



6 Gauge Box Set with Programmable Speedometer

IS0333

Rev C ecr 10221 10/2015

Hot Rod Series

Part Number

KTF029

KTF031

KTF030

Made in the USA

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.

Use stranded, insulated wire not lighter than 18 AWG approved for marine use.

Be certain wire insulation is not in danger of melting from engine or exhaust heat or interfering with moving mechanical parts.

Speedometer Parts

QTY	Description	
1	Speedometer - Programmable	1
1	Mounting Bracket	2
Hardware		
7	#8 Brass Nut	3
2	#8 Brass Flat Washer	4
4	#8 Split Washer	5

Tachometer Parts

QTY	Description	
1	Tachometer	1
1	Mounting Bracket	2
Hardware		
7	#8 Brass Nut	3
2	#8 Brass Flat Washer	4
4	#8 Split Washer	5

Fuel Level Gauge Parts

QTY	Description	
1	Fuel Level gauge	1
1	Mounting Bracket	2
Hardware		
7	#8 Brass Nut	3
2	#8 Brass Flat Washer	4
4	#8 Split Washer	5

Voltmeter Parts

QTY	Description	
1	Voltmeter	1
1	Mounting Bracket	2
Hardware		
4	#8 Brass Nut	3
2	#8 Brass Flat Washer	4
2	#8 Split Washer	5

Water Temperature Gauge Parts

QTY	Description	
1	Water Temperature Gauge	1
1	Mounting Bracket	2
Hardware		
7	#8 Brass Nut	3
2	#8 Brass Flat Washer	4
4	#8 Split Washer	5

Oil Pressure Gauge Parts

QTY	Description	
1	Oil Pressure gauge	1
1	Mounting Bracket	2
Hardware		
7	#8 Brass Nut	3
2	#8 Brass Flat Washer	4
4	#8 Split Washer	5

Fuel Level Sender Parts

QTY	Description	
1	LS1038 - Standard 240-33 Ohms	1
1	HW-184 - Hardware Kit	
1	GK0093 - Gasket	2
3	#8 Brass Nut (5/16")	3
3	#8 Split Washer	4

Pressure Parts

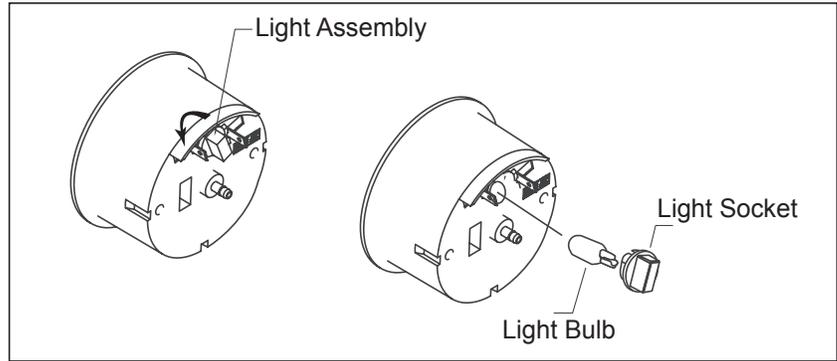
QTY	Description	
1	SD0006 - Pressure Sender	1
1	Hardware	
1	#10 Brass Nut (3/8")	2
1	#10 Brass Flat Washer	3

Temperature Sender Parts

QTY	Description	
1	TS1029 - Temperature Sender	1
1	BS0005 - 1/2 to 1/8 NPTF	2
1	AD0048 - 1/8 to 1/4 NPTF	3
1	BS0003 - 1/8 to 3/8 NPTF	4
1	Hardware	
1	#10 Brass Nut (3/8")	5
1	#10 Brass Flat Washer	6

Light Bulb Replacement

Speedometer	GE No. 194
Tachometer	GE No. 194
Fuel Level Gauge	GE No. 658
Voltmeter	GE No. 658
Water Temp Gauge	GE No. 658
Oil Pressure Gauge	GE No. 658



Installation

1. Disconnect the negative battery terminal.
2. If you are not replacing an existing gauge in the dash, locate a mounting location for the gauge(s) that provide easy readability from the operator's position. Verify there is enough workable space behind the mounting location to install your gauge and make connections if necessary.
3. Cut a hole in the dash for each gauge. Use the chart to determine the correct hole size.
4. Install the gauge in the mounting hole and check fit.
5. Mount the gauge(s) with the mounting brackets using the split washers and brass nuts as shown on the next page. Tighten the nuts finger tight using only 6 inch pounds of torque.

