

**FPU® SYSTEMS OPERATION MANUAL
(INCLUDING REPAIR PARTS & SPECIAL TOOL LIST)
BOH CONTAINERIZED MISSION SYSTEMS
CCC and EWCC
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 CONTAINERIZED MISSION SYSTEMS CCC and EWCC BOH FPU Field Pack-up Units

RIVET REPLACEMENT

INITIAL SETUP:

Materiel/Parts

Rivet Replacement Kit

Personnel Required

One

Tools

Rags, 1/2 hp. Electric Drill, Pop Rivet Tool, 3/16" drill bit and Needle Nose Pliers

References

None

Equipment Condition

Rivet Replacement

INSPECT AND REPAIR

Remove and Replace Rivets

CAUTION

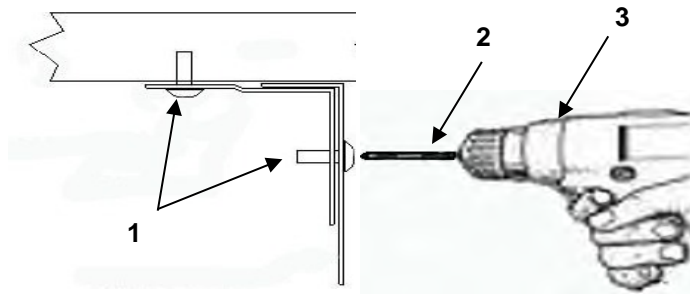
When removing a rivet (1), always ensure that the drill bit (2) will not contact or damage other parts behind the rivet (1).

1. For any rivet replacement, ensure there is nothing behind the area of the rivet (1) to be replaced that might be impacted by the drill bit (2).
2. To remove a rivet, wipe the rivet surfaces clean, use a 1/2 hp. electric drill (3) with a 3/16" drill bit (2), and drill through the center core of the rivet (1).

WARNING

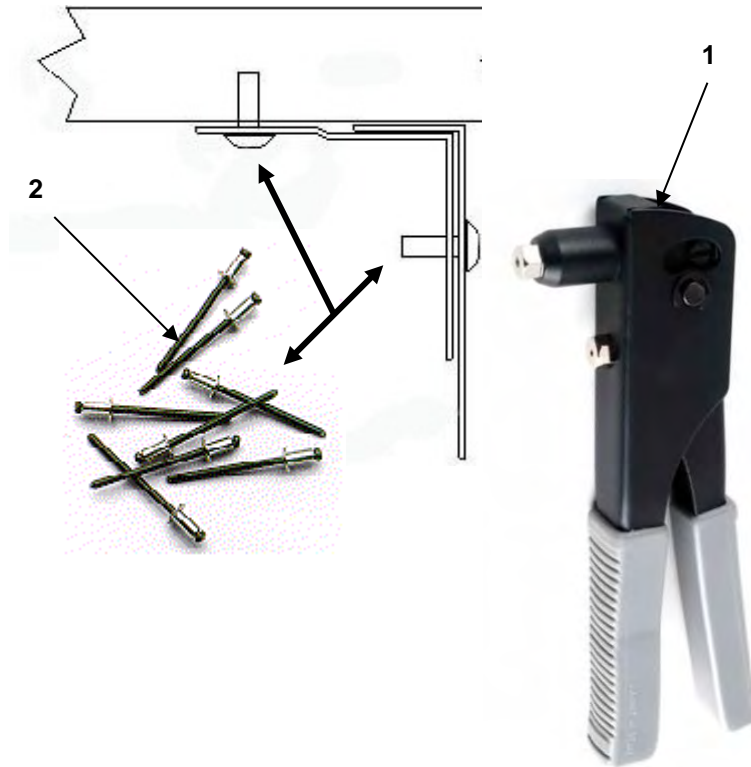


Use proper eye protection when operating a drill.



3. Remove the remainder of any rivet debris with needle nose pliers and wipe the hole clean with a rag.
4. Ensure the holes are properly aligned.

5. Insert a new rivet (2), 1/8" or 3/16" DIA, through the holes of both items to be secured and into the pop rivet tool (1).
6. Use the pop rivet tool (1) to secure the rivet (2) and item in place.
7. Check for proper alignment and tight attachment of the item.



END OF WORK PACKAGE

UNIT MAINTENANCE INSTRUCTIONS

FPU® SYSTEMS OPERATION MANUAL (INCLUDING REPAIR PARTS & SPECIAL TOOL LIST) BOH CONTAINERIZED MISSION SYSTEMS

CCC and EWCC
BOH FPU Field Pack-up Units

EWCC EXTERIOR INSPECTION

INITIAL SETUP:

Materiel/Parts

None

Personnel Required

One

References

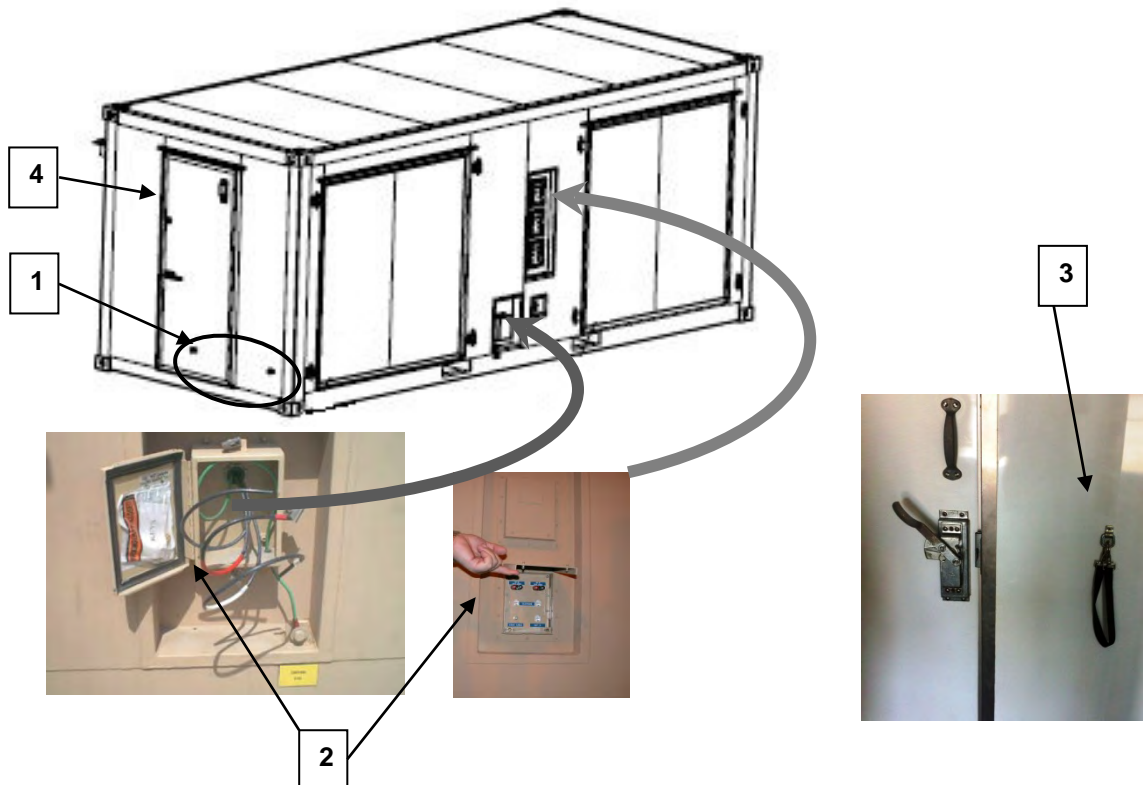
Chapter 2, 3 and 5

Equipment Condition

CCC/EWCC Operation Set-up

INSPECT

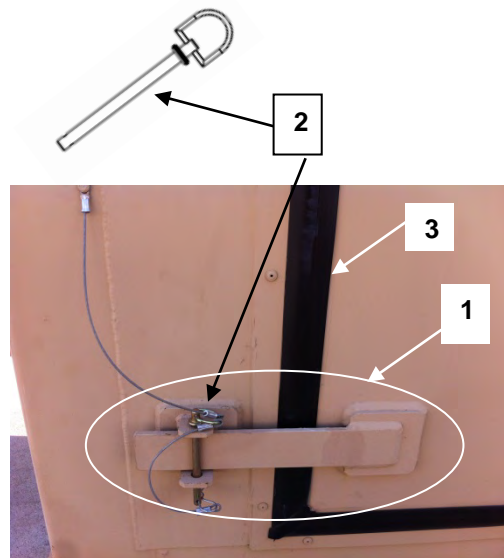
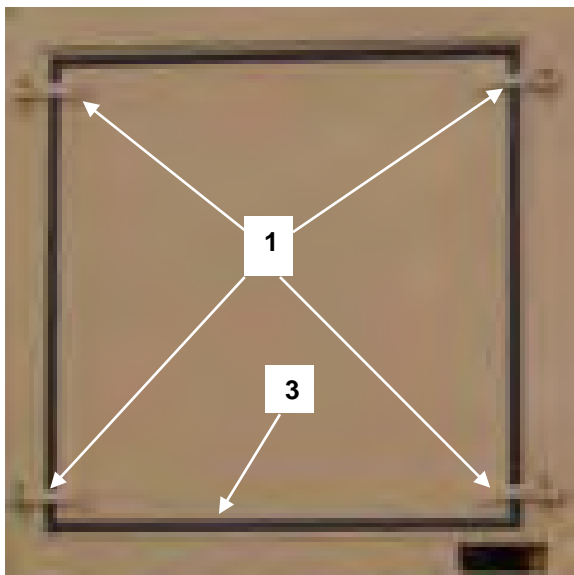
1. Inspect for missing or damaged entrance door retaining strap rings (1).
2. Inspect the power cable, communication door latches and hinges (2) for damage.
3. Ensure there is a door retention strap (3), stored just inside the door.
4. Inspect door seals (4) for cut, cracked or missing seals.



