

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

**CHAPTER 4
OPERATOR MAINTENANCE INSTRUCTIONS**

This page was intentionally left blank

OPERATOR 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

INTRODUCTION TO PREVENTATIVE MAINTENANCE CHECKS & SERVICES (PMCS)

INITIAL SETUP:

Materiel/Parts

None

Personnel Required

Two

References

None

Equipment Condition

CCC/EWCC Set-up

PREVENTATIVE MAINTENANCE CHECKS & SERVICES (PMCS)

Preventative Maintenance Checks and Services (PMCS) are performed to keep the CCC/EWCC in good operating condition. These checks aid in finding, correcting, or reporting problems. Operator personnel are to perform the PMCS tasks as shown in the PMCS table.

Perform PMCS procedures each day the CCC/EWCC is in operation, using the PMCS table in (WP 0017 00). There are different intervals to perform PMCS procedures: before, during and after using the equipment, as well as weekly and monthly. Look at the table carefully to identify the required PMCS interval.

Perform all checks and services keeping in mind the following guidelines:

- Before you begin using the CCC/EWCC, perform **Before Operation PMCS**.
- While the CCC/EWCC is in use, perform **During Operation PMCS**.
- After using the CCC/EWCC, perform **After Operation PMCS**.

If you find something wrong when performing PMCS, fix it using troubleshooting and/or maintenance procedures. Pay attention to WARNING and CAUTION statements. A **WARNING** means someone could be hurt or even killed. A **CAUTION** means equipment could be damaged.

The far right-hand column of the PMCS table lists conditions that make the CCC/EWCC not fully mission capable. Write down the problem that cannot be repaired at your level on DA Form 2404 and forward for unit maintenance.

If tools that are required to perform PMCS are not listed in the procedures, notify your supervisor.

Inspection

Look for signs of trouble. Use your senses to feel, smell, hear, or see problems that may exist. Inspect to see if items are in good condition. Are components correctly installed and secured? Is any damage to the frame or components visible? Correct any faults or notify Unit Maintenance.

Service

Proper service of the CCC/EWCC and components is an integral part of maintenance. Regular cleaning prevents possible problems in the future, so make it a habit to clean the CCC/EWCC and components whenever necessary.

END OF WORK PACKAGE

This page was intentionally left blank

OPERATOR 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

PMCS TABLE

INITIAL SETUP:

Materiel/Parts

Rags, Water, Broom

Personnel Required

Two

References

None

Equipment Condition

CCC/EWCC Operation

Table 1 Preventive Maintenance Checks and Services for the FPU SYSTEMS
PMCS B (Before), D (During), A (After), W (Weekly), M (Monthly)

	B	D	A	W	M	Inspection Item and Procedure	Equipment Not Ready/Available If
1	*	*	*			CCC/EWCC Check all doors and walls for cracks, dents, holes, or loose/missing hardware.	Missing door hardware, punctures, damage that would cause hazard, injury or damage to personnel.
2					*	Lubricate hinges, locks and latches as required.	All hinged items should move freely
3			*	*		Exterior Check all exterior surfaces for cracks, dents that effect the operation of the CCC/EWCC. Check for accumulations of dirt, debris, ice, snow, or salt. Clean as required.	Damage or malfunction that would cause the CCC/EWCC from operating properly such as, exterior electrical power cables, connection covers, HVAC cover door and latches. EWCC missing window shutters and latches. EWCC EXPANDO exterior edge seals are damaged or missing.
						Check for damaged or missing EWCC window shutters and latches.	
						Check damaged or missing external electrical connection covers.	
						EWCC EXPANDO exterior edge seals. Wipe clean and lubricate as required.	
4			*	*		Interior Check interior for dirt and debris. Sweep clean and wipe-down desk tops with rags as required. Check drawer latches for missing or loose hardware. Replace or tighten as necessary. Check circuit panel test for damaged breakers. Test HVAC and lighting system	A clean work area must be maintained. Damage or malfunction that would cause the CCC/EWCC from operating properly such as, inoperative circuit breakers, lighting system, HVAC.
						Lubricate drawer and HVAC slides as required.	
					*	Lubricate drawer and HVAC slides as required.	
5					*	Lubricate drawer and HVAC slides as required.	All bearing items should move freely.
6	*		*			EWCC EXPANDO ratchet straps, upper shelf ratchet straps	Damaged, frayed or missing EXPANDO ratchet straps.
7			*		*	Data Plates Check data plates for legibility, damage and/or missing. Clean with water and rag. Replace as needed.	CCC/EWCC ID plates and Weight limit on CCC/EWCC must be clear of paint, dirt and must be legible.

