

SUPPLEMENTAL DIAGNOSTIC ANALYSIS

LOW OIL PRESSURE

PROBABLE CAUSES

Inaccurate gauge reading, low oil level, oil dilution (fuel), Stuck oil pressure regulator, scored/damaged oil pump, rear main gallery plug, broken or missing piston cooling jets, front cover "O" ring leaks, missing tappet galley plug, missing bearing shells, porous oil reservoir.

PROCEDURES

- Verify oil level, check to see if contaminated with fuel.
- Verify oil pressure using a known good mechanical gauge and measuring at the oil reservoir and at the main oil galley. Oil pressure at both points should be 10 PSI minimum @ low idle and 40 PSI minimum @ wide open throttle with the engine at operating temperature.
- If the difference between the reading on the reservoir and main galley vary more than 5 PSI, swap gauges and recheck, if the reservoir still has a lower reading reservoir is most likely porous, replace reservoir.
- Remove and inspect oil cooler and regulator assembly. Oil regulator should be properly staked in the oil header housing and the regulator piston should be free to move when pressure is applied.
- Remove, inspect and measure clearances in the lube oil pump. (**Figure 4.12.**) Upon removal of the lube oil pump inspect the mating front cover surface for gouging or deep scratching, inspect the oil pump for damage or wear. Measure the "G" rotor to oil pump housing clearance. Specification is 0.028" – 0.032" (0.72 – 0.81 mm). Measure from surface of housing to "G" rotor dimension. Specification is 0.001" – 0.003" (0.02 – 0.08 mm.)
- Remove the transmission and flywheel, inspect rear main plate for oil leaks. Massive oil leak could indicate a missing main galley plug. **Figure 4.13.** If leak is indicated remove rear plate and inspect plugs.
- Remove oil pan and inspect for missing piston cooling jets, bearing shells. **Figure 4.14.**
- Remove front cover, inspect for cut or damaged front cover "O" rings, missing tappet galley plugs. **Figure 4.15.**

