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TECHNICAL MANUAL

OPERATOR'S MANUAL

FOR

**MOBILE INTEGRATED REMAINS
COLLECTION SYSTEM (MIRCS)**

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HEADQUARTERS, DEPARTMENT OF THE ARMY

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WARNING SUMMARY

This warning summary contains general safety warnings and hazardous material warnings that must be understood and applied during operation and maintenance of this equipment. Failure to observe these precautions could result in serious injury or death to personnel. For first aid instructions see FM 4-25.11.

EXPLANATION OF SAFETY WARNING ICONS



ELECTRICAL - electrical wire to hand with electricity symbol running through hand shows that shock hazard is present.



EYE PROTECTION - person with goggles shows that the material will injure the eyes.



HEAVY OBJECT - human figure stooping over heavy object shows physical injury potential from improper lifting technique.



HEAVY PARTS - heavy object on human figure shows that heavy parts present a danger to life or limb.



HEAVY PARTS - heavy object pinning human figure against wall shows that heavy, moving parts present a danger to life or limb.



HOT AREA - hand over object radiating heat shows that part is hot and can burn.



MOVING PARTS - hand with fingers caught between gears shows that the moving parts of the equipment present a danger to life or limb.

GENERAL SAFETY WARNING DESCRIPTIONS**WARNING**

The Mobile Integrated Remains Collection System (MIRCS) requires 208VAC, 3-phase, and 110VAC, single phase, 50-60Hz electrical power to operate the various subsystems. Only maintenance personnel, shall conduct servicing, beyond troubleshooting on electrical controls and circuits. Contact with energized connections will result in serious personal injury or death.

The MIRCS generator or shore power source must be electrically grounded. Do not stand in water while handling live power cords or electrical shock may result. Position all power cables so that they are out of the way during operation and are not lying in the water. Failure to establish electrical ground may result in equipment damage, serious injury or death from electrical malfunction.

WARNING

The MIRCS contains rotating and vibrating equipment. Personnel must keep their hands, feet, clothing, and loose personal items clear while equipment is operating. Failure to follow this warning may result in serious personal injury or death.

WARNING

This equipment generates high temperatures during operation. RU and generator engine exhaust temperatures can reach 600°F. Surface temperatures of the air flow ducts can reach 150°F. Hot water tank and water plumbing temperatures can reach 140°F. Avoid contact with hot equipment surfaces. Failure to follow this warning may result in serious burn injury or death to personnel.

WARNING

Precautions must be taken when working with pressurized (water or hydraulic) systems. Residual pressure must be vented or isolated to prevent release before hoses, fittings, or equipment are connected or disconnected. Failure to follow this warning may result in personal injury or death.

WARNING

Fall hazards exist when climbing onto or working from the top of MIRCS. Always maintain three point contact with the fold down steps or ladder when climbing onto the container. All movement should be in the forward direction. Never move, step, or walk backwards when working on top of the system. Stand erect only if necessary and only away from the edge. Working from a kneeling position helps reduce the threat of a fall. Failure to follow the precaution may result in severe injury or death.

GENERAL SAFETY WARNING DESCRIPTIONS—CONTINUED**WARNING**

Keep hands and fingers away from hinge points on ladder when extending and retracting. Never climb on ladder unless footings are placed securely upon ground, and/or ladder is placed securely upon equipment to prevent slipping. Failure to observe this precaution may result in severe personal injury.

WARNING

Before moving the MIRCS, ensure that all loose equipment is properly stowed and that nothing will drag on the ground. Failure to follow this warning may result in injury to personnel or damage to equipment.

WARNING

Compressed air used for cleaning or drying purposes, or for clearing restrictions, should never exceed 30 psi (207 kPa). Wear protective clothing (goggles/shield, gloves, etc.), and use caution to avoid injury to personnel.

EXPLANATION OF HAZARDOUS MATERIAL ICONS

BIOLOGICAL - abstract symbol bug shows that a material may contain bacteria or viruses that present a danger to life



CHEMICAL - drops of liquid on hand shows that the material will cause burns or irritation to human skin or tissue.



EXPLOSION - rapidly expanding symbol shows that the material may explode if subjected to high temperatures, sources of ignition or high pressure.



FIRE - flame shows that a material may ignite and cause burns.



POISON - skull and crossbones shows that a material is poisonous or is a danger to life.



VAPOR - human figure in a cloud shows that material vapors present a danger to life or health.

GENERAL HAZARDOUS MATERIALS DESCRIPTIONS

WARNING



The fuel, JP-8 or DF-2, used in the MIRCS is a combustible liquid. Vapors and liquid may ignite or explode. Do not smoke or use open flames when connecting fuel hoses, refueling, or when performing maintenance. Flames and fire can occur resulting in severe burns, personal injury, or death.

Fuels are toxic. Wear eye/face and hand protection during the fueling operations, avoiding contact with skin and clothes, and don't breathe vapors. If contact with eyes or skin is made, immediately flush with clean water and get medical aid for eyes. If contact with clothing or skin is made, immediately remove contaminated clothing and clean skin with mild soap or cleanser and flush with clean water. Failure to follow the precaution may result in server injury or illness.

WARNING



Exhaust discharge contains deadly gases. Do not operate the MIRCS in an enclosed area unless exhaust discharge of the RU and generator engines is properly vented outside. Severe personal injury or death due to carbon monoxide poisoning could result.

WARNING



Bleach and other sanitizers used with the MIRCS are irritants. Operators must refer to Material Safety Data Sheets for pertinent information. Impermeable gloves and eye protection must be worn when handling or dispensing these items. Failure to follow this warning may result in personal illness or injury.

WARNING



Waste water generated during MA operations may contain chemical and/or bio-hazardous materials. When sanitizing equipment or maintaining or servicing water plumbing or associated components, personnel must wear impermeable gloves and goggles for protection. Failure to follow this warning may result in serious illness or death to personnel.

WARNING

Improper cleaning methods and use of unauthorized cleaning liquids or solvents can injure personnel and damage equipment. To prevent this, refer to TM 9-247 for further instructions.

LIST OF EFFECTIVE PAGES/WORKPACKAGES

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WASHINGTON, D.C., XX MONTH XXXX

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REPORTING 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 or DA Form 2028 (Recommended Changes to Publications and Blank Forms), located in the back of this manual directly to: Commander, U.S. Army TACOM Life Cycle Management Command, ATTN: AMSTA-LC-LMPP / TECH PUBS, 1 Rock Island Arsenal, Rock Island, IL 61299-7630. You may also send in your recommended changes via electronic mail or by fax. Our fax number is DSN 793-0726 and commercial number (309) 782-0726. Our e-mail address is TACOMLCMC.DAForm2028@us.army.mil. A reply will be furnished to you.

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HOW TO OBTAIN TECHNICAL MANUALS

When a new system is introduced to the Army inventory, it is the responsibility of the receiving units to notify and inform the Unit Publications Clerk that a Technical Manual is available for the new system. Throughout the life cycle of the new system, the Publications Proponent will also provide updates and changes to the Technical Manual.

To receive new Technical Manuals or change packages to fielded Technical Manuals, provide the Unit Publications Clerk the full Technical Manual number, title, date of publication, and number of copies required. The Unit Publications Clerk will then justify the request through the Unit Publications Officer. When the request is approved, DA Form 12-R is used to order the Technical Manual from the Army Publishing Directorate (APD). Obtain the form and request a publications account from the APD Web site at <http://www.apd.army.mil>. Once on the Website, click on the "Orders/Subscriptions/Reports" tab. From the dropdown menu, select "Establish an Account," then select "Tutorial" and follow the instructions in the tutorial presentation.

Complete information for obtaining Army publications can be found in DA PAM 25-33.

ORGANIZATION OF THIS MANUAL

In this manual, primary chapters appear in upper case/capital letters; work packages are presented in numeric sequence, e.g., 0001; paragraphs within a work package are not numbered and are presented in a titles format. For a first level paragraph title all upper case/capital letters, e.g., INTRODUCTION, the next subordinate paragraph title will have the first letter of the first word and of each principle word all upper case/capital letters, e.g., RU Operation in Cooling Mode. The location of additional material that must be referenced is clearly marked. Figures supporting maintenance procedures/text are located as close as possible to their references.

FRONT MATTER. Front matter consists of front cover, warning summary, title block, table of contents, and HOW TO USE THIS MANUAL PAGE.

CHAPTER 1 – INTRODUCTION. Chapter 1 contains general information, equipment description, and theory of operation.

CHAPTER 2 – OPERATOR INSTRUCTIONS. Chapter 2 contains a description and use of operator controls and indicators, operating procedures under usual conditions, and operating procedures under unusual conditions.

CHAPTER 3 – TROUBLESHOOTING PROCEDURES. Chapter 3 contains general troubleshooting information, a troubleshooting index, and troubleshooting procedures authorized at operator level.

CHAPTER 4 – PMCS MAINTENANCE INSTRUCTIONS. Chapter 4 provides preventive maintenance checks and services (PMCS) and lubrication instructions.

CHAPTER 5 – MAINTENANCE INSTRUCTIONS. Chapter 5 provides maintenance procedures authorized at crew level.

CHAPTER 6 – SUPPORTING INFORMATION. Chapter 6 contains references, components of end item (COEI) list, basic issue items list (BII) list, additional authorization list (AAL), and expendable and durable items list.

REAR MATTER – Rear matter consists of alphabetical index, DA Form 2028, authentication page, and back cover.

CHAPTER 1

**GENERAL INFORMATION, EQUIPMENT DESCRIPTION
AND THEORY OF OPERATION
FOR
MOBILE INTEGRATED REMAINS
COLLECTION SYSTEM (MIRCS)**

CREW MAINTENANCE GENERAL INFORMATION

SCOPE

This manual contains instructions for operation, troubleshooting, PMCS and maintenance procedures for the Mobile Integrated Remains Collection System (MIRCS).

Type of Manual: Operator.

Model Number and Equipment Names: Mobile Integrated Remains Collection System

Purpose of Equipment: The system is used to store and transport human remains and to provide personnel with work areas to conduct operations associated with mortuary affairs (MA).

MAINTENANCE FORMS, RECORDS, AND REPORTS

Department of the Army forms and procedures used for equipment maintenance will be those prescribed by (as applicable) DA PAM 750-8, The Army Maintenance Management System (TAMMS) Users Manual; DA PAM 738-751, Functional Users Manual for the Army Maintenance Management System-Aviation (TAMMS-A); or AR 700-138, The Army Logistics Readiness and Sustainability.

REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR)

If your MIRCS 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 or performance. If you have Internet access, the easiest and fastest way to report problems or suggestions is to go to <https://aeprs.ria.army.mil/aeprspublic.cfm> (scroll down and choose the "Submit Quality Deficiency Report" bar). The Internet form lets you choose to submit an Equipment Improvement Recommendation (EIR), a Product Quality Deficiency Report (PQDR or a Warranty Claim Action (WCA). You may also submit your information using an SF 368 (Product Quality Deficiency Report). You can send your SF 368 via e-mail, regular mail, or facsimile using the addresses/facsimile numbers specified in DA PAM 750-8, The Army Maintenance Management System (TAMMS) Users Manual. We will send you a reply.

HAND RECEIPT MANUALS

This manual has a companion document with a TM number followed by "-HR" (which stands for Hand Receipt). TM 10-4110-263-10-HR consists of preprinted hand receipts that list end item related equipment (i.e., COEI, BII, and AAL) that must be accounted for. As an aid to property accountability, additional HR manuals may be requisitioned through normal publication channels.

CORROSION PREVENTION AND CONTROL (CPC)

Corrosion Prevention and Control (CPC) of Army materiel is a continuing concern. It is important that any corrosion problems with this item be reported so that the problem can be corrected and improvements can be made to prevent the problem in future items.

While corrosion is typically associated with rusting of metals, it can also include deterioration of other materials, such as rubber and plastic. Unusual cracking, softening, swelling, or breaking of these materials may be a corrosion problem.

If a corrosion problem is identified, it can be reported using Standard Form (SF) 368, Product Quality Deficiency Report. Use of keywords such as "corrosion," "rust," "deterioration," or "cracking" will ensure that the information is identified as a CPC problem.

The form should be submitted to the address specified in DA PAM 750-8, The Army Maintenance Management System (TAMMS) User's Manual.

OZONE DEPLETING SUBSTANCES

The MIRCS does not contain any ozone depleting substances.

DESTRUCTION OF ARMY MATERIEL TO PREVENT ENEMY USE

References to “destruction of Army materiel to prevent enemy use” are contained in TM 750-244-3.

PREPARATION FOR STORAGE AND SHIPMENT

For short-term (less than 3 months) storage or intra-theater shipment follow PREPARATION FOR MOVEMENT (WP 0012). For long-term storage or intermodal shipment of MIRCS as an ISO container follow guidance provided below.

NOTE

In order to remove rollers the MIRCS rear end must be lifted slightly to take the weight off of the rollers.

1. Raise MIRCS rear using roadside stowed leveling jacks following procedures in WP 0008.
2. Remove container rollers (Figure 1, Item 3) as follows:
 - a. Pull clip (Figure 1, Item 2) out of hitch pin (Figure 1, Item 4).
 - b. While holding roller (Figure 1, Item 3) pull hitch pin (Figure 1, Item 4) out of support bracket (Figure 1, Item 1).
 - c. Remove roller (Figure 1, Item 3) from between support bracket (Figure 1, Item 1) then reinsert hitch pin (Figure 1, Item 4) back into support bracket.
 - d. Reinsert clip (Figure 1, Item 2) back into hitch pin (Figure 1, Item 4).
 - e. Repeat steps a through e for other roller.
3. Stow container rollers (Figure 1, Item 3) as follows:
 - a. Pull clip (Figure 1, Item 6) out of rod (Figure 1, Item 5).
 - b. Insert rollers (Figure 1, Item 3) onto rod (Figure 1, Item 5).
 - c. Reinsert clip (Figure 1, Item 6) back into rod (Figure 1, Item 5) to secure rollers (Figure 1, Item 3).
4. Stow leveling jack feet, ladder and leveling jacks following procedures in WP 0008.

PREPARATION FOR STORAGE AND SHIPMENT-CONTINUED

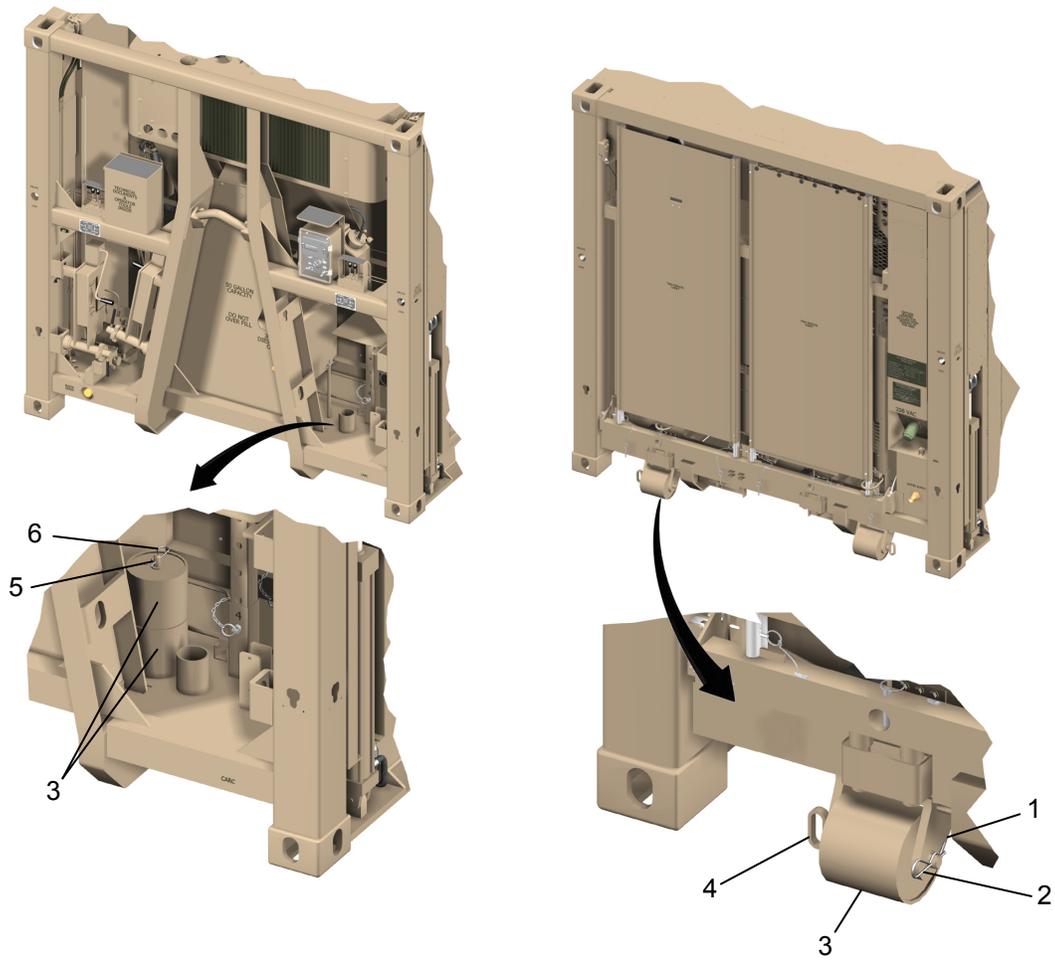


Figure 1. Container Roller Removal and Storage.

PREPARATION FOR STORAGE AND SHIPMENT-CONTINUED

CAUTION

The MIRCS lighting circuit contains leak paths that will drain the 12 volt battery. Always position RU RUN/STOP switch to STOP during extensive periods of non-use to ensure battery is ready for operation.

5. Position RUN/STOP switch (Figure 2, Item 3) to STOP.
6. Remove RU exhaust extension (Figure 2, Item 1) and store in operator tool box (Figure 2, Item 8).
7. Install protective cover (Figure 2, Item 7) over RU (Figure 2, Item 2) as follows:
 - a. Place cover (Figure 2, Item 7) on top of RU (Figure 2, Item 2) and unfold.
 - b. Insert straps (Figure 2, Item 5) through loops (Figure 2, Item 4) on top, front, and sides of RU (Figure 2, Item 2).
 - c. Slide straps (Figure 2, Item 5) into buckles (Figure 2, Item 6) then evenly pull straps tight.
 - d. Fold cover (Figure 2, Item 7) under RU (Figure 2, Item 2) then insert straps (Figure 2, Item 5) through buckles (Figure 2, Item 6) and tighten.

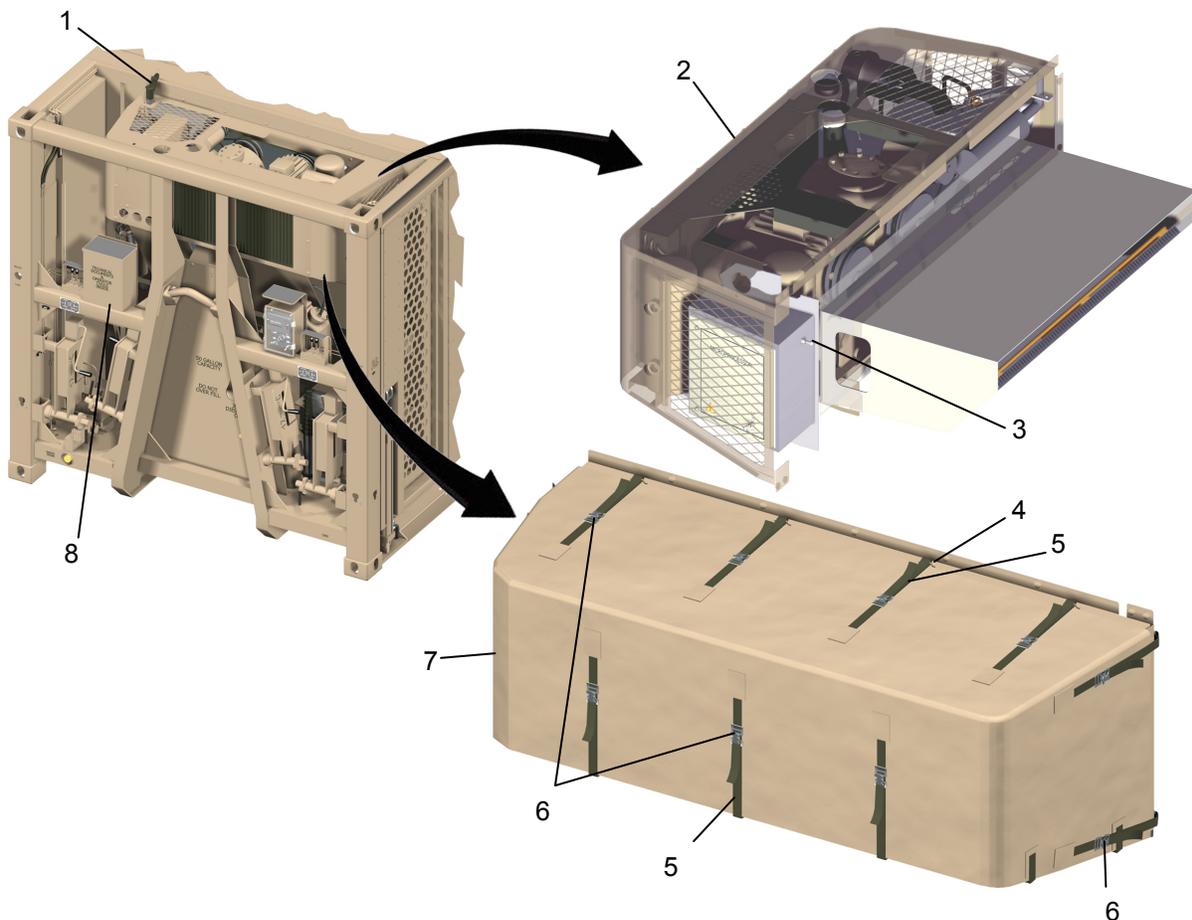


Figure 2. RU Preparation and Cover Installation.

PREPARATION FOR STORAGE AND SHIPMENT-CONTINUED

8. Remove ramps and deploy generator following procedures in WP 0008.
9. Ensure cap (Figure 3, Item 8) is installed on ECU outside air duct (Figure 3, Item 2).
10. Install protective cover (Figure 3, Item 7) over ECU (Figure 3, Item 1) as follows:
 - a. Starting at rear of ECU (Figure 3, Item 1) insert straps (Figure 3, Item 4) through loops (Figure 3, Item 5).
 - b. At front of ECU (Figure 3, Item 1) insert straps (Figure 3, Item 4) through loops (Figure 3, Item 5).
 - c. Slide straps (Figure 3, Item 4) into buckles (Figure 3, Item 3) then evenly pull straps tight.
 - d. Fold flaps (Figure 3, Item 6) over side of ECU (Figure 3, Item 1) then insert straps (Figure 3, Item 4) through buckles (Figure 3, Item 3) and tighten.
11. Stow generator and ramps following procedures in WP 0012.

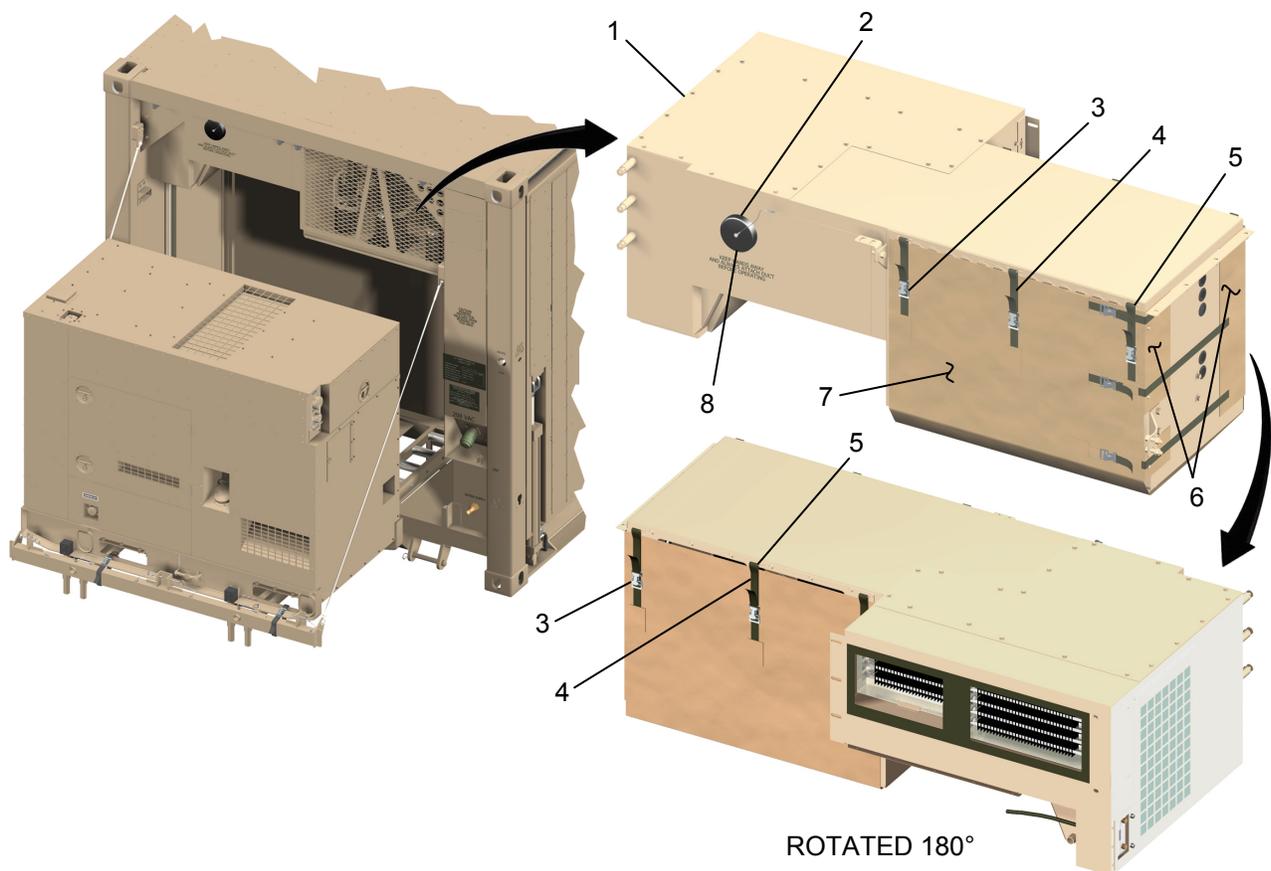


Figure 3. ECU Cover Installation.

WARRANTY INFORMATION

Terms: The following terms apply to the Mobile Integrated Remains Collection System warranty program:

Abuse: The improper use, repair or handling of items such that the warranty may become void.

Acceptance: The act of an authorized representative of the Government by which the Government assumes for itself, or as an agent of another, ownership of existing and identified supplies, or approves specific services rendered, as partial or complete performance of the contract.

Acceptance Date: The date the unit has been accepted by the Government as shown on the Material Inspection and Receiving Report (DD Form 250).

Alterations/Modifications: Any alteration after delivery such as retrofit, conversion, remanufacture, whether or not authorized by a design change or engineering change.

Correction: The elimination of a defect.

Defect: Any condition or characteristic in any supplies furnished by the Contractor under the contract which fails to conform to the design and manufacturing requirements, or fails to meet the standards or materials of workmanship, or is a departure from performance requirements as delineated in the specifications of this contract.

Failed Item: A part, component, or end item that fails to perform its intended use as defined herein.

False Return: The return of suspected defective warranty items to the manufacturer that are eventually determined to be serviceable.

Prime Contractor: A party that enters into an agreement directly with the United States to furnish part or all of a system.

Reimbursement: To repay or make restitution for claims and/or false returns, etc.

Repair: To restore an item to serviceable condition.

Supplies: The commodities purchased under the contract and all original constituent components/parts thereof delivered under the contract, excluding Government-furnished property (GFP). It also includes all new contractor-supplied or contractor overhauled replacement components/parts as may be installed on the original commodities delivered under the contract to remedy a defect in an original component/part.

Validation: The process by which the contractor shall test/measure the WTB to assure its accuracy as it pertains to the warranty items.

Warranty: A promise or statement of fact from a seller to a purchaser on the nature, usefulness, or condition of the supplies or performance of services to be furnished. The main purposes of a warranty in a Government contract are to outline the rights and obligations of the Contractor and the Government for defective items and services. It also serves to foster quality performance by the Contractor but is not a substitute for an adequate quality assurance program.

Warranty claim: An action started by the Government for warranted items which have failed and the claim is issued by the Government activity in conjunction with the contracting officer.

Contractor Responsibilities:

The following paragraphs pertain to MIRCS units purchased under contract via W911QY-05-C-0091.

Warranties covering MIRCS units will be detailed by serial number at the time of the production run.

WARRANTY INFORMATION-CONTINUED

The Prime Contractor, Guild Associates, guarantees the supplies and parts at the time of acceptance or delivery conform to the design and manufacturing requirements, are free from all defects in materials and workmanship, and conform to all performance requirements delineated in the applicable specification of the contract. This guarantee will be for 1800 operating hours on each unit, or twelve months, whichever occurs first, from the date that the unit has been accepted by the Government as shown on the Material Inspection and Receiving (DD Form 250). The guarantee shall include furnishing of new items to replace any that prove to be nonconforming and/or defective within the warranty period. Such items shall be furnished without cost to the Government. When repair or replacement requires transportation of the nonconforming or defective items, shipping cost from the line item delivery point to the Contractor's plant and return shall be at the expense of the Contractor. This warranty does not cover replenishment of supplies consumed as part of normal operations or damage encountered during normal use, such as scratched paint, dents, or cuts and tears in fabrics.

The Contractor (Guild) will be allowed sixty days from the receipt of the warranty claim form to process and validate the warranty claims. The Government activity will be notified in writing at the end of this 60 day period of the recommended action.

The following paragraphs describe the Prime Contractor's understanding of the warranty process and responsibilities of handling a warranty claim.

MIRCS unit fails. User completes appropriate form.

Using activity prepares and submits a Maintenance Request to Government Activity

The Prime Contractor is notified through US Army RDECOM Contracting Center, Natick Contracting Division Contracting Office that a failure has occurred.

Upon notification, the Prime Contractor will review the warranty claim and recommend one of the following within 60 days after receiving warranty claim:

Return item for warranty replacement using Material Return Authorization number which will be assigned by Guild at the time the return decision is made.

Return item for failure analysis and evaluation of warranty using Material Return Authorization number.

Item is not covered under warranty.

Upon notification by the Government activity that the item is to be returned to Guild, the using activity will package and return the item to Guild.

Upon receipt of the failed item and completed form, the Prime Contractor will conduct a failure analysis to determine cause of failure and evaluate the validity of the warranty claim. Guild will provide the results of the analysis to the Government activity within 45 days after receiving the item.

If valid, Guild will return the repaired or replaced item to the user within 60 days after the analysis has been completed.

If the claim is not valid, the Government Activity will be notified and disposition instructions requested.

Government Responsibilities

Government Maintenance: Failure to follow published maintenance procedures at the maintenance levels specified in the appropriate technical manual could result in a warranty claim being declared invalid. All maintenance instructions will be clearly delineated in TM 10-4110-263-10 and TM 10-4110-263-23.

The owning unit is responsible for operating and maintaining the generator sets in accordance with the technical manuals. In addition, all operating procedures will be strictly followed while observing all warnings, cautions and notes. Upon experiencing a warranty related failure, the owning unit shall prepare the required documentation.

WARRANTY INFORMATION-CONTINUED

Abuse determination: In cases where MIRCS unit abuse is suspected (i.e. not obvious), the Government activity or Prime Contractor shall initiate an inquiry into the circumstances leading up to the MIRCS failure. The warranty is void for any MIRCS unit for which abuse is determined.

CROSS-REFERENCE LIST

Common Name	Official Nomenclature
2-1/2 gal waste container	Disposal Container, Biohazardous Materials, 2-1/2 Gallon,
AA partition rod	Pole, Tent, Aa Partition Threshold
Bottom ramp	Ramp, Mobile, Container Loading, Bottom
Cargo net	Netting, Textile
Container roller	Caster, Rigid, Container Roller
ECU inlet filter	Collector, Dust, Ecu Inlet Air
ECU protective cover	Tarpaulin, Ecu Cover
Electrical box	Power Strip, Electrical Outlet
Exhaust pipe extension	Cap Assembly, Protective, Muffler-Exhaust Pipe
Extension cord	Cable Assembly, Power, Electrical, 4 Ft
Exterior flap	Tent Liner, Flap, Exterior
Front support rod	Pole, Tent, Soft Wall, Vertical
Heat cable	Heating Element, Electrical, Non Immersion Type, 24 Ft Long
Leveling jack foot	Plate, Leveling Jack
MIRCS	Mobile Integrated Remains Collection System
Mobile processing platform extension	Extension, Platform, Mobile, Human Remains Processing
Outside air duct	Hose Assembly, Air Duct
Pump handle	Handle, Manual, Platform Pump
RU protective cover	Tarpaulin, Ru Cover
Soft wall support storage bag	Bag, Textile Carrier, Soft Wall Supports
Supply area door	Curtain, Doorway, W/Threshold, Storage Access
Telescoping ladder	Ladder, Extension
Tenon	Connecting Link, Rigid, Rld/Ramp
Top ramp	Ramp, Mobile, Container Loading, Top
Top support rod	Pole, Tent, Soft Wall, Horizontal
Waste container	Disposal Container, Biohazardous Materials
Weapons rack	Rack, Storage, Small Arms
Work lights storage bag	Bag, Textile, Work Lights

LIST OF ABBREVIATIONS/ACRONYMS

Abbreviation/Acronyms	Definition
AA	Administrative Area
AC	Alternating current
AR	Army Regulation
°C	Degree Celsius
CAGEC	Commercial and Government Entity Code
CBRN	Chemical, Biological, Radiological, Nuclear
cm	Centimeter
CCW	Counter clockwise
CW	Clockwise
CPC	Corrosion Prevention and Control
Cu	Cubic
cu ft	Cubic Feet
DA	Department of the Army
DA PAM	Department of the Army Pamphlet
DC	Direct Current
ECU	Environmental Control Unit
EIR	Equipment Improvement Recommendation
°F	Degree Fahrenheit
FM	Field Manual
ft	Foot
gal	Gallon
GFCI	Ground Fault Circuit Interrupter
HEMTT-LHS	Heavy Expanded Mobile Tactical Truck with Load Handling System
Hp	Horsepower
Hz	Hertz (frequency or cycles per second)
in	Inches
ISO	International Organization for Standardization
Kg	Kilogram

LIST OF ABBREVIATIONS/ACRONYMS-CONTINUED

Abbreviation/Acronyms	Definition
kW	Kilowatt
MIRCS	Mobile Integrated Remains Collection System
lb	pound
L	Liters
LCD	Liquid Crystal Display
LED	Light Emitting Diode
MA	Mortuary Affairs
MAC	Maintenance Allocation Chart
MPP	Mobile Processing Platform
MTOE	Modification Table of Organization and Equipment
NSN	National Stock Number
PA	Processing Area
PMCS	Preventive Maintenance Checks and Services
PQDR	Product Quality Deficiency Report
psi	Pounds per square inch
psig	Pounds per square inch gauge
QC	Quick Connect
qty	Quantity
RLD	Remains Lifting Device
RPSTL	Repair Parts and Special Tools List
RSU	Remains Storage Unit
RU	Refrigeration Unit
SF	Standard Form
SMR	Source, Maintenance, and Recoverability (Code)
TAMMS	The Army Maintenance Management System
TM	Technical Manual
TMDE	Test, Measurement, and Diagnostics Equipment
TOE	Table of Organization and Equipment

LIST OF ABBREVIATIONS/ACRONYMS-CONTINUED

Abbreviation/Acronyms	Definition
TQG	Tactical Quiet Generator
VAC	Volts Alternating Current
VDC	Volts Direct Current
WCA	Warranty Claim Action
WP	Work Package

END OF WORK PACKAGE

**CREW MAINTENANCE
EQUIPMENT DESCRIPTION AND DATA**

EQUIPMENT CHARACTERISTICS, CAPABILITIES, AND FEATURES

The Mobile Integrated Remains Collection System (MIRCS) will be used for processing and storing human remains to support mortuary affairs (MA) operations. The MIRCS is a self-contained, expandable unit housed within an International Organization for Standardization (ISO) frame. The MIRCS is capable of continuous remains storage in the transportation mode and MA processing operations at ground and trailer level. A Heavy Expanded Mobile Tactical Truck with Load Handling System (HEMTT-LHS) normally transports the MIRCS. Other ground transportation, C-130 and larger aircraft, CH-47D and larger rotary winged aircraft, sealift support watercraft, rail, and ship can also move the MIRCS. The MIRCS contains a refrigeration unit (RU) to condition stored remains. The RU is powered by an integral diesel engine. JP-8 fuel for the engine is supplied by an on-board fuel tank. The RU can also be powered by an external electrical source or by an on-board 15 kilowatt (kW), MEP804A Tactical Quiet Generator Set (TQG). The TQG is also used to supply power to the MIRCS environmental control unit (ECU), on-board lighting, and water supply systems.

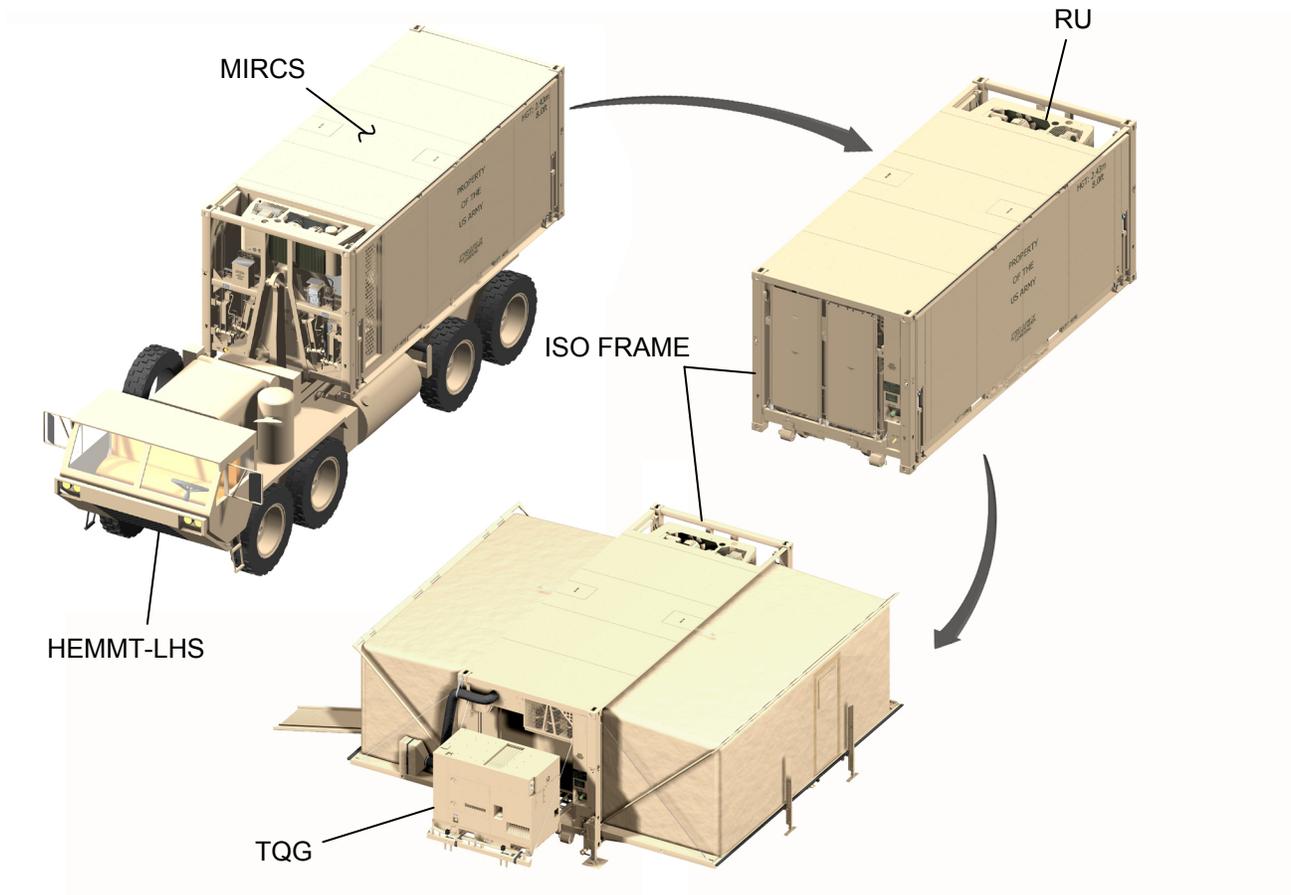


Figure 1. Mobile Integrated Remains Collection System.

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS-CONTINUED

ISO Frame

The MIRCS components are mounted in an 8-foot (ft) wide x 8 ft high x 20 ft long ISO frame. A bale bar and rail system, integral to the frame, is provided to interface with the HEMTT-LHS. Forklift pockets are provided in the rail channels to allow the unit to be moved when fully loaded. Integrated into the frame are walls that form the front mechanical area, remains storage unit (RSU), supply storage area, and rear mechanical area. The frame also contains mounting provisions for the MIRCS major components and subsystems including the processing area platform, administrative area platform, soft walls, RU, ECU, TQG, electrical system, fuel system, hydraulic system, lighting system, and water system.

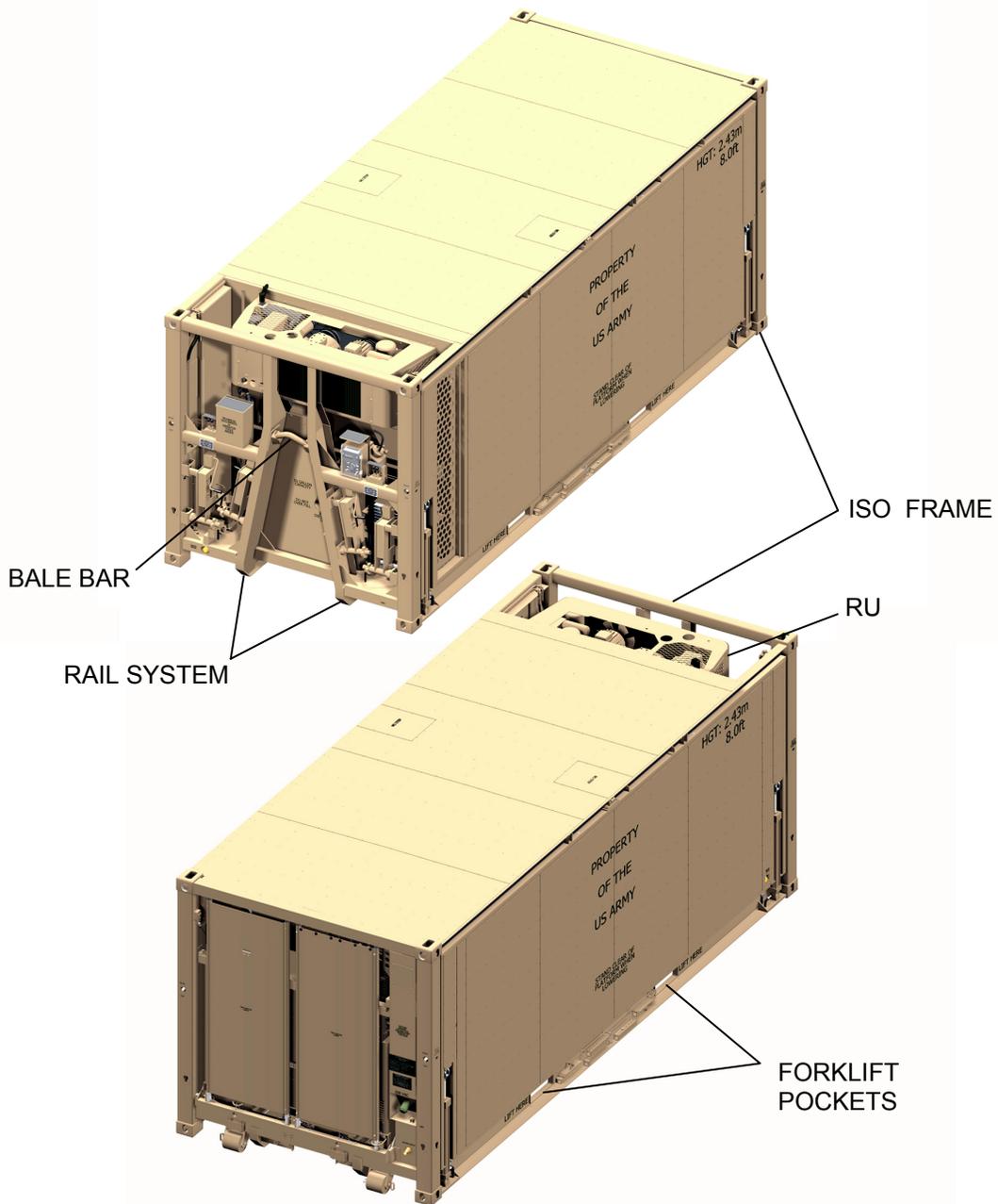


Figure 2. MIRCS ISO Frame.

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS-CONTINUED

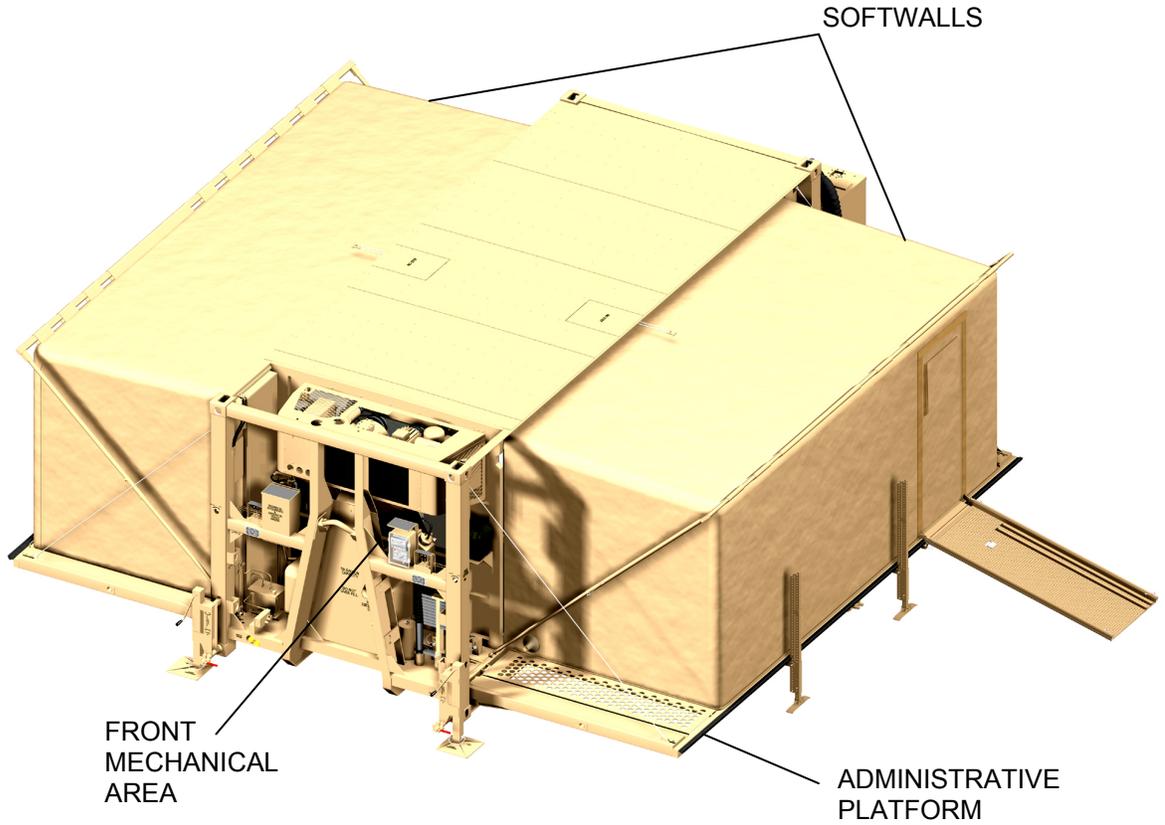


Figure 3. MIRCS Front View Deployed.

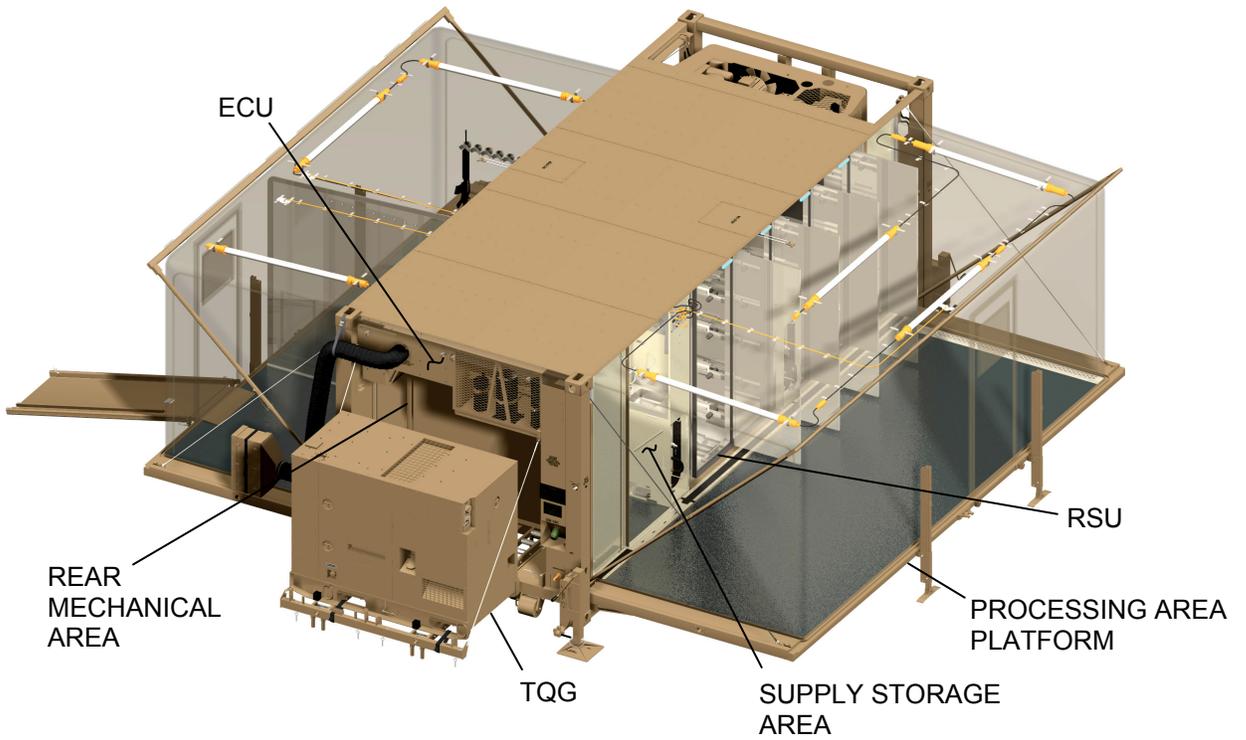


Figure 4. MIRCS Rear View Deployed.

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS-CONTINUED

Front Mechanical Area

The front mechanical area contains the RU used to condition (cool or heat) the air inside of the RSU. Below the RU is a 50-gallon fuel tank that provides fuel to the RU and TQG engines. The controls required to operate the RU are contained on the RU control enclosure. This enclosure along with the battery compartment is located on the roadside and below the RU. On the curbside of the front mechanical area are a technical manual holder and the hydraulic system pump and components used to raise and lower the side work platforms. The front mechanical area also contains provisions for storing the support jacks used to support the MIRCS corners in the ground mode of operation and telescoping ladder used for general equipment access in the transport and trailer mounted operating modes.

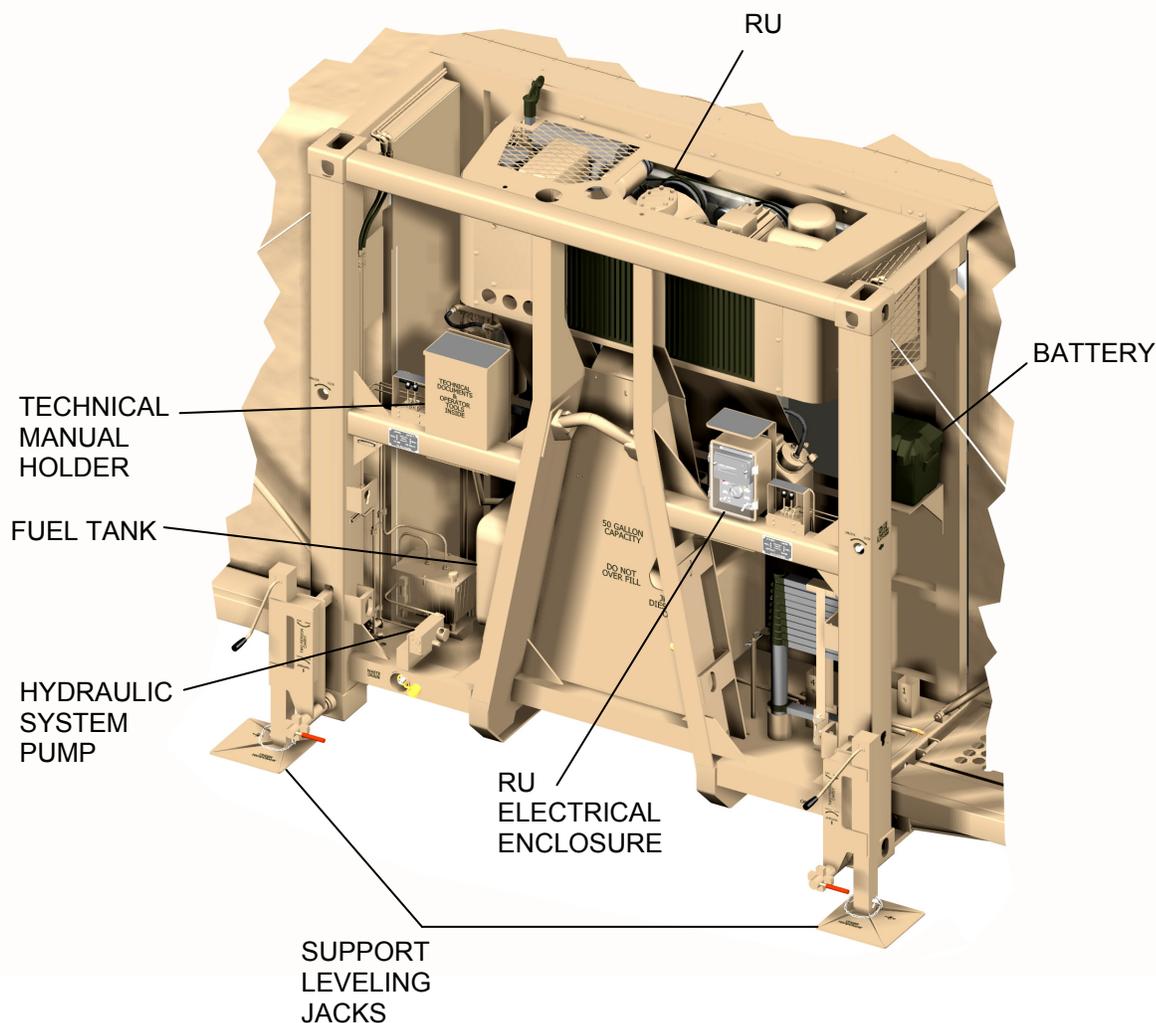


Figure 5. Front Mechanical Area.

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS-CONTINUED

Rear Mechanical Area

The rear mechanical area contains the ECU used to condition (cool or heat) the air inside the operator work areas. Below the ECU is the TQG. The TQG is mounted on a set of rollers that allow it to be pulled out from inside the ISO frame away from the ECU in the ground operation mode. This allows adequate airflow to both the ECU and the TQG and allows full access to all TQG compartments. The right wall of the rear mechanical area contains the connection points for electrical power, earth grounding, and the external water supply. The ECU control enclosure and ECU exhaust duct are located behind this wall. The rear mechanical area contains provisions for stowing the ramp sections.

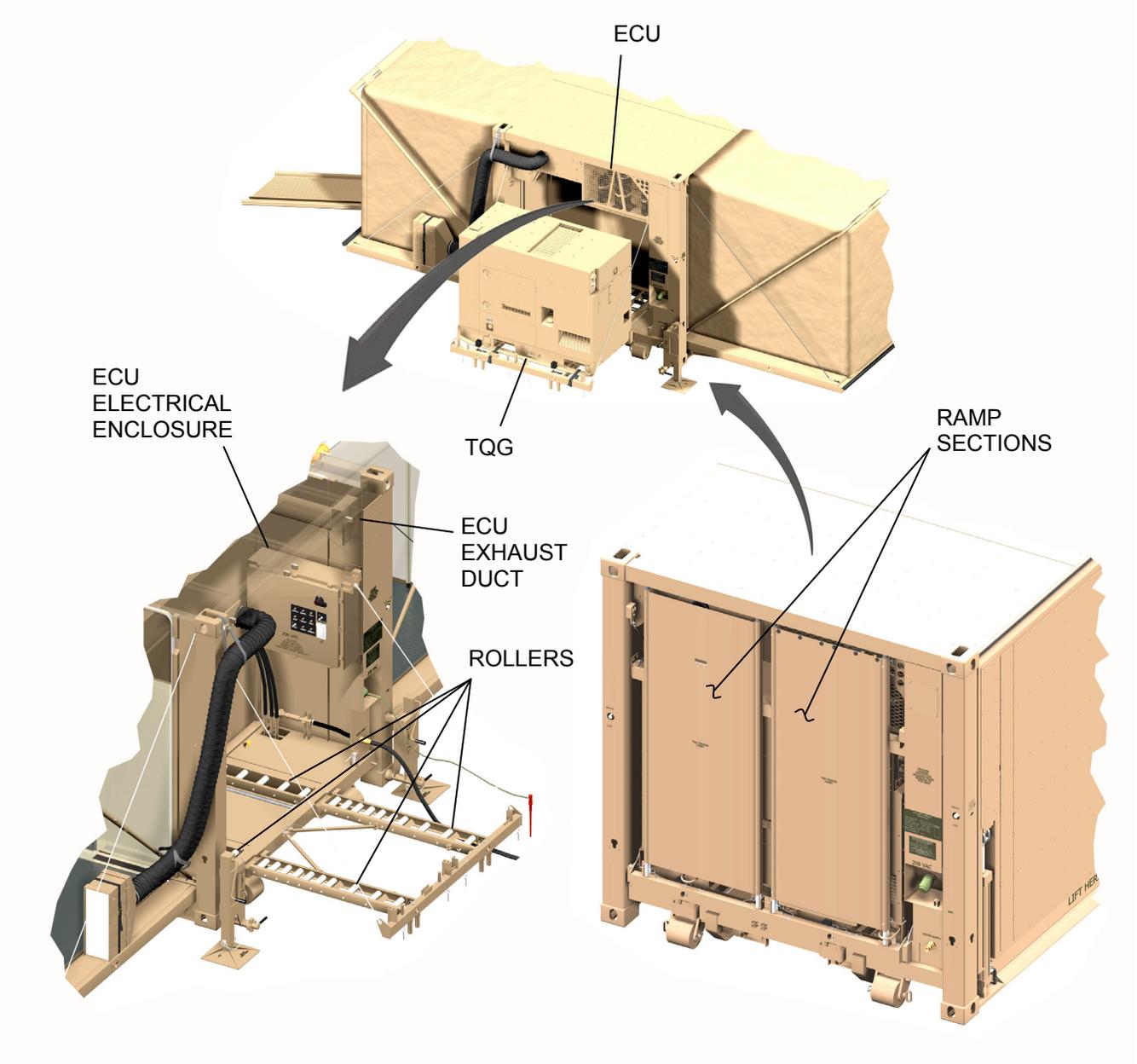


Figure 6. Rear Mechanical Area.

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS-CONTINUED

Processing Platform and Area

A work platform and expandable soft wall is provided on the curbside of the MIRCS. In the stowed position this platform creates the left sidewall of the MIRCS. This platform contains hydraulic cylinders that lower and raise the platform into position. As the platform is lowered the soft wall starts to expand to form the remains processing area (PA). Once expanded the area contains the space necessary to process up to two remains at a time. Direct access to the RSU is also obtained from the PA platform. The PA contains ventilation duct outlets that supply conditioned air from the ECU.

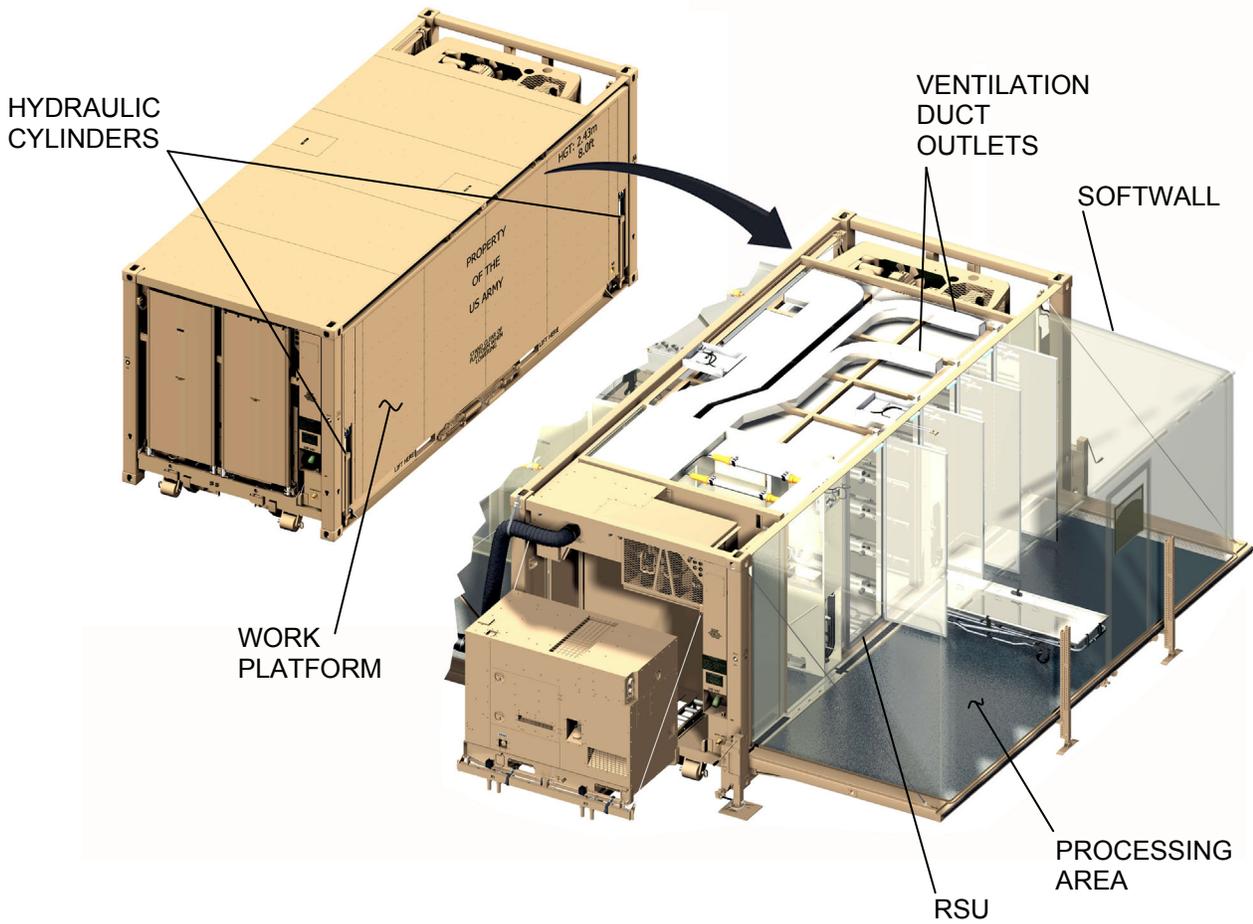


Figure 7. Processing Platform.

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS-CONTINUED

Up to four portable fluorescent lights can be placed in the soft wall ceiling. The floor surface of the PA platform is layered with non-skid flooring. The front side of the platform contains a grated drain that routes wastewater towards a waste port. The inboard side of the PA contains an opening that connects directly to the supply storage area where the personnel sanitization sink is located. The inboard PA wall also contains the utility hose connection used for equipment sanitization. The outboard side of the soft wall contains a door which serves as an emergency egress point in ground operation and as the RSU access point when the MIRCS is in the transport or trailer mounted operating mode. The door contains a screened window that is used to provide fresh-air ventilation when the ECU is not operating.

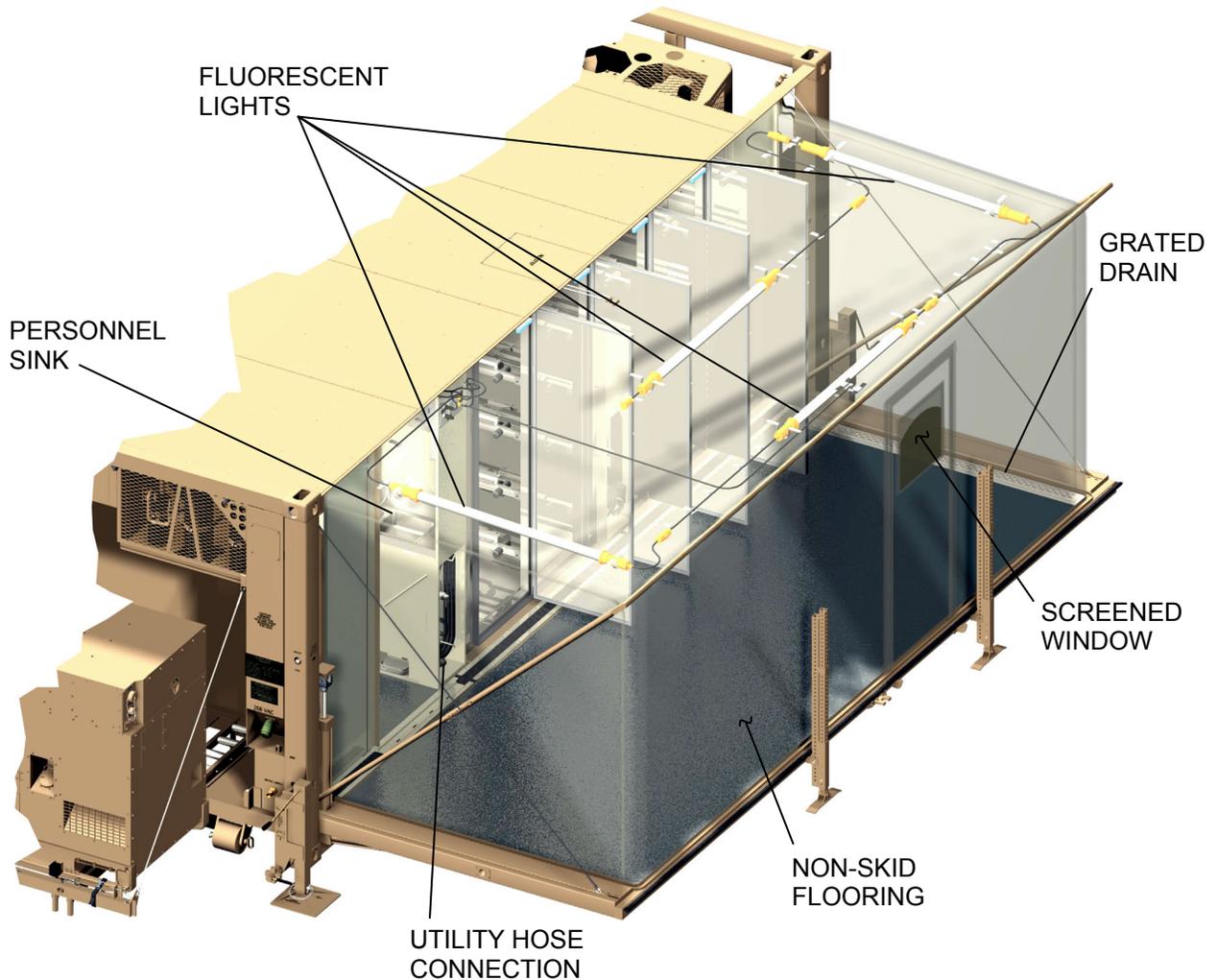


Figure 8. Processing Platform.

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS-CONTINUED

Administrative Platform and Administrative Area (AA)

A work platform and expandable soft wall is provided on the roadside of the MIRCS. In the stowed position this platform creates the right sidewall of the MIRCS. Similar to the PA platform, this platform contains hydraulic cylinders that lower and raise the platform into position. When the platform is lowered the soft wall expands to form the AA and vestibule area. A removable partition with a curtain door divides these two areas. Once expanded the AA area contains the space necessary to perform administrative duties associated with MA operations. The vestibule area provides a transition space that isolates all internal MIRCS work areas from the outside environment. The AA contains ventilation duct outlets that supply conditioned air from the ECU.

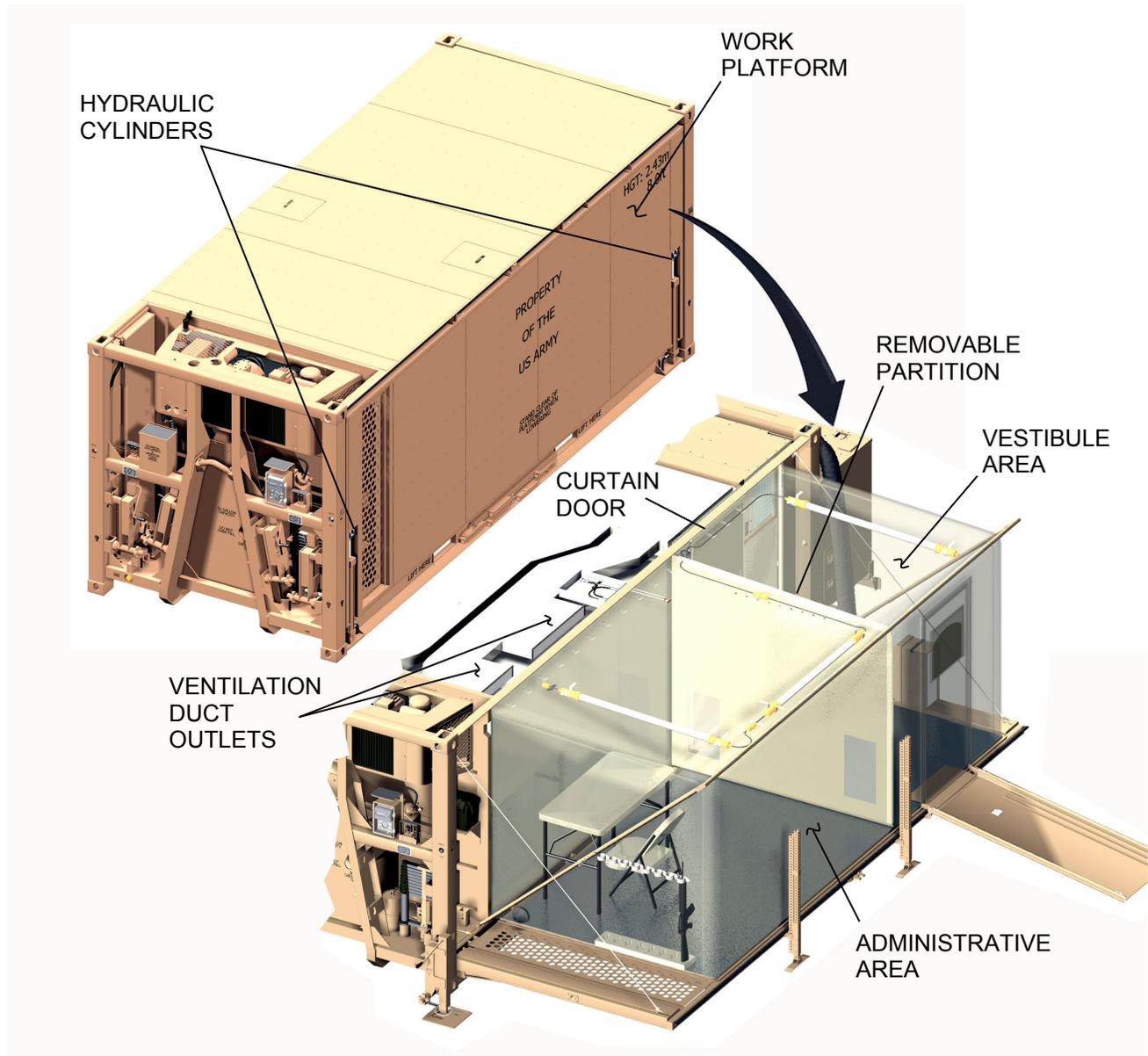


Figure 9. Administrative Platform.

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS-CONTINUED

Two portable fluorescent lights can be placed in the soft wall ceiling in the AA and one fluorescent light can be placed in the vestibule ceiling. The surface of the AA platform is layered with the same flooring material used on the PA platform. The inboard AA wall contains an area where work desks can be set-up. The end wall in the AA contains a weapons rack for holding up to eight rifles. The AA end wall bottom corner also has a weatherproof penetration to allow feed through of communication cabling. The inboard wall of the vestibule area contains a curtain door leading to the supply storage area and the PA. This wall also contains the MA control panel and ECU return air screen and thermostat controls. The outboard side of the soft wall in the vestibule contains the ingress/egress door. The door contains a screened window that is used to provide fresh-air ventilation when the ECU is not operating.

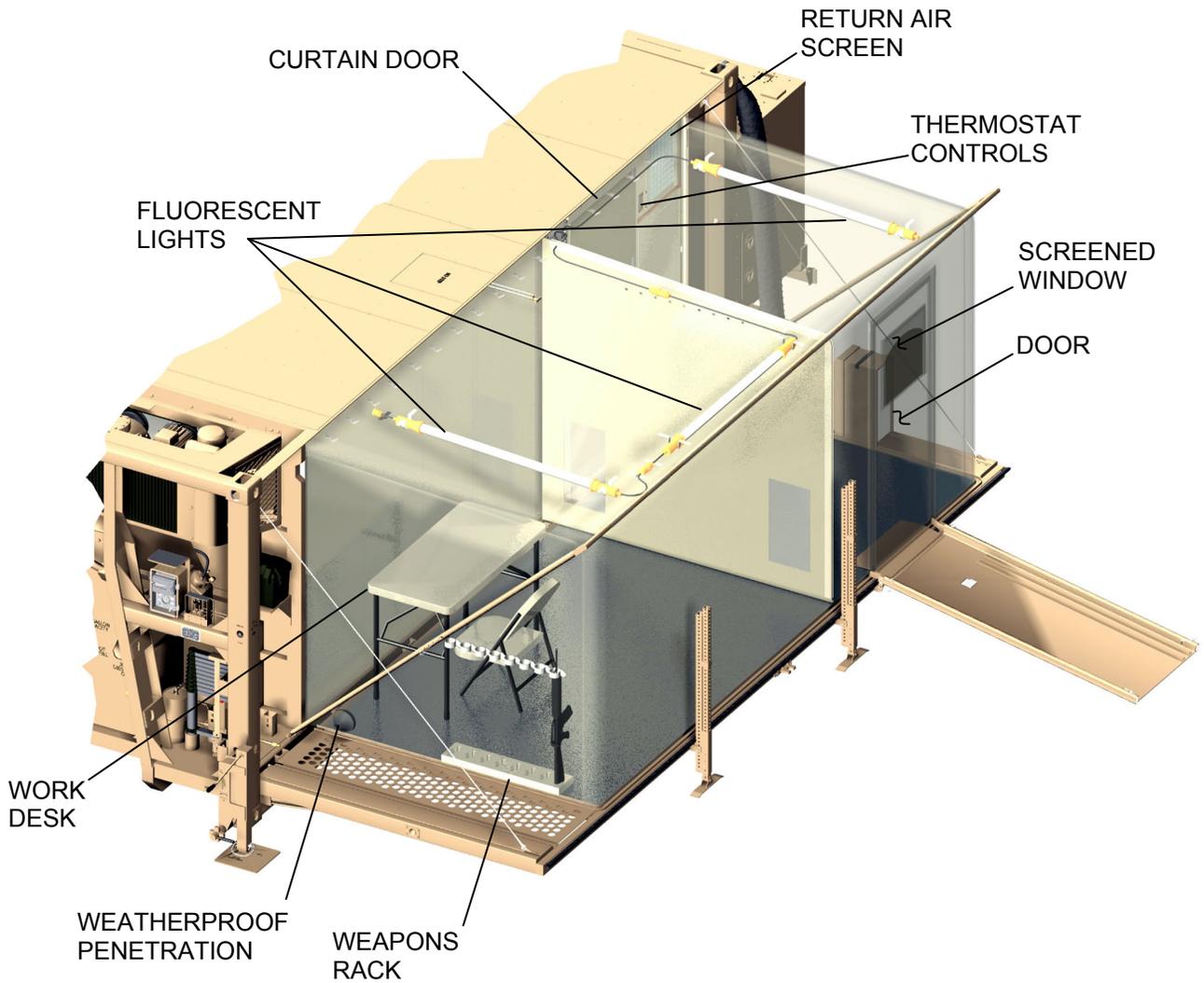


Figure 10. Administrative Platform.

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS-CONTINUED**Remains Storage Unit (RSU)**

The RSU is located in the center of the ISO frame. The RSU is an insulated compartment with an opening in its forward sidewall for the RU. This wall also contains a removable panel for RU maintenance and also doubles as an emergency egress point in the event that personnel are accidentally locked inside the RSU. The ceiling of the RSU contains a duct that directs the conditioned air from the RU towards the aft sidewall. This helps to distribute the air evenly through the RSU. The floor of the RSU contains a drain that directs wastewater to the collection point. There are four doors on the RSU that open to the remains processing area. The doors contain seals and latches to ensure a tight, secure seal exists between the door and the RSU frame. Behind each door are sets of roller tracks that form four columns of four rows. This allows for storage of up to sixteen remains. The remains are secured to mortuary trays that are in turn secured to the roller tracks.

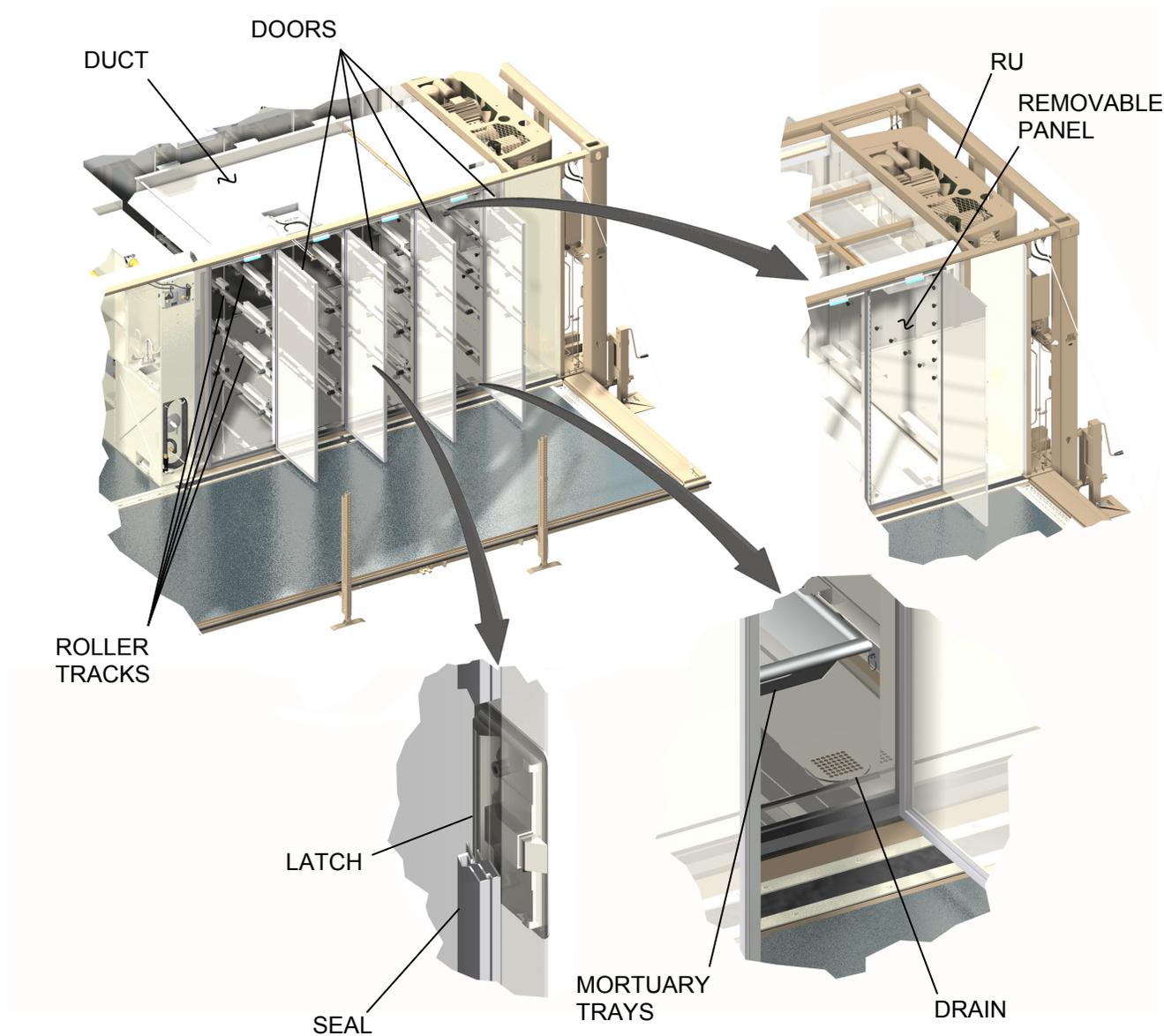


Figure 11. Remains Storage Unit.

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS-CONTINUED

Supply Storage Area

On the rear side of the RSU is the supply storage area. This area contains shelving for MA related supplies. This area also contains the personnel sanitation sink, mirror, glove dispenser, and soap dispenser. The area under the sink contains the water system water heater and related plumbing. The MA operation, PA lights, and water system junction box electrical enclosures are also located within the storage shelving along with the on-board fire extinguisher. The supply storage area acts as an isolation or transition space to isolate the remains processing area from the administrative area and vestibule. Normal entry and egress for the PA is through the supply storage area when operating in the ground mode. This walkway doubles as the storage area for all the accessories and ancillary equipment used inside the MIRCS when the MIRCS is packed-up in the transport mode. At each end of the shelves (within the MA operation and PA lights enclosures) are electrical receptacles that supply power to the work area lighting and other equipment used for MA operations.

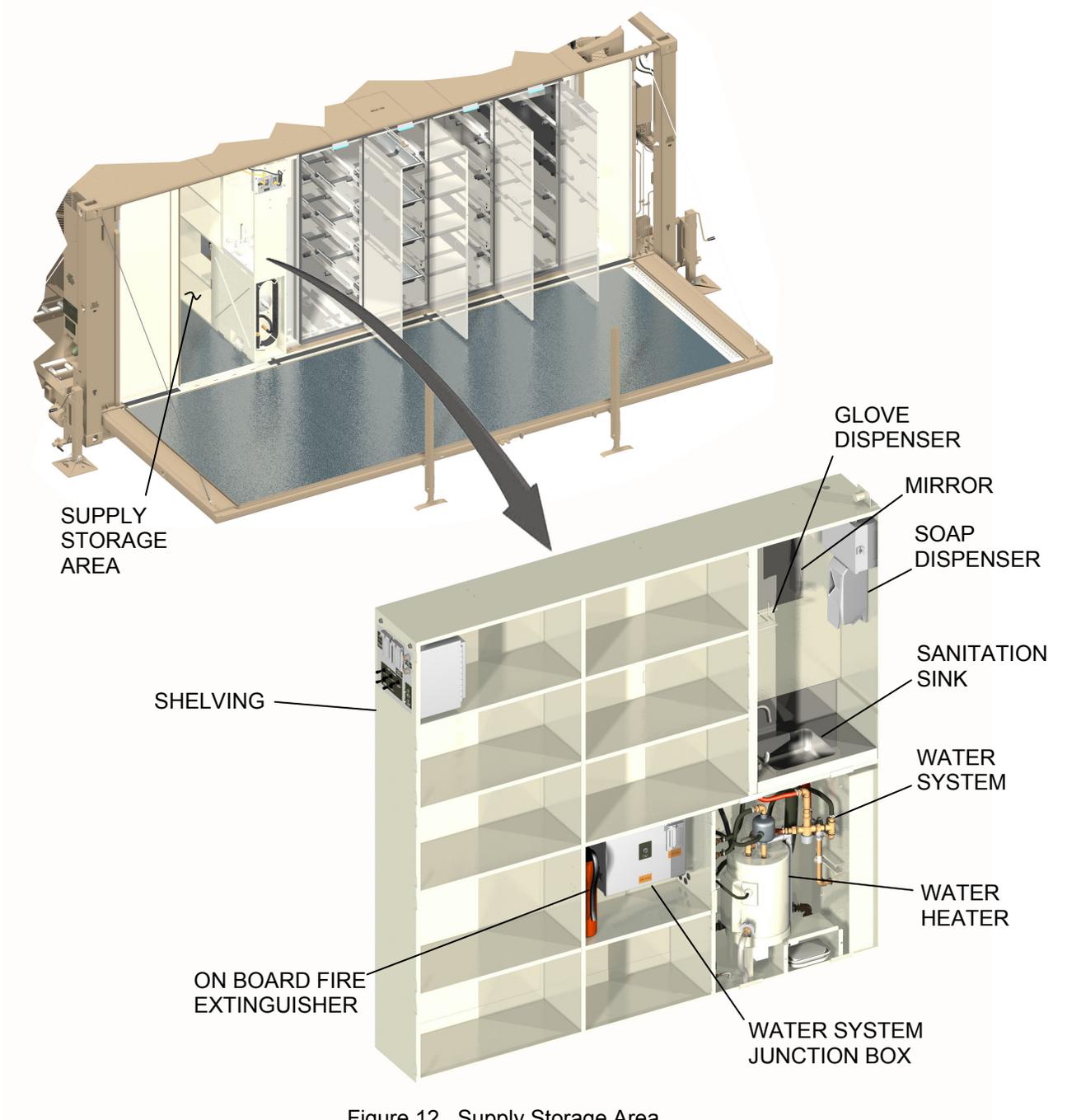


Figure 12. Supply Storage Area.

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS-CONTINUED**Control System**

The control system provides the electrical interface between the on-board TQG or external power and MIRCS electrical and electronic components. The system consists of five waterproof electrical enclosures connected through a series of rigid and flexible conduit runs. The system includes controls and indicators that the operator uses when performing MA operations.

Electrical power enters a connection located at the right rear corner of the MIRCS in the rear mechanical area. Main power is then routed to the ECU enclosure. In the ECU control enclosure, power is split along a bank of circuit breakers and relays and distributed out to the RU control enclosure, MA operation enclosure, PA light enclosure, and water system junction box. The ECU control enclosure also contains the electrical components and circuits required to operate the ECU.

The RU control enclosure contains the components and circuits that are required to control RU operation. This enclosure is located in the front mechanical area. The RU enclosure also contains circuitry for the fuel system and portions of the MIRCS lighting system. The RU enclosure front panel contains the controls and indicators required to operate the RU.

The MA operation enclosure is located on the shelving unit and is accessible from the vestibule. The MA enclosure contains the circuitry necessary to control the MIRCS internal lighting. This enclosure also has the electrical receptacles that supply power to the AA and vestibule lights and surge protected receptacles that supply power for operating utility equipment.

The PA lights enclosure is located on the shelving unit and is accessible from the PA. This enclosure has the electrical receptacles that supply power to the PA and supply storage area lights and surge protected receptacles that supply power for operating utility equipment.

The water system junction box contains the electrical components used to control water system operation. This enclosure contains circuit breakers for all circuits within the MIRCS interior. The water system junction box is located in center of the supply storage area shelving unit.

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS-CONTINUED

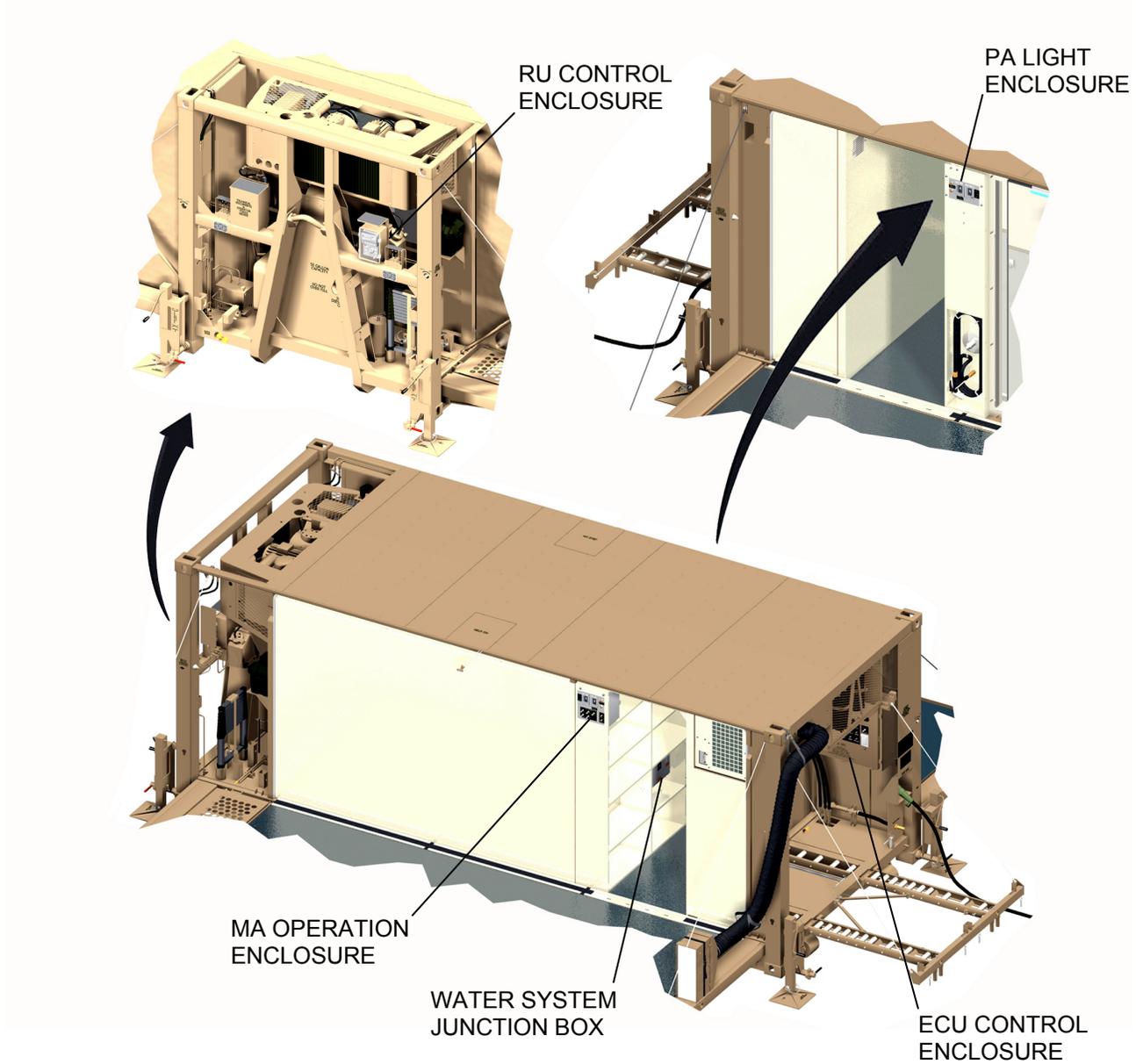


Figure 13. Control System.

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS-CONTINUED

Refrigeration Unit (RU)

The RU provides air to condition the remains in the RSU. The RU is located in the front mechanical area. The RU contains an engine and standby electric motor that drive a refrigeration compressor, condenser fan, and alternator. Evaporator fans at the back end of the RU pull air from the RSU and condition it by passing the air across an evaporator located in the RU outlet duct. The RU refrigeration system then heats or cools the air as necessary to satisfy the selected temperature.

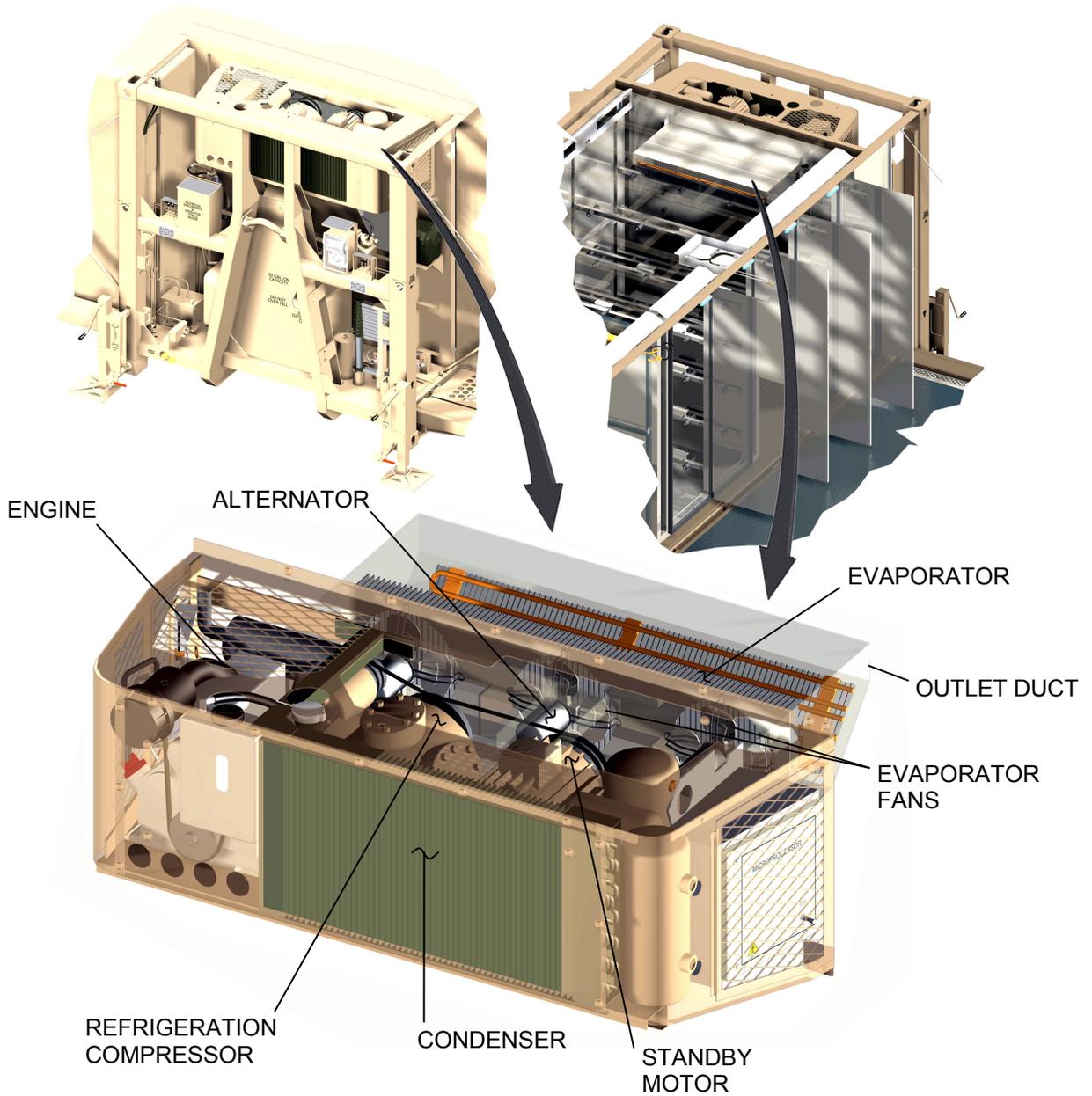


Figure 14. Refrigeration Unit (RU).

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS—CONTINUED

Environmental Control Unit (ECU)

The ECU is located in the rear mechanical area. The ECU interfaces with a network of ducting incorporated in the MIRCS frame. The ECU provides temperature-controlled air at the required air quality to properly ventilate the AA, PA, vestibule, and supply storage area. The ECU is connected to an inlet filter via a fabric duct that brings in fresh outside air. The outside air blower pulls this air into the ECU. The air mixes with air that is recirculating through the AA and is delivered to evaporators that direct the air to the AA and PA ducting. When the ECU refrigeration compressor and condenser are on, refrigerant flowing through the evaporators cools the ventilation air. When heating is required the refrigeration compressor turns off and electric heating elements at the evaporator outlets heat the air going into the AA and PA ducting. The exhaust blower located in the exhaust duct removes the air flowing into the PA from the MIRCS.

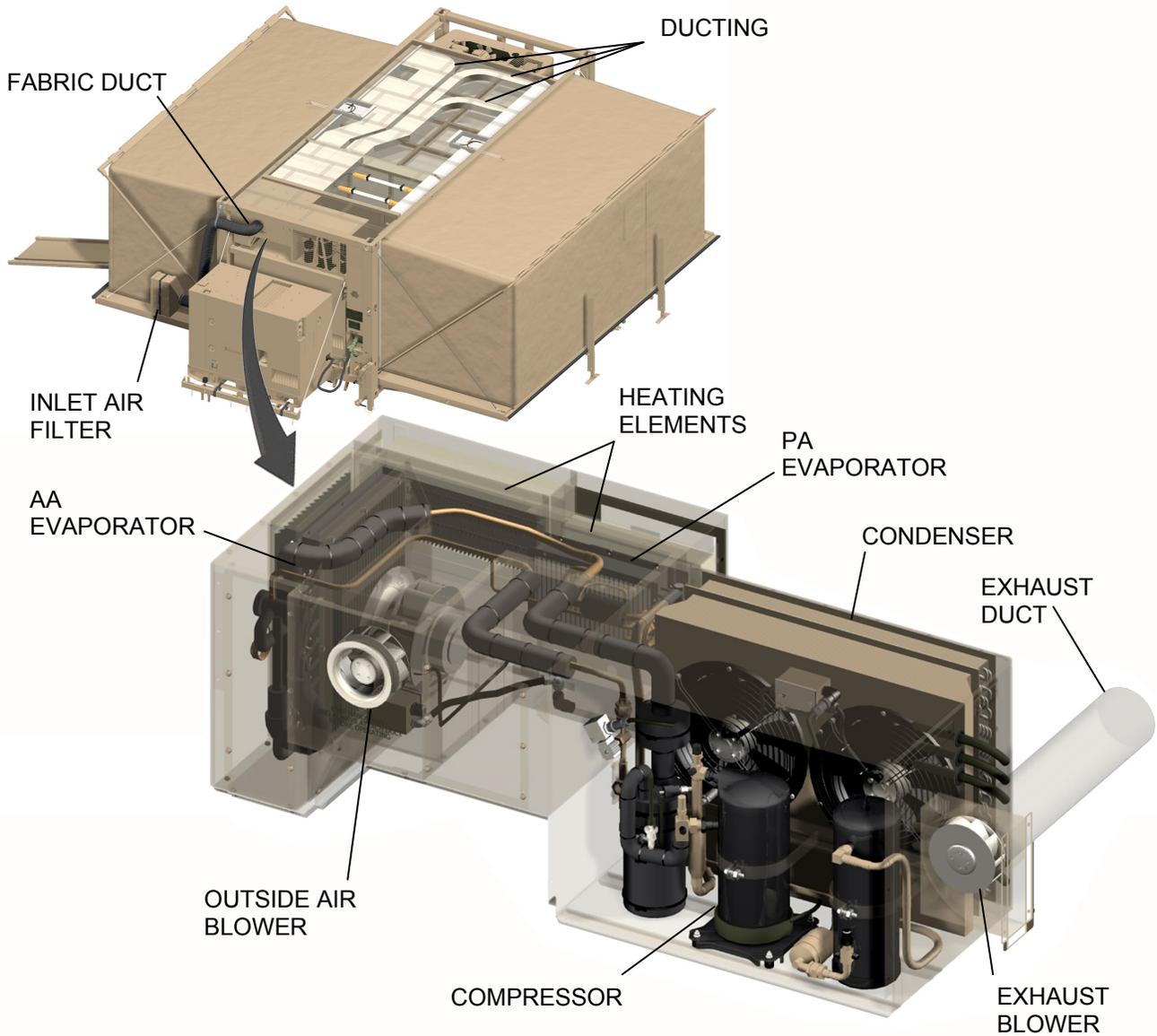


Figure 15. Environmental Control Unit.

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS-CONTINUED

Hydraulic System

The hydraulic system is used to lower and raise the AA and PA platforms. A manual pump provides the pressure and flow needed perform these operations. The pump is connected to a 2-gallon reservoir that stores the fluid used by the hydraulic cylinders. One cylinder is mounted at the top center of each platform to pull in on the platform when the platforms are being stowed. Cylinders are mounted on the sides of each platform to lower and raise the platforms. Valves located with the pump and reservoir in the front mechanical area controls the direction and movement of the cylinders. Threaded side locks keep the platform from moving during transport.

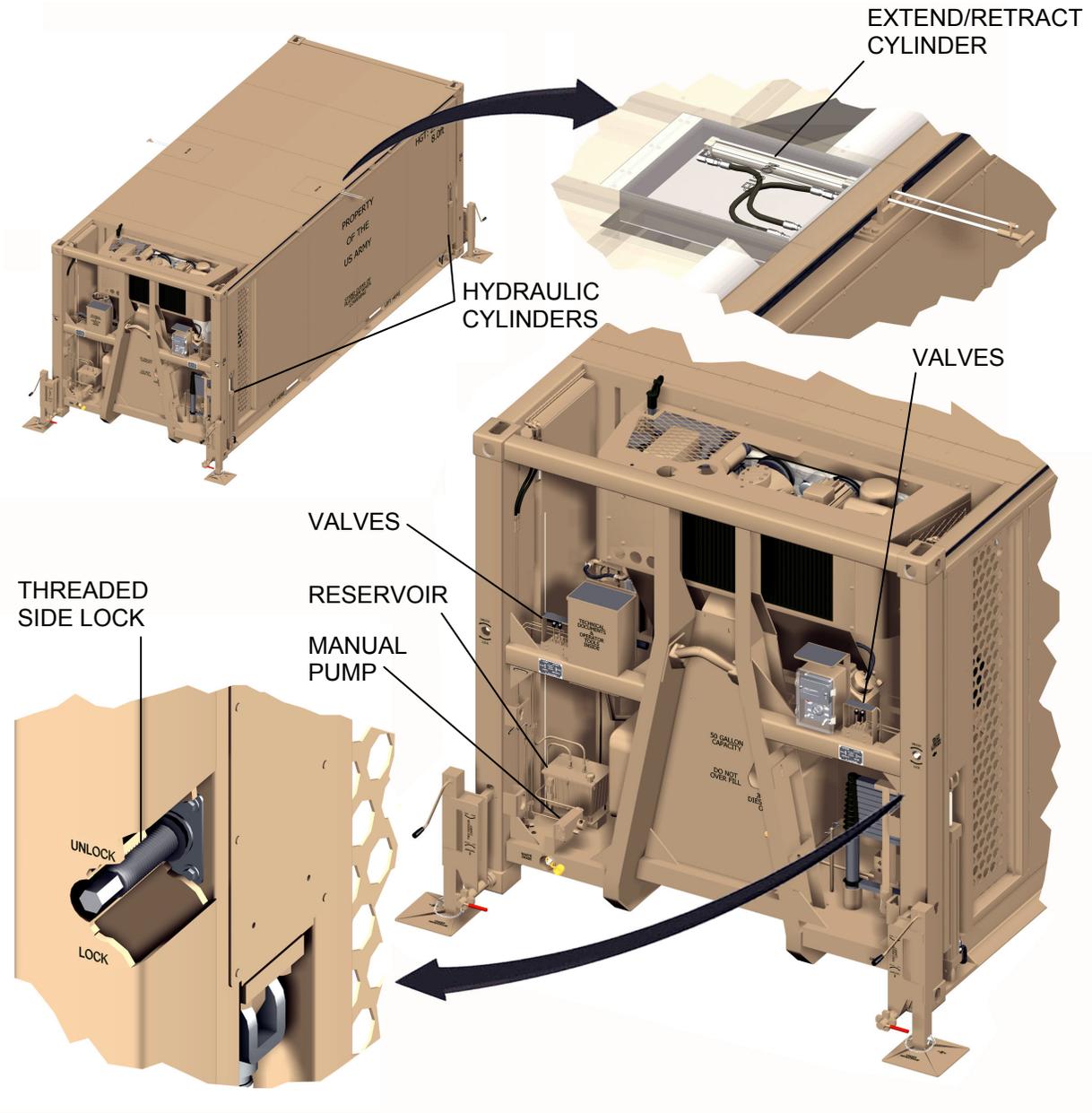


Figure 16. Hydraulic System.

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS-CONTINUED

Fuel System

The MIRCS fuel system provides fuel (JP-8, DF-1, or DF-2) to the engine on the RU and the fuel tank in the TQG. Fuel for the system is stored in a 50-gallon fuel tank. The tank is mounted in the front mechanical area below the RU. The tank contains a fuel port for gravity refueling. Fuel from the tank flows through a fuel/water separator before it is provided to the RU and TQG. A spring-loaded valve is installed in the tank bottom to allow for tank draining. A grounding point is located in front of the fuel tank to ground the MIRCS to the refueling vehicle/equipment during refueling operations.

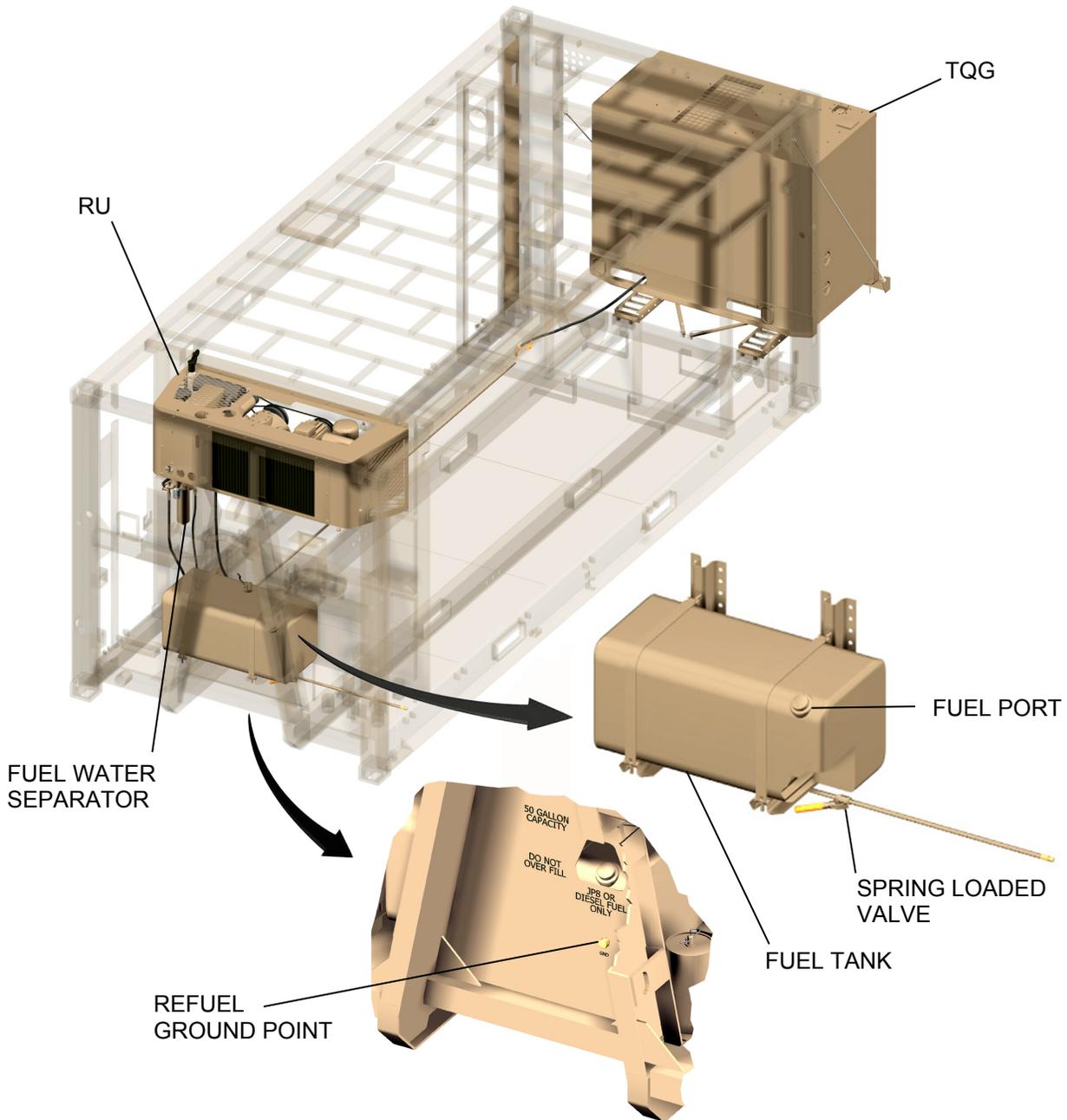


Figure 17. Fuel System.

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS-CONTINUED

Water System

The MIRCS water system provides hot and cold water to the remains processing area for individual and equipment sanitization. The system can be connected to the M149 400-gallon water tank trailer, other water storage containers, or to standard pressurized utility hose connection. A 20-ft supply hose is provided to connect the external water pump to the external source water source. The external water pump is connected to a second 20-ft supply hose which is connected to a supply port located in rear curbside corner of the MIRCS. Water is supplied to the water system 2-1/2-gallon water heater and personnel sink located in the supply storage area and the utility hose connection in the PA.

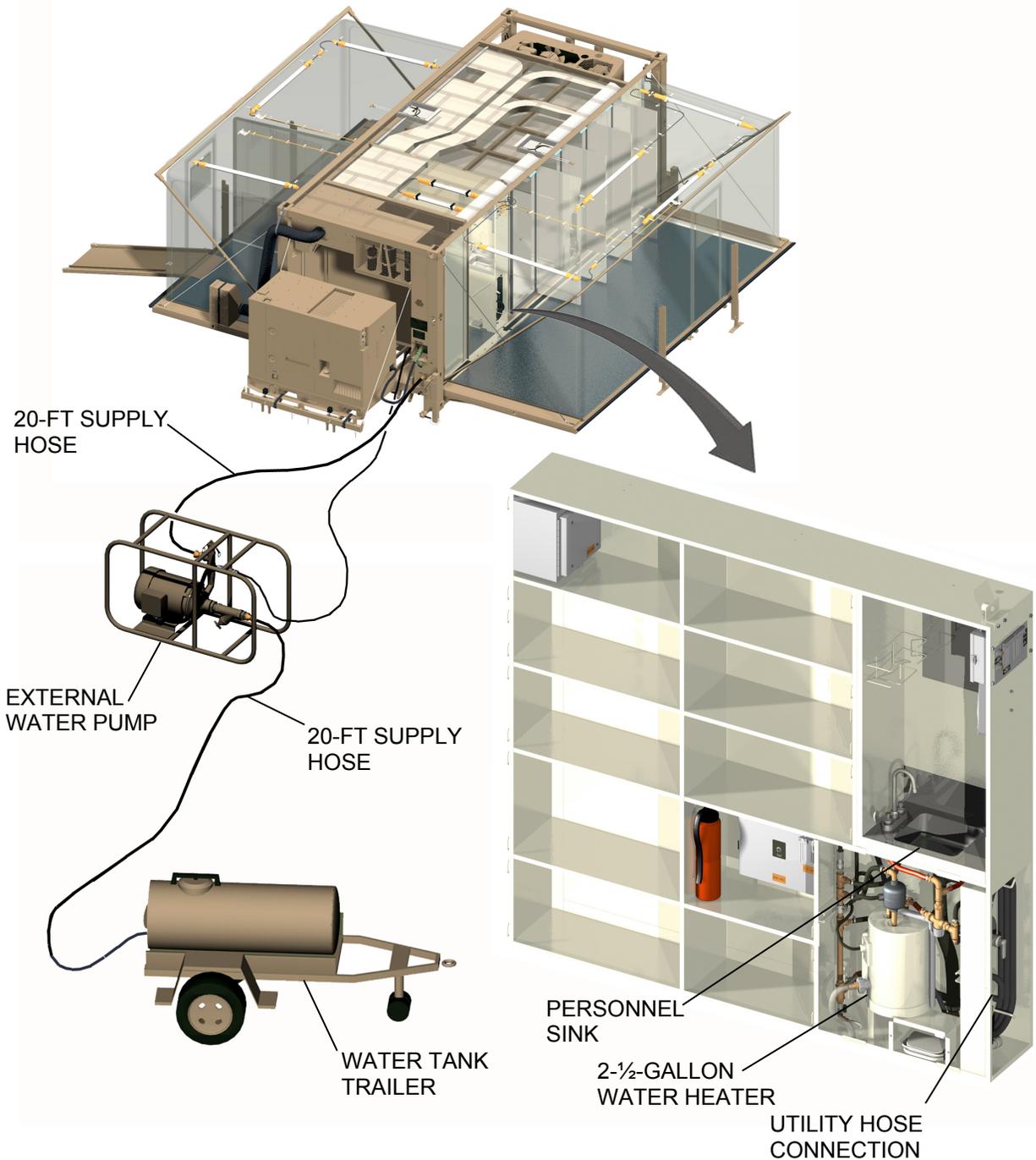


Figure 18. Water System.

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS-CONTINUED

Lighting System

The MIRCS lighting system consists of both portable and fixed lighting fixtures used to supply standard (white), blackout, and emergency lighting.

Standard lighting consists of seven portable fluorescent light fixtures that are installed in the ceiling of the AA and PA soft walls when the MIRCS is set-up for ground operation. There are also two permanently mounted fluorescent light fixtures in the ceiling in the supply storage area.

There are four combination emergency/blackout lights used with the MIRCS. These light fixtures use blue Light Emitting Diodes (LEDs) as the light source. Three fixtures are located to provide light near the ingress/egress doors in each working area. There is also one emergency/blackout fixture mounted in the ceiling of the supply storage area.

The MIRCS also contains four LED light fixtures above the doors on the RSU. These fixtures provided light to assist personnel performing remains transfer operations in the transport mode.

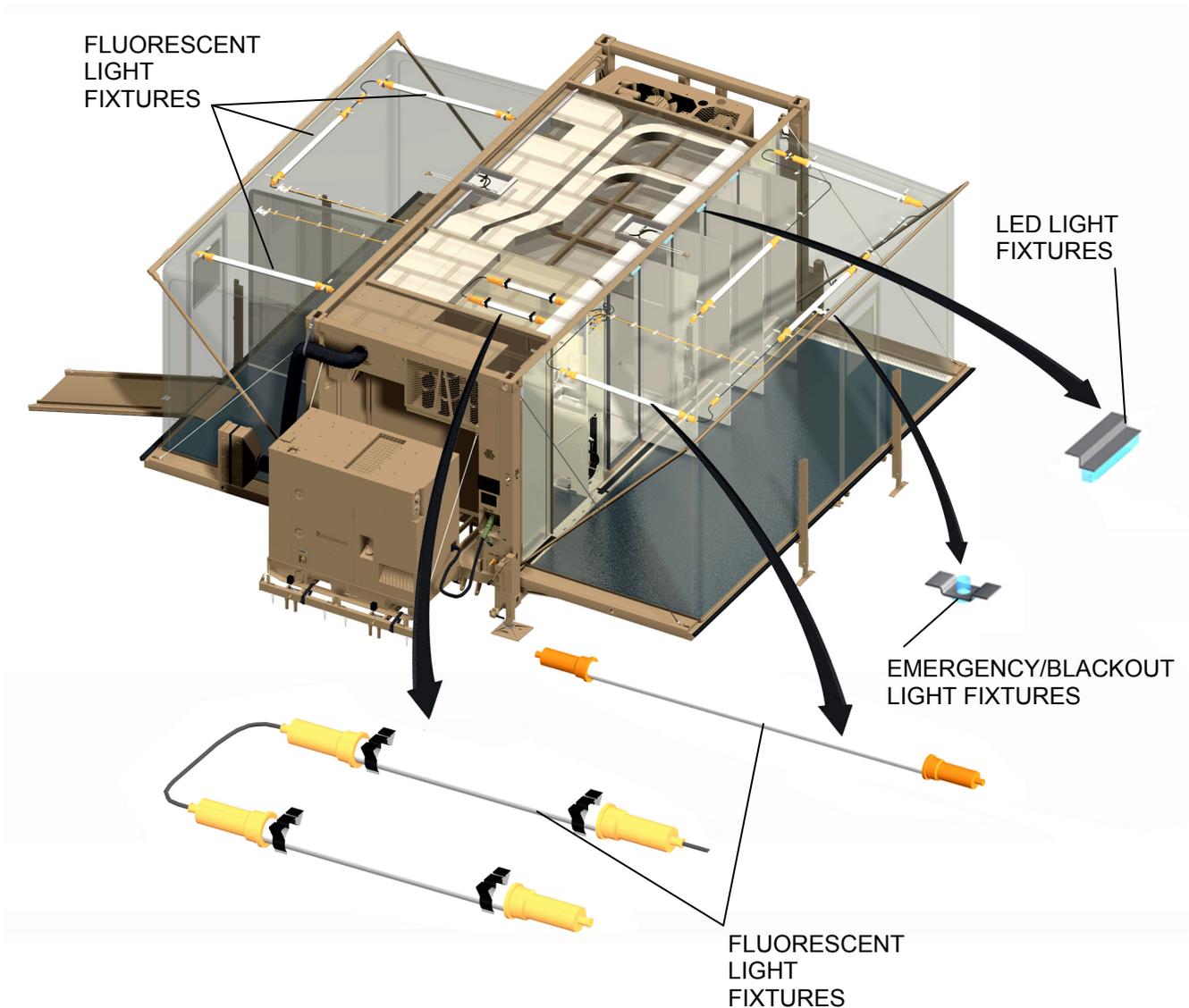


Figure 19. Lighting System.

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS-CONTINUED

Mobile Processing Platforms (MPP)

Two MPPs are provided with each MIRCS. Each MPP contains a manual hydraulic system to allow for raising and lowering of remains on the processing trays. The MPP has four casters. All casters have foot-activated wheel brakes and swivel locks. The MPPs can be collapsed for storage and remains loading, then raised as necessary for transporting the remains into the MIRCS, processing operations, and transfer into the RSU. A pull handle is provided to assist in pulling the MPP up the ramp into the MIRCS. A foot pedal is used to operate the hydraulic pump. A second foot pedal releases the hydraulic pressure to allow the MPP to be lowered. An extension frame is provided to allow the MPP to be raised for the highest roller track height in the RSU.

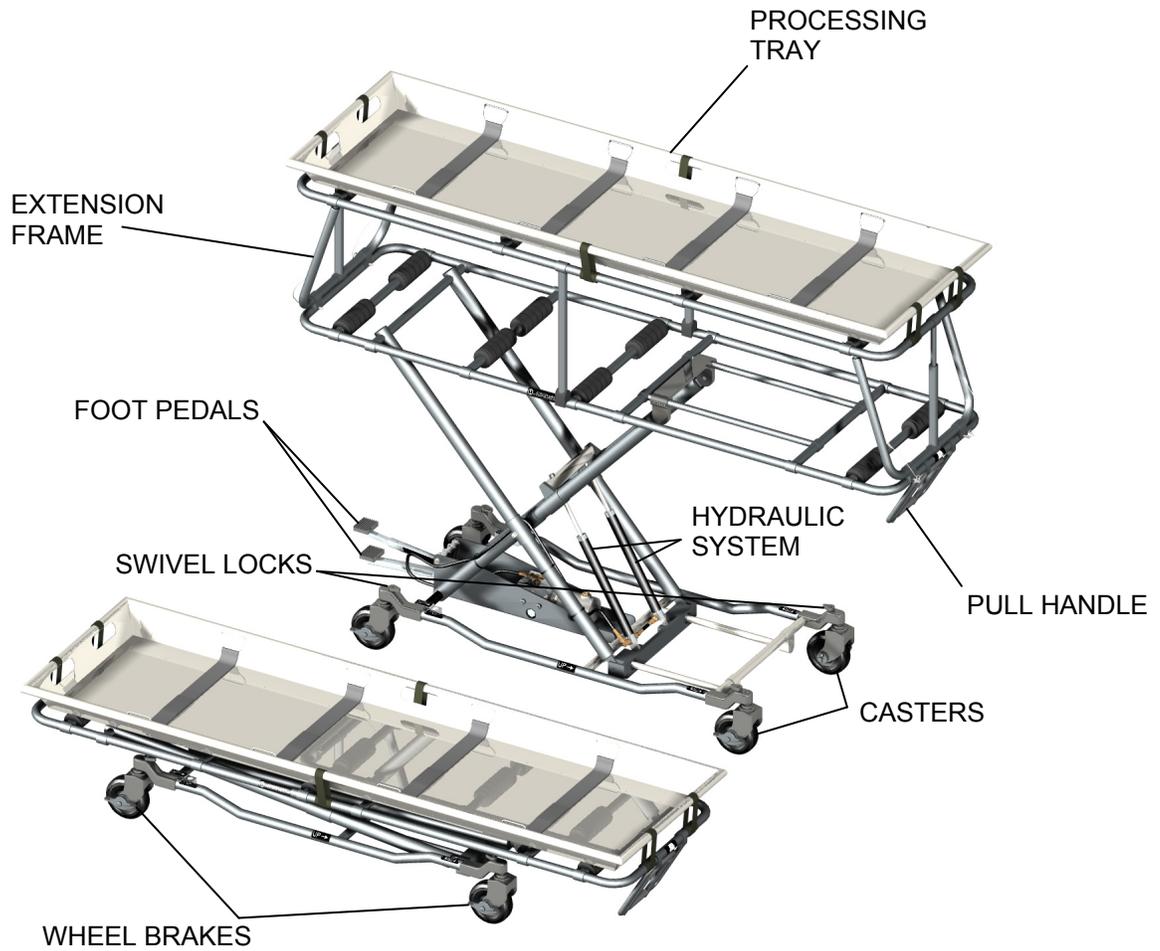


Figure 20. Mobile Processing Platforms.

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS-CONTINUED**Ingress/Egress Ramp**

A two-section ramp is provided to allow the MPPs to be transferred in and out of the MIRCS during ground operations. The ramp contains side guards that prevent the MPP castors from sliding off the sides of the ramp. In the ground mode either one or two ramp sections are required depending on the set-up height and surrounding terrain. The extra ramp section(s) can then be used as a lower threshold to allow the MPP to be placed on a flat surface during transfer operations. A pivoting upper threshold is used to provide smooth transition when the MPP is being transported through the softwall door

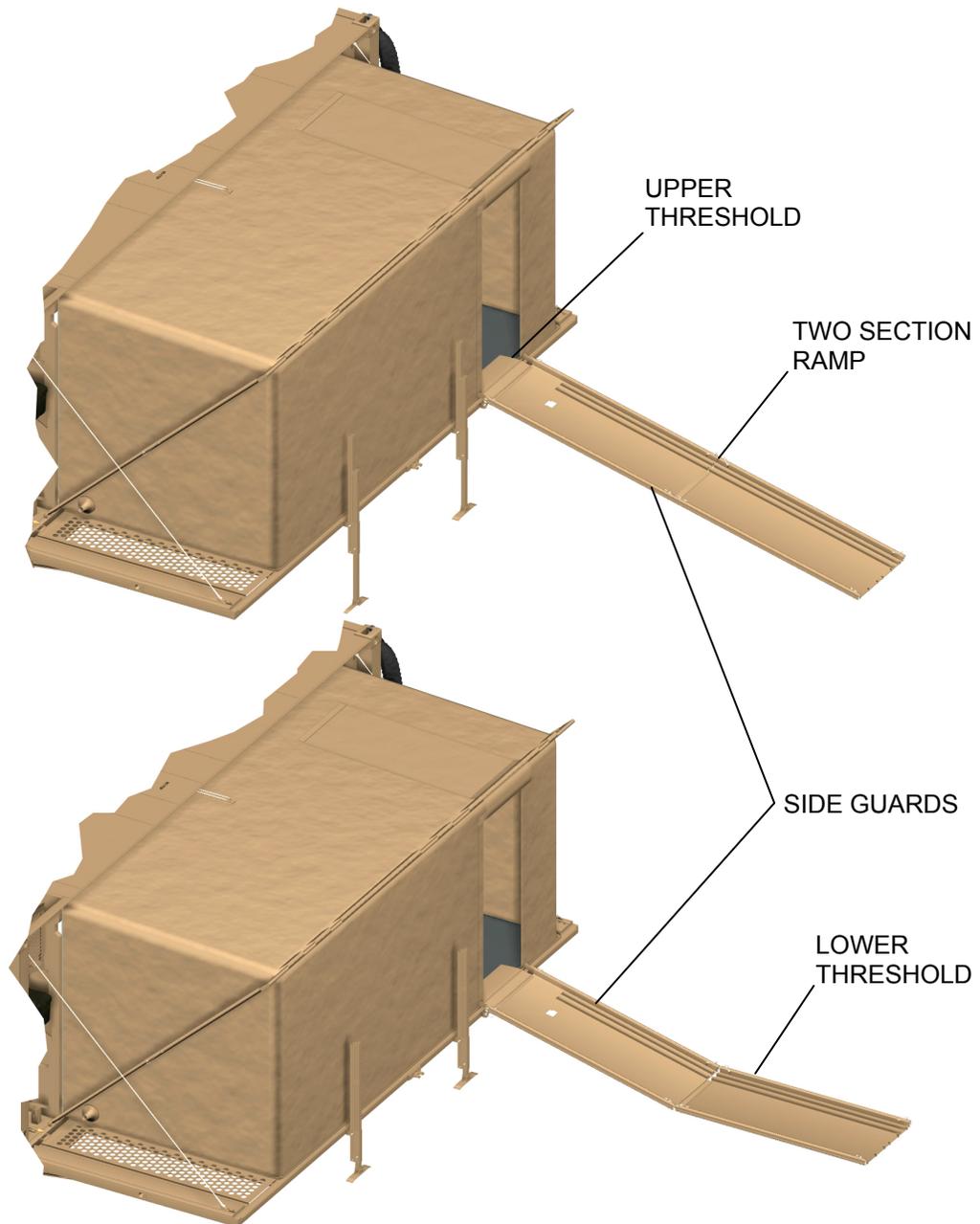


Figure 21. Ingress/Egress Ramp.

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS-CONTINUED

Remains Lifting Device (RLD)

The RLD is provided to allow the MPPs to be transferred in and out of the MIRCS during both trailer mounted and rapid transport operations. The RLD attaches to the ramp sections which are attached to the PA platform to provide a straight path from the ground to the RSU. A manual winch is attached to the underside of the top ramp section. The winch has a 20-ft strap and 4-ft sling that are attached to the MPP frame. A crank handle is then used to operate the winch and move the MPP up or down the ramp and RLD sections. The winch contains a latching mechanism that prevents sudden slipping or movement of the MPP as it is moving along the incline.

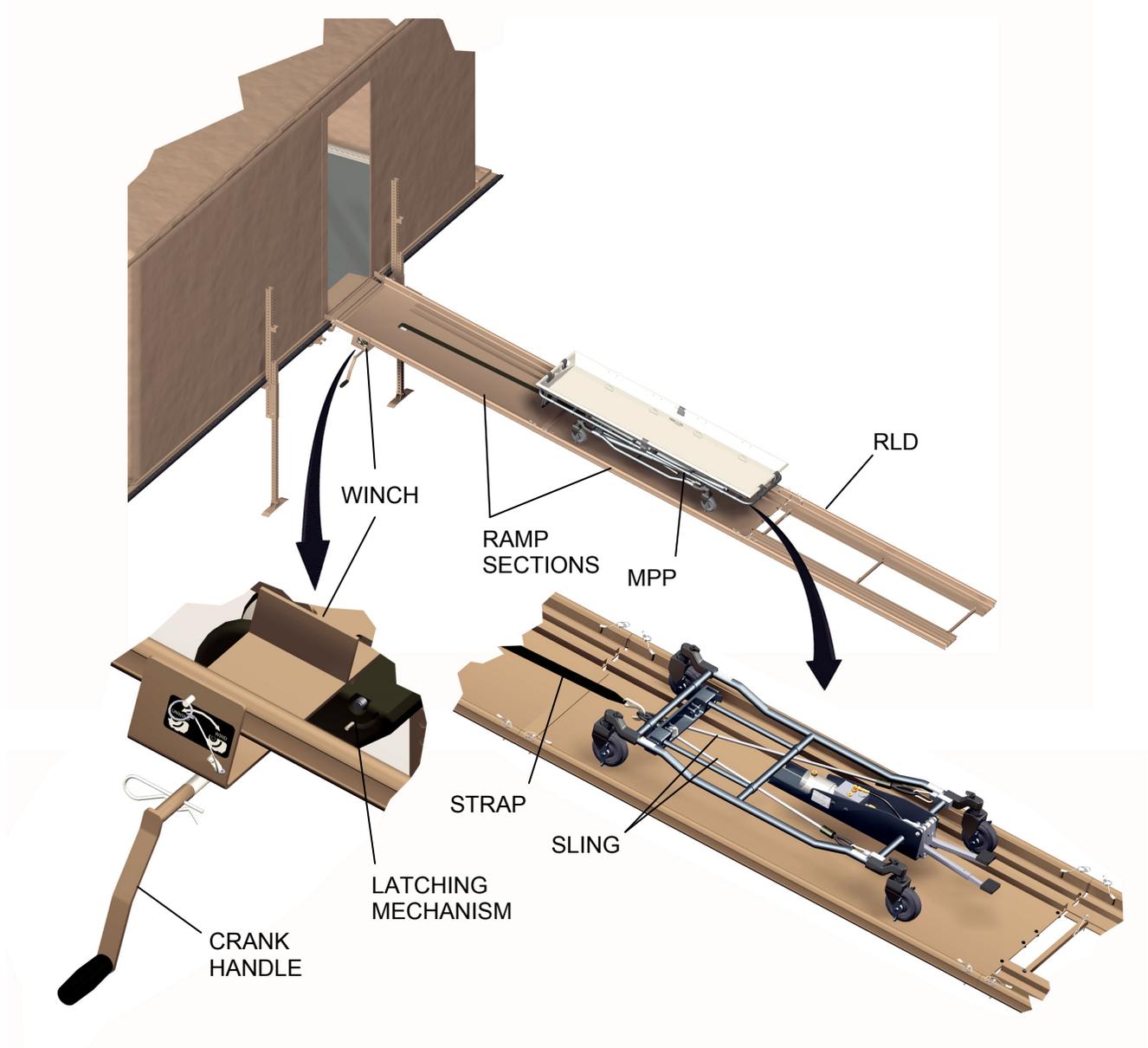


Figure 22. Remains Lifting Device (RLD).

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS-CONTINUED

Temporary Remains Holding Shelters

Four temporary remains holding shelters are supplied with the MIRCS. Each shelter is capable of holding six remains. Side opening compartments are provided to allow access to each remains individually. The flap for each compartment contains a covered pocket to for identification purposes. The end walls have vent screens to allow airflow through the shelter and connection points for ventilation ducting (not provided). The shelters collapse for storage.

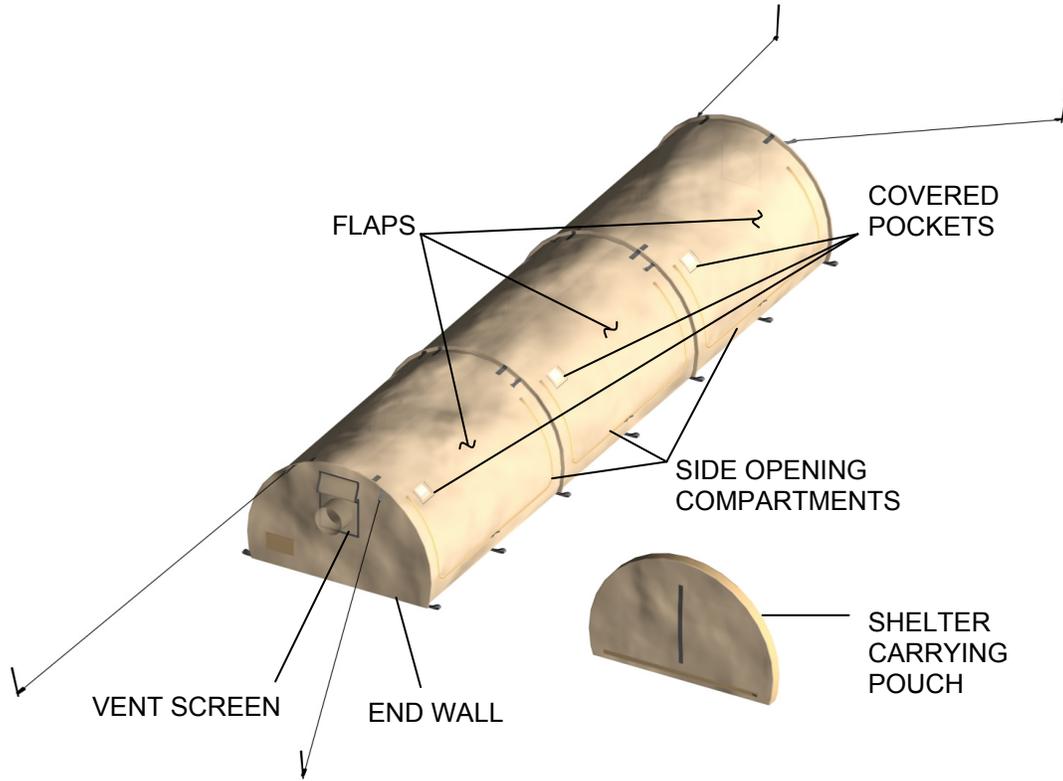


Figure 23. Temporary Remains Holding Shelters.

EQUIPMENT DATA

Table 1 provides information pertaining to operational, electrical, mechanical, and environmental characteristics of MIRCS and related equipment.

Table 1. Equipment Data.

ITEM	CHARACTERISTICS
<p>Operational Characteristics</p> <p>Remains Storage Capacity Temporary Remains Shelter Holding Capacity Storage Rack Weight Capacity (Tray and Remains) Mobile Processing Platform Weight Capacity Water Consumption (Average Per Remains) Water Consumption (Average Per Day) Waste Water Holding Capacity Fuel Tank Capacity (On-board Fuel Tank) Fuel Tank capacity (TQG Fuel Tank) Fuel Consumption (Max Per Day Transport Mode) Fuel Consumption (Max Per Day Set-up Mode) RU Refrigerant Type and Capacity ECU Refrigerant Type and Capacity</p>	<p>16 Remains 24 Remains 300 lbs 300 lbs 2-1/2 gal (9.46 ltrs) 40 gal (151.42 ltrs) 40 gal (151.42 ltrs) 50 gal (189.27 ltrs) 14 gal (53 ltrs) 18 gal (68.14 ltrs) 54 gal (204.41 ltrs) R-404a, 15 lbs (6.80 kg) R-407c, 15 lbs (6.80 kg)</p>
<p>Electrical Characteristics</p> <p>Power Requirement</p>	<p>208 VAC, 3-Phase, 50-60 Hz, 60-Amp</p>
<p>Mechanical Characteristics</p> <p>Shipping Configuration</p> <p>Length Width Height Cube Weight (Empty with On-board Supplies) Weight (Full of Fuel and 16 remains)</p> <p>Ground Operating Configuration</p> <p>Length Width Height Maximum Slope for Set-up</p>	<p>240 in (610 cm) 96 in (244 cm) 96 in (244 cm) 1,280 cu ft (36.24 cu m) 19,992 lbs (9,087 kg) 24,434 lbs (11,083 kg)</p> <p>306 in (777 cm) 510 in (1295 cm) 120 in (305 cm) 6 degrees</p>
<p>Environmental Characteristics</p> <p>Storage Temperature Operating Temperature Operating Altitude</p>	<p>-60°F to 160°F (-51°C to 71°C) -25°F to 120°F (-32°C to 49°C) 7,500 ft maximum (2,286)</p>

END OF WORK PACKAGE

CREW MAINTENANCE THEORY OF OPERATION

THEORY OF OPERATION

MIRCS Theory of Operation

The MIRCS is used to process and store human remains. The MIRCS can be operated in two modes: transport mode and ground mode. In the transport mode the MIRCS is transported to a site where remains can be rapidly loaded into the RSU and evacuated. This is completed by lowering the processing platform and transferring remains directly in and out of the RSU using the RLD and MPP. During transport and ground mode operation the remains are conditioned in the RSU by the RU. In the ground mode the MIRCS is completely set-up and can be used to perform all mortuary affairs (MA) administrative and processing operations. Transferring operations include bringing the remains through the vestibule and supply areas into the processing area on the MPP. The remains are then processed on the MPP and loaded into the RSU. The MIRCS has provisions to store up to sixteen (16) remains in the RSU. In the ground mode environmentally controlled air is available to heat, cool, and ventilate the administrative and processing work areas. The MIRCS contains many systems and equipment used to support MA operations as describe below.

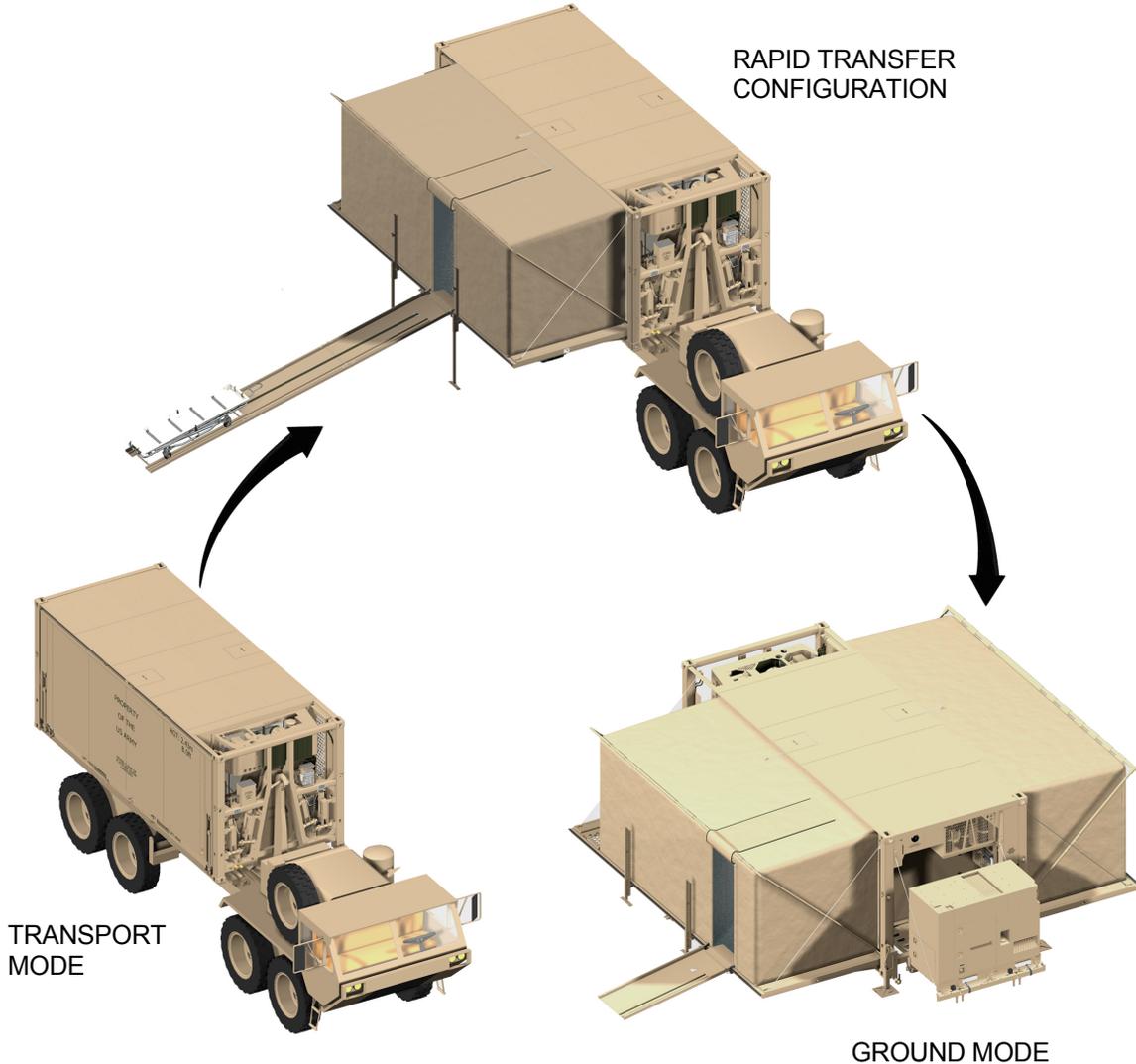


Figure 1. MIRCS Operating Modes.

THEORY OF OPERATION-CONTINUED

Control System Theory of Operation

The control system (Figure 2) provides the electrical interface between the on-board TQG or external power and MIRCS electrical and electronic components. The system controls and monitors operation of the ECU, RU, fuel, lighting, and water systems and provides interface points for the operator. With the exception of power distribution and circuit protection devices, the operation of individual control system components are discussed in the theory of operation of the systems or equipment they control.

The MIRCS requires 208 VAC, 3-Phase, 50/60 Hz electrical power. This power can be supplied from the on-board generator or from an external electrical source. In either case power is routed to the ECU control enclosure to a main disconnect switch (SW910). SW910 removes power from the MIRCS when turned off and provides power to phase monitor (PM920) and main contactor (MC910) when turned on. PM920 continually analyzes the input power. If the voltage level and phasing is correct PM920 allows MC910 to turn on. With MC910 energized, power will be available to feed a bank of circuit breakers. These circuit breakers divide the voltage that will be used by the individual circuit branches. The output of each circuit breaker is distributed inside the ECU control enclosure, or to the RU control enclosure, RU control box, MA operation enclosure, PA lights enclosure, and water system junction box. Power routed to the RU control box feeds the standby motor through contactor (MC1). All power needed to control RU operation comes from the RU battery and alternator. The RU circuitry is protected by a fusible link and individual fuses. The RU battery also provides 12 VDC power for the fuel level indicator, RSU loading lights, emergency and blackout lights, and equipment fault lights. AC power used inside the MIRCS is routed through the water system junction box where additional circuit breakers are located to protect circuit branches for the lighting system, utility receptacles, and water system components. The circuits for the utility receptacles are protected with ground fault circuit interrupter (GFCI) circuit breakers and surge suppressor duplex receptacles.

