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RAIL

SERVICE BULLETIN
MAINTENANCE OF WAY EQUIPMENT

DATE: 4-16-2014 **BULLETIN NO:** 14-003

TITLE: G5 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 G5 JAM Box. Conversion Kits are available to convert to the new style G5 JAM Box.

OPERATIONAL IMPACT: The new style G5 JAM Box provides faster operation, better temperature performance, and offers greater protection from dust and dirt.

ACTION: When needing to replace a "Blue" JAM Box, (#H5991Y01, Y03 and Y04), order the new style G5 JAM Box Conversion Kit applicable to your model 6700S Tamer. 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 G5 JAM Box and its associated components. See Service Bulletin 14-002 for more detailed information concerning the G5 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 G5 JAM BOX CONVERSION KITS

1. Contact the Service Department at Harsco Rail to order the following G5 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 G5 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 G5 JAM Box and its associated components. See Service Bulletin 14-002 for more detailed information concerning the G5 JAM Box and the associated J42 Board.

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

USB PRINTER COMPONENTS

1. The new style G5 JAM Box use a USB port to connect to a USB type printer. If your machine currently has a printer connected to the parallel port on the old style "Blue" JAM Box, your existing printer may not work with the new style G5 JAM Box. If you want to connect a printer to the new style G5 JAM Box, consider ordering the following printer components:

ITEM	PART NO	DESCRIPTION	QTY
	2011683	Conversion, Printer 6700S Jupiter (includes printer cable)	1
	2014137	USB Printer Cable (6 Ft) (cable only).	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 G5 JAM Box Conversion Kit.

#2014209 - 6700SJ Tier 2 WORK JAM CONVERSION KIT**Parts List** - See Drawing #2014209

ITEM	PART NO	DESCRIPTION	QTY
1	5015210	JAM Box	1
2			
3	150987-8	Washer - Plain, #8 Wrought	4
4	150988-6	Washer - Lock, #8 Regular	4
5	250046-148	Screw - Machine, #8-32 x 1/2" Pan Head	4
6	2014077	Serial Cable Assembly - DB9 MF x 2-1/2 Ft.	1
7	4016607	J42 Module Assembly	1
8	253607-1	Wire - 18 AWG Black	20"
9	253607-9	Wire - 18 AWG Red	20"
10	2014085	Label - Programmed Work JAM Box	1
11	251202-1	Label - Computer	1
12	H6197Y01	Kanguru Micro Drive.	1
13	2014212	Network Cable - RJ45 x 5 Ft	1
14	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 COM 2 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.
 - 1.1 Use the new box as a template to locate the 4 mounting holes.
 - 1.2 Drill and tap the 4 holes for #8-32 thread.
 - 1.3 Mount the box to the panel using the supplied hardware (Items 3 - 4 - 5).
2. Connect the Keyboard cable to the MS/KB port.
3. Connect the Touchpad cable to the USB port closest to the panel.

#2014209 - 6700SJ Tier 2 WORK JAM CONVERSION KIT

Installation Instructions - See Drawing #2014209

Install New Unit (continued)

4. Connect the VGA cable to the VGA port of the new box.
5. Connect the COM cable to the COM 1 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 COM 2 port on the bottom of the new box.
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" 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 "+" 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 "-" terminal of the 3-place 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 13) into the LAN 1 port on the bottom 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 CONVERSION KIT**Parts List** - See Drawing #2014210

ITEM	PART NO	DESCRIPTION	QTY
1	5015210	JAM Box.....	1
2			
3	150987-8	Washer - Plain, #8 Wrought.....	4
4	150988-6	Washer - Lock, #8 Regular.....	4
5	250046-148	Screw - Machine, #8-32 x 1/2" Pan Head.....	4
6	2014086	Label - Programmed Instrument JAM Box.....	1
7	251202-1	Label - Computer.....	1
8	H6197Y01	Kanguru Micro Drive.....	1
9			
10	2014212	Network Cable - RJ45 x 5 Ft.....	1
11	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.
 - 1.1 Use the new box as a template to locate the 4 mounting holes.
 - 1.2 Drill and tap the 4 holes for #8-32 thread.
 - 1.3 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 COM 1 port on the bottom of the new box.
4. Do NOT connect the Ethernet cable yet.
5. Connect wire 636A to the "-" terminal of the 3-place power connector on the bottom of the new box.
6. Connect wire 646A to the "+" 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 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 10) into the LAN 1 port on the bottom 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 CONVERSION KIT**Parts List - See Drawing #2014213**

ITEM	PART NO	DESCRIPTION	QTY
1	5015210	JAM Box	1
2			
3	150987-8	Washer - Plain, #8 Wrought	4
4	150988-6	Washer - Lock, #8 Regular	4
5	250046-148	Screw - Machine, #8-32 x 1/2" Pan Head	4
6	2014077	Serial Cable Assembly - DB9 MF x 2-1/2 Ft.	1
7	4016607	J42 Module Assembly	1
8	253607-1	Wire - 18 AWG Black	20"
9	253607-9	Wire - 18 AWG Red	20"
10	2014085	Label - Programmed Work JAM Box	1
11	251202-1	Label - Computer	1
12	H6197Y01	Kanguru Micro Drive.	1
13			
14	2014212	Network Cable - RJ45 x 5 Ft	1
15	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 COM 2 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 power 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.
 - 1.1 Use the new box as a template to locate the 4 mounting holes.
 - 1.2 Drill and tap the 4 holes for #8-32 thread.
 - 1.3 Mount the box to the panel using the supplied hardware (Items 3 - 4 - 5).
2. Connect the Keyboard cable to the MS/KB port.
3. Connect the Touchpad cable to the USB port closest to the panel.

#2014213 - 6700SJ Tier 3 WORK JAM CONVERSION KIT

Installation Instructions - See Drawing #2014213

Install New Unit (continued)

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 COM 2 port on the bottom of the box.
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" 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 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 of the 3-place 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 14) to the LAN 1 port on the bottom 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 CONVERSION KIT**Parts List** - See Drawing #2014214

ITEM	PART NO	DESCRIPTION	QTY
1	5015210	JAM Box	1
2			
3	150987-8	Washer - Plain, #8 Wrought	4
4	150988-6	Washer - Lock, #8 Regular	4
5	250046-148	Screw - Machine, #8-32 x 1/2" Pan Head	4
6	2014086	Label - Programmed Instrument JAM Box	1
7	251202-1	Label - Computer	1
8	H6197Y01	Kanguru Micro Drive.	1
9	4016607	J42 Module Assembly	1
10	2014212	Network Cable - RJ45 x 5 Ft	1
11	253607-1	Wire - 18 AWG Black	20"
12	253607-9	Wire - 18 AWG Red	20"
13	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.
 - 2.1 Use the new box as a template to locate the 4 mounting holes.
 - 2.2 Drill and tap the 4 holes for #8-32 thread.
 - 2.3 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.

