PC INTERFACE 06752 - INSTALLATION GUIDE

Contents

PC INTERFACE 06752
INSTALLATION INSTRUCTIONS

1. Overview

This instruction will guide the user in proper installation of the 06751 PC Interface Kit on the Summit H.F. X-ray generators for use with a digital system.

2. S305 Table Testing

**Skip to Section 6 if no S305 table is present*

If any of the below tests fail, use schematic K158 (and connectors S0-S7 and H1-H2**) to locate bad component.*

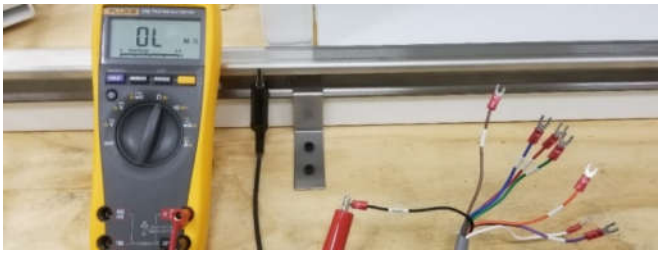
2.1 Check for ***unacceptable*** electrical shorts to the table frame = chassis GND:

a. Disconnect both of the console DB9 cables from the generator.

b. Disconnect the 8-wire table cable from the generator.

c. Connect ohmmeter to bottom steel rail and verify less than 3Ω. (tests Meter and Leads for lowest value).

d. Measure resistance from the steel rail to **each wire end one wire at a time.** **ALL** tests must read open circuit "OL".



2.2 Test Switches

a. Table Lock-Release Switch:

- Connect meter to wires 7 and 8
- Verify meter displays OL for open circuit (OL = Over Limit).
- Press each switch and verify meter display changes to less than 3 Ω

b. Hip Switches (if equipped, optional):

- Connect meter to wires 5 and 6
- Verify meter displays OL for open circuit.
- Press each hip switch and verify meter display shows less than 3Ω.

c. Foot Treadle (if equipped): NOTE: Not compatible with most DR Interfacing

- Connect meter to wires 2 and 4
- Verify meter displays open circuit (OL)
- Press foot treadle and verify meter displays < 3Ω

2.3 Test Locks

a. Test left and right solenoids (used for transverse/front to back motion):

- Connect meter to wires 9 and 10
- Verify meter displays 4 to 8Ω

b. Test rectangular electromagnet (used for longitudinal/left to right motion):

- Connect meter to wires 7 and 10
- Verify meter displays 60 to 90Ω

2.4 Temperature

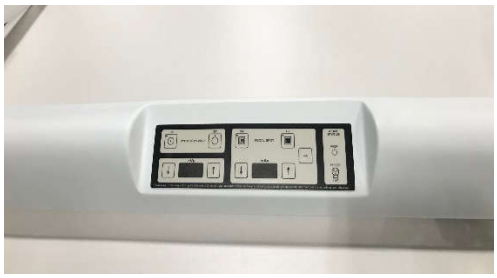
a. The table-top will be ~25°F above room temperature over the electromagnet area.

3. Console Identification

3.1 Identify which console you have from the photos below.

01371

L843



04764

3.2 If you have 01371 continue to step 4.

3.3 If you have L843 continue to step 4.

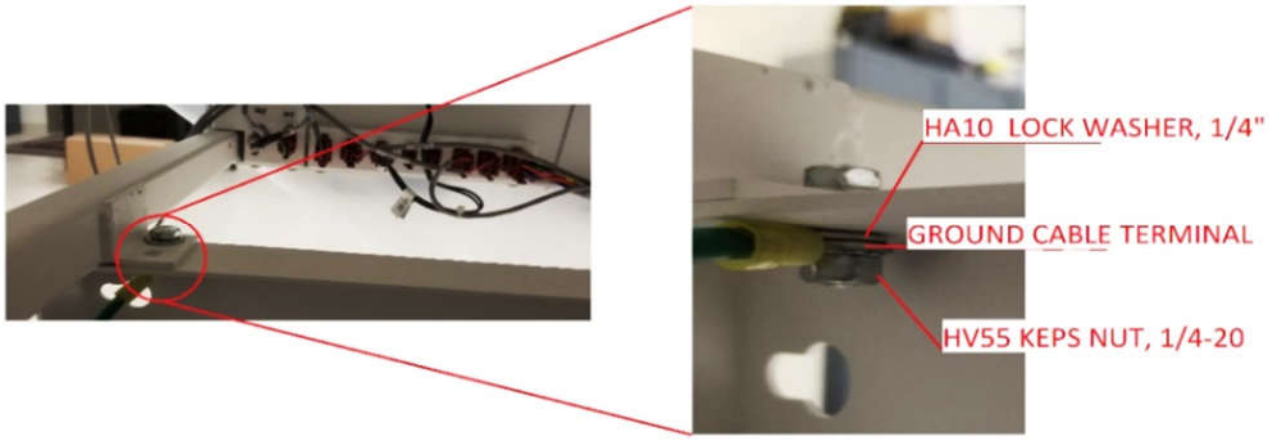
3.4 If you have 04764 skip to step 5.3.

