



## Fuel Level Gauge Installation Instructions

**IS0008**  
Rev. E ecn 6933 7/2007

### Caution

Disconnect the battery during installation. Tighten nuts on the backclamp only slightly more than you can tighten with your fingers. **Six inch-pounds of torque is sufficient.** Overtightening may result in damage to the instrument and may void your warranty. These instructions concern only fuel gauge installations.

SPECIAL CAUTION should be taken when working on or near tanks that have, or have had, fuel in them.

### Note

To change light bulb, twist black socket assembly one-eighth turn counter clockwise until it pops out. Bulb pulls straight out of assembly.

Standard Case: Use a GE No. 161 instrument lamp.

Connectorized Case: Use a Oshino OL-4186NW-001972 instrument lamp for replacement.

### Installation

1. Location: Cut a 2-1/16" diameter hole in the dash and mount the gauge with the back clamp supplied. For connectorized cases be sure to cut a .175" wide by .115" deep notch to accept the key on the case. See detail on next page.
2. Be certain to use stranded, insulated wire not lighter than 18 AWG that is approved for marine use.  
(See diagram on the next page for connections)

### Wire Connections

#### Standard Case

3. Connect a wire to the gauge stud marked "S" (signal) and secure with nut and lock washer. Connect opposite end to the fuel level sender's signal wire or terminal. It is recommended that insulated wire terminals, preferably ring type, be used on all connections to the gauge, except lighting, which requires 1/4" female blade terminals.
4. Connect a wire to the gauge stud marked "I" (ignition) and secure with nut and lock washer. Connect opposite end to a 12VDC circuit that is activated by the ignition switch.
5. Connect a wire to the gauge stud marked "GND" (ground) and secure with nut and lock washer. Connect opposite end to the boat's electrical ground, generally available in several locations at or near the instrument panel.
6. Connect the blade terminal adjacent to the twist-out light assembly to the positive "+" side of the instrument lighting circuit. No separate ground is required for lighting.

#### Connectorized Case

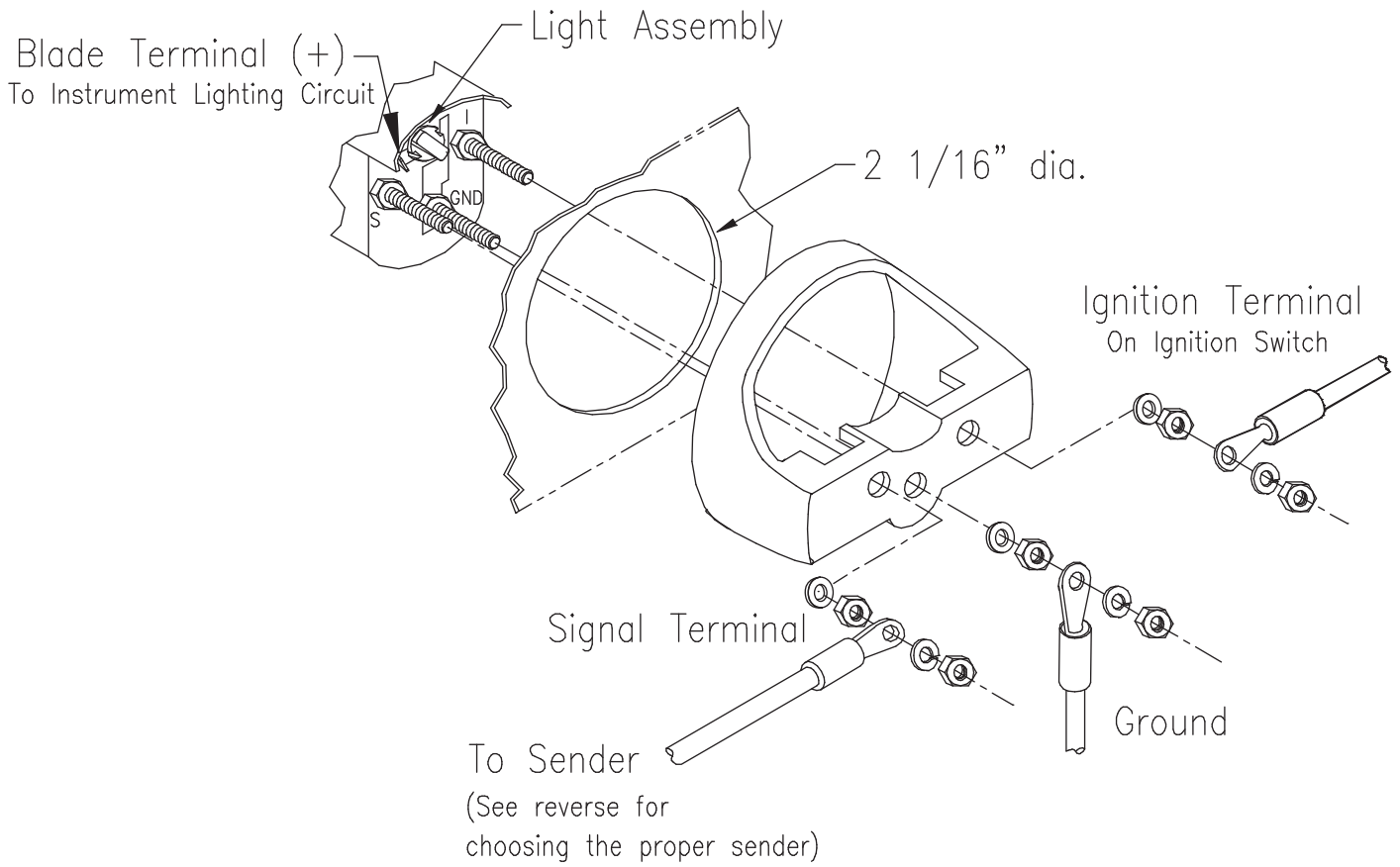
3. Insert a wire with appropriate contact to the Fuel Signal function of the connector. Connect the opposite end to the fuel level sender's signal wire or terminal.
4. Insert a wire with the appropriate contact to the '+' (positive) function of the connector. Connect the opposite end to a 12Vdc circuit that is activated by the ignition switch.
5. Insert a wire with appropriate contact to the ground function of the connector. Connect the opposite end to the boat's electrical ground, generally available in several locations at or near the instrument panel.
6. Insert a wire with appropriate contact to the light function of the connector. Connect the opposite end to the positive portion of the lighting circuit. Insert the connector into the back of the case.