#2014214 - 6700SJ Tier 3 INSTRUMENT JAM CONVERSION KIT

Installation Instructions - See Drawing #2014214

Install New Unit (continued)

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 "-" terminal of the 2-place power connector on the bottom of the new box.
9. Connect one end of red 18 AWG wire (Item 12) to the +24V terminal of the 3-place power connector J2 on the J42 circuit board module and the other end to the "+" terminal of the 2-place power connector on the bottom of the new 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 LAN 1 port on the bottom 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

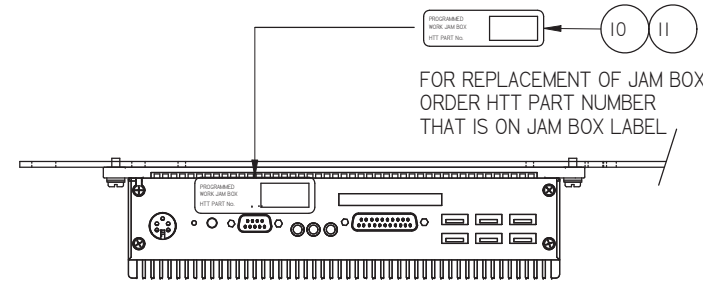
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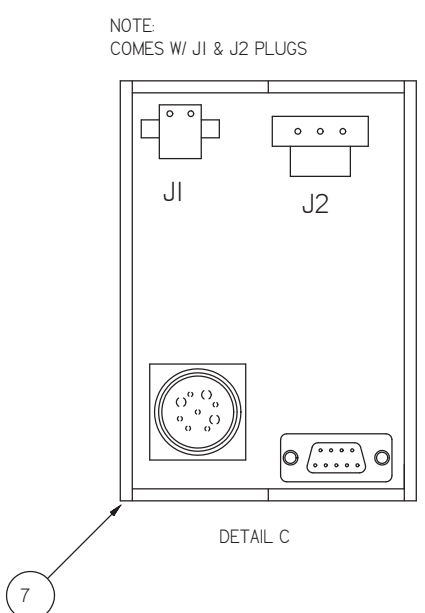
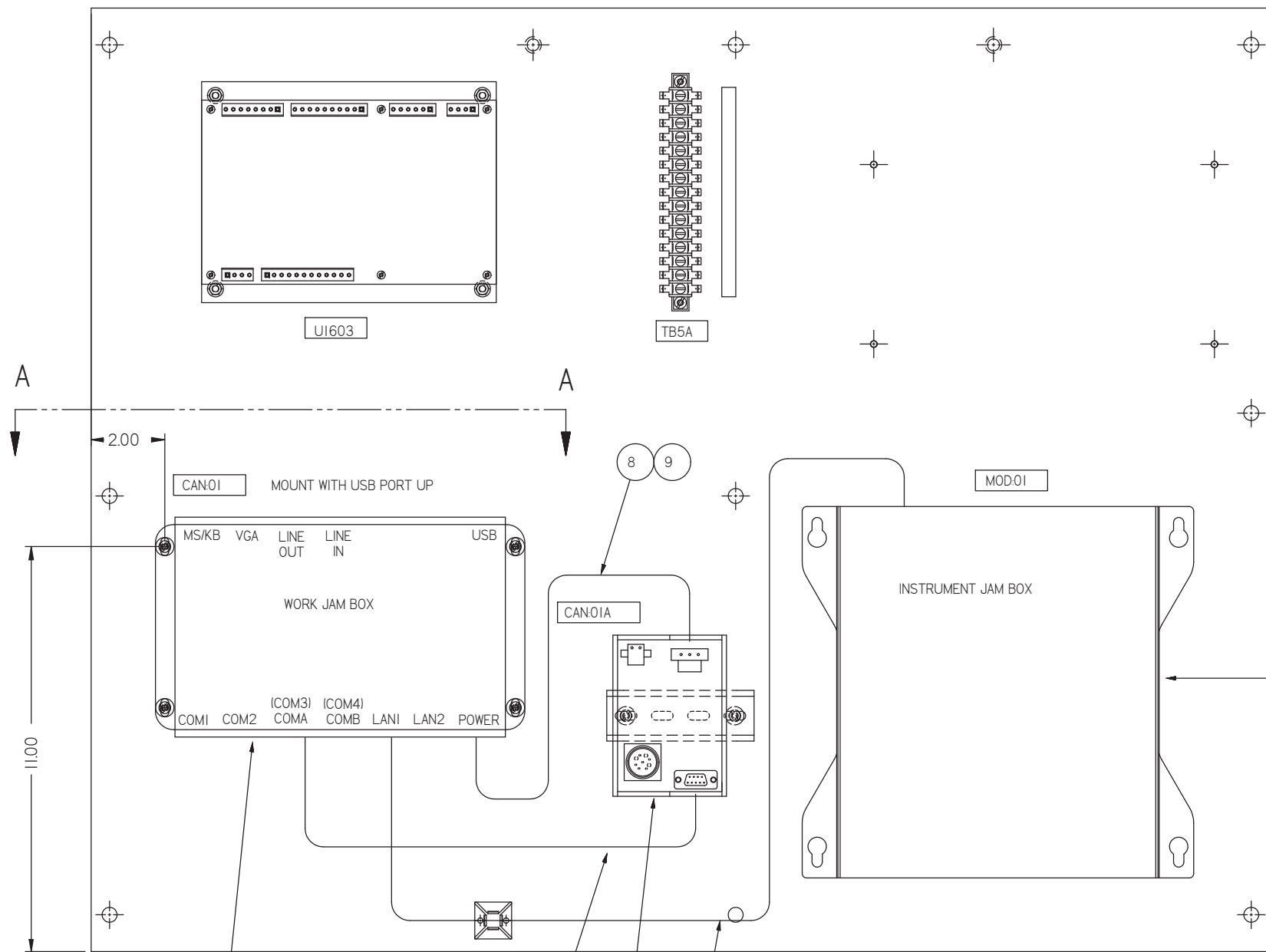
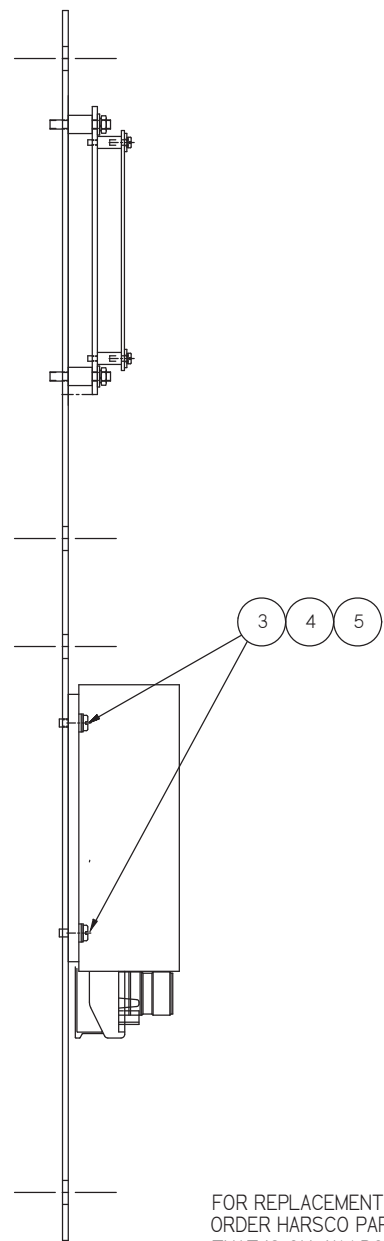
VIEW A