4. Structure Grounding

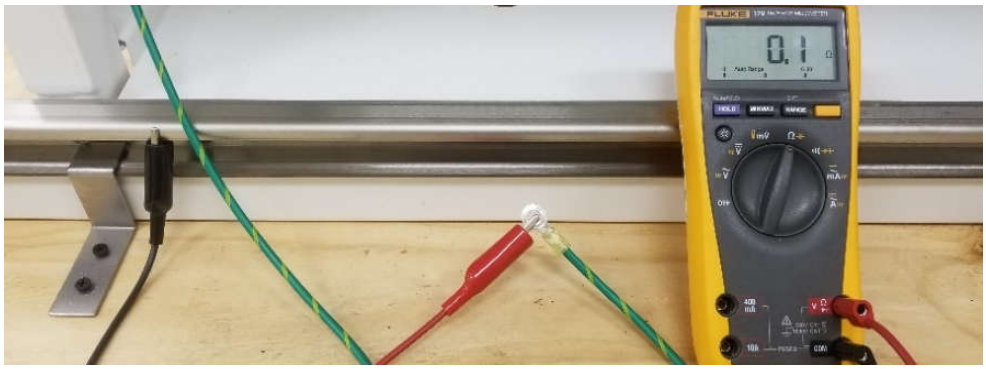
4.1 Table

**If you have the console 04764 skip this step*

4.1.1 Connect the green and yellow ground cable to the right side of the table as depicted in the figure below.



4.1.2 Ensure that the resistance from the steel rail to the other end of the ground cable is less than 1Ω.



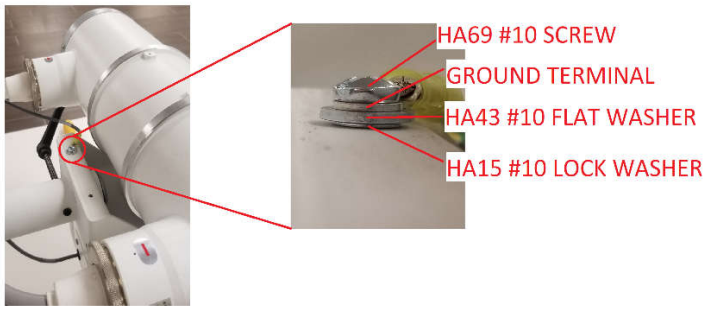
4.1.3 Run other end of ground cable into the generator. It will be connected in step 4.2.

4.1.4 Continue to Step 4.2.

4.2 Tube

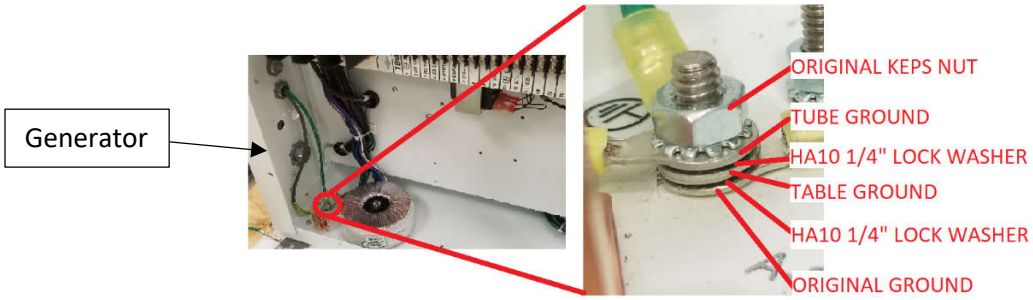
**If you have the console 04764 skip this step*

4.2.1 Connect the gray ground wire to the tube mount as depicted in the figure below.



4.2.2 Zip tie the wire so it follows the high voltage lines under the table.

4.2.3 Connect the table ground and tube ground as shown in the figure below.



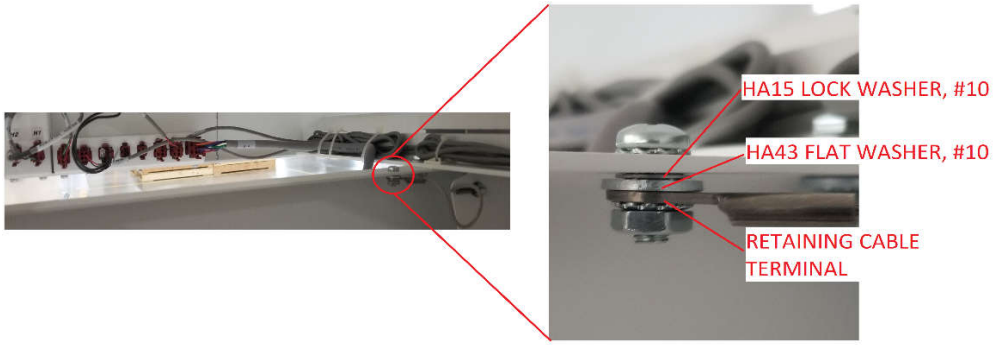
4.2.4 If you have the 01371 Console skip to step 5.1.

