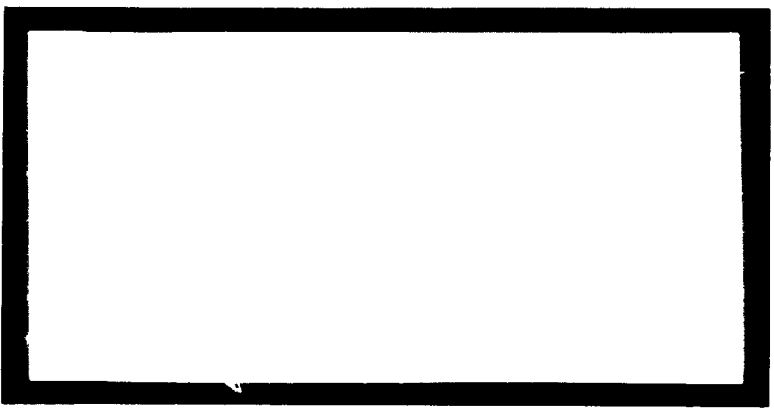


1

MISSILE AND SPACE  
DIVISION



AD No. 403 444  
ASTIA FILE COPY

403 444

BBE  
RECEIVED  
MAY 14 1963  
TISIA A

GENERAL  ELECTRIC  
ADVANCED SPACE PROJECTS DEPARTMENT  
KING OF PRUSSIA PARK  
P.O. BOX 8661, PHILADELPHIA 1, PA

P 1.80

Ed

15

**TISIA A**

MISSILE AND SPACE DIVISION  
ADVANCED SPACE PROJECTS DEPARTMENT  
P.O. BOX 8661, PHILADELPHIA 1, PA.

## INTRODUCTION

↓  
This report is presented in two volumes. Volume 1 is comprised of six sections. Volume 2 consists of the new Failure Summary Log and the Failure Analysis Review Board (FARB) Minutes. ↗

### Volume 1

The first section of Volume 1 describes the reliability program schedule status. The second section summarizes pertinent reliability data for components, subsystems, and system. The third section discusses reliability problem areas. The fourth section introduces Volume 2. The fifth section reviews the supplier reliability programs. The sixth section reports on the field reliability status and parts improvement program.

### Volume 2

Contents of Volume 2 replace the former Failure Summary Report. Volume 2 is unclassified.

**FAILURE SUMMARY LOG**

## PREFACE TO FAILURE SUMMARY LOG

### GENERAL:

This Log is a listing of all significant failures that have occurred on Program 206 to date of issue. It is based on a continuing review of all failure reporting documents, and on information contained in the Failure Analysis Status Log maintained by this operation. All failure reports, failure analyses, and related documents listed or referred to in this Log are kept on permanent file in this office.

Failure events are listed by item drawing number, usually appearing in chronological order - when an entry must be added out of order, the failure report date will be underlined. The headings of each column are in general self-explanatory, with the exceptions noted below.

Log sheets will be updated monthly, and will include all failure reports received up to the cutoff date appearing under the last entry for each drawing number.

### FAILURE ANALYSIS INFORMATION:

An asterisk (\*) in the right-hand margin indicates that the failure analysis report number entered on that line has been summarized in Issue 3 of the Program 206 Failure Summary Report. More recent analyses may be found summarized in the minutes of the Failure Analysis Review Board, for the meeting dates corresponding to the dates of Board action indicated in the last two columns.

### CLOSE-OUT OF FAILURE EVENTS:

All failures appearing in this Log are considered as open items until the Failure Analysis Review Board has:

- (1) reviewed all pertinent data and determined whether or not a failure analysis is required, if not already performed or in progress,
- (2) satisfied itself that the failure analysis, if required, is adequate, complete, and includes appropriate recommended corrective action.
- (3) satisfied itself that the corrective action indicated by the failure analysis has been taken.

Two dates will appear under "ARB close-out" after each closed out failure event. The first date (under "FA") is entered when the Board unanimously agrees that the requirements of (1) and (2) above have been met. The second date (under "CA") is entered when the Board has agreed that the requirement of (3) has been met. In general, the Q.C. Engineer responsible for a component will have performed and/or documented an immediate analysis of each failure, and it only remains for the Board to review and approve the results, and to monitor implementation of corrective action.

## CLASSIFICATION OF FAILURES:

The "Classification" of an item that appears in the heading of each sheet is assigned by Design Engineering in accordance with DCAS 62-10. The basis of this classification is the effect that a catastrophic failure of a particular component would have upon the subsystem of which it is to become a part.

Three classifications are used - Critical, Major, and Minor, defined as follows:

The total failure of a component classified as Critical could cause a safety hazard, mission abort, or inability of the system to achieve primary flight objectives.

Total failure of a component classified as Major could prevent the achievement of secondary flight objectives, or significantly reduce system reliability.

Total failure of a component classified as Minor would not significantly reduce either the mission effectiveness or the reliability of the system.

The number appearing the "Class" column is used to describe the degree of severity of an individual failure in terms of the intended function of the item itself. Failures are classified\* as follows:

A Class 3 failure will render an item incapable of performing its intended function.

A Class 2 failure will materially degrade the performance or the reliability of an item.

A Class 1 failure will have no significant effect on either the performance or the reliability of an item.

Class 0 is used to designate failures found by analysis to be caused by such things as defective or misused test equipment, and which, therefore, should not be taken into consideration in estimates of future reliability.

\*Note: Where doubt exists as to the class of a failure, the higher class is used.

One classification thus defines the importance of a component's function to the system mission; the other describes the effect of a particular failure on the component's ability to perform its function. The combination of these two systems of classification permits a reasonably accurate estimate of the effect a particular failure would have on system performance.

## ABBREVIATIONS

In the interest of conserving space, certain abbreviations are used frequently throughout this Log - these are listed and explained as follows:

Acc - Acceptance Test  
C/T - Component Test (ASPD)  
DR - Defect Report and Material Correction Tag  
Eng - Engineering  
FA - Failure Analysis  
FAR - Failure Analysis Report  
FC - Failure and Consumption Report  
IR - Nonconforming Material Inspection Report  
L&P - Laboratories and Processes Engineering  
LTR - Letter Report  
M&P - Materials and Processes Engineering  
N/R - Not Reported  
NR - Not Required  
P/P - Post-Pot Test (Modules)  
PDS - Performance Data Sheet  
PIR - Program Information Request/Release  
QCE - Parts & Components Quality Control Engineer  
QDR - Quality Data Record (GE-M&AD)  
QME - Quality Maintenance Engineering  
Qual - Qualification Test  
Rpt - Report  
S/A - Sub/Assembly Test  
SFV - System Failure Verification (in Component Test)  
SQCE - Systems Quality Control Engineer  
S/S - Subsystem  
S/T - QC Systems Test (ASPD)

ABBREVIATIONS (Cont'd)

STE - Systems Test Engineering

Suppl- Supplement

Syst - System

(V) - Vendor - used to indicate vendor report, test  
at vendor plant, etc.

V/S - Vendor Surveillance Inspector

CONTENTS

| <u>DRAWING NUMBER</u> | <u>NOMENCLATURE</u>              | <u>SUBSYSTEM</u>         | <u>NO. OF PAGES</u> |
|-----------------------|----------------------------------|--------------------------|---------------------|
| 103C3394 G1           | Mixer Amplifier                  | Telemetry                | 1                   |
| 103C4975 P1           | Command Programmer               | Tracking & Command       | 7                   |
| 100C8809 P4/5         | Accelerometer                    | Telemetry                | 1                   |
| 101C8809 P5           | Accelerometer                    | Telemetry                | 1                   |
| 101C8815 P3           | Pressure Transducer              | Telemetry                | 1                   |
| 101C8817 P3           | Baroresistor                     | Telemetry                | 2                   |
| 100C8828 G1           | Liner Temp. Detector             | Telemetry                | 1                   |
| 100C8828 G2           | Liner Temp. Detector             | Telemetry                | 2                   |
| 100C8829 P1           | Component Temp. Detector         | Telemetry                | 2                   |
| 100C8829 P2           | Component Temp. Detector         | Telemetry                | 2                   |
| 111C1508 P1           | Explosive Piston                 | Separation               | 1                   |
| 111C1751 G1           | F/F Shift Register Module        | Tracking & Command       | 1                   |
| 111C1753 G1           | 28V "OR" Module                  | Tracking & Command       | 1                   |
| 111C1754 G1           | 4-Gate "NAND" Module             | Tracking & Command       | 1                   |
| 111C1755              | Heavy "OR" Module                | Tracking & Command       | 1                   |
| 111C1757 G1           | Medium "OR" Module               | Tracking & Command       | 1                   |
| 111C1758 G1           | Compl. "NOR" (4 Gate) Mod        | Tracking & Command       | 1                   |
| 111C1759 G1           | 28V "AND" Module                 | Tracking & Command       | 1                   |
| 111C1761 G1           | Hi-Voltage "NOR" Module          | Tracking & Command       | 1                   |
| 111C1762 G1           | Complim. "NOR" Module            | Tracking & Command       | 1                   |
| 111C1763 G1           | STD "NOR" Module                 | Tracking & Command       | 1                   |
| 111C1764 G1           | "NAND" (2 Gate) Module           | Tracking & Command       | 1                   |
| 111C1765 G1           | Passive Gate Module              | Tracking & Command       | 1                   |
| 111C1766 G1           | Flip-Flop Module                 | Tracking & Command       | 1                   |
| 111C1769              | Read Line Driver Module          | Tracking & Command       | 1                   |
| 111C1771 G1           | "One-Shot" Module                | Tracking & Command       | 1                   |
| 111C1772 G1           | Diode Matrix Module              | Tracking & Command       | 1                   |
| 111C1773 G1           | Matrix No. 2 Module              | Tracking & Command       | 1                   |
| 111C1774 G1           | Initial Driver Module            | Tracking & Command       | 1                   |
| 111C1775 G1           | Preset "NAND" Module             | Tracking & Command       | 1                   |
| 111C1776              | Voltage Monitor Module           | Tracking & Command       | 1                   |
| 111C1777 G1           | Information Driver Module        | Tracking & Command       | 1                   |
| 111C1778 G1           | 1st Stage "Flip-Flop" Mod        | Tracking & Command       | 1                   |
| 111C1781 G1           | Temperature Detector             | Stabilization-Pneumatic  | 2                   |
| 111C3289 P6/P8        | Thermostat                       | Environmental Control    | 1                   |
| 111C3600 P1           | Nipple, Propellant Fill-Oxidizer | Orbit Adjust             | 1                   |
| 111C3600 P2           | Nipple, Propellant Fill-Fuel     | Orbit Adjust             | 1                   |
| 111C3600 P4           | Nipple, Propellant Fill-Fuel     | Orbit Adjust             | 1                   |
| 111C3611 P2           | Fuel Pre-Press. Valve            | Orbit Adjust             | 1                   |
| 111C3618 P2           | Pneumatic Relief Valve           | Orbit Adjust             | 1                   |
| 111C3773              | TARS Electronic Pkg.             | Stabilization-Electrical | 1                   |
| 111C3776              | Rate Gyro Pkg. (RAGS)            | Stabilization-Electrical | 2                   |
| 111C3791 P1/P3        | Hi-Flow Solenoid Valve           | Stabilization-Pneumatic  | 1                   |
| 111C3797 P1           | Solenoid Valve                   | Stabilization-Pneumatic  | 1                   |
| 111C3820 P1           | Mixer Box                        | Stabilization-Electrical | 1                   |
| 111C3881 P2           | Solenoid-Fuel Valve              | Orbit Adjust             | 1                   |
| 111C3881 P3           | Valve, Solenoid, Oxid.           | Orbit Adjust             | 1                   |
| 111C3881 P4           | Valve, Solenoid, Fuel            | Orbit Adjust             | 1                   |

CONTENTS (Cont'd)

| <u>DRAWING NUMBER</u> | <u>NOMENCLATURE</u>      | <u>SUBSYSTEM</u>         | <u>NO. OF PAGES</u> |
|-----------------------|--------------------------|--------------------------|---------------------|
| 113C9101 G1           | Shift Register Module    | Tracking & Command       | 1                   |
| 113C9114 P1           | Baroswitch               | Separation               | 1                   |
| 113C9129 P1           | Vibration Detector       | Telemetry                | 1                   |
| 113C9152 G1           | Flip-Flop Counter Module | Tracking & Command       | 1                   |
| 113C9312 P1           | Separation Switch        | Separation               | 1                   |
| 113C9385 G2           | Env. Temp. Controller    | Environmental Control    | 1                   |
| 113C9517              | S-Band Beacon            | Tracking & Command       | 2                   |
| 113C9568 G1           | S-Band Antenna           | Tracking & Command       | 1                   |
| 113C9581 G2           | UHF Antenna              | Telemetry                | 1                   |
| 113C9710 G1           | R.F. Transmitter         | Telemetry                | 2                   |
| 113C9735 P8           | Voltage Controlled Osc   | Telemetry                | 1                   |
| 113C9735 P83          | Voltage Controlled Osc   | Telemetry                | 1                   |
| 113C9735 P86          | Voltage Controlled Osc   | Telemetry                | 1                   |
| 113C9735 P87          | Voltage Controlled Osc   | Telemetry                | 1                   |
| 113C9735 P90          | Voltage Controlled Osc   | Telemetry                | 1                   |
| 113C9735 P91          | Voltage Controlled Osc   | Telemetry                | 1                   |
| 113C9735 P92          | Voltage Controlled Osc   | Telemetry                | 1                   |
| 114C1141              | Latching Contactor       | Tracking & Command       | 1                   |
| 114C1553              | PREDAC                   | Stabilization-Electrical | 1                   |
| 114C1564 P1           | Valve Solenoid           | Stabilization-Pneumatic  | 1                   |
| 114C1600 P1           | R.F. Filter              | Telemetry                | 1                   |
| 114C1660              | Thermoswitch             | Environmental Control    | 1                   |
| 131B4126              | Transfer Lead Assy       | Separation               | 1                   |
| 131B4246 P1           | Pneumatic Check Valve    | Orbit Adjust             | 1                   |
| 133B1107              | Amplifier Temp. Sensor   | Orbit Adjust             | 1                   |
| 133B1108 P1           | Transducer, Lo-Press     | Orbit Adjust             | 1                   |
| 242E558 G1            | Power Controller         | Tracking & Command       | 4                   |
| 242E564 G1            | Command Decoder          | Tracking & Command       | 1                   |
| 242E610 G1            | 6V Power Supply          | Tracking & Command       | 2                   |
| 247E798 G1            | OCV Relay Box            | Stabilization-Electrical | 1                   |
| 248E200 G3/4/7/8      | Compartment Heater       | Environmental Control    | 1                   |
| 248E613               | Panel Assy-Pneumatic Pkg | Stabilization-Pneumatic  | 1                   |
| 248E631 P1            | IR Sensor (Rt. Head)     | Stabilization-Electrical | 1                   |
| 248E705 G1            | Attitude Control Amp.    | Stabilization-Electrical | 1                   |
| 248E706 G1            | Roll Maneuver Amplifier  | Stabilization-Electrical | 1                   |
| 248E719 G1            | D.C. Power Supply        | Stabilization-Electrical | 1                   |
| 254E107 G1            | C.D. Relay Box           | Tracking & Command       | 4                   |
| 254E117 P1            | Memory Core Plane        | Tracking & Command       | 1                   |
| 254E151 G1            | Comp. Bd. Assy           | Tracking & Command       | 1                   |
| 254E157 G1            | Component Board Assembly | Tracking & Command       | 1                   |
| 254E162 G1            | Component Board Assembly | Tracking & Command       | 1                   |

CONTENTS (Cont'd)

| <u>DRAWING NUMBER</u> | <u>NOMENCLATURE</u>       | <u>SUBSYSTEM</u>          | <u>NO. OF PAGES</u> |
|-----------------------|---------------------------|---------------------------|---------------------|
| 254E164               | Component Board Assembly  | Tracking & Command        | 1                   |
| 254E165 G1            | Component Board Assembly  | Tracking & Command        | 1                   |
| 254E171               | Component Board Assembly  | Tracking & Command        | 1                   |
| 254E172 G1            | Component Board Assembly  | Tracking & Command        | 1                   |
| 254E176 G1            | Component Board Assembly  | Tracking & Command        | 1                   |
| 254E177 G1            | Component Board Assembly  | Tracking & Command        | 1                   |
| 254E178 G1            | Component Board Assembly  | Tracking & Command        | 1                   |
| 254E266               | Controller, Power Xfer    | Elect. Power & Sig. Dist. | 2                   |
| 689E714 G1            | Separation Controller     | Separation                | 1                   |
| 825D319 G1/G2         | VHF Antenna Element       | Telemetry                 | 1                   |
| 825D370 G1            | Multiplexer 90x1/18       | Telemetry                 | 1                   |
| 825D430 G1            | Multiplexer 30 x 5        | Telemetry                 | 1                   |
| 825D435 G1            | Transfer Switch           | Telemetry                 | 1                   |
| 825D608 P1            | Umbilical Plug            | Elect. Power & Sig. Dist. | 1                   |
| 825D609 P1            | Umbilical Receptacle      | Elect. Power & Sig. Dist. | 1                   |
| 825D615               | Safe & Arm Mechanism      | Separation                | 1                   |
| 825D651 G1            | Latch Actuator Assy.      | Environmental Control     | 1                   |
| 825D645 G1            | Spring & Guide Assy.      | Separation                | 1                   |
| 884D710               | Latch Assembly            | Environmental Control     | 1                   |
| 884D745 P1/2          | Rotary Actuator           | Environmental Control     | 1                   |
| 884D1215 P1           | Regulator, Hi-Press.      | Stabilization-Pneumatic   | 1                   |
| 884D1216 P1           | Low-Pressure Regulator    | Stabilization-Pneumatic   | 1                   |
| 884D1225              | Resolver Summing Amp.     | Stabilization-Electrical  | 1                   |
| 884D1226 G1           | Compensator Elect.        | Stabilization-Electrical  | 1                   |
| 884D1227              | Velocity Sensing Accel.   | Orbit Adjust              | 1                   |
| 884D1228              | Accel. Control Unit       | Orbit Adjust              | 1                   |
| 884D1229              | Velocity Comparator       | Orbit Adjust              | 1                   |
| 884D1202              | 400 CPS Power Supply      | Stabilization-Electrical  | 1                   |
| 888D170               | TARS - Gimbal Assy.       | Stabilization-Electrical  | 2                   |
| 888D354               | Battery (28VDC/400 AH)    | Elect. Power & Sig. Dist. | 1                   |
| 893D126/7 G1/2/3      | Environ. Temp. Controller | Environmental Control     | 2                   |
| 893D159 G1            | Hi-Voltage Power Supply   | Telemetry                 | 1                   |
| 893D208 G1            | 7 Unit SCO Base Assembly  | Telemetry                 | 1                   |
| 893D208 G2/3          | 5 Unit SCO Base Assembly  | Telemetry                 | 1                   |
| 893D209 G1/4          | 7 Unit SCO Base Assembly  | Telemetry                 | 1                   |
| 893D257 G1            | AGE Relay Assembly        | Elect. Power & Sig. Dist. | 1                   |
| 893D261 P1            | Boost Voltage Regulator   | Elect. Power & Sig. Dist. | 1                   |
| 893D580 P1            | Recorder                  | Telemetry                 | 7                   |
| 893D800 G1            | Compl. "AND" Module       | Tracking & Command        | 1                   |
| 894D904 G1            | Separation Monitor        | Separation                | 1                   |

|                 |  |                        |  |                 |  |                   |  |
|-----------------|--|------------------------|--|-----------------|--|-------------------|--|
| NOMENCLATURE    |  | SUBSYSTEM              |  | QC ENGINEER     |  | PAGE 1 OF 1 PAGES |  |
| Mixer Amplifier |  | Telemetry              |  | N. Yerger       |  |                   |  |
| DRAWING NUMBER  |  | MISSION CLASSIFICATION |  | DESIGN ENGINEER |  | MANUFACTURER      |  |
| 103C3394 G1     |  | Major                  |  | J. Serafin      |  | GE - M & AD       |  |

| FAILURE NUMBER | REPORT DATE | SERIAL NO | FAILURE MODE                                                                    | ENVIRONMENT       | TEST TYPE | RPT ACT | FA NO | FA RPTS ISSUED |        |      | FARB CLOSE-OUT |    |   |
|----------------|-------------|-----------|---------------------------------------------------------------------------------|-------------------|-----------|---------|-------|----------------|--------|------|----------------|----|---|
|                |             |           |                                                                                 |                   |           |         |       | BY             | NUMBER | DATE | FA             | CA |   |
| QDR16298       | 7-16-62     | 58        | Distortion exceeds 1.5% limit. Noise exceeds limits.                            | Post HI-Temp      | Acc       | (V)     | A24   | (V)            | MRAD-1 | 7-26 |                |    | P |
| QDR16293       | 7-13-62     | 39        | Distortion exceeds 1.5% limit. Varies 1.6 to 1.85% depending on position of S2. | N/R               | Acc       | (V)     | A25   | (V)            | P11-22 | 7-26 |                |    | P |
| QDR17487       | 7-14-62     | 46        | Failed Noise test.                                                              | Vib. and Post-Vib | Acc       | (V)     | A26   | (V)            | P11-22 | 7-26 |                |    | P |
| QDR17488       | 7-14-62     | 49        | Failed noise test.                                                              | Vib. and Post-Vib | Acc       | (V)     | A27   | (V)            | P11-22 | 7-26 |                |    | P |
| QDR16400       | 7-19-62     | 50        | Output only 0.06V using no. 1 input and 2.20V using no. 2 input.                | Ambient           | Acc       | (V)     | A28   | (V)            | P11-22 | 7-26 |                |    | P |

RECEIVED

| NOMENCLATURE       |             | SUBSYSTEM              |                                                                                                        | QC ENGINEER     |           | APR 26 1963  |       | PAGE 1 OF 8 PAGES |            |                |
|--------------------|-------------|------------------------|--------------------------------------------------------------------------------------------------------|-----------------|-----------|--------------|-------|-------------------|------------|----------------|
| Command Programmer |             | Tracking & Command     |                                                                                                        | D. Sharrock     |           |              |       |                   |            |                |
| DRAWING NUMBER     |             | MISSION CLASSIFICATION |                                                                                                        | DESIGN ENGINEER |           | MANUFACTURER |       |                   |            |                |
| 103C497-PI         |             | Critical               |                                                                                                        | J. McBride      |           | GE-LL-10     |       |                   |            |                |
| FAILURE NUMBER     | REPORT DATE | SERIAL NO              | FAILURE MODE                                                                                           | ENVIRONMENT     | TEST TYPE | RPT ACT      | FA NO | FA RPTS ISSUED    |            | FARD CLOSE-OUT |
|                    |             |                        |                                                                                                        |                 |           |              |       | BY                | NUMBER     |                |
| LTR                | 7-18-62     | 001                    | Channel 1 dropped storage at 180 cps. Delay line assemblies A37 and A38 defective.                     | Vibration       | Acc       | (V)          | A17   | (V)               | LTR        | F 12-10 12-10  |
| LTR                | 7-18-62     | 001                    | A38 delay line failed after 1 hour soak.                                                               | Hi-Temp         | Acc       | (V)          | A17   | "                 | "          | F 12-10 12-10  |
| LTR                | 7-18-62     | 001                    | A11 has no enable pulse.                                                                               | N/R             | Acc       | (V)          | A17   | "                 | "          | F 12-10 12-10  |
| LTR                | 7-18-62     | 001                    | A30 failed at Hi-Temp, operated at ambient.                                                            | Hi-Temp         | Acc       | (V)          | A17   | "                 | "          | F 12-10 12-10  |
| LTR                | 7-18-62     | 001                    | A19 had no erase command pulse                                                                         | N/R             | Acc       | (V)          | A17   | QCE               | 1321-108-5 | F 3-29 3-29    |
| LTR                | 7-25-62     | 002                    | Delay line cavity isolation system out of spec.                                                        | N/R             | Acc       | (V)          | A18   | (V)               | LTR        | F 3-15 3-15    |
| LTR                | 7-25-62     | 002                    | No logic output A44 after heat test. (Output at ground).                                               | Hi-Temp         | Acc       | (V)          | A18   | "                 | "          | F 12-10 12-10  |
| LTR                | 7-25-62     | 002                    | Module potting found to have slight cracks after 300 test.                                             | Lo-Temp         | Acc       | (V)          | NR    |                   |            | 3-15 3-15      |
| LTR                | 9-5-62      | 003                    | A-42 delay line assembly failed because of a noisy delay line.                                         | Vibration       | Acc       | (V)          | A19   | (V)               | LTR        | P 9-25 3-29    |
| LTR                | 9-5-62      | 003                    | Metal shield on delay line amplifier chattered - noise picked up and amplified, distorting the signal. | Vibration       | Acc       | (V)          | A19   | QCE               | 1321-108-4 | F 3-29 3-29    |
| LTR                | 9-5-62      | 003                    | A-9 failed at 130°.                                                                                    | Hi-Temp         | Acc       | (V)          | A19   | "                 | "          | P 3-29 3-29    |

|                    |  |                        |  |                 |  |                   |  |
|--------------------|--|------------------------|--|-----------------|--|-------------------|--|
| NOMENCLATURE       |  | SUBSYSTEM              |  | QC ENGINEER     |  | PAGE 2 OF 8 PAGES |  |
| Command Programmer |  | Tracking & Command     |  | D. Sharrock     |  | MANUFACTURER      |  |
| DRAWING NUMBER     |  | MISSION CLASSIFICATION |  | DESIGN ENGINEER |  | GE-LMD            |  |
| 103C4975 PI        |  | Critical               |  | J. McBride      |  |                   |  |

| FAILURE NUMBER | REPORT DATE | SERIAL NO | FAILURE MODE                                                                                                            | ENVIRON   | TEST TYPE | RPT ACT | FA NO | FA RPTS ISSUED |                             |      | FARE CLOSE-OUT |       |
|----------------|-------------|-----------|-------------------------------------------------------------------------------------------------------------------------|-----------|-----------|---------|-------|----------------|-----------------------------|------|----------------|-------|
|                |             |           |                                                                                                                         |           |           |         |       | BY             | NUMBER                      | DATE | FA             | CA    |
| LTR            | 9-5-62      | 003       | A2, A19 failed at 30°.                                                                                                  | Lo-Temp   | Acc       | (V)     | A19   | QCE            | 1321-108-4                  | 3-25 | F 3-29         | 3-29  |
| LTR            | 9-5-62      | 003       | A37 failed at 30°.                                                                                                      | Lo-Temp   | Acc       | (V)     | A19   | (V)            | LTR                         | 9-5  | F 12-10        | 12-10 |
| LTR            | 9-25-62     | 004       | Channel 4 inoperative after horizontal minor plane.                                                                     | Vibration | Acc       | (V)     | A20   | (V)            | LTR                         | 9-25 | F 12-10        | 12-10 |
| LTR            | 9-25-62     | 004       | Channel 1 inoperative at 131°.                                                                                          | Hi-Temp   | Acc       | (V)     | A20   | "              | "                           | "    | F 12-10        | 12-10 |
| LTR            | 9-25-62     | 004       | Timer inoperative at 131°.                                                                                              | Hi-Temp   | Acc       | (V)     | A20   | "              | "                           | "    | F 12-10        | 12-10 |
| LTR            | 9-25-62     | 004       | Channel 4 inoperative at 131°.                                                                                          | Hi-Temp   | Acc       | (V)     | A20   | "              | "                           | "    | F 12-10        | 12-10 |
| LTR            | 9-25-62     | 004       | A22 failed at 131° - ok at ambient.                                                                                     | Hi-Temp   | Acc       | (V)     | A20   | QCE            | 1321-108-3                  | 3-25 | F 3-29         | 3-29  |
| H50277         | 10-9-62     | 005       | Word stays out at +6V (module A33)                                                                                      | N/R       | Acc       | (V)     | A37   | (V)            | QC Test Data<br>Pkg: S/N005 | --   | F 3-15         |       |
| H50277A        | 10-10-62    | 005       | Channel 2 dropped words during horizontal major vibration. (A39, A40).                                                  | Vibration | Acc       | (V)     | A38   | "              | "                           | --   | F 3-15         | 3-15  |
| H50277A        | 10-11-62    | 005       | No read-out at 230°F (Module A24); No millisecond accept at 230°F (Module A8); No 10 msec accept at 230°F (Module A28). | Lo-Temp   | Acc       | (V)     | A39   | "              | "                           | --   | F 3-15         | 3-15  |
| H50275A        | 10-20-62    | 005       | Improper circulation of stored information from A37 and A1 during random vibration.                                     | Vibration | Acc       | (V)     | A40   | "              | "                           | --   | P              |       |

|                    |  |                        |  |                 |  |                   |  |
|--------------------|--|------------------------|--|-----------------|--|-------------------|--|
| NOMER LATURE       |  | SUBSYSTEM              |  | QC ENGINEER     |  | PAGE 3 OF 3 PAGES |  |
| Command Programmer |  | Tracking & Command     |  | D. Sharrock     |  |                   |  |
| DRAWING NUMBER     |  | MISSION CLASSIFICATION |  | DESIGN ENGINEER |  | MANUFACTURER      |  |
| 103C4975 P1        |  | Critical               |  | J. McBride      |  | GE-LINED          |  |

| FAILURE NUMBER   | REPORT DATE          | SERIAL NO                  | FAILURE MODE                                                                                                                                                            | ENVIRONMENT | TEST TYPE      | RPT ACT | FA NO | FA RPTS ISSUED |                                   |      | FARMS CLOSE-OUT |      |
|------------------|----------------------|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|----------------|---------|-------|----------------|-----------------------------------|------|-----------------|------|
|                  |                      |                            |                                                                                                                                                                         |             |                |         |       | BY             | NUMBER                            | DATE | FA              | CA   |
| IRN1259          | 10-26-62             | J93020<br>-1<br>(001)      | Several 28VDC pulses of 68 msec duration present during second half of alert signal output.                                                                             | Ambient     | SPL (Post-Acc) | C/T     | 025   | QCE            | 1342-103-1                        | 1-29 | P               |      |
| H50355           | 10-29-62             | 005<br>(Re-assembled unit) | 10 msec pulse missing from channel 3 at 131°F.                                                                                                                          | Hi-Temp     | Acc            | (V)     | A41   | (V)            | QC Test Data<br>Pkg: S/N005       | --   | F               | 3-15 |
| H50355A          | 10-31-62             | 005<br>(Re-assembled unit) | Module A7 inoperative after vertical vibration.                                                                                                                         | Post-Vib    | Acc            | (V)     | A42   | "              | "                                 | --   | F               | 3-15 |
| H44878           | 11-9-63              | 006                        | During horizontal minor vibration, bits changed in the timing portion of the word causing the appearance of missing words at read out (A37, A38 delay-line assemblies). | Vibration   | Acc            | (V)     | A43   | (V)            | QC Test Data<br>Pkg: S/N006       | --   | P               |      |
| H50393<br>H50395 | 11-10-62<br>11-12-62 | 006                        | Erase telemetry missing from channel 4 (A32).                                                                                                                           | N/R         | Acc            | (V)     | A44   | "              | "                                 | --   | P               |      |
| IRN1311          | 11-16-62             | J93020<br>-4<br>(004)      | Alert-signal voltage level only drops to 3.8VDC instead of to less than 1VDC as required.                                                                               | Ambient     | Acc            | C/T     | 044   | (V)            | QC Test Data<br>Pkg: S/N<br>RR004 | --   | F               | 3-15 |
| H50278           | 11-21-62             | 006                        | Channel 4 occasionally rejects an acceptable word during continuous read in. (A20)                                                                                      | N/R         | Acc            | (V)     | A45   | (V)            | QC Test Data<br>Pkg: S/N005       | 3-13 | F               | 3-22 |
| H49581           | 11-22-62             | 007                        | Channel 2 inoperative at 131°F (Module A7)                                                                                                                              | Hi-Temp     | Acc            | (V)     | A46   | (V)            | QC Test Data<br>Pkg: S/H007       | --   | P               |      |

|                    |  |                        |  |                 |  |                   |  |
|--------------------|--|------------------------|--|-----------------|--|-------------------|--|
| NOMENCLATURE       |  | SUBSYSTEM              |  | QC ENGINEER     |  | PAGE 4 OF 8 PAGES |  |
| Command Programmer |  | Tracking & Command     |  | D. Sharrock     |  |                   |  |
| DRAWING NUMBER     |  | MISSION CLASSIFICATION |  | DESIGN ENGINEER |  | MANUFACTURER      |  |
| 103C4975 P1        |  | Critical               |  | J. McDride      |  | GE - LIND         |  |

| FAILURE NUMBER | REPORT DATE | SERIAL NO         | FAILURE MODE                                                                                                                                                             | ENVIRONMENT | TEST TYPE | RPT ACT | FA NO | FA RPT'S ISSUED |                             |      | FARB CLOSE-OUT |      |   |
|----------------|-------------|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-----------|---------|-------|-----------------|-----------------------------|------|----------------|------|---|
|                |             |                   |                                                                                                                                                                          |             |           |         |       | BY              | NUMBER                      | DATE | FA             | CA   |   |
| H50278A        | 11-23-62    | 006               | During horizontal minor vibration, bits changed in the timing portion of the word causing the appearance of missing words at read out. (A37, A38 Delay-line assemblies). | Vibration   | Acc       | (V)     | A47   | (V)             | QC Test Data<br>Pkg: S/N006 | --   | 3-15           | 3-15 |   |
| H49577         | 11-23-62    | 007               | Enable pulses were present during erase while the Programmer was tested at 23°F. (Module A17).                                                                           | Lo-Temp     | Acc       | (V)     | A48   | (V)             | QC Test Data<br>Pkg: S/N007 | --   |                |      | P |
| H49622         | 11-24-62    | 007               | During horizontal minor vibration, bits changed in the timing portion of the word causing the appearance of missing words at read out. (A37, A38 Delay lines).           | Vibration   | Acc       | (V)     | A49   | "               | "                           | --   |                |      | P |
| H49623         | 11-26-62    | 006               | No 0.8 second pulse and output stayed at +5V in channel 4 (Module A27).                                                                                                  | N/R         | Acc       | (V)     | A50   | (V)             | QC Test Data<br>Pkg: S/N006 | --   |                |      | P |
| H45274         | 11-22-62    | 007               | Channel 2 did not read out after horizontal vibration (A39 Amplifier).                                                                                                   | Vibration   | Acc       | (V)     | A51   | (V)             | QC Test Data<br>Pkg: S/N007 | --   |                |      | P |
| IRN1331        | 12-4-62     | J93020-3<br>(003) | Zero quiescent level on alert signal at 34 VDC input drops to 5.2 VDC instead of to less than 1VDC as required.                                                          | Ambient     | Acc       | C/T     | 062   | XCE             | 1342-100-2                  | 3-13 | 3-22           | 3-22 | F |

|                     |  |                        |  |                 |  |                   |  |
|---------------------|--|------------------------|--|-----------------|--|-------------------|--|
| NOMENCLATURE        |  | SUBSYSTEM              |  | QC ENGINEER     |  | PAGE 5 OF 8 PAGES |  |
| Core and Programmer |  | Tracking & Command     |  | D. Sharrock     |  |                   |  |
| DRAWING NUMBER      |  | MISSION CLASSIFICATION |  | DESIGN ENGINEER |  | MANUFACTURER      |  |
| 1-24975 P1          |  | Critical               |  | J. McBride      |  | GE - LIED         |  |

| FAILURE NUMBER | REPORT DATE | SERIAL NO   | FAILURE MODE                                                                                                       | ENVIRONMENT | TEST TYPE | RPT ACT    | FA NO | FA RPTS ISSUED |                                    |      | FARU CLOSE-OUT |      |  |
|----------------|-------------|-------------|--------------------------------------------------------------------------------------------------------------------|-------------|-----------|------------|-------|----------------|------------------------------------|------|----------------|------|--|
|                |             |             |                                                                                                                    |             |           |            |       | BY             | NUMBER                             | DATE | FA             | CA   |  |
| H45644         | 12-11-62    | RR004       | 3 10 msec accept pulse on channel 4 missing during vertical plane.                                                 | Vibration   | Acc       | (V)        | A52   | (V)            | QC Test Data<br>Pkg: S/N<br>RR 004 | --   | 3-15           | 3-15 |  |
| H45447         | 12-13-62    | RR004       | 3 Same as above                                                                                                    | Vibration   | Acc       | (V)        | A53   | "              | "                                  | --   | 3-15           | 3-15 |  |
| H53789         | 12-17-62    | 008         | 3 No enable direct pulse from channel 4.                                                                           | Post-Temp   | Acc       | (V)        | A95   | (V)            | QC Test Data<br>Pkg: S/N 008       | --   | P              |      |  |
| H53790         | 12-17-62    | 008         | 3 Comparator module failed to recirculate properly - time bits changed, causing improper readout.                  | Vibration   | Acc       | (V)        | A96   | (V)            | "                                  | --   | P              |      |  |
| H45477         | 12-17-62    | 008         | 3 Inoperative after horizontal major plane.                                                                        | Vibration   | Acc       | (V)        | A97   | (V)            | "                                  | --   | P              |      |  |
| H45498         | 12-18-62    | 008         | 3 Bits changed in timing portion of word, causing appearance of missing words at readout (horizontal minor plane). | Vibration   | Acc       | (V)        | A98   | (V)            | "                                  | --   | P              |      |  |
| H51414         | 12-19-62    | 008         | 3 Bits changing in the timing portion, causing improper read-out.                                                  | N/R         | Acc       | (V)        | A99   | (V)            | "                                  | --   | P              |      |  |
| IR0600         | 12-27-62    | 93020<br>-7 | 0 Unit apparently damaged by handling.                                                                             | Ambient     | N/A       | Fin. Assy. | 073   | QCE            | 1321-103-6                         | 4-18 | F              |      |  |
| H51214         | 1-2-63      | 009         | 3 Channel 3 erase pulse present at all times. 1 being held down. (Horizontal major plane)                          | Post-Vib    | Acc       | (V)        | A102  | (V)            | QC Test Data<br>Pkg: S/N009        | --   | P              |      |  |

|                                     |  |                                    |  |                               |  |                          |  |
|-------------------------------------|--|------------------------------------|--|-------------------------------|--|--------------------------|--|
| NOMENCLATURE:<br>Command Programmer |  | SUBSYSTEM<br>Tracking & Command    |  | QC ENGINEER<br>D. Sharrock    |  | PAGE 6 OF 8 PAGES        |  |
| DRAWING NUMBER<br>103C4975 P1       |  | MISSION CLASSIFICATION<br>Critical |  | DESIGN ENGINEER<br>J. McBride |  | MANUFACTURER<br>GE - MED |  |

| FAILURE NUMBER | FAILURE REPORT DATE | SERIAL NO | FAILURE MODE                                                                    | ENVIRONMENT | TEST TYPE | TEST RPT ACT NO | FA NO    | FA RPTS ISSUED |                                    |      | FARB CLOSE-OUT |    |    |
|----------------|---------------------|-----------|---------------------------------------------------------------------------------|-------------|-----------|-----------------|----------|----------------|------------------------------------|------|----------------|----|----|
|                |                     |           |                                                                                 |             |           |                 |          | BY             | NUMBER                             | DATE | PK             | FA | CA |
| H51304         | 1-2-63              | 009       | Channel 4 completely inoperative except for reject pulse.                       | N/R         | Acc       | (V) A103        | (V) A103 |                | QC Test Data<br>Pkg: S/N 009       | --   | P              |    |    |
| H51340         | 1-2-63              | 009       | Crystal oscillator frequency erratic when power applied at 131°F.               | Hi-Temp     | Acc       | (V) A104        | (V) A104 |                | "                                  | --   | P              |    |    |
| H51346         | 1-3-63              | 009       | P3 bit missing from I1 during test at 230°F.                                    | Lo-Temp     | Acc       | (V) A105        | (V) A105 |                | "                                  | --   | P              |    |    |
| H50018         | 1-5-63              | 009       | Crystal oscillator frequency varied *during temperature test of the programmer. | *           | Acc       | (V) A106        | (V) A106 |                | "                                  | --   | P              |    |    |
| H50183         | 1-17-63             | 010       | Power supply drawing excessive current.                                         | N/R         | Acc       | (V) A107        | (V) A107 |                | QC Test Data<br>Pkg: S/N 010       | --   | P              |    |    |
| H50193         | 1-17-63             | 010       | Crystal oscillator frequency output erratic on pin 4                            | N/R         | Acc       | (V) A108        | (V) A108 |                | "                                  |      | P              |    |    |
| H53758         | 1-18-63             | RR008     | Module A2E #11 failed                                                           | N/R         | ReAcc     | (V) A100        | (V) A100 |                | QC Test Data<br>Pkg: S/N<br>RR 008 | --   | P              |    |    |

| NOMENCLATURE       |              | SUBSYSTEM              |                                                                   | QC ENGINEER     |           | PAGE 7 OF 8 PAGES |                                  |
|--------------------|--------------|------------------------|-------------------------------------------------------------------|-----------------|-----------|-------------------|----------------------------------|
| Command Programmer |              | Tracking & Command     |                                                                   | D. Sharrock     |           |                   |                                  |
| DRAWING NUMBER     |              | MISSION CLASSIFICATION |                                                                   | DESIGN ENGINEER |           | MANUFACTURER      |                                  |
| 103C4975 P1        |              | Critical               |                                                                   | J. KcBride      |           | GE-LIED           |                                  |
| FAILURE NUMBER     | REPORT DATE  | SERIAL NO              | FAILURE MODE                                                      | ENVIRONMENT     | TEST TYPE | TEST RPT ACT NO   | FA RPTS ISSUED                   |
|                    |              |                        |                                                                   |                 |           |                   | BY NUMBER DATE                   |
| H53754             | 1-22-63      | RR008                  | The accept 10ms and reject 10ms pulses are 1.5V higher than spec. | N/R             | ReAcc     | (V) A101          | (V) QC Test Data Pkg: S/N RR 008 |
| H53800             | 53800 2-1-63 | 1-26-63                | Operation of shift pulse counter in A13 module incorrect          | N/R             | Acc       | (V) A109          | (V) QC Test Data Pkg: S/N 010    |
| H53861             | 1-31-63      | 010                    | Channel 2 dropped bits of information.                            | Vibration       | Acc       | (V) A110          | (V) QC Test Data Pkg: S/N 010    |
| H55654             | 2-4-63       | 010                    | Channel 2 dropped time bits of information.                       | Vibration       | Acc       | (V) A111          | "                                |
| H55655             | 2-4-63       | 010                    | Channel 1 dropped time bits of information.                       | Vibration       | Acc       | (V) A112          | "                                |
| H53916             | 2-12-63      | 010                    | Power supply input power reading higher than usual.               | N/R             | Acc       | (V) A113          | "                                |
| H53963             | 2-14-63      | 010                    | Amplifier assembly output voltage lower than normal in channel 4. | N/R             | Acc       | (V) A114          | "                                |
|                    |              |                        |                                                                   |                 |           |                   | FA RPTS ISSUED                   |
|                    |              |                        |                                                                   |                 |           |                   | FA CLOSE-OUT                     |
|                    |              |                        |                                                                   |                 |           |                   | FA CA                            |

