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SERVICE BULLETIN MAINTENANCE OF WAY EQUIPMENT

DATE: 5-27-2009 **BULLETIN NO:** 09-007

TITLE: G4 JAM BOX CONVERSION KITS

RATING:

<input type="checkbox"/> DIRECTIVE (Action Is Required)	<input type="checkbox"/> ALERT (Potential Problem)
<input type="checkbox"/> INFORMATION (Action Is Optional)	<input checked="" type="checkbox"/> PRODUCT IMPROVEMENT (Enhance Product)

PRODUCT SERIES / MODEL: All 6700S Tampers with Jupiter 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 G4 JAM Box. Conversion Kits are available to convert to the new style G4 JAM Box.

OPERATIONAL IMPACT: The new style G4 JAM Box boots up to an operational screen faster than the "Blue" JAM Box with no functional difference in machine operation.

ACTION: When needing to replace a "Blue" JAM Box, order the new style G4 JAM Box Conversion Kit applicable to your machine. When ordering, provide your machine serial number to ensure correct machine software is installed. Use this Service Bulletin to assist in the installation of the new style G4 JAM Box and its associated components. See Service Bulletin 09-007 for more detailed information concerning the G4 JAM Box and the associated J42 Board.

CONTACT: If you have any questions or if we can be of any service, please contact Eugene Russell at the Harsco Rail, Ludington, MI. facility 231-843-3431.

SAFETY INFORMATION



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

CONVERSION KITS

Order the following Conversion Kit applicable to your machine to convert the old style "Blue" JAM Box to a new style G4 JAM Box. When ordering, provide your machine serial number to ensure correct machine software is installed. Use this Service Bulletin to assist in the installation of the new style G4 JAM Box and its associated components. See Service Bulletin 09-007 for more detailed information concerning the G4 JAM Box and the associated J42 Board.

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

The new style G4 JAM Box does not have a parallel port to connect to a parallel type printer. It uses an USB port to connect to an USB type printer. If your machine currently has a printer connected to the parallel port on the old style "Blue" JAM Box, you will need to order a new printer cable #2014137. If you want to connect a printer to the new style G4 JAM Box, consider ordering the following printer components:

PART NO	DESCRIPTION	QTY
2011683	Conversion, Printer 6700S Jupiter (includes printer cable)	1
2014137	USB Printer Cable (6 Ft) (cable only)	1

2014209 - 6700SJ TIER 2 WORK JAM CONVERSION KIT**PARTS LIST** - See Drawing #2014209

ITEM	PART NO	DESCRIPTION	QTY
1	4015854	JAM Box	1
2	254445-1	Sandwich Mount	4
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	2014209-DWG	Hard Copy of Drawing / Bill of Material	1
14	2014212	Network Cable - RJ45 x 5 Ft	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 2 place 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 4 rubber stand-offs, Item 2.
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 COM1 on the bottom of the new box.
6. If the machine has the MobileNet TrakPak unit, connect the COM cable for it to COM2 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 COM3 of the new box.
11. Connect wire 636A to the RTN terminal of the 2 place power connector, J1, on the J42 Module.
12. Connect wire 650A to the +24V terminal of the 2 place power connector, J1, on the J42 Module.
13. Connect red wire 2601A from +24V terminal of 3 place power connector, J2, on the J42 Module to +24 terminal of the power connector on the bottom of the new JAM box.
14. Connect black wire 2605A from RTN terminal of 3 place power connector, J2, on the J42 Module to the GND terminal of the power connector on the bottom of the JAM box.
15. Apply power and confirm that the Work Display is normal.