4.2.5 If you have the L843 Console continue to 4.3.

4.3 Door

**If you have console 04764 or 01371 skip this step*

4.3.1 Add a flat washer and lock washer to BOTH ends of retaining cable.



4.3.2 Ensure that the resistance between the bottom steel rail and the foot lever on the door is < 1Ω.

4.3.3 Skip to step 5.2.

5. Console Isolation

5.1 01371 (AP Angulation Box)

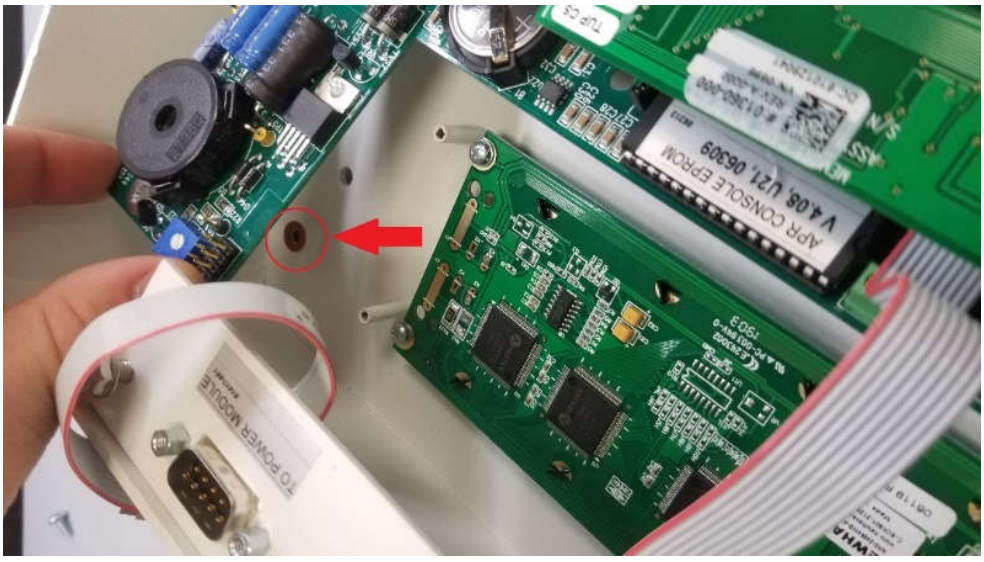
**If you have console 04764 or L843 skip this step*

5.1.1 Remove rear cover from angulation box.

5.1.2 Take picture of inside for reference on assembly.

5.1.3 Remove screws circled in the photo below and unplug the ribbon cables in orange boxes. Screws circled in red will be replaced, screws circled in yellow will be retained.

5.1.4 Place fiber washers on studs where the screws circled in red were threaded into.



5.1.5 Set PCB back on studs and screw plastic screws into the location where the screws circled in red were. Start plastic screws by hand to avoid cross threading.

5.1.6 Reinstall screws circled in yellow, reconnect all ribbon cables, and replace back cover. Reference photo taken in step two if necessary.

5.1.7 Skip to section 6.

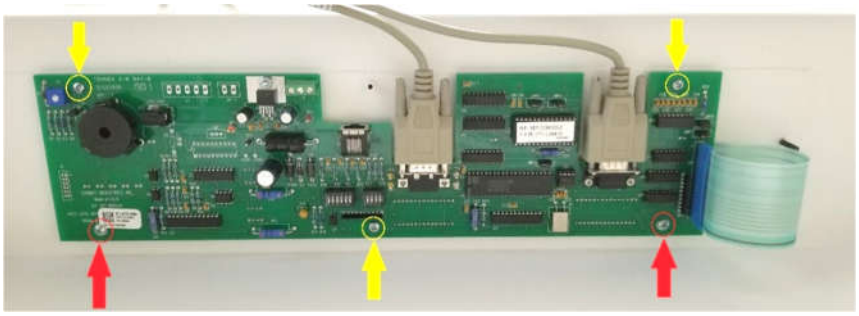
5.2 L843 (2PT Door)

**If you have console 04764 or 01371 skip this step*

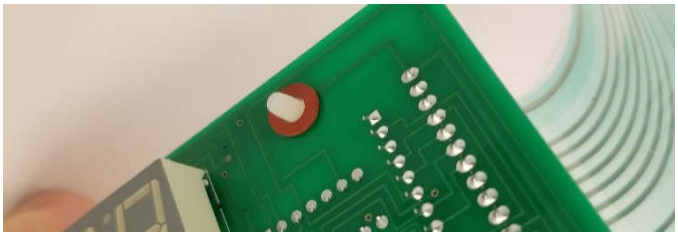
5.2.1 Remove cover from back of console.

