

**FPU® SYSTEMS OPERATION MANUAL
(INCLUDING REPAIR PARTS & SPECIAL TOOL LIST)
BOH Modular Workshop Container (MWC)
BOH FPU Field Pack-up Units**

CHAPTER 5

UNIT MAINTENANCE INSTRUCTIONS

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UNIT MAINTENANCE INSTRUCTIONS

FPU® SYSTEMS OPERATION MANUAL (INCLUDING REPAIR PARTS & SPECIAL TOOL LIST) BOH Modular Workshop Container (MWC) BOH FPU Field Pack-up Units

MWC Exterior Repair

INITIAL SETUP OR STORAGE:

Material/Parts

Lubricant (review Table 1 & 2 Lubrication in WP 0013 00)

Personnel Required

One

Tools

Wrenches 15/16" and two 9/16" open end

References

Chapter 2 0005 00-1 to 0005 00-4

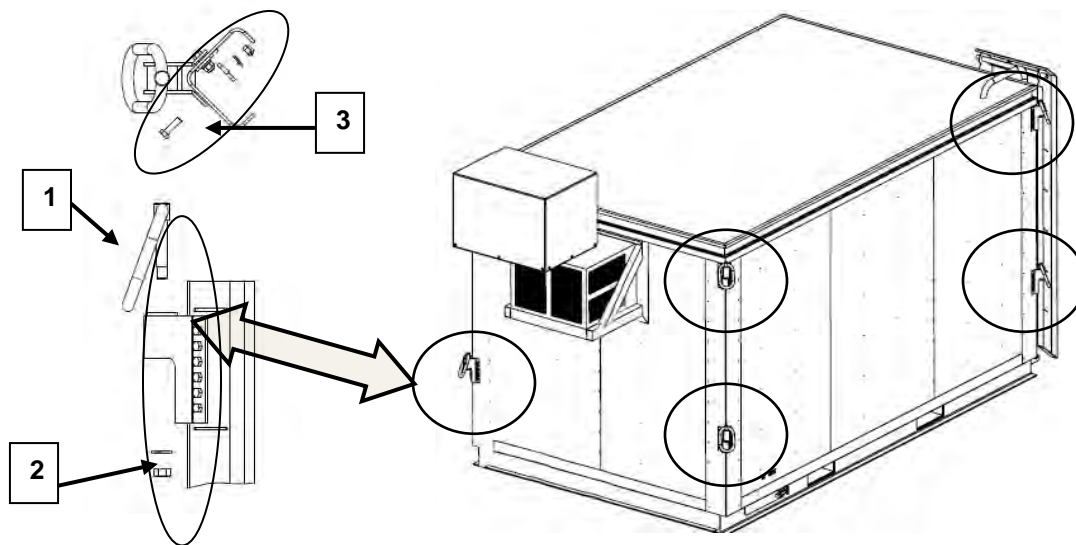
Equipment Condition

MWC on the ground Set-up or storage

Inspect MWC Exterior

Tie-Down Rings

Before positioning the MWC, while the MWC is on the ground, visually inspect all eight corner tie-down rings for damaged, loose or missing hardware on all four corners. Review chapter 2 pages 0005 00-1 to 00-2.



1. Inspect for missing or loose hardware (1). Replace any damaged tie-down rings.
2. Visually inspect the ring mount nuts (2) and check the eight ring hardware (1) with a 9/16" wrench.

NOTE

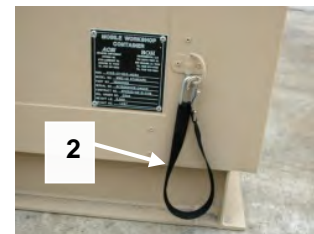
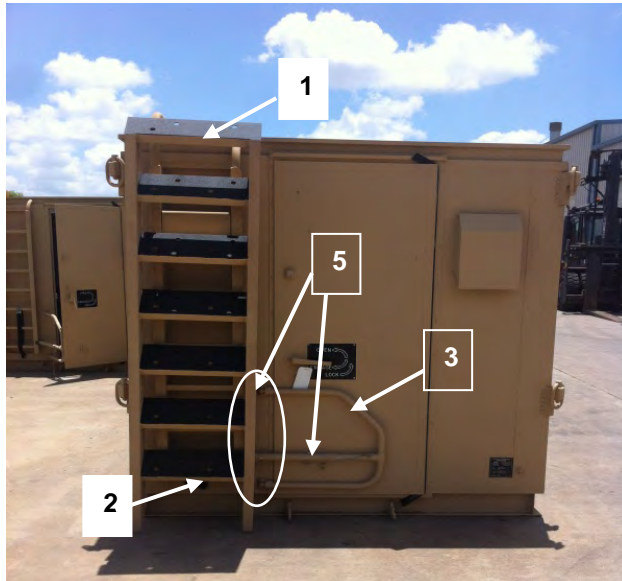
Cracked paint would indicate possible loose bolts.

SERVICE

3. Report loose ring mount bolts (3) to unit maintenance.

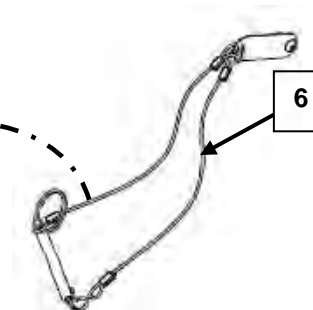
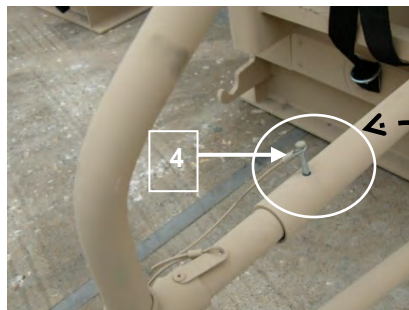
Stairway

1. Check for damaged or missing stairway (1), see chapter 2 page 0005 00-5.
2. Check for frayed or missing retaining straps (2).
3. Check for damage to the stairway handrail (3).



Hand Rail

1. Check handrail pins and lanyard (4), see chapter 2 page 0005 00-6.



CAUTION

Always return and secure the stairway handrail to the stowed position with the securing pins when the MWC is being transported or stored.

SERVICE

2. Lubricate three joints (5) of the handrail to ensure it swings smoothly.
3. Replace missing pin and lanyard (6). Tool required: crimping pliers.

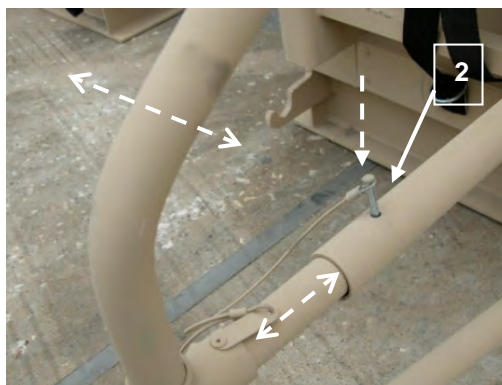
MWC Door

1. The stairway handrail (1) must be swung to the fully out position and secured with the pin (2) before opening the door, see chapter 2 page 0005 00-6.
2. Retain the door with the strap (3) at the lower corner.

**STAIRWAY HAS BEEN REMOVED****WARNING**

Failure to secure the handrail (1) with the pin (2) will allow it to swing and cause injury from a possible fall from the stairway, or trip hazard.

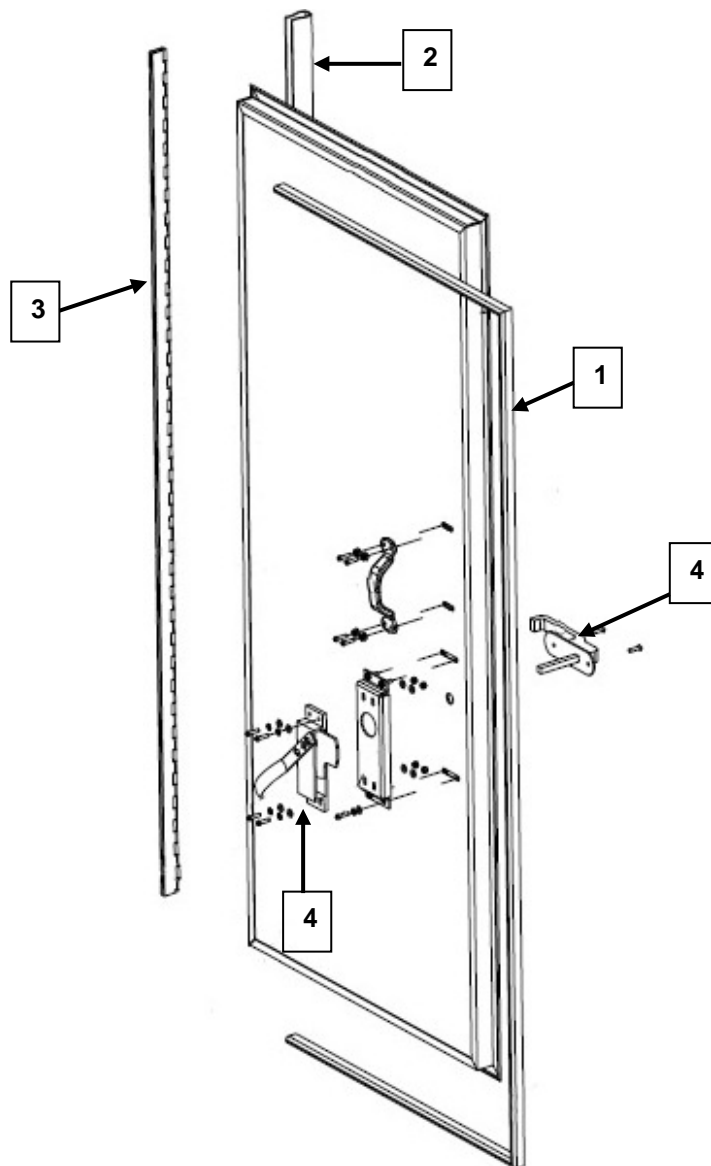
See chapter 2 page 0005 00-7



OLDER MWC Door

For parts support See chapter 6 pages 0023 00-9 and 0023 00-10.