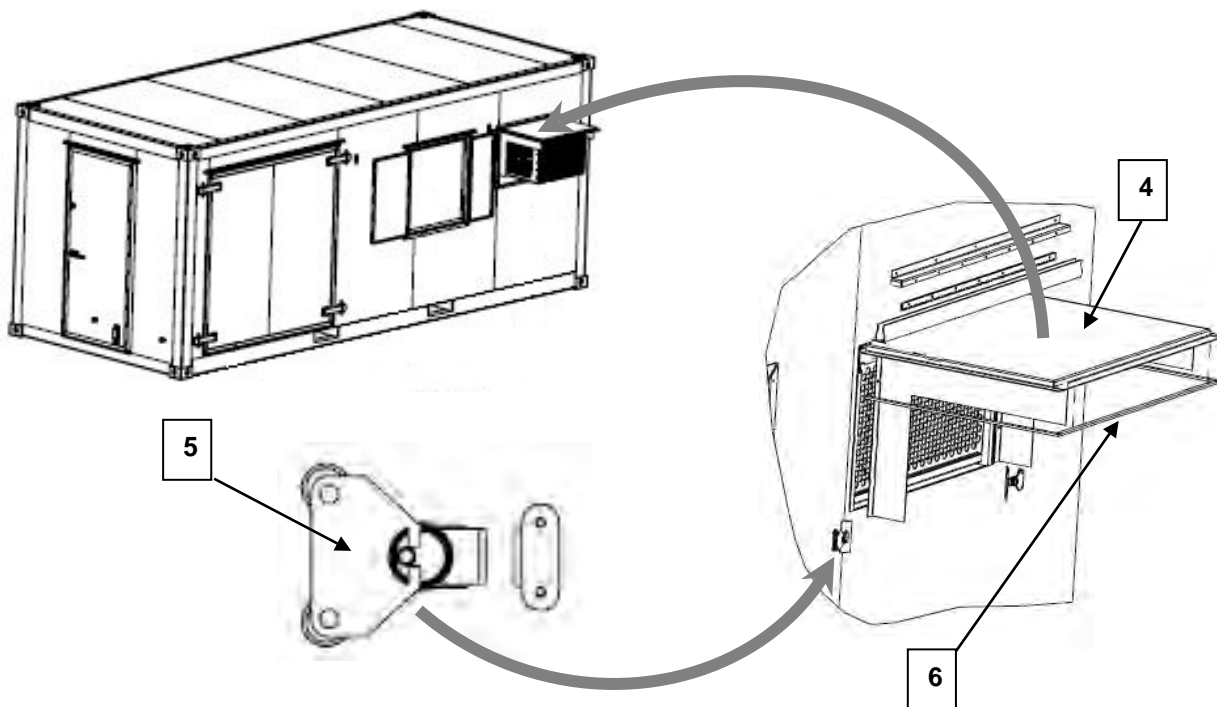
NOTE

New communication pass-through connections provided beginning with EWCC serial # ACEWCC208-03338. See chapter 6 for details.

5. Visually inspect for damaged or missing EXPANDO retaining pin brackets (1) and pins (2).
6. Visually inspect the EXPANDO exterior edge seals (3) for cuts, cracks and damage.

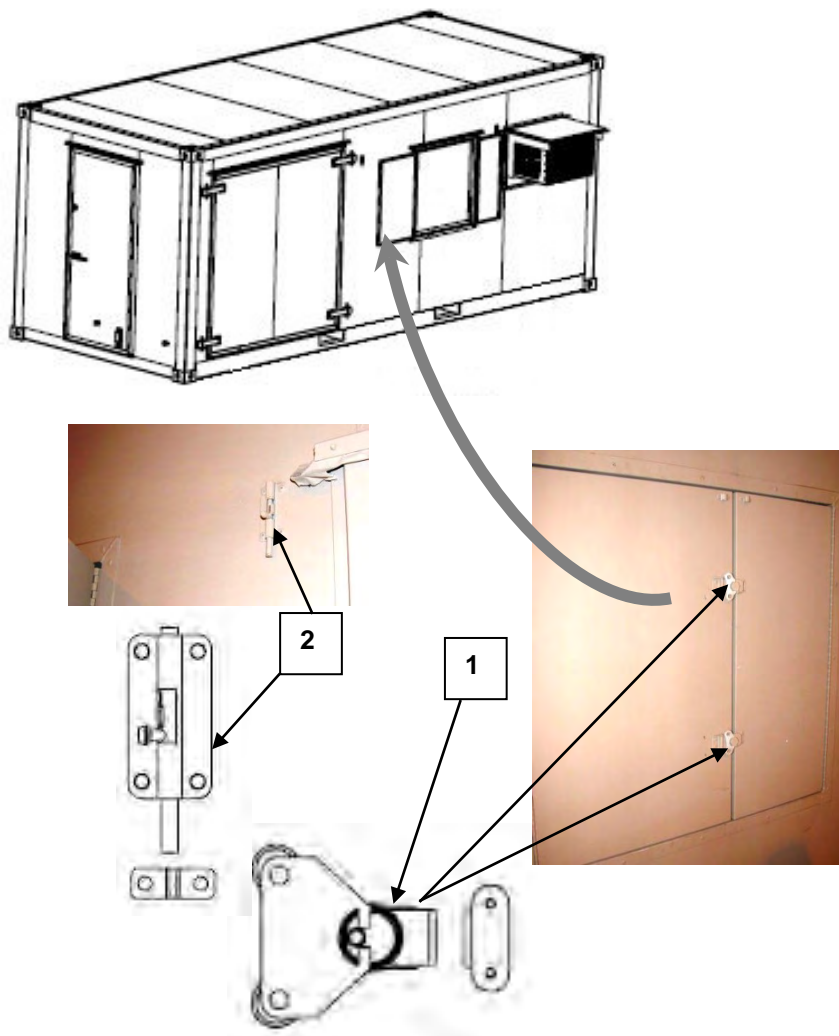


7. Check for damaged or missing HVAC weather cover door assembly (4).
8. Inspect HVAC butterfly latches (5) and door seals (6).



9. Inspect butterfly latches (1) on the window shutter doors.

10. Inspect for missing or damaged left and right barrel latches (2) for the shutter doors.
11. Inspect the window for damage.



