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SERVICE BULLETIN

MAINTENANCE OF WAY EQUIPMENT

DATE: 07-2020 **BULLETIN NO:** 20-007

TITLE: G6 JAM BOX CONVERSION KIT

RATING:

- ☐ **DIRECTIVE** (Action Is Required)
- ☐ **ALERT** (Potential Problem)
- ☐ **INFORMATION** (Action Is Optional)
- ☒ **PRODUCT IMPROVEMENT** (Enhance Product)

PRODUCT SERIES / MODEL: All 6700S Tampers with Jupiter I Control System

SERIAL NO: Machines with Tier 3 Engines: 153311, 153400 and Higher
Machines with Tier 2 Engines: 153203, 153310, 153356 - 153394

SUMMARY: All existing styles of the "Blue" JAM Boxes are now unavailable as repair parts and are being replaced by the new style G6 JAM Box. Conversion Kits are available to convert to the new style G6 JAM Box. Kits include a new J42 Board (to replace the existing P42 Board), Mounting Plate, Cables and Mounting Hardware. A Jupiter software upgrade will also be required.

OPERATIONAL IMPACT: The new style G6 JAM Box provides faster operation, better temperature performance, and offers greater protection from dust and dirt.

ACTION: When necessary to replace a "Blue" JAM Box, (#H5991Y01, Y03 and Y04), order the new style G6 JAM Box Conversion Kit applicable to your model 6700S Tamper. Be able to provide your machine serial number so it can be determined if a Jupiter software upgrade is also required. Use this Service Bulletin as a reference guide to assist in the installation of the new style G6 JAM Box and its associated components. See Service Bulletin 20-006 for more detailed information concerning the G6 JAM Box and the J42 Board.

CONTACT: If you have any questions or if we can be of any service, please contact:
Harsco Rail Service Department
Ludington, MI Facility
(231) 843-3431

ORDERING G6 JAM BOX CONVERSION KITS

1. Contact the Service Department at Harsco Rail to order the following G6 JAM Box Conversion Kit applicable to your model of machine. **Important:** Be able to provide the Model Number and Serial Number of the machine that the G6 JAM Box is being installed on so it can be determined if a Jupiter software upgrade is also required.

   Harsco Rail Service Department
   Ludington, MI Facility
   (231) 843-3431

2. Use this Service Bulletin to assist in the installation of the new style G6 JAM Box and its associated components. See Service Bulletin 20-006 for more detailed information concerning the G6 JAM Box and the associated J42 Board.

ITEM	PART NO	DESCRIPTION	QTY
	2014209	6700SJ Tier 2 Work JAM Box Conversion Kit	1
	2014210	6700SJ Tier 2 Instrument JAM Box Conversion Kit	1
	2014213	6700SJ Tier 3 Work JAM Box Conversion Kit	1
	2014214	6700SJ Tier 3 Instrument JAM Box Conversion Kit	1

USB PRINTER COMPONENTS

1. The new style G6 JAM Box uses a USB port to connect any keyboard, mouse or a USB type printer. Older keyboards using a traditional "PS/2" style connector will require a PS/2 - to- USB converter, or the keyboard may be replaced with a new USB connecting keyboard. If your machine currently has a printer connected to the parallel port on the old style "Blue" JAM Box, your existing printer will not work with the new style G6 JAM Box. If you want to connect a printer to the new style G6 JAM Box, consider ordering the following printer components:

ITEM	PART NO	DESCRIPTION	QTY
	2011683	Conversion, Printer 6700S Jupiter (includes printer cable)	1
	2014137	Printer Cable- USB Type A-B, 2M	1
	4010266	USB Active Ext Cable(16 Ft) (USB signal booster for printer)	1

SAFETY INFORMATION

- **FOLLOW APPLICABLE RAILROAD LOCKOUT - TAGOUT PROCEDURE TO REMOVE MACHINE FROM ALL ENERGY SOURCES. FAILURE TO COMPLY COULD RESULT IN SEVERE BODILY INJURY.**

1. Follow applicable Railroad Lockout - Tagout Procedure to remove the machine from all energy sources when performing maintenance, or making adjustments or repairs to the machine.
2. **Important:** BE SURE the Jupiter Control System and the master disconnect switch are shut OFF on the machine before installing the G6 JAM Box Conversion Kit.

#2014209 - 6700SJ Tier 2 WORK JAM BOX CONVERSION KIT

Parts List - See Drawing #2014209

ITEM	PART NO	DESCRIPTION	QTY
1	5095084	JAM Box, G6	1
2	2014212	Cable, CAT 5, XOver, 5 Ft	1
3	A0060005	Washer, Flat, #8, SAE, ZP	4
4	A0061005	Washer, Lock, #8, Medium, ZP	4
5	250046-148	Screw-Mach, Pan Hd, #8-32 X .50 LG	4
6	2014077	Serial Cable Assy - DB9 MF X 2.5 Ft	1
7	4016607	J42 Module Assembly	1
8	253607-1	Wire - 18 AWG Black 50V Type GXL	2 ft
9	253607-9	Wire - 18 AWG Red 50V Type GXL	2 ft
10	2014085	Label - Programmed Work JAM Box	1
11	251202-1	Label - Computer	1
12	H6197Y01	USB Flash Drive, 8GB	1
	2014209-DWG	Hard Copy of Drawing / Bill of Material	1

Installation Instructions - See Drawing #2014209

Remove Old Unit

1. Make sure power is OFF
2. Disconnect the Keyboard cable, Touchpad cable, VGA cable, COM cable and Ethernet cable from the top of the left hand blue box, CAN01.
3. Remove the COM cable from the COM2 port if the machine has the MobileNet TrakPak unit.
4. Disconnect the power plug from the bottom of the unit.
5. Remove the box from the panel and discard.
6. Disconnect the purple network cable connection from the P42 circuit board (located between the JAM Boxes).
7. Using a small slotted screwdriver, remove wire 636A and wire 650A from the power connector of the P42 circuit board.
8. Remove the P42 circuit board assembly from the DIN rail and discard.

Install New Unit

1. Mount the new Work JAM (Item 1) to the panel.
   a. Use the new box as a template to locate the 4 mounting holes.
   b. Drill and tap the 4 holes for #8-32 thread.
   c. Mount the box to the panel using the supplied hardware (Items 3 - 4 - 5).
2. Connect the Keyboard cable to the USB port as shown.
3. Connect the Touchpad cable to the USB port as shown.
4. Connect the VGA cable to the VGA port of the new box.
5. Connect the COM cable to the COM1 port on the bottom of the new box.
6. If the machine has the MobileNet TrakPak unit, connect the COM cable for it to the COM2 port on the bottom of the new box.

#2014209 - 6700SJ Tier 2 WORK JAM BOX CONVERSION KIT

Installation Instructions - See Drawing #2014209

Install New Unit (continued)

7. Do NOT connect the Ethernet cable yet.
8. Install the J42 Module (Item 7) onto the DIN rail.
9. Attach the purple network cable to the J42 Module.
10. Connect the serial cable (Item 6) to the J42 Module and the other end to COM "A" (COM3) port of the new box.
11. Connect wire 636A to the RTN terminal of the 2-place power J1 connector on the J42 Module.
12. Connect wire 650A to the "+24V" terminal of the 2-place power J1 connector on the J42 Module.
13. Connect red wire 2601A (Item 9) from the "+24V" terminal of the 3-place power J2 connector on the J42 Module to the "+" (+24V) terminal of the 3-place power connector on the bottom of the new JAM box.
14. Connect black wire 2605A (Item 8) from the RTN terminal of the 3-place power J2 connector on the J42 Module to the "-" (-24V) terminal of the 3-place power connector on the bottom of the JAM box.

    Note: There is no connection at frame ground of the power connector on the bottom of the JAM box.

15. Apply power and confirm that the Work Display is normal.

Update Instrument JAM Program

1. Confirm that the Work Screen and Instrument Screen are both normal.
2. Plug the memory stick (Item 12) into a USB port on the INSTRUMENT JAM, right hand blue box.
3. The light on the memory stick will flash on and off as the program is updated.
4. The Instrument Screen will reboot and then come back up to its normal display.
5. Remove the memory stick from the USB port.
6. Turn off the power.
7. Remove the Ethernet cable from the NET port of the Instrument JAM and discard.
8. Plug one end of the Ethernet cable (Item 2) into the LAN1 port on the top of the new Work JAM box and the other end into the NET port of the Instrument JAM box.
9. Apply power and confirm that both screens come up properly.

Documentation

1. Insert the conversion print and BOM into the Cab Assembly section of your Parts Book.

#2014210 - 6700SJ Tier 2 INSTRUMENT JAM BOX CONVERSION KIT

Parts List - See Drawing #2014210

ITEM	PART NO	DESCRIPTION	QTY
1	5095084	JAM Box, G6	1
2	2014212	Cable, CAT 5, XOver, 5 Ft	1
3	A0060005	Washer, Flat, #8, SAE, ZP	4
4	A0061005	Washer, Lock, #8, Medium, ZP	4
5	250046-148	Screw-Mach, Pan Hd, #8-32 X .50 LG	4
6	2014086	Decal, Prog. Instrument JAM Box	1
7	251202-1	Label-Computer	1
8	H6197Y01	USB Flash Drive, 8GB	1
9	5111692	Adapter, USB To PS/2	1
	2014210-DWG	Hard Copy of Drawing / Bill of Material	1

Installation Instructions - See Drawing #2014210

Remove Old Unit

1. Make sure power is OFF
2. Disconnect the VGA cable, COM cable and Ethernet cable from the top of the right hand blue box, MOD01.
3. Using a small slotted screwdriver, remove wire 636A and 646A from the power connector on the bottom of the box.
4. Remove the box from the panel and discard.

