

IN-VEHICLE SERVICE (Continued)

(Continued)

1. Thoroughly clean bearing inserts, connecting rod cap and connecting rod.
CAUTION: Contaminants allowed to remain on the cap or bearing can distort bearing or damage crankshaft journals.
2. Clean crankshaft journal and lubricate with Engine Assembly Lubricant D9AZ-19579-D (ESR-M99C80-A) or equivalent heavy engine oil.
3. Install bearing insert in the connecting rod and pull rod down until it seats on crankshaft.
When installing bearing insert ensure tab on bearing engages slot in rod and that bearing is fully seated in rod.
4. Install bearing insert in connecting rod cap and lubricate bearing surface with Engine Assembly Lubricant D9AZ-19579-D (ESR-M99C80-A) or equivalent heavy engine oil.
5. Install connecting rod cap and retaining nuts.
Tighten nuts to 41-49 N-m (31-36 lb-ft). Back off nuts two to three turns. Final tighten nuts to 41-49 N-m (31-36 lb-ft).
6. Install oil pan as outlined.
7. Install spark plugs.

5. Remove oil pan and oil pickup tube.
6. Remove front cover and water pump as an assembly.
7. Remove distributor drive gear.
8. Remove crankshaft sprocket, camshaft sprocket and timing chain. This requires pulling back on ratcheting mechanism of tensioner and installing pin through hole to relieve tension against chain.
9. Remove flywheel and rear cover plate.
NOTE: On Taurus Police applications remove windage tray.
10. Remove connecting rod caps. Turn crankshaft as necessary to position connecting rod in the low point of travel before removing rod cap.
Push piston up into cylinder bore after removing connecting rod cap. Ensure the crankshaft journals are not damaged.
Each connecting rod cap should be identified so it can be installed in its original position during assembly.
11. Remove main bearing caps.
12. Carefully lift crankshaft out of block to prevent damage to bearing surfaces.
Handle crankshaft with care to prevent possible damage to finished bearing surfaces.
13. Remove crankshaft rear seal and discard.

CAUTION: Because the engine crankshaft incorporates deep rolling of the main journal fillets, journal refinishing is limited to 0.25mm (0.010 inch)—undersize standard journal dimensions. Further main journal refinishing may result in fatigue failure of the crankshaft.

Refer to Section 03-00 for crankshaft cleaning, inspection and refinishing.

Crankshaft

Removal

1. Remove engine from vehicle as outlined.
2. Mount engine in a suitable workstand. If necessary, drain crankcase and cylinder block cooling jackets.
3. Disconnect secondary wire from the spark plugs.
Remove distributor cap and wires as an assembly.
4. Remove spark plugs.

10	10	10	10
11	11	11	11
12	12	12	12
13	13	13	13

4. Carefully lower crankshaft into position in cylinder block. Be careful not to damage main bearing surfaces.
5. If crankshaft main bearing journals have been replaced, install new bearings. Ensure tabs on main bearing assembly engage slots in the cap and block.
6. Ensure seal groove in cylinder block is clean.
7. Loosen lower intake manifold attachment nuts and remove lower intake manifold. Clean bearing surfaces and install new bearings. Ensure tabs on main bearing assembly engage slots in the cap and block.
8. If crankshaft main bearing journals have been replaced, install new bearings. Ensure tabs on main bearing assembly engage slots in the cap and block.
9. Ensure seal groove in cylinder block is clean.