UPDATE THE 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, 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.
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	4015854	JAM Box	1
2	254445-1	Sandwich Mount	4
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	2014210-DWG	Hard Copy of Drawing / Bill of Material	1
10	2014212	Network Cable - RJ45 x 5 Ft	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 4 rubber stand-offs, Item 2.
2. Connect the VGA cable to the VGA port of the new box.
3. Connect the COM cable to COM1 on the bottom of the new box.
4. Do NOT connect the Ethernet cable yet.
5. Connect wire 636A to the GND terminal of the power connector on the bottom of the new box.
6. Connect wire 646A to the 24V terminal of the 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 THE 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 LAN1 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	4015854	JAM Box	1
2	254445-1	Sandwich Mount	4
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	2014213-DWG	Hard Copy of Drawing / Bill of Material	1
14	2014212	Network Cable - RJ45 x 5 Ft	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.
 - 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 4 rubber stand-offs, Item 2.
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 COM1 on the bottom of the new box.
5. If the machine has the MobileNet TrakPak unit, connect the COM cable for it to COM2 on the bottom of the box.
6. Do NOT connect the Ethernet cable yet.
7. Install the J42 circuit board module, Item 7, onto the DIN rail.
8. Attach the purple network cable to the J42 Module.
9. Connect the serial cable, Item 6, to the J42 Module and the other end to COM3 of the new box.
10. Connect wire 636A to the RTN terminal of the 2-place power connector, J1, on the J42 circuit board module.
11. Connect wire 650A to the +24V terminal of the 2-place power connector, J1, on the J42 circuit board module.
12. Connect Item 9 red wire 2601A from +24V terminal of the 3-place power connector, J2, on the J42 circuit board module to +24 terminal of the power connector on the bottom of the new JAM box.
13. Connect Item 8 black wire 2605A from RTN terminal of the 3-place power connector, J2, on the J42 circuit board module to the GND terminal of the power connector on the bottom of the JAM box.
14. Apply power and confirm that the Work Display is normal.

UPDATE THE 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 LAN1 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	4015854	JAM Box	1
2	254445-1	Sandwich Mount	4
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 4 rubber stand-offs, Item 2.
3. Connect the VGA cable to the VGA port of the new box.
4. Connect the COM cable to COM1 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 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 GND terminal of the 2-place power connector on the bottom of the new box.
9. 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 24V 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 THE 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 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

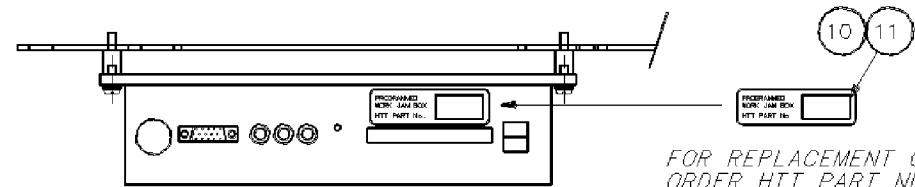
1. Insert conversion print and BOM into the Cab Assembly section of your Parts Book

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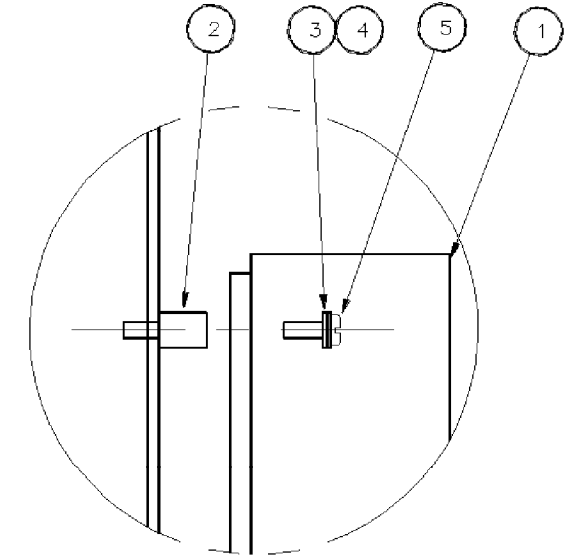
2401 Edmund Road, Box 20
Cayce-West Columbia, SC
29171-0020
Tel: (803) 822-9160
Fax: (803) 822-7471

