TECHNICAL MANUAL

OPERATOR, ORGANIZATIONAL, DIRECT SUPPORT, AND GENERAL SUPPORT MAINTENANCE MANUAL (INCLUDING DEPOT REPAIR PARTS AND SPECIAL TOOLS LIST)

FOR

ELECTRICAL EQUIPMENT SHELTER S-281/G

(NSN 5410-00-070-7936)

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HEADQUARTERS, DEPARTMENT OF THE ARMY
NOVEMBER 1980

WARNING

DANGEROUS VOLTAGE
is present in the electrical circuits.

DEATH ON CONTACT

may result. Use all safety precautions and be extremely careful when performing electrical troubleshooting and repairs.

WARNING

VENTILATION IS ESSENTIAL
to PREVENT ASPHYXIATION
when the shelter is occupied.

WARNING

TRICHLOROETHANE FUMES ARE TOXIC.

Provide adequate ventilation. DO NOT USE NEAR HEAT OR AN OPEN FLAME. Trichloroethane is not flammable, but exposure of the fumes to an open flame or hot metal forms highly toxic phosgene gas.

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CURRENT AS OF 5 MARCH 1980

THIS MANUAL SUPERSEDES TM 32-5410-221-14&P, 30 SEPTEMBER 1976 AND TM 32-5410-221-MAC, 30 SEPTEMBER 1976

HEADQUARTERS, DEPARTMENT OF THE ARMY
NOVEMBER 1980

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ELECTRICAL EQUIPMENT SHELTER S-281/G

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Current as of 5 March 1980

REPORTING OF ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2 located in the back of this manual, direct to: Commander, US Army Electronics Materiel Readi-news Activity, ATTN: SELEM-ME-E, Vint Hill Farms Station, Warrenton, Virginia 22186. A reply will be furnished to you.

This manual supersedes TM 32-5410-221-14&P, 30 September 1976 and TM 32-5410-221-MAC, 30 September 1976.

LIST OF ILLUSTRATIONS

LIST OF TABLES

SAFETY SUMMARY

The following are general safety precautions that are not related to any specific procedures and therefore do not appear elsewhere in this publication. These are recommended precautions that personnel must understand and apply during many phases of operation and maintenance.

KEEP AWAY FROM LIVE CIRCUITS

Operating personnel must always observe safety regulations. Do not replace electrical components or make electrical repairs or adjustments with the power on. To avoid casualties, always remove power; discharge and ground circuits before touching them.

DO NOT SERVICE OR ADJUST ALONE

Under no circumstances should any person replace electrical components or make electrical repairs or adjustments except in the presence of someone who is capable of rendering aid.

RESUSCITATION

Personnel working with or near electrical circuits should be familiar with modern methods of resuscitation.

The following warnings appear in the text of this manual and are repeated here for emphasis.

WARNING

To avoid personnel injury and equipment damage, permit only actively engaged personnel in the loading area.

To eliminate confusion, the loading crew supervisor must give all instructions (page 2-3).

WARNING

All personnel must remain clear of the shelter while it is suspended (page 2-3).

WARNING

VENTILATION IS ESSENTIAL to PREVENT ASPHYXIATION when the shelter is occupied (page 2-5).

WARNING

The shelter must be properly grounded before main power is connected (page 2-5).

WARNING

Disconnect power before checking for loose connections (pages 5-5, 5-6).

WARNING

Dangerous voltage is present in the electrical circuits. Death on contact may result. Use all safety precautions and be extremely careful when performing electrical troubleshooting and repairs (pages 5-7, 5 9, 5-10).

WARNING

The fumes of trichloroethane are toxic. Provide adequate ventilation whenever it is used. DO NOT USE NEAR AN OPEN FLAME. Trichloroethane is not flammable, but exposure of the fumes to an open flame or hot metal forms highly toxic phosgene gas (page 5-8).

WARNING

The shelter must be well ventilated when using cleaners and paints on the shelter interior (page 5-8).

CAUTION

Be careful unpacking. The aluminum skin of the shelter can be damaged easily (page 2-1).

CAUTION

Do not attempt to lift "Craig Round Corner" S-141( )/G shelters with the sling assembly cables connected to the tiedown eyes.

If an uncrated shelter is not pallet-mounted and does not have forklift instructions stenciled on the exterior, DO NOT USE A FORKLIFT TO MOVE THE SHELTER; SLING LIFT THE, SHELTER INSTEAD.

Do not attempt to butt shelters into place with a forklift. The lightweight shelters are not structurally designed for this mode of handling.

If the skirt is punctured during loading or securing operations, the punctures must be patched as soon as possible to prevent moisture seepage into the laminated panels of the shelter and to ensure EMI suppression if this requirement exists for the shelter.

Do not sling lift a seriously damaged shelter (page 2-3).

CAUTION

Do not jerk, bounce, or jar the shelter. Avoid swinging the shelter from side to side (page 2-3).

CAUTION

Do not overtighten the tiedown brackets or sling turnbuckles; this can damage the shelter (page 2-3).

CAUTION

Make certain that the sling hooks point away from the shelter (page 2-5).

CAUTION

Failure to set breakers and switches to OFF before activating main power source may result in a power source overload due to initial current drain (pages 3-2, 3-3).

CAUTION

For Train model air conditioners, unplugging it will cause refrigerant to condensate in the crankcase and mix with the oil (page 3-2).

CAUTION

Solar-reflecting paint per MIL-E-46061(10) has been used to paint the exterior of some shelter facilities to lower the inside temperature when the shelter is exposed to direct rays of the sun.

Before painting shelter exterior, check for a solar-reflecting paint caution notice located on the rear wall exterior next to the door. Do not use paint other than that specified in TB 43-0124 on shelter exteriors with solar-reflecting paint (page 5-1).

CAUTION

Ensure that cleaner does not get into the floor panel of the S-280( )/G. It will dissolve the styrene core material (page 5-9).

CHAPTER 1

INTRODUCTION

Section I. GENERAL

1-1 SCOPE. This manual provides operator/crew, organizational, direct support, and general support instructions for the installation and maintenance of Electrical Equipment Shelter S-281/G (figure 1-1). A repair parts and special tools list is also included.

1-2 MAINTENANCE FORMS AND RECORDS. Department of the Army forms and procedures used for equipment maintenance will be those prescribed by TM 38-750, The Army Maintenance Management System (TAMMS).

1-3 DESTRUCTION OF ARMY MATERIEL TO PREVENT ENEMY USE. The S-281/G will be destroyed to prevent enemy use in accordance with instructions provided in TM 750-244-2, Procedures for Destruction of Electronics Materiel to Prevent Enemy Use (Electronics Command).

1-4 ADMINISTRATIVE STORAGE. Administrative storage will be in accordance with instructions provided in TM 740-90-1, Administrative Storage of Equipment.

1-5 CALIBRATION. No calibration of the equipment in this group is required.

1-6 REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR's). If your S-281/G needs improvement, let us know. Send us an EIR. You, the user, are the only one who can tell us what you don't like about your equipment. Let us know why you don't like the design. Tell us why a procedure is hard to perform. Put it on an SF 368 (Quality Deficiency Report). Mail it to us at US Army Electronics Materiel Readiness Activity, ATTN: SELEM-ME-F, Vint Hill Farms Station, Warrenton, Virginia 22186. We'll send you a reply.

Section II. DESCRIPTION AND DATA

1-7 PURPOSE AND USE. The S-281/G is used in various configurations of mobile electronic facilities. Each configuration is covered separately in its own technical manual.

1-8 DESCRIPTION. See figure 1-1. The S-281/G is a modified S-141/G and/or S-280/G general-purpose shelter. Modifications entail equipping the general-purpose shelter with electrical wiring and components, tiedowns, a power cable reel, and an air conditioner. The S-281/G is a thermally insulated enclosure of aluminum sandwich construction. It is fully weather-insulated, electrically shielded, and designed for mounting on a 2-1/2-ton cargo truck. Refer to TB 43-0124 for a detailed description of the general-purpose shelter.

1-9 TABULATED DATA. See table I for electrical and physical characteristics of the S-281/G.

1-10 ITEMS COMPRISING AN OPERABLE EQUIPMENT. See table 1-2 for items comprising an operable equipment S-281/G. See Appendix B for authorization.

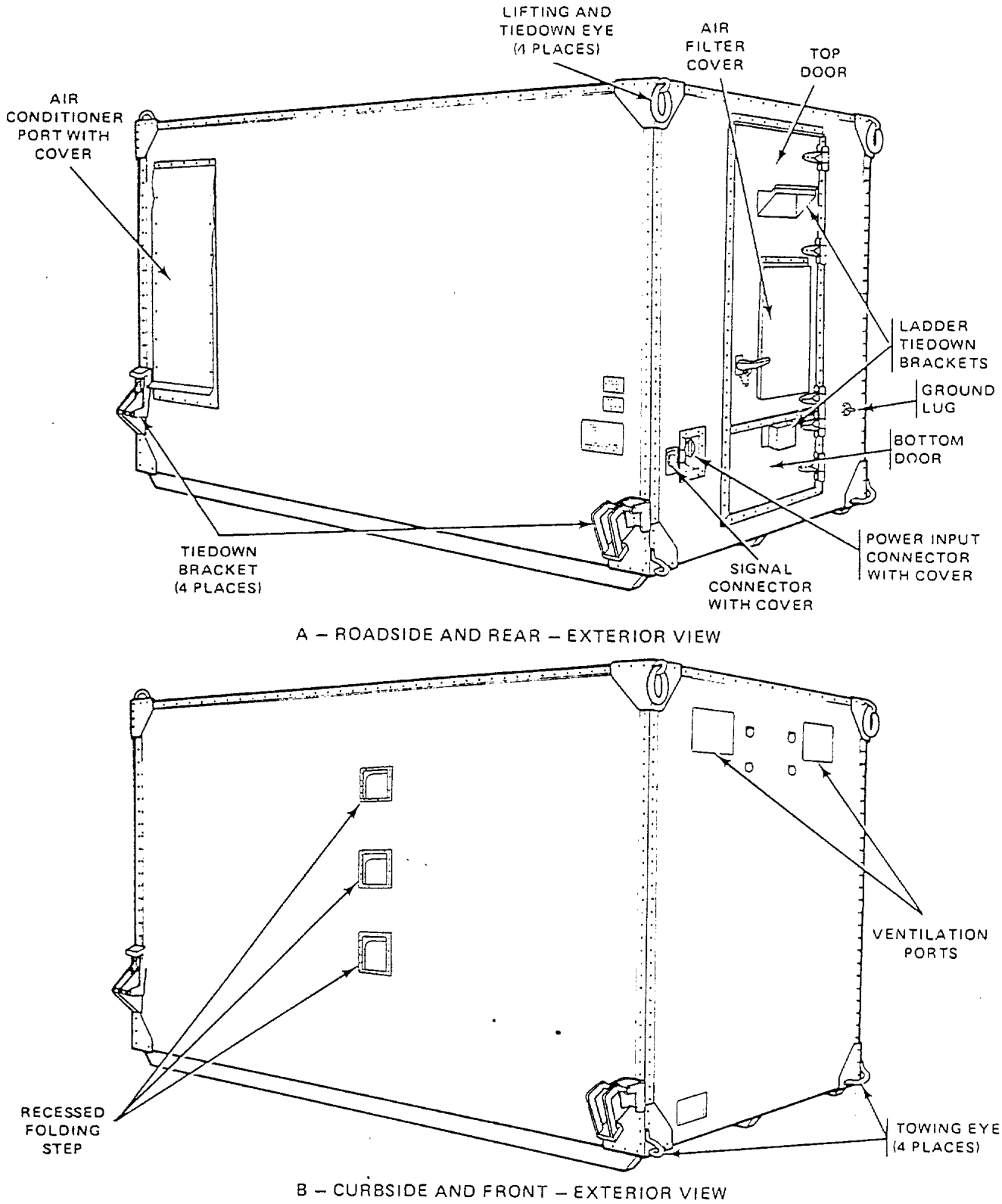

Figure 1-1. Electrical Equipment Shelter S-281/G (Sheet 1 of 3)

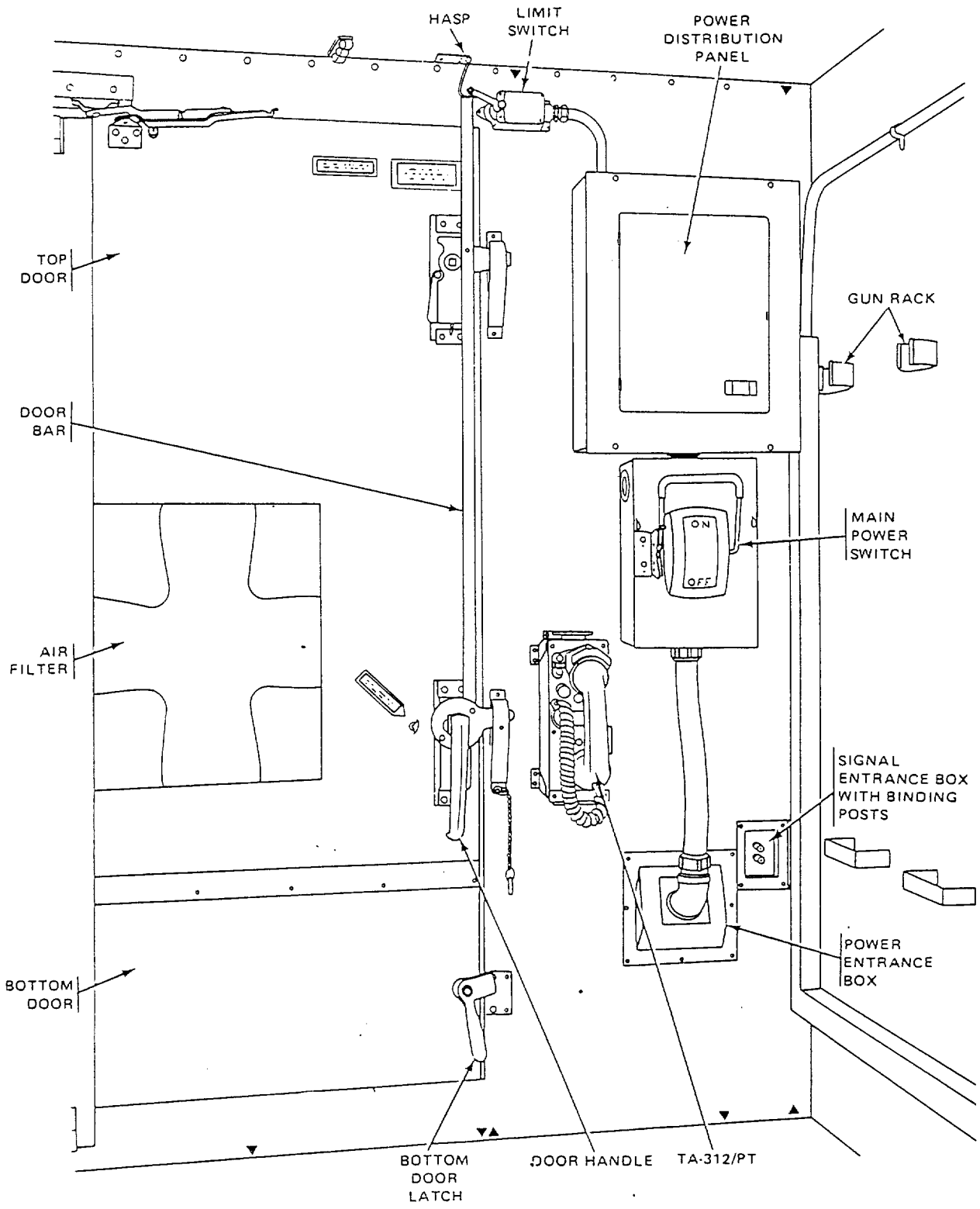

Figure 1-1. Electrical Equipment Shelter S-281/G (Sheet 2 of 3)

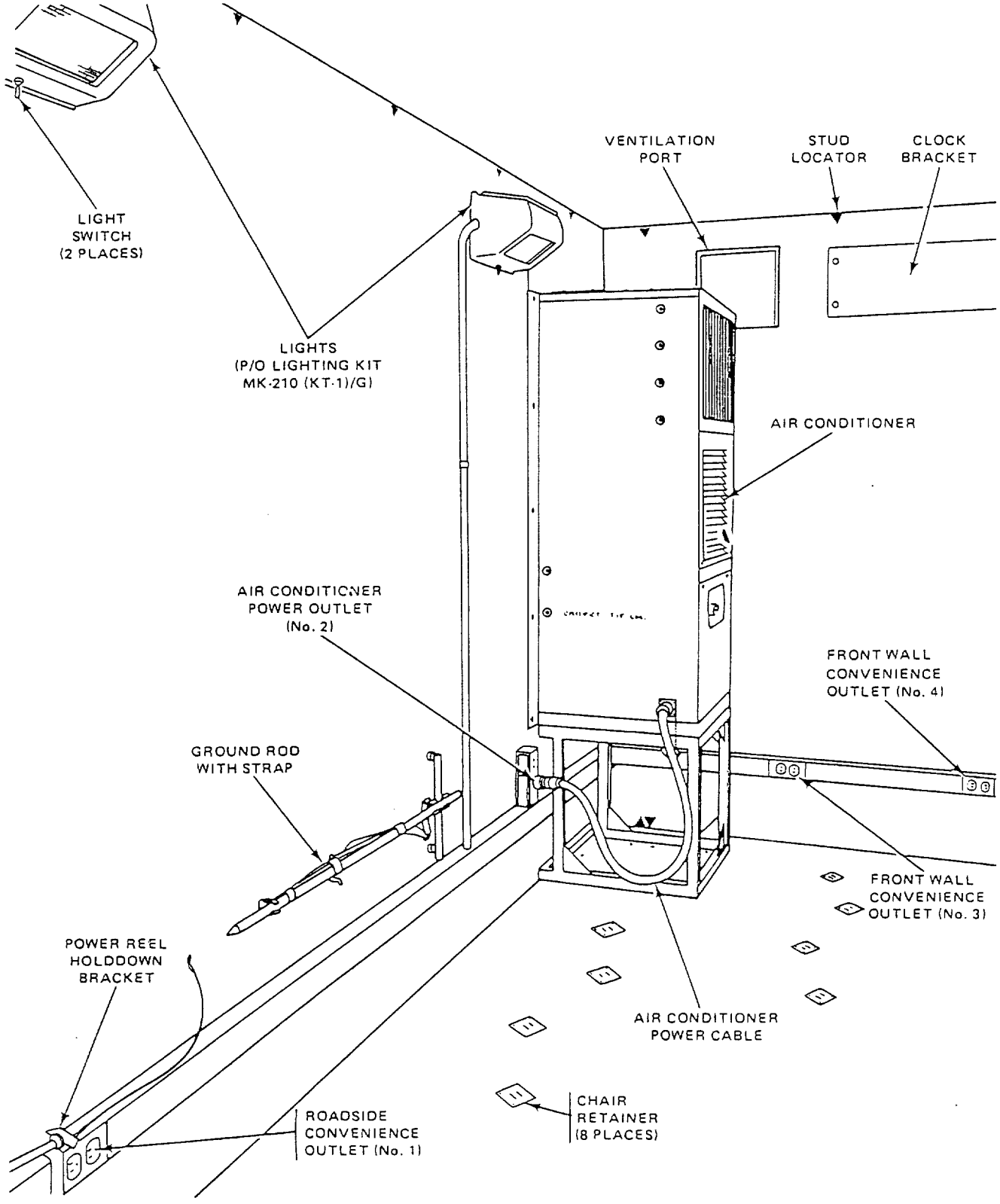

Figure 1-1. Electrical Equipment Shelter S-281/G (Sheet 3 of 3)

Table 1-1. Tabulated Data

Construction.....Stressed aluminum skin, foam-core, with laminated bond between skin and foam-core.

Power requirements .....115/220 Vac ± 10%7, 50/60 Hz, 3-phase, 3 kW.

Power source .....5 kW field generator or commercial power.

Maximum Outside Dimensions (inches):

	S-141/G (modified)	S-280/G (modified)
Length.....	142	147
Width	81	87
Height	82	83-3/8
Weight	3500 pounds	

Table 1-2. Items Comprising an Operable Equipment

NSN	Item	Qty	Height (in.)	Depth (in.)	Width (in.)	Weight (lb)
5410-00-070-7936	Electrical equipment shelter S-281/G consisting of:		82	142	81	3500
	Cable assembly, air-conditioner 0028-1-3121 (15942)	1		3 feet long		
5440-00-835-5003	Ladder MX-7567/G (80058)	1				
	Tiedown MX-239 (XT-1)/G, 1420-24311 (15942)	1				
5410-00-196-2901	Tiedown MX-239 (XT-1)/G, 1420-2-4313 (15942)	2				
	Ground rod assembly 0028-1-3107 (15942)	1				
	Tiedown MX-239 (XT-1)/G, 1420-24304 (15942)	1				
	(XT-1)/MK-(210), 1420-24707 (15942)	1				
5995-00-842-0255	Power cable assembly X8 110-82 (75477)	1		80 feet long		
4120-00-973-4589	Air-conditioner CE20VAL6 (60532)	1				
	Cover assembly, air-conditioner 0099-1-4150 (15942)		1			
4210-00-555-8837	Extinguisher, fire, with bracket FR23-4-11848 (99539)	1				

CHAPTER 2

SERVICE UPON RECEIPT AND INSTALLATION

NOTE

Organizational maintenance personnel are required for installation of Electrical Equipment Shelter S-281/G. There is no operator/crew.

Section I. SYSTEMS PLANNING

2-1 GENERAL. Electrical Equipment Shelter S-281/G is used in various configurations, each of which is covered in its own manual. Refer to the applicable manual for system planning.

Section II. SITE AND SHELTER REQUIREMENTS

2.2 SITING. For ground installation, select a site which:

a. Provides easy access for installation equipment (truck, crane, helicopter, etc.).

b. Has a firm, dry, level surface with good drainage.

c. Meets other requirements for particular shelter configurations. Refer to the applicable manual.

2-3 SHELTER REQUIREMENTS. Not applicable.

Section III. SERVICE UPON RECEIPT OF MATERIEL

2-4 UNPACKING. See figure 2-1. Remove the crate as follows:

CAUTION

Be careful unpacking. The aluminum skin of the shelter can be damaged easily.