RECEIVED

APR 26 1963

4-1-63

| NOMENCLATURE       |         | SUBSYSTEM              |                                                                                                                                             | QC ENGINEER     |               | PAGE 8 OF 8 PAGES |                                |        |                |    |
|--------------------|---------|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|-----------------|---------------|-------------------|--------------------------------|--------|----------------|----|
| Command Programmer |         | Tracking & Command     |                                                                                                                                             | D. Sharrock     |               | MANUFACTURER      |                                |        |                |    |
| DRAWING NUMBER     |         | MISSION CLASSIFICATION |                                                                                                                                             | DESIGN ENGINEER |               | GE-L-1000         |                                |        |                |    |
| 100C4975 F1        |         | Critical               |                                                                                                                                             | J. McBride      |               |                   |                                |        |                |    |
| FAILURE REPORT     |         | SERIAL NO              | FAILURE MODE                                                                                                                                | ENVIRON         | TEST RPT TYPE | FA NO             | FA RPTS ISSUED                 |        | FARB CLOSE-OUT |    |
| NUMBER             | DATE    |                        |                                                                                                                                             |                 |               |                   | BY                             | NUMBER | DATE           | FA |
| H53858             | 2-20-63 | 011                    | Channel 4 inoperative.                                                                                                                      | N/R             | Acc (V)       | A115 (V)          | QC Test Data<br>Pkg: S/N 011   | ---    | P              |    |
| H50399             | 2-21-63 | 011                    | Channels 3 and 4 inoperative -erase pulse appeared intermittently in Channel 3.                                                             | N/R             | Acc (V)       | A116 (V)          | "                              | ---    | P              |    |
| H50408             | 2-21-63 | 011                    | Information missing on Pin B of A024.                                                                                                       | N/R             | Acc (V)       | A117 (V)          | "                              | ---    | P              |    |
| H50409             | 2-21-63 | 011                    | Channel 4 inoperative * in temperature.                                                                                                     | *               | Acc (V)       | A118 (V)          | "                              | ---    | P              |    |
| H50433             | 2-27-63 | 011                    | Channel 4 inoperative line full output at 2 volts. No accept or erase pulses were present. Failure occurs only at low temperature (+230°F). | Lo-Temp         | Acc (V)       | A119 (V)          | "                              | ---    | P              |    |
| H55603             | 3-6-63  | RR005                  | Channel 2 inoperative except for reject pulses (* +230°F).                                                                                  | Lo-Temp *       | Acc (V)       | A120 (V)          | QC Test Data<br>Pkg: S/N RR005 | ---    | P              |    |
| H55698             | 3-6-63  | RR005                  | No 10 msec accept pulse present on Channel 3.                                                                                               | Vibration       | Acc (V)       | A121 (V)          | "                              | ---    | P              |    |
| H55724             | 3-13-63 | RR005                  | Reject pulses appearing intermittently during line read in on Channel 2.                                                                    | Vibration       | Acc (V)       | A122 (V)          | "                              | ---    | P              |    |
| IR2537             | 4-8-63  | 579207                 | Excessive power                                                                                                                             | Ambient         | Qual C/T      | 213               |                                |        |                |    |

RECEIVED  
APR 26 1963

RECEIVED

APR 26 1963

4-24-63

|                                 |  |                                 |  |                               |  |                              |  |
|---------------------------------|--|---------------------------------|--|-------------------------------|--|------------------------------|--|
| NOMENCLATURE<br>Accelerometer   |  | SUBSYSTEM<br>Telemetry          |  | QC ENGINEER<br>J. Young       |  | PAGE 1 OF 1 PAGES            |  |
| DRAWING NUMBER<br>106C8809 P4/5 |  | MISSION CLASSIFICATION<br>Minor |  | DESIGN ENGINEER<br>D. Gicking |  | MANUFACTURER<br>Bourns, Inc. |  |

| FAILURE NUMBER | FAILURE REPORT DATE | SERIAL NO | FAILURE MODE                                                                                                                                                                     | ENVIRONMENT | TEST TYPE | RPT ACT | FA NO | FA RPTS ISSUED |                           |                   | FARB CLOSE-OUT |     |
|----------------|---------------------|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-----------|---------|-------|----------------|---------------------------|-------------------|----------------|-----|
|                |                     |           |                                                                                                                                                                                  |             |           |         |       | BY             | NUMBER                    | DATE              | FA             | CA  |
| IRN1290        | 11-8-62             | GC4190-7  | Out of spec (apparently open) above 3 g.                                                                                                                                         | Ambient     | Acc       | C/T     | 047   | QCE            | 1342-240-1<br>FAR Suppl 1 | 11-19 P<br>12-5 P | 2-25           | 3-8 |
| IRN1291        | 11-8-62             | -10       |                                                                                                                                                                                  |             |           |         |       |                |                           |                   |                |     |
| IRN1293        | 11-8-62             | -13       |                                                                                                                                                                                  |             |           |         |       |                |                           |                   |                |     |
| IR20527        | 1-25-63             | GC4190-7  | Calibration level below spec at 1, 2, and 3 "G" levels. Calibration level below spec at 1 and 2 "G" levels. Intermittent throughout calibration run-appears to be open at 0 "G". | Ambient     | Acc       | C/T     | 157   | QCE            | 1321-239/<br>240-2        | 3-21 P            |                |     |
|                |                     | -8 (P5)   |                                                                                                                                                                                  |             |           |         |       |                |                           |                   |                |     |
|                |                     | -19 (P4)  |                                                                                                                                                                                  |             |           |         |       |                |                           |                   |                |     |
| FC47493        | 2-7-63              | GC4190-4  | Failed to meet spec of SI238133 para. 2.2.6, 15.                                                                                                                                 | Ambient     | S/S (951) | S/T     |       |                |                           |                   |                |     |
| FC47496        | 2-7-63              | GC4190-3  | Pitch accelerometer failed to meet spec per para. 2.2.6 S.I. 238133.                                                                                                             | Ambient     | S/S (951) | S/T     |       |                |                           |                   |                |     |

|                |  |                        |  |                 |  |                   |  |
|----------------|--|------------------------|--|-----------------|--|-------------------|--|
| NOMENCLATURE   |  | SUBSYSTEM              |  | QC ENGINEER     |  | PAGE 1 OF 1 PAGES |  |
| Accelerometer  |  | Telemetry              |  | J. Young        |  |                   |  |
| DRAWING NUMBER |  | MISSION CLASSIFICATION |  | DESIGN ENGINEER |  | MANUFACTURER      |  |
| 108C8809 P5    |  | Minor                  |  | D. Gicking      |  | Bourns, Inc.      |  |

| FAILURE NUMBER | REPORT DATE | SERIAL NO | TEST TYPE | ENVIRONMENT                                        | FAILURE MODE | RPT ACT   | FA NO  | FA RPTS ISSUED |        |      | FARB CLOSE-OUT |      |
|----------------|-------------|-----------|-----------|----------------------------------------------------|--------------|-----------|--------|----------------|--------|------|----------------|------|
|                |             |           |           |                                                    |              |           |        | BY             | NUMBER | DATE | FA             | CA   |
| IRN1292        | 11-8-62     | GC4190-1  | 0         | Output out of spec at -9.0g.                       | Ambient      | Acc       | C/T NR |                |        |      | 1-15           | 1-15 |
| FC47498        | 2-7-63      | GC4190-3  | 2         | Failed to meet spec of S.I. 238133 para. 2.2.6.10. | Ambient      | S/S (951) | S/T NR |                |        |      |                |      |



|                                                               |                                 |  |                               |  |                                |  |
|---------------------------------------------------------------|---------------------------------|--|-------------------------------|--|--------------------------------|--|
| NOMENCLATURE<br>Baroresistor<br>DRAWING NUMBER<br>108C8817 P3 | SUBSYSTEM<br>Telemetry          |  | QC ENGINEER<br>J. Young       |  | PAGE 1 OF 2 PAGES              |  |
|                                                               | MISSION CLASSIFICATION<br>Minor |  | DESIGN ENGINEER<br>D. Gicking |  | MANUFACTURER<br>Bourtons, Inc. |  |

| FAILURE NUMBER | REPORT DATE                      | SERIAL NO                   | FAILURE MODE                                                                                                                  | ENVIRONMENT | TEST TYPE | RPT ACT | FA NO | FA RPTS ISSUED |              | FARB CLOSE-OUT |              |
|----------------|----------------------------------|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------|-------------|-----------|---------|-------|----------------|--------------|----------------|--------------|
|                |                                  |                             |                                                                                                                               |             |           |         |       | BY             | NUMBER       | DATE           | FA CA        |
| IR5004         | 9-5-62                           | GC1168<br>-1                | Unit out of spec during static performance (at 98% of range) reads 0.9545 - spec limits 0.9555 to 1.0000.                     | Ambient     | Acc       | C/T     | NR    |                |              |                | 11-21 11-21  |
|                |                                  | -12                         | Unit out of spec (below minimum) throughout static and dynamic performance ranges.                                            | Ambient     | Acc       | C/T     | A02   | QCE            | 1342-229.2-3 | 11-16          | F11-21 11-21 |
|                |                                  | GC1168<br>-15               | Unit 36% below spec throughout all static and dynamic performance tests.                                                      | Ambient     | Acc       | C/T     | A06   | QCE            | 1342-229.2-1 | 10-24          | F12-5 12-5   |
| IR5007         | 9-21-62                          | -18                         | Unit out of spec (below min.) at 98% range during both static and dynamic performance tests, and at 80% during dynamic tests. | Ambient     | Acc       | C/T     | NR    |                |              |                | 12-5 12-5    |
| FC47718        | 11-12-62                         | 5499373                     | 20% high (static and dynamic).                                                                                                | Post-Vib    | Qual      | C/T     | 039   | QCE            | 1342-229.2-2 | 11-14          | F11-26 11-26 |
| FC47722        | 11-12-62                         | 5499374                     | Same as above                                                                                                                 | Post-Vib    | Qual      | C/T     | 039   | QCE            | 1342-229.2-2 | 11-14          | F11-26 11-26 |
| (V) 368, 9, 70 | 12-11-62<br>12-11-62<br>12-11-62 | 3-8802<br>3-8799<br>3-6898  | High Noise level.                                                                                                             | Vibration   | Acc (V)   | (V)     | 081   | ACE            | 1342-229.2-4 | 1-9            | F1-11 1-11   |
| IR1379         | 1-15-63                          | GC1168<br>-75<br>-76<br>-85 | High Noise level.                                                                                                             | Ambient     | Acc       | C/T     | 097   | QCE            | 1342-229.2-5 | 1-26           | F2-5 2-5     |

|                |  |                        |  |                 |  |                   |  |
|----------------|--|------------------------|--|-----------------|--|-------------------|--|
| NOMENCLATURE   |  | SUBSYSTEM              |  | QC ENGINEER     |  | PAGE 2 OF 2 PAGES |  |
| Baroresistor   |  | Telemetry              |  | J. Young        |  |                   |  |
| DRAWING NUMBER |  | MISSION CLASSIFICATION |  | DESIGN ENGINEER |  | MANUFACTURER      |  |
| 108C8817 P3    |  | Minor                  |  | D. Gicking      |  | Bourns, Inc.      |  |

| FAILURE REPORT NUMBER | DATE    | SERIAL NO                                 | FAILURE MODE                                | ENVIRONMENT | TEST TYPE | RPT ACT | FA NO | FA RPTS ISSUED |              | FARB        |
|-----------------------|---------|-------------------------------------------|---------------------------------------------|-------------|-----------|---------|-------|----------------|--------------|-------------|
|                       |         |                                           |                                             |             |           |         |       | BY             | NUMBER       |             |
| IR1380                | 1-15-63 | GC1168<br>-71<br>-74<br>-77<br>-81<br>-83 | High noise level                            | Ambient     | Acc       | C/T     | 097   | QCE            | 1342-229.2-5 | F 2-5 2-5   |
| 375 (V)               | 1-15-63 | 3-4332                                    |                                             |             |           |         |       |                |              |             |
| FC47487               | 2-5-63  | GC1168<br>-17                             |                                             |             |           |         |       |                |              |             |
| IR1397                | 1-22-63 | GC1168<br>-64                             |                                             |             |           |         |       |                |              |             |
| 376/377 (V)           | 1-30-63 | 3-4342<br>3-4083                          |                                             |             |           |         |       |                |              |             |
|                       |         |                                           | Noise from 0 to 15 PSIA during calibration. | Ambient     | Acc (V)   | (V)     | 107   | QCE            | 1342-229.2-6 | F 2-26 2-26 |
|                       |         |                                           | Sensor leaks at solder joint                | Ambient     | S/S (951) | S/T     | NR    |                |              |             |
|                       |         |                                           | Out of spec (low) at 40 percent of range.   | Ambient     | Acc       | C/T     |       |                |              |             |
|                       |         |                                           | Out of static error band.                   | Ambient     | Acc (V)   | (V)     | 125   | QCE            | 1342-229.2-7 | F 3-15 3-15 |

| NOMENCLATURE         |             | SUBSYSTEM                   |                                             | QC ENGINEER         |           | PAGE 1 OF 1 PAGES |       |                          |     |                  |       |       |       |                |
|----------------------|-------------|-----------------------------|---------------------------------------------|---------------------|-----------|-------------------|-------|--------------------------|-----|------------------|-------|-------|-------|----------------|
| Liner Temp. Detector |             | Telemetry                   |                                             | D. Deitz            |           |                   |       |                          |     |                  |       |       |       |                |
| DRAWING NUMBER       |             | MISSION CLASSIFICATION      |                                             | DESIGN ENGINEER     |           | MANUFACTURER      |       |                          |     |                  |       |       |       |                |
| 108C8828 G1          |             | Minor                       |                                             | D. Gicking          |           | Gulton Industries |       |                          |     |                  |       |       |       |                |
| FAILURE NUMBER       | REPORT DATE | SERIAL NO                   | FAILURE MODE                                | ENVIRON             | TEST TYPE | RPT ACT           | FA NO | FA RPTS ISSUED           | BY  | NUMBER           | DATE  | FA    | CA    | FARB CLOSE-OUT |
| IR23685              | 4-5-62      | GA0040<br>-199              | 2 Radiometer reading out of spec            | Ambient             | Acc       | C/T               | A01   | 1342-224-1<br>1342-224-3 | QCE | 10-25P<br>11-14F | 11-26 | 11-26 | 11-26 |                |
| IR24865              | 5-1-62      | GA0087<br>-207              | 2 Failed calibration test at min. voltage.  | Ambient             | Acc       | C/T               | A01   | Same as above.           | QCE |                  |       |       |       |                |
| IR0316               | 6-30-62     | GA0379<br>-16<br>-25<br>-28 | 2 Radiometer reading out of spec.<br>2<br>2 | Ambient<br>Post-Vib | Acc       | C/T               | A01   | Same as above.           | QCE |                  |       |       |       |                |

| NOMENCLATURE          |         |                                                     | SUBSYSTEM                               |                                                                | QC ENGINEER     |         | PAGE 1 OF 2 PAGES                       |                                              |        |                |       |
|-----------------------|---------|-----------------------------------------------------|-----------------------------------------|----------------------------------------------------------------|-----------------|---------|-----------------------------------------|----------------------------------------------|--------|----------------|-------|
| Liner Temp. Detector  |         |                                                     | Telemetry                               |                                                                | D. Deitz        |         | MANUFACTURER                            |                                              |        |                |       |
| DRAWING NUMBER        |         |                                                     | MISSION CLASSIFICATION                  |                                                                | DESIGN ENGINEER |         | Gulton Industries                       |                                              |        |                |       |
| 106C8828 G2           |         |                                                     | Minor                                   |                                                                | D. Gicking      |         |                                         |                                              |        |                |       |
| FAILURE REPORT NUMBER | DATE    | SERIAL NO                                           | FAILURE MODE                            | ENVIRON                                                        | TEST TYPE       | RPT ACT | FA NO                                   | FA RPTS ISSUED                               |        | FARB CLOSE-OUT |       |
|                       |         |                                                     |                                         |                                                                |                 |         |                                         | BY                                           | NUMBER | DATE           | FA    |
| IR25292               | 6-12-62 | GA0379<br>1 to 10                                   | 0 Ratiometer readings out of spec       | Ambient                                                        | Acc             | C/T     | NR                                      |                                              |        | 12-5           | 12-5  |
| IR7014                | 9-15-62 | GA0379<br>-45<br>-66<br>-82<br>-106<br>-108<br>-109 | Failed calibration test                 | Ambient<br>Ambient<br>PostVib<br>Ambient<br>Ambient<br>Ambient | Acc             | C/T     | NR<br>NR<br>NR<br>NR<br>A01<br>NR<br>NR | 1342-224-1<br>10-25P<br>11-14F<br>1342-224-3 |        | 11-26          | 11-26 |
| FC47719               | 11-1-62 | GA0379<br>-103                                      | 2 Ratiometer readings out of spec (low) | Ambient                                                        | Qual            | C/T     | 027QCE                                  | 1342-226-1<br>FAR Suppl 1                    |        | 12-19          | 12-19 |
| IRN1275               | 11-5-62 | GA0379<br>-25                                       |                                         |                                                                |                 |         |                                         |                                              |        |                |       |
| IRN1276               | 11-5-62 | -16                                                 |                                         |                                                                |                 |         |                                         |                                              |        |                |       |
| IRN1277               | 11-5-62 | -28                                                 |                                         |                                                                |                 |         |                                         |                                              |        |                |       |
| IRN1279               | 11-7-62 | -84<br>-93                                          | 1 Units failed Hi-Temp calibration.     | Hi-Temp                                                        | Acc             | C/T     | NR                                      |                                              |        | 1-15           | 1-15  |
| IRN1280               | 11-7-62 | -72<br>-74                                          |                                         |                                                                |                 |         |                                         |                                              |        |                |       |
| IRN1282               | 11-7-62 | -45                                                 |                                         |                                                                |                 |         |                                         |                                              |        |                |       |
| IRN1278               | 11-8-62 | -82<br>-108                                         |                                         |                                                                |                 |         |                                         |                                              |        |                |       |
| IRN1281               | 12-3-62 | -66<br>-109                                         |                                         |                                                                |                 |         |                                         |                                              |        |                |       |



|                          |  |                        |  |                 |  |                   |  |
|--------------------------|--|------------------------|--|-----------------|--|-------------------|--|
| NOMENCLATURE             |  | SUBSYSTEM              |  | QC ENGINEER     |  | PAGE 1 OF 2 PAGES |  |
| Component Temp. Detector |  | Telemetry              |  | D. Deitz        |  |                   |  |
| DRAWING NUMBER           |  | MISSION CLASSIFICATION |  | DESIGN ENGINEER |  | MANUFACTURER      |  |
| 108C8829 P1              |  | Minor                  |  | D. Gicking      |  | Gulton Industries |  |

| FAILURE REPORT |          |                                            | SERIAL NO | FAILURE MODE                                                    | ENVIRON            | TEST TYPE | RPT ACT | FA NO | FA RPTS ISSUED |                          | FARB CLOSE-OUT     |       |       |
|----------------|----------|--------------------------------------------|-----------|-----------------------------------------------------------------|--------------------|-----------|---------|-------|----------------|--------------------------|--------------------|-------|-------|
| NUMBER         | DATE     | BY                                         |           |                                                                 |                    |           |         |       | NUMBER         | DATE                     | FA                 | CA    |       |
| IR0318         | 7-14-62  | GA0399-52                                  | 2         | Ratiometer readings out of spec                                 | Ambient            | Acc       | C/T     | A01   | QCE            | 1342-224-1<br>1342-224-3 | 10-25 P<br>11-14 F | 11-26 | 11-26 |
| IR0340         | 7-30-62  | GA0399-56<br>-58<br>-60<br>-63             |           |                                                                 |                    |           |         |       |                |                          |                    |       |       |
| IR0270         | 7-31-62  | GA0399-105                                 |           |                                                                 |                    |           |         |       |                |                          |                    |       |       |
| IR0273         | 8-2-62   | GA0399-119<br>-116                         |           |                                                                 |                    |           |         |       |                |                          |                    |       |       |
| IR7010         | 8-21-62  | GA2199-230                                 | 3         | Failed temp. resistance test                                    | Ambient            | Acc       | C/T     | A01   | QCE            | Same as above            |                    |       |       |
| IR0611         | 8-24-62  | GA0399-172<br>-173<br>-185<br>-186<br>-190 |           |                                                                 |                    |           |         |       |                |                          |                    |       |       |
| FC47713        | 10-30-62 | GA0399-53                                  | 3         | Ratiometer readings out of spec wires peeling - potting cracked | Post-Humidity      | Qual      | C/T     | 022   | QCE            | 1342-224-2<br>1342-224-4 | 11-1 P<br>11-14 F  | 12-10 | 12-10 |
| IR1371         | 1-10-63  | GC4734-499                                 | 2         | Readings below tolerance at several points.                     | Hi-Temp<br>Lo-Temp | Acc       | C/T     | NR    |                |                          |                    |       |       |

| NOMENCLATURE             |             | SUBSYSTEM              |                                                           | QC ENGINEER     |               | PAGE 2 OF 2 PAGES  |           |
|--------------------------|-------------|------------------------|-----------------------------------------------------------|-----------------|---------------|--------------------|-----------|
| Component Temp. Detector |             | Telemetry              |                                                           | D. Deltz        |               |                    |           |
| DRAWING NUMBER           |             | MISSION CLASSIFICATION |                                                           | DESIGN ENGINEER |               | MANUFACTURER       |           |
| 103C8829 P1              |             | Minor                  |                                                           | D. Gicking      |               | Colton Industries  |           |
| FAULT REPORT NUMBER      | REPORT DATE | SERIAL NO              | FAILURE MODE                                              | ENVIRON         | TEST RPT TYPE | FA RPT'S ISSUED    | FARB      |
|                          |             |                        |                                                           |                 | ACT           | BY                 | CLOSE-OUT |
|                          |             |                        |                                                           |                 |               | NUMBER             | FA        |
|                          |             |                        |                                                           |                 |               |                    | CA        |
| FCE47426                 | 1-24-63     | GC4734<br>-211         | 3 Thermistor resistance reads 5-4k - should be 2k.        | Ambient         | S/S STE (904) |                    |           |
| FC47735                  | 2-1-63      | GA0399<br>-45          | 3 Ratio readings out of limits at all calibration points. | Post-Orb        | Qual C/T      | 120 QCE 1342-224-6 | 2-25 P    |

|                          |  |                        |  |                 |  |                   |  |
|--------------------------|--|------------------------|--|-----------------|--|-------------------|--|
| NOMENCLATURE             |  | SUBSYSTEM              |  | QC ENGINEER     |  | PAGE 1 OF 2 PAGES |  |
| Component Temp. Detector |  | Telemetry              |  | D. Deitz        |  |                   |  |
| DRAWING NUMBER           |  | MISSION CLASSIFICATION |  | DESIGN ENGINEER |  | MANUFACTURER      |  |
| JC30829 P2               |  | Minor                  |  | D. Gicking      |  | Gulton Industries |  |

| FAILURE NUMBER | REPORT DATE | SERIAL NO                      | FAILURE MODE                                                                                          | ENVIRONMENT                   | TEST TYPE         | RPT ACT           | FA NO             | FA RPTS ISSUED |                          | FARB CLOSE-OUT     |
|----------------|-------------|--------------------------------|-------------------------------------------------------------------------------------------------------|-------------------------------|-------------------|-------------------|-------------------|----------------|--------------------------|--------------------|
|                |             |                                |                                                                                                       |                               |                   |                   |                   | BY             | NUMBER                   |                    |
| IR0235         | 7-10-62     | GA0399<br>-16<br>-36           | Ratiometer readings out of spec                                                                       | Post-Hi-Temp                  | Acc               | C/T               | A01               |                |                          |                    |
| IR0317         | 7-14-62     | GA0399<br>-19                  | Ratiometer readings out of spec                                                                       | Ambient                       | Acc               | C/T               | A01               |                |                          |                    |
| IR0274         | 8-3-62      | GA0399<br>-73                  | Shorted                                                                                               | Ambient                       | Acc               | C/T               | A01               |                |                          |                    |
| IR0278         | 8-4-62      | GA0399<br>-80<br>-112<br>-115  | Ratiometer readings out of spec<br>Ratiometer readings out of spec<br>Ratiometer readings out of spec | PostVib<br>Ambient<br>Ambient | Acc               | C/T               | A01<br>A01<br>A01 | QCE            | 1342-224-1<br>1342-224-3 | 10-25 P<br>11-14 F |
| IR0279         | 8-7-62      | GA0399<br>-211<br>-188<br>-189 | Ratiometer readings out of spec<br>Shorted<br>Shorted                                                 | Ambient<br>Ambient<br>Ambient | Acc<br>Acc<br>Acc | C/T<br>C/T<br>C/T | A01<br>A01<br>A01 |                |                          |                    |
| IR0284         | 8-8-62      | GA0399<br>-204                 | Ratiometer readings out of spec                                                                       | Post<br>Hi-Temp               | Acc               | C/T               | A01               |                |                          |                    |
| FCE47699       | 1-15-63     | GA0399<br>-264                 | Resistance between red and blue leads so low it shorts out 5V supply.                                 | Ambient                       | S/S<br>(904)      | STE               | 5010              |                |                          |                    |
| FC47500        | 2-8-63      | GA0399<br>-68                  | Sensor indicates open per S.I. 238133 para. 2.2.5.17.                                                 | Ambient                       | S/S<br>(951)      | S/T               |                   |                |                          |                    |

| NOMENCLATURE             |             | SUBSYSTEM              |                                                                                                                                   | QC ENGINEER     |           | PAGE 2 OF 2 PAGES |       |                |    |        |      |    |    |
|--------------------------|-------------|------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-----------------|-----------|-------------------|-------|----------------|----|--------|------|----|----|
| Component Temp. Detector |             | Telemetry              |                                                                                                                                   | D. Deitz        |           |                   |       |                |    |        |      |    |    |
| DRAWING NUMBER           |             | MISSION CLASSIFICATION |                                                                                                                                   | DESIGN ENGINEER |           | MANUFACTURER      |       |                |    |        |      |    |    |
| 108C8829 P2              |             | Minor                  |                                                                                                                                   | D. Glicking     |           | Gulton Industries |       |                |    |        |      |    |    |
| FAILURE NUMBER           | REPORT DATE | SERIAL NO              | FAILURE MODE                                                                                                                      | ENVIRONMENT     | TEST TYPE | RPT ACT           | FA NO | FA RPTS ISSUED | BY | NUMBER | DATE | FA | CA |
| FC47481                  | 2-10-63     |                        | 3 Sensor shorted                                                                                                                  | Ambient         | S/S (951) | S/T               |       |                |    |        |      |    |    |
| FC47483                  | 2-10-63     | 5497544                | 2 Sensor reads 2.38V DC - below min. spec. of 2.8V DC.                                                                            | Ambient         | S/S (951) | S/T               |       |                |    |        |      |    |    |
| IR1361                   | 1-3-63      | GA0399-201             | 2 Out of spec at 0° F.                                                                                                            | PostVib         | Acc       | C/T               |       |                |    |        |      |    |    |
|                          |             | -257                   | 2 Out of spec at 0°F.                                                                                                             | Post-Hi-Temp    |           |                   |       |                |    |        |      |    |    |
| IR20157                  | 2-15-63     | GA0399-281             | 3 Inoperative at 60°, 70°, 80°, 90°, and 100°F. Ratiometer reading at all above temperatures was 0.9999, indicating open circuit. | Hi-Temp         | Acc       | C/T               | NR    |                |    |        |      |    |    |

| NOMENCLATURE          |         | SUBSYSTEM                                                                |                                                                                        | QC ENGINEER     |               | PAGE 1 OF 1 PAGES |                |     |       |            |    |    |     |
|-----------------------|---------|--------------------------------------------------------------------------|----------------------------------------------------------------------------------------|-----------------|---------------|-------------------|----------------|-----|-------|------------|----|----|-----|
| Explosive Piston      |         | Separation                                                               |                                                                                        | H. Rigney       |               | MANUFACTURER      |                |     |       |            |    |    |     |
| DRAWING NUMBER        |         | MISSION CLASSIFICATION                                                   |                                                                                        | DESIGN ENGINEER |               | Unidynamics       |                |     |       |            |    |    |     |
| 111C1508 P1           |         | Critical                                                                 |                                                                                        | J. Lilly        |               |                   |                |     |       |            |    |    |     |
| FAILURE REPORT NUMBER | DATE    | SERIAL NO                                                                | FAILURE MODE                                                                           | ENVIRON         | TEST RPT TYPE | ACT NO            | FA RPTS ISSUED | FA  | DATE  | NUMBER     | BY | FA | CA  |
| IR20269               | 12-6-62 | GE2824-44                                                                | 0 Internal parts blew out of piston housing during firing test.                        | Ambient         | Acc           | Expl. Test        | 070            | QCE | 12-27 | 1342-307-1 |    | F  | 1-4 |
| IR1629                | 2-25-63 | GE0486-142<br>-146<br>-147<br>-150<br>-152 to<br>-162<br>-164 to<br>-172 | 2 Rust-like scale condition on (24 mounting lugs and diaphragm at piston end of block. | Post-Humidity   | Qual          | V/S               | 128            | QCE | 3-5   | 1342-307-2 |    | P  |     |
| IR1630                | 3-8-63  | GE0486-142                                                               | 3 Specimen failed to function during firing test.                                      | Hi-Temp         | Qual          | QCE               | 155            | QCE | 3-12  | 1321-307-3 |    | P  |     |
| FC47556               | 3-12-63 | GE0486-147                                                               | 3 Specimen failed to function during firing test.                                      | Hi-Temp         | Qual          | QCE               | 156            | QCE | 3-18  | 1321-307-4 |    | P  |     |

# Subassembly of 242E564 G1

|                           |  |                        |  |                 |  |                   |  |
|---------------------------|--|------------------------|--|-----------------|--|-------------------|--|
| NOMENCLATURE              |  | SUBSYSTEM              |  | QC ENGINEER     |  | PAGE 1 OF 1 PAGES |  |
| F/F Shift Register Module |  | Tracking & Command     |  | D. Sharrock     |  |                   |  |
| DRAWING NUMBER            |  | MISSION CLASSIFICATION |  | DESIGN ENGINEER |  | MANUFACTURER      |  |
| 111C1751 G1               |  | Critical               |  | J. McBride      |  | GE - 18AD         |  |

| FAILURE NUMBER | REPORT DATE | SERIAL NO | TEST TYPE | ENVIRON | FAILURE MODE                                              | RPT ACT | FA NO   | FA RPTS ISSUED |        |      | FARB CLOSE-OUT |    |    |
|----------------|-------------|-----------|-----------|---------|-----------------------------------------------------------|---------|---------|----------------|--------|------|----------------|----|----|
|                |             |           |           |         |                                                           |         |         | BY             | NUMBER | DATE | FA             | CA | CA |
| DRE1614        | 3-8-63      | NR        |           | Hi-Temp | No output - failed on Comp. Assy Bd. 254E172 G1 SN KV234. | S/A     | C/T     |                |        |      |                |    |    |
| IR20110        | 3-20-63     | 10215-201 |           | Hi-Temp | Output remains at +6V (one side) - OK at ambient.         | Re-P/p  | C/T 197 |                |        |      |                |    |    |
|                |             |           |           |         | 4-1-63<br>(5-1-63)                                        |         |         |                |        |      |                |    |    |

Subassembly of 242E564 G1

|                 |  |                        |  |                 |  |                   |  |
|-----------------|--|------------------------|--|-----------------|--|-------------------|--|
| NON-ENCLATURE   |  | SUBSYSTEM              |  | QC ENGINEER     |  | PAGE 1 OF 1 PAGES |  |
| 24V "OR" Module |  | Tracking & Command     |  | D. Sharrock     |  |                   |  |
| DRAWING NUMBER  |  | MISSION CLASSIFICATION |  | DESIGN ENGINEER |  | MANUFACTURER      |  |
| 111C1753 G1     |  | Critical               |  | J. McBride      |  | GE-ASPD           |  |

| FAILURE NUMBER | FAILURE REPORT DATE | SERIAL NO    | TEST TYPE | ENVIRON | FAILURE MODE                                                                                                                             | TEST RPT ACT | FA NO | FA RPTS ISSUED |                                                                                           |                     | FARB CLOSE-OUT |     |     |
|----------------|---------------------|--------------|-----------|---------|------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------|----------------|-------------------------------------------------------------------------------------------|---------------------|----------------|-----|-----|
|                |                     |              |           |         |                                                                                                                                          |              |       | BY             | NUMBER                                                                                    | DATE                | FA             | FA  | CA  |
| IR1204         | 9-25-62             | KK724        | P/P       | Ambient | No output gate No. 1                                                                                                                     | C/T          | 007   | QME<br>FAB     | 1342-106-1<br>FAR 1003<br>(FA 007, 008,<br>014, 016,<br>018, and 019)<br>Mfg PIR 1622-044 | 11-1<br>11-19       | F<br>F         |     |     |
| IR1312         | 11-27-62            | KL123        | P/P       | Ambient | Incorrect output.                                                                                                                        | C/T          | 058   | QCE            | 1342-106-16<br>FAR Suppl 1                                                                | 3-19<br>4-2         | P<br>F         | 4-5 | 4-5 |
| IR1322         | 11-30-62            | KL121        | P/P       | Ambient | No output gate 2.                                                                                                                        | C/T          | 060   | L&P<br>QCE     | PIR 1330-478<br>1342-106-15<br>FAR Suppl 1                                                | 4-11<br>3-19<br>4-3 | F<br>P<br>F    |     | 4-5 |
| IR20119        | 3-13-63             | KL118        | SFV       | Ambient | Gate #1 is defective - output remains at ground. Should go to +28V. (Indication output transistor is open). Failed on C-D Bd 254E157 G1. | C/T          | 158   | QCE            | 1321-106-33                                                                               | 4-19                | F              |     |     |
| IR20110        | 3-20-63             | 10215<br>-16 | P/P       | Hi-Temp | Output remains at 28V - should go to zero. (OK at ambient).                                                                              | C/T          | 198   |                |                                                                                           |                     |                |     |     |
| IR21538        | 4-12-63             | 00018        | QFV *     | Ambient | Gate 2 remains at ground - should go to +28V. (*Ref 242E564 G1).                                                                         | C/T          | 229   |                |                                                                                           |                     |                |     |     |
|                |                     |              |           |         | 5-1-63                                                                                                                                   |              |       |                |                                                                                           |                     |                |     |     |

111C1753 G1

# Subassembly of 242E564 G1

|                     |  |                        |  |                 |  |                   |  |
|---------------------|--|------------------------|--|-----------------|--|-------------------|--|
| NOMENCLATURE        |  | SUBSYSTEM              |  | QC ENGINEER     |  | PAGE 1 OF 1 PAGES |  |
| 4-Gate "RAD" Module |  | Tracking & Command     |  | D. Sharrock     |  |                   |  |
| DRAWING NUMBER      |  | MISSION CLASSIFICATION |  | DESIGN ENGINEER |  | MANUFACTURER      |  |
| 111C1754 G1         |  | Critical               |  | J. McBride      |  | GE-ASPD/MSAD      |  |

| FAILURE NUMBER | REPORT DATE | SERIAL NO | ENVIRONMENT | FAILURE MODE                              | TEST TYPE | RPT ACT | FA NO | FA RPTS ISSUED |             |       | FARB CLOSE-OUT |      |      |
|----------------|-------------|-----------|-------------|-------------------------------------------|-----------|---------|-------|----------------|-------------|-------|----------------|------|------|
|                |             |           |             |                                           |           |         |       | BY             | NUMBER      | DATE  | FA             | CA   |      |
| IR7007         | E-16-62     | KK514     | Ambient     | T <sub>f</sub> Gate 4 out of spec (high)  | P/P       | C/T     | NR    |                |             |       | 12-5           | 12-5 |      |
| IRN1262        | 10-29-62    | KL186     | Ambient     | Vce Sat high                              | P/P       | C/T     | 030   | QCE            | 1342-106-8  | 11-28 | P              |      |      |
| IRN1287        | 11-7-62     | KL188     | Ambient     | Rise-time out of spec (high)              | P/P       | C/T     | NR    | QCE            | FAR Suppl 1 | 12-21 | F              |      |      |
| IRN1315        | 11-26-62    | 10215-48  | Ambient     | Fall time - gate 4, load 2 - out of spec. | P/P       | C/T     | 072   | FAB            | FAR 1005    | 1-11  | F              | 1-29 |      |
|                |             |           |             | 4-1-63<br>(5-1-63)                        |           |         |       |                |             |       |                | 2-11 | 2-11 |

Subassembly of 242E564 G1

|                   |  |                        |  |                 |  |                   |  |
|-------------------|--|------------------------|--|-----------------|--|-------------------|--|
| NON-ENCLOSURE     |  | SUBSYSTEM              |  | QC ENGINEER     |  | PAGE 1 OF 1 PAGES |  |
| Heavy "OR" Module |  | Tracking & Command     |  | D. Sharrock     |  |                   |  |
| DRAWING NUMBER    |  | MISSION CLASSIFICATION |  | DESIGN ENGINEER |  | MANUFACTURER      |  |
| 111C1755          |  | Critical               |  | J. McBride      |  | GE-ASPD/LEAD      |  |

| FAILURE NUMBER | REPORT DATE | SERIAL NO | FAILURE MODE                                  | ENVIRONMENT | TEST TYPE | RPT ACT | FA NO | FA RPTS ISSUED |              |      | FARB CLOSE-OUT |    |  |
|----------------|-------------|-----------|-----------------------------------------------|-------------|-----------|---------|-------|----------------|--------------|------|----------------|----|--|
|                |             |           |                                               |             |           |         |       | BY             | NUMBER       | DATE | FA             | CA |  |
| IR0266         | 7-24-62     | --        | 3 No output gate no. 1.                       | Ambient     | P/P       | C/T     | 003   | QME            | 1340-JJS-137 | 9-24 | 11-21          |    |  |
| IR20156        | 2-14-62     | 10215-8   | 2 Vce reads 0.41V - should be less than 0.4V. | Ambient     | P/P       | C/T     |       |                |              |      |                |    |  |
| IR20163        | 2-18-63     | KN745     | Output gate 1 28VDC - should be square wave.  | Ambient     | P/P       | C/T     | 137   | QCE            | 1321-106-25  | 4-4  | F 4-12         |    |  |
|                |             |           | 4-1-63<br>(5-1-63)                            |             |           |         |       |                |              |      |                |    |  |

# Subassembly of 242E564 G1

|                    |  |                        |  |                 |  |                   |  |
|--------------------|--|------------------------|--|-----------------|--|-------------------|--|
| NON-ENCLOSURE      |  | SUBSYSTEM              |  | QC ENGINEER     |  | PAGE 1 OF 1 PAGES |  |
| Medium "QR" Module |  | Tracking & Command     |  | D. Sharrock     |  |                   |  |
| DRAWING NUMBER     |  | MISSION CLASSIFICATION |  | DESIGN ENGINEER |  | MANUFACTURER      |  |
| 111C1757 G1        |  | Critical               |  | J. McBride      |  | GE-ASPD/22AD      |  |

| FAILURE NUMBER | REPORT DATE | SERIAL NO     | FAILURE MODE                                                                                                                          | ENVIRONMENT | TEST TYPE | RPT ACT | FA NO | FA RPTS ISSUED |                                           |                     | FARB CLOSE-OUT |      |     |
|----------------|-------------|---------------|---------------------------------------------------------------------------------------------------------------------------------------|-------------|-----------|---------|-------|----------------|-------------------------------------------|---------------------|----------------|------|-----|
|                |             |               |                                                                                                                                       |             |           |         |       | BY             | NUMBER                                    | DATE                | FA             | FA   | CA  |
| IR1352         | 12-20-62    | 10215<br>-178 | 3 No output Gate 2                                                                                                                    | Ambient     | P/P       | C/T     | 080   | QCE            | 1321-106-22                               | 4-3                 | F              | 4-5  | 4-5 |
| DR81629        | 2-19-63     | N/R           | 3 Output pin E4 stays high all the time. (Failed during S/S test of 242E564 G1-on C-D Bd. 254E157 G1)                                 | Ambient     | SFV       | C/T     |       |                |                                           |                     |                |      |     |
| IR20140        | 2-25-63     | 10215<br>-27  | 3 Input diode at Gate 2 shorted. -6V shorted to pin E6. (Failed on C-D Bd. 254E157 G1).                                               | Ambient     | S/A       | C/T     | 144   | QCE            | 1321-106-21                               | 3-25                | P              | 4-12 |     |
| IR20120        | 3-12-63     | KL306         | 3 Gate 1 defective - output remains at 28V - will not go to ground. Indication output transistor open. (Failed on C-D Bd 254E157 G1). | Ambient     | SFV       | C/T     | 159   | QCE            | FAR Suppl 1<br>FAR Suppl 2<br>1321-106-33 | 4-5<br>4-25<br>4-19 | F              | F    | F   |
| IR20154        | 2-13-63     | KN161         | 3 Vce 2V - should be less than 0.4V.                                                                                                  | Lo-Temp     | N/R       | C/T     | 143   |                |                                           |                     |                |      |     |
| IR21517        | 4-1-63      | KN211         | 3 Gate 1 output remains at ground when input is +6V - should go to +6V.                                                               | Ambient     | P/P       | C/T     | 203   |                |                                           |                     |                |      |     |
|                |             |               | 5-1-63                                                                                                                                |             |           |         |       |                |                                           |                     |                |      |     |

# Subassembly of 242E564 G1

|                            |  |                        |  |                 |  |                   |  |
|----------------------------|--|------------------------|--|-----------------|--|-------------------|--|
| NOMENCLATURE               |  | SUBSYSTEM              |  | QC ENGINEER     |  | PAGE 1 OF 1 PAGES |  |
| Compl. "KOR" (4 Gate) Mod. |  | Tracking & Command     |  | D. Sharrock     |  |                   |  |
| DRAWING NUMBER             |  | MISSION CLASSIFICATION |  | DESIGN ENGINEER |  | MANUFACTURER      |  |
| 111C1758 G1                |  | Critical               |  | J. McBride      |  | GE - IRAD / ASPD  |  |

| FAILURE REPORT NUMBER | DATE               | SERIAL NO | FAILURE MODE                                                                      | ENVIRON | TEST TYPE | RPT ACT | FA NO | FA RPTS ISSUED |             |      | FARB CLOSE-OUT |      |     |
|-----------------------|--------------------|-----------|-----------------------------------------------------------------------------------|---------|-----------|---------|-------|----------------|-------------|------|----------------|------|-----|
|                       |                    |           |                                                                                   |         |           |         |       | BY             | NUMBER      | DATE | FA             | FA   | CA  |
| IRN1261               | 10-27-62           | 10215-1   | No output all four gates - Q1 shorted E to C.                                     | Ambient | P/P       | C/T     | 024   | QCE            | 1321-106-24 | 4-4  | F4-5           | F4-5 | 4-5 |
| IRN1314               | 11-26-62           | 10215-9   | No output gate 4.                                                                 | Ambient | P/P       | C/T     | 059   | QCE            | 1321-106-27 | 4-5  | F4-12          |      |     |
|                       |                    |           | 4-1-63                                                                            |         |           |         |       |                |             |      |                |      |     |
| DR54735<br>IR21556    | 4-23-63<br>4-26-63 | KL254     | Output pin 5 remains at constant ground potential (Failed on C-D Bd. 254E150 G1). | Ambient | SFV       | C/T     | 254   |                |             |      |                |      |     |
|                       |                    |           | 5-1-63                                                                            |         |           |         |       |                |             |      |                |      |     |

# Subassembly of 242E564 G1

|                                   |                                    |                               |                              |  |
|-----------------------------------|------------------------------------|-------------------------------|------------------------------|--|
| NOMENCLATURE<br>26V "A" D" Module | SUBSYSTEM<br>Tracking & Command    | QC ENGINEER<br>D. Sharrock    | PAGE 1 OF 1 PAGES            |  |
| DRAWING NUMBER<br>111G1759 G1     | MISSION CLASSIFICATION<br>Critical | DESIGN ENGINEER<br>J. McBride | MANUFACTURER<br>GE-ASFD/12AD |  |

| FAILURE NUMBER | REPORT DATE | SERIAL NO           | FAILURE MODE                                                                | ENVIRONMENT | TEST TYPE | RPT ACT | FA NO | FA RPTS ISSUED   |                                                         |                     | FARB CLOSE-OUT        |
|----------------|-------------|---------------------|-----------------------------------------------------------------------------|-------------|-----------|---------|-------|------------------|---------------------------------------------------------|---------------------|-----------------------|
|                |             |                     |                                                                             |             |           |         |       | BY               | NUMBER                                                  | DATE                |                       |
| IR1218         | 10-2-62     | KK770               | 3 Q2 output incorrect - steady 26V - should be 28V square wave.             | Ambient     | P/P       | C/T     | 009   | QCE              | 1342-106-4 FAR Suppl 1                                  | 11-9<br>11-14       | P<br>F1-29            |
| IRN1260        | 10-27-62    | KK004               | 3 No output gate no. 1 - Q2 shorted B to C.                                 | Ambient     | P/P       | C/T     | 023   | QCE              | 1342-106-7 FAR Suppl 1                                  | 11-28<br>12-21      | P<br>F1-29            |
| IRN1323        | 11-30-62    | 10215<br>-14<br>-16 | 3 No output gates 1 and 2.<br>3 No output gate 1.                           | Ambient     | P/P       | C/T     | 061   | QCE              | 1342-106-17<br>1342-106-18<br>FAR Suppl 1<br>(-14 only) | 3-19<br>3-20<br>4-3 | P<br>P<br>F4-5<br>4-5 |
| IR20139        | 2-23-63     | KN092<br>KN093      | 3 No output gate 2.<br>3                                                    | Ambient     | P/P       | C/T     | 148   | QCE              | 1321-106-30                                             | 4-19                | F                     |
| IR21526        | 3-22-63     | 10215<br>-31        | 3 Gate 1 defective - output remains at ground - should go to 28V.<br>4-1-63 | Ambient     | P/P       | C/T     | 181   |                  |                                                         |                     |                       |
| IR21541        | 4-15-63     | KN877               | 3 Gate 2 output should go to ground - instead swings +4.5V to +28V.         | Ambient     | P/P       | C/T     | 231   |                  |                                                         |                     |                       |
| DR70157        | 9-15-62     | N/R                 | 3 Open circuit at E9. (Failed on C-D Bd 254E162 G1).<br>5-1-63              | Ambient     | S/A       | C/T     | 018   | (Sec 254E162 G1) |                                                         |                     |                       |

