

### Procedure for Shortening T/LL140 Capacitive Sensors

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1. Measure and mark the length to which the probe must be shortened.  
**Note:** *It is not recommended to shorten the probe length to less than 200 mm. Always leave at least 20 mm clearance between the end of the probe and the bottom of the tank*



Using a tube cutter; cut the steel tube at the point marked. Using a twisting action, to free the centre rod from its end plug, carefully remove and discard the excess tube length

2. The resulting assembly is as shown



3. Grip the excess rod in a vice and, using a fine toothed hacksaw, cut the centre aluminum rod 1 to 2 mm longer than the steel outer tube. De-burr the end of the rod.



4. Fit the special PTFE end plug over the end of the tube and ensure that the centre rod is located in the centre recess of the end plug.



5. The end plug can be secured to the steel tube using a self Tapping screw. Drill a  $\text{\O} 2$  mm hole through the PTFE and through the thin wall of the tube approximately 5 mm from the top edge of the plug. If using a countersink self tapper, countersink the PTFE to receive the head. Secure the end plug in place with the screw.



**NB:** *The Self tapping screw must not protrude through the steel tube wall and touch the centre probe. Ensure the self tapping screw just breaks through the steel tube.*



## Procedure for Recalibrating T/LL140 Capacitive Sensors

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Red = V+, Green = Ground, Blue = V Out, White = Cal wire, Yellow = Low level alarm, Black = Resistive output

### Recalibrating the Sensor Output.

#### **Step 1**

Connect the calibration wire (white) to ground or to the steel probe and then power up the sender with a 12 V supply. Disconnect the wire after 3 seconds. This has recalibrated the zero point of the sender output.

Keep the sender connected to the 12V supply and move to step 2

#### **Step 2**

Immerse the probe, in the fuel type for which the sender will be used, until the fluid level is at the breather hole in the top of the stem. Touch the calibration wire (white) to ground for 10 seconds and then remove it. This has recalibrated the full point of the sender output.

Ideally, the sender output wire (blue or black) should be connected to a gauge or voltmeter while the calibration procedure is performed. The technician can then see the sender output change as the calibration procedure is actioned. After calibration, the sender can be drawn in and out of the fuel and the sweep of the output observed on the gauge or meter.

