TM 10-5410-221-10

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

OPERATOR'S MANUAL FOR

SHELTER, EXPANDABLE, RIGID CONSTRUCTION, WITH AIR-LOCK (ZERO MANUFACTURING CORP. MODEL SEU-2) FSN 5410-933-9387

HEADQUARTERS, DEPARTMENT OF THE ARMY
AUGUST 1969

SAFETY PRECAUTIONS

Personnel must observe extreme caution to avoid contact with electrical circuits when power source is connected. In case of accident from electric shock, disconnect power source at once. If power source cannot be disconnected, free victim from live conductor with a board or other nonconductor. If victim is unconscious, apply artificial respiration and obtain medical help.

In ,the event of fluorescent lamp breakage, care must be taken in the removal of broken .glass. fragments and white phosphorus dust that may be dispersed within the fixture. Excessive inhalation, of phosphorus dust must be avoided.

Do not use lifting equipment with capacity of less than 9,000 pounds. Do not allow container to swing back and forth when it is suspended. Failure to observe this warning may result in -damage to equipment, or severe injury or death to personnel.

Do not ,attach hoisting sling to the lifting equipment in such a manner that the angle between any of the hoist lines and the top of the shelter is less than 45 degrees. Any angle less than 4;5 degrees will cause an excessive strain, which could damage the container.

Fork extensions are required for fork lifting the shelter in order to prevent damage to the raceways located on the underside of the shelter. Fork lift at points indicated on either side of shelter. Do not use fork lift with capacity of less than 9,000 pounds.

Do not allow container to rock excessively on fork lift. Failure to observe this warning may result in damage to equipment, or severe injury or death to personnel.

Limit skidding of the shelter to short distances over smooth level terrain to prevent damage to shelter skids.

Position shelter with skid base parallel to the longitudinal axis of the carrier to prevent excessive side loads on the skids. Make sure the carrier and restraining methods are capable of supporting a weight of 9,000 pounds minimum.

Changes in Force: C2, C, C4 and C5

TM 10-5410-221-10
C 5

CHANGE

NO. 5

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 9 JULY 1992

Operator's Manual

SHELTER, EXPANDABLE; RIGID CONSTRUCTION; WUITH AIRLOCK
(ZERO MANUFACTURING CORP. MODEL SEU-2)
FSN 5410-933-9387

Approved for public release; Distribution is unlimited

TM 10-5410-221-10, 19 August 1969 is changed as follows:

Change the header of Paragraph 2-7d (added in Change 2) to read, "Installation of Cargo Tiedown."

By Order of the Secretary of the Army:

GORDON R. SULLIVAN
General, United States Army
Chief of Staff

Official: Milton H. Hamilton

MILTON H. HAMILTON
Administrative Assistant to the
Secretary of the Army

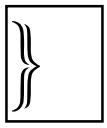
DISTRIBUTION:
To be distributed in accordance with DA Form 12-25E, (qty rqr block no. 1615).

*US COVIERNMENT PINTING OFFICE: 1992 - 6554-028/60325

Changes in force: C 2, C 3, and C 4

TM 10-5410-221-10
C4

Change No. 4



HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, D.C. 28 June 1973

Operator's Manual

SHELTER, EXPANDABLE; RIGID CONSTRUCTION; WITH AIRLOCK (ZERO MANUFACTURING CORP. MODEL SEU-2) FSN 5410.933-9387

TM 10-5410-221-10, 19 August 1969, is changed as follows: Appendix A is rescinded.

By Order of the Secretary of the Army

CREIGHTON W. ABRAMS
General., United States Army
Chief of Staff

Official:

VERNE L. BOWERS
Major General, United States Army
The Adjutant General

Distribution:
To be distributed in accordance with DA Form 12-25A qt9y rqr block No. 861j operator maintenance requirements for Shelters.

* **U.S. GOVERNMENT PRINTING OFFICE: 1984 - 764-028/5071**

TM 10-5410-221-10
C3

CHANGE NO-.3

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 25 October 1972

Operator Manual

SHELTER, IXPANDABLE; RIGID CONSTRUCTION; WITH AIRLOCK (ZERO MANUFACTURING CORP. MODEL SEU-2) FSN 5410-933-9387

TM 10-5401-221-10, 19 August 1969, is changed as follows

Page 2-30. Paragraph 2-7a, add the following:

Drain and purge the water system as described in Paragraph 2-21.

Page 51. Paragraph 2-21 is superseded.

2-21. Operation in Extreme Cold

When shutting down, for extended periods in cold weather, drain and purge the water system as follows:

a. Remove the supply hose from the water supply tank.

b. Flow hot water and cold water into the closet shelter until the utility element water supply is depleted.

c. Shut off the water pumps in the utility element.

d. Disconnect the hot water recirculating hose at the valve shutoff on the utility element.

e. Drain the utility element hot water tank by turning on the tank drain valve.

f. Open up all the other water drains at the utility element.

g. Disconnect the external water supply hose at the utility element and connect the compressed air home

h. Open the compassed air valve about half way to purge reisdual water.

i. As the water ceases to flow from the utility element drains, cap all the drains in sequence

j. Turn the compree,4 air on all the way and operate the shelter faucets until no water flows, only air. Depress nozzle on flex hose only until all water is purged.

k. Open the faucet drain valves and actuate the faucets with the drain valves open.

l. With the sump cover strainer removed, insert the compressed air hose into the sump drain Purge sump and drain line.

m. Close the hot and cold water valves on the utility element.

n. Disconnect the dual water hose and the supply and drain water hose from the connection panel. Drain all hoses and purge with bleed air. Coil hoses and secure ends for storage.

o. Drain and purge all hoses and shelter plumbing.

p. Drain the utility element water system as follows:

(1) Remove drain caps from hot water tank, heat-exchanger, and surge tank drains. Open hot and cold water, the drain, and return valves and the hot water and surge tank vent valves until -all water has drained from the system, then close vent valves.

(2) Connect compressed air hose assembly to compressed air 'outlet fitting. Hold discharge end of air hose assembly against cold water outlet fitting. Open compressed air valve approximately 20-to-80-Deg to deliver a small flow of compressed air into water system to purge residual waters.

CAUTION

Observe water system tank and plumbing for excessive heating due to purge air. If external temperature of water system components approaches safe touch temperature, decrease compressed

air flow or shut off air flow completely until system cools. Excessive temperatures will damage the pump and valve seals.

(3) When all water has been purged, note which water connection is discharging maximum amount of air, then close that connection. Continue to close connections discharging maximum amount of air until only one connection remains open, then shut off compressed air. Remove air hose assembly from cold water outlet fitting and close remaining connection and cold water outlet valve. Disconnect compressed air hose assembly from compressed air outlet fitting, coil hose assembly and secure ends for storage.

Page 3-3. Paragraph 3-9, repair designation "Damaged Fabric" is changed to read "Damaged fabric and/or honeycomb panels and floors".

Appendix A. Appendix A is rescinded. There are no basic issue items for the shelter.

By Order of the Secretary of the Army:

CREIGHTON W. ABRAMS
General, United States Army
Chief of Staff

Official:

VERNE L. BOWERS,
Major General, United States Army,
The Adjutant General.

Distribution:

To be distributed in accordance with DA Form 12-25A, (qty rqr block No. 861) Operator maintenance requirements for Shelters.

*** U.S. Government Printing Office: 1983664-028/6375**

*** GPO 904-702**

Change in force: C 2

CHANGE
No. 2

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, D. C., 4 June 1971

OPERATOR'S MANUAL
SHELTER, EXPANDABLE' RIGID CONSTRUCTION,$ WITH AIRLOCK
(ZERO MANUFACTURING CORP. MODEL SEU-2)
FSN 5410-933-9387

TM 10-5410-221-10, 19 August 1969, is changed as follows:
Page i, Table of Contents. Appendix A is added immediately after Section II, Chapter 4 as follows:

Page 2-1. Paragraph 2-3*e* is added as follows:

e. Cargo Tiedown Installation Removal Procedures

Refer to figure 2-1.1 and remove as follows:

(1) Remove rope net assembly by removing tiedown ropes securing it to strap assemblies.

(2) Remove web net assembly from top of cargo.

(3) Remove strap assembly from shelter tiedown fittings by disconnecting metal ring.

Page 2-5, figure 2-1 (4). Change THREAD PLATE to read: TREAD PLATE, in three places.

***This change supersedes C 1, 8 September 1970.**

Page 2-23. Figure 2-21.1 is added as follows:

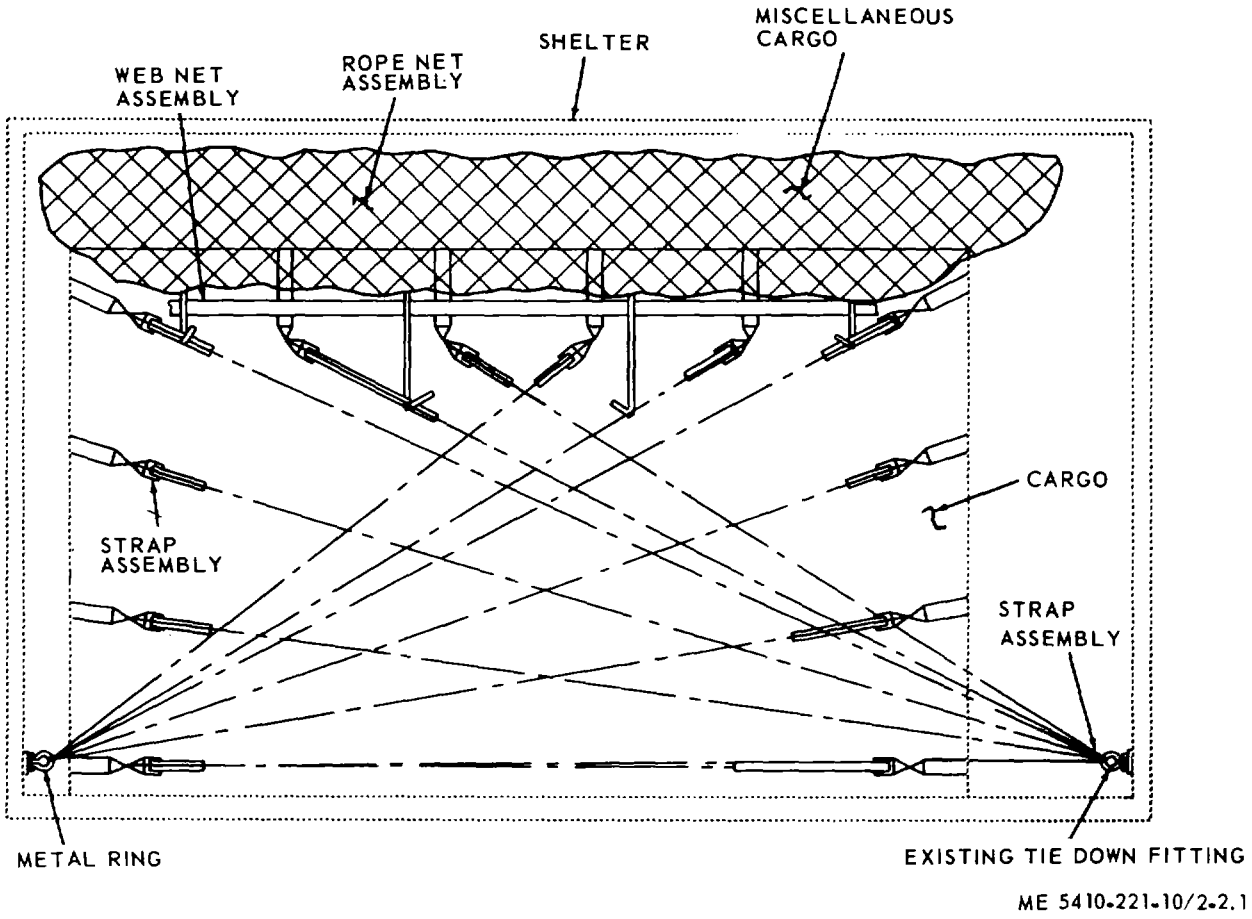


Figure 2-2.1. Cargo tiedown installation.

Page 2-29, figure 2-4 (2). Change THREAD PLATE to read: TREAD PLATE, in four places.

Page 2-30. Paragraph 2-7d is added as follows:

d. Installation of Cargo Tiedown Installation. Install cargo tiedown installation in reverse order of removal, using figure 2-2.1 as a guide and observing the following:

(1) Attach metal ring of strap assemblies to the shelter tiedown fittings.

(2) Place web net assembly over cargo and secure in place with strap assemblies.

(3) Place miscellaneous cargo on top of main cargo and secure with rope net assembly using strap assemblies as a means of attachment.

Page 2-45, figure 2-9 (sheet 2 of 2). Change value of circuit breaker labeled "Airlock Lt" from "5" to "25".

Page 4-1. Paragraph 4-6b is rescinded.

Page 4-2. figure 4-1. Delete FORK HERE, in two places.

Appendix A is added as follows:

APPENDIX A
BASIC ISSUE ITEMS

Section I. INTRODUCTION

A-1. Scope

a. This appendix lists items which accompany the expandable shelter or are required for installation, operation, or operator's maintenance

b. Repair parts and special tools assigned maintenance code "C" in the -20P manual may be stocked at the operator level of maintenance when authorized by the Unit Commander.

A-2. General

This basic issue items list is divided into the following sections:

a. Basic Issue Items - Section II A list of items which accompany the expandable shelter and are required by the operator/crew for installation, operation, or maintenance.

b. Maintenance and Operating Supplies - Section III. Not applicable.

A-3. Explanation of Columns

The following provides an explanation of columns in section II.

a. Source, Maintenance, and Recoverability Codes (SMR).

(1) Source code indicates the source for the listed item.

Source code is -

Code	*Explanation*
P -	Repair parts which are stocked in or supplied from the GSA/DSA, or Army supply system and authorized for use at indicated maintenance categories.

(2) Maintenance code indicates the lowest category of maintenance authorized to install the listed item. The maintenance level code is

Code	*Explanation*
C	Operator/crew

(3) Recoverability code, indicates whether unserviceable items should be returned for recovery or salvage. Items not coded are expendable.

b. Federal Stock Number. This column indicates the Federal stock number assigned to the item and will be used for requisitioning purposes.

c. Description. This column indicates the Federal item name and any additional description of the item required.

d. Unlit of Measure (U/M). A 2-character alphabetic abbreviation indicating the amount or quantity of the item upon which the allowances are based, e.g., ft, ea, pr, etc.

e. Quantity Incorporated in Unit. This column indicates the quantity of the item used in the assembly group. A "V" appearing in this column in lieu of a quantity indicates that a definite quantity cannot be indicated (e.g. shims, spacers, etc.).

f. Quantity Furnished With Equipment. This column indicates the quantity of an item furnished with the equipment.

g. Illustration. This column is divided as follows:

(1) *Figure number.* Indicates the figure number in which the item is shown.

(2) *Item number.* Indicates the callout number used to reference the item in the illustration.

Section II. BASIC ISSUE ITEMS

(1) SMR Code	(2) Federal Stock Number	(3) Description Ref no. & mfr Code	Usable on code	(4) Unit of Meas	(5) Qty in in Unit	(6) Qty furn with equip	(7) Illustration (A) Fig no.	(7) Illustration (B) Item No.
		Group 01 - PUBLICATIONS						
		ARMY TECHNICAL MANUAL TM 10-5410-221-10		.....	.....	1		

By Order of the Secretary of the Army:

W. C. WESTMORELAND,
General, United States Army,
Chief of Staff.

Official:

VERNE L. BOWERS,
Major General, United States Army,
The Adjutant General

Distribution:

To be distributed in accordance with DA Form 12-25, Section I (qty rqr block No. 277) Operator maintenance requirement for Equipment: Tents.

GPO 907-466

TECHNICAL MANUAL

No. 10-5410-221-10

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D. C., 19 August 1969

OPERATOR'S MANUAL

SHELTER, EXPANDABLE, ,RIGID CONSTRUCTION,

WITH AIR-LOCK

(ZERO MANUFACTURING CORP. MODEL SEU-2)
FSN 5410-933-9387

LIST OF ILLUSTRATIONS

CHAPTER 1
INTRODUCTION

Section I. GENERAL

1-1. Scope

These instructions are published for the use of the personnel to whom the expandable shelter with air-lock is issued. They provide instructions for installation, preventive maintenance, and for movement to a new site.

1-2. Forms and Records

a. DA forms and procedures used for equipment operation and preventive maintenance will be only those prescribed by TM 38-750, Army Equipment Record System and Procedures.

b. Direct reporting of errors, omissions, and recommendations for improving this equipment manual by the individual user is authorized and encouraged. Prepare DA Form 2028 (Recommended Changes to DA Publications) for this purpose, using pencil, pen, or typewriter and forward direct to Commanding General, U.S. Mobility Equipment Command, ATTN: AMSME-MP, 4300 Goodfellow Blvd., St. Louis, Mo. 63120.

Section II. DESCRIPTION AND DATA

1-3. Description

a. The expandable shelter is transportable and provides an environment controlled shelter for the function for which the expandable shelter is to be utilized (fig. 1-1 and 1-2). The shelter is an expandable structure, constructed of aluminum-faced foam filled honeycomb panels. The basic shelter includes imbedded inserts for the mounting of equipment. The shelter has provisions for the attachment of such optional equipment as a humidifier and 24 volt dc power supply.

b. An air-lock chamber secured to the shelter over the door provides an entry and exit vestibule to restrict entry of drafts, dust, etc, into the expandable shelter. An electrical system provides for distribution of 120-240 volts, 60 Hertz and 1201'208 volts, 400 Hertz power within the shelter. A conditioned air duct provides passage for conditioned air from an external source to the shelter through openings in the roof. Included on the power input panel are a telephone jack, vacuum inlet connection and hot and cold water inlet connections.

1-4. Identification and Tabulated Data

a. Identification. The expandable shelter is identified as Part No. 380656-1, Model No. SEU-2. An identification nameplate is attached to the shelter center section. Individual parts of the expandable shelter are identified by their part number which is stenciled on the part.

b. Tabulated Data.

(1) Expandable shelter.

Manufacturer ..... Zero Manufacturing Co.
Burbank, California
Part No. 380656-1
Model No. SEU-2

(2) Bellows adapter.

Manufacturer ..... Aero Leather Products
Los Angeles, California
Part No. 1-661129
Type ..... Fabric with foam insulation

(3) Air-lock adapter.

Manufacturer ..... Aero Leather Products
Los Angeles, California
Part No. 1-661130
Type ..... Fabric

(4) Air-lock chamber.

Manufacturer ..... Aircruisers Div., Garrett Corp.
Balmar, New Jersey
Part No. 380301-1-1
Model No. CAL-1
Type ..... Rigid frame, fabric covered
Fasteners ..... Guy line ropes and zipper

(5) Conditioned air duct.

Manufacturer ..... Garrett Corp.
Airesearch Mfg. Co. of Arizona
Phoenix, Arizona
85034 1-1

Part No. 697941-3
Type..... Wire reinforced, insulated fabric
Fasteners ..... Clamp and tie down tabs
(6) Conditioned air duct adapter.
Manufacturer ..... Garrett Corp.
Airesearch Mfg. Co. of Arizona
Phoenix, Arizona 85034
Part No 69702-1
Type..... Insulated fabric with wire stiffeners
Fasteners ..... Clamps and flange
(7) Electrical system.
Manufacturer ..... Zero Manufacturing Co.
Burbank, California
Voltage and frequency ..... .120/240 volts AC, 60 Hertz
120/208 volts AC, 400 Hertz
Circuit protection ..... Circuit breakers
Light assemblies..... Six 80-watt fluorescent
(8) Plumbing system.
Manufacturer ..... Zero Manufacturing Co.
Burbank, California
Type..... Hot and cold water, vacuum
Flow (water)..... 1GPM (MIN) hot, 3GPM (MIN) cold
Suction (vacuum) ..... 3 SCFM (MAX), 18-20 In. Hg
(9) Hose and cable assemblies.
(a) Dual hose, hot and cold water.
Manufacturer ..... Garrett Corp.
Airesearch Mfg. Co. of Arizona
Phoenix, Arizona 85064
Part No. 889140-3
Length..... 6.5 feet
(b) Hose-vacuum.
Manufacturer .....Garrett Corp.
Airesearch Mfg. Co. of Arizona
Phoenix, Arizona 85034
Part No. ----------697191-1
Length ..... 6 feet
(c) Drain hose.
Manufacturer ..... Garrett Corp.
Airesearch Mfg. Co. of Arizona
Phoenix, Arizona 85034
Part No. 697193-3
Length..... 6.5 feet
(d) Power cable, 60 Hertz.
Manufacturer .....Garrett Corp.
Airesearch Mfg. Co. of Arizona
Phoenix, Arizona 85034
Part No. 97124-1
Length .....25 feet
(e) Power cable, 400 Hertz.
Manufacturer .....Garrett Corp.
Airesearch Mfg. Co. of Arizona
Phoenix, Arizona 85034
Part No. 697125-1
Length .....25 feet
(f) Air-lock electric light and cable assembly.
Manufacturer .....Garrett Corp.
Airesearch Mfg. Co. of Arizona
Phoenix, Arizona 85034
Part No. 694400-1
Length .....25 feet
Light type.....50 watt, incandescent
(10) Air distribution plenum.
Manufacturer .....Zero Manufacturing Co.
Bubank, California
Part No 889276-1
Type .....Fabric and metal
Fasteners .....Metal hooks
(11) Dimensions (fig. 1-1 and 1-2).
Expanded shelter
Length .....19 feet 3 inches
Width-.....12 feet 10.75 inches
Height.....8 feet
Floor Space.....207 square feet
Air-lock length .....11 feet
Folded shelter
Length .....12 feet 10.75 inches
Width .....7 feet 8 inches
Height.....8 feet
Weight (with air-lock) __A,20O lbs.
(12) Plan view (fig. 1-2).
(13) Expandable Shelter Electrical System (fig. 1-3).

1-5. Differences in Models

This manual covers only the Model SEU-2, Part No. 380656-1-1 Expandable Shelter. No known unit differences exist for the model covered by this manual.

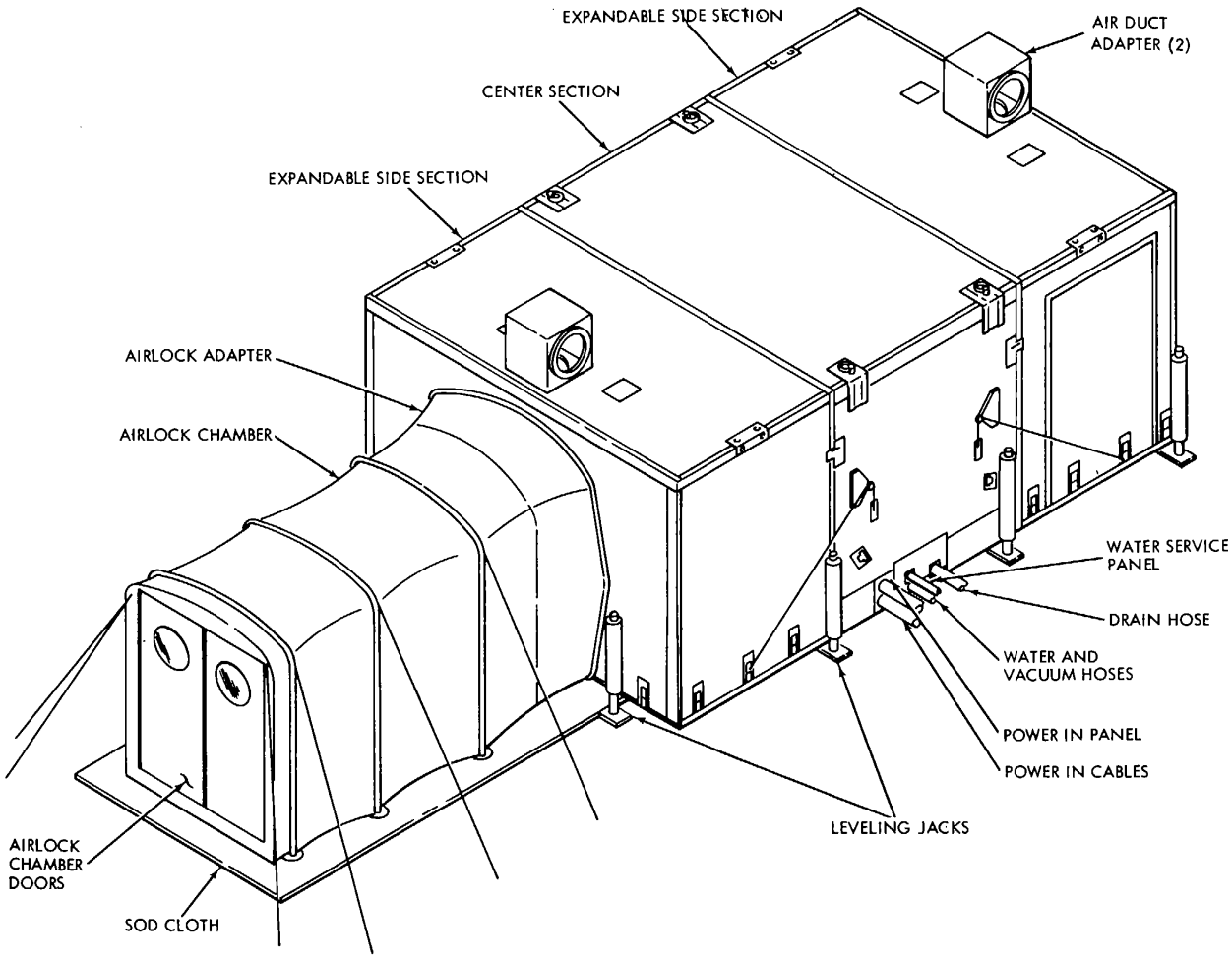


Figure 1-1. Expandable shelter.

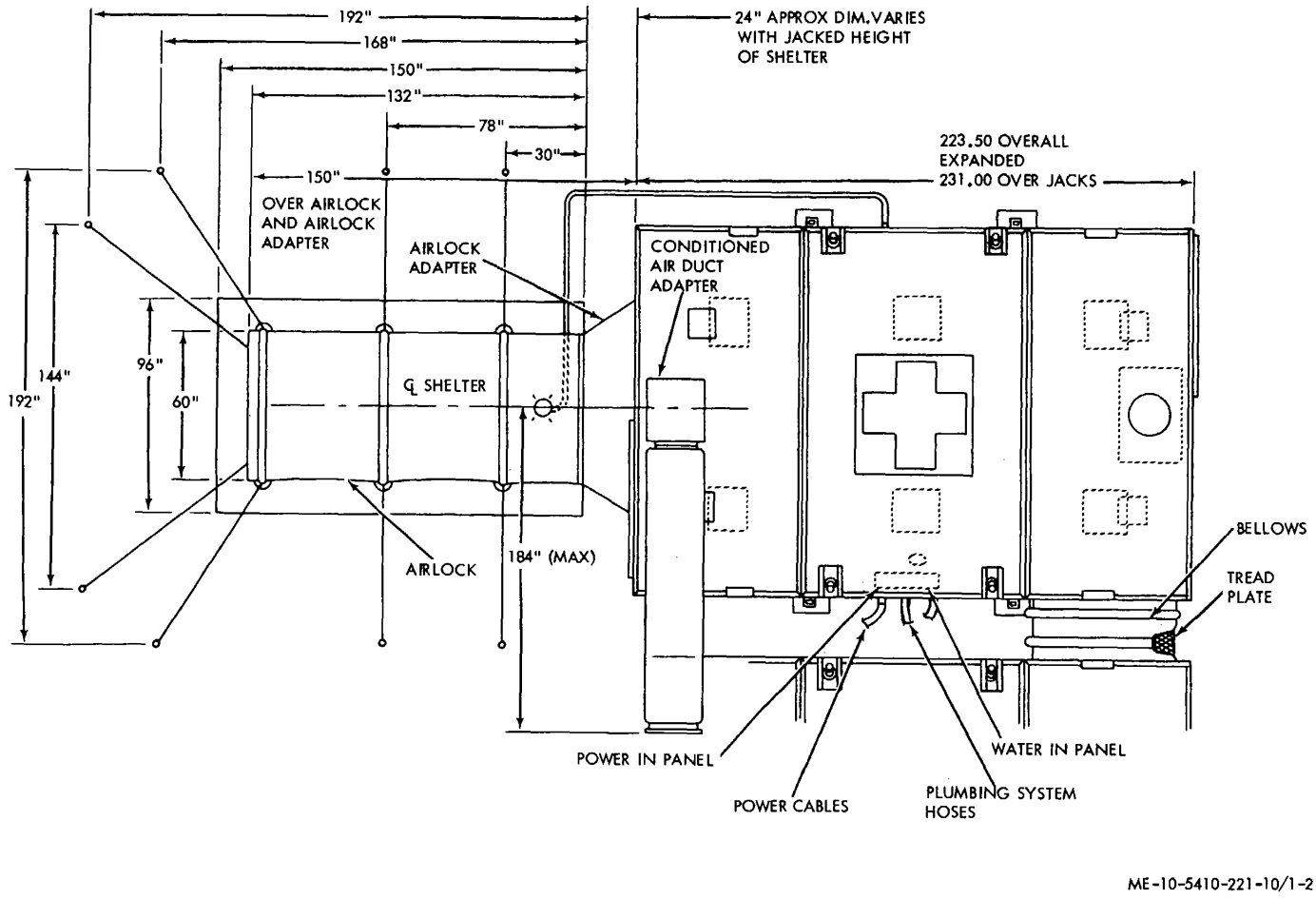


Figure 1-2. Plan view of expandable shelter.

