A2C Jerry A. Wood

T.O. 21-TM76B-1-4

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TECHNICAL MANUAL

LAUNCH AREA OPERATING INSTRUCTIONS

MISSILE MECHANIC SPECIALIST

LAUNCH TEAM

MECHANIC NO. 3

USAF SERIES

TM76B

GUIDED MISSILE

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INTRODUCTION

This is one of a series of technical manuals of operating instructions for the Launch Area of the TM76B Mace Guided Missile.

The purpose of these manuals is to provide complete instructions for designated personnel to install, remove, recycle, hold in a condition of readiness, and launch the Missile.

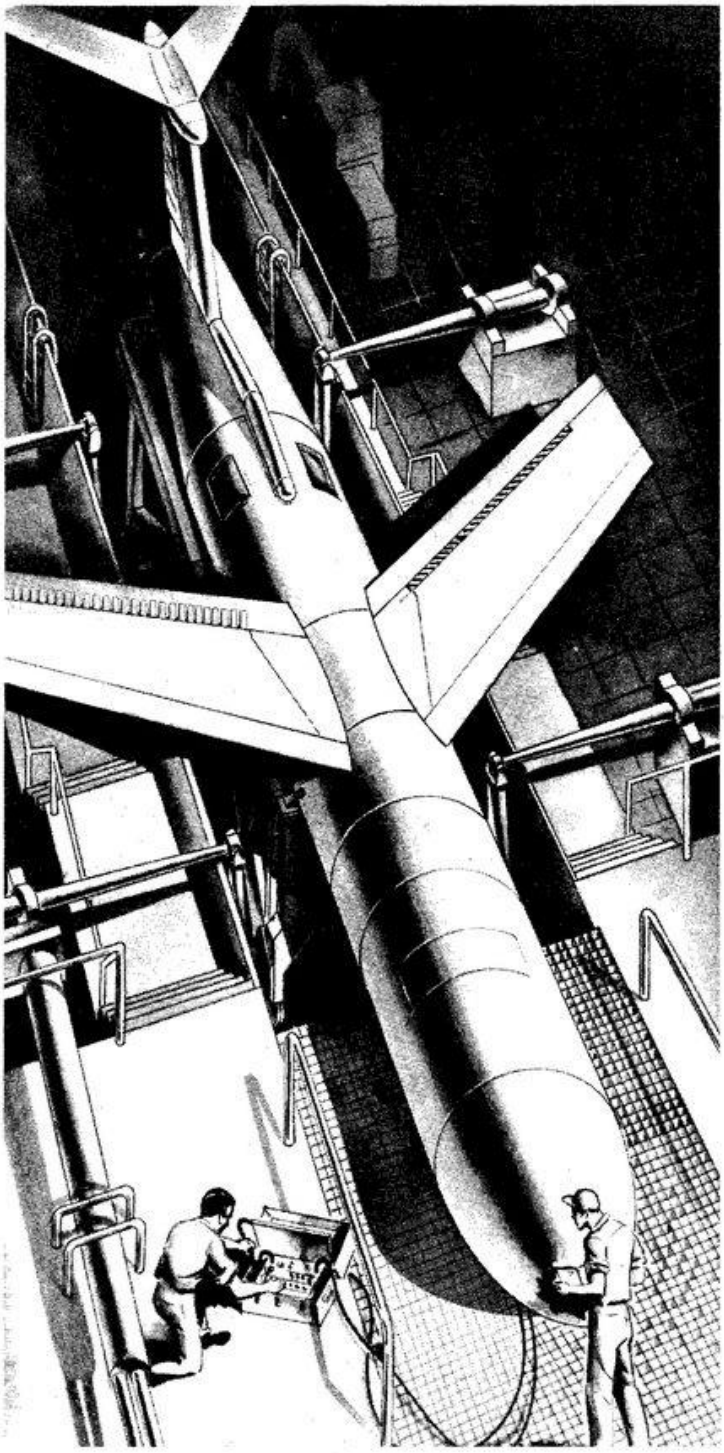

Figure 1-1. Hydraulic Cycling

SECTION I

DESCRIPTION AND LEADING PARTICULARS

SECTION I

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SECTION II

COUNTDOWN

2-1. GENERAL.

2-2. This section contains all the checklists necessary for Missile Mechanic Specialist Mechanic No. 3. This section also contains a table of emergency procedures that are to be performed if any emergency arises during any of the launch area functions.

2-3. DESCRIPTION AND USE OF CHECKLISTS.

2-4. The launch area functions are divided into five color-coded checklists. These checklists and their respective colors are: table 2-1, Initial Setup Checklist (blue); table 2-2, Recycle Checklist (yellow); table 2-3, Hold Status Checklist (green); table 2-4, Alert Countdown Checklist (pink); and table 2-5, Shutdown and Disconnecting Checklist (marigold).

2-5. The launch area checklists are sequentially-arranged tables listing all of the functions that are performed in the Launch Area. By proper use of the Launch Area Manuals and their checklists, a well-coordinated and smooth-functioning launch operation is achieved. The checklist pages in this technical manual should be protected against wear through normal use whenever feasible. Pre-punched plastic envelopes are available from Air Force stock for the 8 x 11 checklist pages of the T.O. 21-TM76B-1-1.

2-6. The Launch Control Officer's manual is the only manual that contains checklists which include all the procedures necessary to perform the launch area operations. This type of checklist is called a master checklist. Each master checklist is divided into columns; one column for each member of the Launch Team working in the launch site. When the Nose Replacement Team and/or Missile Replacement Team are working in the launch site, the functions they perform are listed in an additional column. Each column has as its heading the mechanic or team required to perform the functions listed and the T.O. number of the manual that includes the detailed procedures. This checklist then is the co-ordinator of of all launch area operations. The Launch Control Officer or the NCOIC initiates the start of each operation in the checklist. After an operation has been initiated, the LCO or NCOIC and the mechanics can start performing the procedures listed in each individual's column. If the procedures are not to be performed in coordination with another mechanic, the mechanic may accomplish all the functions listed in his operation continuously until the end of the operation. The LCO or NCOIC must insure that all procedures within the operation are complete prior to initiating another operation. The procedures listed in the checklists are of a general nature and are listed with a paragraph reference. The paragraph reference provides a means whereby the procedure to be performed can be located in a specific mechanic's technical manual.

2-7. The checklists contained in the manuals for the remaining members of the Launch Team list only those procedures necessary for the respective mechanic. The checklists match the color of the master checklists. When in training, the mechanic must use both the checklist and the detailed procedures in order to know what, and how, to do the operation as they are called out by the Launch Control Officer or the NCOIC. After being thoroughly familiar with his job, the mechanic may remove the checklist from the manual and use it as a guide. The manual is still to be carried by mechanic but need only be used for reference to the detailed procedures. The checklists in the manual for the Nose Replacement Team and/or the Missile Replacement Team are the same as those for the mechanics of the Launch Team, except that they are not written for the individual but for the entire team(s). One member of the team uses the checklist and distributes the work to qualified personnel.

2-8. To enable the mechanic to insure that each procedure in the checklist is performed, a check box is placed at the beginning of each procedure that is to be performed. Upon completion of each procedure, the mechanic will place a check mark in the box to indicate that the procedure was completed. Also, upon completion of each procedure, certain launch team personnel must be informed that the procedure was completed. To enable the mechanic to know who must be informed, the initial and/or number of the launch team personnel is placed next to the paragraph reference in the checklist.

2-9. INITIAL SETUP CHECKLIST. The Initial Setup Checklist, which is performed every 90 days, contains procedures for installing the Missile in the Launch Bay and preparing the Missile for testing. Operations 1, 2, 3, and 4 contain procedures for installing the complete Missile (Nose Section and Basic Missile). Operations 5 and 6 contain procedures for installing the Nose Section only. The Initial Setup Checklist procedures include: testing cables (in accordance with T.O. 21-TM76B-6-1), installing Rocket Motor onto Missile, installing Wings, installing the Launcher and Missile into the Launch Bay, preparing and installing the Warhead Section, installing the Nose Section, and equipment self-verification.

2-10. Depending upon time and status of the other Missiles, the LCO may choose to perform certain initial setup functions prior to the actual performance of the initial setup checklist. When this is possible, a considerable amount of time can be saved. By performing these functions prior to the initial setup checklist, the initial setup checklist can be performed more rapidly, minimizing the Launch Doors open time and the overall down time of the Launch Bay. The functions that can be performed before a Missile and/or a Nose Section and replacement team(s) arrival at the Launch Bay for the initial setup are: verification of the LAGG, testing equipment cables, intercommunications system checkout, and preparation of the Azimuth Alignment Group.

2-11. RECYCLE CHECKLIST. The Recycle Checklist contains all the procedures necessary to place a Missile in the hold status. These procedures consist of checking the: Guidance System, Flight Controls System, Hydraulic System, and Safety and Arming System. In order to maintain a Missile in hold status, the Recycle Checklist must be performed every 7 days. To accomplish the Recycle Checklist after a Nose Section, or a complete Missile, has been installed into the Launch Bay, only operations 2 through 10 need to be performed. To perform the Recycle Checklist after a Missile has been in the hold status condition for 7 days, operations 1 through 10 shall be performed.

2-12. HOLD STATUS CHECKLIST. The Hold Status Checklist contains procedures that must be performed to insure that the Missile and test equipment are operational. These checks are spot checks in nature and must be repeated every 12 hours. Every 12 hours, operations 1 through 5 must be performed. Every 6 hours, running set-ins must be evaluated and if adjustments are required they will be accomplished by performing only operations 1, 2, 3, and 5.

2-13. ALERT COUNTDOWN CHECKLIST. The Alert Countdown Checklist contains the procedures necessary to launch a Missile that is in the hold status condition. These procedures consist of advancing the LAGG into the flight mode, opening the launch and exhaust doors, starting the Missile Engines, jettisoning signal cables, and launching the Missiles.

2-14. SHUTDOWN AND DISCONNECTING CHECKLIST. The Shutdown and Disconnecting Checklist contains the procedures that must be performed if it becomes necessary to remove a Missile from Launch Bay. These procedures will be followed at 90-day intervals for the basic missile recycling, or more often if a serious malfunction in the Nose Section and/or Basic Missile is encountered. To remove the complete Missile, only operations 1 through 4 should be performed. To remove the Nose Section only, operations 5 through 7 should be performed.

2-15. When a Missile and/or a Nose Section must be removed due to a malfunction or recycling, the LCO may request that certain shutdown and disconnect functions be performed prior to the arrival of the replacement Missile and/or Nose Sections in the Launch Area. These functions can be performed if the launch team is not involved with installation, cycling, and hold status checks on other Missiles. The functions that can be performed prior to the arrival of a Missile and/or a Nose Section and the replacement team(s) are: insuring that the Rocket Motor safety and arming device is made safe, shutdown of appropriate LAGG and Missile hold power, removal of Launch Safety plug, disconnecting igniter cable, installing of access platform, disconnecting warhead cables, and removing explosive relay package. The functions that can be performed are functions that will not cause possible injury to personnel nor damage to the equipment.

2-16. INVERTER AND TORQUE EXCITER REPLACEMENT. Inverter and torque exciter must be replaced every 1,000 hours (approximately every 45 days). Replacement must be done in

conjunction with a Nose malfunction, recycle, or Basic Missile recycle.

MISSILE MECHANIC SPECIALIST

MECHANIC NO. 3

TABLE 2-1

INITIAL SETUP CHECKLIST

CHECK	INFORM	
		OPERATION 1.
		NOTE For installing complete Missile, perform only operations 1, 2, 3, and 4. For installing Nose Section only, perform only operations 5 and 6.
		a. Assist Mech. No. 2 with FCTS.
☐	LCO	b. Ground Missile and Launcher (para. 3-4).
☐	LCO	c. Check tiedowns and shear bolt (para. 3-5).
☐	LCO	d. Check Missile fuel and oil supplies (para. 3-6).
		OPERATION 2.
		a. Assist Missile Replacement Team in installing Wings.
		b. Assist in removing folding wing mechanism.
		c. Assist in lowering Missile into bay.
☐	LCO	d. Connect static ground cables (para. 3-7).
		OPERATION 3.
☐	LCO	a. Install Umbilical Outlet Box (para. 3-8).
		b. Assist Nose Replacement Team in positioning Nose Section.
		c. After removal of Nose Section Trailer, install maintenance platform bridge grating (para. 3-9).
		d. (Deleted)
		e. (Deleted)

MISSILE MECHANIC SPECIALIST

MECHANIC NO. 3

TABLE 2-1 (cont)

INITIAL SETUP CHECKLIST

CHECK	INFORM	
		OPERATION 3 (cont).
		f. (Deleted)
		g. Assist Mech. No. 2 transfer power to gyro heaters.
☐	LCO	h. Install pullaway brackets on Launcher (para. 3-10).
		OPERATION 4.
☐	LCO	a. Connect Missile Nose Air Conditioner (para. 3-11).
☐	LCO	b. Install Engine Start Fuel Controller (para. 3-12).
☐	LCO	c. Connect power cables and hoses (para. 3-13).
☐	LCO	d. Obtain AZIMUTHAL ALIGNMENT DOOR lanyard from LAUNCHER STOWAGE BOX and prop AZIMUTHAL ALIGNMENT DOOR on Nose Section open.
		OPERATION 5.
		a. Assist Nose Replacement Team in positioning Nose Section.
☐	LCO	b. After removal of Nose Section Trailer, install maintenance platform (para. 3-9).
		c. (Deleted)
		d. (Deleted)
		e. Assist Mech. No. 2 transfer gyro heater power.
		OPERATION 6.
☐	LCO	a. Connect Missile Nose Air Conditioner (para. 3-11).

MISSILE MECHANIC SPECIALIST

MECHANIC NO. 3

TABLE 2-1 (cont)

INITIAL SETUP CHECKLIST

CHECK	INFORM	OPERATION 6 (cont).
☐	LCO	b. Obtain AZIMUTHAL ALIGNMENT DOOR laynard from LAUNCHER STOWAGE BOX and prop AZIMUTHAL ALIGNMENT DOOR on Nose Section Open.

END OF INITIAL SETUP CHECKLIST

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MISSILE MECHANIC SPECIALIST

MECHANIC NO. 3

TABLE 2-2

RECYCLE CHECKLIST

CHECK INFORM OPERATION 1.

NOTE

After initial setup, perform operations 2 thru 10. For recycling after 7-day hold, perform operations 1 thru 10.

NOTE

Perform all steps in operation 1 with Mech. No. 5.

DISCONNECT SADCB CABLE

2 a. Disconnect igniter cable (para. 3-14).

3 b. Install maintenance platform bridge grating (para. 3-9).

