

Sunpro® OIL PRESSURE GAUGE INSTALLATION INSTRUCTIONS

Pressure gauges can measure the pressure present in a system utilizing air or liquids. An electrical pressure gauge is simpler and more versatile for installation than a mechanical gauge but is not quite as fast to respond to pressure changes. The factory warning light sender can be retained to operate the warning light with the use of a T-Fitting which is commonly available at auto parts stores and is manufactured by us.

NOTE: Some vehicles use electric cooling fans or microprocessor engine controls that depend on readings from the original equipment sending units for correct operation. If your vehicle is one of these, then you CANNOT change the OEM (original equipment manufacturer) sending units(s). The only possible way to use non OEM sender is to install it in a different location and leave the OEM sender in its original location. Check with the vehicle's manufacturer or dealer to see if this is possible.

PRECAUTIONS

1. Disconnect the battery ground cable before performing any electrical work.
2. Route all wiring away from linkages, engine parts that become hot, or moving parts.
3. Never smoke while working on your vehicle and always keep a fire extinguisher nearby. It should be rated for gas/chemical/electrical fires.
4. Never lay tools on top of the battery or wear jewelry during electrical work to avoid severe electrical shorts.
5. Locate and operate gauges so that driving visibility is not compromised.
6. Check the owner's or service manual, or your local dealer, to be sure that the normal pressure during cold-start and fully-warmed operation for your engine or air system are within the gauge range.
7. Be sure the tubing kit for the mechanical gauge is long enough for your application.
8. Follow the instructions carefully. A leak that goes unnoticed may lead to serious engine damage.
9. Do not use sealing tapes or compounds on electrical senders. This will disturb their grounding connection to the engine/system, resulting in false low readings.
10. Be careful not to crimp the tubing while unrolling it. Do not use any section of tubing with a crimp or kink in it. If the nylon tubing is a little awkward to use because of being rolled, heat it in boiling water and let the tubing cool while it is unrolled.

INSTALLATION

Gauge Installation

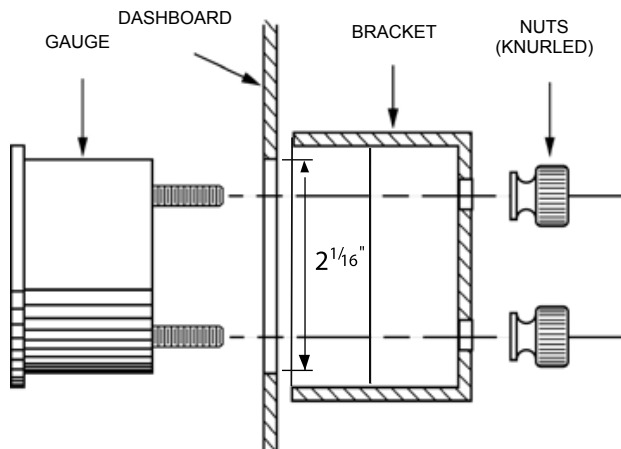
Make temporary test connection before permanently mounting hardware or drilling holes.

This gauge can be mounted into any surface or into a gauge pod. Refer to Figure 1.

Figure 1

Gauge Mounting:

Do not install bracket and nuts until reaching step 8 in the For Mechanical Gauges section or step 10 in For Electrical Gauges section.



1. Disconnect the battery ground cable before performing any electrical work.
2. Choose a location to mount the gauge where it will be viewable from a normal driving position.
3. If you are installing the gauge into a surface (for example the dashboard) make a 2-1/16" hole for the gauge. Do not accidentally cut any wires or hoses. Be sure there is clearance around the hole for the gauge mounting bracket.
4. Connect the blue and white wires using either Figure 2a or Figure 2b.