200 South Jackson Road
Ludington, MI
49431
Tel: (231) 843-3431
Fax: (231) 843-1644

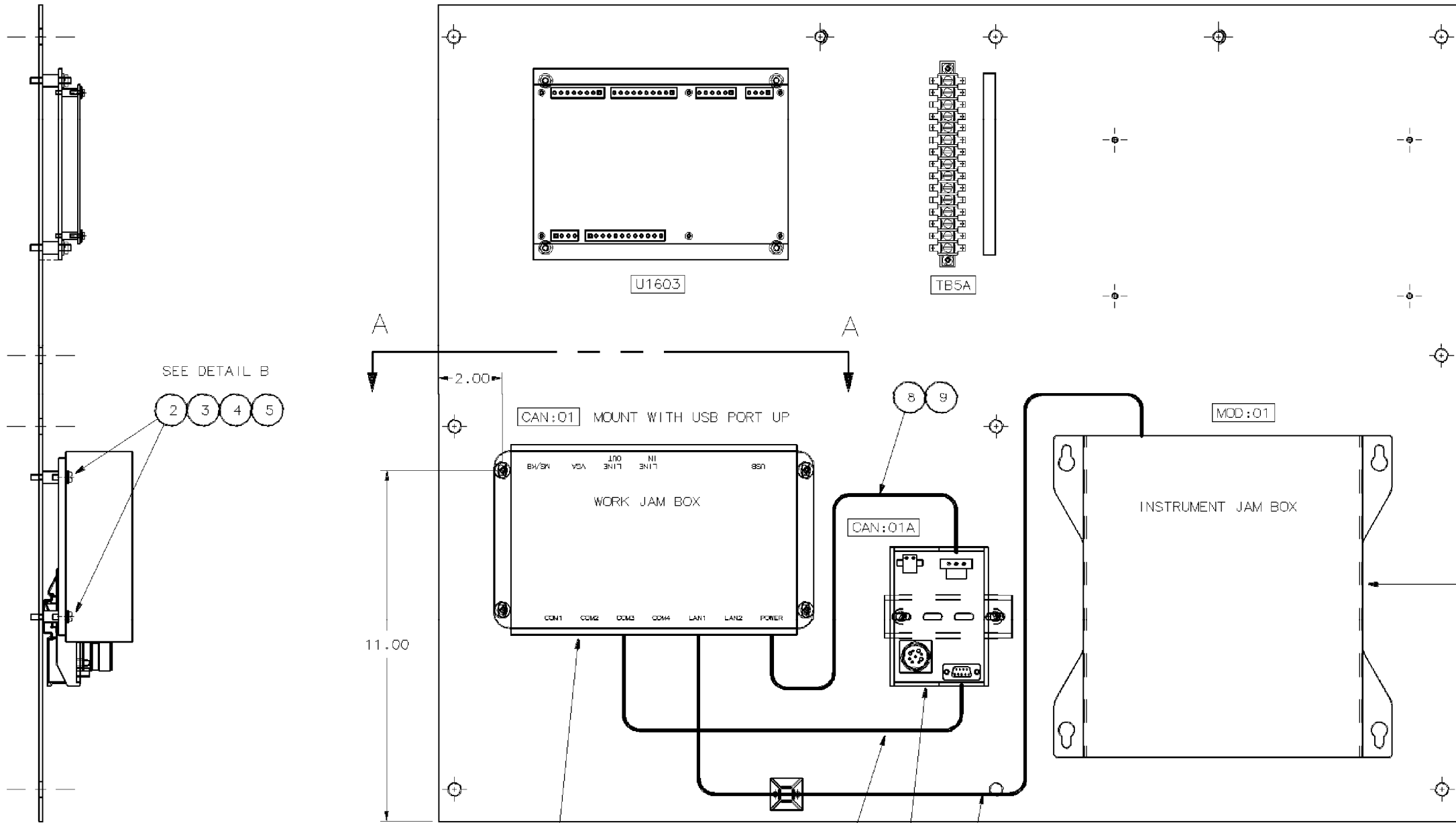


FOR REPLACEMENT OF JAM BOX
ORDER HTT PART NUMBER
THAT IS ON JAM BOX LABEL

VIEW A



DETAIL B
SCALE: FULL



SEE DETAIL B



A

A

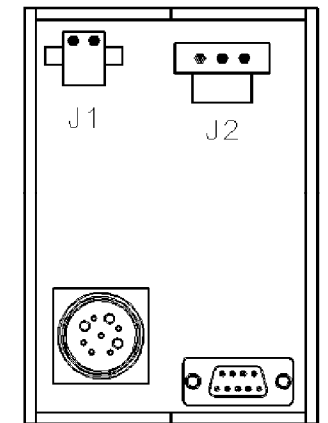
11.00



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

USE 12 TO REPROGRAM
INSTRUMENT JAM BOX

NOTE:
COMES W/ J1 & J2 PLUGS



DETAIL C
SCALE: FULL

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

FOR SERVICE USE
#2014078 2 POSITION
PLUG FOR JAM BOX
POWER WIRES

CADAM DRAWING

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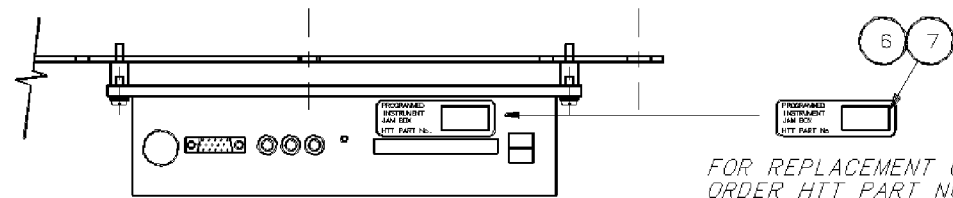