1. Inspect the door seal for cracks, tears and damage (1).
2. Inspect the exterior hinge gasket for cracks, tears and damage (2).
3. Inspect the door hinge (3).
4. Inspect door handle mechanisms (4) for freedom of movement.



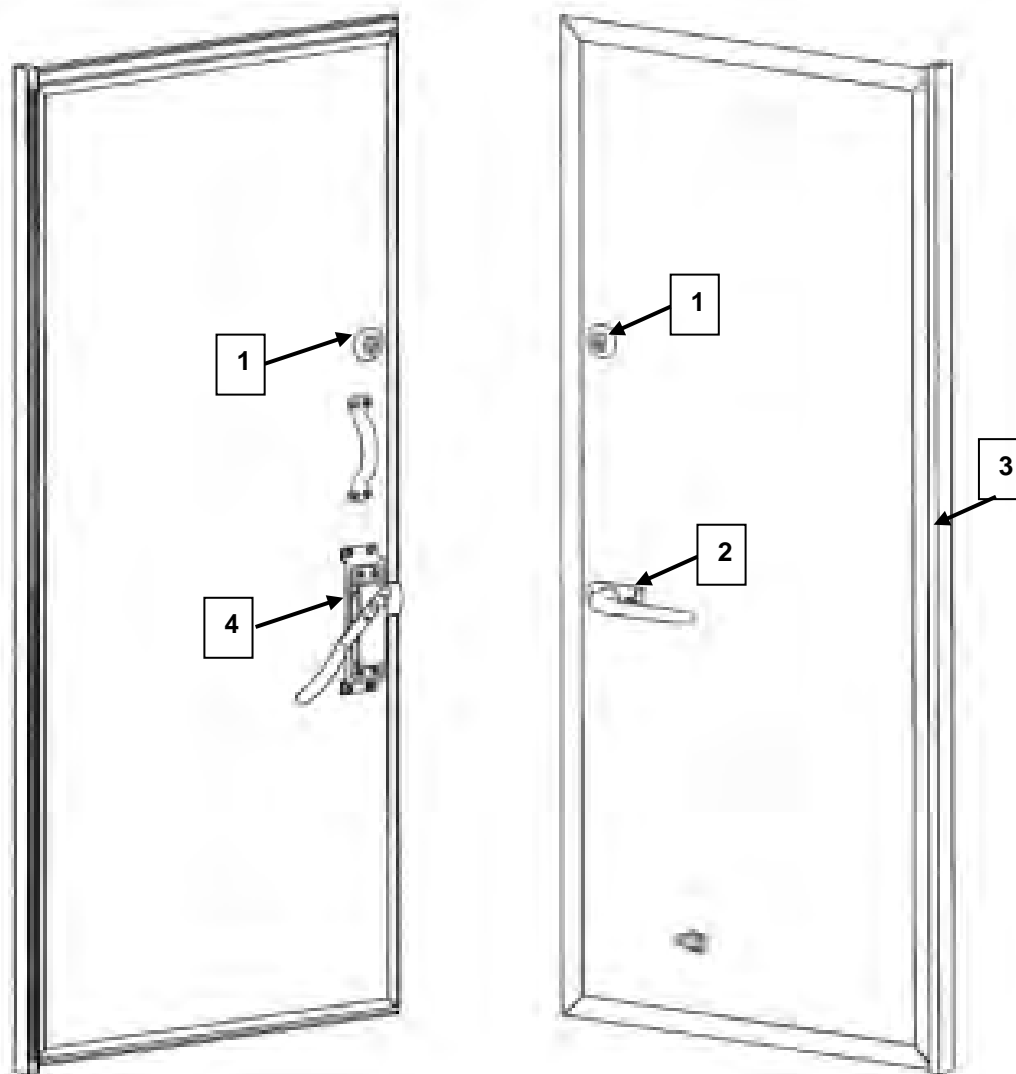
SERVICE

1. Clean and lubricate door seals. See chapter 4 page 0013 00 Table 1 & 2.
2. Clean and lubricate door mechanisms. See chapter 2 page 0013 00 Table 1 & 2.
3. Lubricate the door hinge. See chapter 2 page 0013 00 Table 1 & 2.

New Door Beginning with Serial Number 15002028-04207

For Parts Support, see chapter 6 pages 0023 00-11 and 0023 00-12.

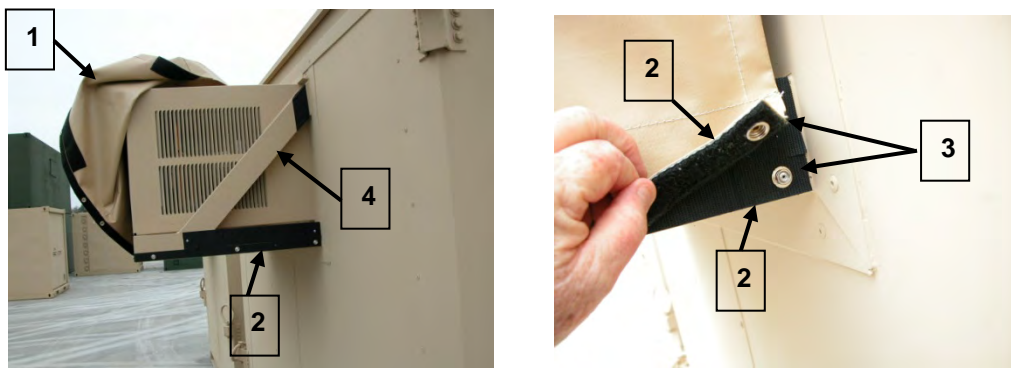
The new door has a dead bolt with key lock (1) and no longer has a key lock on the exterior handle (2).

**SERVICE**

1. Clean and lubricate door seals (3). See chapter 4 page 0013 00 Table 1 & 2.
2. Clean and lubricate door mechanisms (4). See chapter 4 page 0013 00 Table 1 & 2.
3. Lubricate the door hinge. See chapter 4 page 0013 00 Table 1 & 2.

HVAC Cover

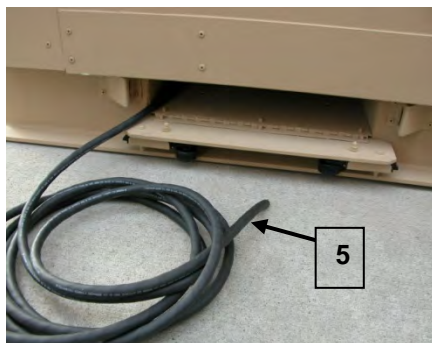
1. Check for missing or damaged vinyl HVAC cover (1). See page chapter 0005 00-8
2. Inspect hook and pile fabric (2) for damage or foreign debris.
3. Inspect snaps (3) for damage, ensure the snaps mate properly.



4. Wash the hook and pile fabric (2) with soap and rinse with water when needed.
5. Notify maintenance of any missing or damaged snaps (3).
6. Notify maintenance of damage to the HVAC or mounting frame (4).

Exterior Electrical power cables

1. Ensure the external electrical single phase 240 VAC and 12 VDC cables (5) connection have been made by a certified electrician and properly connected to the power sources.



WARNING



Ensure HVAC circuit breakers and the power source is switched off before making electrical connections or electrical repairs. Any and all electrical repair of the single phase 240 VAC, 12 VDC or 120 VAC must be made by a certified electrician Army MOS 21R.

END OF WORK PACKAGE

UNIT MAINTENANCE INSTRUCTIONS

FPU® SYSTEMS OPERATION MANUAL (INCLUDING REPAIR PARTS & SPECIAL TOOL LIST) BOH Modular Workshop Container (MWC) BOH FPU Field Pack-up Units

MWC Interior Repair

INITIAL PREOPERATION:

Material/Parts

Lubricant (see Table 1 & 2 Lubrication in WP 0013 00)