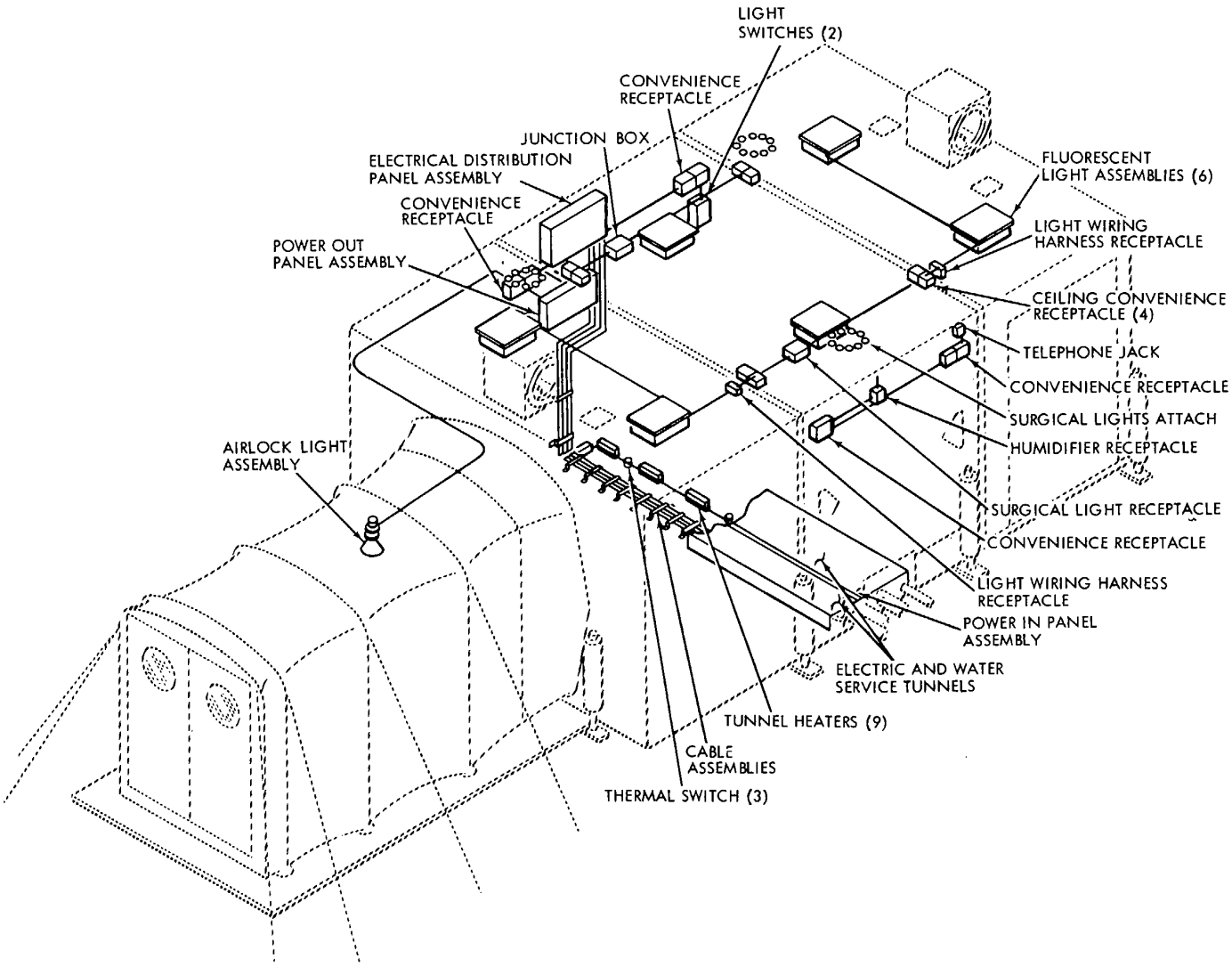


Figure 1-3. Expandable shelter electrical system.

CHAPTER 2
INSTALLATION AND OPERATING INSTRUCTIONS

Section I. SERVICE UPON RECEIPT OF EQUIPMENT

2-1. General
New expandable shelters are shipped uncrated. Upon receipt of an expandable shelter, carefully inspect the shelter for any damage that may have occured during transport. Report and damage of expandable shelter to proper authority.

2-2. Inspection
Inspect the expandable shelter components (fig. 2-1) to ensure that all components are present. Report any missing components to proper authority. Inspect all components for tears, ruptures, breaks, or other obvious shipping or storage damage. Report any damage to proper authority.

Note. During installation procedures (para 2-3), carefully inspect all components for holes, tears, or cuts; broken or missing bolt's, nuts, screws, rivets and other attaching hardware.

2-3. Installation or Setting Up Instructions

a. Personnel Requirements. Under average field conditions, the expandable shelter can be set up and ready for use in approximately 30 minutes using a crew of six.

b. Site Selection. The site selected for erection of the expandable shelter shall be in accordance with functional requirements and convenience to the other elements of the installation. If possible, a site which is fairly level with good drainage should be selected. If drainage is questionable, the area must be properly trenched to ensure adequate drainage away from the shelter. The site selected for the shelter must be cleared of rocks, stumps, or debris. Fill all holes and level all mounds which might interfer with a reasonably level erection-site.

c. Ground Plan. The ground plan dimensions are shown in figure 1-2. The ground plan is provided to give guidance for the location of shelter tent pins, and ground anchors. Careful study of the ground plan should accompany erection of the shelter.

d. Erection Procedures. Figure 2-2 provides step by step instructions for erection of the expandable shelter.

Note. The erection procedures provided in figure 2-2 are typical of both sides of the expendable shelter.

2-4. (Not Applicable)

2-5. Equipment Conversion
Expandable shelters may be interconnected for various uses and positioned for desired floor plan or complex layout. Removable panels and swinging door panels may be interchanged to facilitate interconnection and access to shelters.

2-6. Conversion of Expandable Shelter
Conversion of expandable shelter is as follows:

a. Interchanging Removable Panels and Swinging Door Panels. Interchanging removable panels and swinging door panels may be accomplished as shown and described in figure 2-3.

b. Installation of Bellows Section and Tread Plates. Interconnection of expandable shelters is shown and described in figure 2-4.

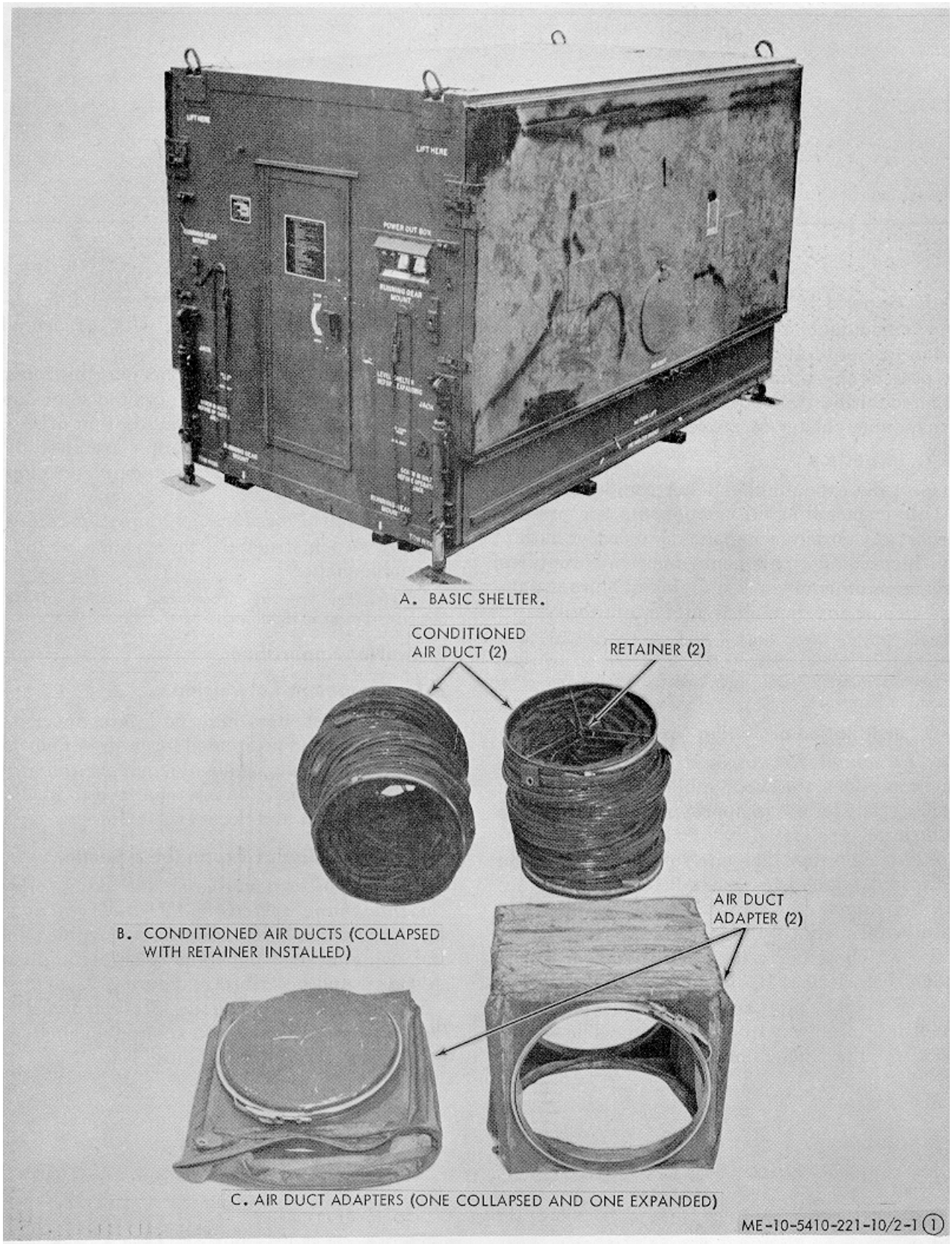


Figure 2-1(1). Expandable shelter components, (sheet 1 of 4).

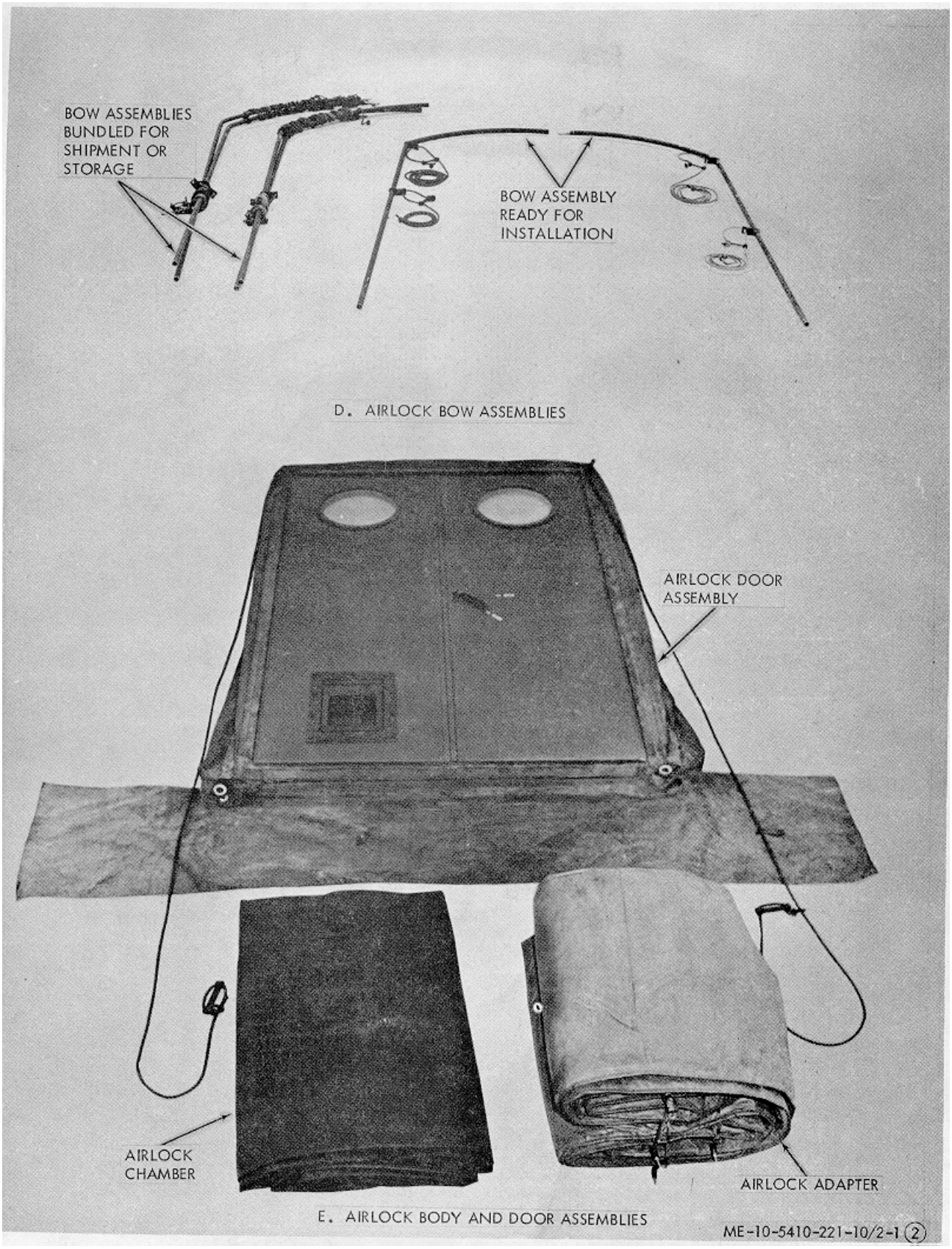


Figure 2-1(2). Expandable shelter components, (sheet 2 of 4).

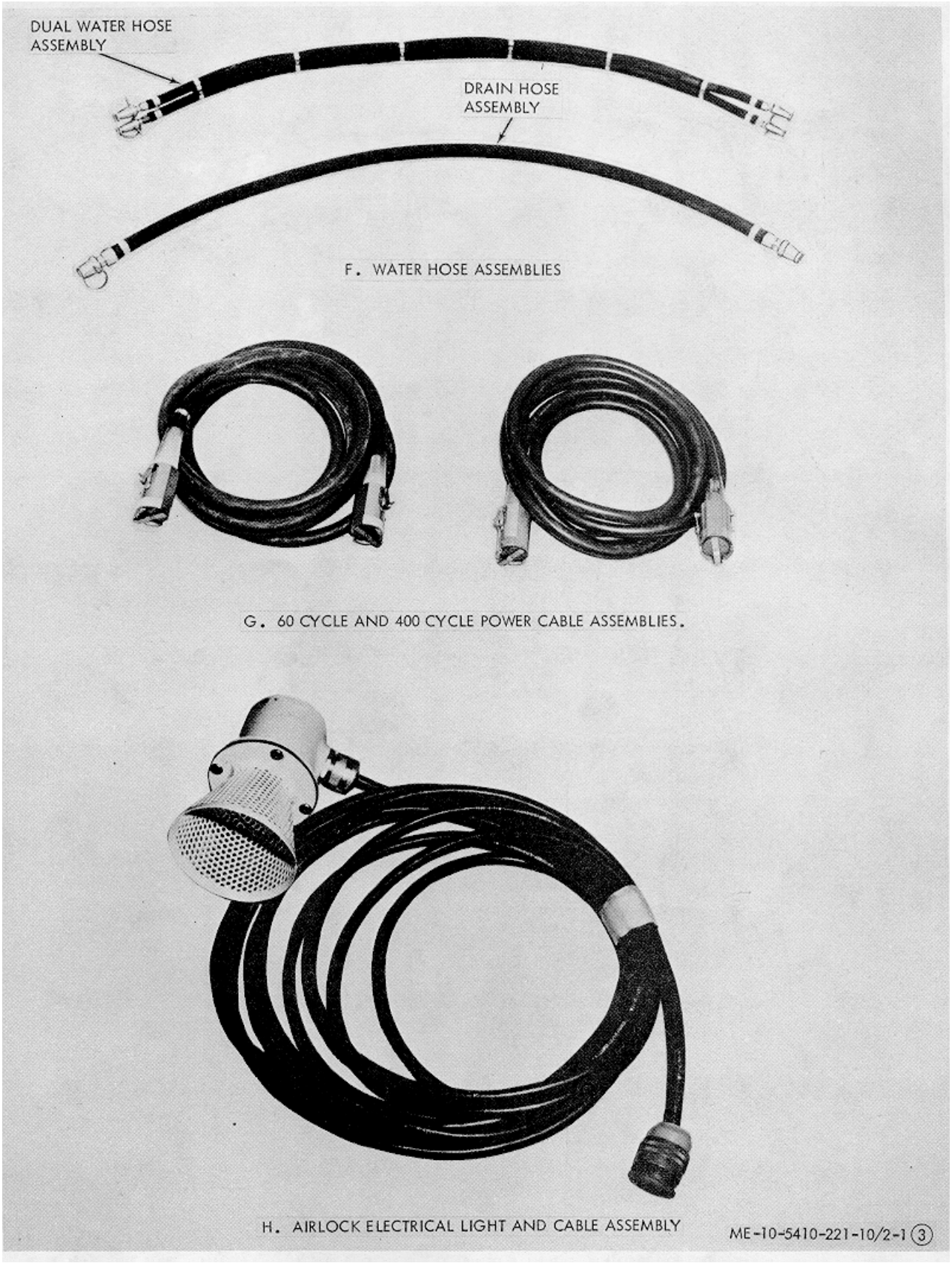


Figure 2-1(3). Expandable shelter components, (sheet 3 of 4).

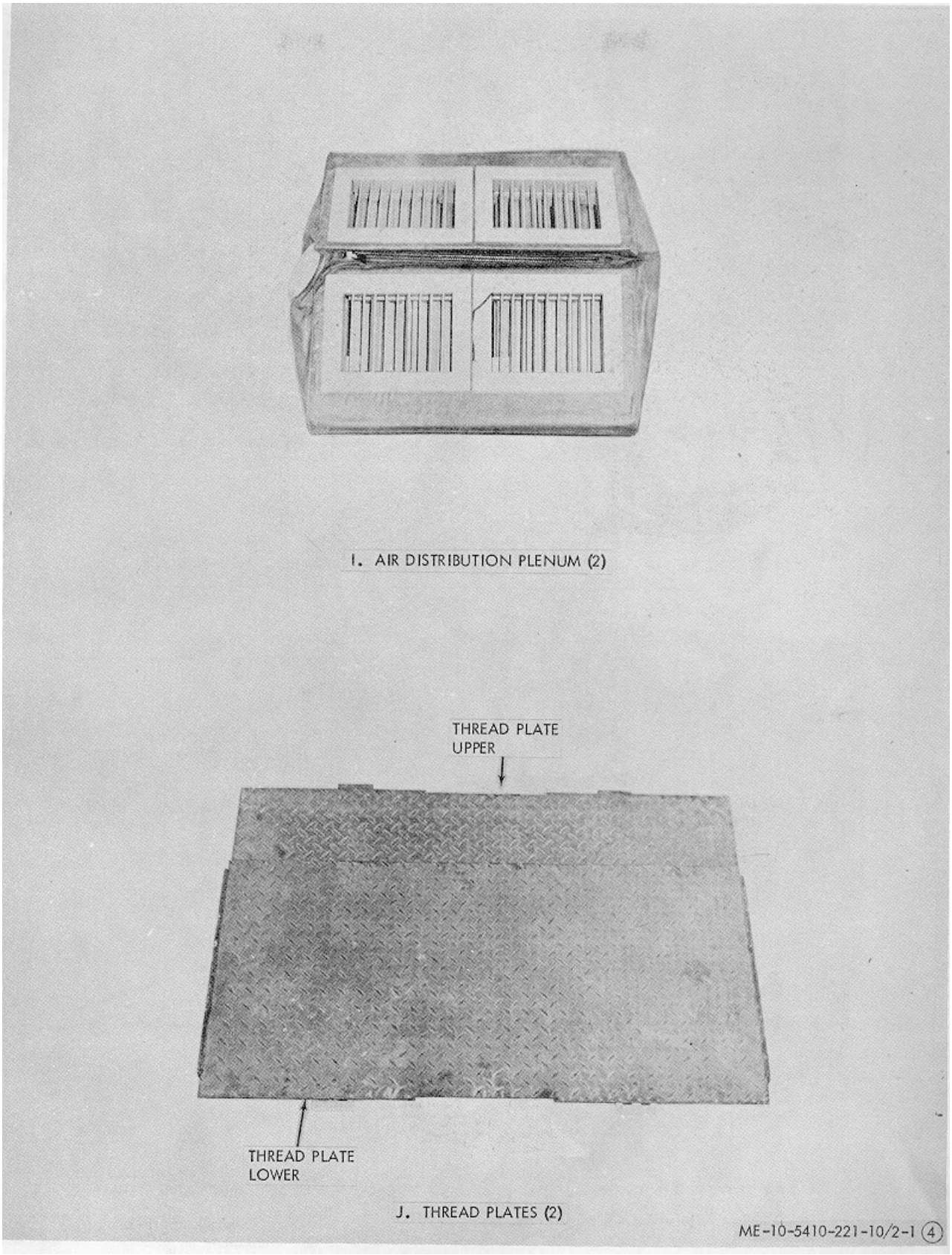


Figure 2-1(4). Expandable shelter components, (sheet 4 of 4).

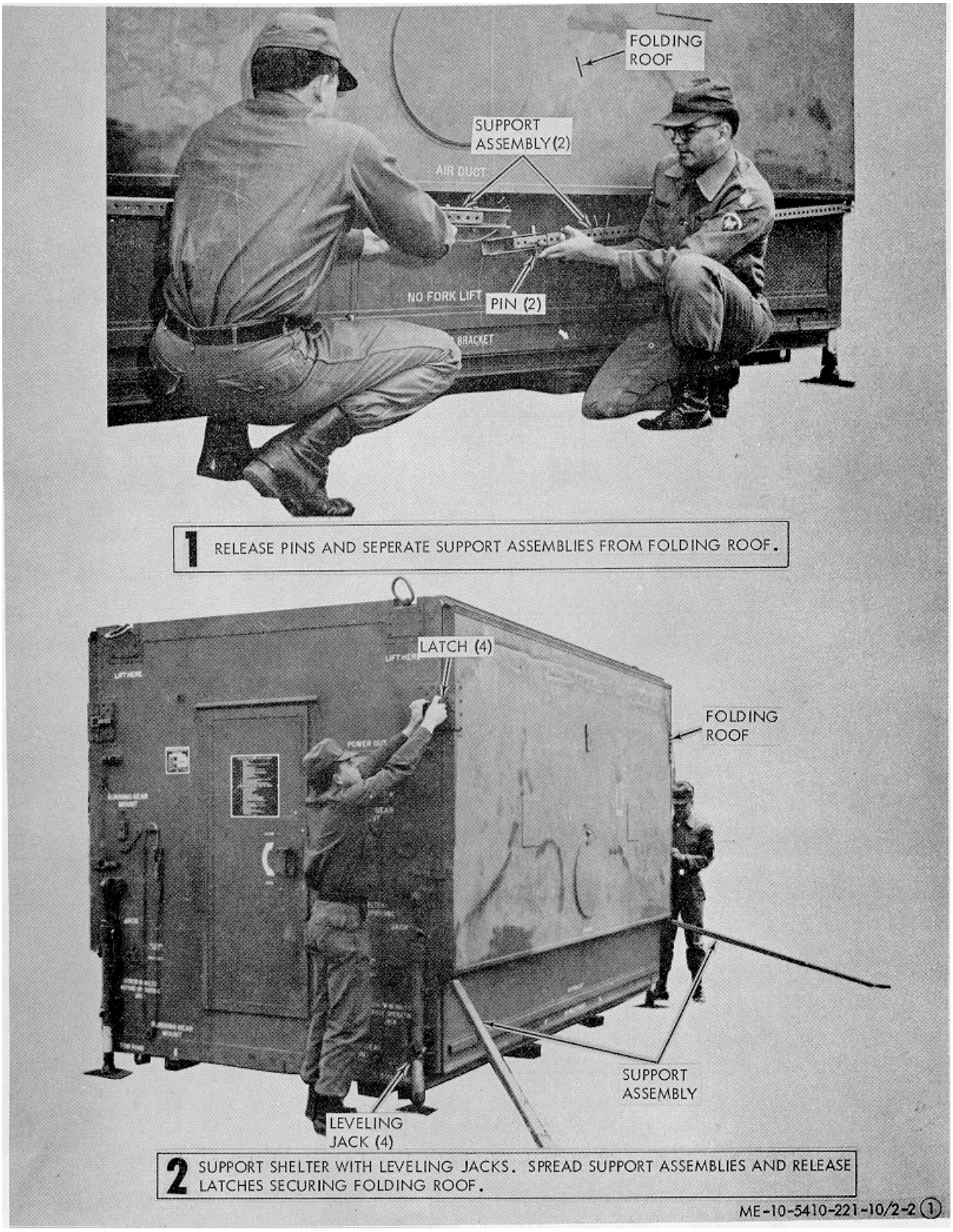


Figure 2-2(1). Erection of expandable shelter, (sheet 1 of 18).

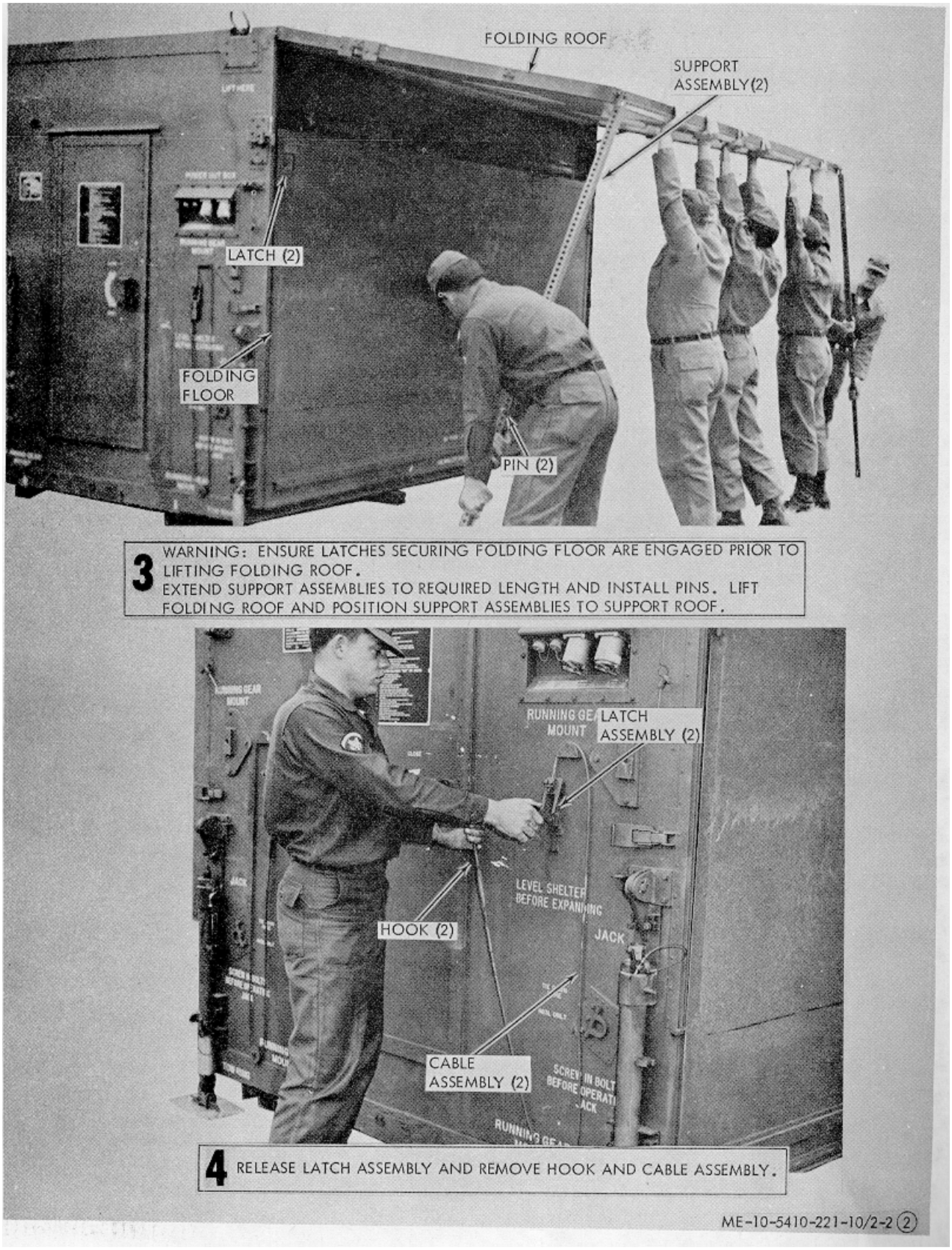


Figure 2-2(2). Erection of expandable shelter, (sheet 2 of 18).