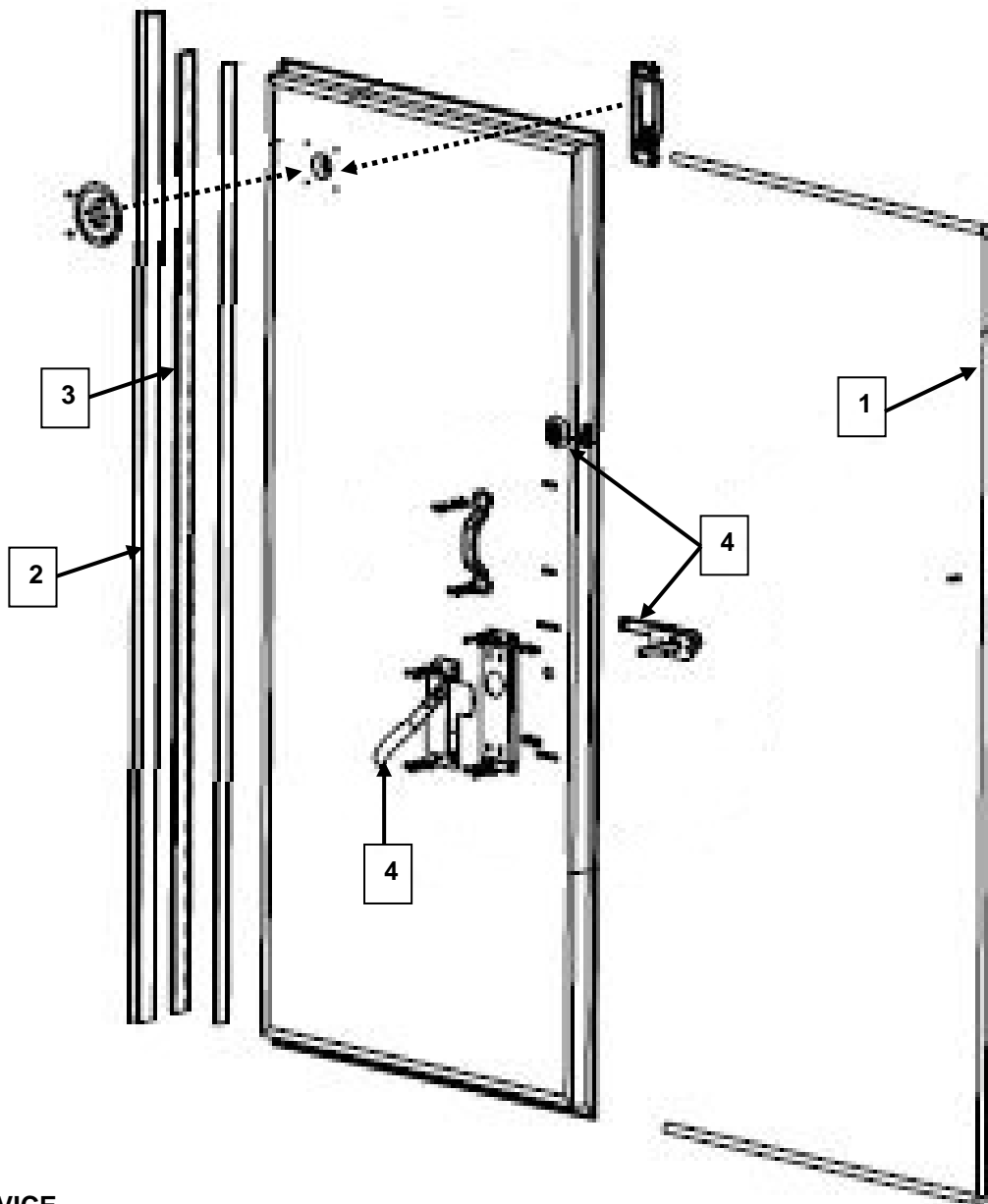
SERVICE

1. Replace door retaining strap rings if damaged.
2. Repair or replace power cable or communication doors if damaged.
3. For maintenance of door seals, see WP 0018.
4. Replace damaged or missing EXPANDO retaining pin brackets and pins.
5. Replace EXPANDO exterior edge seals if damaged. See Appendix B for replacement instructions.
6. Replace or replace HVAC weather cover door assembly (1) if damaged.
7. Replace HVAC butterfly latches (2) and door seals (3) if damaged.
8. Repair or replace butterfly latches and barrel latches on the window shutter doors if damaged.
9. Replace window if cracked or damaged.

OLDER EWCC/CCC Door

For parts support, see chapter 6 pages 0032 00-12 and 00-13.

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 and dead bolt mechanisms (4) for freedom of movement.

**SERVICE**

1. Clean and lubricate door seals. See chapter 4 WP 0018 00 Table 1 & 2.
2. Clean and lubricate door mechanisms. See chapter 4 WP 0018 00 Table 1 & 2.
3. Lubricate the door hinge. See chapter 4 WP 0018 00 Table 1 & 2.

EWCC/CCC Door with New Lock System

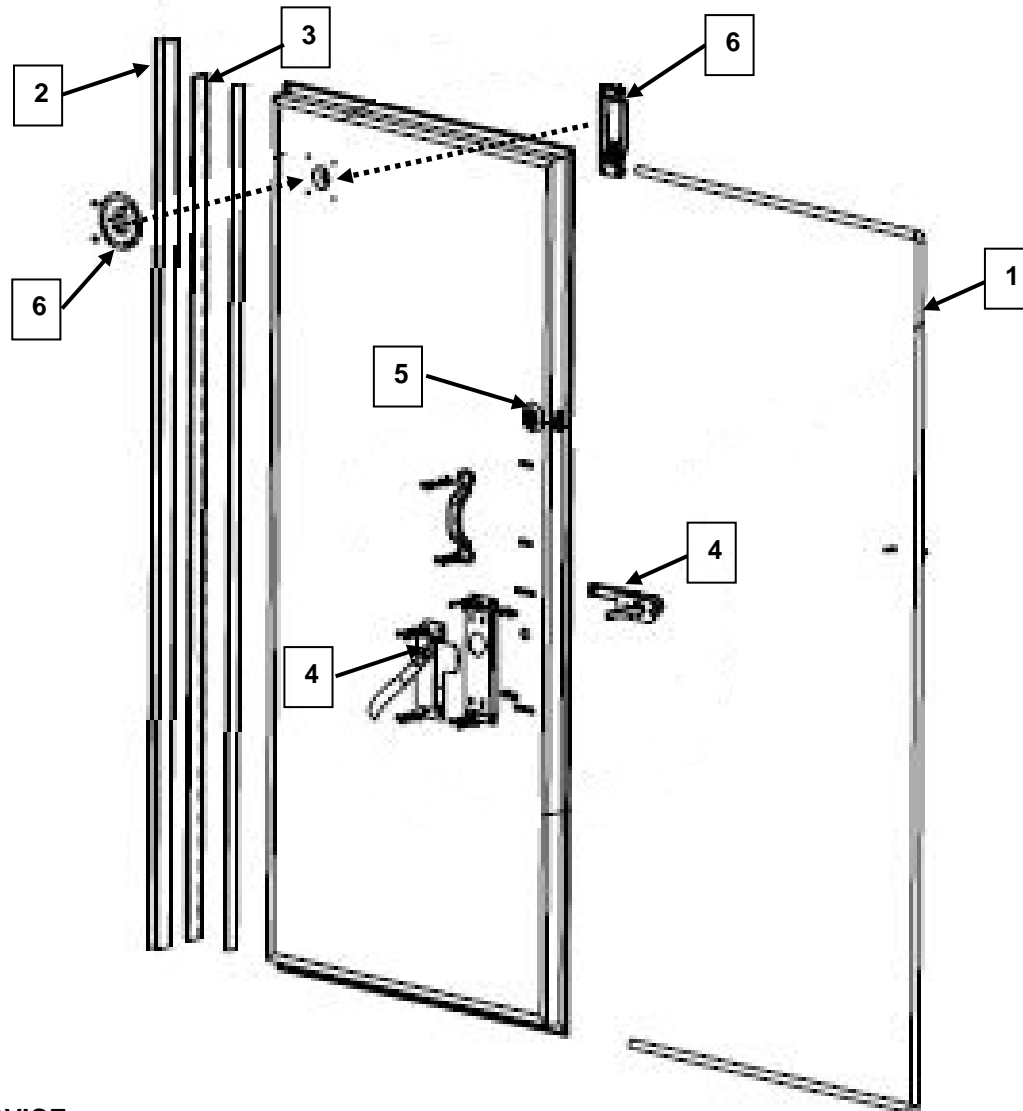
(Beginning with Serial # ACCCC208-03134 (CCC) and ACEWCC208-03197 (EWCC))

For parts support, see chapter 6 pages 0032 00-12 and 0023 00-13.

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.

The new door has a dead bolt with key lock (5) and no longer has a key lock on the exterior handle (4). There is also a new vent (6) that has been placed near the top of one door and near the bottom of the door at the other container end (not shown)

(Beginning with Serial # ACCCC208-03176 (CCC) and ACEWCC208-03315 (EWCC))

**SERVICE**

1. Clean and lubricate door seals (3). See chapter 4 WP 0018 00 Table 1 & 2.
2. Clean and lubricate door mechanisms (4). See chapter 4 WP 0018 00 Table 1 & 2.
3. Lubricate the door hinge. See chapter 4 WP 0018 00 Table 1 & 2.

