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MILITARY STANDARD GENERATORS PROTOTYPE MODIFICATIONS VOLUME II - 30 kW DOD GENERATOR SET

VSE Corporation
2550 Huntington Avenue
Alexandria, VA 22303-1499

31 March 1988

Final Report For Period Of 17 July 1987 Through 31 March 1988

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Prepared for:

U.S. Army Belvoir Research, Development and Engineering Center
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This report consists of three volumes:

- o Volume I - 15 kW DOD Generator Set.
- o Volume II - 30 kW DOD Generator Set.
- o Volume III - 60 kW DOD Generator Set.

Government approved modifications to the military standard 30 kW Diesel Engine Driven (DED) Generator Set were made to reduce noise levels and improve reliability. Tests performed to a government approved test plan showed all design changes to be sound in concept. Further reliability testing should be accomplished after deficiencies resulting from testing are corrected.

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SUMMARY

The 30 kW DoD Generator Sets were modified for sound attenuation and reliability improvements according to government approved designs. A test program, performed in accordance with a government approved test plan showed the design concepts to be sound in principle. Further testing for reliability should be performed by the user, and all deficiencies occurring during these tests should be corrected.

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PREFACE

This report was prepared under the authority of Task Order 0088 to U.S. Army Belvoir Research, Development and Engineering Center (Belvoir) Contract No. DAAK70-86-D-0023. Contract No. DAAK70-86-D-0023 requires VSE Corporation to provide engineering and technical support for a wide range of projects being performed at Belvoir. Task order 0088 is concerned with the modification and improvement of 15 kW, 30 kW, and 60 kW Military Standard Diesel Engine Driven (DED) Generator Sets.

Documentation of the task efforts and results is furnished in three volumes:

- Volume I - 15 kW DOD Generator Set.
- Volume II - 30 kW DOD Generator Set.
- Volume III - 60 kW DOD Generator Set.

The authors of this report wish to acknowledge the valuable guidance and contributions provided by Mr. Noel D. Bishop, Mr. Bobby C. Jones, and Ms. Selma J. Nawrocki of Belvoir's Power Distribution Division.

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MILITARY STANDARD GENERATORS PROTOTYPE MODIFICATIONS

VOLUME II - 30 kW DoD GENERATOR SET

1. INTRODUCTION

1.1 Statement Of The Problem. Existing 30 kW DoD Military Standard Diesel Engine Driven (DED) Generator Sets must be modified to reduce sound levels and vibration. These sets must also be improved for reliability and operational features. Government Furnished Data (GFD) for these modifications and improvements must be evaluated, and receive government approval, for subsequent manufacturing and testing of prototype sets.

1.2 Background. This Task Order 0088 under Belvoir Contract No. DAAK70-86-D-0023 is the third in a series of three tasks which are intended to result in modified and improved military generator sets to include the 30 kW DoD Military Standard DED Generator Set. The first task (No. 0067) was a market investigation which deliberately involved industry in the product improvement process in order to ensure that state-of-the-art materials and manufacturing techniques and processes were considered. Suggestions from industry were reviewed and those considered valid, achievable, and cost effective (given program constraints) were forwarded to Belvoir as recommended improvements. The second task (No. 0076) required a more detailed engineering evaluation and analysis of the improvements approved by the Government, which included the sound attenuation design previously used on the Regency Net set. Delivered under this task were Level 1 engineering drawings supported by calculations, and other engineering data for all improvements. The second task also included a requirement to identify a new engine for the 60 kW generator set. The third task, for which this report is written, required work and services on 12 generator sets; two each: 15 kW, 60 Hz; 15 kW, 400 Hz; 30 kW, 60 Hz; 30 kW, 400 Hz; 60 kW, 60 Hz; and 60 kW, 400 Hz.

1.3 Purpose Of Report. The purpose of this report is to detail the modifications to the 30 kW DoD Generator Sets, the purpose for which they were made, problems which were encountered during testing, and the solutions which were applied.

1.4 Scope Of Report. The test results and findings presented in this report are limited to the 30 kW, 60 Hz and 30 kW, 400 Hz DED generator sets only. The period of this report is 19 July 1987 through 31 March 1988.

1.5 Reference To Related Work. Task Orders 0067 and 0076 under Belvoir Contract No. DAAK70-86-D-0023 provided knowledge and data, used with other GFD, to accomplish the work specified in this task order (0088).

1.6 Disposition Instructions. Destroy this report when no longer needed. Do not return it to the originator.

2. INVESTIGATION

2.1 Technical Requirements. The basic technical requirements for performance of this task order were to: perform an engineering evaluation and analysis of GFD; manufacture, modify, and test prototypes; and, document all work and services. Specifically, VSE Corporation was required to:

- Review, analyze, and evaluate GFD and DOD-D-1000 Level 1 drawings for a concept developed by Regency Net and BBN Laboratories, Inc. These data pertained to sound attenuation, reduced vibration, and improved reliability and operational features for the 30 kW generator set and companion 15 kW and 60 kW generator sets.

- Procure, prototype manufacture, and install improved assemblies/ subassemblies (including components) and changes in accordance with government approved recommendations resulting from task orders 0067 and 0076 of this contract, and from the above mentioned evaluation of GFD.

- Procure and install components to improve the reliability and operational features as specified and as shown in the Statement of Work, "Technical Requirements For Sound Attenuating Modification And Reliability Improvements".

- Test modified and improved generator sets according to the government approved test plan shown in Appendix A (Basis of This Report).

2.2 Technical Approach. The technical approach used to complete testing of the 30 kW Generator Set was based on three steps:

- Pre-modification testing to establish baselines for post-modification tests.

- Modification of generator sets.

- Post-modification testing to determine if modifications produced desired results.

All testing was accomplished at a subcontractor facility (National Technical Systems, Hartwood, VA).

3. DISCUSSION

3.1 30 kW DoD Generator Set Modifications

3.1.1 Scheduled Modifications. Modifications scheduled for incorporation into the 30 kW Generator Sets were:

- Installation of sound attenuation kits.

- Installation of vibration isolation mounts between the engine/ generator assembly and the skid base.

- o Relocation of the manual throttle cable.
- o Pull-out battery rack.
- o Improved door latches.
- o Relocation of engine exhaust outlet.
- o Low coolant level protection.
- o Solar charging kits.
- o Improved fuel filter/water separators.

3.1.2 Modifications For Sound Attenuation. The sound attenuation kit design used for all of the generator sets was based on the concept employed during the modification of the 15 kW Military Standard generator sets for Regency Net application.

The modification included the installation of vibration isolation mounts between the engine/generator and the skid frame; lining the interior of the enclosure, including the doors with sound attenuation panels; installation of a larger more efficient exhaust muffler, the addition of cooling air inlet, and discharge silencers and engine air inlet silencer. Improved door latches were also scheduled for installation, however, they were not available prior to the conduct of testing with the exception of rail impact testing on three sets. The engine cooling fan/water pump speed was reduced from 2025 RPM to 1800 RPM, 1:0 to 1:0 ratio, by reducing the size of the crankshaft drive pulley. This was done to lower the noise level generated by the cooling fan.

3.2 Reliability Improvements. The installation of the vibration isolation mounts for sound attenuation is expected to improve reliability through the reduction of vibration related failures.

The battery rack modification provided for a slide out tray to facilitate battery maintenance, thus reducing battery related failures.

A low coolant level sensor was installed to prevent severe engine damage in the event of a major coolant leak.

A solar battery charging kit was installed to maintain the set batteries in a charged condition throughout long periods of shut-down.

A fuel filter/water separator equipped with a high water level warning light was installed in an effort to reduce fuel contamination related failures.

At the conclusion of all modifications the 400 Hz set weighed 3650 lb and the 60 Hz set weighed 3550 lb for an average weight increase of 675 lbs over the unmodified sets.

When the generator set is trailer mounted the stowage angle of the rear tread plate must be changed to 35 degrees from the vertical to provide clearance.

The trailer tow eye weight, with the generator set installed is 375 lbs. The placards have been modified to reflect all electrical and center of gravity changes which have resulted from the modifications.

Pictures of the modified sets are presented in Figure 1.

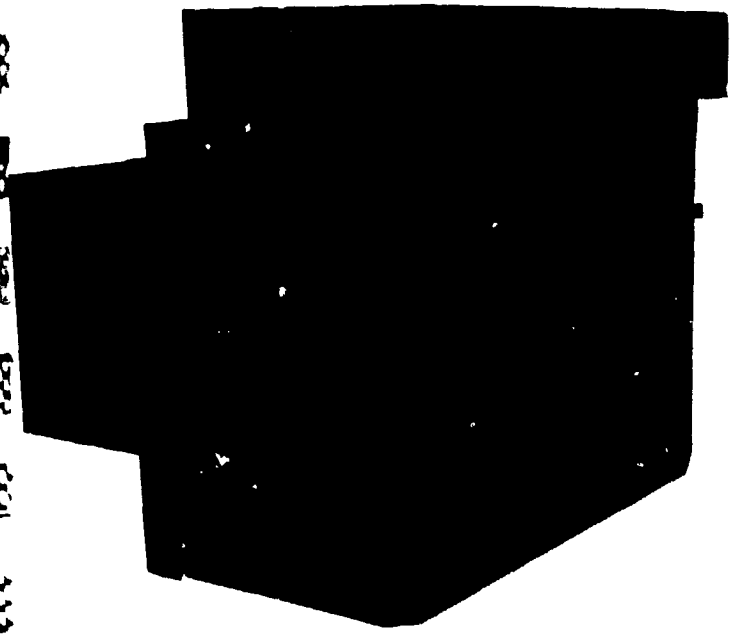
3.3 Testing

3.3.1 Pre-modification Tests. Prior to any modifications testing was conducted to document the baseline noise levels and certain performance characteristics of each generator set. Noise level testing was in accordance with the provisions of MIL-STD-1474 frequency and voltage regulations, stability and transient response testing was in accordance with provisions of Test Method 608.1 of MIL-STD-705.

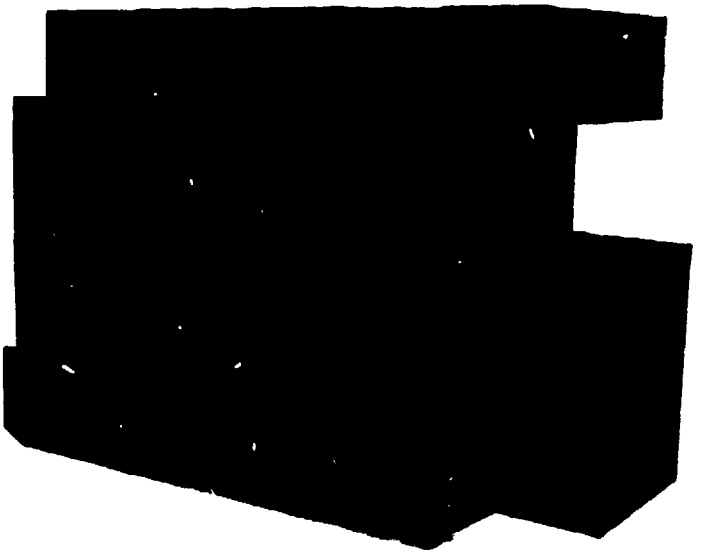
In order to expedite the modification schedule, the first 30 kW, 60 Hz unit SN RZ 53774 scheduled for modification was not subjected to Test Method 608.1 prior to modification.

3.3.2 Scheduled Tests. The following series of testing was conducted to evaluate the effects of the modifications on overall performance characteristics. These tests were performed in accordance with the provisions of MIL-STD-705, Method 710.1, "High Temperature Test":

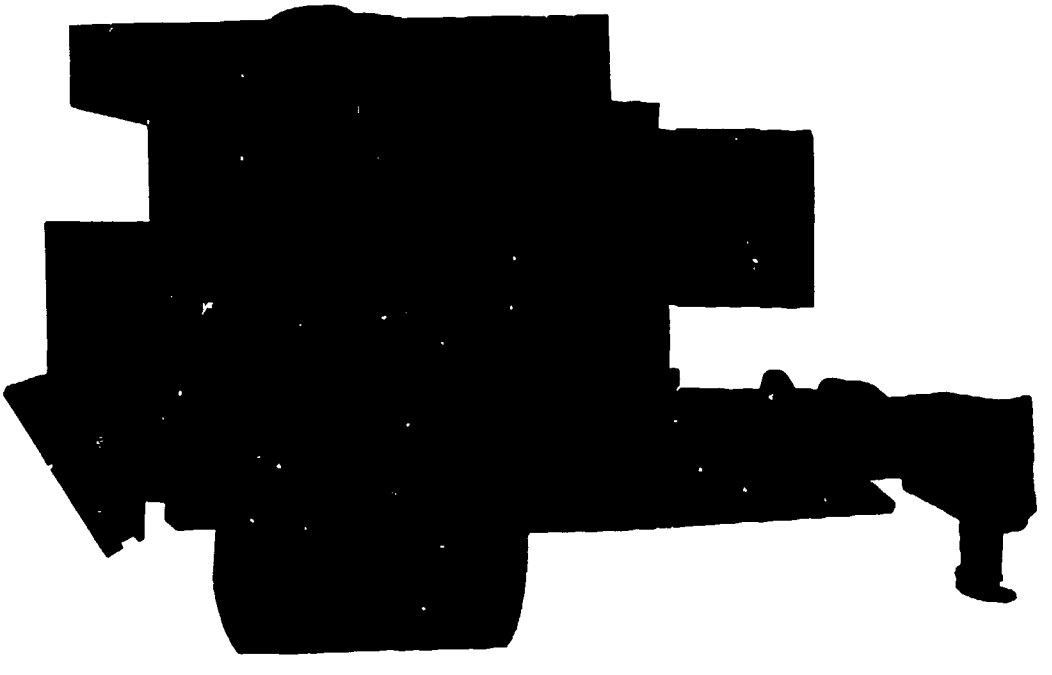
Method 401.1	Winding Resistance Test.
Method 511.1	Regulator Range Test.
Method 511.2	Frequency Adjustment Range Test.
Method 512.1	Circuit Interrupter Test (Short Circuit).
Method 512.2	Circuit Interrupter Test (Overload Trip).
Method 512.3	Circuit Interrupter Test (Overvoltage Undervoltage).
Method 513.3	Indicating Instrument Test (Electrical).
Method 608.1	Frequency and Voltage Regulation, Stability and Transient Response Test (Short Term).
Method 608.2	Frequency and Voltage Stability Test (Long Term).
Method 619.2	Voltage Dip and Rise for Rated Load Test.
Method 655.1	DC Control Test.
Method 710.1.2.1(h)	(Hot Restart).



Right Front View.



Right Rear View.



Trailer Mounted View.

Figure 1. 30 kW (Modified) Military Standard Generator Set.

The tests below, also performed according to MIL-STD-705, were conducted at prevailing ambient conditions:

Method 515.2	Over Temperature Protective Device Test.
Method 640.1	Maximum Power Test.
Method 740.3	Drop Test (Ends).
Method 740.5	Railroad Impact.

3.3.3 Test Procedure. At the conclusion of the modification phase, testing was conducted to insure that the performance characteristics of the generator sets were not adversely affected by any of the modifications.

The general procedures used to conduct testing were as described in the Test Plan, Appendix A. With the exception of Noise Level, Drop and Railroad Impact tests, all testing was conducted with the generator set placed in an environmental chamber. The chamber's ambient temperature was maintained at +125 ^{o}F for all tests with the exception of Maximum Power, Over Temperature Protective Device, and the baseline Winding Resistance Test which were conducted at Normal Ambient Conditions.

3.3.4 Test Results. For ease of identification, each generator set has been assigned a reference number. These numbers are:

Set No.	Set Identification
No. 1	30 kW, 60 Hz S/N RZ53774
No. 2	30 kW, 60 Hz S/N RZ05841
No. 3	30 kW, 400 Hz S/N KZ40323
No. 4	30 kW, 400 Hz S/N KZ70003

All test results are presented in tabulated form in Figures 2 through 5. The tabulations indicate pass or failure findings for each test as well as a brief comment regarding non-compliances. Non-compliances and problems encountered are discussed in greater detail in paragraph 3.3.5, "Test Comments", of this report. Precise values for all test results are in Appendix B, "Test Data", of this report.

3.3.4.1 Noise Level Test. Noise level values for all of the 30 kW units measured prior to and after modification are presented in Figures 6 through 9 for comparison. The after modification values represent the units in final configuration, after adjustments had been made, to correct cooling problems including the removal of the center panel from the cooling air discharge silencer.

All of the values appearing in Figures 6 through 9 are for the highest levels recorded during the rated load or no load conditions for the station indicated.

GENERATOR SET, 30 kW, 60 Hz S/N RZ 53774 (Set No. 1)			
PRE-MODIFICATION BASELINE TESTS			
TEST METHOD AND NAME	PASS	FAIL	COMMENTS
MIL-STD 1474 Sound Level	N/A	N/A	
(608.1) Freq. and Voltage Regulation Stability and Transient Response			Test not conducted
POST-MODIFICATION TESTS HIGH TEMPERATURE (710.1)			
TEST METHOD AND NAME	PASS	FAIL	COMMENTS
(511.1) Regulator Range	X		None
(511.2) Frequency Adj. Range		X	Frequency could not be adjusted to 62 Hz
(512.1) Circuit Interrupter (Short Circuit)	X		None
(512.2) Circuit Interrupter (Overload Current)		X	Excessive trip time at 130% overload
(512.3) Circuit Interrupter (Overvoltage/Undervoltage)	X		None
(513.2) Indicating Instrument		X	Excessive voltmeter error
(608.1) Freq. and Voltage Regulation Stability and Transient Response		X	Frequency regulation in excess of allowable
(608.2) Freq. and Voltage Stability (Long Term)		X	Frequency regulation in excess of allowable
(619.3) Voltage Dip and Rise for Rated Load	X		None
(655.1) D.C. Control		X	Voltage would not adjust to 32 volts
(401.1) Winding Resistance	X		No manufacturer's data available for resistance comparison
(710.1.1.3h) High Temp. Restart	X		None
POST-MODIFICATION TESTS (PREVAILING AMBIENT)			
TEST METHOD AND NAME	PASS	FAIL	COMMENTS
MIL-STD-1474 Sound Level	X		None
(401.1) Winding Resistance	X		None
(515.2) Overtemperature Protective Device		X	Shut down temp. too high No indicator light
(640.1) Maximum Power		X	No meterological data to correct observed value
(608.1) Pre-Drop		X	Voltage regulation in excess of allowable
(740.3) Drop Test (Ends)		X	Some damage was sustained
(608.1) Post Drop		X	Voltage regulation in excess of allowable
(740.5) Rail Impact		X	Some damage sustained

Figure 2. Tabulated data - Set No. 1

GENERATOR SET, 30 kW, 60 Hz S/N KZ 05841 (Set No. 2)			
PRE-MODIFICATION BASELINE TESTS			
TEST METHOD AND NAME	PASS	FAIL	COMMENTS
MIL-STD 1474 Sound Level	N/A	N/A	
(608.1) Freq. and Voltage Regulation Stability and Transient Response	X		None
POST-MODIFICATION TESTS HIGH TEMPERATURE (710.1)			
TEST METHOD AND NAME	PASS	FAIL	COMMENTS
(511.1) Regulator Range	X		None
(511.2) Frequency Adj. Range	X		None
(512.1) Circuit Interrupter (Short Circuit)	X		None
(512.2) Circuit Interrupter (Overload Current)	X		None
(512.3) Circuit Interrupter (Overvoltage/Undervoltage)	X		None
(513.2) Indicating Instrument		X	Excessive Ammeter error
(608.1) Freq. and Voltage Regulation Stability and Transient Response	X		None
(608.2) Freq. and Voltage Stability (Long Term)	X		None
(619.3) Voltage Dip and Rise for Rated Load	X		None
(655.1) D.C. Control		X	Voltage would not adjust to 32 volts
(401.1) Winding Resistance	X		No manufacturers data available for resistance comparison
(710.1.1.3h) High Temp. Restart	X		None
POST-MODIFICATION TESTS (PREVAILING AMBIENT)			
TEST METHOD AND NAME	PASS	FAIL	COMMENTS
MIL-STD-1474 Sound Level	X		None
(401.1) Winding Resistance	X		None
(515.2) Overtemperature Protective Device			Test not conducted
(640.1) Maximum Power	X		None
(608.1) Pre-Drop	X		None
(740.3) Drop Test (Ends)	X		Slight damage sustained
(608.1) Post Drop	X		None
(740.5) Rail Impact			Test not conducted

Figure 3. Tabulated data - Set No. 2.

GENERATOR SET, 30 kW, 400 Hz S/N RZ40323 (Set No. 3)			
PRE-MODIFICATION BASELINE TESTS			
TEST METHOD AND NAME	PASS	FAIL	COMMENTS
MIL-STD 1474 Sound Level	N/A	N/A	
(608.1) Freq. and Voltage Regulation Stability and Transient Response		X	Exceeded maximum allowable voltage regulation
POST-MODIFICATION TESTS HIGH TEMPERATURE (710.1)			
TEST METHOD AND NAME	PASS	FAIL	COMMENTS
(511.1) Regulator Range		X	Exceeded maximum allowable voltage regulation
(511.2) Frequency Adj. Range		X	Frequency could not be adjusted to 420 Hz
(512.1) Circuit Interrupter (Short Circuit)	X		None
(512.2) Circuit Interrupter (Overload Current)			Test not conducted
(512.3) Circuit Interrupter (Overvoltage/Undervoltage)		X	Required excessive trip voltage and time
(513.2) Indicating Instrument		X	Excessive ammeter and wattmeter error
(608.1) Freq. and Voltage Regulation Stability and Transient Response		X	Exceeded maximum allowable voltage regulation
(608.2) Freq. and Voltage Stability (Long Term)		X	Exceeded maximum allowable voltage regulation
(619.3) Voltage Dip and Rise for Rated Load			Data not reducible. Possible test equip. failure.
(655.1) D.C. Control		X	Charging voltage could not be adjusted
(401.1) Winding Resistance	X		No manufacturer's data available for resistance comparison
(710.1,1.3h) High Temp. Restart	X		None
POST-MODIFICATION TESTS (PREVAILING AMBIENT)			
TEST METHOD AND NAME	PASS	FAIL	COMMENTS
MIL-STD-1474 Sound Level		X	Noise level exceeded 70 dBA at 2 positions at 7 meters
(401.1) Winding Resistance	X		None
(515.2) Overtemperature Protective Device		X	Test not conducted
(640.1) Maximum Power	X		None
(608.1) Pre-Drop		X	Exceeded maximum allowable voltage regulation
(740.3) Drop Test (Ends)		X	Cooling air discharge silencer frame broke at weld
(608.1) Post Drop		X	Exceeded maximum allowable voltage regulation
(740.5) Rail Impact			Test not conducted

Figure 4. Tabulated data - Set No. 3.

GENERATOR SET, 30 kW, 400 Hz S/N RZ 70003 (Set No. 4)			
PRE-MODIFICATION BASELINE TESTS			
TEST METHOD AND NAME	PASS	FAIL	COMMENTS
MIL-STD 1474 Sound Level	N/A	N/A	
(608.1) Freq. and Voltage Regulation Stability and Transient Response		X	Exceeded max. allowable voltage regulation
POST-MODIFICATION TESTS HIGH TEMPERATURE (710.1)			
TEST METHOD AND NAME	PASS	FAIL	COMMENTS
(511.1) Regulator Range			Test not conducted
(511.2) Frequency Adj. Range			Test not conducted
(512.1) Circuit Interrupter (Short Circuit)	X		None
(512.2) Circuit Interrupter (Overload Current)			Test not conducted
(512.3) Circuit Interrupter (Overvoltage/Undervoltage)		X	Required excessive trip time
(513.2) Indicating Instrument		X	Excessive voltmeter, ammeter and wattmeter error
(608.1) Freq. and Voltage Regulation Stability and Transient Response		X	Test aborted due to high temperature
(608.2) Freq. and Voltage Stability (Long Term)			Test not conducted
(619.3) Voltage Dip and Rise for Rated Load			Test not conducted
(655.1) D.C. Control			Test not conducted
(401.1) Winding Resistance			Test not conducted
(710.1.1.3h) High Temp. Restart	X		None
POST-MODIFICATION TESTS (PREVAILING AMBIENT)			
TEST METHOD AND NAME	PASS	FAIL	COMMENTS
MIL-STD-1474 Sound Level		X	Noise level exceeded 7 dBA at 1 position at 7 meters
(401.1) Winding Resistance			Test not conducted
(515.2) Overtemperature Protective Device			Test not conducted
(640.1) Maximum Power			Test not conducted
(608.1) Pre-Drop			Test not conducted
(740.3) Drop Test (Ends)	X		Unit could not be operated after drop test
(608.1) Post Drop			Test not conducted
(740.5) Rail Impact			Test not conducted

Figure 5. Tabulated data - Set No. 4.

GENERATOR SET 30 KW 60 HZ SN 82 53224

(Set No. 1)

NOISE LEVELS IN dBA

B = BEFORE MODIFICATION
A = AFTER MODIFICATION

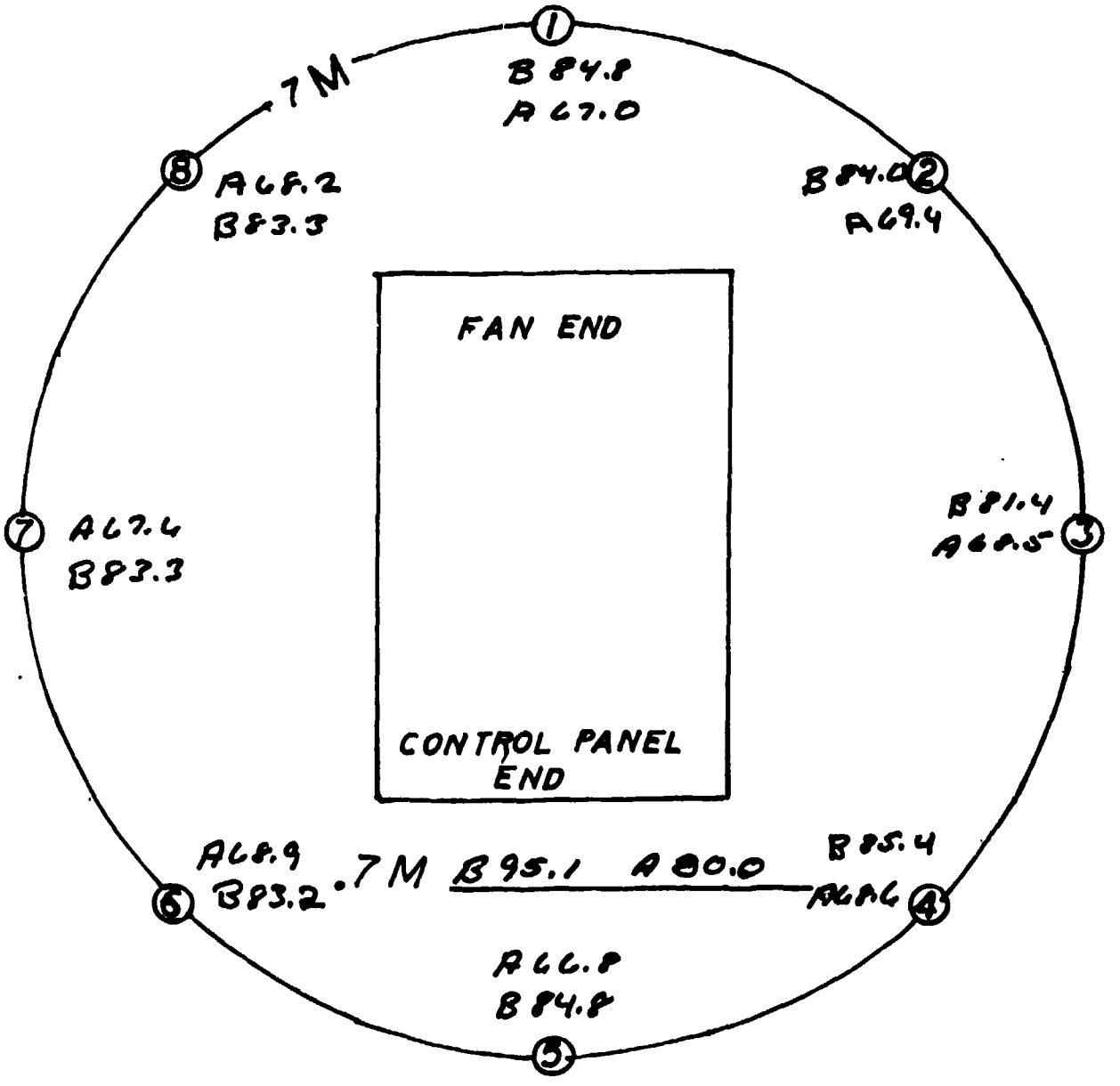


Figure 6. Noise level values - Set No. 1.

GENERATOR SET 30 KW 60 HZ SN 82 05841

(Set No. 2)

NOISE LEVELS IN dBA

B = BEFORE MODIFICATION
A = AFTER MODIFICATION

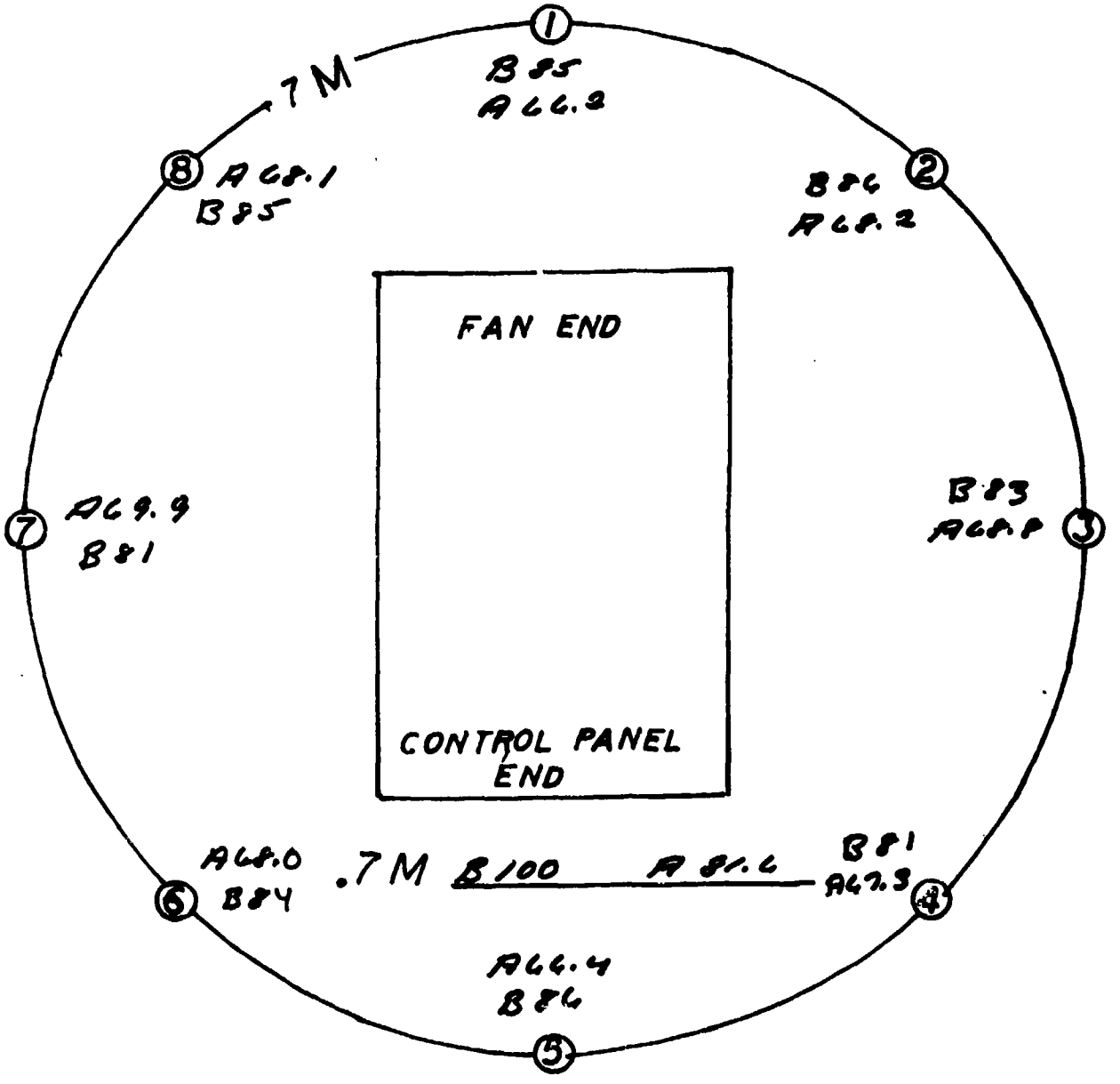


Figure 7. Noise level values - Set No. 2.

GENERATOR SET 30 KW 400 HZ SN RZ 40323

(Set No. 3)

NOISE LEVELS IN dBA

B = BEFORE MODIFICATION
A = AFTER MODIFICATION

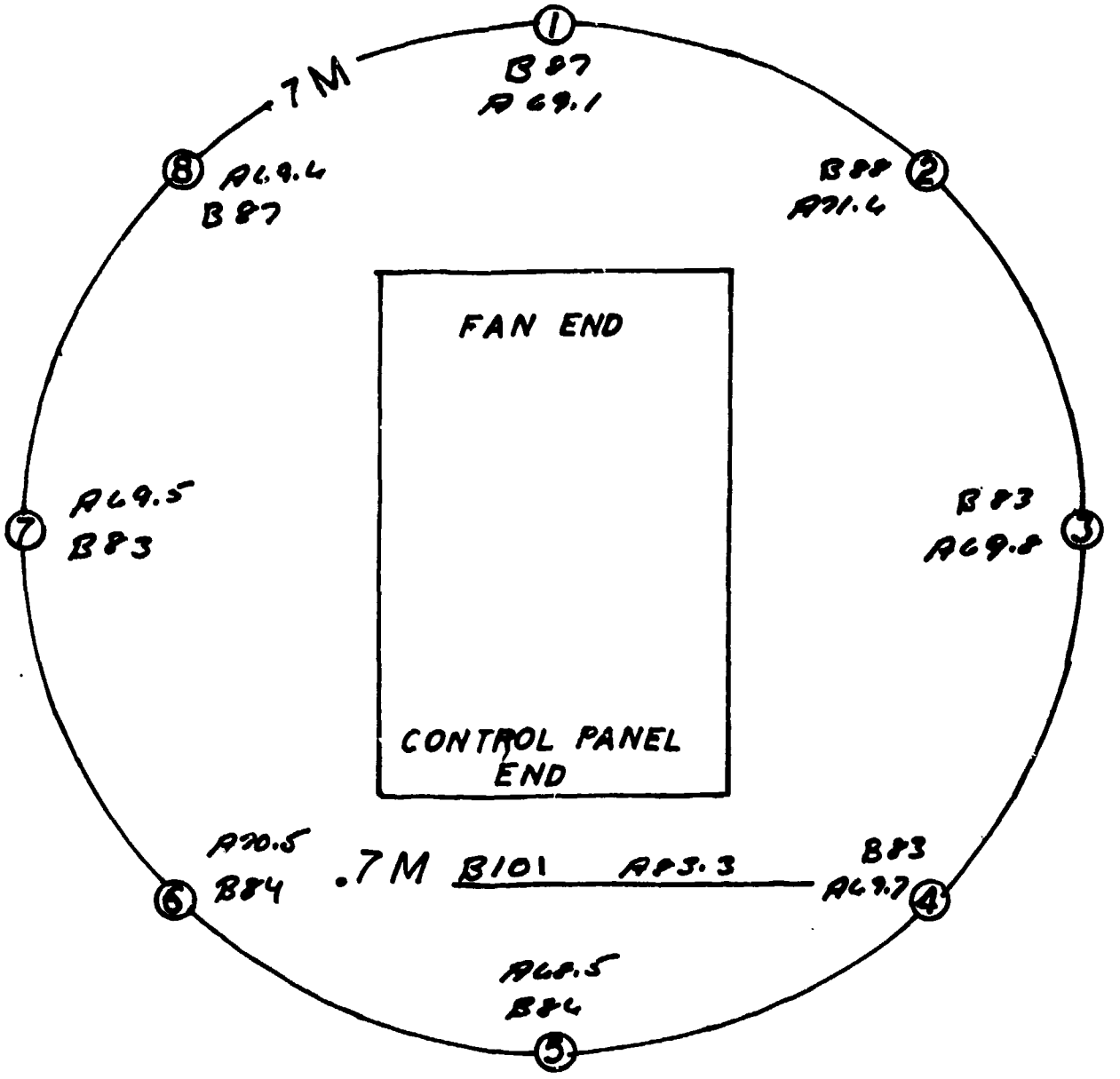


Figure 8. Noise level values - Set No. 3.

GENERATOR SET 30 KW 400 HZ SN RE 70003

(Set No. 4)

NOISE LEVELS IN dBA

B= BEFORE MODIFICATION
A= AFTER MODIFICATION

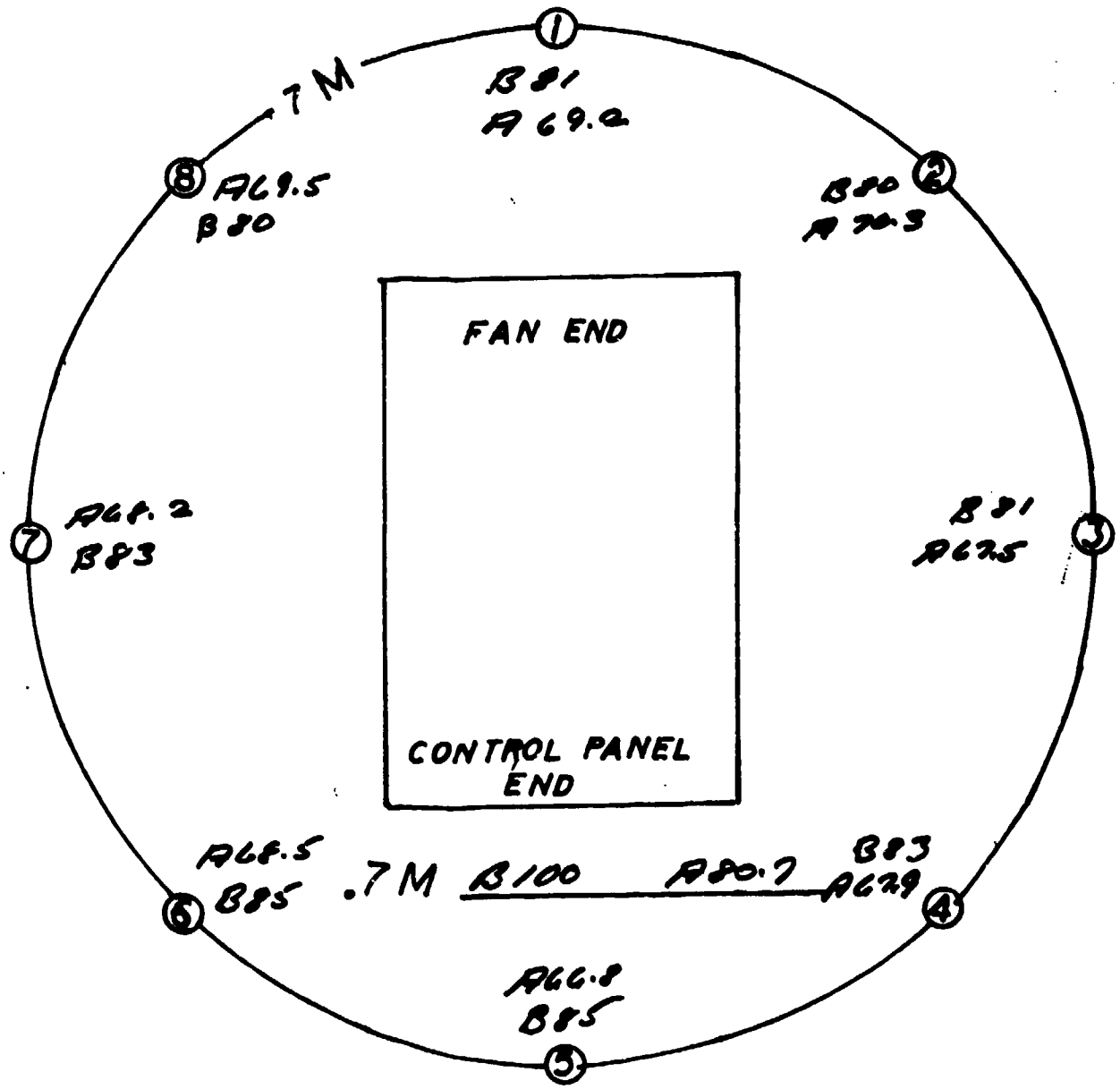


Figure 9. Noise level values - Set No. 4.

As can be seen, the noise levels measured at .7 of a meter from the control panel have been reduced to below the 85 dBA target level in all cases.

Noise levels measured at 7 meter were below the target 70 dBA level for sets No. 1 and 2; however, noise levels measured at the cooling fan end of sets No. 3 and 4 remained above the 70 dBA level. The levels were higher for sets No. 3 and 4 due to the higher fan speed inherent with the 400 Hz units.

All noise level measurements taken at all conditions for all 30 kW units, including those with which to establish an 85 dBA perimeter profile, can be seen in the data section of this report.

3.3.4.2 Frequency and Voltage Regulation, Stability and Transient Response Pre-Modification. Set No. 2 was in compliance with all performance requirements for this test. Voltage regulation for Sets No. 3 and 4 exceeded the maximum allowable by 1.5 percent. Set No. 1 was not scheduled for this test.

3.3.4.3 High Temperature. Sets No. 1, 2 and 3 were successfully operated at high temperature after engine cooling problems were resolved. These problems and their resolution are discussed, in detail in paragraph 3.3.5 of this report. Set No. 4 developed governor and engine cooling problems and it was necessary to abort a majority of remaining tests pending resolution of the problems. The test program was terminated before the problems could be corrected.

3.3.4.4 Regulation Range Test. Sets No. 1 and 2 were in compliance with all requirements for this test. Set No. 3 exceeded the maximum allowable voltage regulation by .39 percent. This test was not performed on Set No. 4.

3.3.4.5 Frequency Range Adjust Test. Set No. 2 was in compliance with all requirements for this test. Set No. 1 frequency could only be adjusted to 61.9 Hz, .1 Hz below the required 62 Hz. Set No. 3 frequency could only be adjusted to 412.2 Hz, 7.8 Hz below the required 420 Hz. Set No. 4 was not subjected to this test.

3.3.4.6 Circuit Interrupter Test (Short Circuit). Sets 1, 2, 3 and 4 were in compliance with all requirements for this test with maximum trip times of 58, 40, 44 and 25 MS respectively.

3.3.4.7 Circuit Interrupter Test (Overload Current). Set No. 2 was in compliance with all requirements for this test. Set No. 1 Circuit Interrupter failed to open within the maximum allowable 10 minutes after the application of 130 percent overload. The circuit interrupter required 10 minutes and 42 seconds to respond. Sets No. 3 and 4 were not subjected to this test.

3.3.4.8 Circuit Interrupter Test (Over Voltage and Under Voltage). Sets No. 1 and 2 were in compliance with all requirements for this test. Set No. 3 exceeded the maximum allowable trip voltage by 3-volts during the 155 volt test and exceeded the trip time by .23 sec during the 99 volt test. Set No. 4 exceeded the maximum allowable trip time by .11 seconds during the 155 Volt test and failed to trip during the 99 volt test.

3.3.4.9 Indicating Instrument Test (Electrical). Set No. 1 Volt meter error was 3.61 percent, 1.11 percent in excess of the maximum allowable. Set No. 2 ammeter error was 8.86 percent, 2.86 percent in excess of the maximum allowable. Set No. 3 ammeter error was 11.96 percent, 5.96 percent in excess of the maximum allowable and wattmeter error was 16.9 percent, 6.9 percent in excess of the maximum allowable. Set No. 4 voltmeter error was 4.8 percent, 2.3 percent in excess of the maximum allowable, ammeter error was 19 percent, 13 percent in excessive of maximum allowable and the wattmeter error was 10.5 percent, .5 percent in excessive of maximum allowable.

3.3.4.10 Frequency and Voltage Regulation Stability and Transient Response. Set No. 1 exceeded the maximum allowable frequency regulation by .83 percent. Set No. 2 was in compliance with all of the requirements for this test. Set No. 3 exceeded the maximum allowable voltage regulation by .25 percent. The testing of Set No. 4 was aborted because of engine cooling problems.

3.3.4.11 Frequency and Voltage Stability Test (Long Term). Set No. 1 frequency regulation exceeded the maximum allowable by .66 percent. Set No. 2 was in compliance with all requirements of this test. Set No. 3 exceeded the maximum allowable voltage regulation by .25 percent. Set No. 4 was not subjected to this test.

3.3.4.12 Voltage Dip and Rise. Sets No. 1 and 2 were in compliance with all requirements for this test. The data for Set No. 3 was not readable, possibly due to test equipment failure. Set No. 4 was not subjected to this test.

3.3.4.13 D.C. Control. The battery charging voltage for Sets No. 1, 2 and 3 could not be adjusted to the required 32 volts. This test was not conducted on Set No. 4.

3.3.4.14 Hot Restart Test. Sets No. 1, 3 and 3 restarted and operated properly after the 45 minute shutdown at high temperature. Set No. 4 restarted properly but failed to continue operation due to a previous governor problem.

3.3.4.15 Winding Resistance Test. Winding temperature rise determined through the winding resistance method for Sets No. 1, 2 and 3 ranged from a low of 33.6 ^{o}C to a high of 69.3 ^{o}C with all temperatures being below the maximum allowable of 90 ^{o}C for Class "B" insulation and 100 ^{o}C for Class "F" insulation. There was no manufacturer's data available with which to make resistance comparisons. Set No. 4 was not subjected to this test.

3.3.4.16 Over Temperature Protective Device. Set No. 1 coolant temperature reached 227 ^{o}F, 2 ^{o}F above the maximum allowable before automatic shut down occurred. The fault indicator failed to light. This test was not conducted on Set Nos. 2, 3 and 4.

3.3.4.17 Maximum Power. The observed maximum power for Set No. 1 was 37.41 kW, .09 kW below the required 37.5 kW. There was no meterological data recorded with which to correct the observed value. The corrected maximum

power for Sets Nos. 2 and 3 was 48.1 and 48.6 kW respectively. This test was not conducted on Set No. 4.

3.3.4.18 Drop Test. Set No. 1 voltage regulation exceeded the maximum allowable by .08 percent prior to the drop test and by .11 percent after the test. Set No. 2 conformed to all voltage and frequency regulation requirements prior to and after the drop test. Set No. 3 exceeded the maximum allowable voltage regulation before and after drop testing by 1.08 percent and 1.16 percent respectively. The voltage and frequency regulation tests were not performed on Set No. 4 due to engine problems.

Set No. 1 sustained some minor damage as a result of the drop test. The battery tray slides and locking pin were bent. A weld in the top sheet metal cracked. The top panel bent causing some door interference. The fuel tank shifted, thus bending the vent lines. All of the doors with the exception of the right front and battery compartment came open. The outer insulation jacket on the exhaust silencer wrinkled in several places.

The cooling air discharge silencer panels became misaligned on Set No. 2. The inlet cooling air silencer screen bowed outward. The battle short and circuit breaker indicator lights would not function after the test. All of the doors came open. The cooling air discharge silencer frame on Set No. 3 broke at the welds. All of the doors came open.

Set No. 4 could not be operated after the test because of excessive noise coming from the generator during operation. All of the doors came open.

3.3.4.19 Rail Impact. The following damage occurred to Set No. 1 during testing: The front engine trunion mount shifted and became wedged in a forward position; The engine cooling fan impacted the shroud; The instrument panel doors came open and the phase selector switch handle fell off; The cooling air discharge silencer panels shifted from the retainer slots; The cooling radiator slid down on the adjustment slots; The battery compartment doors came open; and, The fuel tank vent lines became detached.

The cooling air inlet and auxiliary air inlet silencer panels on Set No. 4 slid forward during impact, causing a slight bulging of the inlet screen; the battery rack slid forward, damaging the door sound attenuation panels and bending the door latches, allowing the doors to open, and; the latches on the front left door bent allowing the doors to open. The fan shroud, front engine trunion mount and the cooling air discharge silencer modifications which were made after testing Set No. 1 prevented a recurrence of the problems encountered in these areas.

Sets 2 and 3 were not tested.

3.3.5 Test Comments

In order to conduct a comprehensive analysis of the test data within the proper perspective it first becomes necessary to consider the initial program goals, the modifications designed to achieve them, and the potential effect of the modifications on performance characteristics.

The two primary goals were to reduce noise levels and improve reliability.

The design changes necessary to reduce noise levels presented the greatest potential effect on performance characteristics. Some of the changes designed to reduce noise had an adverse effect on engine cooling. The reduction of the engine cooling fan speed to reduce noise also lowered the flow of cooling air and water. The installation of silencers on the cooling air inlet and discharge openings imposed an added restriction which further reduced air flow. The original air inlet opening area was increased 15 percent and an auxiliary air inlet, which increased the inlet area an additional 40 percent was provided to offset some of the restrictions, but the discharge opening area could not be increased. The installation of a high efficiency exhaust silencer increased the exhaust silencer surface area 200 percent. The exhaust silencer was subsequently insulated in an effort to reduce the added radiant heat within the set enclosure. In order to establish a better understanding of the diametric effect that some of the noise reduction modifications had on engine cooling, the results of the noise level and high temperature testing will be discussed concurrently in the following paragraphs.

The first 30 kW set to be tested for noise levels after modification was a 60 Hz set (Ser. No. RZ53774). The initial results appeared promising. All noise levels measured at 7-meters were below 70 dBA, with an average of 68.1 dBA for the rated load condition. However, high engine coolant temperatures were encountered during the stabilization period of high temperature testing. The engine coolant temperature reached 220 ^{o}F, thus causing the engine to shut-down prior to stabilization. The following efforts were made to correct the problem, however, some of them provided only limited improvement:

- An auxiliary cooling air inlet cover was removed providing 40 percent more air inlet area. This cover remained off during all further testing. It was left on initially to determine if the added inlet area was needed.

- The engine cooling fan/water pump speed was increased from 1800 RPM to 2025 RPM by installing the original crankshaft drive pulley.

- The standard engine cooing fan was replaced with a 9 blade, adjustable pitch plastic fan in conjunction with a new fan shroud. The units was operated with the fan pitch set at 30 degrees and 45 degrees with little noticeable notable effect on cooling.

- Insulation was placed on all exhaust piping within the enclosure to reduce the amount of radiant heat preheating the cooling air.

- The ambient temperature was reduced to a point where the unit would stabilize without shutdown for the purpose of determining the magnitude of the cooling problem. It was found that the unit could be stabilized at an ambient temperature of 120 ^{o}F with the cooling water discharge temperature at 215 ^{o}F and the oil sump at 240 ^{o}F indicating that only limited additional modifications would be required.

- By operating with first the inlet cooling air silencer removed, then with the discharge cooling air silencer removed it was determined that the discharge silencer imposed the greatest air flow restriction.

- The center panel was removed from the discharge silencer to reduce the restriction. The unit could then be stabilized at 125 ^{o}F ambient, operating at rated load. The cooling water discharger temperature was 210 ^{o}F and the lubricating oil at the sump was 234 ^{o}F at stabilization.

- Noise level testing was conducted to determine what effect the modifications, which were made to enhance cooling, had on noise levels. It was determined that the noise levels could not be maintained within 70 dbA with the cooling fan operation at 2025 RPM.

- Numerous noise tests were conducted with various combinations involving the cooling air discharge silencer panels.

- The combination which appeared to optimize cooling efficiency with noise attenuation required the cooling fan to operate at 1800 RPM, the auxiliary air inlet silencer to be open and the center panel removed from the cooling air discharge silencer. During operation, at rated load in this configuration noise levels averaged 67.9 dbA and the engine coolant temperature stabilized at 215 ^{o}F and at 125 ^{o}F ambient. With the engine cooling problem corrected high temperature testing was resumed with Set No. 1.

The remaining three sets were also configured in this manner. It was necessary to bypass the high temperature safety switch on Set No. 2 when the set shut down and would not run with the coolant temperature at 212 ^{o}F.

The cooling fan shroud was removed from Set No. 2 to investigate the effect on engine cooling. It was found that the shroud was required to prevent overheating.

Set Nos. 2 and 3 completed high temperature testing without engine cooling problems. Set No. 4 developed engine cooling problems during high temperature testing and testing was aborted pending resolution of the engine cooling problems. However, additional problems which are discussed later in this report prevented solution of the cooling problem.

After final modifications to correct cooling problems were made both 60 Hz sets, Sets. No. 1 and 2, maintained noise levels within the design goals. Both of the 400 Hz sets, Sets No. 3 and 4, generated noise levels at the cooling fan end of the unit which exceeded design goals by 1.6 dBA and .3 dBA respectively. The higher noise levels are in part due to the increase in engine and cooling fan speed.

When comparing noise levels between the two 400 Hz sets measured both before and after modification, as presented in Figures 7 and 8 a distinct difference can be seen. The noise levels for Set No. 3 averaged 2.9 dBA higher than Set No. 4 before modification, and 1.4 dBA higher after modification. This condition suggests random noise sources which were not greatly affected by the

attenuation effort. One such noise source could be gaps between the doors and frame openings caused by loose fitting latches which could not be tightened and had not been replaced prior to testing.

A complete noise source analysis which has not been conducted would be required to thoroughly investigate the phenomenon.

A comparison of data for the frequency and voltage regulation, stability and transient response tests conducted at various intervals during the program with a given set appears to indicate that some of the results lack repeatability.

Two of the 3 sets, Sets No. 3 and 4 which were subjected to the baseline frequency and voltage regulation, stability and transient response test failed to comply with the voltage regulation requirements.

Set No. 3 continued to exceed the maximum allowable voltage regulation requirements during all subsequent voltage and frequency regulation tests.

Set No. 4 was not subjected to further voltage and frequency tests due to engine cooling, governor, and generator problems. The governor and generator problems will be discussed later in this report.

Set No. 1 was not scheduled for a baseline test. However, this set exceeded the maximum allowable frequency regulation during the short and long term tests, and it exceeded the maximum allowable voltage regulation during the pre and post drop tests.

Set No. 2 complied with all requirements for the voltage and frequency tests each time this test was conducted.

There is no evidence in the data from these tests that would indicate that the modifications which were performed had any effect on performance.

The frequency range of Sets No. 1 and 3 could not be adjusted to the maximum specified value. Set No. 2 was in compliance with all requirements for the test. Set No. 4 was not tested. The adjustment deficiencies could not be corrected by the adjustment devices normally available to the operator. No further diagnostic efforts or adjustments were made.

The lack of adequate frequency adjustment capability on the 60 Hz set was probably due to the fuel stop or control cable being out of adjustment. The 400 Hz sets probably required adjustments to the electronic governor control unit. Improved quality control during the manufacturer's inspection and testing of the sets would probably reduce these problems.

There is no evidence in the data generated during this test which would indicate that the results were in any way influenced by the modifications performed under this program.

Set No. 1 exceeded the maximum allowable trip time during the Circuit Interrupter Overload Test. A probable cause would be an improperly adjusted current sensor.

The circuit interrupter on Set No. 3 required excessive voltage to effect a trip during the overvoltage test and excessive trip time during undervoltage tests. The cause for this problem was not determined. A probable cause could be an improperly adjusted voltage sensor.

The circuit interrupter on Set. No. 4 failed to trip within the maximum allowable time during the overvoltage test. The causes for this problem are unknown. A probable cause could be an improperly adjusted voltage sensor. The type of circuit interrupter problems demonstrated during these tests could be reduced by improved manufacturer quality control inspections and tests.

The only significant influence the modification might have on the circuit interrupter would be an increase in operating temperature. An increase in operating temperature would probably cause the interrupter to trip prematurely rather than late or not at all. There is no conclusive evidence that the circuit interrupter problems, which occurred during these tests, were caused by the modifications made during this program.

There was no abnormal generator winding temperature rise encountered during the testing of Sets No. 1, 2 and 3. This indicated the generators to be cooling properly. There was no manufacturer's data available with which to make resistance value comparisons.

During the Indicating Instrument Test there were seven incidents of panel meters exceeding the maximum allowable accuracy tolerances; three each ammeters, two each wattmeters, and two each volt meters. No attempt was made to calibrate the meters or determine the cause for error. A cause for some of the inaccuracies could be associated with initial calibrations. Improved test and inspection by the manufacturer should reduce the incidence of excessive meter error. There was no data which associated the meter inaccuracies with the modifications which were performed. To the contrary, the reduction in vibration levels resulting from engine/generator mount modifications should enhance the life of the meters which have been traditionally subject to vibration related failures.

The D.C. control voltage of Set No. 3 could not be adjusted. The D.C. control voltage for Sets No. 1 and 2 could not be adjusted to the required 32 volts. The voltage adjustment problems could be the result of regulator damage caused during the reverse polarity portion of the test. The reverse polarity test was conducted with the battery charging alternator connected which caused severe arcing. This situation can be prevented by modifying Test Method 655.1 of MIL-STD-705 to require the battery charging alternator to be disconnected prior to the reverse polarity test.

All of the sets restarted and operated properly after the 5 minute high temperature shutdown. There were no starting problems or erratic engine operation normally associated with high fuel temperatures which could have resulted from the noise attenuation modifications.

Set No. 1 failed to shut down within the specified temperature limit during the overtemperature protective device test, and the fault light failed to indicate a fault condition. The light bulb was tested and found to be working properly. There was no effort made to investigate the cause for the failure to shut down at the specified temperature. Probable causes could be a faulty high temperature shut-down switch or a temperature gradient with... the cooling system whereby the coolant at the switch location is cooler than the coolant being monitored leaving the engine. These two points are at opposite ends of the engine. There is no evidence to indicate that the problem was related to any of the modifications which were made.

Sets No. 1 and 2 sustained some minor damage as a result of the drop test. A crack developed in the sheet metal weld on the top right rear corner. The cooling radiator slid down, permitting the fan shroud to contact the fan. The cooling air inlet silencer panels slid forward. The outer muffler insulation wrinkled in several places. The battery rack tray slides and locking pin bent. All of the doors came open. The top panel bent causing some door interference.

Sets 1, 2 and 3 started and operated properly at the conclusion of the test, with the exception of the excessive frequency or voltage regulation noted before and after the test which could not be attributed to the test. Set 4 could not be operated after the test.

Several design changes and modifications were made to prevent recurrence of the damage to the units during this test: Stiffeners were welded to the areas of the sheet metal where the weld cracks developed; More torque was applied to the radiator mounting bolts to prevent sliding; A wider stop bar was added to prevent the silencer panels from sliding forward; An additional support was added to the exhaust system; Nylon blocks, to limit downward travel, were added to the battery rack; and, new door latches were installed, but only after all testing had been completed.

The design changes were made to Sets No. 3 and 4 prior to drop testing. These sets completed drop testing without recurrence of the damages experienced with Sets No. 1 and 2. However, a weld on the cooling air discharge silencer frame on Set No. 3 broke. The weld was found to be faulty, indicating a quality control problem rather than a design deficiency.

Set No. 4 could not be tested for voltage and frequency regulation prior to the drop test because of governor problems. The set would start but not continue to run.

The governor problem was encountered after the Indicating Instrument Test, and during the attempt to start the engine for the Maximum Power Test. The engine would crank but would not start. The fuel system was checked and found not to be at fault. The engine could be started by manually operating the governor control rod. The engine would shut down when the throttle control rod was released. All governor system wiring and connectors were inspected. The frequency potentiometer was adjusted. The engine started, ran for about one minute then shut down. The frequency, gain, and stability potentiometers were

adjusted but the engine would not restart. No further efforts were made to determine the problem. All subsequent tests which required the engine to operate were cancelled.

An attempt was made to start the engine after the drop test. The engine started but was immediately shut down when a loud noise was heard coming from the generator. Metal particles were found in the area of the generator cooling air discharge screen and on the sensor end of the governor magnetic pickup. A bolt could be seen lying on the inside of the screen and the screen was bent at the top as though something had struck it from the inside. The unit was not disassembled for inspection. Consequently, the nature of the failure or extent of the damage is not known. However, certain assumptions can be made. The failure was probably not caused by the drop test as the bolt which was seen lying on the screen was intact and not sheared off as it would have been if the failure was caused by the drop test. The bolt was assumed to be a generator coupling bolt, however, it could have been a spare bolt inadvertently left inside the assembly by the manufacturer. The problem could have been intermittent depending on the random position of the loose bolt or bolts. The problems could have been prevalent while the set was being operated inside the environmental chamber and the noise could not have been heard from the outside. The amount of metal particles found would seem to suggest a longer period of operation rather then just the start-up after the drop test.

The vibration insulation mounts which were installed between the engine/generator assembly as part of the noise attenuation modification had the potential for creating problems during rough handling. They permitted relative movement between the engine/generator assembly and the stationary components of the set which could result in damage upon impact. To minimize this potential, stops were incorporated into the mount design which limit movement of the engine/generator assembly in all directions.

Although the stops were effective to a large degree, some mount related problems were encountered during rail impact testing.

The front engine trunion mount shifted and wedged in a forward position. This mount is designed to be loose and rotate in order to compensate for skid base misalignment which could induce stresses into the engine/generator assembly when it is rigidly mounted.

The mount was modified by installing a locking bolt which prevented the mount from moving when tightened.

The engine cooling fan impacted the shroud, thus bending the shroud. A new shroud which provides more fan to shroud clearance was designed and installed.

A vertical brace and a wider stop bar were installed on the cooling air discharge silencer to prevent the panels from shifting.

New latches were installed to prevent the doors from coming open. These latches should be made from thicker or stronger metal to prevent them from bending during rough handling. The battery tray release latch was found to be

undamaged by testing, however, it did open and close on impact allowing the battery tray to slide forward. A stronger return spring or a lighter handle will be required to prevent the latch from opening on impact.

The test plan did not provide for determining reliability or evaluation of the low coolant sensor, solar charging kits, or the improved fuel filter/water separator. This type of testing would have required more time than the program schedule would permit with the exception of the low coolant sensor.

A radiator draw-down test was conducted on each of the sets. Shut down occurred, with a coolant fault indicated each time the coolant level dropped below the sensor probe.

4. CONCLUSIONS

Test data indicates that all of the modifications which were evaluated by the test program appear in concept to be viable solutions in the areas which they were designed to improve.

Time constraints under which the modification program was performed did not permit design optimization. Consequently, optimum results were not achieved.

Areas in need of further improvement were identified through testing.

Some engine cooling and noise problems continue to exist, however, both of these problems can probably be remedied by improving the design of the cooling and discharge silencer.

5. RECOMMENDATIONS

- Belvoir should conduct reliability testing to further evaluate the modifications to the 30 kW generator set.
- Belvoir should correct all deficiencies noted during testing.
- Belvoir should issue sets for user testing.

APPENDIX A

TEST PLAN FOR IMPROVED 30 kW DoD GENERATOR SET

National Technical Systems

Test Plan No. TP555-2140.1
P. O. No. 50199
Date: 28 January 1988

TEST PLAN
FOR
SELECTED PERFORMANCE CHARACTERISTICS OF MIL-DESIGN GENERATOR SETS, 30 KW, DED, MODIFIED FOR RELIABILITY AND NOISE ABATEMENT IMPROVEMENT

PREPARED FOR: VSE CORPORATION
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National Technical Systems

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National Technical Systems

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National Technical Systems

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National Technical Systems

1.0 PURPOSE

The purpose of this test plan is to provide a means for determining selected performance characteristics of 30 KW utility and precise power MIL DESIGN generator sets which have been modified for reliability and noise abatement improvements.

2.0 REFERENCES

2.1 VSE Corporation Purchase Order No. 50199 with attached Statement of Work, dated 6 August 1987.

2.2 MIL-STD-705

2.3 MIL-STD-1474

2.4 FEDERAL SPECIFICATION VV-F-800C

2.5 MIL-L-2104

3.0 TEST ITEM DESCRIPTION

The test items will be MIL-DESIGN generator sets, as follows:

Quantity	Description
2	30 KW, 60 Hz, DED
2	30 KW, 400 Hz, DED

4.0 INSTRUMENTATION

All instrumentation subject to calibration shall be calibrated against standards traceable to the National Bureau of Standards prior to use.

4.1 Temperature

Temperature measurements of the generator sets shall be made with chromel-alumel and copper constantan thermocouples. Ambient temperatures shall be measured with eight (8) thermocouples wired in parallel to indicate an average ambient temperature. Four (4) of the thermocouples shall be immersed in oil to minimize the effects of thermal transients. Temperatures shall be recorded on a Fluke data logger.

4.2 Pressure

Engine exhaust and intake pressure shall be measured with water filled manometers.

4.3 Electrical Measurements

A Texas Instruments Co. Voltage and Frequency Recorder shall be used to monitor output of the generator sets as required by MIL-STD-705.

5.0 TEST PLAN

5.1 General

Testing shall be conducted in two (2) phases. Phase 1 tests shall be conducted to obtain selected performance characteristics of three (3) generator sets: one, 30 KW 60 Hz; and two, 30 KW 400 Hz in the unmodified configuration. Data obtained shall serve as a baseline for comparison of Phase 2 testing, i.e., of the four (4) engine generator sets in the modified configuration. Specific tests to be conducted in each phase are outlined in paragraph 5.2. All testing per MIL-STD-705 specifying tests to be conducted at all available generator voltage outputs shall be tested on the low voltage output only.

The tests shall be conducted in accordance with the test procedures of MIL-STD-705

Fuel oil used for the tests shall be in accordance with FEDERAL SPECIFICATION VV-F-800C.

Lubricating oil used for the tests shall be in accordance with MIL-L-2104.

5.2 Tests

5.2.1 Phase 1 (Unmodified Configuration)

5.2.1.1 Noise Level Test

The standard generator sets, as listed in paragraph 3.0, shall be subjected to this test. Noise levels shall be measured in accordance with MIL-STD-1474 (Paragraph 5.1).

An open area of uniform grade and free of reflecting surfaces located within 100 feet of either the generator set or microphone shall be used for conducting this test. With the generator set operating under rated load and no load, noise levels shall be measured at nine positions, i.e., 7 meters from the center of each side, 7 meters from the corners of the set and 0.7 meters from the control panel. The microphone shall be positioned 1.2 meters above the ground at each position of measurement. MIL-STD-1474 contours shall be taken at 12 equal (horizontal) arc measurements with one increment including date from the noisest position.

National Technical Systems

Maximum noise levels at positions from the center of each side and the corners shall not exceed 70 dBA; from the control panel, 85 dBA.

5.2.1.2 Frequency and Voltage Regulation, Stability and Transient Response Test (Short Term) - Method 710.1(f) 608.1, MIL-STD-705

One (1) 30 KW, 60 Hz and two (2) 30 KW, 400 Hz generator sets shall be subjected to this test. A Texas Instruments Co. model PDR shall be used for recording the voltage and frequency throughout the test. The sets shall be operated at rated load, speed and voltage until stabilized conditions are achieved. Load changes from no load to 4/4, 3/4, 2/4, 1/4, and 4/4 shall be made with the recording chart speed at 12 in/min. Data shall be simultaneously recorded on data sheets at each of the respective load conditions.

5.2.2 Phase 2 (Modified Configuration)

The four (4) generator sets listed in paragraph 3.0 with modifications for improvements in noise abatement and reliability shall undergo the tests as discussed in the following paragraphs. Performance data obtained from Phase 1 tests shall serve as a comparative basis for evaluating modified configuration performance.

5.2.2.1 Noise Level Test

This test shall be conducted as previously discussed in paragraph 5.2.1.1.

5.2.2.2 High Temperature Test (+125°F) - Method 710.1, MIL-STD-705

Each generator set shall be placed in a high temperature chamber and the electrical, thermal and load instrumentation continuously monitored and recorded throughout the test.

Each generator set shall be started and operated at rated speed, voltage and load until stabilized at +125°F. Stabilization shall considered achieved when all generator (or Exciter) field, voltage, and current readings remained unchanged for 4 consecutive 10 minute readings. Following stabilization, each generator set shall be subjected to the tests described below.

5.2.2.2.1 Temperature Rise (Winding Resistance) - Method 710.1.3.2 (a)-(e), MIL-STD-705

The cold winding resistance shall be measured with a Shallcross Model 638 Kelvin-Wheatstone bridge or equivalent resistance measuring instrument after a minimum of 12 hours non-operating storage at normal ambient temperature. The hot winding resistance shall be measured immediately after shutdown following

temperature stabilization in accordance with the procedure described in Method 710.1c of MIL-STD-705. The stator windings shall be measured on all four generator sets.

5.2.2.2.2 Regulator Range Test - Method 710.1(f) 511.1, MIL-STD-705

With the generator sets stabilized at rated load, voltage and frequency the required instrument readings shall be recorded. Subsequent to this event, the series of load changes from no load, to rated load, to no load, etc. with corresponding terminal voltage adjustments and instrument readings as specified by the test method shall be conducted.

5.2.2.2.3 Frequency Adjustment Test - Method 710.1(f) 511.2, MIL-STD-705

The generator sets shall be operated at rated load, voltage and frequency until stabilized conditions are achieved, as indicated when four consecutive voltage and current readings of the generator field either remained unchanged or have only minor variations with evident increase or decrease in value after the last load, voltage or frequency adjustment has been made. With stabilization established the only generator set control adjustments made shall be those on the control panel frequency adjust device. The required series of generator set frequency adjustments with corresponding loads and associated instrument readings, as specified by the test method, shall be conducted.

5.2.2.2.4 Circuit Interrupter Test, (Short Circuit) - Method 710.1(f) 512.1, MIL-STD-705

The generator sets shall be operated at rated voltage, frequency and load. Short circuits shall be applied at all possible short circuit conditions through the use of a switch. Prior to closing the short circuiting switch, instrument readings shall be taken as well as calibration traces of load currents and 60 Hz time reference base. An Oscillograph shall be used to record maximum short circuit current and circuit interrupter trip time.

5.2.2.2.5 Circuit Interrupter Test (Overload) - Method 710.1(f) 512.2, MIL-STD-705

The generator sets shall be started, operated and stabilized at rated voltage, frequency and load. After stabilization, 130 percent overload current shall be applied to a phase, independent of the other phases. The above sequence shall be conducted for each phase until all phases have been subjected to the overload. The final condition shall consist of applying overload to all phases simultaneously. Upon application of the overload for each condi-

National Technical Systems

tion cited, time and instrument readings for circuit interrupter operations shall be obtained. In cases wherein the circuit interrupter fails to open within 15 minutes, the interrupter shall be manually opened. After each overload operation, the generator sets shall be subjected to a 15 minute cooldown at rated current. After completion of the 130 percent overload conditions, the generator sets shall be operated at 110 percent overload current for two hours.

5.2.2.2.6 Circuit Interrupter Test (Over Voltage and Under Voltage) - Method 710.1(f) 512.3, MIL-STD-705

The generator sets shall be equipped with the required instrumentation and circuitry necessary to perform the over voltage and under voltage circuit interrupter test.

The generator sets shall be started and operated at rated frequency and no load. The over-under voltage supply test circuit shall be adjusted, as required, to perform the over voltage test (Proc. I). The test, with the recording oscillograph operating, will be performed three times.

At the conclusion of the over voltage test, the over-under voltage supply test circuit shall be adjusted, as required to perform the under voltage test (Proc. II). The test with the recording oscillograph operating, shall be performed three times.

5.2.2.2.7 Indicating Instrument Test - Method 710.1(f) 513.2, MIL-STD-705

Each generator set shall be initially operated at no load and rated frequency and all set and master instrument readings for each selector switch position recorded. Generator set frequency shall than be reduced to obtain a set frequency indication at the extreme low end of the instrument's operating range, at which occurence all generator set and master instrument readings shall be recorded. Following this event, generator set frequency shall be increased to obtain a generator set frequency indication at the extreme high end of the instrument's operating range. All generator set and master instrument readings shall then be recorded. Upon completion of the above series at a no load condition, the complete series shall be conducted at load ratings of 1/4, 1/2, 3/4 and 4/4 load.

5.2.2.2.8 Frequency and Voltage Regulation, Stability and Transient Response Test (Short Term) - Method 710.1(f) 608.1, MIL-STD-705

A Texas Instrument Co. Model PDR shall be used for recording the voltage and frequency throughout the test. The generator sets shall be operated at rated load, rated speed and voltage until stabilized

conditions have been achieved. Load changes from no load to 4/4, 3/4, 2/4, 1/4 and 4/4 shall be made with the recording chart speed at 12 in/min. The data shall be simultaneously recorded on data sheets at each of the respective load conditions.

5.2.2.2.9 Long-Term Frequency and Voltage Stability - Method 710.1(f) 608.2, MIL-STD-705

The generator set shall be stabilized at rated load, frequency and voltage as determined by four consecutive voltage and current readings of the exciter field. No further adjustments to the voltage and frequency controls shall be allowed for the remainder of the test. A Texas Instruments Co. Model PDR Voltage and Frequency Recorder shall be used for recording the voltage and frequency during the test. Chart speed shall be 12 in/hr., except where specified.

1. Perform short term stability test at rated load. Chart speed 12 in/min.
2. Operate at rated load for the long term stability period of four hours.
3. Stabilize the set at no load as above.
4. Perform short term stability test at no load. Chart speed 12 in/min.
5. Operate at no load for the long term stability period of four hours.
6. Apply three no load to rated load transients and three rated load to no load transients. Chart speed 12 in/min.

5.2.2.2.10 Voltage Dip and Rise (Rated Load) Test - Method 710.1(f) 619.2 MIL-STD-705

Each generator set shall be stabilized at rated load, voltage and frequency. Voltage and current sensing inputs shall be connected to the high speed oscillograph with the amplitudes of the traces adjusted to minimums of 3.0 and 1.5 inches respectively. The oscillograph speed shall be adjusted such that individual waveform peaks were visible. A 60 Hz timing trace shall be used on the chart for actual chart speed reference.

The following sequence shall be performed three times while recording the voltage and current traces on the oscillograph chart:

a. The load and field instrumentation shall be read and recorded.
b. The load shall be reduced to zero in one step.

c. When the voltage and frequency return to steady-state conditions after the transient period, the load and field instrumentation shall be recorded.
d. The load shall be reapplied in one step.
e. After steady-state conditions have been reestabilished, the load and field instrumentation shall be recorded.

5.2.2.2.11 DC Control Test - Method 710.1(f) 655.1, MIL-STD-705

Each generator set's batteries shall be disconnected and the sets started with slave batteries and cable. After starting, generator set shall be shut off and slave battery's polarity reversed. An attempt shall be made to start each generator set with the slave batterys' polarity reversed. After proper polarity connection, the generator sets shall be started and operated at rated voltage, frequency and load. During this period oscilloscope wave forms shall be photographically documented and instrument readings recorded. With the generator sets operating at rated load, the slave batteries shall be disconnected, and the load removed and reapplied. The load shall again be removed and reapplied two additional times. After the third time and with the generator set operating at rated load, instrument readings shall be recorded and oscilloscope wave forms photographically documented. Upon completion of above sequence, sequence, the battery charging system voltage shall be adjusted to the maximum specified with the generator set operating at rated load. With the battery charging system so adjusted, the load shall be removed and reapplied three times. After the third time and with the generator set at rated rated load, instrument readings shall be recorded and oscilloscope wave forms photographically documented. Subsequent to the above (battery charging system adjusted to maximum specified), with the generator set at rated load the battery charging system shall be adjusted to the minimum specified and rated load to no load to rated load etc., cycle shall be repeated three times. After the third time and with the generator set at rated load, instrument readings shall be recorded and oscilloscope wave forms photographed.

5.2.2.3 Overtemperature Protective Device Test - Method 515.2, MIL-STD-705

The generator set shall be instrumented, started and operated at rated voltage, frequency and load. The cooling air to the generator set shall be blocked and generator set coolant temperature obtained via an installed thermocouple. The temperature at which the overtemperature protection device activates shall be recorded. When the generator set has a warning alarm device, the temperature at which it activates shall be recorded. Should the generator set not shut down when the temperature exceeds the maximum trip value, the generator set shall be shut down immediately and the test discontinued.

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5.2.2.4 Maximum Power Test - Method 640.1, MIL-STD-705

The generator set shall be instrumented and loaded in accordance with method 640.1. The generator set circuit interrupter shall be bypassed. The generator set shall be started and stabilized. The maximum output power of the generator set shall be determined and maintained for two minutes. The actual method and procedure employed shall depend upon the type of generator and engine the generator set is equipped with.

At the end of the two minute test, the load shall be reduced to rated load and the generator set allowed to cool for 10 minutes. The maximum power shall be repeated until three valid sets of data are obtained. The results of the three valid maximum power shall be averaged to determine the observed maximum power value.

5.2.2.5 Drop Test (Ends) - Method 740.3b, MIL-STD-705

The generator set shall be instrumented for measuring load conditions, field voltage, current and ambient temperatures. After instrumentation, the generator set shall be subjected to a voltage and frequency regulation test, method 608.1 (performed at rated load only). Following the voltage and frequency regulation test, one end of the generator set shall be raised and supported by a 2-inch timber placed at right angles to the skids, within 6 inches of the skid frame end. The opposite end shall then be raised to the height specified in the procurement document and released to free fall onto a concrete surface. The raise/free fall cycle shall be executed for a total of six (6) cycles. The above steps shall be repeated for the opposite end. Following the twelve drops (six per end), the generator set shall be visually inspected for damage. Upon completion of the drop test, a voltage and frequency regulation test, method 608.1 (performed at rated rated load only) shall be performed.

APPENDIX B

TEST DATA FOR THE 30 kW DoD GENERATOR SET

APPENDIX B

TEST DATA FOR THE 30 kW
DoD GENERATOR SET

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Final Report No. FR555-2140
P.O. No. 50199
Date 29 March 1988

VOLUME IV (Part 1)

TEST DATA AND OPERATORS LOG

FOR

DIESEL ENGINE DRIVEN GENERATOR SETS
30 KW, MEP 005A AND MEP 114A

Gen Set 30 KW 60 Hz

S/N KZ 05841

HIGH TEMPERATURE TEST (710.1c)

Regulator Range (511.1)	✓
Frequency Adj. Range (511.2)	✓
Circuit Interrupter (Short Circuit) (512.1)	✓
Circuit Interrupter (Overload Trip) (512.2)	✓
Circuit Interrupter (512.3) (Overvoltage/Undervoltage)	✓
Indicating Instrument (515.2)	*
Freq. and Voltage Regulation Stab. & Trans Response (608.1)	✓
Freq. and Voltage Stability (Long Term) (608.2)	✓
Voltage Dip & Rise (619.2)	✓
DC Control (655.1)	*
Winding Resistance (401.1a)	✓
710.1.3.2h HIGH TEMP START	✓

BASELINE TESTS

SOUND LEVEL MIL STD 1474	*
FREQUENCY AND VOLTAGE REG. (608.1)	✓

AMBIENT TESTS (Cont.)

PRE DROP (608.1)	✓
POST DROP (608.1)	✓

AMBIENT TEMPERATURE TESTS

Winding Resistance (401.1a)	✓
MIL-STD-1474 Sound Level	✓
(Modified 608.1) Drop Test (740.3b)	SLIGHT STRUCTURAL DAMAGE
Max Power (640.1)	✓
Overtemperature Protective Device (515.2)	1

* FAILED TEST

1 TEST NOT PERFORMED, UNIT FAILED TO SHUT DOWN ON EARLIER OVERTEMP PROBLEMS. IN ALL CASES UNIT WAS MANUALLY SHUT DOWN IF TEMP REACHED 221°F

30 KW 60 Hz

KZ 0 5841

B-4

8-6-87	Checked water OK	OS
	" oil OK	OS
	" Batterys OK	OS
8-12-87	Running Time 8.0	
	Started unit oil pressure 60	
	Electric Governor not on unit	OS
8-14-87	Changed voltage to 240/416	
	Ran unit at full load	
9-9-87	1139 → 1206 Ran Sound level Test	
	RTM 8.4 → 8.7	
9-29-87	1120 Hrs Started unit For 608.1	
	RTM 9.6	
1431	Shut unit Down RTM 9.7	
1505	Restarted unit RTM 9.7	
1515	Shut unit Down 9.5	
1605	Started unit For Stabilization	
	For 608.1 RTM 10.3	
1742	Completed 608.1 And shut	
	unit Down RTM 12.0	

BOORUM & PEASE

ACCOUNT BOOK 12¼ IN x 8½ IN.

100 PAGES	200 PAGES	300 PAGES	RULING
No. 97½-100-J	97½-200-J	97½-300-J	Journal
No. 97½-100-SSL	97½-200-SSL	97½-300-SSL	SE Ledger
No. 97½-100-DSL	97½-200-DSL	97½-300-DSL	DE Ledger
*No. 97½-100-LD	*97½-200-LD	*97½-300-LD	Long Day
No. 97½-100-R 64-6716	97½-200-R 64-6738	97½-300-R 64-6760	Record
No. 97½-100-R IT	97½-200-R IT	97½-300-R IT	Record Indexed

*LONG DAY SIZE 16¾ IN. x 6½ IN.

BOORUM & PEASE CO. ELIZABETH, NJ 07207 USA MADE IN USA

21 Dec 1987

RECEIVED UNIT FROM USE. [initials]

UNIT HAS NO SECOND ALARM RADIOR [initials]

22 Dec 1987

1108 STARTED SETTING UNIT UP FOR SOUND LEVEL TEST. [initials]

1130 START UNIT TO PERFORM SOUND LEVEL TEST. NOTE: CONTROL PANEL DOORS MISSING DOOR HANGERS TO HELD DOORS OPEN. [initials]

* NOTE: CENTER SECTION OF DISCHARGE BAFFLE IN PLACE. [initials]

1511 SHUT UNIT DOWN TO REMOVED CENTER SECTION OF DISCHARGE BAFFLE.

1540 START UNIT TO PERFORM SOUND LEVEL TEST AT POSITIONS "2, 4, 8 AT RATED AND NO LOAD. [initials]

1589 SHUT UNIT DOWN END OF TEST [initials]

* NOTE: PANEL TO START UPPER INTAKE BAFFLE WAS PUT IN PLACE. REMOVED UPPER INTAKE BAFFLE FROM 30 KW/400 Hz GEN. SET TO BE PLACED ON THIS UNIT. [initials]

19 JAN 1988

PLACED UNIT IN CHAMBER SET UP FOR. [initials]

1716 START UNIT AT RATED LOAD START STABILIZATION FOR SHORT TERM 608.1. [initials]

1811 DEMAND LOAD TO ZERO FOR UNIT COOL DOWN. COOLANT OUT TEMP 221°F. [initials]

1813 SHUT UNIT DOWN. [initials]

20 JAN. 1988

0918 START UNIT FOR INDICATING INSTRUMENT TEST METHOD 5132 [initials]

0959 START UNIT FOR CIRCUIT INTERRUPTOR TEST (SHORT CIRCUIT) METHOD 512.1 [initials]

1033 END OF TEST SHUT UNIT DOWN [initials]

20 JAN. 1988

1112 START UNIT FOR D.C. CONTROL TEST METHOD CSS.1 ON SLAVE BATTERIES
1134 SHUT UNIT DOWN COOLANT OUT TEMP 221°F.
1334 START UNIT FOR START CIRCUIT TEST METHOD 512.3 (OVERLECTRIC)
1340 END OF TEST SHUT UNIT DOWN

21 JAN. 1988

RECEIVED AND INSTALLED NEW SHROUD HEATS VSE.

22 JAN. 1988

0810 START UNIT TO STABILIZE FOR START TERM GCB.1 AT RATED LOAD
0933 ABORT TEST EQUIPMENT MALFUNCTION.
0939 RESTART STABILIZATION FOR START TERM GCB.1
1030 END OF TEST SHUT UNIT DOWN
1057 START UNIT FOR CIRCUIT INTERRUPTOR TEST (OVERLOAD) METHOD 512.2 AT RATED LOAD - START STABILIZATION.
1519 END OF TEST SHUT UNIT DOWN
1524 START UNIT AT RATED LOAD FOR VOLTAGE DIP + RISE TEST METHOD 619.2
1600 END OF TEST SHUT UNIT DOWN
1613 START UNIT AT RATED LOAD FOR REGULATOR RANGE TEST. METHOD 511.1 & START STABILIZATION
1702 END OF TEST
1703 START STABILIZATION FOR FREQUENCY ADJUST TEST. METHOD 608 511.2
1741 END OF TEST SHUT UNIT DOWN
1805 START UNIT LOWER LOAD FOR NEW TEMP WINDING RESISTANCE TEST.
1838 SHUT UNIT DOWN TO RECHECK WINDING RESISTANCE TEST.

22 JAN 1988

1213 START UNIT NO LOAD
1251 SHUT UNIT DOWN OPERATING ALREADY

23 JAN 1988

0956 START UNIT AT RATED LOAD FOR LONG TERM GOB. 2
* NOTE: ADDED 1 QUART OF OIL BEFORE STARTING UNIT.
1640 END OF TEST SHUT UNIT DOWN

25 JAN 1988

0855 START UNIT AT RATED LOAD FOR MAX POWER TEST.
0915 START STABILIZATION
1014 END OF TEST
1015 START STABILIZATION FOR MIL DROP TEST GOB1
1101 END OF TEST SHUT UNIT DOWN.
1400-1500 PERFORMED DROP TESTS
DAMAGE
DISCHARGE BAFFLES MISPLACED (NO NOTICEABLE
DAMAGE TO BAFFLE HOUSING
RIGHT FRONT DOOR OPENED EVERY IMPACT
LEFT FRONT DOOR OPENED EVERY IMPACT
CONTROL PANEL DOORS OPENED ON ALL
CONTROL END DROPS
SLIGHT DISTORTION OF BOTH FORWARD & REAR ROOF
INLET BAFFLE SCREEN BOLTED OUT
REINSTALLED UNIT IN TEST SET UP FOR POST TEST

NOTE: FOUND CIRCUIT INTERRUPTER LIGHT DID NOT WORK AFTER DROP TEST. BATTLE SHORT LIGHT

L-8

25 JAN 1980

1520 STARTED UNIT @ R/L FOR STMS.
FOR DROP TEST - POST TEST

1602 COMPLETED TEST - SHUT
UNIT DOWN

ACOUSTICAL TEST DATA

(MAXIMUM NOISE LEVEL ___ DBA)

TEST ITEM: 30KW 60HZ Genset S/N: K205841 HOUR METER: 314

CONFIGURATION: ☐ UNMODIFIED ☐ MODIFIED

TEMPERATURE: 68°F HUMIDITY: 85% TEST SITE: [redacted]

SURFACE: GRASS TERRAIN: ___

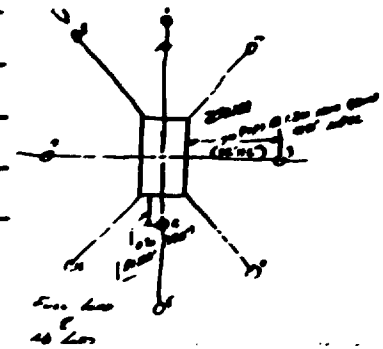
BAROMETRIC PRESSURE: 29.574 SKY COVER: OVERCAST

WIND DIRECTION: NE WIND VELOCITY: <5mph MICROPHONE: ___

SOUND LEVEL METER: GR 1982 OCTAVE ANALYZER: ___

LOAD CONDITION: ☐ RATED ☐ NO LOAD MICROPHONE LOCATION: AS BELOW

DATE	TIME	MICROPHONE POSITION	DISTANCE FT(M)	DBA	REMARKS
9-A-87	1139	1	22 11 1/2	86	
		2		86	
		3		83	
		4		80	
		5		85	
		6		83	
		7		81	
		8	22-11 1/2	85	
9-19-87		9	2-3 1/2	97	
MAXIMUM	BACKGROUND	LEVEL		50 DB	



ACOUSTICAL DATA

(MAXIMUM NOISE LEVEL ___ DBA)

TEST ITEM: 30 KW 60 Hz GEN SET S/N: K20S841 HOUR METER: 84

CONFIGURATION ✓ UNMODIFIED ___ MODIFIED

TEMPERATURE: 68°F HUMIDITY: 85% TEST SITE: HARTWOOD

SURFACE: GRASS TERRAIN: ___

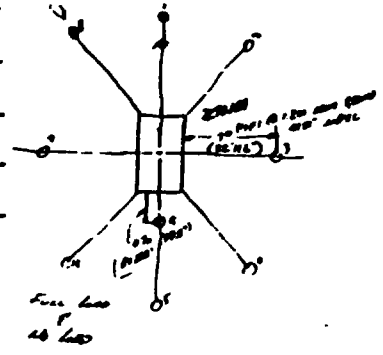
BAROMETRIC PRESSURE: 29.524 SKY COVER: OVERCAST

WIND DIRECTION: NE WIND VELOCITY: < 5 MPH MICROPHONE: ___

SOUND LEVEL METER: GR 1982 OCTAVE ANALYZER: ___

LOAD CONDITION: ✓ RATED ___ NO LOAD MICROPHONE LOCATION: AS BELOW

DATE	TIME	MICROPHONE POSITION	DISTANCE FT (M)	DBA	REMARKS
9-14-87	1151	1	22-11½	85	
		2		86	
		3		83	
		4		81	
		5		86	
		6		84	
		7		81	
		8	22 11½	85	
		9	2 3½	100	



B-10

ACOUSTIC TEST DATA (ON HOUR LEVEL)

(MAXIMUM NOISE LEVEL ___ DBA)

TEST ITEM: 30KW, 60Hz GEN SET S/N: K20584L HOUR METER: 8.4

CONFIGURATION: ✓ UNMODIFIED ___ MODIFIED

TEST SITE: HARTFORD

TEMPERATURE: 68°F HUMIDITY: ___

SURFACE: ___ TERRAIN: ___

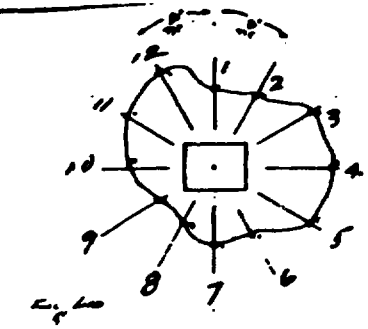
BAROMETRIC PRESSURE: 29.574 SKY COVER: OVERCAST

WIND DIRECTION: NE WIND VELOCITY: <5 MPH MICROPHONE: ___

SOUND LEVEL METER: GR 1982 OCTAVE ANALYZER: ___

LOAD CONDITION: ___ RATED ✓ NO LOAD MICROPHONE LOCATION: AS BELOW

DATE	TIME	MICROPHONE POSITION	DISTANCE FT(M)	DBA	REMARKS
	1155	1	24-8	85	
		2	20-7		
		3	14-1		
		4	15-9		
		5	23-5		
		6	30-1		
		7	26-8		
		8	30-10		
		9	18-1		
		10	21-1		
		11	12-6		
		12	22-10		



ACOUSTICAL DATA

MAXIMUM NOISE LEVEL ___ DBA

TEST ITEM: 30KW, 60HZ GEN SET S/N: K205341 HOUR METER: 8.4

CONFIGURATION: ✓ UNMODIFIED ___ MODIFIED

TEMPERATURE: 68°F HUMIDITY: 85% TEST SITE: HARTFORD

SURFACE: GRASS TERRAIN: ___ EOT RTM 8.7

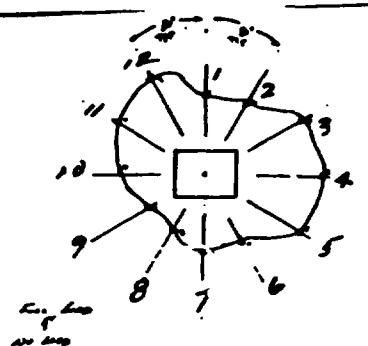
BAROMETRIC PRESSURE: 29.51" SKY COVER: OVERCAST

WIND DIRECTION: NE WIND VELOCITY: < 5MPH MICROPHONE: ___

SOUND LEVEL METER: GR1982 OCTAVE ANALYZER: ___

LOAD CONDITION: ✓ RATED ___ NO LOAD MICROPHONE LOCATION: AS BELOW

DATE	TIME	MICROPHONE POSITION	DISTANCE FEET(M)	DBA	REMARKS
	1200	1	27-11	85	
		2	25-3		
		3	13-9		
		4	12-5		
		5	23-9		
		6	30-7		
		7	24-6		
		8	31-6		
		9	19-6		
		10	18-6		
		11	13-11		
	1206	12	23-9		



ACOUSTICAL TEST DATA

TIME: 1545	DATE: 22 DEC 87				
TEST ITEM: 30 KW / 60 Hz GEN SET	STATION:	TEST CONDUCTED BY: KM GC	TEST ITEM OPERATOR:		
RFG/MODEL NO: MEP 005A	SERIAL NO: A205841	ODOMETER:	HOUR METER: 13.1	TEST ITEM CONDITION: MODIFIED	RATED LOAD
TEMPERATURE: 47°F	HUMIDITY: 53%	TEST SITE: HARTWOOD	SURFACE: GRASS	SEA STATE:	TERRAIN:
BAROMETRIC PRESSURE: 29.719	SKY COVER: OVERCAST	STATIONARY OPERATION: [X]	HIGHWAY DRIVING: [ ]	DRIVE BY: [ ]	
WIND DIRECTION: NE	WIND VELOCITY: < 5 MPH	MICROPHONE: GR 1962	SOUND LEVEL METER: GR 1982	OCTAVE ANALYZER:	
INTERIOR: [ ]	EXTERIOR: [X]	MICROPHONE LOCATION:	TAPE RECORDER:	TAPE NO:	

Run		dbA	dbB	dbC	ALL PASS	31.5	63	125	250	500	1,000	2,000	4000	8000	REMARKS
8	7m	66.6	71.5	76.3	77.4	58.6	69.4	73.9	68.7	64.1	60.0	59.1	54.1	47.8	
1	7m	65.7	72.9	76.5	77.3	62.4	71.4	74.3	69.1	64.0	58.6	56.8	53.8	45.5	
2	7m	69.5	74.8	78.5	78.9	62.5	72.6	74.9	70.3	66.1	64.1	62.1	57.2	50.8	

B-13

ACOUSTICAL TEST DATA

TEST ITEM: 30 KW / 60 Hz GEN SET	STATION:			TIME: 1540	DATE: 20 DEC 87
				TEST CONDUCTED BY: AM CC	TEST ITEM OPERATOR:
RFG/MODEL NO: MEP 005 A	SERIAL NO: KZO 5841	ODOMETER:	HOUR METER: 13.1	TEST ITEM CONDITION: MODIFIED	NOUN
TEMPERATURE: 47°F	HUMIDITY: 53%	TEST SITE: HARTWOOD		SURFACE: GLASS	SEA STATE: TERRAIN:
BAROMETRIC PRESSURE: 29.79	SKY COVER: OVERCAST	STATIONARY OPERATION: [X]	HIGHWAY DRIVING: [ ]	DRIVE BY: [ ]	
WIND DIRECTION: NE	WIND VELOCITY: <5MPH	MICROPHONE: CR 1962	SOUND LEVEL METER: GR 1982	OCTAVE ANALYZER:	
INTERIOR: [ ]	EXTERIOR: [X]	MICROPHONE LOCATION:		TAPE RECORDER:	TAPE NO:

POSITION	DISTANCE	dbA	dbB	dbC	ALL PASS	31.5	63	125	250	500	1,000	2,000	4000	8000	REMARKS
8	7M	63.9	71.2	74.7	77.3	66.4	73.2	71.5	66.6	63.2	56.9	53.5	50.5	42.6	
1	7M	62.2	69.2	72.5	73.8	63.2	69.1	69.5	64.8	62.1	55.8	51.7	47.4	42.8	
2	7M	64.1	70.1	73.6	74.5	66.6	66.3	70.9	67.3	66.2	56.2	52.9	51.6	45.2	

8-14

ACOUSTICAL TEST DATA

TEST ITEM: 30Kw/60 Hz Gen. Set	STATION:			TEST CONDUCTED BY: KM GC	TEST ITEM OPERATOR:
RFG/MODEL NO: MEP 005A	SERIAL NO: KZO 5841	ODOMETER:	HOUR METER: 12.8	TEST ITEM CONDITION: MODIFIED	
TEMPERATURE: 47°F	HUMIDITY: 53%	TEST SITE: HARTWOOD	SURFACE: GRASS	SEA STATE:	TERRAIN:
BAROMETRIC PRESSURE: 29.719	SKY COVER: OVERCAST	STATIONARY OPERATION: [X]	HIGHWAY DRIVING: [ ]	DRIVE BY: [ ]	
WIND DIRECTION: NE	WIND VELOCITY: 15 MPH	MICROPHONE: GR 1962	SOUND LEVEL METER: GR 1982	OCTAVE ANALYZER:	
INTERIOR: [ ]	EXTERIOR: [X]	MICROPHONE LOCATION:	TAPE RECORDER:	TAPE NO:	

POSITION	DISTANCE	dbA	dbB	dbC	ALL PASS	31.5	63	125	250	500	1,000	2,000	4000	8000	REMARKS
1	7M	66.2	72.4	76.6	79.2	63.2	70.3	73.8	69.2	64.8	59.0	57.8	49.8	39.9	
2	7M	68.2	74.0	78.1	79.0	61.5	72.3	75.8	69.9	65.0	61.3	60.6	55.5	50.9	
3	7M	68.8	75.5	79.2	80.4	60.9	72.8	77.2	68.5	65.2	62.6	61.0	56.6	48.0	
4	7M	67.3	73.4	76.6	76.9	60.2	70.4	73.6	69.9	64.2	60.3	59.4	53.8	48.6	
5	7M	66.4	72.6	76.4	76.7	58.9	70.2	73.6	69.2	65.9	59.2	55.4	50.3	48.1	
6	7M	68.0	74.2	77.8	79.0	59.4	70.6	75.4	70.4	66.5	60.6	58.8	52.7	47.6	
7	7M	69.9	73.0	77.1	78.1	60.3	73.1	75.8	69.7	64.0	60.2	59.6	54.4	45.4	
8	7M	68.1	72.5	76.4	78.9	64.3	72.6	72.7	69.8	66.6	61.6	60.1	54.9	48.9	
9	0.7M	81.6	87.1	91.5	92.2	72.7	84.9	89.5	80.6	77.4	77.2	73.3	71.4	69.0	

5-8

ACOUSTICAL TEST DATA

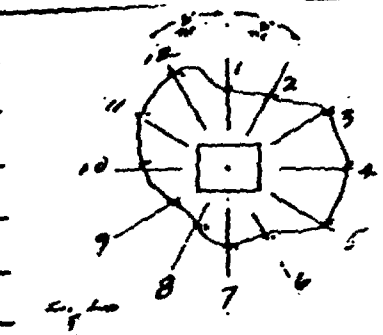
TIME: 1434	DATE: 22 Dec. 1987				
TEST ITEM: 30 KW/60 HZ GEN. SET	STATION:	TEST CONDUCTED BY: KM GC	TEST ITEM OPERATOR:		
RFG/MODEL NO: MEP 005A	SERIAL NO: KZO 5841	ODOMETER:	HOUR METER: 12.4	TEST ITEM CONDITION: MODIFIED	NO LOAD
TEMPERATURE: 47 °F	HUMIDITY: 53%	TEST SITE: HARTWOOD	SURFACE: GRASS	SEA STATE:	TERRAIN:
BAROMETRIC PRESSURE: 29.719	SKY COVER: OVERCAST	STATIONARY OPERATION: X	HIGHWAY DRIVING:	DRIVE BY:	
WIND DIRECTION: NE	WIND VELOCITY: < 5 MPH	MICROPHONE: GR 1962	SOUND LEVEL METER: GR 1982	OCTAVE ANALYZER:	
INTERIOR:	EXTERIOR: X	MICROPHONE LOCATION:	TAPE RECORDER:	TAPE NO:	

POSITION	DISTANCE	dbA	dbB	dbC	ALL PASS	31.5	63	125	250	500	1,000	2,000	4000	8000	REMARKS
1	7M	63.5	70.5	74.4	80.9	63.6	68.6	70.7	66.5	62.0	55.9	53.9	49.3	43.4	
2	7M	65.5	71.5	75.2	75.4	61.1	70.1	71.5	68.6	61.6	57.5	57.8	53.6	46.3	
3	7M	68.5	77.2	80.3	81.1	61.2	71.5	79.9	70.5	63.9	59.3	58.1	54.6	45.9	
4	7M	67.3	75.3	78.6	79.3	61.2	68.9	77.5	71.4	63.5	58.1	56.7	52.1	45.9	
5	7M	66.1	73.8	77.2	77.6	59.9	66.3	75.3	70.6	65.4	54.5	51.6	47.2	45.9	
6	7M	67.2	75.3	78.3	78.7	58.9	66.5	77.2	70.5	64.9	56.9	54.6	50.0	45.3	
7	7M	65.6	74.5	78.9	79.4	59.9	72.6	76.5	68.1	63.0	57.3	55.4	51.9	41.2	
8	7M	64.5	71.1	74.9	77.9	59.1	71.2	73.1	66.7	62.1	57.2	54.9	51.1	43.4	
9	0.7M	79.5	87.1	90.3	91.2	73.4	81.5	89.6	81.0	75.1	73.1	70.6	67.1	63.7	

[redacted] (MAXIMUM NOISE LEVEL ___ LOA) [redacted]

TEST ITEM: 30 Kw/60 Hz GEN SET S/N: KZO 5841 HOUR METER: 126
CONFIGURATION ___ UNMODIFIED ✓ MODIFIED
TEMPERATURE: 41°F HUMIDITY: 53% TEST SITE: HARTWOOD
SURFACE: GRASS TERRAIN: ___
BAROMETRIC PRESSURE: 29.719 SKY COVER: OVERCAST
WIND DIRECTION: NE WIND VELOCITY: 15MPH MICROPHONE: GR1962
SOUND LEVEL METER: GR1982 OCTAVE ANALYZER: ___
LOAD CONDITION: ___ RATED ✓ NO LOAD MICROPHONE LOCATION: AS BELOW

DATE	TIME	MICROPHONE POSITION	DISTANCE FEET(M)	DBA	REMARKS
12-22-81	1447	1	0	83.5	
		2	0	82.3	
		3	0	80.8	
		4	0	82.4	
		5	0	81.8	
		6	0	79.8	
		7	0	84.6	
		8	0	80.5	
		9	0	82.1	
		10	0	84.1	
		11	0	83.5	
12-22-81	1453	12	3'5"	85	



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ACOUSTICAL DATA (MAXIMUM NOISE LEVEL ___ DBA)

TEST ITEM: 30KW 60Hz GEN SET S/N: KZ0 5841 HOUR METER: 13.0

CONFIGURATION: ___ UNMODIFIED V MODIFIED

TEMPERATURE: 47°F HUMIDITY: 53% TEST SITE: HARTWOOD

SURFACE: GRASS TERRAIN: ___

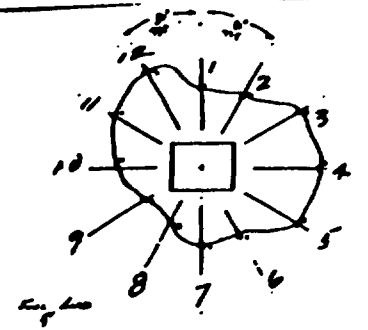
BAROMETRIC PRESSURE: 29.719 SKY COVER: OVERCAST

WIND DIRECTION: NE WIND VELOCITY: ≤ 5MPH MICROPHONE: GR 1962

SOUND LEVEL METER: GR 1982 OCTAVE ANALYZER: ___

LOAD CONDITION: V RATED ___ NO LOAD MICROPHONE LOCATION: AS BELOW

DATE	TIME	MICROPHONE POSITION	DISTANCE FT(M)	DBA	REMARKS
12-22-87	1506	1	3' 3"	85	
		2	0	84.4	
		3	0	83.5	
		4	1' 8"	85	
		5	0	85	
		6	0	82.4	
		7	5' 9"	85	
		8	0	83.6	
		9	2' 2"	85	
		10	1' 9"	85	
		11	0	85	
12-22-87	1511	12	3' 5"	85	



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TEST DATA

ITEM 30 KW, 60 HZ
GENERATOR SET

MFGR. JOHN R HOLLINGSWORTH
MODEL NO. MEP 005A
SERIAL NO. KEO 5841

NTS
National Technical Systems | Scientific Services Group | Testing Division P.O. Box 38 Hartwood, Virginia 22471 Tel: 703 752 5300

Frequency and Voltage
Regulation, Stability and Transient Response Test (Short Term)

REF. NO. MIL-STD 705 Para. 608.1
SHEET 1 OF 2
DATE 29 SEPT. 1987
JOB NO. 555-2140
PROJ. ENGR.
RECORDER/OBSERVER HEH/CWG

INST TIME	STEP NO.	LOAD STEP	VOLTAGE X1 L_1-L_0 VAC	L_2-L_0 VAC	L_3-L_0 VAC	AMPERES X40 L_1-L_0 AC AMPS	L_2-L_0 AC AMPS	L_3-L_0 AC AMPS	KILOWATTS X40 L_1-L_0 Kw	L_2-L_0 Kw	L_3-L_0 Kw	POWER FACTOR PF	FREQ. Hz	EXCITER FIELD VOLTS VDC	AMPS DCA	AMB. TEMP. °F
1628		APPLIED RATED LOAD - START STABILIZATION FOR 608.1														
1638	STABIL	4/4	119	120	120	2.50	2.52	2.52	0.241	0.244	0.244	0.80	60.2	8.4	3.36	84
1648	STABIL	4/4	119	120	120	2.51	2.51	2.51	0.242	0.244	0.244	0.80	60.2	8.5	3.36	85
1658	STABIL	4/4	119	120	120	2.61	2.61	2.52	0.241	0.243	0.244	0.80	60.2	8.5	3.36	87
1708	STABIL	4/4	119	120	120	2.51	2.52	2.52	0.241	0.244	0.245	0.80	60.2	8.9	3.36	80
1710		BEGIN LOAD CYCLE														80
1710	1	4/4	119	120	120	2.52	2.51	2.52	0.241	0.243	0.244	0.80	60.2	8.4	3.40	
	2	0	120	120	120	0	0	0	0	0	0	NA	60.4	3.6	1.44	
	3	4/4	119	120	120	2.53	2.52	2.53	0.242	0.244	0.244	0.80	60.2	8.5	3.36	
	4	0	120	120	120	0	0	0	0	0	0	NA	60.4	3.6	1.45	
	5	4/4	119	120	120	2.52	2.52	2.52	0.242	0.243	0.245	0.80	60.2	8.4	3.40	
	6	0	120	120	120	0	0	0	0	0	0	NA	60.4	3.4	1.40	
	7	4/4	119	120	120	2.53	2.52	2.53	0.242	0.243	0.244	0.80	60.2	8.4	3.40	
	8	0	120	120	120	0	0	0	0	0	0	NA	60.4	3.4	1.40	
	9	3/4	119	120	120	1.91	1.92	1.92	0.186	0.187	0.187	0.80	60.6	6.9	2.80	
	10	0	120	121	121	0	0	0	0	0	0	NA	61.4	3.4	1.30	
	11	3/4	119	120	120	1.91	1.91	1.92	0.185	0.186	0.187	0.81	60.5	6.9	2.80	
	12	0	120	120.5	120.5	0	0	0	0	0	0	NA	61.4	3.4	1.40	
	13	3/4	119	120	120	1.91	1.92	1.92	0.185	0.187	0.187	0.80	60.5	6.8	2.76	
	14	0	120	120.5	120.5	0	0	0	0	0	0	NA	61.4	3.4	1.36	
	15	3/4	119	120	120	1.32	1.33	1.33	0.126	0.127	0.127	0.79	60.7	5.8	2.30	
	16	0	120	120.5	120.5	0	0	0	0	0	0	NA	61.4	3.4	1.40	
	17	3/4	120	120	120	1.33	1.33	1.33	0.126	0.127	0.127	0.79	60.7	5.8	2.30	
	18	0	120	120	120	0	0	0	0	0	0	NA	61.4	3.3	1.30	
	19	3/4	119.5	120	120	1.33	1.34	1.34	0.126	0.127	0.127	0.79	60.7	5.8	2.30	
	20	0	120	120.5	120.5	0	0	0	0	0	0	NA	61.3	3.3	1.30	

NOTES:

TEST DATA

ITEM 30KW, 60 Hz Generator Set

MFGR. John R Hollingsworth

MODEL NO. MEP 005A

SERIAL NO. KZO 5841

NTS

National Technical Systems | Scientific Services Group | Testing Division P.O. Box 38 Harlwood, Virginia 22471 Tel: 703 752 5300

Frequency and Voltage Regulation, Stability and Transient Response Test (Short Term)

REF. NO. MIL-STD 705 Para. 608.1

SHEET 2 OF 2

DATE 29 Sept. 1987

JOB NO. 555-2140

PROJ. ENGR.

RECORDER/OBSERVER KEH/CWG.

INST TIME	STEP NO.	LOAD STEP	VOLTAGE X1 L_1-L_0 VAC	L_2-L_0 VAC	L_3-L_0 VAC	AMPERES X40 L_1-L_0 AC AMPS	L_2-L_0 AC AMPS	L_3-L_0 AC AMPS	KILOWATTS X40 L_1-L_0 Kw	L_2-L_0 Kw	L_3-L_0 Kw	POWER FACTOR PF	FREQ. Hz	EXCITER VOLTS VDC	FIELD AMPS DCA	AMB. TEMP. °F	
*	21	1/4	119	120	120	0.16	0.12	0.13	0.012	0.012	0.018						*
*	20	0	120.5	120	120.5	0	0	0	0	0	0	NA	61.3	3.3	1.30		
*	21	1/4	120	120	120	0.33	0.32	0.33	0.031	0.030	0.032	0.79	60.9	4.5	1.80		
	22	0	120	120	120	0	0	0	0	0	0	NA	61.3	3.3	1.30		
	23	1/4	120	120	120	0.32	0.32	0.33	0.032	0.030	0.032	0.79	60.9	4.6	1.80		
	24	0	120	120	120	0	0	0	0	0	0	NA	61.3	3.2	1.30		
	25	1/4	120	120	120	0.32	0.33	0.33	0.031	0.031	0.032	0.79	60.9	4.5	1.80		
	26	0	120	120.5	120.0	0	0	0	0	0	0	NA	61.3	3.3	1.30		
	27	4/4	119	119.5	119.5	2.54	2.53	2.53	0.243	0.244	0.244	0.80	60.1	8.0	3.20		
	28	0	120	120	120.5	0	0	0	0	0	0	NA	61.3	3.2	1.30		
	29	4/4	119	120	119.5	2.52	2.53	2.52	0.243	0.243	0.244	0.80	60.0	8.1	3.20		
	30	0	120	121	120.5	0	0	0	0	0	0	NA	61.4	3.2	1.30		
	31	4/4	119	120	119.5	2.53	2.52	2.53	0.244	0.244	0.245	0.80	60.1	8.1	3.20		
	32	0	120	120.5	120.5	0	0	0	0	0	0	NA	61.4	3.3	1.30		
1742	END OF TEST																

NOTES: * LOST FUSE IN LOAD BANK, REPEAT STEPS 20 & 21 *

TEST DATA

ITEM 30 KW 1/60 HZ GENERATOR SET

MFGR. JOHN R. HOLLINGSWORTH

MODEL NO. MEP005A

SERIAL NO. K20 5841

NTS

National Technical Systems | Scientific Services Group | Testing Division P.O. Box 38 Hartwood, Virginia 22471 Tel: 703 752 5300

FREQUENCY AND VOLTAGE

REGULATION, STABILITY, AND TRANSIENT RESPONSE TEST (SHORT TERM)

REF. NO. MIL-STD 705

SHEET 1 OF 3

DATE 13 OCT. 1987

JOB NO. 555-2140

PROJ. ENGR.

RECORDER/OBSERVER G. CARTER

	FREQUENCY							VOLTAGE						
	MAXIMUM EXCURSION				REC.	CONSTANT LOAD	REGULATION	MAXIMUM EXCURSION				REC.	CONSTANT LOAD	
LOAD	OVERSHOOT		UNDERSHOOT		TIME	BANDWIDTH		OVERSHOOT		UNDERSHOOT		TIME	BANDWIDTH	
STEP	HZ	%	HZ	%	SEC.	HZ	%	%	%	VOLT	%	VOLT	%	SEC.	VOLT	%
1						.155	.258								.17	.141
1-2	1.2	2.0			.15			.33	0	4.1	3.4			.31		
2						.105	.175		0						.255	.212
2-3			1.5	2.5	.78			.33	0			1.4	1.16	.31		
3						.17	.283								.255	.212
3-4	1.2	2.0			.46			.33	0	4.1	3.4			.39		
4						.105	.175								.255	.212
4-5			1.4	2.3	.78			.33	0			2.6	2.16	.39		
5						.12	.20								.255	.212
5-6	1.2	2.0			.46			.33	0	4.5	3.8			.31		
6						.105	.175								.34	.283
6-7			1.4	2.3	.78			.33	0			2.6	2.16	.31		
7						.17	.283								.255	.212
7-8	1.2	2.0			.46			.33	0	3.4	2.8			.23		
8						.12	.20								.17	.141
8-9			1.0	1.7	1.0			.33	0			1.7	1.4	.25		
9						.17	.283								.255	.212
9-10	.83	1.38			.55			1.33	.83	2.2	1.8			.23		
10						.105	.175								.34	.283
10-11			1.0	1.7	.55			1.5	.41			1.4	1.2	.23		
11						.12	.20								.17	.141
11-12	.86	1.4			.55			1.5	.41	2.2	1.8			.23		
12						.105	.175								.34	.283
12-13			.93	1.5	.70			1.5	.41			1.5	1.3	.15		
13						.14	.233								.255	.212
13-4	.86	1.4			.46			1.5	.41	2.4	2.0			.23		

NOTES:

TEST DATA

ITEM 30 KW 60 Hz GENERATOR SET

MFGR. JOHN R HOLLINGSWORTH

MODEL NO. MEP 005A

SERIAL NO. K20 5841

NTS

National Technical Systems | Scientific Services Group | Testing Division P.O. Box 38 Harwood, Virginia 22471 Tel: 703 752 5300

FREQUENCY AND VOLTAGE

REGULATION, STABILITY, AND TRANSIENT RESPONSE TEST (SHORT TERM)

REF. NO. MIL STD 705

SHEET 2 OF 3

DATE 13 OCT 1987

JOB NO. 555-2140

PROJ. ENGR.

RECORDER/OBSERVER G CARTER

	FREQUENCY								VOLTAGE							
	MAXIMUM EXCURSION				REC.	CONSTANT LOAD		REGULATION	MAXIMUM EXCURSION				REC.	CONSTANT LOAD		
LOAD	OVERSHOOT		UNDERSHOOT		TIME	BANDWIDTH				OVERSHOOT		UNDERSHOOT		TIME	BANDWIDTH	
STEP	HZ	%	HZ	%	SEC.	HZ	%	%	%	VOLT	%	VOLT	%	SEC.	VOLT	%
14						.105	.087								.17	.141
14-15			.65	1.1	.39			1.16	.41			1.0	.83	0		
15						.12	.10								.17	.141
15-16	.55	.92			.23			1.16	.41	1.7	1.4			.15		
16						.12	.10								.17	.141
16-17			.62	1.0	.15			1.16	.41			1.0	.83	0		
17						.12	.10								.34	.283
17-18	.58	.96			.39			1.16	0	1.5	1.2			.23		
18						.105	.087								.17	.141
18-19			.76	1.3	.46			1.16	0			1.3	1.0	0		
19						.105	.087								.255	.212
19-20	.41	.68			.39			1.0	.41	1.7	1.4			.23		
20						.105	.087								.17	.141
20-21			.55	.92	.39			.66	.41			.68	.56	0		
21						.105	.087								.255	.212
21-22	.41	.68			.23			.66	0	.68	.56			0		
22						.105	.087								.17	.141
22-23			.31	.52	.31			.66	0			.68	.56	0		
23						.105	.087								.17	.141
23-24	.37	.63			.31			.66	0	.68	.56			0		
24						.105	.087								.17	.141
24-25			.24	.40	.46			.66	0			.68	.56	0		
25						.14	.116								.17	.141
25-26	.27	.45			.46			.66	0	.68	.56			0		
26						.14	.116								.255	.212
26-27			1.3	2.2	.70			2.0	.41			3.1	2.6	.23		

NOTES:

B-22

TEST DATA

ITEM 30 KW / 60 Hz GENERATOR SET

MFGR. JOHN R. HOLLINGSWORTH

MODEL NO. MEP 005A

SERIAL NO. KZO 5841

NTS

National Technical Systems Scientific Services Group

Testing Division
P.O. Box 38
Harlwood, Virginia 22471
Tel: 703 752 5300

FREQUENCY AND VOLTAGE REGULATION, STABILITY, AND TRANSIENT RESPONSE TEST (SHORT TERM)

REF. NO. MIL-STD 705

SHEET 3 OF 3

DATE 13 OCT. 1987

JOB NO. 555-2140

PROJ. ENGR.

RECORDER/OBSERVER G. CARTER

	FREQUENCY								VOLTAGE							
	MAXIMUM EXCURSION				REC.	CONSTANT LOAD BANDWIDTH		REGULATION	MAXIMUM EXCURSION				REC.	CONSTANT LOAD BANDWIDTH		
LOAD	OVERSHOOT		UNDERSHOOT		TIME			FREQ.	VOLT	OVERSHOOT		UNDERSHOOT		TIME		
STEP	HZ	%	HZ	%	SEC.	HZ	%	%	%	VOLT	%	VOLT	%	SEC.	VOLT	%
27						.155	.258								.255	.212
27-28	1.1	1.8			.39			2.0	.83	4.5	3.7			.23		
28						.155	.258								.255	.212
28-29			1.4	2.5	.70			2.16	.83			2.9	2.4	.31		
29						.155	.258								.17	.141
29-30	1.2	2.0			.39			2.33	.83	4.8	4.0			.31		
30						.155	.258								.255	.212
30-31			1.3	2.2	.70			2.16	.83			2.9	2.4	.23		
31						.155	.258								.17	.141
31-32	1.1	1.8			.46			2.16	.83	4.1	3.4			.31		
32						.105	.175								.255	.212

NOTES:

ET-8-13

TEST DATA

ITEM 30 KW / 60 HZ GENERATOR SET MODIFIED

MFGR. JOHN R. HOLLINGSWORTH

MODEL NO. MEP 005A

SERIAL NO. KZ05841

NTS

National Technical Systems | Scientific Services Group | Testing Division, P.O. Box 38, Harwood, Virginia 22471, Tel: 703 752 5300

REF. NO. MIL-STD 705; 513.2

SHEET 2 OF 2

DATE 20 JAN 1988

JOB NO. 555-2140

PROJ. ENGR.

RECORDER/OBSERVER BT

INDICATING INSTRUMENT TEST (ELECTRICAL)
PANEL INSTRUMENTS

INST TIME	STEP NO.	LOAD STEP	VOLTAGE L_1-L_0 VAC	VOLTAGE L_2-L_0 VAC	VOLTAGE L_3-L_0 VAC	AMPERES L_1-L_0 AC AMPS	AMPERES L_2-L_0 AC AMPS	AMPERES L_3-L_0 AC AMPS	KILOWATTS L_1-L_0 Kw	KILOWATTS L_2-L_0 Kw	KILOWATTS L_3-L_0 Kw	POWER FACTOR PF	FREQ. Hz	% LOAD L_1-L_0	% LOAD L_2-L_0	% LOAD L_3-L_0	AMB. TEMP °F
0915			ZEROED PANEL METERS														
0918			START UNIT @ NL														
0925		NL	120	120	120	0	0	0	NA	NA	NA	NA	60	0	0	0	123
0927		NL	120	120	120	0	0	0	NA	NA	NA	NA	57	0	0	0	123
0929		NL	120	120	120	0	0	0	NA	NA	NA	NA	62	0	0	0	124
0931		1/4	120	120	120	24	24	24	NA	NA	NA	NA	60	24	24	24	125
0932		1/2	120	120	120	48	48	48	NA	NA	NA	NA	60	55	55	55	125
0934		3/4	120	120	120	73	74	74	NA	NA	NA	NA	60	83	83	83	126
0936		4/4	120	120	120	90	95	95	NA	NA	NA	NA	60	110	110	110	125
0939			END OF TEST			SHUT UNIT DOWN											

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NOTES:

TEST DATA

ITEM 30 KW / 60 HZ GENERATOR SET MODIFIED

MFGR. JOHN R. HOLLINGSWORTH

MODEL NO. MEP 005 A

SERIAL NO. KZO 2841

NTS

National Technical Systems | Scientific Services Group | Testing Division, P.O. Box 38, Harwood, Virginia 22471, Tel: 703 752 5300

REF. NO. MIL-STD 705; 513.2

SHEET 1 OF 2

DATE 20 JAN 1988

JOB NO. 555-2140

PROJ. ENGR.

RECORDER/OBSERVER KM/GC

INDICATING INSTRUMENT TEST (ELECTRICAL)

MASTER INSTRUMENTS

INST TIME	STEP NO.	LOAD STEP	E6028D VOLTAGE L_1-L_0 VAC	L_2-L_0 VAC	L_3-L_0 VAC	E6040D AMPERES x 40 L_1-L_0 AC AMPS	L_2-L_0 AC AMPS	L_3-L_0 AC AMPS	E6230D KILOWATTS x 40 L_1-L_0 Kw	L_2-L_0 Kw	L_3-L_0 Kw	E6242D POWER FACTOR PF	E6241D FREQ. Hz	E6167D EXCITER VOLTS VDC	E6258D FIELD AMPS DCA	AMB. TEMP. °F	
2915			ZERO SET ANSLEY METERS														
2918			START UNIT														
2925		NL	122	122	122								60.4	3.6	1.45	123	14.2/15.6
2927		NL	122.5	123	123								59.2	4.6	1.8	123	12.4/14.4
2929		NL	122	122.5	122.5								62.5	3.2	1.3	124	14.0/16.0
2931		1/4	122	122	122	.66	.66	.66	.062	.062	.062	.80	60.4	4.7	1.9	125	13.8/17.3
2932		1/2	122	123	122.5	1.33	1.34	1.33	.13	.13	.13	.80	60.3	6.0	2.4	125	13.4/19
2934		3/4	122	122.5	122.5	1.95	1.96	1.96	.19	.192	.192	.80	60.5	7.3	2.85	126	13.5/20.5
2936		4/4	121.5	122	122	2.57	2.6	2.6	.254	.255	.255	.80	60.4	8.8	3.4	125	13.5/21.7
2939			END OF TEST			SHUT UNIT Down											

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NOTES:

TEST DATA

ITEM 30 KW 60 Hz GENERATOR SET MODIFIED

MFGR. JOHN R HOLLINGSWORTH

MODEL NO. MEP 005A

SERIAL NO. K20 5841

NTS

National Technical Systems | Scientific Services Group | Testing Division P.O. Box 38 Hallwood, Virginia 22471 Tel: 703 752 5300

Panel Instrument Test

Method 513.2 (Computation Results)

REF. NO. MIL-STD-705: 513.2

SHEET 2 OF 2

DATE 6 FEB 1988

JOB NO. 555 2140

PROJ. ENGR.

RECORDER/OBSERVER

INST. → / LOAD ↓	% LOAD L1 - LO	% Error	% LOAD L2 - LO	% Error	% LOAD L3 - LO	% Error		Frequency	% Error
UNITS									
SYM.									
N/L								60	.66
N/L								57	.35
N/L	0	0	0	0	0	0		62	.80
1/4	2.4 KW	3.20	2.4 KW	3.2	2.4 KW	3.2			
2/4	5.5 KW	5.76	5.5 KW	5.76	5.5 KW	5.76			
3/4	8.3 KW	9.21	8.3 KW	8.07	8.3 KW	8.07			
F/L	11.0 KW	8.26	11.0 KW	7.84	11.0 KW	7.84			

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PERCENT OF LOAD CONVERTED TO KW/PHASE

NOTES: FREQUENCY METER READING EXCEED ALLOWABLE LIMIT OF .5% AS PER PROCUREMENT DOCUMENT PARA 3.16.2.4a (2)

TEST DATA

ITEM: 30 KW 60 Hz GENERATOR SET MODIFIED

MFGR. JOHN R HOLLINGSWORTH

MODEL NO. MEP 005A

SERIAL NO. K20 5841

NTS

National Technical Systems | Scientific Services Group | Testing Division, P.O. Box 38, Hartwood, Virginia 22471, Tel: 703 752 5300

Panel Instrument Test

Method 513.2 (Computation Results)

REF. NO. MIL-STD-705: 513.2

SHEET 1 OF 2

DATE

JOB NO.

PROJ. ENGR.

RECORDER/OBSERVER

INST. → / LOAD ↓	VOLTS L1-LO	% Error	VOLTS L2-LO	% Error	VOLTS L3-LO	% Error	AMPS L1-LO	% Error	AMPS L2-LO	% Error	AMPS L3-LO	% Error
UNITS SYM.												
N/L	120	1.63	120	2.04	120	2.04	0	0	0	0	0	0
1/4	120	1.63	120	1.63	120	1.63	24.98	5.38	24.98	5.38	24.98	5.38
1/2	120	1.63	120	2.43	120	2.04	49.96	6.09	49.96	6.09	49.96	6.09
3/4	120	1.63	120	2.04	120	2.04	75.59	2.58	77.03	1.74	77.03	1.74
R/L	120	1.23	120	1.63	120	1.63	93.69	8.86	98.89	1.11	98.89	1.11

PERCENT OF RATED CURRENT CONVERTED TO AMPS WHERE RATED CURRENT = 104.1 AMP/PHASE

VOLTS SHOWN AS READ FROM PANEL METER

B-27

NOTES: L1-LO AMPS = 9.11 AMPS LOW AT RATED LOAD - MAX ALLOWABLE = 6% OF FULL SCALE OR 8.3 AMPS

INDICATING INSTRUMENTS 513.2

BEGIN SCAN GROUP 1 20 JAN 88 09:25:32
30 KW 60 HZ GEN SET S/N KZ0 5841

C	1	EXHAUST 1	339.84	DEG. F
C	2	EXHAUST 2	325.43	DEG. F
C	3	EXHAUST 3	344.70	DEG. F
C	4	EXHAUST 4	367.22	DEG. F
C	5	EXHAUST 5	361.78	DEG. F
C	6	EXHAUST 6	320.06	DEG. F
C	7	ENG. COOL. IN	143.76	DEG. F
C	8	ENG. COOL. OUT	176.91	DEG. F
C	9	OIL SUMP	152.16	DEG. F
C	10	OIL GALLERY	154.42	DEG. F
C	13	ENG. INTAKE	125.22	DEG. F
C	14	RAD. TOP LEFT	143.84	DEG. F
C	15	RAD. BTTM LEFT	142.14	DEG. F
C	16	RAD. TOP RIGHT	140.27	DEG. F
C	17	RAD. BTTM RIGHT	117.61	DEG. F
C	18	GEN. AIR IN	103.82	DEG. F
C	19	GEN. AIR OUT	117.05	DEG. F
C	20	GEN. FRAME TOP	101.71	DEG. F
C	21	GEN. FRAME BTTM	96.989	DEG. F
C	22	GEN. EXCITER	115.63	DEG. F
C	23	GEN. VOLT. REG.	97.643	DEG. F
C	24	CONTROL PANEL	103.66	DEG. F
C	25	RELAY AREA	119.99	DEG. F
C	26	BATTERY LEFT	111.20	DEG. F
C	27	BATTERY RIGHT	106.78	DEG. F
C	28	AIR IN SET	123.76	DEG. F
C	29	FUEL TANK	81.710	DEG. F
C	30	FUEL OUTLET	103.81	DEG. F

END SCAN GROUP 1 20 JAN 88 09:25:42

STOPPED SINGLE SCAN 20 JAN 88 09:25:42

BEGIN SCAN GROUP 1 20 JAN 88 09:29:00
30 KW/60 HZ GEN SET S/N KZ0 5841

C	1	EXHAUST 1	332.74	DEG. F
C	2	EXHAUST 2	321.02	DEG. F
C	3	EXHAUST 3	335.56	DEG. F
C	4	EXHAUST 4	376.55	DEG. F
C	5	EXHAUST 5	386.07	DEG. F
C	6	EXHAUST 6	330.64	DEG. F
C	7	ENG. COOL. IN	172.97	DEG. F
C	8	ENG. COOL. OUT	183.73	DEG. F
C	9	OIL SUMP	169.05	DEG. F
C	10	OIL GALLERY	170.89	DEG. F
C	13	ENG. INTAKE	129.25	DEG. F
C	14	RAD. TOP LEFT	143.49	DEG. F
C	15	RAD. BTTM LEFT	137.72	DEG. F
C	16	RAD. TOP RIGHT	137.24	DEG. F
C	17	RAD. BTTM RIGHT	121.36	DEG. F
C	18	GEN. AIR IN	121.24	DEG. F
C	19	GEN. AIR OUT	113.65	DEG. F
C	20	GEN. FRAME TOP	106.59	DEG. F
C	21	GEN. FRAME BTTM	102.55	DEG. F
C	22	GEN. EXCITER	124.80	DEG. F
C	23	GEN. VOLT. REG.	101.90	DEG. F
C	24	CONTROL PANEL	109.13	DEG. F
C	25	RELAY AREA	120.66	DEG. F
C	26	BATTERY LEFT	125.51	DEG. F
C	27	BATTERY RIGHT	119.85	DEG. F
C	28	AIR IN SET	124.14	DEG. F
C	29	FUEL TANK	82.138	DEG. F
C	30	FUEL OUTLET	113.69	DEG. F

END SCAN GROUP 1 20 JAN 88 09:29:09

STOPPED SINGLE SCAN 20 JAN 88 09:29:09

BEGIN SCAN GROUP 1 20 JAN 88 09:27:06
30 KW/60 HZ GEN SET S/N KZ0 5841

C	1	EXHAUST 1	326.63	DEG. F
C	2	EXHAUST 2	328.44	DEG. F
C	3	EXHAUST 3	335.60	DEG. F
C	4	EXHAUST 4	343.98	DEG. F
C	5	EXHAUST 5	358.23	DEG. F
C	6	EXHAUST 6	317.61	DEG. F
C	7	ENG. COOL. IN	166.88	DEG. F
C	8	ENG. COOL. OUT	181.32	DEG. F
C	9	OIL SUMP	168.48	DEG. F
C	10	OIL GALLERY	162.24	DEG. F
C	13	ENG. INTAKE	130.24	DEG. F
C	14	RAD. TOP LEFT	152.41	DEG. F
C	15	RAD. BTTM LEFT	149.70	DEG. F
C	16	RAD. TOP RIGHT	148.29	DEG. F
C	17	RAD. BTTM RIGHT	123.75	DEG. F
C	18	GEN. AIR IN	105.98	DEG. F
C	19	GEN. AIR OUT	121.31	DEG. F
C	20	GEN. FRAME TOP	104.09	DEG. F
C	21	GEN. FRAME BTTM	99.036	DEG. F
C	22	GEN. EXCITER	119.45	DEG. F
C	23	GEN. VOLT. REG.	99.509	DEG. F
C	24	CONTROL PANEL	105.97	DEG. F
C	25	RELAY AREA	120.51	DEG. F
C	26	BATTERY LEFT	118.03	DEG. F
C	27	BATTERY RIGHT	113.12	DEG. F
C	28	AIR IN SET	123.87	DEG. F
C	29	FUEL TANK	82.051	DEG. F
C	30	FUEL OUTLET	108.03	DEG. F

END SCAN GROUP 1 20 JAN 88 09:27:1[illegible]

STOPPED SINGLE SCAN 20 JAN 88 09:27:[illegible]

BEGIN SCAN GROUP 1 20 JAN 88 09:31:10
30 KW/60 HZ GEN SET S/N KZ0 5841

C	1	EXHAUST 1	445.20	DEG. F
C	2	EXHAUST 2	409.18	DEG. F
C	3	EXHAUST 3	416.56	DEG. F
C	4	EXHAUST 4	429.44	DEG. F
C	5	EXHAUST 5	456.84	DEG. F
C	6	EXHAUST 6	409.13	DEG. F
C	7	ENG. COOL. IN	173.49	DEG. F
C	8	ENG. COOL. OUT	184.57	DEG. F
C	9	OIL SUMP	177.39	DEG. F
C	10	OIL GALLERY	178.82	DEG. F
C	13	ENG. INTAKE	128.85	DEG. F
C	14	RAD. TOP LEFT	143.89	DEG. F
C	15	RAD. BTTM LEFT	137.28	DEG. F
C	16	RAD. TOP RIGHT	137.50	DEG. F
C	17	RAD. BTTM RIGHT	122.11	DEG. F
C	18	GEN. AIR IN	122.89	DEG. F
C	19	GEN. AIR OUT	116.80	DEG. F
C	20	GEN. FRAME TOP	118.36	DEG. F
C	21	GEN. FRAME BTTM	107.46	DEG. F
C	22	GEN. EXCITER	129.13	DEG. F
C	23	GEN. VOLT. REG.	104.44	DEG. F
C	24	CONTROL PANEL	111.70	DEG. F
C	25	RELAY AREA	121.47	DEG. F
C	26	BATTERY LEFT	128.62	DEG. F
C	27	BATTERY RIGHT	122.23	DEG. F
C	28	AIR IN SET	125.60	DEG. F
C	29	FUEL TANK	82.256	DEG. F
C	30	FUEL OUTLET	119.30	DEG. F

END SCAN GROUP 1 20 JAN 88 09:31:19

STOPPED SINGLE SCAN 20 JAN 88 09:31:19

BEGIN SCAN GROUP 1 20 JAN 88 09:32:51
30 KW/60 HZ GEN SET S/N KZO 5841

C	1	EXHAUST 1	550.19	DEG. F
C	2	EXHAUST 2	512.06	DEG. F
C	3	EXHAUST 3	507.17	DEG. F
C	4	EXHAUST 4	522.70	DEG. F
C	5	EXHAUST 5	559.87	DEG. F
C	6	EXHAUST 6	502.17	DEG. F
C	7	ENG. COOL. IN	175.99	DEG. F
C	8	ENG. COOL. OUT	186.42	DEG. F
C	9	OIL SUMP	182.83	DEG. F
C	10	OIL GALLERY	184.23	DEG. F
C	13	ENG. INTAKE	128.58	DEG. F
C	14	RAD. TOP LEFT	143.95	DEG. F
C	15	RAD. BTTM LEFT	136.48	DEG. F
C	16	RAD. TOP RIGHT	137.88	DEG. F
C	17	RAD. BTTM RIGHT	123.66	DEG. F
C	18	GEN. AIR IN	124.37	DEG. F
C	19	GEN. AIR OUT	118.56	DEG. F
C	20	GEN. FRAME TOP	112.80	DEG. F
C	21	GEN. FRAME BTTM	110.45	DEG. F
C	22	GEN. EXCITER	131.03	DEG. F
C	23	GEN. VOLT. REG.	106.25	DEG. F
C	24	CONTROL PANEL	113.76	DEG. F
C	25	RELAY AREA	121.74	DEG. F
C	26	BATTERY LEFT	129.75	DEG. F
C	27	BATTERY RIGHT	122.67	DEG. F
C	28	AIR IN SET	125.36	DEG. F
C	29	FUEL TANK	82.339	DEG. F
C	30	FUEL OUTLET	121.71	DEG. F

END SCAN GROUP 1 20 JAN 88 09:33:00

STOPPED SINGLE SCAN 20 JAN 88 09:33:00

BEGIN SCAN GROUP 1 20 JAN 88 09:36:27
30 KW/60 HZ GEN SET S/N KZO 5841

C	1	EXHAUST 1	781.64	DEG. F
C	2	EXHAUST 2	748.04	DEG. F
C	3	EXHAUST 3	718.69	DEG. F
C	4	EXHAUST 4	747.96	DEG. F
C	5	EXHAUST 5	802.20	DEG. F
C	6	EXHAUST 6	724.19	DEG. F
C	7	ENG. COOL. IN	186.79	DEG. F
C	8	ENG. COOL. OUT	194.49	DEG. F
C	9	OIL SUMP	193.37	DEG. F
C	10	OIL GALLERY	194.83	DEG. F
C	13	ENG. INTAKE	131.15	DEG. F
C	14	RAD. TOP LEFT	149.00	DEG. F
C	15	RAD. BTTM LEFT	141.24	DEG. F
C	16	RAD. TOP RIGHT	141.15	DEG. F
C	17	RAD. BTTM RIGHT	125.67	DEG. F
C	18	GEN. AIR IN	124.96	DEG. F
C	19	GEN. AIR OUT	122.13	DEG. F
C	20	GEN. FRAME TOP	117.76	DEG. F
C	21	GEN. FRAME BTTM	115.59	DEG. F
C	22	GEN. EXCITER	135.54	DEG. F
C	23	GEN. VOLT. REG.	110.90	DEG. F
C	24	CONTROL PANEL	117.78	DEG. F
C	25	RELAY AREA	122.38	DEG. F
C	26	BATTERY LEFT	130.67	DEG. F
C	27	BATTERY RIGHT	121.64	DEG. F
C	28	AIR IN SET	125.82	DEG. F
C	29	FUEL TANK	82.763	DEG. F
C	30	FUEL OUTLET	125.94	DEG. F

END SCAN GROUP 1 20 JAN 88 09:36:36

STOPPED SINGLE SCAN 20 JAN 88 09:36:36

BEGIN SCAN GROUP 1 20 JAN 88 09:34:43
30 KW/60 HZ GEN SET S/N KZO 5841

C	1	EXHAUST 1	660.79	DEG. F
C	2	EXHAUST 2	620.43	DEG. F
C	3	EXHAUST 3	605.79	DEG. F
C	4	EXHAUST 4	628.29	DEG. F
C	5	EXHAUST 5	675.22	DEG. F
C	6	EXHAUST 6	605.39	DEG. F
C	7	ENG. COOL. IN	180.86	DEG. F
C	8	ENG. COOL. OUT	189.52	DEG. F
C	9	OIL SUMP	188.35	DEG. F
C	10	OIL GALLERY	189.82	DEG. F
C	13	ENG. INTAKE	129.58	DEG. F
C	14	RAD. TOP LEFT	145.66	DEG. F
C	15	RAD. BTTM LEFT	138.22	DEG. F
C	16	RAD. TOP RIGHT	138.78	DEG. F
C	17	RAD. BTTM RIGHT	124.43	DEG. F
C	18	GEN. AIR IN	124.85	DEG. F
C	19	GEN. AIR OUT	120.17	DEG. F
C	20	GEN. FRAME TOP	115.50	DEG. F
C	21	GEN. FRAME BTTM	113.42	DEG. F
C	22	GEN. EXCITER	134.65	DEG. F
C	23	GEN. VOLT. REG.	108.25	DEG. F
C	24	CONTROL PANEL	116.89	DEG. F
C	25	RELAY AREA	122.82	DEG. F
C	26	BATTERY LEFT	130.22	DEG. F
C	27	BATTERY RIGHT	122.12	DEG. F
C	28	AIR IN SET	126.81	DEG. F
C	29	FUEL TANK	82.577	DEG. F
C	30	FUEL OUTLET	124.20	DEG. F

END SCAN GROUP 1 20 JAN 88 09:34:52

STOPPED SINGLE SCAN 20 JAN 88 09:34:52

TEST DATA

ITEM 30 KW / 60 HZ GENERATOR SET MODIFIED

MFGR. JOHN L. HOLLINGSWORTH

MODEL NO. MEP005A

SERIAL NO. KZ05841

NTS

National Technical Systems | Scientific Services Group | Testing Division P.O. Box 38 Harwood, Virginia 22471 Tel: 703 752 5300

METHOD 512.1

CIRCUIT INTERRUPTER TEST (SHORT CIRCUIT)

REF. NO. MIL-STD 705

SHEET 1 OF 1

DATE 20 JAN 1988

JOB NO. 555-2140

PROJ. ENGR.

RECORDER/OBSERVER ICM/GC

INST TIME	STEP NO.	LOAD STEP	E60240 VOLTAGE L_1-L_0 VAC	L_2-L_0 VAC	L_3-L_0 VAC	E60140 AMPERES x 46 L_1-L_0 AC AMPS	L_2-L_0 AC AMPS	L_3-L_0 AC AMPS	E62300 KILOWATTS x 46 L_1-L_0 Kw	L_2-L_0 Kw	L_3-L_0 Kw	E68420 POWER FACTOR PF	E68110 FREQ. Hz	E60670 EXCITER VOLTS VDC	E62500 FIELD AMPS DCA	AMB. TEMP. °F	Press Intake IH	Press Exh IH
0959			START UNIT @ RATED LOAD															
1000		RL	120	121	120.5	2.5	2.54	2.53	.244	.25	.25	.80	60.1	8.8	3.35	125	13.0	21.7
	$L_1-L_2-L_3$		APPLIED SHORT TO $L_1-L_2-L_3$ BREAKER TRIPPED INDICATOR ON															
1005			APPLIED RATED LOAD															
1005		RL	120	121	120.5	2.5	2.54	2.53	.243	.25	.25	.80	60.1	9.0	3.4	126	13.2	21.5
	L_2-L_3		APPLIED SHORT TO L_2-L_3 BREAKER TRIPPED INDICATOR ON															
1010			APPLIED RATED LOAD															
1010		RL	120	121	120.5	2.5	2.54	2.53	.244	.25	.25	.80	60.1	9.0	3.4	126	13.3	21.8
	L_1-L_3		APPLIED SHORT TO L_1-L_3 BREAKER TRIPPED INDICATOR ON															
1013			APPLIED RATED LOAD															
1013		RL	120	121	120.5	2.5	2.54	2.53	.244	.25	.25	.80	60.1	9.1	3.45	125	13.1	21.9
	L_3-L_0		APPLIED SHORT TO L_3-L_0 BREAKER TRIPPED INDICATOR ON															
1021			APPLIED RATED LOAD															
1021		RL	120	121	120.5	2.5	2.54	2.53	.244	.25	.25	.80	60.1	9.1	3.45	123	13.5	21.9
	L_1-L_2		APPLIED SHORT TO L_1-L_2 BREAKER TRIPPED INDICATOR ON															
1024			APPLIED RATED LOAD															
1024		RL	120	121	120.5	2.5	2.54	2.53	.244	.25	.25	.80	60.1	9.1	3.45	124	13.5	21.9
	L_2-L_0		APPLIED SHORT TO L_2-L_0 BREAKER TRIPPED INDICATOR ON															
1030			APPLIED RATED LOAD															
1030		RL	120	121	120.5	2.51	2.54	2.53	.244	.25	.25	.80	60.0	9.1	3.45	124	13.3	21.9
	L_1-L_0		APPLIED SHORT TO L_1-L_0 BREAKER TRIPPED INDICATOR ON															
1033			END OF TEST SHUT UNIT DOWN															

UNIT PASSED TEST ALL INTERRUPTERS OPENED IN LESS THAN 150 MSEC - ALL INDICATORS FUNCTIONED PROPERLY

TEST DATA

ITEM 30 KW 60Hz GENERATOR SET MODIFIED

MFGR. JOHN R HOLLINGSWORTH

MODEL NO. MEP 005A

SERIAL NO. KZ 05841

NTS

National Technical Systems | Scientific Services Group | Testing Division P.O. Box 38 Harlwood, Virginia 22471 Tel: 703 752 5300

SHORT CIRCUIT

INTERRUPTER TEST (COMPUTATION RESULTS)

REF. NO. MIL STD 705: 5121C

SHEET 1 OF 1

DATE 6 FEB 1988

JOB NO. 555-2140

PROJ. ENGR.

RECORDER/OBSERVER

INST. →													
Ø Short ↓		CURRENT BEFORE SHORT	CURRENT MAX		INTERRUPT TIME								
UNITS					m sec								
SYM.													
L1-L0		100.4	1187		40								
L2-L0		101.6	1201		33								
L3-L0		101.2	1136		30								
L1-L2		101.6	1051		28								
L2-L3		101.2	995		31								
L3-L1		101.2	1038		25								
L1-L2-L3		101.2	1011		24								

NOTES:

TEST DATA

ITEM 30 KW 60Hz GENERATOR SET MODIFIED

MFGR. JOHN R HOLLINGSWORTH

MODEL NO. MEP 005A

SERIAL NO. KZ 05841

NTS

National Technical Systems | Scientific Services Group | Testing Division P.O. Box 38 Hallwood, Virginia 22471 Tel: 703 752 5300

SHORT CIRCUIT

INTERRUPTER TEST (COMPUTATION RESULTS)

REF. NO. MIL STD 705: 5121C

SHEET 1 OF 1

DATE 6 FEB 1988

JOB NO. 555-2140

PROJ. ENGR.

RECORDER/OBSERVER

INST. →													
Ø SHORT ↓		CURRENT BEFORE SHORT	CURRENT MAX		INTERRUPT TIME								
UNITS					m sec								
SYM.													
L1-L0		100.4	1187		40								
L2-L0		101.6	1201		33								
L3-L0		101.2	1136		30								
L1-L2		101.6	1051		38								
L2-L3		101.2	995		31								
L3-L1		101.2	1038		25								
L1-L2-L3		101.2	1011		24								

NOTES:

CIRCUIT (NTB BOOSTER (REAR CIRCUIT) 572.1

```
BEGIN SCAN GROUP 1    20 JAN 88  10:00:42
30 KW/60 HZ GEN SET S/N KZD 5841

C    1 EXHAUST 1          759.81 DEG. F
C    2 EXHAUST 2          718.85 DEG. F
C    3 EXHAUST 3          704.88 DEG. F
C    4 EXHAUST 4          739.69 DEG. F
C    5 EXHAUST 5          798.61 DEG. F
C    6 EXHAUST 6          708.15 DEG. F
C    7 ENG. COOL. IN      187.68 DEG. F
C    8 ENG. COOL. OUT     195.86 DEG. F
C    9 OIL SUMP           191.46 DEG. F
C   10 OIL GALLERY        192.71 DEG. F
C   13  ENG. INTAKE       139.97 DEG. F
C   14 RAD. TOP LEFT      151.59 DEG. F
C   15 RAD. BTTM LEFT     144.67 DEG. F
C   16 RAD. TOP RIGHT     143.71 DEG. F
C   17 RAD. BTTM RIGHT    126.92 DEG. F
C   18 GEN. AIR IN        123.38 DEG. F
C   19 GEN. AIR OUT       125.99 DEG. F
C   20 GEN. FRAME TOP     123.33 DEG. F
C   21 GEN. FRAME BTTM    119.38 DEG. F
C   22 GEN. EXCITER       135.85 DEG. F
C   23 GEN. VOLT. REG.    128.24 DEG. F
C   24 CONTROL PANEL      138.79 DEG. F
C   25 RELAY AREA         124.72 DEG. F
C   26 BATTERY LEFT       128.84 DEG. F
C   27 BATTERY RIGHT      121.96 DEG. F
C   28 AIR IN SET         125.38 DEG. F
C   29 FUEL TANK          85.787 DEG. F
C   30 FUEL OUTLET        137.71 DEG. F

END SCAN GROUP 1      20 JAN 88  10:00:51

STOPPED SINGLE SCAN   20 JAN 88  10:00:51
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```
BEGIN SCAN GROUP 1    20 JAN 88  10:05:56
30 KW/60 HZ GEN SET S/N KZD 5841

C    1 EXHAUST 1          730.79 DEG. F
C    2 EXHAUST 2          690.88 DEG. F
C    3 EXHAUST 3          677.62 DEG. F
C    4 EXHAUST 4          707.65 DEG. F
C    5 EXHAUST 5          768.18 DEG. F
C    6 EXHAUST 6          683.86 DEG. F
C    7 ENG. COOL. IN      187.84 DEG. F
C    8 ENG. COOL. OUT     194.65 DEG. F
C    9 OIL SUMP           204.45 DEG. F
C   10 OIL GALLERY        205.24 DEG. F
C   13  ENG. INTAKE       136.42 DEG. F
C   14 RAD. TOP LEFT      152.74 DEG. F
C   15 RAD. BTTM LEFT     145.76 DEG. F
C   16 RAD. TOP RIGHT     145.26 DEG. F
C   17 RAD. BTTM RIGHT    138.00 DEG. F
C   18 GEN. AIR IN        124.81 DEG. F
C   19 GEN. AIR OUT       129.41 DEG. F
C   20 GEN. FRAME TOP     126.80 DEG. F
C   21 GEN. FRAME BTTM    123.20 DEG. F
C   22 GEN. EXCITER       [illegible]
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BEGIN SCAN GROUP 1    20 JAN 88  10:10:11
30 KW/60 HZ GEN SET S/N KZD 5841

C    1 EXHAUST 1          734.51 DEG. F
C    2 EXHAUST 2          695.35 DEG. F
C    3 EXHAUST 3          677.29 DEG. F
C    4 EXHAUST 4          719.86 DEG. F
C    5 EXHAUST 5          778.84 DEG. F
C    6 EXHAUST 6          693.88 DEG. F
C    7 ENG. COOL. IN      190.27 DEG. F
C    8 ENG. COOL. OUT     197.18 DEG. F
C    9 OIL SUMP           210.29 DEG. F
C   10 OIL GALLERY        211.63 DEG. F
C   13  ENG. INTAKE       136.60 DEG. F
C   14 RAD. TOP LEFT      153.92 DEG. F
C   15 RAD. BTTM LEFT     146.61 DEG. F
C   16 RAD. TOP RIGHT     146.59 DEG. F
C   17 RAD. BTTM RIGHT    131.95 DEG. F
C   18 GEN. AIR IN        124.94 DEG. F
C   19 GEN. AIR OUT       131.56 DEG. F
C   20 GEN. FRAME TOP     128.98 DEG. F
C   21 GEN. FRAME BTTM    125.35 DEG. F
C   22 GEN. EXCITER       142.81 DEG. F
C   23 GEN. VOLT. REG.    138.30 DEG. F
C   24 CONTROL PANEL      135.84 DEG. F
C   25 RELAY AREA         126.83 DEG. F
C   26 BATTERY LEFT       137.51 DEG. F
C   27 BATTERY RIGHT      125.28 DEG. F
C   28 AIR IN SET         126.64 DEG. F
C   29 FUEL TANK          87.668 DEG. F
C   30 FUEL OUTLET        142.27 DEG. F

END SCAN GROUP 1      20 JAN 88  10:10:21

STOPPED SINGLE SCAN   20 JAN 88  10:10:21
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```
BEGIN SCAN GROUP 1    20 JAN 88  10:13:57
30 KW/60 HZ GEN SET S/N KZD 5841

C    1 EXHAUST 1          736.27 DEG. F
C    2 EXHAUST 2          694.57 DEG. F
C    3 EXHAUST 3          687.15 DEG. F
C    4 EXHAUST 4          718.63 DEG. F
C    5 EXHAUST 5          779.36 DEG. F
C    6 EXHAUST 6          694.35 DEG. F
C    7 ENG. COOL. IN      191.82 DEG. F
C    8 ENG. COOL. OUT     198.81 DEG. F
C    9 OIL SUMP           214.18 DEG. F
C   10 OIL GALLERY        215.38 DEG. F
C   13  ENG. INTAKE       136.23 DEG. F
C   14 RAD. TOP LEFT      154.22 DEG. F
C   15 RAD. BTTM LEFT     146.53 DEG. F
C   16 RAD. TOP RIGHT     146.82 DEG. F
C   17 RAD. BTTM RIGHT    133.89 DEG. F
C   18 GEN. AIR IN        123.56 DEG. F
C   19 GEN. AIR OUT       132.41 DEG. F
C   20 GEN. FRAME TOP     130.16 DEG. F
C   21 GEN. FRAME BTTM    126.44 DEG. F
C   22 GEN. EXCITER       142.88 DEG. F
C   23 GEN. VOLT. REG.    138.91 DEG. F
C   24 CONTROL PANEL      135.69 DEG. F
C   25 RELAY AREA         126.24 DEG. F
C   26 BATTERY LEFT       139.84 DEG. F
C   27 BATTERY RIGHT      126.61 DEG. F
C   28 AIR IN SET         125.89 DEG. F
C   29 FUEL TANK          88.434 DEG. F
C   30 FUEL OUTLET        143.89 DEG. F

END SCAN GROUP 1      20 JAN 88  10:14:07

STOPPED SINGLE SCAN   20 JAN 88  10:14:07
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BEGIN SCAN GROUP 1   20 JAN 88  10:21:03
30 KW/60 HZ GEN SET S/N KZO 5841

C    1 EXHAUST 1          713.65 DEG. F
C    2 EXHAUST 2          667.52 DEG. F
C    3 EXHAUST 3          659.77 DEG. F
C    4 EXHAUST 4          690.71 DEG. F
C    5 EXHAUST 5          753.22 DEG. F
C    6 EXHAUST 6          661.97 DEG. F
C    7 ENG. COOL. IN      182.92 DEG. F
C    8 ENG. COOL. OUT     190.29 DEG. F
C    9 OIL SUMP           215.42 DEG. F
C   10 OIL GALLERY        216.88 DEG. F
C   13  ENG. INTAKE       131.48 DEG. F
C   14 RAD. TOP LEFT      149.42 DEG. F
C   15 RAD. BTTM LEFT     141.77 DEG. F
C   16 RAD. TOP RIGHT     143.89 DEG. F
C   17 RAD. BTTM RIGHT    132.79 DEG. F
C   18 GEN. AIR IN        121.39 DEG. F
C   19 GEN. AIR OUT       131.19 DEG. F
C   20 GEN. FRAME TOP     129.48 DEG. F
C   21 GEN. FRAME BTTM    125.72 DEG. F
C   22 GEN. EXCITER       140.81 DEG. F
C   23 GEN. VOLT. REG.    131.25 DEG. F
C   24 CONTROL PANEL      135.68 DEG. F
C   25 RELAY AREA         123.89 DEG. F
C   26 BATTERY LEFT       138.38 DEG. F
C   27 BATTERY RIGHT      126.89 DEG. F
C   28 AIR IN SET         123.81 DEG. F
C   29 FUEL TANK          89.852 DEG. F
C   30 FUEL OUTLET        145.15 DEG. F

END SCAN GROUP 1     20 JAN 88  10:21:13

STOPPED SINGLE SCAN  20 JAN 88  10:21:13
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BEGIN SCAN GROUP 1   20 JAN 88  10:24:31
30 KW/60 HZ GEN SET S/N KZO 5841

C    1 EXHAUST 1          703.48 DEG. F
C    2 EXHAUST 2          661.51 DEG. F
C    3 EXHAUST 3          653.15 DEG. F
C    4 EXHAUST 4          688.55 DEG. F
C    5 EXHAUST 5          745.97 DEG. F
C    6 EXHAUST 6          657.84 DEG. F
C    7 ENG. COOL. IN      185.19 DEG. F
C    8 ENG. COOL. OUT     191.99 DEG. F
C    9 OIL SUMP           216.48 DEG. F
C   10 OIL GALLERY        217.73 DEG. F
C   13  ENG. INTAKE       131.79 DEG. F
C   14 RAD. TOP LEFT      150.91 DEG. F
C   15 RAD. BTTM LEFT     143.25 DEG. F
C   16 RAD. TOP RIGHT     144.35 DEG. F
C   17 RAD. BTTM RIGHT    133.39 DEG. F
C   18 GEN. AIR IN        123.68 DEG. F
C   19 GEN. AIR OUT       132.45 DEG. F
C   20 GEN. FRAME TOP     129.82 DEG. F
C   21 GEN. FRAME BTTM    126.14 DEG. F
C   22 GEN. EXCITER       140.62 DEG. F
C   23 GEN. VOLT. REG.    131.88 DEG. F
C   24 CONTROL PANEL      135.43 DEG. F
C   25 RELAY AREA         123.45 DEG. F
C   26 BATTERY LEFT       138.82 DEG. F
C   27 BATTERY RIGHT      126.82 DEG. F
C   28 AIR IN SET         124.16 DEG. F
C   29 FUEL TANK          90.307 DEG. F
C   30 FUEL OUTLET        145.13 DEG. F

END SCAN GROUP 1     20 JAN 88  10:24:41

STOPPED SINGLE SCAN  20 JAN 88  10:24:41
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BEGIN SCAN GROUP 1   20 JAN 88  10:30:23
30 KW/60 HZ GEN SET S/N KZO 5841

C    1 EXHAUST 1          706.51 DEG. F
C    2 EXHAUST 2          660.85 DEG. F
C    3 EXHAUST 3          652.84 DEG. F
C    4 EXHAUST 4          685.81 DEG. F
C    5 EXHAUST 5          745.63 DEG. F
C    6 EXHAUST 6          653.81 DEG. F
C    7 ENG. COOL. IN      182.18 DEG. F
C    8 ENG. COOL. OUT     189.34 DEG. F
C    9 OIL SUMP           216.18 DEG. F
C   10 OIL GALLERY        217.47 DEG. F
C   13  ENG. INTAKE       131.31 DEG. F
C   14 RAD. TOP LEFT      149.84 DEG. F
C   15 RAD. BTTM LEFT     142.31 DEG. F
C   16 RAD. TOP RIGHT     143.68 DEG. F
C   17 RAD. BTTM RIGHT    133.61 DEG. F
C   18 GEN. AIR IN        124.56 DEG. F
C   19 GEN. AIR OUT       132.69 DEG. F
C   20 GEN. FRAME TOP     129.94 DEG. F
C   21 GEN. FRAME BTTM    126.43 DEG. F
C   22 GEN. EXCITER       140.83 DEG. F
C   23 GEN. VOLT. REG.    130.93 DEG. F
C   24 CONTROL PANEL      135.41 DEG. F
C   25 RELAY AREA         123.81 DEG. F
C   26 BATTERY LEFT       137.73 DEG. F
C   27 BATTERY RIGHT      127.19 DEG. F
C   28 AIR IN SET         124.34 DEG. F
C   29 FUEL TANK          91.675 DEG. F
C   30 FUEL OUTLET        144.89 DEG. F

END SCAN GROUP 1     20 JAN 88  10:30:32

STOPPED SINGLE SCAN  20 JAN 88  10:30:32
```

TEST DATA

ITEM 30 KW / 60 HZ GENERATOR SET MODIFIED

MFGR. JOHN R. HOLLINGSWORTH

MODEL NO. MEP005A

SERIAL NO. K20 5841

NTS

National Technical Systems | Scientific Services Group | Testing Division, P.O. Box 38, Harwood, Virginia 22471, Tel. 703 752 5300

D.C. CONTROL TEST

REF. NO. MIL-STD 705; 655.1

SHEET 1 OF 1

DATE 20 JAN 1986

JOB NO. 555-2140

PROJ. ENGR.

RECORDER/OBSERVER KM/GC

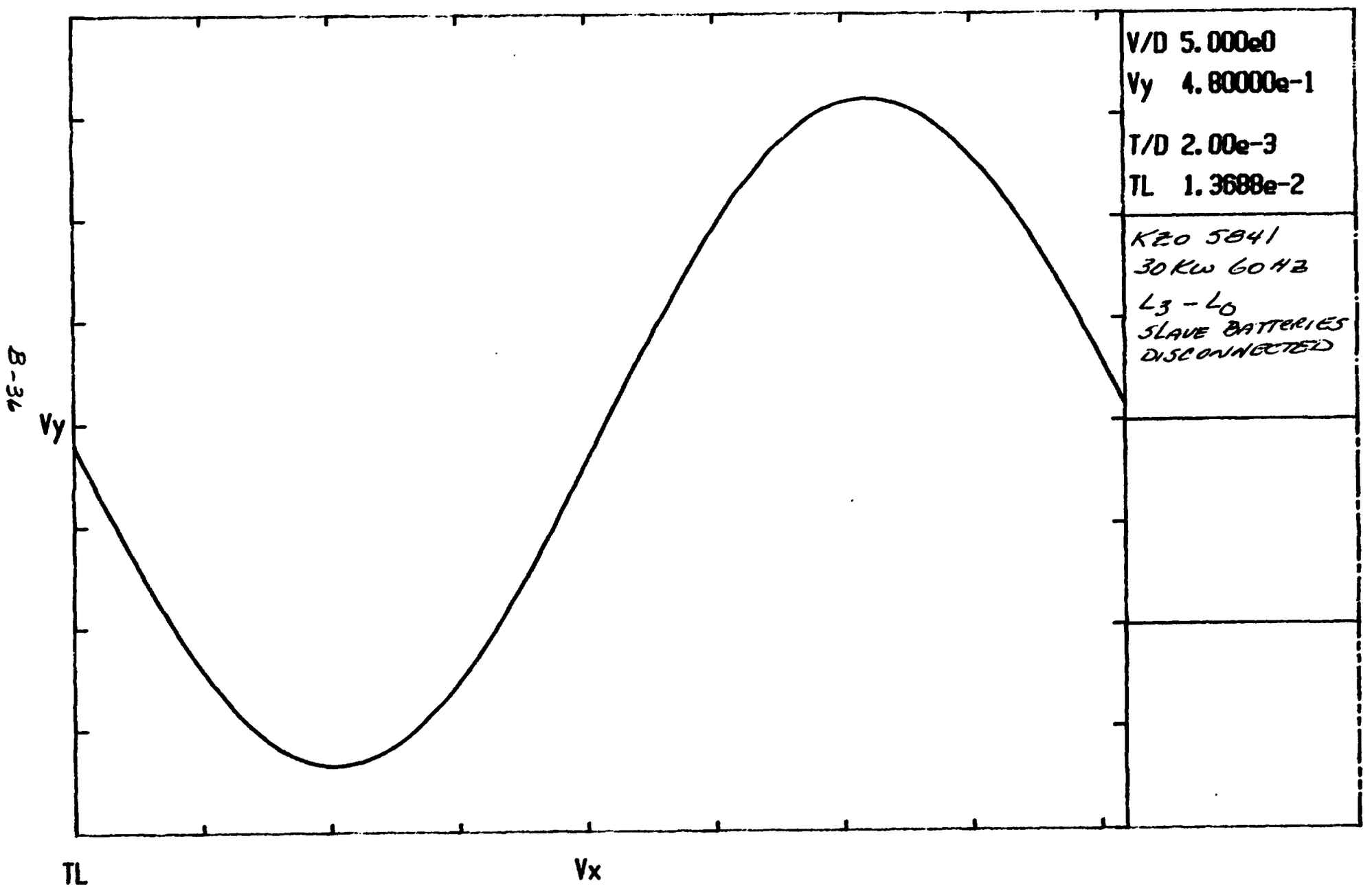
INST TIME	STEP NO.	LOAD STEP	E6060D VOLTAGE L_1-L_0 VAC	L_2-L_0 VAC	L_3-L_0 VAC	E6060D AMPERES x 40 L_1-L_0 AC AMPS	L_2-L_0 AC AMPS	L_3-L_0 AC AMPS	E6230D KILOWATTS x 40 L_1-L_0 Kw	L_2-L_0 Kw	L_3-L_0 Kw	E6230D POWER FACTOR PF	E6230D FREQ. Hz	E6189D D.C. CONTROL VOLTS VDC	AMPS DCA	AMB. TEMP. °F	PRESS IN/GOV IN H2O
1112			START UNIT ON SCALE BATTERIES														
1112			SHUT UNIT DOWN - ATTEMPTED START ON REVERSE POLARITY - WILL NOT START														
1113			START UNIT WITH CORRECT POLARITY APPLIED RATED LOAD														
1114		NL	120	121	120.5	2.48	2.5	2.5	.249	.249	.25	.80	60.1	26.4	2.4	125	13.0/21.8
			NO SPIKES OR NOTCHES NOTED ON WAVE FORM														
			DISCONNECTED SCALE BATTERIES NO NOTICABLE CHANGE										61.7	27.0	2.4	126	13.1/21.0
1115		NL	121.5	121.5	121.5								60.1	27.0	2.4	127	13.0/22.8
		RL	120	121	121	2.45	2.5	2.5	.249	.249	.25	.80	61.6	27.1	2.45	125	13.5/18.9
1116		NL	121.5	121.5	121.5								60.1	26.7	2.4	125	13.6/22.9
		RL	120	121	120.5	2.48	2.5	2.5	.249	.249	.25	.80	61.6	27.1	2.4	125	13.5/18.5
		NL	121.5	122	121.5								60.0	27.1	2.36	126	12.9/23.0
		RL	120	121	120.5	2.48	2.5	2.5	.249	.249	.25	.80		27.9			
			ADJUSTED BATTERY CHARGING VOLTAGE TO MAX.														
1134			COOLANT OUT TEMP REACHED						221°F	SHUT UNIT DOWN							

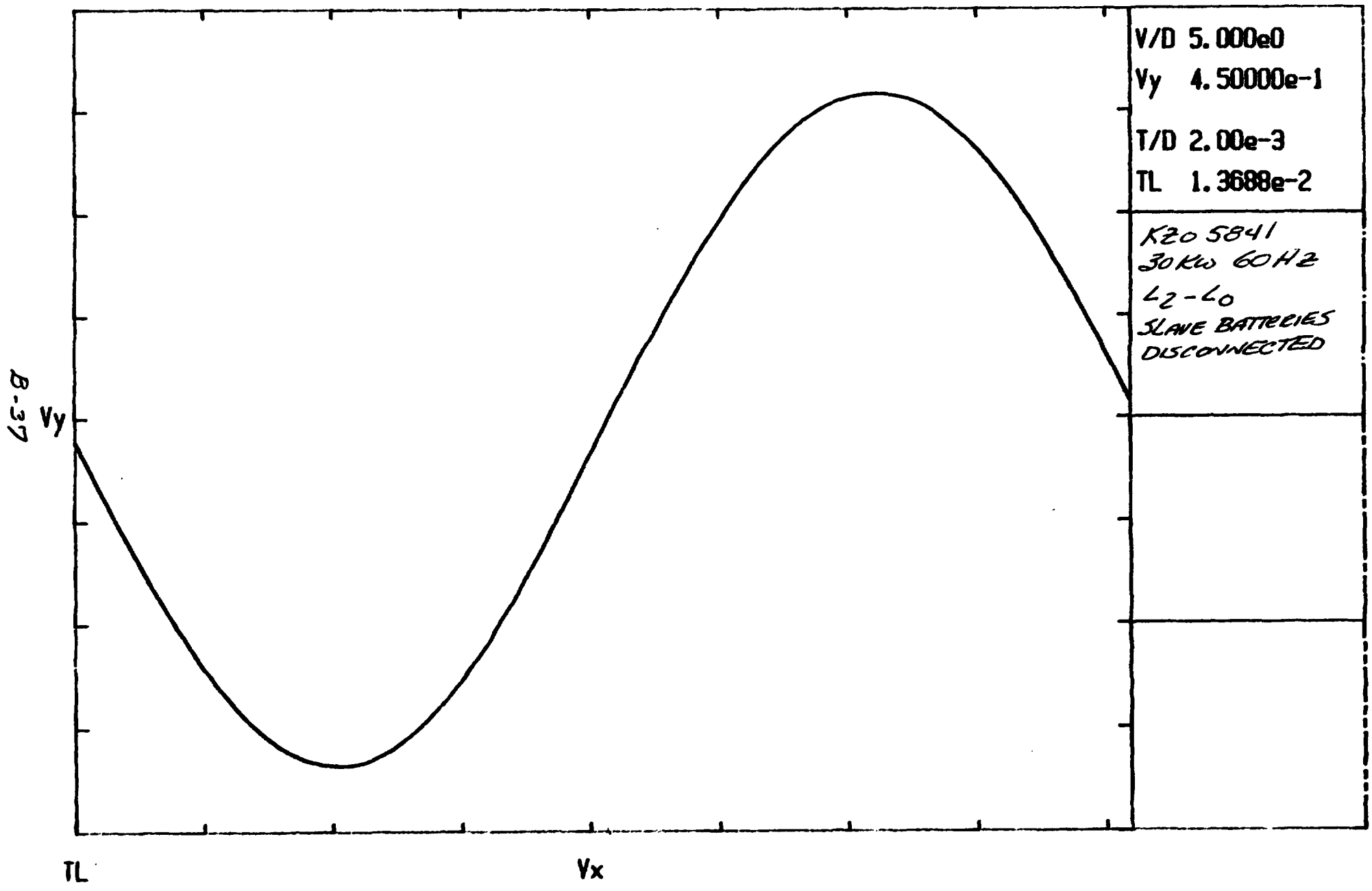
MAX VOLTAGE BANDWIDTH = .86%

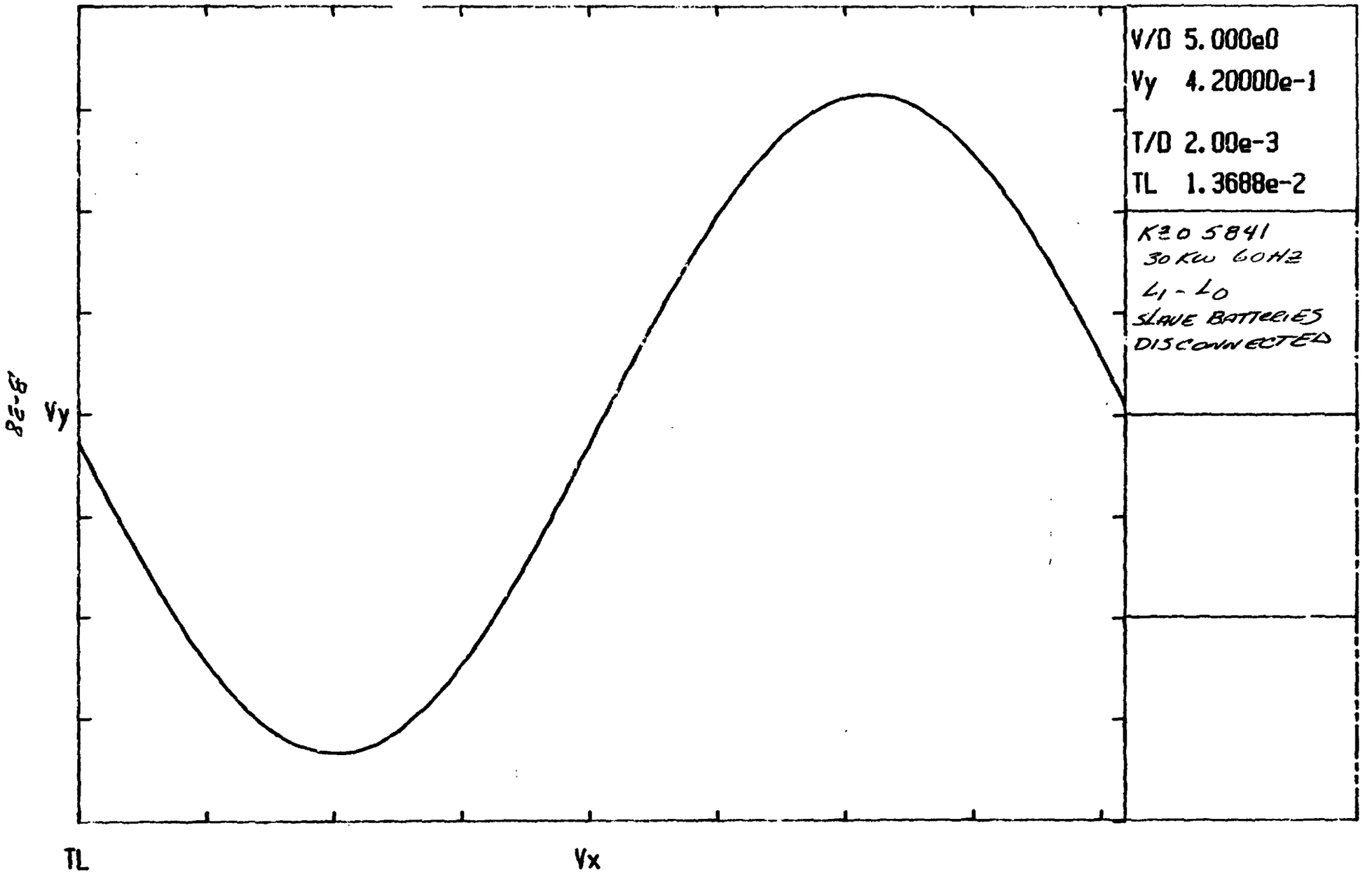
MAX FREQ BANDWIDTH = .28%

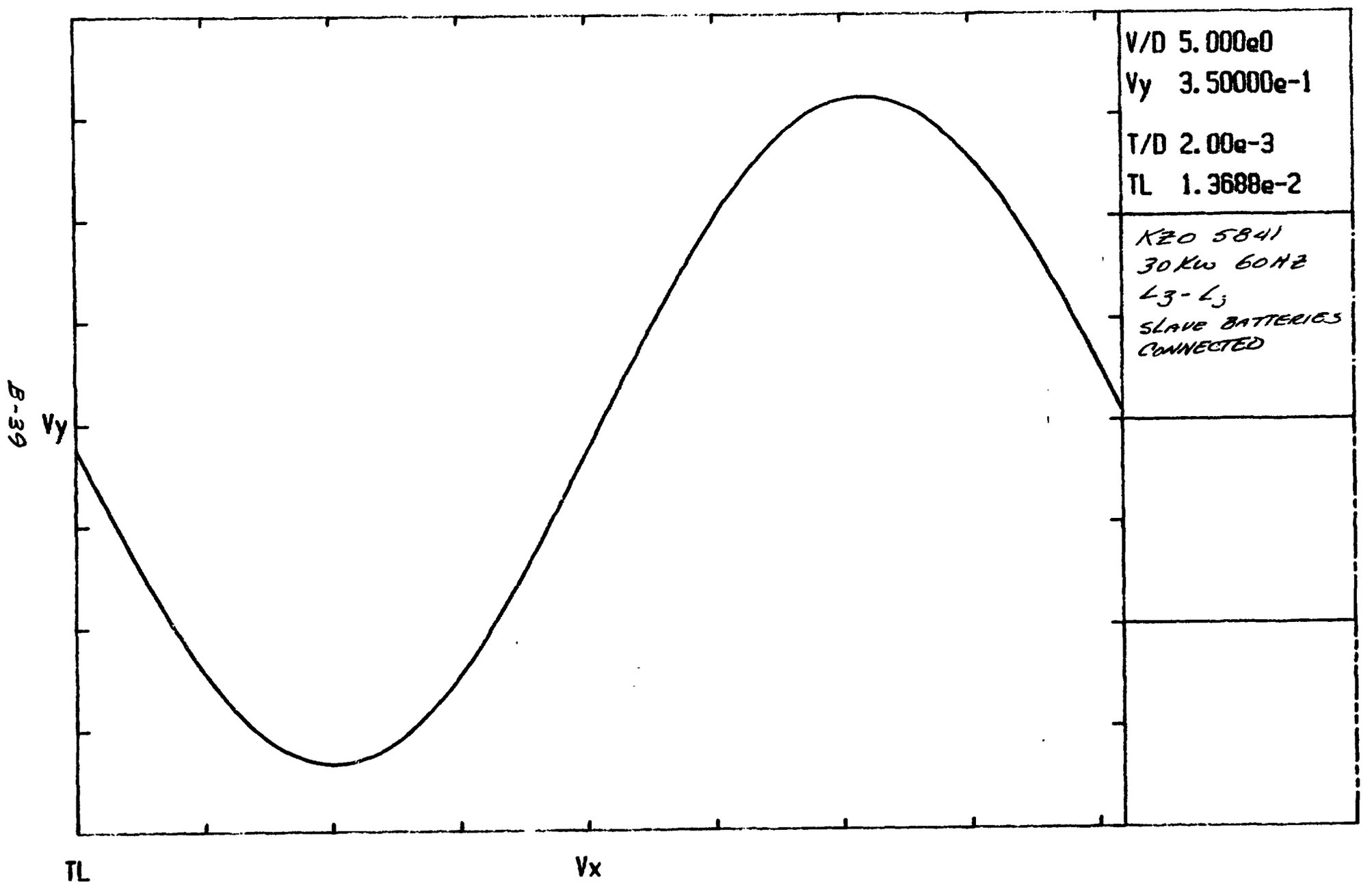
NOTES: BATTERY CHARGING VOLTAGE NOT ADJUSTABLE BY 3V AS PER MIL G 5288A PARA 4.6.2 NOTE 14

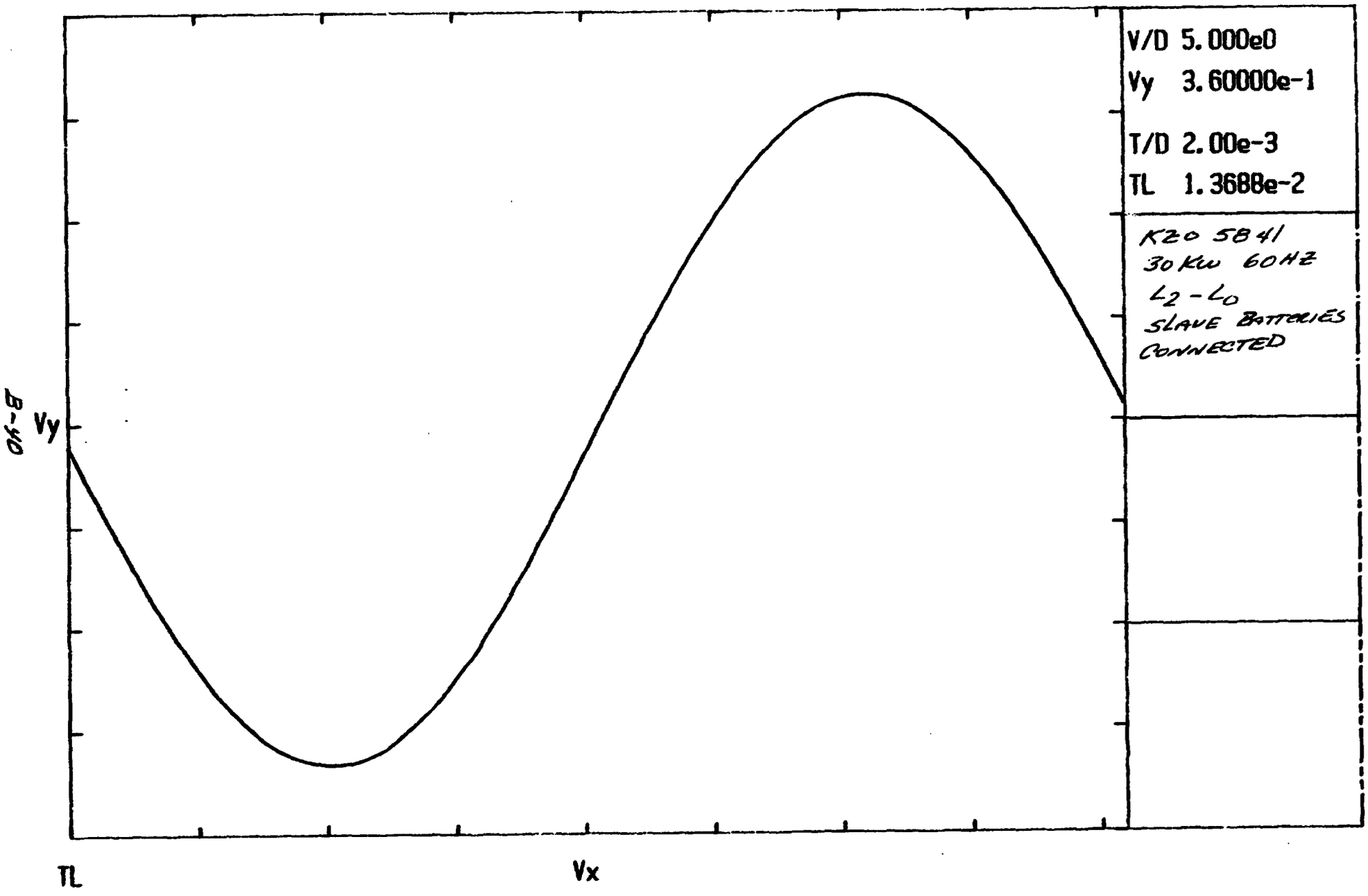
UNABLE TO COMPLETE TEST DUE TO COOLANT OVERTEMP "TEST FAILED"

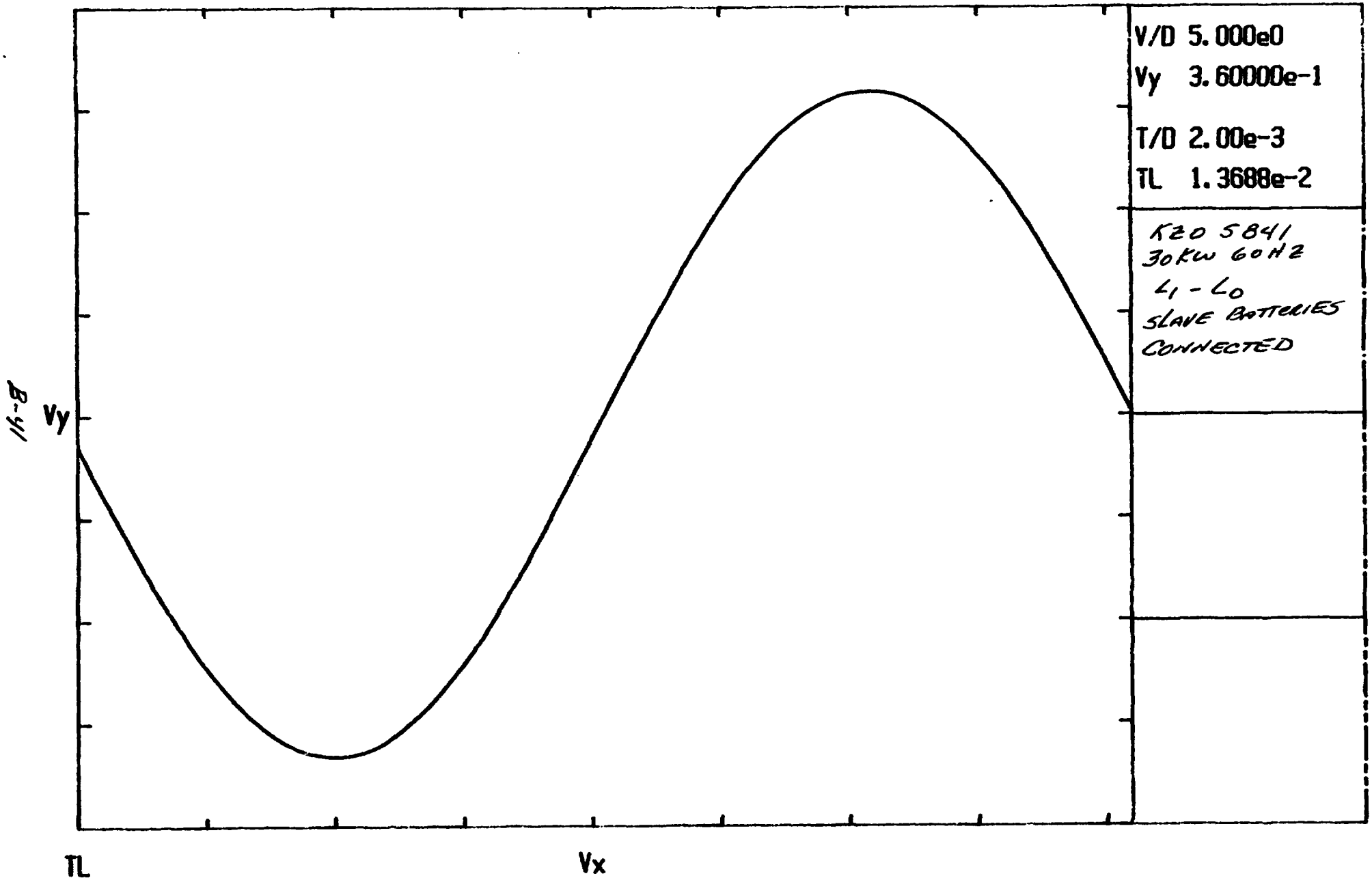

V/D 5.000e0
Vy 4.80000e-1
T/D 2.00e-3
TL 1.3688e-2
KEO 5841
30 KW 60 HZ
L3 - L0
SLAVE BATTERIES
DISCONNECTED
Vy
TL
Vx


V/D 5.000e0
Vy 4.50000e-1
T/D 2.00e-3
TL 1.3688e-2
KZO 5841
30 KW 60 HZ
L2-L0
SLAVE BATTERIES
DISCONNECTED
Vy
TL
Vx


V/D 5.000e0
Vy 4.20000e-1
T/D 2.00e-3
TL 1.3688e-2
K20 5841
30 KW 60HZ
L1 - L0
SLAVE BATTERIES
DISCONNECTED
Vy
TL
Vx


V/D 5.000e0
Vy 3.50000e-1
T/D 2.00e-3
TL 1.3688e-2
KZO 5841
30Kw 60Hz
L3-L3
SLAVE BATTERIES
CONNECTED
Vy
TL
Vx


V/D 5.000e0
Vy 3.60000e-1
T/D 2.00e-3
TL 1.3688e-2
K20 5841
30 KW 60 HZ
L2 - L0
SLAVE BATTERIES
CONNECTED
B-40
Vy
TL
Vx


V/D 5.000e0
Vy 3.60000e-1
T/D 2.00e-3
TL 1.3688e-2
K20 5841
30KW 60HZ
L1 - L0
SLAVE BATTERIES
CONNECTED
Vy
Vx
TL

DC control (55.)

```
BEGIN SCAN GROUP 1   20 JAN 88  11:14:49
30 KW/60 HZ GEN SET S/N KZO 5841

C    1 EXHAUST 1          756.23 DEG. F
C    2 EXHAUST 2          719.72 DEG. F
C    3 EXHAUST 3          710.62 DEG. F
C    4 EXHAUST 4          749.93 DEG. F
C    5 EXHAUST 5          806.26 DEG. F
C    6 EXHAUST 6          709.49 DEG. F
C    7 ENG. COOL. IN      191.04 DEG. F
C    8 ENG. COOL. OUT     198.41 DEG. F
C    9 OIL SUMP           192.52 DEG. F
C   10 OIL GALLERY        194.30 DEG. F
C   13  ENG. INTAKE       141.23 DEG. F
C   14 RAD. TOP LEFT      153.55 DEG. F
C   15 RAD. BTTM LEFT     148.05 DEG. F
C   16 RAD. TOP RIGHT     145.28 DEG. F
C   17 RAD. BTTM RIGHT    126.54 DEG. F
C   18 GEN. AIR IN        125.93 DEG. F
C   19 GEN. AIR OUT       135.74 DEG. F
C   20 GEN. FRAME TOP     134.24 DEG. F
C   21 GEN. FRAME BTTM    129.49 DEG. F
C   22 GEN. EXCITER       133.74 DEG. F
C   23 GEN. VOLT. REG.    131.21 DEG. F
C   24 CONTROL PANEL      131.60 DEG. F
C   25 RELAY AREA         135.31 DEG. F
C   26 BATTERY LEFT       116.07 DEG. F
C   27 BATTERY RIGHT      115.26 DEG. F
C   28 AIR IN SET         125.69 DEG. F
C   29 FUEL TANK          96.437 DEG. F
C   30 FUEL OUTLET        141.96 DEG. F

END SCAN GROUP 1     20 JAN 88  11:14:59

STOPPED SINGLE SCAN  20 JAN 88  11:14:59
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BEGIN SCAN GROUP 1   20 JAN 88  11:23:26
30 KW/60 HZ GEN SET S/N KZO 5841

C    1 EXHAUST 1          734.39 DEG. F
C    2 EXHAUST 2          712.30 DEG. F
C    3 EXHAUST 3          712.00 DEG. F
C    4 EXHAUST 4          750.41 DEG. F
C    5 EXHAUST 5          797.80 DEG. F
C    6 EXHAUST 6          725.05 DEG. F
C    7 ENG. COOL. IN      204.67 DEG. F
C    8 ENG. COOL. OUT     212.62 DEG. F
C    9 OIL SUMP           217.95 DEG. F
C   10 OIL GALLERY        219.57 DEG. F
C   13  ENG. INTAKE       149.26 DEG. F
C   14 RAD. TOP LEFT      162.58 DEG. F
C   15 RAD. BTTM LEFT     157.56 DEG. F
C   16 RAD. TOP RIGHT     151.81 DEG. F
C   17 RAD. BTTM RIGHT    131.81 DEG. F
C   18 GEN. AIR IN        129.89 DEG. F
C   19 GEN. AIR OUT       140.84 DEG. F
C   20 GEN. FRAME TOP     137.98 DEG. F
C   21 GEN. FRAME BTTM    133.72 DEG. F
C   22 GEN. EXCITER       143.82 DEG. F
C   23 GEN. VOLT. REG.    134.21 DEG. F
C   24 CONTROL PANEL      136.99 DEG. F
C   25 RELAY AREA         141.51 DEG. F
C   26 BATTERY LEFT       127.73 DEG. F
C   27 BATTERY RIGHT      127.63 DEG. F
C   28 AIR IN SET         126.85 DEG. F
C   29 FUEL TANK          97.811 DEG. F
C   30 FUEL OUTLET        145.92 DEG. F

END SCAN GROUP 1     20 JAN 88  11:23:35

STOPPED SINGLE SCAN  20 JAN 88  11:23:35
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```
BEGIN SCAN GROUP 1   20 JAN 88  11:22:35
30 KW/60 HZ GEN SET S/N KZO 5841

C    1 EXHAUST 1          484.71 DEG. F
C    2 EXHAUST 2          473.29 DEG. F
C    3 EXHAUST 3          487.87 DEG. F
C    4 EXHAUST 4          549.90 DEG. F
C    5 EXHAUST 5          565.56 DEG. F
C    6 EXHAUST 6          513.87 DEG. F
C    7 ENG. COOL. IN      207.46 DEG. F
C    8 ENG. COOL. OUT     215.44 DEG. F
C    9 OIL SUMP           216.68 DEG. F
C   10 OIL GALLERY        218.33 DEG. F
C   13  ENG. INTAKE       148.81 DEG. F
C   14 RAD. TOP LEFT      162.45 DEG. F
C   15 RAD. BTTM LEFT     157.27 DEG. F
C   16 RAD. TOP RIGHT     151.31 DEG. F
C   17 RAD. BTTM RIGHT    131.38 DEG. F
C   18 GEN. AIR IN        127.85 DEG. F
C   19 GEN. AIR OUT       140.63 DEG. F
C   20 GEN. FRAME TOP     137.56 DEG. F
C   21 GEN. FRAME BTTM    133.38 DEG. F
C   22 GEN. EXCITER       143.49 DEG. F
C   23 GEN. VOLT. REG.    133.79 DEG. F
C   24 CONTROL PANEL      136.59 DEG. F
C   25 RELAY AREA         141.14 DEG. F
C   26 BATTERY LEFT       127.18 DEG. F
C   27 BATTERY RIGHT      127.06 DEG. F
C   28 AIR IN SET         126.58 DEG. F
C   29 FUEL TANK          97.696 DEG. F
C   30 FUEL OUTLET        144.31 DEG. F

END SCAN GROUP 1     20 JAN 88  11:22:45

STOPPED SINGLE SCAN  20 JAN 88  11:22:45
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BEGIN SCAN GROUP 1   20 JAN 88  11:24:64
30 KW/60 HZ GEN SET S/N KZO 5841

C    1 EXHAUST 1          545.67 DEG. F
C    2 EXHAUST 2          514.00 DEG. F
C    3 EXHAUST 3          523.72 DEG. F
C    4 EXHAUST 4          579.87 DEG. F
C    5 EXHAUST 5          616.30 DEG. F
C    6 EXHAUST 6          543.17 DEG. F
C    7 ENG. COOL. IN      204.97 DEG. F
C    8 ENG. COOL. OUT     212.85 DEG. F
C    9 OIL SUMP           219.85 DEG. F
C   10 OIL GALLERY        220.86 DEG. F
C   13  ENG. INTAKE       149.55 DEG. F
C   14 RAD. TOP LEFT      162.00 DEG. F
C   15 RAD. BTTM LEFT     157.33 DEG. F
C   16 RAD. TOP RIGHT     151.41 DEG. F
C   17 RAD. BTTM RIGHT    132.10 DEG. F
C   18 GEN. AIR IN        128.85 DEG. F
C   19 GEN. AIR OUT       141.81 DEG. F
C   20 GEN. FRAME TOP     138.12 DEG. F
C   21 GEN. FRAME BTTM    134.81 DEG. F
C   22 GEN. EXCITER       144.20 DEG. F
C   23 GEN. VOLT. REG.    134.50 DEG. F
C   24 CONTROL PANEL      137.37 DEG. F
C   25 RELAY AREA         142.89 DEG. F
C   26 BATTERY LEFT       128.21 DEG. F
C   27 BATTERY RIGHT      128.89 DEG. F
C   28 AIR IN SET         127.38 DEG. F
C   29 FUEL TANK          97.928 DEG. F
C   30 FUEL OUTLET        145.63 DEG. F

END SCAN GROUP 1     20 JAN 88  11:24:13

STOPPED SINGLE SCAN  20 JAN 88  11:24:13
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BEGIN SCAN GROUP 1   20 JAN 88  11:24:33
30 KW/60 HZ GEN SET S/N KZO 5841

C    1 EXHAUST 1          572.24 DEG. F
C    2 EXHAUST 2          570.29 DEG. F
C    3 EXHAUST 3          576.01 DEG. F
C    4 EXHAUST 4          624.45 DEG. F
C    5 EXHAUST 5          643.06 DEG. F
C    6 EXHAUST 6          681.33 DEG. F
C    7 ENG. COOL. IN      203.29 DEG. F
C    8 ENG. COOL. OUT     218.69 DEG. F
C    9 OIL SUMP           220.83 DEG. F
C   10 OIL GALLERY        221.52 DEG. F
C   13  ENG. INTAKE       149.52 DEG. F
C   14 RAD. TOP LEFT      168.51 DEG. F
C   15 RAD. BTTM LEFT     155.91 DEG. F
C   16 RAD. TOP RIGHT     158.76 DEG. F
C   17 RAD. BTTM RIGHT    132.07 DEG. F
C   18 GEN. AIR IN        127.47 DEG. F
C   19 GEN. AIR OUT       140.48 DEG. F
C   20 GEN. FRAME TOP     138.19 DEG. F
C   21 GEN. FRAME BTTM    134.14 DEG. F
C   22 GEN. EXCITER       144.46 DEG. F
C   23 GEN. VOLT. REG.    134.79 DEG. F
C   24 CONTROL PANEL      137.57 DEG. F
C   25 RELAY AREA         141.34 DEG. F
C   26 BATTERY LEFT       128.51 DEG. F
C   27 BATTERY RIGHT      128.41 DEG. F
C   28 AIR IN SET         125.95 DEG. F
C   29 FUEL TANK          97.959 DEG. F
C   30 FUEL OUTLET        146.06 DEG. F

END SCAN GROUP 1     20 JAN 88  11:24:43

STOPPED SINGLE SCAN  20 JAN 88  11:24:43
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BEGIN SCAN GROUP 1   20 JAN 88  11:25:14
30 KW/60 HZ GEN SET S/N KZO 5841

C    1 EXHAUST 1          597.45 DEG. F
C    2 EXHAUST 2          562.41 DEG. F
C    3 EXHAUST 3          565.94 DEG. F
C    4 EXHAUST 4          619.55 DEG. F
C    5 EXHAUST 5          666.67 DEG. F
C    6 EXHAUST 6          581.50 DEG. F
C    7 ENG. COOL. IN      203.15 DEG. F
C    8 ENG. COOL. OUT     218.82 DEG. F
C    9 OIL SUMP           220.68 DEG. F
C   10 OIL GALLERY        222.52 DEG. F
C   13  ENG. INTAKE       149.89 DEG. F
C   14 RAD. TOP LEFT      161.46 DEG. F
C   15 RAD. BTTM LEFT     156.43 DEG. F
C   16 RAD. TOP RIGHT     151.84 DEG. F
C   17 RAD. BTTM RIGHT    132.38 DEG. F
C   18 GEN. AIR IN        127.62 DEG. F
C   19 GEN. AIR OUT       140.60 DEG. F
C   20 GEN. FRAME TOP     138.31 DEG. F
C   21 GEN. FRAME BTTM    134.30 DEG. F
C   22 GEN. EXCITER       144.60 DEG. F
C   23 GEN. VOLT. REG.    135.12 DEG. F
C   24 CONTROL PANEL      138.84 DEG. F
C   25 RELAY AREA         141.29 DEG. F
C   26 BATTERY LEFT       128.87 DEG. F
C   27 BATTERY RIGHT      128.77 DEG. F
C   28 AIR IN SET         125.48 DEG. F
C   29 FUEL TANK          98.155 DEG. F
C   30 FUEL OUTLET        146.23 DEG. F

END SCAN GROUP 1     20 JAN 88  11:25:23

STOPPED SINGLE SCAN  20 JAN 88  11:25:23
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BEGIN SCAN GROUP 1   20 JAN 88  11:25:51
30 KW/60 HZ GEN SET S/N KZO 5841

C    1 EXHAUST 1          639.99 DEG. F
C    2 EXHAUST 2          630.11 DEG. F
C    3 EXHAUST 3          631.74 DEG. F
C    4 EXHAUST 4          675.18 DEG. F
C    5 EXHAUST 5          706.12 DEG. F
C    6 EXHAUST 6          650.82 DEG. F
C    7 ENG. COOL. IN      201.90 DEG. F
C    8 ENG. COOL. OUT     209.13 DEG. F
C    9 OIL SUMP           221.59 DEG. F
C   10 OIL GALLERY        223.83 DEG. F
C   13  ENG. INTAKE       148.68 DEG. F
C   14 RAD. TOP LEFT      168.57 DEG. F
C   15 RAD. BTTM LEFT     155.87 DEG. F
C   16 RAD. TOP RIGHT     158.77 DEG. F
C   17 RAD. BTTM RIGHT    132.61 DEG. F
C   18 GEN. AIR IN        127.95 DEG. F
C   19 GEN. AIR OUT       140.99 DEG. F
C   20 GEN. FRAME TOP     138.41 DEG. F
C   21 GEN. FRAME BTTM    134.45 DEG. F
C   22 GEN. EXCITER       144.68 DEG. F
C   23 GEN. VOLT. REG.    135.39 DEG. F
C   24 CONTROL PANEL      138.31 DEG. F
C   25 RELAY AREA         141.22 DEG. F
C   26 BATTERY LEFT       129.16 DEG. F
C   27 BATTERY RIGHT      129.81 DEG. F
C   28 AIR IN SET         126.29 DEG. F
C   29 FUEL TANK          98.198 DEG. F
C   30 FUEL OUTLET        146.83 DEG. F

END SCAN GROUP 1     20 JAN 88  11:26:00

STOPPED SINGLE SCAN  20 JAN 88  11:26:00
```

TEST DATA

ITEM 30KW / 60 HZ GENERATOR SET MODIFIED

MFGR. JOHN R HOLLINGSWORTH

MODEL NO. MEP005A

SERIAL NO. K20 5341

NTS

National Technical Systems | Scientific Services Group | Testing Division P.O. Box 38 Harwood, Virginia 22471 Tel: 703 752 5300

METHOD 512.3

CIRCUIT INTERRUPTER TEST (OVERVOLTAGE)

REF. NO. MIL-STD 705

SHEET 1 OF 1

DATE 20 JAN 1988

JOB NO. 555-2140

PROJ. ENGR.

RECORDER/OBSERVER KM / GC

INST TIME	STEP NO.	LOAD STEP	VOLTAGE EG6700 L_1-L_0 VAC	VOLTAGE EG6700 L_2-L_0 VAC	VOLTAGE EG6700 L_3-L_0 VAC	AMPERES L_1-L_0 AC AMPS	AMPERES L_2-L_0 AC AMPS	AMPERES L_3-L_0 AC AMPS	KILOWATTS L_1-L_0 Kw	KILOWATTS L_2-L_0 Kw	KILOWATTS L_3-L_0 Kw	POWER FACTOR PF	FREQ. EG2410 Hz	EXCITER FIELD VOLTS VDC	EXCITER FIELD AMPS DCA	AMB. TEMP. °F	Press inches/Hg IN WATER
1334			START UNIT														
			155		120								60.2			125	
			APPLIED OVERVOLTAGE CIRCUIT BREAKER OPENED UNIT SHUT DOWN INDICATOR ON														
			155		120								60.2			126	
			APPLIED OVERVOLTAGE CIRCUIT BREAKER OPENED UNIT SHUT DOWN INDICATOR ON														
			155		120								60.3			127	
			APPLIED OVERVOLTAGE CIRCUIT BREAKER OPENED UNIT SHUT DOWN INDICATOR ON														
1339			RESTART UNIT														
1340			SHUT UNIT DOWN			END OF TEST											
						TEST #1			540	MSec							
						TEST #2			533	MSec							
						TEST #3			531	MSec							

NOTES: UNIT ABOVE TEST - INTERRUPTER DIDN'T TRIP EARLIER THAN 200 MSEC NOR LATER THAN 1 SEC AS PER PROCUREMENT DOC. PARA. 3.19.1.5

TEST DATA

ITEM 30 Kw / 60 Hz GENERATOR SET MODIFIED

MFGR. JOHN R. HOLLINGSWORTH

MODEL NO. JHGP 005A

SERIAL NO. KZO 5841

NTS

National Technical Systems Scientific Services Group

Testing Division
P.O. Box 38
Hallwood, Virginia 22471
Tel: 703 752 5300

Frequency and Voltage

Regulation, Stability and Transient Response Test (Short Term)

REF. NO. MIL-STD 705 Para. 608.1

SHEET 1 OF 2

DATE 22 JAN 1988

JOB NO. 555-2140

PROJ. ENGR.

RECORDER/OBSERVER KM/GC

INST TIME	STEP NO.	LOAD STEP	E6028 D VOLTAGE L_1-L_0 VAC	L_2-L_0 VAC	L_3-L_0 VAC	E6040 D AMPERES x40 L_1-L_0 AC AMPS	L_2-L_0 AC AMPS	L_3-L_0 AC AMPS	E6230 D KILOWATTS x40 L_1-L_0 Kw	L_2-L_0 Kw	L_3-L_0 Kw	E6320 POWER FACTOR PF	E6410 FREQ. Hz	E6170 EXCITER VOLTS VDC	E6030 FIELD AMPS DCA	AMB. TEMP. °F	
0939			RESTART STABILIZATION														
0940		R/C	119.5	120.5	120.	2.5	2.52	2.52	.245	.25	.25	.80	60.0	9.4	3.5	126	131/252
0950		R/C	119.5	120.5	120.	2.5	2.54	2.53	.245	.25	.25	.80	60.0	9.7	3.6	124	130/250
1000		R/C	119.5	120.5	120.5	2.5	2.54	2.53	.245	.25	.25	.80	59.5	9.8	3.6	123	130/250
1010		R/C	119.5	120.5	120.5	2.5	2.54	2.53	.245	.25	.25	.80	59.9	9.9	3.65	125	130/250
	1	R/C	119.5	120.5	120	2.5	2.53	2.52	.245	.25	.25	.80	59.9	9.9	3.65	125	131/250
	2	N/L	121	121	121								61.5	4.1	1.55	125	
	3	R/C	119.5	120.5	120	2.5	2.53	2.52	.245	.25	.25	.80	59.85	9.8	3.65	125	
	4	N/L	121	121	121								61.5	4.2	1.55	125	
	5	R/L	119.5	120.5	120	2.5	2.54	2.53	.245	.25	.25	.80	59.8	9.8	3.65	124	
	6	N/L	121	121	121								61.4	4.1	1.55	124	
	7	R/L	119.5	120.5	120	2.5	2.53	2.52	.245	.25	.25	.80	59.85	9.8	3.65	124	
	8	N/L	121.6	121.1	121.1								61.4	4.1	1.55	125	
	9	3/4	120	120.5	120.5	1.86	1.89	1.89	.183	.187	.187	.80	60.5	.8	3.0	124	
	10	N/L	121	121.1	121.1								61.5	4.1	1.55	123	
	11	3/4	120	121	120.5	1.86	1.89	1.88	.184	.187	.187	.80	60.45	.8	3.0	125	
	12	N/L	121	121	121								61.4	4.1	1.55	125	
	13	3/4	120	120.5	120.5	1.86	1.89	1.88	.184	.187	.187	.80	60.5	.8	3.0	125	
	14	N/L	121	121.5	121								61.4	4.1	1.55	124	
	15	1/2	120.5	121	121	1.29	1.3	1.3	.124	.125	.125	.80	60.7	6.6	2.45	124	
	16	N/L	121	121	121								61.4	4.1	1.55	124	
	17	1/2	120	121	121	1.29	1.3	1.3	.125	.126	.126	.80	60.7	6.6	2.45	124	
	18	N/L	121	121	121								61.4	4.0	1.56	124	
	19	1/2	120.5	121	121	1.29	1.3	1.3	.124	.126	.126	.80	60.6	6.6	2.46	126	
	20	N/L	121	121.1	121								61.9	4.0	1.65	124	
	21	1/4	120.5	121	121	.65	.66	.66	.062	.062	.062	.80	60.9	5.3	2.0	126	

NOTES:

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TEST DATA

ITEM 30 KW / 60 HZ GENERATOR SET MODIFIED

MFGR. JOHN R. HOLLINGSWORTH

MODEL NO. MEP 005A

SERIAL NO. KZO 5841

NTS

National Technical Systems Scientific Services Group

Testing Division
P.O. Box 38
Hallwood, Virginia 22471
Tel: 703 752 5300

Frequency and Voltage Regulation, Stability and Transient Response Test (Short Term)

REF. NO. MIL-STD 705 Para. 608.1

SHEET 2 OF 2

DATE 22 JAN 1988

JOB NO. 555-2140

PROJ. ENGR.

RECORDER/OBSERVER KM/GC

INST TIME	STEP NO.	LOAD STEP	VOLTAGE L_1-L_0 VAC	VOLTAGE L_2-L_0 VAC	VOLTAGE L_3-L_0 VAC	AMPERES L_1-L_0 AC AMPS	AMPERES L_2-L_0 AC AMPS	AMPERES L_3-L_0 AC AMPS	KILOWATTS L_1-L_0 Kw	KILOWATTS L_2-L_0 Kw	KILOWATTS L_3-L_0 Kw	POWER FACTOR PF	FREQ. Hz	EXCITER FIELD VOLTS VDC	EXCITER FIELD AMPS DCA	AMB. TEMP. °F
													61.5	4.0	1.5	125
	22	NL	121	121.1	121								60.5	5.2	2.0	124
	23	1/4	120.5	121	121	.66	.66	.66	.062	.062	.062	.80	61.4	4.0	1.5	124
	24	NL	121	121.5	121								60.5	5.2	2.0	124
	25	1/4	120.5	121	121	.66	.66	.66	.062	.062	.062	.80	61.3	4.0	1.5	123
	26	NL	120	121	121								59.8	7.9	3.5	124
	27	FL	119.5	120.5	120.5	2.5	2.53	2.52	.245	.25	.25	.80	61.4	4.0	1.5	124
	28	NL	121	121.5	121								59.8	7.9	3.5	123
	29	FL	119.5	120.5	120	2.5	2.53	2.50	.245	.25	.25	.80	61.4	4.0	1.5	124
	30	NL	121	121.5	121								59.8	7.9	3.5	124
	31	FL	119.5	120.5	120	2.5	2.53	2.52	.245	.25	.25	.80	61.4	4.0	1.5	124
	32	NL	121	121.5	121											
1030		END	OF	TEST		SHUT	UNIT	DOWN								

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NOTES:

TEST DATA

ITEM 30KW 60Hz GENERATOR SET MODIFIED

MFGR. JOHN R HOLLINGSWORTH

MODEL NO. MEP 005A

SERIAL NO. KZ05841

NTS National Technical Systems Scientific Services Group Testing Division PO. Box 38 Hartwood, Virginia 22471 Tel: 703 752 5300

FREQUENCY AND VOLTAGE REGULATION, STABILITY, AND TRANSIENT RESPONSE TEST (SHORT FORM)

REF. NO. MILSTD 205

SHEET 1 OF 3

DATE 5 FEB 1988

JOB NO. 555-2140

PROJ. ENGR.

RECORDER/OBSERVER

	FREQUENCY							VOLTAGE							
	MAXIMUM EXCURSION				REC.	(CONSTANT LOAD) BANDWIDTH		REGULATION	MAXIMUM EXCURSION				REC.	(CONSTANT LOAD) BANDWIDTH	
LOAD STEP	OVERSHOOT Hz	OVERSHOOT %	UNDERSHOOT Hz	UNDERSHOOT %	TIME SEC	± Hz	± %	FREQ. %	VOLT %	OVERSHOOT VOLT	OVERSHOOT %	UNDERSHOOT VOLT	UNDERSHOOT %	TIME SEC	± VOLT	± %
1						.07	.12								.17	.15
1-2	1.15	1.91			.47			2.66	.83	2.26	1.88			.16		
2						.05	.09								.17	.15
2-3			1.35	2.26	1.17			2.75	.83			2.60	2.17	.23		
3						.17	.29								.17	.15
3-4	1.25	2.08			.39			2.75	.83	2.26	1.88			.16		
4						.05	.09								.17	.15
4-5			1.42	2.37	1.09			2.83	.83			3.13	2.60	.31		
5						.10	.17								.09	.07
5-6	1.22	2.03			.39			2.66	.83	2.26	1.88			.08		
6						.02	.12								.17	.15
6-7			1.42	2.37	.14			2.58	.83			3.13	2.60	.31		
7						.09	.15								.17	.15
7-8	1.29	2.14			.31			2.58	.91	2.43	2.03			.16		
8						.07	.12								.17	.15
8-9			1.01	1.69	.47			1.65	.50			1.22	1.01	.08		
9						.07	.12								.17	.15
9-10	.90	1.57			.39			1.66	.50	1.74	1.45			.16		
10						.04	.06								.09	.07
10-11			1.04	1.74	.47			1.25	.50			1.91	1.59	.16		
11						.07	.12								.17	.15
11-12	.90	1.51			.31			1.58	.41	1.22	1.01			.16		
12						.05	.09								.17	.15
12-13			1.04	1.74	.39			1.5	.41			1.74	1.45	.23		
13						.07	.12								.17	.15
13-14	.83	1.39			.31			1.5	.41	1.91	1.59			16		

NOTES:

TEST DATA

ITEM 30 KW 60 Hz GENERATOR SET MODIFIED

MFGR. JOHN R HOLLINGSWORTH

MODEL NO. MEP 005A

SERIAL NO. K20,5841

NTS

National Technical Systems Scientific Services Group

Testing Division
P.O. Box 30
Harlwood, Virginia 22471
Tel: 703 752 5300

FREQUENCY AND VOLTAGE REGULATION, STABILITY, AND TRANSIENT RESPONSE TEST (SERIES TIG)

REF. NO. MIL STD 705

SHEET 2 OF 3

DATE 5 FEB 1988

JOB NO. 55S-2140

PROJ. ENGR.

RECORDER/OBSERVER

	FREQUENCY							REGULATION	VOLTAGE							
	MAXIMUM EXCURSION				REC. TIME	CONSTANT LOAD BANDWIDTH			MAXIMUM EXCURSION				REC. TIME	CONSTANT LOAD ± BANDWIDTH	
LOAD STEP	OVERSHOOT Hz	OVERSHOOT %	UNDERSHOOT Hz	UNDERSHOOT %	SEC	± Hz	± %	FREQ. %	VOLT %	OVERSHOOT VOLT	OVERSHOOT %	UNDERSHOOT VOLT	UNDERSHOOT %	SEC	± VOLT	± %
14						.04	.06								.09	.07
14-15			.63	1.04	.23			1.16	0			.87	.72	0		
15						.10	.17								.09	.07
15-16	.63	1.04			0			1.16	0	1.04	.87			0		
16						.07	.12								.17	.15
16-17			.69	1.16	.31			1.16	0			.69	.58	.08		
17						.07	.13								.17	.15
17-18	.63	1.04			0			1.16	0	1.04	.87			.08		
18						.07	.12								.09	.07
18-19			.66	1.10	.39			1.33	0			1.04	.87	0		
19						.09	.15								.09	.07
19-20	1.66	1.10			.31			1.33	0	.87	.72			0		
20						.07	.12								.09	.07
20-21			.17	.29	0			.83	0			.69	.58	0		
21						.07	.12								.09	.07
21-22	.21	.35			0			.66	0	.52	.43			0		
22						.05	.09								.09	.07
22-23			.28	.46	0			.66	0			.69	.58	0		
23						.07	.12								.09	.07
23-24	.38	.46			0			.83	0	.52	.43			0		
24						.05	.09								.09	.07
24-25			.28	.46	0			.83	0			.52	.43	0		
25						.05	.09								.09	.07
25-26	.28	.46			0			.66	0	.52	.43			0		
26						.04	.06								.09	.07
26-27			1.35	2.26	.78			2.5	.41			3.42	2.89	.23		

NOTES:

TEST DATA

ITEM 30 KW 60 Hz GENERATOR SET MODIFIED

MFGR. JOHN R HOLLINGSWORTH

MODEL NO. MEP 005A

SERIAL NO. K205841

NTS

National Technical Systems — Scientific Services Group — Testing Division, P.O. Box 30, Hallwood, Virginia 22471, Tel: 703 752 5300

FREQUENCY AND VOLTAGE REGULATION, STABILITY, AND TRANSIENT RESPONSE TEST (SKRT TF6H)

REF. NO. MIL STD 705

SHEET 3 OF 3

DATE 5 FEB 1988

JOB NO. 555-2140

PROJ. ENGR.