Install New Unit

1. Mount the new Instrument JAM (Item 1) to the panel.
   a. Use the new box as a template to locate the 4 mounting holes.
   b. Drill and tap the 4 holes for #8-32 thread.
   c. Mount the box to the panel using the supplied hardware (Items 3 - 4 - 5).
2. Connect the VGA cable to the VGA port of the new box.
3. Connect the COM cable to the COM1 port on the bottom of the new box.
4. Do NOT connect the Ethernet cable yet.
5. Connect wire 636A to the "-" (-24V) terminal of the 3-place power connector on the bottom of the new box.
6. Connect wire 646A to the "+" (+24V) terminal of the 3-place power connector on the bottom of the new box.
7. Apply power and confirm that the Instrument Display is normal.

#2014210 - 6700SJ Tier 2 INSTRUMENT JAM BOX CONVERSION KIT

Installation Instructions - See Drawing #2014210

Update Work JAM Program

1. Confirm that the Work Screen and Instrument Screen are both normal.
2. Plug the memory stick (Item 8) into a USB port on the WORK JAM, left hand blue box.
3. The light on the memory stick will flash on and off as the program is updated.
4. The Work Screen will reboot and then come back up to its normal display.
5. Remove the memory stick from the USB port.
6. Turn off the power.
7. Remove the Ethernet cable from the NET port of the Work JAM and discard.
8. Plug one end of the Ethernet cable (Item 2) into the LAN 1 port on the top of the new Instrument JAM box and the other end into the NET port on the Work JAM box.
9. Apply power and confirm that both screens come up properly.

Documentation

1. Insert conversion print and BOM into the Cab Assembly section of your Parts Book.

#2014213 - 6700SJ Tier 3 WORK JAM BOX CONVERSION KIT

Parts List - See Drawing #2014213

ITEM	PART NO	DESCRIPTION	QTY
1	5095084	JAM Box, G6	1
2	2014212	Cable, CAT 5, XOver, 5 Ft	1
3	A0060005	Washer, Flat, #8, SAE, ZP	4
4	A0061005	Washer, Lock, #8, Medium, ZP	4
5	250046-148	Screw-Mach, Pan Hd, #8-32 X .50 LG	4
6	2014077	Serial Cable Assy - DB9 MF X 2.5 Ft	1
7	4016607	J42 Module Assy	1
8	253607-1	Wire-18 AWG Black 50V Type GXL	2 ft
9	253607-9	Wire-18 AWG Red 50V Type GXL	2 ft
10	2014085	Label - Programmed Work JAM Box	1
11	251202-1	Label - Computer	1
12	H6197Y01	USB Flash Drive, 8GB	1
	2014213-DWG	Hard Copy of Drawing / Bill of Material	1

Installation Instructions - See Drawing #2014213

Remove Old Unit

1. Make sure power is OFF
2. Disconnect the Keyboard cable, Touchpad cable, VGA cable, COM cable and Ethernet cable from the top of the left hand blue box, CAN01.
3. Remove the COM cable from the COM2 port if the machine has the MobileNet TrakPak unit.
4. Disconnect the power plug from the bottom of the unit.
5. Remove the box from the panel and discard.
6. Disconnect the purple network cable connection from the P42 circuit board module (located to the right of the JAM Box).
7. Using a small slotted screwdriver, remove wire 636A and wire 650A from the 2 place connector of the P42 circuit board module, CAN01A.
8. Remove the P42 circuit board assembly from the DIN rail and discard.

Install New Unit

1. Mount the new Work JAM (Item 1) to the panel.
   a. Use the new box as a template to locate the 4 mounting holes.
   b. Drill and tap the 4 holes for #8-32 thread.
   c. Mount the box to the panel using the supplied hardware (Items 3 - 4 - 5).
2. Connect the Keyboard cable to the USB port as shown.
3. Connect the Touchpad cable to the USB port as shown.
4. Connect the VGA cable to the VGA port of the new box.
5. Connect the COM cable to the COM1 port on the bottom of the new box.
6. If the machine has the MobileNet TrakPak unit, connect the COM cable for it to the COM2 port on the bottom of the box.

#2014213 - 6700SJ Tier 3 WORK JAM BOX CONVERSION KIT

Installation Instructions - See Drawing #2014213

Install New Unit (continued)

7. Do NOT connect the Ethernet cable yet.
8. Install the J42 circuit board module (Item 7) onto the DIN rail.
9. Attach the purple network cable to the J42 Module.
10. Connect the serial cable (Item 6) to the J42 Module and the other end to the COM "A" (COM3) port of the new box.
11. Connect wire 636A to the RTN terminal of the 2-place power J1 connector on the J42 circuit board module.
12. Connect wire 650A to the +24V terminal of the 2-place power J1 connector on the J42 circuit board module.
13. Connect red wire 2601A (Item 9) from the +24V terminal of the 3-place power J2 connector on the J42 circuit board module to the "+" terminal (+24V) of the 3-place power connector on the bottom of the new JAM box.
14. Connect black wire 2605A (Item 8) from the RTN terminal of the 3-place power J2 connector on the J42 circuit board module to the "-" terminal (-24V) of the 3-place power connector on the bottom of the JAM box.

    Note: There is no connection at frame ground of the power connector on the bottom of the JAM box.

15. Apply power and confirm that the Work Display is normal.

Update Instrument JAM Program

1. Confirm that the Work Screen and Instrument Screen are both normal.
2. Plug the memory stick (Item 12) into a USB port on the INSTRUMENT JAM, right hand blue box.
3. The light on the memory stick will flash on and off as the program is updated.
4. The Instrument Screen will reboot and then come back up to its normal display.
5. Remove the memory stick from the USB port.
6. Turn off the power.
7. Remove the Ethernet cable from the NET port of the Instrument JAM and discard.
8. Plug one end of the Ethernet cable (Item 2) to the LAN1 port on the top of the new Work JAM box and the other end into the NET port of the Instrument JAM.
9. Apply power and confirm that both screens come up properly.

Documentation

1. Insert the conversion print and BOM into the Cab Assembly section of your Parts Book.

#2014214 - 6700SJ Tier 3 INSTRUMENT JAM BOX CONVERSION KIT

Parts List - See Drawing #2014214

ITEM	PART NO	DESCRIPTION	QTY
1	5095084	JAM Box, G6	1
2	253607-9	Wire-18 AWG Red 50V Type GXL	2 ft
3	A0060005	Washer, Flat, #8, SAE, ZP	4
4	A0061005	Washer, Lock, #8, Medium, ZP	4
5	250046-148	Screw-Mach, Pan Hd, #8-32 X .50 LG	4
6	2014086	Decal, Prog. Instrument JAM Box	1
7	251202-1	Label-Computer	1
8	H6197Y01	USB Flash Drive, 8GB	1
9	4016607	J42 Module Assy	1
10	2014212	Cable, CAT 5, XOver, 5 Ft	1
11	253607-1	Wire - 18 AWG Black 50V Type GXL	2 ft
12	5111692	Adapter, USB To PS/2	1
	2014214-DWG	Hard Copy of Drawing / Bill of Material	1

Installation Instructions - See Drawing #2014214

Remove Old Unit

1. Make sure power is OFF.
2. Disconnect the VGA cable, COM cable and Ethernet cable from the top of the right hand blue box, MOD01.
3. Using a small slotted screwdriver, remove wire 636A and 646A from the power connector of the P42 circuit board module, MOD01A, just to the left of the box.
4. Remove the P42 circuit board module from the DIN rail, the JAM box from the panel and discard.

Install New Unit

1. Mount the new J42 circuit board module (Item 9) to the DIN rail.
2. Mount the new Instrument JAM (Item 1) to the panel.
   a. Use the new box as a template to locate the 4 mounting holes.
   b. Drill and tap the 4 holes for #8-32 thread.
   c. Mount the box to the panel using the supplied hardware (Items 3 - 4 - 5).
3. Connect the VGA cable to the VGA port of the new box.
4. Connect the COM cable to COM 1 port on the bottom of the new box.
5. Do NOT connect the Ethernet cable yet.
6. Connect wire 636A to the RTN terminal of the 2-place power connector J1 on the J42 circuit board module.
7. Connect wire 646A to the +24V terminal of the 2-place power connector J1 on the J42 circuit board module.
8. Connect one end of black 18 AWG wire (Item 11) to the RTN terminal of the 3-place power connector J2 on the J42 circuit board module and the other end to the "-" (-24V) terminal of the 3-place power connector on the bottom of the new box.

#2014214 - 6700SJ Tier 3 INSTRUMENT JAM BOX CONVERSION KIT

Installation Instructions - See Drawing #2014214

Install New Unit (continued)

9. Connect one end of red 18 AWG wire (Item 2) to the +24V terminal of the 3-place power connector J2 on the J42 circuit board module and the other end to the "+" (+24V) terminal of the 3-place power connector on the bottom of the new box.

   Note: There is no connection at frame ground of the power connector on the bottom of the JAM box.

10. Apply power and confirm that the Instrument Display is normal.

Update Work JAM Program

1. Confirm that the Work Screen and Instrument Screen are both normal.
2. Plug the memory stick (Item 8) into a USB port on the WORK JAM, left hand blue box.
3. The light on the memory stick will flash on and off as the program is updated.
4. The Work Screen will reboot and then come back up to its normal display.
5. Remove the memory stick from the USB port.
6. Turn off the power.
7. Remove the Ethernet cable from the NET port of the Work JAM and discard.
8. Plug one end of the Ethernet cable (Item 10) to the LAN1 port on the top of the new Instrument JAM box and the other end to the NET port on the Work JAM box.
9. Apply power and confirm that both screens come up properly.

