

OIL PRESSURE GAUGE - INSTRUCTIONS

INDICADORES DE PRESION DE ACEITE/AIRE - INSTRUCCIONES TENSION 12 V

MANOMÈTRE DE PRESSION D'HUILE - INSTRUCTIONS

WARNING: If your car is microprocessor (computer) controlled or has an electric cooling fan refer to the section on the front cover titled MICROPROCESSOR CONTROLLED ENGINES.

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 we.

PRECAUTIONS

1. 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.
2. Be sure the tubing kit for the mechanical gauge is long enough for your application.
3. Follow the instructions carefully. A leak that goes unnoticed may lead to serious engine damage.
4. 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.
5. 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.

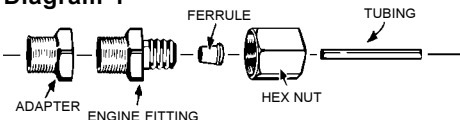
INSTALLATION

Note: If you are planning to install an oil temperature gauge as well as an oil pressure gauge, read the Note under INSTALLATION in TEMPERATURE-WATER/OIL INSTRUCTIONS.

For Mechanical Gauges:

1. If you are monitoring a fluid system, drain the fluid level to a level below the warning light sender location.

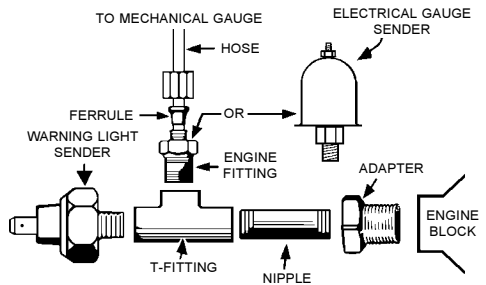
Diagram 1



PARA NOMBRE, DOMICILIO Y TELEFONO DE IMPORTADOR: VER EMPAQUE.

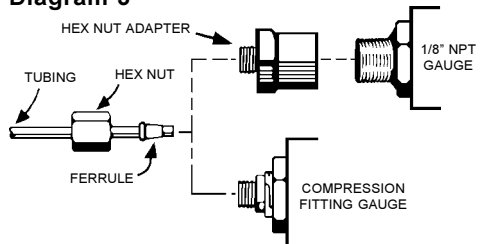
2. Remove the warning light sender from the engine and install the engine fitting in the same location. If an adapter is required, first install the adapter and then install the engine fitting.
3. Uncoil a few feet of tubing and slide the hex nut and ferrule over the end of the tubing as in Diagram 1. Insert the tubing into the engine fitting, and then tighten the hex nut into the engine fitting.

Diagram 2



4. Optional T-Fitting (Diagram 2)- 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).

Diagram 3



5. On some models, the hex nut adapter (Diagram 3) is pre-installed on the back of the gauge. If not, install the hex nut adapter onto the gauge.
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.
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. Facing the back of the gauge, the connection post on the right is for +12 volts power, the center post is for the ground connection and left post is for the sender connection. After you have mounted the gauge, connect the sender wire to the left connection post as shown in Diagram 4. Do not over tighten.
7. Connect one end of another length of 18-gauge insulated copper wire to the center connection post, as shown in Diagram 4, 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 right connection post as shown in Diagram 4, 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.

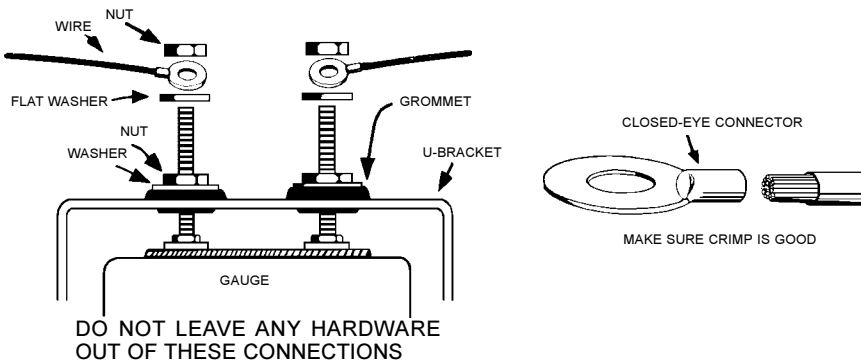
For Electrical Gauges:

1. If you are mounting 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 (Diagram 2) - 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).

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.