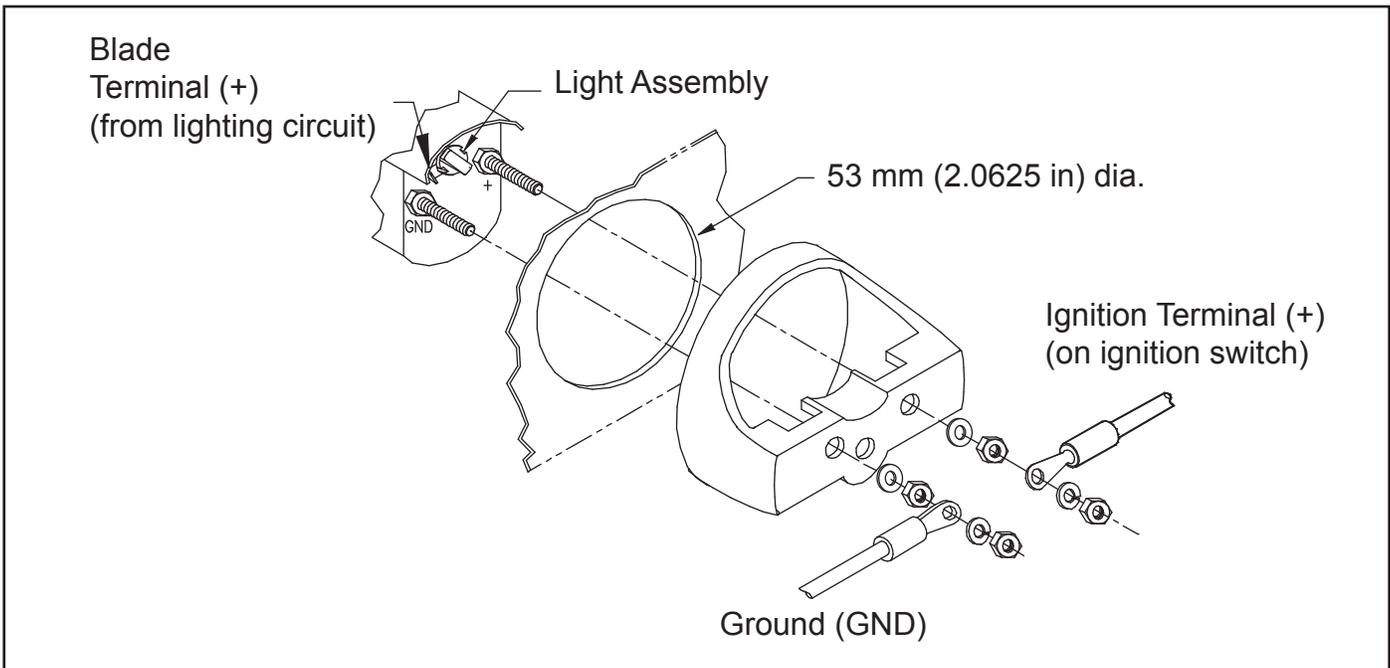
Gauge	Hole Size
Speedometer	85 mm (3.375 in)
Tachometer	85 mm (3.375 in)
Fuel Gauge	53 mm (2.063 in)
Voltmeter	53 mm (2.063 in)
Water Temperature	53 mm (2.063 in)
Oil Pressure	53 mm (2.063 in)

Warning:

Do not over tighten the mounting nuts. Over tightening the nuts may crack the gauge housing, mounting bracket or mounting panel.

6. It is recommended that insulated wire terminals, preferably ring type be used on all connections. Light assembly connections require 6 mm (.25 in) female blade terminal.