Documentation

1. Insert conversion print and BOM into the Cab Assembly section of your Parts Book

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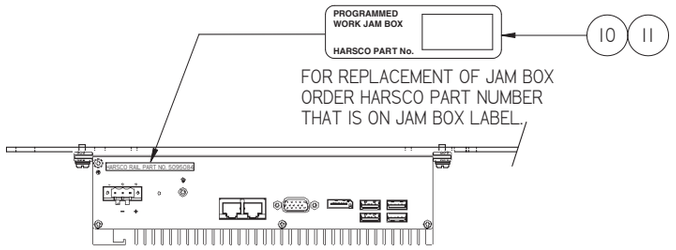
Printed In USA

REFERENCE DRAWINGS

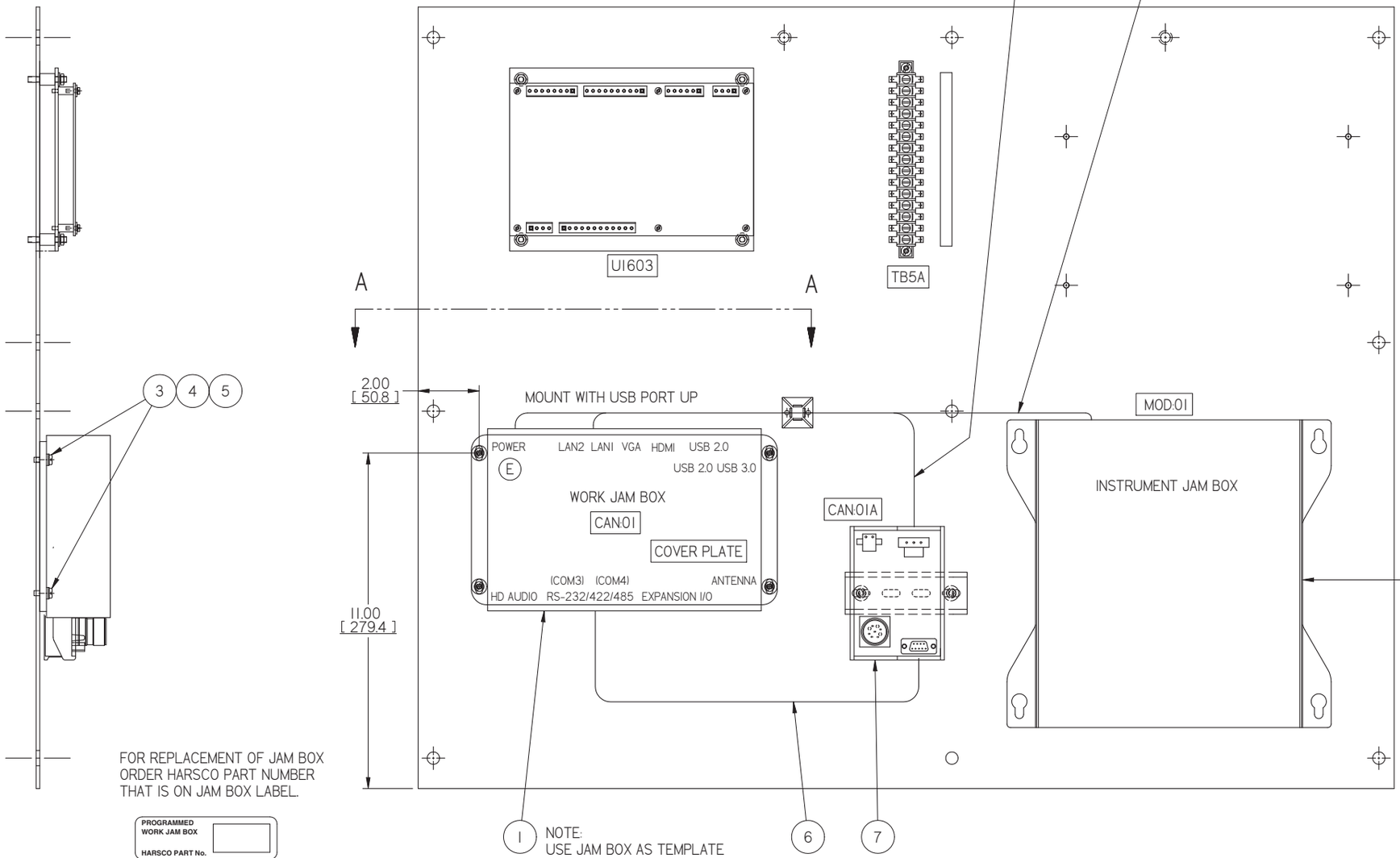
INCLUDE A COPY OF EACH OF THE FOLLOWING DRAWINGS WITH EACH KIT

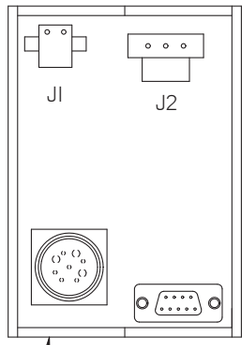
DRAWING #	DESCRIPTION
2014209	WORK JAM BOX CONVERSION

ITEM	PART NO	QTY	DESCRIPTION
1	5095084	1	JAM BOX, G6
2	2014212	1	CABLE, CAT 5, XOVER, 5FT
3	A0060005	4	WASHER, FLAT, #8, SAE, ZP
4	A0061005	4	WASHER, LOCK, #8, MEDIUM, ZP
5	250046-148	4	SCREW-MACH, PAN HD, #8-32 X .50 LG
6	2014077	1	SERIAL CABLEASSY-DB9MFX2.5FT
7	4016607	1	J42 MODULE ASSY
8	253607-1	2	WIRE-#18 AWG BLK 50V TYPE GXL
9	253607-9	2	WIRE-18AWG RED 50V TYPE GXL
10	2014085	1	LABEL- PROGRAMMED WORK JAM BOX
11	251202-1	1	LABEL-COMPUTER
12	H6197Y01	1	USB FLASH DRIVE, 8GB



VIEW A





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FEATURES ENCLOSED IN ⬭ ARE KEY CHARACTERISTICS

NOMINAL SIZE RANGE	INCH PLUS OR MINUS			NOMINAL SIZE RANGE	METRIC PLUS OR MINUS	
OVER	TO	2 PLACE DECIMAL	3 PLACE DECIMAL	OVER	TO	1 PLACE DECIMAL	2 PLACE DECIMAL
0	6	.03	.005	0	150	.8	.13
6	24	.04	.008	150	600	1.0	.20
24	-	.06	.010	600	-	1.5	.25

UNLESS OTHERWISE SPECIFIED:
1. REMOVE BURRS AND BREAK SHARP EDGES
2. ALL MACHINED SURFACES: MILL HAVE, 125 MICRO INCHES OR BETTER ANGULAR TOLERANCE OF +.50° CONCENTRICITY WITHIN .010
3. ALL WELDS SHOULD ADHERE TO THE MOST CURRENT A.W.S WELDING STANDARDS
4. TORQUE ALL FASTENERS PER STD-16030
5. TORQUE ALL FITTINGS PER STD 5169

THIRD ANGLE PROJECTION
DRAFTED PER HARSCO RAIL STANDARD STD-1601D

CHANGE	R/L	REVISION	DR	DATE
EC613150	D	ITEM 1 WAS 5015210, ITEM 3 WAS 150987-8. ITEM 4 WAS 150988-6. ITEM 2 WAS ITEM 14	WJG	06/24/20
EC613297	E	SHT 1 UPDATED JAM BOX ID'S & ROUTING OF IT 2,8,9, SHT 2 UPDATED KEYBRD, TOUCHPAD, ETHERNET CABLE PORT LOCATIONS	BAD	07/14/20

Description: WORK JAM BOX CONVERSION
HARSCO RAIL
Material
Machine Type: 6700SJ
Size: D
Weight: 34.1 lbm
Drawn: bedel
Date Drawn: 3/8/2013
Part Number: 2014209
Sheet: 1 of 2
SOLID EDGE DRAWING
DO NOT SCALE

2014209 INSTRUCTIONS FOR WORK JAM CONVERSION FOR TIER II 6700SJ

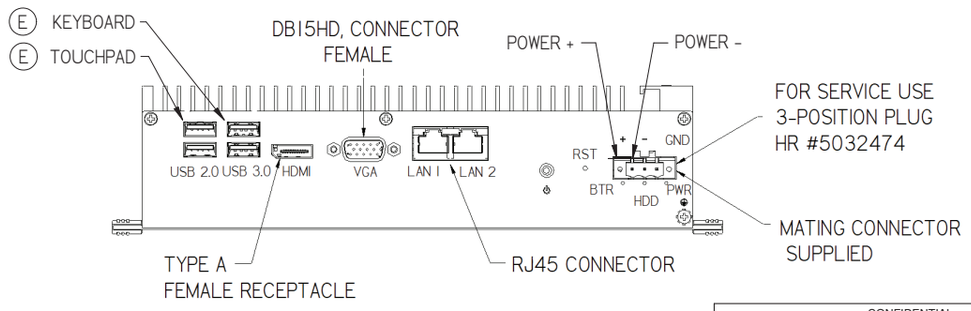
CUSTOMER CONVERSION INSTRUCTIONS

REMOVE OLD UNIT

- Make sure power is OFF
- Disconnect the Keyboard cable, Touchpad cable, VGA cable, COM cable and Ethernet cable from the top of the left hand blue box, CAN01.
- Remove the COM cable from the COM2 port if the machine has the MobileNet TrakPak unit.
- Disconnect the power plug from the bottom of the unit.
- Remove the box from the panel and discard.
- Disconnect the purple network cable connection from the P42 circuit board (located between the JAM Boxes).
- Using a small slotted screwdriver, remove wire 636A and wire 650A from the 2 place connector of the P42 circuit board.
- Remove the P42 circuit board assembly from the DIN rail and discard.