5.2.2 Take picture of inside for reference on assembly.

5.2.3 Remove screws circled in the photo below. Screws circled in red will be replaced, screws circled in yellow will be retained.



5.2.4 Place fiber washers on the back of the PCB where the screws circled in red were threaded into. Replace screws circled in red with plastic screws. Start plastic screws by hand to avoid cross threading.



5.2.5 Reinstall screws circled in yellow and replace back cover. Reference photo taken in step two if necessary.

5.2.6 Skip to section 6.

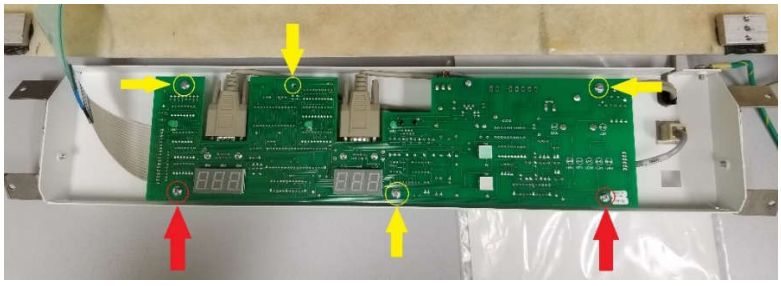
5.3 04764 (2PT Console)

**If you have console L843 or 01371 skip this step*

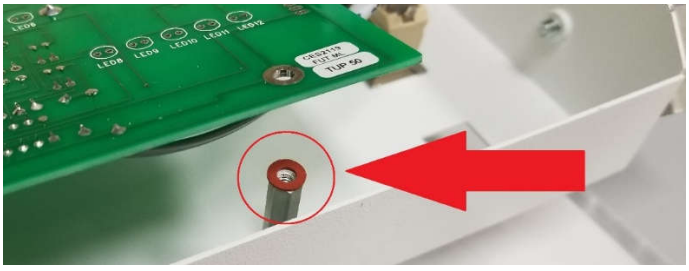
5.3.1 Remove cover from back of console.

5.3.2 Take picture of inside for reference on assembly.

5.3.3 Remove screws circled in the photo below. Screws circled in red will be replaced, screws circled in yellow will be retained.



5.3.4 Place fiber washers on studs where the screws circled in red were threaded into.



5.3.5 Set PCB back on studs and screw plastic screws into the location where the screws circled in red were. Start plastic screws by hand to avoid cross threading

5.3.6 Reinstall screws circled in yellow and replace back cover. Reference photo taken in step two if necessary.

5.3.7 Continue to section 6.

6. PC Interface

6.1 Required Equipment

- Kit 06751 (supplied by summit)
- 3/16” drill bit to make mounting holes (needed on old models, supplied by user)
- Philips screw driver and 3/32-inch Hex Key (supplied by user)

6.2 Pre-Installation

6.2.1 Turn off power to the generator and the main disconnect box.

6.2.2 Open the generator cover to expose the hinged door assembly.

6.2.3 Make note or label the ends of the two DB9 cables that connect the console to the main control board.

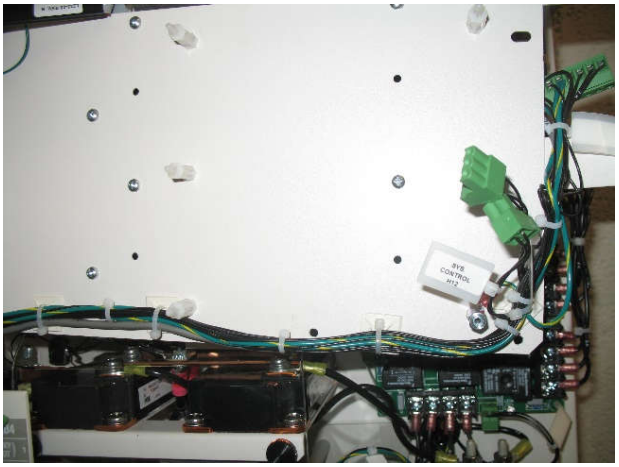
6.2.4 Remove the two DB9 cables from the main control board.