Personnel Required

Two

Tools

9/16" Open End Wrench

References

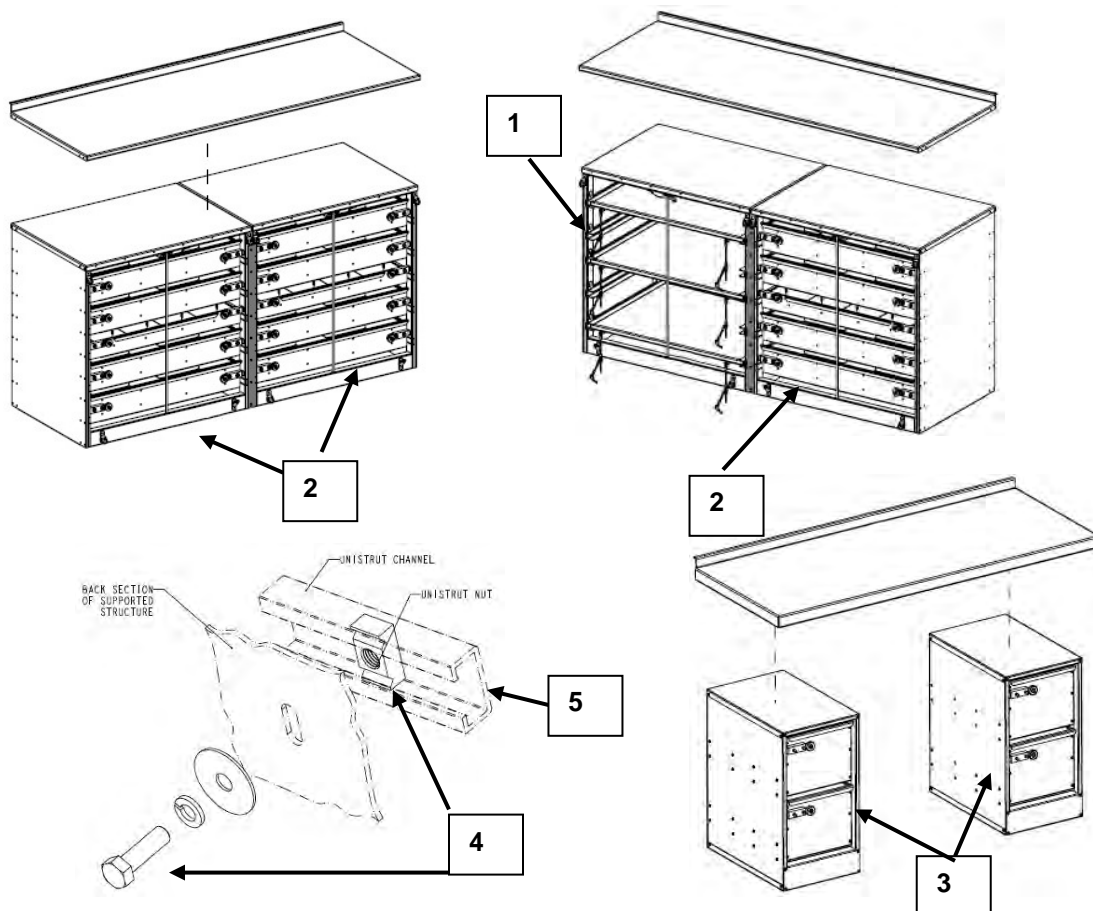
Chapter 2 WP 0006 00

Equipment Condition

MWC Preoperational

Lower Cabinets Left and Right Side

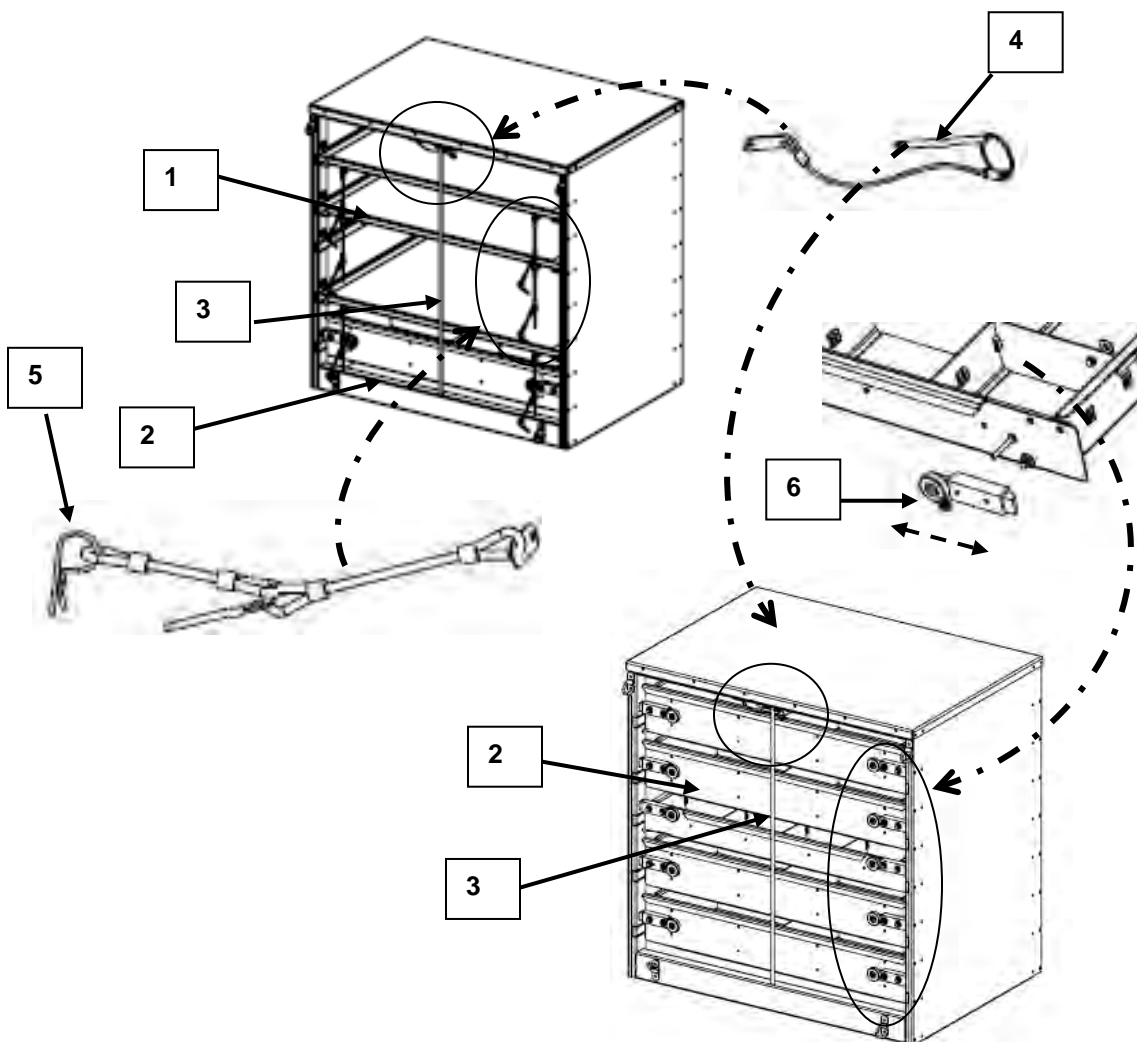
The cabinetry in the MWC is of unitized construction. There is space available for adding additional cabinets or other accessories on the left side at the rear of the workshop. There is a shelf cabinet (1) and a drawer cabinet (2) and a two desk file drawer unit (3) on the left side. All units are retained by bolts and Unistrut nuts (4) and channels (5) in the floor and wall.



Shelves and Drawers

Shelf Units

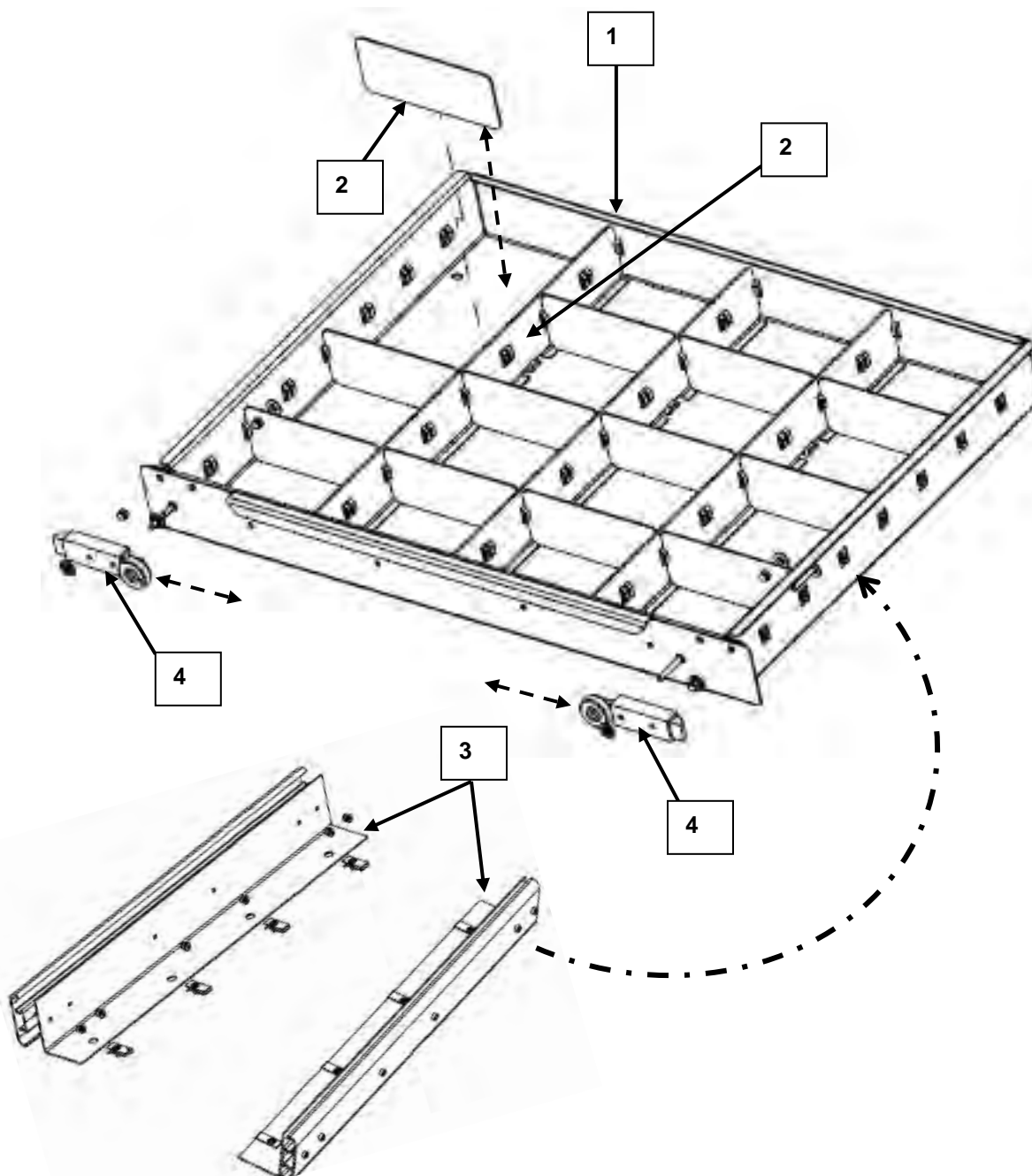
Cabinet shelves (1) can be repositioned within the cabinet to accommodate bulk type material of various sizes and can be configured with drawers (2) within the cabinet. The shelves and drawer as a group are retained by a center restraint bar (3) with pin and lanyard (4) and each shelf (1) is retained by two hairpins with lanyards (5). Drawers are retained with slam latches (6).