8 c. Disarm wing destruct detonators (para. 3-16).

9 d. Connect Missile static ground cable to J8676 on Missile.

OPERATION 2.

☐ LCO a. Disconnect P8673 from Hydraulic Rupture Valve.

☐ LCO b. Remove lower equipment access panel (para. 3-17).

☐ LCO c. Connect HPTS (para. 3-18).

☐ LCO d. On request of LCO, perform hydraulic cycling (para. 3-19).

☐ LCO e. Disconnect HPTS (para. 3-20).

OPERATION 3.

☐ LCO a. Prepare MNAC (para. 3-21).

☐ LCO b. Check to insure that throttle and fuel shutoff valves are closed (para. 3-22)

☐ LCO c. Check tailpipe and air intake (para. 3-23).

MISSILE MECHANIC SPECIALIST

MECHANIC NO. 3

TABLE 2-2 (cont)

RECYCLE CHECKLIST

CHECK	INFORM	
		OPERATION 7.
☐	LCO	a. Connect PSSTS (para. 3-24).
☐	LCO, 2	b. Perform simulated airspeed check (para. 3-25).
☐	LCO, 1	c. Make simulated altitude setting (para. 3-26).
		OPERATION 8.
☐	LCO, 2	a. On Request of Mech. No. 2, make simulated airspeed setting (para. 3-27).
☐	LCO, 2	b. On request of Mech. No. 2, remove and reinsert Arming Plug Wing Destruct jack; then safety-wire.
		c. (Deleted)
☐	LCO	d. Disconnect PSSTS (para. 3-28).
		OPERATION 9.
☐	LCO	a. Install lower equipment access panel (para. 3-29).
		b. Assist Mech. No. 2 in removing test equipment.
☐	LCO	c. Disconnect static ground cable from J8676 on Missile.
☐	LCO	d. Connect P8673 to Hydraulic Rupture Valve.
		OPERATION 10.
		NOTE Perform all steps in Operation 10 with Mech. No. 5.
☐	LCO	a. Arm wing destruct detonators (para. 3-30).

MISSILE MECHANIC SPECIALIST

MECHANIC NO. 3

TABLE 2-2 (cont)

RECYCLE CHECKLIST

CHECK	INFORM	OPERATION 10 (cont).
☐	LCO	3 b. Remove maintenance platform bridge grating (para. 3-31).
☐	LCO	4 c. Connect AZIMUTHAL ALIGNMENT DOOR lanyard to EYE-BRACE ASSY AZ ALIGN DOOR fitting on Launcher.
☐	LCO	6 d. Connect igniter cable (para. 3-32). CONNECT IGNITER CABLE
☐	LCO	7 e. Announce: "Mechanic No. 3 checks complete."

NOTE

When Mech. No. 5 checks are complete, vacate Launch Bay.

END OF RECYCLE CHECKLIST

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MISSILE MECHANIC SPECIALIST

MECHANIC NO. 3

TABLE 2-3

HOLD STATUS CHECKLIST

CHECK INFORM OPERATION 2.

NOTE

Assist Mech. No. 5.

DISCONNECT SADCS CABLE

OPERATION 3.

NOTE

Only perform para. 3-33 if LAGG steps 601 thru 615 are to be performed.

☐	LCO, 1	a. Connect PSSTS (para. 3-33).
☐	LCO	b. Disconnect AZIMUTHAL ALIGNMENT DOOR lanyard from EYE-BRACE ASSY AZ ALIGN DOOR fitting on Launcher.
		c. Install maintenance platform bridge grating (para. 3-9).
☐	LCO	d. Remove lower equipment access panel (para. 3-17).
☐	LCO	e. After running set-ins have been checked by Launch Control, install lower equipment access panel (para. 3-29).

OPERATION 4.

☐	LCO	a. On request of Mech. No. 1, perform simulated altitude setting (para. 3-34).
☐	LCO, 1	b On request of Mech. No. 1, disconnect PSSTS (para. 3-35).

OPERATION 5.

NOTE

Perform all steps in Operation 5 with Mech. No. 5.

MISSILE MECHANIC SPECIALIST

MECHANIC NO. 3

TABLE 2-3 (cont)

HOLD STATUS CHECKLIST

CHECK	INFORM	OPERATION 5 (cont).
☐	LCO	a. Remove maintenance platform bridge grating (para. 3-31).
☐	LCO	b. Connect AZIMUTHAL ALIGNMENT DOOR lanyard to EYE-BRACE ASSY AZ ALIGN DOOR fitting on Launcher.
☐	LCO	c. Announce: "Mechanic No. 3 checks complete."

NOTE

When Mech. No. 5 checks are complete, vacate Bay.

END OF HOLD STATUS CHECKLIST

MISSILE MECHANIC SPECIALIST

MECHANIC NO. 3

TABLE 2-4

ALERT COUNTDOWN CHECKLIST

OPERATION 1.

NOTE

Stand by during Alert Countdown.

END OF ALERT COUNTDOWN CHECKLIST

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MISSILE MECHANIC SPECIALIST

MECHANIC NO. 3

TABLE 2-5

SHUTDOWN AND DISCONNECTING CHECKLIST

CHECK INFORM OPERATION 1.

NOTE

For removing complete Missile, perform operations 1, 2, 3, and 4.
For removing Nose Section only, perform only operations 5, 6, and 7.

NOTE

Perform all steps in Operation 1 with Mech. No. 5.

☐ LCO a. Disconnect igniter cable (para. 3-36).

☐ LCO b. Remove and stow AZIMUTHAL ALIGNMENT DOOR lanyard in LAUNCHER STOWAGE BOX.

☐ LCO c. Install maintenance platform bridge grating (para. 3-9).

d. Assist Munitions Specialist in disarming wing destruct detonators.

☐ LCO e. Disconnect Power and Control cable from SADCB (para. 3-37).

OPERATION 2.

☐ LCO a. Disconnect Missile Nose Air Conditioner (para. 3-38).

☐ LCO b. Remove Engine Start Fuel Controller (para. 3-39).

☐ LCO c. Disconnect external power cables (para. 3-40).

☐ LCO d. Remove pullaway brackets from Launcher (para. 3-41).

e. Assist Mech. No. 2 transfer gyro heater power.

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TABLE 2-5 (cont)

SHUTDOWN AND DISCONNECTING CHECKLIST

CHECK	INFORM	
		OPERATION 2 (cont).
☐	LCO	f. Disconnect hydraulic hoses (para. 3-42).
☐	LCO	g. Remove maintenance platform bridge grating (para. 3-31).
		OPERATION 4.
		a. (Deleted)
☐	LCO	b. Remove UOB (para. 3-43).
☐	LCO	c. Disconnect static ground cables (para. 3-44).
☐	LCO	d. Ground Missile and Launcher (para. 3-45).
☐	LCO	e. Remove Launcher tiedowns.
		f. Assist in folding Wings.
☐	LCO	g. Remove ground cables when ready to load Missile onto transporter.
		OPERATION 5.
		NOTE
		Perform all steps in Operation 5 with Mech. No. 5.
☐	LCO	a. Install maintenance platform bridge grating (para. 3-9).
		OPERATION 6.
☐	LCO	a. Disconnect Missile Nose Air Conditioner (para. 3-38).
		b. Assist Mech. No. 2 transfer gyro heater power.
☐	LCO	c. Remove maintenance platform bridge grating (para. 3-31).

END OF SHUTDOWN AND DISCONNECTING CHECKLIST

MISSILE MECHANIC SPECIALIST

MECHANIC NO. 3

TABLE 2-6

Emergency Procedures

ELECTRICAL FIRE IN LAUNCH BAY

a. Direct carbon dioxide on fire.

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SECTION III

OPERATING INSTRUCTIONS

3-1. GENERAL.

3-2. This section contains the detailed operating instructions necessary for a Missile Mechanic Specialist to assume the duties of Mechanic No. 3 and carry out the operations referred to in the checklists of Section II.

3-3. During certain portions of the checklists, and during all the Alert Countdown Checklists, Mechanic No. 3 has no specific operations that he must perform. However, as specified in the checklists and operating instructions, Mechanic No. 3 must stand by in the event of an emergency or in case his assistance is required by Launch Control or by another mechanic.

3-4. GROUNDING MISSILE AND LAUNCHER.

a. Obtain ground cables 258N9897010-939, 258N9897010-949, and 258N9897010-959.

b. Secure terminal end of -959 cable to GROUND HERE terminal on rear of Launcher.

c. Clamp one end of -939 cable to other end of -959 cable.

d. Clamp one end of -949 cable to other end of -939 cable.

e. Clamp other end of -949 cable to GND ground stud on Missile Nose Air Conditioner.

3-5. CHECKING TIEDOWNS AND SHEAR BOLT.

a. Insure that tiedowns are installed at both TIEDOWN POINT(s) at station 170 of Missile.

b. Insure that tiedowns are installed at both LIFT points at station 346 of Missile.

c. Insure that shear bolt is installed in holdback fitting in Missile and holdback fitting in Launcher.

3-6. CHECKING MISSILE FUEL AND OIL SUPPLIES.

a. Remove fuel tank filler caps from top of Missile.

b. Insure that fuel in each fuel tank is level with bottom of filler cap opening.

NOTE

If fueling is required, fuel Missile in accordance with paragraphs 3-47 through 3-49.

c. Secure fuel tank filler caps.

d. Insure that tape has been removed from BREATHER DOOR(s).

e. Check engine oil level with dip stick, which is accessible through BREATHER DOOR on right side of Missile.

f. If dip stick indicates less than 12 quarts, fill to 12-quart level with mixture consisting of one part MIL-C-6529 corrosion preventive compound and three parts MIL-O-6081, grade 1010, lubricating oil by volume.

NOTE

For cold weather operation below 0°F (--17.8C), use Grade 1005 lubricating oil instead of Grade 1010.

WARNING

Insure that the yellow slippage mark on stationary top face cap of oil dip stick is aligned with corresponding mark on rotating sleeve.

g. Remove ENGINE ACCESS DOOR.

h. Inspect plenum chamber for fuel leaks or traces of fuel. Clean away all traces of fuel, and spray wet spots with fire extinguisher fluid.

3-7. CONNECTING STATIC GROUND CABLES.

a. Disconnect ground cables 258N9897010-939, 258N9897010-949, and 258N9897010-959.

b. Connect missile static ground cable -949 between COMMON GROUND receptacle J8676 on left side of Center Section and static ground stud on floor of Launch Bay aft of Rocket Motor. (See figure 3-1.)

c. Connect launcher static ground cable -959 between GROUND HERE stud on Launcher and static ground stud on floor of bay.

d. Insure that ground connections are secure.

3-8. INSTALLING UMBILICAL OUTLET BOX.

NOTE

If UOB is mounted on Launch Bay, perform only step f. If UOB is mounted on Launcher, perform steps a thru e.