RECORDER/OBSERVER

LOAD STEP	FREQUENCY: MAXIMUM EXCURSION OVERSHOOT Hz	OVERSHOOT %	UNDERSHOOT Hz	UNDERSHOOT %	REC. TIME SEC.	(CONSTANT LOAD) BANDWIDTH ± Hz	BANDWIDTH ± %	REGULATION FREQ. %	REGULATION VOLT %	VOLTAGE: MAXIMUM EXCURSION OVERSHOOT VOLT	OVERSHOOT %	UNDERSHOOT VOLT	UNDERSHOOT %	REC. TIME SEC.	(CONSTANT LOAD) BANDWIDTH ± VOLT	BANDWIDTH ± %
27						.07	.12								.17	.15
27-28	1.29	2.14			.39			2.66	.41	2.60	2.17			.08		
28						.05	.09								.09	.07
28-29			1.42	2.37	.86			2.66	.83			2.95	2.46	.23		
29						.09	.15								.17	.15
29-30	1.18	1.97			.31			2.66	.83	2.43	2.03			.08		
30						.05	.09								.17	.15
30-31			1.35	2.26	.78			2.66	.83			3.43	2.02	.08		
31						.07	.12								.17	.15
31-32	1.26	2.08			.31			2.66	.83	3.47	2.89			.08		
32						.07	.12								.17	.15

NOTES:

FREQ & VOLTAGE REGULATION (SHORT TERM) CONT.

BEGIN SCAN GROUP 1 22 JAN 88 09:39:51
30 KW/60 HZ GEN SET S/N KZO 5841

C	1	EXHAUST 1	774.50	DEG.	F
C	2	EXHAUST 2	784.62	DEG.	F
C	3	EXHAUST 3	699.15	DEG.	F
C	4	EXHAUST 4	741.76	DEG.	F
C	5	EXHAUST 5	788.20	DEG.	F
C	6	EXHAUST 6	785.36	DEG.	F
C	7	ENG. COOL. IN	185.73	DEG.	F
C	8	ENG. COOL. OUT	194.13	DEG.	F
C	9	OIL SUMP	224.42	DEG.	F
C	10	OIL GALLERY	225.11	DEG.	F
C	13	ENG. INTAKE	131.51	DEG.	F
C	14	RAD. TOP LEFT	152.16	DEG.	F
C	15	RAD. BTTM LEFT	141.92	DEG.	F
C	16	RAD. TOP RIGHT	142.84	DEG.	F
C	17	RAD. BTTM RIGHT	133.55	DEG.	F
C	18	GEN. AIR IN	124.82	DEG.	F
C	19	GEN. AIR OUT	136.52	DEG.	F
C	20	GEN. FRAME TOP	131.88	DEG.	F
C	21	GEN. FRAME BTTM	126.54	DEG.	F
C	22	GEN. EXCITER	135.30	DEG.	F
C	23	GEN. VOLT. REG.	131.74	DEG.	F
C	24	CONTROL PANEL	135.42	DEG.	F
C	25	RELAY AREA	122.28	DEG.	F
C	26	BATTERY LEFT	137.23	DEG.	F
C	27	BATTERY RIGHT	126.68	DEG.	F
C	28	AIR IN SET	126.14	DEG.	F
C	29	FUEL TANK	89.042	DEG.	F
C	30	FUEL OUTLET	145.54	DEG.	F

END SCAN GROUP 1 22 JAN 88 09:40:01

STOPPED SINGLE SCAN 22 JAN 88 09:40:01

BEGIN SCAN GROUP 1 22 JAN 88 09:59:52
30 KW/60 HZ GEN SET S/N KZO 5841

C	1	EXHAUST 1	789.86	DEG.	F
C	2	EXHAUST 2	757.24	DEG.	F
C	3	EXHAUST 3	763.65	DEG.	F
C	4	EXHAUST 4	804.66	DEG.	F
C	5	EXHAUST 5	851.39	DEG.	F
C	6	EXHAUST 6	785.67	DEG.	F
C	7	ENG. COOL. IN	203.77	DEG.	F
C	8	ENG. COOL. OUT	213.40	DEG.	F
C	9	OIL SUMP	233.56	DEG.	F
C	10	OIL GALLERY	234.35	DEG.	F
C	13	ENG. INTAKE	138.87	DEG.	F
C	14	RAD. TOP LEFT	162.96	DEG.	F
C	15	RAD. BTTM LEFT	150.00	DEG.	F
C	16	RAD. TOP RIGHT	147.21	DEG.	F
C	17	RAD. BTTM RIGHT	136.26	DEG.	F
C	18	GEN. AIR IN	128.88	DEG.	F
C	19	GEN. AIR OUT	140.58	DEG.	F
C	20	GEN. FRAME TOP	134.31	DEG.	F
C	21	GEN. FRAME BTTM	127.73	DEG.	F
C	22	GEN. EXCITER	138.12	DEG.	F
C	23	GEN. VOLT. REG.	133.90	DEG.	F
C	24	CONTROL PANEL	136.87	DEG.	F
C	25	RELAY AREA	122.87	DEG.	F
C	26	BATTERY LEFT	142.84	DEG.	F
C	27	BATTERY RIGHT	130.87	DEG.	F
C	28	AIR IN SET	123.78	DEG.	F
C	29	FUEL TANK	93.985	DEG.	F
C	30	FUEL OUTLET	144.56	DEG.	F

END SCAN GROUP 1 22 JAN 88 10:00:02

STOPPED SINGLE SCAN 22 JAN 88 10:00:02

BEGIN SCAN GROUP 1 22 JAN 88 09:49:54
30 KW/60 HZ GEN SET S/N KZO 5841

C	1	EXHAUST 1	790.45	DEG.	F
C	2	EXHAUST 2	754.96	DEG.	F
C	3	EXHAUST 3	760.65	DEG.	F
C	4	EXHAUST 4	800.64	DEG.	F
C	5	EXHAUST 5	850.23	DEG.	F
C	6	EXHAUST 6	784.11	DEG.	F
C	7	ENG. COOL. IN	202.33	DEG.	F
C	8	ENG. COOL. OUT	211.80	DEG.	F
C	9	OIL SUMP	229.18	DEG.	F
C	10	OIL GALLERY	230.16	DEG.	F
C	13	ENG. INTAKE	138.43	DEG.	F
C	14	RAD. TOP LEFT	162.98	DEG.	F
C	15	RAD. BTTM LEFT	149.54	DEG.	F
C	16	RAD. TOP RIGHT	146.68	DEG.	F
C	17	RAD. BTTM RIGHT	135.14	DEG.	F
C	18	GEN. AIR IN	121.76	DEG.	F
C	19	GEN. AIR OUT	139.58	DEG.	F
C	20	GEN. FRAME TOP	133.68	DEG.	F
C	21	GEN. FRAME BTTM	127.75	DEG.	F
C	22	GEN. EXCITER	138.75	DEG.	F
C	23	GEN. VOLT. REG.	132.23	DEG.	F
C	24	CONTROL PANEL	136.85	DEG.	F
C	25	RELAY AREA	123.31	DEG.	F
C	26	BATTERY LEFT	140.85	DEG.	F
C	27	BATTERY RIGHT	128.70	DEG.	F
C	28	AIR IN SET	124.85	DEG.	F
C	29	FUEL TANK	91.426	DEG.	F
C	30	FUEL OUTLET	143.63	DEG.	F

END SCAN GROUP 1 22 JAN 88 09:50:03

STOPPED SINGLE SCAN 22 JAN 88 09:50:03

BEGIN SCAN GROUP 1 22 JAN 88 10:09:52
30 KW/60 HZ GEN SET S/N KZO 5841

C	1	EXHAUST 1	791.55	DEG.	F
C	2	EXHAUST 2	755.84	DEG.	F
C	3	EXHAUST 3	764.83	DEG.	F
C	4	EXHAUST 4	806.12	DEG.	F
C	5	EXHAUST 5	853.61	DEG.	F
C	6	EXHAUST 6	785.77	DEG.	F
C	7	ENG. COOL. IN	204.79	DEG.	F
C	8	ENG. COOL. OUT	214.43	DEG.	F
C	9	OIL SUMP	235.72	DEG.	F
C	10	OIL GALLERY	236.44	DEG.	F
C	13	ENG. INTAKE	138.78	DEG.	F
C	14	RAD. TOP LEFT	164.48	DEG.	F
C	15	RAD. BTTM LEFT	150.58	DEG.	F
C	16	RAD. TOP RIGHT	148.29	DEG.	F
C	17	RAD. BTTM RIGHT	137.26	DEG.	F
C	18	GEN. AIR IN	121.79	DEG.	F
C	19	GEN. AIR OUT	141.88	DEG.	F
C	20	GEN. FRAME TOP	135.41	DEG.	F
C	21	GEN. FRAME BTTM	128.77	DEG.	F
C	22	GEN. EXCITER	138.94	DEG.	F
C	23	GEN. VOLT. REG.	135.12	DEG.	F
C	24	CONTROL PANEL	137.88	DEG.	F
C	25	RELAY AREA	123.58	DEG.	F
C	26	BATTERY LEFT	144.31	DEG.	F
C	27	BATTERY RIGHT	132.48	DEG.	F
C	28	AIR IN SET	125.81	DEG.	F
C	29	FUEL TANK	96.143	DEG.	F
C	30	FUEL OUTLET	145.27	DEG.	F

END SCAN GROUP 1 22 JAN 88 10:10:01

STOPPED SINGLE SCAN 22 JAN 88 10:10:01

TEST DATA

ITEM 30 Kw / 60 Hz
GENERATOR SET
MODIFIED
MFGR. JOHN R. HOLLINGSWORTH
MODEL NO. MEP 005A
SERIAL NO. KZ0 5841

NTS
National Technical Systems
Scientific Services Group
Testing Division
P.O. Box 30
Hallwood, Virginia 22471
Tel: 703 752 5300

METHOD 572.2
CIRCUIT INTERRUPTER (OVER LOAD)

REF. NO. MIL-STD 705
SHEET 2 OF 2
DATE 22 JAN 1988
JOB NO. 555-2140
PROJ. ENGR.
RECORDER/OBSERVER KM/GC/BS

INST TIME	STEP NO.	LOAD STEP	E6028 D VOLTAGE L_1-L_0 VAC	L_2-L_0 VAC	L_3-L_0 VAC	E6040 D AMPERES x10 L_1-L_0 AC AMPS	L_2-L_0 AC AMPS	L_3-L_0 AC AMPS	E6230 D KILOWATTS x10 L_1-L_0 Kw	L_2-L_0 Kw	L_3-L_0 Kw	FL2420 POWER FACTOR PF	FL2410 FREQ. Hz	EGK20 EXCITER VOLTS VDC	EGK2520 FIELD AMPS DCA	AMB. TEMP. °F	Press inches/GAU IN WATER	
1250			APPLIED 130% OVER LOAD TO L_3-L_0															
1256		O/C	122.5	124	120	2.56	2.61	3.25	.26	.266	.254	.62	59.6	11.5	4.2	124	13.5	30.6
1300		O/C	125	124	120	2.52	2.56	3.25	.25	.26	.25	.61	60.0	10.9	4.4	126	13.3	30.7
			OVER LOAD INTERRUPTER OPEN AFTER 8 MIN 14 SEC OVER LOAD (WORKING COIL)															
1302			APPLIED RATED LOAD			FOR	15 MIN	(Cont Run)										
1302		R/C	119.5	120.5	120	2.5	2.52	2.52	.246	.25	.25	.60	60.3	9.8	3.6	124	13.5	29.9
1317		R/C	119.5	120.5	120	2.5	2.52	2.52	.246	.25	.25	.60	6.3	9.6	3.6	121	13.4	31.1
			APPLIED 110% OVER LOAD TO $L_1-L_2-L_3$															
1317		O/C	119.5	120.5	120	2.75	2.76	2.76	.249	.251	.251	.735	60.1	10.8	4.0	125	13.3	31.4
1319		O/C	119.5	120.5	120	2.75	2.76	2.76	.249	.251	.251	.735	60.2	11.1	4.1	123	13.3	31.5
1419		O/C	119.5	120.5	120	2.75	2.76	2.76	.249	.251	.251	.735	60.1	11.3	4.1	124	13.3	31.4
1439		O/C	117.5	120	120	2.75	2.76	2.76	.248	.25	.251	.735	60.1	11.3	4.1	125	13.3	32.0
1519		O/C	119.5	120	120	2.75	2.76	2.76	.249	.251	.251	.735	60.2	11.4	4.1	125	13.3	32.0
1519			END OF TEST - UNIT Cooled															

TEST DATA

ITEM 20 KW 1/60 HZ GENERATOR SET MODIFIED

MFGR. JOHN R. HOLLINGSWORTH

MODEL NO. MEP 005A

SERIAL NO. KZO 5841

NTS — National Technical Systems — Scientific Services Group — Testing Division, P.O. Box 38, Harwood, Virginia 22471, Tel: 703 752 5300

METHOD 512.2

CIRCUIT INTERRUPTOR. (OVER LOAD)

REF. NO. MIL-STD 705

SHEET 1 OF 2

DATE 22 JAN 1986

JOB NO. 555-2140

PROJ. ENGR.

RECORDER/OBSERVER KIM/BJ/GC

INST TIME	STEP NO.	LOAD STEP	E6020 D VOLTAGE L_1-L_0 VAC	E6020 D VOLTAGE L_2-L_0 VAC	E6020 D VOLTAGE L_3-L_0 VAC	E6040 D AMPERES x40 L_1-L_0 AC AMPS	E6040 D AMPERES x40 L_2-L_0 AC AMPS	E6040 D AMPERES x40 L_3-L_0 AC AMPS	E6250 D KILOWATTS x40 L_1-L_0 Kw	E6250 D KILOWATTS x40 L_2-L_0 Kw	E6250 D KILOWATTS x40 L_3-L_0 Kw	E62420 POWER FACTOR PF	E62410 FREQ. Hz	E6070 EXCITER VOLTS VDC	E6250 FIELD AMPS DCA	AMB. TEMP. °F	Press inches/GW IH	Press inches/GW
1057			START UNIT AT RATED LOAD STABILIZATION															
1100		R/L	119.5	120.5	120	2.5	2.52	2.52	.245	.25	.25	.80	60.3	9.4	3.5	124	133	280
1110		R/L	119.5	120.5	120	2.49	2.51	2.51	.245	.25	.25	.80	60.3	9.6	3.55	125	130	280
1120		R/L	119.5	120.5	120.5	2.5	2.52	2.52	.245	.25	.25	.80	60.2	9.7	3.6	124	131	284
1130		R/L	119.5	120.5	120.5	2.5	2.53	2.52	.245	.25	.25	.80	60.2	9.8	3.6	126	131	285
1131			APPLIED 130% OVER LOAD TO $L_1-L_2-L_3$															
1131		O/L	119	120	120	3.25	3.3	3.26	.25	.252	.253	.62	59.8	13.0	4.8	126	134	287
1136		O/L	119.5	120.5	120	3.25	3.3	3.27	.25	.253	.254	.62	59.8	13.4	4.85	123	134	287
	B-52		OVER LOAD INTERRUPTOR OPEN AFTER 8 MIN 14 SEC OVERLOAD LIGHT ON															
1145			APPLIED RATED LOAD FOR 15 MIN COOL DOWN.															
1154		R/L	119.5	120	120	2.5	2.52	2.51	.245	.25	.25	.80	60.35	9.8	3.6	123	135	284
1158		R/L	119.5	120.5	120.5	2.5	2.52	2.52	.245	.25	.25	.80	60.3	9.8	3.6	124	133	284
1159			APPLIED OVERLOAD TO L_1-L_0															
1159		O/L	115	120	120.8	3.25	2.52	2.53	.232	.25	.252	.60	60.3	10.6	3.9	124	133	283
1204		O/L	115	120.5	120.5	3.25	2.52	2.53	.232	.25	.252	.60	60.3	10.7	3.9	124	134	284
			OVER LOAD INTERRUPTOR OPEN AFTER 8 MIN 14 SEC OVERLOAD LIGHT ON															
1210			APPLIED RATED LOAD FOR COOL DOWN 15 MIN															
1210		R/L	119.5	120.5	120.5	2.5	2.53	253		.25	.251	.80	60.0	9.8	3.6	124	133	284
1224		R/L	119.5	120.5	120.5	2.5	2.53	2.53	.245	.25	.251	.80	60.3	9.8	3.6	124	132	284
1225			APPLIED 130% OVERLOAD TO L_2-L_0															
1225		O/L	120	116.5	120	2.5	3.29	2.52	.247	.24	.25	.60	60.2	10.6	3.9	124	132	282
1230		O/L	120	116.5	120	2.5	3.29	2.52	.248	.24	.25	.60	60.2	10.7	3.9	124	132	284
			OVER LOAD INTERRUPTOR OPEN AFTER 8 MIN 14 SEC. OVERLOAD INDICATION ON															
1234			APPLIED RATED LOAD FOR 15 MIN COOL DOWN															
1235		R/L	119.5	120.5	120.5	2.5	2.53	2.52	.245	.25	.251	.80	60.3	9.8	3.6	124	134	282
1241		R/L	119.5	120.5	120.	2.5	2.52	252	.245	.25	.25	.80	60.2	9.8	3.6	124	134	284
	PASSED TEST																	

CIRCUIT INTERRUPTER (OVERLOAD) 512.2

BEGIN SCAN GROUP 1 22 JAN 88 10:59:53
30 KW 60 HZ GEN SET S/N KZO 5841

C	1	EXHAUST 1	794.82 DEG. F
C	2	EXHAUST 2	754.09 DEG. F
C	3	EXHAUST 3	756.76 DEG. F
C	4	EXHAUST 4	795.61 DEG. F
C	5	EXHAUST 5	844.19 DEG. F
C	6	EXHAUST 6	773.00 DEG. F
C	7	ENG. COOL. IN	198.56 DEG. F
C	8	ENG. COOL. OUT	207.66 DEG. F
C	9	OIL SUMP	215.96 DEG. F
C	10	OIL GALLERY	216.90 DEG. F
C	13	ENG. INTAKE	136.42 DEG. F
C	14	RAD. TOP LEFT	160.13 DEG. F
C	15	RAD. BTTM LEFT	147.35 DEG. F
C	16	RAD. TOP RIGHT	145.65 DEG. F
C	17	RAD. BTTM RIGHT	134.41 DEG. F
C	18	GEN. AIR IN	121.39 DEG. F
C	19	GEN. AIR OUT	139.22 DEG. F
C	20	GEN. FRAME TOP	133.28 DEG. F
C	21	GEN. FRAME BTTM	128.13 DEG. F
C	22	GEN. EXCITER	136.64 DEG. F
C	23	GEN. VOLT. REG.	136.01 DEG. F
C	24	CONTROL PANEL	136.40 DEG. F
C	25	RELAY AREA	123.79 DEG. F
C	26	BATTERY LEFT	139.17 DEG. F
C	27	BATTERY RIGHT	130.98 DEG. F
C	28	AIR IN SET	124.45 DEG. F
C	29	FUEL TANK	104.96 DEG. F
C	30	FUEL OUTLET	146.60 DEG. F

END SCAN GROUP 1 22 JAN 88 11:00:02

STOPPED SINGLE SCAN 22 JAN 88 11:00:02

BEGIN SCAN GROUP 1 22 JAN 88 11:19:59
30 KW/60 HZ GEN SET S/N KZO 5841

C	1	EXHAUST 1	796.23 DEG. F
C	2	EXHAUST 2	759.84 DEG. F
C	3	EXHAUST 3	765.71 DEG. F
C	4	EXHAUST 4	802.57 DEG. F
C	5	EXHAUST 5	854.17 DEG. F
C	6	EXHAUST 6	788.24 DEG. F
C	7	ENG. COOL. IN	204.84 DEG. F
C	8	ENG. COOL. OUT	214.40 DEG. F
C	9	OIL SUMP	234.25 DEG. F
C	10	OIL GALLERY	235.14 DEG. F
C	13	ENG. INTAKE	138.96 DEG. F
C	14	RAD. TOP LEFT	163.85 DEG. F
C	15	RAD. BTTM LEFT	151.37 DEG. F
C	16	RAD. TOP RIGHT	148.93 DEG. F
C	17	RAD. BTTM RIGHT	138.23 DEG. F
C	18	GEN. AIR IN	121.88 DEG. F
C	19	GEN. AIR OUT	142.18 DEG. F
C	20	GEN. FRAME TOP	135.68 DEG. F
C	21	GEN. FRAME BTTM	129.16 DEG. F
C	22	GEN. EXCITER	139.34 DEG. F
C	23	GEN. VOLT. REG.	136.69 DEG. F
C	24	CONTROL PANEL	138.69 DEG. F
C	25	RELAY AREA	124.28 DEG. F
C	26	BATTERY LEFT	146.11 DEG. F
C	27	BATTERY RIGHT	135.15 DEG. F
C	28	AIR IN SET	124.67 DEG. F
C	29	FUEL TANK	108.41 DEG. F
C	30	FUEL OUTLET	146.42 DEG. F

END SCAN GROUP 1 22 JAN 88 11:20:09

STOPPED SINGLE SCAN 22 JAN 88 11:20:09

BEGIN SCAN GROUP 1 22 JAN 88 11:10:00
30 KW/60 HZ GEN SET S/N KZO 5841

C	1	EXHAUST 1	800.41 DEG. F
C	2	EXHAUST 2	760.25 DEG. F
C	3	EXHAUST 3	764.85 DEG. F
C	4	EXHAUST 4	802.78 DEG. F
C	5	EXHAUST 5	850.88 DEG. F
C	6	EXHAUST 6	787.21 DEG. F
C	7	ENG. COOL. IN	203.72 DEG. F
C	8	ENG. COOL. OUT	213.40 DEG. F
C	9	OIL SUMP	229.89 DEG. F
C	10	OIL GALLERY	229.84 DEG. F
C	13	ENG. INTAKE	138.82 DEG. F
C	14	RAD. TOP LEFT	163.57 DEG. F
C	15	RAD. BTTM LEFT	150.33 DEG. F
C	16	RAD. TOP RIGHT	148.14 DEG. F
C	17	RAD. BTTM RIGHT	136.96 DEG. F
C	18	GEN. AIR IN	121.62 DEG. F
C	19	GEN. AIR OUT	141.10 DEG. F
C	20	GEN. FRAME TOP	134.82 DEG. F
C	21	GEN. FRAME BTTM	128.61 DEG. F
C	22	GEN. EXCITER	138.95 DEG. F
C	23	GEN. VOLT. REG.	136.20 DEG. F
C	24	CONTROL PANEL	137.79 DEG. F
C	25	RELAY AREA	124.37 DEG. F
C	26	BATTERY LEFT	144.47 DEG. F
C	27	BATTERY RIGHT	133.42 DEG. F
C	28	AIR IN SET	125.22 DEG. F
C	29	FUEL TANK	106.72 DEG. F
C	30	FUEL OUTLET	146.17 DEG. F

END SCAN GROUP 1 22 JAN 88 11:10:10

STOPPED SINGLE SCAN 22 JAN 88 11:10:10

BEGIN SCAN GROUP 1 22 JAN 88 11:29:58
30 KW/60 HZ GEN SET S/N KZO 5841

C	1	EXHAUST 1	800.38 DEG. F
C	2	EXHAUST 2	760.15 DEG. F
C	3	EXHAUST 3	768.11 DEG. F
C	4	EXHAUST 4	805.11 DEG. F
C	5	EXHAUST 5	851.88 DEG. F
C	6	EXHAUST 6	787.23 DEG. F
C	7	ENG. COOL. IN	205.85 DEG. F
C	8	ENG. COOL. OUT	215.47 DEG. F
C	9	OIL SUMP	237.39 DEG. F
C	10	OIL GALLERY	237.48 DEG. F
C	13	ENG. INTAKE	139.39 DEG. F
C	14	RAD. TOP LEFT	164.95 DEG. F
C	15	RAD. BTTM LEFT	152.18 DEG. F
C	16	RAD. TOP RIGHT	150.87 DEG. F
C	17	RAD. BTTM RIGHT	139.34 DEG. F
C	18	GEN. AIR IN	122.71 DEG. F
C	19	GEN. AIR OUT	143.47 DEG. F
C	20	GEN. FRAME TOP	136.73 DEG. F
C	21	GEN. FRAME BTTM	129.63 DEG. F
C	22	GEN. EXCITER	139.95 DEG. F
C	23	GEN. VOLT. REG.	137.18 DEG. F
C	24	CONTROL PANEL	138.78 DEG. F
C	25	RELAY AREA	124.56 DEG. F
C	26	BATTERY LEFT	147.87 DEG. F
C	27	BATTERY RIGHT	136.44 DEG. F
C	28	AIR IN SET	126.78 DEG. F
C	29	FUEL TANK	110.03 DEG. F
C	30	FUEL OUTLET	147.82 DEG. F

END SCAN GROUP 1 22 JAN 88 11:30:09

STOPPED SINGLE SCAN 22 JAN 88 11:30:09

BEGIN SCAN GROUP 1 22 JAN 88 11:31:15
30 KW/60 HZ GEN SET S/N KZO 5841

C	1	EXHAUST 1	829.98 DEG. F
C	2	EXHAUST 2	783.76 DEG. F
C	3	EXHAUST 3	787.97 DEG. F
C	4	EXHAUST 4	827.24 DEG. F
C	5	EXHAUST 5	878.10 DEG. F
C	6	EXHAUST 6	810.06 DEG. F
C	7	ENG. COOL. IN	205.92 DEG. F
C	8	ENG. COOL. OUT	215.73 DEG. F
C	9	OIL SUMP	236.84 DEG. F
C	10	OIL GALLERY	237.61 DEG. F
C	13	ENG. INTAKE	139.51 DEG. F
C	14	RAD. TOP LEFT	165.89 DEG. F
C	15	RAD. BTTM LEFT	151.97 DEG. F
C	16	RAD. TOP RIGHT	158.28 DEG. F
C	17	RAD. BTTM RIGHT	139.53 DEG. F
C	18	GEN. AIR IN	123.86 DEG. F
C	19	GEN. AIR OUT	143.88 DEG. F
C	20	GEN. FRAME TOP	136.80 DEG. F
C	21	GEN. FRAME BTTM	129.68 DEG. F
C	22	GEN. EXCITER	139.90 DEG. F
C	23	GEN. VOLT. REG.	137.20 DEG. F
C	24	CONTROL PANEL	138.94 DEG. F
C	25	RELAY AREA	124.61 DEG. F
C	26	BATTERY LEFT	147.19 DEG. F
C	27	BATTERY RIGHT	136.51 DEG. F
C	28	AIR IN SET	126.83 DEG. F
C	29	FUEL TANK	116.23 DEG. F
C	30	FUEL OUTLET	148.13 DEG. F

END SCAN GROUP 1 22 JAN 88 11:31:24

STOPPED SINGLE SCAN 22 JAN 88 11:31:24

BEGIN SCAN GROUP 1 22 JAN 88 11:44:12
30 KW/60 HZ GEN SET S/N KZO 5841

C	1	EXHAUST 1	721.51 DEG. F
C	2	EXHAUST 2	674.68 DEG. F
C	3	EXHAUST 3	672.72 DEG. F
C	4	EXHAUST 4	714.38 DEG. F
C	5	EXHAUST 5	769.82 DEG. F
C	6	EXHAUST 6	687.92 DEG. F
C	7	ENG. COOL. IN	186.68 DEG. F
C	8	ENG. COOL. OUT	194.26 DEG. F
C	9	OIL SUMP	232.58 DEG. F
C	10	OIL GALLERY	233.64 DEG. F
C	13	ENG. INTAKE	132.97 DEG. F
C	14	RAD. TOP LEFT	153.87 DEG. F
C	15	RAD. BTTM LEFT	143.16 DEG. F
C	16	RAD. TOP RIGHT	143.18 DEG. F
C	17	RAD. BTTM RIGHT	137.70 DEG. F
C	18	GEN. AIR IN	119.94 DEG. F
C	19	GEN. AIR OUT	141.55 DEG. F
C	20	GEN. FRAME TOP	135.48 DEG. F
C	21	GEN. FRAME BTTM	128.47 DEG. F
C	22	GEN. EXCITER	136.84 DEG. F
C	23	GEN. VOLT. REG.	136.71 DEG. F
C	24	CONTROL PANEL	137.87 DEG. F
C	25	RELAY AREA	122.15 DEG. F
C	26	BATTERY LEFT	145.29 DEG. F
C	27	BATTERY RIGHT	135.26 DEG. F
C	28	AIR IN SET	123.08 DEG. F
C	29	FUEL TANK	112.68 DEG. F
C	30	FUEL OUTLET	145.52 DEG. F

END SCAN GROUP 1 22 JAN 88 11:44:21

STOPPED SINGLE SCAN 22 JAN 88 11:44:21

BEGIN SCAN GROUP 1 22 JAN 88 11:36:02
30 KW/60 HZ GEN SET S/N KZO 5841

C	1	EXHAUST 1	853.55 DEG. F
C	2	EXHAUST 2	803.89 DEG. F
C	3	EXHAUST 3	812.79 DEG. F
C	4	EXHAUST 4	846.81 DEG. F
C	5	EXHAUST 5	897.81 DEG. F
C	6	EXHAUST 6	828.85 DEG. F
C	7	ENG. COOL. IN	208.82 DEG. F
C	8	ENG. COOL. OUT	218.23 DEG. F
C	9	OIL SUMP	238.89 DEG. F
C	10	OIL GALLERY	238.82 DEG. F
C	13	ENG. INTAKE	138.84 DEG. F
C	14	RAD. TOP LEFT	166.83 DEG. F
C	15	RAD. BTTM LEFT	151.54 DEG. F
C	16	RAD. TOP RIGHT	149.78 DEG. F
C	17	RAD. BTTM RIGHT	139.79 DEG. F
C	18	GEN. AIR IN	126.86 DEG. F
C	19	GEN. AIR OUT	145.34 DEG. F
C	20	GEN. FRAME TOP	137.21 DEG. F
C	21	GEN. FRAME BTTM	129.88 DEG. F
C	22	GEN. EXCITER	139.48 DEG. F
C	23	GEN. VOLT. REG.	137.41 DEG. F
C	24	CONTROL PANEL	138.97 DEG. F
C	25	RELAY AREA	124.82 DEG. F
C	26	BATTERY LEFT	147.46 DEG. F
C	27	BATTERY RIGHT	136.83 DEG. F
C	28	AIR IN SET	123.64 DEG. F
C	29	FUEL TANK	111.88 DEG. F
C	30	FUEL OUTLET	147.27 DEG. F

END SCAN GROUP 1 22 JAN 88 11:36:12

STOPPED SINGLE SCAN 22 JAN 88 11:36:12

BEGIN SCAN GROUP 1 22 JAN 88 11:58:05
30 KW/60 HZ GEN SET S/N KZO 5841

C	1	EXHAUST 1	801.24 DEG. F
C	2	EXHAUST 2	760.42 DEG. F
C	3	EXHAUST 3	767.08 DEG. F
C	4	EXHAUST 4	804.14 DEG. F
C	5	EXHAUST 5	848.12 DEG. F
C	6	EXHAUST 6	788.22 DEG. F
C	7	ENG. COOL. IN	204.86 DEG. F
C	8	ENG. COOL. OUT	214.44 DEG. F
C	9	OIL SUMP	234.36 DEG. F
C	10	OIL GALLERY	235.41 DEG. F
C	13	ENG. INTAKE	138.63 DEG. F
C	14	RAD. TOP LEFT	163.72 DEG. F
C	15	RAD. BTTM LEFT	150.84 DEG. F
C	16	RAD. TOP RIGHT	149.27 DEG. F
C	17	RAD. BTTM RIGHT	139.24 DEG. F
C	18	GEN. AIR IN	121.94 DEG. F
C	19	GEN. AIR OUT	143.87 DEG. F
C	20	GEN. FRAME TOP	136.89 DEG. F
C	21	GEN. FRAME BTTM	130.25 DEG. F
C	22	GEN. EXCITER	139.47 DEG. F
C	23	GEN. VOLT. REG.	136.23 DEG. F
C	24	CONTROL PANEL	137.81 DEG. F
C	25	RELAY AREA	124.38 DEG. F
C	26	BATTERY LEFT	146.13 DEG. F
C	27	BATTERY RIGHT	136.67 DEG. F
C	28	AIR IN SET	124.60 DEG. F
C	29	FUEL TANK	113.94 DEG. F
C	30	FUEL OUTLET	146.83 DEG. F

END SCAN GROUP 1 22 JAN 88 11:58:14

STOPPED SINGLE SCAN 22 JAN 88 11:58:14

BEGIN SCAN GROUP 1 22 JAN 88 11:59:33
30 KW/60 HZ GEN SET S/N KZO 5841

C	1	EXHAUST 1	802.51 DEG. F
C	2	EXHAUST 2	757.11 DEG. F
C	3	EXHAUST 3	766.12 DEG. F
C	4	EXHAUST 4	803.25 DEG. F
C	5	EXHAUST 5	848.54 DEG. F
C	6	EXHAUST 6	788.99 DEG. F
C	7	ENG. COOL. IN	204.68 DEG. F
C	8	ENG. COOL. OUT	214.42 DEG. F
C	9	OIL SUMP	235.00 DEG. F
C	10	OIL GALLERY	235.73 DEG. F
C	13	ENG. INTAKE	138.87 DEG. F
C	14	RAD. TOP LEFT	164.37 DEG. F
C	15	RAD. BTTM LEFT	158.45 DEG. F
C	16	RAD. TOP RIGHT	148.95 DEG. F
C	17	RAD. BTTM RIGHT	133.81 DEG. F
C	18	GEN. AIR IN	121.37 DEG. F
C	19	GEN. AIR OUT	143.65 DEG. F
C	20	GEN. FRAME TOP	136.56 DEG. F
C	21	GEN. FRAME BTTM	129.81 DEG. F
C	22	GEN. EXCITER	139.04 DEG. F
C	23	GEN. VOLT. REG.	136.32 DEG. F
C	24	CONTROL PANEL	138.25 DEG. F
C	25	RELAY AREA	124.08 DEG. F
C	26	BATTERY LEFT	146.38 DEG. F
C	27	BATTERY RIGHT	136.90 DEG. F
C	28	AIR IN SET	124.56 DEG. F
C	29	FUEL TANK	114.20 DEG. F
C	30	FUEL OUTLET	148.01 DEG. F

END SCAN GROUP 1 22 JAN 88 11:59:42

STOPPED SINGLE SCAN 22 JAN 88 11:59:42

BEGIN SCAN GROUP 1 22 JAN 88 12:10:14
30 KW/60 HZ GEN SET S/N KZO 5841

C	1	EXHAUST 1	541.43 DEG. F
C	2	EXHAUST 2	537.15 DEG. F
C	3	EXHAUST 3	546.97 DEG. F
C	4	EXHAUST 4	603.75 DEG. F
C	5	EXHAUST 5	644.39 DEG. F
C	6	EXHAUST 6	577.28 DEG. F
C	7	ENG. COOL. IN	191.92 DEG. F
C	8	ENG. COOL. OUT	199.38 DEG. F
C	9	OIL SUMP	234.15 DEG. F
C	10	OIL GALLERY	235.87 DEG. F
C	13	ENG. INTAKE	135.46 DEG. F
C	14	RAD. TOP LEFT	156.62 DEG. F
C	15	RAD. BTTM LEFT	145.71 DEG. F
C	16	RAD. TOP RIGHT	145.06 DEG. F
C	17	RAD. BTTM RIGHT	138.12 DEG. F
C	18	GEN. AIR IN	128.87 DEG. F
C	19	GEN. AIR OUT	141.75 DEG. F
C	20	GEN. FRAME TOP	135.87 DEG. F
C	21	GEN. FRAME BTTM	128.82 DEG. F
C	22	GEN. EXCITER	137.87 DEG. F
C	23	GEN. VOLT. REG.	136.43 DEG. F
C	24	CONTROL PANEL	137.87 DEG. F
C	25	RELAY AREA	123.81 DEG. F
C	26	BATTERY LEFT	146.58 DEG. F
C	27	BATTERY RIGHT	137.20 DEG. F
C	28	AIR IN SET	122.59 DEG. F
C	29	FUEL TANK	115.54 DEG. F
C	30	FUEL OUTLET	148.23 DEG. F

END SCAN GROUP 1 22 JAN 88 12:10:23

STOPPED SINGLE SCAN 22 JAN 88 12:10:23

BEGIN SCAN GROUP 1 22 JAN 88 12:04:32
30 KW/60 HZ GEN SET S/N KZO 5841

C	1	EXHAUST 1	800.96 DEG. F
C	2	EXHAUST 2	760.90 DEG. F
C	3	EXHAUST 3	768.57 DEG. F
C	4	EXHAUST 4	805.82 DEG. F
C	5	EXHAUST 5	851.27 DEG. F
C	6	EXHAUST 6	788.11 DEG. F
C	7	ENG. COOL. IN	204.86 DEG. F
C	8	ENG. COOL. OUT	214.58 DEG. F
C	9	OIL SUMP	235.85 DEG. F
C	10	OIL GALLERY	236.68 DEG. F
C	13	ENG. INTAKE	137.71 DEG. F
C	14	RAD. TOP LEFT	163.77 DEG. F
C	15	RAD. BTTM LEFT	156.67 DEG. F
C	16	RAD. TOP RIGHT	149.85 DEG. F
C	17	RAD. BTTM RIGHT	139.21 DEG. F
C	18	GEN. AIR IN	121.55 DEG. F
C	19	GEN. AIR OUT	144.51 DEG. F
C	20	GEN. FRAME TOP	136.87 DEG. F
C	21	GEN. FRAME BTTM	129.85 DEG. F
C	22	GEN. EXCITER	138.85 DEG. F
C	23	GEN. VOLT. REG.	136.48 DEG. F
C	24	CONTROL PANEL	138.20 DEG. F
C	25	RELAY AREA	123.51 DEG. F
C	26	BATTERY LEFT	146.88 DEG. F
C	27	BATTERY RIGHT	137.47 DEG. F
C	28	AIR IN SET	125.53 DEG. F
C	29	FUEL TANK	114.86 DEG. F
C	30	FUEL OUTLET	148.10 DEG. F

END SCAN GROUP 1 22 JAN 88 12:04:41

STOPPED SINGLE SCAN 22 JAN 88 12:04:41

BEGIN SCAN GROUP 1 22 JAN 88 12:24:06
30 KW/60 HZ GEN SET S/N KZO 5841

C	1	EXHAUST 1	799.12 DEG. F
C	2	EXHAUST 2	759.95 DEG. F
C	3	EXHAUST 3	766.62 DEG. F
C	4	EXHAUST 4	803.43 DEG. F
C	5	EXHAUST 5	846.75 DEG. F
C	6	EXHAUST 6	786.35 DEG. F
C	7	ENG. COOL. IN	204.41 DEG. F
C	8	ENG. COOL. OUT	214.12 DEG. F
C	9	OIL SUMP	235.39 DEG. F
C	10	OIL GALLERY	236.18 DEG. F
C	13	ENG. INTAKE	137.48 DEG. F
C	14	RAD. TOP LEFT	163.84 DEG. F
C	15	RAD. BTTM LEFT	156.34 DEG. F
C	16	RAD. TOP RIGHT	148.94 DEG. F
C	17	RAD. BTTM RIGHT	139.87 DEG. F
C	18	GEN. AIR IN	121.58 DEG. F
C	19	GEN. AIR OUT	143.39 DEG. F
C	20	GEN. FRAME TOP	136.87 DEG. F
C	21	GEN. FRAME BTTM	129.82 DEG. F
C	22	GEN. EXCITER	138.72 DEG. F
C	23	GEN. VOLT. REG.	136.88 DEG. F
C	24	CONTROL PANEL	137.74 DEG. F
C	25	RELAY AREA	123.41 DEG. F
C	26	BATTERY LEFT	146.83 DEG. F
C	27	BATTERY RIGHT	138.88 DEG. F
C	28	AIR IN SET	124.95 DEG. F
C	29	FUEL TANK	117.17 DEG. F
C	30	FUEL OUTLET	146.93 DEG. F

END SCAN GROUP 1 22 JAN 88 12:24:16

STOPPED SINGLE SCAN 22 JAN 88 12:24:16

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BEGIN SCAN GROUP 1   22 JAN 88  12:25:28
30 KW/60 HZ GEN SET S/N KZO 5841

C    1 EXHAUST 1          800.90 DEG. F
C    2 EXHAUST 2          759.55 DEG. F
C    3 EXHAUST 3          767.74 DEG. F
C    4 EXHAUST 4          804.39 DEG. F
C    5 EXHAUST 5          848.64 DEG. F
C    6 EXHAUST 6          786.69 DEG. F
C    7 ENG. COOL. IN      204.74 DEG. F
C    8 ENG. COOL. OUT     214.38 DEG. F
C    9 OIL SUMP           235.47 DEG. F
C   10 OIL GALLERY        236.40 DEG. F
C   13  ENG. INTAKE       137.62 DEG. F
C   14 RAD. TOP LEFT      164.54 DEG. F
C   15 RAD. BTTM LEFT     158.17 DEG. F
C   16 RAD. TOP RIGHT     148.79 DEG. F
C   17 RAD. BTTM RIGHT    139.87 DEG. F
C   18 GEN. AIR IN        121.18 DEG. F
C   19 GEN. AIR OUT       143.36 DEG. F
C   20 GEN. FRAME TOP     136.32 DEG. F
C   21 GEN. FRAME BTTM    129.14 DEG. F
C   22 GEN. EXCITER       138.95 DEG. F
C   23 GEN. VOLT. REG.    136.85 DEG. F
C   24 CONTROL PANEL      137.84 DEG. F
C   25 RELAY AREA         123.49 DEG. F
C   26 BATTERY LEFT       146.01 DEG. F
C   27 BATTERY RIGHT      138.18 DEG. F
C   28 AIR IN SET         124.73 DEG. F
C   29 FUEL TANK          117.25 DEG. F
C   30 FUEL OUTLET        147.45 DEG. F

END SCAN GROUP 1     22 JAN 88  12:25:37

STOPPED SINGLE SCAN  22 JAN 88  12:25:37
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BEGIN SCAN GROUP 1   22 JAN 88  12:35:35
30 KW/60 HZ GEN SET S/N KZO 5841

C    1 EXHAUST 1          457.81 DEG. F
C    2 EXHAUST 2          458.82 DEG. F
C    3 EXHAUST 3          473.12 DEG. F
C    4 EXHAUST 4          536.56 DEG. F
C    5 EXHAUST 5          544.12 DEG. F
C    6 EXHAUST 6          511.27 DEG. F
C    7 ENG. COOL. IN      194.65 DEG. F
C    8 ENG. COOL. OUT     201.89 DEG. F
C    9 OIL SUMP           234.64 DEG. F
C   10 OIL GALLERY        236.89 DEG. F
C   13  ENG. INTAKE       137.53 DEG. F
C   14 RAD. TOP LEFT      158.63 DEG. F
C   15 RAD. BTTM LEFT     147.62 DEG. F
C   16 RAD. TOP RIGHT     146.43 DEG. F
C   17 RAD. BTTM RIGHT    138.73 DEG. F
C   18 GEN. AIR IN        120.93 DEG. F
C   19 GEN. AIR OUT       142.84 DEG. F
C   20 GEN. FRAME TOP     136.38 DEG. F
C   21 GEN. FRAME BTTM    129.08 DEG. F
C   22 GEN. EXCITER       138.48 DEG. F
C   23 GEN. VOLT. REG.    136.33 DEG. F
C   24 CONTROL PANEL      137.87 DEG. F
C   25 RELAY AREA         123.38 DEG. F
C   26 BATTERY LEFT       147.40 DEG. F
C   27 BATTERY RIGHT      138.57 DEG. F
C   28 AIR IN SET         124.72 DEG. F
C   29 FUEL TANK          118.34 DEG. F
C   30 FUEL OUTLET        148.45 DEG. F

END SCAN GROUP 1     22 JAN 88  12:35:45

STOPPED SINGLE SCAN  22 JAN 88  12:35:45
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BEGIN SCAN GROUP 1   22 JAN 88  12:38:25
30 KW/60 HZ GEN SET S/N KZO 5841

C    1 EXHAUST 1          802.96 DEG. F
C    2 EXHAUST 2          760.13 DEG. F
C    3 EXHAUST 3          769.86 DEG. F
C    4 EXHAUST 4          809.53 DEG. F
C    5 EXHAUST 5          855.84 DEG. F
C    6 EXHAUST 6          789.42 DEG. F
C    7 ENG. COOL. IN      204.96 DEG. F
C    8 ENG. COOL. OUT     214.69 DEG. F
C    9 OIL SUMP           236.34 DEG. F
C   10 OIL GALLERY        237.84 DEG. F
C   13  ENG. INTAKE       137.73 DEG. F
C   14 RAD. TOP LEFT      164.13 DEG. F
C   15 RAD. BTTM LEFT     158.45 DEG. F
C   16 RAD. TOP RIGHT     148.78 DEG. F
C   17 RAD. BTTM RIGHT    139.18 DEG. F
C   18 GEN. AIR IN        120.16 DEG. F
C   19 GEN. AIR OUT       143.97 DEG. F
C   20 GEN. FRAME TOP     136.44 DEG. F
C   21 GEN. FRAME BTTM    129.05 DEG. F
C   22 GEN. EXCITER       139.82 DEG. F
C   23 GEN. VOLT. REG.    136.23 DEG. F
C   24 CONTROL PANEL      137.91 DEG. F
C   25 RELAY AREA         123.48 DEG. F
C   26 BATTERY LEFT       147.42 DEG. F
C   27 BATTERY RIGHT      138.47 DEG. F
C   28 AIR IN SET         124.32 DEG. F
C   29 FUEL TANK          117.85 DEG. F
C   30 FUEL OUTLET        147.30 DEG. F

END SCAN GROUP 1     22 JAN 88  12:38:34

STOPPED SINGLE SCAN  22 JAN 88  12:38:35
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BEGIN SCAN GROUP 1   22 JAN 88  12:49:00
30 KW/60 HZ GEN SET S/N KZO 5841

C    1 EXHAUST 1          797.61 DEG. F
C    2 EXHAUST 2          755.63 DEG. F
C    3 EXHAUST 3          765.76 DEG. F
C    4 EXHAUST 4          803.38 DEG. F
C    5 EXHAUST 5          846.60 DEG. F
C    6 EXHAUST 6          782.48 DEG. F
C    7 ENG. COOL. IN      203.91 DEG. F
C    8 ENG. COOL. OUT     213.48 DEG. F
C    9 OIL SUMP                  OPEN TC
C   10 OIL GALLERY        235.78 DEG. F
C   13  ENG. INTAKE       136.85 DEG. F
C   14 RAD. TOP LEFT      162.83 DEG. F
C   15 RAD. BTTM LEFT     149.87 DEG. F
C   16 RAD. TOP RIGHT     148.34 DEG. F
C   17 RAD. BTTM RIGHT    138.73 DEG. F
C   18 GEN. AIR IN        121.84 DEG. F
C   19 GEN. AIR OUT       143.18 DEG. F
C   20 GEN. FRAME TOP     135.82 DEG. F
C   21 GEN. FRAME BTTM    128.99 DEG. F
C   22 GEN. EXCITER       138.33 DEG. F
C   23 GEN. VOLT. REG.    135.79 DEG. F
C   24 CONTROL PANEL      137.29 DEG. F
C   25 RELAY AREA         123.88 DEG. F
C   26 BATTERY LEFT       147.23 DEG. F
C   27 BATTERY RIGHT      139.83 DEG. F
C   28 AIR IN SET         124.86 DEG. F
C   29 FUEL TANK          119.64 DEG. F
C   30 FUEL OUTLET        147.89 DEG. F

END SCAN GROUP 1     22 JAN 88  12:49:18

STOPPED SINGLE SCAN  22 JAN 88  12:49:18
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BEGIN SCAN GROUP 1   22 JAN 88  12:50:22
30 KW/60 HZ GEN SET S/N KZO 5841

C    1 EXHAUST 1          802.65 DEG. F
C    2 EXHAUST 2          760.64 DEG. F
C    3 EXHAUST 3          767.56 DEG. F
C    4 EXHAUST 4          807.24 DEG. F
C    5 EXHAUST 5          858.71 DEG. F
C    6 EXHAUST 6          788.59 DEG. F
C    7 ENG. COOL. IN      204.89 DEG. F
C    8 ENG. COOL. OUT     213.88 DEG. F
C    9 OIL SUMP           235.58 DEG. F
C   10 OIL GALLERY        236.82 DEG. F
C   13  ENG. INTAKE       137.84 DEG. F
C   14 RAD. TOP LEFT      162.98 DEG. F
C   15 RAD. BTTM LEFT     158.18 DEG. F
C   16 RAD. TOP RIGHT     148.62 DEG. F
C   17 RAD. BTTM RIGHT    138.78 DEG. F
C   18 GEN. AIR IN        121.94 DEG. F
C   19 GEN. AIR OUT       143.34 DEG. F
C   20 GEN. FRAME TOP     136.80 DEG. F
C   21 GEN. FRAME BTTM    128.78 DEG. F
C   22 GEN. EXCITER       138.58 DEG. F
C   23 GEN. VOLT. REG.    135.85 DEG. F
C   24 CONTROL PANEL      137.54 DEG. F
C   25 RELAY AREA         123.16 DEG. F
C   26 BATTERY LEFT       147.45 DEG. F
C   27 BATTERY RIGHT      139.23 DEG. F
C   28 AIR IN SET         125.85 DEG. F
C   29 FUEL TANK          119.83 DEG. F
C   30 FUEL OUTLET        147.93 DEG. F

END SCAN GROUP 1     22 JAN 88  12:50:31

STOPPED SINGLE SCAN  22 JAN 88  12:50:31
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BEGIN SCAN GROUP 1   22 JAN 88  13:02:35
30 KW/60 HZ GEN SET S/N KZO 5841

C    1 EXHAUST 1          739.83 DEG. F
C    2 EXHAUST 2          691.47 DEG. F
C    3 EXHAUST 3          694.54 DEG. F
C    4 EXHAUST 4          738.19 DEG. F
C    5 EXHAUST 5          789.55 DEG. F
C    6 EXHAUST 6          789.52 DEG. F
C    7 ENG. COOL. IN      189.96 DEG. F
C    8 ENG. COOL. OUT     198.88 DEG. F
C    9 OIL SUMP           232.24 DEG. F
C   10 OIL GALLERY        233.94 DEG. F
C   13  ENG. INTAKE       134.79 DEG. F
C   14 RAD. TOP LEFT      155.94 DEG. F
C   15 RAD. BTTM LEFT     145.84 DEG. F
C   16 RAD. TOP RIGHT     144.75 DEG. F
C   17 RAD. BTTM RIGHT    138.28 DEG. F
C   18 GEN. AIR IN        120.27 DEG. F
C   19 GEN. AIR OUT       141.73 DEG. F
C   20 GEN. FRAME TOP     135.86 DEG. F
C   21 GEN. FRAME BTTM    128.98 DEG. F
C   22 GEN. EXCITER       137.81 DEG. F
C   23 GEN. VOLT. REG.    136.28 DEG. F
C   24 CONTROL PANEL      137.96 DEG. F
C   25 RELAY AREA         123.36 DEG. F
C   26 BATTERY LEFT       147.64 DEG. F
C   27 BATTERY RIGHT      139.69 DEG. F
C   28 AIR IN SET         124.32 DEG. F
C   29 FUEL TANK          128.79 DEG. F
C   30 FUEL OUTLET        148.57 DEG. F

END SCAN GROUP 1     22 JAN 88  13:02:44

STOPPED SINGLE SCAN  22 JAN 88  13:02:44
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BEGIN SCAN GROUP 1   22 JAN 88  12:55:16
30 KW/60 HZ GEN SET S/N KZO 5841

C    1 EXHAUST 1          829.13 DEG. F
C    2 EXHAUST 2          779.18 DEG. F
C    3 EXHAUST 3          798.83 DEG. F
C    4 EXHAUST 4          831.24 DEG. F
C    5 EXHAUST 5          877.28 DEG. F
C    6 EXHAUST 6          811.62 DEG. F
C    7 ENG. COOL. IN      206.34 DEG. F
C    8 ENG. COOL. OUT     216.48 DEG. F
C    9 OIL SUMP           237.19 DEG. F
C   10 OIL GALLERY        237.17 DEG. F
C   13  ENG. INTAKE       137.98 DEG. F
C   14 RAD. TOP LEFT      165.22 DEG. F
C   15 RAD. BTTM LEFT     151.22 DEG. F
C   16 RAD. TOP RIGHT     149.46 DEG. F
C   17 RAD. BTTM RIGHT    139.33 DEG. F
C   18 GEN. AIR IN        121.42 DEG. F
C   19 GEN. AIR OUT       144.44 DEG. F
C   20 GEN. FRAME TOP     136.53 DEG. F
C   21 GEN. FRAME BTTM    129.33 DEG. F
C   22 GEN. EXCITER       138.96 DEG. F
C   23 GEN. VOLT. REG.    136.87 DEG. F
C   24 CONTROL PANEL      137.69 DEG. F
C   25 RELAY AREA         123.14 DEG. F
C   26 BATTERY LEFT       147.88 DEG. F
C   27 BATTERY RIGHT      139.76 DEG. F
C   28 AIR IN SET         125.82 DEG. F
C   29 FUEL TANK          126.30 DEG. F
C   30 FUEL OUTLET        147.43 DEG. F

END SCAN GROUP 1     22 JAN 88  12:55:25

STOPPED SINGLE SCAN  22 JAN 88  12:55:25
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BEGIN SCAN GROUP 1   22 JAN 88  13:12:52
30 KW/60 HZ GEN SET S/N KZO 5841

C    1 EXHAUST 1          794.45 DEG. F
C    2 EXHAUST 2          752.37 DEG. F
C    3 EXHAUST 3          761.93 DEG. F
C    4 EXHAUST 4          802.65 DEG. F
C    5 EXHAUST 5          845.52 DEG. F
C    6 EXHAUST 6          783.78 DEG. F
C    7 ENG. COOL. IN      202.98 DEG. F
C    8 ENG. COOL. OUT     212.58 DEG. F
C    9 OIL SUMP                  OPEN TC
C   10 OIL GALLERY        234.35 DEG. F
C   13  ENG. INTAKE       136.82 DEG. F
C   14 RAD. TOP LEFT      162.21 DEG. F
C   15 RAD. BTTM LEFT     148.76 DEG. F
C   16 RAD. TOP RIGHT     147.57 DEG. F
C   17 RAD. BTTM RIGHT    138.22 DEG. F
C   18 GEN. AIR IN        120.61 DEG. F
C   19 GEN. AIR OUT       142.45 DEG. F
C   20 GEN. FRAME TOP     135.25 DEG. F
C   21 GEN. FRAME BTTM    128.46 DEG. F
C   22 GEN. EXCITER       137.85 DEG. F
C   23 GEN. VOLT. REG.    135.39 DEG. F
C   24 CONTROL PANEL      137.28 DEG. F
C   25 RELAY AREA         122.84 DEG. F
C   26 BATTERY LEFT       147.33 DEG. F
C   27 BATTERY RIGHT      139.93 DEG. F
C   28 AIR IN SET         124.11 DEG. F
C   29 FUEL TANK          121.69 DEG. F
C   30 FUEL OUTLET        146.58 DEG. F

END SCAN GROUP 1     22 JAN 88  13:13:02

STOPPED SINGLE SCAN  22 JAN 88  13:13:02
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BEGIN SCAN GROUP 1 22 JAN 88 13:17:45
30 KW/60 HZ GEN SET S/N KZO 5841

C	1	EXHAUST 1	794.55	DEG. F
C	2	EXHAUST 2	755.38	DEG. F
C	3	EXHAUST 3	761.44	DEG. F
C	4	EXHAUST 4	802.86	DEG. F
C	5	EXHAUST 5	846.88	DEG. F
C	6	EXHAUST 6	783.59	DEG. F
C	7	ENG. COOL. IN	203.27	DEG. F
C	8	ENG. COOL. OUT	213.84	DEG. F
C	9	OIL SUMP	234.59	DEG. F
C	10	OIL GALLERY	235.27	DEG. F
C	13	ENG. INTAKE	135.68	DEG. F
C	14	RAD. TOP LEFT	161.88	DEG. F
C	15	RAD. BTTM LEFT	147.97	DEG. F
C	16	RAD. TOP RIGHT	146.64	DEG. F
C	17	RAD. BTTM RIGHT	137.86	DEG. F
C	18	GEN. AIR IN	118.58	DEG. F
C	19	GEN. AIR OUT	141.59	DEG. F
C	20	GEN. FRAME TOP	134.75	DEG. F
C	21	GEN. FRAME BTTM	127.86	DEG. F
C	22	GEN. EXCITER	137.31	DEG. F
C	23	GEN. VOLT. REG.	135.31	DEG. F
C	24	CONTROL PANEL	137.12	DEG. F
C	25	RELAY AREA	122.41	DEG. F
C	26	BATTERY LEFT	147.87	DEG. F
C	27	BATTERY RIGHT	140.22	DEG. F
C	28	AIR IN SET	121.14	DEG. F
C	29	FUEL TANK	122.87	DEG. F
C	30	FUEL OUTLET	146.62	DEG. F

END SCAN GROUP 1 22 JAN 88 13:17:54

STOPPED SINGLE SCAN 22 JAN 88 13:17:54

BEGIN SCAN GROUP 1 22 JAN 88 13:49:11
30 KW/60 HZ GEN SET S/N KZO 5841

C	1	EXHAUST 1	809.51	DEG. F
C	2	EXHAUST 2	772.52	DEG. F
C	3	EXHAUST 3	780.64	DEG. F
C	4	EXHAUST 4	819.14	DEG. F
C	5	EXHAUST 5	867.21	DEG. F
C	6	EXHAUST 6	798.53	DEG. F
C	7	ENG. COOL. IN	205.47	DEG. F
C	8	ENG. COOL. OUT	215.48	DEG. F
C	9	OIL SUMP		OPEN TC
C	10	OIL GALLERY	238.38	DEG. F
C	13	ENG. INTAKE	137.85	DEG. F
C	14	RAD. TOP LEFT	163.73	DEG. F
C	15	RAD. BTTM LEFT	150.86	DEG. F
C	16	RAD. TOP RIGHT	148.39	DEG. F
C	17	RAD. BTTM RIGHT	139.19	DEG. F
C	18	GEN. AIR IN	118.66	DEG. F
C	19	GEN. AIR OUT	144.55	DEG. F
C	20	GEN. FRAME TOP	136.92	DEG. F
C	21	GEN. FRAME BTTM	128.63	DEG. F
C	22	GEN. EXCITER	138.65	DEG. F
C	23	GEN. VOLT. REG.	136.12	DEG. F
C	24	CONTROL PANEL	137.64	DEG. F
C	25	RELAY AREA	122.84	DEG. F
C	26	BATTERY LEFT	149.74	DEG. F
C	27	BATTERY RIGHT	142.26	DEG. F
C	28	AIR IN SET	123.36	DEG. F
C	29	FUEL TANK	124.41	DEG. F
C	30	FUEL OUTLET	146.95	DEG. F

END SCAN GROUP 1 22 JAN 88 13:49:20

STOPPED SINGLE SCAN 22 JAN 88 13:49:20

BEGIN SCAN GROUP 1 22 JAN 88 13:18:54
30 KW/60 HZ GEN SET S/N KZO 5841

C	1	EXHAUST 1	800.37	DEG. F
C	2	EXHAUST 2	757.93	DEG. F
C	3	EXHAUST 3	768.35	DEG. F
C	4	EXHAUST 4	806.38	DEG. F
C	5	EXHAUST 5	851.78	DEG. F
C	6	EXHAUST 6	787.45	DEG. F
C	7	ENG. COOL. IN	203.96	DEG. F
C	8	ENG. COOL. OUT	213.55	DEG. F
C	9	OIL SUMP		OPEN TC
C	10	OIL GALLERY	235.48	DEG. F
C	13	ENG. INTAKE	137.22	DEG. F
C	14	RAD. TOP LEFT	163.61	DEG. F
C	15	RAD. BTTM LEFT	150.37	DEG. F
C	16	RAD. TOP RIGHT	148.49	DEG. F
C	17	RAD. BTTM RIGHT	138.88	DEG. F
C	18	GEN. AIR IN	121.84	DEG. F
C	19	GEN. AIR OUT	143.84	DEG. F
C	20	GEN. FRAME TOP	135.97	DEG. F
C	21	GEN. FRAME BTTM	129.86	DEG. F
C	22	GEN. EXCITER	138.79	DEG. F
C	23	GEN. VOLT. REG.	135.44	DEG. F
C	24	CONTROL PANEL	137.32	DEG. F
C	25	RELAY AREA	122.82	DEG. F
C	26	BATTERY LEFT	147.97	DEG. F
C	27	BATTERY RIGHT	140.33	DEG. F
C	28	AIR IN SET	125.87	DEG. F
C	29	FUEL TANK	122.28	DEG. F
C	30	FUEL OUTLET	146.85	DEG. F

END SCAN GROUP 1 22 JAN 88 13:19:04

STOPPED SINGLE SCAN 22 JAN 88 13:19:04

BEGIN SCAN GROUP 1 22 JAN 88 14:19:00
30 KW/60 HZ GEN SET S/N KZO 5841

C	1	EXHAUST 1	812.61	DEG. F
C	2	EXHAUST 2	775.55	DEG. F
C	3	EXHAUST 3	782.76	DEG. F
C	4	EXHAUST 4	825.97	DEG. F
C	5	EXHAUST 5	866.95	DEG. F
C	6	EXHAUST 6	803.28	DEG. F
C	7	ENG. COOL. IN	207.17	DEG. F
C	8	ENG. COOL. OUT	217.87	DEG. F
C	9	OIL SUMP	233.77	DEG. F
C	10	OIL GALLERY	239.97	DEG. F
C	13	ENG. INTAKE	138.51	DEG. F
C	14	RAD. TOP LEFT	165.95	DEG. F
C	15	RAD. BTTM LEFT	151.86	DEG. F
C	16	RAD. TOP RIGHT	178.44	DEG. F
C	17	RAD. BTTM RIGHT	141.42	DEG. F
C	18	GEN. AIR IN	121.21	DEG. F
C	19	GEN. AIR OUT	146.93	DEG. F
C	20	GEN. FRAME TOP	138.97	DEG. F
C	21	GEN. FRAME BTTM	130.95	DEG. F
C	22	GEN. EXCITER	140.13	DEG. F
C	23	GEN. VOLT. REG.	137.38	DEG. F
C	24	CONTROL PANEL	139.11	DEG. F
C	25	RELAY AREA	124.85	DEG. F
C	26	BATTERY LEFT	151.86	DEG. F
C	27	BATTERY RIGHT	144.78	DEG. F
C	28	AIR IN SET	124.88	DEG. F
C	29	FUEL TANK	126.64	DEG. F
C	30	FUEL OUTLET	149.45	DEG. F

END SCAN GROUP 1 22 JAN 88 14:19:09

STOPPED SINGLE SCAN 22 JAN 88 14:19:09

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BEGIN SCAN GROUP 1   22 JAN 88  14:48:59
30 KW 60 HZ GEN SET S/N KZO 5841

C    1 EXHAUST 1          815.22 DEG.  F
C    2 EXHAUST 2          774.63 DEG.  F
C    3 EXHAUST 3          784.71 DEG.  F
C    4 EXHAUST 4          826.88 DEG.  F
C    5 EXHAUST 5          873.28 DEG.  F
C    6 EXHAUST 6          884.57 DEG.  F
C    7 ENG. COOL. IN      207.41 DEG.  F
C    8 ENG. COOL. OUT     217.32 DEG.  F
C    9 OIL SUMP                  OPEN TC
C   10 OIL GALLERY        240.34 DEG.  F
C   13  ENG. INTAKE       138.75 DEG.  F
C   14 RAD. TOP LEFT      165.88 DEG.  F
C   15 RAD. BTTM LEFT     151.96 DEG.  F
C   16 RAD. TOP RIGHT     158.89 DEG.  F
C   17 RAD. BTTM RIGHT    141.98 DEG.  F
C   18 GEN. AIR IN        121.94 DEG.  F
C   19 GEN. AIR OUT       147.72 DEG.  F
C   20 GEN. FRAME TOP     139.69 DEG.  F
C   21 GEN. FRAME BTTM    131.38 DEG.  F
C   22 GEN. EXCITER       148.51 DEG.  F
C   23 GEN. VOLT. REG.    137.79 DEG.  F
C   24 CONTROL PANEL      139.45 DEG.  F
C   25 RELAY AREA         124.36 DEG.  F
C   26 BATTERY LEFT       153.85 DEG.  F
C   27 BATTERY RIGHT      147.82 DEG.  F
C   28 AIR IN SET         125.66 DEG.  F
C   29 FUEL TANK          128.99 DEG.  F
C   30 FUEL OUTLET        149.65 DEG.  F

END SCAN GROUP 1      22 JAN 88  14:49:08

STOPPED SINGLE SCAN   22 JAN 88  14:49:08


BEGIN SCAN GROUP 1   22 JAN 88  15:18:58
30 KW 60 HZ GEN SET S/N KZO 5841

C    1 EXHAUST 1          816.62 DEG.  F
C    2 EXHAUST 2          779.78 DEG.  F
C    3 EXHAUST 3          786.36 DEG.  F
C    4 EXHAUST 4          825.58 DEG.  F
C    5 EXHAUST 5          873.66 DEG.  F
C    6 EXHAUST 6          886.87 DEG.  F
C    7 ENG. COOL. IN      207.82 DEG.  F
C    8 ENG. COOL. OUT     217.71 DEG.  F
C    9 OIL SUMP                  OPEN TC
C   10 OIL GALLERY        240.54 DEG.  F
C   13  ENG. INTAKE       139.42 DEG.  F
C   14 RAD. TOP LEFT      166.44 DEG.  F
C   15 RAD. BTTM LEFT     152.26 DEG.  F
C   16 RAD. TOP RIGHT     151.38 DEG.  F
C   17 RAD. BTTM RIGHT    142.45 DEG.  F
C   18 GEN. AIR IN        122.92 DEG.  F
C   19 GEN. AIR OUT       148.17 DEG.  F
C   20 GEN. FRAME TOP     139.79 DEG.  F
C   21 GEN. FRAME BTTM    132.29 DEG.  F
C   22 GEN. EXCITER       148.62 DEG.  F
C   23 GEN. VOLT. REG.    137.75 DEG.  F
C   24 CONTROL PANEL      139.29 DEG.  F
C   25 RELAY AREA         124.79 DEG.  F
C   26 BATTERY LEFT       153.67 DEG.  F
C   27 BATTERY RIGHT      148.99 DEG.  F
C   28 AIR IN SET         125.38 DEG.  F
C   29 FUEL TANK          131.87 DEG.  F
C   30 FUEL OUTLET        150.61 DEG.  F

END SCAN GROUP 1      22 JAN 88  15:19:08

STOPPED SINGLE SCAN   22 JAN 88  15:19:08
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TEST DATA

ITEM 30 KW / 60 Hz
GENERATOR SET
MODIFIED

MFGR. JOHN R. HOLLINGSWORTH

MODEL NO. MGP 005A

SERIAL NO. KZO 5841

NTS
National Technical Systems
Scientific Services Group
Testing Division
P.O. Box 38
Harlwood, Virginia 22471
Tel: 703 752 5300

METHOD 619.2
VOLTAGE DIP + RISE

REF. NO. MIL-STD 705
SHEET 1 OF 1
DATE 22 JAN 1988
JOB NO. 555-2140
PROJ. ENGR.
RECORDER/OBSERVER KM/BJ/GC

INST TIME	STEP NO.	LOAD STEP	E6026D VOLTAGE L_1-L_0 VAC	E6026D VOLTAGE L_2-L_0 VAC	E6026D VOLTAGE L_3-L_0 VAC	E6040D AMPERES x40 L_1-L_0 AC AMPS	E6040D AMPERES x40 L_2-L_0 AC AMPS	E6040D AMPERES x40 L_3-L_0 AC AMPS	E6230D KILOWATTS x40 L_1-L_0 KW	E6230D KILOWATTS x40 L_2-L_0 KW	E6230D KILOWATTS x40 L_3-L_0 KW	E62420 POWER FACTOR PF	E62410 FREQ. Hz	E6467D EXCITER VOLTS VDC	E6256A FIELD AMPS DCA	AMB. TEMP. °F	Press in/min	Press in water
1524			START UNIT AT RATED LOAD															
1526			START STABILIZATION															
1526		R/C	119.9	120.5	120.5	2.49	2.52	2.50	.245	.25	.25	.80	603	10.0	3.65	124	13.2	51.2
1536		R/L	119.5	120.5	120	2.5	2.53	2.52	.249	.251	.252	.80	60.3	10.0	8.6	124	13.3	32.6
1546		R/C	119.5	120.5	120	2.5	2.53	2.52	.248	.25	.25	.80	60.25	9.5	3.6	125	13.4	32.7
1556		R/C	119.5	120.5	120	2.5	2.52	2.51	.248	.251	.25	.80	60.2	9.5	3.6	123	13.5	33.4
1556		N/C	121	121.5	121								61.6	4.2	1.55	123	14.0	27.1
1557		R/C	119.5	120.5	120	2.5	2.54	2.53	.248	.25	.25	.80	62.2	7.8	5.6	123	13.5	33.3
1558		N/C	121	121	121								61.75	4.2	1.55	123	14.1	26.7
1559		R/C	119.5	120.5	120	2.5	2.53	2.53	.248	.251	.251	.80	60.2	9.8	3.6	124	13.7	33.1
1600		N/C	121	121.1	121.1								61.7	4.1	1.55	123	14.3	26.5
1600		R/C	119.5	120.5	120	2.5	2.54	2.53	.248	.25	.25	.80	60.2	9.7	3.6	125	13.6	33.1
1600			END OF TEST SHUT DOWN															

DISTORTION NOTED IN VOLTAGE WAVESHAPE UPON APPLICATION OF RATED LOAD.

0-40

TEST DATA

ITEM 30 KW 60 Hz GENERATOR SET MODIFIED

MFGR. JOHN R HOLLINGSWORTH

MODEL NO. MEP 005A

SERIAL NO. KZ05841

NTS

National Technical Systems | Scientific Services Group | Testing Division, P.O. Box 38, Hartwood, Virginia 22471, Tel 703 752 5300

VOLTAGE DIP & RISE (CALCULATION SUMMARY)

REF. NO. MIL STD 705

SHEET 1 OF 1

DATE 6 FEB 1988

JOB NO. 553-2140

PROJ. ENGR.

RECORDER/OBSERVER

INST. → / STEP		DIP TO %		DIP TO VOLTS		RISE TO %		RISE TO VOLTS		RECOVERY TIME
UNITS										m sec
SYM.										
	1					110.4%		132.57V		138
	2	88.46%		107.16V						188
	3					109.89%		131.87V		200
	4	88.6%		107.25V						173
	5					107.3%		128.8 V		143
	6	88.64%		107.47V						172

11-8

NOTES:

BEGIN SCAN GROUP 1 22 JAN 88 15:26:18
30 KW/60 HZ GEN SET S/N KZO 5841

C	1	EXHAUST 1	794.50	DEG.	F
C	2	EXHAUST 2	754.54	DEG.	F
C	3	EXHAUST 3	759.99	DEG.	F
C	4	EXHAUST 4	797.27	DEG.	F
C	5	EXHAUST 5	842.86	DEG.	F
C	6	EXHAUST 6	771.60	DEG.	F
C	7	ENG. COOL. IN	204.89	DEG.	F
C	8	ENG. COOL. OUT	213.72	DEG.	F
C	9	OIL SUMP	235.52	DEG.	F
C	10	OIL GALLERY	236.40	DEG.	F
C	13	ENG. INTAKE	139.12	DEG.	F
C	14	RAD. TOP LEFT	163.93	DEG.	F
C	15	RAD. BTTM LEFT	150.46	DEG.	F
C	16	RAD. TOP RIGHT	149.87	DEG.	F
C	17	RAD. BTTM RIGHT	141.93	DEG.	F
C	18	GEN. AIR IN	121.70	DEG.	F
C	19	GEN. AIR OUT	146.67	DEG.	F
C	20	GEN. FRAME TOP	139.92	DEG.	F
C	21	GEN. FRAME BTTM	132.99	DEG.	F
C	22	GEN. EXCITER	139.71	DEG.	F
C	23	GEN. VOLT. REG.	138.47	DEG.	F
C	24	CONTROL PANEL	136.93	DEG.	F
C	25	RELAY AREA	124.41	DEG.	F
C	26	BATTERY LEFT	153.32	DEG.	F
C	27	BATTERY RIGHT	149.33	DEG.	F
C	28	AIR IN SET	124.86	DEG.	F
C	29	FUEL TANK	131.47	DEG.	F
C	30	FUEL OUTLET	152.89	DEG.	F

END SCAN GROUP 1 22 JAN 88 15:26:27

STOPPED SINGLE SCAN 22 JAN 88 15:26:27

BEGIN SCAN GROUP 1 22 JAN 88 15:45:
30 KW/60 HZ GEN SET S/N KZO 5841

C	1	EXHAUST 1	801.57	DEG.	F
C	2	EXHAUST 2	761.57	DEG.	F
C	3	EXHAUST 3	769.95	DEG.	F
C	4	EXHAUST 4	809.52	DEG.	F
C	5	EXHAUST 5	854.30	DEG.	F
C	6	EXHAUST 6	786.51	DEG.	F
C	7	ENG. COOL. IN	205.52	DEG.	F
C	8	ENG. COOL. OUT	215.07	DEG.	F
C	9	OIL SUMP	236.39	DEG.	F
C	10	OIL GALLERY	237.44	DEG.	F
C	13	ENG. INTAKE	138.16	DEG.	F
C	14	RAD. TOP LEFT	164.67	DEG.	F
C	15	RAD. BTTM LEFT	151.11	DEG.	F
C	16	RAD. TOP RIGHT	150.84	DEG.	F
C	17	RAD. BTTM RIGHT	141.27	DEG.	F
C	18	GEN. AIR IN	123.18	DEG.	F
C	19	GEN. AIR OUT	145.44	DEG.	F
C	20	GEN. FRAME TOP	137.35	DEG.	F
C	21	GEN. FRAME BTTM	138.74	DEG.	F
C	22	GEN. EXCITER	139.54	DEG.	F
C	23	GEN. VOLT. REG.	136.84	DEG.	F
C	24	CONTROL PANEL	138.26	DEG.	F
C	25	RELAY AREA	123.48	DEG.	F
C	26	BATTERY LEFT	152.73	DEG.	F
C	27	BATTERY RIGHT	150.84	DEG.	F
C	28	AIR IN SET	125.63	DEG.	F
C	29	FUEL TANK	131.83	DEG.	F
C	30	FUEL OUTLET	149.62	DEG.	F

END SCAN GROUP 1 22 JAN 88 15:45:

STOPPED SINGLE SCAN 22 JAN 88 15:45:

BEGIN SCAN GROUP 1 22 JAN 88 15:36:05
30 KW/60 HZ GEN SET S/N KZO 5841

C	1	EXHAUST 1	800.42	DEG.	F
C	2	EXHAUST 2	760.17	DEG.	F
C	3	EXHAUST 3	767.13	DEG.	F
C	4	EXHAUST 4	807.26	DEG.	F
C	5	EXHAUST 5	853.45	DEG.	F
C	6	EXHAUST 6	785.06	DEG.	F
C	7	ENG. COOL. IN	205.06	DEG.	F
C	8	ENG. COOL. OUT	214.78	DEG.	F
C	9	OIL SUMP	236.89	DEG.	F
C	10	OIL GALLERY	237.27	DEG.	F
C	13	ENG. INTAKE	137.25	DEG.	F
C	14	RAD. TOP LEFT	164.09	DEG.	F
C	15	RAD. BTTM LEFT	150.22	DEG.	F
C	16	RAD. TOP RIGHT	149.41	DEG.	F
C	17	RAD. BTTM RIGHT	141.27	DEG.	F
C	18	GEN. AIR IN	122.20	DEG.	F
C	19	GEN. AIR OUT	145.59	DEG.	F
C	20	GEN. FRAME TOP	137.57	DEG.	F
C	21	GEN. FRAME BTTM	138.77	DEG.	F
C	22	GEN. EXCITER	139.45	DEG.	F
C	23	GEN. VOLT. REG.	137.58	DEG.	F
C	24	CONTROL PANEL	138.42	DEG.	F
C	25	RELAY AREA	123.58	DEG.	F
C	26	BATTERY LEFT	152.74	DEG.	F
C	27	BATTERY RIGHT	150.53	DEG.	F
C	28	AIR IN SET	124.85	DEG.	F
C	29	FUEL TANK	131.14	DEG.	F
C	30	FUEL OUTLET	150.67	DEG.	F

END SCAN GROUP 1 22 JAN 88 15:36:14

STOPPED SINGLE SCAN 22 JAN 88 15:36:14

BEGIN SCAN GROUP 1 22 JAN 88 15:55:
30 KW/60 HZ GEN SET S/N KZO 5841

C	1	EXHAUST 1	804.97	DEG.	F
C	2	EXHAUST 2	762.94	DEG.	F
C	3	EXHAUST 3	769.98	DEG.	F
C	4	EXHAUST 4	812.35	DEG.	F
C	5	EXHAUST 5	853.76	DEG.	F
C	6	EXHAUST 6	785.77	DEG.	F
C	7	ENG. COOL. IN	205.79	DEG.	F
C	8	ENG. COOL. OUT	215.58	DEG.	F
C	9	OIL SUMP		OPEN	TC
C	10	OIL GALLERY	237.86	DEG.	F
C	13	ENG. INTAKE	138.66	DEG.	F
C	14	RAD. TOP LEFT	165.87	DEG.	F
C	15	RAD. BTTM LEFT	150.51	DEG.	F
C	16	RAD. TOP RIGHT	149.64	DEG.	F
C	17	RAD. BTTM RIGHT	141.14	DEG.	F
C	18	GEN. AIR IN	121.73	DEG.	F
C	19	GEN. AIR OUT	144.84	DEG.	F
C	20	GEN. FRAME TOP	136.95	DEG.	F
C	21	GEN. FRAME BTTM	138.95	DEG.	F
C	22	GEN. EXCITER	139.56	DEG.	F
C	23	GEN. VOLT. REG.	137.88	DEG.	F
C	24	CONTROL PANEL	138.35	DEG.	F
C	25	RELAY AREA	123.54	DEG.	F
C	26	BATTERY LEFT	153.84	DEG.	F
C	27	BATTERY RIGHT	150.61	DEG.	F
C	28	AIR IN SET	123.64	DEG.	F
C	29	FUEL TANK	130.95	DEG.	F
C	30	FUEL OUTLET	150.14	DEG.	F

END SCAN GROUP 1 22 JAN 88 15:55:

STOPPED SINGLE SCAN 22 JAN 88 15:55:

BEGIN SCAN GROUP 1 22 JAN 88 15:56:30
30 KW 60 HZ GEN SET S/N KZ0 5841

C	1	EXHAUST 1	627.87	DEG. F
C	2	EXHAUST 2	589.59	DEG. F
C	3	EXHAUST 3	599.15	DEG. F
C	4	EXHAUST 4	655.29	DEG. F
C	5	EXHAUST 5	691.81	DEG. F
C	6	EXHAUST 6	627.14	DEG. F
C	7	ENG. COOL. IN	205.35	DEG. F
C	8	ENG. COOL. OUT	214.85	DEG. F
C	9	OIL SUMP	236.89	DEG. F
C	10	OIL GALLERY	237.99	DEG. F
C	13	ENG. INTAKE	137.97	DEG. F
C	14	RAD. TOP LEFT	163.74	DEG. F
C	15	RAD. BTTM LEFT	149.78	DEG. F
C	16	RAD. TOP RIGHT	149.12	DEG. F
C	17	RAD. BTTM RIGHT	148.94	DEG. F
C	18	GEN. AIR IN	121.25	DEG. F
C	19	GEN. AIR OUT	144.32	DEG. F
C	20	GEN. FRAME TOP	136.62	DEG. F
C	21	GEN. FRAME BTTM	138.78	DEG. F
C	22	GEN. EXCITER	139.27	DEG. F
C	23	GEN. VOLT. REG.	136.93	DEG. F
C	24	CONTROL PANEL	138.16	DEG. F
C	25	RELAY AREA	123.22	DEG. F
C	26	BATTERY LEFT	152.99	DEG. F
C	27	BATTERY RIGHT	158.59	DEG. F
C	28	AIR IN SET	123.54	DEG. F
C	29	FUEL TANK	138.95	DEG. F
C	30	FUEL OUTLET	149.47	DEG. F

END SCAN GROUP 1 22 JAN 88 15:56:40

STOPPED SINGLE SCAN 22 JAN 88 15:56:40

BEGIN SCAN GROUP 1 22 JAN 88 15:57:26
30 KW 60 HZ GEN SET S/N KZ0 5841

C	1	EXHAUST 1	598.49	DEG. F
C	2	EXHAUST 2	583.88	DEG. F
C	3	EXHAUST 3	600.84	DEG. F
C	4	EXHAUST 4	660.71	DEG. F
C	5	EXHAUST 5	674.58	DEG. F
C	6	EXHAUST 6	634.48	DEG. F
C	7	ENG. COOL. IN	200.11	DEG. F
C	8	ENG. COOL. OUT	209.36	DEG. F
C	9	OIL SUMP	236.55	DEG. F
C	10	OIL GALLERY	237.25	DEG. F
C	13	ENG. INTAKE	137.16	DEG. F
C	14	RAD. TOP LEFT	161.56	DEG. F
C	15	RAD. BTTM LEFT	148.89	DEG. F
C	16	RAD. TOP RIGHT	148.83	DEG. F
C	17	RAD. BTTM RIGHT	148.56	DEG. F
C	18	GEN. AIR IN	122.58	DEG. F
C	19	GEN. AIR OUT	143.61	DEG. F
C	20	GEN. FRAME TOP	136.25	DEG. F
C	21	GEN. FRAME BTTM	138.59	DEG. F
C	22	GEN. EXCITER	138.57	DEG. F
C	23	GEN. VOLT. REG.	136.88	DEG. F
C	24	CONTROL PANEL	138.11	DEG. F
C	25	RELAY AREA	122.58	DEG. F
C	26	BATTERY LEFT	152.72	DEG. F
C	27	BATTERY RIGHT	158.47	DEG. F
C	28	AIR IN SET	123.88	DEG. F
C	29	FUEL TANK	138.90	DEG. F
C	30	FUEL OUTLET	150.20	DEG. F

END SCAN GROUP 1 22 JAN 88 15:57:35

STOPPED SINGLE SCAN 22 JAN 88 15:57:35

BEGIN SCAN GROUP 1 22 JAN 88 15:58:2
30 KW 60 HZ GEN SET S/N KZ0 5841

C	1	EXHAUST 1	734.18	DEG. F
C	2	EXHAUST 2	685.39	DEG. F
C	3	EXHAUST 3	698.88	DEG. F
C	4	EXHAUST 4	735.63	DEG. F
C	5	EXHAUST 5	786.63	DEG. F
C	6	EXHAUST 6	706.21	DEG. F
C	7	ENG. COOL. IN	199.76	DEG. F
C	8	ENG. COOL. OUT	208.68	DEG. F
C	9	OIL SUMP	235.68	DEG. F
C	10	OIL GALLERY	236.75	DEG. F
C	13	ENG. INTAKE	137.16	DEG. F
C	14	RAD. TOP LEFT	161.84	DEG. F
C	15	RAD. BTTM LEFT	148.96	DEG. F
C	16	RAD. TOP RIGHT	148.22	DEG. F
C	17	RAD. BTTM RIGHT	148.61	DEG. F
C	18	GEN. AIR IN	123.16	DEG. F
C	19	GEN. AIR OUT	143.87	DEG. F
C	20	GEN. FRAME TOP	136.21	DEG. F
C	21	GEN. FRAME BTTM	138.68	DEG. F
C	22	GEN. EXCITER	138.83	DEG. F
C	23	GEN. VOLT. REG.	136.95	DEG. F
C	24	CONTROL PANEL	138.33	DEG. F
C	25	RELAY AREA	122.91	DEG. F
C	26	BATTERY LEFT	152.82	DEG. F
C	27	BATTERY RIGHT	158.49	DEG. F
C	28	AIR IN SET	123.88	DEG. F
C	29	FUEL TANK	138.95	DEG. F
C	30	FUEL OUTLET	150.44	DEG. F

END SCAN GROUP 1 22 JAN 88 15:58:30

STOPPED SINGLE SCAN 22 JAN 88 15:58:30

BEGIN SCAN GROUP 1 22 JAN 88 15:59:03
30 KW 60 HZ GEN SET S/N KZ0 5841

C	1	EXHAUST 1	537.24	DEG. F
C	2	EXHAUST 2	523.44	DEG. F
C	3	EXHAUST 3	542.61	DEG. F
C	4	EXHAUST 4	606.24	DEG. F
C	5	EXHAUST 5	617.98	DEG. F
C	6	EXHAUST 6	579.29	DEG. F
C	7	ENG. COOL. IN	197.64	DEG. F
C	8	ENG. COOL. OUT	205.56	DEG. F
C	9	OIL SUMP	235.76	DEG. F
C	10	OIL GALLERY	236.36	DEG. F
C	13	ENG. INTAKE	137.26	DEG. F
C	14	RAD. TOP LEFT	160.48	DEG. F
C	15	RAD. BTTM LEFT	148.28	DEG. F
C	16	RAD. TOP RIGHT	147.85	DEG. F
C	17	RAD. BTTM RIGHT	148.68	DEG. F
C	18	GEN. AIR IN	124.03	DEG. F
C	19	GEN. AIR OUT	143.68	DEG. F
C	20	GEN. FRAME TOP	136.38	DEG. F
C	21	GEN. FRAME BTTM	138.61	DEG. F
C	22	GEN. EXCITER	138.98	DEG. F
C	23	GEN. VOLT. REG.	136.87	DEG. F
C	24	CONTROL PANEL	138.23	DEG. F
C	25	RELAY AREA	122.87	DEG. F
C	26	BATTERY LEFT	152.46	DEG. F
C	27	BATTERY RIGHT	149.56	DEG. F
C	28	AIR IN SET	124.64	DEG. F
C	29	FUEL TANK	138.90	DEG. F
C	30	FUEL OUTLET	150.44	DEG. F

END SCAN GROUP 1 22 JAN 88 15:59:13

STOPPED SINGLE SCAN 22 JAN 88 15:59:13

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BEGIN SCAN GROUP 1   22 JAN 88  16:00:00
30 KW/60 HZ GEN SET S/N KZD 5841

C    1 EXHAUST 1          664.99 DEG. F
C    2 EXHAUST 2          617.31 DEG. F
C    3 EXHAUST 3          621.46 DEG. F
C    4 EXHAUST 4          673.72 DEG. F
C    5 EXHAUST 5          722.68 DEG. F
C    6 EXHAUST 6          648.96 DEG. F
C    7 ENG. COOL. IN      197.84 DEG. F
C    8 ENG. COOL. OUT     206.48 DEG. F
C    9 OIL SUMP           234.55 DEG. F
C   10 OIL GALLERY        235.78 DEG. F
C   13  ENG. INTAKE       137.81 DEG. F
C   14 RAD. TOP LEFT      160.87 DEG. F
C   15 RAD. BTTM LEFT     148.00 DEG. F
C   16 RAD. TOP RIGHT     147.86 DEG. F
C   17 RAD. BTTM RIGHT    148.58 DEG. F
C   18 GEN. AIR IN        124.27 DEG. F
C   19 GEN. AIR OUT       143.70 DEG. F
C   20 GEN. FRAME TOP     136.19 DEG. F
C   21 GEN. FRAME BTTM    138.82 DEG. F
C   22 GEN. EXCITER       138.75 DEG. F
C   23 GEN. VOLT. REG.    136.84 DEG. F
C   24 CONTROL PANEL      138.34 DEG. F
C   25 RELAY AREA         122.85 DEG. F
C   26 BATTERY LEFT       152.40 DEG. F
C   27 BATTERY RIGHT      149.69 DEG. F
C   28 AIR IN SET         123.94 DEG. F
C   29 FUEL TANK          138.94 DEG. F
C   30 FUEL OUTLET        150.75 DEG. F

END SCAN GROUP 1      22 JAN 88  16:00:10

STOPPED SINGLE SCAN   22 JAN 88  16:00:10


BEGIN SCAN GROUP 1   22 JAN 88  16:00:45
30 KW/60 HZ GEN SET S/N KZD 5841

C    1 EXHAUST 1          589.43 DEG. F
C    2 EXHAUST 2          497.33 DEG. F
C    3 EXHAUST 3          515.76 DEG. F
C    4 EXHAUST 4          581.17 DEG. F
C    5 EXHAUST 5          591.80 DEG. F
C    6 EXHAUST 6          552.84 DEG. F
C    7 ENG. COOL. IN      195.77 DEG. F
C    8 ENG. COOL. OUT     203.41 DEG. F
C    9 OIL SUMP           233.98 DEG  F
C   10 OIL GALLERY        235.29 DEG. F
C   13  ENG. INTAKE       137.18 DEG. F
C   14 RAD. TOP LEFT      159.95 DEG. F
C   15 RAD. BTTM LEFT     148.82 DEG. F
C   16 RAD. TOP RIGHT     147.73 DEG. F
C   17 RAD. BTTM RIGHT    148.57 DEG. F
C   18 GEN. AIR IN        124.99 DEG. F
C   19 GEN. AIR OUT       143.57 DEG. F
C   20 GEN. FRAME TOP     136.42 DEG. F
C   21 GEN. FRAME BTTM    131.05 DEG. F
C   22 GEN. EXCITER       139.00 DEG. F
C   23 GEN. VOLT. REG.    136.86 DEG. F
C   24 CONTROL PANEL      138.21 DEG. F
C   25 RELAY AREA         122.76 DEG. F
C   26 BATTERY LEFT       152.82 DEG. F
C   27 BATTERY RIGHT      149.52 DEG. F
C   28 AIR IN SET         125.65 DEG. F
C   29 FUEL TANK          138.88 DEG. F
C   30 FUEL OUTLET        150.45 DEG. F

END SCAN GROUP 1      22 JAN 88  16:00:55

STOPPED SINGLE SCAN   22 JAN 88  16:00:55
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TEST DATA

ITEM 30 KW / 60 Hz GENERATOR SET MODIFIED

MFGR. JOHN R. HOLLINGSWORTH

MODEL NO. MEP 005A

SERIAL NO. KZO 5841

NTS

National Technical Systems | Scientific Services Group | Testing Division, P.O. Box 38, Hartwood, Virginia 22471, Tel: 703 752 5300

REGULATOR RANGE TEST

REF. NO. MIL-STD 705; 511.1

SHEET 1 OF 1

DATE 22 JAN 1988

JOB NO. 555-2140

PROJ. ENGR.

RECORDER/OBSERVER KM / GC / BS

INST TIME	STEP NO.	LOAD STEP	E 6628 D VOLTAGE L1-L2 L1-L0 VAC	L2-L0 VAC	L3-L1 L3-L0 VAC	E 6040 D AMPERES x40 L1-L0 AC AMPS	L2-L0 AC AMPS	L3-L0 AC AMPS	E 6230 D KILOWATTS x40 L1-L0 Kw	L2-L0 Kw	L3-L0 Kw	E6624D POWER FACTOR PF	E6624D FREQ. Hz	E6467D EXCITER VOLTS VDC	E6252D FIELD AMPS DCA	AMB. TEMP. °F	RPMS KM/ESM IN H2O
1613			START	UNIT	START	STABILIZATION											
1615		R/L	209	209.5	209	2.5	2.53	2.52	.248	.25	.25	.80	60.3	9.7	3.55	122	333/333
1626		R/L	209	209	208	2.5	2.53	2.52	.248	.25	.257	.80	60.3	9.8	3.55	123	333/333
1635		R/L	209	209	208	2.5	2.53	2.52	.248	.25	.25	.80	60.2	9.8	3.6	124	335/330
1645		R/L	209	209	208	2.5	2.52	2.51	.248	.25	.25	.80	60.3	9.8	3.6	125	332/330
1646		N/L	210	210	210								61.7	9.2	1.55	125	229/229
1647		N/L	240	240	240								61.8	9.1	2.25	126	233/225.5
1649		R/L	239	239	239	2.2	2.21	2.21	.248	.25	.25	.80	60.2	12.0	4.45	122	333/324
1651		MAX	260	260.1	260								61.7	8.4	3.1	123	331/251
1653	MAX	R/L	259	259	259	2.01	2.04	2.01	.245	.251	.251	.80	60.1	15.4	5.7	129	331/324
1657		R/L	197	199	197	2.64	2.66	2.65	.248	.25	.25	.80	60.3	7.4	3.5	124	333/330
1658		N/L	199	199	198								61.8	3.7	1.4	125	229/227
1700		MIN	172	172	172								61.7	2.9	1.1	126	229/225.3
1702			END	OF	TEST												

NOTES: VOLTAGE IS READ LINE TO LINE - L1-L2, L2-L3, L3-L1

TEST DATA

ITEM 30 KW 60 Hz GENERATOR SET MODIFIED

MFGR. JOHN R. HOLLINGSWORTH

MODEL NO. MEP 005A

SERIAL NO. KZ0584/

NTS

National Technical Systems | Scientific Services Group | Testing Division P.O. Box 38 Hallwood, Virginia 22471 Tel: 703 752 5300

Regulator Range Computation Sheet

REF. NO. MILSTD 705

SHEET 1 OF 1

DATE 6 FEB 1988

JOB NO. 555 2140

PROJ. ENGR.

RECORDER/OBSERVER

INST. →		VOLTAGE				VOLTS		REG.
TIME	LOAD	L1 - L2	L2 - L3	L3 - L1		AVERAGE		PERCENT
1645	R/L	209	209	208		208.6		
	N/L	210	210	210		210		.67
	N/L	240	240	240		240		
	R/L	239	239	239		239		.42
MAX V →	N/L	260	260.1	260		260.03		
	R/L	259	259	259		259		.40
	R/L	197	197	197		197		
		199	199	198		198.6		.80

Where percent of regulation is defined as:

$$\frac{V_{NL}\ \text{avg.} - V_{RL}\ \text{avg.}}{V_{RL}\ \text{avg.}} \times 100$$

NOTES:

11-8

REGULATOR RANGE TEST SH.1

BEGIN SCAN GROUP 1 22 JAN 88 16:15:41
30 KW/60 HZ GEN SET S/N KZO 5841

C	1	EXHAUST 1	733.81	DEG. F
C	2	EXHAUST 2	745.31	DEG. F
C	3	EXHAUST 3	752.36	DEG. F
C	4	EXHAUST 4	732.74	DEG. F
C	5	EXHAUST 5	839.90	DEG. F
C	6	EXHAUST 6	761.67	DEG. F
C	7	ENG. COOL. IN	198.13	DEG. F
C	8	ENG. COOL. OUT	207.29	DEG. F
C	9	OIL SUMP	222.97	DEG. F
C	10	OIL GALLERY	224.76	DEG. F
C	13	ENG. INTAKE	136.83	DEG. F
C	14	RAD. TOP LEFT	158.38	DEG. F
C	15	RAD. BTTM LEFT	146.43	DEG. F
C	16	RAD. TOP RIGHT	145.14	DEG. F
C	17	RAD. BTTM RIGHT	138.66	DEG. F
C	18	GEN. AIR IN	119.71	DEG. F
C	19	GEN. AIR OUT	141.86	DEG. F
C	20	GEN. FRAME TOP	136.30	DEG. F
C	21	GEN. FRAME BTTM	130.87	DEG. F
C	22	GEN. EXCITER	136.52	DEG. F
C	23	GEN. VOLT. REG.	137.89	DEG. F
C	24	CONTROL PANEL	137.46	DEG. F
C	25	RELAY AREA	120.60	DEG. F
C	26	BATTERY LEFT	148.18	DEG. F
C	27	BATTERY RIGHT	148.81	DEG. F
C	28	AIR IN SET	122.12	DEG. F
C	29	FUEL TANK	130.63	DEG. F
C	30	FUEL OUTLET	149.84	DEG. F

END SCAN GROUP 1 22 JAN 88 16:15:50

STOPPED SINGLE SCAN 22 JAN 88 16:15:50

BEGIN SCAN GROUP 1 22 JAN 88 16:35:05
30 KW/60 HZ GEN SET S/N KZO 5841

C	1	EXHAUST 1	807.22	DEG. F
C	2	EXHAUST 2	760.65	DEG. F
C	3	EXHAUST 3	772.76	DEG. F
C	4	EXHAUST 4	810.14	DEG. F
C	5	EXHAUST 5	854.82	DEG. F
C	6	EXHAUST 6	785.85	DEG. F
C	7	ENG. COOL. IN	204.83	DEG. F
C	8	ENG. COOL. OUT	214.56	DEG. F
C	9	OIL SUMP	233.89	DEG. F
C	10	OIL GALLERY	235.76	DEG. F
C	13	ENG. INTAKE	138.19	DEG. F
C	14	RAD. TOP LEFT	164.26	DEG. F
C	15	RAD. BTTM LEFT	150.38	DEG. F
C	16	RAD. TOP RIGHT	148.40	DEG. F
C	17	RAD. BTTM RIGHT	140.77	DEG. F
C	18	GEN. AIR IN	120.56	DEG. F
C	19	GEN. AIR OUT	142.81	DEG. F
C	20	GEN. FRAME TOP	136.12	DEG. F
C	21	GEN. FRAME BTTM	128.70	DEG. F
C	22	GEN. EXCITER	139.16	DEG. F
C	23	GEN. VOLT. REG.	136.99	DEG. F
C	24	CONTROL PANEL	138.44	DEG. F
C	25	RELAY AREA	123.02	DEG. F
C	26	BATTERY LEFT	152.05	DEG. F
C	27	BATTERY RIGHT	150.07	DEG. F
C	28	AIR IN SET	124.92	DEG. F
C	29	FUEL TANK	130.33	DEG. F
C	30	FUEL OUTLET	148.52	DEG. F

END SCAN GROUP 1 22 JAN 88 16:35:14

STOPPED SINGLE SCAN 22 JAN 88 16:35:14

BEGIN SCAN GROUP 1 22 JAN 88 16:25:59
30 KW/60 HZ GEN SET S/N KZO 5841

C	1	EXHAUST 1	804.77	DEG. F
C	2	EXHAUST 2	756.97	DEG. F
C	3	EXHAUST 3	770.65	DEG. F
C	4	EXHAUST 4	808.53	DEG. F
C	5	EXHAUST 5	855.69	DEG. F
C	6	EXHAUST 6	784.33	DEG. F
C	7	ENG. COOL. IN	203.85	DEG. F
C	8	ENG. COOL. OUT	213.40	DEG. F
C	9	OIL SUMP	230.63	DEG. F
C	10	OIL GALLERY	232.56	DEG. F
C	13	ENG. INTAKE	137.46	DEG. F
C	14	RAD. TOP LEFT	163.29	DEG. F
C	15	RAD. BTTM LEFT	149.50	DEG. F
C	16	RAD. TOP RIGHT	147.56	DEG. F
C	17	RAD. BTTM RIGHT	139.41	DEG. F
C	18	GEN. AIR IN	119.79	DEG. F
C	19	GEN. AIR OUT	142.49	DEG. F
C	20	GEN. FRAME TOP	135.63	DEG. F
C	21	GEN. FRAME BTTM	128.87	DEG. F
C	22	GEN. EXCITER	138.58	DEG. F
C	23	GEN. VOLT. REG.	136.77	DEG. F
C	24	CONTROL PANEL	138.00	DEG. F
C	25	RELAY AREA	122.57	DEG. F
C	26	BATTERY LEFT	150.90	DEG. F
C	27	BATTERY RIGHT	149.60	DEG. F
C	28	AIR IN SET	123.60	DEG. F
C	29	FUEL TANK	130.43	DEG. F
C	30	FUEL OUTLET	148.38	DEG. F

END SCAN GROUP 1 22 JAN 88 16:26:08

STOPPED SINGLE SCAN 22 JAN 88 16:26:08

BEGIN SCAN GROUP 1 22 JAN 88 16:44:51
30 KW/60 HZ GEN SET S/N KZO 5841

C	1	EXHAUST 1	810.52	DEG. F
C	2	EXHAUST 2	757.92	DEG. F
C	3	EXHAUST 3	769.68	DEG. F
C	4	EXHAUST 4	811.96	DEG. F
C	5	EXHAUST 5	856.90	DEG. F
C	6	EXHAUST 6	788.49	DEG. F
C	7	ENG. COOL. IN	205.29	DEG. F
C	8	ENG. COOL. OUT	214.91	DEG. F
C	9	OIL SUMP	235.44	DEG. F
C	10	OIL GALLERY	237.35	DEG. F
C	13	ENG. INTAKE	138.52	DEG. F
C	14	RAD. TOP LEFT	164.98	DEG. F
C	15	RAD. BTTM LEFT	150.59	DEG. F
C	16	RAD. TOP RIGHT	148.90	DEG. F
C	17	RAD. BTTM RIGHT	141.36	DEG. F
C	18	GEN. AIR IN	121.76	DEG. F
C	19	GEN. AIR OUT	143.40	DEG. F
C	20	GEN. FRAME TOP	136.47	DEG. F
C	21	GEN. FRAME BTTM	129.02	DEG. F
C	22	GEN. EXCITER	139.58	DEG. F
C	23	GEN. VOLT. REG.	137.31	DEG. F
C	24	CONTROL PANEL	138.83	DEG. F
C	25	RELAY AREA	123.19	DEG. F
C	26	BATTERY LEFT	152.91	DEG. F
C	27	BATTERY RIGHT	150.60	DEG. F
C	28	AIR IN SET	125.08	DEG. F
C	29	FUEL TANK	130.22	DEG. F
C	30	FUEL OUTLET	148.15	DEG. F

END SCAN GROUP 1 22 JAN 88 16:45:01

STOPPED SINGLE SCAN 22 JAN 88 16:45:01

BEGIN SCAN GROUP 1 22 JAN 88 16:46:16
30 KW/60 HZ GEN SET S/N KZO 5841

C	1	EXHAUST 1	540.63	DEG. F
C	2	EXHAUST 2	512.32	DEG. F
C	3	EXHAUST 3	525.61	DEG. F
C	4	EXHAUST 4	590.00	DEG. F
C	5	EXHAUST 5	618.03	DEG. F
C	6	EXHAUST 6	563.82	DEG. F
C	7	ENG. COOL. IN	204.80	DEG. F
C	8	ENG. COOL. OUT	214.02	DEG. F
C	9	OIL SUMP	235.73	DEG. F
C	10	OIL GALLERY	237.49	DEG. F
C	13	ENG. INTAKE	138.70	DEG. F
C	14	RAD. TOP LEFT	164.70	DEG. F
C	15	RAD. BTTM LEFT	150.45	DEG. F
C	16	RAD. TOP RIGHT	148.50	DEG. F
C	17	RAD. BTTM RIGHT	141.06	DEG. F
C	18	GEN. AIR IN	121.05	DEG. F
C	19	GEN. AIR OUT	143.12	DEG. F
C	20	GEN. FRAME TOP	136.57	DEG. F
C	21	GEN. FRAME BTTM	129.01	DEG. F
C	22	GEN. EXCITER	139.66	DEG. F
C	23	GEN. VOLT. REG.	137.32	DEG. F
C	24	CONTROL PANEL	138.77	DEG. F
C	25	RELAY AREA	123.23	DEG. F
C	26	BATTERY LEFT	152.80	DEG. F
C	27	BATTERY RIGHT	151.00	DEG. F
C	28	AIR IN SET	125.26	DEG. F
C	29	FUEL TANK	130.30	DEG. F
C	30	FUEL OUTLET	149.09	DEG. F

END SCAN GROUP 1 22 JAN 88 16:46:25

STOPPED SINGLE SCAN 22 JAN 88 16:46:25

BEGIN SCAN GROUP 1 22 JAN 88 16:47:38
30 KW/60 HZ GEN SET S/N KZO 5841

C	1	EXHAUST 1	370.21	DEG. F
C	2	EXHAUST 2	367.04	DEG. F
C	3	EXHAUST 3	390.53	DEG. F
C	4	EXHAUST 4	461.66	DEG. F
C	5	EXHAUST 5	469.99	DEG. F
C	6	EXHAUST 6	434.03	DEG. F
C	7	ENG. COOL. IN	196.57	DEG. F
C	8	ENG. COOL. OUT	204.07	DEG. F
C	9	OIL SUMP	235.06	DEG. F
C	10	OIL GALLERY	236.46	DEG. F
C	13	ENG. INTAKE	137.79	DEG. F
C	14	RAD. TOP LEFT	160.52	DEG. F
C	15	RAD. BTTM LEFT	148.22	DEG. F
C	16	RAD. TOP RIGHT	146.74	DEG. F
C	17	RAD. BTTM RIGHT	140.35	DEG. F
C	18	GEN. AIR IN	121.28	DEG. F
C	19	GEN. AIR OUT	142.19	DEG. F
C	20	GEN. FRAME TOP	136.28	DEG. F
C	21	GEN. FRAME BTTM	129.13	DEG. F
C	22	GEN. EXCITER	139.34	DEG. F
C	23	GEN. VOLT. REG.	137.36	DEG. F
C	24	CONTROL PANEL	138.91	DEG. F
C	25	RELAY AREA	123.25	DEG. F
C	26	BATTERY LEFT	152.39	DEG. F
C	27	BATTERY RIGHT	150.63	DEG. F
C	28	AIR IN SET	124.91	DEG. F
C	29	FUEL TANK	130.27	DEG. F
C	30	FUEL OUTLET	150.09	DEG. F

END SCAN GROUP 1 22 JAN 88 16:47:47

STOPPED SINGLE SCAN 22 JAN 88 16:47:47

BEGIN SCAN GROUP 1 22 JAN 88 16:49:42
30 KW/60 HZ GEN SET S/N KZO 5841

C	1	EXHAUST 1	770.53	DEG. F
C	2	EXHAUST 2	712.11	DEG. F
C	3	EXHAUST 3	718.50	DEG. F
C	4	EXHAUST 4	761.55	DEG. F
C	5	EXHAUST 5	816.91	DEG. F
C	6	EXHAUST 6	736.02	DEG. F
C	7	ENG. COOL. IN	194.16	DEG. F
C	8	ENG. COOL. OUT	202.49	DEG. F
C	9	OIL SUMP	232.45	DEG. F
C	10	OIL GALLERY	234.49	DEG. F
C	13	ENG. INTAKE	136.22	DEG. F
C	14	RAD. TOP LEFT	158.45	DEG. F
C	15	RAD. BTTM LEFT	146.29	DEG. F
C	16	RAD. TOP RIGHT	145.10	DEG. F
C	17	RAD. BTTM RIGHT	140.85	DEG. F
C	18	GEN. AIR IN	118.66	DEG. F
C	19	GEN. AIR OUT	140.76	DEG. F
C	20	GEN. FRAME TOP	135.28	DEG. F
C	21	GEN. FRAME BTTM	128.71	DEG. F
C	22	GEN. EXCITER	138.59	DEG. F
C	23	GEN. VOLT. REG.	137.31	DEG. F
C	24	CONTROL PANEL	138.95	DEG. F
C	25	RELAY AREA	123.25	DEG. F
C	26	BATTERY LEFT	152.10	DEG. F
C	27	BATTERY RIGHT	150.51	DEG. F
C	28	AIR IN SET	122.88	DEG. F
C	29	FUEL TANK	130.14	DEG. F
C	30	FUEL OUTLET	149.25	DEG. F

END SCAN GROUP 1 22 JAN 88 16:49:52

STOPPED SINGLE SCAN 22 JAN 88 16:49:52

BEGIN SCAN GROUP 1 22 JAN 88 16:51:14
30 KW/60 HZ GEN SET S/N KZO 5841

C	1	EXHAUST 1	382.89	DEG. F
C	2	EXHAUST 2	370.96	DEG. F
C	3	EXHAUST 3	391.82	DEG. F
C	4	EXHAUST 4	464.41	DEG. F
C	5	EXHAUST 5	473.76	DEG. F
C	6	EXHAUST 6	433.72	DEG. F
C	7	ENG. COOL. IN	192.98	DEG. F
C	8	ENG. COOL. OUT	200.23	DEG. F
C	9	OIL SUMP	232.16	DEG. F
C	10	OIL GALLERY	233.68	DEG. F
C	13	ENG. INTAKE	135.77	DEG. F
C	14	RAD. TOP LEFT	157.13	DEG. F
C	15	RAD. BTTM LEFT	145.41	DEG. F
C	16	RAD. TOP RIGHT	144.48	DEG. F
C	17	RAD. BTTM RIGHT	140.11	DEG. F
C	18	GEN. AIR IN	120.18	DEG. F
C	19	GEN. AIR OUT	140.54	DEG. F
C	20	GEN. FRAME TOP	135.19	DEG. F
C	21	GEN. FRAME BTTM	128.59	DEG. F
C	22	GEN. EXCITER	138.18	DEG. F
C	23	GEN. VOLT. REG.	137.27	DEG. F
C	24	CONTROL PANEL	139.12	DEG. F
C	25	RELAY AREA	123.17	DEG. F
C	26	BATTERY LEFT	151.59	DEG. F
C	27	BATTERY RIGHT	150.70	DEG. F
C	28	AIR IN SET	123.23	DEG. F
C	29	FUEL TANK	130.20	DEG. F
C	30	FUEL OUTLET	149.25	DEG. F

END SCAN GROUP 1 22 JAN 88 16:51:23

STOPPED SINGLE SCAN 22 JAN 88 16:51:23

BEGIN SCAN GROUP 1 22 JAN 88 16:53:17
30 KW/60 HZ GEN SET S/N KZO 5841

C	1	EXHAUST 1	776.43 DEG. F
C	2	EXHAUST 2	715.32 DEG. F
C	3	EXHAUST 3	719.33 DEG. F
C	4	EXHAUST 4	765.44 DEG. F
C	5	EXHAUST 5	821.22 DEG. F
C	6	EXHAUST 6	736.98 DEG. F
C	7	ENG. COOL. IN	191.52 DEG. F
C	8	ENG. COOL. OUT	199.74 DEG. F
C	9	OIL SUMP	229.81 DEG. F
C	10	OIL GALLERY	231.78 DEG. F
C	13	ENG. INTAKE	134.36 DEG. F
C	14	RAD. TOP LEFT	156.18 DEG. F
C	15	RAD. BTTM LEFT	144.32 DEG. F
C	16	RAD. TOP RIGHT	143.79 DEG. F
C	17	RAD. BTTM RIGHT	139.84 DEG. F
C	18	GEN. AIR IN	120.17 DEG. F
C	19	GEN. AIR OUT	148.24 DEG. F
C	20	GEN. FRAME TOP	134.41 DEG. F
C	21	GEN. FRAME BTTM	128.38 DEG. F
C	22	GEN. EXCITER	137.92 DEG. F
C	23	GEN. VOLT. REG.	137.05 DEG. F
C	24	CONTROL PANEL	138.97 DEG. F
C	25	RELAY AREA	122.98 DEG. F
C	26	BATTERY LEFT	151.15 DEG. F
C	27	BATTERY RIGHT	151.23 DEG. F
C	28	AIR IN SET	122.90 DEG. F
C	29	FUEL TANK	130.83 DEG. F
C	30	FUEL OUTLET	149.27 DEG. F

END SCAN GROUP 1 22 JAN 88 16:53:26

STOPPED SINGLE SCAN 22 JAN 88 16:53:26

BEGIN SCAN GROUP 1 22 JAN 88 16:57:32
30 KW/60 HZ GEN SET S/N KZO 5841

C	1	EXHAUST 1	793.83 DEG. F
C	2	EXHAUST 2	738.86 DEG. F
C	3	EXHAUST 3	718.82 DEG. F
C	4	EXHAUST 4	792.94 DEG. F
C	5	EXHAUST 5	842.71 DEG. F
C	6	EXHAUST 6	763.46 DEG. F
C	7	ENG. COOL. IN	197.97 DEG. F
C	8	ENG. COOL. OUT	206.85 DEG. F
C	9	OIL SUMP	229.17 DEG. F
C	10	OIL GALLERY	231.29 DEG. F
C	13	ENG. INTAKE	136.82 DEG. F
C	14	RAD. TOP LEFT	160.23 DEG. F
C	15	RAD. BTTM LEFT	147.18 DEG. F
C	16	RAD. TOP RIGHT	146.89 DEG. F
C	17	RAD. BTTM RIGHT	140.26 DEG. F
C	18	GEN. AIR IN	121.56 DEG. F
C	19	GEN. AIR OUT	141.43 DEG. F
C	20	GEN. FRAME TOP	134.90 DEG. F
C	21	GEN. FRAME BTTM	128.83 DEG. F
C	22	GEN. EXCITER	138.90 DEG. F
C	23	GEN. VOLT. REG.	136.59 DEG. F
C	24	CONTROL PANEL	139.54 DEG. F
C	25	RELAY AREA	122.78 DEG. F
C	26	BATTERY LEFT	150.72 DEG. F
C	27	BATTERY RIGHT	150.53 DEG. F
C	28	AIR IN SET	125.30 DEG. F
C	29	FUEL TANK	130.00 DEG. F
C	30	FUEL OUTLET	148.83 DEG. F

END SCAN GROUP 1 22 JAN 88 16:57:42

STOPPED SINGLE SCAN 22 JAN 88 16:57:42

BEGIN SCAN GROUP 1 22 JAN 88 16:58:25
30 KW/60 HZ GEN SET S/N KZO 5841

C	1	EXHAUST 1	450.67 DEG. F
C	2	EXHAUST 2	434.29 DEG. F
C	3	EXHAUST 3	450.26 DEG. F
C	4	EXHAUST 4	521.79 DEG. F
C	5	EXHAUST 5	535.30 DEG. F
C	6	EXHAUST 6	487.36 DEG. F
C	7	ENG. COOL. IN	198.86 DEG. F
C	8	ENG. COOL. OUT	205.95 DEG. F
C	9	OIL SUMP	229.83 DEG. F
C	10	OIL GALLERY	231.44 DEG. F
C	13	ENG. INTAKE	136.57 DEG. F
C	14	RAD. TOP LEFT	160.20 DEG. F
C	15	RAD. BTTM LEFT	147.28 DEG. F
C	16	RAD. TOP RIGHT	146.63 DEG. F
C	17	RAD. BTTM RIGHT	140.33 DEG. F
C	18	GEN. AIR IN	123.11 DEG. F
C	19	GEN. AIR OUT	141.80 DEG. F
C	20	GEN. FRAME TOP	135.15 DEG. F
C	21	GEN. FRAME BTTM	128.63 DEG. F
C	22	GEN. EXCITER	139.15 DEG. F
C	23	GEN. VOLT. REG.	136.50 DEG. F
C	24	CONTROL PANEL	138.49 DEG. F
C	25	RELAY AREA	122.81 DEG. F
C	26	BATTERY LEFT	150.57 DEG. F
C	27	BATTERY RIGHT	150.59 DEG. F
C	28	AIR IN SET	126.19 DEG. F
C	29	FUEL TANK	130.11 DEG. F
C	30	FUEL OUTLET	148.11 DEG. F

END SCAN GROUP 1 22 JAN 88 16:58:34

STOPPED SINGLE SCAN 22 JAN 88 16:58:35

BEGIN SCAN GROUP 1 22 JAN 88 17:00:00
30 KW/60 HZ GEN SET S/N KZO 5841

C	1	EXHAUST 1	344.92 DEG. F
C	2	EXHAUST 2	348.91 DEG. F
C	3	EXHAUST 3	362.30 DEG. F
C	4	EXHAUST 4	442.37 DEG. F
C	5	EXHAUST 5	447.62 DEG. F
C	6	EXHAUST 6	405.97 DEG. F
C	7	ENG. COOL. IN	198.33 DEG. F
C	8	ENG. COOL. OUT	197.06 DEG. F
C	9	OIL SUMP	228.84 DEG. F
C	10	OIL GALLERY	230.35 DEG. F
C	13	ENG. INTAKE	136.37 DEG. F
C	14	RAD. TOP LEFT	157.08 DEG. F
C	15	RAD. BTTM LEFT	146.12 DEG. F
C	16	RAD. TOP RIGHT	145.48 DEG. F
C	17	RAD. BTTM RIGHT	140.73 DEG. F
C	18	GEN. AIR IN	124.71 DEG. F
C	19	GEN. AIR OUT	141.14 DEG. F
C	20	GEN. FRAME TOP	135.13 DEG. F
C	21	GEN. FRAME BTTM	128.87 DEG. F
C	22	GEN. EXCITER	139.25 DEG. F
C	23	GEN. VOLT. REG.	136.48 DEG. F
C	24	CONTROL PANEL	138.63 DEG. F
C	25	RELAY AREA	123.16 DEG. F
C	26	BATTERY LEFT	150.33 DEG. F
C	27	BATTERY RIGHT	150.79 DEG. F
C	28	AIR IN SET	126.76 DEG. F
C	29	FUEL TANK	130.02 DEG. F
C	30	FUEL OUTLET	149.03 DEG. F

END SCAN GROUP 1 22 JAN 88 17:00:10

STOPPED SINGLE SCAN 22 JAN 88 17:00:10

TEST DATA

ITEM 30 KW / 60 Hz
GENERATOR SET
MODIFIED

MFGR. JOHN R. HOLLINGSWORTH

MODEL NO. MEP 005A

SERIAL NO. KZO 5841

NTS
National Technical Systems
Scientific Services Group
Testing Division
P.O. Box 38
Harwood, Virginia 22471
Tel: 703 752 5300

FREQUENCY ADJUSTMENT RANGE.

REF. NO. MIL-STD 705; 511.2

SHEET 1 OF 1

DATE 22 JAN 1988

JOB NO. 555-2140

PROJ. ENGR.

RECORDER/OBSERVER KM/RJ KC

INST TIME	STEP NO.	LOAD STEP	EG028 A VOLTAGE L_1-L_0 VAC	L_2-L_0 VAC	L_3-L_0 VAC	EG040 D AMPERES x40 L_1-L_0 AC AMPS	L_2-L_0 AC AMPS	L_3-L_0 AC AMPS	EG230 A KILOWATTS w/o L_1-L_0 Kw	L_2-L_0 Kw	L_3-L_0 Kw	EG3420 POWER FACTOR PF	EG410 FREQ. Hz	EG1671 EXCITER VOLTS VDC	EG3580 FIELD AMPS DC	AMB. TEMP. °F	ALOAD L1/L2/L3 AMPS
1203			START			STABILIZATION		FOR TEST									
1204		RLC	120	120.5	120.5	2.5	2.53	2.52	.248	.25	.25	.80	60.2	9.7	3.55	126	84/88.5
1215		RLC	119.5	120.5	120	2.5	2.52	2.51	.248	.25	.25	.80	60.2	9.8	3.6	125	133/35.
1226		RLC	120	120.5	120	2.5	2.53	2.52	.248	.25	.25	.80	60.3	9.9	3.6	125	133/34
1235		RLC	120	120.5	120	2.5	2.53	2.52	.248	.25	.25	.80	60.2	9.9	3.6	126	134/35.
1237		MAX	119.5	120.5	120	2.57	2.55	2.54	.248	.25	.25	.80	62.0	9.3	3.4	126	141/35.
1239		MW	120	120.5	120.5	2.49	2.5	2.5	.248	.251	.25	.80	59.0	10.8	4.0	125	129/38.
1241		NLC	121	121.5	121									4.7	1.7	125	34/20.
		END OF TEST				SHUT UNIT DOWN											

MAX FREQUENCY = 62.0 Hz

MIN FREQUENCY = 58.0 Hz

NOTES: UNIT PASSED TEST

FREE AIR RANGE TEST S/N 2

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BEGIN SCAN GROUP 1   22 JAN 88  17:04:31
30 KW 60 HZ GEN SET S/N KZO 5841

C    1 EXHAUST 1          785.44 DEG. F
C    2 EXHAUST 2          738.76 DEG. F
C    3 EXHAUST 3          741.73 DEG. F
C    4 EXHAUST 4          783.38 DEG. F
C    5 EXHAUST 5          832.73 DEG. F
C    6 EXHAUST 6          751.13 DEG. F
C    7 ENG. COOL. IN      195.61 DEG. F
C    8 ENG. COOL. OUT     204.11 DEG. F
C    9 OIL SUMP           226.39 DEG. F
C   10 OIL GALLERY        228.38 DEG. F
C   13  ENG. INTAKE       136.67 DEG. F
C   14 RAD. TOP LEFT      158.89 DEG. F
C   15 RAD. BTTM LEFT     146.42 DEG. F
C   16 RAD. TOP RIGHT     146.23 DEG. F
C   17 RAD. BTTM RIGHT    140.84 DEG. F
C   18 GEN. AIR IN        122.64 DEG. F
C   19 GEN. AIR OUT       141.48 DEG. F
C   20 GEN. FRAME TOP     135.42 DEG. F
C   21 GEN. FRAME BTTM    129.95 DEG. F
C   22 GEN. EXCITER       139.55 DEG. F
C   23 GEN. VOLT. REG.    136.07 DEG. F
C   24 CONTROL PANEL      137.91 DEG. F
C   25 RELAY AREA         124.41 DEG. F
C   26 BATTERY LEFT       150.60 DEG. F
C   27 BATTERY RIGHT      151.55 DEG. F
C   28 AIR IN SET         126.10 DEG. F
C   29 FUEL TANK          129.90 DEG. F
C   30 FUEL OUTLET        148.72 DEG. F

END SCAN GROUP 1     22 JAN 88  17:04:41

STOPPED SINGLE SCAN  22 JAN 88  17:04:41
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BEGIN SCAN GROUP 1   22 JAN 88  17:37:50
30 KW 60 HZ GEN SET S/N KZO 5841

C    1 EXHAUST 1          807.24 DEG. F
C    2 EXHAUST 2          759.57 DEG. F
C    3 EXHAUST 3          768.25 DEG. F
C    4 EXHAUST 4          815.81 DEG. F
C    5 EXHAUST 5          857.58 DEG. F
C    6 EXHAUST 6          795.32 DEG. F
C    7 ENG. COOL. IN      206.85 DEG. F
C    8 ENG. COOL. OUT     215.71 DEG. F
C    9 OIL SUMP           236.78 DEG. F
C   10 OIL GALLERY        238.42 DEG. F
C   13  ENG. INTAKE       139.96 DEG. F
C   14 RAD. TOP LEFT      166.31 DEG. F
C   15 RAD. BTTM LEFT     152.81 DEG. F
C   16 RAD. TOP RIGHT     150.30 DEG. F
C   17 RAD. BTTM RIGHT    142.27 DEG. F
C   18 GEN. AIR IN        122.98 DEG. F
C   19 GEN. AIR OUT       144.52 DEG. F
C   20 GEN. FRAME TOP     137.63 DEG. F
C   21 GEN. FRAME BTTM    138.88 DEG. F
C   22 GEN. EXCITER       140.52 DEG. F
C   23 GEN. VOLT. REG.    137.41 DEG. F
C   24 CONTROL PANEL      139.36 DEG. F
C   25 RELAY AREA         125.81 DEG. F
C   26 BATTERY LEFT       154.29 DEG. F
C   27 BATTERY RIGHT      152.35 DEG. F
C   28 AIR IN SET         126.84 DEG. F
C   29 FUEL TANK          129.86 DEG. F
C   30 FUEL OUTLET        149.90 DEG. F

END SCAN GROUP 1     22 JAN 88  17:37:59

STOPPED SINGLE SCAN  22 JAN 88  17:37:59
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BEGIN SCAN GROUP 1   22 JAN 88  17:14:58
30 KW 60 HZ GEN SET S/N KZO 5841

C    1 EXHAUST 1          805.04 DEG. F
C    2 EXHAUST 2          758.54 DEG. F
C    3 EXHAUST 3          767.66 DEG. F
C    4 EXHAUST 4          808.76 DEG. F
C    5 EXHAUST 5          855.34 DEG. F
C    6 EXHAUST 6          784.86 DEG. F
C    7 ENG. COOL. IN      203.83 DEG. F
C    8 ENG. COOL. OUT     212.49 DEG. F
C    9 OIL SUMP           231.88 DEG. F
C   10 OIL GALLERY        233.17 DEG. F
C   13  ENG. INTAKE       136.44 DEG. F
C   14 RAD. TOP LEFT      162.86 DEG. F
C   15 RAD. BTTM LEFT     148.92 DEG. F
C   16 RAD. TOP RIGHT     147.49 DEG. F
C   17 RAD. BTTM RIGHT    140.30 DEG. F
C   18 GEN. AIR IN        121.58 DEG. F
C   19 GEN. AIR OUT       141.57 DEG. F
C   20 GEN. FRAME TOP     134.49 DEG. F
C   21 GEN. FRAME BTTM    127.86 DEG. F
C   22 GEN. EXCITER       138.82 DEG. F
C   23 GEN. VOLT. REG.    135.60 DEG. F
C   24 CONTROL PANEL      137.10 DEG. F
C   25 RELAY AREA         122.47 DEG. F
C   26 BATTERY LEFT       151.78 DEG. F
C   27 BATTERY RIGHT      152.89 DEG. F
C   28 AIR IN SET         125.48 DEG. F
C   29 FUEL TANK          129.79 DEG. F
C   30 FUEL OUTLET        147.05 DEG. F

END SCAN GROUP 1     22 JAN 88  17:15:07

STOPPED SINGLE SCAN  22 JAN 88  17:15:07
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BEGIN SCAN GROUP 1   22 JAN 88  17:39:48
30 KW 60 HZ GEN SET S/N KZO 5841

C    1 EXHAUST 1          802.12 DEG. F
C    2 EXHAUST 2          765.21 DEG. F
C    3 EXHAUST 3          772.69 DEG. F
C    4 EXHAUST 4          820.77 DEG. F
C    5 EXHAUST 5          865.24 DEG. F
C    6 EXHAUST 6          787.37 DEG. F
C    7 ENG. COOL. IN      206.31 DEG. F
C    8 ENG. COOL. OUT     216.14 DEG. F
C    9 OIL SUMP           236.83 DEG. F
C   10 OIL GALLERY        238.45 DEG. F
C   13  ENG. INTAKE       139.78 DEG. F
C   14 RAD. TOP LEFT      166.46 DEG. F
C   15 RAD. BTTM LEFT     151.45 DEG. F
C   16 RAD. TOP RIGHT     149.52 DEG. F
C   17 RAD. BTTM RIGHT    142.11 DEG. F
C   18 GEN. AIR IN        120.58 DEG. F
C   19 GEN. AIR OUT       144.00 DEG. F
C   20 GEN. FRAME TOP     137.33 DEG. F
C   21 GEN. FRAME BTTM    130.07 DEG. F
C   22 GEN. EXCITER       148.13 DEG. F
C   23 GEN. VOLT. REG.    137.65 DEG. F
C   24 CONTROL PANEL      139.29 DEG. F
C   25 RELAY AREA         125.03 DEG. F
C   26 BATTERY LEFT       154.38 DEG. F
C   27 BATTERY RIGHT      152.93 DEG. F
C   28 AIR IN SET         124.32 DEG. F
C   29 FUEL TANK          129.68 DEG. F
C   30 FUEL OUTLET        150.06 DEG. F

END SCAN GROUP 1     22 JAN 88  17:39:45

STOPPED SINGLE SCAN  22 JAN 88  17:39:45
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BEGIN SCAN GROUP 1    22 JAN 88  17:24:56
30 KW 60 HZ GEN SET S/N KZO 5841

C    1 EXHAUST 1          806.69 DEG. F
C    2 EXHAUST 2          758.10 DEG. F
C    3 EXHAUST 3          771.48 DEG. F
C    4 EXHAUST 4          812.11 DEG. F
C    5 EXHAUST 5          859.28 DEG. F
C    6 EXHAUST 6          790.86 DEG. F
C    7 ENG. COOL. IN      205.85 DEG. F
C    8 ENG. COOL. OUT     214.56 DEG. F
C    9 OIL SUMP           234.84 DEG. F
C   10 OIL GALLERY        236.82 DEG. F
C   13  ENG. INTAKE       138.53 DEG. F
C   14 RAD. TOP LEFT      164.84 DEG. F
C   15 RAD. BTTM LEFT     150.69 DEG. F
C   16 RAD. TOP RIGHT     148.91 DEG. F
C   17 RAD. BTTM RIGHT    140.53 DEG. F
C   18 GEN. AIR IN        121.86 DEG. F
C   19 GEN. AIR OUT       142.79 DEG. F
C   20 GEN. FRAME TOP     136.82 DEG. F
C   21 GEN. FRAME BTTM    129.84 DEG. F
C   22 GEN. EXCITER       139.33 DEG. F
C   23 GEN. VOLT. REG.    136.29 DEG. F
C   24 CONTROL PANEL      138.17 DEG. F
C   25 RELAY AREA         123.78 DEG. F
C   26 BATTERY LEFT       153.26 DEG. F
C   27 BATTERY RIGHT      152.66 DEG. F
C   28 AIR IN SET         125.84 DEG. F
C   29 FUEL TANK          129.72 DEG. F
C   30 FUEL OUTLET        148.41 DEG. F

END SCAN GROUP 1      22 JAN 88  17:25:05

STOPPED SINGLE SCAN   22 JAN 88  17:25:05
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BEGIN SCAN GROUP 1    22 JAN 88  17:34:52
30 KW/60 HZ GEN SET S/N KZO 5841

C    1 EXHAUST 1          814.40 DEG. F
C    2 EXHAUST 2          768.74 DEG. F
C    3 EXHAUST 3          772.23 DEG. F
C    4 EXHAUST 4          811.92 DEG. F
C    5 EXHAUST 5          861.11 DEG. F
C    6 EXHAUST 6          791.30 DEG. F
C    7 ENG. COOL. IN      206.10 DEG. F
C    8 ENG. COOL. OUT     215.84 DEG. F
C    9 OIL SUMP           235.77 DEG. F
C   10 OIL GALLERY        237.79 DEG. F
C   13  ENG. INTAKE       139.77 DEG. F
C   14 RAD. TOP LEFT      165.67 DEG. F
C   15 RAD. BTTM LEFT     151.84 DEG. F
C   16 RAD. TOP RIGHT     150.15 DEG. F
C   17 RAD. BTTM RIGHT    141.81 DEG. F
C   18 GEN. AIR IN        122.51 DEG. F
C   19 GEN. AIR OUT       144.89 DEG. F
C   20 GEN. FRAME TOP     137.28 DEG. F
C   21 GEN. FRAME BTTM    129.94 DEG. F
C   22 GEN. EXCITER       140.60 DEG. F
C   23 GEN. VOLT. REG.    137.20 DEG. F
C   24 CONTROL PANEL      138.75 DEG. F
C   25 RELAY AREA         124.68 DEG. F
C   26 BATTERY LEFT       154.20 DEG. F
C   27 BATTERY RIGHT      152.21 DEG. F
C   28 AIR IN SET         126.60 DEG. F
C   29 FUEL TANK          129.75 DEG. F
C   30 FUEL OUTLET        149.74 DEG. F

END SCAN GROUP 1      22 JAN 88  17:35:02

STOPPED SINGLE SCAN   22 JAN 88  17:35:02
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BEGIN SCAN GROUP 1    22 JAN 88  17:41:35
30 KW 60 HZ GEN SET S/N KZO 5841

C    1 EXHAUST 1          384.20 DEG. F
C    2 EXHAUST 2          394.97 DEG. F
C    3 EXHAUST 3          412.88 DEG. F
C    4 EXHAUST 4          487.66 DEG. F
C    5 EXHAUST 5          492.78 DEG. F
C    6 EXHAUST 6          456.99 DEG. F
C    7 ENG. COOL. IN      202.12 DEG. F
C    8 ENG. COOL. OUT     210.29 DEG. F
C    9 OIL SUMP           236.18 DEG. F
C   10 OIL GALLERY        237.89 DEG. F
C   13  ENG. INTAKE       139.18 DEG. F
C   14 RAD. TOP LEFT      163.51 DEG. F
C   15 RAD. BTTM LEFT     150.15 DEG. F
C   16 RAD. TOP RIGHT     148.60 DEG. F
C   17 RAD. BTTM RIGHT    141.78 DEG. F
C   18 GEN. AIR IN        121.57 DEG. F
C   19 GEN. AIR OUT       143.12 DEG. F
C   20 GEN. FRAME TOP     137.86 DEG. F
C   21 GEN. FRAME BTTM    129.82 DEG. F
C   22 GEN. EXCITER       140.53 DEG. F
C   23 GEN. VOLT. REG.    137.59 DEG. F
C   24 CONTROL PANEL      139.18 DEG. F
C   25 RELAY AREA         124.73 DEG. F
C   26 BATTERY LEFT       154.21 DEG. F
C   27 BATTERY RIGHT      152.54 DEG. F
C   28 AIR IN SET         125.00 DEG. F
C   29 FUEL TANK          129.77 DEG. F
C   30 FUEL OUTLET        150.79 DEG. F

END SCAN GROUP 1      22 JAN 88  17:41:44

STOPPED SINGLE SCAN   22 JAN 88  17:41:44
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TEST DATA

ITEM 30 KW / 60 HZ
GENERATOR SET
MEP-005A
MFGR. JOHN F. HILLINGSWORTH
MODEL NO. MEP 005A
SERIAL NO. KZO 5341

NTS
National Technical Systems
Scientific Services Group
Testing Division
P.O. Box 38
Hartwood, Virginia 22471
Tel: 703 752 5300

HIGH TEMP
WINDING RESISTANCE

REF. NO. MIL-STD 705
SHEET 1 OF
DATE 22 JAN 1988
JOB NO. 555-2140
PROJ. ENGR.
RECORDER/OBSERVER KH/GC/ES

INST TIME	STEP NO.	LOAD STEP	E6028 Δ VOLTAGE E_{1-0} VAC	E_{2-0} VAC	E_{3-0} VAC	E6040 Δ AMPERES ×40 E_{1-0} AC AMPS	E_{2-0} AC AMPS	E_{3-0} AC AMPS	E6050 Δ KILOWATTS ×40 E_{1-0} KW	E_{2-0} KW	E_{3-0} KW	FLUKE POWER FACTOR PF	FLUKE FREQ. Hz	FLUKE EXCITER VOLTS VDC	FLUKE FIELD AMPS ADC	AMB. TEMP. °F	PRESS inches of H2O IN WATER	
1805			START	UNIT	AT	LOAD	LOAD	LOAD	INST	START	LOAD	PWR				125		
1810		R/C	119	120	120	2.5	2.52	2.52	.248	.25	.25	.80	60.5	10.9	3.6	125	135	34.1
1815		R/C	119	120	120	2.5	2.54	2.53	.248	.25	.25	.80	60.1	11.0	3.6	122	134	35.4
1825		R/C	119	120	120	2.5	2.54	2.53	.248	.251	.251	.80	60.1	11.2	3.6	124	134	35.8
1835		R/C	119	120	120	2.5	2.54	2.53	.248	.251	.251	.80	60.2	11.4	3.65	125	134	36.6
1838			SHUT	UNIT	DOWN TO	AMBIENT		FOR	WINDING	RESISTANCE	TEST							
1843			START	UNIT	AT	NO	LOAD		FOR HIGH TEMP START			TEST	METHOD	710.1.3.	JAN			
1848		N/C	121.5	121.5	121.5								60.6	4.7	1.55	120	143	31.5
1853		N/C	121	121.5	121								60.5	4.6	1.55	125	147	28.1
1854			SHUT	UNIT	DOWN		UNIT	OPERATING	PROPERLY									

TEST DATA

ITEM 30 KW / 60 HZ GENERATOR SET MODIFIED

MFGR. JAMES R. HOLLINGSWORTH

MODEL NO. MP 005A

SERIAL NO. KZD 5841

NTS

National Technical Systems | Scientific Services Group | Testing Division, PO Box 38, Hallwood, Virginia 22471, Tel: 703 752 5300

AMBIENT

WINDING RESISTANCE TEST

REF. NO. MIL STD 705

SHEET 1 OF 1

DATE 23 JAN 1986

JOB NO. 535 2140

PROJ. ENGR.

RECORDER/OBSERVER JS/KM/GC

DCI READ OUT UNITS	TIME (HR)	EQUIV DIAL READING	MULTIPLIER	LEAD RESISTANCE	WINDING RESIS. OHMS	WINDING		WINDING RESIS. CORR TO 25°C	AVG. AMBIENT TEMP. °F	
	0623	82.6	10^{-3}	0	.0826	1	4	.0832	74 =	23.3°C
		81.6	10^{-3}		.0816	2	5	.0822		
		84.3	10^{-3}		.0843	3	6	.0849		
		84.0	10^{-3}		.0840	7	10	.0846		
		80.9	10^{-3}		.0809	8	11	.0815		
		79.1	10^{-3}		.0791	9	12	.0796		
		2.3	1		2.3	F1	F2	2.315		

NC-8

NOTES:

TEST DATA

ITEM 30 kW / 60Hz GENERATOR SET MODIFIED

MFGR. JOHN F. HOLLINGSWORTH

MODEL NO. MEP005A

SERIAL NO. KZ0584

NTS

National Technical Systems | Scientific Services Group | Testing Division, PO Box 30, Hallwood, Virginia 22471, Tel: 703 752 5300

REF. NO. MIL STD 705

SHEET 1 OF 2

DATE 22 JAN 1988

JOB NO. 535 2140

PROJ. ENGR.

RECORDER/OBSERVER KM/BJ/GC

WINDING RESISTANCE TEST

E62470

TEST LEAD ID NOTES	TIME HRS	DIAL READING	MULTIPLIER	LEAD RESISTANCE	WINDING RESIS. OHMS	WINDING		WINDING RESIS. CORR TO 25°C		AMB. AMBIENT TEMP.	
	1838	102.2	10^{-3}	0	.1022	1	4		.0927	125	51.6°C
		99.6	10^{-3}		.0996	2	5		.0904		
		103.0	10^{-3}		.1030	3	6		.0934		
		103.1	10^{-3}		.1031	7	10		.0935		
		99.0	10^{-3}		.0990	8	11		.0898		
		95.5	10^{-3}		.0955	9	12		.0866		
		2.6	1		2.6	F1	F2		2.359		
		100.6	10^{-3}		.1006	1	4		.0913	125	
		99.0	10^{-3}		.0990	2	5		.0898		
		102.6	10^{-3}		.1026	3	6		.0931		
		103 1	10^{-3}		.1031	7	10		.0935		
		98.2	10^{-3}		.0982	8	11		.0891		
		95.5	10^{-3}		.0955	9	12		.0866		
		2.6	1		2.6	F1	F2		2.359		
		100.1	10^{-3}		.1001	1	4		.0908	125	
		98.7	10^{-3}		.0987	2	5		.0895		
		102.1	10^{-3}		.1021	3	6		.0926		
		101.7	10^{-3}		.1017	7	10		.0923		
		97.5	10^{-3}		.0975	8	11		.0884		
		94.9	10^{-3}		.0949	9	12		.0861		
		2.6	1		2.6	F1	F2		2.359		
		99.6	10^{-3}		.0996	1	4		.0904	125	
		98.2	10^{-3}		.0982	2	5		.0891		
		101.6	10^{-3}		.1016	3	6		.0922		
		101.3	10^{-3}		.1013	7	10		.0919		
		97.2	10^{-3}		.0972	8	11		.0882		
		94.4	10^{-3}		.0944	9	12		.0856		

NOTES:

TEST DATA

ITEM 30 KW / 60 HZ GENERATOR SET MODIFIED

INSP. JOHN R. HOLLINGSWORTH

MODEL NO. MEP 005A

SERIAL NO. 120 5841

NTS

National Technical Systems | Scientific Services Group | Testing Division PO Box 38 Hallwood, Virginia 22471 tel: 703 752 5300

REF. NO. MIL STD 705

SHEET 2 OF 2

DATE 22 JAN 86

JOB NO. 535 2140

PROJ. ENGR.

RECORDER/OBSERVER KM/BJ/GC

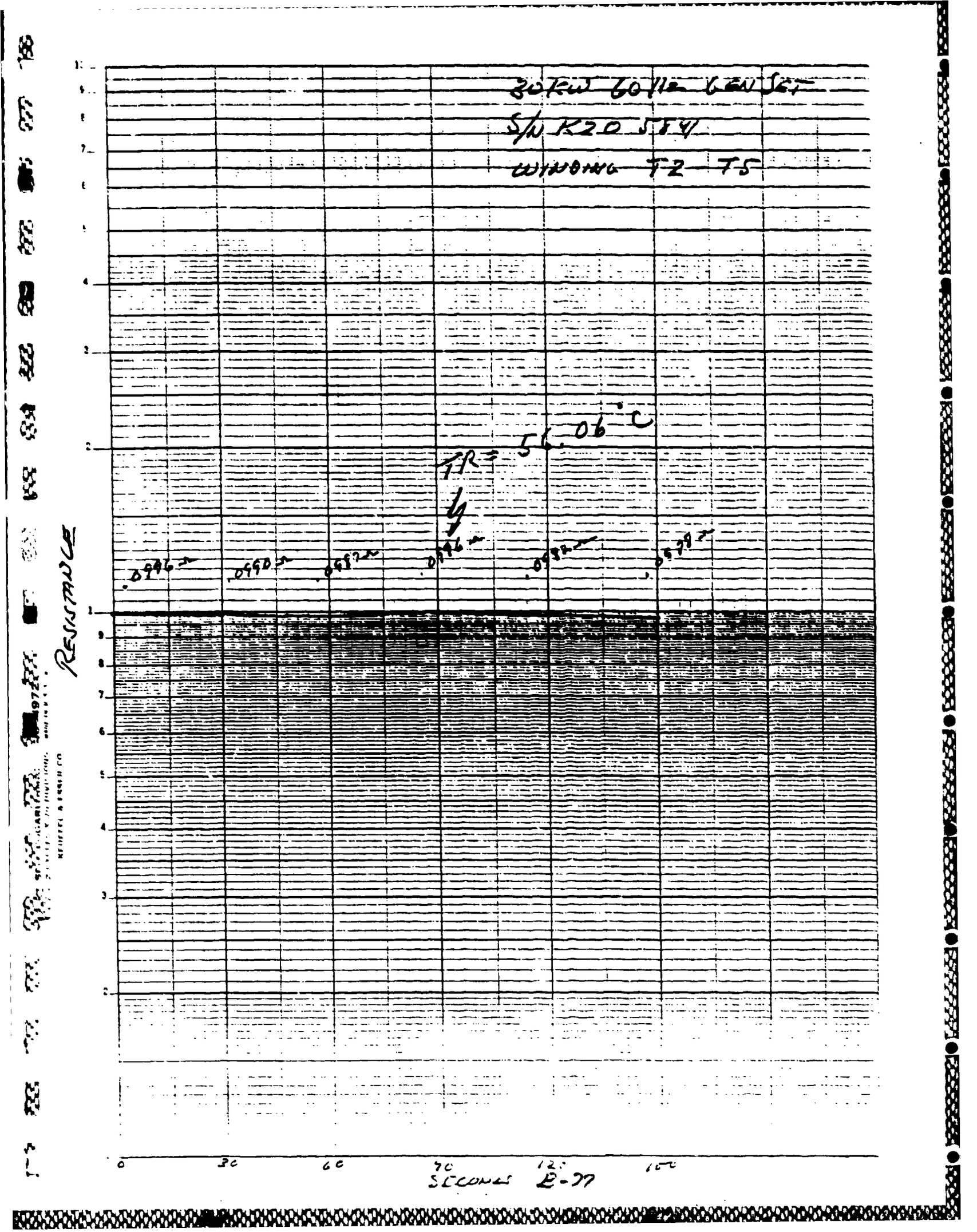
WINDING RESISTANCE TEST

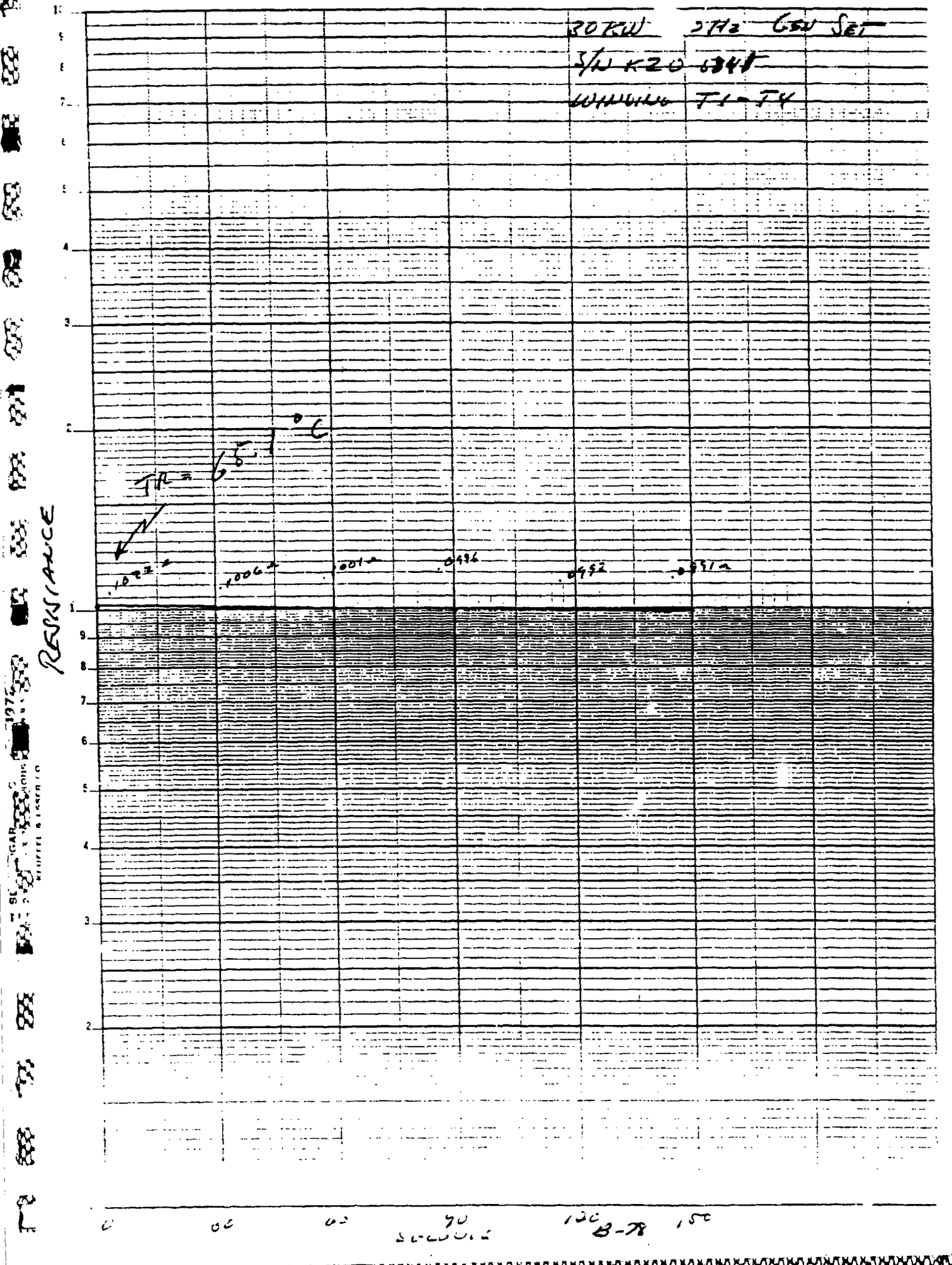
E62470

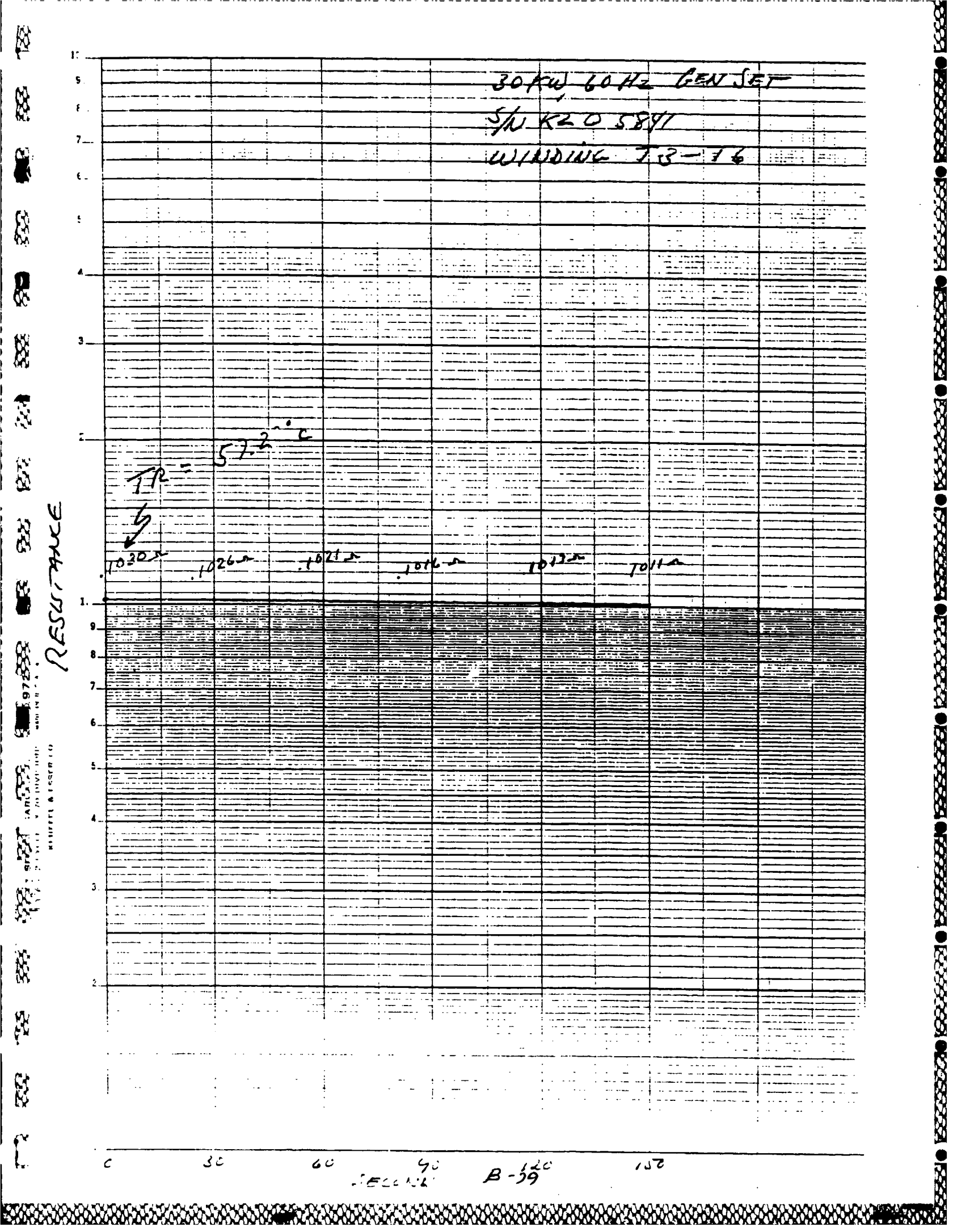
TEST LEAD NO. DELTA	TIME HRS	DIAL READING	MULTIPLIER	LEAD RESISTANCE	WINDING RESIS. OHMS	WINDING		WINDING RESIS. CORR TO 85°C		AVG. AMBIENT TEMP.	
		2.6	1		2.6	F1	F2		2.357		
		99.2	10^{-3}		.0992	1	4		0900	125°	51.6°C
		98.2	10^{-3}		.0982	2	5		.0891		
		101.3	10^{-3}		.1013	3	6		.0919		
		101.1	10^{-3}		.1011	7	10		.0917		
		96.9	10^{-3}		.0969	8	11		.0879		
		94.3	10^{-3}		.0943	9	12		.0855		
		2.6	1		2.6	F1	F2		2.357		
		99.1	10^{-3}		.0991	1	4		.0899	125	
		97.8	10^{-3}		.0978	2	5		.0887		
		101.1	10^{-3}		.1011	3	6		.0917		
		100.7	10^{-3}		.1007	7	10		0913		
		96.6	10^{-3}		.0966	8	11		0876		
		93.8	10^{-3}		.0938	9	12		.0851		
1841	2.6		1		2.6	F1	F2		2.357		

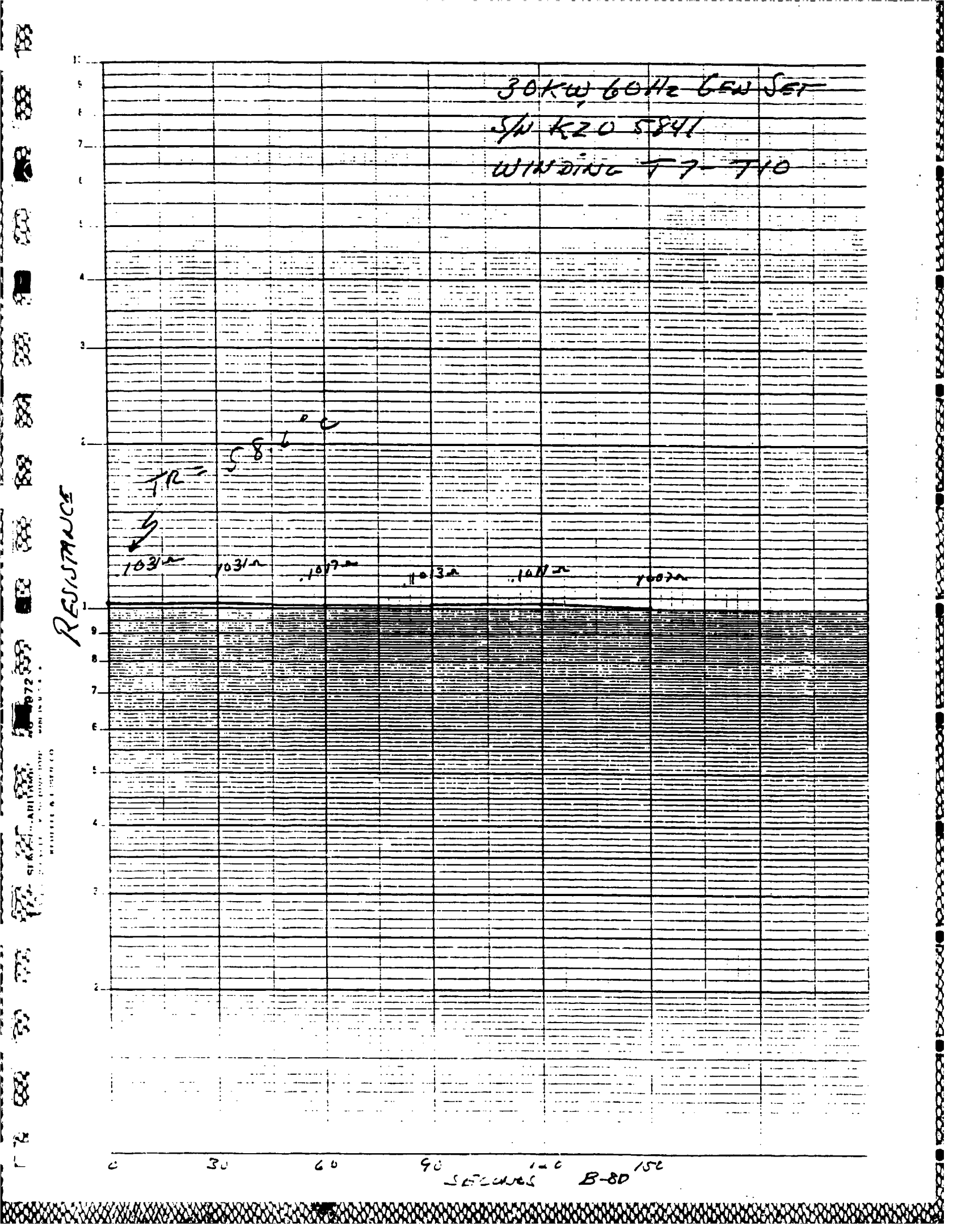
9C-8

NOTES:


20KW GOULD GEN SET
S/N K20 584
WINDING T2 T5
TR = 56.06 °C
.0996 Ω
.0990 Ω
.0972 Ω
.0996 Ω
.0982 Ω
.0979 Ω
RESISTANCE
0
30
60
90
120
150
SECONDS


30 KW 2 Hz GEN SET
S/N K20 6344
WINDING T1-T4
TR = 65.1 °C
RESISTANCE
.1002
.1006
.1001
.0996
.0992
.0971


30KW 60Hz GEN SET
S/N K20 5841
WINDING T3-T6
TR = 57.2°C
1030Ω
1026Ω
1021Ω
1016Ω
1012Ω
1011Ω
RESISTANCE
B-59


30KW 60Hz GEN SET
S/N KZ0 5841
WINDING T7-T10
RESISTANCE
TR=
.1031Ω
.1031Ω
.1017Ω
.1013Ω
.1011Ω
.1007Ω
SECONDS
B-80

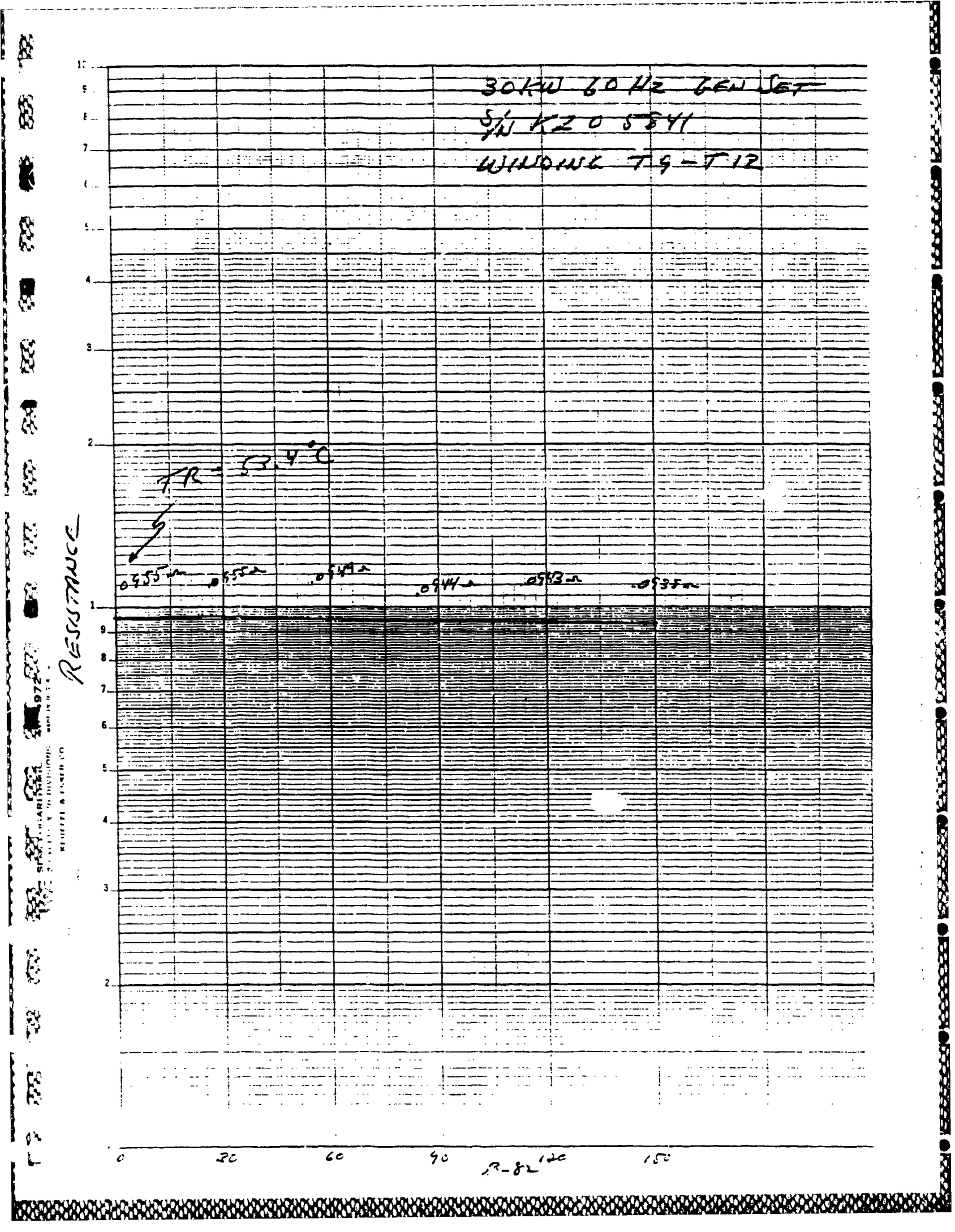
30KW 60Hz GEN SET
S/N KZO 5841
WINDING T8-T11

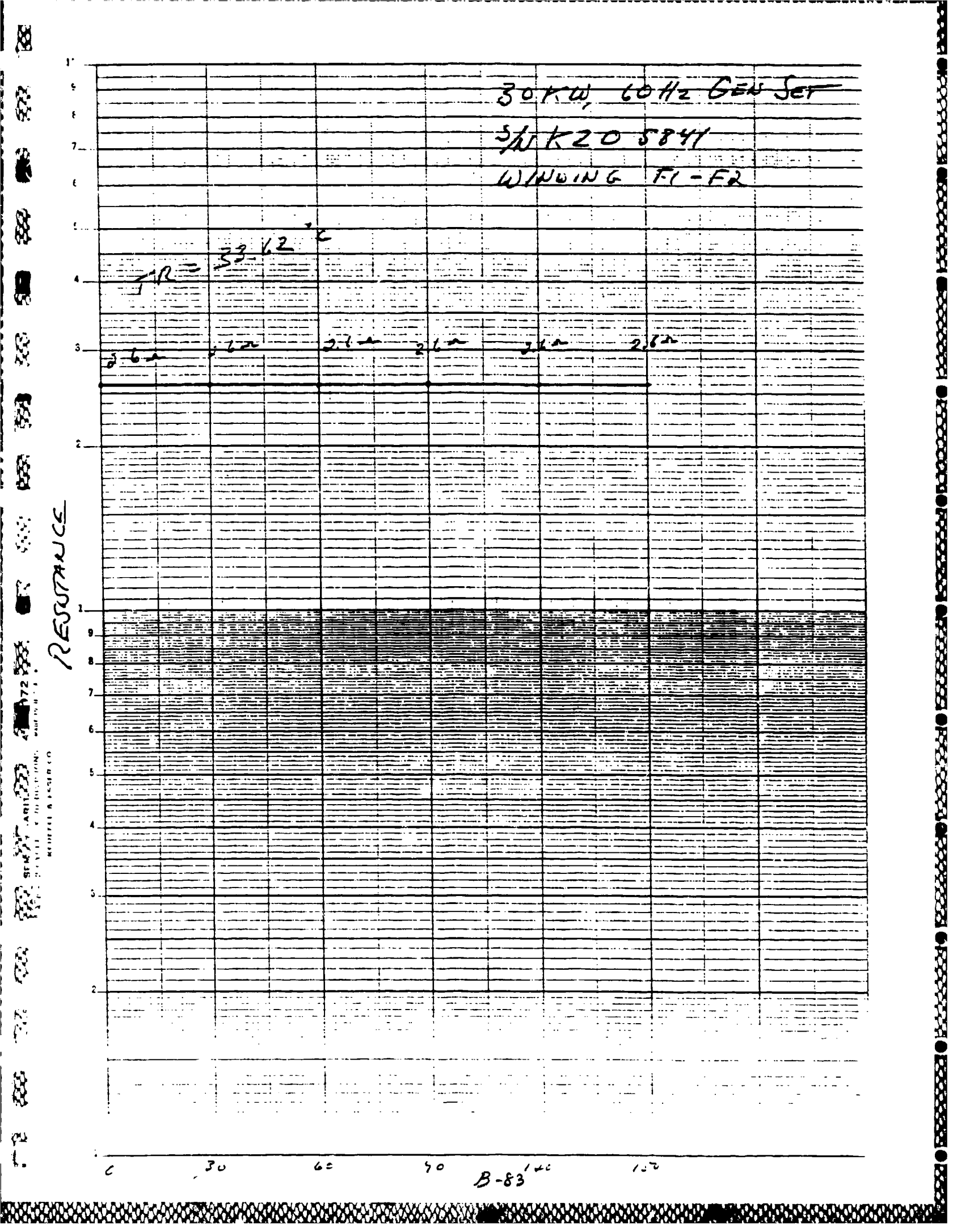
RESISTANCE

$T_2 = 57.7°C$

.0990Ω .0982Ω .0975Ω .0972Ω .0969Ω .0966Ω

C 50 60 70 100 100


30KW 60 Hz GEN SET
S/N KZ0 5541
WINDING T9-T12
TR = 53.4°C
.0555Ω
.0552Ω
.0549Ω
.0544Ω
.0543Ω
.0535Ω
RESISTANCE
0
20
60
90
120
150
R-82