Cabinet Drawers

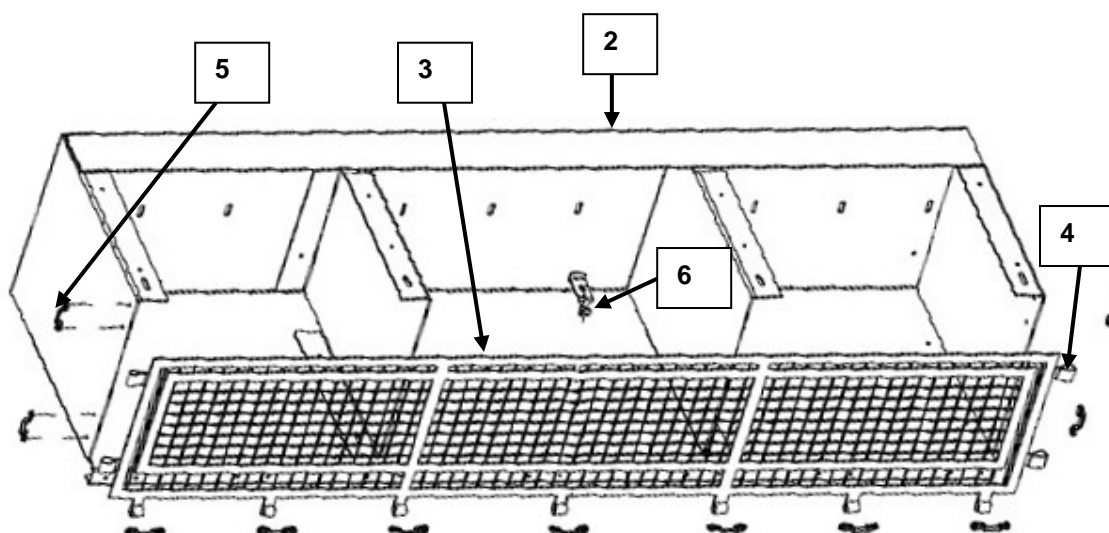
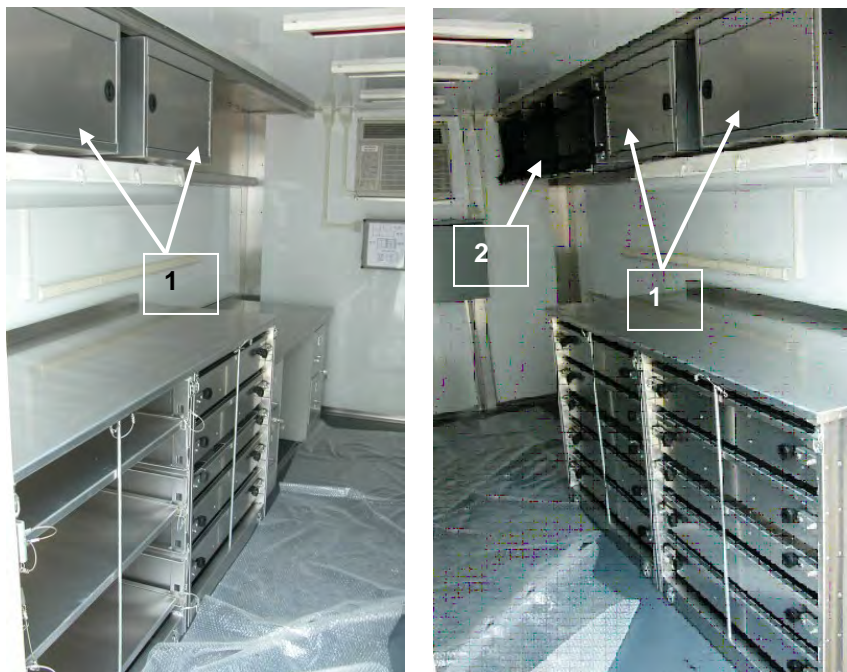
Cabinet Drawers (1) come in 6 and 4 inch depth sizes with matching drawer segment dividers (2) to arrange the drawers to storage needs. The drawers (1) have bearing slides (3) for ease of operation and spring loaded slam latches (4) to retain the drawers.

1. Remove the pin and drawer center restraint bar.
2. Pull the left and right slam latches (4) toward the center while pulling the drawer (1) outward.
3. Arrange the dividers (2) to storage needs.



Overhead Cabinets and Shelves

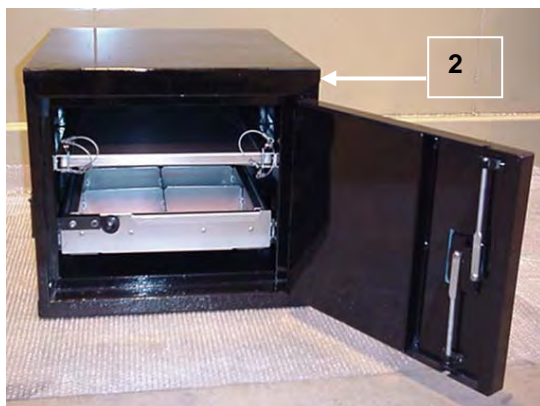
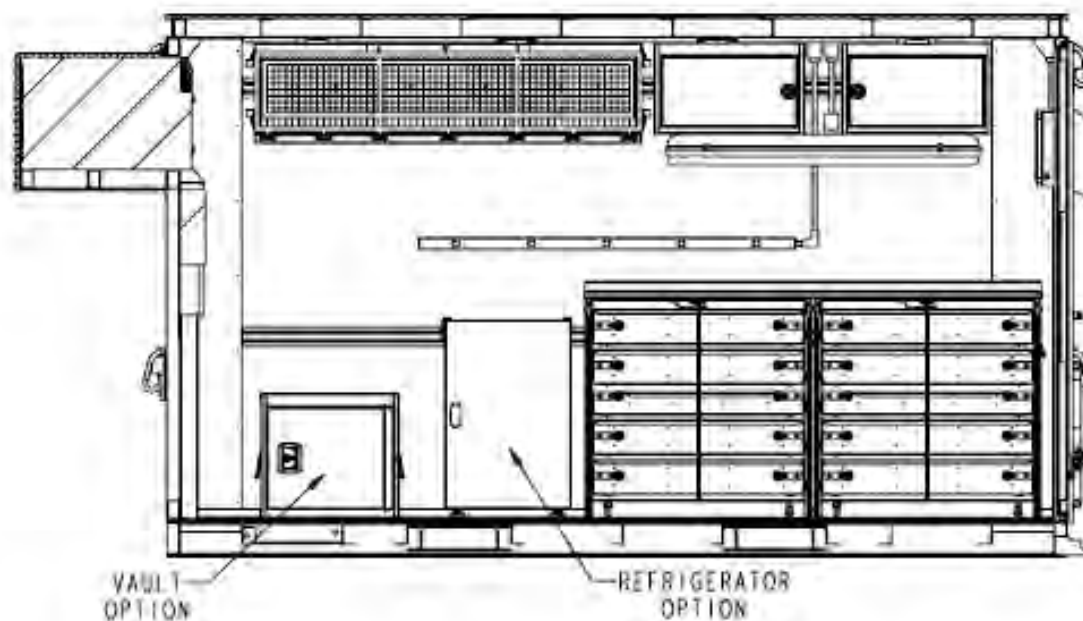
The MWC has additional cabinets (1) and book shelves (2) above the work space for storage of documents and other material. Book shelves (2) have a net (3), to retain material while the MWC is moving. The net (3) is attached by eleven straps (4), footman loops (5) and a center net retaining hook (6).



Optional Equipment

There are two optional components, a refrigerator (1) and a vault (2), to secure documents, is available for the MWC.

