

**FPU® SYSTEMS OPERATION MANUAL
(INCLUDING REPAIR PARTS & SPECIAL TOOL LIST)
MODELS FPU-8-4/BOH-CARGO-12-3 & FPU-20-3
BOH FPU Field Pack-up Units**

CHAPTER 3

TROUBLESHOOTING PROCEDURES

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TROUBLESHOOTING PROCEDURES

FPU® SYSTEMS OPERATION MANUAL (INCLUDING REPAIR PARTS & SPECIAL TOOL LIST) MODELS FPU-8-4/BOH-CARGO-12-3 & FPU-20-3 BOH FPU Field Pack-up Units

INTRODUCTION

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The malfunction/symptom index in WP 0010 00 is a quick reference for finding the troubleshooting procedures. Associated with each symptom name is a table number representing the starting point in a troubleshooting sequence contained in WP 0011 00. The troubleshooting index is broken down by component. Find the component and malfunction/symptom, review the referenced table for the test or inspection and perform the corrective action. This type of activity continues until successful fault isolation is achieved.

Troubleshooting Procedures

The troubleshooting work package contains tables listing the malfunctions, checks or inspections, and corrective actions required to return the equipment to normal operation. Perform the steps in the order they appear in the tables.

The work package is headed by an initial setup. This setup outlines what is needed as well as the conditions that must be met before starting the task. **DO NOT START A TASK UNTIL:**

- You understand the malfunction.
- You understand what you are to do to correct the malfunction.
- You understand what is needed to do the work.
- You have the things you need.

This manual cannot list all malfunctions that may occur, or all tests, inspections and corrective actions. If a malfunction is not listed or is not corrected by listed corrective actions, notify unit maintenance.

END OF WORK PACKAGE

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TROUBLESHOOTING INDEXES

TABLE 1 TROUBLESHOOTING INDEX (OPERATOR)

Malfunction/Symptom	Refer to WP 0011 00, Table 1, Procedure Number
INITIAL SETUP	
Connecting/Disconnecting FPU	
Unable to Insert Horizontal Interconnectors or Bridge Locks into ISO Corner Blocks of BOH-CARGO-12-3 or FPU-8-4.	1
Unable to Insert Loading Rail Connector into BOH-CARGO-12-3 or FPU-8-4 Loading Rails.	2
Unable to install Transversal Stabilizer Cross Bar on to the Load Rail Connectors.	3
Unable to Retract Expandable End Tensioning Blocks.	4
Unable to Join FPU-8-4 to BOH-CARGO-12-3.	5
Unable to Separate FPU-8-4/BOH-CARGO-12-3 Containers.	6
Install/Remove Rear Roller Assembly	
Unable to Install Rear Roller Assembly to FPU-8-4 or FPU-20-3.	7
Installing the Fork Pocket Adapter Plug	
Unable to Install Forklift Adapter Plug in to FPU-8-4 Fork Pocket.	8
Securing FPU to PLS Trailer	
Unable to Insert the 1 ½-inch PLS Trailer Load Securing Pin.	9
OPERATION OF FPU CONTAINERS	
Operation of FPU Doors	
Unable to Open Door	10
Unable to Close Door	11
Doors Leaking	12
Removing/Installing Load Constraint Bars (BOH-Cargo-12-3 or front section of the FPU-20-3 configured with Parts Storage Aids)	
Unable to Install Load Constraint Bar. (OBSOLETE)	13
Operating Adjustable Drawers (BOH-CARGO-12-3 and front section of the FPU-20-3 configured with Parts Storage Aids)	
Unable to Remove Drawer Slide Ledge Assembly from Vertical Rack Frame.	14
Unable to Install Drawer Slide Ledge Assembly onto Vertical Rack Frame.	15
Opening and Closing Drawers ((BOH-Cargo-12-3 or front section of the FPU-20-3 configured with Parts Storage Aids)	
Unable to Open Drawer.	16
Drawer Does Not Lock in the Fully Extended Position.	17
Unable to Close Drawer.	18

Malfunction/Symptom	Refer to WP 0011 00, Table 1, Procedure Number
Pallet Rack System (FPU Configured with Bulk Storage Aids)	
Unable to Insert a Pallet.	19
Unable to Remove a Pallet.	20
Adjusting Pallet Position	
Unable to Remove Pallet Ledge Assembly from Vertical Rack Frame.	21
Unable to Install Pallet Ledge Assembly onto Vertical Rack Frame.	22
Securing FPU Cargo Using Nets (2-inch Drawers and HAZMAT Pallets only)	
Male Parachute Clips on Nets Do Not Align with Female Clips on Drawer/Pallet.	23
Securing Cargo Using Floor Nets (FPU Configured with Bulk Storage Aids)	
Safety Snaps Will Not Stretch Between Rings at Bottom of Vertical Rack Frames.	24
Securing Cargo using Ratchet Straps	
Unable to Operate Ratchet Strap	25
OPERATION OF FPU MODULES	
Loading/Unloading FPU Modules	
Unable to Insert Module and Lock in Position	26
Unable to Remove Module	27
OPERATION OF FPU ACCESSORIES	
Removable Cradle	
Removable cradle Does Not Fit evenly to Floor	28
Connector Kit	
Containers Separate When Lifting	29
Trailer Adapter	
Unable to Secure FPU to FPU-TS Trailer	30
End of Table	

