FUEL SENSOR INSTALLATION PROCEDURE

**CAUTION**

1. **ON NEW INSTALLATIONS, THE FOCUS TUBE SHOULD BE INSERTED INTO TANK BEFORE MOUNTING TANK. FUEL TANK MAY BE MOUNTED OR NOT FOR THE REST OF THE PROCEDURE. WHEN MOUNTING THE TANK, IT SHOULD BE MOUNTED WITH THE SENSOR FLANGE LEVEL AT THE TOP TO WITHIN A HALF BUBBLE OF LEVEL USING A 24 INCH LEVEL (SEE BELOW). THE TRAILER SHOULD BE LEVEL DURING THIS PROCEDURE.**

2. **LEVEL**

3. **HALF BUBBLE**

4. **REMOVE THE EXISTING CAP AND GASKET ON THE FUEL TANK AND INSTALL NEW GASKET, FOCUS TUBE, GASKET AND SENSOR USING THE STAINLESS STEEL WASHERS AND BOLTS PROVIDED. BOLT TORQUE IS 15 IN-POUNDS, NOT TO EXCEED 18 IN-POUNDS. 20 IN-POUNDS WILL CAUSE DAMAGE TO THE SENSOR.**


6. **KEEP FOREIGN MATERIAL OFF OF THE FACE OF THE SENSOR THAT IS PLACED INSIDE OF THE TANK FLANGE.**

7. **CONNECT THE CABLE (ITEM 4) TO THE FUEL LEVEL SENSOR (ITEM 1). ROUTE THE CABLE FROM THE FUEL LEVEL SENSOR TO THE ENGINE HARNESS CONNECTOR (LOCATED BEHIND THE CONTROL BOX) ON THE UNIT. UNIT CABLE SHOULD BE ROUTED SEPARETLY.**

8. **WITHOUT CUTTING INTERIOR FOIL, STRIP OUTER JACKET ON CABLE ABOUT 6", CAREFULLY TRIM OFF FOIL AND BARE CONDUCTOR LEAVING ABOUT 0.25" EXPOSED. THEN USING SOLDER SLEEVE TERMINAL (ITEM 30), ATTACH GROUND WIRE (ITEM 35) TO EXPOSED FOIL AND BARE CONDUCTOR, WITH HEAT GUN, APPLY HEAT UNTIL SOLDER SLEEVE RING INSIDE MELTS AND FUSES WIRE, BARE CONDUCTOR AND SLEEVE.**


**SUP WIRE SEAL (ITEM 45 GREEN, OR PURPLE ON VICTOR) ONTO 6" PIECE OF WIRING, INSTALL FEMALE TERMINAL (ITEM 47) AND INSERT INTO CAVITY A OF CONNECTOR (ITEM 40). PAINT THE ORPOSITE END THROUGH THE CAVITY OF FUSE HOLDER (ITEM 55) AND INSTALL TERMINAL (ITEM 65). THEN PUSH WIRE BACK TO SEAT TERMINAL IN FUSE HOLDER.**

**INSTALL FUSE (ITEM 60) AND FUSE HOLDER CAP (ITEM 56). ATTACH THE SHIELD GROUND RING TERMINAL (ITEM 35) TO THE GROUND TERMINAL JUST BELOW ENGINE OR UNDER THE CONTROL BOX. APX MICROPROCESSOR: INSTALL 5A FUSE (ITEM 59) IN POWER CONTROL MODULE (PCM) SLOT FB (FLS PW).**

4. **FUEL SENSOR SETTINGS**

5. **ADVANCE MICROPROCESSOR: FUEL LEVEL SENSOR MUST BE ENABLED IN THE MICRO CONTROLICM LIST (SEE SERVICE MANUAL). SELECT 0.75V, 2.75V FUEL TANK SENSORS. FOR ALARM, SELECT CURRENT SET SCEPTLY AND FUEL TANK SIZE (IF ACTUAL TANK SIZE IS NOT LISTED, CHOOSE CLOSEST VALUE). TURN SENSOR ON IN THE DATA RECORDER EITHER VIA LAPTOP OR CONFIGURATION CARD. THE SENSOR SHOULD BE SET TO SNAPSHOT IN THE DATA LOGGER. APX MICROPROCESSOR:**

6. **FUEL LEVEL SENSOR MUST BE ENABLED IN THE MICRO CONTROLICM LIST (SEE SERVICE MANUAL). FOR ALARM ONLY, LEAVE LOW FUEL TO "ALARM ONLY", FOR LOW FUEL SHUTDOWN, SELECT UNIT SHUTDOWN. TURN SENSOR ON IN THE DATA RECORDER EITHER VIA LAPTOP OR CONFIGURATION CARD. THE SENSOR SHOULD BE SET TO SNAPSHOT IN THE DATA LOGGER.**