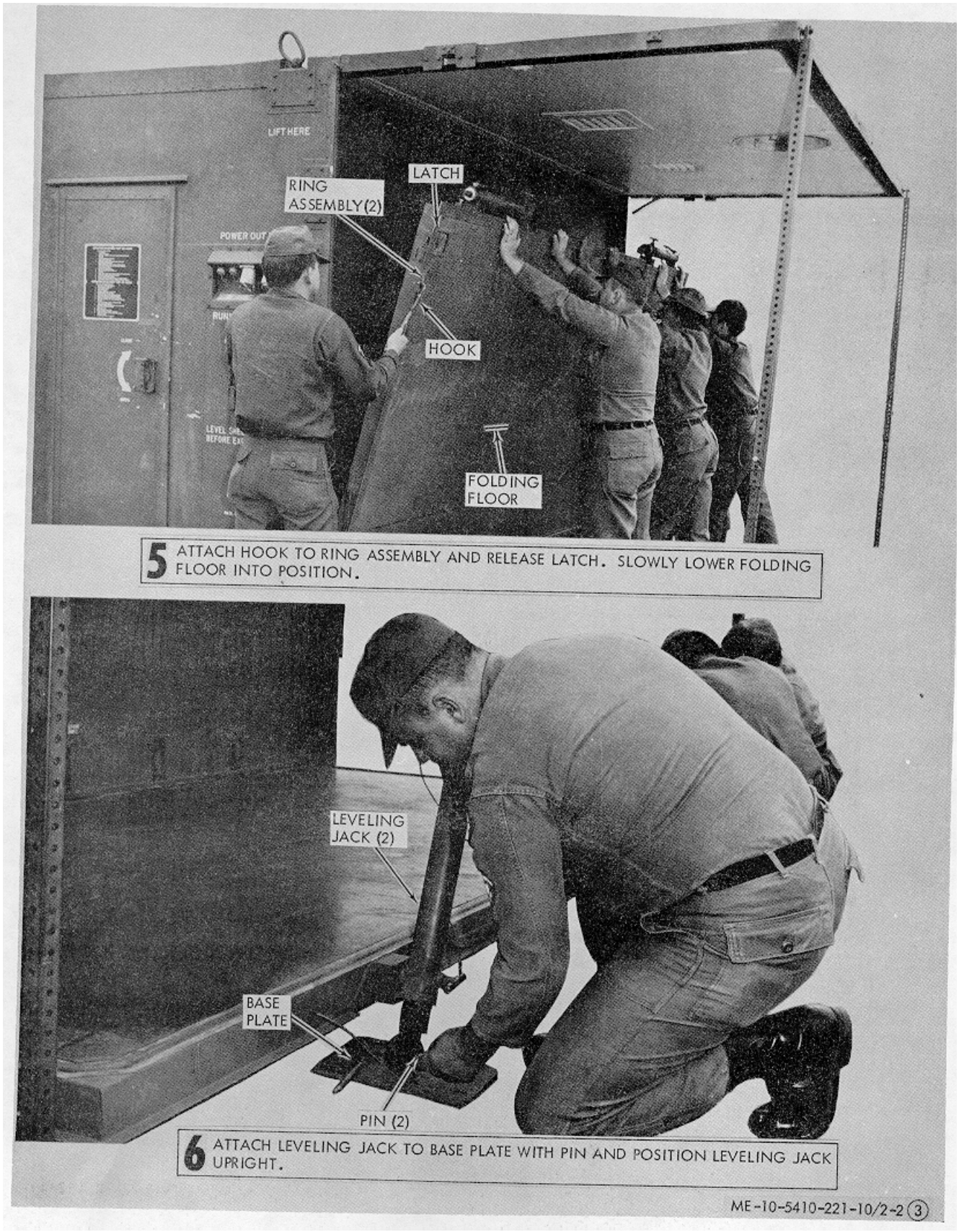


Figure 2-2(3). Erection of expandable shelter, (sheet 3 of 18).

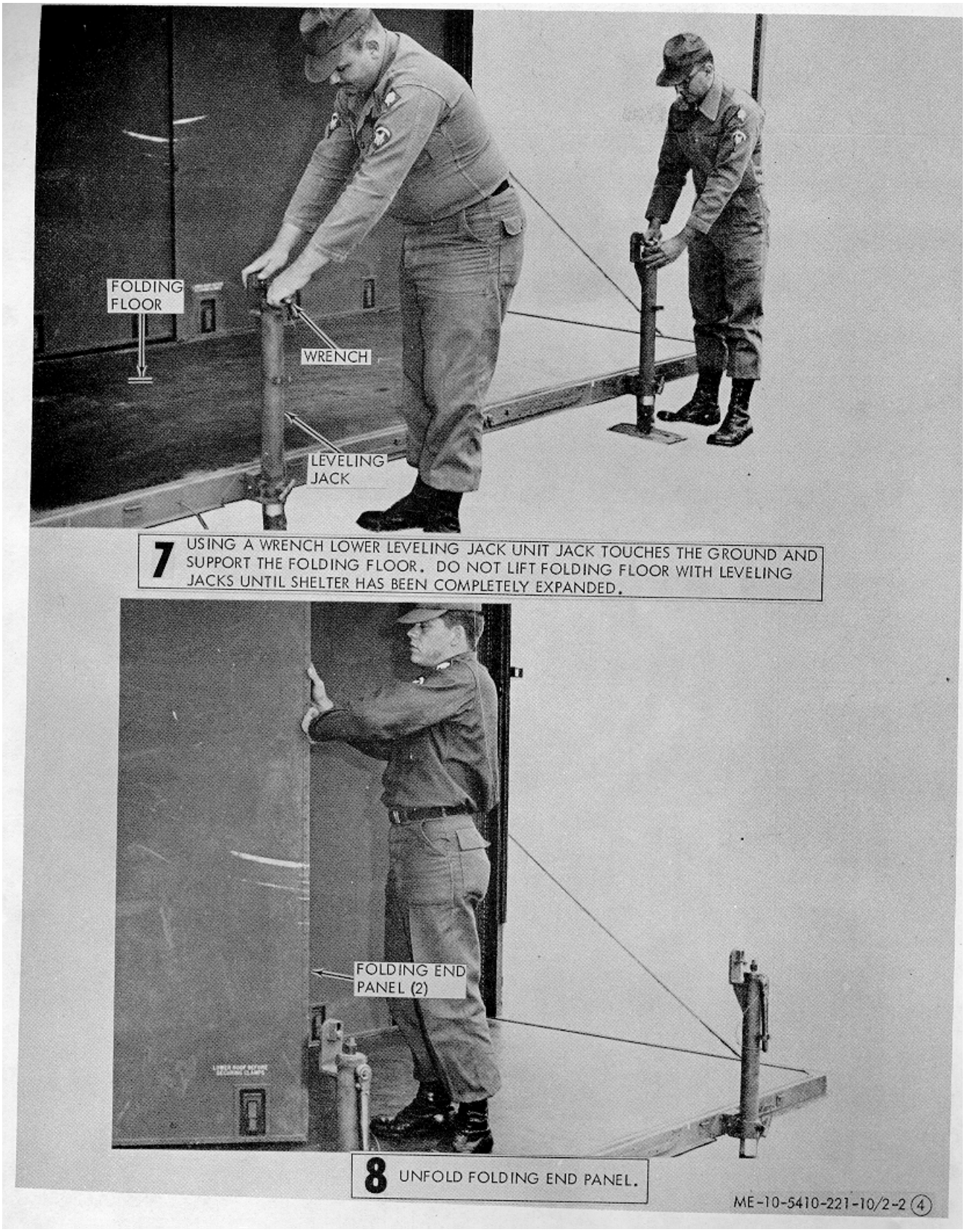


Figure 2-2(4). Erection of expandable shelter, (sheet 4 of 18).

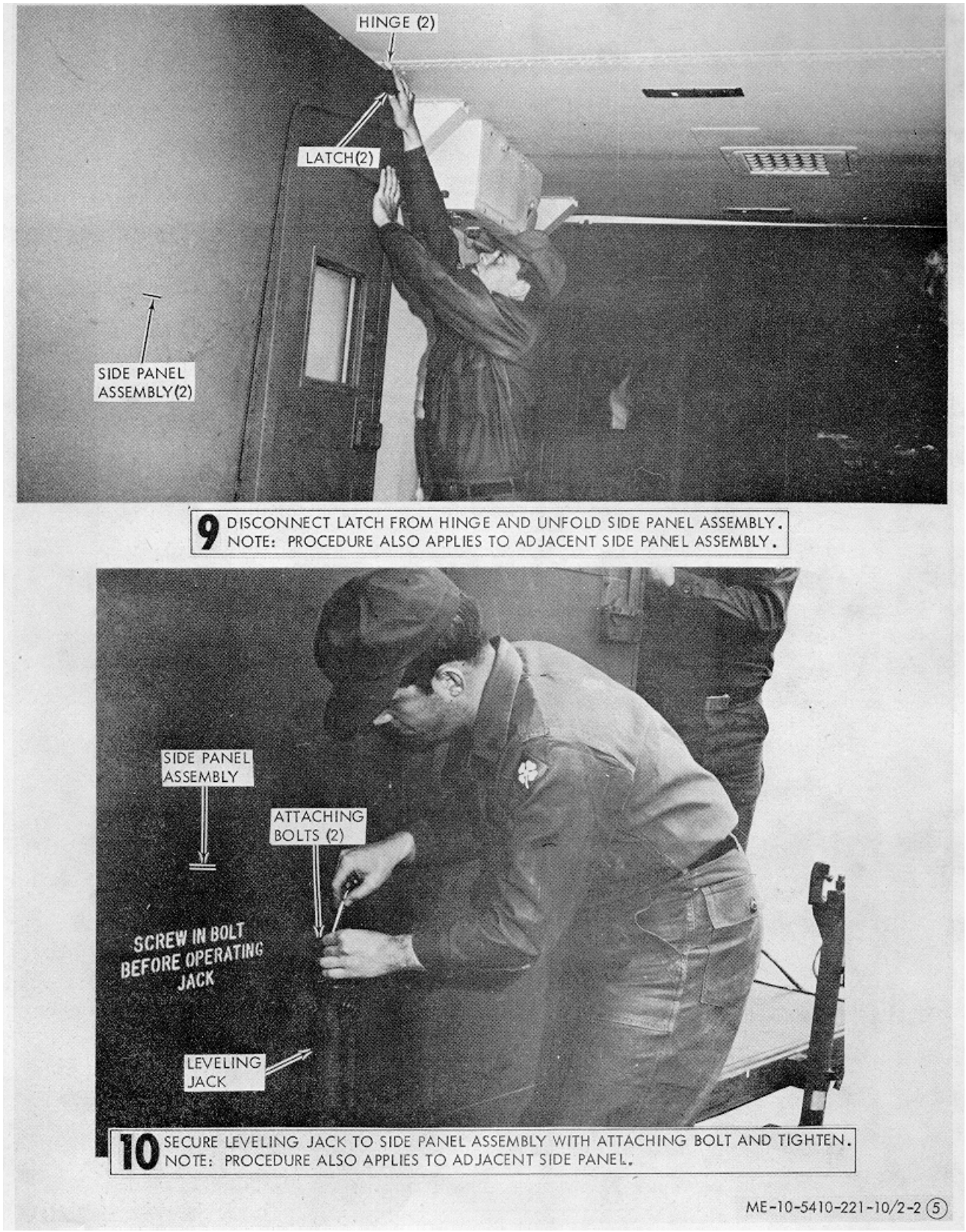


Figure 2-2(5). Erection of expandable shelter, (sheet 5 of 18).

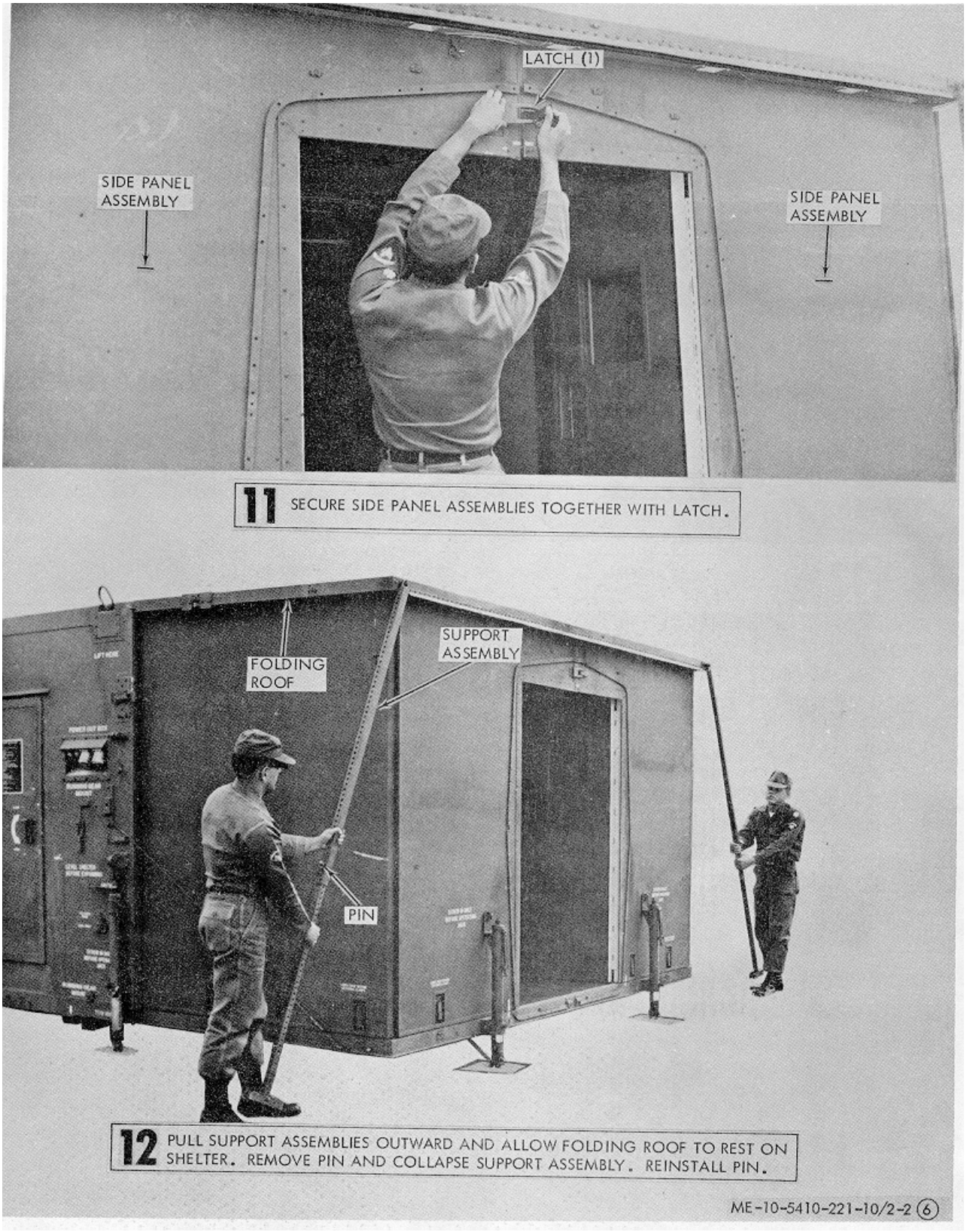


Figure 2-2(6). Erection of expandable shelter, (sheet 6 of 18).

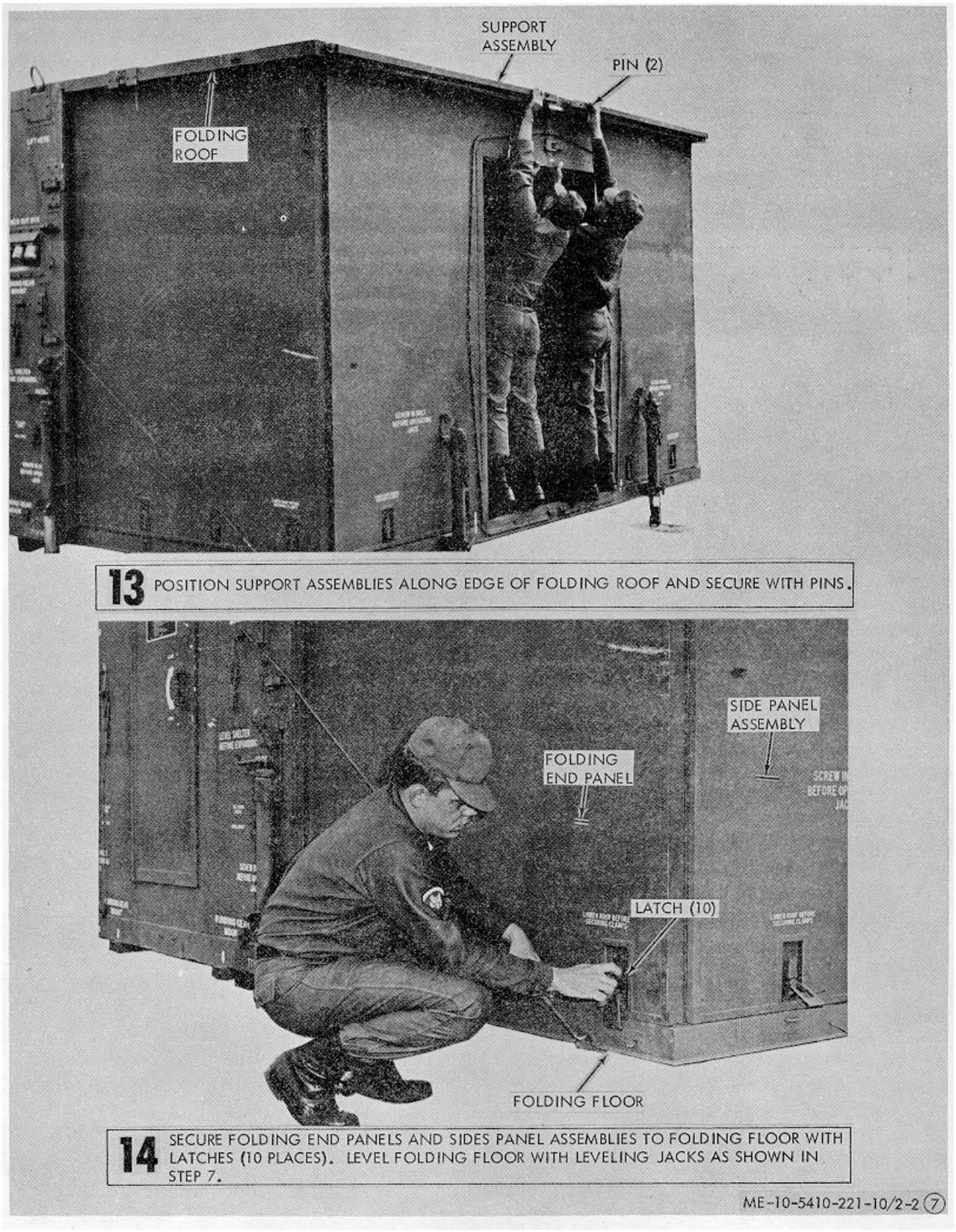


Figure 2-2(7). Erection of expandable shelter, (sheet 7 of 18).

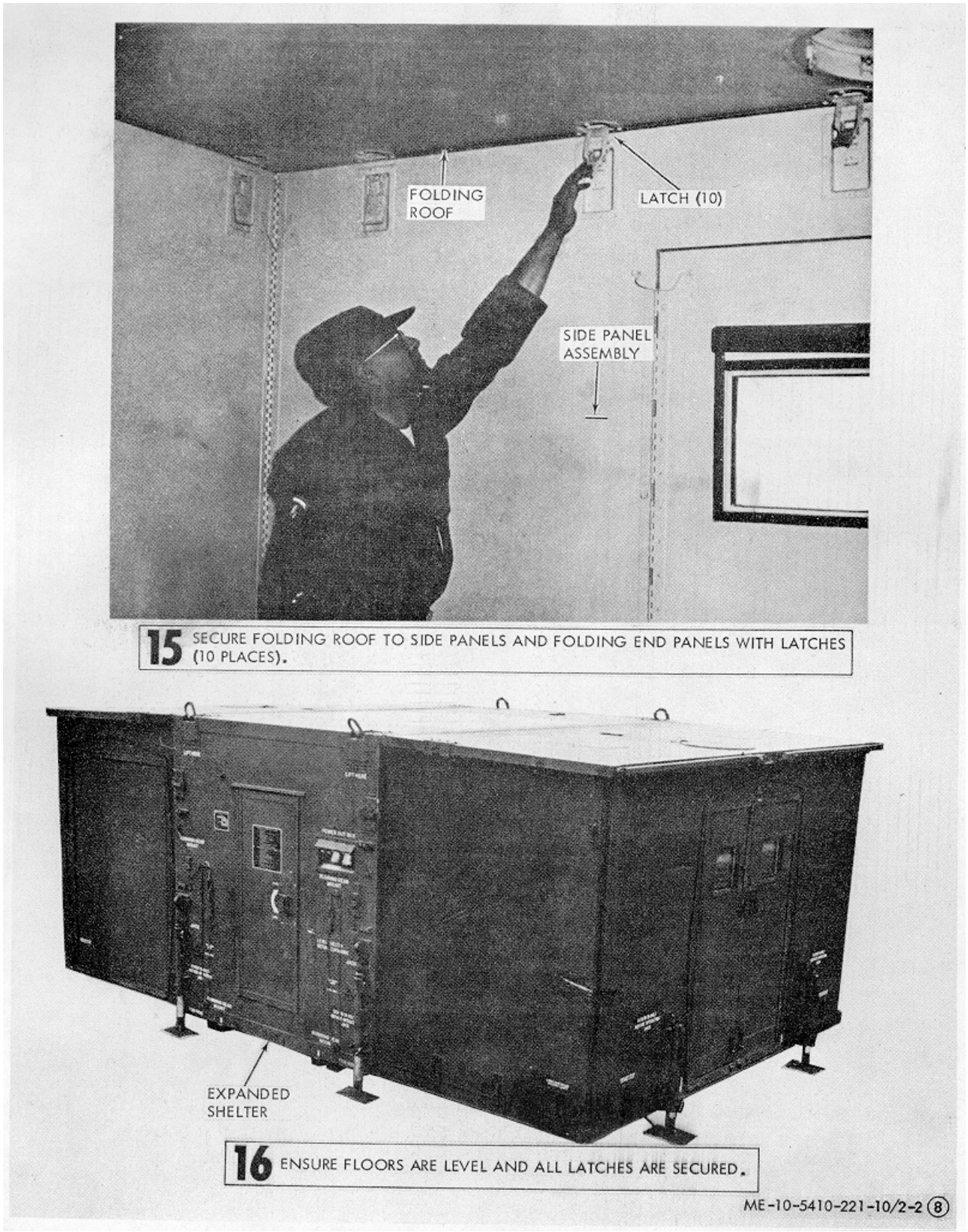


Figure 2-2(8). Erection of expandable shelter, (sheet 8 of 18).

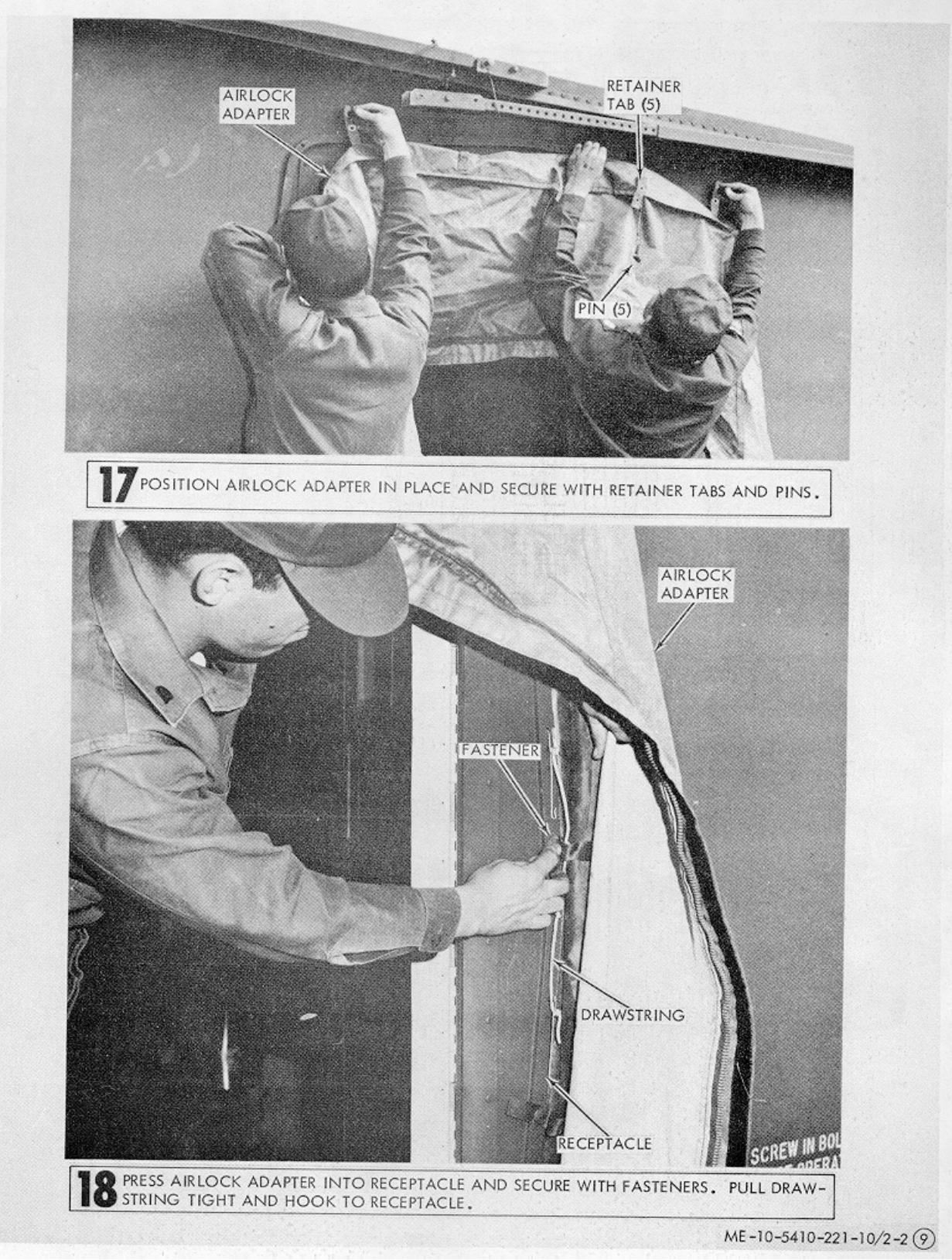


Figure 2-2(9). Erection of expandable shelter, (sheet 9 of 18).

