63-3-2

MODEL Minuteman

DOCUMENT NUMBER D2-5859, Volume I

SECTION OR ADDENDUM NO. .3

TITLE

Wing III QPRI Supplement for WS-133A Minuteman Hardened and Dispersed.

NO. OF PAGES 38

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The technical information contained herein has been coordinated with the System Functional Analysis of System Engineering.

for J. B. Marcella, Chief
System Functional Analysis

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WORK ORDER	UNIT NO.	ITEM NO.

Sub-section title page
Documents

MODEL WS-133A DOCUMENT NO D2-5859 Volume I

TITLE The Wing III QPRI Supplement for WS-133A Minuteman H&D

REVISIONS				ADDITIONS			
PAGE	DATE	PAGE	DATE	PAGE	DATE	PAGE	DATE
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INTRODUCTION

The Wing III Supplement should be used with the Wing I QPRI and the Wing II Supplement. This supplement updates the Wing I document with the Wing II Supplement to the Wing III configuration.

The major Wing III changes resulted from hardening and extending the survival period of the Launch Facility and the Launch Control Facility. An entirely new structure, the Launch Control Equipment Building, was constructed adjacent to the Capsule. It houses the equipment necessary to sustain the Capsule and the EWO capability for extended periods. Also, a hydraulic pusher was substituted for the gearcase motor. A list of Figure A changes with a brief explanation will be found on pages iv. 3 through xv. 3.

Table i-1A. 3 (Volume I) and Table i-1B.3 (Volume II) identify personnel by Air Force Specialty Code (AFSC) that are affected by equipment changes. The equipment is identified by Figure "A" number and name. The "Status" column of Table i-1A. 3 and Table i-1B. 3 show how the Duties and Tasks have changed, as follows: Changed means that Wing II Duties and Tasks have been revised for Wing III. Added signifies that the Duties and Tasks are an addition to those for Wing II. Deleted shows that the Duties and Tasks are performed in Wing II but not in Wing III.

The "Page" column in Table i-1A. 3 and Table i-1B. 3 shows the page in the Wing I and Wing II QPRI affected by changes. The suffixes A. 3, B. 3, C. 3 . . . Z. 3 added to the page number show Wing III peculiarity, (. 3). The A. B. C. . . . Z. part of the suffix shows the sequential order in which pages should follow a particular page in the basic Wing I and II document. These added pages amplify existing pages or inject new material between existing pages.

> Editors Note: Whenever duty/task information has been changed or added for a given AFSC, new duty/task pages have been provided which replace or supplement pages issued previously. These new duty/task pages are listed in Table i-1A. 3 to the right of the AFSC to which they apply. Whenever duty/task information has been deleted for a given AFSC, the work "Deleted" has been entered in the "Status" column and the page number on which the data is to be deleted is listed in the "Page" column of Table i-1A. 3. Because the deleted data is, in many instances, still applicable to earlier wings, and there may be other data on the page that is still current, it is suggested that a handwritten note be placed opposite the deleted data on the duty/task page to the effect that "Figure A XXXX (or Form B XX-XXXXX) duties and tasks deleted for Wing III and on."

The tables in the Supplement have the same basic numbering as corresponding tables in the Wing I document and Wing II Supplement, but in addition, they have a . 3 suffix. For example; Table 5-2. 2 is a Manning Summary for Wing II and Table 5-2. 3 is a Manning Summary for Wing III.

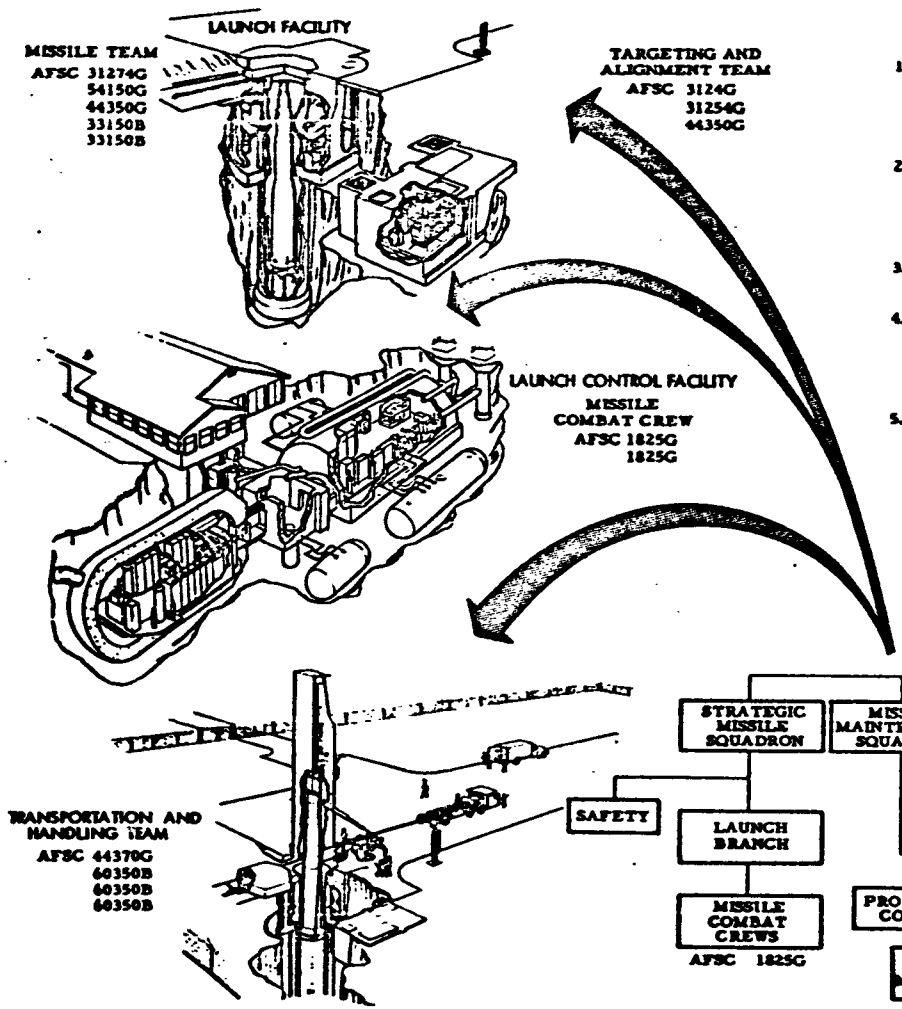
Tables i-1A. 2 or . 3, i-1B. 2 or . 3 and 5-2B. 2 or . 3 are in the Wing II and III Supplements only. Table 5-2B. 3 shows the composition of Minuteman Mobile Maintenance Teams for Wing III. Charts 5-1. 3 and 5-2. 3 compare Wing I, II and III Team and Manning Summaries.

CAUTION

The QPRI and QPRI Supplements are planning documents and should not be considered as the final source of detailed procedural information.

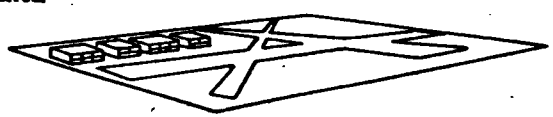
The Technical Orders (T. O. 's) or T. O. Checklists are the official source of detailed information on the use and maintenance of Aero-Space Ground Equipment (AGE) and should be referred to for more complete and authoritative procedures.