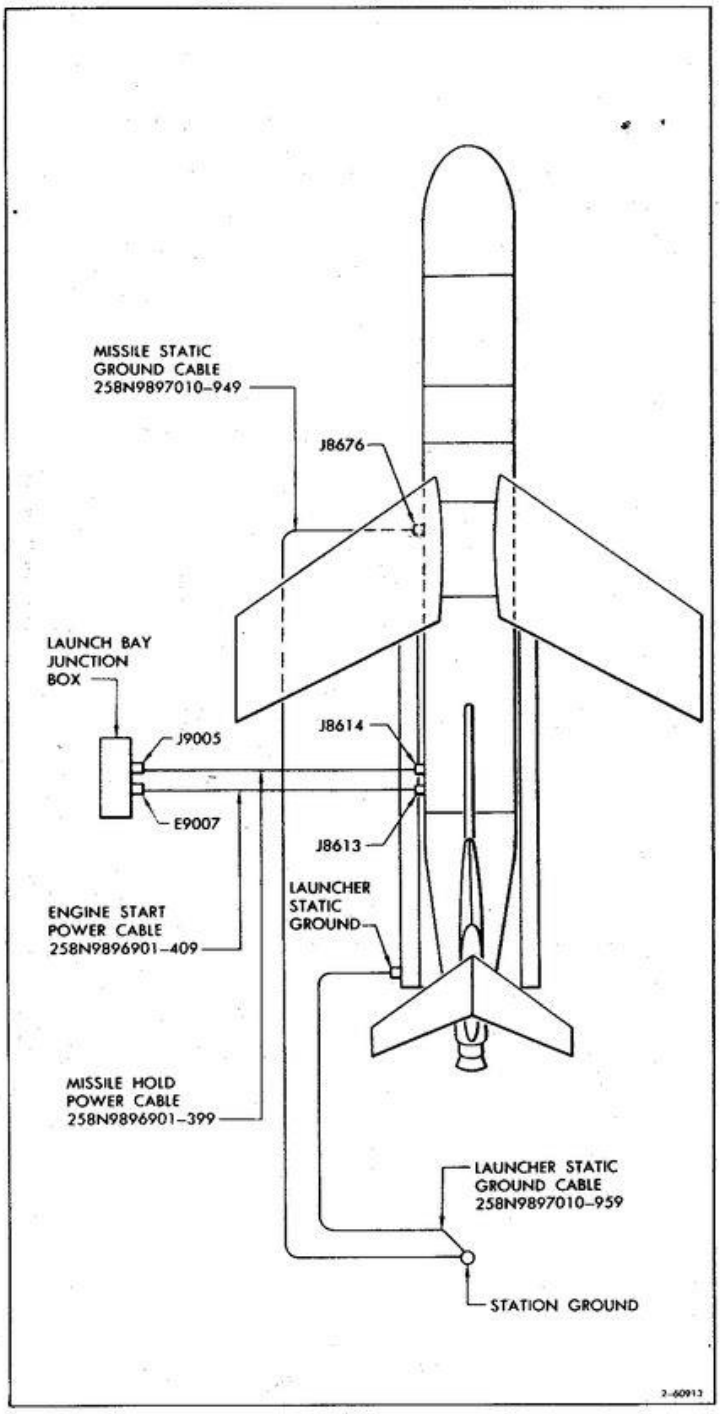

Figure 3-1. External Power and Static Ground Connections

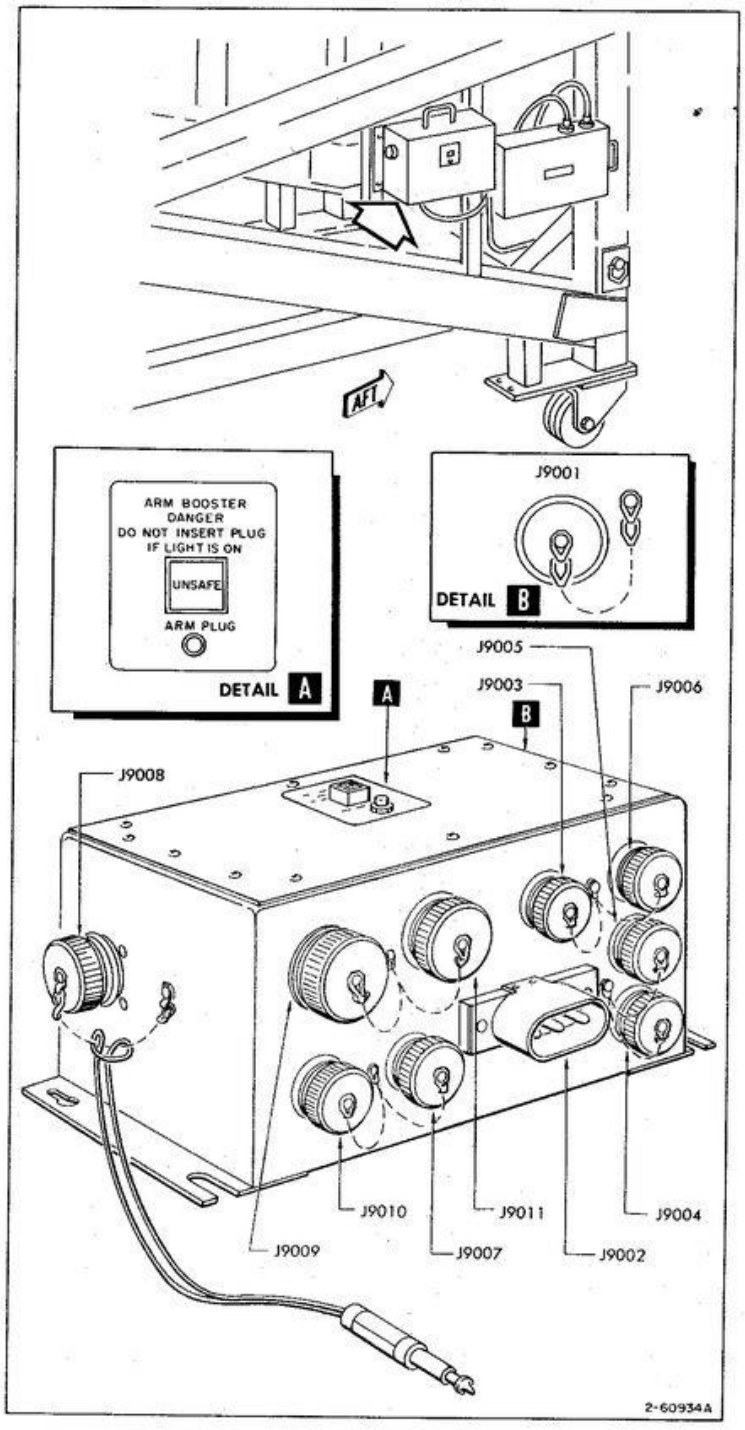

Figure 3-2. Umbilical Outlet Box

a. Install Umbilical Outlet Box (figure 3-2) on UOB brackets aft on left side of Launcher.

b. Connect umbilical cable between J9008 on UOB and J8693 on Missile.

c. Connect launch control cable between J9009 on UOB and J9001 on LBJB.

d. Connect ac power cable between J9003 on UOB and J9008 on LBJB.

e. Connect 28 vdc power cable between J9002 on UOB and J9006 on LBJB.

f. Connect umbilical cable to J8693 on Missile.

3-9. INSTALLING MAINTENANCE PLATFORM BRIDGE GRATING.

a. Remove bridge grating (2, figure 3-3) from stowed position between launcher wheel tracks on floor of Launch Bay.

b. Position bridge grating between permanent platform (4) beneath Nose Section of Missile, insuring that ends of bridge grating fit securely over studs on permanent platform.

c. Remove locking pins from swing-out guard rails (1).

d. Position guard rails and connect chain (3) between forward swing-out guard rails.

3-10. INSTALLING PULLAWAY BRACKETS ON LAUNCHER.

a. Install pullaway brackets on each side of Launcher in sockets provided.

b. Insure that fire extinguisher nozzles on bracket are positioned over BREATHER DOOR(s) on Missile.

c. Insure that each fire extinguisher hose is connected to fire extinguisher supply line.

3-11. CONNECTING MISSILE NOSE AIR CONDITIONER. (Figure 3-4.)

a. Insure that MNAC ends of low and high (smaller) pressure air conditioning duct are connected to receptacles on top panel of MNAC.

b. Insure that power cable is connected between POWER INPUT panel of MNAC and J9010 on LBJB.

c. Raise TEMPERATURE CONTROL panel door on MNAC and place MISSILE/LOCAL switch to LOCAL.

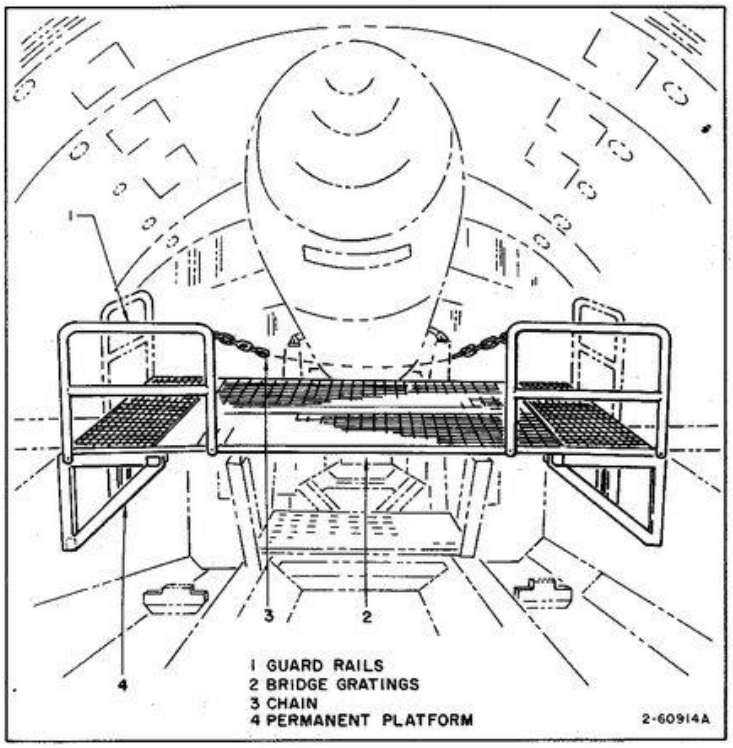

Figure 3-3. Installation of Nose Access Maintenance Platform

a. Install Umbilical Outlet Box (figure 3-2) on UOB brackets aft on left side of Launcher.

b. Connect launch control cable between J9008 on UOB and J8693 on Missile.

c. Connect umbilical cable between J9009 on UOB and J9001 on LBJB.

d. Connect ac power cable between J9003 on UOB and J9008 on LBJB.

e. Connect 28 vdc power cable between J9002 on UOB and J9006 on LBJB.

f. Connect umbilical cable to J8693 on Missile.

3-9. INSTALLING MAINTENANCE PLATFORM BRIDGE GRATING.

a. Install bridge grating (2, figure 3-3) beneath Nose Section.

b. Extend forward and aft guard rails (1).

c. Connect chain between right and left forward guard rails.

3-10. INSTALLING PULLAWAY BRACKETS ON LAUNCHER.

a. Install pullaway brackets on each side of Launcher in sockets provided.

b. Insure that fire extinguisher nozzles on bracket are positioned over BREATHER DOOR(s) on Missile.

c. Insure that each fire extinguisher hose is connected to disconnect coupler in concrete pipe.

3-11. CONNECTING MISSILE NOSE AIR CONDITIONER. (Figure 3-4.)

a. Insure that MNAC ends of low and high (smaller) pressure air conditioning duct are connected to receptacles on top panel of MNAC.

b. Insure that power cable is connected between POWER INPUT panel of MNAC and J9010 on LBJB.

c. Raise TEMPERATURE CONTROL panel door on MNAC and place MISSILE/LOCAL switch to LOCAL.

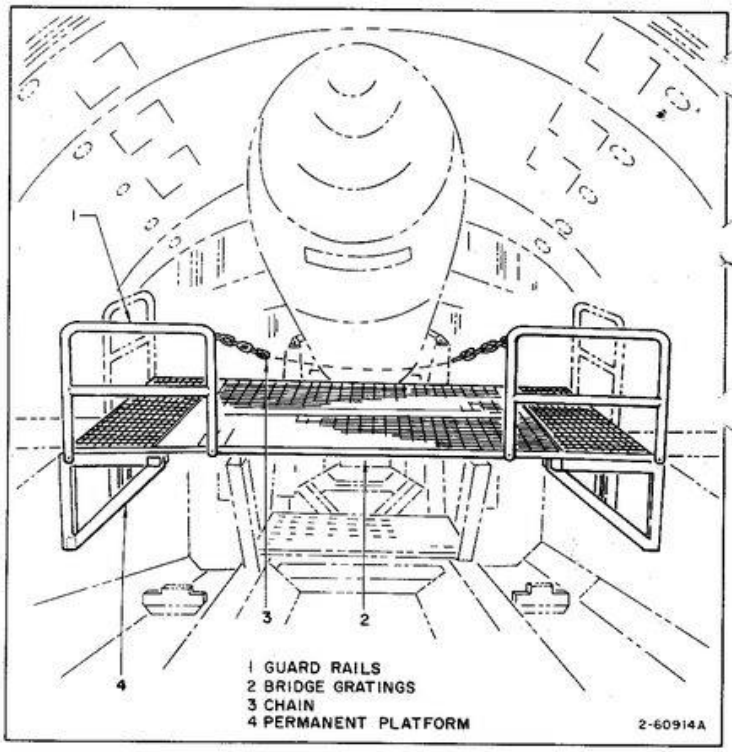

Figure 3-3. Installation of Nose Access Maintenance Platform

d. On MNAC CONTROL PANEL, place MODE SELECTOR switch to QUICK WARMUP; QUICK WARMUP indicator lamp must go on.

NOTE

Allow MNAC to remain in this mode of operation approximately five minutes. This operation will insure that any dust, dirt, or foreign matter will be blown from the low and high pressure ducts.

e. Place MODE SELECTOR switch on MNAC CONTROL PANEL to NORMAL; NORMAL and MALF indicator lamps must go on and QUICK WARMUP indicator lamp must go off.

f. Raise TEMPERATURE CONTROL panel door on MNAC and place MISSILE/LOCAL switch to MISSILE; NORMAL and MALF indicator lamps must go off and MNAC must stop operating.

g. Connect quick-disconnect end of low pressure air conditioning duct (larger) to inlet under ground cooling access door on Nose Section.

h. Connect quick-disconnect end of high pressure air conditioning duct (smaller) to GROUND COOLING INLET on Warhead Section.

i. Remove Missile air conditioner plug set from ports on top of Nose Section.

j. Connect P8332 of interlock cable to J8332 on Nose Section.

k. Insure that P21 on interlock cable is connected to receptacle on top of MNAC.

l. Insure that pull-away lanyards between low pressure air conditioning duct and P8332 on interlock cable are connected.

3-12. INSTALLING ENGINE START FUEL CONTROLLER.

NOTE

If Engine Start Fuel Controller is mounted on Launch Bay, perform only steps f and g. If controller is mounted on Launcher, perform steps a thru g.

a. Install Engine Start Fuel Controller (3, figure 3-5) on engine start fuel controller brackets aft on left side of launcher.

b. Connect start fuel source line (4) between controller and start fuel source disconnect located beneath walkway grating on left side of Missile.

c. Connect start fuel control cable (5) between J1 on controller and J9010 on Umbilical Outlet Box.