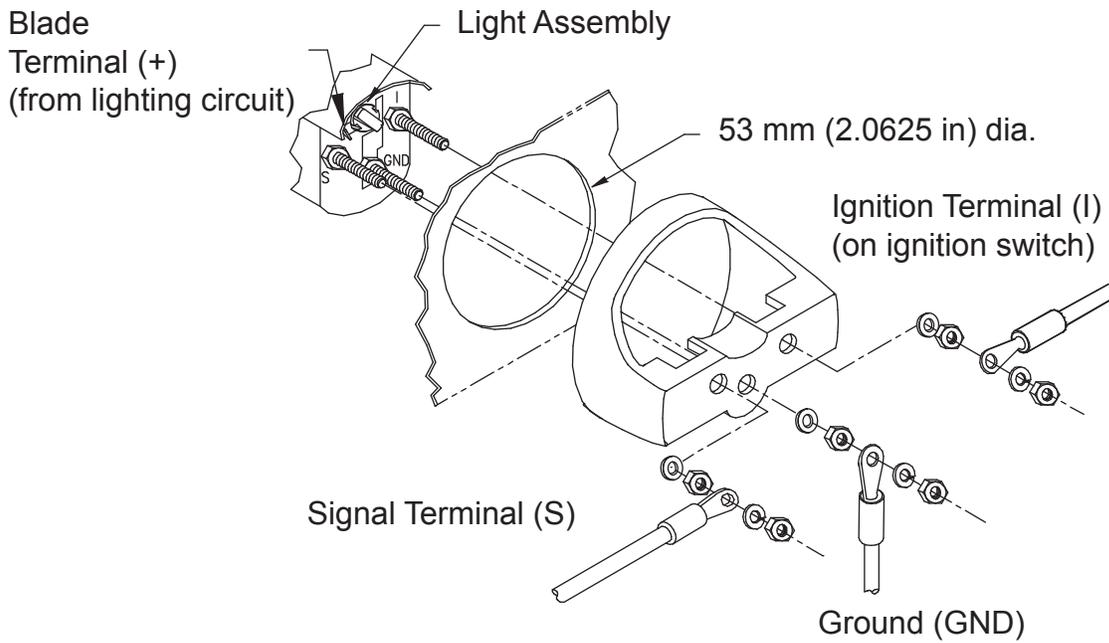
Voltmeter Connections



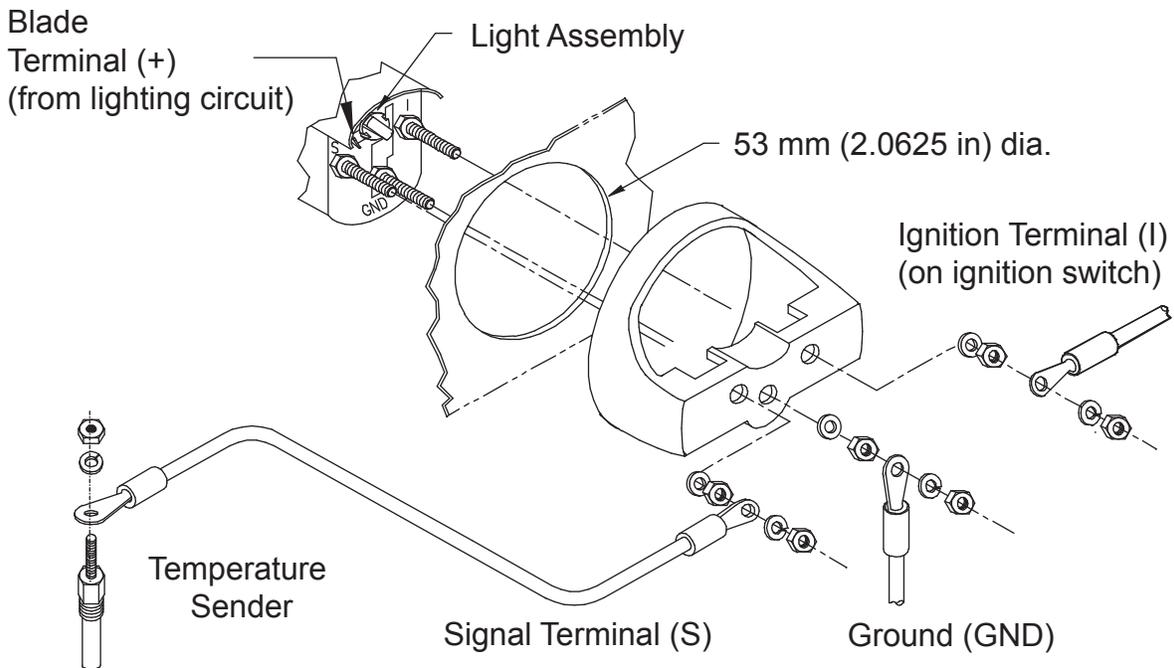
Fuel Level Gauge Connections

Warning:

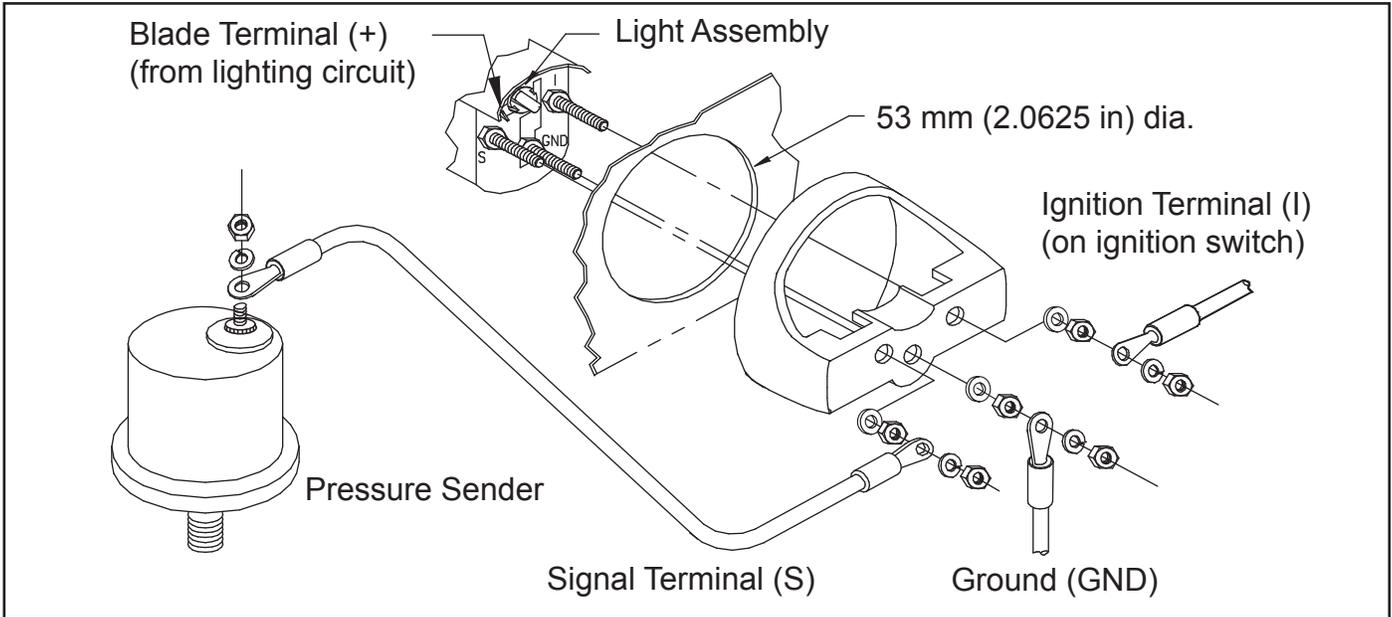
Special caution should be taken when working on or around tanks that have, or have had, fuel in them.