END OF WORK PACKAGE

This page was intentionally left blank

OPERATOR 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

CLEANING AND LUBRICATING

INITIAL SETUP:**Materiel/Parts**

Rags, Water, Detergent

Personnel Required

Three

References

None

Equipment Condition

CCC/EWCC Operation Setup

CLEANING AND LUBRICATING

Cleaning and Lubricating of the CCC/EWCC is performed to keep the CCC/EWCC and its associated equipment in good operating condition. The cleaning and lubrication of the CCC/EWCC can be conducted along with the Preventive Maintenance Checks and Services (PMCS) procedures described in (WP 0017 00). Specific areas described below need to be cleaned after an operational event or periodically if stored/staged outside of a fixed facility to keep the container, modules, and accessories performing as designed. Cleaning also assists in maintaining the condition of the materiel stored within the system. Any damage discovered when cleaning and/or lubricating that cannot be corrected using the troubleshooting procedures described in (WP 0015 00) should be reported for corrective maintenance.

Table 1 Cleaning

SURFACE	OIL/GREASE	SALT/MUD/DIRT DEBRIS	RUST/CORROSION
Exterior and Interior Walls (All)	Detergent, Water, Rags	Soapy Water, Brush, Rags	Corrosion Removal Compound and Wire Brush, Dry Rag, Spot Paint
Door Hinge Cover and Seals	Damp and Dry Rags	Damp and Dry Rags	N/A
EWCC Window Doors	Detergent, Water, Rags	Soapy Water, Brush, Rags	Corrosion Removal Compound and Wire Brush, Dry Rags, Spot Paint
Exterior Power and Communication Door Hinges	Molykote Multipurpose Synthetic Grease P/N 26040124	Brush, Rag and lubricate as needed to ensure hinges travel freely	Corrosion Removal Compound and Wire Brush, Dry Rags and Lubricate as needed Spot Paint
Power Cable Connections	Detergent, Water, Rags	Soapy Water, Wire Brush, Rags	Do Not Paint
HVAC Weather Door and Cover	Detergent, Water, Rags	Soapy Water, Brush, Rags	Corrosion Removal Compound and Wire Brush, Dry Rag, Coat with Lube Oil or Spot Paint
HVAC Filters	None	Vacuum to remove dust as needed	Replace monthly in high dust conditions, clean as needed.
Non-Metallic Door Straps and ratchet mechanism/straps	Detergent, Water, Rags	Soapy Water, Brush, Rags	Do Not Paint
END OF CLEANING TABLE 1			

Table 2 Lubrication

USAGE	FLUID or LUBRICANT	CAPACITIES	EXPECTED TEMPERATURES	INTERVAL
CCC/EWCC Door Hinges	General Purpose Lubricating Oil 10W	As Required	All Temperatures	Monthly or as required if under adverse conditions
CCC/EWCC Door Locks	Molykote Multipurpose Synthetic Grease P/N 26040124	As Required	All Temperatures	Monthly or as required if under adverse conditions
CCC/EWCC Door Hinge Cover and Seals	Molykote Multipurpose Synthetic Grease P/N 26040124	As Required	All Temperatures	Monthly or as required if under adverse conditions
CCC/EWCC Exterior Door Locking Mechanism	General Purpose Lubricating Oil 10W	As Required	All Temperatures	Monthly or as Required if under Adverse Conditions
CCC/EWCC Power Cable Doors And Hinges	Molykote Multipurpose Synthetic Grease P/N 26040124	As Required	All Temperatures	Monthly or as Required if under Adverse Conditions
CCC/EWCC File Cabinet Drawer and HVAC Slides	Clean with WD-40 apply Molykote Multipurpose Synthetic Grease P/N 26040124	As Required	All Temperatures	Bi-annually or as required if under adverse conditions
CCC/EWCC HVAC Units (24,000 BTU)	Allow condensation to remain in the catch pan during HVAC cooling operation	Note: condensation in the catch pan assists the HVAC cooling operation	Note Cooling operation only	Note: Drain condensation only when retracting the HVAC unit into the container
CCC/EWCC interior Door Locking Mechanism	General Purpose Lubricating Oil 10W	As Required	All Temperatures	Monthly or as Required if under Adverse Conditions
CCC/EWCC Drawer Locks	Molykote Multipurpose Synthetic Grease P/N 26040124	As Required	All Temperatures	Monthly or as Required if under Adverse Conditions
CCC/EWCC Cabinet Doors and Drawers	Damp and Dry Rags	As Required	All Temperatures	Monthly or as Required if under Adverse Conditions

Table 2 Lubrication (cont'd)