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	5015210	1	JAM BOX, G5
3	150987-8	4	WASHER- PLAIN, WROUGHT IRON, #8
4	150988-6	4	WASHER- LOCK #8 REGULAR
5	250046-148	4	SCREW-MACH, PAN HD, #8-32 X .50 LG
6	2014077	1	SERIAL CABLE ASSY-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
13	2014212	1	CABLE, CAT 5, XOVER, 5FT



NOTE:
 USE JAM BOX AS TEMPLATE
 #29 (1360) DRILL
 #8-32 UNC-2B
 4 HOLES

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

CONFIDENTIAL

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NORMAL SIZE RANGE	INCH		METRIC	
	OVER	TO	OVER	TO
0	.03	.005	0	.150
6	.24	.04	150	600
24	-.06	.010	600	1.5

UNLESS OTHERWISE SPECIFIED ALL MACHINED SURFACES WILL HAVE:
 A SURFACE FINISH OF 32 MICRONS
 ANGULAR TOLERANCE OF 1° 50'
 CONCENTRICITY WITHIN .015

THIRD ANGLE PROJECTION

UNLESS OTHERWISE SPECIFIED ALL WELDS SHOULD ADHERE TO THE MOST CURRENT A.I.S. WELDING STANDARDS

CHANGE	R/L	REVISION	DR	DATE	Description
EC506436	B	ADDED NOTE TO SHOP INSTRUCTIONS; REMOVED ITEM 2	BJE	3/8/13	WORK JAM BOX CONVERSION
EC508831	C	ITEM 1 WAS 4015854 G4 JAM BOX, REMOVED ITEM 14	BAD	11/20/13	

Weight	0.0 lbm	Drawn	bedel	Date Drawn	3/8/2013	Part Number	6700SJ
SOLID EDGE DRAWING		DO NOT SCALE		2014209		1 of 2	

Inch [mm]



Machine Type 6700SJ

Sheet 1 of 2

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
- Connect the Keyboard cable to the MS/KB port.
- Connect the Touchpad cable to the USB port closest 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.
- 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.
- Plug one end of the Ethernet cable, item 14, into the LAN1 port on the bottom 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

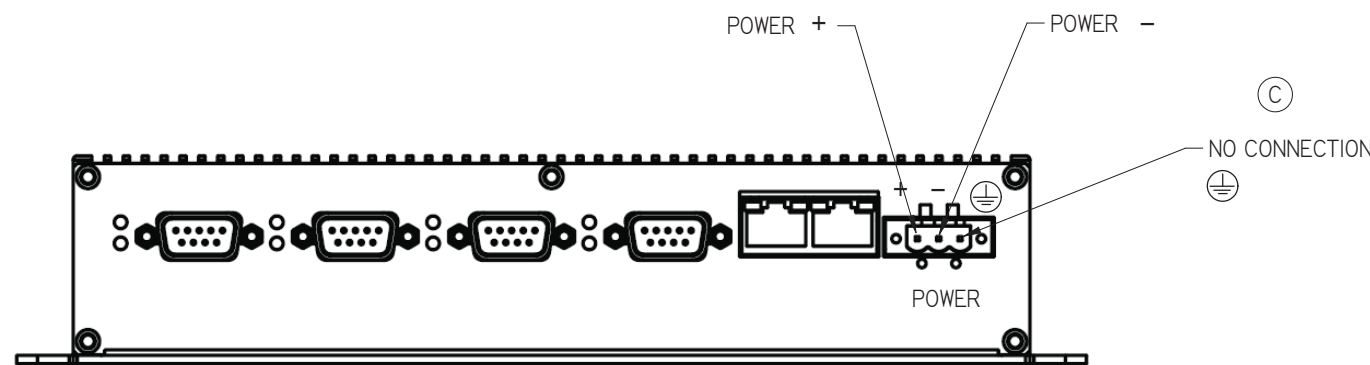
HARSCO RAIL MANUFACTURING INSTRUCTIONS

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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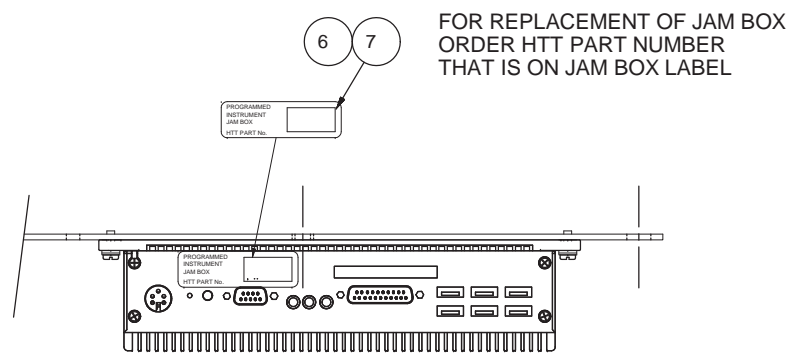
Inch [mm]