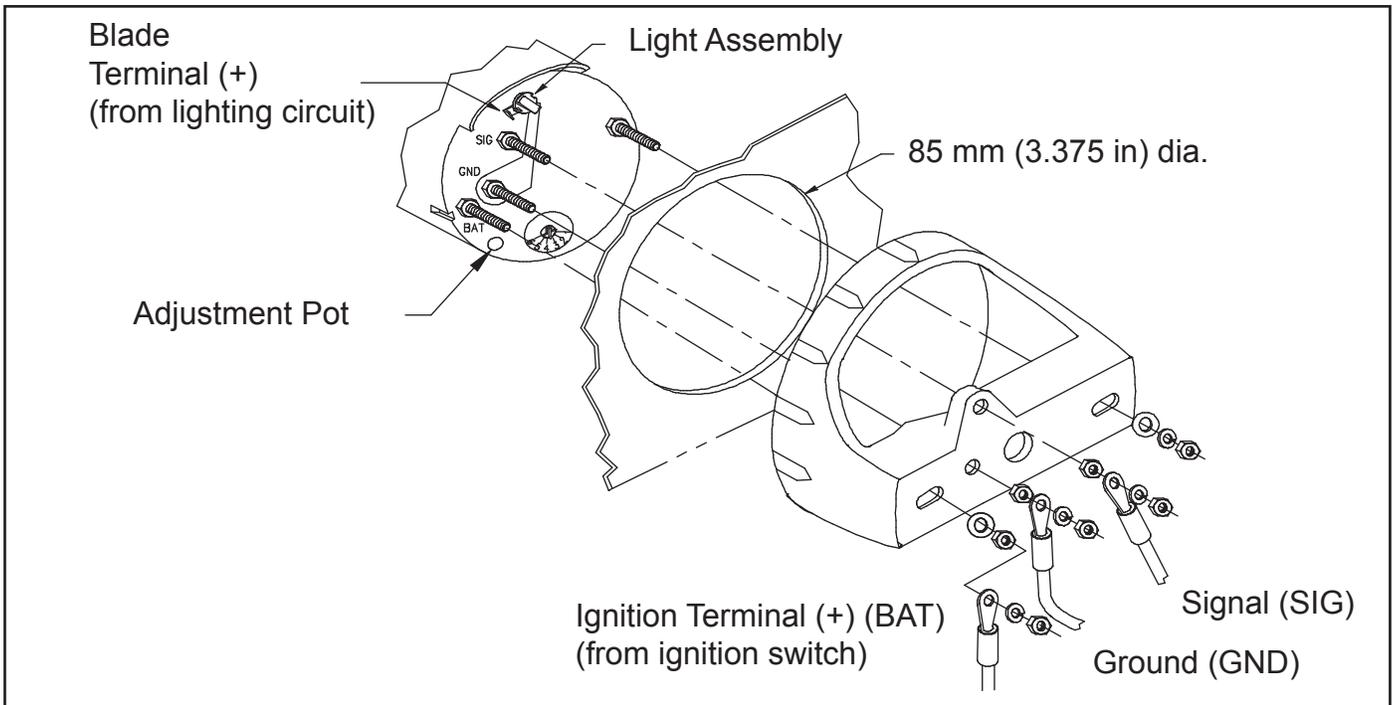
Water Temperature Gauge Connections



Oil Pressure Gauge Connections



Tachometer Connections



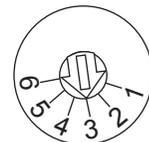
Tachometer Selector Switch Setting

Using a small screwdriver, SLIGHTLY depress and turn the selector switch on the back of the tachometer to the correct position to match the number of cylinders (see label on the side of the tachometer).

Depressing the switch too hard may cause damage to the tachometer!

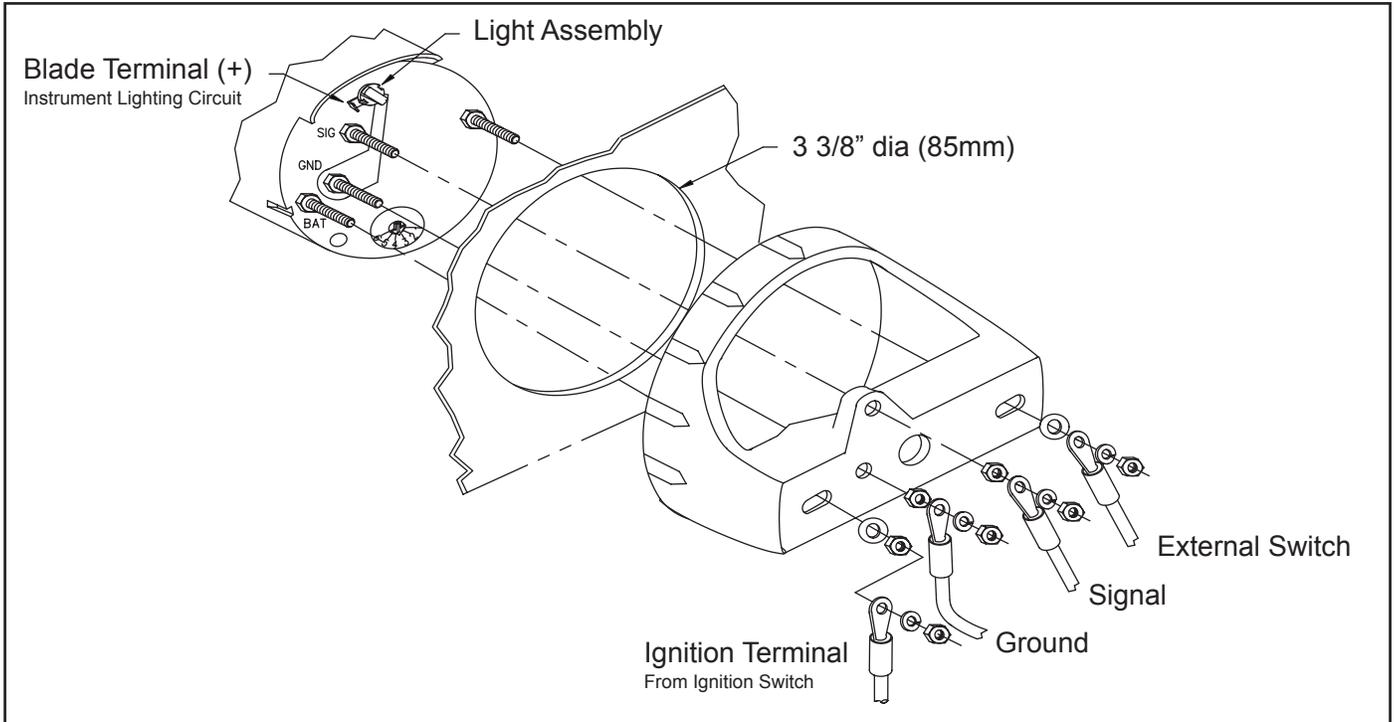
Be sure the selector switch has locked into the correct position by slightly rotating the switch back and forth with the screwdriver.