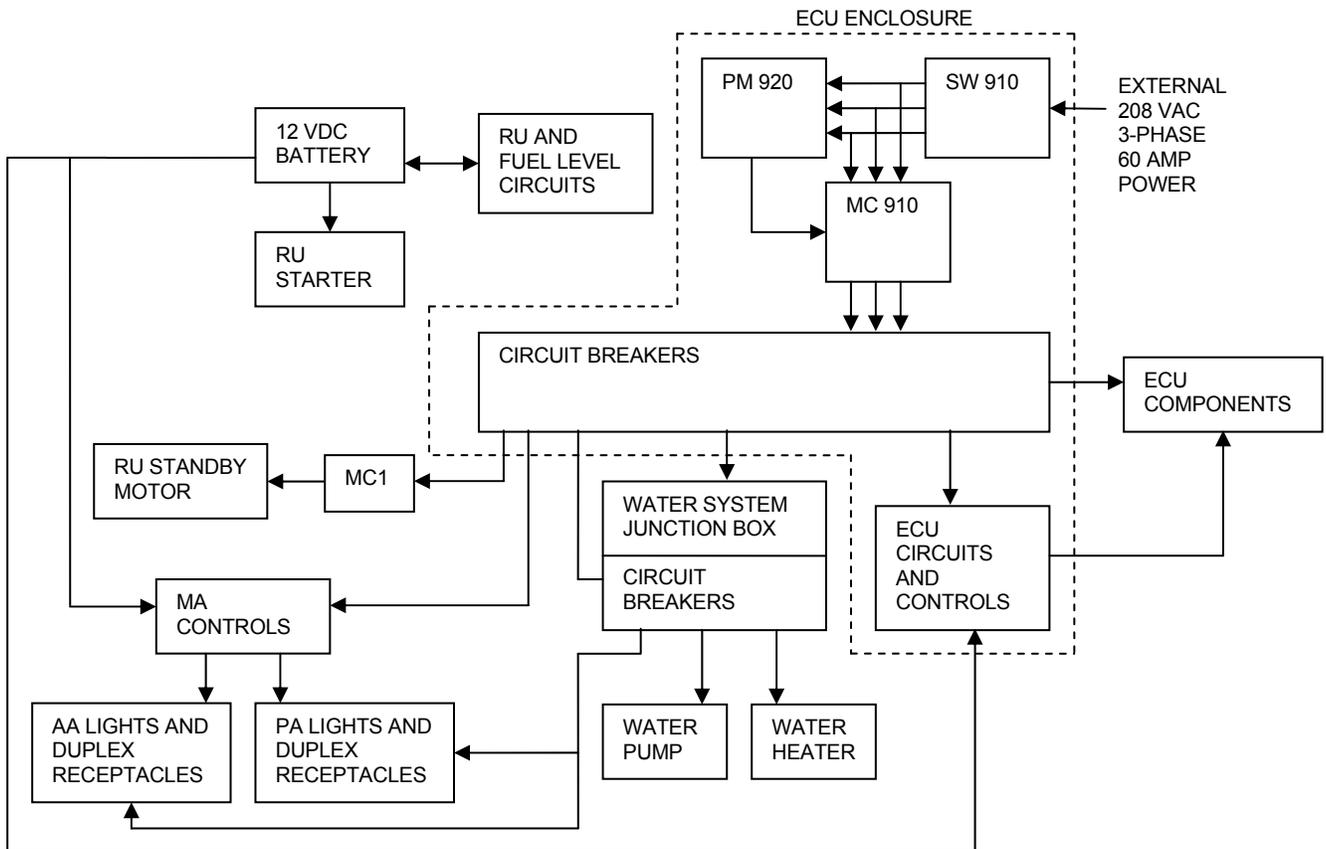


Figure 2. Control System Block Diagram.

THEORY OF OPERATION-CONTINUED**Refrigeration Unit Theory of Operation**

The RU is used to condition (Cool or Heat) the inside of the RSU for remains storage and preservation. The RU is a diesel engine or standby electric motor driven system. The engine drives the refrigeration compressor through a centrifugal clutch and pulley system. When the RU is operating from the on-board generator or external electrical power, the clutch is disengaged from the engine sheave and the compressor is belt-driven by the standby motor. A belt-driven alternator provides the power to operate the electrical evaporator fans, solenoid valves, and RU control circuitry.

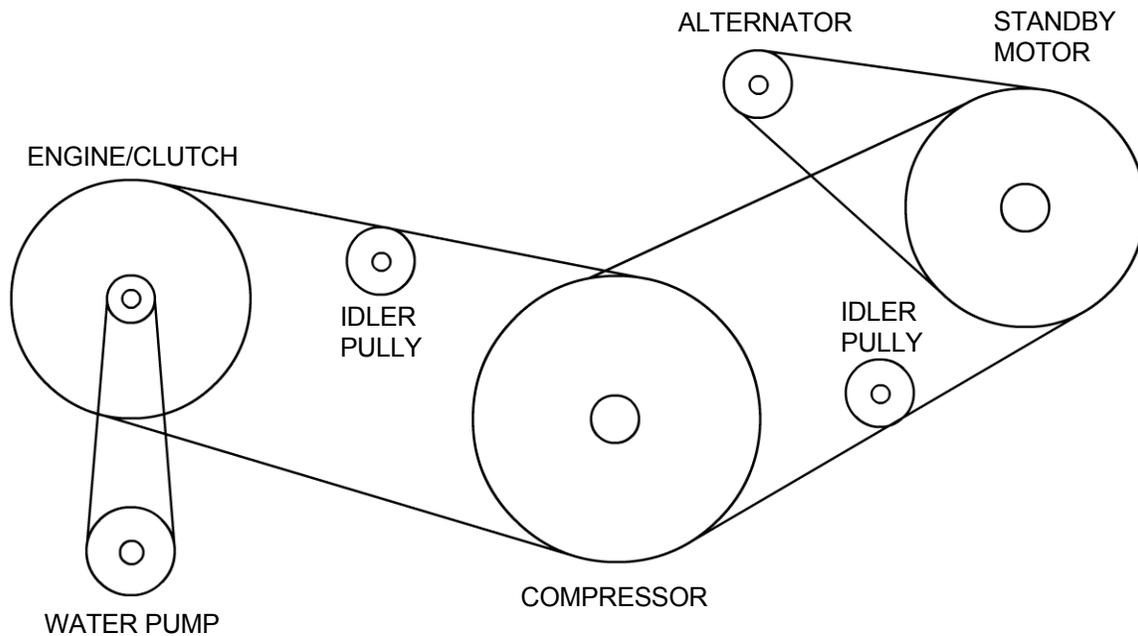


Figure 3. RU Belt/Pulley Arrangement.

THEORY OF OPERATION-CONTINUED

RU Cooling Process

When in cooling mode (Figure 3) the compressor raises the temperature and pressure of the refrigerant vapor by compressing it. The vapor flows into the condenser. The condenser fan circulates ambient air over the outside of the condenser tubes, cooling the vapor and causing it to condense into liquid. The liquid refrigerant flows from the condenser to the receiver, which stores the additional refrigerant charge necessary for low ambient operation and for heating and defrost modes. The refrigerant then leaves the receiver and flows through a sub-cooler that provides additional cooling to the liquid. Out of the sub-cooler refrigerant flows to the evaporator. As the liquid refrigerant passes through the evaporator, heat is removed from the air circulating through the RSU thereby cooling the air. This cold air is circulated throughout the RSU by the fans to maintain the desired temperature. The transfer of heat from the air to the liquid refrigerant causes the liquid to vaporize. This vapor flows into the accumulator where any liquid refrigerant is caught before it can return to the compressor. The compressor draws the vapor out of the accumulator and the cycle starts over.

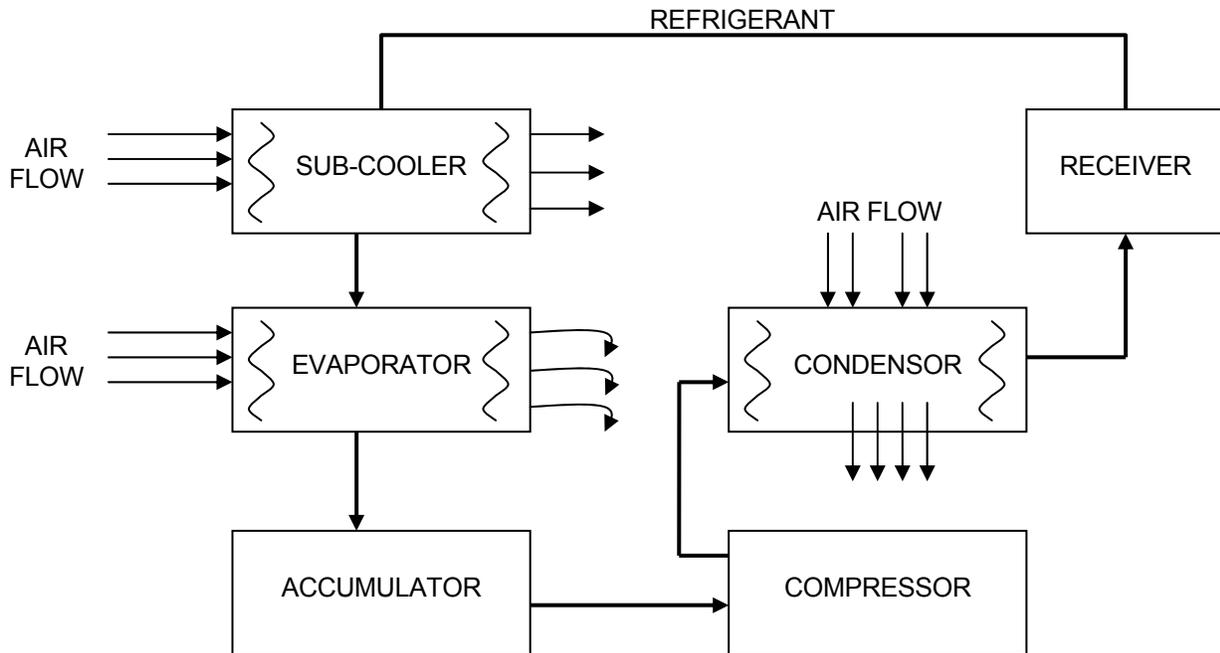


Figure 4. RU Cooling Mode Block Diagram.

THEORY OF OPERATION-CONTINUED

RU Heating Process

When refrigerant vapor is compressed to a high pressure and temperature in a reciprocating compressor, the mechanical energy necessary to operate the compressor is transferred to the gas as it is being compressed. This energy is referred to as the "heat of compression" and can be used as the source of heat during the heating cycle. In the heating mode the hot gas valve is energized diverting the high temperature, high-pressure refrigerant vapor to the evaporator through the drain pan heater. The vapor enters the evaporator to give the required heating. When the engine is running and there is a call for additional heat, the controller will also energize a hot water solenoid valve. This valve will allow coolant from the engine to circulate through a coil in the evaporator supplying additional heat to the interior of the RSU.

RU Defrost Process

The defrost mode is the same as the heat mode, except the evaporator fans are turned off. This keeps the heat at the evaporator coil where it will melt the frost and ice, instead of circulating it through the RSU. Defrost cycles can be initiated automatically by programming the outside RU control panel or manually at either control panel. The automatic defrost timer can be set for 1.5, 3, 6, or 12 hour intervals. A defrost may also automatically start if the defrost air switch detects frost build-up. Since the RU is set to operate at 34°F, the RU rarely goes into defrost mode.

RU Operating Modes

There are three modes of continuous RU operation "ROAD" (high-speed engine, 2300 RPM), "CITY" (low speed engine, 1800 RPM) and "STANDBY" (electric motor, 1750 RPM). These modes are initiated from the RU control panel. Once the RU is turned on and an operating mode is selected there is a 35 second time-delay before RU operation will automatically start. If the RU is turned on and no mode is selected the RU will automatically start in whichever mode was last selected.

RU Control and Monitoring

RU operation is controlled by a microprocessor in conjunction with operator input from the control panel located on the RU control enclosure. Once the operator selects the desired operating mode the microprocessor controls all aspects of unit operation. The RU control system also contains other control circuitry including relays, contactors, and fuses. Most of these components are located on the control relay board. The RU contains several sensors and switches that communicate with the microprocessor to continuously monitor and control the engine, refrigeration and heating components operation.

THEORY OF OPERATION-CONTINUED

Environmental Control Unit (ECU) Theory of Operation

The ECU provides temperature-controlled air at the proper air quality when the MIRCS is operating in the cold and the heat. The ECU is connected to a network of ducting (Figure 5) that provides the conditioned air needed to properly ventilate the interior working areas.

ECU Ventilation and Airflow

The outside air blower (Figure 4, Item 15) draws about 200 CFM of fresh air through the inlet filter (Figure 4, Item 1) and sends it to the re-circulating air blower (Figure 4, Item 13). At the same time, the re-circulating air blower draws in about 1000 CFM of returning air from the AA and vestibule through the re-circulating filter (Figure 4, Item 2) and over the coil of the AA evaporator (Figure 4, Item 14). The re-circulating blower mixes the outside air and re-circulating air together and sends the air towards the AA ducting (Figure 4, Item 6) and PA ducting (Figure 4, Item 10). The air moving to the AA ducting passes over heating elements (Figure 4, Item 3) before leaving the ECU. This air then travels through the AA ducting, out into the AA, through the screened panels (Figure 4, Item 5) on the AA soft wall, and back through the vestibule to the re-circulating filter. Air moving towards the PA passes over the coils of the PA evaporator (Figure 4, Item 12) then heating elements (Figure 4, Item 11) before moving into the PA ducting. This air then circulates through the PA and is pulled into the exhaust duct (Figure 4, Item 9) by the exhaust blower (Figure 4, Item 8) at a rate slightly higher than the outside (fresh) airflow rate. The exhaust blower sends the air out of the MIRCS through the exhaust screen (Figure 4, Item 7). Since the exhaust blower is trying to pull slightly more air than is moving out of the PA ducting a small amount of air will be pulled from around the door (Figure 4, Item 4) separating the vestibule from the supply area. This ensures that air will always flow from the AA towards the PA.

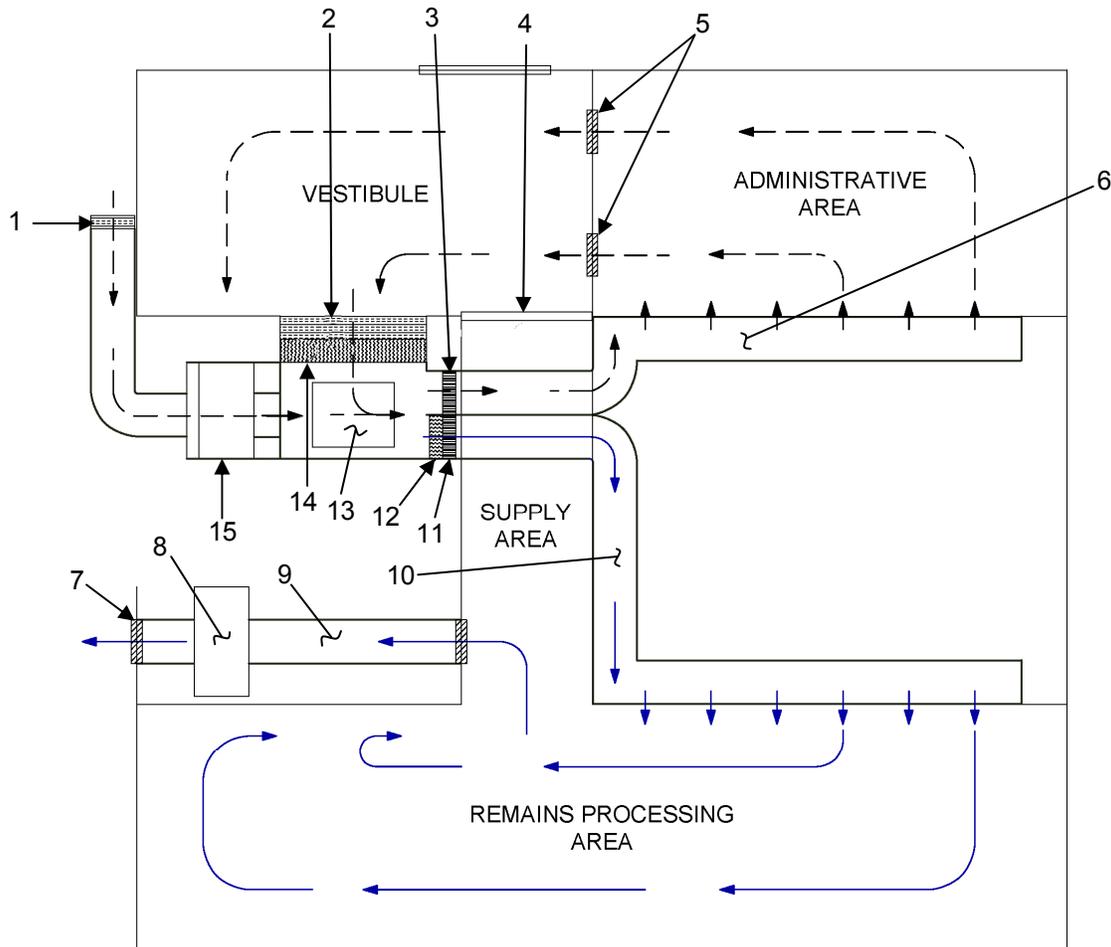


Figure 5. ECU Airflow Diagram.

THEORY OF OPERATION-CONTINUED

ECU Cooling Process

In the cooling mode (Figure 6) the compressor raises the temperature and pressure of the refrigerant vapor by compressing it. The refrigerant flows into the condenser. The condenser fans circulate ambient air over the outside of the condenser tubes, cooling the refrigerant vapor, causing the refrigerant to condense into liquid. The liquid refrigerant flows from the condenser to the receiver. The refrigerant then leaves the receiver and flows to the AA and PA evaporators. Refrigerant flow to each evaporator is based on the outside solar conditions. As the liquid refrigerant passes through the evaporators heat is removed from the air passing around the outside of the evaporators thereby cooling the air. This cold air is carried throughout the MIRCS by ductwork to maintain the desired temperature. The transfer of heat from the air to the liquid refrigerant in the evaporators causes the liquid to vaporize. This vapor passes into the accumulator where any liquid refrigerant is caught before it can return to the compressor. The compressor draws the vapor out of the accumulator and the cycle starts over.

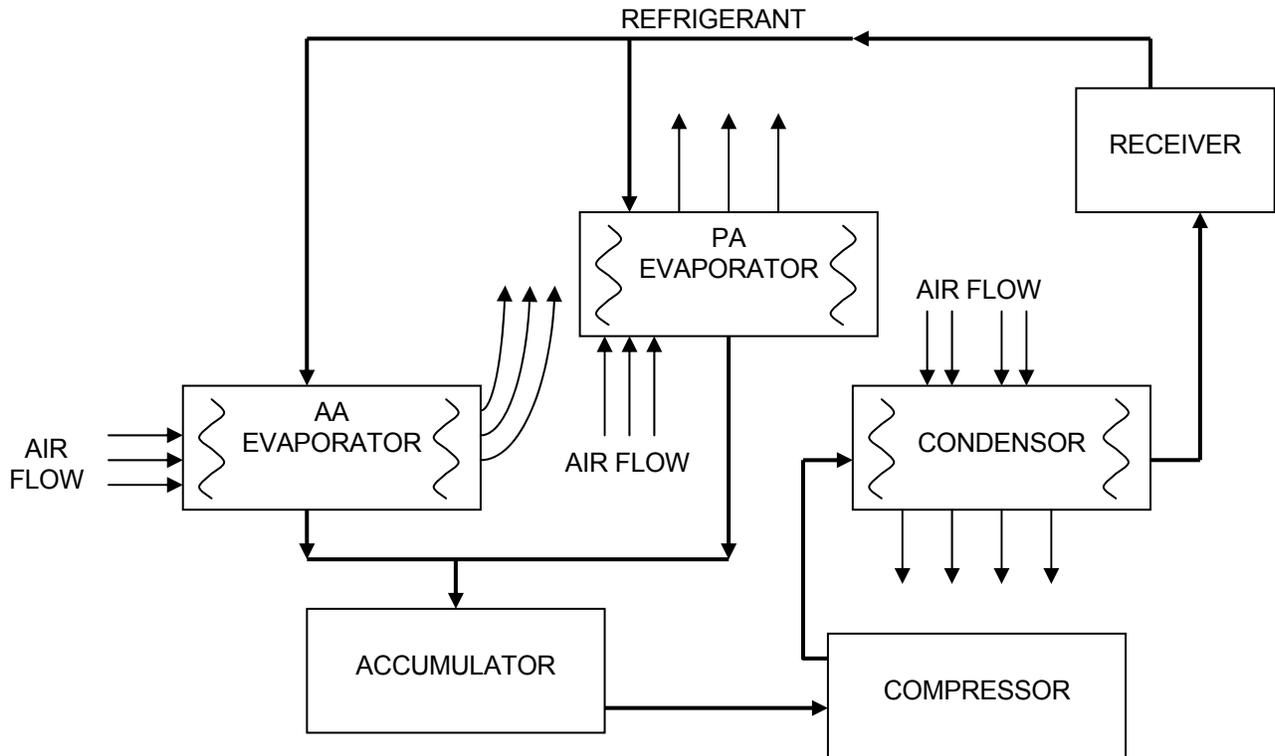


Figure 6. ECU Cooling Mode Block Diagram.

THEORY OF OPERATION-CONTINUED**ECU Heating Process**

In the heating mode electric resistance heaters are used to heat the air moving through the ducting to the AA and PA. The AA side of the ducting contains two sets of heating elements. One set "normal" generates 3,000 watts of heat and the other set "auxiliary" generates 4,500 watts. The PA side of the ducting contains 2,700 watts of heating elements. The AA "normal" heating elements are adequate to provide heated air in most conditions. At extremely cold temperatures the "auxiliary" heating elements can be turned on for supplemental heating with a switch on the ECU control enclosure.

ECU Control and Monitoring

A thermostat with a COOL/OFF/HEAT switch is located on the ECU and is accessible from the vestibule area. The thermostat is used to control ECU operation. After power is applied to the MIRCS and the ventilation fan switch is turned on the outside air, re-circulating air, and exhaust air blowers turn on and start circulating air through the AA and PA. If cooling or heating is desired the operator selects COOL or HEAT at the switch then sets the thermostat at the desired temperature level. Once heating or cooling is selected ECU operation will be controlled through the thermostat in conjunction with control circuitry in the ECU control enclosure. There are eight fault lights for the ECU. These lights mounted on the ECU enclosure provide information for specific ECU faults. An ECU master fault light located on the MA enclosure gives an indication that an ECU fault has occurred. This alerts the operator to go to the ECU enclosure to determine the actual fault condition.

THEORY OF OPERATION-CONTINUED

Lighting System Theory of Operation

The MIRCS lighting system (Figure 7) consists of both portable and fixed lighting fixtures used to supply lighting when conducting MA operations in normal conditions and in blackout operation. The system also provides emergency lighting to allow personnel to safely exit the MIRCS interior in the event of a power failure.

Work Lighting

Seven portable 40 watt fluorescent light fixtures are installed in the ceiling of the AA, PA, and vestibule soft walls when the MIRCS is set-up for ground operation. In the PA, four of these lights are strung to each other and connected to a dedicated electrical duplex receptacle provided at the top of the interior wall. In the AA, two lights are strung together and connected to a dedicated receptacle. One light is set-up in the vestibule. This light is connected to the second receptacle on the AA light duplex receptacle. There are two permanently mounted fluorescent light fixtures (rated at 20 watts each) in the ceiling of the supply storage area. These lights are connected to the second receptacle on the PA light duplex receptacle. There are also four blue LED light fixtures installed above the RSU doors. These lights provide a small amount of light when personnel are performing transfer operations with the MIRCS loaded for transport. There are ON/OFF switches for the white lights located on the MA operation panel in the vestibule. These switches allow the lights in the AA, PA, supply area, and vestibule to be operated independent of each other. The lighting above the RSU doors is controlled from a switch located on the RU control enclosure so that the lights can be turned on during rapid remains transfer operations when the MIRCS is loaded for transport.

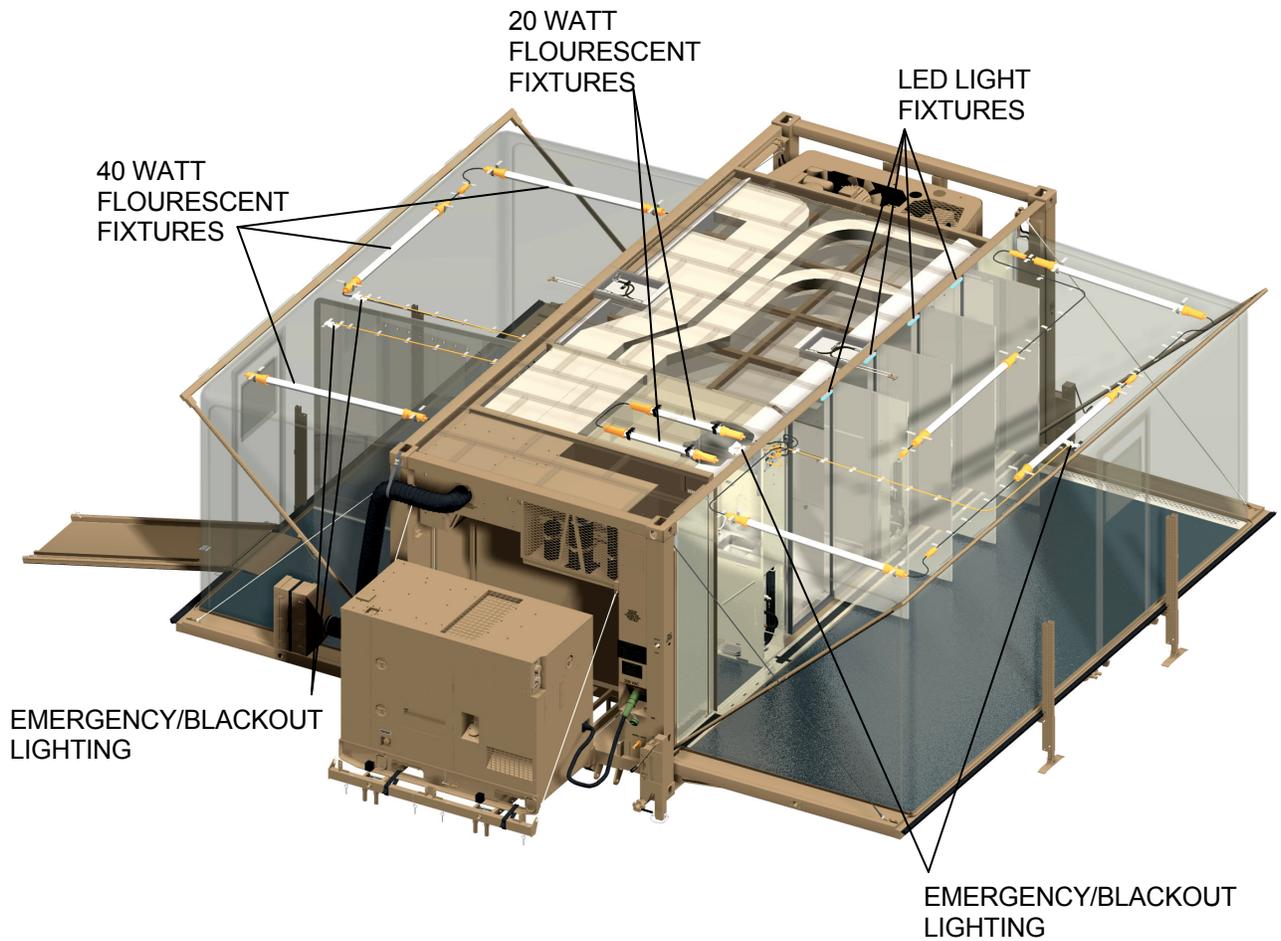


Figure 7. Interior Lighting.

THEORY OF OPERATION-CONTINUED

Emergency/Blackout Lighting

Three portable blue LED light fixtures are installed in the ceiling of the AA, PA, and vestibule soft walls when the MIRCS is set-up for ground operation. In the PA, one light is placed above the emergency/ egress door. This light plugs into a receptacle provided at the PA light enclosure. In the AA, one light is placed next to the partition wall door leading to the vestibule. One light is set-up in the vestibule leading to the normal entry/egress door. The AA and vestibule lights are connected to receptacles on the MA operation enclosure. There is also one portable blue LED light fixture installed in the ceiling of the supply storage area at the entry/egress point leading from the PA to the vestibule. This light plugs into a receptacle provided at the PA light enclosure. These four lights serve the dual function of emergency lights and blackout lights.

Emergency Light Operation

When power is applied to the MIRCS, power is available to turn on the normal (fluorescent) lights in the system. If during MA operation, there is a loss of power due to shutdown or failure of the generator or external power source, a control relay will de-energize to allow RU battery power to turn on the emergency lights. The RU battery is connected to the lights through a time-delay relay. After 5 minutes the relay will de-energize and remove battery power from the lights. This allows personnel to safely exit the MIRCS interior while preventing the excessive draining of RU battery power.

Blackout Light Operation

The MA operator enclosure contains a mode switch to allow the MIRCS to be operated in "NORMAL" or "BLACKOUT" mode. In normal mode the blackout lights are off. In blackout mode the emergency lights previously described turn on with 12 VDC power from the RU battery. The fluorescent lights in the PA will also remain on, but the fluorescent lights in the AA, vestibule, and storage area will be disabled. With the curtain doors to the AA and supply areas closed the white lights in the PA will not affect blackout discipline provided the vestibule and PA entry/egress doors are closed.

THEORY OF OPERATION-CONTINUED

Fuel System Theory of Operation

The MIRCS fuel system (Figure 8) provides fuel to the diesel engine on the RU and the fuel tank in the on-board generator. A 50-gallon fuel tank is used to store the fuel.

Fuel Tank

The fuel tank contains six ports or connections points. The fill port is provided to allow the fuel tank to be gravity refilled. A port is provided for mounting the fuel vent. The fuel vent contains a ball check that vents fuel vapor to prevent over-pressurizing the tank and also prevents liquid fuel from spilling from the tank when the MIRCS is tilted. A drain port is provided at the tank bottom to allow draining for maintenance and air transport. A spring-loaded shutoff valve is connected to the tank drain port. A fuel level sending unit is provided at the top of the tank. A fuel level sending unit is installed in this port. Supply and return ports are located on the back wall of the tank.

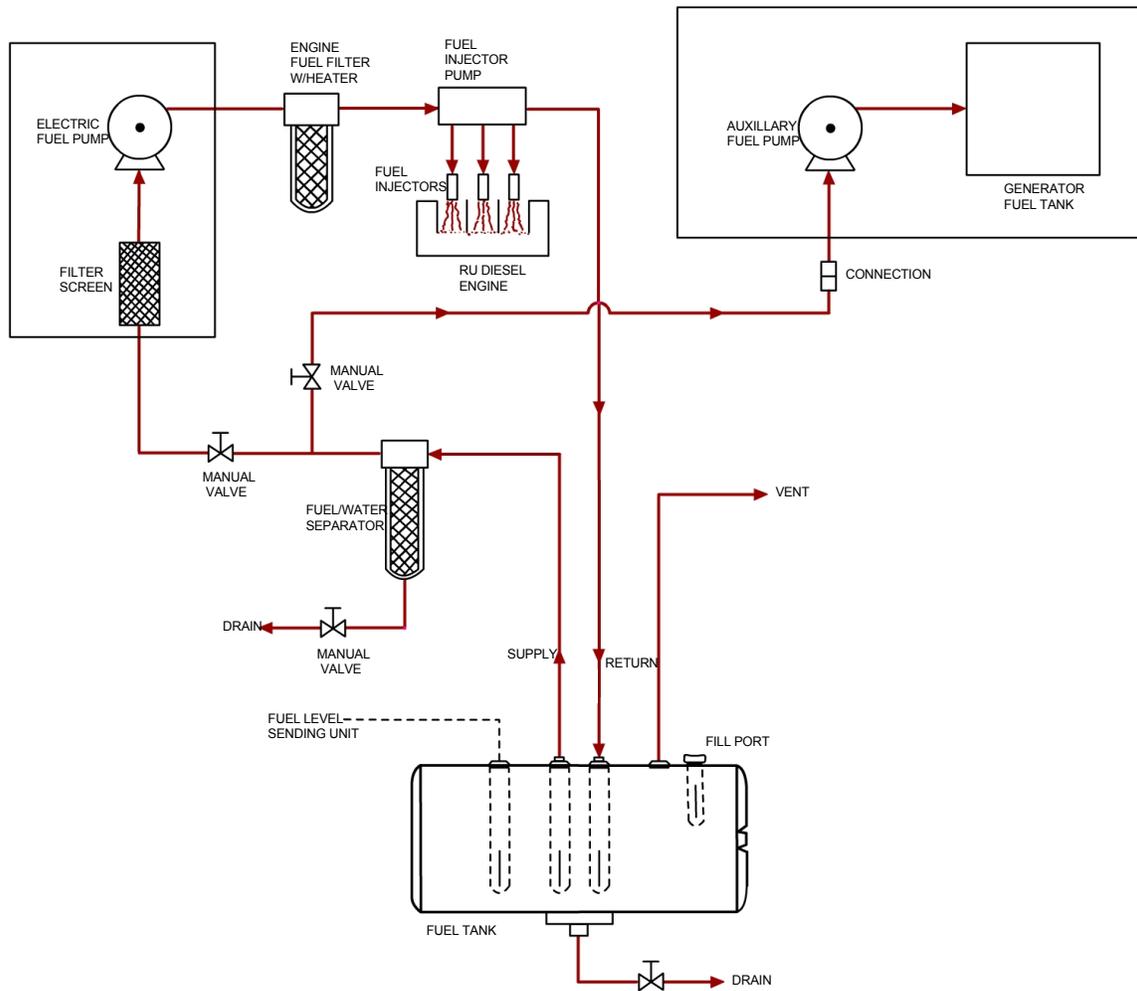


Figure 8. Fuel System Piping Diagram.

THEORY OF OPERATION-CONTINUED

Fuel Supply Piping

Fuel flowing out of the tank supply port goes to a fuel/water separator. The fuel/water separator is used to remove water and particulate contamination that may be in the fuel. The fuel/water separator has a drain valve at its base that must be periodically drained to remove any trapped water. Fuel flowing out of the separator flows to the RU and generator supply lines. Each supply line contains a shut-off valve to allow fuel to be shut-off to one branch without interrupting flow to the other branch.

RU Fuel Supply

Fuel flowing to the RU engine is drawn from the tank by an electric fuel pump. The pump contains a filter screen to prevent particulates from contaminating the pump. Pressurized fuel then passes through the engine fuel filter that prevents contaminants from getting to the engines' fuel injection system. The housing of the fuel filter is equipped with a heater. This heater is turned on by the RU's control system at low ambient temperatures to pre-heat the fuel going into the engine. This helps to atomize the fuel during cold engine starts. Fuel flowing out of the engine fuel filter is delivered to the fuel injector pump where it is distributed to the fuel injector of each cylinder. Not all fuel supplied to the fuel injection pump is used by the engine. Unused fuel is returned to the fuel tank and is reused.

Generator Fuel Supply

Fuel flowing to the generator is terminated at a quick-connect fitting located in the rear mechanical area. A removable fuel hose is used to connect the fuel supply line to the auxiliary fuel connection located on the generator. An auxiliary fuel pump in the generator draws fuel from the fuel supply as need to fill the generator's fuel tank. The fuel actually used by the generator's diesel engine is drawn from this internal tank.

Fuel System Monitoring

The fuel sending unit located in the fuel tank is a capacitance type sensor that changes in resistance as the fuel level drops further down the sensing probe. Two output signals are provided by the fuel sending unit. One output is the probes' resistance. This resistance changes the voltage output to the fuel level indicator that provides an analog reading of the tank fuel level in terms from empty to full. The sending unit also provides an output signal that turns on warning lights on the RU and MA control panels if the fuel level in tank drops below approximately 1/8th full.

THEORY OF OPERATION-CONTINUED

Water System Theory of Operation

The water system (Figure 9) draws water from an external water source and supplies hot or cold water to a personnel sanitation sink and a utility hose connection. The water source can be pressurized or non-pressurized.

Water Pressurizing and Heating

Water is drawn from the external water source by an external $\frac{3}{4}$ HP centrifugal pump. The water flowing into the external pump passes through a Y-strainer that will prevent any large particles from contaminating the pump or MIRCS water piping. Pressurized water is then delivered to the water inlet solenoid valve that controls water flow to the 2-1/2 gallon electric water heater, thermostatic control valve, and mixing valves of the personnel sink faucet and utility hose faucet. A backflow prevention valve is installed in the supply piping to prevent the possibility of water back flowing to the water source. Water coming out of the water heater flows to the thermostatic control valve where it mixes with cold water to supply water at 100°F-110°F to the hot water connection on the mixing valves of the personnel sink faucet and utility hose faucet. The thermostatic control valve also contains a backflow prevention device to prevent water from back flowing to the water source. The sanitation sink contains a standard lavatory faucet (mixing valve) with independent hot and cold-water levers. The utility hose connection has a shower type mixing valve with a single volume and temperature control lever. A 25-ft utility hose with spray nozzle is connected to the utility connection to aid in remains processing and equipment sanitization. The inlet to the spray nozzle contains a backflow prevention device to prevent water from back to the water piping.

Personnel Sink Water Flow Control

Water flow to the personnel sink is established by depressing a foot switch under the sink. When the foot switch is depressed, power is applied to a time-delay relay. The time delay relay energizes and applies power to a control relay and the water inlet solenoid valve. The water inlet solenoid valve opens and the control relay energizes a motor contactor that starts the external water pump. A pressure switch installed on water piping provides a signal to the time delay relay. If there is adequate water pressure coming out of the pump and through the water inlet valve, the time delay relay will continue to be energized and keep the pump running. If the pressure is not adequate the time delay relay will de-energize the motor contactor after 3 seconds even if the operator continues to press the foot switch. This prevents damaging the pump if the external supply of water runs out or if the water system is not primed properly. As long as the foot switch is held down and there is water pressure, the pump and water inlet valve will stay on, and water will flow to the sink faucet. Personnel can then use the hot and cold levers at the sink as necessary to control water volume and temperature. When the foot switch is released the motor control relay and the motor contactor will de-energize and the external water pump will turn off and the water inlet valve will close. This prevents unnecessary waste of fresh water and generation of wastewater by accidentally leaving the faucet running.

Utility Connection Water Flow Control

A push-button switch located on the water system junction box starts water flow to the utility hose. Unlike the sink foot switch, the push-button can be depressed then release and water pressure will be available for 15 minutes. When the push-button switch is depressed power is applied to two time delay relays. The first time delay relay turns on the external water pump through the control relay and motor contactor and energizes the water inlet solenoid valve as described above. As long as there is adequate water pressure the pump will stay on and the valve will remain open for 15 minutes. At that time the second time delay relay will de-energize, removing power from the control relay and motor contactor. If personnel are not done using the utility hose, the push-button switch can be pushed again and another 15 minutes of water pressure will be available. The water system draws water from an external water source and supplies hot or cold water to a personnel sanitation sink and a utility hose connection. The water source can be pressurized or non-pressurized.

THEORY OF OPERATION-CONTINUED**Water Heater Control**

Any time power is applied to the MIRCS the water heater will be on provided that the water system is primed. When the system is primed a level switch mounted in piping above the water heater will close allowing the coil of the water heater relay to energize. The water heater relay will apply power to the heating element in the water heater. This allows water to be heating at all times that the MIRCS has power applied provided the water level does not drop. If the system is not properly primed or the water supply runs out the level switch will open and de-energize the water heater relay. This prevents the water heater's heating element from failing due to over-heating. The water heater also contains a relief valve that will open to relieve pressure in the tank if an over-pressure condition exists.

Water System Draining

When the water system is not in use the water piping and components must be drained to prevent freeze damage. 1/4-turn drain valves are located at the Y-strainer on the external water pump, exterior water piping, and interior water piping. The water heater also contains a drain valve.

THEORY OF OPERATION-CONTINUED

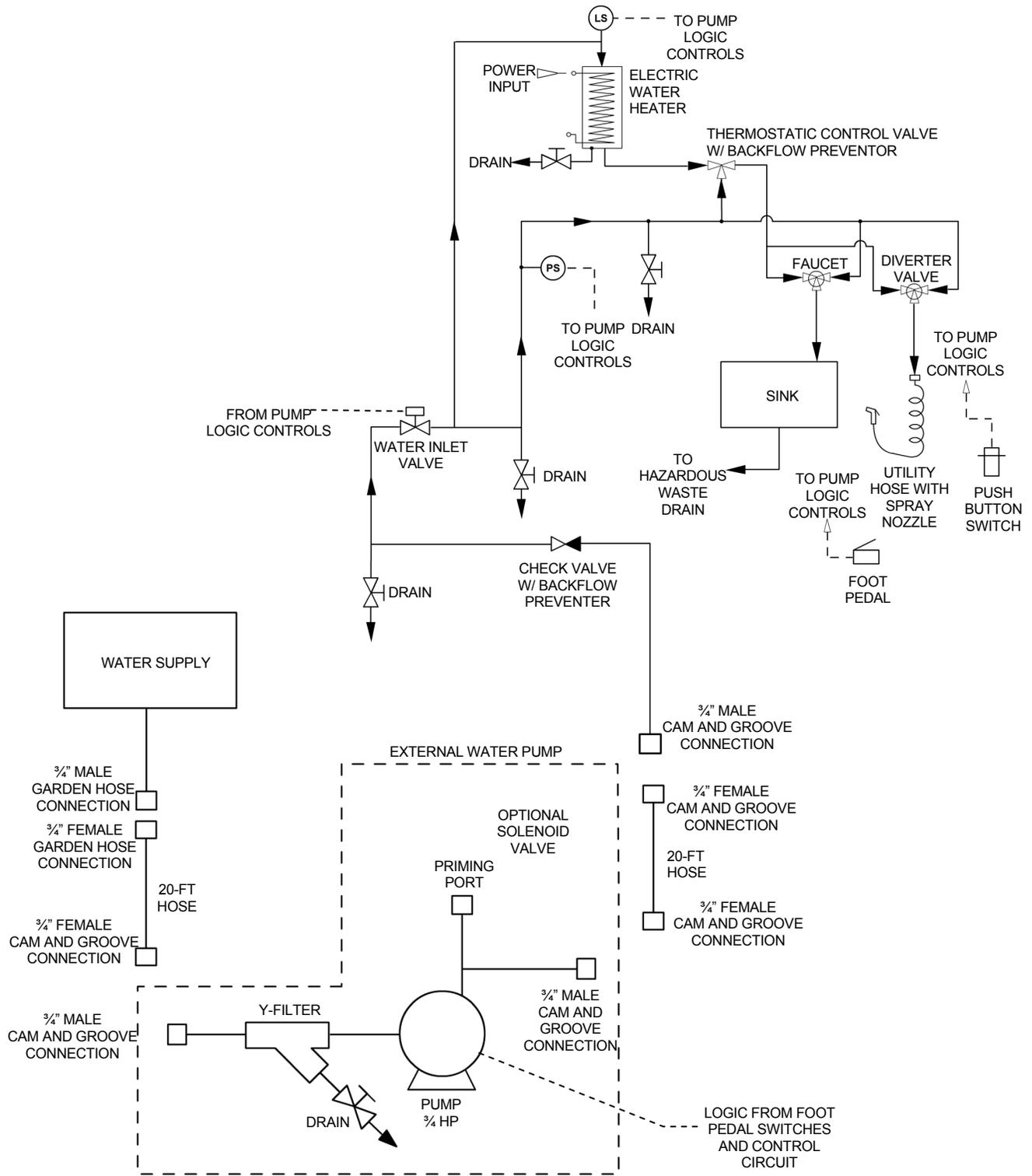


Figure 9. Water System Piping Diagram.

THEORY OF OPERATION-CONTINUED

Waste Collection System Theory of Operation

The waste collection system (Figure 10) is used to collect all wastewater generated when conducting MA operations. Wastewater generated at the personnel sanitization sink flows through a drain to the main wastewater pipe. Wastewater generated when the RSU is sanitized also flows to this main pipe. The main waste pipe is routed to the front of the MIRCS to a connection port. A drain hose with a shut-off valve is connected between this port and a 10-gallon waste container. An indicator is provided on the drain hose to indicate when the container is full. The shut-off valve is closed so that a full container can be removed and an empty one installed without spilling the wastewater. Wastewater generated when the PA is sanitized flows to the PA platform wastewater pipe. This pipe also contains a connection port where a waste container is connected with a drain hose. Condensation generated by the RU is collected by drain hoses and routed to a 2-1/2-gallon waste container located in the front mechanical area.

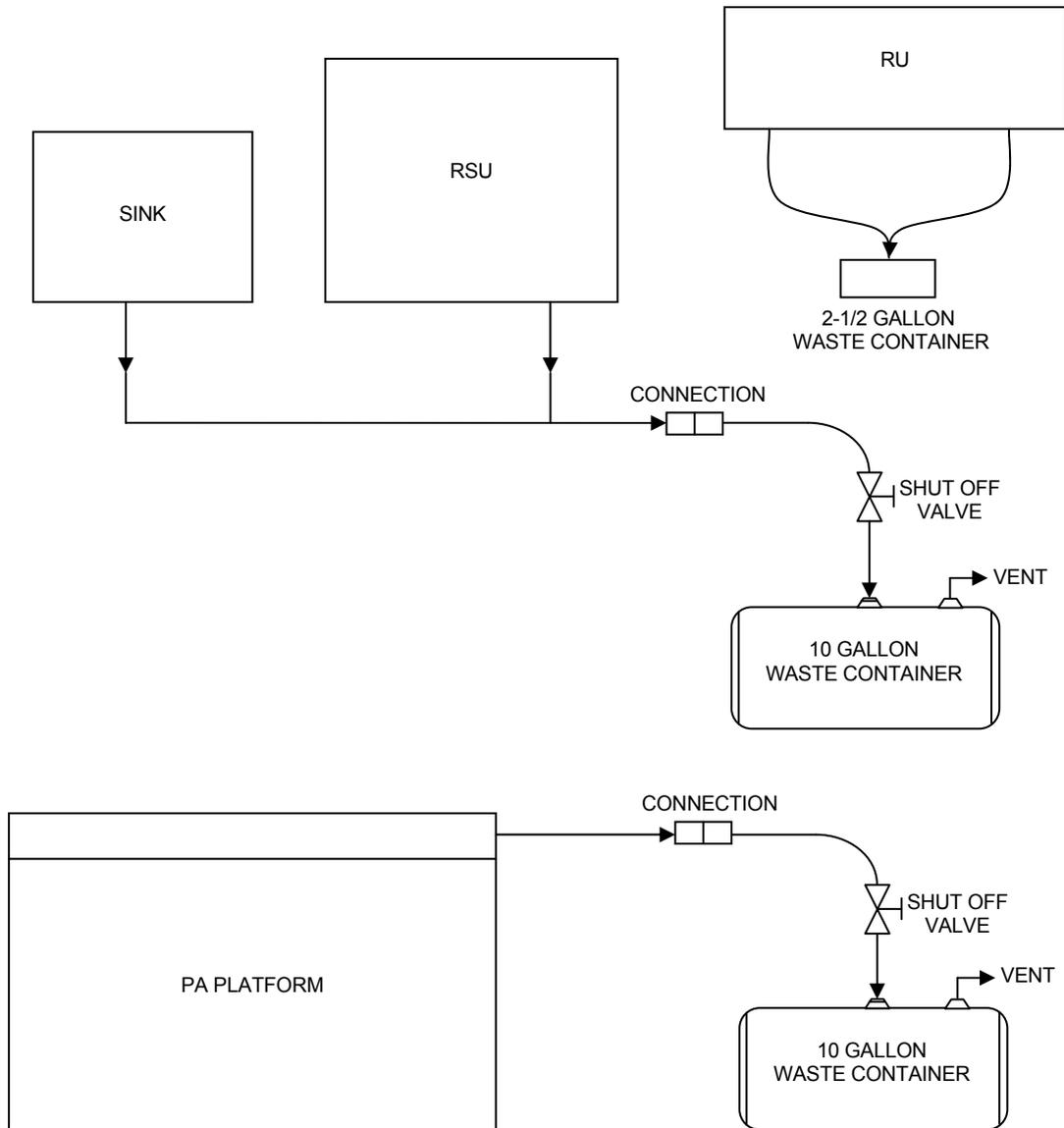


Figure 10. Waste Collection System Piping Diagram.

THEORY OF OPERATION-CONTINUED

Hydraulic System Theory of Operation

The hydraulic system (Figure 11) is used to lower and raise the AA and PA platforms and to pull the platforms in tight to fit the ISO frame. A manual pump provides the pressure and flow needed to perform these operations. The pump draws fluid out of a 2-gallon reservoir and sends the fluid to control valves that are connected to the raise/lower hydraulic cylinders and extend/retract hydraulic cylinders. The pump has an internal relief valve that prevents over-pressurization due to over-pumping. Each platform is secured in the stowed position by two threaded locks. These locks are located on the sides of the ISO frame to screw into the platforms using a crank handle. The locks must be disengaged before the platforms are lowered.

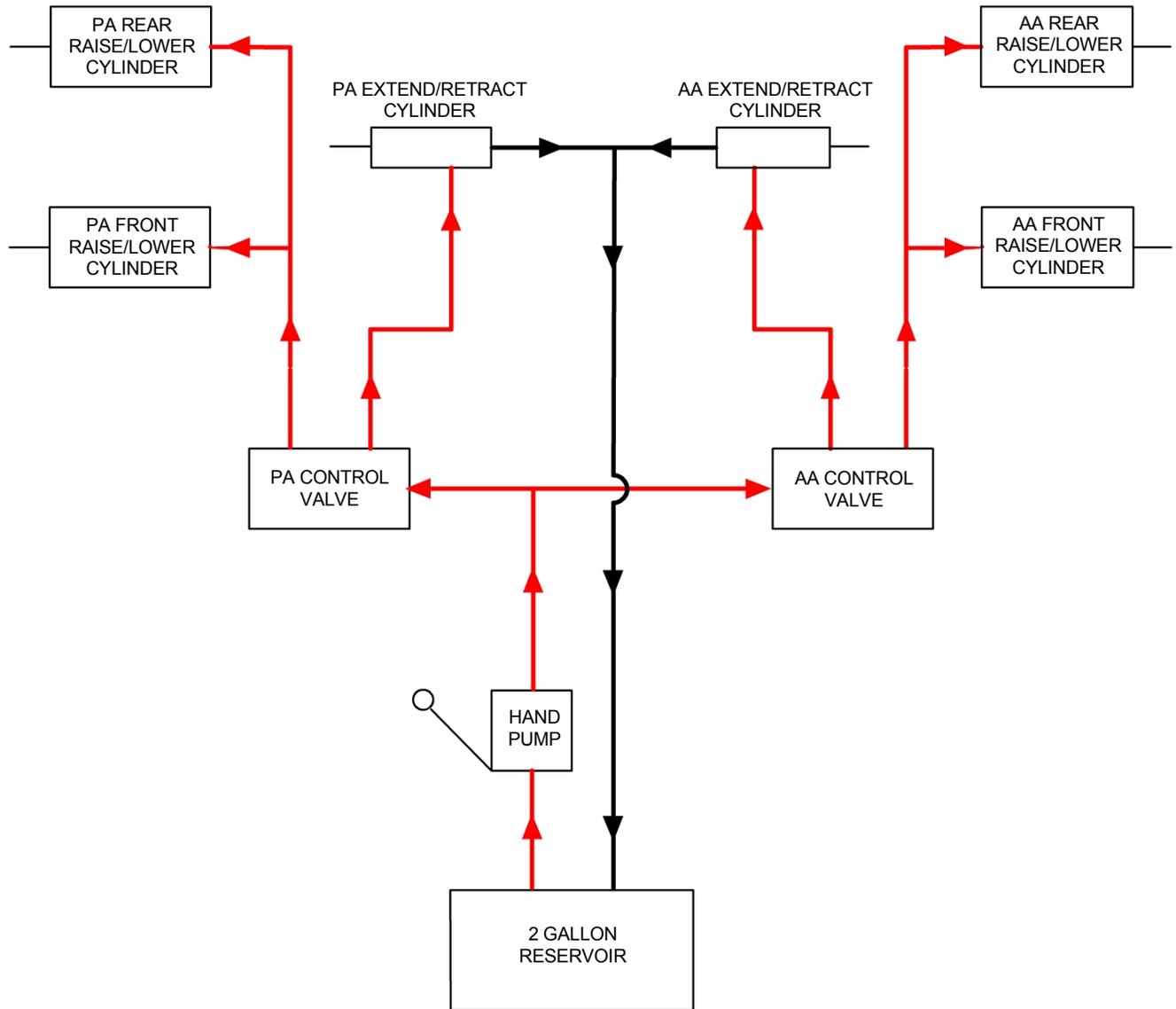


Figure 11. Hydraulic System Piping Diagram.

THEORY OF OPERATION-CONTINUED

Each platform has an extend/retract manual valve and a lower/raise manual valve. When the lever of the extend/retract valve is positioned to "EXTEND" hydraulic fluid flows to the piston of the extend/retract cylinder. The piston extends pushing the catch out about 12 inches so that it is clear of the platform. With the catch out of the way the platform weight is enough for gravity to lower the platform. When the lever of the raise/lower valve is positioned to "LOWER" hydraulic fluid is allowed to flow out of the raise/lower cylinders and the platform lowers to the deployed (horizontal) position. At anytime during the lowering operation, if the operator chooses, the lever can be returned to the "NULL" position and platform movement will stop. The platforms are raised using the manual pump after the lower/raise valve is positioned to "RAISE". In the "RAISE" position hydraulic fluid flows to extend the pistons of the raise/lower cylinders and the platform rises almost to the stowed (vertical) position. To completely close the platform and ensure that the platform will align with the side locks the extend/retract cylinder must be completely retracted. This is accomplished using the manual pump after the extend/retract valve is positioned to "RETRACT". In the "RETRACT" position hydraulic fluid flows to pull in the piston of the extend/retract cylinder. The catch mounted on the end of the piston pulls the platform in tight to the ISO frame. Once in position the platform side locks are engaged to secure the platform for transport and the valves are returned to the "NULL" position.

THEORY OF OPERATION-CONTINUED**Mobile Processing Platform (MPP) Hydraulic System Theory of Operation**

The MPP (Figure 12) contains a hydraulic system that is used to raise and lower the remains during transfer and processing operations. A manual pump is provided to pressurize two hydraulic cylinders. When personnel operate the "RAISE" foot pedal the pump draws fluid out of the gallon reservoir sends it to extend the hydraulic cylinders. The cylinders are connected to scissor legs mounted between the upper frame and lower frame. As the scissor legs move inward the upper frame is raised. To lower the upper frame a "LOWER" foot pedal is pressed. The foot pedal controls a valve that allows the hydraulic fluid in the cylinders to flow back to the reservoir. This results in the scissor legs moving outward. The lowering operation can be stopped at any height by releasing the foot pedal.

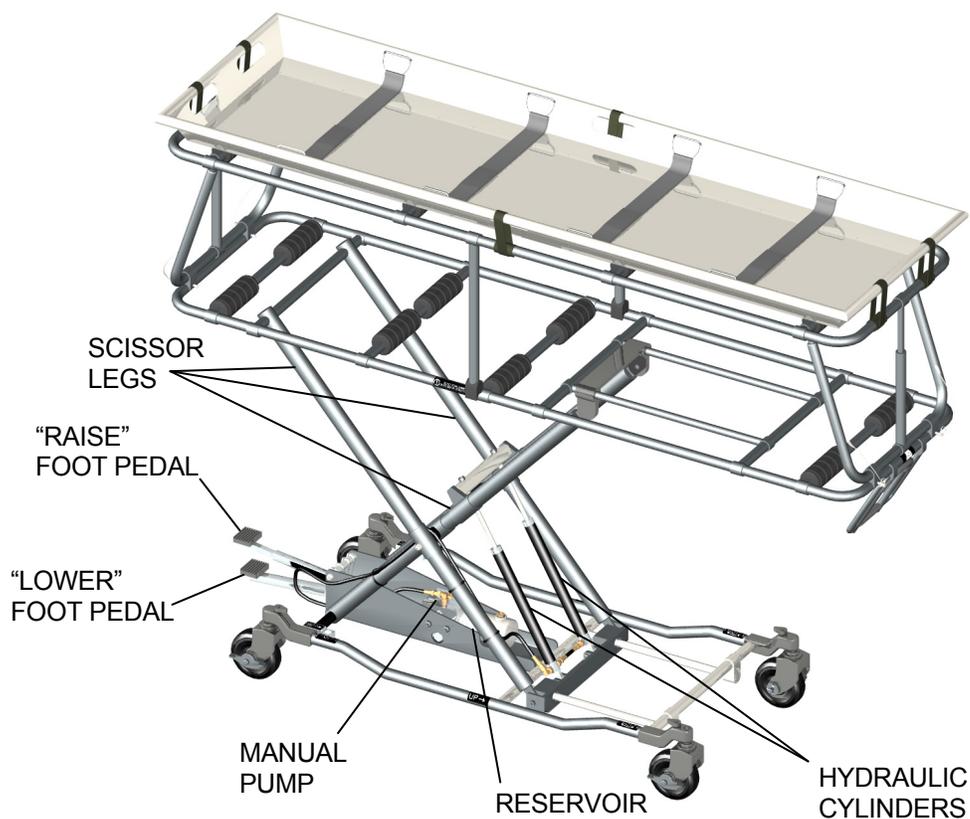


Figure 12. Mobile Processing Platform (MPP).

END OF WORK PACKAGE

CHAPTER 2

**OPERATOR INSTRUCTIONS
FOR
MOBILE INTEGRATED REMAINS
COLLECTION SYSTEM**

**CREW MAINTENANCE
DESCRIPTION AND USE OF OPERATOR CONTROLS AND INDICATORS**

GENERAL

The following paragraphs contain illustrations that show the location of each control and indicator used to operate the MIRCS. Each control and indicator is clearly labeled as it appears on the equipment. Review these paragraphs thoroughly before operating the system.

ENVIRONMENTAL CONTROL UNIT (ECU) ENCLOSURE CONTROLS AND INDICATORS

Figure 1 and Figure 2 show the location of the controls and indicators found on the ECU control enclosure. Figure 1 shows the exterior controls. Figure 2 shows the interior controls. Table 1 describes the exterior controls and Table 2 describes the interior controls.

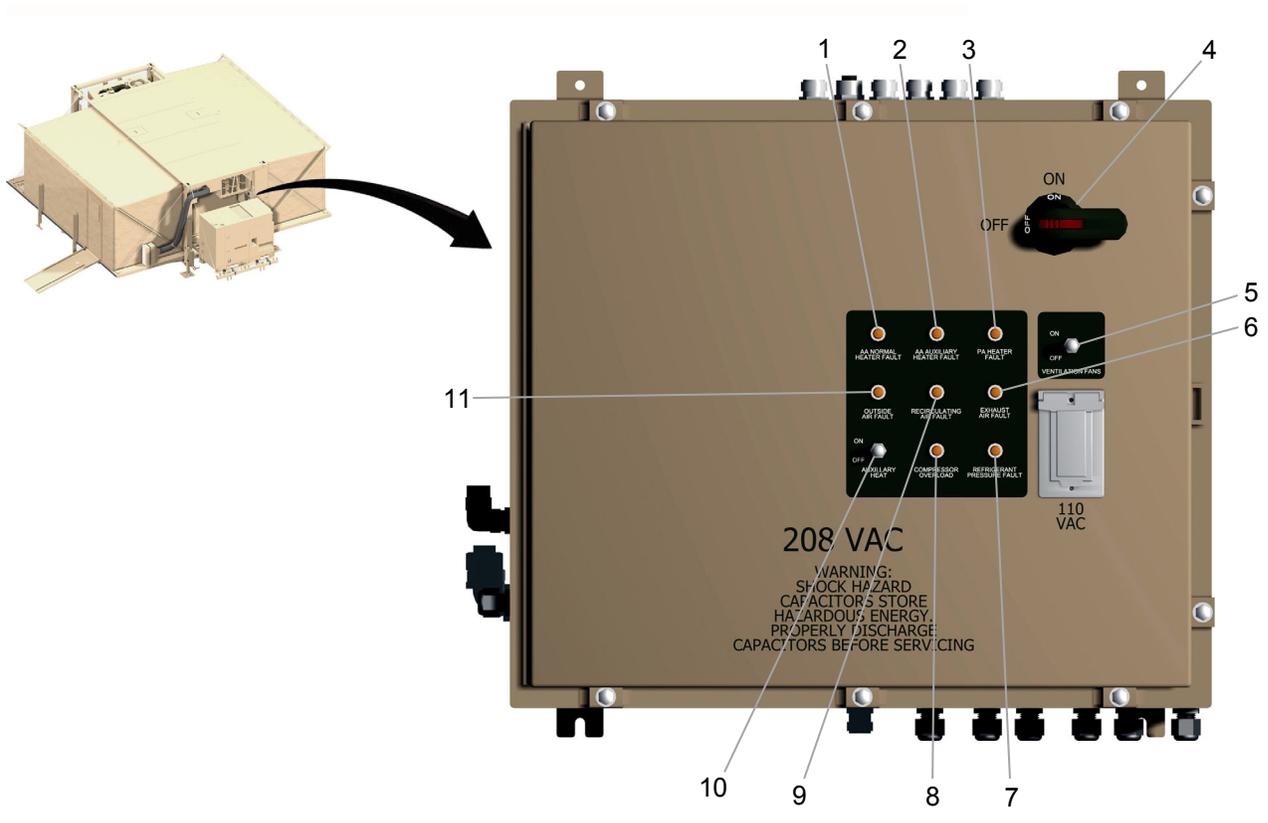


Figure 1. ECU Enclosure Exterior Controls and Indicators.

ENVIRONMENTAL CONTROL UNIT (ECU) ENCLOSURE CONTROLS AND INDICATORS-CONTINUED**Table 1. ECU Control Enclosure Exterior Controls and Indicators.**

INDEX	DESCRIPTION	FUNCTION
1	AA NORMAL HEATER FAULT, Press-To-Test Indicator	Illuminates yellow when the AA normal heating element overheats.
2	AA AUXILIARY HEATER FAULT, Press-To-Test Indicator	Illuminates yellow when the AA auxiliary heating element overheats.
3	PA HEATER FAULT, Press-To-Test Indicator	Illuminates yellow when the PA heating element overheats.
4	MAIN DISCONNECT ON/OFF, 2 Position Lever Actuated Switch	Turns MIRCS main power on and off.
5	VENTILATION FANS ON/OFF, 2 Position Toggle Switch	Turns the ventilation fans on and off.
6	EXHAUST AIR FAULT, Press-To-Test Indicator	Illuminates yellow when a low exhaust air pressure is detected.
7	REFRIGERANT PRESSURE FAULT, Press-To-Test Indicator	Illuminates yellow when the compressor high pressure switch detects a high-pressure condition.
8	COMPRESSOR OVERLOAD, Press-To-Test Indicator	Illuminates yellow when the refrigeration compressor overload relay detects a current overload.
9	RE-CIRCULATING AIR FAULT, Press-To-Test Indicator	Illuminates yellow when a low re-circulating air pressure is detected.
10	AUXILIARY HEAT ON/OFF, 2 Position Toggle Switch	Turns ECU auxiliary heating circuit on and off.
11	OUTSIDE AIR FAULT, Press-To-Test Indicator	Illuminates yellow when a low outside air pressure is detected.

ENVIRONMENTAL CONTROL UNIT (ECU) ENCLOSURE CONTROLS AND INDICATORS-CONTINUED

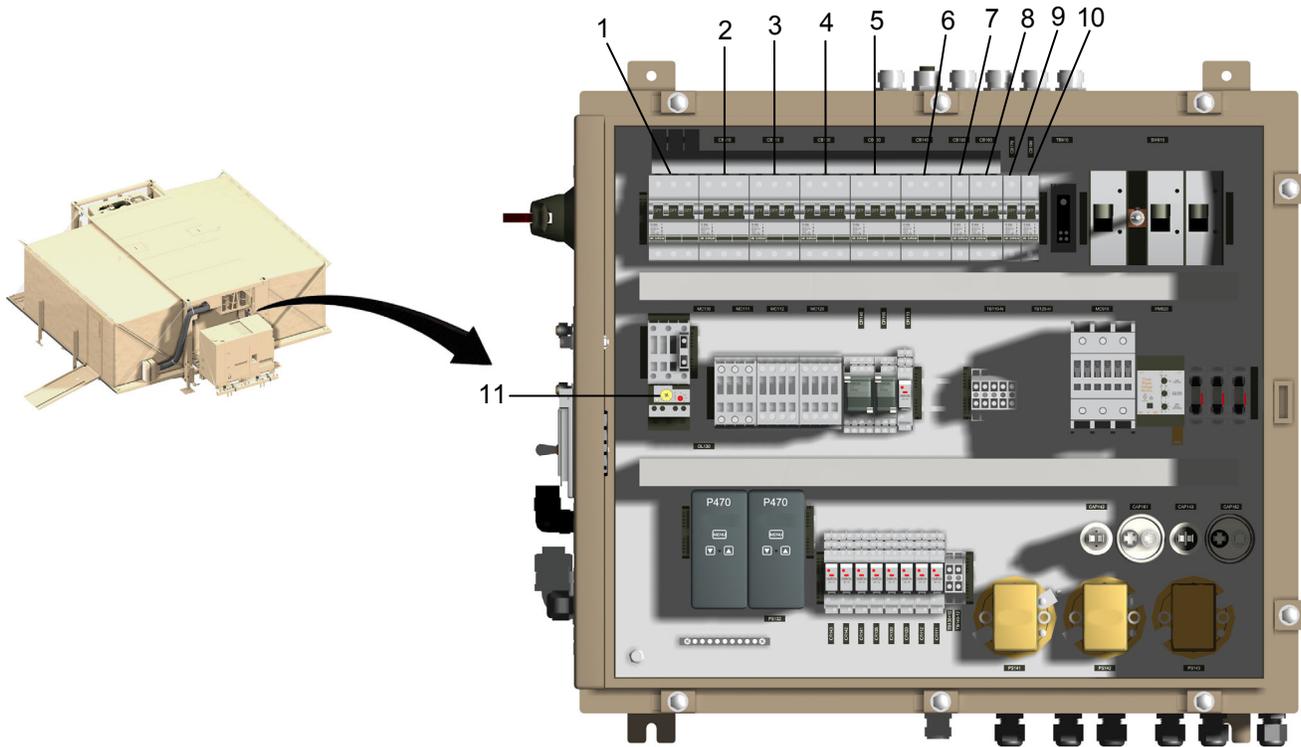


Figure 2. ECU Enclosure Interior Controls.

Table 2. ECU Control Enclosure Interior Controls.

INDEX	DESCRIPTION	FUNCTION
1	CIRCUIT BREAKER CB310, 40 AMP, Lever Actuated	Protects RU standby motor and wiring. Lever is ON in up position.
2	CIRCUIT BREAKER CB510, 20 AMP, Lever Actuated	Protects wiring and components in MA enclosure and water system junction box. Lever is ON in up position.
3	CIRCUIT BREAKER CB110, 30 AMP, Lever Actuated	Protects AA heating element circuits (normal and auxiliary). Lever is ON in up position.
4	CIRCUIT BREAKER CB120, 8 AMP, Lever Actuated	Protects PA heating element circuit. Lever is ON in up position.
5	CIRCUIT BREAKER CB130, 20 AMP, Lever Actuated	Protects refrigeration compressor circuit. Lever is ON in up position.
6	CIRCUIT BREAKER CB140, 4 AMP, Lever Actuated	Protects re-circulating, outside air, and exhaust blower circuits. Lever is ON in up position.
7	CIRCUIT BREAKER CB150, 15 AMP, Lever Actuated	Protects ECU enclosure GFCI receptacle circuit. Lever is ON in up position.
8	CIRCUIT BREAKER CB160, 8 AMP, Lever Actuated	Protects both condenser fan circuits. Lever is ON in up position.
9	CIRCUIT BREAKER CB170, 6 AMP, Lever Actuated	Protects wiring and components in ECU control circuit. Lever is ON in up position.
10	CIRCUIT BREAKER CB180, 5 AMP, Lever Actuated	Protects drain and water piping heater circuits. Lever is ON in up position.
11	COMPRESSOR OVERLOAD RELAY OL130, 16 AMP, Push-To-Reset	Protects refrigeration compressor and wiring.

ENVIRONMENTAL CONTROL UNIT (ECU) CONTROLS AND INDICATORS

Figure 3 shows the location of the controls and indicators on the ECU thermostat. Table 3 describes the use of these controls and indicators.

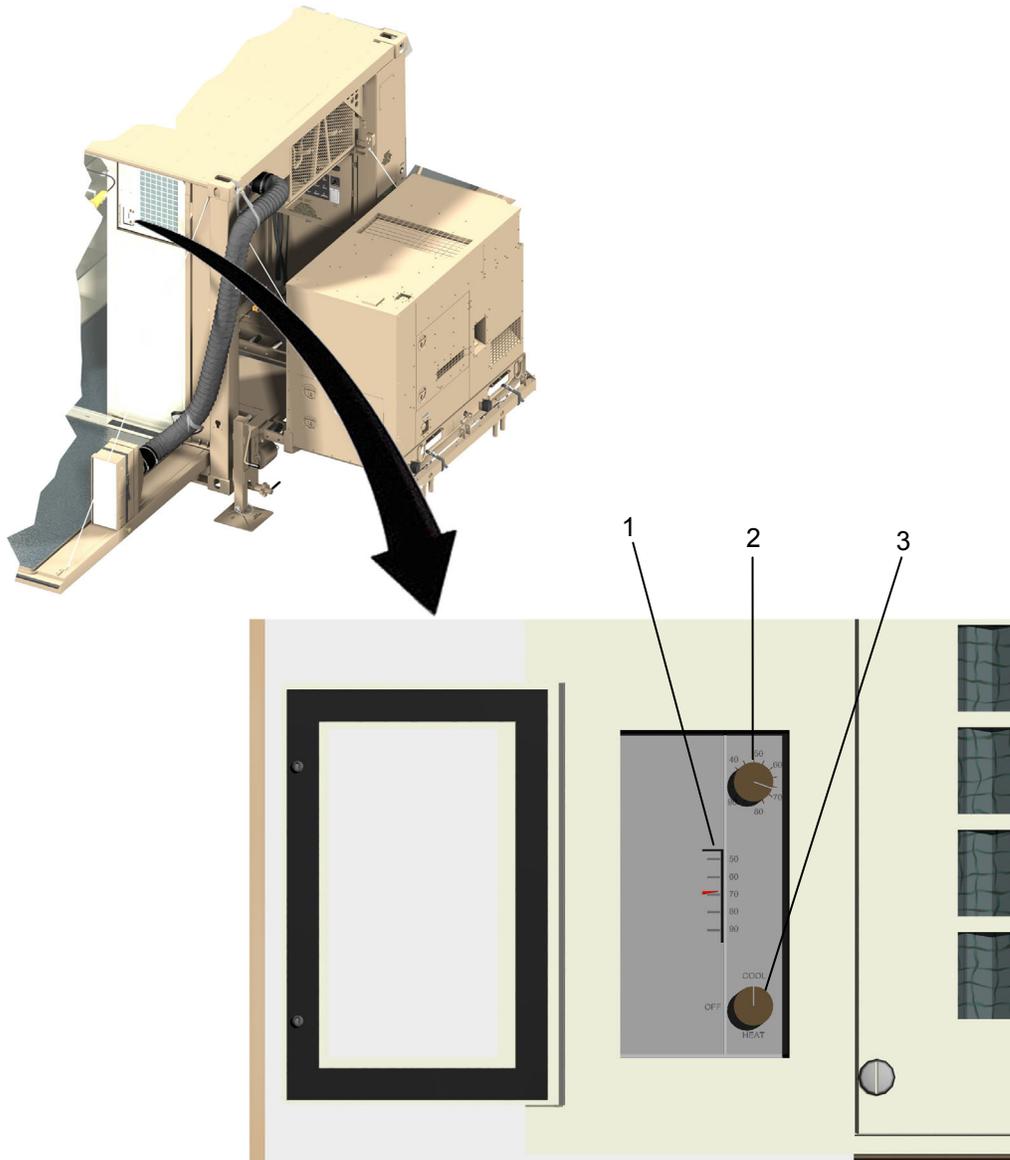


Figure 3. Location of ECU Thermostat Controls.

Table 3. ECU Thermostat Controls.

INDEX	DESCRIPTION	FUNCTION
1	DISPLAY, Analog Scale	Indicates air temperature returning to the ECU re-circulating filter in the vestibule area.
2	TEMPERATURE CONTROL, Rotary Knob	Used to select the desired heating or cooling setting.
3	HEAT/OFF/COOL, 3 Position Rotary Knob	Used to place ECU in cooling, heat, or off mode.

MORTUARY AFFAIRS (MA) OPERATOR PANEL CONTROLS AND INDICATORS

Figure 4 shows the location of the controls and indicators used for MA operations. Table 4 describes the use of these controls and indicators

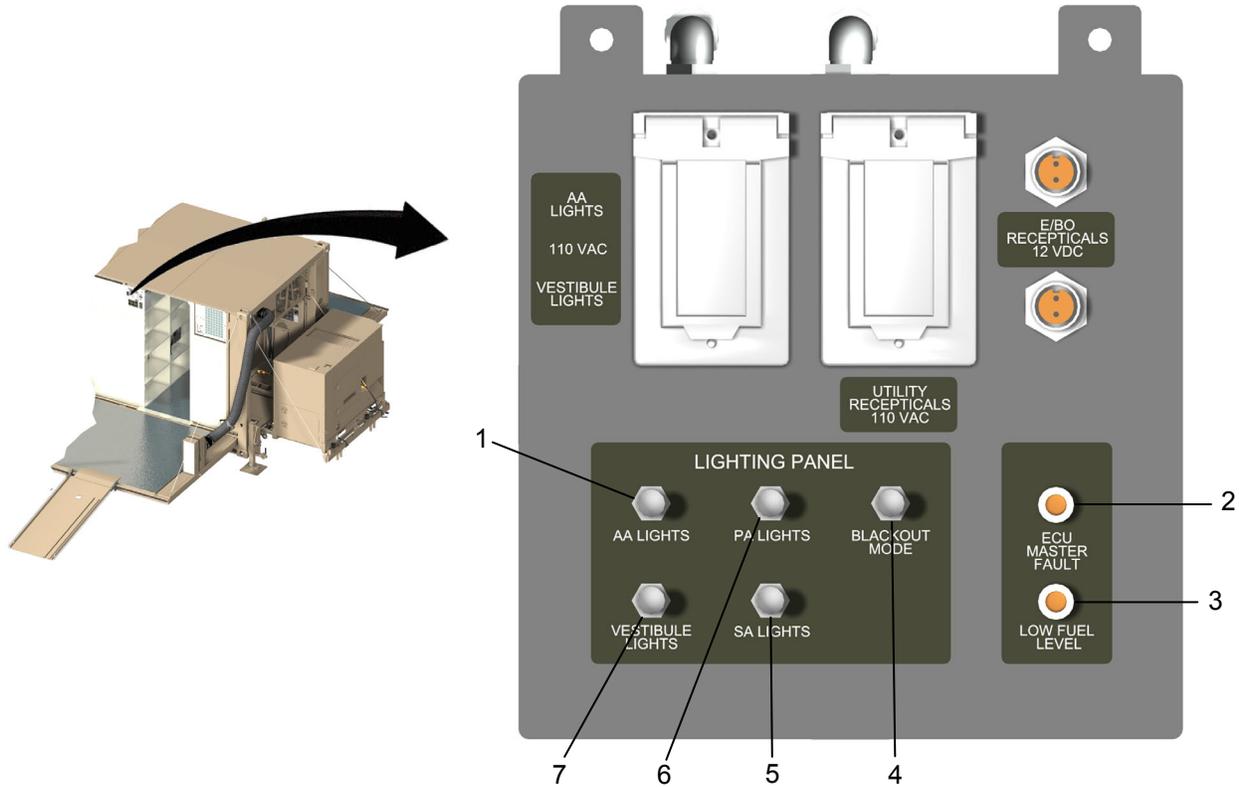


Figure 4. Location of MA Controls and Indicators.

Table 4. MA Controls and Indicators.

INDEX	DESCRIPTION	FUNCTION
1	AA LIGHTS ON/OFF, 2 Position Toggle Switch	Turns administrative area working lights on or off.
2	ECU MASTER FAULT Press-To-Test Indicator	Illuminates yellow when an ECU fault is detected.
3	LOW FUEL LEVEL Press-To-Test Indicator	Illuminates red when the fuel tank level drops to 1/8-full.
4	BLACKOUT MODE ON/OFF, 2 Position Toggle Switch	Turns on blackout lights and place unit in blackout mode.
5	SA LIGHTS ON/OFF, 2 Position Toggle Switch	Turns supply storage area working lights on or off.
6	PA LIGHTS ON/OFF, 2 Position Toggle Switch	Turns processing area working lights on or off.
7	VESTIBULE LIGHT ON/OFF, 2 Position Toggle	Turns vestibule working light on or off.

REFRIGERATION UNIT (RU) ENCLOSURE CONTROLS AND INDICATORS

Figure 5 shows the location of the controls and indicators found on the RU control enclosure. Table 5 describes the use of these controls and indicators.

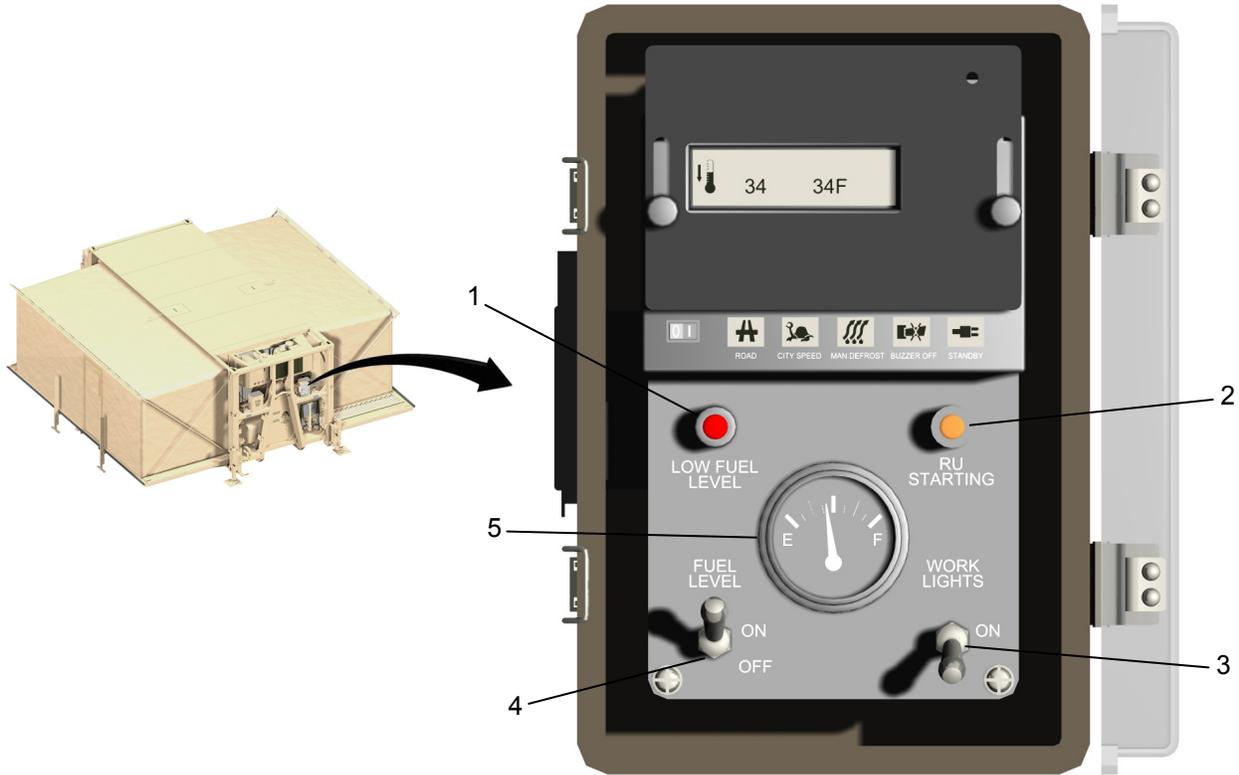


Figure 5. Location of RU Controls and Indicators.

Table 5. RU Control Enclosure Controls and Indicators.

INDEX	DESCRIPTION	FUNCTION
1	LOW FUEL LEVEL, Press-To-Test Indicator	Illuminates red when the fuel tank level drops to 1/8-full.
2	RU STARTING, Press-To-Test Indicator	Illuminates yellow when an RU is about to start.
3	WORK LIGHTS ON, 2 Position, Momentary Toggle Switch	Turns on work lights above RSU doors when lifted.
4	FUEL LEVEL ON/OFF, 2 Position Toggle Switch	Turns fuel tank level sensing circuit on and off.
5	FUEL, Analog Gage	Indicates fuel tank level in 1/8-increments.

REFRIGERATION UNIT (RU) CONTROL PANEL CONTROLS AND INDICATORS

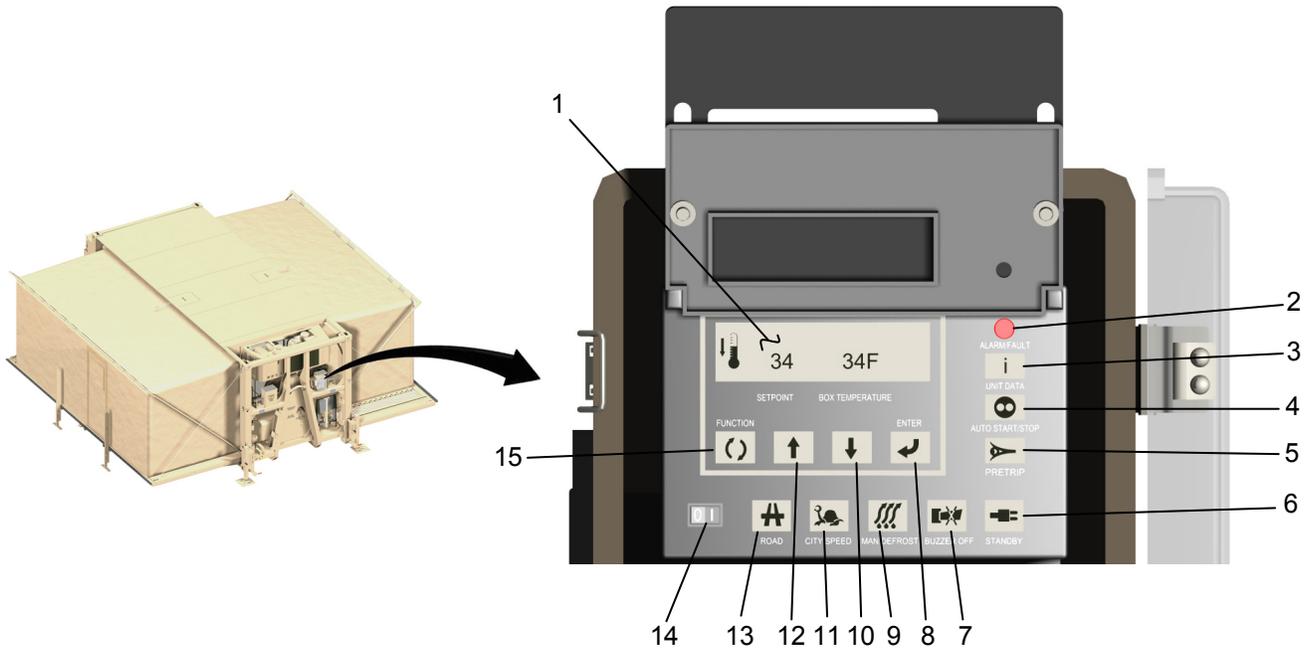


Figure 6. RU Control Panel Controls and Indicators.

Table 6. RU Control Panel Controls and Indicators.

INDEX	DESCRIPTION	FUNCTION
1	DISPLAY LCD	Indicates air temperature set point and temperature at RU evaporator outlet. Also displays operating mode, alarm code, and unit data information.
2	ALARM/FAULT LED, Indicator	Illuminates red when RU fault occurs in conjunction with a displayed message.
3	UNIT DATA, Keypad	Used to enable display of RU operating data in conjunction with ARROW keys.
4	AUTO START/STOP, Keypad	Not Used. RU is programmed not to auto start.
5	PRETRIP, Keypad	Not Used.
6	STANDBY, Keypad	Used to select standby (electric) mode for RU.
7	BUZZER OFF, Keypad	Not Used.
8	ENTER, Keypad	Used to accept changes to unit data or function settings.
9	MAN DEFROST, Keypad	Used to start a manual defrost cycle (RU must be above 34°F for at least 45 minutes before this function will work).
10	DOWN ARROW, Keypad	Used to select previous unit data and function setting selection.
11	CITY SPEED, Keypad	Used to select low-speed engine mode for RU.
12	UP ARROW, Keypad	Used to select next unit data and function setting selection.
13	ROAD, Keypad	Used to select high-speed engine mode for RU.
14	O I, 2 Position Rocker Switch	Used to turn RU on and off.
15	FUNCTION, Keypad	Used to display function codes. Used in conjunction with ARROW and ENTER keys.

REFRIGERATION UNIT (RU) CONTROL BOX CONTROLS AND INDICATORS

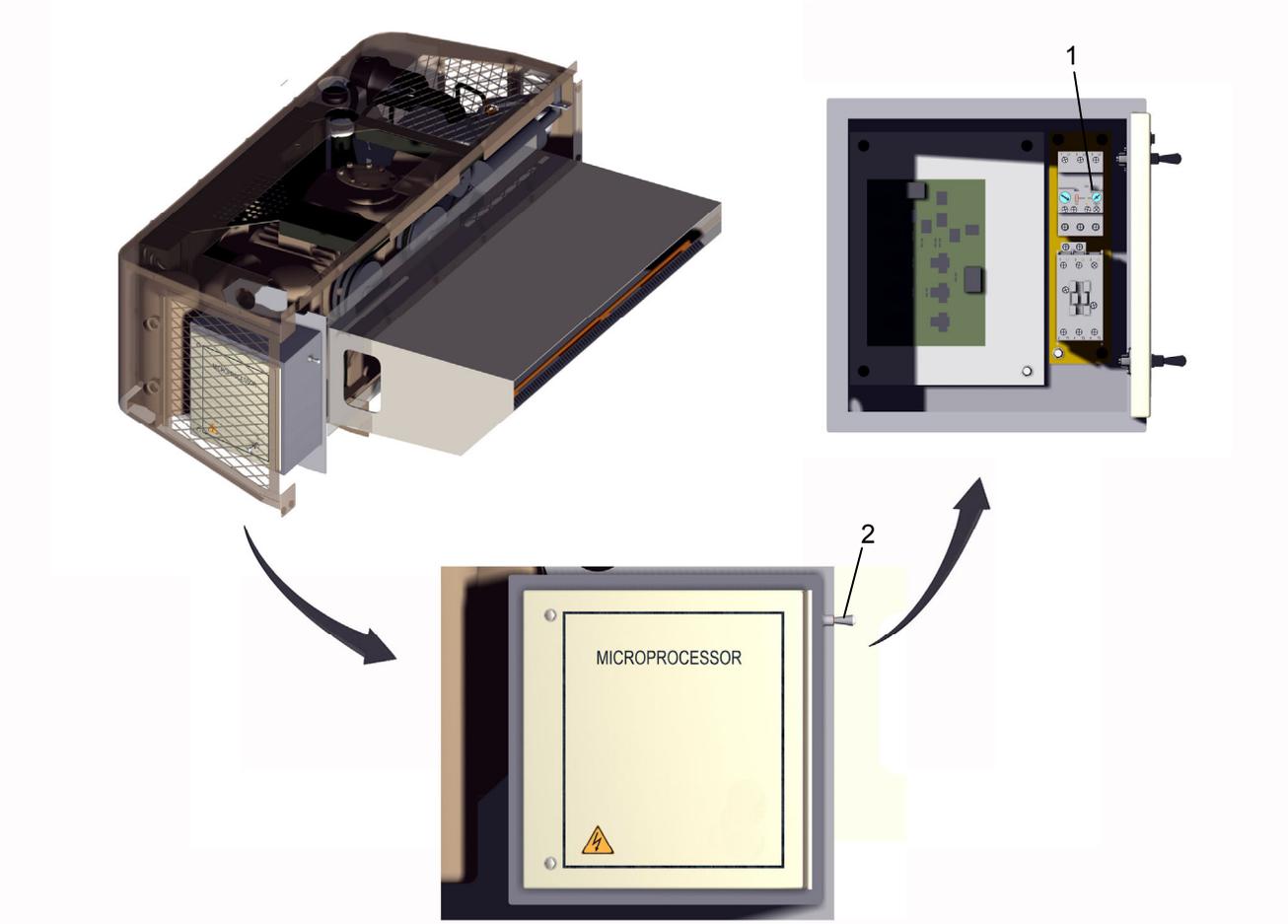


Figure 7. Location of RU Control Box Controls and Indicators.

Table 7. RU Control Box Controls.

INDEX	DESCRIPTION	FUNCTION
1	STANDBY MOTOR OVERLOAD RELAY OL1, 20 AMP, Push-To-Reset	Protects standby motor and wiring.
2	RU RUN/STOP, 2 Position Toggle Switch	Used to disable RU operation during maintenance and for long term storage. Switch is positioned outboard to RUN and inboard to STOP.

WATER SYSTEM CONTROLS AND INDICATORS

Figure 8 shows the location of the controls and indicators found in the water system junction box and on the water system. Table 8 describes the use of these controls and indicators.

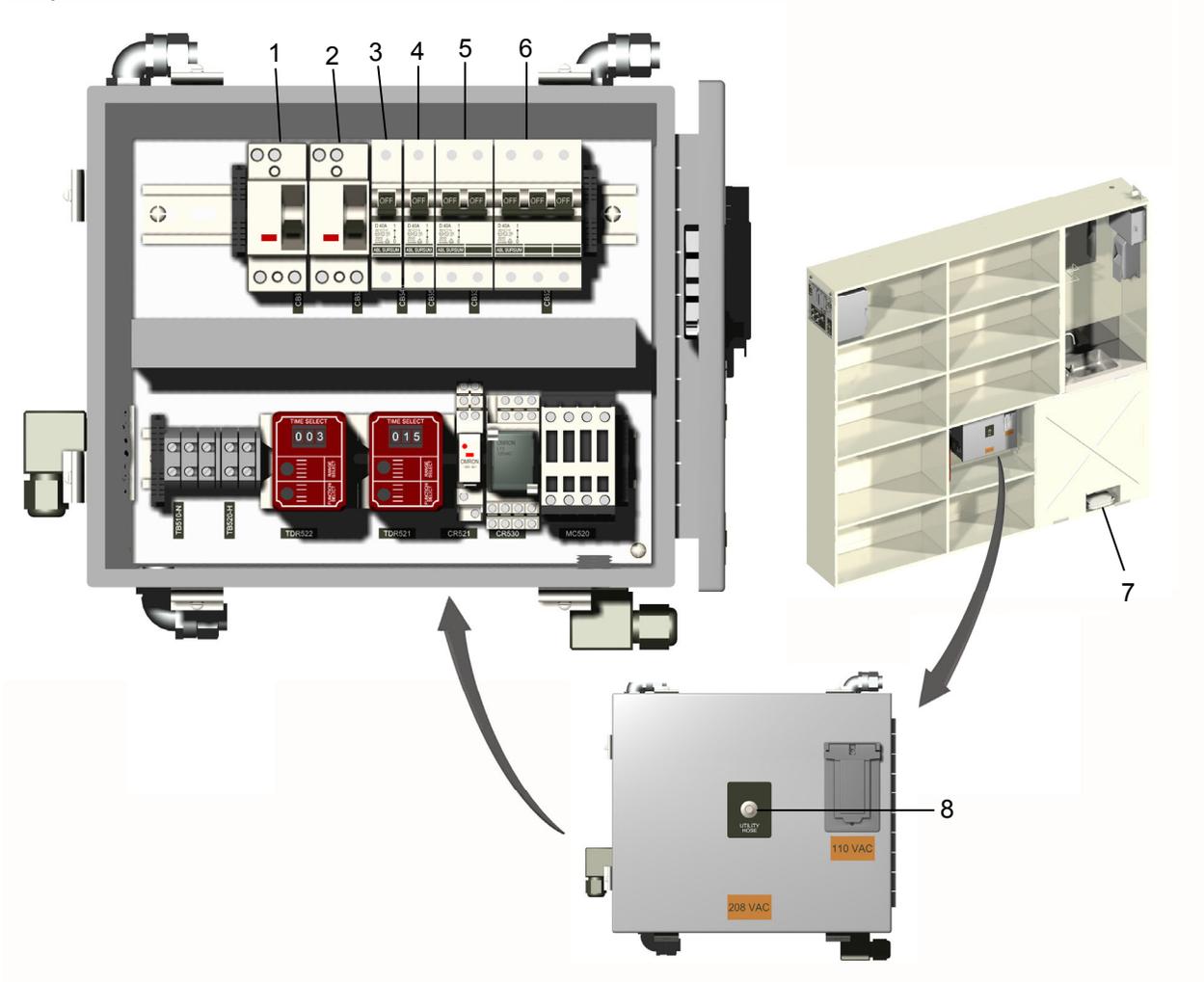


Figure 8. Location of Water System Junction Box Controls and Indicators.

Table 8. Water System Junction Box Controls and Indicators.

INDEX	DESCRIPTION	FUNCTION
1	CIRCUIT BREAKER CB610,15 AMP, Lever Actuated, Ground Fault	Protects AA, SA, and vestibule lighting and AA utility receptacle circuits. Lever is ON in up position.
2	CIRCUIT BREAKER CB620,15 AMP, Lever Actuated, Ground Fault	Protects PA lighting and utility receptacle circuits. Lever is ON in up position.
3	CIRCUIT BREAKER CB540, 2 AMP, Lever Actuated	Protects water system control components and wiring. Lever is ON in up position.
4	CIRCUIT BREAKER CB550,15 AMP, Lever Actuated	Protects junction box GFCI receptacle circuit. Lever is ON in up position.
5	CIRCUIT BREAKER CB530, 8 AMP, Lever Actuated	Protects water heater circuit. Lever is ON in up position.
6	CIRCUIT BREAKER CB520, 8 AMP, Lever Actuated	Protects water pump circuit. Lever is ON in up position.
7	SINK CONTROL, Momentary Foot Switch	Turns on water flow to personnel sanitization sink when depressed.
8	UTILITY HOSE, Pushbutton Switch	Turns on water flow to utility hose connection when pressed.

HYDRAULICS CONTROLS AND INDICATORS

Figure 9 shows the location of the controls for the hydraulic system. Table 9 describes the use of these controls.

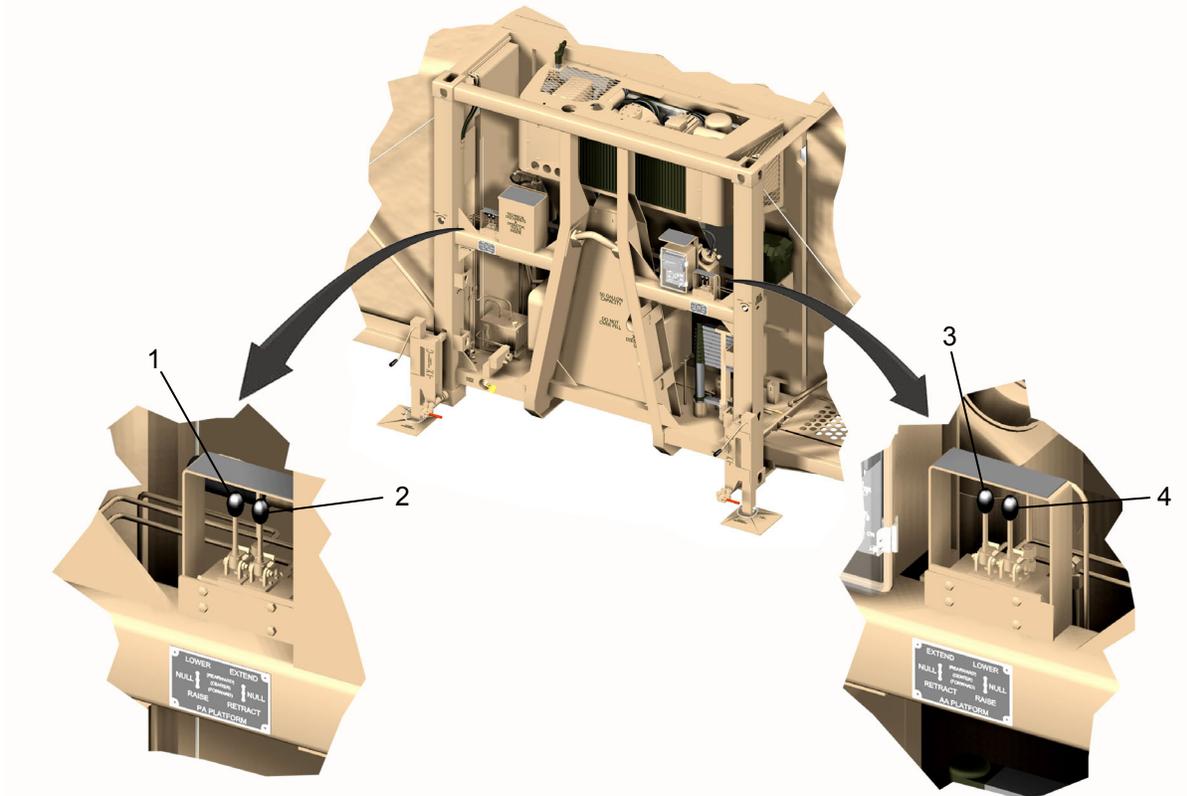


Figure 9. Location of Hydraulics Controls and Indicators.

Table 9. Hydraulics Controls and Indicators.

INDEX	DESCRIPTION	FUNCTION
1	PA PLATFORM RAISE/LOWER, 3- Position Lever Actuated Valve	Controls direction that LOWER/RAISE hydraulic cylinders travel. Push rearward "LOWER" to lower platform. Place in center "NULL" to prevent platform movement. Pull forward "RETRACT" to raise platform.
2	PA PLATFORM EXTEND/RETRACT, 3- Position, Lever Actuated Valve	Controls direction that EXTEND/RETRACT hydraulic cylinder travels. Push rearward "EXTEND" to extend cylinder. Place in center "NULL" to prevent cylinder movement. Pull forward "RETRACT" to retract cylinder.
3	AA PLATFORM EXTEND/RETRACT, 3- Position Lever Actuated Valve	Controls direction that EXTEND/RETRACT hydraulic cylinder travels. Push rearward "EXTEND" to extend cylinder. Place in center "NULL" to prevent cylinder movement. Pull forward "RETRACT" to retract cylinder.
4	AA PLATFORM RAISE/LOWER, 3- Position Lever Actuated Valve	Controls direction that LOWER/RAISE hydraulic cylinders travel. Push rearward "LOWER" to lower platform. Place in center "NULL" to prevent platform movement. Pull forward "RETRACT" to raise platform.

END OF WORK PACKAGE

**CREW MAINTENANCE
OPERATION UNDER USUAL CONDITIONS
SITING REQUIREMENTS**

SITING REQUIREMENTS

Proper siting and set-up of the MIRCS is the most important factor in achieving mission success. Prior to set-up there are many considerations that must be taken into account. These include terrain, space constraints, and traffic flow. The following paragraphs provide guidance for choosing a location to set-up the MIRCS and conduct mortuary affairs (MA) operations.

Terrain

The MIRCS must be operated on firm ground with a 6-degree slope or less. When operating the MIRCS on the ground the more level the terrain the easier it will be to off-load and set-up the unit. Once in position, level can be achieved using leveling jacks at the four corners of the unit as shown in Figure 1. The MIRCS should be positioned in a manner that allows rainwater to run away, so as to not be a nuisance while conducting MA operations. If the MIRCS is to be connected to an external non-pressurized water supply, the height of the water supply should be no more than two feet below the level of the MIRCS.

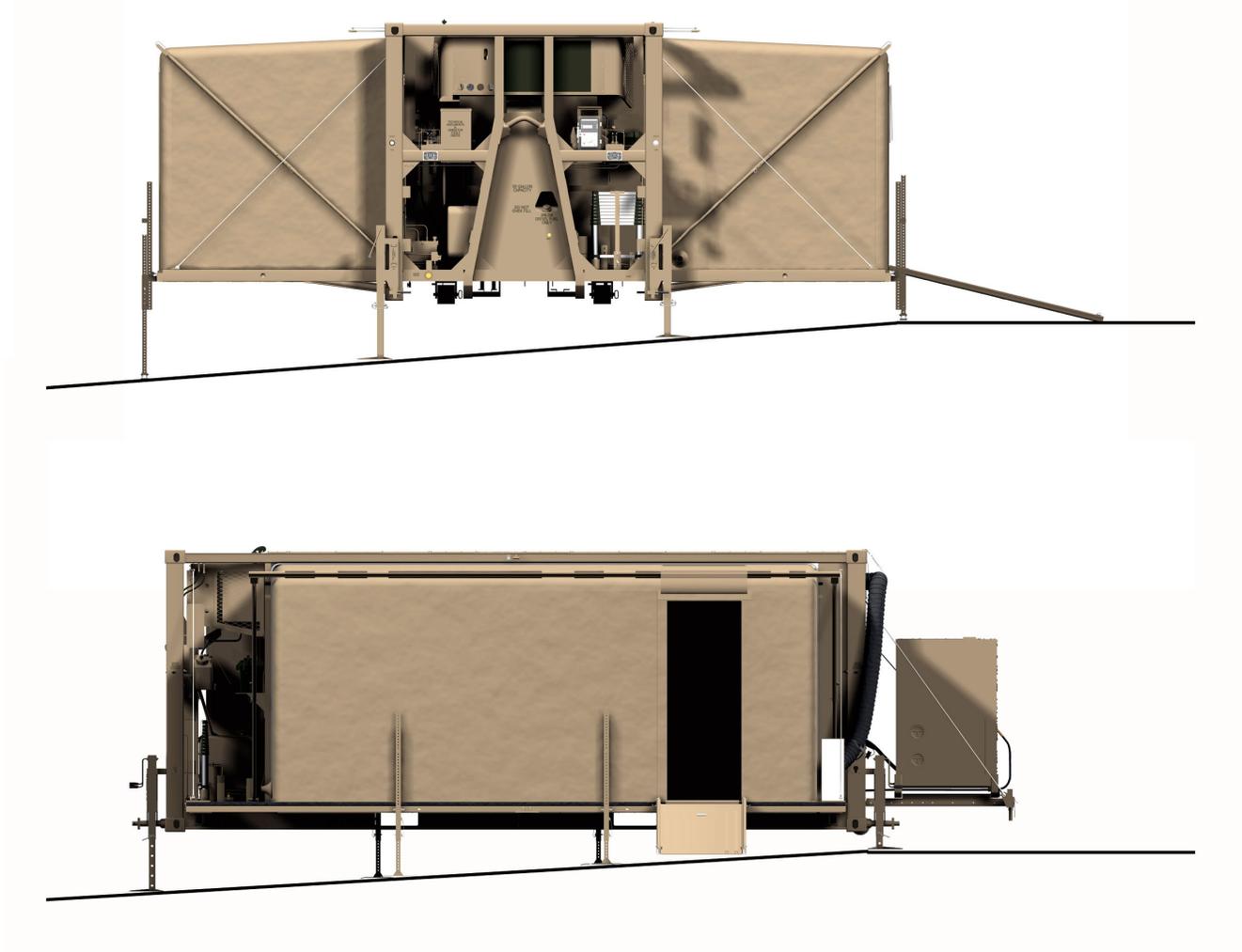


Figure 1. Preferred MIRCS Orientation for Ground Operation.

SITING REQUIREMENTS-CONTINUED

Space Constraints

Providing adequate space for conducting MA operations is essential for efficient remains processing. Allow adequate space to access all four sides of the MIRCS for operator PMCS and maintenance. Also allow space for the side platforms to be lowered and for the generator to be deployed at the rear. Ensure adequate space is provided to deploy the ramp, remains lifting device (RLD), and temporary remains holding shelter(s). Overhead vegetation and other hindrances must clear the top of the MIRCS by 8 feet minimum and be cleared from the path of the exhaust coming from the refrigeration unit (RU) engine and the generator engine. The external water tank must be within 20 feet of the MIRCS water connection point. If an external power source is used, the MIRCS must be a maximum of 50 feet from the power connection point.

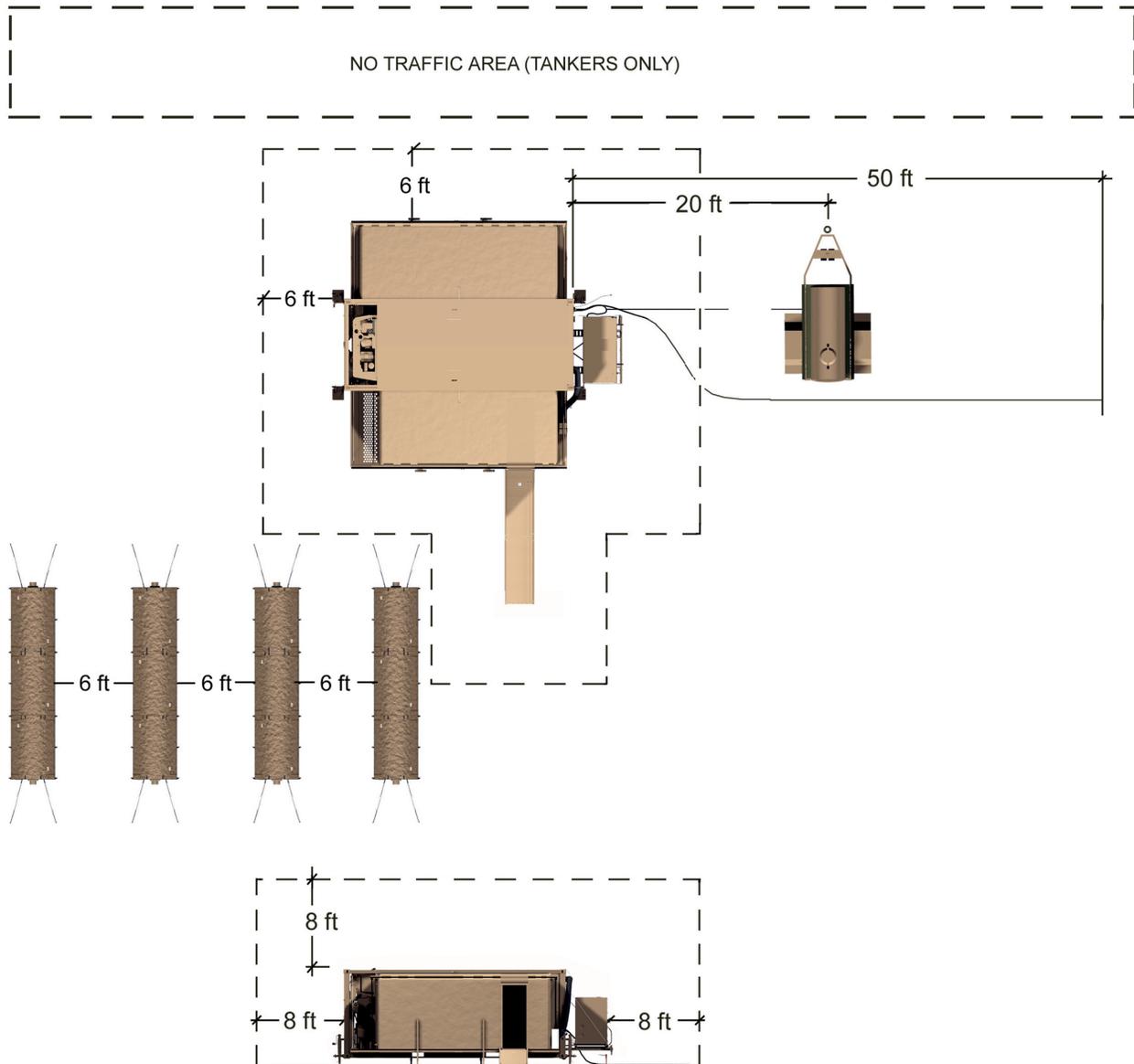


Figure 2. Space Requirements for Ground Operation.

SITING REQUIREMENTS-CONTINUED**Traffic Flow**

Designated areas should be laid out for vehicles in a manner that prevents vehicle traffic from interfering with MA operations. The drain hoses and waste collection containers from the MIRCS should be routed to avoid both vehicle and foot traffic areas. Water supply hoses, electrical power cable (if used), and communication cables must also be routed away from traffic. An unrestricted path must be maintained to allow tankers to service the MIRCS fuel and water supplies.

Surrounding Equipment

The front of the MIRCS should not be located within 5 meters of any equipment containing an RF transmitter.

END OF WORK PACKAGE

**CREW MAINTENANCE
OPERATION UNDER USUAL CONDITIONS
GENERAL OPERATING INFORMATION**

GENERAL OPERATING INFORMATION

The usual conditions operating procedures are divided into seven work packages. The specific procedures required to operate the MIRCS depends on the operational scenario. Table 1 provides a listing of the various procedures by work package with a description of what is contained in each procedure.

Table 1. Usual Condition Operating Procedures.

TITLE	PURPOSE	WORK PACKAGE
GENERAL OPERATING INFORMATION	Provides guidance on which procedures to use when operating MIRCS in usual conditions.	WP 0006
TRANSPORT CONFIGURATION: RAPID TRANSPORT OF REMAINS-ASSEMBLY AND PREPARATION FOR USE	Provides procedures for performing rapid transfer operations including RU start-up while in the transport mode. Includes procedures to access the RSU, perform transfer operations, then return the MIRCS to the ready for transport configuration.	WP 0007
GROUND CONFIGURATION - ASSEMBLY AND PREPARATION FOR USE	Provides procedures for setting up the MIRCS for ground operation from the transport-ready or stored configuration.	WP 0008
INITIAL ADJUSTMENTS, BEFORE USE AND, SELF-TEST	Provides guidance for starting the MIRCS after it has been set-up in either operating configuration. Includes start-up of RU, generator, and ECU. Also contains procedures for priming water system.	WP 0009
OPERATING PROCEDURES	Provides procedures used for daily start-up of RU, generator, and ECU in either operating configuration. Contains procedures for routine daily operation of water and waste collection systems and describes transfer operations and use of MPP. Also contains procedures for draining water system and MIRCS shut down.	WP 0010
DECALS AND INSTRUCTION PLATES	Provides location information for decals and instruction plates found on the MIRCS.	WP 0011
GROUND CONFIGURATION - PREPARATION FOR MOVEMENT	Provides procedures on packing-up the MIRCS for the transport-ready or stored configuration from the ground operating configuration.	WP 0012

END OF WORK PACKAGE

**CREW MAINTENANCE
OPERATION UNDER USUAL CONDITIONS
TRANSPORT CONFIGURATION, RAPID TRANSFER OF REMAINS
ASSEMBLY AND PREPARATION FOR USE**

INITIAL SETUP:

Personnel Required
4

References
WP 0023

PRE-TRANSPORT CHECKS AND RU START-UP**WARNING**

MIRCS ramps and leveling jacks weigh over 45-lbs each. Two persons are required to carry these items. Ensure you lift with your legs and not with your back to avoid injury. Seek immediate medical attention if injury occurs.

Operating personnel must be familiar with system operation, warnings, and emergency procedures prior to operating the MIRCS. Failure to operate this equipment properly can cause severe injury or death to yourself or other personnel working nearby.

NOTE

Prior to transporting MIRCS or starting RU, all Before PMCS procedures for transport mode of operation should be completed. It is recommended that the RU be turned on before departing to the transfer location in order to precondition the inside of the RSU to the proper temperature.

1. Perform BEFORE Transport Mode PMCS procedure, Items 1 through 8 (WP 0023).
2. Position I/O switch (Figure 1, Item 3) to I.
3. Press ROAD key (Figure 1, Item 2).

NOTE

After power is applied to the RU there is a 30 second delay before the RU attempts to start. After starting, the RU should run in heat mode for 45 seconds then switch to cool mode if the RSU temperature is below the set point, or remain in heat mode if the outside temperature is above the set point.

4. After 30-second delay verify engine starts.
5. Observe display (Figure 1, Item 1) it should read a set point of 34°F and show RU operating in heating mode.
6. Perform DURING Transport Mode PMCS procedure, Item 9 (WP 0023).

PRE-TRANSPORT CHECKS AND RU START-UP-CONTINUED

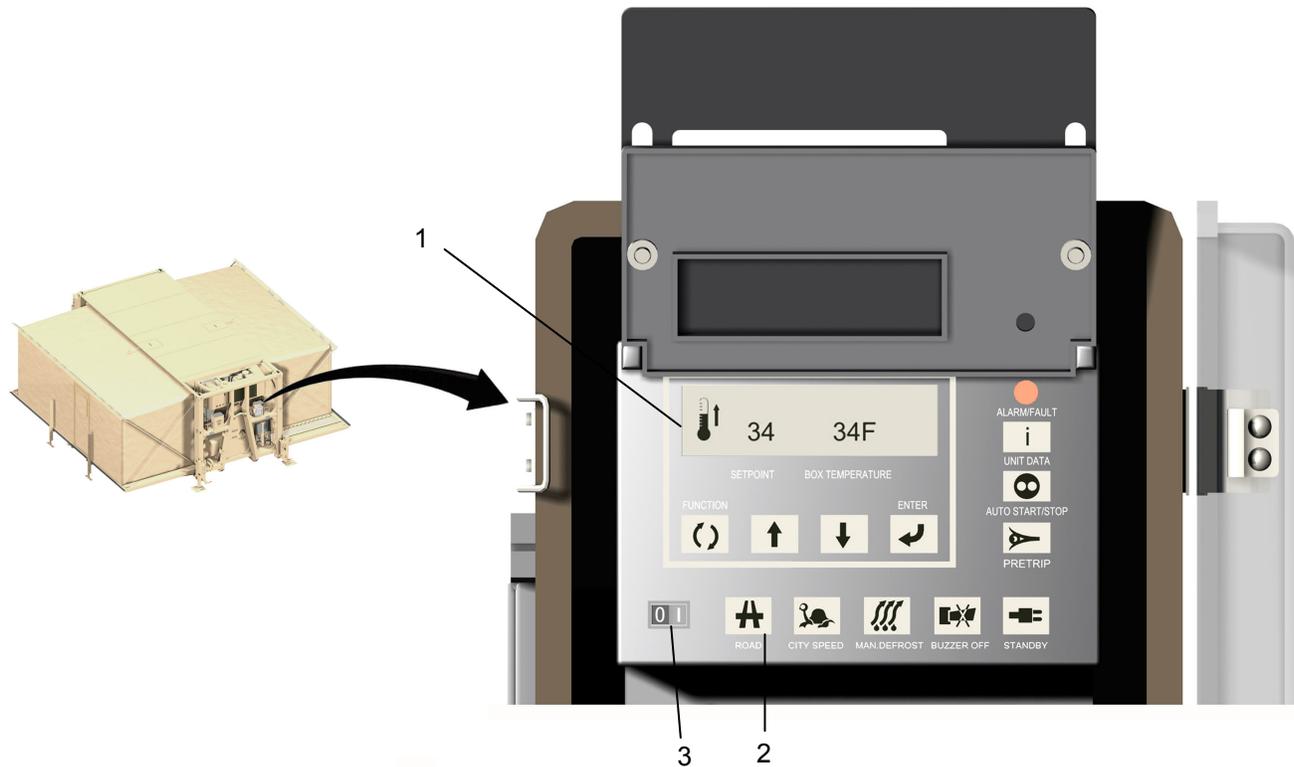


Figure 1. RU Control Enclosure.

END OF TASK**ACCESS AND SET-UP LADDER**

1. For equipment access remove leveling jacks (Figure 2, Item 2) from front storage area (Figure 2, Item 1) as follows:
 - a. Unthread collar (Figure 2, Item 5) a few turns then rotate handle (Figure 2, Item 7) to UNLOCK position on each jack.
 - b. Pull each jack (Figure 2, Item 2) outward until twist lock (Figure 2, Item 6) is clear of bracket (Figure 2, Item 9).
 - c. Lift jack (Figure 2, Item 2) upward until locking pin (Figure 2, Item 3) is clear of keyway (Figure 2, Item 4) then pivot jack out of keyway.
 - d. Repeat steps a through c for other three leveling jacks.
2. Remove ladder (Figure 2, Item 12) from front storage area (Figure 2, Item 1) as follows:
 - a. Remove QC pin (Figure 2, Item 11) securing hold down bracket (Figure 2, Item 8) to retaining plate (Figure 2, Item 10).
 - b. Pivot hold down bracket (Figure 2, Item 8) forward then remove bracket from retaining plate (Figure 2, Item 10).
 - c. Remove ladder (Figure 2, Item 12) from storage area (Figure 2, Item 1).

ACCESS AND SET-UP LADDER-CONTINUED

WARNING

Always extend ladder from the bottom up. Keep hands and fingers away from sliding points on ladder sections when opening and closing. Never climb on ladder unless locking devices are properly engaged. Failure to observe these precautions may result in severe personal injury. Seek immediate medical attention if injury occurs.

3. Extend ladder (Figure 2, Item 12) as follows:
 - a. Place foot on bottom rung (Figure 2, Item 13) and lift to separate from next higher rung until locks (Figure 2, Item 14) are engaged.
 - b. Continue extending ladder (Figure 2, Item 12) following process in step a, until desired height is achieved.

WARNING

Always make sure ladder is resting on and supported by firm ground. Always keep ladder rungs dry and free of dirt. Do not over-reach. Move the ladder instead. Keep body centered between side rails. Never allow more than one person on the ladder at a time and ensure spotter is available. Failure to observe these precautions may result in severe personal injury. Seek immediate medical attention if injury occurs.

4. Use ladder (Figure 2, Item 12) as required.

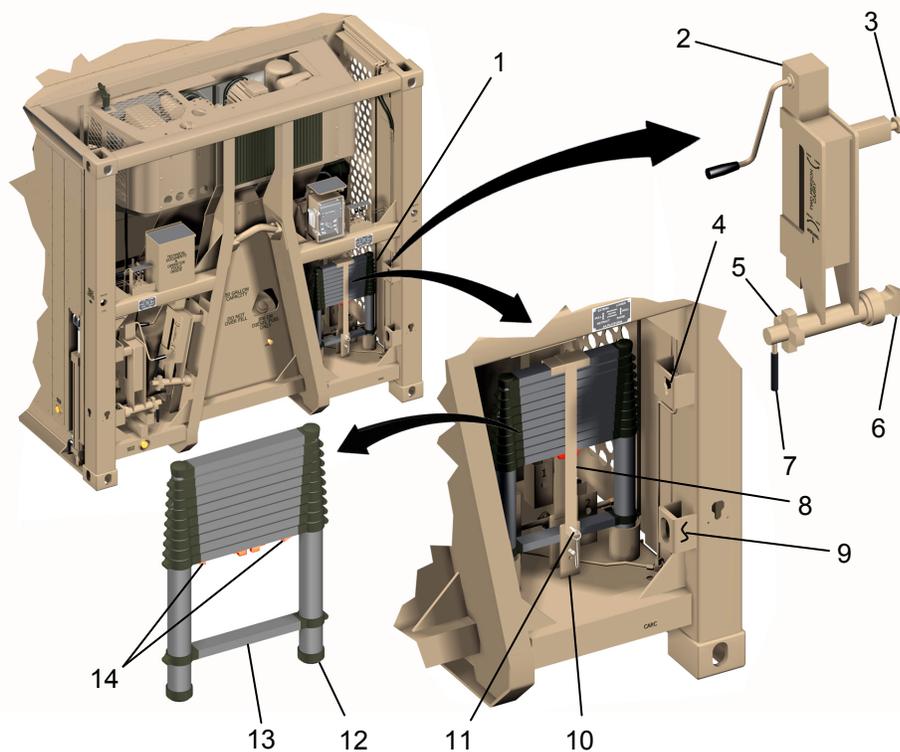


Figure 2. Ladder Access and Set-up.

END OF TASK

DEPLOY PA PLATFORM**WARNING**

If not operated properly platform may experience sudden and unexpected drops. Prior to lowering platform verify all personnel are and remain clear. Failure to follow this precaution can cause severe injury or death to personnel working nearby. Seek immediate medical attention if injury occurs.

CAUTION

Platform support legs must be removed from ISO frame prior to lowering PA platform. Attempting to lower platform without first removing legs will damage platform and legs.

1. Remove two platform support legs (Figure 3, Item 8) as follows:
 - a. Pull QC pin (Figure 3, Item 10) out of support leg (Figure 3, Item 8) and mounting pad (Figure 3, Item 9).
 - b. Slide support leg (Figure 3, Item 8) out of stowage bracket (Figure 3, Item 7).
 - c. Insert QC pin (Figure 3, Item 10) back into support leg (Figure 3, Item 8) then set support leg aside for later installation.
 - d. Repeat steps a through c for second support leg (Figure 3, Item 8).
2. Unlock PA platform (Figure 3, Item 11) as follows:
 - a. Place EXTEND/RETRACT lever (Figure 3, Item 2) in RETRACT position.
 - b. Place RAISE/LOWER lever (Figure 3, Item 1) in RAISE position.
 - c. Install handle (Figure 3, Item 4) into pump (Figure 3, Item 5).
 - d. Stroke pump (Figure 3, Item 5) with handle (Figure 3, Item 4) slightly to ensure PA platform is completely raised.
 - e. Place EXTEND/RETRACT lever (Figure 3, Item 2) and RAISE/LOWER lever (Figure 3, Item 1) to NULL.
 - f. Verify personnel are clear of PA platform (Figure 3, Item 11) and there are no obstructions that would prevent complete lowering of platform.
 - g. Remove crank handle (Figure 3, Item 14) from operator tool box (Figure 3, Item 3).
 - h. Insert crank handle (Figure 3, Item 14) into rear side lock (Figure 3, Item 13) and rotate in UNLOCK direction until pin (Figure 3, Item 12) is completely retracted into beam (Figure 3, Item 15).
 - i. Repeat step h at front side lock (Figure 3, Item 6).

DEPLOY PA PLATFORM-CONTINUED

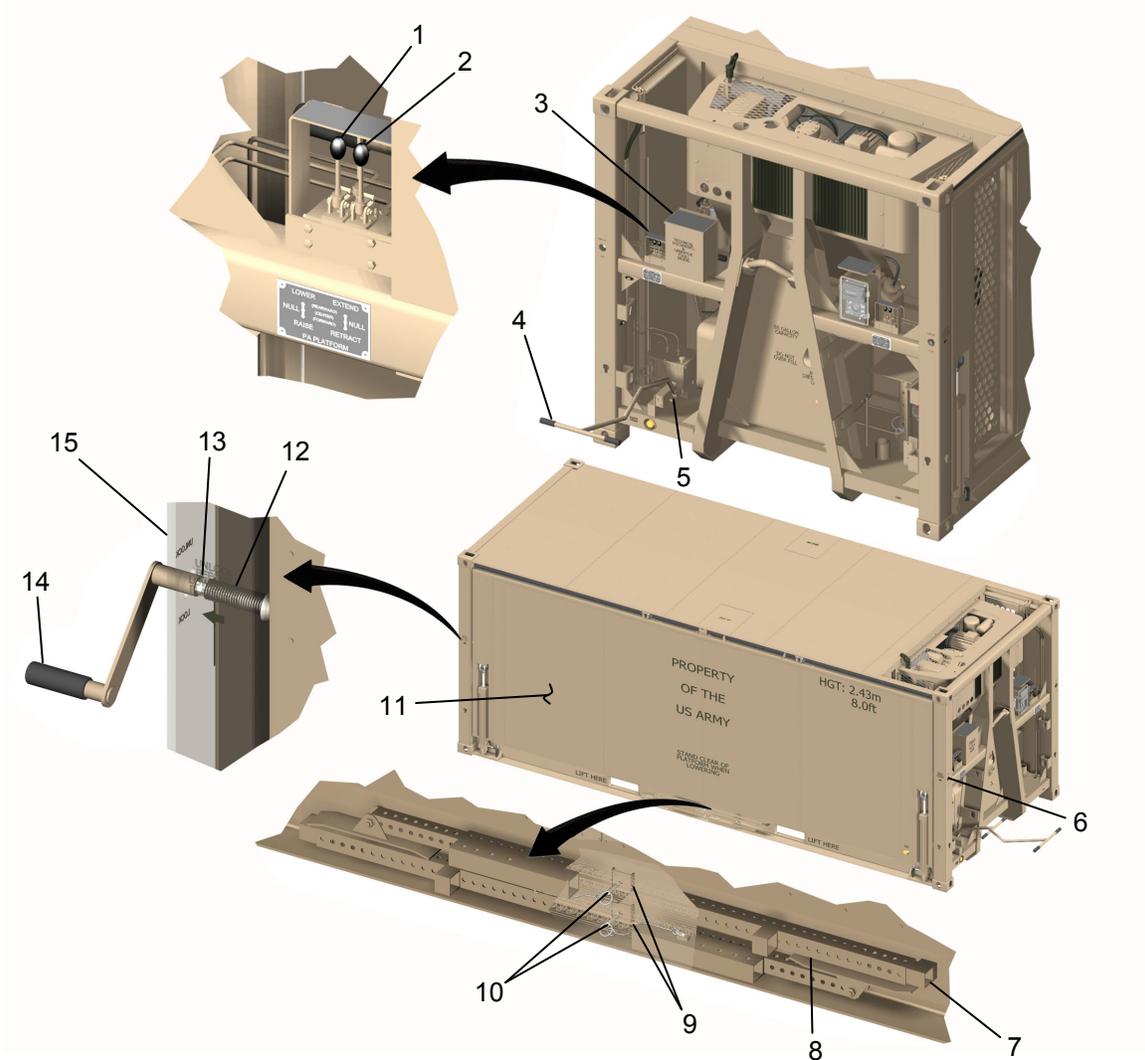


Figure 3. PA Platform Unlocking.

CAUTION

Side locks must be retracted and catch extended prior to lowering platform. Attempting to lower platform without first unlocking side locks and extending catch may cause damage to side locks, catch, platform, and hydraulic system components.

NOTE

During platform lowering operation downward movement of platform can be stopped at any time by placing RAISE/LOWER lever in NULL position.

3. Lower PA platform (Figure 4, Item 7) as follows:
 - a. Position EXTEND/RETRACT lever (Figure 4, Item 3) to EXTEND.
 - b. Operate pump (Figure 4, Item 5) with handle (Figure 4, Item 4) until catch (Figure 4, Item 1) is fully extended.
 - c. Position EXTEND/RETRACT lever (Figure 4, Item 3) to NULL.
 - d. Position RAISE/LOWER lever (Figure 4, Item 2) to LOWER.

DEPLOY PA PLATFORM-CONTINUED

- e. Platform will begin lowering under its own weight. If necessary pull slightly on sides of platform until gravity takes effect.
- f. Allow PA platform (Figure 4, Item 7) to lower until cables (Figure 4, Item 6) are tight.
- g. Place RAISE/LOWER lever (Figure 4, Item 2) back to NULL position.
- h. Remove and stow pump handle (Figure 4, Item 4).

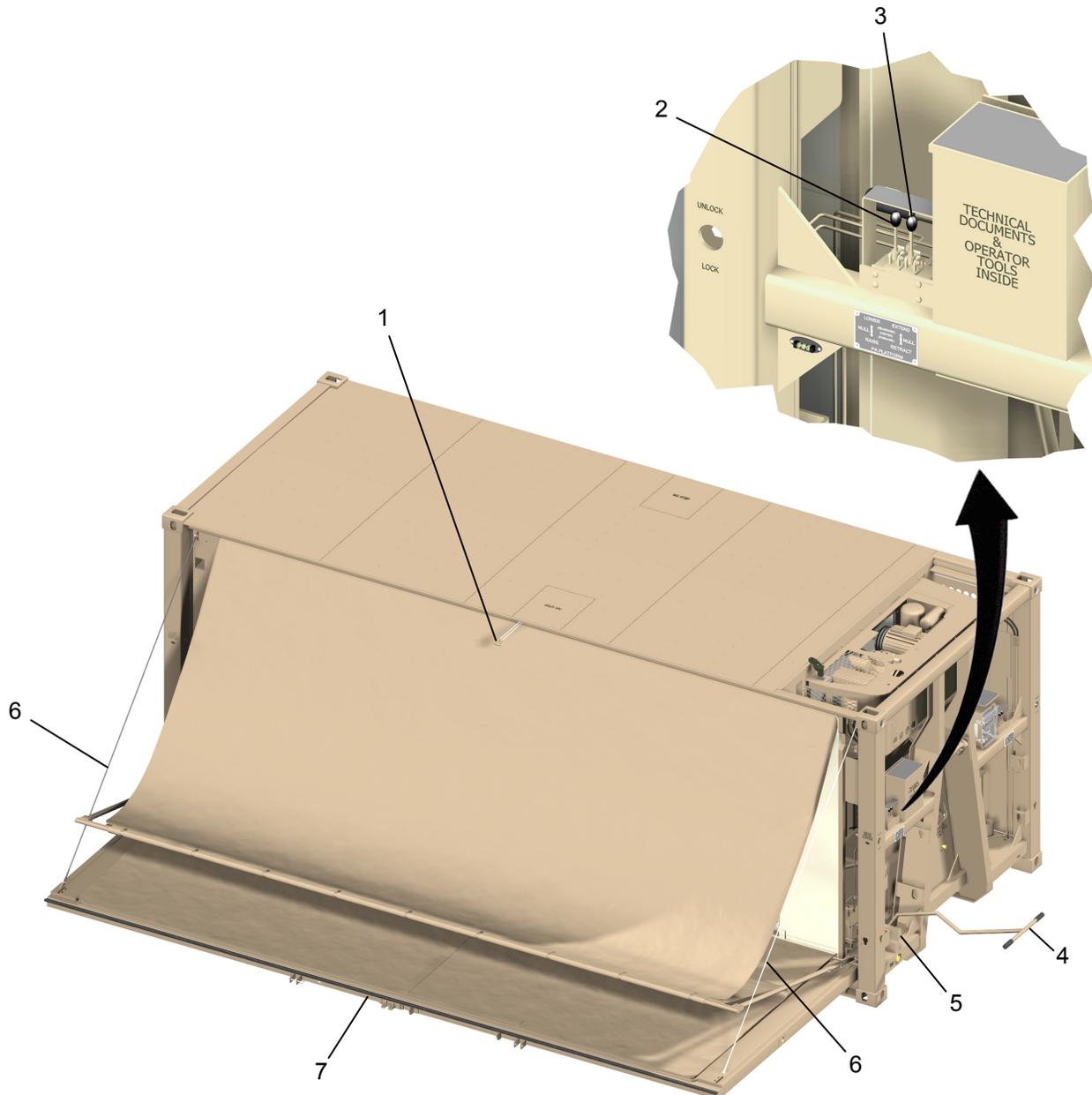


Figure 4. PA Platform Lowering.

DEPLOY PA PLATFORM-CONTINUED

WARNING

Never walk on platforms until they are properly supported. Failure to follow this precaution may cause serious injury to personnel and damage to platforms. Seek immediate medical attention if injury occurs.

4. Install support legs (Figure 5, Item 5) to support PA platform (Figure 5, Item 9) as follows:
 - a. Pull QC pin (Figure 5, Item 2) out of fork support (Figure 5, Item 3) on edge of PA platform (Figure 5, Item 9).
 - b. Mate upper support leg (Figure 5, Item 1) with fork support (Figure 5, Item 3) then insert QC pin (Figure 5, Item 2).
 - c. Pivot foot (Figure 5, Item 6) downward so that it will rest flat on ground.
 - d. Pull QC pin (Figure 5, Item 4) out of upper leg (Figure 5, Item 1) then slide lower leg (Figure 5, Item 7) down until foot (Figure 5, Item 6) is contacting ground.
 - e. Insert QC pin (Figure 5, Item 4) in one of four alignment holes (Figure 5, Item 8) to secure upper leg (Figure 5, Item 1) to lower leg (Figure 5, Item 7).
 - f. Repeat steps a through e for second support leg (Figure 5, Item 5).

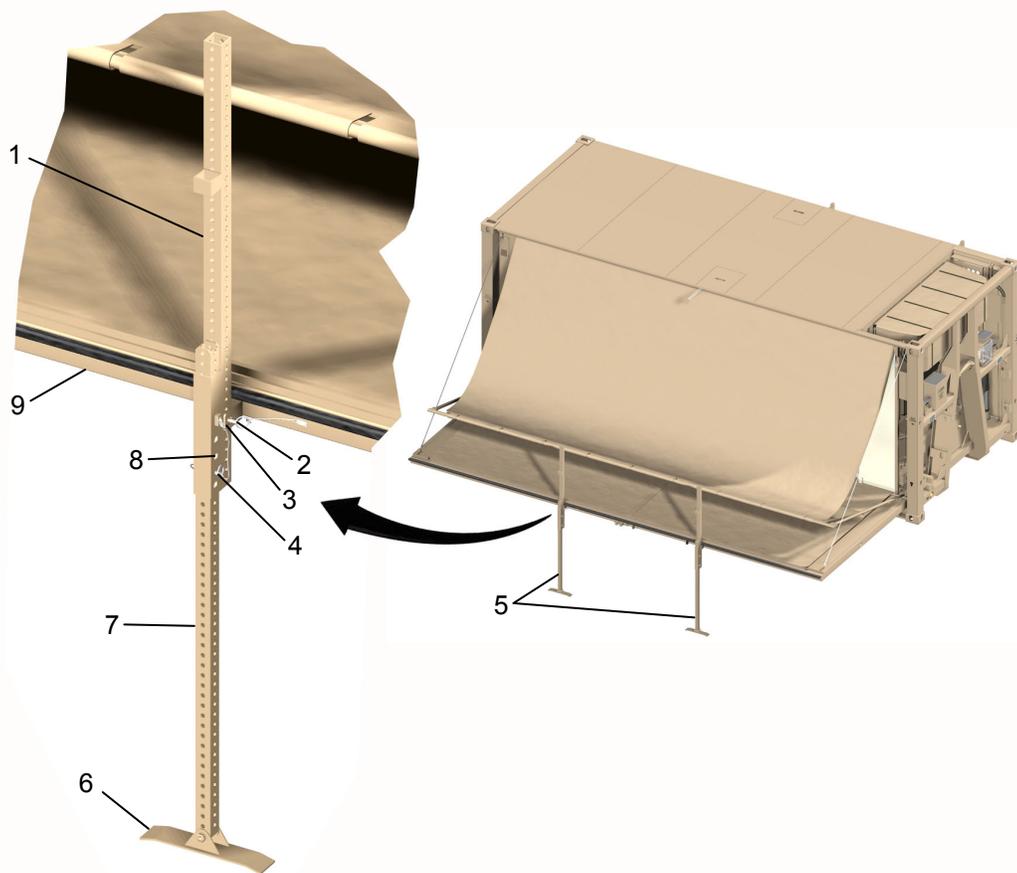


Figure 5. Support Leg Installation.

END OF TASK

DEPLOY PA SOFT WALL

1. Place ladder (Figure 6, Item 8) against rear edge of PA platform (Figure 6, Item 7) to gain access onto platform.
2. With an operator positioned on each end of platform (Figure 6, Item 7) apply tension to soft wall (Figure 6, Item 6) as follows:
 - a. At each side of soft wall (Figure 6, Item 6) hold outer supports (Figure 6, Item 2) and pull QC pins (Figure 6, Item 4).
 - b. Push up and out on outer supports (Figure 6, Item 2) to expand, but not completely tension soft wall (Figure 6, Item 6).
 - c. Reinsert QC pins (Figure 6, Item 4) in any one of four alignment holes (Figure 6, Item 3).
 - d. Working together at either end, pull QC pin (Figure 6, Item 4), push up on outer support (Figure 6, Item 2) to apply tension to soft wall (Figure 6, Item 6), and reinsert pin.
 - e. Repeat step d at other end of soft wall (Figure 6, Item 6).
3. Push end walls (Figure 6, Item 5) out of way or partially zip to keep them out of the way during transfer operations.
4. Unzip door (Figure 9, Item 1) then flip door up onto roof of soft wall (Figure 6, Item 6).

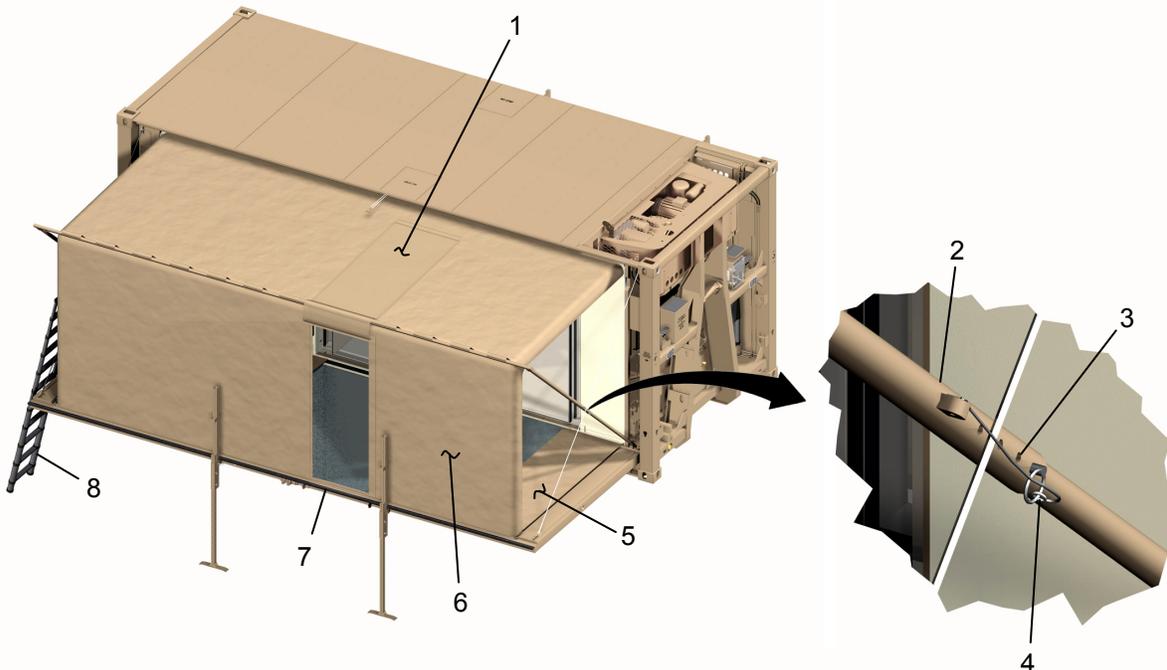


Figure 6. PA Soft Wall Deployment.

END OF TASK

REMOVE RAMP AND RLD FROM STORAGE**WARNING**

To ensure personnel can safely move the mobile processing platform on the ramp with minimal effort, and to prevent accidental tipping of the mobile processing platform, it is important that both ramp sections and the RLD be used during rapid transfer operations. Failure to follow this precaution may cause serious injury to personnel. Seek immediate medical attention if injury occurs.

1. Remove RLD (Figure 7, Item 3) from supply storage area (Figure 7, Item 1) or RSU (Figure 7, Item 2) and place on ground near the PA platform.
2. Remove top ramp (Figure 7, Item 7) and bottom ramp (Figure 7, Item 8) as follows:
 - a. Pull QC pins (Figure 7, Item 4) out of ramps (Figure 7, Items 7 and 8) and generator cable support (Figure 7, Item 5).
 - b. Lift up on top ramp (Figure 7, Item 7) until notch (Figure 7, Item 6) clears support (Figure 7, Item 5) then remove ramp and set aside for later assembly.
 - c. Repeat step b for bottom ramp (Figure 7, Item 8).

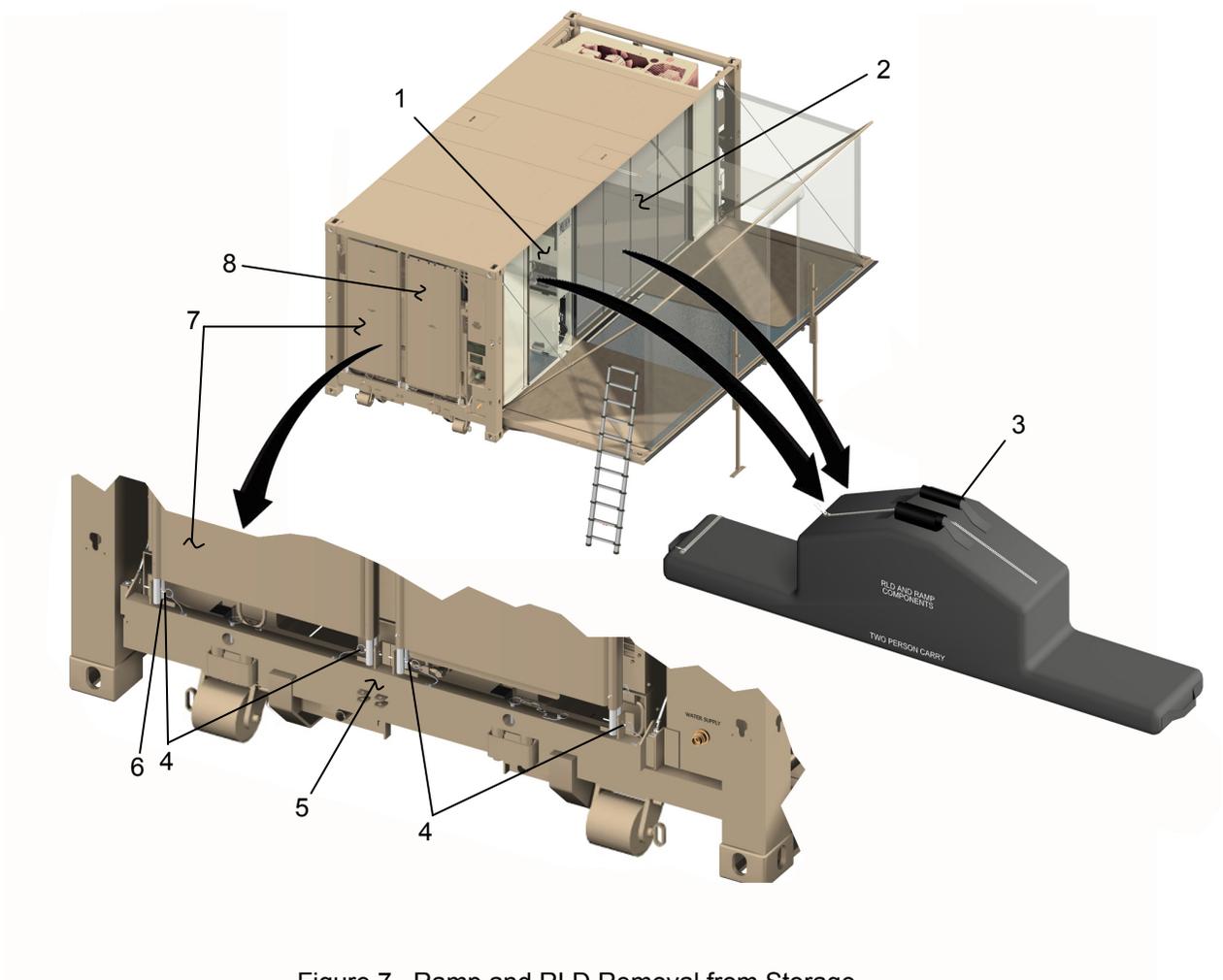


Figure 7. Ramp and RLD Removal from Storage.