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INCH	MILLIMETER	INCH	MILLIMETER	INCH	MILLIMETER
0.001	0.025	±.005	±.150	±.005	±.127
0.002	0.050	±.010	±.300	±.010	±.254
0.005	0.127	±.020	±.762	±.020	±.508
0.010	0.254	±.040	±.152	±.040	±.101
0.020	0.508	±.080	±.305	±.080	±.203
0.050	1.270	±.160	±.762	±.160	±.406
0.100	2.540	±.320	±.152	±.320	±.813
0.200	5.080	±.640	±.305	±.640	±.163
0.500	12.700	±.160	±.762	±.160	±.406
1.000	25.400	±.320	±.152	±.320	±.813

CHANGE	R/I	REVISION	DATE	Description
S10003971		RELEASE	08JAN09	WORK JAM BOX CONVERSION
G10009139		REVISE	09FEB09	Working Number

Model	Drawn	Checked	Date Drawn
1011934.A	BAD	08JAN09	

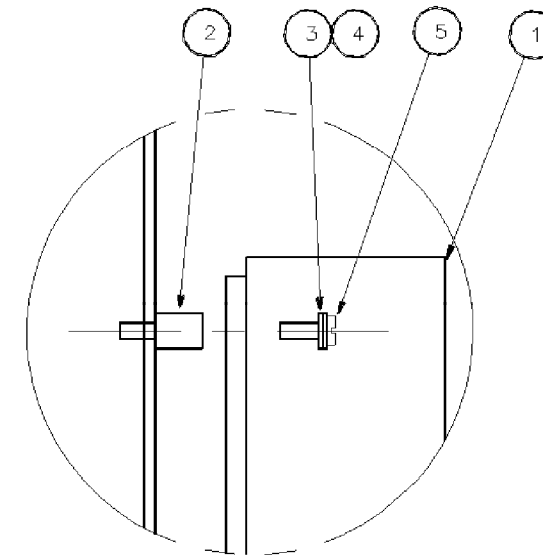
Part Number	Machine Type	Scale	Sheet
2014209.A	6700SJ	.50=1"	1 of 1