Subassembly of 242E564 G1

|                               |  |                                    |  |                               |  |                              |  |
|-------------------------------|--|------------------------------------|--|-------------------------------|--|------------------------------|--|
| NOMENCLATURE                  |  | SUBSYSTEM                          |  | QC ENGINEER                   |  | PAGE 1 OF 1 PAGES            |  |
| Hi-Voltage "NCR" Module       |  | Tracking & Command                 |  | D. Sharrock                   |  |                              |  |
| DRAWING NUMBER<br>111C1761 G1 |  | MISSION CLASSIFICATION<br>Critical |  | DESIGN ENGINEER<br>J. McBride |  | MANUFACTURER<br>GE-ASPD/LSAD |  |

| FAILURE NUMBER | REPORT DATE | SERIAL NO | FAILURE MODE             | ENVIRONMENT | TEST TYPE | RPT ACT | FA NO | FA RPTS ISSUED |        | FARB CLOSE-OUT |
|----------------|-------------|-----------|--------------------------|-------------|-----------|---------|-------|----------------|--------|----------------|
|                |             |           |                          |             |           |         |       | BY             | NUMBER |                |
| IR6011         | 8-22-62     | KK223     | Vce Sat High             | Ambient     | P/P       | C/T     | NR    |                |        | 12-5 12-5      |
| IR7003         | 8-14-62     | 00001     | CR-6 open.               | Ambient     | P/P       | C/T     | NR    |                |        | 2-11 2-11      |
| IR6048         | 9-11-62     | 10215-5   | Incorrect output gate 1. | Ambient     | P/P       | C/T     | NR    |                |        | 1-15 1-15      |
|                |             |           | 4-1-63<br>(5-1-63)       |             |           |         |       |                |        |                |

111C1762 G1

|                        |  |                 |  |                   |  |
|------------------------|--|-----------------|--|-------------------|--|
| SUBSYSTEM              |  | QC ENGINEER     |  | PAGE 1 OF 1 PAGES |  |
| Tracking & Command     |  | D. Sharrock     |  |                   |  |
| MISSION CLASSIFICATION |  | DESIGN ENGINEER |  | MANUFACTURER      |  |
| Critical               |  | J. McBride      |  | GE-ASPD           |  |

| FAILURE NUMBER | FAILURE REPORT |           | SERIAL NO | FAILURE MODE                                                                        | ENVIRONMENT | TEST TYPE | RPT ACT | FA NO | FA RPTS ISSUED |             | DATE  | FAIRB CLOSE-OUT |       |
|----------------|----------------|-----------|-----------|-------------------------------------------------------------------------------------|-------------|-----------|---------|-------|----------------|-------------|-------|-----------------|-------|
|                | NUMBER         | DATE      |           |                                                                                     |             |           |         |       | BY             | NUMBER      |       | FA              | CA    |
| IR1213         | 9-26-62        | KK611     | 3         | No output gate no. 2                                                                | Ambient     | P/P       | C/T     | 008   | QCE            | 1342-106-2  | 11-1  | F               | 11-30 |
| IR1269         | 11-1-62        | KL294     | 3         | Incorrect output                                                                    | Ambient     | P/P       | C/T     | 036   | QCE            | 1342-106-9  | 12-10 | F               | 12-12 |
| IR1341         | 12-11-62       | KL424     | 3         | Output 6V square wave - should be OV.                                               | Ambient     | P/P       | C/T     | 093   | QCE            | 1321-106-31 | 4-18  | F               |       |
| IR1363         | 1-7-63         | 10215-154 | 3         | Output will not drop to OV as required.                                             | Ambient     | P/P       | C/T     | 088   |                |             |       |                 |       |
| IR1369         | 1-9-63         | KMB40     | 3         | Chart 2, step 4 requires measurement of > 5.5V, P-P amp. reading obtained 2.5V.     | Ambient     | P/P       | C/T     |       |                |             |       |                 |       |
| IR20155        | 2-14-63        | 10215-64  | 3         | Output remains at constant +6V, regardless of input. (Failed on C-D Bd 254E155 G1). | Ambient     | P/P       | C/T     | 134   | QCE            | 1321-106-29 | 4-16  | F               |       |
| IR21557        | 4-26-63        | 10215-28  | 3         | Gate 3 output remains at ground - should go to +6V.                                 | Ambient     | SFV       | C/T     | 255   |                |             |       |                 |       |
|                |                |           |           | 4-1-63                                                                              |             |           |         |       |                |             |       |                 |       |
|                |                |           |           | 5-1-63                                                                              |             |           |         |       |                |             |       |                 |       |

111C1762 G1

Subassembly of 242E564 GI

|                  |  |                        |  |                 |  |                   |  |
|------------------|--|------------------------|--|-----------------|--|-------------------|--|
| NOMENCLATURE     |  | SUBSYSTEM              |  | QC ENGINEER     |  | PAGE 1 OF 1 PAGES |  |
| STD "NOR" Module |  | Tracking & Command     |  | D. Sharrock     |  |                   |  |
| DRAWING NUMBER   |  | MISSION CLASSIFICATION |  | DESIGN ENGINEER |  | MANUFACTURER      |  |
| 111CI763 GI      |  | Critical               |  | J. McBride      |  | GE-ASPD/ARAD      |  |

| FAILURE NUMBER | REPORT DATE | SERIAL NO   | FAILURE MODE                                                                                | ENVIRONMENT | TEST TYPE | RPT ACT | FA NO | FA RPTS ISSUED |                           |               | FARB CLOSE-OUT |      |  |
|----------------|-------------|-------------|---------------------------------------------------------------------------------------------|-------------|-----------|---------|-------|----------------|---------------------------|---------------|----------------|------|--|
|                |             |             |                                                                                             |             |           |         |       | BY             | NUMBER                    | DATE          | FA             | CA   |  |
| IR0272         | 8-1-6       | KK053       | 3 No output gate no. 2                                                                      | Ambient     | P/P       | C/T     | 019   | QME            | PIR 1340-JJS-10-4<br>150  | 10-4          | P 11-30        | 1-15 |  |
| IRN120         | 9-24-62     | 10215<br>-9 | 3 No output gate no. 1.                                                                     | Ambient     | P/P       | C/T     | 014   | QME            | 1340-106-6<br>FAR Suppl 1 | 11-9<br>11-14 | P 11-30        | 1-15 |  |
| DR81655        | 3-1-63      | KL752       | 3 Gate 2 output 6VDC instead of square wave. (Salvaged from C-D Board; failed after rework) | Ambient     | P/P       | C/T     | 142   |                |                           |               |                |      |  |
|                |             |             | 4-1-63<br>(5-1-63)                                                                          |             |           |         |       |                |                           |               |                |      |  |

111CI763 GI

# Subassembly of 242E564 G1

|                        |  |                        |  |                 |  |                   |  |
|------------------------|--|------------------------|--|-----------------|--|-------------------|--|
| NOMENCLATURE           |  | SUBSYSTEM              |  | QC ENGINEER     |  | PAGE 1 OF 1 PAGES |  |
| "GATE" (2-Gate) Module |  | Tracking & Command     |  | D. Sharrock     |  |                   |  |
| DRAWING NUMBER         |  | MISSION CLASSIFICATION |  | DESIGN ENGINEER |  | MANUFACTURER      |  |
| 111C1764 G1            |  | Critical               |  | J. McBride      |  | GE-ASPD / READ    |  |

| FAILURE NUMBER | REPORT DATE | SERIAL NO | FAILURE MODE                                                                                                         | ENVIRONMENT | TEST TYPE | RPT ACT | FA NO | FA RPTS ISSUED |             |      | FARB CLOSE-OUT |     |  |
|----------------|-------------|-----------|----------------------------------------------------------------------------------------------------------------------|-------------|-----------|---------|-------|----------------|-------------|------|----------------|-----|--|
|                |             |           |                                                                                                                      |             |           |         |       | BY             | NUMBER      | DATE | FA             | CA  |  |
| IR20161        | 2-15-63     | KN052     | 3 Constant +6V output from Gate 1 - output should go to 0 with all inputs positive.                                  | Ambient     | P/P       | C/T     | 136   | QCE            | 1321-106-23 | 4-3  | F 4-5          | 4-5 |  |
| IR20104        | 3-18-63     | KN030     | 3 Gate 1 defective - remains at 6V all inputs. Diode CR <sub>2</sub> has reverse polarity. (Removed from C-D Board)  | Ambient     | Re P/P    | C/T     | 200   |                |             |      |                |     |  |
| DR1641         | 2-22-63     | 10215-10  | 2 Module gave indication that input and output were shorted together while mounted on board. Tested OK when removed. | Ambient     | N/R       | C/T     |       |                |             |      |                |     |  |
|                |             |           | 5-1-63                                                                                                               |             |           |         |       |                |             |      |                |     |  |

|                                     |                                    |                               |                        |
|-------------------------------------|------------------------------------|-------------------------------|------------------------|
| NOMENCLATURE<br>Passive Gate Module | SUBSYSTEM<br>Tracking & Command    | QC ENGINEER<br>D. Sharrock    | PAGE 1 OF 1 PAGES      |
| DRAWING NUMBER<br>11C1765 G1        | MISSION CLASSIFICATION<br>Critical | DESIGN ENGINEER<br>J. McBride | MANUFACTURER<br>GE-ASD |

| FAILURE REPORT |         | SERIAL NO | QTY | FAILURE MODE                                   | ENVIRON | TEST TYPE | RPT ACT | FA NO | FA RPTS ISSUED                      |             |        | FARB CLOSE-OUT |
|----------------|---------|-----------|-----|------------------------------------------------|---------|-----------|---------|-------|-------------------------------------|-------------|--------|----------------|
| NUMBER         | DATE    |           |     |                                                |         |           |         |       | BY                                  | NUMBER      | DATE   |                |
| IR20159        | 2-15-63 | KK922     | 3   | Short circuit between pins E3 and E11 (Gate 1) | Ambient | P/P       | C/T     | 135   | QCE 1321-106-26<br>L&P PIR 1320-479 | 4-4<br>4-11 | F<br>F | FA 4-12<br>CA  |
|                |         |           |     | 4-1-63<br>(5-1-63)                             |         |           |         |       |                                     |             |        |                |

# Subassembly of 242E564 G1

|                  |  |                        |  |                 |  |                   |  |
|------------------|--|------------------------|--|-----------------|--|-------------------|--|
| NOMENCLATURE     |  | SUBSYSTEM              |  | QC ENGINEER     |  | PAGE 1 OF 1 PAGES |  |
| Flip-Flop Module |  | Tracking & Command     |  | D. Sharrock     |  |                   |  |
| DRAWING NUMBER   |  | MISSION CLASSIFICATION |  | DESIGN ENGINEER |  | MANUFACTURER      |  |
| 111C1766 G1      |  | Critical               |  | J. McBride      |  | GE-AS/D           |  |

| FAILURE NUMBER | REPORT DATE | SERIAL NO      | TEST TYPE | ENVIRONMENT | FAILURE MODE                                                                                          | RPT ACT | FA NO | FA RPTS ISSUED |                         |                    | FARB CLOSE-OUT |       |  |
|----------------|-------------|----------------|-----------|-------------|-------------------------------------------------------------------------------------------------------|---------|-------|----------------|-------------------------|--------------------|----------------|-------|--|
|                |             |                |           |             |                                                                                                       |         |       | BY             | NUMBER                  | DATE               | FA             | CA    |  |
| IR1346         | 12-19-62    | KK995<br>KK533 | 3         | 3           | No output.                                                                                            | P/P     | C/T   | 085            |                         |                    |                |       |  |
| IR20166        | 2-19-63     | J93049<br>-75  | 3         | 3           | TS & TR are internally shorted. (Failed on C-D Bd. 254E136 G1).                                       | S/A     | C/T   | 138            | QCE                     | 1321-106-28        | 4-5            | F4-12 |  |
| IR20138        | 2-26-63     | J93049<br>-74  | 3         | 3           | TS & TR inputs internally shorted in modules. (Failed on C-D Bd. 254E136 G1).                         | S/A     | C/T   | 151            | QCE<br>L&P PIR 1360-474 | 1321-106-28<br>4-5 | 4-17           | F4-12 |  |
| DR51757        | 3-15-63     | J93049<br>-191 | 3         | 3           | Output on "O" side remains at ground. PSI ground pulse has no effect. (Failed on C-D Bd. 254E177 G1). | S/A     | C/T   |                |                         |                    |                |       |  |
|                |             |                |           |             | 4-1-63<br>(5-1-63)                                                                                    |         |       |                |                         |                    |                |       |  |

Subassembly of 242E564 G1

|                             |  |                        |  |                 |  |                   |  |
|-----------------------------|--|------------------------|--|-----------------|--|-------------------|--|
| NONDECLASSIFIED             |  | SUBSYSTEM              |  | QC ENGINEER     |  | PAGE 1 OF 1 PAGES |  |
| Driver Module, Xfer & Write |  | Tracking & Command     |  | D. Sharrock     |  |                   |  |
| DRAWING NUMBER              |  | MISSION CLASSIFICATION |  | DESIGN ENGINEER |  | MANUFACTURER      |  |
| 111C1767 G1                 |  | Critical               |  | J. McBride      |  | GE-13AD           |  |

| FAILURE NUMBER | FAILURE REPORT DATE | SERIAL NO | FAILURE MODE                                                     | ENVIRONMENT | TEST RPT ACT | FA NO | FA RPTS ISSUED |        | FARB CLOSE-OUT |    |    |
|----------------|---------------------|-----------|------------------------------------------------------------------|-------------|--------------|-------|----------------|--------|----------------|----|----|
|                |                     |           |                                                                  |             |              |       | BY             | NUMBER | DATE           | FA | FA |
| IR21539        | 4-12-63             | 10215-5   | Gate 5 output remains at ground. (Failed on C-D Bd. 254E173 G1). | N/R (OA)    | Acc C/T      | 230   |                |        |                |    |    |
|                |                     |           | 5-1-63                                                           |             |              |       |                |        |                |    |    |

# Subassembly of 212E504 G1

|                         |  |                        |  |                 |  |                   |  |
|-------------------------|--|------------------------|--|-----------------|--|-------------------|--|
| NOMENCLATURE            |  | SUBSYSTEM              |  | QC ENGINEER     |  | PAGE 1 OF 1 PAGES |  |
| Read Line Driver Module |  | Tracking & Command     |  | D. Sharrock     |  |                   |  |
| DRAWING NUMBER          |  | MISSION CLASSIFICATION |  | DESIGN ENGINEER |  | MANUFACTURER      |  |
| 111C1769                |  | Critical               |  | J. McBride      |  | GE-RAD / ASPD     |  |

| FAILURE NUMBER | REPORT DATE | SERIAL NO         | TEST TYPE | ENVIRON | RPT ACT | FA NO | FA RPTS ISSUED |        | FARB CLOSE-OUT |
|----------------|-------------|-------------------|-----------|---------|---------|-------|----------------|--------|----------------|
|                |             |                   |           |         |         |       | BY             | NUMBER |                |
| IR1251         | 10-25-62    | 10215<br>-1<br>-2 | 0<br>0    | Ambient | P/P     | C/T   | NR             |        | 12-5 1-15      |
|                |             |                   |           |         |         |       |                |        |                |
| IR1321         | 11-30-62    | 10215<br>-3       | 2         | Ambient | P/P     | C/T   | NR             |        | 2-12 2-12      |
|                |             |                   |           |         |         |       |                |        |                |
| IR21531        | 4-8-63      | KK668             | 3         | Ambient | P/P     | C/T   | 221            |        |                |
|                |             |                   |           |         |         |       |                |        |                |
|                |             |                   |           |         |         |       |                |        |                |
|                |             |                   |           |         |         |       |                |        |                |

|                                   |                                    |                               |                               |
|-----------------------------------|------------------------------------|-------------------------------|-------------------------------|
| NOMENCLATURE<br>"One-Shot" Module | SUBSYSTEM<br>Tracking & Command    | QC ENGINEER<br>D. Sharrock    | PAGE 1 OF 1 PAGES             |
| DRAWING NUMBER<br>111C1771 G1     | MISSION CLASSIFICATION<br>Critical | DESIGN ENGINEER<br>J. McBride | MANUFACTURER<br>GE-ASPD/132AD |

| FAILURE REPORT |          | SERIAL NO | QTY | FAILURE MODE                                           | ENVIRONMENT | TEST TYPE | RPT ACT | FA NO | FA RPTS ISSUED |        |         | FARB CLOSE-OUT |    |
|----------------|----------|-----------|-----|--------------------------------------------------------|-------------|-----------|---------|-------|----------------|--------|---------|----------------|----|
| NUMBER         | DATE     |           |     |                                                        |             |           |         |       | BY             | NUMBER | DATE    | FA             | CA |
| IR6045         | 9-8-62   | KL444     | 1   | Failed S.I. 23E410 Para. 2.5.2.11 input fall time low. | Ambient     | P/P       | C/T     | NR    |                |        | 12-5    | 12-5           |    |
| IR1228         | 10-9-62  | KL590     | 3   | Pin E5 open - incorrect output no. 1.                  | Ambient     | P/P       | C/T     | 016   | QUE 1342-106-3 | 11-1   | F 11-30 | 1-15           |    |
| IR1301         | 11-12-62 | KL647     | 2   | Input rise time and output pulse width out of spec.    | Ambient     | P/P       | C/T     | NR    |                |        | 2-12    | 2-12           |    |
| IR1326         | 2-3-62   | 010215-34 | 2   | Input fall time out of spec (low).                     | Ambient     | P/P       | C/T     | NR    |                |        | 2-12    | 2-12           |    |
|                |          |           |     | 4-1-63<br>(5-1-63)                                     |             |           |         |       |                |        |         |                |    |

|                                                |                                                |                                          |                                    |
|------------------------------------------------|------------------------------------------------|------------------------------------------|------------------------------------|
| <p>NONINCLATURE</p> <p>Diode Matrix Module</p> | <p>SUBSYSTEM</p> <p>Tracking &amp; Command</p> | <p>QC ENGINEER</p> <p>D. Sharrock</p>    | <p>PAGE 1 OF 1 PAGES</p>           |
| <p>DRAWING NUMBER</p> <p>111C1772 G1</p>       | <p>MISSION CLASSIFICATION</p> <p>Critical</p>  | <p>DESIGN ENGINEER</p> <p>J. McBride</p> | <p>MANUFACTURER</p> <p>GE-ASPD</p> |

| FAILURE REPORT |          | SERIAL<br>NO | QTY | FAILURE MODE                                                                                                                                                 | ENVIRON | TEST<br>TYPE | RPT<br>ACT | FA<br>NO | FA RPTS ISSUED                                         |                     |             | PKT # | FARB<br>CLOSE-OUT |    |  |
|----------------|----------|--------------|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|--------------|------------|----------|--------------------------------------------------------|---------------------|-------------|-------|-------------------|----|--|
| NUMBER         | DATE     |              |     |                                                                                                                                                              |         |              |            |          | BY                                                     | NUMBER              | DATE        |       | FA                | CA |  |
| DR49293        | 12-13-62 | KK369        | 3   | Apparent high forward resistance on diode CR 15.<br>(DR written against Comp Bd Assy 254E178 - failure during test of 242E564 Gl.)<br><br>4-1-63<br>(5-1-63) | Hi-Temp | Acc          | C/T        | 078      | QCE 1342-106-10<br>M&P PIR 1380-414<br>QCE FAR Suppl 1 | 1-3<br>1-29<br>3-14 | P<br>P<br>F |       | 3-22              |    |  |

|                                       |                                    |                               |                         |
|---------------------------------------|------------------------------------|-------------------------------|-------------------------|
| NONEXCLENATURE<br>Matrix No. 2 Module | SUBSYSTEM<br>Tracking & Command    | QC ENGINEER<br>D. Sharrock    | PAGE 1 OF 1 PAGES       |
| DRAWING NUMBER<br>111C1773 G1         | MISSION CLASSIFICATION<br>Critical | DESIGN ENGINEER<br>J. McBride | MANUFACTURER<br>GE-ASPD |

[illegible]

|                                       |                                    |                               |                         |
|---------------------------------------|------------------------------------|-------------------------------|-------------------------|
| NONINCLATURE<br>Initial Driver Module | SUBSYSTEM<br>Tracking & Command    | QC ENGINEER<br>D. Sharrock    | PAGE 1 OF 1 PAGES       |
| DRAWING NUMBER<br>111C1774 G1         | MISSION CLASSIFICATION<br>Critical | DESIGN ENGINEER<br>J. McBride | MANUFACTURER<br>GE-ASPD |

111C1774 G1

|                                      |                                    |                               |                   |
|--------------------------------------|------------------------------------|-------------------------------|-------------------|
| NONINFLUENCE<br>Preset "RAND" Module | SUBSYSTEM<br>Tracking & Command    | QC ENGINEER<br>D. Sharrock    | PAGE 1 OF 1 PAGES |
| DRAWING NUMBER<br>111C1775 G1        | MISSION CLASSIFICATION<br>Critical | DESIGN ENGINEER<br>J. McBride |                   |
|                                      |                                    | MANUFACTURER<br>GE-ASPD       |                   |

[illegible]

Serial Number of 242E564 Gl

|                        |  |                 |  |                   |  |
|------------------------|--|-----------------|--|-------------------|--|
| SUBSYSTEM              |  | QC ENGINEER     |  | PAGE 1 OF 1 PAGES |  |
| Tracking & Command     |  | D. Sharrock     |  |                   |  |
| MISSION CLASSIFICATION |  | DESIGN ENGINEER |  | MANUFACTURER      |  |
| Critical               |  | J. McBride      |  | GE-H3AD           |  |
| DRAWING NUMBER         |  |                 |  |                   |  |
| 111C1776               |  |                 |  |                   |  |

| FAILURE NUMBER | REPORT DATE | SERIAL NO | FAILURE MODE                                                          | ENVIRON | TEST TYPE | RPT ACT | FA NO | FA RPTS ISSUED |             | DATE | FARB CLOSE-OUT |
|----------------|-------------|-----------|-----------------------------------------------------------------------|---------|-----------|---------|-------|----------------|-------------|------|----------------|
|                |             |           |                                                                       |         |           |         |       | BY             | NUMBER      |      |                |
| IRN1267        | 11-1-62     | 10215-1   | 3 No "Main Batt" output at 160°F. Output drops off at 140°F to 150°F. | Hi-Temp | P/P       | C/T     | 034   | QCE            | 1321-106-32 | 4-18 | F              |
| IR21208        | 2-18-63     | 10215-1   | 3 No output                                                           | Hi-Temp | Acc       | C/T     | 139   | QCE            | 1321-106-32 | 4-18 | F              |
| DR51723        | 3-29-63     | N/R       | 3 Output on pin E6 out of tolerance. (Failed on C-D Bd. 254E171 Gl)   | Ambient | S/A       | C/T     |       |                |             |      |                |
| IR21518        | 4-2-63      | 10215-4   | 1 Output out of spec. (* Failure during test of 242E564 Gl).          | Hi-Temp | Qual (*)  | C/T     | 222   |                |             |      |                |
|                |             |           | 5-1-63                                                                |         |           |         |       |                |             |      |                |

**DATE RECEIVED:**

SUBSYSTEM

## Tracking & Command

**MISSION CLASSIFICATION**

## Critical

QC ENGINEER

**D. Sharrock**

DESIGN ENGINEER

**J. McBride**

PAGE 1 OF 1 PAGES

**MANUFACTURER**

GE-113AD

| FAILURE REPORT |          | SERIAL NO   | 3 | FAILURE MODE                              | ENVIRON | TEST TYPE | RPT ACT | FA NO | FA RPTS ISSUED |        | DATE | S | FARB CLOSE-OUT |    |
|----------------|----------|-------------|---|-------------------------------------------|---------|-----------|---------|-------|----------------|--------|------|---|----------------|----|
| NUMBER         | DATE     |             |   |                                           |         |           |         |       | BY             | NUMBER |      |   | FA             | CA |
| IR1302         | 11-12-62 | 10215<br>-4 | 3 | Fall time too long.<br>4-1-63<br>(5-1-63) | Ambient | P/P       | C/T     | NR    |                |        |      |   |                |    |

11:017:7 51

Continuation of 242564 G1

|                                        |  |                                 |  |                            |  |                   |  |
|----------------------------------------|--|---------------------------------|--|----------------------------|--|-------------------|--|
| DRAWING NUMBER<br>111C1778 G1          |  | SUBSYSTEM<br>Tracking & Command |  | QC ENGINEER<br>D. Sharrock |  | PAGE 1 OF 1 PAGES |  |
| MISSION CLASSIFICATION<br>Confidential |  | DESIGN ENGINEER<br>J. McBride   |  | MANUFACTURER<br>GE-ASPD    |  |                   |  |

| FAILURE NUMBER | REPORT DATE | SERIAL NO | FAILURE MODE                   | ENVIRONMENT | TEST TYPE | RPT ACT | FA NO | FA RPTS ISSUED |                           |               | FARB CLOSE-OUT |       |       |
|----------------|-------------|-----------|--------------------------------|-------------|-----------|---------|-------|----------------|---------------------------|---------------|----------------|-------|-------|
|                |             |           |                                |             |           |         |       | BY             | NUMBER                    | DATE          | FA             | CA    | CA    |
| IR6017         | 8-25-62     | KL544     | Erratic output - won't trigger | Ambient     | P/P       | C/T     | NR    |                |                           |               | 2-12           | 2-12  |       |
| IRN1231        | 10-11-62    | KL417     | No output Gate 1.              | Ambient     | P/P       | C/T     | 010   | QME            | 1342-106-5<br>FAR Suppl 1 | 11-9<br>11-14 | P<br>F         | 11-21 | 11-21 |
|                |             |           | 4-1-63<br>(5-1-63)             |             |           |         |       |                |                           |               |                |       |       |

111C1778 G1

|                      |  |                         |  |                 |  |                   |  |
|----------------------|--|-------------------------|--|-----------------|--|-------------------|--|
| ENCLOSURE            |  | SUBSYSTEM               |  | QC ENGINEER     |  | PAGE 1 OF 2 PAGES |  |
| Temperature Detector |  | Stabilization-Pneumatic |  | A. Smith        |  | MANUFACTURER      |  |
| DRAWING NUMBER       |  | MISSION CLASSIFICATION  |  | DESIGN ENGINEER |  | Gulton Industries |  |
| 111C1781 G1          |  | Critical                |  | J. Lemmond      |  |                   |  |

| FAILURE NUMBER | REPORT DATE | SERIAL NO                                      | FAILURE MODE                                                      | ENVIRONMENT  | TEST TYPE | RPT ACT | FA NO | FA RPTS ISSUED |        |      | FARB CLOSE-OUT |    |  |
|----------------|-------------|------------------------------------------------|-------------------------------------------------------------------|--------------|-----------|---------|-------|----------------|--------|------|----------------|----|--|
|                |             |                                                |                                                                   |              |           |         |       | BY             | NUMBER | DATE | FA             | CA |  |
| IR1392         | 1-22-63     | GC5011<br>-1<br>-3<br>-4<br>-6<br>-8           | 2 Resistance out of spec at several temperatures per vendor data. | Ambient      | Acc       | C/T     |       |                |        |      |                |    |  |
| IR1393         | 1-22-63     | GC5011<br>-2<br>-5<br>-7<br>-9<br>-10          | 2 Resistance out of spec at several temperatures per vendor data. | Ambient      | Acc       | C/T     |       |                |        |      |                |    |  |
| IR20195        | 2-8-63      | GC5011<br>-18<br>-35                           | 2 Resistance out of spec at 185°.                                 | Hi-Temp      | Acc       | C/T     | NR    |                |        |      |                |    |  |
| IR20196        | 2-9-63      | GC5011<br>-13<br>-17<br>-37<br>-38             | 2 Resistance out of spec at 185°.                                 | Hi-Temp      | Acc       | C/T     |       |                |        |      |                |    |  |
| IR20150        | 2-11-63     | GC5011<br>-10<br>-2                            | 2 Resistance out of spec                                          | Post-Hi-Temp | Acc       | C/T     | 168   |                |        |      |                |    |  |
| IR20152        | 2-12-63     | GC5011<br>11,36,<br>39,12,<br>15,16,<br>19,23, | 2 Resistance out of spec (ref. vendor data).                      | Ambient      | Acc       | C/T     | 167   |                |        |      |                |    |  |

111C1781 G1

| ENCLOSURE            |             | SUBSYSTEM                                               |                                                                              | QC ENGINEER     |           | PAGE 2 OF 2 PAGES |                |        |                |
|----------------------|-------------|---------------------------------------------------------|------------------------------------------------------------------------------|-----------------|-----------|-------------------|----------------|--------|----------------|
| Temperature Detector |             | Stabilization-Pneumatic                                 |                                                                              | A. Smith        |           |                   |                |        |                |
| DRAWING NUMBER       |             | MISSION CLASSIFICATION                                  |                                                                              | DESIGN ENGINEER |           | MANUFACTURER      |                |        |                |
| 111C1781 G1          |             | Critical                                                |                                                                              | J. Lemmond      |           | Gulton Industries |                |        |                |
| FAILURE NUMBER       | REPORT DATE | SERIAL NO                                               | FAILURE MODE                                                                 | ENVIRONMENT     | TEST TYPE | RPT ACT NO        | FA RPTS ISSUED |        | FARB CLOSE-OUT |
|                      |             |                                                         |                                                                              |                 |           |                   | BY             | NUMBER |                |
| IR20152<br>(Cont.)   | 2-12-63     | GC5011<br>25,27,<br>29,34,<br>26,31,<br>20,32,<br>24,30 | 2 Resistance out of spec (ref. vendor data).                                 | Ambient         | Acc       | C/T 167           |                |        |                |
| IR20172              | 2-13-63     | GC5011<br>-7<br>-9                                      | 2 Resistance readings out of spec - potting raised out of units 0.04 inches. | Post Hi-Temp    | Acc       | C/T 146           |                |        |                |
| IR20143              | 2-22-63     | GC5011<br>-14                                           | 2 Resistance out of spec at 100°F.                                           | Hi-Temp         | Acc       | C/T 145           |                |        |                |
| IR20170              | 2-20-63     | GC5011<br>-21<br>-22                                    | 2 Resistance out of spec at 80°F<br>2 Resistance out of spec at 190°F.       | Hi-Temp         | Acc       | C/T 149           |                |        |                |
| IR21510              | 3-26-63     | GC5011<br>-17                                           | 2 Out of spec at 90°F and 190°F.                                             | Hi-Temp         | Acc       | C/T               |                |        |                |

111C1781 G1

|                |  |                        |  |                 |  |                               |  |
|----------------|--|------------------------|--|-----------------|--|-------------------------------|--|
| DOCUMENT TITLE |  | SUBSYSTEM              |  | QC ENGINEER     |  | PAGE 1 OF 1 PAGES             |  |
| Thermostat     |  | Environmental Control  |  | D. Deitz        |  |                               |  |
| DRAWING NUMBER |  | MISSION CLASSIFICATION |  | DESIGN ENGINEER |  | MANUFACTURER                  |  |
| 111C3289 P6/P8 |  | Minor                  |  | W. Delaney      |  | T.I. - Metals & Controls Div. |  |

| FAILURE REPORT NUMBER | DATE    | SERIAL NO      | TEST TYPE | ENVIRON | RPT ACT | FA NO   | FA RPTS ISSUED |                  | FARB CLOSE-OUT |
|-----------------------|---------|----------------|-----------|---------|---------|---------|----------------|------------------|----------------|
|                       |         |                |           |         |         |         | BY             | NUMBER           |                |
| IRN1212               | 9-27-62 | GA1320-8 (P6)  | 3         | Hi-Temp | Acc     | C/T A04 | QCE            | 1342-1102-1 2-23 | F 3-8          |
| IR1625                | 12-6-62 | GA1537-16 (P8) | 2         | Lo-Temp | Acc     | C/T A04 | Same as above  |                  | 3-8            |

| NOMENCLATURE                 |           | SUBSYSTEM                                            | QC ENGINEER     | PAGE 1 OF 1 PAGES |                |                  |         |              |
|------------------------------|-----------|------------------------------------------------------|-----------------|-------------------|----------------|------------------|---------|--------------|
| Nipple, Fuelellant Fill-Oxi. |           | Orbit Adjust                                         | D. Downing      |                   |                |                  |         |              |
| DRAWING NUMBER               |           | MISSION CLASSIFICATION                               | DESIGN ENGINEER | MANUFACTURER      |                |                  |         |              |
| 111C3600 P1                  |           | Critical                                             | C. Rich         | Rocketdyne        |                |                  |         |              |
| FAILURE REPORT NUMBER        | SERIAL NO | FAILURE MODE                                         | ENVIRONMENT     | EST RPT TYPE      | FA RPTS ISSUED | DATE             | FA NO   | FA CLOSE-OUT |
| FC47507                      | 002 012   | Leakage between mounting flange and disconnect body. | Ambient         | Qual (V)          | QCE            | 1342-501.18-12-5 | F 12-14 | 12-14        |

|                              |         |                        |                                                           |                 |           |                   |       |     |                   |      |       |       |
|------------------------------|---------|------------------------|-----------------------------------------------------------|-----------------|-----------|-------------------|-------|-----|-------------------|------|-------|-------|
| NOMENCLATURE                 |         | SUBSYSTEM              |                                                           | QC ENGINEER     |           | PAGE 1 OF 1 PAGES |       |     |                   |      |       |       |
| Nipple, Propellant Fill-Fuel |         | Orbit Adjust           |                                                           | D. Downing      |           |                   |       |     |                   |      |       |       |
| DRAWING NUMBER               |         | MISSION CLASSIFICATION |                                                           | DESIGN ENGINEER |           | MANUFACTURER      |       |     |                   |      |       |       |
| 111C3600 P2                  |         | Critical               |                                                           | C. Rich         |           | Rocketdyne        |       |     |                   |      |       |       |
| FAILURE REPORT NUMBER        | DATE    | SERIAL NO              | FAILURE MODE                                              | ENVIRONMENT     | TEST TYPE | RPT ACT           | FA NO | BY  | NUMBER            | DATE | FA    | CA    |
| FC47509                      | 10-3-62 | 007                    | 3 Leakage between mounting flange and the disconnect body | Post-Vib        | Qual (V)  | QCE               | 052   | QCE | 1342-501.19-12-51 | 12-5 | 12-14 | 12-14 |

|                              |           |                                                  |             |                 |                |                   |       |
|------------------------------|-----------|--------------------------------------------------|-------------|-----------------|----------------|-------------------|-------|
| NOMENCLATURE                 |           | SUBSYSTEM                                        |             | QC ENGINEER     |                | PAGE 1 OF 1 PAGES |       |
| Nipple, Propellant Fill-Fuel |           | Orbit Adjust                                     |             | D. Downing      |                |                   |       |
| DRAWING NUMBER               |           | MISSION CLASSIFICATION                           |             | DESIGN ENGINEER |                | MANUFACTURER      |       |
| 111C3600 P4                  |           | Critical                                         |             | C. Rich         |                | Rocketdyne        |       |
| FAILURE REPORT NUMBER        | SERIAL NO | FAILURE MODE                                     | ENVIRONMENT | TEST RPT TYPE   | FA RPTS ISSUED | FARB CLOSE-OUT    |       |
| DATE                         |           |                                                  |             | ACT NO          | BY             | NUMBER            | FA CA |
| FC47513                      | 4         | 0 Failed vacuum leakage test in mated condition. | Ambient     | Qual QCE NR     |                |                   |       |
| 12-6-62                      |           |                                                  |             |                 |                |                   |       |

|                       |  |                        |  |                 |  |                   |  |  |  |
|-----------------------|--|------------------------|--|-----------------|--|-------------------|--|--|--|
| NOMENCLATURE          |  | SUBSYSTEM              |  | QC ENGINEER     |  | PAGE 1 OF 1 PAGES |  |  |  |
| Fuel Pre-Press. Valve |  | Orbit Adjust           |  | D. Downing      |  |                   |  |  |  |
| DRAWING NUMBER        |  | MISSION CLASSIFICATION |  | DESIGN ENGINEER |  | MANUFACTURER      |  |  |  |
| 111C3611 P2           |  | Critical               |  | C. Rich         |  | Rocketdyne        |  |  |  |

| FAILURE NUMBER | REPORT DATE | SERIAL NO | FAILURE MODE                | ENVIRONMENT | TEST TYPE | RPT ACT | FA NO | FA RPTS ISSUED |                                       | FARB CLOSE-OUT |      |
|----------------|-------------|-----------|-----------------------------|-------------|-----------|---------|-------|----------------|---------------------------------------|----------------|------|
|                |             |           |                             |             |           |         |       | BY             | NUMBER                                | DATE           | FA   |
| 503            | 8-10-62     | 50803     | Excessive internal leakage. | Ambient     | Qual (V)  | QCE     | 049   | QCE            | 1342-501.6-1112-5<br>FAR Suppl 1 1-17 | P 1-22<br>F    | 1-22 |

|                        |  |                        |  |                 |   |                   |  |
|------------------------|--|------------------------|--|-----------------|---|-------------------|--|
| NOMENCLATURE           |  | SUBSYSTEM              |  | QC ENG          | R | PAGE 1 OF 1 PAGES |  |
| Pneumatic Relief Valve |  | Orbit Adjust           |  | I Downing       |   |                   |  |
| DRAWING NUMBER         |  | MISSION CLASSIFICATION |  | DESIGN ENGINEER |   | MANUFACTURER      |  |
| 111C3618 P2            |  | Critical               |  | C. Rich         |   | Rocketdyne        |  |

| FAILURE NUMBER | REPORT DATE | SERIAL NO  | FAILURE MODE                                                                                                                                     | ENVIRON TYPE | TEST TYPE | RPT ACT | FA NO   | FA RPTS ISSUED |                   |       | FARB CLOSE-OUT |     |
|----------------|-------------|------------|--------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-----------|---------|---------|----------------|-------------------|-------|----------------|-----|
|                |             |            |                                                                                                                                                  |              |           |         |         | BY             | NUMBER            | DATE  | FA             | CA  |
| FC47512        | 8-30-62     | 116<br>123 | 3 Failed reseal test - excessive leakage.                                                                                                        | Post Accel   | Qual (V)  | QCE 054 | QCE 054 | QCE            | 1342-501-35<br>-1 | 12-20 | 1-4            | 1-4 |
| FC47523        | 2-15-62     | 108        | 2 Cracking pressure should be 315 $\pm$ 2 psig. Measured 323 psig without cracking. Water observed leaking between valve body and pilot housing. | Post-Humid.  | Qual (V)  | QCE 173 | QCE 173 | QCE            | 1321-501-35<br>-2 | 3-25  |                |     |
| FC47524        | 2-15-63     | 113        | 2 Cracking pressure should be 315 $\pm$ 2 psig. Measured 323 psig.                                                                               | Post-Humid.  | Qual (V)  | QCE 173 | QCE 173 |                |                   |       |                |     |

| NOMENCLATURE          |         | SUBSYSTEM                |                                                                                                                                | QC ENGINEER     |           | PAGE 1 OF 1 PAGES |                |      |         |                |
|-----------------------|---------|--------------------------|--------------------------------------------------------------------------------------------------------------------------------|-----------------|-----------|-------------------|----------------|------|---------|----------------|
| TAKS Electronic Pkg.  |         | Stabilization-Electrical |                                                                                                                                | K. Speight      |           |                   |                |      |         |                |
| DRAWING NUMBER        |         | MISSION CLASSIFICATION   |                                                                                                                                | DESIGN ENGINEER |           | MANUFACTURER      |                |      |         |                |
| 111C3773              |         | Critical                 |                                                                                                                                | J. Catrambone   |           | GE-OD             |                |      |         |                |
| FAILURE REPORT NUMBER | DATE    | SERIAL NO                | FAILURE MODE                                                                                                                   | ENVIRON         | TEST TYPE | RPT ACT NO        | FA RPTS ISSUED | FA   | CA      | FARB CLOSE-OUT |
| 22                    | 8-24-62 | -5                       | Pitch and Roll servos became inoperative for 75 seconds (built in time delay).                                                 | Vibration       | Acc       | (V) A10           | Rpt 22         | 8-24 | F 12-10 | 12-10          |
| 26                    | 9-10-62 | -5                       | Hardware shook loose during vibration test - 2 standoffs supporting relay rack snapped - 2 screws holding cover plate sheared. | Vibration       | Acc       | (V) A11           | Rpt 26         | 9-10 | F 12-10 | 12-10          |
| 28                    | 9-19-62 | -5                       | Resolver 1, 2, 4, 5 voltages out of specs                                                                                      | Vibration       | Acc       | (V) A12           | Rpt 28         | 9-19 | F 2-12  | 2-12           |
| IRN0364               | 11-2-62 | 5498709                  | Blows breaker on AGE positive power supply when "Operate" switch is closed                                                     | Ambient         | Acc       | C/T 041           | QCE 1321-609-1 | 3-25 | F 3-29  | 3-29           |
| IR1781                | 1-18-63 | 5498713                  | T/M out of spec.                                                                                                               | Ambient         | Acc       |                   |                |      |         |                |

111C3773

|                       |  |                          |  |                 |  |                   |  |
|-----------------------|--|--------------------------|--|-----------------|--|-------------------|--|
| NOMENCLATURE          |  | SUBSYSTEM                |  | QC ENGINEER     |  | PAGE 1 OF 2 PAGES |  |
| Rate Gyro Pkg. (RAGS) |  | Stabilization-Electrical |  | R. Bernard      |  |                   |  |
| DRAWING NUMBER        |  | MISSION CLASSIFICATION   |  | DESIGN ENGINEER |  | MANUFACTURER      |  |
| 111C3776              |  | Critical                 |  | A. Lynch        |  | GE - OD           |  |

| FAILURE NUMBER | REPORT DATE | SERIAL NO | FAILURE MODE                                                                                                | ENVIRONMENT | TEST TYPE | RPT ACT NO | FA NO | FA RPTS ISSUED  |            | DATE  | FARB         |
|----------------|-------------|-----------|-------------------------------------------------------------------------------------------------------------|-------------|-----------|------------|-------|-----------------|------------|-------|--------------|
|                |             |           |                                                                                                             |             |           |            |       | BY              | NUMBER     |       |              |
| 20             | 8-21-62     | -5        | Pitch and Yaw gyros exhibited high drift rates and were erratic in operation.                               | Post-Env    | Acc       | (V)        |       |                 |            |       |              |
| 21             | 8-28-62     | -5        | Roll gyro showed excessive drift and was erratic in operation.                                              | Post-Env    | Acc       | (V)        |       |                 |            |       |              |
| 23             | 8-24-62     | -5        | Pitch gyro displayed excessive drift.                                                                       | Post-Env    | Acc       | (V)        |       | ENG PIR1171-139 | 10-26      | 10-26 | F 1-11       |
| 24             | 9-5-62      | -5        | Yaw gyro displays excessive drift and is erratic.                                                           | Post-Env    | Acc       | (V)        |       | ENG PIR1171-148 | 11-9       | 11-9  | F 1-11       |
| 25             | 9-6-62      | -5        | Pitch gyro has excessive drift and is erratic.                                                              | Post-Env    | Acc       | (V)        |       | QCE 1342-604-3  | 12-5       | 12-5  | F 12-10 1-11 |
| 27             | 9-20-62     | -6        | Out of spec and erratic. Gyro exhibited excessive drift.                                                    | Post-Env    | Acc       | (V)        |       |                 |            |       |              |
| 29             | 10-1-62     | -6        | Thermistor calibration curve does not agree with data taken at telemetry subassembly                        | Pre-Env     | Acc       | (V)        | A13   | (V)             | Rpt 29     | 10-1  | F 12-10 1-22 |
| 30             | 10-8-62     | -6        | Roll gyro displays high drift rate - erratic in operation.                                                  | Ambient     | Acc       | (V)        | 037   |                 |            |       |              |
| 31             | 10-20-62    | -5        | Same as above                                                                                               | Ambient     | Acc       | (V)        | 037   | QCE             | 1342-604-3 | 12-5  | F 12-10 1-11 |
| 32             | 11-1-62     | -5        | Gyro mounting block thermistor output curve received from comp. test could not be repeated in systems test. | Ambient     | Acc       | (V)        | A14   | (V)             | Rpt. 29    | 10-1  | F 12-10 1-22 |

|                       |  |                          |  |                 |  |                   |  |
|-----------------------|--|--------------------------|--|-----------------|--|-------------------|--|
| NOMENCLATURE          |  | SUBSYSTEM                |  | QC ENGINEER     |  | PAGE 2 OF 2 PAGES |  |
| Rate Gyro Pkg. (RAGS) |  | Stabilization-Electrical |  | R. Bernard      |  |                   |  |
| DRAWING NUMBER        |  | MISSION CLASSIFICATION   |  | DESIGN ENGINEER |  | MANUFACTURER      |  |
| 111C3776              |  | Critical                 |  | A. Lynch        |  | GE - OD           |  |

| FAILURE NUMBER | REPORT DATE | SERIAL NO | FAILURE MODE                                                                                                                                                                                                        | ENVIRON  | TEST TYPE | RPT ACT | FA NO | FA RPTS ISSUED |                    | FARB CLOSE-OUT    |
|----------------|-------------|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-----------|---------|-------|----------------|--------------------|-------------------|
|                |             |           |                                                                                                                                                                                                                     |          |           |         |       | BY             | NUMBER             |                   |
| IR0367         | 11-8-62     | 5498678   | 3 High drift rate on pitch gyro                                                                                                                                                                                     | Ambient  | Acc       | C/T     | 035   | QCE            | 1342-604-1         | 11-9 P            |
| IR0369         | 11-29-62    | 5498679   | 3 Roll gyro drift excessive.                                                                                                                                                                                        | Ambient  | Acc       | C/T     | 055   |                | 1342-604-2         | 11-29 P           |
| IR20099        | 12-29-62    | 5498678   | 3 Roll Gyro exhibits high drift rate.                                                                                                                                                                               | Ambient  | Acc       | C/T     | 082   | QCE            | 1342-604-3         | 12-5 F 12-10 1-11 |
| IR0377         | 2-14-63     | 5498681   | 2 Pitch temp. sensor resistance low, gave no indication of heating on temp. monitor or test equip.                                                                                                                  | Ambient  | Acc       | C/T     | 113   | QCE            | 1342-604-4         | 1-9 F 1-11 1-11   |
| IR0378         | 2-16-63     | 5498679   | 2 Telemetry out of spec in pitch and yaw channels.                                                                                                                                                                  | Ambient  | Acc       | C/T     | NR    |                | 1342-604-5         | 2-22 P            |
| FC47559        | 3-26-63     | 5498677   | 2 Visual inspection revealed 2 loose capacitors in the component, 4 additional capacitors were broken at the point where the lead is welded to the can. Capacitors located on TB-40 used in filters for rate loops. | Post-Vib | Qual      | QCE     | 183   | QCE            | FAR Suppl 1 3-23 F | 4-5 4-5           |

