Service Note

Date	09 May2013	**Service Note #**	6x00-1077	**Updated**	NA
Product	**6100 & 6300 (5100)**		**Created By**	J. Yangco	
Description	Installing Replacement Calibration Probes				

Release	☑	**Internal**	☑	**Distributors**	☐	**Customers**

Parts Required	**Serial Numbers Affected**
1. Calibration Probe Replacement Kit Consist of: • Calibration Probe (3500-0001) with wires stripped and thinned • Strain Relief (4957-0011) • 3 ¾ inch long (19mm) 3/32 Shrink tubing (5630-5009) • Ground Terminal (already attached) • #10 External Tooth Washer • 4 inch Tie Wrap 2. Solder and Soldering Iron 3. Heat Gun	All

In order to eliminate a potential site for corrosion due to some laboratory environments that can cause the external probe to malfunction, the connector between the external probe and the main unit has been eliminated by directly wiring the calibration probe to the RTD wiring assembly.

Before proceeding, discharge any static electricity from your body by touching a bare screw from the instrument. Turn off the instrument and disconnect the AC power cord.

Solution / Action	
Step 1	Remove the drive plate cover.
Step 2	Remove the calibration probe from the instrument.

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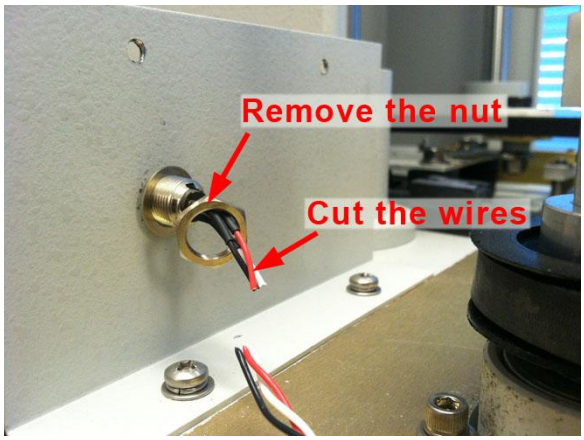
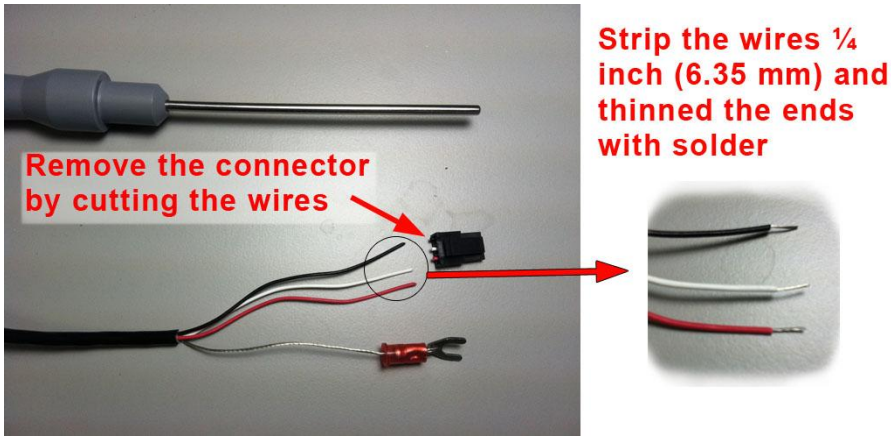
Step 3	Locate the calibration probe connector. Remove the nut that is securing the connector and cut the three wires (white, black and red) close to where they are soldered to the connector, as shown.  **Step3** Push the connector out from its mounting bracket and discard it.
Step 4	Skip this step if you already have a calibration probe that is already stripped and thinned with solder, otherwise prepare the calibration probe by following the below steps: 1. Remove the connector by cutting the three wires 2. Strip the white, black and red wires removing ¼ inch (6.35 mm) of the wires protective covering. 3. Thin the wires with solder  **Step 4**

