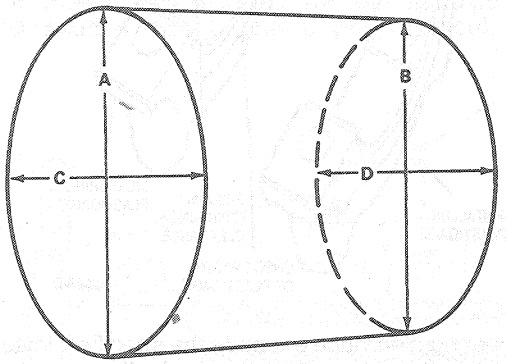
OVERHAUL (Continued)

Measure the diameter of each journal in at least four places to determine an out-of-round, taper or undersize condition. For Specification, refer to Section 03-01A (3.0L), 03-01B (3.0L / 3.2L SHO) or 03-01C (3.8L).

CHECK FOR OUT-OF-ROUND AT EACH END OF JOURNAL



A VS B = VERTICAL TAPER
C VS D = HORIZONTAL TAPER
A VS C AND B VS D = OUT OF ROUND

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On engines with a manual transaxle, check the fit of the clutch pilot bushing in the bore of the crankshaft. A needle roller bearing and adapter assembly is used as a clutch pilot bearing. It is press fit directly into the crankshaft and should not be loose. Inspect the inner surface of the bushing for wear or a bell-mouth condition. Check the inside diameter of the bearing to see if it is worn, or damaged. The bearing and adapter assembly cannot be serviced separately. The needle bearing clutch pilot can only be installed with the seal end of the bearing facing the transaxle. The bearing and seal are pre-greased and do not require additional lubrication. A new bearing must be installed whenever a bearing is removed.

Inspect the pilot bearing (roller bearing), if so equipped, for roughness, evidence of overheating or loss of lubricant. Replace it if any of these conditions are found.

Journals, Refinishing

CAUTION: Because the 3.8L V-6 engine crankshaft incorporates deep rolling of the main journal fillets, journal refinishing is limited to 0.25mm (0.010-inch) undersize of standard journal dimensions. Further main journal refinishing may result in fatigue failure of the crankshaft.

Dress minor imperfections such as scores, nicks or burrs with an oil stone. If the journals are severely marred or exceed the service limit, they should be refinished to size for the next undersize bearing.

If required, machine the journals to give the proper clearance with the next undersize bearing. If the journals will not clean up to maximum undersize bearing available, replace the crankshaft.

Always reproduce the same journal shoulder radius that existed originally. Too small a radius will result in fatigue failure of the crankshaft. Too large a radius will result in bearing failure due to radius ride of the bearing.

After refinishing the journals, chamfer the oil holes. Polish the journal with a No. 500 grit polishing cloth and engine oil (crocus cloth may also be used as a polishing agent) to obtain a smooth finish.

NOTE: On 3.0L V-6 journal radius is undercut and should be refinished. Do not grind more than 0.20-inch off 3.0L journal or deep fillet rolling for strength increase will be compromised.

Pistons, Pins and Rings

Fitting Pistons

Tools Required:

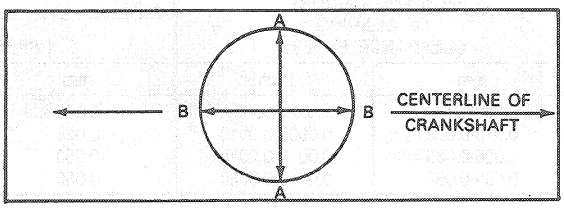
- Engine Cylinder Hone Set T73L-6011-A

Pistons are available for service in standard size and oversize shown in Section 03-01A (3.0L), 03-01B (3.0L / 3.2L SHO) or 03-01C (3.8L) under Specifications.

The standard size pistons are color-coded red, blue or yellow on the dome.

Measure the cylinder bore and select the piston to ensure the proper clearance. When the bore diameter is in the lower one-third of the specified range, a red piston should be used. When the bore diameter is in the middle one-third, a blue piston should be used. When the bore diameter is in the upper one-third, a yellow piston should be used.

NOTE: Cylinder bore must be clean and dry, and engine block must remain at room temperature (21°C / 70°F) for eight hours before taking cylinder measurements.



A - At Right angle to center line of engine
B - Parallel to center line of engine

Top Measurement: Make 12.70mm (1/2 inch) below top of block deck

Bottom Measurement: Make within 12.70mm (1/2 inch) above top of piston - when piston is at its lowest travel (B.D.C)

Bore Service Limit: Equals the average of "A" and "B" when measured at the center of the piston travel.

Taper: Equals difference between "A" top and "A" bottom.

Out-of-Round: Equals difference between "A" and "B" when measured at the center of piston travel.

Refer to Specification tables at end of each engine section.

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