111C3776

|                                     |  |                         |  |                 |  |                          |  |
|-------------------------------------|--|-------------------------|--|-----------------|--|--------------------------|--|
| NOMENCLATURE                        |  | SUBSYSTEM               |  | QC ENGINEER     |  | PAGE 1 OF 1 PAGES        |  |
| H <sub>3</sub> -Flow Solenoid Valve |  | Stabilization-Pneumatic |  | A. Smith        |  |                          |  |
| DRAWING NUMBER                      |  | MISSION CLASSIFICATION  |  | DESIGN ENGINEER |  | MANUFACTURER             |  |
| 111C3791 P1/P3                      |  | Critical                |  | R. Martin       |  | Valcor Engineering Corp. |  |

| FAILURE NUMBER | REPORT DATE | SERIAL NO      | ENVIRONMENT | TEST TYPE | RPT ACT | FA NO | FA RPTS ISSUED |        |      | FARB CLOSE-OUT |
|----------------|-------------|----------------|-------------|-----------|---------|-------|----------------|--------|------|----------------|
|                |             |                |             |           |         |       | BY             | NUMBER | DATE |                |
| IR5001         | 8-24-62     | GF0628-20      | Ambient     | Acc       | C/T NR  |       |                |        |      | 12-5           |
|                |             | -24 (P1)       |             |           |         |       |                |        |      |                |
|                |             | GF0628-86 (P3) |             |           |         |       |                |        |      |                |
| IRN1821        | 2-15-63     |                | Ambient     | Acc       | V/S     |       |                |        |      | 12-5           |

| NOMENCLATURE   |             | SUBSYSTEM               |                                                                                            | QC ENGINEER     |           | PAGE 1 OF 1 PAGES        |           |        |                  |
|----------------|-------------|-------------------------|--------------------------------------------------------------------------------------------|-----------------|-----------|--------------------------|-----------|--------|------------------|
| Solenoid Valve |             | Stabilization-Pneumatic |                                                                                            | A. Smith        |           |                          |           |        |                  |
| DRAWING NUMBER |             | MISSION CLASSIFICATION  |                                                                                            | DESIGN ENGINEER |           | MANUFACTURER             |           |        |                  |
| 111C3797 P1    |             | Critical                |                                                                                            | W. Simpson      |           | Valcor Engineering Corp. |           |        |                  |
| FAILURE NUMBER | REPORT DATE | SERIAL NO               | FAILURE MODE                                                                               | ENVIRONMENT     | TEST TYPE | RPT ACT NO               | FA RPT NO |        | FA RPT CLOSE-OUT |
|                |             |                         |                                                                                            |                 |           |                          | BY        | NUMBER |                  |
| IR1827         | 2-27-63     | GF0629-16               | 2 Leakage past valve seat is 5.354 scc/hr-spec max 2.0 scc/hr.                             | Ambient         | Acc       | V/S 150                  |           |        |                  |
| IR1836         | 3-15-63     | GF0629-17               | 3 Pull-in voltage should be 16.0 volts max. Per data sheet, pull-in voltage is 19.4 volts. | Post-Ambient    | Acc       | V/S 163                  |           |        |                  |

| NOMENCLATURE                  |             | SUBSYSTEM                          |                                                                                                                                                                | QC ENGINEER                  |           | PAGE 1 OF 1 PAGES      |                |            |                     |
|-------------------------------|-------------|------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|-----------|------------------------|----------------|------------|---------------------|
| Mixer Box                     |             | Stabilization-Electrical           |                                                                                                                                                                | K. Speight                   |           | MANUFACTURER<br>Barnes |                |            |                     |
| DRAWING NUMBER<br>111C3820 P1 |             | MISSION CLASSIFICATION<br>Critical |                                                                                                                                                                | DESIGN ENGINEER<br>D. Dolcin |           |                        |                |            |                     |
| PART NUMBER                   | REPORT DATE | SERIAL NO                          | FAILURE MODE                                                                                                                                                   | ENVIRONMENT                  | TEST TYPE | RPT ACT NO             | FA RPTS ISSUED |            | FARS CLOSE-OUT      |
|                               |             |                                    |                                                                                                                                                                |                              |           |                        | BY             | NUMBER     |                     |
| DR3190                        | 10-11-62    | -06A                               | 10:1 reduction of control pitch output scale factor.                                                                                                           | Post Humidity                | Qual (V)  | (V) A21                | (V)            | DR3190     | 10-11 F 12-10 12-10 |
| DR3183                        | 10-12-62    | -06A                               | 15% reduction of control pitch output scale factor                                                                                                             | Post Humidity                | Qual (V)  | (V) A22                | (V)            | DR3183     | 10-12 F 12-10 12-10 |
| DR3217                        | 10-26-62    | -06A                               | Erroneous roll output. Saturates at +5 and -5°.                                                                                                                | Post Humidity                | Qual (V)  | (V) A23                | QCE            | 1342-618-1 | 2-9 F 4-5 4-5       |
| FC47505<br>DR1059             | 11-15-63    | -06A                               | 1. Sun alarm stays on all the time bringing roll outputs to zero.<br>2. Pitch and roll input and output switches not operating due to distorted drive voltage. | Orbital Simulator            | Qual (V)  | QCE 042                | QCE            | 1342-619-1 | 12-11 F 12-28 12-28 |
| FCE47322                      | 1-16-63     | 3                                  | Improper valve of pitch I.M. signal when operating with rest of subsystem - ok when used on test console.                                                      | Ambient                      | S/S (904) | STE 124                | QCE            | 1342-619-2 | 2-26 F 3-8 3-8      |
| FC47565                       | 10-15-62    | -06                                | Resistance between PT and chassis is 400K - should be infinite.                                                                                                | Post-Hum                     | Qual      | QCE 192                |                |            |                     |
| FC47567                       | 10-19-62    | -06                                | High resistance between DC and chassis ground.                                                                                                                 | Post-Hum                     | Qual      | QCE 191                |                |            |                     |
| FC47566                       | 10-25-62    | -06                                | Epon coating broken away from capacitor in Mixer Box.                                                                                                          | Ambient                      | Qual      | QCE 190                |                |            |                     |

| NOMENCLATURE          |         | SUBSYSTEM              |                                                              | QC ENGINEER     |           | PAGE 1 OF 1 PAGES |       |                |                       |                |       |
|-----------------------|---------|------------------------|--------------------------------------------------------------|-----------------|-----------|-------------------|-------|----------------|-----------------------|----------------|-------|
| Solenoid-Fuel Valve   |         | Orbit Adjust           |                                                              | D. Downing      |           |                   |       |                |                       |                |       |
| DRAWING NUMBER        |         | MISSION CLASSIFICATION |                                                              | DESIGN ENGINEER |           | MANUFACTURER      |       |                |                       |                |       |
| 111C381 P2            |         | Critical               |                                                              | C. P. Sch       |           | Rocketdyne        |       |                |                       |                |       |
| FAILURE REPORT NUMBER | DATE    | SERIAL NO              | FAILURE MODE                                                 | ENVIRONMENT     | TEST TYPE | RPT ACT           | FA NO | FA RPTS ISSUED |                       | FARB CLOSE-OUT |       |
|                       |         |                        |                                                              |                 |           |                   |       | BY             | NUMBER                |                | DATE  |
| FC47501               | 8-27-62 | 50915                  | Valve leaked 24 scc per min. - allowable 0.0166 scc per min. | Ambient         | Qual (V)  | QCE               | 048   | QCE            | 1342-501.25-12-5<br>1 | F 12-14        | 12-14 |
|                       |         | 50916                  | Valve leaked 73 scc per min.                                 |                 |           |                   |       |                |                       |                |       |

| NOMENCLATURE           |             | SUBSYSTEM              |                                                                | QC ENGINEER     |           | PAGE 1 OF 1 PAGES |                       |     |        |      |     |    |
|------------------------|-------------|------------------------|----------------------------------------------------------------|-----------------|-----------|-------------------|-----------------------|-----|--------|------|-----|----|
| Valve, Solenoid, Oxid. |             | Orbit Adjust           |                                                                | D. Downing      |           |                   |                       |     |        |      |     |    |
| DRAWING NUMBER         |             | MISSION CLASSIFICATION |                                                                | DESIGN ENGINEER |           | MANUFACTURER      |                       |     |        |      |     |    |
| 111C3881 P3            |             | Critical               |                                                                | C. Rich         |           | Rocketdyne        |                       |     |        |      |     |    |
| FAILURE NUMBER         | REPORT DATE | SERIAL NO              | FAILURE MODE                                                   | ENVIRON         | TEST TYPE | RPT ACT NO        | FA RPTS ISSUED        | BY  | NUMBER | DATE | FA  | CA |
| QC47320                | 25-63       | 8251501                | 2<br>ernal leakage 0.028 scc/min<br>- spec max 0.0166 scc/min. | Lo-Temp         | Qual (V)  | QCE 171           | QCE 1321-501.24<br>-1 | QCE | 3-28   | 4-5  | 4-5 |    |

|                       |  |                        |  |                 |  |                   |  |
|-----------------------|--|------------------------|--|-----------------|--|-------------------|--|
| NOMENCLATURE          |  | SUBSYSTEM              |  | QC ENGINEER     |  | PAGE 1 OF 1 PAGES |  |
| Valve, Solenoid, Fuel |  | Orbit / Just           |  | D. Downing      |  |                   |  |
| DRAWING NUMBER        |  | MISSION CLASSIFICATION |  | DESIGN ENGINEER |  | MANUFACTURER      |  |
| 111C3881 P4           |  | Critical               |  | C. Rich         |  | Rocketdyne        |  |

| FAILURE NUMBER        | REPORT DATE       | SERIAL NO          | FAILURE MODE                                                                                         | ENVIRONMENT | TEST TYPE | RPT ACT | FA NO | FA RPTS ISSUED |                   | FA RB CLOSE-OUT |
|-----------------------|-------------------|--------------------|------------------------------------------------------------------------------------------------------|-------------|-----------|---------|-------|----------------|-------------------|-----------------|
|                       |                   |                    |                                                                                                      |             |           |         |       | BY             | NUMBER            |                 |
| FC47519               | 2-25-63           | 8252756            | 2 External leakage: approx. 1/8 in. bubbles of unspecified number observed. Allowable leakage: none. | Lo-Temp     | Qual (V)  | QCE     | 170   | QCE            | 1321-501.25<br>-1 | F 4-5 4-5       |
| 11702<br>09928<br>(V) | 1-31-63<br>3-7-63 | 8250914<br>8251553 | 3 } Excessive internal leakage.                                                                      | Ambient     | Acc (V)   | (V)     | 187   |                |                   |                 |
| 09925<br>(V)          | 3-7-63            | 8251547            | 2 Drop-out current below minimum allowable.                                                          | Ambient     | Acc (V)   | (V)     | 188   |                |                   |                 |

Subassembly of 242E564 G1

|                       |  |                        |  |                 |  |                   |  |
|-----------------------|--|------------------------|--|-----------------|--|-------------------|--|
| NOMENCLATURE          |  | SUBSYSTEM              |  | QC ENGINEER     |  | PAGE 1 OF 1 PAGES |  |
| Shift Register Module |  | Tracking & Command     |  | D. Sharrock     |  |                   |  |
| DRAWING NUMBER        |  | MISSION CLASSIFICATION |  | DESIGN ENGINEER |  | MANUFACTURER      |  |
| 11309101 G1           |  | Critical               |  | J. McBride      |  | GE-DSD            |  |

| FAILURE NUMBER | FAILURE REPORT |                         | SERIAL NO   | FAILURE MODE                                                                                     | ENVIRONMENT | TEST TYPE | RPT ACT | FA NO | FA RPTS ISSUED |        | FARB CLOSE-OUT |       |
|----------------|----------------|-------------------------|-------------|--------------------------------------------------------------------------------------------------|-------------|-----------|---------|-------|----------------|--------|----------------|-------|
|                | DATE           |                         |             |                                                                                                  |             |           |         |       | BY             | NUMBER | DATE           | FA CA |
| IR20162        | 2-15-63        | J93051-23               | 3           | No output at pin 9. (Open circuit between shift current input and output).                       | Ambient     | P/P       | C/T     | 141   |                |        |                |       |
| DR81611        | 3-1-63         | J93051-18               | 3           | Shift register #2 defective internal short between pin 13 and metal insert. (Short intermittent) | Ambient     | SFV       | C/T     | 154   |                |        |                |       |
| IR20124        | 3-7-63         | J93051-15<br>-18<br>-22 | 3<br>3<br>3 | Shift line shorted P3 to P8<br>Short between P13 and metal insert.<br>Shift line open P3 to P8.  | Ambient     | SFV       | C/T     |       |                |        |                |       |
| IR21522        | 4-3-63         | J93051-31               | 3           | Open shift line - pins E8 to E3.<br>5-1-63                                                       | Ambient     | SFV       | C/T     | 217   |                |        |                |       |

| NOMENCLATURE   | SUBSYSTEM              | QC ENGINEER     | PAGE 1 OF 1 PAGES     |  |
|----------------|------------------------|-----------------|-----------------------|--|
| Baroswitch     | Separation             | F. Malinoski    |                       |  |
| DRAWING NUMBER | MISSION CLASSIFICATION | DESIGN ENGINEER | MANUFACTURER          |  |
| 113C9114 P1    | Critical               | R. Goalwin      | Gorn Electric Company |  |

| FAILURE NUMBER               | REPORT DATE        | SERIAL NO                   | FAILURE MODE                                                                                         | ENVIRON               | TEST TYPE | RPT ACT NO | FA RPTS ISSUED |                                      |                        | FARB CLOSE-OUT |                       |
|------------------------------|--------------------|-----------------------------|------------------------------------------------------------------------------------------------------|-----------------------|-----------|------------|----------------|--------------------------------------|------------------------|----------------|-----------------------|
|                              |                    |                             |                                                                                                      |                       |           |            | FA             | NUMBER                               | DATE                   | FA             | CA                    |
| IR0160                       | 7-6-62             | 604820<br>-38<br>-39<br>-41 | Switch contacts AB failed to close at specified pressure. Excessive case leakage.                    | Ambient<br>Hi-Temp    | Acc       | C/T 001    | FAB<br>FAB     | FAR 1001<br>FAR 1001A                | 7-13<br>7-18           | P<br>F         | 11-26<br>12-5         |
| IR0178                       | 7-9-62             | GC0593<br>-4                | Switch contacts CD failed to close within specified pressure limits.                                 | Ambient               | Acc       | C/T 001    |                |                                      |                        |                |                       |
| IR1313<br>IRO265<br>Reissued | 7-11-62<br>8-27-62 | GC0593<br>-5                | Switch contacts CD failed to close within spec limits.                                               | Ambient<br>Hi-Temp    | Acc       | C/T 005    | QCE<br>M&P     | 1342-301-1<br>PIR1380-249            | 10-24<br>10-29         | F<br>F         | 11-26<br>12-5         |
| FC47701                      | 10-25-62           | GC0593<br>-3                | Contact chatter                                                                                      | Vibration             | Acc       | C/T NR     |                |                                      |                        |                |                       |
| FC47702                      | 10-25-62           | GC0593<br>-6                | Failed post-vibration bench test - contacts failed to close within specified limits. Contact chatter | Vibration<br>Post-Vib | Acc       | C/T 020    | QCE<br>FAB     | 1342-301-2<br>1342-301-3<br>FAR 1002 | 10-24<br>11-6<br>11-15 | P<br>F<br>F    | 11-26<br>12-5<br>1-15 |
| IRN1297                      | 11-9-62            | GC2694<br>-18               | Contacts closed below spec altitude.                                                                 | Hi-Temp               | Acc       | C/T 043    | QCE            | 1342-301-4<br>1342-301-6             | 11-15<br>1-25          | P<br>F         | 2-1                   |
| FC47727                      | 1-8-63             | GC0593<br>-1                | Contact closure out of spec limits: C-D contacts actuated at 5mm hg.                                 | Post-Acc              | Qual      | C/T 083    | QCE            | 1342-301-5<br>FAR Suppl 1            | 1-16<br>1-23           | P<br>F         | 2-1                   |

| NOMENCLATURE          |         | SUBSYSTEM                              |                                                            | QC ENGINEER     |           | PAGE 1 OF 1 PAGES      |       |                |                                |                   |       |
|-----------------------|---------|----------------------------------------|------------------------------------------------------------|-----------------|-----------|------------------------|-------|----------------|--------------------------------|-------------------|-------|
| Vibration Detector    |         | Telemetry                              |                                                            | D. Deitz        |           | MANUFACTURER           |       |                |                                |                   |       |
| DRAWING NUMBER        |         | MISSION CLASSIFICATION                 |                                                            | DESIGN ENGINEER |           | Columbia Research Labs |       |                |                                |                   |       |
| 113C9129 P1           |         | Minor                                  |                                                            | D. Gicking      |           |                        |       |                |                                |                   |       |
| FAILURE REPORT NUMBER | DATE    | SERIAL NO                              | FAILURE MODE                                               | ENVIRON         | TEST TYPE | RPT ACT                | FA NO | FA RPTS ISSUED |                                | FARB CLOSE-OUT    |       |
|                       |         |                                        |                                                            |                 |           |                        |       | BY             | NUMBER                         | DATE              | FA    |
| IR0261                | 7-19-62 | GC0984<br>-1<br>-8<br>-9<br>-10<br>-11 | Output EMF out of spec at 1G (100 cps).                    | Ambient         | Acc       | C/T                    | NR    |                |                                | 12-5              | 12-5  |
| IR7000                | 8-8-62  | GC0984<br>-3                           | Output EMF out of spec at 1G, 5G, 10G, 15G, 20G, (100cps). | Ambient         | Acc       | C/T                    | 002   | QCE            | 1340-JJS-1119-25<br>1342-237-1 | P 12-5<br>F 12-10 | 12-10 |
| IR7001                | 8-8-62  | GC0984<br>-17                          | Same as above                                              | Ambient         | Acc       | C/T                    | 002   | QCE            | Same as above                  |                   |       |
| IR7002                | 8-8-62  | GC0984<br>-18                          | Same as above                                              | Ambient         | Acc       | C/T                    | 002   | QCE            | Same as above                  |                   |       |
| FC47742               | 3-15-63 | 5742086                                | No output.                                                 | Hi-Temp         | Qual      | C/T                    | 164   | QCE            | 1321-237-2                     | 3-29 F 4-5        | 4-5   |

|                                          |                                    |                                  |                   |
|------------------------------------------|------------------------------------|----------------------------------|-------------------|
| NOMENCLATURE<br>Flip-Flop Counter Module | SUBSYSTEM<br>Tracking & Command    | QC ENGINEER<br>J. Roth           | PAGE 1 OF 1 PAGES |
| DRAWING NUMBER<br>113C9152 G1            | MISSION CLASSIFICATION<br>Critical | DESIGN ENGINEER<br>W. Billbrough |                   |
|                                          |                                    | MANUFACTURER<br>GE-ASPD          |                   |

| FAILURE REPORT |         | SERIAL NO | SSA ID | FAILURE MODE                                        | ENVIRON | TEST TYPE | RPT ACT | FA NO | FA RPTS ISSUED |            | DATE | F S | FARB CLOSE-OUT |    |
|----------------|---------|-----------|--------|-----------------------------------------------------|---------|-----------|---------|-------|----------------|------------|------|-----|----------------|----|
| NUMBER         | DATE    |           |        |                                                     |         |           |         |       | BY             | NUMBER     |      |     | FA             | CA |
| IR1378         | 1-17-63 | KL519     | 3      | No output from either "0" or "1" outputs of module. | Ambient | P/P       | C/T     | 115   | QCE            | 1342-107-8 | 3-21 | F   | 3-22           |    |

|                                 |  |                                |  |                              |  |                   |  |
|---------------------------------|--|--------------------------------|--|------------------------------|--|-------------------|--|
| DRAWING NUMBER<br>11309312 P1   |  | SUBSYSTEM<br>Separation Switch |  | QC ENGINEER<br>F. Malinoski  |  | PAGE 1 OF 1 PAGES |  |
| MISSION CLASSIFICATION<br>Minor |  | DESIGN ENGINEER<br>P. Shelley  |  | MANUFACTURER<br>Micro-Switch |  |                   |  |

| FAILURE NUMBER | REPORT DATE | SERIAL NO | FAILURE MODE                           | ENVIRON    | TEST TYPE | RPT ACT | FA NO | FA RPTS ISSUED |                                          | FAR                  | CLOSE-OUT   |      |
|----------------|-------------|-----------|----------------------------------------|------------|-----------|---------|-------|----------------|------------------------------------------|----------------------|-------------|------|
|                |             |           |                                        |            |           |         |       | BY             | NUMBER                                   |                      | FA          | CA   |
| FC47717        | 11-5-62     | FC1647-5  | Dielectric breakdown in all positions. | Post Accel | Qual      | C/T     | 031   | QCE            | 1342-314-1<br>FAR Suppl 1<br>FAR Suppl 2 | 11-8<br>12-20<br>2-7 | P<br>P<br>F | 2-26 |



| NOMENCLATURE            |             | SUBSYSTEM              |                                                                                                                                                                                                                                                       | QC ENGINEER     |           | PAGE 1 OF 2 PAGES |                |                                     |                             |      |
|-------------------------|-------------|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-----------|-------------------|----------------|-------------------------------------|-----------------------------|------|
| S-Band Beacon           |             | Tracking & Command     |                                                                                                                                                                                                                                                       | P. Mattiucci    |           | MANUFACTURER      |                |                                     |                             |      |
| DRAWING NUMBER          |             | MISSION CLASSIFICATION |                                                                                                                                                                                                                                                       | DESIGN ENGINEER |           | ACF Industries    |                |                                     |                             |      |
| 113C9517 (was 103C3264) |             | Critical               |                                                                                                                                                                                                                                                       | J. Serafin      |           |                   |                |                                     |                             |      |
| FAILURE NUMBER          | REPORT DATE | SERIAL NO              | FAILURE MODE                                                                                                                                                                                                                                          | ENVIRONMENT     | TEST TYPE | RPT ACT NO        | FA RPTS ISSUED |                                     | FARB CLOSE-OUT              |      |
|                         |             |                        |                                                                                                                                                                                                                                                       |                 |           |                   | BY             | NUMBER                              |                             | DATE |
| IR0262                  | 7-15-62     | 418                    | 3 Out of spec - tolerance allowed for S.I. 237407 para. 3.1.1.21 is $\pm 2mc$ - reading is 2.775mc.                                                                                                                                                   | Ambient         | Acc       | C/T A30           | (V)            | FR1304                              | 10-12 F2-1                  | 2-1  |
| IR0263                  | 7-19-62     | 416                    | 3 Same as above except reading was 3.41 mc.                                                                                                                                                                                                           | Ambient         | Acc       | C/T A31           | (V)            | FR1303                              | 10-12 F2-1                  | 2-1  |
| FR1345                  | 10-8-62     | 412*                   | 3 After 1.5 hrs. at -6°C, receiver monitor voltage varied from 0.75 to approx. 1.5 volts. Transmitter pulse also showed 50 count variation. (Random triggering occurred only when transmitter was enabled). *Unit had been returned for modification. | Lo-Temp         | Acc (V)   | A32               | (V)            | FR1345                              | 11-26 F2-1                  | 3-15 |
| FR1346                  | 11-1-62     | 412                    | 3 During troubleshooting of temperature failure (see FR1345 above), preselector was found to have approx. 7db loss.                                                                                                                                   | Ambient         | Acc       | (V) A33           | (V)            | FR1346                              | 11-26 F2-1                  | 2-1  |
| IRN1268                 | 11-1-62     | 416                    | 3 Video pulse width read 0.78 sec - spec limits 0.8 to 1.5 sec. Video pulse amplitude read 11.5 volts - spec limit 12V min. Transmitter pulse width read 0.43 sec - spec limits 0.8 $\pm$ 0.1 sec.                                                    | Ambient         | Acc       | C/T D29           | DCE (V) QCE    | 1342-103-1<br>FR1433<br>FAR Suppl 1 | 1-16 P<br>12-11 P<br>1-31 F | 2-8  |
| IR20101                 | 11-3-62     | 421                    | 3 Transmitter frequency out of tolerance, spec limits $\pm 2 mc$ - reads -2.7 mc.                                                                                                                                                                     | Ambient         | Acc       | C/T D40           | (V)            | FR1434<br>FR1439A                   | 12-11 P<br>1-2 F            |      |

|                                           |  |                                    |  |                               |  |                                |  |
|-------------------------------------------|--|------------------------------------|--|-------------------------------|--|--------------------------------|--|
| NOMENCLATURE<br>S-Band Beacon             |  | SUBSYSTEM<br>Tracking & Command    |  | QC ENGR<br>I. Attiucci        |  | PAGE 2 OF 2 PAGES              |  |
| DRAWING NUMBER<br>113C9517 (was 103C3264) |  | MISSION CLASSIFICATION<br>Critical |  | DESIGN ENGINEER<br>J. Serafin |  | MANUFACTURER<br>ACF Industries |  |

| FAILURE NUMBER     | REPORT DATE        | SERIAL NO | FAILURE MODE                                                                                                                                                                                   | ENVIRONMENT | TEST TYPE | RPT ACT | FA NO | FA RPTS ISSUED |            |       | FARB CLOSE-OUT |    |  |
|--------------------|--------------------|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-----------|---------|-------|----------------|------------|-------|----------------|----|--|
|                    |                    |           |                                                                                                                                                                                                |             |           |         |       | BY             | NUMBER     | DATE  | FA             | CA |  |
| FR1435             | 12-10-62           | 421       | During bench tests, beacon began to random trigger at a 2000 prf for first minute of warm-up.                                                                                                  | Ambient     | Acc       | (V)     | A34   | (V)            | FR1435     | 12-11 | F 2-1          |    |  |
| FR1436             | 12-10-62           | 421       | During bench tests, beacon counted down 20% of the interrogation PRF from receiver input levels 0.65 dbm.                                                                                      | Ambient     | Acc (V)   | (V)     | A35   | (V)            | FR1436     | 12-11 | 2-1            |    |  |
| FC47789<br>IR20532 | 3-15-63<br>3-15-63 | 5740848   | 1) Unit draws excessive current<br>1.5A - should be 1.4A max.<br>2) Pulse being fed back into test rack.<br>3) Pulse width out of spec per para. 2.5.18.5<br>(1st 2 min. of transverse plane). | Vibration   | Qual      | C/T     | 174   |                | 11321-1033 |       |                |    |  |

113C9517



|                |  |                        |  |                 |  |                   |  |
|----------------|--|------------------------|--|-----------------|--|-------------------|--|
| NOMENCLATURE   |  | SUBSYSTEM              |  | QC ENGINEER     |  | PAGE 1 OF 1 PAGES |  |
| UHF Antenna    |  | Telemetry              |  | N. Yergler      |  |                   |  |
| DRAWING NUMBER |  | MISSION CLASSIFICATION |  | DESIGN ENGINEER |  | MANUFACTURER      |  |
| J1309581 G2    |  | Minor                  |  | H. Rogers       |  | GE-ASPD           |  |

| FAB NUMBER | REPORT DATE | SERIAL NO | FAB NO | FAILURE MODE                         | ENVIRONMENT | TEST TYPE | RPT ACT NO | FA NO | FA RPTS ISSUED |        | FARB CLOSE-OUT |    |
|------------|-------------|-----------|--------|--------------------------------------|-------------|-----------|------------|-------|----------------|--------|----------------|----|
|            |             |           |        |                                      |             |           |            |       | BY             | NUMBER | DATE           | FA |
| IR1328     | 12-3-62     | 5496656   | 3      | Failed to tune to desired frequency. | Ambient     | Acc       | C/T 091    | QCE   | 1342-122-1     | 1-31   | F2-8           |    |

| NOMENCLATURE     |             |                 | SUBSYSTEM              |                                                                          | QC ENGINEER     |           | PAGE 1 OF 2 PAGES |       |                |        |                |    |
|------------------|-------------|-----------------|------------------------|--------------------------------------------------------------------------|-----------------|-----------|-------------------|-------|----------------|--------|----------------|----|
| R.F. Transmitter |             |                 | Telemetry              |                                                                          | P. Mattiu       |           |                   |       |                |        |                |    |
| DRAWING NUMBER   |             |                 | MISSION CLASSIFICATION |                                                                          | DESIGN ENGINEER |           | MANUFACTURER      |       |                |        |                |    |
| 113C9710 C1      |             |                 | Major                  |                                                                          | J. Serafin      |           | GE-ASPD           |       |                |        |                |    |
| FAILURE NUMBER   | REPORT DATE | SERIAL NO       | QUANTITY               | FAILURE MODE                                                             | ENVIRONMENT     | TEST TYPE | RPT ACT           | FA NO | FA RPTS ISSUED |        | FARB CLOSE-OUT |    |
|                  |             |                 |                        |                                                                          |                 |           |                   |       | BY             | NUMBER | DATE           | PK |
| DR57767          | 12-29-62    | 5498732 (KM151) | 3                      | CR3, Q6, Q7, Q8, Q9 shorted. R8, R9, R15 badly burnt.                    | Ambient         | SFV       | C/T               |       |                |        |                |    |
| DR57769          | 12-31-62    | 5498732 (KM151) | 3                      | CR4 shorted; Q1, Q2, Q3, Q4, Q5 open; C10 cracked and peeling.           | Ambient         | SFV       | C/T               |       |                |        |                |    |
| DR57735          | 2-4-63      | KM236           | 2                      | More than 1db loss of power.                                             | Hi-Temp         | Acc       | C/T               |       |                |        |                |    |
| DR57732          | 2-6-63      | KM236           | 3                      | Power dropped to zero - current 350 ma.                                  | Ambient         | Acc       | C/T               |       |                |        |                |    |
| DR57724          | 2-7-63      | KM237           | 3                      | No power out.                                                            | Ambient         | Acc       | C/T               |       |                |        |                |    |
| DR57731          | 2-7-63      | KM236           | 3                      | No power out - current 350 ma Q9 reads open.                             | Ambient         | Acc       | C/T               |       |                |        |                |    |
| DR57711          | 2-8-63      | KM151           | 2                      | Draws excessive current, preventing proper tuning                        | Ambient         | ReAcc     | C/T               |       |                |        |                |    |
| DR57719          | 2-8-63      | KM236           | 2                      | Low power out - Q7, Q8 defective.                                        | Ambient         | Acc       | C/T               |       |                |        |                |    |
| DR81605          | 2-19-63     | KM151           | 3                      | No regulation at Q1 - CR3 defective                                      | Ambient         | ReAcc     | C/T               |       |                |        |                |    |
| DR51769          | 3-1-63      | KM151           | 3                      | No output when unit reaches hi-temp - bad connection on secondary of T2. | Hi-Temp         | ReAcc     | C/T               |       |                |        |                |    |
| DR51727          | 3-15-63     | KM236           | 2                      | Low output power - 1.7 watts. Q3 defective.                              | Ambient         | Acc       | C/T               |       |                |        |                |    |

113C9710 G1





|                               |  |                        |  |                 |  |                         |  |
|-------------------------------|--|------------------------|--|-----------------|--|-------------------------|--|
| NO. OF INCLATURE              |  | SUBSYSTEM              |  | QC ENGINEER     |  | PAGE 1 OF 1 PAGES       |  |
| Voltage Controlled Oscillator |  | Telemetry              |  | N. Yerger       |  |                         |  |
| DRAWING NUMBER                |  | MISSION CLASSIFICATION |  | DESIGN ENGINEER |  | MANUFACTURER            |  |
| 113C9735 P83                  |  | Major                  |  | J. Serafin      |  | United Electro Dynamics |  |

| F/A NUMBER | REPORT DATE | SERIAL NO  | ENVIRON | FAILURE MODE                                                                                    | TEST RPT TYPE | ACT | FA NO | FA RPTS ISSUED |        | FARB |           |
|------------|-------------|------------|---------|-------------------------------------------------------------------------------------------------|---------------|-----|-------|----------------|--------|------|-----------|
|            |             |            |         |                                                                                                 |               |     |       | BY             | NUMBER | DATE | CLOSE-OUT |
| IR20102    | 3-12-63     | GC5056-780 |         | Harmonic distortion 1.1%.<br>Spec limit 1% max.                                                 | Acc           | C/T | 161   |                |        |      |           |
| DR81645    | 2-27-63     | -653       |         | Frequency changes as output<br>amplitude adjust pot is varied.<br>(Failed on 7-unit base assy). | Acc           | C/T |       |                |        |      |           |







|                               |        |                        |                                   |                 |           |                         |       |       |            |      |      |           |     |
|-------------------------------|--------|------------------------|-----------------------------------|-----------------|-----------|-------------------------|-------|-------|------------|------|------|-----------|-----|
| NOMENCLATURE                  |        | SUBSYSTEM              |                                   | QC ENGINEER     |           | PAGE 1 OF 1 PAGES       |       |       |            |      |      |           |     |
| Voltage Controlled Oscillator |        | Telemetry              |                                   | N. Yerger       |           |                         |       |       |            |      |      |           |     |
| DRAWING NUMBER                |        | MISSION CLASSIFICATION |                                   | DESIGN ENGINEER |           | MANUFACTURER            |       |       |            |      |      |           |     |
| 113C9735 P91                  |        | Major                  |                                   | J. Serafin      |           | United Electro Dynamics |       |       |            |      |      |           |     |
| FAILURE REPORT NUMBER         | DATE   | SERIAL NO              | FAILURE MODE                      | ENVIRONMENT     | TEST TYPE | RPT ACT                 | FA NO | FA BY | FA NUMBER  | DATE | FARB | CLOSE-OUT |     |
|                               |        |                        |                                   |                 |           |                         |       |       |            |      |      | FA        | CA  |
| IR0041                        | 9-7-62 | 537                    | 3 No output - input current high. | Ambient         | Acc       | C/T                     | 071   | QCE   | 1321-214-3 | 3-28 | F    | 4-5       | 4-5 |

|                               |  |                        |  |                 |  |                         |  |
|-------------------------------|--|------------------------|--|-----------------|--|-------------------------|--|
| NOMENCLATURE                  |  | SUBSYSTEM              |  | QC ENGINEER     |  | PAGE 1 OF 1 PAGES       |  |
| Voltage Controlled Oscillator |  | Telemetry              |  | N. Yerger       |  |                         |  |
| DRAWING NUMBER                |  | MISSION CLASSIFICATION |  | DESIGN ENGINEER |  | MANUFACTURER            |  |
| 11309735 P92                  |  | Major                  |  | J. Serafin      |  | United Electro Dynamics |  |

| FAILURE NUMBER | REPORT DATE | SERIAL NO  | FAILURE MODE                                          | ENVIRONMENT | TEST TYPE | RPT ACT | FA NO | FA RPTS ISSUED |            |      | FARB CLOSE-OUT |     |
|----------------|-------------|------------|-------------------------------------------------------|-------------|-----------|---------|-------|----------------|------------|------|----------------|-----|
|                |             |            |                                                       |             |           |         |       | BY             | NUMBER     | DATE | FA             | CA  |
| IR6042         | 9-7-62      | GA0364-529 | 2 High and low stimulus frequencies out of tolerance. | Ambient     | Acc       | C/T     | 114   | QCE            | 1342-214-1 | 3-18 | F 3-22         |     |
| IR1354         | 12-21-62    | GA1946-530 | 2 Low stimulus frequency out of tolerance.            | Ambient     | Acc       | C/T     | 089   | QCE            | 1321-214-4 | 3-28 | F 4-5          | 4-5 |

| NOMENCLATURE          |         | SUBSYSTEM              |                                                                                                                   | QC ENGINEER     |           | PAGE 1 OF 1 PAGES |       |                |     |        |      |                |
|-----------------------|---------|------------------------|-------------------------------------------------------------------------------------------------------------------|-----------------|-----------|-------------------|-------|----------------|-----|--------|------|----------------|
| Latching Contactor    |         | Tracking & Command     |                                                                                                                   | P. Mattiucci    |           |                   |       |                |     |        |      |                |
| DRAWING NUMBER        |         | MISSION CLASSIFICATION |                                                                                                                   | DESIGN ENGINEER |           | MANUFACTURER      |       |                |     |        |      |                |
| 114C1141              |         | Critical               |                                                                                                                   | C. McOsker      |           | Hartman Elec.     |       |                |     |        |      |                |
| FAILURE REPORT NUMBER | DATE    | SERIAL NO              | FAILURE MODE                                                                                                      | ENVIRONMENT     | TEST TYPE | RPT ACT           | FA NO | FA RPTS ISSUED | BY  | NUMBER | DATE | FARB CLOSE-OUT |
| IRN1286               | 11-7-62 | AK6907                 | 2 Failed to actuate at 25v DC - required 25.4 v.                                                                  | Hi-Temp         | Acc       | C/T               | 077   | 1342-123-1     | QCE | 3-7    |      | 3-15           |
| IR20190               | 2-7-63  | AK21018                | 3 With a min. pulse of 18v DC, the relay should return to normal state. Coil Y1, Y2 will not actuate with 30v DC. | Hi-Temp         | Acc       | C/T               | 111   |                |     |        |      |                |

|                            |  |                                       |  |                                  |  |                       |  |
|----------------------------|--|---------------------------------------|--|----------------------------------|--|-----------------------|--|
| NOMENCLATURE<br>PREDAC     |  | SUBSYSTEM<br>Stabilization-Electrical |  | QC ENGINEER<br>R. Bernard        |  | PAGE 1 OF 1 PAGES     |  |
| DRAWING NUMBER<br>114C1553 |  | MISSION CLASSIFICATION<br>Critical    |  | DESIGN ENGINEER<br>D. Montgomery |  | MANUFACTURER<br>GE-OD |  |

| FAILURE NUMBER     | REPORT DATE       | SERIAL NO | FAILURE MODE                                                                                                                                                 | ENVIRON   | TEST TYPE | RPT ACT | FA NO | FA RPTS ISSUED |                                          |                    | FARB CLOSE-OUT |       |      |
|--------------------|-------------------|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-----------|---------|-------|----------------|------------------------------------------|--------------------|----------------|-------|------|
|                    |                   |           |                                                                                                                                                              |           |           |         |       | BY             | NUMBER                                   | DATE               | FA             | CA    |      |
| 1A                 | 10-10-62          | -1        | Erratic output                                                                                                                                               | Pre-Env   | Acc       | (V)     | A15   | (V)            | 1A                                       | 10-10              | F 12-10        | 12-10 |      |
| 2A                 | 10-15-62          | -1        | No output                                                                                                                                                    | Hi-Temp   | Acc       | (V)     | A16   | (V)            | 2A                                       | 11-19              | F 1-15         | 1-15  |      |
| IR1370             | 1-10-62           | 5499143   | Failed to function on Roll Command and drew excessive current.                                                                                               | Ambient   | Acc       | C/T     | 084   | QCE            | 1342-620-1                               | 1-16               | F 1-15         | 2-12  |      |
| FC47730<br>IR20530 | 1-31-63<br>2-4-63 | 5499148   | After 1 min. vib., 3 of 4 mounting studs loosened and cover came loose retaining clip fell into unit. Internal damage to unit - null approx. 5° out of spec. | Vibration | Qual      | C/T     | 105   | QCE            | 1342-620-2<br>FAR Suppl 1<br>FAR Suppl 2 | 1-6<br>2-9<br>3-23 | P<br>P<br>F    | 3-29  | 3-29 |
| FC47561            | 3-19-63           | 5499148   | Unit did not function in one sector during vibration - ok on bench. Intermittent failure - could not be reproduced.                                          | Vibration | Qual      | QCE     | 184   |                |                                          |                    |                |       |      |

| NOMENCLATURE   |             | SUBSYSTEM               |                                                                                                                                                       | QC ENGINEER     |           | PAGE 1 OF 1 PAGES  |       |                |        |      |    |
|----------------|-------------|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-----------|--------------------|-------|----------------|--------|------|----|
| Valve Solenoid |             | Stabilization-Pneumatic |                                                                                                                                                       | A. Smith        |           | MANUFACTURER       |       |                |        |      |    |
| DRAWING NUMBER |             | MISSION CLASSIFICATION  |                                                                                                                                                       | DESIGN ENGINEER |           | Valcor Engineering |       |                |        |      |    |
| 114C1564 P1    |             | Critical (AGE)          |                                                                                                                                                       | W. Simpson      |           |                    |       |                |        |      |    |
| FAILURE NUMBER | REPORT DATE | SERIAL NO               | FAILURE MODE                                                                                                                                          | ENVIRONMENT     | TEST TYPE | RPT ACT            | FA NO | FA RPTS ISSUED |        | FARB |    |
|                |             |                         |                                                                                                                                                       |                 |           |                    |       | BY             | NUMBER | DATE | FA |
| IR1691         | 1-4-63      | GF2919-10               | Pressure drop should be 10-13 Scfm. Measured 9.0 Scfm.                                                                                                | Ambient         | Acc       | C/T                | NR    |                |        |      |    |
|                |             | -11                     |                                                                                                                                                       |                 |           |                    |       |                |        |      |    |
|                |             | -12                     |                                                                                                                                                       |                 |           |                    |       |                |        |      |    |
|                |             | -13                     |                                                                                                                                                       |                 |           |                    |       |                |        |      |    |
| IR1678         | 1-4-63      | GF2919-8                | Coil resistance is 17.88 ohms at 75°F, should be 18 ohms min                                                                                          | Ambient         | Acc       | V/S                | NR    |                |        |      |    |
| IR1819         | 2-13-63     | 133026                  | Solenoid leaks at valve seat at rate of 26.24 cc/hr. with 3600 psi helium applied to inlet side.                                                      | Ambient         | Acc       | C/T                | NR    |                |        |      |    |
| IR1628         | 2-23-63     | GF2919-7                | Coil resistance out of spec (low) at 75°F.                                                                                                            | Ambient         | Qual      | V/S                |       |                |        |      |    |
|                |             | -11                     |                                                                                                                                                       |                 |           |                    |       |                |        |      |    |
| IR1628<br>NOA1 | 3-8-63      | GF2919-7                | Failed pull-in voltage test: should pull in at 18v max. S/N 7 read 23.5v; S/N 11 read 21.0v; S/N 12 read 21.5v. After Mfr. rework, S/N 11 read 22.0v. | Ambient         | Acc       | V/S                | NR    |                |        |      |    |
|                |             | -11                     |                                                                                                                                                       |                 |           |                    |       |                |        |      |    |
|                |             | -12                     |                                                                                                                                                       |                 |           |                    |       |                |        |      |    |
| IR1628<br>NOA2 | 3-18-63     | GF2919-12               | S/N 7 failed response time: valve remained open.                                                                                                      | Hi-Temp         | Acc       | V/S                | NR    |                |        |      |    |
|                |             |                         |                                                                                                                                                       |                 |           |                    |       |                |        |      |    |
| IR1628<br>NOA2 | 3-18-63     | GF2919-12               | Leakage rate excessive - unit flowed continuously, rate could not be checked accurately                                                               | Vibration       | Acc       | V/S                | NR    |                |        |      |    |
|                |             |                         |                                                                                                                                                       |                 |           |                    |       |                |        |      |    |