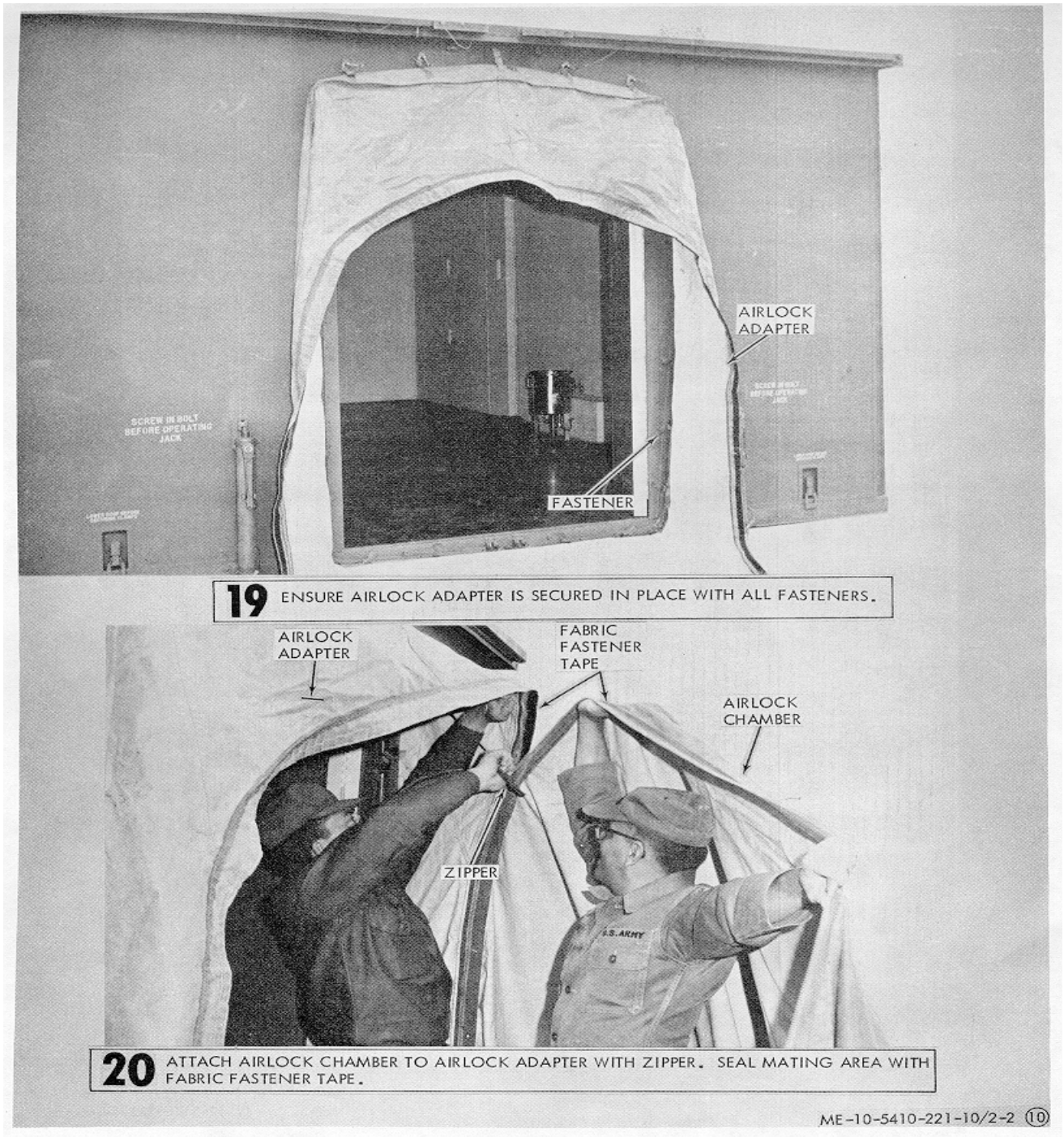


Figure 2-2(10). Erection of expandable shelter, (sheet 10 of 18).

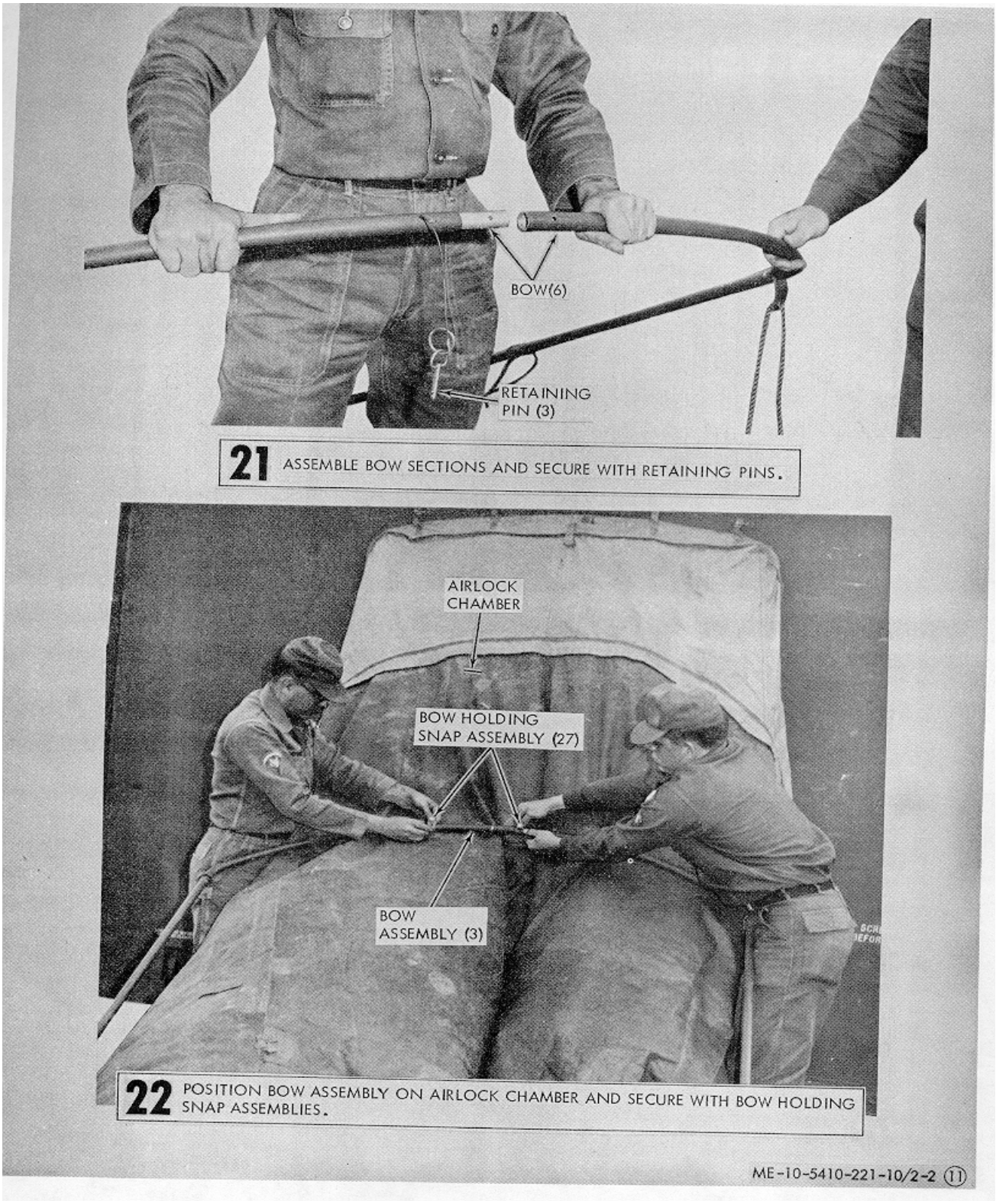


Figure 2-2(11). Erection of expandable shelter, (sheet 11 of 18).

Figure 2-2(12). Erection of expandable shelter, (sheet 12 of 18).

Figure 2-2(13). Erection of expandable shelter, (sheet 13 of 18).

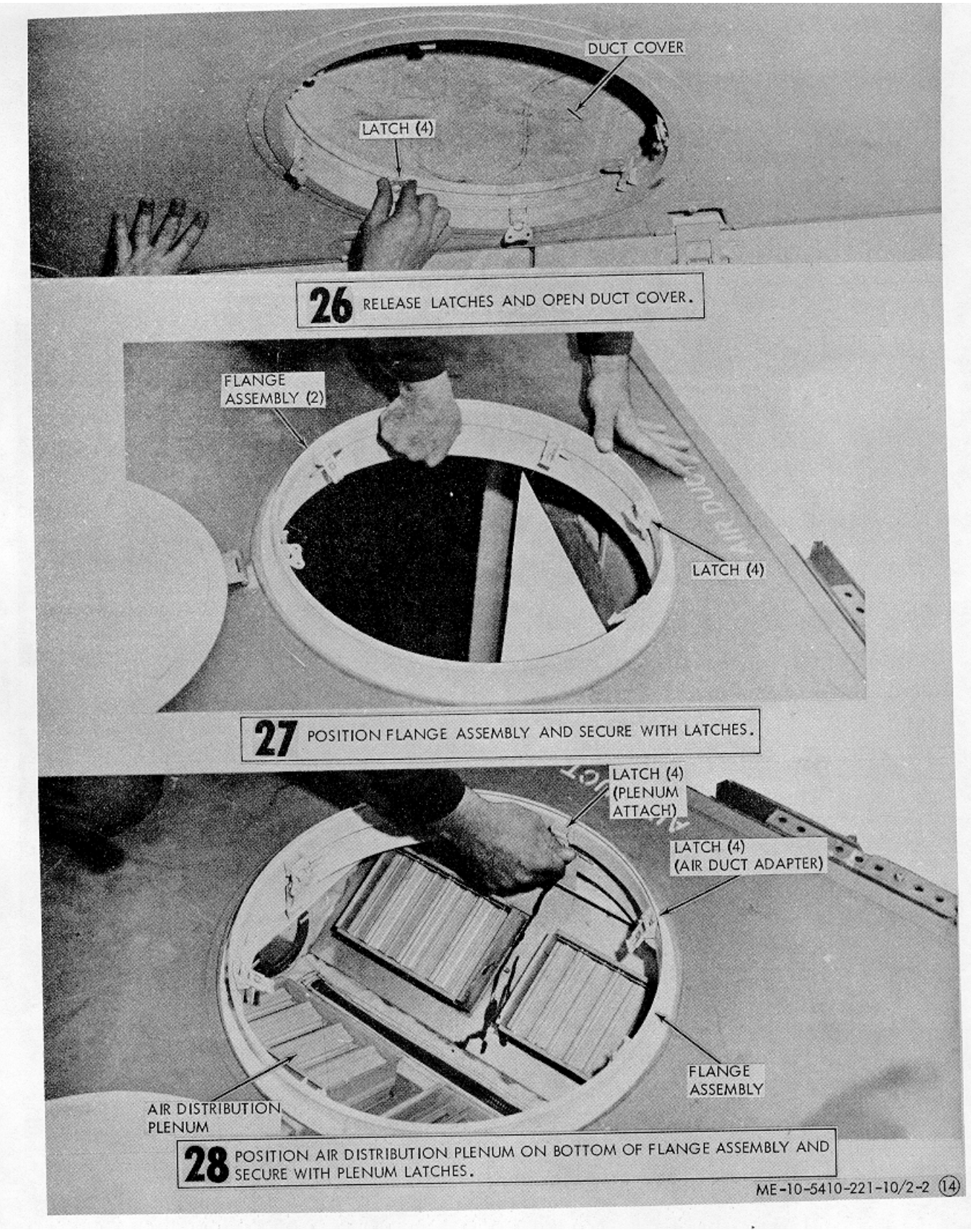


Figure 2-2(14). Erection of expandable shelter, (sheet 14 of 18).

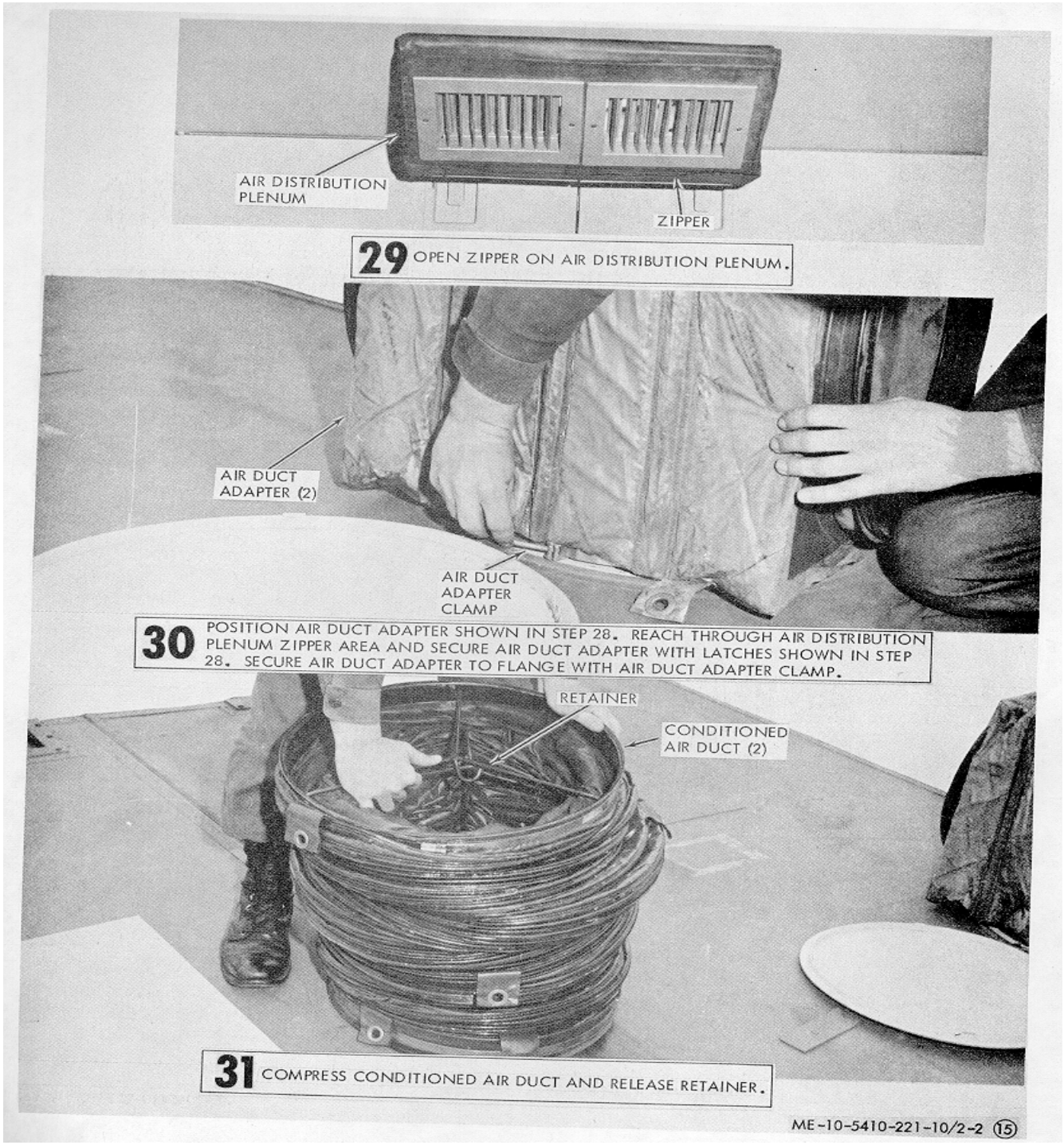


Figure 2-2(15). Erection of expandable shelter, (sheet 15 of 18).

Figure 2-2(16). Erection of expandable shelter, (sheet 16 of 18).

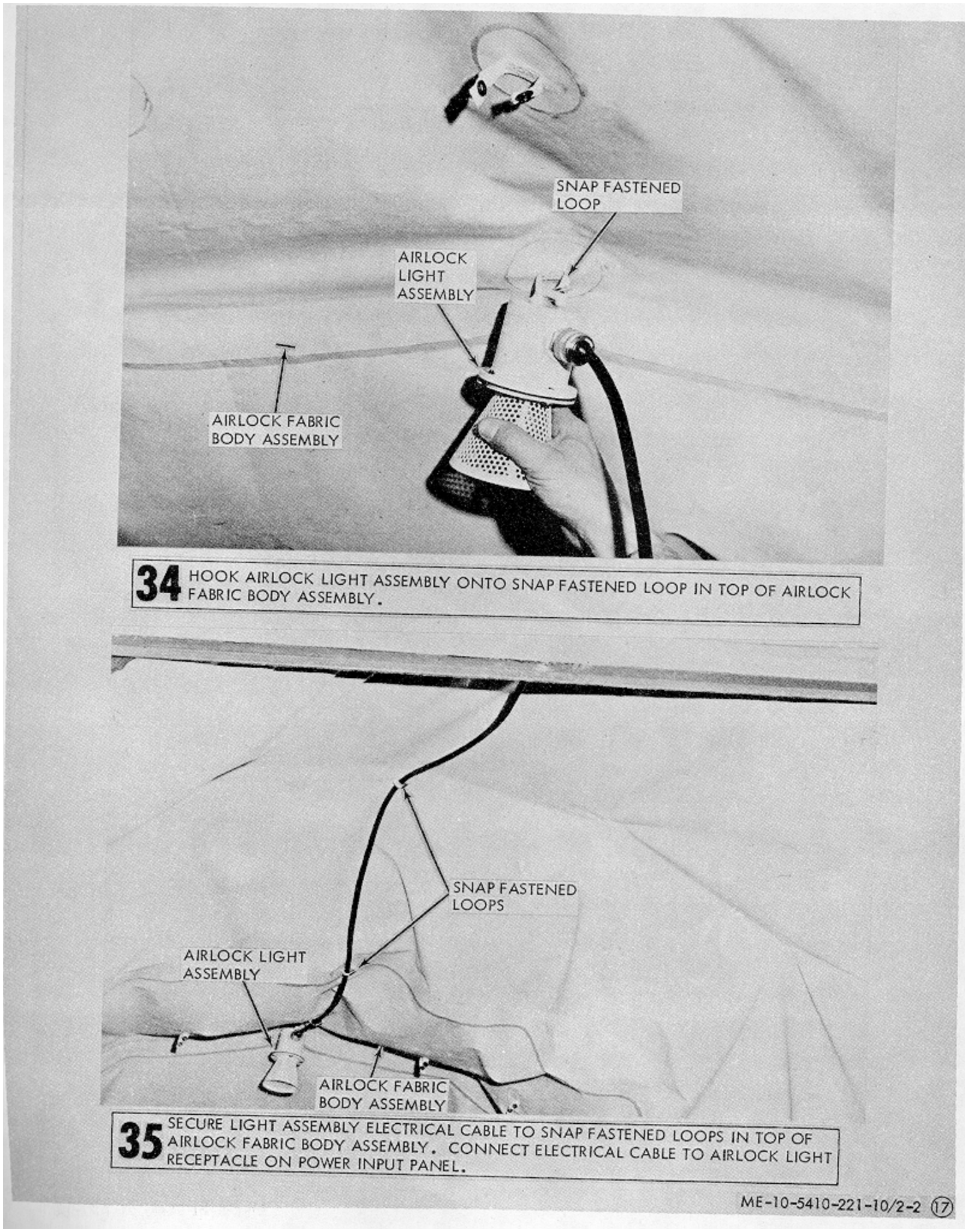


Figure 2-2(17). Erection of expandable shelter, (sheet 17 of 18).

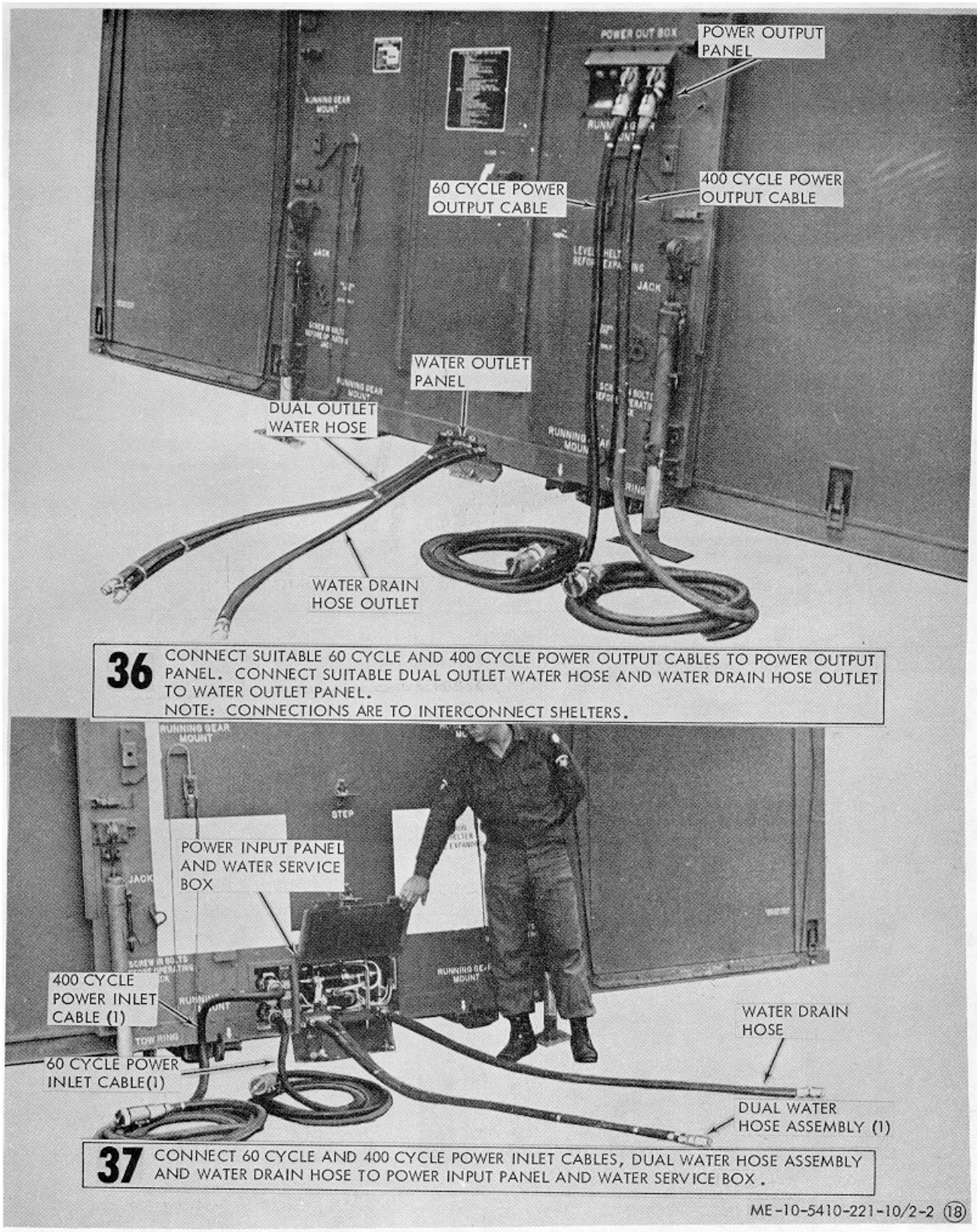


Figure 2-2(18). Erection of expandable shelter, (sheet 18 of 18).

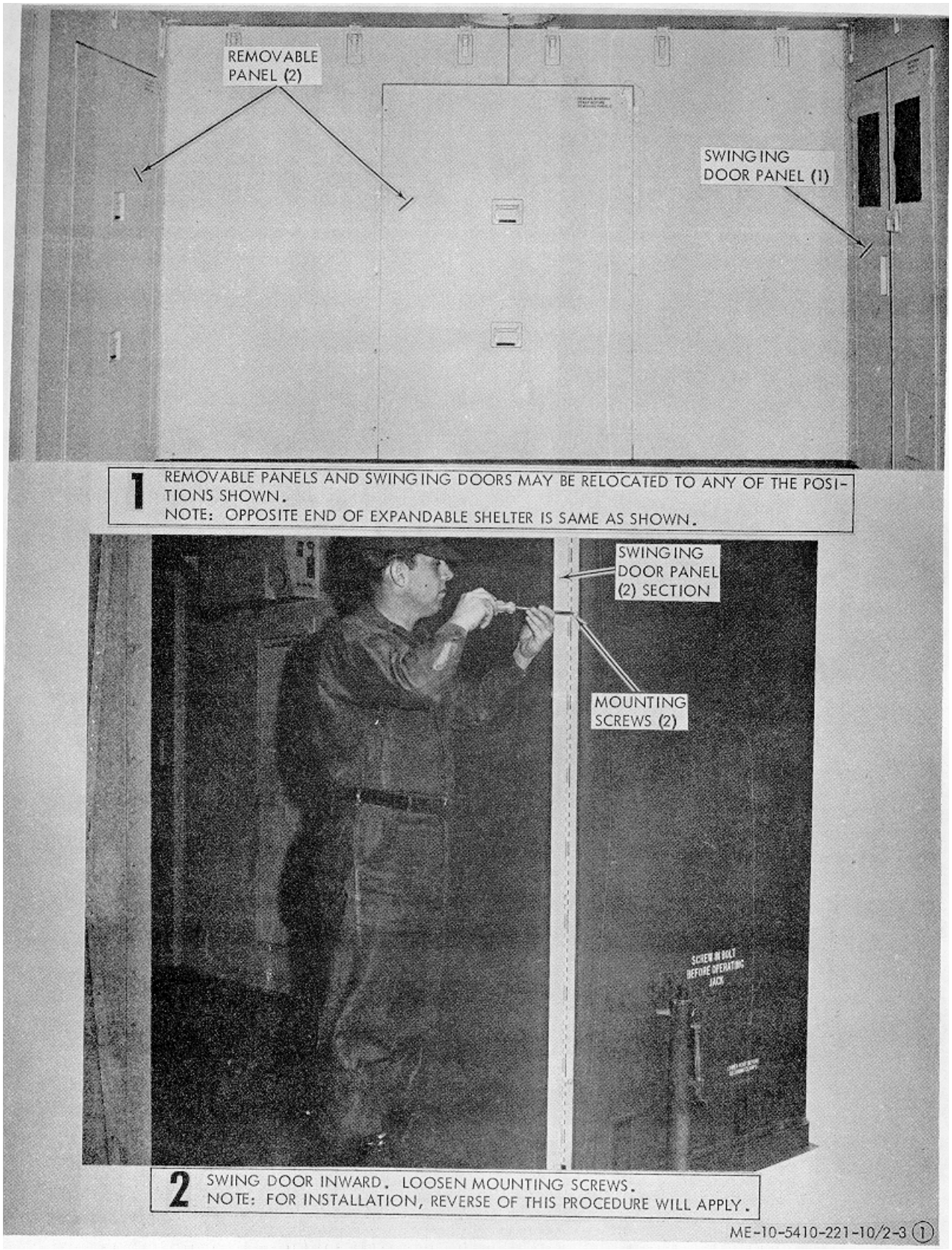


Figure 2-3(1). Interchanging removable panels and swinging door panels (Sheet 1 of 4).

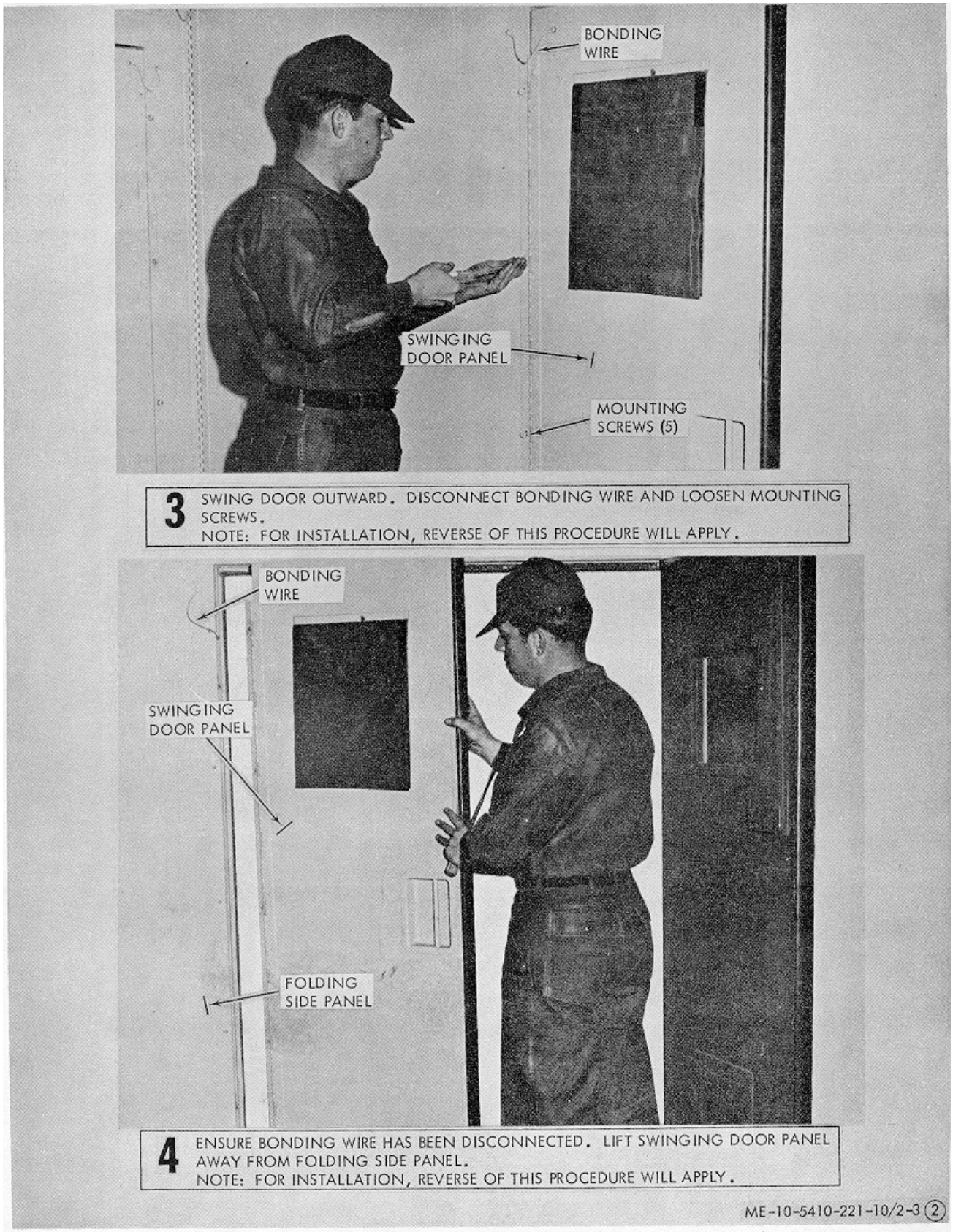


Figure 2-3(2). Interchanging removable panels and swinging door panels (Sheet 2 of 4).