CUTAWAY VIEW OF RIGHT SIDE



END OF WORK PACKAGE

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UNIT MAINTENANCE INSTRUCTIONS

FPU® SYSTEMS OPERATION MANUAL (INCLUDING REPAIR PARTS & SPECIAL TOOL LIST) BOH Modular Workshop Container (MWC) BOH FPU Field Pack-up Units

MWC Electrical System Repair

INITIAL PREOPERATION:

Materiel/Parts

Lubricant (see Table 1 & 2 Lubrication in WP 0013 00)

Personnel Required

One

Tools

The LMTV tie-down device P/N: 50353-050 NSN: 8145-01-509-0245

References

WP 0005 00 and 0006 00

Equipment Condition

MWC Preoperational

INSPECT, SERVICE

Inspect MWC Interior

With the MWC loaded onto the transport vehicle and secured with proper tie-down device (1) (See page WP 0005 00-2 and 00-3). Properly set the stairway (2) and swing out and secure the handrail (3) (See page WP 005 00-4 to 00-7) and enter the MWC (See page WP 0005 00-9).



1. Make the proper electrical connections to the power sources.
2. With the power source activated, switch on the main circuit breaker (See chapter 2 page 006 00-2).

NOTE

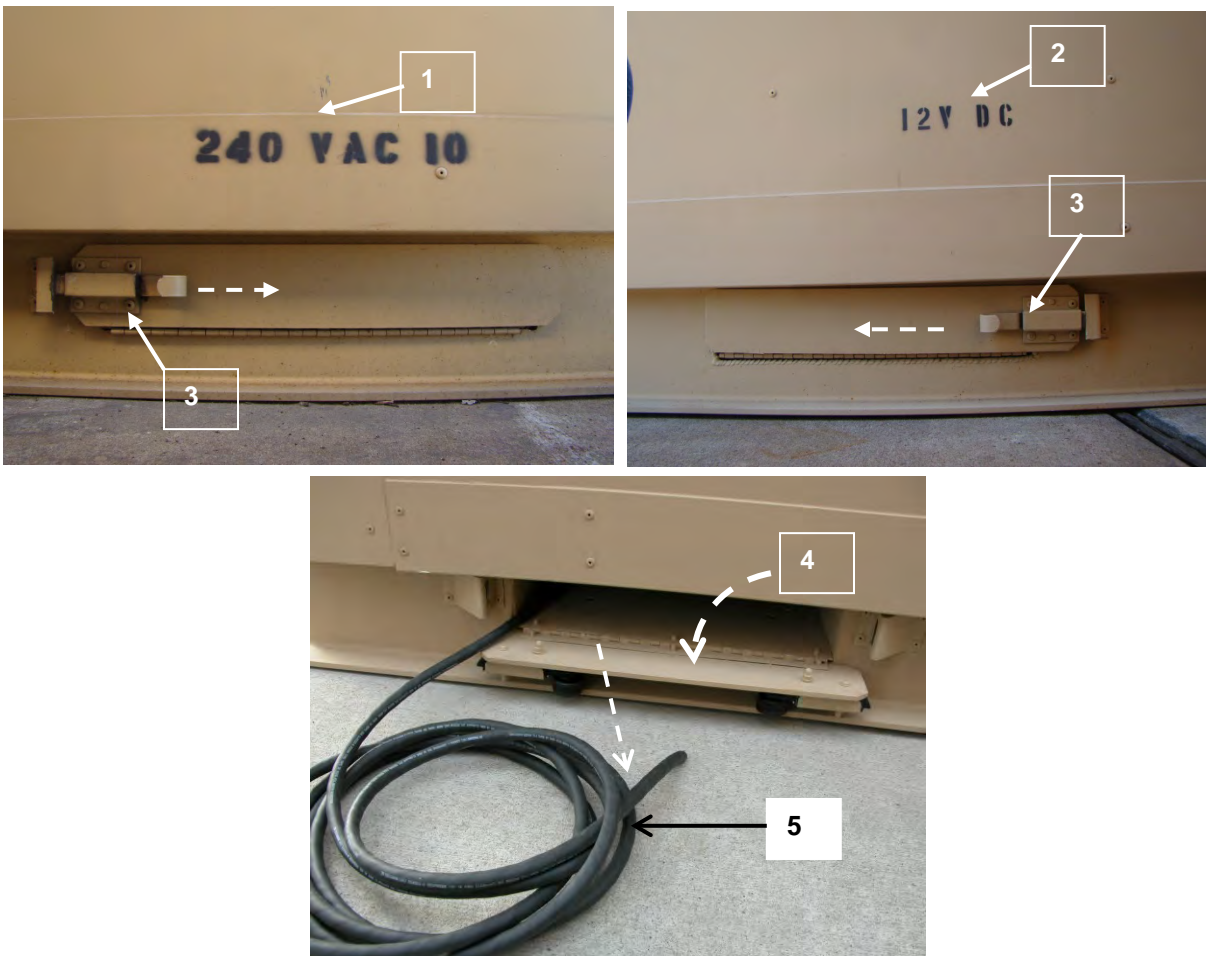
There are various engineering changes to the MWC.
New Overhead Lighting System, see this chapter pages 0019 00-6 and 7.

Exterior Electrical power cables

1. Make the proper electrical connections to the single phase 240 VAC (1) and 12VDC (2) power sources.
2. Pull the spring loaded release slam latch (3) toward the center and pull down the door (4).
3. Open the trap doors and extract the cables (5).
4. Make proper splices and connections to the power sources.

NOTE

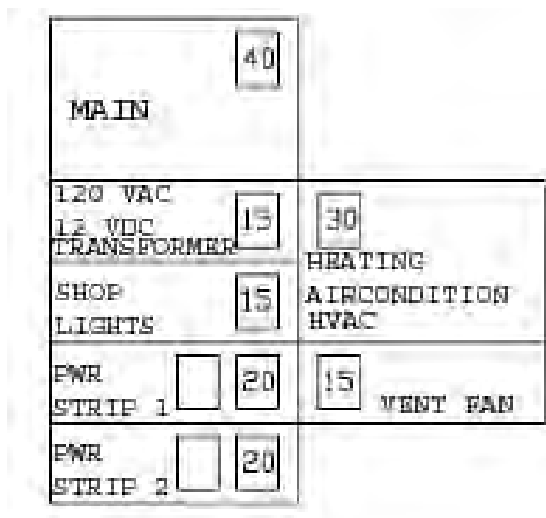
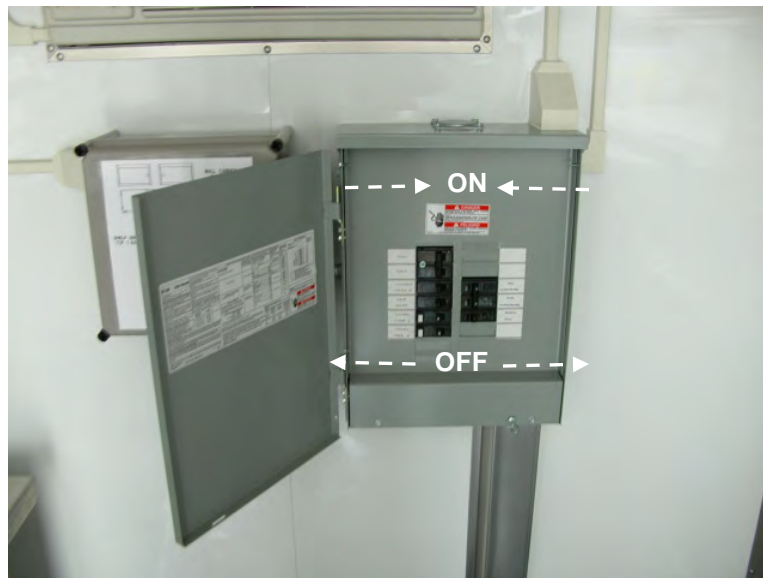
The power cables doors are located on the left rear side and right rear side of the container and specifically dedicated to a 12 VDC and single phase 240 VAC MWC circuit.

**WARNING**

Ensure all circuit breakers and the power source is switched off before making electrical connections or electrical repairs. Any and all electrical repair of the single phase 240 VAC, 12 VDC or 120 VAC must be made by a certified electrician Army MOS 21R.

120 VAC and 12 VDC Lighting System

1. Switch on the 12VDC lighting circuit breaker and activate and test the switches at the door (See page WP 0006 00-4).



120 VAC System

2. Switch on the PWR STRIP #1 and #2 circuit breakers.
3. Switch on and test the HVAC circuit breaker.
4. Switch on and test the vent fan.