|                                     |  |                                    |  |                             |  |                         |  |
|-------------------------------------|--|------------------------------------|--|-----------------------------|--|-------------------------|--|
| NOMENCLATURE<br>Transfer Lead Assy. |  | SUBSYSTEM<br>Separation            |  | QC ENGINEER<br>H. Rigney    |  | PAGE 1 OF 1 PAGES       |  |
| DRAWING NUMBER<br>131B4126          |  | MISSION CLASSIFICATION<br>Critical |  | DESIGN ENGINEER<br>J. Lilly |  | MANUFACTURER<br>Thiokol |  |

| FAILURE NUMBER | REPORT DATE | SERIAL NO  | FAILURE MODE                                                                                                                                          | ENVIRONMENT | TEST TYPE | RPT ACT | FA NO | FA RPTS ISSUED |                        |                 | FARB CLOSE-OUT |       |      |
|----------------|-------------|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-----------|---------|-------|----------------|------------------------|-----------------|----------------|-------|------|
|                |             |            |                                                                                                                                                       |             |           |         |       | BY             | NUMBER                 | DATE            | FA             | FA    | CA   |
| 11N1636        | 10-9-62     | GE0397-21  | 3 Failed to fire first trial - charge ruptured at point of contact with primer.                                                                       | Ambient     | Acc       | V/S     | A05   | (V)            | Rpt. 603 TP            | 10-9            | F              | 12-5  | 12-5 |
| FC47577        | 11-28-62    | J93514-100 | 3 Interrupted propagation of shaped charge detonation wave, preventing separation. Failure occurred after all environmental tests had been performed. | Ambient     | Qual (V)  | QCE     | 056   | QCE            | 1342-315-1 FAR Suppl 1 | 11-29 P 12-10 F | P              | 12-28 | 1-8  |
| FC47557        | 3-29-63     | 100A 101A  | 3 A2 core withdrew from X-349 primer.                                                                                                                 | Vibration   | Qual (V)  | QCE     | 201   | QCE            | 1321-315-2             | 4-2 P           |                |       |      |

|                       |  |                        |  |                 |  |                   |  |
|-----------------------|--|------------------------|--|-----------------|--|-------------------|--|
| NOMENCLATURE          |  | SUBSYSTEM              |  | QC ENGINEER     |  | PAGE 1 OF 1 PAGES |  |
| Pneumatic Check Valve |  | Orbit Adjust           |  | D. Downing      |  |                   |  |
| DRAWING NUMBER        |  | MISSION CLASSIFICATION |  | DESIGN ENGINEER |  | MANUFACTURER      |  |
| 131B4246 P1           |  | Critical               |  | C. Rich         |  | Rocketdyne        |  |

| FAILURE NUMBER | REPORT DATE | SERIAL NO | # | FAILURE MODE                                                                                                              | ENVIRONMENT | TEST TYPE | RPT ACT | FA NO | FA RPTS ISSUED |               |      | FARB CLOSE-OUT |      |     |
|----------------|-------------|-----------|---|---------------------------------------------------------------------------------------------------------------------------|-------------|-----------|---------|-------|----------------|---------------|------|----------------|------|-----|
|                |             |           |   |                                                                                                                           |             |           |         |       | BY             | NUMBER        | DATE | FA             | FA   | CA  |
| FC47511        | 11-9-62     | 148       | 3 | Excessive seat leakage                                                                                                    | Post-Vib    | Qual      | QCE     | 053   | QCE            | 1342-501.38-1 | 1-17 | P              | 2-26 |     |
| FC47521        | 2-21-63     | 106       | 3 | 3.1 scc/hr internal leakage at 5 psid back pressure - spec max 0.8 scc/hr.                                                | Ambient     | Qual      | QCE     | 172   | QCE            | FAR Suppl 1   | 3-25 | F              |      | 4-5 |
| FC47522        | 3-8-63      | 106       | 3 | 10 scc/hr leakage during reseal test when inlet pressure was reduced to 1 psig (1 psid across poppet). Spec max 1 scc/hr. | Ambient     | Qual      | QCE     | 172   | QCE            | 1321-501.38-2 | 3-29 | F              | 4-5  | 4-5 |



|                                                                            |  |                                                                     |                                                                   |                                                        |
|----------------------------------------------------------------------------|--|---------------------------------------------------------------------|-------------------------------------------------------------------|--------------------------------------------------------|
| <b>REFERENCE</b><br>Transducer, Lo-Press.<br>DRAWING NUMBER<br>133B1102 P1 |  | <b>SUBSYSTEM</b><br>Orbit Adjust<br>MISSION CLASSIFICATION<br>Minor | <b>QC ENGINEER</b><br>D. Downing<br>DESIGN ENGINEER<br>J. Lemmond | <b>PAGE 1 OF 1 PAGES</b><br>MANUFACTURER<br>Rocketdyne |
|----------------------------------------------------------------------------|--|---------------------------------------------------------------------|-------------------------------------------------------------------|--------------------------------------------------------|

| FAILURE NUMBER | REPORT DATE | SERIAL NO | FAILURE MODE                                           | ENVIRONMENT | TEST TYPE | RPT ACT | FA NO | FA RPTS ISSUED |        | FARB  |           |
|----------------|-------------|-----------|--------------------------------------------------------|-------------|-----------|---------|-------|----------------|--------|-------|-----------|
|                |             |           |                                                        |             |           |         |       | BY             | NUMBER | DATE  | CLOSE-OUT |
| FC77512        | 12-17-62    | 63765     | Excessive current leakage in dielectric strength test. | Ambient     | Qual (V)  | 086     | QCE   | 1342-501.14-1  | 2-18   | F 3-8 | 3-8       |

| ENCLOSURE        |             | SUBSYSTEM              |                                                                                     | QC ENGINEER                            |           | PAGE 1 OF 4 PAGES |       |                |                        |                |        |
|------------------|-------------|------------------------|-------------------------------------------------------------------------------------|----------------------------------------|-----------|-------------------|-------|----------------|------------------------|----------------|--------|
| Power Controller |             | Tracking & Command     |                                                                                     | J. Roth                                |           |                   |       |                |                        |                |        |
| DRAWING NUMBER   |             | MISSION CLASSIFICATION |                                                                                     | DESIGN ENGINEER                        |           | MANUFACTURER      |       |                |                        |                |        |
| 242E558 G1       |             | Critical               |                                                                                     | W. Billbrough                          |           | GE-ASPD           |       |                |                        |                |        |
| REPORT NUMBER    | REPORT DATE | SERIAL NO              | FAILURE MODE                                                                        | ENVIRONMENT                            | TEST TYPE | RPT ACT NO        | FA NO | FA RPTS ISSUED |                        | FARB CLOSE-OUT |        |
|                  |             |                        |                                                                                     |                                        |           |                   |       | NUMBER         | DATE                   | FA             | CA     |
| 3087             | 11-20-62    | KK040                  | Ground circuit on A-1 Board burned apart.                                           | Ambient                                | Pre-Acc   | C/T               | 064   | QCE            | 1342-107-1             | 12-20          | F 1-2  |
| 30865            | 1-19-63     | KM149                  | No output                                                                           | Hi-Temp                                | Acc       | C/T               | 101   | QCE            | 1342-107-3 FAR Suppl 1 | 2-11           | P 3-22 |
| DR56858          | 1-19-63     | KK040                  | Power Supply oscillating                                                            | Ambient                                | Acc       | C/T               |       |                |                        |                |        |
| DR56832          | 1-22-63     | KM149                  | 6 min timer would operate for a short duration only before shutting down the supply | Lo-Temp                                | Acc       | C/T               | 099   | QCE            | 1342-107-5             | 2-11           | F 2-15 |
| DR56860          | 1-22-63     | KM149                  | 28v observed at test point which should be at 0v.                                   | Lo-Temp                                | Acc       | C/T               | 100   | QCE            | 1342-107-4 FAR Suppl 1 | 2-11           | P 3-13 |
| DR56823          | 1-24-63     | KM149                  | Loose screw found behind J3                                                         | Vibration                              | Acc       | C/T               |       |                |                        |                |        |
| DR56880          | 1-26-63     | KK040                  | Diode CR 35 open.                                                                   | Ambient                                | Acc       | C/T               | 098   | QCE            | 1342-107-2             | 2-8            | F 2-15 |
| DR56881          | 1-26-63     | KM149                  | Noise on 5VDC output 5 VDC outputs high                                             | Ambient                                | Acc       | C/T               |       |                |                        |                |        |
| IR20180          | 1-28-63     | KM149                  | Noise voltage measurements out of spec.                                             | Ambient Post-Vib<br>Lo-Temp<br>Hi-Temp | Acc       | C/T               | NR    |                |                        |                |        |
| DR56876          | 2-2-63      | KM323                  | +6 VDC and 5 VDC outputs dropped to 0 VDC.                                          | Hi-Temp                                | Acc       | C/T               | 132   | QCE            | 1342-107-7             | 3-13           | F 3-22 |

| NOMENCLATURE     |             | SUBSYSTEM              |     | QC ENGINEER                                                           |         | PAGE 2 OF 4 PAGES |         |       |                |                           |                |        |
|------------------|-------------|------------------------|-----|-----------------------------------------------------------------------|---------|-------------------|---------|-------|----------------|---------------------------|----------------|--------|
| Power Controller |             | Tracking & Command     |     | J. Roth                                                               |         | MANUFACTURER      |         |       |                |                           |                |        |
| DRAWING NUMBER   |             | MISSION CLASSIFICATION |     | DESIGN ENGINEER                                                       |         | GE-ASPD           |         |       |                |                           |                |        |
| 242E558 G1       |             | Critical               |     | W. Billbrough                                                         |         |                   |         |       |                |                           |                |        |
| FA NUMBER        | REPORT DATE | SERIAL NO              | QTY | FAILURE MODE                                                          | ENVIRON | TEST TYPE         | RPT ACT | FA NO | FA RPTS ISSUED |                           | FARB CLOSE-OUT |        |
|                  |             |                        |     |                                                                       |         |                   |         |       | BY             | NUMBER                    | DATE           | FA     |
| FC41473          | 2-7-63      | 5740858 (KM149)        | 0   | 6 min. timer inoperative.                                             | Ambient | S/S (951)         | S/T     | NR    |                |                           |                |        |
| FC47009          | 2-13-63     | 5740858 (KM149)        | 3   | Relay K4 does not appear to close - no 28V power to SCO bases.        | Ambient | S/S (951)         | S/T     | 140   | EQCE<br>QCE    | PIR1343-169<br>1342-107-6 | 2-18<br>3-13   | P<br>F |
| DR51479          | 2-13-63     | KM149                  | 3   | No output at J3. CR111 open. Contacts 1 and 6 of K4 fused together.   | Ambient | SFV               | C/T     |       |                |                           |                | 3-29   |
| DR51459          | 2-14-63     | KM149                  | 2   | Possible degradation of K6 and K12 due to high current (see DR51479). | --      | --                | QCE     |       |                |                           |                |        |
| DR51461          | 2-14-63     | KM323                  | 3   | Q11 and Q22 defective - power supply inoperative.                     | Ambient | Acc               | C/T     |       |                |                           |                |        |
| DR81700          | 2-15-63     | KM323                  | 3   | 6 VDC output intermittent. terminal E47 on A3 board loose             | Ambient | Acc               | C/T     |       |                |                           |                |        |
| IR20165          | 2-18-63     | 5740859 (KM323)        | 2   | 5 VDC output out of spec (high noise out of spec.                     | Hi-Temp | Acc               | C/T     | NR    |                |                           |                |        |
| DR81601          | 2-20-63     | KM149                  | 3   | No 6 VDC output - loose wire on A3 board - bare wire in harness.      | Ambient | ReAcc             | C/T     |       |                |                           |                |        |
| DR81665          | 2-22-63     | KM664                  | 3   | High resistance across K5 contacts.                                   | Ambient | Acc               | C/T     |       |                |                           |                |        |

| NOMENCLATURE     |                       |                 | SUBSYSTEM              |                                                                                            | QC ENGINEER                      |           | PAGE 3 OF 4 PAGES |       |                |        |      |    |    |
|------------------|-----------------------|-----------------|------------------------|--------------------------------------------------------------------------------------------|----------------------------------|-----------|-------------------|-------|----------------|--------|------|----|----|
| Power Controller |                       |                 | Tracking & Command     |                                                                                            | J. Roth                          |           |                   |       |                |        |      |    |    |
| DRAWING NUMBER   |                       |                 | MISSION CLASSIFICATION |                                                                                            | DESIGN ENGINEER                  |           | MANUFACTURER      |       |                |        |      |    |    |
| 242E558 G1       |                       |                 | Critical               |                                                                                            | W. Billbrough                    |           | GE-ASPD           |       |                |        |      |    |    |
| ITEM NUMBER      | FAILURE REPORT NUMBER | DATE            | SERIAL NO              | FAILURE MODE                                                                               | ENVIRONMENT                      | TEST TYPE | RPT ACT           | FA NO | FA RPTS ISSUED |        | FARB |    |    |
|                  |                       |                 |                        |                                                                                            |                                  |           |                   |       | BY             | NUMBER | DATE | FA | CA |
| DR51648          | 2-25-63               | KM149           | 3                      | No 6 VDC output - intermittent open between Q16 emitter and pin 6 of T2.                   | Ambient                          | ReAcc     | C/T               |       |                |        |      |    |    |
| DR51649          | 2-26-63               | KM149           | 3                      | 6 VDC output intermittent - terminals E26 of A3, E17 of A1 loose, R22 on A1 cracked.       | Ambient                          | ReAcc     | C/T               |       |                |        |      |    |    |
| DR51782          | 3-8-63                | KM664           | 3                      | Open between J1-J and J2-M.                                                                | Ambient                          | Acc       | C/T               |       |                |        |      |    |    |
| DR51783          | 3-11-63               | KM664           | 3                      | A2 board voltage (ref. S.I. para 2.4.10-k) reads 2.5 VDC - should be greater than 3.4 VDC. | Ambient                          | Acc       | C/T               |       |                |        |      |    |    |
| DR51426          | 3-15-63               | 5740859 (KM323) | 3                      | Suspect internal short J1,2,3.                                                             | Ambient                          | S/S (951) | S/T               |       |                |        |      |    |    |
| IR20109          | 3-12-63               | KM664           | 2                      | 5 VDC output out of spec (high noise out of spec.                                          | Ambient HI-Temp Lo-Temp Post-Vib | Acc       | C/T               |       |                |        |      |    |    |
| DR51737          | 3-26-63               | KM323           | 3                      | K4 hung in set position - 28V on case.                                                     | Ambient                          | Acc       | C/T               |       |                |        |      |    |    |
| DR51736          | 3-26-63               | KM323           | 2                      | Possible degradation K12 (see DR51737)                                                     |                                  | QCE       | QCE               |       |                |        |      |    |    |
| DR51733          | 3-28-63               | KM323           | 3                      | High contact resistance K13 (contacts 1 and 6)                                             | Ambient                          | SFV       | C/T               |       |                |        |      |    |    |

| NOMENCLATURE     |             | SUBSYSTEM              |       | QC ENGINEER                                                                                  |             | PAGE 4 OF 4 PAGES |         |       |                |        |                   |    |
|------------------|-------------|------------------------|-------|----------------------------------------------------------------------------------------------|-------------|-------------------|---------|-------|----------------|--------|-------------------|----|
| Power Controller |             | Tracking & Command     |       | J. Roth                                                                                      |             |                   |         |       |                |        |                   |    |
| DRAWING NUMBER   |             | MISSION CLASSIFICATION |       | DESIGN ENGINEER                                                                              |             | MANUFACTURER      |         |       |                |        |                   |    |
| 242E538 G1       |             | Critical               |       | W. Billbrough                                                                                |             | GE - ASPD         |         |       |                |        |                   |    |
| PART NUMBER      | REPORT DATE | SERIAL NO              | CLASS | FAILURE MODE                                                                                 | ENVIRONMENT | TEST TYPE         | RPT ACT | FA NO | FA RPTS ISSUED |        | FA RPTS CLOSE-OUT |    |
|                  |             |                        |       |                                                                                              |             |                   |         |       | BY             | NUMBER | DATE              | FA |
| DR51751          | 3-30-63     | KM32                   | 3     | Pins 2 and 5 of relay K5 fused together, resulting in constant output.                       | Ambient     | SFV               | C/T     |       |                |        |                   |    |
| DR94103          | 3-31-63     | 5740858 (KM149)        | 3     | Indication of no 28VDC at SCO base #6 in orbital mode. Suspect K6 contacts 6 and 8 or CR111. | Ambient     | S/S (951)         | S/T     |       |                |        |                   |    |
| DR51710          | 4-1-63      | KM149                  | 3     | No 28VDC output at J3-1 CR111 burned out.                                                    | Ambient     | SFV               | C/T     |       |                |        |                   |    |
| DR94778          | 4-1-63      | KM149                  | 3     | Diode CR75 defective                                                                         | Ambient     | SFV               | QCE     |       |                |        |                   |    |

| NOMENCLATURE     |         | SUBSYSTEM              |                                                                                                | QC ENGINEER     |           | PAGE 4 OF 4 PAGES |       |                |        |               |    |
|------------------|---------|------------------------|------------------------------------------------------------------------------------------------|-----------------|-----------|-------------------|-------|----------------|--------|---------------|----|
| Power Controller |         | Tracking & Command     |                                                                                                | J. Roth         |           |                   |       |                |        |               |    |
| DRAWING NUMBER   |         | MISSION CLASSIFICATION |                                                                                                | DESIGN ENGINEER |           | MANUFACTURER      |       |                |        |               |    |
| 242E558 GI       |         | Critical               |                                                                                                | W. Billbrough   |           | GE - ASPD         |       |                |        |               |    |
| PART NUMBER      | DATE    | SERIAL NUMBER          | FAILURE MODE                                                                                   | ENVIRONMENT     | TEST TYPE | RPT ACT           | FA NO | FA RPTS ISSUED |        | ARB CLOSE-OUT |    |
|                  |         |                        |                                                                                                |                 |           |                   |       | BY             | NUMBER | DATE          | FA |
| DR51751          | 3-30-63 | KM32                   | 3 Pins 2 and 5 of relay K5 fused together, resulting in constant output.                       | Ambient         | SFV       | C/T               |       |                |        |               |    |
| DR94103          | 3-31-63 | 5740858 (KM149)        | 3 Indication of no 28VDC at SCO base #6 in orbital mode. Suspect K6 contacts 6 and 8 or CR111. | Ambient         | S/S (951) | S/T               |       |                |        |               |    |
| DR51710          | 4-1-63  | KM149                  | 3 No 28VDC output at J3-1 CR111 burned out.                                                    | Ambient         | SFV       | C/T               |       |                |        |               |    |
| DR94778          | 4-1-63  | KM149                  | 3 Diode CR75 defective                                                                         | Ambient         | SFV       | QCE               |       |                |        |               |    |

242E558 GI

| NOMENCLATURE     |             | SUBSYSTEM              |                                                                                                                                                          | QC ENGINEER     |           | PAGE 1 OF 3 PAGES |                   |                |                            |                 |        |
|------------------|-------------|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-----------|-------------------|-------------------|----------------|----------------------------|-----------------|--------|
| Command Dec. Jct |             | Tracking & Command     |                                                                                                                                                          | E. Tkacz        |           |                   |                   |                |                            |                 |        |
| DRAWING NUMBER   |             | MISSION CLASSIFICATION |                                                                                                                                                          | DESIGN ENGINEER |           | MANUFACTURER      |                   |                |                            |                 |        |
| 2-2E564 G1       |             | Critical               |                                                                                                                                                          | J. McBride      |           | GE-ASFD           |                   |                |                            |                 |        |
| FAILURE NUMBER   | REPORT DATE | SERIAL NO              | FAILURE MODE                                                                                                                                             | ENVIRONMENT     | TEST TYPE | RPT ACT           | FA NO             | FA RPTS ISSUED |                            | FAIRB CLOSE-OUT |        |
|                  |             |                        |                                                                                                                                                          |                 |           |                   |                   | BY             | NUMBER                     | DATE            | FA     |
| DR49293*         | 12-13-62    | 5498212                | 3 No pulse going through diode CR15 (Module A3 (111C172) of Comp. Bd. Assy 254E178 G1) after approx. 10 min. at 145°F. * Written against Comp. Bd. Assy. | Hi-Temp         | Acc       | C/T               | 078               | QCE            | 1342-106-10                | 1-3             | P      |
|                  |             |                        |                                                                                                                                                          |                 |           |                   |                   | MAP            | PIR 1360-414               | 1-29            | P      |
| FC47475          | 2-7-63      | 5498212                | 3 Possible diode breakdown by megger in (1) 25kc; (2) end of work; (3) info in; (4) gated 1 meg.                                                         | Ambient         | S/S (951) | S/T               |                   | QCE            | FAR Suppl 1                | 3-14            | F 3-22 |
| DR56894          | 2-13-63     | KN564                  | 3 Shift Register #1 defective - open between pins 3 and 8. Passive "AND" module A33A5 defective - short between pins E3 and E11.                         | Ambient         | Pre-Acc   | C/T               |                   |                |                            |                 |        |
| FC47467          | 2-18-63     | 5498212                | 3 12v line appears to be shorting to chassis.                                                                                                            | Ambient         | S/S (951) | S/T               | 177               | QCE            | 1321-106-19                | 3-25            | F 4-5  |
| DR81629          | 2-19-63     | KN102                  | 3 Output of module A8 (Dwg No 111C1757) stays high all the time. (Failure on Comp. Bd. Assy. 254E157 G1).                                                | Ambient         | SFV       | C/T               |                   |                |                            |                 |        |
| DR57007          | 2-28-63     | 5498213                | 2 2 output functions inoperative                                                                                                                         | Ambient         | S/S (951) | S/T               | 180               | QCE            | 1321-106-20                | 3-25            | P      |
| DR81600          | 2-28-63     | 5498213                | 3 Modules A3 (111C1753-S/N KL118) and A8 (111C1757-S/N KL306) defective. Output of A3 remains at ground-level-output                                     | Ambient         | SFV       | C/T               | 180<br>159<br>169 | QCE            | 1321-106-20<br>1321-106-33 | 3-25<br>4-19    | P<br>F |

| DOCUMENT IDENTIFICATION |         |         | SUBSYSTEM                                                                                                                                |             | QC ENGINEER     |     | PAGE 2 OF 3 PAGES |                   |        |                |
|-------------------------|---------|---------|------------------------------------------------------------------------------------------------------------------------------------------|-------------|-----------------|-----|-------------------|-------------------|--------|----------------|
| Co. and Decoder         |         |         | Tracking & Command                                                                                                                       |             | E. Tkacz        |     | MANUFACTURER      |                   |        |                |
| DRAWING NUMBER          |         |         | MISSION CLASSIFICATION                                                                                                                   |             | DESIGN ENGINEER |     | GE-ASPD           |                   |        |                |
| 242554 G1               |         |         | Critical                                                                                                                                 |             | J. McBride      |     |                   |                   |        |                |
| FAILURE REPORT          |         | SERIAL  | FAILURE MODE                                                                                                                             | ENVIRONMENT | TEST RPT TYPE   | ACT | FA NO             | FA RPTS ISSUED    |        | FARB CLOSE-OUT |
| NUMBER                  | DATE    | NO      |                                                                                                                                          |             |                 |     |                   | BY                | NUMBER |                |
| DR81606<br>(Cont'd)     |         |         | of A8 remains at +28v. (This DR written against Comp. Bd. Assy 254E157 G1 S/N K1339).                                                    |             |                 |     |                   |                   |        |                |
| DR81611                 | 3-1-63  | KN102   | 3 Shift register No. 2 defective - intermittent internal short pin 13 to metal insert (Dwg No 113C9101).                                 | Ambient     | SFV             | C/T | 154               | (See 113C9101 G1) |        |                |
| DR81660                 | 3-4-63  | KN102   | 3 Shift register #1 defective (open shift line).                                                                                         | Ambient     | Acc             | C/T | 217               | (See 113C9101 G1) |        |                |
| DR81613                 | 3-6-63  | KN102   | 3 Shift register #2 defective - shift line shorted.                                                                                      | Ambient     | Pre-Acc         | C/T |                   |                   |        |                |
| DR81623                 | 3-12-63 | KN102   | 3 Module A2 on card A17 (254E159 G1) defective.                                                                                          | Hi-Temp     | Acc             | C/T |                   |                   |        |                |
| DR94725                 | 4-5-63  | KN470   | 3 Broken wire on TB2-E1.                                                                                                                 | N/R (OA)    | Acc             | C/T |                   |                   |        |                |
| FCE47938                | 4-9-63  | 549E212 | 3 No output on J5-V.                                                                                                                     | Ambient     | Qual            | Eng | 5021<br>248       | Eng 5021          | 4-26   | P              |
| FCE47939                | 4-25-63 | 549E212 | 3 Output of line 4 incorrect.                                                                                                            | Hi-Temp     | Qual            | Eng | 5022<br>249       |                   |        |                |
| DR54735                 | 4-23-63 | N/R     | 3 Module A5 (111C1758 S/N K1254) defective. Output at pin 5 remains at ground. (DR written against Comp. Bd. Assy 254E150 G1 S/N K1947). | Ambient     | SFV             | C/T | 254               | (See 111C1758 G1) |        |                |

| NOMENCLATURE          |                    | SUBSYSTEM              |                                                                                                                                                                                                | QC ENGINEER     |               | PAGE 3 OF 3 PAGES |                   |
|-----------------------|--------------------|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|---------------|-------------------|-------------------|
| Command Decoder       |                    | Tracking & Command     |                                                                                                                                                                                                | E. Thack        |               |                   |                   |
| DRAWING NUMBER        |                    | MISSION CLASSIFICATION |                                                                                                                                                                                                | DESIGN ENGINEER |               | MANUFACTURER      |                   |
| 2423564 G1            |                    | Critical               |                                                                                                                                                                                                | J. McBride      |               | GL-ASID           |                   |
| FAILURE REPORT NUMBER | DATE               | SERIAL NO              | FAILURE MODE                                                                                                                                                                                   | ENVIRON         | TEST RPT TYPE | FA RPTS ISSUED    | FA RPTS           |
| IR21512               | 4-2-63             | N/R                    | Module 111C1776 (S/N 10215-4) defective - output out of spec (IR written against 111C1776)                                                                                                     | Hi-Temp         | Qual          | C/T 222           | (Sec 111C1776 G1) |
| DR94733               | 4-8-63             | N/R                    | Module 111C1767 G1-S/N 10215-5 defective: Output on pin E2 shorted. (DR written against Comp. Bd. Assy. 254E173 G1 - S/N KP414).                                                               | N/R (OA)        | Acc           | C/T 230           | (Sec 111C1767 G1) |
| DR54724<br>IR21557    | 4-23-63<br>4-26-63 | N/R                    | Module A2 (111C1762 G1-S/N 10215-28) defective. Output at pin 3 same as input - should be inverted. (DR written against Comp. Bd. Assy. 254E154 G1-S/N KN230; IR written against 111C1762 G1). | Ambient         | SFV           | C/T 255           | (Sec 111C1762 G1) |
| DR54747               | 4-26-63            | N/R                    | Module A19 (111C1759 G1 - S/N N/R) defective. Output (EB) remains at ground. (DR written against Comp. Bd. Assy. 254E155 G1 - S/N KQ446).                                                      | N/R (OA)        | Acc           | C/T               |                   |
| DR94376               | 4-27-63            | N/R                    | Defective gate. (DR written against Comp. Bd. Assy. 254E150 G1 - S/N KQ409.)                                                                                                                   | Ambient         | S/S (951)     | S/T               |                   |
|                       |                    |                        | 5-1-63                                                                                                                                                                                         |                 |               |                   |                   |

| ENCLOSURE                  |             | SUBSYSTEM                          |                                                                                 | QC ENGINEER                   |           | PAGE 1 OF 2 PAGES       |       |                |            |                |       |      |
|----------------------------|-------------|------------------------------------|---------------------------------------------------------------------------------|-------------------------------|-----------|-------------------------|-------|----------------|------------|----------------|-------|------|
| 6V Power Supply            |             | Tracking & Command                 |                                                                                 | R. Whittington                |           | MANUFACTURER<br>GE-ASPD |       |                |            |                |       |      |
| DRAWING NUMBER<br>2-010 GI |             | MISSION CLASSIFICATION<br>Critical |                                                                                 | DESIGN ENGINEER<br>R. Johnson |           |                         |       |                |            |                |       |      |
| PART NUMBER                | REPORT DATE | SERIAL NO                          | FAILURE MODE                                                                    | ENVIRONMENT                   | TEST TYPE | RPT ACT                 | FA NO | FA RPTS ISSUED |            | FARB CLOSE-OUT |       |      |
|                            |             |                                    |                                                                                 |                               |           |                         |       | BY             | NUMBER     |                | DATE  |      |
| DR50154                    | 9-15-62     | KK279                              | Pin P of J1 shorted to case                                                     | Ambient                       | Acc       | C/T                     |       |                |            |                |       |      |
| DR53113                    | 9-21-62     | KK279                              | Q2 defective                                                                    | Ambient                       | Acc       | C/T                     |       |                |            |                |       |      |
| IR1214                     | 10-1-62     | KK279                              | Ripple voltage on output of -6.3V supply (switched section) exceeds limitation. | Ambient                       | Acc       | C/T                     | NR    |                |            |                |       |      |
| DR58018                    | 11-15-62    | KM024                              | Q2, CR6 defective                                                               | Ambient                       | Acc       | C/T                     |       |                |            |                |       |      |
| DR58028                    | 11-16-62    | KM024                              | Q1, CR2, CR3, CR30, CR31 shorted                                                | Ambient                       | Acc       | C/T                     |       |                |            |                |       |      |
| DR57754                    | 1-9-63      | KM024                              | No continuity between Pin G and L3 (switched supply section)                    | Ambient                       | Acc       | C/T                     |       |                |            |                |       |      |
| DR57750                    | 1-9-63      | NR                                 | Possible short Q10 collector to case.                                           | Hi-Temp                       | Acc       | C/T                     |       |                |            |                |       |      |
| DR57752                    | 1-10-63     | KM395                              | Pin B shorted to case                                                           | Hi-Temp                       | Acc       | C/T                     |       |                |            |                |       |      |
| DR56815                    | 1-29-63     | 5498792                            | Unit drew excessive current after assembly into case.                           | Ambient                       | Acc       | C/T                     | 102   | QCE            | 1342-110-1 | 2-8            | F2-15 | 2-26 |
| DR55892                    | 1-30-63     | KM670                              | Low output voltages from switched supply section.                               | Hi-Temp                       | Acc       | C/T                     | 103   |                |            |                |       |      |
| DR56817                    | 1-31-63     | KL887                              | Q5 shorted to case.                                                             | Ambient                       | Acc       | C/T                     |       |                |            |                |       |      |

242E510 GI

| REPORTING OFFICE        |             | SUBSYSTEM                          |                                           | QC ENGINEER                   |           | PAGE 2 OF 2 PAGES           |                               |
|-------------------------|-------------|------------------------------------|-------------------------------------------|-------------------------------|-----------|-----------------------------|-------------------------------|
| AV Power Supply         |             | Tracking & Command                 |                                           | R. Whittington                |           | MANUFACTURER<br>GE-ASPD     |                               |
| DR NUMBER<br>242E610 G1 |             | MISSION CLASSIFICATION<br>Critical |                                           | DESIGN ENGINEER<br>R. Johnson |           |                             |                               |
| ITEM NO                 | REPORT DATE | SERIAL NO                          | FAILURE MODE                              | ENVIRONMENT                   | TEST TYPE | FA RPTS ISSUED<br>BY NUMBER | FA RPTS<br>CLOSE-OUT<br>FA CA |
| DR51430                 | 2-14-63     | KM570                              | Failed                                    | Hi-Temp                       | Acc C/T   |                             |                               |
| DR51734                 | 3-11-63     | KM670                              | Response time too high                    | Ambient                       | Acc C/T   |                             |                               |
| DR51787                 | 3-12-63     | KM375                              | Turn-on time out of spec<br>Q2 defective. | Ambient                       | Acc C/T   |                             |                               |

242E610 G1

| NO. ENCLOSURE  |       | SUBSYSTEM                |            | QC ENGINEER                                                                                                                                                                             |                      | PAGE 1 OF 1 PAGES |         |       |                |            |                        |                      |      |      |
|----------------|-------|--------------------------|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|-------------------|---------|-------|----------------|------------|------------------------|----------------------|------|------|
| OCV Relay Box  |       | Stabilization-Electrical |            | J. Young                                                                                                                                                                                |                      |                   |         |       |                |            |                        |                      |      |      |
| DRAWING NUMBER |       | MISSION CLASSIFICATION   |            | DESIGN ENGINEER                                                                                                                                                                         |                      | MANUFACTURER      |         |       |                |            |                        |                      |      |      |
| 47E798 G1      |       | Critical                 |            | J. Meyer                                                                                                                                                                                |                      | OCV Relay Box     |         |       |                |            |                        |                      |      |      |
| P              | I     | REPORT NO.               | SERIAL NO. | FAILURE MODE                                                                                                                                                                            | ENVIRONMENT          | TEST TYPE         | RPT ACT | FA NO | FA RPTS ISSUED |            | DATE                   | FARB CLOSE-OUT       |      |      |
|                |       |                          |            |                                                                                                                                                                                         |                      |                   |         |       | BY             | NUMBER     |                        | FA                   | CA   |      |
| 1              | 103   | 9-17-62                  | KK665      | All four corners cracked near junction of flange.<br><br>Burned out of R2, R3, R4, R5, R7 and R10 load resistors (3.3 ohm, 2W) at various times during Acc testing of these components. | Vibration            | Acc               | C/T     | NR    |                |            |                        | 12-5                 | 12-5 |      |
| 1              | 01    | 9-24-62                  |            |                                                                                                                                                                                         |                      |                   |         |       |                |            |                        |                      |      |      |
| 1              | 034   | 9-13-62                  | KK415      |                                                                                                                                                                                         |                      |                   |         |       |                |            |                        |                      |      |      |
| 1              | 013   | 9-15-62                  | KK664      |                                                                                                                                                                                         |                      |                   |         |       |                |            |                        |                      |      |      |
| 1              | 009   | 10-27-62                 | KK667      |                                                                                                                                                                                         |                      |                   |         |       |                |            |                        |                      |      |      |
| 1              | 003   | 11-2-62                  | KK667      |                                                                                                                                                                                         |                      |                   |         |       |                |            |                        |                      |      |      |
| 1              | 002   | 11-6-62                  | KK667      |                                                                                                                                                                                         |                      | Ambient           | Acc     | C/T   | 028            | QCE        | 1342-605-1 FAR Suppl 1 | 11-14 P 11-21 F 2-25 | 12-5 | 12-5 |
| 1              | 006   | 11-10-62                 | KK667      |                                                                                                                                                                                         |                      |                   |         |       |                |            |                        |                      |      |      |
| 1              | 0264  | 12-27-62                 | KK415      |                                                                                                                                                                                         |                      |                   |         |       |                |            |                        |                      |      |      |
| 1              | 7701  | 1-2-63                   | KK415      |                                                                                                                                                                                         |                      |                   |         |       |                |            |                        |                      |      |      |
| 1              | 56853 | 1-14-63                  | KK415      |                                                                                                                                                                                         |                      |                   |         |       |                |            |                        |                      |      |      |
| 1              | 56203 | 10-30-62                 | KK667      | Relay K7 contacts 8+2 latched.                                                                                                                                                          | Ambient              | Acc               | C/T     |       |                |            |                        |                      |      |      |
| 1              | 56842 | 2-5-63                   | KK415      | Glass resistor R1 cracked.                                                                                                                                                              | Post Thermal Cycling | Acc               | C/T     | 121   | QCE            | 1342-605-2 | 2-25 F 3-8             | 3-8                  | 3-8  |      |

| NO. INCLATURE       |             | SUBSYSTEM              |     | QC ENGINEER                                                                      |             | PAGE 1 OF 1 PAGES |     |       |     |             |      |        |      |
|---------------------|-------------|------------------------|-----|----------------------------------------------------------------------------------|-------------|-------------------|-----|-------|-----|-------------|------|--------|------|
| Compartment Heater  |             | Environmental Control  |     | D. Deitz                                                                         |             |                   |     |       |     |             |      |        |      |
| DRAWING NUMBER      |             | MISSION CLASSIFICATION |     | DESIGN ENGINEER                                                                  |             | MANUFACTURER      |     |       |     |             |      |        |      |
| 248E200 G3/G4/G7/G8 |             | Critical               |     | W. Loose                                                                         |             | J. F. Motson      |     |       |     |             |      |        |      |
| FA                  | REPAIR DATE | SERIAL NO              | QTY | FAILURE MODE                                                                     | ENVIRON     | TEST RPT TYPE     | ACT | FA NO | BY  | NUMBER      | DATE | FA     | CA   |
| IR1319              | 11-29-62    | GA1627-3 (G7)          | 2   | Element "A" resistance out of spec                                               | Hi-Temp     | Acc               | C/T |       |     |             |      |        |      |
| IR1351              | 12-20-62    | GA1232-6 (G8)          | 2   | Heater resistance out of spec. (Both Elements)                                   | Ambient     | Acc               | C/T | 066   | QCE | 1342-1103-1 | 2-23 | F 3-8  | 3-8  |
| IR1353              | 12-20-62    | GA1627-4 (G3)          | 2   | Element "A" resistance out of spec                                               | Ambient     | Acc               | C/T |       |     |             |      |        |      |
|                     |             |                        | 3   | Element "B" open.                                                                |             |                   |     |       |     |             |      |        |      |
| IR1376              | 1-15-63     | GA1232-3               | 2   | Element "B" resistance out of spec.                                              | Post-Vacuum | Acc               | C/T | 096   | QCE | 1321-1103-2 | 3-29 | F 3-29 | 3-29 |
|                     |             |                        | 2   | Element "A" resistance out of spec                                               |             |                   |     |       |     |             |      |        |      |
| IR20136             | 2-26-63     | H40079-5 (G4)          | 3   | Resistance of element "B" reads 270 ohms - spec tolerance is 88.2 to 117.6 ohms. | Ambient     | Acc               | C/T |       |     |             |      |        |      |
| 47867               | 4-8         | 5790678                |     | Res out of spec                                                                  | amb         | Qnd               |     | 225   |     |             |      |        |      |
|                     |             | 57                     |     |                                                                                  |             |                   |     |       |     |             |      |        |      |







|                                                                                                                                                    |                             |                                                                                                                                                    |                           |                                    |                       |                               |           |               |             |           |           |
|----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|------------------------------------|-----------------------|-------------------------------|-----------|---------------|-------------|-----------|-----------|
| <b>DESCRIPTION</b><br>101 Manoeuvr Amplifier                                                                                                       |                             | <b>SUBSYSTEM</b><br>Stabilization-Electrical                                                                                                       |                           | <b>QC ENGINEER</b><br>A. Cheddar   |                       | <b>PAGE 1 OF 1 PAGES</b>      |           |               |             |           |           |
| <b>FAVOR NUMBER</b><br>248E706 G1                                                                                                                  |                             | <b>MISSION CLASSIFICATION</b><br>Critical                                                                                                          |                           | <b>DESIGN ENGINEER</b><br>H. Raust |                       | <b>MANUFACTURER</b><br>GE-LED |           |               |             |           |           |
| <b>REPORT DATE</b><br>1-15-63                                                                                                                      | <b>SERIAL NO</b><br>5498511 | <b>FAILURE MODE</b><br>30% of resistors cracked on boards 1 thru 4-conformal coating would not allow resistors to contract during exposure to 0°F. | <b>ENVIRON</b><br>Lo-Temp | <b>TEST TYPE</b><br>Acc            | <b>RPT ACT</b><br>(V) | <b>FA NO</b>                  | <b>BY</b> | <b>NUMBER</b> | <b>DATE</b> | <b>FA</b> | <b>CA</b> |
| 1 to 1-15-63 5498511 2 30% of resistors cracked on boards 1 thru 4-conformal coating would not allow resistors to contract during exposure to 0°F. |                             |                                                                                                                                                    |                           |                                    |                       |                               |           |               |             |           |           |

| Nomenclature    |      | Subsystem                |          | QC Engineer                                                  |                                           | Page 1 of 1 Pages |            |    |    |                |        |      |           |    |
|-----------------|------|--------------------------|----------|--------------------------------------------------------------|-------------------------------------------|-------------------|------------|----|----|----------------|--------|------|-----------|----|
| C. Power Supply |      | Stabilization-Electrical |          | A. Cheddar                                                   |                                           | Manufacturer      |            |    |    |                |        |      |           |    |
| Drawing Number  |      | Mission Classification   |          | Design Engineer                                              |                                           | GE-LMED           |            |    |    |                |        |      |           |    |
| 24SE719 G1      |      | Critical                 |          | R. Williams                                                  |                                           |                   |            |    |    |                |        |      |           |    |
| Part Number     | Port | Serial No                | Date     | Failure Mode                                                 | Environment                               | Test Type         | RPT ACT NO | FA | BY | FA RPTS ISSUED | Number | Date | FARs      |    |
|                 |      |                          |          |                                                              |                                           |                   |            |    |    |                |        |      | Close-Out | CA |
| IR20182         |      | 5498521                  | 12-23-62 | Out of spec on transient duration.<br>Efficiency below spec. | Ambient<br>Lo-Temp<br>Hi-Temp             | Acc               | V/S NR     |    |    |                |        |      |           |    |
| IR20184         |      | 5498522                  | 1-14-63  | Out of spec on transient duration.                           | Ambient<br>Hi-Temp<br>Lo-Temp<br>Post-Vib | Acc               | V/S        |    |    |                |        |      |           |    |
| IR20185         |      | 5498521                  | 1-30-63  | Voltage readings out of spec                                 | Ambient                                   | Acc               | C/T        |    |    |                |        |      |           |    |
| IR20186         |      | 5498522                  | 1-31-63  | Voltage readings out of spec                                 | Ambient                                   | Acc               | C/T NR     |    |    |                |        |      |           |    |
| IR20116         |      | 5498523                  | 3-21-63  | Output ripple out of tolerance                               | Ambient                                   | Acc               | C/T        |    |    |                |        |      |           |    |