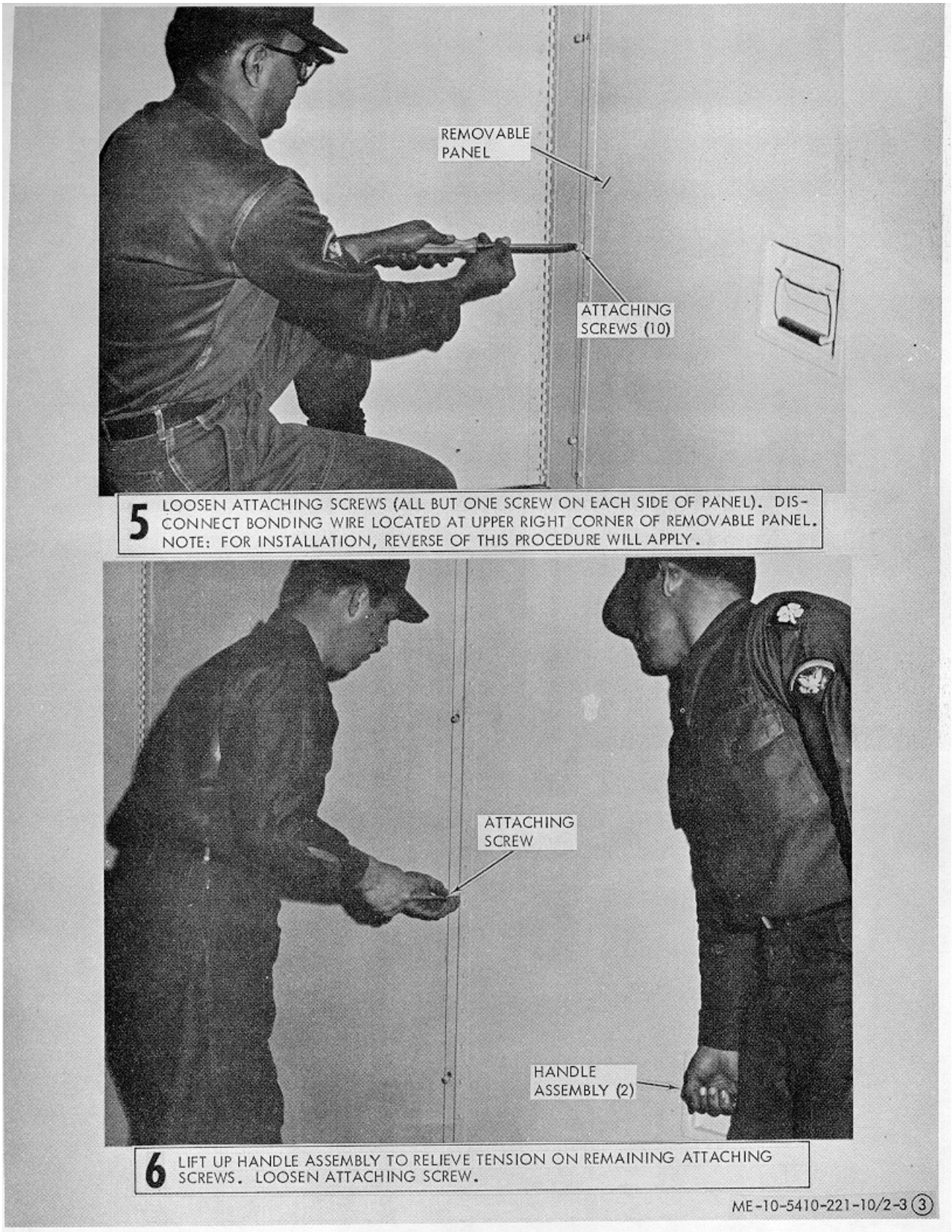


Figure 2-3(3). Interchanging removable panels and swinging door panels (Sheet 3 of 4).

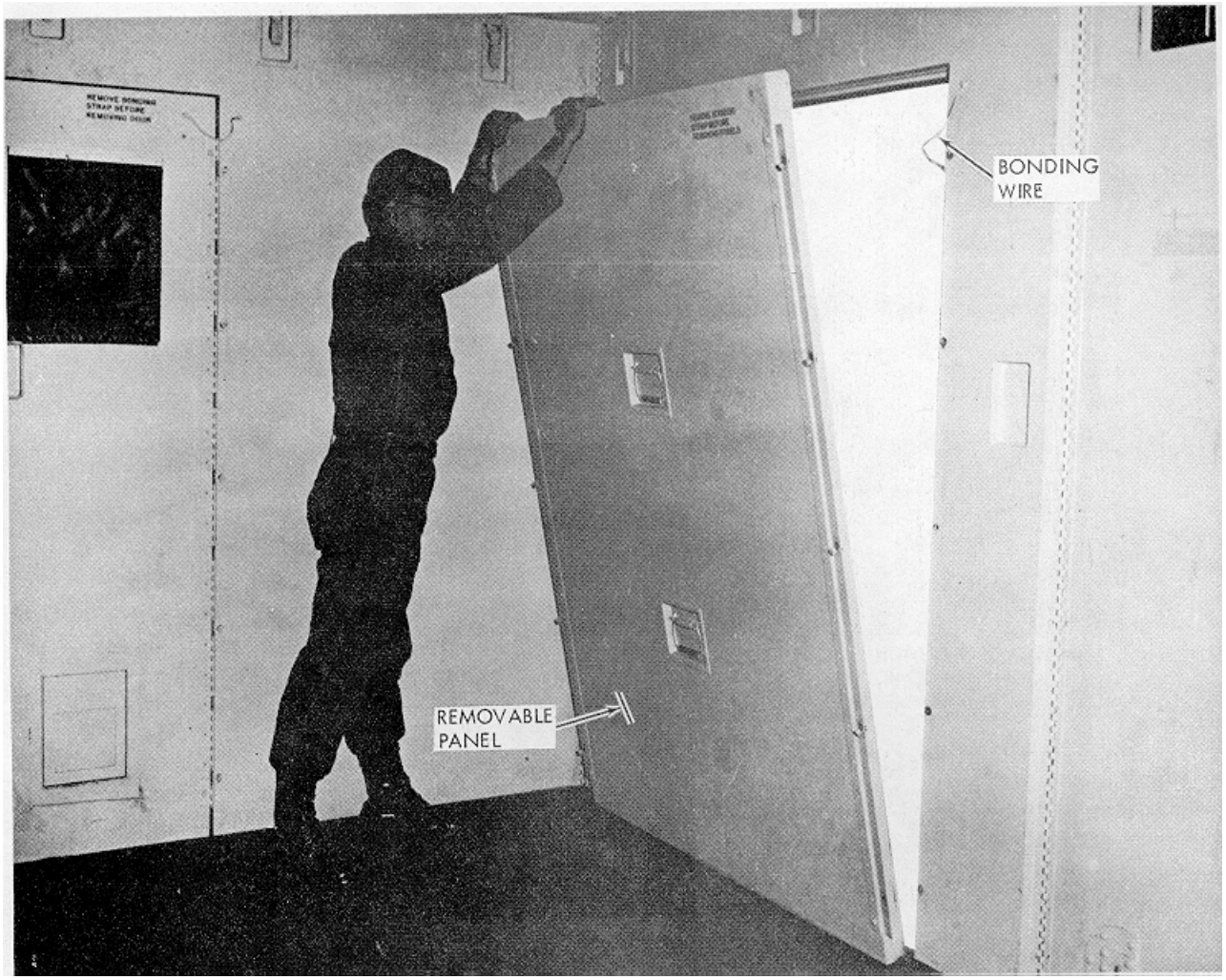


Figure 2-3(4). Interchanging removable panels and swinging door panels (Sheet 4 of 4).

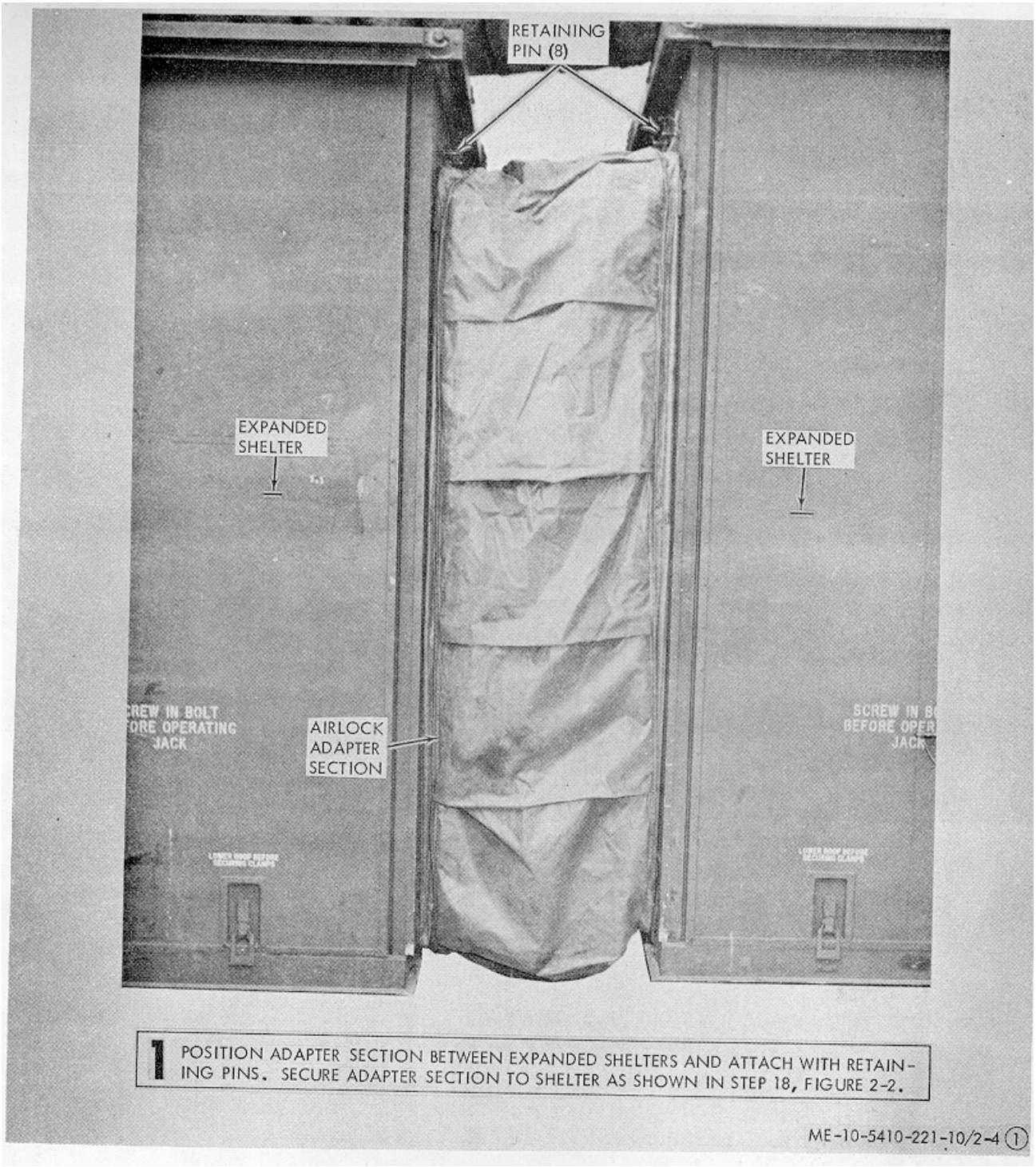


Figure 2-4(1). Installation of bellows section and tread plates (sheet 1 of 2).

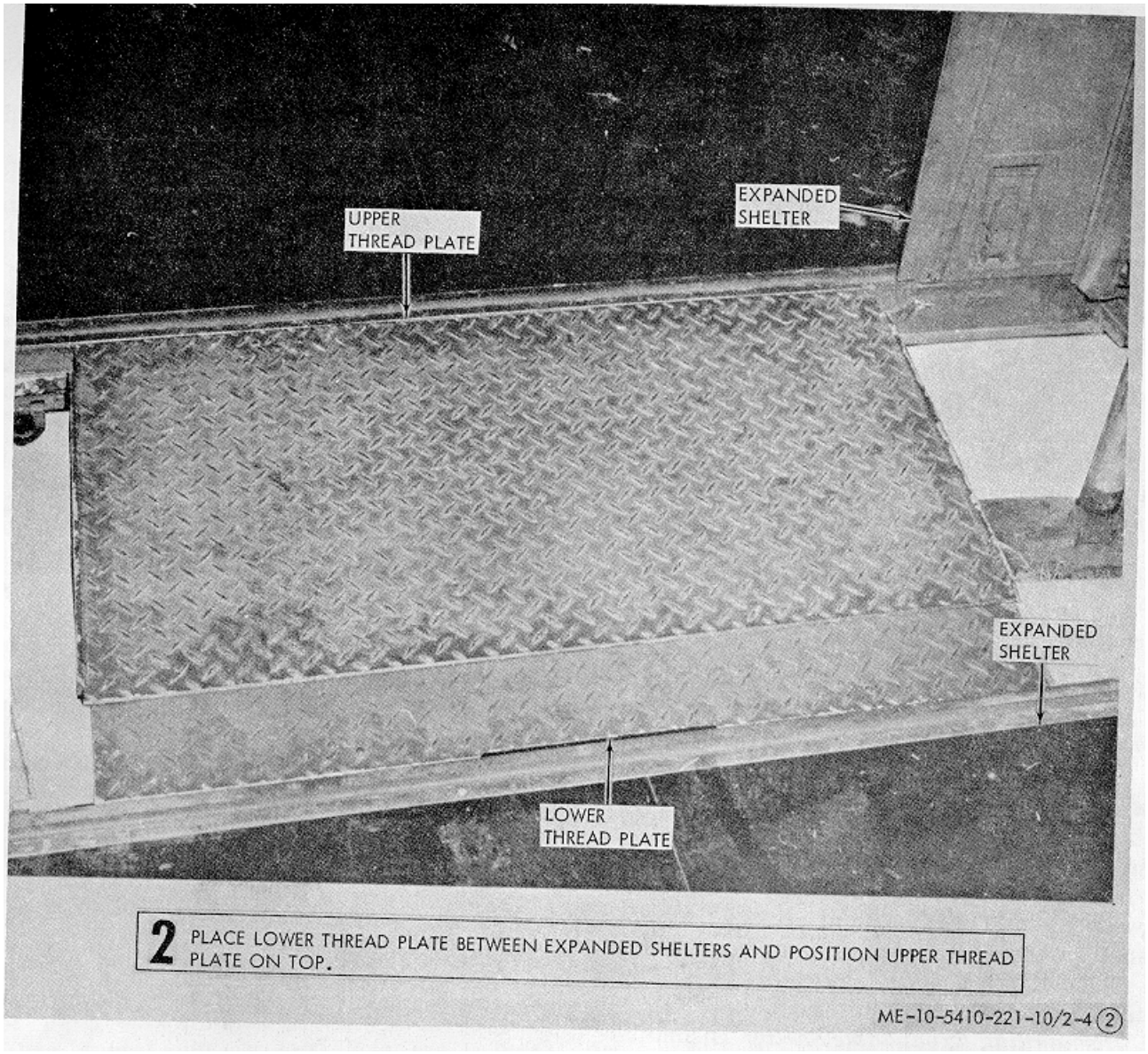


Figure 2-4(2). Installation of bellows section and tread plates (sheet 2 of 2).

Section II. MOVEMENT TO A NEW WORK SITE

2-7. Dismantling for Movement

a. General. In general, the procedures for dismantling the expandable shelter are the reverse of those used for erection. If required for clarification of procedures or for identification of components, reference should be made to applicable erection figure (fig. 2-2). All accessory equipment, furniture, or other items installed in the shelter during use shall be removed or positioned in center section and all external utility services shall be off or disconnected prior to dismantling shelter.

b. Dismantling Air-Lock Chamber. Dismantle air-lock chamber as follows.

(1) Disconnect air-lock light assembly electrical cable from lights cable receptacle at power input or output panel. Remove light assembly from air-lock chamber.

(2) Disconnect guy line ropes from cable assemblies to ground anchors. Remove tent pins. Remove bow spikes installed under bow frame assemblies.

Note. Do not remove ground anchors. Remove cable clamp on end of cable assembly and pull open end of cable through installed ground anchor to free cable assembly.

(3) Remove bow frame assemblies from air-lock chamber. Separate bow frames and wrap with attached guy line ropes to secure for shipment.

(4) Open and disengage zipper connection between air-lock chamber and air-lock adapter, unsnap and remove air-lock adapter from shelter.

(5) Fold fabric body assembly for shipment.

c. Dismantling Expandable Shelter. Dismantle expandable shelter in reverse order of erection procedures (fig. 2-2).

2-8. Loading and Unloading Expandable Shelter on Truck

a. General. When expandable shelter is to be moved to a new location which requires collapsing of the shelter and moving a long distance, the shelter will be transported by truck. Short distance moves or repositioning may be accomplished by sliding shelter on skids, or dolly set FSN 2330-937-1175.

b. Loading Expandable Shelter on Truck. Load collapsed expandable shelter as follows.

(1) When the shelter is to be transported by truck (2 1/2 ton M35), the procedures shown and described in figure 2-5 for loading the shelter onto the truck shall be observed.

Note. Additional special equipment required for loading the shelter is provided in a kit which includes two special hoist support posts for the two front corners of the truck bed, two special cable pivot posts for the rear corners of the truck bed, a set of rollers for the rear edge of the truck bed, two winch-type hoists, a cable yoke assembly, a hoist puller, hoist puller bracket, and straps and cables. Illustrations of loading procedures show a typical shelter.

(2) During transport of the expandable shelter, the shelter shall be secured to the truck with suitable tie downs in sufficient number to prevent shifting or movement of the shelter.

c. Unloading Expandable Shelter from Truck. Unload collapsed expandable shelter as follows.

(1) Select new work site as described in chapter 2, section I.

(2) Disconnect and remove tie downs from shelter.

(3) When the shelter is delivered to the new work site by truck (2 1/2 ton M35), the procedures shown and described in figure 2-6 for unloading the shelter from the truck shall be observed.

Note. Additional special equipment required for unloading the shelter is provided in a kit which includes two special hoist posts for the two front corners of the truck bed, two special cable pivot posts for the rear corners of the truck bed, a set of rollers for the rear edge of the truck bed, two winch-type hoists, a cable yoke assembly, a hoist puller, a hoist puller bracket, and straps and cables.

(4) After shelter has been unloaded at the new work site, erection shall be in accordance with procedure described in chapter 2, section I.

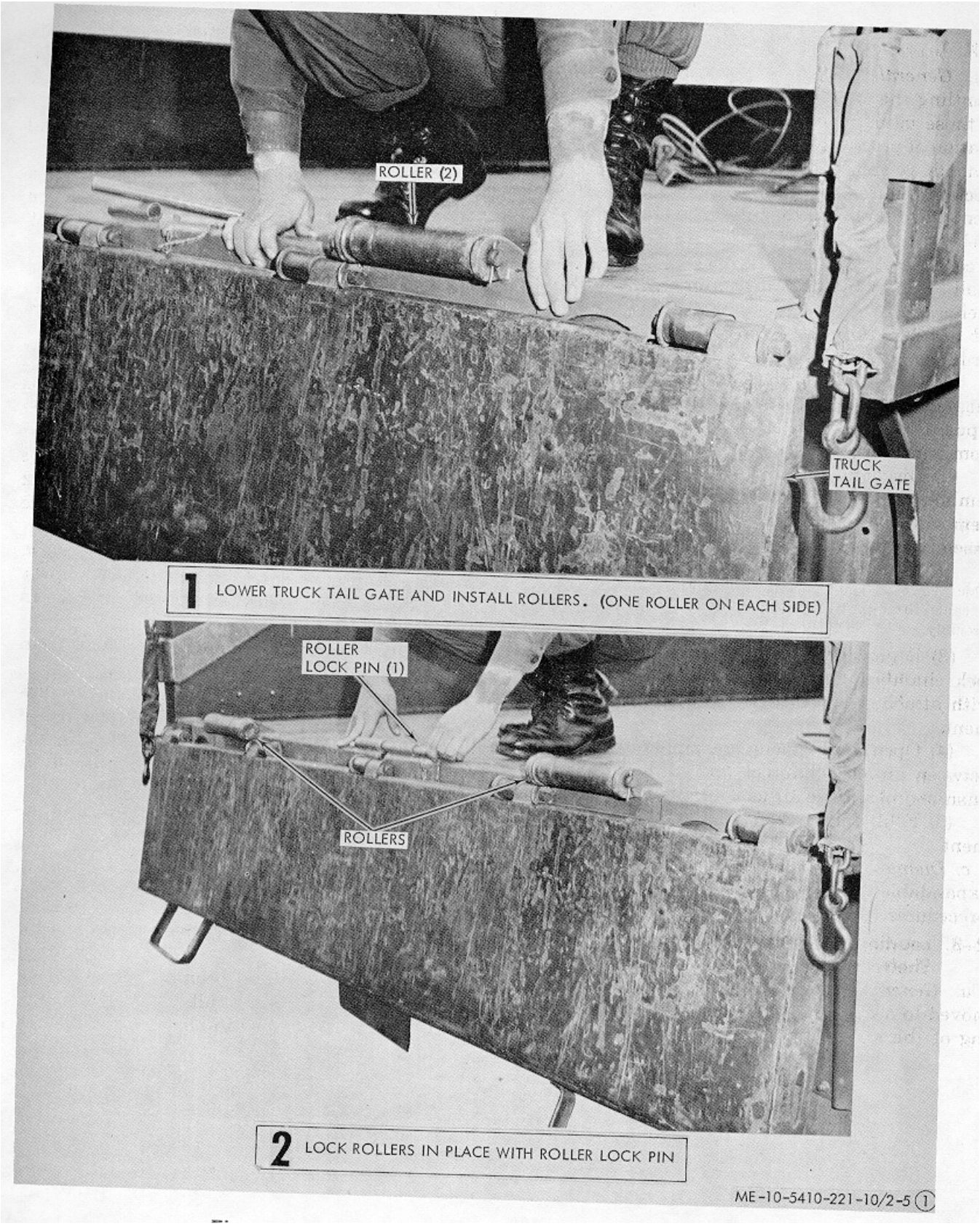


Figure 2-5(1). Loading expandable shelter on truck (sheet 1 of 6).

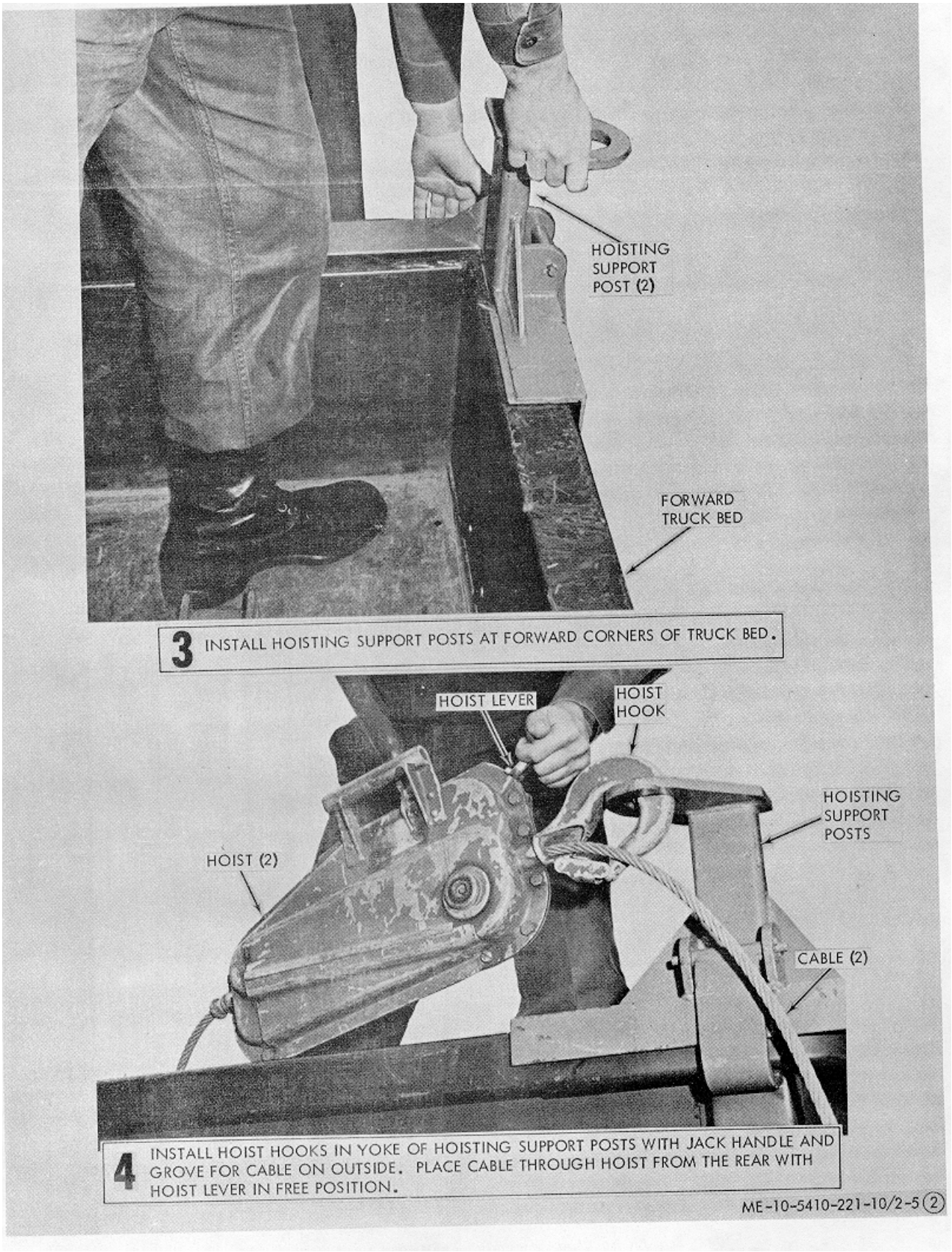


Figure 2-5(2). Loading expandable shelter on truck (sheet 2 of 6).