NOTE

The S-281/G is packed in a reusable wooden crate. If the crate is not reused on site, forward it (reassembled or tied together) to a local storage area, if practical.

a. Remove top, end, and side panels from pallet by removing securing lag screws.

b. Detach sling assemblies from pallet eyebolts and shelter-tiedown eyes by loosening sling turnbuckles. Remove sling assemblies and set them aside.

c. Remove wooden braces from shelter ends and sides.

d. Remove S-281/G from pallet. See 2-8, 2-9, or 2-10.

2-5 CHECKING UNPACKED EQUIPMENT.

a. Inspect the equipment for damage incurred during shipment. If the equipment has been damaged, report the damage on Standard Form 364 (Report of Discrepancy)(ROD)).

b. Check the equipment received against the component listing (table 1-2) and the packing slip. Report all discrepancies on SF 364. The equipment should be placed in service even when a minor assembly or part that does not affect proper functioning is missing.

c. Check to see if the equipment has been modified. (Equipment which has been modified will have the MWO number on the front panel near the nomenclature plate.) Check also to see if all currently applicable have been applied. (Current MWO's applicable to the equipment are listed in DA PAM 310-6 or DA PAM 310-7 as applicable.)

NOTE

Your S-281/G may be modified in accordance with MWO 32-5410-221-35-1.

This MWO updates electrical wiring and components. See the repair parts list usable on codes for component differences. See figures 6-1 and 6-2 for wiring differences.

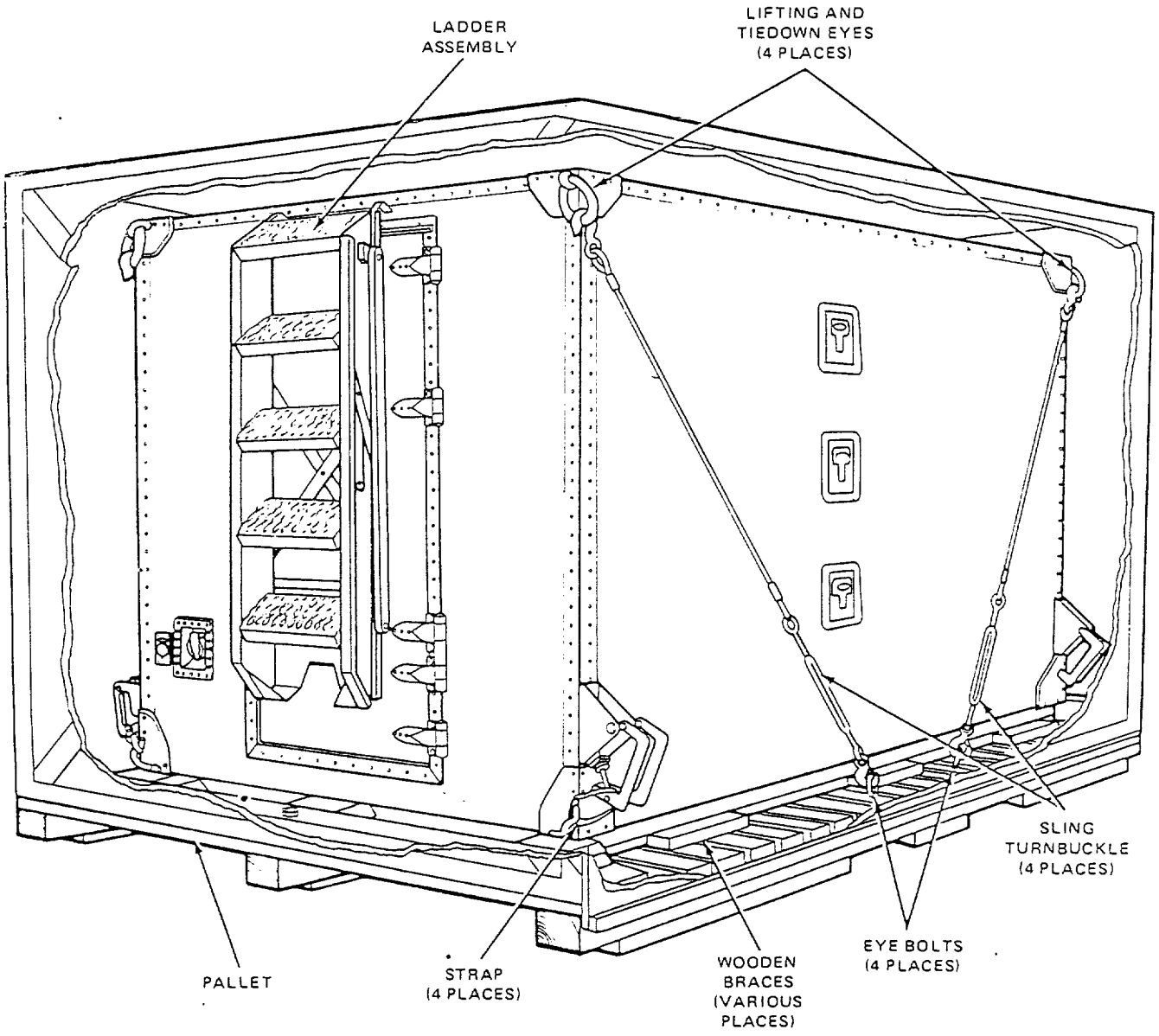

Figure 2-1. Electrical Equipment Shelter S-281/G, Packaged for Transit

Section IV. INSTALLATION INSTRUCTIONS

2-6 TOOLS, TEST EQUIPMENT AND MATERIAL REQUIRED FOR INSTALLATION. Required tools are listed in Appendix D. There are no special tools, test equipment, or materials required.

2-7 GROUND INSTALLATION INSTRUCTIONS. Install the S-281/G as follows:

a. Determine shelter positioning to facilitate power and signal connections.

b. Clear installation site of debris and, if used, position concrete blocks, wooden beams or other supports.

c. To transport the S-281/G to site location by truck, see 2-9; by helicopter, see 2-10.

2-8 TRUCK INSTALLATION. See figure 2-2. Install the S-281/G as follows:

WARNING

To avoid personnel injury and equipment damage, permit only actively engaged personnel in the loading area.

To eliminate confusion, the loading crew supervisor must give all instructions.

CAUTION

Do not attempt to lift "Craig Round Corner" S-141( )/G shelters with the sling assembly cables connected to the tiedown eyes.

If an uncrated shelter is not pallet-mounted and does not have forklift instructions stenciled on the exterior, DO NOT USE A FORKLIFT TO MOVE THE SHELTER; SLING LIFT THE SHELTER INSTEAD.

Do not attempt to butt shelters into place with a forklift. The lightweight shelters are not structurally designed for this mode of handling.

If the skin is punctured during loading or securing operations, the punctures must be patched as soon as possible to prevent moisture seepage into the laminated panels of the shelter and to ensure EMI suppression if this requirement exists for the shelter.

Do not sling lift a seriously damaged shelter.

a. Connect sling hooks (nearest turnbuckles) to shelter lifting eyes.

b. Place sling cables on top of shelter.

c. Connect sling hooks to lifting ring.

d. Connect lifting ring to lifting hook.

e. Tie a 1/2-inch rope (minimum 15 ft long) to each rear towing eye.

f. Lower truck tailgate.

g. Clear all items from truck bed.

h. Position a person at the free end of each rope to stabilize and guide shelter into position.

WARNING

All personnel must remain clear of the shelter while it is suspended.

CAUTION

Do not jerk, bounce, or jar the shelter. Avoid swinging the shelter from side to side.

i. Slowly lift shelter high enough to clear truck body.

NOTE

The shelter door must face the truck rear. The shelter front must be flush with the truck-bed front.

j. Back truck into position under shelter.

k. Lower and guide shelter into position on truck bed.

l. Detach sling hooks from lifting hook and shelter lifting eyes.

m. Detach ropes from shelter towing eyes.

n. Secure ropes and sling assembly.

CAUTION

Do not overtighten the tiedown brackets or sling turnbuckles: this can damage the shelter.

o. Using tiedown brackets and/ or sling assemblies, secure shelter to truck bed:

(1) Tiedown Bracket. Attach a tiedown bracket to each truck bed siderail corner.

(2) Sling . Assembly.

(a) Install plate and eyebolt assemblies above center supports on the truck-bed siderails.

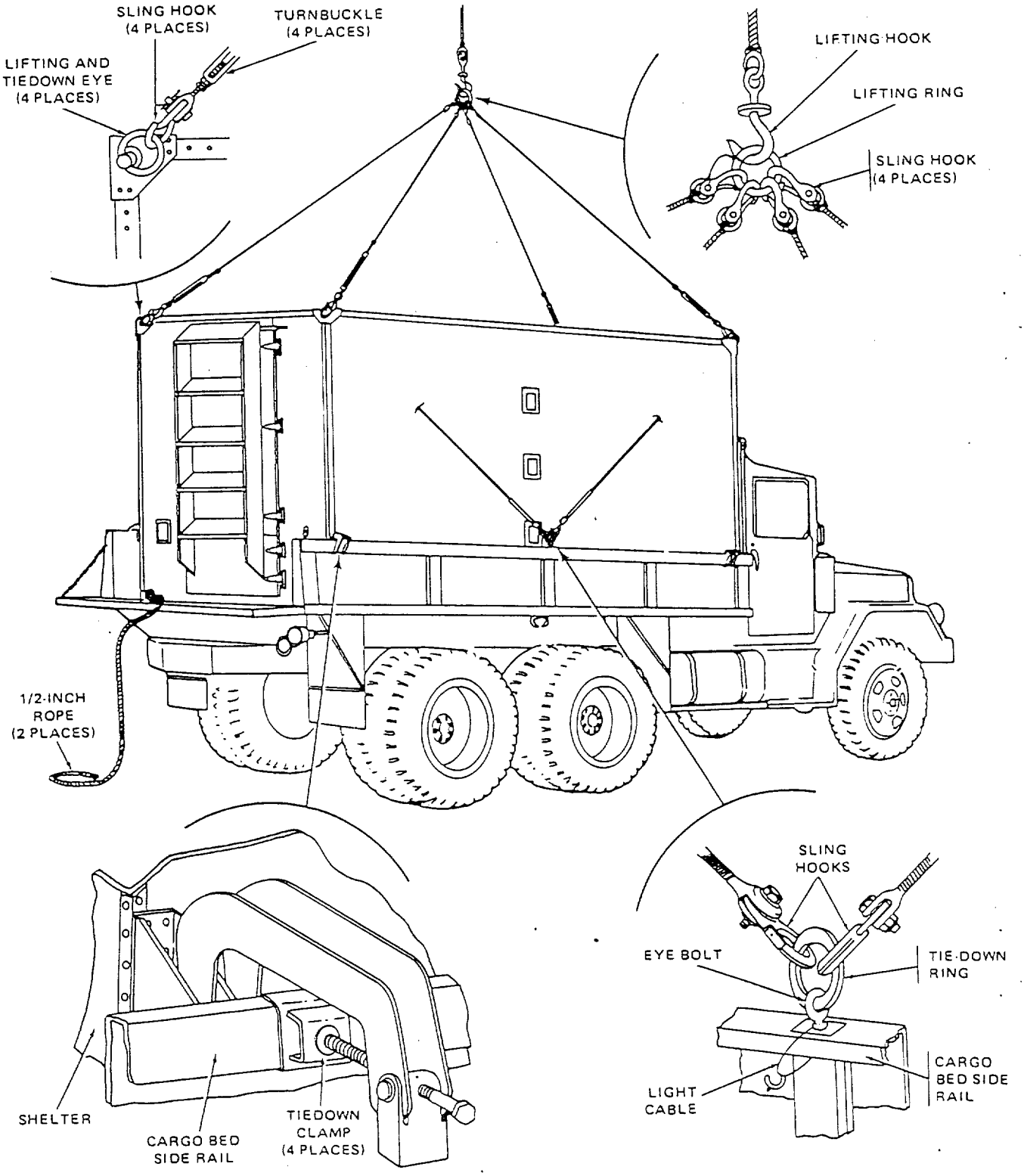

Figure 2-2. Lifting and Tiedown Assemblies, Shelter

CAUTION

Make certain that the sling hooks point away from the shelter.

(b) Attach a sling assembly to each tiedown eye and eye bolt assembly.

(c) Tighten all turnbuckles evenly by hand; then turn each turnbuckle an additional one-half turn with a bar or rod inserted in the turnbuckle slot.

(d) Insert appropriate-sized wooden blocks between shelter skids and truck bed sides to prevent sideways movement strain on the sling assembly cables.

(e) Insert appropriate-sized wooden blocks between the shelter skids and the cab wall of the truck bed to protect the towing eyes of the shelter and the cab wall of the truck bed.

2-9 TRUCK TRANSPORT. See figure 2-2. Prepare and transport the S-281/G as follows:

a. Perform steps 2-8, a through o.

b. Raise and secure truck tailgate.

c. Transport shelter to site.

d. Detach tiedown brackets from each truck-bed siderail corner, and/or detach sling assemblies from each tiedown eye and the tiedown rings.

e. Perform steps 2-8, a through i.

f. Move truck clear of shelter.

g. Lower and position shelter on prepared installation site.

h. Detach sling assemblies from lifting hook and from each shelter lifting eye.

i. Detach ropes from shelter towing eyes.

j. Secure ropes and sling assembly.

2-10 HELICOPTER TRANSPORT. See figure 2-2. Prepare and transport the S-281/G as follows:

a. Perform steps 2-8, a through d.

b. Lift and transport shelter.

c. Lower and position shelter on installation site.

d. Perform steps 2-9, h through j.

2-11 RELEASE OF STOWED EQUIPMENT. See figures 1-1 and 2-1.

WARNING

VENTILATION IS ESSENTIAL to PREVENT ASPHYXIATION when the shelter is occupied.

Release stowed equipment as follows:

a. Boarding Ladder Assembly M-7567/G.

(1) Remove ladder by loosening tiedown clamp assembly at top ladder support.

(2) For truck installation, place tailgate in horizontal position; hook ladder top firmly over tailgate rear edge; and rest ladder bottom on ground.

(3) For ground installation, stow the ladder in an authorized storage area.

b. Air Filter Cover. Open air filter cover on inside door top.

c. Ventilation Ports. Open ventilation ports on shelter front.

d. Power Cable Reel Assembly.

(1) Release reel assembly from floor tiedown plate by loosening hold-down bracket.

(2) Remove reel assembly from shelter.

e. Air Conditioner.

(1) Roll up air conditioner external canvas cover. Secure with tiedown snap located on canvas.

(2) Release air conditioner power cable from tiedown.

2-12 CABLING AND CONNECTIONS.

WARNING

The shelter must be properly grounded before main power is connected.

a. Grounding.

NOTE

The grounding site must be within 6 feet of the shelter ground lug. Grounding should not interfere with the entrance door, field wiring, or power cables. The site should be low and damp if possible.

(1) Select grounding site.

(2) Remove ground rod from tiedown bracket.

(3) Remove grease or other non-conductive soil from ground rod.

(4) Scoop out hole at grounding site (about 6 inches in diameter and 6 inches deep).

(5) Drive ground rod into ground at center of hole until ground rod is firmly set (2 to 3 feet).

(6) Remove ground strap from tiedown bracket.

(7) Connect ground strap to ground rod and shelter ground lug.

(8) Saturate the area around the ground rod with water to keep grounding site moist.

NOTE
If a generator is used for ac power, ground it the same as the shelter.

b. Preliminary Checks and Services. Perform the following checks and services before making power connections:

(1) Using Multimeter AN/USM-223, test ground rod assembly(s) for negligible resistance.

(2) Set all circuit breakers and equipment power switches to OFF.

c. Power Connections (figure 1-1). AC power for the S-281/G may be supplied by a 5-kW generator, a central power source, or commercial power. The power must be 115/220 Vac, 50/60 Hz, 3-phase. Connect power as follows:

(1) Set all circuit breakers and equipment power switches to OFF.

(2) Unwind power cable from power cable reel.

(3) Connect power cable to power source.

(4) Plug power cable into shelter power receptacle.

d. Telephone Set TA-312/PT. When a telephone set is supplied, proceed as follows:

(1) Install telephone set in bracket.

(2) Attach signal leads to the telephone set and the telephone receptacle internal binding post.

(3) Attach signal leads to the telephone receptacle, external binding post, and communications device.

e. Preventive Maintenance Checks and Services (PMCS). Perform the organizational PMCS (paragraph 5-6).

Section V. PRELIMINARY ADJUSTMENT OF EQUIPMENT

2-13 EXTENT OF PRELIMINARY CHECKS AND ADJUSTMENTS. Preliminary checks and adjustments of the S-281/G are limited to the release of stowed equipment, cabling, and connections. See 2-11 and 2-12.

Section VI. INSTALLATION AND CIRCUIT LINEUP

Not applicable.

CHAPTER 3

OPERATING INSTRUCTIONS

Section I. CONTROLS AND INSTRUMENTS

3-1 DAMAGE FROM IMPROPER SETTINGS. Normal settings or combinations of control settings will not cause damage to equipment. However, be sure to set all circuit breakers and electrical switches to OFF before energizing the ac circuits, or the initial current drain may overload the power source.

3-2 OPERATOR/CREW CONTROLS.

NOTE

Refer to the applicable manual for controls in individual configurations of the S-281/G.

a. Shelter. Shelter controls and instruments are listed in table 3-1 and illustrated in figure E-1.

b. Air Conditioner. Refer to TM 5-4120-22-14 for information on the air conditioner controls and instruments.

c. Additional Authorized Equipment. Refer to the applicable manual in Appendix A.

Table 3-1. Operator's Controls

NOTE

This table covers only items used by the operator; items used by higher level maintenance personnel are covered in instructions for the appropriate maintenance level.

Controls, indicators, or connectors	Description	Function
Main power switch	60 amperes	15 to 220 Vac, 50 to 60 amperes, 3-phase furnished to shelter and power distribution panel.
Power distribution panel:		
Circuit breakers:		
CB1 receptacle front wall curb	15 amperes	Provides ac power to receptacles on curbside and front walls.
CB3 lights	15 amperes	Provides ac power to lights (incandescent and blackout).
CBS receptacle equipment rack No. 1	15 amperes	Provides ac power to equipment rack No. 1.
CB7 receptacle equipment rack No. 2	15 amperes	Provides ac power to equipment rack No. 2.
CB9 receptacle equipment rack No. 3	15 amperes	Provides ac power to equipment rack No. 3.

Table 3-1. Operator's Controls - Continued

Controls, indicators, or connectors	Description	Function
CB11 receptacle equipment rack No. 4		Provides ac power to equipment rack No. 4.
CB2, CB4, CB6 air conditioner	50 amperes	Provides 220 Vac power for air conditioner.
CB8 front wall road	15 amperes	Provides ac power to receptacles on roadside and front wall.
CB10 roadside equipment receptacles	15 amperes	Provides ac power to receptacles on roadside.
CB12 receptacle equipment rack No. 5	15 amperes	Provides ac power to equipment rack No. 5.

Section II. OPERATION UNDER USUAL CONDITIONS

3-3 ENERGIZING AC CIRCUITS.

CAUTION

Failure to perform step 3-3a may result in a power source overload due to initial current drain.

a. Set all circuit breakers and electrical switches to OFF.

b. Activate main power source. Refer to the applicable manual for generator operation. Refer to local directives for local or commercial power.

c. Set shelter MAIN POWER SWITCH to ON.

d. Set LIGHTS circuit breaker No. 3 to ON to energize both incandescent and blackout light circuits.

e. Set each light fixture toggle switch to ON to turn each incandescent light on.

f. Raise blackout limit switch arm to turn two blackout lights on and two incandescent lights off. Use hasp to hold arm up.

g. Set circuit breakers Nos. 1, 2, 5 and 7 through 11 to ON to energize convenience outlets and equipment power receptacles.

h. Set AIR CONDITIONER circuit breaker to ON to energize air conditioner receptacle.

3-4 AIR CONDITIONER OPERATION. Operate the air conditioner as follows:

a. Ensure that air conditioner external canvas cover is rolled up and secured with tiedown snap.

b. Check to see that internal and external air flow vent openings are free from obstructions.

c. Set selector switch to OFF.

NOTE

For Trane model air conditioners, step d will energize the crankcase heater to vaporize any refrigerant present in the oil.

d. Plug power cord into No. 2 receptacle (figure E-10).

e. Jog fan motor by turning selector switch to VENTILATE and immediately back to OFF. This checks for binding or interference in the fan.

f. Set temperature control to desired temperature.

g. Set selector switch to COOL, LO HEAT, HIGH HEAT, or VENTILATE for desired operation.

(1) For heating or cooling with 100 percent recirculated air, close damper door and open intake grille damper.

(2) For heating or cooling with fresh makeup air, open damper door and partially close intake grille damper.

(3) For heating or cooling with fresh makeup air drawn through chemical, biological, and radiological filter unit when outside air is contaminated, close damper door and partially close intake grille damper.

(4) For ventilating operation, open damper door and close intake grille damper.

h. To stop the air conditioner, proceed as follows:

(1) Set selector switch to OFF.

CAUTION

For Trane model air conditioners, step (2) will cause refrigerant to condensate in the crankcase and mix with the oil.

(2) Disconnect power cord from receptacle for an extended shutdown period.

(3) Close intake grille damper.

(4) Attach exterior rain cover.

NOTE

Refer to TM 5-4120-222-14 for detailed air conditioner operating instructions.

3-5 EMERGENCY STOPPING PROCEDURE.

CAUTION

When emergency stopping procedure is used, set all circuit breakers and equipment power switches to OFF before restarting the equipment. This will prevent overloading the power source during initial current drain.

To turn the equipment off in an emergency, set the MAIN POWER SWITCH to OFF

.

Section III. OPERATION UNDER UNUSUAL CONDITIONS

3-6 SCOPE. The S-281/G is fully insulated and weatherproofed for operation in hot, cold, or moderate climates. It provides protection from the elements for personnel and equipment. However, under extreme conditions, the following precautions are necessary:

a. Extreme cold causes cables and wires to become hard, brittle, and difficult to handle. Be careful handling and connecting cables to avoid kinks, loops, and stress that may result in permanent damage.

b. Be sure that entrance box binding post and connectors are free from frost, snow, and ice. Close entrance box and receptacle covers when not in use. Keep open connectors out of water, snow, and ice to keep them dry.

c. In hot, dry climates, connectors, receptacles and binding posts are subject to dust and dirt damage. Close entrance box and receptacle covers when not in use.

d. In warm, damp climates, equipment is subject to moisture and fungus damage. Wipe moisture and fungus from equipment with a lint-free cloth.