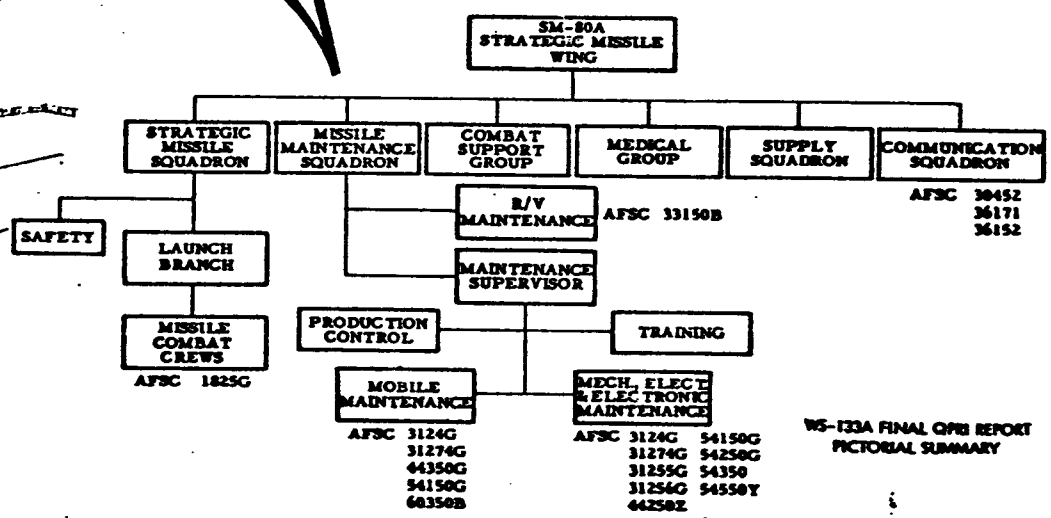
To assist the reader in locating appropriate T. O. data, a matrix that cross references equipment Figure A numbers to T. O. numbers is provided as Appendix A-2, Volume II of Wing III Supplement to D2-5859.



MOBILE MAINTENANCE SEQUENCE

1. Upon receipt of a "Fault" indication on the operator's panel, the Missile Combat Crew will interrogate VRSA. The resulting VRSA information, together with panel indications, will be coordinated with the Maintenance Control Center. The Missile Combat Crew will perform any further tests necessary to assist the Maintenance Control Center in fault diagnosis.
2. The Electro-Mechanical Team, composed of selected personnel (composition depends on the fault) from the Maintenance Mobile Branch are dispatched from the SB to perform organizational, and occasionally, field maintenance, for all non-missile faults. This team also responds to requests for maintenance originating at LCFs.
3. The Missile Team is dispatched for missile faults. If missile removal is required, the Missile Transportation and Handling Team is also dispatched.
4. A Targeting and Alignment Team is required to start-up and target the missile (achieve STRATEGIC ALERT status) after Missile or G&C Section removal. The Electro-Mechanical Team can return the missile to STRATEGIC ALERT with the Start-Up Unit after repairing an OGE failure that had resulted in a missile No-Go.
5. Optical alignment checks are made periodically by the Targeting and Alignment Team. This team also performs optical alignment when the missile is repaired.





REAL PROPERTY INSTALLED EQUIPMENT (RPIE) CHANGES

1. Figure A 1209.3 - Water Control and Removal System, LF

   a. Check valve added on the discharge line of the Sump Pump to prevent reverse flow.

2. Figure A 1210.3 - Sewage Disposal System, LCC

   a. Add automatic/manual valves on drain and vent lines penetrating the capsule.

   b. Add 2" floor drain in the LCEB.

   c. Add a 3500 gallon emergency sewage overflow tank located outside the Tunnel Junction and connected to the sewage sump.

   d. Revise the size of the sump pump in the Tunnel Junction.

*3. Figure A 1230.3 - Fuel System, LCSB

   a. This Figure A now furnishes fuel for the mobile standby generator (Figure A 1437.3) instead of the standby power source (Figure A 1323.3).

   b. Fuel quantity is now figured for a sixty day hot water supply instead of ten day for hot water and standby power.

   c. Delete above-ground day tank, transfer pumps and low-level alarm.

4. Figure A 1241.3 - Shock Attenuztion System, LCC

   a. Increase the number of air storage cylinders at each shock isolator from one to two.

*5. Figure A 1242.3 - Lift, Service, LCC

   a. Increase live load capacity from 2,000 to 6,000 pounds.

   b. Decrease operating speed from 50 to 25 fpm.

   c. Increase load equipment envelope from 30 x 42 x 68 to 58 wide x 114 long x 94 high.

*6. Figure A 1323.3 - Electrical System, LCC (Hard)

   a. Revise electric power ground.

   b. Revise telephone equipment ground.

* Indicates Figure A's included in Wing III QPRI Supplement.

6. Figure A 1323.3 - Electrical System, LCC (Hard) (Cont.)

   c. Relocate standby engine-generator and transfer switch from LCSB to LCEB.

   d. Change engine starting control from manual to automatic.

   e. Change load transfer from manual to automatic.

   f. Delete engine-shutdown for high lube oil temperature.

   g. Add automatic engine exerciser.

   h. Interlock engine operation with 36" Blast Valve operation.

   i. Add power distribution within the LCEB.

   j. Decrease standby generator capacity from 150 KW to 75 KW.

   k. Decrease commercial power requirements from 225 kva to 130 KW with 85% PF.

   l. Provide power for Blast Valve Control System, Figure A 1432.3.

7. Figure A 1324.3 --Water Supply System, LCC

   a. Add shock attenuators on the water line at point of capsule penetration.

   b. Add remote controlled (LCC Supervisory Panel) air-operated shutoff valve on water line at point of capsule penetration.

   c. Add 3500 gallon water storage tank (TK-112) buried outside the LCEB for emergency usage. Add seven compressed air bottles and solenoid valve inside the LCEB to pressurize the tank during the survival period.

   d. Add an emergency shutoff valve on the water line entering the LCEB. Valve is closed manually or mechanically by an upward movement of the floor.

   e. The water treatment equipment is revised to meet conditions at the various sites.

   f. Add a pipe with shutoff valve to supply raw water to the sewage lagoon. Note: AIO will maintain this system.

8. Figure A 1325.3 - Heating System, LCSB

   a. Reduce boiler capacity to 250,000 btu/hr.

   b. Add chemical pot feeder to heating system.

* Indicates Figure A's included in Wing III QPRI Supplement.

v.3

9. Figure A 1327.3 - Security System, LCC

   a. Delete exterior door to the Security Room in the LCSB.

   b. Change size of exterior door to the Access Shift Vestibule in the LCSB from 3 x 7 to 5 x 8-6.

10. Figure A 1328.3 - Fire Alarm System, LCC

   a. Add second system for LCEB with an interlock to shut down the ventilating system for the LCC.

   b. Add visual and aural signals for fire in LCEB in both LCEB and LCC.

11. Figure A 1329.3 - Electrical System, Launcher

   a. Revise number of connected circuits.

   b. Reduce commercial power requirement from 112.5 kva to 75 KW with 0.81 PF.

   c. Divide the engine-generator control panel into an engine control panel and a generator control panel, and revise instrumentation.

   d. Shock mount equipment in the LSB.

   e. Remove emergency power test contactor from IWS panel and modify power switching arrangement to delete emergency power test sequence. (Boeing must initiate this change by FCIR. Change description is part of ECP 358.)

   f. On startup of the standby diesel generator, the load is not connected until the generator output reaches given levels. These levels have been raised from 55 cps for Wing II to 60 cps on Wing III and from 80% of nominal voltage on Wing II to 90% on Wing III.

12. Figure A 1330.3 - Shock Attenuation System, LER

   a. Add shock attenuation equipment for the launcher electrical distribution panel.

13. Figure A 1331.3 - Security System, Launcher

   a. Secure personnel access covers with commercial padlocks rather than conventional hardware with keyed locksets in standard hollow steel door.

14. Figure A 1333.3 - Personnel Support Equipment, LCC

   a. Revise the equipmant list to eliminate those items of a "Stock" nature (refrigerator).

b. Include items of built-in nature (bathroom fixtures) not previously called out in any Figure A.

c. Revise quantities to accommodate new estimated personnel requirements.

15. Figure A 1389.3 - Heating and Ventilating System, LSB

a. Relocate unit heater from ceiling of room to underside of shock mounted floor.

b. Add 10,000 cfm supply fan.

c. Change exhaust fan from a 3450 cfm propeller type to a 10,000 cfm centrifugal type.

d. Delete snow melting requirement.

*16. Figure A 1390.3 - Ventilating System, LCSB

a. Delete provision for ventilating engine-generator and brine-chiller relocated to LCEB.