30 KW, 60 Hz GEN SET
S/N K20 5841
WINDING F1 - F2
T_R = 33.62 °C
2.6Ω
2.6Ω
2.7Ω
2.6Ω
2.6Ω
2.8Ω
RESISTANCE
B-83

HIGH TEMP WINDING RESISTANCE

```
BEGIN SCAN GROUP 1    22 JAN 88  18:04:50
30 KW 60 HZ GEN SET S/N KZO 5841

C    1 EXHAUST 1          785.38 DEG. F
C    2 EXHAUST 2          717.88 DEG. F
C    3 EXHAUST 3          722.09 DEG. F
C    4 EXHAUST 4          757.34 DEG. F
C    5 EXHAUST 5          804.18 DEG. F
C    6 EXHAUST 6          714.48 DEG. F
C    7 ENG. COOL. IN      187.62 DEG. F
C    8 ENG. COOL. OUT     195.52 DEG. F
C    9 OIL SUMP           212.26 DEG. F
C   10 OIL GALLERY        213.58 DEG. F
C   13  ENG. INTAKE       141.93 DEG. F
C   14 RAD. TOP LEFT      154.47 DEG. F
C   15 RAD. BTTM LEFT     142.93 DEG. F
C   16 RAD. TOP RIGHT     143.88 DEG. F
C   17 RAD. BTTM RIGHT    135.16 DEG. F
C   18 GEN. AIR IN        121.72 DEG. F
C   19 GEN. AIR OUT       140.55 DEG. F
C   20 GEN. FRAME TOP     139.20 DEG. F
C   21 GEN. FRAME BTTM    129.18 DEG. F
C   22 GEN. EXCITER       131.97 DEG. F
C   23 GEN. VOLT. REG.    129.84 DEG. F
C   24 CONTROL PANEL      128.11 DEG. F
C   25 RELAY AREA                OPEN TC
C   26 BATTERY LEFT       144.53 DEG. F
C   27 BATTERY RIGHT      146.23 DEG. F
C   28 AIR IN SET         124.92 DEG. F
C   29 FUEL TANK          128.30 DEG. F
C   30 FUEL OUTLET        148.40 DEG. F

END SCAN GROUP 1      22 JAN 88  18:05:00

STOPPED SINGLE SCAN   22 JAN 88  18:05:00
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BEGIN SCAN GROUP 1    22 JAN 88  18:25:00
30 KW 60 HZ GEN SET S/N KZO 5841

C    1 EXHAUST 1          813.46 DEG. F
C    2 EXHAUST 2          758.96 DEG. F
C    3 EXHAUST 3          772.34 DEG. F
C    4 EXHAUST 4          812.87 DEG. F
C    5 EXHAUST 5          860.10 DEG. F
C    6 EXHAUST 6          791.98 DEG. F
C    7 ENG. COOL. IN      204.75 DEG. F
C    8 ENG. COOL. OUT     214.44 DEG. F
C    9 OIL SUMP           232.32 DEG. F
C   10 OIL GALLERY        234.14 DEG. F
C   13  ENG. INTAKE       138.00 DEG. F
C   14 RAD. TOP LEFT      164.48 DEG. F
C   15 RAD. BTTM LEFT     156.32 DEG. F
C   16 RAD. TOP RIGHT     148.31 DEG. F
C   17 RAD. BTTM RIGHT    139.55 DEG. F
C   18 GEN. AIR IN        121.89 DEG. F
C   19 GEN. AIR OUT       142.74 DEG. F
C   20 GEN. FRAME TOP     135.94 DEG. F
C   21 GEN. FRAME BTTM    128.81 DEG. F
C   22 GEN. EXCITER       144.78 DEG. F
C   23 GEN. VOLT. REG.    134.27 DEG. F
C   24 CONTROL PANEL      135.48 DEG. F
C   25 RELAY AREA         135.84 DEG. F
C   26 BATTERY LEFT       152.37 DEG. F
C   27 BATTERY RIGHT      154.31 DEG. F
C   28 AIR IN SET         124.49 DEG. F
C   29 FUEL TANK          127.88 DEG. F
C   30 FUEL OUTLET        147.77 DEG. F

END SCAN GROUP 1      22 JAN 88  18:25:09

STOPPED SINGLE SCAN   22 JAN 88  18:25:09
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BEGIN SCAN GROUP 1    22 JAN 88  18:15:11
30 KW/60 HZ GEN SET S/N KZO 5841

C    1 EXHAUST 1          887.58 DEG. F
C    2 EXHAUST 2          758.62 DEG. F
C    3 EXHAUST 3          769.61 DEG. F
C    4 EXHAUST 4          869.12 DEG. F
C    5 EXHAUST 5          855.81 DEG. F
C    6 EXHAUST 6          787.57 DEG. F
C    7 ENG. COOL. IN      202.18 DEG. F
C    8 ENG. COOL. OUT     211.47 DEG. F
C    9 OIL SUMP           225.64 DEG. F
C   10 OIL GALLERY        227.42 DEG. F
C   13  ENG. INTAKE       136.42 DEG. F
C   14 RAD. TOP LEFT      162.63 DEG. F
C   15 RAD. BTTM LEFT     148.85 DEG. F
C   16 RAD. TOP RIGHT     146.14 DEG. F
C   17 RAD. BTTM RIGHT    137.43 DEG. F
C   18 GEN. AIR IN        120.13 DEG. F
C   19 GEN. AIR OUT       141.28 DEG. F
C   20 GEN. FRAME TOP     134.59 DEG. F
C   21 GEN. FRAME BTTM    127.47 DEG. F
C   22 GEN. EXCITER       142.83 DEG. F
C   23 GEN. VOLT. REG.    131.73 DEG. F
C   24 CONTROL PANEL      132.53 DEG. F
C   25 RELAY AREA         133.68 DEG. F
C   26 BATTERY LEFT       149.83 DEG. F
C   27 BATTERY RIGHT      150.21 DEG. F
C   28 AIR IN SET         122.47 DEG. F
C   29 FUEL TANK          127.91 DEG. F
C   30 FUEL OUTLET        146.27 DEG. F

END SCAN GROUP 1      22 JAN 88  18:15:20

STOPPED SINGLE SCAN   22 JAN 88  18:15:20
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BEGIN SCAN GROUP 1    22 JAN 88  18:35:05
30 KW/60 HZ GEN SET S/N KZO 5841

C    1 EXHAUST 1          812.75 DEG. F
C    2 EXHAUST 2          759.63 DEG. F
C    3 EXHAUST 3          775.47 DEG. F
C    4 EXHAUST 4          814.38 DEG. F
C    5 EXHAUST 5          861.51 DEG. F
C    6 EXHAUST 6          794.81 DEG. F
C    7 ENG. COOL. IN      205.35 DEG. F
C    8 ENG. COOL. OUT     214.97 DEG. F
C    9 OIL SUMP           235.17 DEG. F
C   10 OIL GALLERY        237.82 DEG. F
C   13  ENG. INTAKE       138.83 DEG. F
C   14 RAD. TOP LEFT      163.94 DEG. F
C   15 RAD. BTTM LEFT     150.89 DEG. F
C   16 RAD. TOP RIGHT     149.18 DEG. F
C   17 RAD. BTTM RIGHT    140.41 DEG. F
C   18 GEN. AIR IN        121.94 DEG. F
C   19 GEN. AIR OUT       143.49 DEG. F
C   20 GEN. FRAME TOP     136.23 DEG. F
C   21 GEN. FRAME BTTM    129.81 DEG. F
C   22 GEN. EXCITER       145.42 DEG. F
C   23 GEN. VOLT. REG.    135.46 DEG. F
C   24 CONTROL PANEL      136.79 DEG. F
C   25 RELAY AREA         135.17 DEG. F
C   26 BATTERY LEFT       153.46 DEG. F
C   27 BATTERY RIGHT      155.79 DEG. F
C   28 AIR IN SET         125.78 DEG. F
C   29 FUEL TANK          127.92 DEG. F
C   30 FUEL OUTLET        148.19 DEG. F

END SCAN GROUP 1      22 JAN 88  18:35:15

STOPPED SINGLE SCAN   22 JAN 88  18:35:15
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BEGIN SCAN GROUP 1 22 JAN 88 18:38:40
30 KW/60 HZ GEN SET S/N KZO 5841

C	1	EXHAUST 1	665.00 DEG. F
C	2	EXHAUST 2	611.56 DEG. F
C	3	EXHAUST 3	629.68 DEG. F
C	4	EXHAUST 4	670.08 DEG. F
C	5	EXHAUST 5	720.59 DEG. F
C	6	EXHAUST 6	647.05 DEG. F
C	7	ENG. COOL. IN	205.64 DEG. F
C	8	ENG. COOL. OUT	215.62 DEG. F
C	9	OIL SUMP	236.40 DEG. F
C	10	OIL GALLERY	237.08 DEG. F
C	13	ENG. INTAKE	138.66 DEG. F
C	14	RAD. TOP LEFT	175.14 DEG. F
C	15	RAD. BTTM LEFT	154.26 DEG. F
C	16	RAD. TOP RIGHT	156.84 DEG. F
C	17	RAD. BTTM RIGHT	141.45 DEG. F
C	18	GEN. AIR IN	122.94 DEG. F
C	19	GEN. AIR OUT	143.96 DEG. F
C	20	GEN. FRAME TOP	136.65 DEG. F
C	21	GEN. FRAME BTTM	129.57 DEG. F
C	22	GEN. EXCITER	144.79 DEG. F
C	23	GEN. VOLT. REG.	135.78 DEG. F
C	24	CONTROL PANEL	137.05 DEG. F
C	25	RELAY AREA	136.77 DEG. F
C	26	BATTERY LEFT	153.89 DEG. F
C	27	BATTERY RIGHT	156.19 DEG. F
C	28	AIR IN SET	124.62 DEG. F
C	29	FUEL TANK	128.23 DEG. F
C	30	FUEL OUTLET	148.57 DEG. F

END SCAN GROUP 1 22 JAN 88 18:38:55

BEGIN SCAN GROUP 1 22 JAN 88 18:39:40
30 KW/60 HZ GEN SET S/N KZO 5841

C	1	EXHAUST 1	498.03 DEG. F
C	2	EXHAUST 2	476.21 DEG. F
C	3	EXHAUST 3	520.66 DEG. F
C	4	EXHAUST 4	561.01 DEG. F
C	5	EXHAUST 5	605.68 DEG. F
C	6	EXHAUST 6	529.13 DEG. F
C	7	ENG. COOL. IN	199.84 DEG. F
C	8	ENG. COOL. OUT	226.54 DEG. F
C	9	OIL SUMP	237.26 DEG. F
C	10	OIL GALLERY	229.54 DEG. F
C	13	ENG. INTAKE	141.50 DEG. F
C	14	RAD. TOP LEFT	199.39 DEG. F
C	15	RAD. BTTM LEFT	171.54 DEG. F
C	16	RAD. TOP RIGHT	184.55 DEG. F
C	17	RAD. BTTM RIGHT	148.76 DEG. F
C	18	GEN. AIR IN	124.48 DEG. F
C	19	GEN. AIR OUT	148.32 DEG. F
C	20	GEN. FRAME TOP	139.34 DEG. F
C	21	GEN. FRAME BTTM	130.58 DEG. F
C	22	GEN. EXCITER	146.74 DEG. F
C	23	GEN. VOLT. REG.	135.96 DEG. F
C	24	CONTROL PANEL	137.07 DEG. F
C	25	RELAY AREA	145.76 DEG. F
C	26	BATTERY LEFT	154.24 DEG. F
C	27	BATTERY RIGHT	157.32 DEG. F
C	28	AIR IN SET	124.86 DEG. F
C	29	FUEL TANK	128.27 DEG. F
C	30	FUEL OUTLET	147.58 DEG. F

END SCAN GROUP 1 22 JAN 88 18:39:54

BEGIN SCAN GROUP 1 22 JAN 88 18:39:10
30 KW/60 HZ GEN SET S/N KZO 5841

C	1	EXHAUST 1	563.41 DEG. F
C	2	EXHAUST 2	520.03 DEG. F
C	3	EXHAUST 3	558.56 DEG. F
C	4	EXHAUST 4	600.38 DEG. F
C	5	EXHAUST 5	652.54 DEG. F
C	6	EXHAUST 6	578.83 DEG. F
C	7	ENG. COOL. IN	201.90 DEG. F
C	8	ENG. COOL. OUT	218.33 DEG. F
C	9	OIL SUMP	236.68 DEG. F
C	10	OIL GALLERY	232.71 DEG. F
C	13	ENG. INTAKE	140.88 DEG. F
C	14	RAD. TOP LEFT	194.55 DEG. F
C	15	RAD. BTTM LEFT	165.78 DEG. F
C	16	RAD. TOP RIGHT	177.99 DEG. F
C	17	RAD. BTTM RIGHT	141.11 DEG. F
C	18	GEN. AIR IN	123.68 DEG. F
C	19	GEN. AIR OUT	141.57 DEG. F
C	20	GEN. FRAME TOP	137.88 DEG. F
C	21	GEN. FRAME BTTM	130.86 DEG. F
C	22	GEN. EXCITER	145.84 DEG. F
C	23	GEN. VOLT. REG.	135.83 DEG. F
C	24	CONTROL PANEL	136.90 DEG. F
C	25	RELAY AREA	142.23 DEG. F
C	26	BATTERY LEFT	154.11 DEG. F
C	27	BATTERY RIGHT	156.98 DEG. F
C	28	AIR IN SET	125.24 DEG. F
C	29	FUEL TANK	128.26 DEG. F
C	30	FUEL OUTLET	147.81 DEG. F

END SCAN GROUP 1 22 JAN 88 18:39:24

BEGIN SCAN GROUP 1 22 JAN 88 18:40:10
30 KW/60 HZ GEN SET S/N KZO 5841

C	1	EXHAUST 1	455.53 DEG. F
C	2	EXHAUST 2	451.12 DEG. F
C	3	EXHAUST 3	495.41 DEG. F
C	4	EXHAUST 4	533.32 DEG. F
C	5	EXHAUST 5	571.47 DEG. F
C	6	EXHAUST 6	499.99 DEG. F
C	7	ENG. COOL. IN	197.72 DEG. F
C	8	ENG. COOL. OUT	231.61 DEG. F
C	9	OIL SUMP	237.84 DEG. F
C	10	OIL GALLERY	226.45 DEG. F
C	13	ENG. INTAKE	142.78 DEG. F
C	14	RAD. TOP LEFT	202.88 DEG. F
C	15	RAD. BTTM LEFT	174.88 DEG. F
C	16	RAD. TOP RIGHT	187.54 DEG. F
C	17	RAD. BTTM RIGHT	148.44 DEG. F
C	18	GEN. AIR IN	125.81 DEG. F
C	19	GEN. AIR OUT	139.51 DEG. F
C	20	GEN. FRAME TOP	140.53 DEG. F
C	21	GEN. FRAME BTTM	131.85 DEG. F
C	22	GEN. EXCITER	148.59 DEG. F
C	23	GEN. VOLT. REG.	136.12 DEG. F
C	24	CONTROL PANEL	137.38 DEG. F
C	25	RELAY AREA	147.57 DEG. F
C	26	BATTERY LEFT	154.32 DEG. F
C	27	BATTERY RIGHT	157.63 DEG. F
C	28	AIR IN SET	124.72 DEG. F
C	29	FUEL TANK	128.28 DEG. F
C	30	FUEL OUTLET	147.69 DEG. F

END SCAN GROUP 1 22 JAN 88 18:40:24

BEGIN SCAN GROUP 1 22 JAN 88 18:40:40
30 KW 60 HZ GEN SET S/N KZO 5841

C	1	EXHAUST 1	426.12	DEG. F
C	2	EXHAUST 2	433.87	DEG. F
C	3	EXHAUST 3	475.74	DEG. F
C	4	EXHAUST 4	510.80	DEG. F
C	5	EXHAUST 5	544.24	DEG. F
C	6	EXHAUST 6	476.83	DEG. F
C	7	ENG. COOL. IN	196.24	DEG. F
C	8	ENG. COOL. OUT	234.89	DEG. F
C	9	OIL SUMP	236.89	DEG. F
C	10	OIL GALLERY	223.48	DEG. F
C	13	ENG. INTAKE	143.76	DEG. F
C	14	RAD. TOP LEFT	204.16	DEG. F
C	15	RAD. BTTM LEFT	174.71	DEG. F
C	16	RAD. TOP RIGHT	191.20	DEG. F
C	17	RAD. BTTM RIGHT	148.25	DEG. F
C	18	GEN. AIR IN	125.49	DEG. F
C	19	GEN. AIR OUT	138.88	DEG. F
C	20	GEN. FRAME TOP	141.48	DEG. F
C	21	GEN. FRAME BTTM	131.48	DEG. F
C	22	GEN. EXCITER	150.18	DEG. F
C	23	GEN. VOLT. REG.	136.28	DEG. F
C	24	CONTROL PANEL	137.56	DEG. F
C	25	RELAY AREA	149.88	DEG. F
C	26	BATTERY LEFT	154.38	DEG. F
C	27	BATTERY RIGHT	157.93	DEG. F
C	28	AIR IN SET	124.71	DEG. F
C	29	FUEL TANK	128.30	DEG. F
C	30	FUEL OUTLET	147.96	DEG. F

END SCAN GROUP 1 22 JAN 88 18:40:54

BEGIN SCAN GROUP 1 22 JAN 88 18:41:18
30 KW 60 HZ GEN SET S/N KZO 5841

C	1	EXHAUST 1	404.67	DEG. F
C	2	EXHAUST 2	420.43	DEG. F
C	3	EXHAUST 3	458.28	DEG. F
C	4	EXHAUST 4	491.25	DEG. F
C	5	EXHAUST 5	521.34	DEG. F
C	6	EXHAUST 6	457.24	DEG. F
C	7	ENG. COOL. IN	195.53	DEG. F
C	8	ENG. COOL. OUT	236.29	DEG. F
C	9	OIL SUMP	236.65	DEG. F
C	10	OIL GALLERY	221.25	DEG. F
C	13	ENG. INTAKE	144.83	DEG. F
C	14	RAD. TOP LEFT	207.29	DEG. F
C	15	RAD. BTTM LEFT	174.89	DEG. F
C	16	RAD. TOP RIGHT	194.38	DEG. F
C	17	RAD. BTTM RIGHT	148.83	DEG. F
C	18	GEN. AIR IN	126.85	DEG. F
C	19	GEN. AIR OUT	138.83	DEG. F
C	20	GEN. FRAME TOP	142.33	DEG. F
C	21	GEN. FRAME BTTM	131.88	DEG. F
C	22	GEN. EXCITER	151.40	DEG. F
C	23	GEN. VOLT. REG.	136.50	DEG. F
C	24	CONTROL PANEL	137.83	DEG. F
C	25	RELAY AREA	150.52	DEG. F
C	26	BATTERY LEFT	154.37	DEG. F
C	27	BATTERY RIGHT	158.15	DEG. F
C	28	AIR IN SET	124.87	DEG. F
C	29	FUEL TANK	128.28	DEG. F
C	30	FUEL OUTLET	148.38	DEG. F

END SCAN GROUP 1 22 JAN 88 18:41:24

BEGIN SCAN GROUP 1 22 JAN 88 18:44:58
30 KW 60 HZ GEN SET S/N KZO 5841

C	1	EXHAUST 1	368.16	DEG. F
C	2	EXHAUST 2	353.82	DEG. F
C	3	EXHAUST 3	368.76	DEG. F
C	4	EXHAUST 4	438.96	DEG. F
C	5	EXHAUST 5	448.86	DEG. F
C	6	EXHAUST 6	391.11	DEG. F
C	7	ENG. COOL. IN	196.34	DEG. F
C	8	ENG. COOL. OUT	204.87	DEG. F
C	9	OIL SUMP	228.77	DEG. F
C	10	OIL GALLERY	229.88	DEG. F
C	13	ENG. INTAKE	145.21	DEG. F
C	14	RAD. TOP LEFT	162.88	DEG. F
C	15	RAD. BTTM LEFT	150.77	DEG. F
C	16	RAD. TOP RIGHT	148.75	DEG. F
C	17	RAD. BTTM RIGHT	141.79	DEG. F
C	18	GEN. AIR IN	123.36	DEG. F
C	19	GEN. AIR OUT	143.42	DEG. F
C	20	GEN. FRAME TOP	139.87	DEG. F
C	21	GEN. FRAME BTTM	131.89	DEG. F
C	22	GEN. EXCITER	144.12	DEG. F
C	23	GEN. VOLT. REG.	138.84	DEG. F
C	24	CONTROL PANEL	138.47	DEG. F
C	25	RELAY AREA	137.51	DEG. F
C	26	BATTERY LEFT	152.84	DEG. F
C	27	BATTERY RIGHT	156.58	DEG. F
C	28	AIR IN SET	125.58	DEG. F
C	29	FUEL TANK	128.27	DEG. F
C	30	FUEL OUTLET	158.85	DEG. F

END SCAN GROUP 1 22 JAN 88 18:45:07

STOPPED SINGLE SCAN 22 JAN 88 18:45:07

BEGIN SCAN GROUP 1 22 JAN 88 18:46:06
30 KW 60 HZ GEN SET S/N KZO 5841

C	1	EXHAUST 1	354.19	DEG. F
C	2	EXHAUST 2	339.94	DEG. F
C	3	EXHAUST 3	373.28	DEG. F
C	4	EXHAUST 4	419.94	DEG. F
C	5	EXHAUST 5	432.48	DEG. F
C	6	EXHAUST 6	379.68	DEG. F
C	7	ENG. COOL. IN	191.34	DEG. F
C	8	ENG. COOL. OUT	198.88	DEG. F
C	9	OIL SUMP	228.42	DEG. F
C	10	OIL GALLERY	229.32	DEG. F
C	13	ENG. INTAKE	141.24	DEG. F
C	14	RAD. TOP LEFT	158.72	DEG. F
C	15	RAD. BTTM LEFT	148.58	DEG. F
C	16	RAD. TOP RIGHT	147.13	DEG. F
C	17	RAD. BTTM RIGHT	141.58	DEG. F
C	18	GEN. AIR IN	124.96	DEG. F
C	19	GEN. AIR OUT	142.78	DEG. F
C	20	GEN. FRAME TOP	139.85	DEG. F
C	21	GEN. FRAME BTTM	131.43	DEG. F
C	22	GEN. EXCITER	142.72	DEG. F
C	23	GEN. VOLT. REG.	138.25	DEG. F
C	24	CONTROL PANEL	138.38	DEG. F
C	25	RELAY AREA	136.54	DEG. F
C	26	BATTERY LEFT	152.75	DEG. F
C	27	BATTERY RIGHT	156.86	DEG. F
C	28	AIR IN SET	126.88	DEG. F
C	29	FUEL TANK	128.28	DEG. F
C	30	FUEL OUTLET	152.58	DEG. F

END SCAN GROUP 1 22 JAN 88 18:46:15

STOPPED SINGLE SCAN 22 JAN 88 18:46:15

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BEGIN SCAN GROUP 1    22 JAN 88  18:41:40
30 KW/60 HZ GEN SET S/N KZ0 5841

C    1 EXHAUST 1          388.17 DEG. F
C    2 EXHAUST 2          403.12 DEG. F
C    3 EXHAUST 3          443.48 DEG. F
C    4 EXHAUST 4          473.80 DEG. F
C    5 EXHAUST 5          501.30 DEG. F
C    6 EXHAUST 6          448.13 DEG. F
C    7 ENG. COOL. IN      194.83 DEG. F
C    8 ENG. COOL. OUT     236.81 DEG. F
C    9 OIL SUMP           236.35 DEG. F
C   10 OIL GALLERY        218.53 DEG. F
C   13  ENG. INTAKE       145.87 DEG. F
C   14 RAD. TOP LEFT      211.81 DEG. F
C   15 RAD. BTTM LEFT     174.48 DEG. F
C   16 RAD. TOP RIGHT     199.15 DEG. F
C   17 RAD. BTTM RIGHT    139.78 DEG. F
C   18 GEN. AIR IN        125.78 DEG. F
C   19 GEN. AIR OUT       138.72 DEG. F
C   20 GEN. FRAME TOP     142.95 DEG. F
C   21 GEN. FRAME BTTM    132.25 DEG. F
C   22 GEN. EXCITER       152.52 DEG. F
C   23 GEN. VOLT. REG.    136.78 DEG. F
C   24 CONTROL PANEL      138.18 DEG. F
C   25 RELAY AREA         151.74 DEG. F
C   26 BATTERY LEFT       154.38 DEG. F
C   27 BATTERY RIGHT      158.37 DEG. F
C   28 AIR IN SET         125.88 DEG. F
C   29 FUEL TANK          128.29 DEG. F
C   30 FUEL OUTLET        148.86 DEG. F

END SCAN GROUP 1      22 JAN 88  18:41:54

BEGIN SCAN GROUP 1    22 JAN 88  18:42:18
30 KW/60 HZ GEN SET S/N KZ0 5841

C    1 EXHAUST 1          374.97 DEG. F
C    2 EXHAUST 2          399.82 DEG. F
C    3 EXHAUST 3          438.19 DEG. F
C    4 EXHAUST 4          457.92 DEG. F
C    5 EXHAUST 5          483.39 DEG. F
C    6 EXHAUST 6          424.82 DEG. F
C    7 ENG. COOL. IN      194.61 DEG. F
C    8 ENG. COOL. OUT     236.83 DEG. F
C    9 OIL SUMP           236.81 DEG. F
C   10 OIL GALLERY        217.57 DEG. F
C   13  ENG. INTAKE       146.88 DEG. F
C   14 RAD. TOP LEFT      214.85 DEG. F
C   15 RAD. BTTM LEFT     174.76 DEG. F

STOPPED SCANNING      22 JAN 88  18:42:17

BEGIN SCAN GROUP 1    22 JAN 88  18:53:42
30 KW/60 HZ GEN SET S/N KZ0 5841

C    1 EXHAUST 1          333.62 DEG. F
C    2 EXHAUST 2          313.55 DEG. F
C    3 EXHAUST 3          331.59 DEG. F
C    4 EXHAUST 4          339.11 DEG. F
C    5 EXHAUST 5          414.67 DEG. F
C    6 EXHAUST 6          351.21 DEG. F
C    7 ENG. COOL. IN      176.71 DEG. F
C    8 ENG. COOL. OUT     183.85 DEG. F
C    9 OIL SUMP           221.33 DEG. F
C   10 OIL GALLERY        222.64 DEG. F
C   13  ENG. INTAKE       131.31 DEG. F
C   14 RAD. TOP LEFT      148.67 DEG. F
C   15 RAD. BTTM LEFT     146.15 DEG. F
C   16 RAD. TOP RIGHT     141.38 DEG. F
C   17 RAD. BTTM RIGHT    138.41 DEG. F
C   18 GEN. AIR IN        124.12 DEG. F
C   19 GEN. AIR OUT       138.19 DEG. F
C   20 GEN. FRAME TOP     133.15 DEG. F
C   21 GEN. FRAME BTTM    128.51 DEG. F
C   22 GEN. EXCITER       140.53 DEG. F
C   23 GEN. VOLT. REG.    136.85 DEG. F
C   24 CONTROL PANEL      137.74 DEG. F
C   25 RELAY AREA         138.82 DEG. F
C   26 BATTERY LEFT       149.18 DEG. F
C   27 BATTERY RIGHT      153.76 DEG. F
C   28 AIR IN SET         125.27 DEG. F
C   29 FUEL TANK          128.17 DEG. F
C   30 FUEL OUTLET        158.67 DEG. F

END SCAN GROUP 1      22 JAN 88  18:53:51

STOPPED SINGLE SCAN   22 JAN 88  18:53:51
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BEGIN SCAN GROUP 1    23 JAN 88  06:20:55
30 KW 60 HZ GEN SET S/N KZO 5841

C    1 EXHAUST 1          87.165 DEG. F
C    2 EXHAUST 2          87.139 DEG. F
C    3 EXHAUST 3          87.322 DEG. F
C    4 EXHAUST 4          87.241 DEG. F
C    5 EXHAUST 5          87.343 DEG. F
C    6 EXHAUST 6          87.397 DEG. F
C    7 ENG. COOL. IN      81.950 DEG. F
C    8 ENG. COOL. OUT     86.545 DEG. F
C    9 OIL SUMP           85.039 DEG. F
C   10 OIL GALLERY        86.131 DEG. F
C   11  ENG. INTAKE       87.251 DEG. F
C   14 RAD. TOP LEFT      83.961 DEG. F
C   15 RAD. BTTM LEFT     81.196 DEG. F
C   16 RAD. TOP RIGHT     82.757 DEG. F
C   17 RAD. BTTM RIGHT    78.867 DEG. F
C   18 GEN. AIR IN        75.185 DEG. F
C   19 GEN. AIR OUT       80.895 DEG. F
C   20 GEN. FRAME TOP     86.295 DEG. F
C   21 GEN. FRAME BTTM    80.878 DEG. F
C   22 GEN. EXCITER       82.005 DEG. F
C   23 GEN. VOLT. REG.    80.988 DEG. F
C   24 CONTROL PANEL      80.389 DEG. F
C   25 RELAY AREA         83.518 DEG. F
C   26 BATTERY LEFT       85.425 DEG. F
C   27 BATTERY RIGHT      83.922 DEG. F
C   28 AIR IN SET         74.868 DEG. F
C   29 FUEL TANK          81.855 DEG. F
C   30 FUEL OUTLET        83.186 DEG. F

END SCAN GROUP 1      23 JAN 88  06:21:05

STOPPED SINGLE SCAN   23 JAN 88  06:21:05
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TEST DATA

ITEM 30 KW / 60 HZ GENERATOR SET MODIFIED

MFGR. JOHN R. HOLLINGSWORTH

MODEL NO. MEP 005A

SERIAL NO. KZO 5841

NTS

National Technical Systems | Scientific Services Group | Testing Division, P.O. Box 38, Hartwood, Virginia 22471, Tel: 703 752 5300

REF. NO. MIL-STD 705; 608.2

SHEET 1 OF 2

DATE 23 JAN 1988

JOB NO. 555-2140

PROJ. ENGR.

RECORDER/OBSERVER BJ/KM/CK

FREQUENCY AND VOLTAGE STABILITY TEST (LONG TERM)

INST TIME	STEP NO.	LOAD STEP	EG028 D VOLTAGE L_1-L_0 VAC	L_2-L_0 VAC	L_3-L_0 VAC	EG046 D AMPERES x1K L_1-L_0 AC AMPS	L_2-L_0 AC AMPS	L_3-L_0 AC AMPS	EG230 D KILOWATTS x1K L_1-L_0 Kw	L_2-L_0 Kw	L_3-L_0 Kw	EG021D POWER FACTOR PF	EG011D FREQ. Hz	EG170 EXCITER FIELD VOLTS VDC	EG050 EXCITER FIELD AMPS DCA	AMB. TEMP. °F	
0656			START	UNIT	AT	RATED	LOAD	START	START	STABILIZATION							
0710		R/L	119.5	120.5	120	2.52	2.55	2.55	.25	.251	.251	.80	59.E	9.1	3.5	126	
0720		R/L	119.5	120.5	120	2.53	2.55	2.55	.25	.251	.251	.80	59.5	9.7	3.55	125	
0721			ADJUSTED	FREQUENCY													
0724		R/L	119.5	120.5	120.5	2.52	2.54	253	.25	.252	.252	.80	60.0	9.5	3.55	125	
0735		R/L	119.5	120.5	120.5	2.52	255	2.54	.25	.251	.251	.80	60.0	9.7	3.55	125	
0745		R/L	119.5	120.5	120.5	2.53	2.55	2.55	.25	.252	.252	.80	60.0	9.9	3.65	124	
0755		R/L	120	121	120.5	2.53	2.55	2.55	.25	.252	.252	.80	60.0	10.0	3.65	125	
0800		R/L	120	121	120.5	2.54	2.56	2.55	.25	.253	.253	.80	59.5	10.0	3.7	125	
0815			REGIN	LONG	TERM	STABILITY											
0830	10	R/L	120	121	120.5	2.54	2.56	2.55	.25	.253	.253	.80	59.8	10.2	3.75	126	
0900		R/L	120	121	121	2.54	2.56	2.56	.25	.254	.254	.80	59.9	10.2	3.75	125	
0930	90	R/L	120	121	120.5	2.54	2.56	2.55	.25	.254	.254	.80	59.9	10.3	3.75	126	
1000	10	R/L	120	121	120.5	2.54	2.56	2.55	.25	.253	.253	.80	59.85	10.3	3.75	125	
1020		R/L	120	121	120.5	2.54	2.55	2.55	.25	.253	.253	.80	59.9	10.2	3.75	124	
1100		R/L	120	121	120.5	2.54	2.55	2.55	.25	.253	.253	.80	59.9	10.2	3.75	125	
1130		R/L	120	121	120.5	2.54	2.56	2.55	.25	.253	.253	.80	59.85	10.3	3.75	125	
1200		R/L	120	121	120.5	2.54	2.56	2.55	.25	.253	.253	.80	59.8	10.2	3.75	125	
1210			END LONG TERM STABILITY AT RATED LOAD						START STABILIZATION AT NO LOAD								
1212		N/L	120	121.5	121								61.4	4.3	1.6	126	
1222		N/L	121	121.5	121								61.3	4.1	1.55	124	
1230		N/L	121	121	121								61.3	4.0	1.5	124	
1234		N/L	121	121	121								61.3	4.0	1.5	126	
1234		N/L	121	121.1	121								61.3	3.9	1.5	126	
1234			START	LONG	TERM	STABILITY		AT NO LOAD									
1305		N/L	121	121.1	121								61.3	3.9	1.5	126	

NOTES:

TEST DATA

ITEM 30 KW / 60 HZ GENERATOR SET MODIFIED

MFGR. JOHN R. HOLLINGSWORTH

MODEL NO. MEP 005A

SERIAL NO. KZO 5541

NTS

National Technical Systems | Scientific Services Group | Testing Division, P.O. Box 38, Harwood, Virginia 22471, Tel: 703 752 5300

REF. NO. MIL-STD 705; 608.2

SHEET 2 OF 2

DATE 25 JAN 1986

JOB NO. 555-2140

PROJ. ENGR.

RECORDER/OBSERVER DJ / KM / GC

FREQUENCY AND VOLTAGE STABILITY TEST (LONG TERM)

INST TIME	STEP NO.	LOAD STEP	E 6020 D VOLTAGE L_1-L_0 VAC	L_2-L_0 VAC	L_3-L_0 VAC	E 6010 D AMPERES x10 L_1-L_0 AC AMPS	L_2-L_0 AC AMPS	L_3-L_0 AC AMPS	E 6230 D KILOWATTS x10 L_1-L_0 Kw	L_2-L_0 Kw	L_3-L_0 Kw	E6430D POWER FACTOR PF	E6410D FREQ. Hz	E6470 EXCITER VOLTS VDC	E6500 FIELD AMPS DCA	AMB. TEMP. °F	
			VAC	VAC	VAC	AC AMPS	AC AMPS	AC AMPS	Kw	Kw	Kw	PF	Hz	VDC	DCA	°F	
												4.2	60.2	3.9	1.5	124	14.5/28.5
335		NL	121	121.5	121								61.2	3.9	1.5	125	14.5/28.5
404		NL	121	121	121								61.2	3.9	1.5	125	14.3/28
435		NL	121	121	121								61.2	3.9	1.5	125	14.2/28.5
505		NL	121	121.1	121								61.1	3.9	1.5	125	14.5/28.5
535		NL	121	121	121								61.2	3.9	1.5	126	14.4/27.9
605		NL	121	121.5	121								61.25	3.9	1.5	125	14.4/28.5
635		NL	121	121.5	121												
726		RL	120	120.5	120.5	2.53	2.55	2.55	.25	.252	.252	.80	59.8	9.1	3.5	125	
		NL	121.1	121.5	121.5								60.4	3.9	1.5	125	
		RL	120	120.5	120.5	2.54	2.56	2.55	.25	.252	.252	.80	59.6	9.2	3.5	126	
		NL	121	121.5	121.5								61.4	3.9	1.5	125	
		RL	120	120.5	120.5	2.53	2.55	2.55	.25	.252	.252	.80	59.6	9.2	3.5	126	
		NL	121	121.5	121.5								61.4	3.9	3.5	126	
1640			END	OF	TEST	SHUT	UNIT	DOWN									

NOTES:

TEST DATA

ITEM 30 KW 60 Hz GEN SET MODIFIED

MFGR. JOHN R HOLLINGSWORTH

MODEL NO. MEP 005A

SERIAL NO. KZ 05841

NTS

National Technical Systems | Scientific Services Group | Testing Division P.O. Box 38 Harwood, Virginia 22471 tel: 703 752 5300

FREQUENCY AND VOLTAGE Stability

(Long Term) Method 608.2

REF. NO. MIL-STD-705

SHEET 1 OF 1

DATE 4 FEB 1988

JOB NO. 555-2140

PROJ. ENGR.

RECORDER/OBSERVER

	FREQUENCY								VOLTAGE							
	MAXIMUM EXCURSION				REC.	CONSTANT LOAD BANDWIDTH		REGULATION	MAXIMUM EXCURSION				REC.	CONSTANT LOAD BANDWIDTH		
LOAD STEP	OVERSHOOT Hz	OVERSHOOT %	UNDERSHOOT Hz	UNDERSHOOT %	TIME SEC	± Hz	± %	FREQ. %	VOLT %	OVERSHOOT VOLT	OVERSHOOT %	UNDERSHOOT VOLT	UNDERSHOOT %	TIME SEC	± VOLT	± %
N/L		SHORT TERM STABILITY				.07	.12								.17	.15
N/L		LONG TERM STABILITY				.20	.35								.17	.15
R/L		SHORT TERM STABILITY				.09	.15								.17	.15
R/L		LONG TERM STABILITY				.26	.43									
1						.12	.20								.17	.15
1-2	1.77	2.95			.47			2.66	.83	1.91	1.59			.10		
2						.12	.20								.17	.15
2-3			1.46	2.43	1.17			3.0	.83			1.91	1.59	.23		
3						.12	.20								.17	.15
3-4	1.56	2.60			.47			3.0	.83	1.91	1.59			.23		
4						.09	.15								.17	.15
4-5			1.46	2.43	1.09			3.0	.83			1.74	1.45	.23		
5						.12	.20								.17	.15
5-6	1.67	2.78			.47			3.0	.83	2.08	1.74			.16		

16 + 8

NOTES:

FREQ + VOLTAGE STABILITY (LONG TERM) 60 Hz

BEGIN SCAN GROUP 1 23 JAN 88 06:49:21
30 KW 60 HZ GEN SET S/N KZO 5841

C	1	EXHAUST 1	87.094 DEG. F
C	2	EXHAUST 2	86.938 DEG. F
C	3	EXHAUST 3	87.196 DEG. F
C	4	EXHAUST 4	87.272 DEG. F
C	5	EXHAUST 5	87.272 DEG. F
C	6	EXHAUST 6	87.579 DEG. F
C	7	ENG. COOL. IN	81.638 DEG. F
C	8	ENG. COOL. OUT	86.314 DEG. F
C	9	OIL SUMP	84.659 DEG. F
C	10	OIL GALLERY	86.335 DEG. F
C	13	ENG. INTAKE	86.943 DEG. F
C	14	RAD. TOP LEFT	84.112 DEG. F
C	15	RAD. BTTM LEFT	82.938 DEG. F
C	16	RAD. TOP RIGHT	84.294 DEG. F
C	17	RAD. BTTM RIGHT	81.685 DEG. F
C	18	GEN. AIR IN	84.802 DEG. F
C	19	GEN. AIR OUT	82.527 DEG. F
C	20	GEN. FRAME TOP	87.245 DEG. F
C	21	GEN. FRAME BTTM	82.579 DEG. F
C	22	GEN. EXCITER	84.773 DEG. F
C	23	GEN. VOLT. REG.	82.627 DEG. F
C	24	CONTROL PANEL	83.318 DEG. F
C	25	RELAY AREA	85.057 DEG. F
C	26	BATTERY LEFT	86.103 DEG. F
C	27	BATTERY RIGHT	85.185 DEG. F
C	28	AIR IN SET	103.03 DEG. F
C	29	FUEL TANK	66.599 DEG. F
C	30	FUEL OUTLET	83.998 DEG. F

END SCAN GROUP 1 23 JAN 88 06:49:30

STOPPED SINGLE SCAN 23 JAN 88 06:49:30

BEGIN SCAN GROUP 1 23 JAN 88 07:09:51
30 KW 60 HZ GEN SET S/N KZO 5841

C	1	EXHAUST 1	800.29 DEG. F
C	2	EXHAUST 2	767.12 DEG. F
C	3	EXHAUST 3	763.94 DEG. F
C	4	EXHAUST 4	813.49 DEG. F
C	5	EXHAUST 5	860.43 DEG. F
C	6	EXHAUST 6	796.64 DEG. F
C	7	ENG. COOL. IN	194.80 DEG. F
C	8	ENG. COOL. OUT	203.66 DEG. F
C	9	OIL SUMP	192.45 DEG. F
C	10	OIL GALLERY	194.80 DEG. F
C	13	ENG. INTAKE	136.25 DEG. F
C	14	RAD. TOP LEFT	156.72 DEG. F
C	15	RAD. BTTM LEFT	143.99 DEG. F
C	16	RAD. TOP RIGHT	139.72 DEG. F
C	17	RAD. BTTM RIGHT	119.27 DEG. F
C	18	GEN. AIR IN	125.74 DEG. F
C	19	GEN. AIR OUT	125.59 DEG. F
C	20	GEN. FRAME TOP	121.61 DEG. F
C	21	GEN. FRAME BTTM	116.00 DEG. F
C	22	GEN. EXCITER	135.19 DEG. F
C	23	GEN. VOLT. REG.	103.29 DEG. F
C	24	CONTROL PANEL	109.09 DEG. F
C	25	RELAY AREA	129.37 DEG. F
C	26	BATTERY LEFT	127.28 DEG. F
C	27	BATTERY RIGHT	118.62 DEG. F
C	28	AIR IN SET	126.69 DEG. F
C	29	FUEL TANK	69.312 DEG. F
C	30	FUEL OUTLET	118.19 DEG. F

END SCAN GROUP 1 23 JAN 88 07:10:00

STOPPED SINGLE SCAN 23 JAN 88 07:10:00

BEGIN SCAN GROUP 1 23 JAN 88 06:56:55
30 KW/60 HZ GEN SET S/N KZO 5841

C	1	EXHAUST 1	728.74 DEG. F
C	2	EXHAUST 2	680.82 DEG. F
C	3	EXHAUST 3	685.39 DEG. F
C	4	EXHAUST 4	736.84 DEG. F
C	5	EXHAUST 5	787.97 DEG. F
C	6	EXHAUST 6	689.73 DEG. F
C	7	ENG. COOL. IN	87.050 DEG. F
C	8	ENG. COOL. OUT	129.13 DEG. F
C	9	OIL SUMP	103.77 DEG. F
C	10	OIL GALLERY	113.25 DEG. F
C	13	ENG. INTAKE	102.31 DEG. F
C	14	RAD. TOP LEFT	109.76 DEG. F
C	15	RAD. BTTM LEFT	111.08 DEG. F
C	16	RAD. TOP RIGHT	111.12 DEG. F
C	17	RAD. BTTM RIGHT	96.483 DEG. F
C	18	GEN. AIR IN	93.201 DEG. F
C	19	GEN. AIR OUT	98.244 DEG. F
C	20	GEN. FRAME TOP	91.933 DEG. F
C	21	GEN. FRAME BTTM	87.323 DEG. F
C	22	GEN. EXCITER	96.983 DEG. F
C	23	GEN. VOLT. REG.	85.002 DEG. F
C	24	CONTROL PANEL	87.142 DEG. F
C	25	RELAY AREA	95.648 DEG. F
C	26	BATTERY LEFT	92.643 DEG. F
C	27	BATTERY RIGHT	90.038 DEG. F
C	28	AIR IN SET	111.79 DEG. F
C	29	FUEL TANK	67.219 DEG. F
C	30	FUEL OUTLET	87.931 DEG. F

END SCAN GROUP 1 23 JAN 88 06:57:04

STOPPED SINGLE SCAN 23 JAN 88 06:57:04

BEGIN SCAN GROUP 1 23 JAN 88 07:19:56
30 KW/60 HZ GEN SET S/N KZO 5841

C	1	EXHAUST 1	889.07 DEG. F
C	2	EXHAUST 2	767.36 DEG. F
C	3	EXHAUST 3	772.75 DEG. F
C	4	EXHAUST 4	816.70 DEG. F
C	5	EXHAUST 5	867.23 DEG. F
C	6	EXHAUST 6	793.58 DEG. F
C	7	ENG. COOL. IN	200.93 DEG. F
C	8	ENG. COOL. OUT	210.46 DEG. F
C	9	OIL SUMP	217.16 DEG. F
C	10	OIL GALLERY	217.99 DEG. F
C	13	ENG. INTAKE	137.52 DEG. F
C	14	RAD. TOP LEFT	159.13 DEG. F
C	15	RAD. BTTM LEFT	146.76 DEG. F
C	16	RAD. TOP RIGHT	142.81 DEG. F
C	17	RAD. BTTM RIGHT	126.51 DEG. F
C	18	GEN. AIR IN	121.00 DEG. F
C	19	GEN. AIR OUT	132.05 DEG. F
C	20	GEN. FRAME TOP	128.48 DEG. F
C	21	GEN. FRAME BTTM	122.99 DEG. F
C	22	GEN. EXCITER	138.63 DEG. F
C	23	GEN. VOLT. REG.	116.85 DEG. F
C	24	CONTROL PANEL	122.38 DEG. F
C	25	RELAY AREA	131.72 DEG. F
C	26	BATTERY LEFT	135.54 DEG. F
C	27	BATTERY RIGHT	123.95 DEG. F
C	28	AIR IN SET	123.89 DEG. F
C	29	FUEL TANK	71.553 DEG. F
C	30	FUEL OUTLET	132.43 DEG. F

END SCAN GROUP 1 23 JAN 88 07:20:00

STOPPED SINGLE SCAN 23 JAN 88 07:20:00

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BEGIN SCAN GROUP 1   23 JAN 88  07:24:48
30 KW/60 HZ GEN SET S/N KZO 5841

C    1 EXHAUST 1          803.86 DEG. F
C    2 EXHAUST 2          759.83 DEG. F
C    3 EXHAUST 3          770.10 DEG. F
C    4 EXHAUST 4          814.63 DEG. F
C    5 EXHAUST 5          863.63 DEG. F
C    6 EXHAUST 6          789.88 DEG. F
C    7 ENG. COOL. IN      201.10 DEG. F
C    8 ENG. COOL. OUT     210.53 DEG. F
C    9 OIL SUMP           223.13 DEG. F
C   10 OIL GALLERY        224.88 DEG. F
C   13  ENG. INTAKE       136.49 DEG. F
C   14 RAD. TOP LEFT      160.36 DEG. F
C   15 RAD. BTTM LEFT     147.37 DEG. F
C   16 RAD. TOP RIGHT     144.30 DEG. F
C   17 RAD. BTTM RIGHT    128.69 DEG. F
C   18 GEN. AIR IN        123.09 DEG. F
C   19 GEN. AIR OUT       134.41 DEG. F
C   20 GEN. FRAME TOP     125.97 DEG. F
C   21 GEN. FRAME BTTM    123.88 DEG. F
C   22 GEN. EXCITER       138.13 DEG. F
C   23 GEN. VOLT. REG.    126.87 DEG. F
C   24 CONTROL PANEL      126.34 DEG. F
C   25 RELAY AREA         132.38 DEG. F
C   26 BATTERY LEFT       137.50 DEG. F
C   27 BATTERY RIGHT      124.98 DEG. F
C   28 AIR IN SET         125.52 DEG. F
C   29 FUEL TANK          72.825 DEG. F
C   30 FUEL OUTLET        135.35 DEG. F

END SCAN GROUP 1     23 JAN 88  07:24:57

STOPPED SINGLE SCAN  23 JAN 88  07:24:57
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BEGIN SCAN GROUP 1   23 JAN 88  07:45:01
30 KW/60 HZ GEN SET S/N KZO 5841

C    1 EXHAUST 1          813.98 DEG. F
C    2 EXHAUST 2          759.98 DEG. F
C    3 EXHAUST 3          774.42 DEG. F
C    4 EXHAUST 4          814.28 DEG. F
C    5 EXHAUST 5          864.79 DEG. F
C    6 EXHAUST 6          790.46 DEG. F
C    7 ENG. COOL. IN      203.54 DEG. F
C    8 ENG. COOL. OUT     213.49 DEG. F
C    9 OIL SUMP           233.49 DEG. F
C   10 OIL GALLERY        234.85 DEG. F
C   13  ENG. INTAKE       136.81 DEG. F
C   14 RAD. TOP LEFT      161.82 DEG. F
C   15 RAD. BTTM LEFT     148.61 DEG. F
C   16 RAD. TOP RIGHT     146.25 DEG. F
C   17 RAD. BTTM RIGHT    133.26 DEG. F
C   18 GEN. AIR IN        121.84 DEG. F
C   19 GEN. AIR OUT       139.41 DEG. F
C   20 GEN. FRAME TOP     133.67 DEG. F
C   21 GEN. FRAME BTTM    127.83 DEG. F
C   22 GEN. EXCITER       140.28 DEG. F
C   23 GEN. VOLT. REG.    129.86 DEG. F
C   24 CONTROL PANEL      133.58 DEG. F
C   25 RELAY AREA         133.59 DEG. F
C   26 BATTERY LEFT       141.67 DEG. F
C   27 BATTERY RIGHT      129.23 DEG. F
C   28 AIR IN SET         124.45 DEG. F
C   29 FUEL TANK          78.221 DEG. F
C   30 FUEL OUTLET        142.32 DEG. F

END SCAN GROUP 1     23 JAN 88  07:45:18

STOPPED SINGLE SCAN  23 JAN 88  07:45:18
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BEGIN SCAN GROUP 1   23 JAN 88  07:35:22
30 KW/60 HZ GEN SET S/N KZO 5841

C    1 EXHAUST 1          808.77 DEG. F
C    2 EXHAUST 2          759.87 DEG. F
C    3 EXHAUST 3          772.83 DEG. F
C    4 EXHAUST 4          813.36 DEG. F
C    5 EXHAUST 5          863.55 DEG. F
C    6 EXHAUST 6          788.48 DEG. F
C    7 ENG. COOL. IN      202.54 DEG. F
C    8 ENG. COOL. OUT     212.19 DEG. F
C    9 OIL SUMP           230.76 DEG. F
C   10 OIL GALLERY        231.22 DEG. F
C   13  ENG. INTAKE       135.96 DEG. F
C   14 RAD. TOP LEFT      160.37 DEG. F
C   15 RAD. BTTM LEFT     147.27 DEG. F
C   16 RAD. TOP RIGHT     144.76 DEG. F
C   17 RAD. BTTM RIGHT    131.43 DEG. F
C   18 GEN. AIR IN        120.38 DEG. F
C   19 GEN. AIR OUT       137.85 DEG. F
C   20 GEN. FRAME TOP     131.90 DEG. F
C   21 GEN. FRAME BTTM    125.64 DEG. F
C   22 GEN. EXCITER       138.67 DEG. F
C   23 GEN. VOLT. REG.    126.28 DEG. F
C   24 CONTROL PANEL      131.27 DEG. F
C   25 RELAY AREA         132.31 DEG. F
C   26 BATTERY LEFT       140.28 DEG. F
C   27 BATTERY RIGHT      127.40 DEG. F
C   28 AIR IN SET         123.49 DEG. F
C   29 FUEL TANK          75.676 DEG. F
C   30 FUEL OUTLET        139.22 DEG. F

END SCAN GROUP 1     23 JAN 88  07:35:32

STOPPED SINGLE SCAN  23 JAN 88  07:35:32
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BEGIN SCAN GROUP 1   23 JAN 88  07:55:06
30 KW/60 HZ GEN SET S/N KZO 5841

C    1 EXHAUST 1          818.33 DEG. F
C    2 EXHAUST 2          763.65 DEG. F
C    3 EXHAUST 3          780.36 DEG. F
C    4 EXHAUST 4          816.84 DEG. F
C    5 EXHAUST 5          868.63 DEG. F
C    6 EXHAUST 6          793.98 DEG. F
C    7 ENG. COOL. IN      205.35 DEG. F
C    8 ENG. COOL. OUT     215.11 DEG. F
C    9 OIL SUMP           235.31 DEG. F
C   10 OIL GALLERY        236.83 DEG. F
C   13  ENG. INTAKE       137.97 DEG. F
C   14 RAD. TOP LEFT      162.98 DEG. F
C   15 RAD. BTTM LEFT     149.73 DEG. F
C   16 RAD. TOP RIGHT     147.54 DEG. F
C   17 RAD. BTTM RIGHT    135.27 DEG. F
C   18 GEN. AIR IN        122.22 DEG. F
C   19 GEN. AIR OUT       141.58 DEG. F
C   20 GEN. FRAME TOP     135.43 DEG. F
C   21 GEN. FRAME BTTM    128.45 DEG. F
C   22 GEN. EXCITER       140.35 DEG. F
C   23 GEN. VOLT. REG.    131.36 DEG. F
C   24 CONTROL PANEL      135.26 DEG. F
C   25 RELAY AREA         134.49 DEG. F
C   26 BATTERY LEFT       143.59 DEG. F
C   27 BATTERY RIGHT      130.98 DEG. F
C   28 AIR IN SET         125.57 DEG. F
C   29 FUEL TANK          81.252 DEG. F
C   30 FUEL OUTLET        144.82 DEG. F

END SCAN GROUP 1     23 JAN 88  07:55:15

STOPPED SINGLE SCAN  23 JAN 88  07:55:15
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BEGIN SCAN GROUP 1   23 JAN 88  07:57:54
30 KW/60 HZ GEN SET S/N KZO 5841

C    1 EXHAUST 1          819.73 DEG. F
C    2 EXHAUST 2          763.31 DEG. F
C    3 EXHAUST 3          778.00 DEG. F
C    4 EXHAUST 4          818.41 DEG. F
C    5 EXHAUST 5          871.37 DEG. F
C    6 EXHAUST 6          796.89 DEG. F
C    7 ENG. COOL. IN      205.56 DEG. F
C    8 ENG. COOL. OUT     215.40 DEG. F
C    9 OIL SUMP           235.64 DEG. F
C   10 OIL GALLERY        236.47 DEG. F
C   13  ENG. INTAKE       138.13 DEG. F
C   14 RAD. TOP LEFT      162.96 DEG. F
C   15 RAD. BTTM LEFT     156.01 DEG. F
C   16 RAD. TOP RIGHT     147.75 DEG. F
C   17 RAD. BTTM RIGHT    135.65 DEG. F
C   18 GEN. AIR IN        121.90 DEG. F
C   19 GEN. AIR OUT       141.91 DEG. F
C   20 GEN. FRAME TOP     135.81 DEG. F
C   21 GEN. FRAME BTTM    128.73 DEG. F
C   22 GEN. EXCITER       146.92 DEG. F
C   23 GEN. VOLT. REG.    131.94 DEG. F
C   24 CONTROL PANEL      135.72 DEG. F
C   25 RELAY AREA         135.82 DEG. F
C   26 BATTERY LEFT       144.84 DEG. F
C   27 BATTERY RIGHT      131.67 DEG. F
C   28 AIR IN SET         125.64 DEG. F
C   29 FUEL TANK          81.914 DEG. F
C   30 FUEL OUTLET        144.61 DEG. F

END SCAN GROUP 1      23 JAN 88  07:58:04

STOPPED SINGLE SCAN   23 JAN 88  07:58:04
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BEGIN SCAN GROUP 1   23 JAN 88  08:30:00
30 KW/60 HZ GEN SET S/N KZO 5841

C    1 EXHAUST 1          828.87 DEG. F
C    2 EXHAUST 2          768.71 DEG. F
C    3 EXHAUST 3          782.18 DEG. F
C    4 EXHAUST 4          822.77 DEG. F
C    5 EXHAUST 5          875.65 DEG. F
C    6 EXHAUST 6          798.55 DEG. F
C    7 ENG. COOL. IN      206.68 DEG. F
C    8 ENG. COOL. OUT     216.50 DEG. F
C    9 OIL SUMP           237.67 DEG. F
C   10 OIL GALLERY        238.41 DEG. F
C   13  ENG. INTAKE       138.41 DEG. F
C   14 RAD. TOP LEFT      163.46 DEG. F
C   15 RAD. BTTM LEFT     158.91 DEG. F
C   16 RAD. TOP RIGHT     149.39 DEG. F
C   17 RAD. BTTM RIGHT    138.00 DEG. F
C   18 GEN. AIR IN        122.43 DEG. F
C   19 GEN. AIR OUT       144.39 DEG. F
C   20 GEN. FRAME TOP     137.54 DEG. F
C   21 GEN. FRAME BTTM    130.13 DEG. F
C   22 GEN. EXCITER       141.46 DEG. F
C   23 GEN. VOLT. REG.    135.30 DEG. F
C   24 CONTROL PANEL      138.89 DEG. F
C   25 RELAY AREA         135.61 DEG. F
C   26 BATTERY LEFT       145.83 DEG. F
C   27 BATTERY RIGHT      135.66 DEG. F
C   28 AIR IN SET         126.89 DEG. F
C   29 FUEL TANK          90.566 DEG. F
C   30 FUEL OUTLET        147.30 DEG. F

END SCAN GROUP 1      23 JAN 88  08:30:10

STOPPED SINGLE SCAN   23 JAN 88  08:30:10
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BEGIN SCAN GROUP 1   23 JAN 88  09:00:07
30 KW/60 HZ GEN SET S/N KZO 5841

C    1 EXHAUST 1          815.63 DEG. F
C    2 EXHAUST 2          761.51 DEG. F
C    3 EXHAUST 3          782.64 DEG. F
C    4 EXHAUST 4          819.14 DEG. F
C    5 EXHAUST 5          871.28 DEG. F
C    6 EXHAUST 6          795.39 DEG. F
C    7 ENG. COOL. IN      205.42 DEG. F
C    8 ENG. COOL. OUT     216.12 DEG. F
C    9 OIL SUMP           237.82 DEG. F
C   10 OIL GALLERY        238.52 DEG. F
C   13  ENG. INTAKE       137.34 DEG. F
C   14 RAD. TOP LEFT      164.00 DEG. F
C   15 RAD. BTTM LEFT     159.19 DEG. F
C   16 RAD. TOP RIGHT     146.95 DEG. F
C   17 RAD. BTTM RIGHT    138.72 DEG. F
C   18 GEN. AIR IN        122.17 DEG. F
C   19 GEN. AIR OUT       144.75 DEG. F
C   20 GEN. FRAME TOP     137.64 DEG. F
C   21 GEN. FRAME BTTM    130.21 DEG. F
C   22 GEN. EXCITER       141.64 DEG. F
C   23 GEN. VOLT. REG.    136.34 DEG. F
C   24 CONTROL PANEL      138.73 DEG. F
C   25 RELAY AREA         134.99 DEG. F
C   26 BATTERY LEFT       146.52 DEG. F
C   27 BATTERY RIGHT      138.17 DEG. F
C   28 AIR IN SET         125.71 DEG. F
C   29 FUEL TANK          97.687 DEG. F
C   30 FUEL OUTLET        147.24 DEG. F

END SCAN GROUP 1      23 JAN 88  09:00:16

STOPPED SINGLE SCAN   23 JAN 88  09:00:16
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BEGIN SCAN GROUP 1   23 JAN 88  09:30:24
30 KW/60 HZ GEN SET S/N KZO 5841

C    1 EXHAUST 1          818.78 DEG. F
C    2 EXHAUST 2          766.01 DEG. F
C    3 EXHAUST 3          786.39 DEG. F
C    4 EXHAUST 4          824.86 DEG. F
C    5 EXHAUST 5          874.98 DEG. F
C    6 EXHAUST 6          797.87 DEG. F
C    7 ENG. COOL. IN      207.52 DEG. F
C    8 ENG. COOL. OUT     217.32 DEG. F
C    9 OIL SUMP           238.40 DEG. F
C   10 OIL GALLERY        239.19 DEG. F
C   13  ENG. INTAKE       138.57 DEG. F
C   14 RAD. TOP LEFT      164.67 DEG. F
C   15 RAD. BTTM LEFT     151.57 DEG. F
C   16 RAD. TOP RIGHT     156.11 DEG. F
C   17 RAD. BTTM RIGHT    140.69 DEG. F
C   18 GEN. AIR IN        122.76 DEG. F
C   19 GEN. AIR OUT       145.82 DEG. F
C   20 GEN. FRAME TOP     138.82 DEG. F
C   21 GEN. FRAME BTTM    131.33 DEG. F
C   22 GEN. EXCITER       143.29 DEG. F
C   23 GEN. VOLT. REG.    137.33 DEG. F
C   24 CONTROL PANEL      139.69 DEG. F
C   25 RELAY AREA         135.90 DEG. F
C   26 BATTERY LEFT       148.31 DEG. F
C   27 BATTERY RIGHT      140.38 DEG. F
C   28 AIR IN SET         126.80 DEG. F
C   29 FUEL TANK          104.87 DEG. F
C   30 FUEL OUTLET        148.29 DEG. F

END SCAN GROUP 1      23 JAN 88  09:30:33

STOPPED SINGLE SCAN   23 JAN 88  09:30:33
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BEGIN SCAN GROUP 1   23 JAN 88  10:00:01
30 KW/60 HZ GEN SET S/N KZO 5841

C    1 EXHAUST 1          817.26 DEG. F
C    2 EXHAUST 2          764.09 DEG. F
C    3 EXHAUST 3          780.00 DEG. F
C    4 EXHAUST 4          819.81 DEG. F
C    5 EXHAUST 5          875.21 DEG. F
C    6 EXHAUST 6          794.62 DEG. F
C    7 ENG. COOL. IN      206.18 DEG. F
C    8 ENG. COOL. OUT     216.03 DEG. F
C    9 OIL SUMP           237.58 DEG. F
C   10 OIL GALLERY        238.37 DEG. F
C   13  ENG. INTAKE       136.89 DEG. F
C   14 RAD. TOP LEFT      163.29 DEG. F
C   15 RAD. BTTM LEFT     156.00 DEG. F
C   16 RAD. TOP RIGHT     148.93 DEG. F
C   17 RAD. BTTM RIGHT    138.84 DEG. F
C   18 GEN. AIR IN        128.56 DEG. F
C   19 GEN. AIR OUT       144.51 DEG. F
C   20 GEN. FRAME TOP     137.48 DEG. F
C   21 GEN. FRAME BTTM    129.59 DEG. F
C   22 GEN. EXCITER       141.53 DEG. F
C   23 GEN. VOLT. REG.    136.57 DEG. F
C   24 CONTROL PANEL      138.47 DEG. F
C   25 RELAY AREA         134.71 DEG. F
C   26 BATTERY LEFT       147.82 DEG. F
C   27 BATTERY RIGHT      148.28 DEG. F
C   28 AIR IN SET         125.18 DEG. F
C   29 FUEL TANK          169.82 DEG. F
C   30 FUEL OUTLET        147.92 DEG. F

END SCAN GROUP 1     23 JAN 88  10:00:10

STOPPED SINGLE SCAN  23 JAN 88  10:00:10
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BEGIN SCAN GROUP 1   23 JAN 88  11:00:01
30 KW/60 HZ GEN SET S/N KZO 5841

C    1 EXHAUST 1          816.26 DEG. F
C    2 EXHAUST 2          766.65 DEG. F
C    3 EXHAUST 3          780.14 DEG. F
C    4 EXHAUST 4          819.06 DEG. F
C    5 EXHAUST 5          872.71 DEG. F
C    6 EXHAUST 6          796.12 DEG. F
C    7 ENG. COOL. IN      206.85 DEG. F
C    8 ENG. COOL. OUT     215.79 DEG. F
C    9 OIL SUMP           236.79 DEG. F
C   10 OIL GALLERY        237.52 DEG. F
C   13  ENG. INTAKE       136.99 DEG. F
C   14 RAD. TOP LEFT      162.66 DEG. F
C   15 RAD. BTTM LEFT     156.48 DEG. F
C   16 RAD. TOP RIGHT     148.93 DEG. F
C   17 RAD. BTTM RIGHT    138.71 DEG. F
C   18 GEN. AIR IN        128.76 DEG. F
C   19 GEN. AIR OUT       144.21 DEG. F
C   20 GEN. FRAME TOP     137.35 DEG. F
C   21 GEN. FRAME BTTM    129.38 DEG. F
C   22 GEN. EXCITER       141.59 DEG. F
C   23 GEN. VOLT. REG.    135.59 DEG. F
C   24 CONTROL PANEL      137.58 DEG. F
C   25 RELAY AREA         134.76 DEG. F
C   26 BATTERY LEFT       148.93 DEG. F
C   27 BATTERY RIGHT      143.15 DEG. F
C   28 AIR IN SET         125.31 DEG. F
C   29 FUEL TANK          115.58 DEG. F
C   30 FUEL OUTLET        148.14 DEG. F

END SCAN GROUP 1     23 JAN 88  11:00:10

STOPPED SINGLE SCAN  23 JAN 88  11:00:11
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BEGIN SCAN GROUP 1   23 JAN 88  10:30:02
30 KW/60 HZ GEN SET S/N KZO 5841

C    1 EXHAUST 1          814.67 DEG. F
C    2 EXHAUST 2          762.64 DEG. F
C    3 EXHAUST 3          777.48 DEG. F
C    4 EXHAUST 4          816.38 DEG. F
C    5 EXHAUST 5          869.23 DEG. F
C    6 EXHAUST 6          798.76 DEG. F
C    7 ENG. COOL. IN      205.39 DEG. F
C    8 ENG. COOL. OUT     215.63 DEG. F
C    9 OIL SUMP           237.18 DEG. F
C   10 OIL GALLERY        238.06 DEG. F
C   13  ENG. INTAKE       135.38 DEG. F
C   14 RAD. TOP LEFT      162.43 DEG. F
C   15 RAD. BTTM LEFT     148.55 DEG. F
C   16 RAD. TOP RIGHT     147.81 DEG. F
C   17 RAD. BTTM RIGHT    138.49 DEG. F
C   18 GEN. AIR IN        126.19 DEG. F
C   19 GEN. AIR OUT       143.63 DEG. F
C   20 GEN. FRAME TOP     136.53 DEG. F
C   21 GEN. FRAME BTTM    128.58 DEG. F
C   22 GEN. EXCITER       141.28 DEG. F
C   23 GEN. VOLT. REG.    136.08 DEG. F
C   24 CONTROL PANEL      137.39 DEG. F
C   25 RELAY AREA         133.41 DEG. F
C   26 BATTERY LEFT       148.33 DEG. F
C   27 BATTERY RIGHT      142.81 DEG. F
C   28 AIR IN SET         124.50 DEG. F
C   29 FUEL TANK          113.24 DEG. F
C   30 FUEL OUTLET        147.64 DEG. F

END SCAN GROUP 1     23 JAN 88  10:30:11

STOPPED SINGLE SCAN  23 JAN 88  10:30:11
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BEGIN SCAN GROUP 1   23 JAN 88  11:30:23
30 KW/60 HZ GEN SET S/N KZO 5841

C    1 EXHAUST 1          815.18 DEG. F
C    2 EXHAUST 2          763.39 DEG. F
C    3 EXHAUST 3          778.93 DEG. F
C    4 EXHAUST 4          820.32 DEG. F
C    5 EXHAUST 5          878.25 DEG. F
C    6 EXHAUST 6          794.66 DEG. F
C    7 ENG. COOL. IN      206.34 DEG. F
C    8 ENG. COOL. OUT     216.86 DEG. F
C    9 OIL SUMP           237.89 DEG. F
C   10 OIL GALLERY        238.55 DEG. F
C   13  ENG. INTAKE       136.51 DEG. F
C   14 RAD. TOP LEFT      163.23 DEG. F
C   15 RAD. BTTM LEFT     149.65 DEG. F
C   16 RAD. TOP RIGHT     148.96 DEG. F
C   17 RAD. BTTM RIGHT    139.55 DEG. F
C   18 GEN. AIR IN        121.48 DEG. F
C   19 GEN. AIR OUT       144.62 DEG. F
C   20 GEN. FRAME TOP     137.42 DEG. F
C   21 GEN. FRAME BTTM    129.98 DEG. F
C   22 GEN. EXCITER       141.66 DEG. F
C   23 GEN. VOLT. REG.    136.51 DEG. F
C   24 CONTROL PANEL      138.48 DEG. F
C   25 RELAY AREA         134.36 DEG. F
C   26 BATTERY LEFT       150.68 DEG. F
C   27 BATTERY RIGHT      144.99 DEG. F
C   28 AIR IN SET         125.27 DEG. F
C   29 FUEL TANK          113.59 DEG. F
C   30 FUEL OUTLET        148.55 DEG. F

END SCAN GROUP 1     23 JAN 88  11:30:32

STOPPED SINGLE SCAN  23 JAN 88  11:30:32
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BEGIN SCAN GROUP 1    23 JAN 88  12:00:00
30 KW/60 HZ GEN SET S/N KZO 5841

C    1 EXHAUST 1          818.50 DEG. F
C    2 EXHAUST 2          765.24 DEG. F
C    3 EXHAUST 3          782.69 DEG. F
C    4 EXHAUST 4          822.64 DEG. F
C    5 EXHAUST 5          878.45 DEG. F
C    6 EXHAUST 6          881.93 DEG. F
C    7 ENG. COOL. IN      206.52 DEG. F
C    8 ENG. COOL. OUT     216.17 DEG. F
C    9 OIL SUMP           237.65 DEG. F
C   10 OIL GALLERY        238.54 DEG. F
C   13  ENG. INTAKE       136.55 DEG. F
C   14 RAD. TOP LEFT      163.57 DEG. F
C   15 RAD. BTTM LEFT     149.95 DEG. F
C   16 RAD. TOP RIGHT     149.12 DEG. F
C   17 RAD. BTTM RIGHT    139.69 DEG. F
C   18 GEN. AIR IN        121.38 DEG. F
C   19 GEN. AIR OUT       144.76 DEG. F
C   20 GEN. FRAME TOP     137.58 DEG. F
C   21 GEN. FRAME BTTM    129.88 DEG. F
C   22 GEN. EXCITER       141.14 DEG. F
C   23 GEN. VOLT. REG.    136.51 DEG. F
C   24 CONTROL PANEL      138.32 DEG. F
C   25 RELAY AREA         134.44 DEG. F
C   26 BATTERY LEFT       151.37 DEG. F
C   27 BATTERY RIGHT      146.86 DEG. F
C   28 AIR IN SET         125.37 DEG. F
C   29 FUEL TANK          121.99 DEG. F
C   30 FUEL OUTLET        148.63 DEG. F

END SCAN GROUP 1      23 JAN 88  12:00:09

STOPPED SINGLE SCAN   23 JAN 88  12:00:10
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BEGIN SCAN GROUP 1    23 JAN 88  12:12:17
30 KW/60 HZ GEN SET S/N KZO 5841

C    1 EXHAUST 1          311.95 DEG. F
C    2 EXHAUST 2          292.37 DEG. F
C    3 EXHAUST 3          301.64 DEG. F
C    4 EXHAUST 4          482.58 DEG. F
C    5 EXHAUST 5          427.85 DEG. F
C    6 EXHAUST 6          361.67 DEG. F
C    7 ENG. COOL. IN      174.37 DEG. F
C    8 ENG. COOL. OUT     182.85 DEG. F
C    9 OIL SUMP           223.16 DEG. F
C   10 OIL GALLERY        223.97 DEG. F
C   13  ENG. INTAKE       129.67 DEG. F
C   14 RAD. TOP LEFT      146.88 DEG. F
C   15 RAD. BTTM LEFT     138.77 DEG. F
C   16 RAD. TOP RIGHT     148.45 DEG. F
C   17 RAD. BTTM RIGHT    136.16 DEG. F
C   18 GEN. AIR IN        123.13 DEG. F
C   19 GEN. AIR OUT       138.82 DEG. F
C   20 GEN. FRAME TOP     132.68 DEG. F
C   21 GEN. FRAME BTTM    127.91 DEG. F
C   22 GEN. EXCITER       137.36 DEG. F
C   23 GEN. VOLT. REG.    134.88 DEG. F
C   24 CONTROL PANEL      136.47 DEG. F
C   25 RELAY AREA         129.25 DEG. F
C   26 BATTERY LEFT       145.92 DEG. F
C   27 BATTERY RIGHT      145.88 DEG. F
C   28 AIR IN SET         124.45 DEG. F
C   29 FUEL TANK          122.76 DEG. F
C   30 FUEL OUTLET        148.85 DEG. F

END SCAN GROUP 1      23 JAN 88  12:12:26

STOPPED SINGLE SCAN   23 JAN 88  12:12:27
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BEGIN SCAN GROUP 1    23 JAN 88  12:01:43
30 KW/60 HZ GEN SET S/N KZO 5841

C    1 EXHAUST 1          447.13 DEG. F
C    2 EXHAUST 2          441.39 DEG. F
C    3 EXHAUST 3          455.58 DEG. F
C    4 EXHAUST 4          535.87 DEG. F
C    5 EXHAUST 5          551.88 DEG. F
C    6 EXHAUST 6          589.36 DEG. F
C    7 ENG. COOL. IN      204.46 DEG. F
C    8 ENG. COOL. OUT     213.37 DEG. F
C    9 OIL SUMP           237.65 DEG. F
C   10 OIL GALLERY        238.49 DEG. F
C   13  ENG. INTAKE       136.52 DEG. F
C   14 RAD. TOP LEFT      162.61 DEG. F
C   15 RAD. BTTM LEFT     145.48 DEG. F
C   16 RAD. TOP RIGHT     148.92 DEG. F
C   17 RAD. BTTM RIGHT    139.63 DEG. F
C   18 GEN. AIR IN        122.17 DEG. F
C   19 GEN. AIR OUT       144.72 DEG. F
C   20 GEN. FRAME TOP     137.78 DEG. F
C   21 GEN. FRAME BTTM    129.93 DEG. F
C   22 GEN. EXCITER       141.23 DEG. F
C   23 GEN. VOLT. REG.    136.56 DEG. F
C   24 CONTROL PANEL      138.88 DEG. F
C   25 RELAY AREA         134.71 DEG. F
C   26 BATTERY LEFT       151.23 DEG. F
C   27 BATTERY RIGHT      146.51 DEG. F
C   28 AIR IN SET         126.76 DEG. F
C   29 FUEL TANK          122.24 DEG. F
C   30 FUEL OUTLET        149.04 DEG. F

END SCAN GROUP 1      23 JAN 88  12:01:52

STOPPED SINGLE SCAN   23 JAN 88  12:01:52
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BEGIN SCAN GROUP 1    23 JAN 88  12:22:03
30 KW/60 HZ GEN SET S/N KZO 5841

C    1 EXHAUST 1          384.39 DEG. F
C    2 EXHAUST 2          291.39 DEG. F
C    3 EXHAUST 3          381.75 DEG. F
C    4 EXHAUST 4          483.85 DEG. F
C    5 EXHAUST 5          427.54 DEG. F
C    6 EXHAUST 6          359.62 DEG. F
C    7 ENG. COOL. IN      172.14 DEG. F
C    8 ENG. COOL. OUT     181.61 DEG. F
C    9 OIL SUMP           216.32 DEG. F
C   10 OIL GALLERY        216.83 DEG. F
C   13  ENG. INTAKE       129.53 DEG. F
C   14 RAD. TOP LEFT      145.61 DEG. F
C   15 RAD. BTTM LEFT     137.71 DEG. F
C   16 RAD. TOP RIGHT     139.38 DEG. F
C   17 RAD. BTTM RIGHT    134.38 DEG. F
C   18 GEN. AIR IN        123.57 DEG. F
C   19 GEN. AIR OUT       135.59 DEG. F
C   20 GEN. FRAME TOP     138.76 DEG. F
C   21 GEN. FRAME BTTM    127.14 DEG. F
C   22 GEN. EXCITER       137.39 DEG. F
C   23 GEN. VOLT. REG.    133.43 DEG. F
C   24 CONTROL PANEL      135.36 DEG. F
C   25 RELAY AREA         128.62 DEG. F
C   26 BATTERY LEFT       143.38 DEG. F
C   27 BATTERY RIGHT      143.14 DEG. F
C   28 AIR IN SET         124.57 DEG. F
C   29 FUEL TANK          123.28 DEG. F
C   30 FUEL OUTLET        147.54 DEG. F

END SCAN GROUP 1      23 JAN 88  12:22:12

STOPPED SINGLE SCAN   23 JAN 88  12:22:12
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BEGIN SCAN GROUP 1 23 JAN 88 12:32:16
30 KW/60 HZ GEN SET S/N KZD 5841

C	1	EXHAUST 1	388.45	DEG. F
C	2	EXHAUST 2	290.35	DEG. F
C	3	EXHAUST 3	381.99	DEG. F
C	4	EXHAUST 4	485.12	DEG. F
C	5	EXHAUST 5	429.15	DEG. F
C	6	EXHAUST 6	361.65	DEG. F
C	7	ENG. COOL. IN	172.71	DEG. F
C	8	ENG. COOL. OUT	182.35	DEG. F
C	9	OIL SUMP	214.89	DEG. F
C	10	OIL GALLERY	214.38	DEG. F
C	13	ENG. INTAKE	131.88	DEG. F
C	14	RAD. TOP LEFT	146.59	DEG. F
C	15	RAD. BTTM LEFT	138.53	DEG. F
C	16	RAD. TOP RIGHT	139.87	DEG. F
C	17	RAD. BTTM RIGHT	134.83	DEG. F
C	18	GEN. AIR IN	124.87	DEG. F
C	19	GEN. AIR OUT	135.83	DEG. F
C	20	GEN. FRAME TOP	138.85	DEG. F
C	21	GEN. FRAME BTTM	127.83	DEG. F
C	22	GEN. EXCITER	138.78	DEG. F
C	23	GEN. VOLT. REG.	132.94	DEG. F
C	24	CONTROL PANEL	135.36	DEG. F
C	25	RELAY AREA	129.88	DEG. F
C	26	BATTERY LEFT	143.37	DEG. F
C	27	BATTERY RIGHT	144.89	DEG. F
C	28	AIR IN SET	126.13	DEG. F
C	29	FUEL TANK	123.62	DEG. F
C	30	FUEL OUTLET	147.36	DEG. F

END SCAN GROUP 1 23 JAN 88 12:32:25

STOPPED SINGLE SCAN 23 JAN 88 12:32:26

BEGIN SCAN GROUP 1 23 JAN 88 12:34:27
30 KW/60 HZ GEN SET S/N KZD 5841

C	1	EXHAUST 1	389.66	DEG. F
C	2	EXHAUST 2	292.82	DEG. F
C	3	EXHAUST 3	381.82	DEG. F
C	4	EXHAUST 4	485.37	DEG. F
C	5	EXHAUST 5	428.82	DEG. F
C	6	EXHAUST 6	358.97	DEG. F
C	7	ENG. COOL. IN	172.86	DEG. F
C	8	ENG. COOL. OUT	182.36	DEG. F
C	9	OIL SUMP	213.74	DEG. F
C	10	OIL GALLERY	214.85	DEG. F
C	13	ENG. INTAKE	131.33	DEG. F
C	14	RAD. TOP LEFT	146.64	DEG. F
C	15	RAD. BTTM LEFT	138.56	DEG. F
C	16	RAD. TOP RIGHT	139.93	DEG. F
C	17	RAD. BTTM RIGHT	134.24	DEG. F
C	18	GEN. AIR IN	124.53	DEG. F
C	19	GEN. AIR OUT	134.82	DEG. F
C	20	GEN. FRAME TOP	138.96	DEG. F
C	21	GEN. FRAME BTTM	128.11	DEG. F
C	22	GEN. EXCITER	139.63	DEG. F
C	23	GEN. VOLT. REG.	132.97	DEG. F
C	24	CONTROL PANEL	135.22	DEG. F
C	25	RELAY AREA	129.96	DEG. F
C	26	BATTERY LEFT	143.52	DEG. F
C	27	BATTERY RIGHT	143.88	DEG. F
C	28	AIR IN SET	126.33	DEG. F
C	29	FUEL TANK	123.72	DEG. F
C	30	FUEL OUTLET	146.74	DEG. F

END SCAN GROUP 1 23 JAN 88 12:34:36

STOPPED SINGLE SCAN 23 JAN 88 12:34:36

BEGIN SCAN GROUP 1 23 JAN 88 13:04:00
30 KW/60 HZ GEN SET S/N KZD 5841

C	1	EXHAUST 1	387.01	DEG. F
C	2	EXHAUST 2	295.82	DEG. F
C	3	EXHAUST 3	384.81	DEG. F
C	4	EXHAUST 4	485.48	DEG. F
C	5	EXHAUST 5	428.28	DEG. F
C	6	EXHAUST 6	357.13	DEG. F
C	7	ENG. COOL. IN	173.58	DEG. F
C	8	ENG. COOL. OUT	183.03	DEG. F
C	9	OIL SUMP	213.82	DEG. F
C	10	OIL GALLERY	213.42	DEG. F
C	13	ENG. INTAKE	132.18	DEG. F
C	14	RAD. TOP LEFT	147.08	DEG. F
C	15	RAD. BTTM LEFT	138.96	DEG. F
C	16	RAD. TOP RIGHT	140.17	DEG. F
C	17	RAD. BTTM RIGHT	134.86	DEG. F
C	18	GEN. AIR IN	124.94	DEG. F
C	19	GEN. AIR OUT	133.82	DEG. F
C	20	GEN. FRAME TOP	138.62	DEG. F
C	21	GEN. FRAME BTTM	128.12	DEG. F
C	22	GEN. EXCITER	140.85	DEG. F
C	23	GEN. VOLT. REG.	133.17	DEG. F
C	24	CONTROL PANEL	135.49	DEG. F
C	25	RELAY AREA	130.55	DEG. F
C	26	BATTERY LEFT	144.29	DEG. F
C	27	BATTERY RIGHT	144.25	DEG. F
C	28	AIR IN SET	126.65	DEG. F
C	29	FUEL TANK	124.78	DEG. F
C	30	FUEL OUTLET	146.48	DEG. F

END SCAN GROUP 1 23 JAN 88 13:04:10

STOPPED SINGLE SCAN 23 JAN 88 13:04:10

BEGIN SCAN GROUP 1 23 JAN 88 13:05:00
30 KW/60 HZ GEN SET S/N KZD 5841

C	1	EXHAUST 1	388.86	DEG. F
C	2	EXHAUST 2	295.68	DEG. F
C	3	EXHAUST 3	382.73	DEG. F
C	4	EXHAUST 4	485.58	DEG. F
C	5	EXHAUST 5	428.33	DEG. F
C	6	EXHAUST 6	357.04	DEG. F
C	7	ENG. COOL. IN	173.46	DEG. F
C	8	ENG. COOL. OUT	183.08	DEG. F
C	9	OIL SUMP	212.95	DEG. F
C	10	OIL GALLERY	213.49	DEG. F
C	13	ENG. INTAKE	132.85	DEG. F
C	14	RAD. TOP LEFT	147.14	DEG. F
C	15	RAD. BTTM LEFT	138.87	DEG. F
C	16	RAD. TOP RIGHT	140.07	DEG. F
C	17	RAD. BTTM RIGHT	134.89	DEG. F
C	18	GEN. AIR IN	124.92	DEG. F
C	19	GEN. AIR OUT	133.88	DEG. F
C	20	GEN. FRAME TOP	138.57	DEG. F
C	21	GEN. FRAME BTTM	128.26	DEG. F
C	22	GEN. EXCITER	139.95	DEG. F
C	23	GEN. VOLT. REG.	133.22	DEG. F
C	24	CONTROL PANEL	135.81	DEG. F
C	25	RELAY AREA	130.45	DEG. F
C	26	BATTERY LEFT	144.29	DEG. F
C	27	BATTERY RIGHT	144.17	DEG. F
C	28	AIR IN SET	126.49	DEG. F
C	29	FUEL TANK	124.60	DEG. F
C	30	FUEL OUTLET	146.30	DEG. F

END SCAN GROUP 1 23 JAN 88 13:05:10

STOPPED SINGLE SCAN 23 JAN 88 13:05:10

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BEGIN SCAN GROUP 1   23 JAN 88  13:35:01
30 KW/60 HZ GEN SET S/N KZO 5841

C    1 EXHAUST 1          306.67 DEG. F
C    2 EXHAUST 2          296.73 DEG. F
C    3 EXHAUST 3          306.87 DEG. F
C    4 EXHAUST 4          401.66 DEG. F
C    5 EXHAUST 5          426.82 DEG. F
C    6 EXHAUST 6          354.70 DEG. F
C    7 ENG. COOL. IN      171.86 DEG. F
C    8 ENG. COOL. OUT     182.82 DEG. F
C    9 OIL SUMP           211.91 DEG. F
C   10 OIL GALLERY        212.45 DEG. F
C   13  ENG. INTAKE       129.37 DEG. F
C   14 RAD. TOP LEFT      145.65 DEG. F
C   15 RAD. BTTM LEFT     137.36 DEG. F
C   16 RAD. TOP RIGHT     138.83 DEG. F
C   17 RAD. BTTM RIGHT    131.84 DEG. F
C   18 GEN. AIR IN        124.87 DEG. F
C   19 GEN. AIR OUT       131.43 DEG. F
C   20 GEN. FRAME TOP     128.24 DEG. F
C   21 GEN. FRAME BTTM    125.71 DEG. F
C   22 GEN. EXCITER       138.84 DEG. F
C   23 GEN. VOLT. REG.    131.43 DEG. F
C   24 CONTROL PANEL      134.12 DEG. F
C   25 RELAY AREA         128.34 DEG. F
C   26 BATTERY LEFT       143.72 DEG. F
C   27 BATTERY RIGHT      144.78 DEG. F
C   28 AIR IN SET         124.48 DEG. F
C   29 FUEL TANK          125.32 DEG. F
C   30 FUEL OUTLET        145.13 DEG. F

END SCAN GROUP 1     23 JAN 88  13:35:10

STOPPED SINGLE SCAN  23 JAN 88  13:35:10
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BEGIN SCAN GROUP 1   23 JAN 88  14:35:15
30 KW/60 HZ GEN SET S/N KZO 5841

C    1 EXHAUST 1          313.98 DEG. F
C    2 EXHAUST 2          298.49 DEG. F
C    3 EXHAUST 3          306.30 DEG. F
C    4 EXHAUST 4          403.04 DEG. F
C    5 EXHAUST 5          426.88 DEG. F
C    6 EXHAUST 6          356.70 DEG. F
C    7 ENG. COOL. IN      173.66 DEG. F
C    8 ENG. COOL. OUT     183.70 DEG. F
C    9 OIL SUMP           213.37 DEG. F
C   10 OIL GALLERY        213.54 DEG. F
C   13  ENG. INTAKE       131.19 DEG. F
C   14 RAD. TOP LEFT      146.94 DEG. F
C   15 RAD. BTTM LEFT     138.66 DEG. F
C   16 RAD. TOP RIGHT     139.77 DEG. F
C   17 RAD. BTTM RIGHT    133.11 DEG. F
C   18 GEN. AIR IN        123.51 DEG. F
C   19 GEN. AIR OUT       132.28 DEG. F
C   20 GEN. FRAME TOP     129.60 DEG. F
C   21 GEN. FRAME BTTM    127.24 DEG. F
C   22 GEN. EXCITER       141.32 DEG. F
C   23 GEN. VOLT. REG.    132.10 DEG. F
C   24 CONTROL PANEL      135.27 DEG. F
C   25 RELAY AREA         129.63 DEG. F
C   26 BATTERY LEFT       145.42 DEG. F
C   27 BATTERY RIGHT      146.61 DEG. F
C   28 AIR IN SET         125.29 DEG. F
C   29 FUEL TANK          126.14 DEG. F
C   30 FUEL OUTLET        146.02 DEG. F

END SCAN GROUP 1     23 JAN 88  14:35:24

STOPPED SINGLE SCAN  23 JAN 88  14:35:24
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BEGIN SCAN GROUP 1   23 JAN 88  14:04:46
30 KW/60 HZ GEN SET S/N KZO 5841

C    1 EXHAUST 1          389.66 DEG. F
C    2 EXHAUST 2          296.98 DEG. F
C    3 EXHAUST 3          385.52 DEG. F
C    4 EXHAUST 4          403.25 DEG. F
C    5 EXHAUST 5          426.56 DEG. F
C    6 EXHAUST 6          355.77 DEG. F
C    7 ENG. COOL. IN      173.31 DEG. F
C    8 ENG. COOL. OUT     183.33 DEG. F
C    9 OIL SUMP           212.81 DEG. F
C   10 OIL GALLERY        213.19 DEG. F
C   13  ENG. INTAKE       131.87 DEG. F
C   14 RAD. TOP LEFT      146.77 DEG. F
C   15 RAD. BTTM LEFT     138.66 DEG. F
C   16 RAD. TOP RIGHT     139.94 DEG. F
C   17 RAD. BTTM RIGHT    133.01 DEG. F
C   18 GEN. AIR IN        124.20 DEG. F
C   19 GEN. AIR OUT       132.35 DEG. F
C   20 GEN. FRAME TOP     129.61 DEG. F
C   21 GEN. FRAME BTTM    127.18 DEG. F
C   22 GEN. EXCITER       140.25 DEG. F
C   23 GEN. VOLT. REG.    131.96 DEG. F
C   24 CONTROL PANEL      134.70 DEG. F
C   25 RELAY AREA         129.71 DEG. F
C   26 BATTERY LEFT       145.02 DEG. F
C   27 BATTERY RIGHT      146.62 DEG. F
C   28 AIR IN SET         125.44 DEG. F
C   29 FUEL TANK          125.76 DEG. F
C   30 FUEL OUTLET        145.52 DEG. F

END SCAN GROUP 1     23 JAN 88  14:04:55

STOPPED SINGLE SCAN  23 JAN 88  14:04:56
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BEGIN SCAN GROUP 1   23 JAN 88  15:04:59
30 KW/60 HZ GEN SET S/N KZO 5841

C    1 EXHAUST 1          313.89 DEG. F
C    2 EXHAUST 2          299.30 DEG. F
C    3 EXHAUST 3          307.01 DEG. F
C    4 EXHAUST 4          402.99 DEG. F
C    5 EXHAUST 5          426.85 DEG. F
C    6 EXHAUST 6          356.81 DEG. F
C    7 ENG. COOL. IN      173.81 DEG. F
C    8 ENG. COOL. OUT     183.85 DEG. F
C    9 OIL SUMP           213.58 DEG. F
C   10 OIL GALLERY        213.74 DEG. F
C   13  ENG. INTAKE       131.48 DEG. F
C   14 RAD. TOP LEFT      147.17 DEG. F
C   15 RAD. BTTM LEFT     138.85 DEG. F
C   16 RAD. TOP RIGHT     139.98 DEG. F
C   17 RAD. BTTM RIGHT    133.29 DEG. F
C   18 GEN. AIR IN        123.95 DEG. F
C   19 GEN. AIR OUT       132.32 DEG. F
C   20 GEN. FRAME TOP     129.66 DEG. F
C   21 GEN. FRAME BTTM    127.39 DEG. F
C   22 GEN. EXCITER       141.30 DEG. F
C   23 GEN. VOLT. REG.    132.21 DEG. F
C   24 CONTROL PANEL      134.89 DEG. F
C   25 RELAY AREA         129.78 DEG. F
C   26 BATTERY LEFT       145.88 DEG. F
C   27 BATTERY RIGHT      147.03 DEG. F
C   28 AIR IN SET         125.18 DEG. F
C   29 FUEL TANK          126.54 DEG. F
C   30 FUEL OUTLET        145.52 DEG. F

END SCAN GROUP 1     23 JAN 88  15:05:08

STOPPED SINGLE SCAN  23 JAN 88  15:05:09
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BEGIN SCAN GROUP 1   23 JAN 88  15:35:21
30 KW/60 HZ GEN SET S/N KZO 5841

C    1 EXHAUST 1          299.41 DEG. F
C    2 EXHAUST 2          299.20 DEG. F
C    3 EXHAUST 3          310.88 DEG. F
C    4 EXHAUST 4          405.54 DEG. F
C    5 EXHAUST 5          430.24 DEG. F
C    6 EXHAUST 6          362.39 DEG. F
C    7 ENG. COOL. IN      173.97 DEG. F
C    8 ENG. COOL. OUT     184.05 DEG. F
C    9 OIL SUMP           213.53 DEG. F
C   10 OIL GALLERY        213.82 DEG. F
C   13  ENG. INTAKE       131.51 DEG. F
C   14 RAD. TOP LEFT      147.21 DEG. F
C   15 RAD. BTTM LEFT     139.03 DEG. F
C   16 RAD. TOP RIGHT     148.48 DEG. F
C   17 RAD. BTTM RIGHT    133.43 DEG. F
C   18 GEN. AIR IN        124.75 DEG. F
C   19 GEN. AIR OUT       132.66 DEG. F
C   20 GEN. FRAME TOP     129.77 DEG. F
C   21 GEN. FRAME BTTM    127.44 DEG. F
C   22 GEN. EXCITER       141.78 DEG. F
C   23 GEN. VOLT. REG.    132.35 DEG. F
C   24 CONTROL PANEL      135.25 DEG. F
C   25 RELAY AREA         129.88 DEG. F
C   26 BATTERY LEFT       146.48 DEG. F
C   27 BATTERY RIGHT      148.15 DEG. F
C   28 AIR IN SET         125.76 DEG. F
C   29 FUEL TANK          126.88 DEG. F
C   30 FUEL OUTLET        145.89 DEG. F

END SCAN GROUP 1      23 JAN 88  15:35:30

STOPPED SINGLE SCAN   23 JAN 88  15:35:30
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BEGIN SCAN GROUP 1   23 JAN 88  16:35:01
30 KW/60 HZ GEN SET S/N KZO 5841

C    1 EXHAUST 1          299.04 DEG. F
C    2 EXHAUST 2          298.26 DEG. F
C    3 EXHAUST 3          314.76 DEG. F
C    4 EXHAUST 4          405.66 DEG. F
C    5 EXHAUST 5          429.66 DEG. F
C    6 EXHAUST 6          362.52 DEG. F
C    7 ENG. COOL. IN      174.02 DEG. F
C    8 ENG. COOL. OUT     184.01 DEG. F
C    9 OIL SUMP           213.73 DEG. F
C   10 OIL GALLERY        213.78 DEG. F
C   13  ENG. INTAKE       131.33 DEG. F
C   14 RAD. TOP LEFT      147.21 DEG. F
C   15 RAD. BTTM LEFT     138.82 DEG. F
C   16 RAD. TOP RIGHT     148.17 DEG. F
C   17 RAD. BTTM RIGHT    133.29 DEG. F
C   18 GEN. AIR IN        123.87 DEG. F
C   19 GEN. AIR OUT       132.37 DEG. F
C   20 GEN. FRAME TOP     129.51 DEG. F
C   21 GEN. FRAME BTTM    127.23 DEG. F
C   22 GEN. EXCITER       140.34 DEG. F
C   23 GEN. VOLT. REG.    132.35 DEG. F
C   24 CONTROL PANEL      135.11 DEG. F
C   25 RELAY AREA         129.56 DEG. F
C   26 BATTERY LEFT       146.88 DEG. F
C   27 BATTERY RIGHT      148.82 DEG. F
C   28 AIR IN SET         124.93 DEG. F
C   29 FUEL TANK          127.42 DEG. F
C   30 FUEL OUTLET        146.19 DEG. F

END SCAN GROUP 1      23 JAN 88  16:35:11

STOPPED SINGLE SCAN   23 JAN 88  16:35:11
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BEGIN SCAN GROUP 1   23 JAN 88  16:05:08
30 KW/60 HZ GEN SET S/N KZO 5841

C    1 EXHAUST 1          298.86 DEG. F
C    2 EXHAUST 2          299.10 DEG. F
C    3 EXHAUST 3          311.71 DEG. F
C    4 EXHAUST 4          406.71 DEG. F
C    5 EXHAUST 5          430.48 DEG. F
C    6 EXHAUST 6          364.08 DEG. F
C    7 ENG. COOL. IN      174.14 DEG. F
C    8 ENG. COOL. OUT     184.20 DEG. F
C    9 OIL SUMP           213.61 DEG. F
C   10 OIL GALLERY        213.99 DEG. F
C   13  ENG. INTAKE       131.55 DEG. F
C   14 RAD. TOP LEF       147.44 DEG. F
C   15 RAD. BTTM LFT.     139.19 DEG. F
C   16 RAD. TOP RIGHT     148.44 DEG. F
C   17 RAD. BTTM RIGHT    133.52 DEG. F
C   18 GEN. AIR IN        124.49 DEG. F
C   19 GEN. AIR OUT       132.69 DEG. F
C   20 GEN. FRAME TOP     129.81 DEG. F
C   21 GEN. FRAME BTTM    127.45 DEG. F
C   22 GEN. EXCITER       141.45 DEG. F
C   23 GEN. VOLT. REG.    132.43 DEG. F
C   24 CONTROL PANEL      135.14 DEG. F
C   25 RELAY AREA         129.98 DEG. F
C   26 BATTERY LEFT       146.73 DEG. F
C   27 BATTERY RIGHT      148    DEG. F
C   28 AIR IN SET         12     DEG. F
C   29 FUEL TANK          1      .18 DEG. F
C   30 FUEL OUTLET        146.22 DEG. F

END SCAN GROUP 1      23 JAN 88  16:05:17

STOPPED SINGLE SCAN   23 JAN     16:05:18
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TEST DATA

ITEM 30KW / 60Hz GEN SET MODIFIED
MFGR. JOHN R HOLLINGSWORTH
MODEL NO. MEP 005A
SERIAL NO. K2 05841

NTS
National Technical Systems | Scientific Services Group | Testing Division P.O. Box 38 Harlwood, Virginia 22471 Tel: 703 752 5300

METHOD 640.1
MAX POWER

REF. NO. MIL-STD 705
SHEET 1 OF 1
DATE 25 JAN 1988
JOB NO. 555-2140
PROJ. ENGR.
RECORDER/OBSERVER KM, GC, BJ

INST TIME	STEP NO.	LOAD STEP	E60280 VOLTAGE L_1-L_0 VAC	L_2-L_0 VAC	L_3-L_0 VAC	E60400 AMPERES x40 L_1-L_0 AC AMPS	L_2-L_0 AC AMPS	L_3-L_0 AC AMPS	E62300 KILOWATTS x40 L_1-L_0 Kw	L_2-L_0 Kw	L_3-L_0 Kw	E63420 POWER FACTOR PF	E62410 FREQ. Hz	EC1670 EXCITER VOLTS VDC	EC2500 FIELD AMPS DCA	AMB. TEMP. °F	Pecs lbs/HR	Pecs lbs/HR
0835			START UNIT AT RATED LOAD															
0845			START STABILIZATION															
0845		R/L	119	120	120	2.53	2.55	2.55	.249	.251	.25	.80	60.3	7.7	3.2	73	13.5	41.5
0855		R/L	119.5	120	120	2.54	2.56	2.55	.249	.251	.251	.80	60.2	8.0	3.3	73	13.5	41.7
0905		R/L	119.5	120.1	120	2.54	2.56	2.56	.249	.251	.251	.80	60.0	8.2	3.35	74	13.5	41.7
0915		R/L	119.5	120.5	120	2.54	2.56	2.56	.249	.251	.251	.80	60.0	8.3	3.4	75	13.5	41.9
0925		ADJUST UNIT TO MAX POWER																
0926		PLACED UNIT AT RATED LOAD FOR 10 MIN COOL DOWN BEFORE STARTING MAX POWER																
0936		M/P	119	120	120	3.06	3.09	3.08	.369	.370	.370	1.00	60.0	6.9	2.8	76	13.2	41.3
0938			APPLIED RATED LOAD FOR 10 MIN COOL DOWN.															
0947		M/P	119.5	120	120	3.06	3.09	3.08	.369	.370	.370	1.00	60.0	7.0	2.8	79	14.4	40.8
0952			APPLIED RATED LOAD FOR 10 MIN COOL DOWN															
1002		M/P	119.5	120	120	3.06	3.09	3.07	.369	.370	.370	1.00	60.0	7.0	2.8	80	13.4	41.0
1004			APPLIED RATED LOAD FOR 10 MIN COOL DOWN															
1014			END OF TEST															
				CORRECTED POWER =		44.36 KW			$\left(\frac{29.92}{29.599}\right)\left(\frac{1}{1.022}\right)\left(\sqrt{\frac{460+98.5}{460+60}}\right)$									
						=	46.444 x		1.036									
				CORRECTED POWER		=	48.132 KW											

BAROMETRIC PRESSURE = 29.599, WATER VAPOR PRESSURE = 1.022, OBSERVED POWER = 44.36 KW
INTAKE AIR TEMP = 98.5°F

B-10

MAXPOWER 6401

BEGIN SCAN GROUP 1 25 JAN 88 08:45:20
30 KW 60 HZ GEN SET S/N KZO 5841

C	1	EXHAUST 1	745.62	DEG. F
C	2	EXHAUST 2	714.27	DEG. F
C	3	EXHAUST 3	717.01	DEG. F
C	4	EXHAUST 4	757.33	DEG. F
C	5	EXHAUST 5	802.06	DEG. F
C	6	EXHAUST 6	737.35	DEG. F
C	7	ENG. COOL. IN	167.50	DEG. F
C	8	ENG. COOL. OUT	181.76	DEG. F
C	9	OIL SUMP	161.63	DEG. F
C	10	OIL GALLERY	163.13	DEG. F
C	13	ENG. INTAKE	90.658	DEG. F
C	14	RAD. TOP LEFT	117.49	DEG. F
C	15	RAD. BTTM LEFT	102.99	DEG. F
C	16	RAD. TOP RIGHT	102.52	DEG. F
C	17	RAD. BTTM RIGHT	88.377	DEG. F
C	18	GEN. AIR IN	72.221	DEG. F
C	19	GEN. AIR OUT	82.844	DEG. F
C	20	GEN. FRAME TOP	79.995	DEG. F
C	21	GEN. FRAME BTTM	76.521	DEG. F
C	22	GEN. EXCITER	93.484	DEG. F
C	23	GEN. VOLT. REG.	75.749	DEG. F
C	24	CONTROL PANEL	88.301	DEG. F
C	25	RELAY AREA	83.754	DEG. F
C	26	BATTERY LEFT	108.47	DEG. F
C	27	BATTERY RIGHT	98.819	DEG. F
C	28	AIR IN SET	73.787	DEG. F
C	29	FUEL TANK	73.787	DEG. F
C	30	FUEL OUTLET	91.989	DEG. F

END SCAN GROUP 1 25 JAN 88 08:45:30

STOPPED SINGLE SCAN 25 JAN 88 08:45:30

BEGIN SCAN GROUP 1 25 JAN 88 08:55:48
30 KW/60 HZ GEN SET S/N KZO 5841

C	1	EXHAUST 1	743.61	DEG. F
C	2	EXHAUST 2	707.61	DEG. F
C	3	EXHAUST 3	704.64	DEG. F
C	4	EXHAUST 4	751.51	DEG. F
C	5	EXHAUST 5	793.86	DEG. F
C	6	EXHAUST 6	725.57	DEG. F
C	7	ENG. COOL. IN	171.87	DEG. F
C	8	ENG. COOL. OUT	185.73	DEG. F
C	9	OIL SUMP	191.64	DEG. F
C	10	OIL GALLERY	193.37	DEG. F
C	13	ENG. INTAKE	91.275	DEG. F
C	14	RAD. TOP LEFT	122.82	DEG. F
C	15	RAD. BTTM LEFT	108.79	DEG. F
C	16	RAD. TOP RIGHT	108.12	DEG. F
C	17	RAD. BTTM RIGHT	90.920	DEG. F
C	18	GEN. AIR IN	71.865	DEG. F
C	19	GEN. AIR OUT	86.940	DEG. F
C	20	GEN. FRAME TOP	84.104	DEG. F
C	21	GEN. FRAME BTTM	79.980	DEG. F
C	22	GEN. EXCITER	100.37	DEG. F
C	23	GEN. VOLT. REG.	80.727	DEG. F
C	24	CONTROL PANEL	84.767	DEG. F
C	25	RELAY AREA	87.036	DEG. F
C	26	BATTERY LEFT	109.06	DEG. F
C	27	BATTERY RIGHT	104.75	DEG. F
C	28	AIR IN SET	73.052	DEG. F
C	29	FUEL TANK	74.319	DEG. F
C	30	FUEL OUTLET	96.097	DEG. F

END SCAN GROUP 1 25 JAN 88 08:55:58

STOPPED SINGLE SCAN 25 JAN 88 08:55:58

BEGIN SCAN GROUP 1 25 JAN 88 09:05:18
30 KW 60 HZ GEN SET S/N KZO 5841

C	1	EXHAUST 1	742.55	DEG. F
C	2	EXHAUST 2	707.00	DEG. F
C	3	EXHAUST 3	710.49	DEG. F
C	4	EXHAUST 4	756.16	DEG. F
C	5	EXHAUST 5	794.69	DEG. F
C	6	EXHAUST 6	726.27	DEG. F
C	7	ENG. COOL. IN	172.97	DEG. F
C	8	ENG. COOL. OUT	186.38	DEG. F
C	9	OIL SUMP	202.77	DEG. F
C	10	OIL GALLERY	203.70	DEG. F
C	13	ENG. INTAKE	93.348	DEG. F
C	14	RAD. TOP LEFT	123.06	DEG. F
C	15	RAD. BTTM LEFT	108.73	DEG. F
C	16	RAD. TOP RIGHT	108.03	DEG. F
C	17	RAD. BTTM RIGHT	91.034	DEG. F
C	18	GEN. AIR IN	73.202	DEG. F
C	19	GEN. AIR OUT	89.616	DEG. F
C	20	GEN. FRAME TOP	86.722	DEG. F
C	21	GEN. FRAME BTTM	80.820	DEG. F
C	22	GEN. EXCITER	102.14	DEG. F
C	23	GEN. VOLT. REG.	83.993	DEG. F
C	24	CONTROL PANEL	88.220	DEG. F
C	25	RELAY AREA	87.996	DEG. F
C	26	BATTERY LEFT	110.69	DEG. F
C	27	BATTERY RIGHT	105.49	DEG. F
C	28	AIR IN SET	74.569	DEG. F
C	29	FUEL TANK	75.320	DEG. F
C	30	FUEL OUTLET	98.689	DEG. F

END SCAN GROUP 1 25 JAN 88 09:05:27

STOPPED SINGLE SCAN 25 JAN 88 09:05:27

BEGIN SCAN GROUP 1 25 JAN 88 09:14:57
30 KW/60 HZ GEN SET S/N KZO 5841

C	1	EXHAUST 1	742.26	DEG. F
C	2	EXHAUST 2	707.08	DEG. F
C	3	EXHAUST 3	710.36	DEG. F
C	4	EXHAUST 4	759.38	DEG. F
C	5	EXHAUST 5	799.73	DEG. F
C	6	EXHAUST 6	729.34	DEG. F
C	7	ENG. COOL. IN	173.38	DEG. F
C	8	ENG. COOL. OUT	186.88	DEG. F
C	9	OIL SUMP	206.95	DEG. F
C	10	OIL GALLERY	208.03	DEG. F
C	13	ENG. INTAKE	94.260	DEG. F
C	14	RAD. TOP LEFT	123.04	DEG. F
C	15	RAD. BTTM LEFT	108.84	DEG. F
C	16	RAD. TOP RIGHT	108.26	DEG. F
C	17	RAD. BTTM RIGHT	91.698	DEG. F
C	18	GEN. AIR IN	74.088	DEG. F
C	19	GEN. AIR OUT	91.553	DEG. F
C	20	GEN. FRAME TOP	88.551	DEG. F
C	21	GEN. FRAME BTTM	82.382	DEG. F
C	22	GEN. EXCITER	103.97	DEG. F
C	23	GEN. VOLT. REG.	86.212	DEG. F
C	24	CONTROL PANEL	90.556	DEG. F
C	25	RELAY AREA	88.908	DEG. F
C	26	BATTERY LEFT	111.61	DEG. F
C	27	BATTERY RIGHT	104.50	DEG. F
C	28	AIR IN SET	75.322	DEG. F
C	29	FUEL TANK	76.402	DEG. F
C	30	FUEL OUTLET	101.72	DEG. F

END SCAN GROUP 1 25 JAN 88 09:15:07

STOPPED SINGLE SCAN 25 JAN 88 09:15:07

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BEGIN SCAN GROUP 1   25 JAN 88  09:36:25
30 KW/60 HZ GEN SET S/N KZO 5841

C    1 EXHAUST 1          1024.3 DEG. F
C    2 EXHAUST 2          1022.9 DEG. F
C    3 EXHAUST 3          1031.8 DEG. F
C    4 EXHAUST 4          1058.4 DEG. F
C    5 EXHAUST 5          1115.2 DEG. F
C    6 EXHAUST 6          1012.9 DEG. F
C    7 ENG. COOL. IN       176.96 DEG. F
C    8 ENG. COOL. OUT      190.63 DEG. F
C    9 OIL SUMP            210.23 DEG. F
C   10 OIL GALLERY         211.72 DEG. F
C   13  ENG. INTAKE        97.042 DEG. F
C   14 RAD. TOP LEFT       125.11 DEG. F
C   15 RAD. BTTM LEFT      109.72 DEG. F
C   16 RAD. TOP RIGHT      107.53 DEG. F
C   17 RAD. BTTM RIGHT     93.312 DEG. F
C   18 GEN. AIR IN         75.314 DEG. F
C   19 GEN. AIR OUT        95.332 DEG. F
C   20 GEN. FRAME TOP      90.985 DEG. F
C   21 GEN. FRAME BTTM     83.843 DEG. F
C   22 GEN. EXCITER        102.44 DEG. F
C   23 GEN. VOLT. REG.     90.831 DEG. F
C   24 CONTROL PANEL       94.524 DEG. F
C   25 RELAY AREA          92.226 DEG. F
C   26 BATTERY LEFT        108.95 DEG. F
C   27 BATTERY RIGHT       97.274 DEG. F
C   28 AIR IN SET          76.530 DEG. F
C   29 FUEL TANK           79.051 DEG. F
C   30 FUEL OUTLET         103.84 DEG. F

END SCAN GROUP 1      25 JAN 88  09:36:35

STOPPED SINGLE SCAN   25 JAN 88  09:36:35
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BEGIN SCAN GROUP 1   25 JAN 88  09:49:14
30 KW/60 HZ GEN SET S/N KZO 5841

C    1 EXHAUST 1          1022.8 DEG. F
C    2 EXHAUST 2          1015.8 DEG. F
C    3 EXHAUST 3          1022.9 DEG. F
C    4 EXHAUST 4          1048.6 DEG. F
C    5 EXHAUST 5          1112.8 DEG. F
C    6 EXHAUST 6          1009.3 DEG. F
C    7 ENG. COOL. IN       176.39 DEG. F
C    8 ENG. COOL. OUT      189.82 DEG. F
C    9 OIL SUMP            210.37 DEG. F
C   10 OIL GALLERY         211.84 DEG. F
C   13  ENG. INTAKE        98.498 DEG. F
C   14 RAD. TOP LEFT       125.64 DEG. F
C   15 RAD. BTTM LEFT      111.82 DEG. F
C   16 RAD. TOP RIGHT      108.22 DEG. F
C   17 RAD. BTTM RIGHT     94.438 DEG. F
C   18 GEN. AIR IN         77.516 DEG. F
C   19 GEN. AIR OUT        97.764 DEG. F
C   20 GEN. FRAME TOP      92.874 DEG. F
C   21 GEN. FRAME BTTM     85.106 DEG. F
C   22 GEN. EXCITER        102.78 DEG. F
C   23 GEN. VOLT. REG.     92.694 DEG. F
C   24 CONTROL PANEL       96.559 DEG. F
C   25 RELAY AREA          94.234 DEG. F
C   26 BATTERY LEFT        109.89 DEG. F
C   27 BATTERY RIGHT       97.413 DEG. F
C   28 AIR IN SET          78.934 DEG. F
C   29 FUEL TANK           80.526 DEG. F
C   30 FUEL OUTLET         105.48 DEG. F

END SCAN GROUP 1      25 JAN 88  09:49:23

STOPPED SINGLE SCAN   25 JAN 88  09:49:23
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BEGIN SCAN GROUP 1   25 JAN 88  10:00:22
30 KW/60 HZ GEN SET S/N KZO 5841

C    1 EXHAUST 1          774.61 DEG. F
C    2 EXHAUST 2          761.90 DEG. F
C    3 EXHAUST 3          763.40 DEG. F
C    4 EXHAUST 4          812.11 DEG. F
C    5 EXHAUST 5          853.38 DEG. F
C    6 EXHAUST 6          794.77 DEG. F
C    7 ENG. COOL. IN       171.61 DEG. F
C    8 ENG. COOL. OUT      183.46 DEG. F
C    9 OIL SUMP            210.63 DEG. F
C   10 OIL GALLERY         211.62 DEG. F
C   13  ENG. INTAKE        98.588 DEG. F
C   14 RAD. TOP LEFT       123.93 DEG. F
C   15 RAD. BTTM LEFT      109.51 DEG. F
C   16 RAD. TOP RIGHT      107.67 DEG. F
C   17 RAD. BTTM RIGHT     95.864 DEG. F
C   18 GEN. AIR IN         77.874 DEG. F
C   19 GEN. AIR OUT        98.161 DEG. F
C   20 GEN. FRAME TOP      93.476 DEG. F
C   21 GEN. FRAME BTTM     86.248 DEG. F
C   22 GEN. EXCITER        101.20 DEG. F
C   23 GEN. VOLT. REG.     93.879 DEG. F
C   24 CONTROL PANEL       97.886 DEG. F
C   25 RELAY AREA          94.488 DEG. F
C   26 BATTERY LEFT        109.26 DEG. F
C   27 BATTERY RIGHT       97.559 DEG. F
C   28 AIR IN SET          78.524 DEG. F
C   29 FUEL TANK           81.727 DEG. F
C   30 FUEL OUTLET         105.95 DEG. F

END SCAN GROUP 1      25 JAN 88  10:00:32

STOPPED SINGLE SCAN   25 JAN 88  10:00:32
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TEST DATA

ITEM 30 KW / 60 HZ
GENERATOR SET
MODIFIED
MFGR. JOHN R. HOLLINGSWORTH
MODEL NO. JRH 005A
SERIAL NO. KZO 5941

NTS
National Technical Systems | Scientific Services Group | Testing Division
P.O. Box 38
Harwood, Virginia 22471
Tel: 703 752 5300

Frequency and Voltage
Regulation, Stability and Transient Response Test
(Short Term) PRE DROP TEST

REF. NO. MIL-STD 705 Para. 608.1
SHEET 1 OF
DATE 25 JAN 1988
JOB NO. 555-2140
PROJ. ENGR.
RECORDER/OBSERVER KM/BC/BS

INST TIME	STEP NO.	LOAD STEP	E6020 VOLTAGE L_1-L_0 VAC	L_2-L_0 VAC	L_3-L_0 VAC	E6040 AMPERES KW L_1-L_0 AC AMPS	L_2-L_0 AC AMPS	L_3-L_0 AC AMPS	E6230 KILOWATTS KW L_1-L_0 Kw	L_2-L_0 Kw	L_3-L_0 Kw	E6320 POWER FACTOR PF	E6210 FREQ. Hz	E6071 EXCITER VOLTS VDC	E6250 FIELD AMPS DCA	AMB. TEMP. °F	BARO IN/HG IN H2O
			START STABILIZATION														
1015			119.5	120	120	2.54	2.56	2.56	.249	.257	.257	.80	60.1	8.4	3.4	80	28.57/96.9
1015			119.5	120	120	2.54	2.56	2.55	.249	.251	.251	.80	60.1	8.4	3.4	90	28.57/96.9
1015			119.5	120	120	2.54	2.56	2.56	.249	.257	.251	.80	60.1	8.4	3.4	72	28.58/96.9
1035			119.5	120	120	2.54	2.56	2.56	.249	.257	.251	.80	60.0	8.4	3.4	79	28.57/96.9
1045			119.5	120	120	2.54	2.56	2.56	.249	.257	.257	.80	60.0	8.4	3.4	76	
1052	1		119	120	120	2.54	2.56	2.56	.249	.257	.257	.80	61.3	3.6	1.5	77	
	2		120.5	121	121								60.6	8.4	3.4	80	
	3		119.5	120	120	2.54	2.56	2.56	.249	.257	.257	.80	61.3	3.6	1.5	80	
	4		120.5	121	121								60.6	8.4	3.4	79	
	5		119.5	120	120	2.54	2.56	2.56	.249	.257	.257	.80	61.4	3.6	1.5	81	
	6		120.5	121	121								59.9	8.3	3.4	79	
	7		119.0	120	120	2.54	2.56	2.56	.249	.251	.251	.80	61.2	3.6	1.45	79	
	8		120.5	121	121								60.0	8.3	3.4	78	
1103	9		119.5	120	120	2.54	2.56	2.56	.249	.257	.257	.80	61.2	3.6	1.45	78	
	10		120.5	121	121								59.9	8.3	3.4	77	
	11		119.5	120	120	2.54	2.56	2.56	.249	.257	.257	.80	61.2	3.5	1.45	77	
	12		120.5	121	121								59.9	8.2	3.35	79	
	13		119.0	120	120	2.54	2.56	2.56	.249	.257	.257	.80	61.2	3.5	1.45	79	
1107	14		120.5	121	121												
1107			END OF TEST				SHUT DOWN										

NOTES:

TEST DATA

ITEM 400Hz/0.5Hz
Typical Set
Model 0
MFGR. John Hollingsworth
MODEL NO. MIL 5058
SERIAL NO. 1.2 5841

NTS
National Technical Systems
Scientific Services Group
Testing Division
P.O. Box 30
Hallwood, Virginia 22471
Tel: 703 752 5200

FREQUENCY AND VOLTAGE REGULATION,
STABILITY, AND TRANSIENT RESPONSE TEST Modified
(SHORT TEST) PREDROP TEST

REF. NO. MIL-STD 705
SHEET ____ OF ____
DATE 4 FEB 1988
JOB NO. ____
PROJ. ENGR. ____
RECORDER/OBSERVER ____

LOAD STEP	FREQUENCY: MAXIMUM EXCURSION OVERSHOOT Hz	OVERSHOOT %	UNDERSHOOT Hz	UNDERSHOOT %	REC. TIME SEC	CONSTANT LOAD BANDWIDTH Hz	BANDWIDTH %	REGULATION FREQ. %	VOLTAGE: REGULATION VOLT %	MAXIMUM EXCURSION OVERSHOOT VOLT	OVERSHOOT %	UNDERSHOOT VOLT	UNDERSHOOT %	REC. TIME SEC	CONSTANT LOAD BANDWIDTH VOLT	BANDWIDTH %
1						.10	.17								.17	.15
1-2	1.71	2.75			.70			2.16	.83	1.91	1.59			.10		
2						.12	.20								.17	.15
2-3			1.63	2.72	.78			2.16	.83			1.74	1.45	.16		
3						.07	.12								.17	.15
3-4	1.60	2.66			.78			2.16	.83	2.60	2.17			.20		
4						.09	.15								.17	.15
4-5			1.60	2.66	.78			2.16	.83			1.91	1.59	.16		
5						.10	.17								.17	.15
5-6	1.74	2.87			.70			2.33	.83	1.74	1.45			.08		
6						.10	.17								.17	.15
6-7			1.56	2.60	.63			2.5	.83			1.56	1.30	.08		
7						.10	.17								.17	.15
7-8	1.67	2.78			.417			2.16	.83	2.08	1.74			.16		
8						.12	.20								.17	.15
8-9			1.60	2.66	.86			2.0	.83			1.73	1.45	.16		
9						.07	.12								.17	.15
9-10	1.67	2.78			.70			2.0	.83	2.08	1.74			.12		
10						.10	.17								.09	.07
10-11			1.56	2.60	.78			2.16	.83			1.39	1.16	.08		
11						.09	.15								.09	.07
11-12	1.74	2.75			.86			2.16	.83	2.08	1.74			.16		
12						.14	.23								.17	.15
12-13			1.53	2.55	.86			2.16	.83			1.39	1.16	.08		
13						.10	.17								.17	.15
13-14	1.67	2.78			.31			2.16	.83	2.60	2.17			.16		

NOTES:

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FIRST SCANTRAC RUN SINCE TEST CELL PAC WAS

BEGIN SCAN GROUP 1 25 JAN 88 10:14:55
30 KW/60 HZ GEN SET S/N KZO 5841

C	1	EXHAUST 1	727.20	DEG. F
C	2	EXHAUST 2	706.01	DEG. F
C	3	EXHAUST 3	705.56	DEG. F
C	4	EXHAUST 4	749.79	DEG. F
C	5	EXHAUST 5	794.88	DEG. F
C	6	EXHAUST 6	731.69	DEG. F
C	7	ENG. COOL. IN	171.76	DEG. F
C	8	ENG. COOL. OUT	183.47	DEG. F
C	9	OIL SUMP	209.86	DEG. F
C	10	OIL GALLERY	210.85	DEG. F
C	13	ENG. INTAKE	98.226	DEG. F
C	14	RAD. TOP LEFT	123.43	DEG. F
C	15	RAD. BTTM LEFT	109.32	DEG. F
C	16	RAD. TOP RIGHT	107.18	DEG. F
C	17	RAD. BTTM RIGHT	95.377	DEG. F
C	18	GEN. AIR IN	77.583	DEG. F
C	19	GEN. AIR OUT	98.426	DEG. F
C	20	GEN. FRAME TOP	93.470	DEG. F
C	21	GEN. FRAME BTTM	86.471	DEG. F
C	22	GEN. EXCITER	104.87	DEG. F
C	23	GEN. VOLT. REG.	94.835	DEG. F
C	24	CONTROL PANEL	97.779	DEG. F
C	25	RELAY AREA	93.999	DEG. F
C	26	BATTERY LEFT	109.58	DEG. F
C	27	BATTERY RIGHT	98.259	DEG. F
C	28	AIR IN SET	80.239	DEG. F
C	29	FUEL TANK	83.801	DEG. F
C	30	FUEL OUTLET	105.97	DEG. F

END SCAN GROUP 1 25 JAN 88 10:15:05

STOPPED SINGLE SCAN 25 JAN 88 10:15:05

BEGIN SCAN GROUP 1 25 JAN 88 10:35:
30 KW/60 HZ GEN SET S/N KZO 5841

C	1	EXHAUST 1	730.97	DEG. F
C	2	EXHAUST 2	704.64	DEG. F
C	3	EXHAUST 3	707.14	DEG. F
C	4	EXHAUST 4	749.89	DEG. F
C	5	EXHAUST 5	793.14	DEG. F
C	6	EXHAUST 6	731.29	DEG. F
C	7	ENG. COOL. IN	170.48	DEG. F
C	8	ENG. COOL. OUT	183.12	DEG. F
C	9	OIL SUMP	208.59	DEG. F
C	10	OIL GALLERY	209.38	DEG. F
C	13	ENG. INTAKE	96.833	DEG. F
C	14	RAD. TOP LEFT	121.48	DEG. F
C	15	RAD. BTTM LEFT	107.72	DEG. F
C	16	RAD. TOP RIGHT	105.13	DEG. F
C	17	RAD. BTTM RIGHT	93.484	DEG. F
C	18	GEN. AIR IN	78.261	DEG. F
C	19	GEN. AIR OUT	95.178	DEG. F
C	20	GEN. FRAME TOP	91.481	DEG. F
C	21	GEN. FRAME BTTM	85.743	DEG. F
C	22	GEN. EXCITER	102.71	DEG. F
C	23	GEN. VOLT. REG.	94.341	DEG. F
C	24	CONTROL PANEL	97.348	DEG. F
C	25	RELAY AREA	90.547	DEG. F
C	26	BATTERY LEFT	109.86	DEG. F
C	27	BATTERY RIGHT	98.647	DEG. F
C	28	AIR IN SET	72.596	DEG. F
C	29	FUEL TANK	84.868	DEG. F
C	30	FUEL OUTLET	106.35	DEG. F

END SCAN GROUP 1 25 JAN 88 10:35:

STOPPED SINGLE SCAN 25 JAN 88 10:35:

BEGIN SCAN GROUP 1 25 JAN 88 10:24:55
30 KW/60 HZ GEN SET S/N KZO 5841

C	1	EXHAUST 1	732.23	DEG. F
C	2	EXHAUST 2	704.50	DEG. F
C	3	EXHAUST 3	706.22	DEG. F
C	4	EXHAUST 4	749.36	DEG. F
C	5	EXHAUST 5	792.46	DEG. F
C	6	EXHAUST 6	732.55	DEG. F
C	7	ENG. COOL. IN	171.62	DEG. F
C	8	ENG. COOL. OUT	183.66	DEG. F
C	9	OIL SUMP	208.96	DEG. F
C	10	OIL GALLERY	209.78	DEG. F
C	13	ENG. INTAKE	97.855	DEG. F
C	14	RAD. TOP LEFT	123.43	DEG. F
C	15	RAD. BTTM LEFT	109.11	DEG. F
C	16	RAD. TOP RIGHT	107.32	DEG. F
C	17	RAD. BTTM RIGHT	95.339	DEG. F
C	18	GEN. AIR IN	77.696	DEG. F
C	19	GEN. AIR OUT	98.535	DEG. F
C	20	GEN. FRAME TOP	93.692	DEG. F
C	21	GEN. FRAME BTTM	87.127	DEG. F
C	22	GEN. EXCITER	102.69	DEG. F
C	23	GEN. VOLT. REG.	94.803	DEG. F
C	24	CONTROL PANEL	97.975	DEG. F
C	25	RELAY AREA	93.666	DEG. F
C	26	BATTERY LEFT	109.75	DEG. F
C	27	BATTERY RIGHT	98.527	DEG. F
C	28	AIR IN SET	80.180	DEG. F
C	29	FUEL TANK	83.735	DEG. F
C	30	FUEL OUTLET	107.53	DEG. F

END SCAN GROUP 1 25 JAN 88 10:25:05

STOPPED SINGLE SCAN 25 JAN 88 10:25:05

BEGIN SCAN GROUP 1 25 JAN 88 10:45:
30 KW/60 HZ GEN SET S/N KZO 5841

C	1	EXHAUST 1	734.68	DEG. F
C	2	EXHAUST 2	703.91	DEG. F
C	3	EXHAUST 3	707.93	DEG. F
C	4	EXHAUST 4	749.13	DEG. F
C	5	EXHAUST 5	793.53	DEG. F
C	6	EXHAUST 6	730.34	DEG. F
C	7	ENG. COOL. IN	171.99	DEG. F
C	8	ENG. COOL. OUT	184.55	DEG. F
C	9	OIL SUMP	208.78	DEG. F
C	10	OIL GALLERY	209.65	DEG. F
C	13	ENG. INTAKE	97.346	DEG. F
C	14	RAD. TOP LEFT	123.22	DEG. F
C	15	RAD. BTTM LEFT	109.69	DEG. F
C	16	RAD. TOP RIGHT	108.22	DEG. F
C	17	RAD. BTTM RIGHT	94.495	DEG. F
C	18	GEN. AIR IN	77.374	DEG. F
C	19	GEN. AIR OUT	97.467	DEG. F
C	20	GEN. FRAME TOP	93.867	DEG. F
C	21	GEN. FRAME BTTM	86.422	DEG. F
C	22	GEN. EXCITER	104.93	DEG. F
C	23	GEN. VOLT. REG.	94.804	DEG. F
C	24	CONTROL PANEL	97.205	DEG. F
C	25	RELAY AREA	92.712	DEG. F
C	26	BATTERY LEFT	111.29	DEG. F
C	27	BATTERY RIGHT	100.50	DEG. F
C	28	AIR IN SET	79.572	DEG. F
C	29	FUEL TANK	84.157	DEG. F
C	30	FUEL OUTLET	105.90	DEG. F

END SCAN GROUP 1 25 JAN 88 10:45:

STOPPED SINGLE SCAN 25 JAN 88 10:45:

TEST DATA

ITEM 30 KW/60 HZ
GENERATOR SET
MODIFIED
MFGR. JOHN R. HOLLINGSWORTH
MODEL NO. JRH 2054
SERIAL NO. KZO 5811

NTS
National Technical Systems Group | Scientific Services | Testing Division
P.O. Box 38
Harwood, Virginia 22471
Tel: 703 752 5300

Frequency and Voltage
Regulation, Stability and Transient Response Test
(Short Term) POST DROP TEST

REF. NO. MIL-STD 705 Para. 608.1
SHEET 1 OF
DATE 25 JAN 88
JOB NO. 555-2140
PROJ. ENGR.
RECORDER/OBSERVER CH/EC/BT

INST TIME	STEP NO.	LOAD STEP	E6028 D VOLTAGE L_1-L_0 VAC	L_2-L_0 VAC	L_3-L_0 VAC	E6026 D AMPERES XF6 L_1-L_0 AC AMPS	L_2-L_0 AC AMPS	L_3-L_0 AC AMPS	E6230 D KILOWATTS XF6 L_1-L_0 Kw	L_2-L_0 Kw	L_3-L_0 Kw	E6220 POWER FACTOR PF	E6011 FREQ. Hz	E6670 EXCITER VOLTS VDC	E6025G0 FIELD AMPS DCA	AMB. TEMP. °F	
1520			START	UNIT	LOAD	LOAD	NET	STABILIZATION									
1520		R/L	119	120	120	2.53	2.55	2.55	.249	.25	.25	.80	60.4	7.5	5.15	70	34.2/35.6
1530		R/L	119.5	120	120	2.53	2.56	2.55	.249	.251	.251	.80	60.5	7.8	3.2	69	36.4/36.7
1540		R/L	119	120	120	2.53	2.55	2.55	.249	.251	.251	.80	60.5	8.0	3.3	71	37.8/37.0
1550		R/L	119	120	120	2.53	2.56	2.55	.249	.251	.251	.80	60.4	8.0	3.3	71	38.5/37.8
1551	1	R/L	119.5	120	120	2.52	2.55	2.55	.249	.251	.251	.80	60.4	8.0	3.3	72	
	2	N/L	120.5	121	121								61.5	3.4	1.45	71	
	3	R/L	119.5	120	120	2.53	2.56	2.55	.249	.251	.251	.80	60.3	8.0	3.3	72	
	4	N/L	120.5	121	121								61.5	3.4	1.45	71	
	5	R/L	119.5	120	120	2.53	2.56	2.55	.249	.251	.251	.80	60.5	8.0	3.3	71	
	6	N/L	120.5	121	121								61.6	3.4	1.45	72	
	7	R/L	119.5	120	120	2.53	2.56	2.55	.249	.251	.251	.80	60.4	8.0	3.3	71	
	8	N/L	120.5	121	121								61.5	3.4	1.4	72	
	9	R/L	119.5	120	120	2.53	2.55	2.55	.249	.251	.251	.80	60.4	7.9	3.3	71	
	10	N/L	120.5	121	121								61.6	3.4	1.4	72	
	11	R/L	119.5	120	120	2.53	2.56	2.55	.249	.251	.251	.80	60.3	7.9	3.3	72	
	12	N/L	120.5	120	121								61.6	3.4	1.4	72	
	13	R/L	119.5	120	120	2.53	2.56	2.55	.249	.251	.251	.80	60.3	7.9	3.3	73	
1602	14	N/L	120.5	121	121								61.5	3.4	1.4	73	
1602			END	OF	TEST		SHUT	UNIT	DOWN								

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NOTES:

TEST DATA

ITEM 30 KW 60 Hz
GENERATOR SET
MODIFIED

MFGR. JOHN R HOLLINGSWORTH

MODEL NO. MEP 005A

SERIAL NO. KZ0 5841

NTS
National Technical Systems
Scientific Services Group
Testing Division
P.O. Box 30
Hartwood, Virginia 22471
Tel: 703 752 5300

FREQUENCY AND VOLTAGE REGULATION, STABILITY, AND TRANSIENT RESPONSE TEST
(SHORT TEST) POST DROP TEST

REF. NO. MIL STD 705

SHEET 1 OF 1

DATE 3 FEB 1988

JOB NO. 555-2140

PROJ. ENGR.

RECORDER/OBSERVER

	FREQUENCY								VOLTAGE							
	MAXIMUM EXCURSION				REC. TIME	CONSTANT LOAD BANDWIDTH		REGULATION FREQ.	MAXIMUM EXCURSION				REC. TIME	CONSTANT LOAD BANDWIDTH		
LOAD STEP	OVERSHOOT Hz	OVERSHOOT %	UNDERSHOOT Hz	UNDERSHOOT %	SEC	± Hz	± %	%	VOLT %	OVERSHOOT VOLT	OVERSHOOT %	UNDERSHOOT VOLT	UNDERSHOOT %	SEC	VOLT	%
1						.09	.15								.17	.15
1 - 2	1.77	2.55			.70			1.83	.83	2.95	2.46			.15		
2						.09	.15								.17	.15
2 - 3			1.60	2.66	.70			2.0	.83			2.08	1.74	.23		
3						.09	.15								.17	.15
3 - 4	1.24	2.89			.47			2.0	.83	2.60	2.17			.15		
4						.10	.17								.17	.15
4 - 5			1.70	2.83	.78			1.66	.83			1.39	1.16	.15		
5						.09	.15								.17	.15
5 - 6	1.70	2.83			.39			1.83	.83	2.26	1.88			.15		
6						.10	.17								.17	.15
6 - 7			1.63	2.22	.86			2.0	.83			1.74	1.45	.16		
7						.10	.17								.17	.15
7 - 8	1.63	2.22			.55			1.83	.83	2.26	1.88			.15		
8						09	.15								.17	.15
8 - 9			1.67	2.78	.86			1.83	.83			1.91	1.59	.15		
9						.09	.15								.17	.15
9 - 10	1.77	2.55			.63			2.0	.83	2.26	1.88			.15		
10						.12	.20								.17	.15
10 - 11			1.60	2.66	.78			2.16	.83			1.56	1.30	.15		
11						.12	.20								.17	.15
11 - 12	1.67	2.78			.31			2.16	.83	1.91	1.59			.08		
12						.09	.15								.17	.15
12 - 13			1.60	2.66	.78			2.16	.83			1.74	1.45	.15		
13						.09	.15								.17	.15
13 - 14	1.67	2.78			.39			2.0	.83	1.74	1.45			.15		

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NOTES:

FREQ & VOLTAGE STABILITY SHEET ITEM POST DROP COR.1

BEGIN SCAN GROUP 1 25 JAN 88 15:16:05
30 KW/60 HZ GEN SET S/N KZO 5841

C	1	EXHAUST 1	95.758	DEG. F
C	2	EXHAUST 2	94.834	DEG. F
C	3	EXHAUST 3	93.038	DEG. F
C	4	EXHAUST 4	94.501	DEG. F
C	5	EXHAUST 5	94.581	DEG. F
C	6	EXHAUST 6	93.167	DEG. F
C	7	ENG. COOL. IN	76.887	DEG. F
C	8	ENG. COOL. OUT	98.224	DEG. F
C	9	OIL SUMP	89.211	DEG. F
C	10	OIL GALLERY	86.414	DEG. F
C	13	ENG. INTAKE	90.529	DEG. F
C	14	RAD. TOP LEFT	88.269	DEG. F
C	15	RAD. BTTM LEFT	72.551	DEG. F
C	16	RAD. TOP RIGHT	81.562	DEG. F
C	17	RAD. BTTM RIGHT	60.823	DEG. F
C	18	GEN. AIR IN	63.834	DEG. F
C	19	GEN. AIR OUT	63.889	DEG. F
C	20	GEN. FRAME TOP	83.738	DEG. F
C	21	GEN. FRAME BTTM	67.414	DEG. F
C	22	GEN. EXCITER	73.120	DEG. F
C	23	GEN. VOLT. REG.		OPEN TC
C	24	CONTROL PANEL		OPEN TC
C	25	RELAY AREA		OPEN TC
C	26	BATTERY LEFT	70.560	DEG. F
C	27	BATTERY RIGHT	70.348	DEG. F
C	28	AIR IN SET		OPEN TC
C	29	FUEL TANK	59.465	DEG. F
C	30	FUEL OUTLET	74.319	DEG. F

END SCAN GROUP 1 25 JAN 88 15:16:15

STOPPED SINGLE SCAN 25 JAN 88 15:16:15

BEGIN SCAN GROUP 1 25 JAN 88 15:16:51
30 KW/60 HZ GEN SET S/N KZO 5841

C	1	EXHAUST 1	95.448	DEG. F
C	2	EXHAUST 2	95.524	DEG. F
C	3	EXHAUST 3	93.062	DEG. F
C	4	EXHAUST 4	94.266	DEG. F
C	5	EXHAUST 5	94.626	DEG. F
C	6	EXHAUST 6	93.883	DEG. F
C	7	ENG. COOL. IN	76.857	DEG. F
C	8	ENG. COOL. OUT	98.147	DEG. F
C	9	OIL SUMP	89.208	DEG. F
C	10	OIL GALLERY	86.411	DEG. F
C	13	ENG. INTAKE	90.499	DEG. F
C	14	RAD. TOP LEFT	88.266	DEG. F
C	15	RAD. BTTM LEFT	72.829	DEG. F
C	16	RAD. TOP RIGHT	81.660	DEG. F
C	17	RAD. BTTM RIGHT	60.951	DEG. F
C	18	GEN. AIR IN	64.405	DEG. F
C	19	GEN. AIR OUT	64.017	DEG. F
C	20	GEN. FRAME TOP	83.722	DEG. F
C	21	GEN. FRAME BTTM	67.577	DEG. F
C	22	GEN. EXCITER	73.234	DEG. F
C	23	GEN. VOLT. REG.	71.347	DEG. F
C	24	CONTROL PANEL	68.673	DEG. F
C	25	RELAY AREA	76.947	DEG. F
C	26	BATTERY LEFT	70.668	DEG. F
C	27	BATTERY RIGHT	70.435	DEG. F
C	28	AIR IN SET	72.638	DEG. F
C	29	FUEL TANK	59.498	DEG. F
C	30	FUEL OUTLET	74.418	DEG. F

END SCAN GROUP 1 25 JAN 88 15:17:01

STOPPED SINGLE SCAN 25 JAN 88 15:17:01

BEGIN SCAN GROUP 1 25 JAN 88 15:19:55
30 KW/60 HZ GEN SET S/N KZO 5841

C	1	EXHAUST 1	671.37	DEG. F
C	2	EXHAUST 2	633.95	DEG. F
C	3	EXHAUST 3	629.96	DEG. F
C	4	EXHAUST 4	643.72	DEG. F
C	5	EXHAUST 5	701.89	DEG. F
C	6	EXHAUST 6	594.36	DEG. F
C	7	ENG. COOL. IN	78.134	DEG. F
C	8	ENG. COOL. OUT	114.14	DEG. F
C	9	OIL SUMP	106.64	DEG. F
C	10	OIL GALLERY	112.11	DEG. F
C	13	ENG. INTAKE	79.189	DEG. F
C	14	RAD. TOP LEFT	89.453	DEG. F
C	15	RAD. BTTM LEFT	88.564	DEG. F
C	16	RAD. TOP RIGHT	89.123	DEG. F
C	17	RAD. BTTM RIGHT	75.454	DEG. F
C	18	GEN. AIR IN	73.236	DEG. F
C	19	GEN. AIR OUT	81.344	DEG. F
C	20	GEN. FRAME TOP	81.436	DEG. F
C	21	GEN. FRAME BTTM	71.029	DEG. F
C	22	GEN. EXCITER	74.881	DEG. F
C	23	GEN. VOLT. REG.	71.284	DEG. F
C	24	CONTROL PANEL	68.925	DEG. F
C	25	RELAY AREA	76.507	DEG. F
C	26	BATTERY LEFT	74.984	DEG. F
C	27	BATTERY RIGHT	73.416	DEG. F
C	28	AIR IN SET	70.198	DEG. F
C	29	FUEL TANK	60.699	DEG. F
C	30	FUEL OUTLET	75.311	DEG. F

END SCAN GROUP 1 25 JAN 88 15:20:05

STOPPED SINGLE SCAN 25 JAN 88 15:20:05

BEGIN SCAN GROUP 1 25 JAN 88 15:29:53
30 KW/60 HZ GEN SET S/N KZO 5841

C	1	EXHAUST 1	728.06	DEG. F
C	2	EXHAUST 2	718.33	DEG. F
C	3	EXHAUST 3	716.70	DEG. F
C	4	EXHAUST 4	742.87	DEG. F
C	5	EXHAUST 5	784.84	DEG. F
C	6	EXHAUST 6	717.65	DEG. F
C	7	ENG. COOL. IN	168.88	DEG. F
C	8	ENG. COOL. OUT	182.83	DEG. F
C	9	OIL SUMP	173.44	DEG. F
C	10	OIL GALLERY	175.88	DEG. F
C	13	ENG. INTAKE	88.598	DEG. F
C	14	RAD. TOP LEFT	121.24	DEG. F
C	15	RAD. BTTM LEFT	108.28	DEG. F
C	16	RAD. TOP RIGHT	109.62	DEG. F
C	17	RAD. BTTM RIGHT	94.344	DEG. F
C	18	GEN. AIR IN	68.295	DEG. F
C	19	GEN. AIR OUT	84.934	DEG. F
C	20	GEN. FRAME TOP	82.473	DEG. F
C	21	GEN. FRAME BTTM	75.824	DEG. F
C	22	GEN. EXCITER	84.478	DEG. F
C	23	GEN. VOLT. REG.	75.188	DEG. F
C	24	CONTROL PANEL	76.336	DEG. F
C	25	RELAY AREA	83.651	DEG. F
C	26	BATTERY LEFT	107.22	DEG. F
C	27	BATTERY RIGHT	96.458	DEG. F
C	28	AIR IN SET	69.958	DEG. F
C	29	FUEL TANK	70.418	DEG. F
C	30	FUEL OUTLET	93.911	DEG. F

END SCAN GROUP 1 25 JAN 88 15:30:03

STOPPED SINGLE SCAN 25 JAN 88 15:30:03

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BEGIN SCAN GROUP 1   25 JAN 88  15:40:00
30 KW/60 HZ GEN SET S/N KZO 5841

C    1 EXHAUST 1          725.63 DEG. F
C    2 EXHAUST 2          708.84 DEG. F
C    3 EXHAUST 3          711.56 DEG. F
C    4 EXHAUST 4          743.84 DEG. F
C    5 EXHAUST 5          783.74 DEG. F
C    6 EXHAUST 6          716.20 DEG. F
C    7 ENG. COOL. IN      171.81 DEG. F
C    8 ENG. COOL. OUT     185.41 DEG. F
C    9 OIL SUMP           195.72 DEG. F
C   10 OIL GALLERY        197.22 DEG. F
C   13  ENG. INTAKE       91.861 DEG. F
C   14 RAD. TOP LEFT      124.86 DEG. F
C   15 RAD. BTTM LEFT     111.84 DEG. F
C   16 RAD. TOP RIGHT     111.68 DEG. F
C   17 RAD. BTTM RIGHT    94.753 DEG. F
C   18 GEN. AIR IN        68.869 DEG. F
C   19 GEN. AIR OUT       87.306 DEG. F
C   20 GEN. FRAME TOP     84.230 DEG. F
C   21 GEN. FRAME BTTM    77.308 DEG. F
C   22 GEN. EXCITER       87.950 DEG. F
C   23 GEN. VOLT. REG.    80.005 DEG. F
C   24 CONTROL PANEL      83.031 DEG. F
C   25 RELAY AREA         86.756 DEG. F
C   26 BATTERY LEFT       112.58 DEG. F
C   27 BATTERY RIGHT      100.90 DEG. F
C   28 AIR IN SET         72.481 DEG. F
C   29 FUEL TANK          70.723 DEG. F
C   30 FUEL OUTLET        97.221 DEG. F

END SCAN GROUP 1      25 JAN 88  15:40:10

STOPPED SINGLE SCAN   25 JAN 88  15:40:10


BEGIN SCAN GROUP 1   25 JAN 88  15:49:52
30 KW/60 HZ GEN SET S/N KZO 5841

C    1 EXHAUST 1          730.93 DEG. F
C    2 EXHAUST 2          706.25 DEG. F
C    3 EXHAUST 3          709.92 DEG. F
C    4 EXHAUST 4          745.92 DEG. F
C    5 EXHAUST 5          787.10 DEG. F
C    6 EXHAUST 6          721.17 DEG. F
C    7 ENG. COOL. IN      172.27 DEG. F
C    8 ENG. COOL. OUT     185.87 DEG. F
C    9 OIL SUMP           204.38 DEG. F
C   10 OIL GALLERY        205.19 DEG. F
C   13  ENG. INTAKE       92.101 DEG. F
C   14 RAD. TOP LEFT      124.68 DEG. F
C   15 RAD. BTTM LEFT     111.17 DEG. F
C   16 RAD. TOP RIGHT     111.24 DEG. F
C   17 RAD. BTTM RIGHT    92.938 DEG. F
C   18 GEN. AIR IN        69.549 DEG. F
C   19 GEN. AIR OUT       89.345 DEG. F
C   20 GEN. FRAME TOP     85.932 DEG. F
C   21 GEN. FRAME BTTM    78.846 DEG. F
C   22 GEN. EXCITER       89.411 DEG. F
C   23 GEN. VOLT. REG.    83.606 DEG. F
C   24 CONTROL PANEL      87.484 DEG. F
C   25 RELAY AREA         88.198 DEG. F
C   26 BATTERY LEFT       113.95 DEG. F
C   27 BATTERY RIGHT      102.37 DEG. F
C   28 AIR IN SET         72.115 DEG. F
C   29 FUEL TANK          72.321 DEG. F
C   30 FUEL OUTLET        99.232 DEG. F

END SCAN GROUP 1      25 JAN 88  15:50:01

STOPPED SINGLE SCAN   25 JAN 88  15:50:02
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Gen Set 30 KW 60 Hz

S/N R2 53774

HIGH TEMPERATURE TEST (710.1c)

Regulator Range (511.1)	✓
Frequency Adj. Range (511.2)	*
Circuit Interrupter (Short Circuit) (512.1)	✓
Circuit Interrupter (Overload Trip) (512.2)	*
Circuit Interrupter (512.3) (Overvoltage/Undervoltage)	✓
Indicating Instrument (513.2)	*
Freq. and Voltage Regulation Stab. & Trans Response (608.1)	*
Freq. and Voltage Stability (Long Term) (608.2)	*
Voltage Dip & Rise (619.2)	✓
DC Control (655.1)	*
Winding Resistance (401.1a)	✓
710.1.3.2h HIGH TEMP START	✓

BASELINE TESTS

SOUND LEVEL MIL STD 1474	N/A
FREQUENCY AND VOLTAGE REG. (608.1)	N/A

AMBIENT TESTS (Cont.)

FREQUENCY AND VOLTAGE REG. PRE DROP (614.1)	*
FREQUENCY AND VOLTAGE REG. POST DROP (614.1)	*

AMBIENT TEMPERATURE TESTS

Winding Resistance (401.1a)	✓
MIL-STD-1474 Sound Level	✓
Drop Test STRUCTURAL DAMAGE (740.3b)	*
Max Power (640.1)	*
Overtemperature Protective Device (513.2)	*

* FAILED TEST

30 KW, 60 Hz
S/N RZ 53774

111-B

BOORUM & PEASE
B&P
ACCOUNT BOOK 12¼ IN x 8¼ IN.

100 PAGES	200 PAGES	500 PAGES	RULING
No. 87½-100-J	87½-200-J	87½-500-J	Journal
No. 87½-100-DEL	87½-200-DEL	87½-500-DEL	DE Ledger
No. 87½-100-DEL	87½-200-DEL	87½-500-DEL	DE Ledger
*No. 87½-100-LD	*87½-200-LD	*87½-500-LD	Long Day
No. 87½-100-R 84-8718	87½-200-R 84-8738	87½-500-R 84-8758	Record
No. 87½-100-R IT	87½-200-R IT	87½-500-R IT	Record Indexed

*LONG DAY SIZE 15¾ IN x 8¼ IN

BOORUM & PEASE CO. ELIZABETH NJ 07208 USA MADE IN USA

19 OCTOBER 1987

1145 RECD MODIFIED UNIT FROM VSE BJ

SET UNIT UP FOR SOUND LEVEL TEST
FUELED UNIT
CHECK OIL - OK
CHECKED WATER - COOLANT IS MILKY GREY/GREEN WITH EVIDENCE OF OIL ON RADIATOR CAP AND FILLER NECK - ALSO APPEARS TO BE OIL IN COOLANT.

1548 - 1608 PERFORMED SOUND LEVEL TEST
ATM 33.7 — 34.0 BJ

20 OCTOBER 1987

DRAINED RADIATOR AND TOOK SAMPLE OF COOLANT

REFILLED RADIATOR WITH WATER
RAN UNIT TO FLUSH SYSTEM
DRAINED & TOOK SAMPLE - STILL LOOKS CLOUDY & SOME SOLID BLACK PARTICULATE
REFILLED RADIATOR W/ WATER AND RAN UNIT TO FLUSH AGAIN
DRAINED RADIATOR & TOOK SAMPLE STILL CLOUDY BUT BETTER
REFILLED & FLUSHED AGAIN BJ
REFILLED W/ 50/50 SOLUTION ANTIFREEZE
INSTALLED UNIT IN HIGH TEMP CHAMBER BJ

21 OCTOBER 1987

HOOKED UP INSTRUMENTATION
INSTALLED ADDITIONAL BAFFLE ABOVE CONTROL PANEL AS PER FRANK PISECO-VSE. HOLES DID NOT LINE UP PROPERLY - WERE RECTIFIED BY VSE TECHNICIAN

DISCUSSED LARGE AMOUNT OF WHAT APPEARS TO BE OIL ON THE RIGHT SIDE OF ENGINE. APPEARS FROM CENTER OF EXHAUST MANIFOLD PASSAGE AND FROM INJECTORS DOWN

1730 STARTED AMBIENT SOAK FOR AMBIENT WINDING RESISTANCE TEST.

22 OCTOBER 1987

REMOVED BAFFLE FROM ABOVE CONTROL PANEL AS PER RALPH ANGLE-VSE. TWO (2) RIV-NUTS BROKE DURING REMOVAL

23 OCTOBER 1987

0904 PERFORMED AMBIENT WINDING RESISTANCE

24 OCTOBER 1987

1146- STABILIZED & PERFORMED HIGH TEMP. WINDING RESISTANCE

1241 ATTEMPTED TO RESTART UNIT AFTER WINDING RESISTANCE - WOULD NOT & CONTINUE TO RUN - COOLANT OVERTEMP FILTER OUT & ALLOW TO COOL

B-112

24 OCT 1987

1214 STARTED UNIT TO STABILIZE FOR High Temp 710.1 (H) 35 KV 60Hz

1295

	C9	C10	C30	Sump C9 C10 Oil Cooler	Amb
	Cyl	Cyl	Cyl C30 Fuel Outlet		
1305	97	137		220 231	126
1315	98	138		223 234	128
1325	99	139		225 236	

1328 SHUT DOWN Low Oil Pres Temp. ENG. Coolant

1354 INSTALLED AIRINTAKE BAFFLE ASSY LT, KM

1356 RESTART UNIT

		Fuel Tank	Sump	Amb
1405	142		209	128
1415	141		219	129
1425	139		223	130
1435	138		223	126
1445	136		223	129

1448 SHUT DOWN UNIT. 126

1450 ATTEMPT RESTART 3 LEVERS Down on Over Temp.

10

B-113

25 OCT 87

REVERSE UNIT IN CHAMBER

INTAKE FACING TOWARDS CHAMBER
CONDITIONING FANS; UNIT LOCATED
IN CENTER OF CHAMBER
REMOVE BAFFLE ON INTAKE REPLACE COVER PLATE
1032 CHANGE COMPLETE START FANS W/
CHAMBER HIGH TEMP.

1100 START UNIT FOR 6081
1133 UNIT SHUT DOWN - OVERTEMP
NOTED RADIATOR CAP HAD
RELEIVED - COOLANT PRESENT
ON CHAMBER FLOOR.

REMOVE COVER PLATE REINSTALL INTAKE SET
BAFFLE ASS'Y

B-11-4

1153 RESTART UNIT FOR RETEST 6081
1708 UNIT SHUT DOWN OVER TEMP

26 OCT 1987

0958 STARTED CHAMBER FOR
125°F
1100 STARTED UNIT - OPERATING AT
NO LOAD TO CHECK OUT OVERHEATING
PROBLEM - ~~STARTED~~ ATTEMPTING
TO STABILIZE COOLANT TEMP
1214 BLOCKED BAFFLE AS PER
L. ADOLPH
1300 TURNED UNIT OFF
1420 REFUELED UNIT
1423 RESTARTED UNIT NO LOAD BAFFLE BLOCKED
~~1450~~
1450 SHUT UNIT DOWN

26 OCT 87

1117 STARTED UNIT BAFFLE NOT BLOCKED
1200 SHUT DOWN UNIT
1345 STARTED UNIT
1345 APPLIED FULL LOAD TO GEN
1407 UNIT SHUT DOWN DUE TO OVER TEMP
1425 STARTED UNIT IN BATTLE SHORT TO COOL
DOWN THEN APPLY ¼ LOAD AS SOON AS
UNIT STABILIZES
1420 TOOK UNIT OUT OF BATTLE SHORT
1420 APPLIED ¾ LOAD TO UNIT
1445 APPLIED ⅔ LOAD TO UNIT
1515 TOOK LOAD OFF UNIT
1537 APPLIED ½ LOAD TO UNIT
1543 TOOK LOAD OFF UNIT
1633 APPLIED ⅔ LOAD TO UNIT
1705 CHANGE TO ¾ LOAD
1933 INSTALLED PLATE IN FRONT OF BAFFLE
TO BLOCK INTAKE AIR
2149 TURNED UNIT OFF

29 OCTOBER 1987

FRANK PIERCE - USE ARRIVED AND INSULATED
EXHAUST SYSTEM FROM MUFFLER TO
OUTLET WITH INSULATION BLANKET,
ALUMINUM FOIL OUTER SHIELD & ALUMINUM
TAPE TO SECURE FOIL.
1103 STARTED CHAMBER
1130 STARTED UNIT
1135 UNIT ON FULL LOAD
1209 UNIT SHUT DOWN DUE TO OVER TEMP ON
FULL LOAD
1210 STARTED UNIT ON BATTLE SHORT ADJUSTED
CHAMBER TEMP FROM 125°F TO 180°F
1213 TOOK UNIT OUT OF BATTLE SHORT
1216 GOING TO APPLY RATED LOAD
14:21 UNIT STABILIZED AT 130°F DROPPING
CHAMBER TO 115°F

29 OCT 87

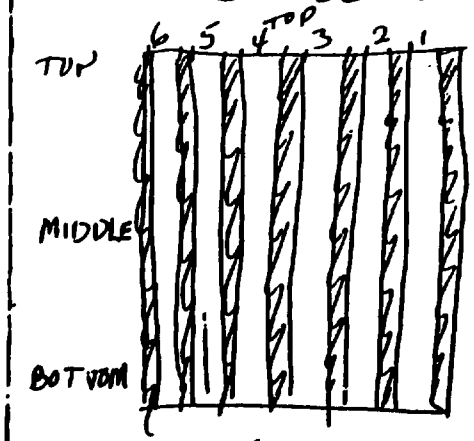
1518 SHUT UNIT DOWN
1536 STARTED UNIT WITHOUT EXHAUST EXTENSION - PLACED ON FULL LOAD TO CHECK EXHAUST PRESSURE - EXH. PRESS 58.0" H2O AND CLIMB -
1537 SHUT UNIT DOWN

30 OCT 87

8 21 STARTED UNIT ON NO LOAD
8 30 PLACED UNIT ON FULL RATED LOAD AT 120°F
920 SHUT UNIT DOWN AS PER VSE
1000 REMOVED FAN AND SHROUD FROM RADIATOR AS PER VSE BOTH FAN AND RAD SHROUD HAD HEAVY OIL DEPOSITS ON THEM ALSO RAD ITSELF HAD A FILM OF OIL ON IT
1195 INSTALLED NEW FAN AND SHROUD UNABLE TO PUT FAN GUARDS BACK AROUND FAN BECAUSE OF DESIGN OF NEW SHROUD
ENGINE OIL 28 QUARTS LOW ADDED 28 QUART
PARTICLES FOUND IN RADIATOR FLUSHED ONCE BEFORE FOR SAME PROBLEM
1309 STARTED GENERATOR FULL RATED LOAD AT 125°F BAFFLE OPEN NEW FAN AND SHROUD INSTALLED
1326 UNIT SHUT DOWN DUE TO OVERTEMP
1350 STARTED UNIT IN BATTLE SHORT TO COOL IT DOWN CHAMBER AT 120°F
1400 TOOK UNIT OUT OF BATTLE SHORT
MAX 200 OUTPUT OF FAN

B-115

30 OCTOBER 1987



LOOKING AT RADIATOR FROM OUTSIDE

UNIT @ N/L
60 Hz

BOTTOM NO LOAD 120°F AMB

	6	5	4	3	2	1	
TOP	900	1200	1280	920	710	470	FT/MIN
MIDDLE	1370	1130	820	780	1140	1360	
BOTTOM	1240	1320	1250	1140	1630	1170	

RATED LOAD 120°F AMB

TOP	920	1310	1320	990	770	~~470~~ 570	
MIDDLE	1400	1110	870	690	1080	1380	
BOTTOM	1160	1220	1260	1480	1610	1150	

1414 APPLIED RATED LOAD
1421 UNIT SHUT DOWN QT
REMOVED FAN - ATAL 220° RESET ATAL TO 240°
REINSTALLED FAN

2 NOVEMBER 1987

0829 START UNIT NO LOAD TO MAP AIR FLOW OUT OF RADIATOR

		NO LOAD			REMOVED FAN		
	6	5	4	3	2	1	120°F AMB
TOP	40	150	70	420	20	50	FT/min
MIDDLE	390	60	690	590	90	260	
BOTTOM	1890	1560	2540	2100	1770	980	

RATED LOAD

TOP	1990	2990	2630	2190	2170	1380	120°F AMB
MIDDLE	2690	2170	1670	1650	2410	2950	FT/MIN
BOTTOM	2490	2940	2730	2960	2770	2610	

NOVEMBER 2 1987

0938 APPLIED RATED LOAD TO UNIT
0950 ASSISTED CHAMBER FOR 125°F
0918 UNIT SHUT DOWN DUE TO OVER TEMP AT 125°F
Removed Louver BAFFLE @ CONTROL PANEL
UPPER BAFFLE OPEN
0947 RESTARTED UNIT @ N/L
0950 PLACED UNIT ON R/L
1010 ASSISTED UNIT TO 135°F
1033 UNIT SHUT SELF DOWN - OVER TEMP

	6	5	4	3	2	1	
TOP	2360	3370	3190	2570	2310	1680	Readings in FPM @ R/L
MIDDLE	2610	2570	2000	1990	2220	3140	
BOTTOM	2350	2950	2590	2010	3310	2100	

1040 REMOVED RADIATOR BAFFLE
1048 RESTARTED RESTARTED UNIT IN N/L BATTLE SHIELD RE Cal Down
1054 REMOVED BATTLE SHIELD - UNIT IN N/L
1152 BLOCKED TOP AFT BAFFLE.
1202 SHUT UNIT DOWN

	6	5	4	3	2	1	
TOP	810	2160	210	1120	560	380	REMOVED BAFFLE REMOVED
MIDDLE	3710	2160	210	320	1010	2080	
BOTTOM	1170	1960	1930	2130	2110	930	

REINSTALLED AFT LOWER BAFFLE - AFT UPPER BAFFLE BLOCK
1500 STARTED UNIT IN R/L

	6	5	4	3	2	1
TOP	1380	3190	3090	1360	100	470
MIDDLE	1860	2140	330	260	1410	3110
BOTTOM	1390	3430	1760	2330	3190	1860

1618 OPEN AFT TOP BAFFLE.
1650 SHUT UNIT DOWN

3 NOVEMBER 1987

REMOVED TWO-PITCH FAN & SHROUD
REINSTALLED ORIGINAL FAN & SHROUD
CONFIGURATION IS NOW
ORIGINAL FAN
ORIGINAL SHROUD
ORIGINAL STOCK CRANKSHAFT PULLEY
LOWER AFT BAFFLE OUT
UPPER AFT BAFFLE OPEN
FORWARD BAFFLE REMOVED
0842 STARTED UNIT N/L
0848 PLACED UNIT ON R/L
UNRATED AIR FLOW

	6	5	4	3	2	1
TOP	810	3190	2610	510	210	310
MIDDLE	2190	3570	2550	200	280	3580
BOTTOM	1450	3660	1490	1410	3690	4000

0959 BLOCKED AFT TOP BAFFLE
1037 SHUT UNIT DOWN - INSTALLED DISCHARGE BAFFLE
REMOVED TOP INTAKE BAFFLE
1055 STARTED UNIT ON BATTLE SHIELD RE COOLDOWN. N/L
1100 REMOVED BATTLE SHIELD UNIT RUNNING ON N/L
1108 PLACED UNIT ON R/L

	6	5	4	3	2	1
TOP	2190	3330	3130	1030	1110	1180
MIDDLE	2190	3350	2010	1710	2250	3710
BOTTOM	2530	2440	2310	220	3530	2410

1721 UNIT SHUT DOWN QT
REMOVED CENTER SECTION FROM DISCHARGE BAFFLE
1525 STARTED UNIT @ R/L

3 Nov. 1987

	6	5	4	3	2	1
Top	1710	2610	2130	1390	1580	1120
Middle	2210	2230	1580	1750	1930	2240
Bottom	1640	2350	1770	2007	3210	2510

1635 Shut unit Down

4 Nov. 1987

0900 Tension control screw on Deflector Baffle
0917 Checked oil added one quart.
920 Started unit placed on R/L.
Operating in Battle short As per Ralph Adler
use.
Repair Load Bank
937 Removed load from unit Running on R/L
in Battle short.
1142 Shut unit down to prepare for
starting High Temp tests
320 Started unit - Stabilizing for 511.2
Freq. Adjust, High Temp.
445 Shut unit Down - Aborted test
Cooling water out temp 189°F

5 Nov 1987

0900 Changing crankshaft pully back to original
Pulley
Going to check sound level by pulling
individual baffles out and doing a complete
sound test to determine change due to different
placed openings in the aft Baffle section
1130 Fuel leak in return line above injector pump
1700 Completed Sound test and placed 66M set
in chamber to stabilize at Ambient temp
for windows Resistance test

6 Nov. 87

1447 Started unit to stabilize top inlet Baffle open
1453 Placed unit on R/L to stabilize unit
for High Resistance windings test
1555 Shut unit Down for Hot winding
Resistance test.

9 Nov. 87

0939 Started unit to stabilize at 135°F
Top inlet Baffle Blocked for
Short test G08.1
1005 Shut unit Down to Repair Load Banks
1010 Restarted unit
1030 Applied Rated Load started stabilization for
710.1.3.2 (F)(1) Method 511.1 Regulator Range
Test
1052 Adjusted Load
1127 Unit shut Down on overtemp with Baffle
(Intake Additional) Blocked on Full Rated
Load
1130 Started unit in Battle Short with Baffle
open no load Over Temp indicator no longer
works
1136 Removed from Battle Short placed on
Rated Load
1247 Shut unit down on completed test
1311 Started unit up no load
1315 Applied Rated Load in order to stabilize
for 710.1.3.2 (F)(2) Method 511.2 Frequency
Adjust
1404 End of test
1410 Started Stabilization for High Temp Operation
710.1.2.2 (H)
1441 Shut unit down for 5 minutes
1447 Tried to start unit 3 times no Run
Started unit in Battle Short no Load

G11-8

9 NOV 87

1447 TO STABILIZE UNIT
1514 SHUT UNIT DOWN TO ADJUST GAUGES TO ZERO FOR GAUGE INDICATING TEST 710.1.3.2(H) 6
METHOD 513.2 INDICATING INSTRUMENT TEST
1525 STARTED UNIT TO DO TEST 710.1.3.2 (H) 6
METHOD 513.2
1543 SHUT UNIT DOWN EQUIPTMENT MALFUNCTION
~~[illegible]~~

10 NOV. 87

0610 ADDED 1 QUART OF OIL TO GEN. SET ALSO TOPPED OFF RADIATOR
0630 STARTED UNIT TO STABILIZE FOR 710.1.3.2 (H) (6)
METHOD 608.2 LONG TERM AT 125°F
0635 APPLIED RATED LOAD FOR STABILIZATION
1212 REMOVED LOAD TO START STABILIZATION
1253 PERFORMED SHORT TERM STABILITY
1255 START LONG TERM STABILITY AT NO LOAD
1155 END OF LONG TERM STABILITY
1215 END OF TEST
1216 SHUT UNIT DOWN.

8-16

11 NOV 87

TEST 710.1.3.2 (F)(6) METHOD 513.2 INDICATING INSTRUMENT TEST (ELECTRICAL)

1054 START UNIT NO LOAD
1155 SHUT UNIT DOWN
1315 START UNIT TO STABILIZE FOR 710.1.3.2(H)(7) METHOD 608.1
1440 STARTED SHORT TERM 608.1
1537 END OF TEST

14 NOV 87

1049 STARTED UNIT NO LOAD FOR 710.1.3.2 (F) (3) CIRCUIT INTERUPTER FOR SHORT CIRCUIT METHOD 512.1
1056 SHUT UNIT DOWN TO REWIRE INSTRUMENTS
1108 START UNIT FOR 710.1.3.2 (F) (3) CIRCUIT INTERUPTER FOR SHORT CIRCUIT METHOD 512.1
1109 APPLIED RATED LOAD
1117 APPLIED SHORT CIRCUIT TO GEN SET (L1 TO L0) SHORT CIRCUIT INDICATOR IS ON, ON THE WARNING PANEL
1124 CLOSED CIRCUIT BREAKER (GEN SET) APPLIED RATED LOAD
~~[illegible]~~
1127 SHORT CIRCUIT TO L2 TO L0 SHORT CIRCUIT INDICATOR LITE ON GEN SET
1132 [illegible] CLOSED CIRCUIT BREAKER ON GEN SET APPLYING FULL LOAD
1136 APPLIED SHORT CIRCUIT (L3 TO L0) SHORT CIRCUIT INDICATOR LIT ON GEN SET
1140 [illegible] RESET CIRCUIT BREAKER ON GEN SET CONNECTED SHORT BETWEEN L1 TO L2
1142 APPLIED SHORT CIRCUIT TO L1 TO L2 INDICATOR LIT ON GEN SET
1146 RESET CIRCUIT BREAKER ON GEN SET
1147 APPLIED SHORT CIRCUIT TO L2 TO L3 INDICATOR LIT ON GEN SET
1151 RESET CIRCUIT BREAKER ON GEN SET
1153 APPLIED SHORT CIRCUIT TO L3 TO L1 SET INDICATOR LIT
1155 RESET CIRCUIT BREAKER ON GEN SET
1157 APPLIED SHORT CIRCUIT L1 TO L2 TO L3
1158 SHUT UNIT DOWN END OF TEST
1214 STARTED UNIT UP APPLIED FULL RATED LOAD STABILIZING FOR DIP AND RISE 710.1.3.2 (F) (9) METHOD 611.2

14 NOV 87

1316 START DIP AND RISE 710.1,3.2 (F) (9)
METHOD 6 19.2
1323 SHUT UNIT DOWN END OF TEST
1451 STARTED GEN SET
1401 SHUT UNIT DOWN
1432 START UNIT FULL RATED LOAD FOR STABILIZATION
CIRCUIT INTERRUPTION OVERLOAD 710,1.3.2
(F) (4) METHOD 512.2
1500 OVERLOAD BREAKER OPENED AS UNIT WAS
PUT IN AN OVERLOAD SITUATION 78:58
1527 APPLIED RATED LOAD FOR COOL DOWN
1542 APPLIED 130% CURRENT TO C1
1552 OVERLOAD BREAKER OPENED AS UNIT WAS PUT
IN OVERLOAD SITUATION AFTER 9 MIN. 53 SEC.
1555 APPLIED RATED LOAD FOR COOLDOWN.
1610 APPLIED 130% CURRENT TO C2
1619 OVERLOAD BREAKER OPENED AFTER 9 MIN 57 SEC.
1622 APPLIED R/L FOR COOL DOWN
1637 APPLIED 135% TO C3
1641 UNIT SHUT DOWN ON OVER TEMP
1646 STARTED UNIT IN BATTLE SHORT NO LOAD
1651 APPLIED FULL LOAD
1928 SHUT UNIT DOWN END OF TEST..

16 NOV. 1987

1945 STARTED UNIT NO LOAD TO PERFORM
CIRCUIT INTERRUPTING TEST (OVERLOAD CURR AND INVERSE VOLTAGE)
1958 CIRCUIT INTERRUPTER OPEN, SET SHUT DOWN ON. LIGHT ON.
2000 CIRCUIT INTERRUPTED OPEN, SET SHUTDOWN ON. LIGHT ON.
2002 CIRCUIT INTERRUPTOR OPEN, SET SHUTDOWN O.V LIGHT ON.

17 NOV. 87

0916 ADDED 1 QUART OF OIL MEETING THE MIL
STANDARD MIL-L-21040 FOR OIL

17 NOV 87

[redacted]
1104 710.1,3.2 (F) (10) METHOD 6556.1.3.2
DC CONTROL TEST
1107 STARTED GEN SET OFF OF SLAVE BATTERIES
1109 SHUT UNIT DOWN CHANGED BATTERY POLARITY
ATTEMPTING RESTART SET DOESN'T HAVE
REVERSE POLARITY PROTECTION
1113 POLARITY CORRECT APPLIED RATED LOAD
1123 DISCONNECTED BATTERIES WHILE SET IS
OPERATING
1133 SET CONTINUED NORMAL OPERATION
1137 NO LOAD
1146 SHUT UNIT DOWN [redacted]
1215 STARTED UNIT PLACED ON RATED LOAD
FOR METHOD 515.2A BLOCKED EXHAUST
AIR OUTLET
1439 UNIT SHUT DOWN ON OVER TEMP AT 227°F
INDICATOR LIGHT DID NOT LIGHT
1450 STARTED UNIT FOR MAX POWER 640.1C
1631 RESTARTED UNIT FOR MAX POWER 640.1C
1752 SHUT UNIT DOWN END OF TEST

18 Nov. 1987

1045 PERFORM SOUND LEVEL ON GEN SET. STARTED UNIT
1119 SHUT UNIT DOWN COMPLETED SOUND LEVEL TEST
1145 STARTED UNIT TO STABILIZE FOR FREQUENCY
AND VOLTAGE REGULATION TEST METHOD 6141.1.
1715 SHUT UNIT DOWN FOR DROP TEST LIFT ON OPERATOR'S SIDE
FIRST DROP OPERATORS DOORS CAME OPEN & FUEL PRESENT
SECOND DROP OPERATORS DOORS CAME OPEN AND
KNOB FELL OFF METER SELECTOR FUEL PRESENT UNDER UNIT
THIRD DROP OPERATOR'S DOORS CAME OPEN
KNOB FELL OFF METER SELECTOR AND RIGHT AFT
SIDE DOOR CAME OPEN & FUEL PRESENT UNDER UNIT
FOURTH DROP ALL THE ABOVE PLUS LEFT
AFT DOOR CAME OPEN

18 NOV. 87

FIFTH DROP ALL THE ABOVE AND LEFT FORWARD DOOR CAME OPEN
SIXTH DROP SAME AS FIFTH DROP
LIFT AT EXHAUST END
FIRST DROP RIGHT AFT DOOR CAME OFF.. WOULDNT CLOSE METAL TORN ON ACROSS RADIATOR TOP C RIGHT CORNER
SECOND DROP LEFT AFT DOOR CAME OPEN
THIRD DROP METAL TORN IN RIGHT TOP CORNER OF RAD. ALSO LEFT SIDE SLIGHTLY SOME FATIGUE LEFT AFT DOOR CAME OPEN ALONG WITH RIGHT AFT DOOR WHICH STILL WENT CLOSE
FOURTH DROP SAME AMOUNT OF DAMAGE AS THIRD
FIFTH DROP NO MORE VISIABLE DAMAGE SEEN EXCEPT FUEL COMING OUT FROM UNDER INTAKE SIDE OF S. P
SIXTH DROP PANEL ABOVE RAD TORN ON CORNER APPROX. 1 INCH AND PANEL WARPED ACROSS TOP TOP BOTH AFT ENGINE COMPARTMENT DOORS WONT CLOSE (BECOZ BENT DOOR JAMS NOT SQUARE) ALSO FUEL TANK SLIDE CAUSING FUEL LINES TOP OF TANK TOWARD EXHAUST END LEFT.
1900 STARTED UNIT NO PROBLEMS STARTED TO STABILIZE AT R/L FOR A FREQUENCY AND VOLTAGE REGULATION TEST
2100 SHUT UNIT DOWN TEST COMPLETE
ALSO RIGHT DOOR OF OPERATORS PANEL DOESNT CLOSE PROPERLY
ALSO EXHAUST END LEFT LINE TOP OF TANK BENT AND CAME OFF

B-130

ACOUSTICAL TEST UNIT
(MAXIMUM NOISE LEVEL ___ DBA)

TEST ITEM: 30kw 50 Hertz Gen Set S/N: RZS 3774 HOUR METER: 33.1

CONFIGURATION ___ UNMODIFIED ✓ MODIFIED

TEMPERATURE: 72 HUMIDITY: 57 TEST SITE: Aberdeen

SURFACE: GRASS TERRAIN: ___

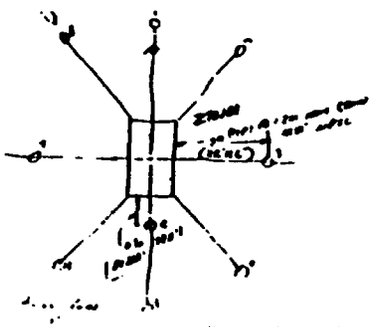
BAROMETRIC PRESSURE: 29.715 SKY COVER: Partly Cloudy

WIND DIRECTION: NW WIND VELOCITY: <10 mph MICROPHONE: ___

SOUND LEVEL METER: GR1902 OCTAVE ANALYZER: NA

LOAD CONDITION: ___ RATED ✓ NO LOAD MICROPHONE LOCATION: AS BELOW

DATE	TIME	MICROPHONE POSITION	DISTANCE ~~FT~~ (M)	DBA	REMARKS
12 MAY 87	1548	1	7 m	66	
		2	7 m	68	
		3	7 m	69	
		4	7 m	68	
		5	7 m	66	
		6	7 m	68	
		7	7m	66	
		8	7m	67	
12 MAY 87	1553	9	0.7 m	76	
MAXIMUM BACKGROUND LEVEL				52 dBA	

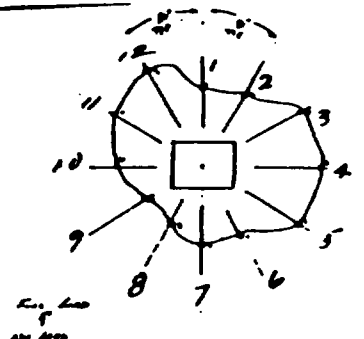


ACOUSTICAL TEST (MAXIMUM NOISE LEVEL ___ DBA)

TEST ITEM: 30KW 50/60 HZ GENSET S/N: RZ53774 HOUR METER: ___
CONFIGURATION ___ UNMODIFIED ✓ MODIFIED
TEMPERATURE: 72 HUMIDITY: 57 TEST SITE: HAKIZUKA
SURFACE: GRASS TERRAIN: ___
BAROMETRIC PRESSURE: 29.75 SKY COVER: PARTLY CLOUDY
WIND DIRECTION: NW WIND VELOCITY: <10 MPH MICROPHONE: ___
SOUND LEVEL METER: GR 1982 OCTAVE ANALYZER: NA
LOAD CONDITION: ___ RATED ✓ NO LOAD MICROPHONE LOCATION: AS BELOW

DATE	TIME	MICROPHONE POSITION	DISTANCE FT(M)	DBA	REMARKS
10-19-81	1557	1	0	80	
		2	0	77	POSITION L- CONTROL PANEL
		3	0	78	2-12 CLOCKWISE
		4	0	79	
		5	0	78	
		6	2'8"	85	
		7	3'5"	85	
		8	0	82	
		9	0	82	
		10	0	83	
		11	0	81	
10-19-81	1605	12	0	79	

DISTANCES OF "0" DENOTE WHEN MICROPHONE COMES IN CONTACT WITH GEN. HOUSING

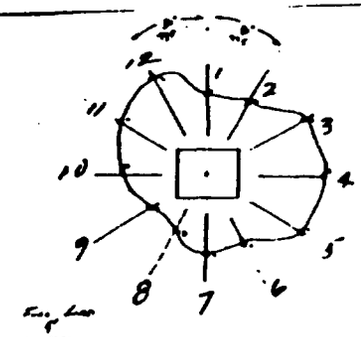


ACOUSTICAL TEST UNIT (MAXIMUM NOISE LEVEL ___ DBA)

TEST ITEM: 30 KW 50/60 HZ GEN SET S/N: RZ53774 HOUR METER: 34.0
CONFIGURATION: ___ UNMODIFIED ✓ MODIFIED
TEMPERATURE: 72 HUMIDITY: 57 TEST SITE: HARTWOOD
SURFACE: GRASS TERRAIN: ___
BAROMETRIC PRESSURE: 29.715 SKY COVER: PARTLY CLOUDY
WIND DIRECTION: NW WIND VELOCITY: <10 MPH MICROPHONE: ___
SOUND LEVEL METER: GR 1962 OCTAVE ANALYZER: N/A
LOAD CONDITION: ✓ RATED ___ NO LOAD MICROPHONE LOCATION: AS BELOW

DATE	TIME	MICROPHONE POSITION	DISTANCE FROM EUT (M)	DBA	REMARKS
10-19-81	1605	1	0	93	
		2	0	91	POSITION 1 - CONTROL PANEL
		3	0	82	2 - 12 - CLOCKWISE
		4	0	82	
		5	0	82	
		6	2' 10"	85	
		7	3' 10"	85	
		8	0	83	
		9	0	83	
		10	0	83	
		11	0	93	
10-19-81	1608	12	0	79	
	EUT	16			

DISTANCES OF "0" DENOTE WHEN MICROPHONE COMES IN CONTACT WITH GEN. HOUSING



E-13

ACCEPTANCE TEST (MAXIMUM NOISE LEVEL — DBA)

TEST ITEM: 30 KW 50/60 Hz GENSET S/N: 1125374 HOUR METER: —

CONFIGURATION: — UNMODIFIED ✓ MODIFIED

TEMPERATURE: 72 HUMIDITY: 57 TEST SITE: HAWTHORNE

SURFACE: GRASS TERRAIN: —

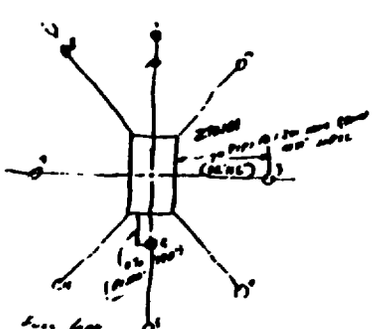
BAROMETRIC PRESSURE: 29.75 SKY COVER: PARTLY CLOUDY

WIND DIRECTION: NW WIND VELOCITY: ≤ 10 MPH MICROPHONE: —

SOUND LEVEL METER: GR 1982 OCTAVE ANALYZER: NA

LOAD CONDITION: ✓ RATED — NO LOAD MICROPHONE LOCATION: AS BELOW

DATE	TIME	MICROPHONE POSITION	DISTANCE FT (M)	DBA	REMARKS
10-19-87	1554	1	7m	66	
		2	7m	69	
		3	7m	69	
		4	7m	68	
		5	7m	68	
		6	7m	70	
		7	7m	69	
		8	7m	68	
10-11-87	1558	9	0.7m	80	



4-124

[redacted] NIMITZ [redacted] NUCLEAR [redacted]

TEST ITEM: 30 KW/60HZ GEN. SET S/N: R25 3774 HOUR METER: 70.1

CONFIGURATION: ___ UNMODIFIED ✓ MODIFIED

TEMPERATURE: 69°F HUMIDITY: 63% TEST SITE: HARTWOOD

SURFACE: GLASS TERRAIN: ____

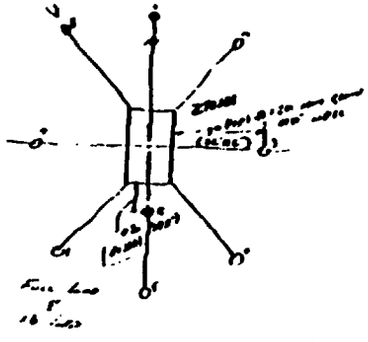
BAROMETRIC PRESSURE: 29.75 SKY COVER: OVERCAST

WIND DIRECTION: N/A WIND VELOCITY: 0 MICROPHONE: GR1962

SOUND LEVEL METER: GR 1982 OCTAVE ANALYZER: ____

LOAD CONDITION: ___ RATED ✓ NO LOAD MICROPHONE LOCATION: 15 BELOW

DATE	TIME	MICROPHONE POSITION	DISTANCE FEET (M)	DBA	REMARKS
11-5-87	1500	1	7m	65.4	7 6 5 4 3 2 1
		2	7m	68.0	DISCHARGE END
		3	7m	68.3	OF UNIT
		4	7m	68.2	
		5	7m	66.6	
		6	7m	68.0	
		7	7m	66.8	AFT BAFFLE NUMBERED RIGHT TO
		8	7m	66.2	LEFT FACING AFT - FORWARD
11-5-87	1504	9	7m	79.8	
					TEST # 1 ALL BAFFLES IN PLACE
					NO LOAD



B-125

MINIMUM NOISE LEVEL SURVEY

TEST ITEM: 30KW/60HZ GEN SET S/N: RZS 3774 HOUR METER: 70.1

CONFIGURATION: ___ UNMODIFIED ✓ MODIFIED

TEMPERATURE: 69°F HUMIDITY: 65% TEST SITE: HACTWEED

SURFACE: GRASS TERRAIN: _____

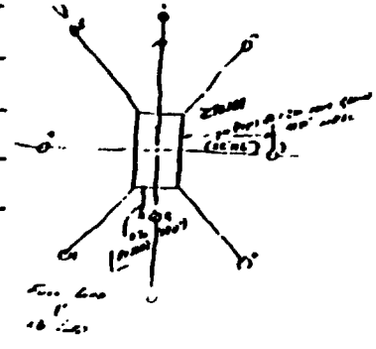
BAROMETRIC PRESSURE: 29.75 SKY COVER: OVERCAST

WIND DIRECTION: N/A WIND VELOCITY: 0 MICROPHONE: GR1962

SOUND LEVEL METER: GR1982 OCTAVE ANALYZER: _____

LOAD CONDITION: ✓ RATED ___ NO LOAD MICROPHONE LOCATION: AS BELOW

DATE	TIME	MICROPHONE POSITION	DISTANCE ~~FT~~ (M)	DBA	REMARKS
11-5-67	1504	1	7m	66.1	
		2	7m	68.2	
		3	7m	67.1	
		4	7m	66.5	
		5	7m	66.0	
		6	7m	67.6	
		7	7m	66.5	
		8	7m	67.5	
11-5-67	1508	9	.7m	80.4	TEST #1 ALL BAFFLES IN PLACE RATED LOAD



8-126

TEST ITEM: 30KW/60HZ GEN SET S/N: RZS 3774 HOUR METER: 70.1

CONFIGURATION ___ UNMODIFIED ✓ MODIFIED

TEMPERATURE: 69°F HUMIDITY: 63% TEST SITE: HARTWOOD

SURFACE: GRASS TERRAIN: _____

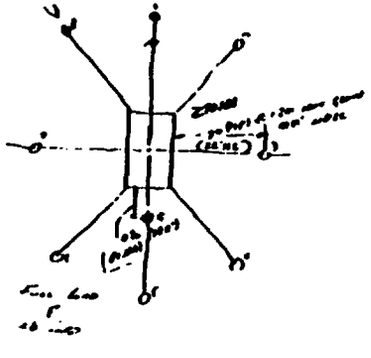
BAROMETRIC PRESSURE: 29.75 SKY COVER: OVERCAST

WIND DIRECTION: NA WIND VELOCITY: 0 MICROPHONE: GR1962

SOUND LEVEL METER: GENERAL OCTAVE ANALYZER: _____

LOAD CONDITION: ___ RATED ✓ NO LOAD MICROPHONE LOCATION: AS BELOW

DATE	TIME	MICROPHONE POSITION	DISTANCE FEET (M)	DBA	REMARKS
1-5-67					
1st	1511	1	7M	65.5	
		2	7M	68.8	
		3	7M	68.1	
		4	7M	68.2	
		5	7M	66.7	
		6	7M	67.4	
		7	7M	66.7	
		8	7M	65.9	
5-67		9			
TEST	1515	1	7M	79.7	
					TEST #2 - NUMBER ONE FOOD BAFFLE REMOVED
					NO LOAD



E-127

TEST ITEM: 30 KW/60HZ GEN SET S/N: RZS 3774 HOUR METER: 10.1

CONFIGURATION ___ UNMODIFIED ✓ MODIFIED

TEMPERATURE: 69°F HUMIDITY: 63% TEST SITE: HARTWELL

SURFACE: GRASS TERRAIN: _____

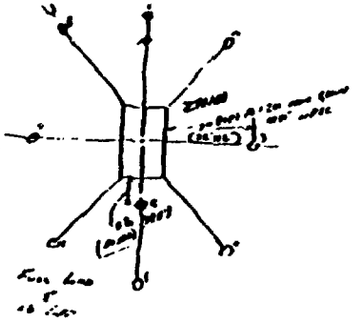
BAROMETRIC PRESSURE: 29.75 SKY COVER: OVERCAST

WIND DIRECTION: NA WIND VELOCITY: 0 MICROPHONE: GR1962

SOUND LEVEL METER: GR1982 OCTAVE ANALYZER: _____

LOAD CONDITION: ✓ RATED ___ NO LOAD MICROPHONE LOCATION: AS BELOW

DATE	TIME	MICROPHONE POSITION	DISTANCE FT(M)	DBA	REMARKS
11-5-97	1515	1	7m	66.8	
		2	7m	68.9	
		3	7m	67.5	
		4	7m	67.0	
		5	7m	65.6	
		6	7m	67.6	
		7	7m	66.7	
		8	7m	68.0	
11-5-97	1518	9	.7m	80.8	TEST #2 - NUMBER ONE FROM BAFFLE REMOVED RATED LOAD



[redacted] MINIMUM NOISE LEVEL [redacted]

TEST ITEM: 30 KW/60HZ S/N: RZS 3774 HOUR METER: 70.2

CONFIGURATION ___ UNMODIFIED ✓ MODIFIED

TEMPERATURE: 69°F HUMIDITY: 63% TEST SITE: HARTWOOD

SURFACE: GRASS TERRAIN: ___

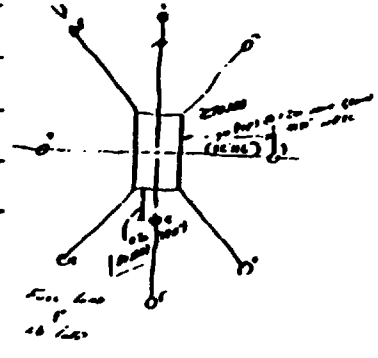
BAROMETRIC PRESSURE: 29.75 SKY COVER: OVERCAST

WIND DIRECTION: N/A WIND VELOCITY: 0 MICROPHONE: GR1962

SOUND LEVEL METER: GR1982 OCTAVE ANALYZER: ___

LOAD CONDITION: ___ RATED ✓ NO LOAD MICROPHONE LOCATION: AS BELOW

DATE	TIME	MICROPHONE POSITION	DISTANCE ~~FT~~ M	DBA	REMARKS
11-5-87	1521	1	7M	66.6	
		2	7M	66.5	
		3	7M	68.2	
		4	7M	67.8	
		5	7M	66.1	
		6	7M	67.9	
		7	7M	66.4	
		8	7M	66.5	
11-5-87	1525	9	7M	79.5	TEST #3 - NUMBER TWO BAFFLE REMOVED NO LOAD



E-129

TEST ITEM: 30 KW/60 HZ GEN SET S/N: RZS 3774 HOUR METER: 70.2

CONFIGURATION: ___ UNMODIFIED ✓ MODIFIED

TEMPERATURE: 69°F HUMIDITY: 63% TEST SITE: HARTWOOD

SURFACE: GRASS TERRAIN: _____

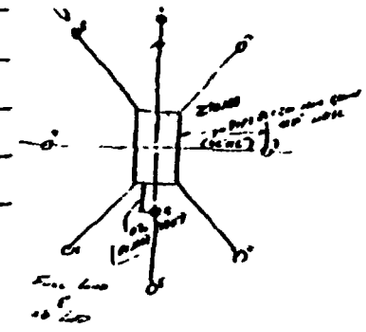
BAROMETRIC PRESSURE: 29.75 SKY COVER: OVERCAST

WIND DIRECTION: NA WIND VELOCITY: 0 MICROPHONE: GR 1962

SOUND LEVEL METER: GR 1982 OCTAVE ANALYZER: _____

LOAD CONDITION: ✓ RATED ___ NO LOAD MICROPHONE LOCATION: AS BELOW

DATE	TIME	MICROPHONE POSITION	DISTANCE FEET (M)	DBA	REMARKS
11-5-87	1525	1	7m	67.8	
		2	7m	69.7	
		3	7m	68.9	
		4	7m	68.8	
		5	7m	67.2	
		6	7m	68.9	
		7	7m	67.9	
		8	7m	68.1	
11-25-87	1530	9	7m	81.6	TEST #3 - NUMBER TWO BAFFLE REMOVED RATED LOAD



MINIMUM NOISE LEVELS (U/I)

TEST ITEM: 30KW/60HZ GEN SET S/N: RLS 3774 HOUR METER: 70.3

CONFIGURATION: ___ UNMODIFIED ✓ MODIFIED

TEMPERATURE: 69°F HUMIDITY: 63% TEST SITE: HARTWELL

SURFACE: GRASS TERRAIN: _____

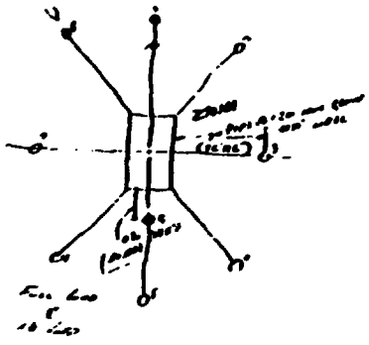
BAROMETRIC PRESSURE: 29.75 SKY COVER: OVERCAST

WIND DIRECTION: NA WIND VELOCITY: 0 MICROPHONE: GR1962

SOUND LEVEL METER: GR1982 OCTAVE ANALYZER: _____

LOAD CONDITION: ___ RATED ✓ NO LOAD MICROPHONE LOCATION: AS BELOW

DATE	TIME	MICROPHONE POSITION	DISTANCE FT(M)	DBA	REMARKS
11-5-87	1534	1	7M	65.7	
		2	7M	67.1	
		3	7M	66.9	
		4	7M	67.6	
		5	7M	65.8	
		6	7M	67.7	
		7	7M	66.2	
		8	7M	65.9	
11-5-87	1538	9	7M	79.2	TEST #4 NUMBER THREE BAFFLE REMOVED NO LOAD



E1-5

TEST ITEM: 30 KW/60 HZ GEN SET S/N: L25 3774 HOUR METER: 20.3

TEMPERATURE: 69°F HUMIDITY: 63% CONFIGURATION: ___ UNMODIFIED ✓ MODIFIED

TEST SITE: HARTWOOD

SURFACE: GRASS TERRAIN: _____

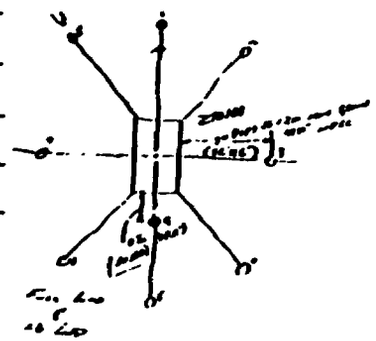
BAROMETRIC PRESSURE: 29.75 SKY COVER: OVERCAST

WIND DIRECTION: NA WIND VELOCITY: 0 MICROPHONE: GR1962

SOUND LEVEL METER: GR1562 OCTAVE ANALYZER: _____

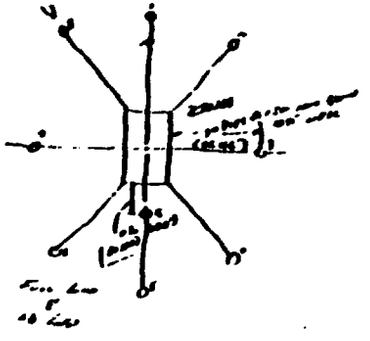
LOAD CONDITION: ✓ RATED ___ NO LOAD MICROPHONE LOCATION: AS BELOW

DATE	TIME	MICROPHONE POSITION	DISTANCE FEET (M)	DBA	REMARKS
11-5-87	1538	1	7M	67.0	
		2	7M	69.4	
		3	7M	68.5	
		4	7M	68.6	
		5	7M	66.8	
		6	7M	68.9	
		7	7M	67.6	
		8	7M	68.2	
11-5-87	1542	9	.7M	80.0	TEST #4 NUMBER THREE BAFFLE REMOVED RATED LOAD



TEST ITEM: 30KW/60HR GEN SET S/N: RLS 377 HOUR METER: 20.4
CONFIGURATION: ___ UNMODIFIED ✓ MODIFIED
TEMPERATURE: 69°F HUMIDITY: 63% TEST SITE: HARTWELL
SURFACE: GRASS TERRAIN: _____
BAROMETRIC PRESSURE: 29.75 SKY COVER: OVERCAST
WIND DIRECTION: NA WIND VELOCITY: 0 MICROPHONE: GR 1962
SOUND LEVEL METER: GR 982 OCTAVE ANALYZER: _____
LOAD CONDITION: ___ RATED ✓ NO LOAD MICROPHONE LOCATION: AS BELOW

DATE	TIME	MICROPHONE POSITION	DISTANCE FT(M)	DBA	REMARKS
11-5-87	1547	1	7m	65.5	
		2	7m	68.6	
		3	7m	67.4	
		4	7m	67.9	
		5	7m	65.9	
		6	7m	68.0	
		7	7m	66.4	
		8	7m	65.9	
11-5-87	1551	9	.7m	78.7	TEST #5 NUMBER FOUR BAFFLE REMOVED NO LOAD



TEST ITEM: 30 KW/60 HZ GEN SET S/N: 125 3774 HOUR METER: 70.4

CONFIGURATION: ___ UNMODIFIED ✓ MODIFIED

TEMPERATURE: 69°F HUMIDITY: 63% TEST SITE: HAGERWOOD

SURFICE: GRASS TERRAIN: ____

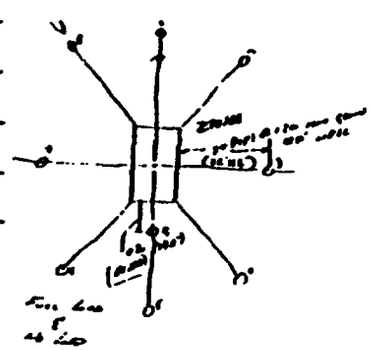
BAROMETRIC PRESSURE: 29.75 SKY COVER: OVERCAST

WIND DIRECTION: N/A WIND VELOCITY: 0 MICROPHONE: GR1562

SOUND LEVEL METER: GR1562 OCTAVE ANALYZER: ____

LOAD CONDITION: ✓ RATED ___ NO LOAD MICROPHONE LOCATION: AS BELOW

DATE	TIME	MICROPHONE POSITION	DISTANCE FT(M)	DBA	REMARKS
11-5-87	1551	1	7m	66.9	
		2	7m	69.5	
		3	7m	68.4	
		4	7m	68.7	
		5	7m	66.5	
		6	7m	68.2	
		7	7m	66.7	
		8	7m	68.1	
11-5-87	1555	9	7m	80.1	TEST #5 NUMBER FOR BAFFLE REMARKS RATED LOAD



B-13

TEST [redacted] MINIATURE NOISE BOOTH

TEST ITEM: 30KW/60HZ Gen Set S/N: 825 374 HOUR METER: 70.5

CONFIGURATION ___ UNMODIFIED ✓ MODIFIED

TEMPERATURE: 69°F HUMIDITY: 63% TEST SITE: HARTWOOD

SURFACE: GRASS TERRAIN: ____

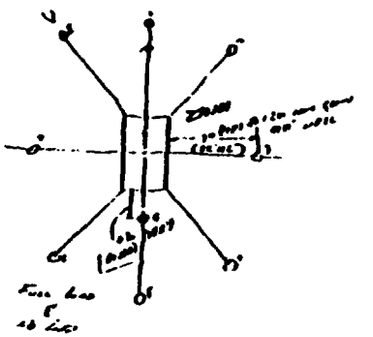
BAROMETRIC PRESSURE: 29.75 SKY COVER: OVERCAST

WIND DIRECTION: NA WIND VELOCITY: 0 MICROPHONE: GR1962

SOUND LEVEL METER: GR1982 OCTAVE ANALYZER: ____

LOAD CONDITION: ___ RATED ✓ NO LOAD MICROPHONE LOCATION: AS BELOW

DATE	TIME	MICROPHONE POSITION	DISTANCE FT(M)	DBA	REMARKS
11-5-81	1600	1	7m	66.1	
		2	7m	67.8	
		3	7m	66.0	
		4	7m	66.1	
		5	7m	65.6	
		6	7m	67.7	
		7	7m	66.0	
		8	7m	65.2	
11-5-81	1604	9	7m	79.0	TEST #6 NUMBER FIVE BAFFLE REMOVED NO LOAD



TEST ITEM: 30 KW/60 Hz 60 SET S/N: RZS 3714 HOUR METER: 10.5

CONFIGURATION: UNMODIFIED ✓ MODIFIED

TEMPERATURE: 69°F HUMIDITY: 63% TEST SITE: HARTWOOD

SURFACE: GRASS TERRAIN: _____

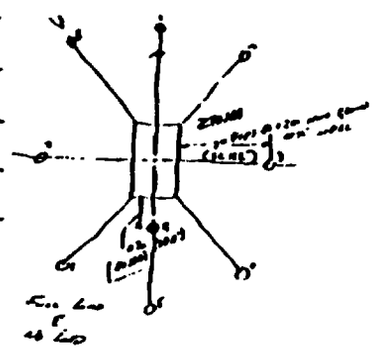
BAROMETRIC PRESSURE: 29.75 SKY COVER: OVERCAST

WIND DIRECTION: NA WIND VELOCITY: 0 MICROPHONE: GR1562

SOUND LEVEL METER: GR1562 OCTAVE ANALYZER: —

LOAD CONDITION: ✓ RATED — NO LOAD MICROPHONE LOCATION: AS BELOW

DATE	TIME	MICROPHONE POSITION	DISTANCE FT(M)	DBA	REMARKS
11-5-87	1604	1	7m	67.3	
		2	7m	69.8	
		3	7m	68.4	
		4	7m	68.9	
		5	7m	66.3	
		6	7m	68.0	
		7	7m	66.6	
		8	7m	68.2	
11-5-87	1607	9	7m	80.0	TEST #6 NUMBER FIVE BAFFLE REMOVED RATED LOAD



[redacted] MILITARY [redacted]

TEST ITEM: 30 KW/60 HZ GEN SET S/N: 625 3774 HOUR METER: 70.6

CONFIGURATION ___ UNMODIFIED ✓ MODIFIED

TEMPERATURE: 69°F HUMIDITY: 63% TEST SITE: HARTFORD

SURFACE: GRASS TERRAIN: _____

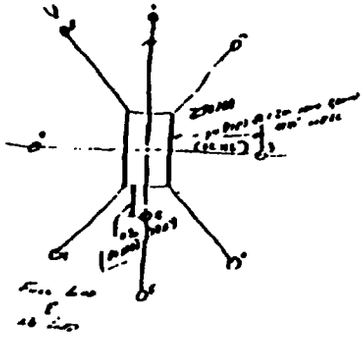
BAROMETRIC PRESSURE: 29.75 SKY COVER: OVERCAST

WIND DIRECTION: NA WIND VELOCITY: 0 MICROPHONE: GR1962

SOUND LEVEL METER: GR1562 OCTAVE ANALYZER: _____

LOAD CONDITION: ___ RATED ✓ NO LOAD MICROPHONE LOCATION: AS BELOW

DATE	TIME	MICROPHONE POSITION	DISTANCE FT(M)	DBA	REMARKS
11-5-87	1611	1	7m	66.0	
		2	7m	68.1	
		3	7m	65.4	
		4	7m	65.3	
		5	7m	64.2	
		6	7m	67.6	
		7	7m	65.9	
		8	7m	65.6	
11-5-87	1615	9	7m	78.6	
					TEST #7 NUMBER 3x BAFFLE REMOVED
					NO LOAD



E-37

TEST ITEM: 30 KW/60 HZ GEN SET S/N: RES 3774 HOUR METER: 70.6

CONFIGURATION ___ UNMODIFIED ✓ MODIFIED

TEMPERATURE: 69°F HUMIDITY: 63% TEST SITE: HARTWOOD

SURFACE: GRASS TERRAIN: _____

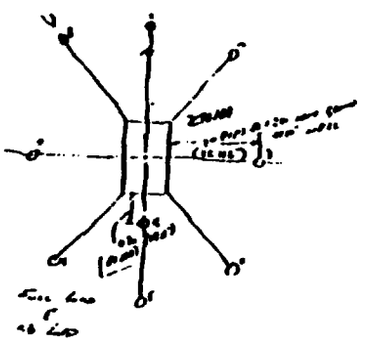
BAROMETRIC PRESSURE: 29.75 SKY COVER: OVERCAST

WIND DIRECTION: N/A WIND VELOCITY: 0 MICROPHONE: GR1962

SOUND LEVEL METER: GR1962 OCTAVE ANALYZER: _____

LOAD CONDITION: ✓ RATED ___ NO LOAD MICROPHONE LOCATION: AS BELOW

DATE	TIME	MICROPHONE POSITION	DISTANCE FEET (M)	DBA	REMARKS
11-5-67	1615	1	7m	67.5	
		2	7m	70.1	
		3	7m	68.5	
		4	7m	67.8	
		5	7m	66.0	
		6	7m	68.0	
		7	7m	66.7	
		8	7m	68.2	
11-5-67	1618	9	7m	80.0	TEST #7 NUMBER SIX BACKUP GENERATOR RATED LOAD



[redacted] MANUFACTURER [redacted] MODEL LEVEL [redacted]

TEST ITEM: 30KW/60HZ (GEN) SET S/N: 625 3774 HOUR METER: 70.7

CONFIGURATION: ___ UNMODIFIED ✓ MODIFIED

TEMPERATURE: 69°F HUMIDITY: 63% TEST SITE: HARTWOOD

SURFACE: GRASS TERRAIN: _____

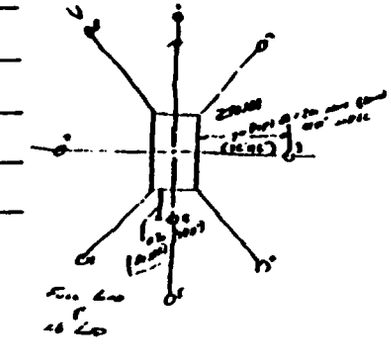
BAROMETRIC PRESSURE: 29.75 SKY COVER: OVERCAST

WIND DIRECTION: NA WIND VELOCITY: 0 MICROPHONE: GRISE2

SOUND LEVEL METER: GR 1952 OCTAVE ANALYZER: _____

LOAD CONDITION: ___ RATED ✓ NO LOAD MICROPHONE LOCATION: AS BELOW

DATE	TIME	MICROPHONE POSITION	DISTANCE FT(M)	DBA	REMARKS
11-5-87	1618	1	7m	66.5	
		2	7m	69.0	
		3	7m	66.8	
		4	7m	66.0	
		5	7m	65.5	
		6	7m	68.4	
		7	7m	66.9	
		8	7m	66.6	
11-5-87	1622	9	7m	79.0	TEST DONE WITH BAFFLES NUMBERS THREE & FIVE REMOVED NO LOAD



B-139

TEST ITEM: 30 KW/60HZ GEN SET S/N: 225 3774 HOUR METER: 70.3

CONFIGURATION ___ UNMODIFIED ✓ MODIFIED

TEMPERATURE: 69°F HUMIDITY: 63% TEST SITE: HARTZELL

SURFACE: GLASS TERRAIN: ____

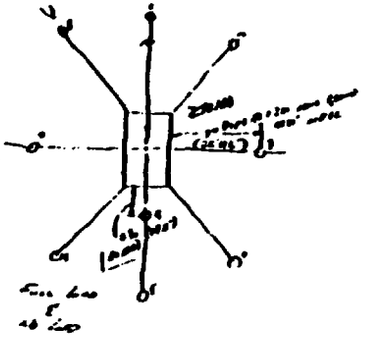
BAROMETRIC PRESSURE: 29.75 SKY COVER: OVERCAST

WIND DIRECTION: NA WIND VELOCITY: 0 MICROPHONE: GR1962

SOUND LEVEL METER: GR1982 OCTAVE ANALYZER: ____

LOAD CONDITION: ✓ RATED ___ NO LOAD MICROPHONE LOCATION: AS BELOW

DATE	TIME	MICROPHONE POSITION	DISTANCE FEET (M)	DBA	REMARKS
11-5-87	1622	1	7m	68.7	
		2	7m	70.2	
		3	7m	68.5	
		4	7m	68.8	
		5	7m	67.1	
		6	7m	69.5	
		7	7m	68.3	
		8	7m	68.6	
11-5-87	1626	9	7m	68.9	TEST DONE WITH BAFFLE NUMBERS THREE & FIVE REMOVED. RATED LOAD



011-8

TEST ITEM: 30 KW/60 Hz GEN SET S/N: RZS 3774 HOUR METER: 70.0

CONFIGURATION — UNMODIFIED ✓ MODIFIED

TEMPERATURE: 60°F HUMIDITY: 56% TEST SITE: HARTWOOD

SURFACE: GLASS TERRAIN: ____

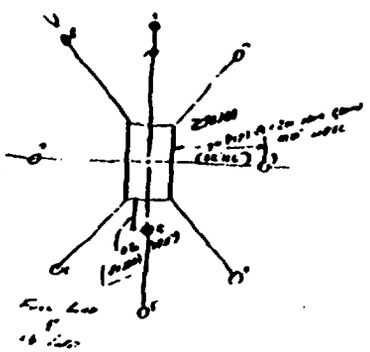
BAROMETRIC PRESSURE: 29.75 SKY COVER: OVERCAST

WIND DIRECTION: NA WIND VELOCITY: 0 MICROPHONE: GR 1962

SOUND LEVEL METER: GR 1982 OCTIVE ANALYZER: ____

LOAD CONDITION: — RATED ✓ NO LOAD MICROPHONE LOCATION: AS BELOW

DATE	TIME	MICROPHONE POSITION	DISTANCE ~~FT~~ FT(M)	DBA	REMARKS
11-5-87	0835	1	7M	70.2	CENTER SECTION REMOVED
		2	7M	71.8	DISCHARGE BAFFLE.
		3	7M	71.5	TOP INTAKE BAFFLE ON AND OPEN
		4	7M	70.7	HIGH SPEED PULLEY
		5	7M	68.7	
		6	7M	71.7	
		7	7M	70.2	
		8	7M	70.3	
11-5-87	0836	9	7M	80.7	



8-91

TEST ITEM: 30Kw/60Hz GEN SET S/N: 125 3774 HOUR METER: 70.0

CONFIGURATION ___ UNMODIFIED ✓ MODIFIED

TEMPERATURE: 60°F HUMIDITY: 56% TEST SITE: HARTWOOD

SURFACE: GRASS TERRAIN: ____

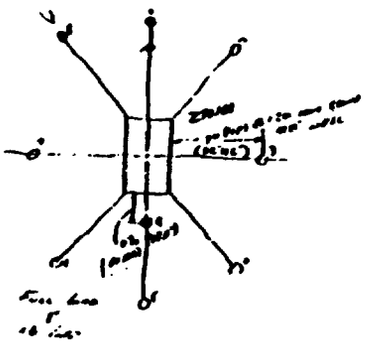
BAROMETRIC PRESSURE: 29.75 SKY COVER: OVERCAST

WIND DIRECTION: NA WIND VELOCITY: 0 MICROPHONE: GR 1962

SOUND LEVEL METER: GR 1982 OCTAVE ANALYZER: ____

LOAD CONDITION: ___ RATED ✓ NO LOAD MICROPHONE LOCATION: AS BELOW

DATE	TIME	MICROPHONE POSITION	DISTANCE FT(M)	DBA	REMARKS
11-5-87	0853	1	7m	68.2	COMPLETE DISCHARGE BAFFLE
		2	7m	70.2	TOP INTAKE BAFFLE ON & OPEN
		3	7m	71.4	HIGH SPEED PULLEY
		4	7m	70.3	
		5	7m	68.0	
		6	7m	70.0	
		7	7m	68.5	
		8	7m	68.1	
11-5-87	0855	9	7m	79.1	



8-142

(MAXIMUM NOISE LEVEL 94 DBA)

TEST ITEM: 30Kw, 60Hz GEN. SET S/N: R25 3774 HOUR METER: 102.5

CONFIGURATION ___ UNMODIFIED ✓ MODIFIED

TEMPERATURE: 78°F HUMIDITY: _____ TEST SITE: HARTWOOD

SURFACE: GRASS TERRAIN: _____

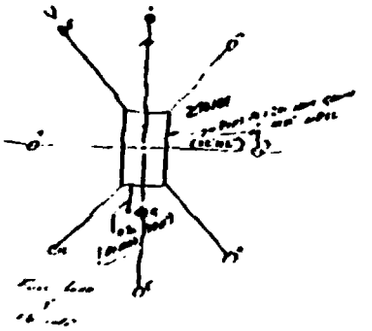
BAROMETRIC PRESSURE: 29.148 SKY COVER: CLEAR

WIND DIRECTION: NW WIND VELOCITY: 5 MPH MICROPHONE: _____

SOUND LEVEL METER: GR 1982 OCTAVE ANALYZER: _____

LOAD CONDITION: ___ RATED ✓ NO LOAD MICROPHONE LOCATION: AS BELOW

DATE	TIME	MICROPHONE POSITION	DISTANCE FT(M)	DBA	REMARKS
18 NOV 87	1045	1	7 m	69.1	SOUND LEVEL TEST PERFORMED
		2	7 m	69.1	FOR FINAL TESTING CONFIGURATION
		3	7 m	68.4	"CENTER OUTLET BAFFLE REMOVED"
		4	7 m	68.6	ORIGINAL PULLEY INSTALLED
		5	7 m	66.6	
		6	7 m	68.5	
		7	7 m	66	
		8	7 m	66	
18 NOV 87	1050	9	.7 m	82	

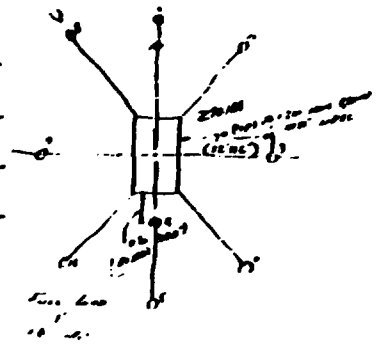


B-53

(MAXIMUM NOISE LEVEL 94 DBA)

TEST ITEM: 30 KW, 60 HZ GEN SET S/N: R25 3T14 HOUR METER: 1026
CONFIGURATION ___ UNMODIFIED ✓ MODIFIED
TEMPERATURE: 18 °F HUMIDITY: ____ TEST SITE: HARTWOOD
SURFACE: GRASS TERRAIN: ____
BAROMETRIC PRESSURE: 29.74B SKY COVER: CLEAR
WIND DIRECTION: NW WIND VELOCITY: 5 MPH MICROPHONE: ____
SOUND LEVEL METER: GR 1982 OCTAVE ANALYZER: ____
LOAD CONDITION: ✓ RATED ___ NO LOAD MICROPHONE LOCATION: AS BELOW

DATE	TIME	MICROPHONE POSITION	DISTANCE ~~FT~~ (M)	DBA	REMARKS
11-18-87	1054	1	7m	68	SOUND LEVEL TEST PERFORMED
11-19-87		2	7m	70	FOR FINAL TESTING CONFIGURATION
		3	7m	69	"CENTER OUTLET BAFFLE REMOVED"
		4	7m	69	ORIGINAL PULLEY INSTALLED
		5	7m	68	
		6	7m	69	
		7	7m	67	
		8	7m	68	
	1058	9	7m	84	



B-144

ACOUSTICAL TEST LOG (MAXIMUM-NOISE LEVEL 49 DBA)

TEST ITEM: 30 KW, 60HZ GEN SET S/N: 225 3774 HOUR METER: 100.7

CONFIGURATION: ___ UNMODIFIED ✓ MODIFIED

TEST SITE: HARTWELL

TEMPERATURE: 78°F HUMIDITY: ____

SURFACE: GRASS TERRAIN: ____

BAROMETRIC PRESSURE: 29.148 SKY COVER: CLEAR

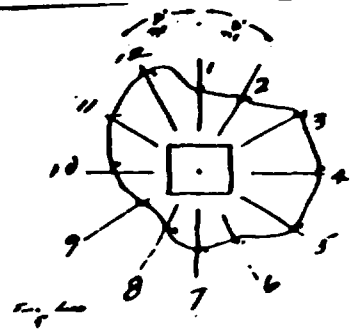
WIND DIRECTION: NW WIND VELOCITY: 5 MPH MICROPHONE: ____

SOUND LEVEL METER: GL1982 OCTAVE ANALYZER: ____

LOAD CONDITION: ✓ RATED ___ NO LOAD MICROPHONE LOCATION: AS BELOW

DATE	TIME	MICROPHONE POSITION	DISTANCE FT(M)	DBA	REMARKS
11-18-87	1058	CONTROL PANEL	4' 5"	85	SOUND LEVEL TEST PERFORMED
		2	3' 4	83	FOR FINAL TESTING CONFIGURATION
		3	2' 0"	85	"CENTER OUTLET BAFFLE REMOVED"
		4	1' 9"	85	ORIGINAL PULLEY INSTALLED
		5	1' 7"	84	
		6	3' 6"	84	
		7	6' 8"	85	
		8	3' 7"	85	
		9	2' 0"	85	
		10	1' 9"	85	
		11	1' 10"	85	
		12	3' 9"	83	
11-18-87	1110				

SK1-8



ASCO [redacted] LEVEL (MAXIMUM-NOISE LEVEL 93 DBA)

TEST ITEM: 30 KW, 60 HZ GEN SET S/N: RES 3774 HOUR METER: 103.5

CONFIGURATION: ___ UNMODIFIED ✓ MODIFIED

TEST SITE: HARTWELL

TEMPERATURE: 78°F HUMIDITY: ____

SURFACE: GRASS TERRAIN: ____

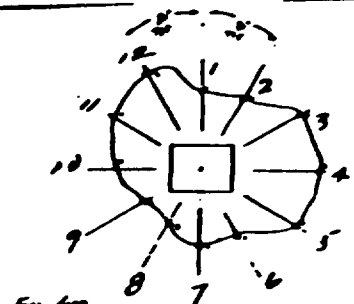
BAROMETRIC PRESSURE: 29.74S SKY COVER: CLEAR

WIND DIRECTION: NW WIND VELOCITY: 5 MPH MICROPHONE: ____

SOUND LEVEL METER: GR1962 OCTAVE ANALYZER: ____

LOAD CONDITION: ___ RATED ✓ NO LOAD MICROPHONE LOCATION: AS BELOW

DATE	TIME	MICROPHONE POSITION	DISTANCE FT(M)	DBA	REMARKS
		CONTROL PANEL ↓ 1	3'2"	85	SOUND LEVEL TEST PERFORMED
11-18-87	1110	2	3'8"	80	FOR FINAL TESTING CONFIGURATION
		3	1'9"	83	"CENTER OUTLET BAFFLE REMOVED"
		4	1'6"	85	ORIGINAL PULLEY INSTALLED
		5	1'6½"	83	
		6	3'5"	82	
		7	6'2½"	85	
		8	3'7"	83	
		9	1'7"	85	
		10	1'5"	85	
		11	1'8½"	85	
		12	3'6"	85	
11-18-87	1117				



351-8

TEST DATA

ITEM 30 KW 60HZ GEN SET MODIFIED
MFGR. LIBBY WELDING
MODEL NO. MEP005A
SERIAL NO. RZ53224

NTS
National Technical Systems
Scientific Services Group
Testing Division
P.O. Box 38
Harlwood, Virginia 22471
Tel: 703 752 5300

124°F WINDING RESISTANCE

REF. NO. MIL-STD 705
SHEET 1 OF 1
DATE 11-6-87
JOB NO. 555-2140
PROJ. ENGR.
RECORDER/OBSERVER K. MALLEY G. CARTER

INST TIME	STEP NO.	LOAD STEP	E6025D VOLTAGE X1 L_1-L_0 VAC	L_2-L_0 VAC	L_3-L_0 VAC	E6040D AMPERES X40 L_1-L_0 AC AMPS	L_2-L_0 AC AMPS	L_3-L_0 AC AMPS	E6230D KILOWATTS X40 L_1-L_0 Kw	L_2-L_0 Kw	L_3-L_0 Kw	E6242 POWER FACTOR PF	E6241 FREQ. Hz	E61 EXCITER VOLTS VDC	89U FIELD AMPS DCA	AMB. TEMP. °F	Press In/Out
1453			APPLIED RATED LOAD TO UNIT TO STABILIZE														
1500		4/4	120	122	121	2.5	2.52	2.52	.25	.255	.25	.81	60.1	8.6	3.3	116	8.4/44.8
1510		4/4	120	122	121	2.5	2.55	2.57	.25	.258	.25	.85	57.9	9.3	3.4	122	8.3/39.9
1520		4/4	120	122	121	2.5	2.56	2.58	.25	.256	.25	.81	59.7	9.7	3.6	124	13.0/51.6
1530		4/4	120	122	121	2.5	2.52	2.52	.25	.255	.25	.81	60.2	9.8	3.5	122	13.3/52.5
1540		4/4	120.5	122	121	2.5	2.55	2.55	.25	.256	.25	.81	60.1	9.9	3.6	123	13.5/39.7
1650		4/4	120.5	122	121	2.5	2.55	2.55	.25	.256	.25	.81	60.1	10.0	3.6	128	13.3/39.1

NOTES:

TEST DATA

TEM 30KW 60Hz
GENERATOR SET
MODIFIED
IFGR. LIBBY WELDING
ODEL NO. MEP 005A
ERIAL NO. RZ53774

NTS
National Technical Systems | Scientific Services Group | Testing Division, P.O. Box 38, Harlwood, Virginia 22471, Tel: 703 752 5300

AMBIENT TEMP

WINDING RESISTANCE TEST MCTMD 401.1a

REF. NO. MIL-STD 705
SHEET 1 OF 1
DATE 6 NOV 1987
JOB NO. 555-2140
PROJ. ENGR.
RECORDER/OBSERVER G. CARTER

TEST LEAD NO ITS	TIME HRS	EG2470 DIAL READING	MULTIPLIER	LEAD RESISTANCE	WINDING RESIS. OHMS	WINDING		WINDING RESIS. CORR TO 60°F	AVG. AMBIENT TEMP.
	1400	13	10^{-6}	.000013					24°F
		2.31	1		2.31	GEN	FIELD	2.325	
		80.0	10^{-3}		0.0800	T1	T4	.0805	
		79.8	10^{-3}		0.0798	T2	T5	.0803	
		81.4	10^{-3}		0.0814	T3	T6	.0819	
		81.3	10^{-3}		0.0813	T7	T10	.0818	
		78.6	10^{-3}		0.0786	T8	T11	.0791	
		76.3	10^{-3}		0.0763	T9	T12	.0768	

8V-4

NOTES:

TEST DATA

TEM 30KW 60Hz
GENERATOR SET
MODIFIED
FGR. LIBBY WELDING
ODEL NO. MEP 005A
ERIAL NO. RZ53774

NTS
National Technical Systems Scientific Services Group
Testing Division
P.O. Box 38
Hardwood, Virginia 22471
Tel: 703 752 5300
HIGH TEMP

REF. NO. MIL-STD 705
SHEET 1 OF 2
DATE 6 NOV 1987
JOB NO. 555-2140
PROJ. ENGR.
RECORDER/OBSERVER G. CARTER

WINDING RESISTANCE TEST METHOD 401.1a

TEST AD NO ITS	TIME HRS	EG2470 DIAL READING	MULTIPLIER	LEAD RESISTANCE	WINDING RESIS. OHMS	WINDING		WINDING RESIS. CORR TO 60°F 25°C		AVG. AMBIENT TEMP.	TEMP RISE Deg C
	1555	13	10^{-6}	.060013						74°F	
		2.700	1		2.700	GEN	FIELD	2.45		124°F	43.5
		100.0	10^{-3}		0.1000	T1	T4	.091			64.5
		99.1	10^{-3}		0.0991	T2	T5	.090			62.4
		101.1	10^{-3}		0.1011	T3	T6	.092			62.4
		106.0	10^{-3}		0.1010	T7	T10	.092			62.5
		97.0	10^{-3}		0.0970	T8	T11	.088			60.4
		94.4	10^{-3}		0.0944	T9	T12	.086			61.2
								~~2.44~~	RM		
		2.69	1		2.69	GEN	FIELD	2.44			42.4
		98.6	10^{-3}		0.0986	T1	T4	.0895			59.9
		97.8	10^{-3}		0.0978	T2	T5	.089			58.2
		100.0	10^{-3}		0.1000	T3	T6	.091			58.9
		99.6	10^{-3}		0.0996	T7	T10	.0905			58.0
		95.8	10^{-3}		0.0958	T8	T11	.087			56.4
		93.4	10^{-3}		0.0934	T9	T12	.085			57.8
		2.71	1		2.71	GEN	FIELD	2.46			44.6
		98.3	10^{-3}		0.0983	T1	T4	.0898			59.0
		97.4	10^{-3}		0.0974	T2	T5	.0885			56.7
		99.4	10^{-3}		0.0994	T3	T6	.0903			57.0
		99.3	10^{-3}		0.0993	T7	T10	.0902			57.1
		95.5	10^{-3}		0.0955	T8	T11	.0867			55.4
		93.0	10^{-3}		0.0930	T9	T12	.0839			56.4
		2.72	1		2.72	GEN	FIELD	2.47			45.6
		97.7	10^{-3}		0.0977	T1	T4	.0887			57.0

SH-8

NOTES:

TEST DATA

EM 30KW 60Hz
GENERATOR SET
MODIFIED
GR. LIBBY WELDING
DEL NO. MEP 005A
RIAL NO. RZ53774

NTS
National Technical Systems
Scientific Services Group
Testing Division
P.O. Box 38
Hartwood, Virginia 22471
Tel: 703 752 5300

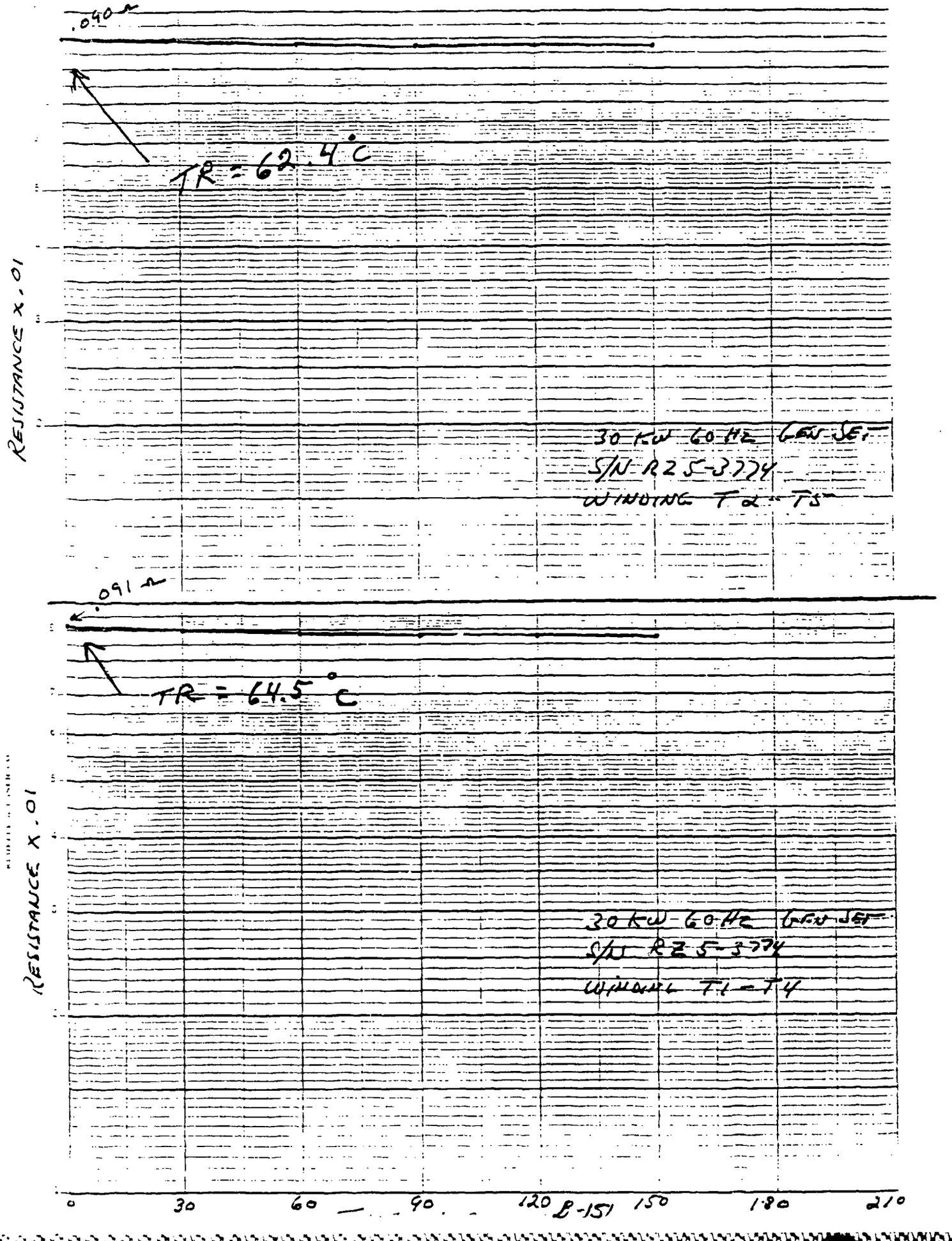
HIGH TEMP

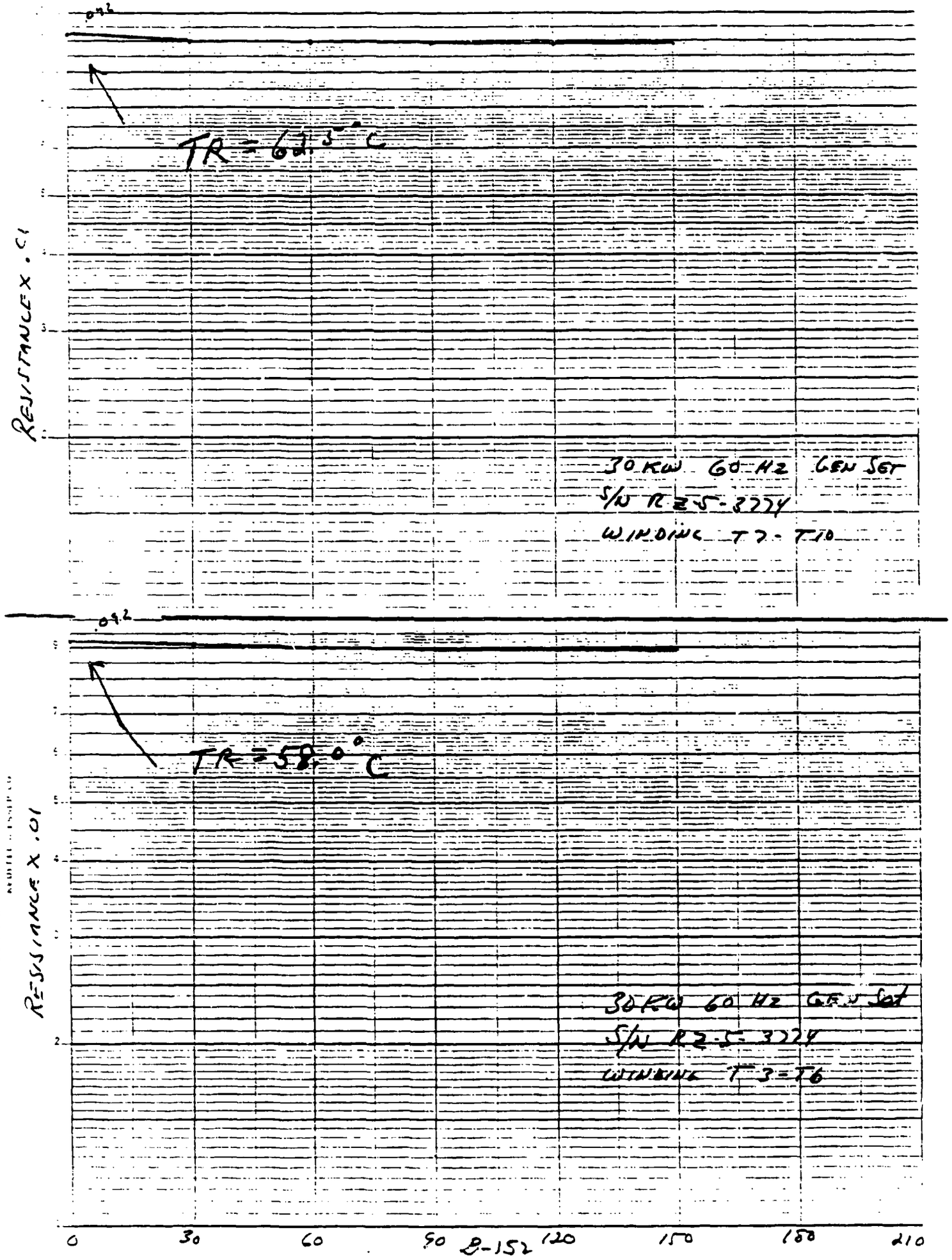
REF. NO. MIL-STD 705
SHEET 2 OF 2
DATE 6 NOV 1987
JOB NO. 55S-2140
PROJ. ENGR.
RECORDER/OBSERVER G. CARTER

WINDING RESISTANCE TEST METHOD 401.1a

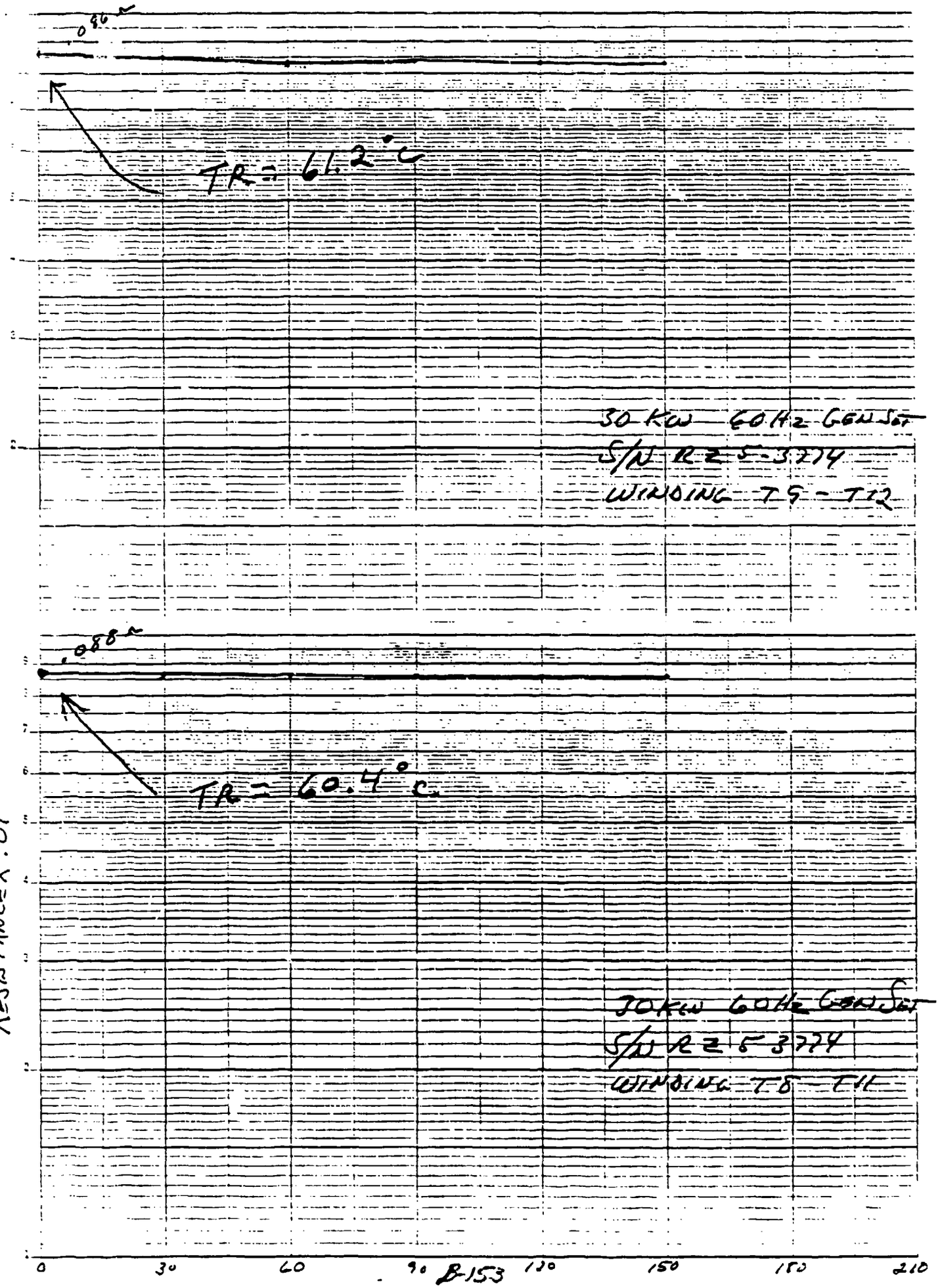
ST D NO ES	TIME HRS	EL2470 DIAL READING	MULTIPLIER	LEAD RESISTANCE	WINDING RESIS. OHMS	WINDING		WINDING RESIS. CORR TO 68°F 25°C	AVG. AMBIENT TEMP.	TEMP RISE Deg C
		96.8	10^{-3}		0.0968	T2	T5	.0879	124°F	54.9
		99.0	10^{-3}		0.0990	T3	T6	.0899		55.7
		98.6	10^{-3}		0.0986	T7	T10	.0896		54.9
		95.0	10^{-3}		0.0950	T8	T11	.0863		53.8
		92.5	10^{-3}		0.0925	T9	T12	.0840		54.7
		2.64	1		2.64	GEN	FIELD	2.399		36.8
		97.1	10^{-3}		0.0971	T1	T4	.0882		55.1
		96.4	10^{-3}		0.0964	T2	T5	.0876		53.6
		98.6	10^{-3}		0.0986	T3	T6	.0896		54.5
		98.2	10^{-3}		0.0982	T7	T10	.0892		53.6
		94.6	10^{-3}		0.0946	T8	T11	.0859		52.5
		92.2	10^{-3}		0.0922	T9	T12	.0836		53.7
		2.70	1		2.70	GEN	FIELD	2.453		43.5
		96.7	10^{-3}		0.0967	T1	T4	.0878		53.8
		96.1	10^{-3}		0.0961	T2	T5	.0873		52.7
		98.3	10^{-3}		0.0983	T3	T6	.0893		53.5
		97.9	10^{-3}		0.0979	T7	T10	.0889		52.6
		94.5	10^{-3}		0.0945	T8	T11	.0859		52.1
		91.7	10^{-3}		0.0917	T9	T12	.0833		52.0

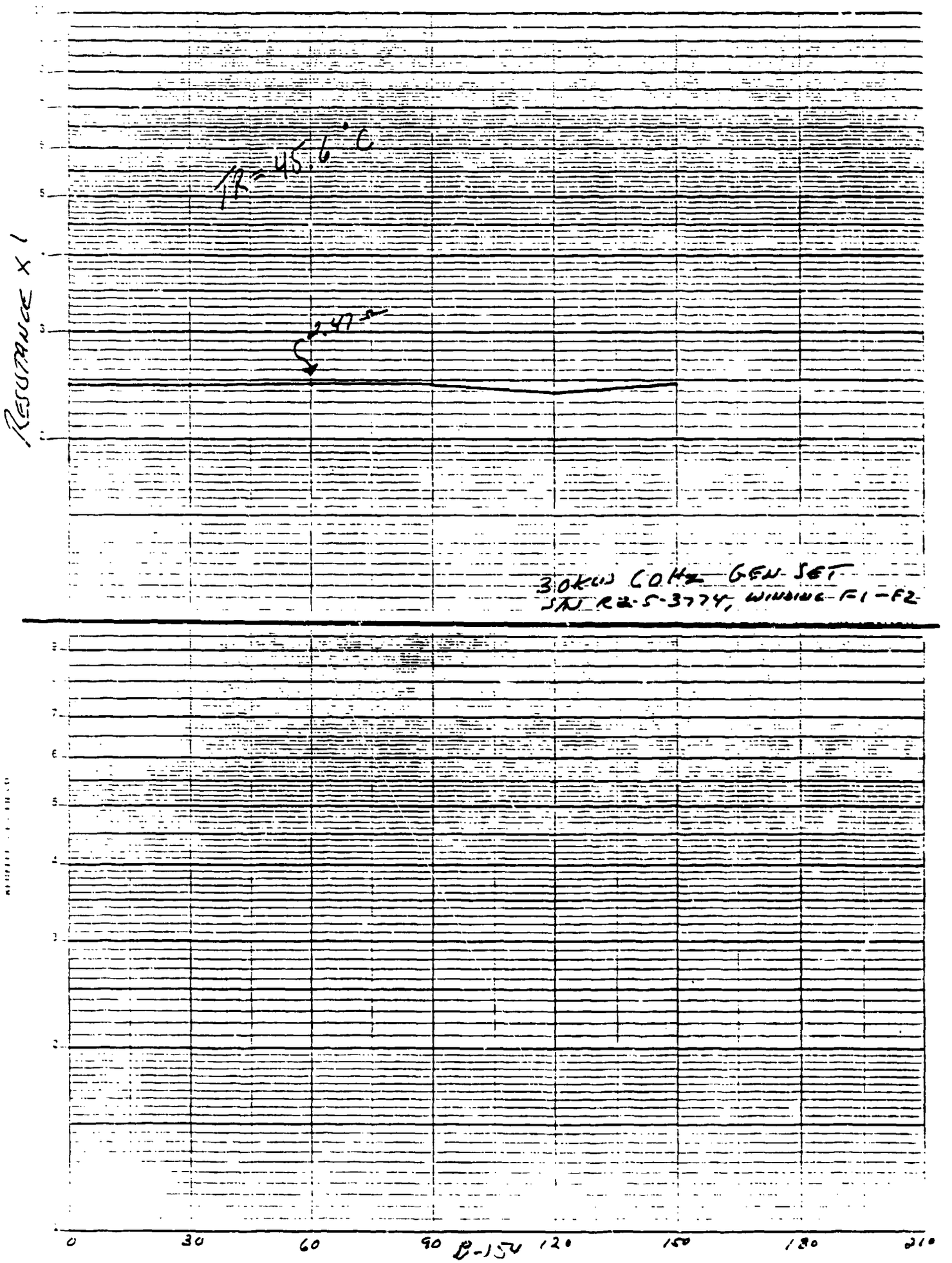
ES:


.040 Ω
TR = 62.4°C
RESISTANCE X .01
30 KW 60 Hz GEN SET
S/N R25-3774
WINDING T2 - T5
.091 Ω
TR = 64.5°C
RESISTANCE X .01
30 KW 60 Hz GEN SET
S/N R25-3774
WINDING T1 - T4
0
30
60
90
120
150
180
210
L-151


RESISTANCE X .01
TR = 58.0° C
30 KW 60 HZ GEN SET
S/N R2.5-3224
WINDING T3-T6
0
30
60
90
120
150
180
210

RESISTANCE X .01
TR = 62.3° C
30 KW 60 HZ GEN SET
S/N R2.5-3224
WINDING T7-T10


.086Ω
TR = 61.2°C
RESISTANCE X.01
30 KW 60Hz GEN SET
S/N RZ5-3274
WINDING T9 - T12
.088Ω
TR = 60.4°C
RESISTANCE X.01
30KW 60Hz GEN SET
S/N RZ5-3274
WINDING T5 - T11
0
30
60
90
120
150
180
210


RESISTANCE X 1
$T_f = 45.6°C$
2.47
30KW 60Hz GEN SET
SN R2-5-3774, WINDING F1-F2
0
30
60
90
120
150
180
210

High Temp Winding Resistance

```
BEGIN SCAN GROUP 1   06 NOV 87  14:57:34
30KW 60HZ GEN SET S/NRZ5 3774

C    1 EXHAUST 1          735.85 DEG. F ALM
C    2 EXHAUST 2          762.03 DEG. F ALM
C    3 EXHAUST 3          783.68 DEG. F ALM
C    4 EXHAUST 4          761.06 DEG. F ALM
C    5 EXHAUST 5          764.12 DEG. F ALM
C    6 EXHAUST 6          740.66 DEG. F ALM
C    7 ENG. COOL. IN      176.97 DEG. F ALM
C    8 ENG. COOL. OUT     186.75 DEG. F ALM
C    9 OIL SUMP           165.15 DEG. F ALM
C   10 OIL GALLERY        169.00 DEG. F ALM
C   11                    .00000
C   12                    .00000
C   13  ENG. INTAKE       109.03 DEG. F ALM
C   14 RAD. TOP LEFT      123.84 DEG. F ALM
C   15 RAD. BTTM LEFT     117.27 DEG. F ALM
C   16 RAD. TOP RIGHT     116.55 DEG. F ALM
C   17 RAD. BTTM RIGHT    120.02 DEG. F ALM
C   18 GEN. AIR IN        108.88 DEG. F ALM
C   19 GEN. AIR OUT       106.39 DEG. F ALM
C   20 GEN. FRAME TOP     94.710 DEG. F ALM
C   21 GEN. FRAME BTTM    91.346 DEG. F ALM
C   22 GEN. EXCITER       107.76 DEG. F ALM
C   23 GEN. VOLT. REG.    84.865 DEG. F ALM
C   24 CONTROL PANEL      88.354 DEG. F ALM
C   25 RELAY AREA         103.95 DEG. F ALM
C   26 BATTERY LEFT       79.907 DEG. F ALM
C   27 BATTERY RIGHT      78.110 DEG. F ALM
C   28 AIR IN SET         111.29 DEG. F ALM
C   29 FUEL TANK          75.067 DEG. F ALM
C   30 FUEL OUTLET        93.170 DEG. F ALM

END SCAN GROUP 1      06 NOV 87  14:57:44

STOPPED SINGLE SCAN   06 NOV 87  14:57:44
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BEGIN SCAN GROUP 1   06 NOV 87  15:09:3-
30KW 60HZ GEN SET S/NRZ5 3774

C    1 EXHAUST 1          761.31 DEG. F AL
C    2 EXHAUST 2          785.19 DEG. F AL
C    3 EXHAUST 3          812.10 DEG. F AL
C    4 EXHAUST 4          779.36 DEG. F AL
C    5 EXHAUST 5          784.67 DEG. F AL
C    6 EXHAUST 6          763.36 DEG. F ALM
C    7 ENG. COOL. IN      187.35 DEG. F ALM
C    8 ENG. COOL. OUT     199.17 DEG. F ALM
C    9 OIL SUMP           204.01 DEG. F ALM
C   10 OIL GALLERY        207.52 DEG. F ALM
C   11                    .00000
C   12                    .00000
C   13  ENG. INTAKE       127.52 DEG. F ALM
C   14 RAD. TOP LEFT      141.24 DEG. F ALM
C   15 RAD. BTTM LEFT     134.07 DEG. F ALM
C   16 RAD. TOP RIGHT     132.74 DEG. F ALM
C   17 RAD. BTTM RIGHT    136.15 DEG. F ALM
C   18 GEN. AIR IN        120.94 DEG. F ALM
C   19 GEN. AIR OUT       126.18 DEG. F ALM
C   20 GEN. FRAME TOP     116.80 DEG. F ALM
C   21 GEN. FRAME BTTM    112.94 DEG. F ALM
C   22 GEN. EXCITER       124.79 DEG. F ALM
C   23 GEN. VOLT. REG.    103.20 DEG. F ALM
C   24 CONTROL PANEL      111.96 DEG. F ALM
C   25 RELAY AREA         121.47 DEG. F ALM
C   26 BATTERY LEFT       88.246 DEG. F ALM
C   27 BATTERY RIGHT      83.050 DEG. F ALM
C   28 AIR IN SET         122.96 DEG. F ALM
C   29 FUEL TANK          90.363 DEG. F ALM
C   30 FUEL OUTLET        118.15 DEG. F ALM

END SCAN GROUP 1      06 NOV 87  15:09:44

STOPPED SINGLE SCAN   06 NOV 87  15:09:44
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```
BEGIN SCAN GROUP 1   06 NOV 87  14:59:56
30KW 60HZ GEN SET S/NRZ5 3774

C    1 EXHAUST 1          742.76 DEG. F ALM
C    2 EXHAUST 2          770.27 DEG. F ALM
C    3 EXHAUST 3          792.37 DEG. F ALM
C    4 EXHAUST 4          765.89 DEG. F ALM
C    5 EXHAUST 5          771.89 DEG. F ALM
C    6 EXHAUST 6          746.68 DEG. F ALM
C    7 ENG. COOL. IN      180.38 DEG. F ALM
C    8 ENG. COOL. OUT     189.00 DEG. F ALM
C    9 OIL SUMP           176.03 DEG. F ALM
C   10 OIL GALLERY        179.81 DEG. F ALM
C   11                    .00000
C   12                    .00000
C   13  ENG. INTAKE       115.36 DEG. F ALM
C   14 RAD. TOP LEFT      129.55 DEG. F ALM
C   15 RAD. BTTM LEFT     121.81 DEG. F ALM
C   16 RAD. TOP RIGHT     120.14 DEG. F ALM
C   17 RAD. BTTM RIGHT    124.18 DEG. F ALM
C   18 GEN. AIR IN        114.43 DEG. F ALM
C   19 GEN. AIR OUT       112.45 DEG. F ALM
C   20 GEN. FRAME TOP     100.83 DEG. F ALM
C   21 GEN. FRAME BTTM    97.358 DEG. F ALM
C   22 GEN. EXCITER       113.67 DEG. F ALM
C   23 GEN. VOLT. REG.    88.736 DEG. F ALM
C   24 CONTROL PANEL      93.677 DEG. F ALM
C   25 RELAY AREA         110.72 DEG. F ALM
C   26 BATTERY LEFT       81.726 DEG. F ALM
C   27 BATTERY RIGHT      79.314 DEG. F ALM
C   28 AIR IN SET         116.70 DEG. F ALM
C   29 FUEL TANK          76.049 DEG. F ALM
C   30 FUEL OUTLET        99.369 DEG. F ALM

END SCAN GROUP 1      06 NOV 87  15:00:06

STOPPED SINGLE SCAN   06 NOV 87  15:00:06
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BEGIN SCAN GROUP 1   06 NOV 87  15:20:14
30KW 60HZ GEN SET S/NRZ5 3774

C    1 EXHAUST 1          769.27 DEG. F ALM
C    2 EXHAUST 2          791.22 DEG. F ALM
C    3 EXHAUST 3          822.24 DEG. F ALM
C    4 EXHAUST 4          789.89 DEG. F ALM
C    5 EXHAUST 5          793.13 DEG. F ALM
C    6 EXHAUST 6          775.73 DEG. F ALM
C    7 ENG. COOL. IN      193.13 DEG. F ALM
C    8 ENG. COOL. OUT     206.07 DEG. F ALM
C    9 OIL SUMP           219.18 DEG. F ALM
C   10 OIL GALLERY        222.83 DEG. F ALM
C   11                    .00000
C   12                    .00000
C   13  ENG. INTAKE       130.79 DEG. F ALM
C   14 RAD. TOP LEFT      145.73 DEG. F ALM
C   15 RAD. BTTM LEFT     139.44 DEG. F ALM
C   16 RAD. TOP RIGHT     138.62 DEG. F ALM
C   17 RAD. BTTM RIGHT    142.71 DEG. F ALM
C   18 GEN. AIR IN        122.30 DEG. F ALM
C   19 GEN. AIR OUT       133.77 DEG. F ALM
C   20 GEN. FRAME TOP     123.99 DEG. F ALM
C   21 GEN. FRAME BTTM    119.85 DEG. F ALM
C   22 GEN. EXCITER       128.75 DEG. F ALM
C   23 GEN. VOLT. REG.    112.82 DEG. F ALM
C   24 CONTROL PANEL      122.20 DEG. F ALM
C   25 RELAY AREA         125.87 DEG. F ALM
C   26 BATTERY LEFT       93.441 DEG. F ALM
C   27 BATTERY RIGHT      87.583 DEG. F ALM
C   28 AIR IN SET         124.60 DEG. F ALM
C   29 FUEL TANK          86.004 DEG. F ALM
C   30 FUEL OUTLET        131.39 DEG. F ALM

