

timing. Operate the engine at fast idle and check all hose connections and gaskets for leaks.

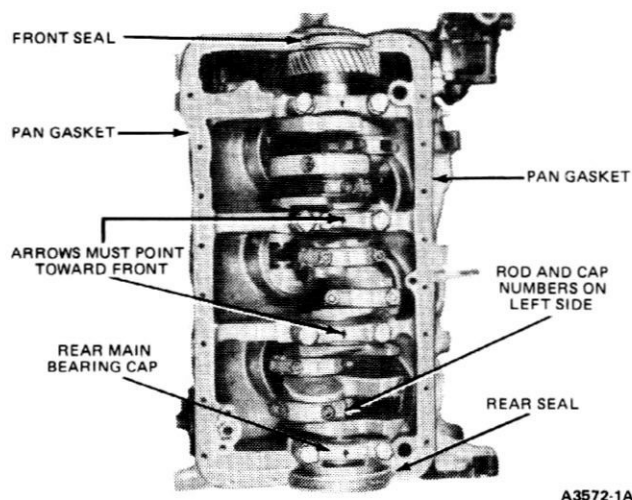
OIL PAN

Removal

1. Remove the oil level dipstick.
2. Remove the radiator pressure cap and drain the cooling system. Disconnect the radiator upper and lower hoses at the radiator.
3. Remove the bolts attaching the fan shroud to the radiator. Position the shroud back over the fan. Disconnect the battery ground cable at the battery.
4. Raise the vehicle. Disconnect the automatic transmission cooler lines (if so equipped) at the radiator.
5. Disconnect the steering gear (and power steering hoses, if equipped) and position the gear out of the way (see Group 13).
6. Disconnect the sway bar at the ends and rotate to allow clearance to remove pan.
7. Drain the crankcase. Remove the splash shield.
8. Disconnect the starter and remove the starter.
9. Remove the engine front support nuts.
10. Raise the engine and place wood blocks between the engine front supports and chassis brackets.
11. Remove the oil pan attaching bolts and remove the oil pan.

Installation

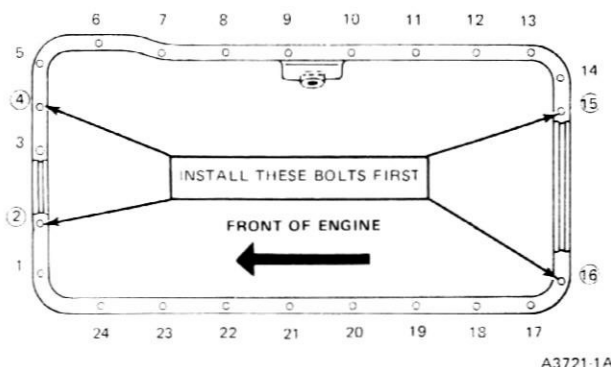
1. Clean the gasket surfaces of the block and oil pan.
2. Coat both pieces of the oil pan gasket block surfaces with oil resistant sealer. Position the oil pan gaskets on the cylinder block (Fig. 28).
3. Position the oil pan front seal on the cylinder cover. Make sure the tabs on the seal are over the oil pan gasket.
4. Place end seals in position, flush with the cylinder block oil pan rail. Position the oil pan rear seal on the rear main bearing cap (Fig. 28). Be sure the tabs on the seal are over the oil pan gasket.
5. Position the oil pan on the cylinder block. Install four bolts as shown in Fig. 29, to secure the front



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FIG. 28 Oil Pan Gaskets and Seals Installed

- and rear of the oil pan. Install the remaining bolts and torque to specification in the sequence shown.
6. Reinstall the clutch cover (or converter housing).
7. Raise the engine and remove the wood blocks. Lower the engine and install the engine support nuts. Torque to specification.
8. Install the starter and reconnect the starter cable.



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FIG. 29 Oil Pan Installation and Bolt Torque Sequence

9. Install the splash shield.
10. Reconnect the sway bar. Install the steering gear and power steering equipment disconnected following procedures in Group 13.
11. Connect the automatic transmission oil cooler lines at the radiator and reconnect the radiator lower cooling hose.
12. Lower the vehicle. Connect the radiator upper hose. Position the radiator shroud forward over the fan and install the attaching bolts. Maintain radial clearance shown in Group 27.
13. Connect the battery ground cable. Fill the cooling system following instructions in Group 27.
14. Install the oil level dipstick and fill the crankcase with the proper grade and amount of engine oil. Start the engine and check for oil or coolant leaks. Correct as necessary.

OIL PUMP

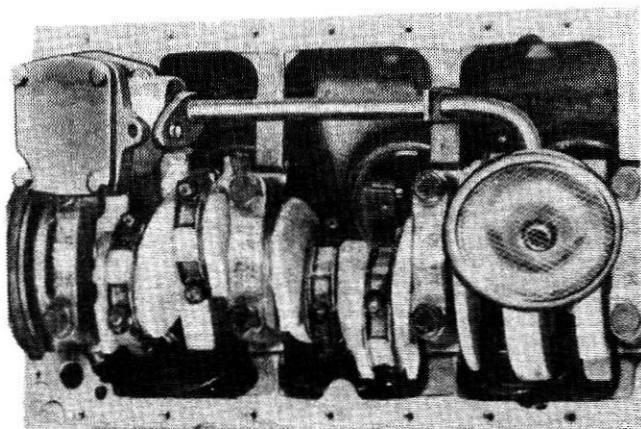
NOTE: The oil pump is only serviced as an assembly. See Part 21-01 for disassembly and cleaning instructions.