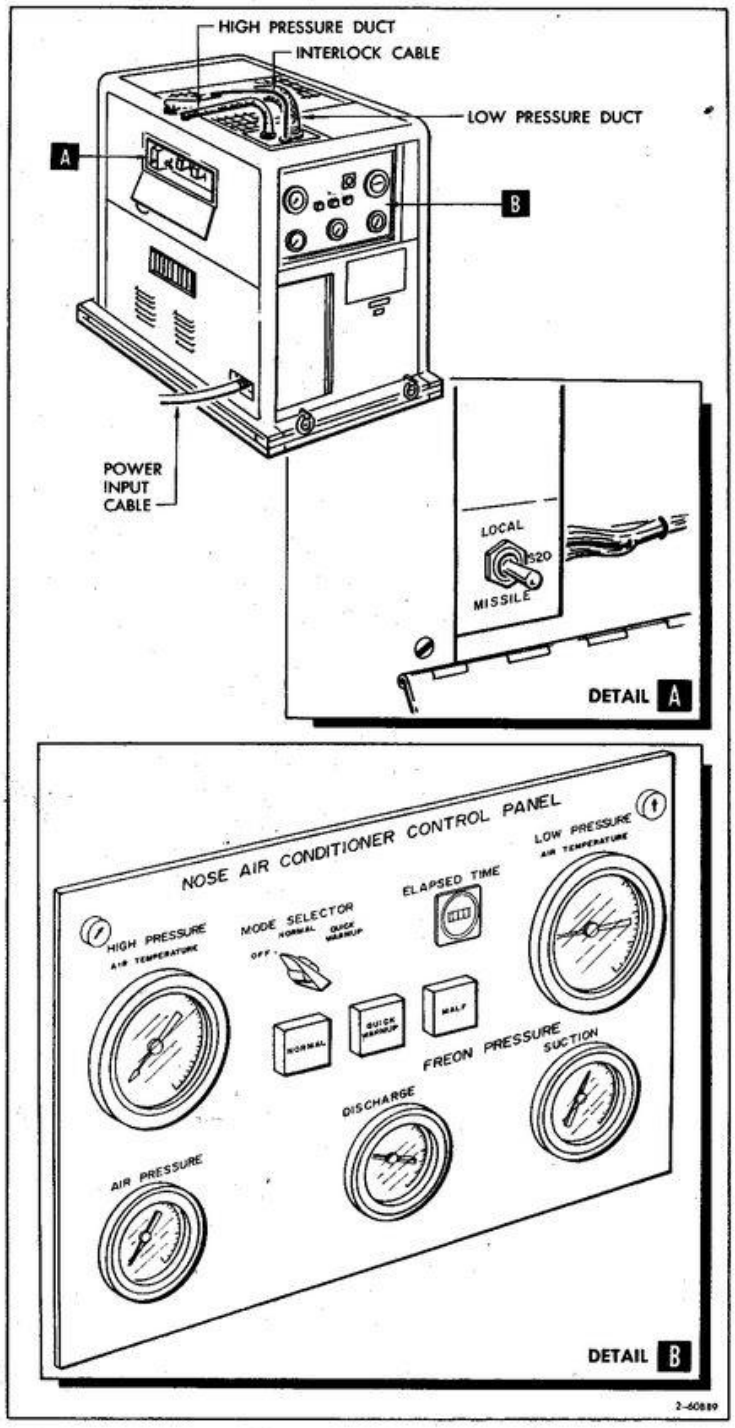

Figure 3-4. Missile Nose Air Conditioner

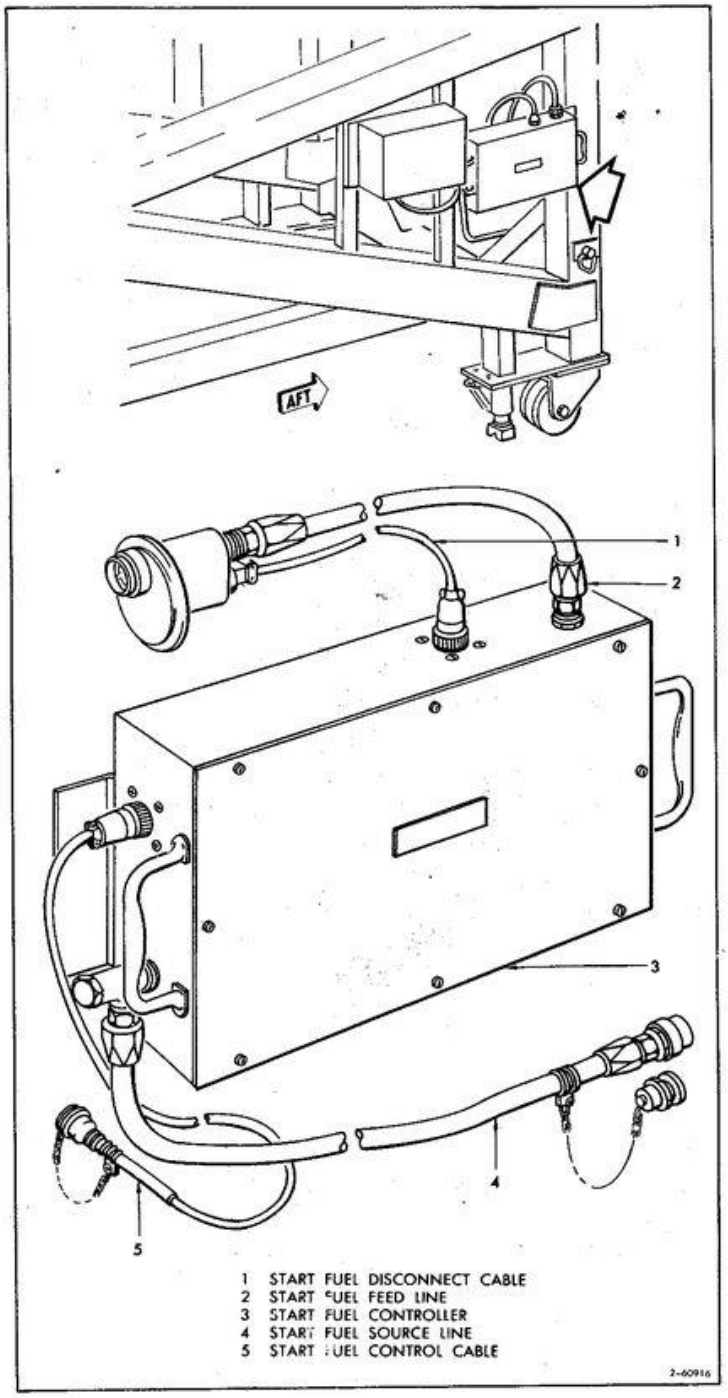

Figure 3-5. Engine Start Fuel Controller

d. Connect free end of start fuel feed line (2) to controller.

e. Connect free end of start fuel disconnect cable (1) to J2 on controller.

f. Connect disconnect solenoid on end of start fuel feed line and start fuel disconnect cable to start fuel connection on Missile.

g. Insure that start fuel connection on Missile is capable of being released; then reconnect start fuel connection on Missile.

3-13. CONNECTING POWER CABLES AND HOSES.

a. Connect Missile hold power cable between J9005 on Launch Bay Junction Box and J8614 on Missile. (See figure 3-1.)

b. Connect engine start power cable to J8613 on Missile.

b-1. Connect engine start power, missile hold power, and umbilical cable lanyards at P8613, P8614, and P8693 LANYARD eyebolts on left pullaway bracket, respectively.

c. Disconnect jumper assembly from between hydraulic pressure and return hoses on right side of Launch Bay.

d. Connect hydraulic pressure hose to HYDRAULIC PRESSURE disconnect on right side of Aft Section.

e. Connect hydraulic return hose to HYDRAULIC RETURN disconnect on right side of Aft Section.

3-14.. DISCONNECTING IGNITER CABLE.

a. Disconnect igniter cable from J9001 on UOB.

b. Connect shorting plug to receptacle on end of igniter cable.

3-15. (Deleted)

3-16. DISARMING WING DESTRUCT DETONATORS.

a. Remove crown panel.

b. Disconnect plug P8625 from J8625 and place shorting receptacle on P8625.

c. Disconnect P8773 of Missile harness from J8773 on Wing Severance Delay Package.

d. Place shorting plug on J8773 of Wing Severance Delay Package.

e. Connect shorting plug onto P8773 of Missile harness.

3-17. REMOVING LOWER EQUIPMENT ACCESS PANEL.

a. Remove lower equipment access panel from Nose Section of Missile.

b. Position panel for later installation.

3-18. CONNECTING HYDRAULIC PACKAGE TEST SET.

a. Obtain Hydraulic Package Test Set (figure 3-6) and position it near Nose Section on right side of Launch Bay.

b. Remove cables from Cable Stowage for Hydraulic Package Test Set.

c. Connect HPTS static ground cable between GROUND STUD (3) on test set and convenient ground.

d. Insure that PITCH and ROLL BYPASS SOLENOID switches (7, 8) are OFF.

e. Insure that POWER switch (12) is OFF.

f. Connect HPTS power cable between J1 (1) on test set and J9004 on Umbilical Outlet Box.

g. Connect HPTS signal cable (no. 1) between J2 (5) on test set and J8688 in Missile.

NOTE

J8688 is accessible through right BREATHER DOOR.

h. Disconnect P8616 and P8621 of Missile harness from receptacles TB9416 and TBF9421 at station 21 of Missile.

NOTE

Access is gained through bottom warhead access opening in Warhead Section.

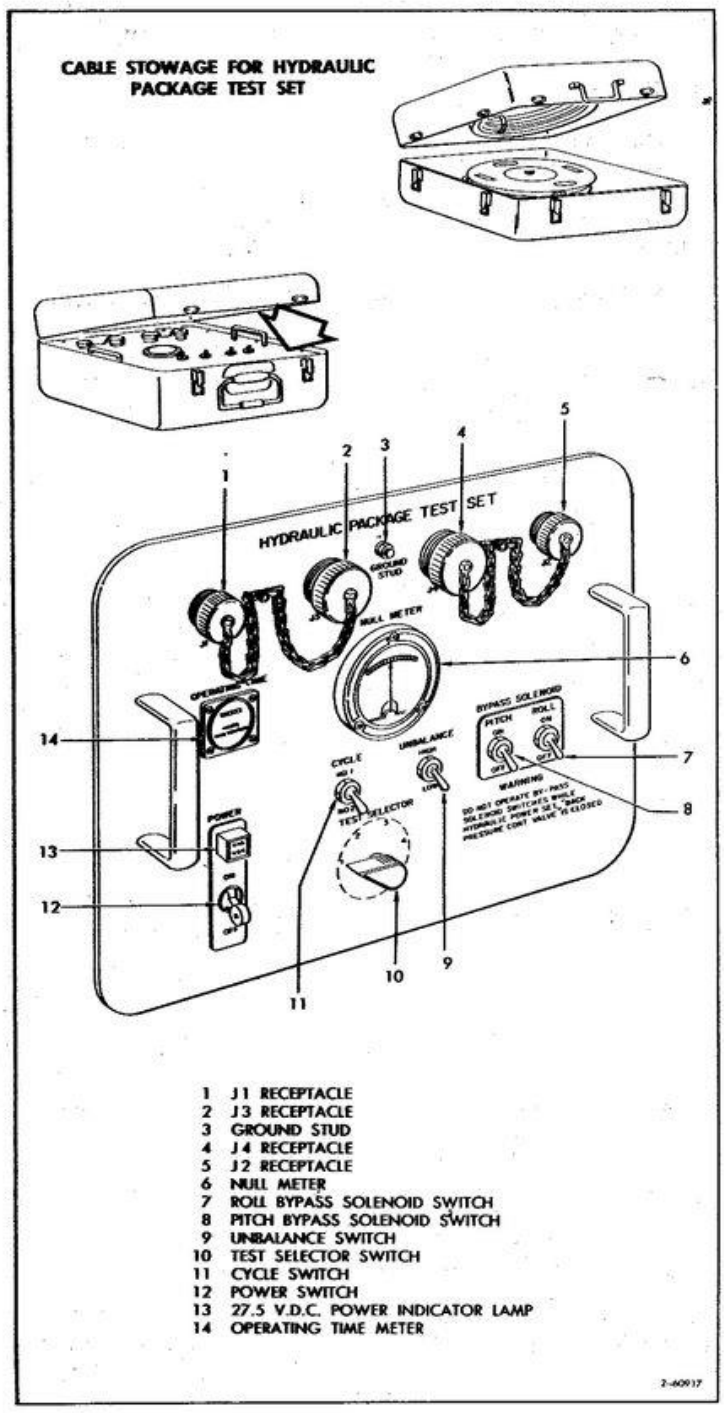

Figure 3-6. Hydraulic Package Test Set

i. Connect HPTS signal cable (no. 2) between J3 (2) of test set and P8616 of Missile harness.

j. Connect HPTS signal cable (no. 3) between J4 (4) of test set and P8621 of Missile harness.

k. Announce: "HPTS is connected."

3-19. HYDRAULIC CYCLING.

NOTE

At request of LCO, proceed to hydraulic cycling. Close coordination must be kept with Mechanic No. 4.

a. Place POWER switch (12, figure 3-6) on Hydraulic Package Test Set ON; 27.5 V.D.C. POWER lamp (13) must go on.

b. Inspect hydraulic lines and inform Mechanic No. 4 of any leakage.

c. Rotate TEST SELECTOR switch (10) to position 1.

d. At request of Mechanic No. 4, place ROLL BYPASS SOLENOID switch (7) ON.

e. At request of Mechanic No. 4, place ROLL BYPASS SOLENOID switch OFF.

f. Repeat steps d and e until Mechanic No. 4 requests to proceed.

g. At request of Mechanic No. 4, place PITCH BYPASS SOLENOID switch (8) ON.

h. At request of Mechanic No. 4, place PITCH BYPASS SOLENOID switch OFF.

i. Repeat steps g and h until Mechanic No. 4 requests to proceed; then proceed with Roll Cycling.

NOTE

During the following step, observe for proper operation of spoilers. Binding, rubbing, or chattering must not be evident.

j. Operate CYCLE switch (11) between positions No. 1 and No. 2 a minimum of five times.

k. Place CYCLE switch to position No. 1; one set of spoilers will move to fully extended position.

NOTE

After 5 minutes in this position, there must be no evidence of leakage or permanent set.

l. Place CYCLE switch to position No. 2; extended spoilers will retract and other set of spoilers will move to fully extended position.

m. Rotate TEST SELECTOR switch to position 2.

n. Inform Mechanic No. 4 that roll cycling is complete.

o. Upon request of Mechanic No. 4, perform Pitch Cycling.

NOTE

During the following step, observe for proper operation of Stabilizer. Binding, rubbing, or chattering must not be evident.

p. Operate CYCLE switch between positions No. 1 and No. 2 a minimum of five times.

q. Place CYCLE switch to position No. 1; Stabilizer must move to one extreme position.

NOTE

After 5 minutes in this position, there must be no evidence of leakage or permanent set.

r. Place CYCLE switch to position No. 2; Stabilizer must move to other extreme position.

s. Inform Mechanic No. 4 pitch cycling is complete; and proceed upon request of Mechanic No. 4.

t. Place UNBALANCE switch (9) to HIGH.

u. Rotate TEST SELECTOR switch to position 3; NULL METER (6) pointer must deflect and return to green area.

v. Place UNBALANCE switch to LOW; NULL METER pointer must deflect and return to green area.

w. Rotate TEST SELECTOR switch to position 4; NULL METER pointer must deflect and return to green area.

x. Place UNBALANCE switch to HIGH; NULL METER pointer must deflect and return to green area.

y. Request Mechanic No. 4 to proceed with back pressure checks.

3-20. DISCONNECTING HYDRAULIC PACKAGE TEST SET.

a. Place POWER switch (12, figure 3-6) on Hydraulic Package Test Set OFF.

b. Disconnect HPTS signal cable (no. 3) from between J4 (4) of test set and P8621 of Missile harness.

c. Disconnect HPTS signal cable (no. 2) from between J3 (2) of test set and P8616 of Missile harness.

d. Reconnect P8621 of Missile harness to receptacle TBF9421 at station 21 of Missile.

e. Reconnect P8616 of Missile harness to receptacle TBF9416 at station 21 of Missile.

f. Disconnect HPTS signal cable (no. 1) from between J2 (5) of test set and J8688 in Missile.

g. Announce: "Hydraulic cycling complete."; then proceed.

h. Disconnect HPTS power cable from between J1 (1) of test set and J9004 of Umbilical Outlet Box.

i. Disconnect HPTS static ground cable.

j. Coil all cables and stow in Cable Stowage for Hydraulic Package Test Set.

k. Close cover and stow test set.

3-21. PREPARING MISSILE NOSE AIR CONDITIONER.

a. Insure MODE SELECTOR switch on MNAC (figure 3-4) is in NORMAL position and MISSILE-LOCAL switch located behind TEMPERATURE CONTROL door on MNAC is in MISSILE position.

NOTE

When LAGG is in test 000, NORMAL and MALF indicator lamps on MNAC must be on. When LAGG is in test, 103, NORMAL indicator lamp must remain on and MALF indicator lamp on MNAC must go off.

3-22. CHECKING THROTTLE AND FUEL SHUTOFF VALVE.

a. Insure that throttle is closed.

b. Insure that fuel shutoff valve is closed.

3-23. CHECKING TAILPIPE AND AIR INTAKE.

a. Insure that engine tailpipe and air intake are free of foreign matter.