Section IV. PREPARATION FOR MOVEMENT

3-7 SCOPE. Preparation of the S-28 1/G for movement is limited to disconnecting equipment and securing it as follows:

a. Cleaning. Clean interior and exterior of shelter. See paragraph 5-9.

b. Air Conditioner.

(1) Turn SELECTOR SWITCH to OFF.

(2) Disconnect and secure air conditioner power cable in tiedown position.

(3) Close intake grille damper.

(4) Attach exterior rain cover.

(5) Refer to the applicable manual for additional requirements for individual models.

c. Electrical Power Cable.

(1) Set all shelter circuit breakers and electrical equipment switches to OFF.

(2) Power:

(a) Central or Commercial Power. Set main power source circuit breaker to OFF.

(b) Individual Generator Power. Stop the generator.

(3) Disconnect power cable at source.

(4) Unplug power cable from shelter power entrance box.

(5) Roll power cable onto cable reel.

(6) Secure cable reel in tiedown position.

d. Grounding Assembly.

(1) Disconnect ground strap from shelter ground lug and ground rod.

(2) Clean and secure ground strap in tiedown position.

(3) Remove ground rod from ground.

(4) Clean and secure ground rod in tiedown position.

e. Telephone and Other External Shelter Connections. Disconnect and secure telephone lines and all other external connections to the shelter.

f. Basic Issue Items, Expendable Supplies and Materials, and Additional Authorized Items. Secure all items in tiedown position.

g. Ventilation Ports. Close and secure ventilation ports on shelter front wall.

h. Air Filter Cover. Close and secure air filter cover on inside top door.

i. Shelter Door.

(1) Close and secure door bottom.

(2) Close, secure, and lock top door.

i. Ladder. Secure ladder in tiedown position.

k. Truck-Mounted Shelter. Raise and secure truck tailgate.

CHAPTER 4

OPERATOR/CREW MAINTENANCE INSTRUCTIONS

Not Applicable

CHAPTER 5

ORGANIZATIONAL MAINTENANCE INSTRUCTIONS

Section I. TOOLS AND EQUIPMENT

5-1 TOOLS AND EQUIPMENT. Tools and test equipment required are listed in Appendix D. There are no special tools or test equipment required.

5-2 REPAIR PARTS. Necessary repair parts are listed and illustrated in Appendix E.

5-3 MATERIALS. Necessary materials are listed in Appendix F. There are no special materials required.

Section II. REPAINTING AND REFINISHING INSTRUCTIONS

CAUTION

Solar-reflecting paint per MIL-E-46061 (MO) has been used to paint the exterior of some shelter facilities to lower the inside temperature when the shelter is exposed to direct rays of the sun.

Before painting shelter exterior, check for a solar-reflecting paint caution notice located on the rear wall exterior next to the door. Do not use paint other than that specified in TB 43-0124 on shelter exteriors with solar-reflecting paint.

Do not paint electrical switches or contacts, plastic surfaces, sliding part contact surfaces, identification plates or other printed information, or light unit window panels.

5-4 REPAINTING, REFINISHING, AND RETOUCHING. Repainting, refinishing, and retouching of the shelter must be in accordance with TB 43-0118, Field Instructions for Painting and Preserving Electronics Command Equipment, Including Camouflage Pattern Painting of Electrical Equipment Shelters. Paints and finishes must be in accordance with SB 11-573, Painting and Preservation Supplies Available for Field Use for Electronics Command Equipment, and AR 746-1, Packaging of Army Materiel for Shipment and Storage.

Section III. LUBRICATION INSTRUCTIONS

5-5 GENERAL. There is no lubrication order for the S-281/G. Lubrication is limited to the sliding and rotating parts listed below. These parts should be checked and lubricated quarterly as required. Checks should be more often when operating under unusual conditions. Refer to the applicable manual for lubrication of the air conditioners.

a. Shelter Door. Apply a light film of oil, item 15, Appendix F, to shelter door hinges and latch assembly.

b. Power Cable Reel. Apply a light film of oil, item 15, Appendix F, to the bearings.

Section IV. PREVENTIVE MAINTENANCE CHECKS AND SERVICES

5-6 SCOPE. Organizational preventive maintenance checks and services (PMCS) are performed weekly, monthly, and quarterly as authorized by the maintenance allocation chart (MAC). These periodic checks and services help maintain the shelter in operating condition. Defects that cannot be corrected must be reported to direct support maintenance.

a. Table 5-1 outlines the inspection sequence in column one, inspection interval in column two, item to be inspected in column three, procedure in column four, and reasons for reporting the shelter not ready (RED) to perform its primary mission in column five. Footnotes indicate requirements for some checks and services to be performed more often than specified in column two when operating under unusual conditions.

b. Records and reports will be in accordance with TM 38-750.

c. All organizational PMCS will be performed at initial installation and when the equipment is reinstalled after removal.

Table 5-1. Organizational Preventive Maintenance Checks and Services

NOTE

If the equipment must be kept in continuous operation, check and service only those items that can be checked and serviced without disturbing operational. Make the complete checks and services when the equipment can be shut down.

The item number column will be used as a source of item numbers for the "TM Number" column on DA Form 2404, Equipment Inspection and Maintenance Worksheet.

W - Weekly **Q - Quarterly** **A - Annually** **H - Hours**
M - Monthly **S - Semiannually** **B - Biennially** **MI Miles**

ITEM NO	INTERVAL								Item to be inspected	Procedures	Equipment will be reported Not Ready (Red) if:
	W	M	Q	S	A	B	H	MI			
1	•								LIGHT BULBS	Check light fixtures for defective bulbs. Replace defective bulbs.	Light is insufficient.
2	•								FIRE EXTINGUISHER	Inspect cylinder for mechanical damage. Replace extinguisher if cylinder is damaged.	Cylinder is damaged and replacement is not available.
										Check stamp, tag, or label for Hydrostatic test within specified tire limit. If not, replace extinguisher.	No hydrostatic test within specified time limit and Replace replacement is not available.
3		•							PUBLICATIONS	Verify that all publications are present, current, complete, and serviceable. Replace or update as necessary.	
4		•							EQUIPMENT INVENTORY	Check for missing equipment and equipment subassemblies. Repair missing items..	Missing items render shelter inoperative, and replacements are not available.

Table 5-1. Organizational Preventive Maintenance Checks and Services - Continued

W - Weekly **Q - Quarterly** **A - Annually** **H - Hours**
M - Monthly **S - Semiannually** **B - Biennially** **MI Miles**

ITEM NO	INTERVAL								Item to be inspected	Procedures	Equipment will be reported Not Ready (Red) if:
	W	M	Q	S	A	B	H	MI			
5		•							MODIFICATIONS	Verily application of all current MWO's. Apply urgent MWO's immediately. When possible, schedule normal MWO's to avoid disrupting operations.	Urgent MWO(s) are not applied.
*6a		•							PRESERVATION	Clean shelter by removing all accumulated soil such as dust, dirt, grease, and grit.	
										Inspect all painted surfaces for damage such as cracked, chipped naked, peeled, weathered, and worn paint. Refinish as necessary.	Paint damage is beyond touch up.
										Inspect all surfaces for deterioration such as rust, corrosion, and fungi.	Surface damage is severe.
*7b		•							INSTALLATION AND SUPPORT	Check shelter and its support for stability. Reposition, realign, or resupport shelter As necessary.	Shelter or support cannot be stabilized.
										Check shelter support fittings for loose connections. Tighten as necessary.	

a. Preservation procedures may be required more frequently when the shelter is operated under unusual conditions.

b. Installation and support procedures may be required more frequently when the shelter is not installed on a solid and level base.

Table 5-1. Organizational Preventive Maintenance Checks and Services - Continued

W - Weekly M - Monthly Q - Quarterly S - Semiannually A - Annually B - Biennially H - Hours MI Miles

ITEM NO	INTERVAL								Item to be inspected	Procedures	Equipment will be reported Not Ready (Red) if:
	W	M	Q	S	A	B	H	MI			
8		•							EXTERIOR POWER CABLES, RECEPTACLES AND EARTH GROUND CONNECTION	**WARNING** Disconnect power before performing step 8. Check for loose connections. Tighten as necessary. Inspect insulation, wires and terminals for damage such as cuts, abrasions, frays, breaks, kinks and bends. Repair damage or replace parts as necessarily.	Damage renders shelter inoperative or causes safety hazard.
9		•							SHELTER EXTERIOR	Inspect overall exterior for damage such as holes, open seam is, cracks, and punctures. Repair damage.	Damage renders shelter inoperative and is not repaired.
10		•							SHELTER DOOR	Check for fit and proper operation of hinges and latch. Repair or replace as necessary.	Door is inoperative and damage is not corrected.
11		•							SHELTER INTERIOR	Check for signs of seepage or leaks. Repair as necessary.	Seepage or leaks render shelter inoperative, and damage is not corrected.

Table 5-1. Organizational Preventive Maintenance Checks and Services - Continued

W - Weekly **Q - Quarterly** **A - Annually** **H - Hours**
M - Monthly **S - Semiannually** **B - Biennially** **MI Miles**

ITEM NO	INTERVAL								Item to be inspected	Procedures	Equipment will be reported Not Ready (Red) if:
	W	M	Q	S	A	B	H	MI			
12		•							SHELTER ELECTRICAL WIRING AND COMPONENTS	**WARNING** Disconnect power before performing step 12. Check for loose collections. Tighten as necessary. Inspect insulation, wires, and terminals for damage such as cuts, abrasions, frays, breaks, kinks, and bends. Repair damage or replace parts as necessary. Check for proper operation of circuit breakers, switches, light units, receptacles, and plugs. Repair or replace as necessary.	Damage renders shelter inoperative or causes safety hazard. Inoperative item renders shelter inoperative or causes safety hazard.
13		•							MECHANICAL EQUIPMENT	Check for loose mountings on power cable reel, air conditioner, light fixtures, power box, and electrical ducts. Tighten loose mounting.	
14c			•						LUBRICATION	As required, lubricate shelter door hinges and latch and power cable reel bearings.	
15			•						EQUIPMENT PARTS AND INVENTORY	Inspect shelter, shelter support fittings, equipment and equipment support fittings for loose or missing parts. Tighten or replace loose or missing parts.	Missing parts render shelter inoperative.
16			•						FLOOR MAT	Check for excessive wear or other damage. Replace as necessary.	

c. Lubrication may be required more frequently when the shelter is operated under unusual conditions.

Section V. TROUBLESHOOTING

5-7 TROUBLESHOOTING PROCEDURE. Table 5-2 indicates the most frequent malfunctions in the S-281/G, their probable causes, and the corrective action required at the organizational level of maintenance as authorized by the MAC. Any trouble that is beyond the scope of organizational maintenance must be referred to direct support maintenance.

WARNING

Dangerous voltage is present in the electrical circuits. Death on contact may result. Use all safety precautions and be extremely careful when performing electrical troubleshooting and repairs.

Table 5-2. Organizational Maintenance Troubleshooting

MALFUNCTION TEST OR INSPECTION CORRECTIVE ACTION

ELECTRICAL -

1. NO POWER IN SHELTER WHEN MAIN CIRCUIT BREAKER IS ON.

Step 1.a. Central or Commercial Power. See if nearby facilities that are using same main source have power.

If main power is OFF, switch to auxiliary power until main power is restored.

b. Individual Generator Power. See if generator is operating properly. Refer to applicable manual.

Step 2. Inspect main power cable for loose or broken connections.

Reconnect, tighten, repair, or replace as necessary.

Step 3. Check output, or make point-to-point continuity test from main power source to main circuit breaker, until the malfunction is isolated.

Repair malfunction or replace defective component.

2. MAIN CIRCUIT BREAKER IS ON BUT THERE IS NO POWER TO A LIGHT UNIT OR RECEPTACLE.

Step 1. Check to see if in-line contact components (circuit breakers, switches, etc.) are ON. See wiring diagram, figure 6-1.

If any in-line contact components are OFF, reset to ON.

Step 2. Check output, or make point-to-point continuity checks from main circuit breaker to light unit or receptacle, until the malfunction is isolated.

Repair malfunction or replace defective component.

3. POWER TO LIGHT UNIT, BUT BULB(S) DOES NOT LIGHT.

Step 1. Check to see that bulb is tight in socket and making good contact.

If bulb is loose in socket, tighten it.

Table 5-2. Organizational Maintenance Troubleshooting - Continued

MALFUNCTION TEST OR INSPECTION CORRECTIVE ACTION

Step 2. Check socket for damage.

Replace socket if damaged. If there is no damage, replace bulb.

MECHANICAL

4. POWER CABLE REEL FAILS TO ROTATE PROPERLY.

Step 1. Check to see if reel is free from obstructions.

Remove obstructions.

Step 2. Check to see if reel is damaged.

Replace damaged reel.

Step 3. Check to see if reel is properly lubricated.

Lubricate reel bearings as required. See 5-5b.

Section VI. MAINTENANCE OF ELECTRICAL EQUIPMENT SHELTER S-281/G

5-8 GENERAL. This section contains organizational maintenance instructions as authorized by the MAC. Instructions are for equipment cleaning, and removal and installation of equipment within the shelter.

5-9 CLEANING.

WARNING

The fumes of trichloroethane are toxic. Provide adequate ventilation whenever it is used. DO NOT USE NEAR AN OPEN FLAME. Trichloroethane is not flammable, but exposure of the fumes to an open flame or hot metal forms highly toxic phosgene gas.

a. Remove dust and dirt from equipment with lint-free cloth or vacuum cleaner.

b. Remove dust and dirt from hard-to-reach areas with one-inch bristle brush or vacuum cleaner.

c. Remove grease or oil with trichloroethane, item 5, Appendix F. Wipe dry with clean, dry, lint-free cloth.

d. Remove caked dirt with one-inch bristle brush soaked with trichloroethane. Wipe dry with clean, dry, lint-free cloth.

5-10 SHELTER.

a. Refer to TB 43-0124 for shelter maintenance. Refer to TM 11-5410-206-14P for shelter repair parts.

b. Refer to the applicable manual for air conditioner maintenance; models vary.

c. Refer to the applicable manual listed in Appendix A for maintenance of additional authorized equipment.

d. Replace floor mat as follows:

WARNING

The shelter must be well ventilated when using cleaners and paints on the shelter interior.

(1) Remove damaged or excessively worn floor mat.

CAUTION

Ensure that cleaner does not get into the floor panel of the S-280( )/G. It will dissolve the styrene core material.

(2) Clean adhesive from floor using netone methylethyl cleaner, item 3, Appendix F.

(3) Apply zinc chromate primer, item 20, Appendix F, to floor.

(4) Apply lusterless gray enamel, item 8, Appendix F, over primer.

(5) Cut new floor mat to size using matting, item 13, Appendix F.

NOTE

Do not use adhesive when installing new floor mat.

(6) Lay new floor mat in place.

e. Replace light bulbs as follows. See figure E-11.

(1) Remove two screws (1), flat washers (2), and lockwashers (3) from lamp fixture.

(2) Remove window glass (13 or 14) from lamp fixture.

(3) Replace defective bulb(s).

(4) Reinstall window glass (13 or 14) on lamp fixture.

(5) Secure, using two screws (1), flat washers (2), and lockwashers (3).

5-11 POWER DISTRIBUTION BOX CIRCUIT BREAKER. See figure E-8. The circuit breakers are secured to the box assembly by retaining clips at the rear of the circuit breakers. To replace a circuit breaker, proceed as follows:

WARNING

Dangerous voltage is present in the electrical circuits. Death on contact may result. Use all safety precautions and be extremely careful when performing electrical troubleshooting and repairs.

a. Set Main Power Switch to OFF. Provide other lighting as required.

b. Remove power distribution box cover.

c. Pull firmly on left or right edge of circuit breaker until clip releases.

d. Pull firmly on other edge of circuit breaker until other clip releases.

e. Remove circuit breaker.

f. Position new circuit breaker and press firmly on left or right edge until clip engages.

g. Press firmly on other edge of circuit breaker until other clip engages.

h. Reinstall power distribution box cover.

i. Set Main Power Switch to ON.

j. Test new circuit breaker operation.

5-12 LIMIT SWITCH. See figure E-9.

WARNING

Dangerous voltage is present in the electrical circuits. Death on contact may result. Use all safety precautions and be extremely careful when performing electrical troubleshooting and repairs.

a. Removal.

(1) Set LIGHTS circuit breaker to OFF. Provide other lighting as required.

(2) Remove limit switch cover by removing four screws.

(3) Tag and disconnect lead wires.

(4) Detach limit switch from shelter wall by removing three screws (2).

(5) Disconnect conduit fitting from limit switch housing.

(6) Remove limit switch.

b. Installation.

(1) Feed lead wires through limit switch wiring hole into limit switch housing.

(2) Connect conduit fitting to limit switch.

(3) Attach limit switch to shelter wall using three screws (2).

(4) Connect lead wires.

(5) Install limit switch cover using four screws.

(6) Set LIGHTS circuit breaker to ON.

(7) Test new limit switch.

5-13 HASP ASSEMBLY. See figure E-9. The hasp is secured to the shelter ceiling by three screws (2). Remove the screws to replace the hasp.

5-14 ELECTRICAL RECEPTACLE CONNECTORS, NOS. 1 AND 3 THROUGH 9. See figure E-10.

WARNING

Dangerous voltage is present in the electrical circuits. Death on contact may result. Use all safety precautions and be extremely careful when performing electrical troubleshooting and repairs.

a. Removal.

(1) Set appropriate circuit breaker to OFF. See figure 5-1.

(2) Remove receptacle cover plate (1) by removing two screws (2).

(3) Detach receptacle (3, 8, or 9) from electrical duct by removing two screws (2).

(4) Tag and disconnect lead wires from receptacle.

(5) Remove receptacle.

b. Installation.

(1) Connect lead wires to receptacle.

(2) Attach receptacle to electrical duct using two screws (2).

(3) Install receptacle cover plate (1) using two screws (2).

(4) Set appropriate circuit breaker to ON and test new receptacle. See figure 6-1.

5-15 AIR CONDITIONER ELECTRICAL RECEPTACLE NO. 2. See figure E-10.

WARNING

Dangerous voltage is present in the electrical circuits. Death on contact may result. Use all safety precautions and be extremely careful when performing electrical troubleshooting and repairs.

a. Removal.

(1) Set AIR CONDITIONER circuit breaker to OFF.

(2) Detach electrical duct cover panel from electrical duct.

(3) Tag and unsolder lead wires from receptacle (5).

(4) Remove receptacle from electrical duct cover by removing four nuts (6), screws (4) and washers (7).

b. Installation.

(1) Install receptacle on electrical duct cover, using four washers (7), screws (4) and nuts (6).

(2) Solder lead wires to receptacle.

(3) Attach electrical duct cover to electrical duct.

(4) Set AIR CONDITIONER circuit breaker to ON and test the new receptacle.

5-16 LAMP FIXTURE ASSEMBLY. See figure E-11.

WARNING

Dangerous voltage is present in the electrical circuits. Death on contact may result. Use all safety precautions and be extremely careful when performing electrical troubleshooting and repairs.

a. Removal.

(1) Set LIGHTS circuit breaker to OFF. Provide other lighting as required.

(2) Remove lamp fixture cover by removing four screws (1), flat washers (2) and lockwashers (3).

(3) Tag and disconnect lead wires.

(4) Disconnect conduit fitting from lamp housing.

(5) Detach lamp fixture from shelter wall.

(6) Remove lamp fixture.

b. Installation.

(1) Feed lead wires through lamp fixture wiring hole into lamp fixture housing.

(2) Connect conduit fitting to lamp fixture.

(3) Attach lamp fixture to shelter wall.

(4) Connect lead wires.

(5) Install lamp fixture cover, using four lockwashers (3), flat washers (2), and screws (I).

(6) Set LIGHTS circuit breaker to ON and test lamp fixture.

5-17 GROUND LUG ASSEMBLY. See figure E-12.

WARNING

Dangerous voltage is present in the electrical circuits. Death on contact may result. Use all safety precautions and be extremely careful when performing electrical troubleshooting and repairs.

a. Removal.

(1) Set all circuit breakers and equipment power switches to OFF. See figure 5-1. Provide other lighting as required.

(2) Unplug main power cable from shelter receptacle.

(3) Remove one wing nut (5), two flat washers (2), one ground terminal (3), one lockwasher (4), and one nut (1) from bolt (7) on exterior shelter wall.

(4) Remove bolt (7) from shelter wall.

(5) Remove two nuts (l), two flat washers (2), one lockwasher (4), and one ground terminal (3) from bolt (7).

b. Installation.

(1) Install one ground terminal (3), one lockwasher (4), two flat washers (2), and two nuts (1) on bolt (7).

(2) Install bolt (7) in shelter wall.

(3) Install one nut (1), one lockwasher (4), one ground terminal (3), two flat washers (2). and one wing nut (5) on bolt (7) on exterior shelter wall.

(4) Using Multimeter AN/USM-223, test ground lug assembly for negligible resistance.

(5) Plug main power cable into shelter receptacle.

(6) Set circuit breakers and equipment power switches to ON.

CHAPTER 6

FUNCTIONING OF EQUIPMENT

6-1 SCOPE. The information in this chapter is limited to wiring diagrams (figures 6-1 and 6-2) of the S-281/G electrical circuits. Refer to TB 43-0124 for additional information on shelter equipment functions. Refer to TM 5-4120-222-14 for information on the air conditioner.

NOTE

1– THE SMALL NUMBER ON EACH WIRE (ADJACENT TO THE COMMON BASE LINE) CORRESPONDS TO THE LARGE NUMBER ADJACENT TO THE STATION TO WHICH THE WIRE RUNS.

2– BLACK WIRES CONNECT TO BRASS TERMINALS ON RECEPTACLES. WHITE WIRES CONNECT TO SILVER-COLORED TERMINALS ON RECEPTACLES.

3– WIRES CONNECTED TO STATION NO. 2 TERMINALS TO T1, T2, & T3 ARE NO. 6 AWG WIRE. THE BLACK WIRE CONNECTED TO STATION NO. 10 & ALL OTHER WHITE WIRES ARE NO. 12 AWG WIRE, & ALL OTHER BLACK WIRES ARE NO. 14 AWG WIRE.

4– TO PERMIT INSTALLATION, TOTAL LENGTH OF EACH SIZE OF WIRE IS GIVEN BELOW, USE AS REQUIRED.