END OF TASK

ASSEMBLE AND ATTACH RAMP AND RLD SECTIONS

1. Unzip RLD storage bag (Figure 8, Item 1) then remove the following:
 - a. LH ramp connecting link (Figure 8, Item 6)
 - b. RH ramp connecting link (Figure 8, Item 7)
 - c. LH RLD section (Figure 8, Item 8)
 - d. RH RLD section (Figure 8, Item 9)
 - e. Winch mounting plate (Figure 8, Item 4)
 - f. Sling (Figure 8, Item 5)
2. Attach connecting links (Figure 8, Items 6 and 7) to top ramp (Figure 8, Item 2) as follows:
 - a. Pull QC pin (Figure 8, Item 10) out of LH connecting link (Figure 8, Item 6).
 - b. Insert LH connecting link (Figure 8, Item 6) into top ramp (Figure 8, Item 2).
 - c. Insert QC pin (Figure 8, Item 10) to secure connecting link (Figure 8, Item 6) to top ramp (Figure 8, Item 2).
 - d. Repeat steps a through c for RH connecting link (Figure 8, Item 7).
3. Attach bottom ramp (Figure 8, Item 13) to top ramp (Figure 8, Item 2) as follows:
 - a. Pull QC pins (Figure 8, Item 14) out of bottom ramp (Figure 8, Item 13) and remove tenons (Figure 8, Item 12).
 - b. Pull QC pins (Figure 8, Item 15) out of top ramp (Figure 8, Item 2), slide tenons (Figure 8, Item 3) down about halfway to center position then reinsert QC pin to secure tenons to ramp.
 - c. Position ramps (Figure 8, Items 2 and 13) so they are resting on their sides.
 - d. Align tenons (Figure 8, Item 3) with bottom ramp (Figure 8, Item 13) and slide bottom ramp into top ramp (Figure 8, Item 2).
 - e. Reinsert QC pins (Figure 8, Item 14) to secure bottom ramp (Figure 8, Item 13) to top ramp (Figure 8, Item 2).
4. Attach top ramp (Figure 8, Item 2) to PA platform (Figure 8, Item 18) as follows:
 - a. Pull QC pins (Figure 8, Item 17) out of connecting links (Figure 8, Items 6 and 7).
 - b. With a person on each side, mate top ramp (Figure 8, Item 2) to PA platform (Figure 8, Item 18) and secure with QC pins (Figure 8, Item 17).
 - c. Flip threshold (Figure 8, Item 16) over PA platform (Figure 8, Item 18).
5. Attach RLD sections (Figure 8, Items 8 and 9) to bottom ramp (Figure 8, Item 13) as follows:
 - a. With a person on each side of bottom ramp (Figure 8, Item 13), pull QC pins (Figure 8, Item 11) out of ramp.

ASSEMBLE AND ATTACH RAMP AND RLD SECTIONS-CONTINUED

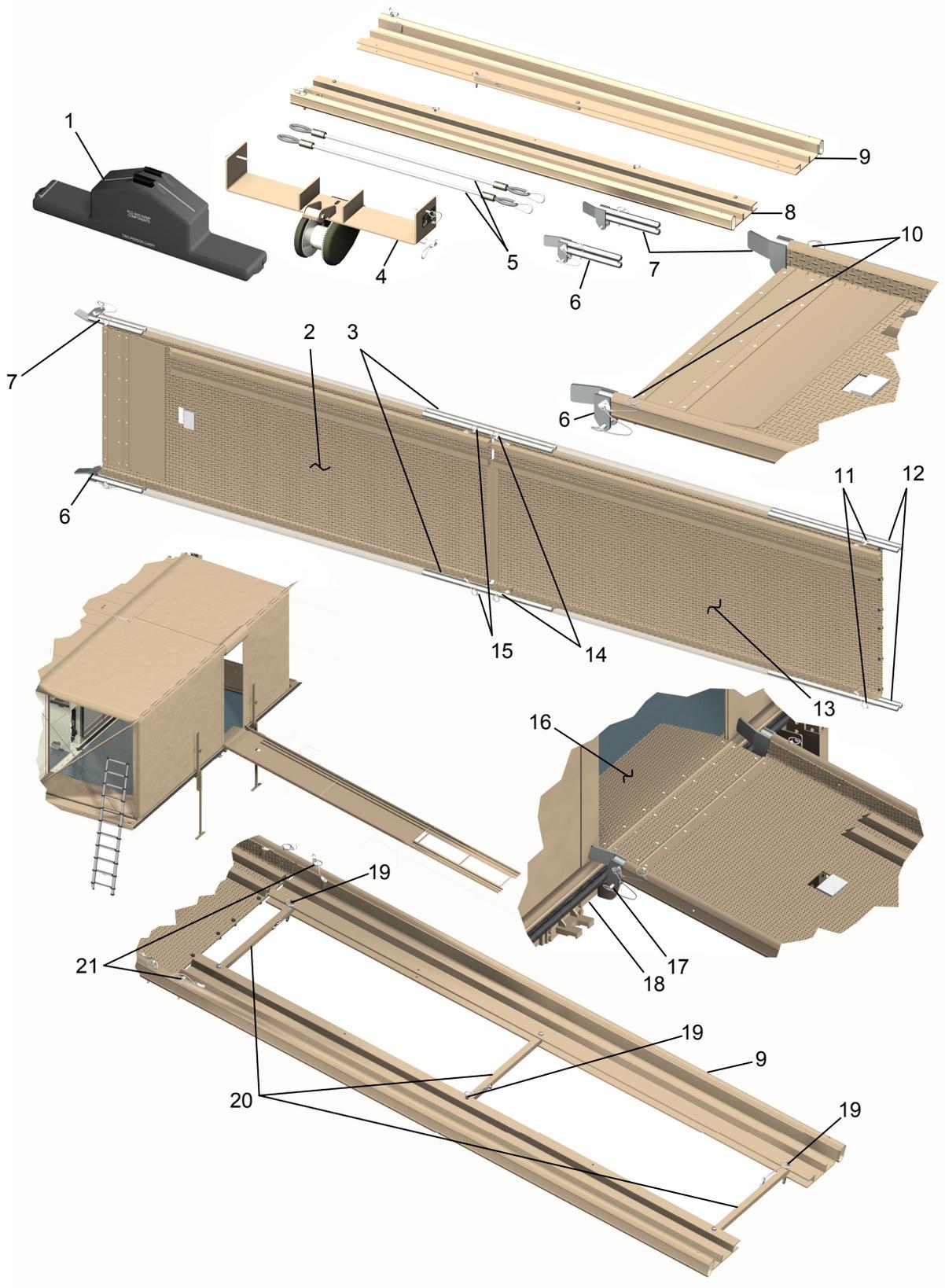


Figure 8. Ramp and RLD Attachment and Assembly.

ASSEMBLE AND ATTACH RAMP AND RLD SECTIONS-CONTINUED**WARNING**

During rapid loading ramp and RLD are for MPP use only. Never walk on the ramp or RLD when installed. Failure to follow this precaution may cause serious injury to personnel. Seek immediate medical attention if injury occurs.

- b. Lift up on bottom ramp (Figure 8, Item 13), insert tenons (Figure 8, Item 12) out about halfway to center position then reinsert QC pins (Figure 8, Item 11) to secure tenons to ramp.
 - c. Pull QC pins (Figure 8, Item 21) out of RLD sections (Figure 8, Items 8 and 9).
 - d. Slide RLD sections (Figure 8, Items 8 and 9) into tenons (Figure 8, Item 12) then reinsert QC pins (Figure 8, Item 21) to secure RLD sections to bottom ramp (Figure 8, Item 13).
 - e. Pull QC pins (Figure 8, Item 19) out of RLD sections (Figure 8, Items 8 and 9).
 - f. Pivot cross braces (Figure 8, Item 20) over and into opposite RLD section (Figure 8, Items 8 and 9).
 - g. Reinsert QC pins (Figure 8, Item 19) to secure cross braces (Figure 8, Item 20) to RLD sections (Figure 8, Items 8 and 9).
6. Attach winch bracket (Figure 9, Item 4) to top ramp (Figure 9, Item 2) as follows:
- a. Pull QC pins (Figure 9, Item 8) out of winch bracket (Figure 9, Item 4).
 - b. With a person on each side of top ramp (Figure 9, Item 2) mate winch bracket (Figure 9, Item 4) to ramp then insert QC pins (Figure 9, Item 8).
 - c. Pull hair pin (Figure 9, Item 7) out of winch shaft (Figure 9, Item 5).
 - d. Install crank handle (Figure 9, Item 6) onto winch shaft (Figure 9, Item 5) then secure with hair pin (Figure 9, Item 7).
 - e. Position latch (Figure 9, Item 3) halfway between WIND and UNWIND to allow strap (Figure 9, Item 1) to be pulled out of winch (Figure 9, Item 9).
 - f. Route strap (Figure 9, Item 1) through opening in top ramp (Figure 9, Item 2).

ASSEMBLE AND ATTACH RAMP AND RLD SECTIONS-CONTINUED

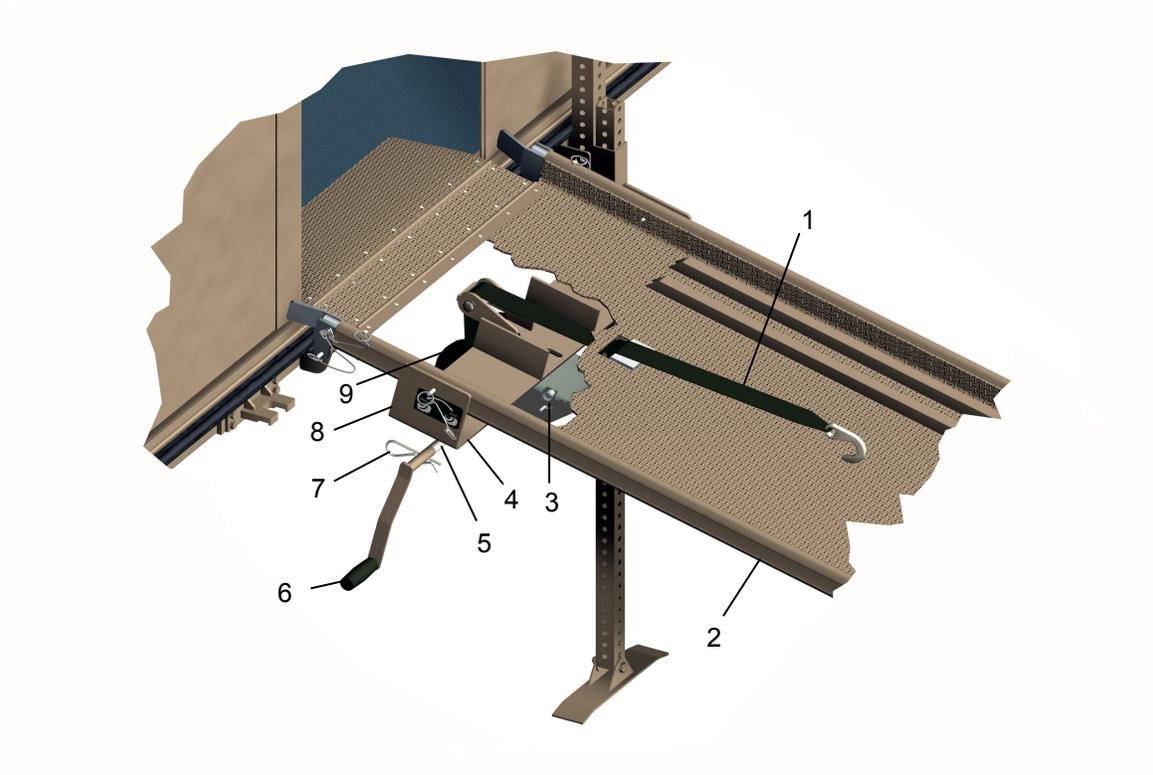


Figure 9. Winch Bracket Attachment.

END OF TASK

TRANSFER OPERATIONS**WARNING**

Do not position hands between tray and MPP frame. Failure to keep hands clear may result in fingers being pinched or crushed. Seek immediate medical attention if injury occurs.

NOTE

Lighting is provided for nighttime transfer operations above and in front of each RSU door. The WORK LIGHTS switch on the RU control enclosure controls operation of these lights. When the switch is lifted and released the lights will stay on for 10 minutes. If additional time is required the switch can be lifted and released every 10 minutes as needed.

1. Remove MPP (Figure 10, Item 8) and MPP extension (Figure 10, Item 7) from supply storage area (Figure 10, Item 2) or RSU (Figure 10, Item 3).

NOTE

When transferring remains into or out of top row of RSU it will be necessary to use MPP extension.

2. Determine location in RSU (Figure 10, Item 3) where remains will be transferred. If MPP extension (Figure 10, Item 7) is required continue to step 3, otherwise proceed to step 4.
3. Attach extension (Figure 10, Item 7) to MPP (Figure 10, Item 8) as follows:

CAUTION

Never load remains onto MPP extension without extension side legs properly located on MPP frame. Failure to properly place side legs on MPP frame can result in failure of the extension frame.

- a. Unfasten straps (Figure 10, Item 4) and fold down end legs (Figure 10, Item 1) and side legs (Figure 10, Item 5).
- b. Pull QC pins (Figure 10, Item 6) out of end legs (Figure 10, Item 1).
- c. Place extension (Figure 10, Item 7) on top of MPP (Figure 10, Item 8) ensuring side legs (Figure 10, Item 5) are resting on MPP frame (Figure 10, Item 9).
- d. Insert QC pins (Figure 10, Item 6) to secure end legs (Figure 10, Item 1) to MPP (Figure 10, Item 8).
- e. Transfer straps (Figure 10, Item 10) from MPP (Figure 10, Item 8) to extension (Figure 10, Item 7).

TRANSFER OPERATIONS-CONTINUED

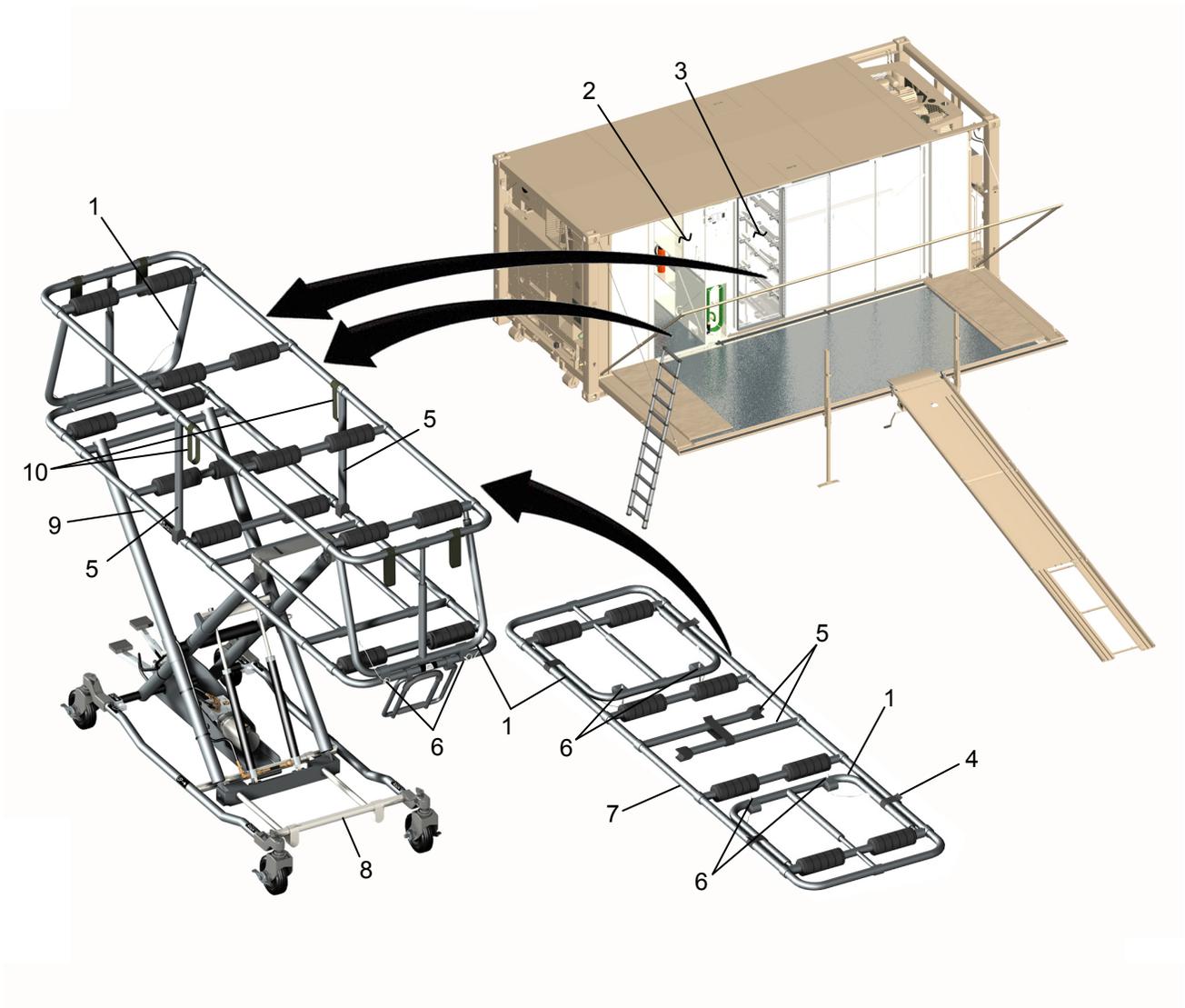


Figure 10. Extension to MPP Attachment.

TRANSFER OPERATIONS-CONTINUED

NOTE

Remains will be transferred into RSU feet first and removed headfirst. In order to maintain the correct orientation, remains will be moved up and down ramp feet first. The MPP should always be moved up and down the ramp with the pull handle on the incline side (towards the MIRCS).

4. Fully open RSU door (Figure 11, Item 3).
5. With a person on each side of MPP (Figure 11, Item 5), position MPP in front of RSU door opening as follows:
 - a. Position swivel locks (Figure 11, Item 6) to unlocked position.
 - b. Unlock all four wheel brakes (Figure 11, Items 7).
 - c. Orient MPP (Figure 11, Item 5) with pull handle (Figure 11, Item 4) towards RSU door opening.
 - d. Set all four wheel brakes (Figure 11, Item 7).
 - e. Adjust height of MPP (Figure 11, Item 5) using foot pedals (Figure 11, Item 8), until rollers (Figure 11, Item 9) are slightly below bottom of tray (Figure 11, Item 2).
6. Pull QC pin (Figure 11, Item 1) then slide tray (Figure 11, Item 2) onto MPP (Figure 11, Item 5).
7. Release wheel brakes (Figure 11, Item 7) then rotate MPP (Figure 11, Item 5) until it is clear of RSU door (Figure 11, Item 3).
8. Close RSU door (Figure 11, Item 3).

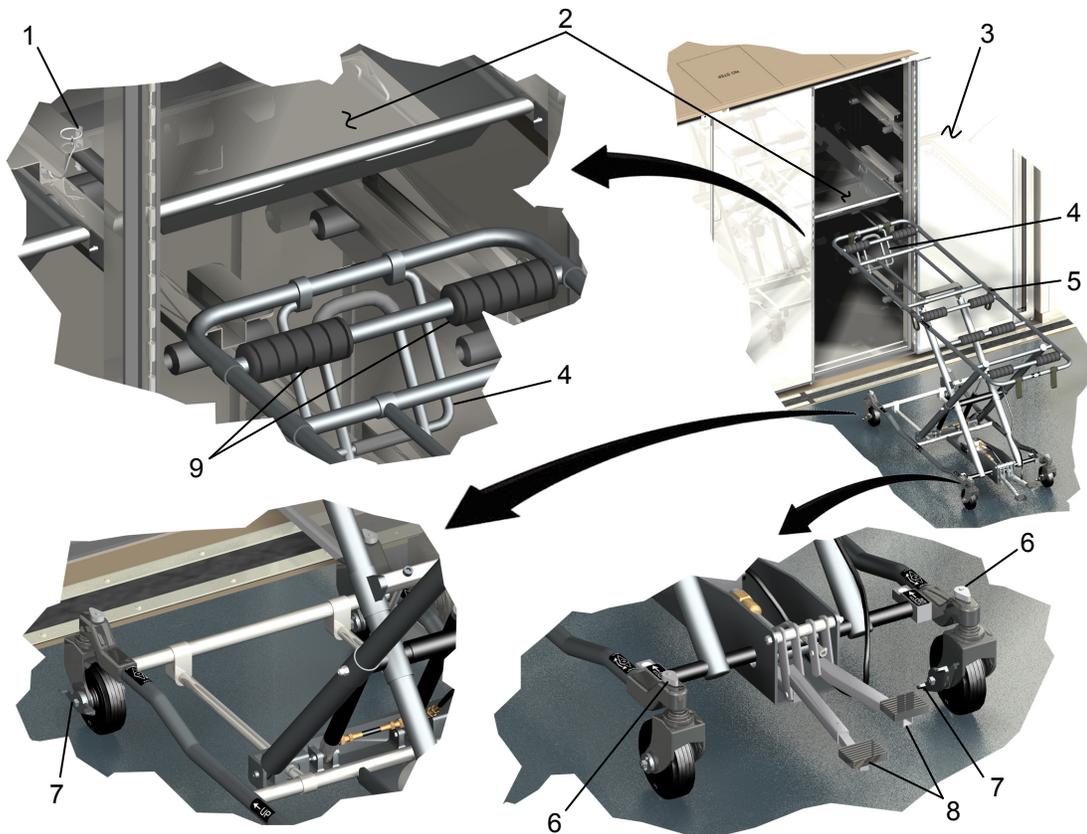


Figure 11. Transferring Tray from RSU to MPP.

TRANSFER OPERATIONS-CONTINUED**CAUTION**

To ensure proper handling, the tray must be properly secured to the MPP and the swivel locks must be engaged during movement. In addition, personnel must securely hold winch handle while MPP is moved down ramp. Failure to follow this precaution may cause accidental sliding of the tray or tipping of the MPP.

9. Secure tray (Figure 12, Item 1) to MPP (Figure 12, Item 22) with six straps (Figure 12, Item 2).
10. Position MPP (Figure 12, Item 22) in front of door opening (Figure 12, Item 5) so that pull handle (Figure 12, Item 10) will be away from incline side of ramp (do not move MPP down ramp at this time).
11. With wheels pointing toward each other position all four swivel locks (Figure 12, Item 19) to locked position.
12. Attach sling (Figure 12, Item 20) to MPP attaching points (Figure 12, Item 21) as shown in Figure 12.
13. Attach sling (Figure 12, Item 20) to winch strap (Figure 12, Item 7).
14. Adjust MPP (Figure 12, Item 22) to lowest height using foot pedals (Figure 12, Item 4).
15. Flip latch (Figure 12, Item 16) on winch (Figure 12, Item 15) to WIND direction.
16. Wind winch (Figure 12, Item 15) to remove all slack from strap (Figure 12, Item 7) taking care not to let hook end of strap go back through hole in top ramp.
17. With personnel at each side of MPP (Figure 12, Item 22), move MPP down ramp (Figure 12, Item 8) only far enough to align and engage caster (Figure 12, Item 18) with ramp guide (Figure 12, Item 6).
18. While holding handle (Figure 12, Item 17) securely, flip latch (Figure 12, Item 16) to UNWIND direction.
19. Slowly guide MPP (Figure 12, Item 22) down incline until sling (Figure 12, Item 20) and strap (Figure 12, Item 7) are carrying weight of MPP.
20. Slowly unwind strap (Figure 12, Item 7) while guiding MPP (Figure 12, Item 22) down incline. Ensure caster (Figure 12, Item 18) does not get out of alignment as it passes from top ramp (Figure 12, Item 8) to bottom ramp (Figure 12, Item 9) to RLD sections (Figure 12, Item 13).
21. When MPP is at base of RLD sections (Figure 12, Item 13) flip latch (Figure 12, Item 16) to WIND direction.
22. Remove four straps (Figure 12, Item 11) from one side of D-rings (Figure 12, Item 12).
23. Transfer remains onto or off of tray (Figure 12, Item 1).
24. Attach four straps (Figure 12, Item 11) through D-rings (Figure 12, Item 12) and tighten.
25. Ensure caster (Figure 12, Item 18) is aligned with RLD guide (Figure 12, Item 14) then begin winding strap (Figure 12, Item 7) and moving MPP (Figure 12, Item 22) up incline.
26. Slowly wind strap (Figure 12, Item 7) while guiding MPP (Figure 12, Item 22) up incline. Ensure caster (Figure 12, Item 18) does not get out of alignment as it passes from RLD sections (Figure 12, Item 13) to bottom ramp (Figure 12, Item 9) to top ramp (Figure 12, Item 8).
27. Once MPP (Figure 12, Item 22) is raised as far as strap will allow, grasp pull handle (Figure 12, Item 10) and firmly hold MPP from inside door opening (Figure 12, Item 5).
28. Flip latch (Figure 12, Item 16) to UNWIND direction then pull MPP (Figure 12, Item 22) completely onto PA platform (Figure 13, Item 3).

TRANSFER OPERATIONS-CONTINUED

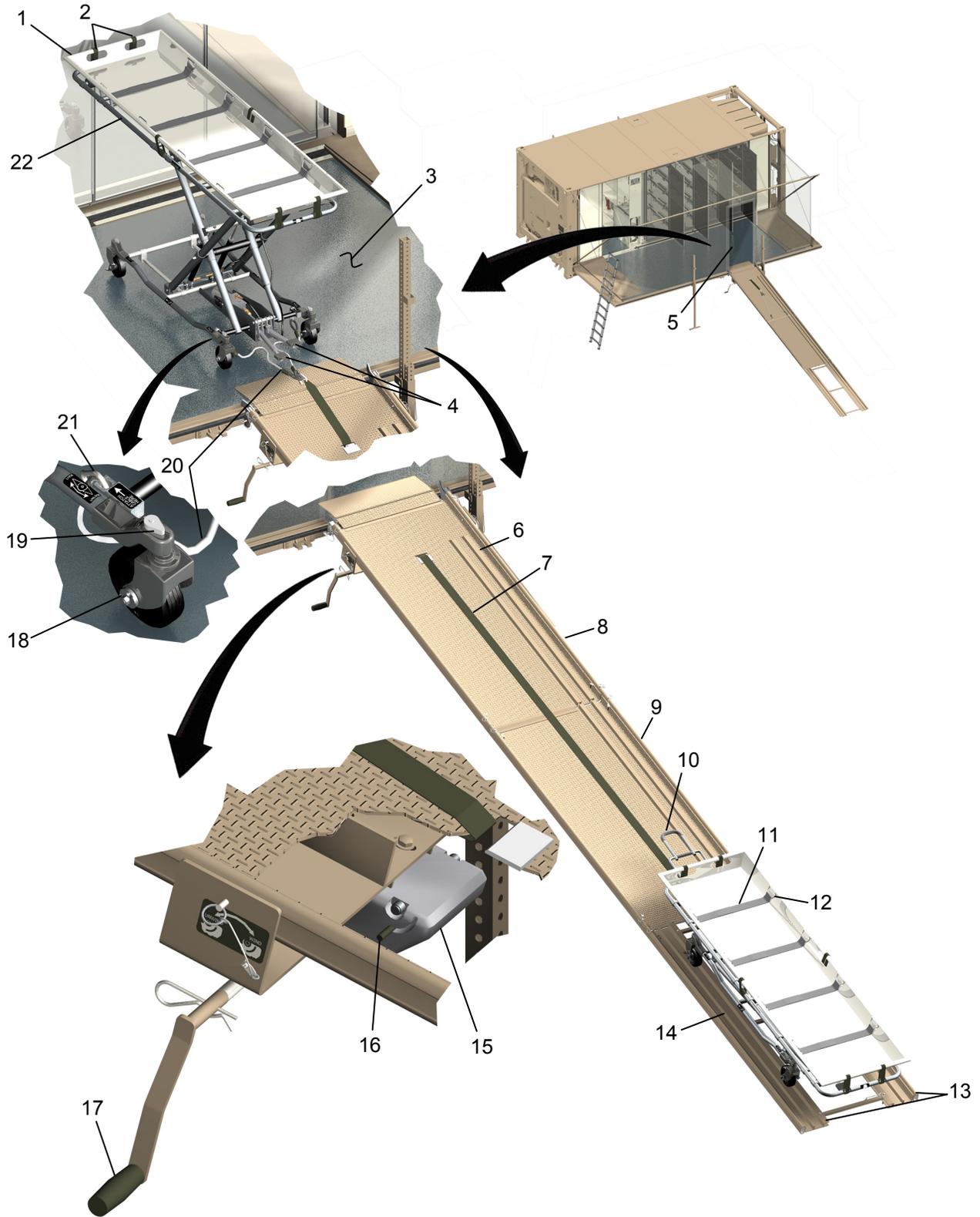


Figure 12. Moving MPP Down and Up Incline.

TRANSFER OPERATIONS-CONTINUED

29. Once inside, set all four wheel brakes (Figure 13, Item 8).
30. Position swivel locks (Figure 13, Item 7) to unlocked position
31. Disconnect strap (Figure 13, Item 11) from sling (Figure 13, Item 12).
32. Disconnect sling (Figure 13, Item 12) from MPP attaching points (Figure 13, Item 6).
33. Open RSU door (Figure 13, Item 2) where tray (Figure 13, Item 5) is to be placed.
34. With a person on each side of MPP (Figure 13, Item 13), position MPP in front of door opening as follows:
 - a. Release all four wheel brakes (Figure 13, Item 8).
 - b. Orient MPP (Figure 13, Item 13) with pull handle (Figure 13, Item 4) towards RSU door opening.
 - c. Set all four wheel brakes (Figure 13, Item 8).
 - d. Adjust height of MPP (Figure 13, Item 13) using foot pedals (Figure 13, Item 9), until bottom of tray (Figure 13, Item 5) is slightly above rollers (Figure 13, Item 1).
35. Unfasten six straps (Figure 13, Item 15) from tray (Figure 13, Item 5).
36. Slide tray (Figure 13, Item 5) into RSU (Figure 13, Item 14).
37. Insert QC pin (Figure 13, Item 3) to secure tray (Figure 13, Item 8).
38. Release wheel brakes (Figure 13, Item 8) then rotate MPP (Figure 13, Item 5) until it is clear of RSU door (Figure 13, Item 2).
39. Close RSU door (Figure 13, Item 2).
40. Repeat steps 4 through 39 for additional transfers or proceed to step 41.

TRANSFER OPERATIONS-CONTINUED

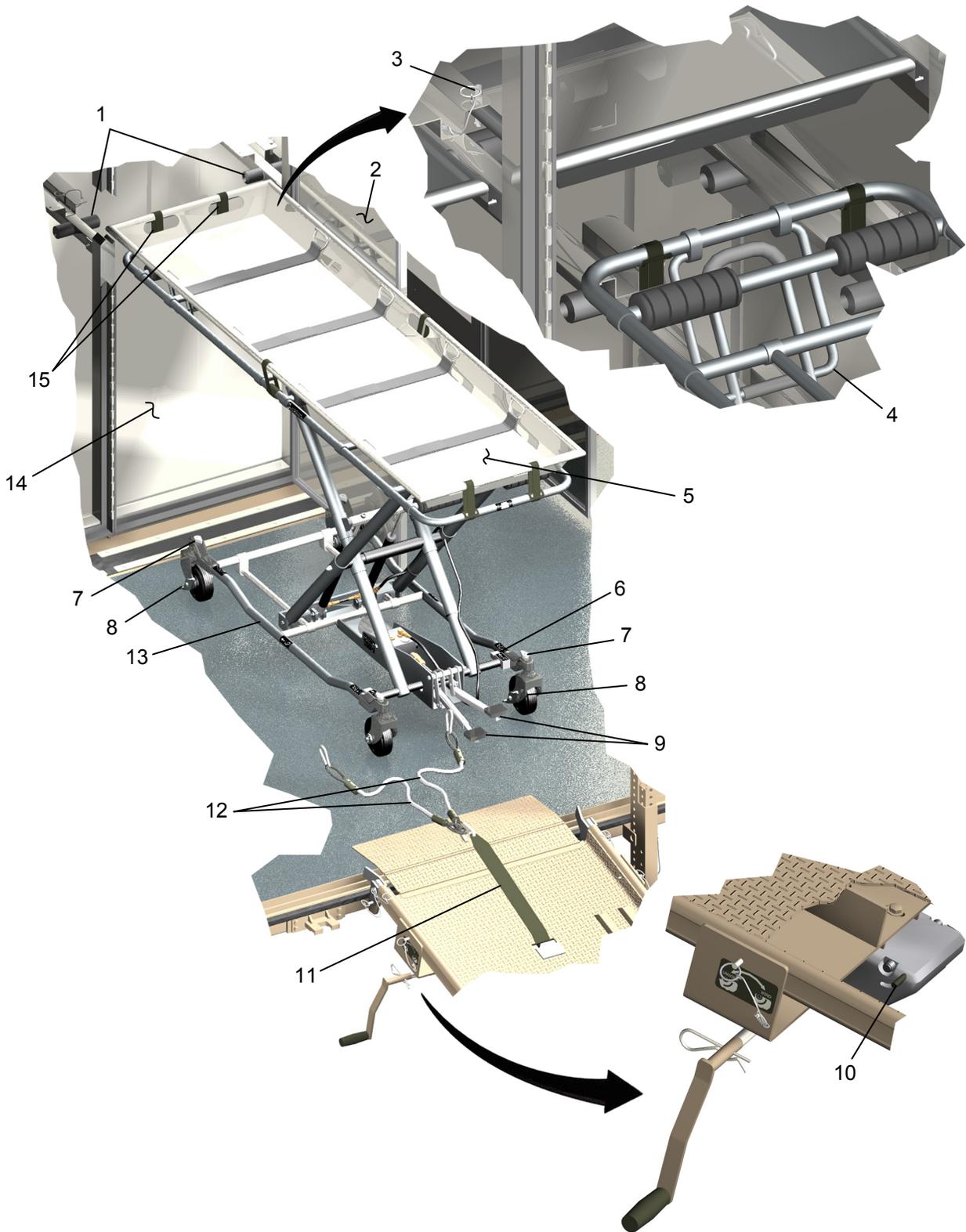


Figure 13. Transferring Tray from MPP to RSU.

TRANSFER OPERATIONS-CONTINUED

41. If extension (Figure 14, Item 1) was used detach from MPP (Figure 14, Item 9) as follows, otherwise proceed to Take Down Ramp and RLD Sections.
 - a. Remove straps (Figure 14, Item 7) from extension (Figure 14, Item 1) and reattach to MPP (Figure 14, Item 9).
 - b. Pull QC pins (Figure 14, Item 5) out of end legs (Figure 14, Item 6).
 - c. Remove extension (Figure 14, Item 1) from MPP (Figure 14, Item 9).
 - d. Insert QC pins (Figure 14, Item 5) back into end legs (Figure 14, Item 6).
 - e. Fold end legs (Figure 14, Item 6) and side legs (Figure 14, Item 8) and secure with straps (Figure 14, Item 4).

CAUTION

Never store MPP on its side or upside down. Hydraulic fluid can seep out of breather cap causing failure of MPP to rise to full height due to loss of fluid.

42. Stow MPP (Figure 14, Item 9) and extension (Figure 14, Item 1) back in supply storage area (Figure 14, Item 2) or RSU (Figure 14, Item 3).

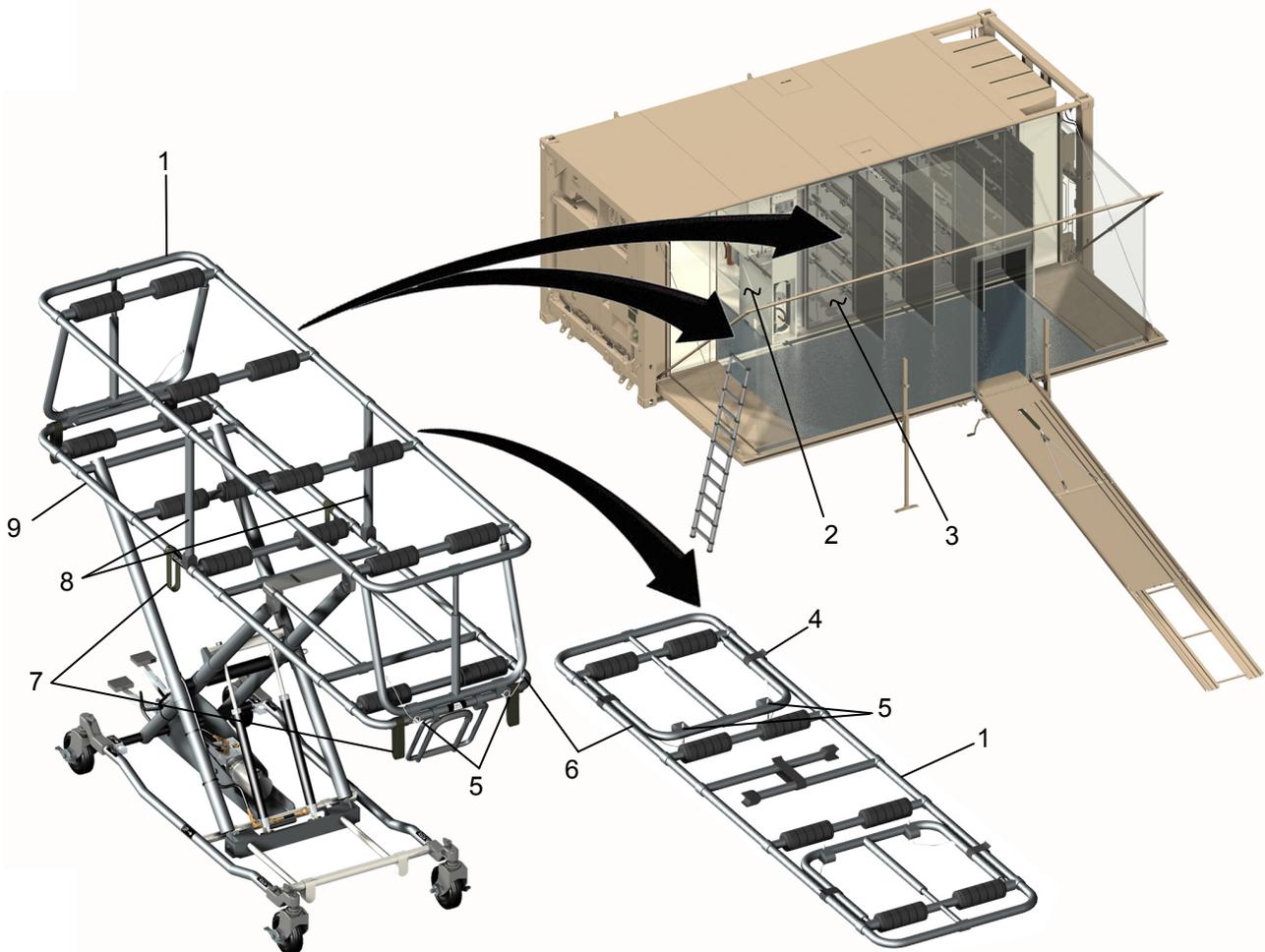


Figure 14. Stowing Extension and MPP.

END OF TASK

TAKE DOWN RAMP AND RLD SECTIONS

1. Remove winch bracket (Figure 15, Item 9) from top ramp (Figure 15, Item 1) as follows:
 - a. Disconnect sling (Figure 15, Item 3) from strap (Figure 15, Item 6).
 - b. Pull strap (Figure 15, Item 6) through opening in top ramp (Figure 15, Item 1).
 - c. Position latch (Figure 15, Item 8) to WIND direction then wind strap (Figure 15, Item 6) onto winch (Figure 15, Item 7).
 - d. Pull hair pin (Figure 15, Item 12) out of crank handle (Figure 15, Item 16)
 - e. Remove crank handle (Figure 15, Item 16) from winch shaft (Figure 15, Item 11), then reinsert hair pin (Figure 15, Item 12) into shaft.
 - f. With a person on each side of top ramp (Figure 15, Item 1) pull QC pins (Figure 15, Item 10) then lower winch bracket (Figure 15, Item 9) from ramp.
 - g. Insert QC pins (Figure 15, Item 10) into winch bracket (Figure 15, Item 9).
2. Separate RLD sections (Figure 15, Items 23 and 24) from bottom ramp (Figure 15, Item 2) as follows:
 - a. Pull QC pins (Figure 15, Item 17) securing cross braces (Figure 15, Item 18) out of RLD sections (Figure 15, Items 23 and 24).
 - b. Pivot cross braces (Figure 15, Item 18) over and into opposite RLD section (Figure 15, Items 23 and 24).
 - c. Reinsert QC pins (Figure 15, Item 17) to secure cross braces (Figure 15, Item 18) to RLD sections (Figure 15, Items 23 and 24).
 - d. With a person on each side, pull QC pins (Figure 15, Item 27) out of RLD sections (Figure 15, Items 23 and 24).
 - e. Lift up on bottom ramp (Figure 15, Item 1), then slide RLD sections (Figure 15, Items 23 and 24) out of tenons (Figure 15, Item 19).
 - f. Reinsert QC pins (Figure 15, Item 27) back into RLD sections (Figure 15, Items 23 and 24).
3. Separate top ramp (Figure 15, Item 1) from PA platform (Figure 15, Item 15) as follows:
 - a. Flip threshold (Figure 15, Item 4) over and place on ramp (Figure 15, Item 1).
 - b. With a person on both sides, pull QC pins (Figure 15, Item 14) and separate top ramp (Figure 15, Item 1) from PA platform (Figure 15, Item 15).
 - c. Position ramps (Figure 15, Items 1 and 2) so they are resting on their sides.
 - d. Pull QC pins (Figure 15, Item 26) and remove connecting links (Figure 15, Items 5 and 13) from top ramp (Figure 15, Item 1).
 - e. Insert QC pins (Figure 15, Item 14) back into connecting links (Figure 15, Item 5).
 - f. Set aside connecting links (Figure 15, Items 5 and 13) for later storage.

TAKE DOWN RAMP AND RLD SECTIONS-CONTINUED

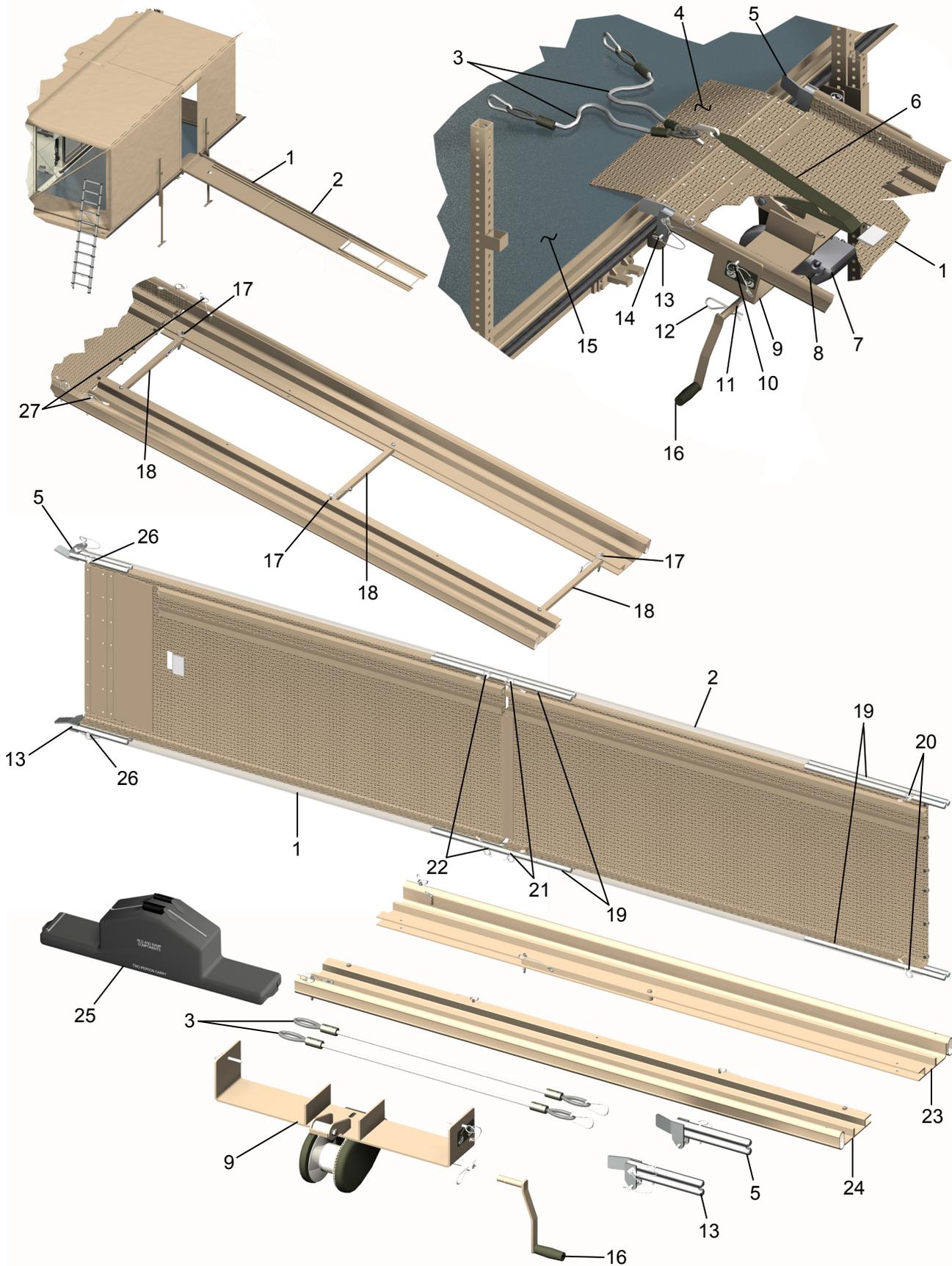


Figure 15. Ramp and RLD Section Removal.
0007-23

TAKE DOWN RLD AND RAMP SECTIONS-CONTINUED

4. Separate bottom ramp (Figure 15, Item 2) from top ramp (Figure 15, Item 1) as follows:
 - a. Pull QC pins (Figure 15, Item 21).
 - b. With a person on both ends pull bottom ramp (Figure 15, Item 2) out of top ramp (Figure 15, Item 1).
 - c. Pull QC pins (Figure 15, Item 22), reposition tenons (Figure 15, Item 19) to stowed position in bottom of top ramp (Figure 15, Item 1), then insert QC pins.
 - d. Pull QC pins (Figure 15, Item 20), remove tenons (Figure 15, Item 19) from end labeled "TOP" of bottom ramp (Figure 15, Item 2), then insert QC pins into side holes on ramp.
 - e. Insert tenons (Figure 15, Item 19) into stowed position in end labeled "BOTTOM" of bottom ramp (Figure 15, Item 2), then insert QC pins (Figure 15, Item 21).
5. Place following the following into RLD storage bag (Figure 15, Item 25) and zip bag closed:
 - a. LH ramp connecting link (Figure 15, Item 13)
 - b. RH ramp connecting link (Figure 15, Item 5)
 - c. LH RLD section (Figure 15, Item 24)
 - d. RH RLD section (Figure 15, Item 23)
 - e. Winch mounting plate (Figure 15, Item 9)
 - f. Sling (Figure 15, Item 3)

END OF TASK

STOW RAMP AND RLD

1. Place RLD storage bag (Figure 16, Item 6) in supply storage area (Figure 16, Item 2) or RSU (Figure 16, Item 3).
2. Stow top ramp (Figure 16, Item 4) and bottom ramp (Figure 16, Item 5) as follows:
 - a. Insert top of top ramp (Figure 16, Item 4) over pins (Figure 16, Item 1) then lower ramp so that notches (Figure 16, Item 10) are captured by generator cable support (Figure 16, Item 9).
 - b. Insert top of bottom ramp (Figure 16, Item 5) over pins (Figure 16, Item 1) then lower ramp so that notches (Figure 16, Item 8) are captured by generator cable support (Figure 16, Item 9).
 - c. Insert QC pins (Figure 16, Item 7) to secure ramps (Figure 16, Items 4 and 5) to generator cable support (Figure 16, Item 9).

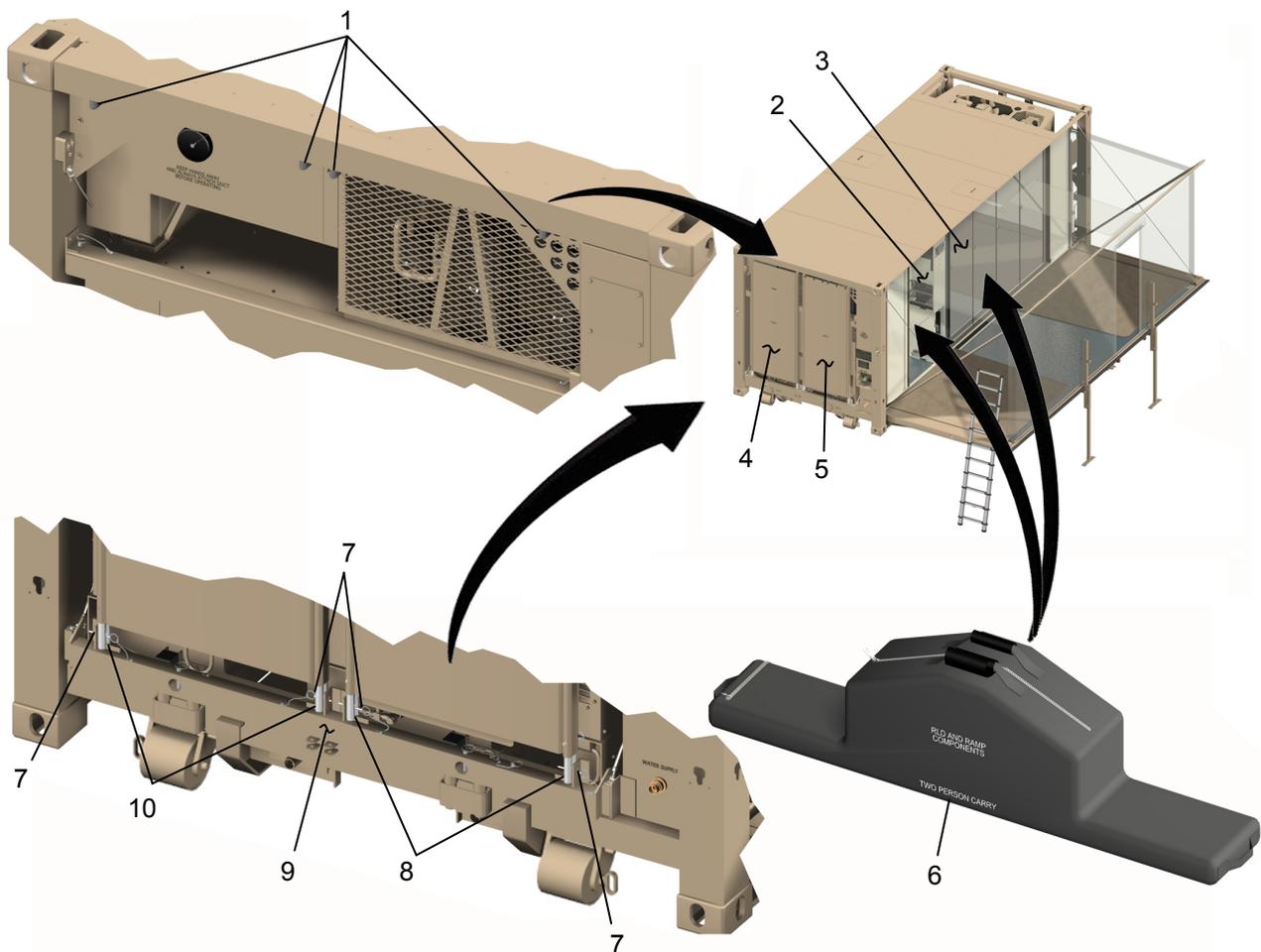


Figure 16. Ramp and RLD Stowage.

END OF TASK

TAKE DOWN PA SOFT WALL

1. Flip door (Figure 17, Item 1) back over front of soft wall (Figure 17, Item 7).
2. Zip door (Figure 17, Item 1) closed.
3. Unzip or unfold end walls (Figure 17, Item 5) and lay flat.
4. With an operator positioned on each end of PA platform (Figure 17, Item 6) apply tension to soft wall (Figure 17, Item 7).
5. Pull QC pins (Figure 17, Item 4) from outer legs (Figure 17, Item 2) then allow soft wall (Figure 17, Item 5) to relax.
6. Slide outer legs (Figure 17, Item 2) downward then insert QC pins (Figure 17, Item 4) to secure outer legs (Figure 17, Item 2) to inner legs (Figure 17, Item 3).
7. Ensure soft wall (Figure 17, Item 5) is folded evenly and edges of soft wall are clear of edges of platform (Figure 17, Item 6).

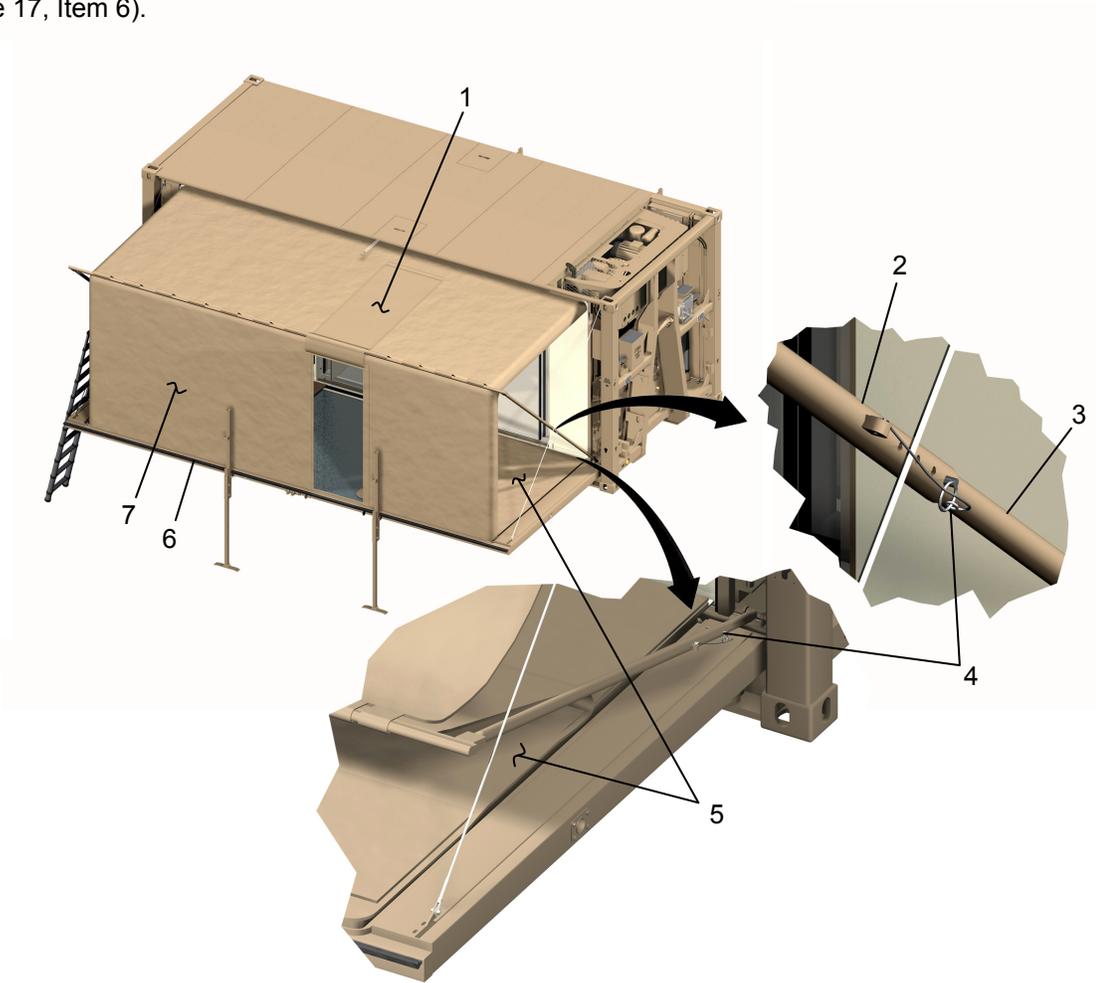


Figure 17. Taking Down PA Soft Wall.

END OF TASK

RAISE AND SECURE PA PLATFORM

1. Remove support legs (Figure 18, Item 4) from PA platform (Figure 18, Item 3) as follows:
 - a. Pull QC pin (Figure 18, Item 7) securing upper leg (Figure 18, Item 10) to lower leg (Figure 18, Item 6).
 - b. Slide lower leg (Figure 18, Item 6) up to stowed position and reinsert QC pin (Figure 18, Item 7) to secure lower leg to upper leg (Figure 18, Item 10).
 - c. Pivot foot (Figure 18, Item 5) up to stowed position.
 - d. Pull QC pin (Figure 18, Item 8) out of fork support (Figure 18, Item 9) then remove support leg (Figure 18, Item 4) from PA platform (Figure 18, Item 3).
 - e. Reinsert QC pin (Figure 18, Item 8) into fork support (Figure 18, Item 9).
 - f. Repeat steps a through e for second support leg (Figure 18, Item 4).
2. Relocate ladder (Figure 18, Item 2) against ISO frame rear curbside corner for access to PA platform rear side lock (Figure 18, Item 1).

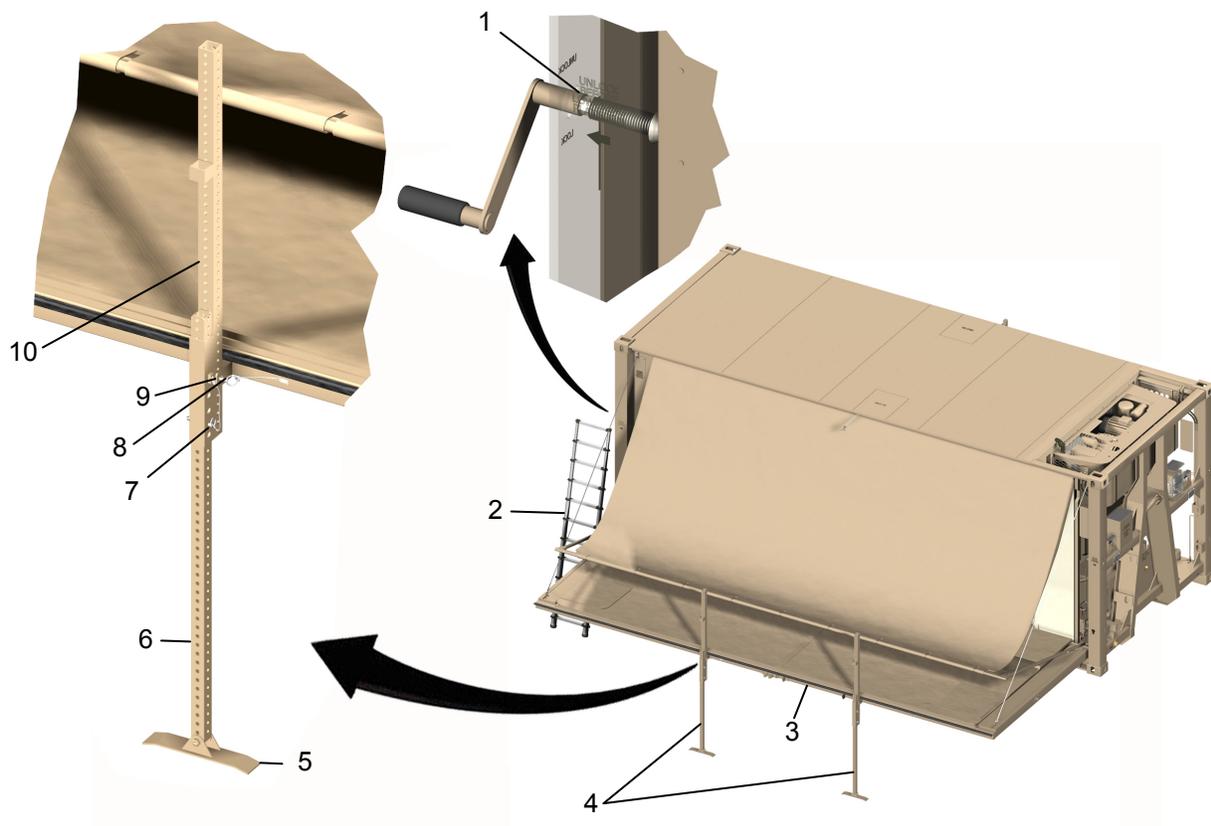


Figure 18. Support Leg Removal from PA Platform.

RAISE AND SECURE PA PLATFORM-CONTINUED**CAUTION**

Side locks must be retracted and catch must be extended prior to raising platform. Attempting to raise platform without first unlocking side locks and extending catch may cause damage to side locks, catch, platform, and hydraulic system components. Do not over pump hydraulic system. There is a noticeable difference when the cylinders are moving and when they reach the end of their travel. When pump handle movement is firm stop pumping to prevent causing damage to system components or creating leaks.

3. Raise PA platform (Figure 19, Item 7) as follows:
 - a. Position EXTEND/RETRACT lever (Figure 19, Item 2) to EXTEND.
 - b. Position RAISE/LOWER lever (Figure 19, Item 1) to NULL.
 - c. Install handle (Figure 19, Item 5) into pump (Figure 19, Item 4).
 - d. Stroke pump (Figure 19, Item 4) with handle (Figure 19, Item 5) until catch (Figure 19, Item 8) is completely extended.
 - e. Position EXTEND/RETRACT lever (Figure 19, Item 2) to NULL.
 - f. Position RAISE/LOWER lever (Figure 19, Item 1) to RAISE.

NOTE

When raising platform make sure soft wall is not sticking into area where bow folds into notches on ISO frame or it will be difficult to fully close platform and secure it with side locks.

- g. Stroke pump (Figure 19, Item 4) with handle (Figure 19, Item 5) until PA platform (Figure 19, Item 7) is vertical and handle is hard to push.
- h. Position EXTEND/RETRACT lever (Figure 19, Item 2) to RETRACT.
- i. Stroke pump (Figure 19, Item 4) with handle (Figure 19, Item 5) until catch (Figure 19, Item 8) engages PA platform (Figure 19, Item 7) and pulls platform in tight.

WARNING

If not operated properly platform may experience sudden and unexpected drops. Prior to raising platform verify all personnel are and remain clear. Failure to follow this precaution can cause severe injury or death to personnel working nearby. Seek immediate medical attention if injury occurs.

NOTE

Slightly stroking pump as side locks are tightened may make it easier to fully engage side locks.

4. Insert crank handle (Figure 19, Item 11) into rear side lock (Figure 19, Item 10) and rotate in LOCK direction until pin (Figure 19, Item 9) is inserted into PA platform (Figure 19, Item 7). Ensure lock is engaged.
5. Repeat step 4 at front side lock (Figure 19, Item 6).

RAISE AND SECURE PA PLATFORM-CONTINUED

6. Remove and stow pump handle (Figure 19, Item 5).
7. Place EXTEND/RETRACT lever (Figure 19, Item 2) and RAISE/LOWER lever (Figure 19, Item 1) back to NULL positions.
8. Remove crank handle (Figure 19, Item 11) and stow in operator tool box (Figure 19, Item 3).

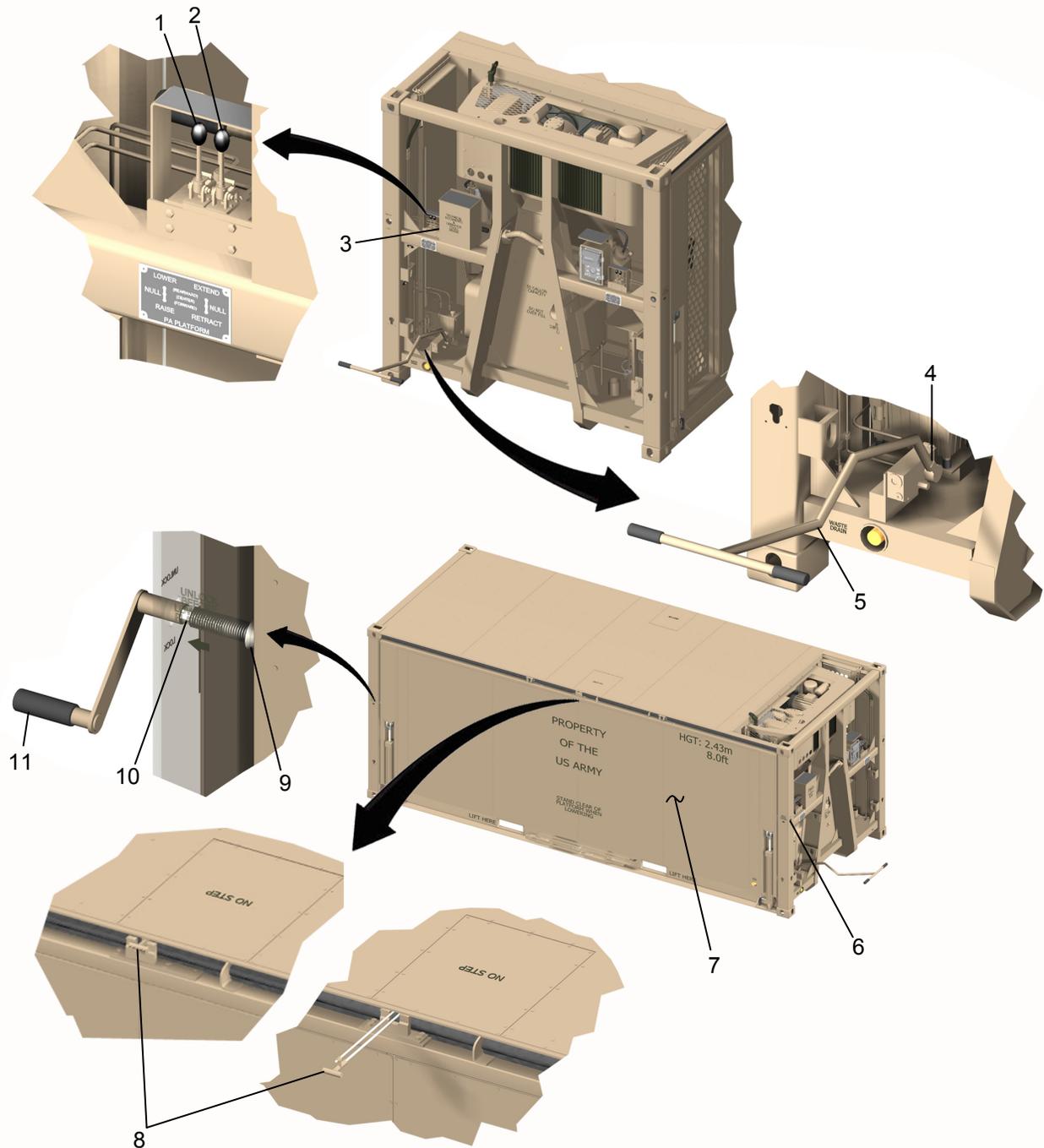


Figure 19. Raising and Locking PA Platform.

RAISE AND SECURE PA PLATFORM-CONTINUED

9. Stow support legs as follows:

- a. Pull QC pin (Figure 20, Item 6) securing upper support leg (Figure 20, Item 1) to lower support leg (Figure 20, Item 4).
- b. Slide lower support leg (Figure 20, Item 4) out of upper support leg (Figure 20, Item 1) then insert and slide lower leg inside of upper leg.
- c. Place support leg (Figure 20, Item 1) on mounting provisions (Figure 20, Item 2) with feet (Figure 20, Item 3) of bottom leg point up and feet of top leg pointing down.
- d. Align holes in upper leg (Figure 20, Item 1) and lower leg (Figure 20, Item 4) with hole in mounting provision (Figure 20, Item 5) then insert QC pin (Figure 20, Item 6).
- e. Repeat steps a through d to stow remaining support leg.

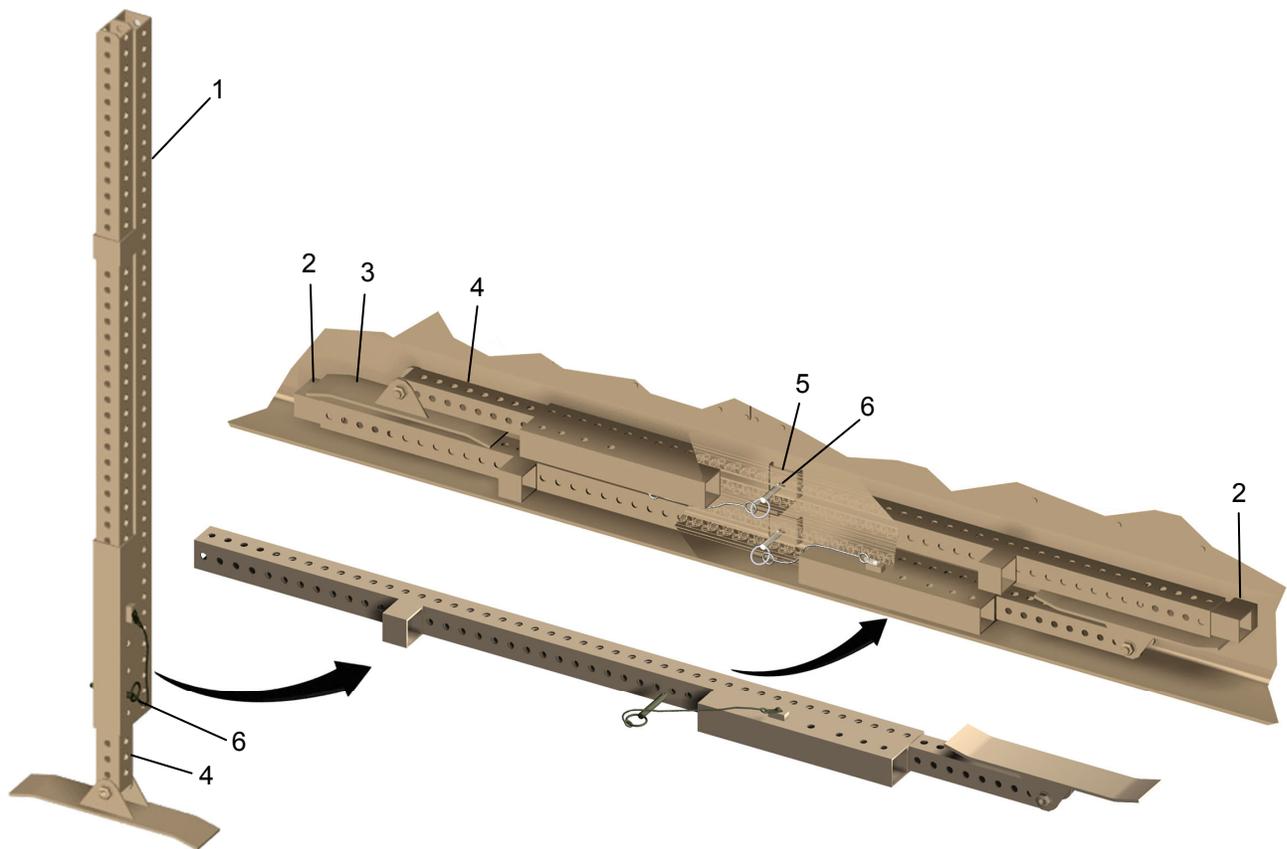


Figure 20. Stowing Platform Support Legs.

END OF TASK

RETRACT AND STOW LADDER**WARNING**

Always retract ladder from the top down. Keep hands and fingers away from sliding points on ladder sections when opening and closing. Never climb on ladder unless locking devices are properly engaged. Failure to observe these precautions may result in severe personal injury. Seek immediate medical attention if injury occurs.

1. Push in on latches (Figure 21, Item 13) under lower rung (Figure 21, Item 15) of top ladder section to unlock.
2. Push down on upper rung (Figure 27, Item 17) to collapse section.
3. Repeat steps 1 and 2 until only the bottom section remains extended.
4. Push in on latches (Figure 21, Item 14) to collapse last ladder section.
5. Stow ladder (Figure 21, Item 16) in front storage area (Figure 21, Item 9) as follows:
 - a. Place ladder (Figure 21, Item 16) inside mounting pads (Figure, Item 8).
 - b. Insert hold down bracket (Figure 21, Item 12) into retaining plate (Figure 21, Item 10) then pivot bracket down over ladder (Figure 21, Item 16).
 - c. Install QC pin (Figure 21, Item 11) to secure hold down bracket (Figure 21, Item 12) to retaining plate (Figure 21, Item 10).
6. Stow jacks (Figure 21, Item 1) in front storage area (Figure 21, Item 9) as follows:
 - a. Lift up on jack (Figure 21, Item 1), insert locking pin (Figure 21, Item 2) into keyway (Figure 21, Item 6) then allow jack to hang from keyway.
 - b. Repeat step a to hang other three jacks in the same manner.
 - c. At outboard jacks (Figure 21, Item 18) drop twist locks (Figure 21, Item 3) into holes in brackets (Figure 21, Item 7).
 - d. Rotate handles (Figure 21, Item 5) to LOCK position with handles pointing downward then tighten collars (Figure 21, Item 4).
 - e. At inboard jacks (Figure 21, Item 19) drop twist locks (Figure 21, Item 3) into holes in brackets (Figure 21, Item 7).
 - f. Rotate handles (Figure 21, Item 5) to LOCK position with handles pointing downward then tighten collars (Figure 21, Item 4).

RETRACT AND STOW LADDER-CONTINUED

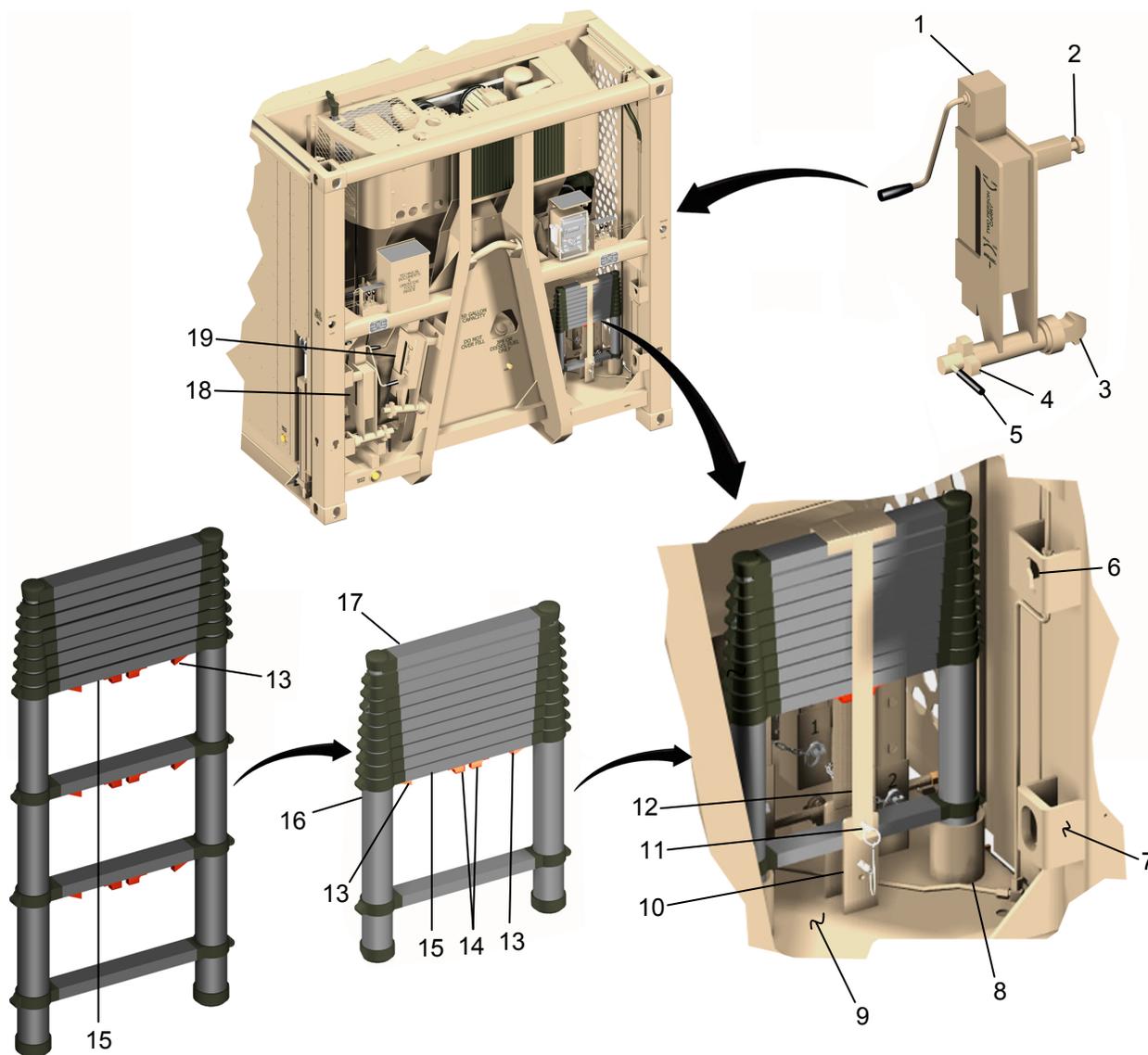


Figure 21. Ladder Retracting and Stowage.

END OF TASK

END OF WORK PACKAGE

**CREW MAINTENANCE
OPERATION UNDER USUAL CONDITIONS
GROUND CONFIGURATION
ASSEMBLY AND PREPARATION FOR USE**

INITIAL SETUP:**Tools and Special Tools**

Screwdriver, Bit Set and Handle (WP 0038, Table 1, Item 10)
Wrench, Adjustable, 6 inch (WP 0038, Table 1, Item 16)

Personnel Required

4

References

FM 5-424
TM 9-6115-643-10
WP 0009
WP 0013

LEVEL MIRCS**WARNING**

MIRCS ramps, leveling jacks, RLD storage bag, work light storage bag, support storage bag, external water pump, and MPPs weigh over 45-lbs each. Two persons are required to carry these items. Ensure you lift with your legs and not with your back to avoid injury. Seek immediate medical attention if injury occurs.

1. Offload MIRCS from HEMTT or other transport vehicle in desired location.
2. Remove leveling jacks (Figure 1, Item 3) from front storage area (Figure 1, Item 1) as follows:
 - a. Unthread collar (Figure 1, Item 6) a few turns then rotate handle (Figure 1, Item 7) to UNLOCK position on each jack.
 - b. Swing each jack (Figure 1, Item 3) outward until twist lock (Figure 1, Item 5) is clear of bracket (Figure 1, Item 10).
 - c. Lift jack (Figure 1, Item 3) upward until locking pin (Figure 1, Item 4) is clear of keyway (Figure 1, Item 8) then remove jack.
 - d. Repeat steps a through c for other three leveling jacks.
3. Remove pump handle (Figure 1, Item 19) from bracket (Figure 1, Item 20) then set aside.
4. Remove ladder (Figure 1, Item 2) from front storage area (Figure 1, Item 1) as follows:
 - a. Pull QC pin (Figure 1, Item 11) securing hold down bracket (Figure 1, Item 9) to front retaining plate (Figure 1, Item 12).
 - b. Pivot hold down bracket (Figure 1, Item 9) forward then remove bracket from rear retaining plate (Figure 1, Item 13).
 - c. Remove ladder (Figure 1, Item 2) from storage area (Figure 1, Item 1).
 - d. Reinstall hold down bracket (Figure 1, Item 9) in retaining plates (Figure 1, Items 12 and 13) and secure with QC pin (Figure 1, Item 11).

LEVEL MIRCS-CONTINUED

5. Remove leveling jack feet (Figure 1, Item 14) from front storage area (Figure 1, Item 1) as follows:
 - a. Flip ring (Figure 1, Item 17) over and pull locking pin (Figure 1, Item 18) out of adjusting pin (Figure 1, Item 16).
 - b. Pull adjusting pin (Figure 1, Item 16) out of storage provision (Figure 1, Item 15) and foot (Figure 1, Item 14) then lift foot off of storage provision.
 - c. Repeat steps a and b for other three leveling jack feet.

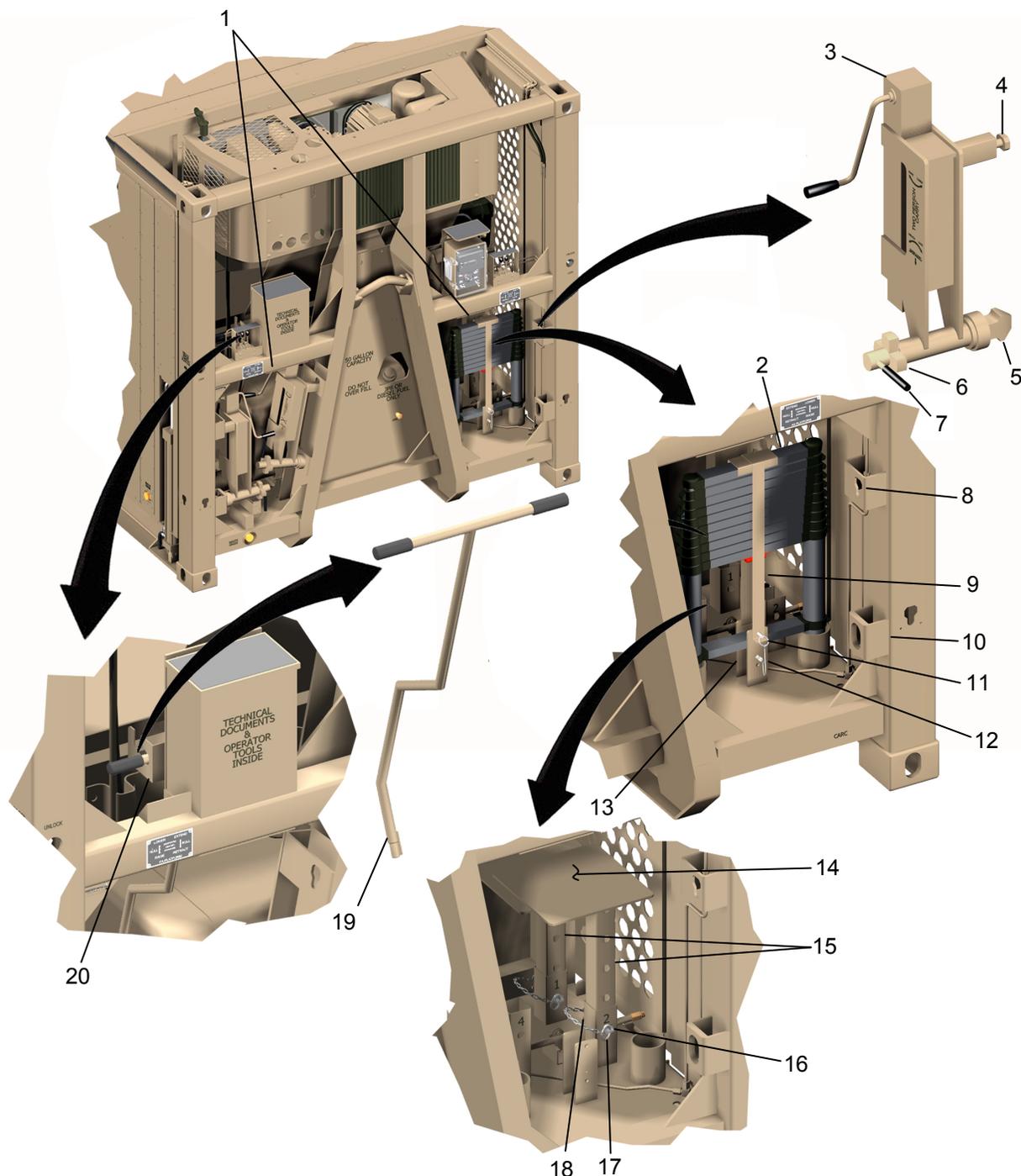


Figure 1. Leveling Jacks Removal.

LEVEL MIRCS-CONTINUED

NOTE

If MIRCS is on uneven terrain and must be lifted more than 15 inches at any corner, follow the instructions provided in the OPERATION IN UNUSUAL CONDITIONS work package (WP 0013) for Operation on Uneven Terrain.

6. Attach feet (Figure 2, Item 5) to leveling jacks (Figure 2, Item 1) as follows:
 - a. Position foot (Figure 2, Item 5) so that "UNDER HANDCRANK" stencil is going to be below handcrank (Figure 2, Item 7).
 - b. Insert foot (Figure 2, Item 5) completely into leg (Figure 2, Item 6).
 - c. Insert adjusting pin (Figure 2, Item 2) through leg (Figure 2, Item 6) and foot (Figure 2, Item 5).
 - d. Insert locking pin (Figure 2, Item 3) through adjusting pin (Figure 2, Item 2) then flip ring (Figure 2, Item 4) over.
 - e. Repeat steps a through c for other three leveling jacks.

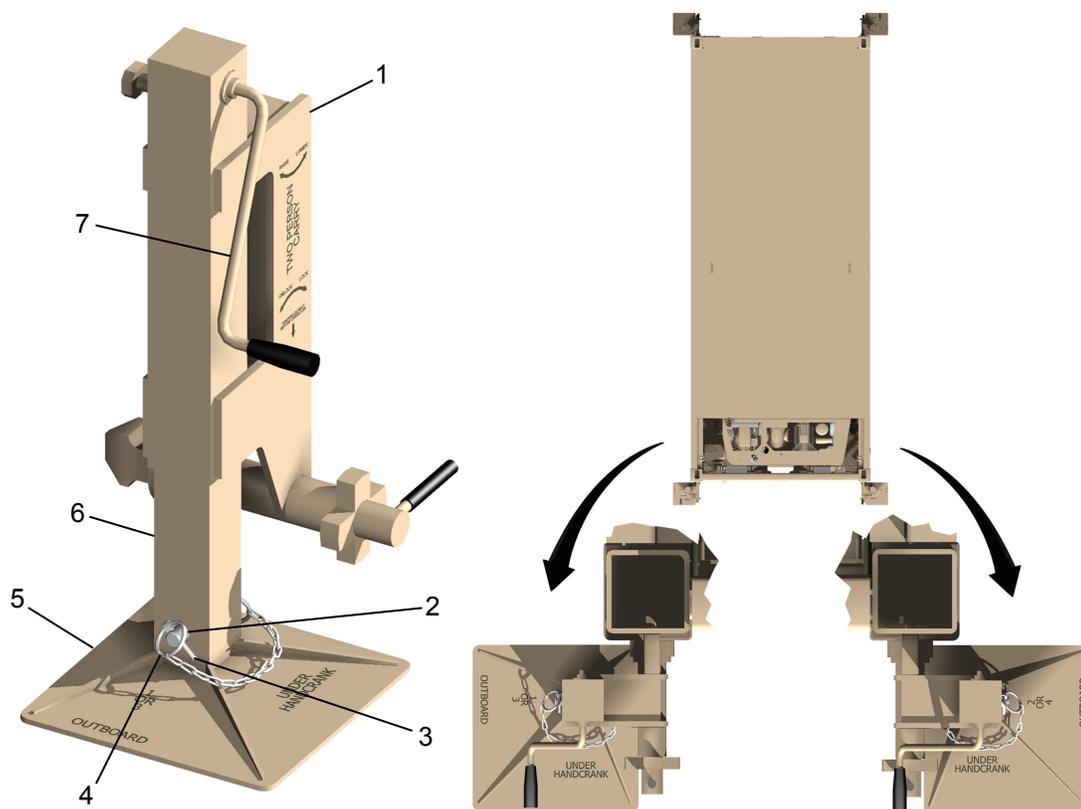


Figure 2. Leveling Jacks Assembly.

LEVEL MIRCS-CONTINUED**WARNING**

Ensure twist locks are properly engaged with corner fittings and locking handle is in the straight up or straight down position. Failure to follow this warning can result in collapse of the jack and a potential for serious personal injury or death if you become trapped under the container. Seek immediate medical attention if injury occurs.

7. Attach leveling jack (Figure 3, Item 1) to each corner of MIRCS as follows:
 - a. Rotate handle (Figure 3, Item 9) towards the LOWER direction until leg (Figure 3, Item 8) is at its lowest position.
 - b. Lift-up and insert locking pin (Figure 3, Item 10) into keyway (Figure 3, Item 11) then pivot jack downward to insert twist lock (Figure 3, Item 4) into corner fitting (Figure 3, Item 3).
 - c. Rotate handle 90° (Figure 3, Item 6) to the vertical LOCK position, then tighten collar (Figure 3, Item 5).
 - d. Repeat steps a through c for other three leveling jacks.

WARNING

MIRCS must be raised evenly on all four corners at the same time. Placing excessive load on one corner can cause excessive stress to leveling jack resulting in collapse of the jack and a potential for serious personal injury or death if you become trapped under the container. Seek immediate medical attention if injury occurs.

8. With an operator stationed at all four corners, level MIRCS as follows:
 - a. Rotate handles (Figure 3, Item 9) until feet (Figure 3, Item 7) on all four jacks are contacting the ground.
 - b. Raise leveling jacks (Figure 3, Item 1) as necessary until bubble levels (Figure 3, Item 12) are within indicator marks (Figure 3, Item 13).
 - c. Together raise the MIRCS until waste drain port (Figure 3, Item 2) is about 12 in off the ground.
 - d. Make final height adjustment then verify the bubble levels (Figure 3, Item 12) are within indicator marks (Figure 3, Item 13).

LEVEL MIRCS-CONTINUED

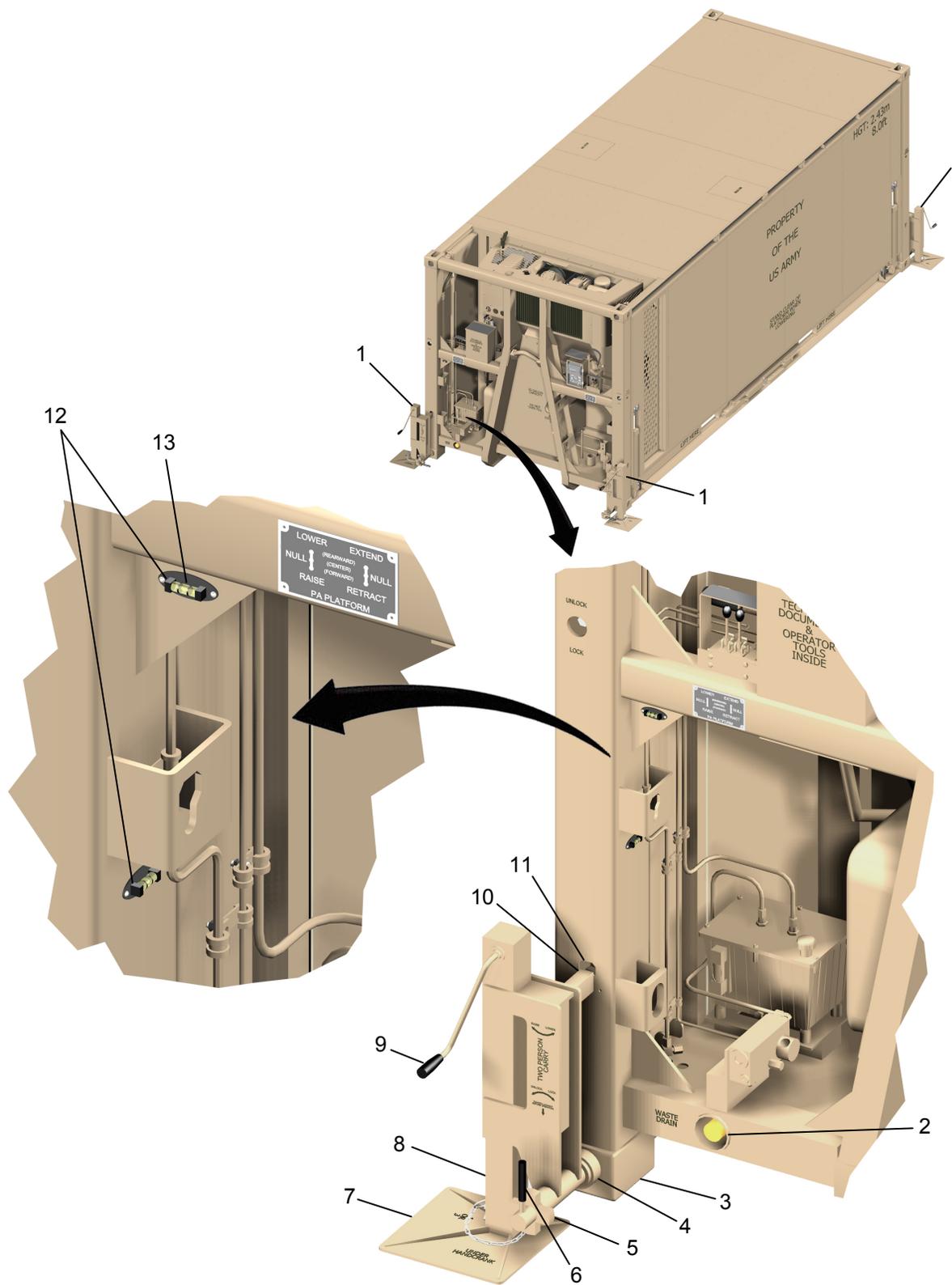


Figure 3. Leveling Jacks Installation.

END OF TASK

SET-UP LADDER**WARNING**

Always extend ladder from the bottom up. Keep hands and fingers away from sliding points on ladder sections when opening and closing. Never climb on ladder unless locking devices are properly engaged. Failure to observe these precautions may result in severe personal injury. Seek immediate medical attention if injury occurs.

1. Extend ladder (Figure 4, Item 1) as follows:
 - a. Place foot on bottom rung (Figure 4, Item 3) and lift to separate from next higher rung until locks (Figure 4, Item 2) are engaged.
 - b. Continue extending ladder (Figure 4, Item 1) following process in step a, until desired height is achieved.

WARNING

Always make sure ladder is resting on and supported by firm ground. Always keep ladder rungs dry and free of dirt. Do not over-reach. Move the ladder instead. Keep body centered between side rails. Never allow more than one person on the ladder at a time and ensure a spotter is available. Failure to observe these precautions may result in severe personal injury. Seek immediate medical attention if injury occurs.

2. Place ladder (Figure 4, Item 1) as required.

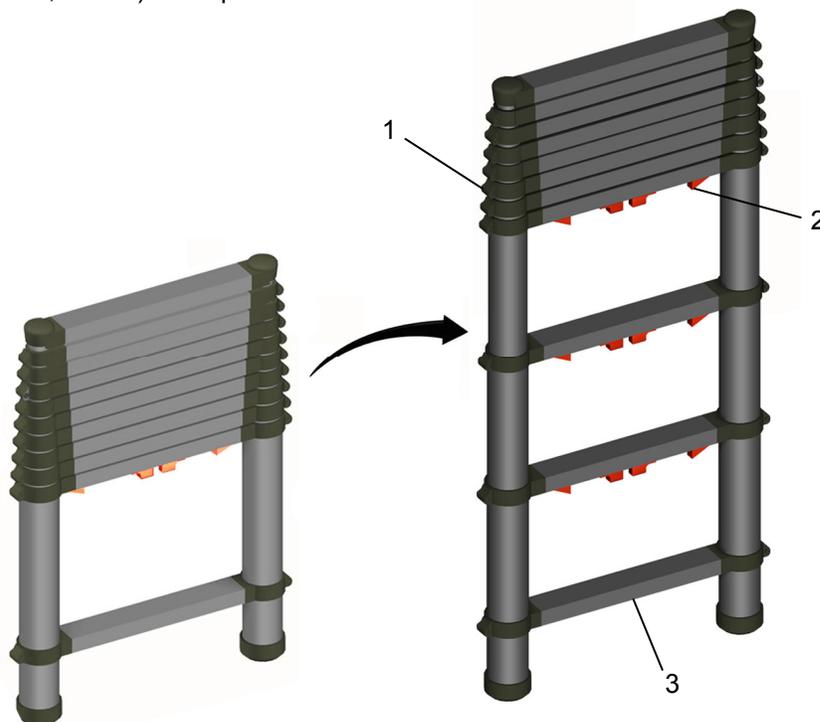


Figure 4. Ladder Set-up.

END OF TASK

REMOVE RAMPS**WARNING**

When removing ramps, be careful not to pinch fingers between ramps and MIRCS structure. Failure to do so could result in serious injury. Seek immediate medical attention if injury occurs.

1. Remove top ramp (Figure 5, Item 4) as follows:
 - a. Pull QC pins (Figure 5, Item 1) out of top ramp (Figure 5, Item 4) and generator cable support (Figure 5, Item 3).
 - b. Lift up on top ramp (Figure 5, Item 4) until notch (Figure 5, Item 5) clears support (Figure 5, Item 3) then remove ramp and set aside for later assembly.
2. Remove bottom ramp (Figure 5, Item 2) as follows:
 - a. Pull QC pins (Figure 5, Item 1) out of bottom ramp (Figure 5, Item 2) and generator cable support (Figure 5, Item 3).
 - b. Lift up on bottom ramp (Figure 5, Item 2) until notch (Figure 5, Item 5) clears support (Figure 5, Item 3) then remove ramp and set aside for later assembly.

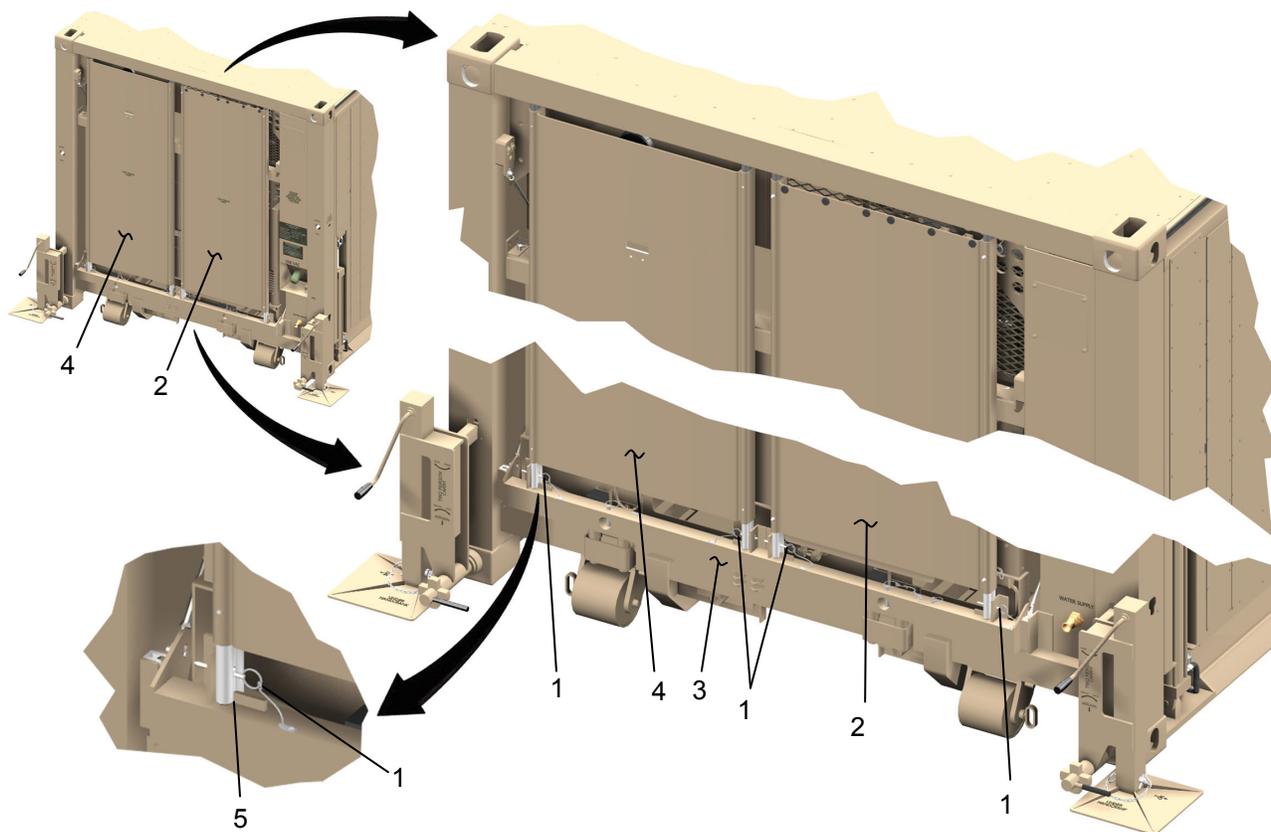


Figure 5. Ramp Removal.

END OF TASK

DEPLOY GENERATOR

1. Remove generator supports (Figure 6, Items 11 and 12) from under frame (Figure 6, Item 6) as follows:
 - a. Pull QC pin (Figure 6, Item 5) out of frame (Figure 6, Item 6) and generator support (Figure 6, Item 4).
 - b. Remove generator support (Figure 6, Item 4) from under frame (Figure 6, Item 6).
 - c. Reinsert QC pin (Figure 6, Item 5) back into frame (Figure 6, Item 6).
 - d. Repeat steps a through c for other generator support.
 - e. Flip generator supports (Figure 6, Items 11 and 12) over so stabilizer bars (Figure 6, Item 9) are facing inboard.
2. Remove generator brace (Figure 6, Item 1) as follows:
 - a. With a person on each end pull QC pins (Figure 6, Item 3).
 - b. Slide generator brace (Figure 6, Item 1) rearward until it clears brackets (Figure 6, Item 2).
 - c. Reinsert QC pins (Figure 6, Item 3) back into generator brace (Figure 6, Item 1) then set brace aside.
3. With a person on each end evenly lift generator cable support (Figure 6, Item 10) up out of frame (Figure 6, Item 6) and allow to hang from cables (Figure 6, Item 13).
4. Install generator supports (Figure 6, Item 11 and 12) onto frame (Figure 6, Item 6) as follows:
 - a. Pull QC pins (Figure 6, Item 7) out of generator cable support (Figure 6, Item 10).
 - b. Lift-up and hold generator cable support (Figure 6, Item 10) out away from unit.
 - c. Install LH generator support (Figure 6, Item 12) onto frame (Figure 6, Item 6) with stabilizer bar (Figure 6, Item 9) facing inboard.
 - d. Install RH generator support (Figure 6, Item 11) onto frame (Figure 6, Item 6) with stabilizer bar (Figure 6, Item 9) facing inboard.
5. Mate generator cable support (Figure 6, Item 10) to generator supports (Figure 6, Item 11 and 12).
6. Insert QC pins (Figure 6, Item 7) to secure supports (Figure 6, Item 11 and 12) to support (Figure 6, Item 10).
7. Secure generator supports (Figure 6, Item 11 and 12) to frame (Figure 6, Item 6) as follows:
 - a. Pull QC pins (Figure 6, Item 8) from stabilizer bars (Figure 6, Item 9).
 - b. Pivot stabilizer bars (Figure 6, Item 9) over and align to frame (Figure 6, Item 6).
 - c. Insert QC pins (Figure 6, Item 8) to secure stabilizer bars (Figure 6, Item 9).

DEPLOY GENERATOR-CONTINUED**WARNING**

Personnel must remain clear of area between generator supports during generator movement. Keep hands away from rollers. When pulling generator rearward keep arms clear of cables. Failure to follow this precaution may result in personnel becoming trapped between generator and support structure causing severe injury. Seek immediate medical attention if injury occurs.

CAUTION

Care must be used when deploying generator not to pinch or damage electrical cable on pigtail. Ensure cable is clear of all obstructions and pinch points as generator is moved rearward.

8. With personnel stationed behind generator cable support (Figure 7, Item 7) move generator (Figure 7, Item 2) from stowed position and secure as follows:
 - a. Using straps (Figure 7, Item 5) attached to tie down rings (Figure 7, Item 1), pull rearward on generator (Figure 7, Item 2) keeping arms clear of cables (Figure 7, Item 3).
 - b. Continue to pull generator (Figure 7, Item 2) rearward until generator contacts stops (Figure 7, Item 8).
 - c. Remove straps (Figure 7, Item 5) from tie down rings (Figure 7, Item 1) then use to secure generator (Figure 7, Item 2) to generator cable support (Figure 7, Item 7).
 - d. Pull QC pin (Figure 7, Item 6) out of generator cable support (Figure 7, Item 7) and insert through RH generator support (Figure 7, Item 4) and generator (Figure 7, Item 2).

DEPLOY GENERATOR-CONTINUED

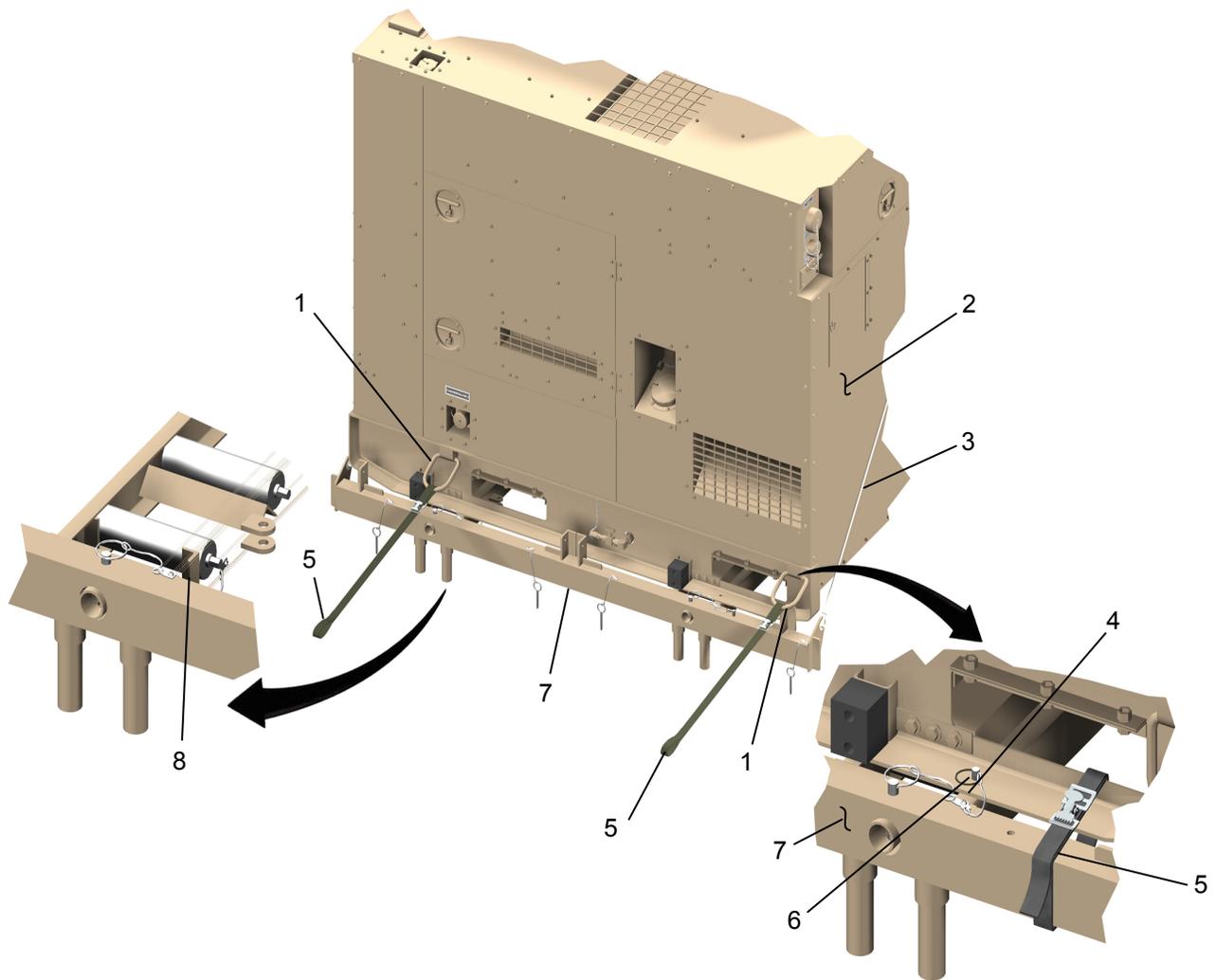


Figure 7. Generator Deployment.

END OF TASK

DEPLOY PA AND AA PLATFORMS**CAUTION**

Platform support legs must be removed from ISO frame prior to lowering PA platform. Attempting to lower platform without first removing legs will damage platform and legs.

1. Remove two platform support legs (Figure 8, Items 8 and 10) as follows:
 - a. Pull QC pin (Figure 8, Item 9) out of support leg (Figure 8, Item 8) and mounting provisions (Figure 8, Item 7).
 - b. Slide support leg (Figure 8, Item 8) out of mounting provisions (Figure 8, Item 7).
 - c. Insert QC pin (Figure 8, Item 9) back into support leg (Figure 8, Item 8) then set support leg aside for later installation.
 - d. Repeat steps a through c for second support leg (Figure 8, Item 10).

NOTE

Slightly retracting platform will remove tension from side locks and allow them to be unthreaded without binding.

2. Unlock PA platform (Figure 8, Item 11) as follows:
 - a. Place EXTEND/RETRACT lever (Figure 8, Item 2) in RETRACT position.
 - b. Place RAISE/LOWER lever (Figure 8, Item 1) in RAISE position.
 - c. Install handle (Figure 8, Item 4) into pump (Figure 8, Item 5).
 - d. Stroke pump (Figure 8, Item 5) with handle (Figure 8, Item 4) slightly to ensure PA platform (Figure 8, Item 11) is completely raised.
 - e. Place EXTEND/RETRACT lever (Figure 8, Item 2) and RAISE/LOWER lever (Figure 8, Item 1) to NULL.
 - f. Verify personnel are clear of PA platform (Figure 8, Item 11) and there are no obstructions that would prevent complete lowering of platform.
 - g. Remove crank handle (Figure 8, Item 13) from operator tool box (Figure 8, Item 3).
 - h. Insert crank handle (Figure 8, Item 13) into rear side lock (Figure 8, Item 14) and rotate in UNLOCK direction until pin (Figure 8, Item 15) is completely retracted into beam (Figure 8, Item 12).
 - i. Repeat step h at front side lock (Figure 8, Item 6).

DEPLOY PA AND AA PLATFORMS-CONTINUED

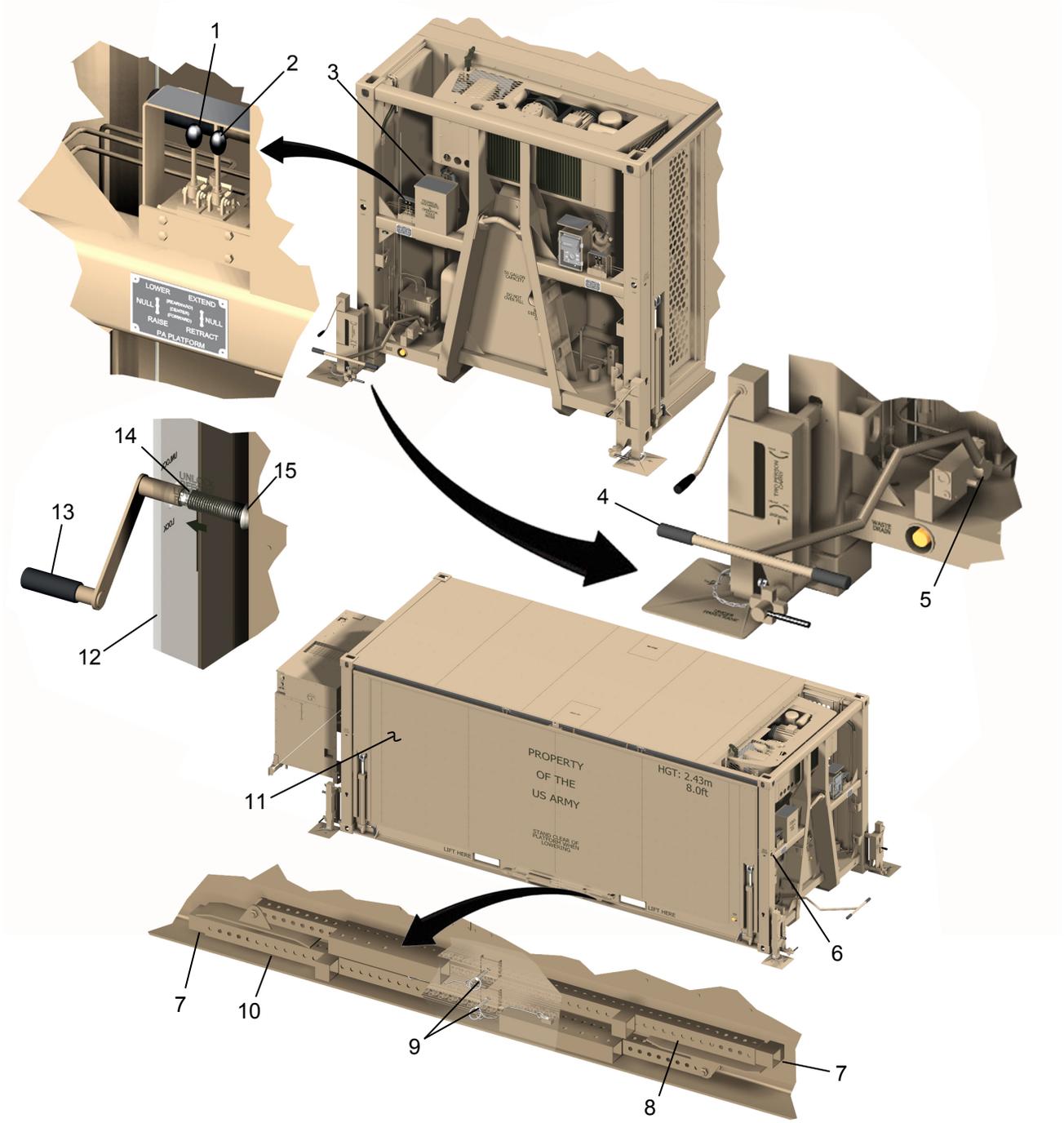


Figure 8. Platform Unlocking.

DEPLOY PA AND AA PLATFORMS-CONTINUED**WARNING**

If not operated properly platform may experience sudden and unexpected drops. Prior to lowering platform verify all personnel are and remain clear. Failure to follow this precaution can cause severe injury or death to personnel working nearby. Seek immediate medical attention if injury occurs.

CAUTION

Side locks must be retracted and catch must be extended prior to lowering platform. Attempting to lower platform without first unlocking side locks and extending catch may cause damage to side locks, catch, platform, and hydraulic system components.

NOTE

During platform lowering operation downward movement of platform can be stopped at any time by placing RAISE/LOWER lever in NULL position.

3. Lower PA platform (Figure 9, Item 7) as follows:
 - a. Position EXTEND/RETRACT lever (Figure 9, Item 3) to EXTEND.
 - b. Operate pump (Figure 9, Item 5) with handle (Figure 9, Item 4) until catch (Figure 9, Item 1) is fully extended.
 - c. Position EXTEND/RETRACT lever (Figure 9, Item 3) to NULL
 - d. Position RAISE/LOWER lever (Figure 9, Item 2) to LOWER.
 - e. Platform will begin lowering under its own weight. If necessary pull slightly on sides of platform until gravity takes affect.
 - f. Allow PA platform (Figure 9, Item 7) to lower until cables (Figure 9, Item 6) are tight.
 - g. Place RAISE/LOWER lever (Figure 9, Item 2) back to NULL position.

DEPLOY PA AND AA PLATFORMS-CONTINUED

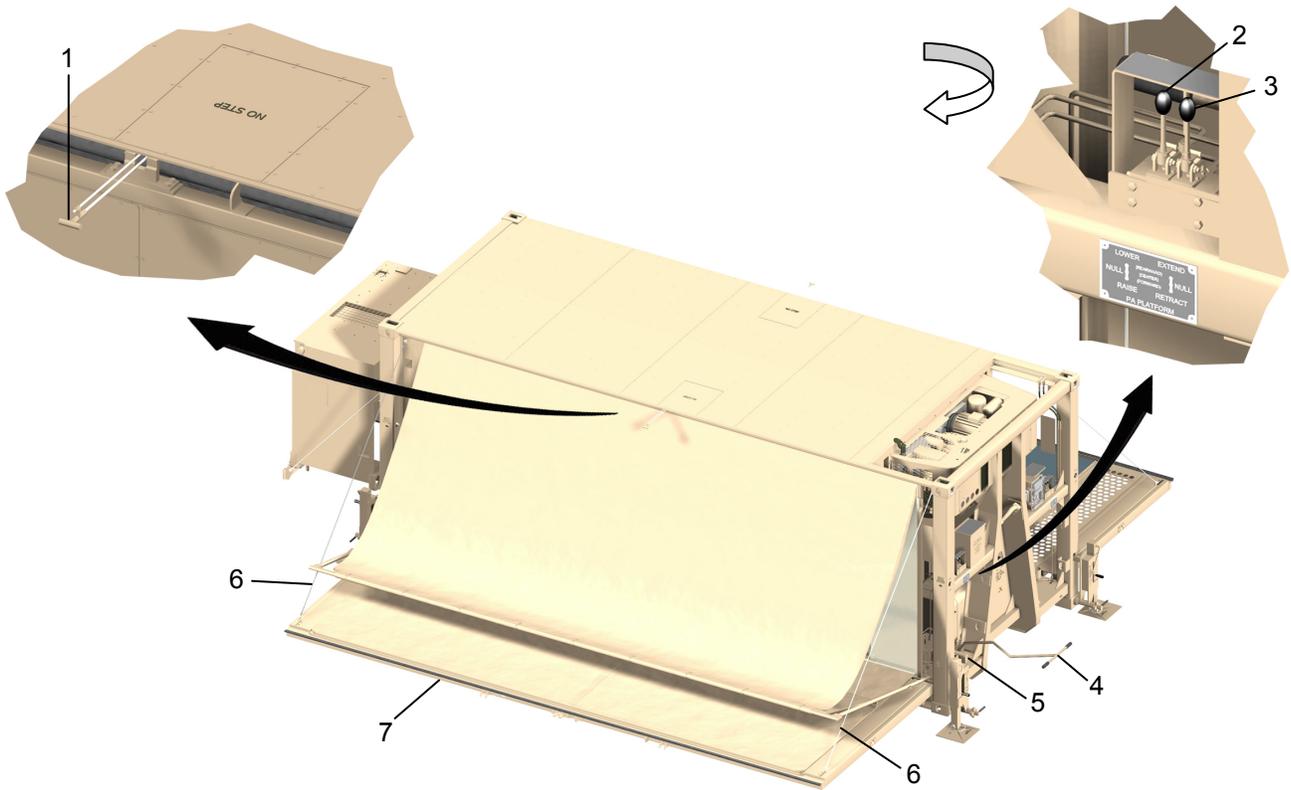


Figure 9. PA Platform Lowering.

DEPLOY PA AND AA PLATFORMS-CONTINUED**WARNING**

Never walk on platforms until they are properly supported. Failure to follow this precaution may cause serious injury to personnel and damage to platforms. Seek immediate medical attention if injury occurs.

4. Install two support legs (Figure 10, Item 9) to support PA platform (Figure 10, Item 4) as follows:
 - a. Pull QC pin (Figure 10, Item 6) out of upper leg (Figure 10, Item 5) then slide lower leg (Figure 10, Item 8) out from inside of upper leg.
 - b. Insert lower leg (Figure 10, Item 8) back into outer tubes of upper leg (Figure 10, Item 5) and temporarily secure by inserting QC pin (Figure 10, Item 6) in one of four alignment holes (Figure 10, Item 7) in upper leg
 - c. Pull QC pin (Figure 10, Item 11) out of fork support (Figure 10, Item 12) on edge of PA platform (Figure 10, Item 4).
 - d. Mate upper support leg (Figure 10, Item 5) with fork support (Figure 10, Item 12) then insert QC pin (Figure 10, Item 11).
 - e. Pull QC pin (Figure 10, Item 6) out of upper leg (Figure 10, Item 5) then slide lower leg (Figure 10, Item 8) down until foot (Figure 10, Item 10) is resting flat on the ground.
 - f. Insert QC pin (Figure 10, Item 6) in one of four alignment holes to secure upper leg (Figure 10, Item 5) to lower leg (Figure 10, Item 8).
 - g. Repeat steps a through f for second support leg (Figure 10, Item 9).
5. Repeat steps 1 through 4 for the AA platform (Figure 10, Item 1).
6. Remove and stow pump handle (Figure 10, Item 2) and crank handle (Figure 10, Item 3).

DEPLOY PA AND AA PLATFORMS-CONTINUED

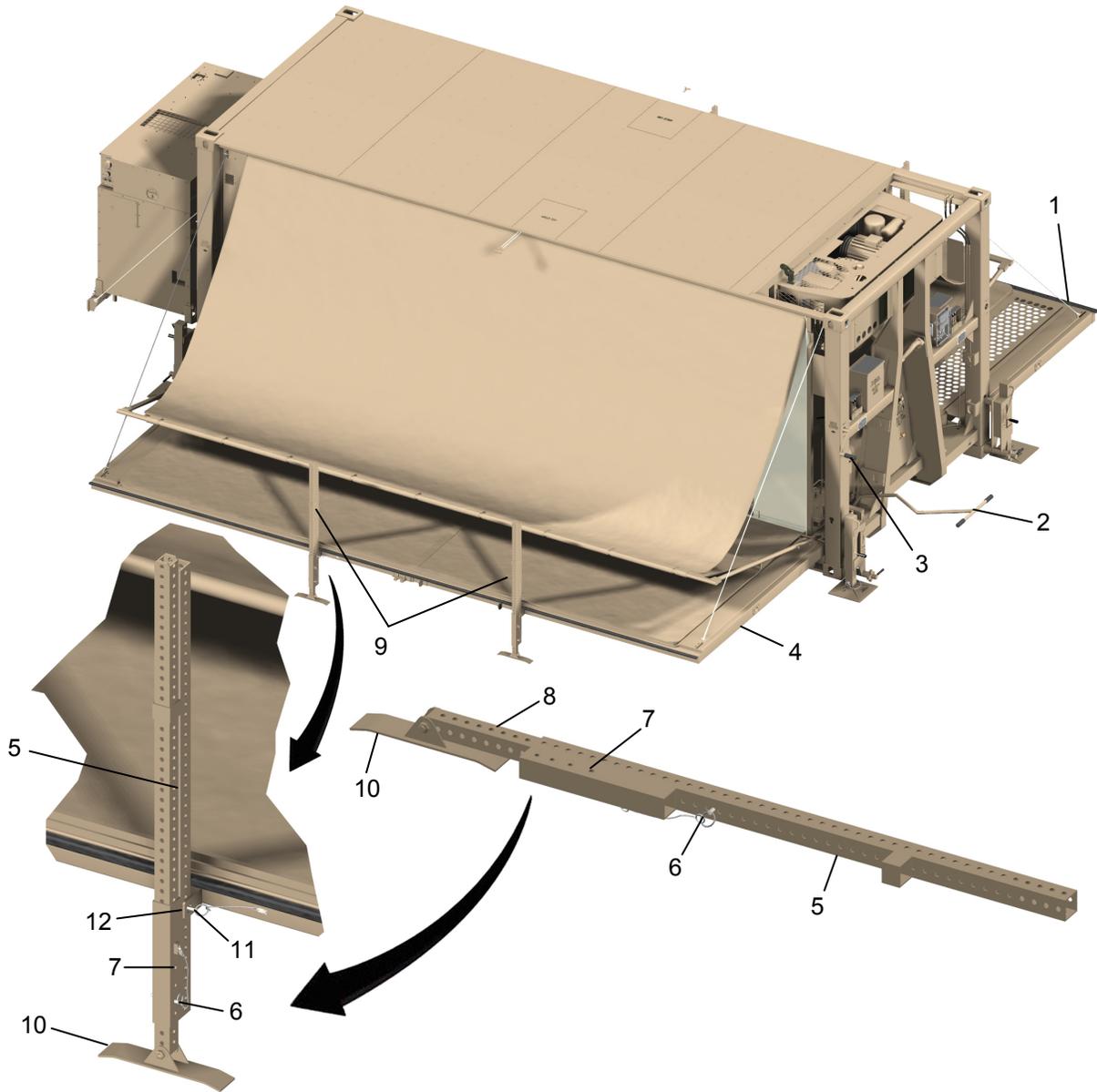


Figure 10. Support Leg Installation.

END OF TASK

DEPLOY AA AND PA SOFT WALLS**NOTE**

In order to allow end walls to be easily zipped do not completely tension soft wall when it is expanded.

1. With an operator positioned on each end of AA platform (Figure 11, Item 3) apply tension to soft wall (Figure 11, Item 2) as follows:
 - a. At each side of soft wall (Figure 11, Item 2) hold outer supports (Figure 11, Item 4) and pull QC pins (Figure 11, Item 6).
 - b. Push up and out on outer supports (Figure 11, Item 4) to expand, but not completely tension soft wall (Figure 11, Item 2).
 - c. Reinsert QC pins (Figure 11, Item 6) in any one of four alignment holes (Figure 11, Item 5).
2. Unzip vestibule door (Figure 11, Item 1) and flip over top of soft wall (Figure 11, Item 2).

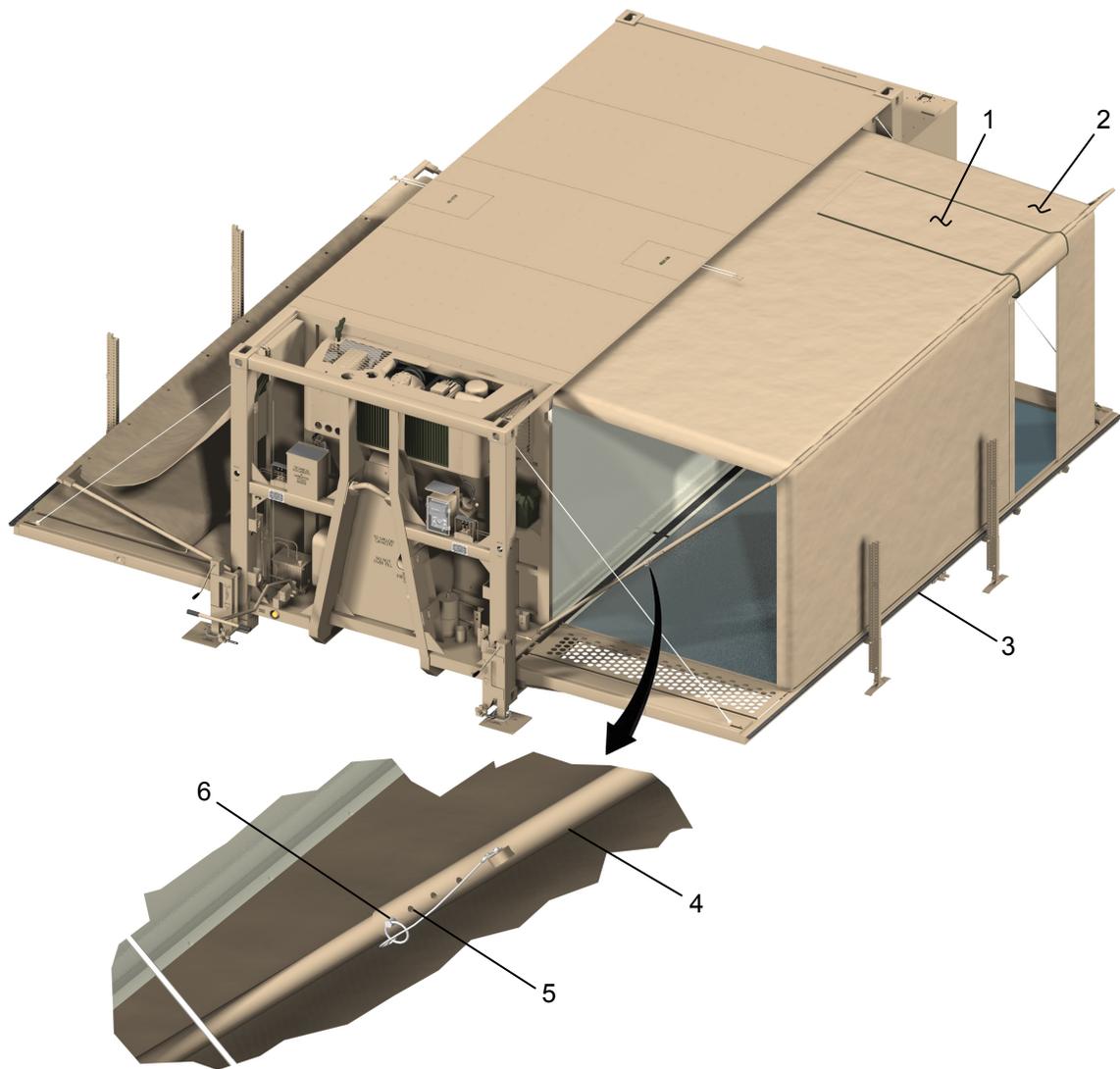


Figure 11. Soft Wall Deployment.

DEPLOY AA AND PA SOFT WALLS-CONTINUED

3. Attach end wall (Figure 12, Item 8) to AA soft wall (Figure 12, Item 3) as follows:
 - a. Lift up on end wall (Figure 12, Item 8) and attach (zip) to soft wall (Figure 12, Item 3) outer edge.
 - b. Pull down on inside (Figure 12, Item 7) and outside flaps (Figure 12, Item 4) along outer edges of soft wall (Figure 12, Item 3).
 - c. Attach inside flap (Figure 12, Item 7) to interior wall (Figure 12, Item 6).
 - d. Repeat steps a through c for opposite end wall (Figure 12, Item 8).
4. Put final tension on both ends of soft wall (Figure 12, Item 3) as follows:
 - a. Working together at either end, remove QC pin (Figure 12, Item 9), push up on outer supports (Figure 12, Item 5) to apply tension to soft wall (Figure 12, Item 3), and reinsert pin.
 - b. Repeat step a at other end of soft wall (Figure 12, Item 3).
5. Repeat step 1 to deploy PA soft wall (Figure 12, Item 2).

NOTE

In order to prevent rain or snow from collecting on roof of soft walls it is important to apply as much tension as possible across the entire length of each soft wall.

6. Unzip PA door (Figure 12, Item 1) and flip over top of soft wall (Figure 12, Item 2).
7. Repeat steps 3 and 4 to attach end walls (Figure 12, Item 8) and perform final tensioning of PA soft wall (Figure 12, Item 2).

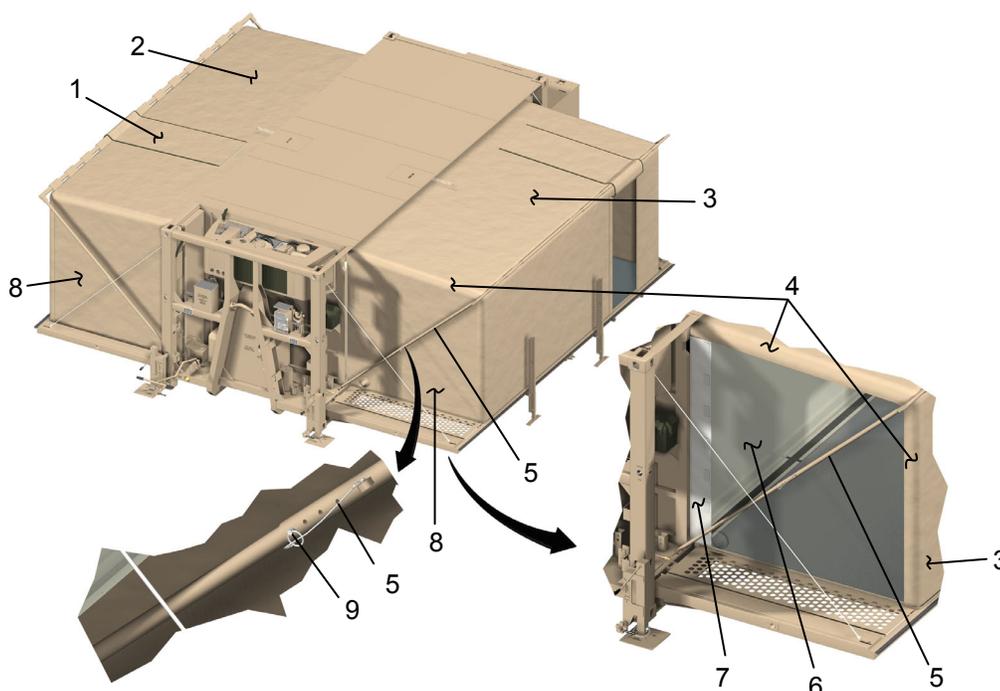


Figure 12. End Wall and Interior Flap Deployment.

END OF TASK

REMOVE STOWED ACCESSORIES

1. Remove cargo net (Figure 13, Item 7) from both sides of supply area (Figure 13, Item 4) as follows:
 - a. Push in on buckles (Figure 13, Item 6) and pull straps (Figure 13, Item 5) out of buckles (Figure 13, Item 6) and gratings (Figure 13, Item 8).
 - b. Insert straps (Figure 13, Item 5) back into buckles (Figure 13, Item 6) to keep them from tangling.
 - c. Lift cargo net (Figure 13, Item 7) off of accessories and fold-up.
2. Remove the following accessories from supply area or RSU and temporarily locate in AA area or outside of unit.
 - a. (Qty 1) RLD storage bag (Figure 13, Item 1) with:
 - (Qty 2) RLD rail
 - (Qty 1) RLD winch
 - (Qty 2) Slings
 - (Qty 2) Ramp connecting links
 - b. (Qty 1) Light storage bag (Figure 13, Item 3) with:
 - (Qty 7) Work lights
 - (Qty 1) Supply area light
 - (Qty 4) Emergency/blackout lights
 - (Qty 2) Electrical boxes
 - (Qty 2) 4-ft extension cords
 - (Qty 1) Water pump electrical cable
 - c. (Qty 1) Support storage bag (Figure 13, Item 2) with:
 - (Qty 9) Top support rod
 - (Qty 9) Front support rod
 - (Qty 1) AA partition rod
 - (Qty 1) AA partition
 - (Qty 1) Supply area door
 - (Qty 2) Weapons racks
 - (Qty 4) Exterior flaps
 - d. (Qty 2) Folding chairs (Figure 13, Item 9).
 - e. (Qty 1) Folding table (Figure 13, Item 10).
 - f. (Qty 4) Waste containers (Figure 13, Item 11).
 - g. (Qty 1) ECU inlet filter (Figure 13, Item 15).
 - h. (Qty 1) 2-1/2-gallon waste container (Figure 13, Item 17).
 - i. (Qty 1) External water pump (Figure 13, Item 19).
 - j. (Qty 1) Outside air duct (Figure 13, Item 20).
 - k. (Qty 2) Waste/Drain hoses (Figure 13, Item 21).
 - l. (Qty 1) Water pump supply hose (Figure 13, Item 22).
 - m. (Qty 1) Water pump discharge hose (Figure 13, Item 23).
 - n. (Qty 4) Temporary remains shelters (Figure 13, Item 24).
 - o. (Qty 1) MPPs (Figure 13, Item 26) (Qty 2) with extension (Figure 13, Item 25).

REMOVE STOWED ACCESSORIES-CONTINUED

3. Remove cargo net (Figure 13, Item 14) from shelving unit (Figure 13, Item 16) as follows:
 - a. Push in on buckles (Figure 13, Item 13) and pull straps (Figure 13, Item 12) out of buckles and from footman's loops (Figure 13, Item 18).
 - b. Fold-up cargo net (Figure 13, Item 14).

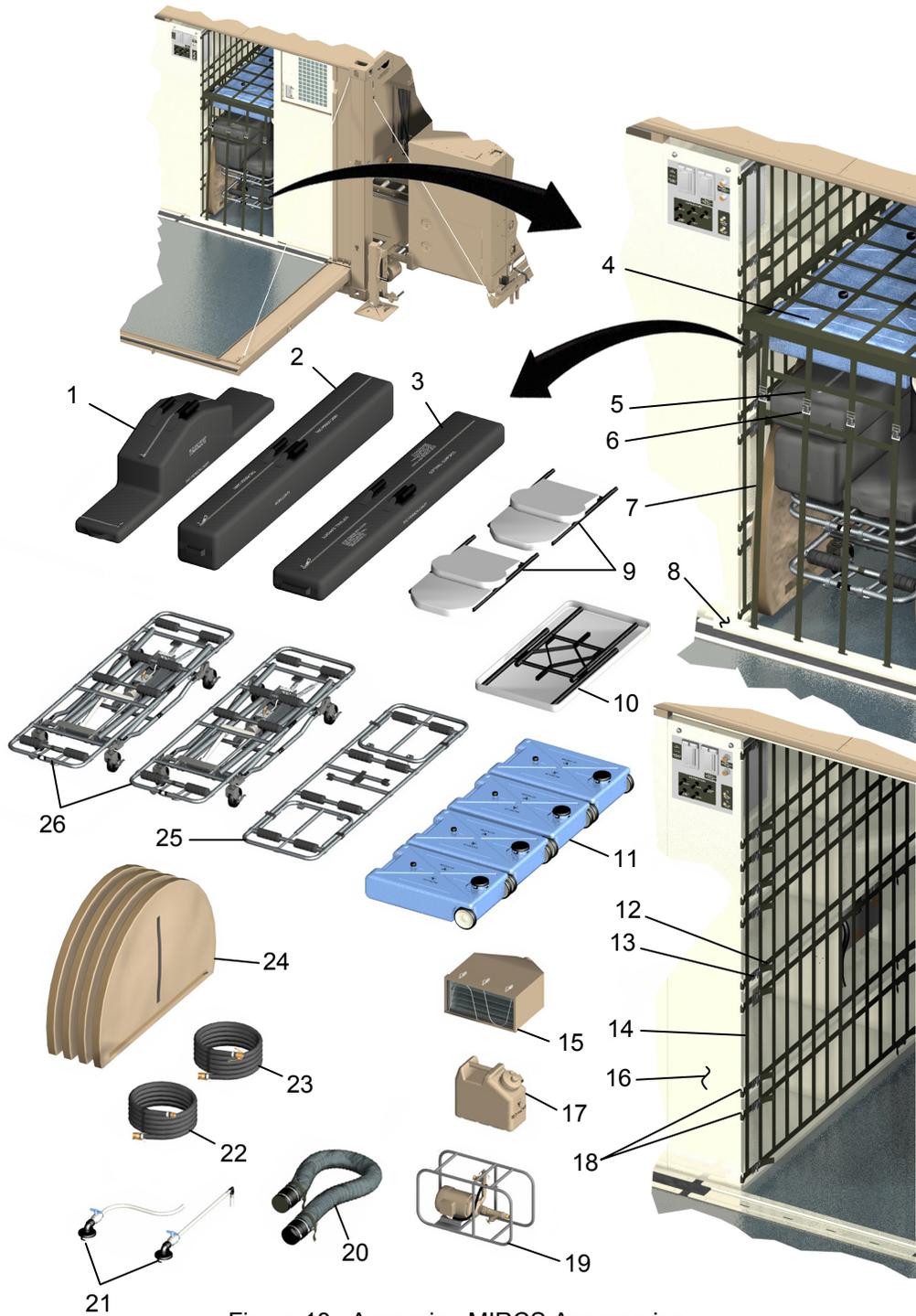


Figure 13. Accessing MIRCS Accessories.

END OF TASK

ASSEMBLE AND ATTACH RAMP SECTIONS**WARNING**

To ensure personnel can safely operate the mobile processing platform on the ramp with minimal effort, it is important that the ramp length be correctly sized and be completely assembled before use. Failure to follow this precaution may cause serious injury to personnel and accidental tipping of mobile processing platform. Seek medical attention if injury occurs.

1. At the ramp connection point on the AA platform (Figure 14, Item 1) determine the approximate distance to the ground. If distance is one foot or less only the top ramp section is required

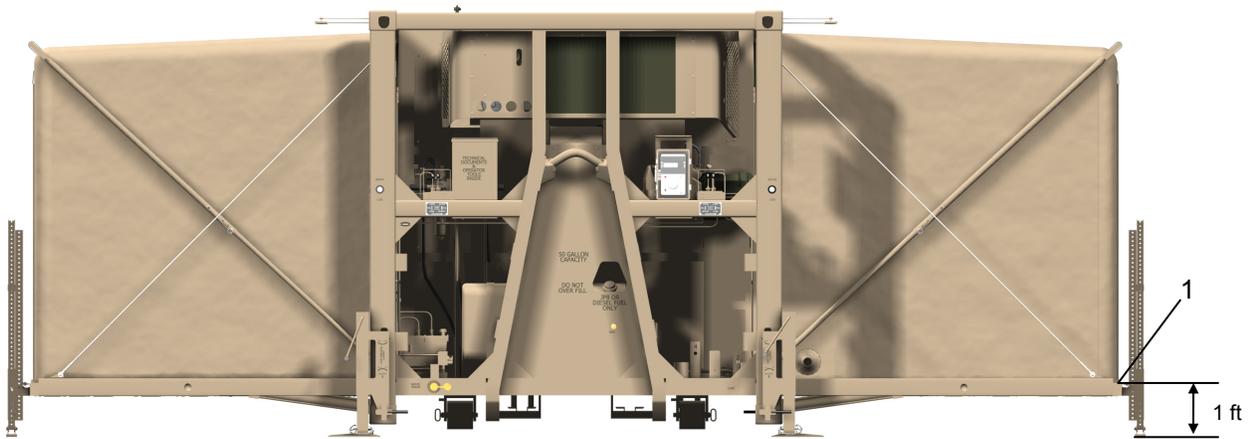


Figure 14. Determining Ramp Length.

ASSEMBLE AND ATTACH RAMP SECTIONS-CONTINUED

2. Pull QC pins (Figure 15, Item 6), remove tenons (Figure 15, Item 5) from top ramp (Figure 15, Item 8) and bottom ramp (Figure 15, Item 7), then re-install QC pins into ramps.
3. Attach connecting links (Figure 15, Items 3 and 4) to top ramp (Figure 15, Item 8) as follows:
 - a. Remove LH connecting link (Figure 15, Item 4) and RH connecting link (Figure 15, Item 3) from RLD storage bag (Figure 15, Item 1).
 - b. Pull QC pin (Figure 15, Item 2) out of LH connecting link (Figure 15, Item 4).
 - c. Insert LH connecting link (Figure 15, Item 4) into top ramp (Figure 15, Item 8).
 - d. Insert QC pin (Figure 15, Item 2) to secure connecting link (Figure 15, Item 4) to top ramp (Figure 15, Item 8).
 - e. Repeat steps b through d for RH connecting link (Figure 15, Item 3).
4. If only top ramp is required, stow tenons (Figure 15, Item 5) in RLD storage bag (Figure 15, Item 1) and proceed to step 6, otherwise proceed to step 5.

