

LUBRICATION

ENGINE OILING SYSTEM

Engine lubrication system is a force-feed type. Oil is supplied under full pressure to crankshaft, connecting rods, camshaft bearing and valve lifters. A controlled volume of oil is supplied to rocker arms and push rods. All other moving parts are lubricated by splash or gravity flow. Oil flows through oil filter before entering main oil gallery. See Fig. 9.

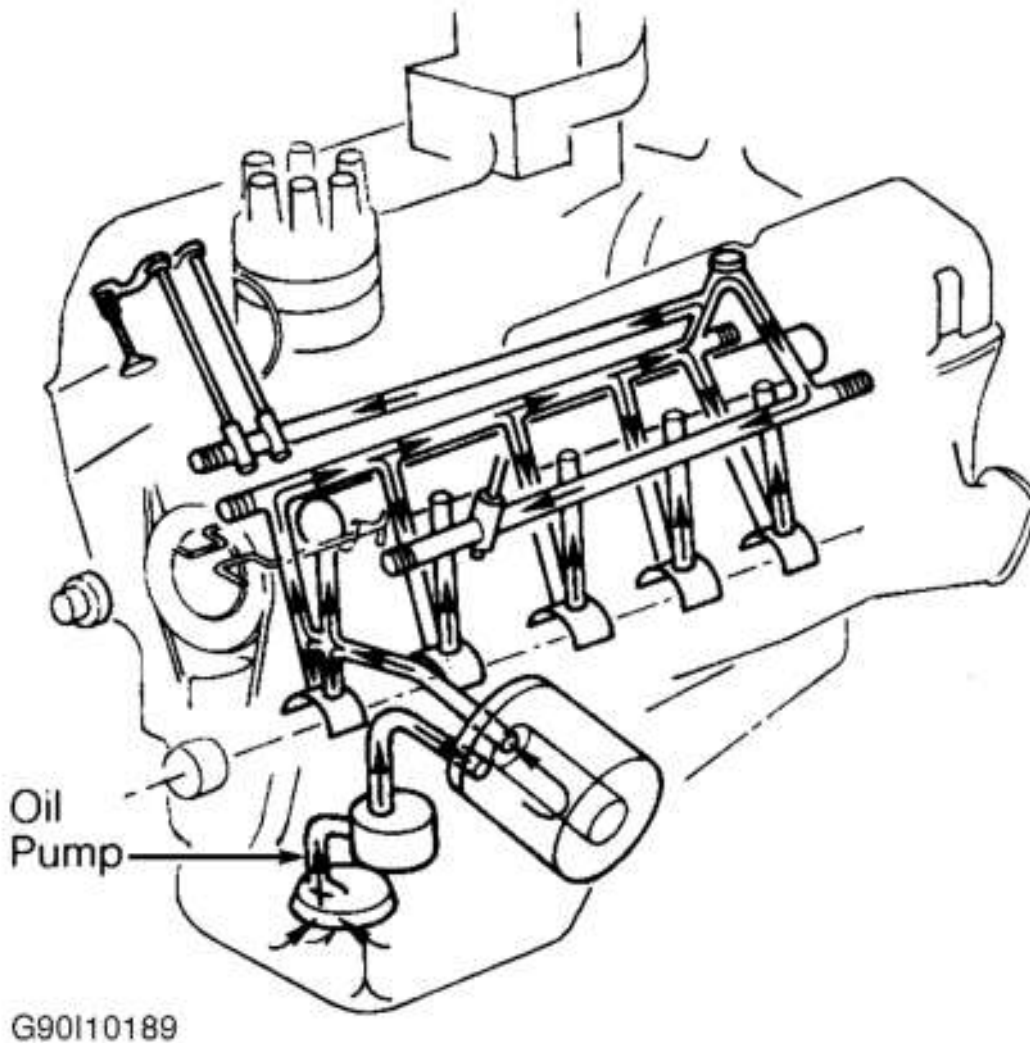


Fig. 9: Cross-Sectional View Of Engine Oil Circuit
Courtesy of FORD MOTOR CO.

Crankcase Capacity

Crankcase capacity is 5 qts. (4.75L). Add one additional qt. (.95L) when replacing oil filter.

Oil Pressure

Normal oil pressure at 2000 RPM should be 40-60 psi (2.8-4.2 kg/cm²) with engine at normal operating temperature.

Pressure Relief Valve

Pressure relief valve is located in oil pump, and is not adjustable.

OIL PUMP

Removal & Disassembly

1. Remove oil pan. See **OIL PAN** under REMOVAL & INSTALLATION. Remove oil pump from oil pan. Remove oil pump drive shaft. Disassemble oil pump.
2. Note direction of component installation for reassembly reference. Drill a small hole in oil pressure relief valve cap. Install self-threading screw in drilled hole and pull on screw to remove cap.

Inspection

Inspect components for damage and wear. Measure rotor end play and outer rotor-to-housing clearance. Measure relief valve-to-bore clearance and relief valve spring tension. Replace oil pump assembly if measurements are not within specifications. See OIL PUMP SPECIFICATIONS table.

OIL PUMP SPECIFICATIONS

| Application | In. (mm) |
|--|-----------------------------------|
| Outer Rotor-To-Housing Clearance | .001-.013 (.03-.33) |
| Relief Valve Spring Tension ⁽¹⁾ | 10.6-12.2 @ 1.74 (4.8-5.5 @ 44.2) |
| Relief Valve-To-Bore Clearance | .0015-.0030 (.038-.076) |
| Rotor End Play | .004 (.10) Max. |
| Shaft-To-Housing Clearance | .0015-.0030 (.038-.076) |
| (1) Lbs. @ In. (Kg @ mm). | |

NOTE: Oil pump is serviced as an assembly only. Replace assembly if measurements are not to specifications. See OIL PUMP SPECIFICATIONS table.

Reassembly & Installation

1. To reassemble, reverse disassembly procedure. Ensure components are installed in original location. Install NEW oil pressure relief valve cap. To install, prime oil pump by filling inlet opening with oil, and rotating pump shaft until oil emerges from outlet opening.
2. Install and tighten oil pump-to-cylinder block bolt to specification. See TORQUE SPECIFICATIONS. To complete installation, reverse removal procedure.

CAUTION: If pump and drive shaft do not seat readily, DO NOT force into position. Realign drive shaft hex with distributor shaft socket and reinstall.