REFERENCE DRAWINGS

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

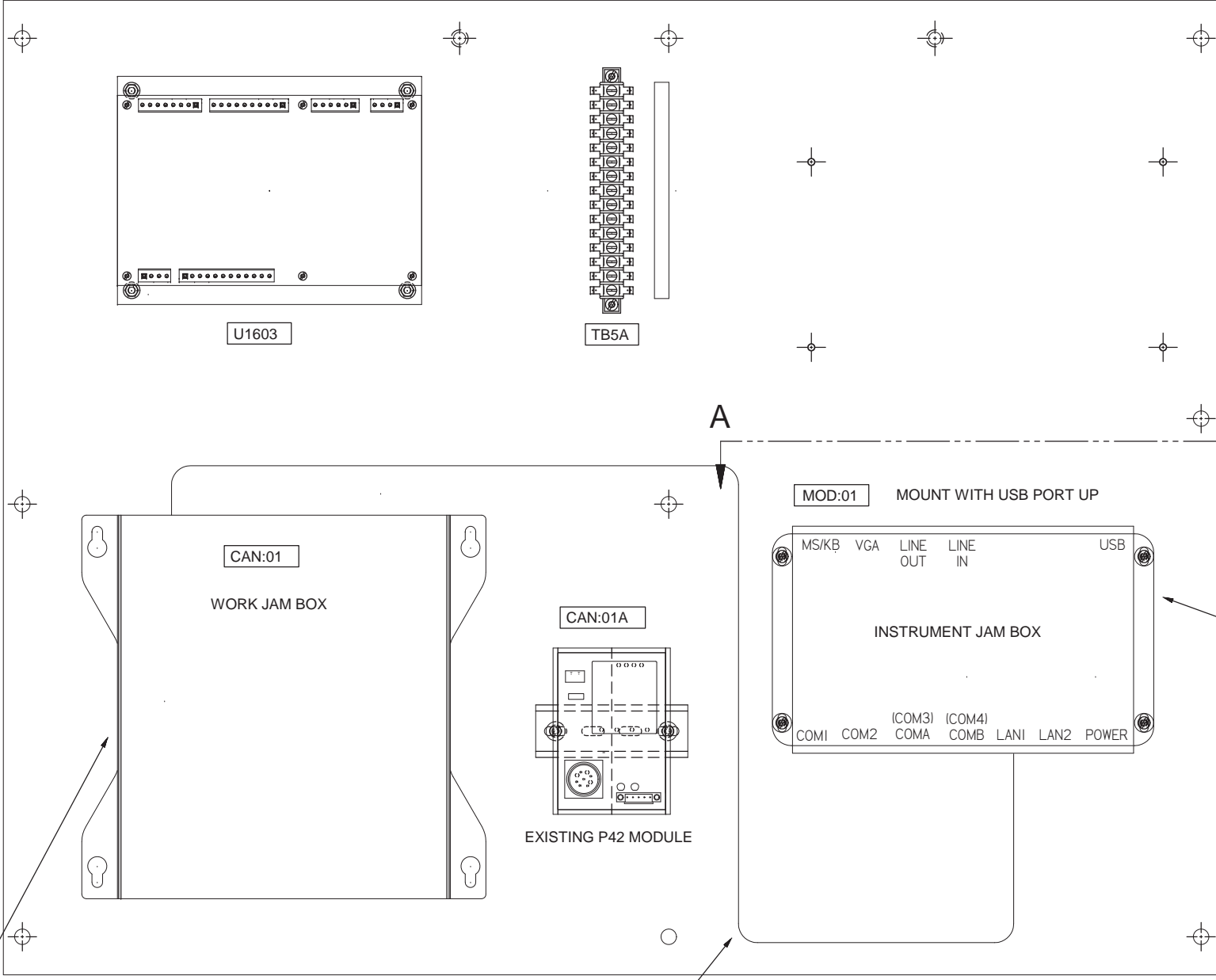
DRAWING #	DESCRIPTION
2014210	INSTRUMENT JAM BOX CONVERSION

ITEM	PART NO	QTY	DESCRIPTION
1	5015210	1	JAM BOX, G5
3	150987-8	4	WASHER- PLAIN, WROUGHT IRON, #8
4	150988-6	4	WASHER- LOCK #8 REGULAR
5	250046-148	4	SCREW-MACH, PAN HD, #8-32 X .50 LG
6	2014086	1	LABEL- PROGRAMMED INSTRUMENT JAM BOX
7	251202-1	1	LABEL-COMPUTER
8	H6197Y01	1	USB FLASH DRIVE
10	2014212	1	CABLE, CAT 5, XOVER, 5FT



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

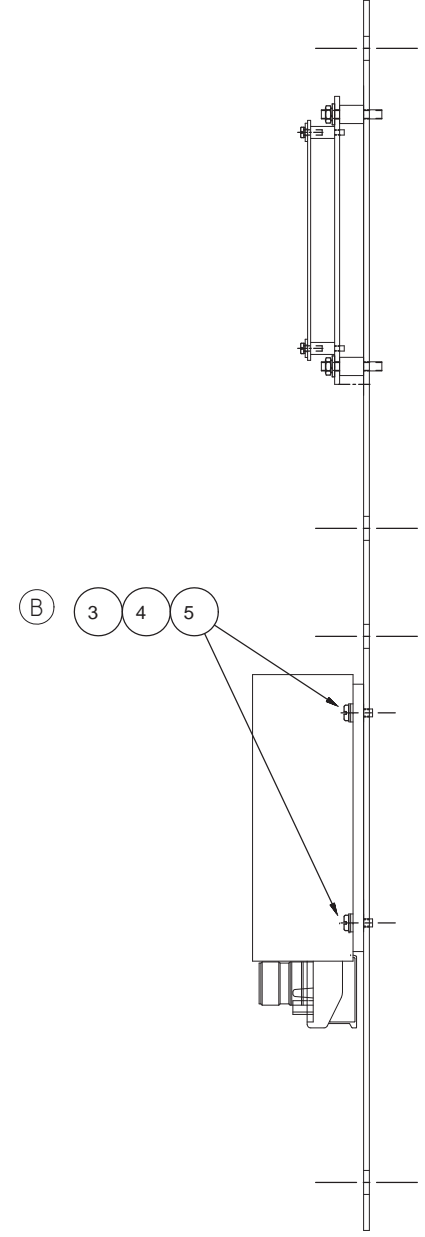
VIEW A



NOTE:
USE JAM BOX AS TEMPLATE
#29 (.1360) DRILL
#8-32 UNC-2B
4 HOLES

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

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



USE 8 TO REPROGRAM WORK JAM BOX

10

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NORMAL SIZE RANGE	INCH PLUS OR MINUS	NORMAL SIZE RANGE	METRIC PLUS OR MINUS	UNLESS OTHERWISE SPECIFIED ALL MACHINED SURFACES WILL HAVE:	CHANGE	R/L	REVISION	DR	DATE	Description	Machine Type	Size
OVER TO	2 PLACES DECIMAL	3 PLACES DECIMAL	OVER TO	A SURFACE FINISH OF 32 MICRONS INCHES ANGULAR TOLERANCE OF 1° 50' CONCENTRICITY WITHIN .015	EC508831	B	ITEM 1 WAS 4015854 G4 JAM BOX, REMOVED ITEMS 2 & 9	BAD	01/16/14	INSTRUMENT JAM BOX CONVERSION	6700SJ	D
0 .6	.03	.005	0 150									
6 24	.04	.008	150 600									
24	-.06	.010	600									

THIRD ANGLE PROJECTION

UNLESS OTHERWISE SPECIFIED ALL WELDS SHOULD ADHERE TO THE MOST CURRENT A.I.W.S WELDING STANDARDS

Material: 0.0 lbm
Weight: 0.0 lbm
Drawn: bedel
Date Drawn: 1/16/2014
Part Number: 2014210
Sheet: 1 of 2