END OF WORK PACKAGE

TROUBLESHOOTING PROCEDURES

FPU® SYSTEMS OPERATION MANUAL (INCLUDING REPAIR PARTS & SPECIAL TOOL LIST) MODELS FPU-8-4/BOH-CARGO-12-3 & FPU-20-3 BOH FPU Field Pack-up Units

TROUBLESHOOTING PROCEDURES

INITIAL SETUP:
Materiel/Parts

None

Personnel Required

Two plus Supervisor and MHE support

Tools

Specials Tool Kit and BII Kit

References

Chapter 6 WP 0037 00 and 0040 00

Equipment Condition

FPU set up

NOTE

If malfunction corrective action does not correct the malfunction, notify unit maintenance.

TABLE 1 OPERATOR TROUBLESHOOTING

Malfunction	Test or inspection	Corrective action required
1. Unable to Insert Horizontal Interconnectors or Bridge Locks into ISO Corner Blocks Of FPU-8-4 or BOH-CARGO-12-3.	Ensure horizontal interconnector is adjusted and the Bridge Lock jaws are fully open.	Using appropriate Special Tools from the tool bag, see WP 0037 00, fully retract horizontal interconnector bolts and Bridge Lock jaws.
	Inspect for debris in ISO corner blocks.	Clean debris as required.
2. Unable to Insert Loading Rail Connectors Into FPU-8-4 or BOH-CARGO-12-3 Loading Rails.	Inspect open end of loading rails on the FPU-8-4 and BOH-CARGO-12-3 for debris.	Clean debris as required.
	Inspect for proper lubrication.	Lubricate the loading rail connectors and open ends of loading rails as necessary.
3. Unable to Install Transversal Stabilizer Cross Bar on to the Load Rail Connectors.	Inspect for Debris.	Clean debris as required.
4. Unable to Retract Expandable End Tensioning Blocks.	Inspect for Debris.	Clean debris as required.
	Inspect for proper lubrication.	Lubricate the tensioning block, tensioning bolt and jam nut as necessary.
5. Unable to Join FPU-8 to BOH-CARGO-12-3.	Inspect open end of loading rails on the BOH-CARGO-12-3 for debris.	Clean as required.
	Inspect for proper orientation.	Reorient rails in proper direction.
	Inspect for proper lubrication.	Lubricate the loading rail connectors and open ends of loading rails as necessary.
6. Unable to Separate FPU-8-4/ BOH-CARGO-12-3 Containers.	Check for cocked/twisted condition.	Push back into connected position, realign MHE and repeat disconnecting process.
	Check to ensure horizontal interconnectors are fully retracted.	Retract horizontal interconnector adjuster bolt to the fully retracted position.

TABLE 1 OPERATOR TROUBLESHOOTING (cont'd)

Malfunction	Test or inspection	Corrective action required
7. Unable to Install Rear Roller Assembly to FPU-8-4 or FPU-20-3.	Inspect for debris on roller bracket saddle, rear support beam on the FPU-8-4 or FPU-20-3 and roller pinning holes.	Clean as debris required.
8. Unable to Install Fork Pocket Adapter Plug into FPU-8-4 Fork Pocket.	Inspect for debris.	Clean debris as required.
9. Unable to Insert The 1 ½" PLS Trailer Load Securing Pin.	Inspect for debris.	Clean any debris as required.
	Ensure container pin hole is aligned with respective rail pin hole on trailer.	Reposition container slightly until the pin holes are aligned.
	Inspect the forklift adapter plug for proper orientation (right / left oriented). Ensure container rollers are installed in their proper orientation.	Switch forklift adapter plugs and install rollers in their proper orientation.
10. Unable to Open Door/Doors.	Ensure the door is opened in the proper sequence.	Align door/doors (refer to chapter 2 pages 0006 00- 9 and 00-10).
	Inspect container position to ensure it is on level ground.	Relocate container to level ground.
11. Unable to Close Door/Doors.	Inspect for debris in door threshold.	Clean debris from threshold. Close door and retry.
	Inspect to ensure door is being closed with proper sequence.	Align door/doors (refer to chapter 2 pages 0006 00- 9 and 00-10).
	Inspect container position to ensure it is on level ground.	Relocate container to level ground.
12. Doors Leaking	Inspect container door threshold for dirt, gravel or other obstructions.	Clean as necessary. Lubricate as required.
	Inspect door seals for proper lubrication.	Lubricate as needed. See Lubrication chart chapter 4 page 0014 00 and 15 00
13. Unable to Install Load Constraint Bar.	Inspect for debris in the bottom load rail retainer boot.	Clean debris as necessary.