3-24. CONNECTING PITOT STATIC SYSTEM TEST SET TO MISSILE.

a. Obtain Pitot Static System Test Set (figure 3-7) from its stowed position.

b. Obtain pitot hose from MB-1 Adapter Set.

c. Connect pitot hose between PITOT connection on test set and PITOT TUBE located on right side of Missile Center Section.

d. Remove protective paper and tape from static ports on Missile.

NOTE

Static port covers must be installed evenly and firmly to insure a flush connection.

e. Install the static port cover that has hose adapter over static port on right side of center section.

f. Install other static port cover over static port on left side of Center Section.

g. Connect static hose between STATIC connection on Pitot Static System Test Set (figure 3-7) and hose adapter on right side of Center Section.

NOTE

Do not use extreme force when valve has been rotated fully clockwise. Also altitude and airspeed cannot be simulated simultaneously.

h. Rotate both VENT valves fully clockwise.

i. Rotate PRESSURE SOURCE valve fully clockwise.

j. Rotate VACUUM SOURCE valve fully clockwise.

k. Rotate CROSS BLEED valve fully clockwise.

l. Pump PRESSURE PUMP until EXTERNAL PRESSURE meter indicates 50 Hg.

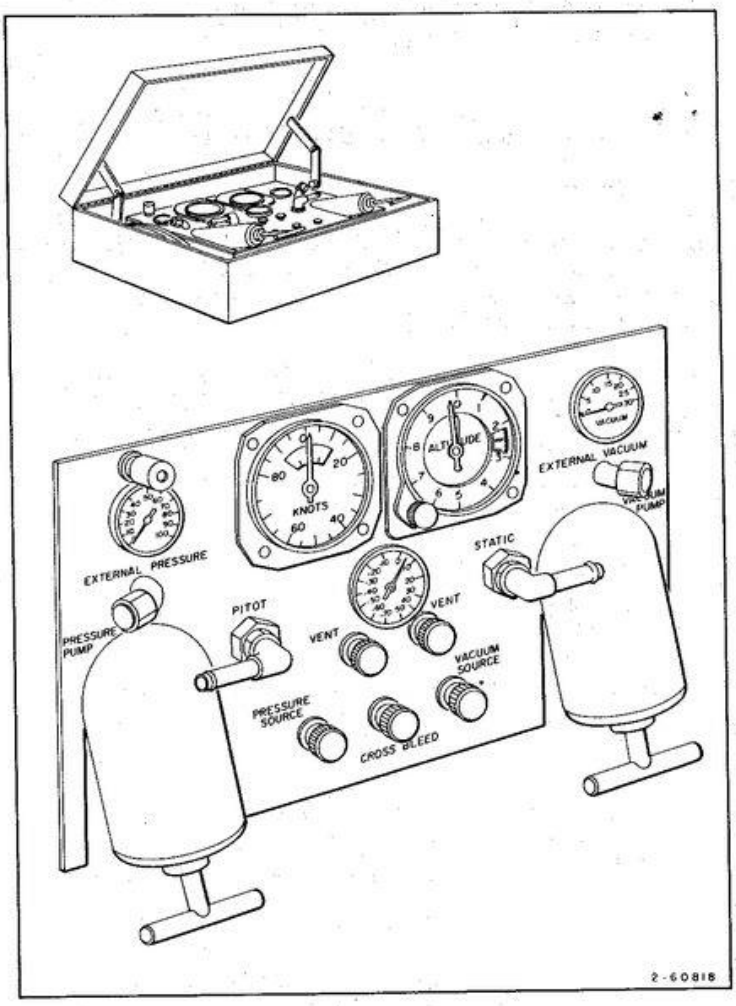

Figure 3-7. Pitot Static System Test Set

3-25. CHECKING SIMULATED AIRSPEED.

NOTE

On request of Mechanic No. 2, proceed with simulated airspeed check.

a. (Deleted)

b. Rotate PRESSURE SOURCE valve on Pitot Static System Test Set (figure 3-7) counterclockwise until airspeed indicator indicates 271 knots; then rotate PRESSURE SOURCE valve fully clockwise.

NOTE

If 271-knot indication is exceeded, rotate pressure VENT valve counterclockwise until proper indication is obtained; then rotate pressure VENT valve fully clockwise. The 271-knot indication must be maintained until Mechanic No. 2 requests a simulated airspeed of 281 knots. Upon receipt of request for 281 knots, proceed with step c.

c. Rotate PRESSURE SOURCE valve counterclockwise until airspeed indicator indicates 281 knots; then rotate PRESSURE SOURCE valve fully clockwise.

NOTE

If 281-knot indication is exceeded, rotate pressure VENT counterclockwise until proper indication is obtained; then rotate pressure VENT valve fully clockwise. The 281-knot indication must be maintained until Mechanic No. 2 announces; "Flight Control Test 10 complete"; then proceed with step d below.

d. Rotate pressure VENT valve fully counterclockwise to bleed system pressure.

3-26. SETTING SIMULATED ALTITUDE.

a. Adjust knob on ALTITUDE dial of Pitot Static System Test Set (figure 3-7) for barometric pressure of day.

b. Rotate CROSS BLEED valve counterclockwise and rotate all other valves fully clockwise.

c. Pump VACUUM PUMP until EXTERNAL VACUUM gage indicates 25.

d. Open VACUUM SOURCE valve until ALTITUDE dial indicates 10,000 feet; if 10,000 feet is exceeded, open vacuum VENT valve to reduce altitude.

e. Announce: "10,000 feet altitude is being simulated."

3-27. SETTING SIMULATED AIRSPEED.

NOTE

On request of Mech. No. 2 proceed with simulated airspeed setting.

a. Rotate vacuum VENT valve counterclockwise until ALTITUDE dial of Pitot Static System Test Set (figure 3-7) indicates zero.

b. Rotate both VENT valves fully clockwise.

c. Rotate PRESSURE SOURCE valve fully clockwise.

d. Rotate VACUUM SOURCE valve fully clockwise.

e. Rotate CROSS BLEED valve fully clockwise.

f. Pump PRESSURE PUMP until EXTERNAL PRESSURE meter indicates 50 Hg.

g. Rotate Pressure Source valve (CCW) until airspeed indicator indicates 271 knots; then rotate Pressure Source valve fully (CW).

NOTE

If 271 knots is exceeded, rotate pressure VENT valve (CCW) until proper indication is obtained; then rotate pressure VENT valve fully clockwise. The 271-knot indication must be maintained until Mech. No. 2 announces "F/C test 13 complete."

h. Announce: "271 knots airspeed is being simulated."

i. When Mech. No. 2 announces "Flight controls test 13 complete", rotate pressure VENT valve fully counterclockwise to bleed system pressure.

3-28. DISCONNECTING PITOT STATIC SYSTEM TEST SET.

CAUTION

Use extreme care when disconnecting PSSTS, insuring that both VENT valves are rotated fully counterclockwise, bleeding system pressure.

a. Rotate both VENT valves fully counterclockwise to bleed system pressure.

b. On request of Mech. No. 2, disconnect pitot and static hoses from Pitot Static System Test Set (figure 3-7) and Missile.

c. Stow hoses and static port covers within MB-1 Adapter Set and stow test sets.

3-29. INSTALLING LOWER EQUIPMENT ACCESS PANEL.

a. Install lower equipment access panel onto Nose Section of Missile.

3-30. ARMING WING DESTRUCT.

a. Insure that ARMING PLUGWING DESTRUCT jack is inserted into receptacle on Missile.

b. Obtain pull-away cable for destruct jack.

c. Secure pull-away cable to destruct jack and to Launcher.

d. Remove shorting receptacle from P8625.

e. Connect plug P8625 to J8625.

f. Remove shorting plug from J8773 on Wing Severance Delay Package.

g. Remove shorting plug from P8773 on Missile harness.

h. Connect P8773 to J8773 on Wing Severence Delay Package.

i. Install detonator well covers on right and left Wings.

j. Replace detonator wire covers on right and left Wings.

k. Install crown panel.

3-31. REMOVING MAINTENANCE PLATFORM BRIDGE GRATING.

a. Disconnect chain (3, figure 3-3) from between forward swing-out guard rails (1).

b. Fold guard rails back and secure with locking pins.

c. Remove bridge grates (3) and stow between launcher wheel tracks on floor of Launch Bay.

d. Secure bridge grating to floor of Launch Bay.

3-32. CONNECTING IGNITER CABLE.

WARNING

Insure that indicator lamp on Umbilical Outlet Box is off.

a. Insert LAUNCH SAFETY plug into ARM PLUG receptacle on Umbilical Outlet Box.

b. Using multimeter, check voltage between sockets A and B, between A and D, between C and B, and between C and D of J9001 on UOB; indication must be 0 volts.

c. Remove LAUNCH SAFETY plug from ARM PLUG receptacle.

d. Using multimeter, check voltage between sockets A and B, between A and D, between C and B, and between C and D of J9001 on UOB; indication must be 0 volts.

e. Disconnect and stow multimeter.

f. Extend and secure BOTTLE IGNITER CABLE BRACKET on aft end of Launcher inboard.

g. Drape igniter cable over BOTTLE IGNITER CABLE BRACKET.

h. Remove shorting plug from receptacle on end of igniter cable.

i. Connect igniter cable to J9001 on UOB.

NOTE

Lanyard must have at least 2 inches of slack after connecting.

j. Connect lanyard from igniter cable to BOTTLE IGNITER CABLE BRACKET on rear of Launcher.

k. Announce: "Mechanic No. 3 checks complete."

NOTE

Vacate Bay when Mech. No. 5 has completed checks.

3-33. CONNECTING PITOT STATIC SYSTEM TEST SET.

NOTE

Static port covers must be installed evenly and firmly to insure a flush connection.

a. Install the static port cover that has hose adapter over static port on right side of Center Section.

b. Install other static port cover over static port on left side of Center Section.

c. Connect static hose between STATIC connection on Pitot Static System Test Set (figure 3-7) and hose adapter on right side of Center Section.

d. Adjust knob on ALTITUDE dial of test for barometric pressure of day.

NOTE

Do not use extreme force when valves have been rotated fully clockwise.

e. Rotate CROSS BLEED valve fully counterclockwise and rotate all other valves fully clockwise.

3-34. SETTING SIMULATED ALTITUDE WHILE IN HOLD STATUS.

NOTE

Insure that CROSS BLEED valve on Pitot Static System Test Set is rotated fully counterclockwise and all other valves are rotated fully clockwise.

a. Pump VACUUM PUMP until EXTERNAL VACUUM gage indicates 25.

NOTE

On request of Mechanic No. 1, simulate altitude of 11,000 feet with steps b and c.

b. Open VACUUM SOURCE valve until ALTITUDE dial indicates 11,000 feet; if 11,000 feet is exceeded, open vacuum VENT valve to reduce altitude.

c. Announce: "11,000 feet altitude is being simulated."

NOTE

On request of Mechanic No. 1 simulate altitude of 13,000 feet with steps d and e.

d. Open VACUUM SOURCE valve until ALTITUDE dial indicates 13,000 feet; if 13,000 feet is exceeded, open vacuum VENT valve to reduce altitude.

e. Announce: "13,000 feet altitude is being simulated."

3-35. DISCONNECTING PITOT STATIC SYSTEM TEST SET.

CAUTION

Use extreme care when disconnecting PSSTS, insuring that VENT valves are rotated fully counterclockwise thereby bleeding system pressure.

a. Rotate all valves on the Pitot Static System Test Set (figure 3-7) fully counterclockwise.

b. Disconnect static hose from Pitot Static System Test Set and Missile.

c. Remove static port covers from Center Section.

d. Stow static port covers and hose within MB-1 Adapter Set and stow test sets.

3-36. DISCONNECTING IGNITER CABLE.

a. Disconnect igniter cable lanyard from BOTTLE IGNITER CABLE BRACKET on rear of Launcher.

b. Disconnect igniter cable from J9001 on UOB.

c. Connect shorting plug to receptacle on end of igniter cable.

d. Coil igniter cable around thrust adapter of Rocket Motor.

e. Loosen hardware securing BOTTLE IGNITER CABLE BRACKET and lower bracket.

3-37. DISCONNECTING POWER AND CONTROL CABLE FROM SADCB.

a. Disconnect power and control cable from receptacle J9015 on Squib Actuated Disconnect Control Box.

3-38. DISCONNECTING MISSILE NOSE AIR CONDITIONER.

a. Disconnect P8332 on interlock cable from J8332 on Nose Section.

b. Disconnect ducts from Nose Section and Warhead Section of Missile.

c. Coil both ducts and stow near MNAC.

d. Install Missile air conditioner plug set into parts on top of Nose Section.

3-39. REMOVING ENGINE START FUEL CONTROLLER.

NOTE

If Engine Start Fuel Controller is mounted on Launch Bay, perform only step d. If controller is mounted on Launcher, perform only steps a thru c.

a. Disconnect Engine Start Fuel Controller lines and cables from Missile and Umbilical Outlet Box; start fuel source disconnect.

b. Remove controller from brackets on Launcher.

c. Stow lines, cables, and controller.

d. Disconnect solenoid on end of start fuel feed line and start fuel disconnect cable from start fuel connection on Missile.

3-40. DISCONNECTING POWER CABLES.

a. Disconnect engine start power, missile hold power, and umbilical cable lanyards from P8613, P8614, and P8693 LANYARD eyebolts on left pullaway bracket, respectively.

a-1. Disconnect missile hold power cable from between J9006 on Launch Bay Junction Box and J8614 on Missile. (See figure 3-1.)

b. Disconnect engine start power cable from between J9004 on Launch Bay Junction Box and J8613 on Missile.

c. Stow both cables.

3-41. REMOVING PULLAWAY BRACKETS FROM LAUNCHER.

a. Remove pullaway brackets from sockets on each side of Launcher.

b. Position brackets for later installation on Launcher.

3-42. DISCONNECTING HYDRAULIC HOSES.

a. Disconnect hydraulic pressure hose from HYDRAULIC PRESSURE disconnect on right side of Aft Section.

b. Disconnect hydraulic return hose from HYDRAULIC RETURN disconnect on right side of Aft Section.

c. Connect jumper assembly between hoses.

d. Coil and stow hoses.

3-43. REMOVING UMBILICAL OUTLET BOX.