6.3 Mounting Holes

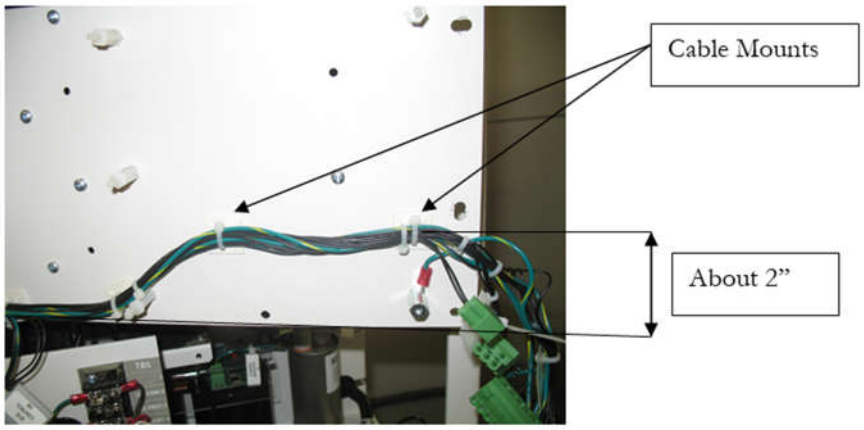
** If your generator already has mounting holes drilled, skip this step*

6.3.1 Make sure each cable connected to the main control board is marked with connecter name (H1, H2…).

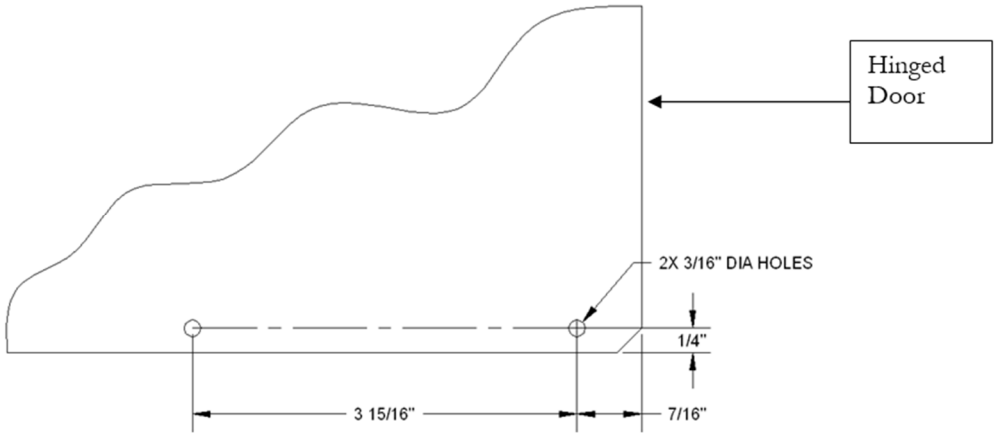
6.3.2 Remove all cables connected to the main control board. Remove main control board. See photo below for reference.



6.3.3 If not already done, reroute the cable as shown in the figure below.



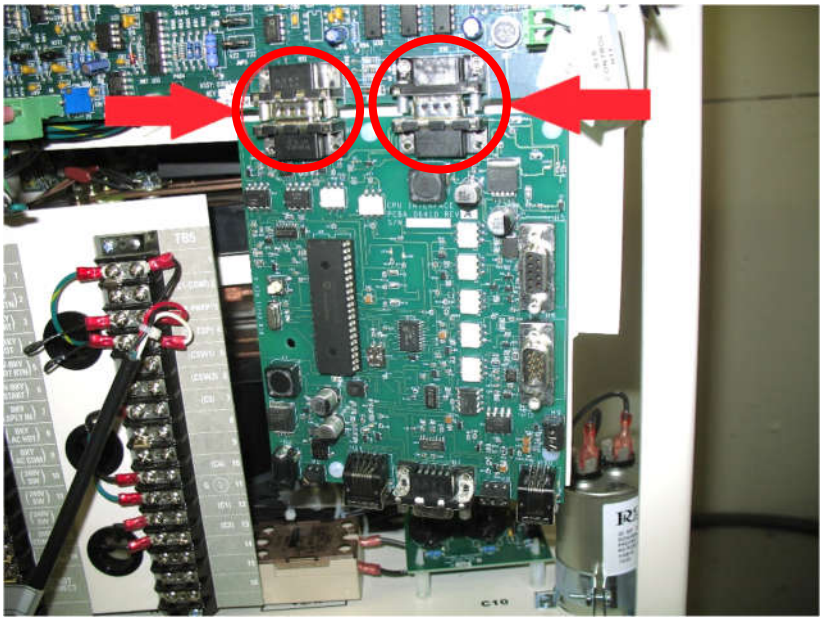
6.3.4 Make 2 new mounting holes in the bottom right corner of the hinged door. Reference the photo below for details.