*17. Figure A 1396.3 - Monitor System, Equipment Fault, LCC

a. Add "LCC Supervisory Panel" in LCC (Capsule) containing the following:

(1) Pushbutton for electric door operator between rooms 101 and 102 in the LCSB. At Wing II there is a pushbutton located separately near the inside of the blast door operating the door between rooms 104 and 105 in the LCSB.

(2) To display light, buzzer and silence push-button connected to the control panel on the engine-generator and the Equipment Building Alarm Panel.

(3) An "open-close" switch that controls a solenoid valve in the LCEB between the compressed air cylinders and the buried water storage tank.

(4) A display light, bell and silence push-button connected to the Fire Alarm Control Cabinet (Figure A 1328.3) located in the LCEB.

(5) A display light that indicates when the Tunnel Junction Blast Door is closed and locked.

(6) A display light and three position switch connected to the three power phases in Panel LCPA located in the LCC (Capsule) to monitor incoming power.

* Indicates Figure A's included in Wing III QPRI Supplement.

*17. Figure A 1396.3 - Monitor System, Equipment Fault, LCC (Cont.)

a. (7) An "open-close" switch that controls three solenoid valves, which in turn control air-operated valves on the cold water, drain and vent lines where they enter the capsule.

(8) An "open" pushbutton and "closed" pushbutton to provide manual control for the Shock Contactor located in the LCEB.

b. The Equipment Room Alarm Panel located in the Equipment Room of the LCSB at Wing II is now the Equipment Building Alarm Panel located in the LCEB at Wing III and is changed as follows:

(1) The three display lights for the deleted second environmental control equipment have been removed.

(2) A display light for no (low) LCC air exhaust has been added. The type and location of monitor are not resolved.

c. The following changes are made in the monitoring provisions of the Generator Instrument Panel:

(1) The panel, which is attached to the engine-generator, is now located in the LCEB rather than the LCSB.

(2) A visual display "Engine failure to start" has been added.

(3) A visual display "air intake and/or exhaust blast valves closed" has been added.

d. Add monitor to show closed and locked condition of Tunnel Junction Blast Door, Figure A 1440.3. Indication appears on LCC Supervisory Panel.

e. The LCC Monitor and Alarm Station at Wing II is renamed the LCSB Monitor and Alarm Station at Wing III and is changed as follows:

(1) The display lights (2) for the Generator Room and the Equipment Room are deleted.

(2) The two-way selector switch for the flood lights is deleted.

(3) A display light for the water treatment system is added. The monitor for this display is located on the water meter in the Water Treatment Room, LCSB.

*18. Figure A 1405.3 - Fuel System, Launcher

a. Increase the size of the bulk storage tank located by the LSB from 1500 to 14,300 gallons.

* Indicates Figure A's included in Wing III QPRI Supplement.

*18. Figure A 1405.3 - Fuel System, Launcher (Cont.)

b. Change the day tank located in the LSB from a horizontal to a vertical configuration.

c. Add flexible connections between the bulk storage tank and the day tank.

d. Delete the 10" inspection outlet and manway to grade on the bulk storage tank and add an 18" buried manhole.

e. Relocate the bulk storage tank conservation vent inside the LSB.

*19. Figure A 1436.3 - Ventilating System, LCEB

a. This new requirement is generated by relocating the engine-generator and brine chiller from the LCSB.

b. These provisions were formerly included in Figure A 1390.3, Ventilating System, LCSB.

*20. Figure A 1437.3 - Electrical System, LCSB

a. New Figure A providing for electrical distribution system in the LCSB. Figure A 1323 previously provided for the LCSB, but now provides only for the hardened structures.

b. Provide for mobile standby generator (to be furnished by SAC) for maintaining service in the LCSB.

*21. Figure A 1438.3 - Fuel System, LCEB

a. Provide fuel storage for the standby engine-generator.

b. This requirement was previously satisfied by Figure A 1230, Fuel System, LCSB.

*22. Figure A 1439.3 - Shock Attenuation System, LCEB

a. Provide shock floor and attenuators for the new structure, complying with Wing III shock criteria.

*23. Figure A 1440.3 - Blast Door Installation, LCC, Tunnel Junction

a. Add blast door at the elevator shaft entrance to the Tunnel Junction. This door protects the equipment and space both within the Tunnel Junction and the LCEB.

*24. Figure A 1441.3 - Shock Attenuation System, LSB

a. This is a new requirement providing for increased shock protection of essential equipment in the LSB.

* Indicates Figure A's included in Wing III QPRI Supplement.

*25. Figure A 1450.3 Accumulator Set, 24-Inch Blast Valve Control

* Indicates Figure A's included in Wing III QPRI Supplement.

OPERATIONAL GROUND EQUIPMENT (OGE) CHANGES

*1. Figure A 1211.3 - Environmental Control System, Launcher

a. Delete the 8" blast valve on the air duct to the LER.

b. Reduce the size of the make-up air duct between the LSB and the LER from 6" to 2" and add a buried serpentine coil to increase the total length.

c. Mount control panels in the LER on shock mounts.

d. Replace the blast check valves on the brine lines entering the LER with "safety heads."

e. Add an absolute filter to the end of the make-up air duct located in the LSB.

f. Redesign the shock mounting of the equipment.

g. Redesign the control panel to provide automatic starting and stopping with 36" blast damper operation.

*2. Figure A 1212.3 - Environmental Control System, LCC

a. Relocate the air conditioning equipment from the LCSB to the LCEB.

b. Add provision for automatic shutdown of the air conditioning equipment in the event of fire in the LCEB.

c. Add a "clean room" to enclose the air handling equipment in the LCEB.

d. Add a monitor to sense low exhaust air flow from the capsule.

e. In the SRCC configuration, replace the dual units used in Wing II with a single large-capacity chiller and air handling unit.

3. Figure A 1246.3 - Cable Assembly Set, Launch Control Facility

a. ECP 403 - Delete, revise, and add cables as required to accommodate changes made to mating facilities and RPIE in the LCF.

4. Figure A 1248.3 - Cable Assembly Set, Launcher

a. ECP 358 - Delete, revise, and add cables as required to accommodate changes made to OGE by this ECP.

* Indicates Figure A's included in Wing III QPRI Supplement.

5. Figure A 1373.3 - Electrical Surge Arrestor, LCF

   a. ECP 401 - Change the ESA to accommodate cable conductor pair count and the hard and soft cable plant peculiar to Wing III. Add surge protection for the soft lines connected to equipment relocated to the LCEB.

6. Figure A 1374.3 - Electrical Surge Arrestor, LF

   a. ECP 401 - Revise to accommodate changes similar to those for Figure A 1373.3.

7. Figure A 1376.3 - Interconnecting Box, LCC

   a. ECP 402 - Revise wiring to accommodate new signal conductors and routing peculiar to Wing III.

8. Figure A 1377.3 - Interconnecting Box, LF

   a. ECP 402 - Revise to accommodate changes in plug and connector sizes resulting from an increase in number of signal conductors. Revise internal and shorting plug wiring to accommodate new signal conductors and routing peculiar to Wing III.

*9. Figure A 1383 - Gear Rack Assembly, Launcher Closure

   This item is deleted.

*10. Figure A 1417.2 - Valves, Blast (8")

   This item is deleted.

11. Figure A 1418.3 - Valves, Blast (24"), LCC

   a. ECP 396 - Revise to contain limit switches for indicating open and closed positions.

*12. Figure A 1428.3 - Valves, Blast (36"), LCEB

   a. ECP 396 - Provide two new 36" valves to protect the LCEB from blast. Design the valves for hydraulic operation and provide a means for electrical interlock control for standby generators.

*13. Figure A 1429.3 - Blast Dampers, LSB

   a. ECP 396 - Provide two new blast dampers in each LSB. Design the valves to be actuated to the closed position by overpressure alone and to reopen automatically upon return of atmospheric pressure to near normal.

* Indicates Figure A's included in Wing III Supplement.