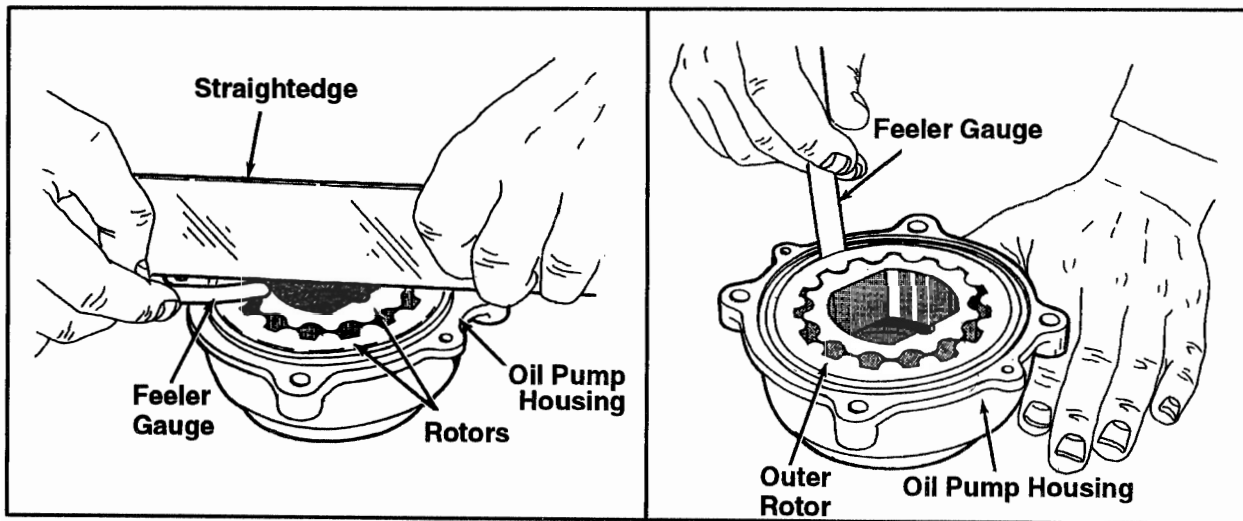
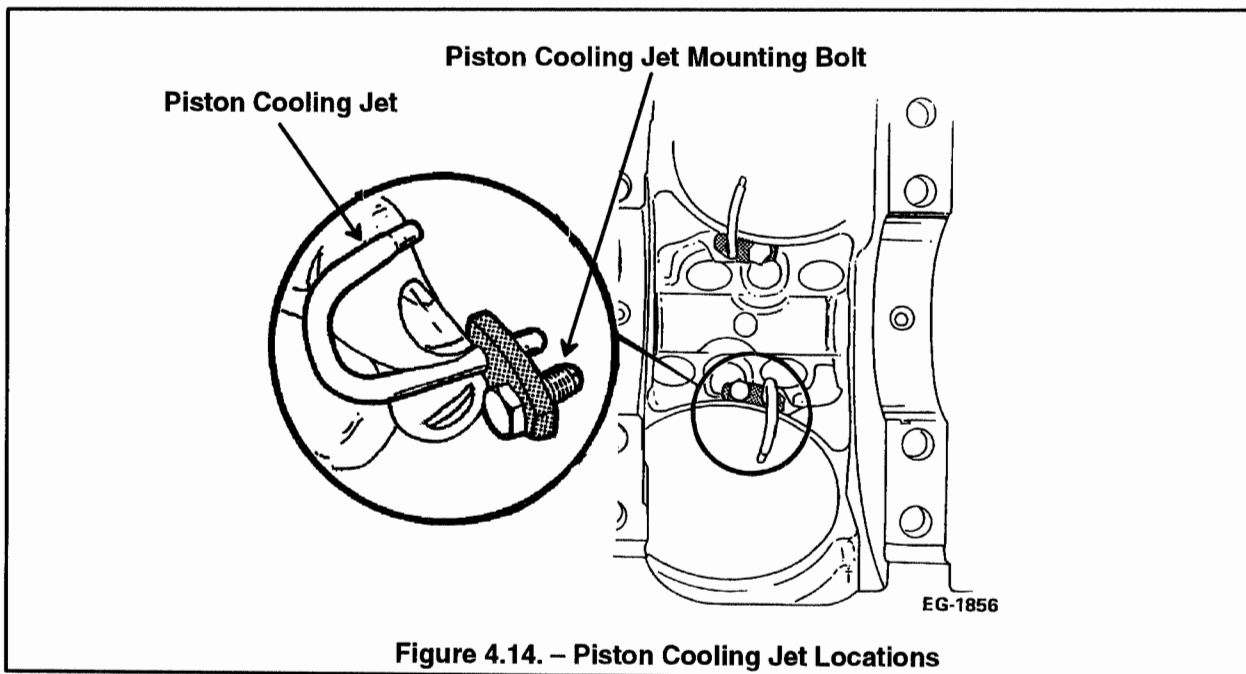
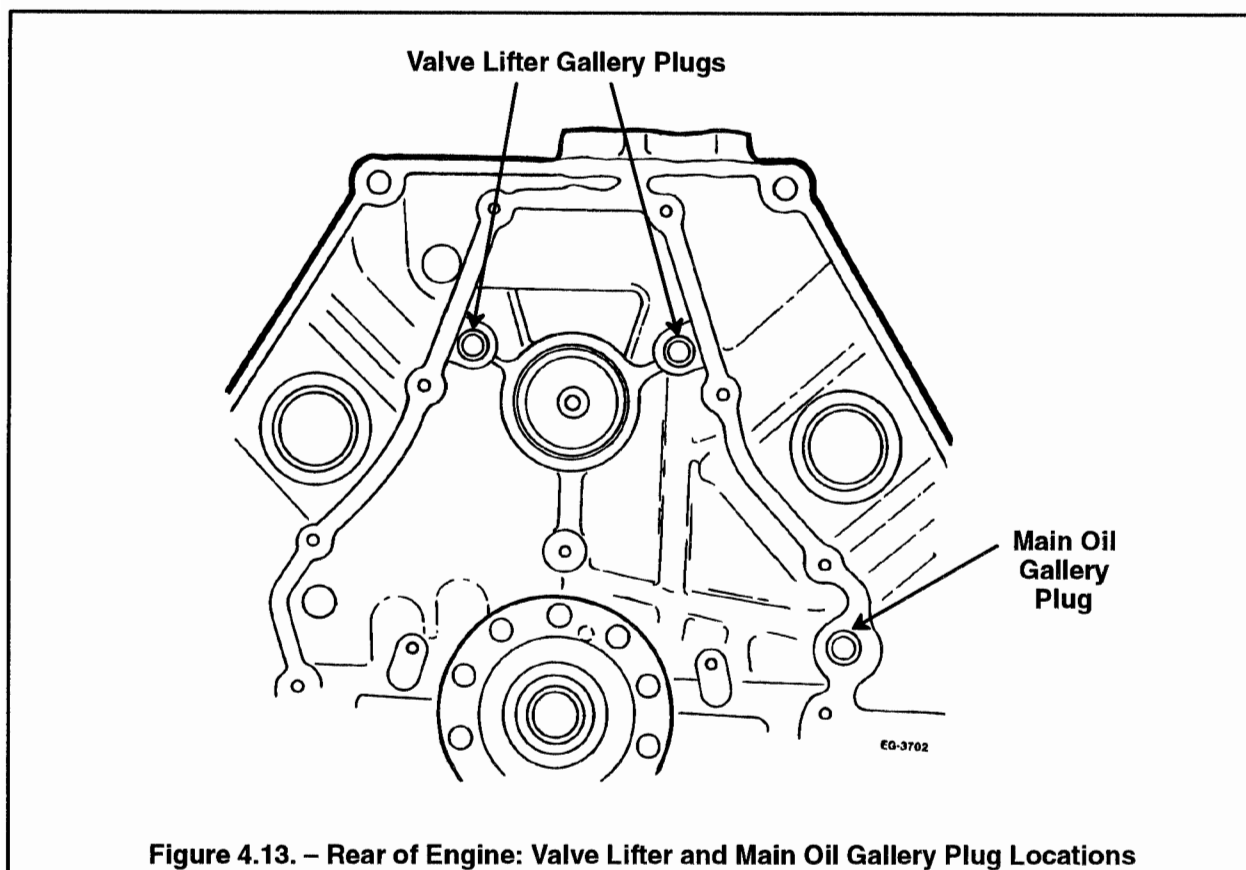


Figure 4.12. – Lube Oil Pump Inspection and Measurement

LOW OIL PRESSURE (Continued)



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