120 VAC and 12 VDC 3 and 4 Wire Connection

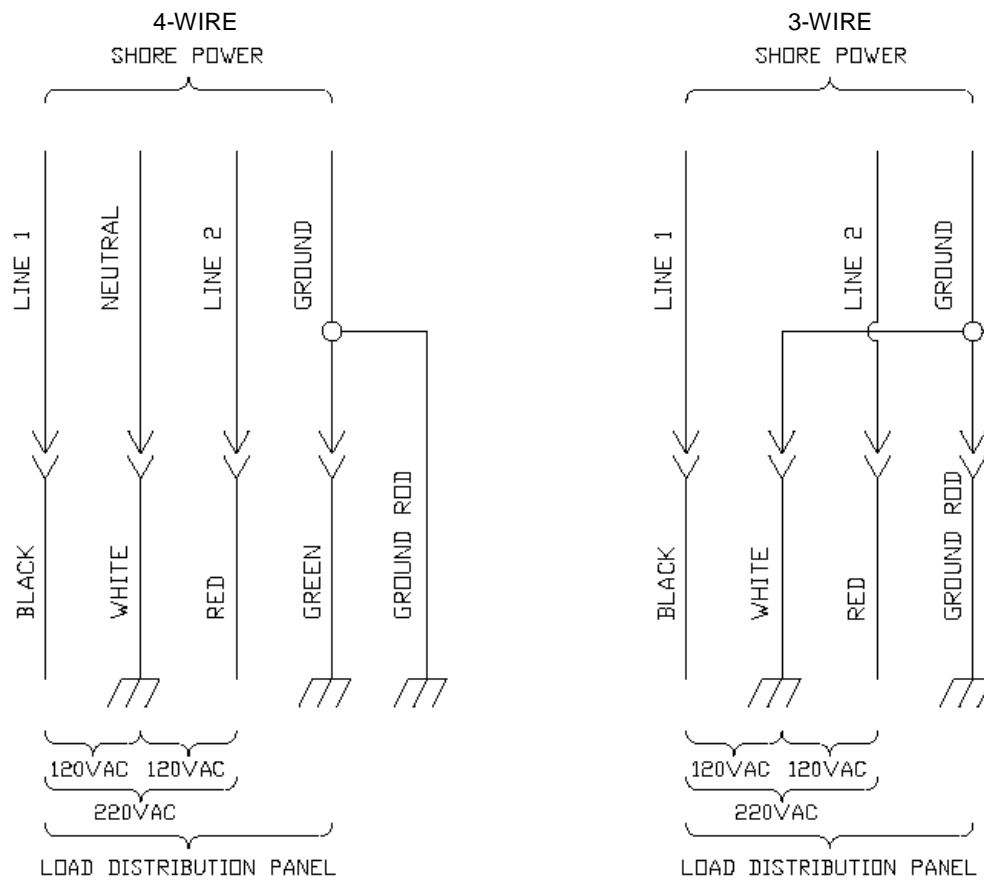
1. Cut away the outer black insulation to expose all 4 wires.
2. Clean all the wire ends for connection.

4-wire 240 VAC (L1, L2, Neutral, Ground):

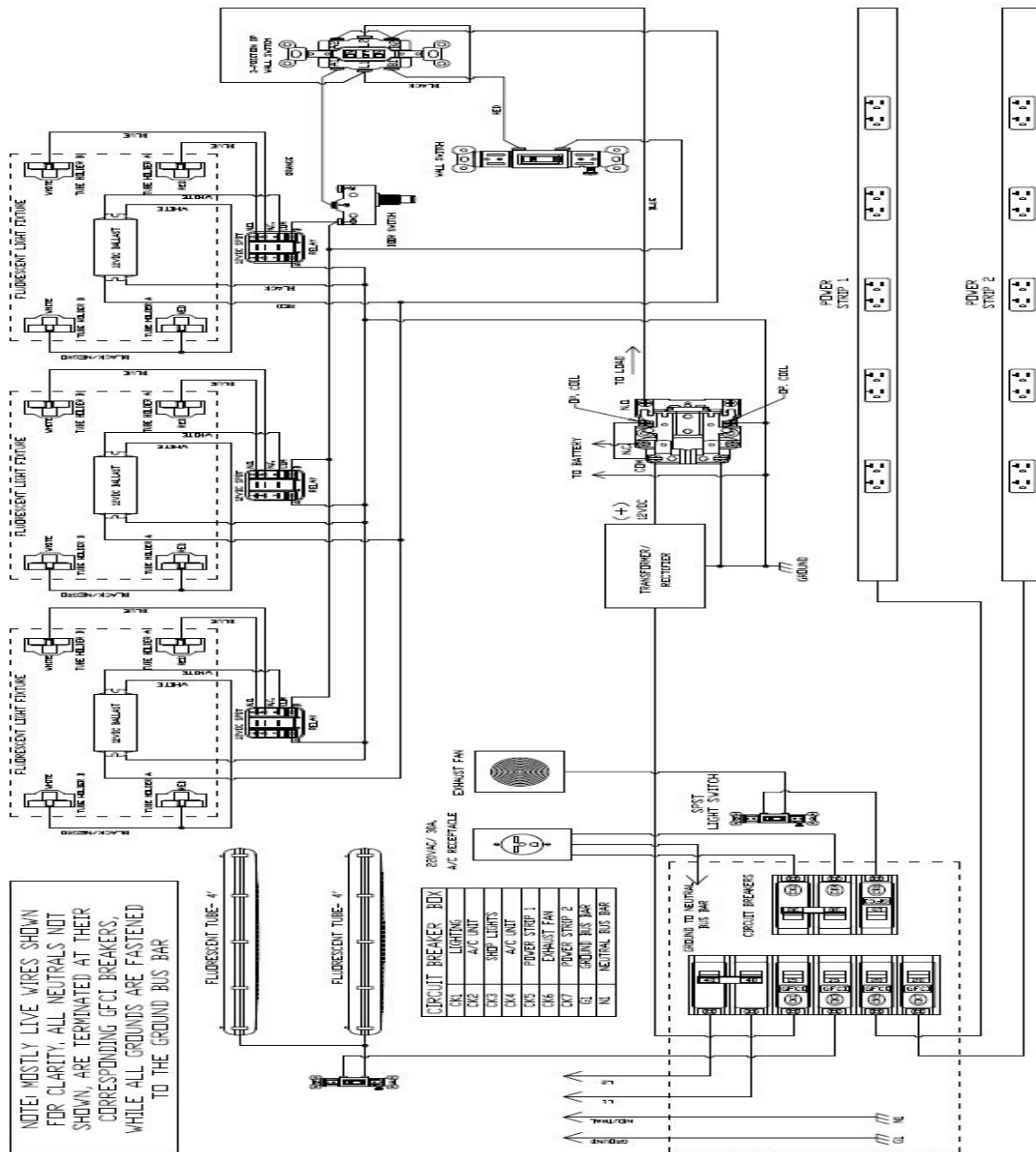
1. Connect the Black wire to Line 1.
2. Connect the White wire to the neutral connection.
3. Connect the Red wire to Line 2.
4. Connect the Green wire to the Green wire on Ground Lug.
5. Connect the Ground Rod to the Ground Lug.

3-wire 240 VAC (L1, L2, Ground):

1. Connect the Black wire to Line 1.
2. Connect the Red wire to Line 2.
3. Connect the White wire to the Ground Lug.
4. Connect the Ground Rod to the Ground Lug.



ELECTRICAL LAYOUT DIAGRAM



WARNING



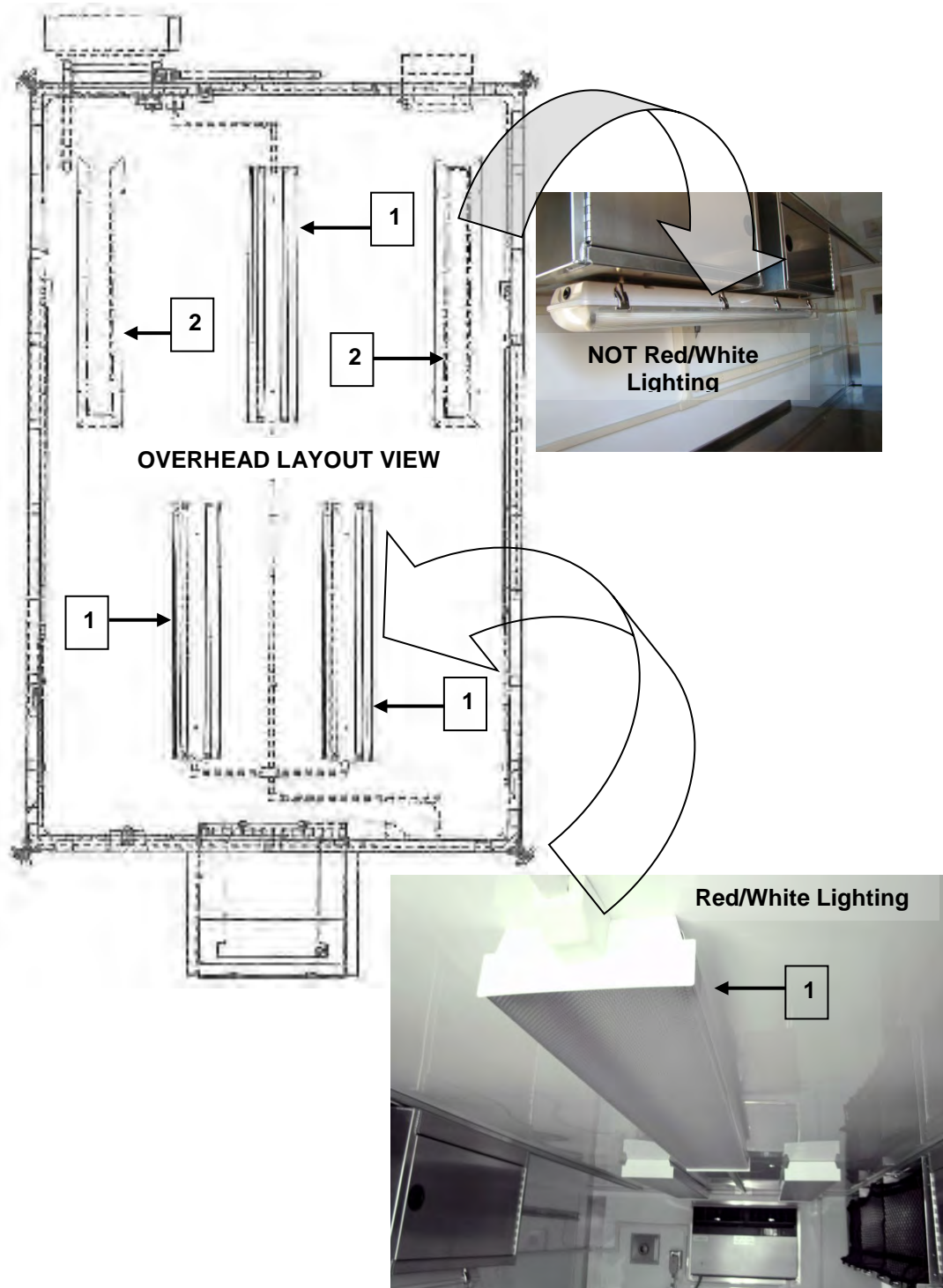
Ensure all circuit breakers and the power source is switched off before making electrical connections or electrical repairs. Any and all electrical repair of the single phase 240 VAC, 12 VDC or 120 VAC must be made by a certified electrician Army MOS 21R. This diagram is for general reference only. Contact BOH if there are questions concerning the electrical layout.