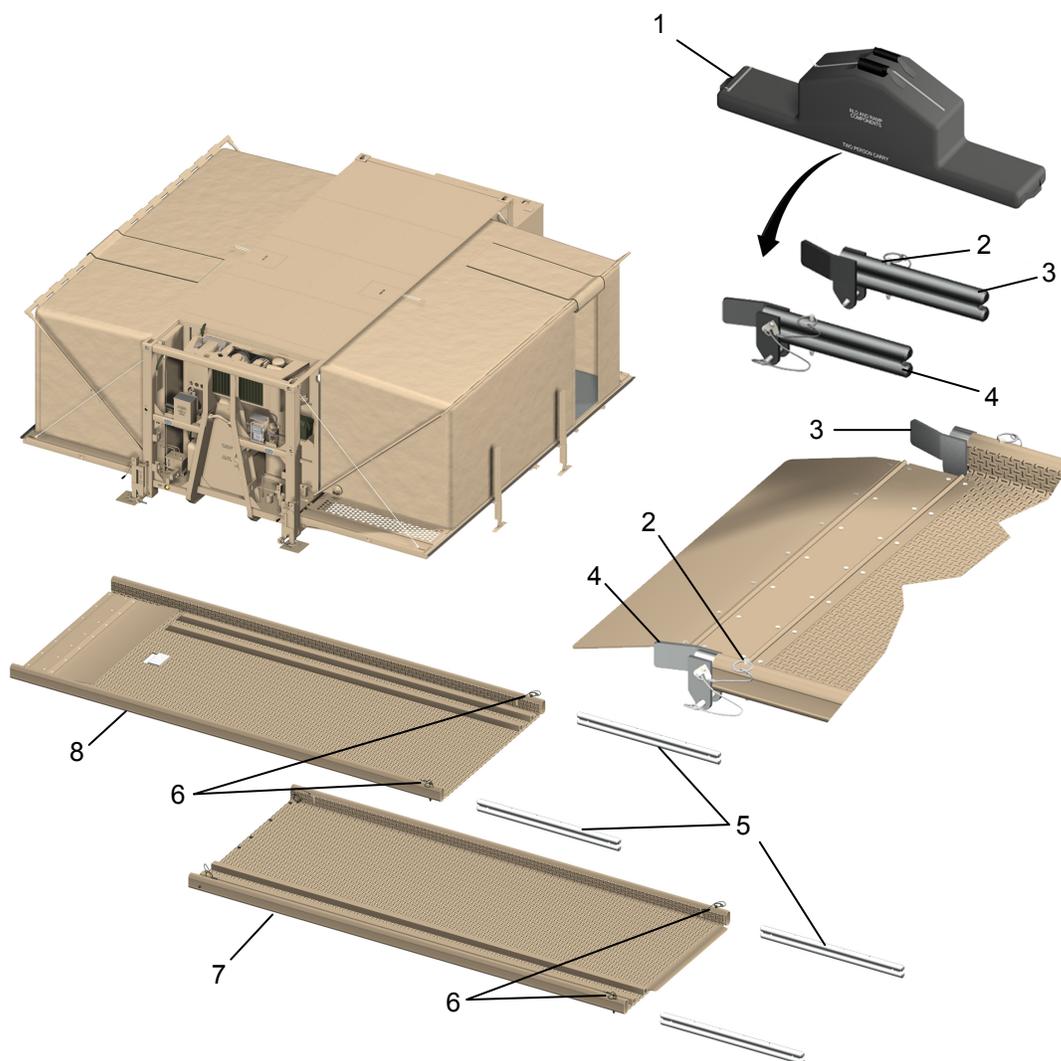


Figure 15. Ramp Assembly.

ASSEMBLE AND ATTACH RAMP SECTIONS-CONTINUED

5. Attach bottom ramp (Figure 16, Item 5) to top ramp (Figure 16, Item 1) as follows:
 - a. Pull QC pins (Figure 16, Item 3) out of top ramp (Figure 16, Item 1).
 - b. Slide tenons (Figure 16, Item 2) to center position then reinsert QC pins (Figure 16, Item 3) to secure tenons to top ramp (Figure 16, Item 1).
 - c. Position ramps (Figure 16, Items 1 and 5) so they are resting on their sides.
 - d. Pull QC pins (Figure 16, Item 4) out of bottom ramp (Figure 16, Item 5).
 - e. With a person on both ends, align tenons (Figure 16, Item 2) with bottom ramp (Figure 16, Item 5) and slide bottom ramp into top ramp (Figure 16, Item 1).
 - f. Reinsert QC pins (Figure 16, Item 4) to secure bottom ramp (Figure 16, Item 5) to top ramp (Figure 16, Item 1).

6. Attach top ramp (Figure 16, Item 1) to AA platform (Figure 16, Item 8) as follows:
 - a. Pull QC pins (Figure 16, Item 7) out of connecting links (Figure 16, Item 6).
 - b. With a person on each side, mate top ramp (Figure 16, Item 1) to AA platform (Figure 16, Item 8) and secure with QC pins (Figure 16, Item 7).
 - c. Flip threshold (Figure 16, Item 9) over AA platform (Figure 16, Item 8).

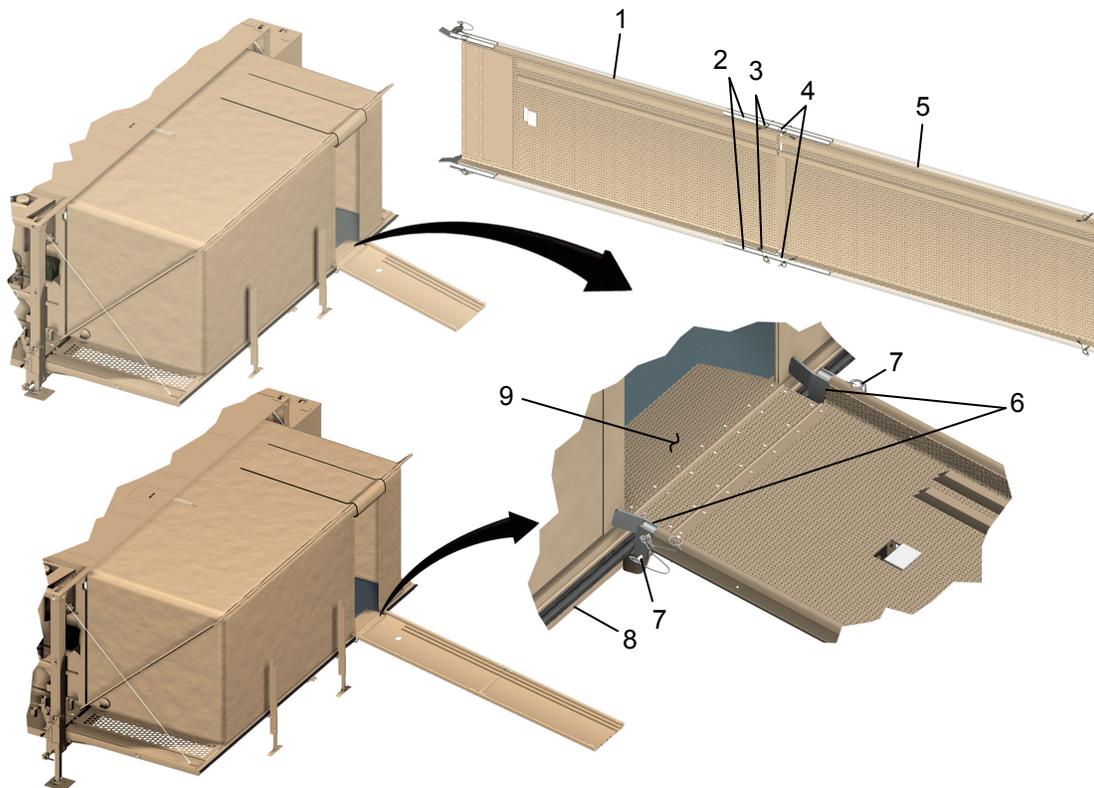


Figure 16. Ramp Attachment.

END OF TASK

ESTABLISH ELECTRICAL POWER CONNECTION**WARNING**

Master power must be shut off before connecting MIRCS power cable. Do not apply power to MIRCS until a separate connection has been made with a suitable earth ground. Be careful not to come into contact with high-voltage connections. Whenever possible, keep one hand away from equipment to reduce the hazard of current flowing through the body's vital organs. Failure to follow this precaution may result in personnel injury or death. Seek immediate medical attention if injury occurs.

1. Ensure the generator set (Figure 17, Item 1) or external power source is turned off.
2. Drive a grounding rod (Figure 17, Item 7) into the ground near ground lug (Figure 17, Item 4) IAW TM 9-6115-643-10.
3. Attach ground wire (Figure 17, Item 6) to establish a ground between ground lug (Figure 17, Item 4) and grounding rod (Figure 17, Item 7) IAW FM5-424.
4. Remove dust cover (Figure 17, Item 5) from electrical connector (Figure 17, Item 3).
5. Remove dust cover (Figure 17, Item 8) from generator pigtail (Figure 17, Item 9) or external power cable (Figure 17, Item 2).
6. Connect pigtail (Figure 17, Item 9) or power cable (Figure 17, Item 2) to electrical connector (Figure 17, Item 3). Do not apply power at this time.
7. Connect dust cover (Figure 17, Item 5) to dust cover (Figure 17, Item 8).

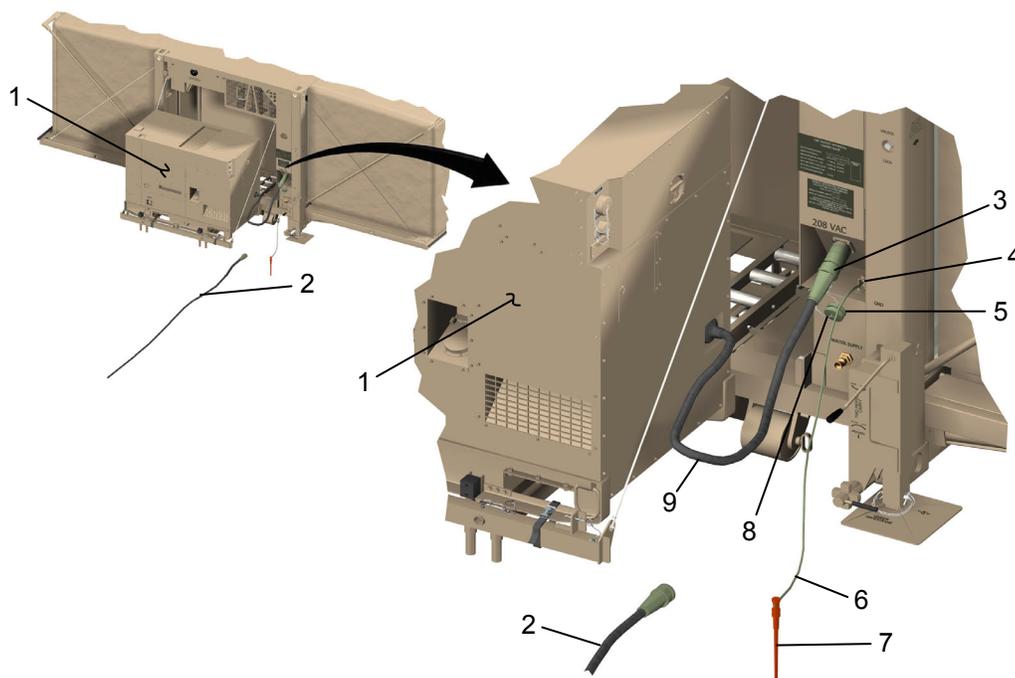


Figure 17. Establishing Ground and Electrical Power.

END OF TASK

ESTABLISH WATER SUPPLY**CAUTION**

If MIRCS will be operating at ambient temperatures below 32°F precautions must be taken to prevent freeze damage to water system. Follow the instructions provided in the OPERATION IN UNUSUAL CONDITIONS work package (WP 0013) for Operation in Cold.

1. Close interior water system valves as follows:
 - a. Slide water system access panel (Figure 18, Item 10) out from shelving unit (Figure 18, Item 1).
 - b. Close drain valve (Figure 18, Item 9) on water plumbing (Figure 18, Item 7) so that valve handle (Figure 18, Item 8) is across valve.
 - c. Close drain valve (Figure 18, Item 6) on water heater (Figure 18, Item 5) by rotating valve CW.
 - d. Reinstall water system access panel (Figure 18, Item 10).
 - e. Close the sink hot and cold water levers (Figure 18, Items 2 and 3).
 - f. Close utility hose diverter valve (Figure 18, Item 4).

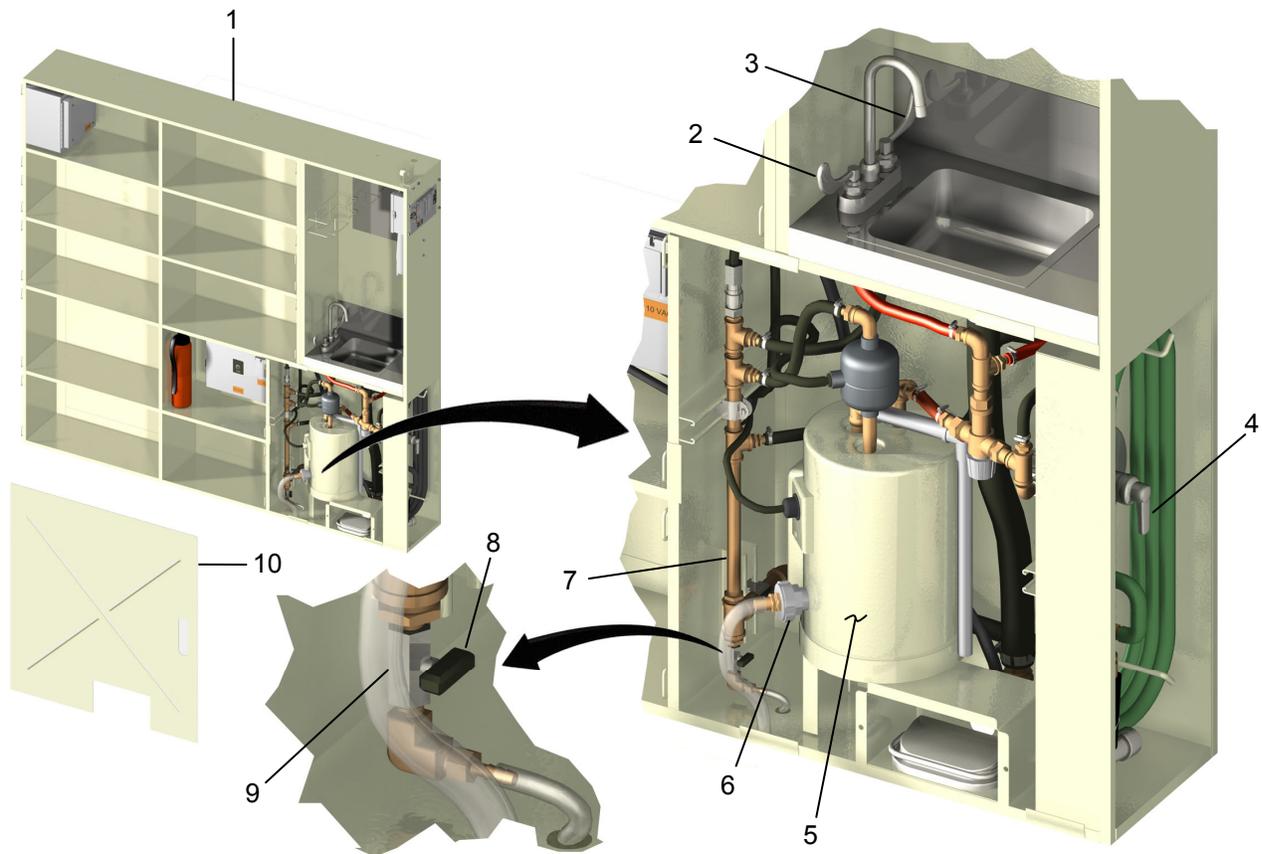


Figure 18. Establishing Water Supply, Interior Valves.

ESTABLISH WATER SUPPLY-CONTINUED

2. Close drain valve (Figure 19, Item 10) on exterior water plumbing (Figure 19, Item 11).
3. Position external water pump (Figure 19, Item 9) within 20 feet of MIRCS and water source (Figure 19, Item 5).
4. Close drain valve (Figure 19, Item 8) on Y-strainer (Figure 19, Item 7).
5. Attach water pump discharge hose (Figure 19, Item 4) to water port (Figure 19, Item 3).
6. Route water pump discharge hose (Figure 19, Item 4) towards and connect to external water pump (Figure 19, Item 9).
7. Attach water pump supply hose (Figure 19, Item 6) to water source. Do not open supply valve at water source at this time.
8. Route water pump supply hose (Figure 19, Item 6) towards and connect to external water pump (Figure 19, Item 9).
9. Connect water pump electrical cable (Figure 19, Item 2) (stored in work light storage bag) to ECU enclosure receptacle (Figure 19, Item 1).
10. Route water pump electrical cable (Figure 19, Item 2) along side of water pump discharge hose (Figure 19, Item 4) then connect to external water pump (Figure 19, Item 9).
11. When ready for water, refer to WP 0009 to prime water system.

ESTABLISH WATER SUPPLY-CONTINUED

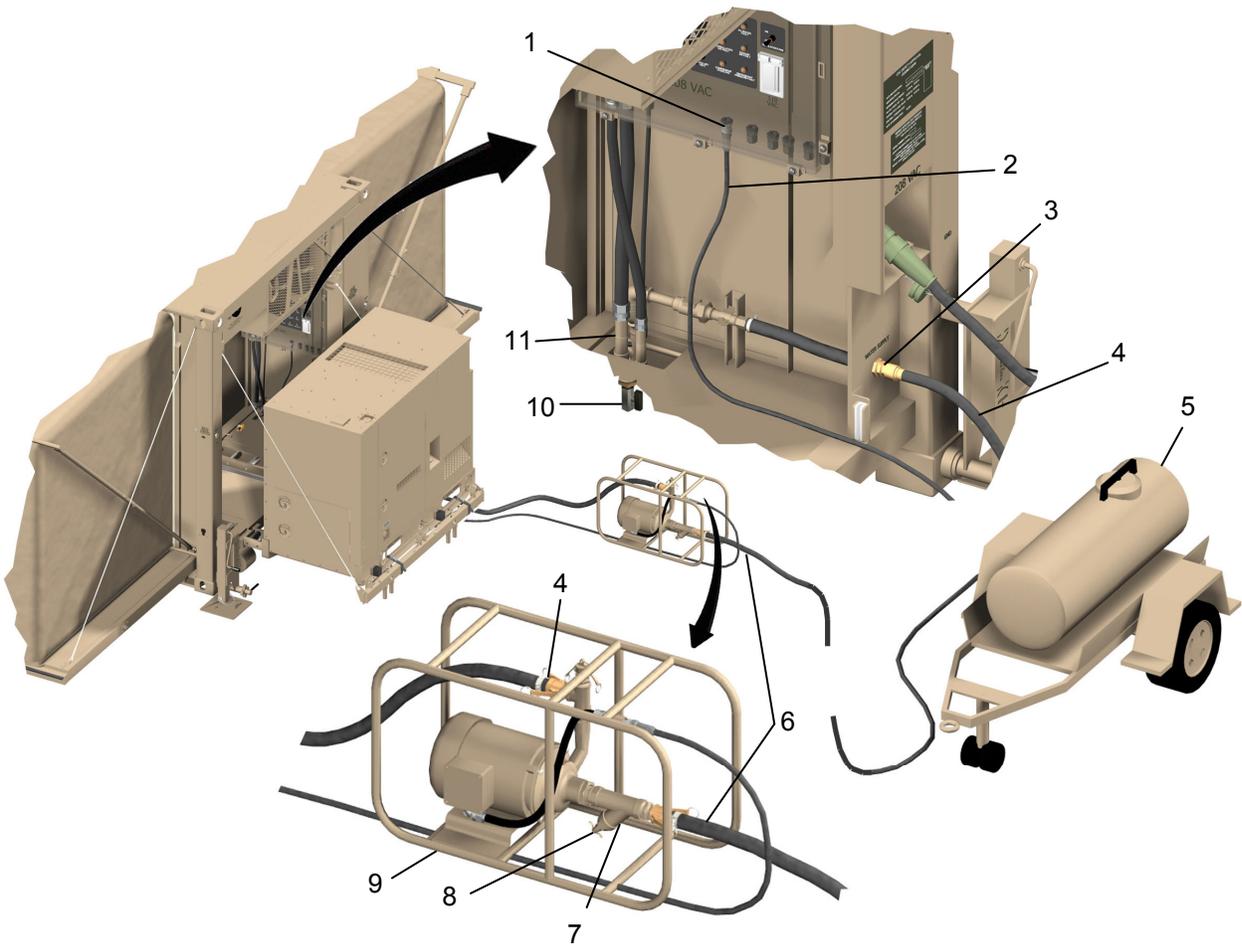


Figure 19. Establishing Water Supply, Exterior Procedures.

END OF TASK

ESTABLISH FUEL SUPPLY**WARNING**

Before making any connections or servicing fuel supply, ensure fuel container is properly connected to a suitable earth ground and is electrically bonded to the MIRCS frame. Ensure fire extinguishing equipment is available and operational. Failure to follow this precaution may result in personnel injury or death. Seek immediate medical attention if injury occurs.

CAUTION

MIRCS should only be operated using JP-8, DF-1, or DF-2 fuel. Fuel supply must be free of water and contaminants. Connections on fuel hoses must be clean prior to connecting to generator and fuel supply. Improper, dirty, or contaminated fuel can cause failure of generator engine, RU engine, and MIRCS fuel system components.

NOTE

In order to establish proper prime in fuel supply hose leading to generator the fuel connection at the generator must be properly tightened and quick-connect fittings on hoses must be fully seated.

1. Remove fuel hose (Figure 20, Item 4) and adapter (Figure 20, Item 7) from generator storage compartment (Figure 20, Item 10).
2. If not already installed, connect adapter (Figure 20, Item 7) to fuel port (Figure 20, Item 6) as follows:
 - a. Unthread dust cap (Figure 20, Item 8) on generator fuel port (Figure 20, Item 6).
 - b. Thread adapter (Figure 20, Item 7) onto fuel port (Figure 20, Item 6). Ensure connection is snug, but **do not** over-tighten.
3. Connect fuel hose (Figure 20, Item 4) to supply port (Figure 20, Item 2). Listen for metallic click to ensure connection is fully seated.
4. Connect dust plug (Figure 20, Item 1) and cap (Figure 20, Item 3) to each other.
5. Route fuel hose (Figure 20, Item 4) under generator through forklift pocket (Figure 20, Item 9).
6. Connect fuel hose (Figure 20, Item 4) to adapter (Figure 20, Item 7). Listen for metallic click to ensure connection is fully seated.
7. Connect dust plug (Figure 20, Item 5) and cap (Figure 20, Item 8) to each other.
8. Ensure shut-off valves (Figure 20, Item 11) are opened.

ESTABLISHING FUEL SUPPLY-CONTINUED

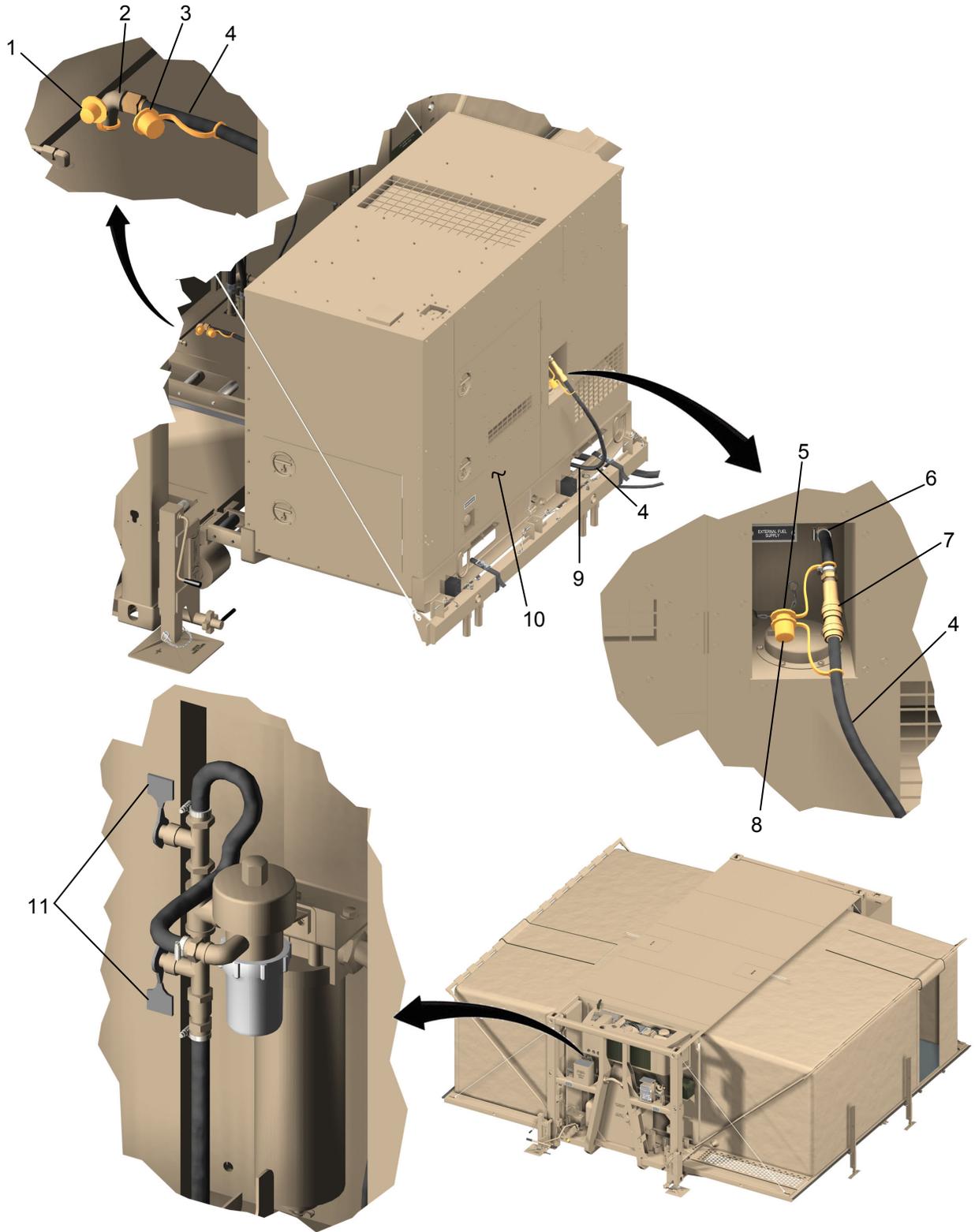


Figure 20. Establishing Fuel Connections.

END OF TASK

ESTABLISH WASTE DRAINS**WARNING**

Wastewater generated during MA operations may contain chemical and/or bio-hazardous materials. When handling waste system hoses and containers personnel must wear impermeable gloves and goggles for protection. Failure to follow this warning may result in serious illness or death. Seek immediate medical attention if injury occurs.

1. Place a waste container (Figure 21, Item 2) next to main drain port (Figure 21, Item 8).
2. Remove main cap (Figure 21, Item 1).
3. Add approximately 1 oz of bleach to waste container (Figure 21, Item 2).
4. Connect waste hose (Figure 21, Item 7) to main drain port (Figure 21, Item 8).
5. Connect waste hose (Figure 21, Item 7) to waste container (Figure 21, Item 2) and tighten.
6. Unthread and remove vent cap (Figure 21, Item 3) from waste container (Figure 21, Item 2).
7. Unthread full indicator (Figure 21, Item 4) from waste hose t-fitting (Figure 21, Item 5) and thread onto waste container (Figure 21, Item 2).
8. Thread vent cap (Figure 21, Item 3) onto side of waste hose t-fitting (Figure 21, Item 5) for storage.
9. Open shutoff valve (Figure 21, Item 6).
10. Repeat steps 1 through 9 to connect waste hose (Figure 21, Item 9) to PA platform drain port (Figure 21, Item 10).

ESTABLISH WASTE DRAINS-CONTINUED

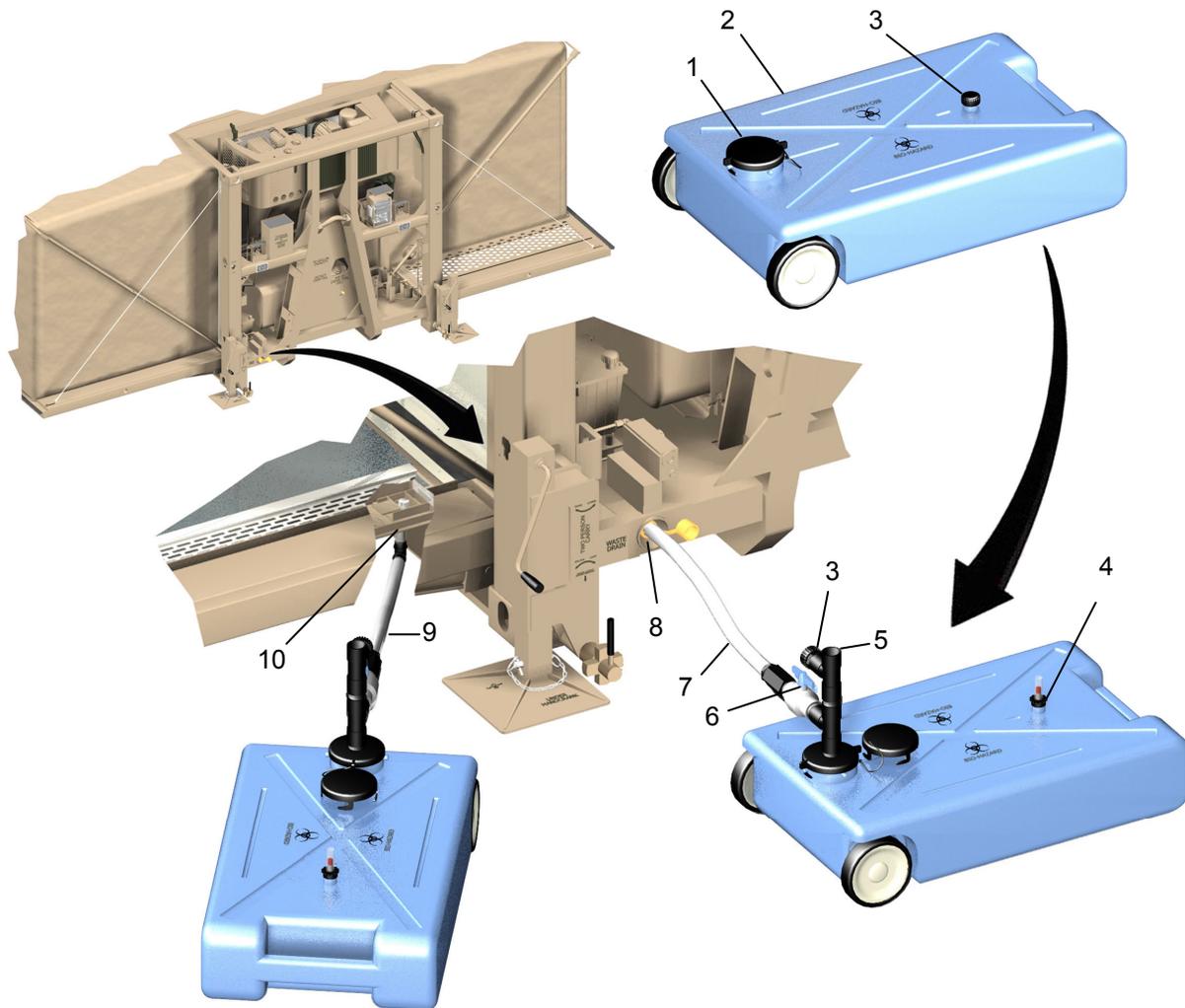


Figure 21. Establishing Waste Drains.

END OF TASK

DEPLOY ECU DUCTING**WARNING**

Generator exhaust contains deadly gases. Do not operate the MIRCS without the ECU inlet filter and ducting installed. Severe personal illness or death due to carbon monoxide poisoning could result. Seek immediate medical attention if illness occurs.

1. Loosen clamps (Figure 22, Item 6) at ends of duct connectors (Figure 22, Item 4). Use a step aid to access duct at inlet port if needed.
2. Pull protective cover from ECU inlet port (Figure 22, Item 5)
3. Attach duct connector (Figure 22, Item 4) to ECU inlet port (Figure 22, Item 5) and secure with clamp (Figure 22, Item 4).
4. Secure duct (Figure 22, Item 3) to corner fitting (Figure 22, Item 2) with strap (Figure 22, Item 1).
5. Place inlet filter (Figure 22, Item 12) on AA platform (Figure 22, Item 13) and secure with strap (Figure 22, Item 14).
6. Attach duct connector (Figure 22, Item 4) to inlet filter (Figure 22, Item 12), and secure with clamp (Figure 22, Item 6).
7. Secure duct (Figure 22, Item 3) to support rod (Figure 22, Item 11) with strap (Figure 22, Item 1).
8. If installed, remove ECU cover (Figure 22, Item 7) by unfastening nine buckles (Figure 22, Item 9), pulling straps (Figure 22, Item 10) out of loops (Figure 22, Item 8) and removing cover from ECU.

DEPLOY ECU DUCTING-CONTINUED

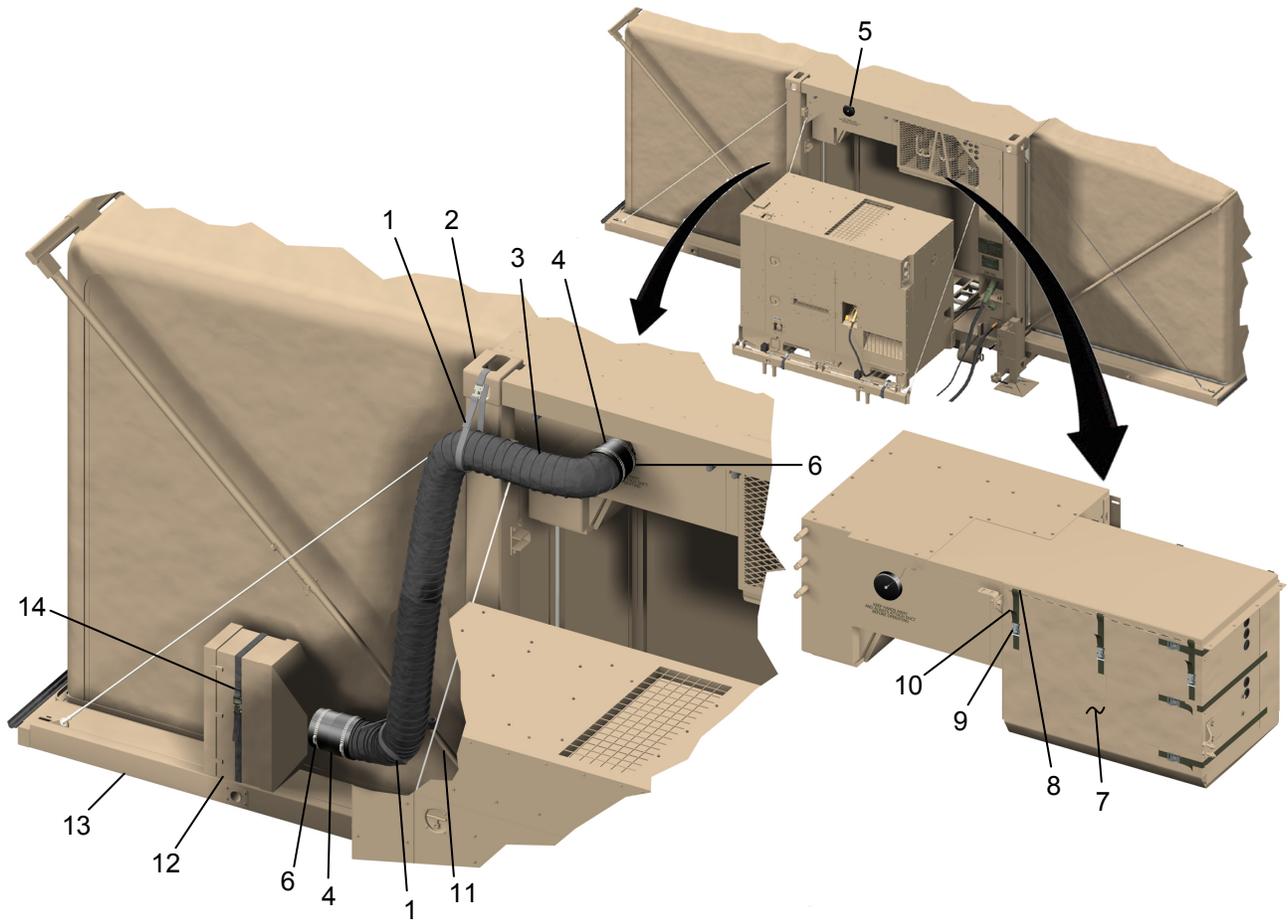


Figure 22. Attaching ECU Inlet Filter and Ducting.

END OF TASK

DEPLOY SOFT WALL SUPPORTS

1. Unzip storage bag (Figure 23, Item 6) and remove AA partition support rod (Figure 23, Item 8), AA partition (Figure 23, Item 4), supply area door (Figure 23, Item 5), exterior flaps (Figure 23, Item 7), and weapons racks (Figure 23, Item 3). Set items aside for later use.
2. Remove nine top supports (Figure 23, Item 2) and front supports (Figure 23, Item 1) from storage bag (Figure 23, Item 6).
3. Install supports under PA soft wall (Figure 23, Item 10) as follows:
 - a. Insert top support (Figure 23, Item 2) into receptacle (Figure 23, Item 9).
 - b. Rotate top support (Figure 23, Item 2) slightly and insert front support (Figure 23, Item 1) into top support (Figure 23, Item 23).
 - c. Lift up slightly on top support (Figure 23, Item 2) then rotate front support (Figure 23, Item 1) until it is straight.
 - d. Ensure foot (Figure 23, Item 18) is out against track (Figure 23, Item 19).
 - e. Secure supports (Figure 23, Items 1 and 2) to PA soft wall (Figure 23, Item 10) with straps (Figure 23, Item 17).
 - f. Repeat steps a through e for remaining four supports.
4. Install supports under AA soft wall (Figure 23, Item 13) as follows:
 - a. Place top support (Figure 23, Item 2) into receptacle (Figure 23, Item 11).
 - b. Rotate top support (Figure 23, Item 2) and insert front support (Figure 23, Item 1) into top support (Figure 23, Item 2).
 - c. Lift up slightly on top support (Figure 23, Item 2) then rotate front support (Figure 23, Item 1) until it is straight.
 - d. Ensure foot (Figure 23, Item 15) is out against track (Figure 23, Item 14).
 - e. Secure supports (Figure 23, Items 1 and 2) to AA soft wall (Figure 23, Item 13) with straps (Figure 23, Item 16).
 - f. Repeat steps a through e for remaining three supports.
5. Fold up storage bag (Figure 23, Item 6) and stow on supply shelving (Figure 23, Item 12).

DEPLOY SOFT WALL SUPPORTS-CONTINUED

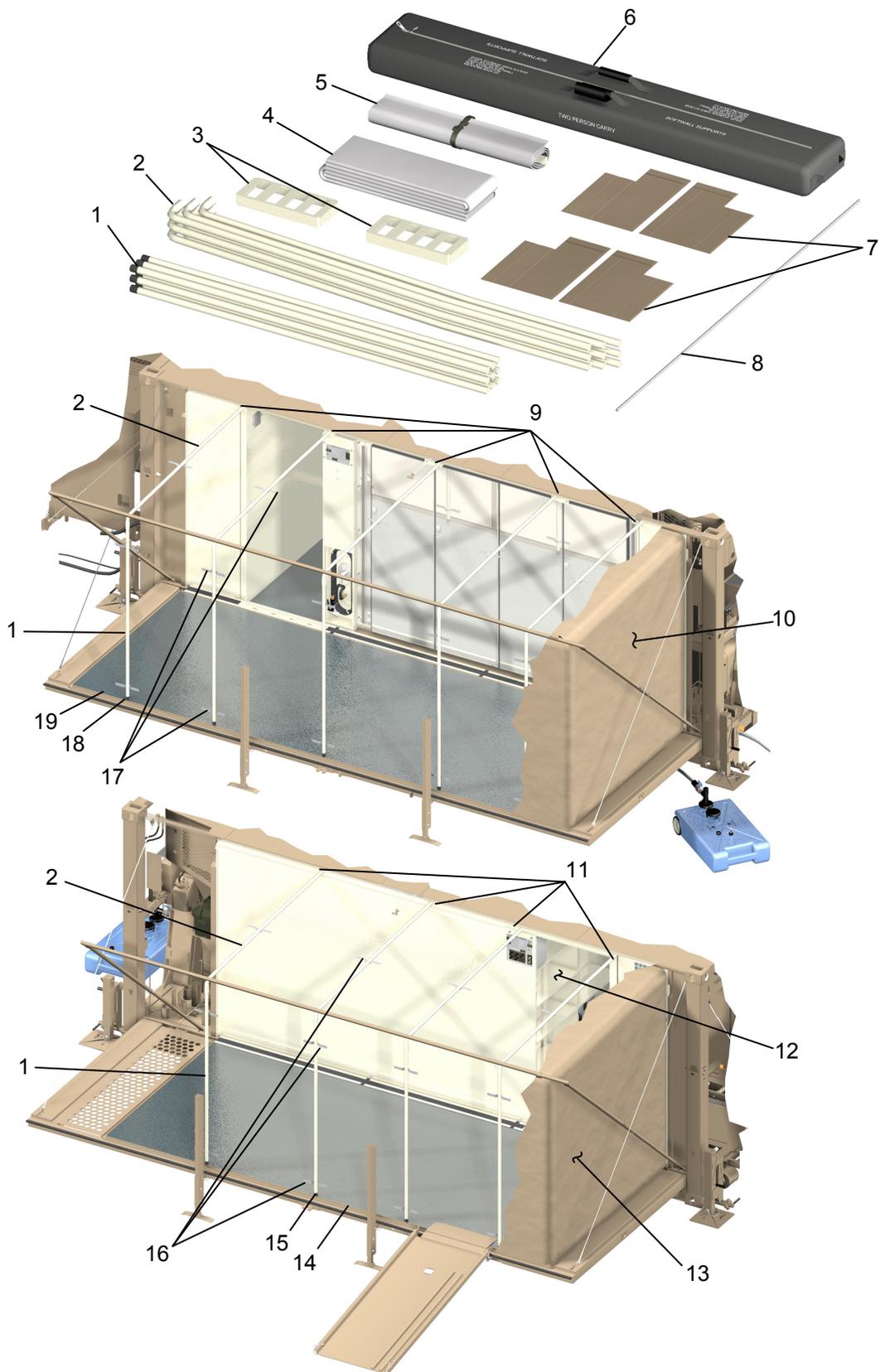


Figure 23. Soft Wall Support Installation.

END OF TASK

DEPLOY WORK LIGHTING**WARNING**

Ensure excess cable from lights are wrapped or tucked into straps to prevent personnel from getting caught or hung up during movement. Failure to follow this warning may result in injury to personnel. Seek immediate medical attention if injury occurs.

NOTE

If power cord from each string of work lights is not connected to proper electrical outlet, light control through MA operator panel switch will not be possible.

Consult Figure 24, Sheet 1 of 2 for layout of work lights.

1. Unzip and remove seven work lights (Figure 24, Items 4, 6, 11, 16, 17, 18 and 19), supply area light (Figure 24, Item 2), and two extension cords (Figure 24, Item 10) from work light storage bag (Figure 24, Item 1).
2. Install PA work lights (Figure 24, Items 4, 6, 11 and 19) as follows:
 - a. Orient light (Figure 24, Item 19) with male plug (Figure 24, Item 9) towards electrical outlet (Figure 24, Item 8), and secure light to ceiling (Figure 24, Item 5) through straps (Figure 24, Item 12).
 - b. Install lights (Figure 24, Item 4, 6, and 11) with male plugs (Figure 24, Item 9) pointing towards preceding light.
 - c. Route power cords (Figure 24, Item 7) through loops (Figure 24, Item 13).
 - d. Connect light (Figure 24, Item 11) to light (Figure 24, Item 4) and light (Figure 24, Item 4) to light (Figure 24, Item 19).
 - e. Install an extension cord (Figure 24, Item 10) to connect light (Figure 24, Item 6) to light (Figure 24, Item 11).
 - f. Connect light (Figure 24, Item 19) to electrical outlet marked PA (Figure 24, Item 8).
3. Install supply area work light (Figure 24, Item 2) as follows:
 - a. Orient light (Figure 24, Item 2) with male plug (Figure 24, Item 9) towards electrical outlet (Figure 24, Item 8) then push light (Figure 24, Item 2) onto mounting clips (Figure 24, Item 3).
 - b. Connect power cord (Figure 24, Item 7) to electrical outlet (Figure 24, Item 8).
4. Install AA work lights (Figure 24, Items 16, 17, 18 and 19) as follows:
 - a. Orient light (Figure 24, Item 17) with male plug (Figure 24, Item 9) towards electrical outlet (Figure 24, Item 14), and secure light to ceiling (Figure 24, Item 15) through straps (Figure 24, Item 12).
 - b. Install light (Figure 24, Item 18) with male plug (Figure 24, Item 9) pointing towards work light (Figure 24, Item 17).
 - c. Route power cords (Figure 24, Item 7) through loops (Figure 24, Item 13).
 - d. Connect light (Figure 24, Item 18) to light (Figure 24, Item 17).
 - e. Connect light (Figure 24, Item 17) to extension cord (Figure 24, Item 10).
 - f. Connect extension cord (Figure 24, Item 10) to electrical outlet marked AA (Figure 24, Item 14).

DEPLOY WORK LIGHTING-CONTINUED

5. Install vestibule work light (Figure 24, Item 16) as follows:
 - a. Orient light (Figure 24, Item 16) with male plug (Figure 24, Item 9) towards electrical outlet (Figure 24, Item 14), and secure light to ceiling (Figure 24, Item 15) through straps (Figure 24, Item 12).
 - b. Route power cord (Figure 24, Item 7) through loops (Figure 24, Item 13).
 - c. Connect light (Figure 24, Item 16) to electrical outlet (Figure 13, Item 14).

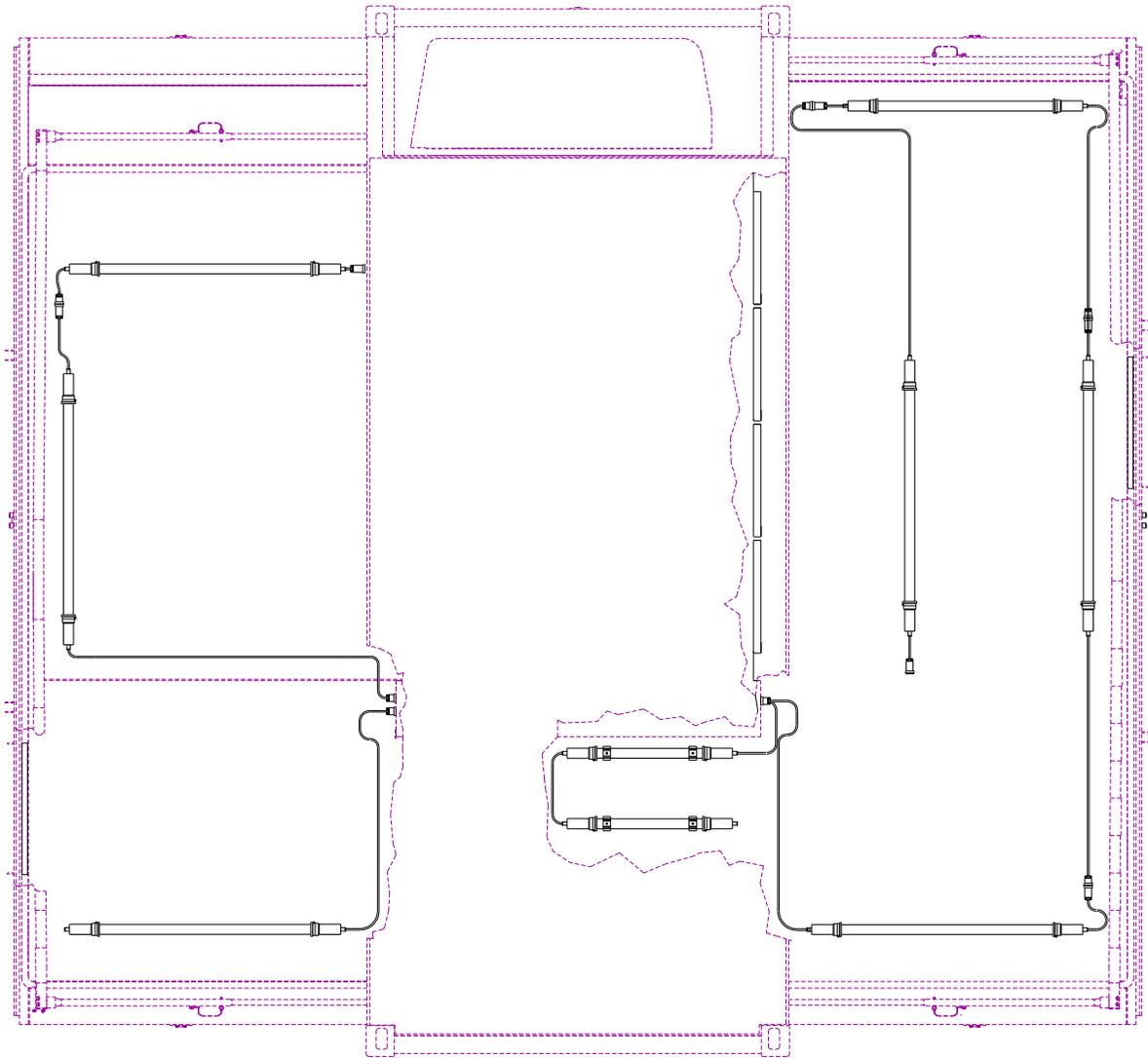


Figure 24. Work Light Installation (Sheet 1 of 2).

DEPLOY WORK LIGHTING-CONTINUED

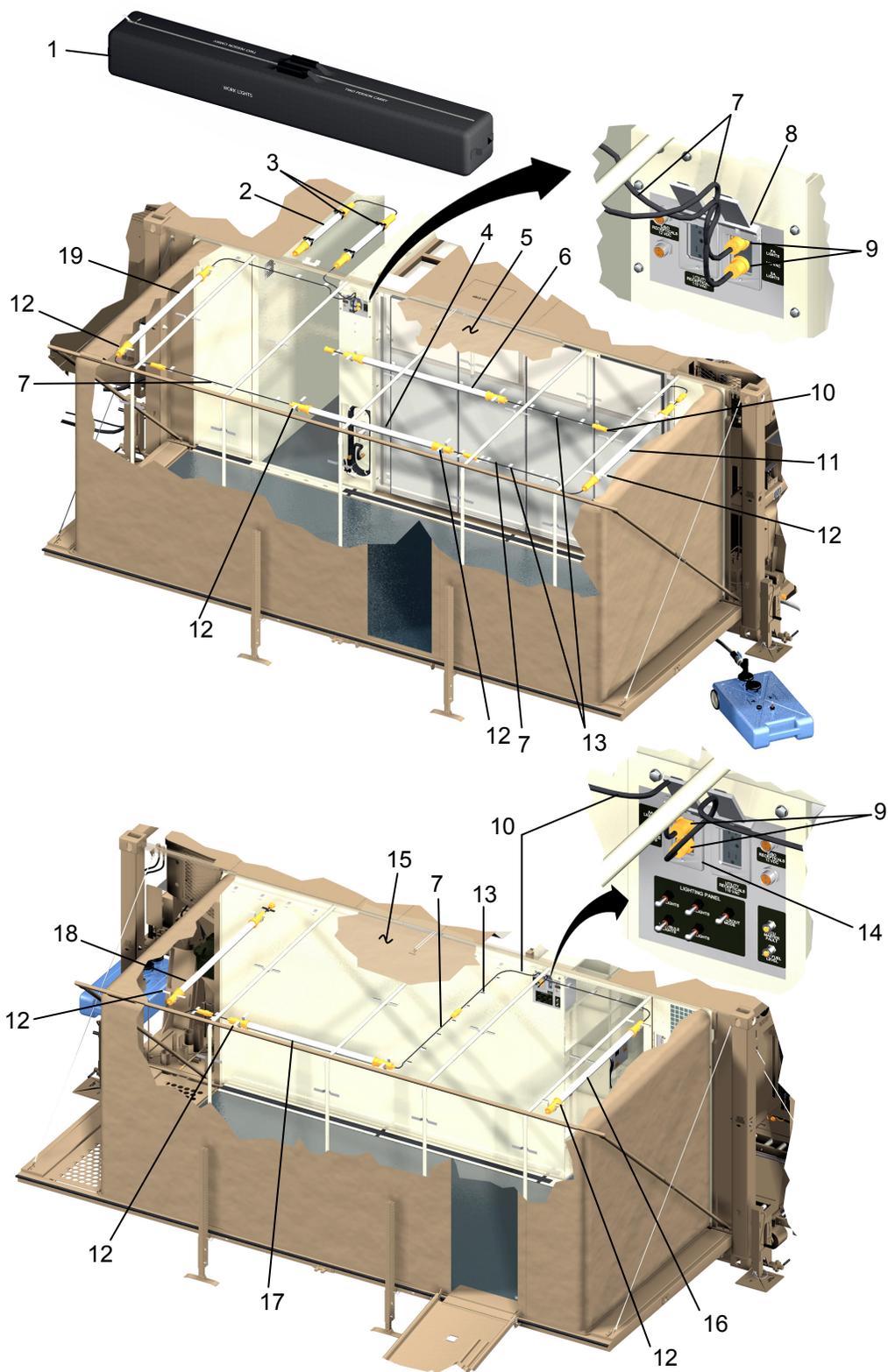


Figure 24. Work Light Installation (Sheet 2 of 2).

END OF TASK

DEPLOY EMERGENCY/BLACKOUT LIGHTING**WARNING**

Ensure excess cable from lights are wrapped or tucked into straps to prevent personnel from getting caught or hung up during movement. Failure to follow this warning may result in injury to personnel. Seek immediate medical attention if injury occurs.

NOTE

Consult Figure 25, Sheet 1 of 2 for layout of emergency/blackout lights.

1. Remove four emergency/blackout lights (Figure 25, Item 3) and extension cable (Figure 25, Item 2) from storage bag (Figure 25, Item 11).
2. Install emergency/blackout lights (Figure 25, Item 3) in supply area (Figure 25, Item 1), PA (Figure 25, Item 5), vestibule (Figure 25, Item 12), and AA (Figure 25, Item 13) as follows:
 - a. Unfasten, but do not remove strap (Figure 25, Item 6), then unroll each light cable (Figure 25, Item 4).
 - b. Route light cables (Figure 25, Item 14) through loops (Figure 25, Item 4) towards power connectors (Figure 25, Item 10).
 - c. For PA light only, connect extension cable (Figure 25, Item 2) to light cable (Figure 25, Item 15).
 - d. Align keys (Figure 25, Item 9) in plugs of light cables (Figure 25, Item 8) with slots (Figure 25, Item 7) in power connectors (Figure 25, Item 10) then thread plugs onto connectors hand-tight.

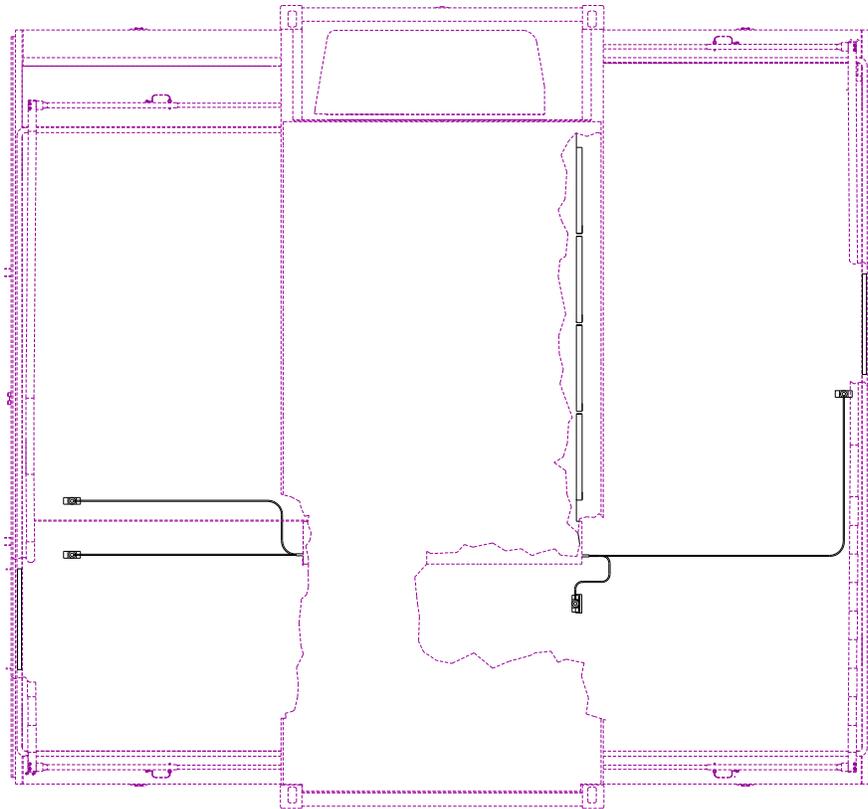


Figure 25. Emergency/Blackout Light Installation (Sheet 1 of 2).

DEPLOY EMERGENCY/BLACKOUT LIGHTING-CONTINUED

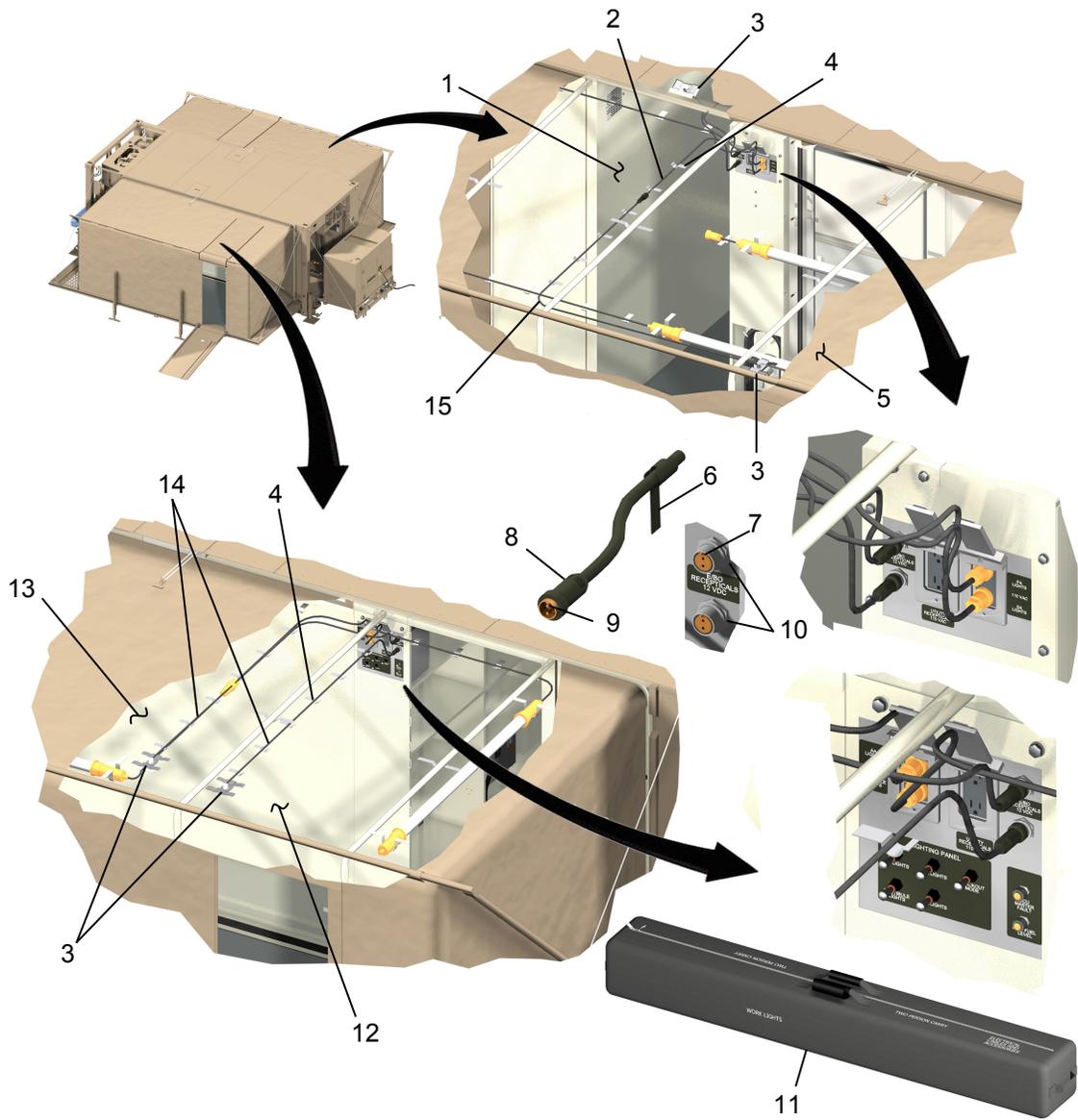


Figure 25. Emergency/Blackout Light Installation (Sheet 2 of 2).

END OF TASK

DEPLOY AA PARTITION AND SUPPLY STORAGE AREA DOOR

1. Attach AA partition (Figure 26, Item 5) as follows:
 - a. Insert rod (Figure 26, Item 12) into sewn hole (Figure 26, Item 15) in base of partition (Figure 26, Item 4).
 - b. Attach partition (Figure 26, Item 5) to AA interior wall (Figure 26, Item 4).
 - c. Separate ceiling and wall flaps (Figure 26, Items 13 and 14) and insert partition (Figure 26, Item 5) between flaps.
 - d. Press down on flaps (Figure 26, Items 13 and 14) to secure to partition (Figure 26, Item 5).
 - e. Unfasten buckles (Figure 26, Item 10) then open curtain door (Figure 26, Item 11).
2. Attach supply door (Figure 26, item 6) as follows:
 - a. Remove strap (Figure 26, Item 7) then unroll supply door (Figure 26, Item 6).
 - b. Pull QC pins (Figure 26, Item 1) from track (Figure 26, Item 2).
 - c. Mate track (Figure 26, Item 2) to frame (Figure 26, Item 3) and secure with QC pins (Figure 26, Item 1).
 - d. Install strap (Figure 26, Item 7) through any mid-height loop (Figure 26, Item 8) on shelving unit (Figure 26, Item 9) and use as desired to keep supply area door opened.

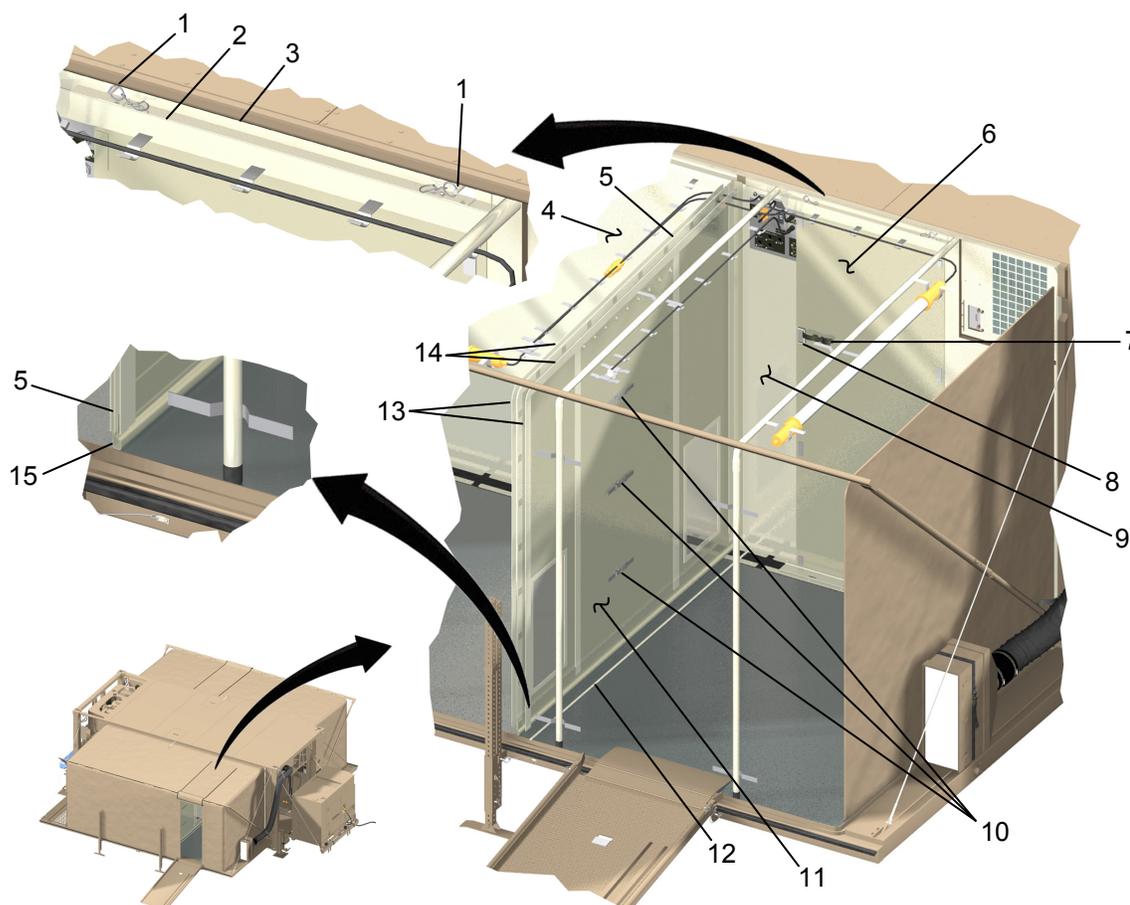


Figure 26. AA Partition and Supply Door Installation.

END OF TASK

DEPLOY EXTERIOR END WALL FLAPS

1. Unfold exterior flap (Figure 27, Item 2).
2. At rear PA corner (Figure 27, Item 5) mate exterior flap (Figure 27, Item 2) with upper corner of soft wall (Figure 27, Item 3) and frame (Figure 27, Item 1).
3. Repeat steps 1 and 2 for front PA corner (Figure 27, Item 4), rear AA corner (Figure 27, Item 6), and front AA corner (Figure 27, Item 7).
4. If installed, remove RU cover (Figure 27, Item 11) by unfastening eleven buckles (Figure 27, Item 9), pulling straps (Figure 27, Item 8) out of loops (Figure 27, Item 10) and pulling cover away from RU.

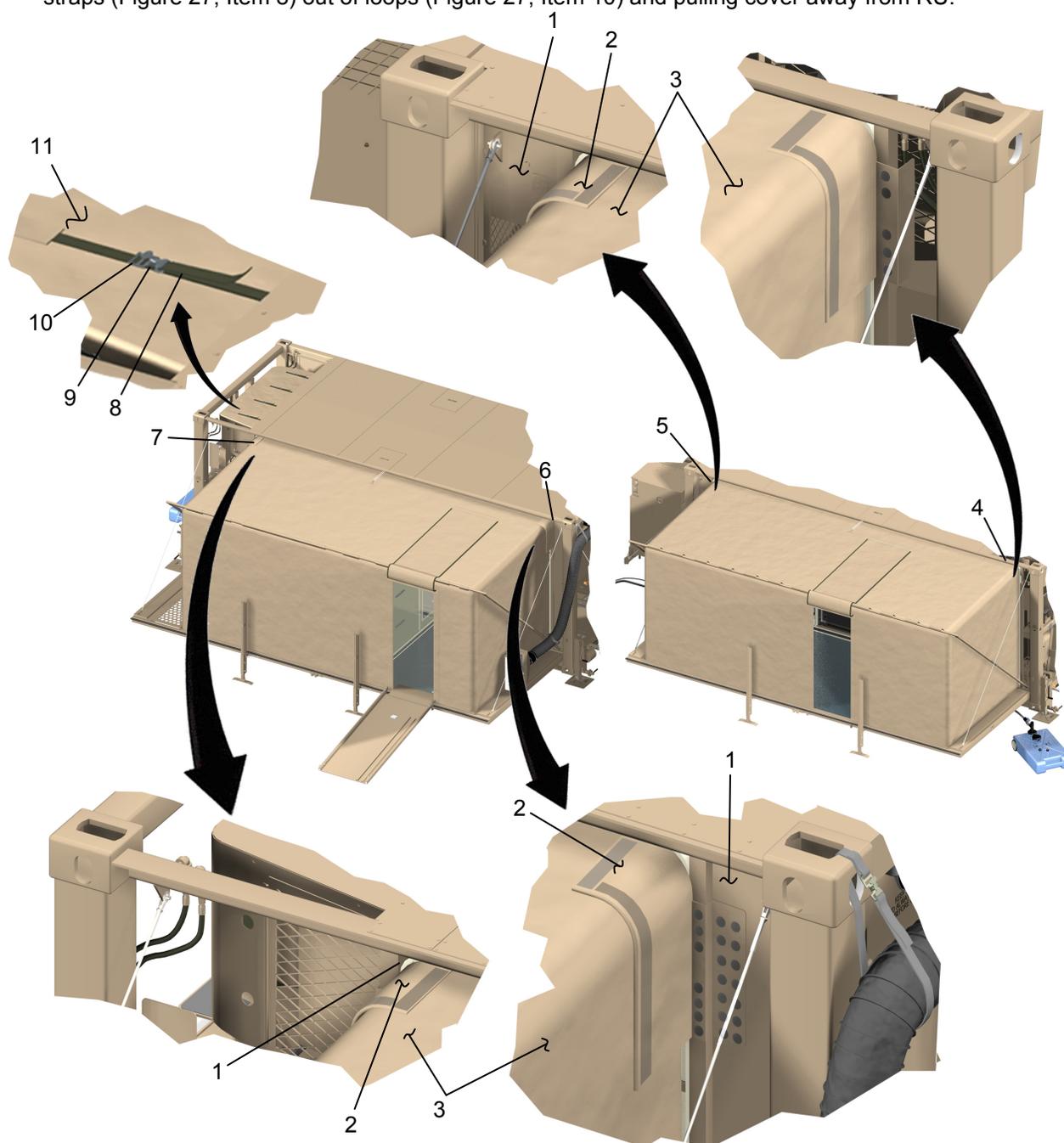


Figure 27. Soft Wall Exterior Flap Installation.

END OF TASK

SET-UP PA WORK SPACE

1. Place the two mobile processing platforms MPPs (Figure 28, Item 4) in PA work area (Figure 28, Item 5).
2. Remove MPP height extension (Figure 28, Item 6) from MPP and place in RSU top row (Figure 28, Item 2).
3. If desired, set up electrical box (Figure 28, Item 7) as follows:
 - a. Remove electrical box (Figure 28, Item 7) from work light storage bag (Figure 28, Item 3) and place on floor as needed.
 - b. Route electrical cord (Figure 28, Item 8) through loops (Figure 28, Item 10) in ceiling (Figure 28, Item 9).
 - c. Plug electrical cord (Figure 28, Item 8) into duplex receptacle (Figure 28, Item 1).

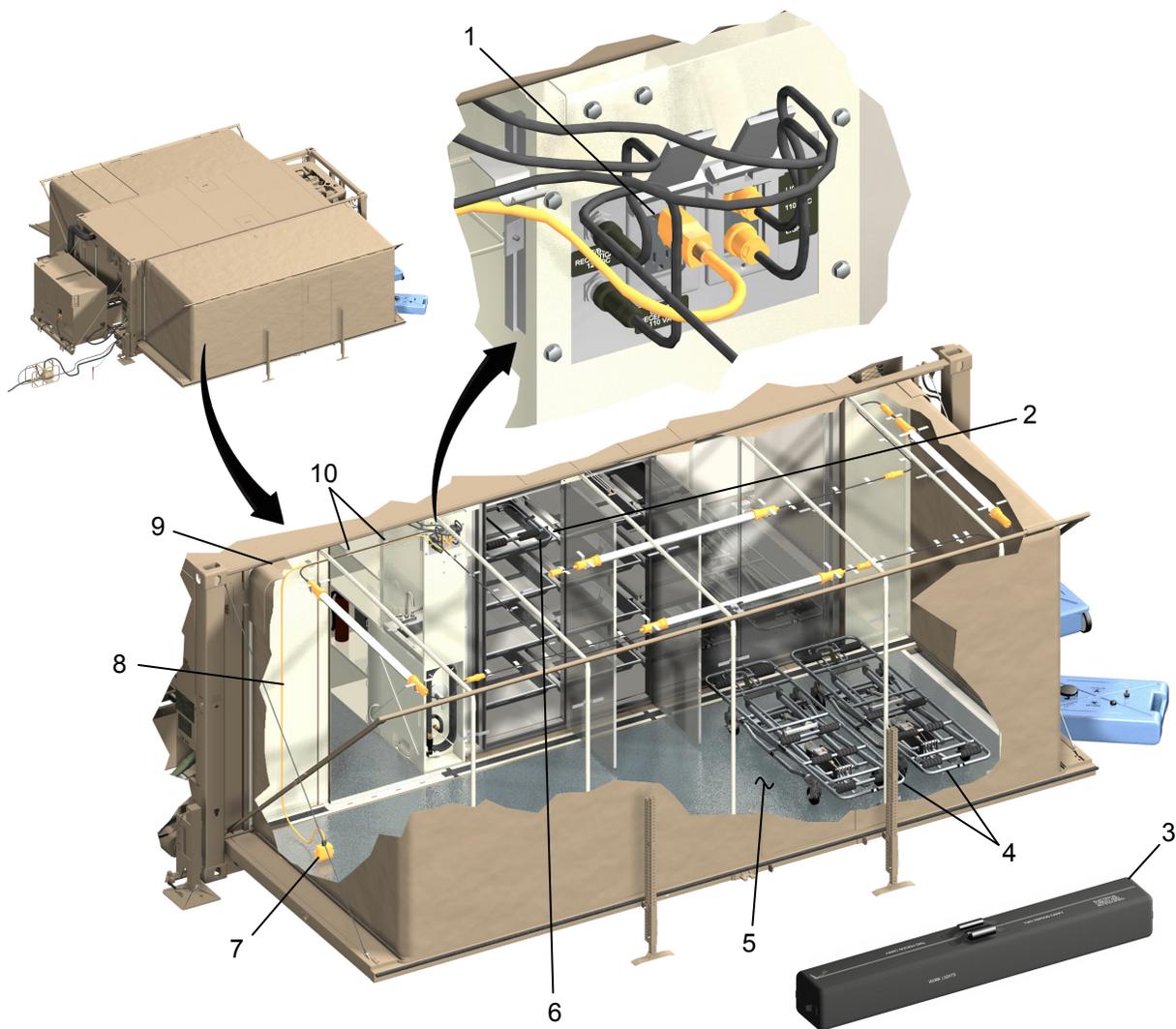


Figure 28. PA Equipment Set-up.

END OF TASK

SET-UP AA WORK SPACE

1. Position weapons racks (Figure 29, Item 8) against base of end wall (Figure 29, Item 10).
2. Locate and set-up folding table (Figure 29, Item 5) and chairs (Figure 29, Item 6) as desired.
3. If desired set-up electrical box (Figure 29, Item 7) as follows:
 - a. Remove electrical box (Figure 29, Item 7) from work light storage bag (Figure 29, Item 9) and place on floor as needed.
 - b. Route electrical cord (Figure 29, Item 1) through loops (Figure 29, Item 3) in ceiling (Figure 29, Item 2).
 - c. Plug electrical cord (Figure 29, Item 1) into duplex receptacle (Figure 29, Item 4).
4. Route any communication cabling as needed through boot (Figure 29, Item 11).
5. Set-up the office area in the AA workspace as desired.

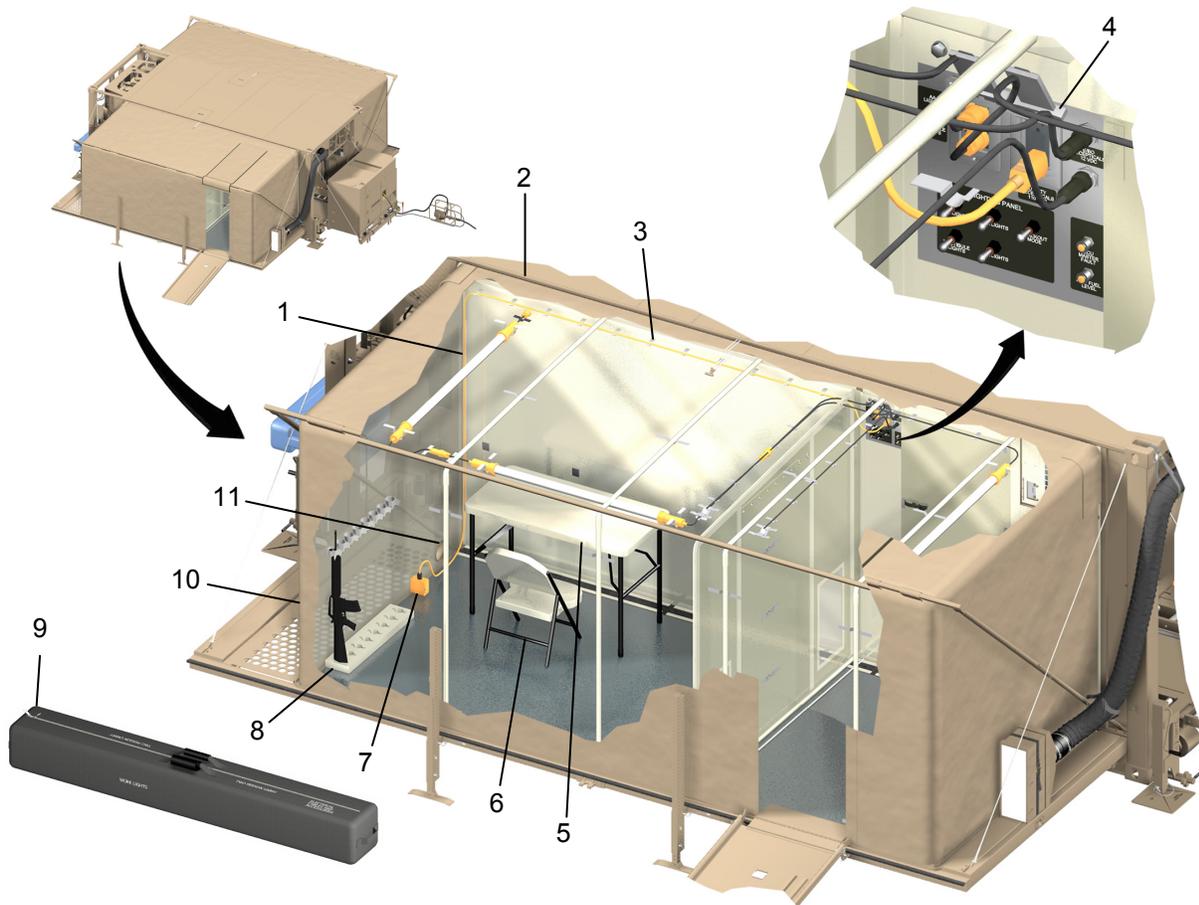


Figure 29. AA Equipment Set-up.

END OF TASK

SET-UP TEMPORARY REMAINS SHELTERS

1. Remove shelter (Figure 30, Item 4) from its carrying pouch (Figure 30, Item 8).
2. Position shelter (Figure 30, Item 4) on ground in desired location.
3. Remove stakes (Figure 30, Item 6) and guy ropes (Figure 30, Item 3) from storage pocket (Figure 30, Item 9)
4. Starting at either end, secure corners of shelter floor (Figure 30, Item 5) to the ground as follows:
 - a. Slide stakes (Figure 30, Item 6) through loops (Figure 30, Item 7) and drive stakes into ground.
 - b. Move back to the next set of loops (Figure 30, Item 7), pull floor (Figure 30, Item 5) tight, and drive stakes (Figure 30, Item 6) into ground.
 - c. Repeat steps a and b until floor (Figure 30, Item 5) is secured with fourteen stakes.
5. Starting at either end, secure the shelter end walls (Figure 30, Item 10) to the ground as follows:
 - a. If not already completed, tie guy ropes (Figure 30, Item 3) to loops (Figure 30, Item 2) at top of end walls (Figure 30, Item 10).
 - b. On each guy rope (Figure 30, Item 3), slide tensioner (Figure 30, Item 1) at least one foot away from looped end to allow for tension adjustment.
 - c. Slide stake (Figure 30, Item 7) through guy rope (Figure 30, Item 3), pull guy rope out away from end wall and drive stake into ground.
 - d. Repeat step c for other guy ropes.
 - e. Adjust tensioners (Figure 30, Item 1) until there is equal tension on all guy ropes (Figure 30, Item 3).

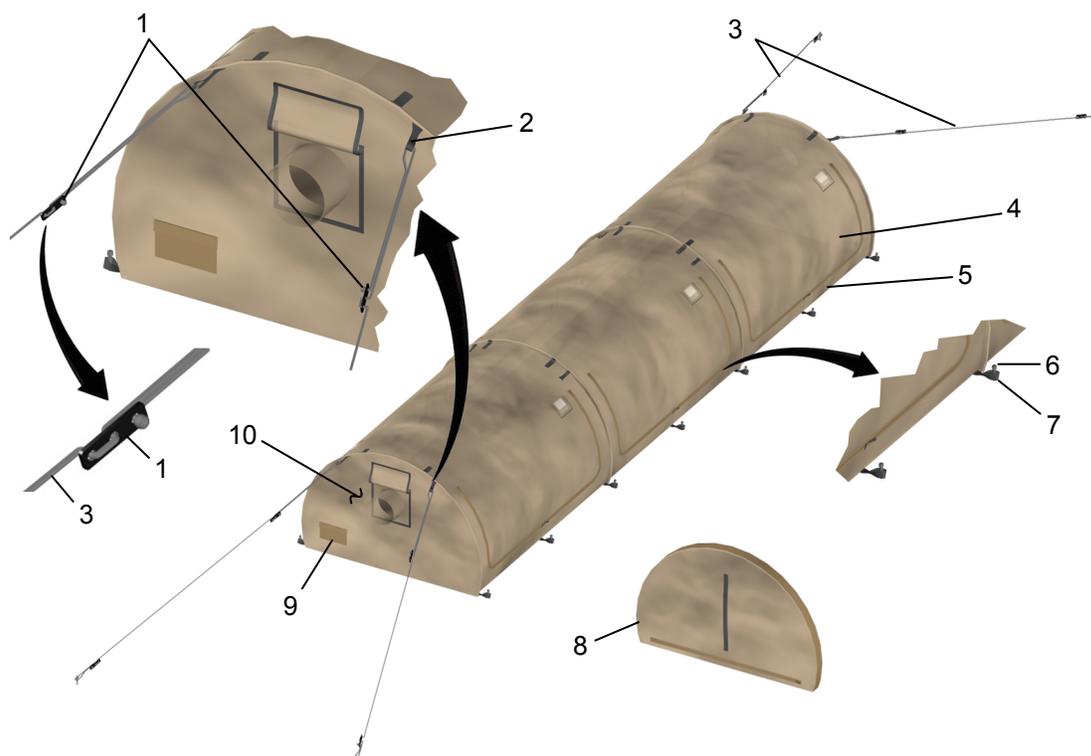


Figure 30. Temporary Remains Shelter Set-up

SET-UP.SET-UP TEMPORARY REMAINS SHELTERS-CONTINUED

6. Place any unused stakes (Figure 31, Item 3) and guy ropes (Figure 31, Item 4) back in storage pocket (Figure 31, Item 6).
7. If ventilation is desired roll up and tie off flaps (Figure 31, Item 2) on end walls (Figure 31, Item 1).

NOTE

Additional ventilation can be achieved by connecting a fan to the ducting (Figure 31, Item 5) at either end of the shelter.

8. Repeat steps 1 through 7 to set-up other temporary shelters if necessary.

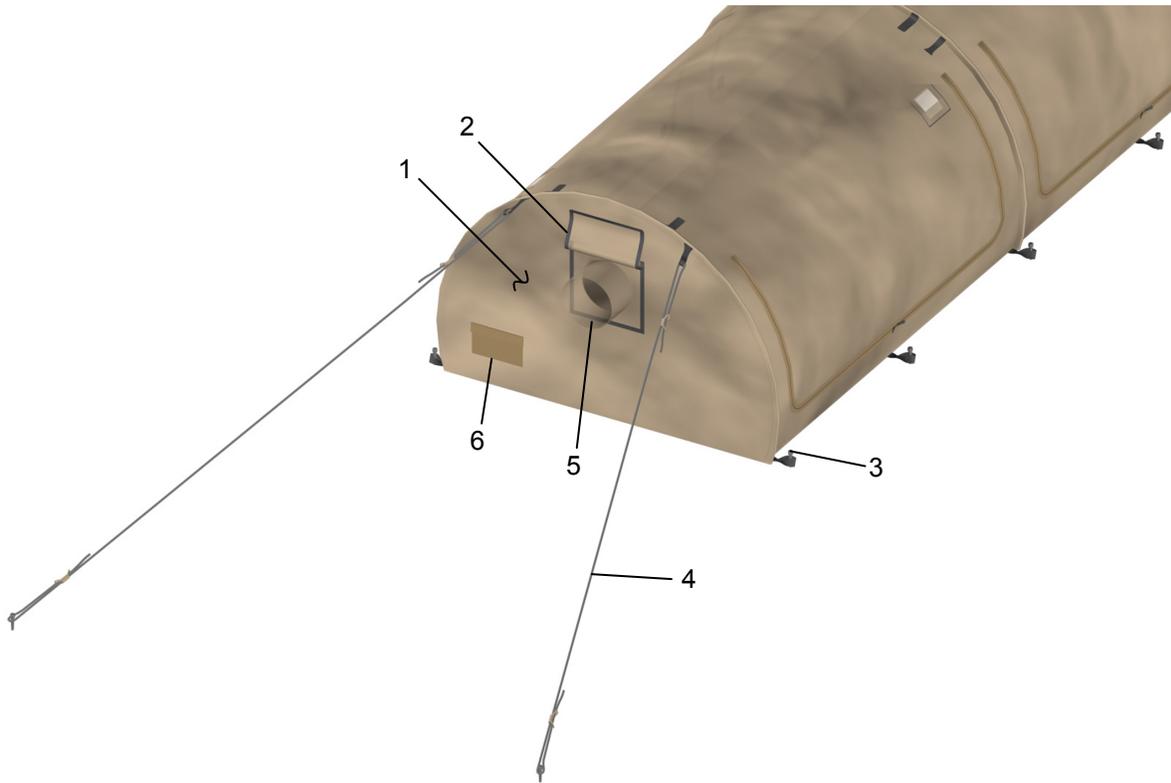


Figure 31. Temporary Remains Shelter End Wall Tensioning.

END OF TASK

END OF WORK PACKAGE

**REW MAINTENANCE
OPERATION UNDER USUAL CONDITIONS
INITIAL ADJUSTMENTS, BEFORE USE AND SELF TEST**

INITIAL SETUP:**Equipment Conditions**

Ground Configuration, Assembly and
Preparation for Use complete (WP 0008)

References

WP 0008
WP 0023

INITIAL RU START-UP**WARNING**

Operating personnel must be familiar with system operation, warnings, and emergency procedures prior to operating the MIRCS. Failure to operate this equipment properly can cause severe injury or death to yourself or other personnel working nearby. Seek immediate medical attention if injury occurs.

CAUTION

If shutting down RU, wait 30 seconds before restarting. Failure to do so may result in tripping of standby motor circuit protection.

1. Perform BEFORE Transport Mode PMCS procedure, Items 1, 2 and 4 (WP 0023).
2. Verify RU RUN/STOP switch (Figure 1, Item 6) on RU control box (Figure 1, Item 5) is positioned outboard to RUN.
3. On RU control enclosure (Figure 1, Item 3), position I/O switch (Figure 1, Item 4) to I.
4. Press ROAD key (Figure 1, Item 2).

NOTE

After power is applied to the RU there is a 30 second delay before the RU attempts to start. After starting, the RU should run in heat mode for 45 seconds then switch to cool mode if the RSU temperature is above the set point, or remain in heat mode if the outside temperature is below the set point.

5. After 30-second delay verify engine starts.
6. Observe display (Figure 1, Item 1) it should read a set point of 34°F and show RU operating in heating mode.
7. Perform DURING Ground Mode PMCS procedure, Item 1 (WP 0023).

END OF TASK

INITIAL RU START-UP-CONTINUED

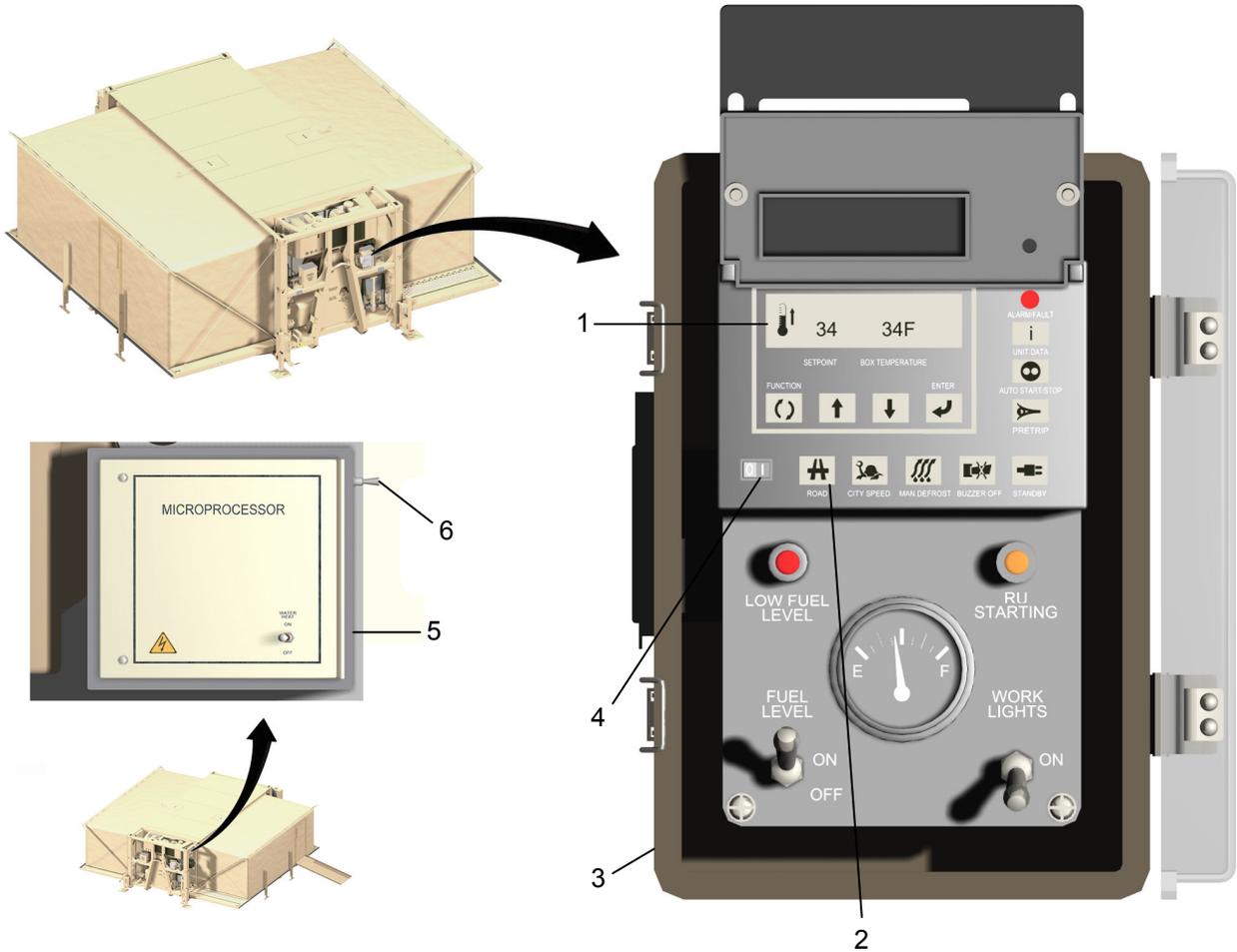


Figure 1. RU Control Box and RU Control Enclosure.

INITIAL ECU START-UP

1. Ensure all BEFORE Ground Mode PMCS procedures have been completed (WP 0023).
2. Bring MEP-804A generator on-line (TM 9-6115-643-10) or apply external power (WP 0008) as required.
3. Set generator output to 208 VAC, 60 Hz.
4. Position MAIN DISCONNECT switch (Figure 2, Item 3) on ECU control enclosure (Figure 2, Item 2) to ON.
5. Position VENTILATION FANS switch (Figure 2, Item 4) to ON.
6. Wait about 30 seconds for fans to speed-up. Check for air flow at AA ducts (Figure 2, Item 7), PA ducts (Figure 2, Item 5) and exhaust outlet (Figure 2, Item 6).
7. Verify no ECU fault lights (Figure 2, Item 1) are on.

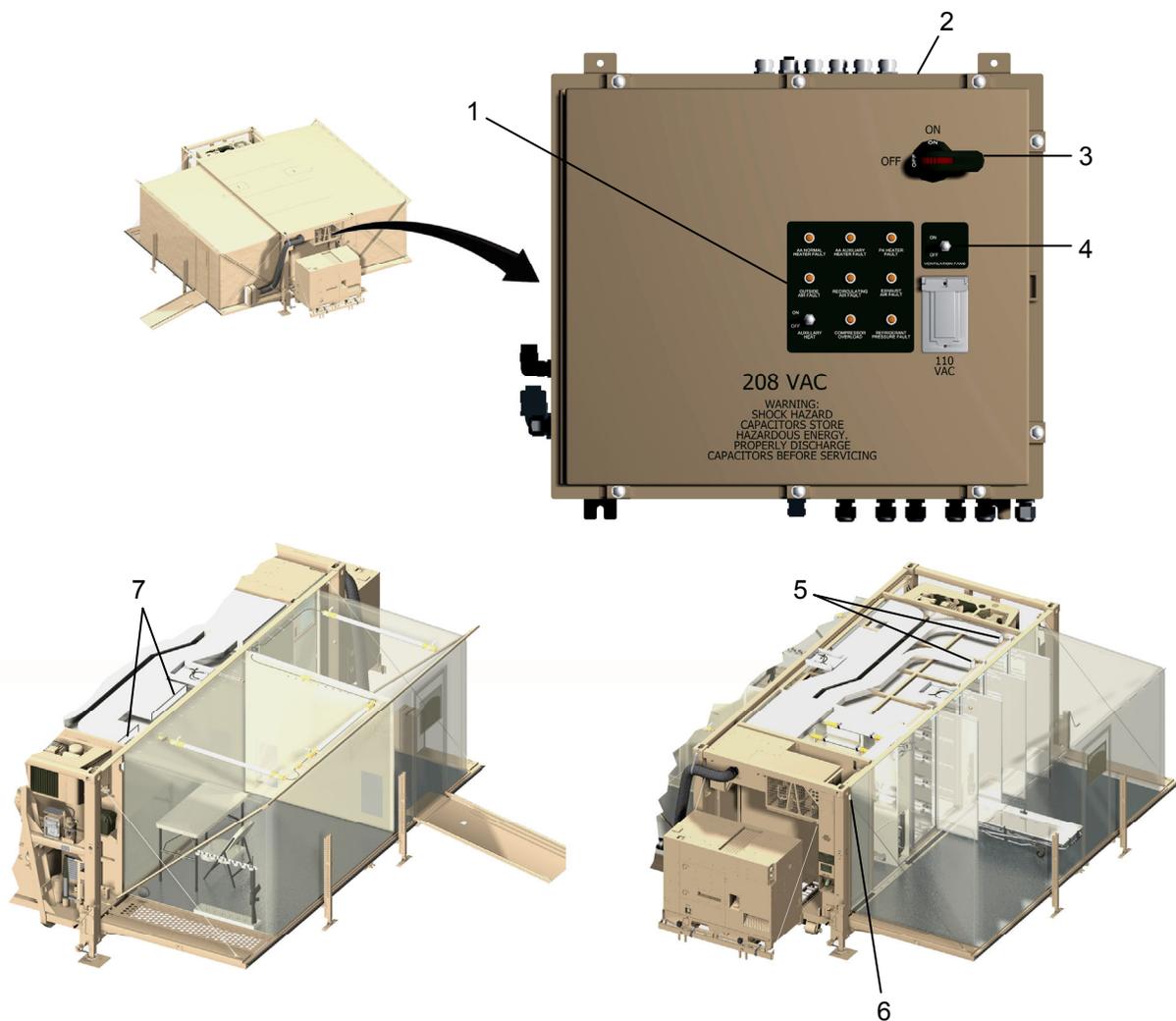


Figure 2. ECU Control Enclosure.

END OF TASK

SETTING INTERIOR WORK AREA AND RSU TEMPERATURES

1. Consult the table below to determine proper switch and temperature settings based on the outside air temperature.

Table 1. ECU/RU Operating Modes.

OUTSIDE TEMPERATURE RANGE (°F)	AUXILIARY HEAT SETTING	ALLOWABLE RU MODE	RECOMMENDED ECU MODE	RECOMMENDED THERMOSTAT SETTING (°F)
-25 TO 10	ON	ENG	HEAT	65
10 TO 55	OFF	ENG or STBY	HEAT	65
56 TO 69	OFF	ENG or STBY	OFF	N/A
70 TO 120	OFF	ENG or STBY	COOL	60

2. Set AUXILIARY HEAT switch (Figure 3, Item 2) on ECU control enclosure (Figure 3, Item 1) to the required position per Table 1.

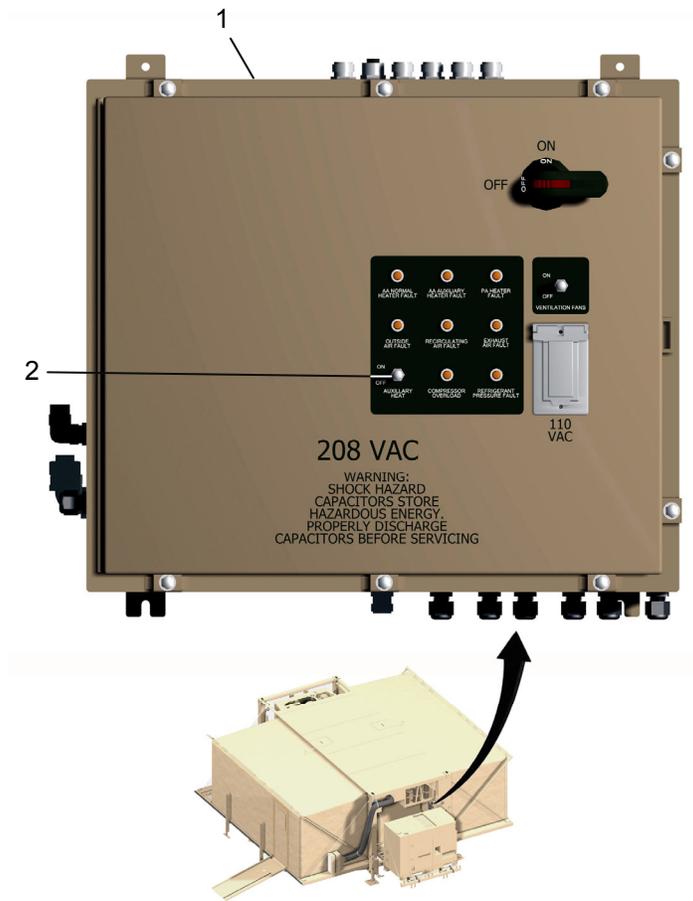


Figure 3. Auxiliary Heat Control.

END OF TASK

SETTING INTERIOR WORK AREA AND RSU TEMPERATURES-CONTINUED

1. At MA operation enclosure (Figure 4, Item 1) select correct mode for BLACKOUT switch (Figure 4, Item 2) per operational requirements.
2. Turn on interior lights as desired using switches ((Figure 4, Items 3 through 6).

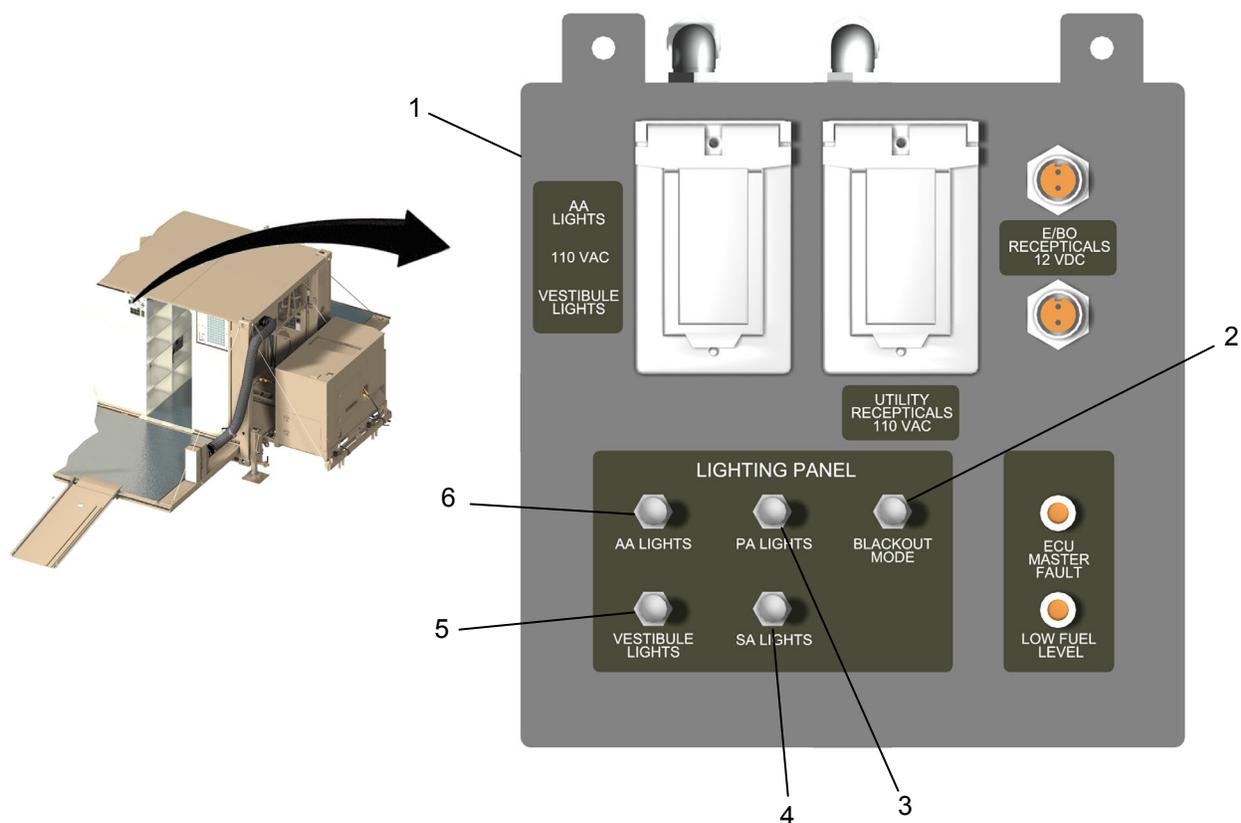


Figure 4. MA Operation Enclosure.

SETTING INTERIOR WORK AREA AND RSU TEMPERATURES-CONTINUED

3. At ECU thermostat (Figure 5, Item 2) select mode and temperature setting per Table 1 and as follows:
 - a. Loosen two captive screws (Figure 5, Item 5) then open access window (Figure 5, Item 1).
 - b. Position HEAT/OFF/COOL switch (Figure 5, Item 4) to the desired mode.
 - c. Adjust knob (Figure 5, Item 3) to desired setting between 50°F and 90°F per Table 1.
 - d. Close access window (Figure 5, item 1) then secure by finger-tightening two captive screws (Figure 5, Item 5).
4. If authorized by Table 1, switch RU operation to standby mode by pressing STANDBY key (Figure 1, Item 2).

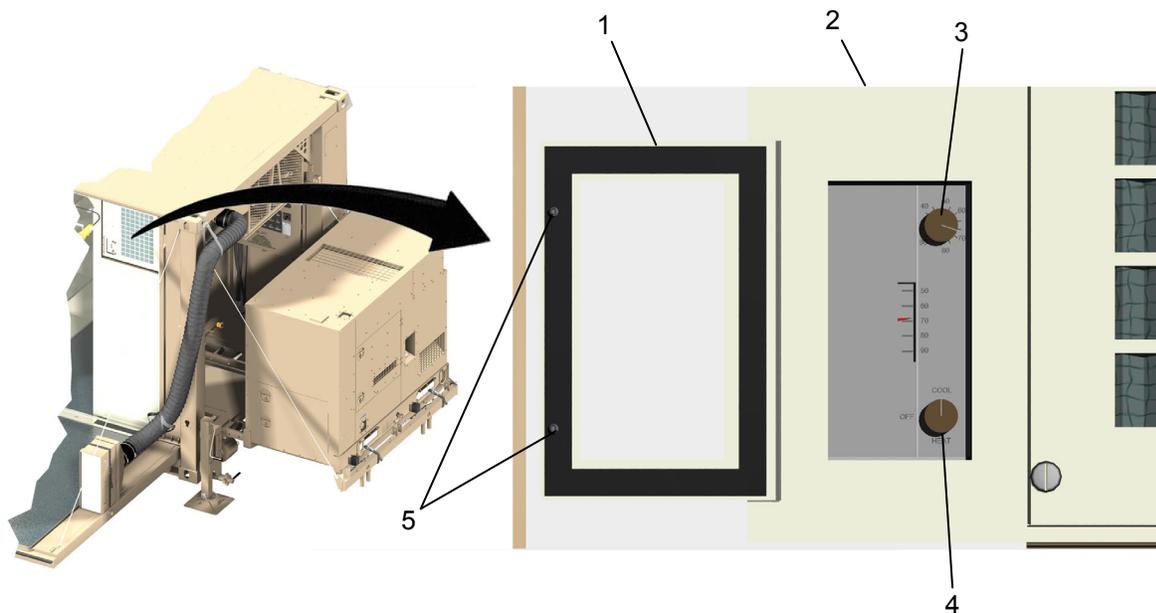


Figure 5. Setting ECU Thermostat and RU Controls.

END OF TASK

PRIME WATER SYSTEM

1. Unless previously completed, establish water supply (WP 0008).
2. Open valve(s) at water source.
3. Open valve (Figure 6, Item 3) on Y-strainer (Figure 6, Item 4).
4. Wait for water to start draining then close valve (Figure 6, Item 3).
5. Open valve (Figure 6, Item 2) on external piping (Figure 6, Item 1).
6. Wait for water to start draining then close valve (Figure 6, Item 2).
7. Slightly open cold water lever (Figure 6, Item 12) on personnel sink faucet (Figure 6, Item 13).
8. Depress and hold foot switch (Figure 6, Item 8) below sink (Figure 6, Item 10).

NOTE

Water pump may turn on and off several times automatically before water system is completely primed. If utility hose switch is pressed prior to properly priming water system, MIRCS power must be turned off and then turned back on prior to attempting to prime water system.

9. Continue to release and hold foot switch (Figure 6, Item 8) until a steady stream of water comes out of faucet (Figure 6, Item 13).
10. Release foot switch (Figure 6, Item 8) and close cold water lever (Figure 6, Item 12).
11. Open hot water lever (Figure 6, Item 11) and depress foot switch (Figure 6, Item 8).
12. Continue to hold foot switch (Figure 6, Item 8) until a steady stream of water comes out of faucet (Figure 6, Item 13).
13. Release foot switch (Figure 6, Item 8) and close hot water lever (Figure 6, Item 11).
14. Un-roll and connect utility hose (Figure 6, Item 6).
15. Fully open lever (Figure 6, Item 9) on utility hose faucet.
16. Point spray nozzle (Figure 6, Item 7) at PA platform drain (Figure 6, Item 5) or into sink (Figure 6, Item 10).
17. Depress and release foot switch (Figure 6, Item 8) while squeezing spray nozzle (Figure 6, Item 7)
18. Release foot switch (Figure 6, Item 8) and spray nozzle (Figure 6, Item 7) when a steady stream is present at spray nozzle.
19. Close lever (Figure 6, Item 9).
20. Roll-up utility hose (Figure 6, Item 6).
21. Utilize cold water as desired. Wait approximately ½ hour for hot water heater to heat water to required temperatures.

PRIME WATER SYSTEM-CONTINUED

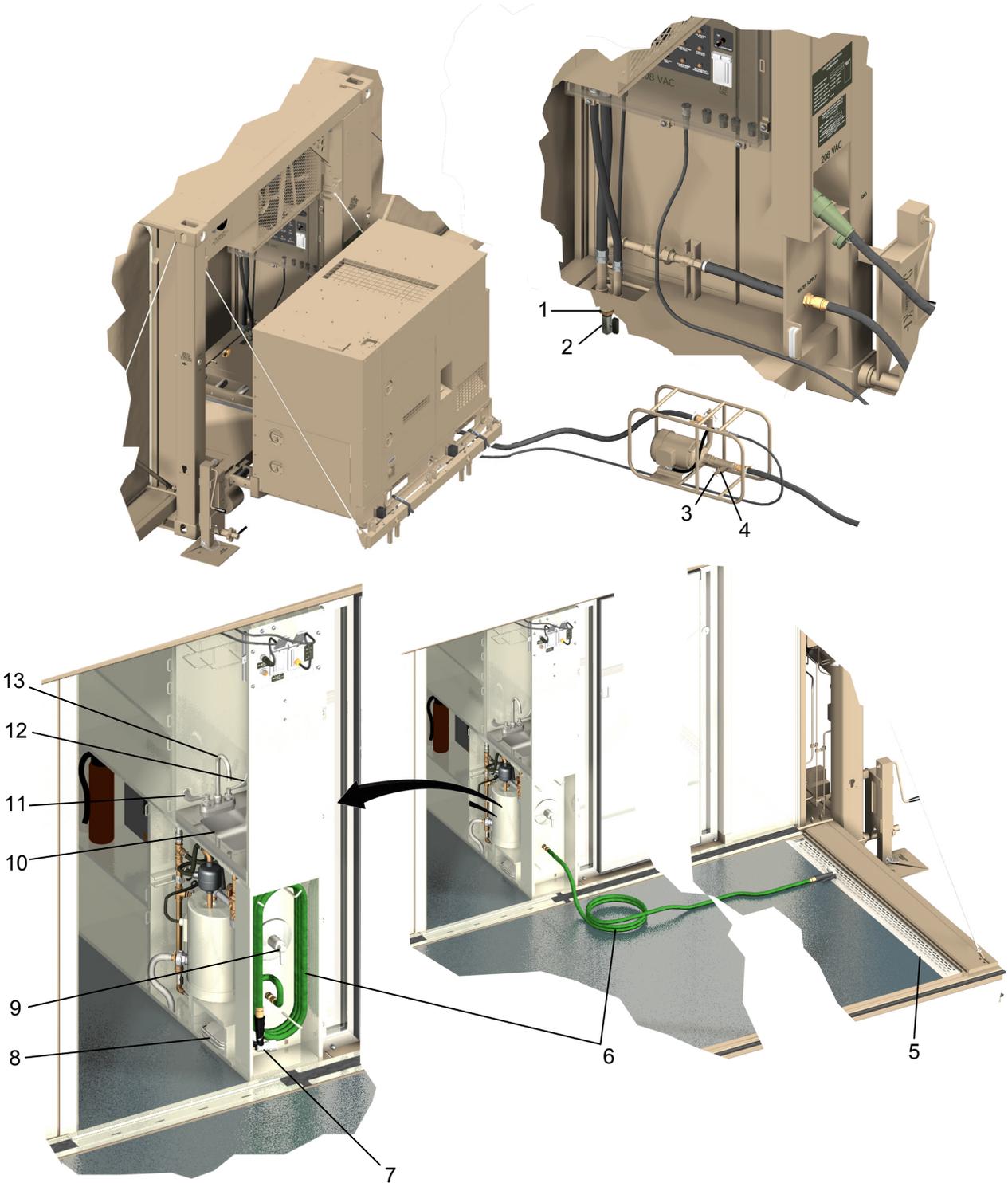


Figure 6. Priming Water System.

END OF TASK

END OF WORK PACKAGE

**CREW MAINTENANCE
OPERATION UNDER USUAL CONDITIONS
GROUND CONFIGURATION
OPERATING PROCEDURES**

INITIAL SETUP:

Personnel Required
2

Equipment Conditions

Initial Adjustments, Before Use and Self Test complete
(WP 0009)

References

WP 0013
WP 0023

START-UP ASSESSMENT**WARNING**

Operating personnel must be familiar with system operation, warnings, and emergency procedures prior to operating the MIRCS. Failure to operate this equipment properly can cause severe injury or death to yourself or other personnel working nearby. Seek immediate medical attention if injury occurs.

NOTE

This procedure is written for continuous 24-hour and partial daily operations.

1. Determine if MIRCS is already in operation. If personnel are changing shifts perform step 2. If personnel are starting from a power off condition and the MIRCS was drained due to cold weather operation perform INITIAL ADJUSTMENTS BEFORE USE AND SELF-TEST (WP 0009). If personnel are starting from a power off condition proceed to step 3.
2. Perform DURING Shift Change PMCS Items 1 through 11 (WP 0023). Perform MA operations as required.
3. Ensure all BEFORE Ground Mode PMCS procedures have been completed (WP 0023). Proceed to RU Start-up.

END OF TASK**RU START-UP****CAUTION**

If shutting down RU, wait 30 seconds before restarting. Failure to do so may result in tripping of standby motor circuit protection.

1. Perform BEFORE Transport Mode PMCS procedure, Items 1, 2 and 4 (WP 0023).
2. On RU control enclosure (Figure 1, Item 3) position I/O switch (Figure 1, Item 4) to I.
3. Press ROAD key (Figure 1, Item 2).

NOTE

After power is applied to the RU there is about a 30 second delay before the RU attempts to start. After starting, the RU should run in heat mode for 45 seconds then switch to cool mode if the RSU temperature is above the set point, or remain in heat mode if the outside temperature is below the set point.

4. After 30-second delay verify engine starts.
5. Perform DURING Ground Mode PMCS procedure, Item 1 (WP 0023).

RU START-UP-CONTINUED

NOTE

High engine speed (ROAD) is only required for very high and low outside temperatures or when the RSU being opened and closed frequently. Operating the RU in low engine speed (CITY) will make the RU run quieter and reduce fuel usage.

6. Press CITY key (Figure 1, Item 1) if desired to change engine speed.

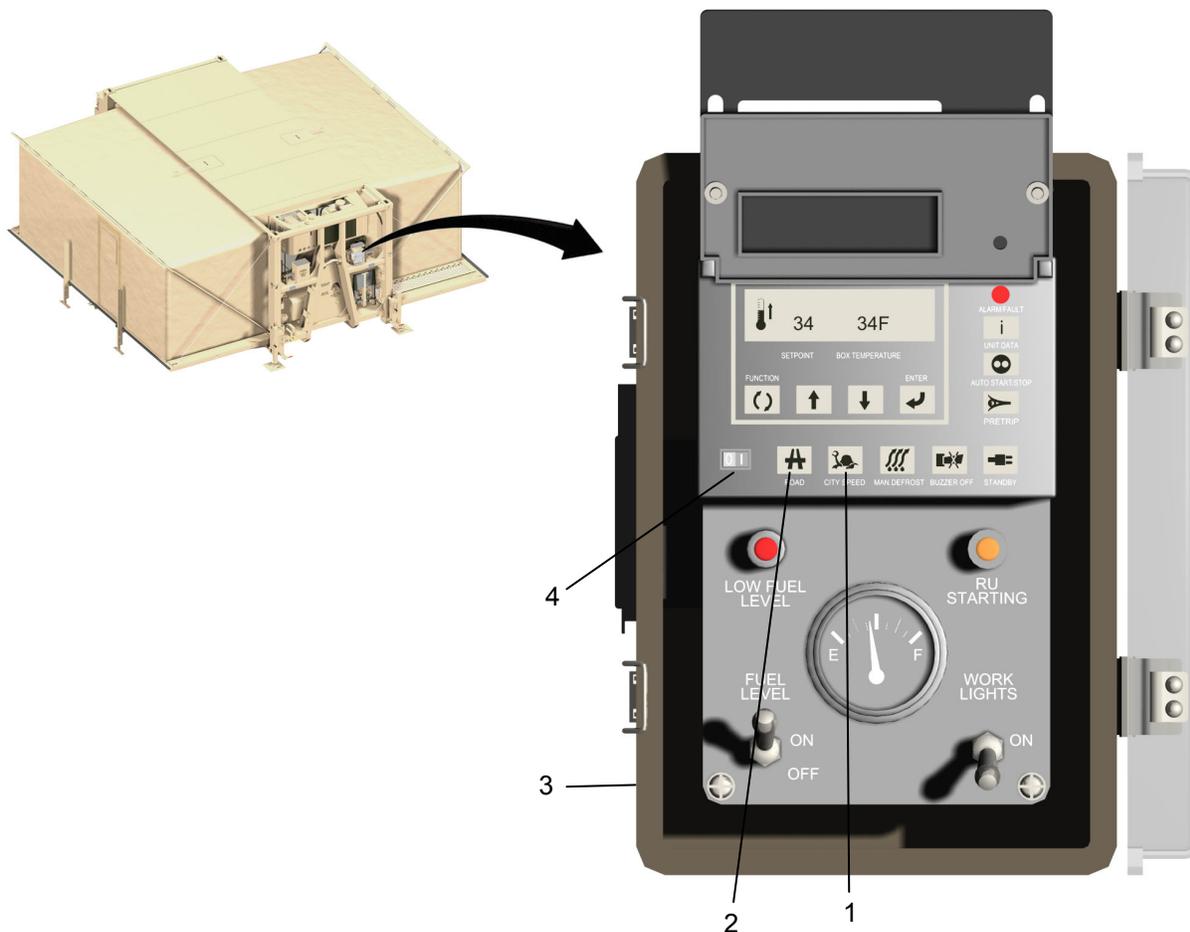


Figure 1. RU Control Enclosure.

END OF TASK

ECU START-UP

1. Bring MEP-804A generator on-line (TM 9-6115-643-10), or apply external power as required.
2. Set generator output to 208 VAC, 60 Hz.
3. Position MAIN DISCONNECT switch (Figure 2, Item 3) on ECU control enclosure (Figure 2, Item 2) to ON.
4. Position VENTILATION FANS switch (Figure 2, Item 4) to ON.
5. Wait about 30 seconds for fans to speed-up. Check for air flow at AA ducts (Figure 2, Item 7), PA ducts (Figure 2, Item 5) and exhaust outlet (Figure 2, Item 6).
6. Verify no ECU fault lights (Figure 2, Item 1) are on.

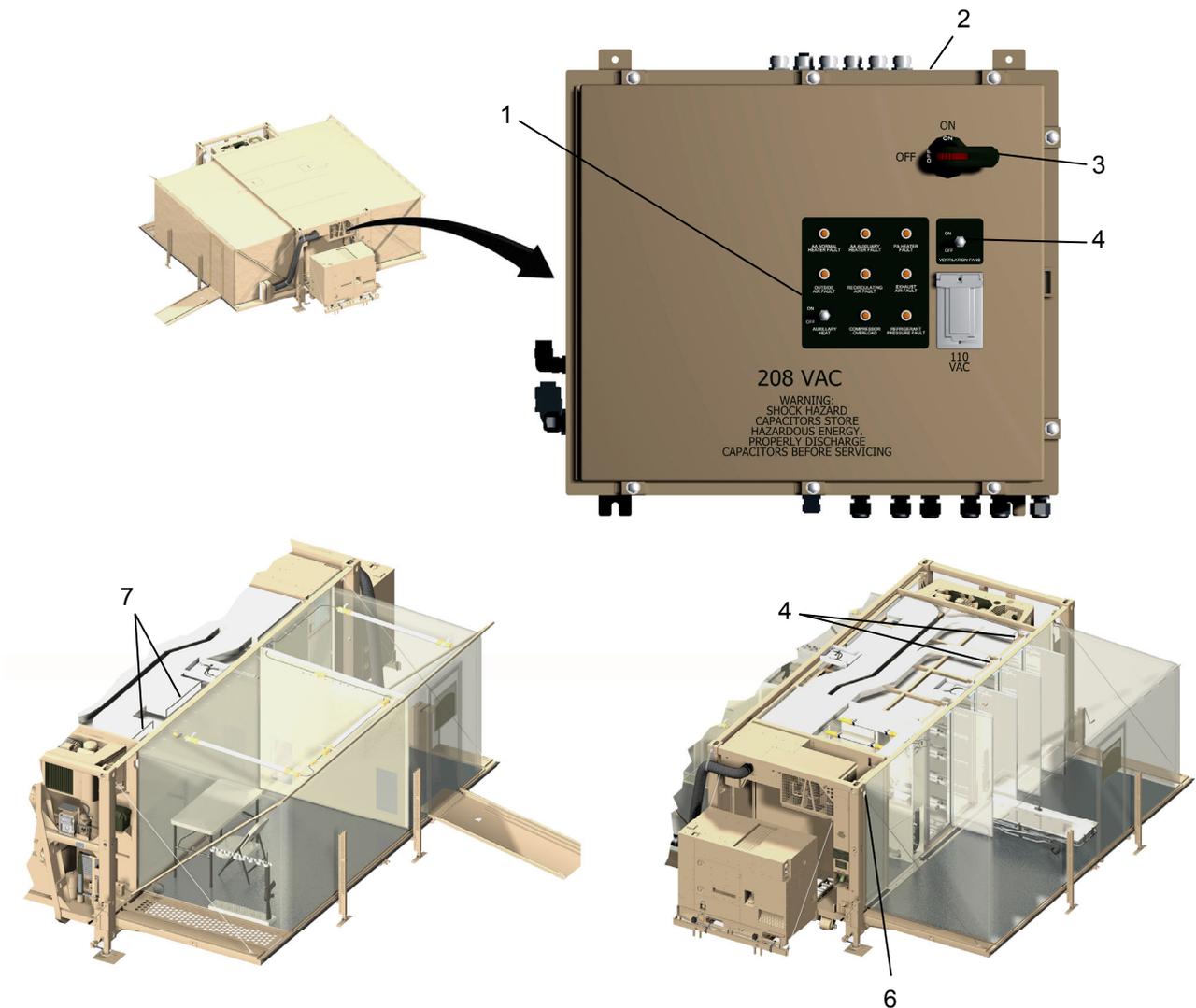


Figure 2. ECU Control Enclosure.

END OF TASK

SETTING INTERIOR WORK AREA AND RSU TEMPERATURES

1. Consult the table below to determine proper switch and temperature settings based on the outside air temperature.

Table 1. ECU/RU Operating Modes.

OUTSIDE TEMPERATURE RANGE (°F)	AUXILIARY HEAT SETTING	ALLOWABLE RU MODE	RECOMMENDED ECU MODE	RECOMMENDED THERMOSTAT SETTING (°F)
-25 TO 10	ON	ENG	HEAT	65
10 TO 55	OFF	ENG or STBY	HEAT	65
56 TO 69	OFF	ENG or STBY	OFF	N/A
70 TO 120	OFF	ENG or STBY	COOL	60

2. Set AUXILIARY HEAT switch (Figure 3, Item 2) on ECU control enclosure (Figure 3, Item 1) to the required position per Table 1.



Figure 3. Auxiliary Heat Control.

SETTING INTERIOR WORK AREA AND RSU TEMPERATURES-CONTINUED

4. At MA Operation Enclosure (Figure 4, Item 1) select proper mode for BLACKOUT switch (Figure 4, Item 2) per operational requirements.
5. Turn on interior lights as desired using switches (Figure 4, Items 3 through 6).

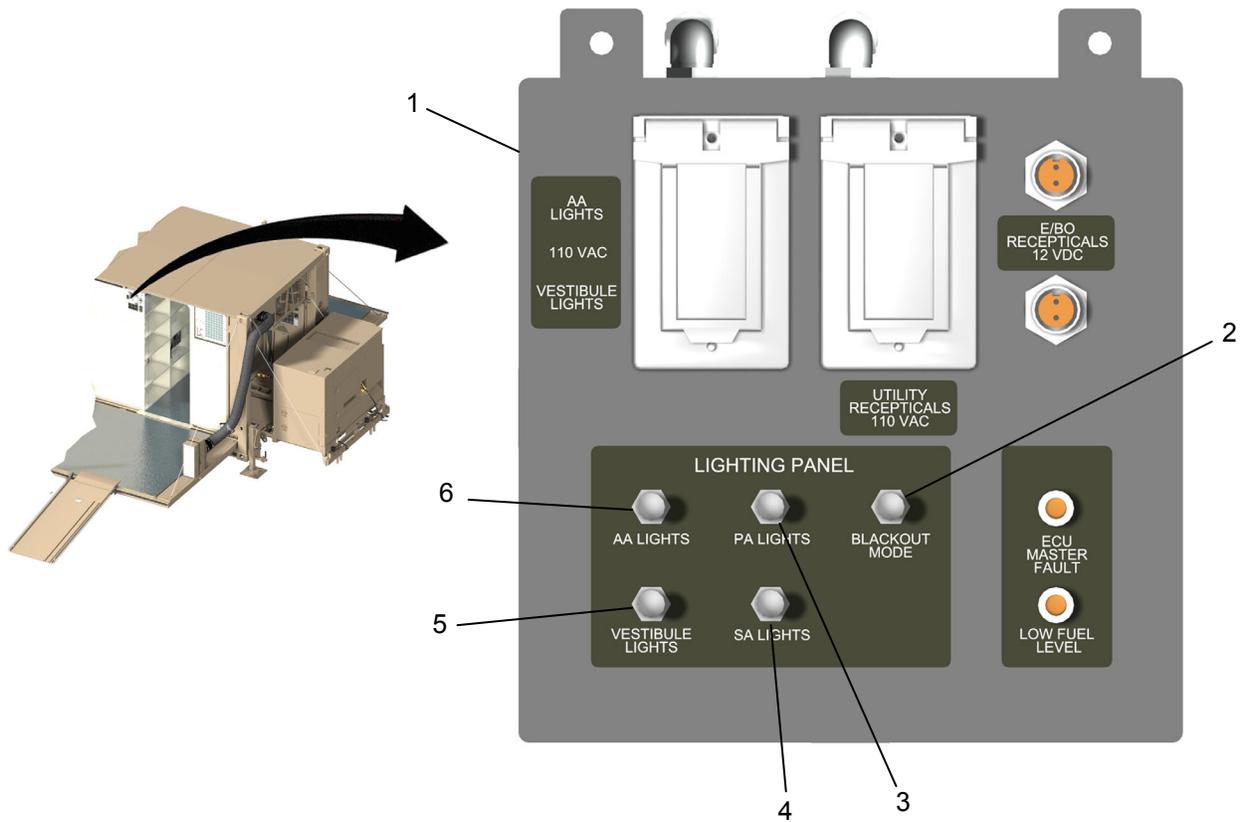


Figure 4. MA Operation Enclosure.

SETTING INTERIOR WORK AREA AND RSU TEMPERATURES-CONTINUED

6. At ECU thermostat (Figure 5, Item 2) select mode and temperature setting per Table 1 and as follows:
 - a. Loosen two captive screws (Figure 5, Item 5) then open access window (Figure 5, Item 1).
 - b. Position HEAT/OFF/COOL switch (Figure 5, Item 4) to the desired mode.
 - c. Adjust knob (Figure 5, Item 3) to desired setting between 50°F and 85°F per Table 1.
 - d. Close access window (Figure 5, item 1) then secure by finger-tightening two captive screws (Figure 5, Item 5).
7. If authorized by Table 1, switch RU operation to standby mode by pressing STANDBY key (Figure 1, Item 1).

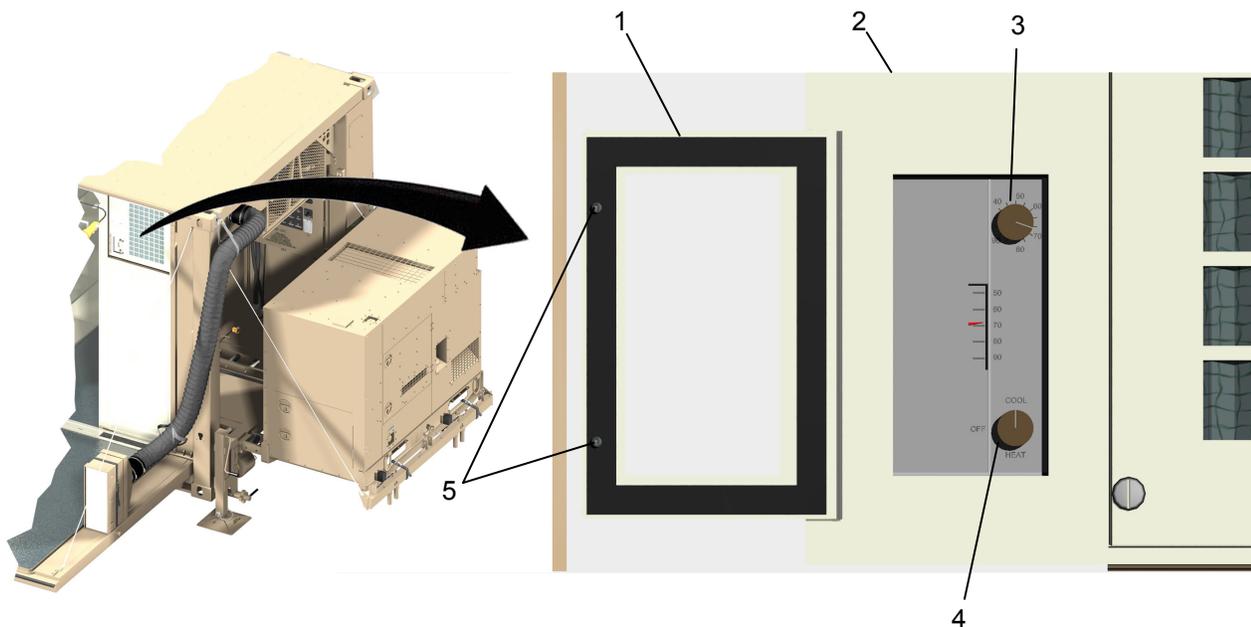


Figure 5. Setting ECU Thermostat and RU Controls.

END OF TASK

WATER SYSTEM START-UP AND OPERATION

1. Open cold and hot water levers (Figure 6, Items 2 and 4) on personnel sink faucet (Figure 6, Item 3).
2. Depress and hold foot switch (Figure 6, Item 5) below sink (Figure 6, Item 1).

NOTE

After start-up it will take the water heater about ½ hour to heat the water. Cold water will be available immediately.

All water consumed at sink and utility hose during daily operation will be collected in waste containers. Use water discipline to conserve water and limit the amount of wastewater, and frequency of changing waste containers. Always keep the hot and cold water levers on the sink faucet closed when not in use.

3. Verify a steady stream of water is flowing from faucet (Figure 6, Item 3) then release foot switch (Figure 6, Item 5) and close levers (Figure 6, Item 2 and 4). If water flow is not steady perform Water System Priming portion of INITIAL ADJUSTMENTS BEFORE USE AND SELF-TEST (WP 0009).

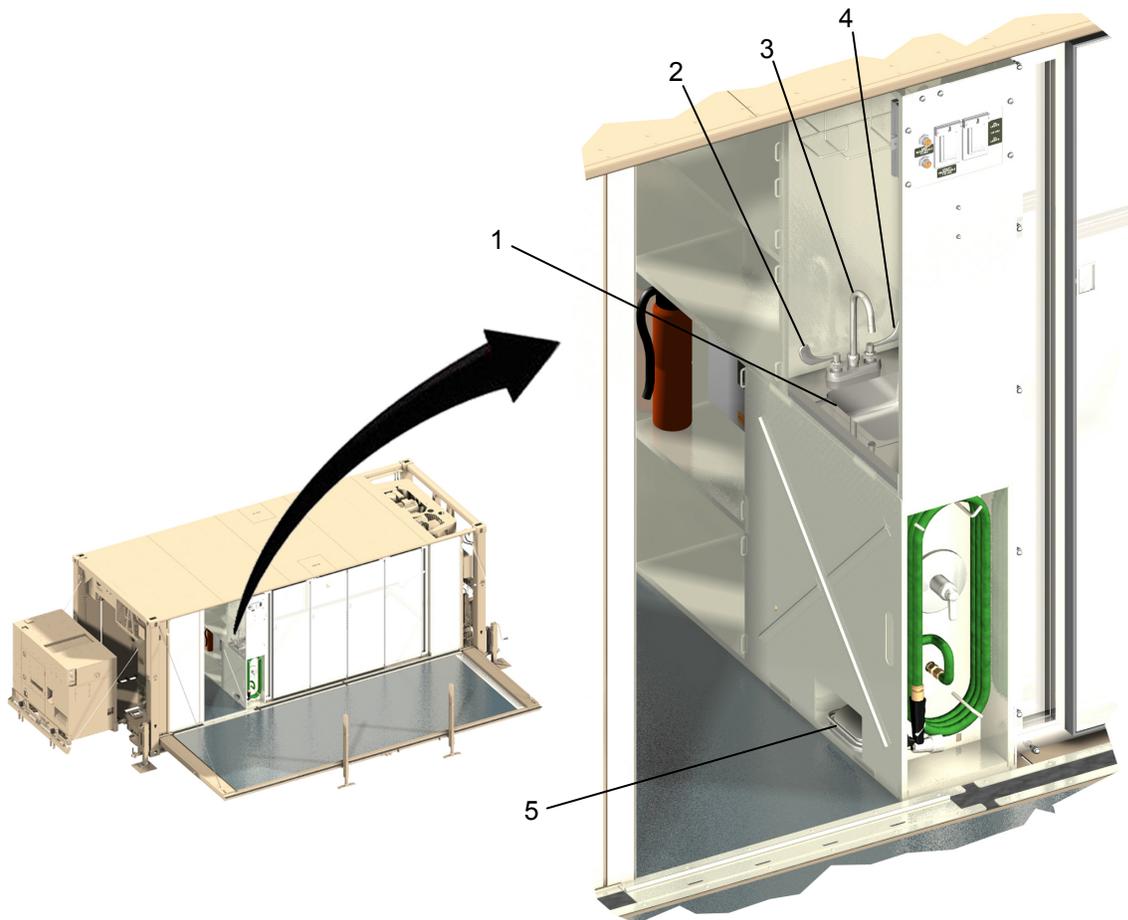


Figure 6. Water System Start-up.

END OF TASK

WATER SYSTEM START-UP AND OPERATION-CONTINUED

4. Utilize water from sink when needed as follows:
 - a. Open cold and hot water levers (Figure 7, Item 3 and 5) on personnel sink faucet (Figure 7, Item 4).
 - b. Depress and hold foot switch (Figure 7, Item 9) below sink (Figure 7, Item 10)
 - c. Adjust water temperature as desired using cold and hot water levers.
 - d. Close cold and hot water levers (Figure 7, Item 3 and 5), then release foot switch (Figure 7, Item 9) when water flow is no longer desired.
5. Utilize utility hose when needed as follows:
 - a. Fully open lever on utility hose faucet (Figure 7, Item 6).
 - b. Un-roll utility hose (Figure 7, Item 7).

NOTE

When UTILITY HOSE switch is pressed and released water pressure will be available at utility hose for 15 minutes. If additional hose usage is required the switch may be depressed and released every 15 minutes as needed.

- c. Depress and release UTILITY HOSE switch (Figure 7, Item 1) on water system junction box (Figure 7, Item 2).
- d. Squeeze spray nozzle (Figure 7, Item 8) and perform sanitizing operations as required.
- e. After sanitizing operations are completed roll-up utility hose (Figure 7, Item 7).
- f. Close lever (Figure 7, Item 6).

WATER SYSTEM START-UP AND OPERATION-CONTINUED

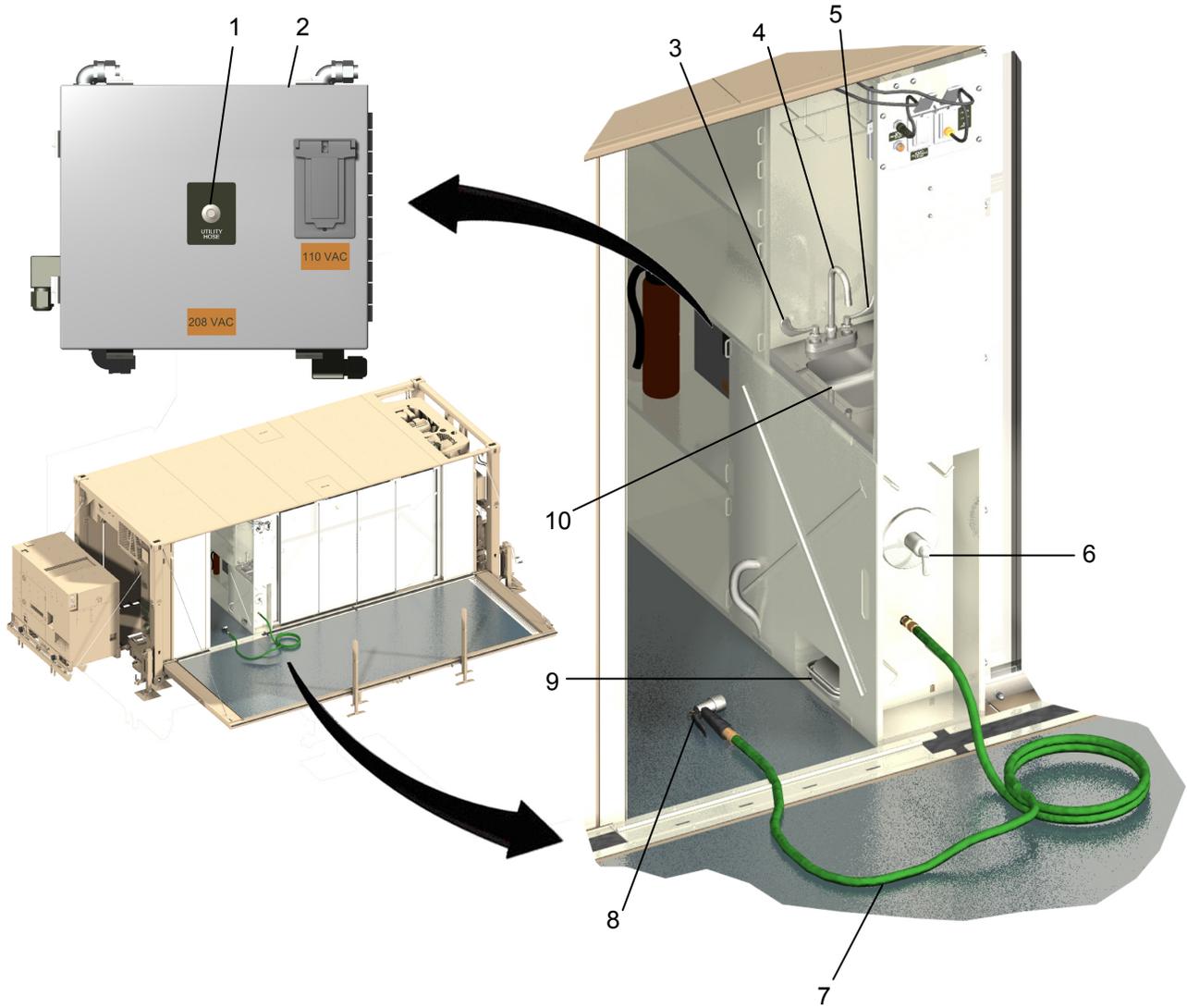


Figure 7. Water System Operation.

END OF TASK

WASTE COLLECTION**WARNING**

Wastewater generated during MA operations may contain chemical and/or bio-hazardous materials. When servicing waste containers personnel must wear impermeable gloves and goggles for protection. Failure to follow this warning may result in serious illness or death. Seek immediate medical attention if injury occurs.

Shutoff valve at inlet to waste containers must be closed prior to disconnecting drain hose. Failure to close valve may result in spilling of chemical or bio-hazardous wastewater causing exposure to improperly protected or unsuspecting personnel working nearby.

NOTE

RU waste container should be checked at least daily. Main and platform waste containers should be checked at least every four processing operations.

1. Change waste containers (Figure 8, Item 1) at main drain (Figure 8, Item 8) and platform drain (Figure 8, Item 9) as follows:
 - a. Close shutoff valve (Figure 8, Item 7) on waste hose (Figure 8, Item 6).
 - b. Unthread full indicator (Figure 8, Item 2) from waste container (Figure 8, Item 1).
 - c. Unthread vent cap (Figure 8, Item 2) from t-fitting (Figure 8, Item 5) and thread onto waste container (Figure 8, Item 1).
 - d. Disconnect waste hose (Figure 8, Item 6) from waste container (Figure 8, Item 1).
 - e. Install cap (Figure 8, Item 4) on waste container (Figure 8, Item 1).
 - f. Relocate full waste container (Figure 8, Item 1) to disposal or collection area.
 - g. Remove cap (Figure 8, Item 4) from empty waste container (Figure 8, Item 1).
 - h. Unthread vent cap (Figure 8, Item 2) from waste container (Figure 8, Item 1).
 - i. Add approximately 1 oz of bleach to waste container (Figure 8, Item 1).
 - j. Connect waste hose (Figure 8, Item 6) to waste container (Figure 8, Item 1) and tighten.
 - k. Thread full indicator (Figure 8, Item 3) onto waste container (Figure 8, Item 1).
 - l. Thread vent cap (Figure 8, Item 2) onto waste hose t-fitting (Figure 8, Item 5).
 - m. Open shutoff valve (Figure 8, Item 5).
 - n. Repeat steps a through l at platform drain (Figure 8, Item 9).

WASTE COLLECTION-CONTINUED

2. Change RU waste container (Figure 9, Item 4) as follows:
 - a. Pull drain hose (Figure 9, Item 2) from waste container (Figure 9, Item 1).
 - b. Thread caps (Figure 9, Item 1 and 3) on waste container (Figure 9, Item 4).
 - c. Push in on latch (Figure 9, Item 5) and separate strap (Figure 9, Item 6).
 - d. Remove full waste container (Figure 9, Item 4) and relocate to disposal or collection area.
 - e. Unthread cap (Figure 9, Item 1) from empty waste container (Figure 9, Item 4).
 - f. Add approximately 1 oz of bleach to waste container (Figure 9, Item 4).
 - g. Thread cap (Figure 9, Item 1) back onto waste container (Figure 9, Item 4).
 - h. Install waste container (Figure 9, Item 4) and secure with strap (Figure 9, Item 6).
 - i. Remove cap (Figure 9, Item 1) and back off vent cap (Figure 9, Item 3) but do not remove.
 - j. Push drain hose (Figure 9, Item 2) back into waste container (Figure 9, Item 4).
3. If authorized, dispose of waste container contents as follows, otherwise collect waste containers to transport back to approved bio-hazardous waste disposal facility.
 - a. Gently shake waste containers for about 1 minute to allow bleach to mix with wastewater.
 - b. Unthread cap (Figure 9, Item 7) and pour contents into approved disposal area.
 - c. Thread cap (Figure 9, Item 7) back onto waste container (Figure 9, Item 4).