*14. Figure A 1432.3 - Control System Blast Valve

a. ECP 396 - Provide a new Blast Valve Control System to power and control the blast valves installed in the LCEB and the LCC.

(1) The LCEB portion of the system, used to control the 36" Blast Valves, consists of a hydraulic pump and motor, reservoir, hydraulic-nitrogen accumulator and hydraulic-electrical control panel.

(2) The LCC portion of the system, used to control the 24" Blast Valves, consists of a hydraulic-electrical control panel, a hydraulic reservoir and a hydraulic-nitrogen accumulator. Also included, but packaged separately, is a portable hand-operated hydraulic pump with reservoir.

*15. Figure A 1443.3 - Rail, Hydraulic Jack

a. ECP 321 - Modify and permanently attach to the LF apron a 90 pound per yard railroad track rail with notches appropriately spaced to be compatible with Hydraulic Jack, Figure A 4640.3.

MAINTENANCE GROUND EQUIPMENT (MGE) CHANGES

*1. Figure A 4105 - Gearcase-Motor, Launcher Closure

a. ECP 321 - This item is deleted.

*2. Figure A 4141 - Dolly, Gearcase-Motor

a. ECP 321 - This item is deleted.

*3. Figure A 4277 - Sling, Gearcase-Motor

a. ECP 321 - This item is deleted.

*4. Figure A 4282 - Hoist, Gearcase-Motor

a. ECP 321 - This item is deleted.

5. Figure A 4370 - Test Stand, Gearcase-Motor

a. ECP 321 - This item is deleted.

6. Figure A 4540.3 - Cable Assembly Set

a. ECP 450 - This Figure A will require reduced quantities to accommodate differences in hardware allocation.

*7. Figure A 4640.3 - Jack Kit, Hydraulic

a. ECP 321 - This is a new item of MGE, replacing Figure A 4105, Gearcase Motor. This new item was initiated through BSD/STL direction. As an off-the-shelf procurement, this Figure A will be controlled by a Specification Control Drawing.

*8. Figure A 4645.3 - Dolly, Hydraulic Jack

a. ECP 321 - This is a new item of MGE, replacing Figure A 4141, Dolly, Gearcase Motor. This new item will facilitate handling of the Hydraulic Jack Kit at the Launch Facility. In addition, this item will support the Hydraulic Jack Kit during transportation between the SMSB and the Launch Facility. This is to be a Boeing designed piece of equipment.

*9. Figure A 4646.3 - Sling, Hydraulic Jack

a. ECP 321 - This is a new item of Boeing designed MGE, replacing Figure A 4277, Sling, Gearcase Motor. This sling will be used to facilitate the handling of the Hydraulic Jack Kit (with Dolly) between the Launcher Apron and the transporting vehicle.

* Indicates Figure A's included in Wing III Supplement.

*10. Figure A 4648.3 - Hoist, Hydraulic Jack

a. ECP 321 - This is a new item of MGE, replacing Figure A 4282, Hoist, Gearcase Motor. This hoist will operate both on the Launcher-Closure and on the Launcher-Apron to facilitate handling of the Hydraulic Jack Kit, with Dolly. This will be a Boeing designed item.

SUMMARY OF EQUIPMENT CHANGES FOR WING III - Volume I				
AFSC	Subsystem/Operation Involved		Status	Page
31255G	3007	Test Set, Explosive Set Circuitry	Changed	4-14.3
44250Z	1211	Blast Valves and Manual Control Components - LF	Deleted	4-25
	1212	Blast Valves and Manual Control Components - LCF	Deleted	4-25
	1241	Shock Attentuation System	Deleted	4-25
	1428.3	Valves, Blast, 36-Inch	Added	4-25.3
	1432.3	Hydraulic System, Blast Valves	Added	4-25.3
54150G	1209.3	Water Control and Removal System, Launcher	Changed	4-30.3
	1210.3	Sewage Disposal System, LCF	Changed	4-30.3
	1211.3	Environmental Control System, Launcher	Changed	4-30.3
	1212.3	Environmental Control System, LCF	Changed	4-30.3
	1230.3	Fuel System, LCSB	Changed	4-30.3
	1241.3	Shock Attenuation System	Changed	4-30.3
	1242.3	Service Lift, LCF	Changed	4-31.3
	1324.3	Water Supply System, LCF	Deleted	4-31.A2
	1325.3	Heating System	Changed	4-31.3
	1330.3	Shock Attenuation System, L	Changed	4-31.3
	1383	Gear Rack	Deleted	4-31A.2
	1390.3	Ventilation System, LCSB	Changed	4-31.3
	1417.2	Valve, Blast 8-inch	Deleted	4-31A.2
	1418.3	Valve Blast, 24-Inch	Changed	4-31.3
	1443.3	Rail, Hydraulic Pusher	Added	4-31.3
54250G	1209.3	Water Control and Removal System	Changed	4-34.3
	1242.3	Service Lift, LCF	Changed	4-34.3
	1246.3	Cable Assembly Set, LCF	Changed	4-34.3
	1248.3	Cable Assembly Set, LF	Changed	4-34.3
	1249	Hatch Installation System, LCF	Deleted	4-34
	1323.3	Electrical System, LCC	Changed	4-34.3
	1329.3	Electrical System, LF	Changed	4-34.3
	1389.3	Heating and Ventilating System	Changed	4-35.3
	1396.3	Monitoring System, Equipment Fault	Changed	4-35.3
	4105	Gearcase Motor	Deleted	4-35
	4166	Cable Assembly Set	Deleted	4-35

SUMMARY OF EQUIPMENT CHANGES FOR WING III - Volume I				
AFSC	Subsystem/Operation Involved		Status	Page
54550Y	1211.3	Environmental Control System, LF	Changed	4-39.3
	1212.3	Environmental Control System, LCF	Changed	4-39.3
	1390.3	Ventilation System LCSB	Added	4.40.3
	1436.3	Ventilation System LCEB	Added	4-40.3

POSITION DEFINITION

POSITION NO.	POSITION TITLE	RECOMMENDED OR AUTHORIZED AFSC
5	Ballistic Missile Checkout Equipment Specialist/Technician	AFSC 31255G/75G

GENERAL FEATURES

POSITION SUMMARY:

The Ballistic Missile Checkout Equipment Specialist is responsible for the Support Base maintenance and calibration of Electronic Test Equipment such as:

623	C90 Adapter Group, Test
624	C91 Test Center, Programmer - Fault Locator
717.2	Test Set, Photo-Electronic Collimator
3007	Test Set, Explosive Set Circuitry
3013	Test Set, Command Control Console
3092	Test Set, Programmer Group
4012	Test Set, Sensitive Command Network
4018	Test Adapter C91
4152.2	Test Equipment, Electronic Facility, Base Maintenance
4490	Missile Simulator
4489	Message Generator
10709	C153 Test Set, Missile Control Group

The Ballistic Missile Checkout Equipment Specialist is responsible for troubleshooting and repairing interconnecting circuits of the Sensitive Command Network, Security System, Programmer Group, and Command Control Console when returned to the Support Base.

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POSITION DEFINITION

POSITION NO.	POSITION TITLE	RECOMMENDED OR AUTHORIZED AFSC
5	Ballistic Missile Checkout Equipment Specialist/Technician	AFSC 31255G/75G

POSITION SUMMARY: (Cont.)

Checkout and testing is accomplished using self test features of programmed checkout equipment, and by using standard voltmeters, frequency meters, oscilloscopes and hand tools.

ENVIRONMENT:

Work Location: The Ballistic Missile Checkout Equipment Specialist's duty location is in the Maintenance Branch - Electronic Section at the Support Base.

Lines of Supervision: He will be supervised at the Support Base by the Missile Officer, AFSC 3124G.

QUALIFICATIONS:

The Ballistic Missile Checkout Equipment Specialist is required to perform at a low to high perceptual skill level (high level is required for test, visual inspection, function checkout, and repair of test equipment); high judgmental skill level is required for accomplishing all detailed electronic maintenance functions; motor skill demands range from high to low.