SOLID EDGE DRAWING **DO NOT SCALE**

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 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, into the LAN1 port on the bottom 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

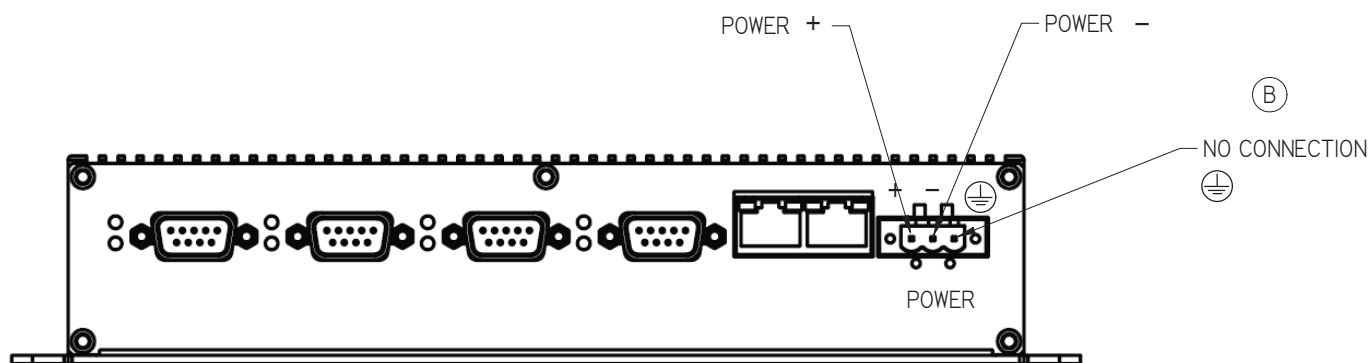
HARSCO RAIL MANUFACTURING INSTRUCTIONS

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.

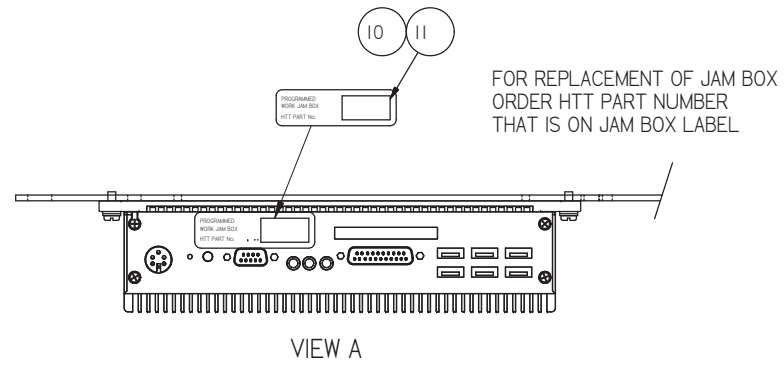
MEMORY STICK PROGRAMMING

- 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.