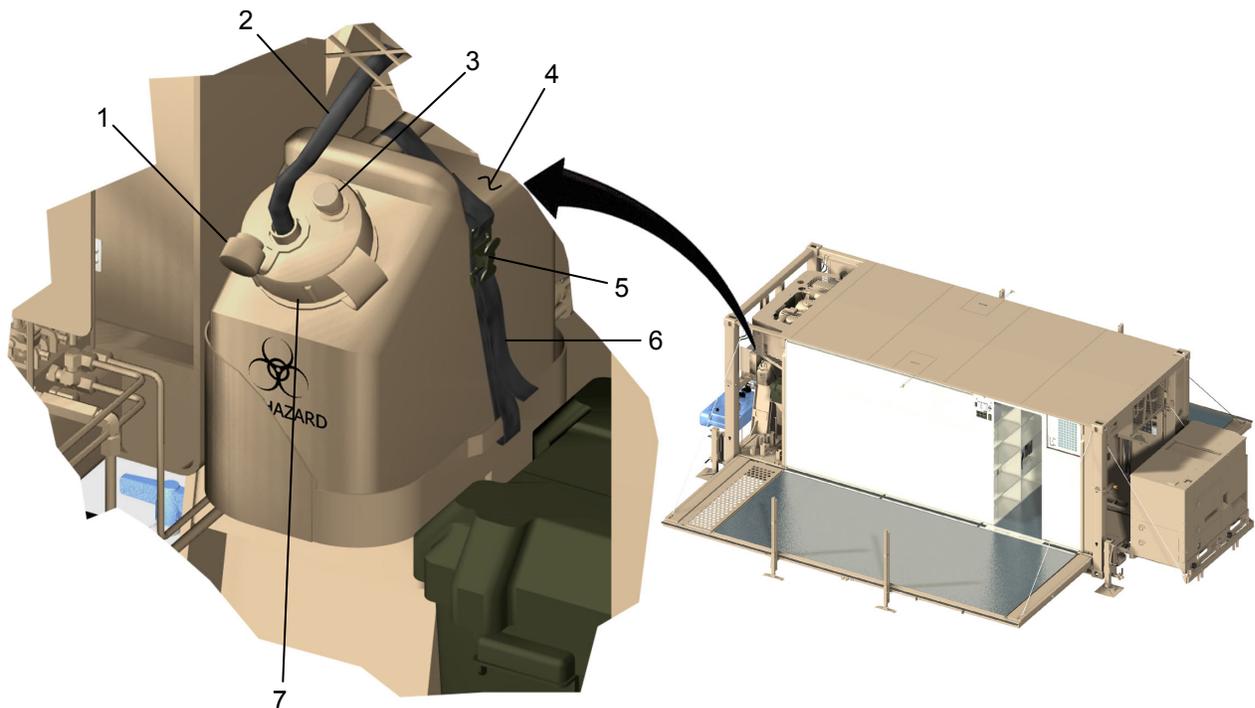


Figure 9. Changing RU Waste Container.

END OF TASK

MPP AND TRANSFER OPERATIONS**NOTE**

When transferring remains into or out of top row of RSU it will be necessary to use MPP extension.

1. Determine location in RSU (Figure 10, Item 1) where remains will be transferred. If MPP extension (Figure 10, Item 7) is required continue to step 2, otherwise proceed to step 3.

CAUTION

When installing extension on top of MPP make sure that end legs and side legs are properly attached. Failure to support extension along its entire length can result in damage to extension or MPP frame when a load is applied.

2. Attach extension (Figure 10, Item 7) to MPP (Figure 10, Item 6) as follows:
 - a. Unfasten straps (Figure 10, Item 2) and fold down end legs (Figure 10, Item 3) and side legs (Figure 10, Item 4).
 - b. Pull QC pins (Figure 10, Item 5) out of end legs (Figure 10, Item 3).
 - c. Place extension (Figure 10, Item 7) on top of MPP (Figure 10, Item 6).
 - d. Insert QC pins (Figure 10, Item 5) to secure end legs (Figure 10, Item 3) to MPP (Figure 10, Item 6).

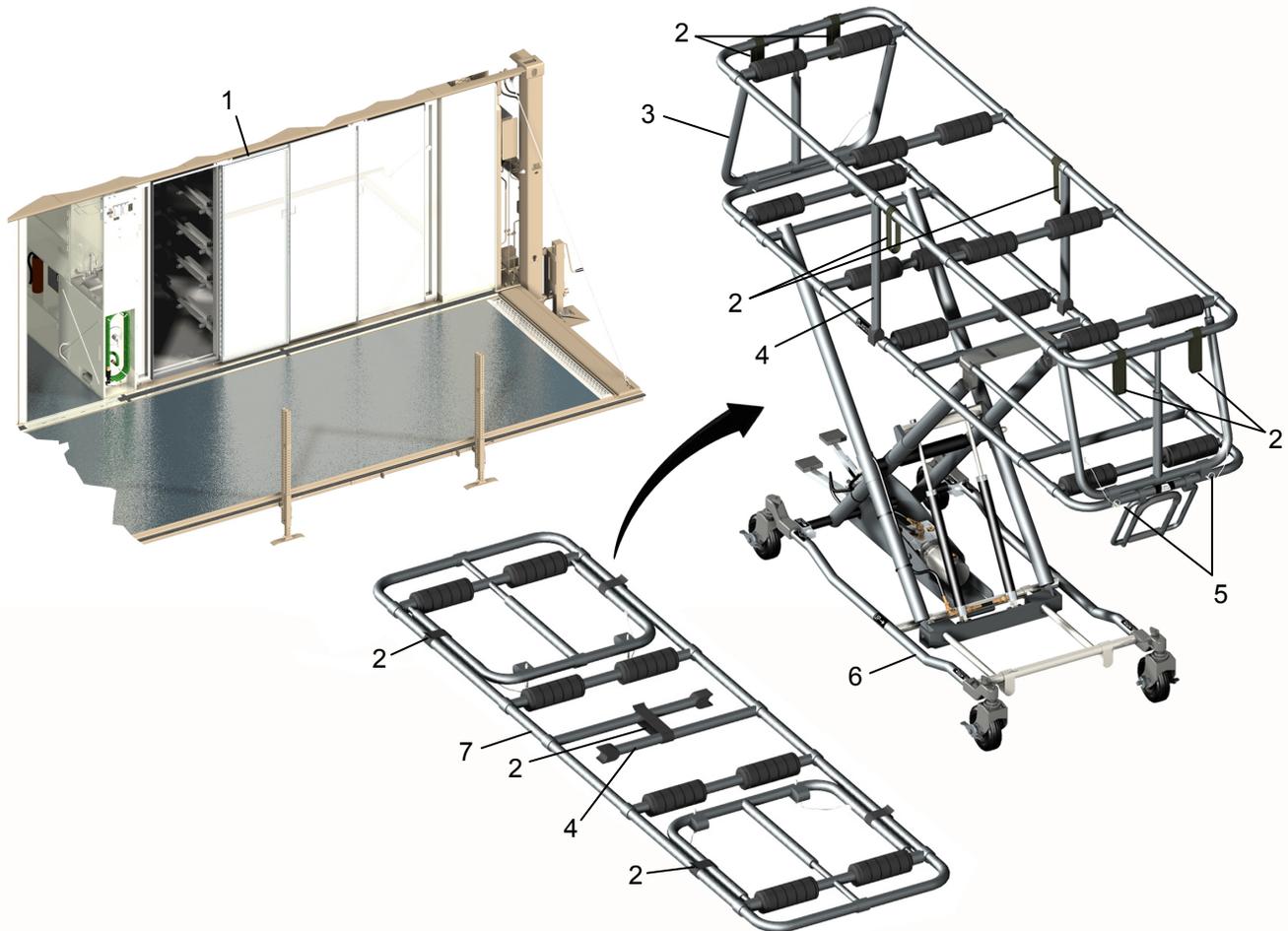


Figure 10. Extension to MPP Attachment.

MPP TRANSFER OPERATIONS-CONTINUED

NOTE

Remains will be transferred into RSU feet first and removed headfirst. In order to maintain the correct orientation, remains will be moved up and down ramp feet first. The MPP should always be moved up and down the ramp with the pull handle on the incline side (towards the MIRCS).

3. Open RSU door (Figure 11, Item 4).
4. With a person on each side of MPP (Figure 11, Item 5), position MPP in front of door opening as follows:
 - a. Position swivel locks (Figure 11, Item 7) to unlocked position.
 - b. Unlock all four wheel brakes (Figure 11, Item 8).
 - c. Orient MPP (Figure 11, Item 5) with pull handle (Figure 11, Item 6) away from door opening.
 - d. Set all four wheel brakes (Figure 11, Item 8).
 - e. Adjust height of MPP (Figure 11, Item 5) using foot pedals (Figure 11, Item 9), until rollers (Figure 11, Item 3) are slightly below bottom of tray (Figure 11, Item 2).
5. Pull QC pin (Figure 11, Item 1) then slide tray (Figure 11, Item 2) onto MPP (Figure 11, Item 5).
6. Release wheel brakes (Figure 11, Item 8) then rotate MPP (Figure 11, Item 5) until it is clear of RSU door (Figure 11, Item 4).
7. Close RSU door (Figure 11, Item 4).

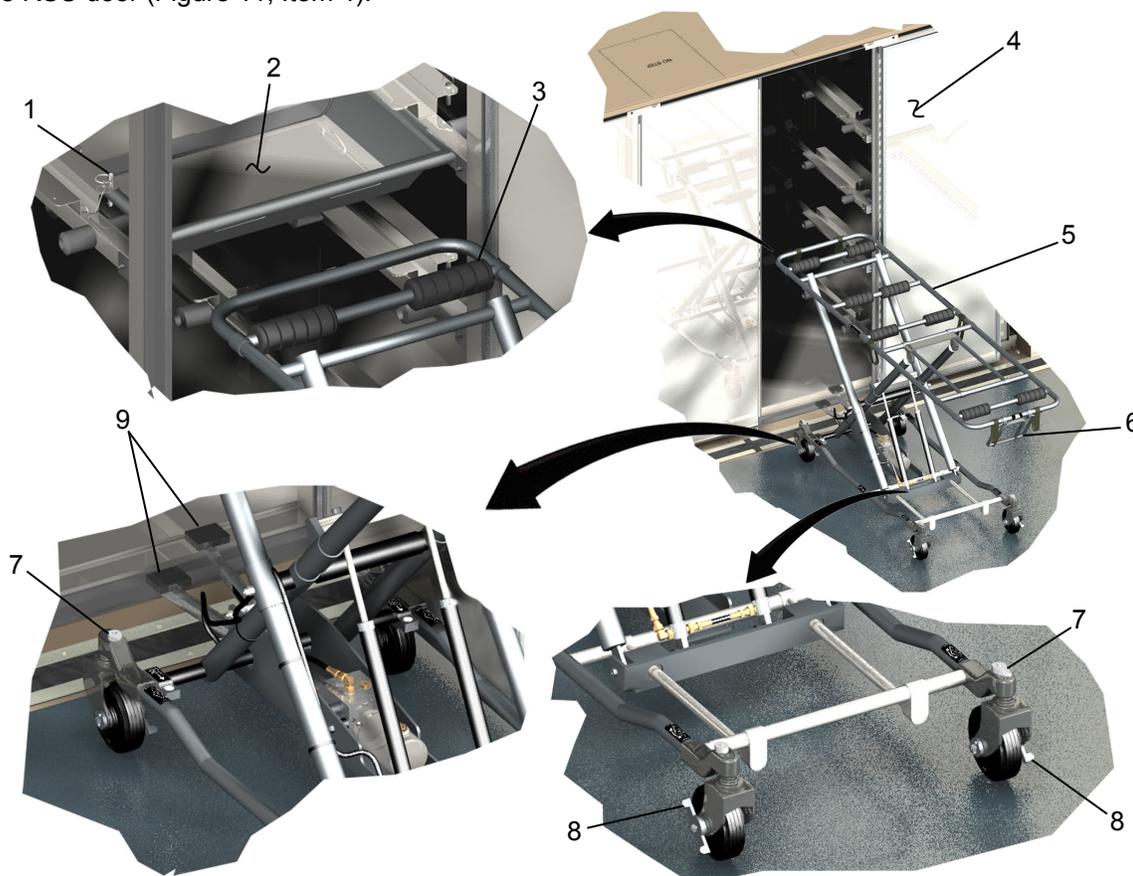


Figure 11. Transferring Tray from RSU to MPP.

TRANSFER OPERATIONS-CONTINUED**WARNING**

When moving MPP up and down ramps there should be a person at each end. The tray must be properly secured to the MPP and the swivel locks must be engaged during movement. Failure to follow this precaution may cause serious injury to personnel and accidental tipping of the MPP. Seek immediate medical attention if injury occurs.

8. Adjust MPP (Figure 12, Item 1) to waist height using foot pedals (Figure 12, Item 12).
9. Secure tray (Figure 12, Item 5) to MPP (Figure 12, Item 1) with six straps (Figure 12, Item 6).
10. Open vestibule door (Figure 12, Item 2).
11. Position MPP (Figure 12, Item 1) in front of door opening with pull handle (Figure 12, Item 7) on incline side of ramp (Figure 12, Item 13). (Do not move MPP down ramp at this time).
12. Align casters (Figure 12, Item 9) with ramp guide (Figure 12, Item 8).
13. Position swivel locks (Figure 12, Item 10) to locked position.
14. With personnel at each end of MPP (Figure 12, Item 5), move MPP down ramp (Figure 12, Item 13).
15. When MPP (Figure 12, Item 1) is at base of ramp (Figure 12, Item 14) set all four wheel brakes (Figure 12, Item 11).
16. Remove four straps (Figure 12, Item 4) attached to D-rings (Figure 12, Item 3).
17. Transfer remains onto or off of tray (Figure 12, Item 5) ensuring they are oriented to travel up the ramp feet first.
18. Attach four straps (Figure 12, Item 4) through D-rings (Figure 12, Item 3) and tighten.

TRANSFER OPERATIONS-CONTINUED

19. With personnel firmly holding MPP (Figure 13, Item 10) at both sides, release wheel brakes (Figure 13, Item 8).
20. Move MPP (Figure 13, Item 9) up ramp (Figure 13, Item 17) through vestibule door (Figure 13, Item 1).
21. Once inside, position swivel locks (Figure 13, Item 7) to unlocked position and move MPP (Figure 13, Item 10) into processing area.

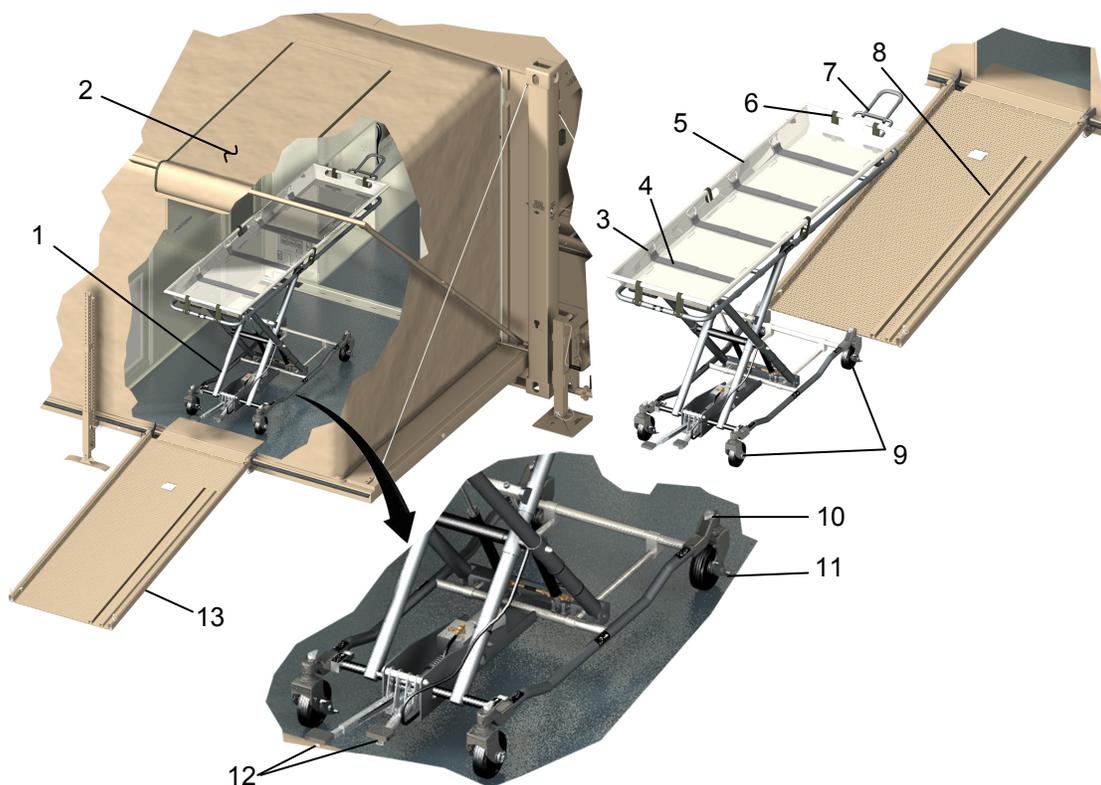


Figure 12. Moving MPP Down and Up Incline.

TRANSFER OPERATIONS-CONTINUED**WARNING**

Vestibule door should be kept closed unless active transfer operations are in process. Leaving door open will prevent proper air circulation inside work areas and reduce the effectiveness of the ECU in trying to maintain temperature set at the thermostat. Failure to follow this guidance may result in personnel working inside the MIRCS being exposed to unsafe levels of airborne pathogens causing serious illness. Seek medical attention if illness occurs.

22. Close vestibule door (Figure 13, Item 1).
23. Process remains per unit SOP. When completed continue to step 24.

CAUTION

Remains pouch and straps must not extend past sides of tray when transferring in and out of RSU. Failure to follow this precaution can result in tearing of pouch or damage to roller tracks.

24. Open RSU door (Figure 13, Item 5) where tray (Figure 13, Item 3) is to be placed.
25. With a person on each side of MPP (Figure 13, Item 10), position MPP in front of door opening as follows:
 - a. Orient MPP (Figure 13, Item 9) with pull handle (Figure 13, Item 11) toward RSU door opening.
 - b. Set all four wheel brakes (Figure 13, Item 8)
 - c. Adjust height of MPP (Figure 13, Item 10) using foot pedals (Figure 13, Item 9), until tray (Figure 13, Item 3) is slightly above rollers (Figure 13, Item 4).
26. Remove six straps (Figure 13, Item 6).
27. Slide tray (Figure 13, Item 3) into RSU.
28. Insert QC pin (Figure 13, Item 2) to secure tray (Figure 13, Item 3).
29. Release wheel brakes (Figure 13, Item 8) then rotate MPP (Figure 13, Item 10) until it is clear of RSU door (Figure 13, Item 5).
30. Close RSU door (Figure 13, Item 5).
31. Repeat steps 4 through 30 for additional transfers or proceed to step 32.
32. If extension (Figure 13, Item 15) was used, detach from MPP (Figure 13, Item 10) as follows:
 - a. Transfer six straps (Figure 13, Item 6) from extension (Figure 13, Item 15) back to MPP (Figure 13, Item 9)
 - b. Pull QC pins (Figure 13, Item 13) out of end legs (Figure 13, Item 12).
 - c. Remove extension (Figure 13, Item 15) from MPP (Figure 13, Item 10).

TRANSFER OPERATIONS-CONTINUED

- d. Insert QC pins (Figure 13, Item 13) back into end legs (Figure 13, Item 12).
- e. Fold end legs (Figure 13, Item 12) and side legs (Figure 13, Item 14) and secure with straps (Figure 13, Item 16).

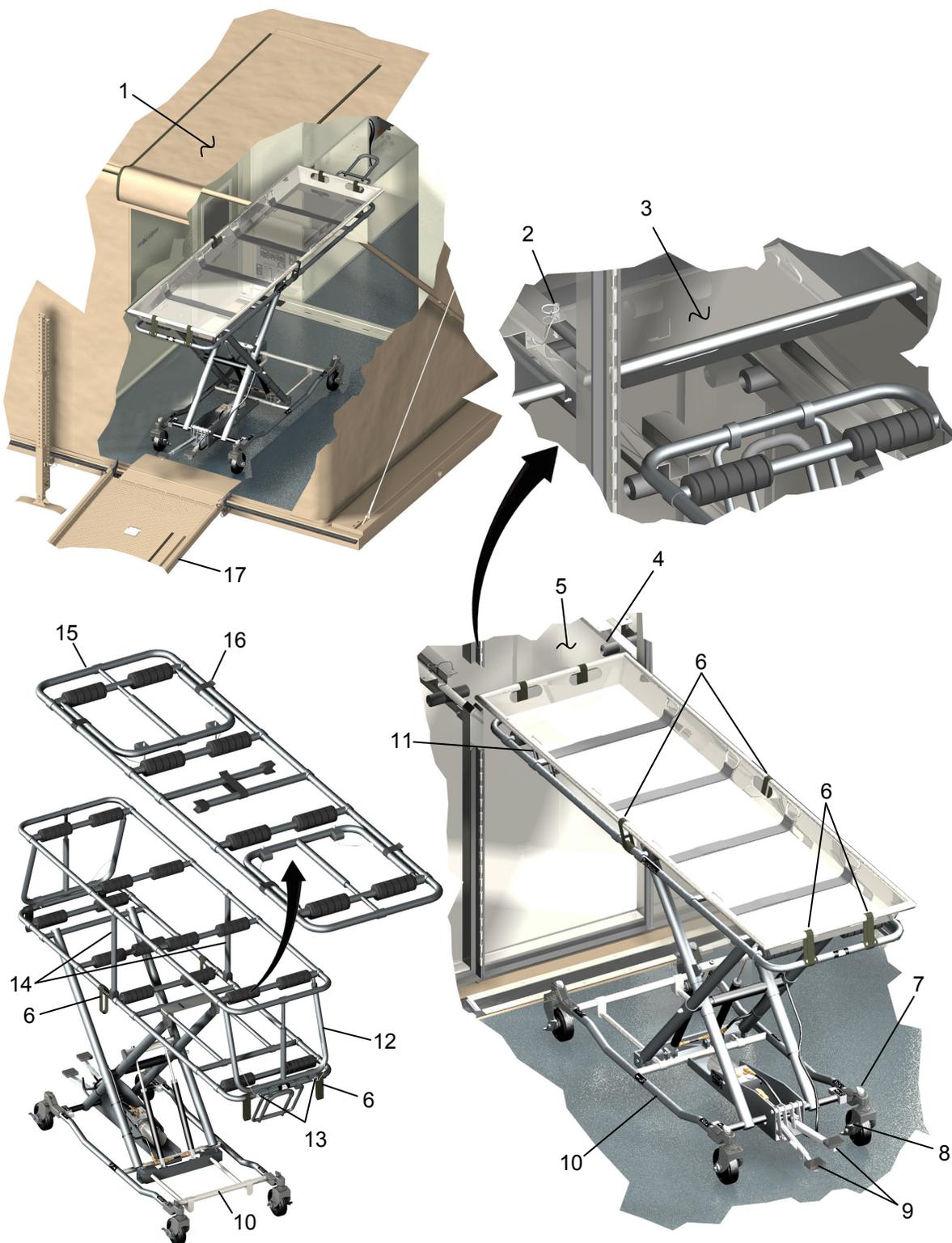


Figure 13. Transferring Tray from MPP to RSU.

END OF TASK

ECU SHUTDOWN

1. At ECU thermostat (Figure 14, Item 3) turn off heating or cooling as follows:
 - a. Loosen two captive screws (Figure 14, Item 1) then open access window (Figure 14, Item 2).
 - b. Position HEAT/OFF/COOL switch (Figure 14, Item 4) to OFF.
 - c. Close access window (Figure 14, item 2) then secure by finger-tightening two captive screws (Figure 14, Item 1).
2. At ECU control enclosure (Figure 14, Item 5) position VENTILATION FANS switch (Figure 14, Item 6) to OFF.

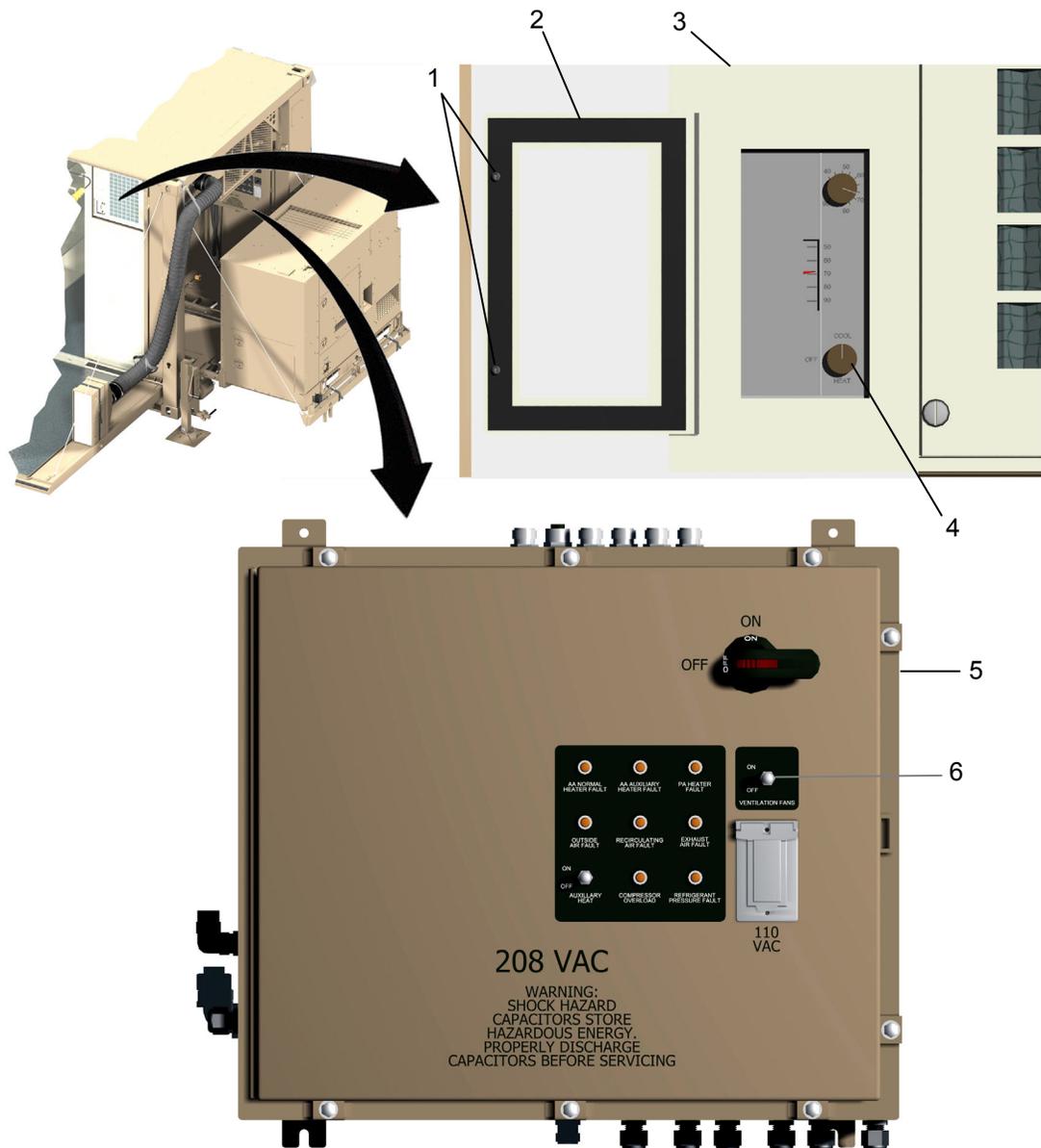


Figure 14. ECU Thermostat and Ventilation Fan Controls.

END OF TASK

RU SHUTDOWN

NOTE

The RU can be left operating in engine mode or turned off completely as desired. High engine speed (ROAD) is only required during very high and low outside temperatures or when the RSU being opened and closed frequently. Operating the RU in low engine speed (CITY) will make the RU run quieter and reduce fuel usage.

1. Determine if RU operation in engine mode or a complete RU shut down is desired. Perform step 2 for a complete shut down or step 3 to switch to engine mode.
2. At RU control enclosure (Figure 15, Item 1) position I/O switch (Figure 15, Item 4) to O.
3. Press ROAD key (Figure 15, Item 3) or CITY key (Figure 15, Item 2) as desired to switch to engine mode.

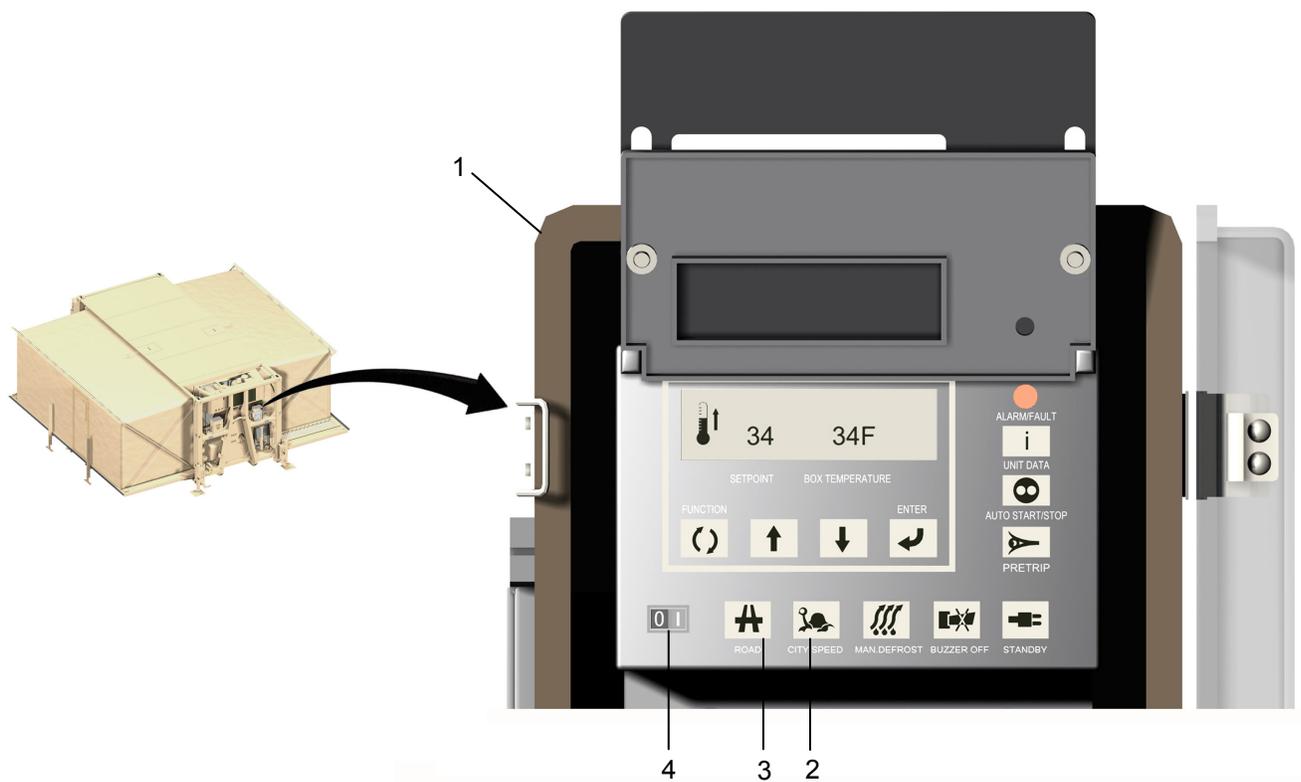


Figure 15. RU Controls.

END OF TASK

SHUT DOWN WATER SYSTEM**CAUTION**

If temperatures are expected to drop below 33°F the water system must either be drained or the necessary precautions must be performed as described in **Operation In Cold** (WP 0013). Failure to either properly drain the system or prepare for cold weather operation will cause freeze damage to system plumbing and components.

1. If MIRCS is only being shut down as part of daily operation and temperatures are not expected to go below 33°F continue to step 2. If MIRCS is going to be prepared for movement or freezing temperatures are expected perform Drain Water System.
2. Verify hot and cold levers (Figure 16, Items 1 and 3) on sink faucet (Figure 16, Item 2) are closed.
3. Verify lever on utility hose faucet (Figure 16, Item 4) is closed. Proceed to Shut Down Waste System.

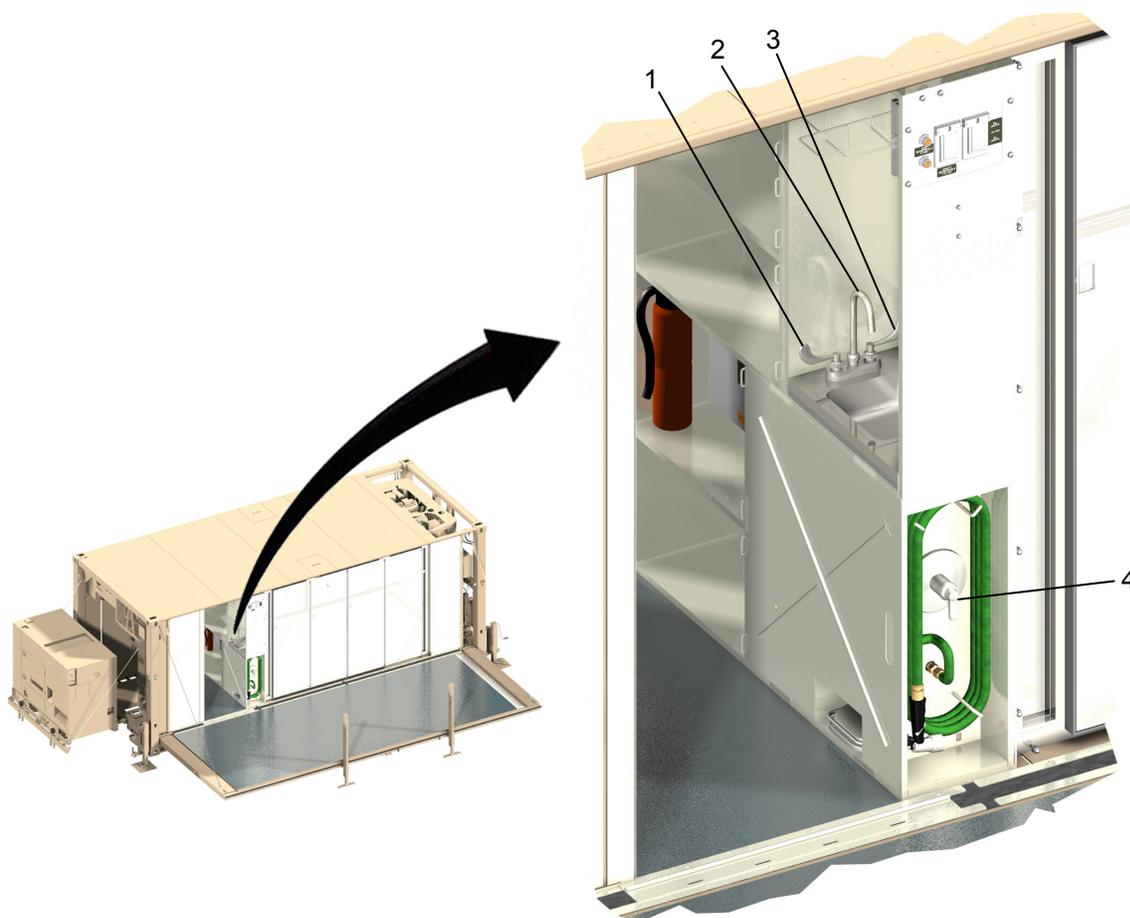


Figure 16. Water System Shutdown.

END OF TASK

DRAIN WATER SYSTEM

1. Close shutoff valve at water source.
2. Disconnect water hose (Figure 17, Item 6) at water source.
3. Disconnect water hoses (Figure 17, Items 6 and 8) at external water pump (Figure 17, Item 1).
4. Disconnect water hose (Figure 17, Item 8) at water port (Figure 17, Item 7).
5. Roll up water hoses (Figure 17, Item 6 and 8) and allow all residual water to drain out of hoses.
6. Open drain valve (Figure 17, Item 4) on external water pump Y-strainer (Figure 17, Item 5).
7. Open drain valve (Figure 17, Item 3) on external water plumbing (Figure 17, Item 2).
8. Open hot and cold water levers (Figure 17, Item 23 and 24) on sink (Figure 17, Item 22).
9. Open utility hose diverter valve (Figure 17, Item 12).
10. Disconnect utility hose (Figure 17, Item 13) and drain water out as follows:
 - a. Place end of hose (Figure 17, Item 13) under drain grate (Figure 17, Item 9).
 - b. Unroll hose (Figure 17, Item 13) and allow water to drain out.
 - c. Roll hose (Figure 17, Item 13) back onto hooks (Figure 17, Item 11). **Do not** reconnect hose.
11. Open all inside water system valves as follows:
 - a. Slide water system access panel (Figure 17, Item 10) out of shelving unit (Figure 17, Item 25).
 - b. Verify drain hoses (Figure 17, Item 16 and 17) are inserted into drain ports (Figure 17, Item 14 and 15).
 - c. Open drain valve (Figure 17, Item 18) on water plumbing (Figure 17, Item 20).
 - d. After all water has drained out of water plumbing (Figure 17, Item 20) close drain valve (Figure 17, Item 18).
 - e. Open drain valve (Figure 17, Item 19) on water heater (Figure 17, Item 21).
 - f. After all water has drained out of water heater (Figure 17, Item 21) close drain valve (Figure 17, Item 19).
 - g. Slide water system access panel (Figure 17, Item 10) back into shelving unit (Figure 17, Item 25).

SHUT DOWN WASTE SYSTEM**WARNING**

Wastewater generated during MA operations may contain chemical and/or biohazardous materials. When servicing waste containers personnel must wear impermeable gloves and goggles for protection. Failure to follow this warning may result in serious illness or death.

Shutoff valve at inlet to waste containers must be closed prior to disconnecting drain hose. Failure to close valve may result in spilling of chemical or biohazardous wastewater causing exposure to improperly protected or unsuspecting personnel working nearby.

CAUTION

If temperatures are expected to drop below 33°F the waste piping must be drained and the collection containers must be either emptied or placed in an area where they will not be exposed to freezing temperatures. Follow guidance provided in **Operation in Cold** (WP 0013). Failure to either properly drain the system or prepare for cold weather operation will cause freeze damage to system piping and containers.

1. If MIRCS is only being shut down as part of daily operation and temperatures are not expected to go below 33°F proceed to TURN OFF MAIN POWER. If MIRCS is going to be prepared for movement or freezing temperatures are expected continue to step 2.
2. Remove waste containers (Figure 18, Item 2) at main drain (Figure 18, Item 8) and platform drain (Figure 18, Item 9) as follows:
 - a. Close shutoff valve (Figure 18, Item 6) on waste hose (Figure 18, Item 7).

NOTE

If waste container is full, it will be necessary to attach a second container to drain hose to ensure that wastewater is completely drained from piping.

- b. Observe full indicator (Figure 18, Item 4). If container is completely full, a second container will need to be installed after step h is completed to complete draining of waste system.
- c. Unthread vent cap (Figure 18, Item 3) from waste hose t-fitting (Figure 18, Item 5).
- d. Unthread full indicator (Figure 18, Item 4) from waste container (Figure 18, Item 2).
- e. Thread full indicator (Figure 18, Item 4) onto top of waste hose t-fitting (Figure 18, Item 5).
- f. Thread vent cap (Figure 18, Item 3) on waste container (Figure 18, Item 2).
- g. Disconnect waste hose (Figure 18, Item 7) from waste container (Figure 18, Item 2).
- h. Install cap (Figure 18, Item 1) on waste container (Figure 18, Item 2).
- i. Relocate full waste container (Figure 18, Item 2) to disposal or collection area.
- j. If container was determined to be completely full in step b, continue to step k, otherwise continue to step r.

SHUT DOWN WASTE SYSTEM-CONTINUED

- k. Remove cap (Figure 18, Item 1) from empty waste container (Figure 18, Item 2).
 - l. Unthread vent cap (Figure 18, Item 3) from waste container (Figure 18, Item 1) and thread onto t-fitting (Figure 18, Item 5).
 - m. Add approximately 1 oz of bleach to waste container (Figure 18, Item 2).
 - n. Connect waste hose (Figure 18, Item 7) to waste container (Figure 18, Item 2) and tighten.
 - o. Thread full indicator (Figure 18, Item 4) onto waste container (Figure 18, Item 2).
 - p. Open shutoff valve (Figure 18, Item 6).
 - q. Allow waste piping to completely drain into second container then repeat steps e through h.
 - r. Repeat steps a through q at platform drain (Figure 18, Item 9).
3. If authorized, dispose of waste container contents as follows, otherwise collect waste containers to transport back to approved bio-hazardous waste disposal facility.
 - a. Gently shake waste containers (Figure 18, Item 2) for about 1 minute to allow bleach to mix with wastewater.
 - b. Remove caps (Figure 18, Item 1) and pour contents into approved disposal area.
 - c. Reinstall caps (Figure 18, Item 1).

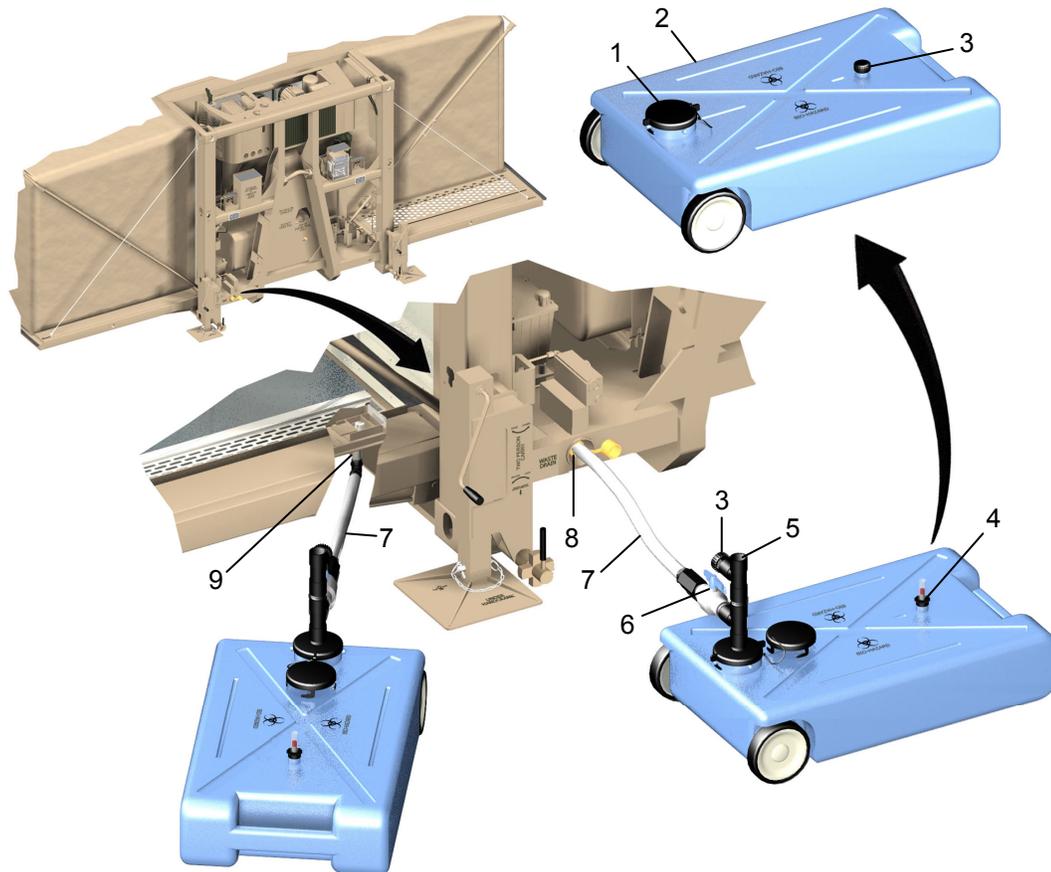


Figure 18. Draining Waste System.

END OF TASK

TURN OFF MAIN POWER

NOTE

When main power is removed the emergency lights will come on for 5 minutes then automatically turn off.

1. At MA operation enclosure (Figure 19, Item 1) turn off interior lights using switches (Figure 19, Item 4).
2. At ECU control enclosure (Figure 19, Item 2) position MAIN DISCONNECT switch (Figure 19, Item 3) to OFF.
3. Shutdown MEP-804A generator (TM 9-6115-643-10) or remove external power as required.

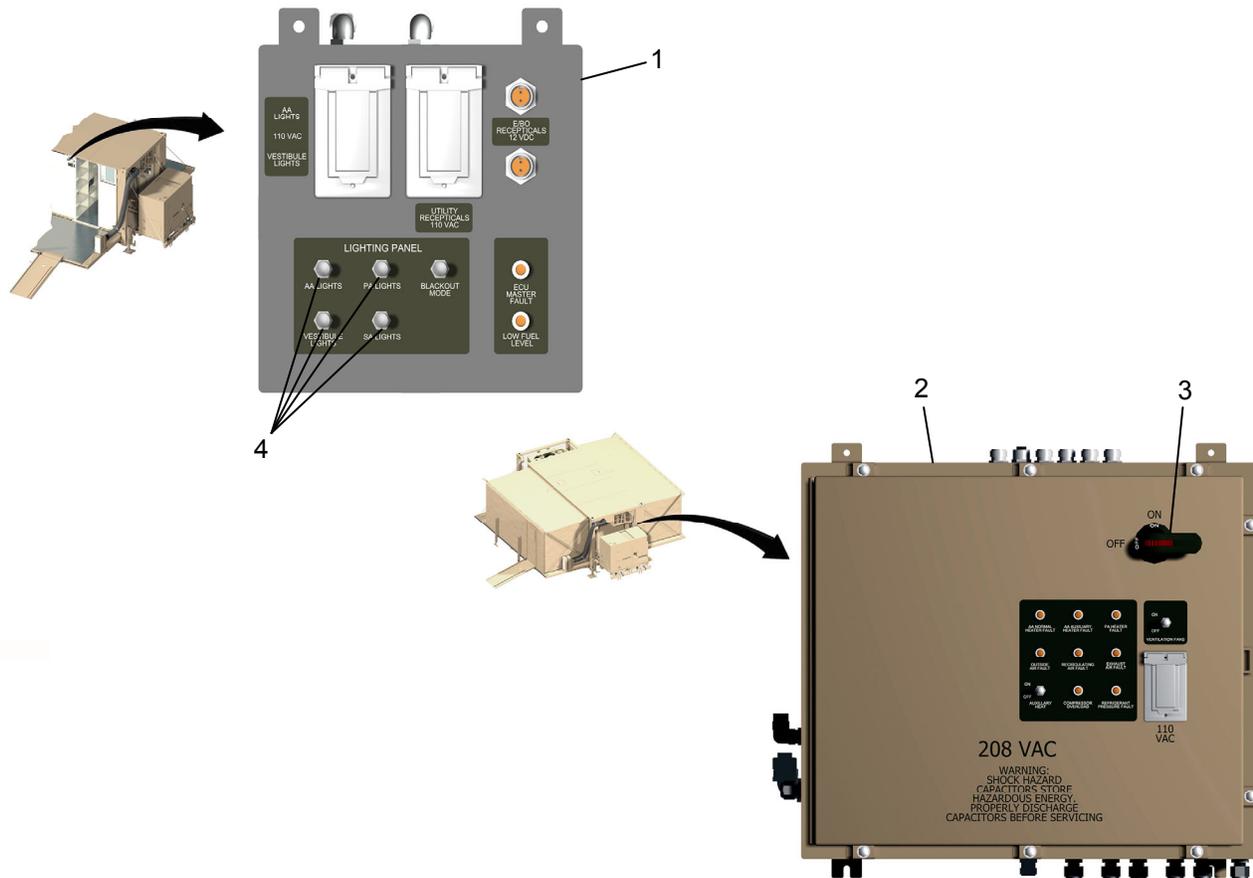


Figure 19. Turning Off Main Power from MIRCS.

END OF TASK

END OF WORK PACKAGE

**CREW MAINTENANCE
OPERATION UNDER USUAL CONDITIONS
DECALS AND INSTRUCTION PLATES**

DECALS AND INSTRUCTION PLATES

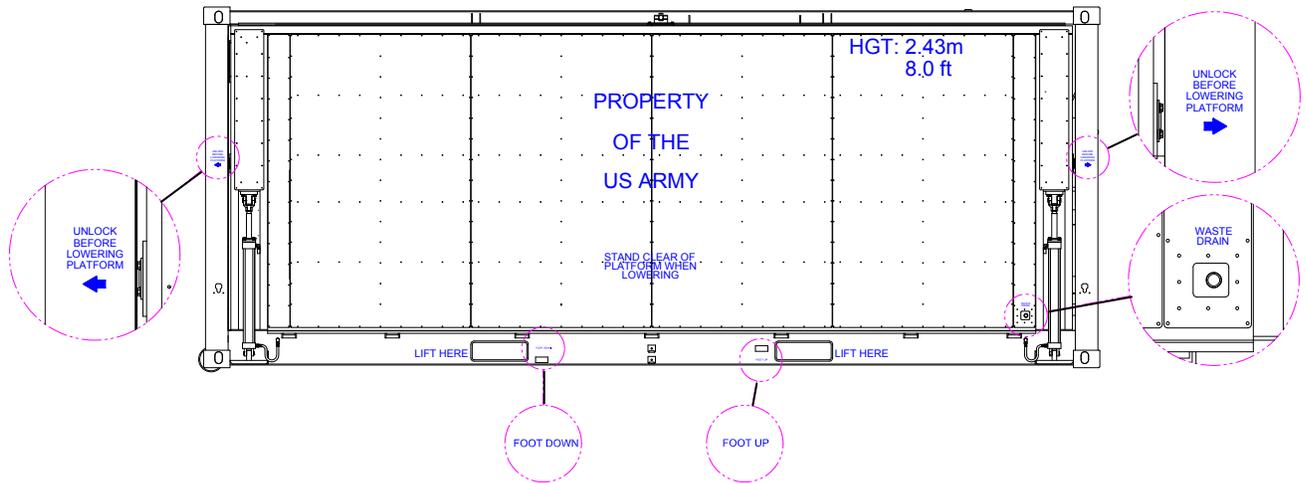


Figure 1. MIRCS Curbside Markings.

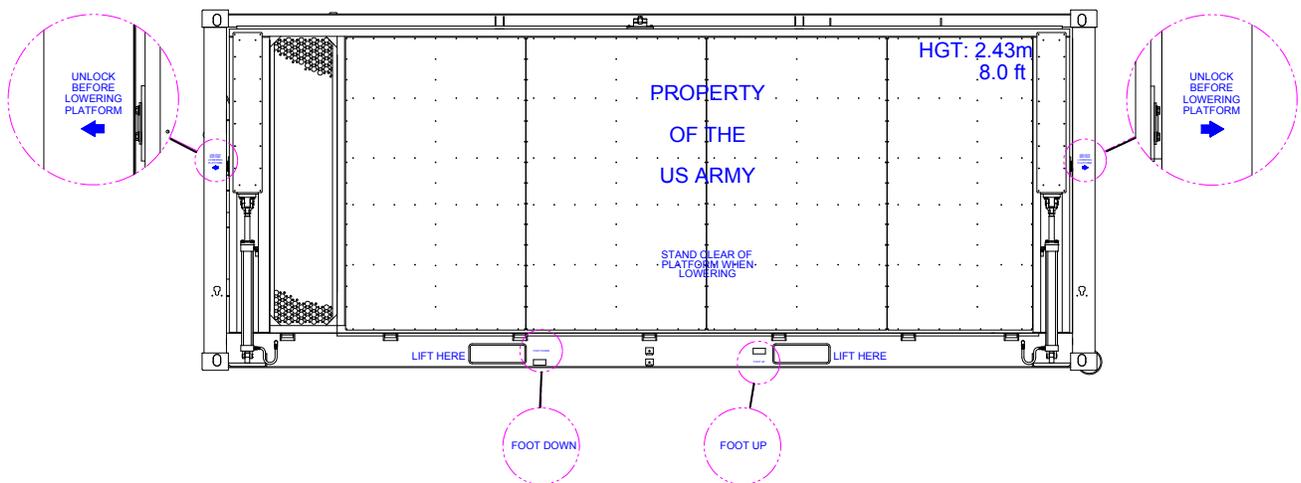


Figure 2. MIRCS Roadside Markings.

DECALS AND INSTRUCTION PLATES-CONTINUED

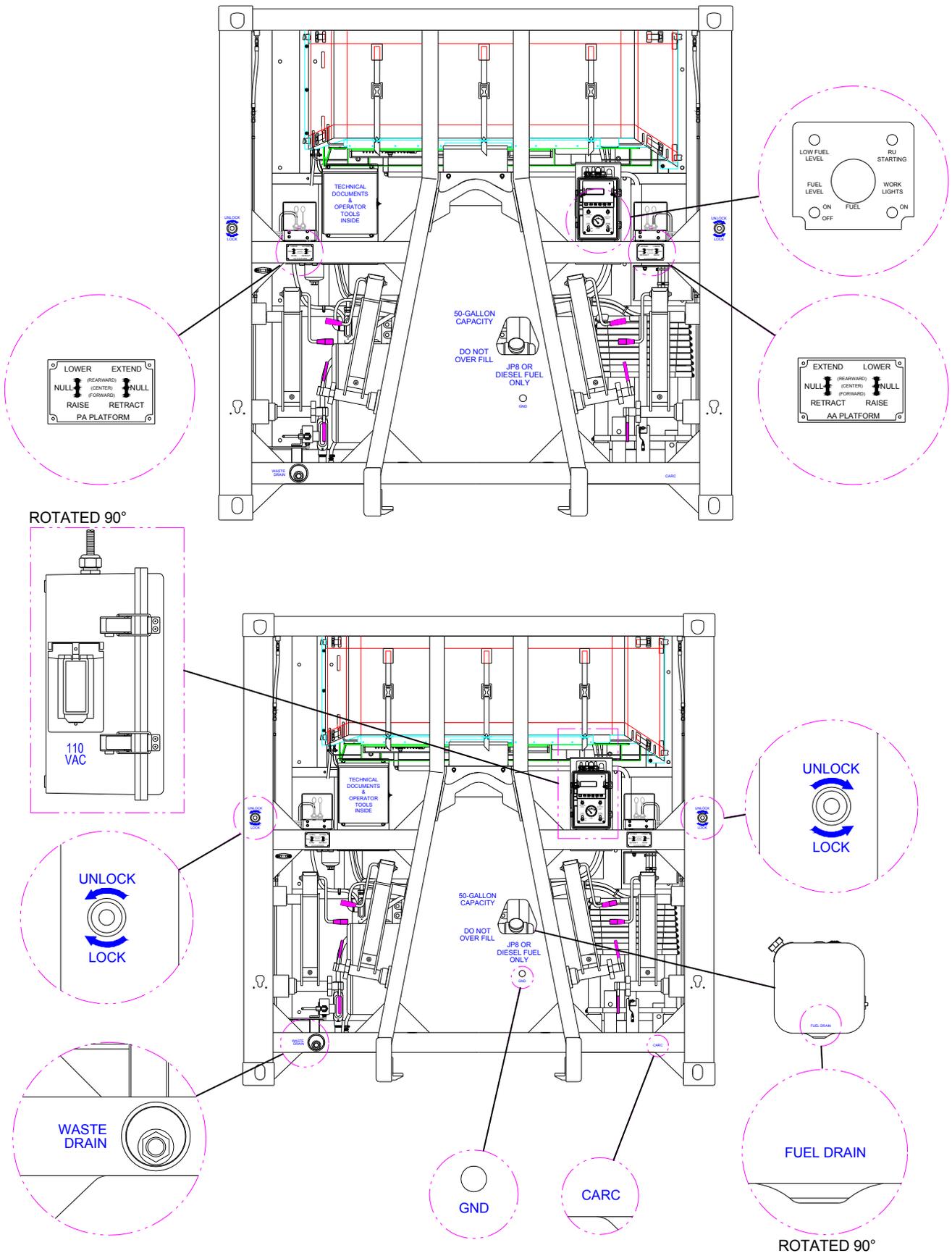


Figure 3. MIRCS Front Markings.

DECALS AND INSTRUCTION PLATES-CONTINUED

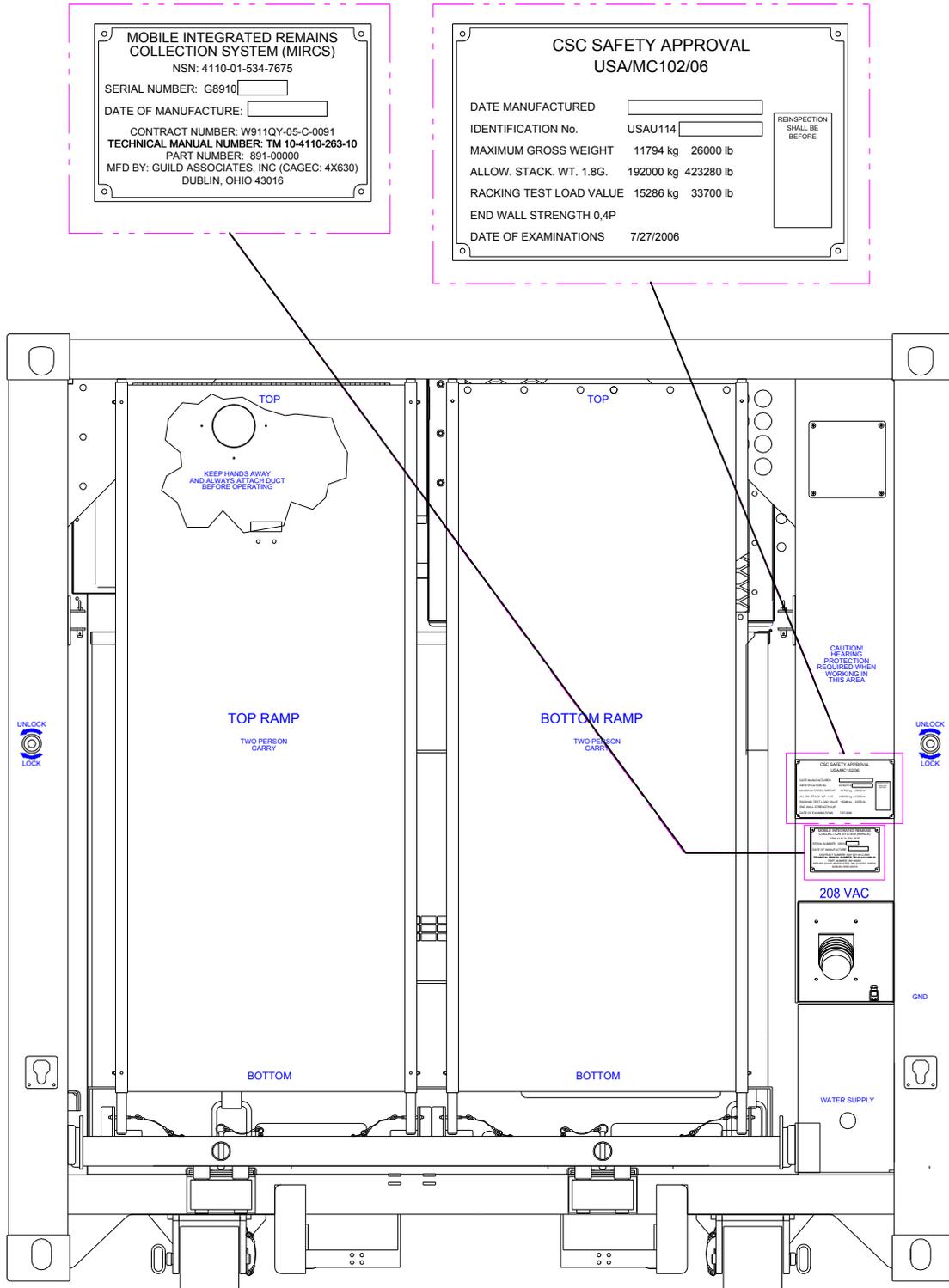


Figure 4. MIRCS Rear Markings (Sheet 1 of 2).

DECALS AND INSTRUCTION PLATES-CONTINUED

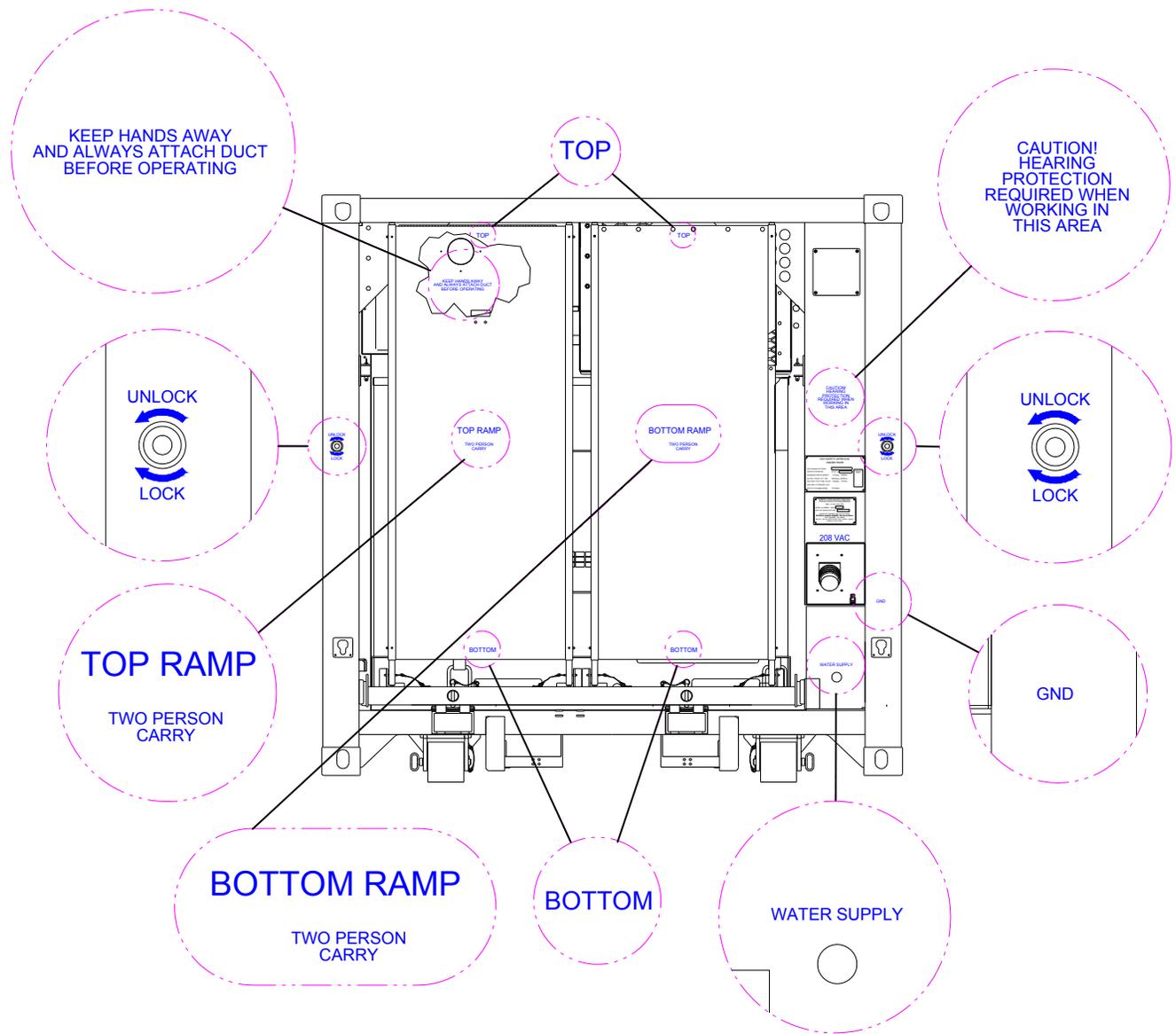


Figure 4. MIRCS Rear Markings (Sheet 2 of 2).

DECALS AND INSTRUCTION PLATES-CONTINUED

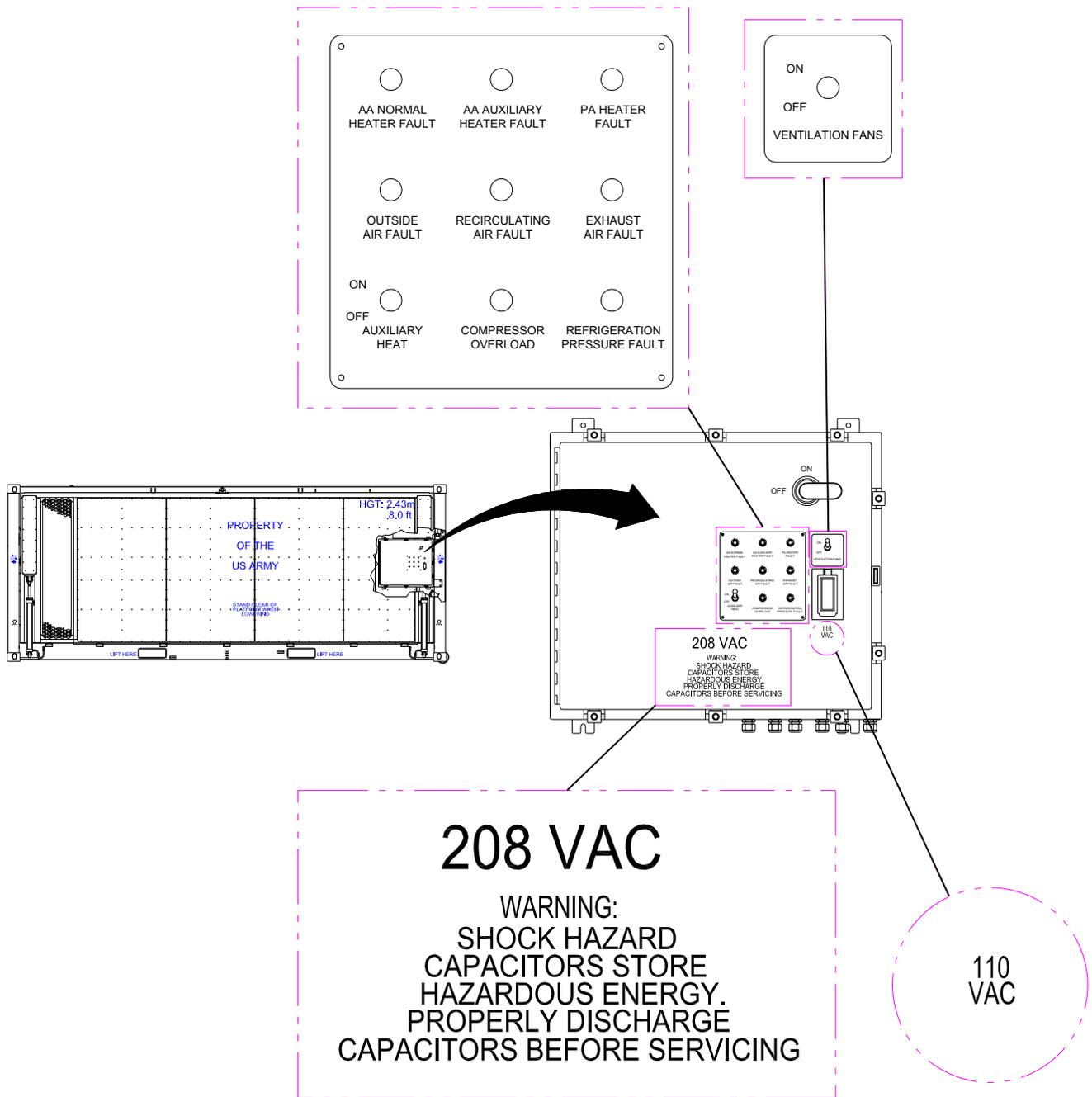


Figure 5. ECU Control Enclosure Exterior Labels.

DECALS AND INSTRUCTION PLATES-CONTINUED

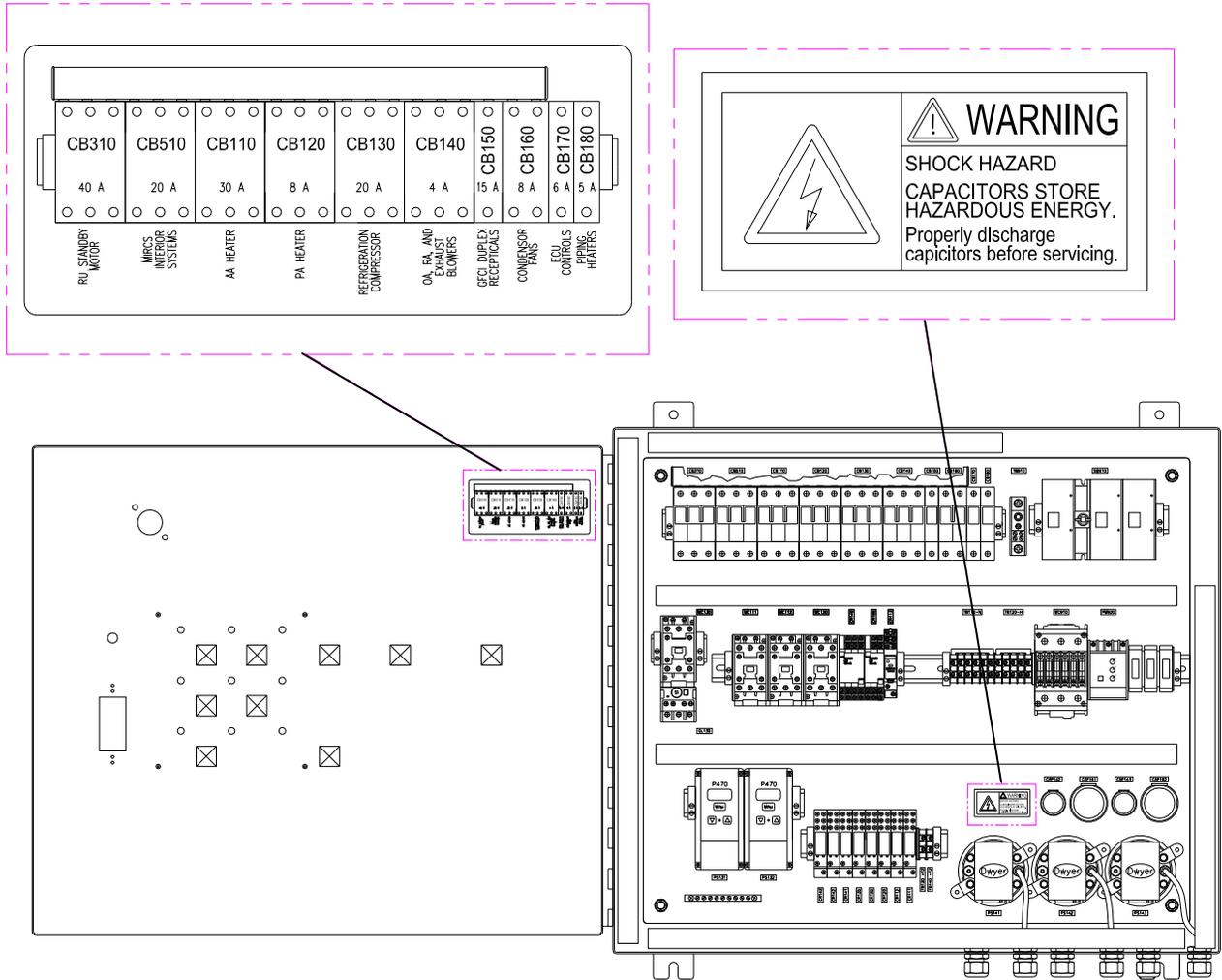


Figure 6. ECU Control Enclosure Interior Labels.

DECALS AND INSTRUCTION PLATES-CONTINUED

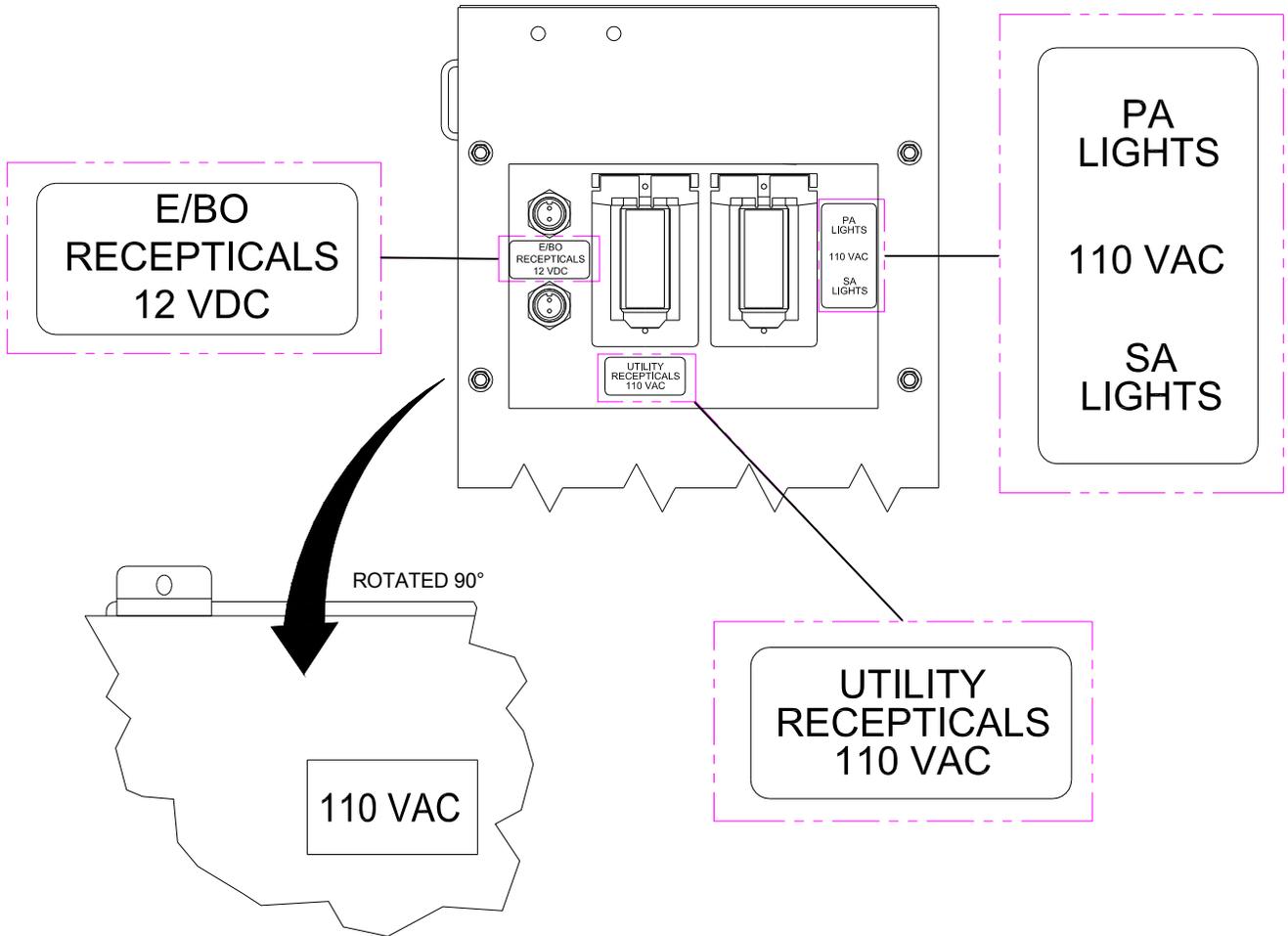


Figure 8. PA Lights Enclosure Labels.

DECALS AND INSTRUCTION PLATES-CONTINUED

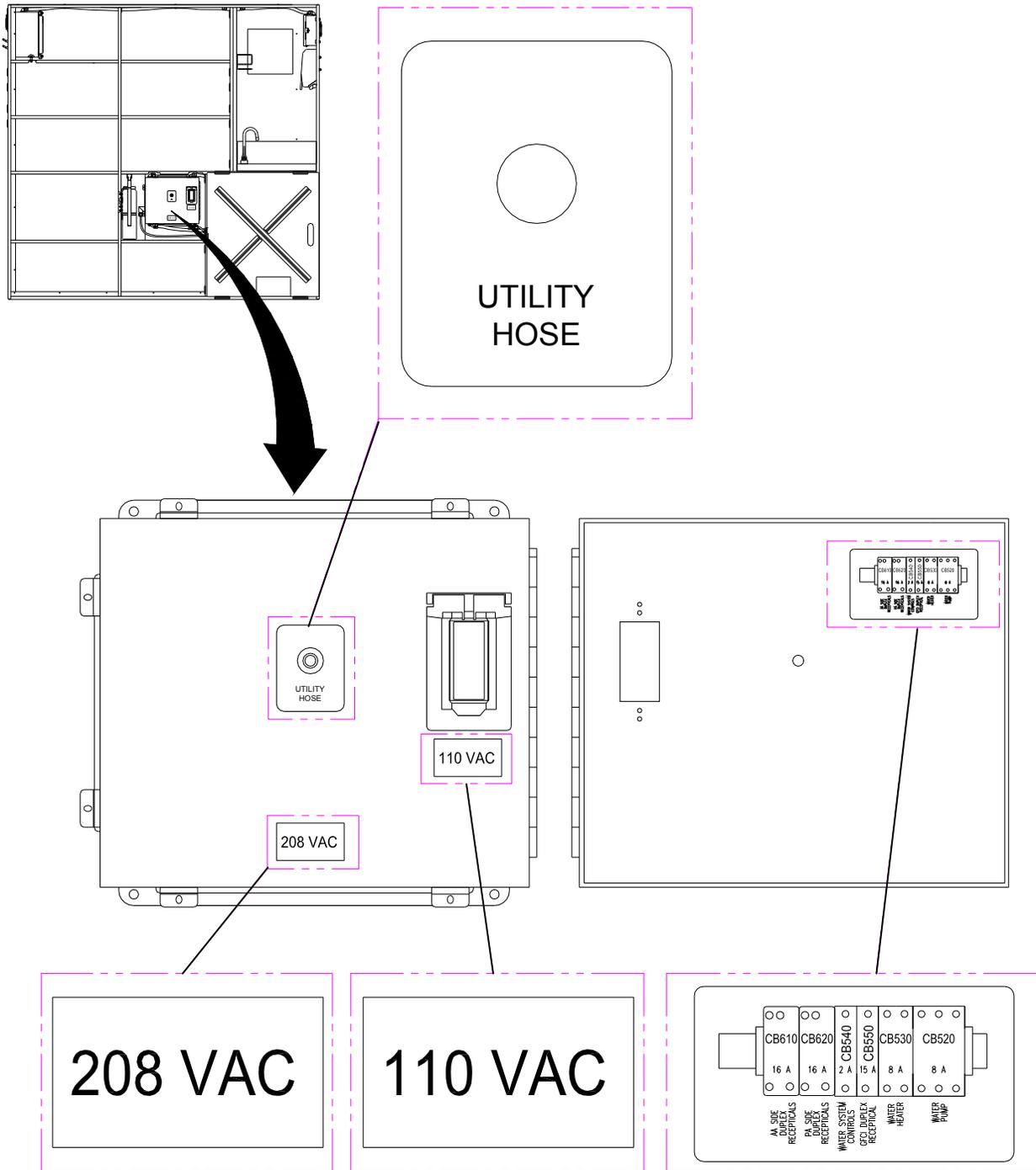


Figure 9. Water System Junction Box Labels.

DECALS AND INSTRUCTION PLATES-CONTINUED

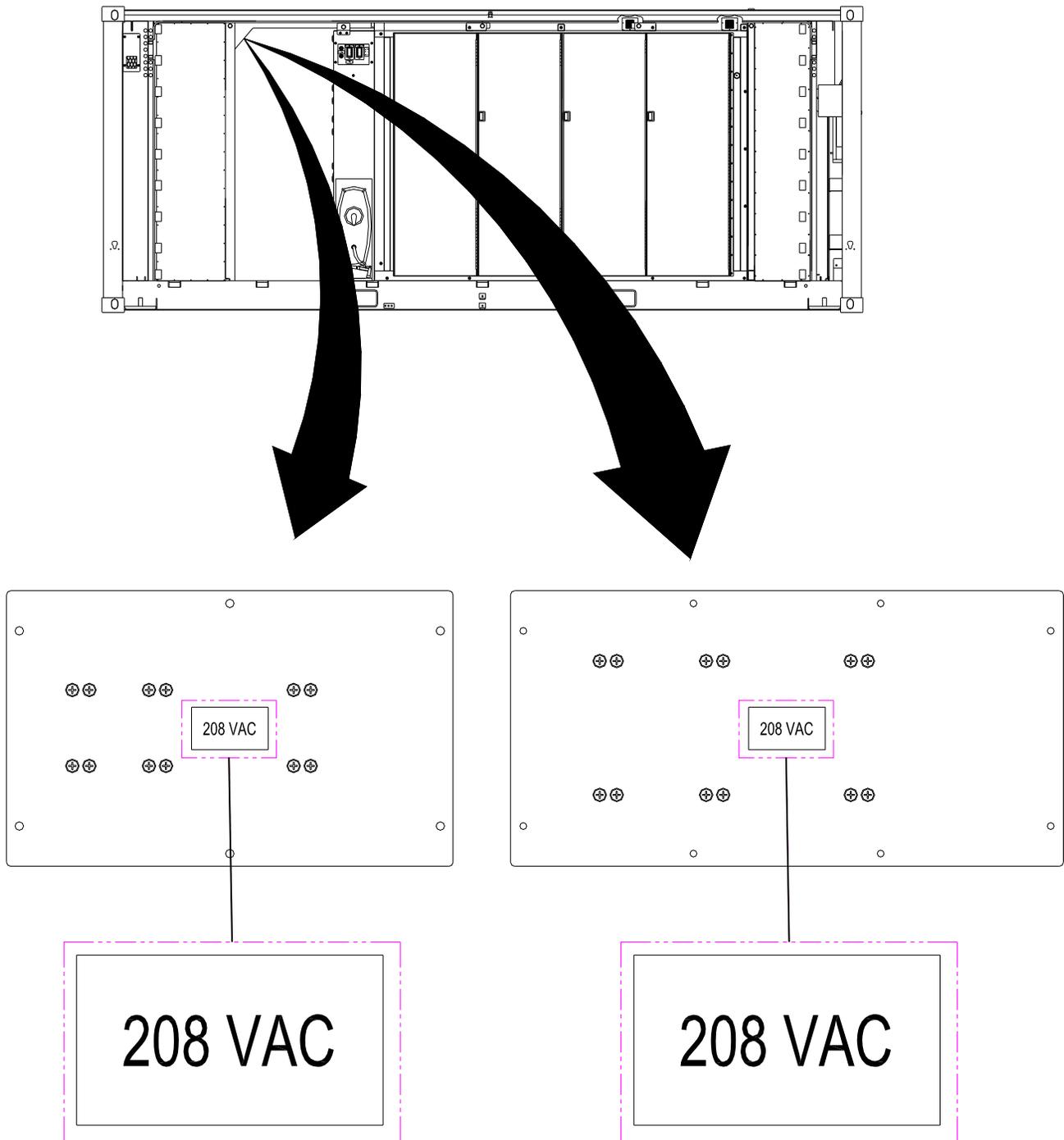


Figure 10. Heater Access Panel Labels.

END OF WORK PACKAGE

**CREW MAINTENANCE
OPERATION UNDER USUAL CONDITIONS
PREPARATION FOR MOVEMENT**

INITIAL SETUP:**Tools and Special Tools**

Screwdriver, Bit Set and Handle (WP 0038, Table 1, Item 10)
Wrench, Adjustable, 6 inch (WP 0038, Table 1, Item 16)

Materials Parts

Rag, Wiping (WP 0040, Table 1, Item 16)

Personnel Required

4

Equipment Conditions

MIRCS shut down and drained
(WP 0010)

References

WP 0008
TM 9-6115-644-10

TAKE DOWN TEMPORARY REMAINS SHELTERS**WARNING**

MIRCS ramps, leveling jacks, RLD storage bag, work light storage bag, support storage bag, external water pump, and MPPs weigh over 45-lbs each. Two persons are required to carry these items. Ensure you lift with your legs and not with your back to avoid injury. Seek immediate medical attention if injury occurs.

1. Ensure inside of shelter (Figure 1, Item 3) is empty and zippers (Figure 1, Item 7) on all side flaps (Figure 1, Item 6) are closed.
2. If attached, disconnect any external ducting from ducts (Figure 1, Item 1).
3. Untie and close flaps (Figure 1, Item 13).
4. Pull stakes (Figure 1, Item 5) securing guy ropes (Figure 1, Item 4) and shelter floor (Figure 1, Item 8) out of ground.

NOTE

Guy ropes may be removed from shelter or left attached as desired.

When collapsing and folding up shelter leave vents on end walls open to release trapped air.

5. Place stakes (Figure 1, Item 5) and guy ropes (Figure 1, Item 4) into storage pocket (Figure 1, Item 12).
6. Fold-up shelter as follows:
 - a. At end wall (Figure 1, Item 11) where storage pocket (Figure 1, Item 12) is located pull shelter towards you while pushing wall and floor material in between the support rods (Figure 1, Item 2).
 - b. Continue pulling shelter (Figure 1, Item 3) towards you until shelter is completely collapsed.
7. Place shelter (Figure 1, Item 3) into carrying pouch (Figure 1, Item 9).
8. Fold flap (Figure 1, Item 10) over and secure to carrying pouch (Figure 1, Item 9).
9. Repeat steps 1 through 8 to take down other temporary shelters if necessary.

TAKE DOWN TEMPORARY REMAINS SHELTERS - CONTINUED

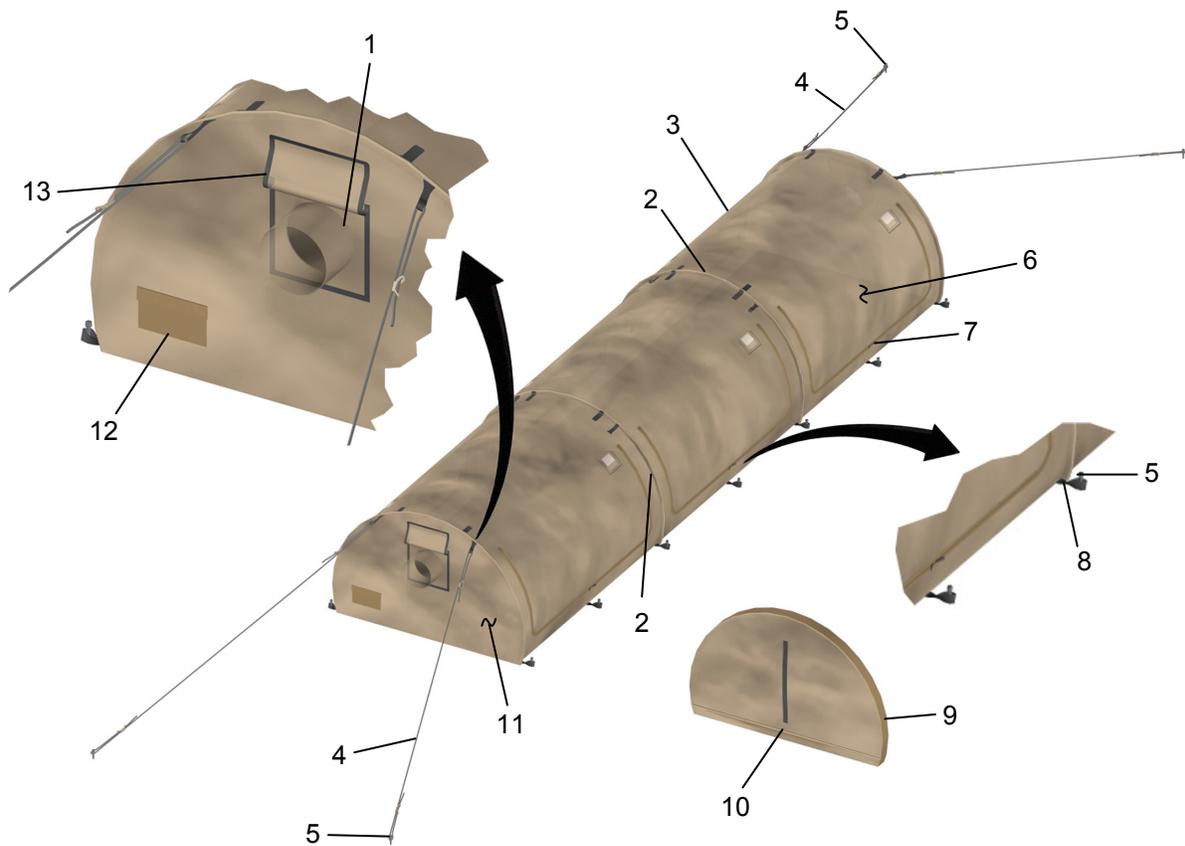


Figure 1. Take Down Temporary Remains Shelter.

END OF TASK

TAKE DOWN PA WORK SPACE**NOTE**

In order to quickly gain access to MPPs and extension during rapid transfer operations, it is recommended that one or both MPPs and extension be stowed in the RSU. If all compartments in the RSU are in use the MPPs and extensions can be properly stowed in the supply storage area.

1. If installed, remove extension (Figure 2, Item 2) from MPP (Figure 2, Item 13) as follows:
 - a. Transfer straps (Figure 2, Item 3) from extension (Figure 2, Item 2) back onto MPP (Figure 2, Item 13).
 - b. Pull QC pins (Figure 2, Item 2) out of legs (Figure 2, Item 1).
 - c. Remove extension (Figure 2, Item 2) from MPP (Figure 2, Item 13).
 - d. Insert QC pins (Figure 2, Item 4) back into legs (Figure 2, Item 1).
 - e. Fold up legs (Figure 2, Item 1) then secure with straps (Figure 2, Item 3).
2. Press foot pedal (Figure 2, Item 14) and completely lower MPP (Figure 2, Item 13).
3. Place extension (Figure 2, Item 4) on MPP (Figure 2, Item 13) and secure with six straps (Figure 2, Item 3).
4. If MPPs are to be stored in RSU continue to step 5 otherwise proceed to step 15.
5. Determine lowest positions that MPPs and extension can be stored.
6. Lift up on latch (Figure 2, Item 12) and fully open RSU door (Figure 2, Item 9).
7. With a person on each side of door opening pull QC pin (Figure 2, Item 11) then slide tray (Figure 2, Item 10) out and place on PA platform floor (Figure 2, Item 8).
8. Remove four straps (Figure 2, Item 5) attached to D-rings (Figure 2, Item 6).

CAUTION

Never store MPP on its side or upside down. Hydraulic fluid can seep out of breather cap causing failure of MPP to rise to full height due to loss of fluid.

9. Lifting with two people on each side, place MPP (Figure 2, Item 13) with extension (Figure 2, Item 4) onto tray (Figure 2, Item 10).
10. Attach four straps (Figure 2, Item 6) through D-rings (Figure 2, Item 5) to secure MPP (Figure 2, Item 13) and extension (Figure 2, Item 4).
11. With a person on each side of, align bottom of tray (Figure 2, Item 10) with rollers (Figure 2, Item 7) then slide tray into RSU.
12. Insert QC pin (Figure 2, Item 11) to secure tray (Figure 2, Item 10).
13. Close RSU door (Figure 2, Item 9).
14. Repeat steps 6 through 13 for second MPP.

TAKE DOWN PA WORK SPACE-CONTINUED

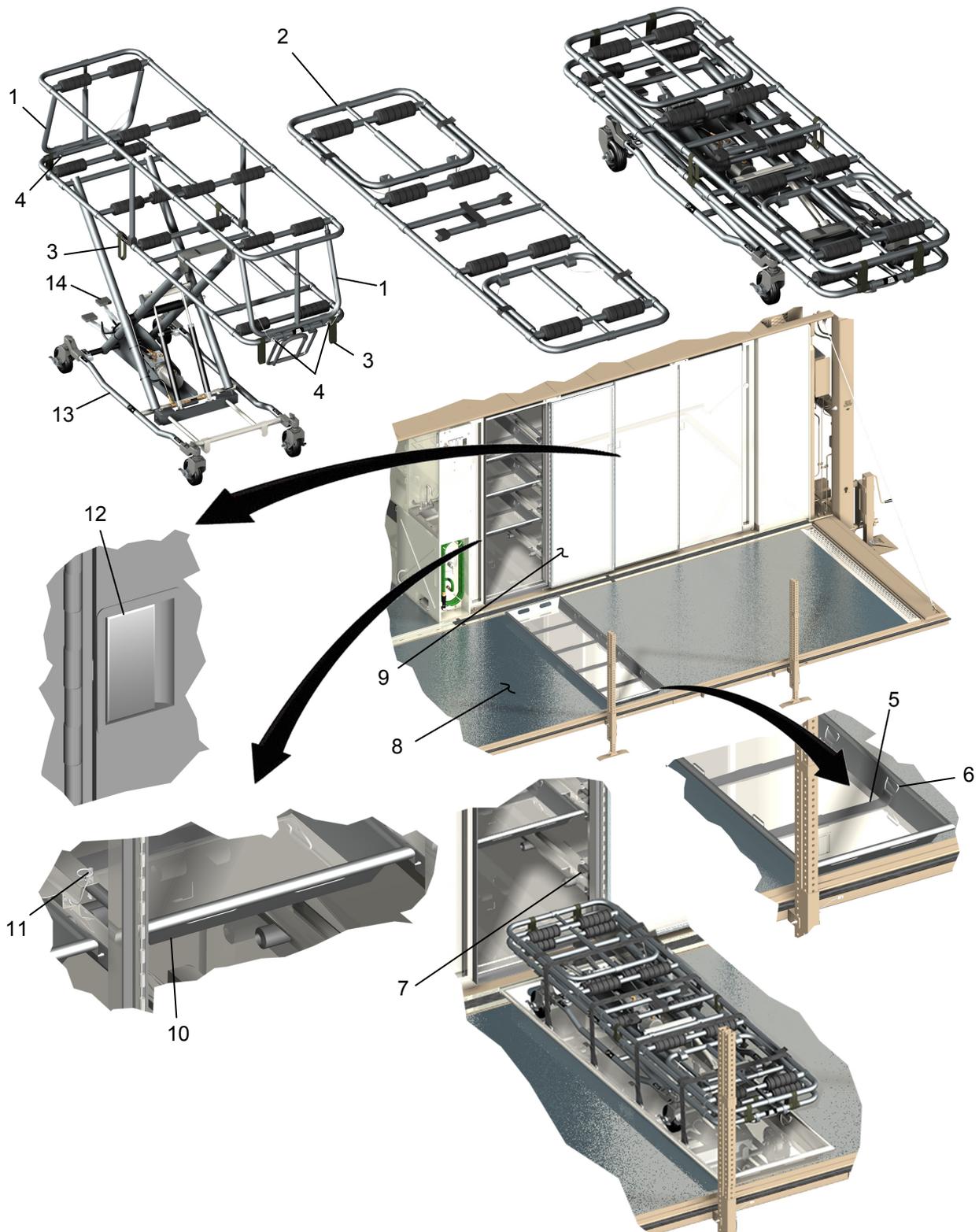


Figure 2. Preparing and Stowing MPPs and Extension.

TAKE DOWN PA WORK SPACE-CONTINUED

15. If used, remove electrical boxes (Figure 3, Item 5) as follows:
 - a. Unplug electrical cords (Figure 3, Item 2) from duplex receptacles (Figure 3, Item 1).
 - b. Pull electrical cords (Figure 3, Item 2) through loops (Figure 3, Item 6) in ceiling (Figure 3, Item 3).
 - c. Rollup electrical cords (Figure 3, Item 2) and place electrical boxes (Figure 3, Item 5) in work lights storage bag (Figure 3, Item 4).
16. Take down and prepare all other MA equipment located in PA for stowage.

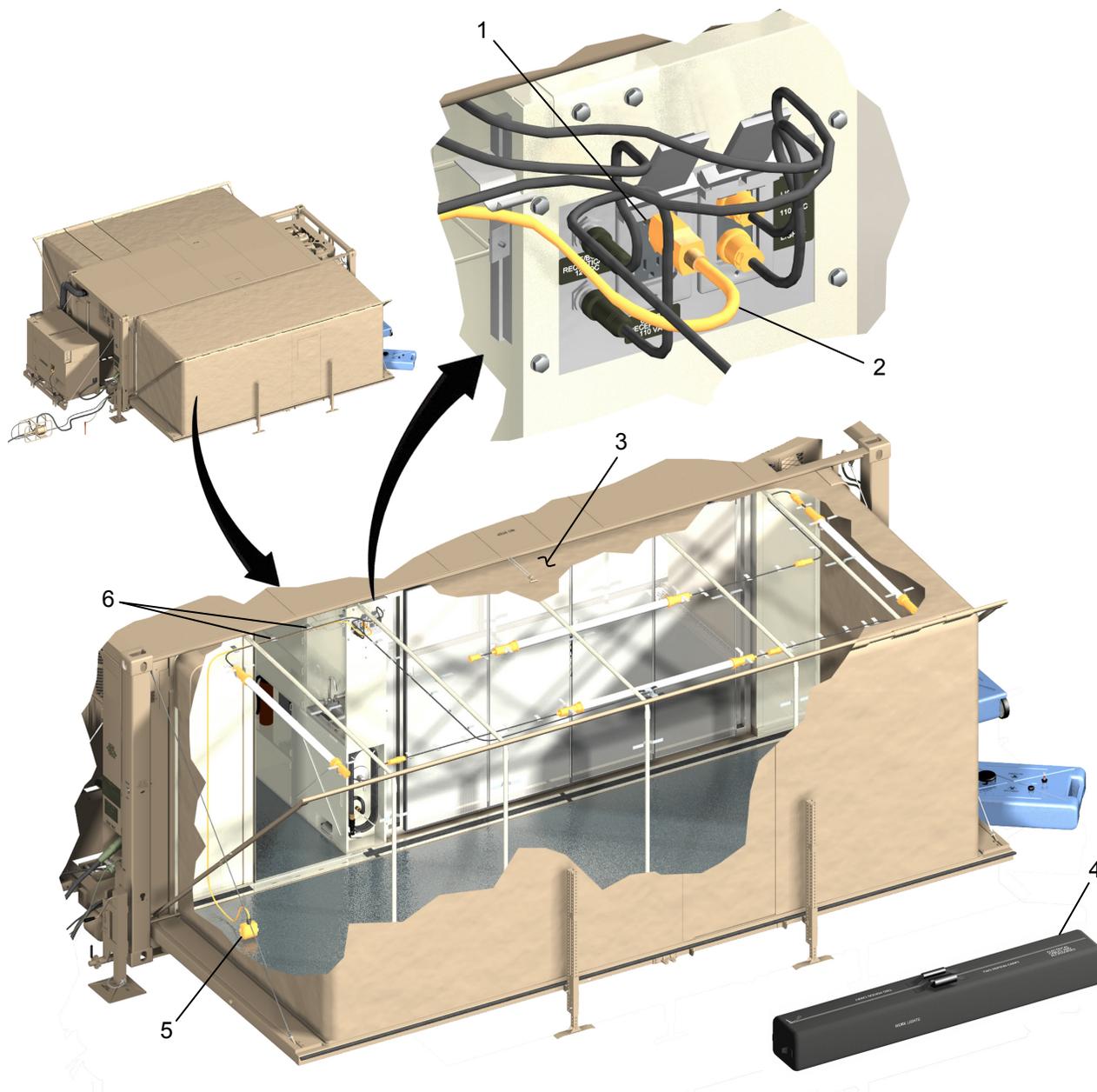


Figure 3. Take Down PA Workspace.

END OF TASK

TAKE DOWN AA WORK SPACE

1. Remove weapons from weapons racks (Figure 4, Item 7) then pull racks off of end wall (Figure 4, Item 9).
2. Fold up table (Figure 4, Item 4) and chairs (Figure 4, Item 5).
3. If used remove electrical boxes (Figure 4, Item 8) as follows:
 - a. Unplug electrical cords (Figure 4, Item 2) from duplex receptacles (Figure 4, Item 3).
 - b. Pull electrical cords (Figure 4, Item 2) through loops (Figure 4, Item 1).
 - c. Rollup electrical cords (Figure 4, Item 2) and place electrical boxes (Figure 4, Item 8) in lights storage bag (Figure 4, Item 6).
4. Take down and prepare all other MA equipment located in AA for stowage.

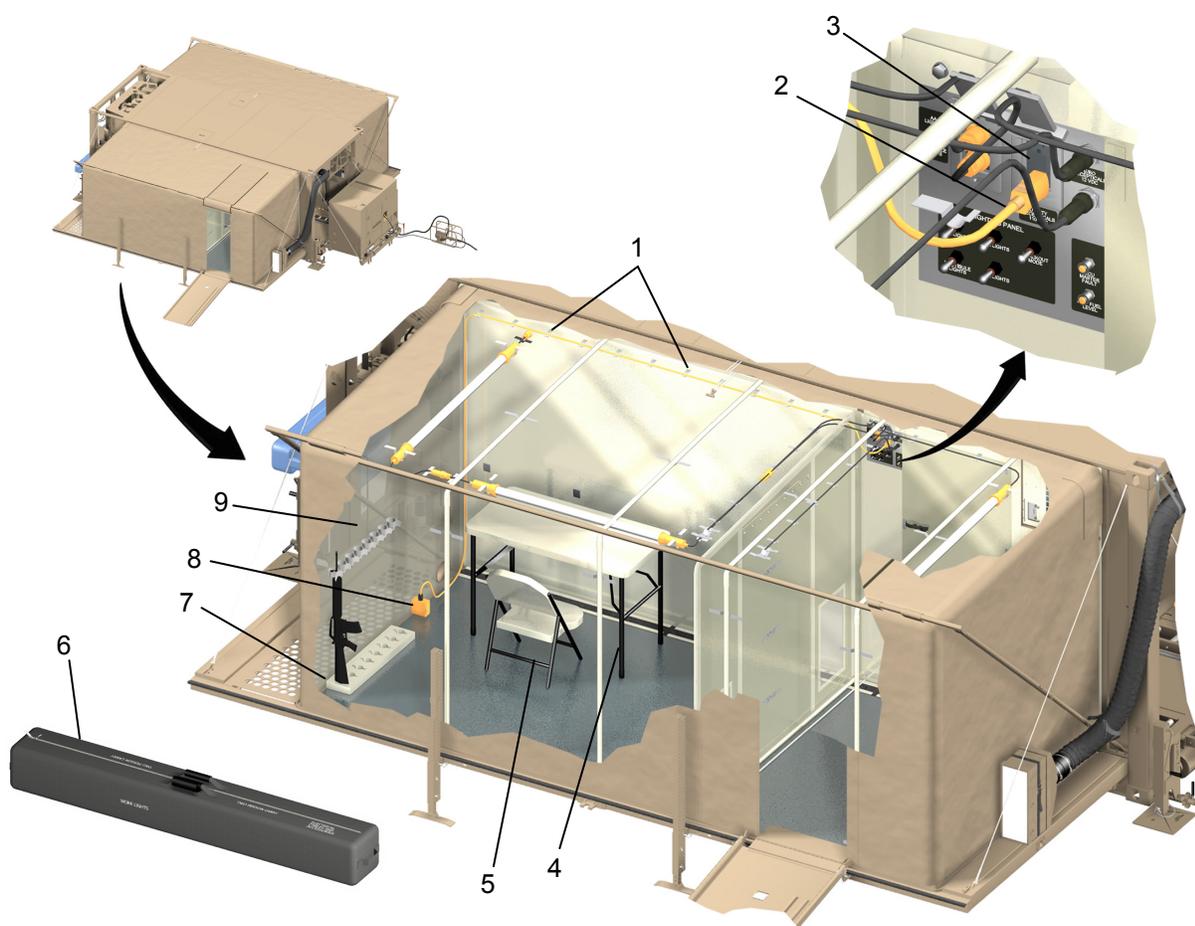


Figure 4. Take Down AA Work Space.

END OF TASK

TAKE DOWN SUPPLY STORAGE AREA DOOR AND AA PARTITION

1. Remove supply area door (Figure 5, Item 6) as follows:
 - a. Remove strap (Figure 5, Item 7) from door, then pull QC pins (Figure 5, Item 1) and remove track (Figure 5, Item 2) from frame (Figure 5, Item 3).
 - b. Insert QC pins (Figure 5, Item 1) back into track (Figure 5, Item 2).
 - c. Roll supply area door (Figure 5, Item 6) up on track (Figure 5, Item 2).
 - d. Place strap (Figure 5, Item 7) around center of supply area door (Figure 5, Item 6) to keep it from unrolling.
2. Detach AA partition (Figure 5, Item 9) as follows:
 - a. Close and secure curtain door (Figure 5, Item 12) by fastening three buckles (Figure 5, Item 10).
 - b. Separate ceiling and wall flaps (Figure 5, Items 4 and 11) and pull AA partition (Figure 5, Item 9) off of AA wall (Figure 5, Item 5).
 - c. Slide rod (Figure 5, Item 8) out of AA partition (Figure 5, Item 9).
 - d. Fold-up AA partition (Figure 5, Item 9).

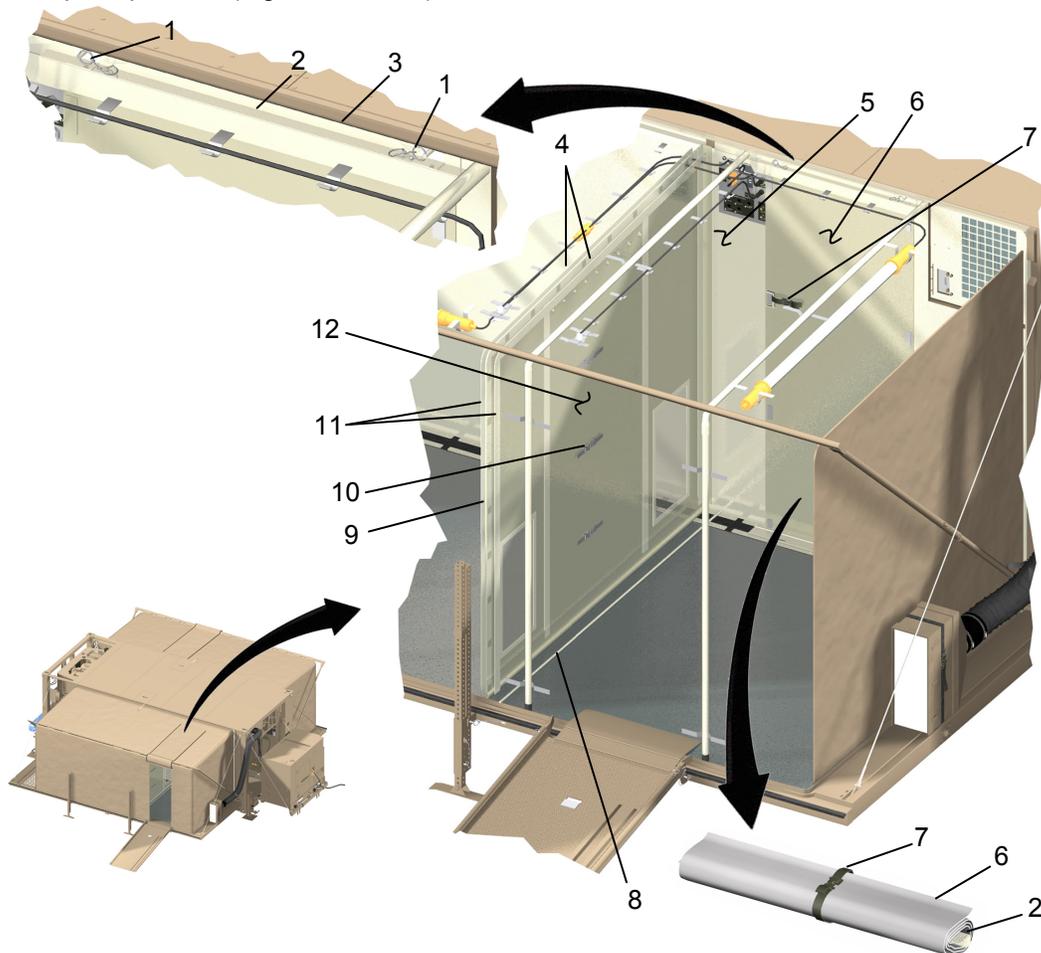


Figure 5. Take Down Supply Area Door and AA Partition.

END OF TASK

TAKE DOWN EMERGENCY/BLACKOUT LIGHTING

1. Remove emergency/blackout lights (Figure 6, Item 1) as follows:
 - a. Unthread and disconnect light cables (Figure 6, Item 2) from power connectors (Figure 6, Item 3).
 - b. Pull cables (Figure 6, Item 2) through loops (Figure 6, Item 6).
 - c. Remove lights (Figure 6, Item 1) from straps (Figure 6, Item 7).
 - d. Rollup light cables (Figure 6, Item 2) and secure with straps (Figure 6, Item 4).
2. Place emergency/blackout lights (Figure 6, Item 1) in work lights storage bag (Figure 6, Item 5).

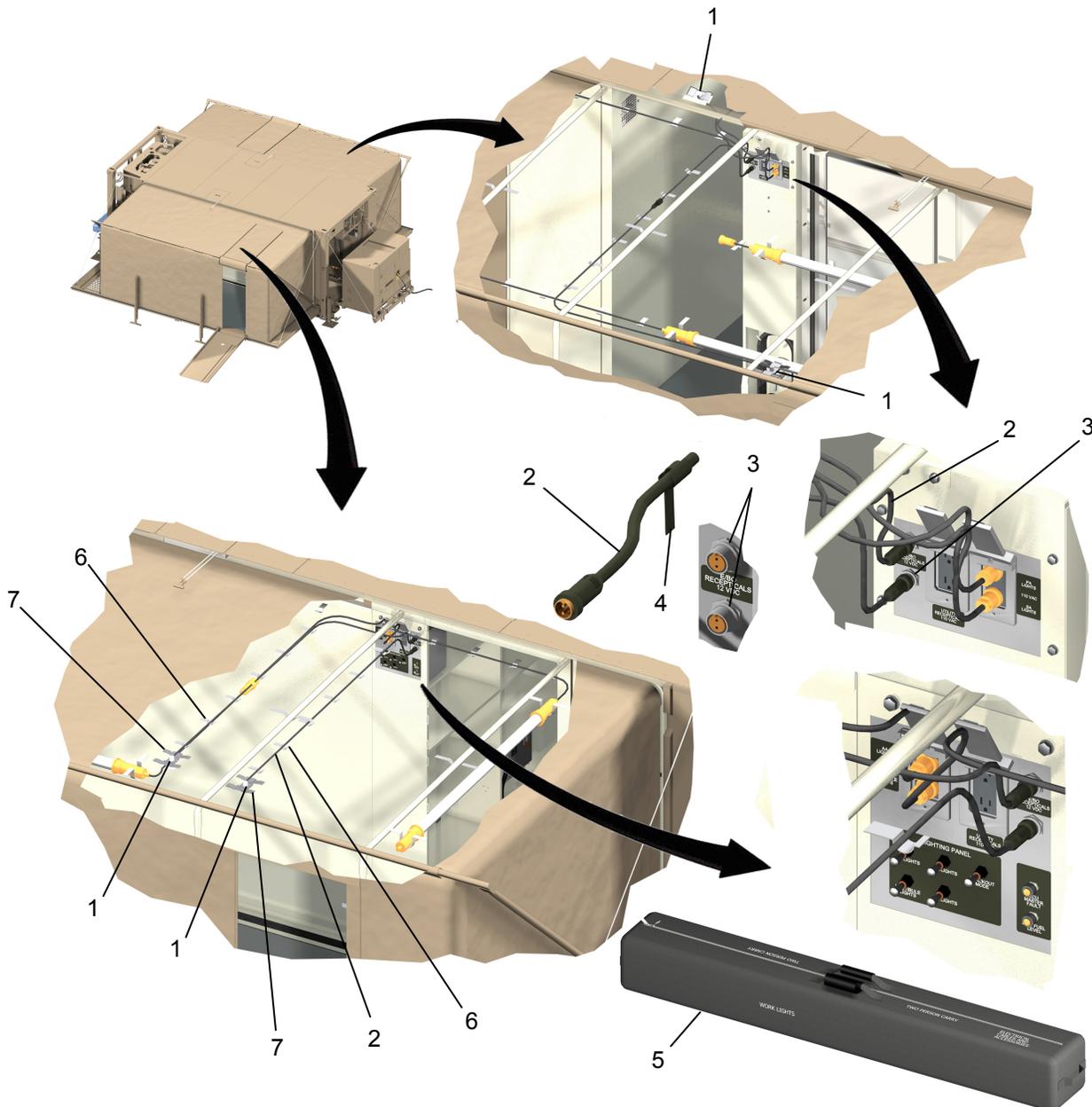


Figure 6. Take Down Emergency/Blackout Lighting.

END OF TASK

TAKE DOWN WORK LIGHTING

1. Remove work lights (Figure 7, Item 5) from AA, PA, and vestibule as follows:
 - a. Disconnect power cord (Figure 7, Item 6) and extension cords (Figure 7, Item 9) from electrical outlets (Figure 7, Item 7).
 - b. Disconnect power cords (Figure 7, Item 6) from each other and extension cords (Figure 7, Item 9).
 - c. Pull power cords (Figure 7, Item 6) through loops (Figure 7, Item 10).
 - d. Pull work lights (Figure 7, Item 5) and power cords through loops (Figure 7, Item 10).
 - e. Connect each power cord (Figure 7, Item 9) to it's opposite end to keep cords from tangling.
2. Remove work light (Figure 7, Item 5) from supply area (Figure 7, item 3) as follows:
 - a. Disconnect plug (Figure 7, Item 8) from electrical outlet (Figure 7, Item 7).
 - b. Pull work light (Figure 7, Item 3) off of clips (Figure 7, Item 4).
3. Place work lights (Figure 7, Item 5), work light (Figure 7, Item 3), and extension cords (Figure 7, item 9) in work lights storage bag (Figure 7, Item 1).

TAKE DOWN WORK LIGHTING-CONTINUED

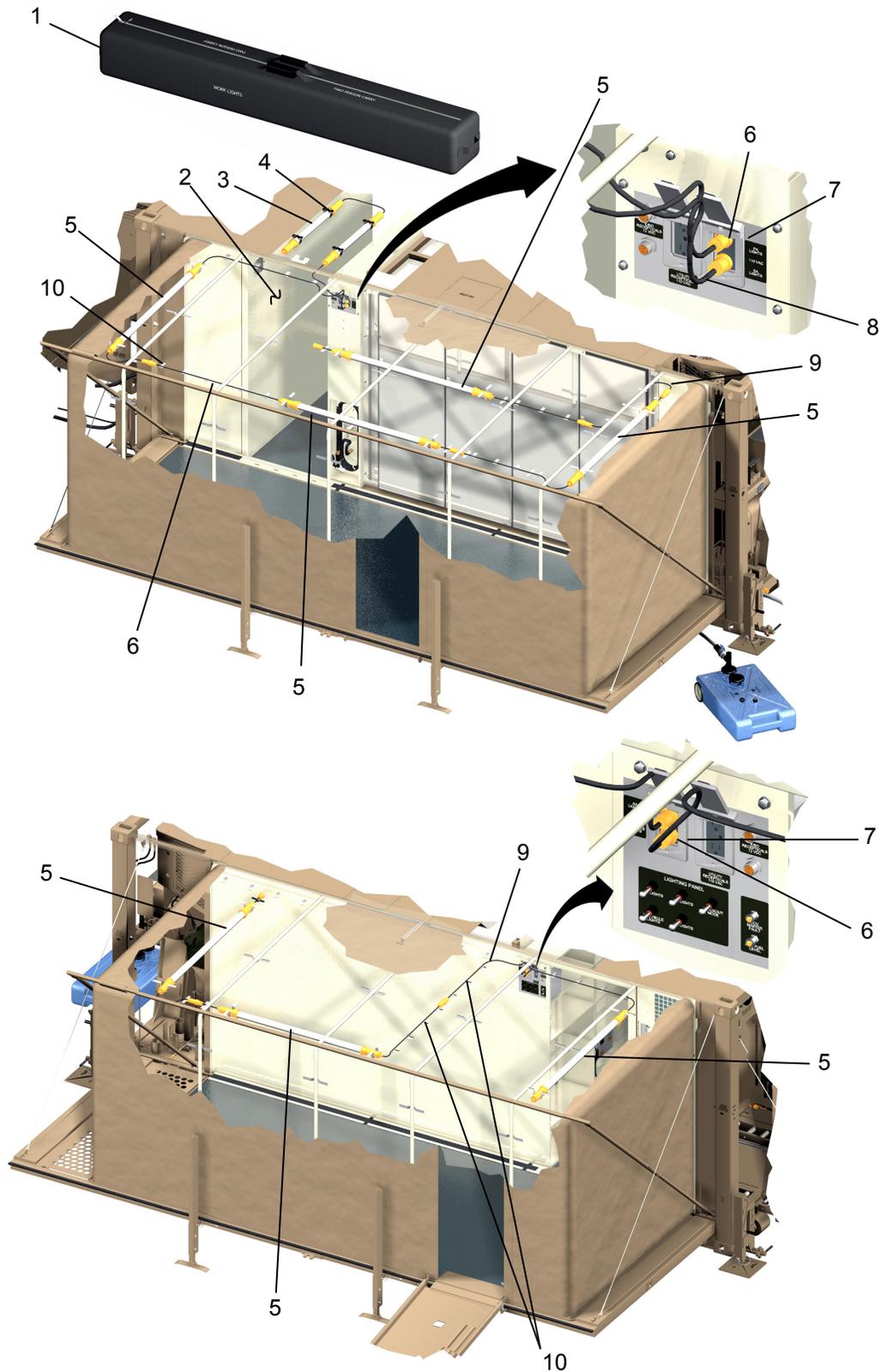


Figure 7. Take Down Work Lighting.

END OF TASK

DISCONNECT ECU DUCTING

1. Remove ECU ducting as follows:
 - a. Loosen clamp (Figure 8, Item 5), then pull duct connector (Figure 8, Item 6) off of inlet filter (Figure 8, Item 9).
 - b. Loosen clamp (Figure 8, Item 5), then pull duct connector (Figure 8, Item 6) off of ECU inlet port (Figure 8, Item 3). Use a step aid to access duct at inlet port if needed.
 - c. Install protective cover (Figure 8, Item 4) onto ECU inlet port (Figure 8, Item 3).
 - d. Remove straps (Figure 8, Item 1) securing duct (Figure 8, Item 7) to corner fitting (Figure 8, item 2) and support rod (Figure 8, Item 11). Secure straps (Figure 8, Item 1) to duct (Figure 8, Item 7).
 - e. Slightly tighten clamps (Figure 8, Item 5) to prevent them from sliding off of duct connector (Figure 8, Item 6).
 - f. Disconnect strap (Figure 8, Item 8) and remove inlet filter (Figure 8, Item 9) from AA platform (Figure 8, Item 10).
 - g. Reconnect strap (Figure 8, Item 8).
 - h. Place duct (Figure 8, Item 7) with straps (Figure 8, Item 1) and inlet filter (Figure 8, Item 9) inside on AA platform (Figure 8, Item 10).

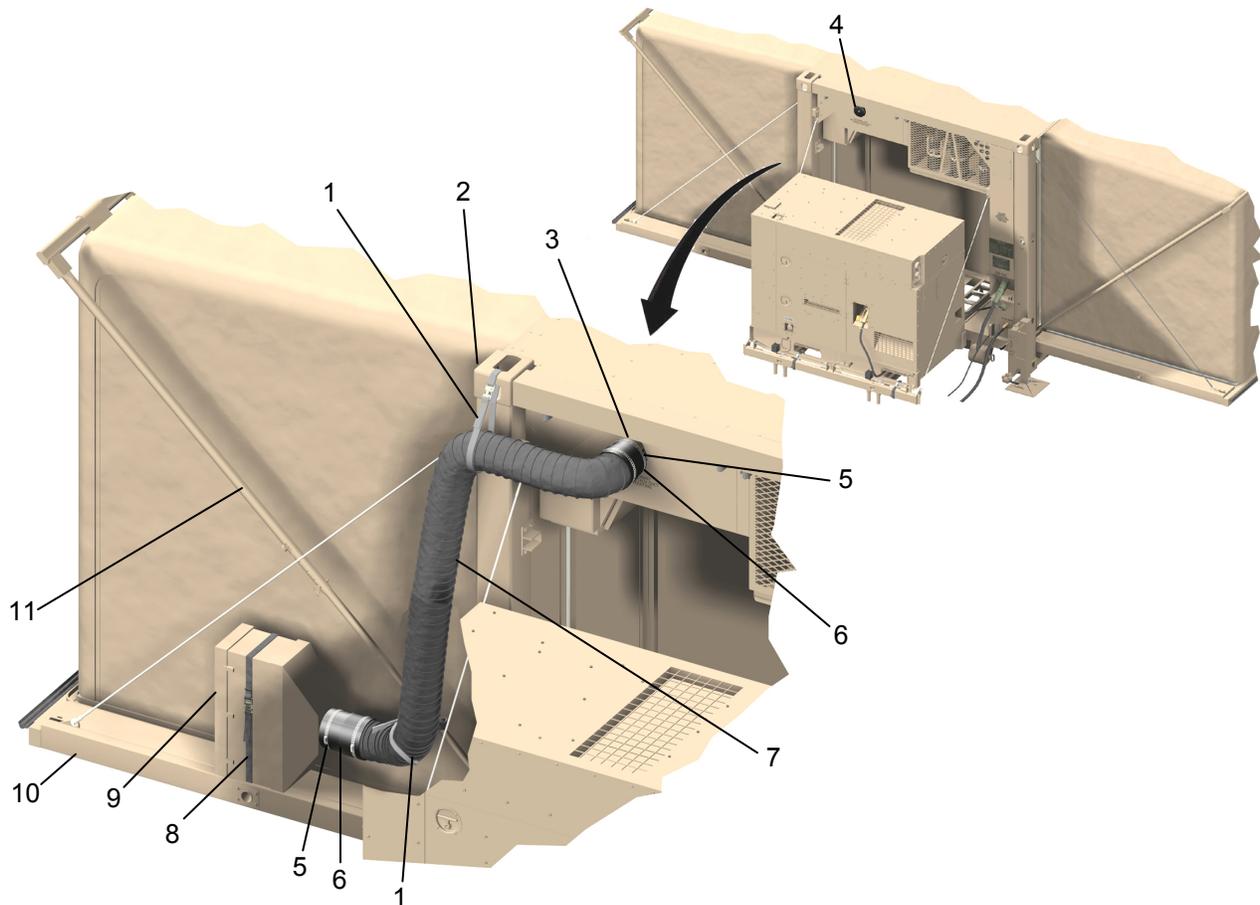


Figure 8. Take Down ECU Ducting.

END OF TASK

TAKE DOWN EXTERIOR END WALL FLAPS

1. At each corner of AA and PA soft wall (Figure 9, Item 3) pull exterior flap (Figure 9, Item 2) off of soft wall and frame (Figure 9, Item 1).
2. Fold-up exterior flaps (Figure 9, Item 2) and place inside on AA platform (Figure 9, Item 4).

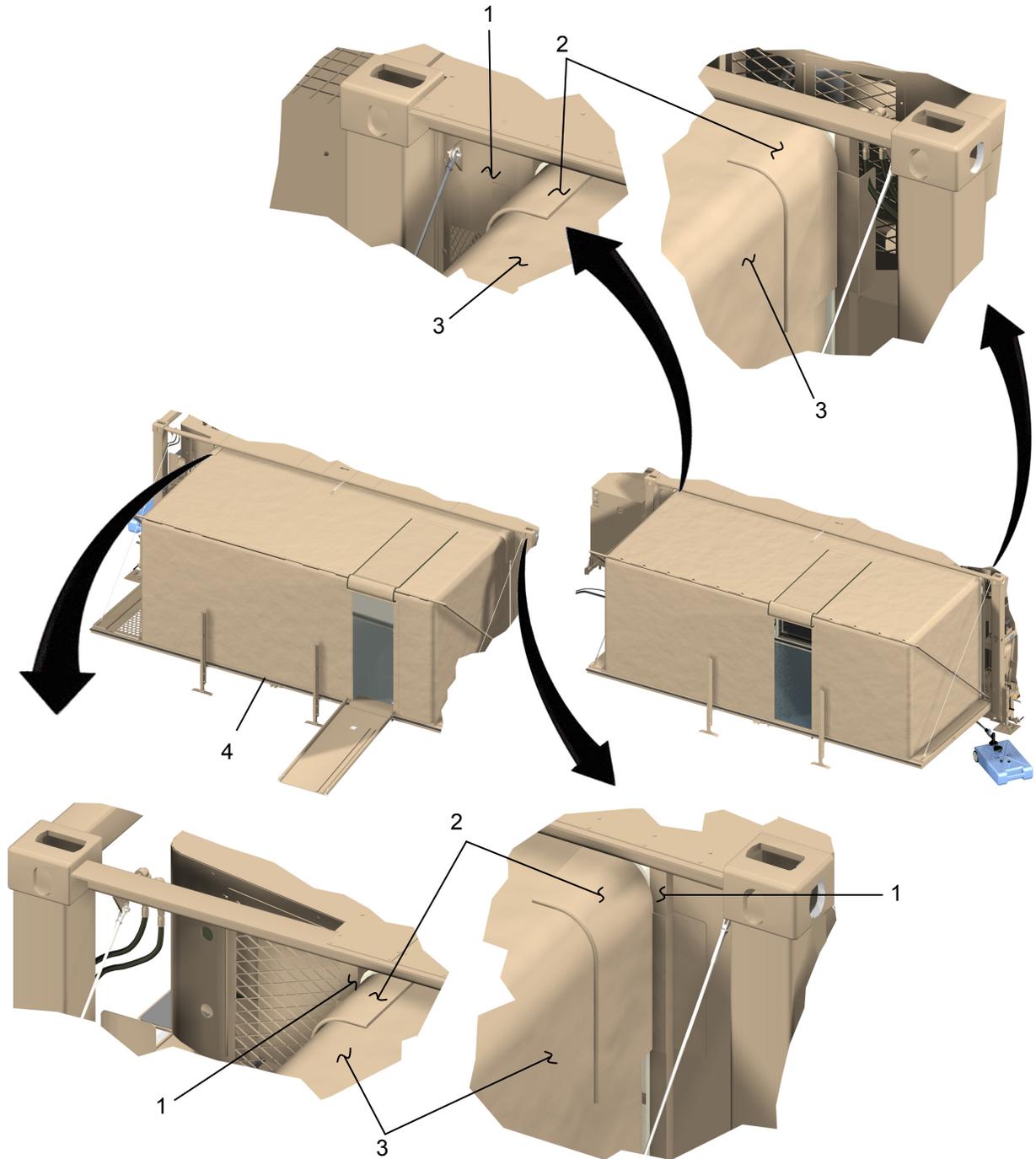


Figure 9. Take Down Exterior Flaps.

END OF TASK

TAKE DOWN SOFT WALL SUPPORTS

1. Remove supports (Figure 10, Items 1 and 2) under AA soft wall (Figure 10, Item 6) and PA soft wall (Figure 10, Item 5) as follows:
 - a. Unfasten straps (Figure 10, Item 3) securing each support (Figure 10, Items 1 and 2).
 - b. Lift up and rotate front support (Figure 10, Item 1) then pull front support out of top support (Figure 10, Item 2) and top support out of receptacle (Figure 10, Item 4).
 - c. Repeat steps a and b for remaining supports.
2. Place top supports (Figure 10, Item 3) and front supports (Figure 10, Item 1) in supports storage bag (Figure 10, Item 9).
3. Place AA partition support rod (Figure 10, Item 11), AA partition (Figure 10, Item 8), supply area door (Figure 10, Item 7), exterior flaps (Figure 10, Item 10), and weapons racks (Figure 10, Item 12) in supports storage bag (Figure 10, Item 9).

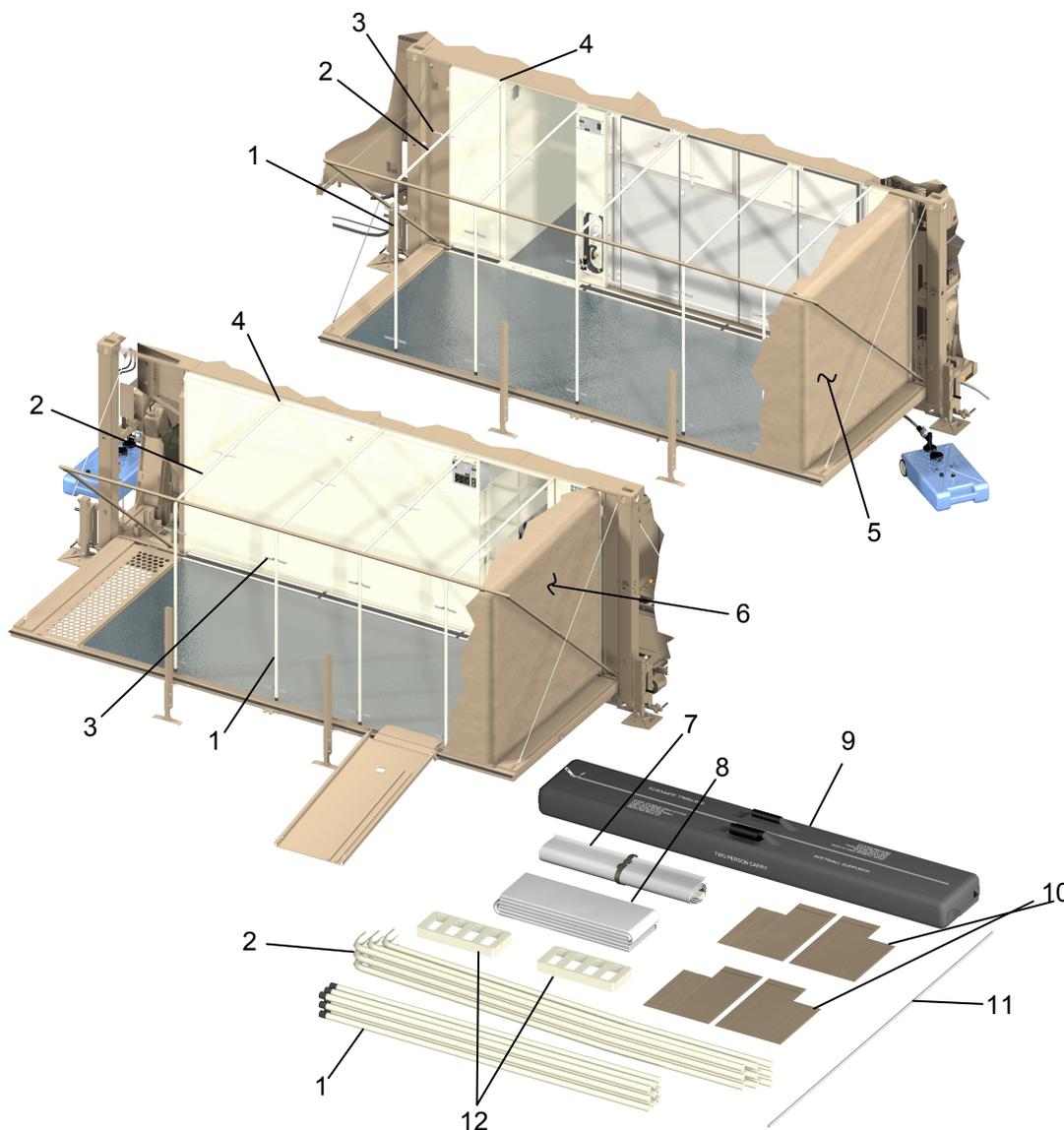


Figure 10. Take Down Soft Wall Supports and Stow Accessories in Storage Bag.

END OF TASK

DISCONNECT WASTE DRAINS**WARNING**

Wastewater generated during MA operations may contain chemical and/or bio-hazardous materials. When handling waste system hoses and containers personnel must wear impermeable gloves and goggles for protection. Failure to follow this warning may result in serious illness or death.

1. Verify waste piping has been drained. If waste containers are still connected to main drain port (Figure 11, Item 2) and/or PA platform drain port (Figure 11, Item 1) properly drain waste system (WP 0008).
2. Disconnect waste hose (Figure 11, Item 3) from main drain port (Figure 11, Item 2).
3. Disconnect waste hose (Figure 11, Item 4) from PA platform drain port (Figure 11, Item 1).

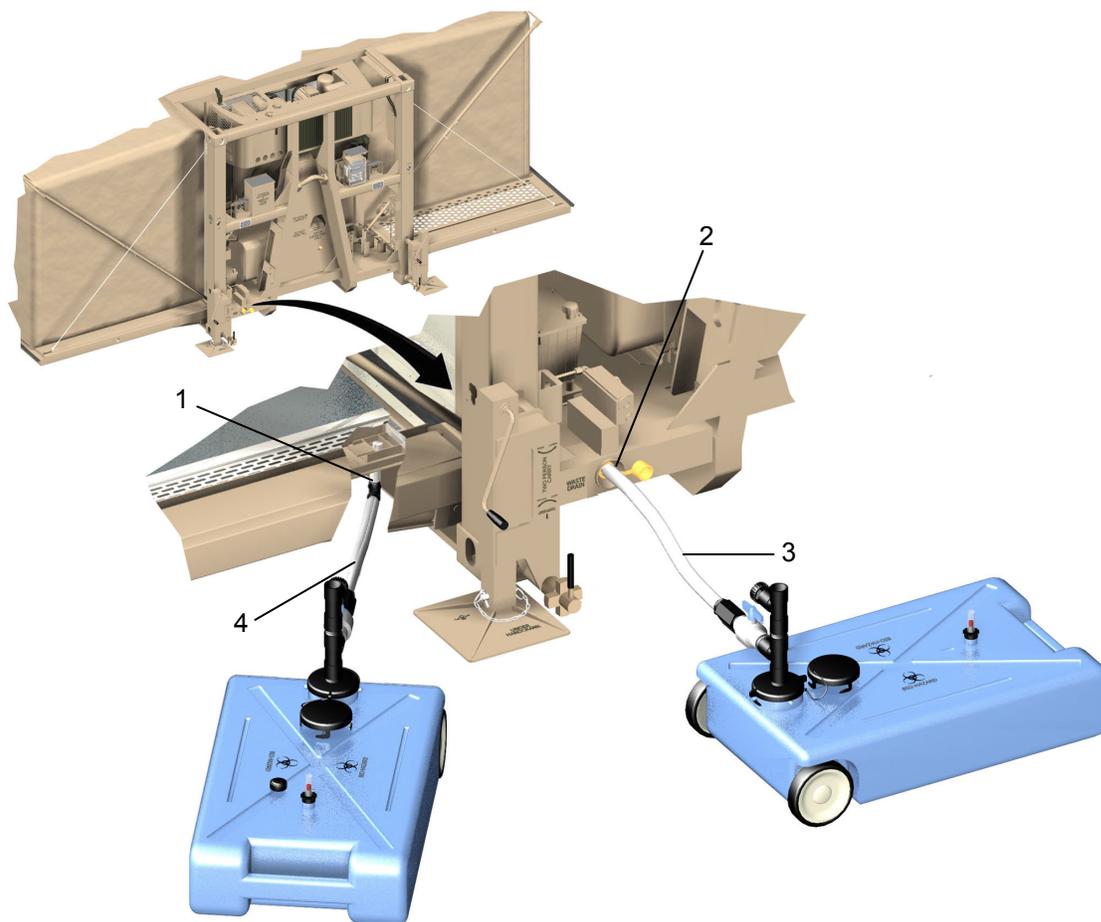


Figure 11. Disconnecting Waste Drains.

END OF TASK

DISCONNECT FUEL SUPPLY**WARNING**

Fuels are toxic. Wear eye/face and hand protection during the fueling operations, avoiding contact with skin and clothes, and don't breathe vapors. If contact with eyes or skin is made, immediately flush with clean water and get medical aid for eyes. If contact with clothing or skin is made, immediately remove contaminated clothing and clean skin with mild soap or cleanser and flush with clean water. Failure to follow the precaution may result in server injury or illness. Seek immediate medical attention if injury or illness occurs.

CAUTION

Always install dust plugs and caps on fuel connections. Dirty or contaminated fuel can cause failure of generator, RU engine, and MIRCS fuel system components.

If fuel hoses are not disconnected in order listed in the following procedures, unnecessary fuel spillage will occur.

1. Disconnect fuel hose (Figure 12, Item 3) from supply port (Figure 12, Item 11).
2. Place dust plug (Figure 12, Item 2) on fuel hose (Figure 12, Item 3) and dust cap (Figure 12, Item 1) on supply port (Figure 12, Item 11).
3. Pull fuel hose (Figure 12, Item 3) out from under generator (Figure 12, Item 4) through forklift pocket (Figure 12, Item 9).
4. Lift up on fuel hose (Figure 12, Item 3) and allow fuel to drain into generator.
5. Disconnect fuel hose (Figure 12, Item 3) from adapter (Figure 12, Item 7).
6. Place dust cap (Figure 12, Item 8) on fuel hose (Figure 12, Item 3) and dust plug (Figure 12, Item 5) on adapter (Figure 12, Item 7).

NOTE

Adapter can be removed from generator fuel connection or left on during transport.

7. If desired, disconnect adapter (Figure 12, Item 7) from fuel port (Figure 12, Item 6).
8. Install dust cap on fuel port (Figure 12, Item 6).
9. Stow fuel hose (Figure 12, Item 3) and adapter (Figure 12, Item 7) in generator storage compartment (Figure 12, Item 10).
10. If necessary use a rag to wipe up any spilled fuel.

DISCONNECT FUEL SUPPLY-CONTINUED

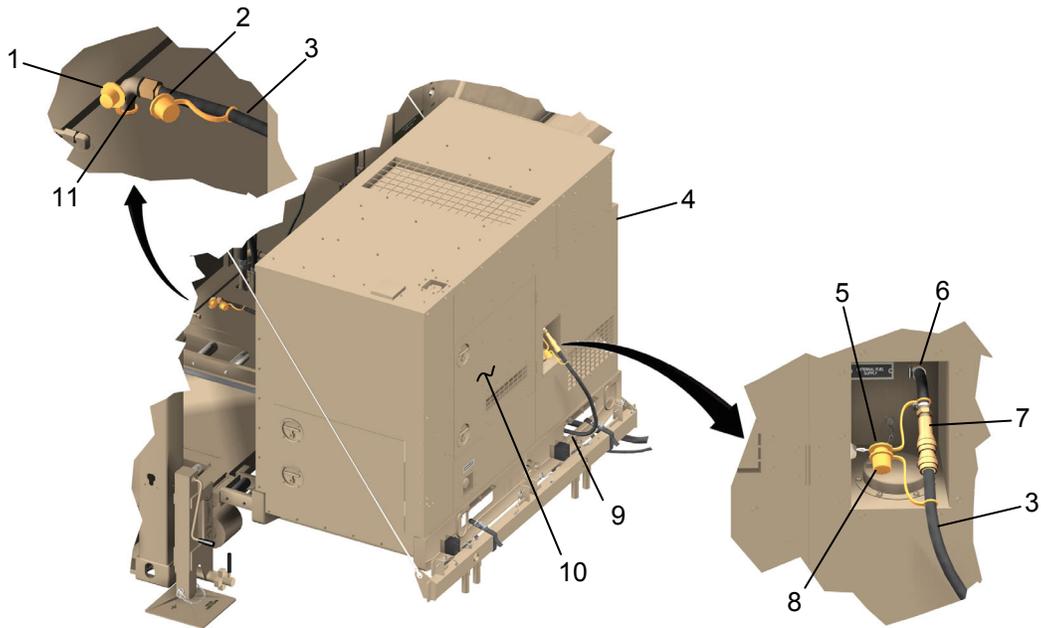


Figure 12. Disconnecting Fuel Supply.

END OF TASK

DISCONNECT ELECTRICAL POWER**WARNING**

Master power must be shut off before disconnect MIRCS power cable. Be careful not to come into contact with high-voltage connections. Whenever possible, keep one hand away from equipment to reduce the hazard of current flowing through the body's vital organs. Failure to follow this precaution may result in personnel injury or death. Seek immediate medical attention if injury occurs.

1. Ensure the generator set (Figure 13, Item 1) or external power source is turned off.
2. Disconnect dust cover (Figure 13, Item 4) from dust cover (Figure 13, Item 5).
3. Disconnect pigtail (Figure 13, Item 6) or power cable (Figure 13, Item 14) from electrical connector (Figure 13, Item 2).
4. Install dust cover (Figure 13, Item 4) onto pigtail (Figure 13, Item 6) or power cable (Figure 13, Item 14).
5. Install dust cover (Figure 13, Item 5) onto electrical connector (Figure 13, Item 2).
6. Disconnect ground wire (Figure 13, Item 7) at ground lug (Figure 13, Item 3) and grounding rod (Figure 13, Item 8). Retighten ground lug.
7. Remove grounding rod (Figure 13, Item 8) from earth.
8. Place ground wire (Figure 13, Item 7) and rod (Figure 13, Item 8) in generator (TM 9-6115-644-10).
9. Disconnect water pump electrical cable (Figure 13, Item 10) from ECU enclosure receptacle (Figure 13, Item 13).
10. Disconnect water pump electrical cable (Figure 13, Item 10) from external water pump (Figure 13, Item 9).
11. Roll-up water pump electrical cable (Figure 13, Item 10), then secure cable with strap (Figure 13, Item 11) and place in work light storage bag (Figure 13, Item 12).

DISCONNECT ELECTRICAL POWER-CONTINUED

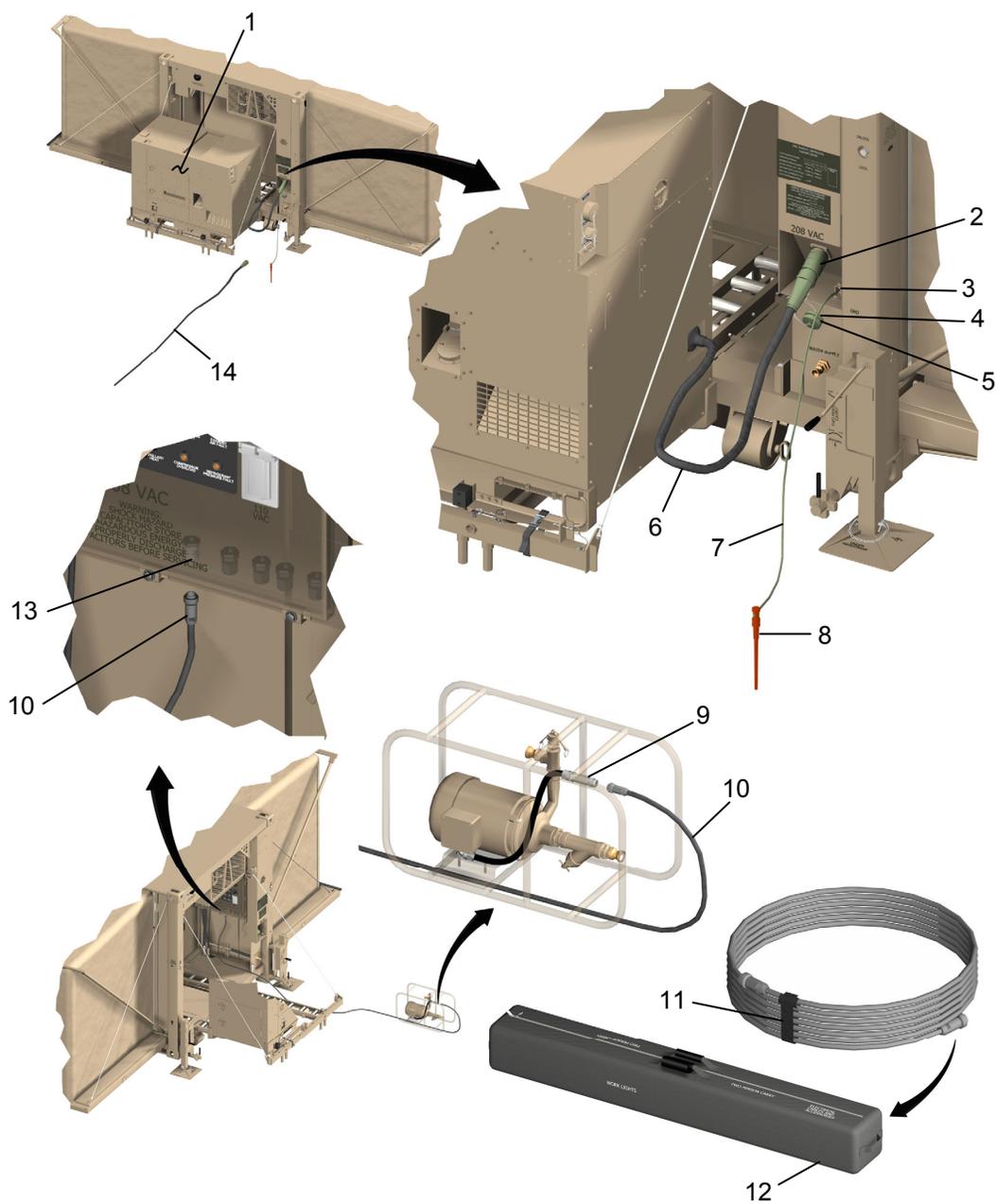


Figure 13. Disconnecting Electrical Power.