END OF WORK PACKAGE

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UNIT MAINTENANCE INSTRUCTIONS

FPU® SYSTEMS OPERATION MANUAL (INCLUDING REPAIR PARTS & SPECIAL TOOL LIST) BOH CONTAINERIZED MISSION SYSTEMS

CCC and EWCC
BOH FPU Field Pack-up Units

CCC EXTERIOR INSPECTION

INITIAL SETUP:

Materiel/Parts

None

Personnel Required

One

References

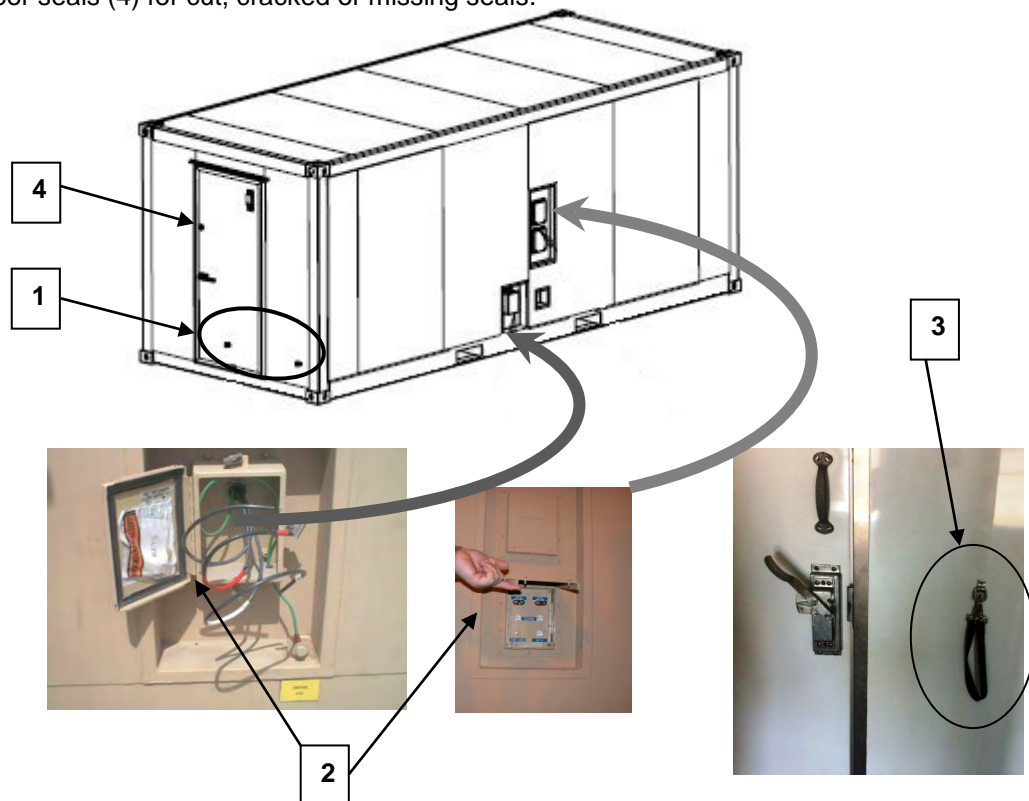
Chapter 2, 3 and 5

Equipment Condition

CCC/EWCC Operation Set-up

INSPECT

10. Inspect for missing or damaged entrance door retaining strap rings (1).
11. Inspect the power cable, communication door latches and hinges (2) for damage.
12. Ensure there is a door retention strap (3), stored just inside the door.
13. Inspect door seals (4) for cut, cracked or missing seals.



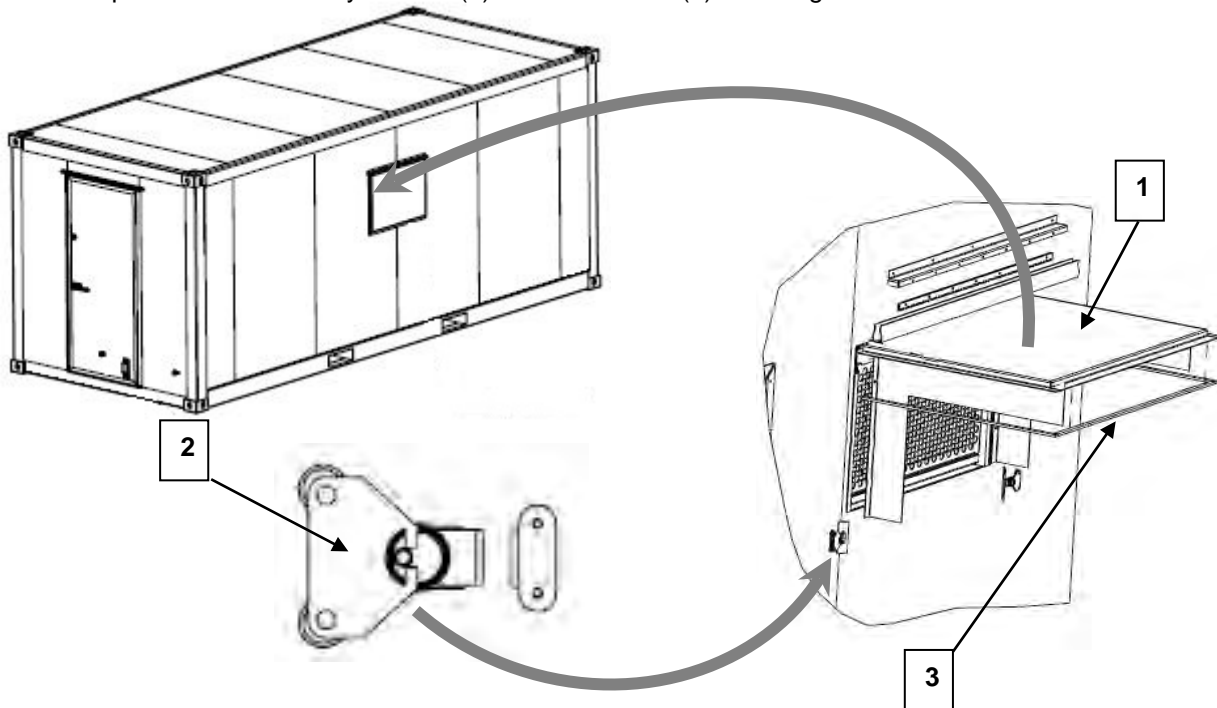
NOTE

New communication pass-through connections provided beginning with CCC serial # ACCCC208-03177.
See chapter 6 for details.

14. Check for damaged or missing HVAC weather cover door assembly (1).
15. Inspect HVAC butterfly latches (2) and door seals (3) for damage.

SERVICE

1. Replace door retaining strap rings if damaged.
2. Repair or replace power cable or communication doors if damaged.
3. For maintenance of door seals, see WP 0018.
4. Replace or replace HVAC weather cover door assembly (1) if damaged.
5. Replace HVAC butterfly latches (2) and door seals (3) if damaged.



WARNING

With the CCC/EWCC placed on level ground and after transport, periodically check for shifting material inside the container. To maintain control, consider the ground and interior surface conditions for adequate traction, such as mud, snow, ice, sand.

END OF WORK PACKAGE

UNIT MAINTENANCE INSTRUCTIONS

FPU® SYSTEMS OPERATION MANUAL (INCLUDING REPAIR PARTS & SPECIAL TOOL LIST) BOH CONTAINERIZED MISSION SYSTEMS

CCC and EWCC
BOH FPU Field Pack-up Units

EWCC INTERIOR INSPECTION

INITIAL SETUP:

Materiel/Parts

Lubricant (review Table 1 & 2 Lubrication in WP 0018 00)

Personnel Required

Three

References

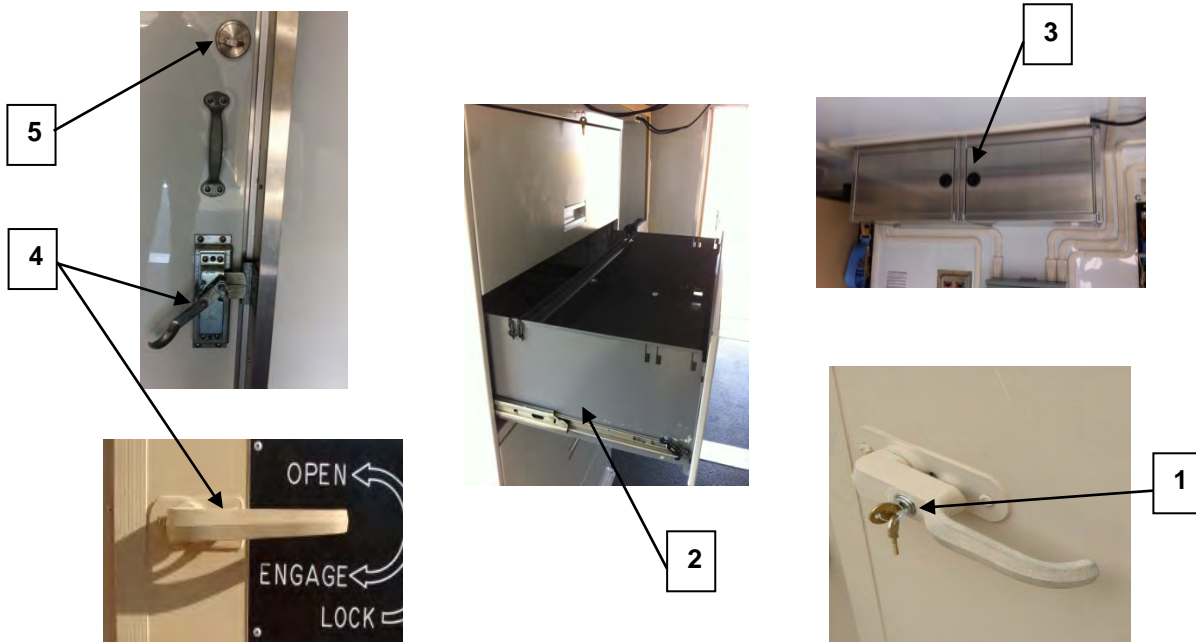
Chapter 2 WP 0007 00

Equipment Condition

EWCC Operation Set-up

INSPECT

1. Inspect the expando unit ratchet straps for damage, fraying or missing straps. See WP 0010 for opening the EWCC expando units prior to further inspection.
2. Inspect door lock set (1) for smooth operation.
3. Open and close file drawers (2) to ensure proper operation and alignment.
4. Inspect overhead door latches (3).