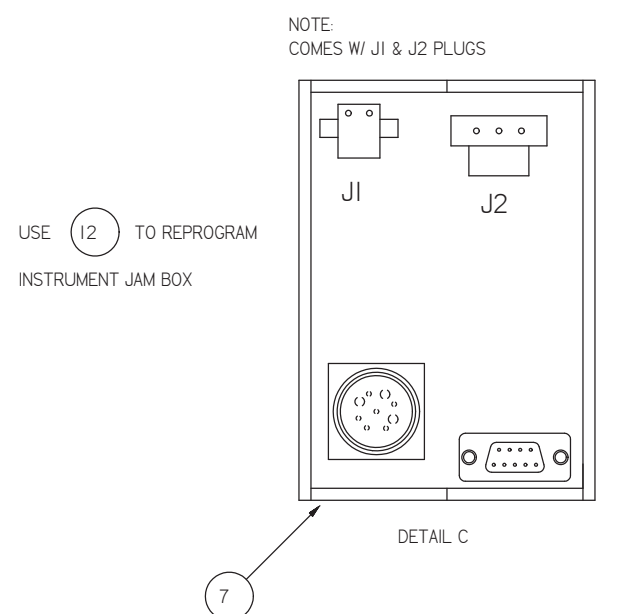
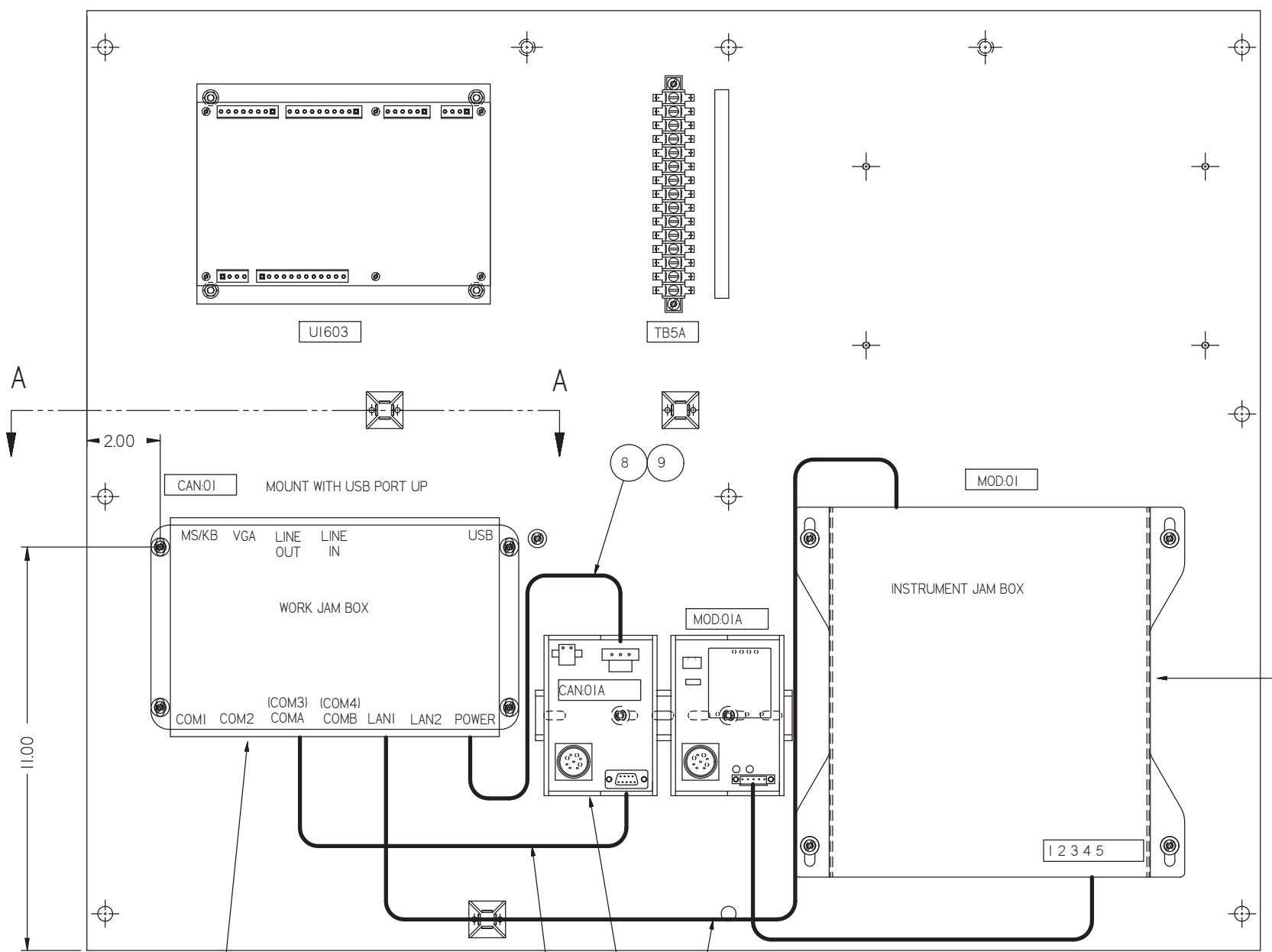
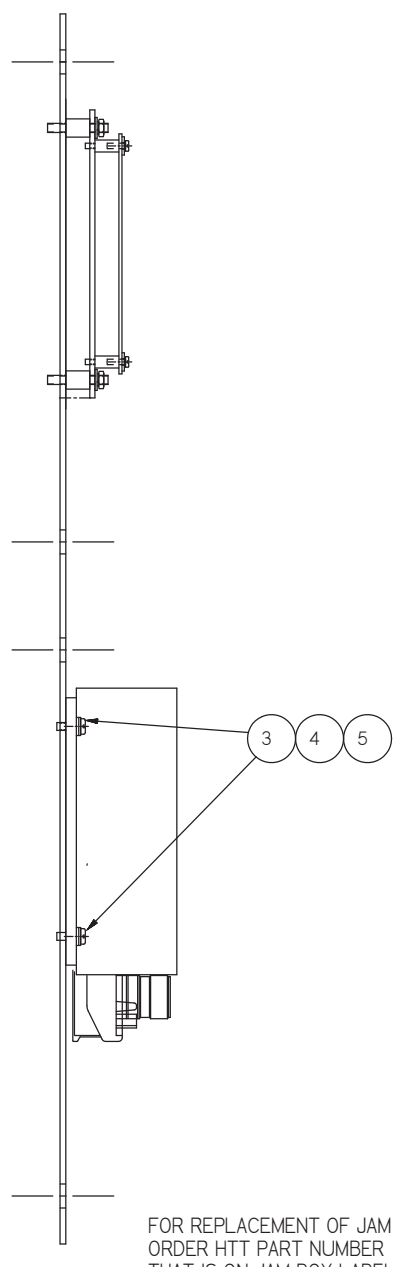
CONFIDENTIAL				CHANGE		R/L		REVISION		DR	DATE	Description	HARSCO RAIL				
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0	6	.03	.005	0	150	.8	.13						Material				
6	24	.04	.008	150	600	1.0	.20						Weight	0.0 lbm			
24	-	.06	.010	600	-	1.5	.25						Drawn	bedel			
												Date Drawn	1/16/2014	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	5015210	1	JAM BOX, G5
3	150987-8	4	WASHER- PLAIN, WROUGHT IRON, #8
4	150988-6	4	WASHER- LOCK #8 REGULAR
5	250046-148	4	SCREW-MACH, PAN HD, #8-32 X .50 LG
6	2014077	1	SERIAL CABLE ASSY-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
14	2014212	1	CABLE, CAT 5, XOVER, 5FT



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INCH	METRIC	CHANGE	R/L	REVISION	DR	DATE	Description
OVER TO PLUS OR MINUS	OVER TO PLUS OR MINUS	EC506436	A	ADDED NOTE TO SHOP INSTRUCTIONS; REMOVED ITEM 2	BJE	3/7/13	WORK JAM BOX CONVERSION TIER 3
0 .6 .03 .005 0 150 .8 .13	0 150 .8 .13	EC508831	B	ITEM 1 WAS 4015854 G4 JAM BOX, REMOVED ITEM 13	BAD	11/20/13	

UNLESS OTHERWISE SPECIFIED ALL MACHINED SURFACES WILL HAVE A SURFACE FINISH OF 32 MICRONS ANGULAR TOLERANCE OF 1.50° CONCENTRICITY WITHIN .015

THIRD ANGLE PROJECTION

UNLESS OTHERWISE SPECIFIED ALL WELDS SHOULD ADHERE TO THE MOST CURRENT A.W.S. WELDING STANDARDS

Material: ; Weight: 0.0 lbm; Drawn: bedel; Date Drawn: 3/7/2013; Machine Type: 6700SJ; Part Number: 2014213

SOLID EDGE DRAWING DO NOT SCALE

1 of 2

Inch [mm]

SIMILAR TO 2014209

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.
- Connect the Keyboard cable to the MS/KB port.
- Connect the Touchpad cable to the USB port closest 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.
- 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.
- Plug one end of the Ethernet cable, Item 14, to the LAN1 port on the bottom 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

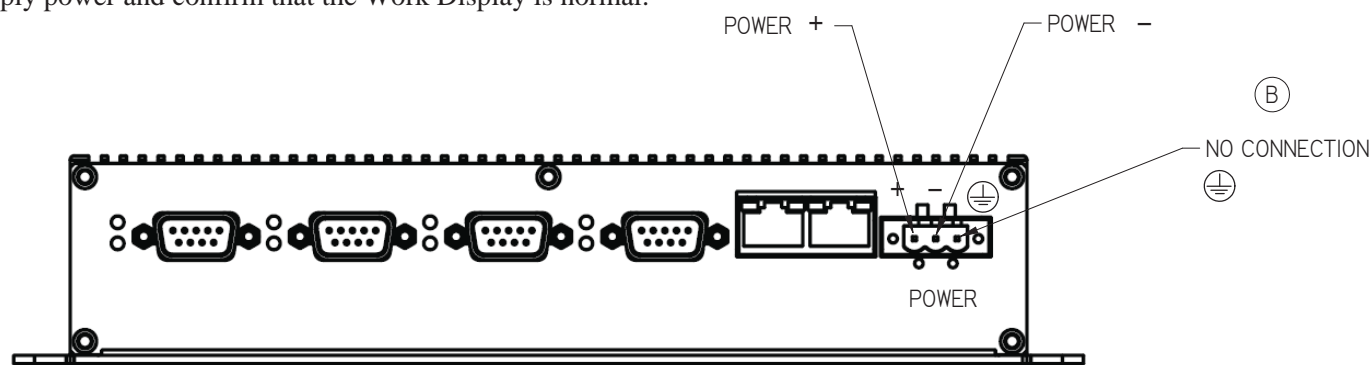
HARSCO RAIL MANUFACTURING INSTRUCTIONS

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.