Task performance is generally critical to subsystem operation.

RELATION TO EXISTING AIR FORCE SPECIALTIES:

This position type falls within the scope of AFS Ballistic Missile Checkout Equipment Specialist/Technician, AFSC 31255G/75G.

POSITION DEFINITION

POSITION NO. 10	POSITION TITLE Missile Pneudraulic Repairman/Repair Technician	RECOMMENDED OR AUTHORIZED AFSC AFSC 44250Z/70Z

GENERAL FEATURES

POSITION SUMMARY:

The Missile Pneudraulic Repairman is responsible for Support Base repair, checkout and testing of the hydraulic equipment components removed from Transporter-Erectors. He is also responsible for assisting the Missile Mechanic/Technician in fault isolating, removing, installing and checking hydraulic equipment components of the Transporter-Erector Tractor and Transporter-Erector Trailer.

He is responsible for testing and repair of pneudraulic components found in equipment such as:

1249. Personnel Hatch Installation System R
1326.2 Blast Door R

He also provides assistance on an "as required" basis to the Electro-Mechanical Team for detailed troubleshooting and repair of pneudraulic components at the Launch Facility and the Launch Control Facility. R(3)

ENVIRONMENT:

Work Location: The Missile Pneudraulic Repairman is assigned to the Mechanical Section of the Missile Maintenance Squadron.

POSITION DEFINITION

POSITION NO. 10	POSITION TITLE	RECOMMENDED OR AUTHORIZED AFSC
	Missile Pneudraulic Repairman/Repair Technician	AFSC 44250Z/70Z

ENVIRONMENT: (Cont.)

Lines of Supervision: He is supervised by the Missile Officer, AFSC 3124G.

QUALIFICATIONS:

The perceptual, judgmental and motor skills required for this position are essentially low to medium. For functions such as fault isolation and checkout, these same skills are considered medium to high.

Task performance is considered critical to Subsystem operations.

RELATION TO EXISTING AIR FORCE SPECIALTIES:

This position falls within the scope of AFS Missile Pneudraulic Repairman/Repair Technician, AFSC 44250Z/70Z.

POSITION DEFINITION

POSITION NO. 12	POSITION TITLE Missile Facilities Specialist/Technician	RECOMMENDED OR AUTHORIZED AFSC AFSC 54150G/70G

GENERAL FEATURES

POSITION SUMMARY:

The Missile Facilities Specialist/Technician is a member of the Missile Team. As a member of this team, he assists in opening and closing the Launch Tube Closure; emplacing and handling environmental covers, personnel cage, safety barriers, and blowers; and assists in preparing the Re-Entry Vehicle - Guidance and Control Van for Missile, Re-Entry Vehicle or Guidance and Control Section removal and replacement.

The Missile Facilities Specialist/Technician is a member of Electro-Mechanical Team and is responsible for the inspecting, servicing, troubleshooting, removal and replacement of equipment and components such as:

1202	G&C Umbilical Retraction Mechanism	
1207	Drier-Air Compressor, Hardened Cable	
1209.3	Water Control and Removal System, Launcher	R
1210.3	Sewage Disposal System, Launch Control Center	R
1211.3	Environmental Control System, Launcher	R
1212.3	Environmental Control System, Launch Control Center	R
1214	Guidance Section Liquid Cooler	
1217	Closure, Launcher Tube	
1230.3	Diesel Fuel Oil System, Launch Control	R
1241.3	Shock Attenuation System, LCC	R
1242.3	Service Lift, Launch Control Facility	R

POSITION DEFINITION

POSITION NO. 12

POSITION TITLE: Missile Facilities Specialist/Technician

RECOMMENDED OR AUTHORIZED AFSC: AFSC 54150G/70G

POSITION SUMMARY: (Cont.)

1249	Hatch Installation, Launcher	
1280	Launcher Closure Actuating and Locking Mechanism	
1282	Battery, Emergency Power	
1288	Battery, Emergency Power	
1283	Motor Generator Set	
1318	G&C Cooling Plumbing Set	
1325.3	Heating System, LCSB	R
1326.2	Blast Door Installation, Launch Control Capsule	R
1330.3	Shock Attenuation System, Launcher Equipment Room Floor	R
1390.3	Ventilation System	R
1418.3	Valve, Blast, 24-Inch	R(2)
1420.3	Damper Set, Sway, Shock Attenuation	R
1421.2	Shock Isolator, Shock Attenuation	
1443.3	Rail, Hydraulic Pusher	
1447	Drier, Air Compressor, Hardened Cable	R

He is assisted in detailed troubleshooting of these equipments by the appropriate AFS having detailed knowledge, such as 44250Z, 54550Y, 54250G or 54350.

He performs maintenance and tests at the Launch Facility on the ballistic charge on the

POSITION DEFINITION

POSITION NO. 12	POSITION TITLE Missile Facilities Specialist/Technician	RECOMMENDED OR AUTHORIZED AFSC AFSC 54150G/70G

POSITION SUMMARY: (Cont.)

Rotary Actuator Assembly and the Ballistic Gas Generator in the Launch Tube Closure Actuator Mechanism.

At the Support Base he is responsible for inspection, servicing and referral to the appropriate section in the Maintenance Branch for detailed repair of mechanical Maintenance Ground Equipment, such as: Elevator and Work Cage, Safety Barrier, Truck Dolly, Launcher Closure Tractor, etc.

ENVIRONMENT:

Work Location: He performs his duties and tasks at the Launch Facilities, Launch Control Facilities, and the Support Base.

Lines of Supervision: As a member of the Mobile Maintenance Teams, his work is coordinated by the Ballistic Missile Analyst Technician, AFSC 31274G. At the Support Base he is supervised by the Missile Officer, AFSC 3124G.

QUALIFICATIONS:

The Missile Facilities Specialist/Technician's skill requirements range from low to medium. Medium perceptual skill is required for troubleshooting, inspection, and checkout functions. Medium judgmental skill is required for accomplishing the various detailed maintenance procedures. Medium motor skill is required for installation and removal of assemblies and for aligning and adjusting tasks.

Composite-test, checkout, visual check and some non-verifiable repair, installation and servicing functions involve tasks whose performance are critical to subsystem operation but which may affect system operation if not correctly performed.

POSITION DEFINITION

POSITION NO.	POSITION TITLE	RECOMMENDED OR AUTHORIZED AFSC
12	Missile Facilities Specialist/Technician	AFSC 54150G/70G

RELATION TO EXISTING AIR FORCE SPECIALTIES:

This position type falls within the scope of AFS Missile Facilities Specialist/Technician, AFSC 54150G/70G.

POSITION DEFINITION

POSITION NO.	POSITION TITLE	RECOMMENDED OR AUTHORIZED AFSC
13	Electrician/Electrical Technician	AFSC 54250G/70G

GENERAL FEATURES

POSITION SUMMARY:

The Electrician/Electrical Technician is responsible for maintenance at the Support Base of electrical power source and distribution system components returned from Launch Facilities and Launch Control Facilities. He also provides assistance on an "as required" basis to the Electro-Mechanical Team for detailed troubleshooting and repair of the electrical power system at the Launch Facilities and Launch Control Facilities.

His duties and tasks include tests to isolate faults to a removable sub-unit, repair by replacing faulty units, and the organizational and field maintenance of such equipment as:

1209.3	Water Control and Removal System, Elec. Components	R
1242.3	Service Lift, Launch Control Facility	R
1246.3	Cable Assembly Set, Launch Control	R
1248.3	Launcher Intra-Site Cabling	R
1283	Motor Generator	
1284	Power Supply Group	
1289	Power Supply Group, LCC	
1323.3	Electrical Systems, LCC	R
1329.3	Electrical System, Launcher	R
1337.2	Junction-Box, Main, Launch Facility	
1367.2	Motor Generator	
1379.2	Battery Charger Alarm Set Group	

POSITION DEFINITION

POSITION NO. 13	POSITION TITLE Electrician/Electrical Technician	RECOMMENDED OR AUTHORIZED AFSC AFSC 5-250G/70G

POSITION SUMMARY: (Cont.)