Refer to your vehicle's manual for the wiring schematic to determine where the tachometer signal is on application with a coil pack. (Found in most automotive stores.) The Tachometer may be hooked up to the negative lead on the ignition coil for Tachometer signal.



Engine	Setting
4 CYL	1
6 CYL	2
8 CYL	3

Speedometer Connections

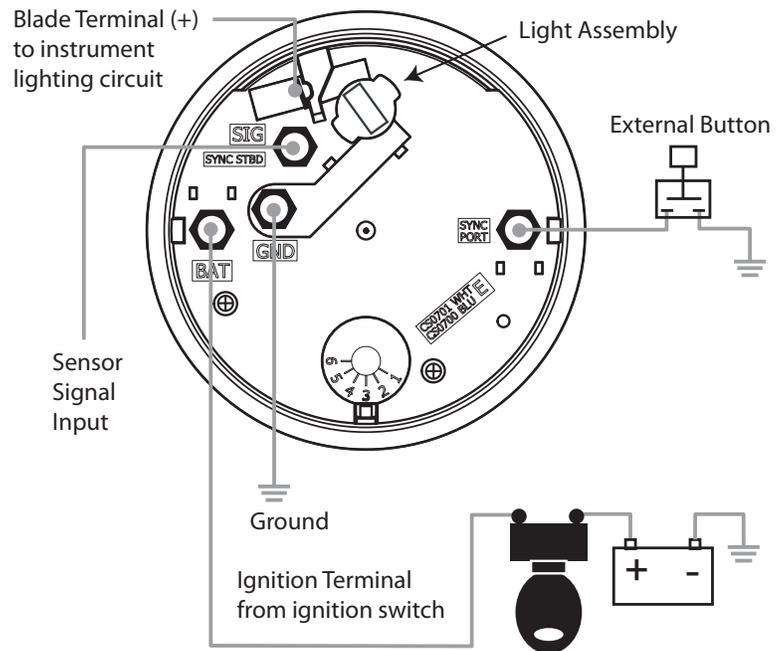


Wire Connections

1. Follow the Installation Instruction in this manual.
2. Connect a wire to the speedometer stud marked "BAT" (battery) and secure with a nut and lock washer. Connect the opposite end to a 12VDC circuit that is activated by the ignition switch.
3. Connect a wire to the speedometer stud marked "SIG" (signal) and secure with a nut and lock washer. Connect the opposite end to a terminal or wire originating from the speed sensor.

Electronic speedometers operate by capturing pulses produced by a sensor. The pulses are then electronically converted to a speed-reading very much like a tachometer converts ignition pulses to RPM.

4. Connect a wire to the speedometer stud marked "GND" (ground) and secure with a nut and lock washer. Connect opposite end to the electrical ground, generally available in several locations at or near the instrument panel.
5. 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.



Speedometer Operations

Odometer

The speedometer contains an odometer to maintain a record of the total mileage and trip mileage. During normal operations and after a power on the odometer display shows;



The displayed miles in the Odometer mode is in whole miles. This display cannot be reset.



A quick press of the push-button changes the display to the Trip odometer.



Trip Odometer

The Trip odometer allows you to keep a record of the trip miles or kilometers independent of the Odometer.



The displayed miles in the Trip Odometer mode is in tenths of miles. The Trip Odometer is fully user reset able.



Reset Trip Odometer

While in the Trip Odometer display press and hold the push-button.



The display will change to "rESEt".