**Go to next page for diagrams of wire connections.**

### Reconnect Power

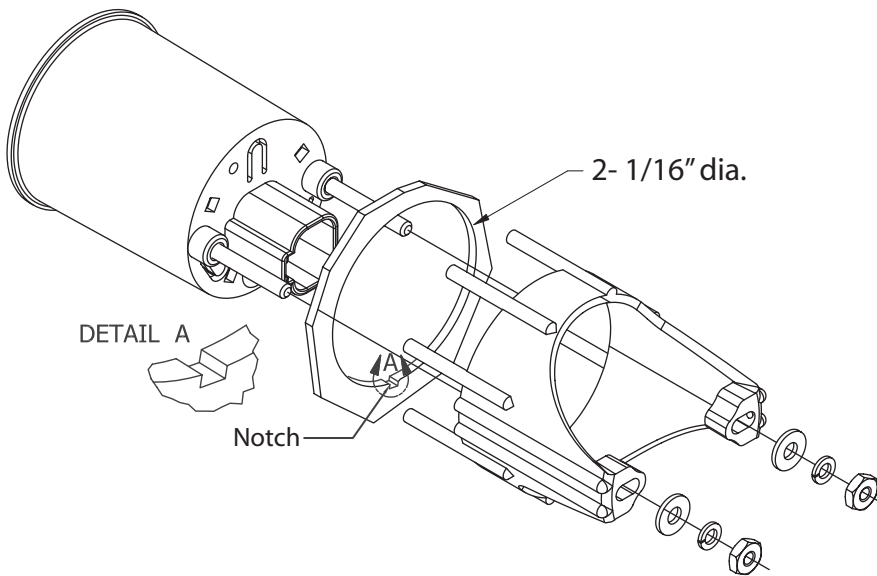
7. Reconnect the battery.

## Standard Case - Wire diagram



## Connectorized Case - Wire diagram

### Deutsch connector case



### Deutsch Connector

Hookup	Function
P1.1	'+' Positive
P1.2	Lights
P1.3	Fuel Signal
P1.4	Ground

Connector	DT06-4S
Contact	1062-16-0122
Wedge Lock	W4S
Plug	114017

### Packard Connector

Hookup	Function
P1.A	'+' Positive
P1.B	Lights
P1.C	Ground
P1.D	Fuel Signal

Connector	12162189
Contact	12124075
Plug	12034413



## Selecting the Proper Sender

Senders are designated by the following descriptions and must be selected in combinations of one each from A, B, & C.

(For example: Single station, American resistance, Standard ground)

A	Station <sup>a</sup>	Single
		Dual
B	Resistance <sup>b</sup>	American
		European
C	Ground <sup>c</sup>	Standard
		Floating

### Notes:

- a. Station: It is the sender that is unique in a dual station application. The gauge is the same in either single or dual applications.
- b. Resistance: Choose your sender to electrically match your gauge not just the manufacturer. Some sender manufacturers make both resistance types; and, some instrument manufacturers may use either resistance type depending on the gauge. There is usually no visual way alone to determine the resistance type.
- c. Ground: Standard ground is the most common having battery negative (-) connected directly to the engine block. Sending units may have one (1) terminal (signal). In a floating ground system, the battery negative is not connected to the engine block so merely threading in the sender does not supply ground. Floating ground senders will have two (2) terminals (signal & ground). Both sender terminals may be wired to the appropriate gauge terminal or the sender's ground may be wired directly to the battery negative. A floating ground sender may be used in a standard ground system but not vice versa.