END OF TASK

TAKE DOWN RAMP SECTIONS

1. Separate top ramp (Figure 14, Item 7) from AA platform (Figure 14, Item 1) as follows:
 - a. Flip threshold (Figure 14, Item 6) over and place on ramp (Figure 14, Item 7).
 - b. With a person on both sides pull QC pins (Figure 14, Item 4) separate top ramp (Figure 14, Item 7) from AA platform (Figure 14, Item 1) and carefully low to ground.
 - c. Pull QC pins (Figure 14, Item 5) and remove connecting links (Figure 14, Item 3) from top ramp (Figure 14, Item 7).
 - d. Insert QC pins (Figure 14, Item 5) back into connecting links (Figure 14, Item 3).
 - e. Place connecting links (Figure 14, Item 3) in RLD storage bag (Figure 14, Item 2).
2. If attached, separate bottom ramp (Figure 14, Item 10) from top ramp (Figure 14, Item 7) as follows:
 - a. Position ramps (Figure 14, Items 7 and 10) so they are resting on their sides.
 - b. Pull QC pins (Figure 14, Item 9).
 - c. With a person on both ends pull bottom ramp (Figure 14, Item 10) out of top ramp (Figure 14, Item 7).
 - d. Pull QC pins (Figure 14, Item 11), reposition tenons (Figure 14, Item 8) to stowed position in bottom of top ramp (Figure 14, Item 7), then insert QC pins (Figure 14, Item 11).
3. Remove tenons (Figure 14, Item 12) from RLD storage bag (Figure 14, Item 2).
4. Insert tenons (Figure 14, Item 12) into stowed position in top of bottom ramp (Figure 14, Item 10).
5. Insert QC pins (Figure 14, Item 9) to secure tenons (Figure 14, Item 12).

TAKE DOWN RAMP SECTIONS-CONTINUED

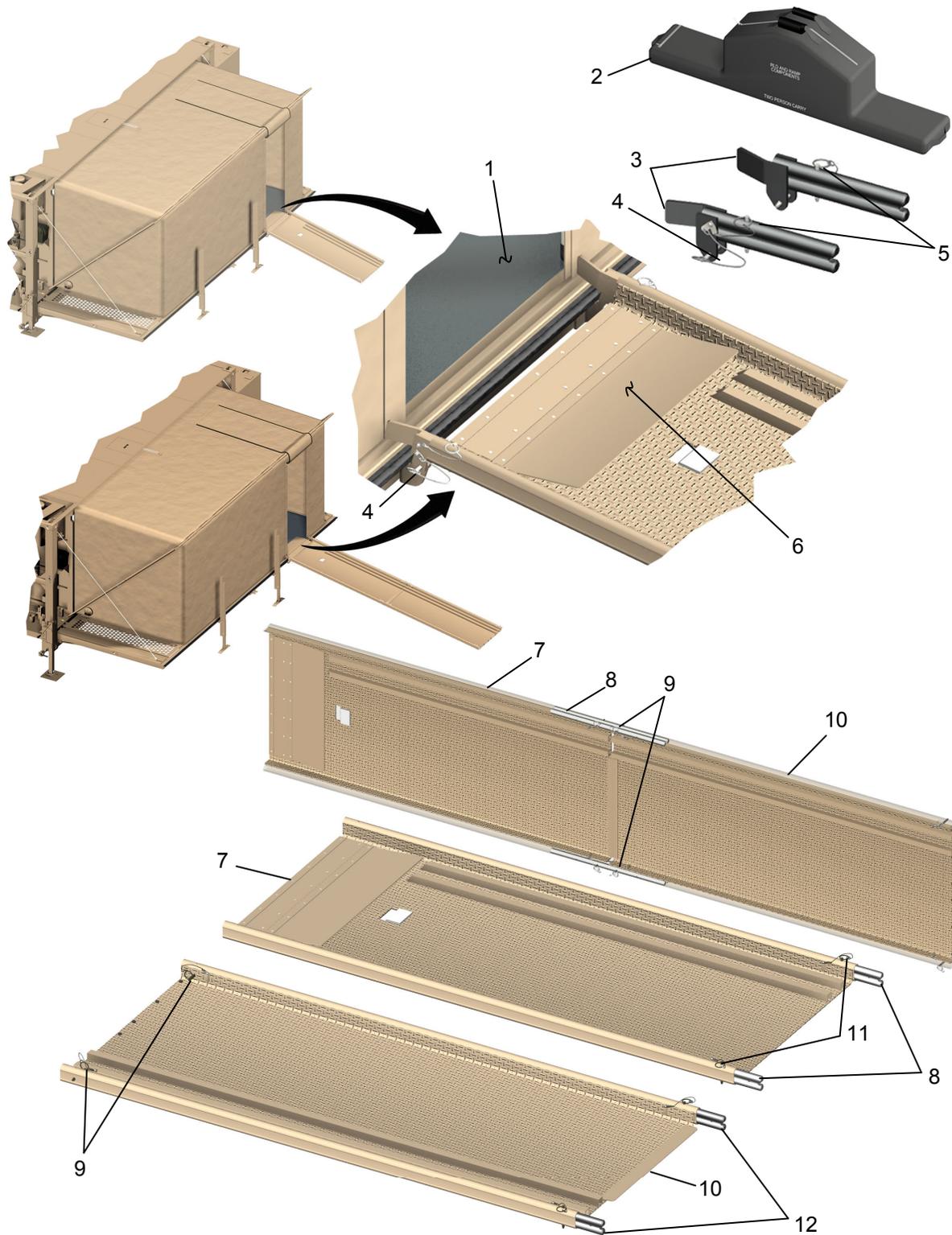


Figure 14. Taking Down Ramp Sections.

END OF TASK

PACK SUPPLY AREA

1. Verify all supplies and items that are to be stored on shelving unit (Figure 15, Item 16) are in place.
2. Install cargo net (Figure 15, Item 12) onto shelving unit (Figure 15, Item 16) as follows:
 - a. Starting at the top, feed straps (Figure 15, Item 13) through loops (Figure 15, Item 15) and back into buckles (Figure 15, Item 14).
 - b. Starting at top on AA side of shelving unit (Figure 15, Item 16) and working downward pull straps (Figure 15, Item 13) tight.
 - c. Starting at top on PA side of shelving unit (Figure 15, Item 16) and working downward pull straps (Figure 15, Item 13) tight.
3. Place the following items in the supply storage area (Figure 15, Item 8):
 - a. (Qty 2) MPPs (Figure 15, Item 26) (unless stored in RSU).
 - b. (Qty 1) MPP extension (Figure 15, Item 25) (unless stored in RSU).
 - c. (Qty 4) Temporary remains shelters (Figure 15, Item 24).
 - d. (Qty 1) Water pump discharge hose (Figure 15, Item 22) (place under MPPs on floor).
 - e. (Qty 1) Water pump supply hose (Figure 15, Item 23) (place under MPPs on floor).
 - f. (Qty 2) Waste/Drain hoses (Figure 15, Item 21) (place under MPPs on floor).
 - g. (Qty 1) Outside air duct (Figure 15, Item 20) (place under MPPs on floor).
 - h. (Qty 1) External water pump (Figure 15, Item 19) (place on top of MPPs).
 - i. (Qty 1) 2-1/2 gallon waste container (Figure 15, Item 18) (nest inside external water pump frame).
 - j. (Qty 1) ECU inlet filter (Figure 15, Item 17) (place on top of MPPs).
 - k. (Qty 4) Waste containers (Figure 15, Item 11) (place on top of MPPs).
 - l. (Qty 1) Folding table (Figure 15, Item 10) (place on top of waste containers).
 - m. (Qty 2) Folding chairs (Figure 15, Item 7) (place on top of folding table).
 - n. (Qty 1) Support storage bag (Figure 15, Item 3) with:
 - (Qty 9) Top support rod
 - (Qty 9) Front support rod
 - (Qty 1) AA partition rod
 - (Qty 1) AA partition
 - (Qty 1) Supply area door
 - (Qty 2) Weapons racks
 - (Qty 4) Exterior flaps
 - o. Light storage bag (Figure 15, Item 2) (Qty 1) with:
 - (Qty 7) Work lights
 - (Qty 1) Supply area light
 - (Qty 4) Emergency/blackout lights
 - (Qty 2) Electrical boxes
 - (Qty 2) 4-ft extension cords
 - (Qty 1) Water pump electrical cable

PACK SUPPLY STORAGE AREA-CONTINUED

- p. RLD storage bag (Figure 15, Item 1) (Qty 1) (unless stored in RSU) with:
 - (Qty 2) RLD rail
 - (Qty 1) RLD winch
 - (Qty 2) Slings
 - (Qty 2) Ramp connecting links
- 4. Install cargo net (Figure 15, Item 6) to secure accessories in supply area (Figure 15, Item 8) as follows:
 - a. Lay cargo net (Figure 15, Item 6) evenly over accessories.
 - b. Push in on buckles (Figure 15, Item 4) and pull straps (Figure 15, Item 5) out buckles.
 - c. Insert straps (Figure 15, Item 5) through slots in transition plates (Figure 15, Item 9).
 - d. Insert straps (Figure 15, Item 5) back into buckles (Figure 15, Item 4) and pull straps only enough to remove slack. **Do not overtighten.**

PACK SUPPLY STORAGE AREA-CONTINUED

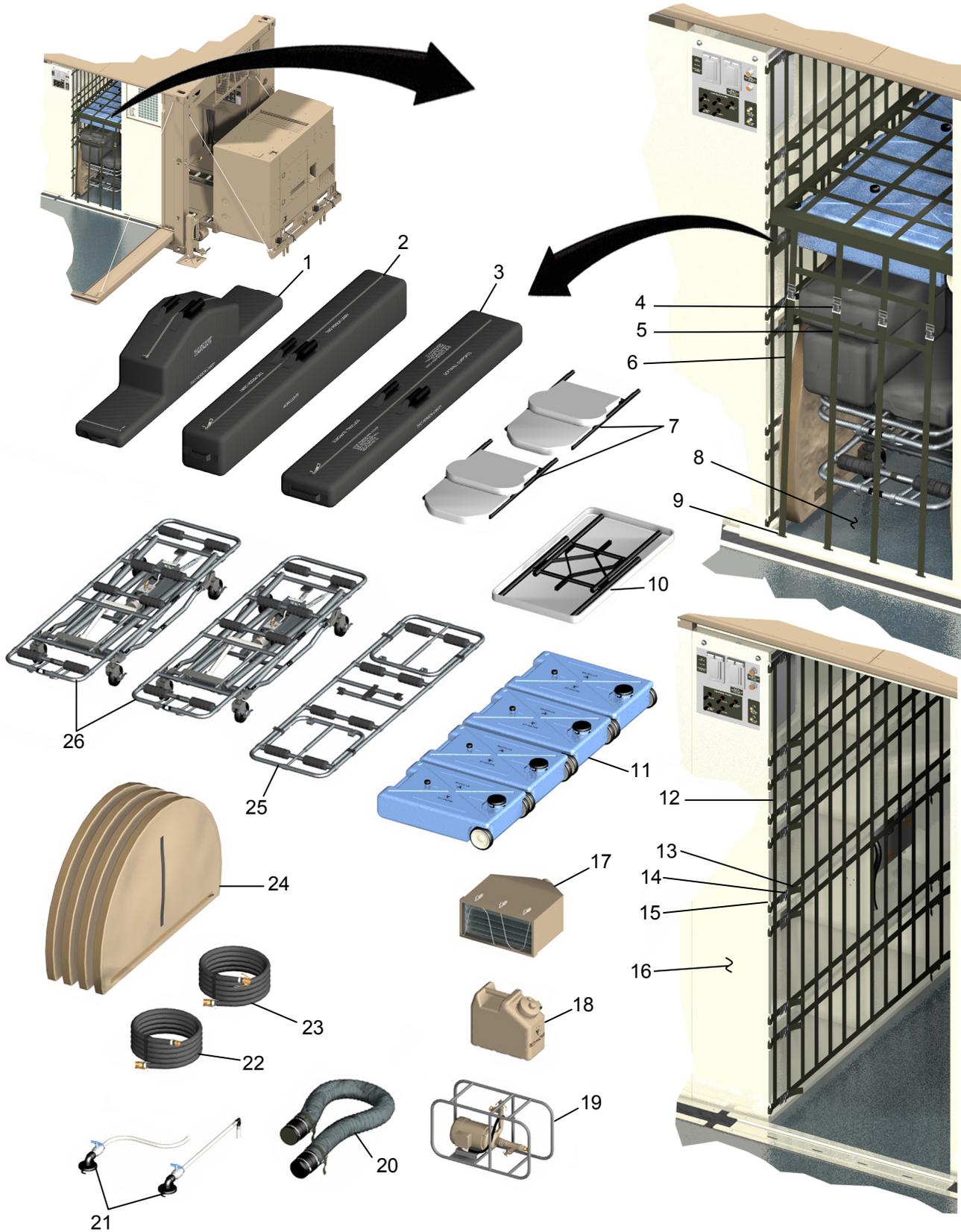


Figure 15. Supply Storage Area and Accessories Pack-up.

END OF TASK

TAKE DOWN AA AND PA SOFT WALLS

1. Unzip end walls (Figure 16, Item 8) and lay flat.
2. If opened, close windows (Figure 16, Item 4) on PA emergency door (Figure 16, Item 1) and vestibule door (Figure 16, Item 5).
3. Close and zip PA emergency door (Figure 16, Item 1) and vestibule door (Figure 16, Item 5).
4. Fold threshold (Figure 16, Item 6) of each door under door so it is not sticking out past edge of platform.
5. With an operator positioned on each end of platform (Figure 16, Item 7) apply tension to soft wall (Figure 16, Item 3).
6. Standing outside of outer legs, pull QC pins (Figure 16, Item 10) from outer leg (Figure 16, Item 9) at each side of soft wall (Figure 16, Item 3) then allow soft wall to relax.
7. Slide outer legs (Figure 16, Item 9) downward then insert QC pins (Figure 16, Item 10) to secure outer leg (Figure 16, Item 9) to inner leg (Figure 16, Item 11).
8. Ensure soft wall (Figure 16, Item 3) is folded evenly and edges of soft wall are clear of edges of platform (Figure 16, Item 7).
9. Repeat steps 5 through 8 to take down PA soft wall (Figure 16, Item 2).

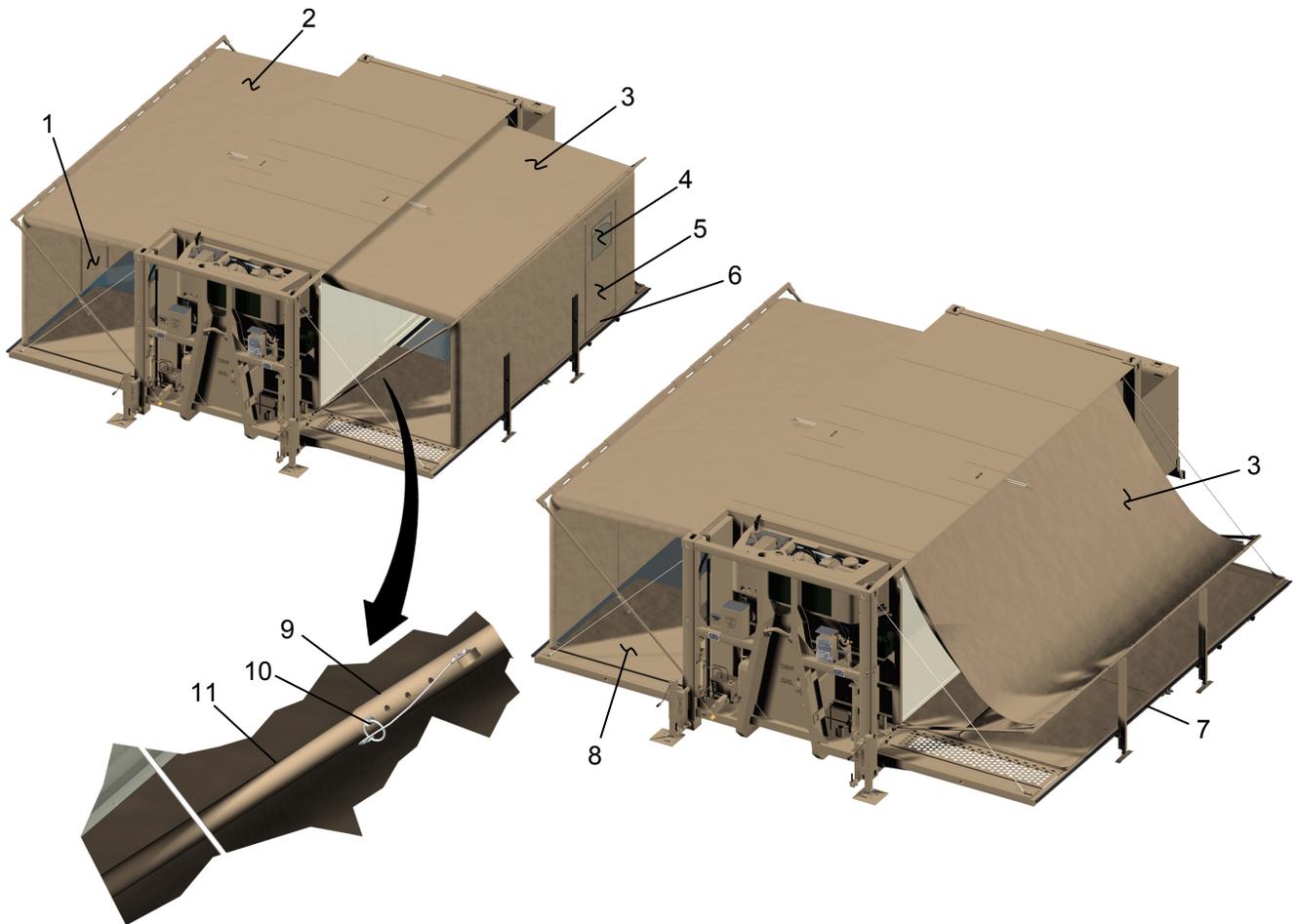


Figure 16. Take Down AA and PA Soft Walls.

END OF TASK

RAISE AND SECURE AA AND PA PLATFORMS**WARNING**

Never walk on platforms once platform supports have been removed. Failure to follow this precaution may cause serious injury to personnel and damage to platforms. If not operated properly, platform may experience sudden and unexpected drops. Prior to raising platform verify all personnel are and remain clear. Failure to follow this precaution can cause severe injury or death to personnel working nearby. Seek immediate medical attention if injury occurs.

CAUTION

Do not over pump hydraulic system. There is a noticeable difference when the cylinders are moving and when they reach the end of their travel. When pump handle movement is firm stop pumping to prevent causing damage to system components or creating leaks.

NOTE

In order to remove tension and make it easier to remove support legs the platform can be raised slightly.

1. Remove support legs (Figure 17, Item 1) from AA platform (Figure 17, Item 5) as follows:
 - a. Install handle (Figure 17, Item 7) into pump (Figure 17, Item 8).
 - b. Position AA platform RAISE/LOWER lever (Figure 17, Item 6) to RAISE.
 - c. Stroke pump (Figure 17, Item 7) with handle (Figure 17, Item 8) lift platform (Figure 17, Item 5) until feet (Figure 17, Item 3) are slightly off the ground.
 - d. Position RAISE/LOWER lever (Figure 17, Item 6) to NULL.
 - e. Pull QC pins (Figure 17, Item 4) out of fork supports (Figure 17, Item 2).
 - f. Remove support legs (Figure 17, Item 1) from fork supports (Figure 17, Item 2).
 - g. Insert QC pins (Figure 17, Item 4) back into fork supports (Figure 17, Item 2).

RAISE AND SECURE AA AND PA PLATFORMS-CONTINUED

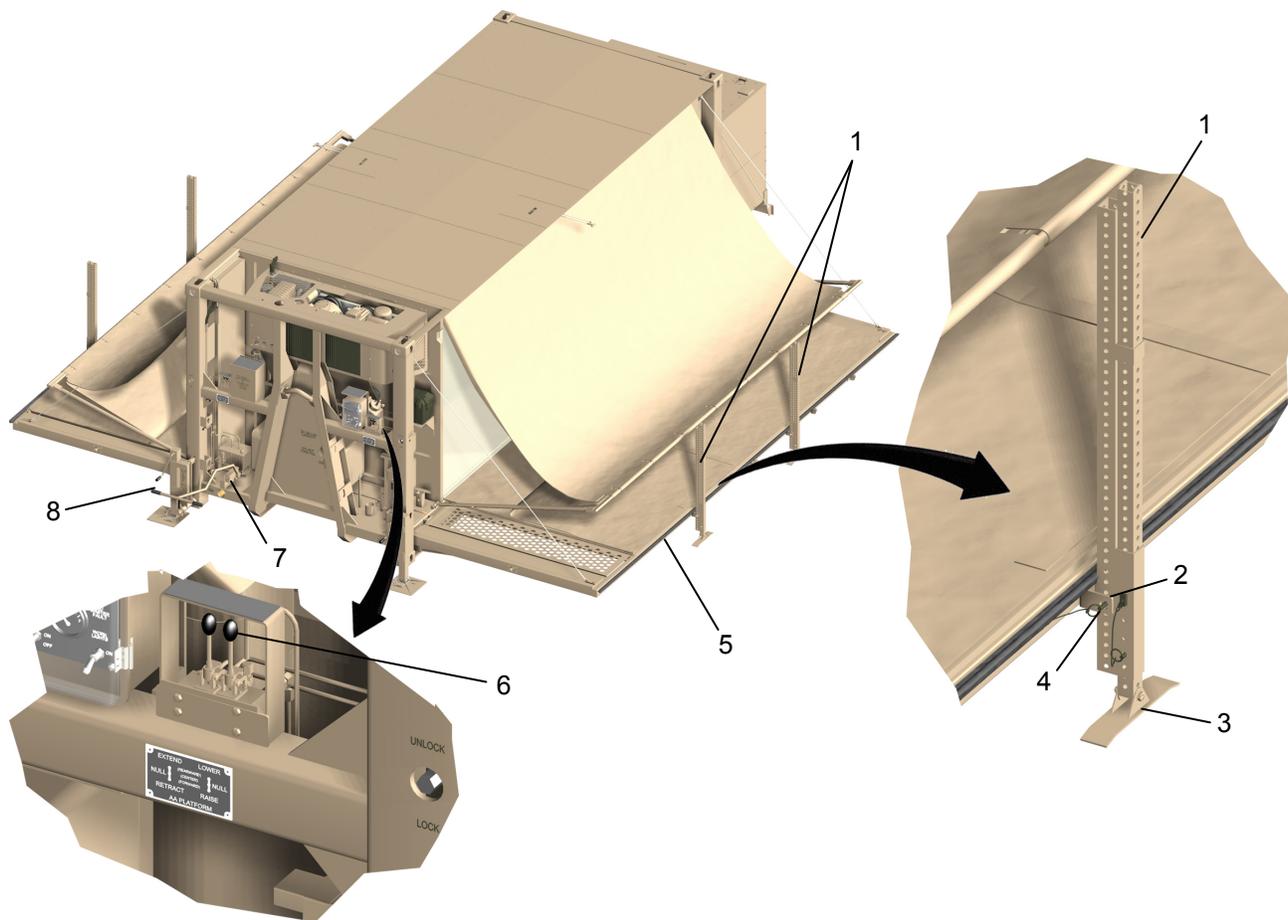


Figure 17. Removing Support Legs.

2. Raise AA platform (Figure 18, Item 1) as follows:
 - a. Verify RAISE/LOWER lever (Figure 18, Item 3) is positioned to NULL.
 - b. Position EXTEND/RETRACT lever (Figure 18, Item 4) to EXTEND.
 - c. Stroke pump (Figure 18, Item 5) with handle (Figure 18, Item 6) until catch (Figure 18, Item 2) is completely extended.
 - d. Holding on to pump handle, position EXTEND/RETRACT lever (Figure 18, Item 4) to NULL.
 - e. Position RAISE/LOWER lever (Figure 18, Item 3) to RAISE.

RAISE AND SECURE AA AND PA PLATFORMS-CONTINUED

WARNING

If not operated properly platform may experience sudden and unexpected drops. Prior to raising platform verify all personnel are and remain clear. Failure to follow this precaution can cause severe injury or death to personnel working nearby. Seek immediate medical attention if injury occurs.

NOTE

When raising platform make sure soft wall is not sticking into area were bow folds into notches on ISO frame or it will be difficult to fully close platform and secure it with side locks.

3. Stroke pump (Figure 18, Item 5) with handle (Figure 18, Item 6) until AA platform (Figure 18, Item 1) is almost vertical and handle is hard to push.
4. Position EXTEND/RETRACT lever (Figure 18, Item 4) to RETRACT (leave RAISE/LOWER lever (Figure 18, Item 3) in RAISE).
5. Stroke pump (Figure 18, Item 5) with handle (Figure 18, Item 6) until catch (Figure 18, Item 2) engages AA platform (Figure 18, Item 1) and pulls platform in tight.

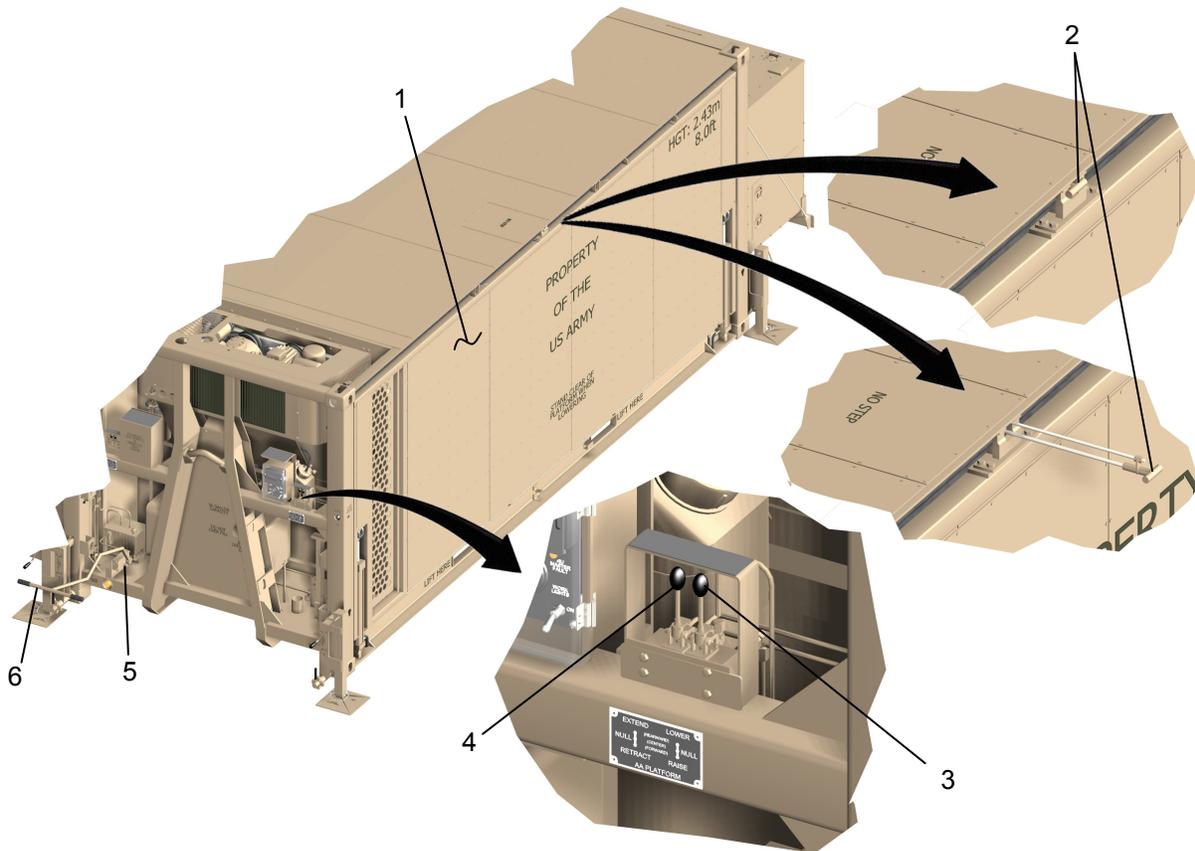


Figure 18. Raising AA and PA Platforms.

RAISE AND SECURE AA AND PA PLATFORMS-CONTINUED**WARNING**

If not operated properly platform may experience sudden and unexpected drops. Prior to raising platform verify all personnel are and remain clear. Failure to follow this precaution can cause severe injury or death to personnel working nearby. Seek immediate medical attention if injury occurs.

CAUTION

Tip of side lock must be within opening on receptacle on platform. Do not attempt to tighten side locks if they are not aligned. Forcing side locks into platform make damage platform receptacles or bend side locks.

NOTE

When tightening side locks, stroking pump slightly as locks are rotated may reduce the amount of force needed to rotate crank handle.

6. Remove crank handle (Figure 19, Item 8) from tool box (Figure 19, Item 1).
7. Secure AA platform (Figure 19, Item 2) as follows:
 - a. Insert crank handle (Figure 19, Item 8) into rear side lock (Figure 19, Item 3) and rotate in LOCK direction until pin (Figure 19, Item 6) is inserted into receptacle (Figure 19, Item 5).
 - b. Insert crank handle (Figure 19, Item 8) into front side lock (Figure 19, Item 7) and rotate in LOCK direction until pin (Figure 19, Item 6) is inserted into receptacle (Figure 19, Item 5).
 - c. Slightly stroke pump (Figure 19, Item 12) with handle (Figure 19, Item 13) to ensure catch (Figure 19, Item 4) is fully retracted.
 - d. Holding onto pump handle, place RAISE/LOWER lever (Figure 19, Item 9) and EXTEND/RETRACT lever (Figure 19, Item 10) back to NULL positions.
8. Repeat steps 1 through 7 for PA platform (Figure 19, Item 15).
9. Stow crank handle (Figure 19, Item 8) in tool box (Figure 19, Item 1).
10. Stow pump handle (Figure 19, Item 13) on bracket (Figure 19, Item 14) ensuring tip of handle is seated in hole in frame (Figure 19, Item 11).

RAISE AND SECURE AA AND PA PLATFORMS-CONTINUED

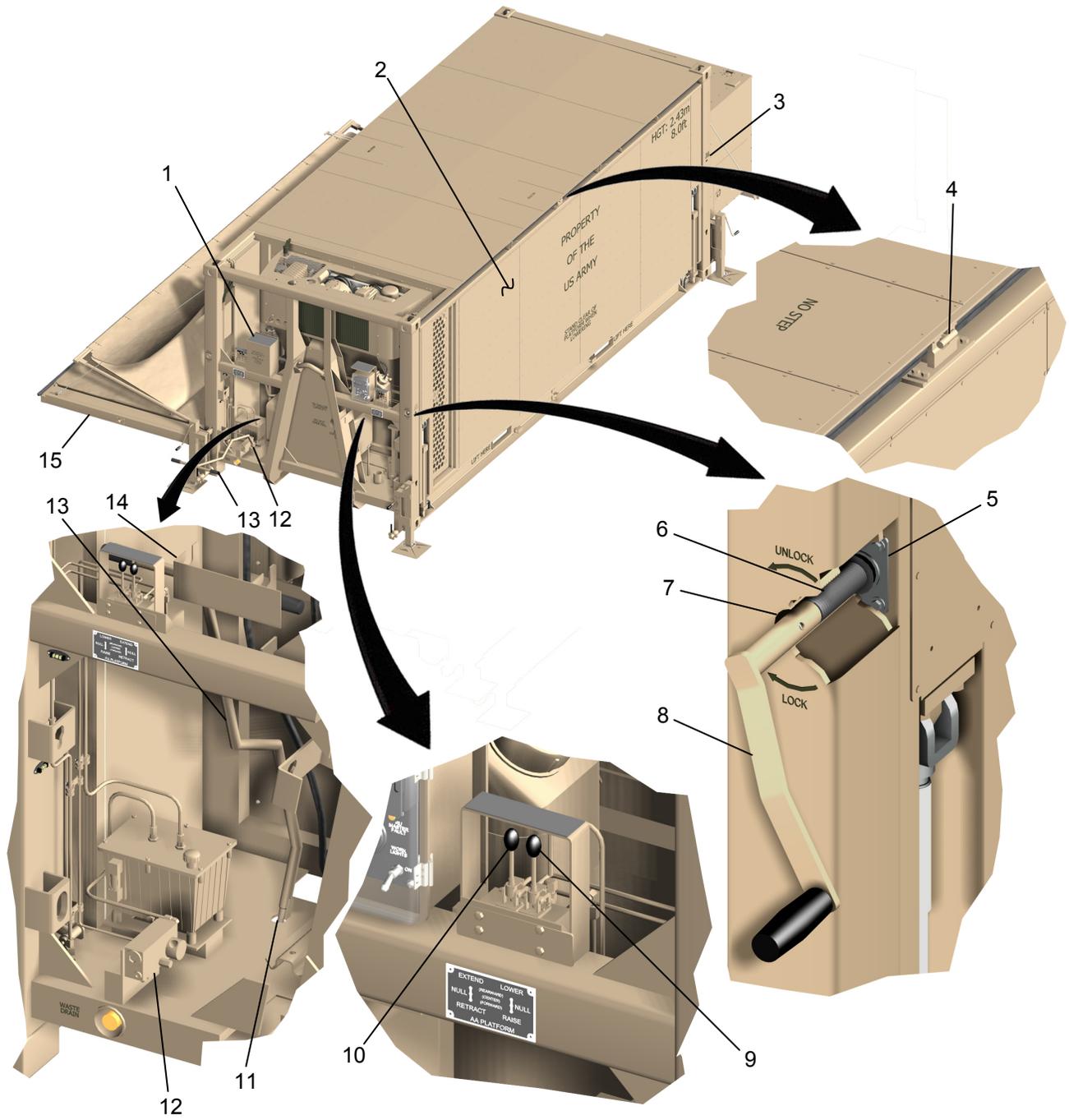


Figure 19. Securing AA and PA Platforms.

RAISE AND SECURE AA AND PA PLATFORMS-CONTINUED

11. Stow support legs as follows:

- a. Pull QC pin (Figure 20, Item 6) securing upper support leg (Figure 20, Item 1) to lower support leg (Figure 20, Item 4).
- b. Slide lower support leg (Figure 20, Item 4) out of upper support leg (Figure 20, Item 1) then insert and slide lower leg inside of upper leg.
- c. Place support leg (Figure 20, Item 1) on mounting provisions (Figure 20, Item 2) with feet (Figure 20, Item 3) of bottom leg point up and feet of top leg pointing down.
- d. Align holes in upper leg (Figure 20, Item 1) and lower leg (Figure 20, Item 4) with hole in mounting provision (Figure 20, Item 5) then insert QC pin (Figure 20, Item 6).
- e. Repeat steps a through d to stow remaining support legs.

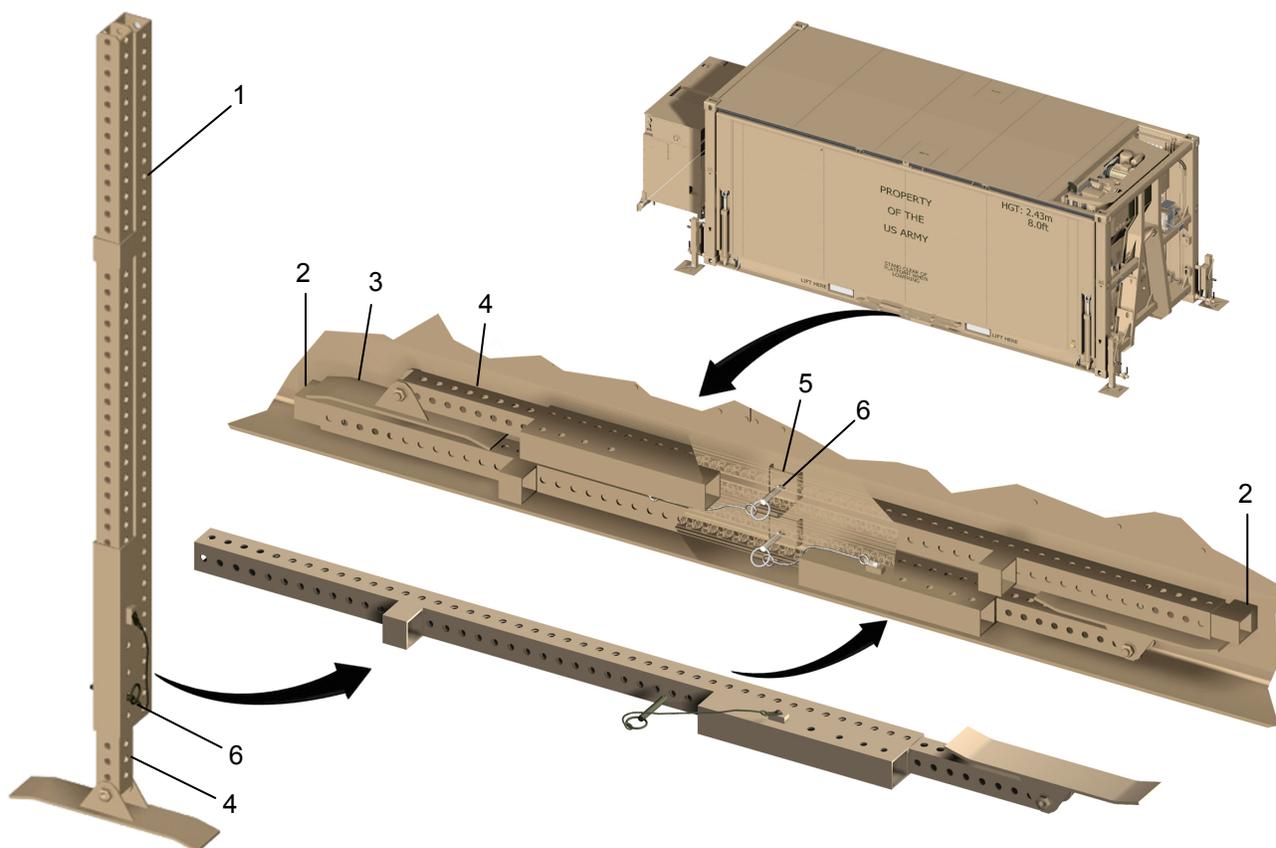


Figure 20. Stowing Platform Support Legs.

END OF TASK

STOW GENERATOR AND GENERATOR SUPPORTS**WARNING**

Personnel must remain clear of area between generator and MIRCS rear mechanical wall during generator movement. Keep hands away from rollers. Failure to follow this precaution may result in personnel becoming trapped between generator and support structure causing severe injury. Seek immediate medical attention if injury occurs.

CAUTION

Care must be used when stowing generator not to pinch or damage electrical cable on pigtail. Ensure cable is clear of all obstructions and pinch points as generator is moved forward. Before sliding generator into rear mechanical area ensure all access panels and doors on generator are closed and all latches are folded in. Failure to follow this precaution will result in damage to generator and ECU.

1. Place pigtail (Figure 21, Item 5) inside rear mechanical area with connector (Figure 21, Item 4) against curbside wall.
2. Pull QC pin (Figure 21, Item 8) out of generator (Figure 21, Item 2) and insert into generator support (Figure 21, Item 6).
3. Remove straps (Figure 21, Item 8) securing generator (Figure 21, Item 2) to generator cable support (Figure 21, Item 7) and place back on tie down rings (Figure 21, Item 1). Tuck straps into fork pockets on generator.
4. With personnel stationed at both sides of generator (Figure 21, Item 2) push generator back into rear mechanical area until generator contacts bumpers (Figure 21, Item 3).

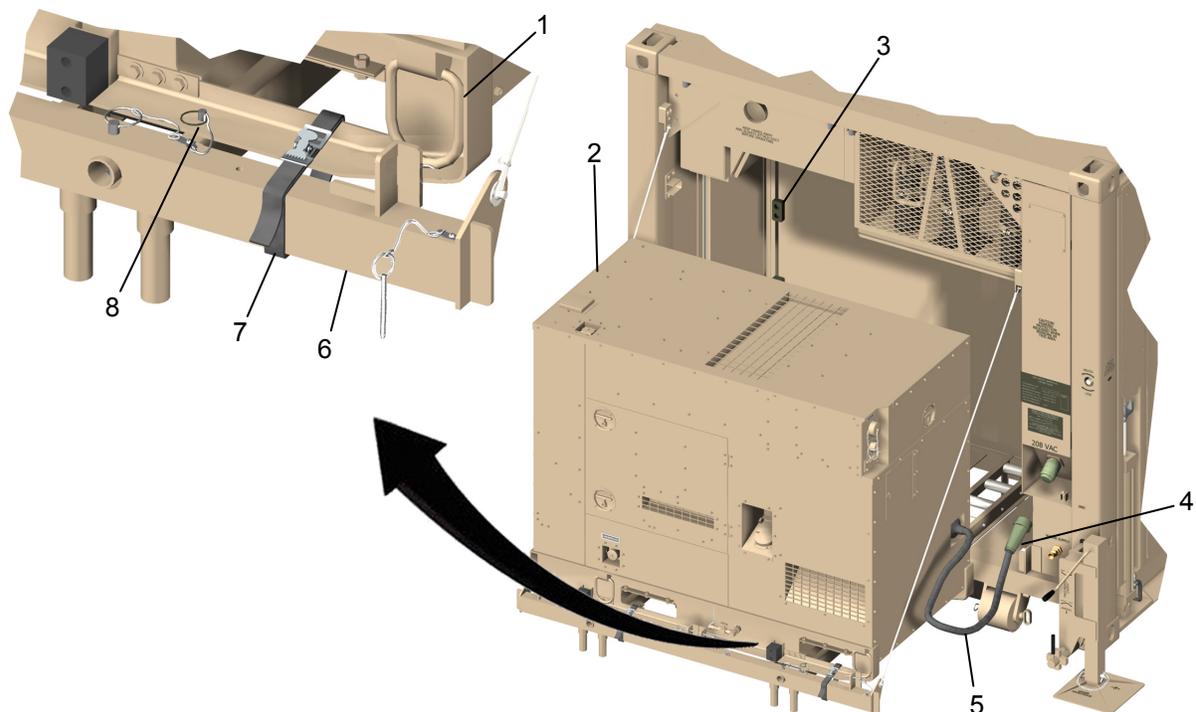


Figure 21. Stowing Generator.
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STOW GENERATOR AND GENERATOR SUPPORTS-CONTINUED

5. Pull QC pins (Figure 22, Item 5) and pull generator cable support (Figure 22, Item 6) off of generator supports (Figure 22, Items 4 and 7). Reinstall QC pins.
6. Disconnect generator supports (Figure 22, Item 4 and 7) from frame (Figure 22, Item 2) as follows:
 - a. Hold generator cable support (Figure 22, Item 6) out away from generator supports (Figure 22, Items 4 and 7).
 - b. Remove QC pins (Figure 22, Item 1) from stabilizer bars (Figure 22, Item 3).
 - c. Pivot stabilizer bars (Figure 22, Item 3) over and secure to supports (Figure 22, Item 4 and 7) with QC pins (Figure 22, Item 1).
 - d. Lift up on LH generator support (Figure 22, Item 7) and remove from frame (Figure 22, Item 2).
 - e. Lift up on RH generator support (Figure 22, Item 4) and remove from frame (Figure 22, Item 2).

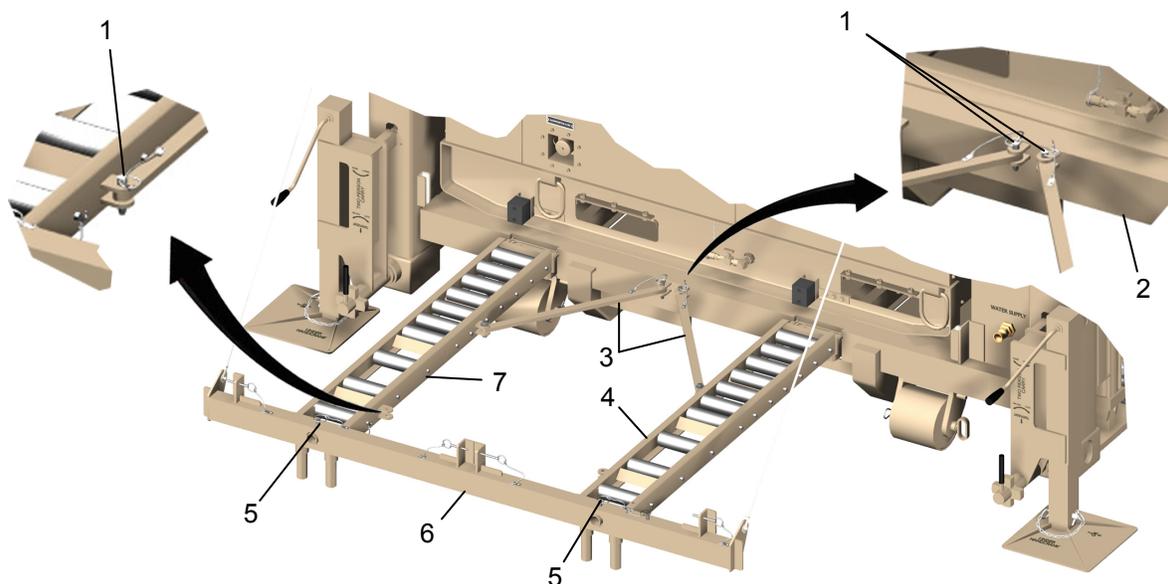


Figure 22. Takedown Generator Cable Supports.

STOW GENERATOR AND GENERATOR SUPPORTS-CONTINUED

7. Stow generator cable support (Figure 23, Item 8) as follows:
 - a. With a person on each side of generator cable support (Figure 23, Item 8) align support with channels (Figure 23, Item 6) on frame (Figure 23, Item 7).
 - b. Insert generator cable support (Figure 23, Item 8) into mounting provisions (Figure 23, Item 6) applying equal pressure at both ends.
 - c. Ensure cables (Figure 23, Item 5) are not sticking out past end of frame (Figure 23, Item 4).
8. Install generator brace (Figure 23, Item 3) as follows:
 - a. With a person on each end pull QC pins (Figure 23, Item 2).
 - b. Lift up and insert generator brace (Figure 23, Item 3) into brackets (Figure 23, Item 1).
 - c. Insert QC pins (Figure 23, Item 2) back into generator brace (Figure 23, Item 3) and brackets (Figure 23, Item 1).
9. Stow generator supports (Figure 23, Item 9) under frame (Figure 23, Item 7) as follows:
 - a. Pull QC pin (Figure 23, Item 10).
 - b. Flip generator support (Figure 23, Item 9) over so that stabilizer (Figure 23, Item 12) is pointing outboard.
 - c. Mate generator support (Figure 23, Item 9) with angles (Figure 23, Item 11) then slide support forward as far as possible.
 - d. Insert QC pin (Figure 23, Item 10) through frame (Figure 23, Item 7) and generator support (Figure 23, Item 9).
 - e. Repeat steps a through d for second generator support.

STOW GENERATOR AND GENERATOR SUPPORTS-CONTINUED

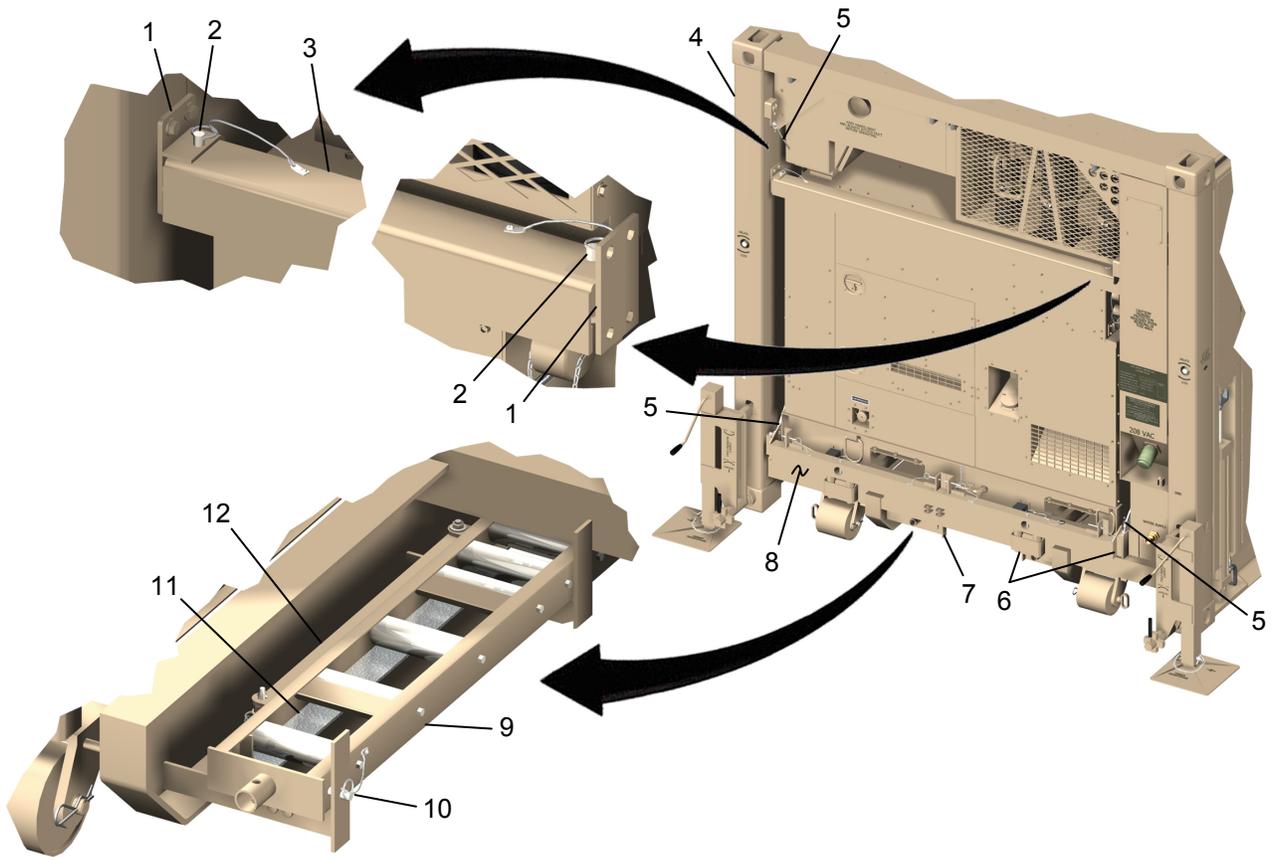


Figure 23. Stowing Generator Supports and Securing Generator.

END OF TASK

STOW RAMP**CAUTION**

When stowing ramps be careful not to pinch fingers between ramps and frame. Failure to do so could result in serious injury to personnel.

1. Pull QC pins (Figure 24, Item 5) from generator cable support (Figure 24, Item 4).
2. With a person at each side, lift and insert top ramp (Figure 24, Item 1) over pins (Figure 24, Item 3) then lower ramp so that notches (Figure 24, Item 6) are captured by generator cable support (Figure 24, Item 4).
3. Insert QC pins (Figure 24, Item 5) to secure ramp (Figure 24, Item 1) to generator cable support (Figure 24, Item 4).
4. Repeat steps 2 and 3 to stow bottom ramp (Figure 24, Item 2),

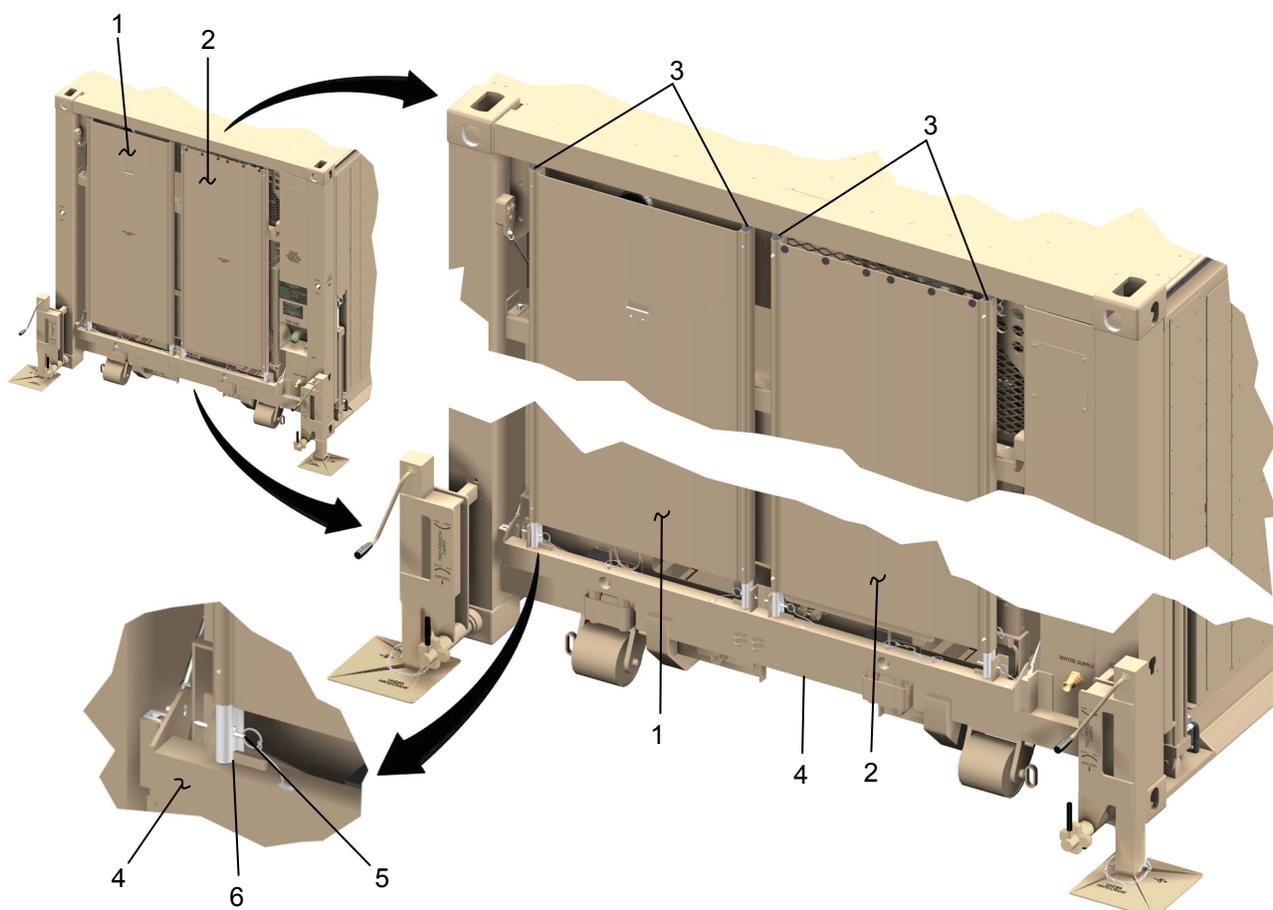


Figure 24. Stowing Ramps.

END OF TASK

REMOVE AND STOW LEVELING JACKS**WARNING**

MIRCS must be lowered evenly on all four corners at the same time. Placing excessive load on one corner can cause excessive stress to leveling jack resulting in collapse of the jack and a potential for serious personal injury or death if you become trapped under the container.

1. Lower the MIRCS to the ground as follows:
 - a. With an operator at each corner rotate the hand cranks (Figure 25, Item 1) until all corner fittings (Figure 25, Item 13) are contacting the ground.
 - b. Continue rotating hand cranks (Figure 25, Item 1) until the feet (Figure 25, Item 7) are no longer contacting the ground.
2. Remove leveling jack (Figure 25, Item 2) from each corner fitting (Figure 25, Item 13) as follows:
 - a. Loosen collar (Figure 25, Item 6), then rotate handle (Figure 25, Item 5) to UNLOCK position.
 - b. Pull jack (Figure 25, Item 2) outward until twist lock (Figure 25, Item 12) is out of corner fitting (Figure 25, Item 13).
 - c. Lift-up on jack (Figure 25, Item 2) until locking pin (Figure 25, Item 4) is clear of keyway (Figure 25, Item 3).
 - d. Repeat steps a through c for other three leveling jacks.
3. Remove feet (Figure 25, Item 7) from leveling jacks (Figure 25, Item 2) as follows:
 - a. Flip ring (Figure 25, Item 10) over and pull locking pin (Figure 25, Item 8) out of adjusting pin (Figure 25, Item 9).
 - b. Pull adjusting pin (Figure 25, Item 9) out of leg and foot (Figure 25, Item 7) then slide foot (Figure 25, Item 7) out of leg (Figure 25, Item 11).
 - c. Repeat steps a and b for other three leveling jacks.

REMOVE AND STOW LEVELING JACKS-CONTINUED

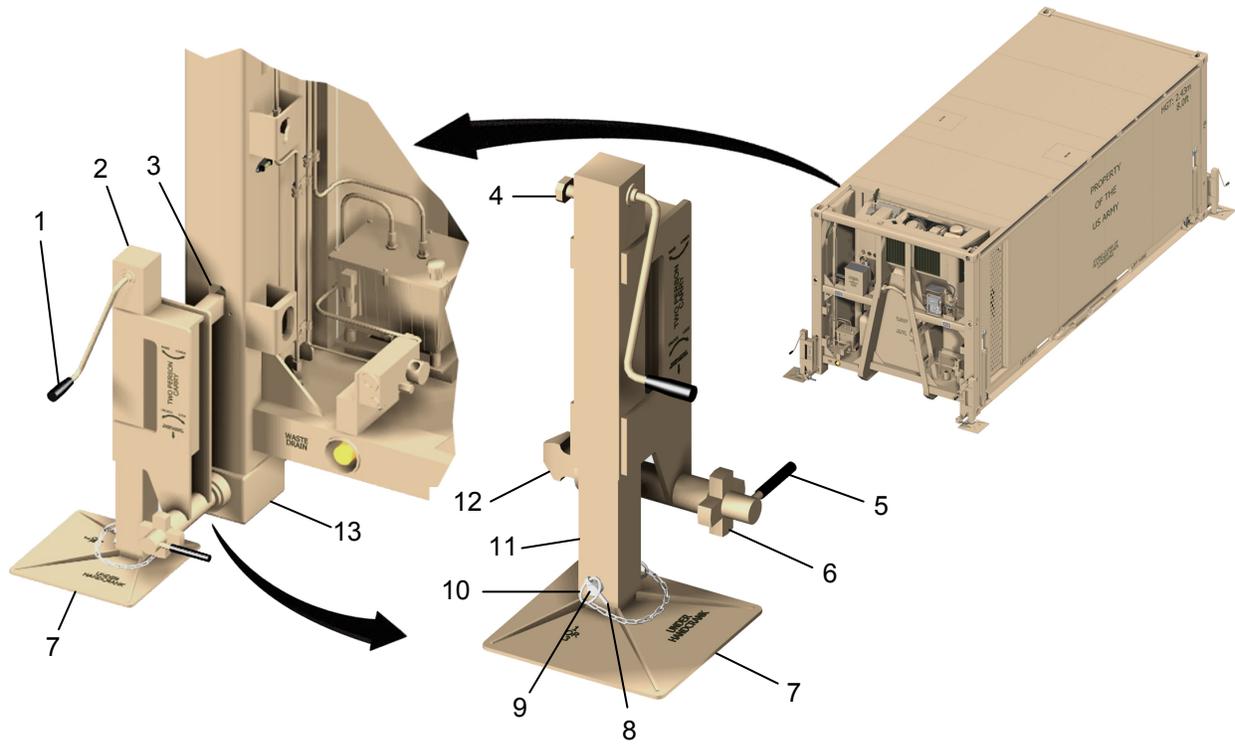


Figure 25. Removing Leveling Jacks.

REMOVE AND STOW LEVELING JACKS-CONTINUED

4. Stow feet (Figure 26, Item 2) as follows:
 - a. Insert a foot (Figure 26, Item 2) labeled "1 OR 3" into shortest storage provision (Figure 26, Item 3) labeled "1".
 - b. Insert adjusting pin (Figure 26, Item 1) through storage provision (Figure 26, Item 3) and foot (Figure 26, Item 2).
 - c. Insert locking pins (Figure 26, Item 4) through adjusting pin (Figure 26, Item 1) then flip ring (Figure 26, Item 5) over.
 - d. Repeat steps a through c to stow other three feet (Figure 26, Item 2) into storage provisions (Figure 26, Item 3) labeled "2, 3, and 4" in that order.
5. Stow ladder (Figure 26, Item 19) as follows:
 - a. Starting under highest extended rung (Figure 26, Item 20) push in on both latches (Figure 26, Item 18) to collapse ladder one section at a time.
 - b. Pull QC pin (Figure 26, Item 7) securing hold down bracket (Figure 26, Item 6) to front retaining plate (Figure 26, Item 9).
 - c. Pivot hold down bracket (Figure 26, Item 6) forward then remove bracket from rear retaining plate (Figure 26, Item 8).
 - d. Place ladder (Figure 26, Item 19) into storage provisions (Figure 26, Item 10).
 - e. Install hold down bracket (Figure 26, Item 6) over ladder (Figure 26, Item 19) and insert tab into rear retaining plate (Figure 26, Item 8).
 - f. Install QC pin (Figure 26, Item 7) to secure hold down bracket (Figure 26, Item 6) to front retaining plate (Figure 26, Item 9).
6. Stow leveling jacks (Figure 26, Item 17) as follows:
 - a. Lift up on jack (Figure 26, Item 17) ensuring jack is oriented as shown in Figure 26 and insert locking pin (Figure 26, Item 14) into keyway (Figure 26, Item 11). Allow jack to hang from locking pin.
 - b. Repeat step a to hang other three jacks in the same manner.
 - c. At outboard jacks (Figure 26, Item 21) drop twist locks (Figure 26, Item 15) into holes in brackets (Figure 26, Item 12).
 - d. Rotate handles (Figure 26, Item 13) to LOCK position with handles pointing downward, then tighten collars (Figure 26, Item 16).
 - e. At inboard jacks (Figure 26, Item 22) drop twist locks (Figure 26, Item 15) into holes in brackets (Figure 26, Item 12).
 - f. Rotate handles (Figure 26, Item 13) to LOCK position with handle pointing upward, then tighten collars (Figure 26, Item 16).

REMOVE AND STOW LEVELING JACKS-CONTINUED

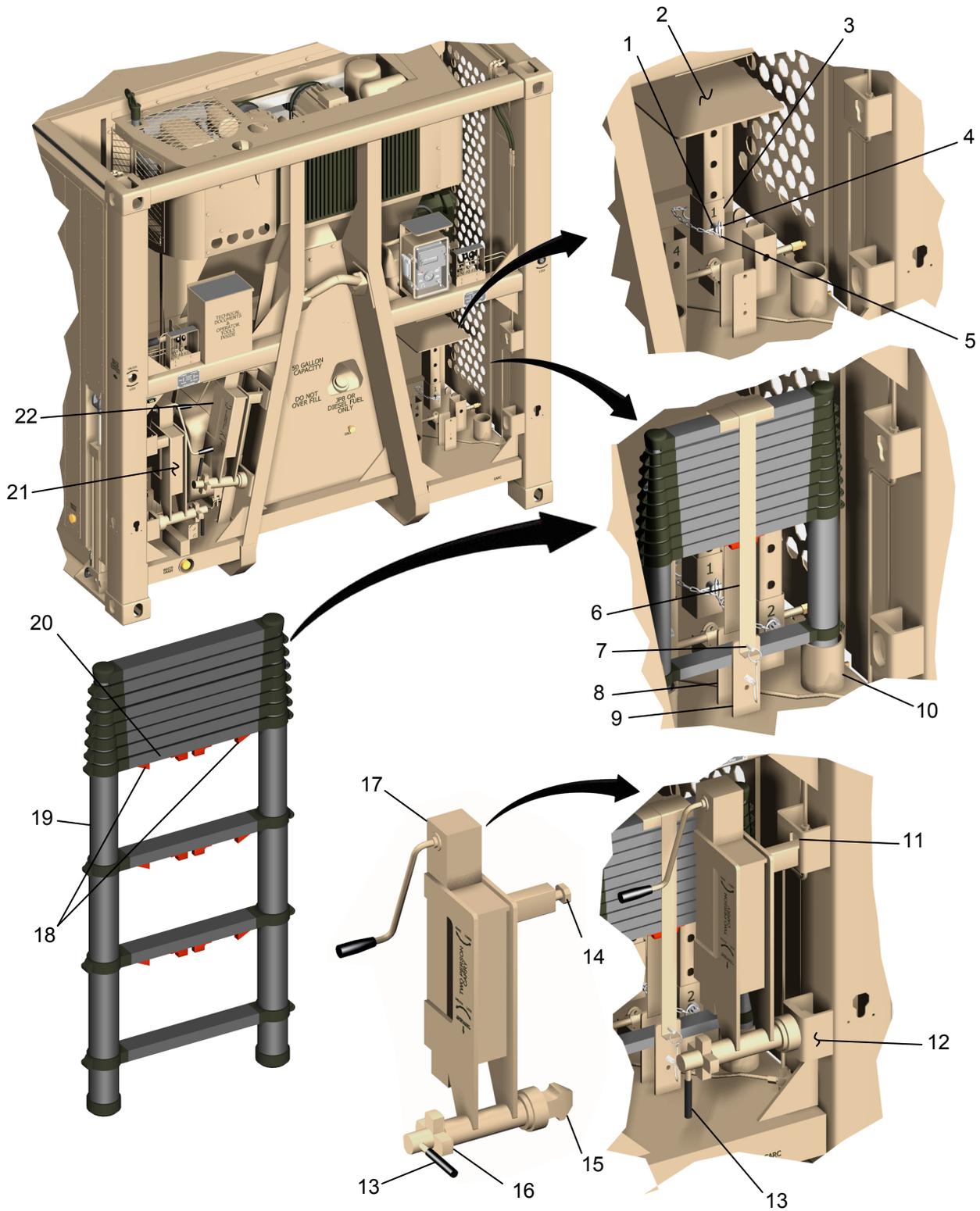


Figure 26. Stowing Leveling Jacks, Feet, and Ladder.

END OF TASK

END OF WORK PACKAGE

**CREW MAINTENANCE
OPERATION UNDER UNUSUAL CONDITIONS**

INITIAL SETUP:**References**

WP 0004

WP 0010

GENERAL

This work package contains instructions for safely operating the MIRCS under unusual conditions. In addition to normal preventative maintenance service, special care must be taken to keep the MIRCS operational in extreme weather conditions. This work package also includes references for the decontamination of the MIRCS

OPERATION ON SLOPED TERRAIN

MIRCS must be operated on firm ground with a 6° slope or less. If the terrain requires that the MIRCS be set up on un-level ground, extra steps are required to ensure the leveling jacks and unit will be stable during use.

Proper positioning of the prime mover and MIRCS is an important factor during uneven terrain set-up. If MIRCS is not properly oriented it will be difficult to properly deploy the platforms and install the ramp sections. Also, the MIRCS should be positioned in a manner that allows rainwater to run away, so as to not be a nuisance while conducting MA operations.

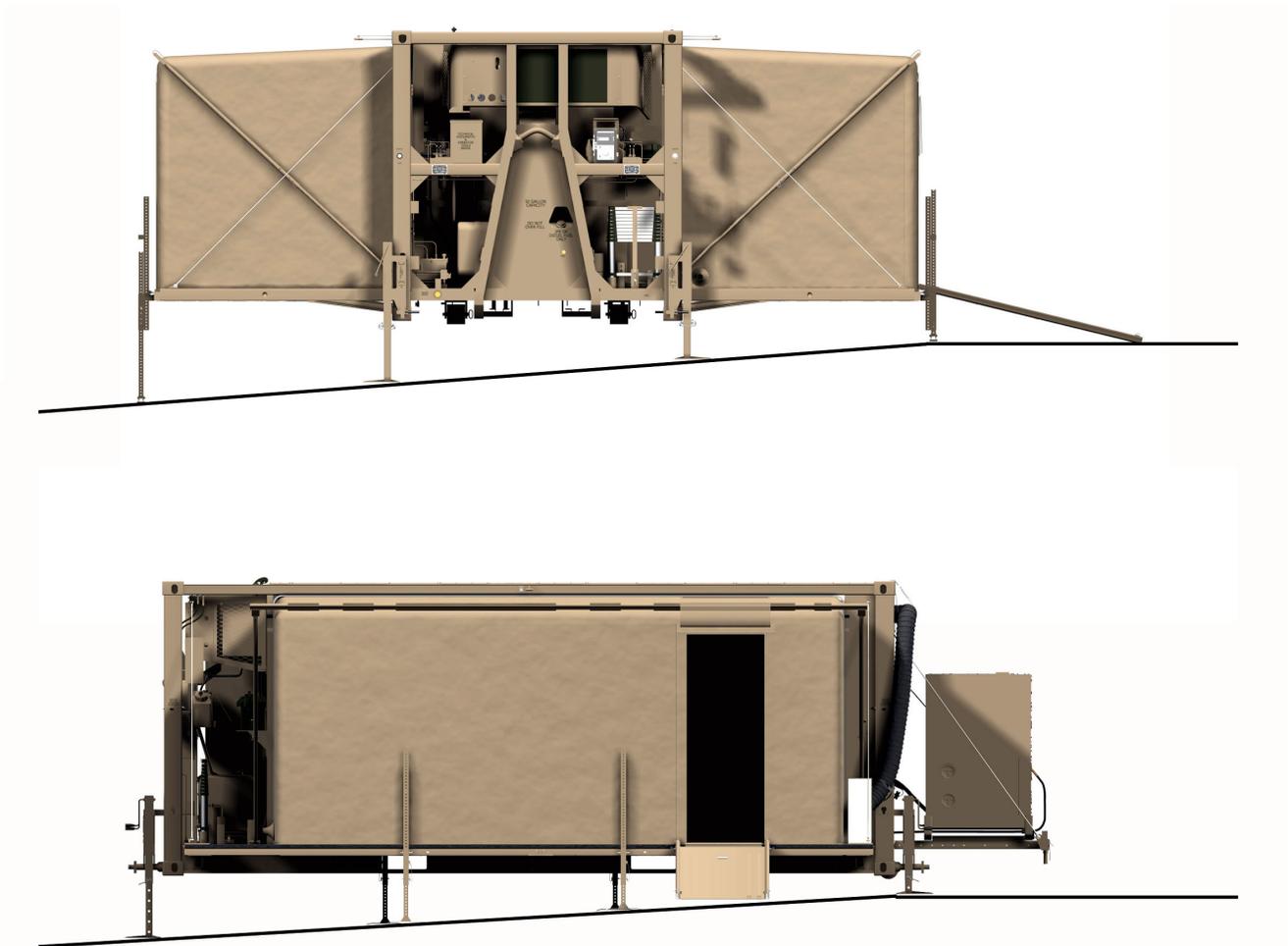


Figure 1. Positioning MIRCS on Sloped Terrain.

OPERATION ON SLOPED TERRAIN-CONTINUED

WARNING

MIRCS must be raised evenly on both corners at the same time. Placing excessive load on one corner can cause excessive stress to leveling jack resulting in collapse of the jack and a potential for serious personal injury or death if you become trapped under the container. Seek immediate medical attention if injury occurs.

MIRCS ramps and leveling jacks weigh over 45 lbs each. Two persons are required to carry these items. Ensure you lift with your legs and not with your back to avoid injury. Seek immediate medical attention if injury occurs.

1. Determine which are the two lowest corners.

NOTE

Leveling jacks will be used at side jacking points of two lowest corners to lift MIRCS high enough to allow leveling jacks with extended feet to be installed at the front (normal) jacking points. When installing feet in leveling jacks that will be attached to the side jacking points the feet must be installed in a manner that will not cause interference with feet that will be installed in front jacking points.

2. Attach feet (Figure 2, Item 2) to leveling jacks (Figure 2, Item 1) as follows:
 - a. Insert foot (Figure 2, Item 2) completely into leg (Figure 2, Item 6).
 - b. Insert adjusting pin (Figure 2, Item 5) through leg (Figure 2, Item 6) and foot (Figure 2, Item 2).
 - c. Insert locking pin (Figure 2, Item 3) through adjusting pin (Figure 2, Item 5) then flip ring (Figure 2, Item 4) over.
 - d. Repeat steps a through c for other three leveling jacks.

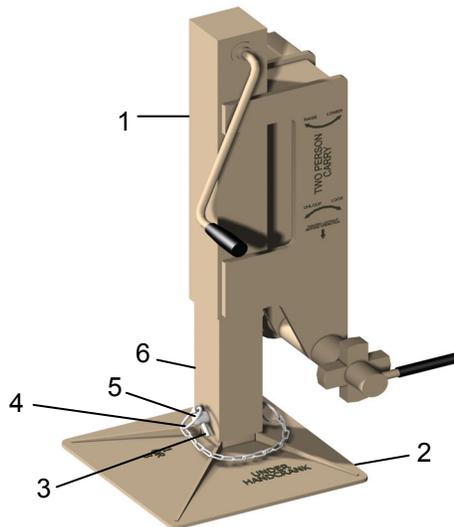


Figure 2. Leveling Jack Feet Installation.

OPERATION ON SLOPED TERRAIN-CONTINUED

3. Attach leveling jacks (Figure 3, Item 16) to the lowest corners on the side jacking points (Figure 3, Item 3) as follows:
 - a. Rotate handle (Figure 3, Item 15) towards the LOWER direction until leg (Figure 3, Item 14) is at its lowest position.
 - b. Lift-up and insert locking pin (Figure 3, Item 17) into keyway (Figure 3, Item 9) then pivot jack downward to insert twist lock (Figure 3, Item 11) into corner fitting (Figure 3, Item 10).
 - c. Rotate handle (Figure 3, Item 13) to LOCK position, then tighten collar (Figure 3, Item 12).
 - d. Repeat steps a through c for leveling jack at second lowest position.
4. With an operator stationed at both corners, raise MIRCS as follows:
 - a. Rotate the handles (Figure 3, Item 15) until feet (Figure 3, Item 7) on both jacks are contacting the ground.
 - b. Together raise the MIRCS until the bubble levels (Figure 3, Item 1) are within indicator marks (Figure 3, Item 2).
5. At the lowest corners attach a second set of leveling jacks (Figure 3, Item 16) to the normal jacking points (Figure 3, Item 3) as follows:
 - a. Rotate handle (Figure 3, Item 15) towards the LOWER direction until leg (Figure 3, Item 14) is at its lowest position.
 - b. Lift-up and insert locking pin (Figure 3, Item 17) into keyway (Figure 3, Item 9) then pivot jack downward to insert twist lock (Figure 3, Item 11) into corner fitting (Figure 3, Item 10).
 - c. Rotate handle (Figure 3, Item 13) to LOCK position, then tighten collar (Figure 3, Item 12).
 - d. Repeat steps a through c for second leveling jack.
6. Drop leg down on lowest leveling jack (Figure 3, Item 16) as follows:
 - a. Flip ring (Figure 3, Item 4) over and pull locking pin (Figure 3, Item 6) out of adjusting pin (Figure 3, Item 8).
 - b. Pull adjusting pin (Figure 3, Item 8) out of foot (Figure 3, Item 7) and allow leg (Figure 3, Item 5) to drop down.
 - c. Continue to evenly raise both side leveling jacks (Figure 3, Item 16) until the adjusting pin (Figure 3, Item 8) can be inserted back into drop down leg (Figure 3, Item 5).
 - d. Insert adjusting pin (Figure 3, Item 8) through leg (Figure 3, Item 5) and foot (Figure 3, Item 7).
 - e. Insert locking pin (Figure 3, Item 6) through adjusting pin (Figure 3, Item 8) then flip ring (Figure 3, Item 4) over.
7. Determine if jack (Figure 3, Item 16) at second lowest point needs to have its drop down leg lowered. If so repeat step 6 for second position.

OPERATION ON SLOPED TERRAIN-CONTINUED

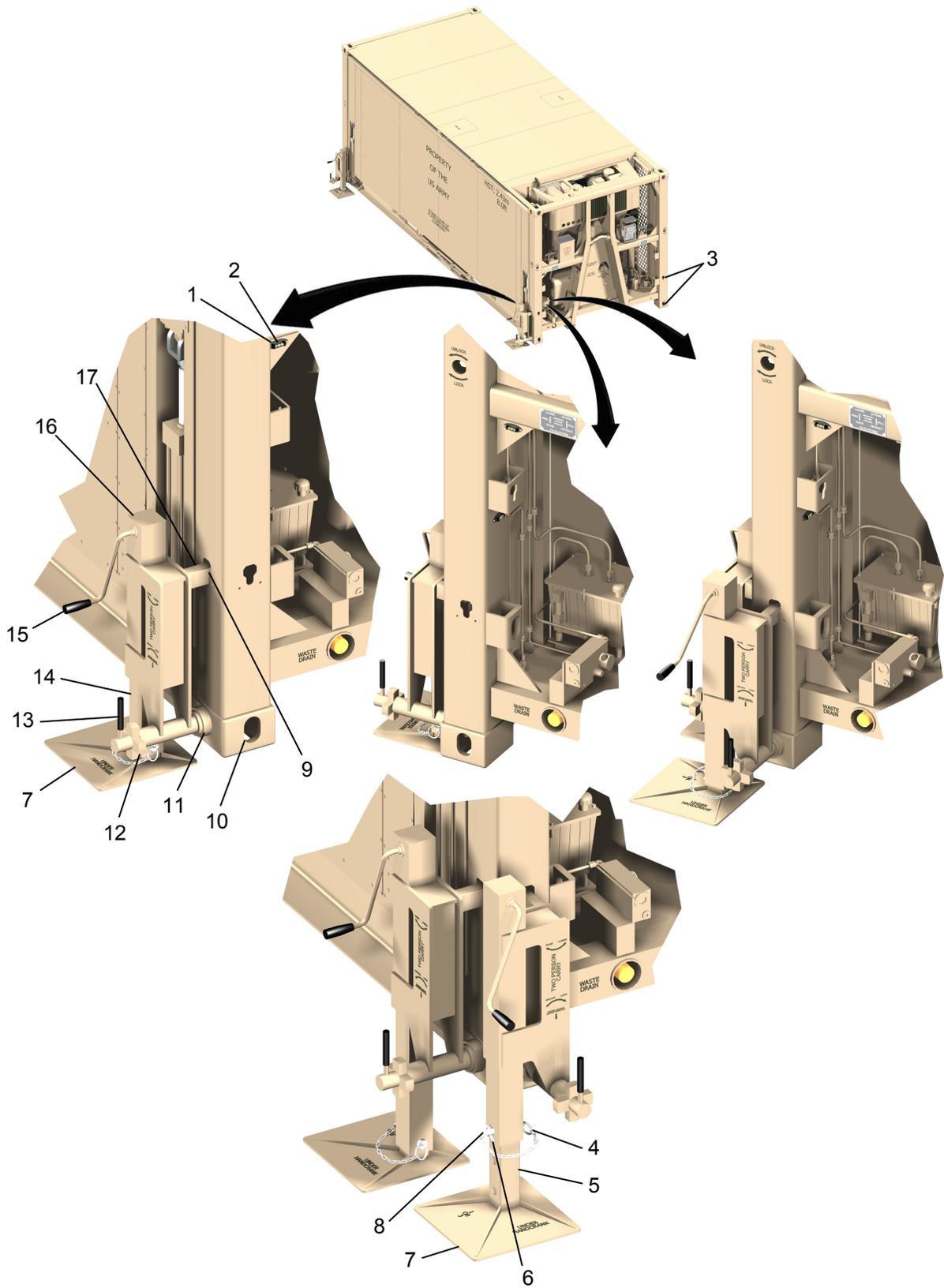


Figure 3. Attaching Leveling Jacks and Raising Low Corners.

OPERATION ON SLOPED TERRAIN-CONTINUED

8. Rotate handles (Figure 4, Item 2) on jacks (Figure 4, Item 1) until original jacks (Figure 4, Item 3) are slightly off the ground.
9. Remove two leveling jacks (Figure 4, Item 3) from side jacking points as follows:
 - a. Loosen collar (Figure 4, Item 8), then rotate handle (Figure 4, Item 7) to UNLOCK position.
 - b. Pull jack (Figure 4, Item 3) outward until twist lock (Figure 4, Item 9) is out of corner fitting (Figure 4, Item 10).
 - c. Lift-up on jack (Figure 4, Item 3) until locking pin (Figure 4, Item 4) is clear of keyway (Figure 4, Item 5).
 - d. Repeat steps a through c for second leveling jack.
10. Remove, reorient, and reinstall feet (Figure 4, Item 14) into leveling jacks (Figure 4, Item 1) as follows:
 - a. Flip ring (Figure 4, Item 12) over and pull locking pin (Figure 4, Item 15) out of adjusting pin (Figure 4, Item 13).
 - b. Pull adjusting pin (Figure 4, Item 15) out of leg (Figure 4, Item 11) and foot (Figure 4, Item 14) then slide foot out of leg.
 - c. Properly orient foot (Figure 4, Item 14) then slide foot back into leg (Figure 4, Item 11).
 - d. Insert adjusting pin (Figure 4, Item 13) through leg (Figure 4, Item 11) and foot (Figure 4, Item 14).
 - e. Insert locking pin (Figure 4, Item 15) through adjusting pin (Figure 4, Item 15) then flip ring (Figure 4, Item 12) over.
 - f. Repeat steps a through e for other leveling jack.
11. Attach leveling jacks (Figure 4, Item 6) to the normal jacking points at the two highest corners as follows:
 - a. Rotate handle (Figure 4, Item 2) towards the LOWER direction until leg (Figure 4, Item 11) is at its lowest position.
 - b. Lift-up and insert locking pin (Figure 4, Item 4) into keyway (Figure 4, Item 5) then pivot jack downward to insert twist lock (Figure 4, Item 9) into corner fitting (Figure 4, Item 10).
 - c. Rotate handle (Figure 4, Item 7) to LOCK position, then tighten collar (Figure 4, Item 8).
 - d. Repeat steps a through c for second leveling jack.

OPERATION ON SLOPED TERRAIN-CONTINUED

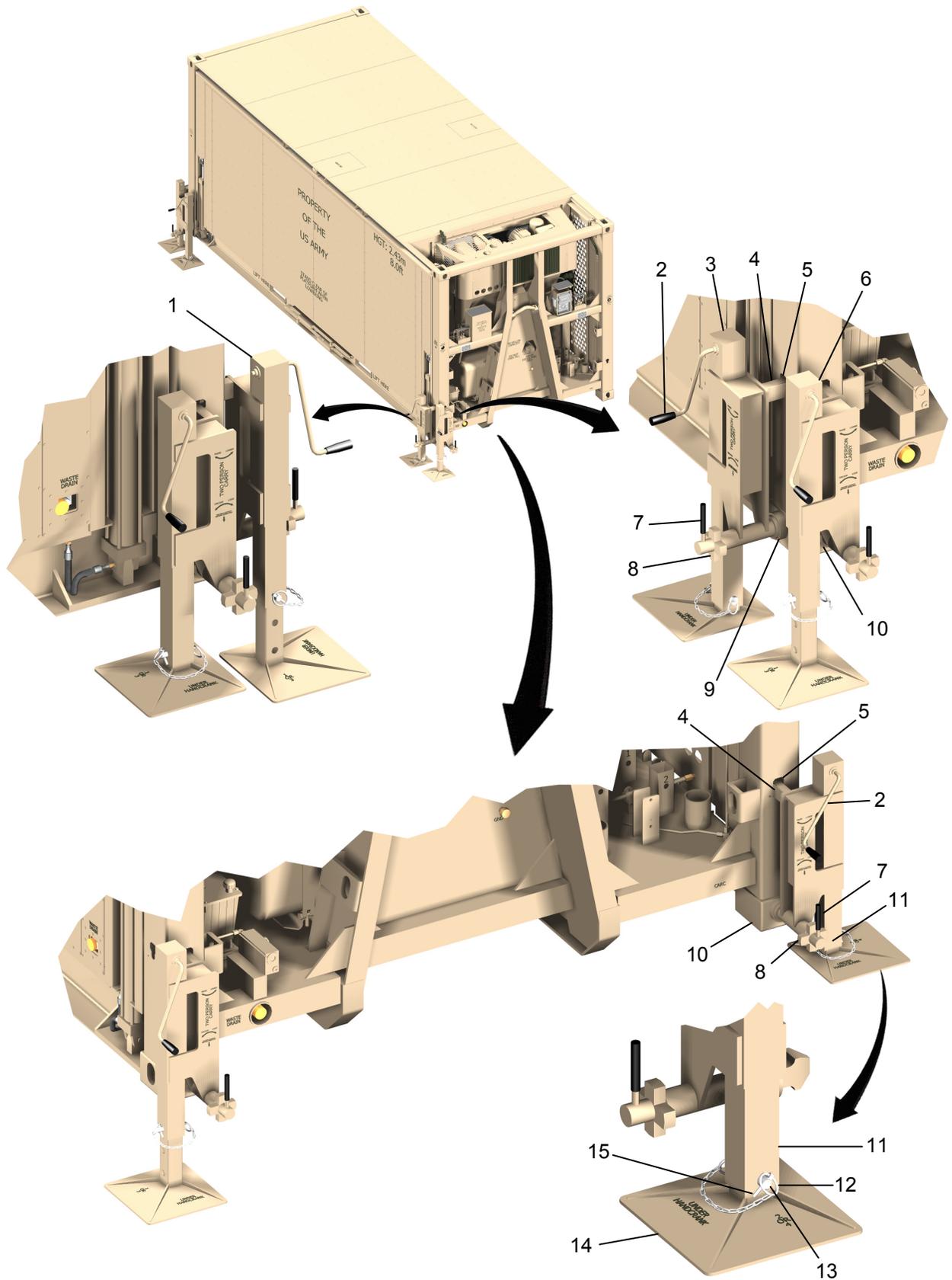


Figure 4. Removing, Reorienting, and Reinstalling Leveling Jacks.

OPERATION ON SLOPED TERRAIN-CONTINUED

12. With an operator stationed at all four corners, level MIRCS as follows:
- Rotate the handles (Figure 5, Item 1) until the bubble levels (Figure 5, Item 2) are within the indicator marks (Figure 5, Item 3).
 - Together raise the MIRCS until the waste drain port (Figure 5, Item 4) is about 14 in off the ground.
 - Make final height adjustment and verify the bubble levels (Figure 5, Item 2) are within the indicator marks (Figure 5, Item 3).

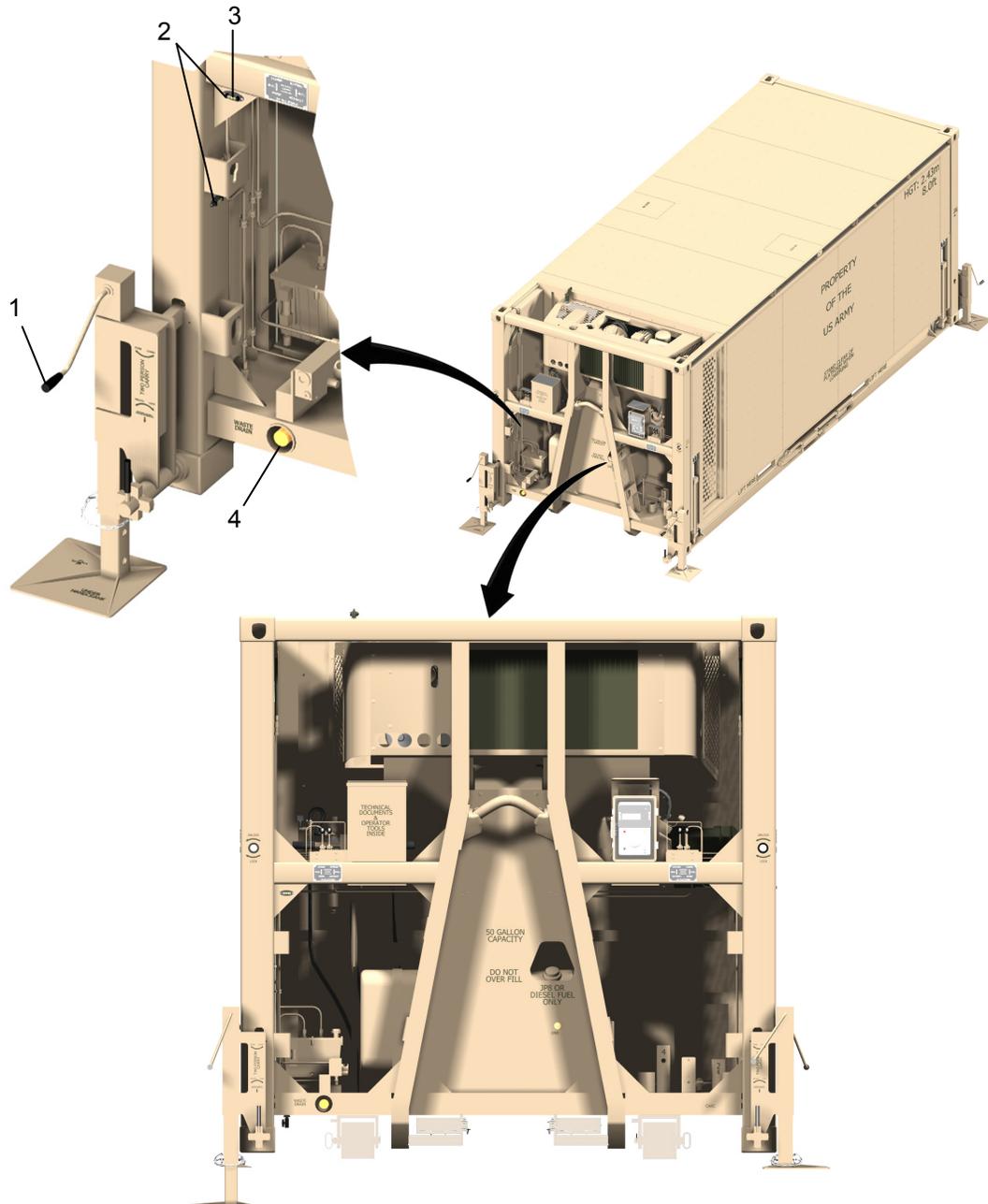


Figure 5. Raising MIRCS.

OPERATION IN COLD

The MIRCS can be operated in conditions down to 0°F following the guidelines contained in this section. To operate the MIRCS in temperatures between -1°F and -25°F follow the guidelines listed for **OPERATION IN EXTREME COLD**.

When temperatures are expected to drop below 33°F and the MIRCS is set-up, but not operating, the water system and waste collection system must be drained following the guidance provided in **Daily Operation** (WP 0010). When the MIRCS is operating at temperatures below 33°F special care must be taken to prevent freeze damage to the water system and waste system. Water and waste system piping imbedded into the ISO frame contains heating elements that will automatically turn on to warm up the piping. The external portions of the water system piping (Figure 6, Item 5), external water pump, and supply hoses (Figure 6, Item 3) must have heat cables (Figure 6, Item 4) wrapped around them. These cables can be connected to the generator utility receptacle (Figure 6, Item 2) or the ECU enclosure GFCI receptacle (Figure 6, Item 1).

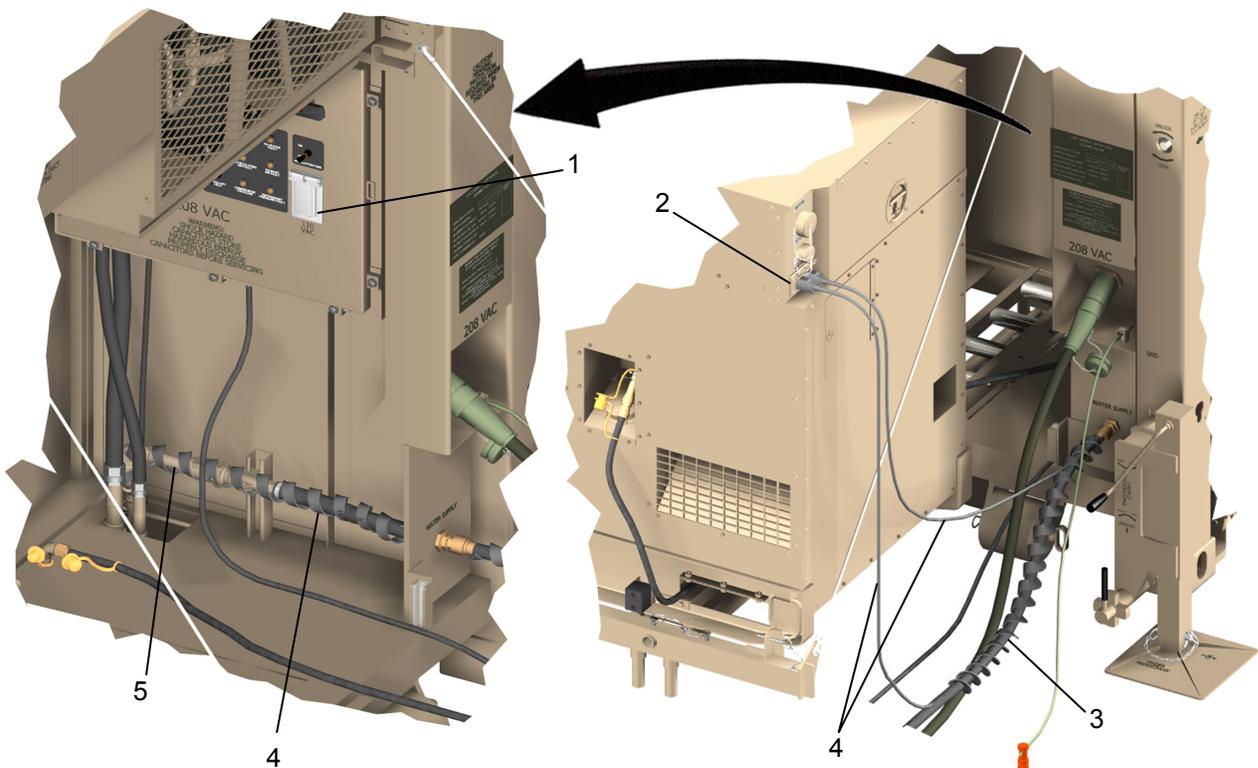


Figure 6. Using Heat Cables on MIRCS External Water System.

The wastewater being collected in the waste containers will be above 33°F as it is flowing towards the containers. Once the water is in the container it will freeze. This will not cause any problems for MIRCS operation provided that the containers are changed frequently enough that the wastewater does not backup above the container connection port into the drain hose. When containers are removed from the waste drain hose they can be capped and brought into the MIRCS to thaw out and then disposed of per the authorized disposal process.

The RU can be operated in engine mode or standby mode down to 0°F. The RU WATER HEAT switch (WP 0004, Figure 7) should be in the OFF position to allow both the RU and ECU to be operated from the generator.

OPERATION IN EXTREME COLD

Care must be taken when handling electrical cables. Extreme cold weather can cause insulation material on electrical wire to crack, causing short circuits. Water hoses, air ducts, and the materials that are used in the soft walls can also become hard, brittle, and easily damaged. When setting up for lengthy periods when temperatures are expected to be below 0°F, place MIRCS in a sheltered area out of the wind. Do not allow ice and snow to build-up on the ISO frame roof (Figure 7, Item 2), soft walls (Figure 7, Item 3), ramps (Figure 7, Items 6 and 7), top of RU (Figure 7, Item 1), or top of generator (Figure 7, Item 4). Place a footing of planks or brush under leveling jacks (Figure 7, Item 5), support legs (Figure 7, Item 8), and lower ramp (Figure 7, Item 7) to keep them from freezing to the ground.

In extreme cold, the RU should be operated in engine mode. This will allow full power to be available to the ECU electric heaters as well as the water heater and piping heaters. The ECU AUXILIARY HEAT switch (WP 0004, Figure 1) should be in the ON position. Use of all doors and windows should be kept to a minimum. It is recommended that 5-gallon containers of water be stored in the MIRCS to keep them from freezing and water usage be limited to the amount that can be stored inside.

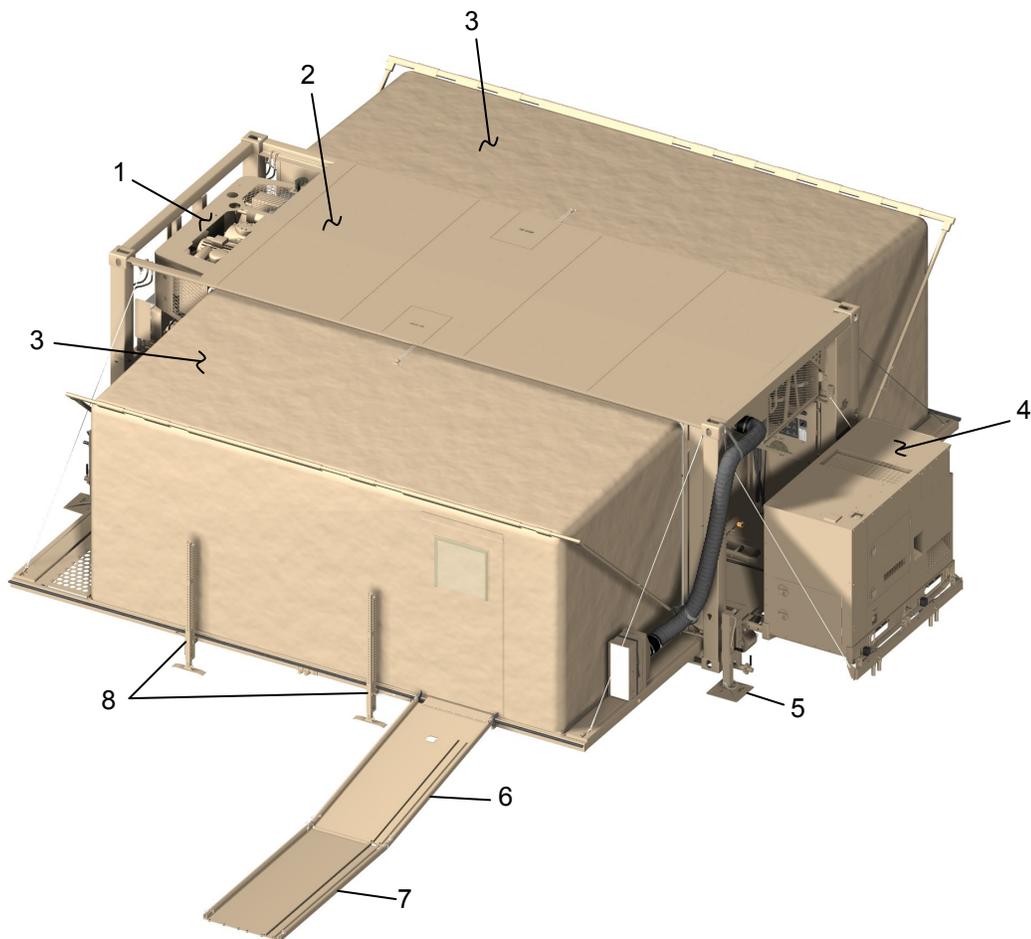


Figure 7. MIRCS Operation in Extreme Cold.

STORAGE IN COLD

Prior to placing MIRCS into storage the water system and waste collection system must be drained following the guidance provided in **Daily Operation** (WP 0010). Even if the temperatures are not currently below 33°F it is possible that the temperatures will drop that low before the MIRCS is used again. This will prevent freeze damage to the piping and components in the water system and waste system.

Planks should be placed under the ISO corners (Figure 8, Item 3). Do not allow ice and snow to build-up on the ISO frame roof (Figure 8, Item 2). Install protective cover over RU (Figure 8, Item 1), (WP 0001).

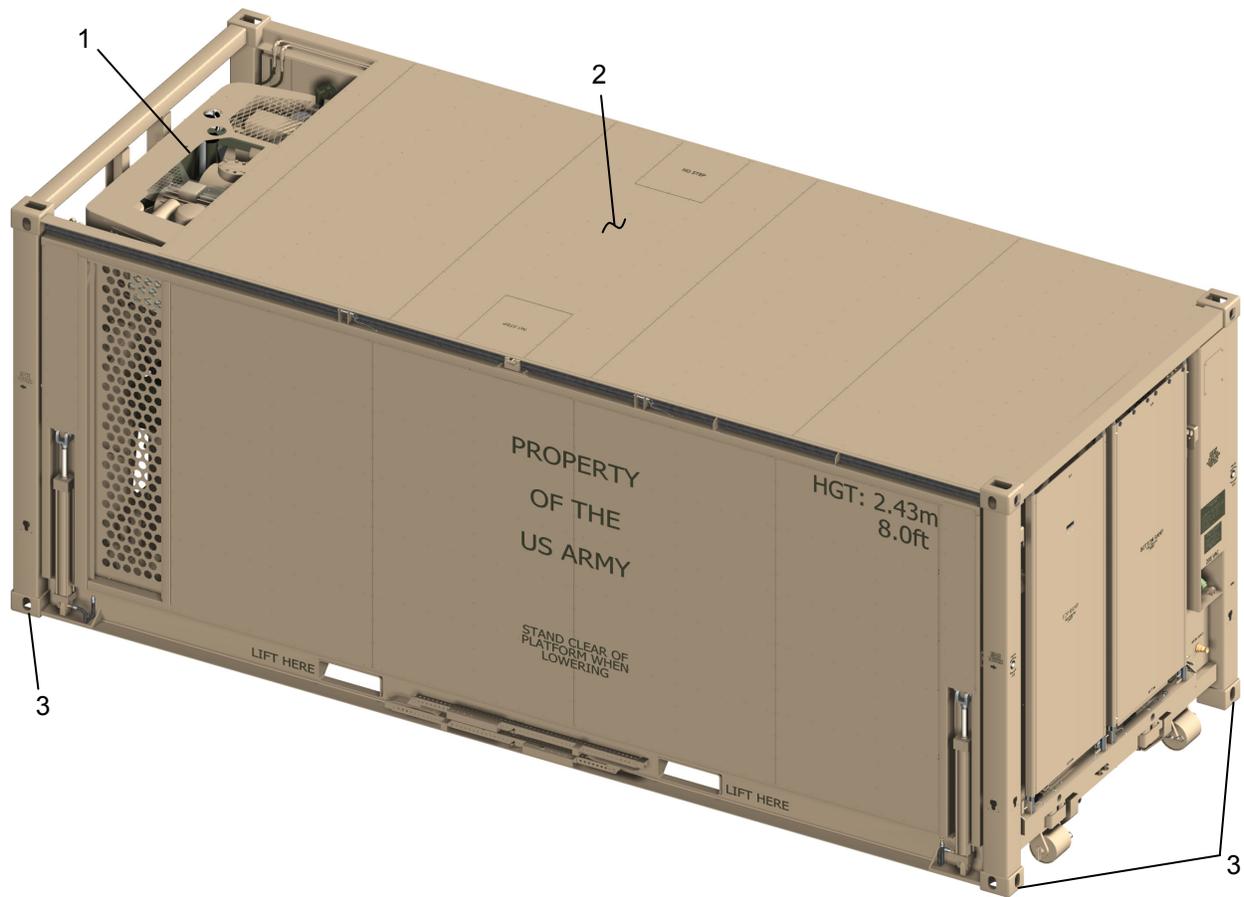


Figure 8. MIRCS Storage in Cold.

OPERATION IN EXTREME HEAT

At temperatures above 100°F the RU should be operated in standby mode when possible to avoid running the engine and generating more heat.

Use of all doors and windows should be kept to a minimum.

The water system does not cool. The minimum water temperature will be at or slightly below the water temperature at the source.

OPERATION IN SANDY OR DUSTY AREAS

When operating in sandy or dusty areas perform Monthly PMCS Weekly, Quarterly PMCS Monthly, and Semi-Annual PMCS Quarterly. Keep use of all doors and windows to a minimum. Make sure ECU and RU electrical enclosures (Figure 9, Items 1 and 2) are kept closed.

OPERATION IN HIGH WIND

Keep all loose objects secured or stowed. Install side guy ropes (Figure 9, Item 4) on temporary remains holding shelters (Figure 9, Item 5). Place sand bags (Figure 9, Item 3) over stakes to keep them from pulling out of ground.

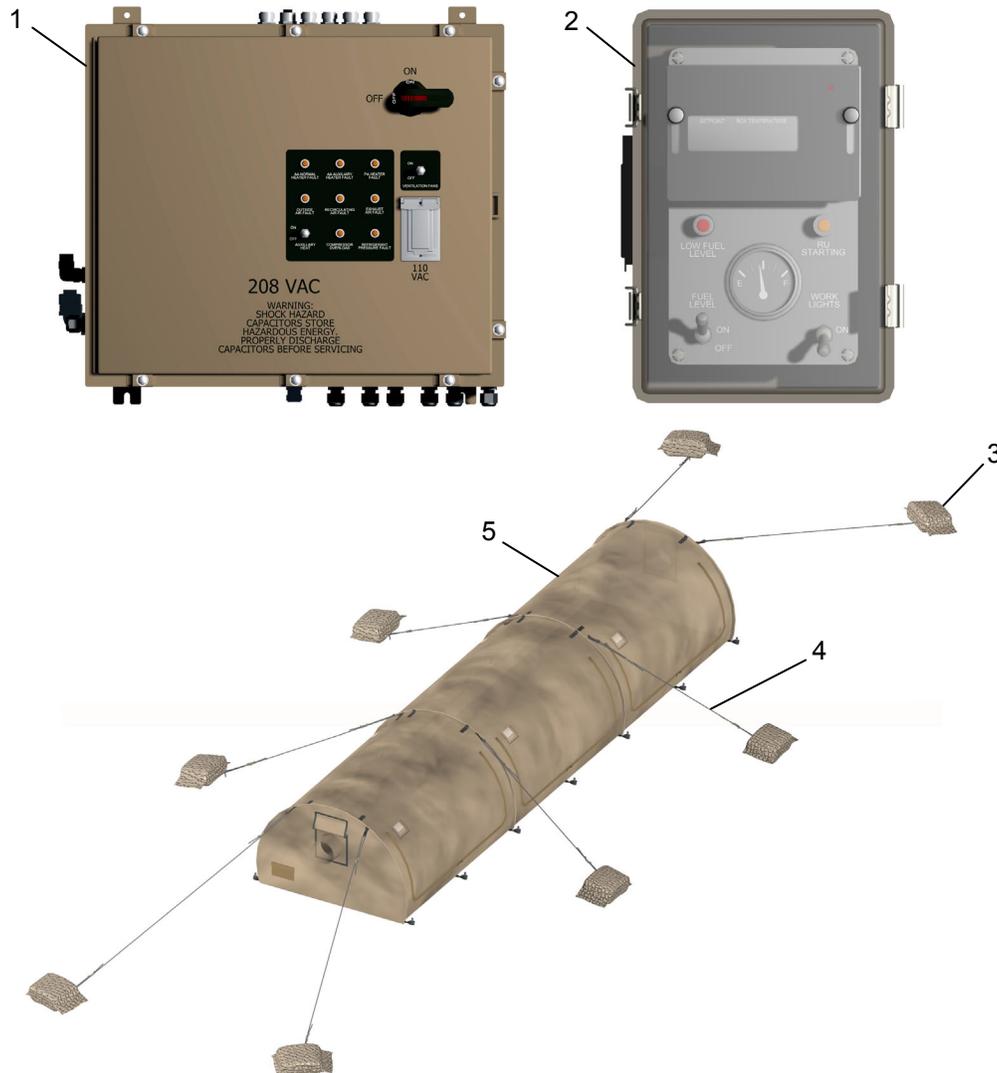


Figure 9. MIRCS Operation in Sandy or Dusty Areas and in High Wind.

OPERATION AT DIFFERENT ALTITUDES

MIRCS can be operated at altitudes up to 7,500 feet. At this altitude engine performance of the generator requires it to be de-rated to 13.5 kW. This may require the RU to be operated in engine mode. RU Engine performance at higher altitudes will also drop off slightly. Since temperatures at higher altitudes are normally not above 90°F, there should be no drop off in refrigeration performance under these conditions.

OPERATION IN RAIN

When rain is expected a drain trench should be dug around the MIRCS outside perimeter to collect and drain the water away. Watch for water collecting on the tops of the soft walls (Figure 10, Item 3). Periodically push up on the ceiling inside each soft wall to drain the water. Make sure door bottoms (Figure 10, Item 7) are flipped outward. Make sure all end wall and door flaps (Figure 10, Item 4) are completely extended and secure. Make sure cable boot (Figure 10, Item 2) is closed off tight. Make sure the exhaust pipes (Figure 10, Items 1 and 6) on the RU (Figure 10, Item 10) and generator (Figure 10, Item 5) are oriented to prevent rain from entering. Make sure ECU (Figure 10, Item 9) and RU (Figure 10, Item 8) electrical enclosures are kept closed. If the MIRCS is not in use, do not leave it set-up. Place it in the ready for transport configuration (WP 0012). Slide the generator (Figure 10, Item 5) back to its stowed position.

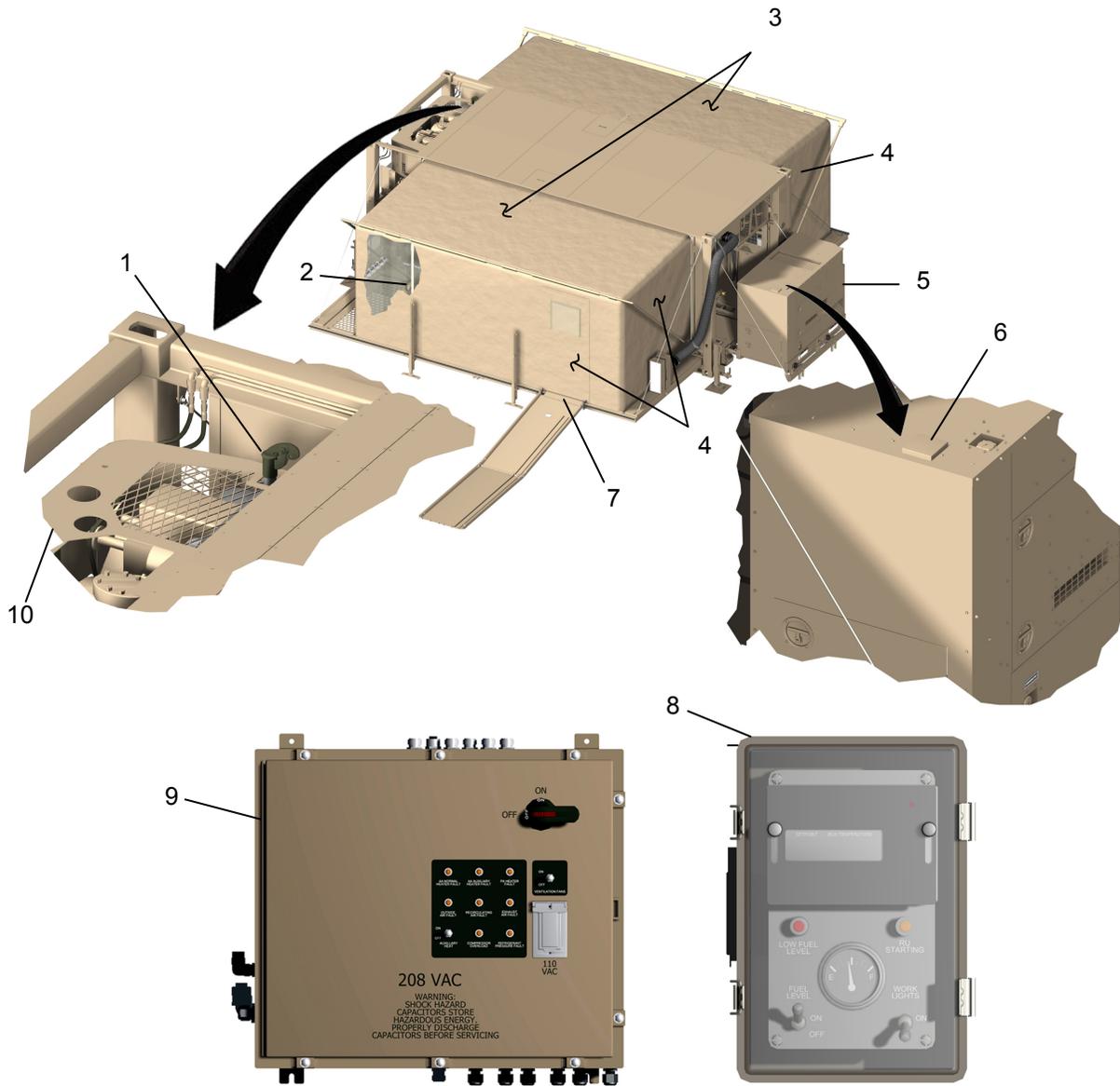


Figure 10. MIRCS Operation in Rain.

OPERATION IN FREEZING RAIN AND SNOW

Do not allow ice and snow to build-up on the ISO frame roof (Figure 11, Item 2), soft walls (Figure 11, Item 3), ramps (Figure 11, Items 6 and 7), top of RU (Figure 11, Item 1), or top of generator (Figure 11, Item 4). Place a footing of planks or brush under leveling jacks (Figure 11, Item 5), support legs (Figure 11, Item 8), and lower ramp (Figure 11, Item 7). If the MIRCS is not in use, do not leave it set up. Place it in the ready for transport configuration (WP 0012). Slide the generator (Figure 11, Item 4) back to its stowed position.

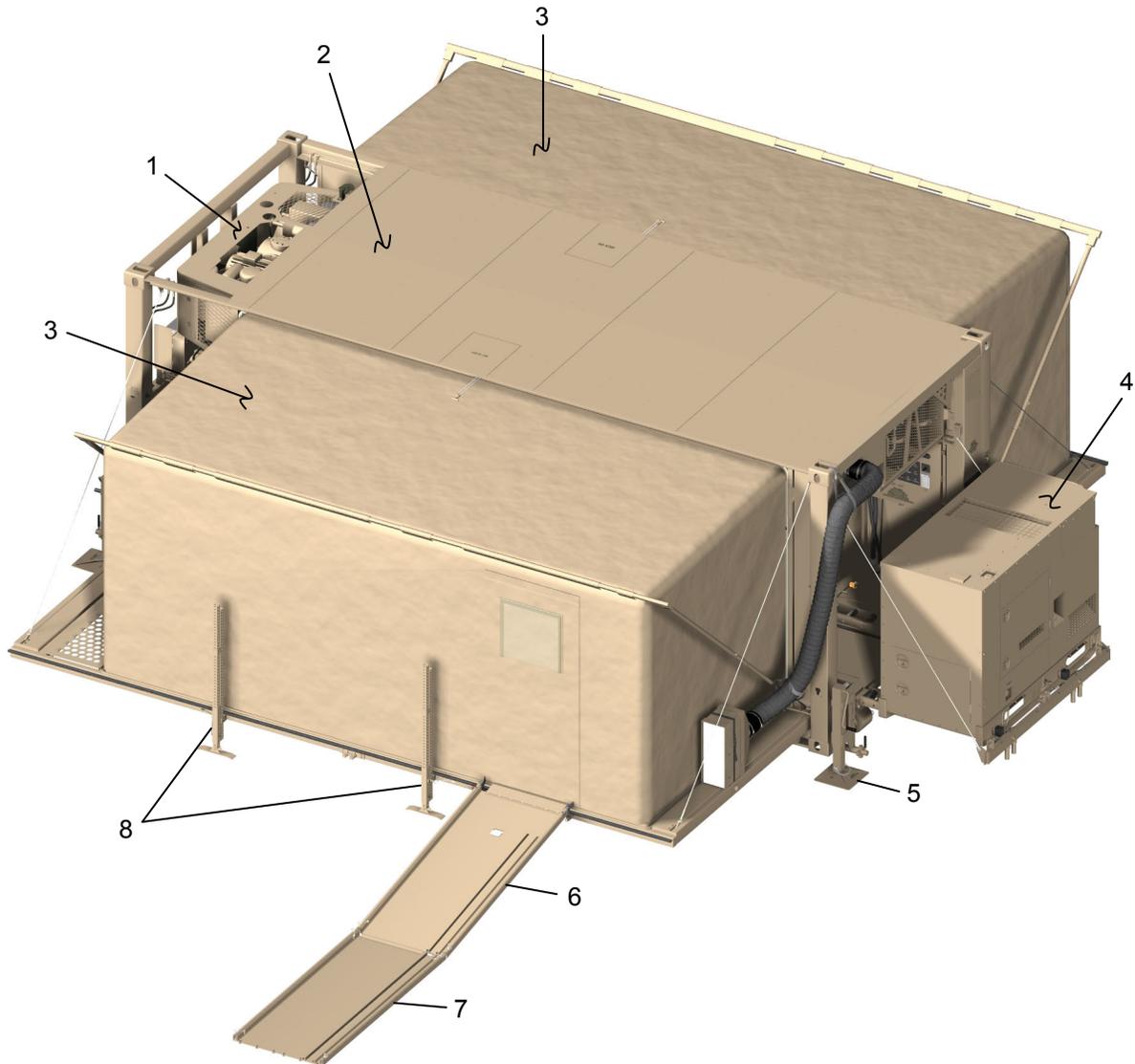


Figure 11. MIRCS Operation in Freezing Rain and Snow.

END OF WORK PACKAGE

CHAPTER 3

**TROUBLESHOOTING PROCEDURES
FOR
MOBILE INTEGRATED REMAINS
COLLECTION SYSTEM**

**CREW MAINTENANCE
TROUBLESHOOTING INDEX**

GENERAL

This chapter contains information for troubleshooting common MIRCS malfunctions. This chapter cannot list all tests, inspections, and corrective actions needed to correct all malfunctions. If a malfunction is not listed, or if the actions listed do not correct the fault, notify your supervisor.

TROUBLESHOOTING INDEX

Table 1. Troubleshooting Index.

OBSERVED OR DISPLAYED FAULT	PROCEDURE OR RECOMMENDED ACTION (RA)	WORK PACKAGE
ECU FAULTS		
AA AUXILIARY HEATER FAULT LIGHT IS ON	Perform FAULT PROCEDURE 1	WP 0015
AA NORMAL HEATER FAULT LIGHT IS ON	Perform FAULT PROCEDURE 1	WP 0015
ADMINISTRATIVE AREA IS NOT COOLING	Perform FAULT PROCEDURE 10	WP 0015
ADMINISTRATIVE AREA IS NOT HEATING	Perform FAULT PROCEDURE 11	WP 0015
CAN NOT ADJUST ECU THERMOSTAT SETTING	Notify Maintenance	
COMPRESSOR OVERLOAD FAULT LIGHT IS ON	Perform FAULT PROCEDURE 2	WP 0015
ECU INDIVIDUAL OR MASTER FAULT LIGHT DOES NOT COME ON WHEN A FAULT OCCURS	Perform FAULT PROCEDURE 8	WP 0015
ECU MASTER FAULT LIGHT IS ON	Perform FAULT PROCEDURE 7	WP 0015
EXHAUST AIR FAULT LIGHT IS ON	Perform FAULT PROCEDURE 6	WP 0015
OUTSIDE AIR FAULT LIGHT IS ON	Perform FAULT PROCEDURE 5	WP 0015
PA HEATER FAULT LIGHT IS ON	Perform FAULT PROCEDURE 1	WP 0015
PROCESSING AREA IS NOT COOLING	Perform FAULT PROCEDURE 10	WP 0015
PROCESSING AREA IS NOT HEATING	Perform FAULT PROCEDURE 11	WP 0015
RECIRCULATING AIR FAULT LIGHT IS ON	Perform FAULT PROCEDURE 4	WP 0015
REFRIGERANT PRESSURE FAULT LIGHT IS ON	Perform FAULT PROCEDURE 3	WP 0015
VENTILATION FANS DO NOT COME ON WHEN POWER IS APPLIED	Perform FAULT PROCEDURE 9	WP 0015
FUEL SYSTEM FAULTS		
FUEL LEVEL GAGE READING DOES NOT MATCH ACTUAL TANK LEVEL	Perform FAULT PROCEDURE 14	WP 0016
FUEL LINES/CONNECTIONS ARE LEAKING	Notify Maintenance	
LOW FUEL LEVEL FAULT LIGHT IS ON	Perform FAULT PROCEDURE 12	WP 0016
LOW FUEL LEVEL FAULT LIGHT DOES NOT COME ON WHEN FUEL LEVEL IS BELOW 1/8TH OF A TANK	Perform FAULT PROCEDURE 13	WP 0016
HYDRAULIC SYSTEM FAULTS		
AA or PA PLATFORM WILL NOT LOWER	Perform FAULT PROCEDURE 15	WP 0017
AA or PA PLATFORM WILL NOT RAISE	Perform FAULT PROCEDURE 16	WP 0017
AA OR PA PLATFORM WILL NOT LOCK	Perform FAULT PROCEDURE 17	WP 0017
HYDRAULIC LINES/CONNECTIONS ARE LEAKING	Notify Maintenance	

Table 1. Troubleshooting Index-Continued.

OBSERVED OR DISPLAYED FAULT	PROCEDURE OR RECOMMENDED ACTION (RA)	WORK PACKAGE
LIGHTING SYSTEM FAULTS		
BLACKOUT LIGHTS WILL NOT TURN ON OR NORMAL LIGHTS WILL NOT TURN OFF IN BLACKOUT MODE	Perform FAULT PROCEDURE 18	WP 0018
EMERGENCY LIGHTS DO NOT TURN ON DURING POWER LOSS	Perform FAULT PROCEDURE 19	WP 0018
FLUORESCENT WORK LIGHTS WILL NOT TURN ON IN AA, PA, SUPPLY AREA, OR VESTIBULE	Perform FAULT PROCEDURE 20	WP 0018
RSU LOADING LIGHTS WILL NOT TURN ON	Perform FAULT PROCEDURE 21	WP 0018
POWER DISTRIBUTION SYSTEM FAULTS		
NO POWER AVAILABLE AT AA OR PA ELECTRICAL RECEPTACLE(S)	Perform FAULT PROCEDURE 22	WP 0019
NO POWER AVAILABLE AT ECU ELECTRICAL RECEPTACLE	Perform FAULT PROCEDURE 23	WP 0019
NO POWER AVAILABLE AT MA ENCLOSURE OR WATER SYSTEM	Perform FAULT PROCEDURE 24	WP 0019
NO POWER AVAILABLE AT WATER SYSTEM JUNCTION BOX OR RU ENCLOSURE ELECTRICAL RECEPTACLES	Perform FAULT PROCEDURE 25	WP 0019
RU FAULTS		
CAN NOT START A MANUAL DEFROST	Perform FAULT PROCEDURE 28	WP 0020
ENGINE STARTS BUT WILL NOT STAY RUNNING	Perform FAULT PROCEDURE 27	WP 0020
RSU IS NOT COOLING DOWN	Perform FAULT PROCEDURE 35	WP 0020
RSU IS NOT HEATING UP	Perform FAULT PROCEDURE 29	WP 0020
RU CAN NOT BE SWITCHED TO HI-SPEED	Notify Maintenance	
RU CAN NOT BE SWITCHED TO LO-SPEED	Notify Maintenance	
RU CAN NOT BE SWITCHED TO STANDBY	Notify Maintenance	
RU CONTROL PANEL DISPLAY HAS NO OR SCRAMBLED CHARACTERS	Notify Maintenance	
RU CONTROL PANEL HAS ALARM CODE DISPLAYED	Determine which ALARM code is displayed and take recommended action. (See next page.)	
RU CONTROL PANEL DOES NOT COME ON WHEN POWER IS APPLIED	Perform FAULT PROCEDURE 27	WP 0020
RU DOES NOT AUTOMATICALLY DEFROST EVERY 12 HOURS	Perform FAULT PROCEDURE 28	WP 0020
RU ALARM LIGHT DOES NOT COME ON WHEN THERE IS AN ALARM CODE DISPLAYED	Notify Maintenance	
RU ALARM LIGHT IS ON	Determine which ALARM code is displayed and take recommended action. (See next page.)	
RU STARTING LIGHT DOES NOT COME ON WHEN RU IS STARTING	Perform FAULT PROCEDURE 26	WP 0020
STARTER CRANKS BUT ENGINE WON'T START	Perform FAULT PROCEDURE 27	WP 0020
STARTER MOTOR WILL NOT CRANK OR CRANKS SLOWLY	Perform FAULT PROCEDURE 27	WP 0020
STARTER WON'T DISENGAGE	Notify Maintenance	

Table 1. Troubleshooting Index-Continued.

OBSERVED OR DISPLAYED FAULT	PROCEDURE OR RECOMMENDED ACTION (RA)	WORK PACKAGE
RU ALARM CODES		
ENG OIL (AL0) - Low oil pressure	Perform FAULT PROCEDURE 30	WP 0020
ENG HOT (AL1) - High coolant temperature	Perform FAULT PROCEDURE 31	WP 0020
HI PRESS (AL2) - High refrigerant pressure	Perform FAULT PROCEDURE 32	WP 0020
START/FAIL (AL3) - Start sequence complete without engine start	Perform FAULT PROCEDURE 27	WP 0020
LOW BATT (AL4) - Battery voltage is below 10 VDC	Perform FAULT PROCEDURE 27	WP 0020
HI BATT (AL5) - Battery voltage is above 17 VDC	Notify Maintenance	
DEFRR FAIL (AL6) - Defrost terminated by 45-minute timer	Perform FAULT PROCEDURE 33	WP 0020
ALT AUX (AL7) - Alternator signal not present with engine running	Notify Maintenance	WP 0020
STARTER (AL8) - Starter signal not present with start solenoid on	Perform FAULT PROCEDURE 27	WP 0020
RA SENSOR (AL9) - Open or shorted sensor	Notify Maintenance	
SA SENSOR (AL10) - Open or shorted sensor	Notify Maintenance	
WT SENSOR (AL11) - Open or shorted sensor	Notify Maintenance	
SBY MOTOR (AL14) - Standby motor overload relay tripped	Perform FAULT PROCEDURE 34	WP 0020
FUSE BAD (AL15) - Open fuse circuit detected	Notify Maintenance	
SYSTEM CK (AL16) - Refrigeration pressure is not in normal range	Perform FAULT PROCEDURE 32	WP 0020
DISPLAY (AL17) - Communication fault between microprocessor and control panel(s)	Notify Maintenance	
SERVICE 1 (AL18) - Hour meter is greater than the maintenance hour meter	No Action Required	
SERVICE 2 (AL19) - Hour meter is greater than the maintenance hour meter	No Action Required	
RAS OUT (AL20) - Temperature out of range by at least 7.2 degrees F for more than 15 minutes after reaching the set point.	Perform FAULT PROCEDURE 35	WP 0020
NO POWER (AL23) - No electric power when in STANDBY mode	Perform FAULT PROCEDURE 36	WP 0020
WATER SYSTEM FAULTS		
NO HOT WATER IS AVAILABLE	Perform FAULT PROCEDURE 37	WP 0021
NO WATER FLOW TO SINK OR UTILITY HOSE	Perform FAULT PROCEDURE 38	WP 0021

NOTIFY MAINTENANCE

If "Notify Maintenance" is listed, the fault will prevent operations from continuing and maintenance should be notified immediately. When "Notify Maintenance" is required, leave the MIRCS in power on condition if possible. This will enable maintenance personnel to troubleshoot and correct problems more efficiently and result in bringing the MIRCS back into operation more rapidly. If power cannot be left on, operator personnel should record the condition or fault for later reference.

Perform FAULT PROCEDURE XX.

If a fault procedure is listed, proceed directly to referenced work package to start the troubleshooting process. Should any one malfunction/symptom require more than one troubleshooting procedure to arrive at the most likely fault, a reference will be made within the starting procedure to lead you to subsequent procedures, until successful fault isolation or disposition is achieved.

END OF WORK PACKAGE

**CREW MAINTENANCE
TROUBLESHOOTING PROCEDURES
ECU FAULTS**

INITIAL SETUP:**References****Tools and Special Tools**

Screwdriver, Bit Set and Handle (WP 0038, Table 1, Item 10)

Equipment Conditions

Initial Adjustments, Before Use and Self Test completed (WP 0009)

WP 0014

WP 0031

WP 0032

WP 0033

WP 0034

ECU FAULTS**FAULT PROCEDURE 1****Step**

1. Verify VENTILATION FANS switch is positioned to ON.

Condition/Indication

Is switch positioned to ON?

Response

YES-Go to next step.

NO-Position VENTILATION FANS switch to ON then go to next step.

Step

2. Do sub-steps listed below:
 - a. Position AUXILARY HEAT and thermostat mode switches to OFF.
 - b. Observe ECU enclosure to determine if the RECIRCULATING AIR fault light is on.

Condition/Indication

Is fault light on?

Response

YES-Go to FAULT PROCEDURE 4.

NO-Go to next step.

FAULT PROCEDURE 1-CONTINUED**Step**

3. Allow fans to run for ten minutes then observe ECU enclosure fault lights.

Condition/Indication

Is AA AUXILARY, AA NORMAL, or PA HEATER fault light on?

Response

YES-Notify maintenance.

NO-Return to normal operation.

END OF TASK**FAULT PROCEDURE 2****Step**

1. Do sub-steps listed below:
 - a. Position VENTILATION FANS switch to OFF and main disconnect to OFF.

WARNING

High voltage is present in ECU enclosure. Use extreme caution when working inside. Contact with energized connections will result in serious personal injury or death. Seek immediate medical attention if injury occurs.

- b. Open door on ECU enclosure then observe overload relay OL130 trip indicator (Figure 1, Item 1).

Condition/Indication

Is indicator tripped?

Response

YES-Go to next step.

NO-Notify Maintenance.

FAULT PROCEDURE 2-CONTINUED

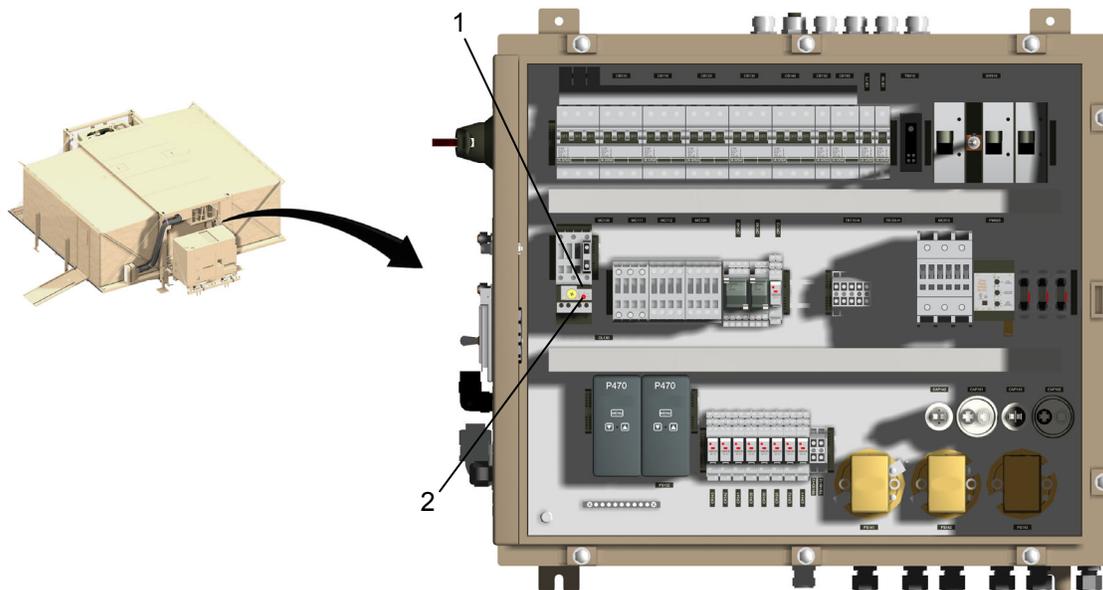


Figure 1. OL130 Trip Indicator and Reset Button.

Step

2. Do sub-steps listed below:
 - a. Reset OL130 using red reset button (Figure 1, Item 2).
 - b. Close door on ECU enclosure then position main power switch to ON.
 - c. Position VENTILATION FANS switch to ON.
 - d. Position thermostat mode switch to COOL then set knob at to full CCW position.
 - e. Allow ECU to run in cooling mode for about 30 minutes.

Condition/Indication

Is ECU cooling and is fault light off?

Response

YES- Attempt to return to normal operation. If OL130 trips again notify maintenance.

NO- Notify maintenance.

END OF TASK

FAULT PROCEDURE 3**Step**

1. Do sub-steps listed below:
 - a. Position VENTILATION FANS switch to OFF and main disconnect to OFF.
 - b. Check for debris blocking air flow into and out of condenser (Figure 2, Item 1).

Condition/Indication

Is any blockage found?

Response

YES-Clear blockage then proceed to step 3.

NO-Go to next step.

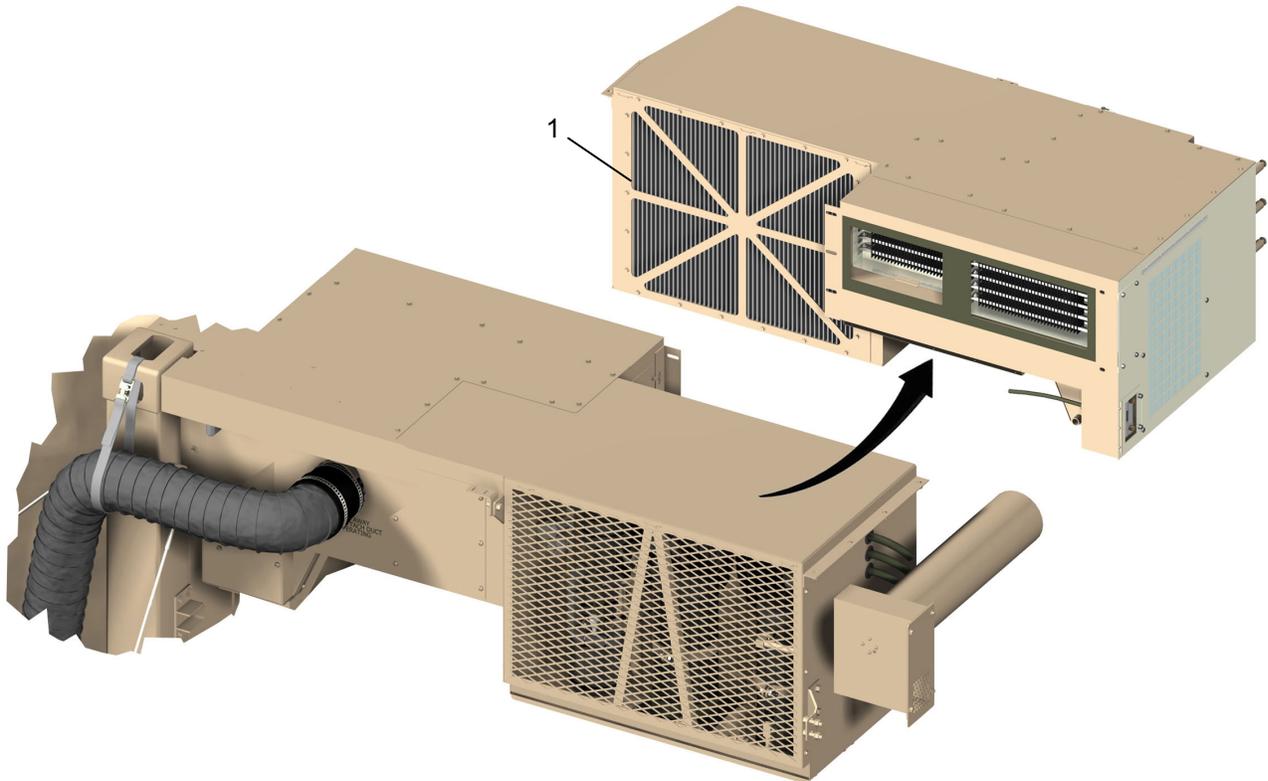


Figure 2. ECU Condenser.

FAULT PROCEDURE 3-CONTINUED**WARNING**

High voltage is present in ECU enclosure. Use extreme caution when working inside. Contact with energized connections will result in serious personal injury or death. Seek immediate medical attention if injury occurs.

Step

2. Open door on ECU enclosure then observe circuit breakers CB130, CB140, CB160, and CB170.

Condition/Indication

Are any of these circuit breakers tripped (off)?

Response

YES-Reset circuit breaker(s) then go to next step.

NO-Go to next step.

Step

3. Do sub-steps listed below:
 - a. Close door on ECU enclosure then position main power switch to ON.
 - b. Position VENTILATION FANS switch to ON.
 - c. Position thermostat mode switch to COOL then set knob to full CCW position.
 - d. Allow ECU to run in cooling mode for about 30 minutes.

Condition/Indication

Is ECU cooling and is fault light off?

Response

YES-Attempt to return to normal operation. If circuit breaker trips again notify maintenance.

NO-Notify maintenance.

END OF TASK

FAULT PROCEDURE 4**Step**

1. Verify VENTILATION FANS switch is positioned to ON.

Condition/Indication

Is switch positioned to ON?

Response

YES-Go to next step.

NO-Position VENTILATION FANS switch to ON.

Step

2. Observe ECU enclosure to determine if the RECIRCULATING AIR fault light is on.

Condition/Indication

Is fault light on?

Response

YES-Go to next step.

NO-Return to normal operation.

Step

3. Check for debris blocking re-circulating air filter.

Condition/Indication

Is filter clogged?

Response

YES-Replace re-circulating air filter (WP 0031).

NO-Go to next step.

FAULT PROCEDURE 4-CONTINUED**Step**

4. Do sub-steps listed below:
 - a. Position VENTILATION FANS switch to OFF and main disconnect to OFF.

WARNING

High voltage is present in ECU enclosure. Use extreme caution when working inside. Contact with energized connections will result in serious personal injury or death. Seek immediate medical attention if injury occurs.

- b. Open door on ECU enclosure then observe circuit breaker CB140.

Condition/Indication

Is CB140 tripped (off)?

Response

YES-Go to next step.

NO-Notify maintenance.

Step

5. Do sub-steps listed below:
 - a. Reset CB140.
 - b. Close door on ECU enclosure.
 - c. Position main power switch to ON then VENTILATION FANS switch to ON.
 - d. Observe ECU enclosure fault lights.

Condition/Indication

Is RECIRCULATING AIR fault light is on?

Response

YES-Notify maintenance.

NO-Attempt to return to normal operation. If CB140 trips again notify maintenance.

END OF TASK

FAULT PROCEDURE 5**Step**

1. Verify VENTILATION FANS switch is positioned to ON.

Condition/Indication

Is switch positioned to ON?

Response

YES-Go to next step.

NO-Position VENTILATION FANS switch to ON.

Step

2. Observe ECU enclosure to determine if the RECIRCULATING AIR fault light is on.

Condition/Indication

Is fault light on?

Response

YES-Go to FAULT PROCEDURE 4.

NO-Go to next step.

Step

3. Do sub-steps listed below:
 - a. Position VENTILATION FANS switch to OFF.
 - b. Wait 30 seconds then position VENTILATION FANS switch to ON.
 - c. Observe ECU enclosure to determine if the OUTSIDE AIR fault light is on.

Condition/Indication

Is fault light on?

Response

YES-Go to next step.

NO-Return to normal operation.

FAULT PROCEDURE 5-CONTINUED**Step**

4. Check for debris blocking inlet air roughing filter.

Condition/Indication

Is filter clogged or blocked?

Response

YES-Remove blockage or replace roughing filter (WP 0032).

NO-Go to next step.

Step

5. Check for debris blocking inlet air fine filter.

Condition/Indication

Is filter clogged?

Response

YES-Replace fine filter (WP 0033).

NO-Notify maintenance.

END OF TASK**FAULT PROCEDURE 6****Step**

1. Verify VENTILATION FANS switch is positioned to ON.

Condition/Indication

Is switch positioned to ON?

Response

YES-Go to next step.

NO-Position VENTILATION FANS switch to ON.

FAULT PROCEDURE 6-CONTINUED**Step**

2. Observe ECU enclosure to determine if the RECIRCULATING AIR fault light is on.

Condition/Indication

Is fault light on?

Response

YES-Go to FAULT PROCEDURE 4.

NO-Go to next step.

Step

3. Observe ECU enclosure to determine if the EXHAUST AIR fault light is on.

Condition/Indication

Is fault light on?

Response

YES-Go to next step.

NO-Return to normal operation.

Step

4. Check for debris blocking exhaust grill in supply area.

Condition/Indication

Is grill blocked?

Response

YES-Remove blockage.

NO-Go to next step.

Step

5. Check for debris blocking exhaust screen.

Condition/Indication

Is screen blocked?

Response

YES-Remove blockage.

NO-Notify maintenance.

END OF TASK

FAULT PROCEDURE 7**Step**

1. Observe ECU enclosure to determine if any fault lights are on.

Condition/Indication

Is fault light on?

Response

YES-Use Troubleshooting Index (WP 0014) to determine which fault procedure to follow.

NO- Notify maintenance.

END OF TASK**FAULT PROCEDURE 8****Step**

1. Perform "PRESS TO TEST" of light.

Condition/Indication

Does light come on?

Response

YES-Return to normal operation.

NO-Replace lamp (WP 0034). Go to next step.

Step

2. Perform "PRESS TO TEST" of light.

Condition/Indication

Does light come on?

Response

YES-Return to normal operation.

NO-Notify maintenance.

END OF TASK

FAULT PROCEDURE 9**Step**

1. Verify VENTILATION FANS switch is positioned to ON.

Condition/Indication

Is switch positioned to ON?

Response

YES-Go to next step.

NO-Position switch to ON.

Step

2. Verify external power is available.

Condition/Indication

Is external power available?

Response

YES- Go to next step.

NO- Apply external power.

Step

3. Verify external power is 208 VAC, 50-60 Hz.

Condition/Indication

Are voltage and frequency settings correct?

Response

YES-Go to next step.

NO-Set voltage and frequency to correct settings.

Step

4. Verify main disconnect switch is ON.

Condition/Indication

Is main disconnect switch ON?

Response

YES-Go to next step.

NO-Turn main disconnect switch ON.

FAULT PROCEDURE 9-CONTINUED**Step**

5. Position VENTILATION FANS switch to OFF and main disconnect to OFF.

WARNING

High voltage is present in ECU enclosure. Use extreme caution when working inside. Contact with energized connections will result in serious personal injury or death. Seek immediate medical attention if injury occurs.

6. Open door on ECU enclosure then observe circuit breakers CB140 and CB170.

Condition/Indication

Is CB140 or CB170 tripped (off)?

Response

YES-Go to next step.

NO-Go to step 8.

Step

7. Do sub-steps listed below:
- Reset CB140 or CB170.
 - Close door on ECU enclosure then position main power switch to ON.
 - Position VENTILATION FANS switch to ON.

Condition/Indication

Do ventilation fans come on?

Response

YES-Attempt to return to normal operation. If CB140 or CB170 trips again notify maintenance.

NO-Notify maintenance to check for correct phasing connections at power source.

END OF TASK

FAULT PROCEDURE 10**Step**

1. Verify thermostat mode switch is positioned to COOL.

Condition/Indication

Is thermostat mode switch positioned to COOL?

Response

YES-Go to next step.

NO-Position switch to COOL.

Step

2. Verify thermostat set point is below displayed temperature.

Condition/Indication

Is set point below displayed temperature?

Response

YES-Go to next step.