USAGE	FLUID or LUBRICANT	CAPACITIES	EXPECTED TEMPERATURES	INTERVAL
Ratchet Mechanism	General Purpose Lubricating Oil 10W	As Required	All Temperatures	Monthly or as required if under adverse conditions
EWCC EXPANDO Unit Seals	Molykote Multipurpose Synthetic Grease P/N 26040124	As Required	All Temperatures	Monthly or as required if under adverse conditions
EWCC Window Door Butterfly Latches	Molykote Multipurpose Synthetic Grease P/N 26040124	As Required	All Temperatures	Monthly or as required if under adverse conditions
END OF LUBRICATION TABLE 2				

END OF WORK PACKAGE

This page was intentionally left blank

OPERATOR 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

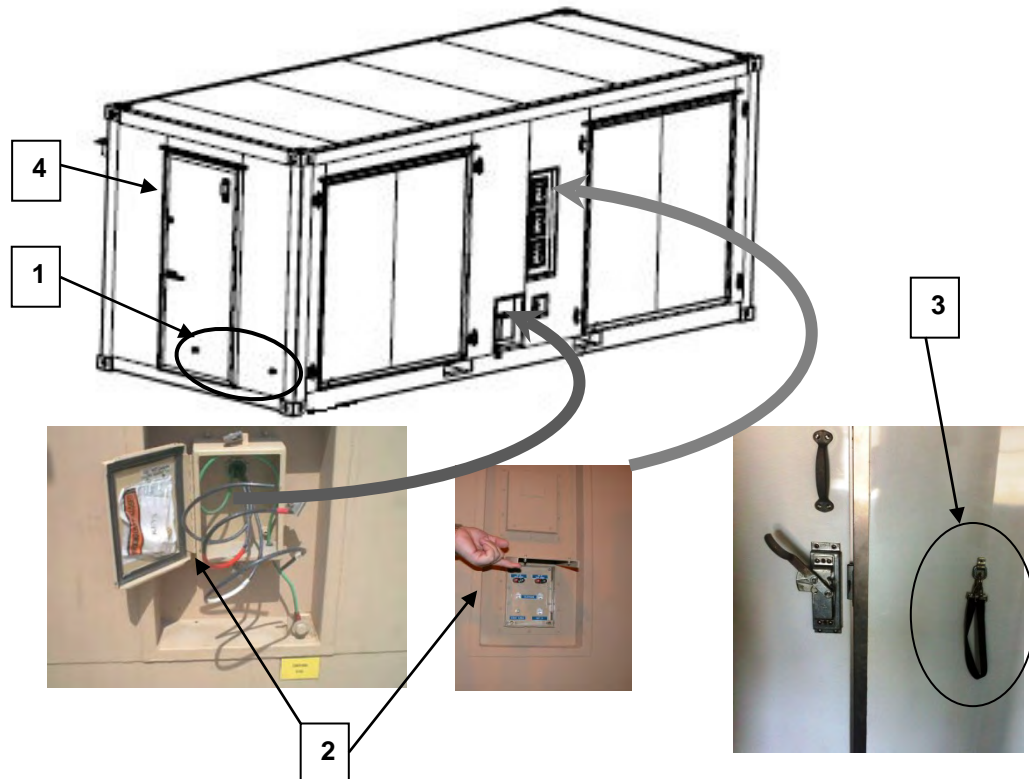
Chapter 2, 3 and 5

Equipment Condition

CCC/EWCC Operation Set-up

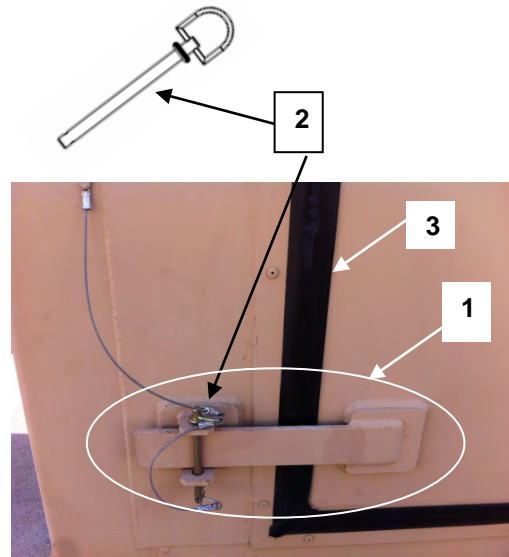
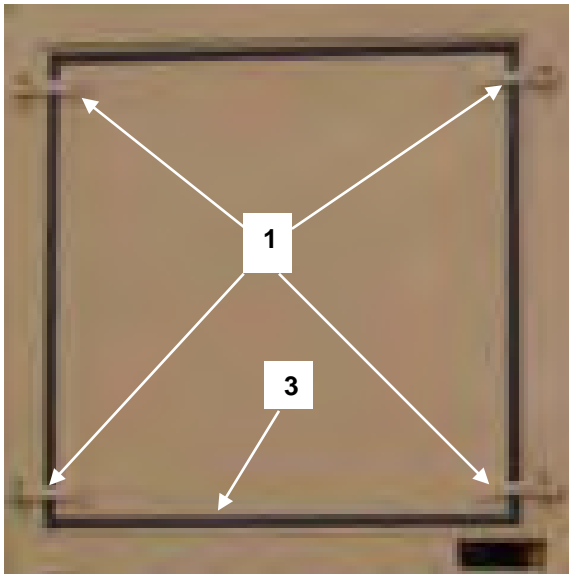
INSPECT