HTT
Harsoco Track Technologies
Harsoco
Ludington, MI

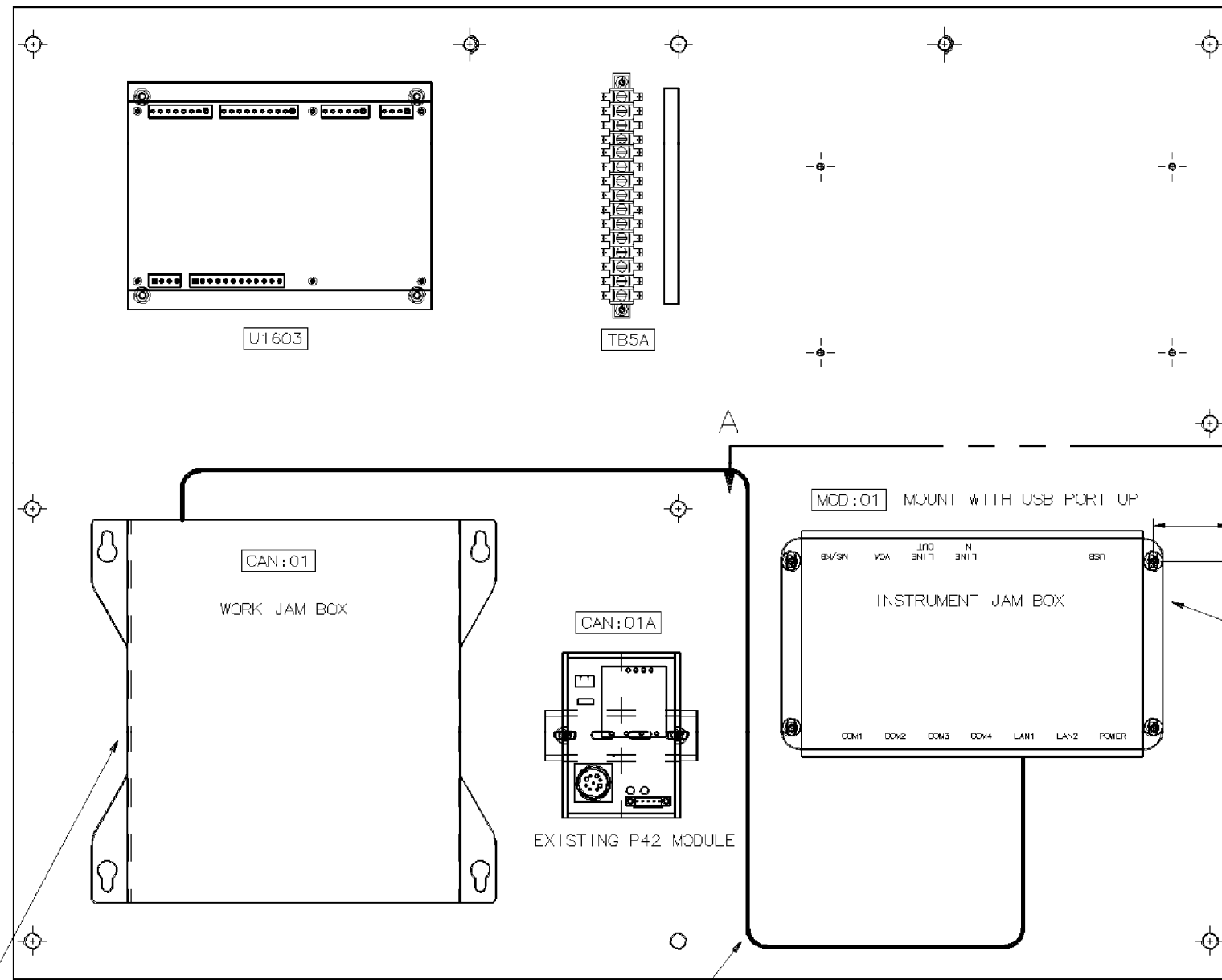


FOR REPLACEMENT OF JAM BOX
ORDER HTT PART NUMBER
THAT IS ON JAM BOX LABEL

VIEW A



DETAIL B
SCALE: FULL



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
#2014078 2 POSITION
PLUG FOR JAM BOX
POWER WIRES

SEE DETAIL B



USE 8 TO REPROGRAM WORK JAM BOX

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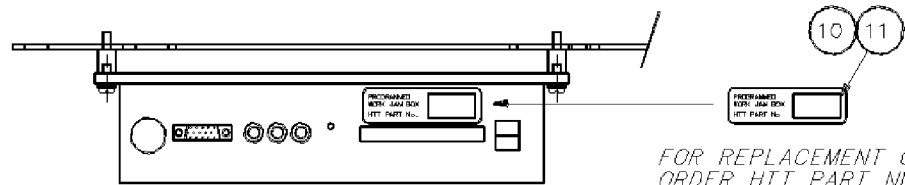
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MINIMUM	MAXIMUM	PLUS	MINUS	PLUS	MINUS
0.005	0.010	0.005	0.010	0.150	0.254
0.005	0.010	0.005	0.010	0.150	0.254

CHANGE	R/L	REVISION	DATE	DESCRIPTION
S10003971		RELEASE	08JAN09	INSTRUMENT JAM BOX CONVERSION
G10009139		REVISE	09FEB09	

Model	1011935, A	Machine Type	6700SJ
Part Number		Drawn	BAD
Scale	1:1	App'd	APG
Sheet	1 of 1	Part Number	

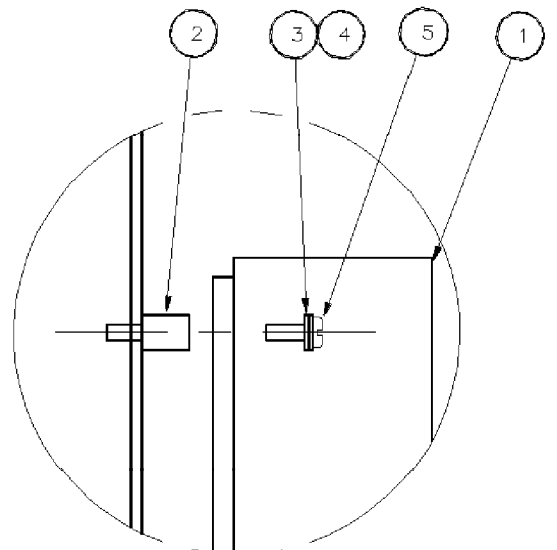
HTT
Harsoco Track Technologies
Harsoco
Ludington, MI
2014210, A