1380	60 Cycle Power Panel
1385	Junction Box, Power and Communication - LCC
1389.3	Heating and Ventilating System, LSB
1396.3	Monitoring System, Equipment
1415	Fixture, Emergency Lighting andAlarm
4024	Semi-Trailer, G&C Re-Entry Vehicle
4043	Elevator Work Cage
4059	Transporter-Erector Semi-Trailer (Electrical Components)
4119	Truck, Transporter-Erector Support
4451	Controller, Power Azimuth Drive

Checkout, testing and maintaining will be accomplished, using Electrical Power Test Equipment, Battery Chargers, and Standard Electrical Test Equipment.

ENVIRONMENT:

Work Location: The Electrician/Electrical Technician's primary duty location is the Maintenance Branch-Mechanical Section at the Support Base and at Launch Facilities and Launch Control Facilities when serving as a member of the Electro-Mechanical Team.

Lines of Supervision: At the Support Base he is supervised by the Missile Officer, AFSC 3124G. When acting as a member of the Electro-Mechanical Team, his work is coordinated by the Ballistic Missile Analyst Technician, AFSC 31274G.

POSITION DEFINITION

POSITION NO.	POSITION TITLE	RECOMMENDED OR AUTHORIZED AFSC
13	Electrician/Electrical Technician	AFSC 54250G/70G

QUALIFICATIONS:

The duties and tasks of the Electrician/Electrical Technician involve low to medium perceptual, judgmental and motor skills.

Task performance is generally critical to subsystem operation.

RELATION TO EXISTING AIR FORCE SPECIALTIES:

This position type falls within the scope of AFS Electrician/Electrical Technician, AFSC 54250G/70G.

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POSITION DEFINITION

POSITION NO.	POSITION TITLE	RECOMMENDED OR AUTHORIZED AFSC
15	Refrigeration Specialist/Technician	AFSC 54550Y/70Y

GENERAL FEATURES

POSITION SUMMARY:

The Refrigeration Specialist/Technician is responsible for Support maintenance of the following: Environmental Control and Equipment Cooling components returned from Launch Facilities and Launch Control Facilities, Maintenance Ground Equipment Cooling Units used at the Support Base, and Transporter-Erector Environmental Control System components. He also provides back-up assistance on an "as required" basis to the Electro-Mechanical Team.

His duties and tasks include tests to isolate faults to a removable sub-unit, repair by replacing faulty units, and organizational and field maintenance of equipment such as:

603.2	Environmental System, C24 (Missile Targeting Set)
1211.3	Environmental System, Launch Facility R
1212.3	Environmental System, Launch Control Facility R
1214	Cooling Unit, Guidance and Control Compartment
1318	Guidance and Control Cooling Plumbing Set
3035	Test Set, Cooling Liquid, Guidance and Control
4024	Environmental System, R/V-G&C Van
4059	Environmental System, Transporter-Erector
4075	Environmental System, Transporter-Erector
4115	Environmental Control, Auxiliary
4150	Test Bench, Guidance and Control Ground Cooling
4191	Tank, Liquid Storage, Metal

POSITION DEFINITION

POSITION NO. 15	POSITION TITLE Refrigeration Specialist/Technician	RECOMMENDED OR AUTHORIZED AFSC AFSC 54550Y/70Y

POSITION SUMMARY: (Cont.)

1390.3 Ventilation System, LCSB R

1436.3 Ventilation System LCEB R

Checkout and testing is accomplished using such equipment as a Multimeter, Refrigeration Repair Kit, Thermometer, Air Flow meters, and hand tools.

ENVIRONMENT:

Work Location: The Refrigeration Specialist/Technician's primary duty is at the Maintenance Branch-Mechanical Section at the Support Base and at Launch Facilities and Launch Control Facilities when required as a member of the Electro-Mechanical Team.

Lines of Supervision: At the Support Base he is supervised by the Missile Officer, AFSC 3124G. When acting as a member of Electro-Mechanical Team, his work is coordinated by the Ballistic Missile Analyst Technician, AFSC 31274G.

QUALIFICATIONS:

The duties and responsibilities of the Refrigeration Specialist/Technician require medium perceptual and motor skills; and high to medium judgmental skill in fault isolating and testing functions.

Task performance is generally critical to subsystem operation.

RELATION TO EXISTING AIR FORCE SPECIALTIES:

The duties of this position fall within the scope of AFS Refrigeration Specialist/Technician, AFSC 54550Y/70Y.

WING III MINUTEMAN DIRECT SUPPORT MANNING SUMMARY

Recommended Team and Composition	No. of Teams	3124G	30452	31254G	31255G	31256G	33150B	36151	36152	44250Z	44350G	54150G	54250G	54350	54550Y	60350B	XXXXX	
Missile Team	9																	
1-31254G				9														
2-33150B							18											
1-44350G											9							
1-54150G												9						
Transport. & Handling Team	3																	
1-44350G											3							
3-60350B																9		
Alignment & Targeting Team	8																	
1-3124G		8																
1-31254G				8														
1-44350G											8							
Electro- #1 Mechanical	5																	
1-31254G				5														
1-54150G												5						
1-XXXXX																	5	
Electro- #2 Mechanical	2																	
1-31254G				2														
1-54150G												2						
1-54250G													2					
Electro- #3 Mechanical	1																	
1-31254G				1														
1-54150G												1						
1-54550Y															1			
Electro- #4 Mechanical	1																	
1-31254G				1														
1-54150G												1						
1-36152									1									
Electro- #5 Mechanical	2																	
1-31254G				2														
1-54150G												2						
1-54350														2				
Electro- #6 Mechanical	1																	
1-31254G				1														
1-54150G												1						
1-44350G											1							
Electro- #7 Mechanical	5																	
1-31254G				5														
1-54150G												5						
1-30452			5															
HCS Team 5-36151	2							10										
AFSC		**3124G**	**30452**	**31254G**	**31255G**	**31256G**	**33150B**	**36151**	**36152**	**44250Z**	**44350G**	**54150G**	**54250G**	**54350**	**54550Y**	**60350B**	**XXXXX**	
MOBILE MAINTENANCE SUB-TOTAL		8	5	34			18	10	1		21	26	2	2	1	9	5	142
SUPPORT BASE MAINTENANCE SUB-TOTAL		5	1	5	1	3	11	3	1	1	1	1	3		1			37
TOTAL MAN MONTHS MAINTENANCE BY AFSC		13	6	39	1	3	29	13	2	1	22	27	5	2	2	9	5	179

MISSILE COMBAT CREW (AFSC 1825G)	150
GRAND TOTAL	329

WING III
MINUTEMAN MOBILE MAINTENANCE TEAMS

Team Composition by AFSCs

Team	No.	AFSC
Missile Team	1	312X4G
	2	331X0B
	1	443X0G
	1	541X0G
Transport & Handling	1	443X0G
	3	603X0B
Alignment & Targeting	1	3124G
	1	312X4G
	1	443X0G
Electro-Mech. No. 1 ▷	1	312X4G
	1	541X0G
	1	XXXXX
Electro-Mech. No. 2	1	312X4G
	1	541X0G
	1	542X0G
Electro-Mech. No. 3	1	312X4G
	1	541X0G
	1	545X0Y
Electro-Mech. No. 4	1	312X4G
	1	541X0G
	1	361X2
Electro-Mech. No. 5	1	312X4G
	1	541X0G
	1	543X0
Electro-Mech. No. 6	1	312X4G
	1	541X0G
	1	443X0G
Electro-Mech. No. 7	1	312X4G
	1	541X0G
	1	304X2
Hardened Cable System Team	5	361X1

AFSC	Title
3124G	Missile Officer
312X4G	Ballistic Missile Analyst Specialist/Technician
331X0B	Nuclear Weapons Specialist
304X2	Ground Communications Equip. Repairman/Tech.
361X2	Telephone Installer Repairman
443X0G	Missile Mechanic/Maintenance Technician
541X0G	Missile Facilities Specialist/Technician
542X0G	Electrician/Electrical Tech.
543X0	Electrical Power Production Specialist/Technician
545X0Y	Refrigeration Specialist/Technician
603X0B	Vehicle Operator/Motor Transportation Supervisor
361X1	Cable Splicer/Cable Splicing Technician

▷ The Electro-Mechanical Teams are numbered 1 through 7. Each E-M Team has a minimum of three (3) people and each team has a 312X4G and a 541X0G. E-M Team No. 1 has any of the other AFSCs available for the third person. E-M Teams No. 2 through 7 have a specific AFSC for the third man, depending on what job is to be done.