INSTALL NEW UNIT

- Mount the new Work JAM, Item 1, to the panel.
  - Use the new box as a template to locate the 4 mounting holes.
  - Drill and tap the 4 holes for #8-32 thread.
- Mount the box to the panel
- (E) Connect the Keyboard cable to the USB port as shown.
- (E) Connect the Touchpad cable to the USB port as shown.
- Connect the VGA cable to the VGA port of the new box.
- Connect the COM cable to COM1 on the bottom of the new box.
- If the machine has the MobileNet TrakPak unit, connect the COM cable for it to COM2 on the bottom of the new box.
- Do NOT connect the Ethernet cable yet.
- Install the J42 Module, Item 7, onto the DIN rail.
- Attach the purple network cable to the J42 Module.
- Connect the serial cable, Item 6, to the J42 Module and the other end to COMA (COM3) of the new box.
- Connect wire 636A to the RTN terminal of the 2 place power connector, J1, on the J42 Module.
- Connect wire 650A to the +24V terminal of the 2 place power connector, J1, on the J42 Module.
- Connect red wire 2601A from +24V terminal of 3 place power connector, J2, on the J42 Module to + terminal (+24v) of the power connector on the bottom of the new JAM box.
- Connect black wire 2605A from RTN terminal of 3 place power connector, J2, on the J42 Module to the – terminal (-24v) of the power connector on the bottom of the JAM box.
- Note, there is no connection at frame ground of the power connector on the bottom of the JAM box.
- Apply power and confirm that the Work Display is normal.



UPDATE THE INSTRUMENT JAM PROGRAM

- Confirm that the Work Screen and Instrument Screen are both normal.
- Plug the memory stick, Item 12, into a USB port on the INSTRUMENT JAM, right hand blue box.
- The light on the memory stick will flash on and off as the program is updated.
- The Instrument Screen will reboot and then come back up to its normal display.
- Remove the memory stick from the USB port.
- Turn off the power.
- Remove the Ethernet cable from the NET port of the Instrument JAM and discard.
- (E) Plug one end of the Ethernet cable, Item 2, into the LAN1 port on the top of the new Work JAM box and the other end into the NET port of the Instrument JAM box.
- Apply power and confirm that both screens come up properly.

DOCUMENTATION

- Insert the conversion print and BOM into the Cab Assembly section of your Parts Book

HARSCO RAIL MANUFACTURING INSTRUCTIONS

JAM BOX PROGRAMMING

- Obtain customer name and machine serial number from Sales Department
- Consult Programmed JAM Box Document 5029134 to locate the proper Work JAM part number to apply to the label.
- Install the program onto the JAM Box as determine from above.
- Confirm proper operation of the JAM Box.
- Build a simple curve to verify program operation.

MEMORY STICK PROGRAMMING

- Copy the companion Instrument JAM Box program as determined from the document to the memory stick.
- Apply a label to the memory stick with the program version, date, and your initials.
- Place memory stick into an anti-static bag.

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FEATURES ENCLOSED IN ⬭ ARE KEY CHARACTERISTICS

NOMINAL SIZE RANGE		INCH PLUS OR MINUS		NOMINAL SIZE RANGE		METRIC PLUS OR MINUS	
OVER	TO	2 PLACE DECIMAL	3 PLACE DECIMAL	OVER	TO	1 PLACE DECIMAL	2 PLACE DECIMAL
0	6	.03	.005	0	150	.8	.13
6	24	.04	.008	150	600	1.0	.20
24	-	.06	.010	600	-	1.5	.25

UNLESS OTHERWISE SPECIFIED:
1. REMOVE BURRS AND BREAK SHARP EDGES
2. ALL MACHINED SURFACES WILL HAVE A SURFACE FINISH OF 125 MICRONCHES
ANGULAR TOLERANCE OF ± .50'
CONCENTRICITY WITHIN .010
3. ALL WELDS SHOULD ADHERE TO THE MOST CURRENT A.W.S WELDING STANDARDS
4. TORQUE ALL BOLTS PER STD 16030
5. TORQUE ALL FITTINGS PER STD 5269
THIRD ANGLE PROJECTION
DRAFTED PER HARSCO RAIL STANDARD STD-1601D.

CHANGE	R/L	REVISION	DR	DATE
EC613150	D	ITEM 1 WAS 5015210, ITEM 3 WAS 150987-8. ITEM 4 WAS 150988-6. ITEM 2 WAS ITEM 14	WJG	06/24/20
EC613297	E	SHT 1 UPDATED JAM BOX ID'S & ROUTING OF IT 2,8,9, SHT 2 UPDATED KEYBRD, TOUCHPAD, ETHERNET CABLE PORT LOCATIONS	BAD	07/14/20

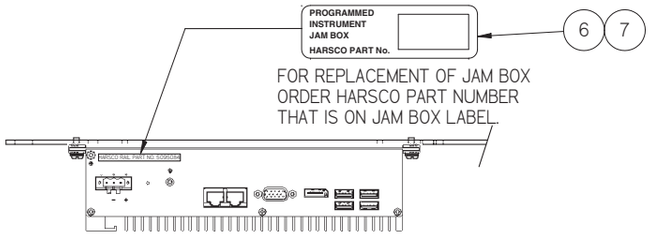
Description: WORK JAM BOX CONVERSION
Material
Weight: 34.1 lbm
Drawn: bedel
Date Drawn: 3/8/2013
SOLID EDGE DRAWING
DO NOT SCALE
Machine Type: 6700SJ
Part Number: 2014209
Size: D
Sheet: 2 of 2
Inch [mm]
HARSCO RAIL

REFERENCE DRAWINGS

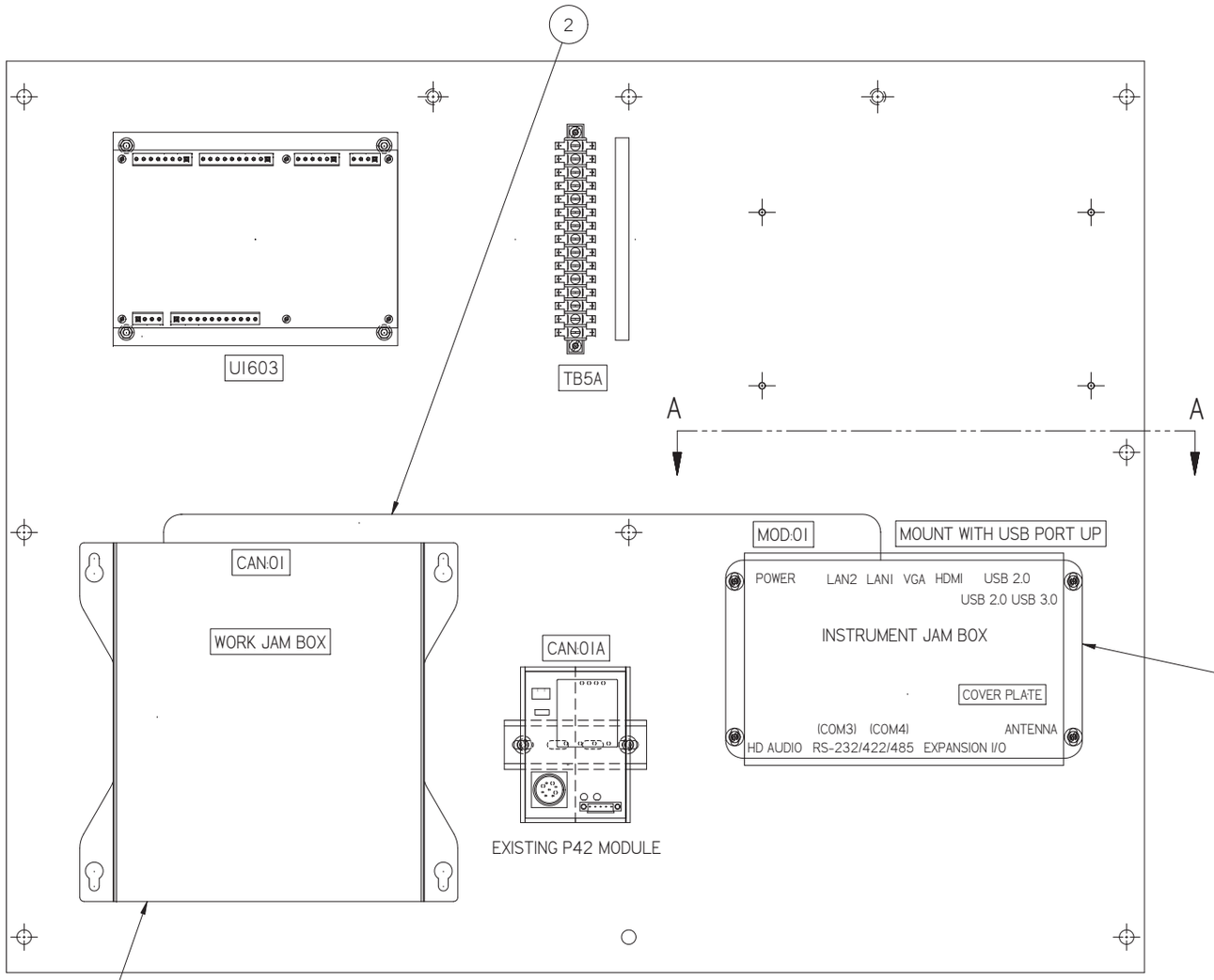
INCLUDE A COPY OF EACH OF THE FOLLOWING DRAWINGS WITH EACH KIT

DRAWING #	DESCRIPTION
2014210	INSTRUMENT JAM BOX CONVERSION

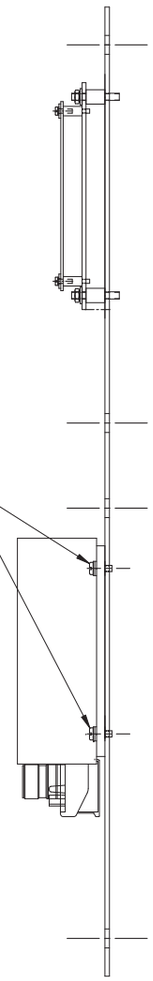
ITEM	PART NO	QTY	DESCRIPTION
1	5095084	1	JAM BOX, G6
2	2014212	1	CABLE, CAT 5, XOVER, 5FT
3	A0060005	4	WASHER, FLAT, #8, SAE, ZP
4	A0061005	4	WASHER, LOCK, #8, MEDIUM, ZP
5	250046-148	4	SCREW-MACH, PAN HD, #8-32 X .50 LG
6	2014086	1	DECAL,PROG. INSTRUMENT JAM BOX
7	251202-1	1	LABEL-COMPUTER
8	H6197Y01	1	USB FLASH DRIVE, 8GB
(D) 9	5111692	1	ADAPTER, USB TO PS/2



VIEW A



SIMILAR TO 2014214



PROGRAMMED
INSTRUMENT
JAM BOX
HARSCO PART No.