1. Visually inspect the container exterior for damage.
2. Inspect for missing or damaged entrance door retaining strap rings (1).
3. Inspect the power cable, communication door latches and hinges (2) for damage.
4. Notify unit maintenance of any missing or damaged power connections, doors or latches.
5. Ensure there is a door retention strap (3), stored just inside the door.
6. Inspect door seals (4) for cut, cracked or missing seals. Notify unit maintenance if damaged.

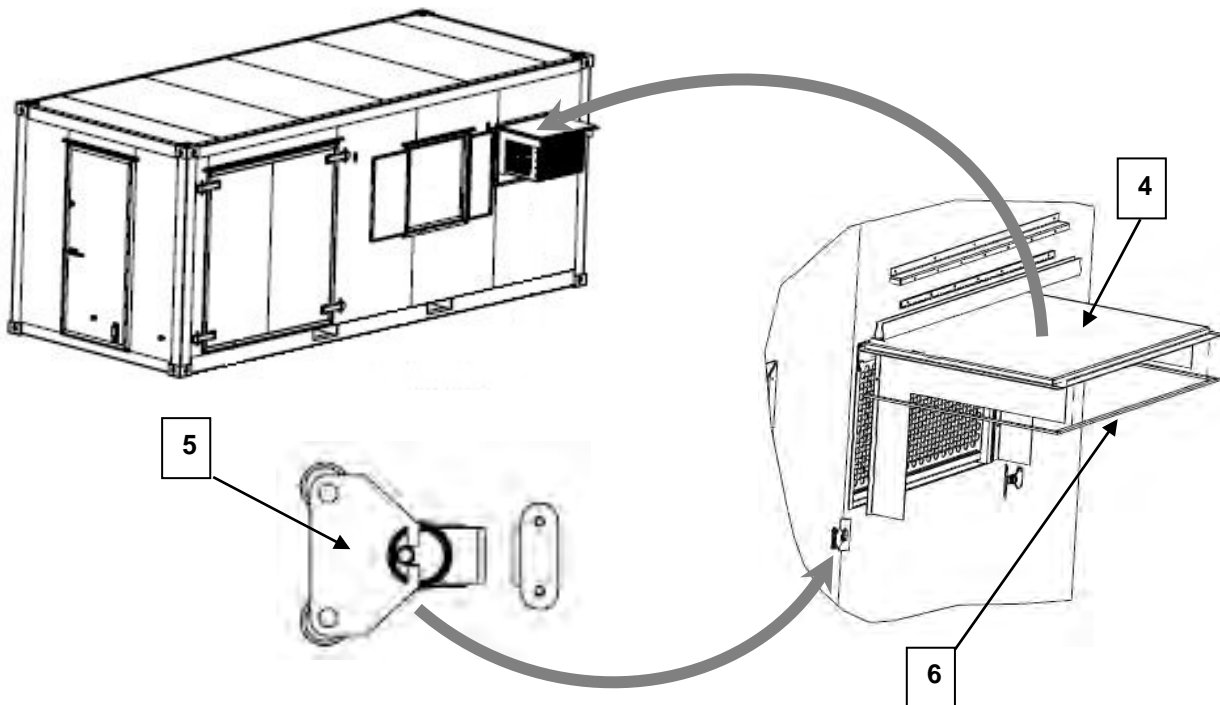
**NOTE**

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

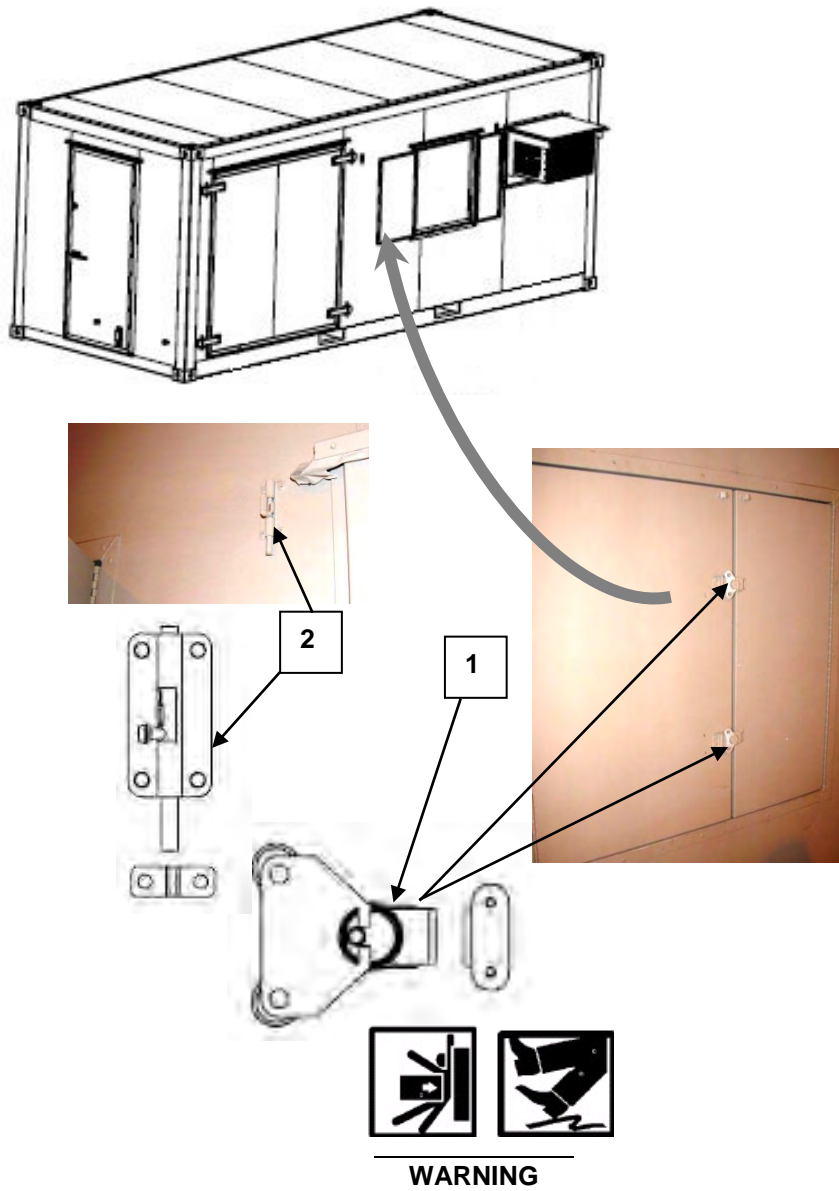
7. Visually inspect for damaged or missing EXPANDO retaining pin brackets (1) and pins (2).
8. Visually inspect the EXPANDO exterior edge seals (3) for cuts, cracks and damage. Notify maintenance if damaged.



9. Check for damaged or missing HVAC weather cover door assembly (4) Notify maintenance if damaged or missing.
10. Inspect HVAC butterfly latches (5) and door seals (6); replace as needed. (See Chapter 5.)



11. Inspect butterfly latches (1) on the window shutter doors.
12. Inspect for missing or damaged left and right barrel latches (2) for the shutter doors.
13. Open window shutters and secure with barrel latches,
14. Inspect the window for damage. Notify maintenance of any damage.
15. Leave the windows open and proceed to the interior for inspection.