TABLE 1 OPERATOR TROUBLESHOOTING (cont'd)

Malfunction	Test or inspection	Corrective action required
14. Unable to Remove Drawer Slide Ledge Assembly from Vertical Rack Frame.	Inspect to ensure all securing bolts have been removed.	Ensure all four carriage bolt nuts are loose.
	Check drawer ledge position to ensure it is clear of the vertical rack stanchion windows.	Using 2X4 or similar object, tap upward on the drawer ledge until clear of vertical rack frame window.
15. Unable to Install Drawer Slide Ledge Assembly on the Vertical Rack Frame.	Inspect ledge tabs to ensure they are inside vertical rack frame windows.	Remove and reposition with all bayonet tabs inside vertical rack frame windows and the four carriage bolts are aligned inside their appropriate slots. Tap downward with a 2X4 or similar object until carriage bolts are completely at the bottom of their slots.
16. Unable to Open Drawer.	Inspect drawer-locking handles to ensure they are in the unlocked position.	Position drawer locking handles into the unlocked position and extend outward.
	Inspect for an obstruction inside the drawer.	Clear obstruction and open.
17. Drawer Does Not Lock in the Fully Extended Position.	Inspect drawer to ensure drawer is fully extended.	Pull back firmly on drawer to fully extend and turn locking handles to their locked position.
18. Unable to Close Drawer.	Inspect drawer-locking handle to ensure they are in the open position.	Position handle in the open position and push inward.
	Check for an obstruction in the drawer.	Clear/remove the obstruction.
19. Unable to Insert a Pallet.	Inspect pallet-locking rod to ensure it is in the fully retracted position.	Fully retract the pallet-locking rod.
	Inspect pallet and pallet ledge area to ensure nets or straps on the pallet are not hung up on the pallet ledge.	
20. Unable to Remove a Pallet.	Inspect pallet-locking rod to ensure it is in the fully retracted position.	Fully retract the pallet-locking rod.
	Inspect pallet and pallet ledge area to ensure nets or straps on the pallet are not hung up on the pallet ledge.	Untangle and continue removing pallet.

TABLE 1 OPERATOR TROUBLESHOOTING (cont'd)

Malfunction	Test or inspection	Corrective action required
21. Unable to Remove Pallet Ledge Assembly From Vertical Rack Frame.	Inspect to ensure all securing bolts have been removed.	Ensure all ten carriage bolt nuts are loose.
	Check pallet ledge position to ensure it is clear of the vertical rack stanchion windows.	Using 2X4 or similar object, tap upward on the drawer ledge until clear of vertical rack frame window.
22. Unable to Install Pallet Ledge Assembly onto Vertical Rack Frame.	Inspect pallet ledge tabs to ensure they are inside vertical rack frame windows.	Remove and reposition with all bayonet tabs inside vertical rack frame windows and the ten carriage bolts are aligned inside their appropriate slots. Tap downward with a 2X4 or similar object until carriage bolts are completely at the bottom of their slots.
23. Male Parachute Clips on Nets Do Not Align with Female Clips on Drawer/Pallet.	Check the orientation of net to ensure it is properly fitted.	Turn net to orientate properly.
24. Safety Snaps on Floor Nets Will Not Stretch Between Rings at Bottom of Vertical Rack Frames.	Check orientation of net to ensure it is properly fitted.	Turn net to orientate properly.
25. Unable to Operate Ratchet Strap.	Check to ensure ratchet handle is in its full open position.	While pulling inward on the tension release bar completely straighten handle until tension is released.
26. Unable to Insert Module and Lock In Position.	Check module adapter plate feet, removable cradle cradles for debris and ensure rubber pads are in place.	Clean debris as necessary. Insert rubber pads as necessary.
	Check module-locking arm to ensure it is in the full open position.	Check module locking arm for obstruction. Clear obstruction and pull to extend outward to its full open position.
27. Unable to Remove Module.	Check module-locking arm to ensure it is in its full open position.	Extend module-locking arm to its full open position.
28. Removable Cradle Does Not Fit Evenly on the Floor.	Inspect for debris under the removable cradle.	Clean as required and install.
29. Containers Separate When Lifting	Ensure both sides of Horizontal Interconnectors and Bridge Locks are correctly installed	Tighten Horizontal Interconnector locking bolts and Bridge Locks as required
30. Unable to Secure FPU to FPU-TS Trailer	Check Trailer Connection Twist Locks and holes for dirt/debris	Remove dirt/debris, sand, dirt, snow, or ice from connection holes and Twist Locks
	Check for presence of FPU-TS Twist Locks. See FPU-TS manual sections 4.3 and 4.3-1 http://www.bohfpusystems.com	Install Twist Locks. See FPU-TS manual sections 4.3 and 4.3-1 http://www.bohfpusystems.com
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END OF WORK PACKAGE