FOR REPLACEMENT OF JAM BOX
ORDER HARSCO PART NUMBER
THAT IS ON JAM BOX LABEL.

FOR SERVICE USE
#5032474
3, POSITION PLUG FOR JAM BOX
POWER WIRES

(D) NOTE:
USE ITEM 9 USB TO PS/2 ADAPTER FOR KEYBOARD.

Inch
[mm]

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FEATURES ENCLOSED IN ⬭ ARE KEY CHARACTERISTICS

NOMINAL SIZE RANGE	OVER	TO	INCH PLUS OR MINUS 2 PLACE DECIMAL	INCH PLUS OR MINUS 3 PLACE DECIMAL	NOMINAL SIZE RANGE	OVER	TO	METRIC PLUS OR MINUS 1 PLACE DECIMAL	METRIC PLUS OR MINUS 2 PLACE DECIMAL
	0	6	.03	.005		0	150	.8	.13
	6	24	.04	.008		150	600	1.0	.20
	24	-	.06	.010		600	-	1.5	.25

UNLESS OTHERWISE SPECIFIED:
1. REMOVE BURRS AND BREAK SHARP EDGES
2. ALL MACHINED SURFACES WILL HAVE A SURFACE FINISH OF 125 MICROINCHES
ANGULAR TOLERANCE OF ± .50°
CONCENTRICITY WITHIN .010
3. ALL WELDING SHALL CONFORM TO THE MOST CURRENT A.W.S. WELDING STANDARDS.
4. TORQUE ALL FASTENERS PER STD-1603D
5. TORQUE ALL FITTINGS PER STD 3369

THIRD ANGLE PROJECTION

DRAFTED PER HARSCO RAIL STANDARD STD-1601D

CHANGE	R/L	REVISION	DR	DATE
EC508831	B	ITEM 1 WAS 4015854 G4 JAM BOX, REMOVED ITEMS 2 & 9	BAD	01/16/14
EC613150	C	ITEM 1 WAS 5015210. ITEM 3 WAS 150987-8, ITEM 4 WAS 150988-6. ITEM 2 WAS ITEM 10	WJG	06/24/20
EC613297	D	SHT 1 UPDATED JAM BOX ID'S & ROUTING OF IT 2, SHT 2 UPDATED ETHERNET CABLE PORT LOCATION, ADDED ITEM 9	BAD	07/15/20

Description: INSTRUMENT JAM BOX CONVERSION

HARSCO RAIL

Material | Weight 31.7 lbm | Drawn bedel | Date Drawn 1/16/2014

SOLID EDGE DRAWING | DO NOT SCALE

Machine Type 6700SJ | Size D | Part Number 2014210 | Sheet 1 of 2

2014210 INSTRUCTIONS FOR INSTRUMENT JAM CONVERSION FOR TIER II 6700SJ

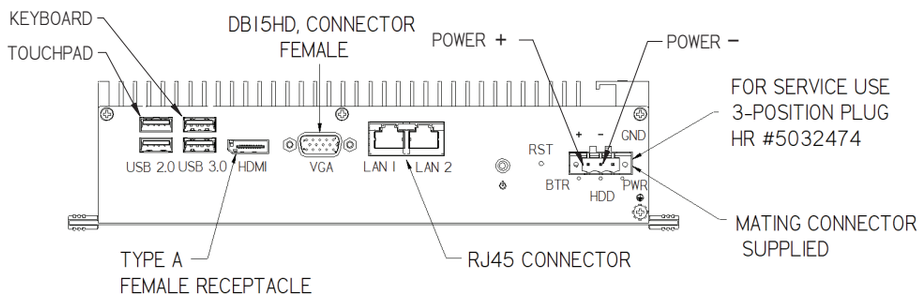
CUSTOMER CONVERSION INSTRUCTIONS

REMOVE OLD UNIT

- Make sure power is OFF
- Disconnect the VGA cable, COM cable and Ethernet cable from the top of the right hand blue box, MOD01.
- Using a small slotted screwdriver, remove wire 636A and 646A from the power connector on the bottom of the box.
- Remove the box from the panel and discard.

INSTALL NEW UNIT

- Mount the new Instrument JAM, Item 1, to the panel.
  - Use the new box as a template to locate the 4 mounting holes.
  - Drill and tap the 4 holes for #8-32 thread.
  - Mount the box to the panel.
- Connect the VGA cable to the VGA port of the new box.
- Connect the COM cable to COM1 on the bottom of the new box.
- Do NOT connect the Ethernet cable yet.
- Connect wire 636A to the - terminal (-24V) of the power connector on the bottom of the new box.
- Connect wire 646A to the + terminal (+24V) of the power connector on the bottom of the JAM box.
- Note, there is no connection at frame ground of the power connector on the bottom of the JAM box.
- Apply power and confirm that the Instrument Display is normal.



UPDATE THE WORK JAM PROGRAM

- Confirm that the Work Screen and Instrument Screen are both normal.
- Plug the memory stick, Item 8, into a USB port on the WORK JAM, left hand blue box.
- The light on the memory stick will flash on and off as the program is updated.
- The Work Screen will reboot and then come back up to its normal display.
- Remove the memory stick from the USB port.
- Turn off the power.
- Remove the Ethernet cable from the NET port of the Work JAM and discard.
- Ⓓ Plug one end of the Ethernet cable, Item 2, into the LAN1 port on the top of the new Instrument JAM box and the other end into the NET port on the Work JAM box.
- Apply power and confirm that both screens come up properly.

DOCUMENTATION

- Insert conversion print and BOM into the Cab Assembly section of your Parts Book

HARSCO RAIL MANUFACTURING INSTRUCTIONS

JAM BOX PROGRAMMING

- Obtain customer name and machine serial number from Sales Department
- Consult Programmed JAM Box Document 5029134 to locate the proper Instrument JAM part number to apply to the label.
- Install the program onto the JAM Box as determine from above.
- Confirm proper operation of the JAM Box.

MEMORY STICK PROGRAMMING

- Copy the companion Work JAM Box program as determined from the document to the memory stick.
- Apply a label to the memory stick with the program version, date, and your initials.
- Place memory stick into an anti-static bag.

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FEATURES ENCLOSED IN ⬭ ARE KEY CHARACTERISTICS

NOMINAL SIZE RANGE		INCH PLUS OR MINUS		NOMINAL SIZE RANGE		METRIC PLUS OR MINUS	
OVER	TO	2 PLACE DECIMAL	3 PLACE DECIMAL	OVER	TO	1 PLACE DECIMAL	2 PLACE DECIMAL
0	6	.03	.005	0	150	.8	.13
6	24	.04	.008	150	600	1.0	.20
24	-	.06	.010	600	-	1.5	.25

UNLESS OTHERWISE SPECIFIED:
1. REMOVE BURRS AND BREAK SHARP EDGES
2. ALL MACHINED SURFACES WILL HAVE A SURFACE FINISH OF 125 MICROINCHES ANGULAR TOLERANCE OF ± .50' CONCENTRICITY WITHIN .015
3. ALL WELDING SHALL CONFORM TO THE MOST CURRENT A.W.S WELDING STANDARDS
4. TORQUE ALL FASTENERS PER STD-1603D
5. TORQUE ALL FITTINGS PER STD 3369

THIRD ANGLE PROJECTION

DRAFTED PER HARSCO RAIL STANDARD STD-1601D

CHANGE	R/L	REVISION	DR	DATE
EC508831	B	ITEM 1 WAS 4015854 G4 JAM BOX, REMOVED ITEMS 2 & 9	BAD	01/16/14
EC613150	C	ITEM 1 WAS 5015210. ITEM 3 WAS 150987-8, ITEM 4 WAS 150988-6. ITEM 2 WAS ITEM 10	WJG	06/24/20
EC613297	D	SHT 1 UPDATED JAM BOX ID'S & ROUTING OF IT 2, SHT 2 UPDATED ETHERNET CABLE PORT LOCATION, ADDED ITEM 9	BAD	07/15/20

Description: INSTRUMENT JAM BOX CONVERSION
HARSCO RAIL
Material
Machine Type 6700SJ
Size D
Weight 31.7 lbm
Drawn bedel
Date Drawn 1/16/2014
Part Number 2014210
Sheet 2 of 2
SOLID EDGE DRAWING
DO NOT SCALE