END SCAN GROUP 1      06 NOV 87  15:20:24

STOPPED SINGLE SCAN   06 NOV 87  15:20:24
```

BEGIN SCAN GROUP 1 06 NOV 87 15:30:38
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	772.24	DEG. F	ALM
C	2	EXHAUST 2	796.01	DEG. F	ALM
C	3	EXHAUST 3	823.43	DEG. F	ALM
C	4	EXHAUST 4	787.04	DEG. F	ALM
C	5	EXHAUST 5	788.60	DEG. F	ALM
C	6	EXHAUST 6	774.05	DEG. F	ALM
C	7	ENG. COOL. IN	197.12	DEG. F	ALM
C	8	ENG. COOL. OUT	209.38	DEG. F	ALM
C	9	OIL SUMP	227.77	DEG. F	ALM
C	10	OIL GALLERY	230.92	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	130.93	DEG. F	ALM
C	14	RAD. TOP LEFT	146.49	DEG. F	ALM
C	15	RAD. BTTM LEFT	140.72	DEG. F	ALM
C	16	RAD. TOP RIGHT	140.91	DEG. F	ALM
C	17	RAD. BTTM RIGHT	143.14	DEG. F	ALM
C	18	GEN. AIR IN	120.61	DEG. F	ALM
C	19	GEN. AIR OUT	136.99	DEG. F	ALM
C	20	GEN. FRAME TOP	127.11	DEG. F	ALM
C	21	GEN. FRAME BTTM	122.66	DEG. F	ALM
C	22	GEN. EXCITER	128.94	DEG. F	ALM
C	23	GEN. VOLT. REG.	119.13	DEG. F	ALM
C	24	CONTROL PANEL	127.72	DEG. F	ALM
C	25	RELAY AREA	126.19	DEG. F	ALM
C	26	BATTERY LEFT	98.854	DEG. F	ALM
C	27	BATTERY RIGHT	91.441	DEG. F	ALM
C	28	AIR IN SET	122.59	DEG. F	ALM
C	29	FUEL TANK	91.542	DEG. F	ALM
C	30	FUEL OUTLET	140.17	DEG. F	ALM

END SCAN GROUP 1 06 NOV 87 15:30:48

STOPPED SINGLE SCAN 06 NOV 87 15:30:48

BEGIN SCAN GROUP 1 06 NOV 87 15:40:28
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	774.87	DEG. F	ALM
C	2	EXHAUST 2	796.11	DEG. F	ALM
C	3	EXHAUST 3	822.86	DEG. F	ALM
C	4	EXHAUST 4	787.86	DEG. F	ALM
C	5	EXHAUST 5	790.21	DEG. F	ALM
C	6	EXHAUST 6	771.01	DEG. F	ALM
C	7	ENG. COOL. IN	201.38	DEG. F	ALM
C	8	ENG. COOL. OUT	209.46	DEG. F	ALM
C	9	OIL SUMP	231.16	DEG. F	ALM
C	10	OIL GALLERY	234.44	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	130.65	DEG. F	ALM
C	14	RAD. TOP LEFT	147.21	DEG. F	ALM
C	15	RAD. BTTM LEFT	141.71	DEG. F	ALM
C	16	RAD. TOP RIGHT	142.14	DEG. F	ALM
C	17	RAD. BTTM RIGHT	144.56	DEG. F	ALM
C	18	GEN. AIR IN	121.23	DEG. F	ALM
C	19	GEN. AIR OUT	139.16	DEG. F	ALM
C	20	GEN. FRAME TOP	127.79	DEG. F	ALM
C	21	GEN. FRAME BTTM	123.45	DEG. F	ALM
C	22	GEN. EXCITER	129.54	DEG. F	ALM
C	23	GEN. VOLT. REG.	121.97	DEG. F	ALM
C	24	CONTROL PANEL	130.05	DEG. F	ALM
C	25	RELAY AREA	127.11	DEG. F	ALM
C	26	BATTERY LEFT	103.02	DEG. F	ALM
C	27	BATTERY RIGHT	94.749	DEG. F	ALM
C	28	AIR IN SET	123.79	DEG. F	ALM
C	29	FUEL TANK	96.465	DEG. F	ALM
C	30	FUEL OUTLET	142.25	DEG. F	ALM

END SCAN GROUP 1 06 NOV 87 15:40:38

STOPPED SINGLE SCAN 06 NOV 87 15:40:38

BEGIN SCAN GROUP 1 06 NOV 87 15:50:14
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	775.22	DEG. F	ALM
C	2	EXHAUST 2	797.25	DEG. F	ALM
C	3	EXHAUST 3	820.96	DEG. F	ALM
C	4	EXHAUST 4	787.66	DEG. F	ALM
C	5	EXHAUST 5	790.71	DEG. F	ALM
C	6	EXHAUST 6	773.35	DEG. F	ALM
C	7	ENG. COOL. IN	202.53	DEG. F	ALM
C	8	ENG. COOL. OUT	210.63	DEG. F	ALM
C	9	OIL SUMP	233.32	DEG. F	ALM
C	10	OIL GALLERY	236.38	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	131.00	DEG. F	ALM
C	14	RAD. TOP LEFT	147.77	DEG. F	ALM
C	15	RAD. BTTM LEFT	142.46	DEG. F	ALM
C	16	RAD. TOP RIGHT	143.11	DEG. F	ALM
C	17	RAD. BTTM RIGHT	146.60	DEG. F	ALM
C	18	GEN. AIR IN	121.51	DEG. F	ALM
C	19	GEN. AIR OUT	140.88	DEG. F	ALM
C	20	GEN. FRAME TOP	128.67	DEG. F	ALM
C	21	GEN. FRAME BTTM	124.30	DEG. F	ALM
C	22	GEN. EXCITER	130.10	DEG. F	ALM
C	23	GEN. VOLT. REG.	125.03	DEG. F	ALM
C	24	CONTROL PANEL	131.29	DEG. F	ALM
C	25	RELAY AREA	127.52	DEG. F	ALM
C	26	BATTERY LEFT	106.23	DEG. F	ALM
C	27	BATTERY RIGHT	98.148	DEG. F	ALM
C	28	AIR IN SET	123.81	DEG. F	ALM
C	29	FUEL TANK	101.11	DEG. F	ALM
C	30	FUEL OUTLET	144.06	DEG. F	ALM

END SCAN GROUP 1 06 NOV 87 15:50:25

STOPPED SINGLE SCAN 06 NOV 87 15:50:25

BEGIN SCAN GROUP 1 06 NOV 87 15:51:21
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	777.09	DEG. F	ALM
C	2	EXHAUST 2	799.25	DEG. F	ALM
C	3	EXHAUST 3	822.13	DEG. F	ALM
C	4	EXHAUST 4	785.66	DEG. F	ALM
C	5	EXHAUST 5	788.54	DEG. F	ALM
C	6	EXHAUST 6	772.49	DEG. F	ALM
C	7	ENG. COOL. IN	202.52	DEG. F	ALM
C	8	ENG. COOL. OUT	210.78	DEG. F	ALM
C	9	OIL SUMP	233.38	DEG. F	ALM
C	10	OIL GALLERY	236.61	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	131.11	DEG. F	ALM
C	14	RAD. TOP LEFT	147.83	DEG. F	ALM
C	15	RAD. BTTM LEFT	142.64	DEG. F	ALM
C	16	RAD. TOP RIGHT	143.29	DEG. F	ALM
C	17	RAD. BTTM RIGHT	146.40	DEG. F	ALM
C	18	GEN. AIR IN	122.16	DEG. F	ALM
C	19	GEN. AIR OUT	141.25	DEG. F	ALM
C	20	GEN. FRAME TOP	128.75	DEG. F	ALM
C	21	GEN. FRAME BTTM	124.38	DEG. F	ALM
C	22	GEN. EXCITER	130.45	DEG. F	ALM
C	23	GEN. VOLT. REG.	125.09	DEG. F	ALM
C	24	CONTROL PANEL	131.64	DEG. F	ALM
C	25	RELAY AREA	127.75	DEG. F	ALM
C	26	BATTERY LEFT	106.74	DEG. F	ALM
C	27	BATTERY RIGHT	98.385	DEG. F	ALM
C	28	AIR IN SET	124.36	DEG. F	ALM
C	29	FUEL TANK	101.60	DEG. F	ALM
C	30	FUEL OUTLET	145.04	DEG. F	ALM

END SCAN GROUP 1 06 NOV 87 15:51:32

STOPPED SINGLE SCAN 06 NOV 87 15:51:32

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BEGIN SCAN GROUP 1   06 NOV 87  16:02:33
30KW 60HZ GEN SET S NRE5 3774

C    1 EXHAUST 1          293.77 DEG.  F ALM
C    2 EXHAUST 2          323.76 DEG.  F ALM
C    3 EXHAUST 3          334.59 DEG.  F ALM
C    4 EXHAUST 4          332.09 DEG.  F ALM
C    5 EXHAUST 5          329.06 DEG.  F ALM
C    6 EXHAUST 6          308.37 DEG.  F ALM
C    7 ENG. COOL. IN      176.99 DEG.  F ALM
C    8 ENG. COOL. OUT     224.31 DEG.  F ALM
C    9 OIL SUMP           229.37 DEG.  F ALM
C   10 OIL GALLERY        216.66 DEG.  F ALM
C   11                    .00000
C   12                    .00000
C   13  ENG. INTAKE       151.21 DEG.  F ALM
C   14 RAD. TOP LEFT      191.46 DEG.  F ALM
C   15 RAD. BTTM LEFT     169.87 DEG.  F ALM
C   16 RAD. TOP RIGHT     176.67 DEG.  F ALM
C   17 RAD. BTTM RIGHT    159.01 DEG.  F ALM
C   18 GEN. AIR IN        117.58 DEG.  F ALM
C   19 GEN. AIR OUT       133.36 DEG.  F ALM
C   20 GEN. FRAME TOP     138.95 DEG.  F ALM
C   21 GEN. FRAME BTTM    125.66 DEG.  F ALM
C   22 GEN. EXCITER       145.33 DEG.  F ALM
C   23 GEN. VOLT. REG.    129.74 DEG.  F ALM
C   24 CONTROL PANEL      138.74 DEG.  F ALM
C   25 RELAY AREA         149.56 DEG.  F ALM
C   26 BATTERY LEFT       109.59 DEG.  F ALM
C   27 BATTERY RIGHT      102.38 DEG.  F ALM
C   28 AIR IN SET         104.26 DEG.  F ALM
C   29 FUEL TANK          103.81 DEG.  F ALM
C   30 FUEL OUTLET        147.99 DEG.  F ALM

END SCAN GROUP 1      06 NOV 87  16:02:43

STOPPED SINGLE SCAN   06 NOV 87  16:02:43
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TEST DATA

ITEM 30 KW 60Hz GEN SET MODIFIED

MFGR. LIBBY WELDING

MODEL NO. MEP 005A

SERIAL NO. RZ53774

NTS

National Technical Systems | Scientific Services Group | Testing Division, P.O. Box 38, Harwood, Virginia 22471, Tel: 703 752 5300

HIGH TEMP 710.1.3.2(F)(1)

REGULATOR RANGE TEST

REF. NO. MIL-STD 705; 511.1

SHEET 1 OF 1

DATE 9 NOV 1987

JOB NO. 555-2140

PROJ. ENGR.

RECORDER/OBSERVER BJ KM GC

INST TIME	STEP NO.	LOAD STEP	E6028D VOLTAGE L_1-L_0 VAC	L_2-L_0 VAC	L_3-L_0 VAC	E6040D AMPERES X 40 L_1-L_0 AC AMPS	L_2-L_0 AC AMPS	L_3-L_0 AC AMPS	E6230D KILOWATTS X 40 L_1-L_0 Kw	L_2-L_0 Kw	L_3-L_0 Kw	E6242D POWER FACTOR PF	E6241D FREQ. Hz	E61 EXCITER VOLTS VDC	B5D FIELD AMPS DCA	AMB. TEMP. °F	PRES IN/EXH INH_2O
1030		APPLIED	R/L	STARTED		STABILIZATION											
1040		R/L	208	208	208	2.47	2.5	2.5	.245	.25	.247	.805	59.9	8.8	3.4	123	13.3/39
1050		R/L	208.5	209	208	2.45	2.5	2.5	.242	.25	.245	.81	59.9	9.0	3.4	124	13.2/37.2
1052		ADJUSTED	LOAD														
1100		R/L	208	208	208	2.5	2.54	2.54	.248	.252	.249	.80	59.9	9.2	3.5	123	13.1/39.2
1110		R/L	208	208	208	2.5	2.54	2.54	.248	.252	.249	.81	59.9	9.4	3.6	123	13.3/39.0
1120		R/L	208	208	208	2.5	2.54	2.54	.248	.252	.249	.80	59.9	9.4	3.6	123	13.3/38.7
1122		UNIT SHUT DOWN — OVER TEMP															
		OPENED TOP INLET BAFFEL															
1130		RESTARTED UNIT @ N/L IN BATTLESHORT TO COOL DOWN															
1138		REMOVED BATTLESHORT — PLACED ON R/L															
1150		R/L	208	209	208	2.5	2.55	2.55	.245	.251	.25	.81	60.1	9.3	3.5	124	13.3/38.0
1200		R/L	208.5	209	208.5	2.5	2.55	2.55	.249	.251	.25	.81	60.1	9.4	3.5	125	13.3/38.2
1210		R/L	208.5	209	208.5	2.5	2.55	2.55	.249	.251	.25	.81	60.1	9.4	3.5	124	13.3/38.6
1220	1	R/L	208.5	209	208.5	2.5	2.55	2.55	.249	.251	.25	.81	60.1	9.4	3.5	123	13.4/38.3
1223	2	N/L	210	210	210	0	0	0	0	0	0	0	62.2	3.9	1.5	123	14.5/37.7
1225	3	N/L	240	240	240	0	0	0	0	0	0	0	62.2	5.6	2.1	122	14.8/35.2
1228	4	R/L	239	239	239	2.15	2.15	2.16	.25	.255	.25	.82	60.1	11.4	4.2	122	13.4/33.0
1232	5	N/L	260	260	260	0	0	0	0	0	0	0	62	2.9	7.6	122	14.7/35.5
1236	6	R/L	258	259	258	2.2	2.25	2.25	.27	.276	.271	.80	59.6	16.2	6.0	122	13.4/34.7
1241	7	R/L	196	198	196	2.67	2.571	2.57	.25	.251	.25	.80	55.9	7.4	3.4	122	15.3/38.9
1243	8	N/L	200	200	200	0	0	0	0	0	0	0	62.1	3.6	1.3	123	14.7/37.5
1246	9	N/L	170	170	170	0	0	0	0	0	0	0	62	2.6	1.0	123	14.8/36.2
1247		SHUT UNIT DOWN — END OF TEST															

NOTES:

TEST DATA

ITEM: 30 KW 60HZ GENERATOR SET MODIFIED

MFGR. LIBBY WELDING

MODEL NO. MEP 005A

SERIAL NO. RZS 3774

NTS

National Technical Systems | Scientific Services Group | Testing Division P.O. Box 38 Hallwood, Virginia 22471 Tel: 703 752 5300

Regulator Range Computation Sheet

REF. NO. MIL STD 705: 511.1

SHEET 1 OF 1

DATE 9 NOV 1987

JOB NO.

PROJ. ENGR.

RECORDER/OBSERVER BS/KM/LC

INST. →		VOLTAGE			VOLTS	REG.
TIME	LOAD	L1 - L2	L2 - L3	L3 - L1	AVERAGE	PERCENT
1220	R/L	208.5	209	208.5	208.7	.
	N/L	210	210	210	210	.62
	N/L	240	240	240	240	
	R/L	239	239	239	239	.41
	N/L	260	260	260	260	
	R/L	258	259	258	258.3	.67
	R/L	196	198	196	197	
	N/L	200	200	200	200	1.52
	N/L	170	170	170	170	

Where percent of regulation is defined as:

$$\frac{V_{NL.\ avg.} - V_{RL\ avg.}}{V_{RL\ avg.}} \times 100$$

NOTES: MAXIMUM ALLOWABLE % OF REGULATION IS 3% FOR UTILITY UNITS — UNIT PASSED

B-15

REGULATOR RANGE TEST 5/11.1

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BEGIN SCAN GROUP 1    09 NOV 87  10:40:01
30KW 60HZ GEN SET S/NRZ5 3774

C    1 EXHAUST 1          764.25 DEG.  F ALM
C    2 EXHAUST 2          786.31 DEG.  F ALM
C    3 EXHAUST 3          810.83 DEG.  F ALM
C    4 EXHAUST 4          782.34 DEG.  F ALM
C    5 EXHAUST 5          781.67 DEG.  F ALM
C    6 EXHAUST 6          763.80 DEG.  F ALM
C    7 ENG. COOL. IN      202.72 DEG.  F ALM
C    8 ENG. COOL. OUT     210.55 DEG.  F ALM
C    9 OIL SUMP           217.16 DEG.  F ALM
C   10 OIL GALLERY        220.19 DEG.  F ALM
C   11                    .00000
C   12                    .00000
C   13  ENG. INTAKE       135.10 DEG.  F ALM
C   14 RAD. TOP LEFT      151.09 DEG.  F ALM
C   15 RAD. BTTM LEFT     142.81 DEG.  F ALM
C   16 RAD. TOP RIGHT     143.67 DEG.  F ALM
C   17 RAD. BTTM RIGHT    146.99 DEG.  F ALM
C   18 GEN. AIR IN        122.86 DEG.  F ALM
C   19 GEN. AIR OUT       135.39 DEG.  F ALM
C   20 GEN. FRAME TOP     127.94 DEG.  F ALM
C   21 GEN. FRAME BTTM    123.89 DEG.  F ALM
C   22 GEN. EXCITER       131.59 DEG.  F ALM
C   23 GEN. VOLT. REG.    126.46 DEG.  F ALM
C   24 CONTROL PANEL      132.46 DEG.  F ALM
C   25 RELAY AREA         131.47 DEG.  F ALM
C   26 BATTERY LEFT       101.15 DEG.  F ALM
C   27 BATTERY RIGHT      98.182 DEG.  F ALM
C   28 AIR IN SET         124.56 DEG.  F ALM
C   29 FUEL TANK          83.898 DEG.  F ALM
C   30 FUEL OUTLET        143.02 DEG.  F ALM

END SCAN GROUP 1      09 NOV 87  10:40:11

STOPPED SINGLE SCAN   09 NOV 87  10:40:11


BEGIN SCAN GROUP 1    09 NOV 87  11:00:20
30KW 60HZ GEN SET S/NRZ5 3774

C    1 EXHAUST 1          777.47 DEG.  F ALM
C    2 EXHAUST 2          797.30 DEG.  F ALM
C    3 EXHAUST 3          819.17 DEG.  F ALM
C    4 EXHAUST 4          784.65 DEG.  F ALM
C    5 EXHAUST 5          791.23 DEG.  F ALM
C    6 EXHAUST 6          769.60 DEG.  F ALM
C    7 ENG. COOL. IN      207.80 DEG.  F ALM
C    8 ENG. COOL. OUT     215.77 DEG.  F ALM
C    9 OIL SUMP           230.92 DEG.  F ALM
C   10 OIL GALLERY        234.70 DEG.  F ALM
C   11                    .00000
C   12                    .00000
C   13  ENG. INTAKE       136.24 DEG.  F ALM
C   14 RAD. TOP LEFT      153.47 DEG.  F ALM
C   15 RAD. BTTM LEFT     145.01 DEG.  F ALM
C   16 RAD. TOP RIGHT     145.64 DEG.  F ALM
C   17 RAD. BTTM RIGHT    149.69 DEG.  F ALM
C   18 GEN. AIR IN        121.42 DEG.  F ALM
C   19 GEN. AIR OUT       140.07 DEG.  F ALM
C   20 GEN. FRAME TOP     128.50 DEG.  F ALM
C   21 GEN. FRAME BTTM    123.18 DEG.  F ALM
C   22 GEN. EXCITER       130.27 DEG.  F ALM
C   23 GEN. VOLT. REG.    131.24 DEG.  F ALM
C   24 CONTROL PANEL      135.62 DEG.  F ALM
C   25 RELAY AREA         132.14 DEG.  F ALM
C   26 BATTERY LEFT       107.65 DEG.  F ALM
C   27 BATTERY RIGHT      102.54 DEG.  F ALM
C   28 AIR IN SET         123.64 DEG.  F ALM
C   29 FUEL TANK          90.091 DEG.  F ALM
C   30 FUEL OUTLET        145.17 DEG.  F ALM

END SCAN GROUP 1      09 NOV 87  11:00:30

STOPPED SINGLE SCAN   09 NOV 87  11:00:30


BEGIN SCAN GROUP 1    09 NOV 87  11:10:0-
30KW 60HZ GEN SET S/NRZ5 3774

C    1 EXHAUST 1          776.40 DEG.  F AL
C    2 EXHAUST 2          793.27 DEG.  F AL
C    3 EXHAUST 3          817.08 DEG.  F AL
C    4 EXHAUST 4          784.52 DEG.  F AL
C    5 EXHAUST 5          790.32 DEG.  F AL
C    6 EXHAUST 6          770.21 DEG.  F ALM
C    7 ENG. COOL. IN      207.54 DEG.  F ALM
C    8 ENG. COOL. OUT     215.82 DEG.  F ALM
C    9 OIL SUMP           232.76 DEG.  F ALM
C   10 OIL GALLERY        236.32 DEG.  F ALM
C   11                    .00000
C   12                    .00000
C   13  ENG. INTAKE       135.82 DEG.  F ALM
C   14 RAD. TOP LEFT      153.39 DEG.  F ALM
C   15 RAD. BTTM LEFT     144.83 DEG.  F ALM
C   16 RAD. TOP RIGHT     145.67 DEG.  F ALM
C   17 RAD. BTTM RIGHT    148.85 DEG.  F ALM
C   18 GEN. AIR IN        120.67 DEG.  F ALM
C   19 GEN. AIR OUT       140.78 DEG.  F ALM
C   20 GEN. FRAME TOP     128.18 DEG.  F ALM
C   21 GEN. FRAME BTTM    122.91 DEG.  F ALM
C   22 GEN. EXCITER       130.13 DEG.  F ALM
C   23 GEN. VOLT. REG.    132.31 DEG.  F ALM
C   24 CONTROL PANEL      135.56 DEG.  F ALM
C   25 RELAY AREA         131.97 DEG.  F ALM
C   26 BATTERY LEFT       109.75 DEG.  F ALM
C   27 BATTERY RIGHT      104.64 DEG.  F ALM
C   28 AIR IN SET         123.06 DEG.  F ALM
C   29 FUEL TANK          92.909 DEG.  F ALM
C   30 FUEL OUTLET        145.20 DEG.  F ALM

END SCAN GROUP 1      09 NOV 87  11:10:14

STOPPED SINGLE SCAN   09 NOV 87  11:10:15


BEGIN SCAN GROUP 1    09 NOV 87  11:19:14
30KW 60HZ GEN SET S/NRZ5 3774

C    1 EXHAUST 1          774.71 DEG.  F ALM
C    2 EXHAUST 2          794.45 DEG.  F ALM
C    3 EXHAUST 3          816.35 DEG.  F ALM
C    4 EXHAUST 4          785.81 DEG.  F ALM
C    5 EXHAUST 5          788.84 DEG.  F ALM
C    6 EXHAUST 6          769.69 DEG.  F ALM
C    7 ENG. COOL. IN      208.22 DEG.  F ALM
C    8 ENG. COOL. OUT     216.05 DEG.  F ALM
C    9 OIL SUMP           234.00 DEG.  F ALM
C   10 OIL GALLERY        236.94 DEG.  F ALM
C   11                    .00000
C   12                    .00000
C   13  ENG. INTAKE       136.33 DEG.  F ALM
C   14 RAD. TOP LEFT      154.13 DEG.  F ALM
C   15 RAD. BTTM LEFT     145.53 DEG.  F ALM
C   16 RAD. TOP RIGHT     146.30 DEG.  F ALM
C   17 RAD. BTTM RIGHT    150.31 DEG.  F ALM
C   18 GEN. AIR IN        122.05 DEG.  F ALM
C   19 GEN. AIR OUT       141.97 DEG.  F ALM
C   20 GEN. FRAME TOP     128.59 DEG.  F ALM
C   21 GEN. FRAME BTTM    123.13 DEG.  F ALM
C   22 GEN. EXCITER       130.76 DEG.  F ALM
C   23 GEN. VOLT. REG.    133.31 DEG.  F ALM
C   24 CONTROL PANEL      135.65 DEG.  F ALM
C   25 RELAY AREA         132.48 DEG.  F ALM
C   26 BATTERY LEFT       111.33 DEG.  F ALM
C   27 BATTERY RIGHT      106.51 DEG.  F ALM
C   28 AIR IN SET         123.72 DEG.  F ALM
C   29 FUEL TANK          95.358 DEG.  F ALM
C   30 FUEL OUTLET        146.37 DEG.  F ALM

END SCAN GROUP 1      09 NOV 87  11:19:24

STOPPED SINGLE SCAN   09 NOV 87  11:19:24
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BEGIN SCAN GROUP 1    09 NOV 87  11:27:43
30KW 60HZ GEN SET S/NRZ5 3774

C    1 EXHAUST 1          660.13 DEG. F ALM
C    2 EXHAUST 2          680.68 DEG. F ALM
C    3 EXHAUST 3          693.47 DEG. F ALM
C    4 EXHAUST 4          673.78 DEG. F ALM
C    5 EXHAUST 5          676.51 DEG. F ALM
C    6 EXHAUST 6          666.00 DEG. F ALM
C    7 ENG. COOL. IN      208.87 DEG. F ALM
C    8 ENG. COOL. OUT     217.10 DEG. F ALM
C    9 OIL SUMP           234.96 DEG. F ALM
C   10 OIL GALLERY        237.51 DEG. F ALM
C   11                    .00000
C   12                    .00000
C   13  ENG. INTAKE       136.98 DEG. F ALM
C   14 RAD. TOP LEFT      156.60 DEG. F ALM
C   15 RAD. BTTM LEFT     147.80 DEG. F ALM
C   16 RAD. TOP RIGHT     147.68 DEG. F ALM
C   17 RAD. BTTM RIGHT    150.71 DEG. F ALM
C   18 GEN. AIR IN        122.27 DEG. F ALM
C   19 GEN. AIR OUT       143.19 DEG. F ALM
C   20 GEN. FRAME TOP     129.17 DEG. F ALM
C   21 GEN. FRAME BTTM    123.74 DEG. F ALM
C   22 GEN. EXCITER       130.80 DEG. F ALM
C   23 GEN. VOLT. REG.    134.24 DEG. F ALM
C   24 CONTROL PANEL      136.13 DEG. F ALM
C   25 RELAY AREA         133.59 DEG. F ALM
C   26 BATTERY LEFT       113.23 DEG. F ALM
C   27 BATTERY RIGHT      108.30 DEG. F ALM
C   28 AIR IN SET         123.88 DEG. F ALM
C   29 FUEL TANK          97.493 DEG. F ALM
C   30 FUEL OUTLET        146.67 DEG. F ALM

END SCAN GROUP 1      09 NOV 87  11:27:53

STOPPED SINGLE SCAN   09 NOV 87  11:27:53
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BEGIN SCAN GROUP 1    09 NOV 87  11:47:50
30KW 60HZ GEN SET S/NRZ5 3774

C    1 EXHAUST 1          768.98 DEG. F ALM
C    2 EXHAUST 2          787.86 DEG. F ALM
C    3 EXHAUST 3          808.81 DEG. F ALM
C    4 EXHAUST 4          776.16 DEG. F ALM
C    5 EXHAUST 5          775.22 DEG. F ALM
C    6 EXHAUST 6          757.04 DEG. F ALM
C    7 ENG. COOL. IN      199.66 DEG. F ALM
C    8 ENG. COOL. OUT     207.51 DEG. F ALM
C    9 OIL SUMP           226.85 DEG. F ALM
C   10 OIL GALLERY        230.85 DEG. F ALM
C   11                    .00000
C   12                    .00000
C   13  ENG. INTAKE       130.92 DEG. F ALM
C   14 RAD. TOP LEFT      147.10 DEG. F ALM
C   15 RAD. BTTM LEFT     142.36 DEG. F ALM
C   16 RAD. TOP RIGHT     143.49 DEG. F ALM
C   17 RAD. BTTM RIGHT    146.27 DEG. F ALM
C   18 GEN. AIR IN        122.90 DEG. F ALM
C   19 GEN. AIR OUT       141.35 DEG. F ALM
C   20 GEN. FRAME TOP     128.99 DEG. F ALM
C   21 GEN  FRAME BTTM    125.11 DEG. F ALM
C   22 GEN. EXCITER       130.70 DEG. F ALM
C   23 GEN. VOLT. REG.    133.92 DEG. F ALM
C   24 CONTROL PANEL      132.90 DEG. F ALM
C   25 RELAY AREA         127.53 DEG. F ALM
C   26 BATTERY LEFT       115.25 DEG. F ALM
C   27 BATTERY RIGHT      111.76 DEG. F ALM
C   28 AIR IN SET         124.58 DEG. F ALM
C   29 FUEL TANK          101.04 DEG. F ALM
C   30 FUEL OUTLET        148.50 DEG. F ALM

END SCAN GROUP 1      09 NOV 87  11:48:00

STOPPED SINGLE SCAN   09 NOV 87  11:48:00
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BEGIN SCAN GROUP 1    09 NOV 87  11:51:1
30KW 60HZ GEN SET S/NRZ5 3774

C    1 EXHAUST 1          767.65 DEG. F AL
C    2 EXHAUST 2          789.08 DEG. F AL
C    3 EXHAUST 3          812.68 DEG. F AL
C    4 EXHAUST 4          780.15 DEG. F AL
C    5 EXHAUST 5          777.54 DEG. F AL
C    6 EXHAUST 6          759.91 DEG. F AL
C    7 ENG. COOL. IN      201.11 DEG. F AL
C    8 ENG. COOL. OUT     209.99 DEG. F AL
C    9 OIL SUMP           228.80 DEG. F AL
C   10 OIL GALLERY        232.07 DEG. F AL
C   11                    .00000
C   12                    .00000
C   13  ENG. INTAKE       131.16 DEG. F AL
C   14 RAD. TOP LEFT      147.55 DEG. F AL
C   15 RAD. BTTM LEFT     142.48 DEG. F AL
C   16 RAD. TOP RIGHT     143.82 DEG. F AL
C   17 RAD. BTTM RIGHT    146.74 DEG. F AL
C   18 GEN. AIR IN        122.18 DEG. F AL
C   19 GEN. AIR OUT       141.78 DEG. F AL
C   20 GEN. FRAME TOP     129.19 DEG. F AL
C   21 GEN. FRAME BTTM    125.19 DEG. F AL
C   22 GEN. EXCITER       130.63 DEG. F AL
C   23 GEN. VOLT. REG.    133.90 DEG. F AL
C   24 CONTROL PANEL      133.00 DEG. F AL
C   25 RELAY AREA         127.41 DEG. F AL
C   26 BATTERY LEFT       115.87 DEG. F AL
C   27 BATTERY RIGHT      112.36 DEG. F AL
C   28 AIR IN SET         124.36 DEG. F AL
C   29 FUEL TANK          101.67 DEG. F AL
C   30 FUEL OUTLET        148.83 DEG. F AL

END SCAN GROUP 1      09 NOV 87  11:51:2

STOPPED SINGLE SCAN   09 NOV 87  11:51:2
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BEGIN SCAN GROUP 1    09 NOV 87  11:59:5
30KW 60HZ GEN SET S/NRZ5 3774

C    1 EXHAUST 1          770.41 DEG. F AL
C    2 EXHAUST 2          790.90 DEG. F AL
C    3 EXHAUST 3          811.69 DEG. F AL
C    4 EXHAUST 4          777.07 DEG. F AL
C    5 EXHAUST 5          777.54 DEG. F AL
C    6 EXHAUST 6          761.98 DEG. F AL
C    7 ENG. COOL. IN      202.49 DEG. F AL
C    8 ENG. COOL. OUT     210.52 DEG. F AL
C    9 OIL SUMP           232.44 DEG. F AL
C   10 OIL GALLERY        235.35 DEG. F AL
C   11                    .00000
C   12                    .00000
C   13  ENG. INTAKE       131.62 DEG. F AL
C   14 RAD. TOP LEFT      148.51 DEG. F AL
C   15 RAD. BTTM LEFT     143.61 DEG. F AL
C   16 RAD. TOP RIGHT     144.92 DEG. F AL
C   17 RAD. BTTM RIGHT    147.48 DEG. F AL
C   18 GEN. AIR IN        122.95 DEG. F AL
C   19 GEN. AIR OUT       143.03 DEG. F AL
C   20 GEN. FRAME TOP     129.79 DEG. F AL
C   21 GEN. FRAME BTTM    125.60 DEG. F AL
C   22 GEN. EXCITER       131.07 DEG. F AL
C   23 GEN. VOLT. REG.    134.01 DEG. F AL
C   24 CONTROL PANEL      133.26 DEG. F AL
C   25 RELAY AREA         127.87 DEG. F AL
C   26 BATTERY LEFT       117.56 DEG. F AL
C   27 BATTERY RIGHT      113.99 DEG. F AL
C   28 AIR IN SET         125.45 DEG. F AL
C   29 FUEL TANK          103.26 DEG. F AL
C   30 FUEL OUTLET        148.94 DEG. F AL

END SCAN GROUP 1      09 NOV 87  12:00:0

STOPPED SINGLE SCAN   09 NOV 87  12:00:0
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BEGIN SCAN GROUP 1    09 NOV 87   12:09:10
30KW 60HZ GEN SET S/NRZ5 3774

C    1 EXHAUST 1          768.74 DEG.  F ALM
C    2 EXHAUST 2          791.41 DEG.  F ALM
C    3 EXHAUST 3          812.75 DEG.  F ALM
C    4 EXHAUST 4          779.08 DEG.  F ALM
C    5 EXHAUST 5          774.98 DEG.  F ALM
C    6 EXHAUST 6          761.81 DEG.  F ALM
C    7 ENG. COOL. IN      202.96 DEG.  F ALM
C    8 ENG. COOL. OUT     210.99 DEG.  F ALM
C    9 OIL SUMP           234.49 DEG.  F ALM
C   10 OIL GALLERY        237.23 DEG.  F ALM
C   11                    .00000
C   12                    .00000
C   13  ENG. INTAKE       131.45 DEG.  F ALM
C   14 RAD. TOP LEFT      148.38 DEG.  F ALM
C   15 RAD. BTTM LEFT     143.48 DEG.  F ALM
C   16 RAD. TOP RIGHT     145.14 DEG.  F ALM
C   17 RAD. BTTM RIGHT    147.98 DEG.  F ALM
C   18 GEN. AIR IN        122.77 DEG.  F ALM
C   19 GEN. AIR OUT       143.63 DEG.  F ALM
C   20 GEN. FRAME TOP     129.99 DEG.  F ALM
C   21 GEN. FRAME BTTM    125.85 DEG.  F ALM
C   22 GEN. EXCITER       131.14 DEG.  F ALM
C   23 GEN. VOLT. REG.    134.02 DEG.  F ALM
C   24 CONTROL PANEL      133.36 DEG.  F ALM
C   25 RELAY AREA         127.78 DEG.  F ALM
C   26 BATTERY LEFT       119.53 DEG.  F ALM
C   27 BATTERY RIGHT      116.11 DEG.  F ALM
C   28 AIR IN SET         124.92 DEG.  F ALM
C   29 FUEL TANK          104.90 DEG.  F ALM
C   30 FUEL OUTLET        148.91 DEG.  F ALM

END SCAN GROUP 1      09 NOV 87   12:09:20

STOPPED SINGLE SCAN   09 NOV 87   12:09:20


BEGIN SCAN GROUP 1    09 NOV 87   12:19:37
30KW 60HZ GEN SET S/NRZ5 3774

C    1 EXHAUST 1          769.25 DEG.  F ALM
C    2 EXHAUST 2          792.10 DEG.  F ALM
C    3 EXHAUST 3          812.94 DEG.  F ALM
C    4 EXHAUST 4          779.42 DEG.  F ALM
C    5 EXHAUST 5          777.92 DEG.  F ALM
C    6 EXHAUST 6          762.29 DEG.  F ALM
C    7 ENG. COOL. IN      203.30 DEG.  F ALM
C    8 ENG. COOL. OUT     211.37 DEG.  F ALM
C    9 OIL SUMP           235.03 DEG.  F ALM
C   10 OIL GALLERY        238.22 DEG.  F ALM
C   11                    .00000
C   12                    .00000
C   13  ENG. INTAKE       131.62 DEG.  F ALM
C   14 RAD. TOP LEFT      148.57 DEG.  F ALM
C   15 RAD. BTTM LEFT     143.65 DEG.  F ALM
C   16 RAD. TOP RIGHT     145.14 DEG.  F ALM
C   17 RAD. BTTM RIGHT    148.03 DEG.  F ALM
C   18 GEN. AIR IN        121.82 DEG.  F ALM
C   19 GEN. AIR OUT       143.56 DEG.  F ALM
C   20 GEN. FRAME TOP     130.16 DEG.  F ALM
C   21 GEN. FRAME BTTM    125.94 DEG.  F ALM
C   22 GEN. EXCITER       131.18 DEG.  F ALM
C   23 GEN. VOLT. REG.    134.04 DEG.  F ALM
C   24 CONTROL PANEL      133.29 DEG.  F ALM
C   25 RELAY AREA         127.55 DEG.  F ALM
C   26 BATTERY LEFT       120.83 DEG.  F ALM
C   27 BATTERY RIGHT      117.91 DEG.  F ALM
C   28 AIR IN SET         124.11 DEG.  F ALM
C   29 FUEL TANK          106.59 DEG.  F ALM
C   30 FUEL OUTLET        149.95 DEG.  F ALM

END SCAN GROUP 1      09 NOV 87   12:19:47
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TEST DATA

ITEM 30 KW, 60 Hz GENERATOR SET MODIFIED

MFGR. LIBBY WELDING

MODEL NO. MEP 005A

SERIAL NO. RZS 3774

NTS

National Technical Systems | Scientific Services Group | Testing Division, P.O. Box 38, Harwood, Virginia 22471, Tel: 703 752 5300

FREQUENCY ADJUSTMENT RANGE.

REF. NO. MIL-STD 705; 511.2

SHEET 1 OF 1

DATE 9 Nov. 1987

JOB NO. 555-2140

PROJ. ENGR.

RECORDER/OBSERVER G. CARTER

INST TIME	STEP NO.	LOAD STEP	E60280 VOLTAGE x1 L_1-L_0 VAC	L_2-L_0 VAC	L_3-L_0 VAC	E60400 AMPERES x40 L_1-L_0 AC AMPS	L_2-L_0 AC AMPS	L_3-L_0 AC AMPS	E62300 KILOWATTS x40 L_1-L_0 Kw	L_2-L_0 Kw	L_3-L_0 Kw	E2428 POWER FACTOR PF	E2410 FREQ. Hz	E6189 EXCITER FIELD VOLTS VDC	AMPS DCA	AMB. TEMP. °F	
1311			STARTED UNIT ON NO LOAD														
1315			APPLIED	RATED	LOAD	TO STABILIZE PER 704.1.3.2 (F)(2) METHOD 511.2 FREQUENCY ADJUST											
1325		RTL	119.7	120.5	120	2.45	2.5	2.5	.241	.25	.245	.80	60.2	9.2	3.5	124	134/34
1335		RTL	119.5	120.5	120	2.45	2.5	2.5	.241	.25	.245	.80	60.1	9.3	3.5	123	134/34
1345		RTL	119.5	120.5	120	2.45	2.5	2.5	.241	.25	.245	.80	60.1	9.4	3.5	123	134/34
1355	1	RTL	119.5	120.5	120	2.45	2.5	2.5	.241	.25	.245	.80	60.1	9.5	3.5	122	133/34
1400	2	RTL	119.5	120.5	120	2.6	2.63	2.63	.251	.26	.253	.80	61.9	9.2	3.4	122	140/41
1405	3	RTL	120	120.5	120	2.4	2.45	2.45	.241	.25	.248	.89	58.0	10.2	3.6	122	125/32
1406			END	OF	TEST												

E1-#

NOTES: UNIT FAILED TO ADJUST TO 62 Hz MAX ATTAINABLE 61.9 Hz

FREQUENCY ADJUSTMENT RANGE 511.2

BEGIN SCAN GROUP 1 09 NOV 87 13:25:31
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	764.37	DEG. F	ALM
C	2	EXHAUST 2	782.27	DEG. F	ALM
C	3	EXHAUST 3	804.29	DEG. F	ALM
C	4	EXHAUST 4	783.29	DEG. F	ALM
C	5	EXHAUST 5	768.87	DEG. F	ALM
C	6	EXHAUST 6	760.05	DEG. F	ALM
C	7	ENG. COOL. IN	199.28	DEG. F	ALM
C	8	ENG. COOL. OUT	207.02	DEG. F	ALM
C	9	OIL SUMP	222.30	DEG. F	ALM
C	10	OIL GALLERY	225.50	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	130.61	DEG. F	ALM
C	14	RAD. TOP LEFT	146.65	DEG. F	ALM
C	15	RAD. BTTM LEFT	141.60	DEG. F	ALM
C	16	RAD. TOP RIGHT	142.99	DEG. F	ALM
C	17	RAD. BTTM RIGHT	145.82	DEG. F	ALM
C	18	GEN. AIR IN	121.24	DEG. F	ALM
C	19	GEN. AIR OUT	140.33	DEG. F	ALM
C	20	GEN. FRAME TOP	129.14	DEG. F	ALM
C	21	GEN. FRAME BTTM	125.24	DEG. F	ALM
C	22	GEN. EXCITER	130.47	DEG. F	ALM
C	23	GEN. VOLT. REG.	134.01	DEG. F	ALM
C	24	CONTROL PANEL	132.46	DEG. F	ALM
C	25	RELAY AREA	127.26	DEG. F	ALM
C	26	BATTERY LEFT	125.73	DEG. F	ALM
C	27	BATTERY RIGHT	124.92	DEG. F	ALM
C	28	AIR IN SET	123.94	DEG. F	ALM
C	29	FUEL TANK	113.19	DEG. F	ALM
C	30	FUEL OUTLET	148.64	DEG. F	ALM

END SCAN GROUP 1 09 NOV 87 13:25:41

STOPPED SINGLE SCAN 09 NOV 87 13:25:41

BEGIN SCAN GROUP 1 09 NOV 87 13:35:17
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	762.80	DEG. F	ALM
C	2	EXHAUST 2	782.88	DEG. F	ALM
C	3	EXHAUST 3	806.89	DEG. F	ALM
C	4	EXHAUST 4	783.95	DEG. F	ALM
C	5	EXHAUST 5	768.70	DEG. F	ALM
C	6	EXHAUST 6	758.82	DEG. F	ALM
C	7	ENG. COOL. IN	202.85	DEG. F	ALM
C	8	ENG. COOL. OUT	210.11	DEG. F	ALM
C	9	OIL SUMP	230.83	DEG. F	ALM
C	10	OIL GALLERY	232.96	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	131.90	DEG. F	ALM
C	14	RAD. TOP LEFT	148.33	DEG. F	ALM
C	15	RAD. BTTM LEFT	143.84	DEG. F	ALM
C	16	RAD. TOP RIGHT	144.75	DEG. F	ALM
C	17	RAD. BTTM RIGHT	147.52	DEG. F	ALM
C	18	GEN. AIR IN	122.54	DEG. F	ALM
C	19	GEN. AIR OUT	142.52	DEG. F	ALM
C	20	GEN. FRAME TOP	130.02	DEG. F	ALM
C	21	GEN. FRAME BTTM	125.72	DEG. F	ALM
C	22	GEN. EXCITER	131.47	DEG. F	ALM
C	23	GEN. VOLT. REG.	134.19	DEG. F	ALM
C	24	CONTROL PANEL	133.14	DEG. F	ALM
C	25	RELAY AREA	128.82	DEG. F	ALM
C	26	BATTERY LEFT	127.29	DEG. F	ALM
C	27	BATTERY RIGHT	126.38	DEG. F	ALM
C	28	AIR IN SET	124.21	DEG. F	ALM
C	29	FUEL TANK	114.19	DEG. F	ALM
C	30	FUEL OUTLET	149.59	DEG. F	ALM

END SCAN GROUP 1 09 NOV 87 13:35:27

STOPPED SINGLE SCAN 09 NOV 87 13:35:27

BEGIN SCAN GROUP 1 09 NOV 87 13:45:35
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	761.26	DEG. F	ALM
C	2	EXHAUST 2	782.21	DEG. F	ALM
C	3	EXHAUST 3	802.88	DEG. F	ALM
C	4	EXHAUST 4	770.66	DEG. F	ALM
C	5	EXHAUST 5	764.00	DEG. F	ALM
C	6	EXHAUST 6	754.81	DEG. F	ALM
C	7	ENG. COOL. IN	202.03	DEG. F	ALM
C	8	ENG. COOL. OUT	210.02	DEG. F	ALM
C	9	OIL SUMP	233.52	DEG. F	ALM
C	10	OIL GALLERY	236.30	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	130.69	DEG. F	ALM
C	14	RAD. TOP LEFT	147.40	DEG. F	ALM
C	15	RAD. BTTM LEFT	142.57	DEG. F	ALM
C	16	RAD. TOP RIGHT	144.63	DEG. F	ALM
C	17	RAD. BTTM RIGHT	146.95	DEG. F	ALM
C	18	GEN. AIR IN	121.20	DEG. F	ALM
C	19	GEN. AIR OUT	142.50	DEG. F	ALM
C	20	GEN. FRAME TOP	129.63	DEG. F	ALM
C	21	GEN. FRAME BTTM	125.61	DEG. F	ALM
C	22	GEN. EXCITER	130.29	DEG. F	ALM
C	23	GEN. VOLT. REG.	134.15	DEG. F	ALM
C	24	CONTROL PANEL	133.15	DEG. F	ALM
C	25	RELAY AREA	126.98	DEG. F	ALM
C	26	BATTERY LEFT	128.32	DEG. F	ALM
C	27	BATTERY RIGHT	128.00	DEG. F	ALM
C	28	AIR IN SET	123.46	DEG. F	ALM
C	29	FUEL TANK	115.25	DEG. F	ALM
C	30	FUEL OUTLET	150.10	DEG. F	ALM

END SCAN GROUP 1 09 NOV 87 13:45:45

STOPPED SINGLE SCAN 09 NOV 87 13:45:45

BEGIN SCAN GROUP 1 09 NOV 87 13:54:56
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	760.76	DEG. F	ALM
C	2	EXHAUST 2	781.73	DEG. F	ALM
C	3	EXHAUST 3	804.80	DEG. F	ALM
C	4	EXHAUST 4	770.13	DEG. F	ALM
C	5	EXHAUST 5	762.92	DEG. F	ALM
C	6	EXHAUST 6	754.43	DEG. F	ALM
C	7	ENG. COOL. IN	201.69	DEG. F	ALM
C	8	ENG. COOL. OUT	209.66	DEG. F	ALM
C	9	OIL SUMP	234.20	DEG. F	ALM
C	10	OIL GALLERY	237.10	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	130.18	DEG. F	ALM
C	14	RAD. TOP LEFT	147.09	DEG. F	ALM
C	15	RAD. BTTM LEFT	142.23	DEG. F	ALM
C	16	RAD. TOP RIGHT	144.27	DEG. F	ALM
C	17	RAD. BTTM RIGHT	146.85	DEG. F	ALM
C	18	GEN. AIR IN	120.69	DEG. F	ALM
C	19	GEN. AIR OUT	142.40	DEG. F	ALM
C	20	GEN. FRAME TOP	129.26	DEG. F	ALM
C	21	GEN. FRAME BTTM	125.04	DEG. F	ALM
C	22	GEN. EXCITER	129.96	DEG. F	ALM
C	23	GEN. VOLT. REG.	133.75	DEG. F	ALM
C	24	CONTROL PANEL	132.73	DEG. F	ALM
C	25	RELAY AREA	126.65	DEG. F	ALM
C	26	BATTERY LEFT	129.67	DEG. F	ALM
C	27	BATTERY RIGHT	129.36	DEG. F	ALM
C	28	AIR IN SET	122.87	DEG. F	ALM
C	29	FUEL TANK	116.18	DEG. F	ALM
C	30	FUEL OUTLET	149.10	DEG. F	ALM

END SCAN GROUP 1 09 NOV 87 13:55:06

STOPPED SINGLE SCAN 09 NOV 87 13:55:06

BEGIN SCAN GROUP 1 09 NOV 87 13:59:57
30KW 60HZ GEN SET S/NR25 3774

C	1	EXHAUST 1	749.44	DEG. F	ALM
C	2	EXHAUST 2	778.51	DEG. F	ALM
C	3	EXHAUST 3	808.50	DEG. F	ALM
C	4	EXHAUST 4	783.51	DEG. F	ALM
C	5	EXHAUST 5	776.16	DEG. F	ALM
C	6	EXHAUST 6	765.67	DEG. F	ALM
C	7	ENG. COOL. IN	201.27	DEG. F	ALM
C	8	ENG. COOL. OUT	209.36	DEG. F	ALM
C	9	OIL SUMP	234.56	DEG. F	ALM
C	10	OIL GALLERY	237.41	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	130.07	DEG. F	ALM
C	14	RAD. TOP LEFT	146.84	DEG. F	ALM
C	15	RAD. BTTM LEFT	142.38	DEG. F	ALM
C	16	RAD. TOP RIGHT	144.37	DEG. F	ALM
C	17	RAD. BTTM RIGHT	147.85	DEG. F	ALM
C	18	GEN. AIR IN	121.83	DEG. F	ALM
C	19	GEN. AIR OUT	142.38	DEG. F	ALM
C	20	GEN. FRAME TOP	129.16	DEG. F	ALM
C	21	GEN. FRAME BTTM	124.89	DEG. F	ALM
C	22	GEN. EXCITER	129.74	DEG. F	ALM
C	23	GEN. VOLT. REG.	133.43	DEG. F	ALM
C	24	CONTROL PANEL	132.29	DEG. F	ALM
C	25	RELAY AREA	126.60	DEG. F	ALM
C	26	BATTERY LEFT	130.16	DEG. F	ALM
C	27	BATTERY RIGHT	129.74	DEG. F	ALM
C	28	AIR IN SET	123.20	DEG. F	ALM
C	29	FUEL TANK	116.70	DEG. F	ALM
C	30	FUEL OUTLET	149.92	DEG. F	ALM

END SCAN GROUP 1 09 NOV 87 14:00:07

STOPPED SINGLE SCAN 09 NOV 87 14:00:07

TEST DATA

ITEM 30 KW 60 Hz GENERATOR SET MODIFIED
MFGR. LIBBY WELDING
MODEL NO. MEP 005A
SERIAL NO. RZ53774

NTS
National Technical Systems | Scientific Services Group | Testing Division P.O. Box 38 Harlwood, Virginia 22471 Tel: 703 752 5300

HIGH TEMP OPERATION
710.1.3.2 (H)

REF. NO. MIL-STD 705
SHEET ____ OF ____
DATE 9 NOV 1987
JOB NO. 555-2140
PROJ. ENGR. ____
RECORDER/OBSERVER G CARTER

INST TIME	STEP NO.	LOAD STEP	E60280 VOLTAGE L_1-L_0 VAC	L_2-L_0 VAC	L_3-L_0 VAC	E60400 AMPERES x40 L_1-L_0 AC AMPS	L_2-L_0 AC AMPS	L_3-L_0 AC AMPS	E60300 KILOWATTS x40 L_1-L_0 Kw	L_2-L_0 Kw	L_3-L_0 Kw	E62420 POWER FACTOR PF	E62410 FREQ. Hz	E61890 EXCITER FIELD VOLTS VDC	AMPS DCA	AMB. TEMP. °F	PRESS (illegible) IN	(illegible)
1410		STARTED STABILIZATION				FOR	HIGH	TEMP	OPERATION									
1420		R/L	119.5	120.5	120	2.51	2.55	2.55	.25	.258	.251	.85	59.9	9.7	3.6	122	13.3	55.9
1430		R/L	119.5	120.5	120	2.51	2.55	2.55	.25	.257	.251	.85	59.9	9.7	3.6	124	13.3	56.9
1440		R/L	119.5	120.5	120	2.51	2.55	2.55	.25	.256	.25	.81	59.9	9.8	3.6	123	13.3	58.5
1441		SHUT	UNIT	DOWN	FOR	5 MIN.												
1447		3 A	TEMPS	TO	START	UNIT	- WOULD NOT		START - STARTED ON BATTLE SHORT WITH NO							LOAD	150	
1455		N/L	122	122	122								61.9	3.7	1.4	121	150	23.7
1505		N/L	121	122	122								61.9	3.7	1.4	122	14.9	13.7
1514		SHUT	UNIT	DOWN	TO	ZERO	GAGES	FOR	GAGE	INDICATING		TEST	—	END	OF	TEST		

NOTES: SET FAILED TO START 3 TIMES - UNIT PLACED IN BATTLE SHORT AND STARTED WITH "NO LOAD"

HIGH TEMP OPERATION 7.0.1.8.2(Y)

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BEGIN SCAN GROUP 1    09 NOV 87   14:10:14
30KW 60HZ GEN SET S/NRZ5 3774

C    1 EXHAUST 1          771.66 DEG.  F ALM
C    2 EXHAUST 2          795.35 DEG.  F ALM
C    3 EXHAUST 3          820.86 DEG.  F ALM
C    4 EXHAUST 4          779.51 DEG.  F ALM
C    5 EXHAUST 5          779.04 DEG.  F ALM
C    6 EXHAUST 6          767.43 DEG.  F ALM
C    7 ENG. COOL. IN      203.06 DEG.  F ALM
C    8 ENG. COOL. OUT     211.21 DEG.  F ALM
C    9 OIL SUMP           235.32 DEG.  F ALM
C   10 OIL GALLERY        238.17 DEG.  F ALM
C   11                    .00000
C   12                    .00000
C   13  ENG. INTAKE       130.28 DEG.  F ALM
C   14 RAD. TOP LEFT      147.66 DEG.  F ALM
C   15 RAD. BTTM LEFT     142.59 DEG.  F ALM
C   16 RAD. TOP RIGHT     144.56 DEG.  F ALM
C   17 RAD. BTTM RIGHT    146.90 DEG.  F ALM
C   18 GEN. AIR IN        120.63 DEG.  F ALM
C   19 GEN. AIR OUT       142.68 DEG.  F ALM
C   20 GEN. FRAME TOP     128.98 DEG.  F ALM
C   21 GEN. FRAME BTTM    124.78 DEG.  F ALM
C   22 GEN. EXCITER       130.07 DEG.  F ALM
C   23 GEN. VOLT. REG.    133.20 DEG.  F ALM
C   24 CONTROL PANEL      132.11 DEG.  F ALM
C   25 RELAY AREA         126.30 DEG.  F ALM
C   26 BATTERY LEFT       132.30 DEG.  F ALM
C   27 BATTERY RIGHT      131.65 DEG.  F ALM
C   28 AIR IN SET         122.92 DEG.  F ALM
C   29 FUEL TANK          118.61 DEG.  F ALM
C   30 FUEL OUTLET        148.91 DEG.  F ALM

END SCAN GROUP 1      09 NOV 87   14:19:24

STOPPED SINGLE SCAN   09 NOV 87   14:19:24


BEGIN SCAN GROUP 1    09 NOV 87   14:29:52
30KW 60HZ GEN SET S/NRZ5 3774

C    1 EXHAUST 1          770.67 DEG.  F ALM
C    2 EXHAUST 2          795.69 DEG.  F ALM
C    3 EXHAUST 3          822.94 DEG.  F ALM
C    4 EXHAUST 4          779.22 DEG.  F ALM
C    5 EXHAUST 5          781.65 DEG.  F ALM
C    6 EXHAUST 6          772.48 DEG.  F ALM
C    7 ENG. COOL. IN      202.96 DEG.  F ALM
C    8 ENG. COOL. OUT     211.26 DEG.  F ALM
C    9 OIL SUMP           235.58 DEG.  F ALM
C   10 OIL GALLERY        238.46 DEG.  F ALM
C   11                    .00000
C   12                    .00000
C   13  ENG. INTAKE       130.21 DEG.  F ALM
C   14 RAD. TOP LEFT      147.52 DEG.  F ALM
C   15 RAD. BTTM LEFT     142.52 DEG.  F ALM
C   16 RAD. TOP RIGHT     144.75 DEG.  F ALM
C   17 RAD. BTTM RIGHT    147.31 DEG.  F ALM
C   18 GEN. AIR IN        120.44 DEG.  F ALM
C   19 GEN. AIR OUT       142.98 DEG.  F ALM
C   20 GEN. FRAME TOP     128.98 DEG.  F ALM
C   21 GEN. FRAME BTTM    124.76 DEG.  F ALM
C   22 GEN. EXCITER       129.56 DEG.  F ALM
C   23 GEN. VOLT. REG.    133.10 DEG.  F ALM
C   24 CONTROL PANEL      132.08 DEG.  F ALM
C   25 RELAY AREA         126.19 DEG.  F ALM
C   26 BATTERY LEFT       133.97 DEG.  F ALM
C   27 BATTERY RIGHT      133.71 DEG.  F ALM
C   28 AIR IN SET         122.51 DEG.  F ALM
C   29 FUEL TANK          119.56 DEG.  F ALM
C   30 FUEL OUTLET        149.32 DEG.  F ALM

END SCAN GROUP 1      09 NOV 87   14:30:02

STOPPED SINGLE SCAN   09 NOV 87   14:30:02


BEGIN SCAN GROUP 1    09 NOV 87   14:39:33
30KW 60HZ GEN SET S/NRZ5 3774

C    1 EXHAUST 1          769.12 DEG.  F ALM
C    2 EXHAUST 2          793.61 DEG.  F ALM
C    3 EXHAUST 3          822.61 DEG.  F ALM
C    4 EXHAUST 4          778.67 DEG.  F ALM
C    5 EXHAUST 5          783.11 DEG.  F ALM
C    6 EXHAUST 6          771.68 DEG.  F ALM
C    7 ENG. COOL. IN      203.25 DEG.  F ALM
C    8 ENG. COOL. OUT     211.46 DEG.  F ALM
C    9 OIL SUMP           235.25 DEG.  F ALM
C   10 OIL GALLERY        238.67 DEG.  F ALM
C   11                    .00000
C   12                    .00000
C   13  ENG. INTAKE       130.38 DEG.  F ALM
C   14 RAD. TOP LEFT      147.93 DEG.  F ALM
C   15 RAD. BTTM LEFT     142.89 DEG.  F ALM
C   16 RAD. TOP RIGHT     144.97 DEG.  F ALM
C   17 RAD. BTTM RIGHT    147.60 DEG.  F ALM
C   18 GEN. AIR IN        120.91 DEG.  F ALM
C   19 GEN. AIR OUT       143.48 DEG.  F ALM
C   20 GEN. FRAME TOP     129.17 DEG.  F ALM
C   21 GEN. FRAME BTTM    124.98 DEG.  F ALM
C   22 GEN. EXCITER       130.00 DEG.  F ALM
C   23 GEN. VOLT. REG.    133.13 DEG.  F ALM
C   24 CONTROL PANEL      132.13 DEG.  F ALM
C   25 RELAY AREA         126.54 DEG.  F ALM
C   26 BATTERY LEFT       134.97 DEG.  F ALM
C   27 BATTERY RIGHT      135.04 DEG.  F ALM
C   28 AIR IN SET         123.10 DEG.  F ALM
C   29 FUEL TANK          120.35 DEG.  F ALM
C   30 FUEL OUTLET        149.45 DEG.  F ALM

END SCAN GROUP 1      09 NOV 87   14:39:46

STOPPED SINGLE SCAN   09 NOV 87   14:39:46


BEGIN SCAN GROUP 1    09 NOV 87   14:55:00
30KW 60HZ GEN SET S/NRZ5 3774

C    1 EXHAUST 1          337.61 DEG.  F ALM
C    2 EXHAUST 2          327.11 DEG.  F ALM
C    3 EXHAUST 3          311.78 DEG.  F ALM
C    4 EXHAUST 4          360.69 DEG.  F ALM
C    5 EXHAUST 5          365.10 DEG.  F ALM
C    6 EXHAUST 6          358.18 DEG.  F ALM
C    7 ENG. COOL. IN      173.67 DEG.  F ALM
C    8 ENG. COOL. OUT     180.99 DEG.  F ALM
C    9 OIL SUMP           220.11 DEG.  F ALM
C   10 OIL GALLERY        222.99 DEG.  F ALM
C   11                    .00000
C   12                    .00000
C   13  ENG. INTAKE       125.73 DEG.  F ALM
C   14 RAD. TOP LEFT      135.54 DEG.  F ALM
C   15 RAD. BTTM LEFT     135.11 DEG.  F ALM
C   16 RAD. TOP RIGHT     137.18 DEG.  F ALM
C   17 RAD. BTTM RIGHT    138.36 DEG.  F ALM
C   18 GEN. AIR IN        118.99 DEG.  F ALM
C   19 GEN. AIR OUT       135.13 DEG.  F ALM
C   20 GEN. FRAME TOP     127.31 DEG.  F ALM
C   21 GEN. FRAME BTTM    123.65 DEG.  F ALM
C   22 GEN. EXCITER       126.85 DEG.  F ALM
C   23 GEN. VOLT. REG.    133.27 DEG.  F ALM
C   24 CONTROL PANEL      131.18 DEG.  F ALM
C   25 RELAY AREA         123.83 DEG.  F ALM
C   26 BATTERY LEFT       135.49 DEG.  F ALM
C   27 BATTERY RIGHT      135.93 DEG.  F ALM
C   28 AIR IN SET         121.06 DEG.  F ALM
C   29 FUEL TANK          121.08 DEG.  F ALM
C   30 FUEL OUTLET        151.03 DEG.  F ALM

END SCAN GROUP 1      09 NOV 87   14:55:10

STOPPED SINGLE SCAN   09 NOV 87   14:55:10
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BEGIN SCAN GROUP 1    09 NOV 87   15:04:05
SCAN 60HZ GEN SET S/N#25 3774

C    1 EXHAUST 1          334.64 DEG.  F ALM
C    2 EXHAUST 2          330.64 DEG.  F ALM
C    3 EXHAUST 3          315.91 DEG.  F ALM
C    4 EXHAUST 4          355.91 DEG.  F ALM
C    5 EXHAUST 5          360.61 DEG.  F ALM
C    6 EXHAUST 6          347.87 DEG.  F ALM
C    7 ENG. COOL. IN      170.30 DEG.  F ALM
C    8 ENG. COOL. OUT     179.31 DEG.  F ALM
C    9 OIL SUMP           213.90 DEG.  F ALM
C   10 OIL GALLERY        216.55 DEG.  F ALM
C   11                    .00000
C   12                    .00000
C   13  ENG. INTAKE       124.64 DEG.  F ALM
C   14 RAD. TOP LEFT      133.81 DEG.  F ALM
C   15 RAD. BTTM LEFT     133.66 DEG.  F ALM
C   16 RAD. TOP RIGHT     136.13 DEG.  F ALM
C   17 RAD. BTTM RIGHT    136.93 DEG.  F ALM
C   18 GEN. AIR IN        128.35 DEG.  F ALM
C   19 GEN. AIR OUT       132.96 DEG.  F ALM
C   20 GEN. FRAME TOP     125.61 DEG.  F ALM
C   21 GEN. FRAME BTTM    122.97 DEG.  F ALM
C   22 GEN. EXCITER       126.93 DEG.  F ALM
C   23 GEN. VOLT. REG.    132.11 DEG.  F ALM
C   24 CONTROL PANEL      130.07 DEG.  F ALM
C   25 RELAY AREA         123.36 DEG.  F ALM
C   26 BATTERY LEFT       135.40 DEG.  F ALM
C   27 BATTERY RIGHT      136.90 DEG.  F ALM
C   28 AIR IN SET         122.07 DEG.  F ALM
C   29 FUEL TANK          121.45 DEG.  F ALM
C   30 FUEL OUTLET        140.82 DEG.  F ALM

END SCAN GROUP 1      09 NOV 87   15:04:15

STOPPED SINGLE SCAN   09 NOV 87   15:04:15
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TEST DATA

ITEM 30 KW 60HZ
GEN SET
MODIFIED
MFGR. LIBBY WELDING
MODEL NO. MEP005A
SERIAL NO. KZS 3774

NTS
National Technical Systems
Scientific Services Group
Testing Division
PO Box 38
Hartwood, Virginia 22471
Tel: 703 752 5300

HIGH TEMP 710.1.3.2(14)(B)

FREQUENCY AND VOLTAGE STABILITY TEST
(LONG TERM)

REF. NO. MIL-STD 705: 608.2
SHEET 1 OF 2
DATE 10 NOV 87
JOB NO. 555-2140
PROJ. ENGR.
RECORDER/OBSERVER BLANCK

INST TIME	STEP NO.	LOAD STEP	E60250 VOLTAGE L_1-L_0 VAC	L_2-L_0 VAC	L_3-L_0 VAC	E60400 AMPERES 140 L_1-L_0 AC AMPS	L_2-L_0 AC AMPS	L_3-L_0 AC AMPS	E62300 KILOWATTS 140 L_1-L_0 Kw	L_2-L_0 Kw	L_3-L_0 Kw	E62420 POWER FACTOR PF	E60410 FREQ. Hz	E61890 EXCITER FIELD VOLTS VDC	AMPS DCA	AMB. TEMP. °F	PRESS IN/EXH IN Hg
0630		STARTED UNIT															
0635		PLACED ON RATED LOAD - STARTED							STABILIZED								
0645		R/L	119.5	121.0	120.5	2.48	2.52	2.52	.246	.25	.248	.80	60.2	8.8	3.4	124	33/29.0
0655		R/L	119.5	121.0	120.5	2.48	2.52	2.52	.246	.25	.248	.80	60.0	9.2	3.5	126	33/29.3
0705		R/L	119.5	121.0	120.5	2.48	2.52	2.52	.247	.252	.249	.80	59.9	9.4	3.5	126	33/29.6
0715		R/L	119.5	121.0	120.5	2.48	2.52	2.52	.247	.252	.249	.80	59.8	9.5	3.6	124	33/29.6
0725		R/L	119.5	121.0	120.5	2.48	2.52	2.52	.247	.252	.249	.80	59.8	9.7	3.6	124	33/29.8
0735		R/L	119.5	121.0	120.5	2.48	2.52	2.52	.247	.252	.249	.80	59.7	9.7	3.6	125	33/30.0
0745		R/L	119.5	121.0	120.5	2.48	2.52	2.52	.247	.252	.249	.80	59.7	9.8	3.6	125	33/30.1
0755		R/L	119.6	121	120.5	2.49	2.51	2.51	.248	.251	.249	.80	59.7	9.8	3.6	124	33/30.1
0805		R/L	119.5	121	120.5	2.48	2.52	2.52	.247	.252	.249	.80	59.7	9.8	3.6	125	33/30.0
		PERFORMED R/L SHORT TERM STABILITY @ R/L															
0807		R/L	119.5	121	120.5	2.48	2.52	2.52	.247	.252	.249	.80	59.7	9.8	3.6	125	33/30.1
0808		START LONG TERM STABILITY @ R/L															
0810		R/L	120	121	120.4	2.49	2.51	2.51	.249	.251	.25	.80	59.6	9.9	3.6	123	33/30.2
0840		R/L	119.9	121	120.3	2.49	2.51	2.51	.249	.251	.249	.80	59.7	9.9	3.6	123	33/30.0
0910		R/L	119.9	121.1	120.4	2.49	2.51	2.51	.249	.251	.25	.80	59.6	9.9	3.6	125	33/30.2
0940		R/L	119.95	121.3	120.3	2.49	2.51	2.51	.249	.251	.25	.80	59.65	9.9	3.6	122	33/30.2
1010		R/L	119.9	121.5	120.5	2.49	2.51	2.53	.249	.251	.25	.80	59.6	9.9	3.7	125	33/30.2
1040		R/L	119.9	121.1	120.3	2.49	2.51	2.51	.249	.251	.25	.80	59.6	10.0	3.7	124	33/30.2
1110		R/L	119.9	121.2	120.3	2.49	2.51	2.51	.249	.251	.25	.80	59.6	10.0	3.7	124	33/30.2
1140		R/L	119.9	121.5	120.3	2.49	2.52	2.52	.249	.251	.25	.80	59.55	10.0	3.7	126	33/30.2
1210		R/L	119.9	121.5	120.3												
1212		REDUCED LOAD TO ZERO TO START STABILIZATION FOR NO LOAD															
1222		N/L	122	121	122	N/A	N/A	N/A	N/A	N/A	N/A	N/A	61.6	4.1	1.5	124	29.1/23.6
1232		N/L	122	121	122	N/A	N/A	N/A	N/A	N/A	N/A	N/A	61.6	4.1	1.5	123	29.1/23.7
1242		N/L	122	121	122	N/A	N/A	N/A	N/A	N/A	N/A	N/A	61.6	4.0	1.5	125	29.1/23.6

NOTES: UNIT FAILED FREQUENCY REGULATION

TEST DATA

ITEM 30KW 60Hz GENERATOR SET MODIFIED

MFGR. LIBBY WELDING

MODEL NO. MEP 005A

SERIAL NO. R2 5 3774

NTS

National Technical Systems | Scientific Services Group | Testing Division P.O. Box 38 Hartwood, Virginia 22471 Tel: 703 752 5300

HIGH TEMP NO. 1,3,2(H)(8)

FREQUENCY AND VOLTAGE STABILITY TEST (LONG TERM)

REF. NO. MIL-STD 705; 608.2

SHEET 2 OF 2

DATE 10 NOV 1987

JOB NO. 555-2140

PROJ. ENGR.

RECORDER/OBSERVER RT KM GC

INST TIME	STEP NO.	LOAD STEP	E6028D VOLTAGE L_1-L_0 VAC	L_2-L_0 VAC	L_3-L_0 VAC	E6040D AMPERES X 40 L_1-L_0 AC AMPS	L_2-L_0 AC AMPS	L_3-L_0 AC AMPS	E6230D KILOWATTS X 40 L_1-L_0 Kw	L_2-L_0 Kw	L_3-L_0 Kw	E6242D POWER FACTOR PF	E6241D FREQ. Hz	E6190 EXCITER FIELD VOLTS VDC	AMPS DCA	AMB. TEMP. °F	PRES IN/OUT IN H2O
1252		N/L	122	121	122								61.6	4.0	1.5	123	14.7/22.5
1253		PERFORM SHORT TERM	NO	LOAD	STABILITY												
1254		N/L	122	121	122								61.6	4.0	1.5	122	14.7/22.5
1255		START LONG TERM STA	BILITY	AT NO	LOAD												
1325		N/L	122	121	122								61.6	3.9	1.5	123	14.8/23.1
1355		N/L	122	121	122								61.5	4.0	1.5	124	14.7/23.6
1425		N/L	122	121	122								61.5	3.9	1.5	124	14.7/23.9
1455		N/L	122.1	121.1	122.1								61.5	3.9	1.5	124	14.6/24.7
1525		N/L	122.1	121.1	122.1								61.5	3.9	1.5	125	14.7/24.7
1555		N/L	122.1	121.1	122.1								61.45	4.0	1.5	124	14.4/24.7
1625		N/L	122.1	121.1	122.1								61.5	3.8	1.5	123	14.6/25.3
1655		N/L	122.1	121.1	122.1								61.5	3.9	1.5	124	14.3/25.5
1655		END OF LONG TERM STABILITY		AT NO	LOAD												
1700		R/L	120	121.5	120.5	2.54	2.56	2.56	.25	.255	.252	.795	59.4	9.1	3.5	124	13.3/32.7
		N/L	122.5	121	122								61.6	4.1	1.5	124	14.3/26.7
		R/L	120	121.5	121	2.54	2.56	2.56	.25	.255	.252	.795	59.4	9.2	3.6	124	13.3/31.2
		N/L	122.5	121	122								61.5	4.0	1.6	124	14.3/27.8
		R/L	120	121.5	120.5	2.54	2.56	2.56	.25	.255	.252	.795	59.4	9.3	3.6	124	13.2/31.4
1705		N/L	122.5	121	122								61.6	4.1	1.5	124	14.3/28.3
1705		END OF TEST															
1706		SHUT DOWN UNIT															

NOTES: TEST FAILURE - SEE COMPUTATION SHEET

TEST DATA

ITEM 30 KW 60 Hz GENERATOR SET MODIFIED
MFGR. LIBBY WELDING
MODEL NO. MEP 005A
SERIAL NO. R2 5 3224

NTS
National Technical Systems | Scientific Services Group | Testing Division PO Box 38 Hallwood, Virginia 22471 tel: 703 752 5300

FREQUENCY AND VOLTAGE Stability
(Long Term) Method 608.2

REF. NO. MIL-STD-705
SHEET 1 OF 1
DATE 11 JAN 1988
JOB NO. 555-2140
PROJ. ENGR.
RECORDER/OBSERVER C.C. / K.M.

	FREQUENCY							VOLTAGE							
	MAXIMUM EXCURSION				REC.	CONSTANT LOAD BANDWIDTH		REGULATION	MAXIMUM EXCURSION				REC.	CONSTANT LOAD BANDWIDTH	
LOAD	OVERSHOOT		UNDERSHOOT		TIME			FREQ.	VOLT	OVERSHOOT		UNDERSHOOT		TIME			
STEP	Hz	%	Hz	%	SEC	Hz	%	%	%	VOLT	%	VOLT	%	SEC.	VOLT	%
R/L	STEADY STATE STABILIZATION					.10	.17							.17	.15	
N/L						.05	.15							.17	.15	
						SHORT TERM LOAD CHANGES										
1						.05	.09								.12	15
1 - 2			1.35	2.26	.56			3.5	1.33			3.82	3.18	.23		
2						.09	.15								.17	.15
2 - 3	1.22	2.03			.39			3.66	1.25	4.17	3.47			.16		
3						.10	.17								.17	.15
3 - 4			1.38	2.22	.20			3.66	.83			3.30	2.75	.23		
4						.09	.15								.17	.15
4 - 5	1.01	1.68			.55			3.5	.83	2.64	2.04			.23		
5						.09	.15								.26	.32
5 - 6			1.29	2.14	.63			3.5	1.25			3.47	2.89	.23		
6						.09	.15								.17	.15
6 - 7	1.22	2.03			.55			3.66	1.25	3.47	2.89			.23		
7						.16	.26								.17	.15

NOTES: FREQUENCY REGULATION EXCEEDED 3%.

161-87

FREQUENCY/VOLTAGE STABILITY TEST 608.2
LOAD TEST

BEGIN SCAN GROUP 1 10 NOV 87 06:45:27
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	755.96	DEG. F	ALM
C	2	EXHAUST 2	778.76	DEG. F	ALM
C	3	EXHAUST 3	800.00	DEG. F	ALM
C	4	EXHAUST 4	779.66	DEG. F	ALM
C	5	EXHAUST 5	771.96	DEG. F	ALM
C	6	EXHAUST 6	762.01	DEG. F	ALM
C	7	ENG. COOL. IN	189.33	DEG. F	ALM
C	8	ENG. COOL. OUT	197.17	DEG. F	ALM
C	9	OIL SUMP	192.81	DEG. F	ALM
C	10	OIL GALLERY	194.42	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	127.94	DEG. F	ALM
C	14	RAD. TOP LEFT	141.29	DEG. F	ALM
C	15	RAD. BTTM LEFT	134.20	DEG. F	ALM
C	16	RAD. TOP RIGHT	132.92	DEG. F	ALM
C	17	RAD. BTTM RIGHT	136.93	DEG. F	ALM
C	18	GEN. AIR IN	121.63	DEG. F	ALM
C	19	GEN. AIR OUT	127.06	DEG. F	ALM
C	20	GEN. FRAME TOP	117.93	DEG. F	ALM
C	21	GEN. FRAME BTTM	113.93	DEG. F	ALM
C	22	GEN. EXCITER	126.23	DEG. F	ALM
C	23	GEN. VOLT. REG.	108.46	DEG. F	ALM
C	24	CONTROL PANEL	114.58	DEG. F	ALM
C	25	RELAY AREA	122.18	DEG. F	ALM
C	26	BATTERY LEFT	101.47	DEG. F	ALM
C	27	BATTERY RIGHT	103.72	DEG. F	ALM
C	28	AIR IN SET	123.55	DEG. F	ALM
C	29	FUEL TANK	89.944	DEG. F	ALM
C	30	FUEL OUTLET	117.18	DEG. F	ALM

END SCAN GROUP 1 10 NOV 87 06:45:38

STOPPED SINGLE SCAN 10 NOV 87 06:45:38

BEGIN SCAN GROUP 1 10 NOV 87 06:55:07
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	760.95	DEG. F	ALM
C	2	EXHAUST 2	782.60	DEG. F	ALM
C	3	EXHAUST 3	810.84	DEG. F	ALM
C	4	EXHAUST 4	785.83	DEG. F	ALM
C	5	EXHAUST 5	773.58	DEG. F	ALM
C	6	EXHAUST 6	766.13	DEG. F	ALM
C	7	ENG. COOL. IN	196.95	DEG. F	ALM
C	8	ENG. COOL. OUT	204.80	DEG. F	ALM
C	9	OIL SUMP	215.54	DEG. F	ALM
C	10	OIL GALLERY	216.81	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	131.49	DEG. F	ALM
C	14	RAD. TOP LEFT	146.21	DEG. F	ALM
C	15	RAD. BTTM LEFT	140.09	DEG. F	ALM
C	16	RAD. TOP RIGHT	139.42	DEG. F	ALM
C	17	RAD. BTTM RIGHT	143.07	DEG. F	ALM
C	18	GEN. AIR IN	123.96	DEG. F	ALM
C	19	GEN. AIR OUT	134.61	DEG. F	ALM
C	20	GEN. FRAME TOP	125.07	DEG. F	ALM
C	21	GEN. FRAME BTTM	121.26	DEG. F	ALM
C	22	GEN. EXCITER	130.19	DEG. F	ALM
C	23	GEN. VOLT. REG.	116.19	DEG. F	ALM
C	24	CONTROL PANEL	123.73	DEG. F	ALM
C	25	RELAY AREA	126.42	DEG. F	ALM
C	26	BATTERY LEFT	105.98	DEG. F	ALM
C	27	BATTERY RIGHT	105.75	DEG. F	ALM
C	28	AIR IN SET	126.05	DEG. F	ALM
C	29	FUEL TANK	90.898	DEG. F	ALM
C	30	FUEL OUTLET	133.18	DEG. F	ALM

END SCAN GROUP 1 10 NOV 87 06:55:17

STOPPED SINGLE SCAN 10 NOV 87 06:55:17

BEGIN SCAN GROUP 1 10 NOV 87 07:04:0
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	765.31	DEG. F	AL
C	2	EXHAUST 2	787.84	DEG. F	AL
C	3	EXHAUST 3	815.50	DEG. F	AL
C	4	EXHAUST 4	787.49	DEG. F	AL
C	5	EXHAUST 5	775.82	DEG. F	AL
C	6	EXHAUST 6	768.22	DEG. F	AL
C	7	ENG. COOL. IN	200.81	DEG. F	AL
C	8	ENG. COOL. OUT	208.77	DEG. F	AL
C	9	OIL SUMP	225.38	DEG. F	AL
C	10	OIL GALLERY	227.19	DEG. F	AL
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	132.96	DEG. F	AL
C	14	RAD. TOP LEFT	148.79	DEG. F	AL
C	15	RAD. BTTM LEFT	143.12	DEG. F	AL
C	16	RAD. TOP RIGHT	142.98	DEG. F	AL
C	17	RAD. BTTM RIGHT	146.69	DEG. F	AL
C	18	GEN. AIR IN	125.20	DEG. F	AL
C	19	GEN. AIR OUT	139.38	DEG. F	AL
C	20	GEN. FRAME TOP	128.61	DEG. F	AL
C	21	GEN. FRAME BTTM	124.78	DEG. F	AL
C	22	GEN. EXCITER	131.91	DEG. F	AL
C	23	GEN. VOLT. REG.	120.89	DEG. F	AL
C	24	CONTROL PANEL	128.88	DEG. F	AL
C	25	RELAY AREA	128.76	DEG. F	AL
C	26	BATTERY LEFT	109.31	DEG. F	AL
C	27	BATTERY RIGHT	108.14	DEG. F	AL
C	28	AIR IN SET	127.15	DEG. F	AL
C	29	FUEL TANK	92.313	DEG. F	AL
C	30	FUEL OUTLET	139.79	DEG. F	AL

END SCAN GROUP 1 10 NOV 87 07:04:16

STOPPED SINGLE SCAN 10 NOV 87 07:04:16

BEGIN SCAN GROUP 1 10 NOV 87 07:14:4
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	764.52	DEG. F	AL
C	2	EXHAUST 2	786.68	DEG. F	AL
C	3	EXHAUST 3	812.54	DEG. F	AL
C	4	EXHAUST 4	781.86	DEG. F	AL
C	5	EXHAUST 5	774.09	DEG. F	AL
C	6	EXHAUST 6	763.63	DEG. F	AL
C	7	ENG. COOL. IN	201.70	DEG. F	AL
C	8	ENG. COOL. OUT	209.94	DEG. F	AL
C	9	OIL SUMP	231.50	DEG. F	AL
C	10	OIL GALLERY	233.26	DEG. F	AL
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	131.43	DEG. F	AL
C	14	RAD. TOP LEFT	147.82	DEG. F	AL
C	15	RAD. BTTM LEFT	142.72	DEG. F	AL
C	16	RAD. TOP RIGHT	143.42	DEG. F	AL
C	17	RAD. BTTM RIGHT	146.84	DEG. F	AL
C	18	GEN. AIR IN	122.51	DEG. F	AL
C	19	GEN. AIR OUT	140.59	DEG. F	AL
C	20	GEN. FRAME TOP	129.36	DEG. F	AL
C	21	GEN. FRAME BTTM	125.44	DEG. F	AL
C	22	GEN. EXCITER	131.08	DEG. F	AL
C	23	GEN. VOLT. REG.	124.41	DEG. F	AL
C	24	CONTROL PANEL	130.50	DEG. F	AL
C	25	RELAY AREA	127.71	DEG. F	AL
C	26	BATTERY LEFT	112.23	DEG. F	AL
C	27	BATTERY RIGHT	110.37	DEG. F	AL
C	28	AIR IN SET	124.56	DEG. F	AL
C	29	FUEL TANK	94.386	DEG. F	AL
C	30	FUEL OUTLET	145.42	DEG. F	AL

END SCAN GROUP 1 10 NOV 87 07:14:5

STOPPED SINGLE SCAN 10 NOV 87 07:14:5

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BEGIN SCAN GROUP 1   10 NOV 87  07:24:28
30KW 60HZ GEN SET S/NRZ5 3774

C    1 EXHAUST 1          765.85 DEG. F ALM
C    2 EXHAUST 2          786.87 DEG. F ALM
C    3 EXHAUST 3          813.69 DEG. F ALM
C    4 EXHAUST 4          775.25 DEG. F ALM
C    5 EXHAUST 5          772.19 DEG. F ALM
C    6 EXHAUST 6          763.82 DEG. F ALM
C    7 ENG. COOL. IN      202.06 DEG. F ALM
C    8 ENG. COOL. OUT     218.28 DEG. F ALM
C    9 OIL SUMP           233.79 DEG. F ALM
C   10 OIL GALLERY        235.46 DEG. F ALM
C   11                    .00000
C   12                    .00000
C   13  ENG. INTAKE       131.53 DEG. F ALM
C   14 RAD. TOP LEFT      148.26 DEG. F ALM
C   15 RAD. BTTM LEFT     143.82 DEG. F ALM
C   16 RAD. TOP RIGHT     144.10 DEG. F ALM
C   17 RAD. BTTM RIGHT    147.32 DEG. F ALM
C   18 GEN. AIR IN        122.79 DEG. F ALM
C   19 GEN. AIR OUT       142.20 DEG. F ALM
C   20 GEN. FRAME TOP     129.80 DEG. F ALM
C   21 GEN. FRAME BTTM    125.49 DEG. F ALM
C   22 GEN. EXCITER       131.12 DEG. F ALM
C   23 GEN. VOLT. REG.    126.37 DEG. F ALM
C   24 CONTROL PANEL      131.17 DEG. F ALM
C   25 RELAY AREA         127.86 DEG. F ALM
C   26 BATTERY LEFT       114.79 DEG. F ALM
C   27 BATTERY RIGHT      112.78 DEG. F ALM
C   28 AIR IN SET         124.27 DEG. F ALM
C   29 FUEL TANK          96.310 DEG. F ALM
C   30 FUEL OUTLET        147.37 DEG. F ALM

END SCAN GROUP 1     10 NOV 87  07:24:38

STOPPED SINGLE SCAN  10 NOV 87  07:24:38
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BEGIN SCAN GROUP 1   10 NOV 87  07:35:14
30KW 60HZ GEN SET S/NRZ5 3774

C    1 EXHAUST 1          767.85 DEG. F ALM
C    2 EXHAUST 2          790.20 DEG. F ALM
C    3 EXHAUST 3          812.58 DEG. F ALM
C    4 EXHAUST 4          774.09 DEG. F ALM
C    5 EXHAUST 5          773.76 DEG. F ALM
C    6 EXHAUST 6          761.90 DEG. F ALM
C    7 ENG. COOL. IN      202.62 DEG. F ALM
C    8 ENG. COOL. OUT     210.65 DEG. F ALM
C    9 OIL SUMP           234.97 DEG. F ALM
C   10 OIL GALLERY        236.64 DEG. F ALM
C   11                    .00000
C   12                    .00000
C   13  ENG. INTAKE       131.64 DEG. F ALM
C   14 RAD. TOP LEFT      148.72 DEG. F ALM
C   15 RAD. BTTM LEFT     143.58 DEG. F ALM
C   16 RAD. TOP RIGHT     144.87 DEG. F ALM
C   17 RAD. BTTM RIGHT    147.91 DEG. F ALM
C   18 GEN. AIR IN        122.92 DEG. F ALM
C   19 GEN. AIR OUT       143.46 DEG. F ALM
C   20 GEN. FRAME TOP     130.29 DEG. F ALM
C   21 GEN. FRAME BTTM    126.08 DEG. F ALM
C   22 GEN. EXCITER       131.16 DEG. F ALM
C   23 GEN. VOLT. REG.    128.12 DEG. F ALM
C   24 CONTROL PANEL      131.92 DEG. F ALM
C   25 RELAY AREA         128.22 DEG. F ALM
C   26 BATTERY LEFT       116.80 DEG. F ALM
C   27 BATTERY RIGHT      115.01 DEG. F ALM
C   28 AIR IN SET         125.12 DEG. F ALM
C   29 FUEL TANK          98.467 DEG. F ALM
C   30 FUEL OUTLET        148.46 DEG. F ALM

END SCAN GROUP 1     10 NOV 87  07:35:24

STOPPED SINGLE SCAN  10 NOV 87  07:35:24
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BEGIN SCAN GROUP 1   10 NOV 87  07:44:5
30KW 60HZ GEN SET S/NRZ5 3774

C    1 EXHAUST 1          767.36 DEG. F AL
C    2 EXHAUST 2          788.42 DEG. F AL
C    3 EXHAUST 3          814.17 DEG. F AL
C    4 EXHAUST 4          772.77 DEG. F ALM
C    5 EXHAUST 5          772.11 DEG. F ALM
C    6 EXHAUST 6          764.00 DEG. F ALM
C    7 ENG. COOL. IN      203.01 DEG. F ALM
C    8 ENG. COOL. OUT     211.08 DEG. F ALM
C    9 OIL SUMP           235.77 DEG. F ALM
C   10 OIL GALLERY        237.43 DEG. F ALM
C   11                    .00000
C   12                    .00000
C   13  ENG. INTAKE       131.82 DEG. F AL
C   14 RAD. TOP LEFT      148.80 DEG. F ALM
C   15 RAD. BTTM LEFT     143.88 DEG. F AL
C   16 RAD. TOP RIGHT     145.38 DEG. F ALM
C   17 RAD. BTTM RIGHT    148.30 DEG. F ALM
C   18 GEN. AIR IN        122.66 DEG. F ALM
C   19 GEN. AIR OUT       143.08 DEG. F ALM
C   20 GEN. FRAME TOP     130.65 DEG. F ALM
C   21 GEN. FRAME BTTM    126.46 DEG. F ALM
C   22 GEN. EXCITER       131.35 DEG. F ALM
C   23 GEN. VOLT. REG.    129.43 DEG. F ALM
C   24 CONTROL PANEL      132.42 DEG. F ALM
C   25 RELAY AREA         128.39 DEG. F ALM
C   26 BATTERY LEFT       118.18 DEG. F ALM
C   27 BATTERY RIGHT      117.17 DEG. F ALM
C   28 AIR IN SET         124.61 DEG. F ALM
C   29 FUEL TANK          100.34 DEG. F ALM
C   30 FUEL OUTLET        149.43 DEG. F ALM

END SCAN GROUP 1     10 NOV 87  07:45:0

STOPPED SINGLE SCAN  10 NOV 87  07:45:0
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BEGIN SCAN GROUP 1   10 NOV 87  07:55:3
30KW 60HZ GEN SET S/NRZ5 3774

C    1 EXHAUST 1          769.90 DEG. F AL
C    2 EXHAUST 2          791.26 DEG. F ALM
C    3 EXHAUST 3          815.94 DEG. F ALM
C    4 EXHAUST 4          773.78 DEG. F ALM
C    5 EXHAUST 5          777.16 DEG. F ALM
C    6 EXHAUST 6          769.13 DEG. F ALM
C    7 ENG. COOL. IN      203.65 DEG. F ALM
C    8 ENG. COOL. OUT     211.90 DEG. F ALM
C    9 OIL SUMP           236.37 DEG. F ALM
C   10 OIL GALLERY        238.08 DEG. F ALM
C   11                    .00000
C   12                    .00000
C   13  ENG. INTAKE       132.10 DEG. F ALM
C   14 RAD. TOP LEFT      149.35 DEG. F ALM
C   15 RAD. BTTM LEFT     144.44 DEG. F ALM
C   16 RAD. TOP RIGHT     145.99 DEG. F ALM
C   17 RAD. BTTM RIGHT    148.88 DEG. F ALM
C   18 GEN. AIR IN        122.55 DEG. F ALM
C   19 GEN. AIR OUT       144.56 DEG. F ALM
C   20 GEN. FRAME TOP     130.98 DEG. F ALM
C   21 GEN. FRAME BTTM    127.89 DEG. F ALM
C   22 GEN. EXCITER       131.81 DEG. F ALM
C   23 GEN. VOLT. REG.    130.77 DEG. F ALM
C   24 CONTROL PANEL      133.10 DEG. F ALM
C   25 RELAY AREA         128.82 DEG. F ALM
C   26 BATTERY LEFT       120.15 DEG. F ALM
C   27 BATTERY RIGHT      119.16 DEG. F AL
C   28 AIR IN SET         124.70 DEG. F AL
C   29 FUEL TANK          102.30 DEG. F AL
C   30 FUEL OUTLET        148.71 DEG. F AL

END SCAN GROUP 1     10 NOV 87  07:55:45

STOPPED SINGLE SCAN  10 NOV 87  07:55:45
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BEGIN SCAN GROUP 1   10 NOV 87  08:04:17
30KW 60HZ GEN SET S/NRZ5 3774

C   1 EXHAUST 1          772.71 DEG.  F ALM
C   2 EXHAUST 2          792.25 DEG.  F ALM
C   3 EXHAUST 3          815.87 DEG.  F ALM
C   4 EXHAUST 4          774.13 DEG.  F ALM
C   5 EXHAUST 5          775.79 DEG.  F ALM
C   6 EXHAUST 6          768.31 DEG.  F ALM
C   7 ENG. COOL. IN      204.27 DEG.  F ALM
C   8 ENG. COOL. OUT     212.44 DEG.  F ALM
C   9 OIL SUMP           236.81 DEG.  F ALM
C  10 OIL GALLERY        238.53 DEG.  F ALM
C  11                    .00000
C  12                    .00000
C  13  ENG. INTAKE       132.43 DEG.  F ALM
C  14 RAD. TOP LEFT      149.72 DEG.  F ALM
C  15 RAD. BTTM LEFT     144.83 DEG.  F ALM
C  16 RAD. TOP RIGHT     146.41 DEG.  F ALM
C  17 RAD. BTTM RIGHT    149.24 DEG.  F ALM
C  18 GEN. AIR IN        123.44 DEG.  F ALM
C  19 GEN. AIR OUT       145.43 DEG.  F ALM
C  20 GEN. FRAME TOP     131.42 DEG.  F ALM
C  21 GEN. FRAME BTTM    127.22 DEG.  F ALM
C  22 GEN. EXCITER       132.15 DEG.  F ALM
C  23 GEN. VOLT. REG.    131.69 DEG.  F ALM
C  24 CONTROL PANEL      133.63 DEG.  F ALM
C  25 RELAY AREA         128.95 DEG.  F ALM
C  26 BATTERY LEFT       121.13 DEG.  F ALM
C  27 BATTERY RIGHT      120.47 DEG.  F ALM
C  28 AIR IN SET         125.80 DEG.  F ALM
C  29 FUEL TANK          103.93 DEG.  F ALM
C  30 FUEL OUTLET        149.31 DEG.  F ALM

END SCAN GROUP 1      10 NOV 87  08:04:27

STOPPED SINGLE SCAN   10 NOV 87  08:04:27
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BEGIN SCAN GROUP 1   10 NOV 87  08:40:17
30KW 60HZ GEN SET S/NRZ5 3774

C   1 EXHAUST 1          765.60 DEG.  F ALM
C   2 EXHAUST 2          790.08 DEG.  F ALM
C   3 EXHAUST 3          812.46 DEG.  F ALM
C   4 EXHAUST 4          771.83 DEG.  F ALM
C   5 EXHAUST 5          778.37 DEG.  F ALM
C   6 EXHAUST 6          765.47 DEG.  F ALM
C   7 ENG. COOL. IN      203.24 DEG.  F ALM
C   8 ENG. COOL. OUT     211.38 DEG.  F ALM
C   9 OIL SUMP           236.75 DEG.  F ALM
C  10 OIL GALLERY        238.41 DEG.  F ALM
C  11                    .00000
C  12                    .00000
C  13  ENG. INTAKE       131.18 DEG.  F ALM
C  14 RAD. TOP LEFT      148.63 DEG.  F ALM
C  15 RAD. BTTM LEFT     143.65 DEG.  F ALM
C  16 RAD. TOP RIGHT     145.57 DEG.  F ALM
C  17 RAD. BTTM RIGHT    148.24 DEG.  F ALM
C  18 GEN. AIR IN        121.38 DEG.  F ALM
C  19 GEN. AIR OUT       144.71 DEG.  F ALM
C  20 GEN. FRAME TOP     130.34 DEG.  F ALM
C  21 GEN. FRAME BTTM    126.38 DEG.  F ALM
C  22 GEN. EXCITER       130.73 DEG.  F ALM
C  23 GEN. VOLT. REG.    133.11 DEG.  F ALM
C  24 CONTROL PANEL      133.33 DEG.  F ALM
C  25 RELAY AREA         127.54 DEG.  F ALM
C  26 BATTERY LEFT       126.49 DEG.  F ALM
C  27 BATTERY RIGHT      126.37 DEG.  F ALM
C  28 AIR IN SET         123.46 DEG.  F ALM
C  29 FUEL TANK          109.81 DEG.  F ALM
C  30 FUEL OUTLET        150.22 DEG.  F ALM

END SCAN GROUP 1      10 NOV 87  08:40:27

STOPPED SINGLE SCAN   10 NOV 87  08:40:27
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BEGIN SCAN GROUP 1   10 NOV 87  09:09:09
30KW 60HZ GEN SET S/NRZ5 3774

C   1 EXHAUST 1          765.87 DEG.  F ALM
C   2 EXHAUST 2          790.86 DEG.  F ALM
C   3 EXHAUST 3          814.57 DEG.  F ALM
C   4 EXHAUST 4          776.38 DEG.  F ALM
C   5 EXHAUST 5          772.65 DEG.  F ALM
C   6 EXHAUST 6          764.18 DEG.  F ALM
C   7 ENG. COOL. IN      203.18 DEG.  F ALM
C   8 ENG. COOL. OUT     211.27 DEG.  F ALM
C   9 OIL SUMP           236.47 DEG.  F ALM
C  10 OIL GALLERY        238.11 DEG.  F ALM
C  11                    .00000
C  12                    .00000
C  13  ENG. INTAKE       130.89 DEG.  F ALM
C  14 RAD. TOP LEFT      148.36 DEG.  F ALM
C  15 RAD. BTTM LEFT     143.60 DEG.  F ALM
C  16 RAD. TOP RIGHT     145.66 DEG.  F ALM
C  17 RAD. BTTM RIGHT    148.24 DEG.  F ALM
C  18 GEN. AIR IN        122.23 DEG.  F ALM
C  19 GEN. AIR OUT       144.73 DEG.  F ALM
C  20 GEN. FRAME TOP     130.81 DEG.  F ALM
C  21 GEN. FRAME BTTM    126.80 DEG.  F ALM
C  22 GEN. EXCITER       130.77 DEG.  F ALM
C  23 GEN. VOLT. REG.    133.49 DEG.  F ALM
C  24 CONTROL PANEL      133.12 DEG.  F ALM
C  25 RELAY AREA         127.68 DEG.  F ALM
C  26 BATTERY LEFT       130.36 DEG.  F ALM
C  27 BATTERY RIGHT      129.53 DEG.  F ALM
C  28 AIR IN SET         124.07 DEG.  F ALM
C  29 FUEL TANK          113.69 DEG.  F ALM
C  30 FUEL OUTLET        150.83 DEG.  F ALM

END SCAN GROUP 1      10 NOV 87  09:09:19

STOPPED SINGLE SCAN   10 NOV 87  09:09:19
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BEGIN SCAN GROUP 1   10 NOV 87  09:39:54
30KW 60HZ GEN SET S/NRZ5 3774

C   1 EXHAUST 1          768.96 DEG.  F ALM
C   2 EXHAUST 2          793.39 DEG.  F ALM
C   3 EXHAUST 3          818.53 DEG.  F ALM
C   4 EXHAUST 4          778.22 DEG.  F ALM
C   5 EXHAUST 5          777.11 DEG.  F ALM
C   6 EXHAUST 6          763.81 DEG.  F ALM
C   7 ENG. COOL. IN      204.46 DEG.  F ALM
C   8 ENG. COOL. OUT     212.57 DEG.  F ALM
C   9 OIL SUMP           236.88 DEG.  F ALM
C  10 OIL GALLERY        238.44 DEG.  F ALM
C  11                    .00000
C  12                    .00000
C  13  ENG. INTAKE       132.63 DEG.  F ALM
C  14 RAD. TOP LEFT      149.92 DEG.  F ALM
C  15 RAD. BTTM LEFT     145.03 DEG.  F ALM
C  16 RAD. TOP RIGHT     147.02 DEG.  F ALM
C  17 RAD. BTTM RIGHT    149.92 DEG.  F ALM
C  18 GEN. AIR IN        123.67 DEG.  F ALM
C  19 GEN. AIR OUT       145.98 DEG.  F ALM
C  20 GEN. FRAME TOP     131.54 DEG.  F ALM
C  21 GEN. FRAME BTTM    127.33 DEG.  F ALM
C  22 GEN. EXCITER       132.58 DEG.  F ALM
C  23 GEN. VOLT. REG.    134.23 DEG.  F ALM
C  24 CONTROL PANEL      133.91 DEG.  F ALM
C  25 RELAY AREA         129.33 DEG.  F ALM
C  26 BATTERY LEFT       133.89 DEG.  F ALM
C  27 BATTERY RIGHT      133.57 DEG.  F ALM
C  28 AIR IN SET         125.50 DEG.  F ALM
C  29 FUEL TANK          117.41 DEG.  F ALM
C  30 FUEL OUTLET        151.66 DEG.  F ALM

END SCAN GROUP 1      10 NOV 87  09:40:04

STOPPED SINGLE SCAN   10 NOV 87  09:40:04
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BEGIN SCAN GROUP 1   10 NOV 87  10:09:29
30KW 60HZ GEN SET S/NRZ5 3774

C    1 EXHAUST 1          764.75 DEG. F ALM
C    2 EXHAUST 2          789.57 DEG. F ALM
C    3 EXHAUST 3          813.49 DEG. F ALM
C    4 EXHAUST 4          768.48 DEG. F ALM
C    5 EXHAUST 5          774.67 DEG. F ALM
C    6 EXHAUST 6          761.82 DEG. F ALM
C    7 ENG. COOL. IN      203.49 DEG. F ALM
C    8 ENG. COOL. OUT     211.59 DEG. F ALM
C    9 OIL SUMP           236.88 DEG. F ALM
C   10 OIL GALLERY        238.58 DEG. F ALM
C   11                    .00000
C   12                    .00000
C   13  ENG. INTAKE       131.00 DEG. F ALM
C   14 RAD. TOP LEFT      148.57 DEG. F ALM
C   15 RAD. BTTM LEFT     143.96 DEG. F ALM
C   16 RAD. TOP RIGHT     146.25 DEG. F ALM
C   17 RAD. BTTM RIGHT    148.71 DEG. F ALM
C   18 GEN. AIR IN        121.59 DEG. F ALM
C   19 GEN. AIR OUT       144.79 DEG. F ALM
C   20 GEN. FRAME TOP     130.49 DEG. F ALM
C   21 GEN. FRAME BTTM    126.29 DEG. F ALM
C   22 GEN. EXCITER       131.17 DEG. F ALM
C   23 GEN. VOLT. REG.    134.30 DEG. F ALM
C   24 CONTROL PANEL      133.67 DEG. F ALM
C   25 RELAY AREA         127.94 DEG. F ALM
C   26 BATTERY LEFT       137.27 DEG. F ALM
C   27 BATTERY RIGHT      136.74 DEG. F ALM
C   28 AIR IN SET         123.38 DEG. F ALM
C   29 FUEL TANK          120.68 DEG. F ALM
C   30 FUEL OUTLET        151.66 DEG. F ALM

END SCAN GROUP 1      10 NOV 87  10:09:39

STOPPED SINGLE SCAN   10 NOV 87  10:09:39
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BEGIN SCAN GROUP 1   10 NOV 87  11:10:15
30KW 60HZ GEN SET S/NRZ5 3774

C    1 EXHAUST 1          773.81 DEG. F ALM
C    2 EXHAUST 2          797.73 DEG. F ALM
C    3 EXHAUST 3          817.72 DEG. F ALM
C    4 EXHAUST 4          774.03 DEG. F ALM
C    5 EXHAUST 5          777.09 DEG. F ALM
C    6 EXHAUST 6          767.62 DEG. F ALM
C    7 ENG. COOL. IN      205.36 DEG. F ALM
C    8 ENG. COOL. OUT     213.55 DEG. F ALM
C    9 OIL SUMP           238.21 DEG. F ALM
C   10 OIL GALLERY        239.80 DEG. F ALM
C   11                    .00000
C   12                    .00000
C   13  ENG. INTAKE       132.34 DEG. F ALM
C   14 RAD. TOP LEFT      149.83 DEG. F ALM
C   15 RAD. BTTM LEFT     145.34 DEG. F ALM
C   16 RAD. TOP RIGHT     147.73 DEG. F ALM
C   17 RAD. BTTM RIGHT    150.18 DEG. F ALM
C   18 GEN. AIR IN        123.35 DEG. F ALM
C   19 GEN. AIR OUT       146.66 DEG. F ALM
C   20 GEN. FRAME TOP     132.41 DEG. F ALM
C   21 GEN. FRAME BTTM    127.99 DEG. F ALM
C   22 GEN. EXCITER       132.36 DEG. F ALM
C   23 GEN. VOLT. REG.    135.43 DEG. F ALM
C   24 CONTROL PANEL      135.82 DEG. F ALM
C   25 RELAY AREA         129.40 DEG. F ALM
C   26 BATTERY LEFT       143.67 DEG. F ALM
C   27 BATTERY RIGHT      145.20 DEG. F ALM
C   28 AIR IN SET         125.43 DEG. F ALM
C   29 FUEL TANK          125.55 DEG. F ALM
C   30 FUEL OUTLET        153.60 DEG. F ALM

END SCAN GROUP 1      10 NOV 87  11:10:25

STOPPED SINGLE SCAN   10 NOV 87  11:10:25
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BEGIN SCAN GROUP 1   10 NOV 87  10:39:56
30KW 60HZ GEN SET S/NRZ5 3774

C    1 EXHAUST 1          771.26 DEG. F ALM
C    2 EXHAUST 2          796.68 DEG. F ALM
C    3 EXHAUST 3          818.81 DEG. F ALM
C    4 EXHAUST 4          773.72 DEG. F ALM
C    5 EXHAUST 5          779.81 DEG. F ALM
C    6 EXHAUST 6          769.82 DEG. F ALM
C    7 ENG. COOL. IN      204.19 DEG. F ALM
C    8 ENG. COOL. OUT     212.37 DEG. F ALM
C    9 OIL SUMP           237.82 DEG. F ALM
C   10 OIL GALLERY        238.69 DEG. F ALM
C   11                    .00000
C   12                    .00000
C   13  ENG. INTAKE       131.69 DEG. F ALM
C   14 RAD. TOP LEFT      149.19 DEG. F ALM
C   15 RAD. BTTM LEFT     144.43 DEG. F ALM
C   16 RAD. TOP RIGHT     146.68 DEG. F ALM
C   17 RAD. BTTM RIGHT    149.28 DEG. F ALM
C   18 GEN. AIR IN        122.86 DEG. F ALM
C   19 GEN. AIR OUT       145.28 DEG. F ALM
C   20 GEN. FRAME TOP     131.11 DEG. F ALM
C   21 GEN. FRAME BTTM    126.83 DEG. F ALM
C   22 GEN. EXCITER       131.62 DEG. F ALM
C   23 GEN. VOLT. REG.    134.41 DEG. F ALM
C   24 CONTROL PANEL      133.73 DEG. F ALM
C   25 RELAY AREA         128.39 DEG. F ALM
C   26 BATTERY LEFT       148.36 DEG. F ALM
C   27 BATTERY RIGHT      148.97 DEG. F ALM
C   28 AIR IN SET         124.69 DEG. F ALM
C   29 FUEL TANK          123.34 DEG. F ALM
C   30 FUEL OUTLET        152.60 DEG. F ALM

END SCAN GROUP 1      10 NOV 87  10:40:06

STOPPED SINGLE SCAN   10 NOV 87  10:40:06
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BEGIN SCAN GROUP 1   10 NOV 87  11:39:54
30KW 60HZ GEN SET S/NRZ5 3774

C    1 EXHAUST 1          767.84 DEG. F ALM
C    2 EXHAUST 2          795.28 DEG. F ALM
C    3 EXHAUST 3          815.56 DEG. F ALM
C    4 EXHAUST 4          770.00 DEG. F ALM
C    5 EXHAUST 5          778.35 DEG. F ALM
C    6 EXHAUST 6          769.51 DEG. F ALM
C    7 ENG. COOL. IN      203.80 DEG. F ALM
C    8 ENG. COOL. OUT     211.62 DEG. F ALM
C    9 OIL SUMP           236.78 DEG. F ALM
C   10 OIL GALLERY        238.53 DEG. F ALM
C   11                    .00000
C   12                    .00000
C   13  ENG. INTAKE       130.87 DEG. F ALM
C   14 RAD. TOP LEFT      148.56 DEG. F ALM
C   15 RAD. BTTM LEFT     144.16 DEG. F ALM
C   16 RAD. TOP RIGHT     146.24 DEG. F ALM
C   17 RAD. BTTM RIGHT    148.80 DEG. F ALM
C   18 GEN. AIR IN        122.12 DEG. F ALM
C   19 GEN. AIR OUT       145.17 DEG. F ALM
C   20 GEN. FRAME TOP     130.51 DEG. F ALM
C   21 GEN. FRAME BTTM    126.08 DEG. F ALM
C   22 GEN. EXCITER       130.95 DEG. F ALM
C   23 GEN. VOLT. REG.    134.53 DEG. F ALM
C   24 CONTROL PANEL      133.45 DEG. F ALM
C   25 RELAY AREA         127.91 DEG. F ALM
C   26 BATTERY LEFT       145.90 DEG. F ALM
C   27 BATTERY RIGHT      147.41 DEG. F ALM
C   28 AIR IN SET         124.56 DEG. F ALM
C   29 FUEL TANK          127.18 DEG. F ALM
C   30 FUEL OUTLET        152.20 DEG. F ALM

END SCAN GROUP 1      10 NOV 87  11:40:04

STOPPED SINGLE SCAN   10 NOV 87  11:40:04
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BEGIN SCAN GROUP 1 10 NOV 87 12:09:45
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	771.66	DEG. F	ALM
C	2	EXHAUST 2	797.00	DEG. F	ALM
C	3	EXHAUST 3	817.96	DEG. F	ALM
C	4	EXHAUST 4	776.23	DEG. F	ALM
C	5	EXHAUST 5	785.82	DEG. F	ALM
C	6	EXHAUST 6	774.47	DEG. F	ALM
C	7	ENG. COOL. IN	205.43	DEG. F	ALM
C	8	ENG. COOL. OUT	213.59	DEG. F	ALM
C	9	OIL SUMP	237.33	DEG. F	ALM
C	10	OIL GALLERY	239.10	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	132.75	DEG. F	ALM
C	14	RAD. TOP LEFT	158.52	DEG. F	ALM
C	15	RAD. BTTM LEFT	145.94	DEG. F	ALM
C	16	RAD. TOP RIGHT	147.85	DEG. F	ALM
C	17	RAD. BTTM RIGHT	158.49	DEG. F	ALM
C	18	GEN. AIR IN	124.47	DEG. F	ALM
C	19	GEN. AIR OUT	146.96	DEG. F	ALM
C	20	GEN. FRAME TOP	132.15	DEG. F	ALM
C	21	GEN. FRAME BTTM	127.78	DEG. F	ALM
C	22	GEN. EXCITER	132.73	DEG. F	ALM
C	23	GEN. VOLT. REG.	135.66	DEG. F	ALM
C	24	CONTROL PANEL	134.43	DEG. F	ALM
C	25	RELAY AREA	129.92	DEG. F	ALM
C	26	BATTERY LEFT	148.38	DEG. F	ALM
C	27	BATTERY RIGHT	149.86	DEG. F	ALM
C	28	AIR IN SET	126.76	DEG. F	ALM
C	29	FUEL TANK	128.46	DEG. F	ALM
C	30	FUEL OUTLET	152.64	DEG. F	ALM

END SCAN GROUP 1 10 NOV 87 12:09:55

STOPPED SINGLE SCAN 10 NOV 87 12:09:55

BEGIN SCAN GROUP 1 10 NOV 87 12:21:29
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	327.19	DEG. F	ALM
C	2	EXHAUST 2	327.69	DEG. F	ALM
C	3	EXHAUST 3	318.22	DEG. F	ALM
C	4	EXHAUST 4	363.94	DEG. F	ALM
C	5	EXHAUST 5	372.36	DEG. F	ALM
C	6	EXHAUST 6	357.55	DEG. F	ALM
C	7	ENG. COOL. IN	175.33	DEG. F	ALM
C	8	ENG. COOL. OUT	181.99	DEG. F	ALM
C	9	OIL SUMP	225.12	DEG. F	ALM
C	10	OIL GALLERY	226.29	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	127.30	DEG. F	ALM
C	14	RAD. TOP LEFT	138.08	DEG. F	ALM
C	15	RAD. BTTM LEFT	137.65	DEG. F	ALM
C	16	RAD. TOP RIGHT	139.91	DEG. F	ALM
C	17	RAD. BTTM RIGHT	140.83	DEG. F	ALM
C	18	GEN. AIR IN	122.68	DEG. F	ALM
C	19	GEN. AIR OUT	138.30	DEG. F	ALM
C	20	GEN. FRAME TOP	129.09	DEG. F	ALM
C	21	GEN. FRAME BTTM	125.75	DEG. F	ALM
C	22	GEN. EXCITER	129.58	DEG. F	ALM
C	23	GEN. VOLT. REG.	134.84	DEG. F	ALM
C	24	CONTROL PANEL	133.67	DEG. F	ALM
C	25	RELAY AREA	126.19	DEG. F	ALM
C	26	BATTERY LEFT	148.45	DEG. F	ALM
C	27	BATTERY RIGHT	150.55	DEG. F	ALM
C	28	AIR IN SET	124.80	DEG. F	ALM
C	29	FUEL TANK	128.68	DEG. F	ALM
C	30	FUEL OUTLET	152.88	DEG. F	ALM

END SCAN GROUP 1 10 NOV 87 12:21:39

STOPPED SINGLE SCAN 10 NOV 87 12:21:39

BEGIN SCAN GROUP 1 10 NOV 87 12:31:3
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	333.55	DEG. F	ALM
C	2	EXHAUST 2	332.73	DEG. F	ALM
C	3	EXHAUST 3	322.72	DEG. F	ALM
C	4	EXHAUST 4	356.01	DEG. F	ALM
C	5	EXHAUST 5	365.20	DEG. F	ALM
C	6	EXHAUST 6	348.90	DEG. F	ALM
C	7	ENG. COOL. IN	171.99	DEG. F	ALM
C	8	ENG. COOL. OUT	180.23	DEG. F	ALM
C	9	OIL SUMP	216.93	DEG. F	ALM
C	10	OIL GALLERY	218.82	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	126.85	DEG. F	ALM
C	14	RAD. TOP LEFT	135.63	DEG. F	ALM
C	15	RAD. BTTM LEFT	135.47	DEG. F	ALM
C	16	RAD. TOP RIGHT	137.71	DEG. F	ALM
C	17	RAD. BTTM RIGHT	138.70	DEG. F	ALM
C	18	GEN. AIR IN	121.59	DEG. F	ALM
C	19	GEN. AIR OUT	134.74	DEG. F	ALM
C	20	GEN. FRAME TOP	127.53	DEG. F	ALM
C	21	GEN. FRAME BTTM	124.74	DEG. F	ALM
C	22	GEN. EXCITER	129.45	DEG. F	ALM
C	23	GEN. VOLT. REG.	133.81	DEG. F	ALM
C	24	CONTROL PANEL	132.17	DEG. F	ALM
C	25	RELAY AREA	125.36	DEG. F	ALM
C	26	BATTERY LEFT	148.40	DEG. F	ALM
C	27	BATTERY RIGHT	150.61	DEG. F	ALM
C	28	AIR IN SET	123.57	DEG. F	ALM
C	29	FUEL TANK	128.74	DEG. F	ALM
C	30	FUEL OUTLET	150.94	DEG. F	ALM

END SCAN GROUP 1 10 NOV 87 12:31:4

STOPPED SINGLE SCAN 10 NOV 87 12:31:4

BEGIN SCAN GROUP 1 10 NOV 87 12:40:4
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	325.42	DEG. F	ALM
C	2	EXHAUST 2	330.36	DEG. F	ALM
C	3	EXHAUST 3	320.85	DEG. F	ALM
C	4	EXHAUST 4	358.25	DEG. F	ALM
C	5	EXHAUST 5	363.96	DEG. F	ALM
C	6	EXHAUST 6	348.07	DEG. F	ALM
C	7	ENG. COOL. IN	170.92	DEG. F	ALM
C	8	ENG. COOL. OUT	179.65	DEG. F	ALM
C	9	OIL SUMP	214.89	DEG. F	ALM
C	10	OIL GALLERY	214.56	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	126.41	DEG. F	ALM
C	14	RAD. TOP LEFT	134.98	DEG. F	ALM
C	15	RAD. BTTM LEFT	134.74	DEG. F	ALM
C	16	RAD. TOP RIGHT	136.79	DEG. F	ALM
C	17	RAD. BTTM RIGHT	137.54	DEG. F	ALM
C	18	GEN. AIR IN	121.91	DEG. F	ALM
C	19	GEN. AIR OUT	132.80	DEG. F	ALM
C	20	GEN. FRAME TOP	126.30	DEG. F	ALM
C	21	GEN. FRAME BTTM	124.20	DEG. F	ALM
C	22	GEN. EXCITER	128.95	DEG. F	ALM
C	23	GEN. VOLT. REG.	132.23	DEG. F	ALM
C	24	CONTROL PANEL	131.43	DEG. F	ALM
C	25	RELAY AREA	124.98	DEG. F	ALM
C	26	BATTERY LEFT	148.44	DEG. F	ALM
C	27	BATTERY RIGHT	151.32	DEG. F	ALM
C	28	AIR IN SET	123.88	DEG. F	ALM
C	29	FUEL TANK	128.59	DEG. F	ALM
C	30	FUEL OUTLET	148.96	DEG. F	ALM

END SCAN GROUP 1 10 NOV 87 12:40:5

STOPPED SINGLE SCAN 10 NOV 87 12:40:5

BEGIN SCAN GROUP 1 10 NOV 87 12:50:47
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	327.24	DEG. F	ALM
C	2	EXHAUST 2	331.84	DEG. F	ALM
C	3	EXHAUST 3	321.26	DEG. F	ALM
C	4	EXHAUST 4	360.93	DEG. F	ALM
C	5	EXHAUST 5	369.40	DEG. F	ALM
C	6	EXHAUST 6	349.66	DEG. F	ALM
C	7	ENG. COOL. IN	172.39	DEG. F	ALM
C	8	ENG. COOL. OUT	181.18	DEG. F	ALM
C	9	OIL SUMP	213.36	DEG. F	ALM
C	10	OIL GALLERY	213.55	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	128.33	DEG. F	ALM
C	14	RAD. TOP LEFT	135.90	DEG. F	ALM
C	15	RAD. BTTM LEFT	135.75	DEG. F	ALM
C	16	RAD. TOP RIGHT	137.90	DEG. F	ALM
C	17	RAD. BTTM RIGHT	138.86	DEG. F	ALM
C	18	GEN. AIR IN	121.95	DEG. F	ALM
C	19	GEN. AIR OUT	132.75	DEG. F	ALM
C	20	GEN. FRAME TOP	127.86	DEG. F	ALM
C	21	GEN. FRAME BTTM	125.86	DEG. F	ALM
C	22	GEN. EXCITER	130.64	DEG. F	ALM
C	23	GEN. VOLT. REG.	132.60	DEG. F	ALM
C	24	CONTROL PANEL	132.46	DEG. F	ALM
C	25	RELAY AREA	126.33	DEG. F	ALM
C	26	BATTERY LEFT	148.56	DEG. F	ALM
C	27	BATTERY RIGHT	151.32	DEG. F	ALM
C	28	AIR IN SET	123.65	DEG. F	ALM
C	29	FUEL TANK	128.52	DEG. F	ALM
C	30	FUEL OUTLET	148.77	DEG. F	ALM

END SCAN GROUP 1 10 NOV 87 12:50:57

STOPPED SINGLE SCAN 10 NOV 87 12:50:57

BEGIN SCAN GROUP 1 10 NOV 87 13:54:16
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	333.18	DEG. F	ALM
C	2	EXHAUST 2	337.22	DEG. F	ALM
C	3	EXHAUST 3	326.11	DEG. F	ALM
C	4	EXHAUST 4	355.86	DEG. F	ALM
C	5	EXHAUST 5	365.50	DEG. F	ALM
C	6	EXHAUST 6	345.83	DEG. F	ALM
C	7	ENG. COOL. IN	171.69	DEG. F	ALM
C	8	ENG. COOL. OUT	181.01	DEG. F	ALM
C	9	OIL SUMP	212.17	DEG. F	ALM
C	10	OIL GALLERY	212.23	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	127.43	DEG. F	ALM
C	14	RAD. TOP LEFT	135.85	DEG. F	ALM
C	15	RAD. BTTM LEFT	135.39	DEG. F	ALM
C	16	RAD. TOP RIGHT	137.44	DEG. F	ALM
C	17	RAD. BTTM RIGHT	138.28	DEG. F	ALM
C	18	GEN. AIR IN	123.83	DEG. F	ALM
C	19	GEN. AIR OUT	130.74	DEG. F	ALM
C	20	GEN. FRAME TOP	125.96	DEG. F	ALM
C	21	GEN. FRAME BTTM	124.25	DEG. F	ALM
C	22	GEN. EXCITER	129.85	DEG. F	ALM
C	23	GEN. VOLT. REG.	130.63	DEG. F	ALM
C	24	CONTROL PANEL	131.16	DEG. F	ALM
C	25	RELAY AREA	125.90	DEG. F	ALM
C	26	BATTERY LEFT	148.79	DEG. F	ALM
C	27	BATTERY RIGHT	153.10	DEG. F	ALM
C	28	AIR IN SET	124.10	DEG. F	ALM
C	29	FUEL TANK	127.56	DEG. F	ALM
C	30	FUEL OUTLET	147.32	DEG. F	ALM

END SCAN GROUP 1 10 NOV 87 13:54:26

STOPPED SINGLE SCAN 10 NOV 87 13:54:27

BEGIN SCAN GROUP 1 10 NOV 87 13:24:31
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	324.71	DEG. F	ALM
C	2	EXHAUST 2	332.57	DEG. F	ALM
C	3	EXHAUST 3	323.00	DEG. F	ALM
C	4	EXHAUST 4	362.71	DEG. F	ALM
C	5	EXHAUST 5	368.62	DEG. F	ALM
C	6	EXHAUST 6	348.33	DEG. F	ALM
C	7	ENG. COOL. IN	171.71	DEG. F	ALM
C	8	ENG. COOL. OUT	180.87	DEG. F	ALM
C	9	OIL SUMP	211.81	DEG. F	ALM
C	10	OIL GALLERY	211.89	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	127.73	DEG. F	ALM
C	14	RAD. TOP LEFT	135.72	DEG. F	ALM
C	15	RAD. BTTM LEFT	135.16	DEG. F	ALM
C	16	RAD. TOP RIGHT	137.38	DEG. F	ALM
C	17	RAD. BTTM RIGHT	138.30	DEG. F	ALM
C	18	GEN. AIR IN	122.29	DEG. F	ALM
C	19	GEN. AIR OUT	130.83	DEG. F	ALM
C	20	GEN. FRAME TOP	126.16	DEG. F	ALM
C	21	GEN. FRAME BTTM	124.30	DEG. F	ALM
C	22	GEN. EXCITER	130.08	DEG. F	ALM
C	23	GEN. VOLT. REG.	130.81	DEG. F	ALM
C	24	CONTROL PANEL	130.98	DEG. F	ALM
C	25	RELAY AREA	125.74	DEG. F	ALM
C	26	BATTERY LEFT	148.64	DEG. F	ALM
C	27	BATTERY RIGHT	152.32	DEG. F	ALM
C	28	AIR IN SET	124.01	DEG. F	ALM
C	29	FUEL TANK	127.89	DEG. F	ALM
C	30	FUEL OUTLET	147.04	DEG. F	ALM

END SCAN GROUP 1 10 NOV 87 13:24:41

STOPPED SINGLE SCAN 10 NOV 87 13:24:41

BEGIN SCAN GROUP 1 10 NOV 87 14:24:30
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	334.65	DEG. F	ALM
C	2	EXHAUST 2	333.59	DEG. F	ALM
C	3	EXHAUST 3	324.42	DEG. F	ALM
C	4	EXHAUST 4	358.43	DEG. F	ALM
C	5	EXHAUST 5	364.48	DEG. F	ALM
C	6	EXHAUST 6	347.62	DEG. F	ALM
C	7	ENG. COOL. IN	171.76	DEG. F	ALM
C	8	ENG. COOL. OUT	181.08	DEG. F	ALM
C	9	OIL SUMP	212.41	DEG. F	ALM
C	10	OIL GALLERY	212.59	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	127.16	DEG. F	ALM
C	14	RAD. TOP LEFT	135.34	DEG. F	ALM
C	15	RAD. BTTM LEFT	135.00	DEG. F	ALM
C	16	RAD. TOP RIGHT	137.20	DEG. F	ALM
C	17	RAD. BTTM RIGHT	138.07	DEG. F	ALM
C	18	GEN. AIR IN	122.05	DEG. F	ALM
C	19	GEN. AIR OUT	130.35	DEG. F	ALM
C	20	GEN. FRAME TOP	126.08	DEG. F	ALM
C	21	GEN. FRAME BTTM	124.61	DEG. F	ALM
C	22	GEN. EXCITER	129.61	DEG. F	ALM
C	23	GEN. VOLT. REG.	130.80	DEG. F	ALM
C	24	CONTROL PANEL	131.55	DEG. F	ALM
C	25	RELAY AREA	125.66	DEG. F	ALM
C	26	BATTERY LEFT	148.91	DEG. F	ALM
C	27	BATTERY RIGHT	153.52	DEG. F	ALM
C	28	AIR IN SET	123.46	DEG. F	ALM
C	29	FUEL TANK	127.61	DEG. F	ALM
C	30	FUEL OUTLET	148.19	DEG. F	ALM

END SCAN GROUP 1 10 NOV 87 14:24:40

STOPPED SINGLE SCAN 10 NOV 87 14:24:40

BEGIN SCAN GROUP 1 10 NOV 87 14:54:53
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	333.13	DEG. F	ALM
C	2	EXHAUST 2	338.54	DEG. F	ALM
C	3	EXHAUST 3	327.13	DEG. F	ALM
C	4	EXHAUST 4	360.03	DEG. F	ALM
C	5	EXHAUST 5	364.89	DEG. F	ALM
C	6	EXHAUST 6	344.27	DEG. F	ALM
C	7	ENG. COOL. IN	172.02	DEG. F	ALM
C	8	ENG. COOL. OUT	181.25	DEG. F	ALM
C	9	OIL SUMP	212.35	DEG. F	ALM
C	10	OIL GALLERY	212.51	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	127.58	DEG. F	ALM
C	14	RAD. TOP LEFT	136.00	DEG. F	ALM
C	15	RAD. BTTM LEFT	135.49	DEG. F	ALM
C	16	RAD. TOP RIGHT	137.59	DEG. F	ALM
C	17	RAD. BTTM RIGHT	138.46	DEG. F	ALM
C	18	GEN. AIR IN	123.24	DEG. F	ALM
C	19	GEN. AIR OUT	136.79	DEG. F	ALM
C	20	GEN. FRAME TOP	126.18	DEG. F	ALM
C	21	GEN. FRAME BTTM	124.84	DEG. F	ALM
C	22	GEN. EXCITER	130.06	DEG. F	ALM
C	23	GEN. VOLT. REG.	130.86	DEG. F	ALM
C	24	CONTROL PANEL	131.59	DEG. F	ALM
C	25	RELAY AREA	126.82	DEG. F	ALM
C	26	BATTERY LEFT	149.28	DEG. F	ALM
C	27	BATTERY RIGHT	154.10	DEG. F	ALM
C	28	AIR IN SET	124.40	DEG. F	ALM
C	29	FUEL TANK	127.50	DEG. F	ALM
C	30	FUEL OUTLET	148.56	DEG. F	ALM

END SCAN GROUP 1 10 NOV 87 14:55:03

STOPPED SINGLE SCAN 10 NOV 87 14:55:03

BEGIN SCAN GROUP 1 10 NOV 87 15:54:4
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	336.44	DEG. F	ALM
C	2	EXHAUST 2	338.60	DEG. F	ALM
C	3	EXHAUST 3	331.09	DEG. F	ALM
C	4	EXHAUST 4	360.59	DEG. F	ALM
C	5	EXHAUST 5	366.17	DEG. F	ALM
C	6	EXHAUST 6	344.94	DEG. F	ALM
C	7	ENG. COOL. IN	172.67	DEG. F	ALM
C	8	ENG. COOL. OUT	181.87	DEG. F	ALM
C	9	OIL SUMP	213.06	DEG. F	ALM
C	10	OIL GALLERY	213.12	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	128.00	DEG. F	ALM
C	14	RAD. TOP LEFT	136.34	DEG. F	ALM
C	15	RAD. BTTM LEFT	135.88	DEG. F	ALM
C	16	RAD. TOP RIGHT	138.05	DEG. F	ALM
C	17	RAD. BTTM RIGHT	138.90	DEG. F	ALM
C	18	GEN. AIR IN	123.41	DEG. F	ALM
C	19	GEN. AIR OUT	131.55	DEG. F	ALM
C	20	GEN. FRAME TOP	126.79	DEG. F	ALM
C	21	GEN. FRAME BTTM	125.47	DEG. F	ALM
C	22	GEN. EXCITER	130.37	DEG. F	ALM
C	23	GEN. VOLT. REG.	131.39	DEG. F	ALM
C	24	CONTROL PANEL	132.16	DEG. F	ALM
C	25	RELAY AREA	126.45	DEG. F	ALM
C	26	BATTERY LEFT	149.97	DEG. F	ALM
C	27	BATTERY RIGHT	155.83	DEG. F	ALM
C	28	AIR IN SET	124.47	DEG. F	ALM
C	29	FUEL TANK	127.68	DEG. F	ALM
C	30	FUEL OUTLET	148.55	DEG. F	ALM

END SCAN GROUP 1 10 NOV 87 15:54:5

STOPPED SINGLE SCAN 10 NOV 87 15:54:5

BEGIN SCAN GROUP 1 10 NOV 87 15:24:43
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	335.65	DEG. F	ALM
C	2	EXHAUST 2	336.33	DEG. F	ALM
C	3	EXHAUST 3	328.88	DEG. F	ALM
C	4	EXHAUST 4	360.46	DEG. F	ALM
C	5	EXHAUST 5	366.77	DEG. F	ALM
C	6	EXHAUST 6	345.41	DEG. F	ALM
C	7	ENG. COOL. IN	172.44	DEG. F	ALM
C	8	ENG. COOL. OUT	181.69	DEG. F	ALM
C	9	OIL SUMP	212.85	DEG. F	ALM
C	10	OIL GALLERY	212.90	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	127.83	DEG. F	ALM
C	14	RAD. TOP LEFT	136.37	DEG. F	ALM
C	15	RAD. BTTM LEFT	135.72	DEG. F	ALM
C	16	RAD. TOP RIGHT	137.99	DEG. F	ALM
C	17	RAD. BTTM RIGHT	138.76	DEG. F	ALM
C	18	GEN. AIR IN	123.39	DEG. F	ALM
C	19	GEN. AIR OUT	131.17	DEG. F	ALM
C	20	GEN. FRAME TOP	126.67	DEG. F	ALM
C	21	GEN. FRAME BTTM	125.40	DEG. F	ALM
C	22	GEN. EXCITER	130.61	DEG. F	ALM
C	23	GEN. VOLT. REG.	131.17	DEG. F	ALM
C	24	CONTROL PANEL	131.95	DEG. F	ALM
C	25	RELAY AREA	126.31	DEG. F	ALM
C	26	BATTERY LEFT	149.49	DEG. F	ALM
C	27	BATTERY RIGHT	155.29	DEG. F	ALM
C	28	AIR IN SET	124.74	DEG. F	ALM
C	29	FUEL TANK	127.50	DEG. F	ALM
C	30	FUEL OUTLET	148.08	DEG. F	ALM

END SCAN GROUP 1 10 NOV 87 15:24:53

STOPPED SINGLE SCAN 10 NOV 87 15:24:53

BEGIN SCAN GROUP 1 10 NOV 87 16:24:4
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	336.07	DEG. F	ALM
C	2	EXHAUST 2	336.49	DEG. F	ALM
C	3	EXHAUST 3	332.22	DEG. F	ALM
C	4	EXHAUST 4	360.25	DEG. F	ALM
C	5	EXHAUST 5	362.10	DEG. F	ALM
C	6	EXHAUST 6	343.75	DEG. F	ALM
C	7	ENG. COOL. IN	171.57	DEG. F	ALM
C	8	ENG. COOL. OUT	180.85	DEG. F	ALM
C	9	OIL SUMP	212.55	DEG. F	ALM
C	10	OIL GALLE	212.75	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	126.55	DEG. F	ALM
C	14	RAD. TOP LEFT	135.17	DEG. F	ALM
C	15	RAD. BTTM LEFT	134.59	DEG. F	ALM
C	16	RAD. TOP RIGHT	136.98	DEG. F	ALM
C	17	RAD. BTTM RIGHT	137.78	DEG. F	ALM
C	18	GEN. AIR IN	122.83	DEG. F	ALM
C	19	GEN. AIR OUT	130.13	DEG. F	ALM
C	20	GEN. FRAME TOP	125.45	DEG. F	ALM
C	21	GEN. FRAME BTTM	123.86	DEG. F	ALM
C	22	GEN. EXCITER	129.13	DEG. F	ALM
C	23	GEN. VOLT. REG.	130.80	DEG. F	ALM
C	24	CONTROL PANEL	131.12	DEG. F	ALM
C	25	RELAY AREA	125.15	DEG. F	ALM
C	26	BATTERY LEFT	149.89	DEG. F	ALM
C	27	BATTERY RIGHT	155.64	DEG. F	ALM
C	28	AIR IN SET	123.86	DEG. F	ALM
C	29	FUEL TANK	126.88	DEG. F	ALM
C	30	FUEL OUTLET	147.96	DEG. F	ALM

END SCAN GROUP 1 10 NOV 87 16:24:5

STOPPED SINGLE SCAN 10 NOV 87 16:24:5

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BEGIN SCAN GROUP 1   10 NOV 87  16:54:45
30KW 60HZ GEN SET S/NRZ5 3774

C    1 EXHAUST 1          343.77 DEG.  F ALM
C    2 EXHAUST 2          331.26 DEG.  F ALM
C    3 EXHAUST 3          329.71 DEG.  F ALM
C    4 EXHAUST 4          365.36 DEG.  F ALM
C    5 EXHAUST 5          362.84 DEG.  F ALM
C    6 EXHAUST 6          346.89 DEG.  F ALM
C    7 ENG. COOL. IN      172.28 DEG.  F ALM
C    8 ENG. COOL. OUT     181.43 DEG.  F ALM
C    9 OIL SUMP           212.96 DEG.  F ALM
C   10 OIL GALLERY        212.94 DEG.  F ALM
C   11                    .00000
C   12                    .00000
C   13  ENG. INTAKE       127.44 DEG.  F ALM
C   14 RAD. TOP LEFT      135.93 DEG.  F ALM
C   15 RAD. BTTM LEFT     135.35 DEG.  F ALM
C   16 RAD. TOP RIGHT     137.62 DEG.  F ALM
C   17 RAD. BTTM RIGHT    138.44 DEG.  F ALM
C   18 GEN. AIR IN        123.24 DEG.  F ALM
C   19 GEN. AIR OUT       131.84 DEG.  F ALM
C   20 GEN. FRAME TOP     126.19 DEG.  F ALM
C   21 GEN. FRAME BTTM    124.78 DEG.  F ALM
C   22 GEN. EXCITER       130.16 DEG.  F ALM
C   23 GEN. VOLT. REG.    131.11 DEG.  F ALM
C   24 CONTROL PANEL      131.64 DEG.  F ALM
C   25 RELAY AREA         125.93 DEG.  F ALM
C   26 BATTERY LEFT       150.31 DEG.  F ALM
C   27 BATTERY RIGHT      156.41 DEG.  F ALM
C   28 AIR IN SET         124.85 DEG.  F ALM
C   29 FUEL TANK          126.78 DEG.  F ALM
C   30 FUEL OUTLET        148.93 DEG.  F ALM

END SCAN GROUP 1      10 NOV 87  16:54:55

STOPPED SINGLE SCAN   10 NOV 87  16:54:55
```

TEST DATA

ITEM 30 Kw / 60 Hz GENERATOR SET MODIFIED

MFGR. LIBBY WELDING

MODEL NO. MEP 005A

SERIAL NO. RES 3774

NTS
National Technical Systems
Scientific Services Group
Testing Division
P.O. Box 38
Hartwood, Virginia 22471
Tel: 703 752 5300

HIGH TEMP 710.1.3.2(F)(6)

REF. NO. MIL-STD 705; 513.2

SHEET 1 OF 2

DATE 11 NOV. 1987

JOB NO. 555-2140

PROJ. ENGR.

RECORDER/OBSERVER GC/BJ/KM

INDICATING INSTRUMENT TEST (ELECTRICAL)
MASTER INSTRUMENTS

INST TIME	STE. NO.	LOAD STEP	EG020D VOLTAGE x1 L_1-L_0 VAC	L_2-L_0 VAC	L_3-L_0 VAC	EG040D AMPERES x40 L_1-L_0 AC AMPS	L_2-L_0 AC AMPS	L_3-L_0 AC AMPS	EG2300 KILOWATTS x40 L_1-L_0 Kw	L_2-L_0 Kw	L_3-L_0 Kw	EG400 POWER FACTOR PF	EG2410 FREQ. Hz	EXCITER FIELD VOLTS VDC	EXCITER FIELD AMPS DCA	AMB. TEMP. °F	AMPS IN/EXH. IN H2O
1054			STARTED	UNIT	ON	NO LOAD							59.6 CC				
1116		N/L	126	126.1	126.1	0	0	0	0	0	0	0	59.9	4.1	1.6	120	23.9/23.7
1118		N/L	126.9	127	127	0	0	0	0	0	0	0	57.0	5.0	2.0	121	27.8/21.9
1120		N/L	124.1	124.9	124.5	0	0	0	0	0	0	0	62.1	3.5	1.4	122	19.9/25.3
1123		1/4	124	124.5	124.1	.65	.67	.67	.062	.067	.067	.78	60.1	5.1	2.0	123	23.4/27.9
1125		1/4	124	125	124.9	.70	.70	.70	.065	.068	.066	.75	57.1	6.3	2.5	123	27.7/26.4
1127	1	1/4	123.9	124.1	124	.65	.66	.66	.065	.066	.067	.80	62.2	4.6	1.8	124	24.7/29.6
1133		1/2	123.1	124.1	124	1.25	1.26	1.26	.122	.126	.126	.799	59.9	6.3	2.5	125	33.7/33.3
1135		1/2	123.9	124.9	124	1.29	1.31	1.31	.125	.129	.129	.755	57.0	7.7	3.0	126	40.5/41.1
1137	08	1/2	123	124	123.9	1.25	1.26	1.26	.121	.125	.125	.81	62.0	5.8	2.2	127	34.4/35.4
1143		3/4	123	124	123.5	1.85	1.85	1.86	.182	.190	.187	.80	59.8	7.8	3.0	128	43.4/32.7
1145		3/4	120	121	120.9	1.81	1.84	1.85	.172	.180	.180	.77	57.1	8.6	3.3	123	42.2/38.6
1146		3/4	122.3	123.1	123	1.80	1.85	1.85	.180	.187	.185	.832	62.1	7.0	2.6	122	39.3/37.6
1151		4/4	122	123.5	123	2.41	2.45	2.45	.242	.25	.25	.801	60.0	9.1	3.4	121	43.4/40.9
1152		4/4	122.1	124	123	2.45	2.5	2.5	.245	.251	.25	.77	57.2	10.6	4.12	123	42.0/37.8
1154		4/4	121.9	123	122.5	2.39	2.41	2.41	.241	.25	.249	.832	62.0	8.4	3.2	122	43.9/42.4
1155			SHUT	UNIT	DOWN		END	OF	TEST								

NOTES: AMMETER & POWER INDICATOR (% LOAD) OUT OF SPEC (SEE COMPUTATION SHEETS)

TEST DATA

ITEM 30 Kw / 60 Hz GENERATOR SET MODIFIED

MFGR. CIBBY WELDING

MODEL NO. MEP005A

SERIAL NO. 825 3774

NTS

National Technical Scientific Services Group

Testing Division
P.O. Box 38
Hartwood, Virginia 22471
Tel: 703 752 5300

HIGH TEMP. TM 1.3.2 (EX6)

REF. NO. MIL-STD 705; 513.2

SHEET 2 OF 2

DATE 11 Nov. 1987

JOB NO. 555-2140

PROJ. ENGR.

RECORDER/OBSERVER BJ

INDICATING INSTRUMENT TEST (ELECTRICAL)
PANEL INSTRUMENTS

INST TIME	STEP NO.	LOAD STEP	VOLTAGE L_1-L_0 VAC	VOLTAGE L_2-L_0 VAC	VOLTAGE L_3-L_0 VAC	AMPERES L_1-L_0 AC AMPS	AMPERES L_2-L_0 AC AMPS	AMPERES L_3-L_0 AC AMPS	KILOWATTS L_1-L_0 Kw	KILOWATTS L_2-L_0 Kw	KILOWATTS L_3-L_0 Kw	POWER FACTOR PF	FREQ. Hz	% LOAD L_1-L_0	% LOAD L_2-L_0	% LOAD L_3-L_0	AMB. TEMP °F
			SET	ZERO	ON	PANEL	METERS										
1116		N/L	120	120	120	0	0	0	N/A	N/A	N/A	N/A	60	0	0	0	
1118		N/L	120	120	120	0	0	0	N/A	N/A	N/A	N/A	57	0	0	0	
1120		N/L	120	120	120	0	0	0	N/A	N/A	N/A	N/A	62	0	0	0	
1123		1/4	120	120	120	20	20	20	N/A	N/A	N/A	N/A	60	25	25	25	
1125		1/4	120	120	120	20	20	20	N/A	N/A	N/A	N/A	57	25	25	25	
1127		1/4	120	120	120	20	20	20	N/A	N/A	N/A	N/A	62	25	25	25	
1133		1/2	120	120	120	43	43	43	N/A	N/A	N/A	N/A	60	49	49	49	
1135		1/2	120	120	120	43	43	43	N/A	N/A	N/A	N/A	57	50	50	50	
1137		1/2	120	120	120	41	42	42	N/A	N/A	N/A	N/A	62	49	49	49	
1143		3/4	120	120	120	67	69	69	N/A	N/A	N/A	N/A	60	74	74	74	
1145		3/4	120	120	120	67	69	69	N/A	N/A	N/A	N/A	57	72	72	72	
1146		3/4	120	120	120	66	68	68	N/A	N/A	N/A	N/A	62	73	73	73	
1151		4/4	120	120	120	90	90	90	N/A	N/A	N/A	N/A	60	100	100	100	
1152		4/4	120	120	120	90	92	92	N/A	N/A	N/A	N/A	57	101	101	101	
1154		4/4	120	120	120	89	90	90	N/A	N/A	N/A	N/A	62	100	100	100	
1155			SHUT	UNIT	DOWN		END	OF	TEST								

NOTES:

TEST DATA

ITEM 30 KW, 60 Hz Generator Set Modified

MFGR. Libby Welding

MODEL NO. MEP 005A

SERIAL NO. RZ5-3774

NTS

National Technical Systems | Scientific Services Group | Testing Division P.O. Box 38 Harwood, Virginia 22471 Tel: 703 752 5300

Panel Instrument Test

Method 513.2 (computation Sheet)

REF. NO. Mil-Std 705

SHEET 2 OF 2

DATE 13 Jan. 1988

JOB NO. 555-2140

PROJ. ENGR.

RECORDER/OBSERVER

INST. →												
Time ↓	%Load L_1-L_0	% Error	%Load L_2-L_0	% Error	%Load L_3-L_0	% Error		Frequency	% Error			
UNITS												
SYM.												
1123	25	0.806	25	6.72	25	6.72		60	0.167			
1132	49	3.410	49	2.78	49	2.78		60	0.167			
1151	100	3.31	100	0	100	0		60	0			
1116								60	0.167			
1118								57	0			
1120								62	0.161			

28-8

NOTES: 1.2 L3 % LOAD OUT OF SPEC AS PER PROCUREMENT DOC (3% MAX), HOWEVER MIL-G-5288A [illegible] TO RESULT IN MAX VOLTAGE FOR REGULATOR.

TEST DATA

ITEM: 30 kW, 60 Hz Generator Set Modified

MFGR. Libby Welding

MODEL NO. MEP 005A

SERIAL NO. RZS-3774

NTS

National Technical Systems | Scientific Services Group | Testing Division P.O. Box 38 Hartwood, Virginia 22471 Tel: 703 752 5300

Panel Instrument Test

Method 513.2 (computation sheet)

REF. NO. Mil-Std 705

SHEET 1 OF 2

DATE 13 Jan 1988

JOB NO. 565-2140

PROJ. ENGR.

RECORDER/OBSERVER

INST. → / Time ↓	Volts L_1-L_o	% Error	Volts L_2-L_o	% Error	Volts L_3-L_o	% Error	% Amps L_1-L_o	% Error	% Amps L_2-L_o	% Error	% Amps L_3-L_o	% Error
UNITS												
SYM.												
1123	120	3.23	120	3.61	120	3.30	20	17.8	20	20.3	20	20.3
1133	120	2.58	120	3.30	120	3.23	43	108	43	0.278	43	0.279
1151	120	1.64	120	2.83	120	2.44	90	2.90	90	4.46	90	4.46

NOTES: MAINTAIN OUTPUT AT SPEC AT .75 PF LOAD ON L_1, L_2 + L_3

TEST DATA

ITEM 30 KW / 60 HZ
GENERATOR SET
MODIFIED
MFGR. LIBBY WELDING
MODEL NO. MEP 005 A
SERIAL NO. 125 3774

NTS
National Technical Systems Scientific Services Group
Testing Division
P.O. Box 38
Hartwood, Virginia 22471
Tel: 703 752 5300

Frequency and Voltage
Regulation, Stability and Transient Response Test
(Short Term) 710.1.3.2 (N)(7)

REF. NO. MIL-STD 705 Para. 608.1
SHEET 1 OF 2
DATE 11 NOV. 1987
JOB NO. 555-2140
PROJ. ENGR.
RECORDER/OBSERVER GC/BJ/KM

INST TIME	STEP NO.	LOAD STEP	E6020 VOLTAGE x 1 L_1-L_0 VAC	L_2-L_0 VAC	L_3-L_0 VAC	E6040 AMPERES x 40 L_1-L_0 AC AMPS	L_2-L_0 AC AMPS	L_3-L_0 AC AMPS	E6230 KILOWATTS x 40 L_1-L_0 Kw	L_2-L_0 Kw	L_3-L_0 Kw	E6220 POWER FACTOR PF	E6210 FREQ. Hz	E6350 EXCITER FIELD VOLTS VDC	AMPS DCA	AMB. TEMP. °F	
1315			STARTED UNIT			APPLIED			RATED COND		FOR	STABILIZATION					
1345		RL	119	120.5	120	2.5	2.55	2.54	.245	.251	.25	.80	60.3	9.4	3.5	122	131/50.2
1355		RL	119	120.5	120	2.5	2.55	2.55	.245	.251	.25	.80	60.0	9.5	3.5	125	132/50.0
1405		RL	119	120.5	120	2.5	2.55	2.55	.248	.252	.25	.80	59.9	9.6	3.6	125	131/50.1
1415		RL	119	120.5	120	2.5	2.55	2.55	.249	.251	.25	.80	59.9	9.6	3.6	124	132/50.2
1425		RL	119	120.5	120	25	2.55	2.54	.245	.251	.25	.80	59.9	9.6	3.6	124	133/52.9
1440		RL	119	120.5	120	2.5	2.55	2.54	.248	.252	.251	.80	59.9	9.5	3.64	NA	NA
		NL	121.5	121.5	122	0	0	0	0	0	0	0	622	4.0	1.48	NA	NA
		RL	119.5	121	120	2.51	2.55	2.55	.248	.252	.251	.80	59.9	9.6	3.60	NA	NA
		NL	121.5	121.5	122	0	0	0	0	0	0	0	621	3.8	1.48	NA	NA
		RL	119.5	120.5	120	2.51	2.55	2.55	.248	.252	.251	.80	59.9	9.6	3.60	NA	NA
		NL	121.5	121.5	122	0	0	0	0	0	0	0	62.0	4.0	1.44	NA	NA
		RL	119.5	121	120	2.51	2.56	2.55	.248	.252	.251	.80	59.9	9.6	3.56	NA	NA
		NL	120.5	121.5	121.5	0	0	0	0	0	0	0	62.1	3.9	1.44	NA	NA
		3/4	120	121	120.5	1.88	1.92	1.92	.186	.189	.189	.805	60.6	7.9	2.96	NA	NA
		NL	121.5	122	122	0	0	0	0	0	0	0	62.0	3.9	1.44	NA	NA
		3/4	119.5	121	120.5	1.89	1.92	1.93	.186	.189	.188	.805	60.6	7.9	2.92	NA	NA
		NL	121.5	122	122	0	0	0	0	0	0	0	62.0	3.9	1.44	NA	NA
		3/4	119.5	121	120.5	1.88	1.92	1.92	.186	.189	.188	.805	60.6	7.7	2.92	NA	NA
		NL	121.5	121.5	121.5	0	0	0	0	0	0	0	62.0	3.9	1.52	NA	NA
		1/2	120.5	121	120.5	1.31	1.33	1.32	.125	.126	.126	.80	61.1	6.4	2.40	NA	NA
		NL	121.5	122	122	0	0	0	0	0	0	0	61.9	3.9	1.44	NA	NA
		1/2	120	121.5	121	1.31	1.33	1.32	.126	.128	.128	.80	61.0	6.3	1.16	NA	NA
		NL	121.5	122	122	0	0	0	0	0	0	0	61.9	3.8	1.44	NA	NA
		1/2	120	121	121	1.32	1.34	1.33	.125	.127	.127	.80	61.0	6.4	2.36	NA	NA
		NL	121.5	121.5	121.5	0	0	0	0	0	0	0	62.0	3.8	1.44	NA	NA

NOTES: FREQUENCY REGULATION OUT OF SPEC FOR 100% LOAD CHANGES

TEST DATA

ITEM 30 KW / 60 Hz
GENERATOR SET
MODIFIED
MFGR. CIBBY WELDING
MODEL NO. MEP 005A
SERIAL NO. RES 3774

NTS
National Technical Systems
Scientific Services Group
Testing Division
P.O. Box 38
Hartwood, Virginia 22471
Tel: 703 752 5300

Frequency and Voltage
Regulation, Stability and Transient Response Test
(Short Term) 710.1.3.2 (M)(7)

REF. NO. MIL-STD 705 Para. 608.1
SHEET 2 OF 2
DATE 11 NOV. 1987
JOB NO. 555-2140
PROJ. ENGR.
RECORDER/OBSERVER GC / BJ / KM

INST TIME	STEP NO.	LOAD STEP	EG6020 VOLTAGE x1 L_1-L_0 VAC	L_2-L_0 VAC	L_3-L_0 VAC	EG6040 AMPERES x40 L_1-L_0 AC AMPS	L_2-L_0 AC AMPS	L_3-L_0 AC AMPS	EG2300 KILOWATTS x40 L_1-L_0 Kw	L_2-L_0 Kw	L_3-L_0 Kw	EG420 POWER FACTOR PF	EG410 FREQ. Hz	EG1891 EXCITER FIELD VOLTS VDC	AMPS DCA	AMB. TEMP. °F	
		YY	121	121.5	121	.66	.65	.66	.064	.063	.063	.80	61.5	5.0	1.88	NA	NA
		NL	121.5	121.5	121.5	0	0	0	0	0	0	0	61.9	3.8	1.44	NA	NA
		YY	120.5	121.5	121.5	.66	.67	.67	.062	.063	.063	.80	61.5	5.0	1.89	NA	NA
		NL	121.5	121.5	121.5	0	0	0	0	0	0	0	61.9	3.8	1.32	NA	NA
		YY	121	121.5	121.5	.67	.67	.67	.062	.063	.063	.80	61.5	5.1	1.84	NA	NA
		NL	121.5	121.5	122	0	0	0	0	0	0	0	61.9	3.8	1.44	NA	NA
4Δ		RL	119.5	121	120	2.5	2.53	2.54	.245	.251	.250	.80	59.9	9.1	3.52	NA	NA
		NL	121.5	121.5	122	0	0	0	0	0	0	0	61.9	3.9	1.44	NA	NA
4Y		RL	119	121	120	2.49	2.54	2.53	.244	.251	.250	.80	59.9	9.0	3.48	NA	NA
		NL	121.5	122	122	0	0	0	0	0	0	0	61.9	3.8	1.40	NA	NA
		RL	119	120.5	120	2.48	2.53	2.52	.244	.251	.250	.80	59.9	9.1	3.44	NA	NA
1507		NL	121.5	122	122	0	0	0	0	0	0	0	61.9	3.8	1.40	NA	NA

NOTES:

TEST DATA

ITEM 30KW 60Hz GENERATOR SET MODIFIED

MFGR. LIBBY WELDING

MODEL NO. MEP005A

SERIAL NO. RZ53774

NTS

National Technical Systems | Scientific Services Group | Testing Division P.O. Box 38 Harwood, Virginia 22471 Tel: 703 752 5300

FREQUENCY AND VOLTAGE REGULATION, STABILITY, AND TRANSIENT RESPONSE TEST (SHORT TERM)

REF. NO. MIL-STD-705; 608.1

SHEET 1 OF 3

DATE 5 JAN 1988

JOB NO. 555-2140

PROJ. ENGR.

RECORDER/OBSERVER BT, KM, GC

	FREQUENCY								VOLTAGE							
	MAXIMUM EXCURSION				REC.	CONSTANT LOAD BANDWIDTH		REGULATION	MAXIMUM EXCURSION				REC.	CONSTANT LOAD BANDWIDTH		
LOAD	OVERSHOOT		UNDERSHOOT		TIME			FREQ.	VOLT	OVERSHOOT		UNDERSHOOT		TIME		
STEP	HZ	%	HZ	%	SEC.	HZ	%	%	%	VOLT	%	VOLT	%	SEC.	VOLT	%
1						.10	.17								.17	.15
1-2	.90	1.5			.39			3.83	1.66	4.34	3.12			.23		
2						.085	.145								.17	.15
2-3			1.1	1.8	.625			3.83	1.66			3.99	3.33	.23		
3						.085	.145								.17	.15
3-4	.80	1.3			.47			3.66	1.66	2.25	1.88			.08		
4						.065	.11								.17	.15
4-5			1.01	1.7	.7			3.66	1.66			1.74	1.45	.31		
5						.065	.145								.17	.15
5-6	.63	1.04			.39			3.50	1.66	3.99	3.33			.08		
6						.104	.173								.17	.15
6-7			1.08	1.80	.7			3.50	1.66			3.99	3.33	.23		
7						.09	.144								.09	.07
7-8	1.01	1.70			.156			3.66	1.25	2.43	2.03			.08		
8						.09	.144								.26	.22
8-9			.83	1.35	.46			2.50	.83			1.21	1.01	.16		
9						.19	.32								.26	.22
9-10	.63	1.04			.46			2.66	1.25	1.74	1.45			.23		
10						.05	.087								.17	.15
10-11			.59	.98	.39			2.66	1.25			1.21	1.01	.08		
11						.05	.087								.17	.15
11-12	.66	1.09			.46			2.66	1.25	1.74	1.45			.08		
12						.069	.116								.17	15
12-13			.73	1.21	.39			2.66	1.25			1.56	1.30	.08		
13						.087	.145								.17	.15
13-14	.66	1.10			.31			2.66	.83	1.74	1.45			.16		

NOTES:

TEST DATA

ITEM 30KW 60Hz GENERATOR SET MODIFIED

MFGR. LIBBY WELDING

MODEL NO. MEP005A

SERIAL NO. RZ53774

NTS

National Technical Systems | Scientific Services Group | Testing Division P.O. Box 38 Hollywood, Virginia 22471 Tel: 703 752 5300

FREQUENCY AND VOLTAGE

REGULATION, STABILITY, AND TRANSIENT RESPONSE TEST (SHORT TERM)

REF. NO. MIL STD 705: 608.1

SHEET 2 OF 3

DATE 5 JAN 1988

JOB NO. 555-2140

PROJ. ENGR.

RECORDER/OBSERVER RJ KM. GC.

	FREQUENCY								VOLTAGE							
	MAXIMUM EXCURSION				REC.	CONSTANT LOAD BANDWIDTH		REGULATION	MAXIMUM EXCURSION					REC.	CONSTANT LOAD BANDWIDTH	
LOAD	OVERSHOOT		UNDERSHOOT		TIME					OVERSHOOT		UNDERSHOOT		TIME		
STEP	HZ	%	HZ	%	SEC.	HZ ±	% ±	%	VOLT	VOLT	%	VOLT	%	SEC.	VOLT ±	% ±
14						.07	.12								.17	.15
14-15			.55	.93	0			1.50	.83			.69	.58	0		
15						.09	.15								.17	.15
15-16	.45	.75			0			1.33	1.25	.69	.58			0		
16						.04	.06								.17	.15
16-17			.55	.93	0			1.50	.83			1.21	1.01	.08		
17						.09	.15								.09	.07
17-18	.52	.87			0			1.50	.83	.52	.43			0		
18						.05	.09								.17	.15
18-19			.55	.93	0			1.50	.83			1.04	.87	0		
19						.09	.15								.17	.15
19-20	.49	.81			0			1.66	.41	.35	.29			0		
20						.06	.09								.17	.15
20-21			.17	.29	0			.83	.41			.52	.43	0		
21						.07	.12								.17	.15
21-22	.10	.17			0			.66	.41	.52	.43			0		
22						.07	.12								.17	.15
22-23			.17	.29	0			.66	0			.35	.29	0		
23						.07	.12								.17	.15
23-24	.17	.29			0			.66	0	.35	.29			0		
24						.05	.09								.17	.15
24-25			.17	.29	0			.66	0			.52	.43	0		
25						.05	.09								.17	.15
25-26	.17	.29			0			.66	.41	.52	.43			0		
26						.07	.12								.17	.15
26-27			1.11	1.85	.63			3.33	1.66			3.34	2.75	.23		

TEST DATA

ITEM 30KW 60Hz GENERATOR SET MODIFIED

MFGR. LIBBY WELDING

MODEL NO. MEP 005A

SERIAL NO. R25 3774

NTS National Technical Systems Scientific Services Group

Testing Division
P.O. Box 38
Harlwood, Virginia 22471
Tel: 703 752 5300

FREQUENCY AND VOLTAGE

REGULATION, STABILITY, AND TRANSIENT RESPONSE TEST (SHORT TERM)

REF. NO. MIL-STD-705; 608.1

SHEET 3 OF 5

DATE 5 JAN 1988

JOB NO. 555-2140

PROJ. ENGR.

RECORDER/OBSERVER BT K.m. GC

	FREQUENCY								VOLTAGE							
	MAXIMUM EXCURSION				REC.	CONSTANT LOAD BANDWIDTH		REGULATION	MAXIMUM EXCURSION					REC.	CONSTANT LOAD BANDWIDTH	
LOAD	OVERSHOOT		UNDERSHOOT		TIME			FREQ.	VOLT	OVERSHOOT		UNDERSHOOT		TIME		
STEP	HZ	%	HZ	%	SEC.	HZ	%	%	%	VOLT	%	VOLT	%	SEC.	VOLT	%
22						.15	.26								.17	.15
22-23	1.04	1.74			.31			2.33	1.66	3.41	2.89			.16		
23						.09	.15								.17	.15
23-24			1.18	1.96	.20			3.33	1.66			2.08	1.74	.23		
24						.09	.15								.17	.15
24-25	1.01	1.68			.31			3.33	1.66	2.60	2.17			.16		
25						.07	.12								.17	.15
25-26			1.15	1.91	.62			3.33	1.66			2.08	1.74	.23		
26						.12	.20								.17	.15
26-27	1.01	1.68			.39			3.33	1.66	3.3	2.75			.16		
27						.07	.12								.17	.15

NOTES:

FREQ/VOLTAGE REG, STABILITY & TRANSIENT RESPONSE 60Hz

BEGIN SCAN GROUP 1 11 NOV 87 13:44:35
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	787.52	DEG. F	ALM
C	2	EXHAUST 2	797.10	DEG. F	ALM
C	3	EXHAUST 3	821.42	DEG. F	ALM
C	4	EXHAUST 4	780.92	DEG. F	ALM
C	5	EXHAUST 5	779.90	DEG. F	ALM
C	6	EXHAUST 6	772.54	DEG. F	ALM
C	7	ENG. COOL. IN	200.31	DEG. F	ALM
C	8	ENG. COOL. OUT	208.29	DEG. F	ALM
C	9	OIL SUMP	227.96	DEG. F	ALM
C	10	OIL GALLERY	229.73	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	129.57	DEG. F	ALM
C	14	RAD. TOP LEFT	145.68	DEG. F	ALM
C	15	RAD. BTTM LEFT	141.41	DEG. F	ALM
C	16	RAD. TOP RIGHT	142.83	DEG. F	ALM
C	17	RAD. BTTM RIGHT	144.53	DEG. F	ALM
C	18	GEN. AIR IN	120.19	DEG. F	ALM
C	19	GEN. AIR OUT	140.64	DEG. F	ALM
C	20	GEN. FRAME TOP	129.39	DEG. F	ALM
C	21	GEN. FRAME BTTM	126.27	DEG. F	ALM
C	22	GEN. EXCITER	129.54	DEG. F	ALM
C	23	GEN. VOLT. REG.	137.55	DEG. F	ALM
C	24	CONTROL PANEL	135.52	DEG. F	ALM
C	25	RELAY AREA	127.08	DEG. F	ALM
C	26	BATTERY LEFT	121.09	DEG. F	ALM
C	27	BATTERY RIGHT	125.45	DEG. F	ALM
C	28	AIR IN SET	122.39	DEG. F	ALM
C	29	FUEL TANK	103.84	DEG. F	ALM
C	30	FUEL OUTLET	150.58	DEG. F	ALM

END SCAN GROUP 1 11 NOV 87 13:44:45

STOPPED SINGLE SCAN 11 NOV 87 13:44:45

BEGIN SCAN GROUP 1 11 NOV 87 13:55:12
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	789.81	DEG. F	ALM
C	2	EXHAUST 2	801.27	DEG. F	ALM
C	3	EXHAUST 3	824.10	DEG. F	ALM
C	4	EXHAUST 4	782.97	DEG. F	ALM
C	5	EXHAUST 5	786.27	DEG. F	ALM
C	6	EXHAUST 6	777.43	DEG. F	ALM
C	7	ENG. COOL. IN	202.80	DEG. F	ALM
C	8	ENG. COOL. OUT	210.96	DEG. F	ALM
C	9	OIL SUMP	233.01	DEG. F	ALM
C	10	OIL GALLERY	234.38	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	131.29	DEG. F	ALM
C	14	RAD. TOP LEFT	148.68	DEG. F	ALM
C	15	RAD. BTTM LEFT	143.57	DEG. F	ALM
C	16	RAD. TOP RIGHT	144.93	DEG. F	ALM
C	17	RAD. BTTM RIGHT	147.87	DEG. F	ALM
C	18	GEN. AIR IN	123.02	DEG. F	ALM
C	19	GEN. AIR OUT	142.87	DEG. F	ALM
C	20	GEN. FRAME TOP	129.53	DEG. F	ALM
C	21	GEN. FRAME BTTM	125.66	DEG. F	ALM
C	22	GEN. EXCITER	131.11	DEG. F	ALM
C	23	GEN. VOLT. REG.	136.05	DEG. F	ALM
C	24	CONTROL PANEL	133.90	DEG. F	ALM
C	25	RELAY AREA	127.93	DEG. F	ALM
C	26	BATTERY LEFT	122.78	DEG. F	ALM
C	27	BATTERY RIGHT	127.39	DEG. F	ALM
C	28	AIR IN SET	125.22	DEG. F	ALM
C	29	FUEL TANK	105.53	DEG. F	ALM
C	30	FUEL OUTLET	149.52	DEG. F	ALM

END SCAN GROUP 1 11 NOV 87 13:55:22

STOPPED SINGLE SCAN 11 NOV 87 13:55:22

BEGIN SCAN GROUP 1 11 NOV 87 14:04:27
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	794.66	DEG. F	ALM
C	2	EXHAUST 2	807.53	DEG. F	ALM
C	3	EXHAUST 3	828.64	DEG. F	ALM
C	4	EXHAUST 4	789.23	DEG. F	ALM
C	5	EXHAUST 5	794.19	DEG. F	ALM
C	6	EXHAUST 6	784.89	DEG. F	ALM
C	7	ENG. COOL. IN	205.30	DEG. F	ALM
C	8	ENG. COOL. OUT	213.47	DEG. F	ALM
C	9	OIL SUMP	235.82	DEG. F	ALM
C	10	OIL GALLERY	237.16	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	133.89	DEG. F	ALM
C	14	RAD. TOP LEFT	149.81	DEG. F	ALM
C	15	RAD. BTTM LEFT	144.70	DEG. F	ALM
C	16	RAD. TOP RIGHT	146.42	DEG. F	ALM
C	17	RAD. BTTM RIGHT	149.41	DEG. F	ALM
C	18	GEN. AIR IN	123.82	DEG. F	ALM
C	19	GEN. AIR OUT	144.63	DEG. F	ALM
C	20	GEN. FRAME TOP	131.40	DEG. F	ALM
C	21	GEN. FRAME BTTM	127.10	DEG. F	ALM
C	22	GEN. EXCITER	132.52	DEG. F	ALM
C	23	GEN. VOLT. REG.	136.25	DEG. F	ALM
C	24	CONTROL PANEL	134.67	DEG. F	ALM
C	25	RELAY AREA	129.29	DEG. F	ALM
C	26	BATTERY LEFT	124.58	DEG. F	ALM
C	27	BATTERY RIGHT	127.88	DEG. F	ALM
C	28	AIR IN SET	125.30	DEG. F	ALM
C	29	FUEL TANK	107.00	DEG. F	ALM
C	30	FUEL OUTLET	150.03	DEG. F	ALM

END SCAN GROUP 1 11 NOV 87 14:04:37

STOPPED SINGLE SCAN 11 NOV 87 14:04:37

BEGIN SCAN GROUP 1 11 NOV 87 14:14:33
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	790.31	DEG. F	ALM
C	2	EXHAUST 2	803.79	DEG. F	ALM
C	3	EXHAUST 3	826.00	DEG. F	ALM
C	4	EXHAUST 4	785.27	DEG. F	ALM
C	5	EXHAUST 5	789.74	DEG. F	ALM
C	6	EXHAUST 6	779.63	DEG. F	ALM
C	7	ENG. COOL. IN	204.55	DEG. F	ALM
C	8	ENG. COOL. OUT	212.78	DEG. F	ALM
C	9	OIL SUMP	236.85	DEG. F	ALM
C	10	OIL GALLERY	238.36	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	131.85	DEG. F	ALM
C	14	RAD. TOP LEFT	149.23	DEG. F	ALM
C	15	RAD. BTTM LEFT	144.21	DEG. F	ALM
C	16	RAD. TOP RIGHT	146.06	DEG. F	ALM
C	17	RAD. BTTM RIGHT	148.87	DEG. F	ALM
C	18	GEN. AIR IN	122.66	DEG. F	ALM
C	19	GEN. AIR OUT	144.67	DEG. F	ALM
C	20	GEN. FRAME TOP	130.93	DEG. F	ALM
C	21	GEN. FRAME BTTM	126.89	DEG. F	ALM
C	22	GEN. EXCITER	131.75	DEG. F	ALM
C	23	GEN. VOLT. REG.	135.84	DEG. F	ALM
C	24	CONTROL PANEL	134.32	DEG. F	ALM
C	25	RELAY AREA	128.48	DEG. F	ALM
C	26	BATTERY LEFT	126.18	DEG. F	ALM
C	27	BATTERY RIGHT	129.20	DEG. F	ALM
C	28	AIR IN SET	124.55	DEG. F	ALM
C	29	FUEL TANK	108.68	DEG. F	ALM
C	30	FUEL OUTLET	150.87	DEG. F	ALM

END SCAN GROUP 1 11 NOV 87 14:14:43

STOPPED SINGLE SCAN 11 NOV 87 14:14:43

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BEGIN SCAN GROUP 1   11 NOV 87  14:24:43
30KW 60HZ GEN SET S/NRZ5 3774

C    1 EXHAUST 1          792.53 DEG.  F ALM
C    2 EXHAUST 2          803.76 DEG.  F ALM
C    3 EXHAUST 3          826.86 DEG.  F ALM
C    4 EXHAUST 4          787.82 DEG.  F ALM
C    5 EXHAUST 5          792.58 DEG.  F ALM
C    6 EXHAUST 6          778.51 DEG.  F ALM
C    7 ENG. COOL. IN      204.59 DEG.  F ALM
C    8 ENG. COOL. OUT     213.03 DEG.  F ALM
C    9 OIL SUMP           237.26 DEG.  F ALM
C   10 OIL GALLERY        238.70 DEG.  F ALM
C   11                    .00000
C   12                    .00000
C   13  ENG. INTAKE       132.21 DEG.  F ALM
C   14 RAD. TOP LEFT      149.47 DEG.  F ALM
C   15 RAD. BTTM LEFT     144.76 DEG.  F ALM
C   16 RAD. TOP RIGHT     146.36 DEG.  F ALM
C   17 RAD. BTTM RIGHT    149.20 DEG.  F ALM
C   18 GEN. AIR IN        122.43 DEG.  F ALM
C   19 GEN. AIR OUT       145.03 DEG.  F ALM
C   20 GEN. FRAME TOP     131.08 DEG.  F ALM
C   21 GEN. FRAME BTTM    126.80 DEG.  F ALM
C   22 GEN. EXCITER       131.69 DEG.  F ALM
C   23 GEN. VOLT. REG.    135.61 DEG.  F ALM
C   24 CONTROL PANEL      134.23 DEG.  F ALM
C   25 RELAY AREA         128.75 DEG.  F ALM
C   26 BATTERY LEFT       127.17 DEG.  F ALM
C   27 BATTERY RIGHT      131.59 DEG.  F ALM
C   28 AIR IN SET         125.32 DEG.  F ALM
C   29 FUEL TANK          110.24 DEG.  F ALM
C   30 FUEL OUTLET        150.53 DEG.  F ALM

END SCAN GROUP 1      11 NOV 87  14:24:54

STOPPED SINGLE SCAN   11 NOV 87  14:24:54


BEGIN SCAN GROUP 1   11 NOV 87  14:39:45
30KW 60HZ GEN SET S/NRZ5 3774

C    1 EXHAUST 1          783.67 DEG.  F ALM
C    2 EXHAUST 2          795.45 DEG.  F ALM
C    3 EXHAUST 3          816.68 DEG.  F ALM
C    4 EXHAUST 4          781.78 DEG.  F ALM
C    5 EXHAUST 5          788.95 DEG.  F ALM
C    6 EXHAUST 6          769.76 DEG.  F ALM
C    7 ENG. COOL. IN      204.20 DEG.  F ALM
C    8 ENG. COOL. OUT     212.36 DEG.  F ALM
C    9 OIL SUMP           237.38 DEG.  F ALM
C   10 OIL GALLERY        238.85 DEG.  F ALM
C   11                    .00000
C   12                    .00000
C   13  ENG. INTAKE       132.52 DEG.  F ALM
C   14 RAD. TOP LEFT      149.79 DEG.  F ALM
C   15 RAD. BTTM LEFT     144.85 DEG.  F ALM
C   16 RAD. TOP RIGHT     146.81 DEG.  F ALM
C   17 RAD. BTTM RIGHT    149.43 DEG.  F ALM
C   18 GEN. AIR IN        123.21 DEG.  F ALM
C   19 GEN. AIR OUT       145.73 DEG.  F ALM
C   20 GEN. FRAME TOP     131.59 DEG.  F ALM
C   21 GEN. FRAME BTTM    127.48 DEG.  F ALM
C   22 GEN. EXCITER       132.17 DEG.  F ALM
C   23 GEN. VOLT. REG.    135.53 DEG.  F ALM
C   24 CONTROL PANEL      134.47 DEG.  F ALM
C   25 RELAY AREA         129.01 DEG.  F ALM
C   26 BATTERY LEFT       129.18 DEG.  F ALM
C   27 BATTERY RIGHT      133.65 DEG.  F ALM
C   28 AIR IN SET         125.53 DEG.  F ALM
C   29 FUEL TANK          112.60 DEG.  F ALM
C   30 FUEL OUTLET        151.23 DEG.  F ALM

END SCAN GROUP 1      11 NOV 87  14:39:55

STOPPED SINGLE SCAN   11 NOV 87  14:39:55
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TEST DATA

ITEM: 30 KW 60 Hz GENERATOR SET MODIFIED
MFGR.: LIBBY WELDING
MODEL NO.: MEP 005A
SERIAL NO.: RZ 53774

NTS
National Technical Systems | Scientific Services Group | Testing Division P.O. Box 38 Hartwood, Virginia 22471 Tel: 703 752 5300

CIRCUIT INTERRUPTER (SHORT CIRCUIT)

REF. NO. MIL-STD 705
SHEET 1 OF 1
DATE 14 NOV 1987
JOB NO. 555-2140
PROJ. ENGR.
RECORDER/OBSERVER GC/BJ/KA

INST TIME	STEP NO.	LOAD STEP	E6028D VOLTAGE L_1-L_0 VAC	L_2-L_0 VAC	L_3-L_0 VAC	E6040D AMPERES X40 L_1-L_0 AC AMP	L_2-L_0 AC AMP	L_3-L_0 AC AMP	E6230D KILOWATTS X40 L_1-L_0 KW	L_2-L_0 KW	L_3-L_0 KW	E6430 POWER FACTOR PF	E6241D FREQ. HZ	E6189D EXCITER VOLTS VDC	EFIELD AMPS DCA	AMB TEMP °F	PRESS IN/EXH IN Hg	
1108		STARTED UNIT																
1109		PLACED UNIT ON RATED LOAD																
1114		R/L	119	120.5	120	2.52	2.56	2.55	.248	.253	.252	.805	60.3	8.2	3.3	124	13.6	30.3
1117		APPLIED SHORT L1-L0 - SHORT CIRCUIT INDICATOR ON																
1125		RESET CIRCUIT BREAKER																
1126		R/L	119	120.5	120	2.52	2.56	2.55	.248	.253	.252	.805	60.1	8.5	3.3	125	13.7	35.5
1127		APPLIED SHORT CIRCUIT L2-L0 SHORT CIRCUIT INDICATOR ON																
1131		RESET CIRCUIT BREAKER																
1134		R/L	119	120.5	120	2.51	2.55	2.55	.25	.255	.253	.80	60	8.6	3.4	124	13.5	41.0
1139		APPLIED SHORT CIRCUIT L3-L0 SHORT CIRCUIT INDICATOR ON																
1140		RESET CIRCUIT BREAKER																
1141		R/L	119	120.5	120	2.52	2.56	2.55	.248	.254	.253	.805	60	8.6	3.4	124	13.5	39.2
1142		APPLIED SHORT CIRCUIT L1-L2 SHORT CIRCUIT INDICATOR ON																
1146		RESET CIRCUIT BREAKER																
1147		R/L	119.5	120.5	120	2.52	2.52	2.56	.248	.254	.254	.805	60	8.8	3.5	126	13.5	39.3
1147		APPLIED SHORT CIRCUIT L2-L2 SHORT CIRCUIT INDICATOR ON																
1151		RESET CIRCUIT BREAKER																
1151		R/L	119	120.5	120	2.52	2.56	2.56	.248	.254	.254	.805	59.9	8.8	3.5	125	13.6	39.1
1153		APPLIED SHORT CIRCUIT L1-L3 SHORT CIRCUIT INDICATOR ON																
1155		RESET CIRCUIT BREAKER																
1156		R/L	119	120.5	120	2.52	2.56	2.56	.249	.255	.254	.805	59.9	8.9	3.5	125	13.5	39.7
1157		APPLIED SHORT CIRCUIT L1-L0-L3 SHORT CIRCUIT INDICATOR ON																
1158		SHUT UNIT DOWN E.O.T.																

NOTES:

TEST DATA

ITEM 30 KW 60 Hz GENERATOR SET MODIFIED

MFGR. LIBBY WELDING.

MODEL NO. MEP 005A

SERIAL NO. R2 5 3774

NTS

National Technical Systems | Scientific Services Group | Testing Division, P.O. Box 38, Harlwood, Virginia 22471, Tel: 703 752 5300

SHORT CIRCUIT

INTERRUPTER TEST (COMPUTATION RESULTS)

REF. NO. MIL STD 705: 5121C

SHEET 1 OF 1

DATE 14 JAN 1988

JOB NO. 555-2140

PROJ. ENGR.

RECORDER/OBSERVER GC/BJ/KM

INST. →													
ØSHORT ↓		CURRENT BEFORE SHORT	CURRENT MAX		INTERRUPT TIME								
UNITS													
SYM.													
L1-L0		100.8	1013.04		58.45								
L2-L0		102.4	1102.02		58.45								
L3-L0		102.0	955.10		58.45								
L1-L2		100.8	897.12		50.10								
L2-L3		102.4	901.12		33.40								
L3-L1		102.4	901.12		50.10								
L1-L2-L3		102.4	1064.96		41.75								

NOTES:

T61-7

CIRCUIT INTERRUPT (SHORT CIRCUIT) S/2.1

BEGIN SCAN GROUP 1 14 NOV 87 11:13:53
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	766.33	DEG. F	ALM
C	2	EXHAUST 2	782.01	DEG. F	ALM
C	3	EXHAUST 3	804.90	DEG. F	ALM
C	4	EXHAUST 4	772.69	DEG. F	ALM
C	5	EXHAUST 5	772.82	DEG. F	ALM
C	6	EXHAUST 6	753.76	DEG. F	ALM
C	7	ENG. COOL. IN	187.43	DEG. F	ALM
C	8	ENG. COOL. OUT	194.92	DEG. F	ALM
C	9	OIL SUMP	176.69	DEG. F	ALM
C	10	OIL GALLERY	187.75	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	126.72	DEG. F	ALM
C	14	RAD. TOP LEFT	139.04	DEG. F	ALM
C	15	RAD. BTTM LEFT	132.49	DEG. F	ALM
C	16	RAD. TOP RIGHT	132.30	DEG. F	ALM
C	17	RAD. BTTM RIGHT	135.30	DEG. F	ALM
C	18	GEN. AIR IN	123.14	DEG. F	ALM
C	19	GEN. AIR OUT	124.38	DEG. F	ALM
C	20	GEN. FRAME TOP	115.56	DEG. F	ALM
C	21	GEN. FRAME BTTM	112.10	DEG. F	ALM
C	22	GEN. EXCITER	125.23	DEG. F	ALM
C	23	GEN. VOLT. REG.	109.57	DEG. F	ALM
C	24	CONTROL PANEL	115.11	DEG. F	ALM
C	25	RELAY AREA	121.10	DEG. F	ALM
C	26	BATTERY LEFT	101.61	DEG. F	ALM
C	27	BATTERY RIGHT	106.74	DEG. F	ALM
C	28	AIR IN SET	124.30	DEG. F	ALM
C	29	FUEL TANK	91.314	DEG. F	ALM
C	30	FUEL OUTLET	119.40	DEG. F	ALM

END SCAN GROUP 1 14 NOV 87 11:14:03

STOPPED SINGLE SCAN 14 NOV 87 11:14:04

BEGIN SCAN GROUP 1 14 NOV 87 11:26:00
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	716.49	DEG. F	ALM
C	2	EXHAUST 2	727.77	DEG. F	ALM
C	3	EXHAUST 3	741.47	DEG. F	ALM
C	4	EXHAUST 4	707.61	DEG. F	ALM
C	5	EXHAUST 5	707.56	DEG. F	ALM
C	6	EXHAUST 6	688.49	DEG. F	ALM
C	7	ENG. COOL. IN	177.45	DEG. F	ALM
C	8	ENG. COOL. OUT	186.67	DEG. F	ALM
C	9	OIL SUMP	194.31	DEG. F	ALM
C	10	OIL GALLERY	205.97	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	128.04	DEG. F	ALM
C	14	RAD. TOP LEFT	137.64	DEG. F	ALM
C	15	RAD. BTTM LEFT	134.67	DEG. F	ALM
C	16	RAD. TOP RIGHT	135.13	DEG. F	ALM
C	17	RAD. BTTM RIGHT	137.83	DEG. F	ALM
C	18	GEN. AIR IN	124.01	DEG. F	ALM
C	19	GEN. AIR OUT	128.77	DEG. F	ALM
C	20	GEN. FRAME TOP	123.23	DEG. F	ALM
C	21	GEN. FRAME BTTM	121.05	DEG. F	ALM
C	22	GEN. EXCITER	128.62	DEG. F	ALM
C	23	GEN. VOLT. REG.	117.56	DEG. F	ALM
C	24	CONTROL PANEL	123.74	DEG. F	ALM
C	25	RELAY AREA	124.32	DEG. F	ALM
C	26	BATTERY LEFT	106.64	DEG. F	ALM
C	27	BATTERY RIGHT	109.52	DEG. F	ALM
C	28	AIR IN SET	124.96	DEG. F	ALM
C	29	FUEL TANK	93.212	DEG. F	ALM
C	30	FUEL OUTLET	134.32	DEG. F	ALM

END SCAN GROUP 1 14 NOV 87 11:26:10

STOPPED SINGLE SCAN 14 NOV 87 11:26:10

BEGIN SCAN GROUP 1 14 NOV 87 11:32:5
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	735.26	DEG. F	ALM
C	2	EXHAUST 2	747.57	DEG. F	ALM
C	3	EXHAUST 3	765.49	DEG. F	ALM
C	4	EXHAUST 4	731.69	DEG. F	ALM
C	5	EXHAUST 5	733.21	DEG. F	ALM
C	6	EXHAUST 6	711.77	DEG. F	ALM
C	7	ENG. COOL. IN	184.08	DEG. F	ALM
C	8	ENG. COOL. OUT	191.57	DEG. F	ALM
C	9	OIL SUMP	199.58	DEG. F	ALM
C	10	OIL GALLERY	211.48	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	128.62	DEG. F	ALM
C	14	RAD. TOP LEFT	139.22	DEG. F	ALM
C	15	RAD. BTTM LEFT	135.75	DEG. F	ALM
C	16	RAD. TOP RIGHT	136.48	DEG. F	ALM
C	17	RAD. BTTM RIGHT	139.44	DEG. F	ALM
C	18	GEN. AIR IN	122.76	DEG. F	ALM
C	19	GEN. AIR OUT	130.84	DEG. F	ALM
C	20	GEN. FRAME TOP	124.99	DEG. F	ALM
C	21	GEN. FRAME BTTM	122.96	DEG. F	ALM
C	22	GEN. EXCITER	129.24	DEG. F	ALM
C	23	GEN. VOLT. REG.	120.37	DEG. F	ALM
C	24	CONTROL PANEL	126.19	DEG. F	ALM
C	25	RELAY AREA	125.17	DEG. F	ALM
C	26	BATTERY LEFT	108.41	DEG. F	ALM
C	27	BATTERY RIGHT	110.37	DEG. F	ALM
C	28	AIR IN SET	123.94	DEG. F	ALM
C	29	FUEL TANK	94.459	DEG. F	ALM
C	30	FUEL OUTLET	137.88	DEG. F	ALM

END SCAN GROUP 1 14 NOV 87 11:33:00

STOPPED SINGLE SCAN 14 NOV 87 11:33:00

BEGIN SCAN GROUP 1 14 NOV 87 11:40:15
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	691.14	DEG. F	ALM
C	2	EXHAUST 2	699.73	DEG. F	ALM
C	3	EXHAUST 3	705.87	DEG. F	ALM
C	4	EXHAUST 4	679.82	DEG. F	ALM
C	5	EXHAUST 5	685.95	DEG. F	ALM
C	6	EXHAUST 6	662.40	DEG. F	ALM
C	7	ENG. COOL. IN	177.32	DEG. F	ALM
C	8	ENG. COOL. OUT	184.96	DEG. F	ALM
C	9	OIL SUMP	202.80	DEG. F	ALM
C	10	OIL GALLERY	215.30	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	129.78	DEG. F	ALM
C	14	RAD. TOP LEFT	138.99	DEG. F	ALM
C	15	RAD. BTTM LEFT	136.51	DEG. F	ALM
C	16	RAD. TOP RIGHT	137.11	DEG. F	ALM
C	17	RAD. BTTM RIGHT	139.28	DEG. F	ALM
C	18	GEN. AIR IN	123.34	DEG. F	ALM
C	19	GEN. AIR OUT	132.18	DEG. F	ALM
C	20	GEN. FRAME TOP	126.59	DEG. F	ALM
C	21	GEN. FRAME BTTM	124.49	DEG. F	ALM
C	22	GEN. EXCITER	130.61	DEG. F	ALM
C	23	GEN. VOLT. REG.	122.63	DEG. F	ALM
C	24	CONTROL PANEL	128.49	DEG. F	ALM
C	25	RELAY AREA	126.45	DEG. F	ALM
C	26	BATTERY LEFT	110.38	DEG. F	ALM
C	27	BATTERY RIGHT	111.62	DEG. F	ALM
C	28	AIR IN SET	124.93	DEG. F	ALM
C	29	FUEL TANK	95.982	DEG. F	ALM
C	30	FUEL OUTLET	142.46	DEG. F	ALM

END SCAN GROUP 1 14 NOV 87 11:40:26

STOPPED SINGLE SCAN 14 NOV 87 11:40:26

BEGIN SCAN GROUP 1 14 NOV 87 11:45:55
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	703.00	DEG. F	ALM
C	2	EXHAUST 2	712.29	DEG. F	ALM
C	3	EXHAUST 3	722.72	DEG. F	ALM
C	4	EXHAUST 4	698.13	DEG. F	ALM
C	5	EXHAUST 5	696.62	DEG. F	ALM
C	6	EXHAUST 6	671.99	DEG. F	ALM
C	7	ENG. COOL. IN	178.81	DEG. F	ALM
C	8	ENG. COOL. OUT	186.46	DEG. F	ALM
C	9	OIL SUMP	203.83	DEG. F	ALM
C	10	OIL GALLERY	216.25	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	129.79	DEG. F	ALM
C	14	RAD. TOP LEFT	139.63	DEG. F	ALM
C	15	RAD. BTTM LEFT	137.32	DEG. F	ALM
C	16	RAD. TOP RIGHT	137.92	DEG. F	ALM
C	17	RAD. BTTM RIGHT	139.85	DEG. F	ALM
C	18	GEN. AIR IN	124.33	DEG. F	ALM
C	19	GEN. AIR OUT	133.47	DEG. F	ALM
C	20	GEN. FRAME TOP	127.22	DEG. F	ALM
C	21	GEN. FRAME BTTM	125.25	DEG. F	ALM
C	22	GEN. EXCITER	130.66	DEG. F	ALM
C	23	GEN. VOLT. REG.	124.08	DEG. F	ALM
C	24	CONTROL PANEL	129.49	DEG. F	ALM
C	25	RELAY AREA	126.91	DEG. F	ALM
C	26	BATTERY LEFT	111.40	DEG. F	ALM
C	27	BATTERY RIGHT	112.78	DEG. F	ALM
C	28	AIR IN SET	125.64	DEG. F	ALM
C	29	FUEL TANK	97.090	DEG. F	ALM
C	30	FUEL OUTLET	144.09	DEG. F	ALM

END SCAN GROUP 1 14 NOV 87 11:46:05

STOPPED SINGLE SCAN 14 NOV 87 11:46:05

BEGIN SCAN GROUP 1 14 NOV 87 11:46:32
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	725.37	DEG. F	ALM
C	2	EXHAUST 2	735.48	DEG. F	ALM
C	3	EXHAUST 3	750.68	DEG. F	ALM
C	4	EXHAUST 4	718.66	DEG. F	ALM
C	5	EXHAUST 5	720.66	DEG. F	ALM
C	6	EXHAUST 6	699.45	DEG. F	ALM
C	7	ENG. COOL. IN	182.65	DEG. F	ALM
C	8	ENG. COOL. OUT	190.85	DEG. F	ALM
C	9	OIL SUMP	204.38	DEG. F	ALM
C	10	OIL GALLERY	216.62	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	129.97	DEG. F	ALM
C	14	RAD. TOP LEFT	140.65	DEG. F	ALM
C	15	RAD. BTTM LEFT	137.76	DEG. F	ALM
C	16	RAD. TOP RIGHT	138.49	DEG. F	ALM
C	17	RAD. BTTM RIGHT	140.51	DEG. F	ALM
C	18	GEN. AIR IN	124.51	DEG. F	ALM
C	19	GEN. AIR OUT	134.19	DEG. F	ALM
C	20	GEN. FRAME TOP	127.31	DEG. F	ALM
C	21	GEN. FRAME BTTM	125.39	DEG. F	ALM
C	22	GEN. EXCITER	131.08	DEG. F	ALM
C	23	GEN. VOLT. REG.	124.19	DEG. F	ALM
C	24	CONTROL PANEL	129.58	DEG. F	ALM
C	25	RELAY AREA	127.07	DEG. F	ALM
C	26	BATTERY LEFT	111.44	DEG. F	ALM
C	27	BATTERY RIGHT	112.98	DEG. F	ALM
C	28	AIR IN SET	125.58	DEG. F	ALM
C	29	FUEL TANK	97.227	DEG. F	ALM
C	30	FUEL OUTLET	143.58	DEG. F	ALM

END SCAN GROUP 1 14 NOV 87 11:46:42

STOPPED SINGLE SCAN 14 NOV 87 11:46:42

BEGIN SCAN GROUP 1 14 NOV 87 11:52:20
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	732.38	DEG. F	ALM
C	2	EXHAUST 2	744.00	DEG. F	ALM
C	3	EXHAUST 3	762.38	DEG. F	ALM
C	4	EXHAUST 4	729.66	DEG. F	ALM
C	5	EXHAUST 5	729.36	DEG. F	ALM
C	6	EXHAUST 6	706.85	DEG. F	ALM
C	7	ENG. COOL. IN	184.65	DEG. F	ALM
C	8	ENG. COOL. OUT	192.08	DEG. F	ALM
C	9	OIL SUMP	205.83	DEG. F	ALM
C	10	OIL GALLERY	217.28	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	129.48	DEG. F	ALM
C	14	RAD. TOP LEFT	141.24	DEG. F	ALM
C	15	RAD. BTTM LEFT	137.97	DEG. F	ALM
C	16	RAD. TOP RIGHT	139.08	DEG. F	ALM
C	17	RAD. BTTM RIGHT	140.93	DEG. F	ALM
C	18	GEN. AIR IN	125.81	DEG. F	ALM
C	19	GEN. AIR OUT	135.17	DEG. F	ALM
C	20	GEN. FRAME TOP	127.28	DEG. F	ALM
C	21	GEN. FRAME BTTM	125.55	DEG. F	ALM
C	22	GEN. EXCITER	130.71	DEG. F	ALM
C	23	GEN. VOLT. REG.	125.13	DEG. F	ALM
C	24	CONTROL PANEL	129.83	DEG. F	ALM
C	25	RELAY AREA	127.30	DEG. F	ALM
C	26	BATTERY LEFT	112.39	DEG. F	ALM
C	27	BATTERY RIGHT	114.92	DEG. F	ALM
C	28	AIR IN SET	126.11	DEG. F	ALM
C	29	FUEL TANK	98.475	DEG. F	ALM
C	30	FUEL OUTLET	144.14	DEG. F	ALM

END SCAN GROUP 1 14 NOV 87 11:52:30

STOPPED SINGLE SCAN 14 NOV 87 11:52:30

BEGIN SCAN GROUP 1 14 NOV 87 11:55:32
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	705.98	DEG. F	ALM
C	2	EXHAUST 2	714.27	DEG. F	ALM
C	3	EXHAUST 3	726.52	DEG. F	ALM
C	4	EXHAUST 4	700.87	DEG. F	ALM
C	5	EXHAUST 5	703.59	DEG. F	ALM
C	6	EXHAUST 6	679.59	DEG. F	ALM
C	7	ENG. COOL. IN	181.22	DEG. F	ALM
C	8	ENG. COOL. OUT	188.08	DEG. F	ALM
C	9	OIL SUMP	205.89	DEG. F	ALM
C	10	OIL GALLERY	217.91	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	129.48	DEG. F	ALM
C	14	RAD. TOP LEFT	140.09	DEG. F	ALM
C	15	RAD. BTTM LEFT	137.57	DEG. F	ALM
C	16	RAD. TOP RIGHT	138.80	DEG. F	ALM
C	17	RAD. BTTM RIGHT	140.74	DEG. F	ALM
C	18	GEN. AIR IN	123.63	DEG. F	ALM
C	19	GEN. AIR OUT	134.43	DEG. F	ALM
C	20	GEN. FRAME TOP	127.76	DEG. F	ALM
C	21	GEN. FRAME BTTM	125.43	DEG. F	ALM
C	22	GEN. EXCITER	130.59	DEG. F	ALM
C	23	GEN. VOLT. REG.	125.86	DEG. F	ALM
C	24	CONTROL PANEL	130.39	DEG. F	ALM
C	25	RELAY AREA	126.84	DEG. F	ALM
C	26	BATTERY LEFT	113.09	DEG. F	ALM
C	27	BATTERY RIGHT	115.95	DEG. F	ALM
C	28	AIR IN SET	125.28	DEG. F	ALM
C	29	FUEL TANK	99.129	DEG. F	ALM
C	30	FUEL OUTLET	145.53	DEG. F	ALM

END SCAN GROUP 1 14 NOV 87 11:55:42

STOPPED SINGLE SCAN 14 NOV 87 11:55:42

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BEGIN SCAN GROUP 1   14 NOV 87  11:56:50
30KW 60HZ GEN SET S/NRZ5 3774

C    1 EXHAUST 1          744.63 DEG.  F ALM
C    2 EXHAUST 2          753.30 DEG.  F ALM
C    3 EXHAUST 3          772.25 DEG.  F ALM
C    4 EXHAUST 4          748.72 DEG.  F ALM
C    5 EXHAUST 5          743.90 DEG.  F ALM
C    6 EXHAUST 6          722.25 DEG.  F ALM
C    7 ENG. COOL. IN      187.23 DEG.  F ALM
C    8 ENG. COOL. OUT     194.27 DEG.  F ALM
C    9 OIL SUMP           206.76 DEG.  F ALM
C   10 OIL GALLERY        218.84 DEG.  F ALM
C   11                    .00000
C   12                    .00000
C   13  ENG. INTAKE       129.55 DEG.  F ALM
C   14 RAD. TOP LEFT      141.73 DEG.  F ALM
C   15 RAD. BTTM LEFT     138.58 DEG.  F ALM
C   16 RAD. TOP RIGHT     139.66 DEG.  F ALM
C   17 RAD. BTTM RIGHT    141.78 DEG.  F ALM
C   18 GEN. AIR IN        123.65 DEG.  F ALM
C   19 GEN. AIR OUT       135.51 DEG.  F ALM
C   20 GEN. FRAME TOP     129.85 DEG.  F ALM
C   21 GEN. FRAME BTTM    128.64 DEG.  F ALM
C   22 GEN. EXCITER       138.82 DEG.  F ALM
C   23 GEN. VOLT. REG.    126.83 DEG.  F ALM
C   24 CONTROL PANEL      138.39 DEG.  F ALM
C   25 RELAY AREA         127.83 DEG.  F ALM
C   26 BATTERY LEFT       113.21 DEG.  F ALM
C   27 BATTERY RIGHT      116.79 DEG.  F ALM
C   28 AIR IN SET         125.22 DEG.  F ALM
C   29 FUEL TANK          99.427 DEG.  F ALM
C   30 FUEL OUTLET        145.73 DEG.  F ALM

END SCAN GROUP 1     14 NOV 87  11:57:00

STOPPED SINGLE SCAN  14 NOV 87  11:57:00
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TEST DATA

ITEM 30 KW 60 HZ GENERATOR SET MODIFIED

MFGR. LIBBY WELDING

MODEL NO. MEP 005A

SERIAL NO. RZS 3774

NTS

National Technical Systems | Scientific Services Group | Testing Division P.O. Box 38 Hartwood, Virginia 22471 Tel: 703 752 5300

710.1.3.2 (F)(4) CIRCUIT INTERUPTER (OVERLOAD)

REF. NO. MIL-STD 705 512.2

SHEET 1 OF 2

DATE 14 NOV 1987

JOB NO. 555-2140

PROJ. ENGR.

RECORDER/OBSERVER C.C. BT. KM.

INST TIME	STEP NO.	LOAD STEP	E60280 VOLTAGE L_1-L_0 VAC	L_2-L_0 VAC	L_3-L_0 VAC	E60400 AMPERES x40 L_1-L_0 AC AMPS	L_2-L_0 AC AMPS	L_3-L_0 AC AMPS	E62300 KILOWATTS x40 L_1-L_0 Kw	L_2-L_0 Kw	L_3-L_0 Kw	E62400 POWER FACTOR PF	E62410 FREQ. Hz	E6185 EXCITER FIELD VOLTS VDC	AMPS DCA	AMB. TEMP. °F	Press inches of oil IN	UNIT
1351		STARTED	UNIT	- NO		LOAD												
1401		SHUTDOWN	UNIT															
1432		STARTED	UNIT	- PLACED	ON	R/L												
1440		R/L	120	121.1	120.5	2.5	2.55	2.55	.249	.251	.25	.79	60	9.8	3.6	122	13.2	40.2
1450		R/L	120	121	120.4	2.5	2.55	2.54	.248	.251	.25	.79	59.9	9.8	3.6	123	13.3	40.2
1500		R/L	120	121.1	120.1	2.5	2.55	2.56	.248	.252	.25	.79	59.9	9.8	3.6	123	13.3	40.0
1510		R/L	120	121	120.3	2.51	2.55	2.55	.248	.251	.25	.79	59.9	9.8	3.6	127	13.3	40.0
1512		APPLIED	130%	CURRENT	TO	ALL	3	PHASES										
1512			119	121	120	3.25	3.34	3.35	.24	.25	.249	.79	59.7	12.8	4.8	123	13.0	40.1
1515			119	120.6	120	3.51	3.59	3.55	.248	.252	.25	.79	59.6	13.3	4.9	123	13.1	40.2
1522		CIRCUIT	INTERUPTER	OPENED	AFTER	9	MIN	58	SEC.	-	OVERLOAD	INDICATOR		ON				
1527		APPLIED	R/L	FOR	COOLDOWN													
1540		R/L	120	121.1	120.1	2.5	2.55	2.55	.248	.25	.25	.79	59.9	9.8	3.6	123	13.1	39.6
1542		APPLIED	130%	CURRENT	TO	L1												
1542			109.5	121	121	3.3	2.55	2.56	.272	.251	.252	.70	59.5	10.6	4.0	123	13.1	39.6
1548			109.1	121	121	3.3	2.55	2.56	.278	.251	.252	.71	59.5	10.7	4.0	124	13.0	39.6
1552		CIRCUIT	INTERUPTER	OPENED	AFTER	9	MIN.	53	SEC.			INDICATOR		ON				
1555		APPLIED	R/L	FOR	COOLDOWN.													
1556		R/L	120	121	120.1	2.51	2.55	2.55	.248	.252	.25	.79	59.9	9.6	3.6	122	13.4	39.9
1610		APPLIED	130%	CURRENT	TO	L2												
1610			120.5	117	120.5	2.58	3.31	2.55	.25	.282	.25	.705	59.6	10.7	3.9	124	13.0	39.6
1615			120.5	117	120.2	2.54	3.3	2.6	.25	.282	.25	.71	59.5	10.6	4.0	127	13.1	39.5
1619		CIRCUIT	INTERUPTER	OPENED	AFTER	9	MIN.	54	SEC.									
1622		APPLIED	RATED	LOAD	FOR	COOL	DOWN											
1625		R/L	120	121	120.5	2.5	2.55	2.6	.248	.251	.25	.79	59.9	9.8	3.6	127	13.4	40.9
~~1630~~		CONTINUE	ON	NEXT	PAGE													

NOTES: TEST FAILURE SEE PAGE 2, INDICATOR FOR L2 OVERLOAD WAS NOT OBSERVED

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TEST DATA

ITEM 30 KW 60Hz GENERATOR SET MODIFIED
MFGR. LIBBY WELDING
MODEL NO. MEP 005A
SERIAL NO. RZ5 3774

NTS
National Technical Systems | Scientific Services Group | Testing Division, P.O. Box 38, Harwood, Virginia 22471, Tel: 703 752 5300

710.1.3.2 (F)(4)
CIRCUIT INTERUPTER (OVERLOAD)

REF. NO. MIL-STD 705 METHOD 512.2
SHEET 2 OF 2
DATE 14 NOV 1987
JOB NO. 555-2140
PROJ. ENGR.
RECORDER/OBSERVER CC / BT / KM

INST TIME	STEP NO.	LOAD STEP	E60280 VOLTAGE L_1-L_0 VAC	L_2-L_0 VAC	L_3-L_0 VAC	E60400 AMPERES X40 L_1-L_0 AC AMPS	L_2-L_0 AC AMPS	L_3-L_0 AC AMPS	E62300 KILOWATTS X40 L_1-L_0 Kw	L_2-L_0 Kw	L_3-L_0 Kw	E62420 POWER FACTOR PF	E62410 FREQ. Hz	EXCITER VOLTS VDC	FIELD AMPS DCA	AMB. TEMP. °F	Press IN	Press OUT
1637		APPLIED	130%		CURRENT	TO	L3											
1637			123	125	119	2.59	2.65	3.32	.26	.27	.291	.71	59.3	11.4	4.2	122	13.5	41.2
1643			123	125	119	2.58	2.65	3.31	.26	.27	.292	.71	59.3	11.5	4.2	124	13.5	41.7
1644		UNIT SHUT DOWN ON OVERTEMP AFTER 6 MIN 07 SEC.																
1646		STARTED UNIT IN BATTLESHORT ON NO LOAD																
1651		REMOVED BATTLESHORT - PLACED UNIT IN R/L																
1652		R/L	120	121	120.3	2.49	2.55	2.53	.248	.251	.25	.80	59.8	9.5	3.6	123	13.6	37.7
1654		APPLIED	130%		CURRENT	TO	L3											
1654			123.5	126	119	2.41	2.49	3.3	.239	.25	.28	.68	59.6	10.9	4.1	124	13.2	38.3
1700			123.5	126	119	2.41	2.48	3.3	.239	.25	.281	.675	59.7	11.0	4.1	123	13.3	38.7
1705		CIRCUIT INTERUPTER OPENED AFTER 10 MIN. 42 SEC. — INDICATOR ON																
1706		APPLIED R/L FOR COOL DOWN																
1707		R/L	120	121.1	120.1	2.49	2.53	2.52	.248	.251	.25	.80	59.8	9.6	3.6	126	13.3	38.1
1725		R/L	120	121	120.5	2.47	2.51	2.5	.248	.252	.25	.80	59.9	9.6	3.6	123	13.3	38.9
1726		APPLIED	110%		CURRENT	TO	L1 -	L2 -	L3									
1726		HTR	119.9	121	120	2.7	2.75	2.74	.248	.253	.251	.735	59.8	10.5	4.0	123	13.1	38.7
1756			120	121	120	2.7	2.75	2.74	.248	.252	.251	.731	59.8	10.8	4.0	125	13.1	38.5
1826			119.6	121	120.1	2.7	2.75	2.74	.248	.252	.251	.73	59.7	10.8	4.0	121	13.2	38.6
1856			119.3	121	120.3	2.7	2.75	2.74	.248	.253	.252	.73	59.8	10.8	4.0	123	13.3	38.6
1926			119.2	121	120.1	2.7	2.75	2.74	.248	.252	.251	.732	59.8	10.8	4.0	123	13.3	38.7
1928		SHUT UNIT DOWN - END OF TEST																

NOTES: CIRCUIT INTERUPTER FAILED TO OPEN IN TIME SPECIFIED WHEN TESTING OVERCURRENT ON L3
IN ACCORDANCE WITH PROCUREMENT DOCUMENT PARA. 3.19.2.4, INTERRUPTER SHOULD OPERATE IN 8 ± 2 min
INTERRUPTER TOOK 10 MIN 42 SEC TO OPEN

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CIRCUIT INTERRUPTER (OVERLOAD CURRENT) SR.2c

BEGIN SCAN GROUP 1 14 NOV 87 14:39:52
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	777.83	DEG. F	ALM
C	2	EXHAUST 2	791.56	DEG. F	ALM
C	3	EXHAUST 3	820.67	DEG. F	ALM
C	4	EXHAUST 4	778.20	DEG. F	ALM
C	5	EXHAUST 5	778.43	DEG. F	ALM
C	6	EXHAUST 6	768.74	DEG. F	ALM
C	7	ENG. COOL. IN	200.40	DEG. F	ALM
C	8	ENG. COOL. OUT	208.47	DEG. F	ALM
C	9	OIL SUMP	216.41	DEG. F	ALM
C	10	OIL GALLERY	229.46	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	129.62	DEG. F	ALM
C	14	RAD. TOP LEFT	146.33	DEG. F	ALM
C	15	RAD. BTTM LEFT	141.34	DEG. F	ALM
C	16	RAD. TOP RIGHT	143.31	DEG. F	ALM
C	17	RAD. BTTM RIGHT	145.48	DEG. F	ALM
C	18	GEN. AIR IN	128.61	DEG. F	ALM
C	19	GEN. AIR OUT	142.66	DEG. F	ALM
C	20	GEN. FRAME TOP	129.45	DEG. F	ALM
C	21	GEN. FRAME BTTM	125.61	DEG. F	ALM
C	22	GEN. EXCITER	129.67	DEG. F	ALM
C	23	GEN. VOLT. REG.	135.78	DEG. F	ALM
C	24	CONTROL PANEL	133.34	DEG. F	ALM
C	25	RELAY AREA	126.78	DEG. F	ALM
C	26	BATTERY LEFT	129.94	DEG. F	ALM
C	27	BATTERY RIGHT	132.32	DEG. F	ALM
C	28	AIR IN SET	122.26	DEG. F	ALM
C	29	FUEL TANK	115.89	DEG. F	ALM
C	30	FUEL OUTLET	158.28	DEG. F	ALM

END SCAN GROUP 1 14 NOV 87 14:40:02

STOPPED SINGLE SCAN 14 NOV 87 14:40:02

BEGIN SCAN GROUP 1 14 NOV 87 15:00:03
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	774.02	DEG. F	ALM
C	2	EXHAUST 2	792.12	DEG. F	ALM
C	3	EXHAUST 3	818.71	DEG. F	ALM
C	4	EXHAUST 4	781.20	DEG. F	ALM
C	5	EXHAUST 5	780.86	DEG. F	ALM
C	6	EXHAUST 6	768.11	DEG. F	ALM
C	7	ENG. COOL. IN	201.82	DEG. F	ALM
C	8	ENG. COOL. OUT	210.86	DEG. F	ALM
C	9	OIL SUMP	222.69	DEG. F	ALM
C	10	OIL GALLERY	235.92	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	138.31	DEG. F	ALM
C	14	RAD. TOP LEFT	147.24	DEG. F	ALM
C	15	RAD. BTTM LEFT	142.21	DEG. F	ALM
C	16	RAD. TOP RIGHT	144.46	DEG. F	ALM
C	17	RAD. BTTM RIGHT	146.83	DEG. F	ALM
C	18	GEN. AIR IN	121.20	DEG. F	ALM
C	19	GEN. AIR OUT	143.51	DEG. F	ALM
C	20	GEN. FRAME TOP	129.36	DEG. F	ALM
C	21	GEN. FRAME BTTM	125.44	DEG. F	ALM
C	22	GEN. EXCITER	138.14	DEG. F	ALM
C	23	GEN. VOLT. REG.	134.46	DEG. F	ALM
C	24	CONTROL PANEL	132.25	DEG. F	ALM
C	25	RELAY AREA	126.76	DEG. F	ALM
C	26	BATTERY LEFT	133.12	DEG. F	ALM
C	27	BATTERY RIGHT	136.94	DEG. F	ALM
C	28	AIR IN SET	122.92	DEG. F	ALM
C	29	FUEL TANK	117.18	DEG. F	ALM
C	30	FUEL OUTLET	149.65	DEG. F	ALM

END SCAN GROUP 1 14 NOV 87 15:00:13

STOPPED SINGLE SCAN 14 NOV 87 15:00:13

BEGIN SCAN GROUP 1 14 NOV 87 14:50:53
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	778.90	DEG. F	ALM
C	2	EXHAUST 2	790.85	DEG. F	ALM
C	3	EXHAUST 3	816.77	DEG. F	ALM
C	4	EXHAUST 4	778.38	DEG. F	ALM
C	5	EXHAUST 5	778.28	DEG. F	ALM
C	6	EXHAUST 6	766.90	DEG. F	ALM
C	7	ENG. COOL. IN	201.41	DEG. F	ALM
C	8	ENG. COOL. OUT	209.47	DEG. F	ALM
C	9	OIL SUMP	221.85	DEG. F	ALM
C	10	OIL GALLERY	234.33	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	129.58	DEG. F	ALM
C	14	RAD. TOP LEFT	146.77	DEG. F	ALM
C	15	RAD. BTTM LEFT	141.63	DEG. F	ALM
C	16	RAD. TOP RIGHT	143.71	DEG. F	ALM
C	17	RAD. BTTM RIGHT	146.38	DEG. F	ALM
C	18	GEN. AIR IN	128.82	DEG. F	ALM
C	19	GEN. AIR OUT	142.78	DEG. F	ALM
C	20	GEN. FRAME TOP	129.17	DEG. F	ALM
C	21	GEN. FRAME BTTM	125.34	DEG. F	ALM
C	22	GEN. EXCITER	129.41	DEG. F	ALM
C	23	GEN. VOLT. REG.	134.89	DEG. F	ALM
C	24	CONTROL PANEL	132.50	DEG. F	ALM
C	25	RELAY AREA	126.47	DEG. F	ALM
C	26	BATTERY LEFT	131.92	DEG. F	ALM
C	27	BATTERY RIGHT	134.70	DEG. F	ALM
C	28	AIR IN SET	122.53	DEG. F	ALM
C	29	FUEL TANK	116.59	DEG. F	ALM
C	30	FUEL OUTLET	149.19	DEG. F	ALM

END SCAN GROUP 1 14 NOV 87 14:51:03

STOPPED SINGLE SCAN 14 NOV 87 14:51:03

BEGIN SCAN GROUP 1 14 NOV 87 15:00:15
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	777.49	DEG. F	ALM
C	2	EXHAUST 2	792.18	DEG. F	ALM
C	3	EXHAUST 3	817.45	DEG. F	ALM
C	4	EXHAUST 4	779.32	DEG. F	ALM
C	5	EXHAUST 5	781.84	DEG. F	ALM
C	6	EXHAUST 6	771.48	DEG. F	ALM
C	7	ENG. COOL. IN	202.19	DEG. F	ALM
C	8	ENG. COOL. OUT	210.59	DEG. F	ALM
C	9	OIL SUMP	223.19	DEG. F	ALM
C	10	OIL GALLERY	236.66	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	138.55	DEG. F	ALM
C	14	RAD. TOP LEFT	147.26	DEG. F	ALM
C	15	RAD. BTTM LEFT	142.48	DEG. F	ALM
C	16	RAD. TOP RIGHT	144.58	DEG. F	ALM
C	17	RAD. BTTM RIGHT	147.12	DEG. F	ALM
C	18	GEN. AIR IN	121.15	DEG. F	ALM
C	19	GEN. AIR OUT	143.60	DEG. F	ALM
C	20	GEN. FRAME TOP	129.46	DEG. F	ALM
C	21	GEN. FRAME BTTM	125.68	DEG. F	ALM
C	22	GEN. EXCITER	138.16	DEG. F	ALM
C	23	GEN. VOLT. REG.	134.23	DEG. F	ALM
C	24	CONTROL PANEL	132.36	DEG. F	ALM
C	25	RELAY AREA	126.70	DEG. F	ALM
C	26	BATTERY LEFT	134.06	DEG. F	ALM
C	27	BATTERY RIGHT	136.79	DEG. F	ALM
C	28	AIR IN SET	122.52	DEG. F	ALM
C	29	FUEL TANK	117.68	DEG. F	ALM
C	30	FUEL OUTLET	149.69	DEG. F	ALM

END SCAN GROUP 1 14 NOV 87 15:00:25

STOPPED SINGLE SCAN 14 NOV 87 15:00:25

BEGIN SCAN GROUP 1 14 NOV 87 15:13:51
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	807.61	DEG. F	ALM
C	2	EXHAUST 2	822.46	DEG. F	ALM
C	3	EXHAUST 3	853.80	DEG. F	ALM
C	4	EXHAUST 4	811.72	DEG. F	ALM
C	5	EXHAUST 5	817.63	DEG. F	ALM
C	6	EXHAUST 6	808.85	DEG. F	ALM
C	7	ENG. COOL. IN	204.15	DEG. F	ALM
C	8	ENG. COOL. OUT	212.44	DEG. F	ALM
C	9	OIL SUMP	224.22	DEG. F	ALM
C	10	OIL GALLERY	237.37	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	138.92	DEG. F	ALM
C	14	RAD. TOP LEFT	148.32	DEG. F	ALM
C	15	RAD. BTTM LEFT	143.83	DEG. F	ALM
C	16	RAD. TOP RIGHT	145.31	DEG. F	ALM
C	17	RAD. BTTM RIGHT	147.82	DEG. F	ALM
C	18	GEN. AIR IN	121.23	DEG. F	ALM
C	19	GEN. AIR OUT	146.93	DEG. F	ALM
C	20	GEN. FRAME TOP	129.88	DEG. F	ALM
C	21	GEN. FRAME BTTM	126.85	DEG. F	ALM
C	22	GEN. EXCITER	138.48	DEG. F	ALM
C	23	GEN. VOLT. REG.	134.15	DEG. F	ALM
C	24	CONTROL PANEL	132.33	DEG. F	ALM
C	25	RELAY AREA	127.22	DEG. F	ALM
C	26	BATTERY LEFT	134.53	DEG. F	ALM
C	27	BATTERY RIGHT	138.68	DEG. F	ALM
C	28	AIR IN SET	123.82	DEG. F	ALM
C	29	FUEL TANK	118.89	DEG. F	ALM
C	30	FUEL OUTLET	150.88	DEG. F	ALM

END SCAN GROUP 1 14 NOV 87 15:14:01

STOPPED SINGLE SCAN 14 NOV 87 15:14:01

BEGIN SCAN GROUP 1 14 NOV 87 15:42:51
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	802.79	DEG. F	ALM
C	2	EXHAUST 2	821.16	DEG. F	ALM
C	3	EXHAUST 3	846.35	DEG. F	ALM
C	4	EXHAUST 4	806.35	DEG. F	ALM
C	5	EXHAUST 5	816.51	DEG. F	ALM
C	6	EXHAUST 6	800.46	DEG. F	ALM
C	7	ENG. COOL. IN	202.56	DEG. F	ALM
C	8	ENG. COOL. OUT	210.79	DEG. F	ALM
C	9	OIL SUMP	221.27	DEG. F	ALM
C	10	OIL GALLERY	234.36	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	138.82	DEG. F	ALM
C	14	RAD. TOP LEFT	147.77	DEG. F	ALM
C	15	RAD. BTTM LEFT	142.77	DEG. F	ALM
C	16	RAD. TOP RIGHT	145.14	DEG. F	ALM
C	17	RAD. BTTM RIGHT	147.34	DEG. F	ALM
C	18	GEN. AIR IN	121.75	DEG. F	ALM
C	19	GEN. AIR OUT	144.43	DEG. F	ALM
C	20	GEN. FRAME TOP	129.98	DEG. F	ALM
C	21	GEN. FRAME BTTM	126.85	DEG. F	ALM
C	22	GEN. EXCITER	138.53	DEG. F	ALM
C	23	GEN. VOLT. REG.	133.49	DEG. F	ALM
C	24	CONTROL PANEL	132.21	DEG. F	ALM
C	25	RELAY AREA	127.25	DEG. F	ALM
C	26	BATTERY LEFT	137.29	DEG. F	ALM
C	27	BATTERY RIGHT	142.85	DEG. F	ALM
C	28	AIR IN SET	123.39	DEG. F	ALM
C	29	FUEL TANK	119.71	DEG. F	ALM
C	30	FUEL OUTLET	149.54	DEG. F	ALM

END SCAN GROUP 1 14 NOV 87 15:43:01

STOPPED SINGLE SCAN 14 NOV 87 15:43:01

BEGIN SCAN GROUP 1 14 NOV 87 15:40:57
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	779.81	DEG. F	AL 1
C	2	EXHAUST 2	797.38	DEG. F	ALM
C	3	EXHAUST 3	817.46	DEG. F	ALM
C	4	EXHAUST 4	781.22	DEG. F	ALM
C	5	EXHAUST 5	788.44	DEG. F	ALM
C	6	EXHAUST 6	769.44	DEG. F	ALM
C	7	ENG. COOL. IN	201.57	DEG. F	ALM
C	8	ENG. COOL. OUT	209.59	DEG. F	ALM
C	9	OIL SUMP	220.37	DEG. F	ALM
C	10	OIL GALLERY	233.65	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	138.98	DEG. F	ALM
C	14	RAD. TOP LEFT	147.36	DEG. F	ALM
C	15	RAD. BTTM LEFT	142.72	DEG. F	ALM
C	16	RAD. TOP RIGHT	144.75	DEG. F	ALM
C	17	RAD. BTTM RIGHT	147.31	DEG. F	ALM
C	18	GEN. AIR IN	121.35	DEG. F	ALM
C	19	GEN. AIR OUT	144.11	DEG. F	ALM
C	20	GEN. FRAME TOP	129.87	DEG. F	ALM
C	21	GEN. FRAME BTTM	126.88	DEG. F	ALM
C	22	GEN. EXCITER	138.68	DEG. F	ALM
C	23	GEN. VOLT. REG.	133.39	DEG. F	ALM
C	24	CONTROL PANEL	131.98	DEG. F	ALM
C	25	RELAY AREA	127.18	DEG. F	ALM
C	26	BATTERY LEFT	137.09	DEG. F	ALM
C	27	BATTERY RIGHT	142.31	DEG. F	ALM
C	28	AIR IN SET	123.29	DEG. F	ALM
C	29	FUEL TANK	119.61	DEG. F	ALM
C	30	FUEL OUTLET	150.32	DEG. F	ALM

END SCAN GROUP 1 14 NOV 87 15:41:07

STOPPED SINGLE SCAN 14 NOV 87 15:41:07

BEGIN SCAN GROUP 1 14 NOV 87 15:46:43
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	807.94	DEG. F	ALM
C	2	EXHAUST 2	827.62	DEG. F	ALM
C	3	EXHAUST 3	852.18	DEG. F	ALM
C	4	EXHAUST 4	813.29	DEG. F	ALM
C	5	EXHAUST 5	825.69	DEG. F	ALM
C	6	EXHAUST 6	809.11	DEG. F	ALM
C	7	ENG. COOL. IN	204.43	DEG. F	ALM
C	8	ENG. COOL. OUT	212.83	DEG. F	ALM
C	9	OIL SUMP	222.44	DEG. F	ALM
C	10	OIL GALLERY	235.81	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	131.41	DEG. F	ALM
C	14	RAD. TOP LEFT	148.82	DEG. F	ALM
C	15	RAD. BTTM LEFT	143.68	DEG. F	ALM
C	16	RAD. TOP RIGHT	145.88	DEG. F	ALM
C	17	RAD. BTTM RIGHT	148.22	DEG. F	ALM
C	18	GEN. AIR IN	121.55	DEG. F	ALM
C	19	GEN. AIR OUT	145.41	DEG. F	ALM
C	20	GEN. FRAME TOP	130.22	DEG. F	ALM
C	21	GEN. FRAME BTTM	126.33	DEG. F	ALM
C	22	GEN. EXCITER	131.00	DEG. F	ALM
C	23	GEN. VOLT. REG.	133.49	DEG. F	ALM
C	24	CONTROL PANEL	132.33	DEG. F	ALM
C	25	RELAY AREA	127.76	DEG. F	ALM
C	26	BATTERY LEFT	137.75	DEG. F	ALM
C	27	BATTERY RIGHT	142.37	DEG. F	ALM
C	28	AIR IN SET	123.56	DEG. F	ALM
C	29	FUEL TANK	119.98	DEG. F	ALM
C	30	FUEL OUTLET	151.30	DEG. F	ALM

END SCAN GROUP 1 14 NOV 87 15:46:53

STOPPED SINGLE SCAN 14 NOV 87 15:46:53

BEGIN SCAN GROUP 1 14 NOV 87 15:55:03
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	622.48	DEG. F ALM
C	2	EXHAUST 2	637.78	DEG. F ALM
C	3	EXHAUST 3	642.68	DEG. F ALM
C	4	EXHAUST 4	636.26	DEG. F ALM
C	5	EXHAUST 5	646.56	DEG. F ALM
C	6	EXHAUST 6	622.80	DEG. F ALM
C	7	ENG. COOL. IN	187.83	DEG. F ALM
C	8	ENG. COOL. OUT	193.40	DEG. F ALM
C	9	OIL SUMP	221.39	DEG. F ALM
C	10	OIL GALLERY	234.46	DEG. F ALM
C	11		.00000	
C	12		.00000	
C	13	ENG. INTAKE	138.26	DEG. F ALM
C	14	RAD. TOP LEFT	143.88	DEG. F ALM
C	15	RAD. BTTM LEFT	140.65	DEG. F ALM
C	16	RAD. TOP RIGHT	142.86	DEG. F ALM
C	17	RAD. BTTM RIGHT	144.78	DEG. F ALM
C	18	GEN. AIR IN	121.83	DEG. F ALM
C	19	GEN. AIR OUT	141.93	DEG. F ALM
C	20	GEN. FRAME TOP	138.46	DEG. F ALM
C	21	GEN. FRAME BTTM	126.45	DEG. F ALM
C	22	GEN. EXCITER	138.27	DEG. F ALM
C	23	GEN. VOLT. REG.	133.78	DEG. F ALM
C	24	CONTROL PANEL	132.77	DEG. F ALM
C	25	RELAY AREA	126.89	DEG. F ALM
C	26	BATTERY LEFT	138.88	DEG. F ALM
C	27	BATTERY RIGHT	142.82	DEG. F ALM
C	28	AIR IN SET	124.12	DEG. F ALM
C	29	FUEL TANK	128.35	DEG. F ALM
C	30	FUEL OUTLET	152.98	DEG. F ALM

END SCAN GROUP 1 14 NOV 87 15:55:13

STOPPED SINGLE SCAN 14 NOV 87 15:55:13

BEGIN SCAN GROUP 1 14 NOV 87 16:10:00
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	806.48	DEG. F ALM
C	2	EXHAUST 2	819.47	DEG. F ALM
C	3	EXHAUST 3	842.44	DEG. F ALM
C	4	EXHAUST 4	810.58	DEG. F ALM
C	5	EXHAUST 5	818.23	DEG. F ALM
C	6	EXHAUST 6	799.89	DEG. F ALM
C	7	ENG. COOL. IN	202.86	DEG. F ALM
C	8	ENG. COOL. OUT	211.29	DEG. F ALM
C	9	OIL SUMP	222.91	DEG. F ALM
C	10	OIL GALLERY	235.56	DEG. F ALM
C	11		.00000	
C	12		.00000	
C	13	ENG. INTAKE	138.98	DEG. F ALM
C	14	RAD. TOP LEFT	148.87	DEG. F ALM
C	15	RAD. BTTM LEFT	143.16	DEG. F ALM
C	16	RAD. TOP RIGHT	145.18	DEG. F ALM
C	17	RAD. BTTM RIGHT	147.73	DEG. F ALM
C	18	GEN. AIR IN	122.48	DEG. F ALM
C	19	GEN. AIR OUT	144.82	DEG. F ALM
C	20	GEN. FRAME TOP	138.88	DEG. F ALM
C	21	GEN. FRAME BTTM	126.15	DEG. F ALM
C	22	GEN. EXCITER	138.55	DEG. F ALM
C	23	GEN. VOLT. REG.	133.42	DEG. F ALM
C	24	CONTROL PANEL	132.37	DEG. F ALM
C	25	RELAY AREA	127.47	DEG. F ALM
C	26	BATTERY LEFT	139.98	DEG. F ALM
C	27	BATTERY RIGHT	145.14	DEG. F ALM
C	28	AIR IN SET	123.98	DEG. F ALM
C	29	FUEL TANK	121.11	DEG. F ALM
C	30	FUEL OUTLET	151.53	DEG. F ALM

END SCAN GROUP 1 14 NOV 87 16:10:10

STOPPED SINGLE SCAN 14 NOV 87 16:10:10

BEGIN SCAN GROUP 1 14 NOV 87 16:08:13
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	777.55	DEG. F ALM
C	2	EXHAUST 2	795.24	DEG. F ALM
C	3	EXHAUST 3	816.88	DEG. F ALM
C	4	EXHAUST 4	788.25	DEG. F ALM
C	5	EXHAUST 5	786.88	DEG. F ALM
C	6	EXHAUST 6	768.53	DEG. F ALM
C	7	ENG. COOL. IN	202.85	DEG. F ALM
C	8	ENG. COOL. OUT	210.20	DEG. F ALM
C	9	OIL SUMP	222.38	DEG. F ALM
C	10	OIL GALLERY	235.12	DEG. F ALM
C	11		.00000	
C	12		.00000	
C	13	ENG. INTAKE	136.84	DEG. F ALM
C	14	RAD. TOP LEFT	147.69	DEG. F ALM
C	15	RAD. BTTM LEFT	142.78	DEG. F ALM
C	16	RAD. TOP RIGHT	144.94	DEG. F ALM
C	17	RAD. BTTM RIGHT	147.45	DEG. F ALM
C	18	GEN. AIR IN	122.18	DEG. F ALM
C	19	GEN. AIR OUT	144.12	DEG. F ALM
C	20	GEN. FRAME TOP	129.89	DEG. F ALM
C	21	GEN. FRAME BTTM	126.12	DEG. F ALM
C	22	GEN. EXCITER	138.67	DEG. F ALM
C	23	GEN. VOLT. REG.	133.46	DEG. F ALM
C	24	CONTROL PANEL	132.42	DEG. F ALM
C	25	RELAY AREA	127.43	DEG. F ALM
C	26	BATTERY LEFT	139.13	DEG. F ALM
C	27	BATTERY RIGHT	145.31	DEG. F ALM
C	28	AIR IN SET	123.95	DEG. F ALM
C	29	FUEL TANK	121.68	DEG. F ALM
C	30	FUEL OUTLET	150.91	DEG. F ALM

END SCAN GROUP 1 14 NOV 87 16:08:23

BEGIN SCAN GROUP 1 14 NOV 87 16:14:05
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	809.81	DEG. F ALM
C	2	EXHAUST 2	828.72	DEG. F ALM
C	3	EXHAUST 3	850.22	DEG. F ALM
C	4	EXHAUST 4	818.46	DEG. F ALM
C	5	EXHAUST 5	826.74	DEG. F ALM
C	6	EXHAUST 6	808.78	DEG. F ALM
C	7	ENG. COOL. IN	205.12	DEG. F ALM
C	8	ENG. COOL. OUT	213.57	DEG. F ALM
C	9	OIL SUMP	223.66	DEG. F ALM
C	10	OIL GALLERY	236.86	DEG. F ALM
C	11		.00000	
C	12		.00000	
C	13	ENG. INTAKE	131.51	DEG. F ALM
C	14	RAD. TOP LEFT	148.99	DEG. F ALM
C	15	RAD. BTTM LEFT	143.92	DEG. F ALM
C	16	RAD. TOP RIGHT	146.85	DEG. F ALM
C	17	RAD. BTTM RIGHT	148.48	DEG. F ALM
C	18	GEN. AIR IN	121.87	DEG. F ALM
C	19	GEN. AIR OUT	145.64	DEG. F ALM
C	20	GEN. FRAME TOP	130.36	DEG. F ALM
C	21	GEN. FRAME BTTM	126.52	DEG. F ALM
C	22	GEN. EXCITER	131.21	DEG. F ALM
C	23	GEN. VOLT. REG.	133.66	DEG. F ALM
C	24	CONTROL PANEL	132.79	DEG. F ALM
C	25	RELAY AREA	127.69	DEG. F ALM
C	26	BATTERY LEFT	140.48	DEG. F ALM
C	27	BATTERY RIGHT	145.21	DEG. F ALM
C	28	AIR IN SET	123.54	DEG. F ALM
C	29	FUEL TANK	121.33	DEG. F ALM
C	30	FUEL OUTLET	150.72	DEG. F ALM

END SCAN GROUP 1 14 NOV 87 16:14:15

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BEGIN SCAN GROUP 1   14 NOV 87  16:27:27
30KW 60HZ GEN SET S/NR25 3774