*IR20182 and IR20184  
eliminated  
24SE719 G1*

| DOCUMENTATION     |          | SUBSYSTEM  |           | QC ENGINEER                                                                                            |             | PAGE 1 OF 4 PAGES |         |       |                |      |         |     |
|-------------------|----------|------------|-----------|--------------------------------------------------------------------------------------------------------|-------------|-------------------|---------|-------|----------------|------|---------|-----|
| Decoder Relay Box |          | Trac       |           | J. Roth                                                                                                |             |                   |         |       |                |      |         |     |
| MISSION C         |          | MISSION C  |           | DESIGN ENGINEER                                                                                        |             | MANUFACTURER      |         |       |                |      |         |     |
| 254E107 G1        |          | C          |           | L. Parness                                                                                             |             | GE-40PD           |         |       |                |      |         |     |
| DATE              | TIME     | REPORT     | SERIAL NO | FAILURE MODE                                                                                           | ENVIRONMENT | TEST TYPE         | RPT ACT | FA NO | FA RPTS ISSUED | DATE | FA      | CA  |
| 11-1-62           | 11-1-62  | KK773      | 2         | Loose screw found inside case                                                                          | Post-Vib    | Acc               | C/T     |       |                |      |         |     |
| 11-5-62           | 11-5-62  | KK773 LOT1 | 3         | Failed Hi-Pot test                                                                                     | Ambient     | Acc               | C/T     |       |                |      |         |     |
| 11-8-62           | 11-8-62  | KL439      | 3         | Failed Megger and Hi-Pot tests                                                                         | Ambient     | Acc               | C/T     |       |                |      |         |     |
| 11-8-62           | 11-8-62  | KK773      | 3         | Failed Hi-Pot test - diodes broke down and shorted to case when 450 VRHS was applied                   | Ambient     | Acc               | C/T     | 033   | 1342-1111-1    | 11-2 | F 11-26 | 1-2 |
| 11-9-62           | 11-9-62  | KK773      | 3         | Bad diode found (due to above?)                                                                        |             |                   |         |       |                |      |         |     |
| 11-19-62          | 11-19-62 | KL439      | 3         | Diodes CR1, CR4, CR5, CR28, CR29, CR32 breaking down in resistance check.                              | Ambient     | Acc               | C/T     |       |                |      |         |     |
| 11-19-62          | 11-19-62 | KK773      | 3         | Diodes CR67, CR68, CR69, CR70, and CR83 burned out during Hi-Pot test at 250V and Megger test at 100V. | Ambient     | Acc               | C/T     | 063   | 1342-1111-2    | 12-3 | F 1-4   | 1-4 |
| 11-21-62          | 11-21-62 | KK773      | 3         | Diodes CR40, CR42, CR52, CR53, CR54, CR84, open, CR89 weak - ref. diode checks S.I. para. 2.5.6.       | Ambient     | Acc               | C/T     |       |                |      |         |     |
| 11-27-62          | 11-27-62 | KK773      | 3         | CR18 shorted, CR90 open, K47 hangs up intermittently. Stand-offs loose and broken.                     | Ambient     | Acc               | C/T     |       |                |      |         |     |

| DECLASSIFICATION          |             | SUBSYSTEM              |                                                                                                                                                                                                      | QC ENGINEER     |           | PAGE 2 OF 4 PAGES |       |                 |        |                |    |
|---------------------------|-------------|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-----------|-------------------|-------|-----------------|--------|----------------|----|
| Command Decoder Relay Box |             | Tracking & Command     |                                                                                                                                                                                                      | J. Roth         |           |                   |       |                 |        |                |    |
| DRAWING NUMBER            |             | MISSION CLASSIFICATION |                                                                                                                                                                                                      | DESIGN ENGINEER |           | MANUFACTURER      |       |                 |        |                |    |
| 254E107 G1                |             | Critical               |                                                                                                                                                                                                      | L. Parness      |           | GE-ASPD           |       |                 |        |                |    |
| PART NUMBER               | REPORT DATE | SERIAL NO              | FAILURE MODE                                                                                                                                                                                         | ENVIRONMENT     | TEST TYPE | RPT ACT           | FA NO | FA RPT'S ISSUED |        | FARB CLOSE-OUT |    |
|                           |             |                        |                                                                                                                                                                                                      |                 |           |                   |       | BY              | NUMBER | DATE           | FA |
| DR56857                   | 12-17-62    | KL439                  | CR80 burned out - short between A2-E186 and J1-F. Wrong info on wiring diagram.                                                                                                                      | Ambient         | Acc       | C/T               |       |                 |        |                |    |
| DR56764                   | 12-19-62    | KL439                  | Coil of K47 shorted - cause unknown.                                                                                                                                                                 | Ambient         | Acc       | C/T               |       |                 |        |                |    |
| DR56244                   | 1-2-63      | KL439                  | Diode CR88 shorted.                                                                                                                                                                                  | Ambient         | Acc       | C/T               |       |                 |        |                |    |
| DR56827                   | 1-18-63     | KM306                  | Diodes CR10, CR25, CR99 shorted                                                                                                                                                                      | Ambient         | Acc       | C/T               |       |                 |        |                |    |
| DR56829                   | 1-20-63     | KM319                  | Loose casing nut found inside component.                                                                                                                                                             | Post-Vib        | Acc       | C/T               |       |                 |        |                |    |
| DR56875                   | 1-22-63     | KM306                  | Diodes CR4, CR6, burned out; CR26 shorted; loose wire at E49 on A1 board.                                                                                                                            | Post-Vib        | Acc       | C/T               |       |                 |        |                |    |
| DR56884                   | 1-25-63     | KM306                  | Diode CR28 shorted during test - cause unknown.                                                                                                                                                      | Ambient         | Acc       | C/T               |       |                 |        |                |    |
| DR57780                   | 1-26-63     | KM306                  | K47 hung up during test. Suspect pitted contacts, due to failure of two diodes which caused supply voltage to drop and relay to chatter. Heavy current flowed through contacts, due to diode failure | Ambient         | Acc       | C/T               |       |                 |        |                |    |
| DR56885                   | 1-26-63     | KM306                  | Diodes CR31, CR86, CR87 partially shorted. Cause unknown.                                                                                                                                            | Ambient         | Acc       | C/T               |       |                 |        |                |    |



|                           |                        |                 |                   |  |
|---------------------------|------------------------|-----------------|-------------------|--|
| ENCLOSURE                 | SUBSYSTEM              | QC ENGINEER     | PAGE 4 OF 4 PAGES |  |
| Command Decoder Relay Box | Tracking & Command     | J. Roth         |                   |  |
| ENCLOSURE NUMBER          | MISSION CLASSIFICATION | DESIGN ENGINEER | MANUFACTURER      |  |
| 254E107 G1                | Critical               | L. Parness      | GE-ASPD           |  |

| P/N      | DATE    | SERIAL NO. | FAILURE MODE                                                                                                                                           | ENVIRONMENT | TEST TYPE | RPT ACT | FA NO | FA RPT'S ISSUED |            | DATE | FARB CLOSE-OUT |       |     |
|----------|---------|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-----------|---------|-------|-----------------|------------|------|----------------|-------|-----|
|          |         |            |                                                                                                                                                        |             |           |         |       | BY              | NUMBER     |      | FA             | CA    |     |
| FR 47787 | 3-15-63 | 5499307    | 2 Diode positions 27 and 39 failed - ref S.I. para. 2.5.6.4a good lamp did not light.                                                                  | Post-Vib    | Qual      | C/T     | 175   | QCE             | 1342-111-7 | 3-22 | P              | F 4-5 | 4-5 |
| FC47788  | 3-19-63 | 5499307    | 3 Diode position 59 failed - ref S.I. para. 2.5.6.3a: good lamp did not light. Diode position 39 failed - ref para 2.5.6.4a - good lamp did not light. | Post-Vib    | Qual      | C/T     | 176   | QCE             | 1321-111-9 | 3-22 | P              | F 4-5 | 4-5 |

Schaeffly of 242E564 G1

|                    |  |                        |  |                 |  |                   |  |
|--------------------|--|------------------------|--|-----------------|--|-------------------|--|
| NOMENCLATURE       |  | SUBSYSTEM              |  | QC ENGINEER     |  | PAGE 1 OF 1 PAGES |  |
| McClary Core Plane |  | Tracking & Command     |  | D. Sharrock     |  |                   |  |
| DRAWING NUMBER     |  | MISSION CLASSIFICATION |  | DESIGN ENGINEER |  | MANUFACTURER      |  |
| 244E117 P1         |  | Critical               |  | J. McDride      |  | GE-Syracuse       |  |

| FAILURE NUMBER | REPORT DATE | SERIAL NO            | FAILURE MODE                                                                                                                                   | ENVIRONMENT | TEST TYPE | RPT ACT | FA NO | FA RPTS ISSUED |        | FA RB CLOSE-OUT |
|----------------|-------------|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-----------|---------|-------|----------------|--------|-----------------|
|                |             |                      |                                                                                                                                                |             |           |         |       | BY             | NUMBER |                 |
| IR1316         | 12-29-62    | J93051<br>-3         | "0" output of core no. 19 is 1.25V. Specs call for a max output of 1.2V.                                                                       | Ambient     | S/A       | C/T     | NR    |                |        | 2-12 2-12       |
| IR1388         | 1-21-63     | J93075<br>-7         | Zero outputs of cores no. 2 and 31 are 1.25V and 1.30V respectively. Tolerance calls out, not greater than 1.2V.                               | Ambient     | S/A       | C/T     | 106   |                |        |                 |
| IR1533         | 1-9-63      | J93075<br>-8         | Core No. 14 has high "0" in cold temp. should be $\pm 1.2V$ ; read 1.35V. Core No. 18 has low "1" in cold temp. should be 5V to 9V; trsf 4.64. | Ambient     | S/A       | C/T     | NR    |                |        |                 |
| IR20186        | 1-31-63     | J93051<br>-1         | Core 28 output is 3V - should be 5 to 9V - core appears to be miswired.                                                                        | Ambient     | S/A       | C/T     | NR    |                |        |                 |
| IR20144        | 2-21-63     | J93083<br>-21<br>-22 | Right current drops to $\frac{1}{2}$ amplitude when pressure is applied to read winding.                                                       | Ambient     | S/A       | C/T     | 133   |                |        |                 |
|                |             |                      | 4-1-63<br>(5-1-63)                                                                                                                             |             |           |         |       |                |        |                 |

Subj: Copy of 242E564 G1

|                 |      |                        |                 |                   |  |
|-----------------|------|------------------------|-----------------|-------------------|--|
| NAME            | DATE | SUBSYSTEM              | QC ENGINEER     | PAGE 1 OF 1 PAGES |  |
| App. Btl. Assy. |      | Tracking & Command     | E. Thacz        |                   |  |
| DRWG. NUMBER    |      | MISSION CLASSIFICATION | DESIGN ENGINEER | MANUFACTURER      |  |
| 254E136 G1      |      | Critical               | J. McBride      | GE-ASPD           |  |

| FAILURE NUMBER | REPORT DATE | SERIAL NO | FAILURE MODE                                                                         | ENVIRONMENT | TEST TYPE | RPT ACT | FA NO | FA RPTS ISSUED |                   |      | FAIRB CLOS.-OUT |    |    |
|----------------|-------------|-----------|--------------------------------------------------------------------------------------|-------------|-----------|---------|-------|----------------|-------------------|------|-----------------|----|----|
|                |             |           |                                                                                      |             |           |         |       | BY             | NUMBER            | DATE | BY              | FA | CA |
| DR49266        | 12-20-62    | KM447     | No inversion on output - module A8 (111C1764 - S/N KL169) defective.                 | Ambient     | S/A       | C/T     |       |                |                   |      |                 |    |    |
| DR56890        | 1-29-63     | KM447     | No inversion of output of module A3 (111C1764 - S/N KL169) Short in board or wiring. | Ambient     | S/A       | C/T     |       |                |                   |      |                 |    |    |
| DR56831        | 2-7-63      | KM447     | Possible short between TR-TS, module A4 (111C1766 G1 S/N J93049 -75).                | Ambient     | S/A       | C/T     | 138   |                | (See 111C1766 G1) |      |                 |    |    |
| DR81626        | 2-19-63     | KM447     | Possible short between TS-TR, module A3 (111C1766 G1 S/N J93049-74).                 | Ambient     | S/A       | C/T     | 151   |                | (See 111C1766 G1) |      |                 |    |    |
|                |             |           | 5-1-63                                                                               |             |           |         |       |                |                   |      |                 |    |    |

Subassembly of 242E564 G1

|                 |  |                        |  |                 |  |                   |  |
|-----------------|--|------------------------|--|-----------------|--|-------------------|--|
| NOMENCLATURE    |  | SUBSYSTEM              |  | QC ENGINEER     |  | PAGE 1 OF 1 PAGES |  |
| Comp. Ed. Assy. |  | Tracking & Command     |  | E. Tkacz        |  |                   |  |
| DRAWING NUMBER  |  | MISSION CLASSIFICATION |  | DESIGN ENGINEER |  | MANUFACTURER      |  |
| 254E150 G1      |  | Critical               |  | J. McBride      |  | GE-15 D           |  |

| FAILURE REPORT NUMBER | DATE    | SERIAL NO | FAILURE MODE                                                                                   | ENVIRON | TEST RPT TYPE | ACT | FA NO | FA RPTS ISSUED |        | FARB CLOSE-OUT |
|-----------------------|---------|-----------|------------------------------------------------------------------------------------------------|---------|---------------|-----|-------|----------------|--------|----------------|
|                       |         |           |                                                                                                |         |               |     |       | BY             | NUMBER |                |
| DR54735               | 4-23-63 | KL947     | Module A5 (111C1758 S/N KL254) defective. Pin 5 (output) remains at constant ground potential. | Ambient | SFV           | C/T |       |                |        |                |
| DR94376               | 4-27-63 | KQ409     | Gate defective.                                                                                | Ambient | S/S (951)     | S/T |       |                |        |                |
|                       |         |           | 5-1-63                                                                                         |         |               |     |       |                |        |                |

|                        |                    |                   |  |
|------------------------|--------------------|-------------------|--|
| MANUFACTURER           | QC ENGINEER        | PAGE 1 OF 1 PAGES |  |
| GE-ASPD                | E. Macz            |                   |  |
| DESIGN ENGINEER        | J. McBride         |                   |  |
| MISSION CLASSIFICATION | Critical           |                   |  |
| SUBSYSTEM              | Tracking & Command |                   |  |
| COMP. Bd. Assy         |                    |                   |  |
| DRAWING NUMBER         | 254E151 G1         |                   |  |

| FAILURE REPORT |         | SERIAL NO | FAILURE MODE                             | ENVIRON | TEST RPT ACT | FA NO | FA RPI'S ISSUED  |        | PY   | FARD CLOSE-OUT |
|----------------|---------|-----------|------------------------------------------|---------|--------------|-------|------------------|--------|------|----------------|
| NUMBER         | DATE    |           |                                          |         |              |       | BY               | NUMBER | DATE | FA CA          |
| IR20167        | 2-20-63 | KK737     | 3 12V (pos) line shorted to heat shield. | Ambient | SFV C/T      | 177   | (Sep 242E564 G1) |        |      |                |
|                |         |           | -4-1-63<br>(5-1-63)                      |         |              |       |                  |        |      |                |

|                 |                        |                 |                   |
|-----------------|------------------------|-----------------|-------------------|
| NOMENCLATURE    | SUBSYSTEM              | QC ENGINEER     | PAGE 1 OF 1 PAGES |
| Comp. Bl. Assy. | Tracking & Command     | E. Tkacz        | MANUFACTURER      |
| DRAWING NUMBER  | MISSION CLASSIFICATION | DESIGN ENGINEER | GE-ASPD           |
| 254E154 G1      | Critical               | J. McBride      |                   |

[illegible]

|                                                 |                                    |                               |                         |
|-------------------------------------------------|------------------------------------|-------------------------------|-------------------------|
| NAME (LAST, FIRST, MIDDLE)<br>Corp., Ltd. Assy. | SUBSYSTEM<br>Tracking & Command    | QC ENGINEER<br>B. Thacz       | PAGE 1 OF 1 PAGES       |
| DRAWING NUMBER<br>254E155 61                    | MISSION CLASSIFICATION<br>Critical | DESIGN ENGINEER<br>J. McBride | MANUFACTURER<br>GE-ASPD |

| FAILURE REPORT |         | SERIAL NO | QTY | FAILURE MODE                                                                            | ENVIRON TYPE | TEST RPT ACT | FA NO | FA RP'S ISSUED |                   |      | STATUS | CROSS-OUT |    |
|----------------|---------|-----------|-----|-----------------------------------------------------------------------------------------|--------------|--------------|-------|----------------|-------------------|------|--------|-----------|----|
| NUMBER         | DATE    |           |     |                                                                                         |              |              |       | BY             | NUMP              | DATE |        | FA        | CA |
| DR57715        | 2-3-63  | K1337     | 3   | Output of module A1 (111C1762G1 S/H 10215-64) stays at +6V - indicates open transistor. | Ambient      | N/R          | C/T   | 134            | (See 111C1762 G1) |      |        |           |    |
| DR54747        | 4-26-63 | K2446     | 3   | Module A19 (111C1759 G1 - S/H M/R) defective. Output (pin EE) remains at ground.        | N/R          | N/R          | C/T   |                |                   |      |        |           |    |
|                |         |           |     | 5-1-63                                                                                  |              |              |       |                |                   |      |        |           |    |

THIS D.G. NO. ADDED 4-29-63

司馬文正公集

Subassembly of 242E564 G1

|                          |  |                        |  |                 |  |                   |  |
|--------------------------|--|------------------------|--|-----------------|--|-------------------|--|
| COMPONENT NAME           |  | SUBSYSTEM              |  | QC ENGINEER     |  | PAGE 1 OF 1 PAGES |  |
| Component Board Assembly |  | Tracking & Command     |  | E. Tkacz        |  |                   |  |
| DRAWING NUMBER           |  | MISSION CLASSIFICATION |  | DESIGN ENGINEER |  | MANUFACTURER      |  |
| 242E564 G1               |  | Critical               |  | J. McBride      |  | GE-A3PD           |  |

| FAILURE NUMBER | REPORT DATE | SERIAL NO | FAILURE MODE                                                                                                                                         | ENVIRON | TEST TYPE | RPT ACT | FA NO             | FA RPT'S ISSUED |                                       |      | FARB CLOSE-OUT |    |  |
|----------------|-------------|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-----------|---------|-------------------|-----------------|---------------------------------------|------|----------------|----|--|
|                |             |           |                                                                                                                                                      |         |           |         |                   | BY              | NUMBER                                | DATE | FA             | CA |  |
| DR81629        | 2-19-63     | KL254     | 3<br>Output of module A8 (Dwg No. 111C1757) pin E4 stays high all the time. (Failure during S/S test 242E564 G1)                                     | Ambient | SFV       | C/T     |                   |                 |                                       |      |                |    |  |
|                |             |           | 4-1-63                                                                                                                                               |         |           |         |                   |                 |                                       |      |                |    |  |
| DR49291        | 12-11-62    | KL757     | 3<br>Module A2 (111C1764 G1 - S/N KL386) defective. No output pin E10.                                                                               | Ambient | S/A       | C/T     |                   |                 |                                       |      |                |    |  |
| DR81625        | 2-19-63     | KL231     | 3<br>Short between pins 3 and 32 on Board (shorts out -6 volts). Possible internal short module A9 (111C1757 G1 - S/N 10215-27)                      | Ambient | N/R       | C/T     | 144               |                 | (See 111C1757 G1)                     |      |                |    |  |
| DR81642        | 2-22-63     | KL231     | 3<br>DR 81625 verified.                                                                                                                              | Ambient | N/R       | C/T     |                   |                 |                                       |      |                |    |  |
| DR81608        | 2-28-63     | KL339     | 3<br>Modules A3 (111C1753 - S/N KL118) and A8 (111C1757 - S/N KL306) defective. Output of A3 remains at ground level - output of A8 remains at +28V. | Ambient | SFV       | C/T     | 158<br>159<br>180 |                 | (See 111C1753 G1)<br>(See 242E564 G1) |      |                |    |  |
|                |             |           | 5-1-63                                                                                                                                               |         |           |         |                   |                 |                                       |      |                |    |  |

|                |                |                        |                     |                 |            |                   |         |
|----------------|----------------|------------------------|---------------------|-----------------|------------|-------------------|---------|
| SYMBOL         | COMP. P. Assy. | SUBSYSTEM              | Tracking F. Command | QC ENGINEER     | E. Thacz   | PAGE 1 OF 1 PAGES |         |
| NAME           | COMP. P. Assy. | MISSION CLASSIFICATION | Critical            | DESIGN ENGINEER | J. McBride |                   |         |
| DRAWING NUMBER | 200-009 G1     |                        |                     |                 |            | MANUFACTURER      | GE-ASPD |

| FAILURE REPORT |         | SERIAL NO | QTY | FAILURE MODE                                                                                 | ENVIRON | TEST TYPE | RPT ACT | FA NO | FA RPT'S ISSUED   |        |      | CL | FA |
|----------------|---------|-----------|-----|----------------------------------------------------------------------------------------------|---------|-----------|---------|-------|-------------------|--------|------|----|----|
| NUMBER         | DATE    |           |     |                                                                                              |         |           |         |       | BY                | NUMBER | DATE |    |    |
| DR49203        | 3-12-63 | KH320     | 3   | Module A2 failed. (During test of 242E564 G1).                                               | Hi-Temp | Acc       | C/T     |       |                   |        |      |    |    |
| DR94736        | 4-9-63  | KL756     | 3   | Module A4 (111C1753 G1 - S/N 00018) defective - gate 2 remains at ground. (*Ref. 242E564 G1) | Ambient | QFV *     | C/T     | 229   | (See 111C1753 G1) |        |      |    |    |
| 5-1-63         |         |           |     |                                                                                              |         |           |         |       |                   |        |      |    |    |

|                 |                        |                 |                   |
|-----------------|------------------------|-----------------|-------------------|
| NOMENCLATURE    | SUBSYSTEM              | QC ENGINEER     | PAGE 1 OF 1 PAGES |
| Comp. Bd. Assy. | Tracking & Command     | E. Tkacz        |                   |
| DRAWING NUMBER  | MISSION CLASSIFICATION | DESIGN ENGINEER | MANUFACTURER      |
| 254E160 G1      | Critical               | J. McBride      | GE-ASPD           |

| FAILURE REPORT |          | SERIAL NO. |   | FAILURE MODE                                                            | ENVIRON | TEST RPT TYPE ACT | FA RP'S ISSUED | FARB CLOSE-OUT |
|----------------|----------|------------|---|-------------------------------------------------------------------------|---------|-------------------|----------------|----------------|
| NUMBER         | DATE     |            |   |                                                                         |         |                   | BY NUMBER DATE | FA CA          |
| DR49290        | 12-18-62 | KL957      | 3 | No control on input gate (pin E5) module A10 (111C1757 G1 - S/N KK864). | Ambient | s/A C/T           |                |                |
|                |          |            |   | 5-1-63                                                                  |         |                   |                |                |

THIS D.C. NO. ADDED 4-29-63

**254E160 G**

|                 |                        |                 |                         |
|-----------------|------------------------|-----------------|-------------------------|
| NONENCLATURE    | SUBSYSTEM              | QC ENGINEER     | PAGE 1 OF 1 PAGES       |
| Comp. Bd. Assy. | Tracking & Comp. Bd.   | E. Tkacz        |                         |
| DRAWING NUMBER  | MISSION CLASSIFICATION | DESIGN ENGINEER |                         |
| 254E161 G1      | Critical               | J. McBride      | MANUFACTURER<br>GE-ASPD |

[illegible]

**254E161 GI**

|                                          |                                    |                               |                   |
|------------------------------------------|------------------------------------|-------------------------------|-------------------|
| NOMENCLATURE<br>Component Board Assembly | SUBSYSTEM<br>Tracking & Command    | QC ENGINEER<br>E. Tkacz       | PAGE 1 OF 1 PAGES |
| DRAWING NUMBER<br>254E162 G1             | MISSION CLASSIFICATION<br>Critical | DESIGN ENGINEER<br>J. McBride |                   |
|                                          |                                    | MANUFACTURER<br>GE-ASPD       |                   |

| FAILURE REPORT |         |  | SERIAL NO. | QTY | FAILURE MODE                                                                                     | ENVIRON | TEST TYPE | RPT ACT | FA NO   | FA RPTS ISSUED |                  | CLOSE-OUT |              |
|----------------|---------|--|------------|-----|--------------------------------------------------------------------------------------------------|---------|-----------|---------|---------|----------------|------------------|-----------|--------------|
| NUMBER         | DATE    |  |            |     |                                                                                                  |         |           |         |         | BY             | NUMBER           | DATE      |              |
| DR70157        | 9-15-62 |  | KL760      | 3   | Module 111C1759 G1 open circuit at E9 - output remains at zero.<br>4-1-63                        | Ambient | S/A       | C/T     | 018 QME |                | PIR 1340-JJS-135 | 9-21      | F 11-26 1-15 |
| DR70151        | 9-15-62 |  | KK748      | 3   | Module A3 (111C1759 G1 - S/N 00010) inoperative. Indication open resistor (R1) in input circuit. | Ambient | S/A       | C/T     |         |                |                  |           |              |
| DR81615        | 3-8-63  |  | KP190      | 3   | Output of module A3 (111C1753 - S/N N/R) shorted to ground.<br>5-1-63                            | Ambient | N/R       | C/T     |         |                |                  |           |              |

Subassembly of 242E504 G1

|                          |  |                        |  |                 |  |                   |  |
|--------------------------|--|------------------------|--|-----------------|--|-------------------|--|
| NOMENCLATURE             |  | SUBSYSTEM              |  | QC ENGINEER     |  | PAGE 1 OF 1 PAGES |  |
| Component Board Assembly |  | Tracking & Command     |  | E. Tkacz        |  |                   |  |
| DRAWING NUMBER           |  | MISSION CLASSIFICATION |  | DESIGN ENGINEER |  | MANUFACTURER      |  |
| 254E164                  |  | Critical               |  | J. McBride      |  | GE-ASPD           |  |

| FAC     | REPORT DATE | SERIAL NO | ENVIRONMENT | FAILURE MODE                                            | TEST TYPE | RPT ACT | FA NO | A RPTS ISSUED |                  |         | FAIR  |       |
|---------|-------------|-----------|-------------|---------------------------------------------------------|-----------|---------|-------|---------------|------------------|---------|-------|-------|
|         |             |           |             |                                                         |           |         |       | BY            | NUMBER           | DATE    | FA    | CA    |
| DR49960 | 10-2-62     | KK750     | 3           | Short between module and heat sink (Module A2, pin E9). | S/A       | C/T     | 011   | QME           | PIR 1340-JJS-155 | 10-10 P |       |       |
|         |             |           |             |                                                         |           |         |       | QME           | PIR 1340-JJS-201 | 11-9 F  | 11-21 | 11-21 |
|         |             |           |             | 4-1-63<br>(5-1-63)                                      |           |         |       |               |                  |         |       |       |

|                          |                        |                 |                   |
|--------------------------|------------------------|-----------------|-------------------|
| NOMENCLATURE             | SUBSYSTEM              | QC ENGINEER     | PAGE 1 OF 1 PAGES |
| Component Board Assembly | Tracking & Command     | E. Tkacz        |                   |
| DRAWING NUMBER           | MISSION CLASSIFICATION | DESIGN ENGINEER | MANUFACTURER      |
| 254E165 G1               | Critical               | J. McBride      | GE-ASPD           |

| FAILURE NUMBER | REPORT DATE | SERIAL NO | QTY | FAILURE MODE                           | ENVIRON | TEST TYPE | RPT ACT | FA NO | BY | A RPTS ISSUED |      | FARB CLOSE-OUT |    |
|----------------|-------------|-----------|-----|----------------------------------------|---------|-----------|---------|-------|----|---------------|------|----------------|----|
|                |             |           |     |                                        |         |           |         |       |    | NUMBER        | DATE | FA             | CA |
| D381612        | 3-11-63     | KN315     | 3   | Diode CR14 open.<br>4-1-63<br>(5-1-63) | N/R     | S/A       | C/T     |       |    |               |      |                |    |

|                                                       |                                                              |                                                        |                                                  |
|-------------------------------------------------------|--------------------------------------------------------------|--------------------------------------------------------|--------------------------------------------------|
| <p> <b>REFERENCE</b><br/> <b>Comp. Bd. Assy.</b> </p> | <p> <b>SUBSYSTEM</b><br/> <b>Tracking &amp; Command</b> </p> | <p> <b>QC ENGINEER</b><br/> <b>E. Tkacz</b> </p>       | <p> <b>PAGE 1 OF 1 PAGES</b> </p>                |
| <p> <b>DRAWING NUMBER</b><br/> <b>254E167 G1</b> </p> | <p> <b>MISSION CLASSIFICATION</b><br/> <b>Critical</b> </p>  | <p> <b>DESIGN ENGINEER</b><br/> <b>J. McBride</b> </p> | <p> <b>MANUFACTURER</b><br/> <b>GE-ASPD</b> </p> |

| FAILURE REPORT<br>DATE | SERIAL<br>NO | FAILURE MODE                                            | ENVIRON<br>TYPE | TEST RPT<br>ACT | FA<br>NO | FA RPT'S ISSUED |        | FARB<br>CLOSE-OUT |
|------------------------|--------------|---------------------------------------------------------|-----------------|-----------------|----------|-----------------|--------|-------------------|
|                        |              |                                                         |                 |                 |          | BY              | NUMBER |                   |
| 12-12-62               | KL770        | No output pin E4 module A1<br>(111C1757 G1 - S/N KL347) | Ambient         | S/A C/T         |          |                 |        |                   |
|                        |              | 5-1-63                                                  |                 |                 |          |                 |        |                   |

|                                 |                                    |                               |                         |
|---------------------------------|------------------------------------|-------------------------------|-------------------------|
| NOMENCLATURE<br>Comp. Bd. Assy. | SUBSYSTEM<br>Tracking & Command    | QC ENGINEER<br>E. Tkacz       | PAGE 1 OF 1 PAGES       |
| DRAWING NUMBER<br>254E168 G1    | MISSION CLASSIFICATION<br>Critical | DESIGN ENGINEER<br>J. McBride | MANUFACTURER<br>GE-ASPD |

| FAILURE REPORT<br>NUMBER | DATE     | SERIAL<br>NO | QTY | FAILURE MODE                                    | ENVIRON<br>TYPE | TEST RPT<br>ACT | FA<br>NO | BY | RPTS ISSUED |      | FARD<br>CLOSE-OUT |    |
|--------------------------|----------|--------------|-----|-------------------------------------------------|-----------------|-----------------|----------|----|-------------|------|-------------------|----|
|                          |          |              |     |                                                 |                 |                 |          |    | NUMBER      | DATE | FA                | CA |
| DR6260                   | 10-25-62 | KL976        | 3   | Module A3 defective - flip-flop will not reset. | Ambient         | S/A C/T         |          |    |             |      |                   |    |
| DR64748                  | 4-26-63  | KK754        | 3   | Diode CR7 defective.<br><br>5-1-63              | N/R             | N/R C/T         |          |    |             |      |                   |    |

254EI68 GI

|                                   |                                    |                               |                         |
|-----------------------------------|------------------------------------|-------------------------------|-------------------------|
| NOMENCLATURE -<br>Comp. Bd. Assy. | SUBSYSTEM<br>Tracking & Command    | QC ENGINEER<br>E. Tkacz       | PAGE 1 OF 1 PAGES       |
| DRAWING NUMBER<br>254F10 G1       | MISSION CLASSIFICATION<br>Critical | DESIGN ENGINEER<br>J. McBride | MANUFACTURER<br>GE-ASPD |

| FAILURE REPORT |          | SERIAL NO | QTY | FAILURE MODE                                         | ENVIRON | TEST TYPE | RPT ACT | FA NO | FA RPTS ISSUED |        | FARB CLOSE-OUT |    |
|----------------|----------|-----------|-----|------------------------------------------------------|---------|-----------|---------|-------|----------------|--------|----------------|----|
| NUMBER         | DATE     |           |     |                                                      |         |           |         |       | BY             | NUMBER | DATE           | FA |
| DR56240        | 10-18-62 | KK755     | 3   | Diode CR6 defective - Flip-Flop A9 will not operate. | Ambient | S/A       | C/T     |       |                |        |                |    |
|                |          |           |     | 5-1-63                                               |         |           |         |       |                |        |                |    |

Subassembly of 242E564 G1

|                          |                        |                 |                   |
|--------------------------|------------------------|-----------------|-------------------|
| NO. ENCLOSURE            | SUBSYSTEM              | QC ENGINEER     | PAGE 1 OF 1 PAGES |
| Component Board Assembly | Tracking & Command     | E. Tkacz        |                   |
| DRAWING NUMBER           | MISSION CLASSIFICATION | DESIGN ENGINEER | MANUFACTURER      |
| 254E171                  | Critical               | J. McBride      | GE-ASPD           |

| FAILURE REPORT NUMBER | SERIAL NO | DATE    | FAILURE MODE                                                            | ENVIRONMENT | TEST TYPE | RPT ACT | FA NO | FA RPTS ISSUED |                  |      | FARB CLOSE-OUT |
|-----------------------|-----------|---------|-------------------------------------------------------------------------|-------------|-----------|---------|-------|----------------|------------------|------|----------------|
|                       |           |         |                                                                         |             |           |         |       | BY             | NUMBER           | DATE |                |
| DR50100               | NR        | 9-14-62 | Module 111C1777 (ser. KK757) inoperative.                               | Ambient     | S/A       | C/T     | A29   | QME            | PIR 1340-JJS-135 | 9-21 | F1-15 1-15     |
| DR51723               | KP412     | 3-29-63 | Module A14 (111C1776 G1) defective - output on pin E6 out of tolerance. | Ambient     | S/A       | C/T     |       |                |                  |      |                |

254E171

|                           |                        |                 |                   |
|---------------------------|------------------------|-----------------|-------------------|
| NO. IN CLATURE            | SUBSYSTEM              | QC ENGINEER     | PAGE 1 OF 1 PAGES |
| (Component Board Assembly | Tracking & Command     | E. Tkacz        |                   |
| DIAGNOSIS NUMBER          | MISSION CLASSIFICATION | DESIGN ENGINEER | MANUFACTURER      |
| 254E77 (                  | Critical               | J. McBride      | GE-ASPD           |

[illegible]

234EI72-G1

Subassembly of 242E564 G1

|                 |  |                        |  |                 |  |                   |  |
|-----------------|--|------------------------|--|-----------------|--|-------------------|--|
| NOMENCLATURE    |  | SUBSYSTEM              |  | QC ENGINEER     |  | PAGE 1 OF 1 PAGES |  |
| Comp. Bd. Assy. |  | Tracking & Command     |  | E. Tkacz        |  |                   |  |
| DRAWING NUMBER  |  | MISSION CLASSIFICATION |  | DESIGN ENGINEER |  | MANUFACTURER      |  |
| 242E173 G1      |  | Critical               |  | J. McBride      |  | GE-ASPD           |  |

| FA REPORT NUMBER | REPORT DATE | SERIAL NO | FAILURE MODE                                                                             | ENVIRONMENT | TEST TYPE | RPT ACT | FA NO | FA RPTS ISSUED |                   | FARB CLOSE-OUT |
|------------------|-------------|-----------|------------------------------------------------------------------------------------------|-------------|-----------|---------|-------|----------------|-------------------|----------------|
|                  |             |           |                                                                                          |             |           |         |       | BY             | NUMBER            |                |
| DR49289          | 12-7-62     | KN238     | Module A8 (111C1754 G1 - S/N KL569) defective - output stays at one level.               | Ambient     | S/A       | C/T     |       |                |                   |                |
| DR81638          | 2-20-63     | KN225     | Module A3 (893D800 G1 - S/N KN294) defective. Output not inverted - in phase with input. | Ambient     | S/A       | C/T     | 199   |                | (See 893D800 G1)  |                |
| DR94733          | 4-8-63      | KP414     | Module 111C1767 G1 - S/N 10215-5 defective: output on pin E2 shorted.                    | N/R (OA)    | N/R       | C/T     | 230   |                | (See 111C1767 G1) |                |
|                  |             |           | 5-1-63                                                                                   |             |           |         |       |                |                   |                |

THIS DWG. NO. ADDED 4-30-63

254E173 G1

|                          |                        |                 |                   |
|--------------------------|------------------------|-----------------|-------------------|
| NON-CLASSIFIED           | SUBSYSTEM              | QC ENGINEER     | PAGE 1 OF 1 PAGES |
| Component Board Assembly | Tracking & Command     | E. Tkacz        |                   |
| DRAWING NUMBER           | MISSION CLASSIFICATION | DESIGN ENGINEER | MANUFACTURER      |
| 254E176 G1               | Critical               | J. McBride      | GE-ASPD           |

[illegible]

Subassembly of 242E564 G1

|                          |  |                        |  |                 |  |                   |  |
|--------------------------|--|------------------------|--|-----------------|--|-------------------|--|
| NOMENCLATURE             |  | SUBSYSTEM              |  | QC ENGINEER     |  | PAGE 1 OF 1 PAGES |  |
| Component Board Assembly |  | Tracking & Command     |  | E. Tkacz        |  |                   |  |
| DRAWING NUMBER           |  | MISSION CLASSIFICATION |  | DESIGN ENGINEER |  | MANUFACTURER      |  |
| 254E177 G1               |  | Critical               |  | J. McBride      |  | GE-ASPD           |  |

| FAILURE REPORT NUMBER | SERIAL NO | FAILURE MODE                                                                                                                    | ENVIRONMENT | TEST RPT TYPE | FA NO | FA RPTS ISSUED |        | DATE | FARB CLOSE-OUT |    |
|-----------------------|-----------|---------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-------|----------------|--------|------|----------------|----|
|                       |           |                                                                                                                                 |             |               |       | BY             | NUMBER |      | FA             | CA |
| DR58076               | 1-21-63   | Module A7 defective. (Dwg No 111C1766 G1, S/N J93049-191) Output on "0" side remains at ground. PSI ground pulse has no effect. | Ambient     | S/A           | C/T   |                |        |      |                |    |
|                       |           | 4-1-63                                                                                                                          |             |               |       |                |        |      |                |    |
| DR58076               | 1-21-63   | Module A4 (111C1774 G1 - S/N KL941) defective. No output - indication transistor failure.                                       | Ambient     | S/A           | C/T   |                |        |      |                |    |
|                       |           | 5-1-63                                                                                                                          |             |               |       |                |        |      |                |    |

254E177 G1

|                          |                        |                 |                   |
|--------------------------|------------------------|-----------------|-------------------|
| NONDECLASSIFYING         | SUBSYSTEM              | QC ENGINEER     | PAGE 1 OF 1 PAGES |
| Component Board Assembly | Tracking & Command     | E. Itacz        |                   |
| DISSEMINATING NUMBER     | MISSION CLASSIFICATION | DESIGN ENGINEER | MANUFACTURER      |
| 254E178 G1               | Critical               | J. McBride      | GE-AS:PD          |

**254E178 G1**

| SIGNATURE              |             | SUBSYSTEM                   |                                                                                                                                                                            | QC ENGINEER     |               | PAGE 1 OF 2 PAGES |                             |       |        |
|------------------------|-------------|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|---------------|-------------------|-----------------------------|-------|--------|
| Controller, Power Xfer |             | Elect. Power & Signal Dist. |                                                                                                                                                                            | W. Mayeros      |               |                   |                             |       |        |
| DRAWING NUMBER         |             | MISSION CLASSIFICATION      |                                                                                                                                                                            | DESIGN ENGINEER |               | MANUFACTURER      |                             |       |        |
| 254E266                |             | Critical                    |                                                                                                                                                                            | P. Romanelli    |               | GE-AEC            |                             |       |        |
| ITEM                   | DATE REPORT | SERIAL NO                   | FAILURE MODE                                                                                                                                                               | ENVIRONMENT     | TEST RPT TYPE | FA NO             | FA RPTS ISSUED              | FA    | CA     |
| J93054-002             | 12-3-62     | J93054-002                  | Trip signal constantly applied to battery relay.                                                                                                                           | Hi-Temp         | In-Proc       | 075               | QCE 1342-1008-1 FAR Suppl 1 | 12-31 | P 2-5  |
| J93054-006             |             | J93054-006                  |                                                                                                                                                                            |                 |               |                   |                             | 1-21  | F 2-5  |
| J93054-007             |             | J93054-007                  |                                                                                                                                                                            |                 |               |                   |                             |       |        |
| J93054-005             | 1-8-63      | J93054-005                  | Total instant current telemetry output out of tol at 15 amps total current. Tol is 1.45v to 1.55v. Telemetry output is 1.33v.                                              | Ambient         | Acc           | 117               | QCE 1342-1008-3             | 2-22  | F 3-8  |
| J93054-003-1           | 1-31-63     | J93054-003                  | Cracking of conformal coating on all matrix boards (4 parts loosened).                                                                                                     | Post-Vib        | Acc           | 110               | QCE 1342-1008-2 FAR Suppl 1 | 2-9   | P 3-8  |
| Data Sht (V)           | 2-14-63     | J93054-006                  | Channel 5 reverse trip exceeded upper limit 125/120 ma.                                                                                                                    | Hi-Temp         | Acc           | 118               | QCE 1342-1008-4             | 2-22  | F 3-8  |
| Data Sht (V)           | 2-14-63     | J93054-006                  | Relays would not reset                                                                                                                                                     | Post-Temp       | Acc           | 119               | QCE 1342-1008-5             | 2-22  | F 3-8  |
| J93054-003-3           | 2-18-63     | J93054-003                  | A terminal block was loose.                                                                                                                                                | Post-Vib        | Acc           | 127               | QCE 1342-1008-6             | 3-4   | F 3-15 |
| DR57054                | 3-6-63      | J93054-003                  | 500V was passed through J-1292 connector into unit.                                                                                                                        | Ambient         | S/S           |                   |                             |       |        |
| IR20114                | 3-21-63     | J93054-008                  | Ref S.I. para 2.2.2.7: Set 2, 4 and 5 readings were 28.1V - spec max 0.1VDC. Reselecting battery in no. 2 position caused it to come on and in approx 3 sec stop back out. |                 | S/S           |                   |                             |       |        |



| DOCUMENTATION         |             | SUBSYSTEM              |                                                                                                                                          | QC ENGINEER     |           | PAGE 1 OF 1 PAGES |       |                |    |        |      |                |    |    |
|-----------------------|-------------|------------------------|------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-----------|-------------------|-------|----------------|----|--------|------|----------------|----|----|
| Separation Controller |             | Separation             |                                                                                                                                          | N. Yerges       |           |                   |       |                |    |        |      |                |    |    |
| DRAWING NUMBER        |             | MISSION CLASSIFICATION |                                                                                                                                          | DESIGN ENGINEER |           | M. MANUFACTURER   |       |                |    |        |      |                |    |    |
| 689E714 G1            |             | Critical               |                                                                                                                                          | J. Russell      |           | GE - ASPD         |       |                |    |        |      |                |    |    |
| REPORT NUMBER         | REPORT DATE | SERIAL NO              | FAILURE MODE                                                                                                                             | ENVIRONMENT     | TEST TYPE | RPT ACT           | FA NO | FA RPTS ISSUED | BY | NUMBER | DATE | FARB CLOSE-OUT | FA | CA |
| DR56881               | 1-23-63     | KM498                  | 3 Interlock feature of events 4, 5, and 6 not performing properly - voltage present during event 4 at points where there should be none. | NR              | Acc       | C/T               |       |                |    |        |      |                |    |    |
| DR56882               | 1-24-63     | KM496                  | 3 Pins D and E of J 701 shorted together.                                                                                                | Ambient         | Acc       | C/T               |       |                |    |        |      |                |    |    |
| DR56887               | 1-26-63     | KM496                  | 0 R113 burned due to test error. Insulation damaged on adjacent wiring - CR34 and CR35 should be replaced.                               | Ambient         | Acc       | C/T               |       |                |    |        |      |                |    |    |
| DR56888               | 1-30-63     | KM496                  | 3 CR3 defective.                                                                                                                         | Ambient         | Acc       | C/T               |       |                |    |        |      |                |    |    |
| IR20199               | 2-2-63      | KM496                  | 2 Telemetry voltages approx 0.2V low on channels 2, 3 and 5; approx 0.05V low on channel 4.                                              | Ambient         | Acc       | C/T               | NR    |                |    |        |      |                |    |    |
| IR20199 (Reissue)     | 2-8-63      | KM496                  | 1 T/M voltages low channels 2, 3, and 5.                                                                                                 | Post-Vib        | Acc       | C/T               | NR    |                |    |        |      |                |    |    |
| DR81634               | 2-18-63     | KM498                  | 3 B-plus on T/M channel 3 out of tolerance.                                                                                              | NR              | Acc       | C/T               |       |                |    |        |      |                |    |    |
| DR57089               | 3-4-63      | NR                     | 0 Component dropped during cleaning - retest required.                                                                                   |                 |           |                   |       |                |    |        |      |                |    |    |
| DR51788               | 3-13-63     | KM498                  | 3 R4 on TB3 burned - insulation on terminals of K10, TB4 burned-lacing on wires between R85 and K1 on TB3 burned.                        | NR              | ReAcc     | C/T               |       |                |    |        |      |                |    |    |

|                     |  |                        |  |                 |  |                   |  |
|---------------------|--|------------------------|--|-----------------|--|-------------------|--|
| SIGNATURE           |  | SUBSYSTEM              |  | QC ENGINEER     |  | PAGE 1 OF 1 PAGES |  |
| VHF Antenna Element |  | Telemetry              |  | N. Yerger       |  |                   |  |
| DRAWING NUMBER      |  | MISSION CLASSIFICATION |  | DESIGN ENGINEER |  | MANUFACTURER      |  |
| 8230319 G1/G2       |  | Major                  |  | H. Rogers       |  | GE-ASPD           |  |

| ITEM NO. | REPORT DATE | SERIAL NO.   | FAILURE MODE                                        | ENVIRONMENT | TEST TYPE | RPT ACT | FA NO | FA RPTS ISSUED |               | DATE  | FARB CLOSE-OUT |      |
|----------|-------------|--------------|-----------------------------------------------------|-------------|-----------|---------|-------|----------------|---------------|-------|----------------|------|
|          |             |              |                                                     |             |           |         |       | BY             | NUMBER        |       | FA             | CA   |
| IRH1235  | 10-11-62    | 5499125 (G1) | VSWR changed to 3:1 at 1350 cps (longitudinal axis) | Vibration   | Acc       | C/T     | 013   | QCE            | 1342-241-1    | 10-25 | F 11-21        | 1-22 |
| IRH1234  | 10-11-62    | 5499134 (G2) | Same as above                                       | Vibration   | Acc       | C/T     | 012   | QCE            | Same as above |       |                |      |