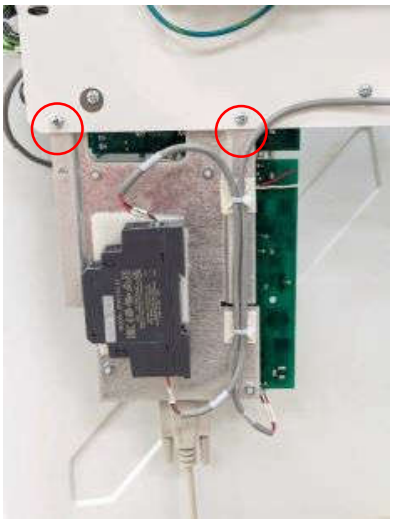
6.3.5 Reinstall the main control board and reconnect all cables.

6.4 PC Interface Board

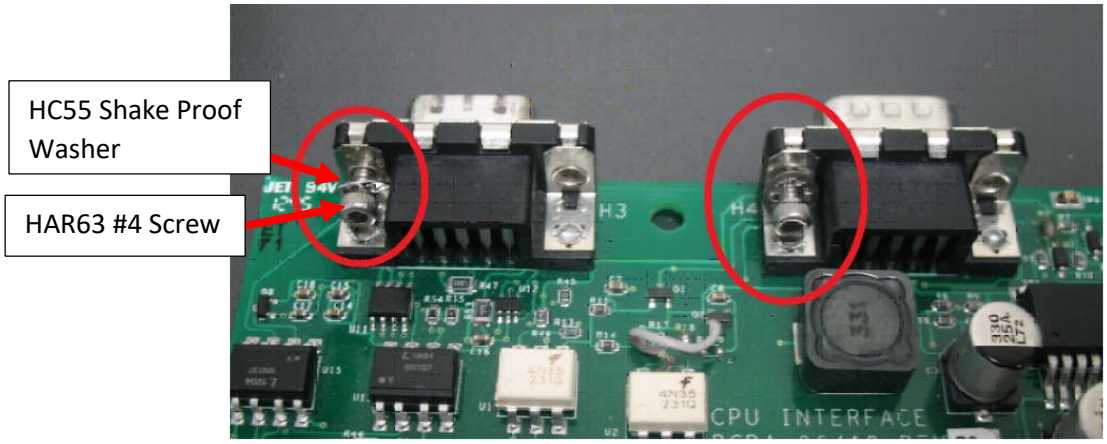
6.4.1 Insert the PC interface into the main control board via the two DB9 connectors circled in red below.



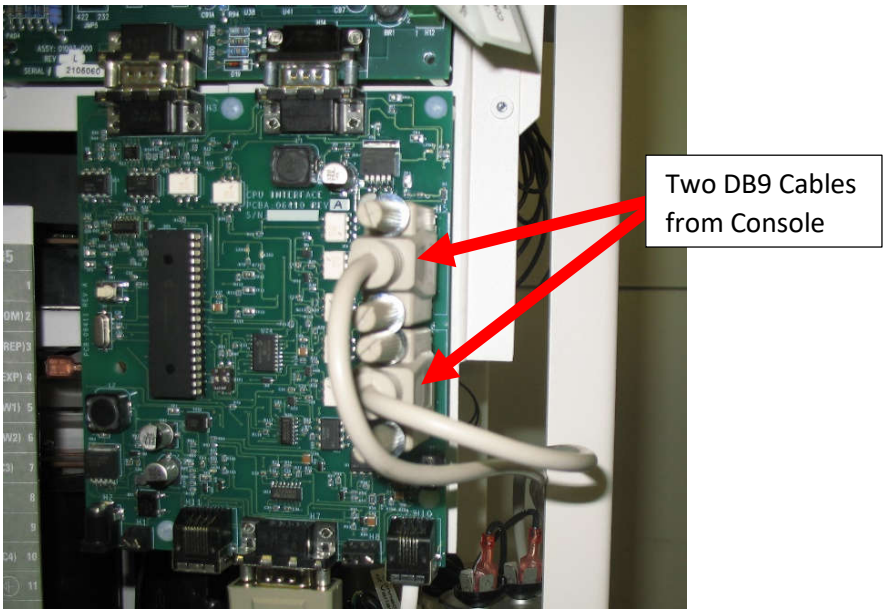
6.4.2 Secure the mounting plate onto hinged door assembly using two #6 screws.