SIZE	COLOR	LENGTH
12 AWG	WHITE	135'
12 AWG	BLACK	24'
14 AWG	BLACK	290'

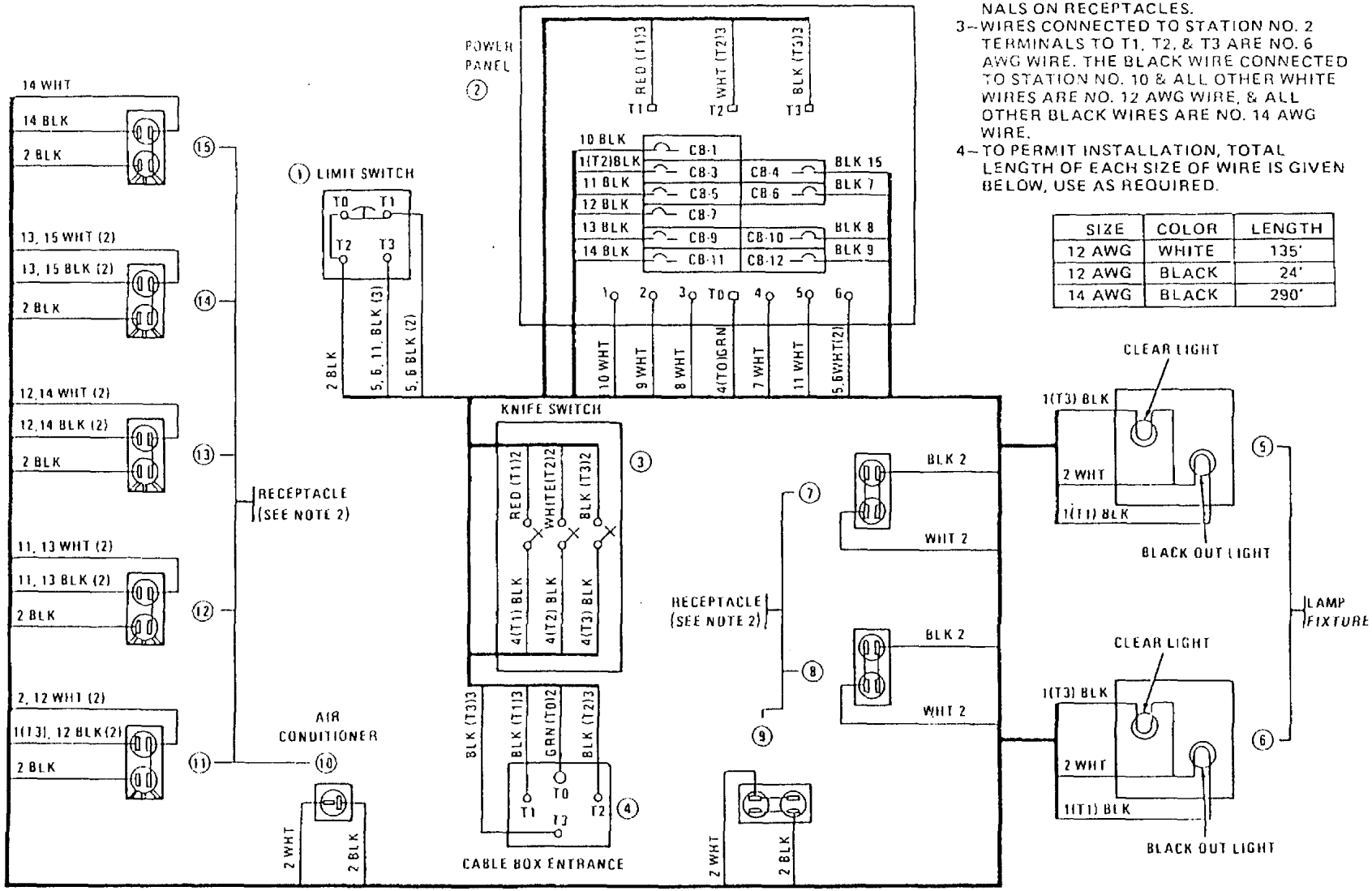

Figure 6-1. Wiring Diagram, Shelter S-281/G

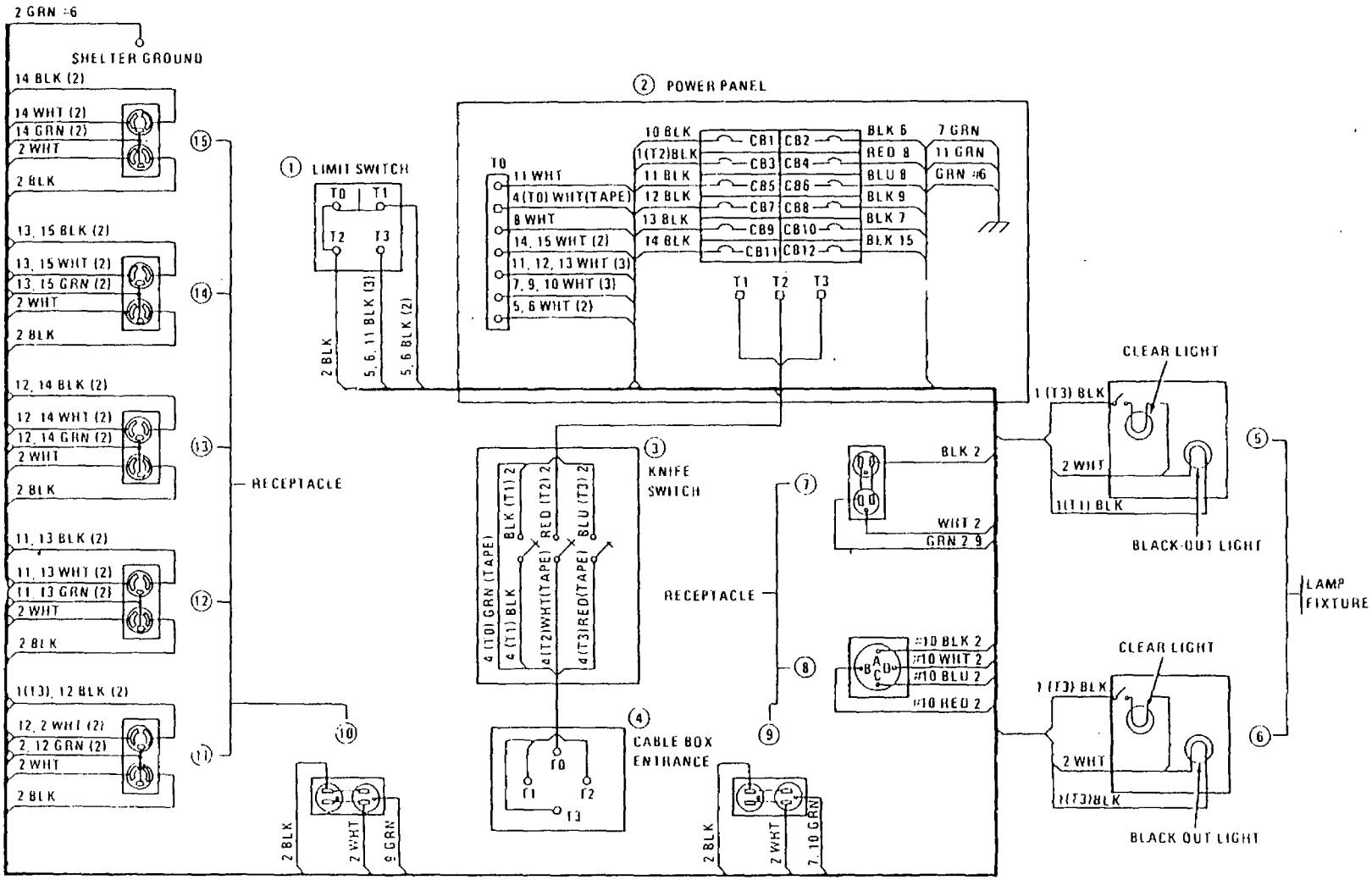

Figure 6 2. Wiring Diagram, Shelter S-281/G (Modified in accordance with MWO 32-5410-221-35-1)

CHAPTER 7

DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE INSTRUCTIONS

7-1 SCOPE. This chapter contains direct support and general support maintenance instructions as authorized by the maintenance allocation chart. Direct support maintenance of Electrical Equipment Shelter S-281/G entails repair of the basic shelter, air conditioner, and cable assemblies; also, replacement of electrical components and component parts below. There is no specific maintenance allocated to general support.

a. Basic Shelter Repair. Refer to TB 43-0124 for detailed maintenance of the basic shelter. Refer to TM 115410-206-14P for basic shelter repair parts.

b. Power Entrance Box Assembly. See figure E-7 for replacement of the power entrance box and its component parts.

c. A Main Power Switch Box Assembly. See figure E-6 for replacement of the main power switch box and its component parts.

d. Power Distribution Box Assembly. See figure E-8 for replacement of the main power switch box and its component parts.

e. Telephone Entrance Box Assembly. See figure E-13 for replacement of the telephone entrance box and its component parts.

f. Electrical Power Cable Assembly. See figure E-14 for replacement of the electrical power cable and its component parts.

g. Air Conditioner Cable Assembly. See figure E-15 for replacement of the air conditioner cable and its component parts.

h. Air Conditioner. Refer to TM 54120-222-14 for maintenance of the air conditioner.

CHAPTER 8

MATERIAL USED IN CONJUNCTION WITH MAJOR ITEM

Not Applicable

APPENDIX A

REFERENCE'

TM 54120-222-14	Operator's, Organizational, Direct Support, and General Support Maintenance Manual: Air Conditioner: Compact, Vertical, 208 V, 3-phase, 18,000 Btuh Cooling, 12,000 Btuh Heating (Trane Models) 50/60 Hz Model CE20VAL6, NSN 4120-00-9734589, 400 Hz Model CE20VAL4, NSN 4120-00-858-5 795
TM 9-2320-209-10	Operator's Manual for 2-1/2 ton 6X6: Chassis, M-35 Truck, Cargo
TM 11-5410-206-14P	Operator's, Organizational, Direct Support, and General Support Maintenance Repair Parts and Special Tools List (Including Depot Maintenance Repair Parts and Special Tools) Shelter, Electrical Equipment S-141/G and S-141B/G
TM 38-750	The Army Maintenance Management System (TAMMS)
TM 43-0139	Painting Instructions for Field Use
TMI 740-90-1	Administrative Storage of Equipment
TM 750-244-2	Procedures for Destruction of Electronics Materiel to Prevent Enemy Use (Electronics Command)
AR 700-42	Classification, Reclassification, Maintenance, Issuance and Reporting of Maintenance Training Aircraft
AR 746-1	Packaging of Army Materiel for Shipment and Storage
CTA 50-970	Expendable Items (Except: Medical, Class V, Repair Parts and Heraldic Items)
SB 11-573	Painting and Preservation Supplies Available for Field Use for Electronics Command Equipment
SB 38-100	Preservation, Packaging, Packing and .Marking Materials, Supplies and Equipment Used by the Army
SB 708-41/42	Federal Supply Code for Manufacturers; United States and Canada. Name to Code and Code to Name (GSA-FSS H4-1/H4-2)
SC 5180-91-CL-R07	Tool Kit, Electronic Equipment TK-105/G
SC 5180SO-91-CL-R13	Tool Kit, Electronic Equipment TK-101/G
TB 5-4200-200-10	Hand Portable Fire Extinguishers Approved for Army Users
TM 11-6625-654-14	Operator's, Organizational, Direct Support, and General Support Maintenance Repair Parts and Special Tools List (Including Depot Maintenance Repair Parts and Special Tools List) for Multimeter AN/USIM-223

TB 43-0118	Field Instructions for Painting and Preserving Electronics Command Equipment Including Camouflage Pattern Painting of Electrical Equipment Shelters
TB 43-0124	Maintenance and Repair Procedure for Shelters, Electrical Equipment S-141/G and S-141B/G (NSN 5410-00-752-9698); S-144/G, S-144A/G, S-144B/G, S-144C/G and S-144D/G (NSN 5410-00-542-2532); S-250/G (NSN 5410-00-999-4935); S-250/G (SHIELDED) (NSN 5410-00-4896076); S-280/G (NSN 5410-00-999-5269); S-280A/G (NSN 5410-00-999-6022); S-280B/G (NSN 5410-00-117-2868); S-280B/G (SHIELDED) (NSN 5410-00-0014093); S-318/G (NSN 5410-00-763-2339); and S-318A/C (NSN 5410-00-116-7086)
DA Pam 310-4	Index of Technical Publications
DA Pam 310-6	Index of Supply Catalogs and Supply Manuals (Excluding Types 7, 8 and 9)
DA Pam 310-7	US Army Equipment Index of Modification Work Orders
DA Form 2028	Recommended Changes to Publications and Blank Forms
DA Form 2404	Equipment Inspection and Maintenance Worksheet
Standard Form 364	Report of Discrepancy ROD).
SF 368	Quality Deficiency Report

APPENDIX B

COMPONENTS OF END ITEM LIST

Section I. INTRODUCTION

B-1 SCOPE. This appendix lists integral components of and Basic Issue Items (BII) for Electrical Equipment Shelter S-281/G to help you inventory items required for safe and efficient operation.

B-2 GENERAL. This Components of End Item List is divided into the following sections:

a. Section II. Integral Components of the End Item. These items, when assembled, comprise the S-281/G and must accompany it whenever it is transferred or turned in. The illustrations will help you identify these items.

b. Section III. Basic Issue Items (BII). These are the minimum essential items required to place the S-281/G in operation, to operate it, and to perform emergency repairs. Although shipped separately packed they must accompany the S-281/G during operation and whenever it is transferred between accountable officers. The illustrations will assist you with hard-to-identify items. This manual is your authority to requisition replacement BII, based on TOE/MTOE authorization of the end item.

B-3 EXPLANATION OF COLUMNS.

a. Illustration. This column is divided as follows:

(1) Figure Number. Indicates the figure number of the illustration on which the item is shown:

(2) Item Number. The number used to identify item called out in the illustration.

b. National Stock Number. Indicates the National stock number assigned to the item and which will be used for requisitioning.

c. Part Number. Indicates the primary number used by the manufacturer, which controls the design and characteristics of the item by means of its engineering drawings, specifications, standards, and inspection requirements to identify an item or range of items.

d. Description. Indicates the Federal item name and, if required, a minimum description to identify the item.

e. Location. The physical location of each item listed is given in this column. The lists are designed to inventory all items in one area of the major item before moving on to an adjacent area.

f. Usable on Code. "USABLE ON" codes are included to help you identify which component items are used on the different models. Identification of the codes used in these lists are: none.

g. Quantity Required (Qty Req'd). This column lists the quantity of each item required for a complete major item.

h. Quantity. This column is left blank for use during an inventory. Under the Rcv'd column, list the quantity you actually receive on your major item. The Date columns are for your use when you inventory the major item at a later date; such as for shipment to another site.

Section II. INTEGRAL COMPONENTS OF END ITEM

(1) Illustration		(2)	(3)	(4)	(5)	(6)	(7)	(8) Quantity			
(a) Figure No.	(b) Item No.	National Stock Number	Part No. & FSCM	Description	Location	Usable On Code	Qty Reqd	Rev'd	Date	Date	Date
E-1	2	541000-196-2901	14'0-2-4313	TIEDOWN MX-239 (XT-)/G (15942)			2				
E-1	3		1412024304	TIEDOWN MX-239 (XT-I)/G (15942)			1				
E-1	8		1420-2-4311	TIEDOWN MX-239 (XT-I)/G (15942)			1				
E-1	9	5440-00-835-5003	1420-24005	LADDER (15942)			1				
E-2	8		0028-1-3107	GROUND ROD ASSE.MBLY (15942)			1				
E-2	9	4120-00-973-4589	CE20OVAL6	AIR CONDITIONER (60532)			1				
E-2	10		0028-1-3121	CABLE ASSEMBLY, AIR CONDITIONER (15942)			1				
E-2	11		1420-24707	REEL, POWER CABLE ASSEM-BLY RL(227) (XT-)/MK-(210) (15942)			1				
E-2	12	5995-00-842-0255.	X8110-82	POWER CABLE ASSEMBLY (90129)			1				

Section III. BASIC ISSUE ITEMS

(1) Illustration		(2)	(3)	(4)	(5)	(6)	(7)	(8) Quantity			
(a) Figure No.	(b) Item No.	National Stock Number	Part No. & FSCM	Description	Location	Usable On Code	Qty Reqd	Rev'd	Date	Date	Date
			0099-14150	COVER ASSEMBLY, AIR CONDITIONER (15942)			1				
		4210-00-555-8837	FR234-11848	EXTINGUISHER, FIRE, WITH BRACKET (99539)			1				
		4030-00-956-5820	SCC90674 BLY.	PLATE AND RING ASSE-TIEDOWN (80063)			2				
		5410-00-759-9846	SCC36424GRI	WIRE ROPE ASSEMBLY (80063)			3				
		5410-00-403-9535	SCC36424GRII	WIRE ROPE ASSEMBLY AND LIFTING RING (80063)			1				

(1) NATIONAL STOCK NUMBER	(2) DESCRIPTION PART NUMBER & FSCM USABLE ON CODE	(3) U/M	(4) QTY AUTH
6115-00-635-8594	GENERATOR SET, GASOLINE DRIVEN, 5kw, ac, 120/240 V 60Hz MIL-G-12373TYPE2 (81349)	EA	1
5120-00198-5406	KEY, SOCKET HEAD SCREW, 3/8" (81348) (gg-k-275)	EA	1
5410-00-793-2021	KIT, REPAIR, ELECTRONIC EQUIPMENT SHELTER MK-680/G (80058)	EA	1
5120-00-596-8502	SCREWDRIVER, FLAT TIP GGG-S-121 (81348)	EA	1
5805-00-198-7465	TELEPHONE SET TA-312/PT (81349) (TA312PT)	EA	1

APPENDIX C

ADDITIONAL AUTHORIZATION LIST

Section I. INTRODUCTION

C-1 SCOPE. This appendix lists additional items you are authorized for the support of Electrical Equipment Shelter S-281 /G.

C-2 GENERAL. This list identifies items that do not have to accompany the S-281/G and that do not have to be turned in with it. These items are all authorized to you by CTA, MTOE, or JTA.

C-3 EXPLANATION OF LISTING. National stock numbers, descriptions, and quantities are provided to help you identify and request the additional items you require to support this equipment.

APPENDIX D

MAINTENANCE ALLOCATION CHART

Section I. INTRODUCTION

D-1 GENERAL.

a. This section provides a general explanation of all maintenance and repair functions authorized at various maintenance levels.

b. The Maintenance Allocation Chart (MAC) in Section 11 designates overall responsibility for the performance of maintenance functions on the identified end item or component. The implementation of the maintenance functions upon the end item or component will be consistent with the assigned maintenance functions.

c. Section III lists the special tools and test equipment required for each maintenance function as referenced from Section II.

d. Section IV contains supplemental instructions and explanatory notes for a particular maintenance function.

D-2 MAINTENANCE FUNCTIONS.

a. Inspect. To determine the serviceability of an item by comparing its physical, mechanical and/or electrical characteristics with established standards through examination.

b. Test. To verify serviceability and detect incipient failure by measuring the mechanical or electrical characteristics of an item and comparing those characteristics with prescribed standards.

c. Service. Operations required periodically to keep an item in proper operating condition; i.e., to clean (decontaminate), to preserve, to drain, to paint, or to replenish fuel, lubricants, hydraulic fluids, or compressed air supplies.

d. Install. The act of emplacing, seating, or fixing into position an item, part, or module (component or assembly) in a manner to allow the proper functioning of an equipment or system.

e. Replace. The act of substituting a serviceable like type part, subassembly, or module for an unserviceable counterpart.

f. Repair. The application of maintenance services or other maintenance actions to restore serviceability to an item by correcting specific damage, fault, malfunction, or failure in a part, subassembly, module (component or assembly), and item, or system.

g. Overhaul. That maintenance effort (services/actions) necessary to restore an item to a completely serviceable/ operational condition as prescribed by maintenance standards; i.e., Depot Maintenance Work Requirement in appropriate technical publications. Overhaul is normally the highest degree of maintenance performed by the Army. Overhaul does not normally return an item to like new condition.

D-3 EXPLANATION OF COLUMNS IN THE MAC, SECTION II.

a. Column 1, *Group Number*. Column 1 lists group numbers, the purpose of which is to identify components, assemblies, subassemblies, and modules with the next higher assembly.

b. Column 2, *Component/Assembly*. Column 2 contains the names of components, assemblies, subassemblies, and modules for which maintenance is authorized.

c. Column 3, *Maintenance Function*. Column 3 lists the functions to be performed on the item Listed in column 2. (For detailed explanation of these functions, see para. D2.)

d. Column 4, Maintenance Level. Column 4 specifies, by the listing of a "work time" figure in the appropriate subcolumn(s), the lowest level of maintenance authorized to perform the function listed in column 3. This figure represents the active time required to perform the maintenance function at the indicated level of maintenance. If the number or complexity of the tasks within the Listed maintenance function vary at different maintenance levels, appropriate "work time" figures will be shown for each level. The number of man-hours specified by the "work time" figure represents the average time required to restore an item (assembly, subassembly, component, module, end item, or system) to a serviceable condition under typical field operating conditions. This time includes preparation time, troubleshooting time, and quality assurance/quality control, time in addition to the time required to perform the specific tasks identified for the maintenance functions authorized in the XMAC. The symbol designations for the various maintenance levels are as follows:

C..... Operator/Crew
O..... Organizational maintenance
F ..... Direct support maintenance
H..... General support maintenance
D.....Depot maintenance

e. Column 5, Tools and Equipment. Column 5 specifies, by code, those common tool sets (not individual tools' and special tools, Test, Measurement, and Diagnostic Equip meat (TMDE), and support equipment required to perform the designated function.

f: Column 6, Remarks. This column will, when applicable, contain a letter code, in alphabetical order, which will be keyed to the remarks contained in Section IV.

D4 EXPLANATION OF COLUMNS IN TOOL AND TEST EQUIPMENT REQUIREMENTS, SECTION III.

a. Column 1, Reference Code. The tool and T reference code correlates with a code used in the MAC, Section II, column 5.

b. Column 2, Maintenance Level. The lowest level of maintenance authorized to use the tool or test equipment.

c. Column 3, ,Nomenclature. Name or identification of the tool or test equipment.

d. Column 4, National/VA TO Stock Number. The National Stock Number'(NSN) of the tool or TNIDE.

e. Column 5, Tool Part Number. The manufacturer's part number.

