

Fig. 46 Location of engine coolant temperature sensor—3.8L engine

To install:

- 5. Apply pipe sealant or Teflon® tape to the threads of the new sender/switch.
- 6. Install the temperature sender/switch and connect the electrical connector.
- 7. Connect the negative battery cable. Fill the cooling system.
 - 8. Run the engine and check for leaks.

Oil Pressure Sender/Switch

TESTING

- 1. Test and verify the engine oil pressure. See Section 3 for more information. If no or insufficient pressure exists, oil pressure problem exists and gauge and sensor are operational, repair oil pressure problem.
- 2. Check the appropriate fuse before attempting any other diagnostics.
 - 3. Unplug the sensor electrical harness.
- 4. Using an ohmmeter, check continuity between the sensor terminals.
- 5. With the engine stopped, continuity should not exist.
- ★The switch inside the oil pressure sensor opens at 6 psi or less of pressure.
- 6. With the engine running, continuity should exist.
- 7. If continuity does not exist as stated, the sensor is faulty.

REMOVAL & INSTALLATION

▶ See Figures 47 and 48

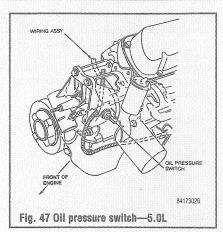
SO: WARNING

The pressure switch used with the oil pressure warning light is not interchangeable with the sending unit used with the oil pressure gauge. If the incorrect part is installed the oil pressure indicating system will be inoperative and the sending unit or gauge will be damaged.

- 1. Disconnect the negative battery cable.
- 2. Disconnect the electrical connector and remove the oil pressure sender/switch.

To install:

Apply pipe sealant to the threads of the new sender/switch.



- 4. Install the oil pressure sender/switch and tighten to 9–11 ft. lbs. (12–16 Nm).
- Connect the electrical connector to the sender/switch and connect the negative battery cable.
- 6. Run the engine and check for leaks and proper operation.

Low Oil Level Sensor

TESTING

With the oil at the FULL mark on the dipstick and the engine oil warm to ensure that the oil drains properly from the oil sensor, turn the ignition switch to the **RUN** position and start the engine. The warning indicator should come on briefly in**START** for a bulb prove-out, then go out. Turn the engine off. Drain 2 qts. of oil from the engine. Wait for five minutes, the restart the engine. The warning indicator should come on and stay on.

Sensor Test

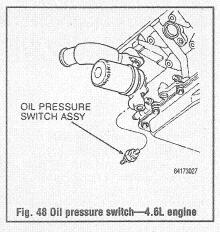
Connect the positive lead of a DVOM to the sensor terminal and the negative lead to the sensor housing. With the sensor submerged in oil (engine full), the meter should read "open." Resistance should be greater than 100,000 ohms. With the sensor out of oil (oil drained), the resistance should be less then 1000ohms.

The sensor must be horizontal when this test is conducted.

REMOVAL & INSTALLATION

▶ See Figure 49

- It is possible for the low oil level warning light to come on in a 1995-96 Continental built through 4/15/96 when it is started while parked on an incline. Ford says this is caused by toosensitive instrument cluster software and/or the location of the oil level sensor in the oil pan. The fix is to install either a revised instrument cluster or a revised oil pan with the sensor mounted in a different spot.
- Here is the procedure; first obviously, make sure the oil level is okay. Then, if the light comes on only after the engine is shut off and restarted within two minutes, do this:
 - 2. Verify the EEPROM (Electrically Erasable



Programmable Read Only Memory)level of the cluster by cycling the key to **OFF** and depressing the DTE/ECON and TRIP buttons simultaneously. Hold them while turning the key to **ON**, then immediately release the buttons. Hit the Menu button until "EEP-ROM" is displayed. If the EEPROM level is 3 or less, replace the instrument cluster. If it is 4 or more, and the warning light comes on only when the engine is started on an incline, install the revised oil pan. (the level 4 and higher software allows 11 minutes for the oil to drain back to the pan before sensing for a low oil level.)

Note that the revised oil pan has the oil level sensor mounted 4mm lower than the original design and therefore is less susceptible to indicate a low oil level when parked on an incline.

- 3. Disconnect the negative battery cable.
- 4. Raise and safely support the vehicle.
- 5. Drain at least 2 quarts of oil from the engine into a suitable container.
- 6. Disconnect the electrical connector from the sensor.
- 7. Remove the sensor using a 1 in. socket or wrench.

To install:

- 8. Install the sensor and tighten to 15–25 ft. lbs. (20–34 Nm).
 - 9. Connect the electrical connector.
- 10. Tighten the oil pan drain plug to 8–12 ft. lbs. (11–16 Nm) on 4.6L engines or 15–25 ft. lbs. (20–34 Nm) on 5.0L engines.
 - 11. Lower the vehicle.
 - 12. Add oil to the proper level.
- 13. Connect the negative battery cable, start the engine and check for leaks.