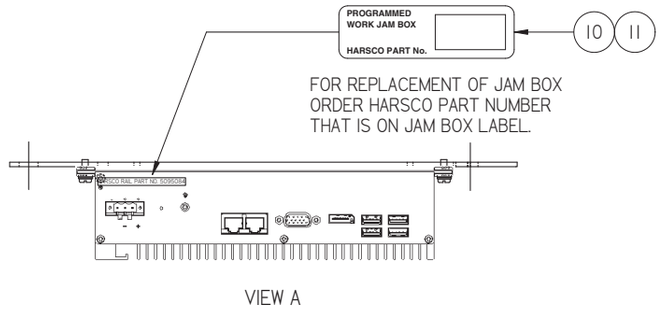
Inch [mm]

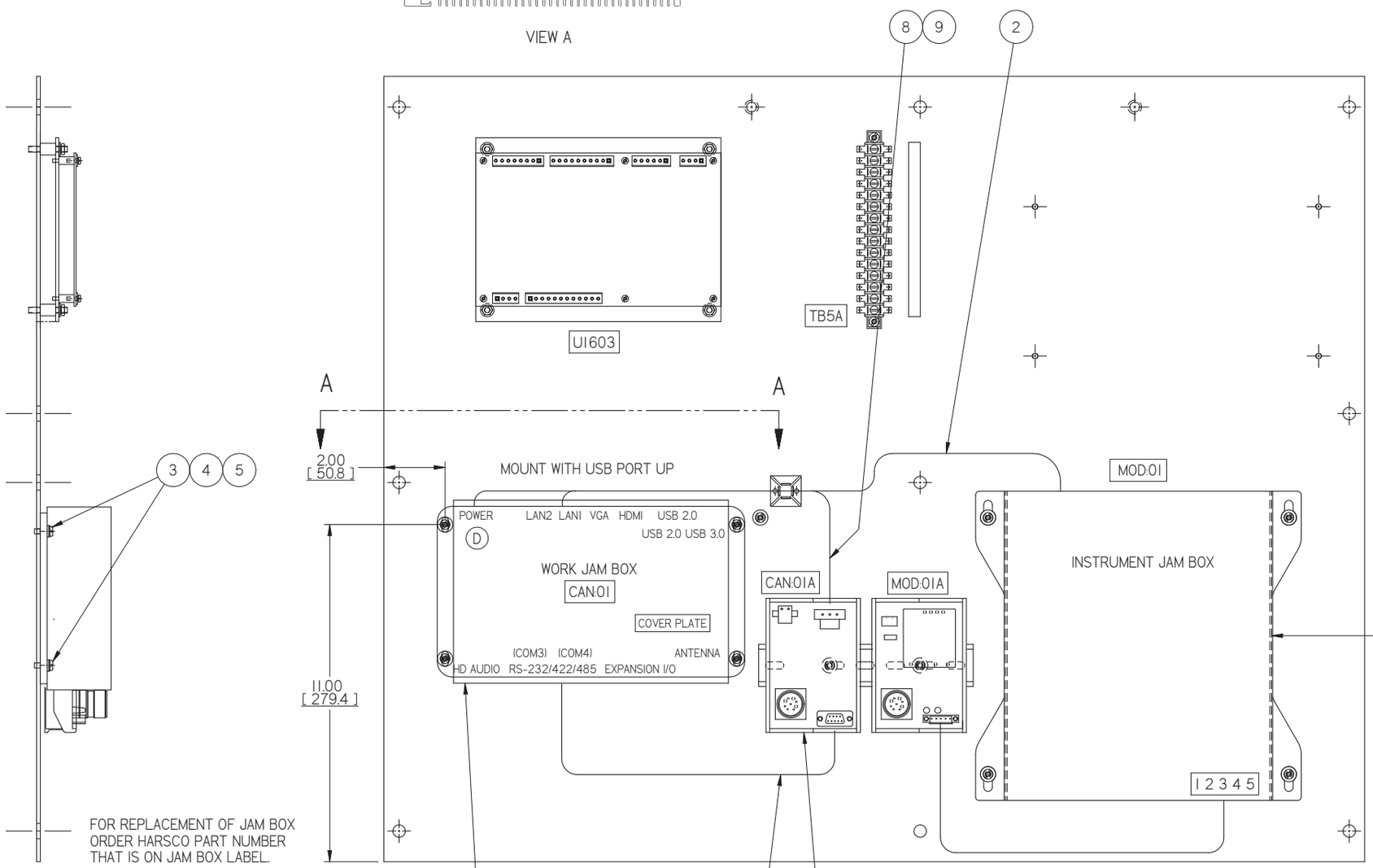
REFERENCE DRAWINGS

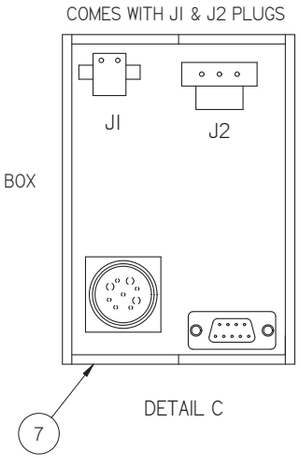
INCLUDE A COPY OF EACH OF THE FOLLOWING DRAWINGS WITH EACH KIT

DRAWING #	DESCRIPTION
2014213	INSTRUMENT JAM BOX CONVERSION

ITEM	PART NO	QTY	DESCRIPTION
1	5095084	1	JAM BOX, G6
2	2014212	1	CABLE, CAT 5, XOVER, 5FT
3	A0060005	4	WASHER, FLAT, #8, SAE, ZP
4	A0061005	4	WASHER, LOCK, #8, MEDIUM, ZP
5	250046-148	4	SCREW-MACH, PAN HD, #8-32 X .50 LG
6	2014077	1	SERIAL CABLEASSY-DB9MFX2.5FT
7	4016607	1	J42 MODULE ASSY
8	253607-1	2	WIRE-#18 AWG BLK 50V TYPE GXL
9	253607-9	2	WIRE-18AWG RED 50V TYPE GXL
10	2014085	1	LABEL- PROGRAMMED WORK JAM BOX
11	251202-1	1	LABEL-COMPUTER
12	H6197Y01	1	USB FLASH DRIVE, 8GB







FOR SERVICE USE
#5032474
3, POSITION PLUG FOR JAM BOX
POWER WIRES

SIMILAR TO 2014209

Inch
[mm]

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FEATURES ENCLOSED IN ⬭ ARE KEY CHARACTERISTICS

INCH NOMINAL SIZE RANGE OVER	TO	PLUS OR MINUS 2 PLACE DECIMAL	PLUS OR MINUS 3 PLACE DECIMAL	METRIC NOMINAL SIZE RANGE OVER	TO	PLUS OR MINUS 1 PLACE DECIMAL	PLUS OR MINUS 2 PLACE DECIMAL
0	6	.03	.005	0	150	.8	.13
6	24	.04	.008	150	600	1.0	.20
24	-	.06	.010	600	-	1.5	.25

UNLESS OTHERWISE SPECIFIED:
1. REMOVE BURRS AND BREAK SHARP EDGES
2. ALL MACHINED SURFACES WILL HAVE: 125 MICRO INCHES AA MAXIMUM ROUGHNESS ANGULAR TOLERANCE OF ±.50° CONCENTRICITY WITHIN .010
3. ALL WELDS SHOULD ADHERE TO THE MOST CURRENT A.W.S WELDING STANDARDS
4. TORQUE ALL FASTENERS PER STD-16030
5. TORQUE ALL FITTINGS PER STD-5349

THIRD ANGLE PROJECTION
DRAFTED PER HARSCO RAIL STANDARD STD-1601D

CHANGE	R/L	REVISION	DR	DATE
EC613150	C	ITEM 1 WAS 5015210. ITEM 3 WAS 150987-8. ITEM 4 WAS 150988-6. ITEM 2 WAS ITEM 14	WJG	06/25/20
EC613297	D	SHT 1 UPDATED JAM BOX ID'S & ROUTING OF IT 2,8,9, SHT 2 UPDATED KEYBRD, TOUCHPAD, ETHERNET CABLE PORT LOCATIONS	BAD	07/14/20

Description: WORK JAM BOX CONVERSION TIER 3
HARSCO RAIL
Material
Weight 34.1 lbm
Drawn bedel
Date Drawn 3/7/2013
SOLID EDGE DRAWING
DO NOT SCALE
Machine Type 6700SJ
Size D
Part Number 2014213
Sheet 1 of 2

2014213 INSTRUCTIONS FOR WORK JAM CONVERSION FOR TIER 3 6700SJ

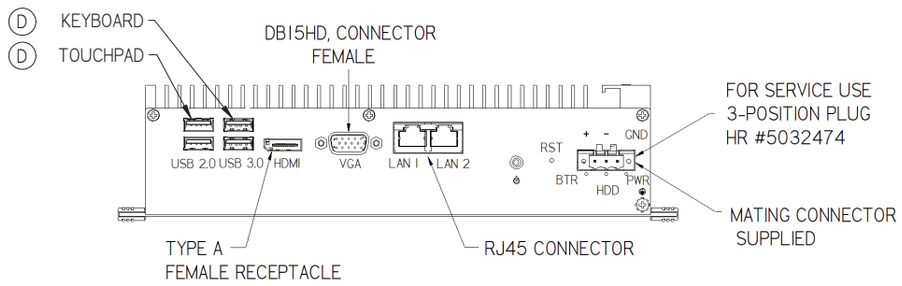
CUSTOMER CONVERSION INSTRUCTIONS

REMOVE OLD UNIT

- Make sure power is OFF
- Disconnect the Keyboard cable, Touchpad cable, VGA cable, COM cable and Ethernet cable from the top of the left hand blue box, CAN01.
- Remove the COM cable from the COM2 port if the machine has the MobileNet TrakPak unit.
- Disconnect the power plug from the bottom of the unit.
- Remove the box from the panel and discard.
- Disconnect the purple network cable connection from the P42 circuit board module (located to the right of the JAM Box).
- Using a small slotted screwdriver, remove wire 636A and wire 650A from the 2 place connector of the P42 circuit board module, CAN01A.
- Remove the P42 circuit board assembly from the DIN rail and discard.