D-5 EXPLANATION OF COLUMNS IN REMARKS, SECTION IV.

a. Reference Code. The code recorded in Section 11, column 6.

b. Remarks. This column lists information pertinent to the maintenance function being performed as indicated in the MIAC, Section II.

Section II. MAINTENANCE ALLOCATION CHART

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL UNIT C	UNIT O	INTERMEDIATE F	INTERMEDIATE H	DEPOT D	(5) TOOLS AND EQUIPMENT	(6) REMARKS
00	ELECTRICAL EQUIPMENT SHELTER S-281/G	Inspect		0.5					B
		Test		0.5				1.2	
		Install		2.0					
		Service		1.0					
		Repair			3.5			1 thru 4	A.C
		Overhaul					40.0		A
01	MAIN POWER SWITCH BOX ASSE'MBLY	Inspect		0.1					
		Test		0.1				1	
		Replace			1.0			2	
		Repair		0.5				2	
02	POWER ENTRAANCE BOX .ASSEMBLY	Inspect		0.1					
		Test		0.1				1	
		Replace		0.5				2,3	C
		Repair		0.5					
03	POWER DISTRIBUTION BOX ASSEMBLY	Inspect		0.1				1	
		Test		0.1				2	
		Replace			1.0			2	
		Repair		0.1					C
04	LIMIT SWITCH AND HASP ASSEMBLY	Inspect		0.1					
		Test		0.1				1	
		Replace		0.5				2	
		Repair		1.0					
05	ELECTRICAL RECEPTACLE CONNECTORS	Inspect		0.1					
		Test		0.1					
		Replace		0.2					
		Repair		0.5					
06	LAMP FIXTURE ASSEMBLY	Inspect		0.1					
		Test		0.1				1	
		Replace		0.5				2	
		Repair		0.5				2	C
07	GROUND LUG ASSEMBLY	Inspect		0.1					
		Test		0.1				1	
		Replace		0.5				2	
		Repair		0.2				2	
08	TELEPHONE ENTRASNCE BOX ASSEMBLY	Inspect		0.1					
		Test		0.1				1	
		Replace			1.0			2,3	
		Repair			0.5			2,3	
09	ELECTRICAL POWER CABLE ASSEMBLY	Inspect		0.1					
		Test		0.1					
		Replace		0.1					
		Repair			0.5			1 thru 4	

Section II. MAINTENANCE ALLOCATION CHART

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT	(6) REMARKS
			UNIT		INTERMEDIATE		DEPOT		
			C	O	F	H	D		
10	AIR-CONDITIONER CABLE ASSENMBLY	Inspect		0.1					
		Test		0.1				1	
		Replace		0.1					
		Repair			0.5			1 thru 4	
11	AIR-CONDITIONER	Inspect		0.1					B
		Test			1.0				
		Repair			2.0				
		Overhaul					3.0		

Section III. TOOL AND TEST EQUIPMENT REOUIREMENTS

(1) Ref Code	(2) Maintenance Level	(3) Nomenclature	(4) National/NATO Stock Number	(5) Tool Number
1	O	MULTTIMETER AN/USM-223 (80058)	665-00999-7465	ANUSM 223
2	O	TOOL KIT, ELECTRON IC EQUIPMENT TK-101/G (80058)	5180-00-6-5178	TK 101G ISSUE6
3	F	TOOL KIT, ELECTRONIC EQUIPMENT TK- 105/G (80058)	5180-00610-817-	TK 105G
4	O	SCREW DRIVER, FLAT TIP .037-INCH THICK, 1/4-iNCH WIDE, 1-1/2-INCH LONG (81348)	5 120-00596-8502	GGS-121

Section IV. REMARKS

Reference Code	Remarks
A	See TB 43-0124 for detailed maintenance of the shelter. See TM 11-5410-206-14P for basic shelter repair pars.
B	See TM 5-4120-223-14 for maintenance of the air-conditioner.
C	Repair of electrical system by organizational maintenance personnel is limited to replacement of breakers, switches and receptacles.

APPENDIX E

REPAIR PARTS AND SPECIAL TOOLS LIST

Section I. INTRODUCTION

E-1 SCOPE. This appendix lists spares and repair parts; special tools; special Test, Measurement, and Diagnostic Equipment (TMIDE), and other special support equipment required for performance of organizational, direct support, and general support maintenance of Electrical Equipment Shelter S-281/G. It authorizes the requisitioning and issue of spare and repair parts as indicated by the source and maintenance codes.

E-2 GENERAL. This Repair Parts and Special Tools List is divided into the following sections:

a. Section II. Repair Parts List. A list of spares and repair parts authorized for use in the performance of maintenance. The list also includes parts which must be removed for replacement of the authorized parts. Parts lists are composed of functional groups in numeric sequence, with the parts in each group listed in figure and item number sequence. Bulk materials are listed in National stock Number (NSN) sequence.

b. Section II. Special Tools List. Not applicable.

c. Section IV. National Stock Number and Part Number Index. A list, in National Item Identification Number (NIIN) sequence, of all National Stock Numbers (NSN) appearing in the listings, followed by a list in alphanumeric sequence of all part numbers appearing in the listings. National stock numbers and part numbers are cross referenced to each illustration figure and item number appearance.

E-3 EXPLANATION OF COLUMNS.

a. Illustration. This column is divided as follows:

(1) *Figure Number*. Indicates the figure number of the illustration on which the item is shown.

(2) *Item Number*. The number used to identify item called out in the illustration.

b. Source, Maintenance, and Recoverability (SIMR) Codes.

(1) Source Code. Source codes indicate the manner of acquiring support items for maintenance, repair, or overhaul of end items. Source codes are entered in the first and second positions of the uniform SMR code format as follows:

Code	Definition
PA	Item procured and stocked for anticipated or known usage.
XD	A support item that is not stocked. When required, item will be procured through normal support channels.

NOTE: Cannibalization or salvage may be used as a source of supply for any items coded above except those coded XA and aircraft support items as restricted by AR 700-42.

(2) *Maintenance Code.* Maintenance codes are assigned to indicate the levels of maintenance authorized to USE and REPAIR support items. The maintenance codes are entered in the third and fourth positions of the uniform SMR code format as follows:

(a) The maintenance code entered in the third position will indicate the lowest maintenance level authorized to remove, replace, and use the support item. The maintenance code entered in the third position will indicate one of the following levels of maintenance:

Code	Application/Explanation
O	Support item is removed, replaced, used at the organizational level.
F	Support item is removed, replaced, used at the direct support level.

(b) The maintenance code entered in the fourth position indicates whether the item is to be repaired and identifies the lowest maintenance level with the capability to perform complete repair; i.e., all authorized maintenance functions. This position will contain one of the following maintenance codes:

Code	Application/Explanation
O	The lowest maintenance level capable of complete repair of the support item is the organizational level.

Code Application/Explanation

F - The lowest maintenance level capable of complete repair of the support item is the direct support level.

Z - Nonreparable. No repair is authorized.

(3) *Recoverability Code*. Recoverability codes are assigned to support items to indicate the disposition action on unserviceable items. The recoverability code is entered in the fifth position of the uniform SMR code format as follows:

Recoverability Code	Definition
Z	- Nonreparable item. When unserviceable, condemn and dispose at the level indicated in position 3.
O	-Reparable item. When uneconomically reparable, condemn and dispose at organizational -level.
D	- Reparable item. When beyond lower level repair capability, return to depot. Condemnation and disposal not authorized below depot level.

c. National Stock Number (VSN). Indicates the NSN assigned to the item and which will be used for requisitioning.

d. Part Number. Indicates the primary number used by the manufacturer (individual, company, firm, corporation, or Government activity), which controls the design and characteristics of the item by means of its engineering drawings, specifications, standards, and inspection requirements to identify an item or range of items.

NOTE: When a stock numbered item is requisitioned, the item received may have a different part number than the part being replaced.

e. Federal Supply Code for Manufacturer (FSCM). The FSCM is a 5-digit numeric code listed in SB 708-41/42 which is used to identify the manufacturer, distributor, or Government agency, etc.

f Description. Indicates the Federal item name and, if required, a minimum description to identify the item.

g. Unit of Measure (U/M). Indicates the standard of the basic quantity of the listed item as used in performing the actual maintenance function. This measure is expressed by a two-character alphabetical abbreviation (e.g., ea, in, pr, etc.). When the U/M differs from the unit of issue, the lowest unit of issue that will satisfy the required U/M will be requisitioned.

h. Quantity Incorporated in Unit. Indicates the quantity of the item used in the breakout shown on the illustration figure, which is prepared for a functional group, subfunctional group, or an assembly. A "V" appearing in this column in lieu of a quantity indicates that no specific quantity is applicable (e.g., shims, spacers, etc.).

E-4 SPECIAL INFORMATION.

a. Usable on codes are shown in the description column. Uncoded items are applicable to all models. Identification of the usable codes used in this publication are:

Code	Used On
A	Electrical Equipment Shelter 5-28 1/G
B	Electrical Equipment Shelter S-281/G (modified in accordance with MWO 32-5410-221-35-1

E-5 HOW TO LOCATE REPAIR PARTS.

a. When National Stock Number or Part Number is unknown:

(1) *First.* Using the table of contents, determine the functional group or subgroup within which the item belongs. This is necessary since illustrations are prepared for functional groups or subgroups, and listings are divided into the same groups.

(2) *Second.* Find the illustration covering the functional group or subgroup to which the item belongs.

(3) *Third*. Identify the item on the illustration and note the illustration figure and item number of the item.

(4) *Fourth.* Using the Repair Parts Listing, find the figure and item number notes on the illustration.

b. When National Stock Number or Part Number is known.

(1) First. Using the Index of National Stock Numbers and Part Numbers, find the pertinent NSN or part number. This index is in NIIN sequence, followed by a list of part numbers in alphanumeric sequence, cross-referenced to the illustration figure number and item number.

(2) Second. After finding the figure and item number, locate the figure and item number in the repair parts list.

E-6 ABBREVIATIONS. Not applicable.

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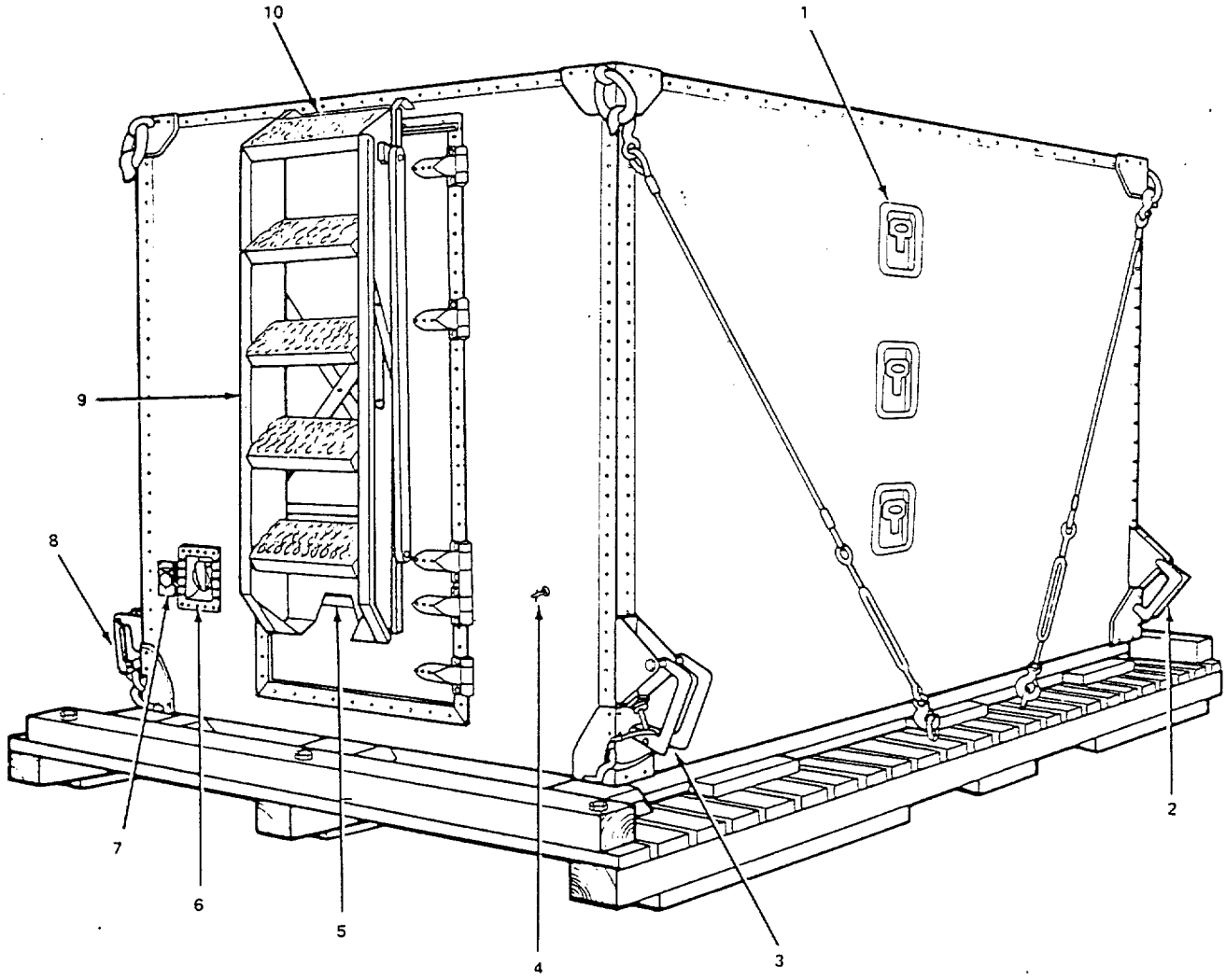


Figure E-1. Electrical Equipment Shelter s-2810/G - Exterior View

San II. REPAIR PARTS LIST

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION UOC	(7) U/M	(8) QTY INC IN UNIT
						GROUP: 00 ELECTRICAL EQUIPMENT SHELTER 5-281/G - EXTERIOR VIEW (80058)		
E-1	1	PAFZZ	5410-O919-4558	1-575709-50	19220	STP, RECESSED, FOLDING	EA	3
E-1	2	PAOZZ	5410-00-1962901	1420-24313	15942	TIEDOWN	EA	2
E-1	3	XDOZZ		1420-24304	15942	TIEDOWN	EA	1
E-1	4	XDFZZ		142-2-27 15	15942	GROUND LUG	EA	1
E-1	5	XDFZZ		1420-2-3011	15942	LADDER MOUNTNG BRACKET ASSEMBLY, LOWER	EA	1
E-1	6	XDFFD		1420-2-2039	15942	POWER ENTRANCE BOX ASSEMBLY	EA	1
E-1	7	XDFFD		1420-2-3030	15942	TELEPHONE ENTRANCE BOX ASSEMBLY	EA	1
E-1	8	XDOZZ		1420-243 1	15942	TIEDOWN	EA	1
E1	9	PAOZZ	5440-00-835-5003	1420-24005	15942	LADDER MX-7567/G	EA	
E-1	10	XDFZZ		1420-2-3006	15942	LADDER MOUNTING BRACKET ASSEMBLY, UPPER	EA	1

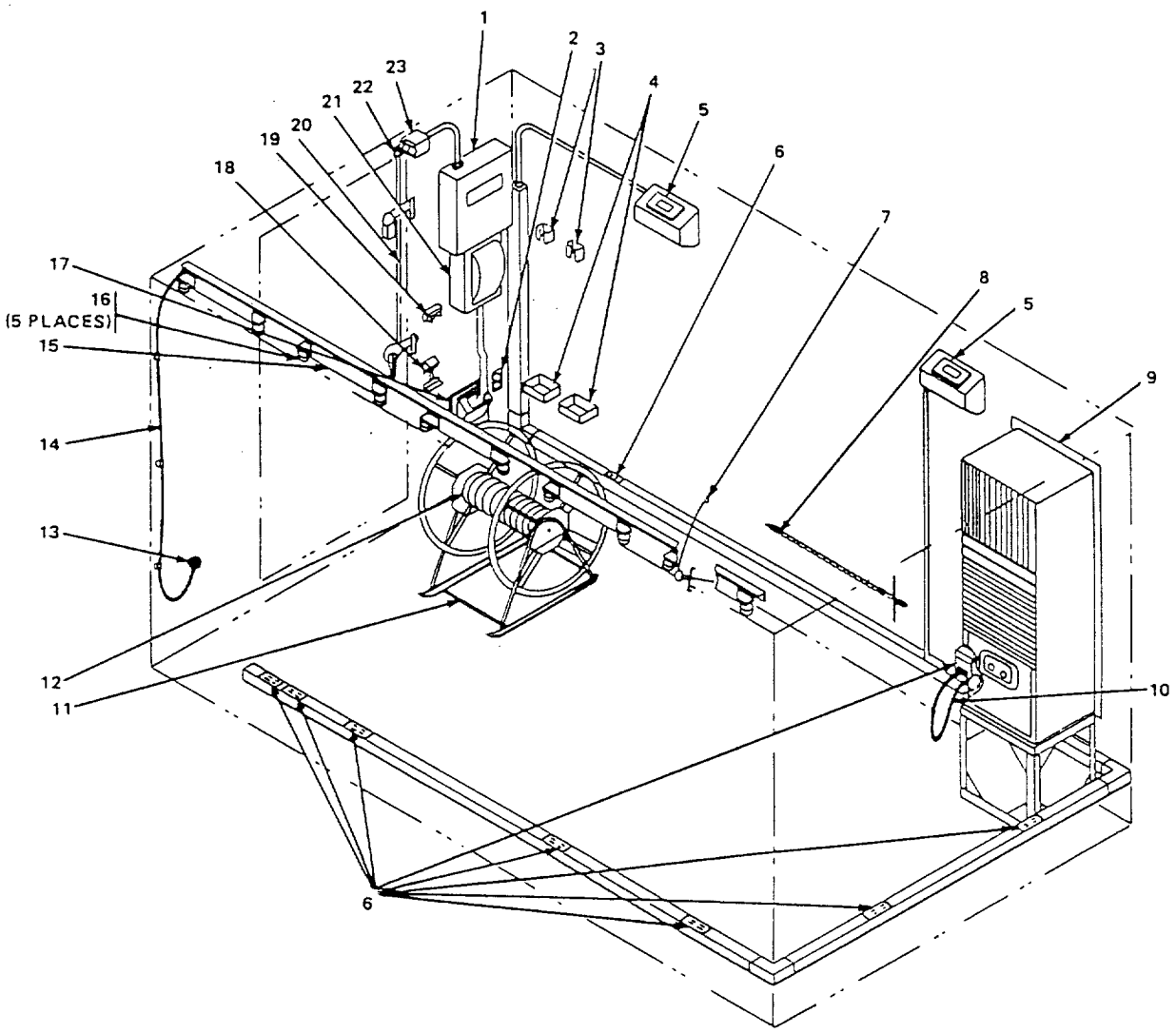


Figure E-2. Electrical Equipment Shelter S-281/G - Interior View

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION UOC	(7) U/M	(8) QTY INC IN UNIT
						GROUP: 00 E LECTRICAL EQUIPMENT SHELTER S-28 1/G - INTERIO R VIEW (80058)		
E-2	1	PAFZZ	5925-0-422-4813	TL12-412S	28432	POWER DISTRIBUTION BOX	EA	1
E-2	2	PAFZZ	5935-0640-99112	1420-2-3029	28432	TELEPHONE RECEPTACLE BOX	EA	1
E-2	3	XDFZZ		1420-2-2729	28432	CUP, RIFLE	EA	2
E-2	4	XDFZZ		0028-14001-1	28432	BRACKET, RIFLE	EA	2
E-2	5	PAFZZ	6210-OG-231-0465	1420-24105	28432	FIXTURE. LAMP	EA	2
E-2	6	XDFZZ		0028-1-4109	28432	OUTLET. POWER	EA	9
E.2	7	XDFZZ		1420-2-'709	28432	CABLE REEL LOCK ASSEMBLY	EA	1
E-2	8	XDFZZ		0028-1-3107	28432	ROD, GROUND	EA	1
E-2	9	PAFFD	4120-0973-4589	CE20VAL6	60532	AIR-CONDITIONER	EA	1
E-2	I0	XDOFF		0028-1-3121	15942	CABLE ASSEMBLY. AIR-CONDITIONER	EA	1
E-2	11	XDOZZ		1420-2-4707	15942	REEL, POWER CABLE, RL-227(XT- 1)	EA	1
E-2	12	PAOFF	5995-00-842-0255	X8110-82	90129	ELECTRICAL POWER CABLE ASSEMBLY	FT	80
E-2	13	XDFZZ		1420-2-2715	15942	LUG, GROU,'ND	EA	1
E-2	14	XDFZZ		1420-2-3105	15942	CABLE, GROUND	EA	1
E-2	15	PAFZZ	5975-00-85-1563	MT3777G	80058	TOP SHOCK MOUNT ASSEMBLY	EA	1
E-2	16	PAFZZ	5340-00-597-6190	C2090T6	81860	SHOCK MOUNT	EA	5
E-2	17	XDFZZ		1420-2-4106	15942	POWER INPUT BOX	EA	1
E-2	18	XDFZZ		1420-2-3000-1	15942	TELEPHONE MOUNT	EA	1
E-2	19	XDFZZ		1420-2-300-2	15942	TELEPHONE MOUNT	EA	1
E-2	20	XDFZZ		0028-1-2042	15942	BAR, LOCKING. DOOR	EA	1
E-2	21	XDFFF		0028-1411 1-3	15942	MAIN POWER SWITCH BOX ASSEMBLY, S51	EA	1
E-2	22	PAOOO	5895-00-138-5757	14202-3015	15942	HASP ASSEMBLY	EA	1
E-2	'3	XDOOO	0028-1-3108	1	5942	LIMIT SWITCH	EA	1