Figure 2a

For Positive Dimmer Controls

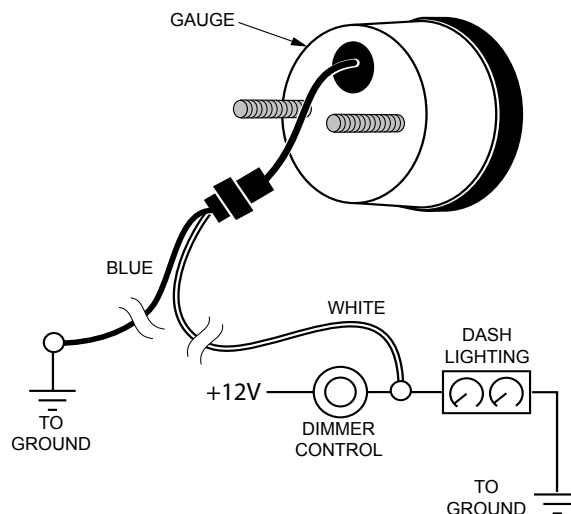
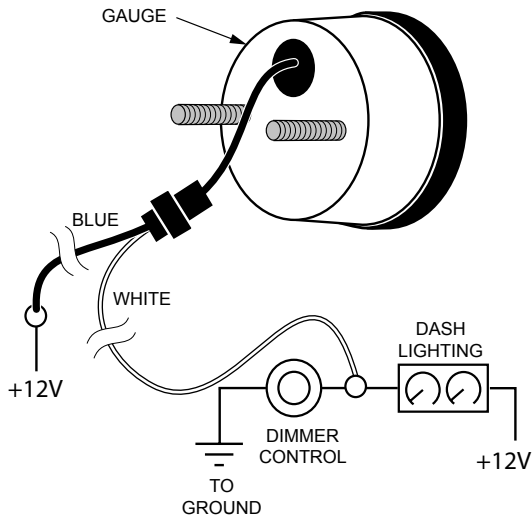


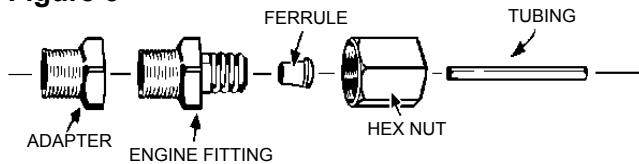
Figure 2b
For Negative Dimmer Controls



For Mechanical Gauges:

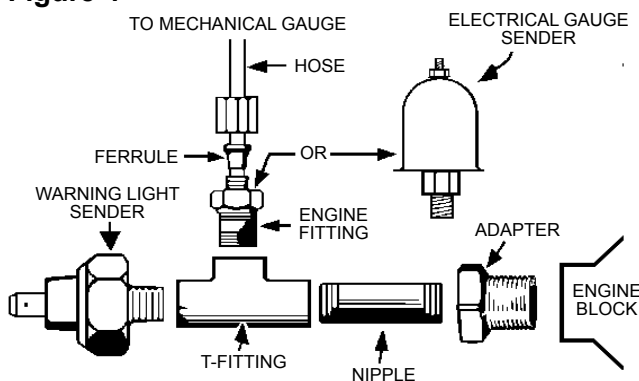
1. If you are monitoring a fluid system, drain the fluid level to a level below the warning light sender location.
2. Remove the warning light sender from the engine and install the engine fitting in the same location. If an adapter is required, first install the adapter and then install the engine fitting.
3. Uncoil a few feet of tubing and slide the hex nut and ferrule over the end of the tubing as shown in Figure 3. Insert the tubing into the engine fitting, and then tighten the hex nut into the engine fitting.