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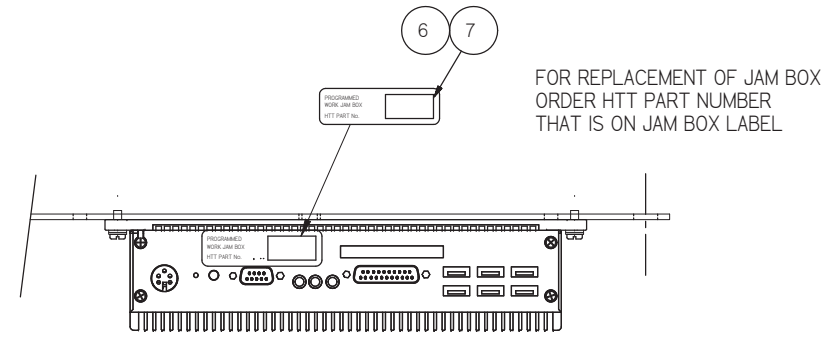
Inch [mm]

REFERENCE DRAWINGS

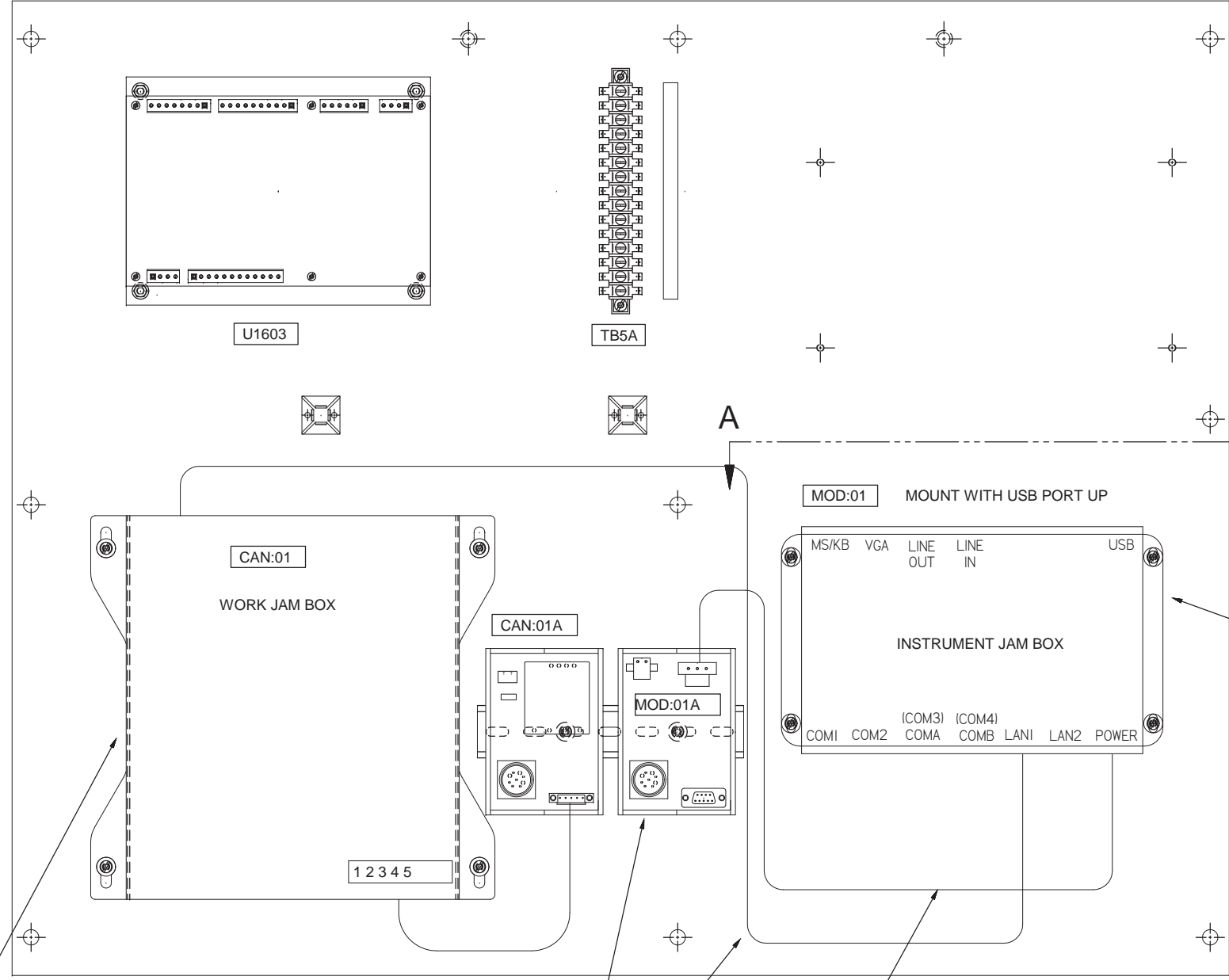
INCLUDE A COPY OF EACH OF THE FOLLOWING DRAWINGS WITH EACH KIT

DRAWING #	DESCRIPTION
2014214	INSTRUMENT JAM BOX CONVERSION

ITEM	PART NO	QTY	DESCRIPTION
1	5015210	1	JAM BOX, G5
3	150987-8	4	WASHER- PLAIN, WROUGHT IRON, #8
4	150988-6	4	WASHER- LOCK #8 REGULAR
5	250046-148	4	SCREW-MACH, PAN HD, #8-32 X .50 LG
6	2014086	1	LABEL- PROGRAMMED INSTRUMENT JAM BOX
7	251202-1	1	LABEL-COMPUTER
8	H6197Y01	1	USB FLASH DRIVE
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
12	253607-9	2	WIRE-18AWG RED 50V TYPE GXL