C    1 EXHAUST 1          780.40 DEG. F ALM
C    2 EXHAUST 2          798.43 DEG. F ALM
C    3 EXHAUST 3          816.59 DEG. F ALM
C    4 EXHAUST 4          778.81 DEG. F ALM
C    5 EXHAUST 5          787.47 DEG. F ALM
C    6 EXHAUST 6          767.31 DEG. F ALM
C    7 ENG. COOL. IN      203.68 DEG. F ALM
C    8 ENG. COOL. OUT     211.80 DEG. F ALM
C    9 OIL SUMP           223.80 DEG. F ALM
C   10 OIL GALLERY        235.96 DEG. F ALM
C   11                    .00000
C   12                    .00000
C   13  ENG. INTAKE       134.21 DEG. F ALM
C   14 RAD. TOP LEFT      149.78 DEG. F ALM
C   15 RAD. BTTM LEFT     145.31 DEG. F ALM
C   16 RAD. TOP RIGHT     147.88 DEG. F ALM
C   17 RAD. BTTM RIGHT    149.67 DEG. F ALM
C   18 GEN. AIR IN        124.49 DEG. F ALM
C   19 GEN. AIR OUT       146.58 DEG. F ALM
C   20 GEN. FRAME TOP     132.83 DEG. F ALM
C   21 GEN. FRAME BTTM    126.63 DEG. F ALM
C   22 GEN. EXCITER       133.88 DEG. F ALM
C   23 GEN. VOLT. REG.    134.57 DEG. F ALM
C   24 CONTROL PANEL      134.86 DEG. F ALM
C   25 RELAY AREA         138.18 DEG. F ALM
C   26 BATTERY LEFT       141.63 DEG. F ALM
C   27 BATTERY RIGHT      145.75 DEG. F ALM
C   28 AIR IN SET         126.56 DEG. F ALM
C   29 FUEL TANK          122.86 DEG. F ALM
C   30 FUEL OUTLET        152.78 DEG. F ALM

END SCAN GROUP 1     14 NOV 87  16:27:37

STOPPED SINGLE SCAN  14 NOV 87  16:27:37
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BEGIN SCAN GROUP 1   14 NOV 87  16:38:29
30KW 60HZ GEN SET S/NR25 3774

C    1 EXHAUST 1          824.91 DEG. F ALM
C    2 EXHAUST 2          856.39 DEG. F ALM
C    3 EXHAUST 3          872.77 DEG. F ALM
C    4 EXHAUST 4          833.52 DEG. F ALM
C    5 EXHAUST 5          848.28 DEG. F ALM
C    6 EXHAUST 6          824.87 DEG. F ALM
C    7 ENG. COOL. IN      204.79 DEG. F ALM
C    8 ENG. COOL. OUT     213.16 DEG. F ALM
C    9 OIL SUMP           224.41 DEG. F ALM
C   10 OIL GALLERY        237.65 DEG. F ALM
C   11                    .00000
C   12                    .00000
C   13  ENG. INTAKE       138.94 DEG. F ALM
C   14 RAD. TOP LEFT      148.22 DEG. F ALM
C   15 RAD. BTTM LEFT     143.22 DEG. F ALM
C   16 RAD. TOP RIGHT     145.66 DEG. F ALM
C   17 RAD. BTTM RIGHT    148.18 DEG. F ALM
C   18 GEN. AIR IN        126.13 DEG. F ALM
C   19 GEN. AIR OUT       144.71 DEG. F ALM
C   20 GEN. FRAME TOP     136.78 DEG. F ALM
C   21 GEN. FRAME BTTM    126.91 DEG. F ALM
C   22 GEN. EXCITER       136.61 DEG. F ALM
C   23 GEN. VOLT. REG.    134.28 DEG. F ALM
C   24 CONTROL PANEL      133.44 DEG. F ALM
C   25 RELAY AREA         127.39 DEG. F ALM
C   26 BATTERY LEFT       142.78 DEG. F ALM
C   27 BATTERY RIGHT      146.58 DEG. F ALM
C   28 AIR IN SET         121.96 DEG. F ALM
C   29 FUEL TANK          122.66 DEG. F ALM
C   30 FUEL OUTLET        152.55 DEG. F ALM

END SCAN GROUP 1     14 NOV 87  16:38:39

STOPPED SINGLE SCAN  14 NOV 87  16:38:39
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BEGIN SCAN GROUP 1   14 NOV 87  16:42:46
30KW 60HZ GEN SET S/NR25 3774

C    1 EXHAUST 1          834.97 DEG. F ALM
C    2 EXHAUST 2          855.52 DEG. F ALM
C    3 EXHAUST 3          881.22 DEG. F ALM
C    4 EXHAUST 4          843.74 DEG. F ALM
C    5 EXHAUST 5          861.75 DEG. F ALM
C    6 EXHAUST 6          835.84 DEG. F ALM
C    7 ENG. COOL. IN      207.95 DEG. F ALM
C    8 ENG. COOL. OUT     216.36 DEG. F ALM
C    9 OIL SUMP           226.12 DEG. F ALM
C   10 OIL GALLERY        239.97 DEG. F ALM
C   11                    .00000
C   12                    .00000
C   13  ENG. INTAKE       131.80 DEG. F ALM
C   14 RAD. TOP LEFT      150.10 DEG. F ALM
C   15 RAD. BTTM LEFT     144.88 DEG. F ALM
C   16 RAD. TOP RIGHT     147.81 DEG. F ALM
C   17 RAD. BTTM RIGHT    149.78 DEG. F ALM
C   18 GEN. AIR IN        122.83 DEG. F ALM
C   19 GEN. AIR OUT       147.18 DEG. F ALM
C   20 GEN. FRAME TOP     138.93 DEG. F ALM
C   21 GEN. FRAME BTTM    126.86 DEG. F ALM
C   22 GEN. EXCITER       131.47 DEG. F ALM
C   23 GEN. VOLT. REG.    134.25 DEG. F ALM
C   24 CONTROL PANEL      133.35 DEG. F ALM
C   25 RELAY AREA         128.50 DEG. F ALM
C   26 BATTERY LEFT       142.97 DEG. F ALM
C   27 BATTERY RIGHT      146.92 DEG. F ALM
C   28 AIR IN SET         125.23 DEG. F ALM
C   29 FUEL TANK          122.86 DEG. F ALM
C   30 FUEL OUTLET        151.83 DEG. F ALM

END SCAN GROUP 1     14 NOV 87  16:42:56

STOPPED SINGLE SCAN  14 NOV 87  16:42:56
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BEGIN SCAN GROUP 1   14 NOV 87  16:45:53
30KW 60HZ GEN SET S/NR25 3774

C    1 EXHAUST 1          444.65 DEG. F ALM
C    2 EXHAUST 2          468.51 DEG. F ALM
C    3 EXHAUST 3          478.48 DEG. F ALM
C    4 EXHAUST 4          481.88 DEG. F ALM
C    5 EXHAUST 5          492.53 DEG. F ALM
C    6 EXHAUST 6          462.15 DEG. F ALM
C    7 ENG. COOL. IN      212.11 DEG. F ALM
C    8 ENG. COOL. OUT     218.89 DEG. F ALM
C    9 OIL SUMP           230.62 DEG. F ALM
C   10 OIL GALLERY        234.29 DEG. F ALM
C   11                    .00000
C   12                    .00000
C   13  ENG. INTAKE       143.94 DEG. F ALM
C   14 RAD. TOP LEFT      163.78 DEG. F ALM
C   15 RAD. BTTM LEFT     153.12 DEG. F ALM
C   16 RAD. TOP RIGHT     153.69 DEG. F ALM
C   17 RAD. BTTM RIGHT    157.95 DEG. F ALM
C   18 GEN. AIR IN        123.24 DEG. F ALM
C   19 GEN. AIR OUT       148.77 DEG. F ALM
C   20 GEN. FRAME TOP     136.19 DEG. F ALM
C   21 GEN. FRAME BTTM    127.48 DEG. F ALM
C   22 GEN. EXCITER       138.86 DEG. F ALM
C   23 GEN. VOLT. REG.    134.54 DEG. F ALM
C   24 CONTROL PANEL      134.47 DEG. F ALM
C   25 RELAY AREA         136.81 DEG. F ALM
C   26 BATTERY LEFT       143.49 DEG. F ALM
C   27 BATTERY RIGHT      147.35 DEG. F ALM
C   28 AIR IN SET         123.81 DEG. F ALM
C   29 FUEL TANK          123.81 DEG. F ALM
C   30 FUEL OUTLET        151.42 DEG. F ALM

END SCAN GROUP 1     14 NOV 87  16:46:07

STOPPED SINGLE SCAN  14 NOV 87  16:46:07
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BEGIN SCAN GROUP 1 14 NOV 87 16:51:58
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	718.32	DEG. F	ALM
C	2	EXHAUST 2	730.44	DEG. F	ALM
C	3	EXHAUST 3	749.89	DEG. F	ALM
C	4	EXHAUST 4	714.32	DEG. F	ALM
C	5	EXHAUST 5	716.22	DEG. F	ALM
C	6	EXHAUST 6	698.82	DEG. F	ALM
C	7	ENG. COOL. IN	186.87	DEG. F	ALM
C	8	ENG. COOL. OUT	193.62	DEG. F	ALM
C	9	OIL SUMP	215.58	DEG. F	ALM
C	10	OIL GALLERY	229.30	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	129.18	DEG. F	ALM
C	14	RAD. TOP LEFT	141.86	DEG. F	ALM
C	15	RAD. BTTM LEFT	139.63	DEG. F	ALM
C	16	RAD. TOP RIGHT	141.65	DEG. F	ALM
C	17	RAD. BTTM RIGHT	143.28	DEG. F	ALM
C	18	GEN. AIR IN	121.24	DEG. F	ALM
C	19	GEN. AIR OUT	141.17	DEG. F	ALM
C	20	GEN. FRAME TOP	138.40	DEG. F	ALM
C	21	GEN. FRAME BTTM	126.16	DEG. F	ALM
C	22	GEN. EXCITER	129.38	DEG. F	ALM
C	23	GEN. VOLT. REG.	134.57	DEG. F	ALM
C	24	CONTROL PANEL	133.64	DEG. F	ALM
C	25	RELAY AREA	126.50	DEG. F	ALM
C	26	BATTERY LEFT	143.31	DEG. F	ALM
C	27	BATTERY RIGHT	147.90	DEG. F	ALM
C	28	AIR IN SET	123.43	DEG. F	ALM
C	29	FUEL TANK	123.23	DEG. F	ALM
C	30	FUEL OUTLET	152.80	DEG. F	ALM

END SCAN GROUP 1 14 NOV 87 16:52:09

STOPPED SINGLE SCAN 14 NOV 87 16:52:11

BEGIN SCAN GROUP 1 14 NOV 87 16:56:0
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	730.91	DEG. F	ALM
C	2	EXHAUST 2	736.57	DEG. F	ALM
C	3	EXHAUST 3	825.87	DEG. F	ALM
C	4	EXHAUST 4	783.15	DEG. F	ALM
C	5	EXHAUST 5	730.66	DEG. F	ALM
C	6	EXHAUST 6	772.66	DEG. F	ALM
C	7	ENG. COOL. IN	197.74	DEG. F	ALM
C	8	ENG. COOL. OUT	205.56	DEG. F	ALM
C	9	OIL SUMP	217.01	DEG. F	ALM
C	10	OIL GALLERY	230.16	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	130.36	DEG. F	ALM
C	14	RAD. TOP LEFT	143.75	DEG. F	ALM
C	15	RAD. BTTM LEFT	141.82	DEG. F	ALM
C	16	RAD. TOP RIGHT	143.74	DEG. F	ALM
C	17	RAD. BTTM RIGHT	145.87	DEG. F	ALM
C	18	GEN. AIR IN	122.54	DEG. F	ALM
C	19	GEN. AIR OUT	143.69	DEG. F	ALM
C	20	GEN. FRAME TOP	138.31	DEG. F	ALM
C	21	GEN. FRAME BTTM	126.47	DEG. F	ALM
C	22	GEN. EXCITER	130.78	DEG. F	ALM
C	23	GEN. VOLT. REG.	134.19	DEG. F	ALM
C	24	CONTROL PANEL	132.64	DEG. F	ALM
C	25	RELAY AREA	127.68	DEG. F	ALM
C	26	BATTERY LEFT	143.28	DEG. F	ALM
C	27	BATTERY RIGHT	147.36	DEG. F	ALM
C	28	AIR IN SET	124.51	DEG. F	ALM
C	29	FUEL TANK	123.36	DEG. F	ALM
C	30	FUEL OUTLET	151.27	DEG. F	ALM

END SCAN GROUP 1 14 NOV 87 16:56:0

STOPPED SINGLE SCAN 14 NOV 87 16:56:0

BEGIN SCAN GROUP 1 14 NOV 87 1 2:55
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	738.71	DEG. F	ALM
C	2	EXHAUST 2	756.13	DEG. F	ALM
C	3	EXHAUST 3	775.55	DEG. F	ALM
C	4	EXHAUST 4	735.96	DEG. F	ALM
C	5	EXHAUST 5	735.97	DEG. F	ALM
C	6	EXHAUST 6	719.58	DEG. F	ALM
C	7	ENG. COOL. IN	198.48	DEG. F	ALM
C	8	ENG. COOL. OUT	197.52	DEG. F	ALM
C	9	OIL SUMP	215.66	DEG. F	ALM
C	10	OIL GALLERY	229.23	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	129.31	DEG. F	ALM
C	14	RAD. TOP LEFT	142.96	DEG. F	ALM
C	15	RAD. BTTM LEFT	139.98	DEG. F	ALM
C	16	RAD. TOP RIGHT	142.65	DEG. F	ALM
C	17	RAD. BTTM RIGHT	143.82	DEG. F	ALM
C	18	GEN. AIR IN	121.68	DEG. F	ALM
C	19	GEN. AIR OUT	141.73	DEG. F	ALM
C	20	GEN. FRAME TOP	138.17	DEG. F	ALM
C	21	GEN. FRAME BTTM	126.22	DEG. F	ALM
C	22	GEN. EXCITER	129.73	DEG. F	ALM
C	23	GEN. VOLT. REG.	134.43	DEG. F	ALM
C	24	CONTROL PANEL	132.91	DEG. F	ALM
C	25	RELAY AREA	126.64	DEG. F	ALM
C	26	BATTERY LEFT	143.20	DEG. F	ALM
C	27	BATTERY RIGHT	147.62	DEG. F	ALM
C	28	AIR IN SET	123.43	DEG. F	ALM
C	29	FUEL TANK	123.22	DEG. F	ALM
C	30	FUEL OUTLET	151.81	DEG. F	ALM

END SCAN GROUP 1 14 NOV 87 16:53:05

STOPPED SINGLE SCAN 14 NOV 87 16:53:05

BEGIN SCAN GROUP 1 14 NOV 87 17:00:0
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	788.24	DEG. F	ALM
C	2	EXHAUST 2	807.33	DEG. F	ALM
C	3	EXHAUST 3	832.45	DEG. F	ALM
C	4	EXHAUST 4	794.44	DEG. F	ALM
C	5	EXHAUST 5	803.11	DEG. F	ALM
C	6	EXHAUST 6	787.72	DEG. F	ALM
C	7	ENG. COOL. IN	201.67	DEG. F	ALM
C	8	ENG. COOL. OUT	209.66	DEG. F	ALM
C	9	OIL SUMP	218.93	DEG. F	ALM
C	10	OIL GALLERY	232.25	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	130.28	DEG. F	ALM
C	14	RAD. TOP LEFT	145.77	DEG. F	ALM
C	15	RAD. BTTM LEFT	142.25	DEG. F	ALM
C	16	RAD. TOP RIGHT	144.26	DEG. F	ALM
C	17	RAD. BTTM RIGHT	146.68	DEG. F	ALM
C	18	GEN. AIR IN	121.84	DEG. F	ALM
C	19	GEN. AIR OUT	144.38	DEG. F	ALM
C	20	GEN. FRAME TOP	138.82	DEG. F	ALM
C	21	GEN. FRAME BTTM	126.25	DEG. F	ALM
C	22	GEN. EXCITER	130.24	DEG. F	ALM
C	23	GEN. VOLT. REG.	134.85	DEG. F	ALM
C	24	CONTROL PANEL	132.77	DEG. F	ALM
C	25	RELAY AREA	127.20	DEG. F	ALM
C	26	BATTERY LEFT	143.56	DEG. F	ALM
C	27	BATTERY RIGHT	146.41	DEG. F	ALM
C	28	AIR IN SET	123.39	DEG. F	ALM
C	29	FUEL TANK	123.51	DEG. F	ALM
C	30	FUEL OUTLET	152.13	DEG. F	ALM

END SCAN GROUP 1 14 NOV 87 17:00:1

STOPPED SINGLE SCAN 14 NOV 87 17:00:1

BEGIN SCAN GROUP 1 14 NOV 87 17:05:37
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	769.48	DEG. F	ALM
C	2	EXHAUST 2	723.95	DEG. F	ALM
C	3	EXHAUST 3	746.65	DEG. F	ALM
C	4	EXHAUST 4	727.87	DEG. F	ALM
C	5	EXHAUST 5	738.47	DEG. F	ALM
C	6	EXHAUST 6	713.35	DEG. F	ALM
C	7	ENG. COOL. IN	198.82	DEG. F	ALM
C	8	ENG. COOL. OUT	205.62	DEG. F	ALM
C	9	OIL SUMP	226.37	DEG. F	ALM
C	10	OIL GALLERY	233.96	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	129.92	DEG. F	ALM
C	14	RAD. TOP LEFT	146.36	DEG. F	ALM
C	15	RAD. BTTM LEFT	142.36	DEG. F	ALM
C	16	RAD. TOP RIGHT	144.37	DEG. F	ALM
C	17	RAD. BTTM RIGHT	146.69	DEG. F	ALM
C	18	GEN. AIR IN	121.38	DEG. F	ALM
C	19	GEN. AIR OUT	143.94	DEG. F	ALM
C	20	GEN. FRAME TOP	129.95	DEG. F	ALM
C	21	GEN. FRAME BTTM	126.83	DEG. F	ALM
C	22	GEN. EXCITER	138.36	DEG. F	ALM
C	23	GEN. VOLT. REG.	133.83	DEG. F	ALM
C	24	CONTROL PANEL	132.58	DEG. F	ALM
C	25	RELAY AREA	127.18	DEG. F	ALM
C	26	BATTERY LEFT	143.99	DEG. F	ALM
C	27	BATTERY RIGHT	147.98	DEG. F	ALM
C	28	AIR IN SET	123.93	DEG. F	ALM
C	29	FUEL TANK	123.75	DEG. F	ALM
C	30	FUEL OUTLET	151.98	DEG. F	ALM

END SCAN GROUP 1 14 NOV 87 17:05:46

STOPPED SINGLE SCAN 14 NOV 87 17:05:46

BEGIN SCAN GROUP 1 14 NOV 87 17:24:1
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	776.31	DEG. F	AL
C	2	EXHAUST 2	734.40	DEG. F	AL
C	3	EXHAUST 3	811.87	DEG. F	AL
C	4	EXHAUST 4	777.89	DEG. F	ALI
C	5	EXHAUST 5	786.15	DEG. F	ALI
C	6	EXHAUST 6	763.45	DEG. F	ALI
C	7	ENG. COOL. IN	202.67	DEG. F	ALI
C	8	ENG. COOL. OUT	210.80	DEG. F	ALI
C	9	OIL SUMP	223.15	DEG. F	ALI
C	10	OIL GALLERY	236.61	DEG. F	ALI
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	138.73	DEG. F	ALI
C	14	RAD. TOP LEFT	147.46	DEG. F	ALI
C	15	RAD. BTTM LEFT	142.65	DEG. F	ALI
C	16	RAD. TOP RIGHT	145.83	DEG. F	ALM
C	17	RAD. BTTM RIGHT	147.53	DEG. F	ALM
C	18	GEN. AIR IN	121.34	DEG. F	ALM
C	19	GEN. AIR OUT	143.81	DEG. F	ALM
C	20	GEN. FRAME TOP	130.00	DEG. F	ALM
C	21	GEN. FRAME BTTM	125.84	DEG. F	ALM
C	22	GEN. EXCITER	138.50	DEG. F	ALM
C	23	GEN. VOLT. REG.	133.86	DEG. F	ALM
C	24	CONTROL PANEL	132.89	DEG. F	ALM
C	25	RELAY AREA	127.13	DEG. F	ALM
C	26	BATTERY LEFT	145.29	DEG. F	ALM
C	27	BATTERY RIGHT	149.49	DEG. F	ALM
C	28	AIR IN SET	123.57	DEG. F	ALM
C	29	FUEL TANK	124.69	DEG. F	ALM
C	30	FUEL OUTLET	150.75	DEG. F	ALM

END SCAN GROUP 1 14 NOV 87 17:24:25

STOPPED SINGLE SCAN 14 NOV 87 17:24:25

BEGIN SCAN GROUP 1 14 NOV 87 17:09:14
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	765.35	DEG. F	ALM
C	2	EXHAUST 2	782.77	DEG. F	ALM
C	3	EXHAUST 3	800.82	DEG. F	ALM
C	4	EXHAUST 4	776.99	DEG. F	ALM
C	5	EXHAUST 5	776.66	DEG. F	ALM
C	6	EXHAUST 6	756.29	DEG. F	ALM
C	7	ENG. COOL. IN	199.98	DEG. F	ALM
C	8	ENG. COOL. OUT	207.86	DEG. F	ALM
C	9	OIL SUMP	228.96	DEG. F	ALM
C	10	OIL GALLERY	234.16	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	131.82	DEG. F	ALM
C	14	RAD. TOP LEFT	147.98	DEG. F	ALM
C	15	RAD. BTTM LEFT	143.56	DEG. F	ALM
C	16	RAD. TOP RIGHT	145.43	DEG. F	ALM
C	17	RAD. BTTM RIGHT	147.84	DEG. F	ALM
C	18	GEN. AIR IN	124.39	DEG. F	ALM
C	19	GEN. AIR OUT	145.43	DEG. F	ALM
C	20	GEN. FRAME TOP	130.34	DEG. F	ALM
C	21	GEN. FRAME BTTM	126.81	DEG. F	ALM
C	22	GEN. EXCITER	132.16	DEG. F	ALM
C	23	GEN. VOLT. REG.	133.95	DEG. F	ALM
C	24	CONTROL PANEL	132.76	DEG. F	ALM
C	25	RELAY AREA	128.66	DEG. F	ALM
C	26	BATTERY LEFT	144.20	DEG. F	ALM
C	27	BATTERY RIGHT	148.75	DEG. F	ALM
C	28	AIR IN SET	126.44	DEG. F	ALM
C	29	FUEL TANK	123.95	DEG. F	ALM
C	30	FUEL OUTLET	151.55	DEG. F	ALM

END SCAN GROUP 1 14 NOV 87 17:09:24

STOPPED SINGLE SCAN 14 NOV 87 17:09:24

BEGIN SCAN GROUP 1 14 NOV 87 17:26:20
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	781.40	DEG. F	ALM
C	2	EXHAUST 2	800.30	DEG. F	ALM
C	3	EXHAUST 3	818.43	DEG. F	ALM
C	4	EXHAUST 4	785.17	DEG. F	ALM
C	5	EXHAUST 5	794.85	DEG. F	ALM
C	6	EXHAUST 6	771.31	DEG. F	ALM
C	7	ENG. COOL. IN	202.77	DEG. F	ALM
C	8	ENG. COOL. OUT	211.00	DEG. F	ALM
C	9	OIL SUMP	223.22	DEG. F	ALM
C	10	OIL GALLERY	236.58	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	138.61	DEG. F	ALM
C	14	RAD. TOP LEFT	147.51	DEG. F	ALM
C	15	RAD. BTTM LEFT	142.49	DEG. F	ALM
C	16	RAD. TOP RIGHT	144.91	DEG. F	ALM
C	17	RAD. BTTM RIGHT	147.47	DEG. F	ALM
C	18	GEN. AIR IN	120.85	DEG. F	ALM
C	19	GEN. AIR OUT	143.88	DEG. F	ALM
C	20	GEN. FRAME TOP	129.87	DEG. F	ALM
C	21	GEN. FRAME BTTM	125.73	DEG. F	ALM
C	22	GEN. EXCITER	138.33	DEG. F	ALM
C	23	GEN. VOLT. REG.	133.88	DEG. F	ALM
C	24	CONTROL PANEL	132.76	DEG. F	ALM
C	25	RELAY AREA	126.88	DEG. F	ALM
C	26	BATTERY LEFT	145.42	DEG. F	ALM
C	27	BATTERY RIGHT	149.64	DEG. F	ALM
C	28	AIR IN SET	122.89	DEG. F	ALM
C	29	FUEL TANK	124.85	DEG. F	ALM
C	30	FUEL OUTLET	151.60	DEG. F	ALM

END SCAN GROUP 1 14 NOV 87 17:26:29

STOPPED SINGLE SCAN 14 NOV 87 17:26:29

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BEGIN SCAN GROUP 1   14 NOV 87  17:55:54
30KW 60HZ GEN SET S/NRZ5 3774

C    1 EXHAUST 1          781.92 DEG. F ALM
C    2 EXHAUST 2          805.61 DEG. F ALM
C    3 EXHAUST 3          825.15 DEG. F ALM
C    4 EXHAUST 4          787.17 DEG. F ALM
C    5 EXHAUST 5          796.59 DEG. F ALM
C    6 EXHAUST 6          776.31 DEG. F ALM
C    7 ENG. COOL. IN      205.11 DEG. F ALM
C    8 ENG. COOL. OUT     213.44 DEG. F ALM
C    9 OIL SUMP           225.52 DEG. F ALM
C   10 OIL GALLERY        238.82 DEG. F ALM
C   11                    .00000
C   12                    .00000
C   13  ENG. INTAKE       132.17 DEG. F ALM
C   14 RAD. TOP LEFT      149.52 DEG. F ALM
C   15 RAD. BTTM LEFT     144.60 DEG. F ALM
C   16 RAD. TOP RIGHT     146.89 DEG. F ALM
C   17 RAD. BTTM RIGHT    149.40 DEG. F ALM
C   18 GEN. AIR IN        122.90 DEG. F ALM
C   19 GEN. AIR OUT       147.92 DEG. F ALM
C   20 GEN. FRAME TOP     131.87 DEG. F ALM
C   21 GEN. FRAME BTTM    127.28 DEG. F ALM
C   22 GEN. EXCITER       132.89 DEG. F ALM
C   23 GEN. VOLT. REG.    134.47 DEG. F ALM
C   24 CONTROL PANEL      133.74 DEG. F ALM
C   25 RELAY AREA         128.69 DEG. F ALM
C   26 BATTERY LEFT       147.42 DEG. F ALM
C   27 BATTERY RIGHT      151.26 DEG. F ALM
C   28 AIR IN SET         125.28 DEG. F ALM
C   29 FUEL TANK          126.28 DEG. F ALM
C   30 FUEL OUTLET        153.11 DEG. F ALM

END SCAN GROUP 1     14 NOV 87  17:56:04

STOPPED SINGLE SCAN  14 NOV 87  17:56:04
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BEGIN SCAN GROUP 1   14 NOV 87  18:55:35
30KW 60HZ GEN SET S/NRZ5 3774

C    1 EXHAUST 1          786.31 DEG. F ALM
C    2 EXHAUST 2          804.73 DEG. F ALM
C    3 EXHAUST 3          821.48 DEG. F ALM
C    4 EXHAUST 4          781.82 DEG. F ALM
C    5 EXHAUST 5          794.25 DEG. F ALM
C    6 EXHAUST 6          774.99 DEG. F ALM
C    7 ENG. COOL. IN      204.92 DEG. F ALM
C    8 ENG. COOL. OUT     213.24 DEG. F ALM
C    9 OIL SUMP           225.69 DEG. F ALM
C   10 OIL GALLERY        239.14 DEG. F ALM
C   11                    .00000
C   12                    .00000
C   13  ENG. INTAKE       131.59 DEG. F ALM
C   14 RAD. TOP LEFT      148.88 DEG. F ALM
C   15 RAD. BTTM LEFT     144.29 DEG. F ALM
C   16 RAD. TOP RIGHT     146.88 DEG. F ALM
C   17 RAD. BTTM RIGHT    149.14 DEG. F ALM
C   18 GEN. AIR IN        121.96 DEG. F ALM
C   19 GEN. AIR OUT       147.93 DEG. F ALM
C   20 GEN. FRAME TOP     131.56 DEG. F ALM
C   21 GEN. FRAME BTTM    127.06 DEG. F ALM
C   22 GEN. EXCITER       131.44 DEG. F ALM
C   23 GEN. VOLT. REG.    134.28 DEG. F ALM
C   24 CONTROL PANEL      133.48 DEG. F ALM
C   25 RELAY AREA         127.93 DEG. F ALM
C   26 BATTERY LEFT       158.39 DEG. F ALM
C   27 BATTERY RIGHT      155.29 DEG. F ALM
C   28 AIR IN SET         124.27 DEG. F ALM
C   29 FUEL TANK          128.35 DEG. F ALM
C   30 FUEL OUTLET        153.23 DEG. F ALM

END SCAN GROUP 1     14 NOV 87  18:55:45

STOPPED SINGLE SCAN  14 NOV 87  18:55:45
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BEGIN SCAN GROUP 1   14 NOV 87  18:25:16
30KW 60HZ GEN SET S/NRZ5 3774

C    1 EXHAUST 1          787.91 DEG. F ALM
C    2 EXHAUST 2          803.93 DEG. F ALM
C    3 EXHAUST 3          822.97 DEG. F ALM
C    4 EXHAUST 4          781.88 DEG. F ALM
C    5 EXHAUST 5          792.03 DEG. F ALM
C    6 EXHAUST 6          775.38 DEG. F ALM
C    7 ENG. COOL. IN      203.13 DEG. F ALM
C    8 ENG. COOL. OUT     211.45 DEG. F ALM
C    9 OIL SUMP           224.68 DEG. F ALM
C   10 OIL GALLERY        238.83 DEG. F ALM
C   11                    .00000
C   12                    .00000
C   13  ENG. INTAKE       129.38 DEG. F ALM
C   14 RAD. TOP LEFT      146.83 DEG. F ALM
C   15 RAD. BTTM LEFT     142.38 DEG. F ALM
C   16 RAD. TOP RIGHT     144.77 DEG. F ALM
C   17 RAD. BTTM RIGHT    147.18 DEG. F ALM
C   18 GEN. AIR IN        119.25 DEG. F ALM
C   19 GEN. AIR OUT       145.75 DEG. F ALM
C   20 GEN. FRAME TOP     129.79 DEG. F ALM
C   21 GEN. FRAME BTTM    125.25 DEG. F ALM
C   22 GEN. EXCITER       129.28 DEG. F ALM
C   23 GEN. VOLT. REG.    133.48 DEG. F ALM
C   24 CONTROL PANEL      132.14 DEG. F ALM
C   25 RELAY AREA         125.84 DEG. F ALM
C   26 BATTERY LEFT       148.85 DEG. F ALM
C   27 BATTERY RIGHT      153.82 DEG. F ALM
C   28 AIR IN SET         121.34 DEG. F ALM
C   29 FUEL TANK          127.38 DEG. F ALM
C   30 FUEL OUTLET        151.49 DEG. F ALM

END SCAN GROUP 1     14 NOV 87  18:25:25

STOPPED SINGLE SCAN  14 NOV 87  18:25:25
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BEGIN SCAN GROUP 1   14 NOV 87  19:24:30
30KW 60HZ GEN SET S/NRZ5 3774

C    1 EXHAUST 1          782.49 DEG. F ALM
C    2 EXHAUST 2          805.45 DEG. F ALM
C    3 EXHAUST 3          828.56 DEG. F ALM
C    4 EXHAUST 4          781.67 DEG. F ALM
C    5 EXHAUST 5          794.92 DEG. F ALM
C    6 EXHAUST 6          772.26 DEG. F ALM
C    7 ENG. COOL. IN      204.64 DEG. F ALM
C    8 ENG. COOL. OUT     212.96 DEG. F ALM
C    9 OIL SUMP           225.59 DEG. F ALM
C   10 OIL GALLERY        238.78 DEG. F ALM
C   11                    .00000
C   12                    .00000
C   13  ENG. INTAKE       131.13 DEG. F ALM
C   14 RAD. TOP LEFT      148.52 DEG. F ALM
C   15 RAD. BTTM LEFT     143.69 DEG. F ALM
C   16 RAD. TOP RIGHT     146.28 DEG. F ALM
C   17 RAD. BTTM RIGHT    148.78 DEG. F ALM
C   18 GEN. AIR IN        120.85 DEG. F ALM
C   19 GEN. AIR OUT       147.26 DEG. F ALM
C   20 GEN. FRAME TOP     131.24 DEG. F ALM
C   21 GEN. FRAME BTTM    126.86 DEG. F ALM
C   22 GEN. EXCITER       138.97 DEG. F ALM
C   23 GEN. VOLT. REG.    133.95 DEG. F ALM
C   24 CONTROL PANEL      132.91 DEG. F ALM
C   25 RELAY AREA         127.32 DEG. F ALM
C   26 BATTERY LEFT       151.68 DEG. F ALM
C   27 BATTERY RIGHT      156.92 DEG. F ALM
C   28 AIR IN SET         123.37 DEG. F ALM
C   29 FUEL TANK          129.15 DEG. F ALM
C   30 FUEL OUTLET        152.61 DEG. F ALM

END SCAN GROUP 1     14 NOV 87  19:24:39

STOPPED SINGLE SCAN  14 NOV 87  19:24:40
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TEST DATA

ITEM 30 KW / 60 HZ GENERATOR SET MODIFIED
MFGR. LIBBY WELDING
MODEL NO. MEP005A
SERIAL NO. R25 3774

CIRCUIT INTERRUPTER TEST METHOD 512.3 (OVER AND UNDER VOLTAGE)

REF. NO. MIL STD 705
SHEET 1 OF 1
DATE 16 NOV. 1987
JOB NO. 5555-2140
PROJ. ENGR.
RECORDER/OBSERVER G.C/BI/KM

INST. →												
READ NO. ↓	TIME	VOLT METER 1	VOLT METER 2	FREQ								AVG. AMB. TEMP. °F
UNITS	HRS			HZ								
SYM.		1	2									
COL.	1	2	3	4	5	6	7	8	9	10	11	12
1	1998	155	120	60.2	CIRCUIT	INTERRUPTER	OPENED	SET SHUT DOWN		O.V. LIGHT ON		121
2	2000	155	120	60.1	CIRCUIT	INTERRUPTER	OPENED	SET SHUT DOWN		O.V. LIGHT ON		121
3	2002	155	120	60.0	CIRCUIT	INTERRUPTER	OPENED	SET SHUT DOWN		O.V. LIGHT ON		121
	2002				END	OF	TEST					

15 JANUARY 1988

CALCULATED TIME FOR INTERRUPTER TO OPEN

1	651.30	MS
2	634.60	MS
3	634.60	MS

NOTES: ONLY OUTAUDIENCE IS REQUIRED ON UTILITY UNIT

SOT-B

CIRCUIT INTERRUPTER (OVERLOAD CURRENT) STR.2C

BEGIN SCAN GROUP 1 14 NOV 87 14:39:52
30KW 60HZ GEN SET S/NRZ5 3774

C	1 EXHAUST 1	777.93	DEG. F ALM
C	2 EXHAUST 2	791.56	DEG. F ALM
C	3 EXHAUST 3	820.67	DEG. F ALM
C	4 EXHAUST 4	778.20	DEG. F ALM
C	5 EXHAUST 5	778.43	DEG. F ALM
C	6 EXHAUST 6	768.74	DEG. F ALM
C	7 ENG. COOL. IN	200.40	DEG. F ALM
C	8 ENG. COOL. OUT	208.47	DEG. F ALM
C	9 OIL SUMP	216.41	DEG. F ALM
C	10 OIL GALLERY	229.46	DEG. F ALM
C	11	.00000	
C	12	.00000	
C	13 ENG. INTAKE	129.62	DEG. F ALM
C	14 RAD. TOP LEFT	146.33	DEG. F ALM
C	15 RAD. BTTM LEFT	141.34	DEG. F ALM
C	16 RAD. TOP RIGHT	143.31	DEG. F ALM
C	17 RAD. BTTM RIGHT	145.48	DEG. F ALM
C	18 GEN. AIR IN	128.61	DEG. F ALM
C	19 GEN. AIR OUT	142.66	DEG. F ALM
C	20 GEN. FRAME TOP	129.45	DEG. F ALM
C	21 GEN. FRAME BTTM	125.61	DEG. F ALM
C	22 GEN. EXCITER	129.67	DEG. F ALM
C	23 GEN. VOLT. REG.	135.78	DEG. F ALM
C	24 CONTROL PANEL	133.34	DEG. F ALM
C	25 RELAY AREA	126.78	DEG. F ALM
C	26 BATTERY LEFT	129.94	DEG. F ALM
C	27 BATTERY RIGHT	132.32	DEG. F ALM
C	28 AIR IN SET	122.26	DEG. F ALM
C	29 FUEL TANK	115.89	DEG. F ALM
C	30 FUEL OUTLET	150.28	DEG. F ALM

END SCAN GROUP 1 14 NOV 87 14:40:02

STOPPED SINGLE SCAN 14 NOV 87 14:40:02

BEGIN SCAN GROUP 1 14 NOV 87 14:50:53
30KW 60HZ GEN SET S/NRZ5 3774

C	1 EXHAUST 1	778.98	DEG. F ALM
C	2 EXHAUST 2	790.85	DEG. F ALM
C	3 EXHAUST 3	816.77	DEG. F ALM
C	4 EXHAUST 4	778.38	DEG. F ALM
C	5 EXHAUST 5	778.28	DEG. F ALM
C	6 EXHAUST 6	766.90	DEG. F ALM
C	7 ENG. COOL. IN	201.41	DEG. F ALM
C	8 ENG. COOL. OUT	209.47	DEG. F ALM
C	9 OIL SUMP	221.85	DEG. F ALM
C	10 OIL GALLERY	234.33	DEG. F ALM
C	11	.00000	
C	12	.00000	
C	13 ENG. INTAKE	129.98	DEG. F ALM
C	14 RAD. TOP LEFT	146.77	DEG. F ALM
C	15 RAD. BTTM LEFT	141.63	DEG. F ALM
C	16 RAD. TOP RIGHT	143.71	DEG. F ALM
C	17 RAD. BTTM RIGHT	146.38	DEG. F ALM
C	18 GEN. AIR IN	128.82	DEG. F ALM
C	19 GEN. AIR OUT	142.78	DEG. F ALM
C	20 GEN. FRAME TOP	129.17	DEG. F ALM
C	21 GEN. FRAME BTTM	125.34	DEG. F ALM
C	22 GEN. EXCITER	129.41	DEG. F ALM
C	23 GEN. VOLT. REG.	134.89	DEG. F ALM
C	24 CONTROL PANEL	132.50	DEG. F ALM
C	25 RELAY AREA	126.47	DEG. F ALM
C	26 BATTERY LEFT	131.82	DEG. F ALM
C	27 BATTERY RIGHT	134.70	DEG. F ALM
C	28 AIR IN SET	122.53	DEG. F ALM
C	29 FUEL TANK	116.59	DEG. F ALM
C	30 FUEL OUTLET	149.18	DEG. F ALM

END SCAN GROUP 1 14 NOV 87 14:51:03

STOPPED SINGLE SCAN 14 NOV 87 14:51:03

BEGIN SCAN GROUP 1 14 NOV 87 15:00:00
30KW 60HZ GEN SET S/NRZ5 3774

C	1 EXHAUST 1	774.02	DEG. F ALM
C	2 EXHAUST 2	792.12	DEG. F ALM
C	3 EXHAUST 3	818.71	DEG. F ALM
C	4 EXHAUST 4	781.20	DEG. F ALM
C	5 EXHAUST 5	780.86	DEG. F ALM
C	6 EXHAUST 6	768.11	DEG. F ALM
C	7 ENG. COOL. IN	201.82	DEG. F ALM
C	8 ENG. COOL. OUT	210.06	DEG. F ALM
C	9 OIL SUMP	222.69	DEG. F ALM
C	10 OIL GALLERY	235.92	DEG. F ALM
C	11	.00000	
C	12	.00000	
C	13 ENG. INTAKE	130.31	DEG. F ALM
C	14 RAD. TOP LEFT	147.24	DEG. F ALM
C	15 RAD. BTTM LEFT	142.21	DEG. F ALM
C	16 RAD. TOP RIGHT	144.46	DEG. F ALM
C	17 RAD. BTTM RIGHT	146.83	DEG. F ALM
C	18 GEN. AIR IN	121.28	DEG. F ALM
C	19 GEN. AIR OUT	143.51	DEG. F ALM
C	20 GEN. FRAME TOP	129.36	DEG. F ALM
C	21 GEN. FRAME BTTM	125.44	DEG. F ALM
C	22 GEN. EXCITER	130.14	DEG. F ALM
C	23 GEN. VOLT. REG.	134.46	DEG. F ALM
C	24 CONTROL PANEL	132.25	DEG. F ALM
C	25 RELAY AREA	126.76	DEG. F ALM
C	26 BATTERY LEFT	133.12	DEG. F ALM
C	27 BATTERY RIGHT	136.94	DEG. F ALM
C	28 AIR IN SET	122.92	DEG. F ALM
C	29 FUEL TANK	117.18	DEG. F ALM
C	30 FUEL OUTLET	149.65	DEG. F ALM

END SCAN GROUP 1 14 NOV 87 15:00:13

STOPPED SINGLE SCAN 14 NOV 87 15:00:13

BEGIN SCAN GROUP 1 14 NOV 87 15:00:15
30KW 60HZ GEN SET S/NRZ5 3774

C	1 EXHAUST 1	777.49	DEG. F ALM
C	2 EXHAUST 2	792.18	DEG. F ALM
C	3 EXHAUST 3	817.45	DEG. F ALM
C	4 EXHAUST 4	779.32	DEG. F ALM
C	5 EXHAUST 5	781.84	DEG. F ALM
C	6 EXHAUST 6	771.48	DEG. F ALM
C	7 ENG. COOL. IN	202.19	DEG. F ALM
C	8 ENG. COOL. OUT	210.59	DEG. F ALM
C	9 OIL SUMP	223.19	DEG. F ALM
C	10 OIL GALLERY	236.66	DEG. F ALM
C	11	.00000	
C	12	.00000	
C	13 ENG. INTAKE	130.35	DEG. F ALM
C	14 RAD. TOP LEFT	147.26	DEG. F ALM
C	15 RAD. BTTM LEFT	142.48	DEG. F ALM
C	16 RAD. TOP RIGHT	144.58	DEG. F ALM
C	17 RAD. BTTM RIGHT	147.12	DEG. F ALM
C	18 GEN. AIR IN	121.15	DEG. F ALM
C	19 GEN. AIR OUT	143.60	DEG. F ALM
C	20 GEN. FRAME TOP	129.46	DEG. F ALM
C	21 GEN. FRAME BTTM	125.68	DEG. F ALM
C	22 GEN. EXCITER	130.16	DEG. F ALM
C	23 GEN. VOLT. REG.	134.23	DEG. F ALM
C	24 CONTROL PANEL	132.36	DEG. F ALM
C	25 RELAY AREA	126.78	DEG. F ALM
C	26 BATTERY LEFT	134.86	DEG. F ALM
C	27 BATTERY RIGHT	138.79	DEG. F ALM
C	28 AIR IN SET	122.52	DEG. F ALM
C	29 FUEL TANK	117.68	DEG. F ALM
C	30 FUEL OUTLET	149.69	DEG. F ALM

END SCAN GROUP 1 14 NOV 87 15:00:25

STOPPED SINGLE SCAN 14 NOV 87 15:00:25

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BEGIN SCAN GROUP 1   14 NOV 87  15:13:51
30KW 60HZ GEN SET S/NRZS 3774

C   1 EXHAUST 1          807.61 DEG. F ALM
C   2 EXHAUST 2          822.46 DEG. F ALM
C   3 EXHAUST 3          853.80 DEG. F ALM
C   4 EXHAUST 4          811.72 DEG. F ALM
C   5 EXHAUST 5          817.63 DEG. F ALM
C   6 EXHAUST 6          808.85 DEG. F ALM
C   7 ENG. COOL. IN      204.15 DEG. F ALM
C   8 ENG. COOL. OUT     212.44 DEG. F ALM
C   9 OIL SUMP           224.22 DEG. F ALM
C  10 OIL GALLERY        237.37 DEG. F ALM
C  11                    .00000
C  12                    .00000
C  13  ENG. INTAKE       138.92 DEG. F ALM
C  14 RAD. TOP LEFT      148.32 DEG. F ALM
C  15 RAD. BTTM LEFT     143.03 DEG. F ALM
C  16 RAD. TOP RIGHT     145.31 DEG. F ALM
C  17 RAD. BTTM RIGHT    147.82 DEG. F ALM
C  18 GEN. AIR IN        121.23 DEG. F ALM
C  19 GEN. AIR OUT       146.93 DEG. F ALM
C  20 GEN. FRAME TOP     129.88 DEG. F ALM
C  21 GEN. FRAME BTTM    126.05 DEG. F ALM
C  22 GEN. EXCITER       138.48 DEG. F ALM
C  23 GEN. VOLT. REG.    134.15 DEG. F ALM
C  24 CONTROL PANEL      132.33 DEG. F ALM
C  25 RELAY AREA         127.22 DEG. F ALM
C  26 BATTERY LEFT       134.53 DEG. F ALM
C  27 BATTERY RIGHT      138.68 DEG. F ALM
C  28 AIR IN SET         123.82 DEG. F ALM
C  29 FUEL TANK          118.89 DEG. F ALM
C  30 FUEL OUTLET        158.88 DEG. F ALM

END SCAN GROUP 1     14 NOV 87  15:14:01

STOPPED SINGLE SCAN  14 NOV 87  15:14:01
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BEGIN SCAN GROUP 1   14 NOV 87  15:42:5
30KW 60HZ GEN SET S/NRZS 3774

C   1 EXHAUST 1          802.79 DEG. F AL
C   2 EXHAUST 2          821.16 DEG. F AL
C   3 EXHAUST 3          846.35 DEG. F AL
C   4 EXHAUST 4          806.35 DEG. F AL
C   5 EXHAUST 5          816.51 DEG. F AL
C   6 EXHAUST 6          808.46 DEG. F AL
C   7 ENG. COOL. IN      202.56 DEG. F ALM
C   8 ENG. COOL. OUT     210.79 DEG. F ALM
C   9 OIL SUMP           221.27 DEG. F ALM
C  10 OIL GALLERY        234.36 DEG. F ALM
C  11                    .00000
C  12                    .00000
C  13  ENG. INTAKE       138.82 DEG. F ALM
C  14 RAD. TOP LEFT      147.77 DEG. F ALM
C  15 RAD. BTTM LEFT     142.77 DEG. F ALM
C  16 RAD. TOP RIGHT     145.14 DEG. F ALM
C  17 RAD. BTTM RIGHT    147.34 DEG. F ALM
C  18 GEN. AIR IN        121.75 DEG. F ALM
C  19 GEN. AIR OUT       144.43 DEG. F ALM
C  20 GEN. FRAME TOP     129.98 DEG. F ALM
C  21 GEN. FRAME BTTM    126.05 DEG. F ALM
C  22 GEN. EXCITER       138.53 DEG. F ALM
C  23 GEN. VOLT. REG.    133.49 DEG. F ALM
C  24 CONTROL PANEL      132.21 DEG. F ALM
C  25 RELAY AREA         127.25 DEG. F ALM
C  26 BATTERY LEFT       137.29 DEG. F ALM
C  27 BATTERY RIGHT      142.85 DEG. F ALM
C  28 AIR IN SET         123.39 DEG. F ALM
C  29 FUEL TANK          119.71 DEG. F ALM
C  30 FUEL OUTLET        149.54 DEG. F ALM

END SCAN GROUP 1     14 NOV 87  15:43:0

STOPPED SINGLE SCAN  14 NOV 87  15:43:0
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BEGIN SCAN GROUP 1   14 NOV 87  15:40:57
30KW 60HZ GEN SET S/NRZS 3774

C   1 EXHAUST 1          779.81 DEG. F ALM
C   2 EXHAUST 2          797.38 DEG. F ALM
C   3 EXHAUST 3          817.46 DEG. F ALM
C   4 EXHAUST 4          781.22 DEG. F ALM
C   5 EXHAUST 5          788.44 DEG. F ALM
C   6 EXHAUST 6          769.44 DEG. F ALM
C   7 ENG. COOL. IN      201.57 DEG. F ALM
C   8 ENG. COOL. OUT     209.59 DEG. F ALM
C   9 OIL SUMP           220.37 DEG. F ALM
C  10 OIL GALLERY        233.65 DEG. F ALM
C  11                    .00000
C  12                    .00000
C  13  ENG. INTAKE       138.80 DEG. F ALM
C  14 RAD. TOP LEFT      147.36 DEG. F ALM
C  15 RAD. BTTM LEFT     142.72 DEG. F ALM
C  16 RAD. TOP RIGHT     144.75 DEG. F ALM
C  17 RAD. BTTM RIGHT    147.31 DEG. F ALM
C  18 GEN. AIR IN        121.35 DEG. F ALM
C  19 GEN. AIR OUT       144.11 DEG. F ALM
C  20 GEN. FRAME TOP     129.87 DEG. F ALM
C  21 GEN. FRAME BTTM    126.00 DEG. F ALM
C  22 GEN. EXCITER       138.68 DEG. F ALM
C  23 GEN. VOLT. REG.    133.39 DEG. F ALM
C  24 CONTROL PANEL      131.98 DEG. F ALM
C  25 RELAY AREA         127.18 DEG. F ALM
C  26 BATTERY LEFT       137.09 DEG. F ALM
C  27 BATTERY RIGHT      142.31 DEG. F ALM
C  28 AIR IN SET         123.29 DEG. F ALM
C  29 FUEL TANK          119.61 DEG. F ALM
C  30 FUEL OUTLET        158.32 DEG. F ALM

END SCAN GROUP 1     14 NOV 87  15:41:07

STOPPED SINGLE SCAN  14 NOV 87  15:41:07
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BEGIN SCAN GROUP 1   14 NOV 87  15:46:4
30KW 60HZ GEN SET S/NRZS 3774

C   1 EXHAUST 1          807.34 DEG. F ALM
C   2 EXHAUST 2          827.62 DEG. F ALM
C   3 EXHAUST 3          852.18 DEG. F ALM
C   4 EXHAUST 4          813.29 DEG. F ALM
C   5 EXHAUST 5          825.69 DEG. F ALM
C   6 EXHAUST 6          809.11 DEG. F ALM
C   7 ENG. COOL. IN      204.43 DEG. F ALM
C   8 ENG. COOL. OUT     212.83 DEG. F ALM
C   9 OIL SUMP           222.44 DEG. F ALM
C  10 OIL GALLERY        235.91 DEG. F ALM
C  11                    .00000
C  12                    .00000
C  13  ENG. INTAKE       131.41 DEG. F ALM
C  14 RAD. TOP LEFT      148.82 DEG. F ALM
C  15 RAD. BTTM LEFT     143.68 DEG. F ALM
C  16 RAD. TOP RIGHT     145.88 DEG. F ALM
C  17 RAD. BTTM RIGHT    148.22 DEG. F ALM
C  18 GEN. AIR IN        121.53 DEG. F ALM
C  19 GEN. AIR OUT       145.41 DEG. F ALM
C  20 GEN. FRAME TOP     130.22 DEG. F ALM
C  21 GEN. FRAME BTTM    126.33 DEG. F ALM
C  22 GEN. EXCITER       131.00 DEG. F ALM
C  23 GEN. VOLT. REG.    133.49 DEG. F ALM
C  24 CONTROL PANEL      132.33 DEG. F ALM
C  25 RELAY AREA         127.76 DEG. F ALM
C  26 BATTERY LEFT       137.75 DEG. F ALM
C  27 BATTERY RIGHT      142.37 DEG. F AL
C  28 AIR IN SET         123.56 DEG. F AL
C  29 FUEL TANK          119.98 DEG. F AL
C  30 FUEL OUTLET        151.38 DEG. F AL

END SCAN GROUP 1     14 NOV 87  15:46:5

STOPPED SINGLE SCAN  14 NOV 87  15:46:5
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BEGIN SCAN GROUP 1 14 NOV 87 15:55:03
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	622.48	DEG. F	ALM
C	2	EXHAUST 2	627.78	DEG. F	ALM
C	3	EXHAUST 3	642.68	DEG. F	ALM
C	4	EXHAUST 4	636.26	DEG. F	ALM
C	5	EXHAUST 5	646.56	DEG. F	ALM
C	6	EXHAUST 6	622.88	DEG. F	ALM
C	7	ENG. COOL. IN	187.03	DEG. F	ALM
C	8	ENG. COOL. OUT	193.48	DEG. F	ALM
C	9	OIL SUMP	221.39	DEG. F	ALM
C	10	OIL GALLERY	234.46	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	138.26	DEG. F	ALM
C	14	RAD. TOP LEFT	143.88	DEG. F	ALM
C	15	RAD. BTTM LEFT	148.65	DEG. F	ALM
C	16	RAD. TOP RIGHT	142.86	DEG. F	ALM
C	17	RAD. BTTM RIGHT	144.78	DEG. F	ALM
C	18	GEN. AIR IN	121.83	DEG. F	ALM
C	19	GEN. AIR OUT	141.93	DEG. F	ALM
C	20	GEN. FRAME TOP	138.46	DEG. F	ALM
C	21	GEN. FRAME BTTM	126.45	DEG. F	ALM
C	22	GEN. EXCITER	138.27	DEG. F	ALM
C	23	GEN. VOLT. REG.	133.78	DEG. F	ALM
C	24	CONTROL PANEL	132.77	DEG. F	ALM
C	25	RELAY AREA	126.89	DEG. F	ALM
C	26	BATTERY LEFT	138.88	DEG. F	ALM
C	27	BATTERY RIGHT	142.82	DEG. F	ALM
C	28	AIR IN SET	124.12	DEG. F	ALM
C	29	FUEL TANK	120.35	DEG. F	ALM
C	30	FUEL OUTLET	152.98	DEG. F	ALM

END SCAN GROUP 1 14 NOV 87 15:55:13

STOPPED SINGLE SCAN 14 NOV 87 15:55:13

BEGIN SCAN GROUP 1 14 NOV 87 16:08:13
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	777.55	DEG. F	ALM
C	2	EXHAUST 2	795.24	DEG. F	ALM
C	3	EXHAUST 3	816.68	DEG. F	ALM
C	4	EXHAUST 4	788.25	DEG. F	ALM
C	5	EXHAUST 5	786.88	DEG. F	ALM
C	6	EXHAUST 6	768.53	DEG. F	ALM
C	7	ENG. COOL. IN	202.85	DEG. F	ALM
C	8	ENG. COOL. OUT	218.28	DEG. F	ALM
C	9	OIL SUMP	222.38	DEG. F	ALM
C	10	OIL GALLERY	235.12	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	138.84	DEG. F	ALM
C	14	RAD. TOP LEFT	147.69	DEG. F	ALM
C	15	RAD. BTTM LEFT	142.78	DEG. F	ALM
C	16	RAD. TOP RIGHT	144.94	DEG. F	ALM
C	17	RAD. BTTM RIGHT	147.45	DEG. F	ALM
C	18	GEN. AIR IN	122.18	DEG. F	ALM
C	19	GEN. AIR OUT	144.12	DEG. F	ALM
C	20	GEN. FRAME TOP	129.89	DEG. F	ALM
C	21	GEN. FRAME BTTM	126.12	DEG. F	ALM
C	22	GEN. EXCITER	138.67	DEG. F	ALM
C	23	GEN. VOLT. REG.	133.46	DEG. F	ALM
C	24	CONTROL PANEL	132.42	DEG. F	ALM
C	25	RELAY AREA	127.43	DEG. F	ALM
C	26	BATTERY LEFT	139.73	DEG. F	ALM
C	27	BATTERY RIGHT	143.31	DEG. F	ALM
C	28	AIR IN SET	123.95	DEG. F	ALM
C	29	FUEL TANK	121.88	DEG. F	ALM
C	30	FUEL OUTLET	150.81	DEG. F	ALM

END SCAN GROUP 1 14 NOV 87 16:08:23

STOPPED SINGLE SCAN 14 NOV 87 16:08:23

BEGIN SCAN GROUP 1 14 NOV 87 16:10:3[illegible]
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	806.48	DEG. F	AL
C	2	EXHAUST 2	819.47	DEG. F	AL
C	3	EXHAUST 3	842.44	DEG. F	AL
C	4	EXHAUST 4	810.98	DEG. F	AL
C	5	EXHAUST 5	818.23	DEG. F	AL
C	6	EXHAUST 6	799.89	DEG. F	AL
C	7	ENG. COOL. IN	202.96	DEG. F	AL
C	8	ENG. COOL. OUT	211.29	DEG. F	AL
C	9	OIL SUMP	222.91	DEG. F	AL
C	10	OIL GALLERY	235.56	DEG. F	AL
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	138.98	DEG. F	AL
C	14	RAD. TOP LEFT	148.87	DEG. F	AL
C	15	RAD. BTTM LEFT	143.16	DEG. F	AL
C	16	RAD. TOP RIGHT	145.18	DEG. F	AL
C	17	RAD. BTTM RIGHT	147.73	DEG. F	AL
C	18	GEN. AIR IN	122.48	DEG. F	AL
C	19	GEN. AIR OUT	144.82	DEG. F	AL
C	20	GEN. FRAME TOP	130.88	DEG. F	AL
C	21	GEN. FRAME BTTM	126.15	DEG. F	AL
C	22	GEN. EXCITER	138.55	DEG. F	AL
C	23	GEN. VOLT. REG.	133.42	DEG. F	AL
C	24	CONTROL PANEL	132.37	DEG. F	AL
C	25	RELAY AREA	127.47	DEG. F	AL
C	26	BATTERY LEFT	139.98	DEG. F	AL
C	27	BATTERY RIGHT	145.14	DEG. F	AL
C	28	AIR IN SET	123.98	DEG. F	AL
C	29	FUEL TANK	121.11	DEG. F	AL
C	30	FUEL OUTLET	151.53	DEG. F	AL

END SCAN GROUP 1 14 NOV 87 16:10:1[illegible]

STOPPED SINGLE SCAN 14 NOV 87 16:10:1[illegible]

BEGIN SCAN GROUP 1 14 NOV 87 16:14:0[illegible]
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	809.91	DEG. F	AL
C	2	EXHAUST 2	828.72	DEG. F	AL
C	3	EXHAUST 3	850.22	DEG. F	AL
C	4	EXHAUST 4	818.46	DEG. F	AL
C	5	EXHAUST 5	826.74	DEG. F	AL
C	6	EXHAUST 6	808.78	DEG. F	AL
C	7	ENG. COOL. IN	205.12	DEG. F	AL
C	8	ENG. COOL. OUT	213.57	DEG. F	AL
C	9	OIL SUMP	223.66	DEG. F	AL
C	10	OIL GALLERY	236.96	DEG. F	AL
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	131.51	DEG. F	AL
C	14	RAD. TOP LEFT	148.99	DEG. F	AL
C	15	RAD. BTTM LEFT	143.92	DEG. F	AL
C	16	RAD. TOP RIGHT	146.85	DEG. F	AL
C	17	RAD. BTTM RIGHT	148.48	DEG. F	AL
C	18	GEN. AIR IN	121.87	DEG. F	AL
C	19	GEN. AIR OUT	145.64	DEG. F	AL
C	20	GEN. FRAME TOP	130.36	DEG. F	AL
C	21	GEN. FRAME BTTM	126.52	DEG. F	AL
C	22	GEN. EXCITER	131.21	DEG. F	AL
C	23	GEN. VOLT. REG.	133.66	DEG. F	AL
C	24	CONTROL PANEL	132.79	DEG. F	AL
C	25	RELAY AREA	127.69	DEG. F	AL
C	26	BATTERY LEFT	140.48	DEG. F	AL
C	27	BATTERY RIGHT	145.21	DEG. F	AL
C	28	AIR IN SET	123.54	DEG. F	AL
C	29	FUEL TANK	121.33	DEG. F	AL
C	30	FUEL OUTLET	150.72	DEG. F	AL

END SCAN GROUP 1 14 NOV 87 16:14:1[illegible]

STOPPED SINGLE SCAN 14 NOV 87 16:14:1[illegible]

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BEGIN SCAN GROUP 1   14 NOV 87  16:27:27
30KW 60HZ GEN SET S/NRZS 3774

C    1 EXHAUST 1          780.40 DEG. F ALM
C    2 EXHAUST 2          798.43 DEG. F ALM
C    3 EXHAUST 3          816.59 DEG. F ALM
C    4 EXHAUST 4          778.01 DEG. F ALM
C    5 EXHAUST 5          787.47 DEG. F ALM
C    6 EXHAUST 6          767.31 DEG. F ALM
C    7 ENG. COOL. IN      203.00 DEG. F ALM
C    8 ENG. COOL. OUT     211.00 DEG. F ALM
C    9 OIL SUMP           223.00 DEG. F ALM
C   10 OIL GALLERY        235.96 DEG. F ALM
C   11                    .00000
C   12                    .00000
C   13  ENG. INTAKE       134.21 DEG. F ALM
C   14 RAD. TOP LEFT      149.70 DEG. F ALM
C   15 RAD. BTTM LEFT     145.31 DEG. F ALM
C   16 RAD. TOP RIGHT     147.00 DEG. F ALM
C   17 RAD. BTTM RIGHT    145.67 DEG. F ALM
C   18 GEN. AIR IN        124.49 DEG. F ALM
C   19 GEN. AIR OUT       146.50 DEG. F ALM
C   20 GEN. FRAME TOP     132.83 DEG. F ALM
C   21 GEN. FRAME BTTM    128.63 DEG. F ALM
C   22 GEN. EXCITER       133.80 DEG. F ALM
C   23 GEN. VOLT. REG.    134.57 DEG. F ALM
C   24 CONTROL PANEL      134.86 DEG. F ALM
C   25 RELAY AREA         130.19 DEG. F ALM
C   26 BATTERY LEFT       141.63 DEG. F ALM
C   27 BATTERY RIGHT      145.75 DEG. F ALM
C   28 AIR IN SET         126.56 DEG. F ALM
C   29 FUEL TANK          122.06 DEG. F ALM
C   30 FUEL OUTLET        152.70 DEG. F ALM

END SCAN GROUP 1     14 NOV 87  16:27:37

STOPPED SINGLE SCAN  14 NOV 87  16:27:37
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BEGIN SCAN GROUP 1   14 NOV 87  16:38:29
30KW 60HZ GEN SET S/NRZS 3774

C    1 EXHAUST 1          824.91 DEG. F ALM
C    2 EXHAUST 2          858.39 DEG. F ALM
C    3 EXHAUST 3          872.77 DEG. F ALM
C    4 EXHAUST 4          833.52 DEG. F ALM
C    5 EXHAUST 5          848.28 DEG. F ALM
C    6 EXHAUST 6          824.87 DEG. F ALM
C    7 ENG. COOL. IN      204.79 DEG. F ALM
C    8 ENG. COOL. OUT     213.16 DEG. F ALM
C    9 OIL SUMP           224.41 DEG. F ALM
C   10 OIL GALLERY        237.65 DEG. F ALM
C   11                    .00000
C   12                    .00000
C   13  ENG. INTAKE       138.94 DEG. F ALM
C   14 RAD. TOP LEFT      148.22 DEG. F ALM
C   15 RAD. BTTM LEFT     143.22 DEG. F ALM
C   16 RAD. TOP RIGHT     145.60 DEG. F ALM
C   17 RAD. BTTM RIGHT    148.18 DEG. F ALM
C   18 GEN. AIR IN        128.13 DEG. F ALM
C   19 GEN. AIR OUT       144.71 DEG. F ALM
C   20 GEN. FRAME TOP     130.70 DEG. F ALM
C   21 GEN. FRAME BTTM    126.91 DEG. F ALM
C   22 GEN. EXCITER       130.61 DEG. F ALM
C   23 GEN. VOLT. REG.    134.20 DEG. F ALM
C   24 CONTROL PANEL      133.44 DEG. F ALM
C   25 RELAY AREA         127.39 DEG. F ALM
C   26 BATTERY LEFT       142.70 DEG. F ALM
C   27 BATTERY RIGHT      146.50 DEG. F ALM
C   28 AIR IN SET         121.90 DEG. F ALM
C   29 FUEL TANK          122.66 DEG. F ALM
C   30 FUEL OUTLET        152.55 DEG. F ALM

END SCAN GROUP 1     14 NOV 87  16:38:39

STOPPED SINGLE SCAN  14 NOV 87  16:38:39
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BEGIN SCAN GROUP 1   14 NOV 87  16:42:4
30KW 60HZ GEN SET S/NRZS 3774

C    1 EXHAUST 1          834.97 DEG. F AL
C    2 EXHAUST 2          855.52 DEG. F AL
C    3 EXHAUST 3          881.22 DEG. F AL
C    4 EXHAUST 4          843.74 DEG. F AL
C    5 EXHAUST 5          861.79 DEG. F ALM
C    6 EXHAUST 6          835.84 DEG. F ALM
C    7 ENG. COOL. IN      207.95 DEG. F ALM
C    8 ENG. COOL. OUT     216.36 DEG. F ALM
C    9 OIL SUMP           226.12 DEG. F ALM
C   10 OIL GALLERY        238.97 DEG. F ALM
C   11                    .00000
C   12                    .00000
C   13  ENG. INTAKE       131.80 DEG. F ALM
C   14 RAD. TOP LEFT      150.18 DEG. F ALM
C   15 RAD. BTTM LEFT     144.88 DEG. F ALM
C   16 RAD. TOP RIGHT     147.81 DEG. F ALM
C   17 RAD. BTTM RIGHT    149.78 DEG. F ALM
C   18 GEN. AIR IN        122.83 DEG. F ALM
C   19 GEN. AIR OUT       147.18 DEG. F ALM
C   20 GEN. FRAME TOP     138.93 DEG. F ALM
C   21 GEN. FRAME BTTM    126.86 DEG. F ALM
C   22 GEN. EXCITER       131.47 DEG. F ALM
C   23 GEN. VOLT. REG.    134.25 DEG. F ALM
C   24 CONTROL PANEL      133.35 DEG. F ALM
C   25 RELAY AREA         128.58 DEG. F ALM
C   26 BATTERY LEFT       142.97 DEG. F ALM
C   27 BATTERY RIGHT      146.92 DEG. F ALM
C   28 AIR IN SET         125.23 DEG. F ALM
C   29 FUEL TANK          122.86 DEG. F ALM
C   30 FUEL OUTLET        151.83 DEG. F ALM

END SCAN GROUP 1     14 NOV 87  16:42:56

STOPPED SINGLE SCAN  14 NOV 87  16:42:56
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BEGIN SCAN GROUP 1   14 NOV 87  16:45:53
30KW 60HZ GEN SET S/NRZS 3774

C    1 EXHAUST 1          444.65 DEG. F ALM
C    2 EXHAUST 2          468.51 DEG. F ALM
C    3 EXHAUST 3          478.48 DEG. F ALM
C    4 EXHAUST 4          481.88 DEG. F ALM
C    5 EXHAUST 5          492.53 DEG. F ALM
C    6 EXHAUST 6          462.15 DEG. F ALM
C    7 ENG. COOL. IN      212.11 DEG. F ALM
C    8 ENG. COOL. OUT     218.89 DEG. F ALM
C    9 OIL SUMP           230.62 DEG. F ALM
C   10 OIL GALLERY        234.29 DEG. F ALM
C   11                    .00000
C   12                    .00000
C   13  ENG. INTAKE       143.94 DEG. F ALM
C   14 RAD. TOP LEFT      163.78 DEG. F ALM
C   15 RAD. BTTM LEFT     153.12 DEG. F ALM
C   16 RAD. TOP RIGHT     153.69 DEG. F ALM
C   17 RAD. BTTM RIGHT    157.95 DEG. F ALM
C   18 GEN. AIR IN        123.24 DEG. F ALM
C   19 GEN. AIR OUT       148.77 DEG. F ALM
C   20 GEN. FRAME TOP     136.18 DEG. F ALM
C   21 GEN. FRAME BTTM    127.48 DEG. F ALM
C   22 GEN. EXCITER       138.86 DEG. F ALM
C   23 GEN. VOLT. REG.    134.54 DEG. F ALM
C   24 CONTROL PANEL      134.47 DEG. F ALM
C   25 RELAY AREA         136.01 DEG. F ALM
C   26 BATTERY LEFT       143.49 DEG. F ALM
C   27 BATTERY RIGHT      147.35 DEG. F ALM
C   28 AIR IN SET         123.01 DEG. F ALM
C   29 FUEL TANK          123.01 DEG. F AL
C   30 FUEL OUTLET        151.42 DEG. F AL

END SCAN GROUP 1     14 NOV 87  16:46:0

STOPPED SINGLE SCAN  14 NOV 87  16:46:0
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BEGIN SCAN GROUP 1 14 NOV 87 16:51:58
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	718.32	DEG. F	ALM
C	2	EXHAUST 2	730.44	DEG. F	ALM
C	3	EXHAUST 3	749.09	DEG. F	ALM
C	4	EXHAUST 4	714.32	DEG. F	ALM
C	5	EXHAUST 5	716.22	DEG. F	ALM
C	6	EXHAUST 6	698.82	DEG. F	ALM
C	7	ENG. COOL. IN	186.87	DEG. F	ALM
C	8	ENG. COOL. OUT	193.62	DEG. F	ALM
C	9	OIL SUMP	215.59	DEG. F	ALM
C	10	OIL GALLERY	229.38	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	129.19	DEG. F	ALM
C	14	RAD. TOP LEFT	141.86	DEG. F	ALM
C	15	RAD. BTTM LEFT	139.63	DEG. F	ALM
C	16	RAD. TOP RIGHT	141.65	DEG. F	ALM
C	17	RAD. BTTM RIGHT	143.28	DEG. F	ALM
C	18	GEN. AIR IN	121.24	DEG. F	ALM
C	19	GEN. AIR OUT	141.17	DEG. F	ALM
C	20	GEN. FRAME TOP	138.48	DEG. F	ALM
C	21	GEN. FRAME BTTM	126.16	DEG. F	ALM
C	22	GEN. EXCITER	129.38	DEG. F	ALM
C	23	GEN. VOLT. REG.	134.57	DEG. F	ALM
C	24	CONTROL PANEL	133.84	DEG. F	ALM
C	25	RELAY AREA	126.58	DEG. F	ALM
C	26	BATTERY LEFT	143.31	DEG. F	ALM
C	27	BATTERY RIGHT	147.98	DEG. F	ALM
C	28	AIR IN SET	123.43	DEG. F	ALM
C	29	FUEL TANK	123.23	DEG. F	ALM
C	30	FUEL OUTLET	152.38	DEG. F	ALM

END SCAN GROUP 1 14 NOV 87 16:52:09

STOPPED SINGLE SCAN 14 NOV 87 16:52:11

BEGIN SCAN GROUP 1 14 NOV 87 16:52:55
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	738.71	DEG. F	ALM
C	2	EXHAUST 2	750.13	DEG. F	ALM
C	3	EXHAUST 3	775.55	DEG. F	ALM
C	4	EXHAUST 4	735.98	DEG. F	ALM
C	5	EXHAUST 5	735.97	DEG. F	ALM
C	6	EXHAUST 6	719.58	DEG. F	ALM
C	7	ENG. COOL. IN	190.48	DEG. F	ALM
C	8	ENG. COOL. OUT	197.52	DEG. F	ALM
C	9	OIL SUMP	215.66	DEG. F	ALM
C	10	OIL GALLERY	229.23	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	129.31	DEG. F	ALM
C	14	RAD. TOP LEFT	142.96	DEG. F	ALM
C	15	RAD. BTTM LEFT	139.98	DEG. F	ALM
C	16	RAD. TOP RIGHT	142.85	DEG. F	ALM
C	17	RAD. BTTM RIGHT	143.82	DEG. F	ALM
C	18	GEN. AIR IN	121.68	DEG. F	ALM
C	19	GEN. AIR OUT	141.73	DEG. F	ALM
C	20	GEN. FRAME TOP	138.17	DEG. F	ALM
C	21	GEN. FRAME BTTM	126.22	DEG. F	ALM
C	22	GEN. EXCITER	129.73	DEG. F	ALM
C	23	GEN. VOLT. REG.	134.43	DEG. F	ALM
C	24	CONTROL PANEL	132.91	DEG. F	ALM
C	25	RELAY AREA	126.64	DEG. F	ALM
C	26	BATTERY LEFT	143.28	DEG. F	ALM
C	27	BATTERY RIGHT	147.62	DEG. F	ALM
C	28	AIR IN SET	123.43	DEG. F	ALM
C	29	FUEL TANK	123.22	DEG. F	ALM
C	30	FUEL OUTLET	151.81	DEG. F	ALM

END SCAN GROUP 1 14 NOV 87 16:53:05

STOPPED SINGLE SCAN 14 NOV 87 16:53:05

BEGIN SCAN GROUP 1 14 NOV 87 16:56:0
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	730.91	DEG. F	AL
C	2	EXHAUST 2	796.57	DEG. F	AL
C	3	EXHAUST 3	825.07	DEG. F	AL
C	4	EXHAUST 4	783.15	DEG. F	AL
C	5	EXHAUST 5	790.66	DEG. F	AL
C	6	EXHAUST 6	772.66	DEG. F	AL
C	7	ENG. COOL. IN	197.74	DEG. F	AL
C	8	ENG. COOL. OUT	205.50	DEG. F	AL
C	9	OIL SUMP	217.01	DEG. F	AL
C	10	OIL GALLERY	230.10	DEG. F	AL
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	138.30	DEG. F	AL
C	14	RAD. TOP LEFT	145.75	DEG. F	AL
C	15	RAD. BTTM LEFT	141.92	DEG. F	AL
C	16	RAD. TOP RIGHT	143.74	DEG. F	AL
C	17	RAD. BTTM RIGHT	145.97	DEG. F	AL
C	18	GEN. AIR IN	122.54	DEG. F	AL
C	19	GEN. AIR OUT	143.69	DEG. F	AL
C	20	GEN. FRAME TOP	138.31	DEG. F	AL
C	21	GEN. FRAME BTTM	126.47	DEG. F	AL
C	22	GEN. EXCITER	138.78	DEG. F	AL
C	23	GEN. VOLT. REG.	134.19	DEG. F	AL
C	24	CONTROL PANEL	132.64	DEG. F	AL
C	25	RELAY AREA	127.68	DEG. F	AL
C	26	BATTERY LEFT	143.28	DEG. F	AL
C	27	BATTERY RIGHT	147.36	DEG. F	AL
C	28	AIR IN SET	124.51	DEG. F	AL
C	29	FUEL TANK	123.36	DEG. F	AL
C	30	FUEL OUTLET	151.27	DEG. F	AL

END SCAN GROUP 1 14 NOV 87 16:56:0

STOPPED SINGLE SCAN 14 NOV 87 16:56:0

BEGIN SCAN GROUP 1 14 NOV 87 17:00:0
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	788.24	DEG. F	AL
C	2	EXHAUST 2	807.33	DEG. F	AL
C	3	EXHAUST 3	832.45	DEG. F	AL
C	4	EXHAUST 4	794.44	DEG. F	AL
C	5	EXHAUST 5	803.11	DEG. F	AL
C	6	EXHAUST 6	787.72	DEG. F	AL
C	7	ENG. COOL. IN	201.67	DEG. F	AL
C	8	ENG. COOL. OUT	209.66	DEG. F	AL
C	9	OIL SUMP	218.93	DEG. F	AL
C	10	OIL GALLERY	232.25	DEG. F	AL
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	138.28	DEG. F	AL
C	14	RAD. TOP LEFT	146.77	DEG. F	AL
C	15	RAD. BTTM LEFT	142.25	DEG. F	AL
C	16	RAD. TOP RIGHT	144.26	DEG. F	AL
C	17	RAD. BTTM RIGHT	146.63	DEG. F	AL
C	18	GEN. AIR IN	121.84	DEG. F	AL
C	19	GEN. AIR OUT	144.38	DEG. F	AL
C	20	GEN. FRAME TOP	138.82	DEG. F	AL
C	21	GEN. FRAME BTTM	126.25	DEG. F	AL
C	22	GEN. EXCITER	138.24	DEG. F	AL
C	23	GEN. VOLT. REG.	134.85	DEG. F	AL
C	24	CONTROL PANEL	132.77	DEG. F	AL
C	25	RELAY AREA	127.28	DEG. F	AL
C	26	BATTERY LEFT	143.56	DEG. F	AL
C	27	BATTERY RIGHT	148.41	DEG. F	AL
C	28	AIR IN SET	123.39	DEG. F	AL
C	29	FUEL TANK	123.51	DEG. F	AL
C	30	FUEL OUTLET	152.13	DEG. F	AL

END SCAN GROUP 1 14 NOV 87 17:00:1

STOPPED SINGLE SCAN 14 NOV 87 17:00:1

BEGIN SCAN GROUP 1 14 NOV 87 17:05:37
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	769.48	DEG. F	ALM
C	2	EXHAUST 2	723.95	DEG. F	ALM
C	3	EXHAUST 3	748.65	DEG. F	ALM
C	4	EXHAUST 4	727.87	DEG. F	ALM
C	5	EXHAUST 5	730.47	DEG. F	ALM
C	6	EXHAUST 6	713.35	DEG. F	ALM
C	7	ENG. COOL. IN	198.82	DEG. F	ALM
C	8	ENG. COOL. OUT	205.62	DEG. F	ALM
C	9	OIL SUMP	228.37	DEG. F	ALM
C	10	OIL GALLERY	233.96	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	129.92	DEG. F	ALM
C	14	RAD. TOP LEFT	146.36	DEG. F	ALM
C	15	RAD. BTTM LEFT	142.36	DEG. F	ALM
C	16	RAD. TOP RIGHT	144.37	DEG. F	ALM
C	17	RAD. BTTM RIGHT	146.69	DEG. F	ALM
C	18	GEN. AIR IN	121.38	DEG. F	ALM
C	19	GEN. AIR OUT	143.94	DEG. F	ALM
C	20	GEN. FRAME TOP	129.95	DEG. F	ALM
C	21	GEN. FRAME BTTM	126.83	DEG. F	ALM
C	22	GEN. EXCITER	138.36	DEG. F	ALM
C	23	GEN. VOLT. REG.	133.83	DEG. F	ALM
C	24	CONTROL PANEL	132.55	DEG. F	ALM
C	25	RELAY AREA	127.18	DEG. F	ALM
C	26	BATTERY LEFT	143.99	DEG. F	ALM
C	27	BATTERY RIGHT	147.98	DEG. F	ALM
C	28	AIR IN SET	123.93	DEG. F	ALM
C	29	FUEL TANK	123.75	DEG. F	ALM
C	30	FUEL OUTLET	151.98	DEG. F	ALM

END SCAN GROUP 1 14 NOV 87 17:05:46

STOPPED SINGLE SCAN 14 NOV 87 17:05:46

BEGIN SCAN GROUP 1 14 NOV 87 17:24:1
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	776.31	DEG. F	AL
C	2	EXHAUST 2	734.40	DEG. F	AL
C	3	EXHAUST 3	811.87	DEG. F	AL
C	4	EXHAUST 4	777.89	DEG. F	AL
C	5	EXHAUST 5	786.16	DEG. F	AL
C	6	EXHAUST 6	763.45	DEG. F	AL
C	7	ENG. COOL. IN	202.67	DEG. F	AL
C	8	ENG. COOL. OUT	210.80	DEG. F	AL
C	9	OIL SUMP	223.16	DEG. F	AL
C	10	OIL GALLERY	236.61	DEG. F	AL
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	138.73	DEG. F	AL
C	14	RAD. TOP LEFT	147.46	DEG. F	AL
C	15	RAD. BTTM LEFT	142.65	DEG. F	AL
C	16	RAD. TOP RIGHT	145.83	DEG. F	AL
C	17	RAD. BTTM RIGHT	147.53	DEG. F	AL
C	18	GEN. AIR IN	121.34	DEG. F	AL
C	19	GEN. AIR OUT	143.81	DEG. F	AL
C	20	GEN. FRAME TOP	130.00	DEG. F	AL
C	21	GEN. FRAME BTTM	125.84	DEG. F	AL
C	22	GEN. EXCITER	138.90	DEG. F	AL
C	23	GEN. VOLT. REG.	133.86	DEG. F	AL
C	24	CONTROL PANEL	132.89	DEG. F	AL
C	25	RELAY AREA	127.13	DEG. F	AL
C	26	BATTERY LEFT	145.29	DEG. F	AL
C	27	BATTERY RIGHT	149.49	DEG. F	AL
C	28	AIR IN SET	123.57	DEG. F	AL
C	29	FUEL TANK	124.69	DEG. F	AL
C	30	FUEL OUTLET	150.75	DEG. F	AL

END SCAN GROUP 1 14 NOV 87 17:24:2

STOPPED SINGLE SCAN 14 NOV 87 17:24:2

BEGIN SCAN GROUP 1 14 NOV 87 17:09:14
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	763.35	DEG. F	ALM
C	2	EXHAUST 2	782.77	DEG. F	ALM
C	3	EXHAUST 3	800.82	DEG. F	ALM
C	4	EXHAUST 4	778.99	DEG. F	ALM
C	5	EXHAUST 5	776.66	DEG. F	ALM
C	6	EXHAUST 6	756.29	DEG. F	ALM
C	7	ENG. COOL. IN	199.98	DEG. F	ALM
C	8	ENG. COOL. OUT	207.86	DEG. F	ALM
C	9	OIL SUMP	228.96	DEG. F	ALM
C	10	OIL GALLERY	234.16	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	131.82	DEG. F	ALM
C	14	RAD. TOP LEFT	147.98	DEG. F	ALM
C	15	RAD. BTTM LEFT	143.56	DEG. F	ALM
C	16	RAD. TOP RIGHT	145.43	DEG. F	ALM
C	17	RAD. BTTM RIGHT	147.84	DEG. F	ALM
C	18	GEN. AIR IN	124.39	DEG. F	ALM
C	19	GEN. AIR OUT	145.43	DEG. F	ALM
C	20	GEN. FRAME TOP	130.34	DEG. F	ALM
C	21	GEN. FRAME BTTM	126.81	DEG. F	ALM
C	22	GEN. EXCITER	132.16	DEG. F	ALM
C	23	GEN. VOLT. REG.	133.95	DEG. F	ALM
C	24	CONTROL PANEL	132.76	DEG. F	ALM
C	25	RELAY AREA	128.66	DEG. F	ALM
C	26	BATTERY LEFT	144.20	DEG. F	ALM
C	27	BATTERY RIGHT	148.75	DEG. F	ALM
C	28	AIR IN SET	126.44	DEG. F	ALM
C	29	FUEL TANK	123.35	DEG. F	ALM
C	30	FUEL OUTLET	151.55	DEG. F	ALM

END SCAN GROUP 1 14 NOV 87 17:09:24

STOPPED SINGLE SCAN 14 NOV 87 17:09:24

BEGIN SCAN GROUP 1 14 NOV 87 17:26:2
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	781.40	DEG. F	AL
C	2	EXHAUST 2	800.30	DEG. F	AL
C	3	EXHAUST 3	818.43	DEG. F	AL
C	4	EXHAUST 4	795.17	DEG. F	AL
C	5	EXHAUST 5	794.85	DEG. F	AL
C	6	EXHAUST 6	771.31	DEG. F	AL
C	7	ENG. COOL. IN	202.77	DEG. F	AL
C	8	ENG. COOL. OUT	211.00	DEG. F	AL
C	9	OIL SUMP	223.22	DEG. F	AL
C	10	OIL GALLERY	236.68	DEG. F	AL
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	138.61	DEG. F	AL
C	14	RAD. TOP LEFT	147.51	DEG. F	AL
C	15	RAD. BTTM LEFT	142.49	DEG. F	AL
C	16	RAD. TOP RIGHT	144.91	DEG. F	AL
C	17	RAD. BTTM RIGHT	147.47	DEG. F	AL
C	18	GEN. AIR IN	120.85	DEG. F	AL
C	19	GEN. AIR OUT	143.88	DEG. F	AL
C	20	GEN. FRAME TOP	129.87	DEG. F	AL
C	21	GEN. FRAME BTTM	125.73	DEG. F	AL
C	22	GEN. EXCITER	138.33	DEG. F	AL
C	23	GEN. VOLT. REG.	133.98	DEG. F	AL
C	24	CONTROL PANEL	132.76	DEG. F	AL
C	25	RELAY AREA	126.83	DEG. F	AL
C	26	BATTERY LEFT	145.42	DEG. F	AL
C	27	BATTERY RIGHT	149.64	DEG. F	AL
C	28	AIR IN SET	122.89	DEG. F	AL
C	29	FUEL TANK	124.85	DEG. F	AL
C	30	FUEL OUTLET	151.60	DEG. F	AL

END SCAN GROUP 1 14 NOV 87 17:26:2

STOPPED SINGLE SCAN 14 NOV 87 17:26:2

BEGIN SCAN GROUP 1 14 NOV 87 17:55:54
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	791.92	DEG. F	ALM
C	2	EXHAUST 2	805.61	DEG. F	ALM
C	3	EXHAUST 3	825.15	DEG. F	ALM
C	4	EXHAUST 4	787.17	DEG. F	ALM
C	5	EXHAUST 5	796.59	DEG. F	ALM
C	6	EXHAUST 6	776.31	DEG. F	ALM
C	7	ENG. COOL. IN	205.11	DEG. F	ALM
C	8	ENG. COOL. OUT	213.44	DEG. F	ALM
C	9	OIL SUMP	225.52	DEG. F	ALM
C	10	OIL GALLERY	238.82	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	132.17	DEG. F	ALM
C	14	RAD. TOP LEFT	149.52	DEG. F	ALM
C	15	RAD. BTTM LEFT	144.60	DEG. F	ALM
C	16	RAD. TOP RIGHT	146.89	DEG. F	ALM
C	17	RAD. BTTM RIGHT	149.40	DEG. F	ALM
C	18	GEN. AIR IN	122.38	DEG. F	ALM
C	19	GEN. AIR OUT	147.92	DEG. F	ALM
C	20	GEN. FRAME TOP	131.87	DEG. F	ALM
C	21	GEN. FRAME BTTM	127.28	DEG. F	ALM
C	22	GEN. EXCITER	132.89	DEG. F	ALM
C	23	GEN. VOLT. REG.	134.47	DEG. F	ALM
C	24	CONTROL PANEL	133.74	DEG. F	ALM
C	25	RELAY AREA	128.69	DEG. F	ALM
C	26	BATTERY LEFT	147.42	DEG. F	ALM
C	27	BATTERY RIGHT	151.26	DEG. F	ALM
C	28	AIR IN SET	125.28	DEG. F	ALM
C	29	FUEL TANK	126.28	DEG. F	ALM
C	30	FUEL OUTLET	153.11	DEG. F	ALM

END SCAN GROUP 1 14 NOV 87 17:56:04

STOPPED SINGLE SCAN 14 NOV 87 17:56:04

BEGIN SCAN GROUP 1 14 NOV 87 18:55:35
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	786.31	DEG. F	ALM
C	2	EXHAUST 2	804.73	DEG. F	ALM
C	3	EXHAUST 3	821.48	DEG. F	ALM
C	4	EXHAUST 4	781.82	DEG. F	ALM
C	5	EXHAUST 5	794.25	DEG. F	ALM
C	6	EXHAUST 6	774.99	DEG. F	ALM
C	7	ENG. COOL. IN	204.92	DEG. F	ALM
C	8	ENG. COOL. OUT	213.24	DEG. F	ALM
C	9	OIL SUMP	225.69	DEG. F	ALM
C	10	OIL GALLERY	239.14	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	131.59	DEG. F	ALM
C	14	RAD. TOP LEFT	148.88	DEG. F	ALM
C	15	RAD. BTTM LEFT	144.29	DEG. F	ALM
C	16	RAD. TOP RIGHT	146.88	DEG. F	ALM
C	17	RAD. BTTM RIGHT	149.14	DEG. F	ALM
C	18	GEN. AIR IN	121.96	DEG. F	ALM
C	19	GEN. AIR OUT	147.93	DEG. F	ALM
C	20	GEN. FRAME TOP	131.56	DEG. F	ALM
C	21	GEN. FRAME BTTM	127.06	DEG. F	ALM
C	22	GEN. EXCITER	131.44	DEG. F	ALM
C	23	GEN. VOLT. REG.	134.28	DEG. F	ALM
C	24	CONTROL PANEL	133.48	DEG. F	ALM
C	25	RELAY AREA	127.93	DEG. F	ALM
C	26	BATTERY LEFT	150.39	DEG. F	ALM
C	27	BATTERY RIGHT	155.29	DEG. F	ALM
C	28	AIR IN SET	124.27	DEG. F	ALM
C	29	FUEL TANK	128.35	DEG. F	ALM
C	30	FUEL OUTLET	153.23	DEG. F	ALM

END SCAN GROUP 1 14 NOV 87 18:55:45

STOPPED SINGLE SCAN 14 NOV 87 18:55:45

BEGIN SCAN GROUP 1 14 NOV 87 18:25:16
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	787.91	DEG. F	ALM
C	2	EXHAUST 2	803.93	DEG. F	ALM
C	3	EXHAUST 3	822.97	DEG. F	ALM
C	4	EXHAUST 4	781.98	DEG. F	ALM
C	5	EXHAUST 5	792.03	DEG. F	ALM
C	6	EXHAUST 6	775.38	DEG. F	ALM
C	7	ENG. COOL. IN	203.13	DEG. F	ALM
C	8	ENG. COOL. OUT	211.45	DEG. F	ALM
C	9	OIL SUMP	224.68	DEG. F	ALM
C	10	OIL GALLERY	238.83	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	129.38	DEG. F	ALM
C	14	RAD. TOP LEFT	146.83	DEG. F	ALM
C	15	RAD. BTTM LEFT	142.38	DEG. F	ALM
C	16	RAD. TOP RIGHT	144.77	DEG. F	ALM
C	17	RAD. BTTM RIGHT	147.18	DEG. F	ALM
C	18	GEN. AIR IN	119.25	DEG. F	ALM
C	19	GEN. AIR OUT	145.75	DEG. F	ALM
C	20	GEN. FRAME TOP	129.79	DEG. F	ALM
C	21	GEN. FRAME BTTM	125.25	DEG. F	ALM
C	22	GEN. EXCITER	129.28	DEG. F	ALM
C	23	GEN. VOLT. REG.	133.48	DEG. F	ALM
C	24	CONTROL PANEL	132.14	DEG. F	ALM
C	25	RELAY AREA	126.84	DEG. F	ALM
C	26	BATTERY LEFT	148.35	DEG. F	ALM
C	27	BATTERY RIGHT	153.82	DEG. F	ALM
C	28	AIR IN SET	121.34	DEG. F	ALM
C	29	FUEL TANK	127.38	DEG. F	ALM
C	30	FUEL OUTLET	151.49	DEG. F	ALM

END SCAN GROUP 1 14 NOV 87 18:25:25

STOPPED SINGLE SCAN 14 NOV 87 18:25:25

BEGIN SCAN GROUP 1 14 NOV 87 19:24:30
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	782.49	DEG. F	ALM
C	2	EXHAUST 2	805.45	DEG. F	ALM
C	3	EXHAUST 3	820.56	DEG. F	ALM
C	4	EXHAUST 4	781.87	DEG. F	ALM
C	5	EXHAUST 5	794.92	DEG. F	ALM
C	6	EXHAUST 6	772.26	DEG. F	ALM
C	7	ENG. COOL. IN	204.64	DEG. F	ALM
C	8	ENG. COOL. OUT	212.96	DEG. F	ALM
C	9	OIL SUMP	225.59	DEG. F	ALM
C	10	OIL GALLERY	238.78	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	131.13	DEG. F	ALM
C	14	RAD. TOP LEFT	148.52	DEG. F	ALM
C	15	RAD. BTTM LEFT	143.69	DEG. F	ALM
C	16	RAD. TOP RIGHT	146.28	DEG. F	ALM
C	17	RAD. BTTM RIGHT	148.78	DEG. F	ALM
C	18	GEN. AIR IN	120.85	DEG. F	ALM
C	19	GEN. AIR OUT	147.26	DEG. F	ALM
C	20	GEN. FRAME TOP	131.24	DEG. F	ALM
C	21	GEN. FRAME BTTM	126.86	DEG. F	ALM
C	22	GEN. EXCITER	130.97	DEG. F	ALM
C	23	GEN. VOLT. REG.	133.95	DEG. F	ALM
C	24	CONTROL PANEL	132.91	DEG. F	ALM
C	25	RELAY AREA	127.32	DEG. F	ALM
C	26	BATTERY LEFT	151.68	DEG. F	ALM
C	27	BATTERY RIGHT	156.92	DEG. F	ALM
C	28	AIR IN SET	123.37	DEG. F	ALM
C	29	FUEL TANK	129.15	DEG. F	ALM
C	30	FUEL OUTLET	152.61	DEG. F	ALM

END SCAN GROUP 1 14 NOV 87 19:24:3

STOPPED SINGLE SCAN 14 NOV 87 19:24:4

TEST DATA

ITEM 30 KW / 60 HZ GENERATOR SET MODIFIED
MFGR. GIBBY WELDING
MODEL NO. MEP 005A
SERIAL NO. R25 3774

OVERTEMP PROTECTIVE DEVICE TEST
METHOD 516.2

REF. NO. MIL STD 705
SHEET 1 OF 1
DATE 17 NOV 1987
JOB NO. 555-2140
PROJ. ENGR.
RECORDER/OBSERVER GC/BS/KM

INST. →												
READ NO. ↓												
UNITS	TIME		COOLANT									
SYM.	HRS		TEMP °F									
COL.	1	2	3	4	5	6	7	8	9	10	11	12
	1415		STARTED	UNIT ON RATED LOAD BLOCKED ENGINE COOLING AIR								
	1429		227	UNIT SHUT DOWN ON OVERTEMP - INDICATING LIGHT NOT ON								

NOTES: FAILED TEST INDICATING LIGHT FAILED TO COME ON AFTER OVERTEMP SHUTDOWN. AS PER PROCUREMENT DOCUMENT PARA 3.19 — COOLANT TEMP OUT OF SPEC. UNIT SHOULD HAVE SHUT DOWN AT 217° +/- 3 °F SHUTDOWN OCCURRED A 227 °F (SEE PROCUREMENT DOC. PARA 3.19.1.2.)

B-213

OVERTEMP PROTECTIVE DEVICE TEST SYS 2

BEGIN SCAN GROUP 1 17 NOV 87 14:16:39
30KW 60HZ GEN SET S/NRZS 3774

C	1	EXHAUST 1	674.87	DEG. F	ALM
C	2	EXHAUST 2	689.50	DEG. F	ALM
C	3	EXHAUST 3	688.83	DEG. F	ALM
C	4	EXHAUST 4	658.24	DEG. F	ALM
C	5	EXHAUST 5	654.98	DEG. F	ALM
C	6	EXHAUST 6	628.82	DEG. F	ALM
C	7	ENG. COOL. IN	116.38	DEG. F	ALM
C	8	ENG. COOL. OUT	144.49	DEG. F	ALM
C	9	OIL SUMP	144.17	DEG. F	ALM
C	10	OIL GALLERY	148.88	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	116.73	DEG. F	ALM
C	14	RAD. TOP LEFT	119.19	DEG. F	ALM
C	15	RAD. BTTM LEFT	119.53	DEG. F	ALM
C	16	RAD. TOP RIGHT	118.75	DEG. F	ALM
C	17	RAD. BTTM RIGHT	118.58	DEG. F	ALM
C	18	GEN. AIR IN	112.78	DEG. F	ALM
C	19	GEN. AIR OUT	124.24	DEG. F	ALM
C	20	GEN. FRAME TOP	127.46	DEG. F	ALM
C	21	GEN. FRAME BTTM	116.23	DEG. F	ALM
C	22	GEN. EXCITER	107.62	DEG. F	ALM
C	23	GEN. VOLT. REG.	119.66	DEG. F	ALM
C	24	CONTROL PANEL	115.88	DEG. F	ALM
C	25	RELAY AREA	113.67	DEG. F	ALM
C	26	BATTERY LEFT	95.918	DEG. F	ALM
C	27	BATTERY RIGHT	99.144	DEG. F	ALM
C	28	AIR IN SET	93.323	DEG. F	ALM
C	29	FUEL TANK	104.35	DEG. F	ALM
C	30	FUEL OUTLET	118.93	DEG. F	ALM

END SCAN GROUP 1 17 NOV 87 14:16:49

STOPPED SINGLE SCAN 17 NOV 87 14:16:50

BEGIN SCAN GROUP 1 17 NOV 87 14:27:46
30KW 60HZ GEN SET S/NRZS 3774

C	1	EXHAUST 1	698.87	DEG. F	ALM
C	2	EXHAUST 2	728.87	DEG. F	ALM
C	3	EXHAUST 3	726.96	DEG. F	ALM
C	4	EXHAUST 4	707.39	DEG. F	ALM
C	5	EXHAUST 5	706.52	DEG. F	ALM
C	6	EXHAUST 6	692.27	DEG. F	ALM
C	7	ENG. COOL. IN	221.98	DEG. F	ALM
C	8	ENG. COOL. OUT	227.84	DEG. F	ALM
C	9	OIL SUMP	205.47	DEG. F	ALM
C	10	OIL GALLERY	206.59	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	117.18	DEG. F	ALM
C	14	RAD. TOP LEFT	175.17	DEG. F	ALM
C	15	RAD. BTTM LEFT	171.68	DEG. F	ALM
C	16	RAD. TOP RIGHT	169.78	DEG. F	ALM
C	17	RAD. BTTM RIGHT	167.57	DEG. F	ALM
C	18	GEN. AIR IN	116.24	DEG. F	ALM
C	19	GEN. AIR OUT	128.98	DEG. F	ALM
C	20	GEN. FRAME TOP	121.73	DEG. F	ALM
C	21	GEN. FRAME BTTM	120.38	DEG. F	ALM
C	22	GEN. EXCITER	113.92	DEG. F	ALM
C	23	GEN. VOLT. REG.	118.14	DEG. F	ALM
C	24	CONTROL PANEL	113.66	DEG. F	ALM
C	25	RELAY AREA	137.87	DEG. F	ALM
C	26	BATTERY LEFT	112.39	DEG. F	ALM
C	27	BATTERY RIGHT	110.73	DEG. F	ALM
C	28	AIR IN SET	99.929	DEG. F	ALM
C	29	FUEL TANK	106.46	DEG. F	ALM
C	30	FUEL OUTLET	132.31	DEG. F	ALM

END SCAN GROUP 1 17 NOV 87 14:27:56

STOPPED SINGLE SCAN 17 NOV 87 14:27:56

TEST DATA

ITEM 30 KW / 60 HZ
GENERATOR SET
MODIFIED
MFGR. LIBBY WELDING
MODEL NO. MEP 005A
SERIAL NO. R25 3774

NTS
National Technical Systems | Scientific Services Group | Testing Division, P.O. Box 38, Harwood, Virginia 22471, Tel. 703 752 5300

MAX POWER TEST
METHOD 640.1C

REF. NO. MIL-STD 705
SHEET 1 OF 1
DATE 17 Nov. 1987
JOB NO. 555-2140
PROJ. ENGR.
RECORDER/OBSERVER G.C / B.J / KM

INST TIME	STEP NO.	LOAD STEP	VOLTAGE L_1-L_0 VAC	VOLTAGE L_2-L_0 VAC	VOLTAGE L_3-L_0 VAC	AMPERES X 40 L_1-L_0 AC AMPS	AMPERES X 40 L_2-L_0 AC AMPS	AMPERES X 40 L_3-L_0 AC AMPS	KILOWATTS X 41 L_1-L_0 Kw	KILOWATTS X 41 L_2-L_0 Kw	KILOWATTS X 41 L_3-L_0 Kw	POWER FACTOR PF	FREQ. Hz	EXCITER FIELD VOLTS VDC	EXCITER FIELD AMPS DCA	AMB. TEMP. °F	Press Intake	Press Exh.
			STABILIZATION	OF UNIT	AT	RATED	LOAD.											
1455		R/L	120	121.5	120.9	2.46	2.51	2.5	.242	.25	.249	.80	60.1	8.7	3.4	89.4	13.7	41.7
1505		R/L	120	121.1	120.5	2.46	2.51	2.5	.241	.25	.249	.80	60.2	8.7	3.4	88.1	13.9	41.4
1515		R/L	120	121.1	120.5	2.46	2.51	2.5	.242	.25	.249	.80	60.2	8.6	3.4	89.2	13.9	41.2
1525		R/L	120	121.1	120.5	2.46	2.51	2.5	.241	.25	.249	.80	60.2	8.6	3.4	89.4	13.9	42.4
1535		R/L	120	121.1	120.5	2.46	2.51	2.49	.241	.25	.249	.80	60.2	8.6	3.4	89.5	13.8	41.7
1545		M/P	N/A	N/A	N/A	N/A	N/A	N/A	.35	.361	.359	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1546	9		SHUT	UNIT	DOWN	TO	ADD	MORE	LOAD	BANK								
1621	-		RESTART		UNIT	FOR	STABILIZATION											
1621	14	R/L	120	121.1	120.6	2.51	2.55	2.56	.25	.254	.252	.80	60.1	8.1	3.3	82.0	13.5	38.4
1625		R/L	120	121.1	120.4	2.51	2.55	2.55	.25	.256	.255	.80	60.1	8.2	3.3	83.2	13.7	40.1
1635		R/L	120	121	120.5	2.51	2.55	2.55	.25	.255	.254	.80	60.2	8.3	3.3	85.0	13.7	41.3
1645		R/L	120	121	120.5	2.51	2.55	2.55	.25	.256	.254	.80	60.2	8.3	3.4	84.7	13.8	41.7
1655		R/L	120	121.1	120.4	2.51	2.55	2.55	.25	.256	.255	.80	60.2	8.3	3.4	85.7	13.6	41.0
1657			PLACED	UNIT	IN	BATTLE	SHORT											
1710		M/P	N/A	N/A	N/A	N/A	N/A	N/A	.325	.281	.33	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1715		R/L	120	121	120.2	2.51	2.55	2.55	.25	.256	.255	.80	60.0	8.4	3.4	83.4	13.8	37.8
1721		M/P	120	123	120.1	2.7	2.25	2.71	.325	.218	.33	.99	60.0	6.1	2.5	83.5	13.6	40.5
1734		R/L	120	121	120.5	2.51	2.55	2.55	.249	.255	.254	.80	60.0	8.3	3.4	83.5	14.0	37.5
1735		M/P	120	123	120.5	2.7	2.25	2.71	.325	.218	.33	.99	60.0	6.1	2.4	83.0	13.7	32.8
1747		R/L	120	121	120.5	2.51	2.55	2.55	.249	.254	.252	.80	60.0	8.3	3.4	85.0	13.9	40.0
1749		M/P	120	123	120	2.7	2.25	2.7	.325	.218	.33	.99	59.9	6.2	2.4	82.0	13.8	40.3
1752			SHUT	UNIT	DOWN		END	OF	TEST									
	DATE	ANALYZED																
1119	14	JAN 1988			AVERAGE MAX POWER =				37.4	KW	(UNCORRECTED)							