NOTE

If UOB is mounted on Launch Bay, perform only step h. If UOB is mounted on Launcher, perform only steps a thru g.

a. Disconnect 28-volt d-c power cable from J9003 on Umbilical Outlet Box (figure 3-2) and J9008 on Launch Bay Junction Box.

b. Disconnect a-c power cable from J9002 on UOB and J9006 on LBJB.

c. Disconnect gyro heater power cable from J9009 on LBJB.

d. Disconnect launch control cable from J9009 on UOB and J9001 on LBJB.

e. Disconnect umbilical cable from J9008 on UOB and J8693 on Missile.

e-1. Stow cables.

f. Loosen knurled knobs securing UOB to Launcher.

g. Remove and stow UOB.

h. Disconnect umbilical cable from J8693 on Missile.

3-44. DISCONNECTING STATIC GROUND CABLES.

a. Disconnect launcher static ground cable from static ground stud on floor of Launch Bay. (See figure 3-1.)

b. Disconnect missile static ground cable from between COMMON GROUND receptacle J8676 on left side of Center Section and static ground on floor of Launch Bay.

3-45. GROUNDING MISSILE AND LAUNCHER.

a. Obtain ground cable 258N9897010-939 and 258N9897010-949.

b. Clamp one end of -949 cable to clamp end of -959 cable.

c. Clamp one end of -939 cable to remaining end of -949 cable.

d. Clamp remaining end of -939 cable to GND ground stud on Missile Nose Air Conditioner.

3-46. AUXILIARY OPERATING INSTRUCTIONS.

3-47. FUELING MISSILE. Fueling operations are to be performed using the F6 Fuel Servicing Semitrailer. Personnel performing fueling operations must be familiar with the overall operation of the Fuel Servicing Semitrailer, contained in the T.O. 36A9-3-8-1. Adequate firefighting equipment must be on hand.

CAUTION

Missile is to be fueled with JP4 (MIL-J-5624) Fuel only.

3-48. PREPARATION.

NOTE

Although Missile Replacement Team personnel will not participate in steps a thru d, they will be present during this operation to insure all functions performed by personnel of the POL section adhere to procedures outlined below.

WARNING

All power to Missile must be off. Standard fueling safety precautions must be observed.

a. Position Fuel Servicing Semitrailer along right side of Missile with rear end of semitrailer approximately even with tail section splice.

b. Insure that semitrailer has been serviced with JP4 Fuel (MIL-J-5624).

c. Insure grounding cables between Missile, Launcher, and Fuel Servicing Semitrailer are all connected to station ground.

WARNING

Make sure all grounds are common to each other and are securely attached.

d. Open all access doors and panels at rear of semitrailer to permit venting of all excessive fuel fumes.

WARNING

Under no circumstances should the refueler engine be started before fuel fumes are properly vented.

3-49. FUELING.

NOTE

Although Missile Replacement Team personnel will not participate in steps a thru c, and u thru x, they will be present during this operation to insure all functions performed by personnel of the POL section adhere to procedures outlined below. The Missile Replacement Team will perform steps d thru t.

NOTE

All instructions given in this procedure must be accomplished in accordance with the instructions contained in T.O. 36A9-3-8-1 for the type F6 Fuel Servicing Semitrailer.

a. Start engine on semitrailer.

b. Check fuel lines in semitrailer for leaks while engine is warming up.

NOTE

Allow engine to warm up properly before attempting to pump fuel.

c. Set flowmeter on semitrailer to 0 gallons.

d. Unreel fuel hose from semitrailer; plug nozzle groundlead into GROUND HERE receptacle near filler cap for No. 1 fuel cell.

e. Remove filler cap from No. 1 fuel cell and insert nozzle into cell opening.

f. Fill No. 1 cell to capacity.

NOTE

Cells are full when fluid level stabilizes even with the bottom edge of filler cap opening. Refer to table 3-1 for fuel cell capacities.

g. Remove nozzle from cell opening and install filler cap in No. 1 fuel cell opening; then remove ground lead from GROUND HERE receptacle near No. 1 fuel cell opening and insert lead into GROUND HERE receptacle near No. 2 fuel cell opening.

h. Remove filler cap from No. 2 fuel cell; then insert nozzle into cell.

i. Fill No. 2 cell to capacity.

j. Remove nozzle from cell opening; then remove ground lead from GROUND HERE receptacle near No. 2 fuel cell opening. Do not replace filler cap on No. 2 fuel cell at this time.

k. Plug ground lead into GROUND HERE receptacle near filler cap for No. 4 fuel cell.

l. Remove filler cap from No. 4 fuel cell; then insert nozzle into cell.

m. Fill No. 4 fuel cell to capacity; then allow fuel level to stabilize.

n. Repeat step m until fuel level remains even with bottom edge of filler opening.

NOTE

As No. 4 and No. 5 fuel cells are filled, fuel will flow through interconnection and will fill No. 3 fuel cell.

o. Remove nozzle from cell opening; then remove ground lead from GROUND HERE receptacle near No. 4 fuel cell opening and insert lead into GROUND HERE receptacle near No. 5 fuel cell opening. Do not replace filler cap on No. 4 fuel cell opening at this time.

p. Remove filler cap from No. 5 fuel cell; then insert nozzle into cell.

q. Fill No. 5 fuel cell to capacity.

r. Remove nozzle from cell opening; then remove ground lead from GROUND HERE receptacle near No. 5 fuel cell opening.

s. Install filler caps on Nos. 2, 4, and 5 fuel cells.

t. Evacuate fuel from hose; then stow fuel hose on reel in semitrailer.

u. Shut down engine on semitrailer.

v. Disconnect all ground leads between semitrailer and Missile. Stow leads belonging to semitrailer in rear of semitrailer.

w. Close all access doors and panels at rear end of semitrailer.

x. Move Fuel Service Semitrailer from area.

TABLE 3-1

FUEL CELL CAPACITIES

Fuel Cell	Capacity (gallons)
No. 1	193.5
No. 2	191.7
No. 3	119.3
No. 4	285.3
No. 5	143.2
Sump Tank	17.0
Forward Auxiliary	33.2
Aft Auxiliary	46.2
TOTAL	1029.4

3-50. MOTORIZATION AND FUEL PURGING.

NOTE

The procedures in this paragraph are to be performed approximately every 30 days. Motorization and fuel purging must not interrupt a Missile that is in hold status, but must be performed to coincide with the performance of a recycle checklist.

a. Remove left BREATHER DOOR from Missile.

b. Disconnect fuel control outlet hose (figure 3-8) from engine fuel manifold.

c. Place disconnected end of fuel control outlet hose in grounded fuel container.

d. Request Mech. No. 4 to start Engine Start Power Motor-Generator and apply engine start power to bus by performing applicable paragraphs of T.O. 21-TM76B-1-5.

e. Request LCO to place POWER switch on appropriate Launch Control panel of LCSC ON; LAUNCH POWER ON indicator lamp must go on.

f. Request LCO to open Maintenance Panel door on rear of LCSC.

g. Request LCO to momentarily depress MOTORIZE switch on appropriate Maintenance Panel and also observe that MOTORIZE indicator lamp goes on for approximately 50 seconds.

h. While engine is motorizing, depress and hold FUEL PURGING switch (figure 3-8) located inside right BREATHER DOOR until approximately 1 gallon of fuel is purged; then release FUEL PURGING switch.

i. Wait 10 minutes for engine starter-generator to cool; then request LCO to momentarily depress MOTORIZE switch on appropriate Maintenance Panel and also observe that MOTORIZE indicator lamp goes on for approximately 50 seconds.

j. (Deleted)

k. Request LCO to close Maintenance Panel door and place POWER switch on appropriate Launch Control panel of LCSC OFF; LAUNCH POWER ON indicator lamp must go off.

l. Request Mech. No. 4 to remove engine start power from bus and shut down Engine Start Power Motor-Generator by performing applicable paragraphs of T.O. 21-TM76B-1-5.

m. Remove fuel control outlet hose from fuel container and remove fuel container from area.

n. Reconnect fuel control outlet hose to fuel manifold.

o. Replace left BREATHER DOOR.

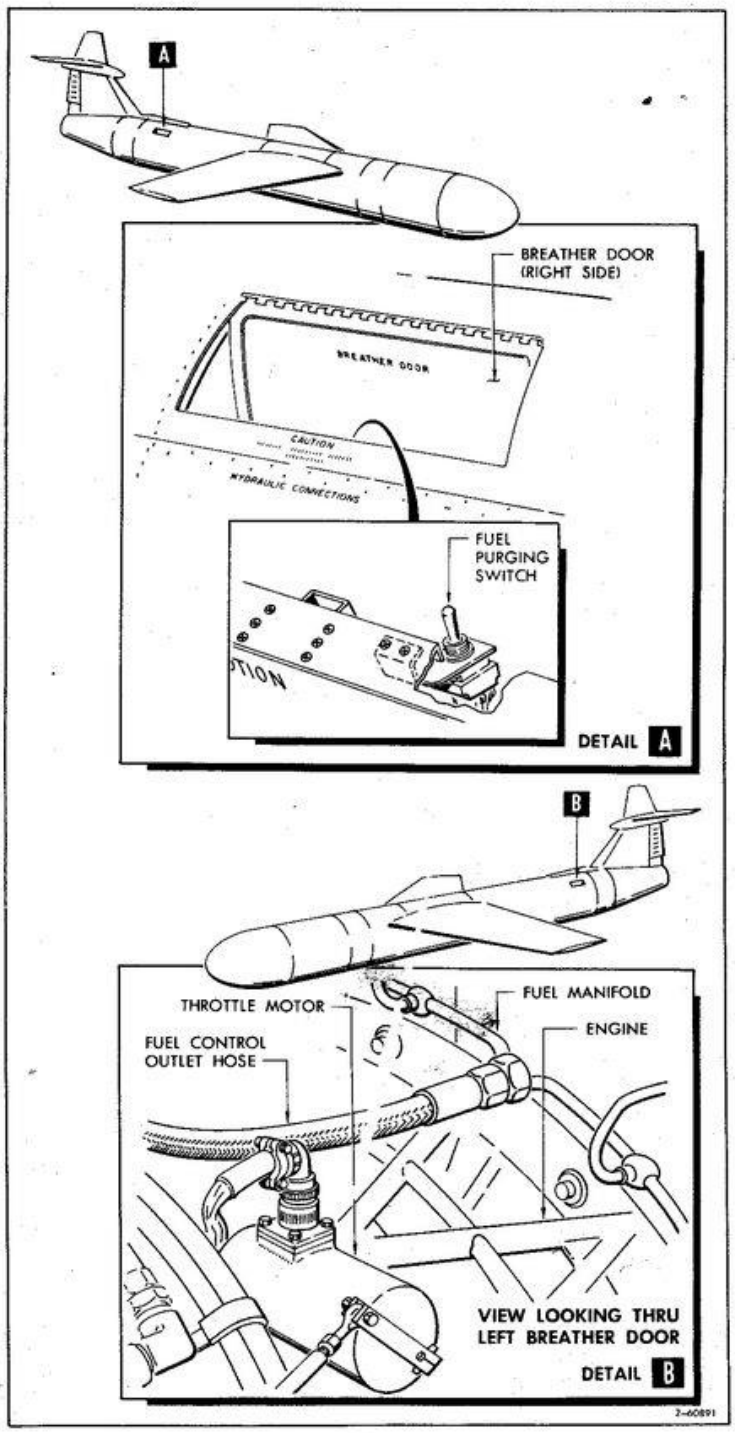

Figure 3-8. Missile Fuel Purging

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T.O. 21-TM76B-1-4

TECHNICAL MANUAL

LAUNCH AREA OPERATING INSTRUCTIONS

MISSILE MECHANIC SPECIALIST

LAUNCH TEAM

MECHANIC NO. 3

USAF SERIES

TM76B

GUIDED MISSILE

PAID PAID

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USAF ACTIVITIES.—In accordance with T.O. 00–5–2.

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MISSILE MECHANIC SPECIALIST

MECHANIC NO. 3

TABLE 2-1

INITIAL SETUP CHECKLIST

CHECK	INFORM	
		OPERATION 1.
		NOTE
		For installing complete Missile, perform only operations 1, 2, 3, and 4. For installing Nose Section only, perform only operations 5 and 6.
		a. Assist Mech. No. 2 with FCTS.
☐	LCO	b. Ground Missile and Launcher (para. 3-4).
☐	LCO	c. Check tiedowns and shear pin (para. 3-5).
☐	LCO	d. Check Missile fuel and oil supplies (para. 3-6).
		OPERATION 2.
		a. Assist Missile Replacement Team in installing Wings.
		b. Assist in removing folding wing mechanism.
		c. Assist in lowering Missile into bay.
☐	LCO	d. Connect static ground cables (para. 3-7).
		OPERATION 3.
☐	LCO	a. Install Umbilical Outlet Box (para. 3-8).
		b. Assist Nose Replacement Team in positioning Nose Section.
		c. After removal of Nose Section Trailer, install maintenance platform bridge grating (para. 3-9).
		d. (Deleted)
		e. (Deleted)

MISSILE MECHANIC SPECIALIST

MECHANIC NO. 3

TABLE 2-1 (cont)

INITIAL SETUP CHECKLIST

CHECK	INFORM	OPERATION 3 (cont).
		f. (Deleted)
		g. Assist Mech. No. 2 transfer power to gyro heaters.
☐	LCO	h. Install pullaway brackets on Launcher (para. 3-10).
		OPERATION 4.
☐	LCO	a. Connect Missile Nose Air Conditioner (para. 3-11).
☐	LCO	b. Install Engine Start Fuel Controller (para. 3-12).
☐	LCO	c. Connect power cables and hoses (para. 3-13).
☐	LCO	d. Obtain AZIMUTHAL ALIGNMENT DOOR lanyard from LAUNCHER STOWAGE BOX and prop AZIMUTHAL ALIGNMENT DOOR on Nose Section open.
		OPERATION 5.
		a. Assist Nose Replacement Team in positioning Nose Section.
☐	LCO	b. After removal of Nose Section Trailer, install maintenance platform (para. 3-9).
		c. (Deleted)
		d. (Deleted)
		e. Assist Mech. No. 2 transfer gyro heater power.
		OPERATION 6.
☐	LCO	a. Connect Missile Nose Air Conditioner (para. 3-11).

SECTION III

OPERATING INSTRUCTIONS

3-1. GENERAL.

3-2. This section contains the detailed operating instructions necessary for a Missile Mechanic Specialist to assume the duties of Mechanic No. 3 and carry out the operations referred to in the checklists of Section II.

3-3. During certain portions of the checklists, and during all the Alert Countdown Checklists, Mechanic No. 3 has no specific operations that he must perform. However, as specified in the checklists and operating instructions, Mechanic No. 3 must stand by in the event of an emergency or in case his assistance is required by Launch Control or by another mechanic.