VIEW A

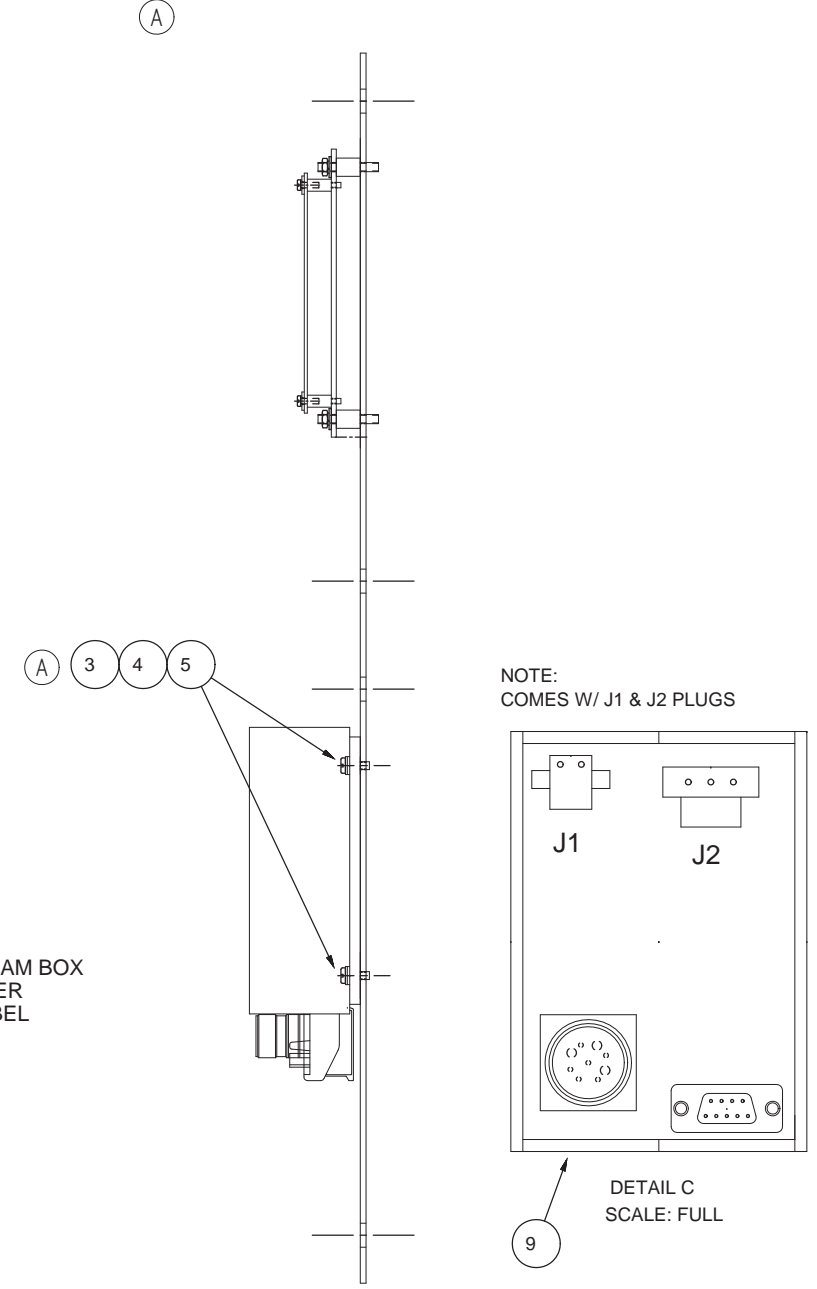


USE 8 TO REPROGRAM WORK JAM BOX

NOTE:
USE JAM BOX AS TEMPLATE
#29 (.1360) DRILL
#8-32 UNC-2B
4 HOLES

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

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



NOTE:
COMES W/ J1 & J2 PLUGS

DETAIL C
SCALE: FULL

SIMILAR TO 2014210

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NORMAL SIZE RANGE	INCH PLUS OR MINUS	NORMAL SIZE RANGE	METRIC PLUS OR MINUS	UNLESS OTHERWISE SPECIFIED ALL MACHINED SURFACES WILL HAVE:	CHANGE	R/L	REVISION	DR	DATE	Description	Machine Type	Size
OVER TO	FRACTIONAL DECIMAL	FRACTIONAL DECIMAL	OVER TO	FRACTIONAL DECIMAL	EC508831	A	ITEM 1 WAS 4015854 G4 JAM BOX, REMOVED ITEM 2 & 13	BAD	11/20/13	INSTRUMENT JAM BOX CONV TIER 3	6700SJ	D
0 .6	.03	.005	0 150	.8 .13								
6 24	.04	.008	150 600	1.0 .20								
24 -	.06	.010	600 -	1.5 .25								

Material: ; Weight: 0.0 lbm; Drawn: bedel; Date Drawn: 1/16/2014; Part Number: 2014214

SOLID EDGE DRAWING **DO NOT SCALE**

1 of 2

2014214 INSTRUCTIONS FOR INSTRUMENT JAM CONVERSION FOR
TIER 3 6700SJ

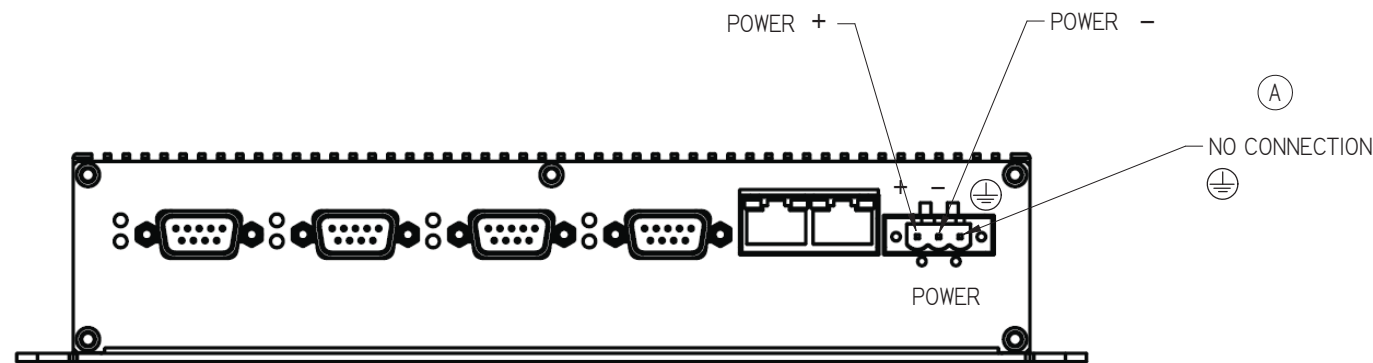
CUSTOMER CONVERSION INSTRUCTIONS

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 bottom 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.

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NORMAL SIZE RANGE		INCH PLUS OR MINUS		NORMAL SIZE RANGE		METRIC PLUS OR MINUS	
OVER	TO	2 PLACE DECIMAL	3 PLACE DECIMAL	OVER	TO	2 PLACE DECIMAL	3 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

CHANGE	R/L	REVISION	DR	DATE	Description
EC508831	A	ITEM 1 WAS 4015854 G4 JAM BOX, REMOVED ITEM 2 & 13	BAD	11/20/13	INSTRUMENT JAM BOX CONV TIER 3

Material	Weight	Drawn	Date Drawn	Part Number	Machine Type
	0.0 lbm	bedel	1/16/2014	6700SJ	

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Inch [mm]