NOTES: PROBLEM WITH LOW POWER ON L2-LO DURING MAX POWER

MAX POWER 640.1

```
BEGIN SCAN GROUP 1   17 NOV 87  15:03:34
30KW 60HZ GEN SET S/NRZ5 3774

C   1 EXHAUST 1          705.76 DEG. F ALM
C   2 EXHAUST 2          734.28 DEG. F ALM
C   3 EXHAUST 3          756.61 DEG. F ALM
C   4 EXHAUST 4          723.55 DEG. F ALM
C   5 EXHAUST 5          734.78 DEG. F ALM
C   6 EXHAUST 6          708.92 DEG. F ALM
C   7 ENG. COOL. IN      172.77 DEG. F ALM
C   8 ENG. COOL. OUT     183.11 DEG. F ALM
C   9 OIL SUMP           209.19 DEG. F ALM
C  10 OIL GALLERY        209.91 DEG. F ALM
C  11                    .00000
C  12                    .00000
C  13  ENG. INTAKE       94.302 DEG. F ALM
C  14 RAD. TOP LEFT      113.89 DEG. F ALM
C  15 RAD. BTTM LEFT     108.43 DEG. F ALM
C  16 RAD. TOP RIGHT           OPEN TC
C  17 RAD. BTTM RIGHT    112.65 DEG. F ALM
C  18 GEN. AIR IN        87.975 DEG. F ALM
C  19 GEN. AIR OUT       111.12 DEG. F ALM
C  20 GEN. FRAME TOP     98.212 DEG. F ALM
C  21 GEN. FRAME BTTM    98.564 DEG. F ALM
C  22 GEN. EXCITER       94.105 DEG. F ALM
C  23 GEN. VOLT. REG.    111.59 DEG. F ALM
C  24 CONTROL PANEL      104.35 DEG. F ALM
C  25 RELAY AREA         93.169 DEG. F ALM
C  26 BATTERY LEFT       107.64 DEG. F ALM
C  27 BATTERY RIGHT      106.79 DEG. F ALM
C  28 AIR IN SET         87.495 DEG. F ALM
C  29 FUEL TANK          100.07 DEG. F ALM
C  30 FUEL OUTLET        125.82 DEG. F ALM

END SCAN GROUP 1     17 NOV 87  15:03:44

STOPPED SINGLE SCAN  17 NOV 87  15:03:44
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BEGIN SCAN GROUP 1   17 NOV 87  15:24:1
30KW 60HZ GEN SET S/NRZ5 3774

C   1 EXHAUST 1          698.09 DEG. F AL
C   2 EXHAUST 2          727.64 DEG. F AL
C   3 EXHAUST 3          747.89 DEG. F AL
C   4 EXHAUST 4          719.08 DEG. F AL
C   5 EXHAUST 5          736.35 DEG. F AL
C   6 EXHAUST 6          708.35 DEG. F AL
C   7 ENG. COOL. IN      172.31 DEG. F AL
C   8 ENG. COOL. OUT     183.08 DEG. F AL
C   9 OIL SUMP           212.23 DEG. F AL
C  10 OIL GALLERY        213.08 DEG. F AL
C  11                    .00000
C  12                    .00000
C  13  ENG. INTAKE       94.238 DEG. F AL
C  14 RAD. TOP LEFT      111.15 DEG. F AL
C  15 RAD. BTTM LEFT     108.40 DEG. F AL
C  16 RAD. TOP RIGHT           OPEN TC
C  17 RAD. BTTM RIGHT    112.64 DEG. F AL
C  18 GEN. AIR IN        88.950 DEG. F AL
C  19 GEN. AIR OUT       110.81 DEG. F AL
C  20 GEN. FRAME TOP     95.572 DEG. F AL
C  21 GEN. FRAME BTTM    95.445 DEG. F AL
C  22 GEN. EXCITER       94.356 DEG. F AL
C  23 GEN. VOLT. REG.    105.12 DEG. F AL
C  24 CONTROL PANEL      99.419 DEG. F AL
C  25 RELAY AREA         92.615 DEG. F AL
C  26 BATTERY LEFT       106.97 DEG. F AL
C  27 BATTERY RIGHT      106.05 DEG. F AL
C  28 AIR IN SET         89.073 DEG. F AL
C  29 FUEL TANK          100.37 DEG. F AL
C  30 FUEL OUTLET        118.77 DEG. F AL

END SCAN GROUP 1     17 NOV 87  15:24:2
STOPPED SINGLE SCAN  17 NOV 87  15:24:2
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BEGIN SCAN GROUP 1   17 NOV 87  15:13:50
30KW 60HZ GEN SET S/NRZ5 3774

C   1 EXHAUST 1          699.85 DEG. F ALM
C   2 EXHAUST 2          728.20 DEG. F ALM
C   3 EXHAUST 3          748.60 DEG. F ALM
C   4 EXHAUST 4          721.44 DEG. F ALM
C   5 EXHAUST 5          739.76 DEG. F ALM
C   6 EXHAUST 6          709.34 DEG. F ALM
C   7 ENG. COOL. IN      172.21 DEG. F ALM
C   8 ENG. COOL. OUT     182.82 DEG. F ALM
C   9 OIL SUMP           211.49 DEG. F ALM
C  10 OIL GALLERY        212.38 DEG. F ALM
C  11                    .00000
C  12                    .00000
C  13  ENG. INTAKE       93.853 DEG. F ALM
C  14 RAD. TOP LEFT      110.87 DEG. F ALM
C  15 RAD. BTTM LEFT     107.99 DEG. F ALM
C  16 RAD. TOP RIGHT     110.35 DEG. F ALM
C  17 RAD. BTTM RIGHT    112.36 DEG. F ALM
C  18 GEN. AIR IN        88.562 DEG. F ALM
C  19 GEN. AIR OUT       110.23 DEG. F ALM
C  20 GEN. FRAME TOP     95.907 DEG. F ALM
C  21 GEN. FRAME BTTM    95.886 DEG. F ALM
C  22 GEN. EXCITER       93.814 DEG. F ALM
C  23 GEN. VOLT. REG.    107.63 DEG. F ALM
C  24 CONTROL PANEL      100.89 DEG. F ALM
C  25 RELAY AREA         92.347 DEG. F ALM
C  26 BATTERY LEFT       106.93 DEG. F ALM
C  27 BATTERY RIGHT      106.13 DEG. F ALM
C  28 AIR IN SET         88.575 DEG. F ALM
C  29 FUEL TANK          100.31 DEG. F ALM
C  30 FUEL OUTLET        120.67 DEG. F ALM

END SCAN GROUP 1     17 NOV 87  15:14:00

STOPPED SINGLE SCAN  17 NOV 87  15:14:00
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BEGIN SCAN GROUP 1   17 NOV 87  15:35:3
30KW 60HZ GEN SET S/NRZ5 3774

C   1 EXHAUST 1          696.19 DEG. F AL
C   2 EXHAUST 2          727.14 DEG. F AL
C   3 EXHAUST 3          747.51 DEG. F AL
C   4 EXHAUST 4          718.11 DEG. F AL
C   5 EXHAUST 5          735.68 DEG. F AL
C   6 EXHAUST 6          708.35 DEG. F AL
C   7 ENG. COOL. IN      172.53 DEG. F AL
C   8 ENG. COOL. OUT     183.20 DEG. F AL
C   9 OIL SUMP           212.48 DEG. F AL
C  10 OIL GALLERY        213.44 DEG. F AL
C  11                    .00000
C  12                    .00000
C  13  ENG. INTAKE       94.565 DEG. F AL
C  14 RAD. TOP LEFT      111.28 DEG. F AL
C  15 RAD. BTTM LEFT     108.48 DEG. F AL
C  16 RAD. TOP RIGHT     110.38 DEG. F AL
C  17 RAD. BTTM RIGHT    112.79 DEG. F AL
C  18 GEN. AIR IN        89.283 DEG. F AL
C  19 GEN. AIR OUT       109.79 DEG. F AL
C  20 GEN. FRAME TOP     95.591 DEG. F AL
C  21 GEN. FRAME BTTM    95.364 DEG. F AL
C  22 GEN. EXCITER       94.587 DEG. F AL
C  23 GEN. VOLT. REG.    103.37 DEG. F AL
C  24 CONTROL PANEL      98.864 DEG. F AL
C  25 RELAY AREA         92.739 DEG. F AL
C  26 BATTERY LEFT       107.21 DEG. F AL
C  27 BATTERY RIGHT      106.12 DEG. F AL
C  28 AIR IN SET         89.348 DEG. F AL
C  29 FUEL TANK          100.39 DEG. F AL
C  30 FUEL OUTLET        118.55 DEG. F AL

END SCAN GROUP 1     17 NOV 87  15:35:4
STOPPED SINGLE SCAN  17 NOV 87  15:35:4
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BEGIN SCAN GROUP 1 17 NOV 87 16:34:54
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	713.41	DEG. F	ALM
C	2	EXHAUST 2	737.85	DEG. F	ALM
C	3	EXHAUST 3	760.88	DEG. F	ALM
C	4	EXHAUST 4	726.89	DEG. F	ALM
C	5	EXHAUST 5	737.15	DEG. F	ALM
C	6	EXHAUST 6	714.19	DEG. F	ALM
C	7	ENG. COOL. IN	170.55	DEG. F	ALM
C	8	ENG. COOL. OUT	183.46	DEG. F	ALM
C	9	OIL SUMP	205.60	DEG. F	ALM
C	10	OIL GALLERY	205.49	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	89.959	DEG. F	ALM
C	14	RAD. TOP LEFT	107.60	DEG. F	ALM
C	15	RAD. BTTM LEFT	164.78	DEG. F	ALM
C	16	RAD. TOP RIGHT	108.19	DEG. F	ALM
C	17	RAD. BTTM RIGHT	169.61	DEG. F	ALM
C	18	GEN. AIR IN	84.869	DEG. F	ALM
C	19	GEN. AIR OUT	103.90	DEG. F	ALM
C	20	GEN. FRAME TOP	91.890	DEG. F	ALM
C	21	GEN. FRAME BTTM	92.293	DEG. F	ALM
C	22	GEN. EXCITER	90.319	DEG. F	ALM
C	23	GEN. VOLT. REG.	99.000	DEG. F	ALM
C	24	CONTROL PANEL	95.679	DEG. F	ALM
C	25	RELAY AREA	88.724	DEG. F	ALM
C	26	BATTERY LEFT	107.12	DEG. F	ALM
C	27	BATTERY RIGHT	105.98	DEG. F	ALM
C	28	AIR IN SET	84.676	DEG. F	ALM
C	29	FUEL TANK	99.100	DEG. F	ALM
C	30	FUEL OUTLET	115.13	DEG. F	ALM

END SCAN GROUP 1 17 NOV 87 16:35:04

STOPPED SINGLE SCAN 17 NOV 87 16:35:04

BEGIN SCAN GROUP 1 17 NOV 87 16:44:13
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	709.47	DEG. F	ALM
C	2	EXHAUST 2	735.93	DEG. F	ALM
C	3	EXHAUST 3	755.31	DEG. F	ALM
C	4	EXHAUST 4	730.29	DEG. F	ALM
C	5	EXHAUST 5	739.10	DEG. F	ALM
C	6	EXHAUST 6	719.43	DEG. F	ALM
C	7	ENG. COOL. IN	171.49	DEG. F	ALM
C	8	ENG. COOL. OUT	184.29	DEG. F	ALM
C	9	OIL SUMP	209.89	DEG. F	ALM
C	10	OIL GALLERY	210.47	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	90.766	DEG. F	ALM
C	14	RAD. TOP LEFT	108.24	DEG. F	ALM
C	15	RAD. BTTM LEFT	165.10	DEG. F	ALM
C	16	RAD. TOP RIGHT	108.36	DEG. F	ALM
C	17	RAD. BTTM RIGHT	110.20	DEG. F	ALM
C	18	GEN. AIR IN	85.558	DEG. F	ALM
C	19	GEN. AIR OUT	104.82	DEG. F	ALM
C	20	GEN. FRAME TOP	91.750	DEG. F	ALM
C	21	GEN. FRAME BTTM	91.851	DEG. F	ALM
C	22	GEN. EXCITER	90.689	DEG. F	ALM
C	23	GEN. VOLT. REG.	97.900	DEG. F	ALM
C	24	CONTROL PANEL	95.239	DEG. F	ALM
C	25	RELAY AREA	88.967	DEG. F	ALM
C	26	BATTERY LEFT	107.29	DEG. F	ALM
C	27	BATTERY RIGHT	105.22	DEG. F	ALM
C	28	AIR IN SET	85.304	DEG. F	ALM
C	29	FUEL TANK	98.814	DEG. F	ALM
C	30	FUEL OUTLET	115.17	DEG. F	ALM

END SCAN GROUP 1 17 NOV 87 16:44:23

STOPPED SINGLE SCAN 17 NOV 87 16:44:23

BEGIN SCAN GROUP 1 17 NOV 87 16:54:12
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	709.83	DEG. F	ALM
C	2	EXHAUST 2	734.73	DEG. F	ALM
C	3	EXHAUST 3	756.34	DEG. F	ALM
C	4	EXHAUST 4	725.97	DEG. F	ALM
C	5	EXHAUST 5	738.13	DEG. F	ALM
C	6	EXHAUST 6	717.12	DEG. F	ALM
C	7	ENG. COOL. IN	171.45	DEG. F	ALM
C	8	ENG. COOL. OUT	184.35	DEG. F	ALM
C	9	OIL SUMP	212.01	DEG. F	ALM
C	10	OIL GALLERY	212.59	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	90.826	DEG. F	ALM
C	14	RAD. TOP LEFT	107.85	DEG. F	ALM
C	15	RAD. BTTM LEFT	165.13	DEG. F	ALM
C	16	RAD. TOP RIGHT	108.17	DEG. F	ALM
C	17	RAD. BTTM RIGHT	110.04	DEG. F	ALM
C	18	GEN. AIR IN	85.185	DEG. F	ALM
C	19	GEN. AIR OUT	104.99	DEG. F	ALM
C	20	GEN. FRAME TOP	91.594	DEG. F	ALM
C	21	GEN. FRAME BTTM	91.774	DEG. F	ALM
C	22	GEN. EXCITER	90.432	DEG. F	ALM
C	23	GEN. VOLT. REG.	96.993	DEG. F	ALM
C	24	CONTROL PANEL	94.703	DEG. F	ALM
C	25	RELAY AREA	88.581	DEG. F	ALM
C	26	BATTERY LEFT	107.29	DEG. F	ALM
C	27	BATTERY RIGHT	104.84	DEG. F	ALM
C	28	AIR IN SET	84.660	DEG. F	ALM
C	29	FUEL TANK	98.480	DEG. F	ALM
C	30	FUEL OUTLET	114.48	DEG. F	ALM

END SCAN GROUP 1 17 NOV 87 16:54:22

STOPPED SINGLE SCAN 17 NOV 87 16:54:22

BEGIN SCAN GROUP 1 17 NOV 87 17:19:39
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	710.70	DEG. F	ALM
C	2	EXHAUST 2	742.59	DEG. F	ALM
C	3	EXHAUST 3	770.87	DEG. F	ALM
C	4	EXHAUST 4	742.76	DEG. F	ALM
C	5	EXHAUST 5	767.46	DEG. F	ALM
C	6	EXHAUST 6	737.36	DEG. F	ALM
C	7	ENG. COOL. IN	169.74	DEG. F	ALM
C	8	ENG. COOL. OUT	181.58	DEG. F	ALM
C	9	OIL SUMP	213.77	DEG. F	ALM
C	10	OIL GALLERY	214.17	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	90.567	DEG. F	ALM
C	14	RAD. TOP LEFT	107.22	DEG. F	ALM
C	15	RAD. BTTM LEFT	103.61	DEG. F	ALM
C	16	RAD. TOP RIGHT	105.43	DEG. F	ALM
C	17	RAD. BTTM RIGHT	107.84	DEG. F	ALM
C	18	GEN. AIR IN	84.770	DEG. F	ALM
C	19	GEN. AIR OUT	104.80	DEG. F	ALM
C	20	GEN. FRAME TOP	90.415	DEG. F	ALM
C	21	GEN. FRAME BTTM	90.590	DEG. F	ALM
C	22	GEN. EXCITER	89.830	DEG. F	ALM
C	23	GEN. VOLT. REG.	96.529	DEG. F	ALM
C	24	CONTROL PANEL	94.358	DEG. F	ALM
C	25	RELAY AREA	87.978	DEG. F	ALM
C	26	BATTERY LEFT	107.69	DEG. F	ALM
C	27	BATTERY RIGHT	105.98	DEG. F	ALM
C	28	AIR IN SET	84.055	DEG. F	ALM
C	29	FUEL TANK	97.662	DEG. F	ALM
C	30	FUEL OUTLET	113.30	DEG. F	ALM

END SCAN GROUP 1 17 NOV 87 17:19:49

STOPPED SINGLE SCAN 17 NOV 87 17:19:49

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BEGIN SCAN GROUP 1   17 NOV 87  17:33:04
30KW 60HZ GEN SET S/NRZ5 3774

C   1 EXHAUST 1          692.22 DEG. F ALM
C   2 EXHAUST 2          722.74 DEG. F ALM
C   3 EXHAUST 3          745.84 DEG. F ALM
C   4 EXHAUST 4          718.32 DEG. F ALM
C   5 EXHAUST 5          738.79 DEG. F ALM
C   6 EXHAUST 6          711.46 DEG. F ALM
C   7 ENG. COOL. IN      169.55 DEG. F ALM
C   8 ENG. COOL. OUT     181.58 DEG. F ALM
C   9 OIL SUMP           212.15 DEG. F ALM
C  10 OIL GALLERY        212.69 DEG. F ALM
C  11                    .00000
C  12                    .00000
C  13  ENG. INTAKE       89.220 DEG. F ALM
C  14 RAD. TOP LEFT      186.52 DEG. F ALM
C  15 RAD. BTTM LEFT     183.18 DEG. F ALM
C  16 RAD. TOP RIGHT     185.62 DEG. F ALM
C  17 RAD. BTTM RIGHT    187.71 DEG. F ALM
C  18 GEN. AIR IN        83.612 DEG. F ALM
C  19 GEN. AIR OUT       183.88 DEG. F ALM
C  20 GEN. FRAME TOP     89.394 DEG. F ALM
C  21 GEN. FRAME BTTM    89.729 DEG. F ALM
C  22 GEN. EXCITER       88.692 DEG. F ALM
C  23 GEN. VOLT. REG.    95.495 DEG. F ALM
C  24 CONTROL PANEL      93.374 DEG. F ALM
C  25 RELAY AREA         86.833 DEG. F ALM
C  26 BATTERY LEFT       186.74 DEG. F ALM
C  27 BATTERY RIGHT      185.42 DEG. F ALM
C  28 AIR IN SET         83.649 DEG. F ALM
C  29 FUEL TANK          97.883 DEG. F ALM
C  30 FUEL OUTLET        113.38 DEG. F ALM

END SCAN GROUP 1     17 NOV 87  17:33:14

STOPPED SINGLE SCAN  17 NOV 87  17:33:14
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BEGIN SCAN GROUP 1   17 NOV 87  17:46:5
30KW 60HZ GEN SET S/NRZ5 3774

C   1 EXHAUST 1          692.19 DEG. F AL
C   2 EXHAUST 2          723.67 DEG. F AL
C   3 EXHAUST 3          746.68 DEG. F AL
C   4 EXHAUST 4          719.42 DEG. F AL
C   5 EXHAUST 5          735.32 DEG. F AL
C   6 EXHAUST 6          712.11 DEG. F AL
C   7 ENG. COOL. IN      169.87 DEG. F AL
C   8 ENG. COOL. OUT     182.87 DEG. F AL
C   9 OIL SUMP           211.58 DEG. F AL
C  10 OIL GALLERY        212.81 DEG. F AL
C  11                    .00000
C  12                    .00000
C  13  ENG. INTAKE       89.848 DEG. F AL
C  14 RAD. TOP LEFT      187.24 DEG. F AL
C  15 RAD. BTTM LEFT     183.75 DEG. F AL
C  16 RAD. TOP RIGHT     185.94 DEG. F AL
C  17 RAD. BTTM RIGHT    188.16 DEG. F AL
C  18 GEN. AIR IN        84.886 DEG. F AL
C  19 GEN. AIR OUT       184.14 DEG. F AL
C  20 GEN. FRAME TOP     89.698 DEG. F AL
C  21 GEN. FRAME BTTM    89.844 DEG. F AL
C  22 GEN. EXCITER       89.589 DEG. F AL
C  23 GEN. VOLT. REG.    94.826 DEG. F AL
C  24 CONTROL PANEL      92.885 DEG. F AL
C  25 RELAY AREA         87.588 DEG. F AL
C  26 BATTERY LEFT       186.16 DEG. F AL
C  27 BATTERY RIGHT      184.52 DEG. F AL
C  28 AIR IN SET         84.989 DEG. F AL
C  29 FUEL TANK          96.437 DEG. F AL
C  30 FUEL OUTLET        111.18 DEG. F AL

END SCAN GROUP 1     17 NOV 87  17:47:0

STOPPED SINGLE SCAN  17 NOV 87  17:47:0
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BEGIN SCAN GROUP 1   17 NOV 87  17:34:05
30KW 60HZ GEN SET S/NRZ5 3774

C   1 EXHAUST 1          739.96 DEG. F ALM
C   2 EXHAUST 2          765.73 DEG. F ALM
C   3 EXHAUST 3          795.58 DEG. F ALM
C   4 EXHAUST 4          767.82 DEG. F ALM
C   5 EXHAUST 5          793.28 DEG. F ALM
C   6 EXHAUST 6          759.23 DEG. F ALM
C   7 ENG. COOL. IN      168.80 DEG. F ALM
C   8 ENG. COOL. OUT     181.16 DEG. F ALM
C   9 OIL SUMP           211.93 DEG. F ALM
C  10 OIL GALLERY        212.62 DEG. F ALM
C  11                    .00000
C  12                    .00000
C  13  ENG. INTAKE       89.321 DEG. F ALM
C  14 RAD. TOP LEFT      186.22 DEG. F ALM
C  15 RAD. BTTM LEFT     182.68 DEG. F ALM
C  16 RAD. TOP RIGHT     185.12 DEG. F ALM
C  17 RAD. BTTM RIGHT    187.37 DEG. F ALM
C  18 GEN. AIR IN        83.591 DEG. F ALM
C  19 GEN. AIR OUT       183.32 DEG. F ALM
C  20 GEN. FRAME TOP     89.482 DEG. F ALM
C  21 GEN. FRAME BTTM    89.812 DEG. F ALM
C  22 GEN. EXCITER       88.748 DEG. F ALM
C  23 GEN. VOLT. REG.    95.458 DEG. F ALM
C  24 CONTROL PANEL      93.228 DEG. F ALM
C  25 RELAY AREA         86.748 DEG. F ALM
C  26 BATTERY LEFT       186.68 DEG. F ALM
C  27 BATTERY RIGHT      185.36 DEG. F ALM
C  28 AIR IN SET         82.912 DEG. F ALM
C  29 FUEL TANK          97.812 DEG. F ALM
C  30 FUEL OUTLET        112.88 DEG. F ALM

END SCAN GROUP 1     17 NOV 87  17:34:15

STOPPED SINGLE SCAN  17 NOV 87  17:34:15
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BEGIN SCAN GROUP 1   17 NOV 87  17:48:3
30KW 60HZ GEN SET S/NRZ5 3774

C   1 EXHAUST 1          732.23 DEG. F AL
C   2 EXHAUST 2          764.69 DEG. F AL
C   3 EXHAUST 3          792.21 DEG. F AL
C   4 EXHAUST 4          763.18 DEG. F AL
C   5 EXHAUST 5          787.37 DEG. F AL
C   6 EXHAUST 6          756.58 DEG. F AL
C   7 ENG. COOL. IN      169.37 DEG. F AL
C   8 ENG. COOL. OUT     181.69 DEG. F AL
C   9 OIL SUMP           211.62 DEG. F AL
C  10 OIL GALLERY        212.88 DEG. F AL
C  11                    .00000
C  12                    .00000
C  13  ENG. INTAKE       89.662 DEG. F AL
C  14 RAD. TOP LEFT      186.16 DEG. F AL
C  15 RAD. BTTM LEFT     183.11 DEG. F AL
C  16 RAD. TOP RIGHT     185.33 DEG. F AL
C  17 RAD. BTTM RIGHT    187.65 DEG. F AL
C  18 GEN. AIR IN        83.372 DEG. F AL
C  19 GEN. AIR OUT       183.23 DEG. F AL
C  20 GEN. FRAME TOP     89.422 DEG. F AL
C  21 GEN. FRAME BTTM    89.731 DEG. F AL
C  22 GEN. EXCITER       88.619 DEG. F AL
C  23 GEN. VOLT. REG.    94.814 DEG. F AL
C  24 CONTROL PANEL      92.819 DEG. F AL
C  25 RELAY AREA         86.584 DEG. F AL
C  26 BATTERY LEFT       186.18 DEG. F AL
C  27 BATTERY RIGHT      184.38 DEG. F AL
C  28 AIR IN SET         83.888 DEG. F AL
C  29 FUEL TANK          96.351 DEG. F AL
C  30 FUEL OUTLET        111.79 DEG. F AL

END SCAN GROUP 1     17 NOV 87  17:48:4

STOPPED SINGLE SCAN  17 NOV 87  17:48:4
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TEST DATA

ITEM 30 KW / 60 Hz
GENERATOR SET
MODIFIED
MFGR. CABOT WELDING
MODEL NO. MEP 005A
SERIAL NO. R25 3774

NTS
National Technical Systems
Scientific Services Group
Testing Division
P.O. Box 38
Harlwood, Virginia 22471
Tel: 703 752 5300

METHOD 4.1 (DROP TEST)
FREQUENCY AND VOLTAGE REGULATION TEST

REF. NO. MIL STD 705
SHEET 1 OF 2
DATE 18 Nov. 1987
JOB NO. 555-246
PROJ. ENGR.
RECORDER/OBSERVER GC/BJ/KM

INST TIME	LOAD STEP	E L1-L2 VAC	6028 L2-L3 VAC	D L3-L1 VAC	E L1-L0 VAC	6028 L2-L0 VAC	D L3-L0 VAC	E L1-L0 AMPS	6040 L2-L0 AMPS	D L3-L0 AMPS	E L1-L0 KW	6230 L2-L0 KW	D L3-L0 KW	POWER FACTOR	FREQ Hz	EXCITER FIELD VOLTS	EXCITER FIELD AMPS	AMB. TEMP °F
1445			STARTED UNIT TO STABILIZE FOR VOLTAGE AND FREQUENCY REGULATION TEST															
1505	RL	208	209	208	120	121	120	2.49	2.55	2.52	.245	.251	.25	.80	60.1	8.3	3.3	71
1515	RL	208	209	208	120	121	120	2.49	2.55	2.52	.245	.25	.25	.80	60.1	8.4	3.4	70
1525	RL	208	209	208	119.9	121	120	2.49	2.54	2.53	.248	.251	.25	.80	60.1	8.6	3.4	69
1535	RL	209	209	208	119.9	121	120	2.5	2.55	2.53	.248	.251	.25	.80	59.9	8.4	3.4	66
1605	RL	208	209	208	120	121	120	2.49	2.55	2.53	.248	.251	.25	.80	60.0	8.4	3.3	65
1615	RL	209	209.3	209	119.9	121	120.1	2.49	2.53	2.52	.248	.251	.25	.80	60.0	8.4	3.3	61
1625	RL	208	209	208	120	121	120	2.49	2.53	2.52	.248	.251	.25	.80	60.0	8.4	3.3	61
1630	RL	209	209.5	209	119.5	121	120	2.49	2.53	2.52	.248	.251	.25	.80	60.0	8.4	3.3	60
1632	NL	212	212.1	212	123.5	124	124	0	0	0	0	0	0	.99	61.7	3.4	1.4	59
1637	RL	209	209.5	209.1	119.5	121	120	2.5	2.54	2.52	.245	.251	.25	.799	59.9	8.4	3.3	60
1634	NL	212	212.2	212.1	123.9	124	124	0	0	0	0	0	0	.99	61.75	3.4	1.4	60
1635	RL	209	209.5	209	119.5	121	120	2.5	2.54	2.53	.245	.251	.25	.799	59.9	8.4	3.3	60
1636	NL	212	212.1	212	123.5	124	123.9	0	0	0	0	0	0	.99	61.7	3.5	1.4	59
1638			APPLIED RESISTIVE LOAD FOR STABILIZATION															
1640	RL	210	210.5	210	121	122	121	2.0	2.1	2.0	.245	.25	.248	.99	60.1	5.2	2.1	58
1650	RL	210	210.5	210.1	121	121.5	121	2.0	2.1	2.0	.245	.25	.246	.99	60.0	5.2	2.1	60
1700	RL	210	210.1	210	121	121.5	121	2.0	2.1	2.0	.245	.25	.248	.99	60.0	5.1	2.1	58
1710	RL	210	210.5	210	121	121.5	121	2.0	2.1	2.0	.245	.25	.249	.99	60.1	5.1	2.1	55
1711	NL	212	212.1	212	123.5	124	124	0	0	0	0	0	0	.99	61.8	3.3	1.3	57
1712	RL	210	210.5	210.1	121	122	121	2.0	2.1	2.0	.245	.25	.249	.99	60.1	5.0	2.1	57
1713	NL	212	212.1	212	123.5	124	124	0	0	0	0	0	0	.99	61.7	3.3	1.3	57
1714	RL	210	210.5	210	121	124.5	121	2.0	2.1	2.0	.245	.25	.248	.99	60.1	5.0	2.1	57
1715	NL	212	212.5	212	123.5	124	124	0	0	0	0	0	0	.99	61.8	3.3	1.1	57
1715			SHUT UNIT DOWN FOR DROP TEST															
1902			START UNIT - NO PROBLEMS - STABILIZING FOR FREQUENCY AND VOLTAGE REGULATION TEST															
1910	RL	208	208.5	208	116.5	120	119	2.49	2.53	2.51	.241	.25	.249	.80	60.1	7.9	3.2	54

NOTES: VOLTAGE REGULATION OUT OF SPEC ON LINE TO NEUTRAL FOR REACTIVE TEST ONLY

EG2420 EG2410

6-29

TEST DATA

ITEM 30 KW / 60 Hz
GENERATOR SET
MODIFIED
MFGR. GIBBY WELDING
MODEL NO. MEP 005A
SERIAL NO. R25 3774

NTS
National Technical Systems
Scientific Services Group
Testing Division
P.O. Box 38
Harlwood, Virginia 22471
Tel: 703 752 5300

METHOD 644.1
FREQUENCY AND VOLTAGE REGULATION TEST

REF. NO. MIL STD 705
SHEET 2 OF 2
DATE 18 NOV. 1987
JOB NO. 553-2140
PROJ. ENGR.
RECORDER/OBSERVER GC / BS / KM

INST TIME	LOAD STEP	E 6028 D L1-L2 VAC	L2-L3 VAC	L3-L1 VAC	E 6028 D L1-L0 VAC	L2-L0 VAC	L3-L0 VAC	E 6040 D L1-L0 AC AMPS	L2-L0 AC AMPS	L3-L0 AC AMPS	E 6230 D L1-L0 KW	L2-L0 KW	L3-L0 KW	POWER FACTOR	FREQ Hz	EXCITER FIELD VOLTS	EXCITER FIELD AMPS	AMB TEMP °F
1920	RL	208	208.3	208	116.1	120	119	2.49	2.52	2.51	.242	.25	.245	.80	60.1	8.6	3.2	55
1930	RL	208	208.5	208	118.5	120	119	2.49	2.53	2.52	.241	.25	.249	.80	60.0	8.0	3.2	57
1940	RL	208	208.5	208	118.1	120	119	2.49	2.53	2.52	.241	.25	.249	.80	60.0	8.0	3.2	56
1941	NL	211.1	211.2	212.1	122.5	123	123	0	0	0	0	0	0	.99	61.7	3.3	1.3	55
1943	RL	208	208.1	208	116.1	120	119	2.49	2.53	2.52	.241	.251	.249	.80	59.9	8.0	3.2	55
1944	NL	212.1	212.1	212.1	122.1	123	123	0	0	0	0	0	0	.99	61.7	3.3	1.3	56
1945	RL	208	208.5	208	118.5	120	119	2.49	2.53	2.52	.243	.251	.249	.80	59.9	8.0	3.2	56
1947	NL	212	212.1	212.1	122.5	123	122.9	0	0	0	0	0	0	.99	61.7	3.3	1.3	55
1948			APPLIED	100%	RESISTIVE	LOAD												
1950	RL	208	208.1	208	120	121	120	2.0	2.1	2.0	.241	.249	.245	.99	60.0	5.0	2.0	52
2000	RL	208	208.1	208	120	121	120	2.0	2.1	2.0	.241	.248	.245	.99	60.0	5.0	2.0	55
2010	RL	208	208.1	208	120	121	120	2.0	2.1	2.0	.241	.249	.245	.99	60.0	4.9	2.0	55
2020	RL	208	208.1	208	120	121	120	2.0	2.1	2.1	.241	.249	.245	.99	60.0	4.9	2.0	54
2022	NL	212	212	212	122.5	123	123	0	0	0	0	0	0	.99	61.8	3.2	1.3	54
2023	RL	208	208.1	208	120	121	120	2.0	2.1	2.0	.241	.249	.245	.99	60.0	4.9	2.0	55
2025	NL	212	212	212.1	122.5	123	122.5	0	0	0	0	0	0	.99	61.8	3.1	1.3	54
2026	RL	208	208.1	208	120	121	120	2.0	2.2	2.1	.241	.249	.245	.99	60.0	4.9	2.0	53
2028	NL	212	212.1	212.1	122.5	123	123	0	0	0	0	0	0	.99	61.7	3.1	1.3	54
2033			SHUT	UNIT	DOWN		END	OF	TEST									

EC2420 EC2410

NOTES: VOLTAGE REGULATION OUT OF SPEC ON LINE TO NEUTRAL FOR REACTIVE TEST ONLY

TEST DATA

ITEM 30KW 60HZ GEN SET MODIFIED
MFGR. LIBBY WELDING
MODEL NO. MEP 005A
SERIAL NO. RZ5 3774

NTS
National Technical Systems | Scientific Services Group | Testing Division P.O. Box 38 Harlwood, Virginia 22471 Tel: 703 752 5300

FREQUENCY & VOLTAGE REGULATION (METHOD 614.1 RESULTS)

REF. NO. MIL STD 705
SHEET 1 OF 1
DATE 14 JAN 1988
JOB NO. 555-2140
PROJ. ENGR.
RECORDER/OBSERVER

INST. →	REACTIVE						RESISTIVE					
LOAD ↓ UNITS SYM.	AVG V. LINE-LINE	AVG V LINE-N.	VOLTAGE REG	AVG FREQ RL	AVG. FREQ NL	FREQ REG. %	AVG V. LINE-LINE	AVG V LINE-N	VOLTAGE REG	AVG FREQ RL	AVG FREQ NL	FREQ REG %
				—	PRE	DROP	—					
R/L	209.18			59.93			210.18			60.1		
N/L	212.06		1.38 %		61.71	2.97 %	212.08		0.9 %		61.76	2.76 %
R/L	↔	120.17						121.22				
N/L		123.87	3.08 %					123.83	2.15 %	~~2.15 %~~		
				—	POST	DROP	—					
R/L	208.14			59.93			208.03			60.0		
N/L	211.88		1.80 %		61.7	2.95 %	212.03		1.92 %		61.77	2.98 %
R/L		119.08						120.33				
N/L		122.78	3.11 %					122.78	2.03 %			

NOTES: VOLTAGE REGULATION OUT OF SPEC — REACTIVE LOAD, MAX ACCURACY ±2% AS PER MIL-STD-705B

B-221

FREQUENCY + VOLTAGE REGULATION 6/4.1

BEGIN SCAN GROUP 1 18 NOV 87 15:55:40
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	317.59	DEG. F	ALM
C	2	EXHAUST 2	338.85	DEG. F	ALM
C	3	EXHAUST 3	339.85	DEG. F	ALM
C	4	EXHAUST 4	353.15	DEG. F	ALM
C	5	EXHAUST 5	355.38	DEG. F	ALM
C	6	EXHAUST 6	332.42	DEG. F	ALM
C	7	ENG. COOL. IN	173.16	DEG. F	ALM
C	8	ENG. COOL. OUT	178.45	DEG. F	ALM
C	9	OIL SUMP	199.20	DEG. F	ALM
C	10	OIL GALLERY	196.64	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	92.941	DEG. F	ALM
C	14	RAD. TOP LEFT	121.89	DEG. F	ALM
C	15	RAD. BTTM LEFT	116.63	DEG. F	ALM
C	16	RAD. TOP RIGHT	119.26	DEG. F	ALM
C	17	RAD. BTTM RIGHT	117.39	DEG. F	ALM
C	18	GEN. AIR IN	71.857	DEG. F	ALM
C	19	GEN. AIR OUT	90.586	DEG. F	ALM
C	20	GEN. FRAME TOP	82.981	DEG. F	ALM
C	21	GEN. FRAME BTTM	74.894	DEG. F	ALM
C	22	GEN. EXCITER	86.818	DEG. F	ALM
C	23	GEN. VOLT. REG.	80.551	DEG. F	ALM
C	24	CONTROL PANEL	80.884	DEG. F	ALM
C	25	RELAY AREA	89.705	DEG. F	ALM
C	26	BATTERY LEFT	93.932	DEG. F	ALM
C	27	BATTERY RIGHT	97.838	DEG. F	ALM
C	28	AIR IN SET	67.347	DEG. F	ALM
C	29	FUEL TANK	75.872	DEG. F	ALM
C	30	FUEL OUTLET	94.005	DEG. F	ALM

END SCAN GROUP 1 18 NOV 87 15:55:58

STOPPED SINGLE SCAN 18 NOV 87 15:55:58

BEGIN SCAN GROUP 1 18 NOV 87 16:08:3
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	668.48	DEG. F	AL
C	2	EXHAUST 2	698.38	DEG. F	AL
C	3	EXHAUST 3	722.84	DEG. F	AL
C	4	EXHAUST 4	691.17	DEG. F	AL
C	5	EXHAUST 5	707.57	DEG. F	AL
C	6	EXHAUST 6	682.55	DEG. F	AL
C	7	ENG. COOL. IN	163.62	DEG. F	AL
C	8	ENG. COOL. OUT	179.14	DEG. F	AL
C	9	OIL SUMP	204.28	DEG. F	AL
C	10	OIL GALLERY	204.53	DEG. F	AL
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	71.616	DEG. F	AL
C	14	RAD. TOP LEFT	97.895	DEG. F	AL
C	15	RAD. BTTM LEFT	93.311	DEG. F	AL
C	16	RAD. TOP RIGHT	99.685	DEG. F	AL
C	17	RAD. BTTM RIGHT	98.928	DEG. F	AL
C	18	GEN. AIR IN	64.385	DEG. F	AL
C	19	GEN. AIR OUT	84.244	DEG. F	AL
C	20	GEN. FRAME TOP	76.986	DEG. F	AL
C	21	GEN. FRAME BTTM	74.638	DEG. F	AL
C	22	GEN. EXCITER	72.418	DEG. F	AL
C	23	GEN. VOLT. REG.	80.066	DEG. F	AL
C	24	CONTROL PANEL	78.813	DEG. F	AL
C	25	RELAY AREA	78.856	DEG. F	AL
C	26	BATTERY LEFT	94.998	DEG. F	AL
C	27	BATTERY RIGHT	99.253	DEG. F	AL
C	28	AIR IN SET	63.338	DEG. F	AL
C	29	FUEL TANK	76.857	DEG. F	AL
C	30	FUEL OUTLET	100.76	DEG. F	AL

END SCAN GROUP 1 18 NOV 87 16:08:4

STOPPED SINGLE SCAN 18 NOV 87 16:08:4

BEGIN SCAN GROUP 1 18 NOV 87 15:57:34
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	658.51	DEG. F	ALM
C	2	EXHAUST 2	679.26	DEG. F	ALM
C	3	EXHAUST 3	691.30	DEG. F	ALM
C	4	EXHAUST 4	663.41	DEG. F	ALM
C	5	EXHAUST 5	673.34	DEG. F	ALM
C	6	EXHAUST 6	641.31	DEG. F	ALM
C	7	ENG. COOL. IN	160.40	DEG. F	ALM
C	8	ENG. COOL. OUT	175.65	DEG. F	ALM
C	9	OIL SUMP	196.36	DEG. F	ALM
C	10	OIL GALLERY	196.71	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	82.286	DEG. F	ALM
C	14	RAD. TOP LEFT	117.87	DEG. F	ALM
C	15	RAD. BTTM LEFT	113.62	DEG. F	ALM
C	16	RAD. TOP RIGHT	115.77	DEG. F	ALM
C	17	RAD. BTTM RIGHT	113.82	DEG. F	ALM
C	18	GEN. AIR IN	69.948	DEG. F	ALM
C	19	GEN. AIR OUT	88.126	DEG. F	ALM
C	20	GEN. FRAME TOP	82.632	DEG. F	ALM
C	21	GEN. FRAME BTTM	77.683	DEG. F	ALM
C	22	GEN. EXCITER	77.397	DEG. F	ALM
C	23	GEN. VOLT. REG.	80.685	DEG. F	ALM
C	24	CONTROL PANEL	81.173	DEG. F	ALM
C	25	RELAY AREA	76.367	DEG. F	ALM
C	26	BATTERY LEFT	93.735	DEG. F	ALM
C	27	BATTERY RIGHT	97.895	DEG. F	ALM
C	28	AIR IN SET	66.576	DEG. F	ALM
C	29	FUEL TANK	75.903	DEG. F	ALM
C	30	FUEL OUTLET	100.98	DEG. F	ALM

END SCAN GROUP 1 18 NOV 87 15:57:44

STOPPED SINGLE SCAN 18 NOV 87 15:57:44

BEGIN SCAN GROUP 1 18 NOV 87 16:13:5
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	663.37	DEG. F	AL
C	2	EXHAUST 2	696.83	DEG. F	AL
C	3	EXHAUST 3	718.91	DEG. F	AL
C	4	EXHAUST 4	687.54	DEG. F	AL
C	5	EXHAUST 5	702.69	DEG. F	AL
C	6	EXHAUST 6	679.85	DEG. F	AL
C	7	ENG. COOL. IN	163.60	DEG. F	AL
C	8	ENG. COOL. OUT	164.53	DEG. F	AL
C	9	OIL SUMP	205.41	DEG. F	AL
C	10	OIL GALLERY	205.75	DEG. F	AL
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	69.854	DEG. F	AL
C	14	RAD. TOP LEFT	96.364	DEG. F	AL
C	15	RAD. BTTM LEFT	92.499	DEG. F	AL
C	16	RAD. TOP RIGHT	98.678	DEG. F	AL
C	17	RAD. BTTM RIGHT	97.372	DEG. F	AL
C	18	GEN. AIR IN	62.603	DEG. F	AL
C	19	GEN. AIR OUT	82.994	DEG. F	AL
C	20	GEN. FRAME TOP	75.985	DEG. F	AL
C	21	GEN. FRAME BTTM	73.997	DEG. F	AL
C	22	GEN. EXCITER	71.331	DEG. F	AL
C	23	GEN. VOLT. REG.	79.483	DEG. F	AL
C	24	CONTROL PANEL	77.938	DEG. F	AL
C	25	RELAY AREA	68.684	DEG. F	AL
C	26	BATTERY LEFT	94.981	DEG. F	AL
C	27	BATTERY RIGHT	99.377	DEG. F	AL
C	28	AIR IN SET	61.372	DEG. F	AL
C	29	FUEL TANK	77.195	DEG. F	AL
C	30	FUEL OUTLET	99.177	DEG. F	AL

END SCAN GROUP 1 18 NOV 87 16:14:0

STOPPED SINGLE SCAN 18 NOV 87 16:14:0

BEGIN SCAN GROUP 1 18 NOV 87 16:24:06
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	662.86	DEG. F	ALM
C	2	EXHAUST 2	691.47	DEG. F	ALM
C	3	EXHAUST 3	716.78	DEG. F	ALM
C	4	EXHAUST 4	684.73	DEG. F	ALM
C	5	EXHAUST 5	702.63	DEG. F	ALM
C	6	EXHAUST 6	678.01	DEG. F	ALM
C	7	ENG. COOL. IN	162.65	DEG. F	ALM
C	8	ENG. COOL. OUT	179.75	DEG. F	ALM
C	9	OIL SUMP	206.32	DEG. F	ALM
C	10	OIL GALLERY	206.43	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	68.383	DEG. F	ALM
C	14	RAD. TOP LEFT	96.679	DEG. F	ALM
C	15	RAD. BTTM LEFT	92.688	DEG. F	ALM
C	16	RAD. TOP RIGHT	98.539	DEG. F	ALM
C	17	RAD. BTTM RIGHT	97.734	DEG. F	ALM
C	18	GEN. AIR IN	61.283	DEG. F	ALM
C	19	GEN. AIR OUT	82.264	DEG. F	ALM
C	20	GEN. FRAME TOP	74.194	DEG. F	ALM
C	21	GEN. FRAME BTTM	71.488	DEG. F	ALM
C	22	GEN. EXCITER	69.872	DEG. F	ALM
C	23	GEN. VOLT. REG.	78.833	DEG. F	ALM
C	24	CONTROL PANEL	76.129	DEG. F	ALM
C	25	RELAY AREA	67.192	DEG. F	ALM
C	26	BATTERY LEFT	94.787	DEG. F	ALM
C	27	BATTERY RIGHT	99.874	DEG. F	ALM
C	28	AIR IN SET	61.287	DEG. F	ALM
C	29	FUEL TANK	77.235	DEG. F	ALM
C	30	FUEL OUTLET	97.898	DEG. F	ALM

END SCAN GROUP 1 18 NOV 87 16:24:16

STOPPED SINGLE SCAN 18 NOV 87 16:24:16

BEGIN SCAN GROUP 1 18 NOV 87 16:31:1
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	327.55	DEG. F	AL
C	2	EXHAUST 2	350.59	DEG. F	AL
C	3	EXHAUST 3	343.95	DEG. F	AL
C	4	EXHAUST 4	384.28	DEG. F	AL
C	5	EXHAUST 5	391.79	DEG. F	ALM
C	6	EXHAUST 6	384.62	DEG. F	ALM
C	7	ENG. COOL. IN	155.35	DEG. F	ALM
C	8	ENG. COOL. OUT	171.09	DEG. F	ALM
C	9	OIL SUMP	205.98	DEG. F	ALM
C	10	OIL GALLERY	205.89	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	68.484	DEG. F	ALM
C	14	RAD. TOP LEFT	104.94	DEG. F	ALM
C	15	RAD. BTTM LEFT	100.79	DEG. F	ALM
C	16	RAD. TOP RIGHT	104.82	DEG. F	ALM
C	17	RAD. BTTM RIGHT	102.52	DEG. F	ALM
C	18	GEN. AIR IN	61.891	DEG. F	ALM
C	19	GEN. AIR OUT	80.976	DEG. F	ALM
C	20	GEN. FRAME TOP	73.611	DEG. F	ALM
C	21	GEN. FRAME BTTM	70.221	DEG. F	ALM
C	22	GEN. EXCITER	69.492	DEG. F	ALM
C	23	GEN. VOLT. REG.	77.226	DEG. F	ALM
C	24	CONTROL PANEL	75.007	DEG. F	ALM
C	25	RELAY AREA	66.190	DEG. F	ALM
C	26	BATTERY LEFT	95.206	DEG. F	ALM
C	27	BATTERY RIGHT	100.16	DEG. F	ALM
C	28	AIR IN SET	59.463	DEG. F	ALM
C	29	FUEL TANK	77.274	DEG. F	ALM
C	30	FUEL OUTLET	97.828	DEG. F	ALM

END SCAN GROUP 1 18 NOV 87 16:31:2

STOPPED SINGLE SCAN 18 NOV 87 16:31:2

BEGIN SCAN GROUP 1 18 NOV 87 16:28:47
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	667.20	DEG. F	ALM
C	2	EXHAUST 2	692.18	DEG. F	ALM
C	3	EXHAUST 3	717.27	DEG. F	ALM
C	4	EXHAUST 4	686.57	DEG. F	ALM
C	5	EXHAUST 5	704.49	DEG. F	ALM
C	6	EXHAUST 6	679.52	DEG. F	ALM
C	7	ENG. COOL. IN	162.66	DEG. F	ALM
C	8	ENG. COOL. OUT	179.83	DEG. F	ALM
C	9	OIL SUMP	206.49	DEG. F	ALM
C	10	OIL GALLERY	206.63	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	68.618	DEG. F	ALM
C	14	RAD. TOP LEFT	96.121	DEG. F	ALM
C	15	RAD. BTTM LEFT	92.387	DEG. F	ALM
C	16	RAD. TOP RIGHT	98.188	DEG. F	ALM
C	17	RAD. BTTM RIGHT	97.234	DEG. F	ALM
C	18	GEN. AIR IN	60.821	DEG. F	ALM
C	19	GEN. AIR OUT	81.444	DEG. F	ALM
C	20	GEN. FRAME TOP	73.936	DEG. F	ALM
C	21	GEN. FRAME BTTM	70.829	DEG. F	ALM
C	22	GEN. EXCITER	69.633	DEG. F	ALM
C	23	GEN. VOLT. REG.	77.468	DEG. F	ALM
C	24	CONTROL PANEL	75.482	DEG. F	ALM
C	25	RELAY AREA	66.511	DEG. F	ALM
C	26	BATTERY LEFT	94.915	DEG. F	ALM
C	27	BATTERY RIGHT	99.869	DEG. F	ALM
C	28	AIR IN SET	60.879	DEG. F	ALM
C	29	FUEL TANK	77.236	DEG. F	ALM
C	30	FUEL OUTLET	96.404	DEG. F	ALM

END SCAN GROUP 1 18 NOV 87 16:28:57

STOPPED SINGLE SCAN 18 NOV 87 16:28:57

BEGIN SCAN GROUP 1 18 NOV 87 16:32:3
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	639.52	DEG. F	ALM
C	2	EXHAUST 2	666.36	DEG. F	ALM
C	3	EXHAUST 3	688.53	DEG. F	ALM
C	4	EXHAUST 4	656.15	DEG. F	ALM
C	5	EXHAUST 5	673.94	DEG. F	ALM
C	6	EXHAUST 6	644.86	DEG. F	ALM
C	7	ENG. COOL. IN	159.38	DEG. F	ALM
C	8	ENG. COOL. OUT	173.54	DEG. F	ALM
C	9	OIL SUMP	205.82	DEG. F	ALM
C	10	OIL GALLERY	205.13	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	71.189	DEG. F	ALM
C	14	RAD. TOP LEFT	119.59	DEG. F	ALM
C	15	RAD. BTTM LEFT	116.48	DEG. F	ALM
C	16	RAD. TOP RIGHT	118.45	DEG. F	ALM
C	17	RAD. BTTM RIGHT	116.41	DEG. F	ALM
C	18	GEN. AIR IN	78.178	DEG. F	ALM
C	19	GEN. AIR OUT	83.646	DEG. F	ALM
C	20	GEN. FRAME TOP	74.820	DEG. F	ALM
C	21	GEN. FRAME BTTM	73.192	DEG. F	ALM
C	22	GEN. EXCITER	71.977	DEG. F	ALM
C	23	GEN. VOLT. REG.	76.959	DEG. F	ALM
C	24	CONTROL PANEL	74.512	DEG. F	ALM
C	25	RELAY AREA	68.058	DEG. F	ALM
C	26	BATTERY LEFT	95.258	DEG. F	ALM
C	27	BATTERY RIGHT	100.18	DEG. F	ALM
C	28	AIR IN SET	60.192	DEG. F	ALM
C	29	FUEL TANK	77.395	DEG. F	ALM
C	30	FUEL OUTLET	97.114	DEG. F	ALM

END SCAN GROUP 1 18 NOV 87 16:32:4

STOPPED SINGLE SCAN 18 NOV 87 16:32:4

BEGIN SCAN GROUP 1 18 NOV 87 16:33:06
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	438.18	DEG. F	ALM
C	2	EXHAUST 2	462.25	DEG. F	ALM
C	3	EXHAUST 3	451.89	DEG. F	ALM
C	4	EXHAUST 4	472.33	DEG. F	ALM
C	5	EXHAUST 5	481.10	DEG. F	ALM
C	6	EXHAUST 6	475.06	DEG. F	ALM
C	7	ENG. COOL. IN	164.98	DEG. F	ALM
C	8	ENG. COOL. OUT	179.27	DEG. F	ALM
C	9	OIL SUMP	205.11	DEG. F	ALM
C	10	OIL GALLERY	205.22	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	71.969	DEG. F	ALM
C	14	RAD. TOP LEFT	117.79	DEG. F	ALM
C	15	RAD. BTTM LEFT	113.87	DEG. F	ALM
C	16	RAD. TOP RIGHT	116.93	DEG. F	ALM
C	17	RAD. BTTM RIGHT	115.35	DEG. F	ALM
C	18	GEN. AIR IN	67.892	DEG. F	ALM
C	19	GEN. AIR OUT	83.292	DEG. F	ALM
C	20	GEN. FRAME TOP	75.317	DEG. F	ALM
C	21	GEN. FRAME BTTM	73.792	DEG. F	ALM
C	22	GEN. EXCITER	72.112	DEG. F	ALM
C	23	GEN. VOLT. REG.	76.936	DEG. F	ALM
C	24	CONTROL PANEL	74.387	DEG. F	ALM
C	25	RELAY AREA	68.111	DEG. F	ALM
C	26	BATTERY LEFT	95.403	DEG. F	ALM
C	27	BATTERY RIGHT	100.39	DEG. F	ALM
C	28	AIR IN SET	60.433	DEG. F	ALM
C	29	FUEL TANK	77.583	DEG. F	ALM
C	30	FUEL OUTLET	96.664	DEG. F	ALM

END SCAN GROUP 1 18 NOV 87 16:33:16

STOPPED SINGLE SCAN 18 NOV 87 16:33:16

BEGIN SCAN GROUP 1 18 NOV 87 16:35:1
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	403.54	DEG. F	AL
C	2	EXHAUST 2	426.79	DEG. F	AL
C	3	EXHAUST 3	414.53	DEG. F	AL
C	4	EXHAUST 4	443.16	DEG. F	AL
C	5	EXHAUST 5	451.98	DEG. F	AL
C	6	EXHAUST 6	446.67	DEG. F	AL
C	7	ENG. COOL. IN	161.46	DEG. F	AL
C	8	ENG. COOL. OUT	177.52	DEG. F	AL
C	9	OIL SUMP	204.92	DEG. F	AL
C	10	OIL GALLERY	204.97	DEG. F	AL
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	71.353	DEG. F	AL
C	14	RAD. TOP LEFT	107.72	DEG. F	AL
C	15	RAD. BTTM LEFT	102.18	DEG. F	AL
C	16	RAD. TOP RIGHT	106.60	DEG. F	AL
C	17	RAD. BTTM RIGHT	105.21	DEG. F	AL
C	18	GEN. AIR IN	62.188	DEG. F	AL
C	19	GEN. AIR OUT	80.718	DEG. F	AL
C	20	GEN. FRAME TOP	75.185	DEG. F	AL
C	21	GEN. FRAME BTTM	72.213	DEG. F	AL
C	22	GEN. EXCITER	72.184	DEG. F	AL
C	23	GEN. VOLT. REG.	76.987	DEG. F	AL
C	24	CONTROL PANEL	74.208	DEG. F	AL
C	25	RELAY AREA	66.833	DEG. F	AL
C	26	BATTERY LEFT	96.134	DEG. F	AL
C	27	BATTERY RIGHT	101.08	DEG. F	AL
C	28	AIR IN SET	59.853	DEG. F	AL
C	29	FUEL TANK	77.936	DEG. F	AL
C	30	FUEL OUTLET	98.416	DEG. F	AL

END SCAN GROUP 1 18 NOV 87 16:35:23

STOPPED SINGLE SCAN 18 NOV 87 16:35:23

BEGIN SCAN GROUP 1 18 NOV 87 16:34:08
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	560.89	DEG. F	ALM
C	2	EXHAUST 2	584.23	DEG. F	ALM
C	3	EXHAUST 3	601.96	DEG. F	ALM
C	4	EXHAUST 4	589.64	DEG. F	ALM
C	5	EXHAUST 5	606.85	DEG. F	ALM
C	6	EXHAUST 6	575.36	DEG. F	ALM
C	7	ENG. COOL. IN	168.46	DEG. F	ALM
C	8	ENG. COOL. OUT	176.14	DEG. F	ALM
C	9	OIL SUMP	205.00	DEG. F	ALM
C	10	OIL GALLERY	205.04	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	71.716	DEG. F	ALM
C	14	RAD. TOP LEFT	107.18	DEG. F	ALM
C	15	RAD. BTTM LEFT	102.01	DEG. F	ALM
C	16	RAD. TOP RIGHT	106.68	DEG. F	ALM
C	17	RAD. BTTM RIGHT	105.26	DEG. F	ALM
C	18	GEN. AIR IN	62.706	DEG. F	ALM
C	19	GEN. AIR OUT	80.736	DEG. F	ALM
C	20	GEN. FRAME TOP	75.330	DEG. F	ALM
C	21	GEN. FRAME BTTM	72.537	DEG. F	ALM
C	22	GEN. EXCITER	71.762	DEG. F	ALM
C	23	GEN. VOLT. REG.	76.954	DEG. F	ALM
C	24	CONTROL PANEL	74.297	DEG. F	ALM
C	25	RELAY AREA	66.985	DEG. F	ALM
C	26	BATTERY LEFT	95.722	DEG. F	ALM
C	27	BATTERY RIGHT	100.72	DEG. F	ALM
C	28	AIR IN SET	60.292	DEG. F	ALM
C	29	FUEL TANK	77.774	DEG. F	ALM
C	30	FUEL OUTLET	98.011	DEG. F	ALM

END SCAN GROUP 1 18 NOV 87 16:34:18

STOPPED SINGLE SCAN 18 NOV 87 16:34:18

BEGIN SCAN GROUP 1 18 NOV 87 16:37:29
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	622.58	DEG. F	ALM
C	2	EXHAUST 2	649.82	DEG. F	ALM
C	3	EXHAUST 3	661.38	DEG. F	ALM
C	4	EXHAUST 4	637.86	DEG. F	ALM
C	5	EXHAUST 5	654.28	DEG. F	ALM
C	6	EXHAUST 6	631.95	DEG. F	ALM
C	7	ENG. COOL. IN	168.26	DEG. F	ALM
C	8	ENG. COOL. OUT	175.48	DEG. F	ALM
C	9	OIL SUMP	204.17	DEG. F	ALM
C	10	OIL GALLERY	204.34	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	71.136	DEG. F	ALM
C	14	RAD. TOP LEFT	113.67	DEG. F	ALM
C	15	RAD. BTTM LEFT	110.88	DEG. F	ALM
C	16	RAD. TOP RIGHT	113.38	DEG. F	ALM
C	17	RAD. BTTM RIGHT	110.98	DEG. F	ALM
C	18	GEN. AIR IN	64.137	DEG. F	ALM
C	19	GEN. AIR OUT	80.935	DEG. F	ALM
C	20	GEN. FRAME TOP	75.202	DEG. F	ALM
C	21	GEN. FRAME BTTM	73.704	DEG. F	ALM
C	22	GEN. EXCITER	71.557	DEG. F	ALM
C	23	GEN. VOLT. REG.	76.827	DEG. F	ALM
C	24	CONTROL PANEL	74.066	DEG. F	ALM
C	25	RELAY AREA	67.036	DEG. F	ALM
C	26	BATTERY LEFT	96.652	DEG. F	ALM
C	27	BATTERY RIGHT	101.43	DEG. F	ALM
C	28	AIR IN SET	59.320	DEG. F	ALM
C	29	FUEL TANK	78.088	DEG. F	ALM
C	30	FUEL OUTLET	99.867	DEG. F	ALM

END SCAN GROUP 1 18 NOV 87 16:37:29

STOPPED SINGLE SCAN 18 NOV 87 16:37:29

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BEGIN SCAN GROUP 1   18 NOV 87  16:42:54
30KW 60HZ GEN SET S/NRZ5 3774

C    1 EXHAUST 1          641.47 DEG. F ALM
C    2 EXHAUST 2          674.11 DEG. F ALM
C    3 EXHAUST 3          693.51 DEG. F ALM
C    4 EXHAUST 4          664.18 DEG. F ALM
C    5 EXHAUST 5          686.38 DEG. F ALM
C    6 EXHAUST 6          659.40 DEG. F ALM
C    7 ENG. COOL. IN      163.33 DEG. F ALM
C    8 ENG. COOL. OUT     180.32 DEG. F ALM
C    9 OIL SUMP           205.57 DEG. F ALM
C   10 OIL GALLERY        205.83 DEG. F ALM
C   11                    .00000
C   12                    .00000
C   13  ENG. INTAKE       67.275 DEG. F ALM
C   14 RAD. TOP LEFT      98.248 DEG. F ALM
C   15 RAD. BTTM LEFT     93.607 DEG. F ALM
C   16 RAD. TOP RIGHT     99.227 DEG. F ALM
C   17 RAD. BTTM RIGHT    97.598 DEG. F ALM
C   18 GEN. AIR IN        58.245 DEG. F ALM
C   19 GEN. AIR OUT       76.879 DEG. F ALM
C   20 GEN. FRAME TOP     72.310 DEG. F ALM
C   21 GEN. FRAME BTTM    69.747 DEG. F ALM
C   22 GEN. EXCITER       68.523 DEG. F ALM
C   23 GEN. VOLT. REG.    76.210 DEG. F ALM
C   24 CONTROL PANEL      73.865 DEG. F ALM
C   25 RELAY AREA         65.008 DEG. F ALM
C   26 BATTERY LEFT       97.489 DEG. F ALM
C   27 BATTERY RIGHT      101.71 DEG. F ALM
C   28 AIR IN SET         58.641 DEG. F ALM
C   29 FUEL TANK          78.194 DEG. F ALM
C   30 FUEL OUTLET        98.422 DEG. F ALM

END SCAN GROUP 1     18 NOV 87  16:43:04

STOPPED SINGLE SCAN  18 NOV 87  16:43:04
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BEGIN SCAN GROUP 1   18 NOV 87  16:59:17
30KW 60HZ GEN SET S/NRZ5 3774

C    1 EXHAUST 1          643.24 DEG. F ALM
C    2 EXHAUST 2          672.65 DEG. F ALM
C    3 EXHAUST 3          691.68 DEG. F ALM
C    4 EXHAUST 4          662.25 DEG. F ALM
C    5 EXHAUST 5          681.12 DEG. F ALM
C    6 EXHAUST 6          661.62 DEG. F ALM
C    7 ENG. COOL. IN      161.75 DEG. F ALM
C    8 ENG. COOL. OUT     179.24 DEG. F ALM
C    9 OIL SUMP           205.78 DEG. F ALM
C   10 OIL GALLERY        206.05 DEG. F ALM
C   11                    .00000
C   12                    .00000
C   13  ENG. INTAKE       66.454 DEG. F ALM
C   14 RAD. TOP LEFT      97.989 DEG. F ALM
C   15 RAD. BTTM LEFT     93.548 DEG. F ALM
C   16 RAD. TOP RIGHT     98.262 DEG. F ALM
C   17 RAD. BTTM RIGHT    97.177 DEG. F ALM
C   18 GEN. AIR IN        57.835 DEG. F ALM
C   19 GEN. AIR OUT       74.885 DEG. F ALM
C   20 GEN. FRAME TOP     69.428 DEG. F ALM
C   21 GEN. FRAME BTTM    67.345 DEG. F ALM
C   22 GEN. EXCITER       66.952 DEG. F ALM
C   23 GEN. VOLT. REG.    74.346 DEG. F ALM
C   24 CONTROL PANEL      72.196 DEG. F ALM
C   25 RELAY AREA         63.820 DEG. F ALM
C   26 BATTERY LEFT       96.624 DEG. F ALM
C   27 BATTERY RIGHT      101.52 DEG. F ALM
C   28 AIR IN SET         58.824 DEG. F ALM
C   29 FUEL TANK          78.334 DEG. F ALM
C   30 FUEL OUTLET        95.944 DEG. F ALM

END SCAN GROUP 1     18 NOV 87  16:59:27

STOPPED SINGLE SCAN  18 NOV 87  16:59:27
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BEGIN SCAN GROUP 1   18 NOV 87  16:49:28
30KW 60HZ GEN SET S/NRZ5 3774

C    1 EXHAUST 1          644.48 DEG. F ALM
C    2 EXHAUST 2          675.73 DEG. F ALM
C    3 EXHAUST 3          694.59 DEG. F ALM
C    4 EXHAUST 4          666.48 DEG. F ALM
C    5 EXHAUST 5          684.27 DEG. F ALM
C    6 EXHAUST 6          662.58 DEG. F ALM
C    7 ENG. COOL. IN      162.49 DEG. F ALM
C    8 ENG. COOL. OUT     179.76 DEG. F ALM
C    9 OIL SUMP           205.88 DEG. F ALM
C   10 OIL GALLERY        206.15 DEG. F ALM
C   11                    .00000
C   12                    .00000
C   13  ENG. INTAKE       67.797 DEG. F ALM
C   14 RAD. TOP LEFT      98.488 DEG. F ALM
C   15 RAD. BTTM LEFT     94.154 DEG. F ALM
C   16 RAD. TOP RIGHT     99.152 DEG. F ALM
C   17 RAD. BTTM RIGHT    98.847 DEG. F ALM
C   18 GEN. AIR IN        59.678 DEG. F ALM
C   19 GEN. AIR OUT       76.868 DEG. F ALM
C   20 GEN. FRAME TOP     71.188 DEG. F ALM
C   21 GEN. FRAME BTTM    69.849 DEG. F ALM
C   22 GEN. EXCITER       68.698 DEG. F ALM
C   23 GEN. VOLT. REG.    75.367 DEG. F ALM
C   24 CONTROL PANEL      73.121 DEG. F ALM
C   25 RELAY AREA         65.379 DEG. F ALM
C   26 BATTERY LEFT       96.919 DEG. F ALM
C   27 BATTERY RIGHT      101.59 DEG. F ALM
C   28 AIR IN SET         60.148 DEG. F ALM
C   29 FUEL TANK          78.199 DEG. F ALM
C   30 FUEL OUTLET        97.399 DEG. F ALM

END SCAN GROUP 1     18 NOV 87  16:49:38

STOPPED SINGLE SCAN  18 NOV 87  16:49:38
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BEGIN SCAN GROUP 1   18 NOV 87  17:08:41
30KW 60HZ GEN SET S/NRZ5 3774

C    1 EXHAUST 1          643.98 DEG. F ALM
C    2 EXHAUST 2          675.57 DEG. F ALM
C    3 EXHAUST 3          693.63 DEG. F ALM
C    4 EXHAUST 4          664.52 DEG. F ALM
C    5 EXHAUST 5          682.57 DEG. F ALM
C    6 EXHAUST 6          662.24 DEG. F ALM
C    7 ENG. COOL. IN      161.90 DEG. F ALM
C    8 ENG. COOL. OUT     179.34 DEG. F ALM
C    9 OIL SUMP           205.63 DEG. F ALM
C   10 OIL GALLERY        205.81 DEG. F ALM
C   11                    .00000
C   12                    .00000
C   13  ENG. INTAKE       67.034 DEG. F ALM
C   14 RAD. TOP LEFT      98.142 DEG. F ALM
C   15 RAD. BTTM LEFT     93.427 DEG. F ALM
C   16 RAD. TOP RIGHT     98.269 DEG. F ALM
C   17 RAD. BTTM RIGHT    97.262 DEG. F ALM
C   18 GEN. AIR IN        58.082 DEG. F ALM
C   19 GEN. AIR OUT       74.243 DEG. F ALM
C   20 GEN. FRAME TOP     69.138 DEG. F ALM
C   21 GEN. FRAME BTTM    67.289 DEG. F ALM
C   22 GEN. EXCITER       67.498 DEG. F ALM
C   23 GEN. VOLT. REG.    73.745 DEG. F ALM
C   24 CONTROL PANEL      71.675 DEG. F ALM
C   25 RELAY AREA         64.105 DEG. F ALM
C   26 BATTERY LEFT       96.772 DEG. F ALM
C   27 BATTERY RIGHT      101.96 DEG. F ALM
C   28 AIR IN SET         58.338 DEG. F ALM
C   29 FUEL TANK          78.307 DEG. F ALM
C   30 FUEL OUTLET        94.587 DEG. F ALM

END SCAN GROUP 1     18 NOV 87  17:08:51

STOPPED SINGLE SCAN  18 NOV 87  17:08:51
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BEGIN SCAN GROUP 1 18 NOV 87 17:09:52
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	470.37	DEG. F	ALM
C	2	EXHAUST 2	497.18	DEG. F	ALM
C	3	EXHAUST 3	491.55	DEG. F	ALM
C	4	EXHAUST 4	505.44	DEG. F	ALM
C	5	EXHAUST 5	514.27	DEG. F	ALM
C	6	EXHAUST 6	509.20	DEG. F	ALM
C	7	ENG. COOL. IN	161.92	DEG. F	ALM
C	8	ENG. COOL. OUT	178.79	DEG. F	ALM
C	9	OIL SUMP	205.91	DEG. F	ALM
C	10	OIL GALLERY	205.72	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	66.645	DEG. F	ALM
C	14	RAD. TOP LEFT	97.387	DEG. F	ALM
C	15	RAD. BTTM LEFT	93.124	DEG. F	ALM
C	16	RAD. TOP RIGHT	97.967	DEG. F	ALM
C	17	RAD. BTTM RIGHT	96.988	DEG. F	ALM
C	18	GEN. AIR IN	57.211	DEG. F	ALM
C	19	GEN. AIR OUT	73.651	DEG. F	ALM
C	20	GEN. FRAME TOP	68.983	DEG. F	ALM
C	21	GEN. FRAME BTTM	67.859	DEG. F	ALM
C	22	GEN. EXCITER	67.212	DEG. F	ALM
C	23	GEN. VOLT. REG.	73.597	DEG. F	ALM
C	24	CONTROL PANEL	71.682	DEG. F	ALM
C	25	RELAY AREA	63.824	DEG. F	ALM
C	26	BATTERY LEFT	96.775	DEG. F	ALM
C	27	BATTERY RIGHT	101.75	DEG. F	ALM
C	28	AIR IN SET	57.426	DEG. F	ALM
C	29	FUEL TANK	78.235	DEG. F	ALM
C	30	FUEL OUTLET	93.748	DEG. F	ALM

END SCAN GROUP 1 18 NOV 87 17:10:02

STOPPED SINGLE SCAN 18 NOV 87 17:10:02

BEGIN SCAN GROUP 1 18 NOV 87 17:10:51
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	528.49	DEG. F	ALM
C	2	EXHAUST 2	562.62	DEG. F	ALM
C	3	EXHAUST 3	578.14	DEG. F	ALM
C	4	EXHAUST 4	563.64	DEG. F	ALM
C	5	EXHAUST 5	583.61	DEG. F	ALM
C	6	EXHAUST 6	558.21	DEG. F	ALM
C	7	ENG. COOL. IN	155.87	DEG. F	ALM
C	8	ENG. COOL. OUT	172.87	DEG. F	ALM
C	9	OIL SUMP	205.31	DEG. F	ALM
C	10	OIL GALLERY	205.10	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	66.719	DEG. F	ALM
C	14	RAD. TOP LEFT	104.58	DEG. F	ALM
C	15	RAD. BTTM LEFT	100.18	DEG. F	ALM
C	16	RAD. TOP RIGHT	103.25	DEG. F	ALM
C	17	RAD. BTTM RIGHT	101.55	DEG. F	ALM
C	18	GEN. AIR IN	59.259	DEG. F	ALM
C	19	GEN. AIR OUT	74.888	DEG. F	ALM
C	20	GEN. FRAME TOP	68.953	DEG. F	ALM
C	21	GEN. FRAME BTTM	67.851	DEG. F	ALM
C	22	GEN. EXCITER	67.934	DEG. F	ALM
C	23	GEN. VOLT. REG.	73.548	DEG. F	ALM
C	24	CONTROL PANEL	71.572	DEG. F	ALM
C	25	RELAY AREA	63.892	DEG. F	ALM
C	26	BATTERY LEFT	96.828	DEG. F	ALM
C	27	BATTERY RIGHT	101.79	DEG. F	ALM
C	28	AIR IN SET	57.754	DEG. F	ALM
C	29	FUEL TANK	78.179	DEG. F	ALM
C	30	FUEL OUTLET	95.337	DEG. F	ALM

END SCAN GROUP 1 18 NOV 87 17:11:01

STOPPED SINGLE SCAN 18 NOV 87 17:11:01

BEGIN SCAN GROUP 1 18 NOV 87 17:11:47
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	458.26	DEG. F	ALM
C	2	EXHAUST 2	478.06	DEG. F	ALM
C	3	EXHAUST 3	466.19	DEG. F	ALM
C	4	EXHAUST 4	484.55	DEG. F	ALM
C	5	EXHAUST 5	491.53	DEG. F	ALM
C	6	EXHAUST 6	484.84	DEG. F	ALM
C	7	ENG. COOL. IN	159.91	DEG. F	ALM
C	8	ENG. COOL. OUT	174.74	DEG. F	ALM
C	9	OIL SUMP	204.87	DEG. F	ALM
C	10	OIL GALLERY	204.83	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	68.279	DEG. F	ALM
C	14	RAD. TOP LEFT	112.56	DEG. F	ALM
C	15	RAD. BTTM LEFT	108.88	DEG. F	ALM
C	16	RAD. TOP RIGHT	111.59	DEG. F	ALM
C	17	RAD. BTTM RIGHT	109.68	DEG. F	ALM
C	18	GEN. AIR IN	62.118	DEG. F	ALM
C	19	GEN. AIR OUT	75.532	DEG. F	ALM
C	20	GEN. FRAME TOP	69.577	DEG. F	ALM
C	21	GEN. FRAME BTTM	68.559	DEG. F	ALM
C	22	GEN. EXCITER	68.663	DEG. F	ALM
C	23	GEN. VOLT. REG.	73.463	DEG. F	ALM
C	24	CONTROL PANEL	71.289	DEG. F	ALM
C	25	RELAY AREA	64.838	DEG. F	ALM
C	26	BATTERY LEFT	96.845	DEG. F	ALM
C	27	BATTERY RIGHT	101.84	DEG. F	ALM
C	28	AIR IN SET	58.255	DEG. F	ALM
C	29	FUEL TANK	78.875	DEG. F	ALM
C	30	FUEL OUTLET	94.598	DEG. F	ALM

END SCAN GROUP 1 18 NOV 87 17:11:57

STOPPED SINGLE SCAN 18 NOV 87 17:11:57

BEGIN SCAN GROUP 1 18 NOV 87 17:12:38
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	517.87	DEG. F	ALM
C	2	EXHAUST 2	547.97	DEG. F	ALM
C	3	EXHAUST 3	563.44	DEG. F	ALM
C	4	EXHAUST 4	558.99	DEG. F	ALM
C	5	EXHAUST 5	572.96	DEG. F	ALM
C	6	EXHAUST 6	546.58	DEG. F	ALM
C	7	ENG. COOL. IN	168.18	DEG. F	ALM
C	8	ENG. COOL. OUT	173.86	DEG. F	ALM
C	9	OIL SUMP	204.49	DEG. F	ALM
C	10	OIL GALLERY	204.44	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	69.881	DEG. F	ALM
C	14	RAD. TOP LEFT	111.78	DEG. F	ALM
C	15	RAD. BTTM LEFT	108.36	DEG. F	ALM
C	16	RAD. TOP RIGHT	111.74	DEG. F	ALM
C	17	RAD. BTTM RIGHT	109.95	DEG. F	ALM
C	18	GEN. AIR IN	61.356	DEG. F	ALM
C	19	GEN. AIR OUT	74.987	DEG. F	ALM
C	20	GEN. FRAME TOP	69.997	DEG. F	ALM
C	21	GEN. FRAME BTTM	69.192	DEG. F	ALM
C	22	GEN. EXCITER	68.931	DEG. F	ALM
C	23	GEN. VOLT. REG.	73.415	DEG. F	ALM
C	24	CONTROL PANEL	71.165	DEG. F	ALM
C	25	RELAY AREA	64.899	DEG. F	ALM
C	26	BATTERY LEFT	96.957	DEG. F	ALM
C	27	BATTERY RIGHT	102.08	DEG. F	ALM
C	28	AIR IN SET	57.660	DEG. F	ALM
C	29	FUEL TANK	78.660	DEG. F	ALM
C	30	FUEL OUTLET	96.778	DEG. F	ALM

END SCAN GROUP 1 18 NOV 87 17:12:40

STOPPED SINGLE SCAN 18 NOV 87 17:12:40

BEGIN SCAN GROUP 1 18 NOV 87 17:13:24
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	500.40	DEG. F	ALM
C	2	EXHAUST 2	529.70	DEG. F	ALM
C	3	EXHAUST 3	521.42	DEG. F	ALM
C	4	EXHAUST 4	526.89	DEG. F	ALM
C	5	EXHAUST 5	535.89	DEG. F	ALM
C	6	EXHAUST 6	527.35	DEG. F	ALM
C	7	ENG. COOL. IN	161.61	DEG. F	ALM
C	8	ENG. COOL. OUT	176.77	DEG. F	ALM
C	9	OIL SUMP	204.29	DEG. F	ALM
C	10	OIL GALLERY	204.41	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	69.689	DEG. F	ALM
C	14	RAD. TOP LEFT	112.58	DEG. F	ALM
C	15	RAD. BTTM LEFT	109.84	DEG. F	ALM
C	16	RAD. TOP RIGHT	112.36	DEG. F	ALM
C	17	RAD. BTTM RIGHT	110.58	DEG. F	ALM
C	18	GEN. AIR IN	61.888	DEG. F	ALM
C	19	GEN. AIR OUT	75.875	DEG. F	ALM
C	20	GEN. FRAME TOP	78.161	DEG. F	ALM
C	21	GEN. FRAME BTTM	69.411	DEG. F	ALM
C	22	GEN. EXCITER	69.846	DEG. F	ALM
C	23	GEN. VOLT. REG.	73.427	DEG. F	ALM
C	24	CONTROL PANEL	71.841	DEG. F	ALM
C	25	RELAY AREA	64.955	DEG. F	ALM
C	26	BATTERY LEFT	97.137	DEG. F	ALM
C	27	BATTERY RIGHT	102.24	DEG. F	ALM
C	28	AIR IN SET	57.438	DEG. F	ALM
C	29	FUEL TANK	78.012	DEG. F	ALM
C	30	FUEL OUTLET	95.126	DEG. F	ALM

END SCAN GROUP 1 18 NOV 87 17:13:34

STOPPED SINGLE SCAN 18 NOV 87 17:13:34

BEGIN SCAN GROUP 1 18 NOV 87 18:51:17
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	115.90	DEG. F	ALM
C	2	EXHAUST 2	115.24	DEG. F	ALM
C	3	EXHAUST 3	115.26	DEG. F	ALM
C	4	EXHAUST 4	114.78	DEG. F	ALM
C	5	EXHAUST 5	114.58	DEG. F	ALM
C	6	EXHAUST 6	114.78	DEG. F	ALM
C	7	ENG. COOL. IN	94.604	DEG. F	ALM
C	8	ENG. COOL. OUT		OPEN	TC
C	9	OIL SUMP	123.67	DEG. F	ALM
C	10	OIL GALLERY	121.34	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	106.99	DEG. F	ALM
C	14	RAD. TOP LEFT		OPEN	TC
C	15	RAD. BTTM LEFT		OPEN	TC
C	16	RAD. TOP RIGHT		OPEN	TC
C	17	RAD. BTTM RIGHT	76.784	DEG. F	ALM
C	18	GEN. AIR IN	58.870	DEG. F	ALM
C	19	GEN. AIR OUT	75.985	DEG. F	ALM
C	20	GEN. FRAME TOP	74.267	DEG. F	ALM
C	21	GEN. FRAME BTTM	64.419	DEG. F	ALM
C	22	GEN. EXCITER	69.836	DEG. F	ALM
C	23	GEN. VOLT. REG.	78.718	DEG. F	ALM
C	24	CONTROL PANEL	78.078	DEG. F	ALM
C	25	RELAY AREA	58.445	DEG. F	ALM
C	26	BATTERY LEFT	83.688	DEG. F	ALM
C	27	BATTERY RIGHT	83.485	DEG. F	ALM
C	28	AIR IN SET	56.262	DEG. F	ALM
C	29	FUEL TANK	69.629	DEG. F	ALM
C	30	FUEL OUTLET	77.641	DEG. F	ALM

END SCAN GROUP 1 18 NOV 87 18:51:27

STOPPED SINGLE SCAN 18 NOV 87 18:51:27

BEGIN SCAN GROUP 1 18 NOV 87 18:52:19
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	115.09	DEG. F	ALM
C	2	EXHAUST 2	114.45	DEG. F	ALM
C	3	EXHAUST 3	114.48	DEG. F	ALM
C	4	EXHAUST 4	114.08	DEG. F	ALM
C	5	EXHAUST 5	113.74	DEG. F	ALM
C	6	EXHAUST 6	114.10	DEG. F	ALM
C	7	ENG. COOL. IN	94.821	DEG. F	ALM
C	8	ENG. COOL. OUT	121.35	DEG. F	ALM
C	9	OIL SUMP	122.99	DEG. F	ALM
C	10	OIL GALLERY	120.61	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	105.94	DEG. F	ALM
C	14	RAD. TOP LEFT	88.731	DEG. F	ALM
C	15	RAD. BTTM LEFT		OPEN	TC
C	16	RAD. TOP RIGHT		OPEN	TC
C	17	RAD. BTTM RIGHT	76.146	DEG. F	ALM
C	18	GEN. AIR IN	58.940	DEG. F	ALM
C	19	GEN. AIR OUT	75.860	DEG. F	ALM
C	20	GEN. FRAME TOP	74.190	DEG. F	ALM
C	21	GEN. FRAME BTTM	64.369	DEG. F	ALM
C	22	GEN. EXCITER	69.848	DEG. F	ALM
C	23	GEN. VOLT. REG.	78.465	DEG. F	ALM
C	24	CONTROL PANEL	77.544	DEG. F	ALM
C	25	RELAY AREA	58.367	DEG. F	ALM
C	26	BATTERY LEFT	83.489	DEG. F	ALM
C	27	BATTERY RIGHT	83.308	DEG. F	ALM
C	28	AIR IN SET	57.976	DEG. F	ALM
C	29	FUEL TANK	69.606	DEG. F	ALM
C	30	FUEL OUTLET	76.878	DEG. F	ALM

END SCAN GROUP 1 18 NOV 87 18:52:29

STOPPED SINGLE SCAN 18 NOV 87 18:52:29

BEGIN SCAN GROUP 1 18 NOV 87 18:57:07
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	110.80	DEG. F	ALM
C	2	EXHAUST 2	110.24	DEG. F	ALM
C	3	EXHAUST 3	110.52	DEG. F	ALM
C	4	EXHAUST 4	110.13	DEG. F	ALM
C	5	EXHAUST 5	109.60	DEG. F	ALM
C	6	EXHAUST 6	109.78	DEG. F	ALM
C	7	ENG. COOL. IN	91.714	DEG. F	ALM
C	8	ENG. COOL. OUT	118.32	DEG. F	ALM
C	9	OIL SUMP	120.65	DEG. F	ALM
C	10	OIL GALLERY	117.77	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	102.61	DEG. F	ALM
C	14	RAD. TOP LEFT	89.632	DEG. F	ALM
C	15	RAD. BTTM LEFT	70.500	DEG. F	ALM
C	16	RAD. TOP RIGHT	85.769	DEG. F	ALM
C	17	RAD. BTTM RIGHT	76.036	DEG. F	ALM
C	18	GEN. AIR IN	59.586	DEG. F	ALM
C	19	GEN. AIR OUT	68.319	DEG. F	ALM
C	20	GEN. FRAME TOP	74.713	DEG. F	ALM
C	21	GEN. FRAME BTTM	64.586	DEG. F	ALM
C	22	GEN. EXCITER	64.268	DEG. F	ALM
C	23	GEN. VOLT. REG.	77.132	DEG. F	ALM
C	24	CONTROL PANEL	75.431	DEG. F	ALM
C	25	RELAY AREA	58.188	DEG. F	ALM
C	26	BATTERY LEFT	82.207	DEG. F	ALM
C	27	BATTERY RIGHT	84.354	DEG. F	ALM
C	28	AIR IN SET	56.793	DEG. F	ALM
C	29	FUEL TANK	69.376	DEG. F	ALM
C	30	FUEL OUTLET	74.110	DEG. F	ALM

END SCAN GROUP 1 18 NOV 87 18:57:27

STOPPED SINGLE SCAN 18 NOV 87 18:57:27

BEGIN SCAN GROUP 1 18 NOV 87 18:59:15
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	271.36	DEG. F	ALM
C	2	EXHAUST 2	289.88	DEG. F	ALM
C	3	EXHAUST 3	287.34	DEG. F	ALM
C	4	EXHAUST 4	297.64	DEG. F	ALM
C	5	EXHAUST 5	281.88	DEG. F	ALM
C	6	EXHAUST 6	278.69	DEG. F	ALM
C	7	ENG. COOL. IN	91.359	DEG. F	ALM
C	8	ENG. COOL. OUT	116.76	DEG. F	ALM
C	9	OIL SUMP	121.84	DEG. F	ALM
C	10	OIL GALLERY	122.86	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	86.587	DEG. F	ALM
C	14	RAD. TOP LEFT	77.321	DEG. F	ALM
C	15	RAD. BTTM LEFT	76.289	DEG. F	ALM
C	16	RAD. TOP RIGHT	78.527	DEG. F	ALM
C	17	RAD. BTTM RIGHT	76.857	DEG. F	ALM
C	18	GEN. AIR IN	67.178	DEG. F	ALM
C	19	GEN. AIR OUT	78.145	DEG. F	ALM
C	20	GEN. FRAME TOP	74.598	DEG. F	ALM
C	21	GEN. FRAME BTTM	66.868	DEG. F	ALM
C	22	GEN. EXCITER	65.618	DEG. F	ALM
C	23	GEN. VOLT. REG.	76.585	DEG. F	ALM
C	24	CONTROL PANEL	74.544	DEG. F	ALM
C	25	RELAY AREA	58.821	DEG. F	ALM
C	26	BATTERY LEFT	81.766	DEG. F	ALM
C	27	BATTERY RIGHT	84.861	DEG. F	ALM
C	28	AIR IN SET	68.174	DEG. F	ALM
C	29	FUEL TANK	69.499	DEG. F	ALM
C	30	FUEL OUTLET	77.365	DEG. F	ALM

END SCAN GROUP 1 18 NOV 87 18:59:25

BEGIN SCAN GROUP 1 18 NOV 87 19:19:0
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	672.19	DEG. F	AL
C	2	EXHAUST 2	691.66	DEG. F	AL
C	3	EXHAUST 3	715.82	DEG. F	AL
C	4	EXHAUST 4	694.71	DEG. F	AL
C	5	EXHAUST 5	699.54	DEG. F	AL
C	6	EXHAUST 6	679.69	DEG. F	AL
C	7	ENG. COOL. IN	164.28	DEG. F	AL
C	8	ENG. COOL. OUT	188.78	DEG. F	AL
C	9	OIL SUMP	196.36	DEG. F	AL
C	10	OIL GALLERY	196.86	DEG. F	AL
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	67.203	DEG. F	AL
C	14	RAD. TOP LEFT	188.74	DEG. F	AL
C	15	RAD. BTTM LEFT	96.165	DEG. F	AL
C	16	RAD. TOP RIGHT	99.884	DEG. F	AL
C	17	RAD. BTTM RIGHT	98.879	DEG. F	AL
C	18	GEN. AIR IN	58.674	DEG. F	AL
C	19	GEN. AIR OUT	76.323	DEG. F	AL
C	20	GEN. FRAME TOP	78.873	DEG. F	AL
C	21	GEN. FRAME BTTM	66.931	DEG. F	AL
C	22	GEN. EXCITER	67.165	DEG. F	AL
C	23	GEN. VOLT. REG.	75.816	DEG. F	AL
C	24	CONTROL PANEL	73.133	DEG. F	AL
C	25	RELAY AREA	56.738	DEG. F	AL
C	26	BATTERY LEFT	94.813	DEG. F	AL
C	27	BATTERY RIGHT	93.867	DEG. F	AL
C	28	AIR IN SET	56.998	DEG. F	AL
C	29	FUEL TANK	71.968	DEG. F	AL
C	30	FUEL OUTLET	92.612	DEG. F	AL

END SCAN GROUP 1 18 NOV 87 19:19:1

BEGIN SCAN GROUP 1 18 NOV 87 19:10:15
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	675.84	DEG. F	ALM
C	2	EXHAUST 2	695.72	DEG. F	ALM
C	3	EXHAUST 3	719.57	DEG. F	ALM
C	4	EXHAUST 4	691.35	DEG. F	ALM
C	5	EXHAUST 5	701.81	DEG. F	ALM
C	6	EXHAUST 6	684.18	DEG. F	ALM
C	7	ENG. COOL. IN	163.87	DEG. F	ALM
C	8	ENG. COOL. OUT	179.78	DEG. F	ALM
C	9	OIL SUMP	179.75	DEG. F	ALM
C	10	OIL GALLERY	181.19	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	67.382	DEG. F	ALM
C	14	RAD. TOP LEFT	188.78	DEG. F	ALM
C	15	RAD. BTTM LEFT	95.788	DEG. F	ALM
C	16	RAD. TOP RIGHT	99.979	DEG. F	ALM
C	17	RAD. BTTM RIGHT	97.869	DEG. F	ALM
C	18	GEN. AIR IN	57.875	DEG. F	ALM
C	19	GEN. AIR OUT	74.611	DEG. F	ALM
C	20	GEN. FRAME TOP	78.764	DEG. F	ALM
C	21	GEN. FRAME BTTM	67.963	DEG. F	ALM
C	22	GEN. EXCITER	67.832	DEG. F	ALM
C	23	GEN. VOLT. REG.	76.325	DEG. F	ALM
C	24	CONTROL PANEL	75.342	DEG. F	ALM
C	25	RELAY AREA	57.871	DEG. F	ALM
C	26	BATTERY LEFT	93.863	DEG. F	ALM
C	27	BATTERY RIGHT	92.481	DEG. F	ALM
C	28	AIR IN SET	54.667	DEG. F	ALM
C	29	FUEL TANK	71.676	DEG. F	ALM
C	30	FUEL OUTLET	93.264	DEG. F	ALM

END SCAN GROUP 1 18 NOV 87 19:10:25

BEGIN SCAN GROUP 1 18 NOV 87 19:29:4
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	668.55	DEG. F	ALM
C	2	EXHAUST 2	689.14	DEG. F	ALM
C	3	EXHAUST 3	715.38	DEG. F	ALM
C	4	EXHAUST 4	686.14	DEG. F	ALM
C	5	EXHAUST 5	697.13	DEG. F	ALM
C	6	EXHAUST 6	681.97	DEG. F	ALM
C	7	ENG. COOL. IN	164.81	DEG. F	ALM
C	8	ENG. COOL. OUT	181.33	DEG. F	ALM
C	9	OIL SUMP	203.58	DEG. F	ALM
C	10	OIL GALLERY	203.72	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	67.590	DEG. F	ALM
C	14	RAD. TOP LEFT	188.16	DEG. F	ALM
C	15	RAD. BTTM LEFT	96.112	DEG. F	ALM
C	16	RAD. TOP RIGHT	188.18	DEG. F	ALM
C	17	RAD. BTTM RIGHT	98.779	DEG. F	ALM
C	18	GEN. AIR IN	59.065	DEG. F	ALM
C	19	GEN. AIR OUT	77.374	DEG. F	ALM
C	20	GEN. FRAME TOP	69.998	DEG. F	ALM
C	21	GEN. FRAME BTTM	66.488	DEG. F	ALM
C	22	GEN. EXCITER	67.153	DEG. F	ALM
C	23	GEN. VOLT. REG.	73.698	DEG. F	ALM
C	24	CONTROL PANEL	71.571	DEG. F	ALM
C	25	RELAY AREA	56.489	DEG. F	ALM
C	26	BATTERY LEFT	95.362	DEG. F	ALM
C	27	BATTERY RIGHT	93.498	DEG. F	ALM
C	28	AIR IN SET	58.188	DEG. F	ALM
C	29	FUEL TANK	72.553	DEG. F	ALM
C	30	FUEL OUTLET	91.728	DEG. F	ALM

END SCAN GROUP 1 18 NOV 87 19:29:5

BEGIN SCAN GROUP 1 18 NOV 87 19:39:14
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	669.88	DEG. F	ALM
C	2	EXHAUST 2	691.71	DEG. F	ALM
C	3	EXHAUST 3	716.43	DEG. F	ALM
C	4	EXHAUST 4	685.70	DEG. F	ALM
C	5	EXHAUST 5	695.56	DEG. F	ALM
C	6	EXHAUST 6	678.28	DEG. F	ALM
C	7	ENG. COOL. IN	164.62	DEG. F	ALM
C	8	ENG. COOL. OUT	188.89	DEG. F	ALM
C	9	OIL SUMP	205.78	DEG. F	ALM
C	10	OIL GALLERY	205.93	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	68.453	DEG. F	ALM
C	14	RAD. TOP LEFT	99.885	DEG. F	ALM
C	15	RAD. BTTM LEFT	96.467	DEG. F	ALM
C	16	RAD. TOP RIGHT	100.89	DEG. F	ALM
C	17	RAD. BTTM RIGHT	98.960	DEG. F	ALM
C	18	GEN. AIR IN	58.008	DEG. F	ALM
C	19	GEN. AIR OUT	77.921	DEG. F	ALM
C	20	GEN. FRAME TOP	78.328	DEG. F	ALM
C	21	GEN. FRAME BTTM	66.185	DEG. F	ALM
C	22	GEN. EXCITER	67.386	DEG. F	ALM
C	23	GEN. VOLT. REG.	72.681	DEG. F	ALM
C	24	CONTROL PANEL	78.814	DEG. F	ALM
C	25	RELAY AREA	56.881	DEG. F	ALM
C	26	BATTERY LEFT	95.428	DEG. F	ALM
C	27	BATTERY RIGHT	93.488	DEG. F	ALM
C	28	AIR IN SET	56.724	DEG. F	ALM
C	29	FUEL TANK	72.756	DEG. F	ALM
C	30	FUEL OUTLET	92.885	DEG. F	ALM

END SCAN GROUP 1 18 NOV 87 19:39:24

BEGIN SCAN GROUP 1 18 NOV 87 19:42:16
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	608.38	DEG. F	ALM
C	2	EXHAUST 2	625.37	DEG. F	ALM
C	3	EXHAUST 3	644.14	DEG. F	ALM
C	4	EXHAUST 4	620.93	DEG. F	ALM
C	5	EXHAUST 5	638.38	DEG. F	ALM
C	6	EXHAUST 6	615.87	DEG. F	ALM
C	7	ENG. COOL. IN	155.98	DEG. F	ALM
C	8	ENG. COOL. OUT	171.13	DEG. F	ALM
C	9	OIL SUMP	205.16	DEG. F	ALM
C	10	OIL GALLERY	205.32	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	67.277	DEG. F	ALM
C	14	RAD. TOP LEFT	110.44	DEG. F	ALM
C	15	RAD. BTTM LEFT	106.14	DEG. F	ALM
C	16	RAD. TOP RIGHT	108.18	DEG. F	ALM
C	17	RAD. BTTM RIGHT	109.25	DEG. F	ALM
C	18	GEN. AIR IN	62.711	DEG. F	ALM
C	19	GEN. AIR OUT	77.912	DEG. F	ALM
C	20	GEN. FRAME TOP	78.881	DEG. F	ALM
C	21	GEN. FRAME BTTM	66.885	DEG. F	ALM
C	22	GEN. EXCITER	67.878	DEG. F	ALM
C	23	GEN. VOLT. REG.	72.416	DEG. F	ALM
C	24	CONTROL PANEL	78.638	DEG. F	ALM
C	25	RELAY AREA	56.485	DEG. F	ALM
C	26	BATTERY LEFT	95.551	DEG. F	ALM
C	27	BATTERY RIGHT	93.457	DEG. F	ALM
C	28	AIR IN SET	55.399	DEG. F	ALM
C	29	FUEL TANK	72.882	DEG. F	ALM
C	30	FUEL OUTLET	93.838	DEG. F	ALM

END SCAN GROUP 1 18 NOV 87 19:42:28

BEGIN SCAN GROUP 1 18 NOV 87 19:48:58
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	484.89	DEG. F	ALM
C	2	EXHAUST 2	506.23	DEG. F	ALM
C	3	EXHAUST 3	506.88	DEG. F	ALM
C	4	EXHAUST 4	515.28	DEG. F	ALM
C	5	EXHAUST 5	518.63	DEG. F	ALM
C	6	EXHAUST 6	518.58	DEG. F	ALM
C	7	ENG. COOL. IN	164.38	DEG. F	ALM
C	8	ENG. COOL. OUT	188.58	DEG. F	ALM
C	9	OIL SUMP	206.18	DEG. F	ALM
C	10	OIL GALLERY	206.88	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	68.368	DEG. F	ALM
C	14	RAD. TOP LEFT	97.659	DEG. F	ALM
C	15	RAD. BTTM LEFT	94.434	DEG. F	ALM
C	16	RAD. TOP RIGHT	99.478	DEG. F	ALM
C	17	RAD. BTTM RIGHT	98.139	DEG. F	ALM
C	18	GEN. AIR IN	56.999	DEG. F	ALM
C	19	GEN. AIR OUT	76.541	DEG. F	ALM
C	20	GEN. FRAME TOP	78.489	DEG. F	ALM
C	21	GEN. FRAME BTTM	66.166	DEG. F	ALM
C	22	GEN. EXCITER	66.952	DEG. F	ALM
C	23	GEN. VOLT. REG.	72.687	DEG. F	ALM
C	24	CONTROL PANEL	78.746	DEG. F	ALM
C	25	RELAY AREA	56.785	DEG. F	ALM
C	26	BATTERY LEFT	95.518	DEG. F	ALM
C	27	BATTERY RIGHT	93.398	DEG. F	ALM
C	28	AIR IN SET	54.963	DEG. F	ALM
C	29	FUEL TANK	72.867	DEG. F	ALM
C	30	FUEL OUTLET	92.457	DEG. F	ALM

END SCAN GROUP 1 18 NOV 87 19:48:59

BEGIN SCAN GROUP 1 18 NOV 87 19:43:30
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	462.36	DEG. F	ALM
C	2	EXHAUST 2	481.83	DEG. F	ALM
C	3	EXHAUST 3	473.65	DEG. F	ALM
C	4	EXHAUST 4	498.91	DEG. F	ALM
C	5	EXHAUST 5	494.28	DEG. F	ALM
C	6	EXHAUST 6	498.63	DEG. F	ALM
C	7	ENG. COOL. IN	165.68	DEG. F	ALM
C	8	ENG. COOL. OUT	179.91	DEG. F	ALM
C	9	OIL SUMP	205.28	DEG. F	ALM
C	10	OIL GALLERY	205.18	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	69.481	DEG. F	ALM
C	14	RAD. TOP LEFT	113.58	DEG. F	ALM
C	15	RAD. BTTM LEFT	108.12	DEG. F	ALM
C	16	RAD. TOP RIGHT	114.15	DEG. F	ALM
C	17	RAD. BTTM RIGHT	111.75	DEG. F	ALM
C	18	GEN. AIR IN	64.139	DEG. F	ALM
C	19	GEN. AIR OUT	78.469	DEG. F	ALM
C	20	GEN. FRAME TOP	78.975	DEG. F	ALM
C	21	GEN. FRAME BTTM	69.132	DEG. F	ALM
C	22	GEN. EXCITER	68.795	DEG. F	ALM
C	23	GEN. VOLT. REG.	72.375	DEG. F	ALM
C	24	CONTROL PANEL	78.481	DEG. F	ALM
C	25	RELAY AREA	56.358	DEG. F	ALM
C	26	BATTERY LEFT	95.638	DEG. F	ALM
C	27	BATTERY RIGHT	93.565	DEG. F	ALM
C	28	AIR IN SET	55.965	DEG. F	ALM
C	29	FUEL TANK	73.821	DEG. F	ALM
C	30	FUEL OUTLET	93.398	DEG. F	ALM

END SCAN GROUP 1 18 NOV 87 19:43:40

STOPPED SINGLE SCAN 18 NOV 87 19:43:40

BEGIN SCAN GROUP 1 18 NOV 87 19:44:36
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	554.83	DEG. F	ALM
C	2	EXHAUST 2	572.17	DEG. F	ALM
C	3	EXHAUST 3	593.17	DEG. F	ALM
C	4	EXHAUST 4	573.25	DEG. F	ALM
C	5	EXHAUST 5	594.67	DEG. F	ALM
C	6	EXHAUST 6	569.43	DEG. F	ALM
C	7	ENG. COOL. IN	159.20	DEG. F	ALM
C	8	ENG. COOL. OUT	174.81	DEG. F	ALM
C	9	OIL SUMP	204.78	DEG. F	ALM
C	10	OIL GALLERY	204.79	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	69.184	DEG. F	ALM
C	14	RAD. TOP LEFT	102.82	DEG. F	ALM
C	15	RAD. BTTM LEFT	98.035	DEG. F	ALM
C	16	RAD. TOP RIGHT	104.28	DEG. F	ALM
C	17	RAD. BTTM RIGHT	101.47	DEG. F	ALM
C	18	GEN. AIR IN	59.124	DEG. F	ALM
C	19	GEN. AIR OUT	76.483	DEG. F	ALM
C	20	GEN. FRAME TOP	71.024	DEG. F	ALM
C	21	GEN. FRAME BTTM	68.354	DEG. F	ALM
C	22	GEN. EXCITER	68.038	DEG. F	ALM
C	23	GEN. VOLT. REG.	72.375	DEG. F	ALM
C	24	CONTROL PANEL	76.481	DEG. F	ALM
C	25	RELAY AREA	56.545	DEG. F	ALM
C	26	BATTERY LEFT	96.166	DEG. F	ALM
C	27	BATTERY RIGHT	93.692	DEG. F	ALM
C	28	AIR IN SET	56.358	DEG. F	ALM
C	29	FUEL TANK	73.534	DEG. F	ALM
C	30	FUEL OUTLET	94.602	DEG. F	ALM

END SCAN GROUP 1 18 NOV 87 19:44:46

STOPPED SINGLE SCAN 18 NOV 87 19:44:46

BEGIN SCAN GROUP 1 18 NOV 87 19:50:0
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	639.81	DEG. F	AL
C	2	EXHAUST 2	664.82	DEG. F	AL
C	3	EXHAUST 3	687.11	DEG. F	AL
C	4	EXHAUST 4	656.24	DEG. F	AL
C	5	EXHAUST 5	668.32	DEG. F	AL
C	6	EXHAUST 6	652.98	DEG. F	AL
C	7	ENG. COOL. IN	164.40	DEG. F	AL
C	8	ENG. COOL. OUT	188.97	DEG. F	AL
C	9	OIL SUMP	204.74	DEG. F	AL
C	10	OIL GALLERY	204.72	DEG. F	AL
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	65.612	DEG. F	AL
C	14	RAD. TOP LEFT	98.415	DEG. F	AL
C	15	RAD. BTTM LEFT	94.163	DEG. F	AL
C	16	RAD. TOP RIGHT	100.12	DEG. F	AL
C	17	RAD. BTTM RIGHT	97.382	DEG. F	AL
C	18	GEN. AIR IN	54.962	DEG. F	AL
C	19	GEN. AIR OUT	73.516	DEG. F	AL
C	20	GEN. FRAME TOP	70.131	DEG. F	AL
C	21	GEN. FRAME BTTM	67.632	DEG. F	AL
C	22	GEN. EXCITER	65.993	DEG. F	AL
C	23	GEN. VOLT. REG.	71.993	DEG. F	AL
C	24	CONTROL PANEL	78.152	DEG. F	AL
C	25	RELAY AREA	55.764	DEG. F	AL
C	26	BATTERY LEFT	97.388	DEG. F	AL
C	27	BATTERY RIGHT	94.356	DEG. F	AL
C	28	AIR IN SET	52.807	DEG. F	AL
C	29	FUEL TANK	74.062	DEG. F	AL
C	30	FUEL OUTLET	96.327	DEG. F	AL

END SCAN GROUP 1 18 NOV 87 19:50:12

STOPPED SINGLE SCAN 18 NOV 87 19:50:1

BEGIN SCAN GROUP 1 18 NOV 87 19:45:49
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	450.54	DEG. F	ALM
C	2	EXHAUST 2	476.52	DEG. F	ALM
C	3	EXHAUST 3	469.37	DEG. F	ALM
C	4	EXHAUST 4	487.78	DEG. F	ALM
C	5	EXHAUST 5	490.92	DEG. F	ALM
C	6	EXHAUST 6	488.81	DEG. F	ALM
C	7	ENG. COOL. IN	162.64	DEG. F	ALM
C	8	ENG. COOL. OUT	177.91	DEG. F	ALM
C	9	OIL SUMP	204.64	DEG. F	ALM
C	10	OIL GALLERY	204.59	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	69.182	DEG. F	ALM
C	14	RAD. TOP LEFT	108.63	DEG. F	ALM
C	15	RAD. BTTM LEFT	103.87	DEG. F	ALM
C	16	RAD. TOP RIGHT	109.10	DEG. F	ALM
C	17	RAD. BTTM RIGHT	107.48	DEG. F	ALM
C	18	GEN. AIR IN	59.569	DEG. F	ALM
C	19	GEN. AIR OUT	77.275	DEG. F	ALM
C	20	GEN. FRAME TOP	71.643	DEG. F	ALM
C	21	GEN. FRAME BTTM	69.848	DEG. F	ALM
C	22	GEN. EXCITER	68.367	DEG. F	ALM
C	23	GEN. VOLT. REG.	72.313	DEG. F	ALM
C	24	CONTROL PANEL	78.424	DEG. F	ALM
C	25	RELAY AREA	56.454	DEG. F	ALM
C	26	BATTERY LEFT	96.459	DEG. F	ALM
C	27	BATTERY RIGHT	93.859	DEG. F	ALM
C	28	AIR IN SET	55.216	DEG. F	ALM
C	29	FUEL TANK	73.759	DEG. F	ALM
C	30	FUEL OUTLET	94.922	DEG. F	ALM

END SCAN GROUP 1 18 NOV 87 19:45:59

STOPPED SINGLE SCAN 18 NOV 87 19:45:59

BEGIN SCAN GROUP 1 18 NOV 87 19:59:1
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	644.72	DEG. F	AL
C	2	EXHAUST 2	673.87	DEG. F	AL
C	3	EXHAUST 3	696.85	DEG. F	AL
C	4	EXHAUST 4	667.32	DEG. F	AL
C	5	EXHAUST 5	677.67	DEG. F	AL
C	6	EXHAUST 6	663.19	DEG. F	AL
C	7	ENG. COOL. IN	162.62	DEG. F	AL
C	8	ENG. COOL. OUT	179.42	DEG. F	AL
C	9	OIL SUMP	205.53	DEG. F	AL
C	10	OIL GALLERY	205.71	DEG. F	AL
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	65.987	DEG. F	AL
C	14	RAD. TOP LEFT	98.713	DEG. F	AL
C	15	RAD. BTTM LEFT	93.988	DEG. F	AL
C	16	RAD. TOP RIGHT	98.587	DEG. F	AL
C	17	RAD. BTTM RIGHT	96.753	DEG. F	AL
C	18	GEN. AIR IN	55.995	DEG. F	AL
C	19	GEN. AIR OUT	73.152	DEG. F	AL
C	20	GEN. FRAME TOP	68.222	DEG. F	AL
C	21	GEN. FRAME BTTM	65.543	DEG. F	AL
C	22	GEN. EXCITER	65.647	DEG. F	AL
C	23	GEN. VOLT. REG.	71.338	DEG. F	AL
C	24	CONTROL PANEL	69.627	DEG. F	AL
C	25	RELAY AREA	55.832	DEG. F	AL
C	26	BATTERY LEFT	96.645	DEG. F	AL
C	27	BATTERY RIGHT	93.919	DEG. F	AL
C	28	AIR IN SET	54.172	DEG. F	AL
C	29	FUEL TANK	74.005	DEG. F	AL
C	30	FUEL OUTLET	93.443	DEG. F	AL

END SCAN GROUP 1 18 NOV 87 19:59:2

STOPPED SINGLE SCAN 18 NOV 87 19:59:2

BEGIN SCAN GROUP 1 18 NOV 87 20:08:35
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	643.41	DEG. F	ALM
C	2	EXHAUST 2	672.44	DEG. F	ALM
C	3	EXHAUST 3	694.57	DEG. F	ALM
C	4	EXHAUST 4	666.96	DEG. F	ALM
C	5	EXHAUST 5	676.61	DEG. F	ALM
C	6	EXHAUST 6	662.66	DEG. F	ALM
C	7	ENG. COOL. IN	162.72	DEG. F	ALM
C	8	ENG. COOL. OUT	179.55	DEG. F	ALM
C	9	OIL SUMP	205.61	DEG. F	ALM
C	10	OIL GALLERY	205.83	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	66.361	DEG. F	ALM
C	14	RAD. TOP LEFT	99.325	DEG. F	ALM
C	15	RAD. BTTM LEFT	94.997	DEG. F	ALM
C	16	RAD. TOP RIGHT	99.152	DEG. F	ALM
C	17	RAD. BTTM RIGHT	97.348	DEG. F	ALM
C	18	GEN. AIR IN	57.636	DEG. F	ALM
C	19	GEN. AIR OUT	72.959	DEG. F	ALM
C	20	GEN. FRAME TOP	67.655	DEG. F	ALM
C	21	GEN. FRAME BTTM	64.843	DEG. F	ALM
C	22	GEN. EXCITER	66.537	DEG. F	ALM
C	23	GEN. VOLT. REG.	78.828	DEG. F	ALM
C	24	CONTROL PANEL	69.218	DEG. F	ALM
C	25	RELAY AREA	55.998	DEG. F	ALM
C	26	BATTERY LEFT	96.497	DEG. F	ALM
C	27	BATTERY RIGHT	93.623	DEG. F	ALM
C	28	AIR IN SET	55.978	DEG. F	ALM
C	29	FUEL TANK	74.243	DEG. F	ALM
C	30	FUEL OUTLET	93.548	DEG. F	ALM

END SCAN GROUP 1 18 NOV 87 20:08:45

STOPPED SINGLE SCAN 18 NOV 87 20:08:45

BEGIN SCAN GROUP 1 18 NOV 87 20:22:0E
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	441.07	DEG. F	ALM
C	2	EXHAUST 2	464.70	DEG. F	ALM
C	3	EXHAUST 3	465.01	DEG. F	ALM
C	4	EXHAUST 4	477.07	DEG. F	ALM
C	5	EXHAUST 5	478.28	DEG. F	ALM
C	6	EXHAUST 6	488.52	DEG. F	ALM
C	7	ENG. COOL. IN	162.28	DEG. F	ALM
C	8	ENG. COOL. OUT	182.03	DEG. F	ALM
C	9	OIL SUMP	205.81	DEG. F	ALM
C	10	OIL GALLERY	205.77	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	66.116	DEG. F	ALM
C	14	RAD. TOP LEFT	98.825	DEG. F	ALM
C	15	RAD. BTTM LEFT	93.764	DEG. F	ALM
C	16	RAD. TOP RIGHT	98.538	DEG. F	ALM
C	17	RAD. BTTM RIGHT	96.438	DEG. F	ALM
C	18	GEN. AIR IN	56.888	DEG. F	ALM
C	19	GEN. AIR OUT	71.722	DEG. F	ALM
C	20	GEN. FRAME TOP	66.617	DEG. F	ALM
C	21	GEN. FRAME BTTM	63.462	DEG. F	ALM
C	22	GEN. EXCITER	65.888	DEG. F	ALM
C	23	GEN. VOLT. REG.	78.888	DEG. F	ALM
C	24	CONTROL PANEL	68.569	DEG. F	ALM
C	25	RELAY AREA	55.526	DEG. F	ALM
C	26	BATTERY LEFT	96.686	DEG. F	ALM
C	27	BATTERY RIGHT	93.478	DEG. F	ALM
C	28	AIR IN SET	54.546	DEG. F	ALM
C	29	FUEL TANK	74.527	DEG. F	ALM
C	30	FUEL OUTLET	91.124	DEG. F	ALM

END SCAN GROUP 1 18 NOV 87 20:22:1E

STOPPED SINGLE SCAN 18 NOV 87 20:22:1E

BEGIN SCAN GROUP 1 18 NOV 87 20:18:54
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	644.41	DEG. F	ALM
C	2	EXHAUST 2	672.44	DEG. F	ALM
C	3	EXHAUST 3	694.77	DEG. F	ALM
C	4	EXHAUST 4	665.16	DEG. F	ALM
C	5	EXHAUST 5	677.16	DEG. F	ALM
C	6	EXHAUST 6	662.64	DEG. F	ALM
C	7	ENG. COOL. IN	162.58	DEG. F	ALM
C	8	ENG. COOL. OUT	179.53	DEG. F	ALM
C	9	OIL SUMP	205.61	DEG. F	ALM
C	10	OIL GALLERY	205.81	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	66.279	DEG. F	ALM
C	14	RAD. TOP LEFT	98.772	DEG. F	ALM
C	15	RAD. BTTM LEFT	94.415	DEG. F	ALM
C	16	RAD. TOP RIGHT	98.646	DEG. F	ALM
C	17	RAD. BTTM RIGHT	96.659	DEG. F	ALM
C	18	GEN. AIR IN	56.879	DEG. F	ALM
C	19	GEN. AIR OUT	71.971	DEG. F	ALM
C	20	GEN. FRAME TOP	66.942	DEG. F	ALM
C	21	GEN. FRAME BTTM	64.388	DEG. F	ALM
C	22	GEN. EXCITER	65.325	DEG. F	ALM
C	23	GEN. VOLT. REG.	78.165	DEG. F	ALM
C	24	CONTROL PANEL	68.735	DEG. F	ALM
C	25	RELAY AREA	55.716	DEG. F	ALM
C	26	BATTERY LEFT	96.561	DEG. F	ALM
C	27	BATTERY RIGHT	93.459	DEG. F	ALM
C	28	AIR IN SET	54.399	DEG. F	ALM
C	29	FUEL TANK	74.562	DEG. F	ALM
C	30	FUEL OUTLET	92.238	DEG. F	ALM

END SCAN GROUP 1 18 NOV 87 20:19:04

STOPPED SINGLE SCAN 18 NOV 87 20:19:04

BEGIN SCAN GROUP 1 18 NOV 87 20:22:5E
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	544.78	DEG. F	ALM
C	2	EXHAUST 2	567.77	DEG. F	ALM
C	3	EXHAUST 3	593.43	DEG. F	ALM
C	4	EXHAUST 4	576.81	DEG. F	ALM
C	5	EXHAUST 5	591.89	DEG. F	ALM
C	6	EXHAUST 6	578.74	DEG. F	ALM
C	7	ENG. COOL. IN	157.27	DEG. F	ALM
C	8	ENG. COOL. OUT	171.54	DEG. F	ALM
C	9	OIL SUMP	205.22	DEG. F	ALM
C	10	OIL GALLERY	205.29	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	65.943	DEG. F	ALM
C	14	RAD. TOP LEFT	100.41	DEG. F	ALM
C	15	RAD. BTTM LEFT	96.238	DEG. F	ALM
C	16	RAD. TOP RIGHT	100.28	DEG. F	ALM
C	17	RAD. BTTM RIGHT	99.249	DEG. F	ALM
C	18	GEN. AIR IN	57.981	DEG. F	ALM
C	19	GEN. AIR OUT	72.099	DEG. F	ALM
C	20	GEN. FRAME TOP	66.595	DEG. F	ALM
C	21	GEN. FRAME BTTM	63.829	DEG. F	ALM
C	22	GEN. EXCITER	65.552	DEG. F	ALM
C	23	GEN. VOLT. REG.	69.945	DEG. F	ALM
C	24	CONTROL PANEL	68.596	DEG. F	ALM
C	25	RELAY AREA	55.526	DEG. F	ALM
C	26	BATTERY LEFT	96.527	DEG. F	ALM
C	27	BATTERY RIGHT	93.351	DEG. F	ALM
C	28	AIR IN SET	55.127	DEG. F	ALM
C	29	FUEL TANK	74.452	DEG. F	ALM
C	30	FUEL OUTLET	91.326	DEG. F	ALM

END SCAN GROUP 1 18 NOV 87 20:23:0

STOPPED SINGLE SCAN 18 NOV 87 20:23:0

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BEGIN SCAN GROUP 1    18 NOV 87   20:24:05
30KW 60HZ GEN SET S/NRZS 3774

C    1 EXHAUST 1          436.25 DEG.  F ALM
C    2 EXHAUST 2          459.45 DEG.  F ALM
C    3 EXHAUST 3          452.20 DEG.  F ALM
C    4 EXHAUST 4          469.62 DEG.  F ALM
C    5 EXHAUST 5          473.67 DEG.  F ALM
C    6 EXHAUST 6          472.27 DEG.  F ALM
C    7 ENG. COOL. IN      162.66 DEG.  F ALM
C    8 ENG. COOL. OUT     177.18 DEG.  F ALM
C    9 OIL SUMP           205.68 DEG.  F ALM
C   10 OIL GALLERY        204.92 DEG.  F ALM
C   11                    .00000
C   12                    .00000
C   13  ENG. INTAKE       67.363 DEG.  F ALM
C   14 RAD. TOP LEFT      112.12 DEG.  F ALM
C   15 RAD. BTTM LEFT     166.79 DEG.  F ALM
C   16 RAD. TOP RIGHT     111.26 DEG.  F ALM
C   17 RAD. BTTM RIGHT    116.87 DEG.  F ALM
C   18 GEN. AIR IN        62.271 DEG.  F ALM
C   19 GEN. AIR OUT       73.200 DEG.  F ALM
C   20 GEN. FRAME TOP     67.114 DEG.  F ALM
C   21 GEN. FRAME BTTM    65.967 DEG.  F ALM
C   22 GEN. EXCITER       66.617 DEG.  F ALM
C   23 GEN. VOLT. REG.    69.828 DEG.  F ALM
C   24 CONTROL PANEL      68.465 DEG.  F ALM
C   25 RELAY AREA         55.581 DEG.  F ALM
C   26 BATTERY LEFT       96.654 DEG.  F ALM
C   27 BATTERY RIGHT      93.351 DEG.  F ALM
C   28 AIR IN SET         53.255 DEG.  F ALM
C   29 FUEL TANK          75.252 DEG.  F ALM
C   30 FUEL OUTLET        92.365 DEG.  F ALM

END SCAN GROUP 1      18 NOV 87   20:24:15

STOPPED SINGLE SCAN   18 NOV 87   20:24:15
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BEGIN SCAN GROUP 1    18 NOV 87   20:24:50
30KW 60HZ GEN SET S/NRZS 3774

C    1 EXHAUST 1          551.09 DEG.  F ALM
C    2 EXHAUST 2          575.43 DEG.  F ALM
C    3 EXHAUST 3          597.70 DEG.  F ALM
C    4 EXHAUST 4          586.68 DEG.  F ALM
C    5 EXHAUST 5          596.69 DEG.  F ALM
C    6 EXHAUST 6          573.43 DEG.  F ALM
C    7 ENG. COOL. IN      161.36 DEG.  F ALM
C    8 ENG. COOL. OUT     176.12 DEG.  F ALM
C    9 OIL SUMP           204.62 DEG.  F ALM
C   10 OIL GALLERY        204.62 DEG.  F ALM
C   11                    .00000
C   12                    .00000
C   13  ENG. INTAKE       67.612 DEG.  F ALM
C   14 RAD. TOP LEFT      189.44 DEG.  F ALM
C   15 RAD. BTTM LEFT     184.66 DEG.  F ALM
C   16 RAD. TOP RIGHT     118.84 DEG.  F ALM
C   17 RAD. BTTM RIGHT    188.87 DEG.  F ALM
C   18 GEN. AIR IN        68.320 DEG.  F ALM
C   19 GEN. AIR OUT       72.570 DEG.  F ALM
C   20 GEN. FRAME TOP     67.272 DEG.  F ALM
C   21 GEN. FRAME BTTM    66.306 DEG.  F ALM
C   22 GEN. EXCITER       66.595 DEG.  F ALM
C   23 GEN. VOLT. REG.    69.793 DEG.  F ALM
C   24 CONTROL PANEL      68.416 DEG.  F ALM
C   25 RELAY AREA         55.476 DEG.  F ALM
C   26 BATTERY LEFT       96.880 DEG.  F ALM
C   27 BATTERY RIGHT      93.499 DEG.  F ALM
C   28 AIR IN SET         53.887 DEG.  F ALM
C   29 FUEL TANK          74.868 DEG.  F ALM
C   30 FUEL OUTLET        93.980 DEG.  F ALM

END SCAN GROUP 1      18 NOV 87   20:24:59

STOPPED SINGLE SCAN   18 NOV 87   20:24:59
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BEGIN SCAN GROUP 1    18 NOV 87   20:25:4
30KW 60HZ GEN SET S/NRZS 3774

C    1 EXHAUST 1          440.75 DEG.  F AL
C    2 EXHAUST 2          464.91 DEG.  F AL
C    3 EXHAUST 3          456.32 DEG.  F AL
C    4 EXHAUST 4          471.68 DEG.  F AL
C    5 EXHAUST 5          476.89 DEG.  F AL
C    6 EXHAUST 6          473.84 DEG.  F AL
C    7 ENG. COOL. IN      162.86 DEG.  F AL
C    8 ENG. COOL. OUT     178.83 DEG.  F AL
C    9 OIL SUMP           204.73 DEG.  F AL
C   10 OIL GALLERY        204.57 DEG.  F AL
C   11                    .00000
C   12                    .00000
C   13  ENG. INTAKE       67.893 DEG.  F AL
C   14 RAD. TOP LEFT      118.21 DEG.  F AL
C   15 RAD. BTTM LEFT     165.28 DEG.  F AL
C   16 RAD. TOP RIGHT     118.75 DEG.  F AL
C   17 RAD. BTTM RIGHT    188.76 DEG.  F AL
C   18 GEN. AIR IN        61.898 DEG.  F AL
C   19 GEN. AIR OUT       72.898 DEG.  F AL
C   20 GEN. FRAME TOP     67.424 DEG.  F AL
C   21 GEN. FRAME BTTM    66.569 DEG.  F AL
C   22 GEN. EXCITER       66.803 DEG.  F AL
C   23 GEN. VOLT. REG.    69.739 DEG.  F AL
C   24 CONTROL PANEL      68.362 DEG.  F AL
C   25 RELAY AREA         55.393 DEG.  F AL
C   26 BATTERY LEFT       97.181 DEG.  F AL
C   27 BATTERY RIGHT      93.626 DEG.  F AL
C   28 AIR IN SET         54.336 DEG.  F AL
C   29 FUEL TANK          75.225 DEG.  F AL
C   30 FUEL OUTLET        92.137 DEG.  F AL

END SCAN GROUP 1      18 NOV 87   20:25:5
STOPPED SINGLE SCAN   18 NOV 87   20:25:5
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TEST DATA

ITEM 30 KW 60HZ
1-PH SET
MODIFIED
MFGR. LIBBY WELDING
MODEL NO. MEP005A
SERIAL NO. X25 3774

NTS
National Technical Systems | Scientific Services Group | Testing Division, P.O. Box 38, Hartwood, Virginia 22471, Tel: 703 752 5300

HIGH TEMP 710.1.3.2(H)(8)

FREQUENCY AND VOLTAGE STABILITY TEST
(LONG TERM)

REF. NO. MIL-STD 705: 608.2
SHEET 1 OF 2
DATE 10 NOV 87
JOB NO. 555-2140
PROJ. ENGR.
RECORDER/OBSERVER BLANCO

INST TIME	STEP NO.	LOAD STEP	E6028D VOLTAGE L_1-L_0 VAC	L_2-L_0 VAC	L_3-L_0 VAC	E6040D AMPERES x40 L_1-L_0 AC AMPS	L_2-L_0 AC AMPS	L_3-L_0 AC AMPS	E6230D KILOWATTS x40 L_1-L_0 Kw	L_2-L_0 Kw	L_3-L_0 Kw	E6240D POWER FACTOR PF	E6040D FREQ. Hz	E6190 EXCITER FIELD VOLTS VDC	AMPS DCA	AMB. TEMP. °F	STEADY W/EXH / IN H2O
0830		STARTED UNIT															
0835		PLACED ON RATED LOAD				STARTED			STABILIZATION								
0840		R/L	119.5	121.0	120.5	2.48	2.52	2.52	.246	.25	.248	.80	60.2	8.8	3.4	124	13.3/35.8
0845		R/L	119.5	121.0	120.5	2.48	2.52	2.52	.246	.25	.248	.80	60.0	9.2	3.5	126	13.4/37.3
0850		R/L	119.5	121.0	120.5	2.48	2.52	2.52	.247	.252	.249	.80	59.9	9.4	3.5	126	13.3/37.0
0855		R/L	119.5	121.0	120.5	2.48	2.52	2.52	.247	.252	.249	.80	59.8	9.5	3.6	129	13.2/37.1
0900		R/L	119.5	121.0	120.5	2.48	2.52	2.52	.247	.252	.249	.80	59.8	9.7	3.6	124	13.2/37.1
0905		R/L	119.5	121.0	120.5	2.48	2.52	2.52	.247	.252	.249	.80	59.7	9.7	3.6	125	13.3/37.8
0910		R/L	119.5	121.0	120.5	2.48	2.52	2.52	.247	.252	.249	.80	59.7	9.8	3.6	125	13.2/37.6
0915	23	R/L	119.6	121	120.5	2.49	2.51	2.51	.248	.251	.249	.80	59.7	9.8	3.6	124	13.2/38.1
0920		R/L	119.5	121	120.5	2.48	2.52	2.52	.247	.252	.249	.80	59.7	9.8	3.6	125	13.3/38.1
		PERFORMED R/L SHORT TERM STABILITY															
0930		R/L	119.5	121	120.5	2.48	2.52	2.52	.247	.252	.249	.80	59.7	9.8	3.6	125	13.3/38.1
0935		START LONG TERM STABILITY @ R/L															
0940		R/L	120	121	120.4	2.49	2.51	2.51	.249	.251	.25	.80	59.6	9.9	3.6	123	13.3/38.1
0945		R/L	119.9	121	120.3	2.49	2.51	2.51	.249	.251	.249	.80	59.7	9.9	3.6	123	13.3/38.6
0950		R/L	119.9	121.1	120.4	2.49	2.51	2.51	.249	.251	.25	.80	59.6	9.9	3.6	125	13.3/38.4
0955		R/L	119.95	121.3	120.3	2.49	2.51	2.51	.249	.251	.25	.80	59.65	9.9	3.6	122	13.2/38.2
1000		R/L	119.9	121.5	120.5	2.49	2.51	2.53	.249	.251	.25	.80	59.6	9.9	3.7	125	13.2/37.8
1005		R/L	119.9	121.1	120.3	2.49	2.51	2.51	.249	.251	.25	.80	59.6	10.0	3.7	124	13.3/37.8
1010		R/L	119.9	121.2	120.3	2.49	2.51	2.51	.249	.251	.25	.80	59.6	10.0	3.7	124	13.3/37.5
1210		R/L	119.9	121.5	120.3	2.49	2.52	2.52	.249	.251	.25	.80	59.55	10.0	3.7	126	13.2/38.1
1212		REDUCED LOAD TO ZERO TO START STABILIZATION FOR NO LOAD															
1222		N/L	122	121	122	N/A	N/A	N/A	N/A	N/A	N/A	N/A	61.6	4.1	1.5	124	N/A/23.2
1232		N/L	122	121	122	N/A	N/A	N/A	N/A	N/A	N/A	N/A	61.6	4.1	1.5	123	N/A/23.4
1242		N/L	122	121	122	N/A	N/A	N/A	N/A	N/A	N/A	N/A	61.6	4.0	1.5	125	N/A/23.1

NOTES: UNIT FAILED FREQUENCY REGULATION

TEST DATA

ITEM SOKU 60Hz GENERATOR SET MODIFIED

MFGR. LIBBY WELDING

MODEL NO. ME° 005A

SERIAL NO. R2 53774

NTS

National Technical Systems | Scientific Services Group | Testing Division P.O. Box 38 Hartwood, Virginia 22471 Tel: 703 752 5300

HIGH TEMP MIL-STD 705 NO. 1,3,2(H)(8)

FREQUENCY AND VOLTAGE STABILITY TEST (LONG TERM)

REF. NO. MIL-STD 705; 608.2

SHEET 2 OF 2

DATE 10 NOV 1987

JOB NO. 555-2140

PROJ. ENGR.

RECORDER/OBSERVER EJ KM GC

INST TIME	STEP NO.	LOAD STEP	E6028D VOLTAGE L_1-L_0 VAC	L_2-L_0 VAC	L_3-L_0 VAC	E6040D AMPERES X 40 L_1-L_0 AC AMPS	L_2-L_0 AC AMPS	L_3-L_0 AC AMPS	E6230D KILOWATTS X 40 L_1-L_0 Kw	L_2-L_0 Kw	L_3-L_0 Kw	E62420 POWER FACTOR PF	E62410 FREQ. Hz	E6189D EXCITER FIELD VOLTS VDC	AMPS DCA	AMB. TEMP. °F	PRES IN/OUT IN H2O
1252		N/L	122	121	122								61.6	4.0	1.5	123	14.2/22.5
1253		PERFORM SHORT TERM	NO	LOAD	STABILITY												
1254		N/L	122	121	122								61.6	4.0	1.5	122	14.7/23.5
1255		START LONG TERM STA	BILITY	AT NO	LOAD												
1325		N/L	122	121	122								61.6	3.9	1.5	123	14.8/23.1
1355		N/L	122	121	122								61.5	4.0	1.5	124	14.7/23.6
1425		N/L	122	121	122								61.5	3.9	1.5	124	14.7/23.9
1455	6	N/L	122.1	121.1	122.1								61.5	3.9	1.5	124	14.6/24.2
1525	8	N/L	122.1	121.1	122.1								61.5	3.9	1.5	125	14.7/24.1
1555	1	N/L	122.1	121.1	122.1								61.45	4.0	1.5	124	14.4/24.3
1625	2	N/L	122.1	121.1	122.1								61.5	3.8	1.5	123	14.6/25.2
1655	3 4	N/L	122.1	121.1	122.1								61.5	3.9	1.5	124	14.5/25.5
1655		END OF LONG TERM STABILITY		AT NO	LOAD												
1700		R/L	120	121.5	120.5	2.54	2.56	2.56	.25	.255	.252	.795	59.4	9.1	3.5	124	13.3/22.7
		N/L	122.5	121	122								61.6	4.1	1.5	124	14.3/24.2
		R/L	120	121.5	121	2.54	2.56	2.56	.25	.255	.252	.795	59.4	9.2	3.6	124	13.3/25.2
		N/L	122.5	121	122								61.5	4.0	1.5	124	14.3/23.8
		R/L	120	121.5	120.5	2.54	2.56	2.56	.25	.255	.252	.795	59.4	9.3	3.6	124	13.2/25.4
		N/L	122.5	121	122								61.6	4.1	1.5	124	14.3/25.3
1705		END OF TEST															
1706		SHUT DOWN UNIT															

NOTES: TEST FAILURE - SEE COMPUTATION SHEET

TEST DATA

ITEM 30 KW 60 Hz GENERATOR SET MODIFIED

MFGR. LIBBY WELDING

MODEL NO. MEP 005A

SERIAL NO. R2S3224

NTS

National Technical Systems Scientific Services Group

Testing Division P.O. Box 38 Hartwood, Virginia 22471 tel: 703 752 5300

FREQUENCY AND VOLTAGE Stability

(Long Term) Method 608.2

REF. NO. MIL-STD-705

SHEET 1 OF 1

DATE 11 JAN 1988

JOB NO. 555-0140

PROJ. ENGR.

RECORDER/OBSERVER G.C./K.m.

	FREQUENCY							VOLTAGE							
	MAXIMUM EXCURSION				REC.	CONSTANT LOAD BANDWIDTH		REGULATION		MAXIMUM EXCURSION				REC.	CONSTANT LOAD BANDWIDTH	
	OVERSHOOT		UNDERSHOOT		TIME			FREQ.	VOLT	OVERSHOOT		UNDERSHOOT		TIME		
LOAD STEP	Hz	%	Hz	%	SEC	Hz	%	%	%	VOLT	%	VOLT	%	SEC	VOLT	%
R/L	STEADY STATE STABILIZATION					.10	.17							.17	.15	
N/L						.05	.15							.17	.15	
						SHORT TERM LOAD CHANGES										
1						.05	.09								.12	.15
1 - 2			1.35	2.26	.56			3.5	1.33			3.82	3.18	.23		
2						.09	.15								.17	.15
2 - 3	1.22	2.03			.39			3.66	1.25	4.11	3.47			.16		
3						.10	.17								.17	.15
3 - 4			1.38	2.22	.20			3.66	.83			3.30	2.75	.23		
4						.09	.15								.17	.15
4 - 5	1.01	1.68			.55			3.5	.83	3.64	3.04			.23		
5						.09	.15								.26	.32
5 - 6			1.29	2.14	.63			3.5	1.25			3.47	2.89	.23		
6						.09	.15								.17	.15
6 - 7	1.22	2.03			.55			3.66	1.25	3.47	2.85			.23		
7						.16	.26								.17	.15

NOTES: FREQUENCY REGULATION EXCEEDED 3%.

FREQUENCY/VOLTAGE STABILITY TEST 608.2
LOW TEMP

BEGIN SCAN GROUP 1 10 NOV 87 06:45:27
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	755.96	DEG. F	ALM
C	2	EXHAUST 2	778.76	DEG. F	ALM
C	3	EXHAUST 3	800.00	DEG. F	ALM
C	4	EXHAUST 4	779.66	DEG. F	ALM
C	5	EXHAUST 5	771.96	DEG. F	ALM
C	6	EXHAUST 6	762.01	DEG. F	ALM
C	7	ENG. COOL. IN	189.33	DEG. F	ALM
C	8	ENG. COOL. OUT	197.17	DEG. F	ALM
C	9	OIL SUMP	192.81	DEG. F	ALM
C	10	OIL GALLERY	194.42	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	127.94	DEG. F	ALM
C	14	RAD. TOP LEFT	141.29	DEG. F	ALM
C	15	RAD. BTTM LEFT	134.20	DEG. F	ALM
C	16	RAD. TOP RIGHT	132.92	DEG. F	ALM
C	17	RAD. BTTM RIGHT	136.93	DEG. F	ALM
C	18	GEN. AIR IN	121.63	DEG. F	ALM
C	19	GEN. AIR OUT	127.06	DEG. F	ALM
C	20	GEN. FRAME TOP	117.93	DEG. F	ALM
C	21	GEN. FRAME BTTM	113.93	DEG. F	ALM
C	22	GEN. EXCITER	126.23	DEG. F	ALM
C	23	GEN. VOLT. REG.	108.46	DEG. F	ALM
C	24	CONTROL PANEL	114.58	DEG. F	ALM
C	25	RELAY AREA	122.18	DEG. F	ALM
C	26	BATTERY LEFT	101.47	DEG. F	ALM
C	27	BATTERY RIGHT	103.72	DEG. F	ALM
C	28	AIR IN SET	123.55	DEG. F	ALM
C	29	FUEL TANK	89.944	DEG. F	ALM
C	30	FUEL OUTLET	117.10	DEG. F	ALM

END SCAN GROUP 1 10 NOV 87 06:45:38

STOPPED SINGLE SCAN 10 NOV 87 06:45:38

BEGIN SCAN GROUP 1 10 NOV 87 06:55:07
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	760.95	DEG. F	ALM
C	2	EXHAUST 2	782.60	DEG. F	ALM
C	3	EXHAUST 3	810.84	DEG. F	ALM
C	4	EXHAUST 4	785.83	DEG. F	ALM
C	5	EXHAUST 5	773.58	DEG. F	ALM
C	6	EXHAUST 6	766.13	DEG. F	ALM
C	7	ENG. COOL. IN	196.95	DEG. F	ALM
C	8	ENG. COOL. OUT	204.80	DEG. F	ALM
C	9	OIL SUMP	215.54	DEG. F	ALM
C	10	OIL GALLERY	216.81	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	131.49	DEG. F	ALM
C	14	RAD. TOP LEFT	146.21	DEG. F	ALM
C	15	RAD. BTTM LEFT	140.09	DEG. F	ALM
C	16	RAD. TOP RIGHT	139.42	DEG. F	ALM
C	17	RAD. BTTM RIGHT	143.07	DEG. F	ALM
C	18	GEN. AIR IN	123.96	DEG. F	ALM
C	19	GEN. AIR OUT	134.61	DEG. F	ALM
C	20	GEN. FRAME TOP	125.07	DEG. F	ALM
C	21	GEN. FRAME BTTM	121.26	DEG. F	ALM
C	22	GEN. EXCITER	130.19	DEG. F	ALM
C	23	GEN. VOLT. REG.	116.19	DEG. F	ALM
C	24	CONTROL PANEL	123.73	DEG. F	ALM
C	25	RELAY AREA	126.42	DEG. F	ALM
C	26	BATTERY LEFT	105.98	DEG. F	ALM
C	27	BATTERY RIGHT	105.75	DEG. F	ALM
C	28	AIR IN SET	126.05	DEG. F	ALM
C	29	FUEL TANK	90.898	DEG. F	ALM
C	30	FUEL OUTLET	133.18	DEG. F	ALM

END SCAN GROUP 1 10 NOV 87 06:55:17

STOPPED SINGLE SCAN 10 NOV 87 06:55:17

BEGIN SCAN GROUP 1 10 NOV 87 07:04:0
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	765.31	DEG. F	AL
C	2	EXHAUST 2	787.84	DEG. F	AL
C	3	EXHAUST 3	815.50	DEG. F	AL
C	4	EXHAUST 4	787.49	DEG. F	AL
C	5	EXHAUST 5	775.82	DEG. F	AL
C	6	EXHAUST 6	768.22	DEG. F	AL
C	7	ENG. COOL. IN	200.81	DEG. F	AL
C	8	ENG. COOL. OUT	208.77	DEG. F	AL
C	9	OIL SUMP	225.38	DEG. F	AL
C	10	OIL GALLERY	227.19	DEG. F	AL
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	132.96	DEG. F	AL
C	14	RAD. TOP LEFT	148.79	DEG. F	AL
C	15	RAD. BTTM LEFT	143.12	DEG. F	AL
C	16	RAD. TOP RIGHT	142.98	DEG. F	AL
C	17	RAD. BTTM RIGHT	146.69	DEG. F	AL
C	18	GEN. AIR IN	125.28	DEG. F	AL
C	19	GEN. AIR OUT	139.38	DEG. F	AL
C	20	GEN. FRAME TOP	128.61	DEG. F	AL
C	21	GEN. FRAME BTTM	124.78	DEG. F	AL
C	22	GEN. EXCITER	131.91	DEG. F	AL
C	23	GEN. VOLT. REG.	120.89	DEG. F	AL
C	24	CONTROL PANEL	128.80	DEG. F	AL
C	25	RELAY AREA	128.76	DEG. F	AL
C	26	BATTERY LEFT	109.31	DEG. F	AL
C	27	BATTERY RIGHT	108.14	DEG. F	AL
C	28	AIR IN SET	127.15	DEG. F	AL
C	29	FUEL TANK	92.313	DEG. F	AL
C	30	FUEL OUTLET	139.79	DEG. F	AL

END SCAN GROUP 1 10 NOV 87 07:04:1

STOPPED SINGLE SCAN 10 NOV 87 07:04:1

BEGIN SCAN GROUP 1 10 NOV 87 07:14:4
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	764.52	DEG. F	ALM
C	2	EXHAUST 2	786.68	DEG. F	ALM
C	3	EXHAUST 3	812.54	DEG. F	ALM
C	4	EXHAUST 4	781.86	DEG. F	ALM
C	5	EXHAUST 5	774.09	DEG. F	ALM
C	6	EXHAUST 6	763.63	DEG. F	ALM
C	7	ENG. COOL. IN	201.70	DEG. F	ALM
C	8	ENG. COOL. OUT	209.94	DEG. F	ALM
C	9	OIL SUMP	231.50	DEG. F	ALM
C	10	OIL GALLERY	233.26	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	131.43	DEG. F	ALM
C	14	RAD. TOP LEFT	147.82	DEG. F	ALM
C	15	RAD. BTTM LEFT	142.72	DEG. F	ALM
C	16	RAD. TOP RIGHT	143.42	DEG. F	ALM
C	17	RAD. BTTM RIGHT	146.84	DEG. F	ALM
C	18	GEN. AIR IN	122.51	DEG. F	ALM
C	19	GEN. AIR OUT	140.59	DEG. F	ALM
C	20	GEN. FRAME TOP	129.36	DEG. F	ALM
C	21	GEN. FRAME BTTM	125.44	DEG. F	ALM
C	22	GEN. EXCITER	131.08	DEG. F	ALM
C	23	GEN. VOLT. REG.	124.41	DEG. F	ALM
C	24	CONTROL PANEL	130.50	DEG. F	ALM
C	25	RELAY AREA	127.71	DEG. F	ALM
C	26	BATTERY LEFT	112.23	DEG. F	ALM
C	27	BATTERY RIGHT	110.37	DEG. F	ALM
C	28	AIR IN SET	124.56	DEG. F	ALM
C	29	FUEL TANK	94.386	DEG. F	ALM
C	30	FUEL OUTLET	145.42	DEG. F	ALM

END SCAN GROUP 1 10 NOV 87 07:14:5

STOPPED SINGLE SCAN 10 NOV 87 07:14:5

BEGIN SCAN GROUP 1 10 NOV 87 07:24:28
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	765.85	DEG. F	ALM
C	2	EXHAUST 2	786.87	DEG. F	ALM
C	3	EXHAUST 3	813.69	DEG. F	ALM
C	4	EXHAUST 4	775.25	DEG. F	ALM
C	5	EXHAUST 5	772.19	DEG. F	ALM
C	6	EXHAUST 6	763.82	DEG. F	ALM
C	7	ENG. COOL. IN	202.06	DEG. F	ALM
C	8	ENG. COOL. OUT	210.28	DEG. F	ALM
C	9	OIL SUMP	233.79	DEG. F	ALM
C	10	OIL GALLERY	235.46	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	131.53	DEG. F	ALM
C	14	RAD. TOP LEFT	148.26	DEG. F	ALM
C	15	RAD. BTTM LEFT	143.02	DEG. F	ALM
C	16	RAD. TOP RIGHT	144.10	DEG. F	ALM
C	17	RAD. BTTM RIGHT	147.32	DEG. F	ALM
C	18	GEN. AIR IN	122.79	DEG. F	ALM
C	19	GEN. AIR OUT	142.20	DEG. F	ALM
C	20	GEN. FRAME TOP	129.80	DEG. F	ALM
C	21	GEN. FRAME BTTM	125.49	DEG. F	ALM
C	22	GEN. EXCITER	131.12	DEG. F	ALM
C	23	GEN. VOLT. REG.	126.37	DEG. F	ALM
C	24	CONTROL PANEL	131.17	DEG. F	ALM
C	25	RELAY AREA	127.86	DEG. F	ALM
C	26	BATTERY LEFT	114.79	DEG. F	ALM
C	27	BATTERY RIGHT	112.78	DEG. F	ALM
C	28	AIR IN SET	124.27	DEG. F	ALM
C	29	FUEL TANK	96.310	DEG. F	ALM
C	30	FUEL OUTLET	147.37	DEG. F	ALM

END SCAN GROUP 1 10 NOV 87 07:24:38

STOPPED SINGLE SCAN 10 NOV 87 07:24:38

BEGIN SCAN GROUP 1 10 NOV 87 07:35:14
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	767.85	DEG. F	ALM
C	2	EXHAUST 2	790.20	DEG. F	ALM
C	3	EXHAUST 3	812.58	DEG. F	ALM
C	4	EXHAUST 4	774.09	DEG. F	ALM
C	5	EXHAUST 5	773.76	DEG. F	ALM
C	6	EXHAUST 6	761.90	DEG. F	ALM
C	7	ENG. COOL. IN	202.62	DEG. F	ALM
C	8	ENG. COOL. OUT	210.65	DEG. F	ALM
C	9	OIL SUMP	234.97	DEG. F	ALM
C	10	OIL GALLERY	236.64	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	131.64	DEG. F	ALM
C	14	RAD. TOP LEFT	148.72	DEG. F	ALM
C	15	RAD. BTTM LEFT	143.58	DEG. F	ALM
C	16	RAD. TOP RIGHT	144.87	DEG. F	ALM
C	17	RAD. BTTM RIGHT	147.91	DEG. F	ALM
C	18	GEN. AIR IN	122.92	DEG. F	ALM
C	19	GEN. AIR OUT	143.46	DEG. F	ALM
C	20	GEN. FRAME TOP	130.29	DEG. F	ALM
C	21	GEN. FRAME BTTM	126.08	DEG. F	ALM
C	22	GEN. EXCITER	131.16	DEG. F	ALM
C	23	GEN. VOLT. REG.	128.12	DEG. F	ALM
C	24	CONTROL PANEL	131.92	DEG. F	ALM
C	25	RELAY AREA	128.22	DEG. F	ALM
C	26	BATTERY LEFT	116.80	DEG. F	ALM
C	27	BATTERY RIGHT	115.01	DEG. F	ALM
C	28	AIR IN SET	125.12	DEG. F	ALM
C	29	FUEL TANK	98.467	DEG. F	ALM
C	30	FUEL OUTLET	148.46	DEG. F	ALM

END SCAN GROUP 1 10 NOV 87 07:35:24

STOPPED SINGLE SCAN 10 NOV 87 07:35:24

BEGIN SCAN GROUP 1 10 NOV 87 07:44:5
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	767.36	DEG. F	AL
C	2	EXHAUST 2	788.42	DEG. F	AL
C	3	EXHAUST 3	814.17	DEG. F	AL
C	4	EXHAUST 4	772.77	DEG. F	AL
C	5	EXHAUST 5	772.11	DEG. F	AL
C	6	EXHAUST 6	764.00	DEG. F	AL
C	7	ENG. COOL. IN	203.01	DEG. F	AL
C	8	ENG. COOL. OUT	211.08	DEG. F	AL
C	9	OIL SUMP	235.77	DEG. F	AL
C	10	OIL GALLERY	237.43	DEG. F	AL
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	131.82	DEG. F	AL
C	14	RAD. TOP LEFT	148.80	DEG. F	AL
C	15	RAD. BTTM LEFT	143.88	DEG. F	AL
C	16	RAD. TOP RIGHT	145.38	DEG. F	AL
C	17	RAD. BTTM RIGHT	148.30	DEG. F	AL
C	18	GEN. AIR IN	122.68	DEG. F	AL
C	19	GEN. AIR OUT	143.88	DEG. F	AL
C	20	GEN. FRAME TOP	130.65	DEG. F	AL
C	21	GEN. FRAME BTTM	126.46	DEG. F	AL
C	22	GEN. EXCITER	131.35	DEG. F	AL
C	23	GEN. VOLT. REG.	129.43	DEG. F	AL
C	24	CONTROL PANEL	132.42	DEG. F	AL
C	25	RELAY AREA	128.39	DEG. F	AL
C	26	BATTERY LEFT	118.18	DEG. F	AL
C	27	BATTERY RIGHT	117.17	DEG. F	AL
C	28	AIR IN SET	124.61	DEG. F	AL
C	29	FUEL TANK	100.34	DEG. F	AL
C	30	FUEL OUTLET	149.43	DEG. F	AL

END SCAN GROUP 1 10 NOV 87 07:45:0

STOPPED SINGLE SCAN 10 NOV 87 07:45:0

BEGIN SCAN GROUP 1 10 NOV 87 07:55:3
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	769.90	DEG. F	AL
C	2	EXHAUST 2	791.26	DEG. F	AL
C	3	EXHAUST 3	815.94	DEG. F	AL
C	4	EXHAUST 4	773.78	DEG. F	AL
C	5	EXHAUST 5	777.16	DEG. F	AL
C	6	EXHAUST 6	769.13	DEG. F	AL
C	7	ENG. COOL. IN	203.65	DEG. F	AL
C	8	ENG. COOL. OUT	211.90	DEG. F	AL
C	9	OIL SUMP	236.37	DEG. F	AL
C	10	OIL GALLERY	238.08	DEG. F	AL
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	132.10	DEG. F	AL
C	14	RAD. TOP LEFT	149.35	DEG. F	AL
C	15	RAD. BTTM LEFT	144.44	DEG. F	AL
C	16	RAD. TOP RIGHT	145.99	DEG. F	AL
C	17	RAD. BTTM RIGHT	148.88	DEG. F	AL
C	18	GEN. AIR IN	122.55	DEG. F	AL
C	19	GEN. AIR OUT	144.56	DEG. F	AL
C	20	GEN. FRAME TOP	130.98	DEG. F	AL
C	21	GEN. FRAME BTTM	127.89	DEG. F	AL
C	22	GEN. EXCITER	131.81	DEG. F	AL
C	23	GEN. VOLT. REG.	130.77	DEG. F	AL
C	24	CONTROL PANEL	133.10	DEG. F	AL
C	25	RELAY AREA	128.82	DEG. F	AL
C	26	BATTERY LEFT	120.15	DEG. F	AL
C	27	BATTERY RIGHT	119.16	DEG. F	AL
C	28	AIR IN SET	124.70	DEG. F	AL
C	29	FUEL TANK	102.30	DEG. F	AL
C	30	FUEL OUTLET	148.71	DEG. F	AL

END SCAN GROUP 1 10 NOV 87 07:55:4

STOPPED SINGLE SCAN 10 NOV 87 07:55:4

BEGIN SCAN GROUP 1 10 NOV 87 08:04:17
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	772.71	DEG. F	ALM
C	2	EXHAUST 2	792.25	DEG. F	ALM
C	3	EXHAUST 3	815.87	DEG. F	ALM
C	4	EXHAUST 4	774.13	DEG. F	ALM
C	5	EXHAUST 5	775.79	DEG. F	ALM
C	6	EXHAUST 6	768.31	DEG. F	ALM
C	7	ENG. COOL. IN	204.27	DEG. F	ALM
C	8	ENG. COOL. OUT	212.44	DEG. F	ALM
C	9	OIL SUMP	236.81	DEG. F	ALM
C	10	OIL GALLERY	238.53	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	132.43	DEG. F	ALM
C	14	RAD. TOP LEFT	149.72	DEG. F	ALM
C	15	RAD. BTTM LEFT	144.83	DEG. F	ALM
C	16	RAD. TOP RIGHT	146.41	DEG. F	ALM
C	17	RAD. BTTM RIGHT	149.24	DEG. F	ALM
C	18	GEN. AIR IN	123.44	DEG. F	ALM
C	19	GEN. AIR OUT	145.43	DEG. F	ALM
C	20	GEN. FRAME TOP	131.42	DEG. F	ALM
C	21	GEN. FRAME BTTM	127.22	DEG. F	ALM
C	22	GEN. EXCITER	132.15	DEG. F	ALM
C	23	GEN. VOLT. REG.	131.69	DEG. F	ALM
C	24	CONTROL PANEL	133.63	DEG. F	ALM
C	25	RELAY AREA	128.95	DEG. F	ALM
C	26	BATTERY LEFT	121.13	DEG. F	ALM
C	27	BATTERY RIGHT	126.47	DEG. F	ALM
C	28	AIR IN SET	125.80	DEG. F	ALM
C	29	FUEL TANK	103.93	DEG. F	ALM
C	30	FUEL OUTLET	149.31	DEG. F	ALM

END SCAN GROUP 1 10 NOV 87 08:04:27

STOPPED SINGLE SCAN 10 NOV 87 08:04:27

BEGIN SCAN GROUP 1 10 NOV 87 08:40:17
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	765.60	DEG. F	ALM
C	2	EXHAUST 2	790.88	DEG. F	ALM
C	3	EXHAUST 3	812.46	DEG. F	ALM
C	4	EXHAUST 4	771.83	DEG. F	ALM
C	5	EXHAUST 5	778.37	DEG. F	ALM
C	6	EXHAUST 6	765.47	DEG. F	ALM
C	7	ENG. COOL. IN	203.24	DEG. F	ALM
C	8	ENG. COOL. OUT	211.38	DEG. F	ALM
C	9	OIL SUMP	236.75	DEG. F	ALM
C	10	OIL GALLERY	238.41	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	131.18	DEG. F	ALM
C	14	RAD. TOP LEFT	148.63	DEG. F	ALM
C	15	RAD. BTTM LEFT	143.65	DEG. F	ALM
C	16	RAD. TOP RIGHT	145.57	DEG. F	ALM
C	17	RAD. BTTM RIGHT	148.24	DEG. F	ALM
C	18	GEN. AIR IN	121.38	DEG. F	ALM
C	19	GEN. AIR OUT	144.71	DEG. F	ALM
C	20	GEN. FRAME TOP	130.34	DEG. F	ALM
C	21	GEN. FRAME BTTM	126.38	DEG. F	ALM
C	22	GEN. EXCITER	130.73	DEG. F	ALM
C	23	GEN. VOLT. REG.	133.11	DEG. F	ALM
C	24	CONTROL PANEL	133.33	DEG. F	ALM
C	25	RELAY AREA	127.54	DEG. F	ALM
C	26	BATTERY LEFT	126.49	DEG. F	ALM
C	27	BATTERY RIGHT	126.37	DEG. F	ALM
C	28	AIR IN SET	123.46	DEG. F	ALM
C	29	FUEL TANK	169.81	DEG. F	ALM
C	30	FUEL OUTLET	150.22	DEG. F	ALM

END SCAN GROUP 1 10 NOV 87 08:40:27

STOPPED SINGLE SCAN 10 NOV 87 08:40:27

BEGIN SCAN GROUP 1 10 NOV 87 09:09:09
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	765.87	DEG. F	ALM
C	2	EXHAUST 2	790.86	DEG. F	ALM
C	3	EXHAUST 3	814.57	DEG. F	ALM
C	4	EXHAUST 4	770.30	DEG. F	ALM
C	5	EXHAUST 5	772.65	DEG. F	ALM
C	6	EXHAUST 6	764.10	DEG. F	ALM
C	7	ENG. COOL. IN	203.10	DEG. F	ALM
C	8	ENG. COOL. OUT	211.27	DEG. F	ALM
C	9	OIL SUMP	236.47	DEG. F	ALM
C	10	OIL GALLERY	238.11	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	130.89	DEG. F	ALM
C	14	RAD. TOP LEFT	148.36	DEG. F	ALM
C	15	RAD. BTTM LEFT	143.60	DEG. F	ALM
C	16	RAD. TOP RIGHT	145.66	DEG. F	ALM
C	17	RAD. BTTM RIGHT	148.24	DEG. F	ALM
C	18	GEN. AIR IN	122.23	DEG. F	ALM
C	19	GEN. AIR OUT	144.73	DEG. F	ALM
C	20	GEN. FRAME TOP	130.81	DEG. F	ALM
C	21	GEN. FRAME BTTM	126.80	DEG. F	ALM
C	22	GEN. EXCITER	130.77	DEG. F	ALM
C	23	GEN. VOLT. REG.	133.49	DEG. F	ALM
C	24	CONTROL PANEL	133.12	DEG. F	ALM
C	25	RELAY AREA	127.68	DEG. F	ALM
C	26	BATTERY LEFT	130.36	DEG. F	ALM
C	27	BATTERY RIGHT	129.53	DEG. F	ALM
C	28	AIR IN SET	124.87	DEG. F	ALM
C	29	FUEL TANK	113.69	DEG. F	ALM
C	30	FUEL OUTLET	150.83	DEG. F	ALM

END SCAN GROUP 1 10 NOV 87 09:09:19

STOPPED SINGLE SCAN 10 NOV 87 09:09:19

BEGIN SCAN GROUP 1 10 NOV 87 09:39:54
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	768.96	DEG. F	ALM
C	2	EXHAUST 2	793.39	DEG. F	ALM
C	3	EXHAUST 3	818.53	DEG. F	ALM
C	4	EXHAUST 4	778.22	DEG. F	ALM
C	5	EXHAUST 5	777.11	DEG. F	ALM
C	6	EXHAUST 6	763.81	DEG. F	ALM
C	7	ENG. COOL. IN	204.46	DEG. F	ALM
C	8	ENG. COOL. OUT	212.57	DEG. F	ALM
C	9	OIL SUMP	236.88	DEG. F	ALM
C	10	OIL GALLERY	238.44	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	132.63	DEG. F	ALM
C	14	RAD. TOP LEFT	149.92	DEG. F	ALM
C	15	RAD. BTTM LEFT	145.03	DEG. F	ALM
C	16	RAD. TOP RIGHT	147.02	DEG. F	ALM
C	17	RAD. BTTM RIGHT	149.92	DEG. F	ALM
C	18	GEN. AIR IN	123.67	DEG. F	ALM
C	19	GEN. AIR OUT	145.98	DEG. F	ALM
C	20	GEN. FRAME TOP	131.54	DEG. F	ALM
C	21	GEN. FRAME BTTM	127.33	DEG. F	ALM
C	22	GEN. EXCITER	132.58	DEG. F	ALM
C	23	GEN. VOLT. REG.	134.23	DEG. F	ALM
C	24	CONTROL PANEL	133.91	DEG. F	ALM
C	25	RELAY AREA	129.33	DEG. F	ALM
C	26	BATTERY LEFT	133.89	DEG. F	ALM
C	27	BATTERY RIGHT	133.57	DEG. F	ALM
C	28	AIR IN SET	125.50	DEG. F	ALM
C	29	FUEL TANK	117.41	DEG. F	ALM
C	30	FUEL OUTLET	151.66	DEG. F	ALM

END SCAN GROUP 1 10 NOV 87 09:40:04

STOPPED SINGLE SCAN 10 NOV 87 09:40:04

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BEGIN SCAN GROUP 1   10 NOV 87  10:09:29
30KW 60HZ GEN SET S/NRZ5 3774

C    1 EXHAUST 1          764.75 DEG. F ALM
C    2 EXHAUST 2          789.57 DEG. F ALM
C    3 EXHAUST 3          813.49 DEG. F ALM
C    4 EXHAUST 4          768.48 DEG. F ALM
C    5 EXHAUST 5          774.67 DEG. F ALM
C    6 EXHAUST 6          761.82 DEG. F ALM
C    7 ENG. COOL. IN      203.49 DEG. F ALM
C    8 ENG. COOL. OUT     211.59 DEG. F ALM
C    9 OIL SUMP           236.88 DEG. F ALM
C   10 OIL GALLERY        238.58 DEG. F ALM
C   11                    .00000
C   12                    .00000
C   13  ENG. INTAKE       131.00 DEG. F ALM
C   14 RAD. TOP LEFT      148.57 DEG. F ALM
C   15 RAD. BTTM LEFT     143.96 DEG. F ALM
C   16 RAD. TOP RIGHT     146.25 DEG. F ALM
C   17 RAD. BTTM RIGHT    148.71 DEG. F ALM
C   18 GEN. AIR IN        121.59 DEG. F ALM
C   19 GEN. AIR OUT       144.79 DEG. F ALM
C   20 GEN. FRAME TOP     130.49 DEG. F ALM
C   21 GEN. FRAME BTTM    126.29 DEG. F ALM
C   22 GEN. EXCITER       131.17 DEG. F ALM
C   23 GEN. VOLT. REG.    134.30 DEG. F ALM
C   24 CONTROL PANEL      133.67 DEG. F ALM
C   25 RELAY AREA         127.84 DEG. F ALM
C   26 BATTERY LEFT       137.27 DEG. F ALM
C   27 BATTERY RIGHT      136.74 DEG. F ALM
C   28 AIR IN SET         123.38 DEG. F ALM
C   29 FUEL TANK          120.68 DEG. F ALM
C   30 FUEL OUTLET        151.66 DEG. F ALM

END SCAN GROUP 1     10 NOV 87  10:09:39

STOPPED SINGLE SCAN  10 NOV 87  10:09:39
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BEGIN SCAN GROUP 1   10 NOV 87  11:10:15
30KW 60HZ GEN SET S/NRZ5 3774

C    1 EXHAUST 1          773.81 DEG. F ALM
C    2 EXHAUST 2          797.73 DEG. F ALM
C    3 EXHAUST 3          817.72 DEG. F ALM
C    4 EXHAUST 4          774.03 DEG. F ALM
C    5 EXHAUST 5          777.09 DEG. F ALM
C    6 EXHAUST 6          767.62 DEG. F ALM
C    7 ENG. COOL. IN      205.36 DEG. F ALM
C    8 ENG. COOL. OUT     213.55 DEG. F ALM
C    9 OIL SUMP           238.21 DEG. F ALM
C   10 OIL GALLERY        239.80 DEG. F ALM
C   11                    .00000
C   12                    .00000
C   13  ENG. INTAKE       132.34 DEG. F ALM
C   14 RAD. TOP LEFT      149.83 DEG. F ALM
C   15 RAD. BTTM LEFT     145.34 DEG. F ALM
C   16 RAD. TOP RIGHT     147.73 DEG. F ALM
C   17 RAD. BTTM RIGHT    150.18 DEG. F ALM
C   18 GEN. AIR IN        123.35 DEG. F ALM
C   19 GEN. AIR OUT       146.66 DEG. F ALM
C   20 GEN. FRAME TOP     132.41 DEG. F ALM
C   21 GEN. FRAME BTTM    127.99 DEG. F ALM
C   22 GEN. EXCITER       132.36 DEG. F ALM
C   23 GEN. VOLT. REG.    135.43 DEG. F ALM
C   24 CONTROL PANEL      135.82 DEG. F ALM
C   25 RELAY AREA         129.40 DEG. F ALM
C   26 BATTERY LEFT       143.67 DEG. F ALM
C   27 BATTERY RIGHT      145.20 DEG. F ALM
C   28 AIR IN SET         125.43 DEG. F ALM
C   29 FUEL TANK          125.55 DEG. F ALM
C   30 FUEL OUTLET        153.60 DEG. F ALM

END SCAN GROUP 1     10 NOV 87  11:10:25

STOPPED SINGLE SCAN  10 NOV 87  11:10:25
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BEGIN SCAN GROUP 1   10 NOV 87  10:39:56
30KW 60HZ GEN SET S/NRZ5 3774

C    1 EXHAUST 1          771.26 DEG. F ALM
C    2 EXHAUST 2          796.68 DEG. F ALM
C    3 EXHAUST 3          818.01 DEG. F ALM
C    4 EXHAUST 4          773.72 DEG. F ALM
C    5 EXHAUST 5          779.81 DEG. F ALM
C    6 EXHAUST 6          769.82 DEG. F ALM
C    7 ENG. COOL. IN      204.19 DEG. F ALM
C    8 ENG. COOL. OUT     212.37 DEG. F ALM
C    9 OIL SUMP           237.82 DEG. F ALM
C   10 OIL GALLERY        238.69 DEG. F ALM
C   11                    .00000
C   12                    .00000
C   13  ENG. INTAKE       131.69 DEG. F ALM
C   14 RAD. TOP LEFT      149.19 DEG. F ALM
C   15 RAD. BTTM LEFT     144.43 DEG. F ALM
C   16 RAD. TOP RIGHT     146.68 DEG. F ALM
C   17 RAD. BTTM RIGHT    149.28 DEG. F ALM
C   18 GEN. AIR IN        122.86 DEG. F ALM
C   19 GEN. AIR OUT       145.20 DEG. F ALM
C   20 GEN. FRAME TOP     131.11 DEG. F ALM
C   21 GEN. FRAME BTTM    126.83 DEG. F ALM
C   22 GEN. EXCITER       131.62 DEG. F ALM
C   23 GEN. VOLT. REG.    134.41 DEG. F ALM
C   24 CONTROL PANEL      133.73 DEG. F ALM
C   25 RELAY AREA         128.39 DEG. F ALM
C   26 BATTERY LEFT       140.36 DEG. F ALM
C   27 BATTERY RIGHT      140.97 DEG. F ALM
C   28 AIR IN SET         124.69 DEG. F ALM
C   29 FUEL TANK          123.34 DEG. F ALM
C   30 FUEL OUTLET        152.60 DEG. F ALM

END SCAN GROUP 1     10 NOV 87  10:40:06

STOPPED SINGLE SCAN  10 NOV 87  10:40:06
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BEGIN SCAN GROUP 1   10 NOV 87  11:39:54
30KW 60HZ GEN SET S/NRZ5 3774

C    1 EXHAUST 1          767.84 DEG. F ALM
C    2 EXHAUST 2          795.28 DEG. F ALM
C    3 EXHAUST 3          815.50 DEG. F ALM
C    4 EXHAUST 4          770.00 DEG. F ALM
C    5 EXHAUST 5          778.35 DEG. F ALM
C    6 EXHAUST 6          769.51 DEG. F ALM
C    7 ENG. COOL. IN      203.80 DEG. F ALM
C    8 ENG. COOL. OUT     211.62 DEG. F ALM
C    9 OIL SUMP           236.76 DEG. F ALM
C   10 OIL GALLERY        238.53 DEG. F ALM
C   11                    .00000
C   12                    .00000
C   13  ENG. INTAKE       130.87 DEG. F ALM
C   14 RAD. TOP LEFT      148.56 DEG. F ALM
C   15 RAD. BTTM LEFT     144.16 DEG. F ALM
C   16 RAD. TOP RIGHT     146.24 DEG. F ALM
C   17 RAD. BTTM RIGHT    148.80 DEG. F ALM
C   18 GEN. AIR IN        122.12 DEG. F ALM
C   19 GEN. AIR OUT       145.17 DEG. F ALM
C   20 GEN. FRAME TOP     130.51 DEG. F ALM
C   21 GEN. FRAME BTTM    126.08 DEG. F ALM
C   22 GEN. EXCITER       130.95 DEG. F ALM
C   23 GEN. VOLT. REG.    134.53 DEG. F ALM
C   24 CONTROL PANEL      133.45 DEG. F ALM
C   25 RELAY AREA         127.91 DEG. F ALM
C   26 BATTERY LEFT       145.98 DEG. F ALM
C   27 BATTERY RIGHT      147.41 DEG. F ALM
C   28 AIR IN SET         124.56 DEG. F ALM
C   29 FUEL TANK          127.18 DEG. F ALM
C   30 FUEL OUTLET        152.20 DEG. F ALM

END SCAN GROUP 1     10 NOV 87  11:40:04

STOPPED SINGLE SCAN  10 NOV 87  11:40:04
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BEGIN SCAN GROUP 1   10 NOV 87  12:09:45
30KW 60HZ GEN SET S/NRZ5 3774

C    1 EXHAUST 1          771.66 DEG. F ALM
C    2 EXHAUST 2          797.08 DEG. F ALM
C    3 EXHAUST 3          817.96 DEG. F ALM
C    4 EXHAUST 4          776.23 DEG. F ALM
C    5 EXHAUST 5          785.82 DEG. F ALM
C    6 EXHAUST 6          774.47 DEG. F ALM
C    7 ENG. COOL. IN      205.43 DEG. F ALM
C    8 ENG. COOL. OUT     213.59 DEG. F ALM
C    9 OIL SUMP           237.33 DEG. F ALM
C   10 OIL GALLERY        239.10 DEG. F ALM
C   11                    .00000
C   12                    .00000
C   13  ENG. INTAKE       132.75 DEG. F ALM
C   14 RAD. TOP LEFT      156.52 DEG. F ALM
C   15 RAD. BTTM LEFT     145.94 DEG. F ALM
C   16 RAD. TOP RIGHT     147.85 DEG. F ALM
C   17 RAD. BTTM RIGHT    156.49 DEG. F ALM
C   18 GEN. AIR IN        124.47 DEG. F ALM
C   19 GEN. AIR OUT       146.96 DEG. F ALM
C   20 GEN. FRAME TOP     132.15 DEG. F ALM
C   21 GEN. FRAME BTTM    127.78 DEG. F ALM
C   22 GEN. EXCITER       132.73 DEG. F ALM
C   23 GEN. VOLT. REG.    135.86 DEG. F ALM
C   24 CONTROL PANEL      134.43 DEG. F ALM
C   25 RELAY AREA         129.92 DEG. F ALM
C   26 BATTERY LEFT       148.38 DEG. F ALM
C   27 BATTERY RIGHT      149.86 DEG. F ALM
C   28 AIR IN SET         126.76 DEG. F ALM
C   29 FUEL TANK          128.46 DEG. F ALM
C   30 FUEL OUTLET        152.64 DEG. F ALM

END SCAN GROUP 1      10 NOV 87  12:09:55

STOPPED SINGLE SCAN   10 NOV 87  12:09:55
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BEGIN SCAN GROUP 1   10 NOV 87  12:21:29
30KW 60HZ GEN SET S/NRZ5 3774

C    1 EXHAUST 1          327.19 DEG. F ALM
C    2 EXHAUST 2          327.89 DEG. F ALM
C    3 EXHAUST 3          318.22 DEG. F ALM
C    4 EXHAUST 4          363.94 DEG. F ALM
C    5 EXHAUST 5          372.36 DEG. F ALM
C    6 EXHAUST 6          357.55 DEG. F ALM
C    7 ENG. COOL. IN      175.33 DEG. F ALM
C    8 ENG. COOL. OUT     181.99 DEG. F ALM
C    9 OIL SUMP           225.12 DEG. F ALM
C   10 OIL GALLERY        226.29 DEG. F ALM
C   11                    .00000
C   12                    .00000
C   13  ENG. INTAKE       127.30 DEG. F ALM
C   14 RAD. TOP LEFT      138.08 DEG. F ALM
C   15 RAD. BTTM LEFT     137.65 DEG. F ALM
C   16 RAD. TOP RIGHT     139.91 DEG. F ALM
C   17 RAD. BTTM RIGHT    148.83 DEG. F ALM
C   18 GEN. AIR IN        122.68 DEG. F ALM
C   19 GEN. AIR OUT       138.38 DEG. F ALM
C   20 GEN. FRAME TOP     129.89 DEG. F ALM
C   21 GEN. FRAME BTTM    125.75 DEG. F ALM
C   22 GEN. EXCITER       129.58 DEG. F ALM
C   23 GEN. VOLT. REG.    134.84 DEG. F ALM
C   24 CONTROL PANEL      133.87 DEG. F ALM
C   25 RELAY AREA         126.19 DEG. F ALM
C   26 BATTERY LEFT       148.45 DEG. F ALM
C   27 BATTERY RIGHT      150.55 DEG. F ALM
C   28 AIR IN SET         124.80 DEG. F ALM
C   29 FUEL TANK          128.68 DEG. F ALM
C   30 FUEL OUTLET        152.88 DEG. F ALM

END SCAN GROUP 1      10 NOV 87  12:21:39

STOPPED SINGLE SCAN   10 NOV 87  12:21:39
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BEGIN SCAN GROUP 1   10 NOV 87  12:31:3
30KW 60HZ GEN SET S/NRZ5 3774

C    1 EXHAUST 1          333.55 DEG. F ALM
C    2 EXHAUST 2          332.73 DEG. F ALM
C    3 EXHAUST 3          322.72 DEG. F ALM
C    4 EXHAUST 4          356.81 DEG. F ALM
C    5 EXHAUST 5          365.20 DEG. F ALM
C    6 EXHAUST 6          348.90 DEG. F ALM
C    7 ENG. COOL. IN      171.99 DEG. F ALM
C    8 ENG. COOL. OUT     180.23 DEG. F ALM
C    9 OIL SUMP           216.93 DEG. F ALM
C   10 OIL GALLERY        218.82 DEG. F ALM
C   11                    .00000
C   12                    .00000
C   13  ENG. INTAKE       126.85 DEG. F ALM
C   14 RAD. TOP LEFT      135.63 DEG. F ALM
C   15 RAD. BTTM LEFT     135.47 DEG. F ALM
C   16 RAD. TOP RIGHT     137.71 DEG. F ALM
C   17 RAD. BTTM RIGHT    138.70 DEG. F ALM
C   18 GEN. AIR IN        121.59 DEG. F ALM
C   19 GEN. AIR OUT       134.74 DEG. F ALM
C   20 GEN. FRAME TOP     127.53 DEG. F ALM
C   21 GEN. FRAME BTTM    124.74 DEG. F ALM
C   22 GEN. EXCITER       129.45 DEG. F ALM
C   23 GEN. VOLT. REG.    133.81 DEG. F ALM
C   24 CONTROL PANEL      132.17 DEG. F ALM
C   25 RELAY AREA         125.36 DEG. F ALM
C   26 BATTERY LEFT       148.40 DEG. F ALM
C   27 BATTERY RIGHT      150.61 DEG. F ALM
C   28 AIR IN SET         123.57 DEG. F ALM
C   29 FUEL TANK          128.74 DEG. F ALM
C   30 FUEL OUTLET        150.94 DEG. F ALM

END SCAN GROUP 1      10 NOV 87  12:31:48

STOPPED SINGLE SCAN   10 NOV 87  12:31:48
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BEGIN SCAN GROUP 1   10 NOV 87  12:40:48
30KW 60HZ GEN SET S/NRZ5 3774

C    1 EXHAUST 1          325.42 DEG. F ALM
C    2 EXHAUST 2          330.36 DEG. F ALM
C    3 EXHAUST 3          320.85 DEG. F ALM
C    4 EXHAUST 4          358.25 DEG. F ALM
C    5 EXHAUST 5          365.96 DEG. F ALM
C    6 EXHAUST 6          348.87 DEG. F ALM
C    7 ENG. COOL. IN      170.92 DEG. F ALM
C    8 ENG. COOL. OUT     179.65 DEG. F ALM
C    9 OIL SUMP           214.89 DEG. F ALM
C   10 OIL GALLERY        214.56 DEG. F ALM
C   11                    .00000
C   12                    .00000
C   13  ENG. INTAKE       126.41 DEG. F ALM
C   14 RAD. TOP LEFT      134.98 DEG. F ALM
C   15 RAD. BTTM LEFT     134.74 DEG. F ALM
C   16 RAD. TOP RIGHT     136.79 DEG. F ALM
C   17 RAD. BTTM RIGHT    137.54 DEG. F ALM
C   18 GEN. AIR IN        121.91 DEG. F ALM
C   19 GEN. AIR OUT       132.80 DEG. F ALM
C   20 GEN. FRAME TOP     126.30 DEG. F ALM
C   21 GEN. FRAME BTTM    124.20 DEG. F ALM
C   22 GEN. EXCITER       128.95 DEG. F ALM
C   23 GEN. VOLT. REG.    132.23 DEG. F ALM
C   24 CONTROL PANEL      131.43 DEG. F ALM
C   25 RELAY AREA         124.98 DEG. F ALM
C   26 BATTERY LEFT       148.44 DEG. F ALM
C   27 BATTERY RIGHT      151.32 DEG. F ALM
C   28 AIR IN SET         123.88 DEG. F ALM
C   29 FUEL TANK          128.59 DEG. F ALM
C   30 FUEL OUTLET        148.96 DEG. F ALM

END SCAN GROUP 1      10 NOV 87  12:40:58

STOPPED SINGLE SCAN   10 NOV 87  12:40:58
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BEGIN SCAN GROUP 1 10 NOV 87 12:50:47
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	327.24	DEG. F	ALM
C	2	EXHAUST 2	331.84	DEG. F	ALM
C	3	EXHAUST 3	321.26	DEG. F	ALM
C	4	EXHAUST 4	360.93	DEG. F	ALM
C	5	EXHAUST 5	369.40	DEG. F	ALM
C	6	EXHAUST 6	349.66	DEG. F	ALM
C	7	ENG. COOL. IN	172.39	DEG. F	ALM
C	8	ENG. COOL. OUT	181.18	DEG. F	ALM
C	9	OIL SUMP	213.36	DEG. F	ALM
C	10	OIL GALLERY	213.55	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	128.33	DEG. F	ALM
C	14	RAD. TOP LEFT	135.90	DEG. F	ALM
C	15	RAD. BTTM LEFT	135.75	DEG. F	ALM
C	16	RAD. TOP RIGHT	137.90	DEG. F	ALM
C	17	RAD. BTTM RIGHT	138.86	DEG. F	ALM
C	18	GEN. AIR IN	121.95	DEG. F	ALM
C	19	GEN. AIR OUT	132.75	DEG. F	ALM
C	20	GEN. FRAME TOP	127.86	DEG. F	ALM
C	21	GEN. FRAME BTTM	125.86	DEG. F	ALM
C	22	GEN. EXCITER	130.64	DEG. F	ALM
C	23	GEN. VOLT. REG.	132.60	DEG. F	ALM
C	24	CONTROL PANEL	132.46	DEG. F	ALM
C	25	RELAY AREA	126.33	DEG. F	ALM
C	26	BATTERY LEFT	148.56	DEG. F	ALM
C	27	BATTERY RIGHT	151.32	DEG. F	ALM
C	28	AIR IN SET	123.69	DEG. F	ALM
C	29	FUEL TANK	128.52	DEG. F	ALM
C	30	FUEL OUTLET	148.77	DEG. F	ALM

END SCAN GROUP 1 10 NOV 87 12:50:57

STOPPED SINGLE SCAN 10 NOV 87 12:50:57

BEGIN SCAN GROUP 1 10 NOV 87 13:54:16
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	333.18	DEG. F	ALM
C	2	EXHAUST 2	337.22	DEG. F	ALM
C	3	EXHAUST 3	326.11	DEG. F	ALM
C	4	EXHAUST 4	355.06	DEG. F	ALM
C	5	EXHAUST 5	365.50	DEG. F	ALM
C	6	EXHAUST 6	345.83	DEG. F	ALM
C	7	ENG. COOL. IN	171.69	DEG. F	ALM
C	8	ENG. COOL. OUT	181.01	DEG. F	ALM
C	9	OIL SUMP	212.17	DEG. F	ALM
C	10	OIL GALLERY	212.23	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	127.43	DEG. F	ALM
C	14	RAD. TOP LEFT	135.85	DEG. F	ALM
C	15	RAD. BTTM LEFT	135.39	DEG. F	ALM
C	16	RAD. TOP RIGHT	137.44	DEG. F	ALM
C	17	RAD. BTTM RIGHT	138.28	DEG. F	ALM
C	18	GEN. AIR IN	123.83	DEG. F	ALM
C	19	GEN. AIR OUT	138.74	DEG. F	ALM
C	20	GEN. FRAME TOP	125.96	DEG. F	ALM
C	21	GEN. FRAME BTTM	124.25	DEG. F	ALM
C	22	GEN. EXCITER	129.85	DEG. F	ALM
C	23	GEN. VOLT. REG.	130.63	DEG. F	ALM
C	24	CONTROL PANEL	131.16	DEG. F	ALM
C	25	RELAY AREA	125.98	DEG. F	ALM
C	26	BATTERY LEFT	148.79	DEG. F	ALM
C	27	BATTERY RIGHT	153.18	DEG. F	ALM
C	28	AIR IN SET	124.18	DEG. F	ALM
C	29	FUEL TANK	127.56	DEG. F	ALM
C	30	FUEL OUTLET	147.32	DEG. F	ALM

END SCAN GROUP 1 10 NOV 87 13:54:26

STOPPED SINGLE SCAN 10 NOV 87 13:54:27

BEGIN SCAN GROUP 1 10 NOV 87 13:24:31
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	324.71	DEG. F	ALM
C	2	EXHAUST 2	332.57	DEG. F	ALM
C	3	EXHAUST 3	323.00	DEG. F	ALM
C	4	EXHAUST 4	362.71	DEG. F	ALM
C	5	EXHAUST 5	368.62	DEG. F	ALM
C	6	EXHAUST 6	348.33	DEG. F	ALM
C	7	ENG. COOL. IN	171.71	DEG. F	ALM
C	8	ENG. COOL. OUT	180.87	DEG. F	ALM
C	9	OIL SUMP	211.81	DEG. F	ALM
C	10	OIL GALLERY	211.89	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	127.73	DEG. F	ALM
C	14	RAD. TOP LEFT	135.72	DEG. F	ALM
C	15	RAD. BTTM LEFT	135.16	DEG. F	ALM
C	16	RAD. TOP RIGHT	137.38	DEG. F	ALM
C	17	RAD. BTTM RIGHT	138.38	DEG. F	ALM
C	18	GEN. AIR IN	122.29	DEG. F	ALM
C	19	GEN. AIR OUT	130.83	DEG. F	ALM
C	20	GEN. FRAME TOP	126.16	DEG. F	ALM
C	21	GEN. FRAME BTTM	124.38	DEG. F	ALM
C	22	GEN. EXCITER	130.08	DEG. F	ALM
C	23	GEN. VOLT. REG.	130.81	DEG. F	ALM
C	24	CONTROL PANEL	130.98	DEG. F	ALM
C	25	RELAY AREA	125.74	DEG. F	ALM
C	26	BATTERY LEFT	148.64	DEG. F	ALM
C	27	BATTERY RIGHT	152.32	DEG. F	ALM
C	28	AIR IN SET	124.01	DEG. F	ALM
C	29	FUEL TANK	127.89	DEG. F	ALM
C	30	FUEL OUTLET	147.64	DEG. F	ALM

END SCAN GROUP 1 10 NOV 87 13:24:41

STOPPED SINGLE SCAN 10 NOV 87 13:24:41

BEGIN SCAN GROUP 1 10 NOV 87 14:24:30
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	334.65	DEG. F	ALM
C	2	EXHAUST 2	333.59	DEG. F	ALM
C	3	EXHAUST 3	324.42	DEG. F	ALM
C	4	EXHAUST 4	358.43	DEG. F	ALM
C	5	EXHAUST 5	364.48	DEG. F	ALM
C	6	EXHAUST 6	347.62	DEG. F	ALM
C	7	ENG. COOL. IN	171.76	DEG. F	ALM
C	8	ENG. COOL. OUT	181.08	DEG. F	ALM
C	9	OIL SUMP	212.41	DEG. F	ALM
C	10	OIL GALLERY	212.59	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	127.16	DEG. F	ALM
C	14	RAD. TOP LEFT	135.34	DEG. F	ALM
C	15	RAD. BTTM LEFT	135.00	DEG. F	ALM
C	16	RAD. TOP RIGHT	137.20	DEG. F	ALM
C	17	RAD. BTTM RIGHT	138.07	DEG. F	ALM
C	18	GEN. AIR IN	122.85	DEG. F	ALM
C	19	GEN. AIR OUT	130.35	DEG. F	ALM
C	20	GEN. FRAME TOP	126.08	DEG. F	ALM
C	21	GEN. FRAME BTTM	124.61	DEG. F	ALM
C	22	GEN. EXCITER	129.61	DEG. F	ALM
C	23	GEN. VOLT. REG.	130.80	DEG. F	ALM
C	24	CONTROL PANEL	131.55	DEG. F	ALM
C	25	RELAY AREA	125.66	DEG. F	ALM
C	26	BATTERY LEFT	148.91	DEG. F	ALM
C	27	BATTERY RIGHT	153.52	DEG. F	ALM
C	28	AIR IN SET	123.46	DEG. F	ALM
C	29	FUEL TANK	127.61	DEG. F	ALM
C	30	FUEL OUTLET	148.19	DEG. F	ALM

END SCAN GROUP 1 10 NOV 87 14:24:40

STOPPED SINGLE SCAN 10 NOV 87 14:24:40

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BEGIN SCAN GROUP 1   10 NOV 87  14:54:53
30KW 60HZ GEN SET S/NRZ5 3774

C   1 EXHAUST 1          333.13 DEG. F ALM
C   2 EXHAUST 2          338.54 DEG. F ALM
C   3 EXHAUST 3          327.13 DEG. F ALM
C   4 EXHAUST 4          360.83 DEG. F ALM
C   5 EXHAUST 5          364.89 DEG. F ALM
C   6 EXHAUST 6          344.27 DEG. F ALM
C   7 ENG. COOL. IN      172.82 DEG. F ALM
C   8 ENG. COOL. OUT     181.25 DEG. F ALM
C   9 OIL SUMP           212.35 DEG. F ALM
C  10 OIL GALLERY        212.51 DEG. F ALM
C  11                    .00000
C  12                    .00000
C  13  ENG. INTAKE       127.58 DEG. F ALM
C  14 RAD. TOP LEFT      136.00 DEG. F ALM
C  15 RAD. BTTM LEFT     135.49 DEG. F ALM
C  16 RAD. TOP RIGHT     137.59 DEG. F ALM
C  17 RAD. BTTM RIGHT    138.46 DEG. F ALM
C  18 GEN. AIR IN        123.24 DEG. F ALM
C  19 GEN. AIR OUT       130.79 DEG. F ALM
C  20 GEN. FRAME TOP     126.18 DEG. F ALM
C  21 GEN. FRAME BTTM    124.84 DEG. F ALM
C  22 GEN. EXCITER       130.86 DEG. F ALM
C  23 GEN. VOLT. REG.    130.86 DEG. F ALM
C  24 CONTROL PANEL      131.59 DEG. F ALM
C  25 RELAY AREA         126.82 DEG. F ALM
C  26 BATTERY LEFT       149.28 DEG. F ALM
C  27 BATTERY RIGHT      154.10 DEG. F ALM
C  28 AIR IN SET         124.40 DEG. F ALM
C  29 FUEL TANK          127.50 DEG. F ALM
C  30 FUEL OUTLET        148.56 DEG. F ALM

END SCAN GROUP 1     10 NOV 87  14:55:03

STOPPED SINGLE SCAN  10 NOV 87  14:55:03
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BEGIN SCAN GROUP 1   10 NOV 87  15:54:4
30KW 60HZ GEN SET S/NRZ5 3774

C   1 EXHAUST 1          336.44 DEG. F AL
C   2 EXHAUST 2          338.60 DEG. F AL
C   3 EXHAUST 3          331.89 DEG. F AL
C   4 EXHAUST 4          360.59 DEG. F AL
C   5 EXHAUST 5          366.17 DEG. F AL
C   6 EXHAUST 6          344.94 DEG. F AL
C   7 ENG. COOL. IN      172.67 DEG. F AL
C   8 ENG. COOL. OUT     181.87 DEG. F AL
C   9 OIL SUMP           213.06 DEG. F AL
C  10 OIL GALLERY        213.12 DEG. F AL
C  11                    .00000
C  12                    .00000
C  13  ENG. INTAKE       128.00 DEG. F AL
C  14 RAD. TOP LEFT      136.34 DEG. F AL
C  15 RAD. BTTM LEFT     135.88 DEG. F AL
C  16 RAD. TOP RIGHT     138.85 DEG. F AL
C  17 RAD. BTTM RIGHT    138.90 DEG. F AL
C  18 GEN. AIR IN        123.41 DEG. F AL
C  19 GEN. AIR OUT       131.55 DEG. F AL
C  20 GEN. FRAME TOP     126.79 DEG. F AL
C  21 GEN. FRAME BTTM    125.47 DEG. F AL
C  22 GEN. EXCITER       130.37 DEG. F AL
C  23 GEN. VOLT. REG.    131.39 DEG. F AL
C  24 CONTROL PANEL      132.16 DEG. F AL
C  25 RELAY AREA         126.45 DEG. F AL
C  26 BATTERY LEFT       149.97 DEG. F AL
C  27 BATTERY RIGHT      155.83 DEG. F AL
C  28 AIR IN SET         124.47 DEG. F AL
C  29 FUEL TANK          127.88 DEG. F AL
C  30 FUEL OUTLET        148.55 DEG. F AL

END SCAN GROUP 1     10 NOV 87  15:54:5

STOPPED SINGLE SCAN  10 NOV 87  15:54:5
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BEGIN SCAN GROUP 1   10 NOV 87  15:24:43
30KW 60HZ GEN SET S/NRZ5 3774

C   1 EXHAUST 1          335.65 DEG. F ALM
C   2 EXHAUST 2          336.33 DEG. F ALM
C   3 EXHAUST 3          328.88 DEG. F ALM
C   4 EXHAUST 4          360.46 DEG. F ALM
C   5 EXHAUST 5          366.77 DEG. F ALM
C   6 EXHAUST 6          345.41 DEG. F ALM
C   7 ENG. COOL. IN      172.44 DEG. F ALM
C   8 ENG. COOL. OUT     181.69 DEG. F ALM
C   9 OIL SUMP           212.85 DEG. F ALM
C  10 OIL GALLERY        212.90 DEG. F ALM
C  11                    .00000
C  12                    .00000
C  13  ENG. INTAKE       127.83 DEG. F ALM
C  14 RAD. TOP LEFT      136.37 DEG. F ALM
C  15 RAD. BTTM LEFT     135.72 DEG. F ALM
C  16 RAD. TOP RIGHT     137.99 DEG. F ALM
C  17 RAD. BTTM RIGHT    138.76 DEG. F ALM
C  18 GEN. AIR IN        123.39 DEG. F ALM
C  19 GEN. AIR OUT       131.17 DEG. F ALM
C  20 GEN. FRAME TOP     126.67 DEG. F ALM
C  21 GEN. FRAME BTTM    125.40 DEG. F ALM
C  22 GEN. EXCITER       130.61 DEG. F ALM
C  23 GEN. VOLT. REG.    131.17 DEG. F ALM
C  24 CONTROL PANEL      131.95 DEG. F ALM
C  25 RELAY AREA         126.31 DEG. F ALM
C  26 BATTERY LEFT       149.49 DEG. F ALM
C  27 BATTERY RIGHT      155.29 DEG. F ALM
C  28 AIR IN SET         124.74 DEG. F ALM
C  29 FUEL TANK          127.50 DEG. F ALM
C  30 FUEL OUTLET        148.00 DEG. F ALM

END SCAN GROUP 1     10 NOV 87  15:24:53

STOPPED SINGLE SCAN  10 NOV 87  15:24:53
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BEGIN SCAN GROUP 1   10 NOV 87  16:24:4
30KW 60HZ GEN SET S/NRZ5 3774

C   1 EXHAUST 1          336.07 DEG. F AL
C   2 EXHAUST 2          336.49 DEG. F AL
C   3 EXHAUST 3          332.22 DEG. F AL
C   4 EXHAUST 4          360.25 DEG. F AL
C   5 EXHAUST 5          362.10 DEG. F AL
C   6 EXHAUST 6          343.75 DEG. F AL
C   7 ENG. COOL. IN      171.57 DEG. F AL
C   8 ENG. COOL. OUT     180.85 DEG. F AL
C   9 OIL SUMP           212.55 DEG. F AL
C  10 OIL GALLERY        212.75 DEG. F AL
C  11                    .00000
C  12                    .00000
C  13  ENG. INTAKE       126.55 DEG. F AL
C  14 RAD. TOP LEFT      135.17 DEG. F AL
C  15 RAD. BTTM LEFT     134.59 DEG. F AL
C  16 RAD. TOP RIGHT     136.98 DEG. F AL
C  17 RAD. BTTM RIGHT    137.78 DEG. F AL
C  18 GEN. AIR IN        122.03 DEG. F AL
C  19 GEN. AIR OUT       130.13 DEG. F AL
C  20 GEN. FRAME TOP     125.45 DEG. F AL
C  21 GEN. FRAME BTTM    123.86 DEG. F AL
C  22 GEN. EXCITER       129.13 DEG. F AL
C  23 GEN. VOLT. REG.    130.80 DEG. F AL
C  24 CONTROL PANEL      131.12 DEG. F AL
C  25 RELAY AREA         125.15 DEG. F AL
C  26 BATTERY LEFT       149.89 DEG. F AL
C  27 BATTERY RIGHT      155.64 DEG. F AL
C  28 AIR IN SET         123.86 DEG. F AL
C  29 FUEL TANK          126.68 DEG. F AL
C  30 FUEL OUTLET        147.96 DEG. F AL

END SCAN GROUP 1     10 NOV 87  16:24:5

STOPPED SINGLE SCAN  10 NOV 87  16:24:5
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BEGIN SCAN GROUP 1   10 NOV 87  16:54:45
30KW 60HZ GEN SET S/NRZ5 3774

C    1 EXHAUST 1          343.77 DEG.  F ALM
C    2 EXHAUST 2          331.26 DEG.  F ALM
C    3 EXHAUST 3          329.71 DEG.  F ALM
C    4 EXHAUST 4          365.36 DEG.  F ALM
C    5 EXHAUST 5          362.84 DEG.  F ALM
C    6 EXHAUST 6          346.89 DEG.  F ALM
C    7 ENG. COOL. IN      172.28 DEG.  F ALM
C    8 ENG. COOL. OUT     181.43 DEG.  F ALM
C    9 OIL SUMP           212.96 DEG.  F ALM
C   10 OIL GALLERY        212.94 DEG.  F ALM
C   11                    .00000
C   12                    .00000
C   13  ENG. INTAKE       127.44 DEG.  F ALM
C   14 RAD. TOP LEFT      135.93 DEG.  F ALM
C   15 RAD. BTTM LEFT     135.35 DEG.  F ALM
C   16 RAD. TOP RIGHT     137.62 DEG.  F ALM
C   17 RAD. BTTM RIGHT    138.44 DEG.  F ALM
C   18 GEN. AIR IN        123.24 DEG.  F ALM
C   19 GEN. AIR OUT       131.84 DEG.  F ALM
C   20 GEN. FRAME TOP     126.19 DEG.  F ALM
C   21 GEN. FRAME BTTM    124.78 DEG.  F ALM
C   22 GEN. EXCITER       138.16 DEG.  F ALM
C   23 GEN. VOLT. REG.    131.11 DEG.  F ALM
C   24 CONTROL PANEL      131.64 DEG.  F ALM
C   25 RELAY AREA         125.93 DEG.  F ALM
C   26 BATTERY LEFT       150.31 DEG.  F ALM
C   27 BATTERY RIGHT      156.41 DEG.  F ALM
C   28 AIR IN SET         124.85 DEG.  F ALM
C   29 FUEL TANK          126.78 DEG.  F ALM
C   30 FUEL OUTLET        148.93 DEG.  F ALM

END SCAN GROUP 1     10 NOV 87  16:54:55

STOPPED SINGLE SCAN  10 NOV 87  16:54:55
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TEST DATA

ITEM 30 KW 60 Hz GENERATOR SET MODIFIED

MFGR. LIBBY WELDING

MODEL NO. MEP 005A

SERIAL NO. RZ53774

NTS

National Technical Systems | Scientific Services Group | Testing Division, P.O. Box 38, Harwood, Virginia 22471, Tel: 703 752 5300

VOLTAGE DIP + RISE

HIGH TEMP 710.1.1.2(F)(9)

REF. NO. MIL-STD 705 614.2B

SHEET ____ OF ____

DATE 14 NOV 1987

JOB NO. 555-2140

PROJ. ENGR. ____

RECORDER/OBSERVER BT/KM/GC

INST TIME	STEP NO.	LOAD STEP	E6028D VOLTAGE L_1-L_0 VAC	L_2-L_0 VAC	L_3-L_0 VAC	E6040D AMPERES x40 L_1-L_0 AC AMPS	L_2-L_0 AC AMPS	L_3-L_0 AC AMPS	E6230D KILOWATTS x40 L_1-L_0 Kw	L_2-L_0 Kw	L_3-L_0 Kw	E6242D POWER FACTOR PF	E6241D FREQ. Hz	E6189D EXCITER VOLTS VDC	E6189D FIELD AMPS KA	AMB. TEMP. °F	Press inlet/GI IN	Press GI OIL
1215		STARTED UNIT & APPLIED LOAD FOR STABILIZATION																
1220		R/L	119	120.7	120	2.51	2.55	2.55	.248	.251	.25	.80	60	9.1	3.4	125	13.2	41.4
1230		R/L	119	120.3	120	2.51	2.55	2.55	.248	.251	.26	.80	60	9.3	3.5	122	13.1	41.2
1240		R/L	119	120.5	120	2.51	2.55	2.55	.248	.251	.25	.80	59.9	9.4	3.5	121	13.2	41.0
1250		R/L	119	120.5	120	2.5	2.55	2.55	.248	.251	.25	.80	59.9	9.4	3.6	121	13.4	40.7
1300		R/L	119	120.5	119.9	2.51	2.55	2.55	.248	.251	.25	.80	59.9	9.4	3.6	122	13.2	40.9
1310		R/L	119	120.2	119.9	2.51	2.55	2.55	.248	.251	.25	.80	59.9	9.5	3.6	124	13.2	41.2
1316		N/L	121	121.5	121.5								62	3.9	1.4	124	14.2	29.4
1317		R/L	119	120.6	120	2.52	2.56	2.55	.246	.252	.25	.80	59.9	9.4	3.6	125	13.2	39.3
1318		N/L	121	121.5	121.5								62	3.9	1.4	124	14.2	28.7
1319		R/L	119	120.5	120	2.52	2.56	2.55	.246	.252	.25	.80	59.8	9.4	3.6	12	13.5	39.4
1320		N/L	121	121.5	121.5								62	3.7	1.4	123	14.5	28.7
1321		R/L	119	120.5	120	2.52	2.56	2.55	.246	.252	.25	.80	59.8	9.4	3.6	122	13.5	38.4
1323		SHUT UNIT DOWN				—	END OF TEST											

NOTES:

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TEST DATA

ITEM: 30KW 60Hz GEN SET MODIFIED

MFGR. LIBBY WELDING

MODEL NO. MEP 005A

SERIAL NO. 82-5-3224

NTS

National Technical Systems | Scientific Services Group | Testing Division P.O. Box 38 Hartwood, Virginia 22471 Tel: 703 752 5300

VOLTAGE DIP & RISE

COMPUTATION RESULTS

REF. NO. MIL STD 705 : 619.2B

SHEET 1 OF 1

DATE 13 JAN 1988

JOB NO. 555-2140

PROJ. ENGR.

RECORDER/OBSERVER

INST. →													
TIME ↓	STEP		DIP TO %	DIP TO VOLTS		RISE TO %	RISE TO VOLTS		RECOVERY SEC.			
UNITS													
SYM.													
1316	1		PROBLEM SWITCHING LOADS — DATA LOST										
1317	2		89.62	109.05					.146				
1318	3					109.47	132.86		.125				
1319	4		89.66	109.09					.137				
1320	5					111.33	133.6		.141				
1321	6		88.30	107.45					.153				

NOTES:

B-295

VOLTAGE DIP & RISE 619.26

BEGIN SCAN GROUP 1 14 NOV 87 12:29:17
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	777.85	DEG. F	ALM
C	2	EXHAUST 2	787.29	DEG. F	ALM
C	3	EXHAUST 3	811.75	DEG. F	ALM
C	4	EXHAUST 4	776.64	DEG. F	ALM
C	5	EXHAUST 5	780.81	DEG. F	ALM
C	6	EXHAUST 6	763.71	DEG. F	ALM
C	7	ENG. COOL. IN	198.99	DEG. F	ALM
C	8	ENG. COOL. OUT	206.98	DEG. F	ALM
C	9	OIL SUMP	213.29	DEG. F	ALM
C	10	OIL GALLERY	226.14	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	129.47	DEG. F	ALM
C	14	RAD. TOP LEFT	145.27	DEG. F	ALM
C	15	RAD. BTTM LEFT	140.33	DEG. F	ALM
C	16	RAD. TOP RIGHT	141.84	DEG. F	ALM
C	17	RAD. BTTM RIGHT	144.57	DEG. F	ALM
C	18	GEN. AIR IN	120.33	DEG. F	ALM
C	19	GEN. AIR OUT	138.69	DEG. F	ALM
C	20	GEN. FRAME TOP	128.81	DEG. F	ALM
C	21	GEN. FRAME BTTM	124.79	DEG. F	ALM
C	22	GEN. EXCITER	129.32	DEG. F	ALM
C	23	GEN. VOLT. REG.	131.00	DEG. F	ALM
C	24	CONTROL PANEL	132.57	DEG. F	ALM
C	25	RELAY AREA	126.38	DEG. F	ALM
C	26	BATTERY LEFT	117.30	DEG. F	ALM
C	27	BATTERY RIGHT	120.01	DEG. F	ALM
C	28	AIR IN SET	122.87	DEG. F	ALM
C	29	FUEL TANK	104.51	DEG. F	ALM
C	30	FUEL OUTLET	147.96	DEG. F	ALM

END SCAN GROUP 1 14 NOV 87 12:29:27

STOPPED SINGLE SCAN 14 NOV 87 12:29:27

BEGIN SCAN GROUP 1 14 NOV 87 12:40:48
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	776.87	DEG. F	ALM
C	2	EXHAUST 2	787.38	DEG. F	ALM
C	3	EXHAUST 3	811.52	DEG. F	ALM
C	4	EXHAUST 4	776.85	DEG. F	ALM
C	5	EXHAUST 5	779.38	DEG. F	ALM
C	6	EXHAUST 6	763.77	DEG. F	ALM
C	7	ENG. COOL. IN	199.78	DEG. F	ALM
C	8	ENG. COOL. OUT	207.72	DEG. F	ALM
C	9	OIL SUMP	219.47	DEG. F	ALM
C	10	OIL GALLERY	232.34	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	129.85	DEG. F	ALM
C	14	RAD. TOP LEFT	145.55	DEG. F	ALM
C	15	RAD. BTTM LEFT	140.49	DEG. F	ALM
C	16	RAD. TOP RIGHT	142.43	DEG. F	ALM
C	17	RAD. BTTM RIGHT	144.97	DEG. F	ALM
C	18	GEN. AIR IN	120.85	DEG. F	ALM
C	19	GEN. AIR OUT	139.98	DEG. F	ALM
C	20	GEN. FRAME TOP	127.59	DEG. F	ALM
C	21	GEN. FRAME BTTM	123.93	DEG. F	ALM
C	22	GEN. EXCITER	128.71	DEG. F	ALM
C	23	GEN. VOLT. REG.	130.78	DEG. F	ALM
C	24	CONTROL PANEL	131.53	DEG. F	ALM
C	25	RELAY AREA	125.64	DEG. F	ALM
C	26	BATTERY LEFT	120.86	DEG. F	ALM
C	27	BATTERY RIGHT	123.19	DEG. F	ALM
C	28	AIR IN SET	121.82	DEG. F	ALM
C	29	FUEL TANK	105.80	DEG. F	ALM
C	30	FUEL OUTLET	147.31	DEG. F	ALM

END SCAN GROUP 1 14 NOV 87 12:40:58

STOPPED SINGLE SCAN 14 NOV 87 12:40:58

BEGIN SCAN GROUP 1 14 NOV 87 12:49:41
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	776.40	DEG. F	ALM
C	2	EXHAUST 2	787.92	DEG. F	ALM
C	3	EXHAUST 3	808.79	DEG. F	ALM
C	4	EXHAUST 4	776.82	DEG. F	ALM
C	5	EXHAUST 5	781.62	DEG. F	ALM
C	6	EXHAUST 6	763.85	DEG. F	ALM
C	7	ENG. COOL. IN	200.00	DEG. F	ALM
C	8	ENG. COOL. OUT	208.85	DEG. F	ALM
C	9	OIL SUMP	221.00	DEG. F	ALM
C	10	OIL GALLERY	234.15	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	128.89	DEG. F	ALM
C	14	RAD. TOP LEFT	145.51	DEG. F	ALM
C	15	RAD. BTTM LEFT	140.55	DEG. F	ALM
C	16	RAD. TOP RIGHT	142.49	DEG. F	ALM
C	17	RAD. BTTM RIGHT	145.08	DEG. F	ALM
C	18	GEN. AIR IN	119.35	DEG. F	ALM
C	19	GEN. AIR OUT	140.52	DEG. F	ALM
C	20	GEN. FRAME TOP	127.54	DEG. F	ALM
C	21	GEN. FRAME BTTM	123.66	DEG. F	ALM
C	22	GEN. EXCITER	128.32	DEG. F	ALM
C	23	GEN. VOLT. REG.	130.78	DEG. F	ALM
C	24	CONTROL PANEL	131.89	DEG. F	ALM
C	25	RELAY AREA	125.25	DEG. F	ALM
C	26	BATTERY LEFT	121.63	DEG. F	ALM
C	27	BATTERY RIGHT	123.95	DEG. F	ALM
C	28	AIR IN SET	121.77	DEG. F	ALM
C	29	FUEL TANK	108.44	DEG. F	ALM
C	30	FUEL OUTLET	147.25	DEG. F	ALM

END SCAN GROUP 1 14 NOV 87 12:49:51

STOPPED SINGLE SCAN 14 NOV 87 12:49:51

BEGIN SCAN GROUP 1 14 NOV 87 12:59:47
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	776.47	DEG. F	ALM
C	2	EXHAUST 2	787.97	DEG. F	ALM
C	3	EXHAUST 3	811.67	DEG. F	ALM
C	4	EXHAUST 4	777.47	DEG. F	ALM
C	5	EXHAUST 5	780.99	DEG. F	ALM
C	6	EXHAUST 6	762.33	DEG. F	ALM
C	7	ENG. COOL. IN	200.27	DEG. F	ALM
C	8	ENG. COOL. OUT	208.28	DEG. F	ALM
C	9	OIL SUMP	221.84	DEG. F	ALM
C	10	OIL GALLERY	235.84	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	129.68	DEG. F	ALM
C	14	RAD. TOP LEFT	146.31	DEG. F	ALM
C	15	RAD. BTTM LEFT	141.19	DEG. F	ALM
C	16	RAD. TOP RIGHT	143.16	DEG. F	ALM
C	17	RAD. BTTM RIGHT	145.68	DEG. F	ALM
C	18	GEN. AIR IN	120.92	DEG. F	ALM
C	19	GEN. AIR OUT	141.86	DEG. F	ALM
C	20	GEN. FRAME TOP	127.84	DEG. F	ALM
C	21	GEN. FRAME BTTM	123.89	DEG. F	ALM
C	22	GEN. EXCITER	128.99	DEG. F	ALM
C	23	GEN. VOLT. REG.	130.86	DEG. F	ALM
C	24	CONTROL PANEL	130.78	DEG. F	ALM
C	25	RELAY AREA	125.65	DEG. F	ALM
C	26	BATTERY LEFT	123.48	DEG. F	ALM
C	27	BATTERY RIGHT	127.11	DEG. F	ALM
C	28	AIR IN SET	123.38	DEG. F	ALM
C	29	FUEL TANK	110.24	DEG. F	ALM
C	30	FUEL OUTLET	147.92	DEG. F	ALM

END SCAN GROUP 1 14 NOV 87 12:59:57

STOPPED SINGLE SCAN 14 NOV 87 12:59:57

BEGIN SCAN GROUP 1 14 NOV 87 13:11:00
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	779.92	DEG. F	ALM
C	2	EXHAUST 2	794.89	DEG. F	ALM
C	3	EXHAUST 3	816.72	DEG. F	ALM
C	4	EXHAUST 4	788.75	DEG. F	ALM
C	5	EXHAUST 5	786.21	DEG. F	ALM
C	6	EXHAUST 6	768.89	DEG. F	ALM
C	7	ENG. COOL. IN	201.97	DEG. F	ALM
C	8	ENG. COOL. OUT	218.21	DEG. F	ALM
C	9	OIL SUMP	222.93	DEG. F	ALM
C	10	OIL GALLERY	236.13	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	131.88	DEG. F	ALM
C	14	RAD. TOP LEFT	147.83	DEG. F	ALM
C	15	RAD. BTTM LEFT	142.95	DEG. F	ALM
C	16	RAD. TOP RIGHT	144.63	DEG. F	ALM
C	17	RAD. BTTM RIGHT	147.21	DEG. F	ALM
C	18	GEN. AIR IN	121.51	DEG. F	ALM
C	19	GEN. AIR OUT	143.21	DEG. F	ALM
C	20	GEN. FRAME TOP	129.46	DEG. F	ALM
C	21	GEN. FRAME BTTM	125.52	DEG. F	ALM
C	22	GEN. EXCITER	138.38	DEG. F	ALM
C	23	GEN. VOLT. REG.	131.62	DEG. F	ALM
C	24	CONTROL PANEL	131.72	DEG. F	ALM
C	25	RELAY AREA	127.37	DEG. F	ALM
C	26	BATTERY LEFT	125.12	DEG. F	ALM
C	27	BATTERY RIGHT	127.83	DEG. F	ALM
C	28	AIR IN SET	124.17	DEG. F	ALM
C	29	FUEL TANK	112.19	DEG. F	ALM
C	30	FUEL OUTLET	148.46	DEG. F	ALM

END SCAN GROUP 1 14 NOV 87 13:11:18

STOPPED SINGLE SCAN 14 NOV 87 13:11:18

BEGIN SCAN GROUP 1 14 NOV 87 13:18:29
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	438.34	DEG. F	ALM
C	2	EXHAUST 2	430.72	DEG. F	ALM
C	3	EXHAUST 3	437.15	DEG. F	ALM
C	4	EXHAUST 4	483.45	DEG. F	ALM
C	5	EXHAUST 5	434.48	DEG. F	ALM
C	6	EXHAUST 6	478.17	DEG. F	ALM
C	7	ENG. COOL. IN	198.87	DEG. F	ALM
C	8	ENG. COOL. OUT	197.18	DEG. F	ALM
C	9	OIL SUMP	220.64	DEG. F	ALM
C	10	OIL GALLERY	234.14	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	138.17	DEG. F	ALM
C	14	RAD. TOP LEFT	143.53	DEG. F	ALM
C	15	RAD. BTTM LEFT	148.94	DEG. F	ALM
C	16	RAD. TOP RIGHT	142.74	DEG. F	ALM
C	17	RAD. BTTM RIGHT	145.86	DEG. F	ALM
C	18	GEN. AIR IN	121.48	DEG. F	ALM
C	19	GEN. AIR OUT	148.77	DEG. F	ALM
C	20	GEN. FRAME TOP	129.69	DEG. F	ALM
C	21	GEN. FRAME BTTM	125.88	DEG. F	ALM
C	22	GEN. EXCITER	136.44	DEG. F	ALM
C	23	GEN. VOLT. REG.	132.84	DEG. F	ALM
C	24	CONTROL PANEL	132.21	DEG. F	ALM
C	25	RELAY AREA	126.86	DEG. F	ALM
C	26	BATTERY LEFT	126.48	DEG. F	ALM
C	27	BATTERY RIGHT	129.25	DEG. F	ALM
C	28	AIR IN SET	123.74	DEG. F	ALM
C	29	FUEL TANK	113.38	DEG. F	ALM
C	30	FUEL OUTLET	150.27	DEG. F	ALM

END SCAN GROUP 1 14 NOV 87 13:18:39

STOPPED SINGLE SCAN 14 NOV 87 13:18:39

BEGIN SCAN GROUP 1 14 NOV 87 13:17:19
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	611.74	DEG. F	ALM
C	2	EXHAUST 2	617.85	DEG. F	ALM
C	3	EXHAUST 3	611.64	DEG. F	ALM
C	4	EXHAUST 4	623.12	DEG. F	ALM
C	5	EXHAUST 5	638.20	DEG. F	ALM
C	6	EXHAUST 6	616.77	DEG. F	ALM
C	7	ENG. COOL. IN	195.61	DEG. F	ALM
C	8	ENG. COOL. OUT	202.89	DEG. F	ALM
C	9	OIL SUMP	221.53	DEG. F	ALM
C	10	OIL GALLERY	235.17	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	130.67	DEG. F	ALM
C	14	RAD. TOP LEFT	145.68	DEG. F	ALM
C	15	RAD. BTTM LEFT	141.75	DEG. F	ALM
C	16	RAD. TOP RIGHT	143.79	DEG. F	ALM
C	17	RAD. BTTM RIGHT	146.82	DEG. F	ALM
C	18	GEN. AIR IN	122.88	DEG. F	ALM
C	19	GEN. AIR OUT	142.43	DEG. F	ALM
C	20	GEN. FRAME TOP	129.88	DEG. F	ALM
C	21	GEN. FRAME BTTM	125.78	DEG. F	ALM
C	22	GEN. EXCITER	138.48	DEG. F	ALM
C	23	GEN. VOLT. REG.	132.83	DEG. F	ALM
C	24	CONTROL PANEL	132.28	DEG. F	ALM
C	25	RELAY AREA	127.22	DEG. F	ALM
C	26	BATTERY LEFT	126.32	DEG. F	ALM
C	27	BATTERY RIGHT	129.88	DEG. F	ALM
C	28	AIR IN SET	124.22	DEG. F	ALM
C	29	FUEL TANK	113.28	DEG. F	ALM
C	30	FUEL OUTLET	149.41	DEG. F	ALM

END SCAN GROUP 1 14 NOV 87 13:17:29

STOPPED SINGLE SCAN 14 NOV 87 13:17:29

BEGIN SCAN GROUP 1 14 NOV 87 13:19:28
30KW 60HZ GEN SET S/NRZ5 3774

C	1	EXHAUST 1	727.48	DEG. F	ALM
C	2	EXHAUST 2	737.86	DEG. F	ALM
C	3	EXHAUST 3	749.87	DEG. F	ALM
C	4	EXHAUST 4	727.63	DEG. F	ALM
C	5	EXHAUST 5	734.88	DEG. F	ALM
C	6	EXHAUST 6	711.44	DEG. F	ALM
C	7	ENG. COOL. IN	191.13	DEG. F	ALM
C	8	ENG. COOL. OUT	198.26	DEG. F	ALM
C	9	OIL SUMP	220.88	DEG. F	ALM
C	10	OIL GALLERY	233.52	DEG. F	ALM
C	11		.00000		
C	12		.00000		
C	13	ENG. INTAKE	129.94	DEG. F	ALM
C	14	RAD. TOP LEFT	143.84	DEG. F	ALM
C	15	RAD. BTTM LEFT	148.72	DEG. F	ALM
C	16	RAD. TOP RIGHT	142.48	DEG. F	ALM
C	17	RAD. BTTM RIGHT	144.51	DEG. F	ALM
C	18	GEN. AIR IN	120.93	DEG. F	ALM
C	19	GEN. AIR OUT	140.99	DEG. F	ALM
C	20	GEN. FRAME TOP	129.46	DEG. F	ALM
C	21	GEN. FRAME BTTM	125.69	DEG. F	ALM
C	22	GEN. EXCITER	138.17	DEG. F	ALM
C	23	GEN. VOLT. REG.	132.11	DEG. F	ALM
C	24	CONTROL PANEL	132.19	DEG. F	ALM
C	25	RELAY AREA	126.61	DEG. F	ALM
C	26	BATTERY LEFT	126.37	DEG. F	ALM
C	27	BATTERY RIGHT	129.32	DEG. F	ALM
C	28	AIR IN SET	123.88	DEG. F	ALM
C	29	FUEL TANK	113.57	DEG. F	ALM
C	30	FUEL OUTLET	150.01	DEG. F	ALM

END SCAN GROUP 1 14 NOV 87 13:19:38

STOPPED SINGLE SCAN 14 NOV 87 13:19:38

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BEGIN SCAN GROUP 1    14 NOV 87  13:28:37
30KW 60HZ GEN SET S/NR25 3774

C    1 EXHAUST 1          422.87 DEG. F ALM
C    2 EXHAUST 2          413.63 DEG. F ALM
C    3 EXHAUST 3          414.94 DEG. F ALM
C    4 EXHAUST 4          464.17 DEG. F ALM
C    5 EXHAUST 5          478.79 DEG. F ALM
C    6 EXHAUST 6          459.31 DEG. F ALM
C    7 ENG. COOL. IN      188.84 DEG. F ALM
C    8 ENG. COOL. OUT     194.16 DEG. F ALM
C    9 OIL SUMP           218.85 DEG. F ALM
C   10 OIL GALLERY        232.68 DEG. F ALM
C   11                    .00000
C   12                    .00000
C   13  ENG. INTAKE       129.56 DEG. F ALM
C   14 RAD. TOP LEFT      142.46 DEG. F ALM
C   15 RAD. BTTM LEFT     139.98 DEG. F ALM
C   16 RAD. TOP RIGHT     141.66 DEG. F ALM
C   17 RAD. BTTM RIGHT    143.92 DEG. F ALM
C   18 GEN. AIR IN        121.28 DEG. F ALM
C   19 GEN. AIR OUT       139.93 DEG. F ALM
C   20 GEN. FRAME TOP     129.14 DEG. F ALM
C   21 GEN. FRAME BTTM    125.49 DEG. F ALM
C   22 GEN. EXCITER       129.41 DEG. F ALM
C   23 GEN. VOLT. REG.    132.86 DEG. F ALM
C   24 CONTROL PANEL      132.88 DEG. F ALM
C   25 RELAY AREA         126.27 DEG. F ALM
C   26 BATTERY LEFT       126.66 DEG. F ALM
C   27 BATTERY RIGHT      129.20 DEG. F ALM
C   28 AIR IN SET         123.34 DEG. F ALM
C   29 FUEL TANK          113.67 DEG. F ALM
C   30 FUEL OUTLET        158.48 DEG. F ALM

END SCAN GROUP 1     14 NOV 87  13:28:47

STOPPED SINGLE SCAN  14 NOV 87  13:28:47
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TEST DATA

ITEM 30 KW / 60 HZ GENERATOR SET (MODIFIED)
MFGR. GIBBY WELDING
MODEL NO. MEP 005A
SERIAL NO. 425-3774

NTS
National Technical Systems | Scientific Services Group | Testing Division
P.O. Box 38, Harwood, Virginia 22471
Tel: 703 752 5300

7.10.1.3.2(F)(10)
D.C. CONTROL TEST

REF. NO. MIL-STD 705; 655.1
SHEET 1 OF
DATE 17 NOV 1987
JOB NO. 555-2140
PROJ. ENGR.
RECORDER/OBSERVER GC / BJ / KM

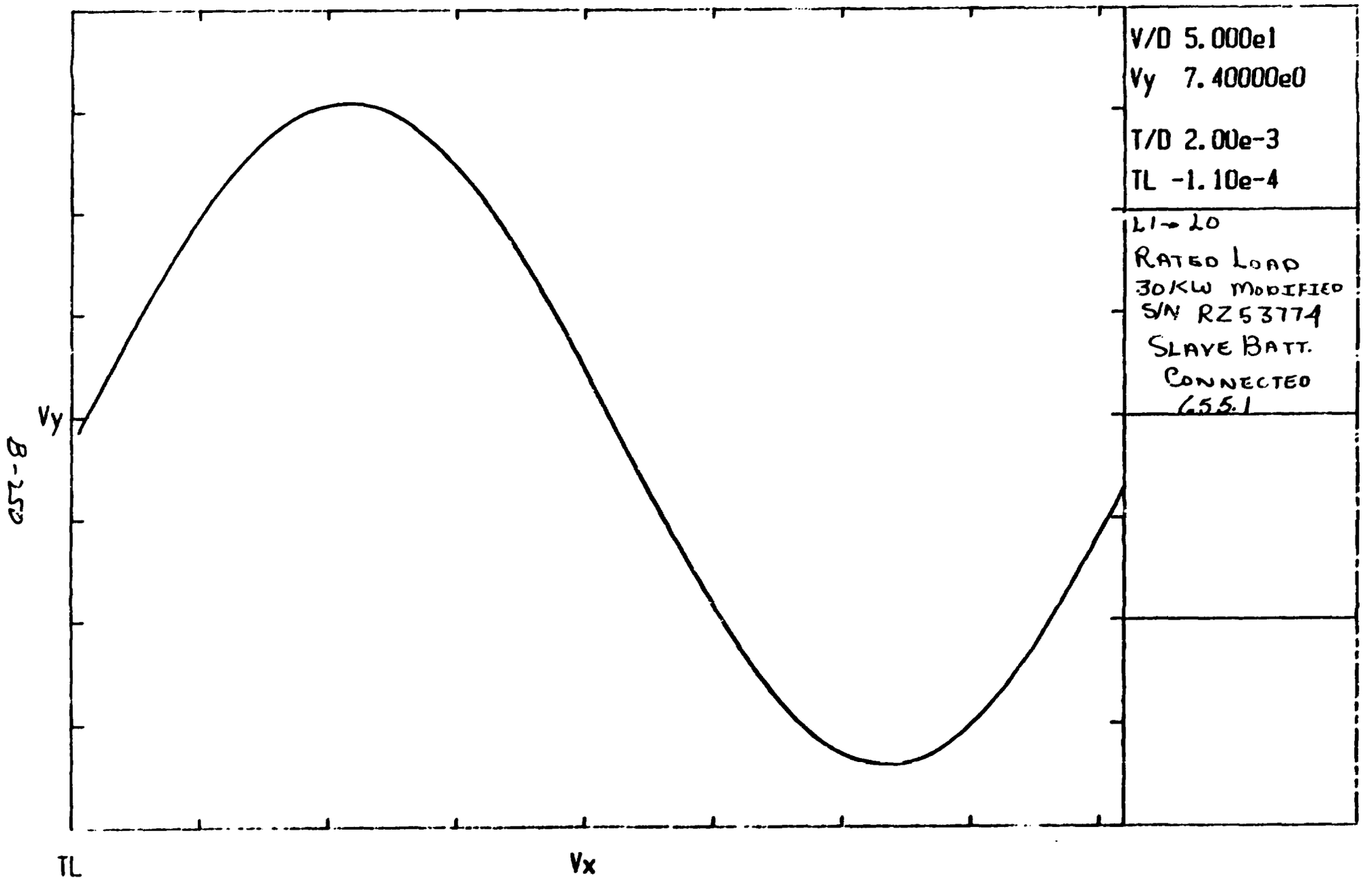
INST TIME	STEP NO.	LOAD STEP	E60280 VOLTAGE L_1-L_0 VAC	E60280 VOLTAGE L_2-L_0 VAC	E60280 VOLTAGE L_3-L_0 VAC	E60400 AMPERES x 40 L_1-L_0 AC AMPS	E60400 AMPERES x 40 L_2-L_0 AC AMPS	E60400 AMPERES x 40 L_3-L_0 AC AMPS	E62800 KILOWATTS x 40 L_1-L_0 Kw	E62800 KILOWATTS x 40 L_2-L_0 Kw	E62800 KILOWATTS x 40 L_3-L_0 Kw	EC2420 POWER FACTOR PF	FC2417 FREQ. Hz	G61 8SP D.C. CONTROL VOLTS VDC	G61 8SP D.C. CONTROL AMPS DCA	AMB. TEMP. °F	Arc
1106			STARTED	UNIT	ON	SLAVE	BATTERIES										
1109			SHUT	UNIT	DOWN	— ATTEMPTED TO START UNIT WITH REVERSE POLARITY —								WOULD NOT START			
1112			START	UNIT	ON	SLAVE	BATTERIES WITH CORRECT POLARITY					APPEAR RATED					
1113		R/L	120	121.7	121	2.49	2.55	2.57	.249	.251	.25	.80	59.9	27.7	2.0	123	33
1121			NO SPIKES	OR NOTCHES	NOTED	IN VOLTAGE	WAVE FORM										
1122			REMOVED	SLAVE	BATTERIES	NO NOTICEABLE	CHANGE IN	UNIT	OPERATION								
1124		R/L	120	122	121	2.49	2.55	2.51	.249	.251	.25	.80	59.9	28.2	2.0	126	33
		N/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	28.4	1.2	N/A	N/A
		R/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	28.2	1.9	N/A	N/A
		N/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	28.2	1.2	N/A	N/A
		R/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	28.2	2.0	N/A	N/A
		N/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	28.4	1.2	N/A	N/A
1130		R/L	120	122	121	2.49	2.57	2.55	.249	.251	.25	.80	59.8	28.2	2.0	124	33
1131			NO	SPIKES	OR NOTCHES	IN VOLTAGE	WAVE FORM										
1145			RECONNECTED	SLAVE	BATTERIES		SHUT	UNIT	DOWN		END OF	TEST					

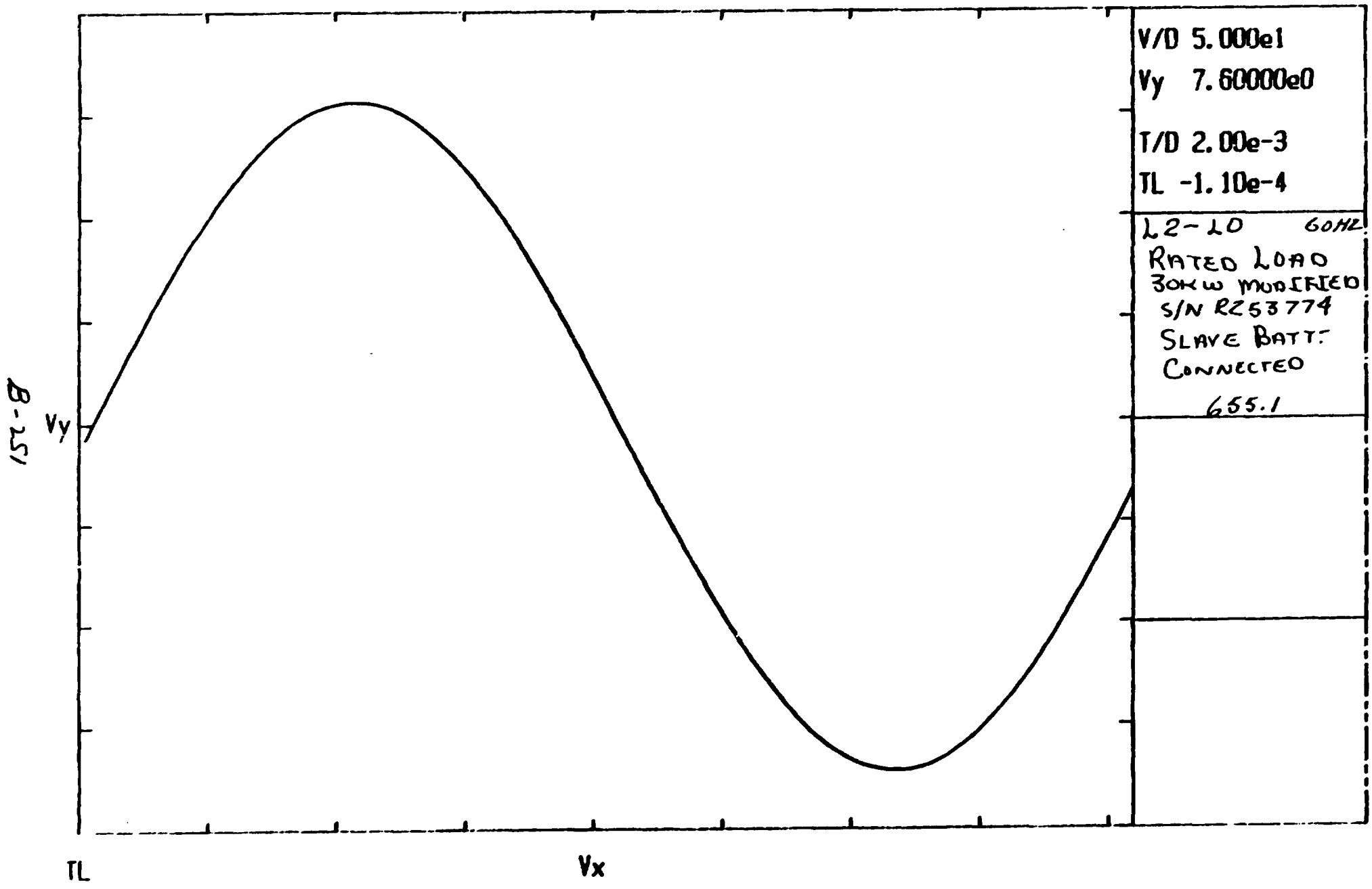
MAX STEADY STATE FREQUENCY BANDWIDTH = .30%

MAX STEADY STATE VOLTAGE BANDWIDTH = .30%

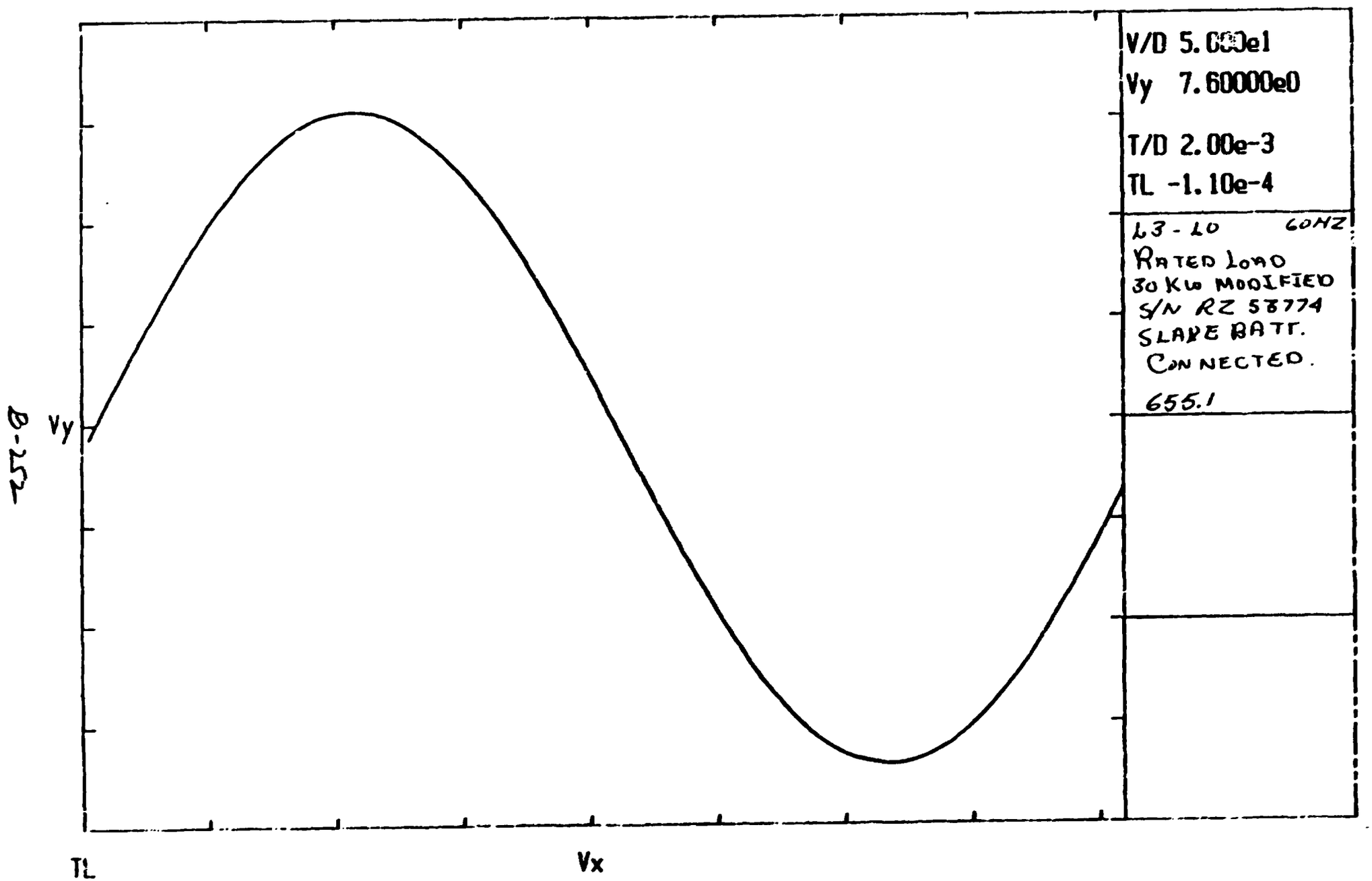
NOTES: UNIT WOULD NOT START WITH REVERSE POLARITY - HEAVY ARCING OF LEADS WHEN TRYING TO CONNECT BATTERIES IN REVERSE POLARITY

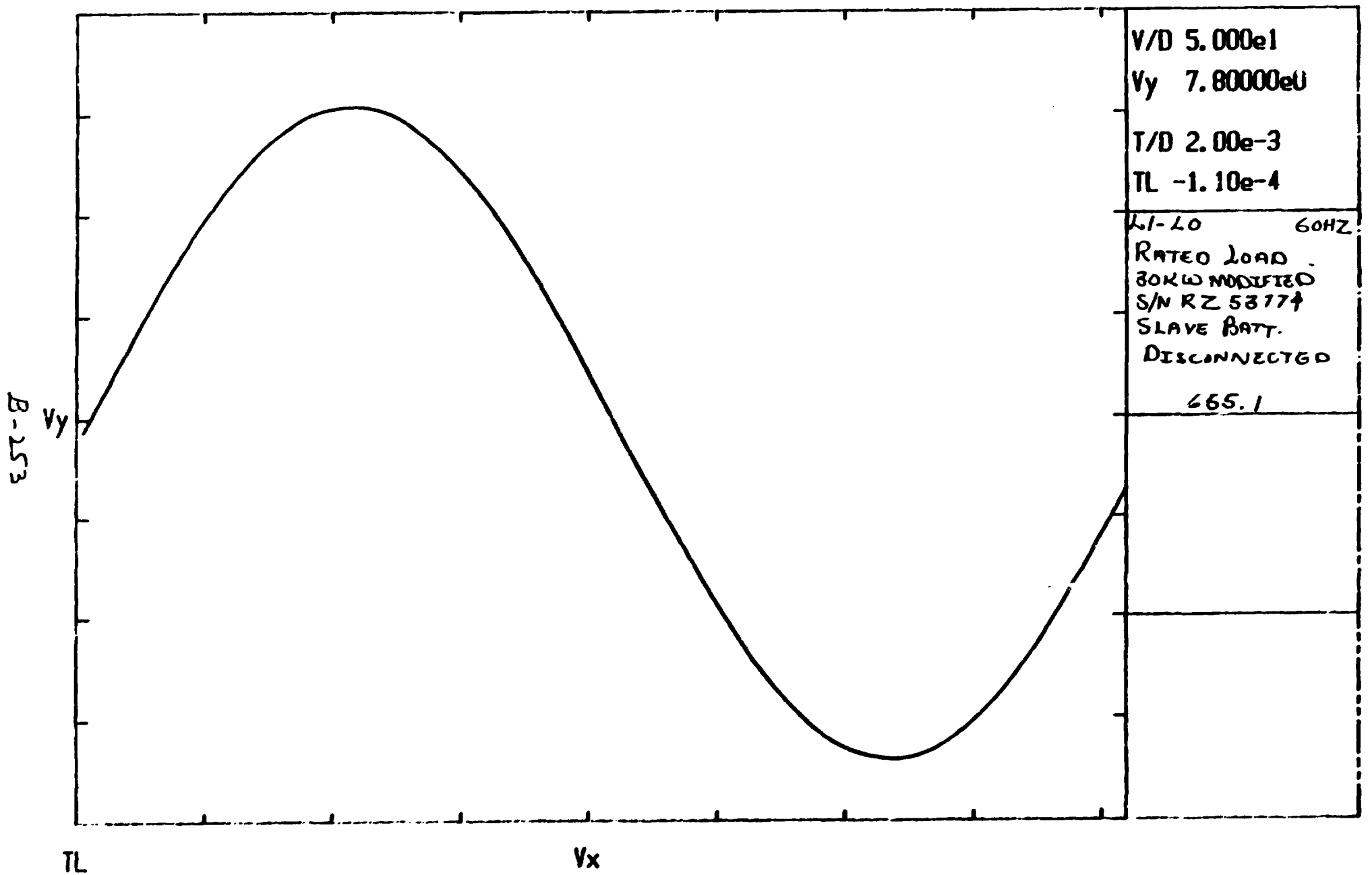
8-279

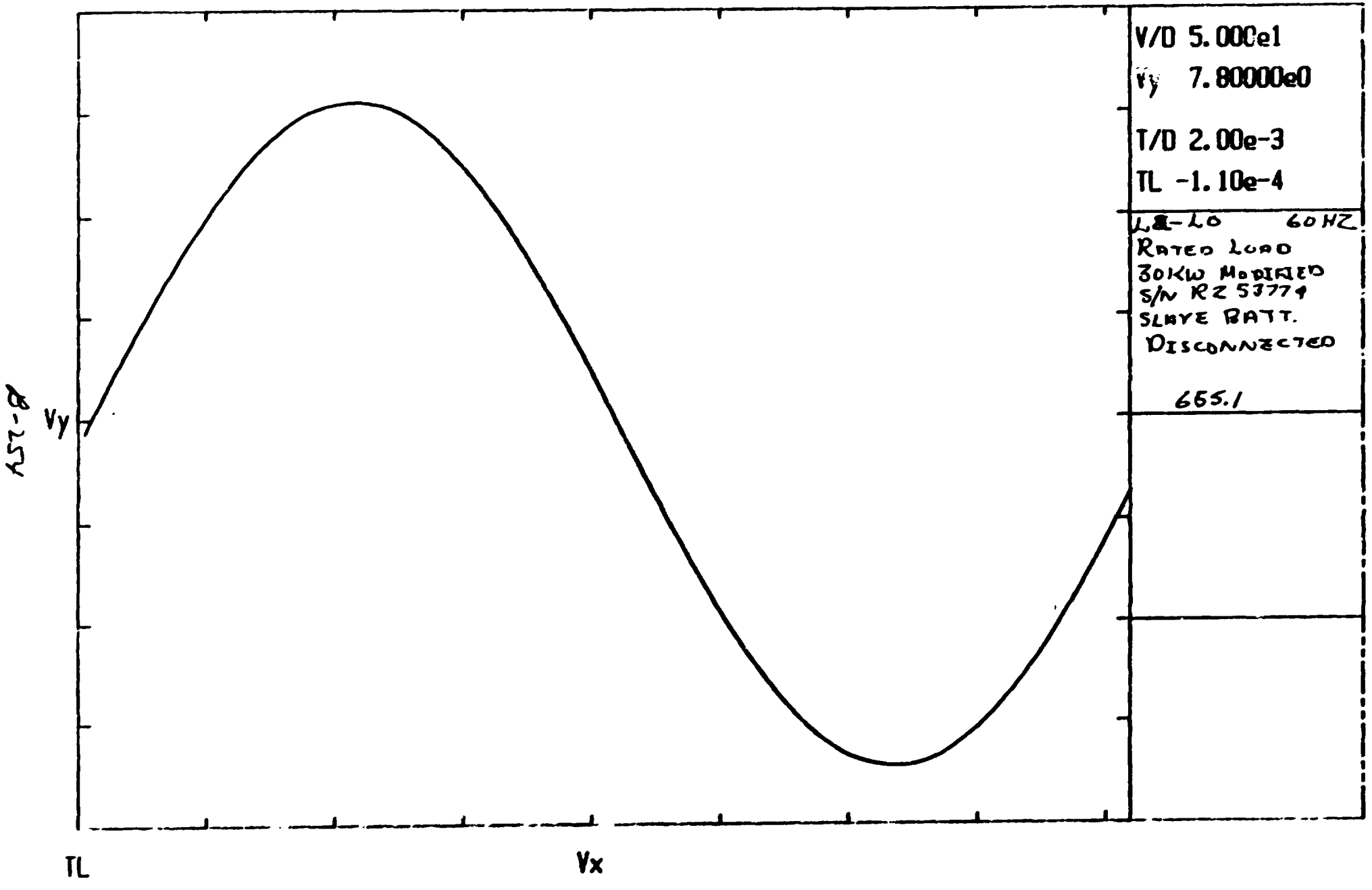

V/D 5.000e1
Vy 7.40000e0
T/D 2.00e-3
TL -1.10e-4
L1→L0
RATED LOAD
30KW MODIFIED
S/N RZ53774
SLAVE BATT.
CONNECTED
655.1
Vy
TL
Vx

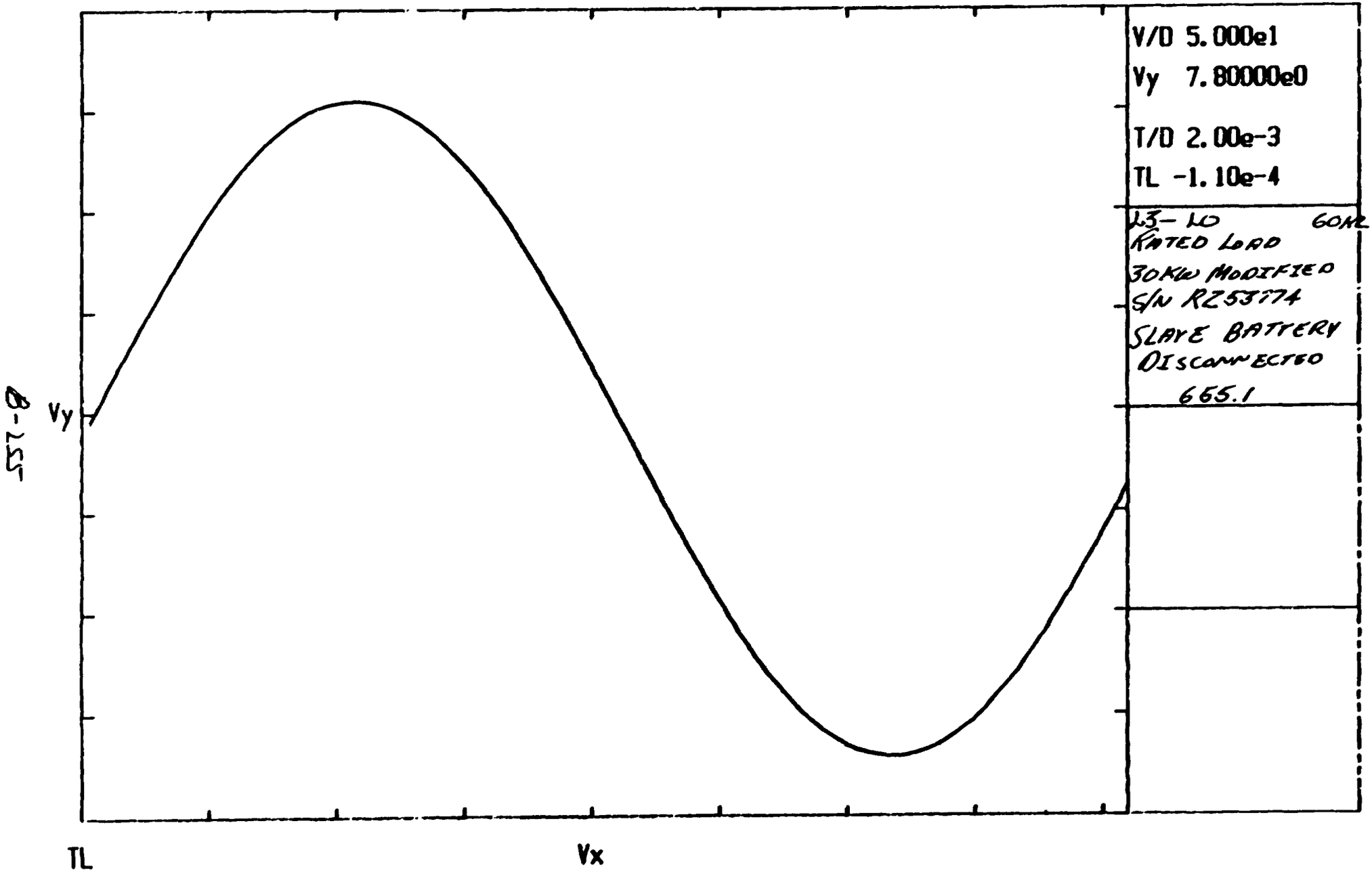

V/D 5.000e1
Vy 7.60000e0
T/D 2.00e-3
TL -1.10e-4
L2-L0 60HZ
RATED LOAD
30KW MODIFIED
S/N RZ53774
SLAVE BATT.
CONNECTED
655.1
Vy
TL
Vx

B-151


V/D 5.000e1
Vy 7.60000e0
T/D 2.00e-3
TL -1.10e-4
L3 - L0 60HZ
RATED LOAD
30 KW MODIFIED
S/N RZ 58774
SLAVE BATT.
CONNECTED.
655.1
B-252
Vy
TL
Vx


V/D 5.000e1
Vy 7.80000eU
T/D 2.00e-3
TL -1.10e-4
L1-L0 60HZ
RATED LOAD
30KW MODIFIED
S/N RZ 58774
SLAVE BATT.
DISCONNECTED
665.1
B-53
Vy
TL
Vx


V/D 5.000e1
Vy 7.80000e0
T/D 2.00e-3
TL -1.10e-4
L&-LO 60HZ
RATED LOAD
30KW MODIFIED
S/N RZ 53774
SLAVE BATT.
DISCONNECTED
665.1
AST-8
Vy
TL
Vx


V/D 5.000e1
Vy 7.80000e0
T/D 2.00e-3
TL -1.10e-4
L3- LO 60HZ
RATED LOAD
30KW MODIFIED
S/N RZ53774
SLAVE BATTERY
DISCONNECTED
665.1
Vy
TL
Vx

B-55

DC Control 655.1

```
BEGIN SCAN GROUP 1   17 NOV 87  11:05:24
30KW 60HZ GEN SET S/NRZ5 3774

C   1 EXHAUST 1          420.09 DEG.  F ALM
C   2 EXHAUST 2          458.14 DEG.  F ALM
C   3 EXHAUST 3          493.18 DEG.  F ALM
C   4 EXHAUST 4          490.83 DEG.  F ALM
C   5 EXHAUST 5          481.95 DEG.  F ALM
C   6 EXHAUST 6          466.65 DEG.  F ALM
C   7 ENG. COOL. IN      187.53 DEG.  F ALM
C   8 ENG. COOL. OUT     202.50 DEG.  F ALM
C   9 OIL SUMP           206.36 DEG.  F ALM
C  10 OIL GALLERY        200.20 DEG.  F ALM
C  11                    .00000
C  12                    .00000
C  13  ENG. INTAKE       130.28 DEG.  F ALM
C  14 RAD. TOP LEFT      187.71 DEG.  F ALM
C  15 RAD. BTTM LEFT     168.87 DEG.  F ALM
C  16 RAD. TOP RIGHT     160.30 DEG.  F ALM
C  17 RAD. BTTM RIGHT    147.09 DEG.  F ALM
C  18 GEN. AIR IN        120.85 DEG.  F ALM
C  19 GEN. AIR OUT       122.94 DEG.  F ALM
C  20 GEN. FRAME TOP     117.20 DEG.  F ALM
C  21 GEN. FRAME BTTM    110.72 DEG.  F ALM
C  22 GEN. EXCITER       120.95 DEG.  F ALM
C  23 GEN. VOLT. REG.    102.85 DEG.  F ALM
C  24 CONTROL PANEL      110.80 DEG.  F ALM
C  25 RELAY AREA         129.75 DEG.  F ALM
C  26 BATTERY LEFT       97.480 DEG.  F ALM
C  27 BATTERY RIGHT              OPEN TC
C  28 AIR IN SET         122.62 DEG.  F ALM
C  29 FUEL TANK          80.267 DEG.  F ALM
C  30 FUEL OUTLET        121.54 DEG.  F ALM

END SCAN GROUP 1     17 NOV 87  11:05:34

STOPPED SINGLE SCAN  17 NOV 87  11:05:34


BEGIN SCAN GROUP 1   17 NOV 87  11:13:59
30KW 60HZ GEN SET S/NRZ5 3774

C   1 EXHAUST 1          744.84 DEG.  F ALM
C   2 EXHAUST 2          766.53 DEG.  F ALM
C   3 EXHAUST 3          781.61 DEG.  F ALM
C   4 EXHAUST 4          746.19 DEG.  F ALM
C   5 EXHAUST 5          742.52 DEG.  F ALM
C   6 EXHAUST 6          726.33 DEG.  F ALM
C   7 ENG. COOL. IN      186.52 DEG.  F ALM
C   8 ENG. COOL. OUT     194.12 DEG.  F ALM
C   9 OIL SUMP           208.93 DEG.  F ALM
C  10 OIL GALLERY        209.74 DEG.  F ALM
C  11                    .00000
C  12                    .00000
C  13  ENG. INTAKE       130.65 DEG.  F ALM
C  14 RAD. TOP LEFT      140.41 DEG.  F ALM
C  15 RAD. BTTM LEFT     137.59 DEG.  F ALM
C  16 RAD. TOP RIGHT     136.30 DEG.  F ALM
C  17 RAD. BTTM RIGHT    138.51 DEG.  F ALM
C  18 GEN. AIR IN        121.65 DEG.  F ALM
C  19 GEN. AIR OUT       129.34 DEG.  F ALM
C  20 GEN. FRAME TOP     122.36 DEG.  F ALM
C  21 GEN. FRAME BTTM    118.55 DEG.  F ALM
C  22 GEN. EXCITER       126.83 DEG.  F ALM
C  23 GEN. VOLT. REG.    110.75 DEG.  F ALM
C  24 CONTROL PANEL      118.75 DEG.  F ALM
C  25 RELAY AREA         125.56 DEG.  F ALM
C  26 BATTERY LEFT       101.20 DEG.  F ALM
C  27 BATTERY RIGHT              OPEN TC
C  28 AIR IN SET         123.19 DEG.  F ALM
C  29 FUEL TANK          83.292 DEG.  F ALM
C  30 FUEL OUTLET        132.15 DEG.  F ALM