CADAM DRAWING

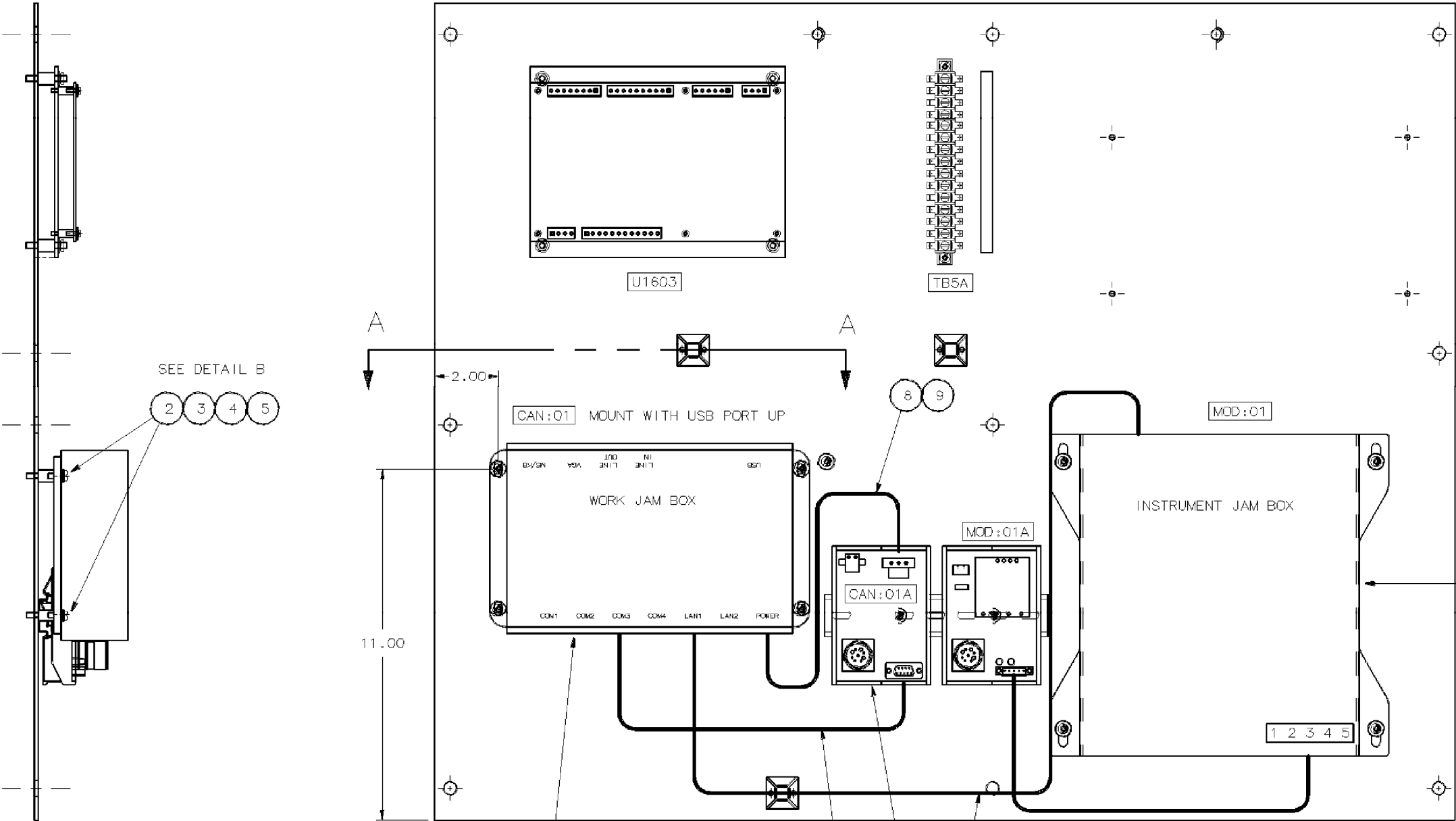


FOR REPLACEMENT OF JAM BOX
ORDER HTT PART NUMBER
THAT IS ON JAM BOX LABEL

VIEW A

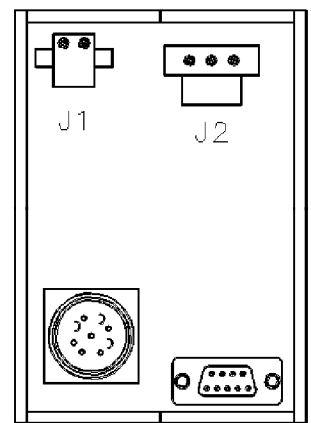


DETAIL B
SCALE: FULL



SEE DETAIL B

NOTE:
COMES W/ J1 & J2 PLUGS



DETAIL C
SCALE: FULL

USE 12 TO REPROGRAM
INSTRUMENT JAM BOX