Diagram 4



INSTALLATION INSTRUCTIONS

GENERAL MOUNTING INSTRUCTIONS INSTRUCCIONES GENERALES DE MONTAJE TENSIÓN 12 V INSTRUCCIONES GÉNERALES DE MONTAJE

The manufacturer produces a full line of gauges with many different styles.

1-1/2" Gauges

2" Gauges

2-5/8" Gauges

(See page 2 for hole sizes.)

Gauges allow you to monitor the condition of your vehicle and tell how well it is performing. If there are any problems, you can detect them immediately before they become severe. Warning lights only tell you when the problem already requires immediate attention. You will find that the addition of these gauges will add to your peace of mind and driving comfort.

MICROPROCESSOR-CONTROLLED ENGINES

Many newer vehicles employ microprocessors that control most of the engine and electrical functions. Microprocessors are very sensitive electrical components. Before installing any aftermarket equipment consult the vehicle's manufacturer or shop manual to make certain that no damage will result.

Some of these newer 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 you CANNOT replace the sender(s) with any other. You can add an additional oil pressure sender with a "Tee Adapter Kit," but the only possible way to install a non OEM water temperature sender is to install the new sender in a different location, retaining the OEM unit in its original location. Check with the vehicle's manufacturer or dealer to see if this is possible.

INSTALLATION & SAFETY PRECAUTIONS

1. Read the entire instructions for your gauge before proceeding.
2. Be sure the gauge is suitable for your vehicle:
 - Does the gauge's range cover the vehicle's operating range?
 - Will the tubing of the mechanical gauges reach from the engine connection point to the gauge (temperature gauges cannot be lengthened)?
 - Is the vehicle's electrical system 12 volt and negatively grounded?
3. It is recommended that the battery ground cable be disconnected before any electrical work is performed, especially when installing Ammeters or Voltmeters.
4. Route all wiring and gauge tubing away from linkages, high heat or moving parts.
5. Never smoke while working on your vehicle and always keep a fire extinguisher nearby. It should be rated for gas/chemical/electrical fires.
6. Never lay tools on top of the battery or wear jewelry during electrical work to avoid severe electrical shorts.

GAUGE MOUNTING

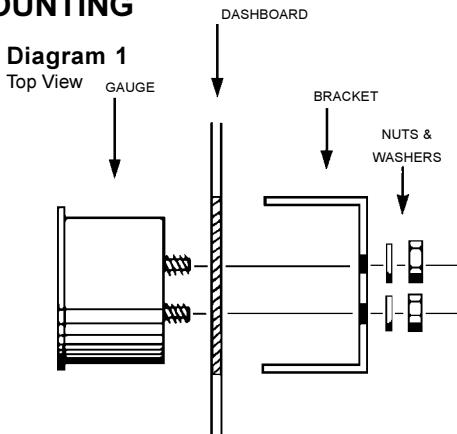
All gauges can be mounted into a surface of your choice or into a panel. Single, dual & triple gauge mounting panels are produced for all size gauges. Some panels are in black or chrome finishes. A fully chromed mounting cup is available for the 2-5/8" gauges.

1. Choose a location to mount the gauge where it will be viewable from a normal driving position (fuel pressure gauges should never be mounted within the interior of the vehicle).
2. If you are using a mounting panel, mount it at the chosen location with the screws provided.

If you are creating a hole, use the following sizes:

| <u>Gauge Style</u> | <u>Hole Size</u> |
|--------------------|------------------|
| 1-1/2" | 1-5/8" (41 mm) |
| 2" | 2-1/16" (53 mm) |
| 2-5/8" | 2-5/8" (67 mm) |

PARA NOMBRE, DOMICILIO Y TELEFONO DE IMPORTADOR: VER EMPAQUE.

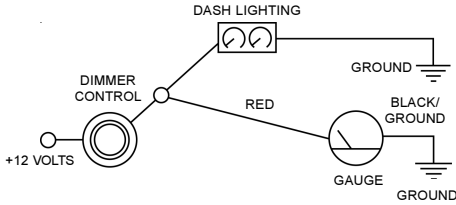


3. Dimmer Control.

For dash lighting dimmers that control the positive side (Diagram 2A) of the lighting circuit:

Diagram 2A

For Positive Dimmer Controls



- For Two-wire Bulb Holder -

Connect the red wire into the circuit between the dimmer control and the dash lights. Connect the black wire to a good electrical ground.