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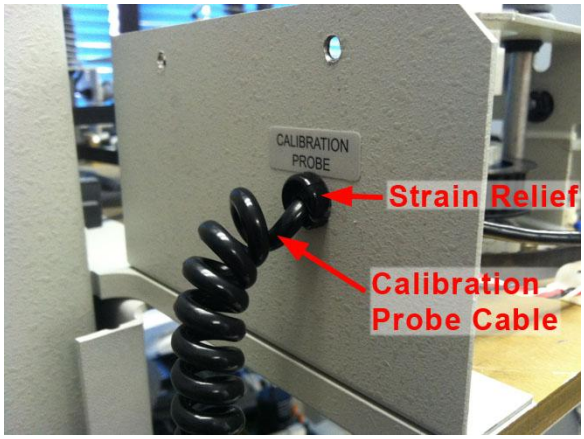
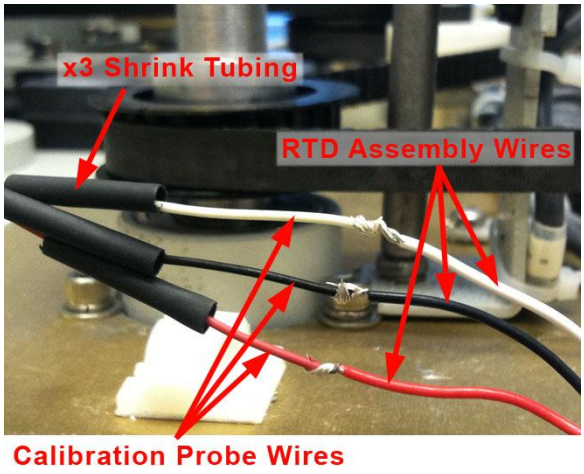
Step 5	Carefully thread the new calibration probe wires through the bracket. Position the strain relief clamp on the last coil of the cable and use a pair of pliers to squeeze the clamp to secure the cable on the bracket as shown.  **Step 5**
Step 6	On the RTD cable assembly side, strip the white, black and red wires removing ¼ inch (6.35 mm) of the wires protective covering.
Step 7	Slip the shrink tubing over each wire on the calibration probe side.
Step 8	Connect the wires together (by matching the wires by color) by twisting the stripped wires together as shown.  **Step 8** Solder the wires to finalize the connection.

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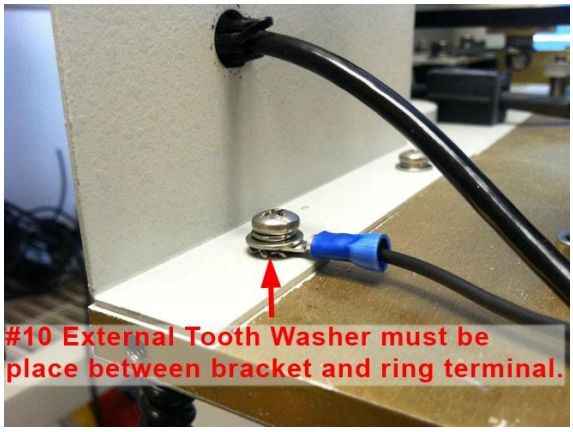
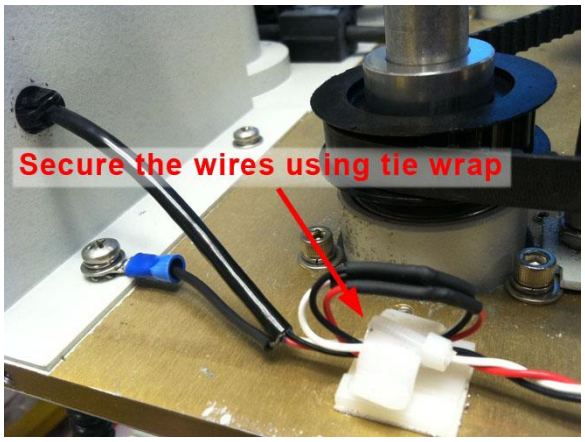
Step 9	Slide the shrink tubing over the new soldered connections. Shrink the tubing using a heat gun. (You can use the heat of soldering iron to shrink the tubing if heat gun is not available.)
Step 10	Secure the drain wire on one of the bracket screws as shown.  **Step 10**
Step 11	Secure the wires by using the plastic clamp with a tie wrap as shown. (If the wire of the replacement probe is too long, make sure that it will not interfere with the drive belt and the like by securing the excess cable with tie wraps.)  **Step 11**
Step 12	Reinstall the drive plate cover.
Step 13	Power up the instrument and check the calibration probe functionality. Verify that the calibration probe is reading the temperature accurately; if not perform a High and Low temperature calibration of the probe.

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