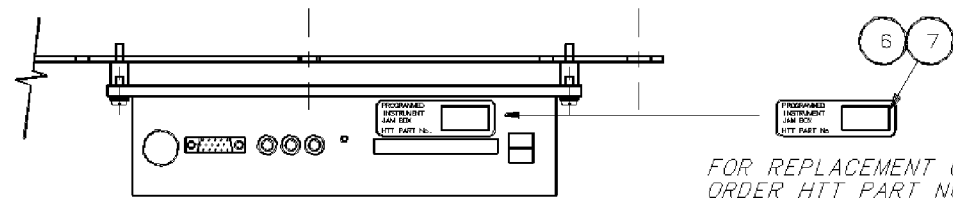
FOR REPLACEMENT OF JAM BOX
ORDER HTT PART NUMBER
THAT IS ON JAM BOX LABEL

FOR SERVICE USE
#2014078 2 POSITION
PLUG FOR JAM BOX
POWER WIRES

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

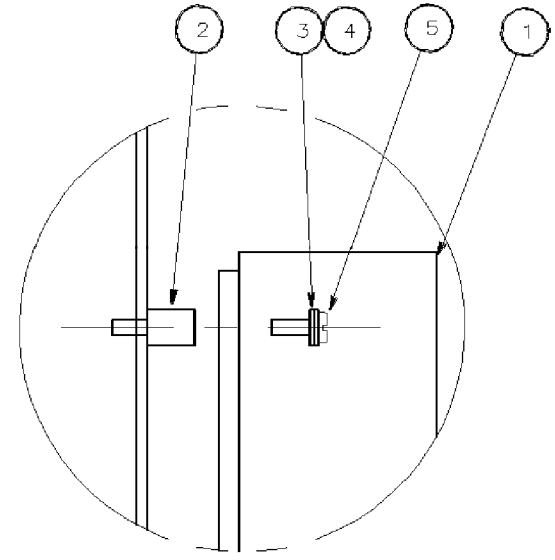
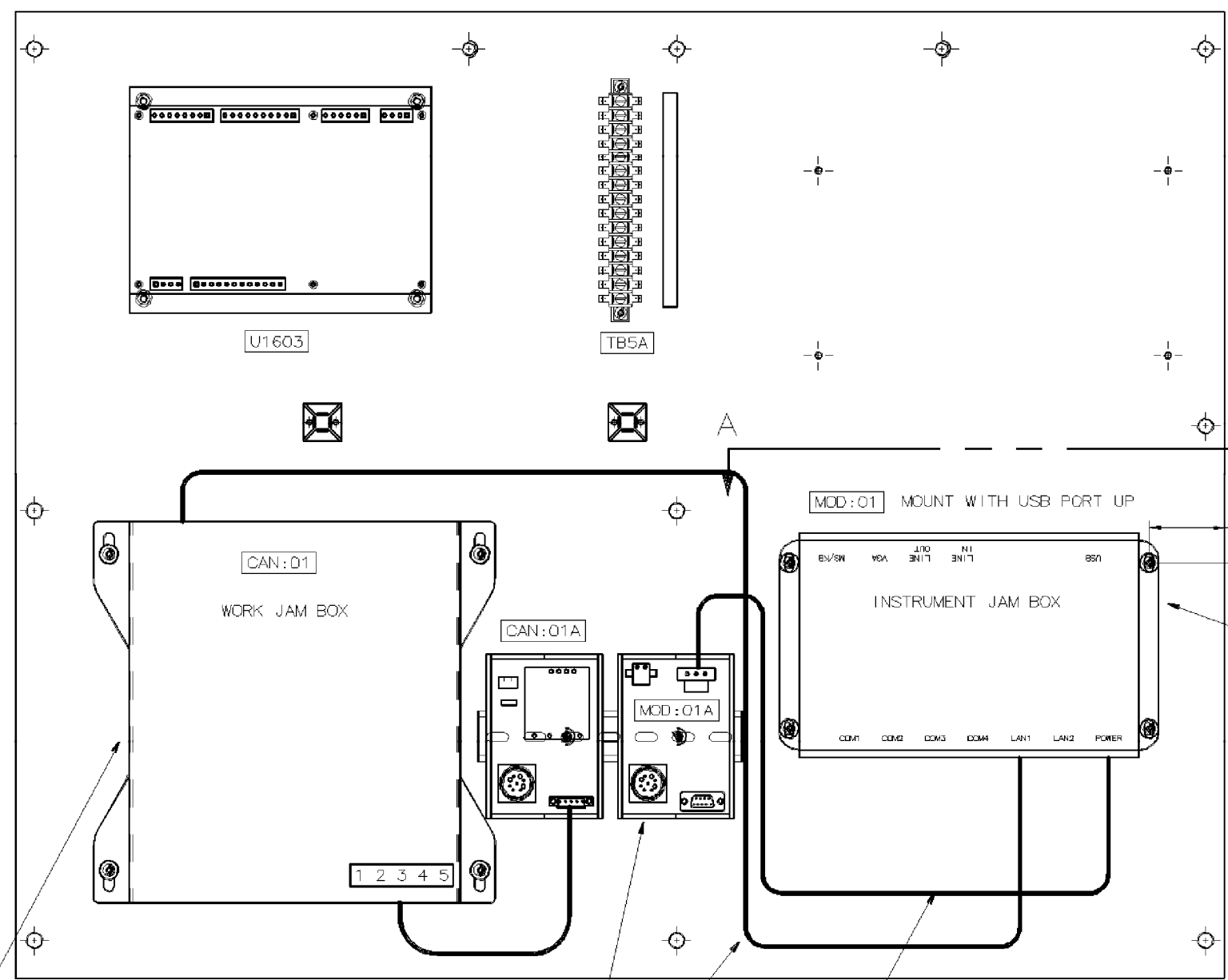
SIMILAR TO 2014209