NEW INTERIOR 120 VAC LIGHTING SYSTEM

There are three new 120 VAC fluorescent light fixtures (1) with one red sleeve for red or white light conditions.

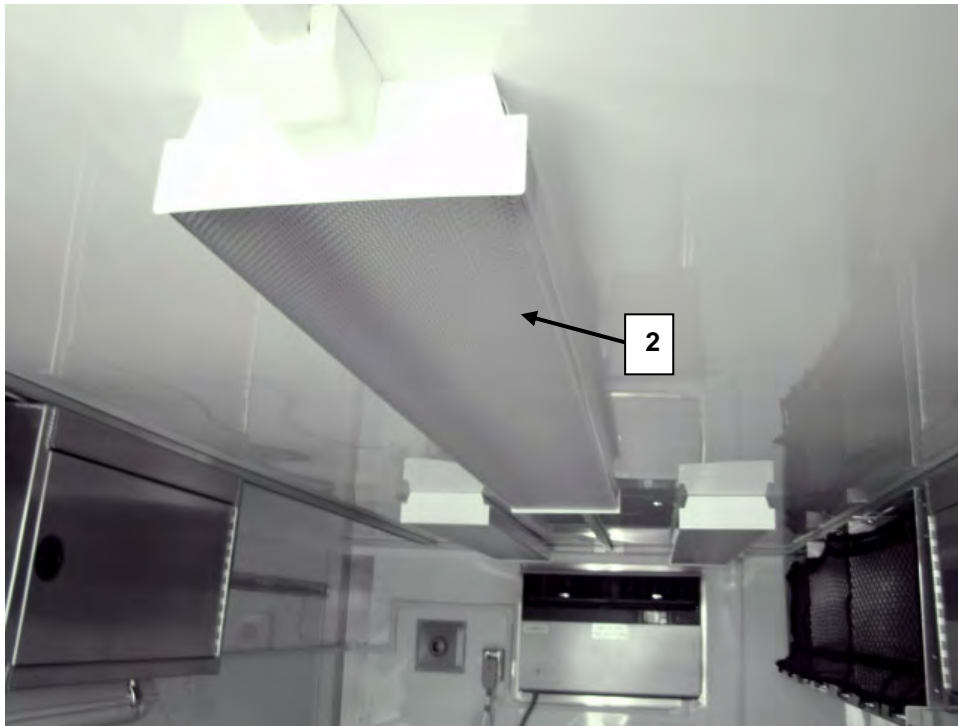
The two existing workbench 120 VAC fluorescent lights (2) are white light only.

Beginning with Serial Number 15002028-04226

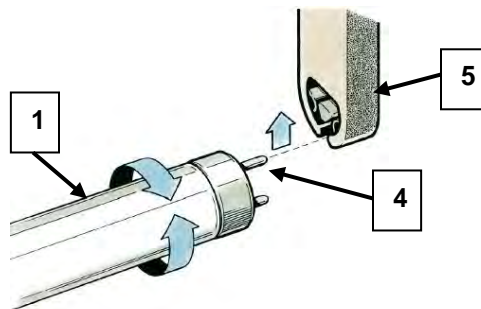


NOTE

Fluorescent tubes may contain hazardous material.
For proper disposal of Fluorescent tubes refer to
DOD 4160.21-M page 10.1-12.



1. To access the fluorescent tubes (1) for replacement, push up on the flexible cover (2) till the flanges are disengaged then pull the cover down to access the light tubes (1).
2. Rotate the fluorescent tube (1) until the prongs (4) drop free of the mounting.
3. Remove and reuse the red sleeve on the replacement tube.
4. Align the prongs (4) of both ends of the fluorescent tube (1) to the mount push up and rotate 90 degrees or until the tube (1) is seated in the mount (5).
5. Return the cover (2) and turn light switch on to test the light.

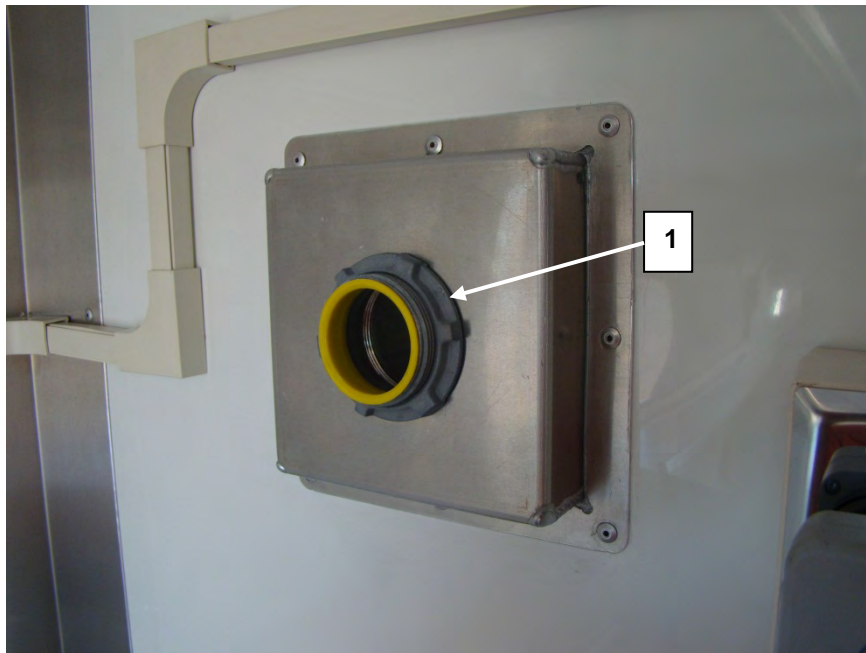


Beginning with Serial Number 15002028-04226

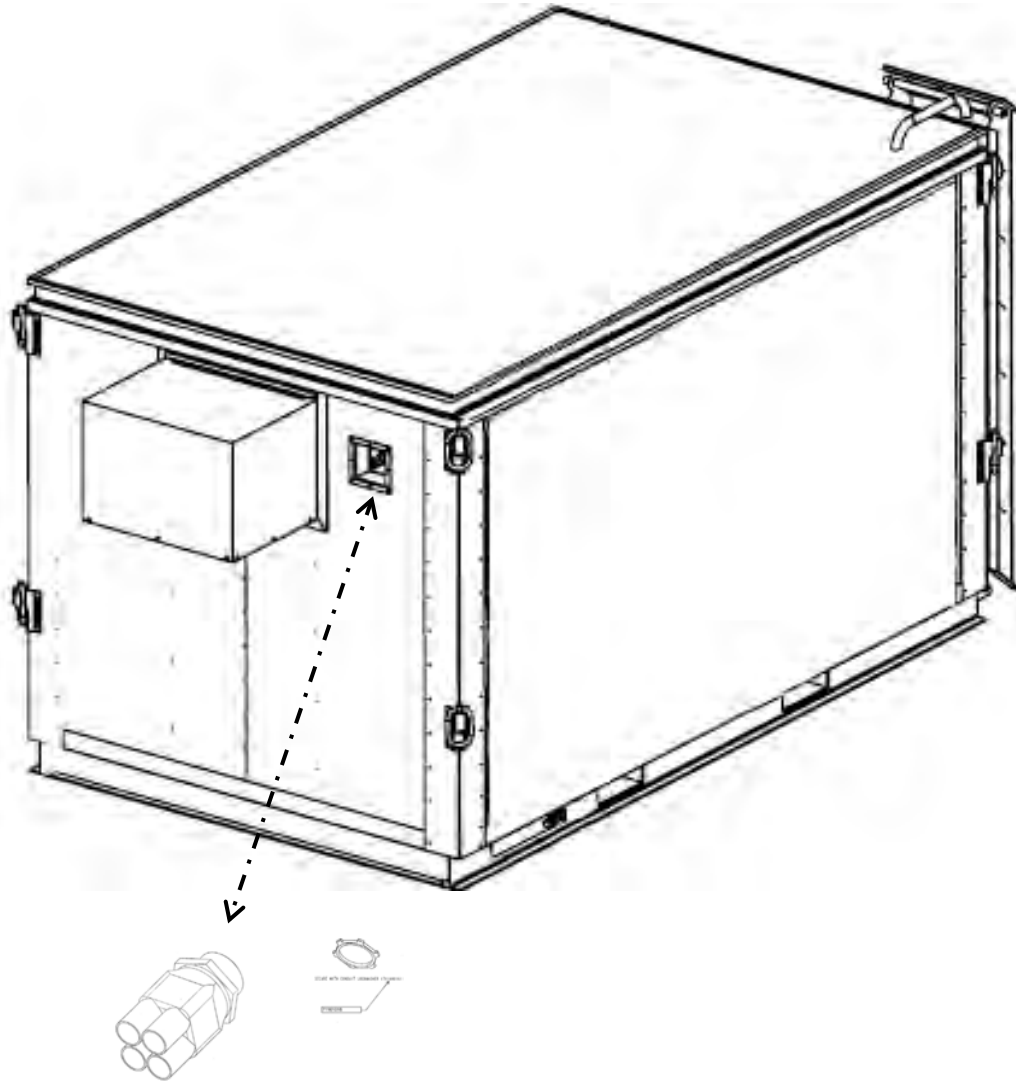
NEW Communication Cable Pass-through Interior View