TABLE 5-2B.3

TEAM COMPOSITION COMPARISON CHART

Team Composition by AFSCs: Recommended Team Name	No. on Team	AFSC	WING I: No. of Teams Recommended	WING I: No. of AFSCs Recommended	WING II: No. of Teams Recommended	WING II: No. of AFSCs Recommended	WING III: No. of Teams Recommended	WING III: No. of AFSCs Recommended
Missile Team	1	312X4G	20	20	12	12	9	9
	2	331X0B		40		24		18
	1	443X0G		20		12		9
	1	541X0G		20		12		9
Transport & Handling	1	443X0G	8	8	4	4	3	3
	3	603X0B		24		12		9
Alignment & Targeting	1	3124G	14	14	12	12	8	8
	1	312X4G		14		12		8
	1	443X0G		14		12		8
Electro-Mech. No. 1	1	312X4G	15	15	8	8	5	5
	1	541X0G		15		8		5
	1	XXXXX		15		8		5
Electro-Mech. No. 2	1	312X4G	5	5	2	2	2	2
	1	541X0G		5		2		2
	1	542X0G		5		2		2
Electro-Mech. No. 3	1	312X4G	2	2	2	2	1	1
	1	541X0G		2		2		1
	1	545X0Y		2		2		1
Electro-Mech. No. 4	1	312X4G	2	2	2	2	1	1
	1	541X0G		2		2		1
	1	361X2		2		2		1
Electro-Mech. No. 5	1	312X4G	1	1	1	1	2	2
	1	541X0G		1		1		2
	1	543X0		1		1		2
Electro-Mech. No. 6	1	312X4G	1	1	1	1	1	1
	1	541X0G		1		1		1
	1	443X0G		1		1		1
Electro-Mech. No. 7 [1]	1	312X4G	6	6	7	7	5	5
	1	541X0G		*		7		5
	1	304X2		12		7		5
Hardened Cable System Team	5	361X1	2	10	2	10	2	10
		TOTALS	76	280	53	191	39	142

[1] Includes loading for 100% of HF/UHF Failures.

* Wing I requires a team consisting of One (1) 312X4G and two (2) 304X2's.

CHART 5-1.3

WING I

Position	AFSC	Title	Calculated Loading	
1	1825G/1816	Missile Launch Officer/Missile Operations Staff Officer	150	1421.
2	3124G/3116	Missile Officer/Missile Staff Officer	19	
3	304X2	Ground Communications Equipment Repairman (Light)/ Tech.	13	2900, 2906, 2950,
4	312X4G	Ballistic Missile Analyst Specialist/Technician	71	602. 2
5	312X5G	BM Checkout Equipment Specialist/Technician	1	717. 2
6	312X6G	BM Launch Equipment Repairman/Technician	6	603. 2
7	331X0B	Nuclear Weapons Specialist/ Technician	51	
8	361X1	Cable Splicer/Cable Splicing Technician	13	
9	361X2	Telephone Installer-Repairman/ Installation and Repair Super.	3	
10	442X0Z	Missile Pneudraulic Repairman/ Technician	1	
11	443X0G	Missile Mechanic/Maintenance Technician	44	
12	541X0G	Missile Facilities Specialist/ Technician	47	1324. 1418. 1211.
13	542X0G	Electrician/Electrical Tech.	9	
14	543X0	Electrical Power Production Specialist/Technician	1	
15	545X0Y	Refrigeration Specialist/Tech.	3	603. 2
16	603X0B	Vehicle Operator/Motor Transportation Supervisor	24	
	XXXXX	Unspecified AFSC	15	
	WING MANNING TOTALS		471	

MANNING COMPARISON CHART

WING II

New Equipment by Figure A No.	Deleted Equipment by Figure A No.	Calculated Loading	
1421.2		150	
		17	
2900, 2901, 2902, 2903, 2904, 2905, 2906, 2907, 2908, 2909, 2910, 2911, 2950, 2952, 2958	1293, 1295, 1296, 1411, 3109	8	
602.2, 604.2, 717.2	602, 604, 717, 1411	52	
717.2, 3007.2	717, 3007	1	3007
603.2	603	3	
		33	
		13	
		3	
		1	
		30	
1324.2, 1323.2, 1390.2, 1417.2, 1418.2, 1212.2, 1240.2, 1421.2, 1211.2, 1405.2, 1242.2	1323, 1324, 1390, 1211, 1405, 1212, 1242	36	1209.3, 1210.3, 1211.3, 1242.3, 1390 3, 1440.3, 1450.3, 1432.3
		5	1323.3, 1396.3, 1437.3,
		1	
603.2	603	3	1211.3, 1212.3
		12	
		0	

CHART 9-2.1

ulated ing	New Equipment By Figure A No.	De by
0		
7		
8		
2		
1	3007	3007. 2
3		
3		
3		
3		
1		
0		
6	1209. 3, 1210. 3, 1211. 3, 1405. 3, 1429 3, 1441. 3, 1323. 3, 1443. 3, 1212. 3, 1230. 3, 1242. 3, 1390. 3, 1396. 3, 1241. 3, 1325. 3, 1330. 3, 1428 3, 1436. 3, 1439. 3, 1140. 3, 1450. 3, 1432. 3	1209 2, 12 1211. 2, 14 1390 2, 13
5	1323 3, 1396. 3, 1437. 3, 1209. 3, 1242. 3, 1246. 3, 1248. 3, 1329. 3, 1389. 3	1249, 4105, 1246. 2, 12
1		
3	1211. 3, 1212. 3	1211. 2, 12
2		
8		
6		

CHART 5-2. 3

	Deleted Equipment by Figure A No.	Calculated Loading
		150
		13
		6
		39
	3007. 2	1
		3
		29
		13
		2
		1
		22
, 1443. 3, 1212. 3, 1230. 3, , 1428. 3, 1436. 3, 1439. 3,	1209 2, 1210. 2, 1405. 2, 1230. 2, 1396, 1241. 2, 1283, 1211. 2, 1417. 2, 1212. 2, 1242. 2, 1323. 2, 1324. 2, 1390. 2, 1383, 4141, 4282, 1325. 2, 1330	27
, 1329. 3, 1389. 3	1249, 4105, 4166, 1323. 2, 1396, 1209. 2, 1242. 2, 1246. 2, 1248, 1329. 2, 1389. 2	5
		2
	1211. 2, 1212. 2	2
		9
		5
		329

VRSA CHANNEL	1A	1B	2	3	5	6A	6B	7A	7B	8A	8B	
First Trip Figure A's Second Trip Hold Over	1283	1412.2	604.2 G&C	604.2 G&C	1201	R/V 1201	1412.2 1201	R/V 1201	1412.2 1201	1337.2 D 1201	1412.2 1201	G 1 1 6
Missile Team 1-31254G 2-33150B 1-44350G 1-54150G			12.9	12.9		11.4		22.5		9.7		4
Transport & Handling 1-44350G 3-60350B										7.0		
Alignment & Targeting 1-3124G 1-31254G 1-44350G			2.1	2.1						2.2		8
Electro-Mechanical #1 1-31254G 1-54150G 1-XXXXX		.8			.2	.1	.8	.1	.8	.1	.8	7
#2 1-31254G 1-54150G 1-54250G	58.2											
#3 1-31254G 1-54150G 1-54550Y												
#4 1-31254G 1-54150G 1-36152												
#5 1-31254G 1-54150G 1-54350												
#6 1-31254G 1-54150G 1-44350G										7.8		
#7 1-31254G 1-54190G 1-38462												