Figure 3



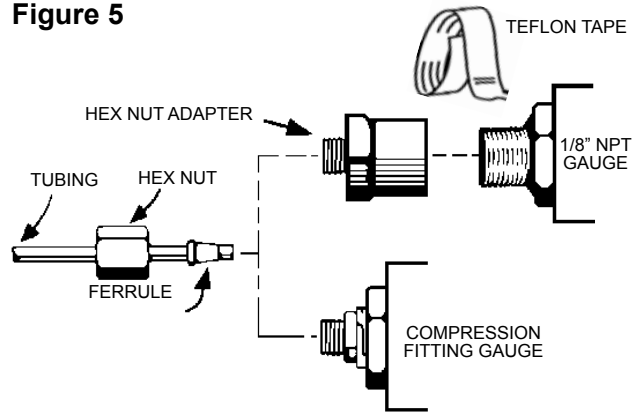
4. **Optional T-Fitting (CP7556)** (Figure 4) - Install the nipple into the T-Fitting and tighten the end of the other nipple into the warning light sender location. Install an adapter fitting first if needed. In one of the two remaining openings in the T-Fitting, insert the engine fitting and then follow Step 3 to connect the pressure tubing. Insert the warning light sender into the remaining T-Fitting opening. Install an adapter fitting first, if needed (we do not produce metric fittings for the connection from a metric warning light sender to the T-Fitting).

Figure 4



5. If the hex nut adapter is not attached to the gauge, then wrap Teflon tape around the adapter's threads and attach the hex nut adapter. Refer to Figure 5.

Figure 5



6. Route the remaining tubing through the fire wall to the gauge mounting location. Leave at least one 3" or longer loop in the tubing before it enters the fire wall and protect the tubing from rough edges of the fire wall hole.
7. Repeat Step 3 to attach the tubing to the gauge.
8. Complete the mounting of the gauge.
9. Refill the fluid level, if drained, to its normal level.
10. Start the engine and observe the fitting connections for leaks and the gauge for proper operation.

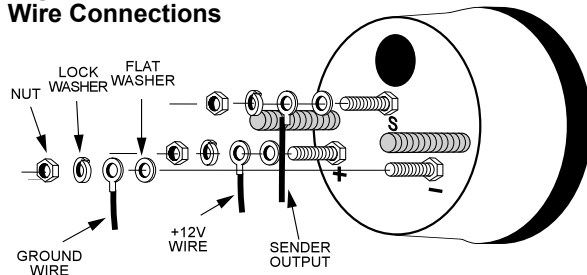
For Electrical Gauges:

1. If you are monitoring a fluid system, drain the fluid level to a level below the warning light sender location.
2. Remove the warning light sender from the engine and insulate the end of the sender wire if a T-Fitting is not being used. Install the gauge's sender in the same location in the engine block. If an adapter is required, first install the adapter and then the gauge's sender.
3. **Optional T-Fitting (CP7556)** (Figure 4) - Install the nipple into the T-Fitting and tighten the other end of the nipple into the warning light sender location in the engine block. Install an adapter fitting first if needed. In one of the two remaining openings in the T-Fitting, insert the gauge sender. Insert the warning light into the remaining T-Fitting opening. Install the adapter fitting first, if needed. (we do not produce metric fittings for the connection from a metric warning light sender to the T-Fitting).
4. Run a length of 18-gauge insulated copper wire from the gauge's sender to the gauge's mounting location.
5. Connect the wire to the connection on top of the gauge sender.
6. Connect the sender wire to the "S" connection post as shown in Figure 6. Do not over tighten.

7. Connect one end of another length of 18-gauge insulated copper wire to “-” connection post as shown in Figure 6, and the other end of the wire to a good ground source.
8. Connect a third length of 18-gauge insulated copper wire to the “+” connection post as shown in Figure 6, and the other end of the wire should be connected to the fuse box where the wire will receive +12 volts of power whenever the ignition key is in the START, ON or ACCESSORY position.

NOTE: Do NOT leave any hardware out of these connections.

Figure 6
Wire Connections



9. Complete the mounting of the gauge.
10. Refill the fluid level, if drained, to its normal level.
11. Start the engine and observe the fitting connections for leaks and the gauge for proper operation.

TROUBLESHOOTING

If your electrical gauge reads lower than you would expect, check all electrical connections, particularly grounding connections. Any poor connection will increase resistance resulting in a false low reading.