The New Door Handle Lock System

The Older Door Handle Lock System

Note

The new handle version (4) no-longer has a key lock device (1).
The new deadbolt (5) replaces the handle key lock device (1).
See WP 0008; applied to Serial # ACEWCC208-03197 and beyond.

SERVICE

1. Replace expando unit straps if damaged or missing.
2. Clean and lubricate door mechanisms. Repair or replace if lock sets are dysfunctional.
3. Replace overhead door latch if damaged.

END OF WORK PACKAGE

UNIT MAINTENANCE INSTRUCTIONS

FPU® SYSTEMS OPERATION MANUAL (INCLUDING REPAIR PARTS & SPECIAL TOOL LIST) BOH CONTAINERIZED MISSION SYSTEMS

CCC and EWCC
BOH FPU Field Pack-up Units

CCC INTERIOR INSPECTION

INITIAL SETUP:

Materiel/Parts

Lubricant (review Table 1 & 2 Lubrication in WP 0018 00)

Personnel Required

One

Tools

Allen Wrench, Socket Wrench

References

Chapter 2 WP 0007 00

Equipment Condition

CCC Operation Set-up

INSPECT

1. Inspect door lock set (1) for smooth operation.
2. Inspect slam latches (6) on cabinet drawers for smooth movement, spring tension and retention of the drawer in the fully closed position.
3. Open and close file drawers (2) to ensure proper operation and alignment.
4. Inspect overhead door latches (3).

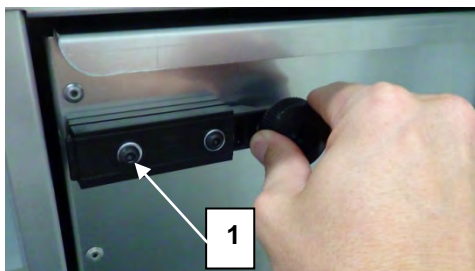
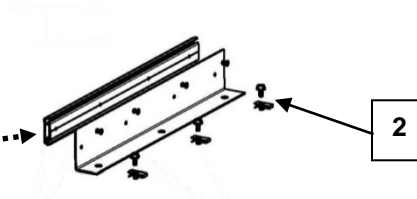
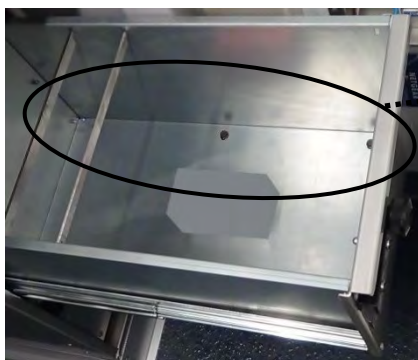


Note

The new handle version (4) no-longer has a key lock device (1).
The new deadbolt (5) replaces the handle key lock device (1).
See WP 0008; applied to Serial # ACCCC208-03134 and beyond.

SERVICE

4. Clean and lubricate door mechanisms. Repair or replace if lock sets are dysfunctional.
5. Use Allen wrench to repair or replace damaged cabinet drawer latches (1).
6. If drawer is not opening/closing properly, lubricate, repair or replace as needed. If drawer is damaged, use socket wrench to unscrew the 6 screws (3 each side) (2) inside the drawer to detach the drawer from the slides.
7. Replace overhead door latch if damaged.

**END OF WORK PACKAGE**

UNIT MAINTENANCE INSTRUCTIONS

FPU® SYSTEMS OPERATION MANUAL (INCLUDING REPAIR PARTS & SPECIAL TOOL LIST) BOH CONTAINERIZED MISSION SYSTEMS

CCC and EWCC
BOH FPU Field Pack-up Units

CCC/EWCC ELECTRICAL SYSTEM INSPECTION

INITIAL SETUP:

Materiel/Parts

Power Source Connectors

Personnel Required

Two Operator / Electrician

References

Chapter 2 WP 0009 and 0011

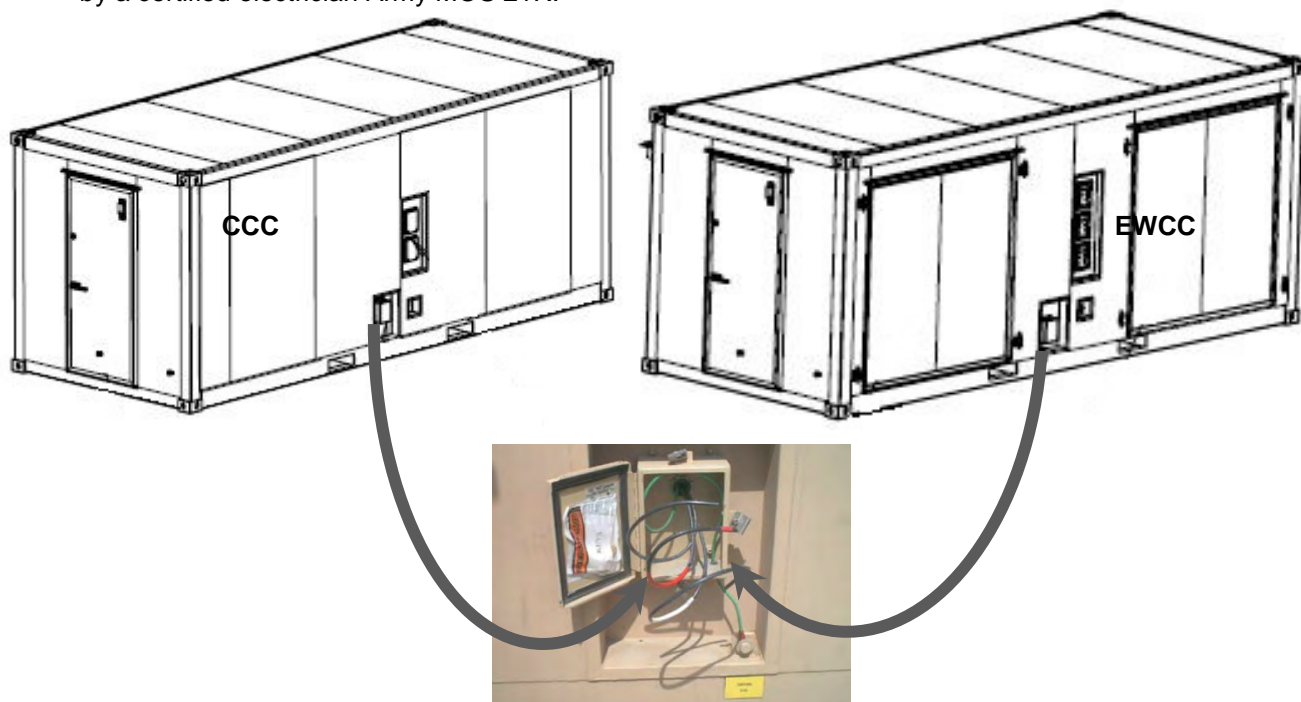
Equipment Condition

CCC/EWCC Operation Set-up

INSPECT

Exterior Electrical power cables

1. The proper electrical connections to the power source (110/220, single phase, 60 Hz) must be made by a certified electrician Army MOS 21R.



WARNING

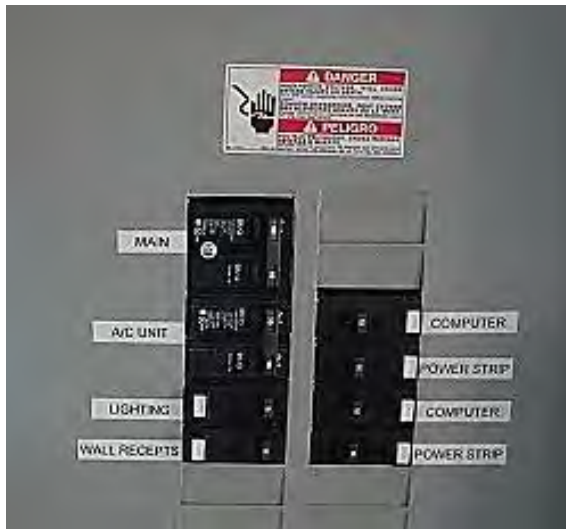


Ensure all circuit breakers and the power source is switched off before making electrical connections or electrical repairs. Any and all electrical repairs must be made by a certified electrician Army MOS 21R.