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

This page was intentionally left blank

OPERATOR 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

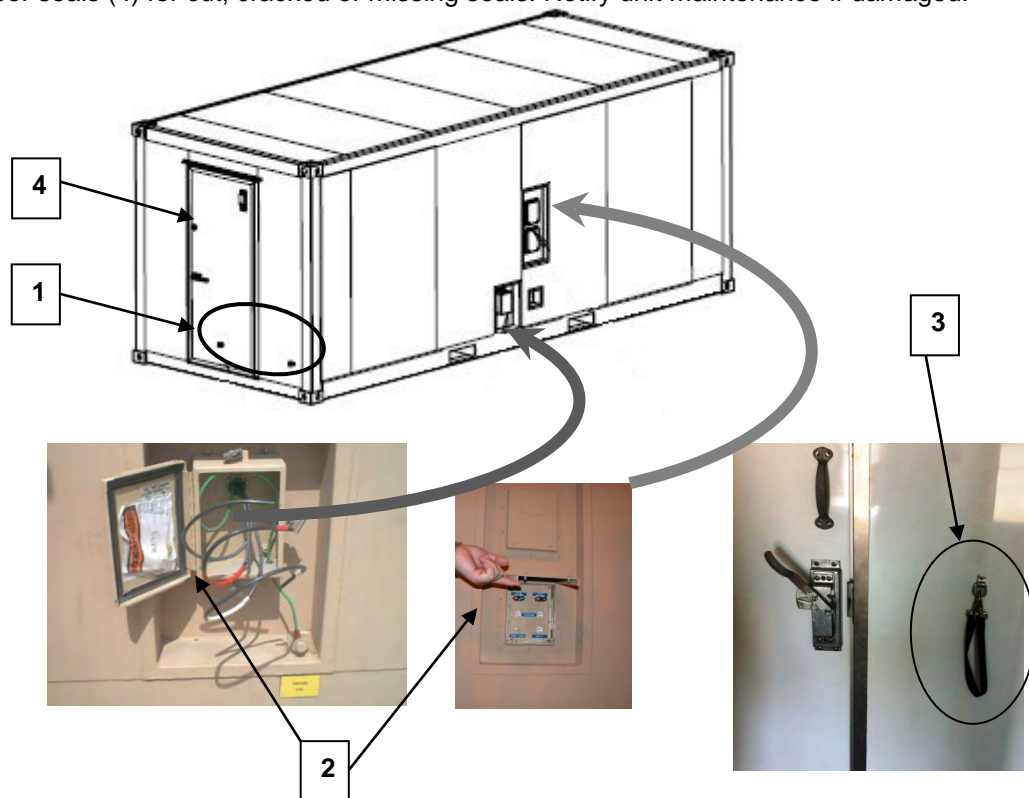
Chapter 2, 3 and 5

Equipment Condition

CCC/EWCC Operation Set-up

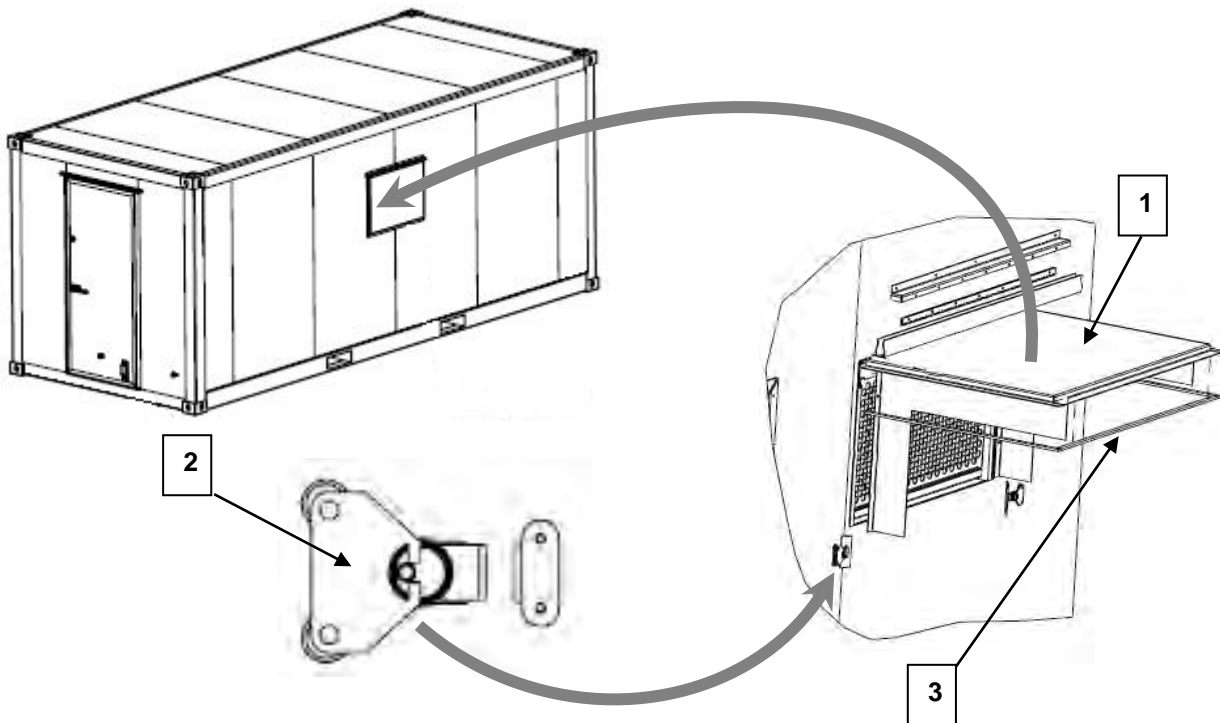
INSPECT

1. Visually inspect the container exterior for damage.
2. Inspect for missing or damaged entrance door retaining strap rings (1).
3. Inspect the power cable, communication door latches and hinges (2) for damage.
4. Notify unit maintenance of any missing or damaged power connections, doors or latches.
5. Ensure there is a door retention strap (3), stored just inside the door.
6. Inspect door seals (4) for cut, cracked or missing seals. Notify unit maintenance if damaged.

**NOTE**

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

7. Check for damaged or missing HVAC weather cover door assembly (1) Notify maintenance if damaged or missing.
8. Inspect HVAC butterfly latches (2) and door seals (3); replace as needed. (See Chapter 5.)