INSTALL NEW UNIT

- Mount the new Work JAM, Item 1, to the panel.
  - Use the new box as a template to locate the 4 mounting holes.
  - Drill and tap the 4 holes for #8-32 thread.
  - Mount the box to the panel.
- (D) Connect the Keyboard cable to the USB port as shown.
- (D) Connect the Touchpad cable to the USB port as shown.
- Connect the VGA cable to the VGA port of the new box.
- Connect the COM cable to COM1 on the bottom of the new box.
- If the machine has the MobileNet TrakPak unit, connect the COM cable for it to COM2 on the bottom of the box.
- Do NOT connect the Ethernet cable yet.
- Install the J42 circuit board module, Item 7, onto the DIN rail.
- Attach the purple network cable to the J42 Module.
- Connect the serial cable, Item 6, to the J42 Module and the other end to COMA (COM3) of the new box.
- Connect wire 636A to the RTN terminal of the 2-place power connector, J1, on the J42 circuit board module.
- Connect wire 650A to the +24V terminal of the 2-place power connector, J1, on the J42 circuit board module.
- Connect Item 9 red wire 2601A from +24V terminal of the 3-place power connector, J2, on the J42 circuit board module to + terminal (+24v) of the power connector on the bottom of the new JAM box.
- Connect Item 8 black wire 2605A from RTN terminal of the 3-place power connector, J2, on the J42 circuit board module to the – terminal (-24v) of the power connector on the bottom of the JAM box.
- Note, there is no connection at frame ground of the power connector on the bottom of the JAM box.
- Apply power and confirm that the Work Display is normal.



UPDATE THE INSTRUMENT JAM PROGRAM

- Confirm that the Work Screen and Instrument Screen are both normal.
- Plug the memory stick, Item 12, into a USB port on the INSTRUMENT JAM, right hand blue box.
- The light on the memory stick will flash on and off as the program is updated.
- The Instrument Screen will reboot and then come back up to its normal display.
- Remove the memory stick from the USB port.
- Turn off the power.
- Remove the Ethernet cable from the NET port of the Instrument JAM and discard.
- (D) Plug one end of the Ethernet cable, Item 2, to the LAN1 port on the top of the new Work JAM box and the other end into the NET port of the Instrument JAM.
- Apply power and confirm that both screens come up properly.

DOCUMENTATION

- Insert the conversion print and BOM into the Cab Assembly section of your Parts Book

HARSCO RAIL MANUFACTURING INSTRUCTIONS

JAM BOX PROGRAMMING

- Obtain customer name and machine serial number from Sales Department
- Consult Programmed JAM Box Document 5029134 to locate the proper Work JAM part number to apply to the label.
- Install the program onto the JAM Box as determine from above.
- Confirm proper operation of the JAM Box.
- Build a simple curve to verify program operation.

MEMORY STICK PROGRAMMING

- Copy the companion Instrument JAM Box program as determined from the document to the memory stick.
- Apply a label to the memory stick with the program version, date, and your initials.
- Place memory stick into an anti-static bag.

Inch [mm]

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FEATURES ENCLOSED IN ⬭ ARE KEY CHARACTERISTICS

NOMINAL DIM. RANGE	INCH PLUS OR MINUS		NOMINAL DIM. RANGE	METRIC PLUS OR MINUS	
OVER / TO	2 PLACE DECIMAL	3 PLACE DECIMAL	OVER / TO	1 PLACE DECIMAL	2 PLACE DECIMAL
0 / 6	.03	.005	0 / 150	.8	.13
6 / 24	.04	.008	150 / 600	1.0	.20
24 / -	.06	.010	600 / -	1.5	.25

UNLESS OTHERWISE SPECIFIED:
1. REMOVE BURRS AND BREAK SHARP EDGES
2. ALL MACHINED SURFACES: WILL HAVE A SURFACE FINISH OF 125 MICRONCHES ANGULAR TOLERANCE OF ± .50' CONCENTRICITY WITHIN .010
3. ALL WELDMENTS SHALL CONFORM TO THE MOST CURRENT A.W.S WELDING STANDARDS
4. TORQUE ALL FASTENERS PER STD-1603D
5. TORQUE ALL FITTINGS PER STD-3369

THIRD ANGLE PROJECTION

DRAFTED PER HARSCO RAIL STANDARD STD-1601D

CHANGE	R/L	REVISION	DR	DATE
EC613150	C	ITEM 1 WAS 5015210. ITEM 3 WAS 150987-8. ITEM 4 WAS 150988-6. ITEM 2 WAS ITEM 14	WJG	06/25/20
EC613297	D	SHT 1 UPDATED JAM BOX ID'S & ROUTING OF IT 2,8,9, SHT 2 UPDATED KEYBRD, TOUCHPAD, ETHERNET CABLE PORT LOCATIONS	BAD	07/14/20

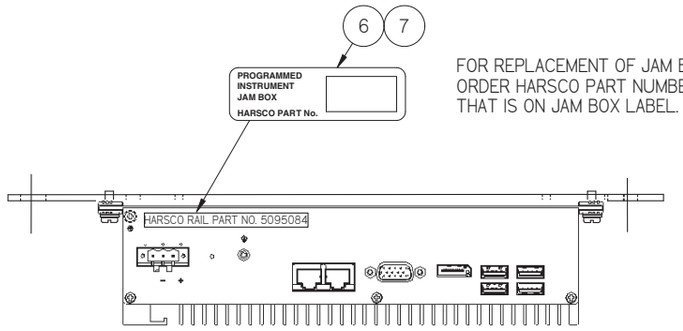
Description: WORK JAM BOX CONVERSION TIER 3
HARSCO RAIL
Material:
Machine Type: 6700SJ
Size: D
Weight: 34.1 lbm
Drawn: bedel
Date Drawn: 3/7/2013
Part Number: 2014213
Sheet: 2 of 2
SOLID EDGE DRAWING
DO NOT SCALE

REFERENCE DRAWINGS

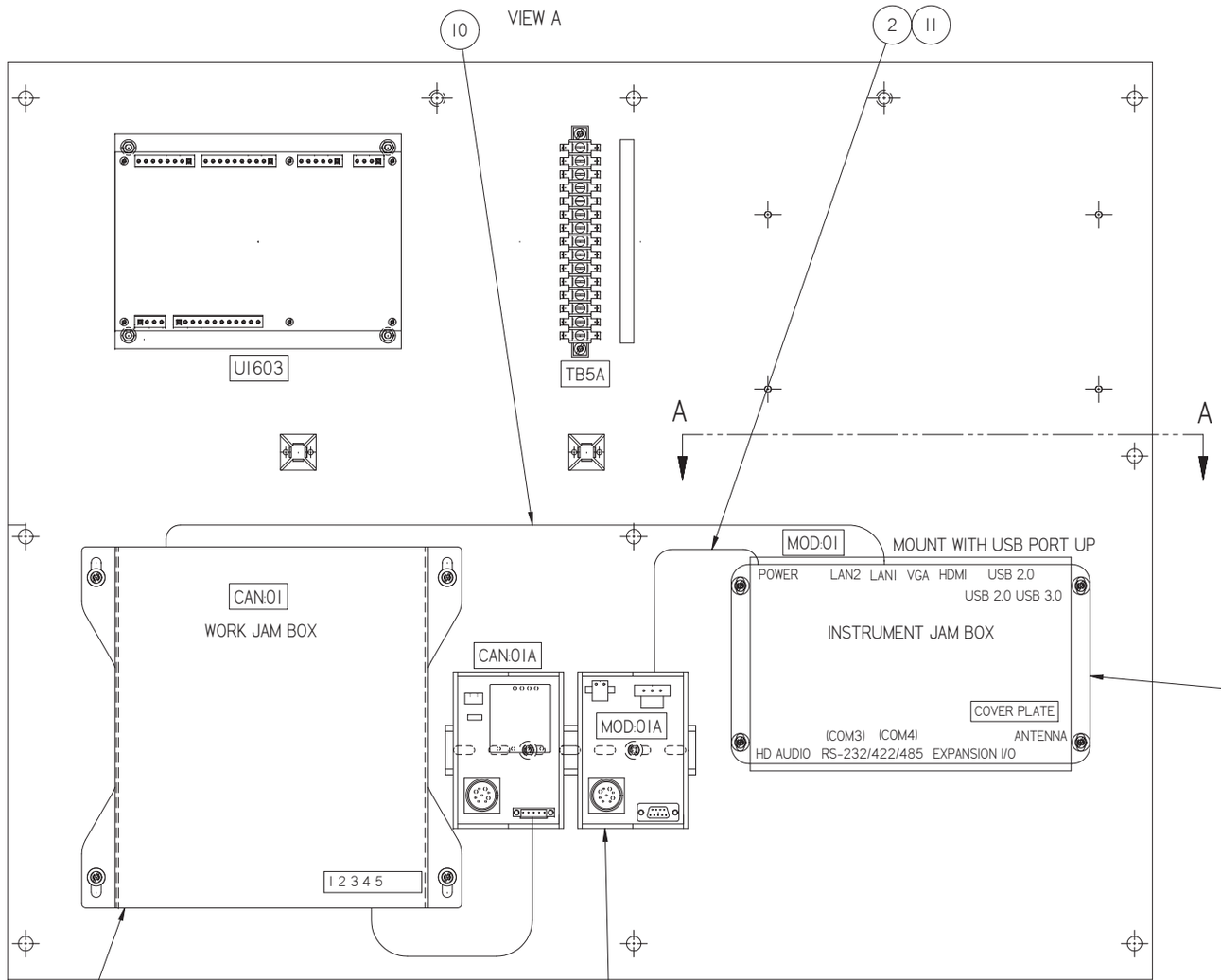
INCLUDE A COPY OF EACH OF THE FOLLOWING DRAWINGS WITH EACH KIT

DRAWING #	DESCRIPTION
2014214	INSTRUMENT JAM BOX CONVERSION

ITEM	PART NO	QTY	DESCRIPTION
1	5095084	1	JAM BOX, G6
2	253607-9	2	WIRE-18AWG RED 50V TYPE GXL
3	A0060005	4	WASHER, FLAT, #8, SAE, ZP
4	A0061005	4	WASHER, LOCK, #8, MEDIUM, ZP
5	250046-148	4	SCREW-MACH, PAN HD, #8-32 X .50 LG
6	2014086	1	DECAL,PROG. INSTRUMENT JAM BOX
7	251202-1	1	LABEL-COMPUTER
8	H6197Y01	1	USB FLASH DRIVE, 8GB
9	4016607	1	J42 MODULE ASSY
10	2014212	1	CABLE, CAT 5, XOVER, 5FT
11	253607-1	2	WIRE-#18 AWG BLK 50V TYPE GXL
C 12	5111692	1	ADAPTER, USB TO PS/2



FOR REPLACEMENT OF JAM BOX ORDER HARSCO PART NUMBER THAT IS ON JAM BOX LABEL.