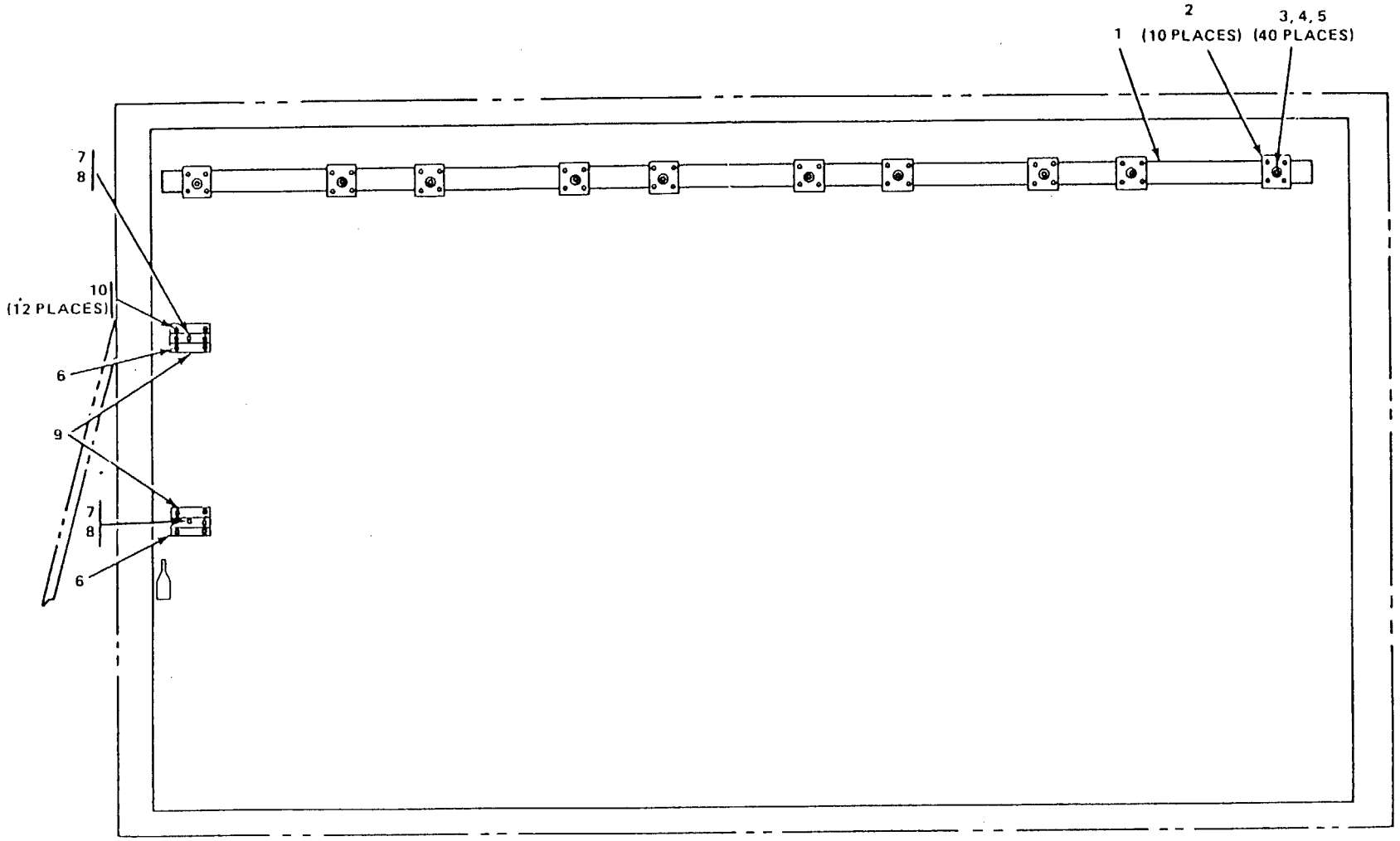


Figure E-3. Electrical Equipment Shelter S-281/G Ceiling

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6)	(7)	(8)
FIG NO.	ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	DESCRIPTION USABLE ON CODE	U/M	QTY INC IN UNIT
						GROUP: 00 ELECTRICAL EQUIPMENT SHELTER S-281/G - CEILING (80058)		
E-3	1	PAFZZ	5975851-1563	MT3777G	80058	TOP, SHOCK MOUNT ASSEMBLY	EA	1
E-3	2	PAFZZ	5340-00-597-6190	C209OT6	81860	SHOCK MOUNT	EA	10
E-3	3	XDFZZ		AN656-12	88044	BOLT	EA	40
E-3	4	PAFZZ	5310-00-637-9541	AN935-616	88044	WASHER, LOCK	EA	40
E-3	5	PAFZZ	5310-00-167-0821	AN960-616	88044	WASHER, FLAT	EA	40
E-3	6	XDFZZ		14202-2037	15942	BRACKET, CABLE	EA	2
E-3	7	PAFZZ	5305-00-984-6192	MS35206-244	96906	SCREW.CLAMP	EA	2
E-3	8	PAFZZ	5310-00-515-8058	AN960-8	88044	WASHER, CL	EA	2
E-3	9	XDFZZ		1420-2-2036-1	15942	CLAMP, CABLE	EA	2
E-3	10	PAFZZ	5305-00-292-7939	AN504-6	88044	SCREW. BRACKET	EA	12

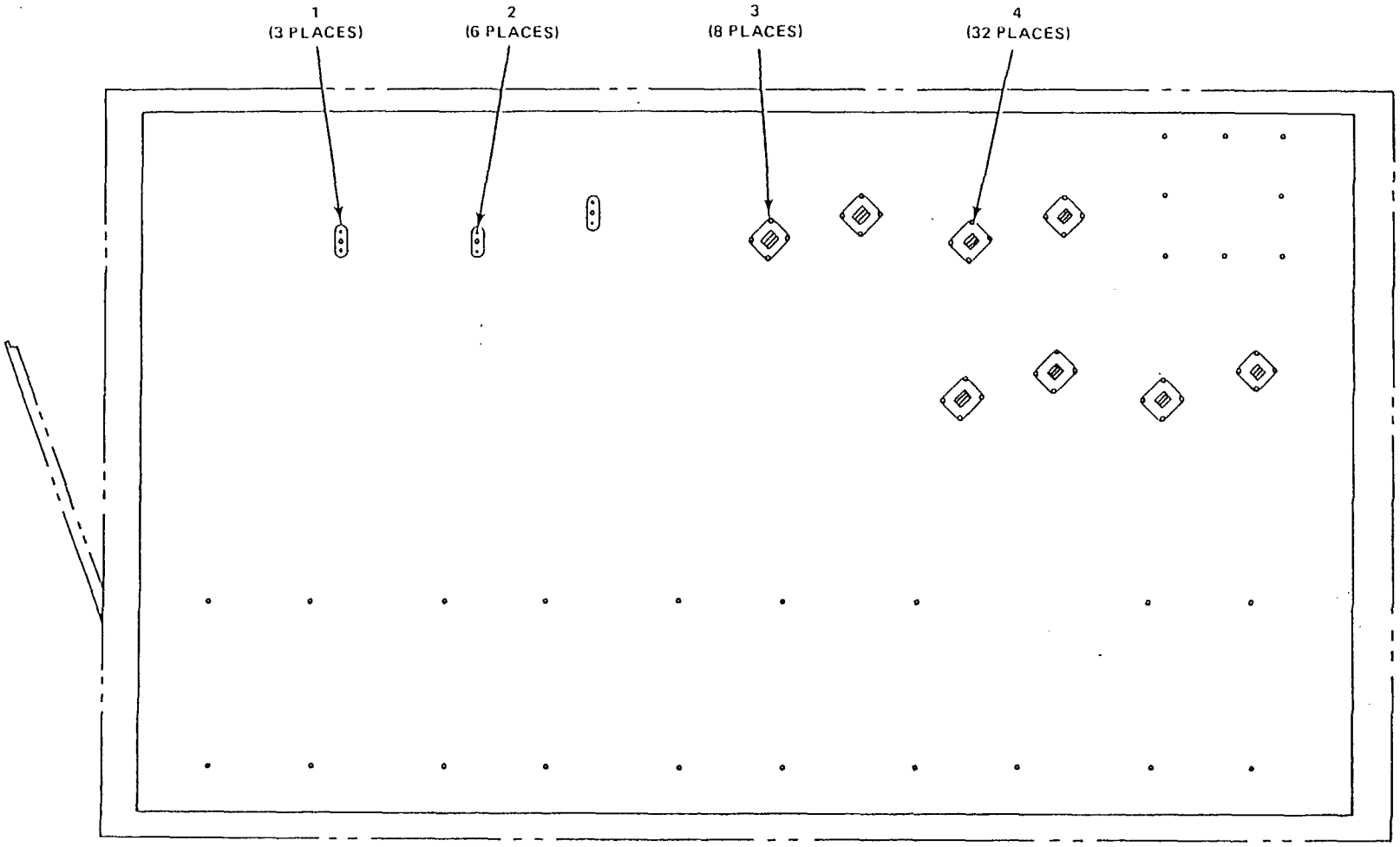
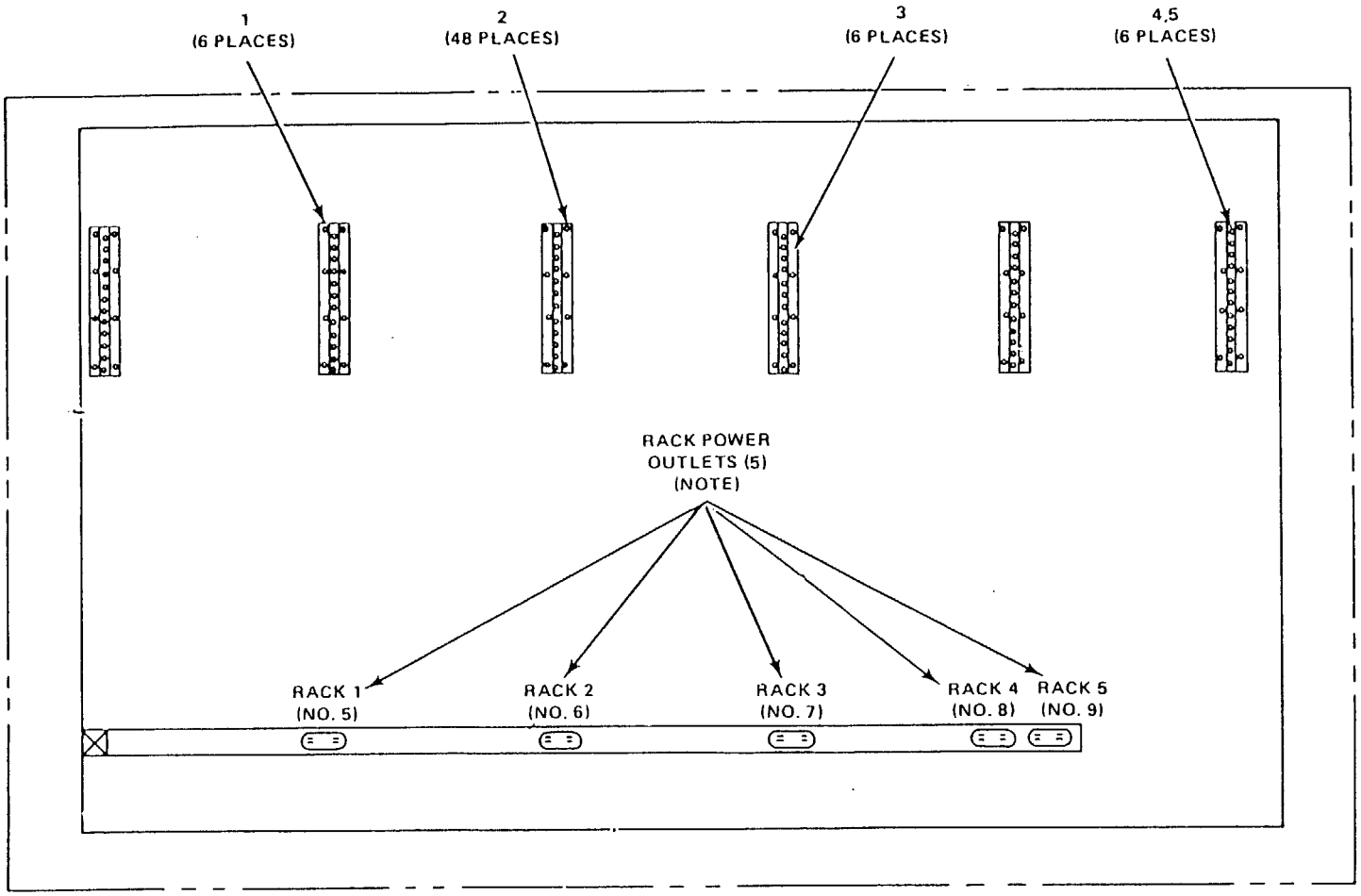


Figure E-4. Electrical Equipment Shelter S-281/G Floor

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6)	(7)	(8)
FIG NO.	ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	DESCRIPTION USABLE ON CODE	U/M	QTY INC IN UNIT
						GROUP: 00 ELECTRICAL EQUIPMENT SHELTER S-281/G - FLOOR (80058)		
E4	1	XDFZZ		1420-2-4001-2	15942	RECEPTACLE, REEL RETAINER	EA	3
E4	2	PAFZZ	5320-0-582-3305	RV2003	98996	RIVET	EA	6
E-4	3	XDFZZ		1420-2-2033	15942	RETAINER. CHAIR	EA	8
E-4	4	PAFZZ	5320-00-582-3276	MS20600 AD6WH	96906	RIVET	EA	30



NOTE: EACH RACK OUTLET HAS TWO CONNECTORS. THE ONE ON LEFT IS FOR EQUIPMENT CONNECTIONS. THE ONE ON RIGHT IS FOR RACK LIGHTING CONNECTIONS.

Figure E-5. Electrical Equipment Shelter S-281/G Interior Right Wall

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6)	(7)	(8)
FIG NO.	ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	DESCRIPTION USABLE ON CODE	U/M	QTY INC IN UNIT
						GROUP: 00 ELECTRICAL EQUIPMENT SHELTER S-281/G - INTERIOR RIGHT WALL (80058)		
E-5	1	XDFZZ		1420-2-3014-1	15942	BRACKET, CABLE	EA	6
E-5	2	PAFZZ	5305-00-844-9888	MS24621-15	96906	SCREW	EA	48
E-5	3	XDFZZ		1420-2-3031-1	15942	CLAIP, CABLE	EA	6
E-5	4	PAFZZ	5305-00-984-6192	MS35206-244	96906	SCREW, CLAMP	EA	6
E-5	5	PAFZZ	5310-00-515-8058	AN960-8	88044	WASHER, CLAMP	EA	6

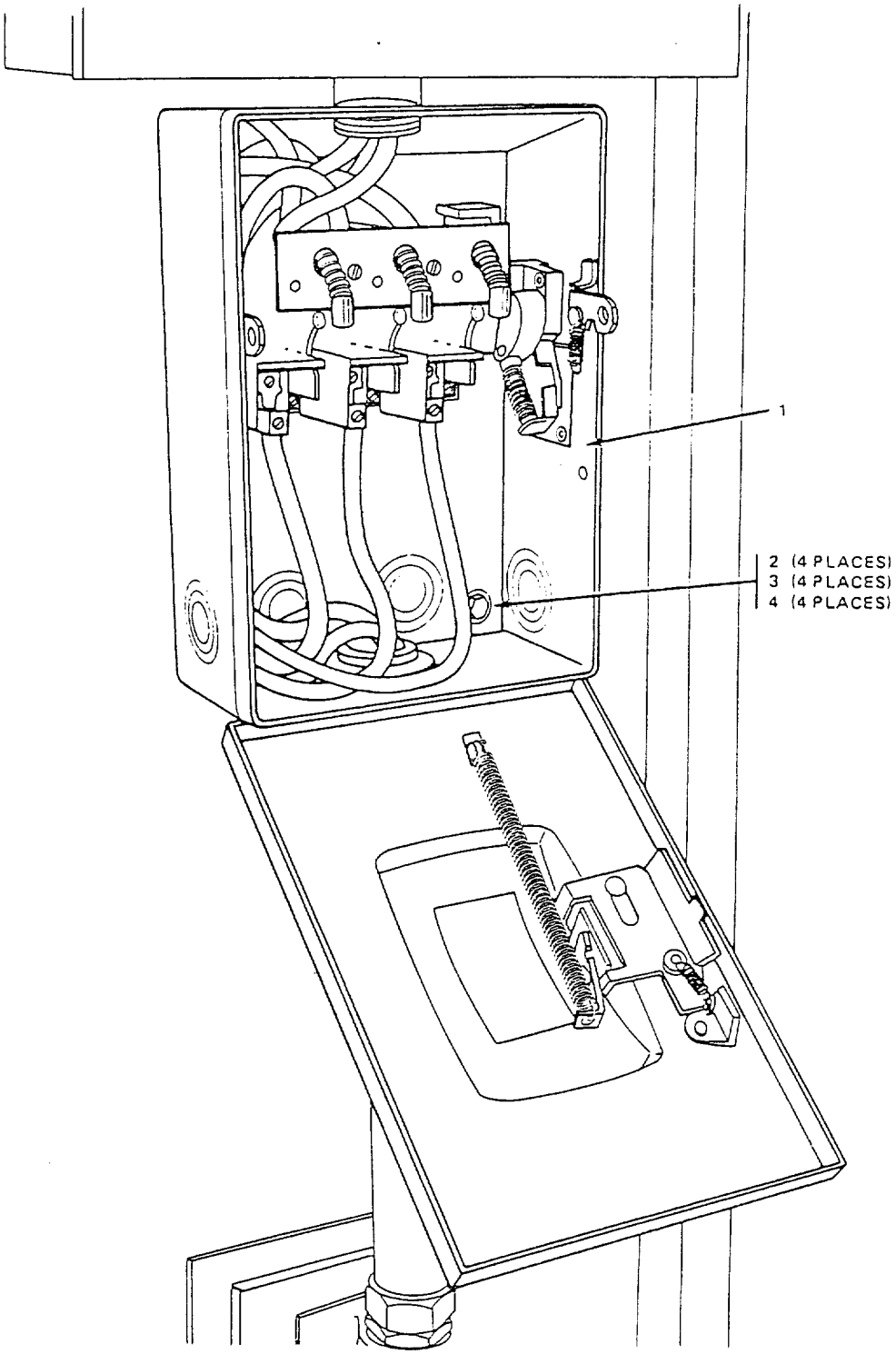


Figure E-6. Main Power Switch Box Assembly

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6)	(7)	(8)
FIG NO.	ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	DESCRIPTION USABLE ON CODE	U/M	QTY INC IN UNIT
						GROUP:01 MAIN POWER SWITCH COX ASSEMBLY (1520)		
E-6	1	PAFZZ	5930-00-089-8778	THN-3360	60969	MAIN POWER SWITCH BOX	EA	1
E-6	2	PAFZZ	5306-00-680-7219	FFB575	81348	BOLT, HEX	EA	4
E-6	3	PAFZZ	5310-00-141-1795	AN960-416	88044	WASHER, FLAT	EA	4
E-6	4	XDFZZ		0028-1-2122	15942	SPACER	EA	4

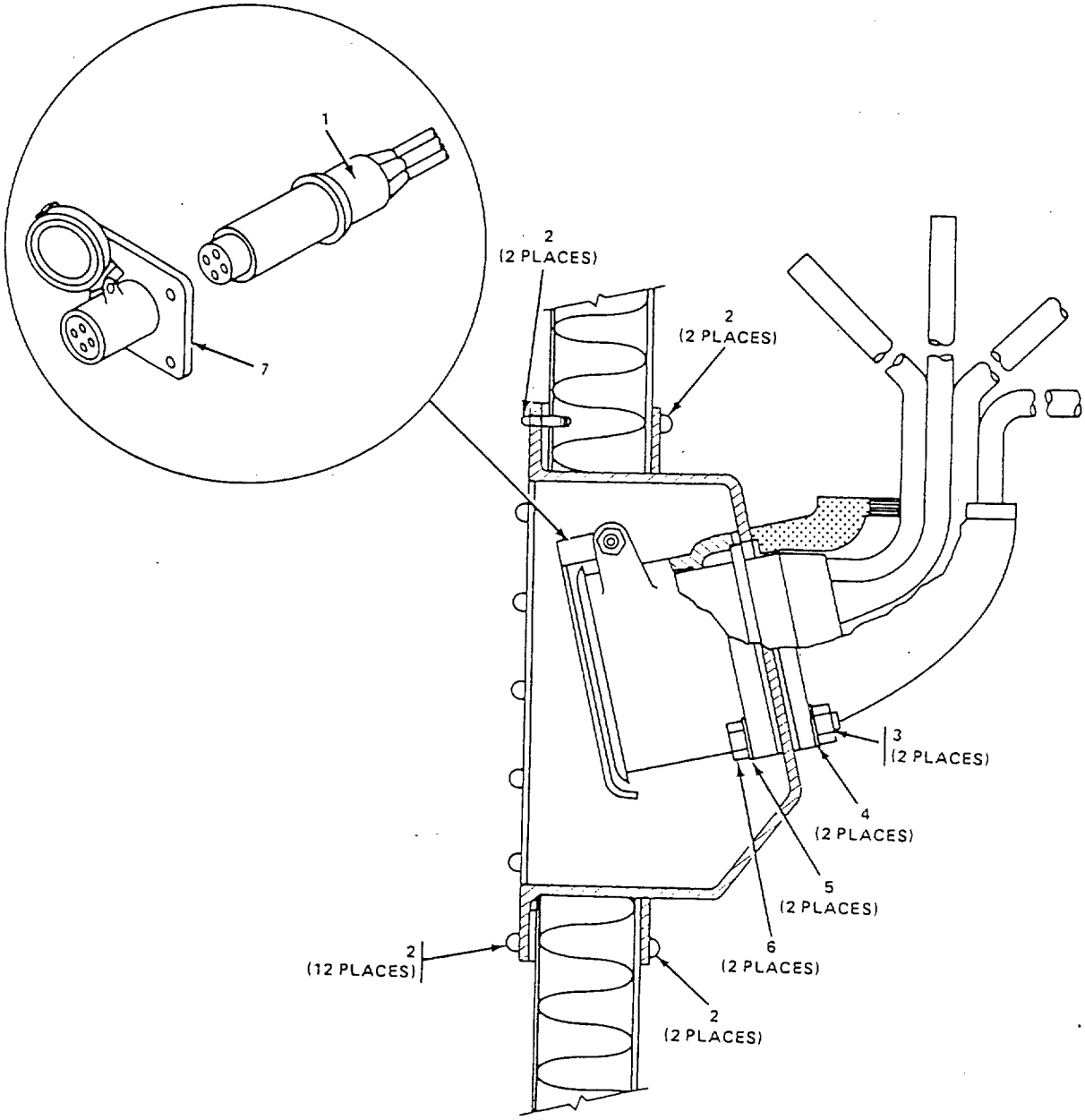


Figure E-7. Power Entrance Box Assembly

(1) ILLUSTRATION FIG NO.	(1) ILLUSTRATION ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP: 02 POWER EN7TRANCE BOX ASSEMBLY (15942)		
E-7	I	PAFZZ	5935-00-770-8275	X-8110-3	90129	HOUSING, PLUG CONNECTOR	EA	I
E-7	2	PAFZZ	5305-00-432-4202	MS51861-46	96906	SCREW, SELF-TAPPING	EA	18
E-7	3	PAFZZ	5310-00-761-6882	M551957-2	96906	NUT, PLAIN, HEX	EA	2
E-7	4	PAFZZ	5310-00-582-5965	MS35338-4	96906	WASHER, LOCK	EA	2
E-7	5	PAFZZ	5310-00-141-1795	AN960-416	88044	WASHER,FLAT	EA	2
E-7	6	PAFZZ	5306-00-141-2883	FFB575TYPE	81348	BOLT, HEX HEAD	EA	2
E-7	7	PAFZZ	5935-00-679-1518	7535645	19204	CONNECTOR. PLUG	EA	I