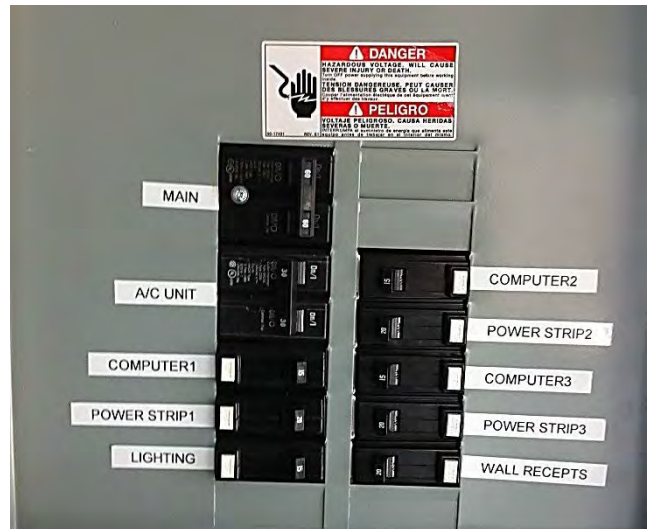
WARNING

The electrical ground must be established first to prevent electrical shock to personnel. See page 0009 00-2 through 00-4. Consult ARMY TM 5- 811-3 Chapter 2 and MIL-HDBK 149A Chapter 2-5.

2. With the power source activated, switch on the main circuit breaker. See chapter 2 pages 0009 00-3 and 0011 00-3.
3. Test each circuit breaker and the GFCB reset to ensure they operate properly.



CCC Load Center



EWCC Load Center

Lighting System

1. Switch on the 12VDC lighting circuit breaker and activate and test the switches at the door. See Chapter 2 Page 0009 00-5 and 0011 00- 5.



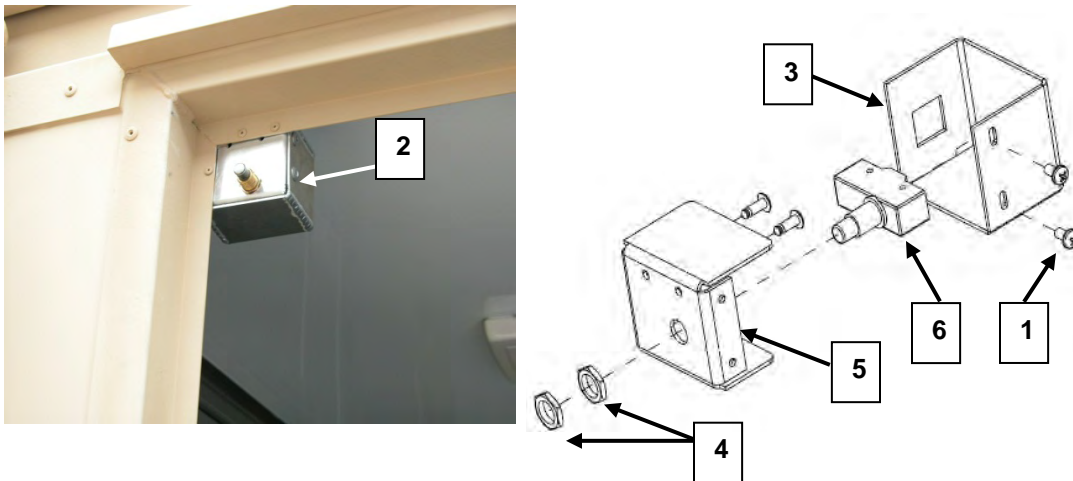
Door Lighting Interrupter Switch

REPLACE

WARNING



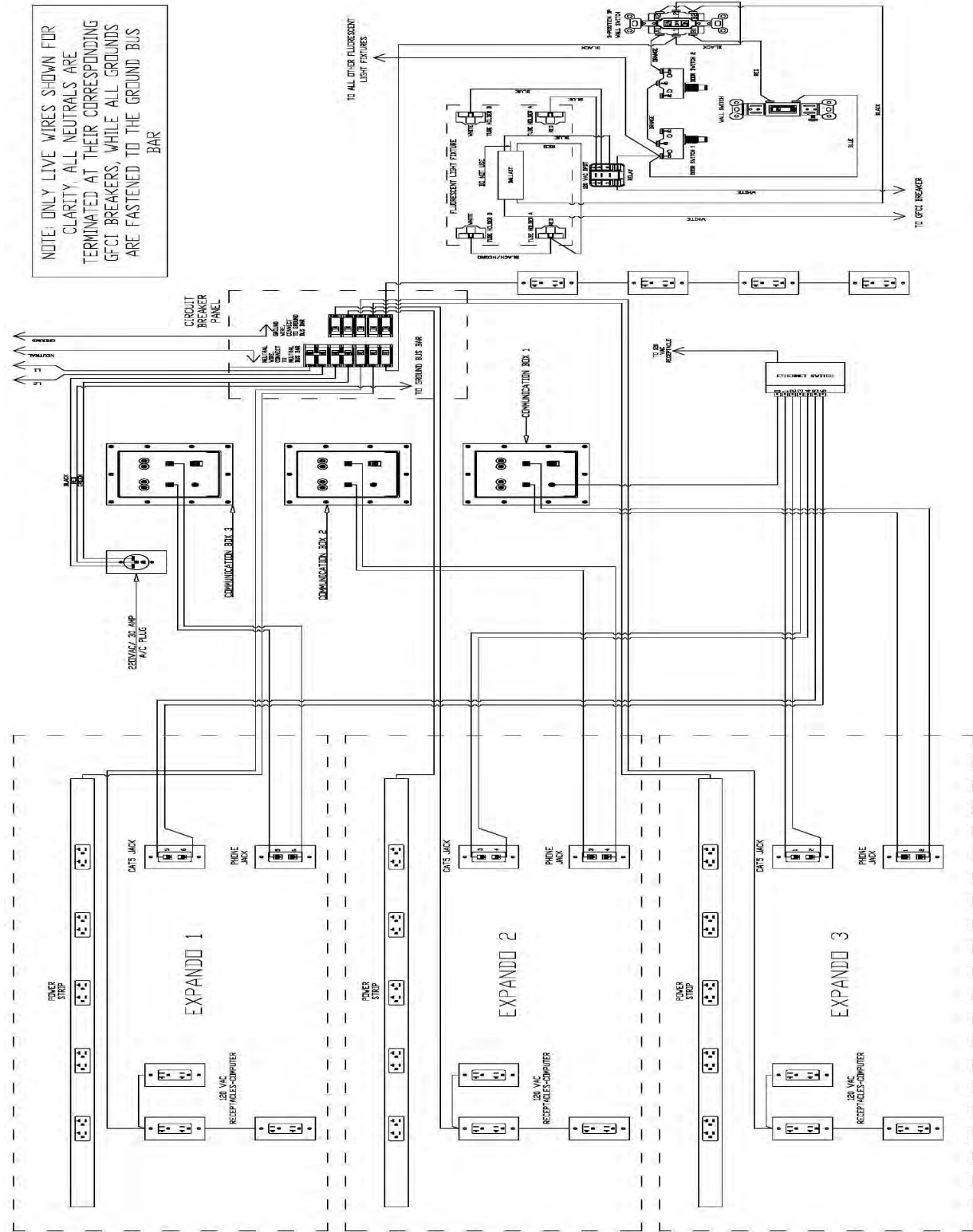
Ensure all circuit breakers and the power source is switched off before making electrical connections or electrical repair. Any and all electrical repairs must be made by a certified electrician Army MOS 21R.



1. Switch the Main circuit breaker off. See chapter 2 pages 0009 00-3 and 0011 00-3.
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 and test the door interrupter switch. See chapter 2 pages 0009 00-3 and 0011 00-3.