NO-Select desired set point.

Step

3. Verify AA and PA ventilation outlets and supply area exhaust grill are not blocked.

Condition/Indication

Are ventilation outlets or exhaust grill blocked?

Response

YES-Remove blockage.

NO-Go to next step.

Step

4. Verify screens in partition wall are not blocked.

Condition/Indication

Are screens blocked?

Response

YES-Remove blockage.

NO-Go to next step.

FAULT PROCEDURE 10-CONTINUED**Step**

5. Verify re-circulating air filter inlet screen is not blocked.

Condition/Indication

Is screen blocked?

Response

YES-Remove blockage.

NO-Go to next step.

Step

6. Verify both (PA and AA) soft wall doors and windows are closed.

Condition/Indication

Are both soft wall doors and windows closed?

Response

YES-Go to next step.

NO-Close windows or doors.

Step

7. Verify re-circulating air filter is not clogged.

Condition/Indication

Is filter clogged?

Response

YES-Replace filter (WP 0031).

NO- Follow guidance for FAULT PROCEDURE 3.

END OF TASK

FAULT PROCEDURE 11**Step**

1. Verify thermostat mode switch is positioned to HEAT.

Condition/Indication

Is thermostat mode switch positioned to HEAT?

Response

YES-Go to next step.

NO-Properly position switch to HEAT.

Step

2. Verify thermostat set point is above displayed temperature.

Condition/Indication

Is thermostat set point above displayed temperature?

Response

YES-Go to next step.

NO-Set thermostat set point above displayed temperature.

Step

3. Verify AA and PA ventilation outlets and supply area exhaust grill are not blocked.

Condition/Indication

Are ventilation outlets or exhaust grill blocked?

Response

YES-Remove blockage.

NO-Go to next step.

Step

4. Verify screens in partition wall are not blocked.

Condition/Indication

Are screens blocked?

Response

YES-Remove blockage.

NO-Go to next step.

FAULT PROCEDURE 11-CONTINUED**Step**

5. Verify re-circulating air filter inlet screen is not blocked.

Condition/Indication

Is screen blocked?

Response

YES-Remove blockage.

NO-Go to next step.

Step

6. Verify both soft wall (PA and AA) doors and window are closed.

Condition/Indication

Are soft wall doors and windows closed?

Response

YES-Go to next step.

NO-Close doors and windows.

Step

7. Verify re-circulating air filter is not clogged.

Condition/Indication

Is filter clogged?

Response

YES-Replace filter (WP 0031).

NO- Go to next step.

FAULT PROCEDURE 11-CONTINUED**Step**

8. Verify AUXILIARY HEAT switch is positioned to ON.

Condition/Indication

Is AUXILIARY HEAT switch positioned to ON?

Response

YES-Go to next step.

NO-Position switch to ON. Wait about 15 minutes. If it doesn't start to warm up, notify maintenance.

Step

9. Do sub-steps listed below:

- a. Position thermostat mode switch and AUXILIARY HEAT switch to OFF.
- b. Position VENTILATION FANS switch to OFF and main disconnect to OFF.

WARNING

High voltage is present in ECU enclosure. Use extreme caution when working inside. Contact with energized connections will result in serious personal injury or death. Seek immediate medical attention if injury occurs.

- c. Open door on ECU enclosure then observe circuit breakers CB110 and CB120.

Condition/Indication

Are either of these circuit breakers tripped (off)?

Response

YES-Reset circuit breaker(s) then go to next step.

NO-Go to next step.

FAULT PROCEDURE 11-CONTINUED**Step**

10. Do sub-steps listed below:

- a. Close door on ECU enclosure then position main power switch to ON.
- b. Position VENTILATION FANS switch to ON.
- c. Position thermostat mode switch to HEAT then set knob to full CW position.
- d. Allow ECU to run in heating mode for about 30 minutes.

Condition/Indication

Is ECU heating?

Response

YES- Attempt to return to normal operation. If circuit breaker trips again notify maintenance.

NO-Notify maintenance.

END OF TASK

END OF WORK PACKAGE

**CREW MAINTENANCE
TROUBLESHOOTING PROCEDURES
FUEL SYSTEM FAULTS**

INITIAL SETUP:**References****Equipment Conditions**

WP 0035

Initial Adjustments, Before Use and Self Test completed (WP 0009)

FAULT PROCEDURE 12**Step**

1. Observe reading on fuel gauge.

Condition/Indication

Is fuel gauge reading < 1/4 tank?

Response

YES-Return to normal operation. Refill tank within 5-8 hours.

NO-Go to next step.

Step

2. Remove fill cap from fuel tank and visually check fuel level.

Condition/Indication

Is fuel level < 1/4 tank?

Response

YES-Refill tank within 5-8 hours. Notify maintenance.

NO-Notify maintenance.

END OF TASK**FAULT PROCEDURE 13****Step**

1. Verify FUEL LEVEL switch is positioned to ON.

Condition/Indication

Is FUEL LEVEL switch positioned to ON?

Response

YES-Go to next step.

NO-Position switch to ON. Return to normal operation.

FAULT PROCEDURE 13-CONTINUED**Step**

2. Perform "PRESS TO TEST" of LOW FUEL LEVEL light.

Condition/Indication

Does light come on?

Response

YES-Return to normal operation.

NO-Replace lamp (WP 0035). Go to next step.

Step

3. Perform "PRESS TO TEST" of LOW FUEL LEVEL light.

Condition/Indication

Does light come on?

Response

YES-Return to normal operation.

NO-Notify maintenance.

END OF TASK**FAULT PROCEDURE 14****Step**

1. Verify FUEL LEVEL switch is positioned to ON.

Condition/Indication

Is FUEL LEVEL switch positioned to ON?

Response

YES-Go to FAULT PROCEDURE 26

NO-Position switch to ON. Return to normal operation.

END OF TASK**END OF WORK PACKAGE**

**CREW MAINTENANCE
TROUBLESHOOTING PROCEDURES
HYDRAULIC SYSTEM FAULTS**

INITIAL SETUP:**Equipment Conditions**

Initial Adjustments, Before Use and Self Test completed (WP 0009)

FAULT PROCEDURE 15**Step**

1. Verify there are no obstructions that would prevent platform extend/retract cylinder from extending.

Condition/Indication

Are there any obstructions?

Response

YES-Remove obstructions. Return to normal operation.

NO-Go to next step.

Step

2. Verify there are no obstructions that would prevent platform raise/lower cylinders from lowering.

Condition/Indication

Are there any obstructions?

Response

YES- Remove obstructions. Return to normal operation.

NO- Go to next step.

Step

3. Verify side platform locks are completely retracted and are clear of each side of platform.

Condition/Indication

Are locks completely retracted?

Response

YES-Go to next step.

NO-Retract locks. Return to normal operation.

FAULT PROCEDURE 15-CONTINUED**Step**

4. Verify handle for platform extend/retract valve is in the extend position.

Condition/Indication

Is handle in the extended position?

Response

YES-Go to next step.

NO-Rotate handle to EXTEND. Return to normal operation.

Step

5. Verify handle platform raise/lower valve is in LOWER position.

Condition/Indication

Is handle in LOWER position?

Response

YES-Go to next step.

NO-Rotate handle to LOWER position. Return to normal operation.

Step

6. While standing along each side of platform, pull outward to assist platform movement. Do not pry or force platform movement.

Condition/Indication

Does platform begin lowering under its own weight?

Response

YES-Return to normal operation.

NO-Notify maintenance.

END OF TASK

FAULT PROCEDURE 16**Step**

1. Verify there are no obstructions that would prevent platform raise/lower cylinders from raising.

Condition/Indication

Are there any obstructions?

Response

YES-Remove obstruction. Return to normal operation.

NO-Go to next step.

Step

2. Verify that platform extend/retract cylinder is extended.

Condition/Indication

Is cylinder extended?

Response

YES-Go to next step.

NO-Extend cylinder. Return to normal operation.

Step

3. Verify side platform locks are completely retracted and are clear of each side of platform.

Condition/Indication

Are platform locks completely retracted?

Response

YES-Go to next step.

NO-Unlock locks. Return to normal operation.

Step

4. Verify handle platform raise/lower valve is in RAISE position.

Condition/Indication

Is handle in RAISE position?

Response

YES-Go to next step.

NO-Place handle in RAISE position. Return to normal operation.

FAULT PROCEDURE 16-CONTINUED**Step**

5. Attempt to stroke pump and raise platform.

Condition/Indication

Does platform raise?

Response

YES-Return to normal operation.

NO-Notify maintenance.

END OF TASK**FAULT PROCEDURE 17****Step**

1. Verify there are no obstructions that would prevent platform extend/retract cylinder from retracting.

Condition/Indication

Do any obstructions exist?

Response

YES-Remove obstruction. Return to normal operation.

NO-Go to next step.

Step

2. Verify edges of softwall are folded up and not sticking out along sides of platform.

Condition/Indication

Are softwall edges properly stowed?

Response

YES-Go to next step.

NO-Lower platform, properly stow softwall and repeat platform raising procedure.

FAULT PROCEDURE 17-CONTINUED**Step**

3. Verify handle for platform extend/retract valve is in the RETRACT position.

Condition/Indication

Is handle in the RETRACT position?

Response

YES-Go to next step.

NO-Place handle in RETRACT position. Return to normal operation.

Step

4. Verify there are no obstructions that would prevent side platform locks from extending into each side of platform.

Condition/Indication

Are there any obstructions?

Response

YES-Remove obstruction. Return to normal operation.

NO-Notify maintenance.

END OF TASK

END OF WORK PACKAGE

**CREW MAINTENANCE
TROUBLESHOOTING PROCEDURES
LIGHTING SYSTEM FAULTS**

INITIAL SETUP:**Equipment Conditions**

Initial Adjustments, Before Use and Self Test completed (WP 0009)

References

WP 0036

FAULT PROCEDURE 18**Step**

1. Verify BLACKOUT MODE switch is positioned to ON.

Condition/Indication

Is switch positioned to ON?

Response

YES-go to next step.

NO-Position switch to ON.

Step

2. Verify light fixture(s) are plugged into electrical receptacles.

Condition/Indication

Are light fixtures plugged into receptacles?

Response

YES-Notify maintenance.

NO-Plug light fixtures into receptacles. Return to normal operation.

END OF TASK

FAULT PROCEDURE 19**Step**

1. Verify light fixture(s) are plugged into electrical receptacles.

Condition/Indication

Are light fixtures plugged into receptacles?

Response

YES-Go to FAULT PROCEDURE 27.

NO-Plug light fixtures into receptacles. Return to normal operation.

END OF TASK**FAULT PROCEDURE 20****Step**

1. Verify light switch is positioned to ON.

Condition/Indication

Is switch ON?

Response

YES-Go to next step.

NO-Position switch to ON.

Step

2. Verify light fixture(s) are plugged into electrical receptacle and to each other.

Condition/Indication

Are lights plugged in?

Response

YES-Go to next step.

NO-Plug lights in.

FAULT PROCEDURE 20-CONTINUED**Step**

3. Verify light bulb(s) is not burnt-out by plugging light into a known good 110 VAC electrical receptacle.

Condition/Indication

Is light bulb burnt-out?

Response

YES-Replace bulb (WP 0036). Return to normal operation.

NO-Go to next step.

Step

4. Plug a known good light into electrical receptacle where light was not working.

Condition/Indication

Does light come on?

Response

YES-Replace faulty work light.

NO-Go to FAULT PROCEDURE 22.

END OF TASK**FAULT PROCEDURE 21****Step**

1. Lift up on work light switch located on RU control enclosure, then release switch.

Condition/Indication

Do loading lights come on?

Response

YES-Return to normal operation.

NO-Go to FAULT PROCEDURE 27.

END OF TASK**END OF WORK PACKAGE**

**CREW MAINTENANCE
TROUBLESHOOTING PROCEDURES
POWER DISTRIBUTION SYSTEM FAULTS**

INITIAL SETUP:**Tools and Special Tools**

Screwdriver, Bit Set and Handle (WP 0038, Table 1, Item 10)

Equipment Conditions

Initial Adjustments, Before Use and Self Test completed (WP 0009)

FAULT PROCEDURE 22**Step**

1. Do sub-steps listed below:
 - a. Position all light switches on MA enclosure to OFF.
 - b. Unplug any equipment plugged into AA or PA utility receptacles.

WARNING

High voltage is present in water system junction box. Use extreme caution when working inside. Contact with energized connections will result in serious personal injury or death. Seek immediate medical attention if injury occurs.

- c. Open door on water system junction box then observe circuit breakers CB610 and CB620.

Condition/Indication

Is either circuit breaker tripped (off)?

Response

YES-Reset circuit breaker then go to next step.

NO-Go to next step.

FAULT PROCEDURE 22-CONTINUED**Step**

2. Do sub-steps listed below:
 - a. Close door on water system junction box.
 - b. Position interior light switches to ON.
 - c. Verify interior lights stay on.

Condition/Indication

Do lights stay on?

Response

YES-Go to next step.

NO-Notify maintenance.

Step

3. Do sub-steps listed below:
 - a. Reconnect any equipment that was plugged into utility receptacles.
 - b. Verify interior lights stay on and equipment is operating correctly.

Condition/Indication

Do lights and equipment operate?

Response

YES-Attempt to return to normal operation. If circuit breaker trips again notify maintenance.

NO-Do not reconnect equipment. Return to step 1 to reset tripped circuit breaker.

END OF TASK

FAULT PROCEDURE 23**Step**

1. Do sub-steps listed below:
 - a. Unplug any equipment plugged into ECU enclosure GFCI receptacle.
 - b. Press RESET button on GFCI receptacle.

Condition/Indication

Does GFCI reset?

Response

YES-Go to next step.

NO-Go to step 3.

Step

2. Plug equipment back into GFCI receptacle.

Condition/Indication

Does GFCI trip again?

Response

YES-Do not reconnect equipment.

NO-Return to normal operation.

FAULT PROCEDURE 23-CONTINUED**Step**

3. Do sub-steps listed below:
 - a. Position all light switches on MA enclosure to OFF.
 - b. Unplug any equipment plugged into AA or PA utility receptacles.
 - c. Position thermostat mode switch to OFF.
 - d. Position VENTILATION FANS switch to OFF.
 - e. Position main disconnect switch to OFF.

WARNING

High voltage is present in ECU enclosure. Use extreme caution when working inside. Contact with energized connections will result in serious personal injury or death. Seek immediate medical attention if injury occurs.

- f. Open door on ECU enclosure then observe circuit breaker CB150.

Condition/Indication

Is circuit breaker tripped (off)?

Response

YES-Reset circuit breaker then go to next step.

NO-Go to next step.

Step

4. Do sub-steps listed below:
 - a. Close door on ECU enclosure.
 - b. Plug equipment back into GFCI receptacle.

Condition/Indication

Does GFCI or circuit breaker trip again?

Response

YES-Do not reconnect equipment.

NO-Return to normal operation.

END OF TASK

FAULT PROCEDURE 24**Step**

1. Do sub-steps listed below:
 - a. Position all light switches on MA enclosure to OFF.
 - b. Unplug any equipment plugged into AA or PA utility receptacles.
 - c. Position thermostat mode switch to OFF.
 - d. Position VENTILATION FANS switch to OFF.
 - e. Position main disconnect switch to OFF.

WARNING

High voltage is present in ECU enclosure. Use extreme caution when working inside. Contact with energized connections will result in serious personal injury or death. Seek immediate medical attention if injury occurs.

- f. Open door on ECU enclosure then observe circuit breaker CB510.

Condition/Indication

Is circuit breaker tripped (off)?

Response

YES-Reset circuit breaker then go to next step.

NO-Go to next step.

FAULT PROCEDURE 24-CONTINUED**Step**

2. Do sub-steps listed below:
 - a. Close door on ECU enclosure then position main power switch to ON.
 - b. Position VENTILATION FANS switch to ON.
 - c. Position thermostat mode switch to desired mode (HEAT, OFF, or COOL).
 - d. Position interior light switches to ON.
 - e. Press UTILITY switch on water system junction box.
 - f. Verify interior lights stay on and external water pump stays on for 15 minutes.

Condition/Indication

Do lights and water pump stay on?

Response

YES-Attempt to return to normal operation. If circuit breaker trips again notify maintenance.

NO-Notify maintenance.

END OF TASK**FAULT PROCEDURE 25****Step**

1. Do sub-steps listed below:
 - a. Unplug any equipment plugged into water system junction box or RU enclosure GFCI receptacles.
 - b. Press RESET button on GFCI receptacle.

Condition/Indication

Does GFCI reset?

Response

YES-Go to next step.

NO-Go to step 3.

FAULT PROCEDURE 25-CONTINUED**Step**

2. Plug equipment back into GFCI receptacle.

Condition/Indication

Does GFCI trip again?

Response

YES-Do not reconnect equipment.

NO-Return to normal operation.

WARNING

High voltage is present in water system junction box. Use extreme caution when working inside. Contact with energized connections will result in serious personal injury or death. Seek immediate medical attention if injury occurs.

Step

3. Open door on water system junction box then observe circuit breaker CB550.

Condition/Indication

Is circuit breaker tripped (off)?

Response

YES-Reset circuit breaker then go to next step.

NO-Go to next step.

FAULT PROCEDURE 25-CONTINUED**Step**

4. Do sub-steps listed below:
 - a. Close door on water system junction box.
 - b. Plug equipment back into GFCI receptacle.

Condition/Indication

Does GFCI or circuit breaker trip again?

Response

YES-Do not reconnect equipment.

NO-Return to normal operation.

END OF TASK

END OF WORK PACKAGE

**GUCREW MAINTENANCE
TROUBLESHOOTING PROCEDURES
RU FAULTS**

INITIAL SETUP:**Tools and Special Tools**

Screwdriver, Bit Set and Handle (WP 0038, Table 1, Item 10)
Wrench, Adjustable, 6 inch (WP 0038, Table 1, Item 16)

Equipment Conditions

Initial Adjustments, Before Use and Self Test completed (WP 0009)

References

WP 0027
WP 0028
WP 0029
WP 0035

FAULT PROCEDURE 26**Step**

1. Do sub-steps listed below:
 - a. Position RU control panel I/O switch to I.
 - b. Perform "PRESS TO TEST" of RU STARTING light.

Condition/Indication

Does light come on?

Response

YES-Return to normal operation.

NO- Replace lamp (WP 0035). Go to next step.

Step

2. Perform "PRESS TO TEST" of RU STARTING light.

Condition/Indication

Does light come on?

Response

YES-Return to normal operation.

NO-Notify maintenance.

END OF TASK

FAULT PROCEDURE 27**Step**

1. Verify fuel is available in fuel tank.

Condition/Indication

Is fuel tank empty?

Response

YES-Refill fuel tank. Return to normal operation.

NO-Go to next step.

Step

2. Verify shut-off valve at fuel pump inlet (Figure 1, Item 1) is open.

Condition/Indication

Is shut-off valve at fuel pump inlet open?

Response

YES-Go to next step.

NO-Open shutoff valve. Go to next step.

Step

3. Verify RUN/STOP switch is positioned to ON.

Condition/Indication

Is RUN/STOP switch positioned to ON?

Response

YES-Inspect battery connections (WP 0027). If connections are loose or corroded notify maintenance.

NO- Position switch to ON. Return to normal operation.

FAULT PROCEDURE 27-CONTINUED

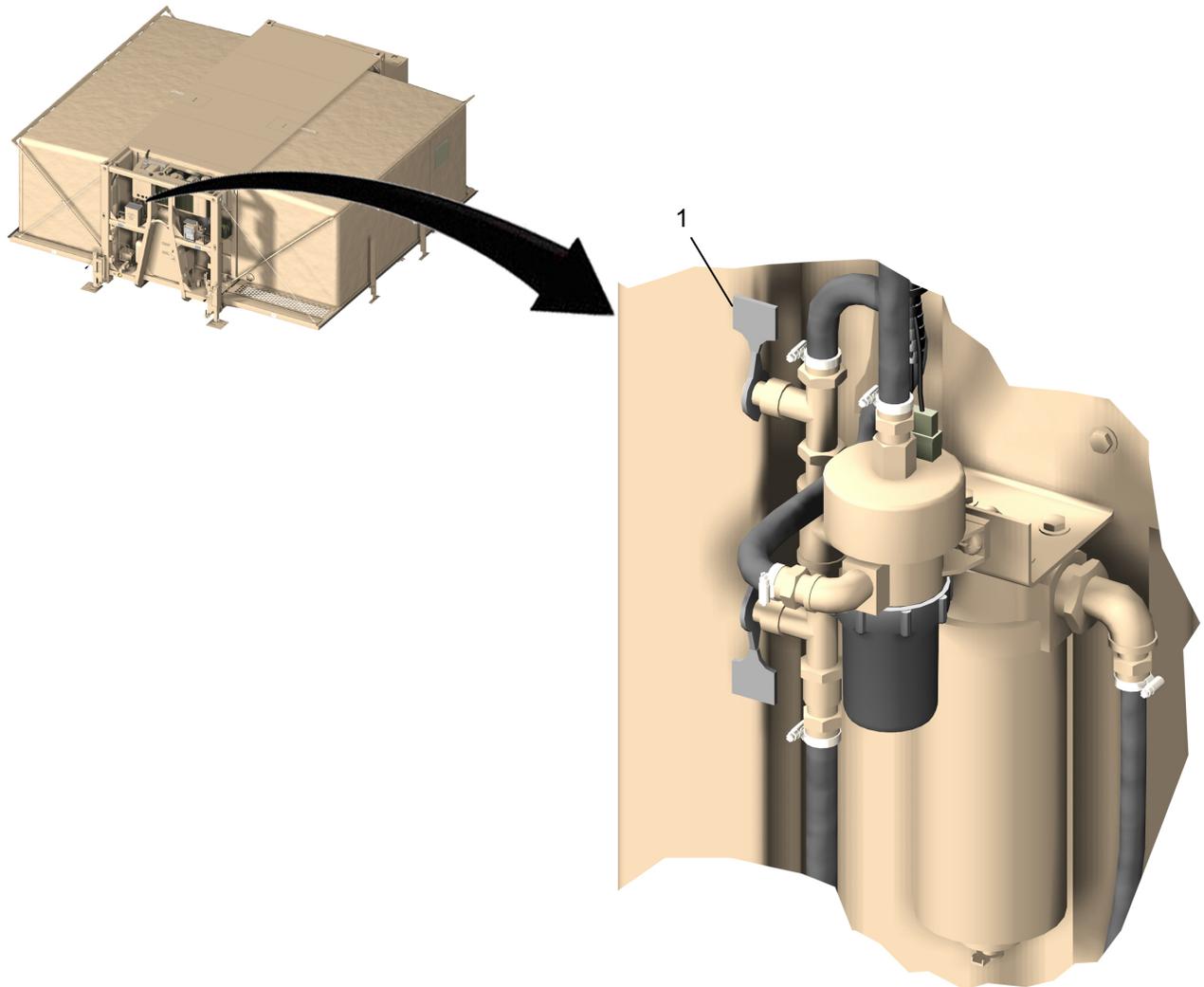


Figure 1. Shut-off Valve at Fuel Pump Inlet.

END OF TASK

FAULT PROCEDURE 28**Step**

1. Determine if RSU temperature has been at or below 37°F for at least 45 minutes.

Condition/Indication

Has RSU temperature been at or below 37°F for at least 45 minutes?

Response

YES-Notify maintenance.

NO-Manual defrost cycle cannot be started.

END OF TASK**FAULT PROCEDURE 29****Step**

1. Verify RU is operating in engine mode.

Condition/Indication

Is RU operating in engine mode?

Response

YES-Perform FAULT PROCEDURE 35.

NO-Operate RU in engine mode. Return to normal operation.

END OF TASK

FAULT PROCEDURE 30**Step**

1. Check oil level (WP 0029).

Condition/Indication

Is oil level low?

Response

YES-Add oil (WP 0029). Return to normal operation.

NO-Notify maintenance.

END OF TASK**FAULT PROCEDURE 31****Step**

1. Verify front grill, cover, and side panels are not blocked with debris.

Condition/Indication

Are front grill, cover and/or side panels blocked with debris?

Response

YES-Remove blockage. Return to normal operation.

NO-Go to next step.

Step

2. Verify condenser/radiator (Figure 2, Item 1) is not blocked with debris.

Condition/Indication

Is condenser/radiator blocked with debris?

Response

YES-Remove blockage. Return to normal operation.

NO-Go to next step.

FAULT PROCEDURE 31-CONTINUED

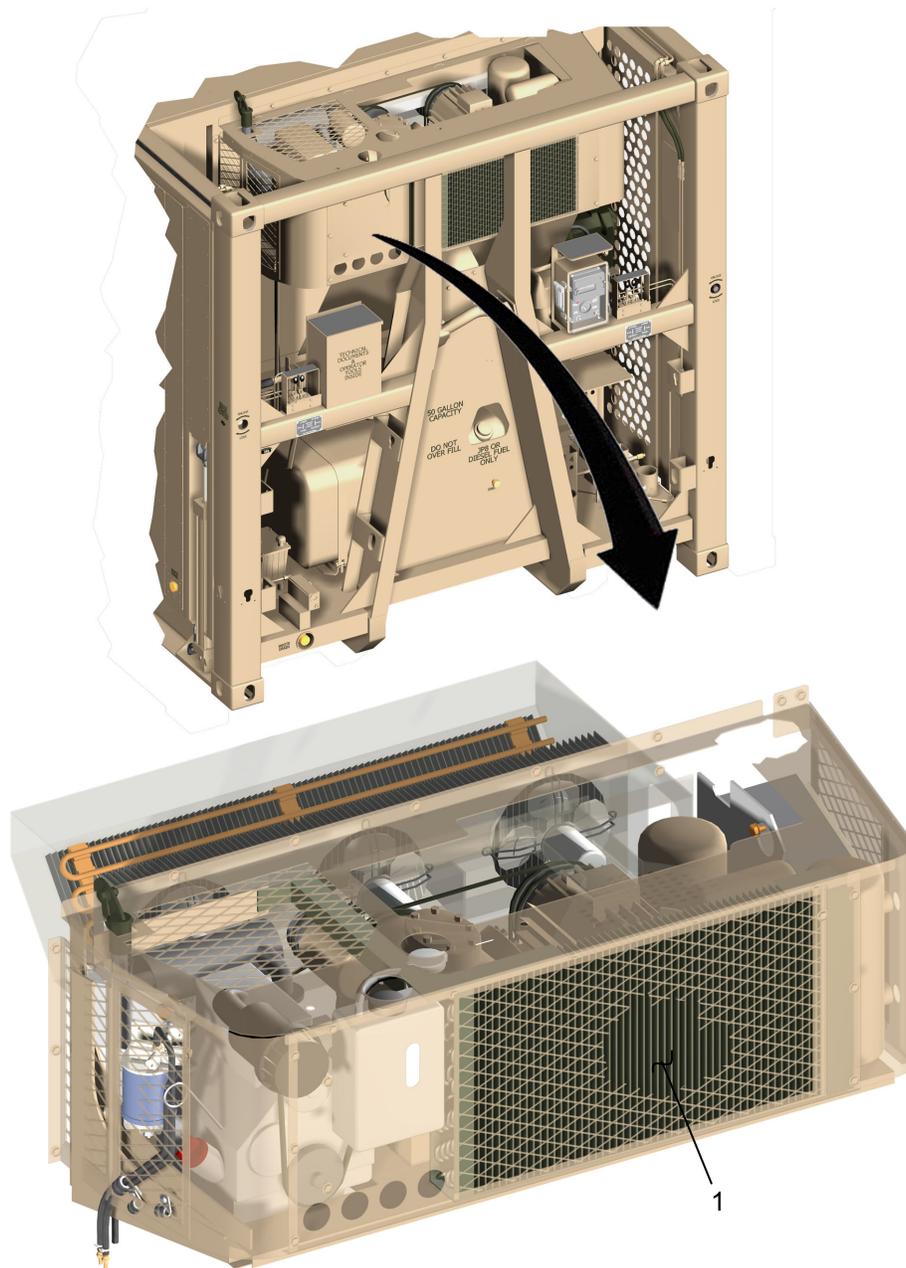


Figure 2. Condenser/Radiator.

FAULT PROCEDURE 31-CONTINUED**Step**

3. Check coolant level in overflow tank.

Condition/Indication

Is coolant level low?

Response

YES-Add coolant (WP 0028).

NO-Notify maintenance.

END OF TASK**FAULT PROCEDURE 32****Step**

1. Verify front grill, cover, and side panels are not blocked with debris.

Condition/Indication

Are front grill, cover and/or side panels blocked with debris?

Response

YES-Remove blockage.

NO-Go to next step.

Step

2. Verify condenser/radiator (Figure 2, Item 1) is not blocked with debris.

Condition/Indication

Is condenser/radiator blocked?

Response

YES-Remove blockage. Return to normal operation.

NO-Notify maintenance.

END OF TASK

FAULT PROCEDURE 33**Step**

1. Verify all RSU doors are closed and latched.

Condition/Indication

Are all RSU doors closed and latched?

Response

YES-Go to next step.

NO-Close and latch door. Go to next step.

Step

2. Manually start a defrost cycle by pushing MAN. DEFROST button on RU control enclosure.

Condition/Indication

Does defrost cycle terminate normally?

Response

YES-Return to normal operation.

NO-Notify maintenance.

END OF TASK

FAULT PROCEDURE 34**Step**

1. Press RU control panel ROAD key (Figure 3, Item 7) and attempt to operate RU in engine mode.

Condition/Indication

Does RU operate in engine mode?

Response

YES-Allow RU to run in engine mode for at least 1/2 hour. Go to next step.

NO-Wait 1/2 hour. Go to next step.

Step

2. Do sub-steps listed below:
 - a. Allow RU standby motor to cool down.
 - b. Position RU control panel I/O switch (Figure 3, Item 8) to O, wait 5 seconds, then position switch to I.
 - c. Press STANDBY key (Figure 3, Item 6).

Condition/Indication

Does RU start in standby mode?

Response

YES-Return to normal operation. If RU stops with another SBY MOTOR alarm notify maintenance.

NO-Go to next step.

FAULT PROCEDURE 34-CONTINUED

WARNING

High voltage is present in RU control box. Use extreme caution when working inside. Contact with energized connections will result in serious personal injury or death. Seek immediate medical attention if injury occurs.

Step

3. Do sub-steps listed below.
 - a. Position I/O switch (Figure 3, Item 8) to O.
 - b. Loosen two captive screws (Figure 3, Item 1) on RU control box (Figure 3, Item 2) and open door (Figure 3, Item 3).
 - c. Check mode setting (Figure 3, Item 4) on OL1 (Figure 3, Item 5).

Condition/Indication

Is OL1 set to "AO"?

Response

YES-Close door (Figure 3, Item 3) on RU control box (Figure 3, Item 2) and secure with two captive screws (Figure 3, Item 1). Go to next step.

NO-If mode switch was already reset once notify maintenance, otherwise position mode switch (Figure 3, Item 4) to "AO" and return to step 1.

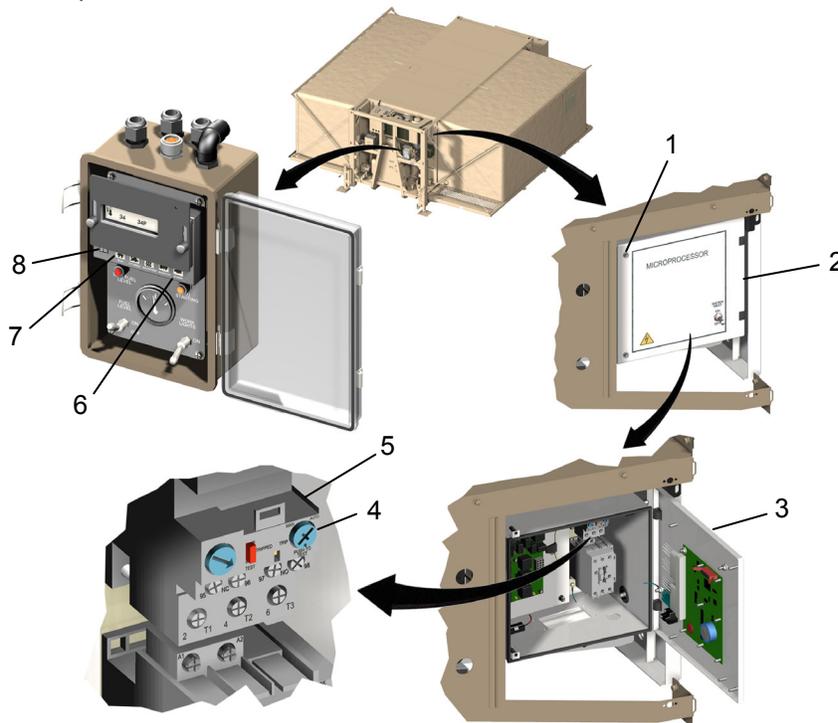


Figure 3. OL1 Mode Switch.

FAULT PROCEDURE 34-CONTINUED**Step**

4. Operate RU in STANDBY mode for about 30 minutes while observing RU operation.

Condition/Indication

Does another SBY MOTOR alarm occur?

Response

YES-Notify maintenance.

NO-Return to normal operation.

END OF TASK**FAULT PROCEDURE 35****Step**

1. Verify all RSU doors are closed and latched.

Condition/Indication

Are all RSU doors closed and latched?

Response

YES- Go to step 3.

NO-Close door and go to next step.

Step

2. Operate RU in for about 30 minutes while observing RU operation.

Condition/Indication

Does alarm condition go away?

Response

YES-Return to normal operation.

NO-Go to next step.

FAULT PROCEDURE 35-CONTINUED**Step**

3. Do sub-steps listed below:
 - a. Open RSU door (Figure 4, Item 2).
 - b. Verify removable panel (Figure 4, Item 1) is installed and properly secured.

Condition/Indication

Is removable panel installed and properly secured?

Response

YES-Close RSU door. Go to next step.

NO-Install and seal panel. Close RSU door. Go to next step.

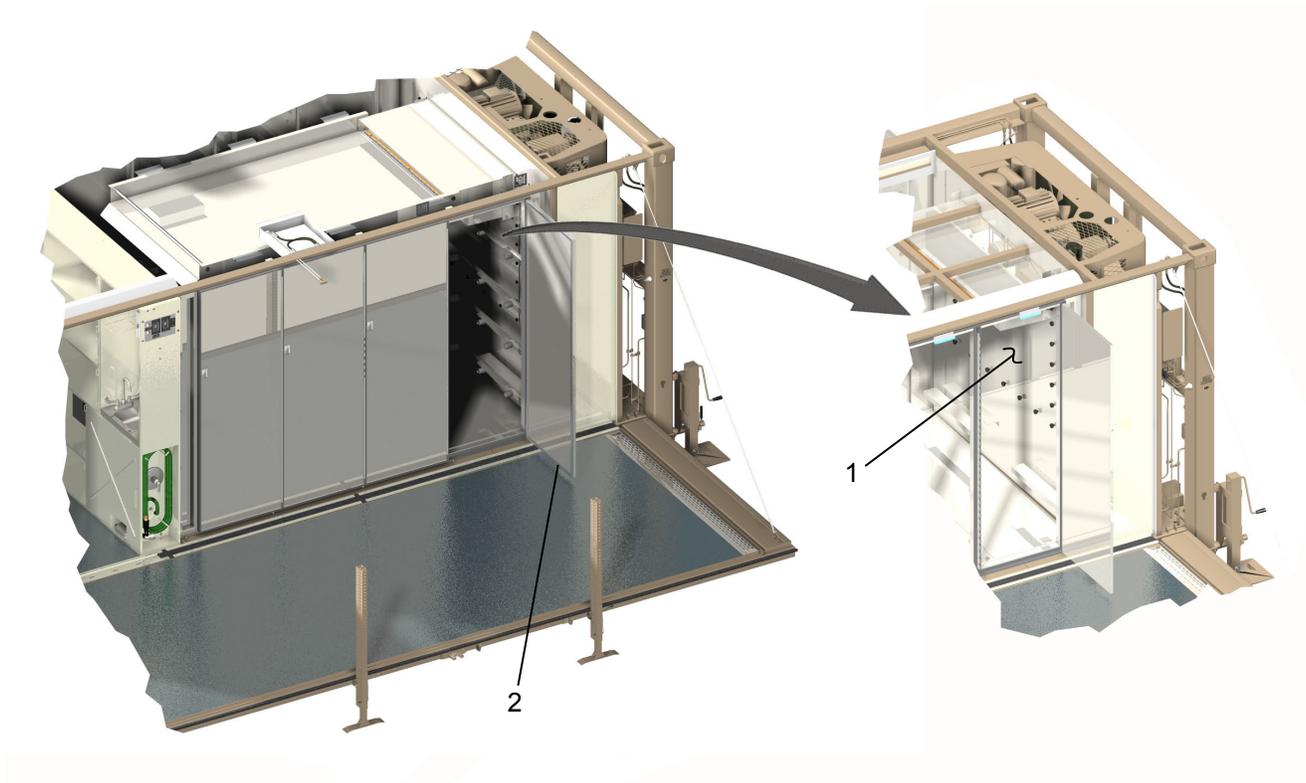


Figure 4. Removable Panel.

FAULT PROCEDURE 35-CONTINUED**Step**

4. Allow RU to operate for at least 30 minutes to see if alarm condition goes away.

Condition/Indication

Does alarm condition go away?

Response

YES-Return to normal operation.

NO-Go to next step.

Step

5. Manually start a defrost cycle by pushing MAN. DEFROST button on RU control enclosure.

Condition/Indication

Does defrost cycle terminate normally?

Response

YES-Return to normal operation.

NO-Notify maintenance.

END OF TASK

FAULT PROCEDURE 36**Step**

1. Verify RUN/STOP switch is positioned to ON.

Condition/Indication

Is RUN/STOP switch positioned to ON?

Response

YES-Go to next step.

NO- Position switch to ON. Return to normal operation.

Step

2. Verify external power is available.

Condition/Indication

Is external power available?

Response

YES-Go to next step.

NO-Apply external power. Return to normal operation.

Step

3. Verify external power is 208 VAC, 50-60 Hz.

Condition/Indication

Is external power 208 VAC, 50-60 Hz?

Response

YES-Go to next step.

NO-Set external power to 208 VAC, 50-60 Hz. Return to normal operation.

Step

4. Verify main disconnect switch is on.

Condition/Indication

Is main disconnect switch on?

Response

YES-Go to next step.

NO-Position switch to ON. Return to normal operation.

FAULT PROCEDURE 36-CONTINUED**Step**

5. Do sub-steps listed below:
 - a. Position RU control panel I/O switch to O.
 - b. Position all light switches on MA enclosure to OFF.
 - c. Unplug any equipment plugged into AA or PA utility receptacles.
 - d. Position thermostat mode switch to OFF.
 - e. Position VENTILATION FANS switch to OFF.
 - f. Position main disconnect switch to OFF.

WARNING

High voltage is present in ECU enclosure. Use extreme caution when working inside. Contact with energized connections will result in serious personal injury or death. Seek immediate medical attention if injury occurs.

- g. Open door on ECU enclosure then observe circuit breaker CB310.

Condition/Indication

Is circuit breaker tripped (off)?

Response

YES-Reset circuit breaker then go to next step.

NO-Go to next step.

FAULT PROCEDURE 36-CONTINUED**Step**

6. Do sub-steps listed below:
 - a. Close door on ECU enclosure then position main power switch to ON.
 - b. Position RU control panel I/O switch to I and press STANDBY key.

Condition/Indication

Does RU start?

Response

YES- Attempt to return to normal operation. If circuit breaker trips again notify maintenance.

NO-Notify maintenance to check phasing connections at power source.

END OF TASK

END OF WORK PACKAGE

**CREW MAINTENANCE
TROUBLESHOOTING PROCEDURES
WATER SYSTEM FAULTS**

INITIAL SETUP:**Tools and Special Tools**

Screwdriver, Bit Set and Handle (WP 0038, Table 1, Item 10)

Equipment Conditions

Initial Adjustments, Before Use and Self Test completed (WP 0009)

References

WP 0037

FAULT PROCEDURE 37**Step**

1. Push down on foot switch and open hot and cold levers on sink.

Condition/Indication

Does water flow properly?

Response

YES-Release foot switch. Close hot and cold levers. Go to next step.

NO- Release foot switch. Close hot and cold levers. Go to FAULT PROCEDURE 38.

WARNING

High voltage is present in water system junction box. Use extreme caution when working inside. Contact with energized connections will result in serious personal injury or death. Seek immediate medical attention if injury occurs.

Step

2. Open door on water system junction box then observe circuit breaker CB530.

Condition/Indication

Is circuit breaker tripped (off)?

Response

YES-Reset circuit breaker then go to next step.

NO-Go to next step.

FAULT PROCEDURE 37-CONTINUED**Step**

3. Do sub-steps listed below:
 - a. Close door on water system junction box.
 - b. Wait about 1/2 hour to determine if circuit breaker trips.

Condition/Indication

Does circuit breaker trip again?

Response

YES-Notify maintenance.

NO-Go to next step.

Step

4. Push down on foot switch and open hot lever on sink.

Condition/Indication

Does hot water come out at sink faucet?

Response

YES-Release foot switch. Close hot lever. Return to normal operation.

NO-Release foot switch. Close hot lever. Notify maintenance.

END OF TASK**FAULT PROCEDURE 38****Step**

1. Push down on foot switch and open hot and cold levers on sink faucet.

Condition/Indication

Does water flow properly?

Response

YES- Release foot switch, close hot and cold levers. Return to normal operation.

NO- Release foot switch, close hot and cold levers. Go to next step.

FAULT PROCEDURE 38-CONTINUED**Step**

2. Do sub-steps listed below:
 - a. Push UTILITY HOSE switch on water system junction box.
 - b. Rotate utility hose faucet lever to open.
 - c. Point spray nozzle on utility hose at drain grating or sink and squeeze.

Condition/Indication

Does water flow properly out of utility hose?

Response

YES-Release spray nozzle. Close utility hose faucet lever. Return to normal operation.

NO-Release spray nozzle. Close utility hose faucet lever. Go to next step.

Step

3. Verify there is enough water at water source.

Condition/Indication

Is water supply low?

Response

YES-Refill water supply. Return to normal operation.

NO-Go to next step.

Step

4. Verify supply hose is connected between source and external water pump.

Condition/Indication

Is supply hose connected between source and pump?

Response

YES-Go to next step.

NO-Properly connect hose. Return to normal operation.

FAULT PROCEDURE 38-CONTINUED**Step**

5. Verify supply hose is connected between external water pump and MIRCS.

Condition/Indication

Is supply hose properly connected?

Response

YES-Go to next step.

NO-Properly connect hose. Return to normal operation.

Step

6. Verify electrical cable is connected between external water pump and ECU enclosure.

Condition/Indication

Is cable properly connected?

Response

YES-Go to next step.

NO-Properly connect cable. Return to normal operation.

Step

7. If water source has a shut-off valve verify it is open.

Condition/Indication

Is shut-off valve open?

Response

YES-Go to next step.

NO-Open shut-off valve. Return to normal operation.

Step

8. Verify all system drain valves are closed.

Condition/Indication

Are system drain valves closed?

Response

YES-Go to next step.

NO-Close system drain valves. Return to normal operation.

FAULT PROCEDURE 38-CONTINUED**Step**

9. Verify there are no water connections leaking.

Condition/Indication

Are any water connections leaking?

Response

YES-Correct water connection leaks or notify maintenance.

NO-Go to next step.

Step

10. Open door on water system junction box then observe circuit breakers CB520 and CB540.

Condition/Indication

Is either circuit breaker tripped (off)?

Response

YES-Reset circuit breaker then go to next step.

NO-Go to next step.

Step

11. Do sub-steps listed below:

- a. Close door on water system junction box.
- b. Push down on foot switch and open hot and cold levers on sink.

Condition/Indication

Does circuit breaker trip again?

Response

YES-Release foot switch. Close hot and cold levers. Notify maintenance.

NO-Go to next step.

FAULT PROCEDURE 38-CONTINUED**Step**

12. Continue to push down on foot switch.

Condition/Indication

Does water flow properly?

Response

YES-Release foot switch. Close hot and cold levers. Go to next step.

NO-Release foot switch. Close hot and cold levers. Notify maintenance.

Step

13. Do sub-steps listed below:

- a. Press UTILITY HOSE switch.
- b. Rotate utility hose faucet lever to open.
- c. Point utility hose spray nozzle at drain grating and squeeze.

Condition/Indication

Does circuit breaker trip again?

Response

YES-Release spray nozzle. Close utility hose faucet lever. Notify maintenance.

NO-Go to next step.

Step

14. Continue to squeeze spray nozzle.

Condition/Indication

Does water flow properly?

Response

YES-Release spray nozzle. Close utility hose faucet lever. Return to normal operation.

NO-Release spray nozzle. Close utility hose faucet lever. Notify maintenance.

END OF TASK

END OF WORK PACKAGE

CHAPTER 4

**PMCS MAINTENANCE INSTRUCTIONS
FOR
MOBILE INTEGRATED REMAINS
COLLECTION SYSTEM**

**CREW MAINTENANCE
PMCS INTRODUCTION**

GENERAL

Preventive Maintenance Checks and Services (PMCS) are performed to keep the MIRCS in operating condition. The checks are used to find, correct, or report problems. Operators are to do the PMCS jobs as shown in the PMCS table. PMCS are done every day the MIRCS is operated, using the PMCS table. Pay attention to WARNING and CAUTION statements. A WARNING means someone could get hurt. A CAUTION means equipment could be damaged.

Before you begin operating the MIRCS equipment, do Before PMCS.

During operation, do During PMCS.

After operation, do After PMCS.

Do Weekly PMCS once a week while performing After PMCS when the MIRCS is set-up and operating.

Do Monthly PMCS once a month while performing After PMCS when the MIRCS is set-up and operating.

Do Quarterly PMCS once every three months while performing After PMCS when the MIRCS is set-up and operating.

Do Post-Deployment PMCS after returning from any deployment requiring the MIRCS to be moved, set-up, operated, and packed-up.

If you find something wrong when performing PMCS, fix it if you can using troubleshooting procedures and/or maintenance procedures provided in this TM. If you do not have the tools required to perform a repair, or if repair is too difficult, notify unit maintenance.

The right-hand column of the PMCS table lists conditions that make the MIRCS not fully mission capable. Write up items not fixed on DA Form 2404 for unit maintenance. For further information on how to use this form, see DA PAM 750-8.

CORROSION PREVENTION AND CONTROL (CPC)

Corrosion Prevention and Control (CPC) of Army materiel is a continuing concern. It is important that any corrosion problems with this item be reported so that the problem can be corrected and improvements can be made to prevent the problem in future items.

While corrosion is typically associated with rusting of metals, it can also include deterioration of other materials, such as rubber and plastic. Unusual cracking, softening, swelling, or breaking of these materials may be a corrosion problem.

If a corrosion problem is identified, it can be reported using Standard Form (SF) 368, Product Quality Deficiency Report. Use of keywords such as "corrosion," "rust," "deterioration," or "cracking" will ensure that the information is identified as a CPC problem.

The form should be submitted to the address specified in DA PAM 750-8, The Army Maintenance Management System (TAMMS).

Leakage Definition

CAUTION

Equipment operation is allowable with minor leakages except for fuel (no class allowable). Of course, consideration must be given to the fluid capacity of the item or system being checked. When in doubt, ask your supervisor.

When operating with class I or II fluid leaks, continue to check fluid levels as required in your PMCS

Class III leaks should be reported immediately to your supervisor.

It is necessary to know how fluid leakage affects the status of the MIRCS. The following are definitions of the classes of leakage a maintainer needs to know to be able to determine the condition of the leak. Learn and then be familiar with them, and REMEMBER – WHEN IN DOUBT, ASK YOUR SUPERVISOR.

Leakage definitions for Operator PMCS.

CLASS I – Seepage of fluid (as indicated by wetness or discoloration) not great enough to form drops.

CLASS II – Leakage of fluid great enough to form drops but not enough to cause drops to drip from item being checked.

CLASS III – Leakage of fluid great enough to form drops that fall from the item being checked.

Inspection

Look for signs of a problem or trouble. Senses can help here. You can feel, smell, hear, or see many problems. Be alert when inspecting MIRCS.

Inspect to see if items are in good condition. Are they correctly assembled, stowed, secured, excessively worn, leaking, corroded, or properly lubricated? Correct any problems found.

There are some common items to check all over the MIRCS. These include the following:

1. Bolts, clamps, nuts, and screws: Continuously check for looseness. Look for chipped paint, bare metal, rust, or corrosion around bolt and screw heads and nuts. Tighten them when you find them loose. If tools are not available, notify unit maintenance.
2. Welds: Many items on the MIRCS are welded. To check these welds look for chipped paint, rust, corrosion, or gaps. When these conditions exist, notify maintenance on DA Form 2404.
3. Electrical wires, connectors, and harnesses: Tighten loose connectors. Look for cracked or broken insulation, bare wires and broken connectors. If any are found, notify maintenance.
4. Hoses and fluid lines: Look for wear, damage and leaks, and make sure clamps and fittings are tight. Wet spots mean a leak. A stain by a fitting or connector can also mean a leak. Correct any problems found. If tools are not available, notify maintenance.

Lubrication Service Intervals

For safer, more trouble free operations, make sure that your MIRCS is serviced according to PMCS.

Your MIRCS will require extra service and care when you operate under unusual conditions. High or low temperatures, long periods of hard use, or continued use in sand, water, mud, or snow will break down lubricants, requiring you to add or change lubricants more often.

END OF WORK PACKAGE

**CREW MAINTENANCE
PMCS, INCLUDING LUBRICATION INSTRUCTIONS**

INITIAL SETUP:

References

- WP 0010
- WP 0024
- WP 0026
- WP 0028
- WP 0029
- WP 0031
- WP 0032
- WP 0033
- WP 0040
- TM 9-6115-643-10

Table 1. Operator Transport Mode PMCS.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF
1	Before	Fuel System	<p>Check fuel tank (Figure 1, Item 1), fuel pump (Figure 1, Item 2), fuel/water separator (Figure 1, Item 3), and fuel hoses (Figure 1, Item 4) for evidence of leakage.</p> <p>Check for adequate supply of fuel (JP-8) in fuel tank as follows:</p> <ol style="list-style-type: none"> 1. Loosen two 1/4-turn fasteners (Figure 1, Item 5) and open refrigeration service access door (Figure 1, Item 6). 2. Position RUN/STOP switch (Figure 1, Item 7) outboard to the RUN position. 3. Release two latches (Figure 1, Item 8) and open door (Figure 1, Item 9) on RU enclosure (Figure 1, Item 10). 4. On RU control panel position FUEL LEVEL switch (Figure 1, Item 11) to ON. 5. Verify fuel level indicator (Figure 1, Item 12) reads adequate fuel level. 6. On RU control panel position FUEL LEVEL switch (Figure 1, Item 11) to OFF. 7. Position RUN/STOP switch (Figure 1, Item 7) inboard to the STOP position. 	<p>Any class II leak is detected.</p> <p>Fuel supply is < 12 gallons (1/4 tank or less).</p>

Table 1. Operator Transport Mode PMCS-Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF
			8. Close refrigeration service access door (Figure 1, Item 6) and secure with 1/4 turn fasteners (Figure 1, Item 5). Ensure cap (Figure 1, Item 13) is screwed on tight.	Cap is loose or missing.

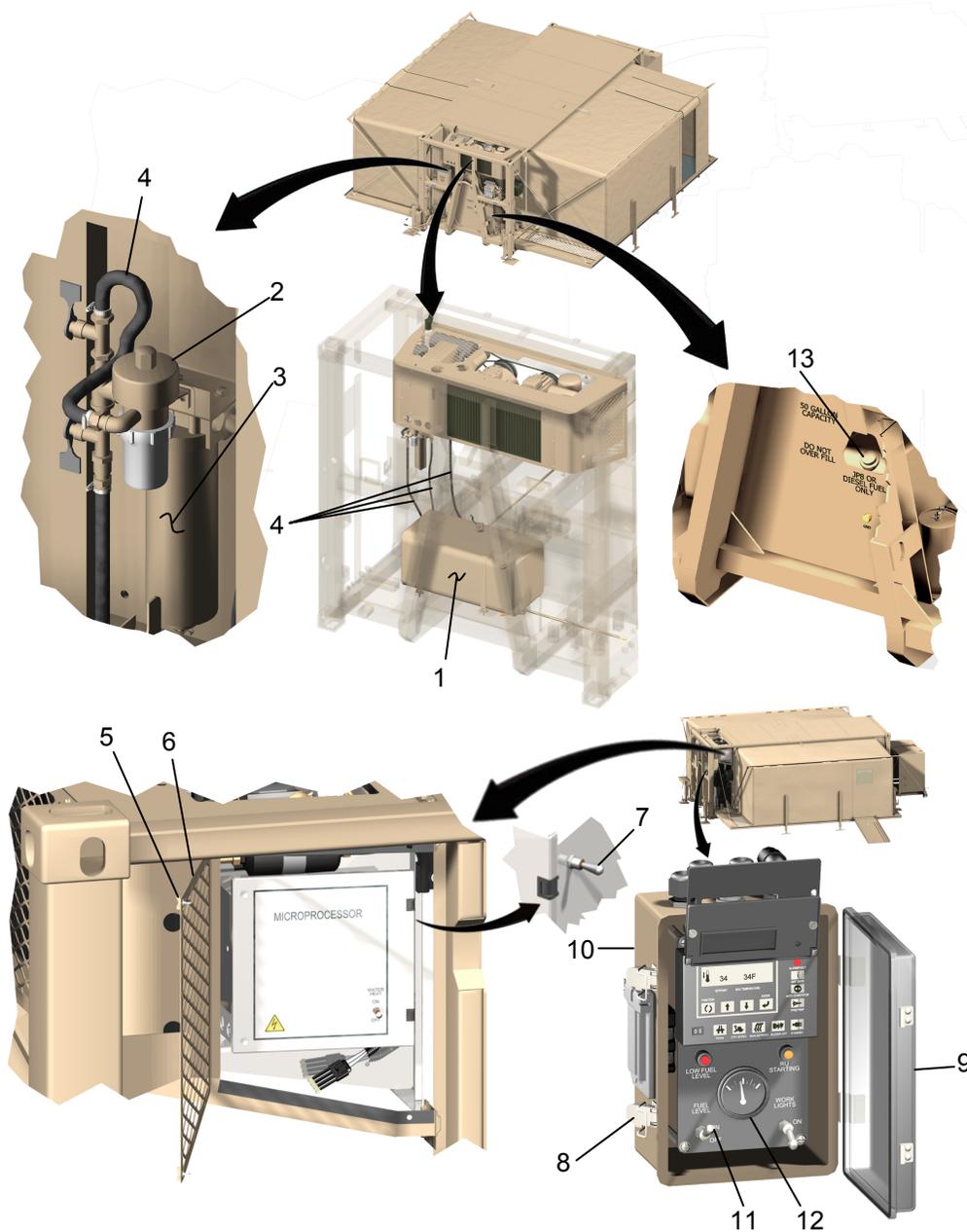


Figure 1. Transport Mode, Before PMCS Item 1.

Table 1. Operator Transport Mode PMCS-Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF
2	Before	RU	<p>Check for presence of water in engine fuel/water separator bowl (Figure 2, Item 1).</p> <p>Check engine fuel lines (Figure 2, Item 2) for evidence of leakage.</p> <p>Check coolant level in overflow tank (WP 0028).</p> <p>Check engine and radiator coolant hoses and connections (Figure 2, Item 3) for evidence of leakage.</p> <p>Check engine oil level. (WP 0029).</p> <p>Check engine (Figure 2, Item 4) for evidence of oil leakage.</p> <p>Ensure air cleaner intake (Figure 2, Item 5) is not blocked with debris.</p> <p>Ensure radiator/condenser fins (Figure 2, Item 6) are not bent over or blocked with debris.</p> <p>Ensure engine access door (Figure 2, Item 7) and control box access door (Figure 2, Item 8) are closed and secured.</p> <p>Ensure front grill (Figure 2, Item 9), side panels (Figure 2, Item 10 and 11), and cover (Figure 2, Items 12) are not blocked with debris.</p>	<p>Water is visible in filter bowl.</p> <p>Any class II leak is detected.</p> <p>Coolant level is not visible.</p> <p>Any class II leak is detected.</p> <p>Level is below bottom mark.</p> <p>Any class I leak is detected.</p> <p>Intake is blocked.</p> <p>Fins are bent or blocked.</p> <p>Doors are not closed and secured.</p> <p>Openings are blocked.</p>

Table 1. Operator Transport Mode PMCS-Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF
2			<p style="text-align: center;">NOTE</p> <p>There are two exhaust pipe extensions included with the MIRCS. The long extension is used for normal operations. The short extension is only for intermodal transport or transport operations in NATO countries.</p> <p>Unless already completed, install exhaust pipe extension (Figure 2, Item 13 on muffler (Figure 2, Item 14). Ensure flapper is positioned to open rearward.</p>	<p>Extension is not installed or is not properly positioned.</p>

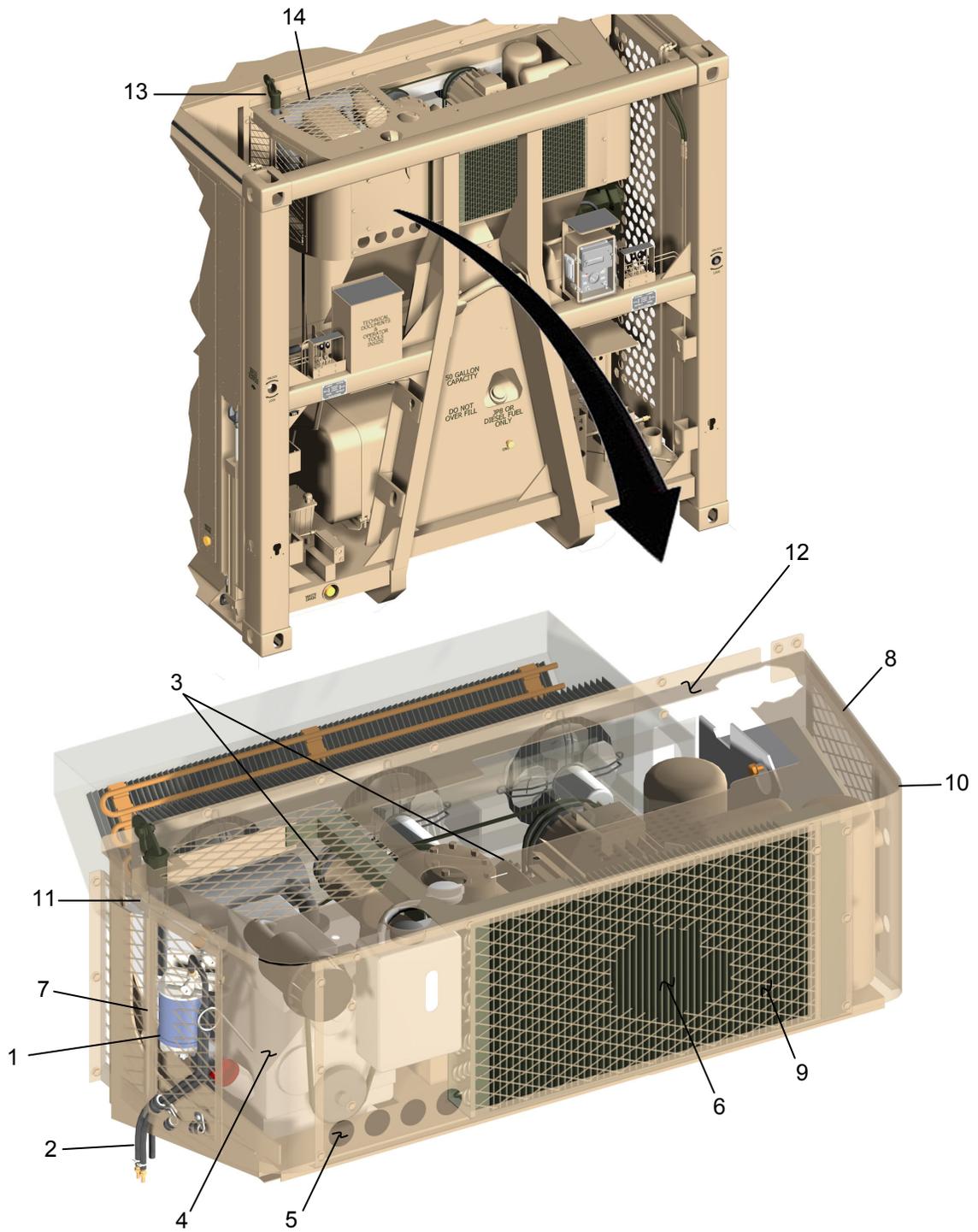


Figure 2. Transport Mode, Before PMCS Item 2.

Table 1. Operator Transport Mode PMCS-Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF
3	Before	RU Control Enclosure	Ensure door (Figure 3, Item 1) is closed and secured.	Door is not closed or secured.
4	Before	Battery	Ensure cover (Figure 3, Item 2) is secured to battery box (Figure 3, Item 3) and battery box is secured.	Cover is not installed or cover and box are not secured.
5	Before	2-1/2 Gal Condensate Waste Container	Ensure condensate waste container (Figure 3, Item 4) is empty. Ensure waste container is secure and drain hose (Figure 3, Item 5) is attached.	Container is > 1/4 full. Container is not secured or hose is not connected.
6	Before	Hydraulic System	Check manual pump (Figure 3, Item 6) , reservoir (Figure 3, Item 7), valves (Figure 3, Item 8) , and hydraulic lines (Figure 3, Item 9) for evidence of leakage. Check cylinders (Figure 3, Item 10) and hydraulic hoses (Figure 3, Item 11) for evidence of leakage.	Any class II leak is detected. Any class II leak is detected.
7	Before	Work Platforms	Ensure platforms (Figure 3, Items 12 and 13) are fully stowed and catches (Figure 3, Item 14) are engaged. Ensure two side locks (Figure 3, Item 15) are fully engaged in each platform.	Platforms are not completely stowed or catches are not engaged. Side locks are not fully engaged.
8	Before	Ramps	Ensure ramp sections (Figure 3, Item 16) are secured to ISO frame (Figure 3, Item 17) and support (Figure 3, Item 18) and QC pins (Figure 3, Item 19) are installed.	Ramps are not properly secured or pins are not installed.
9	Before	Generator Supports	Ensure generator supports (Figure 3, Item 20) are secured to ISO frame (Figure 3, Item 21) and QC pins (Figure 3, Item 22) are installed.	Supports are not properly secured or pins are not installed.

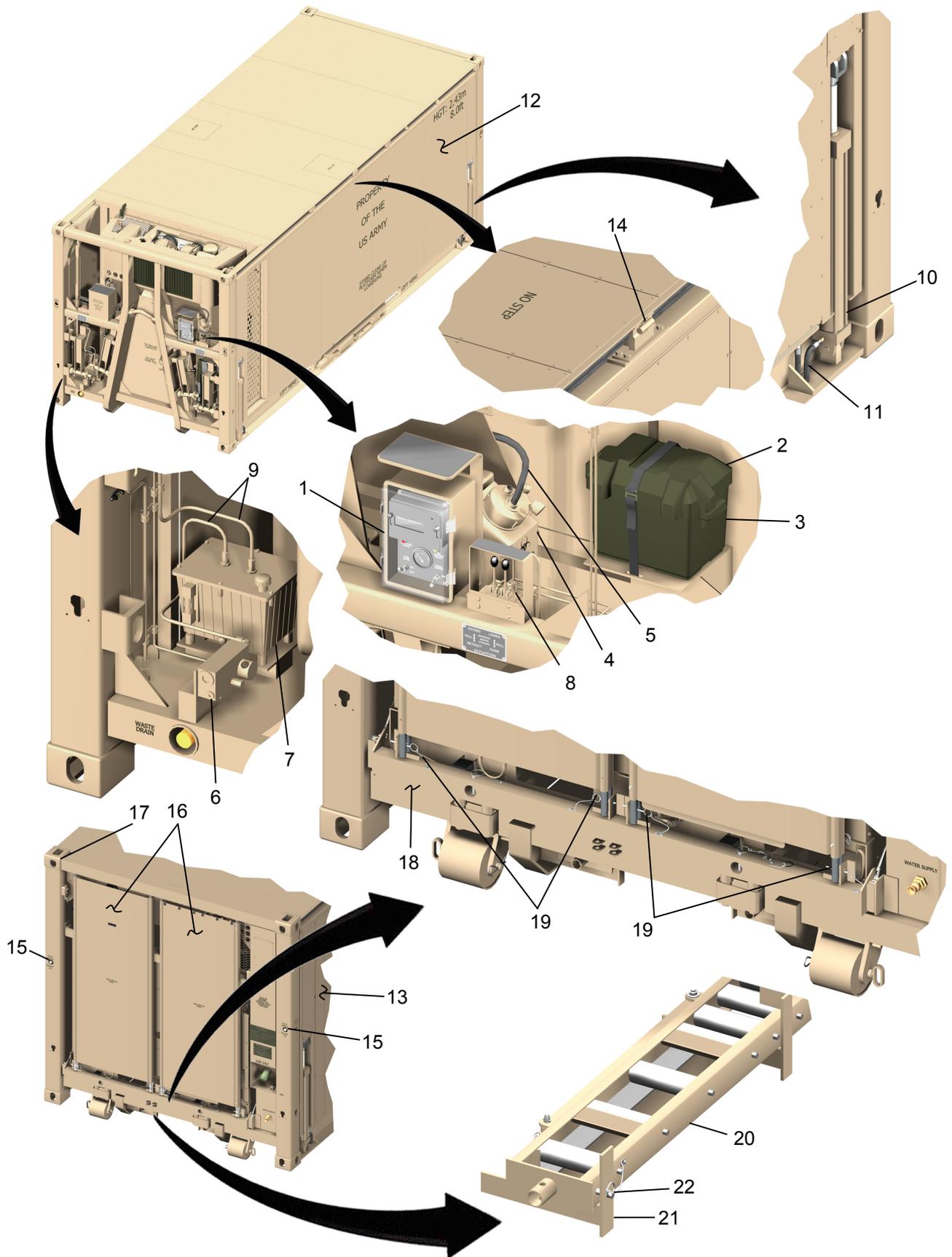


Figure 3. Transport Mode, Before PMCS Items 3 through 9.

Table 1. Operator Transport Mode PMCS-Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF
10	During (At Start-up)	RU	Audibly check operation of engine (Figure 4, Item 1) for abnormal sounds or vibrations. Check for evidence of coolant, fuel, or oil leakage. Ensure temperature reading on control panel (Figure 4, Item 2) is changing and is moving towards selected temperature.	Abnormal sounds or vibrations are heard. Any class II leak is detected. Air temperature in RSU is not moving towards selected temperature.
11	After	RU	Check for evidence of coolant, fuel, or oil leakage.	Any class II leak is detected.
12	Daily	Condensate Waste Container	Check level in condensate waste container (Figure 4, Item 3) empty as necessary.	Container is > 3/4 full.

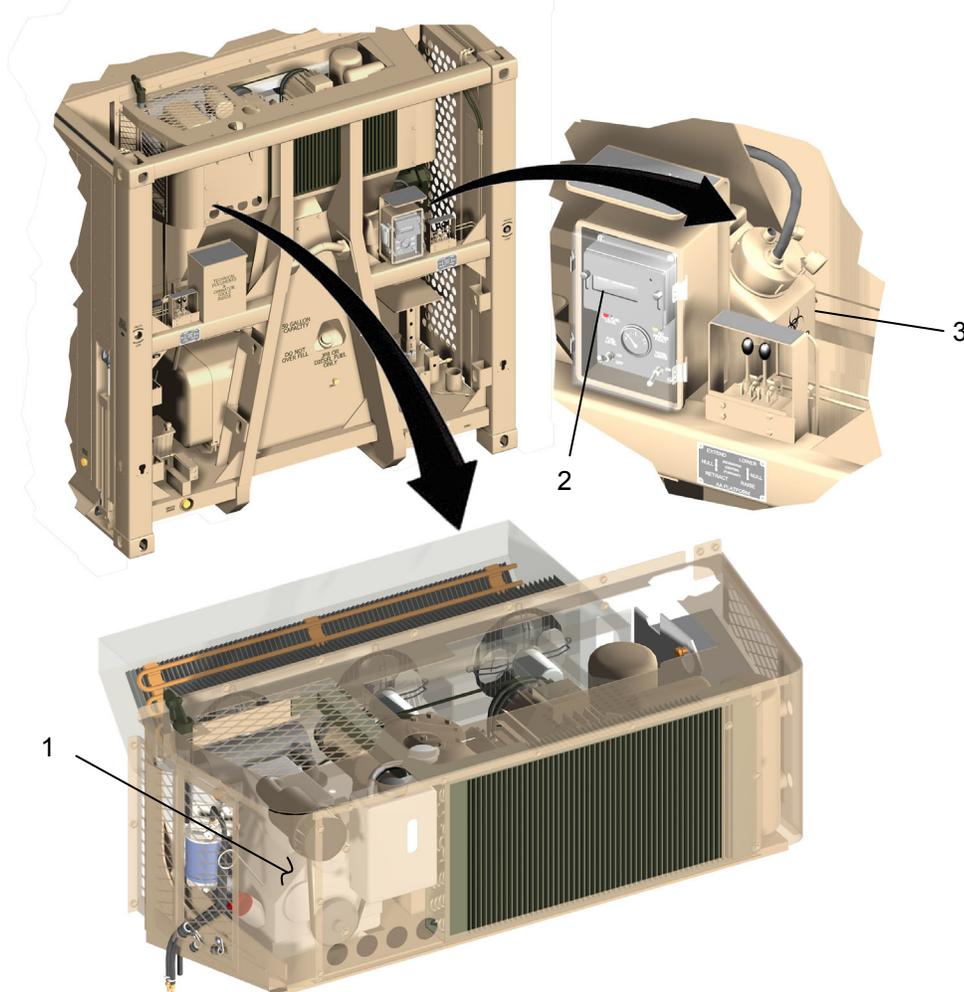


Figure 4. Transport Mode, During, After and Daily PMCS.

Table 2. Ground Mode Before PMCS.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF
1	Before	Fuel System	Refer to Before Transport, Item 1.	Refer to Before Transport, Item 1.
2	Before	RU	Refer to Before Transport, Item 2.	Refer to Before Transport, Item 2.
3	Before	Battery	Refer to Before Transport, Item 4.	Refer to Before Transport, Item 4.
4	Before	2-1/2 Gal Condensate Waste Container	Refer to Before Transport, Item 5.	Refer to Before Transport, Item 5.
5	Before	Waste Plumbing	Ensure waste containers (Figure 5, Item 1) are empty and secure. Check drain hoses (Figure 5, Item 2) for proper connections at waste ports (Figure 5, Item 3) and waste containers. Ensure manual valves (Figure 5, Item 4) are open, vent caps (Figure 5, Item 5) are removed and full indicators (Figure 5, Item 6) are installed.	Containers have > 1 gallon of waste. Hoses are not connected. Manual valves are closed, caps are not removed and full indicators are not installed.
6	Before	On-Board Generator or Electrical Supply	Ensure generator (Figure 5, Item 7) is fully deployed and is secured to support (Figure 5, Item 8) with strap (Figure 5, Item 9) and QC pin (Figure 5, Item 10). Ensure fuel hose (Figure 5, Item 11) is not damaged and is connected at supply port (Figure 5, Item 12) and generator fuel tank (Figure 5, Item 13). Check fuel hose (Figure 5, Item 11) and connections for evidence of leakage. Check pigtail (Figure 5, Item 14) or power cable (Figure 5, Item 15) for damage and proper connection at source and main connector (Figure 5, Item 16).	Generator is not pulled out all the way or is not strapped and pinned to support. Hose is damaged or not connected. Any class II leak is detected. Pigtail or power cable is damaged or not connected.

Table 2. Ground Mode Before PMCS-Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF
		On-Board Generator or Electrical Supply	<p>Check ground wire (Figure 5, Item 17) for proper connection at ISO frame (Figure 5, Item 18) and ground rod (Figure 5, Item 19).</p> <p>Ensure external electrical power is available. If power is to be supplied by on-board generator ensure all PMCS has been done per TM 9-6115-643-10.</p>	<p>Ground wire is not properly connected.</p> <p>External power or generator is not available.</p>

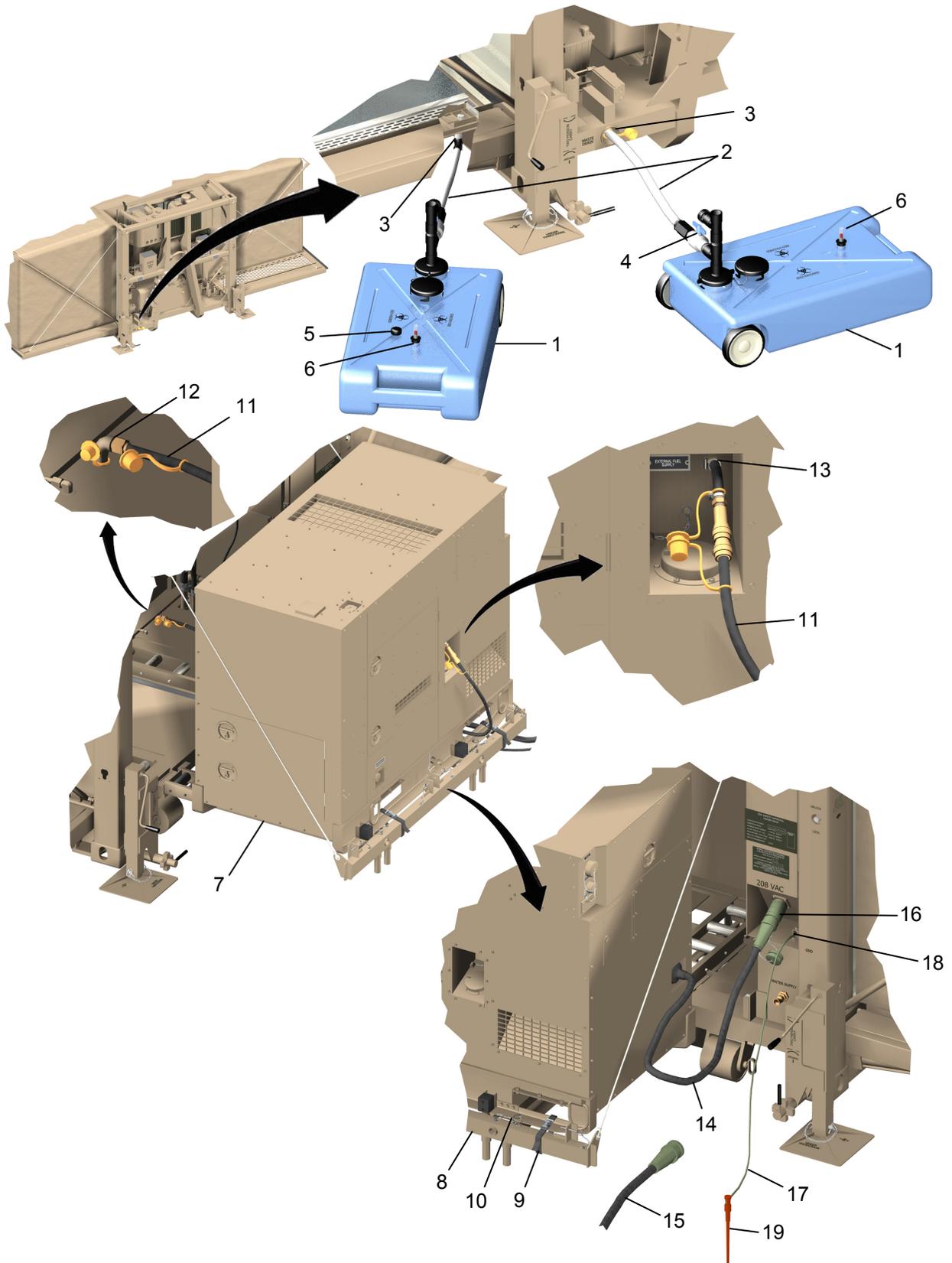


Figure 5. Ground Mode, Before PMCS Items 1 through 6.

Table 2. Ground Mode Before PMCS-Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF
7	Before	Water Supply	<p>Ensure manual drain valves (Figure 6, Item 1) are closed.</p> <p>Ensure supply hoses (Figure 6, Item 2) are not damaged and are connected at supply port (Figure 6, Item 3) external water pump (Figure 6, Item 4) and water source (Figure 6, Item 5).</p> <p>Ensure external water pump (Figure 6, Item 4) is not damaged, valve (Figure 6, Item 6) is closed and cap (Figure 6, Item 7) is installed.</p> <p>Ensure electrical cable (Figure 6, Item 8) is not damaged and is properly connected at external water pump (Figure 6, Item 4) and ECU enclosure (Figure 6, Item 9).</p> <p>Check for adequate supply of water in external container.</p>	<p>Manual valves are open.</p> <p>Supply hoses are damaged or not connected.</p> <p>Pump is damaged, valve is open, or cap is not installed.</p> <p>Cable is damaged or not properly connected.</p> <p>Water supply is < 50 gallons.</p>
8	Before	ECU	<p>Ensure condenser air inlet (Figure 6, Item 10) and outlet (Figure 6, Item 11) screens are not blocked with debris.</p>	<p>Screens are blocked.</p>
9	Before	ECU Exhaust Duct	<p>Ensure exhaust duct screen (Figure 6, Item 12) is not blocked with debris.</p>	<p>Screen is blocked.</p>
10	Before	ECU Inlet Filter	<p>Ensure inlet filter (Figure 6, Item 13) is not blocked with debris and is strapped to platform (Figure 6, Item 14).</p>	<p>Filter is blocked or is not strapped.</p>

Table 2. Ground Mode Before PMCS-Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF
11	Before	ECU Outside Air Duct	<p>Ensure inlet air duct (Figure 6, Item 15) is properly connected and clamped to inlet filter and ECU inlet port (Figure 6, Item 16).</p> <p>Ensure inlet duct is properly secured with straps (Figure 6, Item 17) to ISO frame (Figure 6, Item 18).</p>	<p>Duct is not connected and clamped.</p> <p>Duct is not secured and strapped.</p>

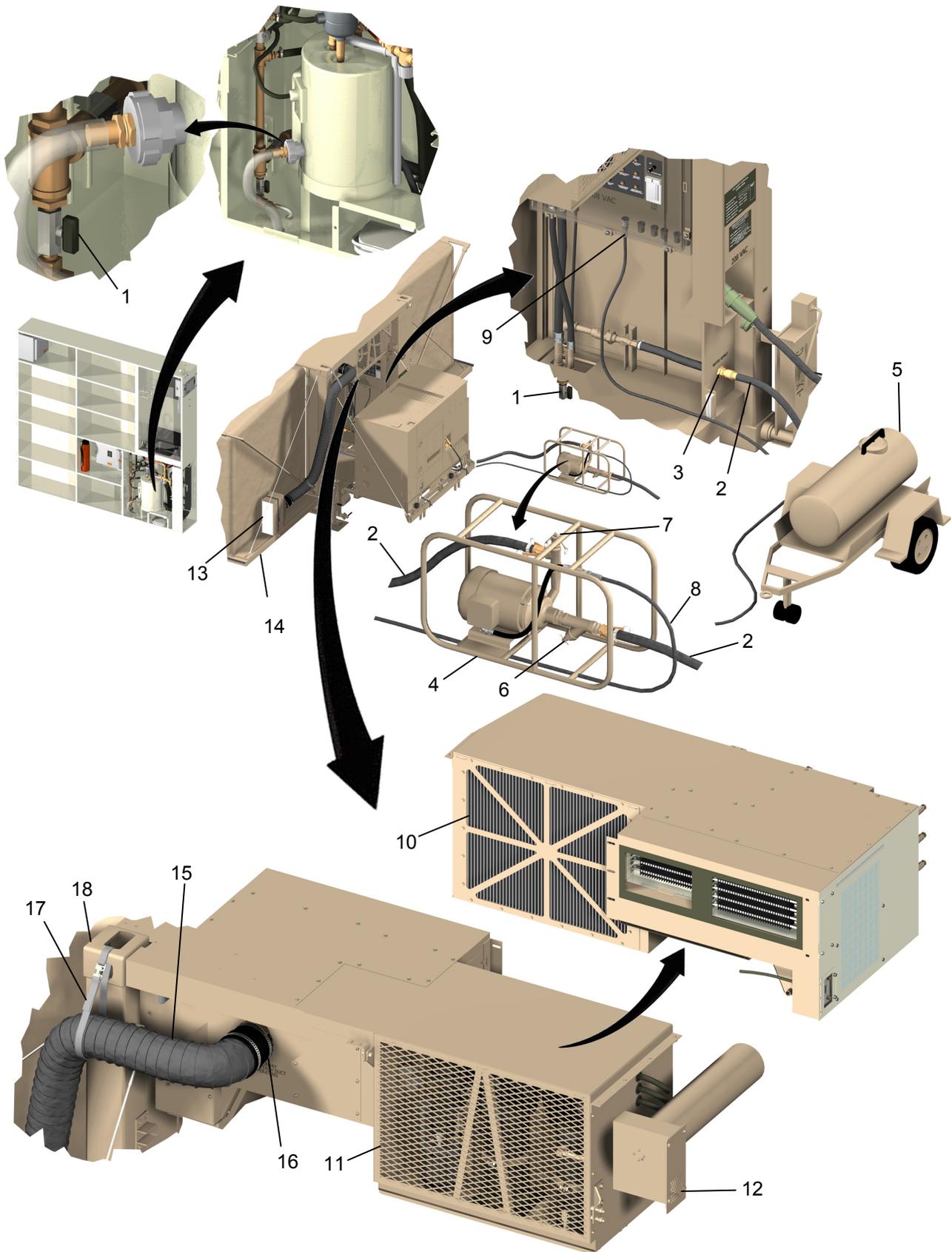


Figure 6. Ground Mode, Before PMCS Items 7 through 11.

Table 2. Ground Mode Before PMCS-Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF
12	Before	ISO Frame	Check bubble levels (Figure 7, Item 1) to ensure ISO frame (Figure 7, Item 2) is level.	ISO frame is not level.
13	Before	Leveling Jacks	Ensure leveling jacks (Figure 7, Item 3) are engaged with corner fittings (Figure 7, Item 4) and key holes (Figure 7, Item 5).	Jacks are not straight and engaged with ISO frame.
14	Before	PA Platform	Ensure supports (Figure 7, Item 6) are secured to platform (Figure 7, Item 7) and are or close to contacting the ground.	Supports are loose and are not close to or touching ground.
15	Before	AA Platform	Ensure supports (Figure 7, Item 8) are secured to platform (Figure 7, Item 9) and are or close to contacting the ground.	Supports are loose and are not close to or touching ground.
16	Before	Ramp	Ensure top ramp section (Figure 7, Item 10) is secured to platform (Figure 7, Item 11) and threshold (Figure 7, Item 12) is in place.	Ramp is not secured or threshold is not in place.
			Ensure mortises (Figure 7, Item 13) and tenons (Figure 7, Item 14) on all ramp sections used are fully seated into each other and QC pins (Figure 7, Item 15) are installed.	Ramp sections are not properly connected to each other.
17	Before	Temporary Remains Holding Shelter	Ensure stakes (Figure 7, Item 16) are fully inserted into ground.	Stakes are sticking up.
			Ensure guy ropes (Figure 7, Item 17) are tight.	Guy ropes are loose.

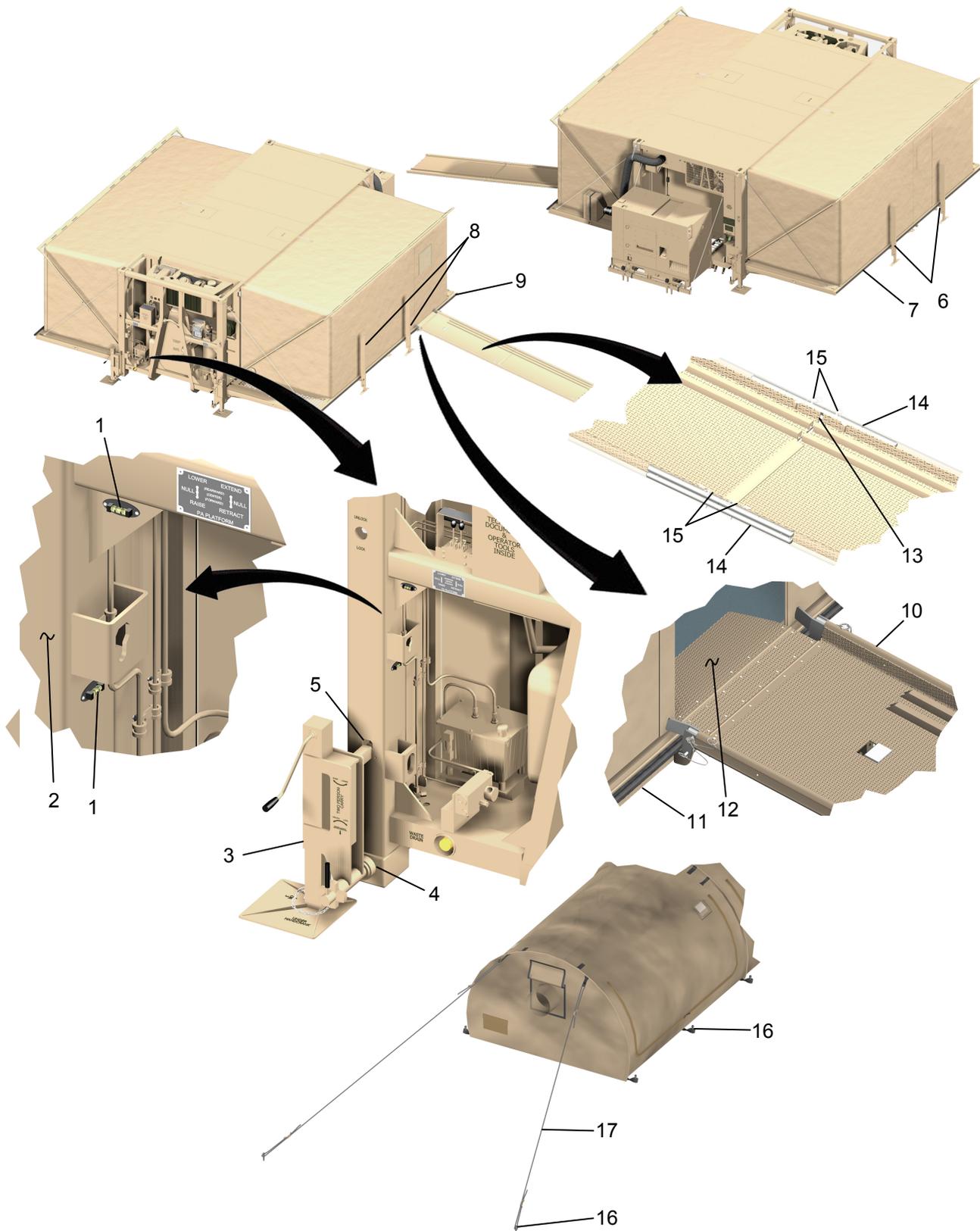


Figure 7. Ground Mode, Before PMCS Items 12 through 17.

Table 3. Ground Mode During PMCS.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF
1	During (At Start-up or Shift Change)	RU	<p>Audibly check operation of engine (Figure 8, Item 1) or standby motor (Figure 8, Item 2) for abnormal sounds or vibrations.</p> <p>Check for evidence of coolant, fuel, or oil leakage.</p> <p>Ensure temperature reading on RU cover panel (Figure 8, Item 3) is changing and is moving towards or is at selected temperature.</p>	<p>Abnormal sounds or vibrations are heard.</p> <p>Any class II leak is detected.</p> <p>Air temperature in RSU is not moving towards or at selected temperature.</p>
2	During (At Start-up or Shift Change)	ECU	<p>Audibly check operation of ECU (Figure 8, Item 4) for abnormal sounds or vibrations.</p> <p>Ensure temperature reading on thermostat (Figure 8, Item 5) is moving towards or is at selected temperatures.</p>	<p>Abnormal sounds or vibrations are heard.</p> <p>AA and PA air temperatures are not moving towards or at selected temperature.</p>
3	During (At Start-up or Shift Change)	Fuel Hose	<p>Check for evidence of fuel leakage on generator fuel supply hose (Figure 8, Item 6).</p>	<p>Any class II leak is detected.</p>

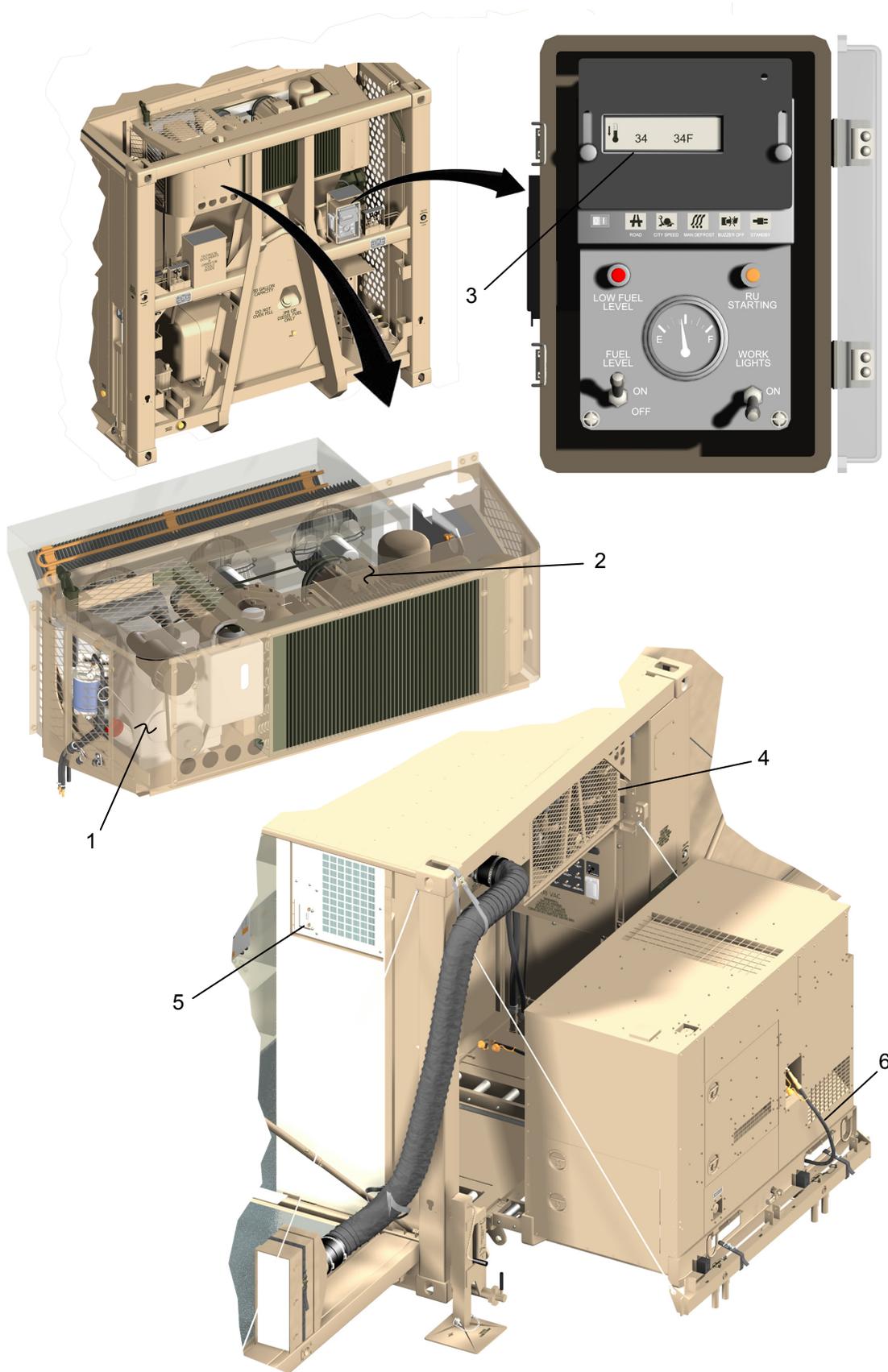


Figure 8. Ground Mode, During PMCS Items 1 through 3.

Table 3. Ground Mode During PMCS-Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF
4	During	AA Soft Wall	<p>Ensure zippers (Figure 9, Item 1) on end walls (Figure 9, Item 2) are closed and inner flap (Figure 9, Item 3) completely covers each zipper.</p> <p>Ensure window (Figure 9, Item 4) is closed and outer flap (Figure 9, Item 5) completely covers window opening.</p> <p>Ensure partition wall (Figure 9, Item 6) is sandwiched between layers of soft wall (Figure 9, Item 7) and secured to inner wall (Figure 9, Item 8).</p> <p>Ensure ventilation screens (Figure 9, Item 9) are clear and not blocked with debris.</p> <p>Check partition curtain door (Figure 9, Item 10) for proper travel.</p> <p>Ensure support rods (Figure 9, Item 11) are properly seated in receptacles (Figure 9, Item 12) and are secured with straps (Figure 9, Item 13).</p>	<p>End walls are not closed and zippers are not covered.</p> <p>Window is open or not covered.</p> <p>Partition is not secured to inner wall or soft wall.</p> <p>Screens are blocked.</p> <p>Curtain cannot be open or closed.</p> <p>Rods are not seated or secured.</p>
5	During	Supply Area Curtain Door	<p>Ensure curtain track (Figure 9, Item 14) is secured to frame (Figure 9, Item 15).</p> <p>Check curtain door (Figure 9, Item 16) for proper travel in both directions.</p>	<p>Track is not pinned to frame.</p> <p>Curtain cannot be slid open or closed.</p>
6	During	Administrative Area	<p>Ensure ventilation grilles (Figure 9, Item 17) are not blocked with debris.</p> <p>Ensure light cables (Figure 9, Item 18) and power cords are routed in manner that will not obstruct movement or create a trip hazard.</p>	<p>Grilles are blocked.</p> <p>Cables or cords obstruct free movement.</p>

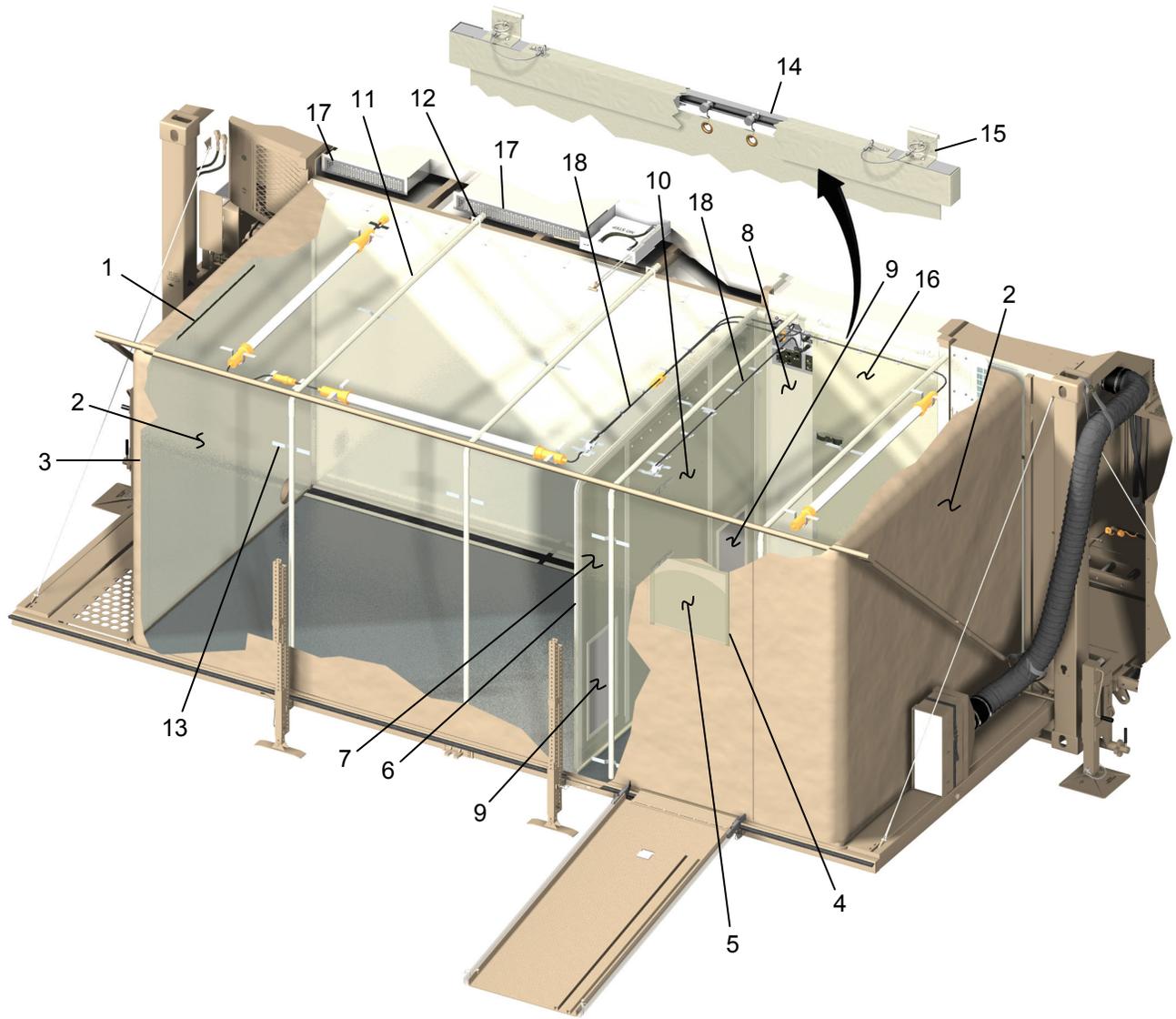


Figure 9. Ground Mode, During PMCS Items 4 through 6.

Table 3. Ground Mode During PMCS-Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF
7	During	Water Plumbing	<p>Ensure manual valve (Figure 10, Item 1) on water piping (Figure 10, Item 2) is closed.</p> <p>Ensure drain valve (Figure 10, Item 3) on water heater (Figure 10, Item 4) is closed (turned fully clockwise).</p> <p>Ensure hot and cold levers (Figure 10, Item 5) on sink faucet are closed.</p> <p>Ensure lever (Figure 10, Item 6) on utility faucet is closed.</p>	<p>Manual valve are open.</p> <p>Drain valve is open.</p> <p>Levers are open.</p> <p>Lever is open.</p>
8	During	Soap Dispenser	<p>Check for adequate supply of soap in dispenser (Figure 10, Item 7).</p>	<p>Soap dispenser is out of soap.</p>
9	During	MA Supplies	<p>Check for adequate stock of MA supplies per WP 0040.</p>	<p>Supplies are not available to support at least 16 processing operations.</p>
10	During	Fire Extinguisher	<p>Inspect fire extinguisher (Figure 10, Item 8) for any obvious damage. Check indicator (Figure 10, Item 9) for correct charge level. Verify expiration date on tag (Figure 10, Item 10).</p>	<p>Damage is found, charge is low, or tag has expired.</p>

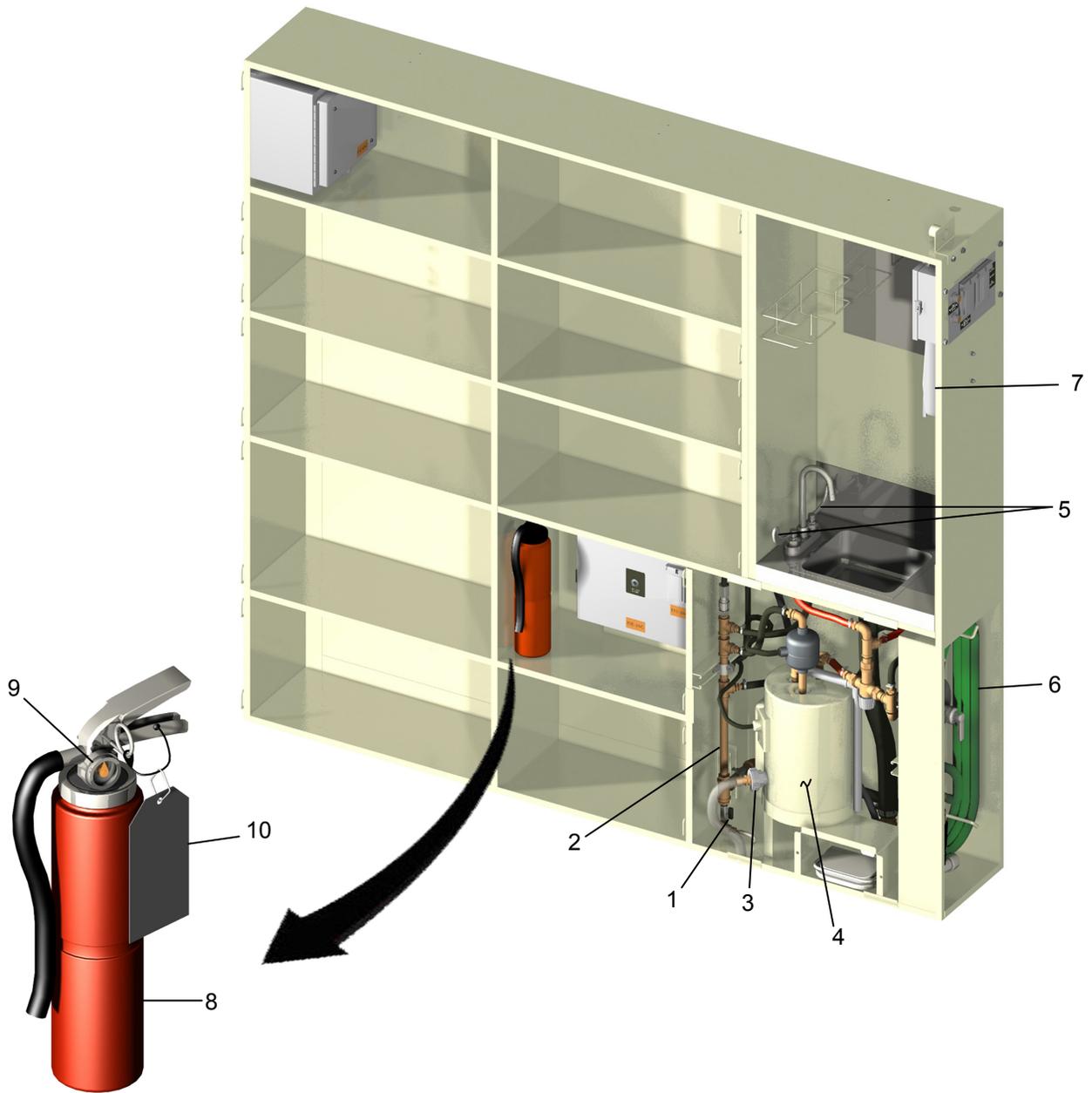


Figure 10. Ground Mode, During PMCS Items 7 through 10.

Table 3. Ground Mode During PMCS-Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF
11	During	Exhaust Grille	Ensure exhaust grille (Figure 11, Item 1) is not blocked with debris.	Grille is blocked.
12	During	PA Soft Wall	<p>Ensure zippers (Figure 11, Item 2) on end walls (Figure 11, Item 3) and emergency door (Figure 11, Item 4) are closed and inner flap (Figure 11, Item 5) completely covers each zipper.</p> <p>Ensure window (Figure 11, Item 6) is closed and outer flap (Figure 11, Item 7) completely covers window opening.</p> <p>Ensure support rods (Figure 11, Item 8) are properly seated in retainers (Figure 11, Item 9) and secured with straps (Figure 11, Item 10).</p>	<p>End walls or door are not closed and zippers are not covered.</p> <p>Window is open or not covered.</p> <p>Rods are not fully inserted into retainers or secured.</p>
13	During	Processing Area	<p>Ensure ventilation grilles (Figure 11, Item 11) are not blocked with debris.</p> <p>Ensure light cables and power cords (Figure 11, Item 12) are routed in manner that will not obstruct movement or create a trip hazard.</p> <p>Ensure utility hose (Figure 11, Item 13) is rolled-up and not creating a trip hazard.</p>	<p>Grilles are blocked.</p> <p>Cables or cords obstruct free movement.</p> <p>Hose are not rolled-up and stowed.</p>
14	During	Waste Drain	Ensure trough (Figure 11, Item 14) is clear to allow waste flow to drain port.	Trough or waste port are blocked with debris.
15	During	RSU Doors	Ensure doors (Figure 11, Item 15) are closed and latches (Figure 11, Item 16) are engaged.	Doors are not closed and latched.

Table 3. Ground Mode During PMCS-Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF
16	During	Mobile Processing Platforms (MPP)	<p>Check cylinders (Figure 11, Item 17) and hydraulic hoses (Figure 11, Item 18) for evidence of leakage.</p> <p>Check that MPP moves up and down.</p> <p>Check reservoir level (Figure 11, Item 19).</p> <p>Check wheel brakes (Figure 11, Item 20).</p>	<p>Any class II leak is detected.</p> <p>MPP does not move up and down.</p> <p>Reservoir level is low.</p> <p>Wheel brakes do not work.</p>

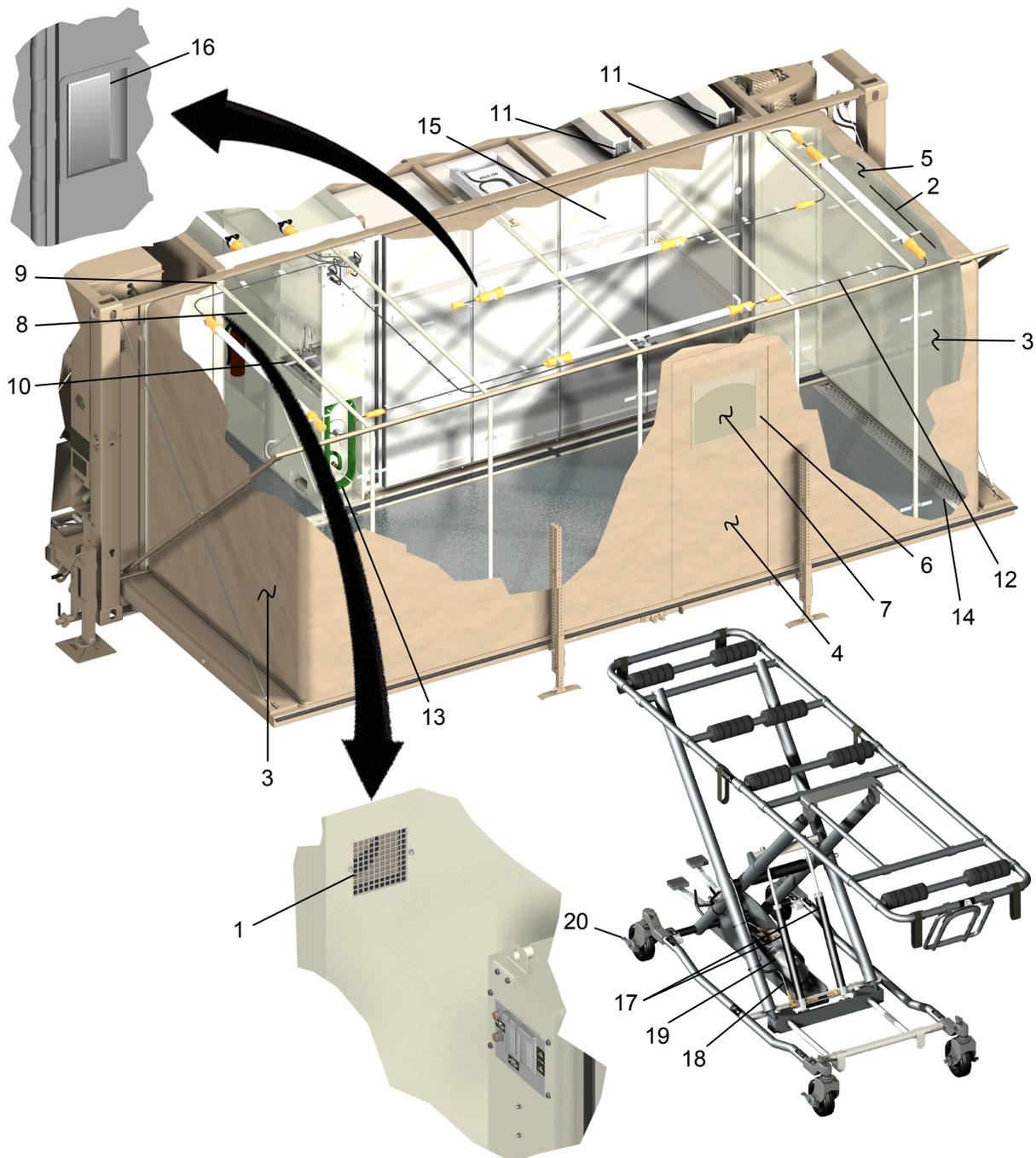


Figure 11. Ground Mode, During PMCS Items 11 through 16.

Table 3. Ground Mode During PMCS-Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF
17	During (Every four processing operations)	Waste Containers	Ensure waste containers (Figure 12, Item 1) are not full. Change out full for empty containers as required (WP 0010).	Containers have > 1 gallon of waste.
18	During (At Shift Change)	Fuel Supply	Check for adequate supply of fuel (JP-8) in fuel tank (Figure 12, Item 2). Refer to Before Transport, Item 1.	Fuel supply is < 10 gallons (1/4 tank or less).
19	During (At Shift Change)	Water Supply	Check for adequate supply of water in external container (Figure 12, Item 3).	Water supply is < 50 gallons.
20	During (At Shift Change)	Administrative and Vestibule Area	Police work space. Check that lights work (Figure 12, Item 4).	Area has trash or is dirty. Lights don't work.
21	During (At Shift Change)	Processing Area	Sanitize work area (WP 0026). Check that lights work (Figure 12, Item 5).	Area is not sanitized. Lights don't work.
22	During (At Shift Change)	Supply Area Soap Dispenser	Sanitize sink area (WP 0026). Check for adequate supply of soap in dispenser (Figure 12, Item 6).	Area is not sanitized. Soap dispenser is out of soap.
23	During (At Shift Change)	MA Supplies	Check for adequate stock of MA supplies per WP 0040.	Supplies are not available to support at least 16 processing operations.
24	After	MIRCS System	Perform DURING PMCS items 1-11.	

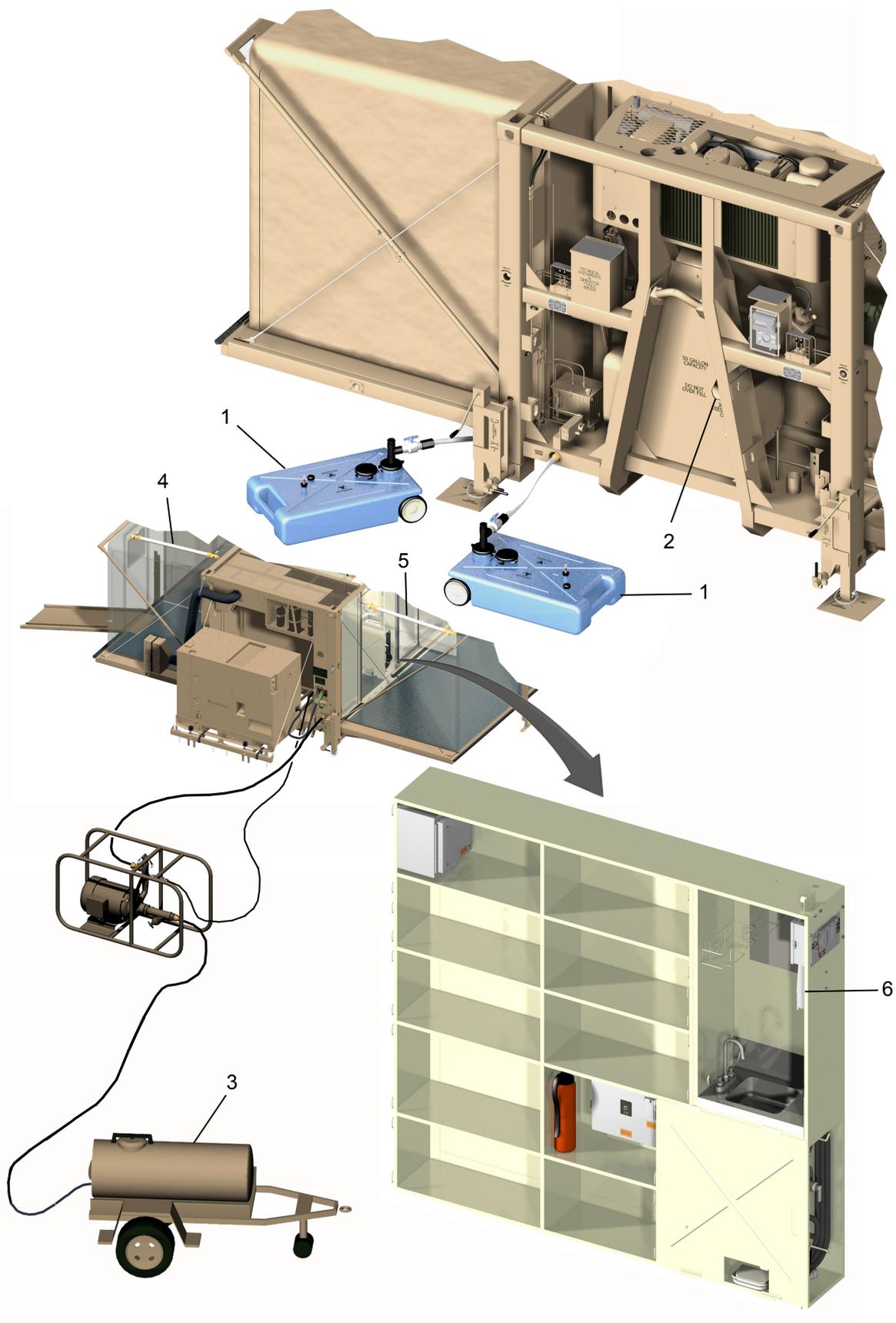


Figure 12. Ground Mode, During PMCS Items 17 through 24.

Table 4. Operator PMCS, Other Intervals.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF
1	Daily	Condensate Waste Container	Check level in condensate waste container (Figure 13, Item 1) empty as necessary.	Container is > 3/4 full.
2	Monthly or Post - Deployment	GFCI Receptacles	With system electrical power applied and all MA enclosure light switches ON perform the following: At each GFCI receptacle (Figure 13, Item 2) press the test button (Figure 13, Item 3). Plug in a known good light (Figure 13, Item 4). Light should be off. Press the reset button (Figure 13, Item 5). Ensure light comes on.	Receptacles do not trip or reset when tested.
3	Monthly or Post - Deployment	ECU Inlet Filter	Clean roughing filter (WP 0032).	Filter is not clean.
4	Quarterly or Post - Deployment	ECU Inlet Filter	Replace pleated filter (WP 0033).	Filter is not clean.

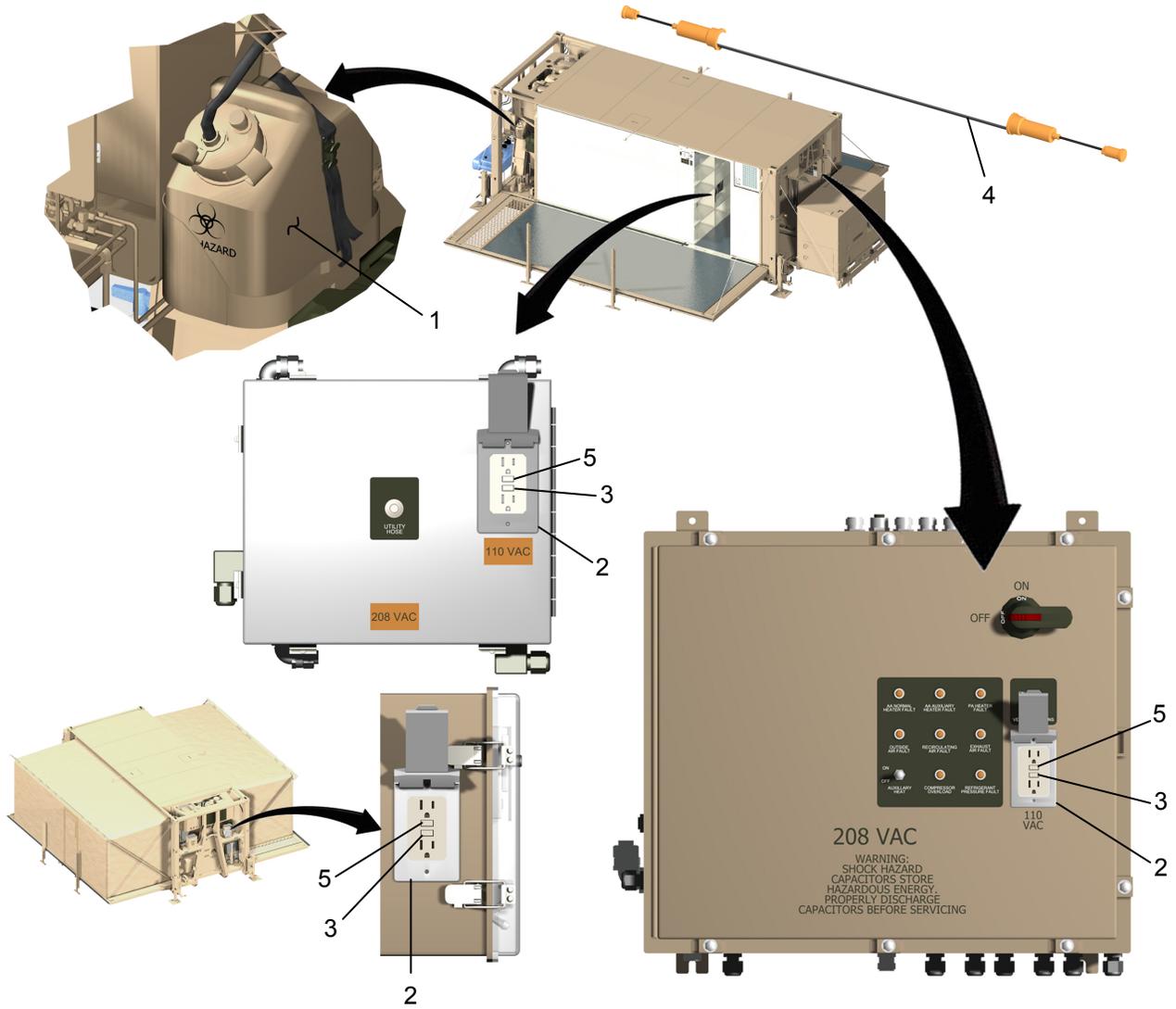


Figure 13. Daily/Monthly/Quarterly PMCS.

Table 4. Operator PMCS, Other Intervals-Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF
5	Semi-Annually or Post-Deployment	ECU Re-circulating Filter	Replace pleated filter (WP 0031).	Filter is not clean.
6	Annually or Post - Deployment	Grounding Lug	Lubricate grounding lug (WP 0024).	Not lubricated.
7	Annually or Post - Deployment	Work Platforms	<p>Inspect exterior wall (Figure 14, Item 1) for cracks and holes. Ensure panels (Figure 14, Item 2) are not loose.</p> <p>Inspect seals at top (Figure 14, Item 3) and bottom edges (Figure 14, Item 4) for cut or tears.</p>	<p>Wall surfaces are damaged or panels are loose.</p> <p>Seals are damaged.</p>
8	Annually or Post - Deployment	Platform Support Legs	<p>Inspect leg attaching points (Figure 14, Item 5) for cracked welds and damage.</p> <p>Check for damaged or missing QC pins (Figure 14, Item 6). Ensure lanyards (Figure 14, Item 7) are not damaged and are secured to platform.</p> <p>Inspect feet (Figure 14, Item 8) for damage. Ensure feet pivot but are not loose.</p>	<p>Attaching points have cracked welds, or damage.</p> <p>Pins or lanyards are missing or damaged.</p> <p>Feet are damaged, do not pivot, or are loose.</p>

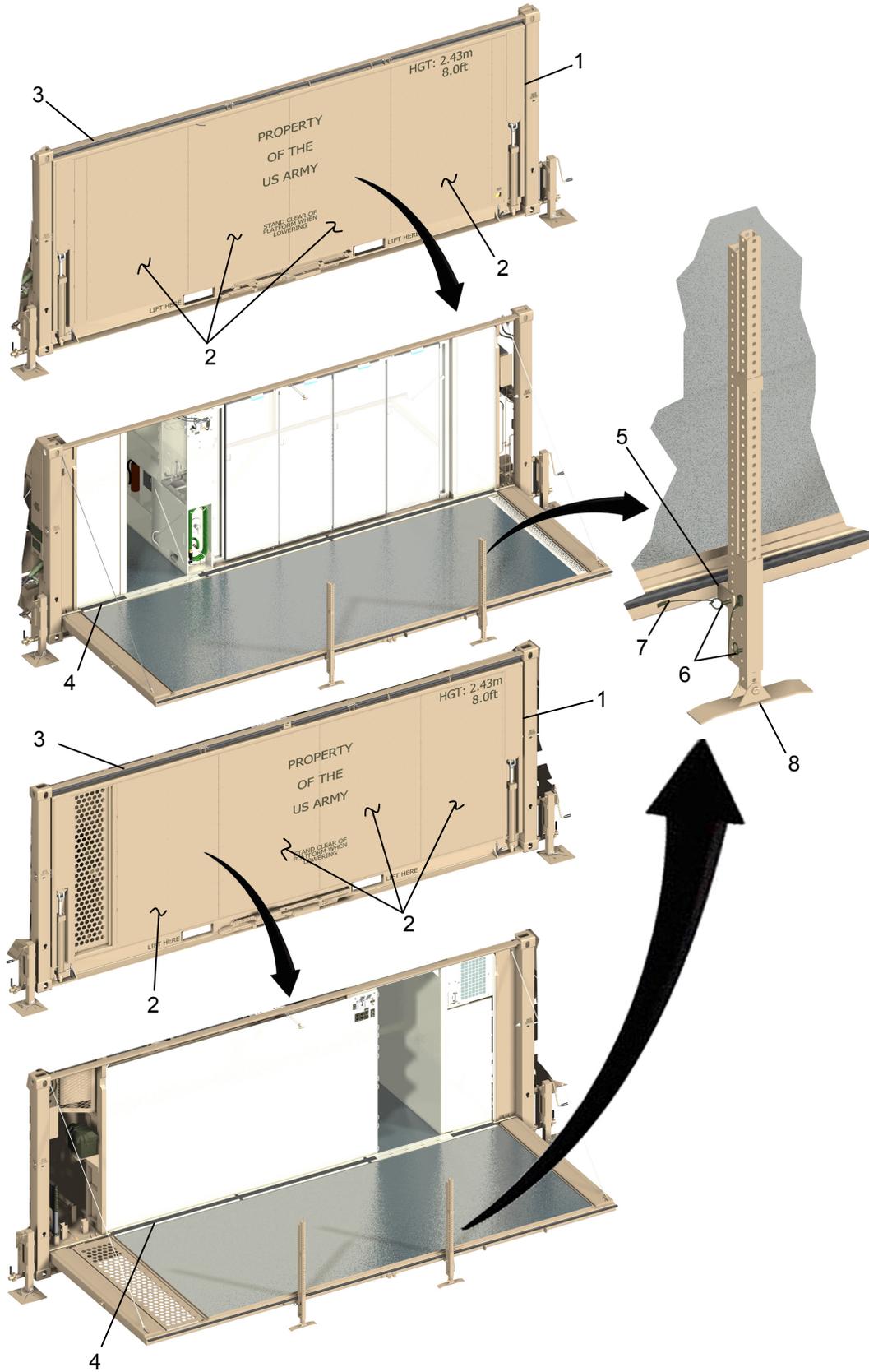


Figure 14. Semi Annual and Annual PMCS Items 5 through 8.

Table 4. Operator PMCS, Other Intervals-Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF
9	Annually or Post - Deployment	Platform Side Locks	Lubricate side locks (WP 0024). Ensure locks (Figure 15, Item 1) thread in and out without binding.	Not lubricated. Locks bind-up during movement.
10	Annually or Post - Deployment	Soft wall support structure	Ensure support tubes (Figure 15, Item 2) are not bent. Inspect for cracked welds at ends of tubes. Check security of tubes to each other and at ISO frame. Inspect cables (Figure 15, Item 3) for kinks or fraying. Ensure protective covering is not cut or split. Ensure cables connections (Figure 15, Item 4) are secure. Inspect support rods. Ensure rods (Figure 15, Items 5 and 6) are not bent or cracked. Ensure front rods (Figure 15, Item 5) slide into top rods (Figure 15, Item 6). Ensure feet (Figure 15, Item 7) are not loose or damaged.	Tubes are bent or loose, cracked welds are found. Cables are kinked or frayed, covering or connections and are not fastened securely. Support rods are bent or cracked. Rod sections do not fit into each other or feet are loose or damaged.
11	Annually or Post - Deployment	Soft Walls	Inspect fabric and webbing (Figure 15, Item 8) for holes and tears. Ensure loop strips (Figure 15, Item 9) and straps (Figure 15, Item 10) are not loose or torn. Inspect for torn or damaged zippers (Figure 15, Item 11) on windows (Figure 15, Item 12), doors (Figure 15, Item 13) and end walls (Figure 15, Item 14). Inspect windows (Figure 15, Item 12) for damaged screens (Figure 15, Item 15).	Fabric or webbing is torn or cut. Loop strips or straps are damaged. Zippers are torn or do not operate, screens are ripped.

Table 4. Operator PMCS, Other Intervals-Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF
		Soft Walls	Ensure retaining rods (Figure 15, Item 16) are secure and there are no signs of leakage between soft walls and structure.	Rods are loose or there is leakage under soft wall.

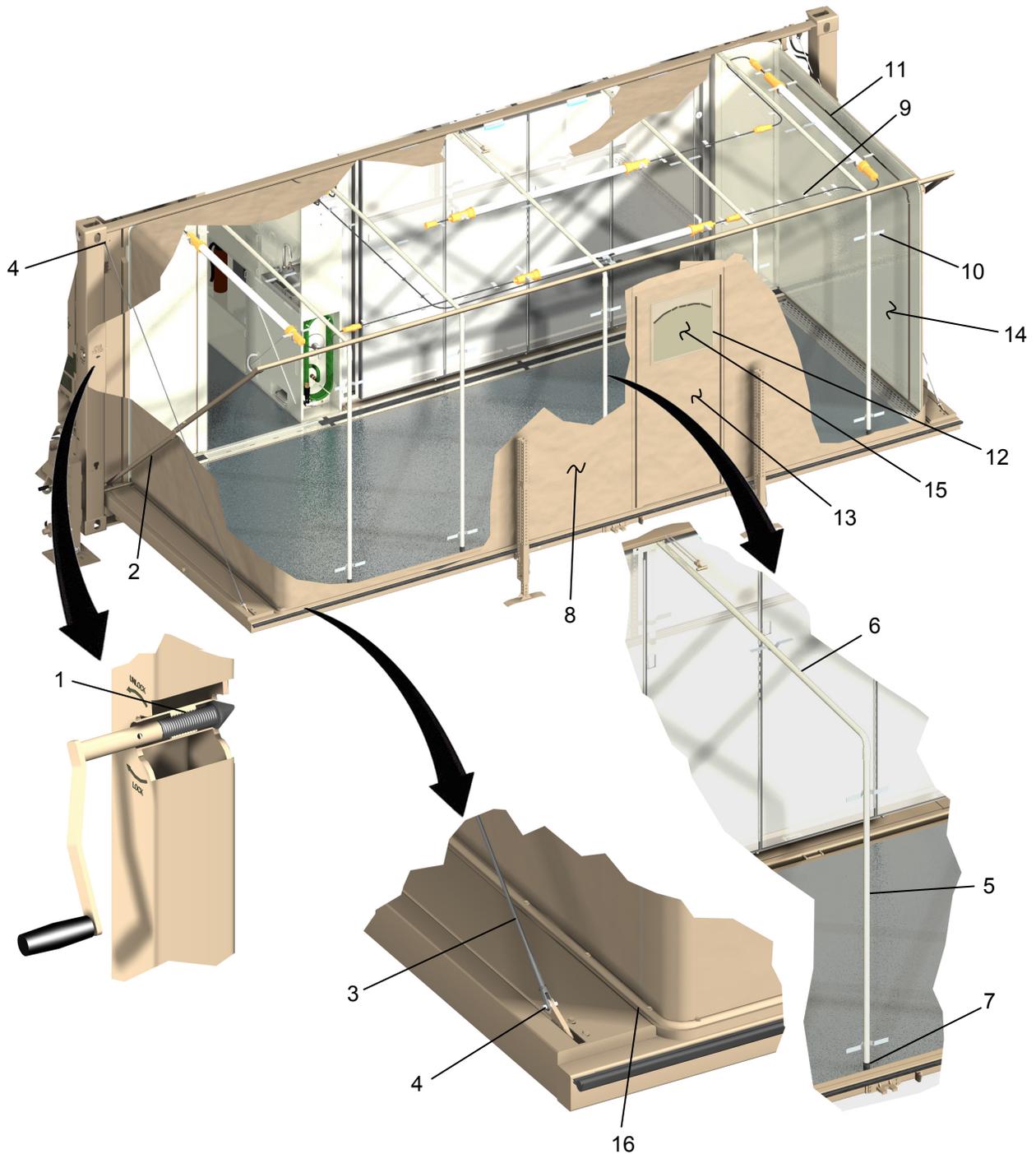


Figure 15. Annual PMCS Items 9 through 11.

Table 4. Operator PMCS, Other Intervals-Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF
12	Annually or Post - Deployment	Interior Work Areas	<p>Inspect floors (Figure 16, Item 1) for cuts and tears. Ensure floor drain grate (Figure 16, Item 2) is not bent and lays flat on trough (Figure 16, Item 3).</p> <p>Inspect wall panels (Figure 16, Item 4) for cracks or holes. Ensure panels are not loose.</p> <p>Inspect ventilation grilles (Figure 16, Item 5) for damage and security.</p> <p>Inspect electrical outlets (Figure 16, Item 6) for security. Ensure protective covers (Figure 16, Item 7) are not damaged and gaskets (Figure 16, Item 8) are intact.</p> <p>Inspect lights (Figure 16, Item 9) and (Figure 16, Item 10) for cracks in lenses and security of fixtures.</p> <p>Inspect shelving (Figure 16, Item 11) for bends or surface defects. Verify loops (Figure 16, Item 12) are not bent or loose.</p> <p>Inspect sink (Figure 16, Item 13) and back splash (Figure 16, Item 14) for dents and surface damage. Ensure sink is secured to wall. Check soap dispenser (Figure 16, Item 15), glove dispenser (Figure 16, Item 16) and mirror (Figure 16, Item 17) for damage and security.</p>	<p>Floors or drain are damaged.</p> <p>Panels are damaged or loose.</p> <p>Grilles are damaged or loose.</p> <p>Outlet, covers, or gaskets are loose or damaged.</p> <p>Lenses are cracked or fixtures are loose.</p> <p>Shelving is damaged. Loops are bent or loose.</p> <p>Sink, backsplash, soap dispenser, glove dispenser, or mirror are damaged or loose.</p>

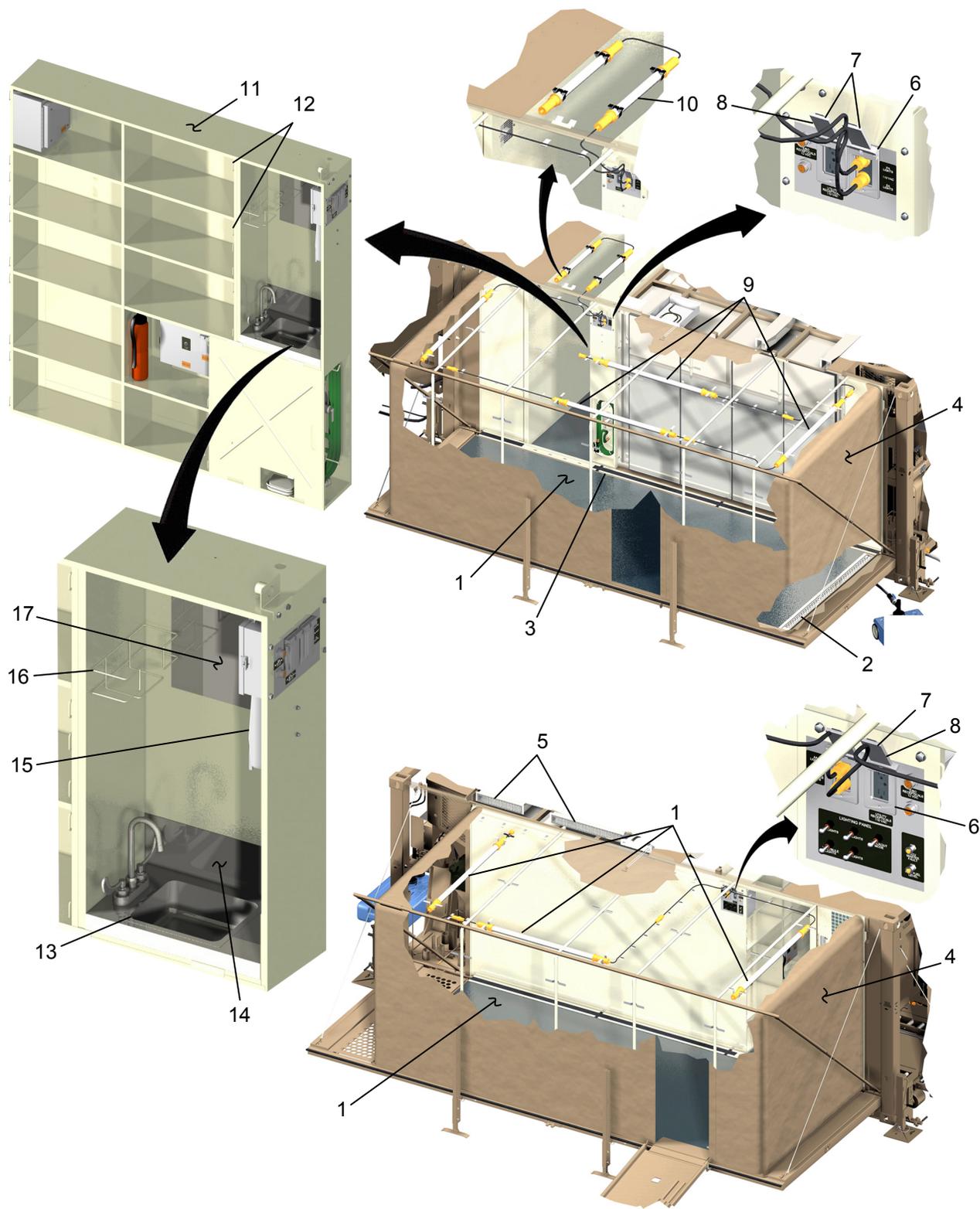


Figure 16. Annual PMCS Item 12.

Table 4. Operator PMCS, Other Intervals-Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF
13	Annually or Post - Deployment	RSU	<p style="text-align: center;">WARNING</p> <div style="text-align: center;">  </div> <p>Waste water generated during MA operations may contain chemical and/or bio-hazardous materials. When sanitizing equipment or maintaining or servicing water plumbing or associated components, personnel must wear impermeable gloves and goggles for protection. Failure to follow this warning may result in serious illness or death to personnel.</p> <p>Inspect doors (Figure 17, Item 1) for major dents and surface defects. Ensure doors open and close without binding.</p> <p>Inspect seals (Figure 17, Item 2) for cuts and tears. Ensure latches (Figure 17, Item 3) engage with frame (Figure 17, Item 4) and doors seal against frame.</p> <p>Inspect removable panel (Figure 17, Item 5) for dents and surface defects. Ensure seal (Figure 17, Item 6) is tight against wall and panel is secure.</p> <p>Inspect interior walls (Figure 17, Item 7) for dents or holes. Ensure wall and ceiling panels do not have gaps at joints (Figure 17, Item 8).</p> <p>Ensure ducting (Figure 17, Item 9), baffles (Figure 17, Item 10) and drain cover (Figure 17, Item 11) are not damaged or loose.</p>	<p>Doors are damaged enough to expose insulation or bind during movement.</p> <p>Seals are damaged, latches do not function, or door does not close tight to frame.</p> <p>Panel is loose or damaged or seal is damaged.</p> <p>Walls are damaged or have gaps at joints.</p> <p>Ducting, baffles, or drain cover are damaged.</p>

Table 4. Operator PMCS, Other Intervals-Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF
14	Annually or Post - Deployment	Track Roller Assemblies	<p>Inspect each assembly for bent rails (Figure 17, Item 12).</p> <p>Inspect each roller (Figure 17, Item 13) for damage. Ensure rollers spin freely and roller shafts are not bent.</p> <p>Check for damaged or missing QC pins (Figure 17, Item 14). Ensure lanyards are not damaged and are secured to rails.</p>	<p>Rails are bent.</p> <p>Rollers are damaged, do not spin, or shafts are bent.</p> <p>Pins or lanyards are missing or damaged.</p>
15	Annually or Post - Deployment	Remains Trays	<p>Inspect each tray (Figure 17, Item 15) for dents. Ensure each tray lays flat and is not bent.</p> <p>Ensure D-rings (Figure 17, Item 16) are not loose or missing.</p>	<p>Trays are dented or bent.</p> <p>D-rings are not secure or are missing.</p>
16	Annually or Post - Deployment	Remains and Tray Restraint Belts	<p>Inspect belts (Figure 17, Item 17) for cleanliness.</p> <p>Inspect belts for cuts or tears. Ensure hook and loop (Figure 17, Item 18) is intact.</p>	<p>Belts are dirty or contaminated.</p> <p>Belts are torn or hook and loop does not hold.</p>

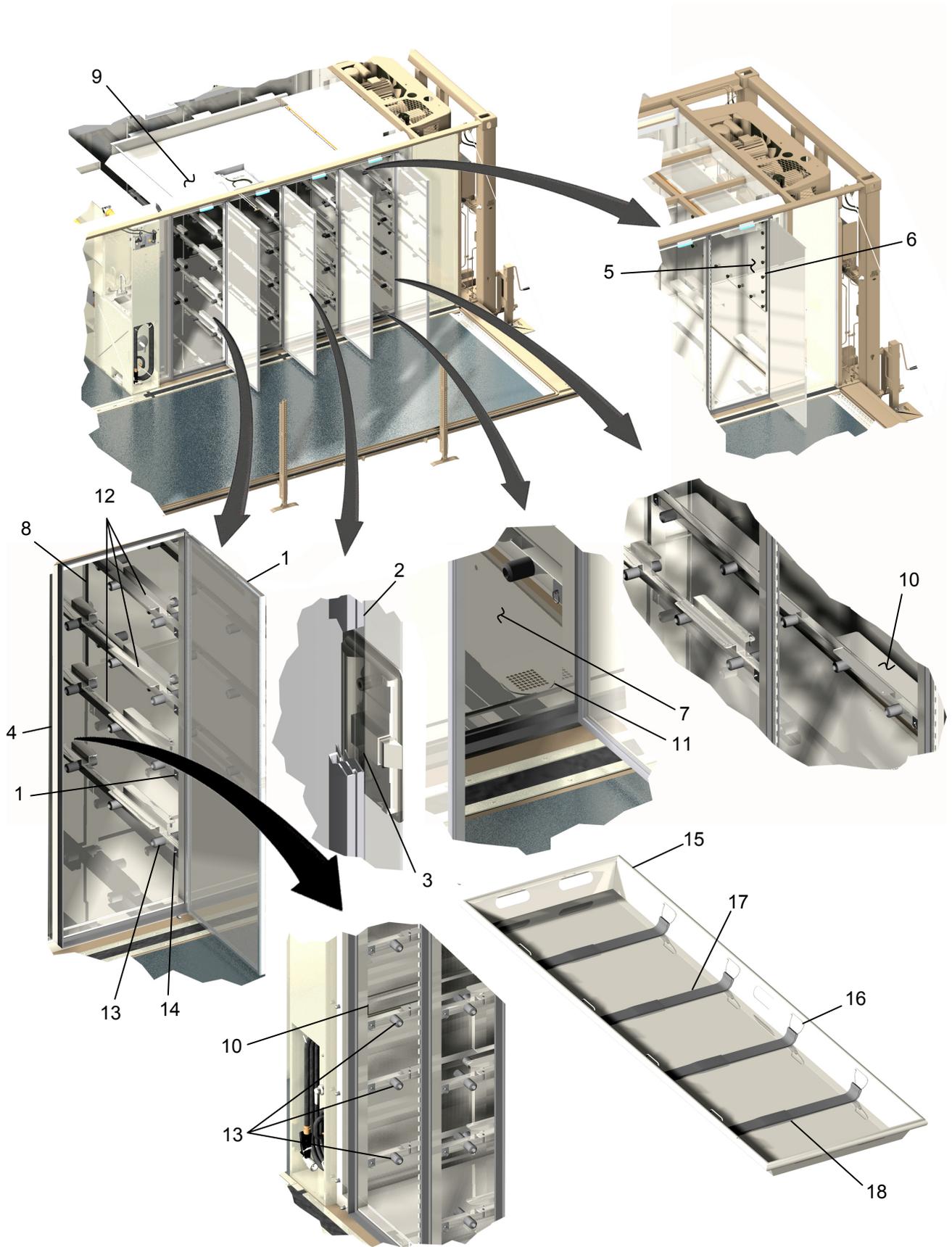


Figure 17. Annual PMCS Items 13 through 16.

Table 4. Operator PMCS, Other Intervals-Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF
17	Annually or Post - Deployment	Generator Supports	<p>Inspect generator supports (Figure 18, Item 1) and cable support bracket (Figure 18, Item 2) for cracked welds or other structural damage.</p> <p>Inspect rollers (Figure 18, Item 3) for damage. Ensure rollers spin freely.</p> <p>Inspect bumpers (Figure 18, Item 4) for cuts or splits and other defects. Ensure bumpers are securely fastened.</p> <p>Check for damaged or missing QC pins (Figure 18, Item 5). Ensure lanyards (Figure 18, Item 6) are not damaged and are secured to supports.</p> <p>Inspect cables (Figure 18, Item 7) for kinks or fraying. Ensure protective covering is not cut or split. Ensure cables connections (Figure 18, Item 8) are secure.</p>	<p>Weld cracks or other damage is found.</p> <p>Rollers are damaged or do not rotate.</p> <p>Bumpers are damaged or loose.</p> <p>Pins or lanyards are missing or damaged.</p> <p>Cables are kinked or frayed, covering or connections are not fastened securely.</p>

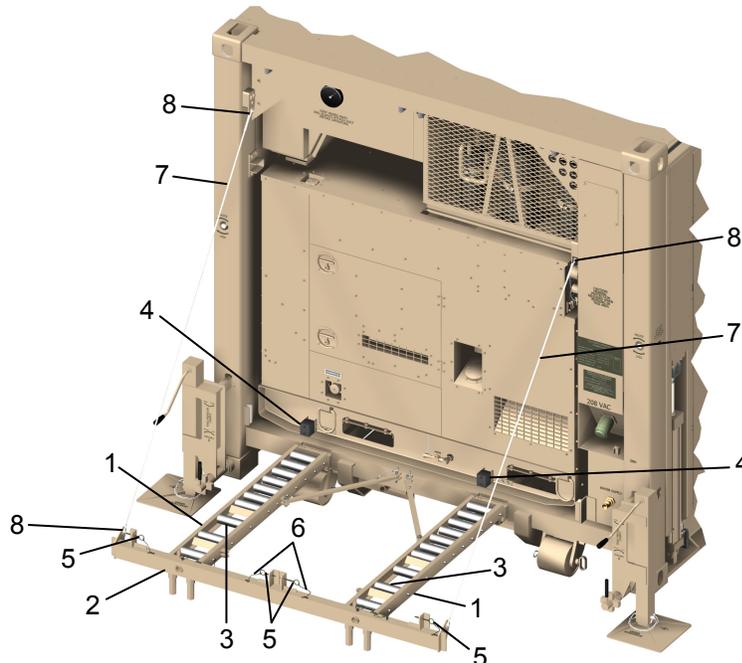


Figure 18. Annual PMCS Item 17.