3-4. GROUNDING MISSILE AND LAUNCHER.

a. Obtain ground cables 258N9897010-939, 258N9897010-949, and 258N9897010-959.

b. Secure terminal end of -959 cable to GROUND HERE terminal on rear of Launcher.

c. Clamp one end of -939 cable to other end of -959 cable.

d. Clamp one end of -949 cable to other end of -939 cable.

e. Clamp other end of -949 cable to GND ground stud on Missile Nose Air Conditioner.

3-5. CHECKING TIEDOWNS AND SHEAR PIN.

a. Insure that tiedowns are installed at both TIEDOWN POINT(s) at station 170 of Missile.

b. Insure that tiedowns are installed at both LIFT points at station 346 of Missile.

c. Insure that shear pin is installed in holdback fitting in Missile and holdback fitting in Launcher.

3-6. CHECKING MISSILE FUEL AND OIL SUPPLIES.

a. Remove fuel tank filler caps from top of Missile.

b. Insure that fuel in each fuel tank is level with bottom of filler cap opening.

NOTE

If fueling is required, fuel Missile in accordance with paragraphs 3-47 through 3-49.

c. Secure fuel tank filler caps.

d. Insure that tape has been removed from BREATHER DOOR(s).

e. Check engine oil level with dip stick, which is accessible through BREATHER DOOR on right side of Missile.

f. If dip stick indicates less than 12 quarts, fill to 12-quart level with mixture consisting of one part MIL-C-6529 corrosion preventive compound and three parts MIL-O-6081, grade 1010, lubricating oil by volume.

NOTE

For cold weather operation below 0°F (--17.8C), use Grade 1005 lubricating oil instead of Grade 1010.

WARNING

Insure that the yellow slippage mark on stationary top face cap of oil dip stick is aligned with corresponding mark on rotating sleeve.

g. Remove ENGINE ACCESS DOOR.

h. Inspect plenum chamber for fuel leaks or traces of fuel. Clean away all traces of fuel, and spray wet spots with fire extinguisher fluid.

3-7. CONNECTING STATIC GROUND CABLES.

a. Disconnect ground cables 258N9897010-939, 258N9897010-949, and 258N9897010-959.

b. Connect missile static ground cable -949 between COMMON GROUND receptacle J8676 on left side of Center Section and static ground stud on floor of Launch Bay aft of Rocket Motor. (See figure 3-1.)

c. Connect launcher static ground cable -959 between GROUND HERE stud on Launcher and static ground stud on floor of bay.

d. Insure that ground connections are secure.

3-8. INSTALLING UMBILICAL OUTLET BOX.

NOTE

If UOB is mounted on Launch Bay, perform only step f. If UOB is mounted on Launcher, perform steps a thru e.

a. Install Umbilical Outlet Box (figure 3-2) on UOB brackets aft on left side of Launcher.

b. Connect launch control cable between J9008 on UOB and J8693 on Missile.

c. Connect umbilical cable between J9009 on UOB and J9001 on LBJB.

d. Connect ac power cable between J9003 on UOB and J9008 on LBJB.

e. Connect 28 vdc power cable between J9002 on UOB and J9006 on LBJB.

f. Connect umbilical cable to J8693 on Missile.

3-9. INSTALLING MAINTENANCE PLATFORM BRIDGE GRATING.

a. Install bridge grating (2, figure 3-3) beneath Nose Section.

b. Extend forward and aft guard rails (1).

c. Connect chain between right and left forward guard rails.

3-10. INSTALLING PULLAWAY BRACKETS ON LAUNCHER.

a. Install pullaway brackets on each side of Launcher in sockets provided.

b. Insure that fire extinguisher nozzles on bracket are positioned over BREATHER DOOR(s) on Missile.

c. Insure that each fire extinguisher hose is connected to disconnect coupler in concrete pipe.

3-11. CONNECTING MISSILE NOSE AIR CONDITIONER. (Figure 3-4.)

a. Insure that MNAC ends of low and high (smaller) pressure air conditioning duct are connected to receptacles on top panel of MNAC.

b. Insure that power cable is connected between POWER INPUT panel of MNAC and J9010 on LBJB.

c. Raise TEMPERATURE CONTROL panel door on MNAC and place MISSILE/LOCAL switch to LOCAL.

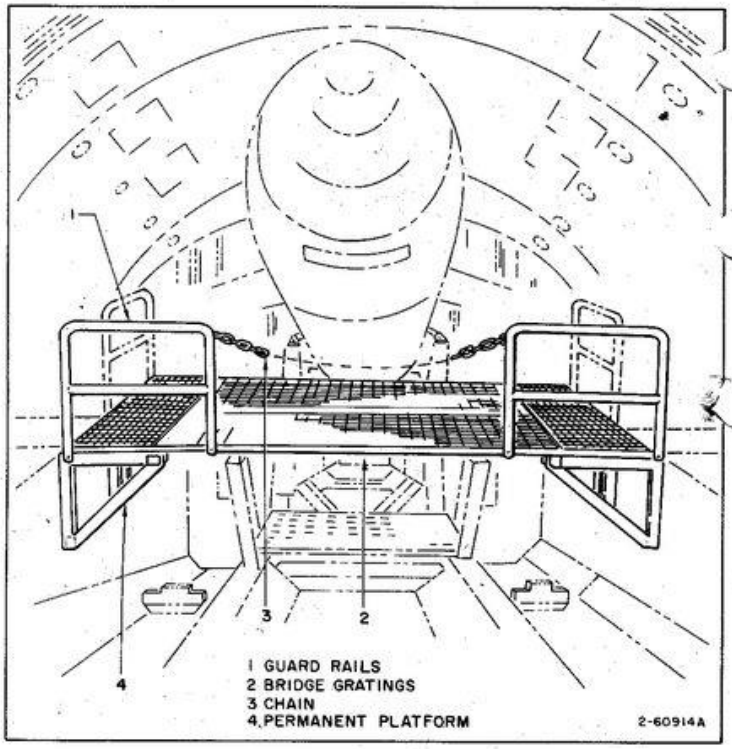

Figure 3-3. Installation of Nose Access Maintenance Platform

d. On MNAC CONTROL PANEL, place MODE SELECTOR switch to QUICK WARMUP; QUICK WARMUP indicator lamp must go on.

NOTE

Allow MNAC to remain in this mode of operation approximately five minutes. This operation will insure that any dust, dirt, or foreign matter will be blown from the low and high pressure ducts.

e. Place MODE SELECTOR switch on MNAC CONTROL PANEL to NORMAL; NORMAL and MALF indicator lamps must go on and QUICK WARMUP indicator lamp must go off.

f. Raise TEMPERATURE CONTROL panel door on MNAC and place MISSILE/LOCAL switch to MISSILE; NORMAL and MALF indicator lamps must go off and MNAC must stop operating.

g. Connect quick-disconnect end of low pressure air conditioning duct (larger) to inlet under ground cooling access door on Nose Section.

h. Connect quick-disconnect end of high pressure air conditioning duct (smaller) to GROUND COOLING INLET on Warhead Section.

i. Remove Missile air conditioner plug set from ports on top of Nose Section.

j. Connect P8332 of interlock cable to J8332 on Nose Section.

k. Insure that P21 on interlock cable is connected to receptacle on top of MNAC.

3-12. INSTALLING ENGINE START FUEL CONTROLLER.

NOTE

If Engine Start Fuel Controller is mounted on Launch Bay, perform only steps f and g. If controller is mounted on Launcher, perform steps a thru g.

a. Install Engine Start Fuel Controller (3, figure 3-5) on engine start fuel controller brackets aft on left side of launcher.

b. Connect start fuel source line (4) between controller and disconnect in concrete pipe on level 2 of bay.

c. Connect start fuel control cable (5) between J1 on controller and J9010 on Umbilical Outlet Box.

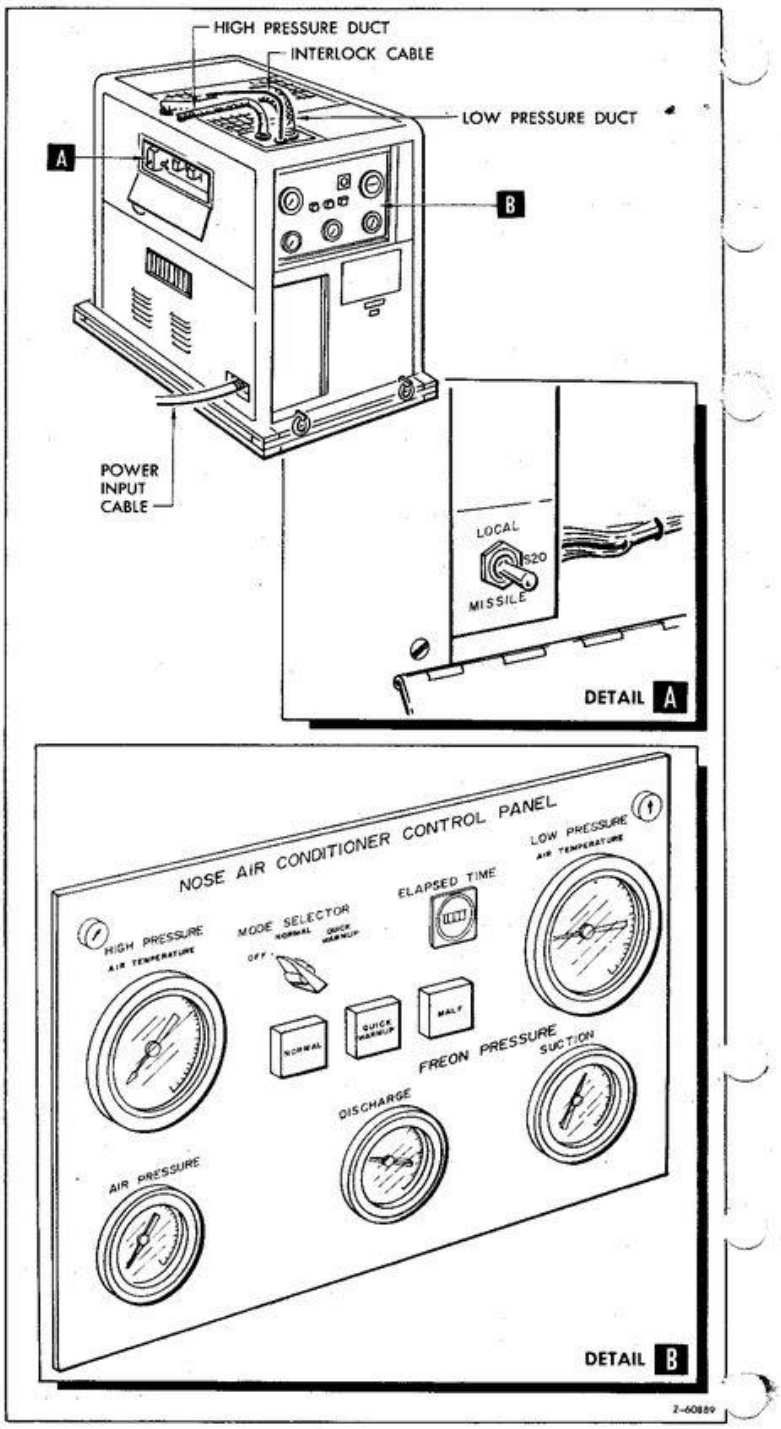

Figure 3-4. Missile Nose Air Conditioner

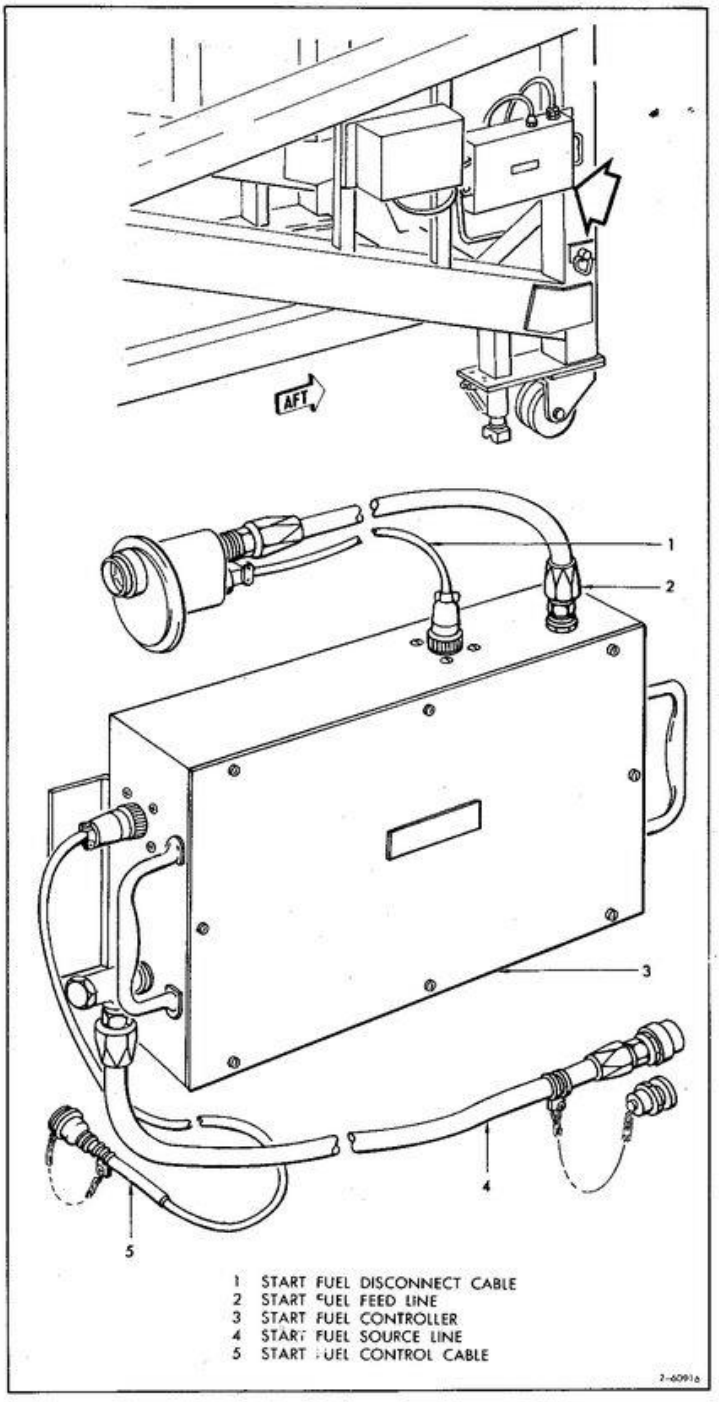

Figure 3-5. Engine Start Fuel Controller

d. Connect free end of start fuel feed line (2) to controller.

e. Connect free end of start fuel disconnect cable (1) to J2 on controller.

f. Connect disconnect solenoid on end of start fuel feed line and start fuel disconnect cable to start fuel connection on Missile.

g. Insure that start fuel connection on Missile is capable of being released; then reconnect start fuel connection on Missile.