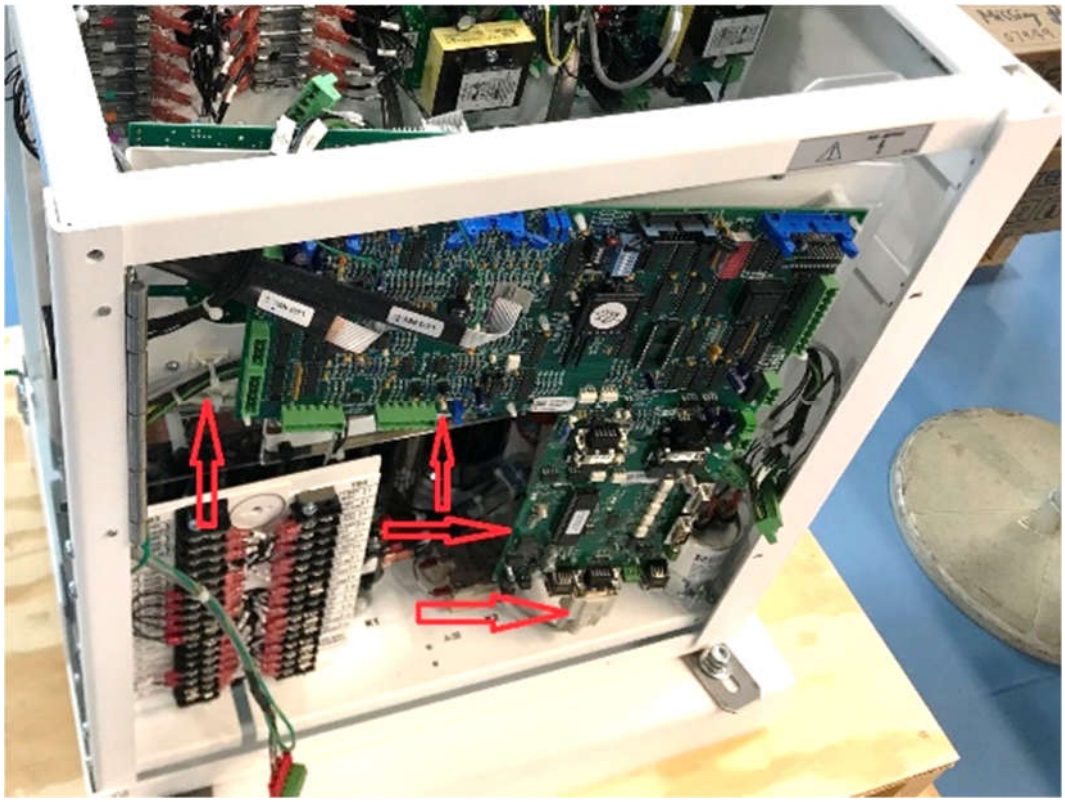
6.4.3 Secure interface board to main control board using two #4 screws on headers H3 and H4 (on the interface board).

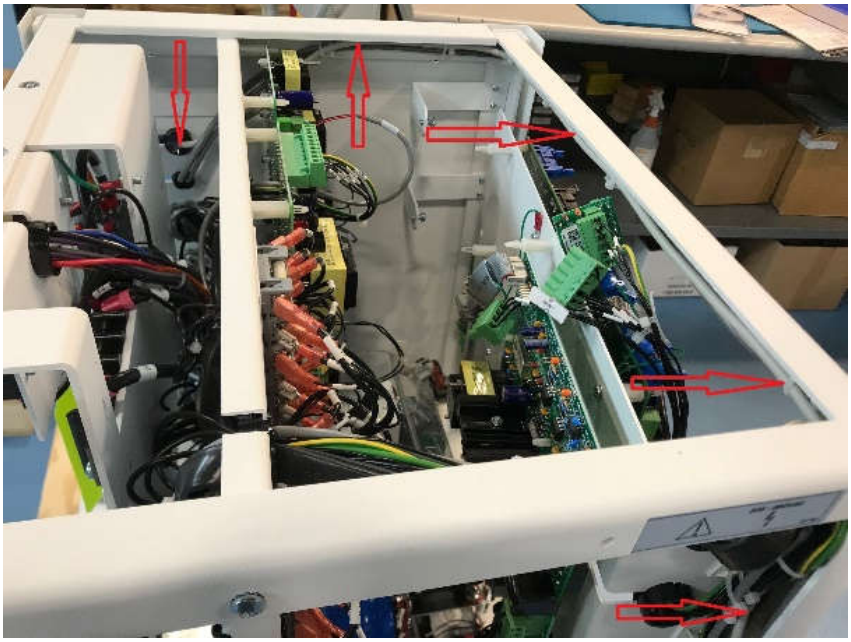


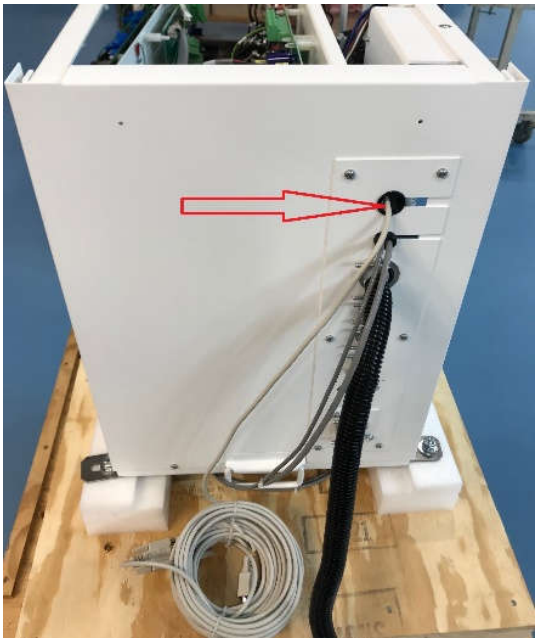
6.4.4 Connect the two DB9 cables from the console to H5 and H6 on the PC Interface board.