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

OPERATOR 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

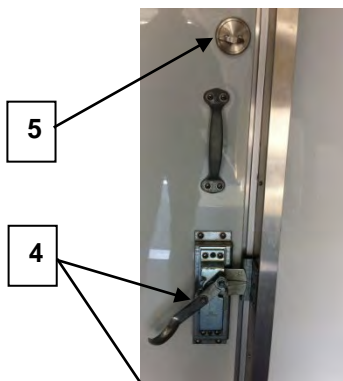
Chapter 2 WP 0007 00

Equipment Condition

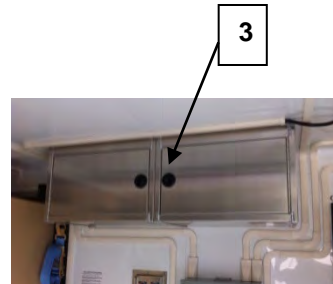
CCC/EWCC Operation Set-up

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. Notify unit maintenance if missing, cracked, broken or poorly operating lock set. See WP 0008.
3. Open and close file drawers (2) to ensure proper operation and alignment. Lubricate, repair or replace as needed.
4. Inspect overhead door latches (3).

**The New Door Handle Lock System**

2



3



1

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.

END OF WORK PACKAGE

This page was intentionally left blank

OPERATOR 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

References

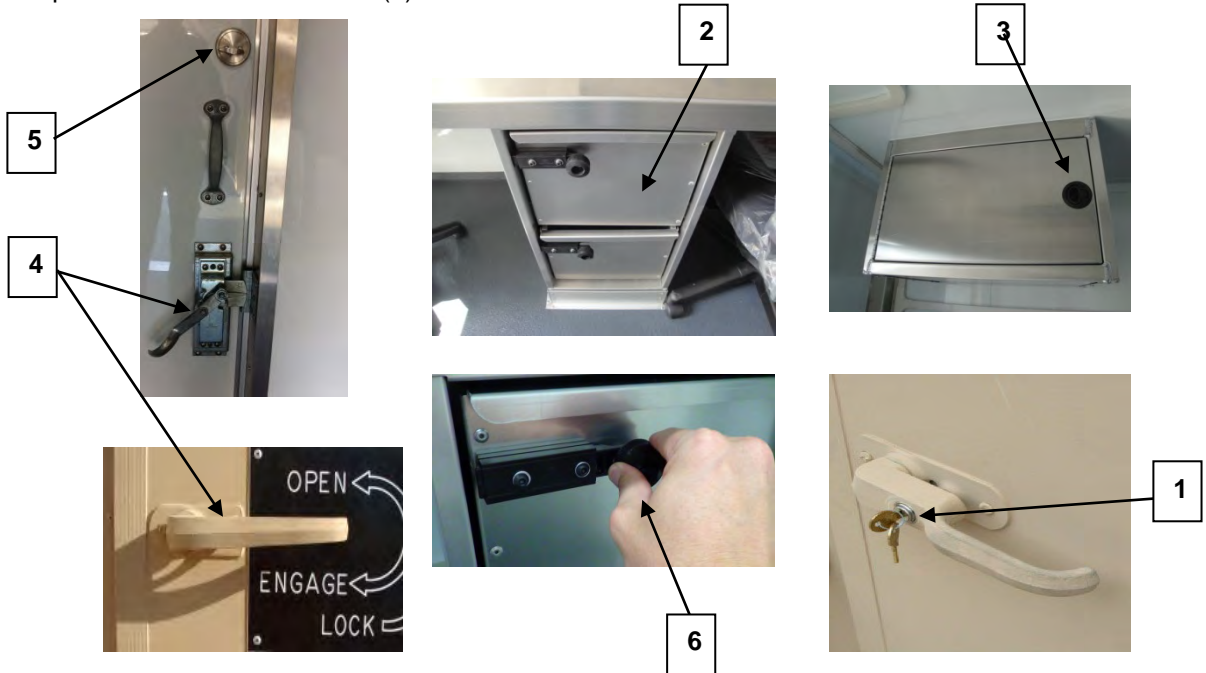
Chapter 2 WP 0007 00

Equipment Condition

CCC/EWCC Operation Set-up

INSPECT

1. Inspect door lock set (1) for smooth operation. Notify unit maintenance if missing, cracked, broken or poorly operating lock set. See WP 0008.
2. Inspect slam latches (6) on cabinet drawers for smooth movement, spring tension and retention of the drawer in the fully closed position. Notify unit maintenance of any missing or damaged drawer latches.
3. Open and close file drawers (2) to ensure proper operation and alignment. Lubricate, repair or replace as needed.
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 # ACCCC208-03134 and beyond.