3-13. CONNECTING POWER CABLES AND HOSES.

a. Connect Missile hold power cable between J9005 on Launch Bay Junction Box and J8614 on Missile. (See figure 3-1.)

b. Connect engine start power cable to J8613 on Missile.

c. Disconnect jumper assembly from between hydraulic pressure and return hoses on right side of Launch Bay.

d. Connect hydraulic pressure hose to HYDRAULIC PRESSURE disconnect on right side of Aft Section.

e. Connect hydraulic return hose to HYDRAULIC RETURN disconnect on right side of Aft Section.

3-14. DISCONNECTING IGNITER CABLE.

a. Disconnect igniter cable from J9001 on UOB.

b. Connect shorting plug to receptacle on end of igniter cable.

3-15. (Deleted)

e. Announce: "10,000 feet altitude is being simulated."

3-27. SETTING SIMULATED AIRSPEED.

NOTE

On request of Mech. No. 2 proceed with simulated airspeed setting.

a. Rotate vacuum VENT valve counterclockwise until ALTITUDE dial of Pitot Static System Test Set (figure 3-7) indicates zero.

b. Rotate both VENT valves fully clockwise.

c. Rotate PRESSURE SOURCE valve fully clockwise.

d. Rotate VACUUM SOURCE valve fully clockwise.

e. Rotate CROSS BLEED valve fully clockwise.

f. Pump PRESSURE PUMP until EXTERNAL PRESSURE meter indicates 50 Hg.

g. Rotate Pressure Source valve (CCW) until airspeed indicator indicates 271 knots; then rotate Pressure Source valve fully (CW).

NOTE

If 271 knots is exceeded, rotate pressure VENT valve (CCW) until proper indication is obtained; then rotate pressure VENT valve fully clockwise. The 271-knot indication must be maintained until Mech. No. 2 announces "F/C test 13 complete."

h. Announce: "271 knots airspeed is being simulated."

i. When Mech. No. 2 announces "Flight controls test 13 complete", rotate pressure VENT valve fully counterclockwise to bleed system pressure.

3-28. DISCONNECTING PITOT STATIC SYSTEM TEST SET.

CAUTION

Use extreme care when disconnecting PSSTS, insuring that both VENT valves are rotated fully counterclockwise, bleeding system pressure.

a. Rotate both VENT valves fully counterclockwise to bleed system pressure.

b. On request of Mech. No. 2, disconnect pitot and static hoses from Pitot Static System Test Set (figure 3-7) and Missile.

c. Stow hoses and static port covers within MB-1 Adapter Set and stow test sets.

3-29. INSTALLING LOWER EQUIPMENT ACCESS PANEL.

a. Install lower equipment access panel onto Nose Section of Missile.

3-30. ARMING WING DESTRUCT.

a. Insure that ARMING PLUGWING DESTRUCT jack is inserted into receptacle on Missile.

b. Obtain pull-away cable for destruct jack.

c. Secure pull-away cable to destruct jack and to Launcher.

d. Remove shorting receptacle from P8625.

e. Connect plug P8625 to J8625.

f. Remove shorting plug from J8773 on Wing Severance Delay Package.

g. Remove shorting plug from P8773 on Missile harness.

h. Connect P8773 to J8773 on Wing Severance Delay Package.

i. Install detonator well covers on right and left Wings.

j. Replace detonator wire covers on right and left Wings.

k. Install crown panel.

3-31. REMOVING MAINTENANCE PLATFORM BRIDGE GRATING.

a. Disconnect chain from between forward guard rails (1, figure 3-3).

b. Fold forward and aft guard rails (1) into stowed position.

c. Remove bridge grates (3) and stow between Launcher wheel tracks in Launch Bay.

3-35. DISCONNECTING PITOT STATIC SYSTEM TEST SET.

CAUTION

Use extreme care when disconnecting PSSTS, insuring that VENT valves are rotated fully counterclockwise thereby bleeding system pressure.

a. Rotate all valves on the Pitot Static System Test Set (figure 3-7) fully counterclockwise.

b. Disconnect static hose from Pitot Static System Test Set and Missile.

c. Remove static port covers from Center Section.

d. Stow static port covers and hose within MB-1 Adapter Set and stow test sets.

3-36. DISCONNECTING IGNITER CABLE.

a. Disconnect igniter cable lanyard from BOTTLE IGNITER CABLE BRACKET on rear of Launcher.

b. Disconnect igniter cable from J9001 on UOB.

c. Connect shorting plug to receptacle on end of igniter cable.

d. Coil igniter cable around thrust adapter of Rocket Motor.

e. Loosen hardware securing BOTTLE IGNITER CABLE BRACKET and lower bracket.

3-37. DISCONNECTING POWER AND CONTROL CABLE FROM SADCB.

a. Disconnect power and control cable from receptacle J9015 on Squib Actuated Disconnect Control Box.

3-38. DISCONNECTING MISSILE NOSE AIR CONDITIONER.

a. Disconnect P8332 on interlock cable from J8332 on Nose Section.

b. Disconnect ducts from Nose Section and Warhead Section of Missile.

c. Coil both ducts and stow near MNAC.

d. Install Missile air conditioner plug set into parts on top of Nose Section.

3-39. REMOVING ENGINE START FUEL CONTROLLER.

NOTE

If Engine Start Fuel Controller is mounted on Launch Bay, perform only step d. If controller is mounted on Launcher, perform only steps a thru c.

a. Disconnect all lines and cables from Engine Start Fuel Controller (figure 3-5) and from pipe, Umbilical Outlet Box, and Missile.

b. Remove controller from brackets on Launcher.

c. Stow lines, cables, and controller.

d. Disconnect solenoid on end of start fuel lead line and start fuel disconnect cable from start fuel connection on Missile.

3-40. DISCONNECTING POWER CABLES.

a. Disconnect missile hold power cable from between J9006 on Launch Bay Junction Box and J8614 on Missile. (See figure 3-1.)

b. Disconnect engine start power cable from between J9004 on Launch Bay Junction Box and J8613 on Missile.

c. Stow both cables.

3-41. REMOVING PULLAWAY BRACKETS FROM LAUNCHER.

a. Remove pullaway brackets from sockets on each side of Launcher.

b. Position brackets for later installation on Launcher.

3-42. DISCONNECTING HYDRAULIC HOSES.

a. Disconnect hydraulic pressure hose from HYDRAULIC PRESSURE disconnect on right side of Aft Section.

b. Disconnect hydraulic return hose from HYDRAULIC RETURN disconnect on right side of Aft Section.

c. Connect jumper assembly between hoses.

d. Coil and stow hoses.

3-43. REMOVING UMBILICAL OUTLET BOX.

NOTE

If UOB is mounted on Launch Bay, perform only step h. If UOB is mounted on Launcher, perform only steps a thru g.

a. Disconnect 28-volt d-c power cable from J9003 on Umbilical Outlet Box (figure 3-2) and J9008 on Launch Bay Junction Box.

b. Disconnect a-c power cable from J9002 on UOB and J9006 on LBJB.

c. Disconnect gyro heater power cable from J9007 on UOB and J9001 on LBJB.

d. Disconnect launch control cable from J9009 on UOB and J9001 on LBJB.

e. Disconnect umbilical cable from J9008 on UOB and J8693 on Missile.

f. Loosen knurled knobs securing UOB to Launcher.

g. Remove and stow UOB.

h. Disconnect umbilical cable from J8693 on Missile.

3-44. DISCONNECTING STATIC GROUND CABLES.

a. Disconnect launcher static ground cable from static ground stud on floor of Launch Bay. (See figure 3-1.)

b. Disconnect missile static ground cable from between COMMON GROUND receptacle J8676 on left side of Center Section and static ground on floor of Launch Bay.

3-45. GROUNDING MISSILE AND LAUNCHER.

a. Obtain ground cable 258N9897010-939 and 258N9897010-949.

b. Clamp one end of -949 cable to clamp end of -959 cable.

c. Clamp one end of -939 cable to remaining end of -949 cable.

d. Clamp remaining end of -939 cable to GND ground stud on Missile Nose Air Conditioner.

3-46. AUXILLIARY OPERATING INSTRUCTIONS.

3-47. FUELING MISSILE. Fueling operations are to be performed using the F6 Fuel Servicing Semitrailer. Personnel performing fueling operations must be familiar with the overall operation of the Fuel Servicing Semitrailer, contained in the T.O. 36A9-3-8-1. Adequate firefighting equipment must be on hand.

CAUTION

Missile is to be fueled with JP4 (MIL-J-5624) Fuel only.

3-48. PREPARATION.

NOTE

Although Missile Replacement Team personnel will not participate in steps a thru d, they will be present during this operation to insure all functions performed by personnel of the POL section adhere to procedures outlined below.

WARNING

All power to Missile must be off. Standard fueling safety precautions must be observed.

a. Position Fuel Servicing Semitrailer along right side of Missile with rear end of semitrailer approximately even with tail section splice.

b. Insure that semitrailer has been serviced with JP4 Fuel (MIL-J-5624).

c. Insure grounding cables between Missile, Launcher, and Fuel Servicing Semitrailer are all connected to station ground.

WARNING

Make sure all grounds are common to each other and are securely attached.

d. Open all access doors and panels at rear of semitrailer to permit venting of all excessive fuel fumes.

WARNING

Under no circumstances should the refueler engine be started before fuel fumes are properly vented.

3-49. FUELING.

NOTE

Although Missile Replacement Team personnel will not participate in steps a thru c, and u thru x, they will be present during this operation to insure all functions performed by personnel of the POL section adhere to procedures outlined below. The Missile Replacement Team will perform steps d thru t.

NOTE

All instructions given in this procedure must be accomplished in accordance with the instructions contained in T.O. 36A9-3-8-1 for the type F6 Fuel Servicing Semitrailer.

a. Start engine on semitrailer.

b. Check fuel lines in semitrailer for leaks while engine is warming up.

NOTE

Allow engine to warm up properly before attempting to pump fuel.

c. Set flowmeter on semitrailer to 0 gallons.

d. Unreel fuel hose from semitrailer; plug nozzle groundlead into GROUND HERE receptacle near filler cap for No. 1 fuel cell.

e. Remove filler cap from No. 1 fuel cell and insert nozzle into cell opening.

f. Fill No. 1 cell to capacity.

NOTE

Cells are full when fluid level stabilizes even with the bottom edge of filler cap opening. Refer to table 3-1 for fuel cell capacities.

g. Remove nozzle from cell opening and install filler cap in No. 1 fuel cell opening; then remove ground lead from GROUND HERE receptacle near No. 1 fuel cell opening and insert lead into GROUND HERE receptacle near No. 2 fuel cell opening.

h. Remove filler cap from No. 2 fuel cell; then insert nozzle into cell.

i. Fill No. 2 cell to capacity.

j. Remove nozzle from cell opening; then remove ground lead from GROUND HERE receptacle near No. 2 fuel cell opening. Do not replace filler cap on No. 2 fuel cell at this time.

k. Plug ground lead into GROUND HERE receptacle near filler cap for No. 4 fuel cell.

l. Remove filler cap from No. 4 fuel cell; then insert nozzle into cell.

m. Fill No. 4 fuel cell to capacity; then allow fuel level to stabilize.

n. Repeat step m until fuel level remains even with bottom edge of filler opening.

NOTE

As No. 4 and No. 5 fuel cells are filled, fuel will flow through interconnection and will fill No. 3 fuel cell.

o. Remove nozzle from cell opening; then remove ground lead from GROUND HERE receptacle near No. 4 fuel cell opening and insert lead into GROUND HERE, receptacle near No. 5 fuel cell opening. Do not replace filler cap on No. 4 fuel cell opening at this time.

p. Remove filler cap from No. 5 fuel cell; then insert nozzle into cell.

q. Fill No. 5 fuel cell to capacity.

r. Remove nozzle from cell opening; then remove ground lead from GROUND HERE receptacle near No. 5 fuel cell opening.

s. Install filler caps on Nos. 2, 4, and 5 fuel cells.

t. Evacuate fuel from hose; then stow fuel hose on reel in semitrailer.

u. Shut down engine on semitrailer.

NOTE

Flowmeter must indicate approximately 950 gallons if tanks were empty.

v. Disconnect all ground leads between semitrailer and Missile. Stow leads belonging to semitrailer in rear of semitrailer.

w. Close all access doors and panels at rear end of semitrailer.

x. Move Fuel Service Semitrailer from area.

TABLE 3-1

FUEL CELL CAPACITIES

Fuel Cell	Capacity (gallons)
No. 1	193.5
No. 2	191.7
No. 3	119.3
No. 4	285.3
No. 5	143.2
Sump Tank	17.0
Forward Auxiliary	33.2
Aft Auxiliary	46.2
TOTAL	1029.4

3-50. MISSILE FUEL PURGING (every 30 days).

a. Remove left BREATHER DOOR from Missile.

b. Disconnect fuel control outlet hose (figure 3-8) from engine fuel manifold.

c. Place disconnected end of fuel control outlet hose in grounded fuel container.

d. Request Mech. No. 4 to start Engine Start Power Motor-Generator and apply engine start power to bus by performing applicable paragraphs of T.O. 21-TM76B-1-5.

e. Request LCO to place POWER switch on appropriate Launch Control panel of LCSC ON; LAUNCH POWER ON indicator lamp must go on.

f. Request LCO to open Maintenance Panel door on rear of LCSC.

NOTE

Steps g and h must be performed simultaneously.

g. Depress and hold FUEL PURGING SWITCH (figure 3-8) located inside right BREATHER DOOR while motorizing.

h. Request LCO to depress MOTORIZE switch on appropriate Maintenance Panel and also observe that FUEL SHUT VALVE OPEN and MOTORIZE indicator lamps go on for approximately 50 seconds.

i. When engine stops motorizing, release FUEL PURGING SWITCH.

j. Wait 10 minutes for engine starter-generator to cool and then repeat steps g through i.

k. Request LCO to close Maintenance Panel door and place POWER switch on appropriate Launch Control panel of LCSC OFF; LAUNCH POWER ON indicator lamp must go off.

l. Request Mech. No. 4 to remove engine start power from bus and shut down Engine Start Power Motor-Generator by performing applicable paragraphs of T.O. 21-TM76B-1-5.

m. Remove fuel control outlet hose from fuel container and remove fuel container from area.

n. Reconnect fuel control outlet hose to fuel manifold.

o. Replace left BREATHER DOOR.