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APPROVAL [Signature]	CHECKED [Signature]	DESIGNED [Signature]	DRAWN [Signature]	DATE 14JAN09	TITLE WORK JAM BOX CONVERSION TIER 3 6700SJ	SCALE 1:1	SHEET 1 OF 1	PART NUMBER 2014213	DRAWN [Signature]	DATE 14JAN09	SHEET 1 OF 1		



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

VIEW A

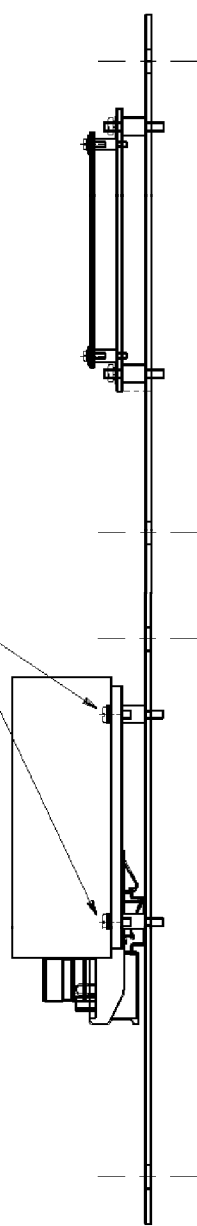


DETAIL B
SCALE: FULL

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

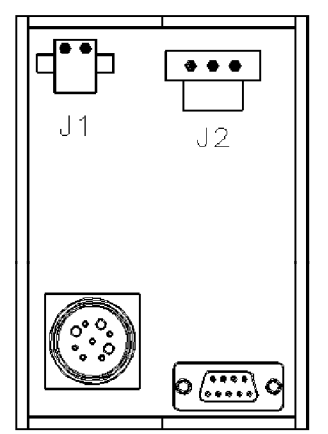
FOR REPLACEMENT OF JAM BOX
ORDER HTT PART NUMBER
THAT IS ON JAM BOX LABEL

FOR SERVICE USE
#2014078 2 POSITION
PLUG FOR JAM BOX
POWER WIRES



SEE DETAIL B

NOTE:
COMES W/ J1 & J2 PLUGS



DETAIL C
SCALE: FULL

USE 8 TO REPROGRAM WORK JAM BOX

SIMILAR TO 2014210

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