8230319 G1



|                    |  |                        |  |                 |  |                   |  |
|--------------------|--|------------------------|--|-----------------|--|-------------------|--|
| DOCUMENTATION      |  | SUBSYSTEM              |  | QC ENGINEER     |  | PAGE 1 OF 1 PAGES |  |
| Multiplexer 30 x 5 |  | Telemetry              |  | J. Roth         |  |                   |  |
| DRAWING NUMBER     |  | MISSION CLASSIFICATION |  | DESIGN ENGINEER |  | MANUFACTURER      |  |
| 825D430 G1         |  | Major                  |  | M. Shapiro      |  | GE - DSD          |  |

| FA NUMBER | REPORT DATE | SERIAL NO    | FAILURE MODE                                                                                                                       | ENVIRON   | TEST RPT TYPE | FA NO   | FA RPTS ISSUED |            |      | FARB   |    |      |
|-----------|-------------|--------------|------------------------------------------------------------------------------------------------------------------------------------|-----------|---------------|---------|----------------|------------|------|--------|----|------|
|           |             |              |                                                                                                                                    |           |               |         | BY             | NUMBER     | DATE | FA     | FA | CA   |
| IR1216    | 10-1-62     | J93005<br>-7 | Negative pedestal out of spec                                                                                                      | Ambient   | Acc           | C/T NR  |                |            |      |        |    |      |
| FC47799   | 12-13-62    | 5498066      | Pulse configuration disappears on both channels in both horizontal and vertical planes                                             | Vibration | Qual          | C/T 067 | QCE            | 1342-217-1 | 2-8  | F 2-15 |    | 2-15 |
| IR1398    | 1-23-63     | 5498062      | Negative pulse between 27th and 28th pulse missing; limiting pulses out of spec, input-output offset out of spec. (Both channels). | Ambient   | Acc           | C/T 131 | QCE            | 1321-217-2 | 4-5  | F 4-12 |    |      |

825D430 G1

|                 |  |                        |  |                 |  |                   |  |
|-----------------|--|------------------------|--|-----------------|--|-------------------|--|
| NOMENCLATURE    |  | SUBSYSTEM              |  | QC ENGINEER     |  | PAGE 1 OF 1 PAGES |  |
| Transfer Switch |  | Telemetry              |  | P. Mattiucci    |  |                   |  |
| DRAWING NUMBER  |  | MISSION CLASSIFICATION |  | DESIGN ENGINEER |  | MANUFACTURER      |  |
| 823D435 G1      |  | Major                  |  | C. McOsker      |  | GE - M&AD         |  |

| F/A                | DATE              | REPORT SERIAL NO | FAILURE MODE | ENVIRONMENT | TEST RPT TYPE | FA NO   | FA RPT IS ISSUED |        | FARB CLOSE-OUT |    |
|--------------------|-------------------|------------------|--------------|-------------|---------------|---------|------------------|--------|----------------|----|
|                    |                   |                  |              |             |               |         | BY               | NUMBER | DATE           | FA |
| FC47731<br>IR20550 | 2-7-63<br>2-11-63 | 5498386          | No output    | Post-Vib    | Qual C/T      | 112 QCE | 1342-207-1       | 3-15   | P              |    |

| NOMENCLATURE    |         | SUBSYSTEM                   |                                     | QC ENGINEER     |               | PAGE 1 OF 1 PAGES |                |    |        |      |    |    |
|-----------------|---------|-----------------------------|-------------------------------------|-----------------|---------------|-------------------|----------------|----|--------|------|----|----|
| Umblilical Plug |         | Elect. Power & Signal Dist. |                                     | F. Malinoski    |               |                   |                |    |        |      |    |    |
| DRAWING NUMBER  |         | MISSION CLASSIFICATION      |                                     | DESIGN ENGINEER |               | MANUFACTURER      |                |    |        |      |    |    |
| 825D608 P1      |         | Major                       |                                     | W. Rovin        |               | Amphenol          |                |    |        |      |    |    |
| PLUG REPORT NO. | DATE    | SERIAL NO.                  | FAILURE MODE                        | ENVIRONMENT     | TEST RPT TYPE | FA NO             | FA RPTS ISSUED | BY | NUMBER | DATE | FA | CA |
| 10 57           | 1-8-63  | GC5298-7                    | Piston release operates prematurely | Ambient         | Acc           | C/T               |                |    |        |      |    |    |
| 11:20115        | 3-21-63 | GC0209-9<br>-10             | Units will not cock                 | Ambient         | Acc           | C/T               |                |    |        |      |    |    |

|                                                |  |                                                 |  |                                    |  |                                 |  |
|------------------------------------------------|--|-------------------------------------------------|--|------------------------------------|--|---------------------------------|--|
| <b>DESCRIPTION</b><br>U. S. Medical Receptacle |  | <b>SUBSYSTEM</b><br>Elect. Power & Signal Dist. |  | <b>QC ENGINEER</b><br>F. Malinoski |  | <b>PAGE 1 OF 1 PAGES</b>        |  |
| <b>DRAWING NUMBER</b><br>823D609 P1            |  | <b>MISSION CLASSIFICATION</b><br>Major          |  | <b>DESIGN ENGINEER</b><br>W. Rovin |  | <b>MANUFACTURER</b><br>Amphenol |  |

| IR        | REPORT DATE | SERIAL NO | FAILURE MODE    | ENVIRON      | TEST TYPE | RPT ACT  | FA NO | FA RPTS ISSUED |             | FARB |
|-----------|-------------|-----------|-----------------|--------------|-----------|----------|-------|----------------|-------------|------|
|           |             |           |                 |              |           |          |       | BY             | NUMBER      |      |
| IR1213    | 1-16-63     | GC0209    | Cracked insert. | Post-Hi Temp | Acc       | C/T      | 090   | QCE            | 1342-1007-1 | F2-1 |
| IR1389    | 1-21-63     | -5        |                 |              |           |          |       |                |             |      |
| IR1394    | 1-22-63     | -4        |                 |              |           |          |       |                |             |      |
| IR20197   | 2-11-63     | GC3876    | Cracked insert  | Post-Hi Temp | Acc       | C/T      |       |                |             | 2-1  |
|           |             | -14       |                 |              |           |          |       |                |             |      |
|           |             | -15       |                 |              |           |          |       |                |             |      |
| IR20153   | 2-12-63     | GC3876    | Cracked insert. | Post-Hi Temp | Acc       | C/T      |       |                |             |      |
|           |             | -16       |                 |              |           |          |       |                |             |      |
| IR20164   | 2-18-63     | GC3876    | Cracked insert. | NR           | Acc       | C/T      |       |                |             |      |
|           |             | -18       |                 |              |           |          |       |                |             |      |
| IRNOA1727 | 2-23-63     | GC0209    | Cracked insert. | NR           | Acc       | Rec Insp |       |                |             |      |
|           |             | -10       |                 |              |           |          |       |                |             |      |

| NOMENCLATURE           |             | SUBSYSTEM              |   | QC ENGINEER     |   | PAGE 1 OF 1 PAGES      |   |
|------------------------|-------------|------------------------|---|-----------------|---|------------------------|---|
| Safe and Arm Mechanism |             | Separation             |   | H. Rigney       |   |                        |   |
| DRAWING NUMBER         |             | MISSION CLASSIFICATION |   | DESIGN ENGINEER |   | MANUFACTURER           |   |
| 825D615                |             | Critical               |   | J. Lilly        |   | Thiokol Chemical Corp. |   |
| REPORT NUMBER          | REPORT DATE | SERIAL NO              | Q | Q               | Q | Q                      | Q |
| TR1531                 | 9-26-62     | GE0397-40              | 2 | 2               | 2 | 2                      | 2 |
|                        |             | GE0607-22-23           | 2 | 2               | 2 | 2                      | 2 |
| FC47576                | 11-13-63    | GE J93514-65           | 1 | 1               | 1 | 1                      | 1 |
| IR1684                 | 11-7-62     | GE0609-48-61           | 2 | 2               | 2 | 2                      | 2 |
| IR1778                 | 2-7-63      | GE0607-9               | 3 | 3               | 3 | 3                      | 3 |

| TEST TYPE | RPT AC | FA NO | BY  | FA RPTS NUMBER | DATE  | FARB CLOSE-OUT |      |
|-----------|--------|-------|-----|----------------|-------|----------------|------|
|           |        |       |     |                |       | FA             | CA   |
| Acc       | V/S    | A07   | QCE | 1342-303-2     | 10-23 | F 12-5         | 1-8  |
| Acc       | V/S    | A08   | QCE | 1342-303-1     | 10-25 | F 12-5         | 1-8  |
| Qual      | V/S    | O57   | QCE | 1342-303-3     | 11-16 | F 12-3         | 12-3 |
| Acc       | V/S    | O65   | QCE | 1342-303-4     | 12-13 | F 12-19        | 1-8  |
| Acc       | V/S    | 122   | QCE | 1321-303-5     | 3-11  | F 3-29         | 3-29 |

825D615



| NOMENCLATURE            |             | SUBSYSTEM                         |                                                                                              | QC ENGINEER     |             | PAGE 1 OF 1 PAGES   |                |
|-------------------------|-------------|-----------------------------------|----------------------------------------------------------------------------------------------|-----------------|-------------|---------------------|----------------|
| Spring & Guide Assembly |             | Separation                        |                                                                                              | G. Quanbeck     |             |                     |                |
| DRAWING NUMBER          |             | MISSION CLASSIFICATION            |                                                                                              | DESIGN ENGINEER |             | MANUFACTURER        |                |
| 825D645 GI              |             | Critical                          |                                                                                              | R. Lancharich   |             | Vertex Tool Co.     |                |
| FAULT NUMBER            | REPORT DATE | SERIAL NO                         | FAILURE MODE                                                                                 | TEST RPT TYPE   | ENVIRONMENT | FA RPTS ISSUED      | FARB CLOSE-OUT |
|                         |             |                                   |                                                                                              |                 |             | BY NUMBER DATE      | FA CA          |
| IR1010                  | 1-2-63      | GE1036<br>-8 -2<br>-6 -2<br>-5 -2 | Did not meet compression spec<br>S.I. 238234 para 2.3.6.                                     | Acc<br>C/T      | Ambient     | QCE 1342-319-1 2-12 | F 2-26 2-26    |
| IR20107                 | 3-18-63     | GH0646<br>-83-21                  | Did not meet specified tolerance on X-Y distance; measured 1.829" - should be 1.800 ± .010". | Acc<br>C/T      | Ambient     |                     |                |

|                |  |                        |  |                 |  |                   |  |
|----------------|--|------------------------|--|-----------------|--|-------------------|--|
| NOMENCLATURE   |  | SUBSYSTEM              |  | QC ENGINEER     |  | PAGE 1 OF 1 PAGES |  |
| Latch Assembly |  | Environmental Control  |  | W. Mayeros      |  |                   |  |
| DRAWING NUMBER |  | MISSION CLASSIFICATION |  | DESIGN ENGINEER |  | MANUFACTURER      |  |
| 884D710        |  | Major                  |  | W. Loose        |  | Technitrol        |  |

| FAILURE NUMBER | REPORT DATE | SERIAL NO | ENVIRONMENT | FAILURE MODE                                                              | TEST RPT TYPE | ACT | FA NO | FA RPTS ISSUED |        | FARB CLOSE-OUT |            |
|----------------|-------------|-----------|-------------|---------------------------------------------------------------------------|---------------|-----|-------|----------------|--------|----------------|------------|
|                |             |           |             |                                                                           |               |     |       | BY             | NUMBER | DATE           | FA         |
| LRN            | 8-20-62     | GA0903-9  | 2           | Failed to lift required wt. of 1.115 lbs.                                 | Acc           | (V) | A09   | (V)            | LTR    | 8-10           | 12-10 1-15 |
| IR5022         | 12          | GA0903-5  | 0           | When power was applied to unit it shorted power supply - CR2 shorted out. | Acc           | C/T | NR    |                |        |                |            |

884D710

QC ENGINEER

W. Mayeros

DESIGN ENGINEER

MANUFACTURER

P. Shelley

Nash Controls

SUBSYSTEM

Environmental Control

MISSION CLASSIFICATION

Critical

NOMENCLATURE

Rotary Actuator

DRAWING NUMBER

884D745 Pl/2

| FAILURE REPORT |          | SERIAL NO                | FAILURE MODE                                                                                                                                                   | ENVIRONMENT | TEST TYPE | RPT ACT NO | FA RPT |                 | DATE  | CLOSE-OUT |      |
|----------------|----------|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-----------|------------|--------|-----------------|-------|-----------|------|
| NUMBER         | DATE     |                          |                                                                                                                                                                |             |           |            | BY     | NUMBER          |       | FA        | CA   |
| IR1209         | 9-27-62  | GAI782<br>-4<br>(P1)     | Failed time/mass inertia load test. Unit froze and would not operate past 60° rotation after being energized.                                                  | Ambient     | Acc       | C/T 006    | QCE    | 1340-JJS-117    | 10-1  | P         | 1-15 |
| IR1210         | 9-27-62  | GAI783<br>-2<br>(P2)     | Same as above.                                                                                                                                                 | Ambient     | Acc       | C/T 006    | QCE    | 1340-JJS-131    | 10-9  | F         | 1-2  |
| IR1241         | 10-16-62 | GAI268<br>-4             | In reset position test, unit had reached max ccw rotation when popping noise was heard in cw reset (index) position, unit returned to 29.5° where it remained. | Ambient     | Acc       | C/T 017    | QCE    | 1342-1104-1     | 10-31 | F         | 1-2  |
| FC47740        | 1-31-63  | 5791291                  | Segment gear teeth broken.                                                                                                                                     | Ambient     | Qual      | C/T 109    | QCE    | 1342-1104-2     | 2-5   | P         | 3-8  |
| IR1368         | 1-9-63   | GAI268<br>-5<br>-6<br>-7 | All units: reached actuation limits 5 sec before spec time; drew too much current; did not return CW to zero. S/N 7: reset position did not meet specs.        | Ambient     | Acc       | C/T        | QCE    | PIR1340-JJS-325 | 2-13  | P         | 3-8  |
| IR21509        | 3-26-63  | GAI268<br>-12            | Failed torque test (S.I. para. 2.2.3) - rotary shaft did not fully return to normal position                                                                   | Lo-Temp     | Acc       | C/T        | QCE    | FAR Suppl 1     | 3-4   | F         | 3-8  |

|                          |  |                         |  |                 |  |                   |  |
|--------------------------|--|-------------------------|--|-----------------|--|-------------------|--|
| NOMENCLATURE             |  | SUBSYSTEM               |  | QC ENGINEER     |  | PAGE 1 OF 1 PAGES |  |
| Regulator, High-Pressure |  | Stabilization-Pneumatic |  | A. Smith        |  |                   |  |
| DRAWING NUMBER           |  | MISSION CLASSIFICATION  |  | DESIGN ENGINEER |  | MANUFACTURER      |  |
| 884D1215 P1              |  | Critical                |  | D. McKenz       |  | Moratto           |  |

| ITEM NUMBER | REPORT DATE | SERIAL NO           | FAILURE MODE                                                                                                                                                                         | ENVIRONMENT | TEST TYPE | FA RPTS ISSUED |     |              | FARBS CLOSE-OUT |    |    |
|-------------|-------------|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-----------|----------------|-----|--------------|-----------------|----|----|
|             |             |                     |                                                                                                                                                                                      |             |           | A              | BY  | NUMBER       | DATE            | FA | CA |
| IR1600      | 11-15-62    | -11<br>-12<br>-13   | Excessive case leakage (200scc per hr).                                                                                                                                              | Ambient     | Acc       | V/S 046        | QCE | 1342-630.7-1 | 12-5            | P  |    |
| IR1679      | 1-11-63     | GF0311<br>-16       | Out of spec on post-env. leak test - rate 960 scc/hr. Max should be 600 scc/hr. Same results on rerun. Test repeated after response test - unit passed both response and leak tests. | Ambient     | Acc       | V/S            |     |              |                 |    |    |
| IR1626      | 2-11-63     | GF0311<br>-7<br>-15 | Regulated pressure over spec max.                                                                                                                                                    | Ambient     | Acc       | V/S            |     |              |                 |    |    |

|                        |  |                         |  |                 |  |                    |  |
|------------------------|--|-------------------------|--|-----------------|--|--------------------|--|
| NOMENCLATURE           |  | SUBSYSTEM               |  | QC ENGINEER     |  | PAGE 1 OF 1 PAGES  |  |
| Low-Pressure Regulator |  | Stabilization-Pneumatic |  | A. Smith        |  |                    |  |
| DRAWING NUMBER         |  | MISSION CLASSIFICATION  |  | DESIGN ENGINEER |  | MANUFACTURER       |  |
| 884D1216 P1            |  | Critical                |  | D. McKenzie     |  | Whittaker Controls |  |

| P/N               | REPORT DATE        | SERIAL NO            | FAILURE MODE                                                                                                                          | ENVIRONMENT                        | TEST TYPE | RPT ACT NO     | FA RPTS ISSUED                      |                    |      | FARB CLOSE-OUT |      |  |
|-------------------|--------------------|----------------------|---------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|-----------|----------------|-------------------------------------|--------------------|------|----------------|------|--|
|                   |                    |                      |                                                                                                                                       |                                    |           |                | BY                                  | NUMBER             | DATE | FA             | CA   |  |
| IR2054            | 8-2-62             | GF0499<br>-14<br>-15 | Units failed time response test (spec. limit 0.035 sec max)                                                                           | Ambient                            | Acc       | V/S NR         |                                     |                    |      | 1-2            | 1-2  |  |
| IR2065            | 8-2-62             | GF0478<br>-3         | Same as above                                                                                                                         | Ambient                            | Acc       | V/S NR         |                                     |                    |      | 1-2            | 2-12 |  |
| IR2070            | 8-7-62             | GF0478<br>-4         | Same as above                                                                                                                         | Ambient                            | Acc       | V/S NR         |                                     |                    |      | 1-2            | 2-12 |  |
| IRN1598           | 11-14-62           | -5<br>-7<br>-8       | Excessive case leakage (500 to 700 scc per hr. - max allowed 40 scc per hr.)                                                          | Ambient                            | Acc       | C/T 045        | QCE 1342-630.8-1<br>QCE FAR Suppl 1 | 11-26 P<br>11-23 F |      | 1-25           | 1-25 |  |
| IR1627            | 2-15-63            | GF0478<br>-11        | Failed response test - read 0.086 msec - should be 0.075 msec max.                                                                    | Hi-Temp                            | Acc       | V/S 162        |                                     |                    |      |                |      |  |
| FC47560<br>IR1648 | 3-25-63<br>3-27-63 | GF0478<br>-9         | External (case) leakage should be 40 scc/hr max.<br>Read 61.25 scc/hr in<br>Read 102.1 scc/hr in<br>Internal leakage 43,700 scc/hr in | Hi-Temp<br>Post Hi-Temp<br>Lo-Temp | Qual      | QCE 186<br>V/S |                                     |                    |      |                |      |  |

|                       |  |                          |  |                 |  |                   |  |
|-----------------------|--|--------------------------|--|-----------------|--|-------------------|--|
| NOMENCLATURE          |  | SUBSYSTEM                |  | QC ENGINEER     |  | PAGE 1 OF 1 PAGES |  |
| Resolver Summing Amp. |  | Stabilization-Electrical |  | K. Speight      |  |                   |  |
| DRAWING NUMBER        |  | MISSION CLASSIFICATION   |  | DESIGN ENGINEER |  | MANUFACTURER      |  |
| 884D1225              |  | Critical                 |  | E. C            |  | GE - OD           |  |

| FAILURE NUMBER     | REPORT DATE      | SERIAL NO | FAILURE MODE                                                                                                                      | ENVIRONMENT        | TEST TYPE | T FA NO | FA RPTS ISSUED |        | FARB CLOSE-OUT |
|--------------------|------------------|-----------|-----------------------------------------------------------------------------------------------------------------------------------|--------------------|-----------|---------|----------------|--------|----------------|
|                    |                  |           |                                                                                                                                   |                    |           |         | BY             | NUMBER |                |
| IR0371             | 1-31-63          | 5498543   | 2 RSA Yaw gradient out of spec except for +50 valve.<br>2 RSA Pitch gradient -30 and -40 valves out of spec.                      | Ambient            | A         | C/T     |                |        |                |
|                    |                  |           |                                                                                                                                   |                    |           |         |                |        |                |
| IR0376             | 2-4-63           | 5498543   | 1 Pitch and Yaw channel gradients out of spec.<br>0 Yaw RSA null out of spec                                                      | Ambient<br>Hi-Temp | Acc       | C/T NR  |                |        |                |
|                    |                  |           |                                                                                                                                   |                    |           |         |                |        |                |
| FC47505<br>IR20717 | 3-1-63<br>3-1-63 | 5498545   | 3 Low gradients out of Roll channel between "channel" and period: -0.5V/deg - should be 1.0V/deg. gain 1.4V/V - should be 2.8V/V. | Ambient            | Qual      | QCE 208 |                |        |                |
|                    |                  |           |                                                                                                                                   |                    |           |         |                |        |                |

|                    |  |                          |  |                 |  |                   |  |
|--------------------|--|--------------------------|--|-----------------|--|-------------------|--|
| ENCLOSURE          |  | SUBSYSTEM                |  | QC ENGINEER     |  | PAGE 1 OF 1 PAGES |  |
| Compensator Elect. |  | Stabilization-Electrical |  | R. Bernard      |  |                   |  |
| DRAWING NUMBER     |  | MISSION CLASSIFICATION   |  | DESIGN ENGINEER |  | MANUFACTURER      |  |
| 884DI226 G1        |  | Critical                 |  | D. Montgomery   |  | GE - 00           |  |

| FAILURE NUMBER | REPORT DATE | SERIAL NO | FAILURE MODE                                                                                                          | ENVIRONMENT    | TEST TYPE | RPT ACT | FA NO | FA RPTS ISSUED |            |       | FARB CLOSE-OUT |     |  |
|----------------|-------------|-----------|-----------------------------------------------------------------------------------------------------------------------|----------------|-----------|---------|-------|----------------|------------|-------|----------------|-----|--|
|                |             |           |                                                                                                                       |                |           |         |       | BY             | NUMBER     | DATE  | FA             | CA  |  |
| IR6446         | 9-8-62      | 5498532   | 3 Unit failed insulation resistance test and shows evidence of arcing (spec limit 20 meg., measured resistance 500 K) | Post-Immersion | Acc       | C/T     | A03   | QCE            | 1342-614-1 | 12-12 | F 1-2          | 1-2 |  |
| IRN1238        | 10-13-63    | 5498537   | 2 Failed S.I. 23445 B para 2.2.2.4.3 - spec tol 98K to 102K - channel A reads 95.7K channel B reads 83K.              | Ambient        | Acc       | C/T     | NR    |                |            |       |                | 1-2 |  |
| IRN1239        | 10-16-62    | 5498535   | 2 Leak under connector - lasted one minute.                                                                           | Immersion      | Acc       | C/T     | NR    |                |            |       |                | 1-2 |  |
| IRN1211        | 9-27-62     | 5498533   | 2 Leakage appears at mounting holes.                                                                                  | Immersion      | Acc       | C/T     | NR    |                |            |       |                | 1-2 |  |
| FC47797        | 3-26-63     | 5499537   | 2 Leak at top seam. (* had completed all other Qual tests)                                                            | Immersion *    | Qual      | C/T     | 182   |                |            |       |                |     |  |

| NOMENCLATURE                   |           | SUBSYSTEM                                                                                                        |           | QC ENGINEER     |         | PAGE 1 OF 1 PAGES |                |       |       |     |               |
|--------------------------------|-----------|------------------------------------------------------------------------------------------------------------------|-----------|-----------------|---------|-------------------|----------------|-------|-------|-----|---------------|
| Velocity Sensing Accelerometer |           | Orbit Adjust                                                                                                     |           | R. Bernard      |         |                   |                |       |       |     |               |
| DRAWING NUMBER                 |           | MISSION CLASSIFICATION                                                                                           |           | DESIGN ENGINEER |         | MANUFACTURER      |                |       |       |     |               |
| 884D1227                       |           | Critical                                                                                                         |           | C. Miller       |         | Atrna             |                |       |       |     |               |
| FAILURE REPORT NUMBER          | SERIAL NO | FAILURE MODE                                                                                                     | ENVIRON   | TEST TYPE       | RPT ACT | FA NO             | FA RPTS ISSUED | DATE  | FA    | CA  | FAB CLOSE-OUT |
| FC045294                       | 4         | 3 Thermostat did not sustain proper temp. during vibration-temp. did not return to proper level after vibration. | Vibration | Acc             | (V)     | A73               | (V)            | 12-20 | F 4-5 | 4-5 |               |
| FC045295                       | 5         | 3 Two open strings found in continuity check.                                                                    | Post-Vib  | Acc             | (V)     | A74               | (V)            | 11-20 | F 4-5 | 4-5 |               |
| FC045297                       | 4         | 3 One open string found in continuity check.                                                                     | Post-Vib  | Acc             | (V)     | A75               | (V)            | 11-20 | F 4-5 | 4-5 |               |
| FC045293                       | 6         | 3 Resistance of heaters changed from 208 to 70 ohms.                                                             | Ambient   | Acc             | (V)     | A76               | (V)            | 11-20 | F 4-5 | 4-5 |               |
| FC045298                       | 6         | 3 During sine sweep (at 250cps in Z-axis) string signals ceased. Continuity check showed 2 strings open.         | Vibration | Acc             | (V)     | A77               | (V)            | 11-20 | F 4-5 | 4-5 |               |
| FC046005                       | 4         | 2 Hermetic seal failed to meet leakage spec.                                                                     | Post-Vib  | Acc             | (V)     | A78               | (V)            | 11-20 | F 4-5 | 4-5 |               |
| FC053769                       | 5         | 2 VSA mirror alignment out of tolerance in sensitive axis.                                                       | Ambient   | Acc             | (V)     | A79               | (V)            | 11-20 | F 4-5 | 4-5 |               |
| FC046029                       | 7         | 3 Could not attain required temperature. (Thermostat defective).                                                 | Ambient   | Acc             | (V)     | A80               | (V)            | 12-12 | F 4-5 | 4-5 |               |

|                            |  |                        |  |                 |  |                   |  |
|----------------------------|--|------------------------|--|-----------------|--|-------------------|--|
| NOMENCLATURE               |  | SUBSYSTEM              |  | QC ENGINEER     |  | PAGE 1 OF 1 PAGES |  |
| Accelerometer Control Unit |  | Orbit Adjust           |  | R. Bernard      |  |                   |  |
| DRAWING NUMBER             |  | MISSION CLASSIFICATION |  | DESIGN ENGINEER |  | MANUFACTURER      |  |
| 884D1228                   |  | Critical               |  | C. Miller       |  | Arma              |  |

| FAILURE NUMBER | REPORT DATE | SERIAL NO | FAILURE MODE                                                            | ENVIRONMENT | TEST TYPE | RPT ACT | FA NO | FA RPTS ISSUED |        |       | FARB CLOSE-OUT |     |
|----------------|-------------|-----------|-------------------------------------------------------------------------|-------------|-----------|---------|-------|----------------|--------|-------|----------------|-----|
|                |             |           |                                                                         |             |           |         |       | BY             | NUMBER | DATE  | FA             | CA  |
| FC045296       | 8-13-62     | 4         | ACU heater resistance out of spec - varied as housing was flexed.       | Vibration   | Acc       | (V)     | A81   | (V)            | ----   | 10-4  | F 4-5          | 4-5 |
| FC045026       | 11-29-62    | 8         | Excessive vibration level observed in ACQ at about 50cps (Mech. noise). | Vibration   | Acc       | (V)     | A82   | (V)            | ----   | 12-12 | F 4-5          | 4-5 |
| FC045027       | 11-30-62    | 8         | Internal noise (Mechanical) developed during vibration.                 | Vibration   | Acc       | (V)     | A83   | (V)            | ----   | 12-28 | F 4-5          | 4-5 |

| NOMENCLATURE        |          | SUBSYSTEM              |                                                                                                                                                                     | QC ENGINEER     |           | PAGE 1 OF 1 PAGES |       |                |            |                |       |     |
|---------------------|----------|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-----------|-------------------|-------|----------------|------------|----------------|-------|-----|
| Velocity Comparator |          | Orbit Adjust           |                                                                                                                                                                     | R. Bernard      |           |                   |       |                |            |                |       |     |
| DRAWING NUMBER      |          | MISSION CLASSIFICATION |                                                                                                                                                                     | DESIGN ENGINEER |           | MANUFACTURER      |       |                |            |                |       |     |
| 884D1229            |          | Critical               |                                                                                                                                                                     | C. Miller       |           | Atma              |       |                |            |                |       |     |
| FA RPT NO           | DATE     | SERIAL NO              | FAILURE MODE                                                                                                                                                        | ENVIRON         | TEST TYPE | RPT ACT           | FA NO | FA RPTS ISSUED |            | FARS CLOSE-OUT |       |     |
|                     |          |                        |                                                                                                                                                                     |                 |           |                   |       | BY             | NUMBER     | DATE           | FA    | CA  |
| FC053290            | 8-13-62  | 4                      | Transistor opened (base to emitter) - caused by test cabling error.                                                                                                 | Ambient         | Acc       | (V)               | A84   | (V)            | ----       | 12-14          | F 4-5 | 4-5 |
| FC053763            | 11-1-62  | 5                      | Transistor shorted in power supply - error in test cabling.                                                                                                         | Ambient         | Acc       | (V)               | A85   | (V)            | ----       | 12-19          | F 4-5 | 4-5 |
| FC053764            | 11-1-62  | 5                      | LFO period read high (15750 $\mu$ sec) - spec 15620 $\mu$ sec.                                                                                                      | Ambient         | Acc       | (V)               | A86   | (V)            | ----       | 12-24          | F 4-5 | 4-5 |
| FC030358            | 11-16-62 | 7                      | K <sub>p</sub> problem out of spec by 4 seconds.                                                                                                                    | Ambient         | Acc       | (V)               | A87   | (V)            | ----       | 12-28          | F 4-5 | 4-5 |
| IRN1317             | 11-29-62 | 4                      | Mode B problems failed to operate. (*100°F, 10 <sup>-5</sup> mm Hg).                                                                                                | Orbital *       | Acc       | C/T               |       |                |            |                |       |     |
| FC046028            | 12-1-62  | 6                      | Temperature of VSA could not be adjusted.                                                                                                                           | Ambient         | Acc       | (V)               | A88   | (V)            | ----       | 12-12          | F 4-5 | 4-5 |
| FC046032            | 12-4-62  | 6                      | 22 volt power supply unstable - read 28V.                                                                                                                           | Ambient         | Acc       | (V)               | A89   | (V)            | ----       | 1-4            | F 4-5 | 4-5 |
| IRN1337             | 12-6-62  | 5                      | High heat does not turn off at prescribed temp. VCU fails to load and verify. Real time for all problems half that indicated. (*40°F, 1.2 x 10 <sup>-5</sup> mm Hg) | Orbital *       | Acc       | C/T               | 068   | QCE            | 1342-502-1 | 1-7            | P     |     |
| IRN1348             | 12-20-62 | 6                      | Unit failed to operate in Mode B.                                                                                                                                   | Orbital         | Acc       | C/T               |       |                |            |                |       |     |

|                                   |  |                                       |  |                                  |  |                         |  |
|-----------------------------------|--|---------------------------------------|--|----------------------------------|--|-------------------------|--|
| SIGNATURE<br>400 CPS Power Supply |  | SUBSYSTEM<br>Stabilization-Electrical |  | QC ENGINEER<br>R. Bernard        |  | PAGE 1 OF 1 PAGES       |  |
| DRAWING NUMBER<br>884D1232        |  | MISSION CLASSIFICATION<br>Critical    |  | DESIGN ENGINEER<br>D. Montgomery |  | MANUFACTURER<br>GE - 00 |  |

| FAILURE REPORT NUMBER | DATE     | SERIAL NO | FAILURE MODE                                                                                                                         | ENVIRO  | TEST RPT TYPE | ACT | FA NO | FA RPTS ISSUED |        | FARB CLOSE-OUT |
|-----------------------|----------|-----------|--------------------------------------------------------------------------------------------------------------------------------------|---------|---------------|-----|-------|----------------|--------|----------------|
|                       |          |           |                                                                                                                                      |         |               |     |       | BY             | NUMBER |                |
| IR11027               | 10-9-62  | 5498699   | 0 Failed S.I. 237499A para. 2.2.2.1 (open pins)                                                                                      | Ambient | Acc           | C/T | NR    |                |        | 12-5 1-15      |
|                       |          |           | 0 Failed para 2.2.2.4.3 (voltage high)                                                                                               |         |               |     |       |                |        |                |
|                       |          |           | 0 Failed para 2.2.3 (dielectric strength)                                                                                            |         |               |     |       |                |        |                |
|                       |          |           | 0 Failed para 2.2.4 (insulation resistance)                                                                                          |         |               |     |       |                |        |                |
| IR1308                | 11-15-62 | J93061-3  | 0 Failed dielectric strength test - (500 VRMS) - breakdown indicated pins D and E to case. Resistance pins D and E to case was 100K. | Ambient | Acc           | C/T | NR    |                |        | 1-15 1-15      |

|                          |  |                        |  |                 |  |                        |  |
|--------------------------|--|------------------------|--|-----------------|--|------------------------|--|
| NOMENCLATURE             |  | SUBSYSTEM              |  | QC ENGINEER     |  | PAGE 1 OF 1 PAGES      |  |
| Shaped Charge Ring Assy. |  | Separation             |  | H. Rigney       |  |                        |  |
| DRAWING NUMBER           |  | MISSION CLASSIFICATION |  | DESIGN ENGINEER |  | MANUFACTURER           |  |
| 884 1244                 |  | Critical               |  | J. Lilly        |  | Thiokol Chemical Corp. |  |

| ITEM NUMBER | REPORT DATE | SERIAL NO | FAILURE MODE | ENVIRONMENT                                                                                                                                                                                                        | TEST TYPE | FA RPT'S ISSUED |        | FAR CLOSE-OUT   |      |        |
|-------------|-------------|-----------|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-----------------|--------|-----------------|------|--------|
|             |             |           |              |                                                                                                                                                                                                                    |           | BY              | NUMBER | DATE            | FA   | CA     |
| FC47582     | 1-4-63      | J93514    | 3            | 75% propagation (interruption). Interruption occurred at two places at the relay and at approx 90° from the relay. All other phases of the firing train functioned satisfactorily ( at -350F, 50 microns pressure) | Orbital   | Qual (V)        | QCE    | 1342-302-1      | 1-4  | P      |
|             |             |           |              |                                                                                                                                                                                                                    |           |                 | QCE    | IR 1340-JJS-217 | 1-11 | P      |
|             |             |           |              |                                                                                                                                                                                                                    |           |                 | QCE    | FAR Suppl 1     | 3-11 | F 3-22 |

| NOMENCLATURE   |         | SUBSYSTEM              |   | QC ENGINEER                                                                                                                                 |    | PAGE 1 OF 1 PAGES |     |
|----------------|---------|------------------------|---|---------------------------------------------------------------------------------------------------------------------------------------------|----|-------------------|-----|
| Tank Module    |         | Orbit Adjust           |   | D. Downing                                                                                                                                  |    | MANUFACTURER      |     |
| DRAWING NUMBER |         | MISSION CLASSIFICATION |   | DESIGN ENGINEER                                                                                                                             |    | Rocketdyne        |     |
| 884D1248 G5/6  |         | Critical               |   | F. Walker                                                                                                                                   |    |                   |     |
| IR1813         | 1-63    | 4044869<br>(V)<br>(G6) | 2 | Ref S.I. 238238A para 2.5.7<br>leakage at 15.0 psig 4 scc/15<br>min, leakage at 2.0 psig zero.<br>Allowable leakage - none.                 | NR | Acc               | C/T |
| IR1815         | 2-5-63  | 4044867<br>(V)<br>(G5) | 1 | Output voltage from temp.<br>sensor amplifier 2.279V. Should<br>be 2.525 $\pm$ 0.150V.                                                      | NR | Acc               | C/T |
| IR1826         | 2-14-63 | 4044870<br>(V)<br>(G5) | 2 | Leakage at 15 psig was 0.9<br>scc/min. None at 2 psig.<br>Allowable - none.                                                                 | NR | Acc               | C/T |
| IR1829         | 3-6-63  | 4044871<br>(V)<br>(G ) | 0 | Temp. amplifier output<br>voltage 2.286V at 750F.<br>Should be 2.525 $\pm$ 0.150V.                                                          | NR | Acc               | C/T |
|                |         |                        |   | Acceptable bladder leakage<br>none. Rate at 15.0 psig was<br>.40 scc/hr; at 2.0 psig was<br>6 scc/hr. (IR voided - test<br>method invalid). | NR | Acc               | C/T |

| NOMENCLATURE        |             | SUBSYSTEM                |                                                                                                                                   | QC ENGINEER          |               | PAGE 1 OF 2 PAGES |                |        |      |      |    |
|---------------------|-------------|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------|----------------------|---------------|-------------------|----------------|--------|------|------|----|
| TARS - Gimbal Assy. |             | Stabilization-Electrical |                                                                                                                                   | K. Speight           |               |                   |                |        |      |      |    |
| DRAWING NUMBER      |             | MISSION CLASSIFICATION   |                                                                                                                                   | DESIGN ENGINEER      |               | MANUFACTURER      |                |        |      |      |    |
| 888D170             |             | Critical                 |                                                                                                                                   | J. Catrambone        |               | GE - OD           |                |        |      |      |    |
| PART NUMBER         | REPORT DATE | SERIAL NO                | FAILURE MODE                                                                                                                      | ENVIRONMENT          | TEST RPT TYPE | FA RPTS ACT NO    | FA RPTS ISSUED |        |      | FARS |    |
|                     |             |                          |                                                                                                                                   |                      |               |                   | BY             | NUMBER | DATE | FA   | CA |
| IR0042              | 7-20-62     | 5498687                  | Resolver alignments out of spec on resolvers 1, 3, 4 when connected to M-DAC load. Mechanical freedom of roll Gimbal out of spec. | Ambient              | Acc           | V/S NR            |                |        |      |      |    |
|                     |             |                          |                                                                                                                                   |                      |               |                   |                |        |      |      |    |
|                     |             |                          |                                                                                                                                   |                      |               |                   |                |        |      |      |    |
|                     |             |                          |                                                                                                                                   |                      |               |                   |                |        |      |      |    |
| IRN0119             | 10-7-62     | 5498688                  | Mech. Freedom Roll Gimbal out of spec                                                                                             | Ambient              | Acc           | S/T NR            |                |        |      |      |    |
|                     |             |                          | Gimbal friction out of spec                                                                                                       |                      |               |                   |                |        |      |      |    |
|                     |             |                          | Roll axis resolver alignment out of spec.                                                                                         |                      |               |                   |                |        |      |      |    |
|                     |             |                          | Gimbal breakaway torque (roll) out of spec.                                                                                       |                      |               |                   |                |        |      |      |    |
|                     |             |                          | Temp I/M (roll, pitch, yaw) out of spec                                                                                           |                      |               |                   |                |        |      |      |    |
|                     |             |                          | Yaw Gyro output I/M out of spec                                                                                                   |                      |               |                   |                |        |      |      |    |
|                     |             |                          | Pitch Gyro drift ADIA out of spec                                                                                                 |                      |               |                   |                |        |      |      |    |
|                     |             |                          | Pitch/Yaw gyro drift BD out of spec.                                                                                              |                      |               |                   |                |        |      |      |    |
| IR1527              | 11-30-62    | 5498689                  | Pitch/Roll torquing rate out of spec.                                                                                             | Ambient              | Acc           | V/S NR            |                |        |      |      |    |
|                     |             |                          | Roll axis 2 and 3 resolver alignment out of spec                                                                                  |                      |               |                   |                |        |      |      |    |
|                     |             |                          | Gyro drift out of spec                                                                                                            |                      |               |                   |                |        |      |      |    |
|                     |             |                          | Roll breakaway torque too low                                                                                                     |                      |               |                   |                |        |      |      |    |
| IR1530              | 12-31-62    | 5498690                  | Gyro and servo I/M out of spec                                                                                                    | Hi-Temp Post Hi-Temp | Acc           | V/S NR            |                |        |      |      |    |
|                     |             |                          | Pitch resolver out of spec                                                                                                        |                      |               |                   |                |        |      |      |    |
|                     |             |                          | Roll Temp I/M out of spec                                                                                                         |                      |               |                   |                |        |      |      |    |
|                     |             |                          | I/M Temp (null voltage) out of spec                                                                                               |                      |               |                   |                |        |      |      |    |
|                     |             |                          | Gyro drift out of spec.                                                                                                           |                      |               |                   |                |        |      |      |    |

888D170

| NOMENCLATURE        |             | SUBSYSTEM                |                                                                                                                             | QC ENGINEER     |               | PAGE 2 OF 2 PAGES |                   |
|---------------------|-------------|--------------------------|-----------------------------------------------------------------------------------------------------------------------------|-----------------|---------------|-------------------|-------------------|
| TARS - Gimbal Assy. |             | Stabilization-Electrical |                                                                                                                             | K. Speight      |               |                   |                   |
| DRAWING NUMBER      |             | MISSION CLASSIFICATION   |                                                                                                                             | DESIGN ENGINEER |               | MANUFACTURER      |                   |
| 888D170             |             | Critical                 |                                                                                                                             | J. Catrambone   |               | GE - 00           |                   |
| FA NUMBER           | REPORT DATE | SERIAL NO                | FAILURE MODE                                                                                                                | ENVIRONMENT     | TEST RPT TYPE | FA RPTS ISSUED    | FA RPTS CLOSE-OUT |
|                     |             |                          |                                                                                                                             |                 |               | BY NUMBER DATE    | FA CA             |
| IR1731              | 1-18-63     | 5498691                  | 2 Gyro Temp T/M out of spec                                                                                                 | Ambient         | Acc           |                   |                   |
| FC47588             | 2-18-63     | 5498690                  | 3 With system adjusted so that Ey 5mv, output of resolver 4. Ey Sin Op, was 220mv. (Found cold solder joint and repaired).  | Ambient         | Qual          | QCE 123           | 2-25 F 3-8 3-8    |
| FC47554<br>IR20718  | 3-8-63      | 5498690                  | 3 With SinOp at null, Pitch command resolver reads approx 15 deg. CosOp = 0. (Pitch resolver cosine winding open or short.) | Ambient         | Qual          | QCE 153           |                   |
| IR1782              | 3 15-63     | 5498687                  | 3 Pitch and roll gyro temp. T/M out of spec (low): Pitch bias drift variation 0.3°/hr - should not exceed 0.2°/hr.          | NR              | Acc           | V/S               |                   |