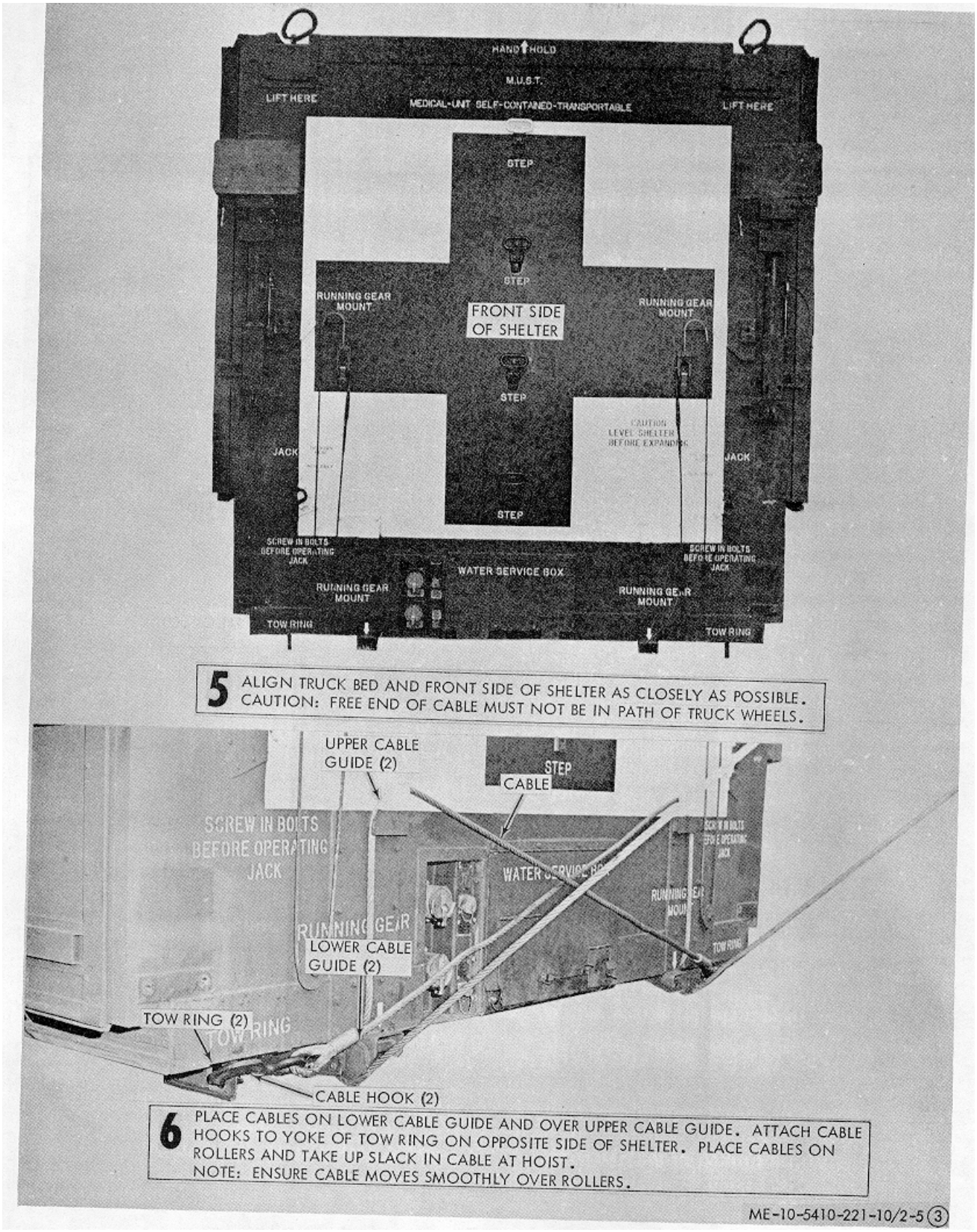


Figure 2-5(3). Loading expandable shelter on truck (sheet 3 of 6).

Figure 2-5(4). Loading expandable shelter on truck (sheet 4 of 6).

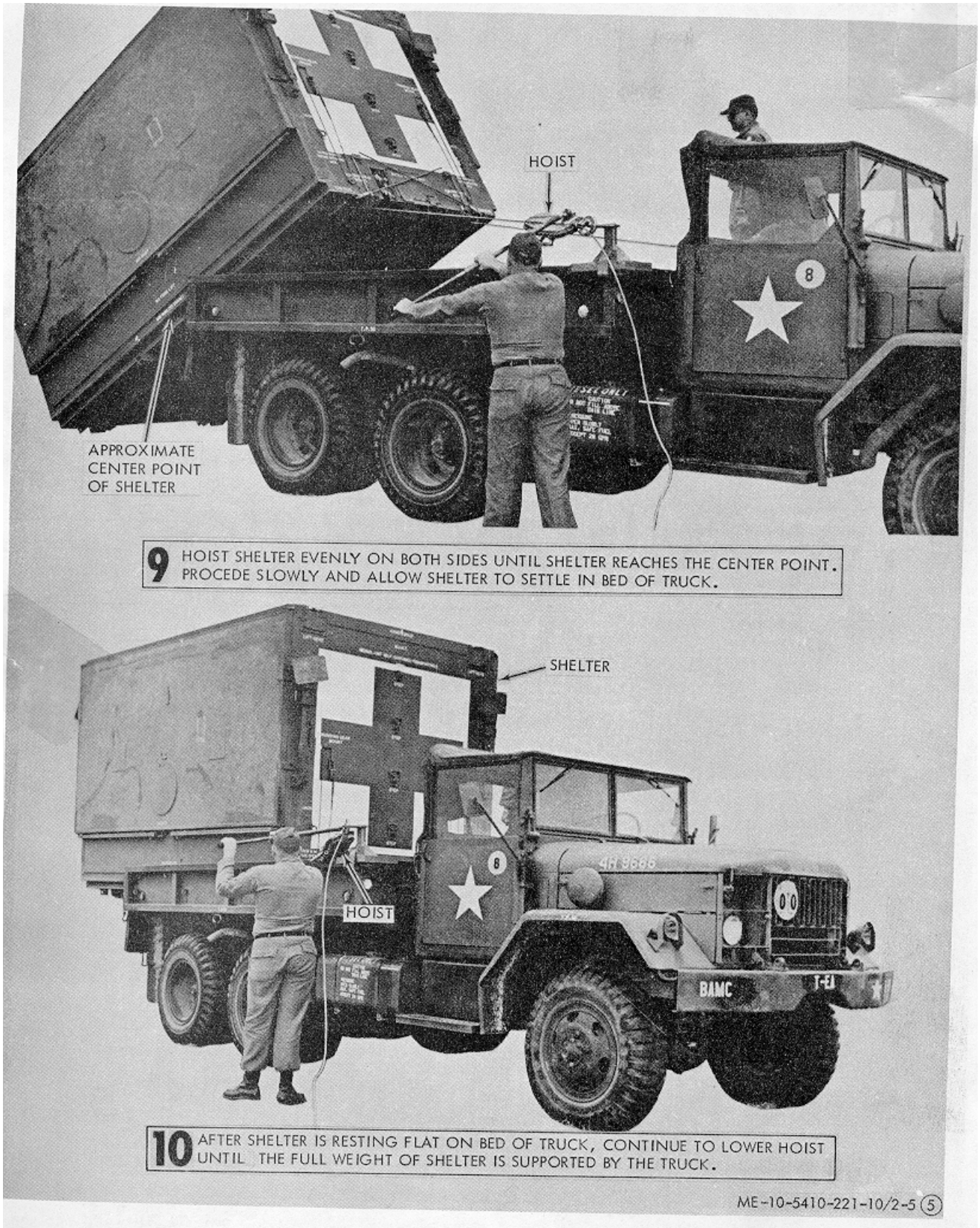


Figure 2-5(5). Loading expandable shelter on truck (sheet 5 of 6).

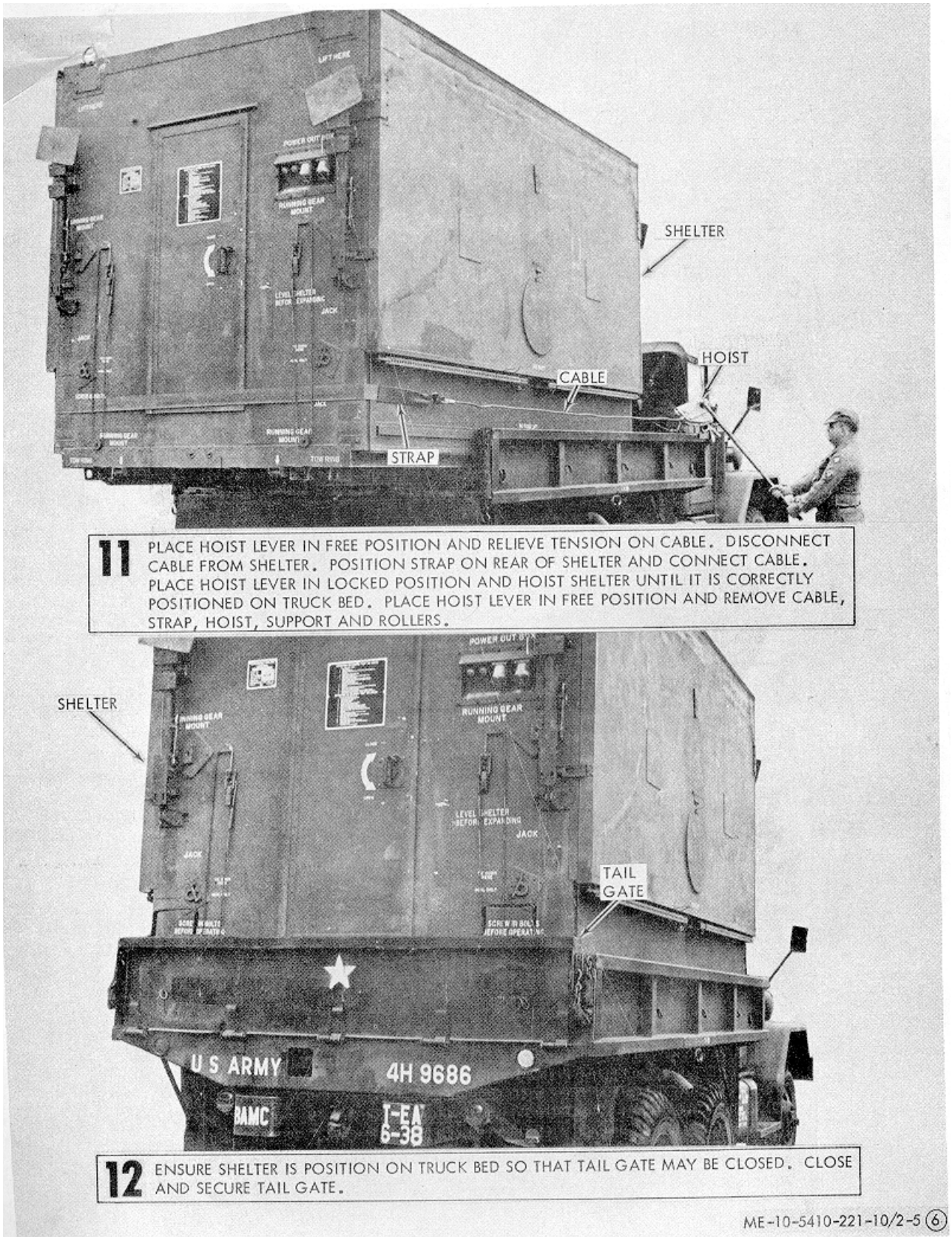


Figure 2-5(6). Loading expandable shelter on truck (sheet 6 of 6).

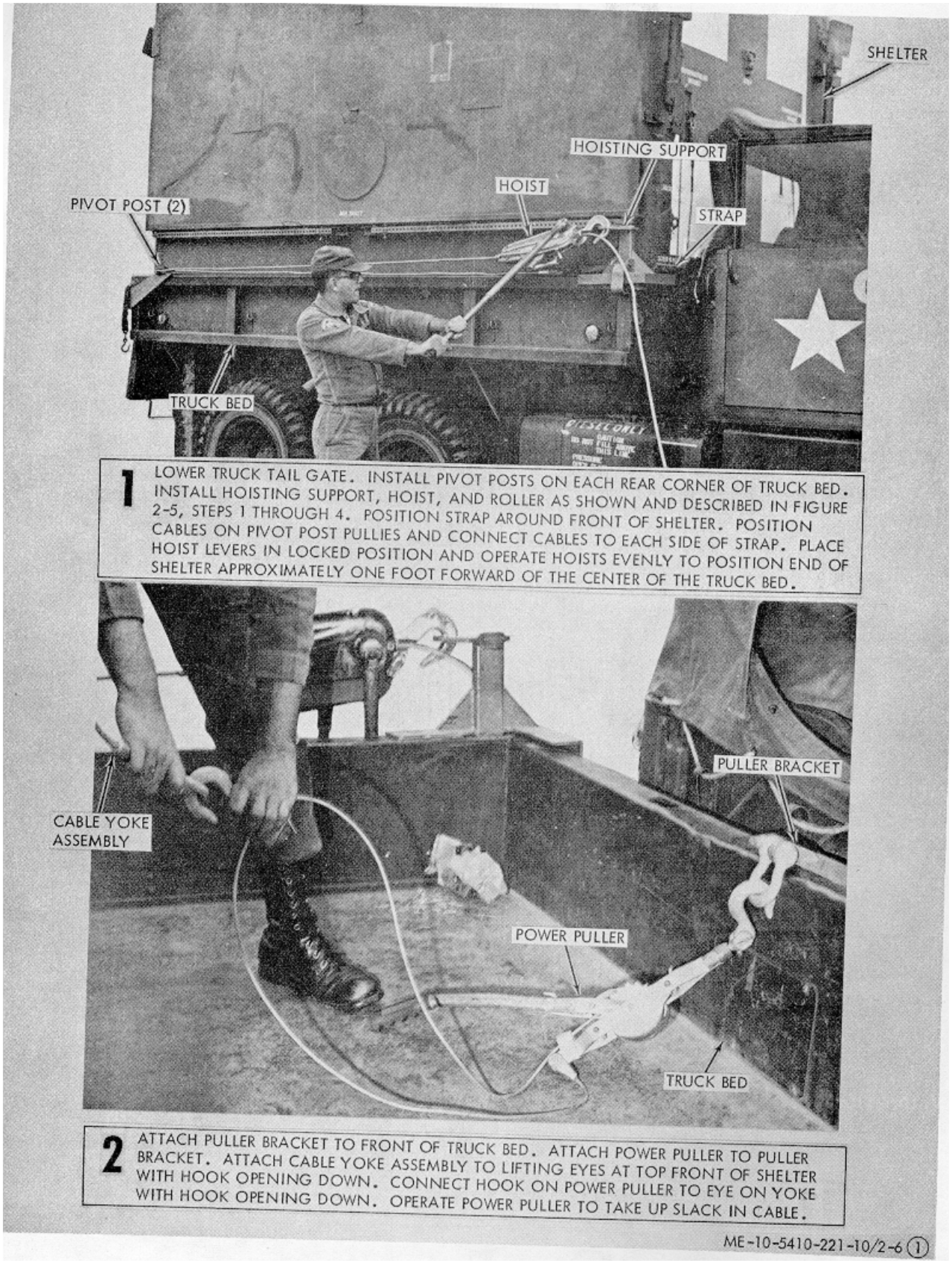


Figure 2-6(1). Unloading expandable shelter on truck (sheet 1 of 3).

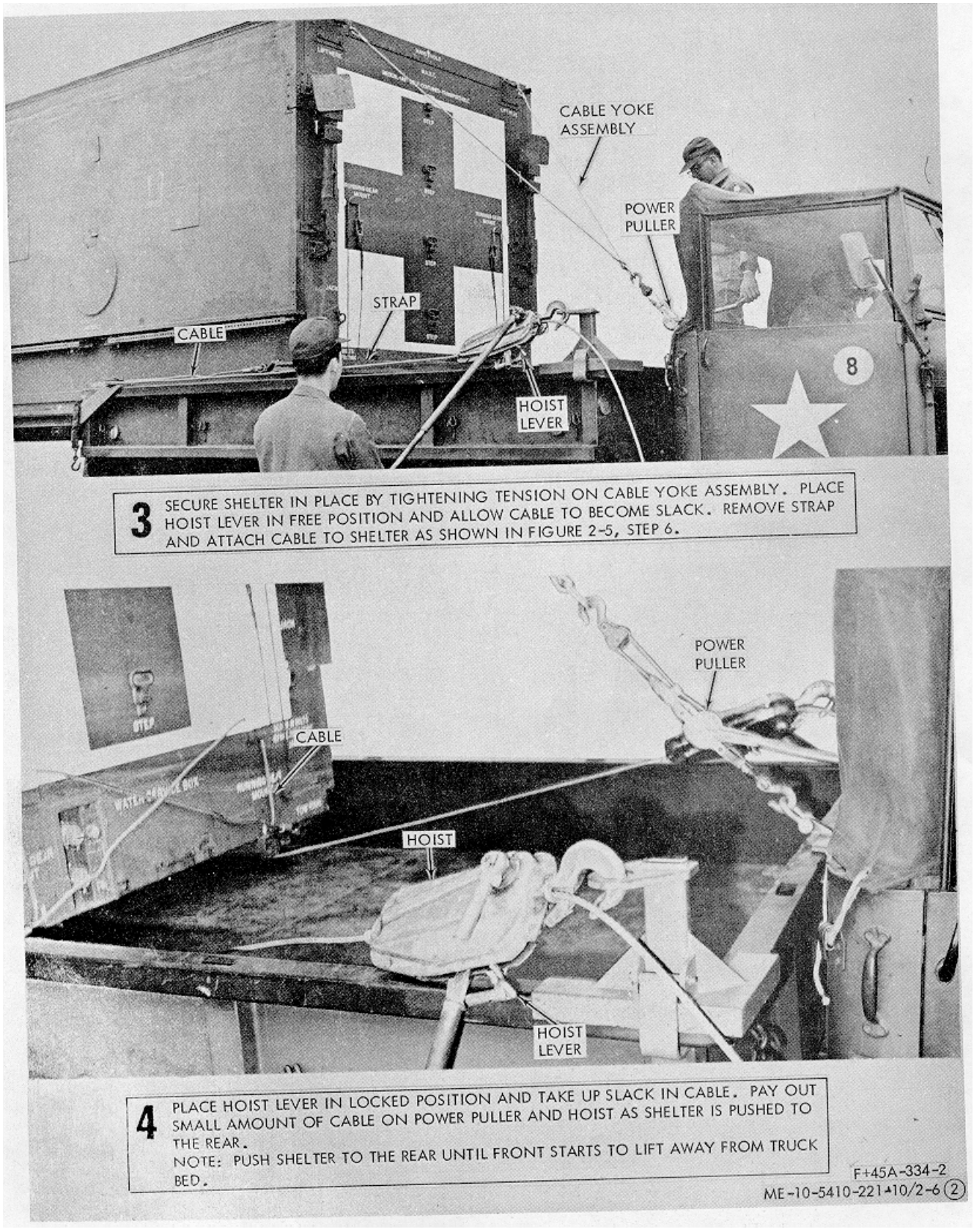


Figure 2-6(2). Unloading expandable shelter on truck (sheet 2 of 3).

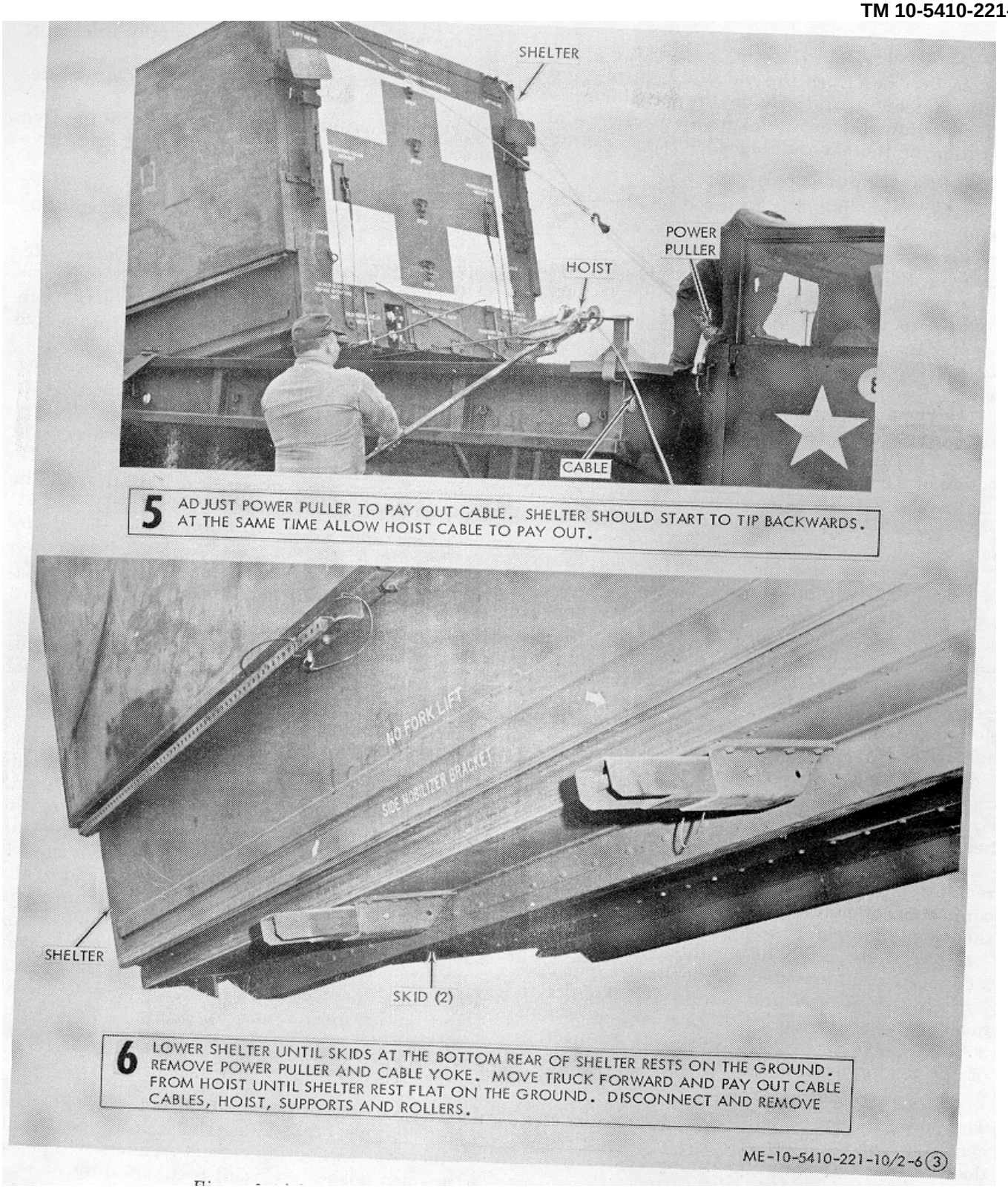


Figure 2-6(3). Unloading expendable shelter from truck (sheet 3 of 3).

Section III. CONTROLS AND UTILITY CONNECTIONS

2-9. General

This section describes the various controls and utility connections and provides the operator/crew sufficient information to ensure connection and operation of the expandable shelter.

2-10. Power Input Panel

The power input panel is recessed on the lower outside of the front, center section wall. The power input panel provides power inlet receptacles for 120/208 volts, 400 Hz; 120/240 volts, 60 Hz power, air-lock light, hose heater, remote temperature sensor, telephone jack and drain hose heater (fig. 2-7).

a. 120/208 Volts, 400 Hz Power Inlet Receptacle.

(1) The inlet receptacle is a five pin snap lock receptacle with a hinged protective cover.

(2) The inlet receptacle provides for connection of a source of 120/208 volts, 400 Hz electrical power to the shelter electrical system.

b 120/240 Volts, 60 Hz Power Inlet Receptacle.

(1) The inlet receptacle is a five pin snap lock receptacle with a hinged protective cover.

(2) The inlet receptacle provides for connection of a source of 120/240 volts, 60 Hz electrical power to the shelter electrical system.

c. Air-lock Light Receptacle. The air-lock light receptacle provides a source of 120 volt, 400 Hz electrical power for connection of the air-lock light assembly.

d. Hose Heater Receptacle. The hose heater receptacle provides a source of 120/208 volts, 400 Hz electrical power for connection of the hose heater.

e Remote Temperature Sensor Receptacle. The remote temperature sensor receptacle provides for connection of condition air source thermostat to the remote temperature sensor.

f. Telephone Jack. The telephone jack provides a connection for an external telephone input line.

g. Drain Hose Heater Receptacle. The drain hose heater receptacle provides a source of 120/ 208 volts, 400 Hz electrical power for connection of the drain hose heater.

2-11. Power Output Panel The power output panel is mounted on the rear, center section wall, adjacent to the shelter access door. The power output panel provides output receptacles for 120/208 volts, 400 Hz power; 120/240 volts, 60 Hz power, air-lock light, and emergency surgery light power supply inlet (fig.2-8).

a. 120/208 Volts, 400 Hz Power Output Receptacle.

(1) The output power receptacle is a five pin snap lock receptacle with a hinged protective cover.

(2) The outlet power receptacle provides for connection of another shelter to the 120/208 volts, 400 Hz electrical circuit.

b. 120/240 Volts, 60 Hz Power Output Receptacle.

(1) The outlet power receptacle is a five pin snap lock receptacle with a hinged protective cover.

(2) The output power receptacle provides for connection of another shelter to the 120/240 volts, 60 Hz electrical circuit.

c. Air-lock Light Receptacle. The air-lock light receptacle provides a source of 120 volts, 400 Hz electrical power for alternate connection of the air-lock light assembly.

d. Emergency Surgery Light Power Supply Inlet Receptacle. The emergency surgery light power supply inlet receptacle provides a connection for an emergency light power supply.

2-12. Power Distribution Panel

a. Power Distribution Panel. The power distribution panel is located above the access door on the inside of the rear, center section wall. The panel contained all circuit breakers for shelter Electrical systems, with a tinged door for access.

Three toggle switches are provided to operate the 28 volt dc ceiling mounted surgery lights and emergency light when used. The left end of the power panel includes a means for attaching and electrically connecting a humidistat from the humidifier system, when used. The right end of the power panel includes a means for attaching and electrically connecting a thermostat from the temperature control system, when used. Two connectors are provided for supplying 120/208 volts, 400 Hz power for sterilize cabinets, when used; and one connector for supplying 120/240 volts, 60 Hz power for an X-ray machine, when used (fig. 2-9).

b. Circuit Breaker Panel. The circuit breaker panel provides protection for shelter electrical circuits. Circuit breakers are push-pull type, which, when overload occurs circuit breakers will pop to the open position. Circuit breakers may be reset by pressing in to close the circuit after overload

condition has been corrected. For location and function of circuit breakers refer to figure 2-9.

2-13. Electrical Convenience Receptacles

The convenience receptacles consist of twelve duplex outlets, located at intervals along the left and right walls, and on the left and right sides of the ceiling, providing 120 volt, 60 Hz and 400 Hz electrical power (fig. 1-3).

a 120 Volt, 60 Cycle, Convenience Receptacles. The convenience receptacles are standard parallel type twist *lock* receptacles. Six receptacles are located on the walls of the shelter and four on the ceiling. Each receptacle has voltage and cycles noted on the face plate.

b. 102 Volt, 400 Cycle, Convenience Receptacles. The convenience receptacles are standard parallel type twist lock receptacles. Two receptacles are located on the walls of the shelter. Each receptacle has voltage and cycles noted on the face plate.

2-14. Fluorescent Light Assemblies

Two fluorescent light assemblies are provided in the center section ceiling, and two light assemblies in each of the fold-out sections. The light assemblies are flush-mounting, replaceable type, housing one 80-watt square fluorescent lamp panel. The interconnecting wiring for the lights are contained in raceways that are separate from other wiring for radio noise filtering purposes.

A flexible shielded insulated cable is provided for connecting the fold out ceiling lights across the hinge line.

2-15. Air-Lock Light Assembly

The air-lock light-cable assembly is a rugged, weatherproof type fixture, accepting a standard base 50 watt, incandescent lamp. The light operates on 120 volt, 400 Hz power and is connected directly either to the power-input panel or power output panel (fig. 1-3).

2-16. Water Box Interior Connections and Sump Installation

The water box interior connections and sump installation is located at the front fixed wall of the shelter and consists of hot and cold water connections, sump, vacuum connection, washer drain, and overboard drain (fig. 2-10).

a. Hot and cold water connections. The hot and cold water connections contain two capped ports each to facilitate connection of water service equipment.

b. Sump. The sump is secured to the shelter floor in front of the water box and contains connections for sump vent, service equipment drain, and sump drain.

(1) *vent.* The sump vent is located at the top side of the sump and vents the sump to the overboard drain.

(2) S*ervice equipment drain.* The service equipment drain is located at the top side of the sump. The drain allows waste from service equipment to enter the sump.

(3) *Sump drain.* The sump drain is located on the bottom of the sump and is connected to the sump pump to facilitate draining of waste from service equipment.

c. Vacuum Connection. The vacuum connection is located on the inner face of the water box and facilitates connection and operation of vacuum equipment.

d. Washer Drain. The washer drain is a plugged port located on the inner face of the water box and facilitates draining of washer, when used.

e. Overboard Drain. The overboard drain is located on the top left end of the water box and contains connections for humidifier drain and sump vent.

(1) *Humidifier drain connection.* The humidifier drain connection is a capped port on the overboard drain which is utilized for drainage of the humidifier, when used.

(2) *Sump vent connection.* The sump vent connection has a sump vent line connected which facilitates venting of the sump to the overboard drain.

2-17. Water Outlet Panel

The water outlet panel is located at the bottom rear of the shelter and serves as a interconnection point for additional shelters. The water output panel contains connections for hot and cold water outlet, drain outlet and hose heater (fig. 2-11).

a. Hot and Cold Water Outlet Connections. Two outlet connections are furnished for interconnection of shelter water system.

b. Drain Outlet Connection. The drain connection facilitates interconnection of shelter drain systems.

c. Hose Heater Receptacle. The hose heater receptacle is provided as a source of 120 volts, 400 Hz electrical power for outlet hose heater.

2-18. Conditioned Air System

Ducts are installed between a conditioned air source and the expandable shelter roof duct adapter to provide inlet or return air passage for

the shelter. Metal flanges at each end of the duct provide for connection by clamping to the shelter and air source or additional ducts may be joined together if required. Air distribution plenums are connected to the metal flange on the interior of the shelter. The air distribution plenum has four sets of air directional vanes, each one adjustable for control of conditioned air unto the shelter.