Let go of the push-button and the Trip Odometer display will begin to flash.

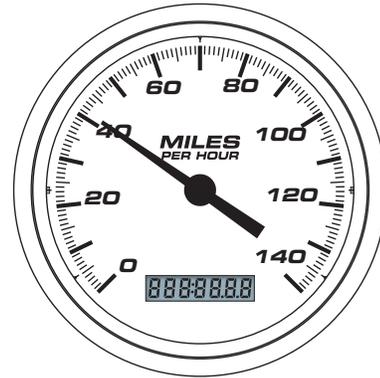


A short push on the push-button will reset the trip mileage to zero.



Speed Display

The pointer travels over a 270-degree dial to indicate mph (or kph) to indicate the speed. The kph is handled the same as a mph in the microprocessor. The pulses per mile will be pulses per kilometer and the self-cal will be for 1 kilometer instead of 1 mile. There is no provision to change from miles to kilometers.



Set up the speedometer

Power On

If the push-button is pressed and held on when power is first turned on the "set up menu" will be activated.

Setup

In the "SETUP" menu, a short button push will cycle through the selections; "CAL", "SIGnAL", "CALdAnn" and "PrG". A long push will select the function shown in the display.



CALdAnn



Pr 6

CAL

“CAL” will allow you to set the Pulse Per Mile (PPM).

CAL

Press the push-button with a short push.



The display shows “SEt”.

SEt

After 3 seconds the display changes and shows the Pulse Per Mile display.

002000

Each digit will flash and a short push will increment it. Wait 3 seconds and the next digit will flash. This will continue for all digits and start over.

Note: Check with your speed sensor manufacturer for the correct number of pulses per mile data. If this data is not known calibrate with the Drive-A-Mile feature.

When you are done setting the PPM, a long button press will save it and return to the main “CAL” menu.

CAL

SIGnAL

S 16nAL

“SIGnAL” will allow you to set the Speedometer input sensitivity, low (“LO A”), medium (“b”) or high (“HIGH C”).

LO A

b

HIGH C

Note - Setting “b” is appropriate for most applications

A short button push will cycle through the three options and a long push will save the setting and return to the main “SIGnAL” menu.

S 16nAL

Calibrate (Drive A Mile)

Use the Drive-A-Mile function to calibrate the Speedometer. With the engine off and in park, start the engine while pressing the push-button to enter the “SetUP” menu.



SEtUP

Using short button pushes press the button to cycle to the “CALdAnn” mode.

CALdAnn

A long press of the push-button will put the speedometer in calibration mode.



The display will begin to flash. The number displayed is the current number of pulses per mile and will change after calibration.

050000

Press the push-button.



The screen will change to the starting position.

00

Drive the mile or kilometer depending on your region. Stop the vehicle. Press the push-button to end the measurement. Restart engine. The speedometer is calibrated.

PrG (Program)A rectangular digital display showing the text "PrG" in a stylized, segmented font.

When finished with the "SETUP" menu, cycle power to restart the speedometer in "NORMAL" mode.

"PrG" displays the current software revision. A long button push display a numerical value of the program.

A rectangular digital display showing the number "73" in a stylized, segmented font.

A long button push will return to the main "PrG" menu.

A rectangular digital display showing the text "PrG" in a stylized, segmented font.

For technical assistance, contact Faria Beede Instruments - Customer Service between 8:30 AM and 5:30 PM Eastern time weekdays at (860) 848-9271 or (800) 473-2742.

Fuel Level Sender Installation

Standard Fuel Level Sender 240-33 Ohms

Warning

Read all instructions thoroughly before installation. If you are not experienced in working with fuel tanks, seek professional assistance. Disconnect battery before proceeding! Any type of work involving fuel tank repair or modification should be performed with extreme care. Due to the possibility of igniting fuel fumes, the tank should be empty, dry, and purged of fumes. Work should be performed in a well ventilated area. Only tools that will not create possible fuel ignition sparks should be used.

Failure to comply with installation instructions may result in unsatisfactory instrument performance. Improper installation or use of the product for an application other than its intended use will void your warranty and could result in serious personal injury.