Table 4. Operator PMCS, Other Intervals-Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF
18	Annually or Post - Deployment	Mobile Processing Platforms (MPP)	<p>Apply wheel-brake (Figure 19, Item 1) on each caster (Figure 19, Item 2) and ensure wheels (Figure 19, Item 3) do not rotate.</p> <p>Release wheel-brake and ensure each wheel rotates freely.</p> <p>Apply swivel lock (Figure 19, Item 4) on casters and ensure casters rotate to straight position then lock.</p> <p>Release swivel lock. Ensure all four casters rotate 360 degrees.</p> <p>Inspect each caster (Figure 19, Item 2) for cracked, cut, or missing treads.</p> <p>Pump foot pedal (Figure 19, Item 5) and raise MPP to full height.</p> <p>Check cylinders (Figure 19, Item 6) and hydraulic hoses (Figure 19, Item 7) for evidence of leakage.</p> <p>Push down on upper frame (Figure 19, Item 8) and ensure frame stays in extended position.</p> <p>Push down on lowering foot pedal (Figure 19, Item 9), allow MPP to drop about halfway then release foot pedal.</p> <p>Push down on upper frame (Figure 19, Item 8) and ensure frame stays in position.</p> <p>Push down on lowering foot pedal (Figure 19, Item 9), allow MPP to drop to collapsed height.</p>	<p>Wheels rotate with brake applied.</p> <p>Wheels do not spin with brakes released.</p> <p>Casters do not lock straight.</p> <p>Any caster does not swivel completely around.</p> <p>Treads are damaged or missing.</p> <p>MPP will not rise.</p> <p>Any class II leak is detected.</p> <p>Frame starts to drop.</p> <p>Frame does not move downward.</p> <p>MPP does not completely collapse.</p>

Table 4. Operator PMCS, Other Intervals-Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF
19	Annually or Post - Deployment	<p>Mobile Processing Platforms (MPP)</p> <p>MPP Extension</p>	<p>Inspect tray rollers (Figure 19, Item 10) for damage. Ensure rollers spin freely.</p> <p>Inspect frame (Figure 19, Item 11) for bent or damaged members and welds.</p> <p>Inspect pull handle (Figure 19, Item 12) for damage. Ensure handle can be secured to frame.</p> <p>Inspect frame (Figure 19, Item 13) for bent or damage members and welds.</p> <p>Inspect tray rollers (Figure 19, Item 14) for damage. Ensure rollers spin freely.</p> <p>Inspect support legs (Figure 19, Item 15) for damage and security. Ensure legs pivot open and closed.</p> <p>Check for damaged or missing QC pins (Figure 19, Item 16). Ensure lanyards (Figure 19, Item 17) are not damaged and are secured to supports.</p>	<p>Rollers are damaged or do not rotate.</p> <p>Weld cracks or other damage is found.</p> <p>Handle is damaged or cannot be attached.</p> <p>Weld cracks or other damage is found.</p> <p>Rollers are damaged or do not rotate.</p> <p>Legs are damaged, loose, or bind during movement.</p> <p>Pins or lanyards are missing or damaged.</p>

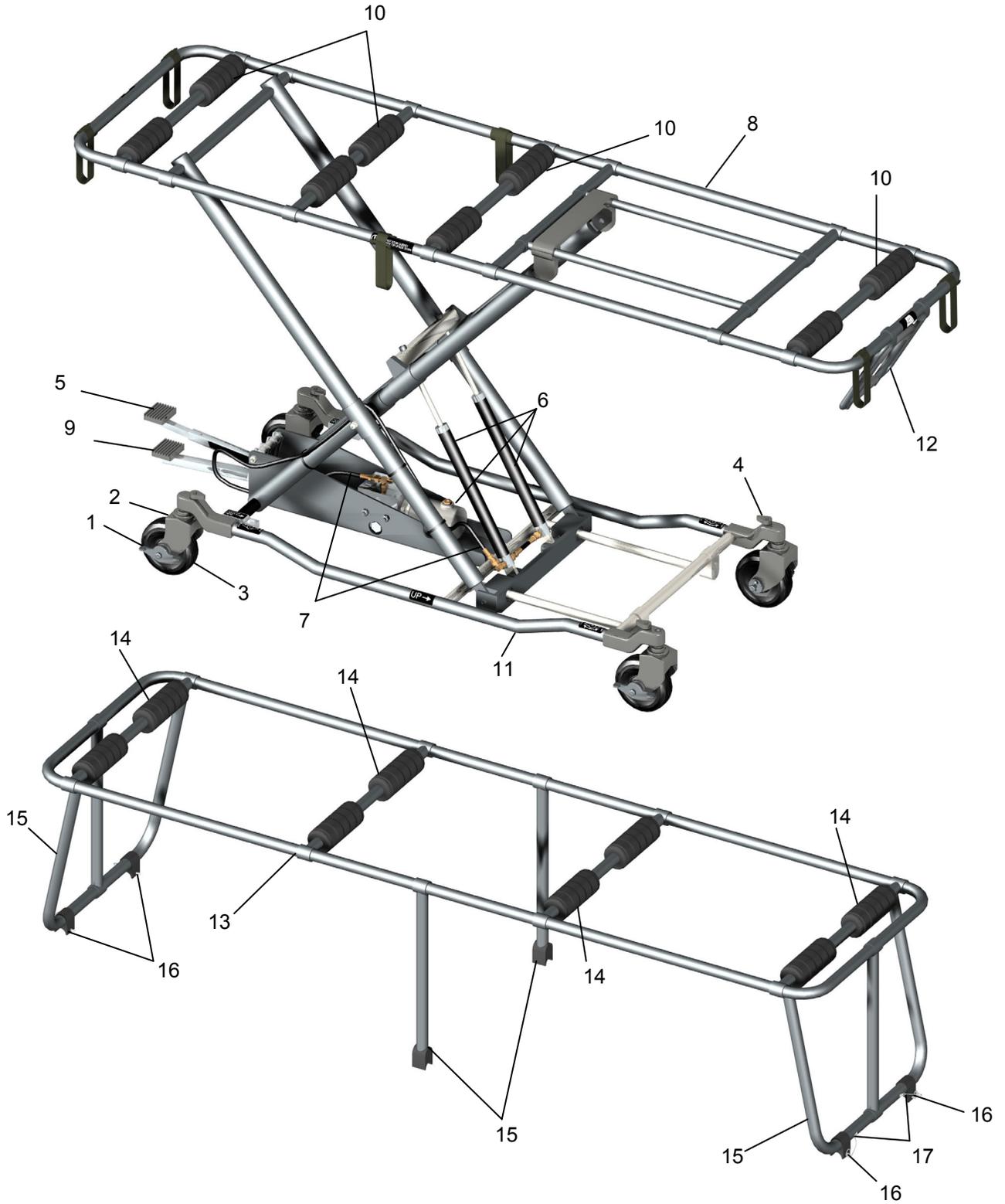


Figure 19. Annual PMCS Items 18 and 19.

Table 4. Operator PMCS, Other Intervals-Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF
20	Annually or Post - Deployment	Partition Wall	Inspect AA partition (Figure 20, Item 1) and ventilation screens (Figure 20, Item 2) for cuts and tears. Ensure curtain door (Figure 20, Item 3) slides back and forth. Make sure threshold rod (Figure 20, Item 4) is not cracked.	Partition is torn, door does not slide, rod is cracked.
21	Annually or Post - Deployment	Supply Area Curtain Door	Inspect track (Figure 20, Item 5) for damage. Check for damaged or missing QC pins (Figure 20, Item 6). Ensure lanyards (Figure 20, Item 7) are not damaged and are secured to supports. Ensure curtain (Figure 20, Item 8) is attached to hangers (Figure 20, Item 9) and hangers slide properly on track. Check curtain for tears and holes.	Track is damaged, pins or lanyards are missing or damaged. Hangers don't slide. Curtain is not hung properly or is torn.
22	Annually or Post - Deployment	Cargo Nets	Inspect netting and webbing (Figure 20, Item 10) for cuts or tears. Ensure buckles (Figure 20, Item 11) are not damaged or missing.	Netting or webbing is damaged, Buckles are damaged or missing.
23	Annually or Post - Deployment	Weapons Racks	Inspect racks (Figure 20, Item 12) for damage. Ensure hook strip is intact (Figure 20, Item 13).	Racks are bent, hook strip is loose or damaged.

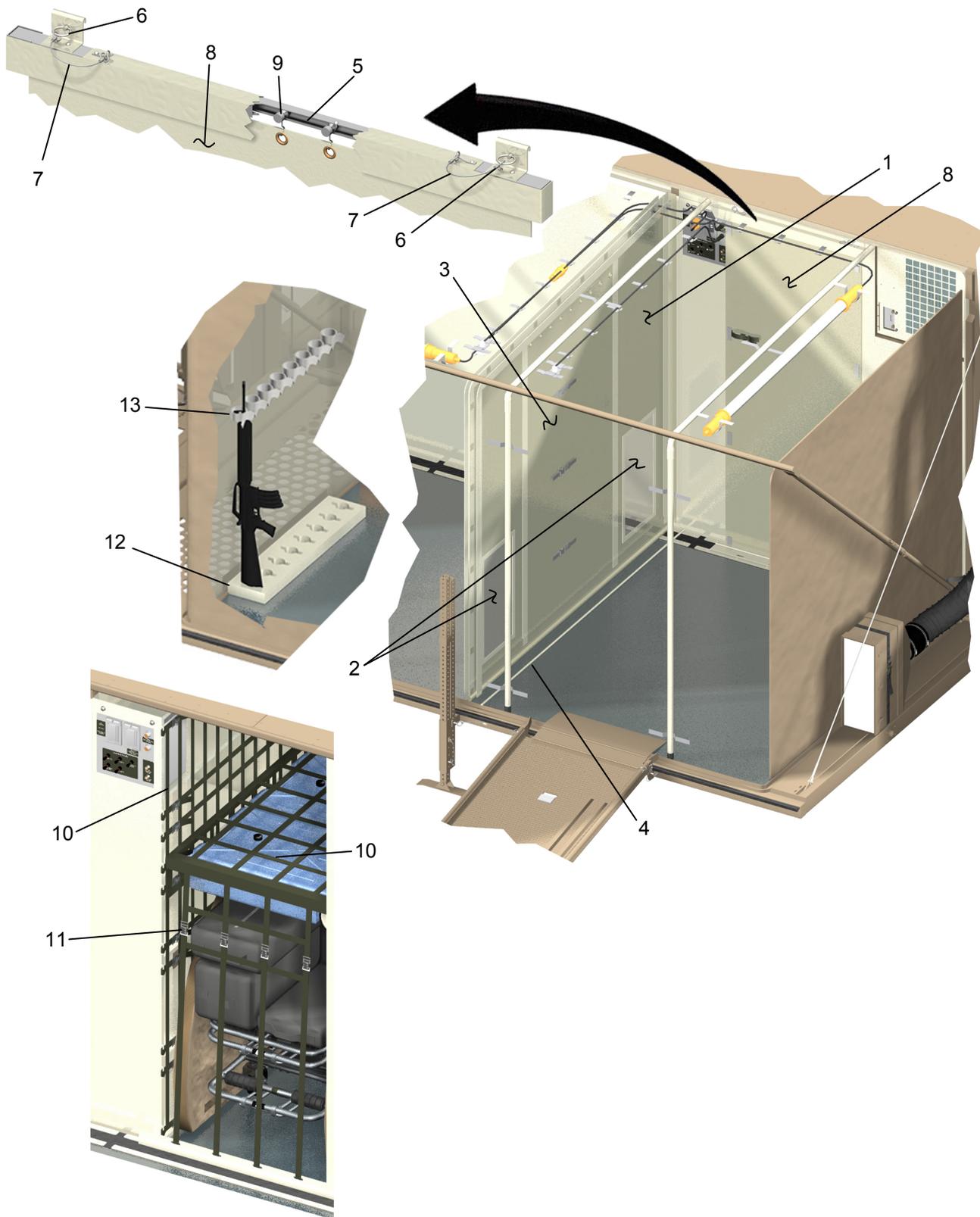


Figure 20. Annual PMCS Items 20 through 23.

Table 4. Operator PMCS, Other Intervals-Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF
24	Annually or Post - Deployment	Fluorescent Lights	Inspect lights (Figure 21, Item 1) for cracks or damage to protective cover (Figure 21, Item 2). Check for cuts or fraying of cord (Figure 21, Item 3) and damaged plugs (Figure 21, Item 4).	Cover, cords or plugs are damaged.
25	Annually or Post - Deployment	Emergency/Blackout Lights	Inspect lights (Figure 21, Item 5) for cracks in lenses (Figure 21, Item 6). Check for cuts or fraying of cord (Figure 21, Item 7) and damaged plugs (Figure 21, Item 8).	Lenses are cracked, cords or plugs are damaged.
26	Annually or Post - Deployment	Inlet Filter Assembly	<p>Separate housing (Figure 21, Item 9) into two sections. Inspect sections damage. Ensure gaskets (Figure 21, Item 10) are not cut.</p> <p>Inspect latches (Figure 21, Item 11) for damage. Reassemble housing sections and ensure latches engage.</p>	<p>Housing or gaskets are damaged.</p> <p>Latches are damaged or will not engage.</p>
27	Annually or Post - Deployment	Outside Air Duct	Inspect ducting (Figure 21, Item 12) for tears or holes. Ensure end connections (Figure 21, Item 13) are secured with clamps (Figure 21, Item 14).	Ducts are damaged or end connections are missing or loose.

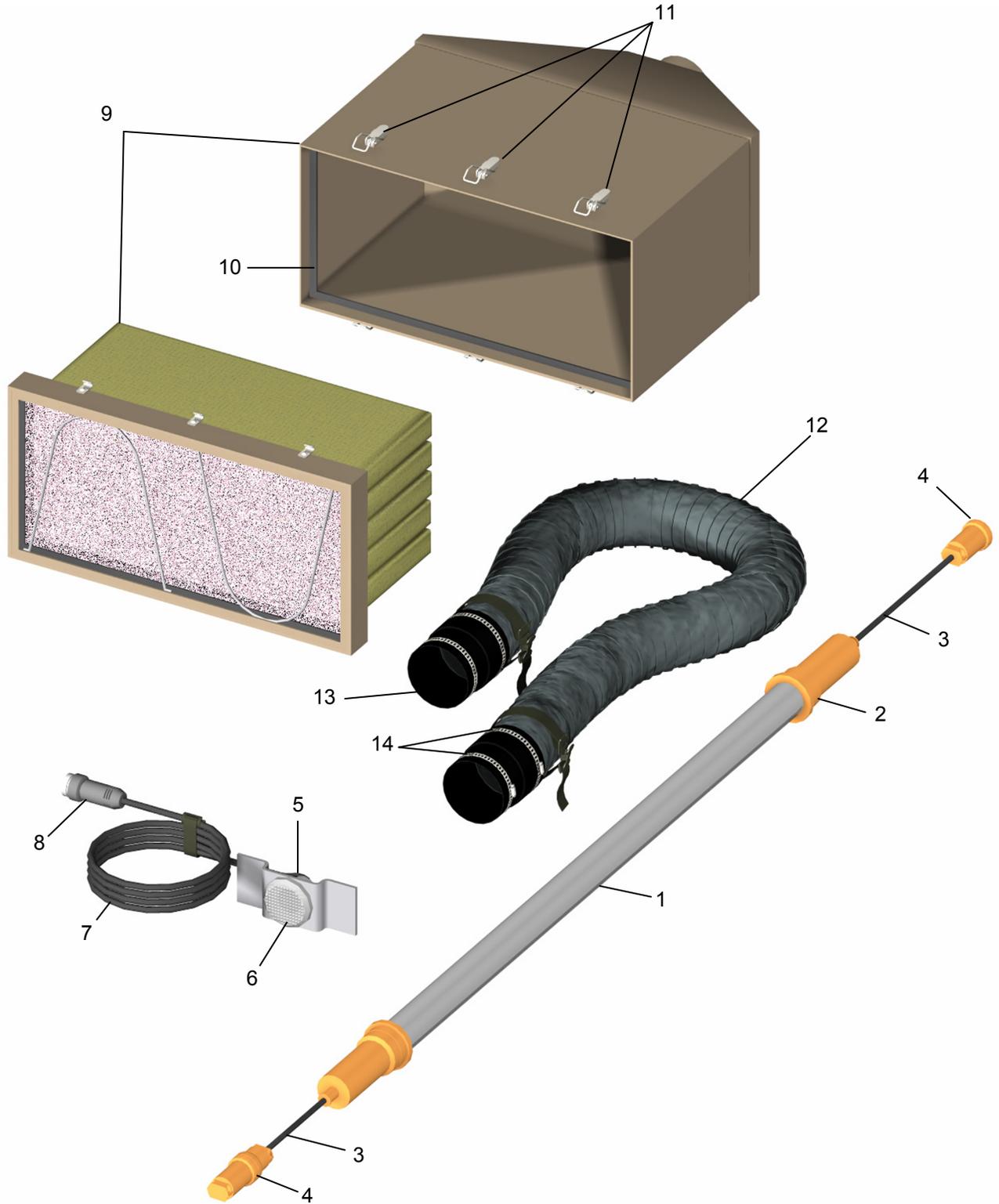


Figure 21. Annual PMCS Items 24 through 27.

Table 4. Operator PMCS, Other Intervals-Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF
28	Annually or Post - Deployment	Water Hoses	Inspect supply hoses (Figure 22, Item 1) and utility hose (Figure 22, Item 2) for cracks or splits. Ensure end connections (Figure 22, Item 3) are not damaged and clamps (Figure 22, Item 4) are tight.	Hoses leak or connections are damaged.
29	Annually or Post - Deployment	Waste Hoses	Inspect hoses (Figure 22, Item 5) for cracks or splits. Ensure end connections (Figure 22, Item 6) are not damaged and shut-off valve (Figure 22, Item 7) opens and closes. Ensure full indicators (Figure 22, Item 8) are not damaged or missing.	Hoses leak, connections are damaged, valves do not operate, or full indicators are damaged or missing.
30	Annually or Post - Deployment	Waste Containers	Inspect containers (Figure 22, Item 9) for cracks. Ensure Bio-hazard markings (Figure 22, Item 10) are readable.	Containers are cracked or markings are not legible.
			Ensure fill caps (Figure 22, Item 11) and vent caps (Figure 22, Item 12) are not damaged or missing.	Caps are damaged or missing.
31	Annually or Post - Deployment	Fuel Hoses	Inspect fuel hose (Figure 22, Item 13) and adapter (Figure 22, Item 14) for cracks and splits. Ensure end connections (Figure 22, Item 15) are not damaged and clamps (Figure 22, Item 16) are tight. Ensure protective caps (Figure 22, Item 17) are not missing.	Hoses leak, connections are damaged, or caps are missing.

Table 4. Operator PMCS, Other Intervals-Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF
32	Annually or Post - Deployment	Temporary Remains Shelters	<p>Ensure fabric and webbing (Figure 22, Item 18) is not torn or fraying. Inspect zippers (Figure 22, Item 19) for wear or damage. Ensure support rods (Figure 22, Item 20) are not broken or loose.</p> <p>Ensure stakes (Figure 22, Item 21) are not bent or missing. Make sure guy ropes (Figure 22, Item 22) are not cut or frayed and rope tensioners (Figure 22, Item 23) are not broken or missing.</p>	<p>Fabric or webbing is damaged, zippers are damaged, support rods are broken or loose.</p> <p>Stakes are bent or missing, guy ropes are damaged, rope tensioners are broken or missing.</p>

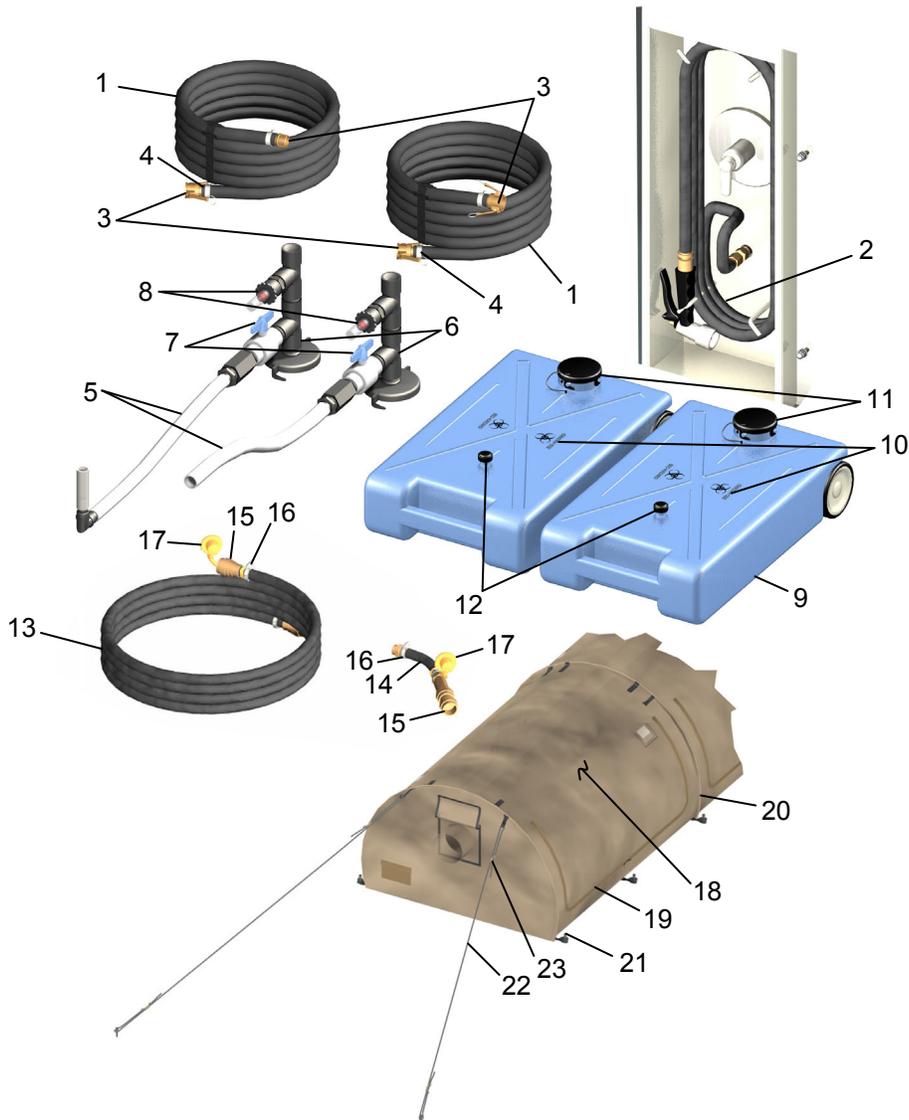


Figure 22. Annual PMCS Items 28 through 32.

Table 4. Operator PMCS, Other Intervals-Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF
33	Annually or Post - Deployment	Ramps	<p>Ensure ramp sections (Figure 23, Item 1) are not twisted. Check for cracked welds on side supports (Figure 23, Item 2).</p> <p>Ensure mortises (Figure 23, Item 3) are not enlarged and tenons (Figure 23, Item 4) are not damaged or loose. Ensure ramp sections can be mated. Check for damaged or missing QC pins (Figure 23, Item 5). Ensure lanyards (Figure 23, Item 6) are not damaged or loose.</p>	<p>Ramp sections are twisted, side supports are damaged or have cracked welds.</p> <p>Mortise and tenons are damaged or ramp sections cannot be mated. Pins or lanyards are missing or damaged.</p>
34	Annually or Post - Deployment	Threshold	Ensure threshold (Figure 23, Item 7) is not bent or damaged and pivots freely.	Threshold is damaged or binds.
35	Annually or Post - Deployment	Connecting Links	Ensure links (Figure 23, Item 8) are not bent. Check for damaged or missing QC pins (Figure 23, Item 9).	Links are bent or pins are damaged or missing.

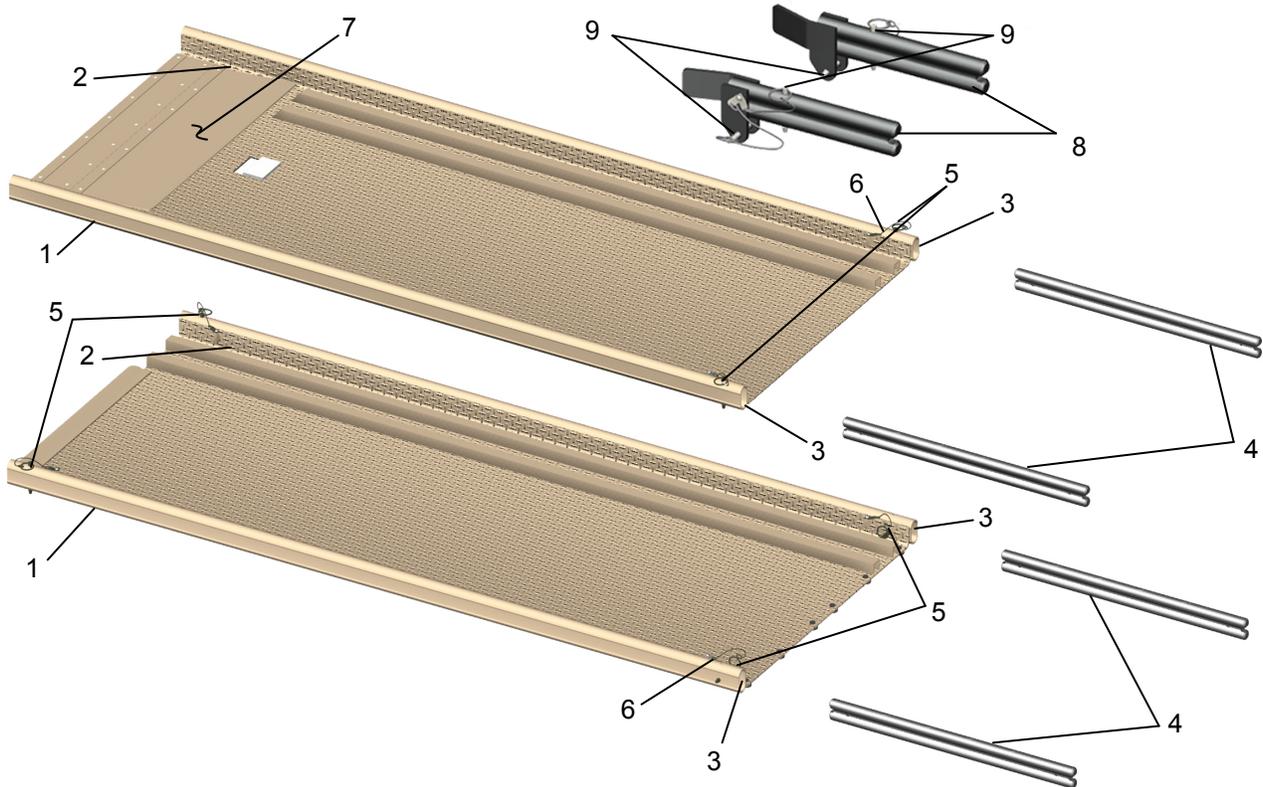


Figure 23. Annual PMCS Items 33 through 35.

Table 4. Operator PMCS, Other Intervals-Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF
36	Annually or Post – Deployment	Leveling Jacks	<p>Ensure handles (Figure 24, Item 1) are not bent and knobs (Figure 24, Item 2) are not cracked or broken off. Rotate handle in both directions and make sure leg extends and retracts smoothly.</p> <p>Inspect feet (Figure 24, Item 3) for damage or cracked welds.</p> <p>Check for damaged or missing pins (Figure 24, Item 4). Ensure chains (Figure 24, Item 5) are not damaged and are secured to pins.</p> <p>Operate lock nuts (Figure 24, Item 6) and handles (Figure 24, Item 7) on twist locks (Figure 24, Item 8) and make sure they rotate without binding.</p> <p>Lubricate jackscrew and connecting link lug (WP 0024).</p>	<p>Handles are damaged, knobs are broken or missing, jack binds during movement.</p> <p>Feet are damaged or have cracked welds.</p> <p>Pins or chains are missing or damaged.</p> <p>Locknuts or handles bind during movement.</p> <p>Not lubricated.</p>
37	Annually or Post – Deployment	Platform Support Legs	<p>Ensure supports (Figure 24, Item 9) and feet (Figure 24, Item 10) are not bent. Inspect feet (Figure 24, Item 10) for cracked welds.</p> <p>Check for damaged or missing QC pins (Figure 24, Item 11). Ensure lanyards (Figure 24, Item 12) are not damaged and are secured to feet.</p>	<p>Supports are bent or feet are bent or have cracked welds.</p> <p>Pins or lanyards are missing or damaged.</p>
38	Annually or Post – Deployment	Ladder	<p>Ensure side supports (Figure 24, Item 13) are not bent or twisted. Check for loose or damaged rungs (Figure 24, Item 14).</p>	<p>Ladder is twisted or rungs are loose or damaged.</p>

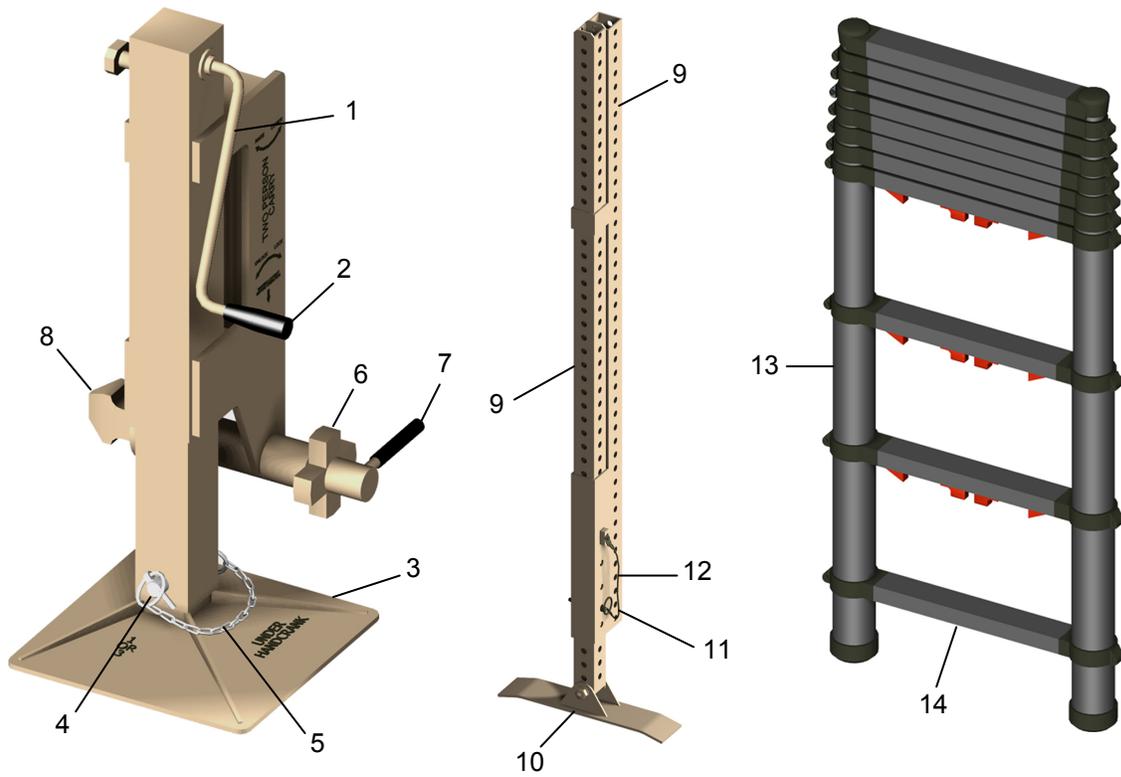


Figure 24. Annual PMCS Items 36 through 38.

Table 4. Operator PMCS, Other Intervals-Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF
39	Annually or Post – Deployment	Generator Pigtail	Inspect pigtail (Figure 25, Item 1) for cuts or fraying on cable and damaged connection (Figure 25, Item 2).	Cable jackets or end connector is damaged.

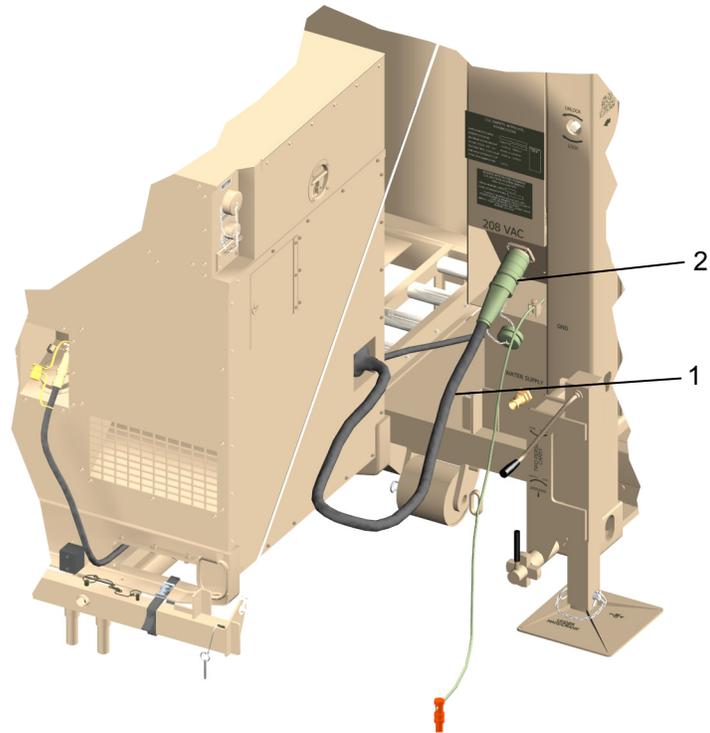


Figure 25. Annual PMCS Item 39.

END OF WORK PACKAGE

**CREW MAINTENANCE
LUBRICATION INSTRUCTIONS**

INITIAL SETUP:**Materials and Parts**

Anti-Seize Compound (WP 0040, Table 1, Item 1)

References

DA PAM 738-750
FM 9-207

LUBRICATION INSTRUCTIONS**General**

The Mobile Integrated Remains Collection System must be lubricated with approved lubricants at recommended intervals in order to be mission-ready at all times.

The lubrication chart, Figure 1, shows lubrication points, components to be lubricated, the required lubricant, and recommended intervals for lubrication. Any special lubrication instructions required for specific components are contained in the NOTES section of Figure 1.

Recommended intervals are based on normal conditions of operation, temperature, and humidity. When operating under extreme conditions, lubricants should always be changed more frequently. When in doubt, notify your supervisor. Keep all lubricants in a closed container and store in a clean, dry place away from extreme heat. Keep container covers clean and do not allow dust, dirt, or other foreign material to mix with lubricants. Keep all lubrication equipment clean and ready for use.

Maintain a record of lubrication performed and report any problems noted during lubrication. Refer to DA PAM 738-750 for maintenance forms and procedures to record and report any findings.

Keep all external parts of equipment not requiring lubrication free of lubricants. After lubrication, wipe off excess oil or grease to prevent accumulation of foreign matter.

Refer to FM 9-207 for lubrication instructions in cold weather.

After operation in mud, sandy, or dusty conditions, clean and inspect all points of lubrication for fouled lubricants. Change lubricants, if required.

Clean all fittings and the area around lubrication points with a lint free cloth or equivalent before lubricating equipment. After lubrication, wipe off excess oil or grease to prevent accumulation of foreign matter.

If dust caps are installed, re-install after lubrication is complete.

LUBRICATION INSTRUCTIONS—CONTINUED

NOTE

When lubricating sidelocks and grounding lug, unthread completely, apply anti-seize to threads, then thread in and out several times to distribute lubricant evenly.

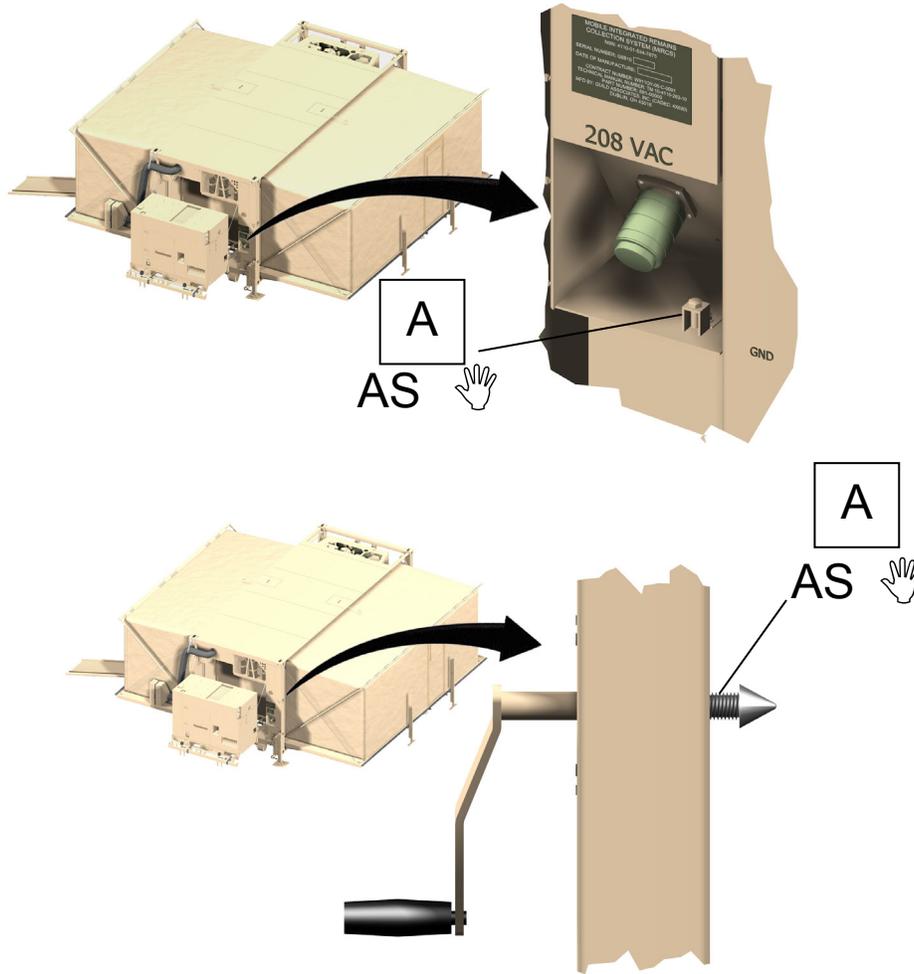


Figure 1. MIRCS Lubrication Points.

Table 1. Lubrication Instructions.

TABLE OF LUBRICANTS			SYMBOLS	FREQUENCY	METHOD OF APPLICATION
IDENTIFICATION LETTER	SPECIFICATION	TYPE OF LUBRICANT			
AS	Anti-Seize	Anti-Seize	A	ANNUALLY	 Hand

END OF WORK PACKAGE

CHAPTER 5

**MAINTENANCE INSTRUCTIONS
FOR
MOBILE INTEGRATED REMAINS
COLLECTION SYSTEM**

**CREW MAINTENANCE
MIRCS ASSEMBLY
SERVICE**

INITIAL SETUP:**Personnel Required**
2**Equipment Conditions**MIRCS in Ready for Transport Configuration
(WP0012)**References**WP 0008
TM 9-6115-643-10

SERVICE**Exterior Cleaning****CAUTION**

Most areas on the MIRCS exterior can be cleaned with a pressure washer. Prior to spraying MIRCS from a pressurized or non-pressurized source verify all openings on fuel tanks and hydraulic reservoir are capped or closed. Contaminating the fuel or hydraulic systems with water can lead to failures of the RU engine, generator engine, and hydraulic system.

Never aim high-pressure water spray directly at controls, electrical connections, conduit penetrations, and edges of electrical enclosure doors and junction boxes. Water can cause damage to electrical components and cause short circuits in wiring. Also never aim high-pressure water at fins on RU radiator, condenser, and evaporator or ECU condenser or evaporators. Fins will bend over blocking airflow or maybe torn off causing leaks in heat exchanger tubing.

NOTE

MIRCS should be positioned in a wash rack or parking area where water utilities or a pressure washer are available.

1. Start with MIRCS in the ready for transport (storage) configuration.
2. Clean the roof (Figure 1, Item 1) and outsides of AA and PA platforms (Figure 1, Items 2 and 24).
3. Level MIRCS then deploy generator, platforms, ramps, and soft walls (WP 0008).
4. Ensure RU control enclosure (Figure 1, Item 16) is closed and door latches (Figure 1, Item 15) are secure.
5. Ensure cover (Figure 1, Item 13) is installed on battery box (Figure 1, Item 14).
6. Ensure door (Figure 1, Item 19) is secured on RU control box (Figure 1, Item 20).
7. Ensure cap (Figure 1, Item 18) is installed on fuel tank (Figure 1, Item 17).
8. Ensure there are no open or disconnected fuel or hydraulic lines.
9. Ensure ECU control enclosure (Figure 1, Item 7) is closed and door latches (Figure 1, Item 8) are all tight.
10. Ensure cover (Figure 1, Item 10) is installed on main power junction box (Figure 1, Item 9).
11. Ensure cover is installed on ECU air inlet port (Figure 1, Item 6).

SERVICE-CONTINUED

12. Ensure cap (Figure 1, Item 11) is installed on fuel port (Figure 1, Item 12).
13. Clean exterior of AA soft wall (Figure 1, Item 21) and PA soft wall (Figure 1, Item 23).
14. Clean MEP-804A generator (Figure 1, Item 4) as specified in TM 9-6115-643-10.
15. Clean front mechanical area (Figure 1, Item 22) and rear mechanical area (Figure 1, Item 3).
16. Clean ramp (Figure 1, Item 5).
17. Return MIRCS to ready for transport configuration (WP 0012).

END OF TASK

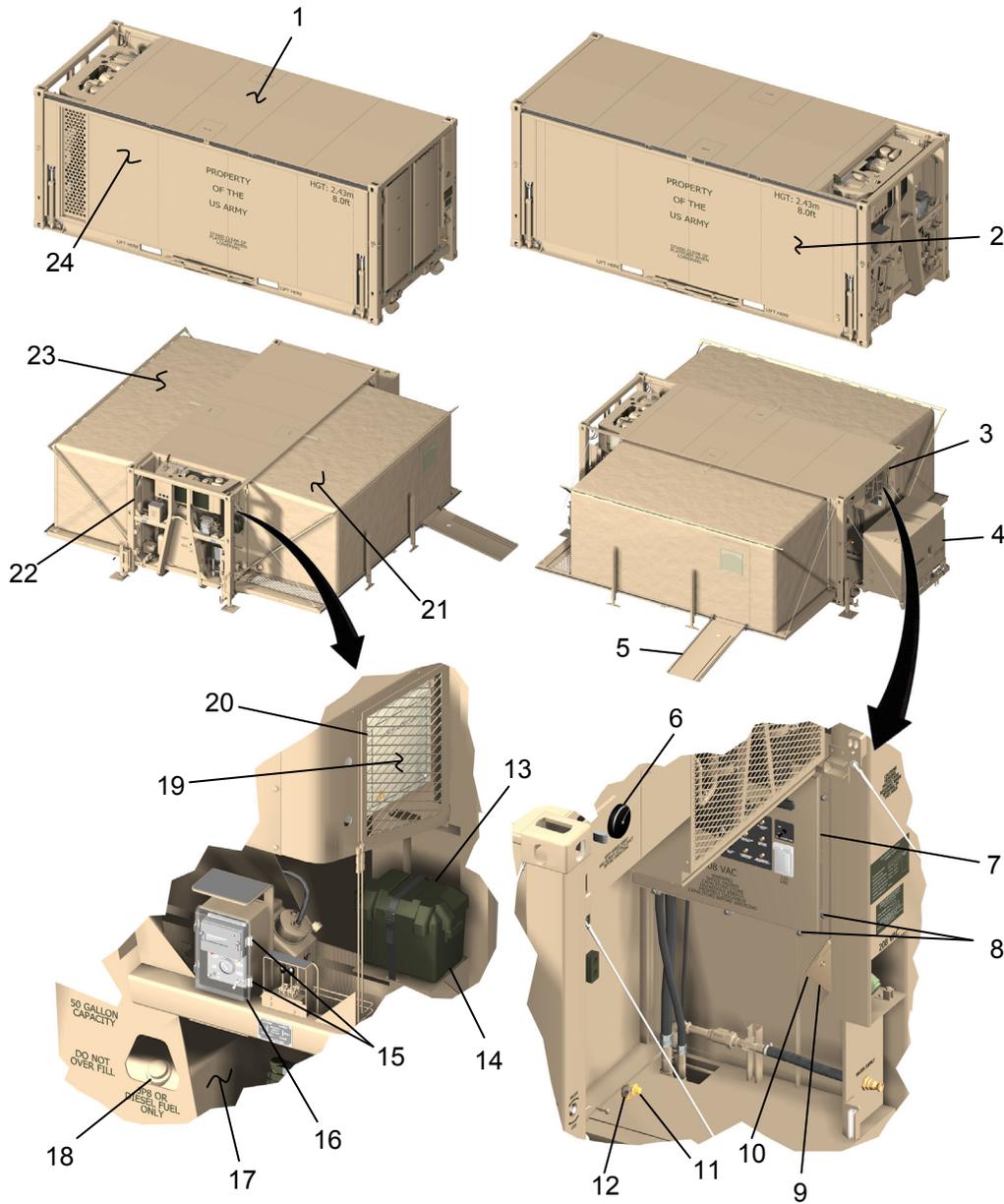


Figure 1. MIRCS Exterior Cleaning.

END OF WORK PACKAGE

**CREW MAINTENANCE
CONTAINER ASSEMBLY, MIRCS
SERVICE**

INITIAL SETUP:**Materials and Parts**

Bleach, Chlorine (WP 0040, Table 1, Item 4)
 Gloves (WP 0040, Table 1, Items 10, 11, 12)
 Goggles (WP 0040, Table 1, Item 13)
 Rag, Wiping (WP 0040, Table 1, Item 16)

Personnel Required

4

Equipment Conditions

Ground Configuration, Assembly and
 Preparation for Use complete (WP 0008)

References

WP 0008
 WP 0009
 WP 0012
 TM 9-6115-643-10

SERVICE**MIRCS Interior Cleaning and Sanitizing****WARNING**

During sanitizing operations personnel may be exposed to chemical and/or bio-hazardous materials. In addition, wastewater generated during MA sanitizing operations may also contain chemical and/or bio-hazardous materials. When performing this procedure personnel must wear impermeable gloves and goggles for protection. Failure to follow this warning may result in serious illness or death.

The waste containers should be checked frequently during sanitizing operations to prevent overfilling. When containers are emptied the shutoff valve at inlet to waste containers must be closed prior to disconnecting drain hose. Failure to close valve may result in spilling of chemical or bio-hazardous wastewater causing exposure to improperly protected or unsuspecting personnel working nearby.

CAUTION

The MIRCS interior must not be cleaned with a pressurized cleaning device. High pressure water spray can get into seams causing panels to delaminate and insulation to get wet. Never water spray directly at controls, electrical connections, conduit penetrations, and edges of electrical enclosure doors and junction boxes. Water can cause damage to electrical components and cause short circuits in wiring.

NOTE

MIRCS interior surface should be sanitized with a cleaning solution made up of 2 percent bleach and water.

1. Start with MIRCS in the set-up for ground operation configuration (WP 0008) except do not install vestibule door, supply area doors, lights, or any accessories in work inside areas. Remove items if installed (WP 0012).
2. Remove all supply items from the supply area shelving (Figure 1, Item 3).
3. Open doors (Figure 1, Item 1). Leave windows (Figure 1, Item 2) closed.
4. Apply power from generator or external power supply and turn on ECU ventilation fans (WP 0009).

SERVICE-CONTINUED

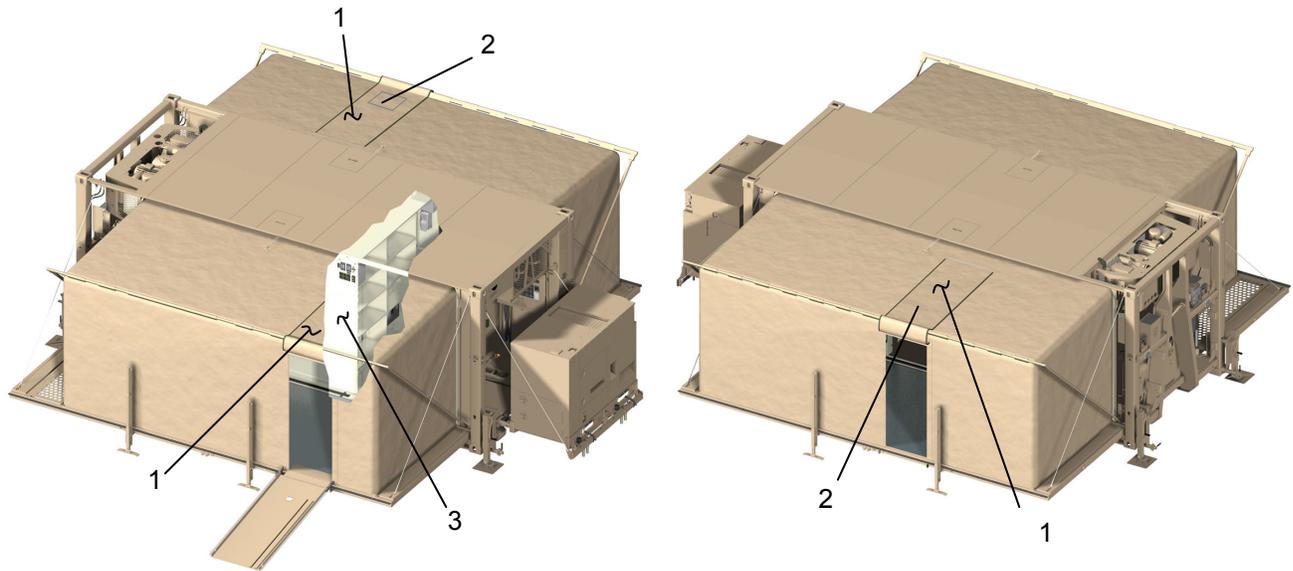


Figure 1. MIRCS Interior Cleaning Preparation.

5. Remove all trays (Figure 2, Item 10) and then all tracks (Figure 2, Item 7) from RSU (Figure 2, Item 11) as follows:
 - a. Open door (Figure 2, Item 5).
 - b. Pull QC pin (Figure 2, Item 9) then slide trays (Figure 2, Item 10) out of tracks (Figure 2, Item 7).
 - c. Pull QC pins (Figure 2, Item 6) then remove tracks (Figure 2, Item 7).
 - d. Repeat steps a through c for other three RSU sections.
 - e. Remove knobs (Figure 2, Item 12) and spreader bar (Figure 2, Item 13).
 - f. Remove knobs (Figure 2, Item 4) securing duct (Figure 2, Item 11) to evaporator (Figure 2, Item 3).
 - g. With two persons on each side, slide duct rearward until it clears evaporator (Figure 2, Item 3), then squeeze duct (Figure 2, Item 1) until edges are clear of clips (Figure 2, Item 2) and lower duct.
6. Clean trays (Figure 2, Item 10), tracks (Figure 2, Item 7), and duct (Figure 2, Item 1) with cleaning solution then rinse with fresh water. Allow cleaned items to air dry.
7. Clean inside of RSU (Figure 2, Item 11) as follows:
 - a. Clean and rinse inside and outside of evaporator (Figure 2, Item 3).
 - b. Clean and rinse interior surfaces ceiling and walls.
 - c. Clean both sides of door (Figure 2, Item 5) including underside of seals (Figure 2, Item 8).
 - d. Clean and rinse floor.
 - e. Allow inside of RSU to air dry.
8. With two persons on each side, reinstall duct (Figure 2, Item 1), all tracks (Figure 2, Item 7) and trays (Figure 2, Item 10) into RSU (Figure 2, Item 11).

SERVICE-CONTINUED

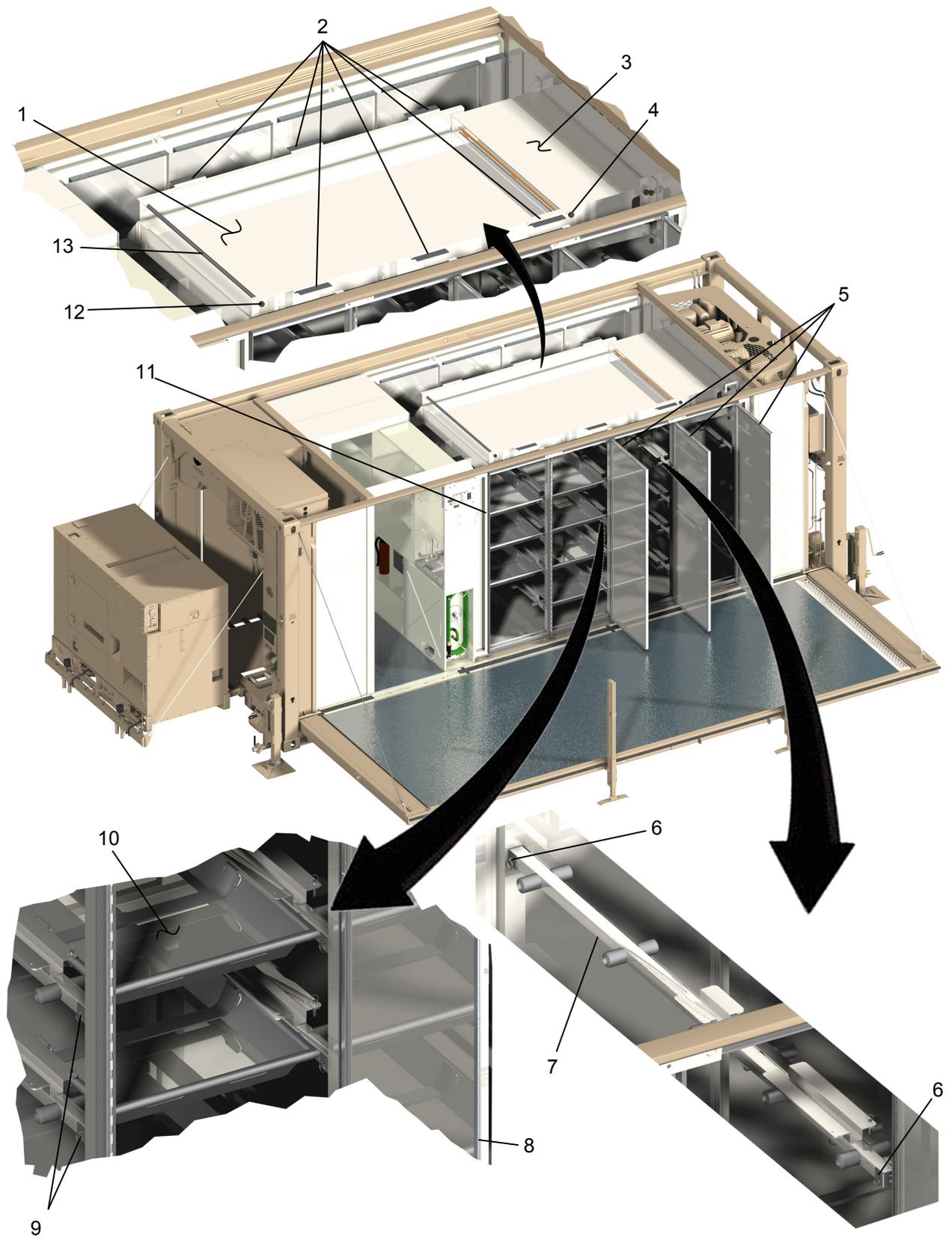


Figure 2. Cleaning RSU.

SERVICE-CONTINUED

9. Clean AA work area (Figure 3, Item 7) as follows:
 - a. Clean and rinse interior surfaces of soft wall (Figure 3, Item 8).
 - b. Clean and rinse inside wall (Figure 3, Item 9).
 - c. Clean and rinse both sides of partition wall (Figure 3, Item 1).
 - d. Clean and rinse floor (Figure 3, Item 6).
 - e. Allow all surfaces to air dry.
10. Clean vestibule area (Figure 3, Item 3) as follows:
 - a. Clean and rinse interior surfaces of soft wall (Figure 3, Item 3).
 - b. Clean and rinse inside wall (Figure 3, Item 2).
 - c. Clean and rinse floor (Figure 3, Item 5).
 - d. Allow all surfaces to air dry.

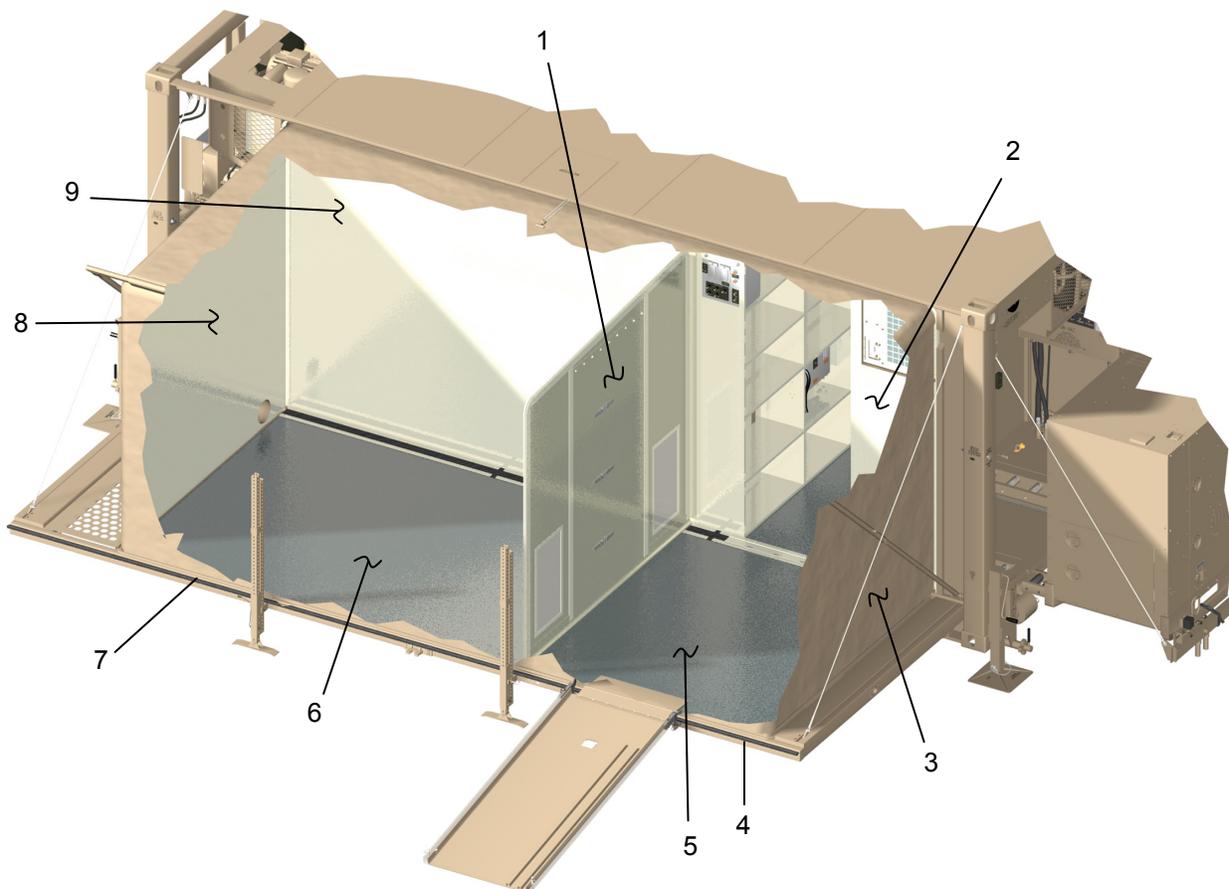


Figure 3. Cleaning Administrative Area and Vestibule.

SERVICE-CONTINUED

11. Remove access panel (Figure 4, Item 5).
12. Clean and rinse both sides of access panel (Figure 4, Item 5) and set aside to air dry.
13. Clean supply area (Figure 4, Item 1) as follows:
 - a. Clean and rinse ceiling and wall.
 - b. Clean and rinse supply area shelving (Figure 4, Item 3) and water plumbing area (Figure 4, Item 4).
 - c. Clean and rinse out floor.
 - d. Allow inside of supply area to dry.
 - e. Clean and rinse supply area curtain door (Figure 4, Item 2).
14. Reinstall access panel (Figure 4, Item 5).

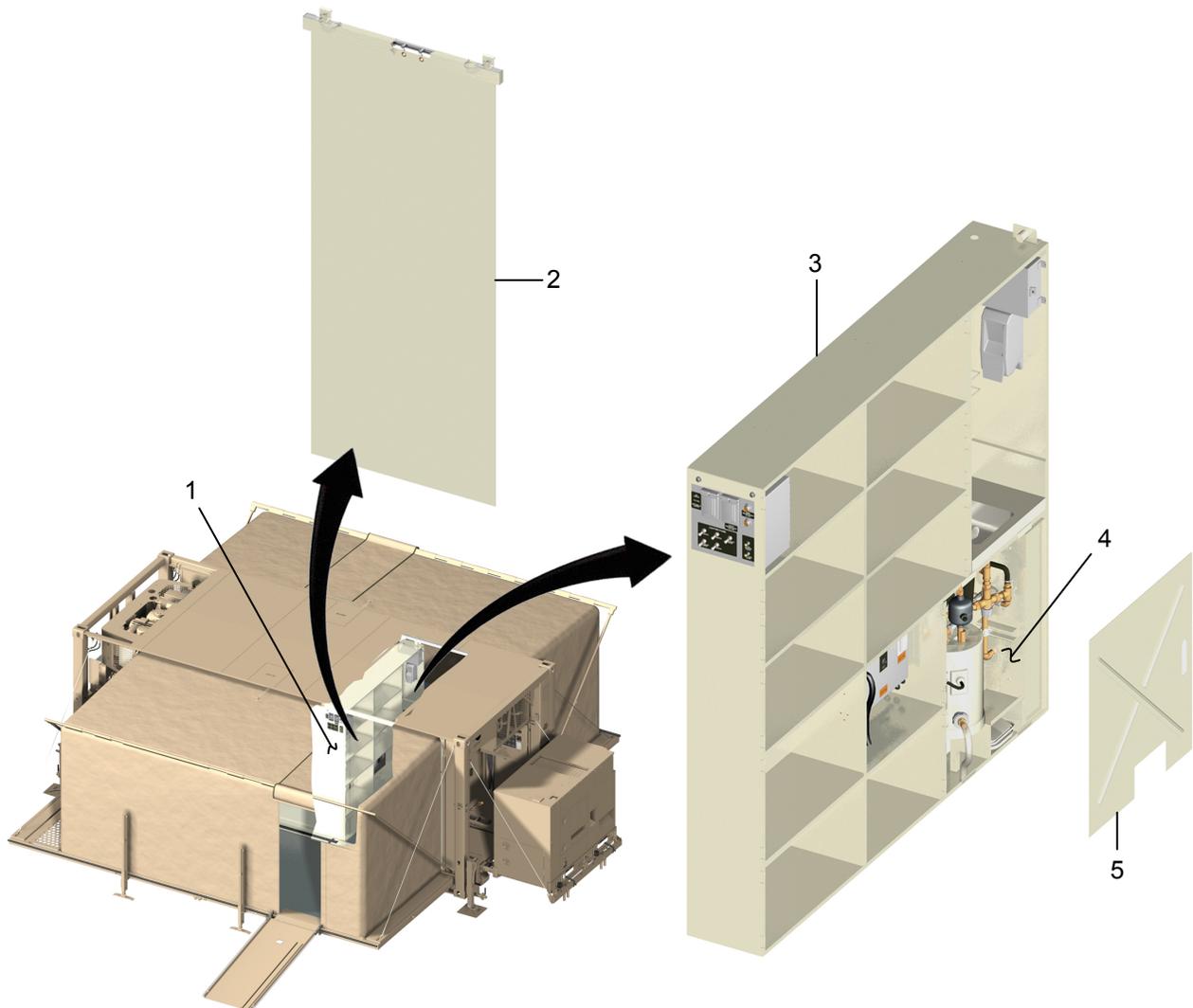


Figure 4. Cleaning Supply Area.

SERVICE-CONTINUED

15. Clean and rinse the following accessories in PA work area (Figure 5, Item 5).
 - a. Mobile processing platforms (Figure 5, Item 8)
 - b. MPP extensions (Figure 5, Item 7).
16. Clean PA work area (Figure 5, Item 5) as follows:
 - a. Add 2 oz of bleach to 2 gal of water and pour down supply area sink drain.
 - b. Clean and rinse interior surfaces of soft wall (Figure 5, Item 3).
 - c. Clean and rinse inside wall (Figure 5, Item 2).
 - d. Clean and rinse utility hose storage area (Figure 5, Item 1).
 - e. Clean and rinse floor (Figure 5, Item 6).
 - f. Clean and rinse floor grate (Figure 5, Item 5) and drain trough (Figure 5, Item 4).
 - g. Allow all surfaces to air dry.
17. Set-up MIRCS for operation (WP 0008) or return MIRCS to ready for transport configuration (WP 0012).

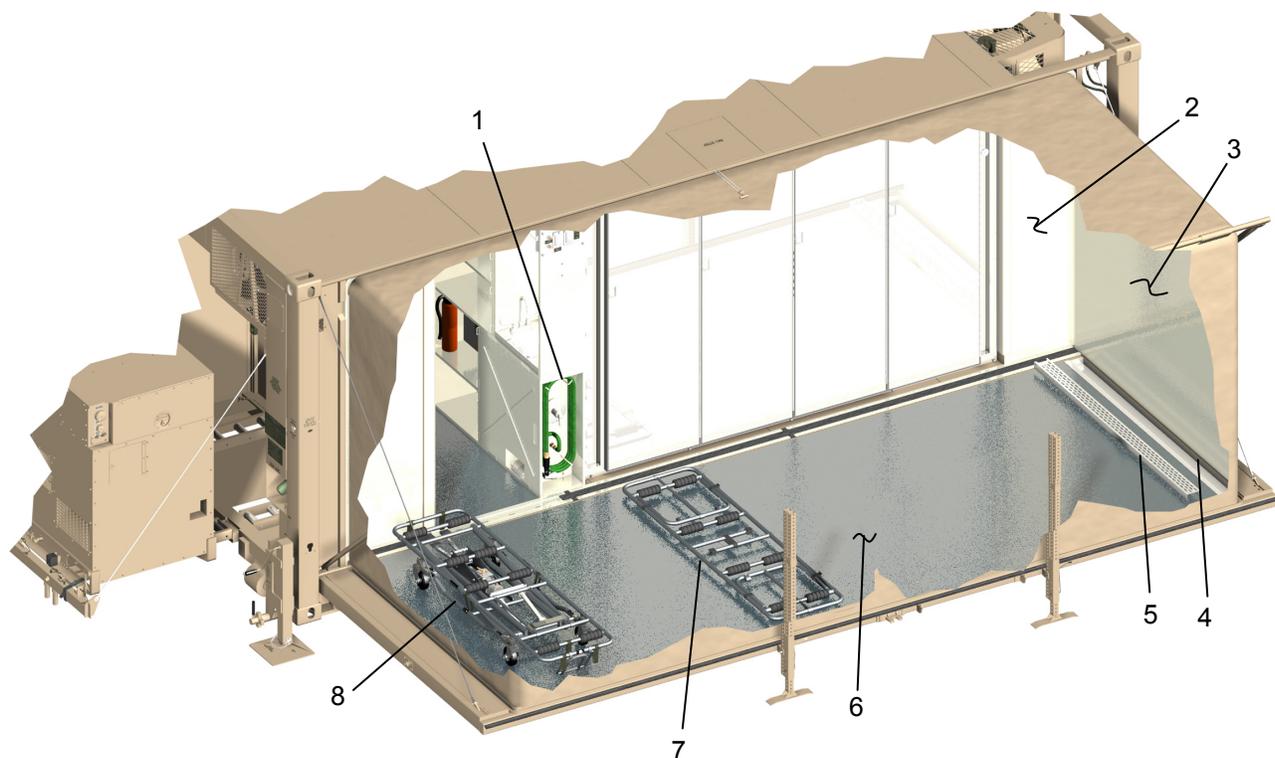
END OF TASK

Figure 5. Cleaning Processing Area.

END OF WORK PACKAGE

**CREW MAINTENANCE
ENGINE, DIESEL, 3 CYLINDER, 719 CC
BATTERY
INSPECT**

INITIAL SETUP:

Equipment Conditions

RU shut down (WP 0010)

INSPECT

WARNING



Do not allow metallic objects such as watches, rings or other jewelry to touch battery terminals. Contact with energized connections can result in serious personal injury or death. Seek immediate medical attention if injury occurs.

RU Battery Inspection

1. Loosen strap (Figure 1, Item 3) and remove cover (Figure 1, Item 4) from battery box (Figure 1, Item 5).
2. Inspect battery cable terminal connections (Figure 1, Item 1) to ensure they are secured to battery posts (Figure 1, Item 2). If cable connections are loose, notify maintenance.
3. Check terminal connections (Figure 1, Item 1) and battery posts (Figure 1, Item 2) for evidence of corrosion. If corrosion is found notify maintenance.
4. Check battery (Figure 1, Item 6) for any signs of damage or leakage. If damage is found notify maintenance.
5. Replace cover (Figure 1, Item 4) and tighten strap (Figure 1, Item 3) on battery box (Figure 1, Item 5).

INSPECT-CONTINUED

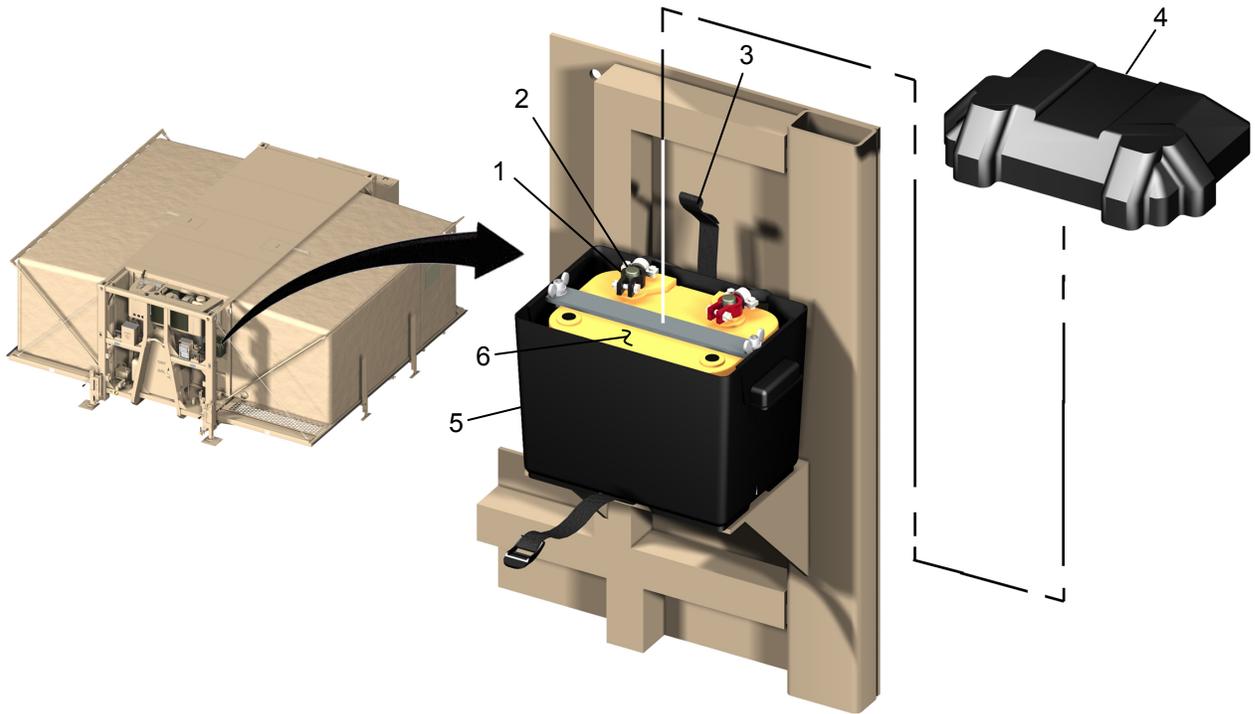


Figure 1. RU Battery Inspection.

END OF TASK

END OF WORK PACKAGE

**CREW MAINTENANCE
ENGINE, DIESEL, 3 CYLINDER, 719 CC
COOLANT
SERVICE**

INITIAL SETUP:**Materials/Parts**

Coolant, Pre-Diluted, 50/50 Mixture (WP 0040, Table 1, Item 6)

Equipment Conditions

Ladder removed and set up
(WP 0007)
RU shut down (WP 0010)

SERVICE**Coolant Service****WARNING**

RU engine surfaces can reach temperatures near 300°F. Avoid contact with hot surfaces. Wear impermeable gloves and goggles for protection. Failure to follow this precaution could result in severe burn injuries. Seek immediate medical attention if injury occurs.

1. Observe fill marks (Figure 1, Item 2) on coolant reservoir (Figure 1, Item 3).
2. If coolant is visible at or between marks (Figure 1, Item 2) level is correct. If coolant level is below lower mark continue to step 3.
3. Unthread fill cap (Figure 1, Item 1) from reservoir (Figure 1, Item 3).
4. Add 50/50 coolant mixture to coolant reservoir (Figure 1, Item 3) until level is visible at lower mark (Figure 1, Item 2).
5. Thread fill cap (Figure 1, Item 1) onto reservoir (Figure 1, Item 3).

END OF TASK

SERVICE-CONTINUED

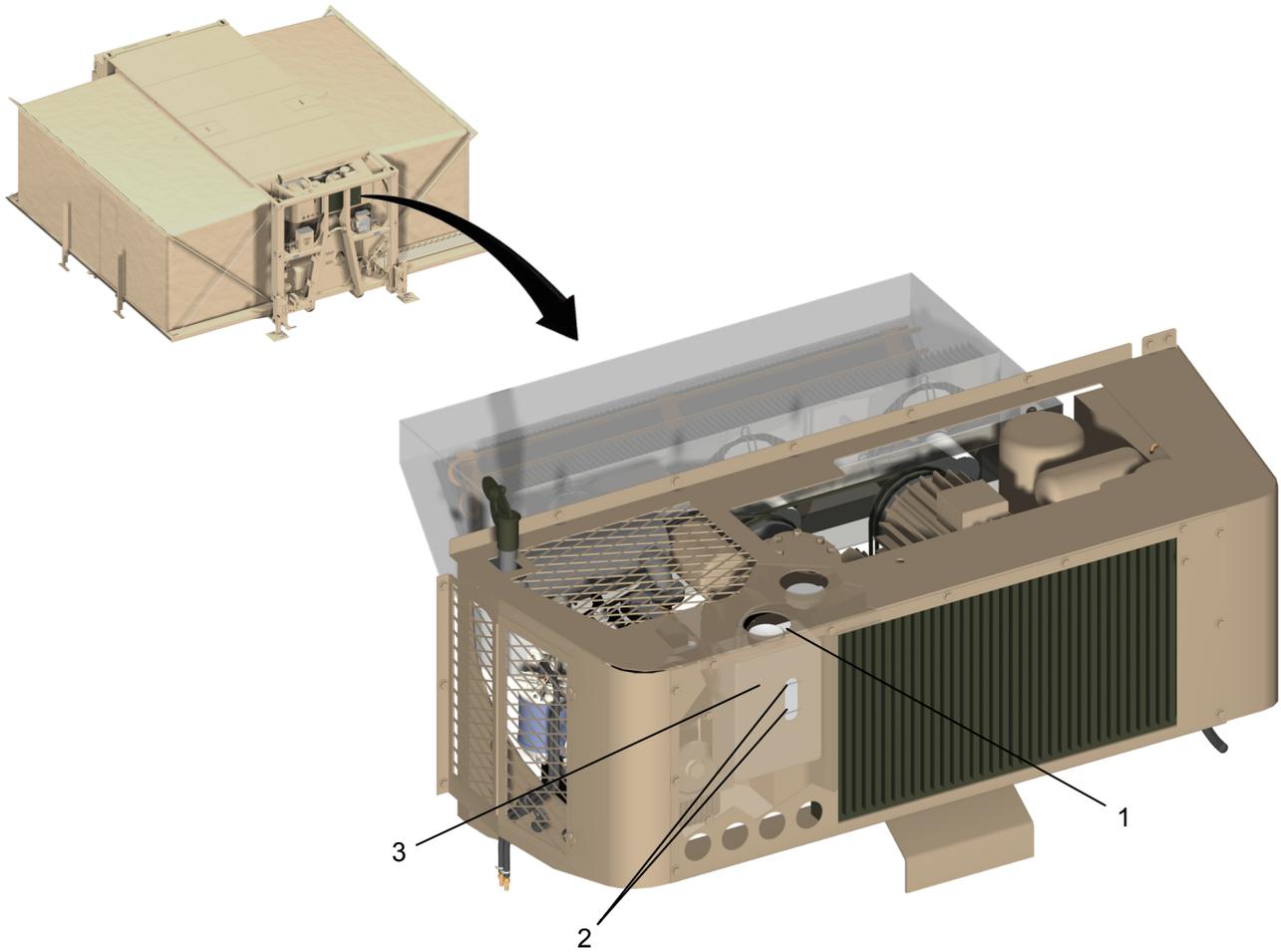


Figure 1. Engine Coolant Servicing.

END OF WORK PACKAGE

**CREW MAINTENANCE
ENGINE, DIESEL, 3 CYLINDER, 719 CC
ENGINE OIL
SERVICE**

INITIAL SETUP:**Tools and Special Tools**

Funnel (WP 0038, Table 2, Item 5)

Materials Parts

Oil, Synthetic, 15w-40 (WP 0040, Table 1, Item 15)

Rag, Wiping (WP 0040, Table 1, Item 16)

Equipment Conditions

Ladder removed and set up (WP 0007)

RU shut down (WP 0010)

SERVICE**Engine Oil Service****WARNING**

RU engine surfaces can reach temperatures near 300°F. Avoid contact with hot surfaces. Wear impermeable gloves and goggles for protection. Failure to follow this precaution could result in severe burn injuries. Seek immediate medical attention if injury occurs.

1. Disengage two latches (Figure 1, Item 1), then open access door (Figure 1, Item 2).
2. Pull dipstick (Figure 1, Item 4) out of engine and wipe oil off of dipstick with a clean rag.
3. Reinsert dipstick (Figure 1, Item 4) fully into engine then remove dipstick.
4. Observe fill marks (Figure 1, Items 5 and 6), wipe oil off of dipstick (Figure 1, Item 4) with a clean rag, then reinsert dipstick.
5. If oil was visible at or between marks (Figure 1, Items 5 and 6) level is correct proceed to step 10. If oil level is below lower mark continue to step 6.
6. Unthread fill cap (Figure 1, Item 3) from engine.
7. Add about 1/2 quart of oil then repeat steps 4 and 5 until level is visible at lower mark (Figure 1, Item 5).
8. Thread fill cap (Figure 1, Item 3) onto engine.
9. Wipe up any residual oil in area around fill port.
10. Close access door (Figure 1, Item 2) and secure by engaging two latches (Figure 1, Item 1).

END OF TASK

SERVICE-CONTINUED

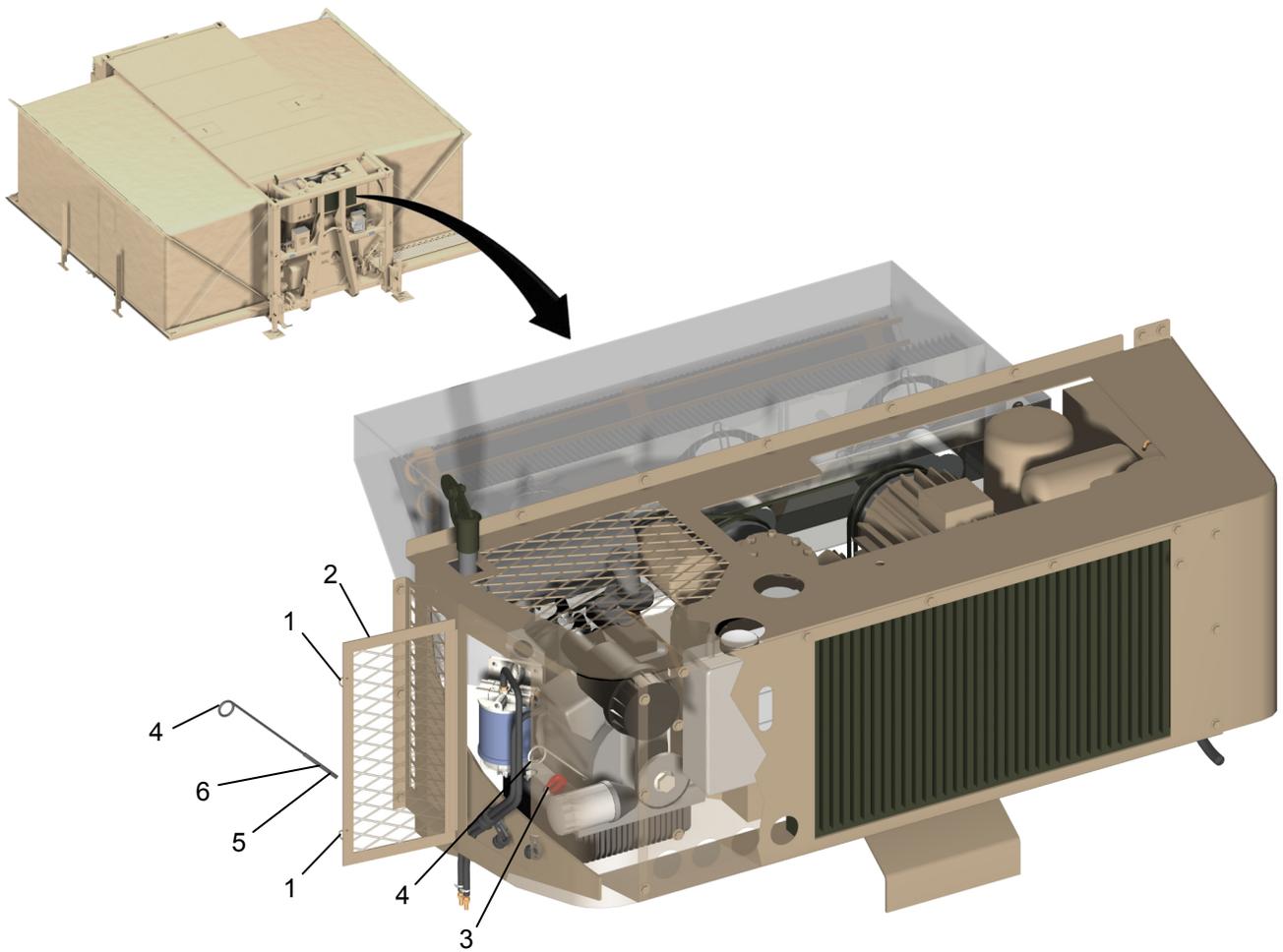


Figure 1. Engine Oil Servicing.

END OF WORK PACKAGE

**CREW MAINTENANCE
REMAINS STORAGE UNIT
DOOR SEAL
REPLACE**

INITIAL SETUP:

Tools and Special Tools

Screwdriver, Bit Set and Handle (WP 0038, Table 1, Item 10)

REPLACE

RSU Door Seal Removal

1. Remove thirty-two screws (Figure 1, Item 4) securing door seal (Figure 1, Item 2) to RSU door (Figure 1, Item 1).
2. Slide door seal (Figure 1, Item 2) out from between retaining plate (Figure 1, Item 3) and door (Figure 1, Item 1).

END OF TASK

RU Door Seal Installation

1. Place new door seal (Figure 1, Item 2) between retaining plate (Figure 1, Item 3) and door (Figure 1, Item 1).
2. While holding door seal (Figure 1, Item 2) tight against door (Figure 1, Item 1) install thirty-two screws (Figure 1, Item 4) to secure seal to door.

END OF TASK

REPLACE-CONTINUED

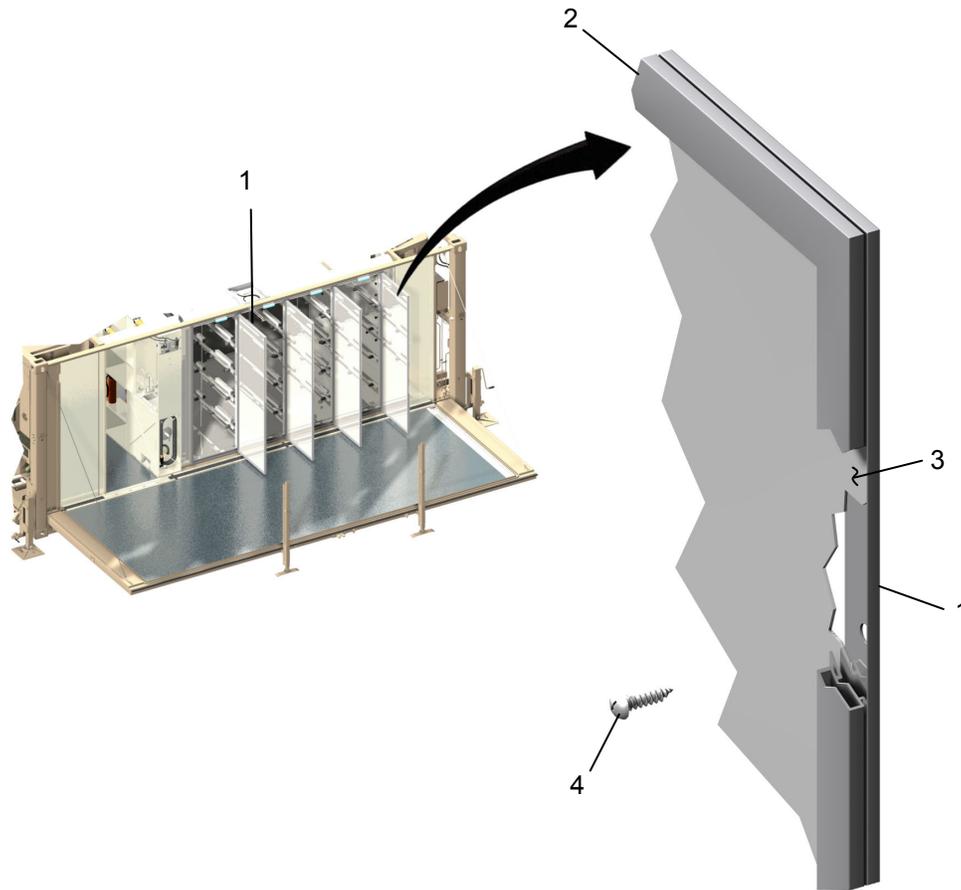


Figure 1. Door Seal Replacement.

END OF WORK PACKAGE

**CREW MAINTENANCE
ENVIRONMENTAL CONTROL UNIT ASSEMBLY
RECIRCULATING AIR FILTER
REPLACE**

INITIAL SETUP:**Tools and Special Tools**

Screwdriver, Bit Set and Handle (WP 0038, Table 1, Item 10)

Materials Parts

Filter, Pleated (WP 0040, Table 1, Item 7)

Equipment Conditions

ECU shutdown and ventilation fans off (WP 0010)

REPLACE**ECU Recirculating Air Filter Removal**

1. Loosen four 1/4-turn fasteners (Figure 1, Item 1), securing inlet screen (Figure 1, Item 2) to ECU (Figure 1, Item 3).
2. Lift up on inlet screen (Figure 1, Item 2) to access filter (Figure 1, Item 4).
3. Slide filter (Figure 1, Item 5) out of inlet screen (Figure 1, Item 2).

END OF TASK**ECU Recirculating Air Filter Installation**

1. Orient filter (Figure 1, Item 5) so that air flow arrow (Figure 1, Item 4) will be pointing towards ECU (Figure 1, Item 3) when installed.
2. Slide new filter (Figure 1, Item 5) into inlet screen (Figure 1, Item 2).
3. Mate inlet screen (Figure 1, Item 2) with ECU (Figure 1, Item 3) then secure with four 1/4-turn fasteners (Figure 1, Item 1).

END OF TASK

REPLACE-CONTINUED

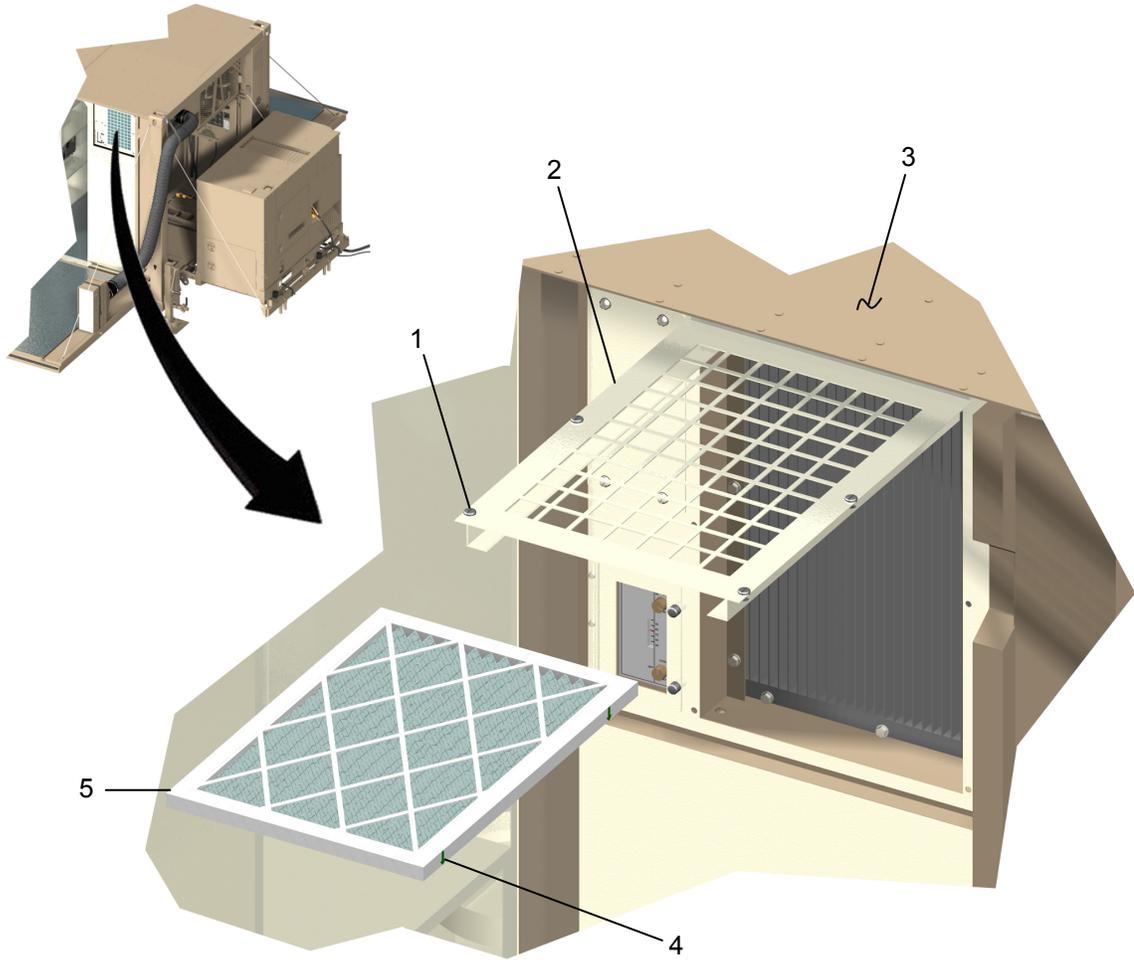


Figure 1. Recirculating Air Filter Replacement.

END OF WORK PACKAGE

**CREW MAINTENANCE
ENVIRONMENTAL CONTROL UNIT ASSEMBLY
INLET AIR ROUGHING FILTER
REPLACE**

INITIAL SETUP:**Materials Parts**

Filter, Roughing (WP 0040, Table 1, Item 9)

Equipment ConditionsECU shutdown and ventilation fans off
(WP 0010)

REPLACE**ECU Inlet Air Roughing Filter Removal**

1. Remove two retainers (Figure 1, Item 4) as follows:
 - a. Slide ends of retainers (Figure 1, Item 4) out of tabs (Figure 1, Item 2).
 - b. Pull retainers (Figure 1, Item 4) out from under front cover (Figure 1, Item 1).
2. Remove filter (Figure 1, Item 3) and discard IAW local regulations.

END OF TASK**ECU Inlet Air Roughing Filter Installation**

1. Install new filter (Figure 1, Item 3) by tucking filter edges under front cover (Figure 1, Item 1).
2. Insert two retainers (Figure 1, Item 4) as follows:
 - a. Insert tip of retainers (Figure 1, Item 4) under front cover (Figure 1, Item 1).
 - b. Slides ends of each retainer (Figure 1, Item 4) in tabs (Figure 1, Item 2).

END OF TASK

REPLACE-CONTINUED

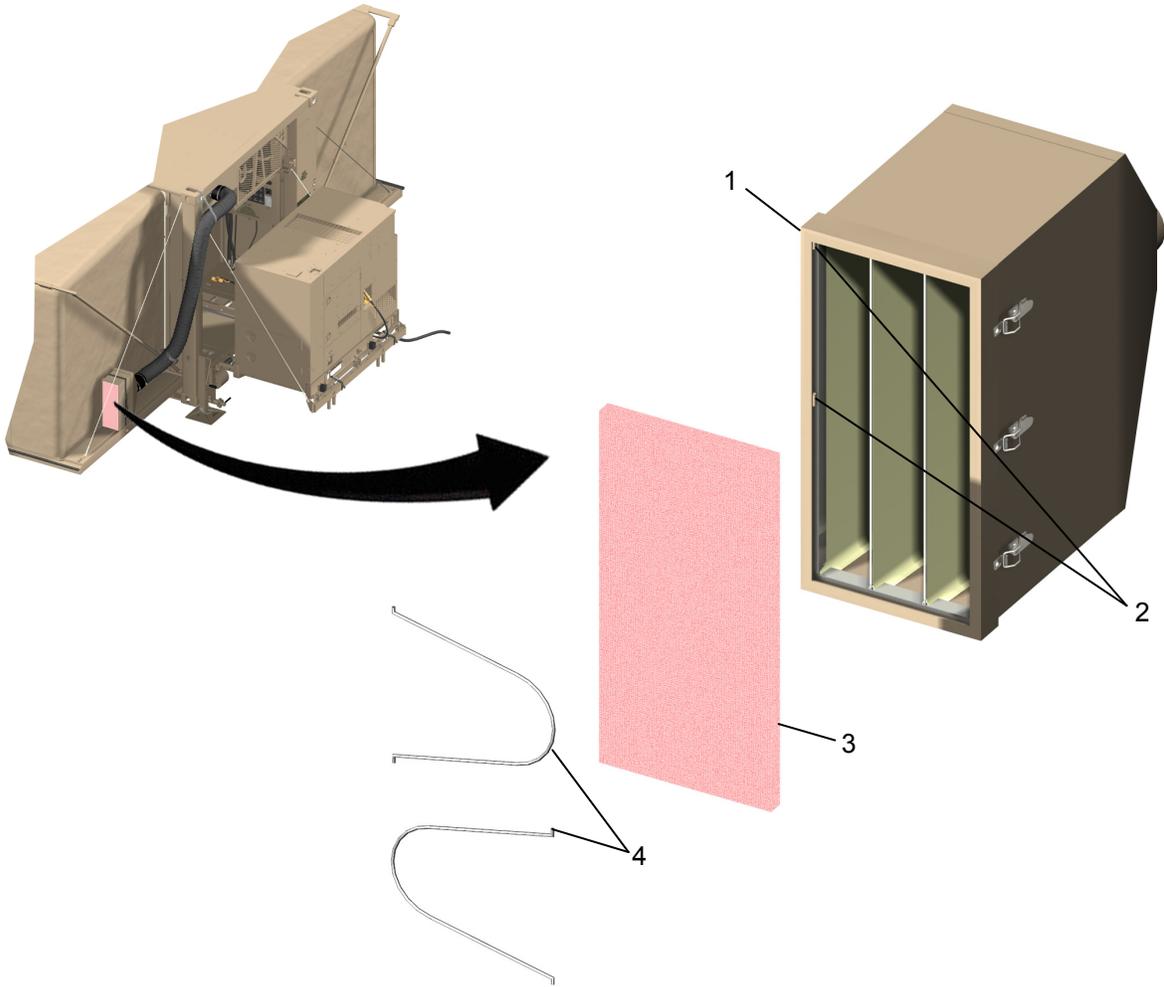


Figure 1. Inlet Air Roughing Filter Replacement.

END OF WORK PACKAGE

**CREW MAINTENANCE
ENVIRONMENTAL CONTROL UNIT ASSEMBLY
INLET AIR, FINE FILTER
REPLACE**

INITIAL SETUP:**Materials Parts**

Filter, Pocket, 24 X 12 X 14 (WP 0040, Table 1, Item 8)

Equipment ConditionsECU shutdown and ventilation fans off
(WP 0010)

REPLACE**ECU Inlet Air Fine Filter Removal**

1. Disengage six latches (Figure 1, Item 1) then separate front cover (Figure 1, Item 5) from housing (Figure 1, Item 2).
2. Remove filter (Figure 1, Item 4) from housing (Figure 1, Item 2).

END OF TASK**ECU Inlet Air Fine Filter Installation****NOTE**

Extending and separating pleats on backside of air filter increases airflow and extends useful life of filter.

1. Pull out and separate pleats (Figure 1, Item 3).
2. Install new filter (Figure 1, Item 4) into housing (Figure 1, Item 2).
3. Mate front cover (Figure 1, Item 5) to housing (Figure 1, Item 2) then secure by engaging six latches (Figure 1, Item 1).

END OF TASK

REPLACE-CONTINUED

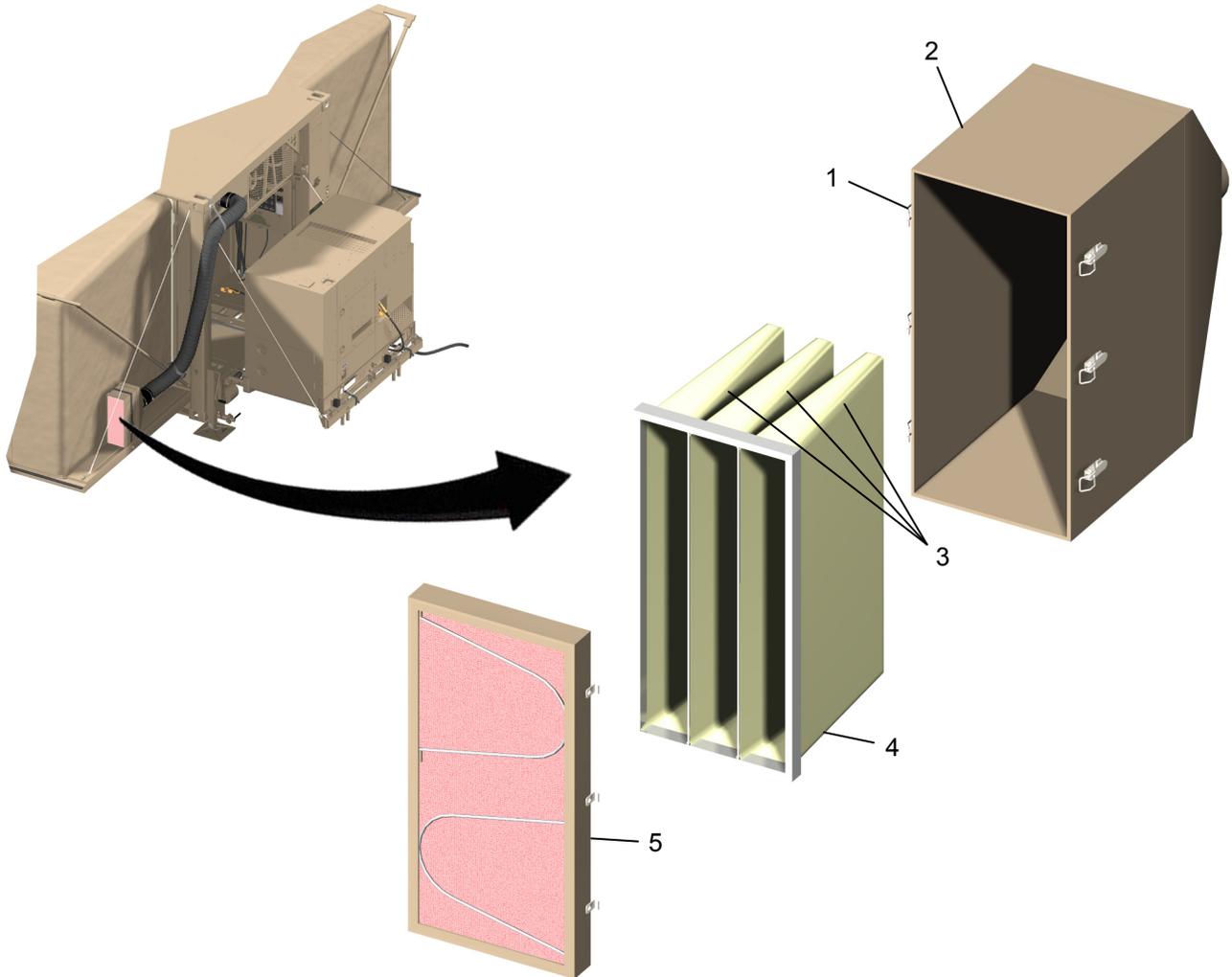


Figure 1. Inlet Fine Air Filter Replacement.

END OF WORK PACKAGE

**CREW MAINTENANCE
ENVIRONMENTAL CONTROL UNIT ASSEMBLY OR MA ENCLOSURE
LED LAMP
REPLACE**

INITIAL SETUP:**Materials Parts**

LED Lamp

Equipment Conditions

MIRCS Main Power Shut Off (WP 0010)

References

WP 0009

REPLACE**LED Lamp Removal**

1. Unthread lens (Figure 1, Item 3) from socket (Figure 1, Item 1).
2. Pull lamp (Figure 1, Item 2) out of lens (Figure 1, Item 3).

END OF TASK**LED Lamp Installation**

1. Insert new lamp (Figure 1, Item 2) into lens (Figure 1, Item 3).
2. Thread lens (Figure 1, Item 3) onto socket (Figure 1, Item 1).

END OF TASK**LED Lamp Checkout**

1. Perform SYSTEM START-UP (WP 0009).
2. Press-To-Test lens (Figure 1, Item 3) and verify lamp comes on.

END OF TASK

REPLACE-CONTINUED

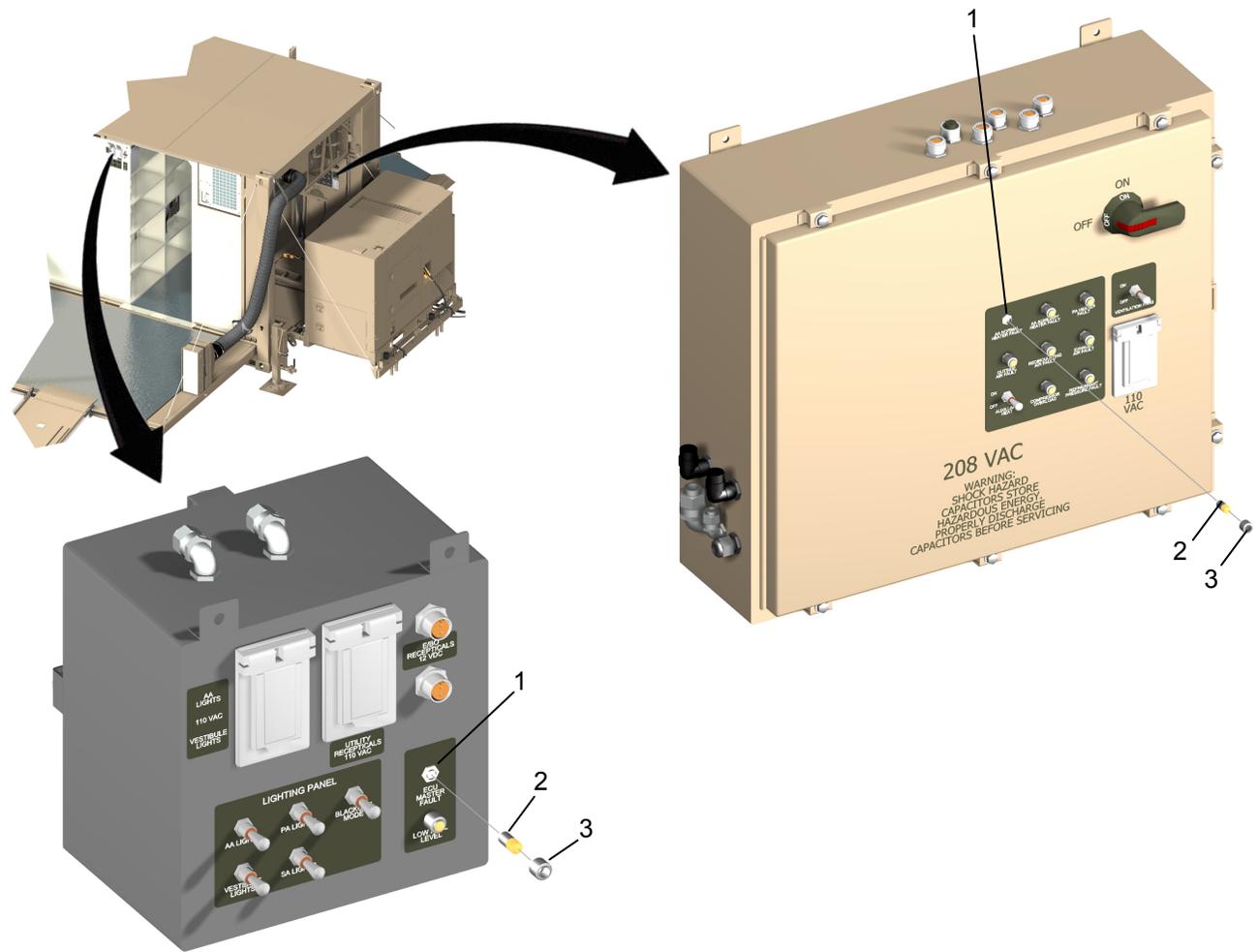


Figure 1. LED Lamp Replacement.

END OF WORK PACKAGE

**CREW MAINTENANCE
ENCLOSURE ASSEMBLY, RU CONTROL
LED LAMP
REPLACE**

INITIAL SETUP:**Materials Parts**

LED Lamp

Equipment Conditions

MIRCS Main Power Shut Off (WP 0010)

ReferencesWP 0009

REPLACE**LED Lamp Removal**

1. Unfasten two latches (Figure 1, Item 9) on enclosure (Figure 1, Item 1) and open door (Figure 1, Item 2).
2. Unthread lens (Figure 1, Item 4) from socket (Figure 1, Item 7).
3. Pull lamp (Figure 1, Item 5) out of lens (Figure 1, Item 4).

END OF TASK**LED Lamp Installation**

1. Insert new lamp (Figure 1, Item 5) into lens (Figure 1, Item 4).
2. Thread lens (Figure 1, Item 4) onto socket (Figure 1, Item 7)

END OF TASK**LED Lamp Checkout**

1. Turn on MIRCS main power (WP 0009).
2. Position FUEL LEVEL switch (Figure 1, Item 6) to ON.
3. Press-To-Test lens (Figure 1, Item 4) on low fuel level light (Figure 1, Item 7) and verify lamp comes on.
4. Position FUEL LEVEL switch (Figure 1, Item 6) to OFF.
5. Position RU controller I/O switch (Figure 1, Item 8) to I.
6. Press-To-Test lens (Figure 1, Item 4) on RU STARTING light (Figure 1, Item 3) and verify lamp comes on.
7. Position RU controller I/O switch (Figure 1, Item 8) to O.
8. Close door (Figure 1, Item 2) then secure to enclosure (Figure 1, Item 1) by fastening two latches (Figure 1, Item 9).

END OF TASK

REPLACE-CONTINUED

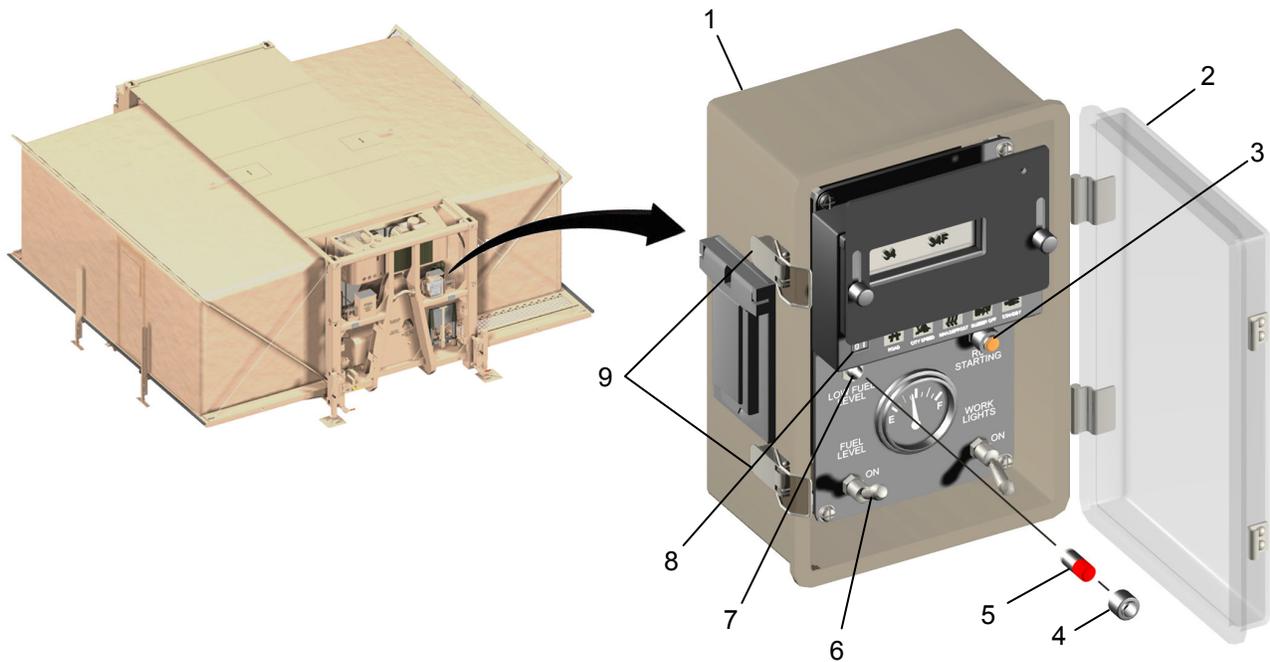


Figure 1. LED Lamp Replacement.

END OF WORK PACKAGE

**CREW MAINTENANCE
LIGHTING INSTALLATION
FLUORESCENT WORK LIGHT LAMP
REPLACE**

INITIAL SETUP:**Tools and Special Tools**

Screwdriver, Bit Set and Handle (WP 0038, Table 1, Item 10)

Materials Parts

Lamp, Fluorescent, 40 Watt

Equipment Conditions

Work Light Removed (WP 0012)

References

WP 0009

REPLACE**WARNING**

Fluorescent bulbs contain low levels of mercury. Broken bulbs present an additional hazard. When handling broken bulbs wear eye and hand protection. Do not use a vacuum or broom to clean-up shards of glass or chemical powder material. Dispose of bulbs or bulb materials IAW local regulations. Failure to follow this precaution can cause serious injury or illness. Seek medical attention if injury occurs.

Fluorescent Work Light Lamp Removal

1. Loosen and remove clamp (Figure 1, Item 1) from end cap at receptacle end (Figure 1, Item 2).
2. Slowly wiggle and pull end cap (Figure 1, Item 2) off of sleeve (Figure 1, Item 7).
3. Disconnect power cable wires (Figure 1, Item 9) from wire connector (Figure 1, Item 8) then completely remove end cap (Figure 1, Item 2).
4. Loosen and remove clamp (Figure 1, Item 5) from end cap at plug end (Figure 1, Item 6).
5. Slowly wiggle and pull end cap (Figure 1, Item 6) off of sleeve (Figure 1, Item 7).
6. Carefully pull lamp (Figure 1, Item 3) with attached wire connectors (Figure 1, Item 10) from sleeve (Figure 1, Item 7).
7. Detach wire connectors (Figure 1, Item 10) from lamp (Figure 1, Item 3).
8. Slide spacer (Figure 1, Item 4) off of lamp (Figure 1, Item 3).
9. Dispose of lamp (Figure 1, Item 3) IAW local regulations.

END OF TASK**Fluorescent Work Light Lamp Installation**

1. Slide spacer (Figure 1, Item 4) onto new lamp (Figure 1, Item 3) and position in lamp center.
2. Attach wire connectors (Figure 1, Item 10) onto lamp (Figure 1, Item 3).

REPLACE-CONTINUED**NOTE**

When sliding lamp back into sleeve make sure wires do not twist-up. **Do not** force lamp. If insertion becomes difficult withdraw lamp from sleeve, straighten wires, and reinsert.

3. Carefully slide lamp (Figure 1, Item 3) with attached wire connectors (Figure 1, Item 10) into sleeve (Figure 1, Item 7). Ensure wiring is on shaded side of sleeve.
4. Fit end cap at plug end (Figure 1, Item 6) over sleeve (Figure 1, Item 7) and wiggle until end cap is fully seated.
5. Install clamp (Figure 1, Item 5) to secure end cap (Figure 1, Item 6).

NOTE

The power cable wires are color-coded. The red stripe wire attaches to the black wire, the green stripe wire attaches to the green wire, and the yellow/black wire attaches to the white wire.

6. Connect power cable wires (Figure 1, Item 9) to wire connector (Figure 1, Item 8).
7. Fit end cap at receptacle (Figure 1, Item 2) over sleeve (Figure 1, Item 7) and wiggle until end cap is fully seated.
8. Install clamp (Figure 1, Item 1) to secure end cap (Figure 1, Item 2).

END OF TASK**Fluorescent Work Light Lamp Checkout**

1. Perform SYSTEM START-UP (WP 0009).
2. Plug work light into any unused 110-volt electrical outlet and verify light comes on.
3. Reinstall work light in location desired.

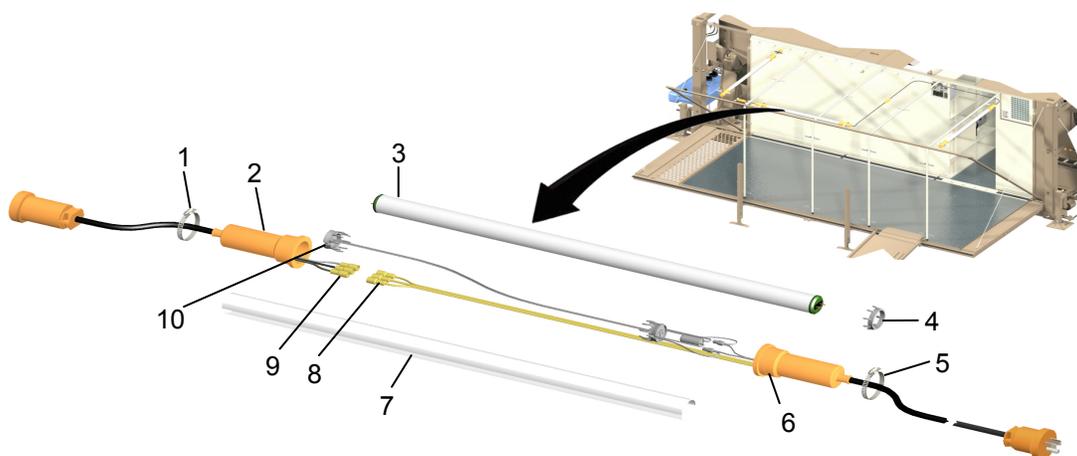
END OF TASK

Figure 1. Fluorescent Work Light Bulb Replacement.

END OF WORK PACKAGE

CHAPTER 6

**SUPPORTING INFORMATION
FOR
MOBILE INTEGRATED REMAINS
COLLECTION SYSTEM**

**CREW MAINTENANCE
MIRCS REFERENCES**

SCOPE

This work package lists all Forms, Field Manuals, and Technical Manuals referenced in this manual.

FORMS

Equipment Inspection and Maintenance Worksheet	DA Form 2404
Product Quality Deficiency Report	SF-368
Recommended Changes to Publications and Blank Forms	DA Form 5988E/DA Form 2028
Request for Establishment of a Publications Account	DA 12-R

FIELD MANUALS

Field Sanitation and Hygiene	FM 21-10
First Aid	FM 4-25.11
Lubrication Instructions for Cold Weather	FM 9-207
Multiservice Tactics, Techniques, and Procedures for Chemical, Biological, Radiological, and Nuclear Decontamination	FM 3-11.5
Multiservice Tactics, Techniques, and Procedures for Nuclear, Biological, and Chemical (NBC) Protection	FM 3-11.4
Quartermaster Principles	FM 10-1
Techniques and Procedures for Quartermaster Field Service Companies	FM 42-414
Theater of Operations Electrical Systems Chapter 8 Generators, Determining Grounding Systems	FM 5-424

TECHNICAL MANUALS

Destruction of Army Material to Prevent Enemy Use	TM 750-244-6
HEMTT-LHS Operators Manual	TM 9-2320-279-10-1
MIRCS Hand Receipt Manual	TM 10-4110-263-10HR
Tactical Dual-Purpose Breakbulk/Container Transport Semi-Trailer Operator, Unit, Direct Support, General Support Maintenance Manual, with RPSTL	TM 9-2330-326-14& P
Tactical Quiet Skid Mounted Generator Set Operator's Manual	TM 9-6115-643-10

ARMY REGULATIONS

Soldier Support in the Field	AR 700-135
The Army Logistics Readiness and Sustainability	AR 700-138

PAMPHLETS

The Army Maintenance Management System (TAMMS)	DA PAM 750-8
The Army Maintenance Management System-Aviation (TAMMS-A)	DA PAM 738-751
User's Guide for Army Publications and Forms	DA PAM 25-33

END OF WORK PACKAGE

**CREW MAINTENANCE
MIRCS COMPONENTS OF END ITEM (COEI) AND BASIC ISSUE ITEMS (BII) LISTS**

**COMPONENTS OF END ITEM (COEI) AND BASIC ISSUE ITEMS (BII) LISTS
INTRODUCTION****Scope**

This work package lists COEI and BII for the MIRCS to help you inventory items for safe and efficient operation of the equipment.

General

The COEI and BII information is divided into the following lists:

Components of End Item (COEI). This list is for information purposes only and is not authority to requisition replacements. These items are part of the MIRCS. As part of the end item, these items must be with the end item whenever it is issued or transferred between property accounts. Items of COEI are removed and separately packaged for transportation or shipment only when necessary. Illustrations are furnished to help you find and identify the items.

Basic Issue Items (BII). These essential items are required to place the MIRCS in operation, operate it, and to do emergency repairs. Although shipped separately packaged, BII must be with the MIRCS during operation and when it is transferred between property accounts. Listing these items is your authority to request/requisition them for replacement based on authorization of the end item by the TOE/MTOE. Illustrations are furnished to help you find and identify the items.

Explanation of Columns in the COEI List and BII List

Column (1) – Illus Number. Gives you the number of the item illustrated.

Column (2) – National Stock Number (NSN). Identifies the stock number of the item to be used for requisitioning purposes.

Column (3) – Description, Part Number/(CAGEC). Identifies the Federal item name (in all capital letters) followed by a minimum description when needed. The stowage location of COEI and BII is also included in this column. The last line below the description is the part number and the Commercial Government Entity Code (CAGEC) (in parentheses).

Column (4) – Usable On Code. When applicable, gives you a code if the item you need is not the same for different models of equipment.

Column (5) – Unit of Issue (U/I). Indicates the physical measurement or count of the item as issued per the National Stock Number shown in column (2).

Column (6) – Qty Rqr. Indicates the quantity required.

COMPONENTS OF END ITEM (COEI) LIST

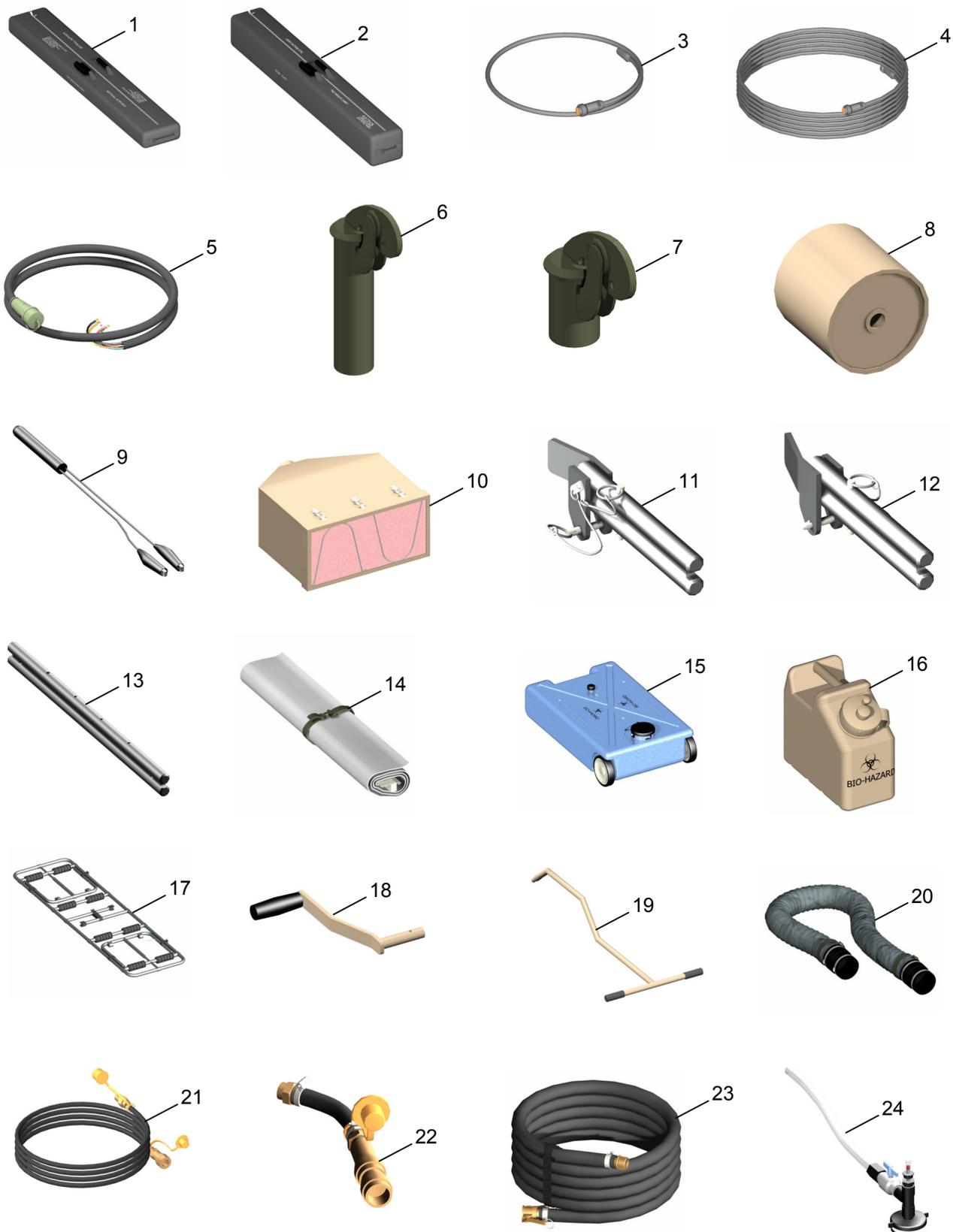


Figure 1. COEI List (Sheet 1 of 3).

COMPONENTS OF END ITEM (COEI) LIST-CONTINUED



Figure 1. COEI List (Sheet 2 of 3).

COMPONENTS OF END ITEM (COEI) LIST-CONTINUED

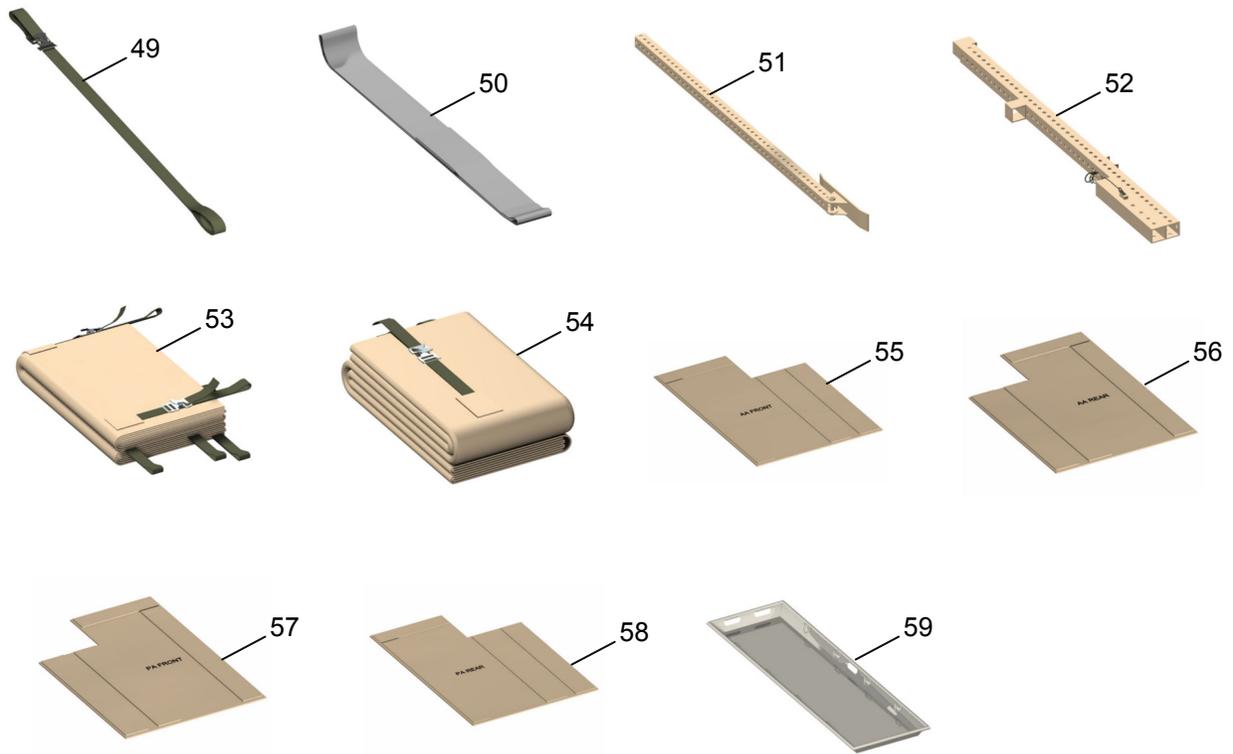


Figure 1. COEI List (Sheet 3 of 3).

Table 1. Components of End Item (COEI) List.

(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, PART NUMBER/(CAGEC)	(4) USABLE ON CODE	(5) UNIT OF ISSUE	(6) QTY RQR
1		BAG, TEXTILE CARRIER, SOFT WALL SUPPORTS, 891-29040, (4X630)		EA	1
2		BAG, TEXTILE, WORK LIGHTS, 891-29500, (4X630)		EA	1
3		CABLE ASSEMBLY, POWER, ELECTRICAL, EMERGENCY BLACKOUT LIGHTS, 3 FT, 112020A01F0302, (1EBJ4)		EA	1
4		CABLE ASSEMBLY, POWER, ELECTRICAL, EXTERNAL WATER PUMP, SPR6119-7, (1EBJ4)		EA	1
5		CABLE ASSEMBLY, SPECIAL PURPOSE, ELECTRICAL, BRANCHED, 8 FT, UEC76060-8C, (3FXU2)		EA	1
6		CAP ASSEMBLY, PROTECTIVE, MUFFLER- EXHAUST PIPE, LONG, 891-28010, (4X630)		EA	1
7		CAP ASSEMBLY, PROTECTIVE, MUFFLER- EXHAUST PIPE, SHORT, 891-28000, (4X630)		EA	1
8		CASTER, RIGID, CONTAINER ROLLER, 891-27000, (4X630)		EA	2
9		CLIP, ELECTRICAL, BLEED RESISTOR, CAPACITOR, DISCHARGE, 891-15900, (4X630)		EA	1
10		COLLECTOR, DUST, ECU INLET AIR, 891-14650, (4X630)		EA	1
11		CONNECTING LINK, RIGID, RAMP, LH, 891-22200, (4X630)		EA	1
12		CONNECTING LINK, RIGID, RAMP, RH, 891-22210, (4X630)		EA	1

Table 1. Components of End Item (COEI) List-Continued.

(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, PART NUMBER/(CAGEC)	(4) USABLE ON CODE	(5) UNIT OF ISSUE	(6) QTY RQR
13		CONNECTING LINK, RIGID, RLD/RAMP, 891-22455, (4X630)		EA	4
14		CURTAIN, DOORWAY, W/THRESHOLD, STORAGE ACCESS, 891-29100, (4X630)		EA	1
15		DISPOSAL CONTAINER, BIOHAZARDOUS MATERIALS, 891-26000, (4X630)		EA	4
16		DISPOSAL CONTAINER, BIOHAZARDOUS MATERIALS, 2-1/2 GALLON, 891-26100-1 (TAN) or -2 (GREEN), (4X630)		EA	2
17		EXTENSION, PLATFORM, MOBILE, HUMAN REMAINS PROCESSING, 891-24500, (4X630)		EA	1
18		HANDLE, CRANK, PLATFORM LOCK/WINCH, 891-23020, (4X630)		EA	1
19		HANDLE, MANUAL, PLATFORM PUMP, 891-23030, (4X630)		EA	1
20		HOSE ASSEMBLY, AIR DUCT, 891-14660, (4X630)		EA	1
21		HOSE ASSEMBLY, NON- METALLIC, FUEL SUPPLY, 10 FT, 891-20039, (4X630)		EA	1
22		HOSE ASSEMBLY, NON-METALLIC, GENERATOR ADAPTER, 863-87120, (4X630)		EA	1
23		HOSE ASSEMBLY, NON-METALLIC, PUMP SUPPLY, 20 FT, 891-20035, (4X630)		EA	1
24		HOSE ASSEMBLY, NON-METALLIC, WASTE WATER, MAIN DRAIN, 891-20020, (4X630)		EA	1

Table 1. Components of End Item (COEI) List-Continued.

(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, PART NUMBER/(CAGEC)	(4) USABLE ON CODE	(5) UNIT OF ISSUE	(6) QTY RQR
25		HOSE ASSEMBLY, NON-METALLIC, WASTE WATER, PLATFORM DRAIN, 891-20025, (4X630)		EA	1
26		HOSE ASSEMBLY, NON-METALLIC, WATER SUPPLY, 20 FT, 891-20030, (4X630)		EA	1
27		JACK, LEVELING-SUPPORT, LH, 891-22510, (4X630)		EA	2
28		JACK, LEVELING-SUPPORT, RH, 891-22560, (4X630)		EA	2
29		LIFTING DEVICE ASSEMBLY, HUMAN REMAINS, 891-22054, (4X630)		EA	1
30		LIGHT UNIT, PORTABLE, EMERGENCY/BLACKOUT, 891-20050, (4X630)		EA	4
31		LIGHT UNIT, PORTABLE, FLUORESCENT, 20 WATT, 2005-T12ABS, (15664)		EA	1
32		LIGHT UNIT, PORTABLE, FLUORESCENT, 40 WATT, 4005-T12ADL, (15664)		EA	7
33		NETTING, TEXTILE, SHELVING UNIT, 891-29000, (4X630)		EA	1
34		NETTING, TEXTILE, SUPPLY AREA, 891-29010, (4X630)		EA	1
35		PARTITION, TENT, AA SOFT WALL, 891-11141, (4X630)		EA	1
36		PLATE, LEVELING JACK, FRONT LEFT/REAR RIGHT, 891-22542, (4X630)		EA	2
37		PLATE, LEVELING JACK, FRONT RIGHT/REAR LEFT, 891-22540, (4X630)		EA	2

Table 1. Components of End Item (COEI) List-Continued.

(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, PART NUMBER/(CAGEC)	(4) USABLE ON CODE	(5) UNIT OF ISSUE	(6) QTY RQR
38		PLATFORM, MOBILE, HUMAN REMAINS PROCESSING, 891-24000, (4X630)		EA	2
39		POLE, TENT, AA PARTITION THRESHOLD, 891-11145, (4X630)		EA	1
40		POLE, TENT, SOFT WALL, HORIZONTAL, 891-29020, (4X630)		EA	9
41		POLE, TENT, SOFT WALL, VERTICAL, 891-29030, (4X630)		EA	9
42		POWER STRIP, ELECTRICAL OUTLET, 7DG-515-E14D-WR, (15664)		EA	2
43		PUMP UNIT, CENTRIFUGAL, EXTERNAL WATER SUPPLY, 891-20060, (4X630)		EA	1
44		RACK, STORAGE, SMALL ARMS, 891-29200, (4X630)		EA	2
45		RAMP, MOBILE, CONTAINER LOADING, BOTTOM, 891-22090, (4X630)		EA	1
46		RAMP, MOBILE, CONTAINER LOADING, TOP, 891-22070, (4X630)		EA	1
47		SHELTER, EXPANDABLE, TEMPORARY REMAINS HOLDING, 038-3037, (TAN) or 038-3036 (GREEN), (16835)		EA	4
48		STRAP, WEBBING, 2-1/2 GALLON WASTE CONTAINER, 891-26110, (4X630)		EA	1
49		STRAP, WEBBING, GENERATOR, 891-26105, (4X630)		EA	2
50		STRAP, WEBBING, REMAINS RESTRAINT, 891-24520, (4X630)		EA	64

Table 1. Components of End Item (COEI) List-Continued.

(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, PART NUMBER/(CAGEC)	(4) USABLE ON CODE	(5) UNIT OF ISSUE	(6) QTY RQR
51		SUPPORT PLATFORM, JACK, LOWER, 891-22590, (4X630)		EA	4
52		SUPPORT PLATFORM, JACK, UPPER, 891-22580, (4X630)		EA	4
53		TARPAULIN, ECU COVER, 891-29610-1 (TAN) or -2 (GREEN), (4X630)		EA	1
54		TARPAULIN, RU COVER, 891-29600-1 (TAN) or -2 (GREEN), (4X630)		EA	1
55		TENT LINER, FLAP, EXTERIOR, AA FRONT, 891-11143-1 (TAN) or -2 (GREEN), (4X630)		EA	1
56		TENT LINER, FLAP, EXTERIOR, AA REAR, 891-11144-1 (TAN) or -2 (GREEN), (4X630)		EA	1
57		TENT LINER, FLAP, EXTERIOR, PA FRONT, 891-11138-1 (TAN) or -2 (GREEN), (4X630)		EA	1
58		TENT LINER, FLAP, EXTERIOR, PA REAR, 891-11139-1 (TAN) or -2 (GREEN), (4X630)		EA	1
59		TRAY, HUMAN REMAINS, PROCESSING 891-24600, (4X630)		EA	16

BASIC ISSUE ITEMS LIST



Figure 2. BII List.

Table 2. Basic Issue Items (BI) List.

(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, PART NUMBER/(CAGEC)	(4) USABLE ON CODE	(5) UNIT OF ISSUE	(6) QTY RQR
1		CABLE ASSEMBLY, POWER, ELECTRICAL, 4 FT, 29930, (NONE)		EA	2
2	7105-00-269-8463	CHAIR, FOLDING, (GSA)		EA	2
3		EXTINGUISHER, FIRE, ABC 25614, (NONE)		EA	1
4		FASTENER TAPE, HOOK AND PILE, 24 LG, 6605K56, (39428)		EA	12
5	7240-00-826-4099	FUNNEL, 4383T2, (39428)		EA	1
6	4520-00-555-8696	HEATER, SPACE, ELECTRIC, PORTABLE, 1500 WATT, UL 1278, (81345)		EA	4
7		HEATING ELEMENT, ELECTRICAL, NON IMMERSION TYPE, 24 FT LONG, 3580K28, (39428)		EA	2
8		HOLDER, BAG, TRASH AND GARBAGE, G45486, (NONE)		EA	2
9	5440-01-506-2927	LADDER, EXTENSION, 8148T7, (39428)		EA	1
10	5120-01-535-7245	SCREWDRIVER, BIT SET AND HANDLE, (GSA)		EA	1
11	5120-01-532-3477	SCREWDRIVER, JEWELERS, SWIVEL KNOB, 1/8" WIDE, 52985A43, (39428)		EA	1
12		TABLE, FOLDING, (GSA)		EA	1
13		TM 10-4110-263-10, OPERATORS MANUAL FOR MIRCS		EA	1
14		TM 10-4110-263-23, FIELD MAINTENANCE MANUAL FOR MIRCS		EA	1

Table 2. Basic Issue Items (BII) List-Continued.

(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, PART NUMBER/(CAGEC)	(4) USABLE ON CODE	(5) UNIT OF ISSUE	(6) QTY RQR
15		TM 10-4110-263-23P, REPAIR PARTS AND SPECIAL TOOLS LIST (RPSTL) FOR MIRCS		EA	1
16	5120-00-264-3795	WRENCH, ADJUSTABLE, 6", B107.8, (05047)		EA	1

END OF WORK PACKAGE

**CREW MAINTENANCE
ADDITIONAL AUTHORIZATION LIST (AAL)**

INTRODUCTION**Scope**

This work package lists additional items you are authorized for the support of the MIRCS

General

This list identifies items that do not have to accompany the MIRCS and that do not have to be turned in with it. These items are authorized to you by CTA, MTOE, TDA, or JTA.

Explanation Of Columns In The AAL

Column (1) – National Stock Number (NSN). Identifies the stock number of the item to be used for requisitioning purposes.

Column (2) – Description, Part Number/(CAGEC). Identifies the Federal item name (in all capital letters), followed by a minimum description when needed. The last line below the description is the part number and the Commercial and Government Entity Code (CAGEC) (in parentheses).

Column (3) – Usable On Code. When applicable, gives you a code if the item you need is not the same for different models of equipment.

Column (4) – Unit of Issue (U/I) Indicates the physical measurement or count of the item as issued per the National Stock Number shown in column (1).

Column (5) – Qty Recm. Indicates the quantity recommended.

Table 1. Additional Authorization List.

(1) NATIONAL STOCK NUMBER	(2) DESCRIPTION, PART NUMBER, AND (CAGEC)	(3) USABLE ON CODE	(4) U/I	(5) QTY RECM
6150-01-247-4781	CABLE ASSEMBLY, 60 AMP, 50 FT, 13226E7023, (97403)		EA	1
4240-01-234-1796	FOUNTAIN, EYE AND FACE WASH, S19- 921, (08380)		EA	1

END OF WORK PACKAGE

**CREW MAINTENANCE
EXPENDABLE AND DURABLE ITEMS LIST**

EXPENDABLE AND DURABLE ITEMS LIST

INTRODUCTION

Scope

This work package lists expendable and durable items that you will need to operate and maintain the MIRCS. This list is for information only and is not authority to requisition the listed items. These items are authorized to you by CTA 50-970, Expendable, Durable Items (Except Medical, Class V Repair Parts, and Heraldic Items), CTA 50-909, Field and Garrison Furnishings and Equipment or CTA 8-100, Army Medical Department Expendable, Durable Items.

Explanation of Columns in the Expendable, Durable Items List

Column (1) - Item Number. This number is assigned to the entry in the list and is referenced in the narrative instructions to identify the item (e.g., Grease, Ball and Roller, General Purpose (WP 00XX, Item X).

Column (2) - Level. This column indicates the lowest level of maintenance that requires the listed item (C=Operator/Crew).

Column (3) - National Stock Number (NSN). This is the NSN assigned to the item which you can use to requisition it.

Column (4) - Item Name, Description, Part Number/(CAGEC). This column provides the other information you need to identify the item. The last line below the description is the part number and the Commercial and Government Entity Code (CAGEC)(in parentheses).

Column (5) - U/I. Unit of Issue (U/I) code shows the physical measurement or count of an item, such as gallon, dozen, gross, etc.

Table 1. Expendable and Durable Items List.

(1) ITEM NO.	(2) LEVEL	(3) NATIONAL STOCK NUMBER (NSN)	(4) ITEM NAME, DESCRIPTION, PART NUMBER/(CAGEC)	(5) U/I
1	C	8030-01-311-6473	ANTI-SIEZE COMPOUND, 80078 (1PBQ8)	BX100
2	C	8415-00-222-8074	APRON, PLASTIC, DISPOSIBLE, 28" X 46", DA2846, (80244)	CS
3	C		BAG, BIOHAZAROUS WASTE, 33" X 40", 33-GALLON41-8656C, (1K527)	GAL
4	C		BLEACH, CHLORINE, (GSA)	EA
5	C		BOTTLE, EYE WASH SALINE, 16 OZ, 32-000454, (00236)	BT
6	C		COOLANT, PRE-DILUTED, 50, 50 MIXTURE, PSA053, (0U3B1)	GAL

Table 1. Expendable and Durable Items List-Continued.

(1) ITEM NO.	(2) LEVEL	(3) NATIONAL STOCK NUMBER (NSN)	(4) ITEM NAME, DESCRIPTION, PART NUMBER/(CAGEC)	(5) U/I
7	C		FILTER, ELEMENT, AIR CONDITIONING, 12 X 24 X1, MERV 7, DP40-110, (29296)	EA
8	C		FILTER, POCKET, 24 X 12 X 14, MERV 12, CP9-B-3-14, (29296)	EA
9	C		FILTER, ROUGHING, 891-14657, (4X630)	EA
10	C	8415-01-492-0178	GLOVE, DISPOSABLE, NITRILE, 4MIL, POWDER FREE, LG, 700PF, (80244)	BX100
11	C	8415-01-492-0179	GLOVE, DISPOSABLE, NITRILE, 4MIL, POWDER FREE, MD, 700PF, (80244)	BX100
12	C	8415-01-492-0176	GLOVE, DISPOSABLE, NITRILE, 4MIL, POWDER FREE, SM, 700PF, (80244)	BX100
13	C	4240-00-052-3776	GOGGLES, INDUSTRIAL, ANSI Z87.1, (80204)	PR
14	C	9150-01-496-4919	GREASE, BALL AND ROLLER, GENERAL PURPOSE LITHIUM, COMPLEX EP 863-000264 (4X630),	TU
15	C		OIL, SYNTHETIC, MOBIL DELVAC 1300, 15W-40, 976685, (1ZA46)	GAL
16	C	7920-00-205-3570	RAG, WIPING, UNDYED COTTON (80244)	BE
17	C	4240-01-463-5449	RESPIRATOR, PARTICULATE, 8210, (50378)	BX20
18	C	8520-01-378-3090	SKIN CLEANSER, 1000ML, 9112-12, (02905)	BX

END OF WORK PACKAGE

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