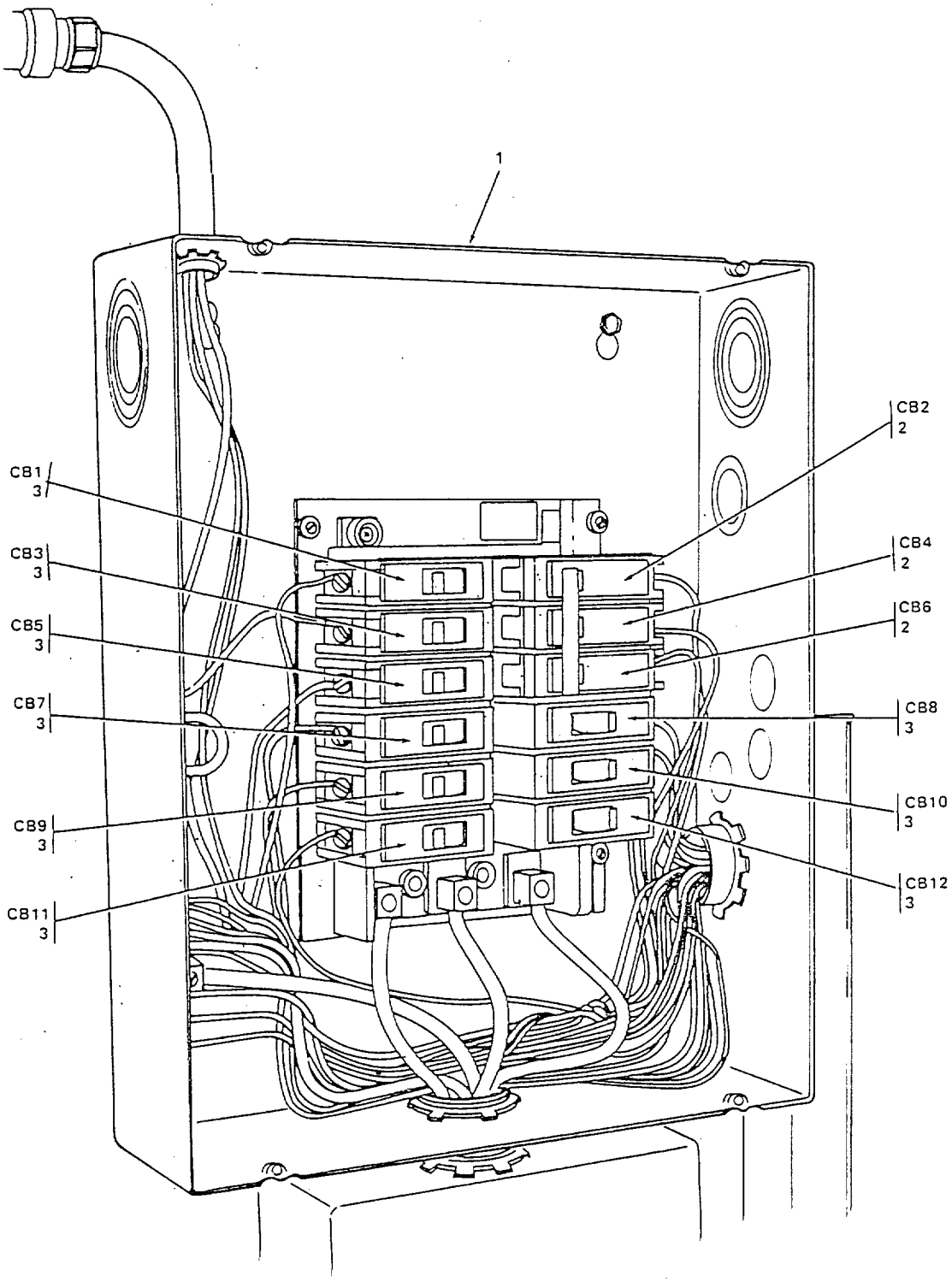


Figure E-8. Power Distribution Box Assembly

(1) ILLUSTRATION FIG NO.	ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP: 03 POWER DISTRI-BUTION BOX ASSEMBLY (15942)		
E-8	1	PAFZZ	5925-00422-4813	TL12-412S	28482	BOX. CIRCUIT BREAKER	EA	1
E-8	2	PAFZZ	5925-00-835-6009	THQL-32050	60969	CIRCUIT BREAKER. CB2, CB4. CB6 A	EA	3
E-8	3	PAFZZ	5925-00-931-7935	GETHQL 32030	60969	CIRCUIT BREAKER. CB2, CB4. CB6 B	EA	3
E-8	3	PAFZZ	5925-00-549-4041	TQL-1115	60969	CIRCUTT BREAKER.CB1,.CB3, CB5, CB7-CB12	EA	9

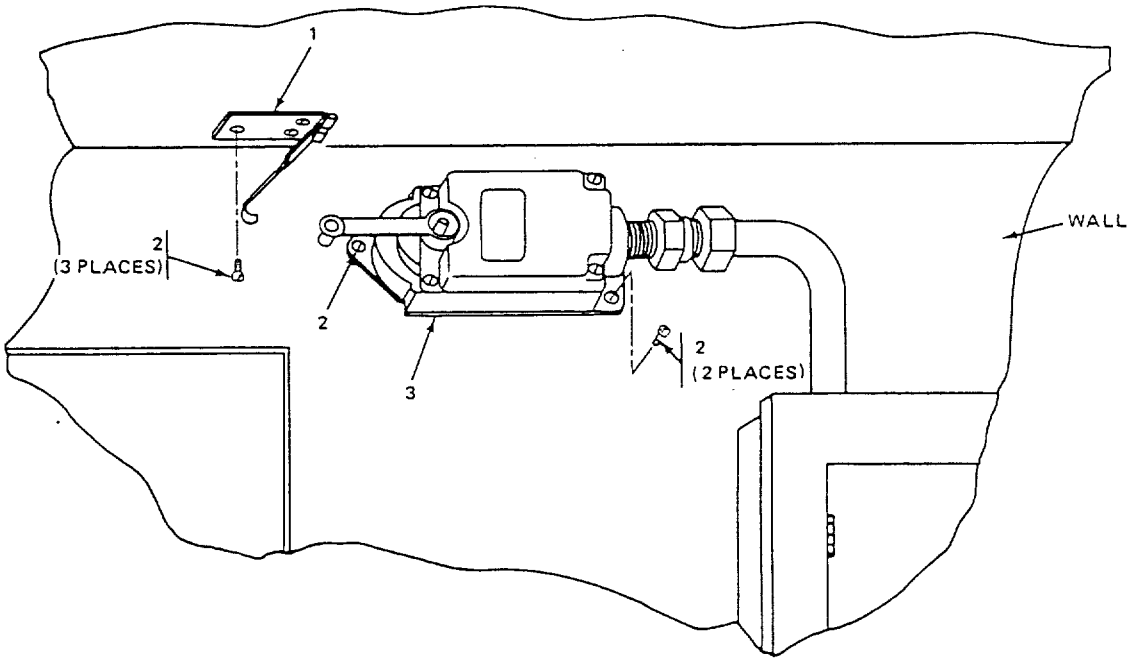


Figure E-9. Limit Switch and Hasp Assembly

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6)	(7)	(8)
FIG NO.	ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	DESCRIPTION USABLE ON CODE	U/M	QTY INC IN UNIT
						GROUP: 04 LIMIT SWTTCH AND HASP ASSEMBLY (15942)		
E-9	1	PAFZZ	5895-00-138-5757	14202-3015	15942	HASP ASSEMBLY	EA	1
E-9	2	PAFZZ	53054004324202	MS55186146	96906	SCREW, SELF-TAPPING	EA	6
E-9	3	XDFZZ		1420-2-3108	15942	LIMIT SWTTCH	EA	1

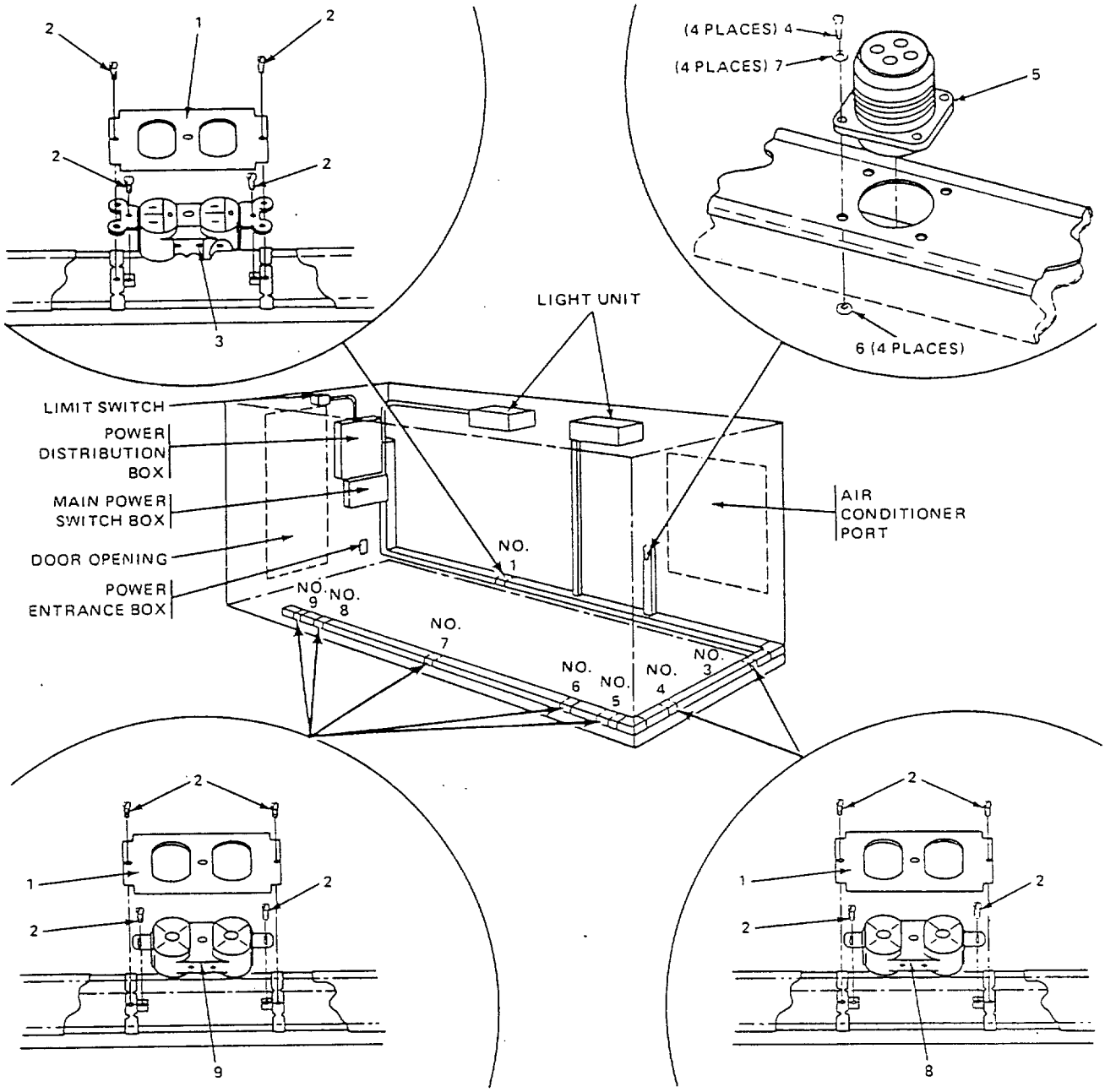


Figure E-10. Electrical Receptacle Connectors

(1) ILLUSTRATION FIG NO.	ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE		(7) U/M	(8) QTY INC IN UNIT
						GROUP: 05 ELECTRICAL RECEPTACLE CONNECTORS (15942)			
E-10	1	PAOZZ	5975-00-615-1380	3046B	79725	PLATE.WALLDUPLEX	A	EA	8
E-10	1	PAOZZ	5975-01-P02-1180	G4046B	79725	COVER, RECEPTACLE, DUPLEX	B	EA	8
E-102	PAOZZ	5305-0718-1630		M52462245	96906	SCREW, SHEET METAL		EA	32
E-103	PAOZZ	5935-01-012-3080		WC596-12 4	81348	CONNECTOR. RECEPTACLE, ELECTRICAL	A	EA	1
E-103	PAOZZ	5935-01-012-3080		5262	81348	OUTLET, STRAIGHT BLADE DUPLEX	B	EA	1
E-104	PAOZZ	5305-00-889-2997		MS35206-215	96906	SCREW, MACHINE		EA	4
E-105	PAOZZ	5935-0-189-2970		MS3102A22-225	96906	CONNECTOR, RECEPTACLE. ELECTRICAL		EA	1
E-106	PAOZZ	5310-00-934-9739		MS35649-242	96906	NUT, PLAIN, HEX		EA	4
E-107	PAOZZ	5310-00-167-0831		AN960-4L	88044	WASHER. FLAT		EA	4
E-10-8	PAOZZ	5935-0116-2464		WC596-6-1	81348	CONNECTOR. RECEPTACLE, ELECTRICAL	A	EA	2
E-108	PAOZZ	5935-01-012-3080		5262	81348	OUTLET, STRAIGHT BLADE DUPLEX	B	EA	2
E-109	PAOZZ	5935-00-078-6869		WC596-6-2	81348	CONNECTOR. RECEPTACLE. ELECTRICAL	A	EA	5
E-109	PAOZZ	5935-00-133-8694		4703	81348	RECEPTACLE, TWIST LOCK DUPLEX	B	EA	5

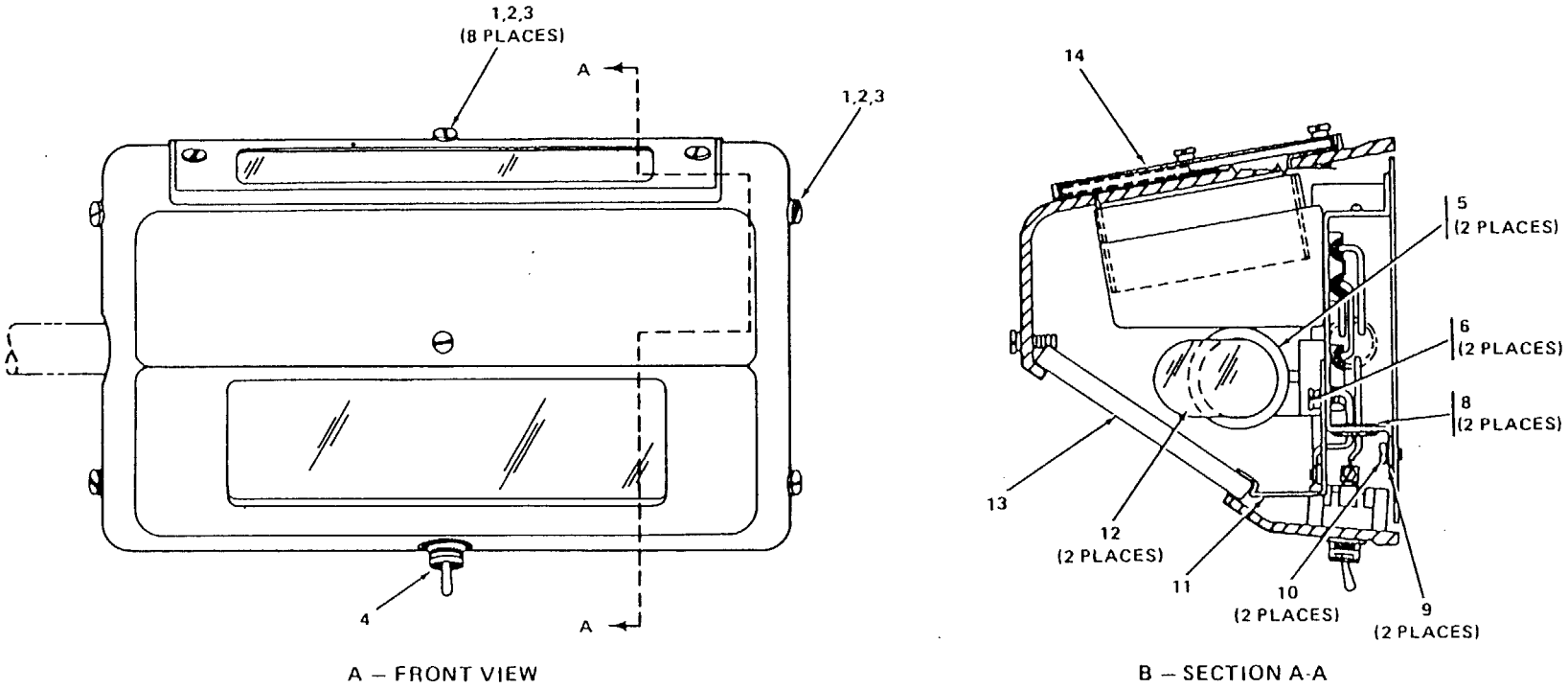


Figure E-11. Lamp Fixture Assembly

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP: 06 LAMP FIXTURE ASSEMBLY (15942)		
E-11	1	PAOZZ	5305-00-054-6670	MS5195745	96906	SCREW,.MACHINE	EA	8
E-11	2	PAOZZ	5310-00-880-5978	MS15795-807	96906	WASHER, FLAT	EA	8
E-11	3	PAOZZ	5310-00-933-8119	MS35338-37	96906	WASHER, LOCK	EA	1
E-11	4	PAOZZ	5930-00-134-9756	L40A	50671	SWITCH. TOGGLE, SPST	EA	1
E-11	5	XDOZZ		1420-2-4104-2	50671	RECEPTACLE, LAMP	EA	2
E-11	6	PAOZZ	5305-00-701-5057	MS51958-41	96906	SCREW, MACHINE	EA	2
E-11	7	PAOZZ	5310-00-543-2739	MS35333-72	96906	WASHER. LOCK	EA	2
E-11	8	XDOZZ		1420-2-4104-2	15942	GROMMET, RUBBER	EA	1
E-11	9	PAOZZ	5310-00-543-2740	MS35333-74	96906	WASHER, LOCK	EA	2
E-11	10	PAOZZ	5305-00-054-6665	MS5195740	96906	SCREW, MACHINE	EA	2
E-11	11	XDOZZ		1420-2-2105	15942	BRACKET	EA	1
E-11	12	PAOZZ	6240-00-143-3052	WL101-100T	81348	LAMP, INCANDESCENT	EA	2
E-11	13	XDOZZ		1420-2-4105-1	15942	WINDOW,GLASS	EA	1
E-11	14	PAOZZ	9330-00-838-0027	1420-2-2103	15942	WINDOW. PLEXIGLAS. BLUE	EA	1

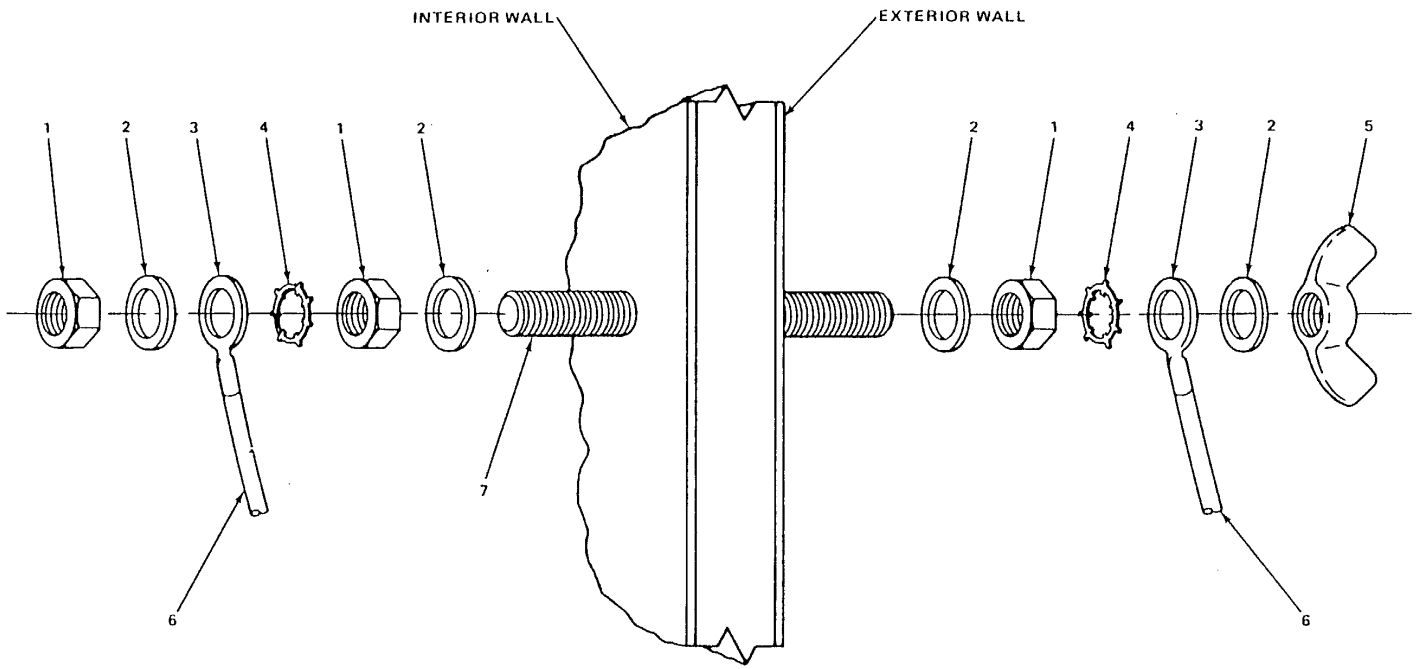


Figure E-12. Ground Lug Assembly

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP: 07 GROUND LUG ASSEMBLY (15942)		
E-12	1	PAOZZ	(5310-00-732-0558	MS51967-8	96906	NUT, PLAIN, HEX	EA	3
E-12	2	PAOZZ	5310-00-167-0821	AN960-616	88044	WASHER, FLAT	EA	4
E-12	3	XDOZZ		1420-2-4045	15942	TERMINAL, LUG	EA	2
E-12	4	PAOZZ	5310-00-637-9541	MS35338-46	96906	WASHER, LOCK	EA	2
E-12	5	PAOZZ	5310-00-889-2606	MS3542542	96906	WING NUT, PLAIN	EA	1
E-12	6	XDOZZ		142-2-3106	15942	CABLE,GROUND	EA	2
E-12	7	XDOZZ		65-6-44	80049	BOLT	EA	1