	8A	8B	9A	9B	9C	9D	9E	10A	10B	10C	11A	11B	11C	12A	12B	12C	12D
.2	1337.2 D 1201	1412.2 1201	G&C 1284 1201 604.2	G&C	G&C 1201	604.2 1201	1412.2 1201	G&C D 604.2 1201	D 1282 1284 1379.2	1412.2 1201	1214 1318 G&C 1337.2 1201	G&C 1201	1412.2 1201	604.2 G&C (1201)	604.2	604.2	1412. 1201
	9.7		431.1	47.4	30.8			77.9	318.8		4.5	5.1		37.5			
	7.0							12.5	211.2								
	2.2		80.0	10.9	6.9			16.6	65.2		1.0	1.1		8.6			
	.1	.8	7.8		.2	.7	.8	.1		.8	.1	.1	.8	37.5	1.6	1.2	.8
									13.2								
											54.5						
	7.8										1.8						

12C	12D	13A	13B	13C	14A	14B	15A	15B	15C	15D	15E	15F	15G	16A	16B	16C
604.2	1412.2 1201	602.2 G&C (604.2)	1201	1412.2 1201	1201	1412.2 1201	1201	1201 1337.2	1201	1201	1201	1201	1201 1412.2	1201	1201	1201
		18.7														
		28.1 4.3														
1.2	.8		.1	.8	.2	.8	.2	19.4	.1	.5	.5	.1	.8	.3	4.7	.7
								8.5								

3	16C	16D	16E	16F	16G	17A	17B	18A	18B	19A	19B	20A	20B	21A	21B	23A	23B
1	1201	1201	1201	1201	1412.2 1201	1201	1412.2 1201	1201 1209.3	1412.2 1201	1201	1412.2 1201	1201	1412.2 1201	1329.3 1409.3 1201	1412.2 1201	1211.3 1201	1412. 1201
	.7	.4	.1	.2	1.0	.8	.8	.2	.8	.1	.8	.1	.8		.8		.8
																30.6	
														20.0 .5			

ORGANIZATIONAL MAINTENANCE AT LAUNCH FACILITY

1B	23A	23B	24A	24B	25A	25B	26A	26B	27A	27B	28A	28B	29A	29B	30A	30B
12.2 01	1211.3 (1201)	1412.2 1201	1211.3 (1201)	1412.2 1201	1211.3 (1201)	1412.2 1201	1201	1412.2 1201	1201	1412.2 1201	1228	1251 1201 1412.2	1251	1251 1201 1412.2	1228	1251 1201 1412.2
8		.8		.8		.8	.1	.8	.1	.8	6.3	1.1	25.1	1.2	22.1	1.2
	30.6		24.8		5.5											

A	30B	31A	31B	31C	32A	32B	33A	33B	34A	34B	34C	40	I	II	IIIA	IIIB	I
8	1251 1201 1412.2	1228	1228 (1228)	1251 1201 1412.2	1251 1228 (1251) (1228)	1412.2 1251 1201	1228	1201 1251 1412.2	2900	2900 2903	2900 1412.2 (1201)	1412.2	1412.2 1251	1251	1284 1251 1228 1228 1379.2	1251	12
1	1.2	2.4	17.0	1.2	27.9 (.2)	1.1	10.5	1.2					21.7	3.2		6.6	
															34.7 4.5		
									1.5	26.4	1.7 (.1)	.6					

TABLE 5-3.3 WING III

IIIB	IV	V	VI	VII	VIII	IXA	IXB	XA	XB	XI	XII	XIII	XIV	XV	XVI	XV
1251	1228	G&C 604.2 1201	1201	604.2	1228 1251	1201	1251 1201	1201	1201	1201	1337.2	604.2 1251 1201 1209.3 1211.3 1228 1251	1303 1251 1268 1284 1331.3 1337.3 1412.2 2900 2903 G&C 1329.3 D	1201	1201 1228	12 12
		42.7										20.2				
												3.7				
		8.6										4.6				
6.6	.2		.2	1.5	45.0	23.5	1.7	2.2	.1	1.0		100.4	1.9	.2	1.8	3.
												17.3				
												7.8				
													18.8			
												117.7				
											65.1	1.8				
												10.0				

XVI	XVII	XVIII	XIX	XX	XXI	XXII	XXIII	XXIV	XXV	XXVI	XXVII	XXVIII	XXIX	XXX	XXXI	Unmonitored Faults LF
1201 1228	1201 1228	1228	1228	1228	1201	1201	1201	1201	1201	1201	2900 2905	2910 2911	1331.3 (1251)	2900 1331.3	2910 2911 1311.3	
																5.7
.8	3.1	2.7	3.6	.1	1.4	.2	.2	.1	.1	1.8			.7 (.1)			111.7
																3.9
						All figures in matrix indicate hours per month per team. Second Trip hours are underlined. Hold Over hours are enclosed in cartouch.										
																4.3
											6.5	.6		6.9	4.4	10.5

XXIII	XXIV	XXV	XXVI	XXVII	XXVIII	XXIX	XXX	XXXI	Unmonitored Faults LF	TOTAL TEAM HOURS/MONTH FOR LF	NUMBERS OF TEAMS FOR LF
1201	1201	1201	1201	2900 2905	2910 2911	1331.3 (1251)	2900 1331.3	2910 2911 1311.3			
									5.7	1109.8 R/V Scheduled Sampling 55.7 TOTAL 1165.5	8.3
										234.4 Missile Handling SMSA 166.1 TOTAL 400.5	2.9
										242.3 Periodic Mirror Check 674.8 Operational Retargeting 152.7 TOTAL 1069.8	7.6
.2	.1	.1	1.8			.7 (.1)			111.7	552.0	3.9
										127.9	0.9
										123.2	0.9
									3.9	22.7	0.2
gures in matrix indicate hours per month per team. d Trip hours are underlined. Over hours are enclosed in cartouch.										138.2	1.0
									4.3	89.3	0.6
				6.5	.6		6.9	4.4	10.5	69.2	0.5

ORGANIZATIONAL MAINTENANCE AT LAUNCH CONTROL FACILITY

	OGE	RPIE	Total Team Hours / Month	Number of Teams
Electro - Mechanical #1 1 - 31254G 1 - 54150G 1 - XXXXX	69.3	28.8	98.1	.7
Electro - Mechanical #2 1 - 31254G 1 - 54150G 1 - 54250G	4.8	17.3	22.1	.2
Electro - Mechanical #3 1 - 31254G 1 - 54150G 1 - 54550Y	3.5		3.5	
Electro - Mechanical #4 1 - 31254G 1 - 54150G 1 - 36152	38.4		38.4	.3
Electro - Mechanical #5 1 - 31254G 1 - 54150G 1 - 54350G		8.9	8.9	.1
Electro - Mechanical #7 1 - 31254G 1 - 54150G 1 - 30452	603.6		603.6	4.3
HCS Team 5 - 36151			195.9	1.4

Note: Work on the Hardened Cable System (HCS) may be conducted at the LCF, LF, or between them

Table 5-4.3

MAINTENANCE AT THE SUPPORT BASE

AFSC	OGE MAINT.	RPIE MAINT.	MGE MAINT.	R/V & R/V MGE MAINT.	MCC OPERATION	CABLE PLANT IN PLACE RECORDS MAINT.	TOTAL SUPPORT BASE MAINT. MAN/ MONTHS
3124G					5.00		5
30452	0.27		0.01				1
31254G					4.22		5
31255G			0.35				1
31256G	1.81		0.58				3
33150B				11.0			11
36151						3.0	3
36152	0.6						1
44250Z			0.43				1
44350G			0.51				1
54150G		0.03	0.34				1
54250G	1.88	0.12	0.39				3
54550Y	0.16	0.05	0.18				1

Note: Figures show men per month.

TABLE 5-5.3