END OF WORK PACKAGE

This page was intentionally left blank

OPERATOR 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

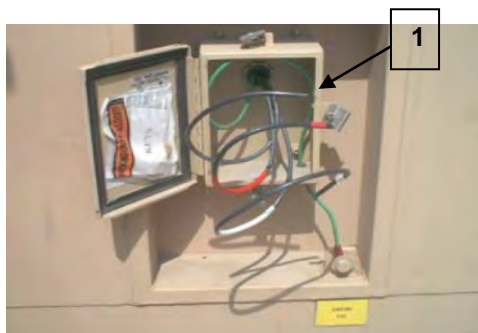
Chapter 2 WP 0009 and 0011

Equipment Condition

CCC/EWCC Operation Set-up

INSPECT**External Electrical Connection**

1. Ensure the external electrical connection (1) has been made by a certified electrician and properly connected to the power sources (110/220, single phase, 60 Hz).

**WARNING**

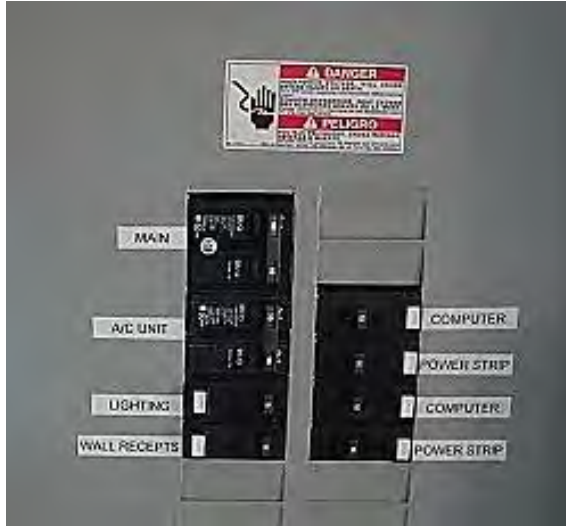
Ensure all circuit breakers and the main power source is switched off before making electrical connections. Ensure the cable connectors are properly installed by a certified electrician Army MOS 21R and match the power source (110/220, single phase, 60 Hz)

WARNING

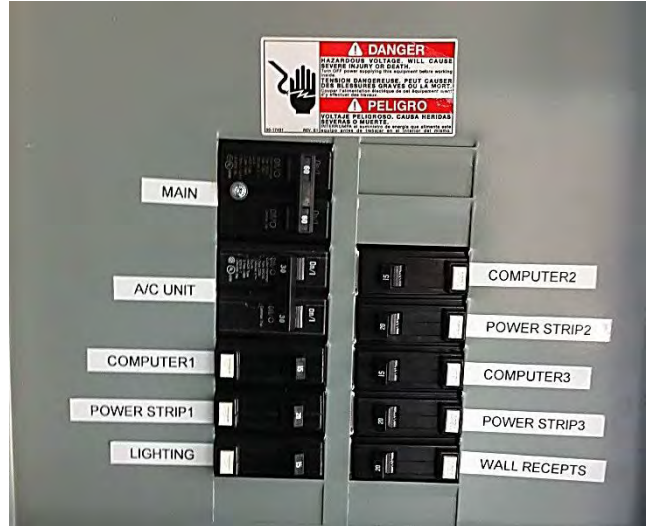
The electrical ground must be established first to prevent electrical shock to personnel. See page 0009 00-2 through 00-4. Consult ARMY TM 5- 811-3 Chapter 2 and MIL-HDBK 149A Chapter 2-5.

Internal Electrical System

1. When the power sources are connected enter the container switch on the all circuit breakers at the back wall below the HVAC unit. See Chapter 2 pages 0009 00-3 and 0011 00-3.



CCC Load Center



EWCC Load Center

2. Actuate and test the 12 VDC red and white lighting system switches at the door. Ensure the door interrupter switch operates properly. See Chapter 2 Page 0009 00-5 and 0011 00- 5.



3. Test each electrical power strip with a circuit tester or an appliance, such as, drill, fan or light. If the appliance fails, reactivate the circuit breaker power strip #1, #2 and #3. See Chapter 2 pages 0009 00-3 and 0011 00-3.

4. Ensure the HVAC is plugged into the outlet adjacent to the HVAC unit on the left.
5. Activate the 30 Amp circuit breaker in the circuit breaker panel.
6. Test the HVAC at the side wall of the container. If the HVAC fails to operate, reactivate the circuit breaker retest. See Chapter 2 pages 0009 00-3 and 0011 00-3.

Old Friedrich 24000 BTU HVAC



New LG 24000 BTU HVAC



END OF WORK PACKAGE

This page was intentionally left blank