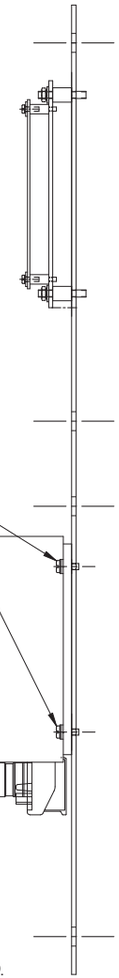


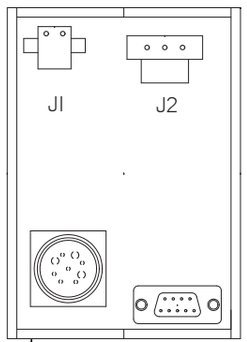
1 NOTE:
USE JAM BOX AS TEMPLATE
4X #8-32 UNC-2B

PROGRAMMED INSTRUMENT JAM BOX
HARSCO PART No.

FOR REPLACEMENT OF JAM BOX ORDER HARSCO PART NUMBER THAT IS ON JAM BOX LABEL.

FOR SERVICE USE
#5032474
3, POSITION PLUG FOR JAM BOX POWER WIRES





C NOTE:
USE ITEM 12 USB TO PS/2 ADAPTER FOR KEYBOARD.

SIMILAR TO 2014210

Inch [mm]

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FEATURES ENCLOSED IN ⬭ ARE KEY CHARACTERISTICS

NOMINAL SIZE RANGES	INCH PLUS OR MINUS 2 PLACE DECIMAL	INCH PLUS OR MINUS 3 PLACE DECIMAL	NOMINAL SIZE RANGES	METRIC PLUS OR MINUS 1 PLACE DECIMAL	METRIC PLUS OR MINUS 2 PLACE DECIMAL
OVER / TO			OVER / TO		
0 / 6	.03	.005	0 / 150	.8	.13
6 / 24	.04	.008	150 / 600	1.0	.20
24 / -	.06	.010	600 / -	1.5	.25

UNLESS OTHERWISE SPECIFIED:
1. REMOVE BURRS AND BREAK SHARP EDGES
2. ALL MACHINED SURFACES TO HAVE A SURFACE FINISH OF 125 MICROINCHES ANGULAR TOLERANCE OF ± .50° CONCENTRICITY WITHIN .010
3. ALL WELDS SHOULD ADHERE TO THE MOST CURRENT A.W.S WELDING STANDARDS
4. TORQUE ALL FASTENERS PER STD-1600D
5. TORQUE ALL FITTINGS PER STD 5309

THIRD ANGLE PROJECTION

DRAFTED PER HARSCO RAIL STANDARD STD-1601D

CHANGE	R/L	REVISION	DR	DATE
EC508831	A	ITEM 1 WAS 4015854 G4 JAM BOX, REMOVED ITEM 2 & 13	BAD	11/20/13
EC613150	B	ITEM 1 WAS 5015210. ITEM 3 WAS 150987-8. ITEM 4 WAS 150988-6. ITEM 2 WAS ITEM 12	WJG	06/24/20
EC613297	C	SHT 1 UPDATED JAM BOX ID'S & ROUTING OF IT 2,10,11, SHT 2 UPDATED ETHERNET CABLE PORT LOCATION, ADDED ITEM 12	BAD	07/15/20

Description: INSTRUMENT JAM BOX CONV TIER 3
Material:
Weight: 34.2 lbm
Drawn: bedel
Date Drawn: 1/16/2014
SOLID EDGE DRAWING
DO NOT SCALE
Machine Type: 6700SJ
Part Number: 2014214
Size: D
Sheet: 1 of 2

2014214 INSTRUCTIONS FOR INSTRUMENT JAM CONVERSION FOR TIER 3 6700SJ

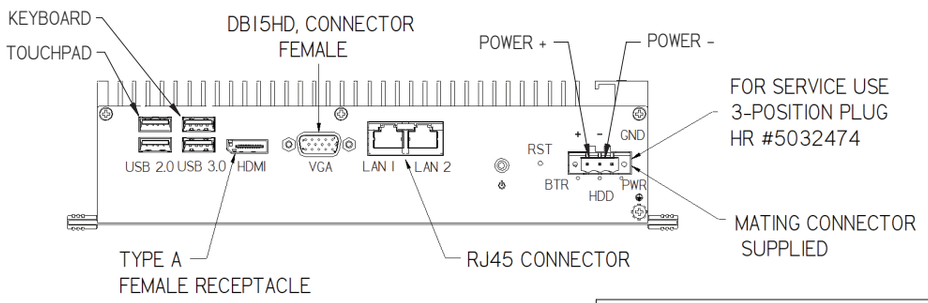
CUSTOMER CONVERSION INSTRUCTIONS

REMOVE OLD UNIT

- Make sure power is OFF
- Disconnect the VGA cable, COM cable and Ethernet cable from the top of the right hand blue box, MOD01.
- Using a small slotted screwdriver, remove wire 636A and 646A from the power connector of the P42 circuit board module, MOD01A, just to the left of the box.
- Remove the P42 circuit board module from the DIN rail, the JAM box from the panel and discard.

INSTALL NEW UNIT

- Mount the new J42 circuit board module, Item 9, to the DIN rail.
- Mount the new Instrument JAM, Item 1, to the panel.
  - Use the new box as a template to locate the 4 mounting holes.
  - Drill and tap the 4 holes for #8-32 thread.
  - Mount the box to the panel.
- Connect the VGA cable to the VGA port of the new box.
- Connect the COM cable to COM1 on the bottom of the new box.
- Do NOT connect the Ethernet cable yet.
- Connect wire 636A to the RTN terminal of the 2-place power connector, J1, on the J42 circuit board module.
- Connect wire 646A to the +24V terminal of the 2-place power connector, J1, on the J42 circuit board module.
- Connect one end of Item 11 black 18 AWG wire to the RTN terminal of the 3-place power connector, J2, on the J42 circuit board module and the other end to the - terminal (-24V) of the 3-place power connector on the bottom of the new box.
- Connect one end of Item 12 red 18 AWG wire to the +24V terminal of the 3-place power connector, J2, on the J42 circuit board module and the other end to the + terminal (+24V) of the 3-place power connector on the bottom of the new box.
- Note, there is no connection at frame ground of the power connector on the bottom of the JAM box.
- Apply power and confirm that the Instrument Display is normal.



UPDATE THE WORK JAM PROGRAM

- Confirm that the Work Screen and Instrument Screen are both normal.
- Plug the memory stick, Item 8, into a USB port on the WORK JAM, left hand blue box.
- The light on the memory stick will flash on and off as the program is updated.
- The Work Screen will reboot and then come back up to its normal display.
- Remove the memory stick from the USB port.
- Turn off the power.
- Remove the Ethernet cable from the NET port of the Work JAM and discard.
- Ⓒ Plug one end of the Ethernet cable, Item 10 to the LAN1 port on the top of the new Instrument JAM box and the other end to the NET port on the Work JAM box.
- Apply power and confirm that both screens come up properly.

DOCUMENTATION

- Insert conversion print and BOM into the Cab Assembly section of your Parts Book

HARSCO RAIL MANUFACTURING INSTRUCTIONS

JAM BOX PROGRAMMING

- Obtain customer name and machine serial number from Sales Department
- Consult Programmed JAM Box Document 5029134 to locate the proper Instrument JAM part number to apply to the label.
- Install the program onto the JAM Box as determine from above.
- Confirm proper operation of the JAM Box.

MEMORY STICK PROGRAMMING

- Copy the companion Work JAM Box program as determined from the document to the memory stick.
- Apply a label to the memory stick with the program version, date, and your initials.
- Place memory stick into an anti-static bag.

Inch [mm]

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0	6	.03	.005	0	150	.8	.13
6	24	.04	.008	150	600	1.0	.20
24	-	.06	.010	600	-	1.5	.25

UNLESS OTHERWISE SPECIFIED:
1. REMOVE BURRS AND BREAK SHARP EDGES .010 MAXIMUM RADIUS OR .030 X 45°
2. A SURFACE FINISH OF 125 MICROINCHES ANGULAR TOLERANCE OF ± .50° CONCENTRICITY WITHIN .010
3. ALL WELDS SHOULD ADHERE TO THE MOST CURRENT A.W.S WELDING STANDARD.
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Date Drawn: 1/16/2014
Part Number: 2014214
Sheet: 2 of 2
SOLID EDGE DRAWING
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