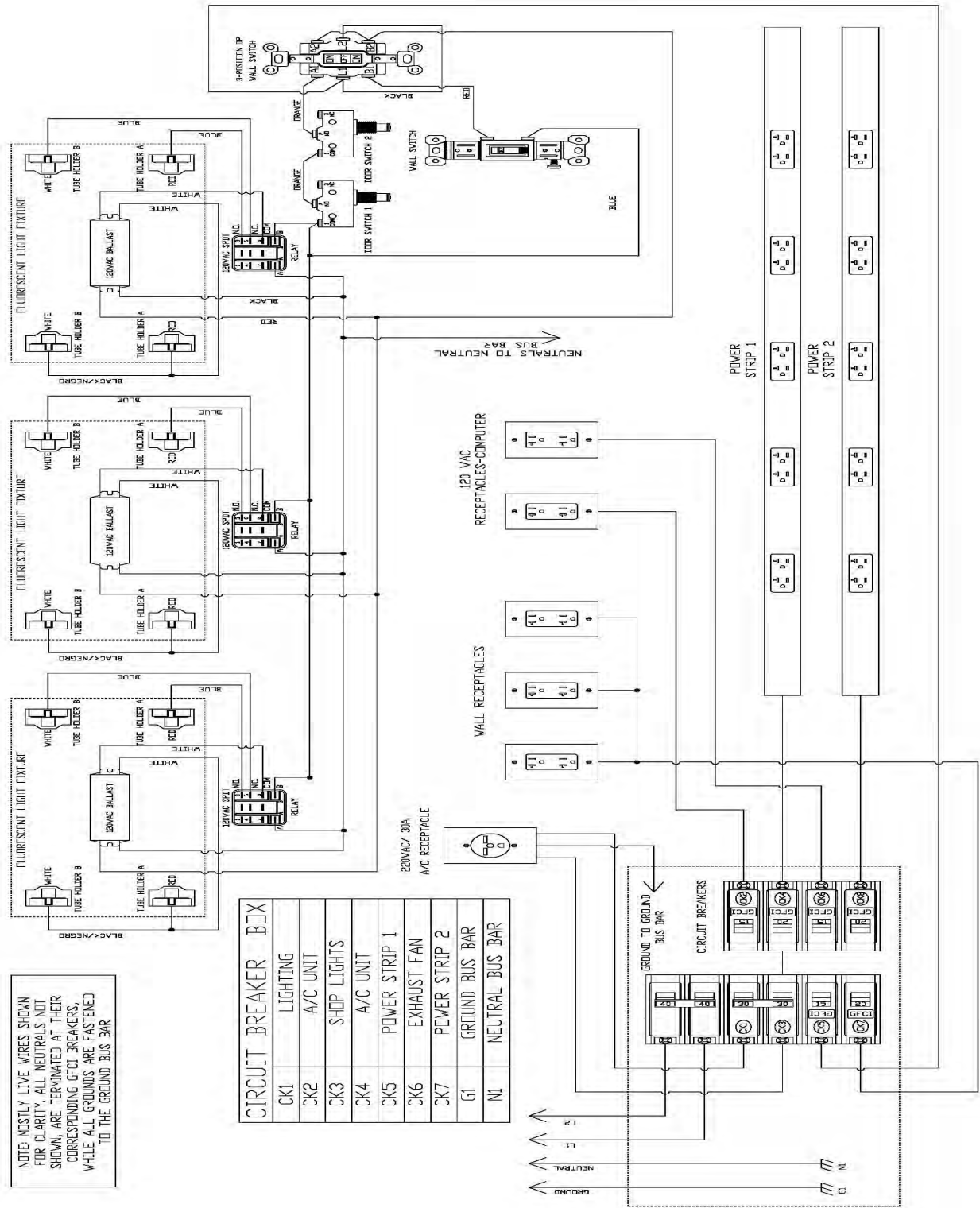
EWCC Electrical Layout Diagram

(Applicable only to EWCC units SN ACEWCC208-03310 through ACEWCC208-03337)



CCC Electrical Layout Diagram

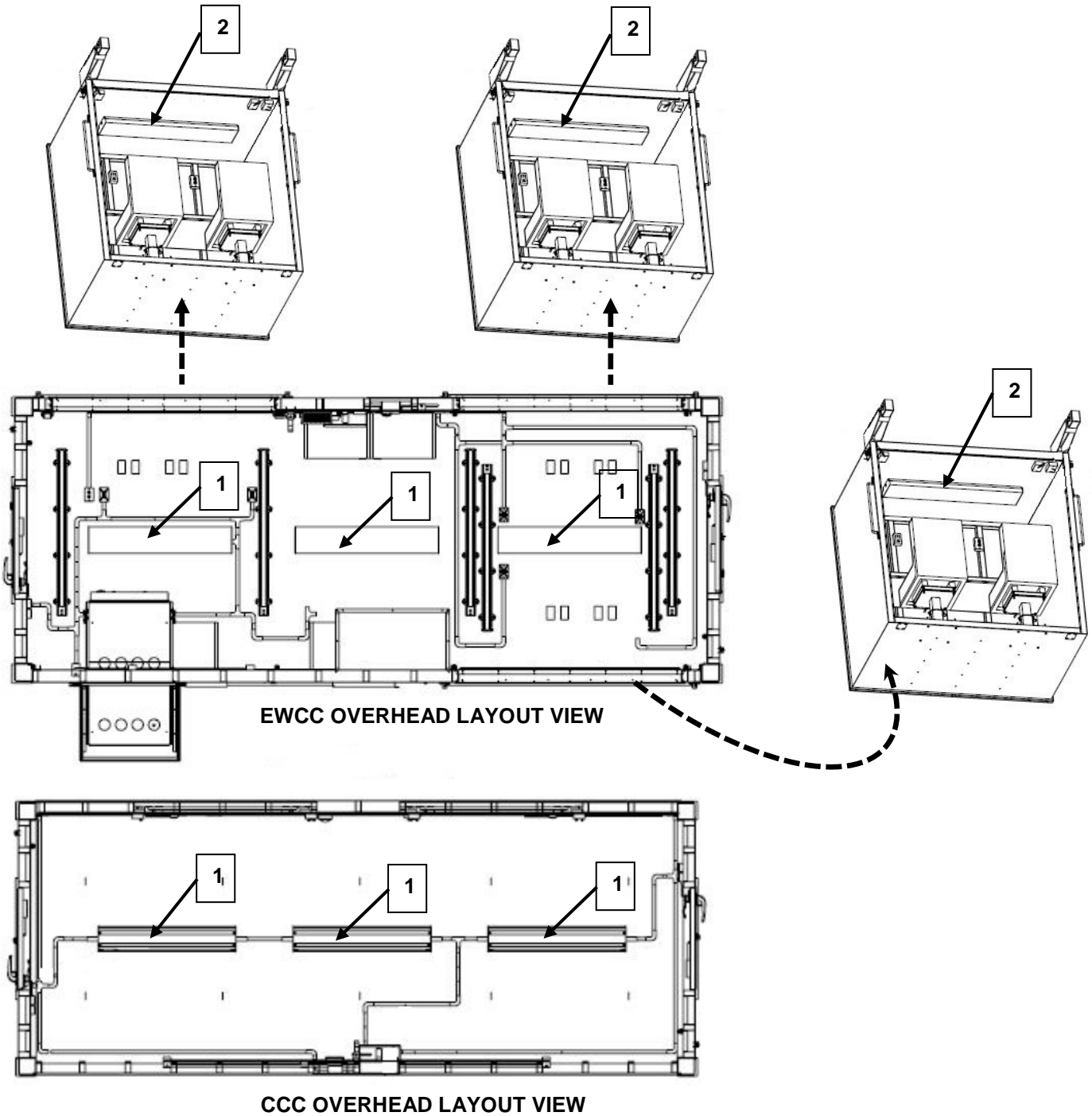
(Applicable only to CCC units SN ACCCC208-03159 through ACCCC208-03176)



Interior 120 VAC Lighting System

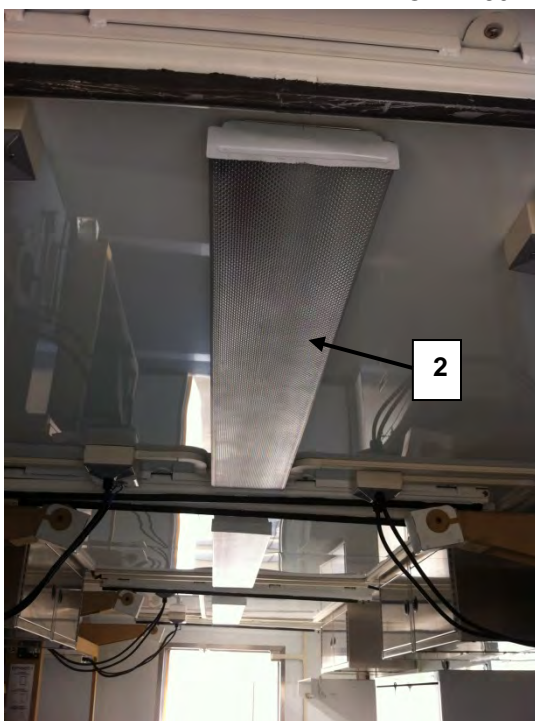
There are three 120 VAC fluorescent light fixtures (1) down the center of the container and one light fixture (2) in each of the three expando units. All fixtures have one red sleeve for red or white light conditions.

Beginning with Serial # ACCCC208-03144 (CCC) and ACEWCC208-03234 (EWCC)

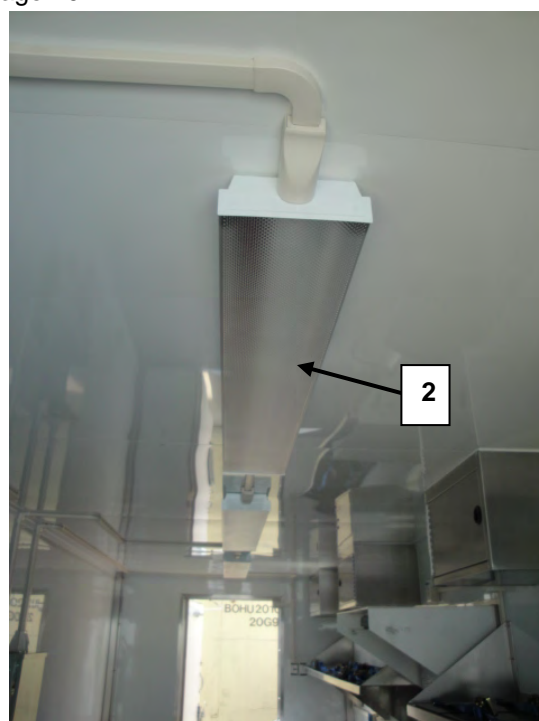


NOTE

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

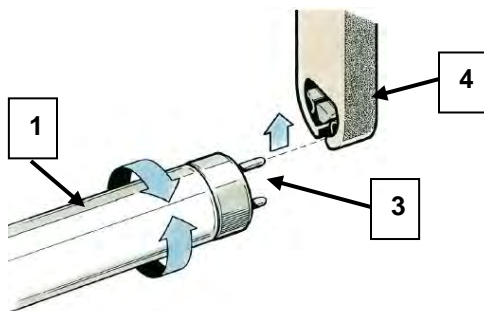


EWCC Overhead View



CCC Overhead View

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 (3) drop free of the mounting.
3. Remove and reuse the red sleeve on the replacement tube.
4. Align the prongs (3) 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 (4).
5. Return the cover (2) and turn light switch on to test the light.