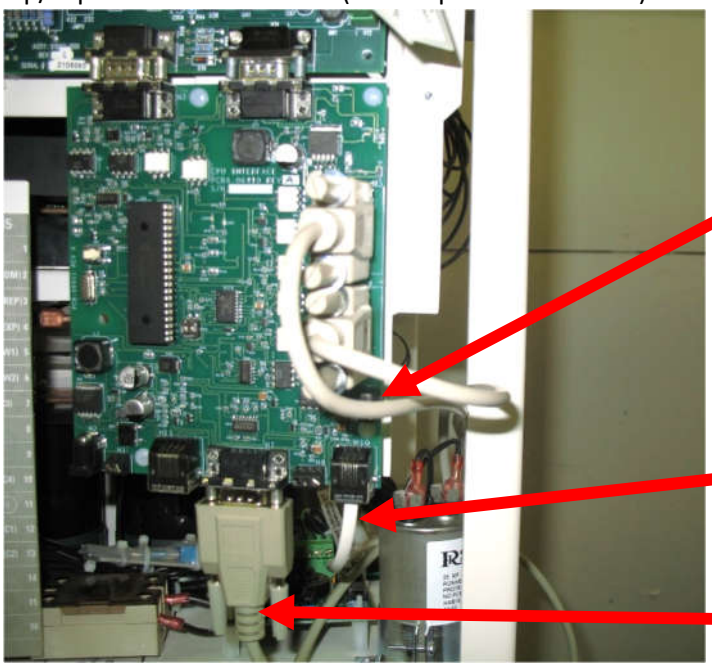
6.4.5 Connect DB9 cable from kit between H7 on PC Interface board and the PC. Route cable as shown in pictures below Make sure that the DB9 cable and its strain relief screws are not interfering with the K444 Rotor Current Sense board located below H7.







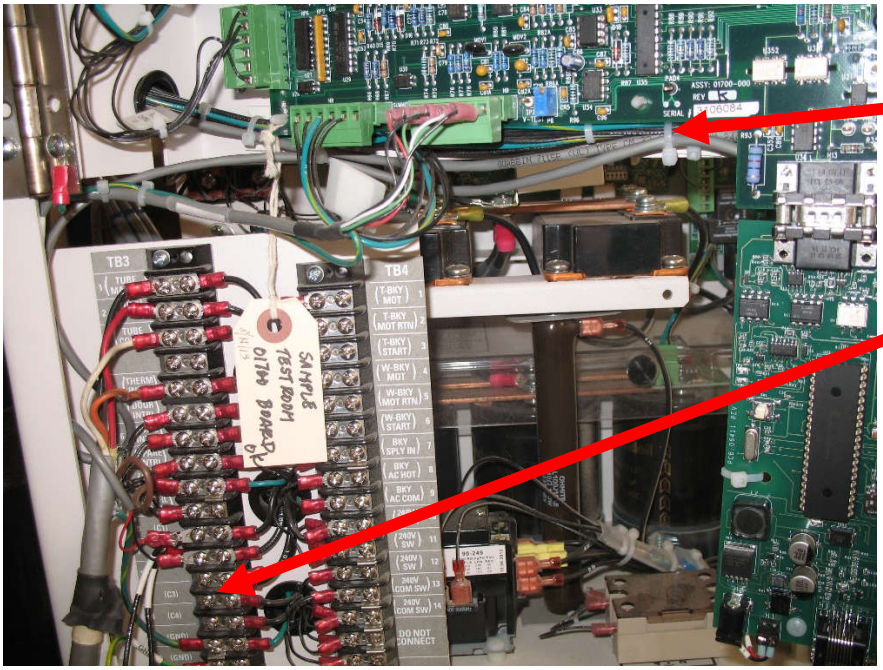
6.4.6 Connect external Prep/Exp switch to H9 or H10 (if this option is available).



6.5 Power Supply

6.5.1 **WARNING:** TB3-C3 and TB3-C4 have 24 VDC present at all times (when X-Ray Disconnect is ON)! Proceed to the next step with caution.

6.5.2 Connect spring spade end of 08846 power cable to TB3 terminals C3 and C4 on Generator. Route the cable as shown in the picture below.



7. System Testing

7.1 Perform the preliminary testing of the full system per Digital Integration Testing Instruction 07394.