**ADDITIONAL NOTES**

7. **THERE IS A 90-240 SECOND DELAY IN THE SENSOR'S RESPONSE TO THE FUEL LEVEL TO AVOID THE EFFECTS OF FUEL SLOSHING. WHEN APPROXIMATELY 15% OF THE FUEL IS REMAINING, THE APX MICROPROCESSOR WILL SHUT OFF THE UNIT. UNIT CABLE SHOULD BE ROUTED SEPARATELY.**

8. **MAKE CERTAIN TO RESPECT FUEL SENSOR POLARITY, MARK THE WIRE TO MAKE SURE THE BLACK WIRE FROM THE FUEL LEVEL SENSOR IS CONNECTED TO THE WIRE Labeled "FLSB". MAKE SURE THE RED WIRE FROM THE FUEL SENSOR IS CONNECTED TO THE WIRE Labeled "FLSC". REVERSAL OF THESE WIRE WILL CAUSE INCORRECT READINGS OF THE FUEL LEVEL AND POSSIBLE DAMAGE TO THE SENSOR.**

9. **BE SURE TO TURN THE SENSOR TO ON SNAPSHOT LOGGING USING REEFER MANAGER'S DATA RECORDER SETUP.**

**ADVANCE MICROPROCESSOR SETUP - CONFIGURATIONS**

<table>
<thead>
<tr>
<th>FUEL SENSOR</th>
<th>0.25 - 4.75 VDC</th>
</tr>
</thead>
<tbody>
<tr>
<td>FUEL TANK SIZE</td>
<td>OFF (ALARM ONLY)</td>
</tr>
<tr>
<td>30.5, 75, 100, 120 GALL (ALARM &amp; SHUTDOWN)</td>
<td></td>
</tr>
</tbody>
</table>

**ADVANCE DATA RECORDER SETUP - SENSORS**

<table>
<thead>
<tr>
<th>FUEL LEVEL SENSOR</th>
<th>SNAPSHOT LOGGING</th>
</tr>
</thead>
<tbody>
<tr>
<td>FUEL SENSOR</td>
<td>YES</td>
</tr>
<tr>
<td>LOW FUEL</td>
<td>ALARM ONLY</td>
</tr>
<tr>
<td>UNIT SHUTDOWN</td>
<td></td>
</tr>
</tbody>
</table>

**APX MICROPROCESSOR SETUP - CONFIGURATIONS**

<table>
<thead>
<tr>
<th>FUEL SENSOR</th>
<th>YES</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOW FUEL</td>
<td>ALARM ONLY</td>
</tr>
<tr>
<td>UNIT SHUTDOWN</td>
<td></td>
</tr>
</tbody>
</table>

**APX DATA RECORDER SETUP - SENSORS**

<table>
<thead>
<tr>
<th>FUEL LEVEL SENSOR</th>
<th>SNAPSHOT LOGGING</th>
</tr>
</thead>
<tbody>
<tr>
<td>FUEL SENSOR</td>
<td>YES</td>
</tr>
<tr>
<td>LOW FUEL</td>
<td>ALARM ONLY</td>
</tr>
<tr>
<td>UNIT SHUTDOWN</td>
<td></td>
</tr>
</tbody>
</table>

SEE SEPARATE PARTS LIST
### ADVANCE CABLE CONNECTIONS

**INDEX HOLE**
(ALIGNS WITH SENSOR WIRE AND NOTCH IN FOCUS TUBE)

**INDEX Dimple**

**SENSOR GASKET ORIENTATION**
SCALE: FULL

**INDEX NOTCH**
(ALIGNS WITH SENSOR WIRES AND HOLE IN GASKETS)

**FOCUS TUBE ORIENTATION**
TO TOP VIEW
SCALE: FULL

---

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>Sensor Gasket Flange to be Level ±5°.</td>
</tr>
<tr>
<td>G</td>
<td>Fuel Level Sensor Flange to be Level ±5°.</td>
</tr>
<tr>
<td>H</td>
<td>Bolt torque not to exceed 15 in-lbs.</td>
</tr>
</tbody>
</table>

---

**INSTALLATION INSTRUCTIONS**
**FUEL LEVEL SENSOR OPTION**

---

**REV 03292**
APX CABLE CONNECTIONS

WHITE WIRE FROM CABLE
YELLOW WIRE FROM SENSOR
BLACK WIRE FROM CABLE
BLACK WIRE FROM SENSOR
RED WIRE FROM CABLE
RED WIRE FROM SENSOR

SENSOR CONNECTIONS

GASKET

#10-32 ALLEN SCREWS
BOLT TORQUE NOT TO EXCEED 15 IN-LBS

FUEL LEVEL SENSOR FLANGE TO BE LEVEL ±5°.