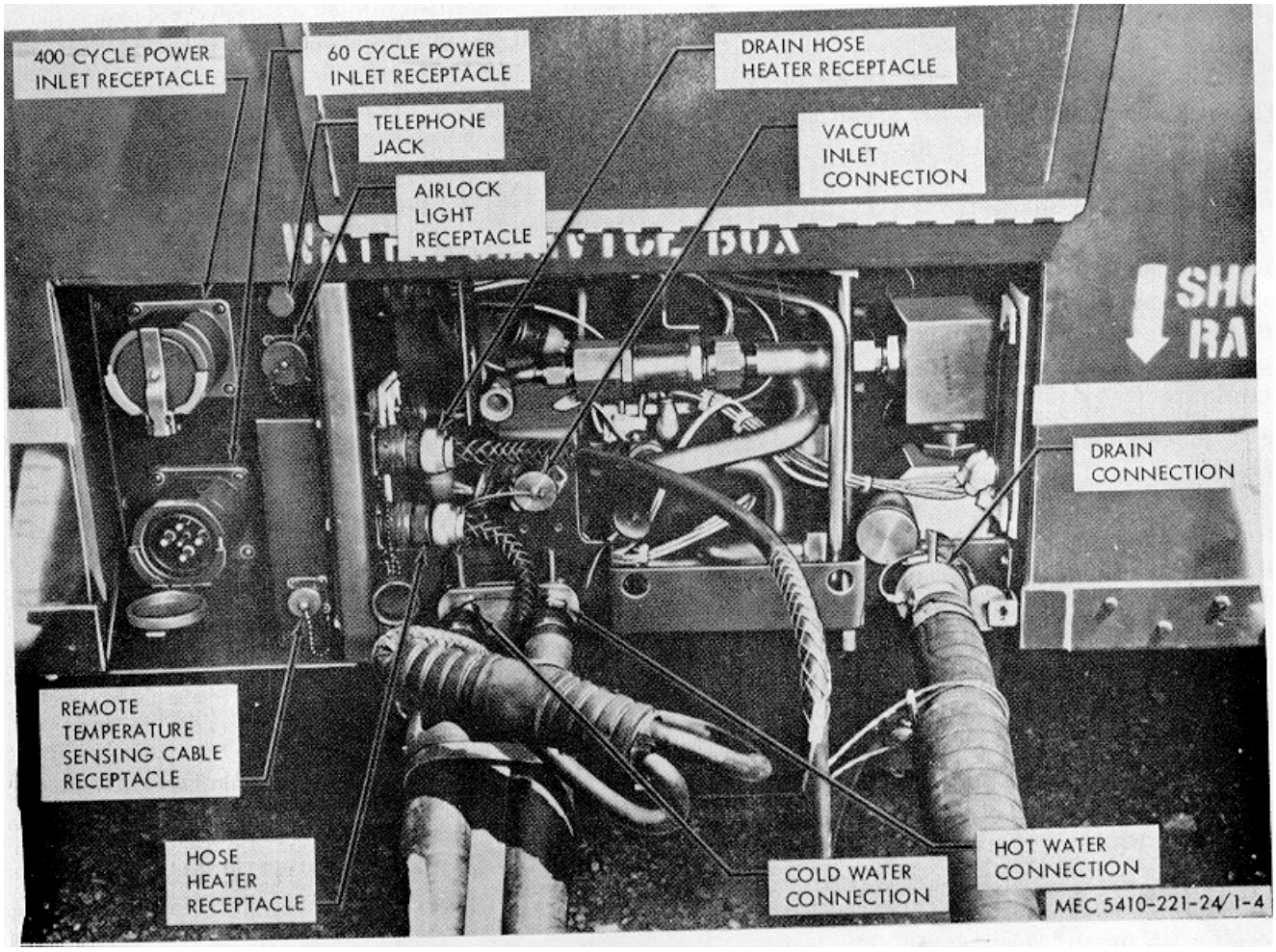


Figure 2-7. Power input panel and water service box.

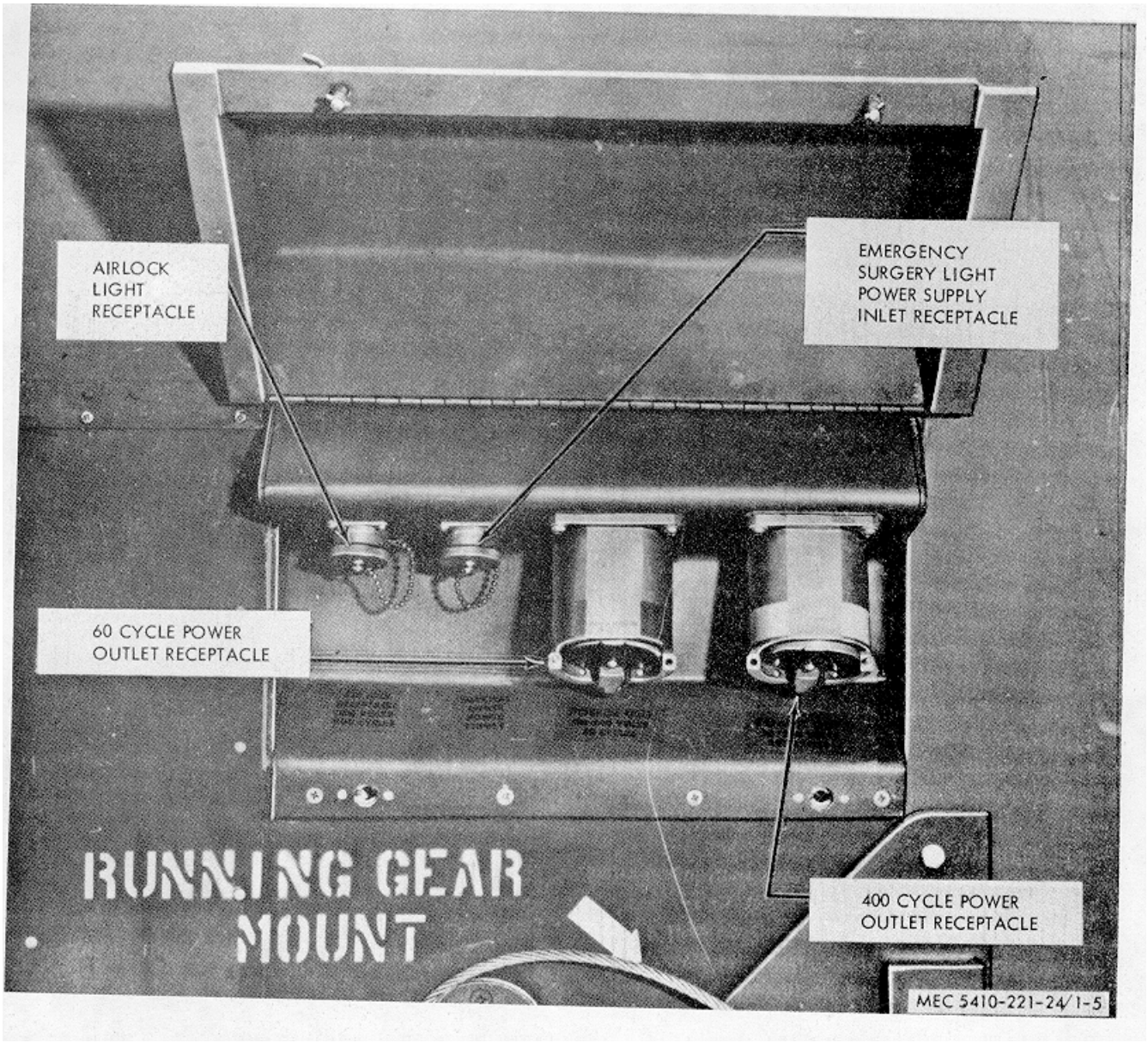


Figure 2-8. Power output panel assembly.

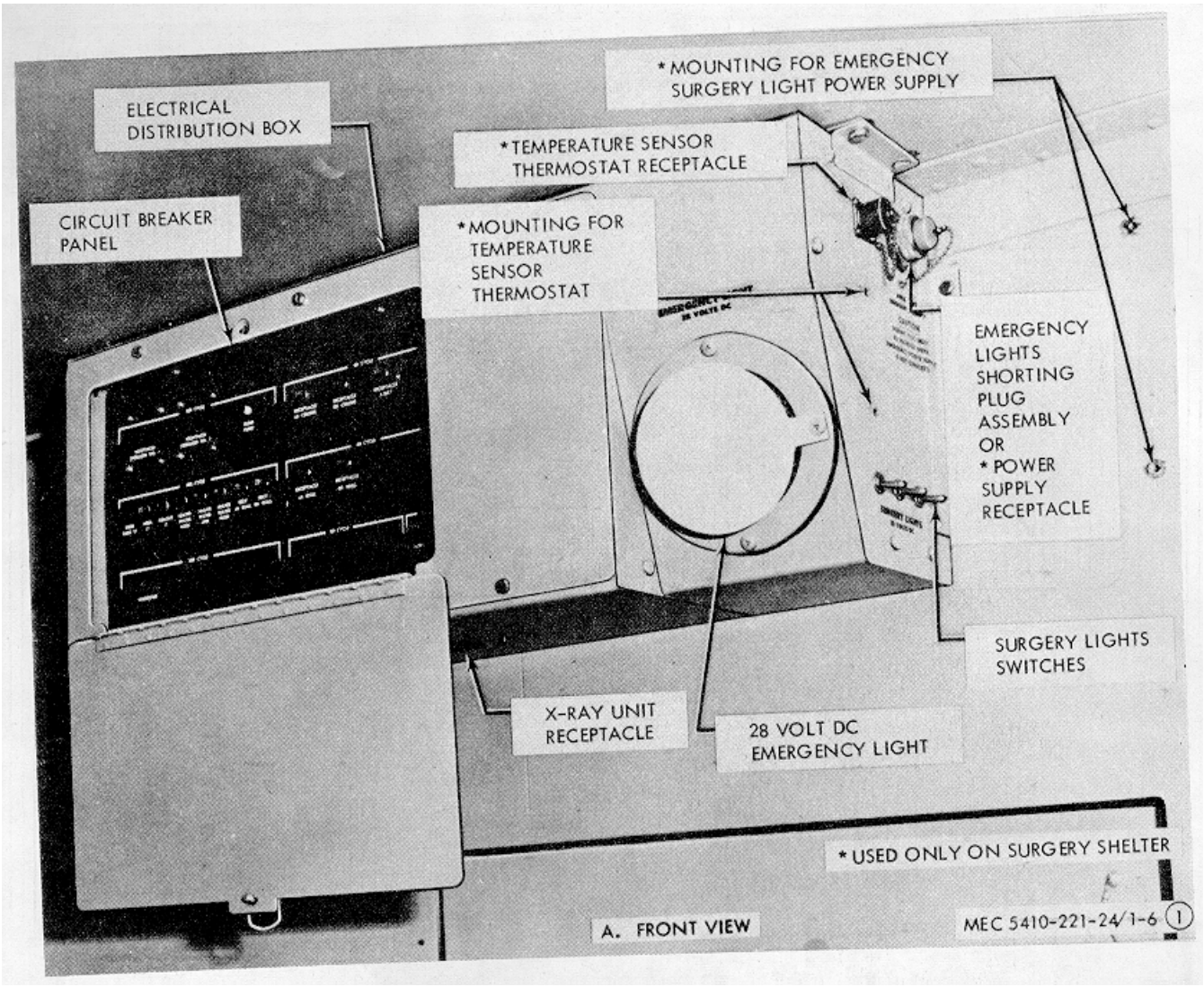
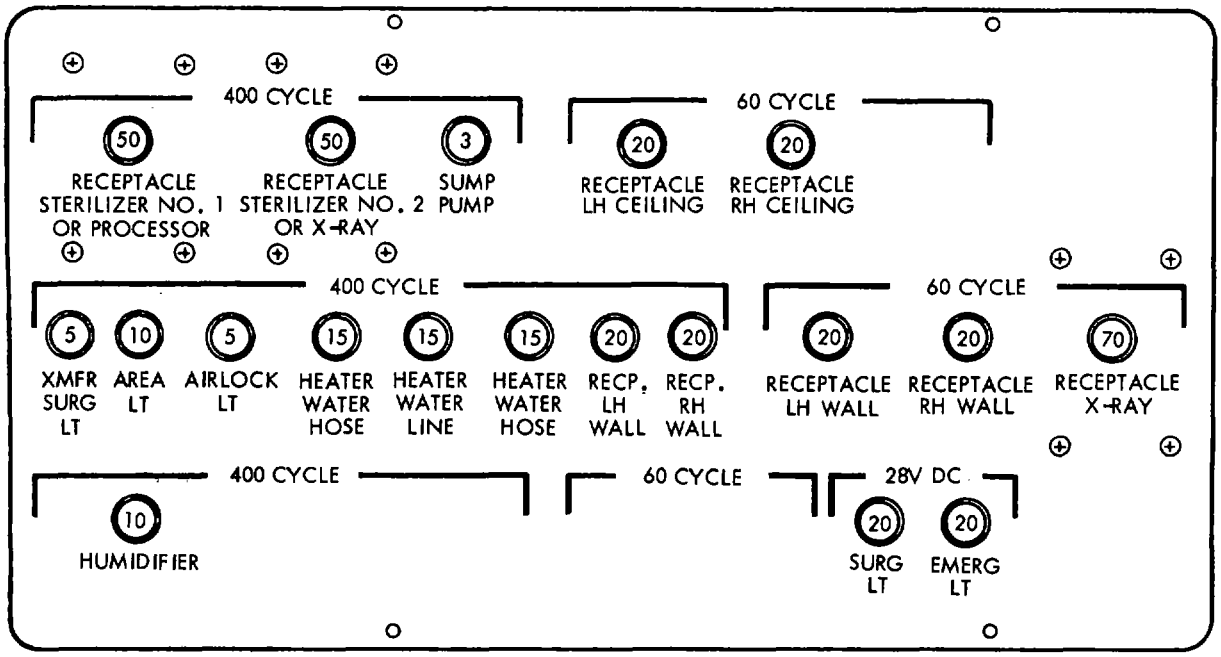


Figure 2-9(1). Power distribution panel assembly (sheet 1 of 2).



FRONT VIEW OF CIRCUIT BREAKER PANEL ME-10-5410-221 -10/2-90

Figure 2-9(2). Power distribution panel assembly (sheet 2 of 2).

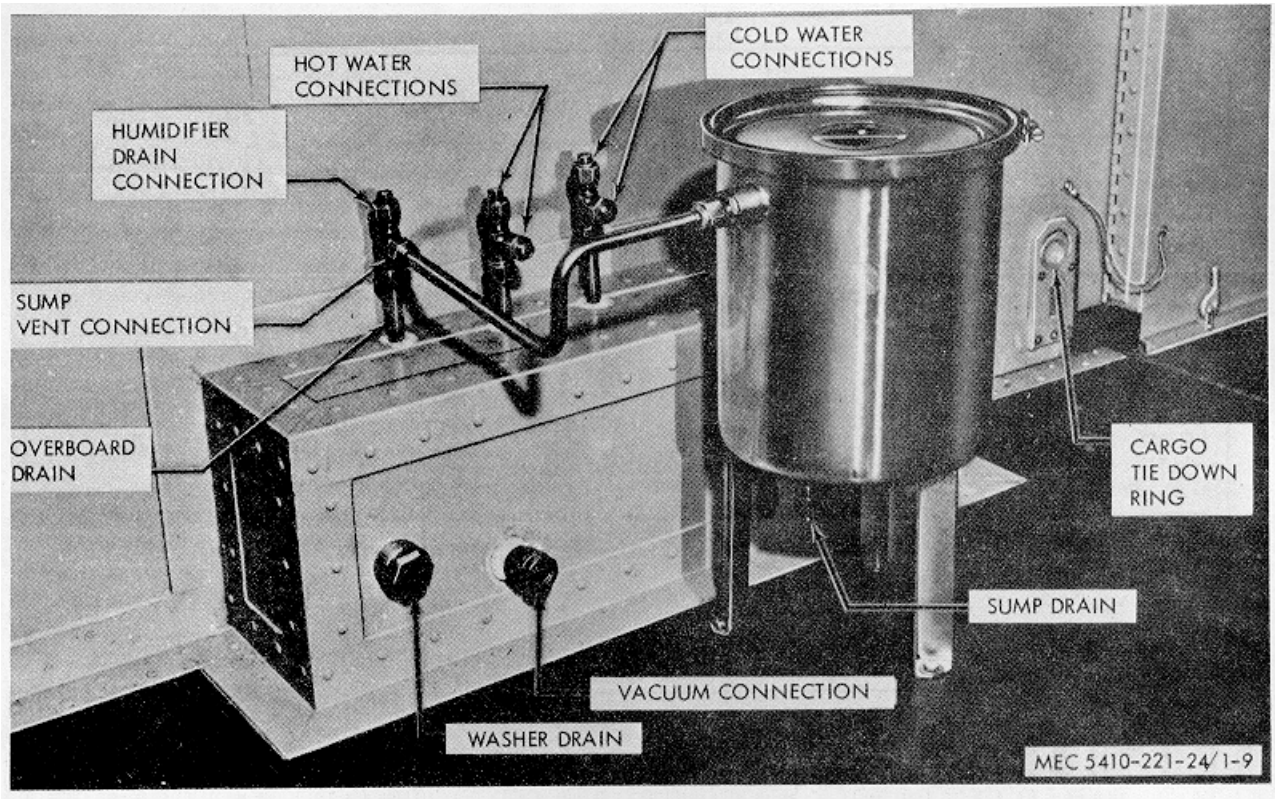


Figure 2-10. Water box interior connection and sump installation.

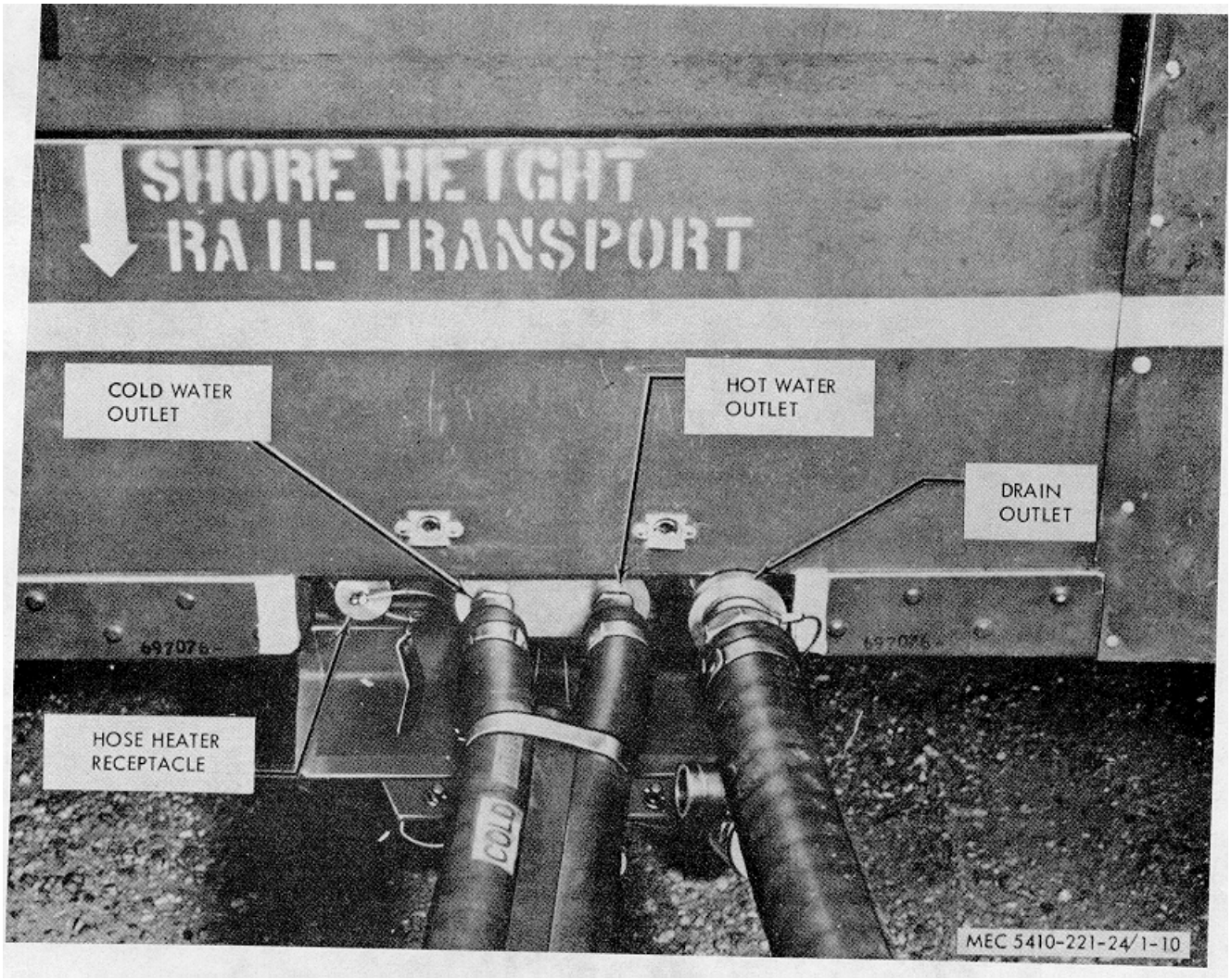


Figure 2-11. Water outlet panel with hose assemblies attached.

Section IV. OPERATION UNDER USUAL CONDITIONS

2-19. General

a. The instructions in this section are published for the information and guidance of personnel responsible for operation of the expandable shelter.

*b. T*he operator shall be familiar with the operation of all of the components and fixtures of the expandable shelter. This section provides instructions for operation of the various components and fixtures of the expandable shelter and for coordinating the basic motions to perform the specific functions for which the shelter is designed.

Since nearly every job presents a different problem the operator may have to vary given procedures to fit the individual job.

2-20. Operation of Components and Fixtures

a. Air-lock Door. Operation of air-lock door handles and adjustment of anti-backdraft valves on doors is shown and described in figure 2-12.

b. Shelter Doors. Operation of shelter doors is shown and described in figure 2-13.

c. Blackout Curtains. Operation of blackout curtains is shown and described in figure 2-14.

d. Conditioned Air Plenums. Operation of conditioned air plenums is shown and described in figure 2-15.

e. Electrical Circuit Breakers and Components. For operation of electrical circuit breakers and components, refer to chapter 2, section III.

f. Leveling Jacks. Leveling jacks will be maintained at a level position under all conditions to prevent damage to the shelter.

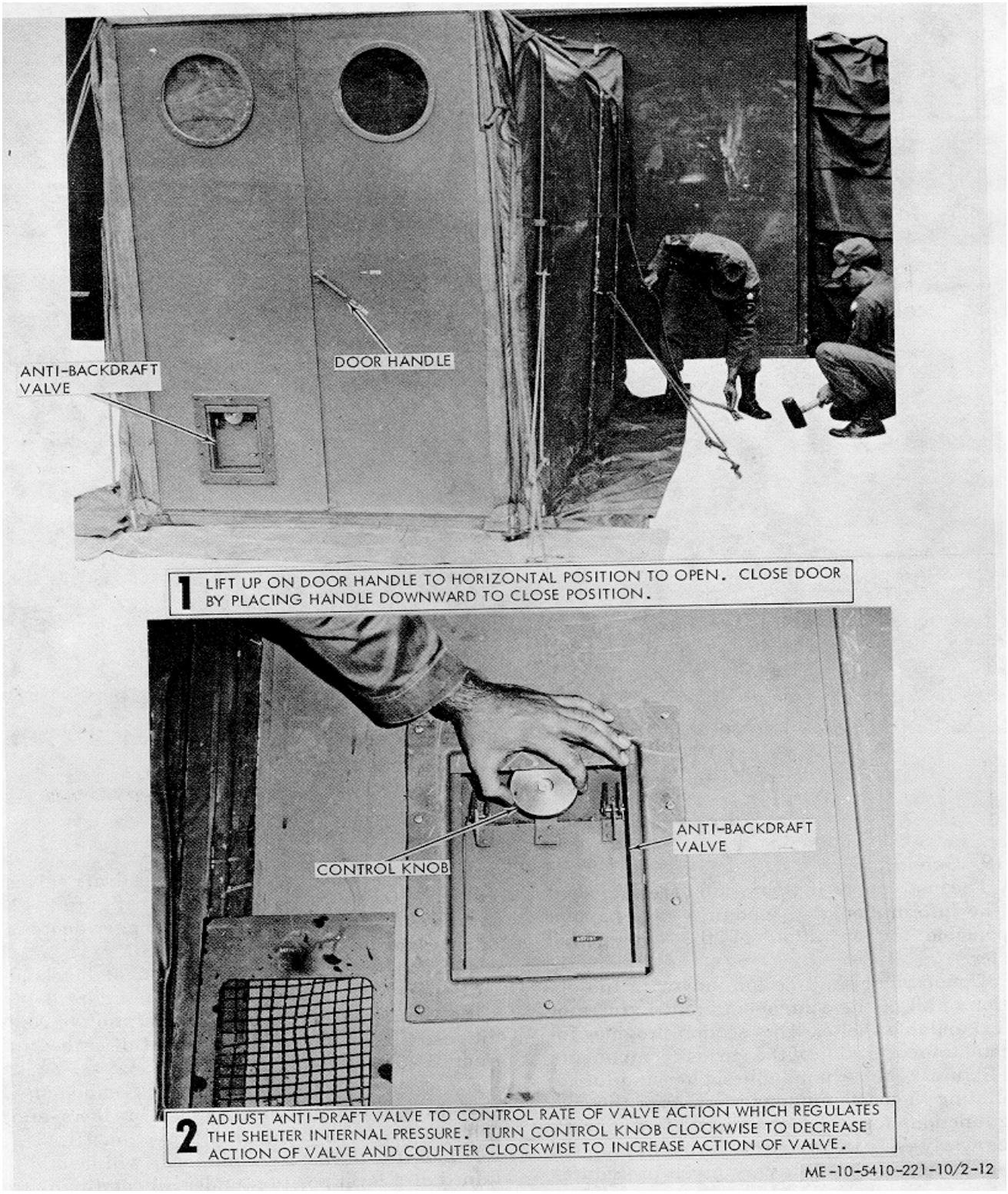


Figure 2-12. Operation of airlock door handles and anti-backdraft valve.

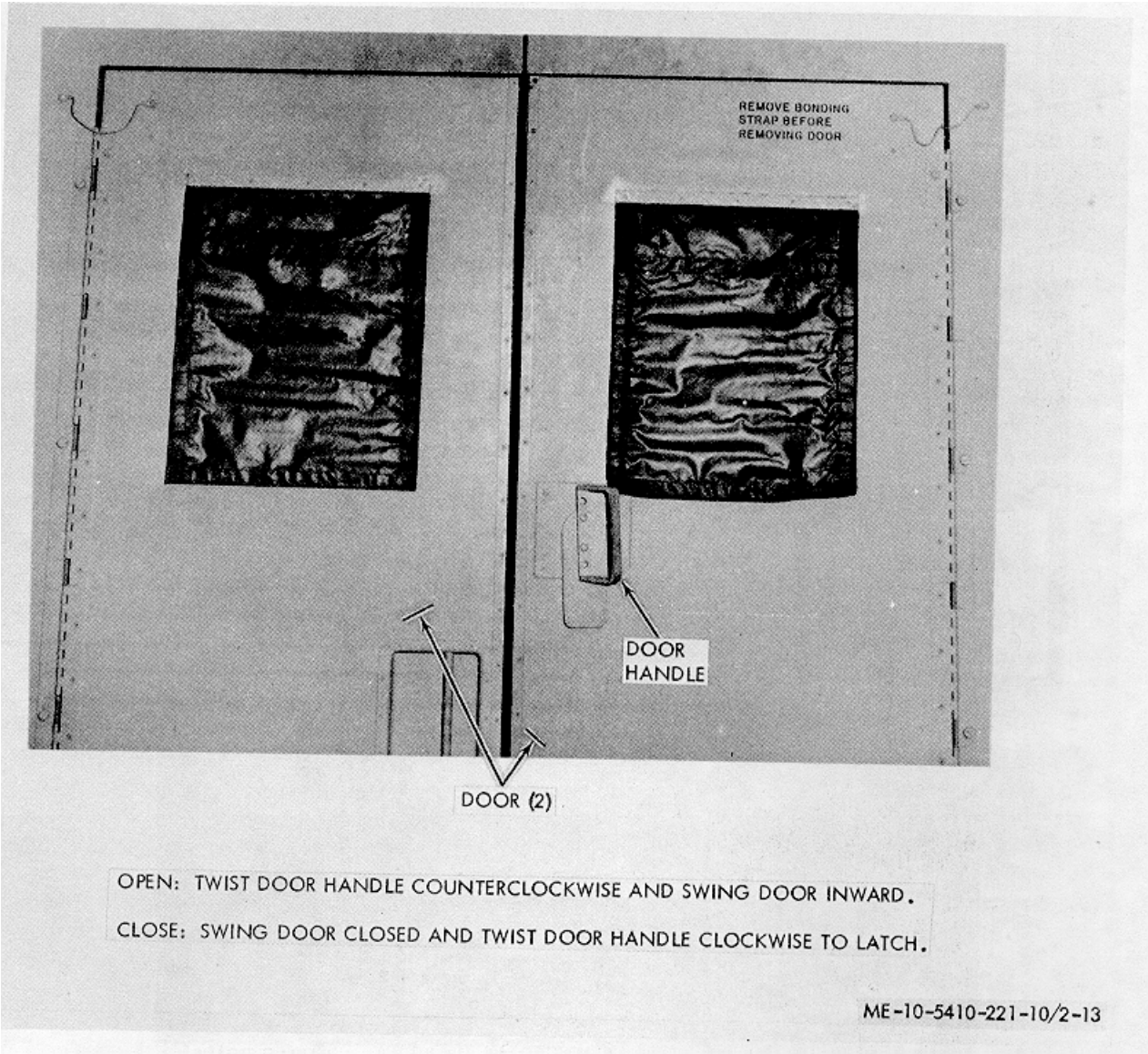


Figure 2-13. Operation of shelter door.