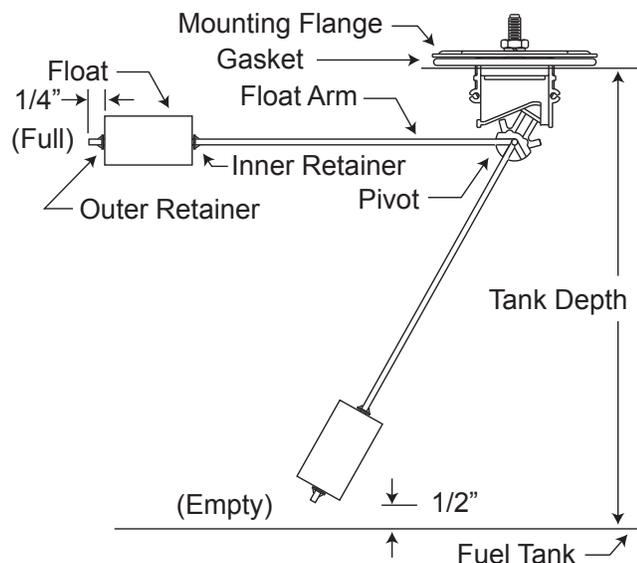
Tools You Will Need

Tape Measure
Hacksaw
3/8" Wrench

Part I: Adjusting the Sender

1. Measure the depth of the tank down through the large hole.
2. Allow the Float Arm to hang down loosely so that the float hangs just above the tank bottom. See Illustration A. Measure the length of the Float Arm. If the Float Arm is too long you must cut off the excess with a hacksaw.

Illustration A



3. Slide the Float and both Retainers toward the Pivot along the Float Arm to the desired length. Leave about 1/4 inch of the arm beyond the Outer Retainer and cut off the excess. Do not position the Inner Retainer at this time.

4. Insert the Float and Float Arm assembly into the tank hole, and lower the sender until the mounting flange makes contact with the top of the tank. Make sure the flange is positioned flat against the tank. The Float should hang freely and not contact the bottom of the tank. If the float contacts the bottom of the tank, slide the Float and the Retainer 1/4 inch up the arm towards the Pivot and trim the excess as in step 3. Try the fit again, and repeat this step as necessary for the Float to hang freely. Now you may slide the Inner Retainer against the Float.

Part II: Installing the Sender

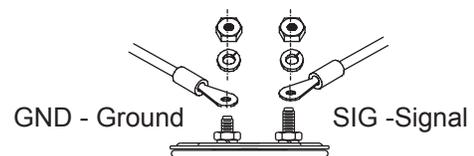
1. Place the gasket on the tank top and rotate it until all the holes align properly. Lower the float into the tank and lower the sender until the mounting flange is flat on the gasket and all the holes align properly.

Important

Use only the Faria Beede gasket supplied with the level sender. The use of any other gasket could effect the function of the sender, result in damage to the sender or may not provide a reliable seal between the tank and sender.

NOTE: If you find that when aligning the holes, the float arm hits the tank side, a baffle, or a pick-up tube, it will be necessary to rotate the float arm. (In most applications the float arm should point forward).

2. Gently turn all the screws or nuts until they just contact the mounting flange. Snug the screws or nuts in opposite sequence. If you do this in several stages it will ensure that the mounting flange evenly compresses the gasket. Do not overtighten as you may strip out threads in tank top.
3. Connect the end of the black ground wire to ground (GND). Connect the signal wire (SIG) to the signal wire of the gauge. Your installation is now complete.



Caution

Observe the fuel tank during initial operation to be sure there are no leaks!

Sender Information

Oil Pressure Senders

Engines or transmissions equipped with a low oil pressure switch that activates a warning light require an appropriate "T" pipe fitting to accommodate both pressure sender and warning light. Most oil pressure sending units have 1/8" NPT pipe threads and are usually mounted in the engine's block. If the block or transmission case has a larger pipe size, an appropriate bushing may be used without affecting pressure- sensing accuracy.

Temperature Senders

Temperature senders are available from Faria® Performance Instruments in 1/8" NPT thread sizes. If your water jacket, oil pan or transmission housing requires a thread diameter larger than 1/8" NPT, a bushing will be required. "T" fittings should NOT be used as these may affect the accuracy of the sender by reducing the temperature signal.

Sender Specifications

Temperature Sender:	100°F (450 Ω) to 250°F (29.6 Ω)
Fuel Level Sender:	E(240 Ω) - F (33.5 Ω)
Oil Pressure:	0 PSI (240 Ω) - 80 PSI (33.5 Ω)

SD0047 (Faria part#) may be used for Speedometer sensor.

Mount to bell housing to count flywheel teeth.

DK9005 (Faria part#) Hooks up to mechanical take off on transmission.

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