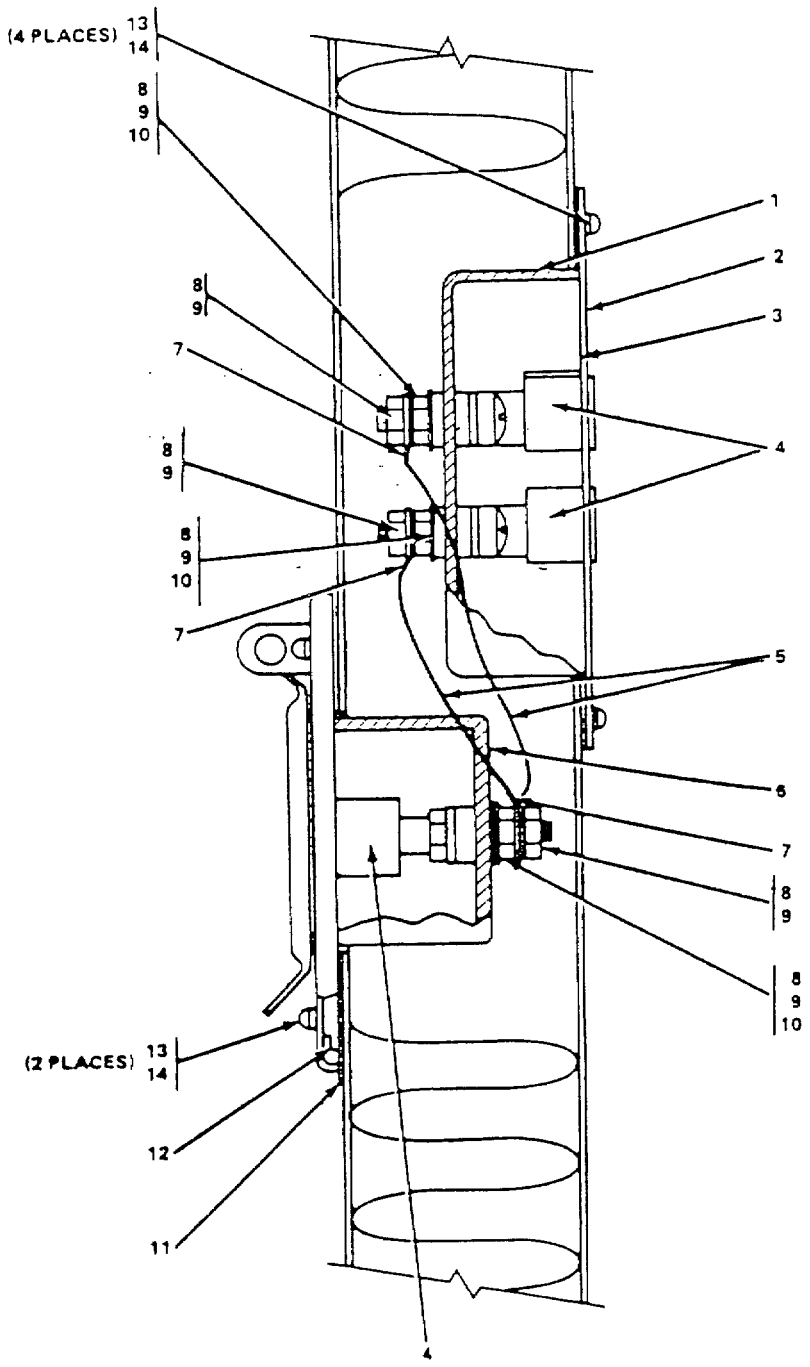


Figure E-13. Telephone Entrance Box Assembly

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP: 08 TELEPHONE ENTRANCE BOX ASSEMBLY (15942)		
E-13	1	XDFZZ		1420-2-3030-1	15942	TELEPHONE RECEPTACLE BOX	EA	1
E-13	2	XDFZZ		1420-2-2025	15942	FLANGE	EA	1
E-13	3	XDFZZ		1420-2-2038	15942	GASKET	EA	1
E-13	4	XDFZZ		1420-2-3030-2	15942	JACK, PMHH170	EA	3
E-13	5	XDFZZ		0028-1-2041	15942	JUMPER CABLE	EA	2
E-13	6	PAFZZ	5811-00-949-2729	1420-2-3028	15942	RECEPTACLE, TELEPHONE	EA	1
E-13	7	PAFZZ	5940-00-113-3138	MS20659-102	96906	TERMINAL, LUG	EA	3
E-13	8	PAFZZ	5310-00-410-3025	MS3560-305T	96906	NUT, PLAIN, HEX	EA	6
E-13	9	PAFZZ	5310-00-167-0818	AN960-10	88044	WASHER, FLAT	EA	6
E-13	10	PAFZZ	5325-00-839-9456	Z-3026	76385	GROMMET, RUBBER	EA	3
E-13	11	XDFZZ		1420-2-2028	15942	GASKET	EA	1
E-13	12	XDFZZ		0028-1-4001-3	15942	GASKET	EA	1
E-13	13	PAFZZ	5305-00-432-4202	MS51861-46	96906	SCREW, SELF-TAPPING	EA	8
E-13	14	PAFZZ	53100045-3296	MS3533843	96906	WASHER, LOCK	EA	8

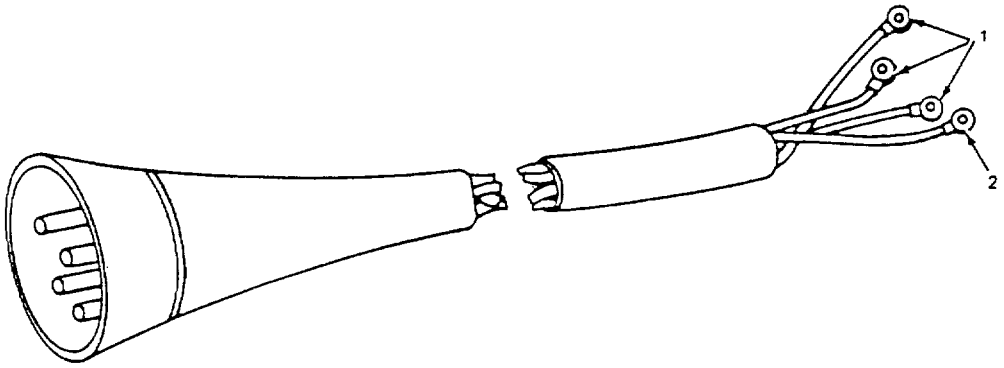


Figure E-14. Electrical Power Cable Assembly

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP: 09 ELECTRICAL POWER CABLE ASSEMBLY (90129)		
E-14	1	PAFZZ	5940-00-114-1315	MS20659-142	96906	TERMINAL, LUG	EA	3
E-14	2	PAFZZ	5940-00-115-0777	MS20659-L33	96906	TERMINAL, LUG	EA	1

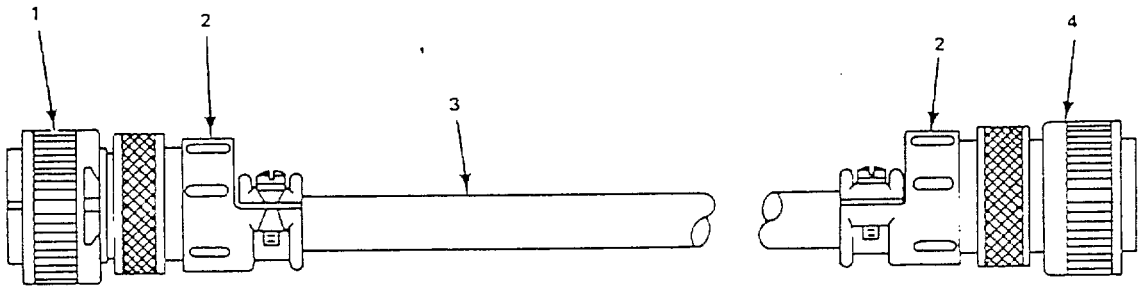


Figure E-15. Air Conditioner Cable Assembly

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 10 AIR-CONDITIONER CABLE ASSEMBLY (15942)		
E-15	1	PAFZZ	5935-00-827-5658	MS3106A-22-22.SC	96906	CONNECTOR, PLUG, ELECTRICAL	EA	1
E15	2	PAFZZ	5835-00-283-3394	MS3057-12B	96906	CLAMP, CABLE	EA	2
E15	3	PAFZZ	6145-00-387-5465	1938-4	92194	CABLE, POWER	FT	3
E-15	4	PAFZZ	5935-00-201-8373	MS3106A-22-22P	96906	CONNECTOR, PLUG, ELECTRICAL	EA	1

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
				(Not applicable)				

NATIONAL STOCK NUMBER	FIGURE NUMBER	ITEM NUMBER	NATIONAL STOCK NUMBER	FIGURE NUMBER	ITEM NUMBER
5310-00-045-3296	E-13	14	5310-00-582-5965	E-7	4
5305-00-054-6665	E-11	10	5340-00597-6190	E-2	16
5305-00-054-6670	E-11	1	5340-00-5976190	E-3	2
5935-00-078-6869	E-10	9	5975-00-615-1380	E-10	1
5930-00-089-8778	E-6	1	5310-00-637-9541	E-3	4
5940-00-113-3138	E-13	7	5310-00-637-9541	E-12	4
5940-00-114-1315	E-14	1	5935-00-679-1518	E-7	7
5940-00-115-0777	E-14	2	5306-00-680-7219	E-6	2
5935-00-133-8694	E-10	9	5305-00-701-5057	E-11	6
5930-00-134-9756	E-11	4	5305-00-718-1630	E-10	2
5895-00-138-5757	E-2	22	5310-00-732-0558	E-12	1
5895-00-138-5757	E-9	1	5310-00-761-6882	E-7	3
5310-00-141-1795	E-6	3	5935-00-770-8275	E-7	1
5310-00-141-1795	E-7	5	5440-00-835-5003	E-1	9
5306-00-141-2883	E-7	6	5925-00-835-6009	E-8	2
6240-00-143-3052	E-11	12	9330-00-838-0027	E-11	14
5310-00-167-0818	E-13	9	5325-00-839-9456	E-13	10
5310-00-167-0821	E-3	5	5995-00-842-0255	E-2	12
5310-00-167-0821	E-12	2	5305-00-844-9888	E-5	2
5310-00-167-0831	E-10	7	5975-00-851-1563	E-2	15
5935-00-189-2970	E-10	5	5975-00-851-1563	E-3	1
5410-00-196-2901	E-1	2	5310-00-880-5978	E-11	2
6210-00-231-0465	E-2	5	5310-00-889-2606	E-12	5
5305-00-292-7939	E-3	10	5305-00-889-2997	E-10	4
5935-00-406-9112	E-2	2	5410-00-919-4558	E-1	1
5310-00-410-3025	E-13	8	5925-00-931-7935	E-8	2
5925-00-422-4813	E-2	1	5310-00-934-8119	E-11	3
5925-00-422-4813	E-8	1	5310-00-934-9739	E-10	6
5305-00-432-4202	E-7	2	5811-00-949-2729	E-13	6
5305-00-432-4202	E-9	2	4120-00-973-4589	E-2	9
5305-00-432-4202	E-13	13	5305-00-984-6192	E-3	7
5310-00-515-8058	E-3	8	5305-00-984-6192	E-5	4
5310-00-515-8058	E-5	5	5975-01-P02-1180	E-10	1
5310-00-543-2739	E-11	7	5935-01-012-3080	E-10	3
5310-00-543-2740	E-11	9	5935-01-012-3080	E-10	3
5925-00-549-4041	E-8	3	5935-01-012-3080	E-10	8
5320-00-582-3276	E-4	4	5935-01-016-2464	E-10	8
5320-00-582-3305	E-4	2			

PART STOCK NUMBER	FSCM	FIG. NO.	ITEM NO.	PART NUMBER	FSCM	FIG. NO.	ITEM NO.
AN504-6-6	88044	E-3	10	MS5195841	96906	E-11	6
AN656-12	88044	E-3	3	MS51967-8	96906	E-12	1
AN935-616	88044	E-3	4	MT3777G	80058	E-2	15
AN960-10	88044	E-13	9	MT3777G	80058	E-3	1
AN960-4L	88044	E-10	7	RV2004-3	98996	E4	2
AN960-416	88044	E-6	3	THN-3360	60969	E-6	1
AN960-416	88044	E-7	5	THQL-32050	60969	E-8	2
AN960-616	88044	E-3	5	TL12-412S	28482	E-8	1
AN960-616	88044	E-12	2	TL12-4125	28432	E-2	1
AN960-8	88044	E-3	8	TQL-1115	60969	E-8	3
AN960-8	88044	E-5	5	WC596-124	81348	E-10	3
CE20VAL6	.60532	E-2	9	WC596-6-1	81348	E-10	8
C2090T6	81860	E-2	16	WC596-6-2	81348	E-10	9
C2090T6	81860	E-3	2	WL101-100T	81348	E-11	12
FFB575	81348	E-6	2	X-8110-3	90129	E-7	1
FFB575TYPE3GR1	81348	E-7	6	X-8110-82	90129	E-2	12
GE THQL32030	60969	E-8	2	Z-3026	76385	E-13	10
G4046B	79725	E-10	1	0028-1-2041	15942	E-13	5
L40A	50671	E-11	4	0028-1-2042	15942	E-2	20
MS15795-807	96906	E-11	2	0028-1-2122	15942	E-6	4
MS20600AD6WH	96906	E4	4	0028-1-3107	28432	E-2	8
MS20659-102	96906	E-13	7	0028-1-3108	15942	E-2	23
MS20659-133	96906	E-14	2	0028-1-3121	15942	E-2	10
MS20659-142	96906	E-14	1	0028-14001-1	28432	E-2	4
MS24621-15	96906	E-5	2	0028-14001-3	15942	E-13	12
MS2462245	96906	E-10	2	0028-14109	28432	E-2	6
MS3102A22-22S	96906	E-10	5	0028-14111-3	15942	E-2	21
MS35206-215	96906	E-10	4	1-575709-50	19220	E-1	1
MS35206-244	96906	E-3	7	1420-2-2025	15942	E-13	2
MS35206-244	96906	E-5	4	1420-2-2028	15942	E-13	11
MS35333-72	96906	E-11	7	1420-2-2033	15942	E-4	3
MS35333-74	96906	E-11	9	1420-2-2036-1	15942	E-3	9
MS35338-137	96906	E-11	3	1420-2-2037	15942	E-3	6
MS3533843	96906	E-13	14	1420-2-2038	15942	E-13	3
MS3533844	96906	E-7	4	1420-2-2039	15942	E-1	6
MS3533846	96906	E-12	4	1420-2-2103	15942	E-11	14
MS3542542	96906	E-12	5	1420-2-2105	15942	E-11	11
MS3560-305T	96906	E-13	8	1420-2-2709	28432	E-2	7
MS35649-242	96906	E-10	6	1420-2-2715	15942	E-1	4
MS5186146	96906	E-7	2	1420-2-2715	15942	E-2	13
MS5186146	96906	E-9	2	1420-2-2729	28432	E-2	3
MS5186146	96906	E-13	13	1420-2-3000-1	15942	E-2	18
MS51957-2	96906	E-7	3	1420-2-3000-2	15942	E-2	19
MS5195740	96906	E-11	10	1420-2-3006	15942	E-1	10
MS5195745	96906	E-11	1	1420-2-3011	15942	E-1	5

PART STOCK NUMBER	FSCM	FIG. NO.	ITEM NO.	PART NUMBER	FSCM	FIG. NO.	ITEM NO.
1420-2-3014-1	15942	E-5	1	1420-24104-1	15942	E-11	8
1420-2-3015	15942	E-2	22	1420-24104-2	50671	E-11	5
1420-2-3015	15942	E-9	1	1420-2-4105	28432	E-2	5
1420-2-3028	15942	E-13	6	1420-2-4105-1	15942	E-11	13
1420-2-3029	28432	E-2	2	1420-2-4106	15942	E-2	17
1420-2-3030	15942	E-1	7	1420-2-4304	15942	E-1	3
1420-2-3030-1	15942	E-13	1	1420-24311	15942	E-1	8
1420-2-3030-2	15942	E-13	4	1420-24313	15942	E-1	2
1420-2-3031-1	15942	E-5	3	1420-24707	15942	E-2	11
1420-2-3105	15942	E-2	14	3046B	79725	E-10	1
1420-2-3106	15942	E-12	6	4703	81348	E-10	9
1420-2-3108	15942	E-9	3	5262	81348	E-10	3
1420-24001-2	15942	E-4	1	5262	81348	E-10	8
1420-24005	15942	E-1	9	65-644	80049	E-12	7
1420-24045	15942	E-12	3	7535645	19204	E-7	7

APPENDIX F

EXPENDABLE SUPPLIES AND MATERIALS LIST

Section I. INTRODUCTION

F-1 SCOPE. This appendix lists expendable supplies and materials you will need to operate and maintain Electrical Equipment Shelter S-281/G. These items are authorized to you by CTA 50-970, Expendable Items (except Medical, Class V, Repair Parts, and Heraldic Items).

F-2 EXPLANATION OF COLUMNS.

a. Column 1, Item Number. This number is assigned to the entry in the listing and is referenced in the narrative instructions to identify the material (e.g., "Use cleaning compound, item 5, App. D").

b. Column 2, Level. This column identifies the lowest level of maintenance that requires the listed item.

O.....Organizational maintenance

c. Column 3, National Stock Number (NSN). This is the NSN assigned to the item; use it to request or requisition the item.

d. Column 4, Description. Indicates the Federal Item name and, if required, a description to identify the item. The last line for each item indicates the part number followed by the Federal Supply Code for Manufacture (FSCM) in parentheses, if applicable.

e. Column 5, Unit of Measure (U/M). Indicates the measure used in performing the actual maintenance function. This measure is expressed by a two-character alphabetical abbreviation (e.g., ea, in, pr). If the U/M differs from the unit of issue, requisition the lowest unit that will satisfy your requirements.

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) DESCRIPTION	(5) U/M
1	O	7920-00-685-3980	BRUSH, DUSTING, PAINT, 2-1/2 INCH DIAMETER HB00212 (81348)	EA
2	O	8520-00-225-8563	CLEANER, HAND (ZOOM), 5 OUNCE TUBE P-H-31 (81348)	OZ
3	O	6810-00-687-8429	CLEANER, NETONE METHYL ETHYL, 12 BT TTM261 (81348)	OZ
4	O	6810-00-281-2785	CLEANER, NETONE METHYL ETHYL, 1 GALLON TTM261 (81348)	OZ
5	O	6850-00-597-9765	CLEANING COMPOUND, TRICHLOROETHANE MILC-18718 (81349)	GL
6	O	8300-00-222-2423	CLOTH, COTTON (CHEESE CLOTH), 20 YARD BOLT CCCC425 (81348)	YD
7	O	7930-00-249-8036	DETERGENT, GENERAL PURPOSE, 5 POUND PAIL P-D-220 (81348)	CN

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) DESCRIPTION	(5) U/M
8	0	8010-00-900-1621	ENAMEL, LUSTERLESS, GRAY, 1 QUART CAN TTE527 (81348)	CN
9	0	8010-00-900-1622	ENAMEL, LUSTERLESS, GRAY, 1 GALLON CAN TTE527 (81348)	CN
10	0	8010-00-878-5761	ENAMEL, LUSTERLESS, WHITE, 16 OUNCE AEROSOL CAN TTE516 (81348)	CN
11	0	8010-00-297-2111	ENAMEL, LUSTERLESS, WHITE, 1 GALLON CAN TTE516 (81348)	CN
12	0	8010-00-297-5060	ENAMEL, LUSTERLESS, OLIVE DRAB, 1 GALLON CAN TTE527 (8 1348)	CN
13	0	7220-00-965-4699	MATTING, FLOOR, RUBBER, 3/16 INCH THICK, 36 INCH WIDE, 25 YARD ROLL ZZM0071 (81348)	YD
14	0	7220-00-2544240	MATTING, FLOOR, RUBBER, 1/8 INCH THICK, 36 INCH WIDE, 50 YARD ROLL ZZM0071 (81348)	YD
15	0	9150-00-231-6639	OIL, LUBRICATING, GENERAL PURPOSE	CN
16	0	8010-00-985-7258	PAINT, FOREST GREEN, OD, 1 GALLON CAN MIL-E-46061 (81349)	CN
17	0	8010-00-914-3081	PAINT, HEAT REFLECT, OD MIL-E-46096 (81349)	CN
18	0	5350-00-264-3485	PAPER, ABRASIVE, FLINT, CLOSED COATING, EXTRA FINE GRADE, 1 SHEET PP105 CLASS 2 (81348)	SH
19	0	8010-00-297-0593	PRIMER COATING, 16 OUNCE AEROSOL CAN TT-P-1757 (81348)	CN
20	0	8010-00-835-2114	PRIMER COATING, 1 PINT CAN TTP 1757 (81348)	CN
21	0	8010-00-515-2208	PRIMER COATING, 1 GALLON CAN TTP1757 (81348)	CN
22	0	5410-00-793-2021	REPAIR KT EL MK 680/G (80058)	EA

By Order of the Secretary of the Army:

E. C. MEYER
General, United States Army
Chief of Staff

Official:

J. C. PENNINGTON
Major General, United States Army
The Adjutant General

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