HVAC

SERVICE (old Friedrich unit)

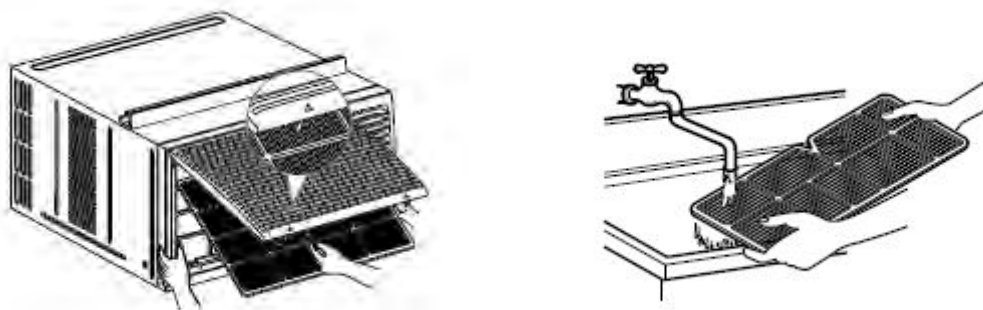
1. Fold down cover panel to expose front panel. Use hand tools (screwdriver provided) when installing and removing front panel. Do not overtighten screws.
2. Use handle on filter to flex filter up and out of retainer. Remove filter from unit.
3. Clean filter monthly, or more frequently if needed.
4. Replace filter and front panel and close cover panel.



OLD FRIEDRICH 24000 BTU HVAC UNIT

SERVICE (new LG unit)

1. Lift the inlet grille upward.
2. Remove the air filter from the front grille by pulling the air filter up slightly.
3. Wash the filter using lukewarm water below 40 degrees C (104 degrees F).
4. Gently shake the excess water from the filter and replace.
5. Check the air filter at least twice a month to see if cleaning is necessary.



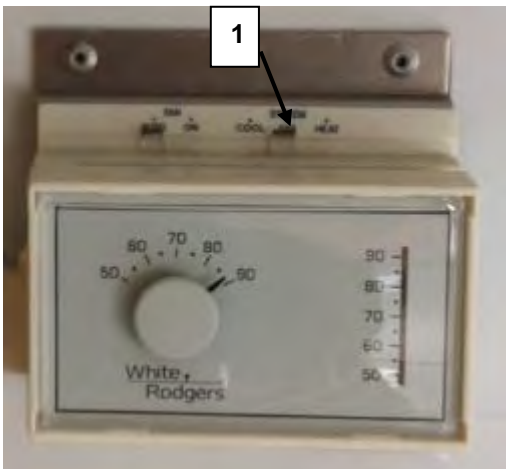
NEW LG 24000 BTU HVAC UNIT

HVAC THERMOSTAT

(Applicable only to EWCC units SN ACEWCC208-03233 through ACEWCC208-03310 and CCC units SN ACCCC208-03144 through ACCCC208-03159)

Reset Procedure

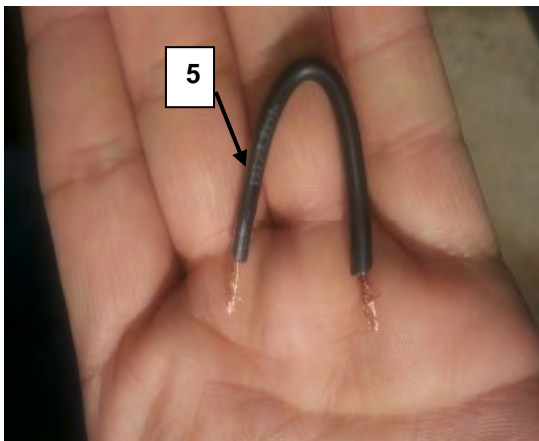
1. First switch the thermostat to the "OFF" position (1) and power down the HVAC unit before proceeding.
2. Push the "TEST" button (2) on the HVAC electric plug.



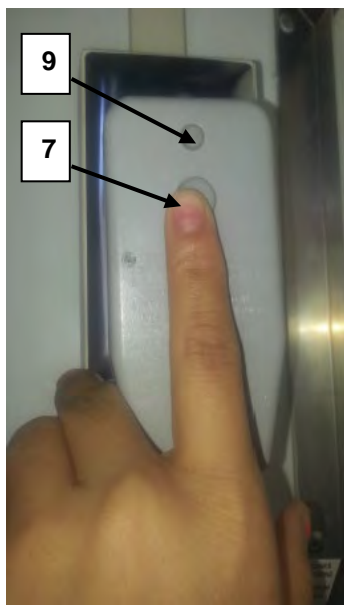
3. Fold the HVAC unit front lid (3) down to expose the colored electrical cables.
4. Unscrew each cable (4) in any order.



5. Connect a jumper wire (5) into the “FP” and “F2” ports (6).

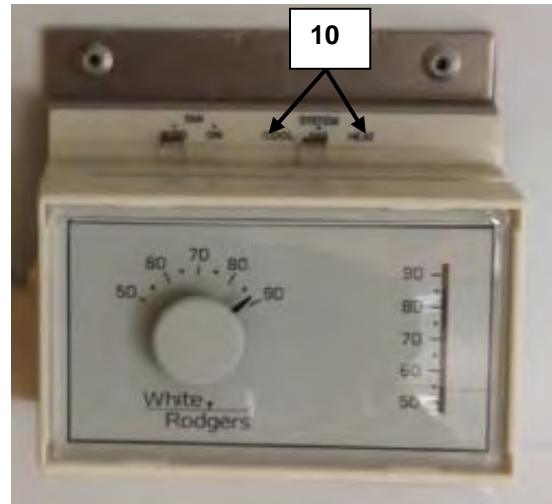
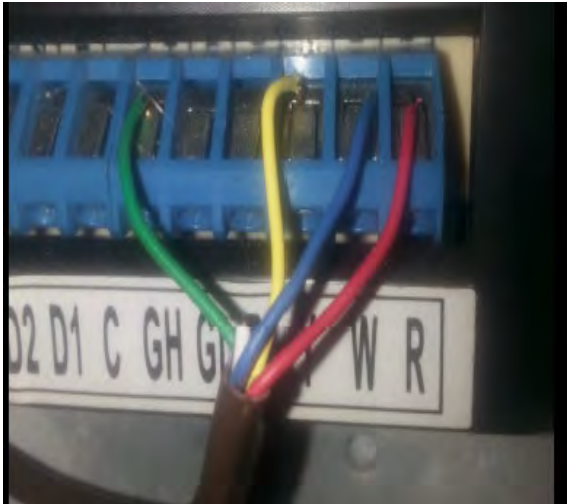


6. Wait a few minutes, then push the “RESET” button (7) on the HVAC electric plug.
7. Power the HVAC unit back on (8).



8. After the HVAC unit is running a few minutes, power the unit off (8).
9. Push the “TEST” button (9) on the HVAC electric plug.
10. Remove the jumper wire.

11. Connect and screw the colored wires back into place.
 - a. Green wire connected with "GH"
 - b. Yellow wire connected with "Y"
 - c. Blue wire connected with "W"
 - d. Red wire connected with "R"
12. Push the "RESET" button again on the HVAC electric plug.
13. Turn the thermostat back on (10).
14. Lift the HVAC unit front lid back up.



REPAIR

NOTE

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

1. For HVAC repair information prior to Serial Number ACCCC208-03144 (CCC) and ACEWCC208-03233 (EWCC) refer to Friedrich HVAC Model EM18J34B (18,000 BTU)
2. For HVAC repair information after Serial Number ACCCC208-03144 (CCC) and ACEWCC208-03233 (EWCC) refer to Friedrich HVAC Model EM24N34 (24,000 BTU)
3. For HVAC replacement parts, filters, etc., review the attached Friedrich Repair and parts manuals found in Appendix A, or go to www.friedrich.com

WARNING



Ensure HVAC circuit breakers and the power source is switched off before making electrical connections or electrical repairs. Any and all electrical repairs must be made by a certified electrician Army MOS 21R.

END OF WORK PACKAGE