END SCAN GROUP 1     17 NOV 87  11:14:09

STOPPED SINGLE SCAN  17 NOV 87  11:14:09
```

Final Report No. FR555-2140
P.O. No. 50199
Date 29 March 1988

VOLUME IV (Part 2)

TEST DATA AND OPERATORS LOG

FOR

DIESEL ENGINE DRIVEN GENERATOR SETS
30 KW, MEP 005A AND MEP 114A

Gen Set 30 KW 400 Hz

S/N RZ40323

HIGH TEMPERATURE TEST (710.1c)

Regulator Range (511.1)	*
Frequency Adj. Range (511.2)	*
Circuit Interrupter (Short Circuit) (512.1)	✓
Circuit Interrupter (Overload Trip) (512.2)	*
Circuit Interrupter (512.3) (Overvoltage/Undervoltage)	*
Indicating Instrument (515.2)	✓
Freq. and Voltage Regulation Stab. & Trans Response (608.1)	*
Freq. and Voltage Stability (Long Term) (608.2)	*
Voltage Dip & Rise (619.2)	1
DC Control (655.1)	*
Winding Resistance (401.1a)	3
710.1.3.2h HIGH TEMP START	✓

BASELINE TESTS

SOUND LEVEL MIL STD 1474	*
FREQUENCY AND VOLTAGE REG. (608.1)	*

AMBIENT TESTS (Cont.)

PRE DROP (608.1)	*
POST DROP (608.1)	*

AMBIENT TEMPERATURE TESTS

Winding Resistance (401.1a)	3
MIL-STD-1474 Sound Level	*
Drop Test (740.3b)	✓
Max Power (640.1)	✓
Overtemperature Protective Device (515.2)	2

* FAILED TEST

1. UNEXPLAINED VOLTAGE SHIFT ON OSCILLOGRAPH DATA, DATA NOT REDUCABLE.
2. OVERTEMP SWITCH JUMPERED OUT.
3. NO COMPARATIVE DATA

30 KW 400 Hz

R2 4 0323

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BOORUM & PEASE

ACCOUNT BOOK 12¼ IN x 8¼ IN

150 PAGES	300 PAGES	600 PAGES	RULING
No. 87%-150-J	87%-300-J	87%-600-J	Journal
No. 87%-150-SEL	87%-300-SEL	87%-600-SEL	SE Ledger
No. 87%-150-DEL	87%-300-DEL	87%-600-DEL	DE Ledger
*No. 87%-150-LD	*87%-300-LD	*87%-600-LD	Long Day
No. 87%-150-R 84-6716	87%-300-R 84-6717	87%-600-R 84-6756	Record
No. 87%-150-R IT	87%-300-R IT	87%-600-R IT	Record Indexed

*LONG DAY SIZE 15¼ IN x 8¼ IN.

BOORUM & PEASE CO. ELIZABETH NJ 07206 USA MADE IN USA

6-6-87 CHECKED WATER HEAT SOAK OK
" OIL OC OK
" BATTERYS OC OK

8-12-87 HOOKED UP TO LOAD BANK RUNNING TIME 3127.4
OIL PRESSURE 40 STARTING UNIT & UNIT RUN
NOT SHOW VOLTAG INBERATION. UNIT SHUT SELF
DOWN DUE TO OVERSPEED CONTROL RESET OVERSPEED
RESTARTED UNIT & UNIT SHOWED VOLTAG OK

8-14-87 CHANGED VOLTAGE TO 240/416
RAN UNIT AT FUN LOAD

9-9-87 1059-1114 RAN SOUND LEVEL
TEST RTMI 3128.4 — 3128.7 OK

6 OCT 1987

0850 STARTED UNIT FOR STABILIZATION
FOR 608.1 RTMI 3128.9 OK

0946 SHUT UNIT DOWN - UNIT RUNNING
ERRATIC - WILL NOT STABILIZE
SUSPECT FAULTY ELECTRONIC GOVERNOR
RTMI 3130.1 AC

1445 INSTALLED GOVENOR
CONTROL BOX FROM ANOTHER
UNIT - NO CHANGE
INSTALLED GOVENOR ACUATOR
FROM ANOTHER UNIT - NO CHANGE

1646 SHUT UNIT DOWN 3130.6

7 OCT 1987

0800 DISCONNECTED J31 ELECTRONIC
GOVENOR ACTUATOR ARM & SET
MANUAL THROTTLE ARM

0820 STARTED UNIT ON MANUAL
THROTTLE FOR CHECKOUT 3130.6

SHUT UNIT DOWN - OPERATES
PROPERLY

7 OCT 1987

Hooked unit Backup as a precise set - unit ran erratic

Checked Mag Pick-up Position - Pickup 3/4 turn off flywheel

Adjusted Pickup to 1/2 turn from Flywheel (About Procedures as per Ralph Adolph - USE)

Changed Mag Pick-up No Difference

Changed Load Sharing (Common Bypass Electronic Governor) Modules - Erratic Running Problem Solved. However, Governor will not adjust Proper i.e. R/L to N/L Freq undershoot - N/L to R/L Freq Overshoot

Swapped Load Sharing Unit Cut & Installed Load Sharing Unit From 15/400 w/ Electronic Governor - Unit Runs properly

8 OCT 1987

Replaced Mag Pick up with original.

0830 Started unit for Stabilization For 6081 RTM 3152.9

0942 Shut unit Down. End of Test For 6081

Reinstalled original Load Sharing unit and adjusted Governor and Load Sharing unit. No Change

22 Dec. 1987
Received unit from Usc.

22 Dec. 1987

0830 Start setting unit up for sound level test.
Placed center section of discharge baffle in unit.

1050 Started unit for sound level test. Fuel gage indicating always indicates empty.

1200 Shut unit down to remove center section of discharge baffle.

1315 Started unit to perform sound level test at position points #1, #2 & #3

1406 Shut unit down end of test.

* Note: Unit had sound level test at rated load with center discharge baffle in place at positions #2 & #6. Unit also tested with the center discharge baffle removed at rated and no load condition at position #2.

14 Jan. 1988

Under voltage and under frequency indicators on control panel come on after start, but reset after reset switch is on.

0820 Start unit to check load variations

0855 Placed unit on Rated load. Start stabilization for short term load.

0940 Unit shut self down on over temp

0946 Start unit to check over temp problems. Overtemp switch tested unit.

0947 Ajusted Rated load.

* Note Added one quart of oil before starting unit

14 JAN 1988

1050 START STABILIZATION FOR SHORT TERM 609.1.
1157 END OF TEST
1159 SHUT UNIT DOWN
1237 STARTED UNIT NO LOAD
1238 APPLIED RATED LOAD START STABILIZATION FOR FREQUENCY ADJUSTMENT RANGE TEST. METHOD 511.2
1325 END OF TEST
1326 SHUT UNIT DOWN
1329 START UNIT ON RATED LOAD START STABILIZATION FOR REGULATION RANGE TEST
1507 END OF TEST
1508 SHUT UNIT DOWN
1557 START UNIT FOR INDICATING INSTRUMENT TEST METHOD 513.2
1633 END OF TEST SHUT UNIT DOWN INDICATING INSTRUMENT TEST ABORT REQ.
1650 START UNIT FOR INDICATING INSTRUMENT TEST METHOD 513.2
1717 END OF TEST SHUT UNIT DOWN

15 JAN. 1988

0408 START UNIT FOR FREQUENCY AND VOLTAGE STABILITY TEST. METHOD 609.2 LONG TERM.
0421 APPLIED RATED LOAD START STABILIZATION
1409 END OF TEST
1610 UNIT SHUT DOWN TO CONNECT FOR WINDING RESISTANCE TEST (HIGH TEMP)
1614 START UNIT APPLIED RATED LOAD FOR WINDING RESISTANCE TEST STABILIZATION.
1720 Shut unit Down to Perform Winding Resistance.

15 JAN. 1988

NOTE: DURING LONG TERM GOLD TEST DIP STICK IN OIL GALLERY WORKED IT'S WAY OUT. [illegible] LOSS OF 2 QUARTS OF OIL. REPLACED OIL

16 JAN. 1988

0904	STARTED UNIT AT RATED LOAD	[illegible]
0909	SHUT UNIT DOWN	[illegible]
0910	RESTART UNIT	[illegible]
0916	APPLIED RATED LOAD	[illegible]
0917	SHUT UNIT DOWN.	[illegible]
0929	START UNIT AT RATED LOAD.	[illegible]
0936	REDUCED TO NO LOAD	[illegible]
0937	APPLIED RATED LOAD START CIRCUIT INTERRUPTER TEST TRANS CIRCUIT	
1037	END OF TEST SHUT UNIT DOWN	[illegible]
1136	START UNIT FOR VOLTAGE DIP AND RISE TEST METHOD 619.2	[illegible]
1136	SHUT UNIT DOWN ABORT TEST	[illegible]
1305	START UNIT AT RATED LOAD TO STABILIZE FOR CIRCUIT INTERRUPTER (OVERLOAD) TEST METHOD 512.2	[illegible]
1325	SHUT UNIT DOWN EQUIPMENT MALFUNCTION	[illegible]
N21	START UNIT RATED LOAD TO STABILIZE FOR CIRCUIT INTERRUPTER TEST. METHOD 512.2	[illegible]
1508	DROP LOAD ON UNIT - APPLIED 133% OVER LOAD CURRENT AT TEMP INCREASED TO 221°F. ABORT TEST	[illegible]
1511	SHUT UNIT DOWN	[illegible]

18 JAN 1988

0713 STARTED TO HEAT CHAMBER FOR OVER LOAD CURRENT 512.2 CHAMBER TEMP AT 120° BECAUSE OF OVER TEMP ON THE 16 OF JAN 1988 AS PER USE [illegible]

0710	START UNIT AT RATED LOAD START STABILIZATION	[illegible]
1233	END OF ~~TEST~~ SHUT UNIT DOWN	[illegible]
1330	START UNIT FOR VOLTAGE DIP & RISE TEST METHOD 619.2	[illegible]
1400	SHUT UNIT DOWN. EQUIPMENT MALFUNCTION	[illegible]
1453	START UNIT FOR TEST - METHOD 619.2 START STABILIZATION.	[illegible]
1513	END OF TEST.	[illegible]

1544 SHUT UNIT DOWN

1707 STARTED UNIT FOR 512.3 CIRCUIT INTERRUPTER TEST OVER VOLTAGE

1723 UNIT NEVER TRIPPED END OF TEST (UNIT DID TRIP AT 158 [158 IS OUT OF SPEC])

1746 STARTED UNIT FOR CHECK OUT UNDERVOLTAGE SET UP

1750 SHUT UNIT DOWN

1751 RESTARTED UNIT

1801 END OF TEST

1841 STARTED UNIT ON SLAVE BATTERY DC control test method 6.5.1

1910 END OF TEST - UNIT FAILED BOTTOM CHARGER VOLTAGE PORTION OF TEST

UNIT SHUT DOWN

19 JAN 1988

* NOTE: UNIT HAS USED APPROXIMATELY AMOUNT OF OIL DURING HIGH TEMP TEST OPERATIONS.

0858 START UNIT FOR MAX. POWER TEST METHOD 6.6.1 AT RATED LOAD

0911 SHUT UNIT DOWN TO ADD MORE LOAD BANKS FOR MAX POWER TEST.

0920 RESTART UNIT AT RATED LOAD FOR MAX. POWER TEST.

1010 END OF TEST START STABILIZATION FOR AIR LOAD TEST (6.6.1)

1124 END OF TEST SHUT UNIT DOWN. COMMENCED DROP TEST

AFT END OF UNIT (CONTROL PANEL END) Summary

- CENTER PANEL BANKS, BOTTOM DOORS, INTAKE BAFFLES SHOW SOME DEFORMATION AS TRYING TO WORK THEIR WAY OUT. DISCHARGE END.
- DISCHARGE BAFFLES FRAME BROKE OUT WITH BAFFLES COMING OUT. LEFT BOTTOM DOOR WILL NOT LATCH.

A-24

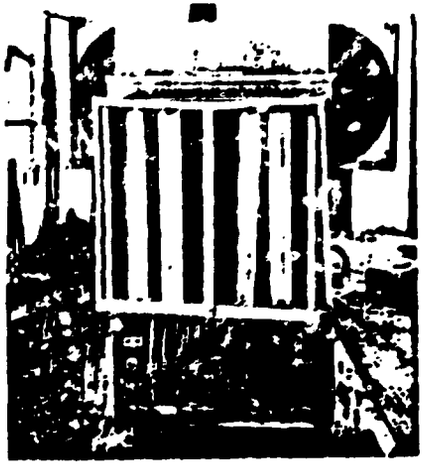


Photo shows damage caused by drop test

Drop TEST (CONT'D) 18 JAN 1988

~~0900~~ START UNIT FOR DROP TEST. UNIT STARTED WITH NO PROBLEMS AND APPEARS TO RUN WITH NO DIFFICULTY. JHC

- OUTSIDE BEARING ON UNIT FOR GENERATOR HEAD ~~FOR~~ DRIVE APPEAR TO HAVE SOME STRESS ON THEM. JHC

NOT START UNIT TO STABILIZE FOR POST DROP TEST (LOG 1) AT RATED LOAD. JHC

1513 END OF TEST SHUT UNIT DOWN. JHC

ACOUSTICAL TEST DATA

(MAXIMUM NOISE LEVEL ___ DBA)

TEST ITEM: 30KW 400Hz Gen Set S/N: R240323 HOUR METER: 3128.4

CONFIGURATION: ✓ UNMODIFIED ___ MODIFIED

TEMPERATURE: 68°F HUMIDITY: 85% TEST SITE: HANGER 40

SURFACE: GRASS TERRAIN: ___

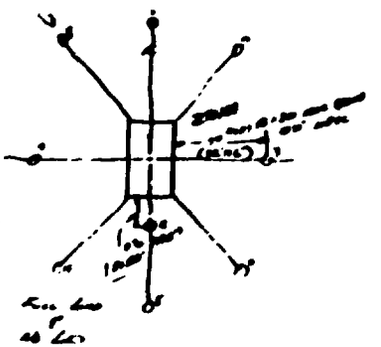
BAROMETRIC PRESSURE: 29.574 SKY COVER: OVERCAST

WIND DIRECTION: NE WIND VELOCITY: <5mph MICROPHONE: ___

SOUND LEVEL METER: GR 802 OCTAVE ANALYZER: ___

LOAD CONDITION: ___ RATED ✓ NO LOAD MICROPHONE LOCATION: AS BELOW

DATE	TIME	MICROPHONE POSITION	DISTANCE FT (M)	DBA	REMARKS
9-19-87	1057	1	22 11½	86	
		2		87	
		3		92	
		4		81	
		5		84	
		6		82	
		7		82	
		8	22-11½	85	
		9	2-3½	98	
9-19-87					
		MAXIMUM BACKGROUND	LEVEL	50DB	



177-8

ACOUSTICAL TEST DATA (MAXIMUM NOISE LEVEL ___ DBA)

TEST ITEM: 30Kw 400Hz Gen Set S/N: R240323 HOUR METER: ___

CONFIGURATION: Unmodified ___ Modified TEST SITE: Aberdeen

TEMPERATURE: 68°F HUMIDITY: 65%

SURFACE: Grass TERRAIN: ___

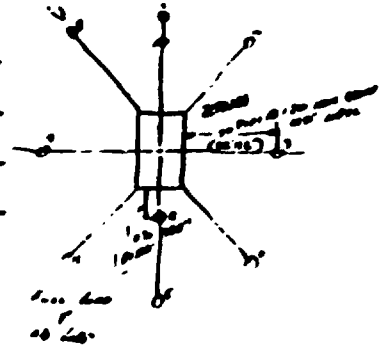
BAROMETRIC PRESSURE: 29.574 SKY COVER: Overcast

WIND DIRECTION: NE WIND VELOCITY: <5mph MICROPHONE: ___

SOUND LEVEL METER: GR 1982 OCTAVE ANALYZER: ___

LOAD CONDITION: Rated ___ No Load MICROPHONE LOCATION: As Below

DATE	TIME	MICROPHONE POSITION	DISTANCE FT(M)	DBA	REMARKS
9-19-87	1102	1	22 11½	87	
		2		88	
		3		83	
		4		83	
		5		86	
		6		84	
		7		83	
		8	22-11½	87	
9-A-87		9	2-3½	101	
MAXIMUM Background level				90dB	



8-267

ACOUSTICAL TEST DATA (MAXIMUM NOISE LEVEL ___ DBA)

TEST ITEM: 30 KW 400 Hz GEN SET S/N: R24 0323 HOUR METER: ____

CONFIGURATION: ✓ UNMODIFIED ___ MODIFIED

TEST SITE: HAWKINS

TEMPERATURE: 68°F HUMIDITY: 85%

SURFACE: GRASS TERRAIN: ____

BAROMETRIC PRESSURE: 29.57" SKY COVER: OVERCAST

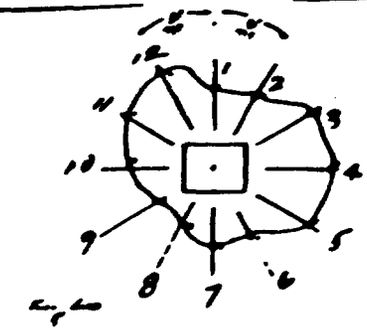
WIND DIRECTION: NE WIND VELOCITY: <5 MPH MICROPHONE: ____

SOUND LEVEL METER: GR 1982 OCTAVE ANALYZER: ____

LOAD CONDITION: ___ RATED ___ NO LOAD MICROPHONE LOCATION: AS BELOW

DATE	TIME	MICROPHONE POSITION	DISTANCE FEET(M)	DBA	REMARKS
9-8-87	1105	1	21-8	85	
		2	18-9		
		3	19-5		
		4	17-0		
		5	23-3		
		6	32-6		
		7	32-10		
		8	36-3		
		9	24.0		
		10	14-9		
		11	14-3		
9-8-87		12	21-0	85	

MAXIMUM BACKGROUND LEVEL 50dB



ACOUSTICAL [illegible] CONTOUR LEVEL

(MAXIMUM NOISE LEVEL ___ DBA)

TEST ITEM: 30 KW 400 HZ GEN SET S/N: RZ40323 HOUR METER: ___

CONFIGURATION: ✓ UNMODIFIED ___ MODIFIED

TEMPERATURE: 68°F HUMIDITY: 85% TEST SITE: HARTWOOD

EOT 3128.7

SURFACE: GRASS TERRAIN: ___

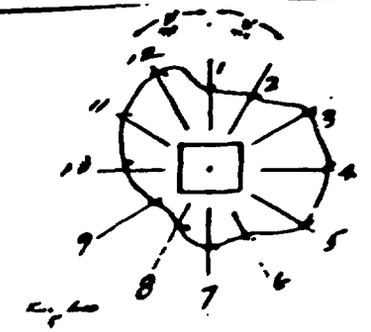
BAROMETRIC PRESSURE: 29.57Y SKY COVER: OVERCAST

WIND DIRECTION: NE WIND VELOCITY: 5 mph MICROPHONE: ___

SOUND LEVEL METER: GR 1982 OCTAVE ANALYZER: ___

LOAD CONDITION: ✓ RATED ___ NO LOAD MICROPHONE LOCATION: AS BELOW

DATE	TIME	MICROPHONE POSITION	DISTANCE FEET (M)	DBA	REMARKS
9-19-87	1110	1	25-10	85	
		2	21-0		
		3	18-6		
		4	17-5		
		5	24-0		
		6	136-5		
		7	26-4		
		8	37.0		
		9	24-8		
		10	14-11		
		11	18-3		
9-19-87	1114	12	23-7		
		MAXIMUM	BACKGROUND	LEVEL	50dB



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ACOUSTICAL TEST DATA

TEST ITEM: 30 KW/400 Hz GEN SET	STATION:			TIME: 1055	DATE: 22 DEC 1987
				TEST CONDUCTED BY: KM CC	TEST ITEM OPERATOR:
RFG/MODEL NO: MEP 114A	SERIAL NO: RZ4 0323	ODOMETER:	HOUR METER: 3134.6	TEST ITEM CONDITION: MODIFIED	NO LOAD
TEMPERATURE: 47°F	HUMIDITY: 53%	TEST SITE: HARTWOOD		SURFACE: GRASS	SEA STATE: TERRAIN:
BAROMETRIC PRESSURE: 29.719	SKY COVER: OVERCAST	STATIONARY OPERATION: [X]	HIGHWAY DRIVING: [ ]	DRIVE BY: [ ]	
WIND DIRECTION: NE	WIND VELOCITY: < 5 MPH	MICROPHONE: GR 1962	SOUND LEVEL METER: GR 1982	OCTAVE ANALYZER:	
INTERIOR: [ ]	EXTERIOR: [X]	MICROPHONE LOCATION:		TAPE RECORDER:	TAPE NO:

POSITION	DISTANCE	dbA	dbB	dbC	ALL PASS	~~20.0~~ 31.5	63	125	250	500	1,000	2,000	4000	8000	REMARKS
1	7M	68.1	75.0	78.1	79.2	69.6	69.5	75.8	73.0	65.6	60.9	54.2	48.1	48.7	
2	7M	69.2	75.8	79.2	80.1	68.3	72.3	76.6	73.1	65.6	62.5	59.1	51.5	49.6	
3	7M	67.4	74.1	78.3	79.9	73.9	74.4	75.3	70.1	63.4	61.6	59.0	53.9	45.1	
4	7M	~~79.9~~ 69.9	75.0	78.6	79.8	72.5	72.4	75.6	72.6	64.1	61.1	58.5	54.1	46.5	
5	7M	66.9	74.2	78.5	80.1	66.4	70.5	76.3	70.5	66.1	57.1	53.2	49.8	49.0	
6	7M	68.4	76.6	80.2	81.4	67.9	72.5	68.3	71.5	64.8	60.6	57.6	52.9	48.3	
7	7M	67.0	74.5	79.8	80.6	70.5	74.8	77.9	67.8	63.6	59.3	58.3	53.0	49.9	
8	7M	67.3	74.1	78.5	80.5	70.4	71.3	75.3	70.4	64.3	60.8	58.4	43.4	47.3	
9	0.7M	81.3	88.3	92.0	93.2	81.3	82.5	91.6	81.4	76.5	77.1	71.1	67.5	65.3	

ACOUSTICAL TEST DATA

TEST ITEM: 30KW/400HZ GEN SET	STATION:			TIME: 1114	DATE: 22 DEC 1987
				TEST CONDUCTED BY: KM GC	TEST ITEM OPERATOR:
RFG/MODEL NO: MEP 114A	SERIAL NO: RZ4 0323	ODOMETER:	HOUR METER: 3134.9	TEST ITEM CONDITION: MODIFIED	RATED LOAD
TEMPERATURE: 47°F	HUMIDITY: 53%	TEST SITE: HARTWOOD		SURFACE: GRASS	SEA STATE: TERRAIN:
BAROMETRIC PRESSURE: 29.719	SKY COVER: OVERCAST	STATIONARY OPERATION: [X]		HIGHWAY DRIVING: [ ]	DRIVE BY: [ ]
WIND DIRECTION: NE	WIND VELOCITY: <5 MPH	MICROPHONE: GR 1962		SOUND LEVEL METER: GR 1982	OCTAVE ANALYZER:
INTERIOR: [ ]	EXTERIOR: [X]	MICROPHONE LOCATION:		TAPE RECORDER:	TAPE NO:

POSITION	DISTANCE	dbA	dbB	dbC	ALL PASS	36.5	63	125	250	500	1,000	2,000	4000	8000	REMARKS
1	7M	69.0	76.2	79.8	80.5	68.3	71.8	78.2	73.5	65.1	62.3	57.8	53.3	47.9	
2	7M	70.9	76.7	80.4	81.5	69.5	71.7	78.6	75.2	66.1	63.9	62.9	58.2	52.6	
3	7M	69.8	75.6	79.9	81.5	71.6	75.6	77.3	70.6	65.5	64.1	63.3	57.6	49.2	
4	7M	69.7	76.7	80.9	81.6	70.4	73.8	78.6	72.8	66.9	62.4	62.3	57.4	48.7	
5	7M	68.5	76.3	79.9	81.1	67.3	71.3	69.2	69.8	67.6	59.1	58.3	52.4	51.5	
6	7M	70.5	77.9	82.4	82.8	68.3	73.9	80.6	73.2	68.1	62.6	62.5	56.1	51.1	
7	7M	69.5	76.8	81.4	82.1	71.9	75.6	80.5	69.5	65.6	62.1	62.6	56.7	47.8	
8	7M	69.6	74.3	79.5	79.6	71.5	72.3	77.3	70.5	66.5	63.5	62.6	56.8	50.4	
9	0.7M	83.3	88.1	91.6	92.3	81.8	83.5	89.6	82.8	77.5	79.2	74.4	70.2	68.1	
#2		71.2													POSITIONS #2 + #6
#6		70.3													REPEATED FOR DATA VALIDATION

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ACOUSTICAL DATA (MAXIMUM NOISE LEVEL ___ DBA)

TEST ITEM: GENERATOR SET 30KW/400 Hz S/N: RZ4 0323 HOUR METER: 3135.5

CONFIGURATION ___ UNMODIFIED ✓ MODIFIED

TEST SITE: HARTWOOD

TEMPERATURE: 47°F HUMIDITY: 53%

SURFACE: GRASS TERRAIN: ___

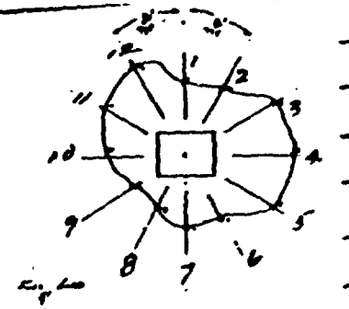
BAROMETRIC PRESSURE: 29.719 SKY COVER: OVERCAST

WIND DIRECTION: NE WIND VELOCITY: < 5 MPH MICROPHONE: GR1962

SOUND LEVEL METER: GR1982 OCTAVE ANALYZER: ___

LOAD CONDITION: ___ RATED ✓ NO LOAD MICROPHONE LOCATION: AS BELOW

DATE	TIME	MICROPHONE POSITION	DISTANCE FROM SET (M)	DBA	REMARKS
1-22-87	1147	1	0	83.9	POSITION #1 AT CONTROL PANEL
		2	0	83.8	
		3	0	83.4	
		4	0	84.8	
		5	0	83.4	
		6	3' 8½"	85	
		7	6' 3"	85	
		8	3' 9"	85	
		9	0	84	
		10	0	85	
		11	0	84.6	
	1153	12	3' 3"	85	



ACOUSTICAL DATA (MAXIMUM NOISE LEVEL ___ DBA)

TEST ITEM: 80Kw/400Hz GEN SET S/N: RZ4 0323 HOUR METER: 3135.6

CONFIGURATION ___ UNMODIFIED ✓ MODIFIED

TEMPERATURE: 47°F HUMIDITY: 53% TEST SITE: HAKTWEN

SURFACE: GRASS TERRAIN: ____

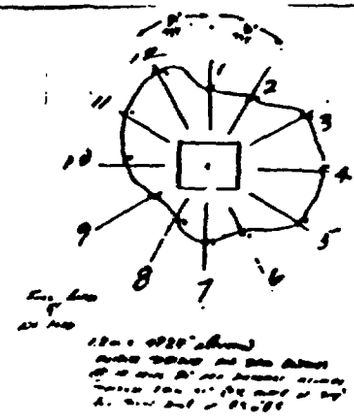
BAROMETRIC PRESSURE: 29.719 SKY COVER: OVERCAST

WIND DIRECTION: NE WIND VELOCITY: ≤5MPH MICROPHONE: GR1962

SOUND LEVEL METER: GR982 OCTAVE ANALYZER: ____

LOAD CONDITION: ✓ RATED ___ NO LOAD MICROPHONE LOCATION: AS BELOW

DATE	TIME	MICROPHONE POSITION	DISTANCE FT(M)	DBA	REMARKS
12-12-81	1154	1	3' 4"	85	
		2	3' 10"	85	
		3	2' 2"	85	
		4	1' 10"	85	
12-2		5	3' 3"	85	
81		6	4'	85	
		7	6'6"	85	
		8	4' 3"	85	
		9	2' 10"	85	
		10	2' 4"	85	
		11	3' 2"	85	
12-12-81	1200	12	3'8"	85	



ACOUSTICAL TEST DATA

TEST ITEM: 30 KW / 400 Hz GEN SET	STATION:			TIME: 1350	DATE: 22 DEC 1987
				TEST CONDUCTED BY: KA GC	TEST ITEM OPERATOR:
RFG/MODEL NO: MEP 114A	SERIAL NO: RZ4 0323	ODOMETER:	HOUR METER: 3135.7	TEST ITEM CONDITION: MODIFIED	NO LOAD
TEMPERATURE: 47 °F	HUMIDITY: 53 %	TEST SITE: HARTWOOD		SURFACE: GRASS	SEA STATE: TERRAIN:
BAROMETRIC PRESSURE: 29.719	SKY COVER: OVERCAST	STATIONARY OPERATION: [X]		HIGHWAY DRIVING: [ ]	DRIVE BY: [ ]
WIND DIRECTION: NE	WIND VELOCITY: < 5 MPH	MICROPHONE: GR 1962		SOUND LEVEL METER: GR 1982	OCTAVE ANALYZER:
INTERIOR: [ ]	EXTERIOR: [X]	MICROPHONE LOCATION:		TAPE RECORDER:	TAPE NO:

POSITION	DISTANCE	dbA	dbB	dbC	ALL PASS	~~20.8~~ 31.5	63	125	250	500	1,000	2,000	4000	8000	REMARKS
1	7M	68.4	76.0	79.3	80.3	68.9	70.1	77.1	75.6	65.1	61.2	58.3	54.3	48.8	CENTER DISCHARGE
2	7M	70.4	76.9	80.4	81.3	68.9	71.4	77.9	75.1	66.8	64.7	59.9	55.8	53.4	BAFFLE REMOVED
3	7M	68.1	74.7	78.7	79.1	72.6	71.4	75.9	72.2	65.8	61.4	59.1	54.6	50.1	

AGZ-8

ACOUSTICAL TEST DATA

TEST ITEM: 30KW/400 Hz GEN SET	STATION:			TIME: 1358	DATE: 22 DEC. 1987
RFG/MODEL NO: MEP 114A	SERIAL NO: RZ4 0323	ODOMETER:	HOUR METER: 3135.9	TEST CONDUCTED BY: KM GC	TEST ITEM OPERATOR:
TEMPERATURE: 47°F	HUMIDITY: 53%	TEST SITE: HARTWOOD		TEST ITEM CONDITION: MODIFIED	RATED LOAD
BAROMETRIC PRESSURE: 29.719	SKY COVER: OVERCAST	STATIONARY OPERATION: [X]	HIGHWAY DRIVING: [ ]	SURFACE: GRASS	SEA STATE:	TERRAIN:
WIND DIRECTION: NE	WIND VELOCITY: <5MPA	MICROPHONE: GR 1962		SOUND LEVEL METER: GR1982	OCTAVE ANALYZER:
INTERIOR: [ ]	EXTERIOR: [X]	MICROPHONE LOCATION:		TAPE RECORDER:	TAPE NO:

Position	Distance	dbA	dbB	dbC	ALL PASS	~~31.5~~ 31.5	63	125	250	500	1,000	2,000	4000	8000	REMARKS
1	7M	69.1	76.7	80.4	80.2	67.6	71.3	78.8	73.6	66.4	62.4	61.6	55.9	57.6	CENTER SECTION OF
2	7M	71.6	77.9	81.2	82.1	69.8	72.4	79.3	75.1	67.2	66.3	64.4	58.6	54.9	DISCHARGE BAFFLE
3	7M	69.6	76.1	80.1	80.6	68.4	72.3	78.1	72.6	67.2	62.9	62.1	56.4 ~~54.4~~	57.4 ~~56.4~~	REMOVED

S72-B

TEST DATA

ITEM 30KW, 400HZ GENERATOR SET.

MFGR. LIBBY WELDING

MODEL NO. MEP 114A

SERIAL NO. RZ40323

NTS

National Technical Systems | Scientific Services Group | Testing Division, P.O. Box 38, Hartwood, Virginia 22471, Tel: 703 752 5300

Frequency and Voltage

Regulation, Stability and Transient Response Test

(Short Term)

REF. NO. MIL-STD 705 Para. 608.1

SHEET 1 OF 2

DATE 8 OCTOBER 1987

JOB NO. 555-2140

PROJ. ENGR.

RECORDER/OBSERVER ENT/ENG.

INST TIME	STEP NO.	LOAD STEP	VOLTAGE X1 L_1-L_0 VAC	L_2-L_0 VAC	L_3-L_0 VAC	AMPERES X40 L_1-L_0 AC AMPS	L_2-L_0 AC AMPS	L_3-L_0 AC AMPS	KILOWATTS X40 L_1-L_0 Kw	L_2-L_0 Kw	L_3-L_0 Kw	POWER FACTOR PF	FREQ. Hz	EXCITER FIELD VOLTS VDC	AMPS DCA	AMB. TEMP. °F
0830	START	4/4	START UNIT FOR STABILIZATION						FOR 60	8.1						
0845	STABIL	4/4	120.0	120.5	120.0	2.60	2.62	2.65	0.245	0.250	0.250	0.80	400.1	12.9	5.38	46
0855	STABIL	4/4	120.0	120.5	120.0	2.60	2.62	2.65	0.245	0.250	0.250	0.80	400.2	13.0	5.40	48
0905	STABIL	4/4	120.0	120.5	120.0	2.60	2.62	2.65	0.245	0.250	0.250	0.80	400.2	13.1	5.40	50
0910	STABIL	4/4	120.0	120.5	120.0	2.60	2.62	2.65	0.245	0.250	0.250	0.80	400.1	13.2	5.40	51
0915	STABIL	4/4	120.0	120.5	120.0	2.60	2.62	2.65	0.245	0.250	0.250	0.80	400.1	13.2	5.40	51
0918			BEGIN	608.1												
	1	4/4	120.5	120.5	120.0	2.62	2.63	2.64	0.249	0.251	0.250	0.80	400.4	13.2	5.40	
	2	0	123.0	123.0	123.0	0	0	0	0	0	0	NA	400.4	9.2	3.80	
	3	4/4	120.5	120.5	120.0	2.62	2.63	2.64	0.249	0.251	0.251	0.80	400.4	13.1	5.40	
	4	0	123.0	123.0	123.0	0	0	0	0	0	0	NA	400.4	9.2	3.80	
	5	4/4	120.5	120.5	120.0	2.62	2.63	2.64	0.249	0.251	0.250	0.80	400.4	13.1	5.40	
	6	0	123.0	123.0	123.0	0	0	0	0	0	0	NA	400.4	9.2	3.80	
	7	4/4	120.5	120.5	120.5	2.62	2.63	2.65	0.249	0.251	0.250	0.80	400.4	13.0	5.36	
	8	0	123.0	123.0	123.0	0	0	0	0	0	0	NA	400.4	9.1	3.76	
	9	3/4	121.0	121.0	120.5	1.93	1.94	1.94	0.188	0.189	0.189	0.80	400.4	12.0	4.96	
	10	0	123.0	123.0	123.0	0	0	0	0	0	0	NA	400.5	9.1	3.44	
	11	3/4	121.0	121.0	120.5	1.94	1.94	1.95	0.188	0.190	0.188	0.795	400.4	12.0	4.96	
	12	0	123.0	123.0	123.0	0	0	0	0	0	0	NA	400.5	9.0	3.36	
	13	3/4	121.0	121.0	120.5	1.94	1.93	1.94	0.189	0.189	0.189	0.795	400.5	11.9	4.96	
	14	0	123.0	123.0	123.0	0	0	0	0	0	0	NA	400.5	9.0	3.36	
	15	2/4	121.5	121.5	121.5	1.31	1.30	1.31	0.127	0.124	0.125	0.79	400.4	10.9	4.52	
	16	0	123.0	123.0	123.0	0	0	0	0	0	0	NA	400.4	9.0	3.00	
	17	2/4	121.5	121.5	121.0	1.31	1.30	1.30	0.127	0.125	0.125	0.79	400.4	10.9	4.56	
	18	0	123.0	123.0	123.0	0	0	0	0	0	0	NA	400.4	9.0	3.76	
	19	2/4	121.5	121.5	121.5	1.31	1.30	1.31	0.126	0.125	0.125	0.79	400.4	10.8	4.08	
	20	0	123.0	123.0	123.0	0	0	0	0	0	0	NA	400.5	8.9	3.20	

NOTES: UNIT EXCEEDED 1% FOR VOLTAGE REGULATION

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TEST DATA

ITEM 30 KW, 400HZ GENERATOR SET

MFGR. LIBBY WELDING

MODEL NO. MEP 114A

SERIAL NO. RZ 40383

NTS

National Technical Systems — Scientific Services Group — Testing Division, P.O. Box 38, Hartwood, Virginia 22471, Tel: 703 752 5300

Frequency and Voltage

Regulation, Stability and Transient Response Test (Short Term)

REF. NO. MIL-STD 705 Para. 608.1

SHEET 2 OF 2

DATE 8 OCTOBER 1987

JOB NO. 555-2140

PROJ. ENGR.

RECORDER/OBSERVER EMT/CWG.

INST TIME	STEP NO.	LOAD STEP	VOLTAGE X1 L_1-L_0 VAC	VOLTAGE X1 L_2-L_0 VAC	VOLTAGE X1 L_3-L_0 VAC	AMPERES X40 L_1-L_0 AC AMPS	AMPERES X40 L_2-L_0 AC AMPS	AMPERES X40 L_3-L_0 AC AMPS	KILOWATTS X40 L_1-L_0 Kw	KILOWATTS X40 L_2-L_0 Kw	KILOWATTS X40 L_3-L_0 Kw	POWER FACTOR PF	FREQ. Hz	EXCITER FIELD VOLTS VDC	EXCITER FIELD AMPS DCA	AMB. TEMP. °F
	21	1/4	122.0	122.0	122.0	0.64	0.64	0.65	0.062	0.063	0.063	0.79	400.5	9.8	4.08	
	22	0	123.0	123.0	123.0	0	0	0	0	0	0	NA	400.4	8.9	3.72	
	23	1/4	122.0	122.0	122.0	0.64	0.63	0.64	0.062	0.063	0.063	0.795	400.5	9.8	4.08	
	24	0	123.0	123.0	123.0	0	0	0	0	0	0	NA	400.4	8.9	3.72	
	25	1/4	122.0	122.0	122.0	0.63	0.64	0.64	0.062	0.062	0.063	0.79	400.4	9.8	4.08	
	26	0	123.0	123.0	123.0	0	0	0	0	0	0	NA	400.4	8.9	3.72	
	27	4/4	120.5	120.5	120.0	2.61	2.62	2.63	0.250	0.252	0.252	0.80	400.5	12.8	5.36	
	28	0	123.0	123.0	123.0	0	0	0	0	0	0	NA	400.5	8.9	3.72	
	29	4/4	120.5	120.5	120.0	2.62	2.62	2.62	0.250	0.251	0.252	0.80	400.5	12.9	5.36	
	30	0	123.0	123.0	123.0	0	0	0	0	0	0	NA	400.5	8.9	3.72	
	31	4/4	120.5	120.5	120.0	2.61	2.61	2.62	0.250	0.251	0.253	0.80	400.5	12.9	5.36	
	32	0	123.0	123.0	123.0	0	0	0	0	0	0	NA	400.5	9.0	3.49	
0442	END OF TEST.															

NOTES:

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TEST DATA

ITEM 30 KW 400 Hz
GEN SET
(IN MODIFIED
MFGR. LIBBY WELDING
MODEL NO. MEP 114A
SERIAL NO. R240323

NTS
National Technical Systems
Scientific Services Group
Testing Division
P.O. Box 30
Hallwood, Virginia 22471
Tel: 703 752 5300

FREQUENCY AND VOLTAGE REGULATION, STABILITY, AND TRANSIENT RESPONSE TEST (SURGE TEST)

REF. NO. MIL STD 705; 608.1
SHEET 1 OF 3
DATE 29 FEB 1988
JOB NO. 555-2140
PROJ. ENGR.
RECORDER/OBSERVER

LOAD STEP	FREQUENCY: MAXIMUM EXCURSION OVERSHOOT Hz	OVERSHOOT %	UNDERSHOOT Hz	UNDERSHOOT %	REC. TIME SEC	STEADY STATE BAND (MINIMUM) Hz	STEADY STATE BAND (MINIMUM) % ±	REGULATION FREQ. %	VOLTAGE: REGULATION VOLT %	MAXIMUM EXCURSION OVERSHOOT VOLT	OVERSHOOT %	UNDERSHOOT VOLT	UNDERSHOOT %	REC. TIME SEC	STEADY STATE BAND (MINIMUM) VOLT	STEADY STATE BAND (MINIMUM) % ±
1						.52	.13								0	0
1 - 2	2.08	.52			.45			0	2.5	1.04	.87			.30		
2						.17	.04								0	0
2 - 3			1.56	.39	.25			0	2.5			1.04	.87	.25		
3						.87	.22								0	0
3 - 4	2.43	.60			.45			0	2.5	1.04	.87			.40		
4						.87	.22								0	0
4 - 5			2.26	.56	.35			0	2.5			1.04	.87	.25		
5						1.04	.26								0	0
5 - 6	2.43	.61			.35			0	2.5	1.22	1.01			.35		
6						1.04	.26								0	0
6 - 7			1.74	.43	.35			0	2.08			1.04	.87	.30		
7						1.04	.26								0	0
7 - 8	2.08	.52			.25			0	2.08	1.22	1.01			.30		
8						.87	.22								0	0
8 - 9			.52	.13	0			0	2.08			1.04	.87	.20		
9						.87	.22								0	0
9 - 10	1.56	.39			.45			.02	2.08	.52	.43			0		
10						.87	.22								0	0
10 - 11			.35	.09	0			.02	2.08			1.04	.87	.25		
11						1.04	.26								0	0
11 - 12	1.39	.35			.45			.02	2.08	.69	.58			.15		
12						1.39	.35								0	0
12 - 13			.52	.13	0.07 sec			0	2.08			1.04	.87	.25		
13						1.39	.35								0	0
13 - 14	1.91	.48			.63			0	2.08	.87	.72			0		

NOTES:

TEST DATA

ITEM 30 KW 400 Hz GEN SET UNMODIFIED

MFGR. LIBBY WELDING

MODEL NO. MEP 114A

SERIAL NO. R2 4 0323

NTS

National Technical Systems

Scientific Services Group

Testing Division
P.O. Box 30
Hallwood, Virginia 22471
Tel: 703 752 5300

FREQUENCY AND VOLTAGE REGULATION, STABILITY, AND TRANSIENT RESPONSE TEST (SINGLE PHASE)

REF. NO. MIL STD 705 608.1

SHEET 2 OF 3

DATE 29 FEB 1988

JOB NO. 555-2140

PROJ. ENGR.

RECORDER/OBSERVER

LOAD STEP	FREQUENCY: MAXIMUM EXCURSION OVERSHOOT Hz	FREQUENCY: MAXIMUM EXCURSION OVERSHOOT %	FREQUENCY: MAXIMUM EXCURSION UNDERSHOOT Hz	FREQUENCY: MAXIMUM EXCURSION UNDERSHOOT %	FREQUENCY: REC. TIME SEC	FREQUENCY: (DROOP) (DEAD BAND) MINIMUM ± Hz	FREQUENCY: (DROOP) (DEAD BAND) MINIMUM ± %	FREQUENCY: STEADY STATE BAND %	VOLTAGE: STEADY STATE BAND %	VOLTAGE: MAXIMUM EXCURSION OVERSHOOT VOLT	VOLTAGE: MAXIMUM EXCURSION OVERSHOOT %	VOLTAGE: MAXIMUM EXCURSION UNDERSHOOT VOLT	VOLTAGE: MAXIMUM EXCURSION UNDERSHOOT %	VOLTAGE: REC. TIME SEC	VOLTAGE: (DROOP) (DEAD BAND) MINIMUM ± VOLT	VOLTAGE: (DROOP) (DEAD BAND) MINIMUM ± %
14						1.21	.36								0	0
14-15			.52	.13	0			.02	1.25			.87	.72	.45		
15						.87	.22								0	0
15-16	.87	.22			0			0	1.25	.52	.43			0		
16						1.21	.30								0	0
16-17			.69	.17	0			0	1.66			.87	.22	.15		
17						1.04	.26								0	0
17-18	.69	.17			0			0	1.66	.52	.43			0		
18						.17	.04								0	0
18-19			.17	.04	0			0	1.25			.69	.58	0		
19						1.04	.26								0	0
19-20	.87	.22			0			.02	1.25	.52	.43			0		
20						1.04	.26								0	0
20-21			.69	.17	0			0	.83			.35	.29	0		
21						1.22	.30								0	0
21-22	.70	.17			0			.02	.83	.35	.29			0		
22						1.56	.39								0	0
22-23			.87	.22	0			.02	.83			.52	.43	0		
23						.87	.22								0	0
23-24	1.22	.30			0			.02	.83	.17	.15			0		
24						.87	.22								0	0
24-25			1.39	.35	.25			0	.83			.35	.29	0		
25						1.04	.26								0	0
25-26	1.30	.33			0			0	.83	.35	.29			0		
26						.87	.22								0	0
26-27			1.91	.48	.35			.02	2.5			1.10	.91	.25		

NOTES:

TEST DATA

ITEM 30 KW 400 Hz
GEN SET
UNMODIFIED
MFGR. LIBBY WELDING
MODEL NO. MEA 114A
SERIAL NO. R2 40323

NTS
National Technical Systems
Scientific Services Group
Testing Division
P.O. Box 30
Lanham, Virginia 22471
Tel: 703 752 5300

FREQUENCY AND VOLTAGE REGULATION, STABILITY, AND TRANSIENT RESPONSE TEST (SEMI-AUTO)

REF. NO. MIL STD 705; 608.1
SHEET 3 OF 3
DATE 29 FEB 1988
JOB NO. 555-2140
PROJ. ENGR.
RECORDER/OBSERVER

LOAD STEP	FREQUENCY: MAXIMUM EXCURSION OVERSHOOT Hz	OVERSHOOT %	UNDERSHOOT Hz	UNDERSHOOT %	REC. TIME SEC	(CONSTANT LOAD) INSTABILITY ± Hz	± %	REGULATION FREQ. %	VOLT. %	VOLTAGE: MAXIMUM EXCURSION OVERSHOOT VOLT	OVERSHOOT %	UNDERSHOOT VOLT	UNDERSHOOT %	REC. TIME SEC	(CONSTANT LOAD) INSTABILITY ± VOLT	± %
27						1.56	.39								0	0
27 - 28	2.60	.65			.45			0	2.5	1.22	1.01			.30		
28						.87	.22								0	0
28 - 29			2.26	.56	.40			0	2.5			1.22	1.01	.25		
29						.35	.09								0	0
29 - 30	2.08	.52			.30			0	2.5	1.04	.82			.25		
30						.17	.04								0	0
30 - 31			1.56	.39	.40			0	2.5			1.22	1.01	.15		
31						.35	.09								0	0
31 - 32	2.40	.60			.30			0	2.5	1.10	.91			.30		

0-180

NOTES:

TEST DATA

ITEM 30 KW / 400 Hz GENERATOR SET MODIFIED

MFGR. LIBBY WELDING

MODEL NO. MEP 114A

SERIAL NO. RZ4 0323

NTS

National Technical Systems | Scientific Services Group | Testing Division P.O. Box 38 Harlwood, Virginia 22471 Tel: 703 752 5300

Frequency and Voltage

Regulation, Stability and Transient Response Test (Short Term)

REF. NO. MIL-STD 705 Para. 608.1

SHEET 1 OF 1

DATE 14 JAN. 1988

JOB NO. 555-2140

PROJ. ENGR.

RECORDER/OBSERVER KM / GC

INST TIME	STEP NO.	LOAD STEP	E6023 D VOLTAGE L_1-L_0 VAC	L_2-L_0 VAC	L_3-L_0 VAC	E6040 D AMPERES x40 L_1-L_0 AC AMPS	L_2-L_0 AC AMPS	L_3-L_0 AC AMPS	E6230 D KILOWATTS x40 L_1-L_0 Kw	L_2-L_0 Kw	L_3-L_0 Kw	E6252 D POWER FACTOR PF	E6040 D FREQ. Hz	E6040 D EXCITER VOLTS VDC	E6040 D FIELD AMPS DCA	AMB. TEMP. °F	
0830			STARTED UNIT TO CHECK LOAD VARIATION														
0955			APPLIED RATED LOAD START STABILIZATION														
0900		RR	119.9	120	120	2.60	2.62	2.62	.249	.257	.257	.80	400.5	15.9	5.65	125	24/39
0910			UNIT ABORT	SHUT	SELF TEST	DOWN	ON	OVERTEMP									

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NOTES:

SHORT TERM GOB.1

BEGIN SCAN GROUP 1 14 JAN 88 08:16:27
30 KW 400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	71.823	DEG. F
C	2	EXHAUST 2	71.899	DEG. F
C	3	EXHAUST 3	72.084	DEG. F
C	4	EXHAUST 4	72.214	DEG. F
C	5	EXHAUST 5	72.236	DEG. F
C	6	EXHAUST 6	72.366	DEG. F
C	7	ENG. COOL. IN	68.234	DEG. F
C	8	ENG. COOL. OUT	72.305	DEG. F
C	9	OIL SUMP		OPEN TC
C	10	OIL GALLERY	71.358	DEG. F
C	13	ENG. INTAKE	72.703	DEG. F
C	14	RAD. TOP LEFT	77.012	DEG. F
C	15	RAD. BTTM LEFT	74.073	DEG. F
C	16	RAD. TOP RIGHT	76.898	DEG. F
C	17	RAD. BTTM RIGHT	73.916	DEG. F
C	18	GEN. AIR IN	73.245	DEG. F
C	19	GEN. AIR OUT	70.948	DEG. F
C	20	GEN. FRAME TOP	73.892	DEG. F
C	21	GEN. FRAME BTTM	70.367	DEG. F
C	22	GEN. EXCITER	71.535	DEG. F
C	23	GEN. VOLT. REG.	71.198	DEG. F
C	24	CONTROL PANEL	71.198	DEG. F
C	25	RELAY AREA	86.631	DEG. F
C	26	BATTERY LEFT	69.122	DEG. F
C	27	BATTERY RIGHT	69.644	DEG. F
C	28	AIR IN SET	92.798	DEG. F
C	29	FUEL TANK	68.163	DEG. F
C	30	FUEL OUTLET	71.822	DEG. F

END SCAN GROUP 1 14 JAN 88 08:16:33

STOPPED SINGLE SCAN 14 JAN 88 08:16:33

BEGIN SCAN GROUP 1 14 JAN 88 08:21:44
30 KW/400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	72.551	DEG. F
C	2	EXHAUST 2	72.448	DEG. F
C	3	EXHAUST 3	72.524	DEG. F
C	4	EXHAUST 4	72.703	DEG. F
C	5	EXHAUST 5	72.681	DEG. F
C	6	EXHAUST 6	72.833	DEG. F
C	7	ENG. COOL. IN	68.414	DEG. F
C	8	ENG. COOL. OUT	74.168	DEG. F
C	9	OIL SUMP	71.426	DEG. F
C	10	OIL GALLERY	72.668	DEG. F
C	13	ENG. INTAKE	73.470	DEG. F
C	14	RAD. TOP LEFT	81.501	DEG. F
C	15	RAD. BTTM LEFT	78.577	DEG. F
C	16	RAD. TOP RIGHT	83.264	DEG. F
C	17	RAD. BTTM RIGHT	80.169	DEG. F
C	18	GEN. AIR IN	73.680	DEG. F
C	19	GEN. AIR OUT	73.367	DEG. F
C	20	GEN. FRAME TOP	76.280	DEG. F
C	21	GEN. FRAME BTTM	70.649	DEG. F
C	22	GEN. EXCITER	74.811	DEG. F
C	23	GEN. VOLT. REG.	72.461	DEG. F
C	24	CONTROL PANEL	72.510	DEG. F
C	25	RELAY AREA	93.199	DEG. F
C	26	BATTERY LEFT	70.284	DEG. F
C	27	BATTERY RIGHT	70.958	DEG. F
C	28	AIR IN SET	97.441	DEG. F
C	29	FUEL TANK	69.260	DEG. F
C	30	FUEL OUTLET	74.400	DEG. F

END SCAN GROUP 1 14 JAN 88 08:21:54

STOPPED SINGLE SCAN 14 JAN 88 08:21:54

BEGIN SCAN GROUP 1 14 JAN 88 09:00:0
30 KW 400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	783.00	DEG. F
C	2	EXHAUST 2	820.37	DEG. F
C	3	EXHAUST 3	825.03	DEG. F
C	4	EXHAUST 4	830.22	DEG. F
C	5	EXHAUST 5	833.96	DEG. F
C	6	EXHAUST 6	769.49	DEG. F
C	7	ENG. COOL. IN	197.45	DEG. F
C	8	ENG. COOL. OUT	204.32	DEG. F
C	9	OIL SUMP	221.47	DEG. F
C	10	OIL GALLERY	224.55	DEG. F
C	13	ENG. INTAKE	134.61	DEG. F
C	14	RAD. TOP LEFT	149.68	DEG. F
C	15	RAD. BTTM LEFT	147.42	DEG. F
C	16	RAD. TOP RIGHT	143.76	DEG. F
C	17	RAD. BTTM RIGHT	146.13	DEG. F
C	18	GEN. AIR IN	124.86	DEG. F
C	19	GEN. AIR OUT	146.99	DEG. F
C	20	GEN. FRAME TOP	130.42	DEG. F
C	21	GEN. FRAME BTTM	129.91	DEG. F
C	22	GEN. EXCITER	134.85	DEG. F
C	23	GEN. VOLT. REG.	117.88	DEG. F
C	24	CONTROL PANEL	120.01	DEG. F
C	25	RELAY AREA	117.24	DEG. F
C	26	BATTERY LEFT	119.38	DEG. F
C	27	BATTERY RIGHT	115.41	DEG. F
C	28	AIR IN SET	125.96	DEG. F
C	29	FUEL TANK	76.579	DEG. F
C	30	FUEL OUTLET	130.64	DEG. F

END SCAN GROUP 1 14 JAN 88 09:00:13

STOPPED SINGLE SCAN 14 JAN 88 09:00:13

BEGIN SCAN GROUP 1 14 JAN 88 09:10:0
30 KW/400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	686.92	DEG. F
C	2	EXHAUST 2	717.50	DEG. F
C	3	EXHAUST 3	719.07	DEG. F
C	4	EXHAUST 4	726.18	DEG. F
C	5	EXHAUST 5	733.79	DEG. F
C	6	EXHAUST 6	676.43	DEG. F
C	7	ENG. COOL. IN	204.82	DEG. F
C	8	ENG. COOL. OUT	212.90	DEG. F
C	9	OIL SUMP	237.72	DEG. F
C	10	OIL GALLERY	238.43	DEG. F
C	13	ENG. INTAKE	136.79	DEG. F
C	14	RAD. TOP LEFT	155.62	DEG. F
C	15	RAD. BTTM LEFT	152.56	DEG. F
C	16	RAD. TOP RIGHT	149.54	DEG. F
C	17	RAD. BTTM RIGHT	151.30	DEG. F
C	18	GEN. AIR IN	122.59	DEG. F
C	19	GEN. AIR OUT	154.53	DEG. F
C	20	GEN. FRAME TOP	130.73	DEG. F
C	21	GEN. FRAME BTTM	134.49	DEG. F
C	22	GEN. EXCITER	137.67	DEG. F
C	23	GEN. VOLT. REG.	124.64	DEG. F
C	24	CONTROL PANEL	128.83	DEG. F
C	25	RELAY AREA	119.86	DEG. F
C	26	BATTERY LEFT	126.62	DEG. F
C	27	BATTERY RIGHT	122.56	DEG. F
C	28	AIR IN SET	124.56	DEG. F
C	29	FUEL TANK	80.250	DEG. F
C	30	FUEL OUTLET	127.75	DEG. F

END SCAN GROUP 1 14 JAN 88 09:10:1

STOPPED SINGLE SCAN 14 JAN 88 09:10:1

TEST DATA

ITEM 30 KW 1400 HZ
GENERATOR SET
MODIFIED
MFGR. GABEL WELDING
MODEL NO. MEP 114A
SERIAL NO. RZ4 0323

NTS
National Technical Systems | Scientific Services Group | Testing Division
P.O. Box 38
Hartwood, Virginia 22471
Tel: 703 752 5300

Frequency and Voltage
Regulation, Stability and Transient Response Test
(Short Term)

REF. NO. MIL-STD 705 Para. 608.1
SHEET 1 OF 2
DATE 14 JAN 1983
JOB NO. 555-2140
PROJ. ENGR.
RECORDER/OBSERVER KM/LC

INST TIME	STEP NO.	LOAD STEP	E6025D VOLTAGE L_1-L_0 VAC	L_2-L_0 VAC	L_3-L_0 VAC	E6040D AMPERES X40 L_1-L_0 AC AMPS	L_2-L_0 AC AMPS	L_3-L_0 AC AMPS	E6230D KILOWATTS X40 L_1-L_0 Kw	L_2-L_0 Kw	L_3-L_0 Kw	E2520 POWER FACTOR PF	E6040D FREQ. Hz	E4670 EXCITER VOLTS VDC	R2330 FIELD AMPS DCA	AMB. TEMP. °F	EXH PRESS IN/OUT IN H2O
			START	STABILIZATION													
0955		R/L	120	121.1	120	2.6	2.62	2.62	.25	.251	.251	.80	400.5	16.7	5.9	120	2.9/32.6
1050		R/L	120	121.1	120	2.6	2.62	2.63	.25	.251	.251	.80	400.5	16.8	5.75	125	2.7/32.3
1100		R/L	120	121.1	120	2.6	2.62	2.62	.25	.251	.251	.80	400.5	16.8	5.75	125	2.7/32.8
1110		R/L	120	121.1	120	2.6	2.62	2.62	.25	.251	.251	.80	400.5	16.8	5.9	126	3.1/32.8
1120		R/L	120	121.1	120	2.6	2.62	2.62	.25	.251	.251	.80	400.5	16.8	5.9	125	
	1	R/L	120	120.1	120	2.6	2.62	2.62	.25	.251	.251	.80	400.7	11.8	4.1	125	
	2	N/L	121.5	121.5	121.5								400.7	16.6	5.75	126	
	3	R/L	120	120.1	120.1	2.6	2.62	2.63	.25	.251	.251	.80	400.4	11.6	4.1	125	
	4	N/L	121.5	121.5	121.5								400.5	16.5	5.9	125	
	5	R/L	120	120.1	120	2.6	2.62	2.63	.25	.251	.251	.80	400.5	11.6	4.1	126	
	6	N/L	121.5	121.5	121.5								400.9	16.5	5.8	125	
	7	R/L	120	120.1	120	2.6	2.62	2.63	.25	.251	.251	.80	400.6	11.6	4.1	125	
	8	N/L	121.5	121.5	121.5								400.6	14.9	5.3	124	
	9	3/4	120	120.5	120.5	1.92	1.94	1.94	.182	.187	.187	.80	400.5	11.5	4.1	125	
	10	N/L	121.5	121.9	121.5								400.6	14.8	5.3	125	
	11	3/4	120.1	121	120.5	1.93	1.94	1.94	.182	.187	.187	.80	400.6	11.3	4.05	125	
	12	N/L	120.5	120.5	120.5								400.5	14.8	5.3	125	
	13	3/4	120.5	120.5	120.5	1.93	1.94	1.95	.182	.187	.187	.80	400.5	11.3	4.05	123	
	14	N/L	121.5	121.5	121.5								400.6	13.4	4.9	125	
	15	1/2	120.5	121	121	1.3	1.31	1.31	.122	.124	.125	.80	400.5	11.3	4.0	124	
	16	N/L	121.5	121.5	121.5								400.7	13.4	4.9	123	
	17	1/2	120.5	121	121	1.3	1.31	1.31	.122	.123	.125	.80	400.5	11.2	4.0	125	
	18	N/L	120.5	120.5	120.5								400.6	13.4	4.9	125	
	19	1/2	120.5	121	121	1.3	1.31	1.31	.122	.124	.125	.80	400.5	11.2	4.0	125	
	20	N/L	121.5	121.5	121.5								400.6	12.2	4.4	125	
	21	1/4	121	121	121.5	.64	.65	.65	.062	.061	.062	.80	400.6	12.2	4.4	125	

NOTES:

TEST DATA

ITEM 30 KW / 400 HZ GENERATOR SET MODIFIED
MFGR. LIBBY WELDING
MODEL NO. MEP 114A
SERIAL NO. R24 0323

NTS
National Technical Systems | Scientific Services Group | Testing Division P.O. Box 38 Hartwood, Virginia 22471 Tel: 703 752 5300

Frequency and Voltage Regulation, Stability and Transient Response Test (Short Term)

REF. NO. MIL-STD 705 Para. 608.1
SHEET 2 OF 2
DATE 14 JAN 1988
JOB NO. 555-2140
PROJ. ENGR.
RECORDER/OBSERVER KM / GC

INST TIME	STEP NO.	LOAD STEP	E6023 D VOLTAGE L_1-L_0 VAC	VOLTAGE L_2-L_0 VAC	VOLTAGE L_3-L_0 VAC	E6040 D AMPERES x40 L_1-L_0 AC AMPS	AMPERES x40 L_2-L_0 AC AMPS	AMPERES x40 L_3-L_0 AC AMPS	E6230 D KILOWATTS x40 L_1-L_0 Kw	KILOWATTS x40 L_2-L_0 Kw	KILOWATTS x40 L_3-L_0 Kw	E6250 D POWER FACTOR PF	E6040 FREQ. Hz	E6670 EXCITER VOLTS VDC	E6230 FIELD AMPS DCA	AMB. TEMP. °F
													400.6	11.1	4.0	126
	22	N/L	121.5	121.5	121.5								400.7	12.0	4.4	125
	23	F/L	121.	121.5	121.5	.64	.65	.65	.062	.063	.062	.80	400.7	11.0	4.0	125
	24	N/L	121.5	121.5	121.5								400.5	12.0	4.375	125
	25	F/L	121.5	121.5	121.5	.64	.65	.65	.062	.063	.062	.80	400.5	11.0	4.0	124
	26	N/L	121.5	121.5	121.5								400.8	15.8	5.7	125
	27	R/L	120	120.5	120	2.6	2.63	2.64	.25	.251	.257	.80	400.6	11.1	4.0	125
	28	N/L	121.5	121.5	121.5								400.7	15.8	5.75	124
	29	R/L	120	120.5	120	2.6	2.63	2.64	.25	.252	.257	.80	400.6	11.2	4.0	124
	30	N/L	121.5	121.5	121.5								400.7	15.8	5.75	125
	31	R/L	120	120.5	120	2.6	2.63	2.64	.25	.251	.257	.80	400.6	11.2	4.0	125
	32	N/L	121.5	121.5	121.5											
1157			END OF TEST													
1159			SHUT UNIT DOWN													

NOTES:

TEST DATA

ITEM 30KW 400 Hz GEN SET MODIFIED

MFGR. LIBBY WELDING

MODEL NO. MEP 114A

SERIAL NO. RZ 4 0323

NTS

National Technical Systems Scientific Services Group

Testing Division
P.O. Box 30
Hartwood, Virginia 22471
Tel: 703 757 5300

FREQUENCY AND VOLTAGE REGULATION, STABILITY, AND TRANSIENT RESPONSE TEST (SHORT TERM)

REF. NO. MIL STD 705

SHEET 1 OF 3

DATE 2 FEB 1988

JOB NO. 555-2140

PROJ. ENGR.

RECORDER/OBSERVER RS.

LOAD STEP	FREQUENCY: MAXIMUM EXCURSION OVERSHOOT Hz	OVERSHOOT %	MAXIMUM EXCURSION UNDERSHOOT Hz	UNDERSHOOT %	REC. TIME SEC	CONSTANT LOAD BANDWIDTH ± Hz	± %	REGULATION FREQ. %	VOLT %	VOLTAGE: MAXIMUM EXCURSION OVERSHOOT VOLT	OVERSHOOT %	UNDERSHOOT VOLT	UNDERSHOOT %	REC. TIME SEC	CONSTANT LOAD BANDWIDTH ± VOLT	± %
1						.17	.04								.17	.15
1-2	2.42	.60			.31			.05	1.25	1.56	1.30			.23		
2						.26	.07								.17	.15
2-3			1.56	.39	.31			0	1.16			1.74	1.45	.35		
3						.26	.07								.17	.15
3-4	2.43	.60			.31			.075	1.16	1.56	1.30			.29		
4						.26	.07								.17	.15
4-5			1.91	.48	.31			.05	1.25			1.74	1.45	.31		
5						.35	.09								.17	.15
5-6	2.43	.60			.31			0	1.25	1.74	1.45			.31		
6						.26	.07								.17	.15
6-7			1.74	.43	.23			.1	1.25			1.91	1.59	.35		
7						.17	.04								.17	.15
7-8	2.60	.65			.23			.075	1.25	1.39	1.16			.16		
8						.17	.04								.17	.15
8-9			.69	.17	0			0	.83			1.22	1.01	.31		
9						.17	.04								.17	.15
9-10	1.04	.26			0			.025	.83	.87	.72			.16		
10						.26	.07								.17	.15
10-11			.87	.22	0			.025	.83			1.56	1.30	.47		
11						.17	.04								.17	.15
11-12	1.04	.26			0			0	0	1.04	.87			.39		
12						.17	.04								.17	.15
12-13			.69	.17	0			.025	0			1.22	1.01	.39		
13						.17	.04								.17	.15
13-14	1.04	.26			0			0	.83	1.04	.87			.23		

NOTES: VOLTAGE REGULATION EXCEEDED 1%

TEST DATA

ITEM 30 KW / 400 HZ
SECONDARY SET
MODIFIED
MFGR. LEAR WELDING
MODEL NO. MEP 114A
SERIAL NO. RZ4 0323

NTS
National Technical Systems | Scientific Services Group | Testing Division, P.O. Box 38, Harwood, Virginia 22471, Tel: 703 752 5300

WINDING RESISTANCE
HIGH TEMP

REF. NO. MIL-STD 705
SHEET 1 OF 3
DATE 15 JAN 1986
JOB NO. 555-2140
PROJ. ENGR.
RECORDER/OBSERVER ICM / C.C

INST TIME	STEP NO.	LOAD STEP	E6083 D VOLTAGE L_1-L_0 VAC	L_2-L_0 VAC	L_3-L_0 VAC	E6040 D AMPERES X40 L_1-L_0 AC AMPS	L_2-L_0 AC AMPS	L_3-L_0 AC AMPS	E6230 D KILOWATTS X40 L_1-L_0 Kw	L_2-L_0 Kw	L_3-L_0 Kw	E6252D POWER FACTOR PF	E6040D FREQ. Hz	E6167D EXCITER VOLTS VDC	E6280D FIELD AMPS DCA	AMB. TEMP. °F	Press inches/cc IN	WATT
1644			START	UNIT	ARMOR	RATED	LOAD		TO	STABILIZE	FOR	TEST						
1645		R/C	119	120	119.5	2.6	2.61	2.61	.249	.25	.25	.80	400.8	17	5.8	126	13.3	96.
1655		R/C	119	120	119.5	2.59	2.61	2.61	.245	.25	.25	.80	400.5	17.6	5.9	126	132	94.
1706		R/C	119	120	119.5	2.59	2.61	2.61	.248	.25	.25	.80	400.7	17.8	5.95	123	136	93.
1716		R/C	119	120	119.5	2.59	2.61	2.61	.249	.25	.25	.80	400.7	18.0	5.95	124	137	94.
1720			START	UNIT	DOWN	TO	PERFORM		WINDING	RESISTANCE								

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NOTES:

TEST DATA

EM 30KW 400HZ
GEN SET
MODIFIED
MFR. LIMA WELDING
MODEL NO. MEP 114A
SERIAL NO. RZ4 0323

NTS
National Technical Systems
Scientific Services Group
Testing Division
PO Box 38
Hartwood, Virginia 22471
Tel: 703 752 5300

AMBIENT

WINDING RESISTANCE TEST

REF. NO. MIL STD 705: 401.1c
SHEET 1 OF 1
DATE 16 JAN 1988
JOB NO. 555-2140
PROJ. ENGR.
RECORDER/OBSERVER KM/GC

ITEM NO.	TIME HRS	E6207D DIAL READING	MULTIPLIER	LEAD RESISTANCE	WINDING RESIS. OHMS	WINDING		WINDING RESIS. CORR TO 25°C		AVG. AMBIENT TEMP.		TEMP RISE MAX °C
	1729	41.7	10^{-3}	.0417		T1	T4		.0428	65	18.3°C	66.68
		40.9	10^{-3}	.0409		T2	T5		.0419			69.63
		41.1	10^{-3}	.0411		T3	T6		.0422			64.6
		41.5	10^{-3}	.0415		T7	T10		.0426			62.13
		39.5	10^{-3}	.0395		T8	T11		.0405			62.22
		39.5	10^{-3}	.0395		T9	T12		.0405			62.08
		2.3	1	2.3		F1	F2		2.36			

18K-9

NOTES:

TEST DATA

ITEM 30 KW / 400 Hz
GENERATOR SET
MODIFIED

MFGR. UBBY WELDING

MODEL NO. 1116V 116A

SERIAL NO. 824 0323

NTS
National Technical Systems | Scientific Services Group | Testing Division PO Box 38 Hallwood, Virginia 22471 Tel: 703 752 5300

WINDING RESISTANCE TEST

REF. NO. MIL STD 705

SHEET 2 OF 3

DATE 15 JAN 1988

JOB NO. 555-2140

PROJ. ENGR.

RECORDER/OBSERVER KM/GC

TEST LEAD ID NUMBER	TIME HRS	E602/10 DIAL READING	MULTIPLIER	LEAD RESISTANCE	WINDING RESIS. OHMS	WINDING		WINDING RESIS. CORR TO 25°C	AVG. AMBIENT TEMP.	
720		52.2	10^{-3}	0000	.0527	1	4	.0478	125°F	51.6°C
		52.1	10^{-3}		.0521	2	5	.0472		
		51.6	10^{-3}		.0516	3	6	.0468		
		51.7	10^{-3}		.0517	7	10	.0469		
		49.2	10^{-3}		.0492	8	11	.0446		
		49.2	10^{-3}		.0492	9	12	.0446		
		2.8	1		2.8	F1	F2	2.54		
		52.1	10^{-3}		.0521	1	4	.0472		
		51.2	10^{-3}		.0512	2	5	.0464		
		51.2	10^{-3}		.0512	3	6	.0464		
		51.7	10^{-3}		.0517	7	10	.0469		
		49.3	10^{-3}		.0493	8	11	.0447		
		49.1	10^{-3}		.0491	9	12	.0445		
		2.7	1		2.7	F1	F2	2.45		
		52.1	10^{-3}		.0521	1	4	.0472		
		51.3	10^{-3}		.0513	2	5	.0465		
		51.2	10^{-3}		.0512	3	6	.0464		
		51.6	10^{-3}		.0516	7	10	.0468		
		49.2	10^{-3}		.0492	8	11	.0446		
		49.1	10^{-3}		.0491	9	12	.0445		
		2.7	1		2.7	F1	F2	2.45		
		52.2	10^{-3}		.0522	1	4	.0474		
		51.3	10^{-3}		.0513	2	5	.0465		
		51.2	10^{-3}		.0512	3	6	.0464		
		51.5	10^{-3}		.0515	7	10	.0467		
		49.1	10^{-3}		.0491	8	11	.0445		
		49.2	10^{-3}		.0492	9	12	.0446		

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NOTES:

TEST DATA

TEM 30 KW / 400 Hz
GENERATOR SET
MODIFIED
MFGR. LIBBY WELDING
MODEL NO. MEP 114A
SERIAL NO. 124 0323

NTS
National Technical Systems
Scientific Services Group
Testing Division
P.O. Box 38
Harwood, Virginia 22471
Tel: 703 752 5300

WINDING RESISTANCE TEST

REF. NO. MIL STD 705
SHEET 3 OF 3
DATE 15 JAN. 1982
JOB NO. 555-246
PROJ. ENGR.
RECORDER/OBSERVER KM/GC

TEST LEAD NO. WIRES	TIME HRS	4624M DIAL READING	MULTIPLIER	LEAD RESISTANCE	WINDING RESIS. OHMS	WINDING		WINDING RESIS. CORR TO 25°C	AVG. AMBIENT TEMP.
		2.7	1	0000	2.7	F1	F2	2.45	125°F
		53.5	10^{-3}		.0525	1	4	.0476	
		51.4	10^{-3}		.0514	2	5	.0466	
		57.1	10^{-3}		.0571	3	6	.0464	
		51.5	10^{-3}		.0515	7	10	.0467	
		49.2	10^{-3}		.0492	8	11	.0446	
		49.1	10^{-3}		.0491	9	12	.0445	
		2.7	1		2.7	F1	F2	2.45	
		52.1	10^{-3}		.0521	1	4	.0472	
		51.3	10^{-3}		.0513	2	5	.0465	
		51.1	10^{-3}		.0511	3	6	.0464	
		51.4	10^{-3}		.0514	7	10	.0466	
		49.0	10^{-3}		.0490	8	11	.0444	
		48.9	10^{-3}		.0489	9	12	.0443	
		2.7	1		2.7	F1	F2	2.45	

B-289

NOTES:

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BEGIN SCAN GROUP 1    15 JAN 88  16:04:55
30 KW/400 HZ GEN SET S/N RZ4 0323

C    1 EXHAUST 1          459.40 DEG. F
C    2 EXHAUST 2          520.52 DEG. F
C    3 EXHAUST 3          523.30 DEG. F
C    4 EXHAUST 4          528.43 DEG. F
C    5 EXHAUST 5          532.74 DEG. F
C    6 EXHAUST 6          472.98 DEG. F
C    7 ENG. COOL. IN      186.46 DEG. F
C    8 ENG. COOL. OUT     193.14 DEG. F
C    9 OIL SUMP           176.44 DEG. F
C   10 OIL GALLERY        224.32 DEG. F
C   13  ENG. INTAKE       130.72 DEG. F
C   14 RAD. TOP LEFT      143.63 DEG. F
C   15 RAD. BTTM LEFT     141.23 DEG. F
C   16 RAD. TOP RIGHT     145.45 DEG. F
C   17 RAD. BTTM RIGHT    146.12 DEG. F
C   18 GEN. AIR IN        122.38 DEG. F
C   19 GEN. AIR OUT       156.27 DEG. F
C   20 GEN. FRAME TOP     131.07 DEG. F
C   21 GEN. FRAME BTTM    135.65 DEG. F
C   22 GEN. EXCITER       137.92 DEG. F
C   23 GEN. VOLT. REG.    133.71 DEG. F
C   24 CONTROL PANEL      136.06 DEG. F
C   25 RELAY AREA         120.57 DEG. F
C   26 BATTERY LEFT       139.48 DEG. F
C   27 BATTERY RIGHT      139.84 DEG. F
C   28 AIR IN SET         123.88 DEG. F
C   29 FUEL TANK          129.85 DEG. F
C   30 FUEL OUTLET        146.52 DEG. F

END SCAN GROUP 1      15 JAN 88  16:05:05

STOPPED SINGLE SCAN   15 JAN 88  16:05:05
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BEGIN SCAN GROUP 1    15 JAN 88  16:06:31
30 KW/400 HZ GEN SET S/N RZ4 0323

C    1 EXHAUST 1          445.55 DEG. F
C    2 EXHAUST 2          516.00 DEG. F
C    3 EXHAUST 3          510.60 DEG. F
C    4 EXHAUST 4          512.34 DEG. F
C    5 EXHAUST 5          525.86 DEG. F
C    6 EXHAUST 6          459.37 DEG. F
C    7 ENG. COOL. IN      190.45 DEG. F
C    8 ENG. COOL. OUT     195.74 DEG. F
C    9 OIL SUMP           173.01 DEG. F
C   10 OIL GALLERY        226.70 DEG. F
C   13  ENG. INTAKE       131.88 DEG. F
C   14 RAD. TOP LEFT      144.60 DEG. F
C   15 RAD. BTTM LEFT     142.18 DEG. F
C   16 RAD. TOP RIGHT     146.61 DEG. F
C   17 RAD. BTTM RIGHT    147.76 DEG. F
C   18 GEN. AIR IN        123.04 DEG. F
C   19 GEN. AIR OUT       156.71 DEG. F
C   20 GEN. FRAME TOP     131.16 DEG. F
C   21 GEN. FRAME BTTM    135.01 DEG. F
C   22 GEN. EXCITER       138.61 DEG. F
C   23 GEN. VOLT. REG.    134.14 DEG. F
C   24 CONTROL PANEL      136.94 DEG. F
C   25 RELAY AREA         120.86 DEG. F
C   26 BATTERY LEFT       138.46 DEG. F
C   27 BATTERY RIGHT      139.52 DEG. F
C   28 AIR IN SET         125.46 DEG. F
C   29 FUEL TANK          129.92 DEG. F
C   30 FUEL OUTLET        145.96 DEG. F

END SCAN GROUP 1      15 JAN 88  16:06:41

STOPPED SINGLE SCAN   15 JAN 88  16:06:41
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BEGIN SCAN GROUP 1    15 JAN 88  16:05:43
30 KW/400 HZ GEN SET S/N RZ4 0323

C    1 EXHAUST 1          739.36 DEG. F
C    2 EXHAUST 2          776.73 DEG. F
C    3 EXHAUST 3          789.13 DEG. F
C    4 EXHAUST 4          785.63 DEG. F
C    5 EXHAUST 5          796.94 DEG. F
C    6 EXHAUST 6          741.58 DEG. F
C    7 ENG. COOL. IN      189.84 DEG. F
C    8 ENG. COOL. OUT     196.42 DEG. F
C    9 OIL SUMP           159.10 DEG. F
C   10 OIL GALLERY        225.97 DEG. F
C   13  ENG. INTAKE       131.45 DEG. F
C   14 RAD. TOP LEFT      144.56 DEG. F
C   15 RAD. BTTM LEFT     142.71 DEG. F
C   16 RAD. TOP RIGHT     146.04 DEG. F
C   17 RAD. BTTM RIGHT    146.97 DEG. F
C   18 GEN. AIR IN        123.38 DEG. F
C   19 GEN. AIR OUT       157.07 DEG. F
C   20 GEN. FRAME TOP     130.94 DEG. F
C   21 GEN. FRAME BTTM    135.47 DEG. F
C   22 GEN. EXCITER       137.79 DEG. F
C   23 GEN. VOLT. REG.    133.68 DEG. F
C   24 CONTROL PANEL      136.63 DEG. F
C   25 RELAY AREA         120.66 DEG. F
C   26 BATTERY LEFT       138.99 DEG. F
C   27 BATTERY RIGHT      139.58 DEG. F
C   28 AIR IN SET         124.49 DEG. F
C   29 FUEL TANK          129.95 DEG. F
C   30 FUEL OUTLET        147.57 DEG. F

END SCAN GROUP 1      15 JAN 88  16:05:52

STOPPED SINGLE SCAN   15 JAN 88  16:05:52
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BEGIN SCAN GROUP 1    15 JAN 88  16:07:15
30 KW/400 HZ GEN SET S/N RZ4 0323

C    1 EXHAUST 1          738.08 DEG. F
C    2 EXHAUST 2          774.37 DEG. F
C    3 EXHAUST 3          790.51 DEG. F
C    4 EXHAUST 4          783.86 DEG. F
C    5 EXHAUST 5          798.61 DEG. F
C    6 EXHAUST 6          741.71 DEG. F
C    7 ENG. COOL. IN      191.13 DEG. F
C    8 ENG. COOL. OUT     197.85 DEG. F
C    9 OIL SUMP           168.30 DEG. F
C   10 OIL GALLERY        227.13 DEG. F
C   13  ENG. INTAKE       131.80 DEG. F
C   14 RAD. TOP LEFT      145.82 DEG. F
C   15 RAD. BTTM LEFT     143.62 DEG. F
C   16 RAD. TOP RIGHT     146.53 DEG. F
C   17 RAD. BTTM RIGHT    147.75 DEG. F
C   18 GEN. AIR IN        122.81 DEG. F
C   19 GEN. AIR OUT       157.34 DEG. F
C   20 GEN. FRAME TOP     130.96 DEG. F
C   21 GEN. FRAME BTTM    135.63 DEG. F
C   22 GEN. EXCITER       138.82 DEG. F
C   23 GEN. VOLT. REG.    133.82 DEG. F
C   24 CONTROL PANEL      136.67 DEG. F
C   25 RELAY AREA         120.80 DEG. F
C   26 BATTERY LEFT       139.83 DEG. F
C   27 BATTERY RIGHT      139.56 DEG. F
C   28 AIR IN SET         124.48 DEG. F
C   29 FUEL TANK          129.89 DEG. F
C   30 FUEL OUTLET        146.73 DEG. F

END SCAN GROUP 1      15 JAN 88  16:07:25

STOPPED SINGLE SCAN   15 JAN 88  16:07:25
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BEGIN SCAN GROUP 1 15 JAN 88 15:30:09
30 KW 400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	377.21	DEG. F
C	2	EXHAUST 2	443.51	DEG. F
C	3	EXHAUST 3	441.36	DEG. F
C	4	EXHAUST 4	444.13	DEG. F
C	5	EXHAUST 5	443.07	DEG. F
C	6	EXHAUST 6	375.16	DEG. F
C	7	ENG. COOL. IN	182.23	DEG. F
C	8	ENG. COOL. OUT	188.46	DEG. F
C	9	OIL SUMP	OPEN	TC
C	10	OIL GALLERY	223.81	DEG. F
C	13	ENG. INTAKE	132.91	DEG. F
C	14	RAD. TOP LEFT	143.61	DEG. F
C	15	RAD. BTTM LEFT	141.67	DEG. F
C	16	RAD. TOP RIGHT	145.34	DEG. F
C	17	RAD. BTTM RIGHT	146.17	DEG. F
C	18	GEN. AIR IN	125.30	DEG. F
C	19	GEN. AIR OUT	156.42	DEG. F
C	20	GEN. FRAME TOP	132.09	DEG. F
C	21	GEN. FRAME BTTM	136.52	DEG. F
C	22	GEN. EXCITER	139.43	DEG. F
C	23	GEN. VOLT. REG.	133.65	DEG. F
C	24	CONTROL PANEL	136.28	DEG. F
C	25	RELAY AREA	120.29	DEG. F
C	26	BATTERY LEFT	138.79	DEG. F
C	27	BATTERY RIGHT	139.48	DEG. F
C	28	AIR IN SET	126.82	DEG. F
C	29	FUEL TANK	129.91	DEG. F
C	30	FUEL OUTLET	146.60	DEG. F

END SCAN GROUP 1 15 JAN 88 15:30:19

STOPPED SINGLE SCAN 15 JAN 88 15:30:24

BEGIN SCAN GROUP 1 15 JAN 88 16:00:11
30 KW 400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	379.47	DEG. F
C	2	EXHAUST 2	445.11	DEG. F
C	3	EXHAUST 3	440.85	DEG. F
C	4	EXHAUST 4	442.25	DEG. F
C	5	EXHAUST 5	444.13	DEG. F
C	6	EXHAUST 6	375.83	DEG. F
C	7	ENG. COOL. IN	181.92	DEG. F
C	8	ENG. COOL. OUT	187.98	DEG. F
C	9	OIL SUMP	OPEN	TC
C	10	OIL GALLERY	223.85	DEG. F
C	13	ENG. INTAKE	131.98	DEG. F
C	14	RAD. TOP LEFT	142.26	DEG. F
C	15	RAD. BTTM LEFT	140.46	DEG. F
C	16	RAD. TOP RIGHT	[illegible].46	DEG. F
C	17	RAD. BTTM RIGHT	[illegible].37	DEG. F
C	18	GEN. AIR IN	123.18	DEG. F
C	19	GEN. AIR OUT	155.64	DEG. F
C	20	GEN. FRAME TOP	131.40	DEG. F
C	21	GEN. FRAME BTTM	136.05	DEG. F
C	22	GEN. EXCITER	138.89	DEG. F
C	23	GEN. VOLT. REG.	133.75	DEG. F
C	24	CONTROL PANEL	136.75	DEG. F
C	25	RELAY AREA	120.64	DEG. F
C	26	BATTERY LEFT	139.08	DEG. F
C	27	BATTERY RIGHT	139.49	DEG. F
C	28	AIR IN SET	124.98	DEG. F
C	29	FUEL TANK	129.99	DEG. F
C	30	FUEL OUTLET	[illegible]28	F

END SCAN GROUP 1 15 JAN 88 16:00:20

STOPPED SINGLE SCAN 15 JAN 88 16:00:20

BEGIN SCAN GROUP 1 15 JAN 88 16:03:12
30 KW 400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	383.08	DEG. F
C	2	EXHAUST 2	444.01	DEG. F
C	3	EXHAUST 3	441.51	DEG. F
C	4	EXHAUST 4	445.43	DEG. F
C	5	EXHAUST 5	447.43	DEG. F
C	6	EXHAUST 6	383.87	DEG. F
C	7	ENG. COOL. IN	188.93	DEG. F
C	8	ENG. COOL. OUT	187.67	DEG. F
C	9	OIL SUMP	OPEN	TC
C	10	OIL GALLERY	223.06	DEG. F
C	13	ENG. INTAKE	138.46	DEG. F
C	14	RAD. TOP LEFT	141.98	DEG. F
C	15	RAD. BTTM LEFT	140.27	DEG. F
C	16	RAD. TOP RIGHT	143.83	DEG. F
C	17	RAD. BTTM RIGHT	144.57	DEG. F
C	18	GEN. AIR IN	122.95	DEG. F
C	19	GEN. AIR OUT	155.71	DEG. F
C	20	GEN. FRAME TOP	130.27	DEG. F
C	21	GEN. FRAME BTTM	136.11	DEG. F
C	22	GEN. EXCITER	137.12	DEG. F
C	23	GEN. VOLT. REG.	133.30	DEG. F
C	24	CONTROL PANEL	136.37	DEG. F
C	25	RELAY AREA	120.57	DEG. F
C	26	BATTERY LEFT	139.50	DEG. F
C	27	BATTERY RIGHT	139.60	DEG. F
C	28	AIR IN SET	124.27	DEG. F
C	29	FUEL TANK	130.00	DEG. F
C	30	FUEL OUTLET	146.91	DEG. F

END SCAN GROUP 1 15 JAN 88 16:03:22

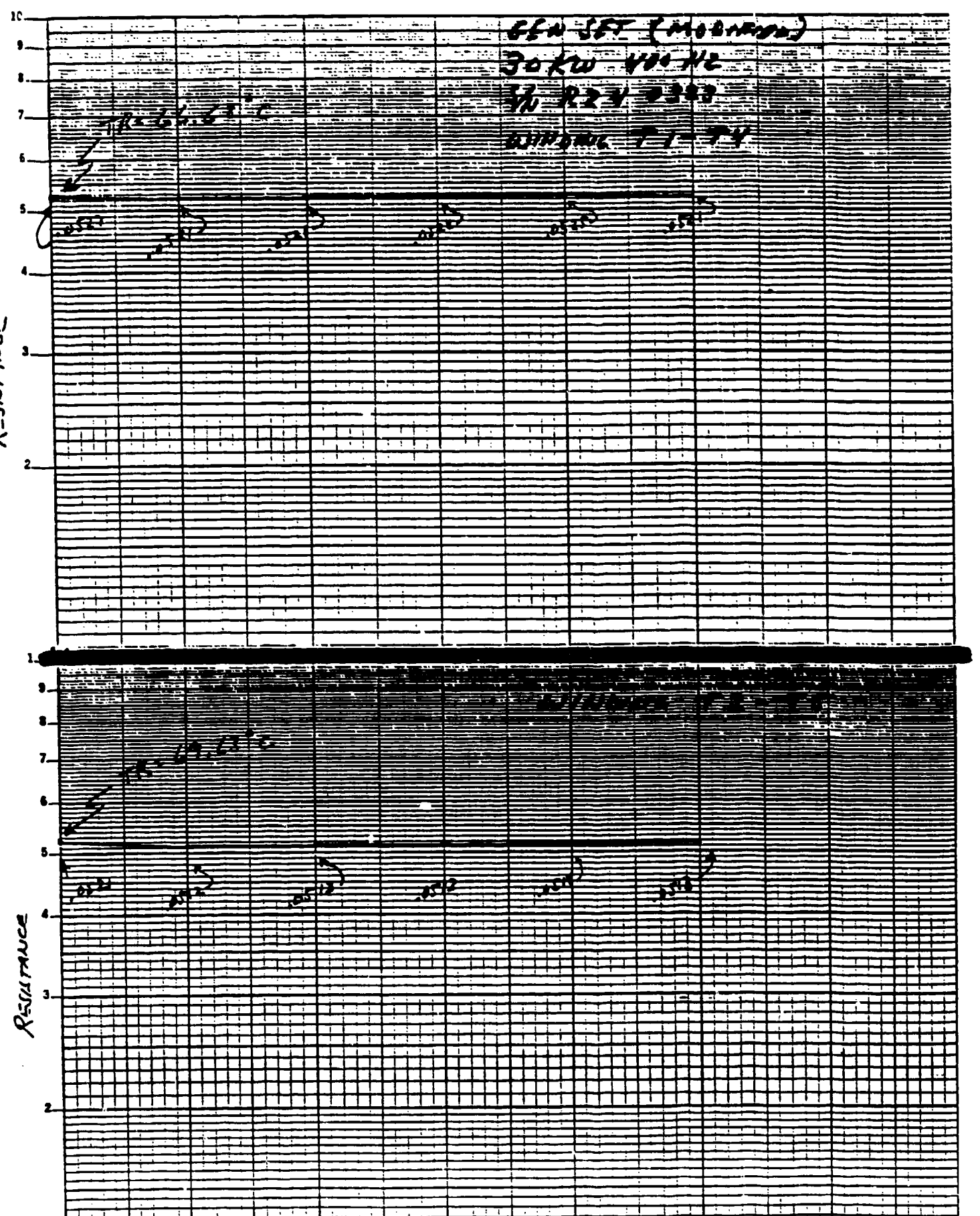
STOPPED SINGLE SCAN 15 JAN 88 16:03:22

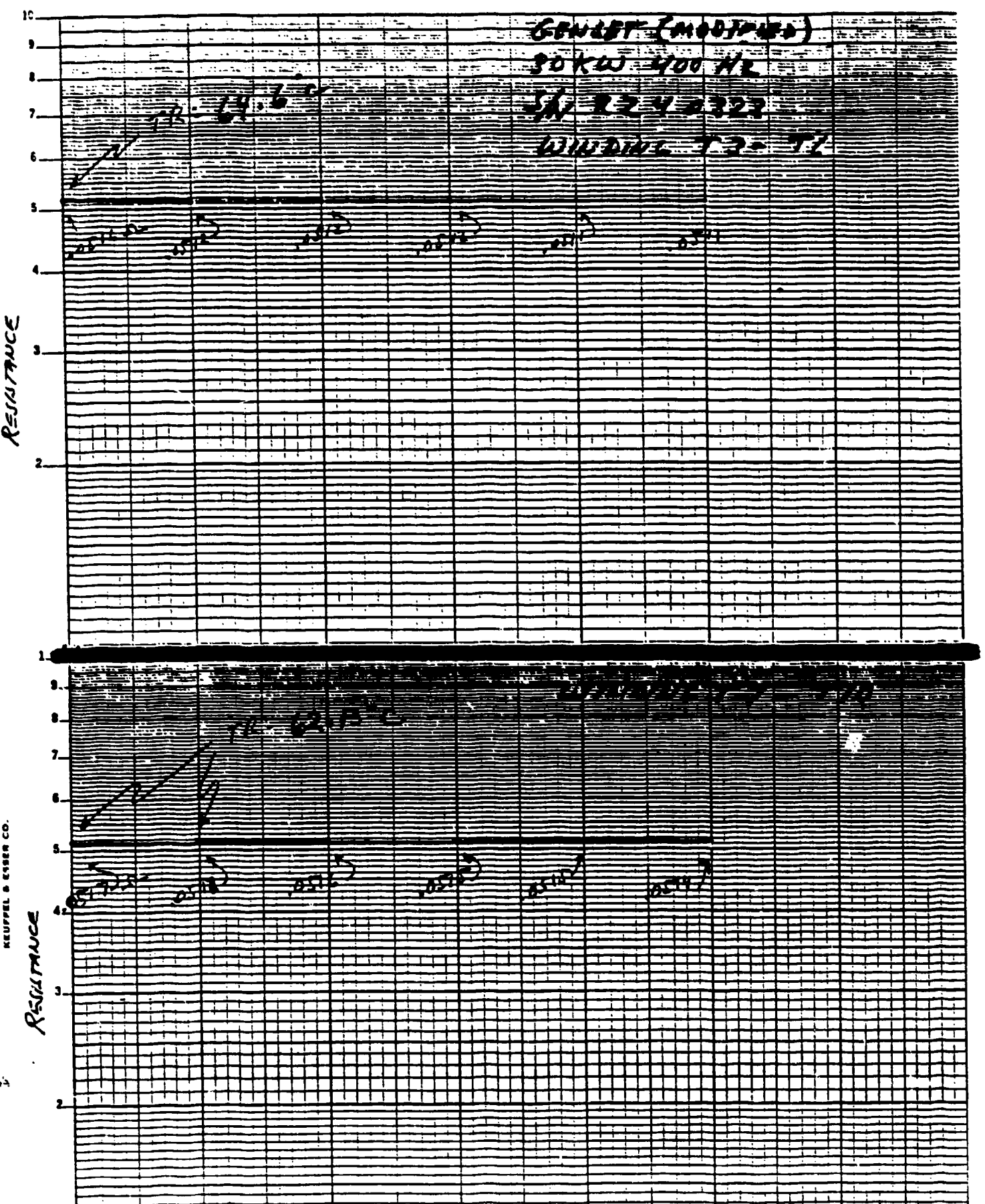
BEGIN SCAN GROUP 1 15 JAN 88 16:04:10
30 KW 400 HZ GEN SET S/N RZ4 0323

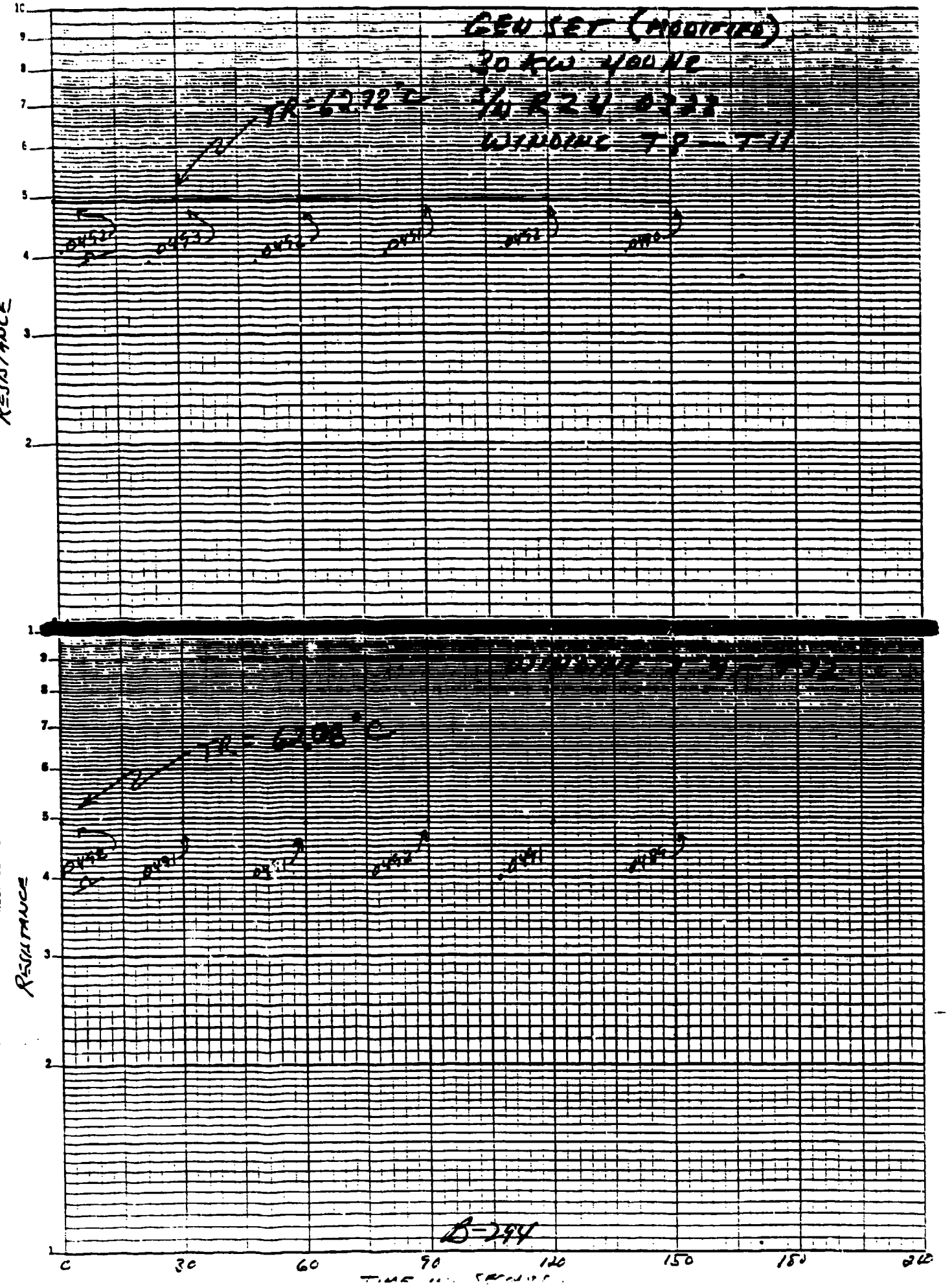
C	1	EXHAUST 1	659.89	DEG. F
C	2	EXHAUST 2	699.99	DEG. F
C	3	EXHAUST 3	713.26	DEG. F
C	4	EXHAUST 4	711.00	DEG. F
C	5	EXHAUST 5	721.30	DEG. F
C	6	EXHAUST 6	665.81	DEG. F
C	7	ENG. COOL. IN	186.43	DEG. F
C	8	ENG. COOL. OUT	193.52	DEG. F
C	9	OIL SUMP	167.26	DEG. F
C	10	OIL GALLERY	224.71	DEG. F
C	13	ENG. INTAKE	130.02	DEG. F
C	14	RAD. TOP LEFT	143.27	DEG. F
C	15	RAD. BTTM LEFT	141.32	DEG. F
C	16	RAD. TOP RIGHT	144.94	DEG. F
C	17	RAD. BTTM RIGHT	146.02	DEG. F
C	18	GEN. AIR IN	122.58	DEG. F
C	19	GEN. AIR OUT	156.32	DEG. F
C	20	GEN. FRAME TOP	130.39	DEG. F
C	21	GEN. FRAME BTTM	135.31	DEG. F
C	22	GEN. EXCITER	137.46	DEG. F
C	23	GEN. VOLT. REG.	133.83	DEG. F
C	24	CONTROL PANEL	136.52	DEG. F
C	25	RELAY AREA	120.67	DEG. F
C	26	BATTERY LEFT	138.76	DEG. F
C	27	BATTERY RIGHT	139.43	DEG. F
C	28	AIR IN SET	124.32	DEG. F
C	29	FUEL TANK	129.98	DEG. F
C	30	FUEL OUTLET	148.15	DEG. F

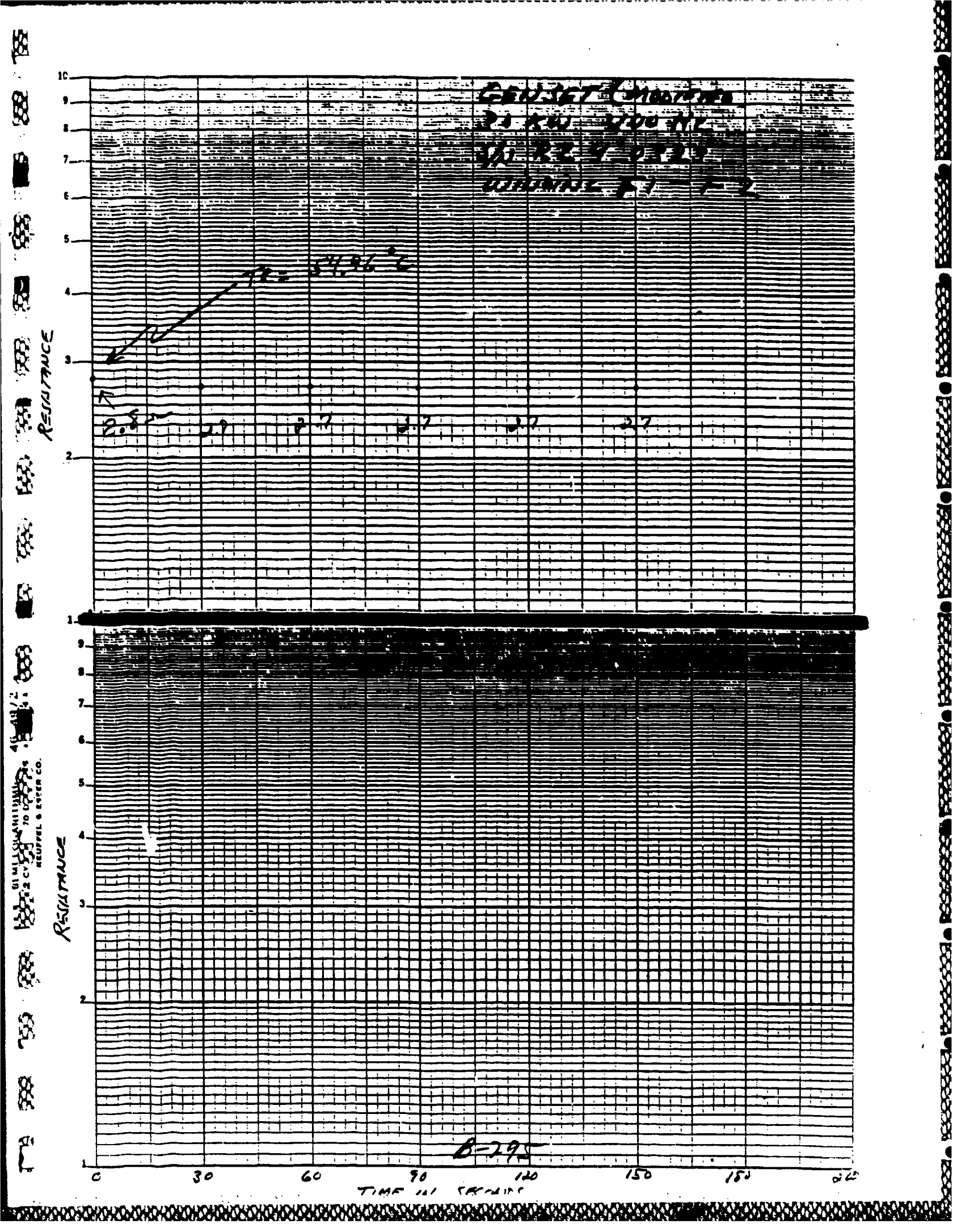
END SCAN GROUP 1 15 JAN 88 16:04:20

STOPPED SINGLE SCAN 15 JAN 88 16:04:20


GEN SET (MOBILE)
30 KW 400 HZ
W R2Y #343
CONTRACT F1-74
RESISTANCE
RESISTANCE
B-292
0
30
60
90
120
150
180
210


GENSET (MODIFIED)
30 KW 400 HZ
SN R24-322
WINDING T3-T1
RESISTANCE
RESISTANCE
0
30
60
90
120
150
180
210


GEN SET (MODIFIED)
30 KW VOLTAGE
TR = 6.32°C
RESISTANCE
TR = 6.08°C
RESISTANCE
B-24
TIME


RESISTANCE
RESISTANCE
TIME
0
30
60
90
120
150
180
B-29

Window Restart

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BEGIN SCAN GROUP 1    15 JAN 88  16:45:23
30 KW 400 HZ GEN SET S/N RZ4 0323

C    1 EXHAUST 1          790.25 DEG. F
C    2 EXHAUST 2          838.78 DEG. F
C    3 EXHAUST 3          855.30 DEG. F
C    4 EXHAUST 4          845.69 DEG. F
C    5 EXHAUST 5          858.26 DEG. F
C    6 EXHAUST 6          803.34 DEG. F
C    7 ENG. COOL. IN      192.65 DEG. F
C    8 ENG. COOL. OUT     199.52 DEG. F
C    9 OIL SUMP           202.26 DEG. F
C   10 OIL GALLERY        201.51 DEG. F
C   13  ENG. INTAKE       134.82 DEG. F
C   14 RAD. TOP LEFT      147.00 DEG. F
C   15 RAD. BTTM LEFT     144.35 DEG. F
C   16 RAD. TOP RIGHT     146.50 DEG. F
C   17 RAD. BTTM RIGHT    147.74 DEG. F
C   18 GEN. AIR IN        124.00 DEG. F
C   19 GEN. AIR OUT       155.66 DEG. F
C   20 GEN. FRAME TOP     130.51 DEG. F
C   21 GEN. FRAME BTTM    141.11 DEG. F
C   22 GEN. EXCITER       135.86 DEG. F
C   23 GEN. VOLT. REG.    131.55 DEG. F
C   24 CONTROL PANEL      132.42 DEG. F
C   25 RELAY AREA         122.86 DEG. F
C   26 BATTERY LEFT       139.14 DEG. F
C   27 BATTERY RIGHT      137.87 DEG. F
C   28 AIR IN SET         126.15 DEG. F
C   29 FUEL TANK          129.46 DEG. F
C   30 FUEL OUTLET        141.26 DEG. F

END SCAN GROUP 1      15 JAN 88  16:45:33

STOPPED SINGLE SCAN   15 JAN 88  16:45:33
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BEGIN SCAN GROUP 1    15 JAN 88  17:06:37
30 KW 400 HZ GEN SET S/N RZ4 0323

C    1 EXHAUST 1          819.90 DEG. F
C    2 EXHAUST 2          874.05 DEG. F
C    3 EXHAUST 3          894.38 DEG. F
C    4 EXHAUST 4          878.43 DEG. F
C    5 EXHAUST 5          893.10 DEG. F
C    6 EXHAUST 6          818.42 DEG. F
C    7 ENG. COOL. IN      213.16 DEG. F
C    8 ENG. COOL. OUT     220.51 DEG. F
C    9 OIL SUMP                  OPEN TC
C   10 OIL GALLERY        246.54 DEG. F
C   13  ENG. INTAKE       137.68 DEG. F
C   14 RAD. TOP LEFT      157.22 DEG. F
C   15 RAD. BTTM LEFT     154.82 DEG. F
C   16 RAD. TOP RIGHT     153.48 DEG. F
C   17 RAD. BTTM RIGHT    156.96 DEG. F
C   18 GEN. AIR IN        122.43 DEG. F
C   19 GEN. AIR OUT       164.34 DEG. F
C   20 GEN. FRAME TOP     130.45 DEG. F
C   21 GEN. FRAME BTTM    139.42 DEG. F
C   22 GEN. EXCITER       141.90 DEG. F
C   23 GEN. VOLT. REG.    135.39 DEG. F
C   24 CONTROL PANEL      136.55 DEG. F
C   25 RELAY AREA         122.20 DEG. F
C   26 BATTERY LEFT       141.75 DEG. F
C   27 BATTERY RIGHT      140.48 DEG. F
C   28 AIR IN SET         123.47 DEG. F
C   29 FUEL TANK          129.87 DEG. F
C   30 FUEL OUTLET        146.52 DEG. F

END SCAN GROUP 1      15 JAN 88  17:06:46

STOPPED SINGLE SCAN   15 JAN 88  17:06:46
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BEGIN SCAN GROUP 1    15 JAN 88  16:55:06
30 KW/400 HZ GEN SET S/N RZ4 0323

C    1 EXHAUST 1          822.22 DEG. F
C    2 EXHAUST 2          861.41 DEG. F
C    3 EXHAUST 3          886.98 DEG. F
C    4 EXHAUST 4          886.93 DEG. F
C    5 EXHAUST 5          898.26 DEG. F
C    6 EXHAUST 6          828.82 DEG. F
C    7 ENG. COOL. IN      207.38 DEG. F
C    8 ENG. COOL. OUT     215.63 DEG. F
C    9 OIL SUMP           231.78 DEG. F
C   10 OIL GALLERY        233.62 DEG. F
C   13  ENG. INTAKE       136.84 DEG. F
C   14 RAD. TOP LEFT      154.58 DEG. F
C   15 RAD. BTTM LEFT     152.99 DEG. F
C   16 RAD. TOP RIGHT     150.59 DEG. F
C   17 RAD. BTTM RIGHT    153.56 DEG. F
C   18 GEN. AIR IN        124.23 DEG. F
C   19 GEN. AIR OUT       161.57 DEG. F
C   20 GEN. FRAME TOP     137.07 DEG. F
C   21 GEN. FRAME BTTM    135.82 DEG. F
C   22 GEN. EXCITER       142.03 DEG. F
C   23 GEN. VOLT. REG.    135.81 DEG. F
C   24 CONTROL PANEL      135.28 DEG. F
C   25 RELAY AREA         120.89 DEG. F
C   26 BATTERY LEFT       137.72 DEG. F
C   27 BATTERY RIGHT      139.48 DEG. F
C   28 AIR IN SET         126.37 DEG. F
C   29 FUEL TANK          129.64 DEG. F
C   30 FUEL OUTLET        146.80 DEG. F

END SCAN GROUP 1      15 JAN 88  16:55:15

STOPPED SINGLE SCAN   15 JAN 88  16:55:15
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BEGIN SCAN GROUP 1    15 JAN 88  17:16:16
30 KW/400 HZ GEN SET S/N RZ4 0323

C    1 EXHAUST 1          819.98 DEG. F
C    2 EXHAUST 2          867.49 DEG. F
C    3 EXHAUST 3          890.56 DEG. F
C    4 EXHAUST 4          876.85 DEG. F
C    5 EXHAUST 5          890.36 DEG. F
C    6 EXHAUST 6          815.83 DEG. F
C    7 ENG. COOL. IN      212.99 DEG. F
C    8 ENG. COOL. OUT     219.85 DEG. F
C    9 OIL SUMP           212.85 DEG. F
C   10 OIL GALLERY        249.31 DEG. F
C   13  ENG. INTAKE       135.51 DEG. F
C   14 RAD. TOP LEFT      155.53 DEG. F
C   15 RAD. BTTM LEFT     153.65 DEG. F
C   16 RAD. TOP RIGHT     154.72 DEG. F
C   17 RAD. BTTM RIGHT    155.20 DEG. F
C   18 GEN. AIR IN        121.12 DEG. F
C   19 GEN. AIR OUT       166.85 DEG. F
C   20 GEN. FRAME TOP     134.61 DEG. F
C   21 GEN. FRAME BTTM    136.54 DEG. F
C   22 GEN. EXCITER       142.25 DEG. F
C   23 GEN. VOLT. REG.    137.68 DEG. F
C   24 CONTROL PANEL      137.46 DEG. F
C   25 RELAY AREA         121.07 DEG. F
C   26 BATTERY LEFT       141.12 DEG. F
C   27 BATTERY RIGHT      141.41 DEG. F
C   28 AIR IN SET         124.42 DEG. F
C   29 FUEL TANK          130.52 DEG. F
C   30 FUEL OUTLET        149.37 DEG. F

END SCAN GROUP 1      15 JAN 88  17:16:26

STOPPED SINGLE SCAN   15 JAN 88  17:16:26
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END SCAN GROUP 0      15 JAN 88  17:19:35

STOPPED SINGLE SCAN   15 JAN 88  17:19:35


BEGIN SCAN GROUP 1    15 JAN 88  17:20:00
30 KW 400 HZ GEN SET S/N R24 0323

C    1 EXHAUST 1          535.64 DEG. F
C    2 EXHAUST 2          564.76 DEG. F
C    3 EXHAUST 3          614.99 DEG. F
C    4 EXHAUST 4          628.19 DEG. F
C    5 EXHAUST 5          638.82 DEG. F
C    6 EXHAUST 6          567.53 DEG. F
C    7 ENG. COOL. IN      206.01 DEG. F
C    8 ENG. COOL. OUT     227.16 DEG. F
C    9 OIL SUMP           250.94 DEG. F
C   10 OIL GALLERY        242.77 DEG. F
C   13  ENG. INTAKE       139.55 DEG. F
C   14 RAD. TOP LEFT      174.19 DEG. F
C   15 RAD. BTTM LEFT     166.31 DEG. F
C   16 RAD. TOP RIGHT     184.25 DEG. F
C   17 RAD. BTTM RIGHT    172.19 DEG. F
C   18 GEN. AIR IN        123.39 DEG. F
C   19 GEN. AIR OUT       163.30 DEG. F
C   20 GEN. FRAME TOP     139.88 DEG. F
C   21 GEN. FRAME BTTM    142.52 DEG. F
C   22 GEN. EXCITER       143.63 DEG. F
C   23 GEN. VOLT. REG.    136.70 DEG. F
C   24 CONTROL PANEL      137.52 DEG. F
C   25 RELAY AREA         121.35 DEG. F
C   26 BATTERY LEFT       143.36 DEG. F
C   27 BATTERY RIGHT      143.51 DEG. F
C   28 AIR IN SET         124.82 DEG. F
C   29 FUEL TANK          130.77 DEG. F
C   30 FUEL OUTLET        148.32 DEG. F

END SCAN GROUP 1      15 JAN 88  17:20:10

STOPPED SINGLE SCAN   15 JAN 88  17:20:10
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BEGIN SCAN GROUP 0    15 JAN 88  17:19:23
GO

C    0                  .00000
C    1 EXHAUST 1        607.89 DEG. F
C    2 EXHAUST 2        637.31 DEG. F
C    3 EXHAUST 3        670.38 DEG. F
C    4 EXHAUST 4        678.25 DEG. F
C    5 EXHAUST 5        691.57 DEG. F
C    6 EXHAUST 6        627.35 DEG. F
C    7 ENG. COOL. IN    209.91 DEG. F
C    8 ENG. COOL. OUT   218.79 DEG. F
C    9 OIL SUMP         250.53 DEG. F
C   10 OIL GALLERY      245.61 DEG. F
C   11 OIL COOLER IN           OPEN TC
C   12 OIL COOLER OUT          OPEN TC
C   13  ENG. INTAKE     137.22 DEG. F
C   14 RAD. TOP LEFT    164.27 DEG. F
C   15 RAD. BTTM LEFT   161.43 DEG. F
C   16 RAD. TOP RIGHT   169.58 DEG. F
C   17 RAD. BTTM RIGHT  163.87 DEG. F
C   18 GEN. AIR IN      122.61 DEG. F
C   19 GEN. AIR OUT     164.60 DEG. F
C   20 GEN. FRAME TOP   135.35 DEG. F
C   21 GEN. FRAME BTTM  148.37 DEG. F
C   22 GEN. EXCITER     142.85 DEG. F
C   23 GEN. VOLT. REG.  136.78 DEG. F
C   24 CONTROL PANEL    137.57 DEG. F
C   25 RELAY AREA       121.14 DEG. F
C   26 BATTERY LEFT     142.98 DEG. F
C   27 BATTERY RIGHT    142.89 DEG. F
C   28 AIR IN SET       123.91 DEG. F
C   29 FUEL TANK        130.71 DEG. F
C   30 FUEL OUTLET      148.53 DEG. F
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BEGIN SCAN GROUP 1 15 JAN 88 17:20:33
30 KW/400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	495.25 DEG. F
C	2	EXHAUST 2	525.81 DEG. F
C	3	EXHAUST 3	579.26 DEG. F
C	4	EXHAUST 4	593.38 DEG. F
C	5	EXHAUST 5	601.47 DEG. F
C	6	EXHAUST 6	529.72 DEG. F
C	7	ENG. COOL. IN	204.47 DEG. F
C	8	ENG. COOL. OUT	232.66 DEG. F
C	9	OIL SUMP	251.62 DEG. F
C	10	OIL GALLERY	238.30 DEG. F
C	13	ENG. INTAKE	141.18 DEG. F
C	14	RAD. TOP LEFT	179.03 DEG. F
C	15	RAD. BTTM LEFT	169.20 DEG. F
C	16	RAD. TOP RIGHT	189.93 DEG. F
C	17	RAD. BTTM RIGHT	175.00 DEG. F
C	18	GEN. AIR IN	123.95 DEG. F
C	19	GEN. AIR OUT	162.92 DEG. F
C	20	GEN. FRAME TOP	142.37 DEG. F
C	21	GEN. FRAME BTTM	143.93 DEG. F
C	22	GEN. EXCITER	144.86 DEG. F
C	23	GEN. VOLT. REG.	136.84 DEG. F
C	24	CONTROL PANEL	137.63 DEG. F
C	25	RELAY AREA	121.61 DEG. F
C	26	BATTERY LEFT	143.64 DEG. F
C	27	BATTERY RIGHT	143.95 DEG. F
C	28	AIR IN SET	125.28 DEG. F
C	29	FUEL TANK	130.81 DEG. F
C	30	FUEL OUTLET	148.43 DEG. F

END SCAN GROUP 1 15 JAN 88 17:20:42

STOPPED SINGLE SCAN 15 JAN 88 17:20:42

BEGIN SCAN GROUP 1 15 JAN 88 17:20:52
30 KW/400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	477.32 DEG. F
C	2	EXHAUST 2	508.44 DEG. F
C	3	EXHAUST 3	561.63 DEG. F
C	4	EXHAUST 4	575.62 DEG. F
C	5	EXHAUST 5	582.45 DEG. F
C	6	EXHAUST 6	511.49 DEG. F
C	7	ENG. COOL. IN	204.82 DEG. F
C	8	ENG. COOL. OUT	235.61 DEG. F
C	9	OIL SUMP	250.97 DEG. F
C	10	OIL GALLERY	236.84 DEG. F
C	13	ENG. INTAKE	142.62 DEG. F
C	14	RAD. TOP LEFT	181.38 DEG. F
C	15	RAD. BTTM LEFT	170.53 DEG. F
C	16	RAD. TOP RIGHT	192.51 DEG. F
C	17	RAD. BTTM RIGHT	176.64 DEG. F
C	18	GEN. AIR IN	124.26 DEG. F
C	19	GEN. AIR OUT	162.73 DEG. F
C	20	GEN. FRAME TOP	142.99 DEG. F
C	21	GEN. FRAME BTTM	144.68 DEG. F
C	22	GEN. EXCITER	145.53 DEG. F
C	23	GEN. VOLT. REG.	136.89 DEG. F
C	24	CONTROL PANEL	137.56 DEG. F
C	25	RELAY AREA	121.74 DEG. F
C	26	BATTERY LEFT	143.76 DEG. F
C	27	BATTERY RIGHT	144.15 DEG. F
C	28	AIR IN SET	125.41 DEG. F
C	29	FUEL TANK	130.79 DEG. F
C	30	FUEL OUTLET	148.55 DEG. F

END SCAN GROUP 1 15 JAN 88 17:21:01

STOPPED SINGLE SCAN 15 JAN 88 17:21:01

BEGIN SCAN GROUP 1 15 JAN 88 17:21:16
30 KW/400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	458.47 DEG. F
C	2	EXHAUST 2	490.08 DEG. F
C	3	EXHAUST 3	541.68 DEG. F
C	4	EXHAUST 4	555.11 DEG. F
C	5	EXHAUST 5	560.56 DEG. F
C	6	EXHAUST 6	491.34 DEG. F
C	7	ENG. COOL. IN	203.95 DEG. F
C	8	ENG. COOL. OUT	237.05 DEG. F
C	9	OIL SUMP	250.90 DEG. F
C	10	OIL GALLERY	233.45 DEG. F
C	13	ENG. INTAKE	142.83 DEG. F
C	14	RAD. TOP LEFT	183.61 DEG. F
C	15	RAD. BTTM LEFT	171.62 DEG. F
C	16	RAD. TOP RIGHT	194.48 DEG. F
C	17	RAD. BTTM RIGHT	177.13 DEG. F
C	18	GEN. AIR IN	124.67 DEG. F
C	19	GEN. AIR OUT	162.75 DEG. F
C	20	GEN. FRAME TOP	144.45 DEG. F
C	21	GEN. FRAME BTTM	145.34 DEG. F
C	22	GEN. EXCITER	146.51 DEG. F
C	23	GEN. VOLT. REG.	136.96 DEG. F
C	24	CONTROL PANEL	137.83 DEG. F
C	25	RELAY AREA	121.88 DEG. F
C	26	BATTERY LEFT	143.91 DEG. F
C	27	BATTERY RIGHT	144.41 DEG. F
C	28	AIR IN SET	125.45 DEG. F
C	29	FUEL TANK	130.81 DEG. F
C	30	FUEL OUTLET	148.81 DEG. F

END SCAN GROUP 1 15 JAN 88 17:21:26

STOPPED SINGLE SCAN 15 JAN 88 17:21:26

BEGIN SCAN GROUP 1 15 JAN 88 17:21:46
30 KW/400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	439.53 DEG. F
C	2	EXHAUST 2	471.24 DEG. F
C	3	EXHAUST 3	520.87 DEG. F
C	4	EXHAUST 4	532.48 DEG. F
C	5	EXHAUST 5	536.51 DEG. F
C	6	EXHAUST 6	469.95 DEG. F
C	7	ENG. COOL. IN	203.88 DEG. F
C	8	ENG. COOL. OUT	237.83 DEG. F
C	9	OIL SUMP	250.63 DEG. F
C	10	OIL GALLERY	238.47 DEG. F
C	13	ENG. INTAKE	143.81 DEG. F
C	14	RAD. TOP LEFT	186.68 DEG. F
C	15	RAD. BTTM LEFT	172.57 DEG. F
C	16	RAD. TOP RIGHT	197.69 DEG. F
C	17	RAD. BTTM RIGHT	177.47 DEG. F
C	18	GEN. AIR IN	124.54 DEG. F
C	19	GEN. AIR OUT	162.70 DEG. F
C	20	GEN. FRAME TOP	146.13 DEG. F
C	21	GEN. FRAME BTTM	146.13 DEG. F
C	22	GEN. EXCITER	147.28 DEG. F
C	23	GEN. VOLT. REG.	137.10 DEG. F
C	24	CONTROL PANEL	137.99 DEG. F
C	25	RELAY AREA	122.00 DEG. F
C	26	BATTERY LEFT	144.13 DEG. F
C	27	BATTERY RIGHT	144.72 DEG. F
C	28	AIR IN SET	125.28 DEG. F
C	29	FUEL TANK	130.83 DEG. F
C	30	FUEL OUTLET	148.13 DEG. F

END SCAN GROUP 1 15 JAN 88 17:21:56

STOPPED SINGLE SCAN 15 JAN 88 17:21:56

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BEGIN SCAN GROUP 1   15 JAN 88  17:22:16
30 KW 400 HZ GEN SET S/N RZ4 0323

C    1 EXHAUST 1          424.25 DEG. F
C    2 EXHAUST 2          455.67 DEG. F
C    3 EXHAUST 3          501.53 DEG. F
C    4 EXHAUST 4          512.73 DEG. F
C    5 EXHAUST 5          515.65 DEG. F
C    6 EXHAUST 6          451.94 DEG. F
C    7 ENG. COOL. IN      203.28 DEG. F
C    8 ENG. COOL. OUT     238.12 DEG. F
C    9 OIL SUMP           258.38 DEG. F
C   10 OIL GALLERY        228.82 DEG. F
C   13  ENG. INTAKE       144.76 DEG. F
C   14 RAD. TOP LEFT      165.44 DEG. F
C   15 RAD. BTTM LEFT     172.99 DEG. F
C   16 RAD. TOP RIGHT     201.00 DEG. F
C   17 RAD. BTTM RIGHT    178.51 DEG. F
C   18 GEN. AIR IN        125.25 DEG. F
C   19 GEN. AIR OUT       162.74 DEG. F
C   20 GEN. FRAME TOP     147.69 DEG. F
C   21 GEN. FRAME BTTM    146.93 DEG. F
C   22 GEN. EXCITER       148.26 DEG. F
C   23 GEN. VOLT. REG.    137.31 DEG. F
C   24 CONTROL PANEL      138.18 DEG. F
C   25 RELAY AREA         122.11 DEG. F
C   26 BATTERY LEFT       144.42 DEG. F
C   27 BATTERY RIGHT      145.02 DEG. F
C   28 AIR IN SET         125.59 DEG. F
C   29 FUEL TANK          138.07 DEG. F
C   30 FUEL OUTLET        145.63 DEG. F

END SCAN GROUP 1     15 JAN 88  17:22:25

STOPPED SINGLE SCAN  15 JAN 88  17:22:25
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TEST DATA

ITEM 30 KW 400 Hz GEN SET MODIFIED

MFGR. LIBBY WELDING

MODEL NO. MEP 114A

SERIAL NO. KZ4 0323

NTS

National Technical Systems Scientific Services Group

Testing Division
P.O. Box 38
Harlwood, Virginia 22471
Tel: 703 752 5300

FREQUENCY AND VOLTAGE REGULATION,
STABILITY, AND TRANSIENT RESPONSE TEST
(SHORT TERM)

REF. NO. MIL STD 705

SHEET 2 OF 3

DATE 2 FEB 1988

JOB NO. 555-2140

PROJ. ENGR.

RECORDER/OBSERVER R.S.

	FREQUENCY								VOLTAGE							
	MAXIMUM EXCURSION				REC.	CONSTANT LOAD BANDWIDTH ±		REGULATION	MAXIMUM EXCURSION				REC.	CONSTANT LOAD BANDWIDTH ±		
LOAD	OVERSHOOT		UNDERSHOOT		TIME					OVERSHOOT		UNDERSHOOT		TIME		
STEP	Hz	%	Hz	%	SEC	Hz	%	FREQ. %	VOLT %	VOLT	%	VOLT	%	SEC	VOLT	%
14						.17	.04								.17	.15
14-15			.69	.17	0			.025	.41			.69	.58	0		
15						.17	.04								.17	.15
15-16	1.39	.35			.31			.025	.41	.87	.72			.08		
16						.17	.04								.17	.15
16-17			1.39	.35	.39			.05	.41			.69	.58	.08		
17						.17	.04								.17	.15
17-18	1.56	.39			.55			.05	.41	.87	.72			.16		
18						.17	.04								.17	.15
18-19			1.39	.35	.23			.025	.41			.52	.43	0		
19						.17	.04								.17	.15
19-20	1.74	.43			.16			.025	.41	.69	.58			.08		
20						.17	.04								.17	.15
20-21			.69	.17	0			.025	0			.52	.43	.0		
21						.17	.04								.17	.15
21-22	1.22	.30			0			0	0	.52	.43			0		
22						.17	.04								.17	.15
22-23			.87	.22	0			.025	0			.35	.29	0		
23						.17	.04								.17	.15
23-24	.87	.22			.23			0	0	.35	.29			0		
24						.17	.04								.17	.15
24-25			.87	.22	.16			.05	0			.35	.29	0		
25						.17	.04								.17	.15
25-26	.87	.22			.23			0	0	.35	.29			0		
26						.17	.04								.17	.15
26-27			2.26	.56	.31			.075	1.25			1.39	1.16	.47		

NOTES:

TEST DATA

ITEM 30 KW 400 Hz GENERATOR JET MODIFIED

MFGR. LIBBY WELDING

MODEL NO. MEP 114A

SERIAL NO. RZ 4 0323

NTS

National Technical Systems | Scientific Services Group | Testing Division P.O. Box 38 Hartwood, Virginia 22471 Tel: 703 752 5300

FREQUENCY AND VOLTAGE REGULATION, STABILITY, AND TRANSIENT RESPONSE TEST (SHORT TERM)

REF. NO. MIL STD 705

SHEET 3 OF 3

DATE 2 FEB 1988

JOB NO. 535 2140

PROJ. ENGR.

RECORDER/OBSERVER RS.

	FREQUENCY								VOLTAGE							
	MAXIMUM EXCURSION				REC.	CONSTANT LOAD BANDWIDTH ±		REGULATION		MAXIMUM EXCURSION				REC.	CONSTANT LOAD BANDWIDTH ±	
	OVERSHOOT		UNDERSHOOT		TIME			FREQ.	VOLT	OVERSHOOT		UNDERSHOOT		TIME		
LOAD STEP	Hz	%	Hz	%	SEC	Hz	%	%	%	VOLT	%	VOLT	%	SEC	VOLT	%
22						.26	.07								.17	.11
22-25	2.26	.56			.23			.05	1.25	1.39	1.16			.23		
25						.17	.04								.17	.15
25-29			1.52	.39	.31			.025	1.25			1.74	1.45	.39		
29						.26	.07								.17	.15
29-30	2.78	.69			.31			.025	1.25	1.66	1.30			.35		
30						.17	.04								.17	.15
30-31			1.39	.35	.23			.025	1.25			1.56	1.30	.31		
31						.17	.04								.17	.15
31-32	2.26	.56			.31			.025	1.25	1.39	1.16			.31		
32						17	04								.17	.15

B-301

NOTES:

SHORT TERM 600.1

BEGIN SCAN GROUP 1 14 JAN 88 10:50:09
30 KW 400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	794.91	DEG. F
C	2	EXHAUST 2	841.67	DEG. F
C	3	EXHAUST 3	852.33	DEG. F
C	4	EXHAUST 4	852.14	DEG. F
C	5	EXHAUST 5	854.78	DEG. F
C	6	EXHAUST 6	767.84	DEG. F
C	7	ENG. COOL. IN	208.57	DEG. F
C	8	ENG. COOL. OUT	216.77	DEG. F
C	9	OIL SUMP	248.26	DEG. F
C	10	OIL GALLERY	251.10	DEG. F
C	13	ENG. INTAKE	136.26	DEG. F
C	14	RAD. TOP LEFT	157.35	DEG. F
C	15	RAD. BTTM LEFT	154.13	DEG. F
C	16	RAD. TOP RIGHT	153.18	DEG. F
C	17	RAD. BTTM RIGHT	155.13	DEG. F
C	18	GEN. AIR IN	122.74	DEG. F
C	19	GEN. AIR OUT	168.79	DEG. F
C	20	GEN. FRAME TOP	135.99	DEG. F
C	21	GEN. FRAME BTTM	139.36	DEG. F
C	22	GEN. EXCITER	139.75	DEG. F
C	23	GEN. VOLT. REG.	138.33	DEG. F
C	24	CONTROL PANEL	138.23	DEG. F
C	25	RELAY AREA	121.70	DEG. F
C	26	BATTERY LEFT	135.41	DEG. F
C	27	BATTERY RIGHT	133.64	DEG. F
C	28	AIR IN SET	126.35	DEG. F
C	29	FUEL TANK	105.21	DEG. F
C	30	FUEL OUTLET	147.82	DEG. F

END SCAN GROUP 1 14 JAN 88 10:50:18

STOPPED SINGLE SCAN 14 JAN 88 10:50:18

BEGIN SCAN GROUP 1 14 JAN 88 11:00:10
30 KW/400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	793.90	DEG. F
C	2	EXHAUST 2	839.68	DEG. F
C	3	EXHAUST 3	852.58	DEG. F
C	4	EXHAUST 4	854.62	DEG. F
C	5	EXHAUST 5	853.86	DEG. F
C	6	EXHAUST 6	765.62	DEG. F
C	7	ENG. COOL. IN	207.95	DEG. F
C	8	ENG. COOL. OUT	216.76	DEG. F
C	9	OIL SUMP	248.66	DEG. F
C	10	OIL GALLERY	252.81	DEG. F
C	13	ENG. INTAKE	137.49	DEG. F
C	14	RAD. TOP LEFT	157.28	DEG. F
C	15	RAD. BTTM LEFT	154.08	DEG. F
C	16	RAD. TOP RIGHT	153.37	DEG. F
C	17	RAD. BTTM RIGHT	155.58	DEG. F
C	18	GEN. AIR IN	123.57	DEG. F
C	19	GEN. AIR OUT	168.98	DEG. F
C	20	GEN. FRAME TOP	135.51	DEG. F
C	21	GEN. FRAME BTTM	140.64	DEG. F
C	22	GEN. EXCITER	140.42	DEG. F
C	23	GEN. VOLT. REG.	138.54	DEG. F
C	24	CONTROL PANEL	138.14	DEG. F
C	25	RELAY AREA	121.56	DEG. F
C	26	BATTERY LEFT	136.69	DEG. F
C	27	BATTERY RIGHT	134.87	DEG. F
C	28	AIR IN SET	125.16	DEG. F
C	29	FUEL TANK	107.83	DEG. F
C	30	FUEL OUTLET	148.32	DEG. F

END SCAN GROUP 1 14 JAN F 11:00:19

STOPPED SINGLE SCAN 14 JAN 88 11:00:19

BEGIN SCAN GROUP 1 14 JAN 88 11:10:05
30 KW 400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	798.04	DEG. F
C	2	EXHAUST 2	843.94	DEG. F
C	3	EXHAUST 3	856.14	DEG. F
C	4	EXHAUST 4	854.26	DEG. F
C	5	EXHAUST 5	849.99	DEG. F
C	6	EXHAUST 6	766.85	DEG. F
C	7	ENG. COOL. IN	208.44	DEG. F
C	8	ENG. COOL. OUT	216.98	DEG. F
C	9	OIL SUMP	248.91	DEG. F
C	10	OIL GALLERY	253.81	DEG. F
C	13	ENG. INTAKE	137.66	DEG. F
C	14	RAD. TOP LEFT	157.10	DEG. F
C	15	RAD. BTTM LEFT	153.85	DEG. F
C	16	RAD. TOP RIGHT	153.54	DEG. F
C	17	RAD. BTTM RIGHT	155.78	DEG. F
C	18	GEN. AIR IN	123.48	DEG. F
C	19	GEN. AIR OUT	169.12	DEG. F
C	20	GEN. FRAME TOP	136.82	DEG. F
C	21	GEN. FRAME BTTM	140.58	DEG. F
C	22	GEN. EXCITER	140.18	DEG. F
C	23	GEN. VOLT. REG.	138.77	DEG. F
C	24	CONTROL PANEL	138.24	DEG. F
C	25	RELAY AREA	121.81	DEG. F
C	26	BATTERY LEFT	137.83	DEG. F
C	27	BATTERY RIGHT	135.28	DEG. F
C	28	AIR IN SET	125.48	DEG. F
C	29	FUEL TANK	109.78	DEG. F
C	30	FUEL OUTLET	147.74	DEG. F

END SCAN GROUP 1 14 JAN 88 11:10:14

STOPPED SINGLE SCAN 14 JAN 88 11:10:15

BEGIN SCAN GROUP 1 14 JAN 88 11:20:07
30 KW/400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	797.52	DEG. F
C	2	EXHAUST 2	846.20	DEG. F
C	3	EXHAUST 3	856.15	DEG. F
C	4	EXHAUST 4	855.36	DEG. F
C	5	EXHAUST 5	856.27	DEG. F
C	6	EXHAUST 6	765.97	DEG. F
C	7	ENG. COOL. IN	209.12	DEG. F
C	8	ENG. COOL. OUT	217.63	DEG. F
C	9	OIL SUMP	249.62	DEG. F
C	10	OIL GALLERY	253.37	DEG. F
C	13	ENG. INTAKE	138.28	DEG. F
C	14	RAD. TOP LEFT	157.54	DEG. F
C	15	RAD. BTTM LEFT	154.75	DEG. F
C	16	RAD. TOP RIGHT	154.34	DEG. F
C	17	RAD. BTTM RIGHT	156.73	DEG. F
C	18	GEN. AIR IN	124.25	DEG. F
C	19	GEN. AIR OUT	169.98	DEG. F
C	20	GEN. FRAME TOP	137.12	DEG. F
C	21	GEN. FRAME BTTM	140.76	DEG. F
C	22	GEN. EXCITER	141.00	DEG. F
C	23	GEN. VOLT. REG.	139.85	DEG. F
C	24	CONTROL PANEL	138.43	DEG. F
C	25	RELAY AREA	122.46	DEG. F
C	26	BATTERY LEFT	137.39	DEG. F
C	27	BATTERY RIGHT	135.87	DEG. F
C	28	AIR IN SET	127.42	DEG. F
C	29	FUEL TANK	111.60	DEG. F
C	30	FUEL OUTLET	148.40	DEG. F

END SCAN GROUP 1 14 JAN 88 11:20:16

STOPPED SINGLE SCAN 14 JAN 88 11:20:16

TEST DATA

ITEM 30 KW / 400HZ GENERATOR SET MODIFIED

MFGR. LIMA WELLNO.

MODEL NO. MEP 114A

SERIAL NO. RZ4 0323

NTS

National Technical Systems | Scientific Services Group | Testing Division, P.O. Box 38, Harlwood, Virginia 22471, Tel: 703 752 5300

FREQUENCY ADJUSTMENT RANGE.

REF. NO. MIL-STD 705 : 511.2

SHEET 1 OF 1

DATE 14 JAN 1988

JOB NO. 555-2140

PROJ. ENGR.

RECORDER/OBSERVER KM/GC

INST TIME	STEP NO.	LOAD STEP	E6273D VOLTAGE L_1-L_0 VAC	L_2-L_0 VAC	L_3-L_0 VAC	E6046D AMPERES X40 L_1-L_0 AC AMPS	L_2-L_0 AC AMPS	L_3-L_0 AC AMPS	E62300 KILOWATTS X40 L_1-L_0 Kw	L_2-L_0 Kw	L_3-L_0 Kw	PG520 POWER FACTOR PF	PG520 FREQ. Hz	PG670 EXCITER FIELD VOLTS VDC	PG258 EXCITER FIELD AMPS DCA	AMB. TEMP. °F	PRESS IN/HG IN Hg
1237			START UNIT														
1239			ADJUSTED RATED			LOAD	STAB	STABILIZATION									
1245		R/L	120	120	120	2.6	2.62	2.62	.25	.251	.251	.80	400.6	16.4	5.80	123	30.33
1255		R/L	120	120.1	120	2.6	2.62	2.63	.25	.251	.251	.80	400.5	16.7	5.85	125	30.41
1305		R/L	120	120	120	2.6	2.63	2.63	.25	.251	.251	.80	400.6	16.8	5.9	126	30.43
1315		R/L	120	120	120	2.6	2.62	2.63	.25	.251	.251	.80	400.8	16.8	5.9	124	30.42
			ADJUSTED		FREQUENCY TO	MAX											
1318	MAX	M/F	119.9	120	120	2.62	2.64	2.65	.248	.251	.251	.80	412.2	15.2	5.35	125	30.46
			ADJUSTED		FREQUENCY TO	MIN.											
1321	MIN	M/F	120	120.2	120	2.64	2.65	2.66	.25	.252	.252	.77	390	18.4	6.5	125	30.41
1325			END	OF	TEST												
1330			SHUT	UNIT	DOWN												

NOTES: UNIT DID NOT ADJUST TO MAX FREQUENCY OF 420 HZ - MAX ATTAINED WAS 412.2 HZ
MIN. ATTAINED 370 HZ UNDER FREQUENCY LIGHT ON CONTROL PANEL ILLUMINATED AT 388 HZ
RESET AT 390 HZ

FREQUENCY ADJUSTMENT RANGE METHOD S/N 2

BEGIN SCAN GROUP 1 14 JAN 88 12:45:11
30 KW/400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	792.20 DEG. F
C	2	EXHAUST 2	834.07 DEG. F
C	3	EXHAUST 3	843.83 DEG. F
C	4	EXHAUST 4	841.63 DEG. F
C	5	EXHAUST 5	845.66 DEG. F
C	6	EXHAUST 6	770.07 DEG. F
C	7	ENG. COOL. IN	201.82 DEG. F
C	8	ENG. COOL. OUT	209.06 DEG. F
C	9	OIL SUMP	225.60 DEG. F
C	10	OIL GALLERY	225.50 DEG. F
C	13	ENG. INTAKE	135.19 DEG. F
C	14	RAD. TOP LEFT	151.57 DEG. F
C	15	RAD. BTTM LEFT	148.92 DEG. F
C	16	RAD. TOP RIGHT	150.00 DEG. F
C	17	RAD. BTTM RIGHT	151.09 DEG. F
C	18	GEN. AIR IN	122.30 DEG. F
C	19	GEN. AIR OUT	162.32 DEG. F
C	20	GEN. FRAME TOP	134.26 DEG. F
C	21	GEN. FRAME BTTM	138.36 DEG. F
C	22	GEN. EXCITER	137.74 DEG. F
C	23	GEN. VOLT. REG.	135.32 DEG. F
C	24	CONTROL PANEL	135.56 DEG. F
C	25	RELAY AREA	122.65 DEG. F
C	26	BATTERY LEFT	130.47 DEG. F
C	27	BATTERY RIGHT	129.84 DEG. F
C	28	AIR IN SET	123.63 DEG. F
C	29	FUEL TANK	121.45 DEG. F
C	30	FUEL OUTLET	146.33 DEG. F

END SCAN GROUP 1 14 JAN 88 12:45:21

STOPPED SINGLE SCAN 14 JAN 88 12:45:21

BEGIN SCAN GROUP 1 14 JAN 88 13:05:10
30 KW/400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	794.89 DEG. F
C	2	EXHAUST 2	844.01 DEG. F
C	3	EXHAUST 3	849.05 DEG. F
C	4	EXHAUST 4	847.57 DEG. F
C	5	EXHAUST 5	855.28 DEG. F
C	6	EXHAUST 6	766.28 DEG. F
C	7	ENG. COOL. IN	208.53 DEG. F
C	8	ENG. COOL. OUT	216.12 DEG. F
C	9	OIL SUMP	244.77 DEG. F
C	10	OIL GALLERY	248.92 DEG. F
C	13	ENG. INTAKE	137.10 DEG. F
C	14	RAD. TOP LEFT	156.47 DEG. F
C	15	RAD. BTTM LEFT	153.28 DEG. F
C	16	RAD. TOP RIGHT	152.94 DEG. F
C	17	RAD. BTTM RIGHT	155.17 DEG. F
C	18	GEN. AIR IN	123.69 DEG. F
C	19	GEN. AIR OUT	167.89 DEG. F
C	20	GEN. FRAME TOP	136.20 DEG. F
C	21	GEN. FRAME BTTM	139.65 DEG. F
C	22	GEN. EXCITER	139.60 DEG. F
C	23	GEN. VOLT. REG.	137.94 DEG. F
C	24	CONTROL PANEL	137.23 DEG. F
C	25	RELAY AREA	121.75 DEG. F
C	26	BATTERY LEFT	137.67 DEG. F
C	27	BATTERY RIGHT	136.88 DEG. F
C	28	AIR IN SET	125.54 DEG. F
C	29	FUEL TANK	124.49 DEG. F
C	30	FUEL OUTLET	148.13 DEG. F

END SCAN GROUP 1 14 JAN 88 13:05:20

STOPPED SINGLE SCAN 14 JAN 88 13:05:20

BEGIN SCAN GROUP 1 14 JAN 88 12:55:17
30 KW/400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	796.81 DEG. F
C	2	EXHAUST 2	843.24 DEG. F
C	3	EXHAUST 3	846.87 DEG. F
C	4	EXHAUST 4	850.23 DEG. F
C	5	EXHAUST 5	857.11 DEG. F
C	6	EXHAUST 6	771.27 DEG. F
C	7	ENG. COOL. IN	207.62 DEG. F
C	8	ENG. COOL. OUT	215.53 DEG. F
C	9	OIL SUMP	241.26 DEG. F
C	10	OIL GALLERY	241.48 DEG. F
C	13	ENG. INTAKE	137.54 DEG. F
C	14	RAD. TOP LEFT	157.34 DEG. F
C	15	RAD. BTTM LEFT	153.71 DEG. F
C	16	RAD. TOP RIGHT	153.02 DEG. F
C	17	RAD. BTTM RIGHT	154.56 DEG. F
C	18	GEN. AIR IN	124.93 DEG. F
C	19	GEN. AIR OUT	167.07 DEG. F
C	20	GEN. FRAME TOP	134.40 DEG. F
C	21	GEN. FRAME BTTM	140.58 DEG. F
C	22	GEN. EXCITER	139.81 DEG. F
C	23	GEN. VOLT. REG.	135.44 DEG. F
C	24	CONTROL PANEL	137.54 DEG. F
C	25	RELAY AREA	123.69 DEG. F
C	26	BATTERY LEFT	135.40 DEG. F
C	27	BATTERY RIGHT	133.80 DEG. F
C	28	AIR IN SET	126.51 DEG. F
C	29	FUEL TANK	123.26 DEG. F
C	30	FUEL OUTLET	146.49 DEG. F

END SCAN GROUP 1 14 JAN 88 12:55:26

STOPPED SINGLE SCAN 14 JAN 88 12:55:26

BEGIN SCAN GROUP 1 14 JAN 88 13:15:11
30 KW/400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	799.13 DEG. F
C	2	EXHAUST 2	846.71 DEG. F
C	3	EXHAUST 3	857.60 DEG. F
C	4	EXHAUST 4	849.18 DEG. F
C	5	EXHAUST 5	857.28 DEG. F
C	6	EXHAUST 6	768.41 DEG. F
C	7	ENG. COOL. IN	209.93 DEG. F
C	8	ENG. COOL. OUT	217.48 DEG. F
C	9	OIL SUMP	255.87 DEG. F
C	10	OIL GALLERY	250.43 DEG. F
C	13	ENG. INTAKE	136.80 DEG. F
C	14	RAD. TOP LEFT	156.13 DEG. F
C	15	RAD. BTTM LEFT	153.33 DEG. F
C	16	RAD. TOP RIGHT	155.18 DEG. F
C	17	RAD. BTTM RIGHT	156.70 DEG. F
C	18	GEN. AIR IN	122.65 DEG. F
C	19	GEN. AIR OUT	168.17 DEG. F
C	20	GEN. FRAME TOP	135.05 DEG. F
C	21	GEN. FRAME BTTM	140.43 DEG. F
C	22	GEN. EXCITER	139.58 DEG. F
C	23	GEN. VOLT. REG.	137.39 DEG. F
C	24	CONTROL PANEL	138.91 DEG. F
C	25	RELAY AREA	123.26 DEG. F
C	26	BATTERY LEFT	138.60 DEG. F
C	27	BATTERY RIGHT	136.58 DEG. F
C	28	AIR IN SET	124.72 DEG. F
C	29	FUEL TANK	125.82 DEG. F
C	30	FUEL OUTLET	148.18 DEG. F

END SCAN GROUP 1 14 JAN 88 13:15:20

STOPPED SINGLE SCAN 14 JAN 88 13:15:20

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BEGIN SCAN GROUP 1    14 JAN 88  13:18:39
30 KW 400 HZ GEN SET S/N RZ4 0323

C    1 EXHAUST 1          794.31 DEG. F
C    2 EXHAUST 2          846.19 DEG. F
C    3 EXHAUST 3          849.09 DEG. F
C    4 EXHAUST 4          846.72 DEG. F
C    5 EXHAUST 5          855.82 DEG. F
C    6 EXHAUST 6          761.17 DEG. F
C    7 ENG. COOL. IN      208.73 DEG. F
C    8 ENG. COOL. OUT     216.45 DEG. F
C    9 OIL SUMP           249.35 DEG. F
C   10 OIL GALLERY        251.82 DEG. F
C   13  ENG. INTAKE       135.68 DEG. F
C   14 RAD. TOP LEFT      156.18 DEG. F
C   15 RAD. BTTM LEFT     152.68 DEG. F
C   16 RAD. TOP RIGHT     153.48 DEG. F
C   17 RAD. BTTM RIGHT    155.57 DEG. F
C   18 GEN. AIR IN        123.80 DEG. F
C   19 GEN. AIR OUT       168.67 DEG. F
C   20 GEN. FRAME TOP     134.80 DEG. F
C   21 GEN. FRAME BTTM    148.11 DEG. F
C   22 GEN. EXCITER       139.72 DEG. F
C   23 GEN. VOLT. REG.    137.20 DEG. F
C   24 CONTROL PANEL      138.23 DEG. F
C   25 RELAY AREA         122.36 DEG. F
C   26 BATTERY LEFT       139.17 DEG. F
C   27 BATTERY RIGHT      137.41 DEG. F
C   28 AIR IN SET         126.30 DEG. F
C   29 FUEL TANK          126.23 DEG. F
C   30 FUEL OUTLET        148.63 DEG. F

END SCAN GROUP 1      14 JAN 88  13:18:48

STOPPED SINGLE SCAN   14 JAN 88  13:18:48


BEGIN SCAN GROUP 1    14 JAN 88  13:21:36
30 KW/400 HZ GEN SET S/N RZ4 0323

C    1 EXHAUST 1          798.31 DEG. F
C    2 EXHAUST 2          845.65 DEG. F
C    3 EXHAUST 3          855.68 DEG. F
C    4 EXHAUST 4          856.66 DEG. F
C    5 EXHAUST 5          857.32 DEG. F
C    6 EXHAUST 6          788.64 DEG. F
C    7 ENG. COOL. IN      207.87 DEG. F
C    8 ENG. COOL. OUT     216.52 DEG. F
C    9 OIL SUMP           250.21 DEG. F
C   10 OIL GALLERY        252.34 DEG. F
C   13  ENG. INTAKE       134.69 DEG. F
C   14 RAD. TOP LEFT      156.43 DEG. F
C   15 RAD. BTTM LEFT     152.48 DEG. F
C   16 RAD. TOP RIGHT     153.57 DEG. F
C   17 RAD. BTTM RIGHT    155.93 DEG. F
C   18 GEN. AIR IN        122.84 DEG. F
C   19 GEN. AIR OUT       168.59 DEG. F
C   20 GEN. FRAME TOP     132.64 DEG. F
C   21 GEN. FRAME BTTM    139.98 DEG. F
C   22 GEN. EXCITER       138.39 DEG. F
C   23 GEN. VOLT. REG.    137.98 DEG. F
C   24 CONTROL PANEL      138.63 DEG. F
C   25 RELAY AREA         122.19 DEG. F
C   26 BATTERY LEFT       139.45 DEG. F
C   27 BATTERY RIGHT      136.85 DEG. F
C   28 AIR IN SET         125.64 DEG. F
C   29 FUEL TANK          126.52 DEG. F
C   30 FUEL OUTLET        148.31 DEG. F

END SCAN GROUP 1      14 JAN 88  13:21:45

STOPPED SINGLE SCAN   14 JAN 88  13:21:45
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TEST DATA

ITEM 30 Kw / 400 Hz GENERATOR SET MODIFIED

MFGR. GIBBY WELDING

MODEL NO. MEP 114A

SERIAL NO. RZ40323

NTS
National Technical Systems
Scientific Services Group
Testing Division
P.O. Box 38
Harlwood, Virginia 22471
Tel: 703 752 5300

REGULATOR RANGE TEST

REF. NO. MIL-STD 705; 511.1

SHEET 1 OF 1

DATE 14 JAN. 1988

JOB NO. 555-2140

PROJ. ENGR.

RECORDER/OBSERVER KM / GC

INST TIME	STEP NO.	LOAD STEP	E6023 D VOLTAGE L_1-L_0 VAC	L_2-L_0 VAC	L_3-L_0 VAC	E6040 D AMPERES x40 L_1-L_0 AC AMPS	L_2-L_0 AC AMPS	L_3-L_0 AC AMPS	E6230 D KILOWATTS x40 L_1-L_0 Kw	L_2-L_0 Kw	L_3-L_0 Kw	E6253A POWER FACTOR PF	E6096D FREQ. Hz	E6070 EXCITER VOLTS VDC	E6025D FIELD AMPS DCA	AMB. TEMP. °F	
1329			START	UNIT	ON	RATED	LOAD		START STABILIZATION								
1330		R/L	120	120	120	2.6	2.62	2.63	.25	.251	.251	.80	400.5	16.5	5.55	125	4/7/41
1340		R/L	119.9	120.1	120	2.6	2.62	2.62	.249	.251	.251	.80	400.4	16.7	5.9	127	4/7/41
1350		R/L	120	120.2	120	2.6	2.62	2.63	.25	.251	.251	.80	400.3	16.8	5.9	124	4/2/41
1400		R/L	120	120	120	2.6	2.62	2.62	.25	.251	.251	.80	400.4	16.9	5.9	125	4/3/41
1402		R/L	120	120	120	2.6	2.62	2.63	.25	.251	.251	.80	400.3	16.8	5.9	125	4/3/41
1403		N/L	121.5	121.5	121.5								400.2	11.7	4.1	125	4/5/31
	LINE-LINE	N/L	240	240	240								400.4	16.9	5.95	125	4/5/31
1340	LINE-LINE	R/L	237	237	236	2.24	2.25	2.25	.249	.25	.25	.80	400.5	24	8.35	124	4/4/41
	LINE-LINE	MAX V	254	254	254								400.5	23.5	8.0	124	4/5/31
1330	LINE-LINE	R/L	252	252	252	2.14	2.15	2.15	.25	.251	.251	.80	400.5	34	15.4	123	4/5/41
1340	LINE-LINE	R/L	197	197	196	2.7	2.71	2.71	.249	.25	.25	.80	400.4	15.7	5.3	125	4/5/35
	LINE-LINE	N/L	199	199	199								400.4	10.8	3.7	124	4/7/35
	LINE-LINE	MIN V	199.9	180	180								400.1	9.8	3.1	123	4/9/20
1507			END	OF	TEST												
1508			SHUT	UNIT	DOWN												

NOTES: FAILED VOLTAGE REGULATION - MAX ALLOWABLE % REGULATION FOR VOLTAGE: 1% IN ACCORDANCE WITH MIL-STD-633E

TEST DATA

ITEM 30 KW 400 Hz GENERATOR SET MODIFIED

MFGR. LIBBY WELDING

MODEL NO. MEP 114A

SERIAL NO. RZ 4 0323

NTS

National Technical Systems | Scientific Services Group | Testing Division P.O. Box 38 Harwood, Virginia 22471 Tel: 703 752 5300

Regulator Range Computation Sheet

REF. NO. MIL STD 705: 511.1

SHEET 1 OF 1

DATE 20 JANUARY 1988

JOB NO. 555-2140

PROJ. ENGR.

RECORDER/OBSERVER

TEST →									
		VOLTAGE				VOLTS		REG.	
TIME	LOAD	L1 - L2	L2 - L3	L3 - L1		AVERAGE		PERCENT	
1402	R/L	(L1 - L0) 120	(L2 - L0) 120	(L3 - L0) 120		120			
	N/L	(L1 - L0) 121.5	(L2 - L0) 121.5	(L3 - L0) 121.5		121.5		1.25%	
	N/L	240	240	240		240			
	R/L	237	237	236		236.7		1.39%	
MAX VOLTS	N/L	254	254	254		254			
	R/L	252	252	252		252		.79%	
	R/L	197	197	196		196.7			
	N/L	199	199	199		199		1.17%	
MIN VOLTS	N/L	179.9	180	180					

Where percent of regulation is defined as:

$$\frac{V_{NL.\ avg.} - V_{RL\ avg.}}{V_{RL\ avg.}} \times 100$$

NOTES:

8-309

Regulator Range Test Method 511.1

BEGIN SCAN GROUP 1 14 JAN 88 13:30:25
30 KW/400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	793.03 DEG. F
C	2	EXHAUST 2	823.25 DEG. F
C	3	EXHAUST 3	839.62 DEG. F
C	4	EXHAUST 4	826.51 DEG. F
C	5	EXHAUST 5	829.51 DEG. F
C	6	EXHAUST 6	745.94 DEG. F
C	7	ENG. COOL. IN	203.73 DEG. F
C	8	ENG. COOL. OUT	210.94 DEG. F
C	9	OIL SUMP	240.64 DEG. F
C	10	OIL GALLERY	243.70 DEG. F
C	13	ENG. INTAKE	135.78 DEG. F
C	14	RAD. TOP LEFT	153.35 DEG. F
C	15	RAD. BTTM LEFT	150.76 DEG. F
C	16	RAD. TOP RIGHT	153.52 DEG. F
C	17	RAD. BTTM RIGHT	154.73 DEG. F
C	18	GEN. AIR IN	122.65 DEG. F
C	19	GEN. AIR OUT	167.89 DEG. F
C	20	GEN. FRAME TOP	132.70 DEG. F
C	21	GEN. FRAME BTTM	142.42 DEG. F
C	22	GEN. EXCITER	137.70 DEG. F
C	23	GEN. VOLT. REG.	137.25 DEG. F
C	24	CONTROL PANEL	138.67 DEG. F
C	25	RELAY AREA	122.00 DEG. F
C	26	BATTERY LEFT	140.23 DEG. F
C	27	BATTERY RIGHT	138.76 DEG. F
C	28	AIR IN SET	125.72 DEG. F
C	29	FUEL TANK	127.48 DEG. F
C	30	FUEL OUTLET	150.20 DEG. F

END SCAN GROUP 1 14 JAN 88 13:30:34

STOPPED SINGLE SCAN 14 JAN 88 13:30:35

BEGIN SCAN GROUP 1 14 JAN 88 13:40:44
30 KW/400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	794.77 DEG. F
C	2	EXHAUST 2	838.24 DEG. F
C	3	EXHAUST 3	856.72 DEG. F
C	4	EXHAUST 4	845.33 DEG. F
C	5	EXHAUST 5	858.52 DEG. F
C	6	EXHAUST 6	778.52 DEG. F
C	7	ENG. COOL. IN	209.84 DEG. F
C	8	ENG. COOL. OUT	216.72 DEG. F
C	9	OIL SUMP	248.85 DEG. F
C	10	OIL GALLERY	247.21 DEG. F
C	13	ENG. INTAKE	136.84 DEG. F
C	14	RAD. TOP LEFT	157.16 DEG. F
C	15	RAD. BTTM LEFT	153.54 DEG. F
C	16	RAD. TOP RIGHT	154.39 DEG. F
C	17	RAD. BTTM RIGHT	155.74 DEG. F
C	18	GEN. AIR IN	124.26 DEG. F
C	19	GEN. AIR OUT	169.52 DEG. F
C	20	GEN. FRAME TOP	135.34 DEG. F
C	21	GEN. FRAME BTTM	141.34 DEG. F
C	22	GEN. EXCITER	148.89 DEG. F
C	23	GEN. VOLT. REG.	139.46 DEG. F
C	24	CONTROL PANEL	137.73 DEG. F
C	25	RELAY AREA	122.57 DEG. F
C	26	BATTERY LEFT	140.33 DEG. F
C	27	BATTERY RIGHT	138.87 DEG. F
C	28	AIR IN SET	127.14 DEG. F
C	29	FUEL TANK	128.50 DEG. F
C	30	FUEL OUTLET	148.58 DEG. F

END SCAN GROUP 1 14 JAN 88 13:40:53

STOPPED SINGLE SCAN 14 JAN 88 13:40:53

BEGIN SCAN GROUP 1 14 JAN 88 13:50:00
30 KW/400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	793.13 DEG. F
C	2	EXHAUST 2	839.58 DEG. F
C	3	EXHAUST 3	851.62 DEG. F
C	4	EXHAUST 4	843.52 DEG. F
C	5	EXHAUST 5	856.46 DEG. F
C	6	EXHAUST 6	768.47 DEG. F
C	7	ENG. COOL. IN	208.48 DEG. F
C	8	ENG. COOL. OUT	216.43 DEG. F
C	9	OIL SUMP	249.55 DEG. F
C	10	OIL GALLERY	249.80 DEG. F
C	13	ENG. INTAKE	134.97 DEG. F
C	14	RAD. TOP LEFT	155.93 DEG. F
C	15	RAD. BTTM LEFT	153.01 DEG. F
C	16	RAD. TOP RIGHT	153.29 DEG. F
C	17	RAD. BTTM RIGHT	154.81 DEG. F
C	18	GEN. AIR IN	121.88 DEG. F
C	19	GEN. AIR OUT	168.93 DEG. F
C	20	GEN. FRAME TOP	135.24 DEG. F
C	21	GEN. FRAME BTTM	140.26 DEG. F
C	22	GEN. EXCITER	139.42 DEG. F
C	23	GEN. VOLT. REG.	138.84 DEG. F
C	24	CONTROL PANEL	137.71 DEG. F
C	25	RELAY AREA	121.37 DEG. F
C	26	BATTERY LEFT	140.00 DEG. F
C	27	BATTERY RIGHT	137.98 DEG. F
C	28	AIR IN SET	124.23 DEG. F
C	29	FUEL TANK	129.68 DEG. F
C	30	FUEL OUTLET	149.62 DEG. F

END SCAN GROUP 1 14 JAN 88 13:50:18

STOPPED SINGLE SCAN 14 JAN 88 13:50:18

BEGIN SCAN GROUP 1 14 JAN 88 14:00:05
30 KW/400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	795.63 DEG. F
C	2	EXHAUST 2	835.26 DEG. F
C	3	EXHAUST 3	860.89 DEG. F
C	4	EXHAUST 4	849.30 DEG. F
C	5	EXHAUST 5	853.87 DEG. F
C	6	EXHAUST 6	773.21 DEG. F
C	7	ENG. COOL. IN	209.98 DEG. F
C	8	ENG. COOL. OUT	217.27 DEG. F
C	9	OIL SUMP	251.33 DEG. F
C	10	OIL GALLERY	251.86 DEG. F
C	13	ENG. INTAKE	136.98 DEG. F
C	14	RAD. TOP LEFT	156.17 DEG. F
C	15	RAD. BTTM LEFT	152.87 DEG. F
C	16	RAD. TOP RIGHT	155.22 DEG. F
C	17	RAD. BTTM RIGHT	156.78 DEG. F
C	18	GEN. AIR IN	123.15 DEG. F
C	19	GEN. AIR OUT	169.57 DEG. F
C	20	GEN. FRAME TOP	133.23 DEG. F
C	21	GEN. FRAME BTTM	141.53 DEG. F
C	22	GEN. EXCITER	140.28 DEG. F
C	23	GEN. VOLT. REG.	137.16 DEG. F
C	24	CONTROL PANEL	138.69 DEG. F
C	25	RELAY AREA	122.44 DEG. F
C	26	BATTERY LEFT	140.83 DEG. F
C	27	BATTERY RIGHT	138.83 DEG. F
C	28	AIR IN SET	125.84 DEG. F
C	29	FUEL TANK	131.27 DEG. F
C	30	FUEL OUTLET	148.93 DEG. F

END SCAN GROUP 1 14 JAN 88 14:00:14

STOPPED SINGLE SCAN 14 JAN 88 14:00:14

BEGIN SCAN GROUP 1 14 JAN 88 14:01:46
30 KW 400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	793.25	DEG. F
C	2	EXHAUST 2	840.01	DEG. F
C	3	EXHAUST 3	861.52	DEG. F
C	4	EXHAUST 4	849.20	DEG. F
C	5	EXHAUST 5	858.01	DEG. F
C	6	EXHAUST 6	774.36	DEG. F
C	7	ENG. COOL. IN	203.60	DEG. F
C	8	ENG. COOL. OUT	217.52	DEG. F
C	9	OIL SUMP	247.94	DEG. F
C	10	OIL GALLERY	250.46	DEG. F
C	13	ENG. INTAKE	136.49	DEG. F
C	14	RAD. TOP LEFT	157.20	DEG. F
C	15	RAD. BTTM LEFT	153.62	DEG. F
C	16	RAD. TOP RIGHT	155.43	DEG. F
C	17	RAD. BTTM RIGHT	156.59	DEG. F
C	18	GEN. AIR IN	123.46	DEG. F
C	19	GEN. AIR OUT	170.05	DEG. F
C	20	GEN. FRAME TOP	133.79	DEG. F
C	21	GEN. FRAME BTTM	141.75	DEG. F
C	22	GEN. EXCITER	140.89	DEG. F
C	23	GEN. VOLT. REG.	137.61	DEG. F
C	24	CONTROL PANEL	138.38	DEG. F
C	25	RELAY AREA	122.30	DEG. F
C	26	BATTERY LEFT	141.17	DEG. F
C	27	BATTERY RIGHT	139.06	DEG. F
C	28	AIR IN SET	126.97	DEG. F
C	29	FUEL TANK	131.32	DEG. F
C	30	FUEL OUTLET	148.23	DEG. F

END SCAN GROUP 1 14 JAN 88 14:01:55

STOPPED SINGLE SCAN 14 JAN 88 14:01:56

BEGIN SCAN GROUP 1 14 JAN 88 14:05:43
30 KW 400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	413.02	DEG. F
C	2	EXHAUST 2	455.03	DEG. F
C	3	EXHAUST 3	457.18	DEG. F
C	4	EXHAUST 4	461.99	DEG. F
C	5	EXHAUST 5	475.74	DEG. F
C	6	EXHAUST 6	422.30	DEG. F
C	7	ENG. COOL. IN	193.80	DEG. F
C	8	ENG. COOL. OUT	200.10	DEG. F
C	9	OIL SUMP	OPEN	TC
C	10	OIL GALLERY	247.18	DEG. F
C	13	ENG. INTAKE	135.48	DEG. F
C	14	RAD. TOP LEFT	151.42	DEG. F
C	15	RAD. BTTM LEFT	148.59	DEG. F
C	16	RAD. TOP RIGHT	150.94	DEG. F
C	17	RAD. BTTM RIGHT	152.72	DEG. F
C	18	GEN. AIR IN	123.66	DEG. F
C	19	GEN. AIR OUT	167.83	DEG. F
C	20	GEN. FRAME TOP	134.90	DEG. F
C	21	GEN. FRAME BTTM	140.83	DEG. F
C	22	GEN. EXCITER	140.23	DEG. F
C	23	GEN. VOLT. REG.	138.01	DEG. F
C	24	CONTROL PANEL	138.59	DEG. F
C	25	RELAY AREA	122.88	DEG. F
C	26	BATTERY LEFT	140.68	DEG. F
C	27	BATTERY RIGHT	138.42	DEG. F
C	28	AIR IN SET	126.88	DEG. F
C	29	FUEL TANK	131.65	DEG. F
C	30	FUEL OUTLET	150.85	DEG. F

END SCAN GROUP 1 14 JAN 88 14:05:52

STOPPED SINGLE SCAN 14 JAN 88 14:05:52

BEGIN SCAN GROUP 1 14 JAN 88 14:03:46
30 KW 400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	426.21	DEG. F
C	2	EXHAUST 2	477.50	DEG. F
C	3	EXHAUST 3	483.91	DEG. F
C	4	EXHAUST 4	485.89	DEG. F
C	5	EXHAUST 5	495.15	DEG. F
C	6	EXHAUST 6	435.98	DEG. F
C	7	ENG. COOL. IN	203.28	DEG. F
C	8	ENG. COOL. OUT	210.15	DEG. F
C	9	OIL SUMP	OPEN	TC
C	10	OIL GALLERY	249.96	DEG. F
C	13	ENG. INTAKE	136.62	DEG. F
C	14	RAD. TOP LEFT	155.15	DEG. F
C	15	RAD. BTTM LEFT	152.13	DEG. F
C	16	RAD. TOP RIGHT	153.63	DEG. F
C	17	RAD. BTTM RIGHT	155.29	DEG. F
C	18	GEN. AIR IN	123.54	DEG. F
C	19	GEN. AIR OUT	168.59	DEG. F
C	20	GEN. FRAME TOP	135.11	DEG. F
C	21	GEN. FRAME BTTM	141.52	DEG. F
C	22	GEN. EXCITER	140.65	DEG. F
C	23	GEN. VOLT. REG.	137.95	DEG. F
C	24	CONTROL PANEL	138.68	DEG. F
C	25	RELAY AREA	122.68	DEG. F
C	26	BATTERY LEFT	140.94	DEG. F
C	27	BATTERY RIGHT	138.78	DEG. F
C	28	AIR IN SET	124.88	DEG. F
C	29	FUEL TANK	131.60	DEG. F
C	30	FUEL OUTLET	149.19	DEG. F

END SCAN GROUP 1 14 JAN 88 14:03:55

STOPPED SINGLE SCAN 14 JAN 88 14:03:55

BEGIN SCAN GROUP 1 14 JAN 88 14:08:28
30 KW 400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	782.84	DEG. F
C	2	EXHAUST 2	821.86	DEG. F
C	3	EXHAUST 3	837.75	DEG. F
C	4	EXHAUST 4	826.82	DEG. F
C	5	EXHAUST 5	836.80	DEG. F
C	6	EXHAUST 6	757.51	DEG. F
C	7	ENG. COOL. IN	196.41	DEG. F
C	8	ENG. COOL. OUT	202.91	DEG. F
C	9	OIL SUMP	242.57	DEG. F
C	10	OIL GALLERY	243.84	DEG. F
C	13	ENG. INTAKE	132.88	DEG. F
C	14	RAD. TOP LEFT	149.72	DEG. F
C	15	RAD. BTTM LEFT	146.83	DEG. F
C	16	RAD. TOP RIGHT	148.81	DEG. F
C	17	RAD. BTTM RIGHT	151.66	DEG. F
C	18	GEN. AIR IN	122.25	DEG. F
C	19	GEN. AIR OUT	169.20	DEG. F
C	20	GEN. FRAME TOP	133.06	DEG. F
C	21	GEN. FRAME BTTM	140.83	DEG. F
C	22	GEN. EXCITER	139.77	DEG. F
C	23	GEN. VOLT. REG.	137.72	DEG. F
C	24	CONTROL PANEL	138.83	DEG. F
C	25	RELAY AREA	122.46	DEG. F
C	26	BATTERY LEFT	140.58	DEG. F
C	27	BATTERY RIGHT	138.59	DEG. F
C	28	AIR IN SET	125.22	DEG. F
C	29	FUEL TANK	131.84	DEG. F
C	30	FUEL OUTLET	149.53	DEG. F

END SCAN GROUP 1 14 JAN 88 14:08:37

STOPPED SINGLE SCAN 14 JAN 88 14:08:37

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BEGIN SCAN GROUP 1    14 JAN 88  14:11:02
30 KW 400 HZ GEN SET S/N RZ4 0323

C    1 EXHAUST 1          431.59 DEG. F
C    2 EXHAUST 2          476.29 DEG. F
C    3 EXHAUST 3          475.81 DEG. F
C    4 EXHAUST 4          477.66 DEG. F
C    5 EXHAUST 5          493.91 DEG. F
C    6 EXHAUST 6          436.80 DEG. F
C    7 ENG. COOL. IN      191.76 DEG. F
C    8 ENG. COOL. OUT     197.98 DEG. F
C    9 OIL SUMP           226.74 DEG. F
C   10 OIL GALLERY        242.27 DEG. F
C   13  ENG. INTAKE       132.62 DEG. F
C   14 RAD. TOP LEFT      148.41 DEG. F
C   15 RAD. BTTM LEFT     145.79 DEG. F
C   16 RAD. TOP RIGHT     149.32 DEG. F
C   17 RAD. BTTM RIGHT    150.60 DEG. F
C   18 GEN. AIR IN        122.31 DEG. F
C   19 GEN. AIR OUT       169.67 DEG. F
C   20 GEN. FRAME TOP     133.79 DEG. F
C   21 GEN. FRAME BTTM    148.37 DEG. F
C   22 GEN. EXCITER       133.41 DEG. F
C   23 GEN. VOLT. REG.    137.29 DEG. F
C   24 CONTROL PANEL      138.28 DEG. F
C   25 RELAY AREA         122.34 DEG. F
C   26 BATTERY LEFT       139.72 DEG. F
C   27 BATTERY RIGHT      137.79 DEG. F
C   28 AIR IN SET         124.84 DEG. F
C   29 FUEL TANK          132.89 DEG. F
C   30 FUEL OUTLET        149.89 DEG. F

END SCAN GROUP 1      14 JAN 88  14:11:11

STOPPED SINGLE SCAN   14 JAN 88  14:11:11
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BEGIN SCAN GROUP 1    14 JAN 88  14:56:24
30 KW 400 HZ GEN SET S/N RZ4 0323

C    1 EXHAUST 1          778.48 DEG. F
C    2 EXHAUST 2          825.13 DEG. F
C    3 EXHAUST 3          839.45 DEG. F
C    4 EXHAUST 4          838.14 DEG. F
C    5 EXHAUST 5          847.81 DEG. F
C    6 EXHAUST 6          774.26 DEG. F
C    7 ENG. COOL. IN      192.88 DEG. F
C    8 ENG. COOL. OUT     199.17 DEG. F
C    9 OIL SUMP           248.47 DEG. F
C   10 OIL GALLERY        239.78 DEG. F
C   13  ENG. INTAKE       134.78 DEG. F
C   14 RAD. TOP LEFT      149.28 DEG. F
C   15 RAD. BTTM LEFT     146.75 DEG. F
C   16 RAD. TOP RIGHT     149.88 DEG. F
C   17 RAD. BTTM RIGHT    151.49 DEG. F
C   18 GEN. AIR IN        122.63 DEG. F
C   19 GEN. AIR OUT       168.46 DEG. F
C   20 GEN. FRAME TOP     133.97 DEG. F
C   21 GEN. FRAME BTTM    148.32 DEG. F
C   22 GEN. EXCITER       139.93 DEG. F
C   23 GEN. VOLT. REG.    135.83 DEG. F
C   24 CONTROL PANEL      138.22 DEG. F
C   25 RELAY AREA         124.18 DEG. F
C   26 BATTERY LEFT       139.71 DEG. F
C   27 BATTERY RIGHT      138.51 DEG. F
C   28 AIR IN SET         123.90 DEG. F
C   29 FUEL TANK          134.89 DEG. F
C   30 FUEL OUTLET        148.76 DEG. F

END SCAN GROUP 1      14 JAN 88  14:56:33

STOPPED SINGLE SCAN   14 JAN 88  14:56:33
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BEGIN SCAN GROUP 1    14 JAN 88  14:13:10
30 KW/400 HZ GEN SET S/N RZ4 0323

C    1 EXHAUST 1          802.94 DEG. F
C    2 EXHAUST 2          846.33 DEG. F
C    3 EXHAUST 3          855.81 DEG. F
C    4 EXHAUST 4          858.86 DEG. F
C    5 EXHAUST 5          864.57 DEG. F
C    6 EXHAUST 6          789.47 DEG. F
C    7 ENG. COOL. IN      193.42 DEG. F
C    8 ENG. COOL. OUT     200.84 DEG. F
C    5 OIL SUMP           248.23 DEG. F
C   10 OIL GALLERY        239.88 DEG. F
C   13  ENG. INTAKE       138.58 DEG. F
C   14 RAD. TOP LEFT      148.19 DEG. F
C   15 RAD. BTTM LEFT     145.58 DEG. F
C   16 RAD. TOP RIGHT     149.89 DEG. F
C   17 RAD. BTTM RIGHT    150.85 DEG. F
C   18 GEN. AIR IN        121.71 DEG. F
C   19 GEN. AIR OUT       171.97 DEG. F
C   20 GEN. FRAME TOP     132.45 DEG. F
C   21 GEN. FRAME BTTM    148.73 DEG. F
C   22 GEN. EXCITER       139.12 DEG. F
C   23 GEN. VOLT. REG.    137.26 DEG. F
C   24 CONTROL PANEL      137.53 DEG. F
C   25 RELAY AREA         121.76 DEG. F
C   26 BATTERY LEFT       139.68 DEG. F
C   27 BATTERY RIGHT      137.79 DEG. F
C   28 AIR IN SET         122.73 DEG. F
C   29 FUEL TANK          131.97 DEG. F
C   30 FUEL OUTLET        150.83 DEG. F

END SCAN GROUP 1      14 JAN 88  14:13:20

STOPPED SINGLE SCAN   14 JAN 88  14:13:20
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BEGIN SCAN GROUP 1    14 JAN 88  15:00:08
30 KW/400 HZ GEN SET S/N RZ4 0323

C    1 EXHAUST 1          769.82 DEG. F
C    2 EXHAUST 2          814.47 DEG. F
C    3 EXHAUST 3          839.84 DEG. F
C    4 EXHAUST 4          822.19 DEG. F
C    5 EXHAUST 5          823.77 DEG. F
C    6 EXHAUST 6          717.11 DEG. F
C    7 ENG. COOL. IN      200.89 DEG. F
C    8 ENG. COOL. OUT     200.31 DEG. F
C    9 OIL SUMP           236.47 DEG. F
C   10 OIL GALLERY        241.68 DEG. F
C   13  ENG. INTAKE       134.16 DEG. F
C   14 RAD. TOP LEFT      151.76 DEG. F
C   15 RAD. BTTM LEFT     148.80 DEG. F
C   16 RAD. TOP RIGHT     152.21 DEG. F
C   17 RAD. BTTM RIGHT    153.54 DEG. F
C   18 GEN. AIR IN        122.96 DEG. F
C   19 GEN. AIR OUT       171.86 DEG. F
C   20 GEN. FRAME TOP     132.92 DEG. F
C   21 GEN. FRAME BTTM    141.97 DEG. F
C   22 GEN. EXCITER       138.84 DEG. F
C   23 GEN. VOLT. REG.    135.29 DEG. F
C   24 CONTROL PANEL      138.26 DEG. F
C   25 RELAY AREA         122.72 DEG. F
C   26 BATTERY LEFT       148.48 DEG. F
C   27 BATTERY RIGHT      139.25 DEG. F
C   28 AIR IN SET         125.43 DEG. F
C   29 FUEL TANK          134.98 DEG. F
C   30 FUEL OUTLET        149.21 DEG. F

END SCAN GROUP 1      14 JAN 88  15:00:18

STOPPED SINGLE SCAN   14 JAN 88  15:00:18
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BEGIN SCAN GROUP 1    14 JAN 88  15:02:08
30 KW/400 HZ GEN SET S/N RZ4 0323

C    1 EXHAUST 1          419.68 DEG. F
C    2 EXHAUST 2          471.83 DEG. F
C    3 EXHAUST 3          477.82 DEG. F
C    4 EXHAUST 4          479.19 DEG. F
C    5 EXHAUST 5          490.31 DEG. F
C    6 EXHAUST 6          423.72 DEG. F
C    7 ENG. COOL. IN      190.32 DEG. F
C    8 ENG. COOL. OUT     205.07 DEG. F
C    9 OIL SUMP           210.82 DEG. F
C   10 OIL GALLERY        241.21 DEG. F
C   13  ENG. INTAKE       133.89 DEG. F
C   14 RAD. TOP LEFT      151.68 DEG. F
C   15 RAD. BTTM LEFT     148.57 DEG. F
C   16 RAD. TOP RIGHT     151.43 DEG. F
C   17 RAD. BTTM RIGHT    152.67 DEG. F
C   18 GEN. AIR IN        122.59 DEG. F
C   19 GEN. AIR OUT       169.82 DEG. F
C   20 GEN. FRAME TOP     134.26 DEG. F
C   21 GEN. FRAME BTTM    141.27 DEG. F
C   22 GEN. EXCITER       138.82 DEG. F
C   23 GEN. VOLT. REG.    136.34 DEG. F
C   24 CONTROL PANEL      138.85 DEG. F
C   25 RELAY AREA         122.38 DEG. F
C   26 BATTERY LEFT       148.43 DEG. F
C   27 BATTERY RIGHT      138.99 DEG. F
C   28 AIR IN SET         124.55 DEG. F
C   29 FUEL TANK          134.84 DEG. F
C   30 FUEL OUTLET        147.83 DEG. F

END SCAN GROUP 1      14 JAN 88  15:02:17

STOPPED SINGLE SCAN   14 JAN 88  15:02:17


BEGIN SCAN GROUP 1    14 JAN 88  15:05:10
30 KW/400 HZ GEN SET S/N RZ4 0323

C    1 EXHAUST 1          371.23 DEG. F
C    2 EXHAUST 2          424.48 DEG. F
C    3 EXHAUST 3          428.73 DEG. F
C    4 EXHAUST 4          424.14 DEG. F
C    5 EXHAUST 5          438.23 DEG. F
C    6 EXHAUST 6          372.49 DEG. F
C    7 ENG. COOL. IN      186.82 DEG. F
C    8 ENG. COOL. OUT     192.26 DEG. F
C    9 OIL SUMP           244.18 DEG. F
C   10 OIL GALLERY        238.15 DEG. F
C   13  ENG. INTAKE       132.88 DEG. F
C   14 RAD. TOP LEFT      146.78 DEG. F
C   15 RAD. BTTM LEFT     144.39 DEG. F
C   16 RAD. TOP RIGHT     147.81 DEG. F
C   17 RAD. BTTM RIGHT    149.22 DEG. F
C   18 GEN. AIR IN        122.81 DEG. F
C   19 GEN. AIR OUT       165.98 DEG. F
C   20 GEN. FRAME TOP     132.86 DEG. F
C   21 GEN. FRAME BTTM    139.83 DEG. F
C   22 GEN. EXCITER       138.34 DEG. F
C   23 GEN. VOLT. REG.    136.27 DEG. F
C   24 CONTROL PANEL      137.69 DEG. F
C   25 RELAY AREA         122.12 DEG. F
C   26 BATTERY LEFT       148.03 DEG. F
C   27 BATTERY RIGHT      138.99 DEG. F
C   28 AIR IN SET         123.61 DEG. F
C   29 FUEL TANK          134.87 DEG. F
C   30 FUEL OUTLET        149.08 DEG. F

END SCAN GROUP 1      14 JAN 88  15:05:20

STOPPED SINGLE SCAN   14 JAN 88  15:05:20
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TEST DATA

ITEM 30 KW / 400 HZ
GENERATOR SET
MODIFIED
MFGR. GIBBY WELDING
MODEL NO. MGP 11 HA
SERIAL NO. RZ4 0323

NTS
National Technical Systems Scientific Services Group
Testing Division
PO Box 38
Harlwood, Virginia 22471
Tel: 703 752 5300

REF. NO. MIL-STD 705; 513.2
SHEET 1 OF 2
DATE 14 JAN 1988
JOB NO. 555-2140
PROJ. ENGR.
RECORDER/OBSERVER KM/GC

INDICATING INSTRUMENT TEST (ELECTRICAL)
MASTER INSTRUMENTS

INST TIME	STEP NO.	LOAD STEP	EG023 Δ VOLTAGE L_1-L_0 VAC	L_2-L_0 VAC	L_3-L_0 VAC	EG040 Δ AMPERES x 40 L_1-L_0 AC AMPS	L_2-L_0 AC AMPS	L_3-L_0 AC AMPS	EG230 Δ KILOWATTS x 40 L_1-L_0 Kw	L_2-L_0 Kw	L_3-L_0 Kw	EG200 POWER FACTOR PF	EG060 FREQ. Hz	EG670 EXCITER VOLTS VDC	EG250 FIELD AMPS DCA	AMB. TEMP. °F
1647			ZERO	GA	GAUGES											
1651		NIL	120	120	120	0	0	0	0	0	0	0	400	10.4	3.8	123
1704		NIL	120	120	120.1	0	0	0	0	0	0	0	390.5	11.2	4.15	124
1706		NIL	119.9	119.9	119.9	0	0	0	0	0	0	0	412	9.8	3.6	124
1708		1/4	119.1	119.5	119.5	.7	.7	.7	.062	.063	.063	.80	400	11.6	4.25	126
1711		1/2	119	119.1	119.1	1.31	1.32	1.32	.122	.125	.125	.80	400	12.6	4.6	126
1713		3/4	118.5	119	119	1.96	1.97	1.97	.181	.189	.189	.80	400	13.8	5.0	123
1716		4/4	118	118.5	118.5	2.62	2.64	2.64	.25	.252	.252	.80	400	15.3	5.5	126
1717			END	OF	TEST	SHUT	UNIT	DOWN								

B-3.12

NOTES:

TEST DATA

ITEM 30 KW/400 HZ GENERATOR SET MODIFIED

MFGR. LIBBY WELDING

MODEL NO. MEP 114A

SERIAL NO. RZ40323

NTS
National Technical Systems
Scientific Services Group
Testing Division
P.O. Box 38
Hartwood, Virginia 22471
Tel: 703 752 5300

REF. NO. MIL-STD 705; 513.2

SHEET 2 OF 2

DATE 14 JAN 1988

JOB NO. 555-2140

PROJ. ENGR.

RECORDER/OBSERVER KM/GC

INDICATING INSTRUMENT TEST (ELECTRICAL)
PANEL INSTRUMENTS

INST TIME	STEP NO.	LOAD STEP	VOLTAGE L_1-L_0 VAC	VOLTAGE L_2-L_0 VAC	VOLTAGE L_3-L_0 VAC	AMPERES L_1-L_0 AC AMPS	AMPERES L_2-L_0 AC AMPS	AMPERES L_3-L_0 AC AMPS	KILOWATTS L_1-L_0 Kw	KILOWATTS L_2-L_0 Kw	KILOWATTS L_3-L_0 Kw	POWER FACTOR PF	FREQ. Hz	% LOAD L_1-L_0	% LOAD L_2-L_0	% LOAD L_3-L_0	AMB TEMP °F
1647			ZEROED GAGES														
1650			STARTED SET														
1651		N/L	119.9	119.9	119.9	0	0	0	N/A	N/A	N/A	N/A	398	0	0	0	123
1704			119.5	119.5	119.5	0	0	0	N/A	N/A	N/A	N/A	389	0	0	0	124
1706			120	120	120	0	0	0	N/A	N/A	N/A	N/A	410	0	0	0	124
1708		.25	119.9	119.9	119.9	30	30	30	N/A	N/A	N/A	N/A	398	29	29	29	126
1711		.50	120	120	120	53	54	54	N/A	N/A	N/A	N/A	398	52	52	52	126
1713		.75	119.5	120	120	79	80	80	N/A	N/A	N/A	N/A	398	77	77	77	123
1716		R/L	119.5	120	120	101	102	102	N/A	N/A	N/A	N/A	398	105	105	105	126
1717		END OF TEST															

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NOTES:

ITEM 30 KW 400 Hz GENERATOR SET MODIFIED

MFGR. LIBBY WELDING

MODEL NO. MEP 114A

SERIAL NO. RZ4 0323

NTS
National Technical Systems
Scientific Services Group
Testing Division
P.O. Box 38
Harwood, Virginia 22471
tel: 703 752 5300

Panel Instrument Test

Method 513.2 (Computation Results)

REF. NO. MIL-STD-705: 513.2

SHEET 2 OF 2

DATE 20 JAN 1988

JOB NO. 555-2140

PROJ. ENGR.

RECORDER/OBSERVER R.S.

TEST. →	KW L1-L0	% Error	KW L2-L0	% Error	KW L3-L0	% Error		Frequency	% Error			
UNITS												
SYM.												
N/L	0	0	0	0	0	0						
1/4	39	16.9	29	15.1	29	15.1						
1/2	52	6.85	52	4.0	52	4.0						
3/4	77	6.3	77	1.85	77	1.85						
R/L	105	6.0	105	4.16	105	4.16						
								398	.5			
								389	.38			
								410	.48			

B-314

NOTES:

TEST DATA

ITEM 30 KW 400 Hz GENERATOR SET MODIFIED

MFGR. LIBBY WELDING

MODEL NO. MEP 114 A

SERIAL NO. RZ 4 0823

NTS

National Technical Systems | Scientific Services Group | Testing Division P.O. Box 38 Hailwood, Virginia 22471 Tel: 703 752 5300

Panel Instrument Test

Method 513.2 (Computation Results)

REF. NO. MIL-STD-705: 513.2

SHEET 1 OF 2

DATE 20 JAN 1988

JOB NO. 5JI-2140

PROJ. ENGR.

RECORDER/OBSERVER RS.

TEST. → / ↓	VOLTS L1-LO	% Error	VOLTS L2-LO	% Error	VOLTS L3-LO	% Error	AMPS L1-LO	% Error	AMPS L2-LO	% Error	AMPS L3-LO	% Error
UNITS												
SYM.												
N/L	119.9	.083	119.9	.083	119.9	.083						
N/L	119.5	.42	119.5	.42	119.5	.50						
N/L	120	.083	120	.50	120	.083						
1/4	119.9	.67	119.9	.33	119.9	.33	31.35	11.96	31.35	11.96	31.35	11.96
2/4	120	.84	120	.76	120	.76	55.22	5.38	56.25	6.53	56.25	6.53
3/4	119.9	.84	120	.84	120	.84	82.29	4.96	83.33	5.75	83.33	5.75
R/L	119.5	1.27	120	1.27	120	1.26	105.30	0.47	106.25	0.61	106.25	0.61

8-345

NOTES:

TEST DATA

ITEM 30 KW / 400 HZ GENERATOR SET MODIFIED
MFGR. LIBBY WELDING
MODEL NO. MEP 114A
SERIAL NO. RZ4 0323

NTS
National Technical Systems | Scientific Services Group | Testing Division, P.O. Box 38, Hartwood, Virginia 22471, Tel: 703 752 5300

REF. NO. MIL-STD 705: 608.2
SHEET 1 OF 2
DATE 16 JAN 1989
JOB NO. 555-2140
PROJ. ENGR.
RECORDER/OBSERVER KM / GC

FREQUENCY AND VOLTAGE STABILITY TEST (LONG TERM)

INST TIME	STEP NO.	LOAD STEP	E6023 O VOLTAGE L_1-L_0 VAC	L_2-L_0 VAC	L_3-L_0 VAC	E6040 O AMPERES x40 L_1-L_0 AC AMPS	L_2-L_0 AC AMPS	L_3-L_0 AC AMPS	E6230 O KILOWATTS x40 L_1-L_0 Kw	L_2-L_0 Kw	L_3-L_0 Kw	E6520 POWER FACTOR PF	E6060 FREQ. Hz	E6170 EXCITER VOLTS VDC	E6280 FIELD AMPS DCA	AMB. TEMP. °F	
0629			START UNIT														
0629			APPLIED RATED			LOAD	START STABILIZATION										
0640		RL	119.5	120	120	2.6	2.61	2.61	.249	.25	.251	.80	400.5	15.4	5.65	125	26/46
0650		RL	119.5	120	120	2.6	2.61	2.61	.249	.25	.251	.80	400.2	16.2	5.8	126	29/46
0700		RL	119.9	120	120	2.6	2.61	2.62	.249	.251	.257	.80	400.2	16.5	5.85	125	30/46
0710		RL	119.9	120.1	120	2.6	2.61	2.61	.249	.257	.257	.80	400.3	16.6	5.85	126	32/46
0716		RL	120	120.1	120	2.6	2.61	2.61	.249	.251	.251	.80	400.3	16.6	5.9	125	32/46
0716			START LONG TERM			STABILITY AT RATED LOAD											
0745		RL	120	120.1	120	2.6	2.61	2.61	.249	.251	.251	.80	400.3	16.7	5.9	126	45/47
0815	B-14	RL	119.5	120	120	2.6	2.61	2.61	.249	.251	.251	.80	400.4	16.8	5.9	125	52/47
0815		RL	119.5	120	120	2.6	2.61	2.61	.249	.251	.251	.80	400.5	16.7	5.9	125	52/48
0915		RL	119.5	120	120	2.6	2.61	2.61	.249	.257	.251	.80	400.5	16.7	5.85	124	57/47
0915		RL	120	120.1	120	2.6	2.63	2.63	.249	.257	.257	.80	400.5	16.8	5.9	124	57/48
1015		RL	120	120.1	120	2.6	2.63	2.63	.249	.257	.257	.80	400.7	16.8	5.9	124	60/48
1015		RL	119.5	120	120	2.6	2.62	2.62	.249	.257	.251	.80	400.6	16.8	5.9	125	61/47
1115		RL	119.5	120	120	2.6	2.62	2.62	.249	.251	.251	.80	400.8	16.9	5.9	125	126/48
1117			REMOVED LOAD START STABILIZATION AT NO LOAD														
1125		NL	121.5	121	121.5								400.7	11.0	4.0	124	133/31
1135		NL	121.5	121.5	121.5								400.7	10.9	4.0	126	136/31
1145		NL	121.5	121.5	121.5								400.8	10.8	4.0	123	138/32
1155		NL	121.5	121.5	121.5								400.8	10.8	4.0	125	140/33
1156		NL	121.5	121.5	121.5								400.9	10.8	4.0	125	142/33
1156			START LONG TERM STABILITY AT NO LOAD														
1230		NL	121.5	121.5	121.5								400.9	10.9	4.0	125	148/34
1300		NL	121.5	121.5	121.5								400.8	10.8	4.0	125	151/34
1330		NL	121.5	121.5	121.5								400.8	10.8	4.0	124	153/34

NOTES:

TEST DATA

ITEM 15 KW / 400 HZ GENERATOR SET MODIFIED
MFGR. LIBBY WELDING
MODEL NO. MEP 114A
SERIAL NO. RZ4 0323

NTS
National Technical Systems | Scientific Services Group | Testing Division, P.O. Box 38, Hartwood, Virginia 22471, Tel: 703 752 5300

REF. NO. MIL-STD 705: 608.2
SHEET 2 OF 2
DATE 15 JAN. 1988
JOB NO. 555-2140
PROJ. ENGR.
RECORDER/OBSERVER KM/GC

FREQUENCY AND VOLTAGE STABILITY TEST
(LONG TERM)

INST TIME	STEP NO.	LOAD STEP	E6023 D VOLTAGE L_1-L_0 VAC	L_2-L_0 VAC	L_3-L_0 VAC	E6040 D AMPERES x 40 L_1-L_0 AC AMPS	L_2-L_0 AC AMPS	L_3-L_0 AC AMPS	C6230 D KILOWATTS x 40 L_1-L_0 Kw	L_2-L_0 Kw	L_3-L_0 Kw	FE2520 POWER FACTOR PF	E6460 FREQ. Hz	E6470 EXCITER VOLTS VDC	E6230 FIELD AMPS DCA	AMB. TEMP. °F	
1400		N/L	121.5	121.5	121.5								400.6	10.9	4.0	125	
1430		N/L	121.5	121.5	121.5								400.7	10.8	4.0	124	
1500		N/L	121.5	121.5	121.5								400.8	10.8	4.0	124	
1530		N/L	121.5	121.5	121.5								400.8	10.8	4.0	126	
1600		N/L	121.5	121.5	121.5								400.8	10.8	4.0	124	
		R/L	119.5	120	120	26	263	265	.249	.851	.257	.80	401	15.4	5.7	123	
		N/L	121.5	121.5	121.5								400.8	10.7	4.0	124	
1615-D		R/L	119.5	120	120	26	263	263	.249	.251	.251	.80	400.7	15.6	5.7	124	
		N/L	121.5	121.5	121.5								400.9	11.0	4.0	124	
		R/L	119.5	120.1	120	2.6	263	263	.249	.251	.251	.80	400.8	15.6	5.7	124	
		N/L	121.5	121.5	121.5								400.8	11.0	4.0	124	
1645			END OF TEST														
1650			SHUT UNIT DOWN														

NOTES:

TEST DATA

ITEM 30KW 400 Hz GEN SET MODIFIED

MFGR. LIBBY WELDING

MODEL NO. MEP 114A

SERIAL NO. R24 0323

NTS

National Technical Systems | Scientific Services Group | Testing Division P.O. Box 38 Harwood, Virginia 22471 tel: 703 752 5300

FREQUENCY AND VOLTAGE Stability

(Long Term) Method 608.2

REF. NO. MIL-STD-705

SHEET 1 OF 1

DATE 25 JAN 1988

JOB NO. 555-3140

PROJ. ENGR.

RECORDER/OBSERVER RS

LOAD STEP	FREQUENCY: MAXIMUM EXCURSION OVERSHOOT Hz	OVERSHOOT %	UNDERSHOOT Hz	UNDERSHOOT %	REC. TIME SEC	CONSTANT LOAD BANDWIDTH ± Hz	± %	REGULATION FREQ. %	VOLTAGE: VOLT %	MAXIMUM EXCURSION OVERSHOOT VOLT	OVERSHOOT %	UNDERSHOOT VOLT	UNDERSHOOT %	REC. TIME SEC	CONSTANT LOAD BANDWIDTH ± VOLT	± %
R/L	SHORT TERM STABILITY					.17	.04								0	0
R/L	LONG TERM STABILITY					.52	.13								.35	.29
N/L	SHORT TERM STABILITY					.17	.04								0	0
N/L	LONG TERM STABILITY					.52	.13								.35	.29
1						.26	.07								.17	.15
1-2	2.6	.65			.31			.05	1.25	1.39	1.16			.31		
2						.17	.04								.17	.15
2-3			1.91	.48	.31			.025	1.25			1.56	1.30	.23		
3						.17	.04								.17	.15
3-4	1.88	.47			.23			.05	1.25	1.39	1.16			.31		
4						.26	.07								.17	.15
4-5			1.91	.48	.39			.025	1.25			1.24	1.45	.31		
5						.17	.04								.17	.15
5-6	2.6	.65			.31			.0	1.25	1.39	1.16			.31		

NOTES: VOLTAGE REGULATION EXCEEDED 1%.

Long Term 608.1

BEGIN SCAN GROUP 1 15 JAN 88 06:40:24
30 KW 400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	797.83	DEG. F
C	2	EXHAUST 2	839.18	DEG. F
C	3	EXHAUST 3	864.91	DEG. F
C	4	EXHAUST 4	856.42	DEG. F
C	5	EXHAUST 5	871.16	DEG. F
C	6	EXHAUST 6	799.63	DEG. F
C	7	ENG. COOL. IN	196.13	DEG. F
C	8	ENG. COOL. OUT	204.06	DEG. F
C	9	OIL SUMP	161.66	DEG. F
C	10	OIL GALLERY	202.09	DEG. F
C	13	ENG. INTAKE	135.50	DEG. F
C	14	RAD. TOP LEFT	149.85	DEG. F
C	15	RAD. BTTM LEFT	148.49	DEG. F
C	16	RAD. TOP RIGHT	142.06	DEG. F
C	17	RAD. BTTM RIGHT	143.73	DEG. F
C	18	GEN. AIR IN	122.37	DEG. F
C	19	GEN. AIR OUT	141.67	DEG. F
C	20	GEN. FRAME TOP	125.48	DEG. F
C	21	GEN. FRAME BTTM	125.80	DEG. F
C	22	GEN. EXCITER	132.65	DEG. F
C	23	GEN. VOLT. REG.	111.71	DEG. F
C	24	CONTROL PANEL	114.03	DEG. F
C	25	RELAY AREA	113.91	DEG. F
C	26	BATTERY LEFT	115.17	DEG. F
C	27	BATTERY RIGHT	113.66	DEG. F
C	28	AIR IN SET	125.31	DEG. F
C	29	FUEL TANK	94.955	DEG. F
C	30	FUEL OUTLET	128.73	DEG. F

END SCAN GROUP 1 15 JAN 88 06:40:34

STOPPED SINGLE SCAN 15 JAN 88 06:40:34

BEGIN SCAN GROUP 1 15 JAN 88 07:00:24
30 KW 400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	817.72	DEG. F
C	2	EXHAUST 2	858.45	DEG. F
C	3	EXHAUST 3	868.69	DEG. F
C	4	EXHAUST 4	864.52	DEG. F
C	5	EXHAUST 5	864.18	DEG. F
C	6	EXHAUST 6	782.50	DEG. F
C	7	ENG. COOL. IN	209.49	DEG. F
C	8	ENG. COOL. OUT	216.98	DEG. F
C	9	OIL SUMP	167.29	DEG. F
C	10	OIL GALLERY	241.95	DEG. F
C	13	ENG. INTAKE	139.93	DEG. F
C	14	RAD. TOP LEFT	156.48	DEG. F
C	15	RAD. BTTM LEFT	153.21	DEG. F
C	16	RAD. TOP RIGHT	152.65	DEG. F
C	17	RAD. BTTM RIGHT	154.68	DEG. F
C	18	GEN. AIR IN	123.70	DEG. F
C	19	GEN. AIR OUT	158.92	DEG. F
C	20	GEN. FRAME TOP	134.07	DEG. F
C	21	GEN. FRAME BTTM	136.85	DEG. F
C	22	GEN. EXCITER	141.30	DEG. F
C	23	GEN. VOLT. REG.	130.82	DEG. F
C	24	CONTROL PANEL	134.24	DEG. F
C	25	RELAY AREA	123.24	DEG. F
C	26	BATTERY LEFT	131.38	DEG. F
C	27	BATTERY RIGHT	130.65	DEG. F
C	28	AIR IN SET	125.17	DEG. F
C	29	FUEL TANK	100.10	DEG. F
C	30	FUEL OUTLET	143.87	DEG. F

END SCAN GROUP 1 15 JAN 88 07:00:34

STOPPED SINGLE SCAN 15 JAN 88 07:00:34

BEGIN SCAN GROUP 1 15 JAN 88 06:50:18
30 KW/400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	811.07	DEG. F
C	2	EXHAUST 2	849.30	DEG. F
C	3	EXHAUST 3	860.73	DEG. F
C	4	EXHAUST 4	861.74	DEG. F
C	5	EXHAUST 5	865.99	DEG. F
C	6	EXHAUST 6	785.04	DEG. F
C	7	ENG. COOL. IN	204.82	DEG. F
C	8	ENG. COOL. OUT	212.97	DEG. F
C	9	OIL SUMP	170.54	DEG. F
C	10	OIL GALLERY	229.14	DEG. F
C	13	ENG. INTAKE	138.15	DEG. F
C	14	RAD. TOP LEFT	154.92	DEG. F
C	15	RAD. BTTM LEFT	152.74	DEG. F
C	16	RAD. TOP RIGHT	149.93	DEG. F
C	17	RAD. BTTM RIGHT	151.81	DEG. F
C	18	GEN. AIR IN	123.68	DEG. F
C	19	GEN. AIR OUT	152.72	DEG. F
C	20	GEN. FRAME TOP	131.32	DEG. F
C	21	GEN. FRAME BTTM	133.21	DEG. F
C	22	GEN. EXCITER	138.57	DEG. F
C	23	GEN. VOLT. REG.	123.74	DEG. F
C	24	CONTROL PANEL	126.67	DEG. F
C	25	RELAY AREA	120.53	DEG. F
C	26	BATTERY LEFT	125.36	DEG. F
C	27	BATTERY RIGHT	124.55	DEG. F
C	28	AIR IN SET	126.38	DEG. F
C	29	FUEL TANK	97.372	DEG. F
C	30	FUEL OUTLET	135.13	DEG. F

END SCAN GROUP 1 15 JAN 88 06:50:27

STOPPED SINGLE SCAN 15 JAN 88 06:50:27

BEGIN SCAN GROUP 1 15 JAN 88 07:10:12
30 KW/400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	813.26	DEG. F
C	2	EXHAUST 2	854.03	DEG. F
C	3	EXHAUST 3	862.52	DEG. F
C	4	EXHAUST 4	862.32	DEG. F
C	5	EXHAUST 5	864.79	DEG. F
C	6	EXHAUST 6	777.08	DEG. F
C	7	ENG. COOL. IN	208.64	DEG. F
C	8	ENG. COOL. OUT	216.09	DEG. F
C	9	OIL SUMP	161.80	DEG. F
C	10	OIL GALLERY	245.70	DEG. F
C	13	ENG. INTAKE	137.48	DEG. F
C	14	RAD. TOP LEFT	156.14	DEG. F
C	15	RAD. BTTM LEFT	152.99	DEG. F
C	16	RAD. TOP RIGHT	152.80	DEG. F
C	17	RAD. BTTM RIGHT	154.69	DEG. F
C	18	GEN. AIR IN	123.86	DEG. F
C	19	GEN. AIR OUT	161.71	DEG. F
C	20	GEN. FRAME TOP	133.24	DEG. F
C	21	GEN. FRAME BTTM	137.57	DEG. F
C	22	GEN. EXCITER	139.67	DEG. F
C	23	GEN. VOLT. REG.	132.83	DEG. F
C	24	CONTROL PANEL	137.02	DEG. F
C	25	RELAY AREA	120.56	DEG. F
C	26	BATTERY LEFT	132.13	DEG. F
C	27	BATTERY RIGHT	131.30	DEG. F
C	28	AIR IN SET	126.19	DEG. F
C	29	FUEL TANK	102.65	DEG. F
C	30	FUEL OUTLET	144.87	DEG. F

END SCAN GROUP 1 15 JAN 88 07:10:22

STOPPED SINGLE SCAN 15 JAN 88 07:10:22

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BEGIN SCAN GROUP 1   15 JAN 88  07:16:16
30 KW/400 HZ GEN SET S/N RZ4 0323

C    1 EXHAUST 1          813.83 DEG. F
C    2 EXHAUST 2          854.57 DEG. F
C    3 EXHAUST 3          867.38 DEG. F
C    4 EXHAUST 4          867.70 DEG. F
C    5 EXHAUST 5          864.20 DEG. F
C    6 EXHAUST 6          778.90 DEG. F
C    7 ENG. COOL. IN      209.27 DEG. F
C    8 ENG. COOL. OUT     217.32 DEG. F
C    9 OIL SUMP           196.58 DEG. F
C   10 OIL GALLERY        248.30 DEG. F
C   13  ENG. INTAKE       139.19 DEG. F
C   14 RAD. TOP LEFT      156.70 DEG. F
C   15 RAD. BTTM LEFT     153.41 DEG. F
C   16 RAD. TOP RIGHT     152.74 DEG. F
C   17 RAD. BTTM RIGHT    155.21 DEG. F
C   18 GEN. AIR IN        123.39 DEG. F
C   19 GEN. AIR OUT       163.54 DEG. F
C   20 GEN. FRAME TOP     134.10 DEG. F
C   21 GEN. FRAME BTTM    139.74 DEG. F
C   22 GEN. EXCITER       140.34 DEG. F
C   23 GEN. VOLT. REG.    133.85 DEG. F
C   24 CONTROL PANEL      137.26 DEG. F
C   25 RELAY AREA         122.09 DEG. F
C   26 BATTERY LEFT       134.41 DEG. F
C   27 BATTERY RIGHT      132.50 DEG. F
C   28 AIR IN SET         125.13 DEG. F
C   29 FUEL TANK          104.24 DEG. F
C   30 FUEL OUTLET        145.76 DEG. F

END SCAN GROUP 1     15 JAN 88  07:16:26

STOPPED SINGLE SCAN  15 JAN 88  07:16:26
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BEGIN SCAN GROUP 1   15 JAN 88  08:15:12
30 KW 400 HZ GEN SET S/N RZ4 0323

C    1 EXHAUST 1          815.30 DEG. F
C    2 EXHAUST 2          859.27 DEG. F
C    3 EXHAUST 3          871.66 DEG. F
C    4 EXHAUST 4          868.30 DEG. F
C    5 EXHAUST 5          873.01 DEG. F
C    6 EXHAUST 6          783.30 DEG. F
C    7 ENG. COOL. IN      210.98 DEG. F
C    8 ENG. COOL. OUT     218.50 DEG. F
C    9 OIL SUMP           175.18 DEG. F
C   10 OIL GALLERY        249.30 DEG. F
C   13  ENG. INTAKE       138.36 DEG. F
C   14 RAD. TOP LEFT      157.80 DEG. F
C   15 RAD. BTTM LEFT     154.68 DEG. F
C   16 RAD. TOP RIGHT     155.65 DEG. F
C   17 RAD. BTTM RIGHT    157.05 DEG. F
C   18 GEN. AIR IN        123.62 DEG. F
C   19 GEN. AIR OUT       169.64 DEG. F
C   20 GEN. FRAME TOP     134.20 DEG. F
C   21 GEN. FRAME BTTM    141.79 DEG. F
C   22 GEN. EXCITER       140.30 DEG. F
C   23 GEN. VOLT. REG.    137.68 DEG. F
C   24 CONTROL PANEL      140.23 DEG. F
C   25 RELAY AREA         122.30 DEG. F
C   26 BATTERY LEFT       138.57 DEG. F
C   27 BATTERY RIGHT      134.88 DEG. F
C   28 AIR IN SET         125.53 DEG. F
C   29 FUEL TANK          116.40 DEG. F
C   30 FUEL OUTLET        148.06 DEG. F

END SCAN GROUP 1     15 JAN 88  08:15:21

STOPPED SINGLE SCAN  15 JAN 88  08:15:21
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BEGIN SCAN GROUP 1   15 JAN 88  07:45:18
30 KW/400 HZ GEN SET S/N RZ4 0323

C    1 EXHAUST 1          813.80 DEG. F
C    2 EXHAUST 2          855.23 DEG. F
C    3 EXHAUST 3          867.54 DEG. F
C    4 EXHAUST 4          867.34 DEG. F
C    5 EXHAUST 5          867.17 DEG. F
C    6 EXHAUST 6          783.81 DEG. F
C    7 ENG. COOL. IN      209.24 DEG. F
C    8 ENG. COOL. OUT     217.60 DEG. F
C    9 OIL SUMP           198.87 DEG. F
C   10 OIL GALLERY        250.38 DEG. F
C   13  ENG. INTAKE       138.56 DEG. F
C   14 RAD. TOP LEFT      157.89 DEG. F
C   15 RAD. BTTM LEFT     154.11 DEG. F
C   16 RAD. TOP RIGHT     153.42 DEG. F
C   17 RAD. BTTM RIGHT    155.75 DEG. F
C   18 GEN. AIR IN        123.58 DEG. F
C   19 GEN. AIR OUT       167.63 DEG. F
C   20 GEN. FRAME TOP     135.35 DEG. F
C   21 GEN  FRAME BTTM    139.79 DEG. F
C   22 GEN. EXCITER       141.63 DEG. F
C   23 GEN. VOLT. REG.    137.93 DEG. F
C   24 CONTROL PANEL      139.74 DEG. F
C   25 RELAY AREA         121.35 DEG. F
C   26 BATTERY LEFT       136.87 DEG. F
C   27 BATTERY RIGHT      133.73 DEG. F
C   28 AIR IN SET         126.82 DEG. F
C   29 FUEL TANK          109.95 DEG. F
C   30 FUEL OUTLET        148.69 DEG. F

END SCAN GROUP 1     15 JAN 88  07:45:28

STOPPED SINGLE SCAN  15 JAN 88  07:45:28
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BEGIN SCAN GROUP 1   15 JAN 88  08:45:03
30 KW/400 HZ GEN SET S/N RZ4 0323

C    1 EXHAUST 1          889.41 DEG. F
C    2 EXHAUST 2          848.97 DEG. F
C    3 EXHAUST 3          870.98 DEG. F
C    4 EXHAUST 4          865.12 DEG. F
C    5 EXHAUST 5          863.63 DEG. F
C    6 EXHAUST 6          774.53 DEG. F
C    7 ENG. COOL. IN      209.23 DEG. F
C    8 ENG. COOL. OUT     216.74 DEG. F
C    9 OIL SUMP           -57.345 DEG. F
C   10 OIL GALLERY        249.66 DEG. F
C   13  ENG. INTAKE       136.59 DEG. F
C   14 RAD. TOP LEFT      156.58 DEG. F
C   15 RAD. BTTM LEFT     153.46 DEG. F
C   16 RAD. TOP RIGHT     153.31 DEG. F
C   17 RAD. BTTM RIGHT    155.38 DEG. F
C   18 GEN. AIR IN        123.66 DEG. F
C   19 GEN. AIR OUT       169.14 DEG. F
C   20 GEN. FRAME TOP     135.03 DEG. F
C   21 GEN. FRAME BTTM    140.85 DEG. F
C   22 GEN. EXCITER       139.90 DEG. F
C   23 GEN. VOLT. REG.    138.29 DEG. F
C   24 CONTROL PANEL      138.34 DEG. F
C   25 RELAY AREA         120.14 DEG. F
C   26 BATTERY LEFT       139.33 DEG. F
C   27 BATTERY RIGHT      136.91 DEG. F
C   28 AIR IN SET         125.61 DEG. F
C   29 FUEL TANK          120.46 DEG. F
C   30 FUEL OUTLET        147.83 DEG. F

END SCAN GROUP 1     15 JAN 88  08:45:13

STOPPED SINGLE SCAN  15 JAN 88  08:45:13
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BEGIN SCAN GROUP 1 15 JAN 88 10:15:02
30 KW 400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	812.59	DEG. F
C	2	EXHAUST 2	855.60	DEG. F
C	3	EXHAUST 3	870.95	DEG. F
C	4	EXHAUST 4	866.41	DEG. F
C	5	EXHAUST 5	870.38	DEG. F
C	6	EXHAUST 6	779.66	DEG. F
C	7	ENG. COOL. IN	209.63	DEG. F
C	8	ENG. COOL. OUT	217.21	DEG. F
C	9	OIL SUMP		OPEN TC
C	10	OIL GALLERY	249.01	DEG. F
C	13	ENG. INTAKE	135.62	DEG. F
C	14	RAD. TOP LEFT	155.45	DEG. F
C	15	RAD. BTTM LEFT	152.08	DEG. F
C	16	RAD. TOP RIGHT	154.72	DEG. F
C	17	RAD. BTTM RIGHT	156.09	DEG. F
C	18	GEN. AIR IN	122.39	DEG. F
C	19	GEN. AIR OUT	169.61	DEG. F
C	20	GEN. FRAME TOP	133.55	DEG. F
C	21	GEN. FRAME BTTM	140.26	DEG. F
C	22	GEN. EXCITER	139.25	DEG. F
C	23	GEN. VOLT. REG.	138.24	DEG. F
C	24	CONTROL PANEL	139.56	DEG. F
C	25	RELAY AREA	121.91	DEG. F
C	26	BATTERY LEFT	141.17	DEG. F
C	27	BATTERY RIGHT	139.56	DEG. F
C	28	AIR IN SET	124.68	DEG. F
C	29	FUEL TANK	132.70	DEG. F
C	30	FUEL OUTLET	149.51	DEG. F

END SCAN GROUP 1 15 JAN 88 10:15:12

STOPPED SINGLE SCAN 15 JAN 88 10:15:12

BEGIN SCAN GROUP 1 15 JAN 88 09:15:21
30 KW 400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	812.64	DEG. F
C	2	EXHAUST 2	851.61	DEG. F
C	3	EXHAUST 3	867.89	DEG. F
C	4	EXHAUST 4	861.50	DEG. F
C	5	EXHAUST 5	869.48	DEG. F
C	6	EXHAUST 6	778.96	DEG. F
C	7	ENG. COOL. IN	208.06	DEG. F
C	8	ENG. COOL. OUT	216.83	DEG. F
C	9	OIL SUMP	177.47	DEG. F
C	10	OIL GALLERY	248.75	DEG. F
C	13	ENG. INTAKE	135.75	DEG. F
C	14	RAD. TOP LEFT	156.05	DEG. F
C	15	RAD. BTTM LEFT	152.23	DEG. F
C	16	RAD. TOP RIGHT	153.49	DEG. F
C	17	RAD. BTTM RIGHT	155.08	DEG. F
C	18	GEN. AIR IN	122.77	DEG. F
C	19	GEN. AIR OUT	169.38	DEG. F
C	20	GEN. FRAME TOP	133.55	DEG. F
C	21	GEN. FRAME BTTM	140.72	DEG. F
C	22	GEN. EXCITER	139.35	DEG. F
C	23	GEN. VOLT. REG.	137.57	DEG. F
C	24	CONTROL PANEL	138.31	DEG. F
C	25	RELAY AREA	120.61	DEG. F
C	26	BATTERY LEFT	140.50	DEG. F
C	27	BATTERY RIGHT	138.00	DEG. F
C	28	AIR IN SET	124.28	DEG. F
C	29	FUEL TANK	125.51	DEG. F
C	30	FUEL OUTLET	148.55	DEG. F

END SCAN GROUP 1 15 JAN 88 09:15:30

STOPPED SINGLE SCAN 15 JAN 88 09:15:30

BEGIN SCAN GROUP 1 15 JAN 88 10:45:03
30 KW/400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	814.60	DEG. F
C	2	EXHAUST 2	858.49	DEG. F
C	3	EXHAUST 3	873.05	DEG. F
C	4	EXHAUST 4	865.97	DEG. F
C	5	EXHAUST 5	872.11	DEG. F
C	6	EXHAUST 6	780.53	DEG. F
C	7	ENG. COOL. IN	208.39	DEG. F
C	8	ENG. COOL. OUT	217.17	DEG. F
C	9	OIL SUMP	395.52	DEG. F
C	10	OIL GALLERY	248.50	DEG. F
C	13	ENG. INTAKE	135.08	DEG. F
C	14	RAD. TOP LEFT	156.15	DEG. F
C	15	RAD. BTTM LEFT	152.50	DEG. F
C	16	RAD. TOP RIGHT	155.64	DEG. F
C	17	RAD. BTTM RIGHT	156.10	DEG. F
C	18	GEN. AIR IN	123.16	DEG. F
C	19	GEN. AIR OUT	169.83	DEG. F
C	20	GEN. FRAME TOP	134.35	DEG. F
C	21	GEN. FRAME BTTM	140.58	DEG. F
C	22	GEN. EXCITER	139.14	DEG. F
C	23	GEN. VOLT. REG.	137.71	DEG. F
C	24	CONTROL PANEL	137.91	DEG. F
C	25	RELAY AREA	120.96	DEG. F
C	26	BATTERY LEFT	142.60	DEG. F
C	27	BATTERY RIGHT	140.96	DEG. F
C	28	AIR IN SET	125.51	DEG. F
C	29	FUEL TANK	134.65	DEG. F
C	30	FUEL OUTLET	148.72	DEG. F

END SCAN GROUP 1 15 JAN 88 10:45:12

STOPPED SINGLE SCAN 15 JAN 88 10:45:12

BEGIN SCAN GROUP 1 15 JAN 88 09:45:06
30 KW/400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	813.72	DEG. F
C	2	EXHAUST 2	857.55	DEG. F
C	3	EXHAUST 3	871.82	DEG. F
C	4	EXHAUST 4	862.86	DEG. F
C	5	EXHAUST 5	870.06	DEG. F
C	6	EXHAUST 6	775.93	DEG. F
C	7	ENG. COOL. IN	209.17	DEG. F
C	8	ENG. COOL. OUT	217.24	DEG. F
C	9	OIL SUMP		OPEN TC
C	10	OIL GALLERY	249.25	DEG. F
C	13	ENG. INTAKE	136.13	DEG. F
C	14	RAD. TOP LEFT	156.28	DEG. F
C	15	RAD. BTTM LEFT	152.82	DEG. F
C	16	RAD. TOP RIGHT	153.75	DEG. F
C	17	RAD. BTTM RIGHT	155.29	DEG. F
C	18	GEN. AIR IN	123.15	DEG. F
C	19	GEN. AIR OUT	169.70	DEG. F
C	20	GEN. FRAME TOP	133.81	DEG. F
C	21	GEN. FRAME BTTM	141.30	DEG. F
C	22	GEN. EXCITER	138.17	DEG. F
C	23	GEN. VOLT. REG.	137.16	DEG. F
C	24	CONTROL PANEL	138.99	DEG. F
C	25	RELAY AREA	121.74	DEG. F
C	26	BATTERY LEFT	141.82	DEG. F
C	27	BATTERY RIGHT	138.36	DEG. F
C	28	AIR IN SET	124.66	DEG. F
C	29	FUEL TANK	129.26	DEG. F
C	30	FUEL OUTLET	147.91	DEG. F

END SCAN GROUP 1 15 JAN 88 09:45:16

STOPPED SINGLE SCAN 15 JAN 88 09:45:16

BEGIN SCAN GROUP 1 15 JAN 88 11:15:06
30 KW 400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	817.07	DEG. F
C	2	EXHAUST 2	861.18	DEG. F
C	3	EXHAUST 3	877.34	DEG. F
C	4	EXHAUST 4	872.28	DEG. F
C	5	EXHAUST 5	878.22	DEG. F
C	6	EXHAUST 6	784.57	DEG. F
C	7	ENG. COOL. IN	208.85	DEG. F
C	8	ENG. COOL. OUT	217.57	DEG. F
C	9	OIL SUMP		OPEN TC
C	10	OIL GALLERY	249.88	DEG. F
C	13	ENG. INTAKE	137.78	DEG. F
C	14	RAD. TOP LEFT	156.24	DEG. F
C	15	RAD. BTTM LEFT	152.95	DEG. F
C	16	RAD. TOP RIGHT	154.21	DEG. F
C	17	RAD. BTTM RIGHT	156.36	DEG. F
C	18	GEN. AIR IN	123.40	DEG. F
C	19	GEN. AIR OUT	169.48	DEG. F
C	20	GEN. FRAME TOP	135.09	DEG. F
C	21	GEN. FRAME BTTM	141.25	DEG. F
C	22	GEN. EXCITER	140.39	DEG. F
C	23	GEN. VOLT. REG.	137.11	DEG. F
C	24	CONTROL PANEL	137.81	DEG. F
C	25	RELAY AREA	121.43	DEG. F
C	26	BATTERY LEFT	143.10	DEG. F
C	27	BATTERY RIGHT	141.66	DEG. F
C	28	AIR IN SET	125.34	DEG. F
C	29	FUEL TANK	135.74	DEG. F
C	30	FUEL OUTLET	148.62	DEG. F

END SCAN GROUP 1 15 JAN 88 11:15:15

STOPPED SINGLE SCAN 15 JAN 88 11:15:15

BEGIN SCAN GROUP 1 15 JAN 88 11:35:05
30 KW 400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	378.08	DEG. F
C	2	EXHAUST 2	436.23	DEG. F
C	3	EXHAUST 3	428.00	DEG. F
C	4	EXHAUST 4	418.61	DEG. F
C	5	EXHAUST 5	434.59	DEG. F
C	6	EXHAUST 6	375.66	DEG. F
C	7	ENG. COOL. IN	181.54	DEG. F
C	8	ENG. COOL. OUT	187.08	DEG. F
C	9	OIL SUMP		OPEN TC
C	10	OIL GALLERY	227.64	DEG. F
C	13	ENG. INTAKE	132.84	DEG. F
C	14	RAD. TOP LEFT	143.51	DEG. F
C	15	RAD. BTTM LEFT	141.67	DEG. F
C	16	RAD. TOP RIGHT	146.83	DEG. F
C	17	RAD. BTTM RIGHT	146.84	DEG. F
C	18	GEN. AIR IN	123.86	DEG. F
C	19	GEN. AIR OUT	161.14	DEG. F
C	20	GEN. FRAME TOP	132.34	DEG. F
C	21	GEN. FRAME BTTM	137.83	DEG. F
C	22	GEN. EXCITER	139.84	DEG. F
C	23	GEN. VOLT. REG.	135.23	DEG. F
C	24	CONTROL PANEL	136.94	DEG. F
C	25	RELAY AREA	120.80	DEG. F
C	26	BATTERY LEFT	139.16	DEG. F
C	27	BATTERY RIGHT	138.94	DEG. F
C	28	AIR IN SET	126.34	DEG. F
C	29	FUEL TANK	138.86	DEG. F
C	30	FUEL OUTLET	149.24	DEG. F

END SCAN GROUP 1 15 JAN 88 11:35:15

STOPPED SINGLE SCAN 15 JAN 88 11:35:15

BEGIN SCAN GROUP 1 15 JAN 88 11:25:16
30 KW/400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	377.96	DEG. F
C	2	EXHAUST 2	437.42	DEG. F
C	3	EXHAUST 3	426.35	DEG. F
C	4	EXHAUST 4	422.86	DEG. F
C	5	EXHAUST 5	437.14	DEG. F
C	6	EXHAUST 6	377.10	DEG. F
C	7	ENG. COOL. IN	183.06	DEG. F
C	8	ENG. COOL. OUT	188.27	DEG. F
C	9	OIL SUMP		OPEN TC
C	10	OIL GALLERY	235.42	DEG. F
C	13	ENG. INTAKE	131.87	DEG. F
C	14	RAD. TOP LEFT	144.26	DEG. F
C	15	RAD. BTTM LEFT	142.20	DEG. F
C	16	RAD. TOP RIGHT	146.70	DEG. F
C	17	RAD. BTTM RIGHT	147.84	DEG. F
C	18	GEN. AIR IN	122.88	DEG. F
C	19	GEN. AIR OUT	163.52	DEG. F
C	20	GEN. FRAME TOP	132.15	DEG. F
C	21	GEN. FRAME BTTM	139.01	DEG. F
C	22	GEN. EXCITER	138.65	DEG. F
C	23	GEN. VOLT. REG.	136.58	DEG. F
C	24	CONTROL PANEL	137.59	DEG. F
C	25	RELAY AREA	121.10	DEG. F
C	26	BATTERY LEFT	141.11	DEG. F
C	27	BATTERY RIGHT	139.97	DEG. F
C	28	AIR IN SET	124.75	DEG. F
C	29	FUEL TANK	130.91	DEG. F
C	30	FUEL OUTLET	150.48	DEG. F

END SCAN GROUP 1 15 JAN 88 11:25:25

STOPPED SINGLE SCAN 15 JAN 88 11:25:25

BEGIN SCAN GROUP 1 15 JAN 88 11:45:11
30 KW/400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	379.65	DEG. F
C	2	EXHAUST 2	437.88	DEG. F
C	3	EXHAUST 3	430.88	DEG. F
C	4	EXHAUST 4	417.87	DEG. F
C	5	EXHAUST 5	434.42	DEG. F
C	6	EXHAUST 6	376.78	DEG. F
C	7	ENG. COOL. IN	180.96	DEG. F
C	8	ENG. COOL. OUT	186.95	DEG. F
C	9	OIL SUMP	156.78	DEG. F
C	10	OIL GALLERY	225.86	DEG. F
C	13	ENG. INTAKE	131.32	DEG. F
C	14	RAD. TOP LEFT	142.18	DEG. F
C	15	RAD. BTTM LEFT	140.21	DEG. F
C	16	RAD. TOP RIGHT	144.74	DEG. F
C	17	RAD. BTTM RIGHT	145.77	DEG. F
C	18	GEN. AIR IN	122.67	DEG. F
C	19	GEN. AIR OUT	159.07	DEG. F
C	20	GEN. FRAME TOP	131.74	DEG. F
C	21	GEN. FRAME BTTM	137.18	DEG. F
C	22	GEN. EXCITER	138.67	DEG. F
C	23	GEN. VOLT. REG.	135.22	DEG. F
C	24	CONTROL PANEL	137.88	DEG. F
C	25	RELAY AREA	121.79	DEG. F
C	26	BATTERY LEFT	139.20	DEG. F
C	27	BATTERY RIGHT	139.18	DEG. F
C	28	AIR IN SET	123.48	DEG. F
C	29	FUEL TANK	130.86	DEG. F
C	30	FUEL OUTLET	148.74	DEG. F

END SCAN GROUP 1 15 JAN 88 11:45:20

STOPPED SINGLE SCAN 15 JAN 88 11:45:20

BEGIN SCAN GROUP 1 15 JAN 88 12:30:16
30 KW 400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	384.08	DEG. F
C	2	EXHAUST 2	434.36	DEG. F
C	3	EXHAUST 3	429.82	DEG. F
C	4	EXHAUST 4	425.82	DEG. F
C	5	EXHAUST 5	440.58	DEG. F
C	6	EXHAUST 6	385.96	DEG. F
C	7	ENG. COOL. IN	181.83	DEG. F
C	8	ENG. COOL. OUT	187.10	DEG. F
C	9	OIL SUMP		OPEN TC
C	10	OIL GALLERY	223.53	DEG. F
C	13	ENG. INTAKE	131.88	DEG. F
C	14	RAD. TOP LEFT	142.44	DEG. F
C	15	RAD. BTTM LEFT	140.64	DEG. F
C	16	RAD. TOP RIGHT	143.93	DEG. F
C	17	RAD. BTTM RIGHT	145.39	DEG. F
C	18	GEN. AIR IN	124.57	DEG. F
C	19	GEN. AIR OUT	156.69	DEG. F
C	20	GEN. FRAME TOP	131.19	DEG. F
C	21	GEN. FRAME BTTM	136.16	DEG. F
C	22	GEN. EXCITER	138.84	DEG. F
C	23	GEN. VOLT. REG.	133.96	DEG. F
C	24	CONTROL PANEL	136.93	DEG. F
C	25	RELAY AREA	120.72	DEG. F
C	26	BATTERY LEFT	138.50	DEG. F
C	27	BATTERY RIGHT	138.84	DEG. F
C	28	AIR IN SET	125.30	DEG. F
C	29	FUEL TANK	130.85	DEG. F
C	30	FUEL OUTLET	147.69	DEG. F

END SCAN GROUP 1 15 JAN 88 12:30:25

STOPPED SINGLE SCAN 15 JAN 88 12:30:25

BEGIN SCAN GROUP 1 15 JAN 88 11:55:07
30 KW 400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	380.24	DEG. F
C	2	EXHAUST 2	437.27	DEG. F
C	3	EXHAUST 3	427.95	DEG. F
C	4	EXHAUST 4	417.47	DEG. F
C	5	EXHAUST 5	437.24	DEG. F
C	6	EXHAUST 6	379.80	DEG. F
C	7	ENG. COOL. IN	180.51	DEG. F
C	8	ENG. COOL. OUT	186.70	DEG. F
C	9	OIL SUMP		OPEN TC
C	10	OIL GALLERY	223.87	DEG. F
C	13	ENG. INTAKE	130.70	DEG. F
C	14	RAD. TOP LEFT	142.60	DEG. F
C	15	RAD. BTTM LEFT	140.77	DEG. F
C	16	RAD. TOP RIGHT	145.02	DEG. F
C	17	RAD. BTTM RIGHT	146.84	DEG. F
C	18	GEN. AIR IN	124.09	DEG. F
C	19	GEN. AIR OUT	158.87	DEG. F
C	20	GEN. FRAME TOP	131.59	DEG. F
C	21	GEN. FRAME BTTM	136.21	DEG. F
C	22	GEN. EXCITER	138.19	DEG. F
C	23	GEN. VOLT. REG.	134.47	DEG. F
C	24	CONTROL PANEL	136.69	DEG. F
C	25	RELAY AREA	121.57	DEG. F
C	26	BATTERY LEFT	138.79	DEG. F
C	27	BATTERY RIGHT	139.20	DEG. F
C	28	AIR IN SET	125.84	DEG. F
C	29	FUEL TANK	130.91	DEG. F
C	30	FUEL OUTLET	147.28	DEG. F

END SCAN GROUP 1 15 JAN 88 11:55:17

STOPPED SINGLE SCAN 15 JAN 88 11:55:17

BEGIN SCAN GROUP 1 15 JAN 88 13:00:15
30 KW/400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	378.34	DEG. F
C	2	EXHAUST 2	441.99	DEG. F
C	3	EXHAUST 3	436.20	DEG. F
C	4	EXHAUST 4	429.69	DEG. F
C	5	EXHAUST 5	435.94	DEG. F
C	6	EXHAUST 6	380.49	DEG. F
C	7	ENG. COOL. IN	181.44	DEG. F
C	8	ENG. COOL. OUT	187.77	DEG. F
C	9	OIL SUMP		OPEN TC
C	10	OIL GALLERY	224.11	DEG. F
C	13	ENG. INTAKE	131.45	DEG. F
C	14	RAD. TOP LEFT	142.21	DEG. F
C	15	RAD. BTTM LEFT	140.41	DEG. F
C	16	RAD. TOP RIGHT	144.58	DEG. F
C	17	RAD. BTTM RIGHT	145.51	DEG. F
C	18	GEN. AIR IN	123.58	DEG. F
C	19	GEN. AIR OUT	156.31	DEG. F
C	20	GEN. FRAME TOP	131.23	DEG. F
C	21	GEN. FRAME BTTM	136.07	DEG. F
C	22	GEN. EXCITER	138.31	DEG. F
C	23	GEN. VOLT. REG.	134.36	DEG. F
C	24	CONTROL PANEL	136.96	DEG. F
C	25	RELAY AREA	121.45	DEG. F
C	26	BATTERY LEFT	138.68	DEG. F
C	27	BATTERY RIGHT	139.57	DEG. F
C	28	AIR IN SET	124.44	DEG. F
C	29	FUEL TANK	130.40	DEG. F
C	30	FUEL OUTLET	147.65	DEG. F

END SCAN GROUP 1 15 JAN 88 13:00:25

STOPPED SINGLE SCAN 15 JAN 88 13:00:25

BEGIN SCAN GROUP 1 15 JAN 88 11:56:47
30 KW/400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	381.69	DEG. F
C	2	EXHAUST 2	437.61	DEG. F
C	3	EXHAUST 3	429.65	DEG. F
C	4	EXHAUST 4	419.48	DEG. F
C	5	EXHAUST 5	436.24	DEG. F
C	6	EXHAUST 6	379.11	DEG. F
C	7	ENG. COOL. IN	181.87	DEG. F
C	8	ENG. COOL. OUT	186.96	DEG. F
C	9	OIL SUMP		OPEN TC
C	10	OIL GALLERY	223.75	DEG. F
C	13	ENG. INTAKE	131.55	DEG. F
C	14	RAD. TOP LEFT	142.79	DEG. F
C	15	RAD. BTTM LEFT	140.95	DEG. F
C	16	RAD. TOP RIGHT	145.12	DEG. F
C	17	RAD. BTTM RIGHT	146.22	DEG. F
C	18	GEN. AIR IN	124.62	DEG. F
C	19	GEN. AIR OUT	158.10	DEG. F
C	20	GEN. FRAME TOP	131.90	DEG. F
C	21	GEN. FRAME BTTM	136.84	DEG. F
C	22	GEN. EXCITER	138.45	DEG. F
C	23	GEN. VOLT. REG.	134.42	DEG. F
C	24	CONTROL PANEL	137.10	DEG. F
C	25	RELAY AREA	122.30	DEG. F
C	26	BATTERY LEFT	139.22	DEG. F
C	27	BATTERY RIGHT	139.15	DEG. F
C	28	AIR IN SET	126.84	DEG. F
C	29	FUEL TANK	130.90	DEG. F
C	30	FUEL OUTLET	147.89	DEG. F

END SCAN GROUP 1 15 JAN 88 11:56:56

STOPPED SINGLE SCAN 15 JAN 88 11:56:57

BEGIN SCAN GROUP 1 15 JAN 88 14:30:11
30 KW 400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	374.81	DEG. F
C	2	EXHAUST 2	442.33	DEG. F
C	3	EXHAUST 3	437.66	DEG. F
C	4	EXHAUST 4	437.86	DEG. F
C	5	EXHAUST 5	440.80	DEG. F
C	6	EXHAUST 6	377.57	DEG. F
C	7	ENG. COOL. IN	181.57	DEG. F
C	8	ENG. COOL. OUT	187.94	DEG. F
C	9	OIL SUMP		OPEN TC
C	10	OIL GALLERY	224.49	DEG. F
C	13	ENG. INTAKE	131.35	DEG. F
C	14	RAD. TOP LEFT	142.26	DEG. F
C	15	RAD. BTTM LEFT	140.15	DEG. F
C	16	RAD. TOP RIGHT	144.11	DEG. F
C	17	RAD. BTTM RIGHT	145.38	DEG. F
C	18	GEN. AIR IN	123.11	DEG. F
C	19	GEN. AIR OUT	156.15	DEG. F
C	20	GEN. FRAME TOP	131.08	DEG. F
C	21	GEN. FRAME BTTM	136.82	DEG. F
C	22	GEN. EXCITER	138.85	DEG. F
C	23	GEN. VOLT. REG.	134.43	DEG. F
C	24	CONTROL PANEL	137.08	DEG. F
C	25	RELAY AREA	122.11	DEG. F
C	26	BATTERY LEFT	138.96	DEG. F
C	27	BATTERY RIGHT	139.59	DEG. F
C	28	AIR IN SET	124.53	DEG. F
C	29	FUEL TANK	130.84	DEG. F
C	30	FUEL OUTLET	147.57	DEG. F

END SCAN GROUP 1 15 JAN 88 14:30:21

STOPPED SINGLE SCAN 15 JAN 88 14:30:21

BEGIN SCAN GROUP 1 15 JAN 88 13:30:48
30 KW 400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	374.46	DEG. F
C	2	EXHAUST 2	442.38	DEG. F
C	3	EXHAUST 3	440.61	DEG. F
C	4	EXHAUST 4	436.43	DEG. F
C	5	EXHAUST 5	434.25	DEG. F
C	6	EXHAUST 6	373.62	DEG. F
C	7	ENG. COOL. IN	181.01	DEG. F
C	8	ENG. COOL. OUT	187.09	DEG. F
C	9	OIL SUMP		OPEN TC
C	10	OIL GALLERY	223.60	DEG. F
C	13	ENG. INTAKE	131.15	DEG. F
C	14	RAD. TOP LEFT	141.82	DEG. F
C	15	RAD. BTTM LEFT	139.95	DEG. F
C	16	RAD. TOP RIGHT	143.86	DEG. F
C	17	RAD. BTTM RIGHT	144.84	DEG. F
C	18	GEN. AIR IN	122.77	DEG. F
C	19	GEN. AIR OUT	155.39	DEG. F
C	20	GEN. FRAME TOP	130.41	DEG. F
C	21	GEN. FRAME BTTM	135.45	DEG. F
C	22	GEN. EXCITER	137.62	DEG. F
C	23	GEN. VOLT. REG.	133.44	DEG. F
C	24	CONTROL PANEL	136.75	DEG. F
C	25	RELAY AREA	121.23	DEG. F
C	26	BATTERY LEFT	138.51	DEG. F
C	27	BATTERY RIGHT	138.99	DEG. F
C	28	AIR IN SET	124.12	DEG. F
C	29	FUEL TANK	130.16	DEG. F
C	30	FUEL OUTLET	147.01	DEG. F

END SCAN GROUP 1 15 JAN 88 13:30:57

STOPPED SINGLE SCAN 15 JAN 88 13:30:57

BEGIN SCAN GROUP 1 15 JAN 88 15:00:21
30 KW/400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	374.91	DEG. F
C	2	EXHAUST 2	441.91	DEG. F
C	3	EXHAUST 3	440.15	DEG. F
C	4	EXHAUST 4	440.69	DEG. F
C	5	EXHAUST 5	440.20	DEG. F
C	6	EXHAUST 6	376.39	DEG. F
C	7	ENG. COOL. IN	180.92	DEG. F
C	8	ENG. COOL. OUT	187.32	DEG. F
C	9	OIL SUMP	137.61	DEG. F
C	10	OIL GALLERY	223.71	DEG. F
C	13	ENG. INTAKE	131.03	DEG. F
C	14	RAD. TOP LEFT	142.16	DEG. F
C	15	RAD. BTTM LEFT	140.16	DEG. F
C	16	RAD. TOP RIGHT	143.98	DEG. F
C	17	RAD. BTTM RIGHT	145.06	DEG. F
C	18	GEN. AIR IN	123.72	DEG. F
C	19	GEN. AIR OUT	155.39	DEG. F
C	20	GEN. FRAME TOP	130.17	DEG. F
C	21	GEN. FRAME BTTM	135.02	DEG. F
C	22	GEN. EXCITER	137.58	DEG. F
C	23	GEN. VOLT. REG.	133.56	DEG. F
C	24	CONTROL PANEL	136.27	DEG. F
C	25	RELAY AREA	120.68	DEG. F
C	26	BATTERY LEFT	138.49	DEG. F
C	27	BATTERY RIGHT	139.31	DEG. F
C	28	AIR IN SET	124.86	DEG. F
C	29	FUEL TANK	130.00	DEG. F
C	30	FUEL OUTLET	146.79	DEG. F

END SCAN GROUP 1 15 JAN 88 15:00:31

STOPPED SINGLE SCAN 15 JAN 88 15:00:31

BEGIN SCAN GROUP 1 15 JAN 88 14:00:08
30 KW/400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	373.23	DEG. F
C	2	EXHAUST 2	443.27	DEG. F
C	3	EXHAUST 3	440.18	DEG. F
C	4	EXHAUST 4	440.98	DEG. F
C	5	EXHAUST 5	438.39	DEG. F
C	6	EXHAUST 6	378.18	DEG. F
C	7	ENG. COOL. IN	182.83	DEG. F
C	8	ENG. COOL. OUT	188.81	DEG. F
C	9	OIL SUMP		OPEN TC
C	10	OIL GALLERY	224.87	DEG. F
C	13	ENG. INTAKE	132.37	DEG. F
C	14	RAD. TOP LEFT	143.88	DEG. F
C	15	RAD. BTTM LEFT	141.16	DEG. F
C	16	RAD. TOP RIGHT	145.84	DEG. F
C	17	RAD. BTTM RIGHT	145.95	DEG. F
C	18	GEN. AIR IN	124.90	DEG. F
C	19	GEN. AIR OUT	156.60	DEG. F
C	20	GEN. FRAME TOP	131.68	DEG. F
C	21	GEN. FRAME BTTM	136.64	DEG. F
C	22	GEN. EXCITER	139.12	DEG. F
C	23	GEN. VOLT. REG.	133.96	DEG. F
C	24	CONTROL PANEL	136.86	DEG. F
C	25	RELAY AREA	121.85	DEG. F
C	26	BATTERY LEFT	138.86	DEG. F
C	27	BATTERY RIGHT	139.75	DEG. F
C	28	AIR IN SET	125.89	DEG. F
C	29	FUEL TANK	129.89	DEG. F
C	30	FUEL OUTLET	147.63	DEG. F

END SCAN GROUP 1 15 JAN 88 14:00:18

STOPPED SINGLE SCAN 15 JAN 88 14:00:18

TEST DATA

ITEM 30 KW / 400 HZ GENERATOR SET MODIFIED

MFGR. LIBBY WELDING

MODEL NO. MEP 1KHA

SERIAL NO. R24 0323

NTS

National Technical Systems | Scientific Services Group | Testing Division P.O. Box 38 Hartwood, Virginia 22471 Tel: 703 752 5300

METHOD 5121

CIRCUIT INTERRUPTER TEST (SHORT CIRCUIT)

REF. NO. MIL-STD 705

SHEET 1 OF 1

DATE 16 JAN 1988

JOB NO. 555-2140

PROJ. ENGR.

RECORDER/OBSERVER KM/GC

INST TIME	STEP NO.	LOAD STEP	E6023D VOLTAGE L1-L0 VAC	L2-L0 VAC	L3-L0 VAC	E6040D AMPERES x 40 L1-L0 AC AMPS	L2-L0 AC AMPS	L3-L0 AC AMPS	E6230D KILOWATTS x 40 L1-L0 Kw	L2-L0 Kw	L3-L0 Kw	E6250D POWER FACTOR PF	E6240D FREQ. Hz	E6270 EXCITER VOLTS VDC	E6250D FIELD AMPS DCA	AMB. TEMP. °F	PRESS IN/EXH IN	H2O
0929			START UNIT															
0937			APPLIED RATED LOAD															
0941		R/L	119	119.5	120	2.56	2.6	2.61	.245	.25	.25	.80	400.2	16.0	5.8	125	9.8	44.5
	L1-L2		APPLIED SHORT TO L1-L2 - MALFUNCTION IN OSCORE RETEST STEP															
0951		R/L	119.2	120	120.1	2.59	2.61	2.63	.249	.251	.251	.80	400.2	16.4	5.9	125	10.6	44.5
	L1-L2		APPLIED SHORT TO L1-L2 BREAKER TRIPPED INDICATOR LIGHT ON															
0957			APPLIED RATED LOAD															
0957		R/L	119.1	120	120.1	2.59	2.61	2.62	.246	.251	.252	.80	400.0	16.3	5.85	124	11.3	44.7
	L1-L3		APPLIED SHORT TO L1-L3 BREAKER TRIPPED INDICATOR LIGHT ON															
1003			APPLIED RATED LOAD															
1003		R/L	119.2	120	120.1	2.59	2.61	2.63	.245	.251	.252	.80	400.0	16.3	5.85	124	11.8	43.7
	L1-L0		APPLIED SHORT TO L1-L0 BREAKER TRIPPED INDICATOR LIGHT ON															
1008			APPLIED RATED LOAD															
1008		R/L	120	119.9	120	2.6	2.61	2.63	.249	.251	.251	.80	400.0	16.0	5.85	123	12.5	43.0
	L2-L0		APPLIED SHORT TO L2-L0 BREAKER TRIPPED INDICATOR LIGHT ON															
1011			APPLIED RATED LOAD															
1011		R/L	120	119.9	120.1	2.6	2.61	2.63	.249	.25	.252	.80	400.0	16.2	5.85	123	12.8	44.2
	L2-L3		APPLIED SHORT TO L2-L3 BREAKER TRIPPED INDICATOR LIGHT ON															
1019			APPLIED RATED LOAD															
1019		R/L	120	120.1	120	2.6	2.62	2.63	.249	.251	.251	.80	400.1	16.1	5.85	126	13.4	44.6
	L3-L0		APPLIED SHORT TO L3-L0 BREAKER TRIPPED INDICATOR LIGHT ON															
1024			APPLIED RATED LOAD															
1024		R/L	119.9	120.1	120	2.59	2.61	2.61	.249	.251	.25	.80	400.3	16.1	5.85	125	13.5	44.7
	L1-L2-L3		APPLIED SHORT TO L1-L0-L3 BREAKER TRIPPED INDICATOR LIGHT ON															
1027			END OF TEST SHUT UNIT DOWN															

NOTES:

TEST DATA

ITEM 30 KW, 400 Hz
GENERATOR SET
MODIFIED
MFGR. LIBBY WELDING
MODEL NO. MEP 114A
SERIAL NO. RZ4-0323

FTS
National Technical Systems Scientific Services Group
Testing Division
P.O. Box 38
Harlwood, Virginia 22471
Tel: 703 752 5300

SHORT CIRCUIT
INTERRUPTER TEST (COMPUTATION RESULTS)

REF. NO. MIL STD 705: 5121C
SHEET 1 OF 1
DATE 25 JAN 1988
JOB NO. 555-2140
PROJ. ENGR.
RECORDER/OBSERVER

INST. →													
∅ SHORT ↓		CURRENT BEFORE SHORT	CURRENT MAX		INTERRUPT TIME								
UNITS					msec								
SYM.													
L1-L0		103.6	1153.11		40.1								
L2-L0		105.2	1185.39		43.7								
L3-L0		105.2	981.81		39.8								
L1-L2		103.6	936.90		41.4								
L2-L3		104.4	894.20		42.1								
L3-L1		103.6	860.33		37.5								
L1-L2-L3		104.4	804.75		38.3								

NOTES:

B-326

CIRCUIT INTERRUPTER TEST (SHORT CIRCUIT) METHOD 512.1

BEGIN SCAN GROUP 1 16 JAN 88 09:44:20
30 KW/400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	804.31	DEG. F
C	2	EXHAUST 2	856.98	DEG. F
C	3	EXHAUST 3	867.96	DEG. F
C	4	EXHAUST 4	867.59	DEG. F
C	5	EXHAUST 5	881.75	DEG. F
C	6	EXHAUST 6	805.18	DEG. F
C	7	ENG. COOL. IN	204.36	DEG. F
C	8	ENG. COOL. OUT	212.60	DEG. F
C	9	OIL SUMP	231.61	DEG. F
C	10	OIL GALLERY	232.20	DEG. F
C	13	ENG. INTAKE	135.47	DEG. F
C	14	RAD. TOP LEFT	152.10	DEG. F
C	15	RAD. BTTM LEFT	151.55	DEG. F
C	16	RAD. TOP RIGHT	147.93	DEG. F
C	17	RAD. BTTM RIGHT	149.76	DEG. F
C	18	GEN. AIR IN	123.75	DEG. F
C	19	GEN. AIR OUT	150.94	DEG. F
C	20	GEN. FRAME TOP	132.28	DEG. F
C	21	GEN. FRAME BTTM	132.21	DEG. F
C	22	GEN. EXCITER	136.35	DEG. F
C	23	GEN. VOLT. REG.	130.35	DEG. F
C	24	CONTROL PANEL	132.82	DEG. F
C	25	RELAY AREA	118.74	DEG. F
C	26	BATTERY LEFT	126.98	DEG. F
C	27	BATTERY RIGHT	121.75	DEG. F
C	28	AIR IN SET	125.52	DEG. F
C	29	FUEL TANK	84.928	DEG. F
C	30	FUEL OUTLET	137.16	DEG. F

END SCAN GROUP 1 16 JAN 88 09:44:30

STOPPED SINGLE SCAN 16 JAN 88 09:44:30

BEGIN SCAN GROUP 1 16 JAN 88 09:56:24
30 KW/400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	756.07	DEG. F
C	2	EXHAUST 2	805.12	DEG. F
C	3	EXHAUST 3	826.63	DEG. F
C	4	EXHAUST 4	812.87	DEG. F
C	5	EXHAUST 5	826.45	DEG. F
C	6	EXHAUST 6	767.27	DEG. F
C	7	ENG. COOL. IN	191.35	DEG. F
C	8	ENG. COOL. OUT	199.16	DEG. F
C	9	OIL SUMP	234.20	DEG. F
C	10	OIL GALLERY	233.94	DEG. F
C	13	ENG. INTAKE	136.89	DEG. F
C	14	RAD. TOP LEFT	149.55	DEG. F
C	15	RAD. BTTM LEFT	147.50	DEG. F
C	16	RAD. TOP RIGHT	147.31	DEG. F
C	17	RAD. BTTM RIGHT	149.48	DEG. F
C	18	GEN. AIR IN	122.97	DEG. F
C	19	GEN. AIR OUT	156.58	DEG. F
C	20	GEN. FRAME TOP	130.69	DEG. F
C	21	GEN. FRAME BTTM	137.64	DEG. F
C	22	GEN. EXCITER	138.41	DEG. F
C	23	GEN. VOLT. REG.	131.49	DEG. F
C	24	CONTROL PANEL	135.49	DEG. F
C	25	RELAY AREA	120.34	DEG. F
C	26	BATTERY LEFT	131.76	DEG. F
C	27	BATTERY RIGHT	127.26	DEG. F
C	28	AIR IN SET	124.97	DEG. F
C	29	FUEL TANK	89.235	DEG. F
C	30	FUEL OUTLET	143.68	DEG. F

END SCAN GROUP 1 16 JAN 88 09:56:34

STOPPED SINGLE SCAN 16 JAN 88 09:56:34

BEGIN SCAN GROUP 1 16 JAN 88 09:51:32
30 KW/400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	798.82	DEG. F
C	2	EXHAUST 2	842.22	DEG. F
C	3	EXHAUST 3	871.38	DEG. F
C	4	EXHAUST 4	861.46	DEG. F
C	5	EXHAUST 5	869.40	DEG. F
C	6	EXHAUST 6	863.72	DEG. F
C	7	ENG. COOL. IN	201.29	DEG. F
C	8	ENG. COOL. OUT	209.42	DEG. F
C	9	OIL SUMP	233.87	DEG. F
C	10	OIL GALLERY	234.05	DEG. F
C	13	ENG. INTAKE	137.31	DEG. F
C	14	RAD. TOP LEFT	152.32	DEG. F
C	15	RAD. BTTM LEFT	150.39	DEG. F
C	16	RAD. TOP RIGHT	148.73	DEG. F
C	17	RAD. BTTM RIGHT	151.03	DEG. F
C	18	GEN. AIR IN	122.39	DEG. F
C	19	GEN. AIR OUT	155.66	DEG. F
C	20	GEN. FRAME TOP	128.93	DEG. F
C	21	GEN. FRAME BTTM	135.72	DEG. F
C	22	GEN. EXCITER	138.98	DEG. F
C	23	GEN. VOLT. REG.	129.35	DEG. F
C	24	CONTROL PANEL	134.19	DEG. F
C	25	RELAY AREA	119.74	DEG. F
C	26	BATTERY LEFT	129.30	DEG. F
C	27	BATTERY RIGHT	125.05	DEG. F
C	28	AIR IN SET	124.64	DEG. F
C	29	FUEL TANK	88.616	DEG. F
C	30	FUEL OUTLET	140.42	DEG. F

END SCAN GROUP 1 16 JAN 88 09:51:41

STOPPED SINGLE SCAN 16 JAN 88 09:51:41

BEGIN SCAN GROUP 1 16 JAN 88 10:00:48
30 KW/400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	776.24	DEG. F
C	2	EXHAUST 2	836.01	DEG. F
C	3	EXHAUST 3	839.63	DEG. F
C	4	EXHAUST 4	832.29	DEG. F
C	5	EXHAUST 5	844.18	DEG. F
C	6	EXHAUST 6	782.94	DEG. F
C	7	ENG. COOL. IN	193.87	DEG. F
C	8	ENG. COOL. OUT	201.63	DEG. F
C	9	OIL SUMP	234.98	DEG. F
C	10	OIL GALLERY	236.05	DEG. F
C	13	ENG. INTAKE	136.87	DEG. F
C	14	RAD. TOP LEFT	148.48	DEG. F
C	15	RAD. BTTM LEFT	147.88	DEG. F
C	16	RAD. TOP RIGHT	147.10	DEG. F
C	17	RAD. BTTM RIGHT	149.01	DEG. F
C	18	GEN. AIR IN	123.21	DEG. F
C	19	GEN. AIR OUT	156.96	DEG. F
C	20	GEN. FRAME TOP	134.46	DEG. F
C	21	GEN. FRAME BTTM	136.66	DEG. F
C	22	GEN. EXCITER	138.01	DEG. F
C	23	GEN. VOLT. REG.	133.81	DEG. F
C	24	CONTROL PANEL	135.84	DEG. F
C	25	RELAY AREA	119.91	DEG. F
C	26	BATTERY LEFT	132.21	DEG. F
C	27	BATTERY RIGHT	127.76	DEG. F
C	28	AIR IN SET	124.74	DEG. F
C	29	FUEL TANK	90.499	DEG. F
C	30	FUEL OUTLET	144.74	DEG. F

END SCAN GROUP 1 16 JAN 88 10:00:58

STOPPED SINGLE SCAN 16 JAN 88 10:00:58

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BEGIN SCAN GROUP 1    16 JAN 88   10:08:04
30 KW/400 HZ GEN SET S/N RZ4 0323

C    1 EXHAUST 1          649.62 DEG. F
C    2 EXHAUST 2          713.66 DEG. F
C    3 EXHAUST 3          726.19 DEG. F
C    4 EXHAUST 4          717.58 DEG. F
C    5 EXHAUST 5          721.78 DEG. F
C    6 EXHAUST 6          658.42 DEG. F
C    7 ENG. COOL. IN      182.08 DEG. F
C    8 ENG. COOL. OUT     189.16 DEG. F
C    9 OIL SUMP           229.42 DEG. F
C   10 OIL GALLERY        228.88 DEG. F
C   13  ENG. INTAKE       132.25 DEG. F
C   14 RAD. TOP LEFT      144.99 DEG. F
C   15 RAD. BTTM LEFT     142.84 DEG. F
C   16 RAD. TOP RIGHT     145.75 DEG. F
C   17 RAD. BTTM RIGHT    147.33 DEG. F
C   18 GEN. AIR IN        122.72 DEG. F
C   19 GEN. AIR OUT       157.26 DEG. F
C   20 GEN. FRAME TOP     131.13 DEG. F
C   21 GEN. FRAME BTTM    137.52 DEG. F
C   22 GEN. EXCITER       137.54 DEG. F
C   23 GEN. VOLT. REG.    133.17 DEG. F
C   24 CONTROL PANEL      136.33 DEG. F
C   25 RELAY AREA         119.84 DEG. F
C   26 BATTERY LEFT       132.39 DEG. F
C   27 BATTERY RIGHT      128.53 DEG. F
C   28 AIR IN SET         123.65 DEG. F
C   29 FUEL TANK          93.016 DEG. F
C   30 FUEL OUTLET        146.62 DEG. F

END SCAN GROUP 1      16 JAN 88   10:08:13

STOPPED SINGLE SCAN   16 JAN 88   10:08:14
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BEGIN SCAN GROUP 1    16 JAN 88   10:19:08
30 KW/400 HZ GEN SET S/N RZ4 0323

C    1 EXHAUST 1          617.63 DEG. F
C    2 EXHAUST 2          690.40 DEG. F
C    3 EXHAUST 3          685.77 DEG. F
C    4 EXHAUST 4          685.65 DEG. F
C    5 EXHAUST 5          693.04 DEG. F
C    6 EXHAUST 6          621.32 DEG. F
C    7 ENG. COOL. IN      181.60 DEG. F
C    8 ENG. COOL. OUT     188.69 DEG. F
C    9 OIL SUMP           230.27 DEG. F
C   10 OIL GALLERY        226.96 DEG. F
C   13  ENG. INTAKE       134.20 DEG. F
C   14 RAD. TOP LEFT      145.15 DEG. F
C   15 RAD. BTTM LEFT     143.79 DEG. F
C   16 RAD. TOP RIGHT     145.84 DEG. F
C   17 RAD. BTTM RIGHT    147.23 DEG. F
C   18 GEN. AIR IN        123.54 DEG. F
C   19 GEN. AIR OUT       159.38 DEG. F
C   20 GEN. FRAME TOP     134.64 DEG. F
C   21 GEN. FRAME BTTM    137.01 DEG. F
C   22 GEN. EXCITER       138.14 DEG. F
C   23 GEN. VOLT. REG.    133.74 DEG. F
C   24 CONTROL PANEL      136.52 DEG. F
C   25 RELAY AREA         118.35 DEG. F
C   26 BATTERY LEFT       131.98 DEG. F
C   27 BATTERY RIGHT      129.79 DEG. F
C   28 AIR IN SET         126.21 DEG. F
C   29 FUEL TANK          95.944 DEG. F
C   30 FUEL OUTLET        147.14 DEG. F

END SCAN GROUP 1      16 JAN 88   10:19:17

STOPPED SINGLE SCAN   16 JAN 88   10:19:17
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BEGIN SCAN GROUP 1    16 JAN 88   10:11:50
30 KW/400 HZ GEN SET S/N RZ4 0323

C    1 EXHAUST 1          672.27 DEG. F
C    2 EXHAUST 2          744.34 DEG. F
C    3 EXHAUST 3          754.15 DEG. F
C    4 EXHAUST 4          741.79 DEG. F
C    5 EXHAUST 5          755.84 DEG. F
C    6 EXHAUST 6          679.39 DEG. F
C    7 ENG. COOL. IN      189.09 DEG. F
C    8 ENG. COOL. OUT     193.77 DEG. F
C    9 OIL SUMP           231.43 DEG. F
C   10 OIL GALLERY        233.92 DEG. F
C   13  ENG. INTAKE       131.93 DEG. F
C   14 RAD. TOP LEFT      146.00 DEG. F
C   15 RAD. BTTM LEFT     144.80 DEG. F
C   16 RAD. TOP RIGHT     146.07 DEG. F
C   17 RAD. BTTM RIGHT    147.65 DEG. F
C   18 GEN. AIR IN        123.39 DEG. F
C   19 GEN. AIR OUT       156.53 DEG. F
C   20 GEN. FRAME TOP     129.85 DEG. F
C   21 GEN. FRAME BTTM    135.44 DEG. F
C   22 GEN. EXCITER       138.77 DEG. F
C   23 GEN. VOLT. REG.    131.72 DEG. F
C   24 CONTROL PANEL      135.40 DEG. F
C   25 RELAY AREA         118.87 DEG. F
C   26 BATTERY LEFT       131.33 DEG. F
C   27 BATTERY RIGHT      127.90 DEG. F
C   28 AIR IN SET         123.78 DEG. F
C   29 FUEL TANK          96.046 DEG. F
C   30 FUEL OUTLET        145.83 DEG. F

END SCAN GROUP 1      16 JAN 88   10:12:00

STOPPED SINGLE SCAN   16 JAN 88   10:12:00
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BEGIN SCAN GROUP 1    16 JAN 88   10:24:22
30 KW/400 HZ GEN SET S/N RZ4 0323

C    1 EXHAUST 1          613.67 DEG. F
C    2 EXHAUST 2          686.99 DEG. F
C    3 EXHAUST 3          690.56 DEG. F
C    4 EXHAUST 4          687.01 DEG. F
C    5 EXHAUST 5          691.88 DEG. F
C    6 EXHAUST 6          622.47 DEG. F
C    7 ENG. COOL. IN      181.74 DEG. F
C    8 ENG. COOL. OUT     188.87 DEG. F
C    9 OIL SUMP           228.35 DEG. F
C   10 OIL GALLERY        225.66 DEG. F
C   13  ENG. INTAKE       133.28 DEG. F
C   14 RAD. TOP LEFT      145.27 DEG. F
C   15 RAD. BTTM LEFT     143.62 DEG. F
C   16 RAD. TOP RIGHT     146.41 DEG. F
C   17 RAD. BTTM RIGHT    147.42 DEG. F
C   18 GEN. AIR IN        123.71 DEG. F
C   19 GEN. AIR OUT       159.47 DEG. F
C   20 GEN. FRAME TOP     132.98 DEG. F
C   21 GEN. FRAME BTTM    138.12 DEG. F
C   22 GEN. EXCITER       138.17 DEG. F
C   23 GEN. VOLT. REG.    133.61 DEG. F
C   24 CONTROL PANEL      136.68 DEG. F
C   25 RELAY AREA         118.55 DEG. F
C   26 BATTERY LEFT       132.76 DEG. F
C   27 BATTERY RIGHT      130.11 DEG. F
C   28 AIR IN SET         125.63 DEG. F
C   29 FUEL TANK          97.331 DEG. F
C   30 FUEL OUTLET        147.69 DEG. F

END SCAN GROUP 1      16 JAN 88   10:24:31

STOPPED SINGLE SCAN   16 JAN 88   10:24:31
```

TEST DATA

ITEM 30 Kw / 400 Hz
GENERATOR SET
MODIFIED
MFGR. GIBBS (WILDEN)
MODEL NO. MEP 114A
SERIAL NO. 274 0323

NTS
National Technical Systems | Scientific Services Group | Testing Division P.O. Box 38 Harlwood, Virginia 22471 Tel: 703 752 5300

CIRCUIT INTERRUPTER
METHOD 512.2 (OVER LOAD)

REF. NO. MIL-STD 705
SHEET 1 OF 1
DATE 16 JAN 1988
JOB NO. 555-2140
PROJ. ENGR.
RECORDER/OBSERVER KM / GC

INST TIME	STEP NO.	LOAD STEP	E6023D VOLTAGE L_1-L_0 VAC	L_2-L_0 VAC	L_3-L_0 VAC	E6040D AMPERES x40 L_1-L_0 AC AMPS	L_2-L_0 AC AMPS	L_3-L_0 AC AMPS	E6230D KILOWATTS x40 L_1-L_0 Kw	L_2-L_0 Kw	L_3-L_0 Kw	E6025D POWER FACTOR PF	E6006D FREQ. Hz	E6006D EXCITER VOLTS VDC	E6025D FIELD AMPS DCA	AMB. TEMP. °F	PRESS IN/EXH IN H2O
1305			START UNIT @			RATED	LOAD		START	STABILIZATION							
1315		RL	119.5	120	120	2.6	2.61	2.61	.249	.257	.257	.80	400	16.8	15.9	125	65 / 46.0
1325			SHUT UNIT Down			& EQUIPMENT			MALFUNCTION								
1421			START UNIT @			RATED	LOAD	TO	STABILIZE								
1430		RL	119.5	120	120	2.6	2.61	2.61	.249	.25	.25	.80	400.5	16.2	5.8	124	70 / 45.4
1440		RL	119.5	120	120	2.61	2.61	2.62	.249	.25	.25	.80	400.5	16.8	5.9	125	66.8 / 45.9
1450		RL	119.5	120	119.5	2.6	2.61	2.62	.249	.257	.257	.80	400.5	16.9	5.95	125	16.7 / 45.3
1500		RL	119.5	120	119.5	2.6	2.61	2.62	.249	.257	.257	.80	400.5	17.0	6.0	124	16.8 / 45.7
1502			APPLIED 130%			OVER LOAD		TO $L_1-L_2-L_3$									
1503		OL	118.5	119	118.5	3.38	3.38	3.38	.249	.257	.257	.655	400.4	22.0	7.2	124	16.6 / 45.7
1506			DUMPED LOAD ON UNIT			COOLANT			OUT	TEMP	221°F						
1511			SHUT UNIT Down														

NOTES: TEST NOT COMPLETED DUE TO OVERTEMP PROBLEM

8-329

CIRCUIT INTERRUPTER (UNDER LOAD) METHOD 512.2

```
BEGIN SCAN GROUP 1    16 JAN 88  13:15:36
30 KW 400 HZ GEN SET S/N RZ4 0323

C    1 EXHAUST 1          817.89 DEG. F
C    2 EXHAUST 2          867.40 DEG. F
C    3 EXHAUST 3          887.30 DEG. F
C    4 EXHAUST 4          883.85 DEG. F
C    5 EXHAUST 5          892.62 DEG. F
C    6 EXHAUST 6          819.32 DEG. F
C    7 ENG. COOL. IN      204.27 DEG. F
C    8 ENG. COOL. OUT     213.87 DEG. F
C    9 OIL SUMP           226.20 DEG. F
C   10 OIL GALLERY        227.55 DEG. F
C   13  ENG. INTAKE       137.58 DEG. F
C   14 RAD. TOP LEFT      153.10 DEG. F
C   15 RAD. BTTM LEFT     152.12 DEG. F
C   16 RAD. TOP RIGHT     146.69 DEG. F
C   17 RAD. BTTM RIGHT    151.56 DEG. F
C   18 GEN. AIR IN        122.92 DEG. F
C   19 GEN. AIR OUT       160.36 DEG. F
C   20 GEN. FRAME TOP     132.37 DEG. F
C   21 GEN. FRAME BTTM    138.38 DEG. F
C   22 GEN. EXCITER       138.21 DEG. F
C   23 GEN. VOLT. REG.    133.39 DEG. F
C   24 CONTROL PANEL      134.59 DEG. F
C   25 RELAY AREA         120.04 DEG. F
C   26 BATTERY LEFT       132.32 DEG. F
C   27 BATTERY RIGHT      129.45 DEG. F
C   28 AIR IN SET         125.85 DEG. F
C   29 FUEL TANK          112.35 DEG. F
C   30 FUEL OUTLET        141.56 DEG. F

END SCAN GROUP 1      16 JAN 88  13:15:45

STOPPED SINGLE SCAN   16 JAN 88  13:15:45
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CIRCUIT INTERRUPTER (UNDER LOAD) METHOD 512.2

```
BEGIN SCAN GROUP 1    16 JAN 88  14:30:15
30 KW 400 HZ GEN SET S/N RZ4 0323

C    1 EXHAUST 1          805.73 DEG. F
C    2 EXHAUST 2          852.35 DEG. F
C    3 EXHAUST 3          876.10 DEG. F
C    4 EXHAUST 4          872.14 DEG. F
C    5 EXHAUST 5          888.19 DEG. F
C    6 EXHAUST 6          814.67 DEG. F
C    7 ENG. COOL. IN      197.36 DEG. F
C    8 ENG. COOL. OUT     204.44 DEG. F
C    9 OIL SUMP           213.96 DEG. F
C   10 OIL GALLERY        749.78 DEG. F
C   13  ENG. INTAKE       131.40 DEG. F
C   14 RAD. TOP LEFT      148.12 DEG. F
C   15 RAD. BTTM LEFT     146.45 DEG. F
C   16 RAD. TOP RIGHT     144.98 DEG. F
C   17 RAD. BTTM RIGHT    145.78 DEG. F
C   18 GEN. AIR IN        123.70 DEG. F
C   19 GEN. AIR OUT       156.43 DEG. F
C   20 GEN. FRAME TOP     131.20 DEG. F
C   21 GEN. FRAME BTTM    131.98 DEG. F
C   22 GEN. EXCITER       131.51 DEG. F
C   23 GEN. VOLT. REG.    122.08 DEG. F
C   24 CONTROL PANEL      121.24 DEG. F
C   25 RELAY AREA         105.52 DEG. F
C   26 BATTERY LEFT       115.89 DEG. F
C   27 BATTERY RIGHT      115.81 DEG. F
C   28 AIR IN SET         124.82 DEG. F
C   29 FUEL TANK          111.66 DEG. F
C   30 FUEL OUTLET        133.24 DEG. F

END SCAN GROUP 1      16 JAN 88  14:38:25

STOPPED SINGLE SCAN   16 JAN 88  14:38:25


BEGIN SCAN GROUP 1    16 JAN 88  14:40:12
30 KW/400 HZ GEN SET S/N RZ4 0323

C    1 EXHAUST 1          821.65 DEG. F
C    2 EXHAUST 2          866.88 DEG. F
C    3 EXHAUST 3          875.91 DEG. F
C    4 EXHAUST 4          882.52 DEG. F
C    5 EXHAUST 5          893.51 DEG. F
C    6 EXHAUST 6          815.76 DEG. F
C    7 ENG. COOL. IN      207.42 DEG. F
C    8 ENG. COOL. OUT     215.77 DEG. F
C    9 OIL SUMP           239.22 DEG. F
C   10 OIL GALLERY              OPEN TC
C   13  ENG. INTAKE       138.05 DEG. F
C   14 RAD. TOP LEFT      153.78 DEG. F
C   15 RAD. BTTM LEFT     152.74 DEG. F
C   16 RAD. TOP RIGHT     151.22 DEG. F
C   17 RAD. BTTM RIGHT    153.02 DEG. F
C   18 GEN. AIR IN        123.48 DEG. F
C   19 GEN. AIR OUT       163.41 DEG. F
C   20 GEN. FRAME TOP     134.68 DEG. F
C   21 GEN. FRAME BTTM    138.53 DEG. F
C   22 GEN. EXCITER       137.62 DEG. F
C   23 GEN. VOLT. REG.    129.55 DEG. F
C   24 CONTROL PANEL      129.46 DEG. F
C   25 RELAY AREA         117.86 DEG. F
C   26 BATTERY LEFT       130.96 DEG. F
C   27 BATTERY RIGHT      128.90 DEG. F
C   28 AIR IN SET         125.68 DEG. F
C   29 FUEL TANK          112.18 DEG. F
C   30 FUEL OUTLET        141.04 DEG. F

END SCAN GROUP 1      16 JAN 88  14:40:21

STOPPED SINGLE SCAN   16 JAN 88  14:40:21
```

BEGIN SCAN GROUP 1 16 JAN 88 15:03:36
30 KW 400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	848.37	DEG.	F
C	2	EXHAUST 2	895.36	DEG.	F
C	3	EXHAUST 3	915.92	DEG.	F
C	4	EXHAUST 4	917.25	DEG.	F
C	5	EXHAUST 5	925.91	DEG.	F
C	6	EXHAUST 6	874.33	DEG.	F
C	7	ENG. COOL. IN	214.39	DEG.	F
C	8	ENG. COOL. OUT	221.06	DEG.	F
C	9	OIL SUMP	249.17	DEG.	F
C	10	OIL GALLERY		OPEN	TC
C	13	ENG. INTAKE	138.36	DEG.	F
C	14	RAD. TOP LEFT	156.63	DEG.	F
C	15	RAD. BTTM LEFT	154.30	DEG.	F
C	16	RAD. TOP RIGHT	154.54	DEG.	F
C	17	RAD. BTTM RIGHT	156.70	DEG.	F
C	18	GEN. AIR IN	124.27	DEG.	F
C	19	GEN. AIR OUT	168.19	DEG.	F
C	20	GEN. FRAME TOP	131.95	DEG.	F
C	21	GEN. FRAME BTTM	141.99	DEG.	F
C	22	GEN. EXCITER	140.33	DEG.	F
C	23	GEN. VOLT. REG.	134.78	DEG.	F
C	24	CONTROL PANEL	135.94	DEG.	F
C	25	RELAY AREA	119.86	DEG.	F
C	26	BATTERY LEFT	140.26	DEG.	F
C	27	BATTERY RIGHT	135.20	DEG.	F
C	28	AIR IN SET	125.33	DEG.	F
C	29	FUEL TANK	117.11	DEG.	F
C	30	FUEL OUTLET	147.18	DEG.	F

END SCAN GROUP 1 16 JAN 88 15:03:46

STOPPED SINGLE SCAN 16 JAN 88 15:03:46

BEGIN SCAN GROUP 1 16 JAN 88 14:50:50
30 KW 400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	828.55	DEG.	F
C	2	EXHAUST 2	863.46	DEG.	F
C	3	EXHAUST 3	876.84	DEG.	F
C	4	EXHAUST 4	878.62	DEG.	F
C	5	EXHAUST 5	886.71	DEG.	F
C	6	EXHAUST 6	806.66	DEG.	F
C	7	ENG. COOL. IN	207.87	DEG.	F
C	8	ENG. COOL. OUT	217.32	DEG.	F
C	9	OIL SUMP	245.73	DEG.	F
C	10	OIL GALLERY		OPEN	TC
C	13	ENG. INTAKE	137.15	DEG.	F
C	14	RAD. TOP LEFT	154.23	DEG.	F
C	15	RAD. BTTM LEFT	152.66	DEG.	F
C	16	RAD. TOP RIGHT	152.17	DEG.	F
C	17	RAD. BTTM RIGHT	154.16	DEG.	F
C	18	GEN. AIR IN	121.96	DEG.	F
C	19	GEN. AIR OUT	164.86	DEG.	F
C	20	GEN. FRAME TOP	135.15	DEG.	F
C	21	GEN. FRAME BTTM	137.64	DEG.	F
C	22	GEN. EXCITER	137.20	DEG.	F
C	23	GEN. VOLT. REG.	133.39	DEG.	F
C	24	CONTROL PANEL	133.68	DEG.	F
C	25	RELAY AREA	117.71	DEG.	F
C	26	BATTERY LEFT	135.25	DEG.	F
C	27	BATTERY RIGHT	133.19	DEG.	F
C	28	AIR IN SET	125.80	DEG.	F
C	29	FUEL TANK	113.29	DEG.	F
C	30	FUEL OUTLET	145.25	DEG.	F

END SCAN GROUP 1 16 JAN 88 14:50:59

STOPPED SINGLE SCAN 16 JAN 88 14:50:59

BEGIN SCAN GROUP 1 16 JAN 88 15:05:40
30 KW 400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	655.43	DEG.	F
C	2	EXHAUST 2	698.79	DEG.	F
C	3	EXHAUST 3	704.53	DEG.	F
C	4	EXHAUST 4	710.24	DEG.	F
C	5	EXHAUST 5	725.74	DEG.	F
C	6	EXHAUST 6	683.81	DEG.	F
C	7	ENG. COOL. IN	213.39	DEG.	F
C	8	ENG. COOL. OUT	221.38	DEG.	F
C	9	OIL SUMP	249.96	DEG.	F
C	10	OIL GALLERY		OPEN	TC
C	13	ENG. INTAKE	138.89	DEG.	F
C	14	RAD. TOP LEFT	156.97	DEG.	F
C	15	RAD. BTTM LEFT	154.77	DEG.	F
C	16	RAD. TOP RIGHT	156.88	DEG.	F
C	17	RAD. BTTM RIGHT	157.30	DEG.	F
C	18	GEN. AIR IN	123.76	DEG.	F
C	19	GEN. AIR OUT	170.56	DEG.	F
C	20	GEN. FRAME TOP	134.94	DEG.	F
C	21	GEN. FRAME BTTM	141.93	DEG.	F
C	22	GEN. EXCITER	140.32	DEG.	F
C	23	GEN. VOLT. REG.	135.81	DEG.	F
C	24	CONTROL PANEL	136.83	DEG.	F
C	25	RELAY AREA	119.37	DEG.	F
C	26	BATTERY LEFT	140.83	DEG.	F
C	27	BATTERY RIGHT	136.22	DEG.	F
C	28	AIR IN SET	125.44	DEG.	F
C	29	FUEL TANK	115.99	DEG.	F
C	30	FUEL OUTLET	148.08	DEG.	F

END SCAN GROUP 1 16 JAN 88 15:05:50

STOPPED SINGLE SCAN 16 JAN 88 15:05:50

BEGIN SCAN GROUP 1 16 JAN 88 15:00:07
30 KW 400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	824.87	DEG.	F
C	2	EXHAUST 2	863.45	DEG.	F
C	3	EXHAUST 3	891.56	DEG.	F
C	4	EXHAUST 4	888.99	DEG.	F
C	5	EXHAUST 5	887.13	DEG.	F
C	6	EXHAUST 6	799.14	DEG.	F
C	7	ENG. COOL. IN	211.79	DEG.	F
C	8	ENG. COOL. OUT	219.35	DEG.	F
C	9	OIL SUMP	244.14	DEG.	F
C	10	OIL GALLERY		OPEN	TC
C	13	ENG. INTAKE	136.62	DEG.	F
C	14	RAD. TOP LEFT	156.46	DEG.	F
C	15	RAD. BTTM LEFT	154.09	DEG.	F
C	16	RAD. TOP RIGHT	154.39	DEG.	F
C	17	RAD. BTTM RIGHT	156.36	DEG.	F
C	18	GEN. AIR IN	123.53	DEG.	F
C	19	GEN. AIR OUT	166.27	DEG.	F
C	20	GEN. FRAME TOP	133.28	DEG.	F
C	21	GEN. FRAME BTTM	139.49	DEG.	F
C	22	GEN. EXCITER	140.06	DEG.	F
C	23	GEN. VOLT. REG.	134.68	DEG.	F
C	24	CONTROL PANEL	135.41	DEG.	F
C	25	RELAY AREA	118.96	DEG.	F
C	26	BATTERY LEFT	138.62	DEG.	F
C	27	BATTERY RIGHT	134.47	DEG.	F
C	28	AIR IN SET	124.89	DEG.	F
C	29	FUEL TANK	116.42	DEG.	F
C	30	FUEL OUTLET	147.17	DEG.	F

END SCAN GROUP 1 16 JAN 88 15:00:17

STOPPED SINGLE SCAN 16 JAN 88 15:00:17

TEST DATA

ITEM 30 KW 400 Hz GENERATOR SET MODIFIED

MFGR. LIBBY WELDING

MODEL NO. MEP 114A

SERIAL NO. RZ4 0323

National Technical Systems | Scientific Services Group | Testing Division, PO Box 38, Hallwood, Virginia 22471, Tel. 703 752 5300

D.C. CONTROL TEST

REF. NO. MIL-STD 705; 555.1

SHEET 1 OF 1

DATE 18 JAN 1988

JOB NO. 555-2140

PROJ. ENGR.

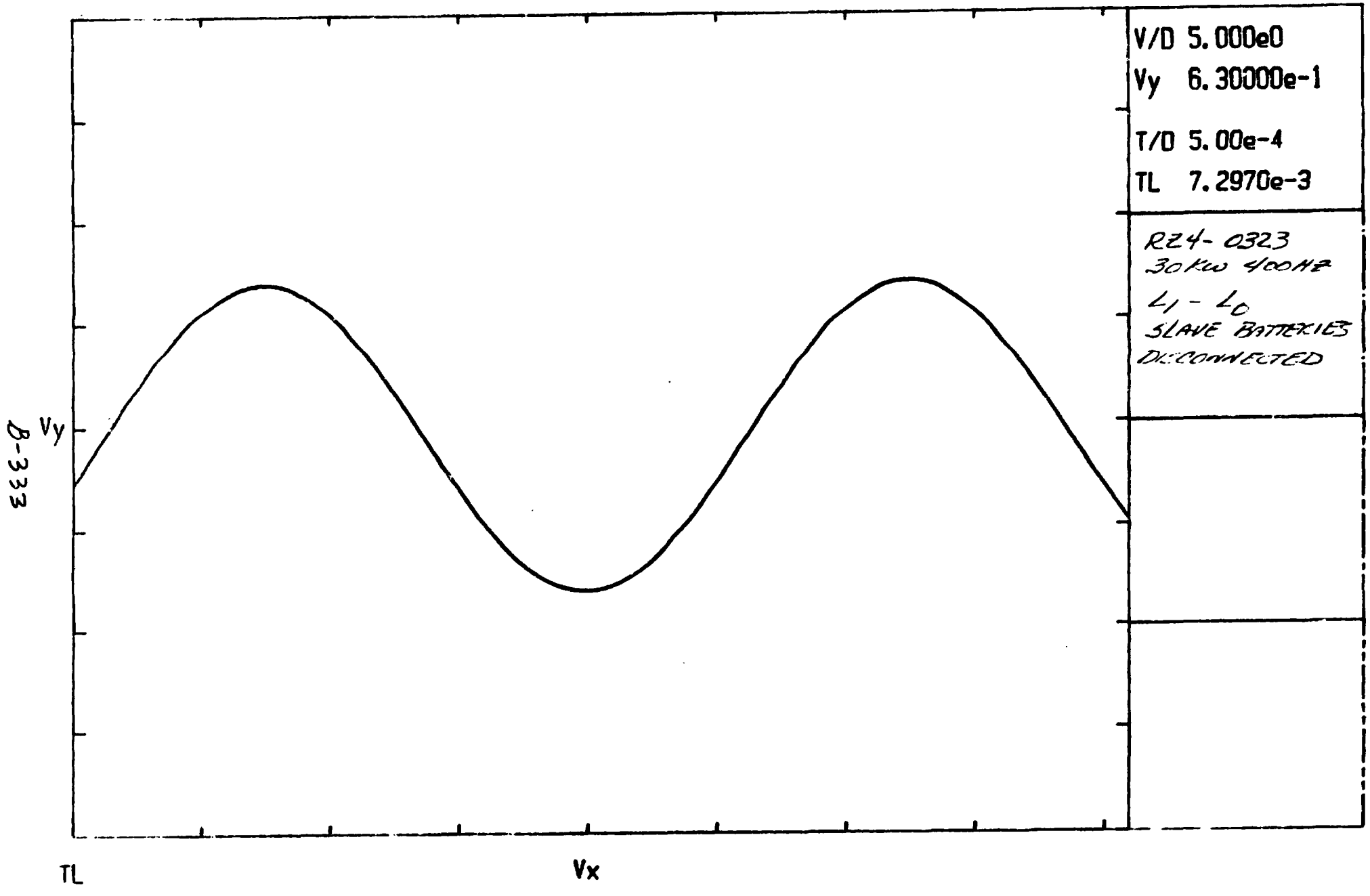
RECORDER/OBSERVER KM GC LT

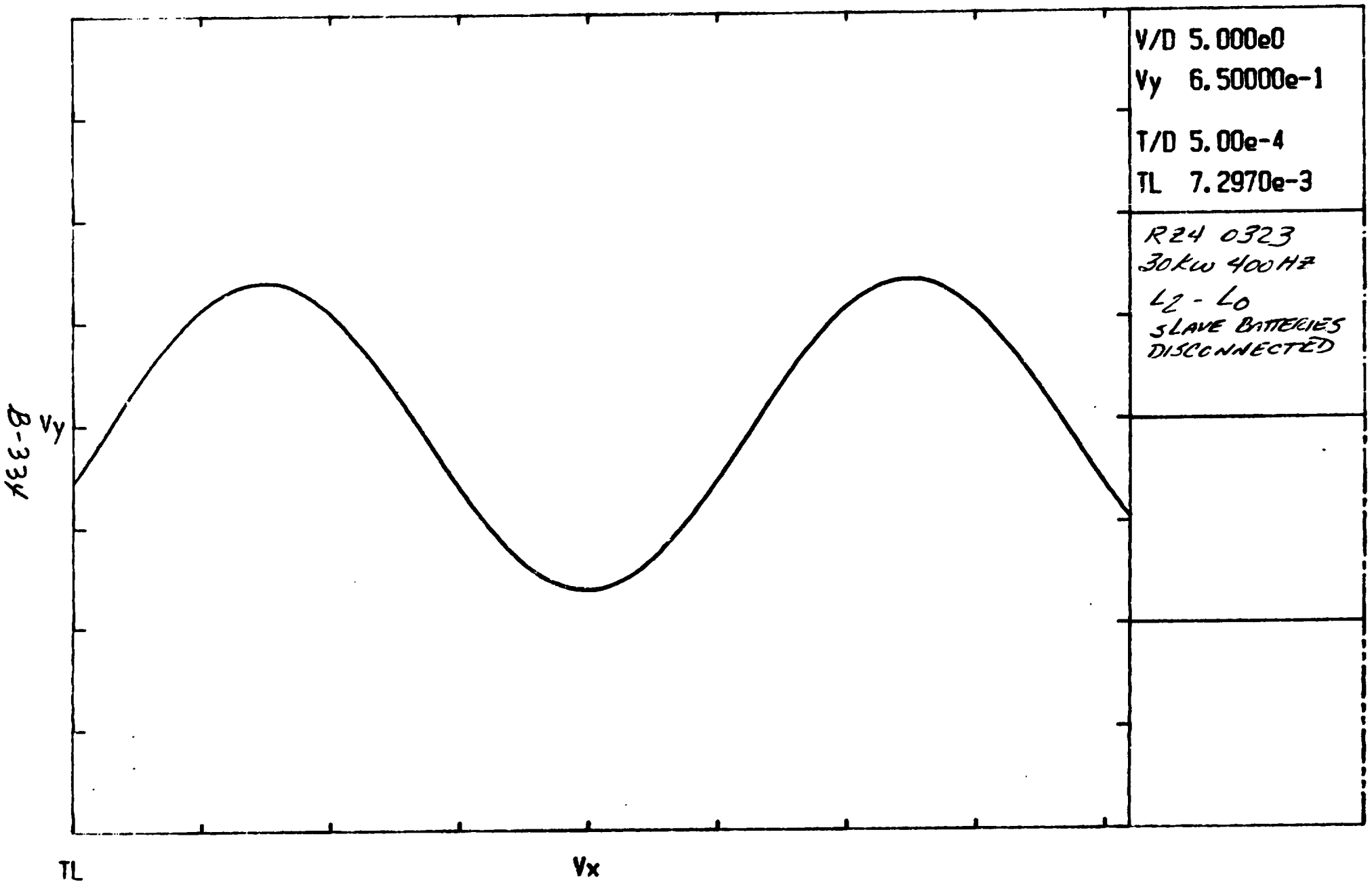
INST TIME	STEP NO.	LOAD STEP	E60350 VOLTAGE L_1-L_0 VAC	E60350 VOLTAGE L_2-L_0 VAC	E60350 VOLTAGE L_3-L_0 VAC	E60400 AMPERES L_1-L_0 AC AMPS	E60400 AMPERES L_2-L_0 AC AMPS	E60400 AMPERES L_3-L_0 AC AMPS	E60300 KILOWATTS L_1-L_0 Kw	E60300 KILOWATTS L_2-L_0 Kw	E60300 KILOWATTS L_3-L_0 Kw	E60520 POWER FACTOR PF	E60960 FREQ. Hz	FC1850 D.C. CONTROL VOLTS VDC	FC1850 D.C. CONTROL AMPS DCA	AMB. TEMP. °F	EX/INT IN H2O
1841			STARTED UNIT USING SLAVE BATTERIES														
1842			SHUT UNIT DOWN														
1842			ATTEMPTED TO REVERSE POLARITY OF BATTERY CABLES - COULD NOT CONNECT - EXCESSIVE SPARKING														
1843			STARTED UNIT ON SLAVE BATTERIES (NORMAL POLARITY)														
1844			APPLIED RATED LOAD														
1845		R/L	120	121	120.5	2.62	2.63	2.64	.25	.252	.252	.80	400.7	27.16	2.92	125	43/17
1853			REMOVED SLAVE CABLES - SET CONTINUED TO RUN														
		N/L												27.9	3.64		
		R/L												28.1	2.96		
		N/L												28.0	2.68		
		R/L												28.0	2.92		
		N/L												27.9	2.68		
		R/L												28.1	2.96		
1857		R/L												28.1	2.96		
1858		R/L	120	120.5	120	2.62	2.63	2.63	.251	.252	.252	.80		28.1	2.96	124	44.5/16
2108		R/C	ATTEMPTED TO ADJUST CHARGING VOLTAGE - WOULD NOT ADJUST														
1910			END OF TEST														

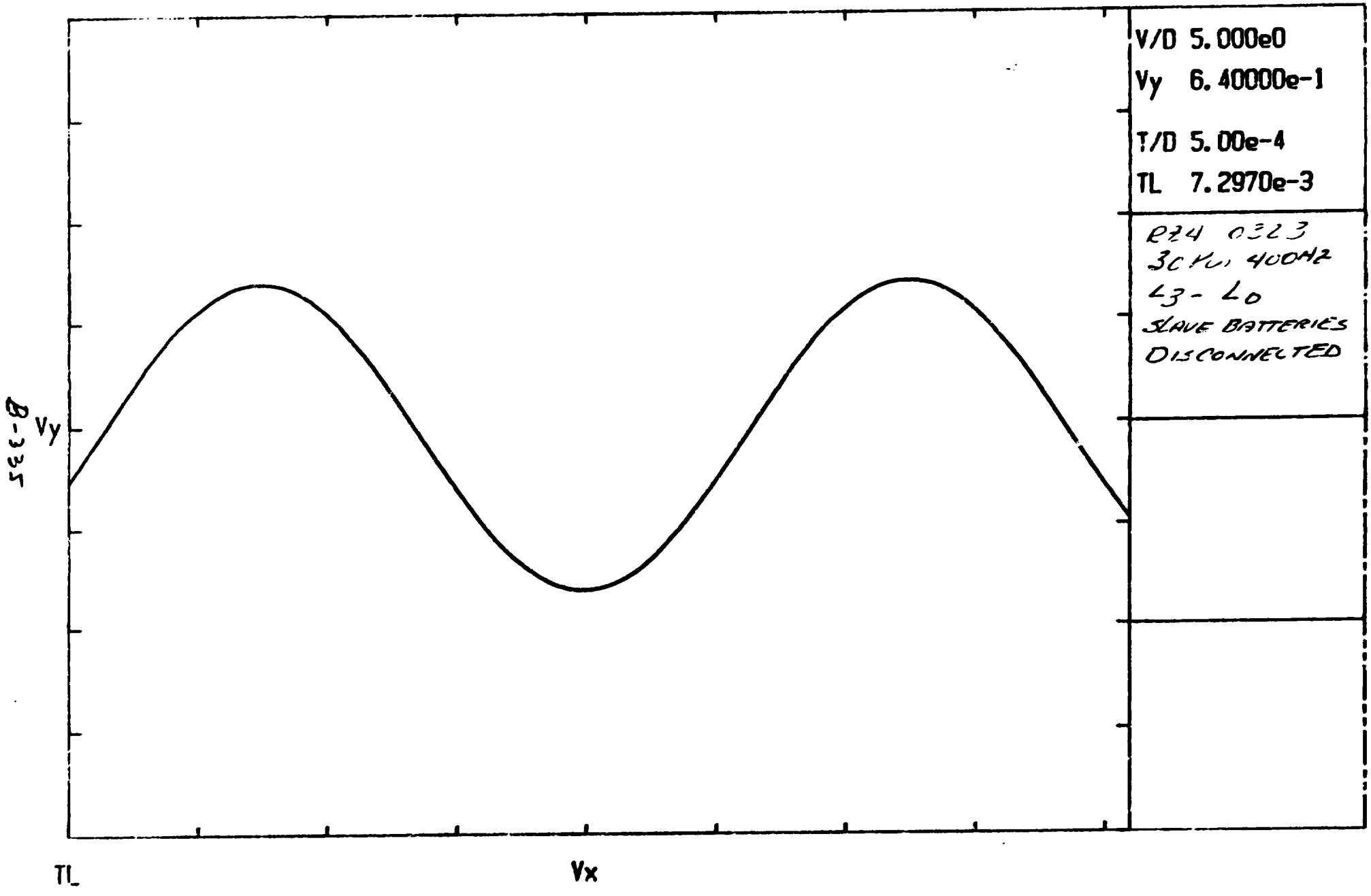
B-1337

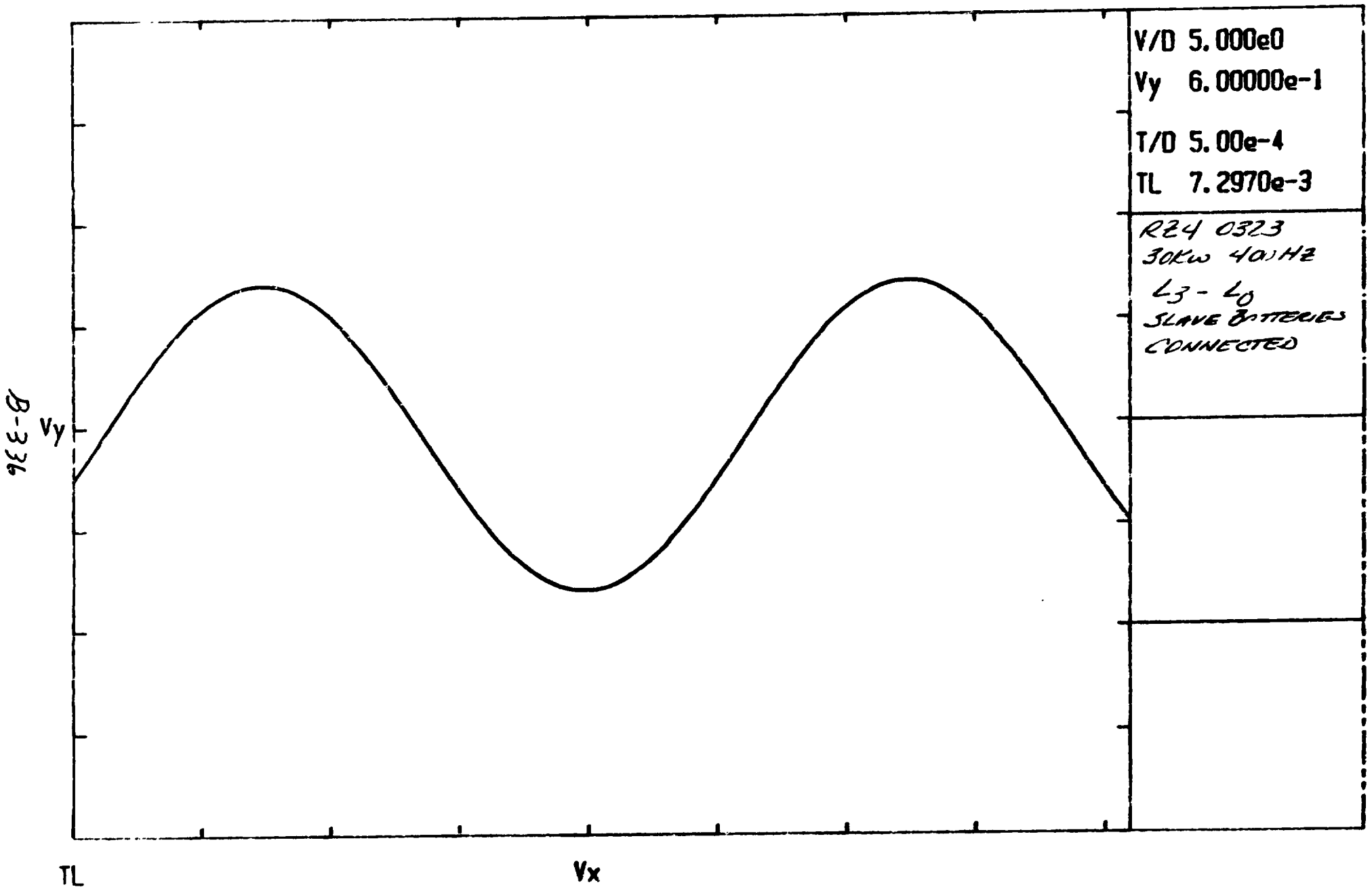
NOTES: UNIT FAILED TEST CHARGING VOLTAGE COULD NOT BE ADJUSTED

MAXIMUM VOLTAGE BANDWIDTH = ± .15%, MAX FREQUENCY BANDWIDTH = ± .04%. BOTH BANDWIDTHS ARE WITHIN SPEC.

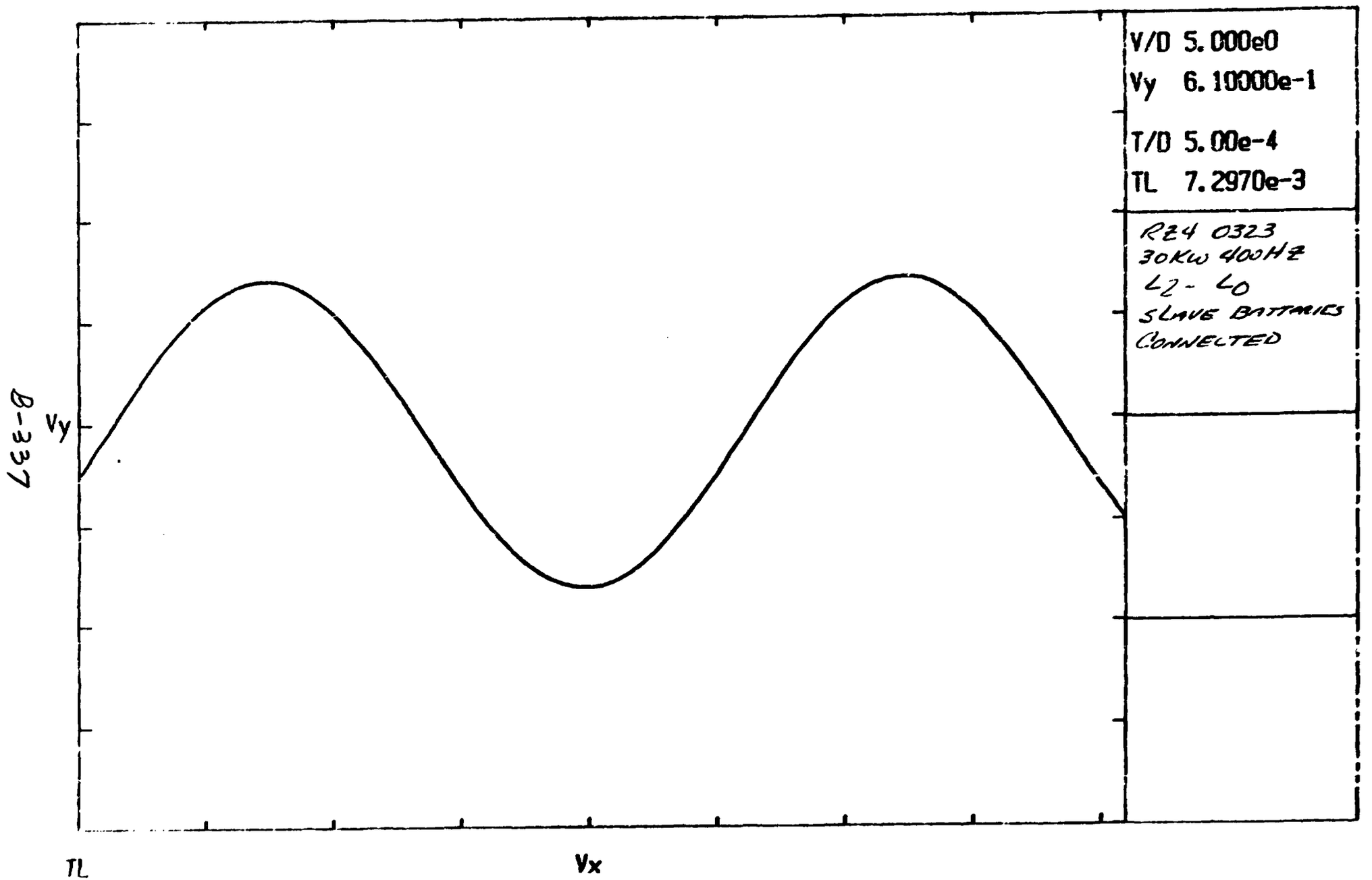

V/D 5.000e0
Vy 6.30000e-1
T/D 5.00e-4
TL 7.2970e-3
RZ4-0323
30KW 400HZ
L1 - L0
SLAVE BATTERIES
DISCONNECTED
Vy
B-333
TL
Vx

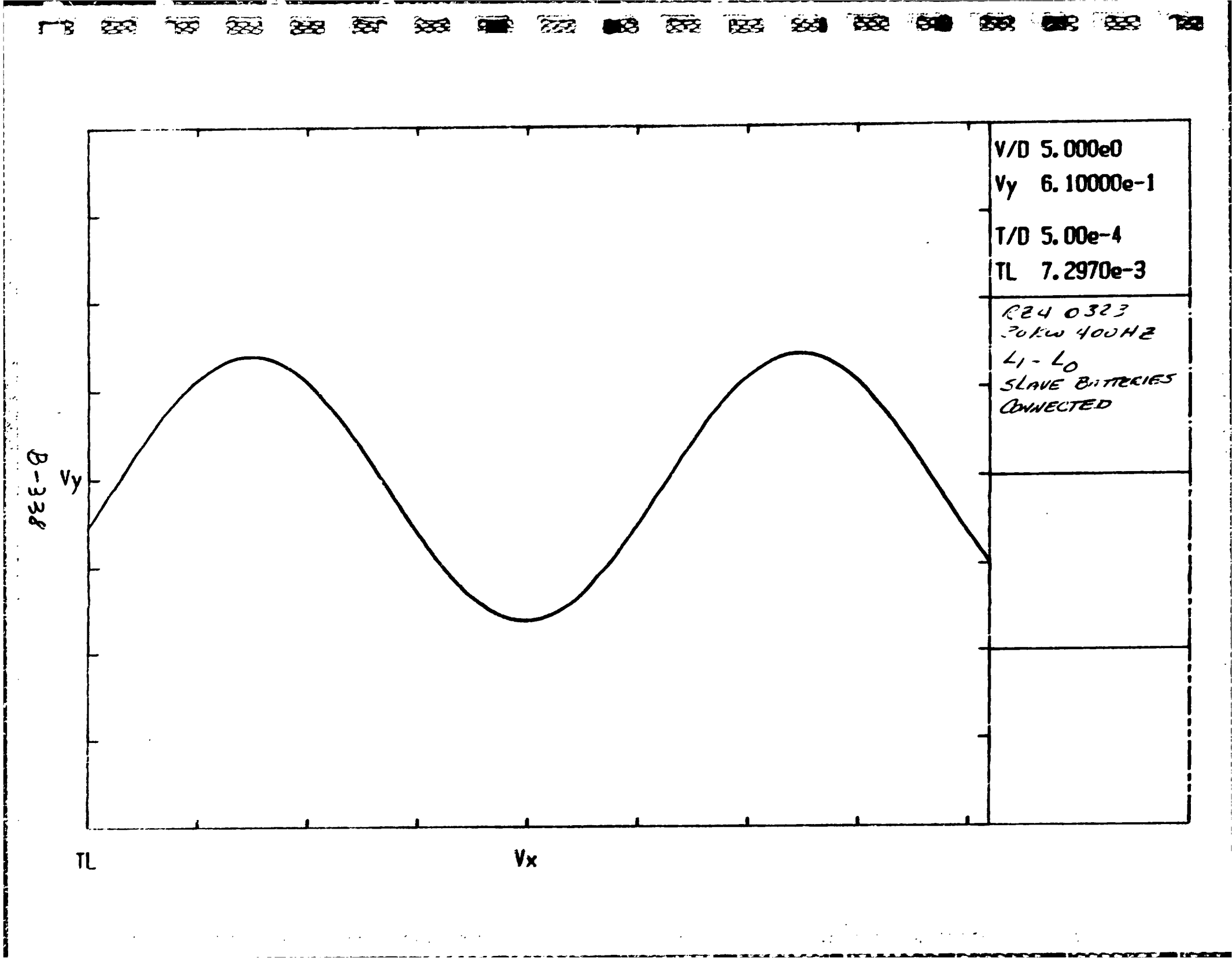

V/D 5.000e0
Vy 6.50000e-1
T/D 5.00e-4
TL 7.2970e-3
R24 0323
30kw 400Hz
L2 - L0
SLAVE BATTERIES
DISCONNECTED
B-33Y
Vy
TL
Vx


V/D 5.000e0
Vy 6.40000e-1
T/D 5.00e-4
TL 7.2970e-3
R24 0323
30 KV, 400HZ
L3 - L0
SLAVE BATTERIES
DISCONNECTED
Vy
Vx
TL


V/D 5.000e0
Vy 6.00000e-1
T/D 5.00e-4
TL 7.2970e-3
R24 0323
30Kw 401Hz
L3 - L0
SLAVE BATTERIES
CONNECTED
Vy
TL
Vx

B-336


V/D 5.000e0
Vy 6.10000e-1
T/D 5.00e-4
TL 7.2970e-3
R24 0323
30KW 400HZ
L2 - L0
SLAVE BATTERIES
CONNECTED
B-337
Vy
TL
Vx


V/D 5.000e0
Vy 6.10000e-1
T/D 5.00e-4
TL 7.2970e-3
R24 0323
30kW 400HZ
L1 - L0
SLAVE BATTERIES
CONNECTED
Vy
Vx
TL
8-338

D.C Control Method 655.1

