

Low Engine Oil Pressure Problem

Insufficient oil pressure is serious, since the oiling system must be properly pressurized to keep the moving parts of the engine lubricated to prevent excessive wear. Most vehicles use a visual indicator, which may be a light or gauge, mounted in the instrument panel to alert the driver of low engine oil pressure.

The oil pressure indicator is connected with a pressure switch, as shown in Figure 1. The pressure switch sends a signal when the oil pressure is below 5 PSI (3.5 kPa). This pressure is established by the engine manufacturer based upon individual engine characteristics and requirements.

When the engine is not running and the ignition switch is turned on, the warning light illuminates. If the vehicle is equipped with a gauge there will be no indication of pressure. When the engine is started, oil pressure will compress the diaphragm in the pressure switch, opening the contacts and cause the light to go out or, in the case of a gauge, a positive pressure reading will be indicated.

If the warning light remains on, or the gauge fails to register a normal pressure several seconds after start up, shut the engine off immediately. Check the oil level and fill as necessary. If the warning light remains on or the gauge fails to register normally when the oil level is correct, there are a number of possibilities that may be the cause of the problem:

1. The oil pressure switch could be faulty.
2. The wiring between the oil pressure switch and warning indicator could be grounded or disconnected.
3. The oil pump may have lost its prime.
4. The oil pump intake screen could be clogged.
5. The oil pump pressure regulating valve could be stuck in the open position.

If the warning light does not illuminate with the ignition switch in the on/run position, and the engine is not running, then the bulb, pressure switch, and wiring should be checked and repaired as necessary.

On some engines the filter is mounted in a position which could allow the oil in the filter to drain back to the crankcase when the engine is shut down. This would be the case for the filter shown in Figure 2 where the filter is horizontal and is above the level of the oil in the crankcase. Normally, it takes less than five (5) seconds for the pump to fill the filter after the engine has been started, during which time the warning device will indicate no or low oil pressure.

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Filters designed for these mounting positions contain an anti-drain back valve to prevent the engine from operating without oil pressure for the period of time after start up. This valve is usually in the form of a rubber gasket, which is visible through the inlet holes of the filter, and allows the flow of oil through the filter in the correct direction. When the engine is shut down, the anti-drain back valve prevents the oil in the filter from draining back to the crankcase.

Under some conditions the warning light may fluctuate when the engine is running. This usually happens when the vehicle is going around a corner or is on a relatively steep hill. If oil pressure fluctuation occurs under these conditions, it is because the oil level is low and the oil pump strainer is no longer fully submerged in the oil. The oil level should be immediately filled to the proper level.

In summary, the oil pressure warning device provides vital information to the driver. If there is an indication of low or no oil pressure when the engine is running, it should be shut off immediately and the cause investigated.

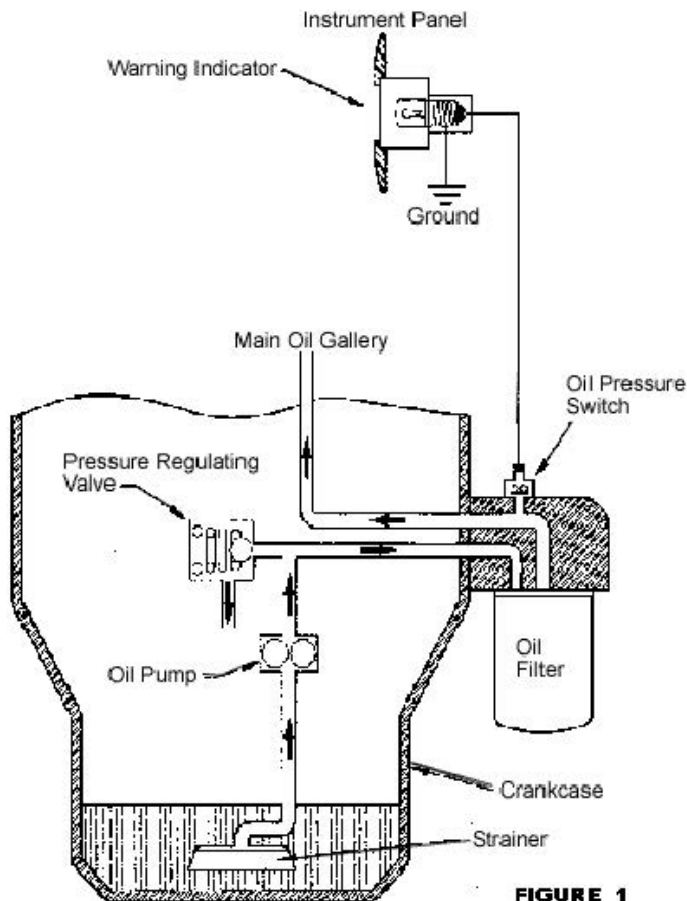


FIGURE 1

Low Engine Oil Pressure Problem

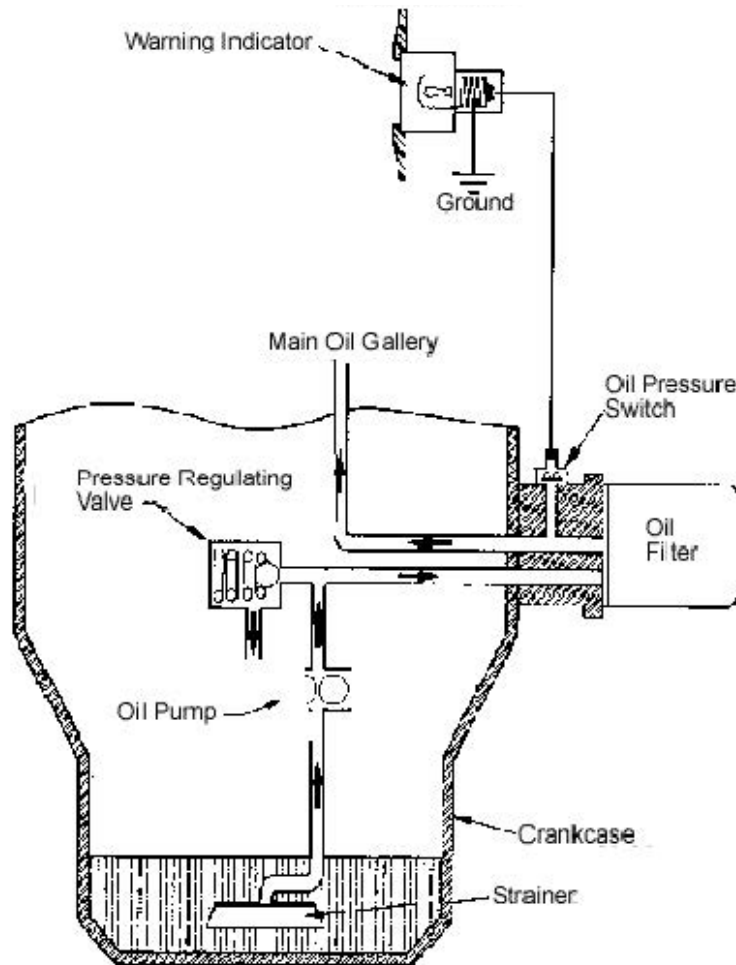


FIGURE 2

FOR ADDITIONAL INFORMATION, CONTACT:

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