Begins with MWC Serial Number 15002028-04212

The new Communication cable pass-through (1) is located on the back wall next to the HVAC



NEW Communication Cable Pass-through Exterior View
Begins with MWC Serial Number 15002028-04212



Pass through Beginning with MWC Serial Number 15002028-04212

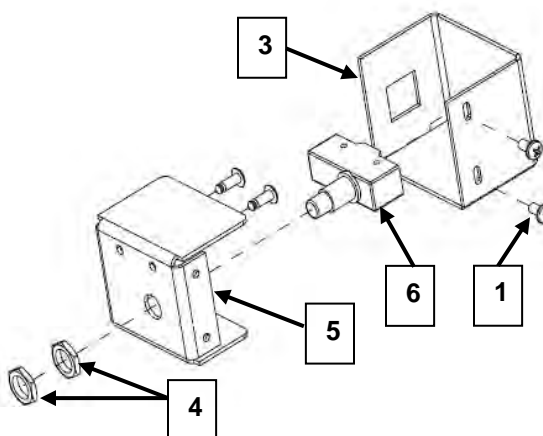
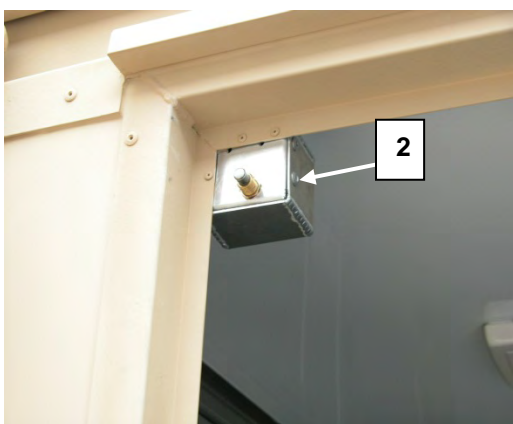
Door Lighting Interrupter Switch

REPLACE

WARNING



Ensure all circuit breakers and the power source is switched off before making electrical connections or electrical repair. Any and all electrical repair of the single phase 240 VAC or 12 VDC or 120 VAC must be made by a certified electrician Army MOS 21R.



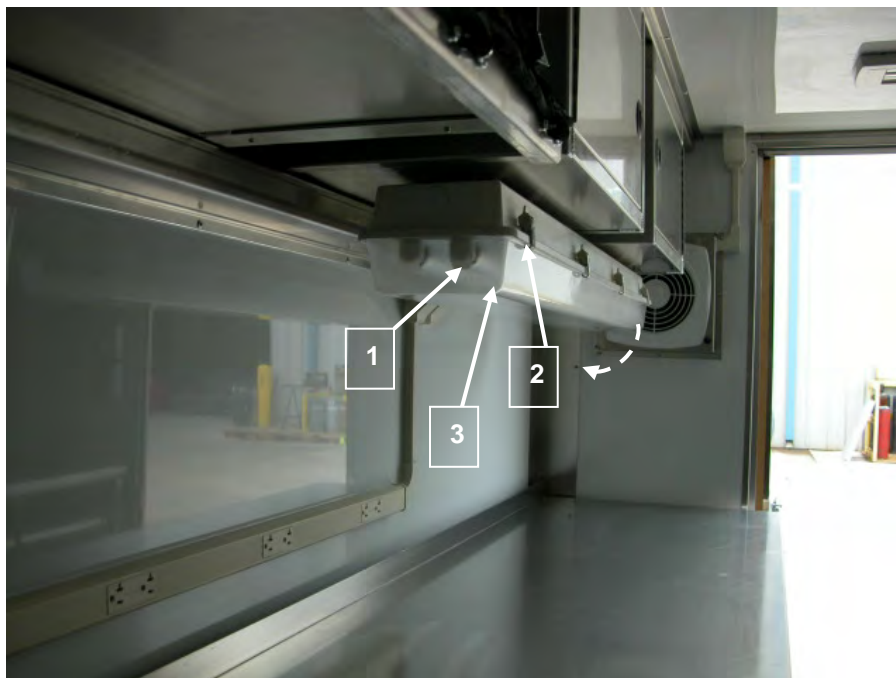
1. Switch the Main circuit breaker off (See WP 0019 00-2).
2. Remove the two #2 Philips screws (1) on the side of the switch box (2).
3. Remove the $\frac{3}{4}$ " jam and lock nuts (4) from the switch front mount (5).
4. Pull the rear cover (3) back to expose the switch, disconnect the switch wires.
5. Replace the switch and reconnect the wires.
6. Insert the switch (6) into the front mount (5), replace and tighten the $\frac{3}{4}$ " lock and jam nuts (4).
7. Insert the rear cover (3) over the mounted switch (6) and tighten the two # 2 Philips screws (1).
8. Switch the main circuit breaker on (See WP 0019 00-2) and test the door interrupter switch.

Work Bench fluorescent Light tubes

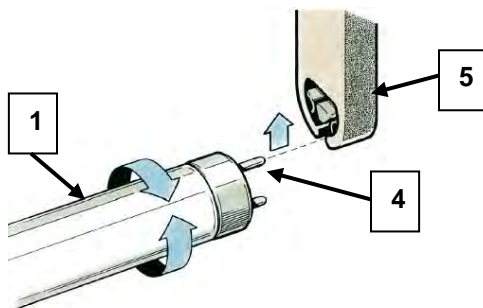
REPLACE

NOTE

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For proper disposal of Fluorescent tubes refer to
DOD 4160.21-M page 10.1-12.



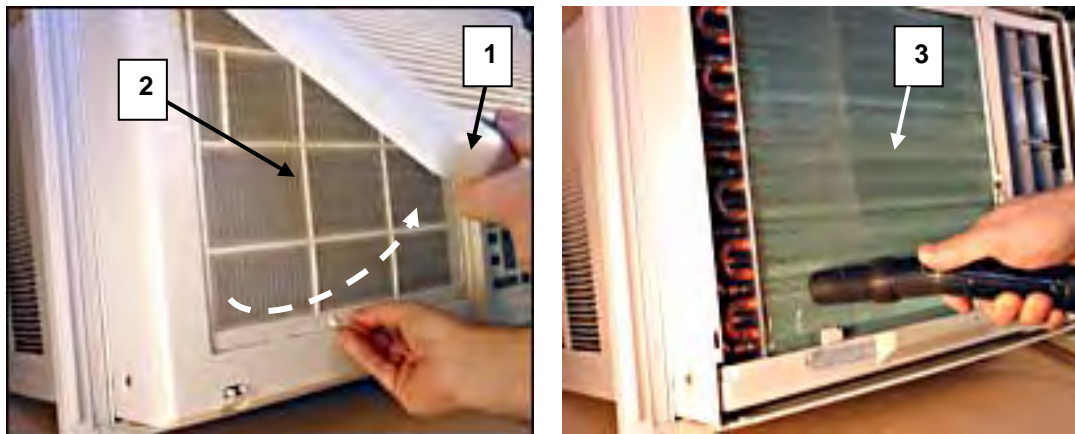
1. To access the fluorescent tubes (1) for replacement, pull down on the latch releases (2) and swing the cover (3) down.
2. Rotate the fluorescent tube (1) until the prongs (4) drop free of the mounting (5).
3. Align the prongs (4) of both ends to the fluorescent tube (1) to the mount push up and rotate 90 degrees or until the tube (1) is seated in the mount (5).
4. Return the cover (3), attach the latches (2) and test the light.



HVAC

SERVICE

1. Remove the cover panel (1) and filter (2) to access the condenser (3) located behind the filter element (2).
2. Vacuum the condenser with a brush attachment to remove dust (3).
3. Replace filter (2) and cover panel (1).



REPAIR

NOTE

Any HVAC service and repair must be made by a qualified Utilities Equipment Repairman MOS91C

1. For HVAC repair information prior to MWC AC15002028-04226 refer to Friedrich HVAC Model EM18J34B 18000BTU
2. For HVAC replacement parts filters etc., review the attached Friedrich Repair and parts manual at the end of this document, or go to www.friedrich.com

WARNING



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UNIT MAINTENANCE INSTRUCTIONS**FPU[®] SYSTEMS OPERATION MANUAL
(INCLUDING REPAIR PARTS & SPECIAL TOOL LIST)
BOH Modular Workshop Container (MWC)
BOH FPU Field Pack-up Units****18000 to 20000 BTU HVAC RETROFIT**

INITIAL PREOPERATION:**Materiel/Parts**

New 20000 BTU Retrofit Kit

Personnel Required

Two personnel and a certified electrician Army MOS 21R

Tools

Electrician's tool and grinder and goggles

References

Chapter 6 WP 0025 00

Equipment Condition

HVAC Replacement

NOTE

Replacement of the 18000 BTU HVAC with the 20000 BTU HVAC unit prior to MWC SN AC15002028-04226. Contact BOH for more information concerning the retrofit procedure.

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