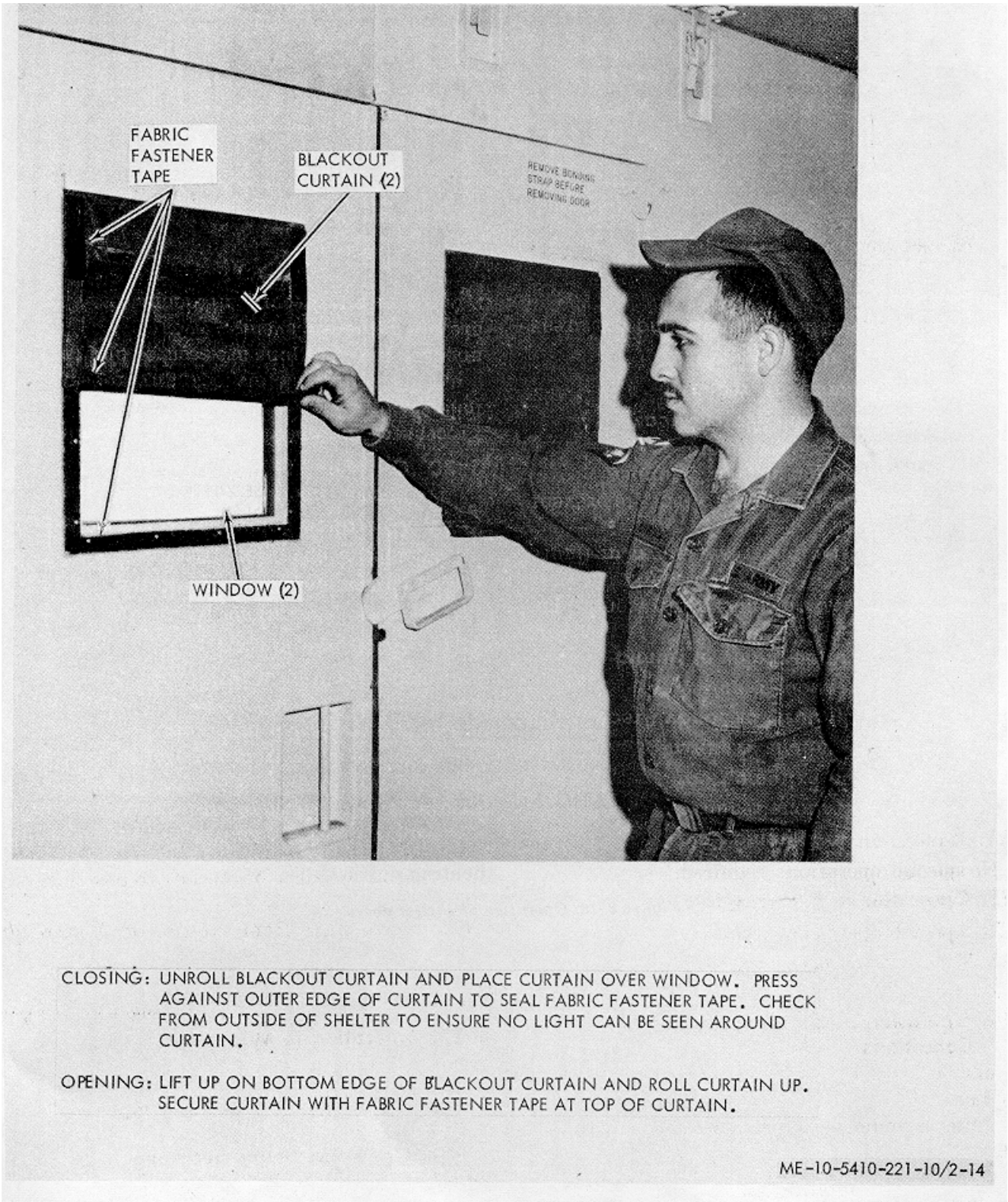


Figure 2-14. Operation of blackout curtains.

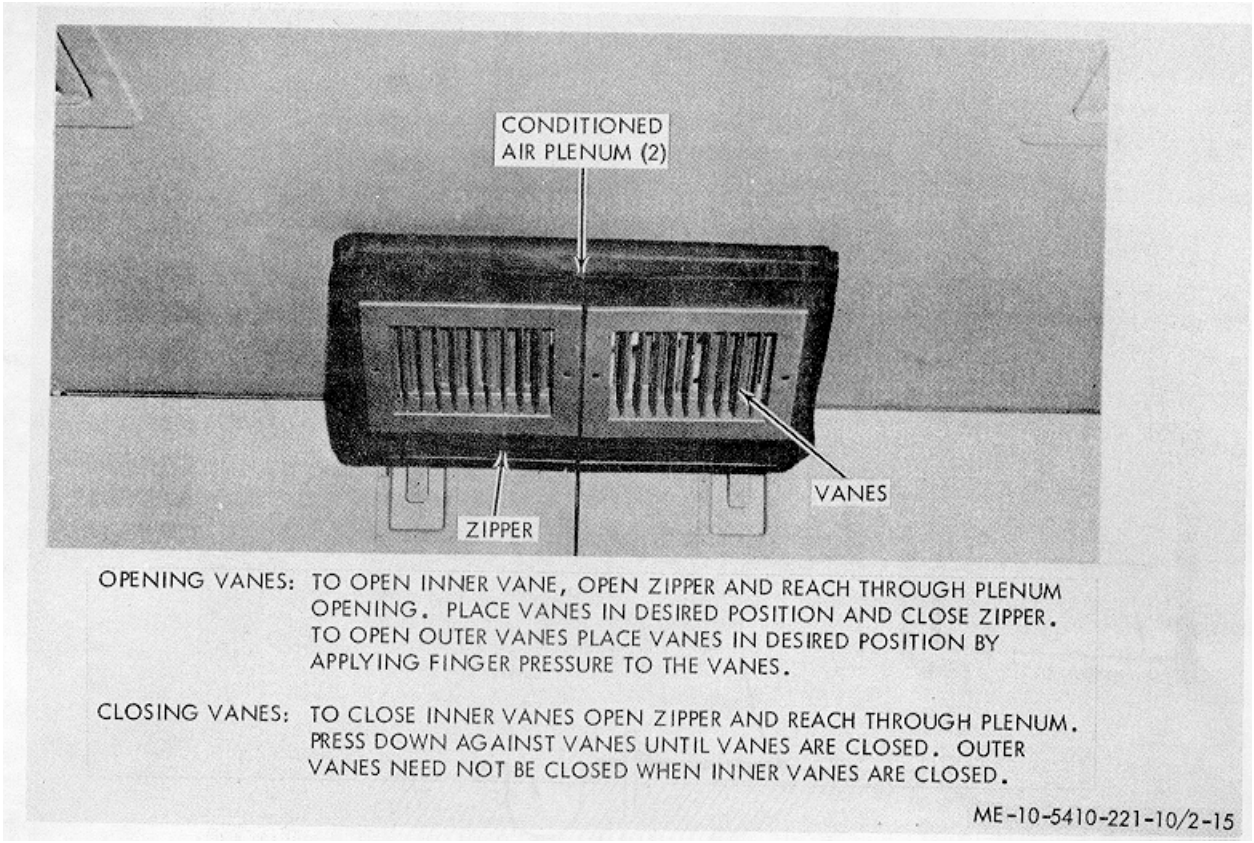


Figure 2-15. Operation

Section V. OPERATION UNDER UNUSUAL CONDITIONS

2-21. Operation in Extreme Cold

No special operations required.

2-22. Operation in Extreme Heat

No special operations required.

2-23. Operation in Dusty or Sandy Areas

No special operations required.

2-24. Operation Under Rainy or Humid Conditions

Procedures for operation under rainy conditions as follows.

a. Ditch around periphery as shown in figure 2-16.

b. Provide adequate drainage ditches to prevent standing water entering air-lock chamber.

c. Close and secure all doors.

2-25. Operation in Salt Water Areas

No special operations required.

2-26. Operation in Snow and Ice

Procedures for operation in snow and ice areas as follows.

a. Apply bleed air and/or hot air from utility heating unit to fabric of air-lock to assist in erection.

b. Remove snow from exterior of shelter with a soft bristled brush or broom.

c. Remove ice build-up by applying bleed air and/or hot air from utility heating unit.

2-27. Operation in Mud

No special operations required.

2-28. Operation at High Altitudes

No special operations required.

2-29. Operation Below Sea Level

No special operations required.

2-30. Operation in High Winds

Procedures for operation in high winds are as follows.

a. Check that all air-lock guy ropes, ground anchors, and tent pins are secured and that ropes are all tightened evenly.

b. Close and secure all doors.

c. Place sand bags, sod, or other available material on air-lock sod cloth around periphery of air-lock.

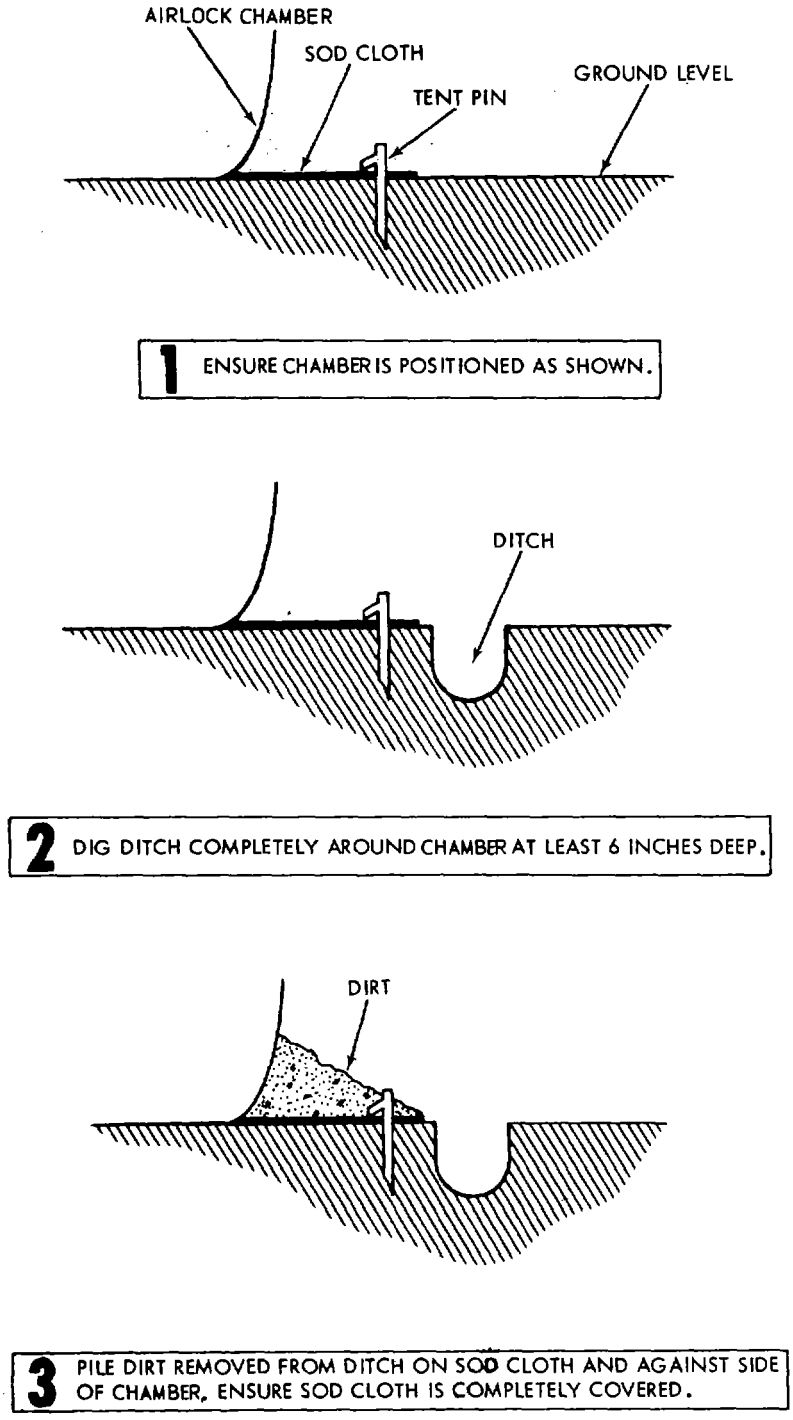


Figure 2-16. Preparation for rain.

CHAPTER 3

OPERATOR'S MAINTENANCE INSTRUCTIONS

Section I. OPERATOR'S TOOLS AND EQUIPMENT

3-1. Tools and Equipment

No special tools or equipment are required by operator/crew personnel for maintenance of the expandable shelter.

Section II. LUBRICATION

3-2. Lubrication

Lubrication of the expandable shelter shall consist of lubrication of zipper with zipper ease.

Section III. PREVENTIVE MAINTENANCE CHECKS AND SERVICES

3-3. General

To ensure that the expandable shelter is ready for use at all times, it must be inspected systematically so that defects may be discovered and corrected before they result in serious damage or failed before they result in serious damage or failure.

The necessary preventive maintenance services graphs 3-4 and 3-5. The item numbers indicate the sequence of minimum inspection requirements. Defects discovered during use of the shelter will be noted for future correction, to be made as soon as use is discontinued. Stop use immediately if a deficiency is noted which would damage the shelter if use were continued. All deficiencies and shortcomings will be recorded together with the corrective action taken, on DA Form 2404 at the earliest possible opportunity.

3-4. Daily Preventive Maintenance Services

Daily preventive maintenance and services which must be performed by operator/crew are contained in table 3-1. The item numbers are listed consecutively and indicate the sequence of minimum inspection requirements. Refer to table 3-1 for the daily preventive maintenance services.

3-5. Weekly Preventive Maintenance Services

Weekly preventive maintenance and services which must be performed by operator/crew are contained in table 3-1. The item numbers are listed consecutively and indicate the sequence of minimum inspection requirements. Refer to table 3-1 for the weekly preventive maintenance services.

Table 3-1. Preventive Maintenance Checks and Services

	Interval						B - Before Operation D - During Operation	A - After Operation W - Weekly	M - Monthly Q - Quarterly
	Operator				Org				
Item number	Daily			W	M	Q	Item to be Inspected	Procedure	Reference
	B	D	A						
1	X	X	X	X			GUY ROPES AND CABLE ASSEMBLIES	Check for even tension and for fraying or breaks. Tighten or replace guy ropes or cable assemblies as required.	
2	X	X	X	X			TENT PINS AND GROUND ANCHORS	or anchors as required.	Check for secure installation reinstall pin
3	X	X	X				CONDITIONED AIR DUCTS	Check air ducts for secure attachment and for holes, tears or other damage .	
4	X	X		X			ELECTRICAL CONNECTIONS	Check for secure installation of electrical connections.	

Table 3-1. Preventive Maintenance Checks and Services-Continued

Item number	Interval: Operator Daily B	Operator Daily D	Operator Daily A	Interval: Org W	Org M	Org Q	Item to be Inspected	Procedure	Reference
	B - Before Operation	D - During Operation	A - After Operation	W - Weekly	M - Monthly	Q - Quarterly			
5		X	X	X			PLUMBING CONNECTIONS	Check for secure installation of plumbing connections.	
6				X			SHELTER FABRIC	Check fabric inside and outside of airlock for wear at seams, for broken stitches, for holes, for weak spots, or other damage to fabric.	
7				X			ZIPPERS	Check zippers for smooth operation, complete closure, missing teeth, unstitched seams, or other damage, apply zipper ease to zipper teeth for lubrication.	
8				X			FABRIC FASTENER TAPE	Check for damage and unstitched seams.	
9				X			ELECTRICAL SYSTEM	Check all electrical connections, cables, receptacles, circuit breakers and light assemblies for damage, burned contacts or insulation. Check light assemblies for burned or weak tubes.	
10				X			PLUMBING SYSTEM	Check all lines and fittings for leaks, or other damage, check pump and float switch operation.	
11				X			BELLOWS ADAPTER	Check fabric inside and outside of bellows for wear at seams, for fabric stitches, for holes, for weak spots, or other damage.	
12		X	X	X			SUMP CONTAINER	Remove sump screen, clean and reinstall.	

Section IV. OPERATOR'S MAINTENANCE

3-6. General

Operator/crew are not authorized to repair or replace parts of the expandable shelter. All damage requiring repair or replacement shall be reported to organizational maintenance. Deviations may be authorized by the Commanding officer to meet his operational requirements.

Section V.

3-7. General

This section provides information useful in diagnosing and correcting unsatisfactory operation or failure of the expandable shelter and its components. Malfunctions which may occur are listed in table 3-2. Each malfunction stated is followed by a list of probably causes of the trouble. The corrective action recommended is described opposite the probable cause.

Table 3-2. Troubleshooting

1. Water leakage into shelter	a. Weather seal assemblies damaged	a. Report discrepancy to organizational maintenance.
	b. Loose or improperly positioned assemblies	b. Position seal assemblies to cover joints in shelter and secure
2. Circuit breaker tripped	a. Eelectrical overload in circuit	a. Check circuit for overload condition and shorts, remove overload condition and reset circuit breaker.
	b. Circuit breaker malfunction	b. Report discrepancy to organizational maintenance.

Table 3-2. Troubleshooting-Continued

Malfunction	Probable cause	Corrective action
3. No electrical power inside shelter	a. Circuit breaker tripped	a. Check circuit for overload condition and shorts, remove overload condition and reset circuit breaker.
	b. External power source not connected	. b. Connect external power source.
4. No hot water or cold water inside shelter	a. External water source not connected.	a. Connect water hoses to water source
	b. Dual water hose heater or water tunnel heater circuit breaker tripped	connection. b. Remove and clean screen.
	condition and reset circuit breaker.	c. Check circuit for overload condition and shorts, remove overload
		a. Clean drain hose and lines.
5. Waste water will not drain or drains slowly	a. Drain hose or lines clogged	a. Clean drain hose and lines.
	b. Filter screen in sump dirty	b. Remove and clean screen.
	c. Sump pump circuit breaker tripped	c. Check circuit for overload condition and shorts, remove overload condition and reset circuit breaker.
	d. Check valve or sump defective	d. Report discrepancy to organizational maintenance.
	e. Water tunnel heater or drain hose heater circuit breaker tripped	e. Check circuit for overload condition and shorts, remove overload
	f. Drain hose heater defective	f. Report discrepancy to organizational maintenance.

Section VI. FIELD EXPEDIENT REPAIRS

3-8. General

Operator/crew maintenance troubles may occur while the expandable shelter is operation in the field where supplies and repair parts are not available and normal corrective action cannot be performed. When this condition exists, the following expedient repairs may be used in emergencies, upon the decision of the unit commander. Equipment so repaired must be removed from operation as soon as possible and properly repaired before being placed in operation again.

3-9. Torn or Otherwise Damaged Fabric or Fasteners

Damaged fabric ----------	Repair damage with adhesive tape or other sealant material until normal repairs can be made.
Damaged or missing fastener.	Use rope, cord, wire or other available material to replace fastener.

CHAPTER 4

SHIPMENT AND LIMITED STORAGE AND DEMOLITION TO PREVENT EN'EMY USE

Section I. SHIPMENT AND LIMITED STORAGE

4-1. General
This section provides instructions for handling, shipment, and limited storage of the expandable shelter.

4-2. Inspection
The shelters and components shall be inspected as specified in chapter 2, section I, 2-2.

4-3. Cleaning and Drying
Cleaning and drying by an approved technique is the first essential procedure in any effective preservation process. Approved methods of cleaning and drying, type of preservatives, and methods of application are described in TM-38-230.

4-4. Shelter Components
Components shall be placed and secured 'in the shelter to prevent movement during shipment.

4-5. Marking
Marking shall be in accordance with MIL-STD129.

4-6. Handling
a. Hoisting. Attach a hoisting sling 9,000 pound minimum capacity to the four hoist rings (fig. 4-1). Secure hoisting sling to a crane or other hoisting device capable of hoisting a minimum of 9,000 pounds and hoist to the desired location.

Warning: **Do not use lifting equipment with capacity of less than 9,000 pounds. Do not allow shelter to swing back and forth when it is suspended. Failure to observe this warning may result in damage to equipment or severe injury or death to personnel.**

Caution: **Do not attach hoisting sling to the lifting equipment in such a manner that the angle between any of the hoist lines and the top of the shelter is less than 45 degrees. Any angle less than 45 degrees will cause an excessive strain, which could damage the shelter.**

b. Fork Lift. Position the fork lift, 9,000 pound minimum capacity, at the lift points designated on the shelter and shown in figure 4-1 and lift shelter for loading or transport for short distances.

Caution: **Fork extensions are required for fork lifting the shelter in order to prevent damage to the raceways located on the underside of the shelter.**

Warning: **Do not use fork lift with capacity of less than 9,000 pounds. Do not allow shelter to rock excessively on fork lift. Failure to observe this warning may result in damage to equipment, or severe injury, or death to personnel.**

c. Skidding. Attach a cable or chain sling to towing rings identified on the shelter and shown in figure 4-1 and connect to suitable equipment for skidding the shelter.

Caution: **Limit skidding of the shelter to short distances over smooth level terrain to prevent damage to shelter skids.**

4-7. Shipment
The expandable shelter may be transported by airplane, helicopter, ship, truck, or train. Various tie down and hoisting rings identified on the shelter and shown in figure 4-1 may be used to secure the shelter to the transport equipment. Refer to American Railroads Operation and Maintenance Loading of Commodities on Open Top Flat Cars (sec. 4, fig. 1A) for blocking and tie down procedures when shipment is by railroad flatcar.

Caution: **Position shelter with skid base parallel to the longitudinal axis of the carrier to prevent excessive side loads on the skids. Make sure the carrier and restraining methods are capable of supporting a weight of 9,000 pounds minimum.**

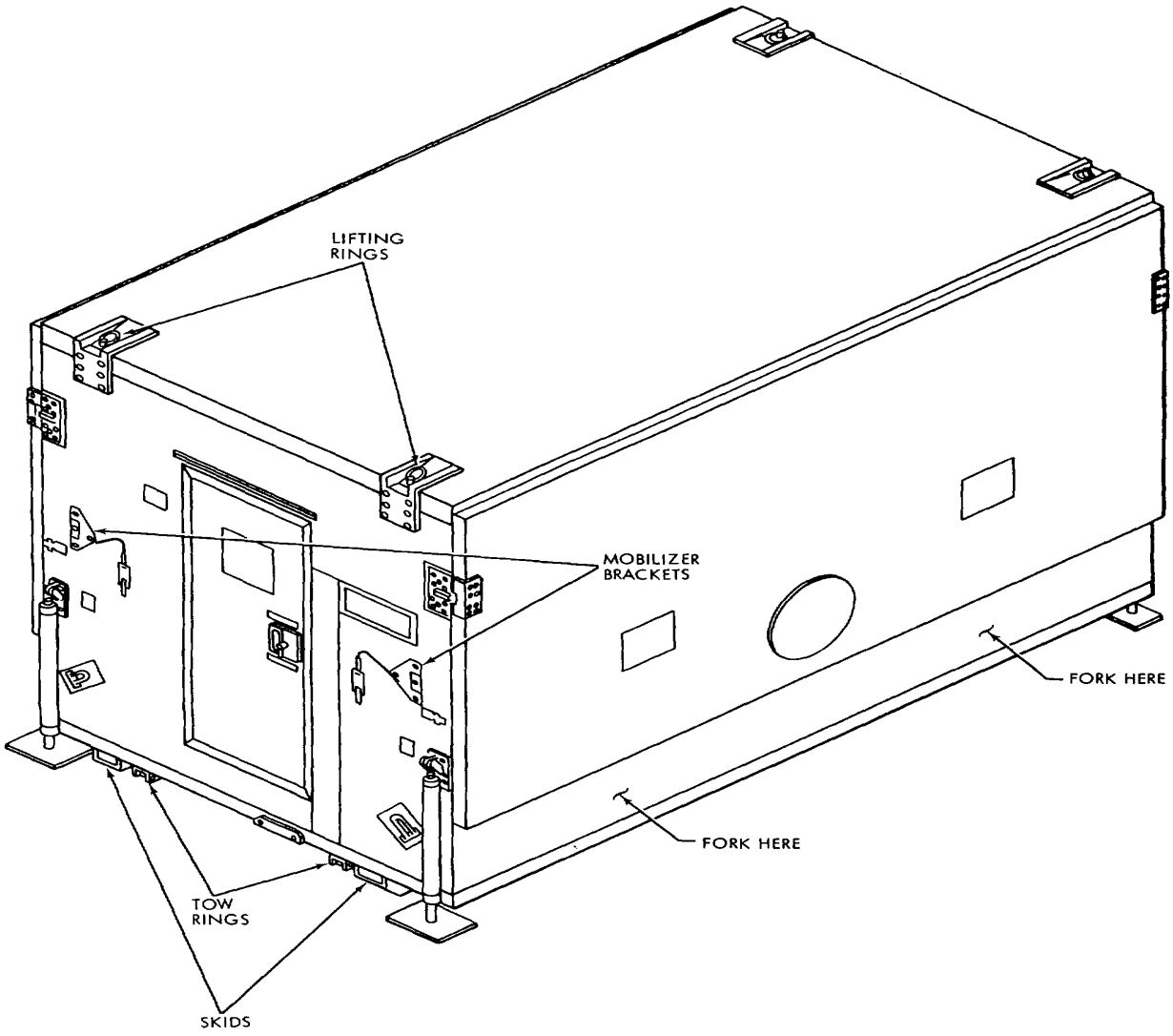


Figure 4-1. Shelter handling points.

4-8. Limited Storage

a. General. Every effort should be made to provide covered storage for the expandable shelter. If this is impossible, select a firm, level, well drained storage location, protected from prevailing winds. Position the shelter on heavy planking. Cover the shelter with a tarpaulin or other suitable waterproof covering and secure in a

manner that will provide the shelter maximum protection from the elements.

b. Preparation for Limited Storage. The following items shall be performed prior to folding the shelter for limited storage.

(1) Drain all water from equipment in shelter.

(2) Disconnect dual water hose assembly from water service box and from water outlet box as applicable. If provided, disconnect heater receptacles on hoses from power receptacles. Drain and store hoses. Install covers on all connections and on hose assemblies.

(3) Disconnect telephone inlet line from telephone jack.

(4) Disconnect 400 Hertz and 6 Hertz cables from power inlet receptacles and from power outlet box as applicable. Disconnect emergency light power supply, if indicated. Store cables and power supply.

(5) If applicable, disconnect surgery light power supply and humidistat.

(6) Detach, disassemble, and stack for storage all equipment in accordance with instructions on instruction placard located on side of access door. Secure equipment with applicable tie down apparatus in accordance with instructions placard.

(7) Disconnect and store conditioned air system components.

Section II. DEMOLITION 1

4-9. Authority

The expandable shelter will be destroyed only if it is in danger of being captured and used by the enemy, and only upon the order of the unit commander.

4-10. Method

a. Destroy the same parts on all similar equipment to prevent enemy use through cannibalization.

(1) Use sledge hammers, axes, crowbars, or any other heavy tools to smash the components.

(2) Slash electrical wires, cables, cords, hose, and fabric.

(3) Remove easily removable assemblies.

(4) Punch holes in sump drain.

(5) Destroy electrical controls and lights.

(6) If a stream is nearby, throw loose parts into the water. Bury or scatter remaining parts.

b. If demolition explosives are available, charges should be placed in the following areas.

(1) Inside shelter.

(2) Inside water service box.

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Chief of Staff.

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