888D170



| NOMENCLATURE              |             | SUBSYSTEM                                                                                                           |                                           | QC ENGINEER                                                      |             | PAGE 1 OF 2 PAGES |            |                |     |                      |      |      |     |
|---------------------------|-------------|---------------------------------------------------------------------------------------------------------------------|-------------------------------------------|------------------------------------------------------------------|-------------|-------------------|------------|----------------|-----|----------------------|------|------|-----|
| Environ. Temp. Controller |             | Environmental Control                                                                                               |                                           | W. Mayeros                                                       |             |                   |            |                |     |                      |      |      |     |
| DRAWING NUMBER            |             | MISSION CLASSIFICATION                                                                                              |                                           | DESIGN ENGINEER                                                  |             | MANUFACTURER      |            |                |     |                      |      |      |     |
| 893D126/7 G1/2/3          |             | Critical                                                                                                            |                                           | J. Evans                                                         |             | Gulton Industries |            |                |     |                      |      |      |     |
| IR NUMBER                 | REPORT DATE | SERIAL NO                                                                                                           | QUANTITY                                  | FAILURE MODE                                                     | ENVIRONMENT | TEST TYPE         | RPT ACT NO | FA RPTS ISSUED | BY  | NUMBER               | DATE | FA   | CA  |
| IR1350                    | 11-29-62    | GA1040<br>-7, -18<br>(-126G1)                                                                                       | 2                                         |                                                                  |             |                   |            |                |     |                      |      |      |     |
| IR1355                    | 12-21-62    | GA1040<br>-16<br>(-127G2)<br>-38<br>(-126G1)                                                                        | 2                                         |                                                                  |             |                   |            |                |     |                      |      |      |     |
| IR1357                    | 1-2-63      | GA1040<br>-6<br>(-126G1)<br>-27<br>(-127G1)                                                                         | 2<br>2                                    |                                                                  |             |                   |            |                |     |                      |      |      |     |
| IR1358                    | 1-2-63      | GA1040<br>-66, -44<br>-46, -29<br>-32, -31<br>-54<br>(-126G1)<br>-28, -18<br>-20, -9<br>-13, -14<br>-23<br>(-127G3) | 2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2 | Units failed to shut off power to load at specified temperature. | Ambient     | Acc               | C/T        | 092            | QCE | 1342-1107/<br>1108-1 | 2-25 | F3-8 | 3-8 |
| IR1359                    | 1-2-63      | GA1040<br>-14, -37<br>-76, -36<br>-45, -48<br>-30<br>(126G1)                                                        | 2<br>2<br>2<br>2<br>2                     |                                                                  |             |                   |            |                |     |                      |      |      |     |

| NOMENCLATURE              |         | SUBSYSTEM              |                                                                     | QC ENGINEER     |               | PAGE 2 OF 2 PAGES |                |                      |      |    |  |
|---------------------------|---------|------------------------|---------------------------------------------------------------------|-----------------|---------------|-------------------|----------------|----------------------|------|----|--|
| Environ. Temp. Controller |         | Environmental Control  |                                                                     | W. Mayhew       |               | MANUFACTURER      |                |                      |      |    |  |
| DRAWING NUMBER            |         | MISSION CLASSIFICATION |                                                                     | DESIGN ENGINEER |               | Gilton Industries |                |                      |      |    |  |
| 893D126/7 GI/2/3          |         | Critical               |                                                                     | J. Evans        |               |                   |                |                      |      |    |  |
| FACTURE REPORT NUMBER     | DATE    | SERIAL NO              | FAILURE MODE                                                        | ENVIRONMENT     | TEST RPT TYPE | FA RPTS ISSUED    | FARB CLOSE-OUT |                      |      |    |  |
|                           |         |                        |                                                                     |                 |               | BY                | NUMBER         | DATE                 | FA   | CA |  |
| IR1359<br>(Cont'd)        |         | 2                      | Same as above                                                       |                 |               |                   |                |                      |      |    |  |
|                           |         | -26,-17                |                                                                     |                 |               |                   |                |                      |      |    |  |
|                           |         | -31,-14                |                                                                     |                 |               |                   |                |                      |      |    |  |
|                           |         | -57,-13                |                                                                     |                 |               |                   |                |                      |      |    |  |
|                           |         | -12                    |                                                                     |                 |               |                   |                |                      |      |    |  |
| IR20177                   |         | (127G2)                |                                                                     |                 |               |                   |                |                      |      |    |  |
|                           | 1-26-63 | GAL040                 |                                                                     |                 |               |                   |                |                      |      |    |  |
|                           |         | -75                    |                                                                     |                 |               |                   |                |                      |      |    |  |
|                           |         | (126G3)                |                                                                     |                 |               |                   |                |                      |      |    |  |
|                           |         | -29                    |                                                                     |                 |               |                   |                |                      |      |    |  |
| IR20178                   |         | (127G3)                |                                                                     |                 |               |                   |                |                      |      |    |  |
|                           | 1-26-63 | GAL040                 |                                                                     |                 |               |                   |                |                      |      |    |  |
|                           |         | -52                    |                                                                     |                 |               |                   |                |                      |      |    |  |
|                           |         | (126G1)                |                                                                     |                 |               |                   |                |                      |      |    |  |
|                           |         | -24                    |                                                                     |                 |               |                   |                |                      |      |    |  |
|                           |         | (127G2)                |                                                                     |                 |               |                   |                |                      |      |    |  |
|                           |         | -69                    |                                                                     |                 |               |                   |                |                      |      |    |  |
|                           |         | (126G1)                |                                                                     |                 |               |                   |                |                      |      |    |  |
|                           |         | -28                    |                                                                     |                 |               |                   |                |                      |      |    |  |
|                           |         | (127G2)                |                                                                     |                 |               |                   |                |                      |      |    |  |
|                           |         | -81                    | Same as above                                                       |                 |               |                   |                |                      |      |    |  |
|                           |         | (126G1)                |                                                                     |                 |               |                   |                |                      |      |    |  |
|                           |         | -88                    |                                                                     |                 |               |                   |                |                      |      |    |  |
|                           |         | (126G1)                |                                                                     |                 |               |                   |                |                      |      |    |  |
|                           |         | -99                    |                                                                     |                 |               |                   |                |                      |      |    |  |
| IR20179                   |         | (126G1)                |                                                                     |                 |               |                   |                |                      |      |    |  |
|                           | 1-26-63 | GAL040                 |                                                                     |                 |               |                   |                |                      |      |    |  |
|                           |         | -81/31                 |                                                                     |                 |               |                   |                |                      |      |    |  |
|                           |         | -93/37                 |                                                                     |                 |               |                   |                |                      |      |    |  |
|                           |         |                        |                                                                     |                 |               |                   |                |                      |      |    |  |
|                           |         |                        | Thermostats (GE Dwg No 114C1660) Ambient                            |                 | Acc           | C/T               | 116            | QCE 1342-1107/1108-2 | 2-25 | F  |  |
|                           |         |                        | S.I. 237496; one failed to close at 500; one failed to open at 500. |                 |               |                   |                |                      |      |    |  |

893D126/7 GI/2/3

| DOCUMENTATION        |         | SUBSYSTEM              |             | QC ENGINEER                                                                   |         | PAGE 1 OF 1 PAGES |            |     |       |     |
|----------------------|---------|------------------------|-------------|-------------------------------------------------------------------------------|---------|-------------------|------------|-----|-------|-----|
| Voltage Power Supply |         | Telemetry              |             | R. Whittington                                                                |         |                   |            |     |       |     |
| DRAWING NUMBER       |         | MISSION CLASSIFICATION |             | DESIGN ENGINEER                                                               |         | MANUFACTURER      |            |     |       |     |
| 893D159 G1           |         | Major                  |             | W. Billbrough                                                                 |         | GE-ASPD           |            |     |       |     |
| REPORT               | SERIAL  | FAILURE MODE           | ENVIRONMENT | TEST RPT TYPE                                                                 | FA RPTS | ISSUED            | FARS       |     |       |     |
| DATE                 | NO      |                        |             | ACT NO                                                                        | BY      | NUMBER            | CLOSE-OUT  |     |       |     |
|                      |         |                        |             |                                                                               |         |                   | FA CA      |     |       |     |
| FC-7/23              | 1-29-63 | 5498748                | 3           | No DC output voltage or current (After 2nd axis of vibration). (Equalization) | Qual    | C/T 104           | 1342-206-1 | 2-4 | F2-15 | 3-8 |

893D159 G1



|                        |  |                        |  |                 |  |                   |  |
|------------------------|--|------------------------|--|-----------------|--|-------------------|--|
| DOCUMENTURE            |  | SUBSYSTEM              |  | QC ENGINEER     |  | PAGE 1 OF 1 PAGES |  |
| Unit SCO Base Assembly |  | Telemetry              |  | N. Yarger       |  |                   |  |
| DRAWING NUMBER         |  | MISSION CLASSIFICATION |  | DESIGN ENGINEER |  | MANUFACTURER      |  |
| 893D206 G2/G3          |  | Major                  |  | J. Serafin      |  | GE-ASPD           |  |

| FAILURE REPORT NO. | SERIAL NO. | FAILURE MODE                                                                               | ENVIRONMENT | TEST RPT TYPE | FA NO | FA RPT'S ISSUED |        | FARB |    |    |
|--------------------|------------|--------------------------------------------------------------------------------------------|-------------|---------------|-------|-----------------|--------|------|----|----|
|                    |            |                                                                                            |             |               |       | BY              | NUMBER | DATE | FA | CA |
| DR49873            | 9-28-62    | 3 No output (Ref S.I. 238209 para. 1.5) suspect mixer amplifier.                           | Ambient     | Acc           | C/T   |                 |        |      |    |    |
| DR94102            | 3-20-63    | 3 30kc SCO on base No. 2 appears to be noisy - it interacts with 10.5kc SCO on base no. 3. | Ambient     | S/S (951)     | S/T   |                 |        |      |    |    |

| NOMENCLATURE             |             | SUBSYSTEM              |                                                                                                                                   | QC ENGINEER     |           | PAGE 1 OF 1 PAGES |                |    |        |      |    |    |
|--------------------------|-------------|------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-----------------|-----------|-------------------|----------------|----|--------|------|----|----|
| 7 Unit SCO Base Assembly |             | Telemetry              |                                                                                                                                   | N. Yerger       |           |                   |                |    |        |      |    |    |
| DRAWING NUMBER           |             | MISSION CLASSIFICATION |                                                                                                                                   | DESIGN ENGINEER |           | MANUFACTURER      |                |    |        |      |    |    |
| 893D209 G1/G4            |             | Major                  |                                                                                                                                   | J. Serafin      |           | GE-ASPD           |                |    |        |      |    |    |
| FAILURE NUMBER           | REPORT DATE | SERIAL NO              | FAILURE MODE                                                                                                                      | TEST TYPE       | RPT ACT   | FA NO             | FA RPTS ISSUED | BY | NUMBER | DATE | FA | CA |
| DR70122                  | 9-5-62      | KL662 (G1)             | No output from SCO P91                                                                                                            | Ambient         | Acc       | C/T               |                |    |        |      |    |    |
| RC77465                  | 2-4-63      | 5492441 (KM984) (G4)   | No output SCO Base #4 - suspect test cable improperly wired.                                                                      | Ambient         | S/S (951) | S/T               |                |    |        |      |    |    |
| DR31645                  | 2-27-63     | KN216 (G4)             | Incorrect output from SCO P83 (SN 653) (See Dwg. No. 113C9735 P83). Frequency changes as output amplitude - adjust pot is varied. | Ambient         | Acc       | C/T               |                |    |        |      |    |    |
| DR94764                  | 4-1-63      | KM894 (G4)             | No output - printed circuit board is burned in vicinity of standoff.                                                              | Ambient         | SFV       | C/T               |                |    |        |      |    |    |

893D209 G1/G4

| NOMENCLATURE       |             | SUBSYSTEM                   |                                                                                                                                       | QC ENGINEER     |           | PAGE 1 OF 1 PAGES |                                             |    |        |      |     |     |
|--------------------|-------------|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------|-----------------|-----------|-------------------|---------------------------------------------|----|--------|------|-----|-----|
| AGE Relay Assembly |             | Elect. Power & Signal Dist. |                                                                                                                                       | F. Malinoski    |           |                   |                                             |    |        |      |     |     |
| DRAWING NUMBER     |             | MISSION CLASSIFICATION      |                                                                                                                                       | DESIGN ENGINEER |           | MANUFACTURER      |                                             |    |        |      |     |     |
| 893D257 G1         |             | Major                       |                                                                                                                                       | E. Howard       |           | GE - ASPD         |                                             |    |        |      |     |     |
| REPORT NUMBER      | REPORT DATE | SERIAL NO                   | FAILURE MODE                                                                                                                          | ENVIRONMENT     | TEST TYPE | RPT ACT NO        | FA RPTS ISSUED                              | BY | NUMBER | DATE | FA  | CA  |
| IRN1266            | 10-30-62    | KM037                       | 3 Relay light No. 6 stays on when it should be off. Short between contacts "S" and "C". High resistance between contacts "J" and "Y". | Ambient         | Acc       | C/T NR            |                                             |    |        |      | 1-2 | 1-2 |
| IRN1289            | 11-8-62     | KM040                       | 2 Contact current through set no. 2 "normally open" relay reads 20ma. Max allowable is 10ma. Set no. 2 contacts stay closed.          | Ambient         | Acc       | C/T 095           | QCE 1342-1013-1 2-6<br>QCE FAR Suppl 1 3-21 | P  | F      | 4-5  | 4-5 |     |
| IR20160            | 2-15-63     | KL422                       | 1 Contact currents (normally open) out of spec (high) - decrease to within spec after 15 min warm-up.                                 | Ambient         | Acc       | C/T NR            |                                             |    |        |      |     |     |
| IR20125            | 2-27-63     | KL421                       | 2 Contact currents, coil current out of spec.                                                                                         | Ambient         | Acc       | C/T               |                                             |    |        |      |     |     |

|                       |  |                             |  |                 |  |                   |  |
|-----------------------|--|-----------------------------|--|-----------------|--|-------------------|--|
| SIGNATURE             |  | SUBSYSTEM                   |  | QC ENGINEER     |  | PAGE 1 OF 1 PAGES |  |
| Rec Voltage Regulator |  | Elect. Power & Signal Dist. |  | D. Deitz        |  |                   |  |
| DRAWING NUMBER        |  | MISSION CLASSIFICATION      |  | DESIGN ENGINEER |  | MANUFACTURER      |  |
| 893D261 P1            |  | Major                       |  | P. Romanelli    |  | Leer Siegler      |  |

| FAILURE NUMBER | REPORT DATE | SERIAL NO      | FAILURE MODE                                                            | ENVIRONMENT | TEST TYPE | RPT ACT NO | FA RPTS ISSUED |                |         | FAIR |    |           |
|----------------|-------------|----------------|-------------------------------------------------------------------------|-------------|-----------|------------|----------------|----------------|---------|------|----|-----------|
|                |             |                |                                                                         |             |           |            | BY             | NUMBER         | DATE    | FA   | CA | CLOSE-OUT |
| IRN1229        | 10-25-62    | GAI244-4       | Efficiency and ripple out of spec                                       | Ambient     | Acc       | C/T 021    |                |                |         |      |    |           |
| IRN1253        | 10-27-62    | GAI244-3-4     | Efficiency below acceptable level.                                      | Ambient     | Acc       | C/T 021    | QCE            | 1342-1014-1    | 11-9 P  |      |    |           |
| IRN1668        | 10-26-62    | GAI244-6       | Same as above.                                                          | Ambient     | Acc       | C/T NR     | QCE            | FAR Suppl 1    | 12-14 F |      |    | 12-19     |
| IRN1283        | 11-8-62     | GAI244-5       | B-plus voltage shorted to ground when unit was connected to test panel. | Ambient     | Acc       | C/T 021    |                | Same as above  |         |      |    |           |
| IRI307         | 11-14-62    | GAI244-3-4-7-8 | Efficiency below acceptable level. (Vendor Data)                        | Ambient     | Acc       | C/T 021    |                | Same as above. |         |      |    |           |

| NOMENCLATURE   |             | SUBSYSTEM              |              | QC ENGINEER                                                                                                                                                                              |           | PAGE 1 OF 7 PAGES    |       |                |        |          |                |           |
|----------------|-------------|------------------------|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|----------------------|-------|----------------|--------|----------|----------------|-----------|
| Recordon       |             | Telemetry              |              | R. Whittington                                                                                                                                                                           |           |                      |       |                |        |          |                |           |
| DRAWING NUMBER |             | MISSION CLASSIFICATION |              | DESIGN ENGINEER                                                                                                                                                                          |           | MANUFACTURER         |       |                |        |          |                |           |
| 893D580 P1     |             | Major                  |              | J. Ruch                                                                                                                                                                                  |           | Borg-Warner Controls |       |                |        |          |                |           |
| P. NUMBER      | REPORT DATE | SERIAL NO              | FAILURE MODE | ENVIRON                                                                                                                                                                                  | TEST TYPE | RPT ACT              | FA NO | FA RPTS ISSUED |        | DATE     | FARB CLOSE-OUT |           |
|                |             |                        |              |                                                                                                                                                                                          |           |                      |       | BY             | NUMBER |          | FA             | CA        |
| BWC0602        | 11-9-62     | 1317-3                 | 2            | Tape developed kinks which appeared to be impressions caused by tape folding - did not cause the recorder to malfunction beyond spec limits but did cause erratic blanks on tape record. | N/R       | Acc                  | (V)   | A54            | (V)    | FAR 0602 | 11-9           | F         |
| BWC0610        | 11-9-62     | 1317-3                 | 2            | Carrier deviation exceeds spec limits in modes 2 and 3 reproduce. Output frequencies are lower than minimum allowable.                                                                   | N/R       | Acc                  | (V)   | A55            | (V)    | FAR 0610 | 11-9           | F         |
| BWC0601        | 11-12-62    | 1317-3                 | 3            | Reg power supply became noisy with attendant rise of output potential to unregulated condition. Regulation ok when unit was returned to room ambient conditions.                         | Lo-Temp   | Acc                  | (V)   | A56            | (V)    | FAR 0601 | 11-12          | P         |
| BWC0611        | 11-27-62    | 1713-4                 | 2            | Mode 1 operation input current rose to 0.9 amperes.                                                                                                                                      | Hi-Temp   | Acc                  | (V)   | A57            | (V)    | FAR 0611 | 11-27          | P         |
| BWC0615        | 11-27-62    | 1713-4                 | 3            | Record circuits became inoperative in modes 1 and 3.                                                                                                                                     | Hi-Temp   | Acc                  | (V)   | A58            | (V)    | FAR 0615 | 11-27          | P         |
| BWC0614        | 11-29-62    | 1317-4                 | 3            | Carrier deviation exceeded lower limits together with marked increase in input current.                                                                                                  | Accel     | Acc                  | (V)   | 076            | (V)    | FAR 0614 | 11-29          | F 1-9 1-9 |

| ENCLOSURE        |             | SUBSYSTEM              |              | QC ENGINEER                                                                                                                                                                                                       |              | PAGE 2 OF 7 PAGES    |       |            |        |          |                |   |
|------------------|-------------|------------------------|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|----------------------|-------|------------|--------|----------|----------------|---|
| Recorder         |             | Telemetry              |              | R. Whittington                                                                                                                                                                                                    |              |                      |       |            |        |          |                |   |
| DRAWING NUMBER   |             | MISSION CLASSIFICATION |              | DESIGN ENGINEER                                                                                                                                                                                                   |              | MANUFACTURER         |       |            |        |          |                |   |
| 893D590 P1       |             | Major                  |              | J. Ruch                                                                                                                                                                                                           |              | Porg-Warner Controls |       |            |        |          |                |   |
| ENCLOSURE NUMBER | REPORT DATE | SERIAL NO              | FAILURE MODE | ENVIRONMENT                                                                                                                                                                                                       | TEST TYPE    | RPT ACT              | FA NO | FA RPTS BY | NUMBER | DATE     | FARB CLOSE-OUT |   |
|                  |             |                        |              |                                                                                                                                                                                                                   |              |                      |       |            |        |          | FA CA          |   |
| BWC0603          | 12-18-62    | 1317-4                 | 2            | Current exceeded spec limits (reached 0.9 amp) during "Z" axis at 210 cps.                                                                                                                                        | Vibration    | Acc                  | (V)   | A59        | (V)    | FAR 0608 | 12-18          | F |
| BWC0618          | 12-18-62    | 1317-4                 | 0            | Clutch became noisy after R & D vibration testing. The noise was of moderate pitch and intensity but was audible with the case cover in place and secured.                                                        | Post-Vib     | Acc                  | (V)   | A60        | (V)    | FAR 0618 | 12-18          | P |
| BWC0619          | 12-28-62    | 1317-4                 | 2            | Visual inspection revealed two 180° twists in the tape - they were external to the cartridge and caused no performance variation.                                                                                 | Post Lo-Temp | Acc                  | (V)   | A61        | (V)    | FAR 0619 | 12-28          | F |
| BWC0632          | 12-28-62    | 1317-4                 | 3            | The low-speed motor belt broke after approx. 3/4 of the OA test. The belt broke at essentially 90° to its major dimension. The break showed some evidence of separation at or near stock center at rupture point. | N/R          | Acc                  | (V)   | A62        | (V)    | FAR 0632 | 12-28          | F |
| BWC0617          | 1-3-63      | 1317-4                 | 2            | Carrier deviation exceeded 1/2" (high) - input vibration 5"G" at 560 cps in "X"-axis.                                                                                                                             | Vibration    | Acc                  | (V)   | A63        | (V)    | FAR 0617 | 1-3            | F |

| NOMENCLATURE   |             | SUBSYSTEM              |              | QC ENGINEER     |           | PAGE 3 OF 7 PAGES    |       |           |          |      |      |           |
|----------------|-------------|------------------------|--------------|-----------------|-----------|----------------------|-------|-----------|----------|------|------|-----------|
| Recorder       |             | Telemetry              |              | R. Whittington  |           |                      |       |           |          |      |      |           |
| DRAWING NUMBER |             | MISSION CLASSIFICATION |              | DESIGN ENGINEER |           | M/NUFACTURER         |       |           |          |      |      |           |
| 893D580 P1     |             | Major                  |              | J. Ruch         |           | Porg-Warner Controls |       |           |          |      |      |           |
| FA RPT NO      | REPORT DATE | SERIAL NO              | FAILURE MODE | ENVIRONMENT     | TEST TYPE | RPT ACT              | FA NO | FA RPT NO | ISSUED   | DATE | FARB | CLOSE-OUT |
|                |             |                        |              |                 |           |                      |       | BY        | NUMBER   |      | FA   | CA        |
| BWC0635        | 1-11-63     | 1317-5                 | 2            | N/R             | Acc       | (V)                  | A64   | (V)       | FAR 0635 | 1-11 | F    |           |
| BWC0636        | 1-17-63     | 1317-5                 | 2            | N/R             | Acc       | (V)                  | A65   | (V)       | FAR 0633 | 1-17 | P    |           |
| BWC0634        | 1-17-63     | 1317-5                 | 3            | N/R             | Acc       | (V)                  | A66   | (V)       | FAR 0634 | 1-17 | P    |           |
| BWC0635        | 1-19-63     | 1317-5                 | 2            | N/R             | Acc       | (V)                  | A67   | (V)       | FAR 0635 | 1-19 | F    |           |
| BWC0637        | 1-22-63     | 1317-5                 | 2            | N/R             | Acc       | (V)                  | A68   | (V)       | FAR 0637 | 1-22 | F    |           |
| BWC0639        | 1-22-63     | 1317-6                 | 3            | N/R             | Acc       | (V)                  | A69   | (V)       | FAR 0639 | 1-22 | F    |           |

| NOMENCLATURE   |             | SUBSYSTEM              |                                                                                                                                                                                 | QC ENGINEER     |           | PAGE 4 OF 7 PAGES    |                |                |                |
|----------------|-------------|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-----------|----------------------|----------------|----------------|----------------|
| Recorder       |             | Telemetry              |                                                                                                                                                                                 | R. Whittington  |           |                      |                |                |                |
| DRAWING NUMBER |             | MISSION CLASSIFICATION |                                                                                                                                                                                 | DESIGN ENGINEER |           | MANUFACTURER         |                |                |                |
| 893D580 P1     |             | Major                  |                                                                                                                                                                                 | J. Ruch         |           | Borg-Warner Controls |                |                |                |
| FAILURE NUMBER | REPORT DATE | SERIAL NO              | FAILURE MODE                                                                                                                                                                    | ENVIRONMENT     | TEST TYPE | RPT ACT              | FA RPTS ISSUED |                | FARB CLOSE-OUT |
|                |             |                        |                                                                                                                                                                                 |                 |           |                      | BY             | NUMBER         |                |
| BWC0640        | 1-25-63     | 1317-6                 | 2 Tape evidenced erosion which depressed output amplitude. Kinks in the tape were also present on visual inspection of the removed tape.                                        | N/R             | Acc       | (V)                  | A70 (V)        | FAR 0640       | 1-25 P         |
| BWC0641        | 1-30-63     | 1317-6                 | 3 Carrier deviation exceeded limits in plus and then minus direction during "Z" axis vibration. Recorder subjected to initial bench and X-Y axes of vibration prior to failure. | Vibration       | Acc       | (V)                  | A71 (V)        | FAR 0641       | 1-30 F         |
| BWC0642        | 2-1-63      | 1317-6                 | 3 Two 180° twists were inserted in the tape between the output of upper tape reservoir and the input of the lower tape storage deck.                                            | Hi-Temp         | Acc       | (V)                  | A72 (V)        | FAR 0642       | 2-1 F          |
| IR20189        | 2-6-63      | 1317-5                 | 2 Frequency response out of spec at 40.0 and 70.0 kc.                                                                                                                           | Ambient         | Acc       | C/T                  | 126            | QCE 1342-238-1 | 3-22 P         |
| BWC0663        | 2-8-63      | 1317-7                 | 3 Tape jammed during Z-axis vibration - both X and Y axes tested ok prior to jam.                                                                                               | Vibration       | Acc       | (V)                  | A90 (V)        | FAR 0663       | 2-8 P          |
| BWC0659        | 2-9-63      | 1317-7                 | 2 Belt (lower pinch) showed signs of start of material separation. No performance degradation occurred. Belt had 20 hrs. running time.                                          | N/R             | Pre-OAT   | (V)                  |                |                |                |

|                |  |                        |  |                 |  |                   |  |
|----------------|--|------------------------|--|-----------------|--|-------------------|--|
| NOMENCLATURE   |  | SUBSYSTEM              |  | QC ENGINEER     |  | PAGE 5 OF 7 PAGES |  |
| Recorder       |  | Telemetry              |  | R. Whittington  |  |                   |  |
| DRAWING NUMBER |  | MISSION CLASSIFICATION |  | DESIGN ENGINEER |  | MANUFACTURER      |  |
| E930560 P1     |  | Major                  |  | J. Ruch         |  | Warner Controls   |  |

| FAIR REPORT NUMBER | REPORT DATE | SERIAL NO | FAILURE                                                                                                                                                                                                                                             | ENVIRONMENT | TEST TYPE | RPT ACT | FA NO | FA RPT# ISSUED |          |      | FARB CLOSE-OUT |    |  |
|--------------------|-------------|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-----------|---------|-------|----------------|----------|------|----------------|----|--|
|                    |             |           |                                                                                                                                                                                                                                                     |             |           |         |       | BY             | NUMBER   | DATE | FA             | CA |  |
| BMC0664            | 2-10-63     | 1317-2    | Wow and flutter carrier deviation (lower limit 14 and all OAI to completed).                                                                                                                                                                        | *N/R        | N/R       | (V)     | A91   | (V)            | FAR 0664 | 2-10 | P              |    |  |
| BMC0653            | 2-12-63     | 1317-7    | Upper pinch belt evidence of separation. No performance degradation occurred in the recorder. Operating time on the belt was 40 hrs.                                                                                                                | N/R         | Pre-OAI   | (V)     |       |                |          |      |                |    |  |
| BMC0657            | 2-13-63     | 1317-7    | Clutch became intermittently noisy. Free torque, slip torque, current, and all other performance indices were satisfactory. (Test status: bench, vibration, acceleration, and low temp. 46 hrs total - time on clutch).                             | N/R         | Pre-OAI   | (V)     |       |                |          |      |                |    |  |
| BMC0655            | 2-18-63     | 1317-7    | Lower pinch belt was removed and replaced during investigation of other problems. Belt showed evidence of mid-point separation failure characteristic. (Belt running time approx 32 hrs, during bench, vibration, acceleration, high and low temp). | N/R         | N/R       | (V)     |       |                |          |      |                |    |  |

| SUBSYSTEM  |         |           | QC ENGINEER                                                                                                                                                                                                               |             | PAGE 6 OF 7 PAGES    |        |     |        |            |      |      |
|------------|---------|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|----------------------|--------|-----|--------|------------|------|------|
| Recorder   |         |           | R. Whittington                                                                                                                                                                                                            |             | MANUFACTURER         |        |     |        |            |      |      |
| BHC NUMBER |         |           | DESIGN ENGINEER                                                                                                                                                                                                           |             | Borg-Warner Controls |        |     |        |            |      |      |
| 893D590 P1 |         |           | J. Ruch                                                                                                                                                                                                                   |             |                      |        |     |        |            |      |      |
| REPORT NO  | DATE    | SERIAL NO | FAILURE MODE                                                                                                                                                                                                              | ENVIRONMENT | TEST RPT TYPE        | ACT NO | BY  | NUMBER | DATE       | FA   | CA   |
| BHC0655    | 2-18-63 | 1317-7    | 2 A drop of 6.5db was discovered at 70kc in final bench frequency response test - drop generally at high end. Recorder had been subjected to complete OAT up to final bench.                                              | Ambient     | Acc                  | (V)    |     |        |            |      |      |
| BHC0662    | 2-19-63 | 1317-5    | 3 R302-6020 motor drive module malfunctioned. *(Unit had been returned from ASPD because of 70kc response drop-off).                                                                                                      | Ambient     | *                    | (V)    |     |        |            |      |      |
| BHC0660    | 2-22-63 | 1317-7    | 2 Upper pinch belt showed signs of material separation and was replaced - no recorder performance degradation occurred. (32 hrs running time on belt-recorder had been subjected to 2 complete OAT tests with this belt). | N/R         | N/R                  | (V)    |     |        |            |      |      |
| IR20135    | 2-27-63 | 1317-6    | 3 Amplitude instability (read 4 to 6db - spec max 2db). Failure due to high noise level on output - measured approx 4V P-P at 150-220 cps.                                                                                | Ambient     | Acc                  | C/T    | 160 | QCE    | 1342-238-2 | 3-22 | 3-22 |
| BHC0666    | 3-2-63  | 1317-8    | 3 Signal interruption in mode II high current in mode I. Clutch mechanically dragging and relay inoperative in magnetic field of vibration test equipment.                                                                | Vibration   | Acc                  | (V)    | A92 | (V)    | EAR 0666   | 3-2  | P    |

|                |  |                        |  |                 |  |                      |  |
|----------------|--|------------------------|--|-----------------|--|----------------------|--|
| NOMENCLATURE   |  | SUBSYSTEM              |  | QC ENGINEER     |  | PAGE 7 OF 7 PAGES    |  |
| Recorder       |  | Telemetry              |  | R. Whittington  |  |                      |  |
| DRAWING NUMBER |  | MISSION CLASSIFICATION |  | DESIGN ENGINEER |  | MANUFACTURER         |  |
| 893050 P1      |  | Major                  |  | J. Ruch         |  | Borg-Warner Controls |  |

| FAILURE NUMBER | REPORT DATE | SERIAL NO | ENVIRONMENT | TEST TYPE                                                                                                                                                             | REF. ACT | FA NO | FA RPTS ISSUED |        | FARB CLOSE-OUT |            |
|----------------|-------------|-----------|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-------|----------------|--------|----------------|------------|
|                |             |           |             |                                                                                                                                                                       |          |       | BY             | NUMBER | DATE           | FA CA      |
| BWC0665        | 3-2-63      | 1317-7    | 2           | Both pinch belts exhibit visual evidence of material separation - one belt with 29 hrs, the other with 35 hrs of operation. No operating characteristic was affected. | N/R      | Acc   | (V)            | A93    | EAR 0665       | 3-2 P      |
| BWC0668        | 3-7-63      | 1317-7    | 3           | 70kc response in mode III 10mv below spec minimum.                                                                                                                    | Hi-Temp  | Acc   | (V)            | A94    | EAR 0668       | 3-7 F 4-12 |

|                            |                        |                 |                   |
|----------------------------|------------------------|-----------------|-------------------|
| NOMENCLATURE               | SUBSYSTEM              | QC ENGINEER     | PAGE 1 OF 1 PAGES |
| Complimentary "AND" Module | Tracking & Command     | E. Tkacz        |                   |
| DRAWING NUMBER             | MISSION CLASSIFICATION | DESIGN ENGINEER | MANUFACTURER      |
| 893D300 G1                 | Critical               | J. McBride      | GE-ASPD           |

| FAILURE REPORT                                         |                    | SERIAL NO | QTY | FAILURE MODE                                                                                                     | ENVIRON | TEST TYPE | RPT ACT | FA NO | FA RPTS ISSUED |        | FARS CLOSE-OUT |    |
|--------------------------------------------------------|--------------------|-----------|-----|------------------------------------------------------------------------------------------------------------------|---------|-----------|---------|-------|----------------|--------|----------------|----|
| NUMBER                                                 | DATE               |           |     |                                                                                                                  |         |           |         |       | BY             | NUMBER | DATE           | FA |
| DR81662<br>IR21527                                     | 2-25-63<br>3-22-63 | KN294     | 3   | Output remains at constant 6V- should go to ground when any input is grounded. (Failed on C-D Board 254E173 G1). | Ambient | S/A       | C/T     | 199   |                |        |                |    |
| <p style="text-align: center;">4-1-63<br/>(5-1-63)</p> |                    |           |     |                                                                                                                  |         |           |         |       |                |        |                |    |

**FAILURE ANALYSIS  
REVIEW BOARD  
MINUTES**

| <u>FA Log.<br/>No.</u> | <u>Component<br/>Dwg. No.</u>      | <u>Failure Analysis</u>                                                                                                                                                                                                                                 | <u>Corrective Action</u>                                                                                                                                                                                          | <u>Completed<br/>Date</u> |
|------------------------|------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| A04                    | Thermoswitch<br>111C3289P6         | Cause of out-of-tolerance opening and closing could not be established.                                                                                                                                                                                 | This was only failure in several hundred units. Unit was replaced. Other units will be closely watched in test for tolerance problems.                                                                            | 3-15-63*<br>(3-15-63)**   |
| A19                    | Command<br>Programmer<br>103C4975  | Noisy delay line assembly due to improperly stressed shield. Assembly passed all operational tests when held firmly during vibration. CRI Diode not defective - bad weld found at diode - circuit ribbon connection. Broken weld found on resistor A47. | Shields reworked to proper designed stress. Mfg. notified shields must be stressed to angle less than 90°. Replacements shipped where required. Welding machines calibrated; pull tests now conducted every hour. | 3-27-63<br>FA & CA        |
| A20                    | Command<br>Programmer<br>103C4975  | Capacitor C3, Module A22 capacitance decreased with increase of temperature. C3 lead made poor contact with metallic film.                                                                                                                              | Mfr. informed. This has been treated as an isolated failure. No action planned unless a repetition of this failure occurs.                                                                                        | 3-27-63<br>FA & CA        |
| A23                    | Mixer Box<br>111C3820              | Vendor (Barnes) advises that supplier of transformer used with this sensor has gone out of business. F.A. indicates qual. test (humidity) failure due to 30 percent breakdown in transformer ratio attributable to excessive heating or humidity.       | Design change in process. Barnes seeking new source.                                                                                                                                                              | 2-15-63<br>3-8-63         |
| 028                    | OCV Relay<br>Box<br>247E798G1      | Load resistors burned out as a result of chattering of the 30 ms relay in the test panels. The resultant intermittent pulses across the load resistors caused them to overheat.                                                                         | Capacitor installed in relay circuit to eliminate chatter. Subsequent OA of units with fix indicates it is effective.                                                                                             | 2-15-63<br>(2-15-63)      |
| 031                    | Separation<br>Switch<br>113C9312P1 | Dielectric and/or insulation resistance breakdown in post-acceleration qual test failure could not be duplicated in retest at vendor. Incorrect test procedure suspected.                                                                               | Unit replaced by vendor. No. of dielectric tests reduced from 8 to 2 on assumption repeated tests precipitate failure condition.                                                                                  | 2-26-63<br>(2-26-63)      |
| 041                    | TARS<br>Electronics<br>111C3773    | Wire added at ASPD from J1-m to B+ was routed around TB #1 and stressed to the point that it shorted through the insulation to TB #1.                                                                                                                   | Damaged wire was replaced and routed so as to preclude recurrence. Rework and modifications to be monitored more closely to ensure proper wire routing and that insulation damage does not occur.                 | 3-27-63<br>FA & CA        |

\* Failure Analysis Completion Date

\*\* Corrective Action Completion Date

| <u>FA Log.<br/>No.</u> | <u>Component<br/>Dwg. No.</u>                       | <u>Failure Analysis</u>                                                                                                                                 | <u>Corrective Action</u>                                                                                                               | <u>Completed<br/>Date</u> |
|------------------------|-----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| 047                    | Accelerometer<br>108C8809P4                         | Out-of-spec. tolerance in acceptance test was caused by application of excessive current which broke down the silicone oil.                             | Test equip't and procedure reviewed to preclude any possibility of excess current being applied.                                       | 2-26-63                   |
| 066                    | Compartment<br>Heater<br>248E200G7                  | Failures were caused by local overheating on open circuits due to cracks caused by improper handling.                                                   | Vulnerable areas reinforced, vendor h&f instituted in-process testing with heat sensitive paper to isolate faults.                     | 3-8-63<br>(3-8-63)        |
| 067                    | 30 x 5 Multiplexer<br>825D430                       | Unit struck during manufacture resulting in fracture of swaged terminal connection.                                                                     | Unit repaired. Improved handling techniques introduced in MFR cycle.                                                                   | 2-15-63<br>(2-15-63)      |
| 077                    | Latching<br>Contactor<br>114C1141                   | Relay returned to vendor for F. A. Vendor lost failed relay in process of relocating his facility. Future F. A. on this component will be done at ASPD. | Sample units being built for ASPD test to evaluate operating voltages and times thru ambient temp. range and life cycle at rated load. | 3-15-63                   |
| 084                    | PREDAC<br>114C1553                                  | 28 volts introduced on 10 volt line - procedural error.                                                                                                 | Procedure corrected to preclude repetition of this error.                                                                              | 2-26-63<br>(2-26-63)      |
| 086                    | Lo-Press<br>Transducer<br>133B1108P1                | Leakage from coil windings to pot core to case due to insulation breakdown.                                                                             | Coating pot cores with epoxy material. Tests show fix effective.                                                                       | 3-8-63<br>(3-8-63)        |
| 087                    | Separation<br>Spring and<br>Guide Assy<br>825D645G1 | Spring deflection improperly calibrated by vendor.                                                                                                      | Vendor instructed on correct calibration.                                                                                              | 2-26-63<br>(2-26-63)      |
| 092                    | Env. Temp.<br>Controller<br>893D126/127 G1          | Vendor testing tolerances and test procedure incorrect.                                                                                                 | New vendor test reqm'ts implemented.                                                                                                   | 3-8-63<br>(3-8-63)        |
| 096                    | Compartment<br>Heater<br>248E200 G8                 | Break and pin holes located in heaters.                                                                                                                 | Units repaired and resubmitted. Vendor now using heat sensitive paper to detect potential failure areas in in-process testing.         | 3-27-63<br><br>FA & CA    |
| 098                    | Power<br>Controller<br>242E558G1                    | Diode open circuited as result of tester applying 28 volts to relay coil with incorrect polarity.                                                       | Test procedure changed to preclude repetition of this failure.                                                                         | 2-15-63<br>(2-15-63)      |
| 099                    | Power<br>Controller<br>242E558G1                    | Premature shutdown due to out-of-spec transistor. F. A. not feasible because failed transistor was not returned.                                        | Transistor replace wire shop advised to save all failed parts for Q. C. Eng'r evaluation and F. A.                                     | 2-15-63<br>(2-15-63)      |

| <u>FA Log.<br/>No.</u> | <u>Component<br/>Dwg. No.</u>               | <u>Failure Analysis</u>                                                                                                                                                                                  | <u>Corrective Action</u>                                                                                                                                                                                      | <u>Completed<br/>Date</u> |
|------------------------|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| 102                    | G-volt power<br>Supply<br>242E610           | Insulation damaged on leads of Q5 transistor; lead shorted to heat sink. Damaged due to pinching in assembly; fabrication jig not rigid enough.                                                          | New wiring jig ordered 1-31-63.                                                                                                                                                                               | 2-15-63<br>(2-26-63)      |
| 104                    | Hi-Voltage<br>Power Supply<br>893D159G1     | Loss of 300 V. D. C. and rise of nominally 6.3 V. A. C. to 7.15 V. was result of break in wire between bridge rectifier and output filter. Wire broke while shipping under qual. vibration test.         | Bonding of this wire to preclude whipping is included in AN issued after this unit was built. Unit modified accordingly when repaired.                                                                        | 2-15-63<br>(3-8-63)       |
| 105                    | PREDAC<br>114C1553                          | Ref. to FSR Issue 3 for Prelim. F. A. Further investigation revealed three broken pins at center of bottom board. Vendor believes high damage potential was result of shock tests on unsupported boards. | Unit modified by addition of polyurethane sheets and con-formal cavity pads to withstand shock and vibration in qual. testing. Stacked and cushioned ass'y is 10-15% compression stressed by 4 through bolts. | 3-27-73<br><br>FA & CA    |
| 107                    | Baroresistor<br>108C8817P3                  | Failure (noisy output) was caused by high spot on element.                                                                                                                                               | Noise eliminated on this unit by cycling. Closer inspection will be maintained on future units.                                                                                                               | 2-26-63<br>(2-26-63)      |
| 109                    | Rotary<br>Actuator<br>884D745               | Broken gear and pinion due to incorrect heat treatment.                                                                                                                                                  | Heat treatment modified; spring system modified. Vendor surveillance will be required for in-process inspection. Existing parts not meeting new reqm't will be scrapped.                                      | 3-8-63<br>(3-8-63)        |
| 110                    | Controller,<br>Power<br>Transfer<br>254E266 | Cracks in conformal coating in OA vibration could not be enlarged by additional vibration. Performance not affected.                                                                                     | Repair for boards which do show cracks has been devised.                                                                                                                                                      | 3-8-63<br>(3-8-63)        |
| 117                    | Controller<br>Power<br>Transfer<br>254E266  | Battery current TM signal out of spec. Could not be duplicated by vendor or by ASPD when unit was returned.                                                                                              | Not required.                                                                                                                                                                                                 | 3-8-63                    |
| 118                    | Controller,<br>Power<br>Transfer<br>254E266 | Malfunction isolated to card tester. F. A. also found RF pickup in test cable.                                                                                                                           | Grounding changed to correct card tester filter capacitor installed to minimize RF pick-up.                                                                                                                   | 3-8-63<br>(3-8-63)        |
| 119                    | Controller, Pwr.<br>Transfer<br>254E266     | Test equipment applying excess voltage to relays, over stressing parts.                                                                                                                                  | Test equip't modified to preclude repetition.                                                                                                                                                                 | 3-8-63<br>(3-8-63)        |

| <u>FA Log<br/>No.</u> | <u>Component<br/>Dwg. No.</u>              | <u>Failure Analysis</u>                                                                                                                                                         | <u>Corrective Action</u>                                                                                                                                                                                             | <u>Completed<br/>Date</u> |
|-----------------------|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| 122                   | Safe and Arm<br>Mech.<br>825D615           | Flag and Flag slot showed<br>indications of scraping. Flag<br>was improperly installed on<br>shaft.                                                                             | Unit reassembled correctly<br>Thickol has implemented<br>new inspection point to<br>control flag inspec-<br>installation.                                                                                            | 3-27-63<br><br>FA & CA    |
| 125                   | Baroresistor<br>108C8817P3                 | Hollow electrical feed throughs<br>were defective and allowed<br>case to lose vacuum.                                                                                           | Solid pin feed throughs were<br>installed and will be used in<br>the future. Engineering<br>changes have been issued<br>at vendor.                                                                                   | 3-15-63<br>(3-15-63)      |
| 127                   | Controller<br>Power<br>Transfer<br>254E266 | Loose terminal block was<br>found attributable to dirty<br>surface at time of epoxy<br>bonding.                                                                                 | T. B. surface cleaned,<br>rebonded and tested satis-<br>factorily.                                                                                                                                                   | 3-15-63<br>(3-15-63)      |
| 140                   | Power<br>Controller<br>242E558             | Contacts 1 and 6 of Relay<br>K-4 welded together and had<br>a 10 ohm resistance across<br>them. Diode CR11 was<br>disintegrated. Failure<br>was caused by an external<br>short. | Corrective action pending.                                                                                                                                                                                           | 3-27-63<br><br>FA only    |
| 160                   | Signal<br>Data<br>Recorder<br>893D580P1    | Open weld connection in<br>flip-flop module of motor<br>servo control circuit.                                                                                                  | Module replaced. Defec-<br>tive module repaired.<br>Care will be exercised<br>in the future to avoid<br>bending leads during<br>potting so as not to<br>break welds. Gold<br>plating of leads to be<br>incorporated. | 3-27-63<br><br>FA & CA    |