Removal

1. Remove oil pan as described under Oil Pan Removal.
2. Remove bolt that attaches oil pick-up screen to main bearing cap. Remove oil pump attaching bolts (Fig. 30). Lift off oil pump and withdraw oil pump drive shaft.

Installation

1. Prime the oil pump by filling either the inlet or outlet port with engine oil. Rotate the pump shaft to distribute the oil within the pump body.
2. Insert oil pump drive shaft into block with the pointed end facing inward. The pointed end is closest to the pressed-on flange. Place oil pump in



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FIG. 30 Oil Pump and Inlet Tube Installed

position with new gasket and install attaching screws. Tighten screws securely. Clean and install the oil pump inlet tube and screen assembly with a new gasket. Torque the bolts to specifications.

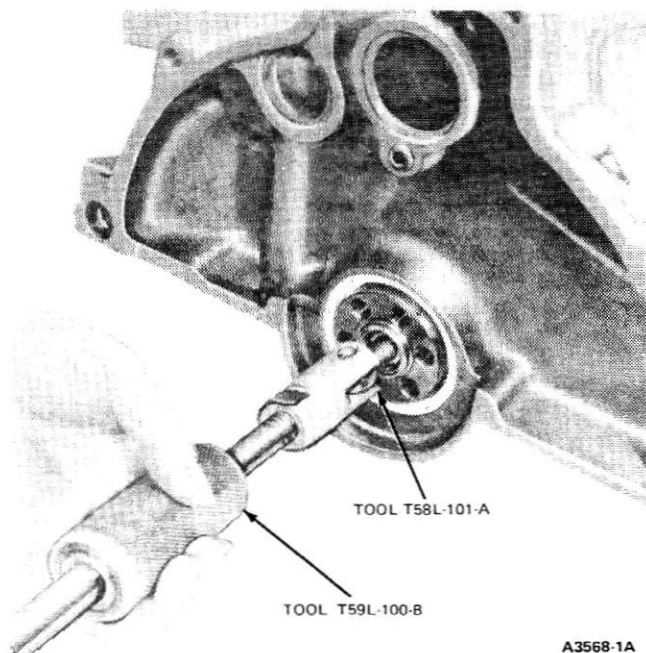
3. Install oil pan as described in this Section.
4. Operate the engine at fast idle speed and check for oil leaks.

CLUTCH PILOT BEARING

Inspection procedures are outlined in Part 21-01. **NOTE:** The clutch pilot bearing may be replaced with the flywheel installed or removed.

Removal

1. Remove the transmission, clutch pressure plate, and disc following the procedures in Group 16—Clutch.
2. Using Tools T59L-100-B and T58L-101-A, remove the pilot bearing (Fig. 31).

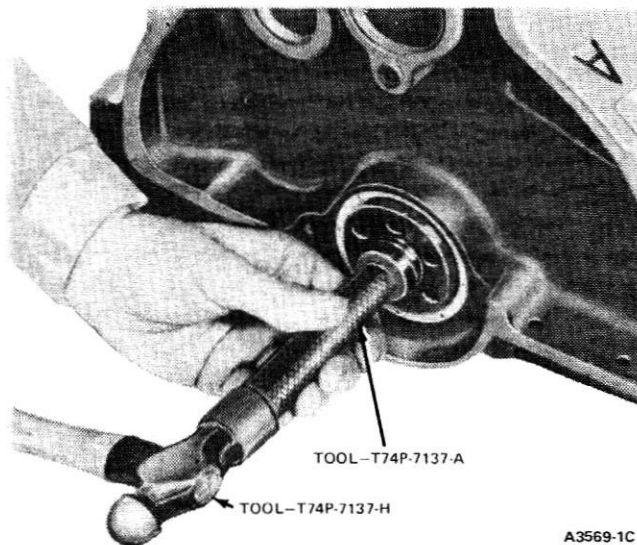


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FIG. 31 Removing Clutch Pilot Bearing

Installation

1. Using Tools T74P-7137-A and T71P-7137-H install the pilot service bearing with the seal facing the transmission (Fig. 32).



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FIG. 32 Installing Clutch Pilot Bearing

2. Install the clutch pressure plate and disc, and the transmission following the procedure in Group 16—Clutch.

FLYWHEEL

Removal

1. On a manual-shift transmission, remove the transmission, clutch pressure plate and disc, following the procedures in Group 16—Clutch.
On a vehicle with an automatic transmission, remove the transmission and converter housing following the procedure in Group 17—Automatic Transmission.
2. Refer to Part 21-01 for procedure for checking flywheel face runout. Remove the flywheel attaching bolts and remove the flywheel.

Installation

1. Clean and inspect all parts before installation. Position the flywheel on the crankshaft flange. Apply oil-resistant sealer to the attaching bolts. Install and torque the bolts in sequence across from each other to specifications.
2. On a manual-shift transmission, install the clutch pressure plate, disc, and the transmission following the procedures in Group 16—Clutch.

On a vehicle with automatic transmission, install the converter housing and transmission following the procedure in Group 17—Automatic Transmission. It is not necessary to adjust the transmission, when it has been removed only for flywheel removal.

CAMSHAFT REAR BEARING CORE PLUG

Removal

1. On a vehicle with a manual-shift transmission, slide the transmission to the rear and remove the clutch