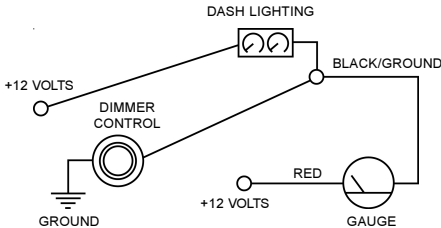
- For One-wire Bulb Holder -

Connect the one wire into the circuit between the dimmer control and the dash lights. Obtain a length of 18-gauge insulated copper wire and connect one end of the wire to a good electrical ground source and the other end to one of the mounting bracket posts.

For dash lighting dimmers that control the grounded side (Diagram 2B) of the lighting circuit:

Diagram 2B

For Ground Dimmer Controls



- For Two-wire Bulb Holder -

Connect the black wire into the circuit between the dimmer control and the dash lights. Connect the red wire to the fuse box so that the wire only receives +12-volt power when the dash lights are turned on.

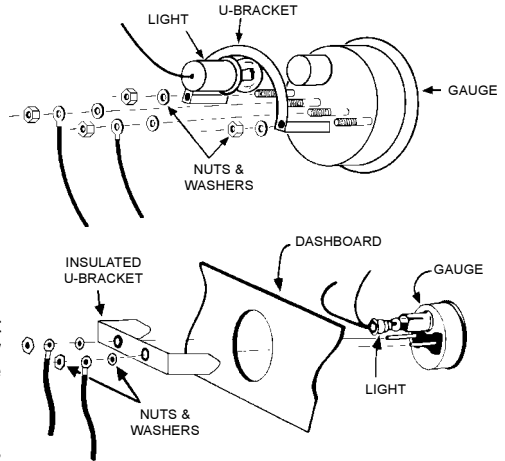
- For One-wire Bulb Holder -

Connect the wire to the fuse box so it receives only +12-volt power when the dash lights are on. Obtain a length of 18-gauge insulated copper wire and connect one end to the gauge mounting bracket or panel. Connect the other end of the wire into the circuit between the dimmer control and the dash lights. **Insulate the gauge and bracket from grounded surfaces.**

4. Refer to specific instructions for the gauge you are installing. They explain other connections that should be made before mounting is completed.
5. Insert the gauge into the mounting panel or hole.
6. Insert the bulb holder into the bulb socket on the back of the gauge.
7. Install the appropriate mounting bracket (Diagram 1: insulated or non-insulated) over the mounting posts (Diagram 3), slide on washer, plus a lock washer if supplied, and tighten the nut with only light pressure. If the gauge is an electrical model, be sure you use a bracket that has grommets to insulate the posts from the mounting bracket. This does not apply to gauges using separate bracket mounting posts from the posts used for wire connections.
8. Position the gauge for best visibility and appearance, then tighten the bracket nuts with moderate pressure. Do not over-tighten these nuts when using an insulated bracket. Excess pressure can distort the grommets causing them to crack and short the wiring, even months after installation.
9. Refer to the specific instructions for the gauge you are now installing to complete any other connections.

Diagram 3

Electrical Gauges Shown



FULL ONE (1) YEAR WARRANTY

Actron Manufacturing Company, 15825 Industrial Parkway, Cleveland, Ohio 44135, warrants to the user that this unit will be free from defects in materials and workmanship for a period of one (1) year from the date of original purchase.

Any unit that fails within this period will be repaired or replaced at Actron's option and without charge when returned to the Factory. Actron requests that a copy of the original, dated sales receipt be returned with the unit to determine if the warranty period is still in effect.

This warranty does not apply to damages caused by accident, alterations, or improper or unreasonable use. Expendable items, such as batteries, fuses, lamp bulbs, flash tubes are also excluded from this warranty.

ACTRON MANUFACTURING COMPANY DISCLAIMS ANY LIABILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR BREACH OF ANY WRITTEN WARRANTY ON THE UNIT. Some states do not allow the disclaimer of liability for incidental or consequential damages, so the above disclaimer may or may not apply to you. This warranty gives specific legal rights, and you may also have rights which vary from state to state.

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Actron Manufacturing Company, 15825 Industrial Parkway, Cleveland, Ohio 44135, garantiza al usuario que esta unidad estará libre de defectos de materiales y mano de obra por un período de un (1) año a partir de la fecha original de compra.

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0002-002-2376