```
BEGIN SCAN GROUP 1    18 JAN 88  18:45:00
30 KW 400 HZ GEN SET S/N RZ4 0323

C    1 EXHAUST 1          809.55 DEG. F
C    2 EXHAUST 2          846.75 DEG. F
C    3 EXHAUST 3          858.95 DEG. F
C    4 EXHAUST 4          858.75 DEG. F
C    5 EXHAUST 5          876.29 DEG. F
C    6 EXHAUST 6          817.50 DEG. F
C    7 ENG. COOL. IN      188.76 DEG. F
C    8 ENG. COOL. OUT     194.67 DEG. F
C    9 OIL SUMP           194.17 DEG. F
C   10 OIL GALLERY                OPEN TC
C   13  ENG. INTAKE       131.44 DEG. F
C   14 RAD. TOP LEFT      141.87 DEG. F
C   15 RAD. BTTM LEFT     139.88 DEG. F
C   16 RAD. TOP RIGHT     137.39 DEG. F
C   17 RAD. BTTM RIGHT    137.81 DEG. F
C   18 GEN. AIR IN        127.81 DEG. F
C   19 GEN. AIR OUT       153.49 DEG. F
C   20 GEN. FRAME TOP     146.78 DEG. F
C   21 GEN. FRAME BTTM    137.34 DEG. F
C   22 GEN. EXCITER       132.80 DEG. F
C   23 GEN. VOLT. REG.    125.79 DEG. F
C   24 CONTROL PANEL      125.48 DEG. F
C   25 RELAY AREA         117.55 DEG. F
C   26 BATTERY LEFT               OPEN TC
C   27 BATTERY RIGHT              OPEN TC
C   28 AIR IN SET         125.84 DEG. F
C   29 FUEL TANK          118.84 DEG. F
C   30 FUEL OUTLET        136.21 DEG. F

END SCAN GROUP 1      18 JAN 88  18:45:09

STOPPED SINGLE SCAN   18 JAN 88  18:45:09


BEGIN SCAN GROUP 1    18 JAN 88  18:58:23
30 KW/400 HZ GEN SET S/N RZ4 0323

C    1 EXHAUST 1          839.65 DEG. F
C    2 EXHAUST 2          879.24 DEG. F
C    3 EXHAUST 3          891.68 DEG. F
C    4 EXHAUST 4          894.86 DEG. F
C    5 EXHAUST 5          894.79 DEG. F
C    6 EXHAUST 6          829.84 DEG. F
C    7 ENG. COOL. IN      206.87 DEG. F
C    8 ENG. COOL. OUT     212.48 DEG. F
C    9 OIL SUMP           232.93 DEG. F
C   10 OIL GALLERY                OPEN TC
C   13  ENG. INTAKE       137.81 DEG. F
C   14 RAD. TOP LEFT      155.75 DEG. F
C   15 RAD. BTTM LEFT     151.36 DEG. F
C   16 RAD. TOP RIGHT     148.39 DEG. F
C   17 RAD. BTTM RIGHT    148.48 DEG. F
C   18 GEN. AIR IN        125.32 DEG. F
C   19 GEN. AIR OUT       163.81 DEG. F
C   20 GEN. FRAME TOP     150.98 DEG. F
C   21 GEN. FRAME BTTM    141.83 DEG. F
C   22 GEN. EXCITER       140.82 DEG. F
C   23 GEN. VOLT. REG.    131.81 DEG. F
C   24 CONTROL PANEL      132.83 DEG. F
C   25 RELAY AREA         120.82 DEG. F
C   26 BATTERY LEFT               OPEN TC
C   27 BATTERY RIGHT              OPEN TC
C   28 AIR IN SET         124.63 DEG. F
C   29 FUEL TANK          120.87 DEG. F
C   30 FUEL OUTLET        145.32 DEG. F

END SCAN GROUP 1      18 JAN 88  18:58:32

STOPPED SINGLE SCAN   18 JAN 88  18:58:32
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TEST DATA

ITEM 30KW/400 HZ GENERATOR SET MODIFIED
MFGR. LIBBY WELDING
MODEL NO. MEP 114A
SERIAL NO. R240323

NTS
National Technical Systems | Scientific Services Group | Testing Division P.O. Box 38 Harlwood, Virginia 22471 Tel: 703 752 5300

METHOD 609.2
VOLTAGE DIP & RISE

REF. NO. MIL-STD 705
SHEET 1 OF 1
DATE 18 JAN 1988
JOB NO. 555-2140
PROJ. ENGR.
RECORDER/OBSERVER KM/BC

INCT TIME	STEP NO.	LOAD STEP	E6023D VOLTAGE L_1-L_0 VAC	E6023D VOLTAGE L_2-L_0 VAC	E6023D VOLTAGE L_3-L_0 VAC	E6040D AMPERES KVA L_1-L_0 AC AMPS	E6040D AMPERES KVA L_2-L_0 AC AMPS	E6040D AMPERES KVA L_3-L_0 AC AMPS	E6230D KILOWATTS KVA L_1-L_0 Kw	E6230D KILOWATTS KVA L_2-L_0 Kw	E6230D KILOWATTS KVA L_3-L_0 Kw	E6250 POWER FACTOR PF	E6260D FREQ. Hz	E6270 EXCITER VOLTS VDC	E6280 FIELD AMPS DCA	AMB. TEMP. °F	PRESS IN/EXH IN	PRESS IN/EXH H2O
1453			START	UNIT	@ RATED	LOAD		START	STABILIZED									
1500		R/L	119.5	120	119.5	2.61	2.61	2.61	2.49	2.51	2.51	.80	400.7	16.6	5.9	125	16.9	123
1510		R/L	119.5	120	119.5	2.61	2.61	2.61	2.49	2.51	2.51	.80	400.9	17.0	5.95	123	16.8	122.7
1520		R/L	119.5	120	119.5	2.61	2.61	2.61	2.49	2.51	2.51	.80	400.9	17.0	5.95	125	16.9	122.8
1530		R/L	119.5	120	119.5	2.61	2.61	2.61	2.49	2.51	2.51	.80	400.9	17.1	6.0	125	17.0	123.0
1531		R/L	119.5	120	119.5	2.61	2.61	2.61	2.49	2.51	2.51	.80	400.9	17.1	6.0	125	16.8	122.7
1532		N/L	122	122	122								400.9	12.0	4.2	125	17.1	33.7
1533		R/L	119.5	120	119.5	2.61	2.61	2.61	2.49	2.51	2.51	.80	400.9	17.0	6.0	125	17.3	41.4
1535		N/L	122	122	122								400.9	11.8	4.2	124	17.4	33.6
1536		R/L	119.5	120	119.5	2.61	2.61	2.61	2.49	2.51	2.51	.80	401	16.8	5.95	125	17.3	41.5
1537		N/L	122	122	122								400.9	11.8	4.15	124	17.3	33.5
1539		R/L	119.5	120	119.5	2.61	2.61	2.61	2.49	2.51	2.51	.80	400.9	16.6	5.9	123	17.3	40.8
1543			END	OF	TEST													
1544			SHUT	UNIT	DOWN													

B-1340

NOTES: DATA ON OSCILLOGRAPH NOT REDUCED DUE TO UNOBTAINABLE VOLTAGE CHANGES
OSCILLOGRAPH CHARTS ~~AVAILAB~~ AVAILABLE UPON REQUEST

VOLTAGE DIP & RISE METHOD 619.2

BEGIN SCAN GROUP 1 18 JAN 88 15:00:11
30 KW/400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	831.49	DEG. F
C	2	EXHAUST 2	870.78	DEG. F
C	3	EXHAUST 3	893.71	DEG. F
C	4	EXHAUST 4	887.28	DEG. F
C	5	EXHAUST 5	891.29	DEG. F
C	6	EXHAUST 6	834.14	DEG. F
C	7	ENG. COOL. IN	200.62	DEG. F
C	8	ENG. COOL. OUT	208.85	DEG. F
C	9	OIL SUMP	214.58	DEG. F
C	10	OIL GALLERY		OPEN TC
C	13	ENG. INTAKE	131.86	DEG. F
C	14	RAD. TOP LEFT	149.14	DEG. F
C	15	RAD. BTTM LEFT	147.16	DEG. F
C	16	RAD. TOP RIGHT	149.21	DEG. F
C	17	RAD. BTTM RIGHT	149.19	DEG. F
C	18	GEN. AIR IN	124.81	DEG. F
C	19	GEN. AIR OUT	160.66	DEG. F
C	20	GEN. FRAME TOP	130.41	DEG. F
C	21	GEN. FRAME BTTM	137.72	DEG. F
C	22	GEN. EXCITER	136.58	DEG. F
C	23	GEN. VOLT. REG.	133.22	DEG. F
C	24	CONTROL PANEL	133.80	DEG. F
C	25	RELAY AREA	118.53	DEG. F
C	26	BATTERY LEFT	131.31	DEG. F
C	27	BATTERY RIGHT	130.65	DEG. F
C	28	AIR IN SET	125.24	DEG. F
C	29	FUEL TANK	114.89	DEG. F
C	30	FUEL OUTLET	143.47	DEG. F

END SCAN GROUP 1 18 JAN 88 15:00:20

STOPPED SINGLE SCAN 18 JAN 88 15:00:20

BEGIN SCAN GROUP 1 18 JAN 88 15:10:49
30 KW/400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	828.34	DEG. F
C	2	EXHAUST 2	872.49	DEG. F
C	3	EXHAUST 3	894.21	DEG. F
C	4	EXHAUST 4	884.87	DEG. F
C	5	EXHAUST 5	889.70	DEG. F
C	6	EXHAUST 6	815.00	DEG. F
C	7	ENG. COOL. IN	206.48	DEG. F
C	8	ENG. COOL. OUT	216.15	DEG. F
C	9	OIL SUMP	237.98	DEG. F
C	10	OIL GALLERY		OPEN TC
C	13	ENG. INTAKE	137.07	DEG. F
C	14	RAD. TOP LEFT	153.19	DEG. F
C	15	RAD. BTTM LEFT	151.51	DEG. F
C	16	RAD. TOP RIGHT	151.67	DEG. F
C	17	RAD. BTTM RIGHT	153.29	DEG. F
C	18	GEN. AIR IN	122.63	DEG. F
C	19	GEN. AIR OUT	165.25	DEG. F
C	20	GEN. FRAME TOP	131.35	DEG. F
C	21	GEN. FRAME BTTM	140.82	DEG. F
C	22	GEN. EXCITER	138.49	DEG. F
C	23	GEN. VOLT. REG.	134.28	DEG. F
C	24	CONTROL PANEL	135.10	DEG. F
C	25	RELAY AREA	119.56	DEG. F
C	26	BATTERY LEFT	137.47	DEG. F
C	27	BATTERY RIGHT	135.49	DEG. F
C	28	AIR IN SET	123.75	DEG. F
C	29	FUEL TANK	114.98	DEG. F
C	30	FUEL OUTLET	146.13	DEG. F

END SCAN GROUP 1 18 JAN 88 15:10:59

STOPPED SINGLE SCAN 18 JAN 88 15:10:59

BEGIN SCAN GROUP 1 18 JAN 88 15:20:02
30 KW/400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	831.39	DEG. F
C	2	EXHAUST 2	882.98	DEG. F
C	3	EXHAUST 3	895.77	DEG. F
C	4	EXHAUST 4	887.17	DEG. F
C	5	EXHAUST 5	891.51	DEG. F
C	6	EXHAUST 6	813.62	DEG. F
C	7	ENG. COOL. IN	209.28	DEG. F
C	8	ENG. COOL. OUT	218.79	DEG. F
C	9	OIL SUMP	245.82	DEG. F
C	10	OIL GALLERY		OPEN TC
C	13	ENG. INTAKE	136.27	DEG. F
C	14	RAD. TOP LEFT	155.84	DEG. F
C	15	RAD. BTTM LEFT	153.47	DEG. F
C	16	RAD. TOP RIGHT	155.32	DEG. F
C	17	RAD. BTTM RIGHT	155.21	DEG. F
C	18	GEN. AIR IN	123.32	DEG. F
C	19	GEN. AIR OUT	167.52	DEG. F
C	20	GEN. FRAME TOP	135.61	DEG. F
C	21	GEN. FRAME BTTM	142.31	DEG. F
C	22	GEN. EXCITER	139.33	DEG. F
C	23	GEN. VOLT. REG.	135.68	DEG. F
C	24	CONTROL PANEL	136.80	DEG. F
C	25	RELAY AREA	120.51	DEG. F
C	26	BATTERY LEFT	139.93	DEG. F
C	27	BATTERY RIGHT	138.53	DEG. F
C	28	AIR IN SET	125.73	DEG. F
C	29	FUEL TANK	114.75	DEG. F
C	30	FUEL OUTLET	146.93	DEG. F

END SCAN GROUP 1 18 JAN 88 15:20:12

STOPPED SINGLE SCAN 18 JAN 88 15:20:12

BEGIN SCAN GROUP 1 18 JAN 88 15:30:06
30 KW/400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	838.15	DEG. F
C	2	EXHAUST 2	877.75	DEG. F
C	3	EXHAUST 3	897.71	DEG. F
C	4	EXHAUST 4	885.73	DEG. F
C	5	EXHAUST 5	886.96	DEG. F
C	6	EXHAUST 6	812.57	DEG. F
C	7	ENG. COOL. IN	210.77	DEG. F
C	8	ENG. COOL. OUT	219.47	DEG. F
C	9	OIL SUMP	247.75	DEG. F
C	10	OIL GALLERY		OPEN TC
C	13	ENG. INTAKE	136.47	DEG. F
C	14	RAD. TOP LEFT	155.34	DEG. F
C	15	RAD. BTTM LEFT	152.87	DEG. F
C	16	RAD. TOP RIGHT	155.36	DEG. F
C	17	RAD. BTTM RIGHT	156.12	DEG. F
C	18	GEN. AIR IN	123.35	DEG. F
C	19	GEN. AIR OUT	169.96	DEG. F
C	20	GEN. FRAME TOP	133.88	DEG. F
C	21	GEN. FRAME BTTM	140.90	DEG. F
C	22	GEN. EXCITER	139.50	DEG. F
C	23	GEN. VOLT. REG.	136.57	DEG. F
C	24	CONTROL PANEL	137.29	DEG. F
C	25	RELAY AREA	121.24	DEG. F
C	26	BATTERY LEFT	140.59	DEG. F
C	27	BATTERY RIGHT	138.88	DEG. F
C	28	AIR IN SET	125.94	DEG. F
C	29	FUEL TANK	117.28	DEG. F
C	30	FUEL OUTLET	148.84	DEG. F

END SCAN GROUP 1 18 JAN 88 15:30:16

STOPPED SINGLE SCAN 18 JAN 88 15:30:16

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BEGIN SCAN GROUP 1   18 JAN 88  15:31:18
30 KW/400 HZ GEN SET S/N RZ4 0323

C    1 EXHAUST 1          831.58 DEG.  F
C    2 EXHAUST 2          882.60 DEG.  F
C    3 EXHAUST 3          893.59 DEG.  F
C    4 EXHAUST 4          885.78 DEG.  F
C    5 EXHAUST 5          891.86 DEG.  F
C    6 EXHAUST 6          811.76 DEG.  F
C    7 ENG. COOL. IN      210.51 DEG.  F
C    8 ENG  COOL. OUT     219.83 DEG.  F
C    9 OIL SUMP           249.94 DEG.  F
C   10 OIL GALLERY                OPEN TC
C   13  ENG. INTAKE       137.51 DEG.  F
C   14 RAD. TOP LEFT      154.84 DEG.  F
C   15 RAD. BTTM LEFT     153.18 DEG.  F
C   16 RAD. TOP RIGHT     154.44 DEG.  F
C   17 RAD. BTTM RIGHT    156.26 DEG.  F
C   18 GEN. AIR IN        123.72 DEG.  F
C   19 GEN. AIR OUT       169.88 DEG.  F
C   20 GEN. FRAME TOP     136.69 DEG.  F
C   21 GEN. FRAME BTTM    141.68 DEG.  F
C   22 GEN. EXCITER       138.69 DEG.  F
C   23 GEN. VOLT. REG.    136.84 DEG.  F
C   24 CONTROL PANEL      137.88 DEG.  F
C   25 RELAY AREA         121.17 DEG.  F
C   26 BATTERY LEFT       141.85 DEG.  F
C   27 BATTERY RIGHT      140.16 DEG.  F
C   28 AIR IN SET         125.88 DEG.  F
C   29 FUEL TANK          115.39 DEG.  F
C   30 FUEL OUTLET        148.99 DEG.  F

END SCAN GROUP 1     18 JAN 88  15:31:28

STOPPED SINGLE SCAN  18 JAN 88  15:31:28
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BEGIN SCAN GROUP 1   18 JAN 88  15:33:28
30 KW/400 HZ GEN SET S/N RZ4 0323

C    1 EXHAUST 1          595.94 DEG.  F
C    2 EXHAUST 2          666.10 DEG.  F
C    3 EXHAUST 3          673.72 DEG.  F
C    4 EXHAUST 4          672.27 DEG.  F
C    5 EXHAUST 5          681.99 DEG.  F
C    6 EXHAUST 6          598.70 DEG.  F
C    7 ENG. COOL. IN      206.81 DEG.  F
C    8 ENG. COOL. OUT     212.69 DEG.  F
C    9 OIL SUMP           248.33 DEG.  F
C   10 OIL GALLERY                OPEN TC
C   13  ENG. INTAKE       136.73 DEG.  F
C   14 RAD. TOP LEFT      153.31 DEG.  F
C   15 RAD. BTTM LEFT     151.34 DEG.  F
C   16 RAD. TOP RIGHT     153.95 DEG.  F
C   17 RAD. BTTM RIGHT    154.92 DEG.  F
C   18 GEN. AIR IN        123.87 DEG.  F
C   19 GEN. AIR OUT       169.27 DEG.  F
C   20 GEN. FRAME TOP     135.16 DEG.  F
C   21 GEN. FRAME BTTM    140.18 DEG.  F
C   22 GEN. EXCITER       139.53 DEG.  F
C   23 GEN. VOLT. REG.    136.92 DEG.  F
C   24 CONTROL PANEL      137.41 DEG.  F
C   25 RELAY AREA         121.81 DEG.  F
C   26 BATTERY LEFT       140.56 DEG.  F
C   27 BATTERY RIGHT      139.38 DEG.  F
C   28 AIR IN SET         125.74 DEG.  F
C   29 FUEL TANK          117.86 DEG.  F
C   30 FUEL OUTLET        149.30 DEG.  F

END SCAN GROUP 1     18 JAN 88  15:33:37

STOPPED SINGLE SCAN  18 JAN 88  15:33:37
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BEGIN SCAN GROUP 1   18 JAN 88  15:32:48
30 KW/400 HZ GEN SET S/N RZ4 0323

C    1 EXHAUST 1          523.93 DEG.  F
C    2 EXHAUST 2          563.59 DEG.  F
C    3 EXHAUST 3          563.31 DEG.  F
C    4 EXHAUST 4          571.82 DEG.  F
C    5 EXHAUST 5          585.12 DEG.  F
C    6 EXHAUST 6          523.35 DEG.  F
C    7 ENG. COOL. IN      209.82 DEG.  F
C    8 ENG. COOL. OUT     217.24 DEG.  F
C    9 OIL SUMP           249.17 DEG.  F
C   10 OIL GALLERY                OPEN TC
C   13  ENG. INTAKE       136.29 DEG.  F
C   14 RAD. TOP LEFT      154.80 DEG.  F
C   15 RAD. BTTM LEFT     152.35 DEG.  F
C   16 RAD. TOP RIGHT     154.59 DEG.  F
C   17 RAD. BTTM RIGHT    155.87 DEG.  F
C   18 GEN. AIR IN        123.14 DEG.  F
C   19 GEN. AIR OUT       168.52 DEG.  F
C   20 GEN. FRAME TOP     134.78 DEG.  F
C   21 GEN. FRAME BTTM    141.67 DEG.  F
C   22 GEN. EXCITER       139.68 DEG.  F
C   23 GEN. VOLT. REG.    136.56 DEG.  F
C   24 CONTROL PANEL      137.58 DEG.  F
C   25 RELAY AREA         121.86 DEG.  F
C   26 BATTERY LEFT       141.28 DEG.  F
C   27 BATTERY RIGHT      139.68 DEG.  F
C   28 AIR IN SET         125.71 DEG.  F
C   29 FUEL TANK          116.86 DEG.  F
C   30 FUEL OUTLET        148.81 DEG.  F

END SCAN GROUP 1     18 JAN 88  15:32:58

STOPPED SINGLE SCAN  18 JAN 88  15:32:58
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BEGIN SCAN GROUP 1   18 JAN 88  15:35:13
30 KW/400 HZ GEN SET S/N RZ4 0323

C    1 EXHAUST 1          735.36 DEG.  F
C    2 EXHAUST 2          767.87 DEG.  F
C    3 EXHAUST 3          785.38 DEG.  F
C    4 EXHAUST 4          775.59 DEG.  F
C    5 EXHAUST 5          785.15 DEG.  F
C    6 EXHAUST 6          712.91 DEG.  F
C    7 ENG. COOL. IN      206.37 DEG.  F
C    8 ENG. COOL. OUT     214.19 DEG.  F
C    9 OIL SUMP           247.85 DEG.  F
C   10 OIL GALLERY                OPEN TC
C   13  ENG. INTAKE       135.58 DEG.  F
C   14 RAD. TOP LEFT      153.15 DEG.  F
C   15 RAD. BTTM LEFT     151.81 DEG.  F
C   16 RAD. TOP RIGHT     153.44 DEG.  F
C   17 RAD. BTTM RIGHT    154.74 DEG.  F
C   18 GEN. AIR IN        122.76 DEG.  F
C   19 GEN. AIR OUT       168.25 DEG.  F
C   20 GEN. FRAME TOP     134.86 DEG.  F
C   21 GEN. FRAME BTTM    141.66 DEG.  F
C   22 GEN. EXCITER       139.16 DEG.  F
C   23 GEN. VOLT. REG.    136.67 DEG.  F
C   24 CONTROL PANEL      137.45 DEG.  F
C   25 RELAY AREA         121.83 DEG.  F
C   26 BATTERY LEFT       141.13 DEG.  F
C   27 BATTERY RIGHT      139.71 DEG.  F
C   28 AIR IN SET         124.78 DEG.  F
C   29 FUEL TANK          117.14 DEG.  F
C   30 FUEL OUTLET        149.33 DEG.  F

END SCAN GROUP 1     18 JAN 88  15:35:22

STOPPED SINGLE SCAN  18 JAN 88  15:35:23
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BEGIN SCAN GROUP 1   18 JAN 88  15:36:23
30 KW 400 HZ GEN SET S/N RZ4 0323

C    1 EXHAUST 1          530.65 DEG. F
C    2 EXHAUST 2          605.73 DEG. F
C    3 EXHAUST 3          596.92 DEG. F
C    4 EXHAUST 4          602.31 DEG. F
C    5 EXHAUST 5          618.69 DEG. F
C    6 EXHAUST 6          529.21 DEG. F
C    7 ENG. COOL. IN      201.84 DEG. F
C    8 ENG. COOL. OUT     207.77 DEG. F
C    9 OIL SUMP           247.67 DEG. F
C   10 OIL GALLERY                OPEN TC
C   13  ENG. INTAKE       135.90 DEG. F
C   14 RAD. TOP LEFT      151.19 DEG. F
C   15 RAD. BTTM LEFT     149.17 DEG. F
C   16 RAD. TOP RIGHT     152.19 DEG. F
C   17 RAD. BTTM RIGHT    153.31 DEG. F
C   18 GEN. AIR IN        122.94 DEG. F
C   19 GEN. AIR OUT       168.49 DEG. F
C   20 GEN. FRAME TOP     136.13 DEG. F
C   21 GEN. FRAME BTTM    140.25 DEG. F
C   22 GEN. EXCITER       138.35 DEG. F
C   23 GEN. VOLT. REG.    136.95 DEG. F
C   24 CONTROL PANEL      137.77 DEG. F
C   25 RELAY AREA         120.90 DEG. F
C   26 BATTERY LEFT       140.66 DEG. F
C   27 BATTERY RIGHT      140.86 DEG. F
C   28 AIR IN SET         125.28 DEG. F
C   29 FUEL TANK          116.12 DEG. F
C   30 FUEL OUTLET        148.78 DEG. F

END SCAN GROUP 1     18 JAN 88  15:36:32

STOPPED SINGLE SCAN  18 JAN 88  15:36:32
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BEGIN SCAN GROUP 1   18 JAN 88  15:37:39
30 KW 400 HZ GEN SET S/N RZ4 0323

C    1 EXHAUST 1          728.87 DEG. F
C    2 EXHAUST 2          762.59 DEG. F
C    3 EXHAUST 3          771.91 DEG. F
C    4 EXHAUST 4          763.46 DEG. F
C    5 EXHAUST 5          776.38 DEG. F
C    6 EXHAUST 6          787.61 DEG. F
C    7 ENG. COOL. IN      202.26 DEG. F
C    8 ENG. COOL. OUT     209.78 DEG. F
C    9 OIL SUMP           246.36 DEG. F
C   10 OIL GALLERY                OPEN TC
C   13  ENG. INTAKE       134.55 DEG. F
C   14 RAD. TOP LEFT      151.39 DEG. F
C   15 RAD. BTTM LEFT     149.15 DEG. F
C   16 RAD. TOP RIGHT     152.83 DEG. F
C   17 RAD. BTTM RIGHT    153.31 DEG. F
C   18 GEN. AIR IN        122.65 DEG. F
C   19 GEN. AIR OUT       167.54 DEG. F
C   20 GEN. FRAME TOP     133.46 DEG. F
C   21 GEN. FRAME BTTM    140.96 DEG. F
C   22 GEN. EXCITER       138.75 DEG. F
C   23 GEN. VOLT. REG.    136.46 DEG. F
C   24 CONTROL PANEL      137.37 DEG. F
C   25 RELAY AREA         120.86 DEG. F
C   26 BATTERY LEFT       141.84 DEG. F
C   27 BATTERY RIGHT      139.42 DEG. F
C   28 AIR IN SET         124.12 DEG. F
C   29 FUEL TANK          117.45 DEG. F
C   30 FUEL OUTLET        150.27 DEG. F

END SCAN GROUP 1     18 JAN 88  15:37:49

STOPPED SINGLE SCAN  18 JAN 88  15:37:49
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```
BEGIN SCAN GROUP 1   18 JAN 88  15:39:21
30 KW 400 HZ GEN SET S/N RZ4 0323

C    1 EXHAUST 1          541.42 DEG. F
C    2 EXHAUST 2          608.63 DEG. F
C    3 EXHAUST 3          609.66 DEG. F
C    4 EXHAUST 4          605.48 DEG. F
C    5 EXHAUST 5          616.90 DEG. F
C    6 EXHAUST 6          535.97 DEG. F
C    7 ENG. COOL. IN      193.94 DEG. F
C    8 ENG. COOL. OUT     201.32 DEG. F
C    9 OIL SUMP           244.85 DEG. F
C   10 OIL GALLERY                OPEN TC
C   13  ENG. INTAKE       132.84 DEG. F
C   14 RAD. TOP LEFT      149.38 DEG. F
C   15 RAD. BTTM LEFT     147.16 DEG. F
C   16 RAD. TOP RIGHT     150.47 DEG. F
C   17 RAD. BTTM RIGHT    152.84 DEG. F
C   18 GEN. AIR IN        122.61 DEG. F
C   19 GEN. AIR OUT       164.79 DEG. F
C   20 GEN. FRAME TOP     138.91 DEG. F
C   21 GEN. FRAME BTTM    141.54 DEG. F
C   22 GEN. EXCITER       139.23 DEG. F
C   23 GEN. VOLT. REG.    136.87 DEG. F
C   24 CONTROL PANEL      137.18 DEG. F
C   25 RELAY AREA         120.66 DEG. F
C   26 BATTERY LEFT       141.25 DEG. F
C   27 BATTERY RIGHT      138.75 DEG. F
C   28 AIR IN SET         123.75 DEG. F
C   29 FUEL TANK          118.78 DEG. F
C   30 FUEL OUTLET        151.87 DEG. F

END SCAN GROUP 1     18 JAN 88  15:39:30

STOPPED SINGLE SCAN  18 JAN 88  15:39:30
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TEST DATA

ITEM 30 Kw / 400 HZ
GENERATER SET
MODIFIED
MFGR. LIBBY WELDING
MODEL NO. MEP 114A
SERIAL NO. RZ4 0323

NTS
National Technical Systems | Scientific Services Group | Testing Division P.O. Box 38 Harwood, Virginia 22471 Tel: 703 752 5300

CIRCUIT INTERRUPTER
OVERVOLTAGE & UNDERVOLTAGE

REF. NO. MIL-STD 705 5123C
SHEET 1 OF 1
DATE 1-18-85
JOB NO. 555-2140
PROJ. ENGR.
RECORDER/OBSERVER BJ/KM/RS

INST TIME	STEP NO.	LOAD STEP	E6078D E6024D #1 VOLTAGE #2 L_1-L_0 VAC	L_2-L_0 VAC	L_3-L_0 VAC	AMPERES L_1-L_0 AC AMPS	L_2-L_0 AC AMPS	L_3-L_0 AC AMPS	KILOWATTS L_1-L_0 Kw	L_2-L_0 Kw	L_3-L_0 Kw	POWER FACTOR PF	E21670 FREQ. Hz	EXCITER FIELD VOLTS VDC	AMPS DCA	AMB. TEMP. °F	Press in/cm/cal in water
1707			STARTED UNIT TO CHECK OUT SET UP														
1715			120		155								401.0			125	
1720			UNIT SHUT DOWN O-V										401.0			127	
1721			120.5		166												
1723			END OF TEST														
			UNIT FAILED TO SHUT DOWN WHEN EXCESSIVE VOLTAGE WAS APPLIED														
	10		UNIT DID TRIP OUT AT 154 VOLTS WHICH IS OUT OF SPEC.														
			UNDERVOLTAGE TEST														
1746	3		STARTED UNIT TO CHECK OUT SET UP														
1750	thru		SHUT UNIT DOWN														
1751	9		RESTARTED UNIT														
1753			STARTED TEST														
1753			LIGHTS ON UNIT STILL RUNNING														
1754			120		46	"						"	401.6			124	
1754			120		46	"						"	401.0			124	
1755			120		46	LIGHT WAS ON CIRCUIT BREAKER OPENED							401.0			123	
1756			MONETARY CONTACTER UNIT DID NOT GO OUT										400.7			125	
1759			120		99												
1759			UNIT BUMPED LOAD BREAKER OPENED														
1759			"					"									
			"					"					400.7			124	
			120		99												
1800			120		73	UNIT BUMPED		"					400.7			125	
			120		73	"		"					400.8			124	
			120		73	"		"					400.7			124	
1801			END OF TEST														

NOTES: UNIT FAILED OVERVOLTAGE TEST - REQUIRED 15SU TO TRIP INTERRUPTER.
UNIT FAILED UNDERVOLTAGE TEST 8.23 SECONDS REQUIRED TO TRIP BREAKER WHEN AT 99 V AC

TEST DATA

ITEM 30 KW / 400 HZ
GENERATOR SET
MEP-114A
MFGR. LIBBY WELDING
MODEL NO. MEP 114A
SERIAL NO. RZ40323

NTS
National Technical Systems | Scientific Services Group | Testing Division P.O. Box 38 Hartwood, Virginia 22471 Tel: 703 752 5300

UNDERVOLTAGE TEST
METHOD 512.3 (COMMUTATION RESULTS)

REF. NO. MIL-STD-705
SHEET 1 OF 1
DATE 21 JAN 1988
JOB NO. 555-2140
PROJ. ENGR.
RECORDER/OBSERVER KM/RS/BJ/CC

TEST →		INITIAL VOLTS	TRIP VOLTS					TRIP TIME SEC.				
↓ UNITS SYM.												
		120	46					.085				
		120	46					.089				
		120	46					.089				
		99		MOMENTARY CLOSURE				.				
	TD	120	99					8.234				
	TD	120	99					8.074				
SN 6-8	TD	120	99					7.984				
	TD	120	73					3.921				
	TD	120	73					3.875				
	TD	120	73					3.871				

NOTES: TD - TIME DELAY

TEST DATA

ITEM 30 KW / 400 Hz
GENERATOR SET
MODIFIED
MFGR. CABBY WELDING
MODEL NO. MEP 114A
SERIAL NO. RZ4 0323

NTS
National Technical Systems | Scientific Services Group | Testing Division P.O. Box 38 Hartwood, Virginia 22471 Tel: 703 752 5300

METHOD 606.1
MAX. POWER

REF. NO. MIL-STD 705
SHEET 1 OF 1
DATE 19 JAN 1988
JOB NO. 555-2140
PROJ. ENGR.
RECORDER/OBSERVER KM/GC

TEST TIME	STEP NO.	LOAD STEP	E6023 D VOLTAGE L1-L0 VAC	L2-L0 VAC	L3-L0 VAC	E6010 AMPERES x40 L1-L0 AC AMPS	L2-L0 AC AMPS	L3-L0 AC AMPS	E6230 D KILOWATTS x40 L1-L0 Kw	L2-L0 Kw	L3-L0 Kw	E2500 POWER FACTOR PF	E6060 FREQ. Hz	E6070 EXCITER VOLTS VDC	E6080 FIELD AMPS DCA	AMB. TEMP. °F	PRESS. IN/EXH IN H2O
0855			START UNIT @ RATED LOAD					START STABILIZATION									
0900		RIL	119.5	120	120	2.61	2.61	2.62	.25	.251	.251	.80	400.5	12.9	5.15	83	27.8 / 45.7
0911			SHUT UNIT DOWN TO 1/2 RATED LOAD					MAKE LOAD BANK									
0920			RESTART UNIT @ RATED LOAD														
0920		RIL	119.5	120	120	2.61	2.69	2.62	.249	.251	.251	.80	400.6	13.6	5.45	86	27.7 / 45.3
0930		RIL	119.5	120	119.5	2.61	2.61	2.62	.249	.251	.251	.80	400.7	14.6	5.6	86	27.7 / 47.0
0940		RIL	119.5	120	119.5	2.6	2.61	2.61	.249	.251	.251	.80	400.7	14.9	5.7	90	27.7 / 47.4
0950		RIL	119.5	120	120	2.61	2.61	2.61	.249	.251	.251	.80	400.7	15.0	5.7	89	27.5 / 47.1
			END STABILIZATION			START MAX POWER											
1003		MIP	120	121	121	3.03	3.06	3.01	.368	.372	.37		400.2	12.6	4.7	91	27.2 / 53.3
1016		MIP	120	121	121	3.04	3.06	3.05	.368	.37	.37		400.5	12.6	4.75	92	27.4 / 54.2
1028		MIP	120	121	121	3.04	3.06	3.05	.368	.372	.37		401	12.6	4.75	90	27.3 / 54.0
1040			END OF TEST														

9.1.3-B

CORRECTED POWER = $44.3 \left(\frac{29.92}{29.923 - 1.173} \right) \left(\sqrt{\frac{460 + 109}{460 + 60}} \right)$

$= 44.3 \text{ KW} (1.0509)(1.0442)$

$= 48.6 \text{ KW}$

NOTES: BAROMETRIC PRESSURE - 29.923 CORRECTED POWER = 63.85 HP USING MIL HDBK 705 METHOD 220.2b
AVE MAX POWER = 44.3 KW, CORRECTED POWER = 48.6 KW OR 102% OF RATED POWER

Max Power Test Method 640.1

BEGIN SCAN GROUP 1 19 JAN 88 08:59:36
30 KW/400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	731.27 DEG. F
C	2	EXHAUST 2	761.30 DEG. F
C	3	EXHAUST 3	793.94 DEG. F
C	4	EXHAUST 4	804.82 DEG. F
C	5	EXHAUST 5	823.56 DEG. F
C	6	EXHAUST 6	767.05 DEG. F
C	7	ENG. COOL. IN	80.649 DEG. F
C	8	ENG. COOL. OUT	90.492 DEG. F
C	9	OIL SUMP	110.13 DEG. F
C	10	OIL GALLERY	112.71 DEG. F
C	13	ENG. INTAKE	83.518 DEG. F
C	14	RAD. TOP LEFT	90.035 DEG. F
C	15	RAD. BTTM LEFT	90.136 DEG. F
C	16	RAD. TOP RIGHT	88.972 DEG. F
C	17	RAD. BTTM RIGHT	88.817 DEG. F
C	18	GEN. AIR IN	79.521 DEG. F
C	19	GEN. AIR OUT	93.438 DEG. F
C	20	GEN. FRAME TOP	84.082 DEG. F
C	21	GEN. FRAME BTTM	85.081 DEG. F
C	22	GEN. EXCITER	84.873 DEG. F
C	23	GEN. VOLT. REG.	82.213 DEG. F
C	24	CONTROL PANEL	82.599 DEG. F
C	25	RELAY AREA	76.436 DEG. F
C	26	BATTERY LEFT	80.060 DEG. F
C	27	BATTERY RIGHT	79.421 DEG. F
C	28	AIR IN SET	83.059 DEG. F
C	29	FUEL TANK	81.521 DEG. F
C	30	FUEL OUTLET	83.568 DEG. F

END SCAN GROUP 1 19 JAN 88 08:59:45

STOPPED SINGLE SCAN 19 JAN 88 08:59:45

BEGIN SCAN GROUP 1 19 JAN 88 09:20:05
30 KW/400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	737.77 DEG. F
C	2	EXHAUST 2	785.54 DEG. F
C	3	EXHAUST 3	787.15 DEG. F
C	4	EXHAUST 4	781.14 DEG. F
C	5	EXHAUST 5	821.62 DEG. F
C	6	EXHAUST 6	766.46 DEG. F
C	7	ENG. COOL. IN	161.42 DEG. F
C	8	ENG. COOL. OUT	180.09 DEG. F
C	9	OIL SUMP	181.67 DEG. F
C	10	OIL GALLERY	177.93 DEG. F
C	13	ENG. INTAKE	101.31 DEG. F
C	14	RAD. TOP LEFT	110.16 DEG. F
C	15	RAD. BTTM LEFT	109.69 DEG. F
C	16	RAD. TOP RIGHT	107.35 DEG. F
C	17	RAD. BTTM RIGHT	109.17 DEG. F
C	18	GEN. AIR IN	81.681 DEG. F
C	19	GEN. AIR OUT	109.79 DEG. F
C	20	GEN. FRAME TOP	94.829 DEG. F
C	21	GEN. FRAME BTTM	97.756 DEG. F
C	22	GEN. EXCITER	93.701 DEG. F
C	23	GEN. VOLT. REG.	91.401 DEG. F
C	24	CONTROL PANEL	93.346 DEG. F
C	25	RELAY AREA	77.745 DEG. F
C	26	BATTERY LEFT	90.843 DEG. F
C	27	BATTERY RIGHT	89.908 DEG. F
C	28	AIR IN SET	86.170 DEG. F
C	29	FUEL TANK	81.214 DEG. F
C	30	FUEL OUTLET	97.397 DEG. F

END SCAN GROUP 1 19 JAN 88 09:20:14

STOPPED SINGLE SCAN 19 JAN 88 09:20:14

BEGIN SCAN GROUP 1 19 JAN 88 09:30:00
30 KW 400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	754.84 DEG. F
C	2	EXHAUST 2	791.10 DEG. F
C	3	EXHAUST 3	825.41 DEG. F
C	4	EXHAUST 4	821.42 DEG. F
C	5	EXHAUST 5	852.71 DEG. F
C	6	EXHAUST 6	791.20 DEG. F
C	7	ENG. COOL. IN	174.99 DEG. F
C	8	ENG. COOL. OUT	188.82 DEG. F
C	9	OIL SUMP	206.83 DEG. F
C	10	OIL GALLERY	206.56 DEG. F
C	13	ENG. INTAKE	97.875 DEG. F
C	14	RAD. TOP LEFT	114.67 DEG. F
C	15	RAD. BTTM LEFT	114.28 DEG. F
C	16	RAD. TOP RIGHT	112.82 DEG. F
C	17	RAD. BTTM RIGHT	114.75 DEG. F
C	18	GEN. AIR IN	84.297 DEG. F
C	19	GEN. AIR OUT	116.77 DEG. F
C	20	GEN. FRAME TOP	93.053 DEG. F
C	21	GEN. FRAME BTTM	97.643 DEG. F
C	22	GEN. EXCITER	100.28 DEG. F
C	23	GEN. VOLT. REG.	93.963 DEG. F
C	24	CONTROL PANEL	95.581 DEG. F
C	25	RELAY AREA	88.455 DEG. F
C	26	BATTERY LEFT	93.915 DEG. F
C	27	BATTERY RIGHT	93.053 DEG. F
C	28	AIR IN SET	86.157 DEG. F
C	29	FUEL TANK	83.479 DEG. F
C	30	FUEL OUTLET	104.69 DEG. F

END SCAN GROUP 1 19 JAN 88 09:30:10

STOPPED SINGLE SCAN 19 JAN 88 09:30:10

BEGIN SCAN GROUP 1 19 JAN 88 09:40:22
30 KW/400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	763.65 DEG. F
C	2	EXHAUST 2	802.91 DEG. F
C	3	EXHAUST 3	816.66 DEG. F
C	4	EXHAUST 4	827.62 DEG. F
C	5	EXHAUST 5	861.93 DEG. F
C	6	EXHAUST 6	796.12 DEG. F
C	7	ENG. COOL. IN	180.42 DEG. F
C	8	ENG. COOL. OUT	189.45 DEG. F
C	9	OIL SUMP	217.95 DEG. F
C	10	OIL GALLERY	220.41 DEG. F
C	13	ENG. INTAKE	100.53 DEG. F
C	14	RAD. TOP LEFT	117.16 DEG. F
C	15	RAD. BTTM LEFT	116.27 DEG. F
C	16	RAD. TOP RIGHT	115.14 DEG. F
C	17	RAD. BTTM RIGHT	117.95 DEG. F
C	18	GEN. AIR IN	86.256 DEG. F
C	19	GEN. AIR OUT	121.98 DEG. F
C	20	GEN. FRAME TOP	97.248 DEG. F
C	21	GEN. FRAME BTTM	101.39 DEG. F
C	22	GEN. EXCITER	102.67 DEG. F
C	23	GEN. VOLT. REG.	96.821 DEG. F
C	24	CONTROL PANEL	99.086 DEG. F
C	25	RELAY AREA	82.461 DEG. F
C	26	BATTERY LEFT	96.367 DEG. F
C	27	BATTERY RIGHT	95.459 DEG. F
C	28	AIR IN SET	90.829 DEG. F
C	29	FUEL TANK	83.329 DEG. F
C	30	FUEL OUTLET	109.70 DEG. F

END SCAN GROUP 1 19 JAN 88 09:40:31

STOPPED SINGLE SCAN 19 JAN 88 09:40:31

BEGIN SCAN GROUP 1 19 JAN 88 09:50:00
30 KW/400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	765.88	DEG. F
C	2	EXHAUST 2	807.56	DEG. F
C	3	EXHAUST 3	820.91	DEG. F
C	4	EXHAUST 4	822.08	DEG. F
C	5	EXHAUST 5	859.07	DEG. F
C	6	EXHAUST 6	794.31	DEG. F
C	7	ENG. COOL. IN	178.70	DEG. F
C	8	ENG. COOL. OUT	189.56	DEG. F
C	9	OIL SUMP	222.34	DEG. F
C	10	OIL GALLERY	224.02	DEG. F
C	13	ENG. INTAKE	183.11	DEG. F
C	14	RAD. TOP LEFT	118.81	DEG. F
C	15	RAD. BTTM LEFT	115.16	DEG. F
C	16	RAD. TOP RIGHT	115.83	DEG. F
C	17	RAD. BTTM RIGHT	118.41	DEG. F
C	18	GEN. AIR IN	86.288	DEG. F
C	19	GEN. AIR OUT	125.57	DEG. F
C	20	GEN. FRAME TOP	96.639	DEG. F
C	21	GEN. FRAME BTTM	103.22	DEG. F
C	22	GEN. EXCITER	103.94	DEG. F
C	23	GEN. VOLT. REG.	98.505	DEG. F
C	24	CONTROL PANEL	101.14	DEG. F
C	25	RELAY AREA	83.814	DEG. F
C	26	BATTERY LEFT	98.552	DEG. F
C	27	BATTERY RIGHT	96.819	DEG. F
C	28	AIR IN SET	89.288	DEG. F
C	29	FUEL TANK	85.883	DEG. F
C	30	FUEL OUTLET	111.85	DEG. F

END SCAN GROUP 1 19 JAN 88 09:50:10

STOPPED SINGLE SCAN 19 JAN 88 09:50:10

BEGIN SCAN GROUP 1 19 JAN 88 10:04:52
30 KW/400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	1034.7	DEG. F
C	2	EXHAUST 2	1093.2	DEG. F
C	3	EXHAUST 3	1055.4	DEG. F
C	4	EXHAUST 4	1077.6	DEG. F
C	5	EXHAUST 5	1092.3	DEG. F
C	6	EXHAUST 6	1087.8	DEG. F
C	7	ENG. COOL. IN	181.62	DEG. F
C	8	ENG. COOL. OUT	192.48	DEG. F
C	9	OIL SUMP	224.92	DEG. F
C	10	OIL GALLERY	227.89	DEG. F
C	13	ENG. INTAKE	185.78	DEG. F
C	14	RAD. TOP LEFT	123.87	DEG. F
C	15	RAD. BTTM LEFT	118.88	DEG. F
C	16	RAD. TOP RIGHT	118.88	DEG. F
C	17	RAD. BTTM RIGHT	121.55	DEG. F
C	18	GEN. AIR IN	89.183	DEG. F
C	19	GEN. AIR OUT	128.66	DEG. F
C	20	GEN. FRAME TOP	98.565	DEG. F
C	21	GEN. FRAME BTTM	107.62	DEG. F
C	22	GEN. EXCITER	103.48	DEG. F
C	23	GEN. VOLT. REG.	101.55	DEG. F
C	24	CONTROL PANEL	104.95	DEG. F
C	25	RELAY AREA	85.404	DEG. F
C	26	BATTERY LEFT	102.88	DEG. F
C	27	BATTERY RIGHT	100.48	DEG. F
C	28	AIR IN SET	90.672	DEG. F
C	29	FUEL TANK	84.648	DEG. F
C	30	FUEL OUTLET	114.56	DEG. F

END SCAN GROUP 1 19 JAN 88 10:05:02

STOPPED SINGLE SCAN 19 JAN 88 10:05:02

BEGIN SCAN GROUP 1 19 JAN 88 10:03:59
30 KW/400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	795.38	DEG. F
C	2	EXHAUST 2	858.31	DEG. F
C	3	EXHAUST 3	848.83	DEG. F
C	4	EXHAUST 4	854.58	DEG. F
C	5	EXHAUST 5	878.44	DEG. F
C	6	EXHAUST 6	828.69	DEG. F
C	7	ENG. COOL. IN	178.53	DEG. F
C	8	ENG. COOL. OUT	188.29	DEG. F
C	9	OIL SUMP	224.79	DEG. F
C	10	OIL GALLERY	224.17	DEG. F
C	13	ENG. INTAKE	186.83	DEG. F
C	14	RAD. TOP LEFT	121.98	DEG. F
C	15	RAD. BTTM LEFT	117.33	DEG. F
C	16	RAD. TOP RIGHT	118.68	DEG. F
C	17	RAD. BTTM RIGHT	120.55	DEG. F
C	18	GEN. AIR IN	87.348	DEG. F
C	19	GEN. AIR OUT	130.18	DEG. F
C	20	GEN. FRAME TOP	103.17	DEG. F
C	21	GEN. FRAME BTTM	105.87	DEG. F
C	22	GEN. EXCITER	104.17	DEG. F
C	23	GEN. VOLT. REG.	101.72	DEG. F
C	24	CONTROL PANEL	104.92	DEG. F
C	25	RELAY AREA	85.299	DEG. F
C	26	BATTERY LEFT	102.87	DEG. F
C	27	BATTERY RIGHT	99.714	DEG. F
C	28	AIR IN SET	91.247	DEG. F
C	29	FUEL TANK	87.834	DEG. F
C	30	FUEL OUTLET	113.89	DEG. F

END SCAN GROUP 1 19 JAN 88 10:04:09

STOPPED SINGLE SCAN 19 JAN 88 10:04:09

BEGIN SCAN GROUP 1 19 JAN 88 10:16:25
30 KW/400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	815.91	DEG. F
C	2	EXHAUST 2	867.52	DEG. F
C	3	EXHAUST 3	866.46	DEG. F
C	4	EXHAUST 4	876.21	DEG. F
C	5	EXHAUST 5	895.88	DEG. F
C	6	EXHAUST 6	838.54	DEG. F
C	7	ENG. COOL. IN	180.49	DEG. F
C	8	ENG. COOL. OUT	188.95	DEG. F
C	9	OIL SUMP	225.78	DEG. F
C	10	OIL GALLERY	227.52	DEG. F
C	13	ENG. INTAKE	187.27	DEG. F
C	14	RAD. TOP LEFT	122.65	DEG. F
C	15	RAD. BTTM LEFT	118.38	DEG. F
C	16	RAD. TOP RIGHT	119.59	DEG. F
C	17	RAD. BTTM RIGHT	121.67	DEG. F
C	18	GEN. AIR IN	88.384	DEG. F
C	19	GEN. AIR OUT	132.79	DEG. F
C	20	GEN. FRAME TOP	102.29	DEG. F
C	21	GEN. FRAME BTTM	106.43	DEG. F
C	22	GEN. EXCITER	105.59	DEG. F
C	23	GEN. VOLT. REG.	104.11	DEG. F
C	24	CONTROL PANEL	106.96	DEG. F
C	25	RELAY AREA	85.952	DEG. F
C	26	BATTERY LEFT	103.96	DEG. F
C	27	BATTERY RIGHT	102.11	DEG. F
C	28	AIR IN SET	92.961	DEG. F
C	29	FUEL TANK	85.365	DEG. F
C	30	FUEL OUTLET	115.46	DEG. F

END SCAN GROUP 1 19 JAN 88 10:16:34

STOPPED SINGLE SCAN 19 JAN 88 10:16:34

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BEGIN SCAN GROUP 1    19 JAN 88  10:16:45
30 KW/400 HZ GEN SET S/N RZ4 0323

C    1 EXHAUST 1          978.66 DEG. F
C    2 EXHAUST 2          1020.0 DEG. F
C    3 EXHAUST 3          1020.2 DEG. F
C    4 EXHAUST 4          1043.5 DEG. F
C    5 EXHAUST 5          1043.2 DEG. F
C    6 EXHAUST 6          1018.8 DEG. F
C    7 ENG. COOL. IN      181.20 DEG. F
C    8 ENG. COOL. OUT     189.94 DEG. F
C    9 OIL SUMP           223.71 DEG. F
C   10 OIL GALLERY        224.90 DEG. F
C   13  ENG. INTAKE       187.33 DEG. F
C   14 RAD. TOP LEFT      122.06 DEG. F
C   15 RAD. BTTM LEFT     118.49 DEG. F
C   16 RAD. TOP RIGHT     119.22 DEG. F
C   17 RAD. BTTM RIGHT    122.19 DEG. F
C   18 GEN. AIR IN        88.722 DEG. F
C   19 GEN. AIR OUT       130.67 DEG. F
C   20 GEN. FRAME TOP     188.44 DEG. F
C   21 GEN. FRAME BTTM    189.97 DEG. F
C   22 GEN. EXCITER       185.49 DEG. F
C   23 GEN. VOLT. REG.    183.67 DEG. F
C   24 CONTROL PANEL      187.87 DEG. F
C   25 RELAY AREA         86.318 DEG. F
C   26 BATTERY LEFT       184.47 DEG. F
C   27 BATTERY RIGHT      181.89 DEG. F
C   28 AIR IN SET         92.386 DEG. F
C   29 FUEL TANK          85.683 DEG. F
C   30 FUEL OUTLET        116.16 DEG. F

END SCAN GROUP 1      19 JAN 88  10:16:54

STOPPED SINGLE SCAN   19 JAN 88  10:16:54


BEGIN SCAN GROUP 1    19 JAN 88  10:20:32
30 KW/400 HZ GEN SET S/N RZ4 0323

C    1 EXHAUST 1          818.13 DEG. F
C    2 EXHAUST 2          852.95 DEG. F
C    3 EXHAUST 3          868.78 DEG. F
C    4 EXHAUST 4          875.75 DEG. F
C    5 EXHAUST 5          898.32 DEG. F
C    6 EXHAUST 6          824.84 DEG. F
C    7 ENG. COOL. IN      181.89 DEG. F
C    8 ENG. COOL. OUT     188.92 DEG. F
C    9 OIL SUMP           224.44 DEG. F
C   10 OIL GALLERY        228.16 DEG. F
C   13  ENG. INTAKE       185.32 DEG. F
C   14 RAD. TOP LEFT      123.28 DEG. F
C   15 RAD. BTTM LEFT     119.58 DEG. F
C   16 RAD. TOP RIGHT     119.73 DEG. F
C   17 RAD. BTTM RIGHT    122.55 DEG. F
C   18 GEN. AIR IN        88.458 DEG. F
C   19 GEN. AIR OUT       132.34 DEG. F
C   20 GEN. FRAME TOP     188.22 DEG. F
C   21 GEN. FRAME BTTM    189.23 DEG. F
C   22 GEN. EXCITER       186.59 DEG. F
C   23 GEN. VOLT. REG.    184.77 DEG. F
C   24 CONTROL PANEL      187.49 DEG. F
C   25 RELAY AREA         86.278 DEG. F
C   26 BATTERY LEFT       184.77 DEG. F
C   27 BATTERY RIGHT      181.75 DEG. F
C   28 AIR IN SET         90.978 DEG. F
C   29 FUEL TANK          88.557 DEG. F
C   30 FUEL OUTLET        116.85 DEG. F

END SCAN GROUP 1      19 JAN 88  10:20:41

STOPPED SINGLE SCAN   19 JAN 88  10:20:41
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TEST DATA

ITEM 30 KW 400 Hz GENERATOR SET MODIFIED

MFGR. LIBBY WELDING

MODEL NO. MEP 114A

SERIAL NO. RZ4 0323

NTS

National Technical Systems | Scientific Services Group | Testing Division, PO Box 38, Harlwood, Virginia 22471, tel: 703 752 5300

Frequency and Voltage

Regulation, Stability and Transient Response Test (Short Term) (PRE DROP)

REF. NO. MIL-STD 705 Para. 608.1

SHEET 1 OF 1

DATE 19 JAN 1988

JOB NO. 555-2140

PROJ. ENGR.

RECORDER/OBSERVER GC/AM

INST TIME	STEP NO.	LOAD STEP	E60230 VOLTAGE L_1-L_0 VAC	L_2-L_0 VAC	L_3-L_0 VAC	E60400 AMPERES X40 L_1-L_0 AC AMPS	L_2-L_0 AC AMPS	L_3-L_0 AC AMPS	E62300 KILOWATTS X40 L_1-L_0 Kw	L_2-L_0 Kw	L_3-L_0 Kw	E62520 POWER FACTOR PF	E60460 FREQ. Hz	E61610 EXCITER VOLTS VDC	E62500 FIELD AMPS DCA	AMB. TEMP. °F	PRESS IN WATER	PRESS OUT WATER
1040			START STABILIZATION AT RATED LOAD															
1040		R/L	119.2	120	119.5	2.6	2.61	2.61	.249	.251	.251	.80	400.7	15.1	5.7	85	13.5	39.2
1050		R/L	119	120	119.5	2.6	2.61	2.61	.249	.251	.251	.80	400.2	14.8	5.65	79	12.6	44.3
1100		R/L	119	120	119.5	2.61	2.62	2.62	.249	.251	.251	.80	400.2	14.6	5.6	83	13.0	41.2
1110		R/L	119	120	119.5	2.6	2.61	2.61	.249	.251	.251	.80	400.1	14.6	5.6	83	12.9	44.9
	1	R/L	119	119.5	119.5	2.61	2.61	2.62	.249	.251	.251	.80	400.8	14.6	5.6	79	13.1	43.1
	2	N/L	122	122	122								400.9	10.2	3.95	83	13.3	32.5
	3	R/L	119	119.5	119.5	2.61	2.61	2.61	.249	.251	.250	.80	401	14.6	5.6	79	13.0	40.6
	4	N/L	122	122	122								400.9	10.2	3.75	79	13.4	33.5
	5	R/L	119	119.5	119.5	2.61	2.61	2.61	.249	.251	.251	.80	401	14.6	5.6	80	13.1	40.3
	6	N/L	122	122	122								400.9	10.1	3.75	78	13.1	33.3
	7	R/L	119	120	119.5	2.61	2.61	2.61	.249	.251	.251	.80	401	14.4	5.6	83	13.2	35.1
	8	N/L	122	122	122								400.8	10.1	3.9	83	13.2	32.5
	9	R/L	119	120	119.5	2.61	2.61	2.61	.249	.251	.251	.80	400.8	14.3	5.6	83	13.0	39.4
	10	N/L	122	122	122								400.9	10.0	3.9	80	13.0	32.0
	11	R/L	119	120	119.5	2.61	2.61	2.61	.249	.251	.251	.80	401	14.2	5.55	83	13.2	39.2
	12	N/L	122	122	122								400.9	10.0	3.9	82	13.0	33.1
	13	R/L	119	120	119.5	2.61	2.61	2.61	.249	.251	.251	.80	400.9	14.2	5.55	82	13.2	39.2
	14	N/L	122	122	122								400.8	10.0	3.9	78	13.2	33.1
1124			END OF TEST SHUT UNIT DOWN															

B-350

NOTES: VOLTAGE RECOVERY TIME EXCEEDED 0.5 SEC VOLTAGE REGULATION EXCEEDED 1%

TEST DATA

ITEM 30 KW 400 Hz GENERATOR SET MODIFIED

MFGR. KIRBY WELDING

MODEL NO. MEP 114A

SERIAL NO. RZ 40323

NTS

National Technical Systems Scientific Services Group

Testing Division
P.O. Box 38
Hartwood, Virginia 22471
Tel: 703 752 5300

FREQUENCY AND VOLTAGE

REGULATION, STABILITY, AND TRANSIENT RESPONSE

TEST (SHORT TERM) (PRE DROP)

REF. NO. MIL STD 705

SHEET 1 OF 1

DATE 21 JAN 1988

JOB NO. 555 2140

PROJ. ENGR.

RECORDER/OBSERVER RS.

	FREQUENCY								VOLTAGE							
	MAXIMUM EXCURSION				REC.	CONSTANT LOAD BANDWIDTH		REGULATION	MAXIMUM EXCURSION				REC.	CONSTANT LOAD BANDWIDTH		
LOAD	OVERSHOOT		UNDERSHOOT		TIME			FREQ.	VOLT	OVERSHOOT		UNDERSHOOT		TIME		
STEP	HZ	%	HZ	%	SEC.	HZ	± %	%	%	VOLT	%	VOLT	%	SEC.	VOLT ±	± %
1						.35	.05								.17	.15
1 - 2	2.08	.52			.39			.025	2.08	1.56	1.30			.65		
2						.17	.04								.17	.15
2 - 3			1.39	.35	.23			.025	2.08			1.56	1.30	.31		
3						.26	.07								.17	.15
3 - 4	2.26	.56			.23			.025	2.08	1.22	1.01			.47		
4						.17	.04								.17	.15
4 - 5			1.74	.43	.31			.025	2.08			1.56	1.30	.31		
5						.17	.04								.17	.15
5 - 6	2.60	.65			.31			.025	2.08	1.22	1.16			.47		
6						.17	.04								.17	.15
6 - 7			.87	.22	.31			.025	2.08			1.56	1.30	.31		
7						.17	.04								.17	.15
7 - 8	2.08	.52			.31			.05	2.08	1.22	1.01			.47		
8						.17	.04								.17	.15
8 - 9			1.22	.30	.31			0	2.08			1.39	1.16	.35		
9						.17	.04								.17	.15
9 - 10	2.26	.56			.23			.025	2.08	.87	.22			.47		
10						.17	.04								.17	.15
10 - 11			1.56	.39	.35			.025	2.08			.78	.65	.39		
11						.17	.04								.17	.15
11 - 12	2.08	.52			.39			.025	2.08	1.56	1.30			.20		
12						.17	.04								.17	.15
12 - 13			1.56	.39	.23			0	2.08			1.39	1.16	.31		
13						.17	.04								.17	.15
13 - 14	2.08	.52			.23			.025	2.08	1.39	1.16			.55		

NOTES: VOLTAGE REGULATION EXCEEDED 1%

PRE DROP TEST 60D.1

BEGIN SCAN GROUP 1 19 JAN 88 10:40:22
30 KW/400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	750.38	DEG. F
C	2	EXHAUST 2	789.88	DEG. F
C	3	EXHAUST 3	810.20	DEG. F
C	4	EXHAUST 4	804.66	DEG. F
C	5	EXHAUST 5	822.88	DEG. F
C	6	EXHAUST 6	740.89	DEG. F
C	7	ENG. COOL. IN	176.70	DEG. F
C	8	ENG. COOL. OUT	187.42	DEG. F
C	9	OIL SUMP	225.19	DEG. F
C	10	OIL GALLERY	221.61	DEG. F
C	13	ENG. INTAKE	104.44	DEG. F
C	14	RAD. TOP LEFT	121.53	DEG. F
C	15	RAD. BTTM LEFT	116.86	DEG. F
C	16	RAD. TOP RIGHT	116.89	DEG. F
C	17	RAD. BTTM RIGHT	119.42	DEG. F
C	18	GEN. AIR IN	85.339	DEG. F
C	19	GEN. AIR OUT	131.75	DEG. F
C	20	GEN. FRAME TOP	97.538	DEG. F
C	21	GEN. FRAME BTTM	105.93	DEG. F
C	22	GEN. EXCITER	102.63	DEG. F
C	23	GEN. VOLT. REG.	105.38	DEG. F
C	24	CONTROL PANEL	107.99	DEG. F
C	25	RELAY AREA	84.138	DEG. F
C	26	BATTERY LEFT	104.51	DEG. F
C	27	BATTERY RIGHT	100.58	DEG. F
C	28	AIR IN SET	89.226	DEG. F
C	29	FUEL TANK	89.662	DEG. F
C	30	FUEL OUTLET	115.87	DEG. F

END SCAN GROUP 1 19 JAN 88 10:40:31

STOPPED SINGLE SCAN 19 JAN 88 10:40:31

BEGIN SCAN GROUP 1 19 JAN 88 11:00:58
30 KW/400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	744.51	DEG. F
C	2	EXHAUST 2	787.93	DEG. F
C	3	EXHAUST 3	793.21	DEG. F
C	4	EXHAUST 4	798.89	DEG. F
C	5	EXHAUST 5	824.58	DEG. F
C	6	EXHAUST 6	751.09	DEG. F
C	7	ENG. COOL. IN	175.33	DEG. F
C	8	ENG. COOL. OUT	185.24	DEG. F
C	9	OIL SUMP	228.77	DEG. F
C	10	OIL GALLERY	221.97	DEG. F
C	13	ENG. INTAKE	99.591	DEG. F
C	14	RAD. TOP LEFT	114.68	DEG. F
C	15	RAD. BTTM LEFT	111.21	DEG. F
C	16	RAD. TOP RIGHT	109.35	DEG. F
C	17	RAD. BTTM RIGHT	113.15	DEG. F
C	18	GEN. AIR IN	79.465	DEG. F
C	19	GEN. AIR OUT	122.57	DEG. F
C	20	GEN. FRAME TOP	92.485	DEG. F
C	21	GEN. FRAME BTTM	98.806	DEG. F
C	22	GEN. EXCITER	94.359	DEG. F
C	23	GEN. VOLT. REG.	101.12	DEG. F
C	24	CONTROL PANEL	103.39	DEG. F
C	25	RELAY AREA	78.846	DEG. F
C	26	BATTERY LEFT	97.426	DEG. F
C	27	BATTERY RIGHT	95.664	DEG. F
C	28	AIR IN SET	83.232	DEG. F
C	29	FUEL TANK	83.634	DEG. F
C	30	FUEL OUTLET	109.11	DEG. F

END SCAN GROUP 1 19 JAN 88 11:01:08

STOPPED SINGLE SCAN 19 JAN 88 11:01:08

BEGIN SCAN GROUP 1 19 JAN 88 10:50:04
30 KW/400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	748.14	DEG. F
C	2	EXHAUST 2	775.43	DEG. F
C	3	EXHAUST 3	804.36	DEG. F
C	4	EXHAUST 4	805.01	DEG. F
C	5	EXHAUST 5	820.78	DEG. F
C	6	EXHAUST 6	736.40	DEG. F
C	7	ENG. COOL. IN	174.84	DEG. F
C	8	ENG. COOL. OUT	185.13	DEG. F
C	9	OIL SUMP	222.84	DEG. F
C	10	OIL GALLERY	218.91	DEG. F
C	13	ENG. INTAKE	99.399	DEG. F
C	14	RAD. TOP LEFT	115.73	DEG. F
C	15	RAD. BTTM LEFT	111.32	DEG. F
C	16	RAD. TOP RIGHT	110.83	DEG. F
C	17	RAD. BTTM RIGHT	113.65	DEG. F
C	18	GEN. AIR IN	77.266	DEG. F
C	19	GEN. AIR OUT	125.98	DEG. F
C	20	GEN. FRAME TOP	92.653	DEG. F
C	21	GEN. FRAME BTTM	99.478	DEG. F
C	22	GEN. EXCITER	94.876	DEG. F
C	23	GEN. VOLT. REG.	104.83	DEG. F
C	24	CONTROL PANEL	107.88	DEG. F
C	25	RELAY AREA	80.329	DEG. F
C	26	BATTERY LEFT	100.36	DEG. F
C	27	BATTERY RIGHT	98.780	DEG. F
C	28	AIR IN SET	79.684	DEG. F
C	29	FUEL TANK	88.319	DEG. F
C	30	FUEL OUTLET	112.81	DEG. F

END SCAN GROUP 1 19 JAN 88 10:50:14

STOPPED SINGLE SCAN 19 JAN 88 10:50:14

BEGIN SCAN GROUP 1 19 JAN 88 11:10:00
30 KW/400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	745.62	DEG. F
C	2	EXHAUST 2	776.00	DEG. F
C	3	EXHAUST 3	809.89	DEG. F
C	4	EXHAUST 4	801.31	DEG. F
C	5	EXHAUST 5	820.95	DEG. F
C	6	EXHAUST 6	746.42	DEG. F
C	7	ENG. COOL. IN	173.60	DEG. F
C	8	ENG. COOL. OUT	185.16	DEG. F
C	9	OIL SUMP	218.58	DEG. F
C	10	OIL GALLERY	216.16	DEG. F
C	13	ENG. INTAKE	97.748	DEG. F
C	14	RAD. TOP LEFT	114.54	DEG. F
C	15	RAD. BTTM LEFT	110.85	DEG. F
C	16	RAD. TOP RIGHT	110.38	DEG. F
C	17	RAD. BTTM RIGHT	112.73	DEG. F
C	18	GEN. AIR IN	78.882	DEG. F
C	19	GEN. AIR OUT	124.54	DEG. F
C	20	GEN. FRAME TOP	91.969	DEG. F
C	21	GEN. FRAME BTTM	99.851	DEG. F
C	22	GEN. EXCITER	94.447	DEG. F
C	23	GEN. VOLT. REG.	99.877	DEG. F
C	24	CONTROL PANEL	102.38	DEG. F
C	25	RELAY AREA	78.962	DEG. F
C	26	BATTERY LEFT	97.113	DEG. F
C	27	BATTERY RIGHT	95.578	DEG. F
C	28	AIR IN SET	83.864	DEG. F
C	29	FUEL TANK	88.678	DEG. F
C	30	FUEL OUTLET	108.33	DEG. F

END SCAN GROUP 1 19 JAN 88 11:10:09

STOPPED SINGLE SCAN 19 JAN 88 11:10:09

TEST DATA

ITEM 30 Kw / 400 Hz
GENERATOR SET
MODIFIED
MFGR. LIBBY WELDING
MODEL NO. MEP 1H4
SERIAL NO. RZ4 0323

NTS
National Technical Systems | Scientific Services Group | Testing Division P.O. Box 38 Harwood, Virginia 22471 Tel: 703 752 5300

Frequency and Voltage
Regulation, Stability and Transient Response Test (Short Term) (POST DROP)

REF. NO. MIL-STD 705 Para. 608.1
SHEET 1 OF 1
DATE 19 JAN 1988
JOB NO. 555-2140
PROJ. ENGR.
RECORDER/OBSERVER KM/GC

INST TIME	STEP NO.	LOAD STEP	E6023 Δ VOLTAGE L_1-L_0 VAC	L_2-L_0 VAC	L_3-L_0 VAC	E6040 Δ AMPERES x40 L_1-L_0 AC AMPS	L_2-L_0 AC AMPS	L_3-L_0 AC AMPS	E6230 Δ KILOWATTS x40 L_1-L_0 Kw	L_2-L_0 Kw	L_3-L_0 Kw	E6230 POWER FACTOR PF	E6040 FREQ. Hz	E6040 EXCITER VOLTS VDC	E6040 FIELD AMPS DCA	AMB. TEMP. °F	PRESS IN/EX IN H2O
1427			START UNIT FOR STABILIZATION @ RATED LOAD														
1430		R/L	119.5	120	119.5	2.59	2.59	2.6	.245	.249	.25	.80	400.5	13.1	5.3	69	17.8/40.8
1440		R/L	119.5	120	119.5	2.6	2.61	2.61	.245	.25	.25	.80	400.5	13.8	5.5	70	17.8/41.3
1450		R/L	119.5	120	119.5	2.61	2.61	2.61	.245	.25	.25	.80	400.5	14.0	5.55	71	17.8/42.6
1500		R/L	119.5	120	119.5	2.61	2.61	2.61	.249	.25	.25	.80	400.4	14.1	5.55	66	17.7/43.3
	1	R/L	119.5	120	119.5	2.61	2.61	2.61	.249	.251	.25	.80	400.5	14.1	5.55	72	17.8/43.2
	2	N/L	122	122	122.1								400.5	10.0	3.9	71	18.0/55.5
	3	R/L	119.5	120	119.5	2.61	2.61	2.61	.245	.251	.251	.80	400.5	14.0	5.55	75	18.2/42.4
	4	N/L	122	122	122								400.5	9.9	3.9	80	18.1/36.0
	5	R/L	119.5	120	119.5	2.61	2.61	2.61	.249	.251	.251	.80	400.5	14.0	5.55	74	18.3/41.4
	6	N/L	122	122	122								400.4	9.9	3.9	74	18.1/35.1
	7	R/L	119.5	120	119.5	2.61	2.61	2.61	.249	.251	.25	.80	400.6	13.9	5.55	76	18.2/41.1
	8	N/L	122	122	122.1								400.4	9.8	3.9	78	18.2/35.0
	9	R/L	119.5	120	119.5	2.61	2.61	2.61	.249	.251	.251	.80	400.4	13.9	5.55	79	18.0/41.1
	10	N/L	122	122	122.1								400.6	9.9	3.9	78	18.1/34.8
	11	R/L	119.5	120	119.5	2.61	2.61	2.61	.249	.251	.25	.80	400.5	13.9	5.55	78	18.3/41.0
	12	N/L	122	122	122								400.5	9.8	3.7	76	18.3/34.5
	13	R/L	119.5	120	119.5	2.61	2.61	2.61	.249	.251	.25	.80	400.5	13.9	5.55	77	18.2/41.0
	14	N/L	122	122	122								400.5	9.8	3.9	78	18.2/34.7
1453			END OF TEST SHUT UNIT DOWN														

TES:

D-3453

TEST DATA

ITEM 30 KW 400 Hz GENERATOR SET MODIFIED
MFGR. LIBBY WELDING
MODEL NO. MEP 114A
SERIAL NO. RZ4 0323

NTS
National Technical Systems Scientific Services Group
Testing Division P.O. Box 38 Harlwood, Virginia 22471 Tel: 703 752 5300

FREQUENCY AND VOLTAGE REGULATION, STABILITY, AND TRANSIENT RESPONSE TEST (SHORT TERM) (POST DROP)

REF. NO. MIL STD 705
SHEET 1 OF 1
DATE 19 JAN 1988
JOB NO. 555-2140
PROJ. ENGR.
RECORDER/OBSERVER RS.

	FREQUENCY								VOLTAGE							
	MAXIMUM EXCURSION				REC.	CONSTANT LOAD BANDWIDTH ±		REGULATION	MAXIMUM EXCURSION				REC.	CONSTANT LOAD BANDWIDTH ±		
LOAD STEP	OVERSHOOT Hz	OVERSHOOT %	UNDERSHOOT Hz	UNDERSHOOT %	TIME SEC	Hz	%	FREQ. %	VOLT %	OVERSHOOT VOLT	OVERSHOOT %	UNDERSHOOT VOLT	UNDERSHOOT %	TIME SEC	VOLT	%
1						.17	.04								.17	.15
1 - 2	2.08	.52			.31			0	2.16	1.22	1.01			.47		
2						.17	.04								.17	.15
2 - 3			1.39	.35	.47			0	2.16			1.22	1.01	.39		
3						.17	.04								.17	.15
3 - 4	2.08	.52			.31			0	2.08	1.04	.61			.47		
4						.26	.07								.17	.15
4 - 5			1.39	.35	.31			0	2.08			1.39	1.16	.39		
5						.17	.04								.17	.15
5 - 6	2.43	.61			.28			.025	2.08	1.39	1.16			.31		
6						.17	.04								.17	.15
6 - 7			1.04	.26	.31			.05	2.08			1.39	1.16	.23		
7						.26	.07								.17	.15
7 - 8	2.26	.56			.33			.05	2.16	1.22	1.01			.39		
8						.17	.04								.17	.15
8 - 9			1.04	.26	0			0	2.16			1.22	1.01	.33		
9						.26	.07								.17	.15
9 - 10	2.60	.65			.31			.05	2.16	1.22	1.01			.39		
10						.17	.04								.17	.15
10 - 11			1.04	.26	0			.025	2.16			1.39	1.16	.23		
11						.17	.04								.17	.15
11 - 12	2.43	.61			.23			0	2.08	1.39	1.16			.31		
12						.17	.04								.17	.15
12 - 13			1.22	.30	0			0	2.08			1.39	1.16	.31		
13						.26	.07								.15	.15
13 - 14	2.28	.69			.39			0	2.08	1.39	1.16			.39		

NOTES: VOLTAGE REGULATION EXCEEDED 1%

ADST Dlop TEST 608.1

BEGIN SCAN GROUP 1 19 JAN 88 14:30:01
30 KW/400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	727.99	DEG. F
C	2	EXHAUST 2	758.97	DEG. F
C	3	EXHAUST 3	778.44	DEG. F
C	4	EXHAUST 4	797.44	DEG. F
C	5	EXHAUST 5	799.43	DEG. F
C	6	EXHAUST 6	725.57	DEG. F
C	7	ENG. COOL. IN	89.239	DEG. F
C	8	ENG. COOL. OUT	174.25	DEG. F
C	9	OIL SUMP	145.15	DEG. F
C	10	OIL GALLERY		OPEN TC
C	13	ENG. INTAKE	88.299	DEG. F
C	14	RAD. TOP LEFT	87.858	DEG. F
C	15	RAD. BTTM LEFT	88.598	DEG. F
C	16	RAD. TOP RIGHT	86.125	DEG. F
C	17	RAD. BTTM RIGHT	86.637	DEG. F
C	18	GEN. AIR IN	69.019	DEG. F
C	19	GEN. AIR OUT	95.755	DEG. F
C	20	GEN. FRAME TOP	75.101	DEG. F
C	21	GEN. FRAME BTTM	76.196	DEG. F
C	22	GEN. EXCITER	74.051	DEG. F
C	23	GEN. VOLT. REG.	73.694	DEG. F
C	24	CONTROL PANEL	73.537	DEG. F
C	25	RELAY AREA	67.233	DEG. F
C	26	BATTERY LEFT	73.331	DEG. F
C	27	BATTERY RIGHT	72.892	DEG. F
C	28	AIR IN SET	69.390	DEG. F
C	29	FUEL TANK	71.748	DEG. F
C	30	FUEL OUTLET	81.033	DEG. F

END SCAN GROUP 1 19 JAN 88 14:30:11

STOPPED SINGLE SCAN 19 JAN 88 14:30:11

BEGIN SCAN GROUP 1 19 JAN 88 14:40:03
30 KW/400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	734.80	DEG. F
C	2	EXHAUST 2	775.26	DEG. F
C	3	EXHAUST 3	786.21	DEG. F
C	4	EXHAUST 4	799.25	DEG. F
C	5	EXHAUST 5	822.11	DEG. F
C	6	EXHAUST 6	743.31	DEG. F
C	7	ENG. COOL. IN	158.23	DEG. F
C	8	ENG. COOL. OUT	185.12	DEG. F
C	9	OIL SUMP	195.16	DEG. F
C	10	OIL GALLERY		OPEN TC
C	13	ENG. INTAKE	88.944	DEG. F
C	14	RAD. TOP LEFT	102.15	DEG. F
C	15	RAD. BTTM LEFT	101.10	DEG. F
C	16	RAD. TOP RIGHT	99.491	DEG. F
C	17	RAD. BTTM RIGHT	101.35	DEG. F
C	18	GEN. AIR IN	71.009	DEG. F
C	19	GEN. AIR OUT	104.43	DEG. F
C	20	GEN. FRAME TOP	85.169	DEG. F
C	21	GEN. FRAME BTTM	82.311	DEG. F
C	22	GEN. EXCITER	82.284	DEG. F
C	23	GEN. VOLT. REG.	78.927	DEG. F
C	24	CONTROL PANEL	79.901	DEG. F
C	25	RELAY AREA	70.384	DEG. F
C	26	BATTERY LEFT	85.858	DEG. F
C	27	BATTERY RIGHT	81.925	DEG. F
C	28	AIR IN SET	69.938	DEG. F
C	29	FUEL TANK	72.376	DEG. F
C	30	FUEL OUTLET	90.453	DEG. F

END SCAN GROUP 1 19 JAN 88 14:40:12

STOPPED SINGLE SCAN 19 JAN 88 14:40:12

BEGIN SCAN GROUP 1 19 JAN 88 14:50:00
30 KW/400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	732.38	DEG. F
C	2	EXHAUST 2	779.16	DEG. F
C	3	EXHAUST 3	792.49	DEG. F
C	4	EXHAUST 4	793.55	DEG. F
C	5	EXHAUST 5	814.46	DEG. F
C	6	EXHAUST 6	745.50	DEG. F
C	7	ENG. COOL. IN	164.37	DEG. F
C	8	ENG. COOL. OUT	185.01	DEG. F
C	9	OIL SUMP	210.48	DEG. F
C	10	OIL GALLERY		OPEN TC
C	13	ENG. INTAKE	90.523	DEG. F
C	14	RAD. TOP LEFT	104.74	DEG. F
C	15	RAD. BTTM LEFT	103.81	DEG. F
C	16	RAD. TOP RIGHT	102.64	DEG. F
C	17	RAD. BTTM RIGHT	104.26	DEG. F
C	18	GEN. AIR IN	70.547	DEG. F
C	19	GEN. AIR OUT	108.42	DEG. F
C	20	GEN. FRAME TOP	85.961	DEG. F
C	21	GEN. FRAME BTTM	85.197	DEG. F
C	22	GEN. EXCITER	84.663	DEG. F
C	23	GEN. VOLT. REG.	82.334	DEG. F
C	24	CONTROL PANEL	84.454	DEG. F
C	25	RELAY AREA	71.472	DEG. F
C	26	BATTERY LEFT	91.724	DEG. F
C	27	BATTERY RIGHT	85.934	DEG. F
C	28	AIR IN SET	77.383	DEG. F
C	29	FUEL TANK	74.343	DEG. F
C	30	FUEL OUTLET	95.233	DEG. F

END SCAN GROUP 1 19 JAN 88 14:50:10

STOPPED SINGLE SCAN 19 JAN 88 14:50:10

BEGIN SCAN GROUP 1 19 JAN 88 15:00:00
30 KW/400 HZ GEN SET S/N RZ4 0323

C	1	EXHAUST 1	736.07	DEG. F
C	2	EXHAUST 2	770.05	DEG. F
C	3	EXHAUST 3	796.97	DEG. F
C	4	EXHAUST 4	800.68	DEG. F
C	5	EXHAUST 5	817.18	DEG. F
C	6	EXHAUST 6	745.29	DEG. F
C	7	ENG. COOL. IN	165.37	DEG. F
C	8	ENG. COOL. OUT	185.68	DEG. F
C	9	OIL SUMP	216.09	DEG. F
C	10	OIL GALLERY		OPEN TC
C	13	ENG. INTAKE	91.281	DEG. F
C	14	RAD. TOP LEFT	103.71	DEG. F
C	15	RAD. BTTM LEFT	102.49	DEG. F
C	16	RAD. TOP RIGHT	101.46	DEG. F
C	17	RAD. BTTM RIGHT	103.61	DEG. F
C	18	GEN. AIR IN	66.156	DEG. F
C	19	GEN. AIR OUT	108.70	DEG. F
C	20	GEN. FRAME TOP	85.455	DEG. F
C	21	GEN. FRAME BTTM	85.354	DEG. F
C	22	GEN. EXCITER	81.316	DEG. F
C	23	GEN. VOLT. REG.	85.637	DEG. F
C	24	CONTROL PANEL	87.669	DEG. F
C	25	RELAY AREA	71.397	DEG. F
C	26	BATTERY LEFT	93.373	DEG. F
C	27	BATTERY RIGHT	88.255	DEG. F
C	28	AIR IN SET	68.777	DEG. F
C	29	FUEL TANK	76.258	DEG. F
C	30	FUEL OUTLET	98.415	DEG. F

END SCAN GROUP 1 19 JAN 88 15:00:10

STOPPED SINGLE SCAN 19 JAN 88 15:00:10

Gen Set 30, KW 400 Hz

S/N R27 0003

HIGH TEMPERATURE TEST (710.1c)

Regulator Range (511.1)	/
Frequency Adj. Range (511.2)	/
Circuit Interrupter (Short Circuit) (512.1)	OK
Circuit Interrupter (Overload Trip) (512.2)	/
Circuit Interrupter (512.3) (Overvoltage/Undervoltage)	*
Indicating Instrument (513.2)	*
Freq. and Voltage Regulation Stab. & Trans Response (608.1)	*
Freq. and Voltage Stability (Long Term) (608.2)	/
Voltage Dip & Rise (619.2)	/
DC Control (655.1)	/
Winding Resistance (401.1a)	/
710.1.3.2h HIGH TEMP START	/

BASELINE TESTS

SOUND LEVEL MIL STD 1474	*
FREQUENCY AND VOLTAGE REG. (608.1)	*

AMBIENT TESTS (Cont.)

PRE DROP (608.1)	/
GENERATOR DAMAGED BY DROP TEST POST DROP (608.1)	*

AMBIENT TEMPERATURE TESTS

Winding Resistance (401.1a)	/
MIL-STD-1474 Sound Level	OK
Drop Test (740.3b)	*
Max Power (640.1)	/
Overtemperature Protective Device (515.2)	/

* FAILED TEST

/ TESTS NOT CONDUCTED BECAUSE OF OVERTEMP PROBLEMS/OR GOVERNOR PROBLEMS

30 KW, 400 Hz

S/N KZ 70003

B-357

BOORUM & PEASE

ACCOUNT BOOK 12¼ IN x 8⅝ IN.

100 PAGES		200 PAGES		500 PAGES		RULING
STOCK NUMBER	NO. CARBONLESS NUMBERED	STOCK NUMBER	NO. CARBONLESS NUMBERED	STOCK NUMBER	NO. CARBONLESS NUMBERED	
No. 97%-100-J		97%-200-J		97%-500-J		Journal
No. 97%-100-DEL		97%-200-DEL		97%-500-DEL		DE Ledger
No. 97%-100-DEL		97%-200-DEL		97%-500-DEL		DE Ledger
*No. 97%-100-LD		*97%-200-LD		*97%-500-LD		Long Day
No. 97%-100-R 64-6718		97%-200-R 64-6732		97%-500-R 64-6750		Record
No. 97%-100-R IT		97%-200-R IT		97%-500-R IT		Record Indexed

*LONG DAY SIZE 15¾ IN x 8⅝ IN

BOORUM & PEASE CO. ELIZABETH NJ 07207 USA MADE IN USA

5-6-87	Checked water ok	CS
	" oil ok	CR
	" Battery ok	CS
7-19-87	Running Time 99.8	
	Oil Pressure 40 when Running	
	Battery Chg. Ammeter showing Discharge Rate	
	Crossion in alt. fuse holder	
8-14-87	Changed voltage plate to high voltage 240/416	CS
	Ran unit at full load	

9 Aug 87 ASE-1014 Ran Sound Level Test
RTM 51.0 — 51.2

6 October 1987

1055	Started unit to stabilize for 608.1 RTM 51.5	
1122	Shut Down unit Due to Equipment Failure. RTM 52.1	
~~1130~~ 11		
1330	Started unit to stabilize for 603.1 RTM 52.1	GC
1436	shut unit Down - Test complete RTM 53.3	

27 Jan 1988

Received unit from USE CGC

2 Feb 1988

1130	Set unit up for Sound Leak Test.
1806	Start unit to recheck Sound Level Test.
1815	Completed Sound Level Test Shut unit Down

4 FEB 1988

0930 PLACED UNIT IN CHAMBER AND SET UP FOR HIGH TEMP OPERATIONAL TEST

1120 START UNIT APPLIED RATED LOAD FOR FREQUENCY & VOLTAGE STABILITY TEST (SHORT TERM) 608.1

* NOTE: BEFORE STARTING OVERTEMP SWITCH WAS JUMPED OUT AS PER VSC. ALSO OVERTEMP SENSOR HAS SOME DAMAGE TO IT. ALSO NOTE FUEL GAGE DOES NOT WORK. FOR TANK IS FULL, GAGE INDICATES EMPTY.

1210 SHUT UNIT DOWN COOLANT OUT TEMP 221°F

1405 START UNIT APPLIED RATED LOAD FOR CIRCUIT INTERRUPTER TEST (SHORT CIRCUIT METHOD 512.1)

1455 END OF TEST SHUT UNIT DOWN

1456 START UNIT APPLIED [illegible] FOR OVER & UNDER VOLTAGE METHOD 512.3

1522 END OF TEST SHUT UNIT DOWN

1618 START UNIT FOR INDICATING INSTRUMENTS

1720 END OF TEST SHUT UNIT DOWN

5 FEB 1988

0800 START UNIT APPLIED RATED LOAD FOR MAX POWER TEST METHOD 6401

WHEN ATTEMPTING TO START UNIT, UNIT WOULD NOT FIRE - ENGINE WOULD TURN OVER BUT WOULD NOT FIRE.

ATTEMPTED TO START UNIT - UNIT WOULD CRANK BUT WOULD NOT FIRE. UNIT GIVES IMPRESSION OF NO FUEL TO INJECTORS. LOOSENED FINAL FUEL FILTER & TURN ON FUEL PUMP, NOTED VERY SMALL AMOUNT OF AIR. RETIGHTENED FILTER AND UNLOCKED FUEL SUPPLY HOSE AT INJECTOR PUMP

5 FEB 1988

NO AIR VISABLE @ FUEL SUPPLY. ATTEMPTED TO START UNIT, NOTED NO MOVEMENT IN GOVERNOR ACTUATOR DURING CRANKING. MANUALLY MOVED THROTTLE ARM DURING CRANK AND UNIT STARTED. UNIT WOULD CONTINUE TO RUN AS LONG AS THROTTLE ARM WAS HELD OPEN. MANUALLY RAN ENGINE SPEED UP TO CHECK FOR HIGH SPEED GOVERNOR OPERATION. ELECTRIC GOVERNOR DID NOT RESPOND TO OVERSPEED CONDITION BEFORE MECHANICAL GOVERNOR TOOK OVER. SHUT UNIT DOWN AND CHECKED ALL CABLE CONNECTIONS. ADJUSTED FREQ. ADJ. POT IN THE GOVERNOR CONTROL UNIT +3 TURNS. ATTEMPTED TO START UNIT - UNIT RAN AT FREQ OVER 412 HZ WHEN PANEL CONTROL TURNED DOWN. ADJUSTED FREQ. ADJ. POT TO OBTAIN 2 HZ @ THE MIDPOINT OF FREQ. CONTROL ON PANEL. UNIT OPERATED FOR APPROX. 1 MIN. AND SHUT DOWN. ATTEMPTED TO START - UNIT WOULD NOT START. [redacted] ADJUSTED FREQ ADJ. POT: NO CHANGE. ADJUSTED GAIN & STABILITY +90°. NO CHANGE.

REMOVED UNIT FROM CHAMBER. SET UNIT UP FOR ROAD TEST. ON EVERY WAY ALL STATE ROADS OPENED. CENTRAL PHASE AND BOSTON ROADS ALSO OPENED ON REAR PANEL. RIGHT REAR DOOR HAS OBSTRUCTION ON LOAD SIDE INSIDE, ALSO INSIDE DOORS CANNOT BE LOCKED.

8-359

AFTER OLD TEST ATTEMPTED START
ON UNIT, UNIT STARTED. @ UPON START
LOUD SCRAPING AND METAL CLANKING SOUND
WAS COMING FROM CONDENSATOR. SOME
DISTORTATION IN CONDENSATOR EXHAUST FAN SCREEN
WITH METAL SHAVINGS, ALSO DUCT LAYING
IN BOTTOM OF CONDENSATOR EXHAUST SCREEN.
NOTE ON INSIDE BAFFLES ON RIGHT REAR SIDE
WELDED ON EXHAUST - SAME WHEN TRYING TO
OPEN.

B-360

ACOUSTICAL TEST DATA - CONTOUR LEVEL

(MAXIMUM NOISE LEVEL _____ DBA)

TEST ITEM 30Kw/400Hz GEN SET S/N L270003 HOUR METER 57.0 CONFIGURATION ✓ UNMODIFIED ___ MODIFIED

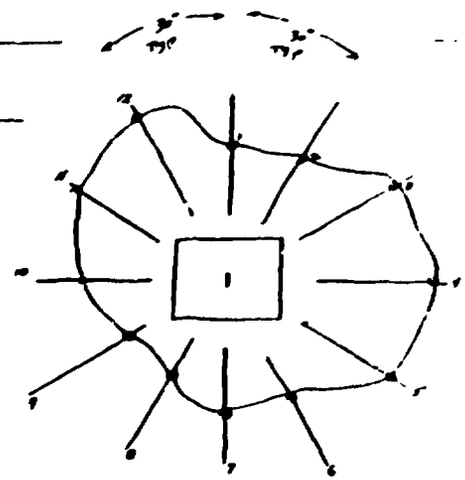
TEMPERATURE 68°F HUMIDITY 85% TEST SITE HARTWOOD SURFACE GRASS TERRAIN _____

BAROMETRIC PRESSURE 29.56" SKY COVER OVERCAST WIND DIRECTION NE WIND VELOCITY < 5 MPH

MICROPHONE _____ SOUND LEVEL METER GR 1982 OCTAVE ANALYZER _____

LOAD CONDITION ___ RATED ✓ NO LOAD MICROPHONE LOCATION AS BELOW

DATE	TIME	MICROPHONE POSITION	DISTANCE	DBA	REMARKS
		1	24-8	85	
		2	26-7		
		3	14-3		
		4	10-4		
		5	13-3		
		6	19-8		
		7	18-5		
		8	19-6		
		9	13-10		Full Load & No Load
		10	12-3		
		11	10-11		
		12	19-8		



1.2m = 47.24" Approx
Record Distance and Draw Contours @ 12 equal 30° arc Distances Record Distance from Set (or center of Set for Sound Level of 85 dBA

B-36

ACOUSTICAL TEST DATA - CONTROL LEVER

(MAXIMUM NOISE LEVEL _____ DBA)

TEST ITEM 30KW/400Hz GEN SET S/N R270003 HOUR METER 57.2 CONFIGURATION ✓ UNMODIFIED ___ MODIFIED

TEMPERATURE 68°F HUMIDITY 85% TEST SITE HARTWOOD SURFACE GRASS TERRAIN _____

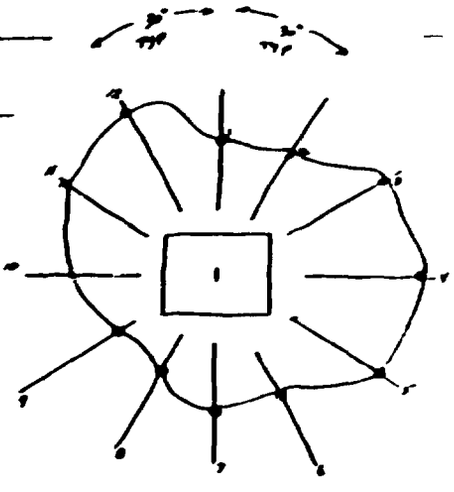
BAROMETRIC PRESSURE 29.56H SKY COVER OVERCAST WIND DIRECTION NE WIND VELOCITY < 5 MPH

MICROPHONE ~~GR 1982~~ GCC SOUND LEVEL METER GR 1982 OCTAVE ANALYZER _____

LOAD CONDITION ✓ RATED ___ NO LOAD MICROPHONE LOCATION AS BELOW

ATE	TIME	MICROPHONE POSITION	DISTANCE	DBA	REMARKS
	1009	1	21-10	85	
		2	21-4		
		3	13-9		
		4	12-9		
		5	15-10		
		6	27-3		
		7	18-9		
		8	27-2		
		9	15-2		Full Load & No Load
		10	12-3		
		11	11-5		
	1017	12	19-11	85	

B-362



1.2m = 47.24" (Approx)
Radial Distance and Arc Distance
@ 12 equal 30° Arc Distance Radius
Distance From Set (or Center of Set)
for Sound Level of 85 dBA

ACOUSTICAL TEST DATA

(MAXIMUM NOISE LEVEL ___ DBA)

TEST ITEM: 30 KW/60 KVA GEN SET S/N: R27 0003 HOUR METER: 51.0

CONFIGURATION: ✓ UNMODIFIED ___ MODIFIED

TEMPERATURE: 68°F HUMIDITY: 85% TEST SITE: HANGFIELD

SURFACE: GRASS TERRAIN: ___

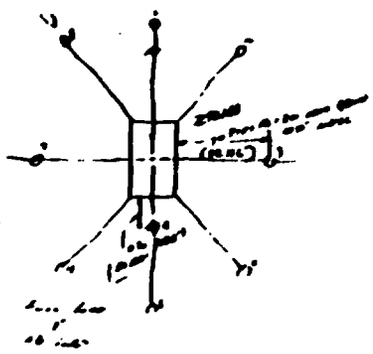
BAROMETRIC PRESSURE: 29.56H SKY COVER: OVERCAST

WIND DIRECTION: NE WIND VELOCITY: <5MPH MICROPHONE: ___

SOUND LEVEL METER: GR 1982 OCTIVE ANALYZER: ___

LOAD CONDITION: ✓ RATED ___ NO LOAD MICROPHONE LOCATION: AS BELOW

DATE	TIME	MICROPHONE POSITION	DISTANCE SET (M)	DBA	REMARKS
	1002	1	22 - 11½"	81	
		2		80	
		3		81	
		4		83	
		5		82	
		6		85	
		7		85	
		8	22 - 11½"	80	
	1004	9	2 - 3½"	100	



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ACOUSTICAL TEST DATA (MAXIMUM NOISE LEVEL ___ DBA)

TEST ITEM: 30 KW/4 KW GEN SET S/N: RZ1 0003 HOUR METER: 51.0

CONFIGURATION: ✓ UNMODIFIED ___ MODIFIED

TEST SITE: HARTWOOD

TEMPERATURE: 68°F HUMIDITY: 85%

SURFACE: GRASS TERRAIN: ___

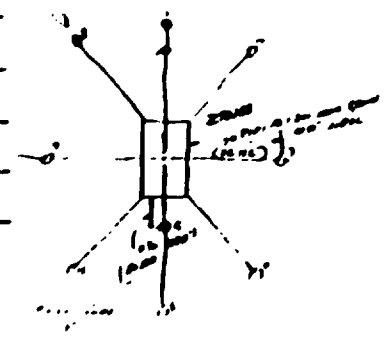
BAROMETRIC PRESSURE: 29.56H SKY COVER: OVERCAST

WIND DIRECTION: NE WIND VELOCITY: < 5 MPH MICROPHONE: ___

SOUND LEVEL METER: GR 1982 OCTIVE ANALYZER: ___

LOAD CONDITION: ___ RATED ✓ NO LOAD MICROPHONE LOCATION: AS BELOW

DATE	TIME	MICROPHONE POSITION	DISTANCE SET (M)	DBA	REMARKS
9-19-87	0952	1	22-11½"	80	
		2		79	MAXIMUM BACKGROUND LEVEL
		3		81	50 dBA
		4		81	
		5		85	
		6		83	
		7		82	
		8	22-11½"	79	
		9	2-3½"	98	



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TEST DATA

ITEM 30KW, 400Hz GENERATOR SET

MFGR. LIBBY WELDING

MODEL NO. MEP-114A

SERIAL NO. RZ70003

NTS

National Technical Systems Scientific Services Group

Testing Division
P.O. Box 38
Harlwood, Virginia 22471
Tel: 703 752 5300

Frequency and Voltage

Regulation, Stability and Transient Response Test

(Short Term)

REF. NO. MIL-STD 705 Para. 608.1

SHEET 1 OF 2

DATE 6 OCTOBER 1987

JOB NO. 555-2140

PROJ. ENGR.

RECORDER/OBSERVER ENI/CWG

INST TIME	STEP NO.	LOAD STEP	VOLTAGE x1 L_1-L_0 VAC	VOLTAGE x1 L_2-L_0 VAC	VOLTAGE x1 L_3-L_0 VAC	AMPERES x40 L_1-L_0 AC AMPS	AMPERES x40 L_2-L_0 AC AMPS	AMPERES x40 L_3-L_0 AC AMPS	KILOWATTS x40 L_1-L_0 Kw	KILOWATTS x40 L_2-L_0 Kw	KILOWATTS x40 L_3-L_0 Kw	POWER FACTOR PF	FREQ. Hz	EXCITER FIELD VOLTS VDC	EXCITER FIELD AMPS DCA	AMB. TEMP. °F
1050	START	1/4	STARTED STABILIZATION FOR 608.1													66
1100	START	1/4	120.0	120.0	120.0	2.62	2.64	2.65	0.245	0.250	0.250	0.80	400.1	12.2	6.2	66
1110	START	1/4	120.0	119.5	120.0	261	2.64	2.65	0.245	0.250	0.250	0.80	400.1	12.1	4.9	66
1120	START	1/4	120.0	120.0	119.5	2.60	2.63	2.65	0.245	0.250	0.250	0.80	400.2	12.5	4.9	66
1122	SHUT UNIT DOWN: INSTRUMENT PROBLEM (TS READING INCORRECTLY DUE TO GROUND LOOP)															
1330	START	1/4	STARTED STABILIZATION FOR 608.1													
1340	START	1/4	120.0	121.0	120.0	2.63	2.65	2.66	0.245	0.250	0.250	0.80	400.0	12.8	5.03	70
1350	START	1/4	120.0	121.0	120.0	2.62	2.66	2.66	0.245	0.250	0.250	0.80	400.0	12.9	5.04	70
1400	START	1/4	120.0	121.0	120.0	2.62	2.65	2.66	0.245	0.250	0.250	0.80	400.1	12.9	5.04	71
1410	START	1/4	120.0	121.0	120.0	2.62	2.65	2.66	0.245	0.250	0.251	0.80	400.1	12.9	5.04	71
1412	BEGIN 608.1															
1412	1.	1/4	120.0	121.0	120.0	2.63	2.65	2.66	0.249	0.251	0.252	0.80	400.5	12.8	5.04	
	2.	0	123.0	123.0	123.0	0	0	0	0	0	0	NA	400.5	9.1	3.56	
	3.	1/4	120.0	121.0	120.0	2.64	2.66	2.67	0.249	0.251	0.251	0.80	400.5	12.9	5.04	
	4.	0	123.0	123.0	123.0	0	0	0	0	0	0	NA	400.5	9.1	3.60	
	5.	1/4	120.0	121.0	120.0	2.64	2.66	2.67	0.249	0.252	0.251	0.80	400.5	12.8	5.04	
	6.	0	123.0	123.0	123.0	0	0	0	0	0	0	NA	400.5	9.0	3.56	
	7.	1/4	120.0	121.0	120.0	2.63	2.66	2.67	0.249	0.252	0.251	0.80	400.5	12.8	5.04	
	8.	0	123.0	123.0	123.0	0	0	0	0	0	0	NA	400.5	9.1	3.56	
	9.	3/4	120.5	121.5	120.5	1.97	1.94	1.95	0.187	0.188	0.190	0.80	400.6	11.7	4.64	
	10.	0	123.0	123.0	123.0	0	0	0	0	0	0	NA	400.6	9.0	3.56	
	11.	3/4	120.5	121.0	120.5	1.96	1.95	1.95	0.186	0.187	0.188	0.80	400.6	11.7	4.56	
	12.	0	123.0	123.0	123.0	0	0	0	0	0	0	NA	400.5	9.1	3.52	
	13.	3/4	121.0	121.0	120.5	1.96	1.94	1.95	0.186	0.187	0.189	0.80	400.6	11.7	4.60	
	14.	0	123.0	123.0	123.0	0	0	0	0	0	0	NA	400.6	8.9	3.56	
	15	3/4	121.5	122.0	121.5	1.54	1.32	1.36	0.126	0.127	0.126	0.79	400.6	9.0	3.52	

NOTES:

TEST DATA

ITEM 50KW, 400HZ GENERATOR SET

MFGR. LIBBY WELDING

MODEL NO. MEP 114A

SERIAL NO. RZ70003

NTS

National Technical Systems | Scientific Services Group | Testing Division, P.O. Box 38, Harlwood, Virginia 22471, Tel: 703 752 5300

Frequency and Voltage

Regulation, Stability and Transient Response Test (Short Term)

REF. NO. MIL-STD 705 Para. 608.1

SHEET 2 OF 2

DATE 6 OCTOBER 1987

JOB NO. 555-2140

PROJ. ENGR.

RECORDER/OBSERVER ENT/CMG.

INST TIME	STEP NO.	LOAD STEP	VOLTAGE X1 L_1-L_0 VAC	L_2-L_0 VAC	L_3-L_0 VAC	AMPERES X40 L_1-L_0 AC AMPS	L_2-L_0 AC AMPS	L_3-L_0 AC AMPS	KILOWATTS X40 L_1-L_0 Kw	L_2-L_0 Kw	L_3-L_0 Kw	POWER FACTOR PF	FREQ. Hz	EXCITER FIELD VOLTS VDC	AMPS DCA	AMB. TEMP. °F
	16.	0	123.0	123.0	123.0	0	0	0	0	0	0	NA	400.6	9.0	3.58	
	17.	3/4	121.5	121.5	121.5	1.33	1.32	1.34	0.126	0.127	0.127	0.79	400.6	10.7	4.20	
	18.	0	123.0	123.0	123.0	0	0	0	0	0	0	NA	400.6	8.8	3.56	
	19.	3/4	121.5	122.0	121.5	1.32	1.32	1.35	0.126	0.126	0.127	0.795	400.6	10.5	4.14	
	20.	0	123.0	123.0	123.0	0	0	0	0	0	0	NA	400.6	8.0	3.56	
	21.	1/4	122.0	122.0	122.0	0.64	0.65	0.65	0.063	0.062	0.063	0.79	400.6	9.3	3.88	
	22.	0	123.0	123.0	123.0	0	0	0	0	0	0	NA	400.6	8.9	3.52	
	23.	1/4	122.0	122.5	122.0	0.63	0.65	0.64	0.063	0.063	0.063	0.795	400.6	9.8	3.84	
	24.	0	123.0	123.0	123.0	0	0	0	0	0	0	NA	400.6	8.9	3.52	
	25.	1/4	122.0	122.5	122.0	0.64	0.65	0.64	0.064	0.062	0.062	0.795	400.7	9.7	3.88	
	26.	0	123.0	123.0	123.0	0	0	0	0	0	0	NA	400.7	8.8	3.52	
	27.	4/4	120.0	121.0	120.0	2.66	2.67	2.67	0.251	0.253	0.252	0.805	400.7	12.4	4.96	
	28.	0	123.0	123.0	123.0	0	0	0	0	0	0	NA	400.7	8.7	3.56	
	29.	4/4	120.0	121.0	120.0	2.64	2.67	2.68	0.250	0.254	0.252	0.80	400.7	12.5	4.96	
	30	0	123.0	123.0	123.0	0	0	0	0	0	0	NA	400.7	8.9	3.58	
	31	1/4	120.0	121.0	120.0	2.65	2.67	2.68	0.250	0.265	0.253	0.80	400.7	12.5	4.96	
	32	0	123.0	123.0	123.0	0	0	0	0	0	0	NA	400.7	8.9	3.52	
1435	END OF TEST.															

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NOTES:

TEST DATA

ITEM 30KW 400Hz GENERATOR SET

MFGR. LIBBY WELDING

MODEL NO. MEP 114A

SERIAL NO. RZ7 0003

NTS

National Technical Systems | Scientific Services Group | Testing Division P.O. Box 38 Harwood, Virginia 22471 Tel: 703 752 5300

FREQUENCY AND VOLTAGE REGULATION, STABILITY, AND TRANSIENT RESPONSE TEST (SHORT TERM)

REF. NO. MIL STD 705

SHEET 1 OF 3

DATE 13 NOV 1987

JOB NO. 555-2140

PROJ. ENGR.

RECORDER/OBSERVER G CARTER

	FREQUENCY								VOLTAGE							
	MAXIMUM EXCURSION				REC.	CONSTANT LOAD BANDWIDTH		REGULATION	MAXIMUM EXCURSION				REC.	CONSTANT LOAD BANDWIDTH		
	OVERSHOOT		UNDERSHOOT		TIME			FREQ.	VOLT	OVERSHOOT		UNDERSHOOT		TIME		
LOAD STEP	Hz	%	Hz	%	SEC	Hz	%	%	%	VOLT	%	VOLT	%	SEC	VOLT	%
1						.5	.125								.08	.066
1-2	2.0	.50			.39			0	2.5	.68	.56			.39		
2						.6	.15								.68	.066
2-3			.68	.17	0			0	2.5			1.2	1	.23		
3						.43	.107								.08	.066
3-4	1.7	.425			.23			0	2.5	.68	.56			.31		
4						.6	.15								.08	.066
4-5			.34	.085	0			0	2.5			1.0	.83	.23		
5						.5	.125								.08	.066
5-6	2.4	.6			.39			0	2.5	.68	.56			.39		
6						.6	.15								.08	.066
6-7			1.2	.3	.46			0	2.5			1.0	.83	.23		
7						.43	.107								.08	.066
7-8	2.0	.5			.31			0	2.5	.86	.71			.39		
8						.5	.125								.08	.066
8-9			0	0	0			.025	2.08			1.0	.83	.23		
9						.5	.125								.08	.066
9-10	.86	.215			0			0	2.08	.86	.71			.31		
10						.5	.125								.08	.066
10-11			.34	.085	0			0	2.08			1.0	.83	.23		
11						.6	.15								.08	.066
11-12	1.2	.3			0			.025	2.08	.68	.56			.15		
12						.75	.187								.08	.066
12-13			.68	.17	0			.025	2.08			1.2	1	.23		
13						.5	.125								.08	.066
13-14	1.0	.25			0			0	2.08	.86	.71			.15		

NOTES:

613-8

TEST DATA

ITEM 30 KW 400 Hz GENERATOR SET

MFGR. LIMA WELDING

MODEL NO. MEP 114A

SERIAL NO. RZ 70003

NTS

National Technical Systems | Scientific Services Group | Testing Division, P.O. Box 38, Hartwood, Virginia 22471, Tel: 703 752 5300

FREQUENCY AND VOLTAGE REGULATION, STABILITY, AND TRANSIENT RESPONSE TEST (SHORT TERM)

REF. NO. MIL STD 705

SHEET 2 OF 3

DATE 13 NOV 1987

JOB NO. 555-2140

PROJ. ENGR.

RECORDER/OBSERVER G CARTER

	FREQUENCY								VOLTAGE							
	MAXIMUM EXCURSION				REC.	CONSTANT LOAD BANDWIDTH		REGULATION	MAXIMUM EXCURSION				REC.	CONSTANT LOAD BANDWIDTH		
LOAD STEP	OVERSHOOT Hz	OVERSHOOT %	UNDERSHOOT Hz	UNDERSHOOT %	TIME SEC	Hz	%	FREQ. %	VOLT %	OVERSHOOT VOLT	OVERSHOOT %	UNDERSHOOT VOLT	UNDERSHOOT %	TIME SEC	VOLT	%
						.6	.15								.08	.066
14																
14-15			.68	.17	0			0	2.08			.68	.56	.31		
15						.6	.15								.08	.066
15-16	.86	.215			0			0	2.08	.50	.41			0		
16						.6	.15								.08	.066
16-17			0	0	0			0	1.25			.68	.56	.23		
17						.6	.15								.08	.066
17-18	.43	.325			.465			0	1.25	.68	.56			.155		
18						.65	.162								.08	.066
18-19			0	0	0			0	1.25			.68	.56	.31		
19						.65	.162								.08	.066
19-20	.34	.085			0			0	1.25	.50	.41			0		
20						.6	.15								.08	.066
20-21			1.5	.375	.155			0	.83			.34	.28	0		
21						.6	.15								.08	.066
21-22	.86	.215			0			0	.83	0	0			0		
22						.6	.15								.08	.066
22-23			0	0	0			0	.83			.34	.28	0		
23						.6	.15								.08	.066
23-24	.86	.215			0			0	.83	.50	.41			0		
24						.75	.187								.08	.066
24-25			0	0	0			.025	.83			.34	.28	0		
25						.6	.15								.08	.066
25-26	1.0	.25			0			0	.83	0	0			0		
26						.65	.162								.08	.066
26-27			.50	.125	0			0	2.5			1.3	1.08	.155		

B-3-368

NOTES:

TEST DATA

ITEM 30 KW 400 Hz GENERATOR SET

MFGR. LIBBY WELDING

MODEL NO. MEN 114A

SERIAL NO. R27 0003

NTS

National Technical Systems | Scientific Services Group | Testing Division P.O. Box 38 Hartwood, Virginia 22471 Tel: 703 752 5300

FREQUENCY AND VOLTAGE REGULATION, STABILITY, AND TRANSIENT RESPONSE TEST (SHORT TERM)

REF. NO. MIL STD 705

SHEET 3 OF 3

DATE 13 NOV 1987

JOB NO. 555-2140

PROJ. ENGR.

RECORDER/OBSERVER G CARTER

	FREQUENCY								VOLTAGE							
	MAXIMUM EXCURSION				REC.	CONSTANT LOAD BANDWIDTH		REGULATION	MAXIMUM EXCURSION				REC.	CONSTANT LOAD BANDWIDTH		
LOAD	OVERSHOOT		UNDERSHOOT		TIME			FREQ.	VOLT	OVERSHOOT		UNDERSHOOT		TIME		
STEP	Hz	%	Hz	%	SEC	Hz	%	%	%	VOLT	%	VOLT	%	SEC	VOLT	%
27						.6	.15								.08	.066
27-28	2.0	.5			.31			0	2.5	1.0	.83			.15		
28						.6	.15								.08	.066
28-29			.34	.085	0			0	2.5			1.3	1.08	.23		
29						.65	.162								.08	.066
29-30	2.2	.67			.31			0	2.5	.68	.56			.15		
30						.65	.162								.08	.066
30-31			0	0	0			0	2.5			1.2	1.0	.46		
31						.65	.162								.08	.066
31-32	2.2	.55			.23			0	2.5	.86	.71			.23		
32						.65	.162								.08	.066

B-369

NOTES:

ACOUSTICAL TEST DATA

TIME: 1306	DATE: 2 FEB 1988				
TEST ITEM: 10 KW / 400 Hz GEN SET	STATION:	TEST CONDUCTED BY:	TEST ITEM OPERATOR		
RIG/MODEL NO: MEP 114A	SERIAL NO: KZ7 0003	ODOMETER:	HOUR METER: 53.5	TEST ITEM CONDITION: MACHINE	NO LOAD
TEMPERATURE: 68 °F	HUMIDITY: 71%	TEST SITE: HARTWOOD	SURFACE: GRASS	SEA STATE:	TERRAIN:
BAROMETRIC PRESSURE: 29.687	SKY COVER: OVERCAST	STATIONARY OPERATION: [X]	HIGHWAY DRIVING: [ ]	DRIVE BY: [ ]	
WIND DIRECTION: NW	WIND VELOCITY: < 10 MPH	MICROPHONE: GR 1962	SOUND LEVEL METER: GR 1982	OCTAVE ANALYZER:	
INTERIOR: [ ]	EXTERIOR: [X]	MICROPHONE LOCATION:	TAPE RECORDER:	TAPE NO:	

POSITION	DISTANCE	dbA	dbB	dbC	ALL PASS	~~25~~ 31.5	63	125	250	500	1,000	2,000	4000	8000	REMARKS
1	7M	68.9	75.9	79.2	83.1	71.6	74.2	76.3	72.4	65.5	72.3	58.2	54.2	51.2	POSITION #1 AT
2	7M	68.9	75.3	78.9	79.1	65.3	72.1	75.5	73.4	66.4	63.2	59.8	54.6	51.0	EXHAUST END
3	7M	66.2	73.2	78.3	79.1	68.6	74.3	75.7	68.4	65.1	60.1	55.8	52.8	45.6	
4	7M	65.8	72.8	76.2	78.1	66.2	69.1	73.1	69.8	63.5	57.2	56.1	51.4	46.2	
5	7M	65.7	72.2	5	76.7	64.5	66.9	73.2	70.1	64.1	57.1	52.8	48.6	45.4	
6	7M	66.3	73.4	76.7	77.3	59.7	66.5	75.1	71.5	63.9	58.2	56.1	51.7	48.0	
7	7M	66.3	73.2	77.3	78.5	65.5	73.6	75.4	68.5	64.6	60.8	56.3	50.8	44.6	
8	7M	67.7	73.3	77.5	80.6	66.1	72.5	75.1	70.7	64.5	61.3	59.4	52.8	48.3	
9	0.7M	77.7	84.4	88.1	89.2	78.9	78.6	86.5	79.1	75.9 [illegible]	71.3	66.3	64.5	63.9	

B-320

ACOUSTICAL TEST DATA

TIME: 1414	DATE: 2 FEB 1989		
TEST ITEM: 30 KW 400 Hz GEN SET	STATION:	TEST CONDUCTED BY:	TEST ITEM OPERATOR:
REG/MODEL NO: MEP 114A	SERIAL NO: RZ7 0003	ODOMETER:	HOUR METER: 53.6
TEST ITEM CONDITION: MODIFIED RATED LOAD			
TEMPERATURE: 68°F	HUMIDITY: 71%	TEST SITE: HARTWOOD	SURFACE: GRASS / SEA STATE: / TERRAIN:
BAROMETRIC PRESSURE: 29.689	SKY COVER: OVERCAST	STATIONARY OPERATION: ☒	HIGHWAY DRIVING: ☐ DRIVE BY: ☐
WIND DIRECTION: NW	WIND VELOCITY: <10 MPH	MICROPHONE: GR 1962	SOUND LEVEL METER: GR 1982 / OCTAVE ANALYZER:
INTERIOR: ☐	EXTERIOR: ☒	MICROPHONE LOCATION:	TAPE RECORDER: / TAPE NO:

POSITION	DISTANCE	dbA	dbB	dbC	ALL PASS	~~20.0~~ 31.5	63	125	250	500	1,000	2,000	4000	8000	REMARKS
1	7m	69.2	76.1	79.2	79.8	65.4	72.8	76.4	73.4	66.2	63.4	61.6	55.5	52.1	POSITION #1 AT
2	7m	70.3	75.7	79.2	80.1	69.2	73.2	75.8	73.7	67.1	65.5	63.2	57.1	53.5	EXHAUST END
3	7m	67.5	74.6	78.2	79.3	72.1	75.6	76.6	69.2	64.1	61.9	58.9	56.4	48.9	
4	7m	67.9	74.5	78.2	78.5	68.4	71.3	74.3	73.1	63.2	61.5	59.1	55.2	48.3	
5	7m	66.8	73.2	75.7	77.1	68.2	68.9	73.1	71.0	65.9	59.5	57.0	52.5	51.1	
6	7m	68.5	75.1	79.1	79.3	69.5	68.6	77.4	72.2	64.4	61.5	57.2	54.9	49.1	
7	7m	68.2	74.3	78.6	79.1	66.2	73.6	77.2	69.0	65.1	64.1	59.2	54.2	49.2	
8	7m	69.5	74.6	78.2	79.2	62.0	71.6	76.2	70.4	66.2	64.5	61.0	56.7	51.1	
9	0.7m	80.7	86.5	90.1	91.0	82.0	80.4	86.3	82.2	79.2	75.1	75.7	70.0	67.3	

B-371

TEST ITEM: 30KW/60HZ GEN SET S/N: RZ70003 HOUR METER: 53.9

CONFIGURATION: UNMODIFIED ✓ MODIFIED

TEST SITE: HARTWOOD

TEMPERATURE: 65°F HUMIDITY: 71%

SURFACE: GRASS TERRAIN:

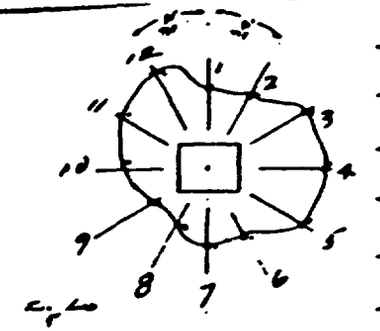
BAROMETRIC PRESSURE: 29.687 SKY COVER: OVERCAST

WIND DIRECTION: NW WIND VELOCITY: <10MPH MICROPHONE: GR1962

SOUND LEVEL METER: GR1982 OCTAVE ANALYZER:

LOAD CONDITION: ✓ RATED — NO LOAD MICROPHONE LOCATION: AS BELOW

DATE	TIME	MICROPHONE POSITION	DISTANCE FEET(M)	DBA	REMARKS
22-88	1443	1	0	85	
		2	0	85	
		3	1'10"	85	
		4	1'9"	85	
		5	2'3"	85	
		6	0	85	
		7	6'8"	85	
		8	3'5"	85	
		9	2'2"	85	
		10	1'8"	85	
		11	1'11"	85	
22-88	1445	12	0	83.6	



B-372

(MAXIMUM NOISE LEVEL ___ DBA)

TEST ITEM: 30 KW/400 HZ GEN SET S/N: GE 70003 HOUR METER: 54.0

CONFIGURATION ___ UNMODIFIED ✓ MODIFI

TEMPERATURE: 68° HUMIDITY: 71% TEST SITE: HARTWOOD

SURFACE: GRASS TERRAIN: ___

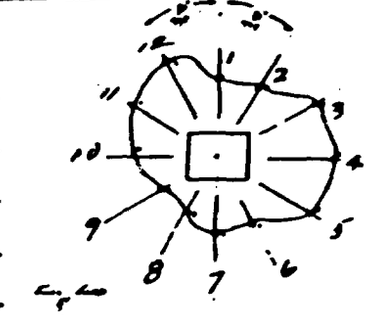
BAROMETRIC PRESSURE: 29.687 SKY COVER: OVERCAST

WIND DIRECTION: NW WIND VELOCITY: <10 MPH MICROPHONE: GR 1962

SOUND LEVEL METER: GR 1982 OCTAVE ANALYZER: ___

LOAD CONDITION: ___ RATED ✓ NO LOAD MICROPHONE LOCATION: AS BELOW

DATE	TIME	MICROPHONE POSITION	DISTANCE FT(M)	DBA	REMARKS
2-1-89	1449	1	0	81.4	
		2	0	82.9	
		3	0	82.2	
		4	0	83.1	
		5	0	83.4	
		6	0	83.7	
		7	6'6"	85	
		8	3'6"	85	
		9	0	83.9	
		10	0	82.6	
		11	0	83.1	
2-1-89	1455	12	0	80.0	



TEST DATA

TEM 30 KW / 400 Hz
GEN SET
MODIFIED
NGR. LARRY WELDING
ODEL NO. MEP 114A
ERIAL NO. R2 0003

NTS
National Technical Systems
Scientific Services Group
Testing Division
P.O. Box 38
Hartwood, Virginia 22471
Tel: 703 752 5300

Frequency and Voltage
Regulation, Stability and Transient Response Test
(Short Term)

REF. NO. MIL-STD 705 Para. 608.1
SHEET 1 OF 1
DATE 4 FEB 1988
JOB NO. 555-2140
PROJ. ENGR.
RECORDER/OBSERVER RT, KM, GC

INST TIME	STEP NO.	LOAD STEP	E 60788 VOLTAGE L_1-L_0 VAC	L_2-L_0 VAC	L_3-L_0 VAC	E 60420 AMPERES x40 L_1-L_0 AC AMPS	L_2-L_0 AC AMPS	L_3-L_0 AC AMPS	E 62530 KILOWATTS x40 L_1-L_0 Kw	L_2-L_0 Kw	L_3-L_0 Kw	E62520 POWER FACTOR PF	E60960 FREQ. Hz	E61670 EXCITER VOLTS VDC	E62500 FIELD AMPS DCA	AMB. TEMP. °F	PAGE IN/EXH IN H2O
1054			START UNIT APPLIED RATED LOAD														
1140		R/L	120	120	120	2.56	2.56	2.58	.249	.25	.25	.80	400.6	15.6	5.15	125	13.3/36.0
1150		L/L	120	120	120	2.56	2.56	2.58	.249	.25	.25	.80	400.6	16.1	5.2	124	13.0/36.
1201		R/L	120	120	120	2.56	2.56	2.58	.249	.249	.25	.80	400.5	16.4	5.3	126	13.6/36.
1201			SHUT UNIT DOWN - COOLANT OUT TEMP 201°F														

MIL-STD-705A

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BEGIN SCAN GROUP 1    04 FEB 88  11:24:17
30 KW 400 HZ GEN SET S/N RZ7 0003

C    1 EXHAUST 1          793.10 DEG. F
C    2 EXHAUST 2          644.05 DEG. F
C    3 EXHAUST 3          767.05 DEG. F
C    4 EXHAUST 4          853.49 DEG. F
C    7 ENG. COOL. IN      152.77 DEG. F
C    8 ENG. COOL. OUT     177.76 DEG. F
C    9 OIL SUMP           126.32 DEG. F
C   10 OIL GALLERY        135.33 DEG. F
C   13  ENG. INTAKE       117.67 DEG. F
C   14 RAD. TOP LEFT      134.63 DEG. F
C   15 RAD. BTTM LEFT     132.69 DEG. F
C   16 RAD. TOP RIGHT     132.28 DEG. F
C   17 RAD. BTTM RIGHT    131.12 DEG. F
C   18 GEN. AIR IN        118.90 DEG. F
C   19 GEN. AIR OUT       107.10 DEG. F
C   20 GEN. FRAME TOP      99.904 DEG. F
C   21 GEN. FRAME BTTM    101.23 DEG. F
C   22 GEN. EXCITER       117.06 DEG. F
C   23 GEN. VOLT. REG.    100.81 DEG. F
C   24 CONTROL PANEL      103.73 DEG. F
C   25 RELAY AREA         120.28 DEG. F
C   26 BATTERY LEFT       102.31 DEG. F
C   27 BATTERY RIGHT       98.041 DEG. F
C   28 AIR IN SET         125.22 DEG. F
C   29 FUEL TANK           58.981 DEG. F
C   30 FUEL OUTLET         94.389 DEG. F

END SCAN GROUP 1      04 FEB 88  11:24:26

STOPPED SINGLE SCAN   04 FEB 88  11:24:26
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BEGIN SCAN GROUP 1    04 FEB 88  11:40:15
30 KW 400 HZ GEN SET S/N RZ7 0003

C    1 EXHAUST 1          823.34 DEG. F
C    2 EXHAUST 2          678.92 DEG. F
C    3 EXHAUST 3          799.69 DEG. F
C    4 EXHAUST 4          877.20 DEG. F
C    7 ENG. COOL. IN      198.99 DEG. F
C    8 ENG. COOL. OUT     209.74 DEG. F
C    9 OIL SUMP           210.84 DEG. F
C   10 OIL GALLERY        215.92 DEG. F
C   13  ENG. INTAKE       134.98 DEG. F
C   14 RAD. TOP LEFT      156.57 DEG. F
C   15 RAD. BTTM LEFT     152.59 DEG. F
C   16 RAD. TOP RIGHT     145.60 DEG. F
C   17 RAD. BTTM RIGHT    152.59 DEG. F
C   18 GEN. AIR IN        124.23 DEG. F
C   19 GEN. AIR OUT       142.95 DEG. F
C   20 GEN. FRAME TOP     142.53 DEG. F
C   21 GEN. FRAME BTTM    128.61 DEG. F
C   22 GEN. EXCITER       136.05 DEG. F
C   23 GEN. VOLT. REG.    122.04 DEG. F
C   24 CONTROL PANEL      125.47 DEG. F
C   25 RELAY AREA         134.89 DEG. F
C   26 BATTERY LEFT       136.82 DEG. F
C   27 BATTERY RIGHT      117.70 DEG. F
C   28 AIR IN SET         125.98 DEG. F
C   29 FUEL TANK           68.339 DEG. F
C   30 FUEL OUTLET        130.35 DEG. F

END SCAN GROUP 1      04 FEB 88  11:40:24

STOPPED SINGLE SCAN   04 FEB 88  11:40:24
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BEGIN SCAN GROUP 1    04 FEB 88  11:50:28
30 KW 400 HZ GEN SET S/N RZ7 0007

C    1 EXHAUST 1          829.13 DEG. F
C    2 EXHAUST 2          683.53 DEG. F
C    3 EXHAUST 3          807.92 DEG. F
C    4 EXHAUST 4          885.41 DEG. F
C    7 ENG. COOL. IN      206.56 DEG. F
C    8 ENG. COOL. OUT     215.66 DEG. F
C    9 OIL SUMP           232.44 DEG. F
C   10 OIL GALLERY        235.96 DEG. F
C   13  ENG. INTAKE       136.07 DEG. F
C   14 RAD. TOP LEFT      158.92 DEG. F
C   15 RAD. BTTM LEFT     155.37 DEG. F
C   16 RAD. TOP RIGHT     149.39 DEG. F
C   17 RAD. BTTM RIGHT    157.43 DEG. F
C   18 GEN. AIR IN        120.79 DEG. F
C   19 GEN. AIR OUT       151.53 DEG. F
C   20 GEN. FRAME TOP     150.05 DEG. F
C   21 GEN. FRAME BTTM    132.44 DEG. F
C   22 GEN. EXCITER       138.10 DEG. F
C   23 GEN. VOLT. REG.    127.53 DEG. F
C   24 CONTROL PANEL      130.94 DEG. F
C   25 RELAY AREA         135.54 DEG. F
C   26 BATTERY LEFT       144.18 DEG. F
C   27 BATTERY RIGHT      125.09 DEG. F
C   28 AIR IN SET         124.24 DEG. F
C   29 FUEL TANK           72.305 DEG. F
C   30 FUEL OUTLET        140.53 DEG. F

END SCAN GROUP 1      04 FEB 88  11:50:37

STOPPED SINGLE SCAN   04 FEB 88  11:50:37
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BEGIN SCAN GROUP 0    04 FEB 88  12:00:45
GO

C    0                    .00000
C    1 EXHAUST 1          831.55 DEG. F
C    2 EXHAUST 2          684.85 DEG. F
C    3 EXHAUST 3          816.56 DEG. F
C    4 EXHAUST 4          887.45 DEG. F
C    5 EXHAUST 5          882.52 DEG. F
C    6 EXHAUST 6          784.96 DEG. F
C    7 ENG. COOL. IN      211.43 DEG. F
C    8 ENG. COOL. OUT     221.26 DEG. F
C    9 OIL SUMP           241.89 DEG. F
C   10 OIL GALLERY        244.27 DEG. F
C   11 OIL COOLER IN              OPEN TC
C   12 OIL COOLER OUT             OPEN TC
C   13  ENG. INTAKE       138.63 DEG. F
C   14 RAD. TOP LEFT      162.56 DEG. F
C   15 RAD. BTTM LEFT     158.42 DEG. F
C   16 RAD. TOP RIGHT     154.61 DEG. F
C   17 RAD. BTTM RIGHT    160.31 DEG. F
C   18 GEN. AIR IN        126.12 DEG. F
C   19 GEN. AIR OUT       159.39 DEG. F
C   20 GEN. FRAME TOP     156.90 DEG. F
C   21 GEN. FRAME BTTM    137.39 DEG. F
C   22 GEN. EXCITER       -10.635 DEG. F
C   23 GEN. VOLT. REG.    130.79 DEG. F
C   24 CONTROL PANEL      136.16 DEG. F
C   25 RELAY AREA         137.44 DEG. F
C   26 BATTERY LEFT               OPEN TC
C   27 BATTERY RIGHT              OPEN TC
C   28 AIR IN SET         125.55 DEG. F
C   29 FUEL TANK           74.079 DEG. F
C   30 FUEL OUTLET        146.95 DEG. F
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BEGIN SCAN GROUP 1    04 FEB 88  12:01:05
30 KW 400 HZ GEN SET S/N REF 0003

C    1 EXHAUST 1          831.55 DEG. F
C    2 EXHAUST 2          686.18 DEG. F
C    3 EXHAUST 3          817.78 DEG. F
C    4 EXHAUST 4          887.21 DEG. F
C    7 ENG. COOL. IN      211.85 DEG. F
C    8 ENG. COOL. OUT     221.64 DEG. F
C    9 OIL SUMP           242.55 DEG. F
C   10 OIL GALLERY        243.36 DEG. F
C   13  ENG. INTAKE       138.30 DEG. F
C   14 RAD. TOP LEFT      162.48 DEG. F
C   15 RAD. BTTM LEFT     158.07 DEG. F
C   16 RAD. TOP RIGHT     155.87 DEG. F
C   17 RAD. BTTM RIGHT    160.78 DEG. F
C   18 GEN. AIR IN        125.44 DEG. F
C   19 GEN. AIR OUT       158.97 DEG. F
C   20 GEN. FRAME TOP     156.78 DEG. F
C   21 GEN. FRAME BTTM    136.64 DEG. F
C   22 GEN. EXCITER       148.79 DEG. F
C   23 GEN. VOLT. REG.    132.36 DEG. F
C   24 CONTROL PANEL      136.31 DEG. F
C   25 RELAY AREA         137.73 DEG. F
C   26 BATTERY LEFT              OPEN TC
C   27 BATTERY RIGHT             OPEN TC
C   28 AIR IN SET         126.41 DEG. F
C   29 FUEL TANK          75.474 DEG. F
C   30 FUEL OUTLET        146.89 DEG. F

END SCAN GROUP 1      04 FEB 88  12:01:14

STOPPED SINGLE SCAN   04 FEB 88  12:01:14
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TEST DATA

ITEM 30 KW / 400 Hz
3 PH WYE
ALTERNATOR
MFGR. LIMA ELECTRIC
MODEL NO. MEP 114A
SERIAL NO. A27 0003

NTS
National Technical Systems | Scientific Services Group | Testing Division P.O. Box 38 Harwood, Virginia 22471 Tel: 703 752 5300

METHOD 512.1
CIRCUIT INTERRUPTER. (SHORT CIRCUIT)

REF. NO. MIL-STD 705
SHEET 1 OF
DATE 4 FEB 1985
JOB NO. 555-2140
PROJ. ENGR.
RECORDER/OBSERVER BJ/LEN/GC

INST TIME	STEP NO.	LOAD STEP	E6029D VOLTAGE L_1-L_0 VAC	L_2-L_0 VAC	L_3-L_0 VAC	E6030D AMPERES x 10 L_1-L_0 AC AMPS	L_2-L_0 AC AMPS	L_3-L_0 AC AMPS	E6031D KILOWATTS x 10 L_1-L_0 Kw	L_2-L_0 Kw	L_3-L_0 Kw	E6252D POWER FACTOR PF	E6040D FREQ. Hz	E6060D EXCITER VOLTS VDC	E6280D FIELD AMPS DCA	AMB. TEMP. °F	Press inches of H2O IN WATER
1425			START UNIT APPLIED RATED LOAD														
1426		RL	120	120	120	2.56	2.56	2.58	.249	.25	.25	.50	400.5	15.5	5.1	125	33.2 SEC
	L3-L0		APPLIED SHORT TO L3-L0 CIRCUIT BREAKER TRIPPED INDICATOR CIRCUIT ON														
1432			APPLIED RATED LOAD														
1432		RL	120	120	120	2.56	2.56	2.56	.249	.25	.25	.50	400.5	15.7	5.1	127	33.6 33.8
	L2-L3		APPLIED SHORT TO L2-L3 CIRCUIT BREAKER TRIPPED INDICATOR LIGHT ON														
1435			APPLIED RATED LOAD														
1436		RL	120	120	120	2.56	2.56	2.58	.249	.25	.25	.50	400.5	15.8	5.15	125	33.6 35.4
	L1-L3		APPLIED SHORT TO L1-L3 CIRCUIT BREAKER TRIPPED INDICATOR LIGHT ON														
1439			APPLIED RATED LOAD														
1439		RL	120	120	120	2.50	2.57	2.58	.249	.25	.25	.50	400.6	15.8	5.15	124	33.7 35.7
	L1-L2-L3		APPLIED SHORT TO L1-L2-L3 CIRCUIT BREAKER TRIPPED INDICATOR LIGHT ON														
1442			APPLIED RATED LOAD														
1442		RL	120	120	120	2.56	2.56	2.58	.249	.25	.25	.50	400.5	15.7	5.15	122	33.7 34.6
	L1-L2		APPLIED SHORT TO L1-L2 CIRCUIT BREAKER TRIPPED INDICATOR LIGHT ON														
1445			APPLIED RATED LOAD														
1445		RL	120	120	120	2.56	2.56	2.58	.249	.25	.25	.50	400.5	15.6	5.15	127	33.7 34.6
	L2-L0		APPLIED SHORT TO L2-L0 CIRCUIT BREAKER TRIPPED INDICATOR LIGHT ON														
1447			APPLIED RATED LOAD														
1447		RL	120	120	120	2.56	2.56	2.58	.248	.25	.25	.50	400.6	15.6	5.15	127	33.6 34.6
			APPLIED SHORT TO L1-L0 CIRCUIT BREAKER TRIPPED INDICATOR LIGHT ON														
1455			END OF TEST SHUT UNIT DOWN														

TEST DATA

ITEM 30 KW 400 Hz
GENERATOR SET
MODIFIED
MFGR. LIGBY WELDING.
MODEL NO. MEP 114A
SERIAL NO. RZ 70003

NTS
National Technical Systems | Scientific Services Group | Testing Division, P.O. Box 38, Harwood, Virginia 22471, Tel: 703 752 5300

SHORT CIRCUIT
INTERRUPTER TEST (COMPUTATION RESULTS)

REF. NO. MIL STD 705: 5121C
SHEET 1 OF 1
DATE 15 FEB 1988
JOB NO. 555 2140
PROJ. ENGR.
RECORDER/OBSERVER

TEST. → / √ SHORT ↓	CURRENT BEFORE SHORT	CURRENT MAX	INTERRUPT TIME
UNITS			
SYM.			
L1-L0	102.4	1039	21.1
L2-L0	102.4	1054.2	25
L3-L0	103.2	1135.6	22.5
L1-L2	102.4	858.5	20.3
L2-L3	103.2	912.3	22.6
L3-L1	103.2	924.2	20.3
L1-L2-L3	103.2	939	17.1

NOTES:

B-378

Short Circuit

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BEGIN SCAN GROUP 1    04 FEB 88  14:12:56
30 KW 400 HZ GEN SET S/N RZ7 0003

C    1 EXHAUST 1          141.90 DEG. F
C    2 EXHAUST 2          141.44 DEG. F
C    3 EXHAUST 3          141.59 DEG. F
C    4 EXHAUST 4          141.64 DEG. F
C    7 ENG. COOL. IN      119.95 DEG. F
C    8 ENG. COOL. OUT     149.02 DEG. F
C    9 OIL SUMP           147.38 DEG. F
C   10 OIL GALLERY        139.22 DEG. F
C   13  ENG. INTAKE       129.28 DEG. F
C   14 RAD. TOP LEFT      134.44 DEG. F
C   15 RAD. BTTM LEFT     120.21 DEG. F
C   16 RAD. TOP RIGHT     135.55 DEG. F
C   17 RAD. BTTM RIGHT    121.53 DEG. F
C   18 GEN. AIR IN        120.90 DEG. F
C   19 GEN. AIR OUT       113.63 DEG. F
C   20 GEN. FRAME TOP     148.10 DEG. F
C   21 GEN. FRAME BTTM    133.95 DEG. F
C   22 GEN. EXCITER       130.99 DEG. F
C   23 GEN. VOLT. REG.    130.24 DEG. F
C   24 CONTROL PANEL      127.74 DEG. F
C   25 RELAY AREA         129.37 DEG. F
C   27 BATTERY RIGHT      111.79 DEG. F
C   28 AIR IN SET         120.18 DEG. F
C   29 FUEL TANK          94.109 DEG. F
C   30 FUEL OUTLET        118.27 DEG. F

END SCAN GROUP 1      04 FEB 88  14:13:04

STOPPED SINGLE SCAN   04 FEB 88  14:13:04


BEGIN SCAN GROUP 0    04 FEB 88  14:28:29
GO

C    0                    .00000
C    1 EXHAUST 1          800.38 DEG. F
C    2 EXHAUST 2          645.89 DEG. F
C    3 EXHAUST 3          790.85 DEG. F
C    4 EXHAUST 4          869.22 DEG. F
C    5 EXHAUST 5          853.97 DEG. F
C    6 EXHAUST 6          762.53 DEG. F
C    7 ENG. COOL. IN      191.31 DEG. F
C    8 ENG. COOL. OUT     198.58 DEG. F
C    9 OIL SUMP           182.66 DEG. F
C   10 OIL GALLERY        185.35 DEG. F
C   11 OIL COOLER IN             OPEN TC
C   12 OIL COOLER OUT            OPEN TC
C   13  ENG. INTAKE       129.49 DEG. F
C   14 RAD. TOP LEFT      148.10 DEG. F
C   15 RAD. BTTM LEFT     144.73 DEG. F
C   16 RAD. TOP RIGHT     144.23 DEG. F
C   17 RAD. BTTM RIGHT    146.36 DEG. F
C   18 GEN. AIR IN        125.80 DEG. F
C   19 GEN. AIR OUT       150.44 DEG. F
C   20 GEN. FRAME TOP     145.01 DEG. F
C   21 GEN. FRAME BTTM    131.86 DEG. F
C   22 GEN. EXCITER       131.96 DEG. F
C   23 GEN. VOLT. REG.    129.58 DEG. F
C   24 CONTROL PANEL      127.14 DEG. F
C   25 RELAY AREA         129.89 DEG. F
C   26 BATTERY LEFT              OPEN TC
C   27 BATTERY RIGHT      120.04 DEG. F
C   28 AIR IN SET         125.21 DEG. F
C   29 FUEL TANK          95.936 DEG. F
C   30 FUEL OUTLET        134.52 DEG. F
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BEGIN SCAN GROUP 1    04 FEB 88  14:32:16
30 KW 400 HZ GEN SET S/N RZ7 0003

C    1 EXHAUST 1          572.68 DEG. F
C    2 EXHAUST 2          480.36 DEG. F
C    3 EXHAUST 3          590.92 DEG. F
C    4 EXHAUST 4          615.98 DEG. F
C    7 ENG. COOL. IN      187.59 DEG. F
C    8 ENG. COOL. OUT     193.60 DEG. F
C    9 OIL SUMP           199.88 DEG. F
C   10 OIL GALLERY        202.80 DEG. F
C   13  ENG. INTAKE       132.40 DEG. F
C   14 RAD. TOP LEFT      148.65 DEG. F
C   15 RAD. BTTM LEFT     148.12 DEG. F
C   16 RAD. TOP RIGHT     145.09 DEG. F
C   17 RAD. BTTM RIGHT    149.63 DEG. F
C   18 GEN. AIR IN        125.51 DEG. F
C   19 GEN. AIR OUT       153.76 DEG. F
C   20 GEN. FRAME TOP     150.16 DEG. F
C   21 GEN. FRAME BTTM    134.95 DEG. F
C   22 GEN. EXCITER       137.47 DEG. F
C   23 GEN. VOLT. REG.    129.60 DEG. F
C   24 CONTROL PANEL      129.74 DEG. F
C   25 RELAY AREA         132.61 DEG. F
C   27 BATTERY RIGHT      122.64 DEG. F
C   28 AIR IN SET         127.63 DEG. F
C   29 FUEL TANK          97.376 DEG. F
C   30 FUEL OUTLET        140.68 DEG. F

END SCAN GROUP 1      04 FEB 88  14:32:25

STOPPED SINGLE SCAN   04 FEB 88  14:32:25


BEGIN SCAN GROUP 1    04 FEB 88  14:35:18
30 KW/400 HZ GEN SET S/N RZ7 0003

C    1 EXHAUST 1          708.14 DEG. F
C    2 EXHAUST 2          538.51 DEG. F
C    3 EXHAUST 3          676.38 DEG. F
C    4 EXHAUST 4          758.89 DEG. F
C    7 ENG. COOL. IN      187.39 DEG. F
C    8 ENG. COOL. OUT     193.59 DEG. F
C    9 OIL SUMP           207.87 DEG. F
C   10 OIL GALLERY        210.82 DEG. F
C   13  ENG. INTAKE       133.50 DEG. F
C   14 RAD. TOP LEFT      148.78 DEG. F
C   15 RAD. BTTM LEFT     148.28 DEG. F
C   16 RAD. TOP RIGHT     146.59 DEG. F
C   17 RAD. BTTM RIGHT    150.64 DEG. F
C   18 GEN. AIR IN        125.33 DEG. F
C   19 GEN. AIR OUT       155.81 DEG. F
C   20 GEN. FRAME TOP     152.69 DEG. F
C   21 GEN. FRAME BTTM    135.93 DEG. F
C   22 GEN. EXCITER       136.87 DEG. F
C   23 GEN. VOLT. REG.    130.74 DEG. F
C   24 CONTROL PANEL      131.43 DEG. F
C   25 RELAY AREA         133.85 DEG. F
C   27 BATTERY RIGHT      124.78 DEG. F
C   28 AIR IN SET         125.19 DEG. F
C   29 FUEL TANK          98.518 DEG. F
C   30 FUEL OUTLET        143.53 DEG. F

END SCAN GROUP 1      04 FEB 88  14:35:27

STOPPED SINGLE SCAN   04 FEB 88  14:35:27
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BEGIN SCAN GROUP 1    04 FEB 88  14:49:03
30 KW 400 HZ GEN SET S/N RZ7 0003

C    1 EXHAUST 1          563.15 DEG. F
C    2 EXHAUST 2          465.67 DEG. F
C    3 EXHAUST 3          572.85 DEG. F
C    4 EXHAUST 4          593.35 DEG. F
C    7 ENG. COOL. IN      187.54 DEG. F
C    8 ENG. COOL. OUT     193.29 DEG. F
C    9 OIL SUMP           222.32 DEG. F
C   10 OIL GALLERY        222.83 DEG. F
C   13  ENG. INTAKE       132.63 DEG. F
C   14 RAD. TOP LEFT      148.71 DEG. F
C   15 RAD. BTTM LEFT     147.21 DEG. F
C   16 RAD. TOP RIGHT     148.31 DEG. F
C   17 RAD. BTTM RIGHT    151.17 DEG. F
C   18 GEN. AIR IN        127.72 DEG. F
C   19 GEN. AIR OUT       158.32 DEG. F
C   20 GEN. FRAME TOP     153.90 DEG. F
C   21 GEN. FRAME BTTM    136.10 DEG. F
C   22 GEN. EXCITER       137.60 DEG. F
C   23 GEN. VOLT. REG.    134.21 DEG. F
C   24 CONTROL PANEL      134.63 DEG. F
C   25 RELAY AREA         132.49 DEG. F
C   27 BATTERY RIGHT      129.19 DEG. F
C   28 AIR IN SET         127.93 DEG. F
C   29 FUEL TANK          98.898 DEG. F
C   30 FUEL OUTLET        147.27 DEG. F

END SCAN GROUP 1      04 FEB 88  14:49:12

STOPPED SINGLE SCAN   04 FEB 88  14:49:12
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BEGIN SCAN GROUP 1    04 FEB 88  14:39:15
30 KW 400 HZ GEN SET S/N RZ7 0003

C    1 EXHAUST 1          569.10 DEG. F
C    2 EXHAUST 2          454.53 DEG. F
C    3 EXHAUST 3          569.81 DEG. F
C    4 EXHAUST 4          604.03 DEG. F
C    7 ENG. COOL. IN      184.60 DEG. F
C    8 ENG. COOL. OUT     191.09 DEG. F
C    9 OIL SUMP           214.18 DEG. F
C   10 OIL GALLERY        217.99 DEG. F
C   13  ENG. INTAKE       131.81 DEG. F
C   14 RAD. TOP LEFT      146.01 DEG. F
C   15 RAD. BTTM LEFT     146.25 DEG. F
C   16 RAD. TOP RIGHT     144.39 DEG. F
C   17 RAD. BTTM RIGHT    149.09 DEG. F
C   18 GEN. AIR IN        122.93 DEG. F
C   19 GEN. AIR OUT       156.10 DEG. F
C   20 GEN. FRAME TOP     153.28 DEG. F
C   21 GEN. FRAME BTTM    135.47 DEG. F
C   22 GEN. EXCITER       136.53 DEG. F
C   23 GEN. VOLT. REG.    131.64 DEG. F
C   24 CONTROL PANEL      132.98 DEG. F
C   25 RELAY AREA         130.82 DEG. F
C   27 BATTERY RIGHT      126.93 DEG. F
C   28 AIR IN SET         124.53 DEG. F
C   29 FUEL TANK          99.068 DEG. F
C   30 FUEL OUTLET        145.54 DEG. F

END SCAN GROUP 1      04 FEB 88  14:39:23

STOPPED SINGLE SCAN   04 FEB 88  14:39:23
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BEGIN SCAN GROUP 1    04 FEB 88  14:54:43
30 KW/400 HZ GEN SET S/N RZ7 0003

C    1 EXHAUST 1          588.31 DEG. F
C    2 EXHAUST 2          445.94 DEG. F
C    3 EXHAUST 3          569.27 DEG. F
C    4 EXHAUST 4          623.31 DEG. F
C    7 ENG. COOL. IN      184.09 DEG. F
C    8 ENG. COOL. OUT     189.69 DEG. F
C    9 OIL SUMP           224.81 DEG. F
C   10 OIL GALLERY        225.76 DEG. F
C   13  ENG. INTAKE       133.49 DEG. F
C   14 RAD. TOP LEFT      147.84 DEG. F
C   15 RAD. BTTM LEFT     147.01 DEG. F
C   16 RAD. TOP RIGHT     148.13 DEG. F
C   17 RAD. BTTM RIGHT    151.51 DEG. F
C   18 GEN. AIR IN        127.03 DEG. F
C   19 GEN. AIR OUT       158.94 DEG. F
C   20 GEN. FRAME TOP     155.33 DEG. F
C   21 GEN. FRAME BTTM    137.87 DEG. F
C   22 GEN. EXCITER       138.95 DEG. F
C   23 GEN. VOLT. REG.    134.87 DEG. F
C   24 CONTROL PANEL      135.91 DEG. F
C   25 RELAY AREA         132.74 DEG. F
C   27 BATTERY RIGHT      131.11 DEG. F
C   28 AIR IN SET         127.35 DEG. F
C   29 FUEL TANK          100.08 DEG. F
C   30 FUEL OUTLET        151.34 DEG. F

END SCAN GROUP 1      04 FEB 88  14:54:51

STOPPED SINGLE SCAN   04 FEB 88  14:54:51
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BEGIN SCAN GROUP 1    04 FEB 88  14:46:20
30 KW/400 HZ GEN SET S/N RZ7 0003

C    1 EXHAUST 1          613.96 DEG. F
C    2 EXHAUST 2          452.53 DEG. F
C    3 EXHAUST 3          584.90 DEG. F
C    4 EXHAUST 4          651.22 DEG. F
C    7 ENG. COOL. IN      188.37 DEG. F
C    8 ENG. COOL. OUT     186.55 DEG. F
C    9 OIL SUMP           228.20 DEG. F
C   10 OIL GALLERY        228.64 DEG. F
C   13  ENG. INTAKE       138.24 DEG. F
C   14 RAD. TOP LEFT      143.94 DEG. F
C   15 RAD. BTTM LEFT     142.69 DEG. F
C   16 RAD. TOP RIGHT     144.39 DEG. F
C   17 RAD. BTTM RIGHT    147.31 DEG. F
C   18 GEN. AIR IN        122.38 DEG. F
C   19 GEN. AIR OUT       155.26 DEG. F
C   20 GEN. FRAME TOP     152.23 DEG. F
C   21 GEN. FRAME BTTM    133.58 DEG. F
C   22 GEN. EXCITER       135.73 DEG. F
C   23 GEN. VOLT. REG.    134.06 DEG. F
C   24 CONTROL PANEL      134.18 DEG. F
C   25 RELAY AREA         128.69 DEG. F
C   27 BATTERY RIGHT      128.50 DEG. F
C   28 AIR IN SET         122.81 DEG. F
C   29 FUEL TANK          98.304 DEG. F
C   30 FUEL OUTLET        148.11 DEG. F

END SCAN GROUP 1      04 FEB 88  14:46:28

STOPPED SINGLE SCAN   04 FEB 88  14:46:28
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TEST DATA

ITEM 30 KW / 400 Hz GEN SET MODIFIED

MFGR. LIBBY WELDING

MODEL NO. MEP 114A

SERIAL NO. RZ 20003

NTS

National Technical Systems | Scientific Services Group | Testing Division P.O. Box 30 Hallwood, Virginia 22471 Tel: 703 752 5300

METHOD 512.3

CIRCUIT INTERRUPTER. (OVER & UNDER VOLTAGE)

REF. NO. MIL-STD 705

SHEET 1 OF 2

DATE 4 FEB 1988

JOB NO. 555-2140

PROJ. ENGR.

RECORDER/OBSERVER

INST TIME	STEP NO.	LOAD STEP	#1 E60780 VOLTAGE t_1-t_0 VAC	#2 E60240 VOLTAGE t_2-t_0 VAC	VOLTAGE t_3-t_0 VAC	E60420 AMPERES t_1-t_0 AC AMPS	AMPERES t_2-t_0 AC AMPS	AMPERES t_3-t_0 AC AMPS	E60530 KILOWATTS t_1-t_0 KW	KILOWATTS t_2-t_0 KW	KILOWATTS t_3-t_0 KW	E62520 POWER FACTOR PF	E60760 FREQ. Hz	E61670 EXCITER VOLTS VDC	E62500 FIELD AMPS ADC	AMB. TEMP. °F	Press Pwr Fuel In/H2O
1536			START UNIT													121	
1538			155		120								400.5				
1539			APPLIED OVERVOLTAGE - UNIT SHUTDOWN INDICATOR LIGHT ON - RED STEP														
1540			RESTART UNIT - CIRCUIT BREAKER RESET														
1540			156		120								400.5			123	
1542	8		APPLIED OVERVOLTAGE - UNIT SHUTDOWN - INDICATOR LIGHT ON														
1542	8-39		RESTART UNIT - CIRCUIT BREAKER RESET														
1543			156		120								400.5			123	
1543			APPLIED OVERVOLTAGE - UNIT SHUTDOWN							INDICATOR LIGHT ON							
1603			RESTART UNIT FOR UNDERVOLTAGE TEST														
			120		46								400.5			123	
			APPLIED UNDERVOLTAGE - CIRCUIT BREAKER TRIPPED - INDICATOR LIGHT ON														
			RESET CIRCUIT BREAKER														
1610			120		46								400.5			123	
			APPLIED UNDERVOLTAGE - CIRCUIT BREAKER TRIPPED - INDICATOR LIGHT ON														
			RESET CIRCUIT BREAKER														
1610			120		46								400.5			124	
			APPLIED UNDERVOLTAGE - CIRCUIT BREAKER TRIPPED INDICATOR LIGHT ON														
			RESET CIRCUIT BREAKER														
1613			120		73								400.5			125	
			APPLIED UNDERVOLTAGE - CIRCUIT BREAKER TRIPPED - INDICATOR LIGHT ON														
			RESET CIRCUIT BREAKER														

NOTES: UNIT FAILED OVERVOLTAGE - EXCEEDED 1 SEC 2 OUT OF 3 TRIES i.e. 1.11, 1.05, 0.95 Sec

TEST DATA

ITEM 30 KW / 400 HZ
400 SET
MOUNTED [illegible]
MFGR. CIRCLE WELDING
MODEL NO. MEP 114A
SERIAL NO. RZ1 0003

NTS
National Technical Systems | Scientific Services Group | Testing Division P.O. Box 38 Hailwood, Virginia 22471 Tel: 703 752 5300

METHOD 512.3
CIRCUIT INTERRUPTER (OVER & UNDER VOLTAGE)

REF. NO. MIL-STD 705
SHEET 2 OF 2
DATE 4 FEB 86
JOB NO. 555-2140
PROJ. ENGR.
RECORDER/OBSERVER BJ/KM/RC

INST TIME	STEP NO.	LOAD STEP	E60780 #1 VOLTAGE L_1-L_0 VAC	E60240 #2 VOLTAGE L_2-L_0 VAC	L_3-L_0 VAC	E60420 AMPERES x40 L_1-L_0 AC AMPS	L_2-L_0 AC AMPS	L_3-L_0 AC AMPS	E6253D KILOWATTS x40 L_1-L_0 Kw	L_2-L_0 Kw	L_3-L_0 Kw	E62500 POWER FACTOR PF	E60760 FREQ. Hz	E6K670 EXCITER VOLTS VDC	E62500 FIELD AMPS DCA	AMB. TEMP. °F	Press inches/Hg IN UNIT
1614			120		73								400.5			126	
			APPLIED UNDER VOLTAGE CIRCUIT BREAKER TRIPPED INDICATOR ON														
			RESET CIRCUIT BREAKER														
1615			120		73								400.5			126	
			APPLIED UNDER VOLTAGE CIRCUIT BREAKER TRIPPED INDICATOR ON														
			RESET CIRCUIT BREAKER														
1617	B-3 82		120		99	TO CHECK TIME DELAY							400.5			127	
1618			120		99								400.5			125	
			APPLIED UNDER VOLTAGE CIRCUIT BREAKER TRIPPED INDICATOR ON														
			RESET CIRCUIT BREAKER														
1619			120		99								400.6			123	
			APPLIED UNDER VOLTAGE CIRCUIT BREAKER TRIPPED INDICATOR ON														
			RESET CIRCUIT BREAKER														
1620			120		99								400.6			122	
			APPLIED UNDER VOLTAGE CIRCUIT BREAKER TRIPPED INDICATOR ON														
1622			END OF TEST SHUT UNIT DOWN														

NOTES:

Can/under voltage Next 5 F.3

BEGIN SCAN GROUP 1 04 FEB 88 15:37:46
30 KW 400 HZ GEN SET S/N RZT 0003

C	1	EXHAUST 1	404.02	DEG. F
C	2	EXHAUST 2	324.05	DEG. F
C	3	EXHAUST 3	378.45	DEG. F
C	4	EXHAUST 4	407.84	DEG. F
C	7	ENG. COOL. IN	178.99	DEG. F
C	8	ENG. COOL. OUT	186.63	DEG. F
C	9	OIL SUMP	194.79	DEG. F
C	10	OIL GALLERY	197.87	DEG. F
C	13	ENG. INTAKE	137.90	DEG. F
C	14	RAD. TOP LEFT	139.33	DEG. F
C	15	RAD. BTTM LEFT	140.26	DEG. F
C	16	RAD. TOP RIGHT	142.16	DEG. F
C	17	RAD. BTTM RIGHT	143.46	DEG. F
C	18	GEN. AIR IN	121.57	DEG. F
C	19	GEN. AIR OUT	153.36	DEG. F
C	20	GEN. FRAME TOP	156.14	DEG. F
C	21	GEN. FRAME BTTM	141.13	DEG. F
C	22	GEN. EXCITER	135.85	DEG. F
C	23	GEN. VOLT. REG.	135.97	DEG. F
C	24	CONTROL PANEL	134.69	DEG. F
C	25	RELAY AREA	128.99	DEG. F
C	27	BATTERY RIGHT	125.19	DEG. F
C	28	AIR IN SET	121.52	DEG. F
C	29	FUEL TANK	105.30	DEG. F
C	30	FUEL OUTLET	148.64	DEG. F

END SCAN GROUP 1 04 FEB 88 15:37:55

STOPPED SINGLE SCAN 04 FEB 88 15:37:55

BEGIN SCAN GROUP 1 04 FEB 88 15:40:41
30 KW/400 HZ GEN SET S/N RZ7 0003

C	1	EXHAUST 1	398.30	DEG. F
C	2	EXHAUST 2	326.74	DEG. F
C	3	EXHAUST 3	377.94	DEG. F
C	4	EXHAUST 4	406.39	DEG. F
C	7	ENG. COOL. IN	174.67	DEG. F
C	8	ENG. COOL. OUT	182.21	DEG. F
C	9	OIL SUMP	195.99	DEG. F
C	10	OIL GALLERY	198.49	DEG. F
C	13	ENG. INTAKE	134.64	DEG. F
C	14	RAD. TOP LEFT	140.36	DEG. F
C	15	RAD. BTTM LEFT	141.36	DEG. F
C	16	RAD. TOP RIGHT	141.85	DEG. F
C	17	RAD. BTTM RIGHT	144.00	DEG. F
C	18	GEN. AIR IN	122.69	DEG. F
C	19	GEN. AIR OUT	154.42	DEG. F
C	20	GEN. FRAME TOP	155.69	DEG. F
C	21	GEN. FRAME BTTM	139.14	DEG. F
C	22	GEN. EXCITER	135.87	DEG. F
C	23	GEN. VOLT. REG.	135.33	DEG. F
C	24	CONTROL PANEL	134.27	DEG. F
C	25	RELAY AREA	129.57	DEG. F
C	27	BATTERY RIGHT	126.84	DEG. F
C	28	AIR IN SET	123.25	DEG. F
C	29	FUEL TANK	105.58	DEG. F
C	30	FUEL OUTLET	148.92	DEG. F

END SCAN GROUP 1 04 FEB 88 15:40:58

STOPPED SINGLE SCAN 04 FEB 88 15:40:58

BEGIN SCAN GROUP 1 04 FEB 88 15:41:57
30 KW 400 HZ GEN SET S/N RZT 0003

C	1	EXHAUST 1	403.36	DEG. F
C	2	EXHAUST 2	334.77	DEG. F
C	3	EXHAUST 3	386.13	DEG. F
C	4	EXHAUST 4	408.42	DEG. F
C	7	ENG. COOL. IN	174.46	DEG. F
C	8	ENG. COOL. OUT	182.45	DEG. F
C	9	OIL SUMP	197.84	DEG. F
C	10	OIL GALLERY	200.83	DEG. F
C	13	ENG. INTAKE	132.42	DEG. F
C	14	RAD. TOP LEFT	139.96	DEG. F
C	15	RAD. BTTM LEFT	140.12	DEG. F
C	16	RAD. TOP RIGHT	141.71	DEG. F
C	17	RAD. BTTM RIGHT	143.58	DEG. F
C	18	GEN. AIR IN	123.41	DEG. F
C	19	GEN. AIR OUT	154.38	DEG. F
C	20	GEN. FRAME TOP	153.50	DEG. F
C	21	GEN. FRAME BTTM	138.15	DEG. F
C	22	GEN. EXCITER	136.53	DEG. F
C	23	GEN. VOLT. REG.	134.99	DEG. F
C	24	CONTROL PANEL	134.00	DEG. F
C	25	RELAY AREA	128.83	DEG. F
C	27	BATTERY RIGHT	127.15	DEG. F
C	28	AIR IN SET	123.31	DEG. F
C	29	FUEL TANK	105.78	DEG. F
C	30	FUEL OUTLET	149.22	DEG. F

END SCAN GROUP 1 04 FEB 88 15:42:05

STOPPED SINGLE SCAN 04 FEB 88 15:42:05

BEGIN SCAN GROUP 1 04 FEB 88 15:42:55
30 KW/400 HZ GEN SET S/N RZ7 0003

C	1	EXHAUST 1	404.40	DEG. F
C	2	EXHAUST 2	336.61	DEG. F
C	3	EXHAUST 3	386.85	DEG. F
C	4	EXHAUST 4	414.73	DEG. F
C	7	ENG. COOL. IN	175.50	DEG. F
C	8	ENG. COOL. OUT	183.34	DEG. F
C	9	OIL SUMP	199.15	DEG. F
C	10	OIL GALLERY	201.33	DEG. F
C	13	ENG. INTAKE	131.91	DEG. F
C	14	RAD. TOP LEFT	140.58	DEG. F
C	15	RAD. BTTM LEFT	140.89	DEG. F
C	16	RAD. TOP RIGHT	141.82	DEG. F
C	17	RAD. BTTM RIGHT	144.08	DEG. F
C	18	GEN. AIR IN	123.92	DEG. F
C	19	GEN. AIR OUT	154.97	DEG. F
C	20	GEN. FRAME TOP	153.95	DEG. F
C	21	GEN. FRAME BTTM	137.79	DEG. F
C	22	GEN. EXCITER	135.74	DEG. F
C	23	GEN. VOLT. REG.	135.07	DEG. F
C	24	CONTROL PANEL	133.98	DEG. F
C	25	RELAY AREA	129.85	DEG. F
C	27	BATTERY RIGHT	127.20	DEG. F
C	28	AIR IN SET	124.25	DEG. F
C	29	FUEL TANK	105.91	DEG. F
C	30	FUEL OUTLET	149.22	DEG. F

END SCAN GROUP 1 04 FEB 88 15:43:04

STOPPED SINGLE SCAN 04 FEB 88 15:43:04

BEGIN SCAN GROUP 1 04 FEB 88 16:09:04
30 KW 400 HZ GEN SET S/N RZ7 0003

C	1	EXHAUST 1	397.51	DEG. F
C	2	EXHAUST 2	313.80	DEG. F
C	3	EXHAUST 3	366.66	DEG. F
C	4	EXHAUST 4	399.01	DEG. F
C	7	ENG. COOL. IN	167.49	DEG. F
C	8	ENG. COOL. OUT	177.27	DEG. F
C	9	OIL SUMP	186.72	DEG. F
C	10	OIL GALLERY	189.47	DEG. F
C	13	ENG. INTAKE	135.08	DEG. F
C	14	RAD. TOP LEFT	138.51	DEG. F
C	15	RAD. BTTM LEFT	138.99	DEG. F
C	16	RAD. TOP RIGHT	142.11	DEG. F
C	17	RAD. BTTM RIGHT	166.51	DEG. F
C	18	GEN. AIR IN	122.81	DEG. F
C	19	GEN. AIR OUT	151.85	DEG. F
C	20	GEN. FRAME TOP	154.86	DEG. F
C	21	GEN. FRAME BTTM	141.71	DEG. F
C	22	GEN. EXCITER	132.85	DEG. F
C	23	GEN. VOLT. REG.	130.48	DEG. F
C	24	CONTROL PANEL	129.14	DEG. F
C	25	RELAY AREA	126.92	DEG. F
C	27	BATTERY RIGHT	124.38	DEG. F
C	28	AIR IN SET	123.23	DEG. F
C	29	FUEL TANK	107.24	DEG. F
C	30	FUEL OUTLET	143.57	DEG. F

END SCAN GROUP 1 04 FEB 88 16:09:13

STOPPED SINGLE SCAN 04 FEB 88 16:09:13

BEGIN SCAN GROUP 1 04 FEB 88 16:09:54
30 KW/400 HZ GEN SET S/N RZ7 0003

C	1	EXHAUST 1	401.19	DEG. F
C	2	EXHAUST 2	324.10	DEG. F
C	3	EXHAUST 3	375.18	DEG. F
C	4	EXHAUST 4	402.97	DEG. F
C	7	ENG. COOL. IN	169.30	DEG. F
C	8	ENG. COOL. OUT	179.38	DEG. F
C	9	OIL SUMP	189.87	DEG. F
C	10	OIL GALLERY	191.92	DEG. F
C	13	ENG. INTAKE	132.95	DEG. F
C	14	RAD. TOP LEFT	138.48	DEG. F
C	15	RAD. BTTM LEFT	138.77	DEG. F
C	16	RAD. TOP RIGHT	142.82	DEG. F
C	17	RAD. BTTM RIGHT		OPEN TC
C	18	GEN. AIR IN	122.82	DEG. F
C	19	GEN. AIR OUT	151.45	DEG. F
C	20	GEN. FRAME TOP	152.61	DEG. F
C	21	GEN. FRAME BTTM	140.16	DEG. F
C	22	GEN. EXCITER	133.14	DEG. F
C	23	GEN. VOLT. REG.	130.33	DEG. F
C	24	CONTROL PANEL	129.11	DEG. F
C	25	RELAY AREA	127.58	DEG. F
C	27	BATTERY RIGHT	125.41	DEG. F
C	28	AIR IN SET	123.65	DEG. F
C	29	FUEL TANK	107.19	DEG. F
C	30	FUEL OUTLET	144.63	DEG. F

END SCAN GROUP 1 04 FEB 88 16:10:03

STOPPED SINGLE SCAN 04 FEB 88 16:10:03

BEGIN SCAN GROUP 1 04 FEB 88 16:10:29
30 KW 400 HZ GEN SET S/N RZ7 0003

C	1	EXHAUST 1	401.43	DEG. F
C	2	EXHAUST 2	329.40	DEG. F
C	3	EXHAUST 3	379.10	DEG. F
C	4	EXHAUST 4	407.21	DEG. F
C	7	ENG. COOL. IN	170.44	DEG. F
C	8	ENG. COOL. OUT	180.42	DEG. F
C	9	OIL SUMP	190.46	DEG. F
C	10	OIL GALLERY	193.63	DEG. F
C	13	ENG. INTAKE	131.94	DEG. F
C	14	RAD. TOP LEFT	138.27	DEG. F
C	15	RAD. BTTM LEFT	138.68	DEG. F
C	16	RAD. TOP RIGHT	141.69	DEG. F
C	17	RAD. BTTM RIGHT		OPEN TC
C	18	GEN. AIR IN	123.12	DEG. F
C	19	GEN. AIR OUT	151.63	DEG. F
C	20	GEN. FRAME TOP	151.96	DEG. F
C	21	GEN. FRAME BTTM	139.43	DEG. F
C	22	GEN. EXCITER	133.32	DEG. F
C	23	GEN. VOLT. REG.	130.43	DEG. F
C	24	CONTROL PANEL	129.34	DEG. F
C	25	RELAY AREA	127.71	DEG. F
C	27	BATTERY RIGHT	126.82	DEG. F
C	28	AIR IN SET	123.95	DEG. F
C	29	FUEL TANK	107.27	DEG. F
C	30	FUEL OUTLET	144.94	DEG. F

END SCAN GROUP 1 04 FEB 88 16:10:38

STOPPED SINGLE SCAN 04 FEB 88 16:10:38

BEGIN SCAN GROUP 1 04 FEB 88 16:13:07
30 KW/400 HZ GEN SET S/N RZ7 0003

C	1	EXHAUST 1	400.97	DEG. F
C	2	EXHAUST 2	334.52	DEG. F
C	3	EXHAUST 3	383.41	DEG. F
C	4	EXHAUST 4	412.14	DEG. F
C	7	ENG. COOL. IN	173.29	DEG. F
C	8	ENG. COOL. OUT	182.03	DEG. F
C	9	OIL SUMP	194.81	DEG. F
C	10	OIL GALLERY	197.79	DEG. F
C	13	ENG. INTAKE	138.45	DEG. F
C	14	RAD. TOP LEFT	139.78	DEG. F
C	15	RAD. BTTM LEFT	139.87	DEG. F
C	16	RAD. TOP RIGHT	141.22	DEG. F
C	17	RAD. BTTM RIGHT	162.21	DEG. F
C	18	GEN. AIR IN	124.21	DEG. F
C	19	GEN. AIR OUT	153.21	DEG. F
C	20	GEN. FRAME TOP	151.27	DEG. F
C	21	GEN. FRAME BTTM	137.00	DEG. F
C	22	GEN. EXCITER	134.10	DEG. F
C	23	GEN. VOLT. REG.	130.83	DEG. F
C	24	CONTROL PANEL	129.86	DEG. F
C	25	RELAY AREA	128.25	DEG. F
C	27	BATTERY RIGHT	127.74	DEG. F
C	28	AIR IN SET	125.88	DEG. F
C	29	FUEL TANK	107.78	DEG. F
C	30	FUEL OUTLET	145.74	DEG. F

END SCAN GROUP 1 04 FEB 88 16:13:15

STOPPED SINGLE SCAN 04 FEB 88 16:13:15

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BEGIN SCAN GROUP 1    04 FEB 88  16:14:46
30 KW 400 HZ GEN SET S/N RZ7 0003

C    1 EXHAUST 1          403.33 DEG. F
C    2 EXHAUST 2          337.96 DEG. F
C    3 EXHAUST 3          387.09 DEG. F
C    4 EXHAUST 4          412.59 DEG. F
C    7 ENG. COOL. IN      174.37 DEG. F
C    8 ENG. COOL. OUT     182.79 DEG. F
C    9 OIL SUMP           198.61 DEG. F
C   10 OIL GALLERY        201.74 DEG. F
C   13  ENG. INTAKE       129.99 DEG. F
C   14 RAD. TOP LEFT      140.79 DEG. F
C   15 RAD. BTTM LEFT     140.44 DEG. F
C   16 RAD. TOP RIGHT     141.75 DEG. F
C   17 RAD. BTTM RIGHT    144.01 DEG. F
C   18 GEN. AIR IN        125.68 DEG. F
C   19 GEN. AIR OUT       154.11 DEG. F
C   20 GEN. FRAME TOP     150.87 DEG. F
C   21 GEN. FRAME BTTM    136.59 DEG. F
C   22 GEN. EXCITER       135.55 DEG. F
C   23 GEN. VOLT. REG.    138.85 DEG. F
C   24 CONTROL PANEL      130.27 DEG. F
C   25 RELAY AREA         128.91 DEG. F
C   27 BATTERY RIGHT      128.42 DEG. F
C   28 AIR IN SET         126.43 DEG. F
C   29 FUEL TANK          108.07 DEG. F
C   30 FUEL OUTLET        145.95 DEG. F

END SCAN GROUP 1      04 FEB 88  16:14:55

STOPPED SINGLE SCAN   04 FEB 88  16:14:55


BEGIN SCAN GROUP 1    04 FEB 88  16:15:29
30 KW/400 HZ GEN SET S/N RZ7 0003

C    1 EXHAUST 1          404.05 DEG. F
C    2 EXHAUST 2          339.07 DEG. F
C    3 EXHAUST 3          388.26 DEG. F
C    4 EXHAUST 4          414.72 DEG. F
C    7 ENG. COOL. IN      175.00 DEG. F
C    8 ENG. COOL. OUT     183.54 DEG. F
C    9 OIL SUMP           199.98 DEG. F
C   10 OIL GALLERY        203.12 DEG. F
C   13  ENG. INTAKE       129.98 DEG. F
C   14 RAD. TOP LEFT      141.16 DEG. F
C   15 RAD. BTTM LEFT     140.80 DEG. F
C   16 RAD. TOP RIGHT     142.34 DEG. F
C   17 RAD. BTTM RIGHT           OPEN TC
C   18 GEN. AIR IN        126.40 DEG. F
C   19 GEN. AIR OUT       154.55 DEG. F
C   20 GEN. FRAME TOP     150.65 DEG. F
C   21 GEN. FRAME BTTM    136.58 DEG. F
C   22 GEN. EXCITER       135.83 DEG. F
C   23 GEN. VOLT. REG.    131.23 DEG. F
C   24 CONTROL PANEL      130.36 DEG. F
C   25 RELAY AREA         129.10 DEG. F
C   27 BATTERY RIGHT      128.36 DEG. F
C   28 AIR IN SET         126.88 DEG. F
C   29 FUEL TANK          108.29 DEG. F
C   30 FUEL OUTLET        145.97 DEG. F

END SCAN GROUP 1      04 FEB 88  16:15:38

STOPPED SINGLE SCAN   04 FEB 88  16:15:38
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BEGIN SCAN GROUP 1    04 FEB 88  16:17:10
30 KW 400 HZ GEN SET S/N RZ7 0003

C    1 EXHAUST 1          403.69 DEG. F
C    2 EXHAUST 2          339.95 DEG. F
C    3 EXHAUST 3          390.21 DEG. F
C    4 EXHAUST 4          418.98 DEG. F
C    7 ENG. COOL. IN      175.94 DEG. F
C    8 ENG. COOL. OUT     184.26 DEG. F
C    9 OIL SUMP           203.24 DEG. F
C   10 OIL GALLERY        206.45 DEG. F
C   13  ENG. INTAKE       130.35 DEG. F
C   14 RAD. TOP LEFT      142.09 DEG. F
C   15 RAD. BTTM LEFT     141.49 DEG. F
C   16 RAD. TOP RIGHT     142.96 DEG. F
C   17 RAD. BTTM RIGHT           OPEN TC
C   18 GEN. AIR IN        126.58 DEG. F
C   19 GEN. AIR OUT       155.23 DEG. F
C   20 GEN. FRAME TOP     151.18 DEG. F
C   21 GEN. FRAME BTTM    136.38 DEG. F
C   22 GEN. EXCITER       137.00 DEG. F
C   23 GEN. VOLT. REG.    131.46 DEG. F
C   24 CONTROL PANEL      130.83 DEG. F
C   25 RELAY AREA         129.88 DEG. F
C   27 BATTERY RIGHT      129.12 DEG. F
C   28 AIR IN SET         127.72 DEG. F
C   29 FUEL TANK          108.50 DEG. F
C   30 FUEL OUTLET        146.68 DEG. F

END SCAN GROUP 1      04 FEB 88  16:17:18

STOPPED SINGLE SCAN   04 FEB 88  16:17:18


BEGIN SCAN GROUP 1    04 FEB 88  16:18:06
30 KW/400 HZ GEN SET S/N RZ7 0003

C    1 EXHAUST 1          402.41 DEG. F
C    2 EXHAUST 2          339.67 DEG. F
C    3 EXHAUST 3          393.66 DEG. F
C    4 EXHAUST 4          421.29 DEG. F
C    7 ENG. COOL. IN      176.48 DEG. F
C    8 ENG. COOL. OUT     184.86 DEG. F
C    9 OIL SUMP           204.83 DEG. F
C   10 OIL GALLERY        207.80 DEG. F
C   13  ENG. INTAKE       130.72 DEG. F
C   14 RAD. TOP LEFT      142.30 DEG. F
C   15 RAD. BTTM LEFT     141.70 DEG. F
C   16 RAD. TOP RIGHT     142.72 DEG. F
C   17 RAD. BTTM RIGHT    145.37 DEG. F
C   18 GEN. AIR IN        126.80 DEG. F
C   19 GEN. AIR OUT       155.46 DEG. F
C   20 GEN. FRAME TOP     151.51 DEG. F
C   21 GEN. FRAME BTTM    136.57 DEG. F
C   22 GEN. EXCITER       137.26 DEG. F
C   23 GEN. VOLT. REG.    131.63 DEG. F
C   24 CONTROL PANEL      131.22 DEG. F
C   25 RELAY AREA         130.32 DEG. F
C   27 BATTERY RIGHT      129.25 DEG. F
C   28 AIR IN SET         125.81 DEG. F
C   29 FUEL TANK          108.69 DEG. F
C   30 FUEL OUTLET        146.87 DEG. F

END SCAN GROUP 1      04 FEB 88  16:18:15

STOPPED SINGLE SCAN   04 FEB 88  16:18:15
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BEGIN SCAN GROUP 1   04 FEB 88  16:18:57
30 KW 400 HZ GEN SET S/N RZ7 0003

C    1 EXHAUST 1          401.87 DEG. F
C    2 EXHAUST 2          339.91 DEG. F
C    3 EXHAUST 3          393.19 DEG. F
C    4 EXHAUST 4          420.51 DEG. F
C    7 ENG. COOL. IN      176.79 DEG. F
C    8 ENG. COOL. OUT     194.92 DEG. F
C    9 OIL SUMP           206.14 DEG. F
C   10 OIL GALLERY        209.42 DEG. F
C   13  ENG. INTAKE       138.34 DEG. F
C   14 RAD. TOP LEFT      141.40 DEG. F
C   15 RAD. BTTM LEFT     141.52 DEG. F
C   16 RAD. TOP RIGHT     142.31 DEG. F
C   17 RAD. BTTM RIGHT    156.73 DEG. F
C   18 GEN. AIR IN        123.61 DEG. F
C   19 GEN. AIR OUT       155.89 DEG. F
C   20 GEN. FRAME TOP     151.42 DEG. F
C   21 GEN. FRAME BTTM    135.77 DEG. F
C   22 GEN. EXCITER       137.22 DEG. F
C   23 GEN. VOLT. REG.    131.34 DEG. F
C   24 CONTROL PANEL      131.58 DEG. F
C   25 RELAY AREA         129.42 DEG. F
C   27 BATTERY RIGHT      129.56 DEG. F
C   28 AIR IN SET         123.44 DEG. F
C   29 FUEL TANK          108.67 DEG. F
C   30 FUEL OUTLET        147.20 DEG. F

END SCAN GROUP 1      04 FEB 88  16:19:06

STOPPED SINGLE SCAN   04 FEB 88  16:19:06


BEGIN SCAN GROUP 1   04 FEB 88  16:19:38
30 KW/400 HZ GEN SET S/N RZ7 0003

C    1 EXHAUST 1          403.08 DEG. F
C    2 EXHAUST 2          348.27 DEG. F
C    3 EXHAUST 3          394.09 DEG. F
C    4 EXHAUST 4          420.11 DEG. F
C    7 ENG. COOL. IN      176.66 DEG. F
C    8 ENG. COOL. OUT     185.20 DEG. F
C    9 OIL SUMP           207.18 DEG. F
C   10 OIL GALLERY        210.15 DEG. F
C   13  ENG. INTAKE       129.93 DEG. F
C   14 RAD. TOP LEFT      141.38 DEG. F
C   15 RAD. BTTM LEFT     141.19 DEG. F
C   16 RAD. TOP RIGHT     142.83 DEG. F
C   17 RAD. BTTM RIGHT    168.80 DEG. F
C   18 GEN. AIR IN        122.66 DEG. F
C   19 GEN. AIR OUT       154.88 DEG. F
C   20 GEN. FRAME TOP     151.28 DEG. F
C   21 GEN. FRAME BTTM    135.12 DEG. F
C   22 GEN. EXCITER       137.82 DEG. F
C   23 GEN. VOLT. REG.    131.66 DEG. F
C   24 CONTROL PANEL      131.88 DEG. F
C   25 RELAY AREA         128.81 DEG. F
C   27 BATTERY RIGHT      129.65 DEG. F
C   28 AIR IN SET         122.76 DEG. F
C   29 FUEL TANK          108.90 DEG. F
C   30 FUEL OUTLET        147.03 DEG. F

END SCAN GROUP 1      04 FEB 88  16:19:47

STOPPED SINGLE SCAN   04 FEB 88  16:19:47
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TEST DATA

ITEM 200 KW 400 HZ
GENERATOR SET
MODIFIED
MFGR. LIMA WELDING
MODEL NO. 200 114A
SERIAL NO. A7 0003

NTS
National Technical Systems
Scientific Services Group
Testing Division
P.O. Box 38
Harlwood, Virginia 22471
Tel: 703 752 5300

REF. NO. MIL-STD 705; 513.2
SHEET 1 OF 1
DATE 4 FEB 1988
JOB NO. 555-2140
PROJ. ENGR.
RECORDER/OBSERVER BJ

INDICATING INSTRUMENT TEST (ELECTRICAL)
PANEL, INSTRUMENTS

INST. TIME	STEP NO.	LOAD STEP	VOLTAGE L_1-L_0 VAC	VOLTAGE L_2-L_0 VAC	VOLTAGE L_3-L_0 VAC	% AMPERES L_1-L_0 AC AMPS	% AMPERES L_2-L_0 AC AMPS	% AMPERES L_3-L_0 AC AMPS	KILOWATTS L_1-L_0 Kw	KILOWATTS L_2-L_0 Kw	KILOWATTS L_3-L_0 Kw	POWER FACTOR PF	FREQ. Hz	% LOAD L_1-L_0	% LOAD L_2-L_0	% LOAD L_3-L_0	AMB. TEMP °F
163			ZEROED PANEL METERS														
1642			STARTED UNIT @ N/L RATED VOLTAGE + FREQ														
1648		N/L	120	121	121	0	0	0	NA	NA	NA	NA	400.0	0	0	0	121
1654		N/L	120	121	120	0	0	0	NA	NA	NA	NA	388.0	0	0	0	122
1659		N/L	120	120	120	0	0	0	NA	NA	NA	NA	412.0	0	0	0	125
1705		1/4	120	120	120	22	22	23	NA	NA	NA	NA	400.0	22	22	22	126
1711		1/4	120	120	120	46	46	47	NA	NA	NA	NA	400.0	45	45	45	125
1717		3/4	120	120	120	77	78	79	NA	NA	NA	NA	400.0	77	77	77	123
1723	1B3-B	3/4	120	120	120	103	103	105	NA	NA	NA	NA	400.0	105	105	105	126
1730		END OF TEST		SHUT UNIT DOWN													

NOTES: UNIT FAILED - VOLTMETER OUT OF SPEC AT RATED LOAD EXCEED 5V ALLOWABLE ERROR BETWEEN 115VAC AND 120VAC AS PER PROCUREMENT DOCUMENT, PARA. 3.16.2.1 FREQUENCY METER EXCEEDED MAX ALLOWABLE ERROR OF 2% AS PER PROCUREMENT DOCUMENT, PARA 3.16.2.4 c (2)

TEST DATA

ITEM 10 KVA 400 Hz
[illegible] Set
[illegible]
MFGR. Kiba Mfg Corp
MODEL NO. [illegible] 114A
SERIAL NO. K.F.T 0003

NTS
National Technical Systems | Scientific Services Group | Testing Division, P.O. Box 38, Harwood, Virginia 22471, Tel: 703 752 5300

REF. NO. MIL-STD 705; 513.2
SHEET 1 OF 1
DATE 4 FEB 1988
JOB NO. 555-2140
PROJ. ENGR.
RECORDER/OBSERVER BJ, KM, GC

INDICATING INSTRUMENT TEST (ELECTRICAL)
MASTER INSTRUMENTS

INST. TIME	STEP NO.	LOAD STEP	E60280 VOLTAGE L_1-L_0 VAC	E60280 VOLTAGE L_2-L_0 VAC	E60280 VOLTAGE L_3-L_0 VAC	E60420 AMPERES X40 L_1-L_0 AC AMPS	E60420 AMPERES X40 L_2-L_0 AC AMPS	E60420 AMPERES X40 L_3-L_0 AC AMPS	E62530 KILOWATTS X40 L_1-L_0 Kw	E62530 KILOWATTS X40 L_2-L_0 Kw	E62530 KILOWATTS X40 L_3-L_0 Kw	E62520 POWER FACTOR PF	E60960 FREQ. Hz	E61670 EXCITER VOLTS VDC	E62500 FIELD AMPS DCA	AMB. TEMP. °F	PRESS IN/HRM in H2O
1645			ZEROED PANEL METERS														
1646			START UNIT														
1646													401.9	9.9	3.3	120	13.5/22.5
1647		N/L	119	119	119								390.5	10.5	3.55	123	13.4/22.3
1647		N/L	118	118	118								413	9.3	3.1	125	15.0/24.9
1648		N/L	118.5	118.5	118.5								401.5	10.9	3.65	126	14.2/24
1652		1/4	117	117	117	.5	.5	.5	.061	.061	.061	.80	401.5	10.9	3.65	126	14.2/24
1654		1/2	116.5	116.5	116.5	1.2	1.2	1.2	.125	.125	.125	.80	401.6	11.8	3.9	125	14.1/28.3
1657		3/4	115	115.5	116	2.0	2.1	2.2	.187	.189	.189	.80	401.6	13.1	4.4	125	13.9/33.5
1659		4/4	114.5	116.0	115.5	2.59	2.59	2.6	.248	.25	.25	.80	401.9	14.5	4.8	126	13.8/36.4
1700			END OF TEST														

OTRS:

TEST DATA

TEST 30 KVA 400 Hz
GENERATOR SET
MODIFIED
MFGR. LIBBY WELDING
MODEL NO. MEP 114A
SERIAL NO. RZ7-00003

NTS
National Technical Systems
Scientific Services Group
Testing Division
P.O. Box 38
Harlwood, Virginia 22471
Tel: 703 752 5300

Panel Instrument Test
Method 513.2 (Computation Results)

REF. NO. MIL-STD-705: 513.2
SHEET 1 OF 2
DATE 15 FEB 1988
JOB NO. 555-2140
PROJ. ENGR.
RECORDER/OBSERVER

TEST → / LOAD ↓	VOLTS L1-LO	% Error	VOLTS L2-LO	% Error	VOLTS L3-LO	% Error	AMPS L1-LO	% Error	AMPS L2-LO	% Error	AMPS L3-LO	% Error
UNITS												
SYM.												
N/L	120	1.26	120	1.26	120	1.26						
1/4	120	2.5	120	2.5	120	2.5	22.9	14.5	22.9	14.5	23.9	19.5
2/4	120	3.0	120	3.0	120	3.0	47.9	0.21	47.9	0.21	48.9	1.85
3/4	120	4.34	120	3.9	120	3.45	80.2	0.25	81.2	3.33	82.3	6.47
4/4	120	4.8	120	4.34	120	3.9	107.2	3.47	107.2	3.47	109.3	5.1

% of AMPS ON PANEL METER CONVERTED TO AMPS USING 104.16 AS RATED AMPS/PHASE @ FULL LOAD

6-389

UNIT FAILED TEST - VOLTMETER 5.5V OFF AT 4/4 LOAD L1-LO

NOTES:

TEST DATA

ITEM 30KW 400Hz GENERATOR SET MODIFIED

MFGR. LIBBY WELDING

MODEL NO. MEP 114A

SERIAL NO. RZ7 0003

NTS National Technical Systems | Scientific Services Group | Testing Division, PO Box 38, Hillwood, Virginia 22471, Tel: 703 752 5300

Panel Instrument Test

Method 513.2 (Computation Results)

REF. NO. MIL-STD-705: 513.2

SHEET 2 OF 2

DATE 15 FEB 1988

JOB NO. 5555-2140

PROJ. ENGR.

RECORDER/OBSERVER

TEST → / UNITS SYM.	% LOAD L1 - L0	% Error	% LOAD L2 - L0	% Error	% LOAD L3 - L0	% Error		Frequency	% Error			
								400.0	.47			
								388.0	.64			
NL	0	0	0	0	0	0		412.0	.24			
1/4	2.2	9.83	2.2	9.83	2.2	9.83						
2/4	4.5	10.0	4.5	10.0	4.5	10.0						
3/4	7.7	2.94	7.7	1.85	7.7	1.85						
4/4	10.5	5.85	10.5	5.0	10.5	5.0						

% LOAD CONVERTED TO KW ASSUMING RATED LOAD = 10KW/PHASE

NOTES: 1. EQ METER EXCEEDS .5% ERR AS PER PROCUREMENT DOCUMENT PARA 3.16.2.4a(2)

BEGIN SCAN GROUP 1 04 FEB 88 16:46:05
30 KW 400 HZ GEN SET S/N RZ7 0003

C	1	EXHAUST 1	386.28 DEG. F
C	2	EXHAUST 2	295.15 DEG. F
C	3	EXHAUST 3	353.83 DEG. F
C	4	EXHAUST 4	383.11 DEG. F
C	7	ENG. COOL. IN	166.17 DEG. F
C	8	ENG. COOL. OUT	174.89 DEG. F
C	9	OIL SUMP	189.42 DEG. F
C	10	OIL GALLERY	191.11 DEG. F
C	13	ENG. INTAKE	143.00 DEG. F
C	14	RAD. TOP LEFT	140.74 DEG. F
C	15	RAD. BTTM LEFT	143.57 DEG. F
C	16	RAD. TOP RIGHT	144.36 DEG. F
C	17	RAD. BTTM RIGHT	148.07 DEG. F
C	18	GEN. AIR IN	121.32 DEG. F
C	19	GEN. AIR OUT	152.38 DEG. F
C	20	GEN. FRAME TOP	159.29 DEG. F
C	21	GEN. FRAME BTTM	144.23 DEG. F
C	22	GEN. EXCITER	136.77 DEG. F
C	23	GEN. VOLT. REG.	134.57 DEG. F
C	24	CONTROL PANEL	133.68 DEG. F
C	25	RELAY AREA	129.00 DEG. F
C	27	BATTERY RIGHT	127.51 DEG. F
C	28	AIR IN SET	120.10 DEG. F
C	29	FUEL TANK	110.74 DEG. F
C	30	FUEL OUTLET	143.65 DEG. F

END SCAN GROUP 1 04 FEB 88 16:46:14

STOPPED SINGLE SCAN 04 FEB 88 16:46:14

BEGIN SCAN GROUP 1 04 FEB 88 16:48:41
30 KW 400 HZ GEN SET S/N RZ7 0003

C	1	EXHAUST 1	406.02 DEG. F
C	2	EXHAUST 2	333.84 DEG. F
C	3	EXHAUST 3	382.61 DEG. F
C	4	EXHAUST 4	422.92 DEG. F
C	7	ENG. COOL. IN	171.74 DEG. F
C	8	ENG. COOL. OUT	181.43 DEG. F
C	9	OIL SUMP	194.95 DEG. F
C	10	OIL GALLERY	197.90 DEG. F
C	13	ENG. INTAKE	132.75 DEG. F
C	14	RAD. TOP LEFT	139.89 DEG. F
C	15	RAD. BTTM LEFT	139.99 DEG. F
C	16	RAD. TOP RIGHT	142.97 DEG. F
C	17	RAD. BTTM RIGHT	143.97 DEG. F
C	18	GEN. AIR IN	124.40 DEG. F
C	19	GEN. AIR OUT	153.06 DEG. F
C	20	GEN. FRAME TOP	152.75 DEG. F
C	21	GEN. FRAME BTTM	139.58 DEG. F
C	22	GEN. EXCITER	135.49 DEG. F
C	23	GEN. VOLT. REG.	133.89 DEG. F
C	24	CONTROL PANEL	133.11 DEG. F
C	25	RELAY AREA	128.13 DEG. F
C	27	BATTERY RIGHT	130.08 DEG. F
C	28	AIR IN SET	125.14 DEG. F
C	29	FUEL TANK	110.94 DEG. F
C	30	FUEL OUTLET	147.46 DEG. F

END SCAN GROUP 1 04 FEB 88 16:48:49

STOPPED SINGLE SCAN 04 FEB 88 16:48:50

BEGIN SCAN GROUP 1 04 FEB 88 16:47:35
30 KW/400 HZ GEN SET S/N RZ7 0003

C	1	EXHAUST 1	402.48 DEG. F
C	2	EXHAUST 2	322.66 DEG. F
C	3	EXHAUST 3	378.29 DEG. F
C	4	EXHAUST 4	389.24 DEG. F
C	7	ENG. COOL. IN	169.21 DEG. F
C	8	ENG. COOL. OUT	179.51 DEG. F
C	9	OIL SUMP	192.40 DEG. F
C	10	OIL GALLERY	195.03 DEG. F
C	13	ENG. INTAKE	135.65 DEG. F
C	14	RAD. TOP LEFT	139.65 DEG. F
C	15	RAD. BTTM LEFT	148.47 DEG. F
C	16	RAD. TOP RIGHT	143.64 DEG. F
C	17	RAD. BTTM RIGHT	143.97 DEG. F
C	18	GEN. AIR IN	122.95 DEG. F
C	19	GEN. AIR OUT	152.32 DEG. F
C	20	GEN. FRAME TOP	154.56 DEG. F
C	21	GEN. FRAME BTTM	141.49 DEG. F
C	22	GEN. EXCITER	131.86 DEG. F
C	23	GEN. VOLT. REG.	133.78 DEG. F
C	24	CONTROL PANEL	133.31 DEG. F
C	25	RELAY AREA	128.53 DEG. F
C	27	BATTERY RIGHT	129.36 DEG. F
C	28	AIR IN SET	123.82 DEG. F
C	29	FUEL TANK	110.72 DEG. F
C	30	FUEL OUTLET	146.34 DEG. F

END SCAN GROUP 1 04 FEB 88 16:47:43

STOPPED SINGLE SCAN 04 FEB 88 16:47:43

BEGIN SCAN GROUP 1 04 FEB 88 16:52:57
30 KW/400 HZ GEN SET S/N RZ7 0003

C	1	EXHAUST 1	472.14 DEG. F
C	2	EXHAUST 2	394.55 DEG. F
C	3	EXHAUST 3	474.87 DEG. F
C	4	EXHAUST 4	509.27 DEG. F
C	7	ENG. COOL. IN	188.44 DEG. F
C	8	ENG. COOL. OUT	198.00 DEG. F
C	9	OIL SUMP	204.81 DEG. F
C	10	OIL GALLERY	207.57 DEG. F
C	13	ENG. INTAKE	138.68 DEG. F
C	14	RAD. TOP LEFT	143.69 DEG. F
C	15	RAD. BTTM LEFT	141.99 DEG. F
C	16	RAD. TOP RIGHT	143.81 DEG. F
C	17	RAD. BTTM RIGHT	172.18 DEG. F
C	18	GEN. AIR IN	125.82 DEG. F
C	19	GEN. AIR OUT	154.89 DEG. F
C	20	GEN. FRAME TOP	150.75 DEG. F
C	21	GEN. FRAME BTTM	136.08 DEG. F
C	22	GEN. EXCITER	136.20 DEG. F
C	23	GEN. VOLT. REG.	133.86 DEG. F
C	24	CONTROL PANEL	133.64 DEG. F
C	25	RELAY AREA	129.56 DEG. F
C	27	BATTERY RIGHT	130.85 DEG. F
C	28	AIR IN SET	126.39 DEG. F
C	29	FUEL TANK	111.57 DEG. F
C	30	FUEL OUTLET	148.85 DEG. F

END SCAN GROUP 1 04 FEB 88 16:53:05

STOPPED SINGLE SCAN 04 FEB 88 16:53:05

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BEGIN SCAN GROUP 1    04 FEB 88  16:54:43
30 KW 400 HZ GEN SET S/N RZ7 0003

C    1 EXHAUST 1          548.74 DEG. F
C    2 EXHAUST 2          436.19 DEG. F
C    3 EXHAUST 3          535.85 DEG. F
C    4 EXHAUST 4          602.71 DEG. F
C    7 ENG. COOL. IN      183.46 DEG. F
C    8 ENG. COOL. OUT     190.66 DEG. F
C    9 OIL SUMP           207.53 DEG. F
C   10 OIL GALLERY        210.98 DEG. F
C   13  ENG. INTAKE       131.37 DEG. F
C   14 RAD. TOP LEFT      145.37 DEG. F
C   15 RAD. BTTM LEFT     144.03 DEG. F
C   16 RAD. TOP RIGHT     145.13 DEG. F
C   17 RAD. BTTM RIGHT    148.07 DEG. F
C   18 GEN. AIR IN        127.84 DEG. F
C   19 GEN. AIR OUT       156.17 DEG. F
C   20 GEN. FRAME TOP     151.76 DEG. F
C   21 GEN. FRAME BTTM    136.67 DEG. F
C   22 GEN. EXCITER       139.44 DEG. F
C   23 GEN. VOLT. REG.    133.12 DEG. F
C   24 CONTROL PANEL      133.80 DEG. F
C   25 RELAY AREA         131.38 DEG. F
C   27 BATTERY RIGHT      138.62 DEG. F
C   28 AIR IN SET         129.19 DEG. F
C   29 FUEL TANK          112.26 DEG. F
C   30 FUEL OUTLET        147.98 DEG. F

END SCAN GROUP 1      04 FEB 88  16:54:52

STOPPED SINGLE SCAN   04 FEB 88  16:54:52
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BEGIN SCAN GROUP 1    04 FEB 88  16:57:14
30 KW/400 HZ GEN SET S/N RZ7 0003

C    1 EXHAUST 1          664.46 DEG. F
C    2 EXHAUST 2          508.29 DEG. F
C    3 EXHAUST 3          648.87 DEG. F
C    4 EXHAUST 4          741.75 DEG. F
C    7 ENG. COOL. IN      188.56 DEG. F
C    8 ENG. COOL. OUT     195.86 DEG. F
C    9 OIL SUMP           212.35 DEG. F
C   10 OIL GALLERY        215.83 DEG. F
C   13  ENG. INTAKE       138.96 DEG. F
C   14 RAD. TOP LEFT      147.98 DEG. F
C   15 RAD. BTTM LEFT     145.39 DEG. F
C   16 RAD. TOP RIGHT     146.73 DEG. F
C   17 RAD. BTTM RIGHT    149.86 DEG. F
C   18 GEN. AIR IN        124.14 DEG. F
C   19 GEN. AIR OUT       155.89 DEG. F
C   20 GEN. FRAME TOP     151.67 DEG. F
C   21 GEN. FRAME BTTM    135.69 DEG. F
C   22 GEN. EXCITER       138.87 DEG. F
C   23 GEN. VOLT. REG.    133.12 DEG. F
C   24 CONTROL PANEL      134.35 DEG. F
C   25 RELAY AREA         130.72 DEG. F
C   27 BATTERY RIGHT      131.81 DEG. F
C   28 AIR IN SET         125.87 DEG. F
C   29 FUEL TANK          111.61 DEG. F
C   30 FUEL OUTLET        148.88 DEG. F

END SCAN GROUP 1      04 FEB 88  16:57:23

STOPPED SINGLE SCAN   04 FEB 88  16:57:23
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BEGIN SCAN GROUP 1    04 FEB 88  16:59:24
30 KW 400 HZ GEN SET S/N RZ7 0003

C    1 EXHAUST 1          782.11 DEG. F
C    2 EXHAUST 2          602.53 DEG. F
C    3 EXHAUST 3          749.15 DEG. F
C    4 EXHAUST 4          838.60 DEG. F
C    7 ENG. COOL. IN      193.88 DEG. F
C    8 ENG. COOL. OUT     201.26 DEG. F
C    9 OIL SUMP           218.32 DEG. F
C   10 OIL GALLERY        219.21 DEG. F
C   13  ENG. INTAKE       132.17 DEG. F
C   14 RAD. TOP LEFT      150.83 DEG. F
C   15 RAD. BTTM LEFT     148.54 DEG. F
C   16 RAD. TOP RIGHT     149.28 DEG. F
C   17 RAD. BTTM RIGHT    151.90 DEG. F
C   18 GEN. AIR IN        124.21 DEG. F
C   19 GEN. AIR OUT       157.97 DEG. F
C   20 GEN. FRAME TOP     151.90 DEG. F
C   21 GEN. FRAME BTTM    135.41 DEG. F
C   22 GEN. EXCITER       139.27 DEG. F
C   23 GEN. VOLT. REG.    134.69 DEG. F
C   24 CONTROL PANEL      134.91 DEG. F
C   25 RELAY AREA         132.17 DEG. F
C   27 BATTERY RIGHT      131.76 DEG. F
C   28 AIR IN SET         126.86 DEG. F
C   29 FUEL TANK          113.87 DEG. F
C   30 FUEL OUTLET        149.49 DEG. F

END SCAN GROUP 1      04 FEB 88  16:59:32

STOPPED SINGLE SCAN   04 FEB 88  16:59:33
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