

not out-of-round. However, if a bearing is being fitted to an out-of-round journal 0.025 mm (0.001 inch) maximum, be sure to fit to maximum diameter of journal. If bearing is fitted to minimum diameter, and journal is out-of-round 0.025 mm (0.001 inch), interference between bearing and journal will result in rapid bearing failure. If flattened gauging plastic tapers toward middle or ends, there is a difference in clearance indicating taper, low spot or other irregularity of bearing or journal. Be sure to measure journal with a micrometer if flattened gauging plastic indicates more than 0.025 mm (0.001 inch) difference.

6. If bearing clearance is within specifications, bearing insert is satisfactory. If clearance is not within specifications, replace insert. Always replace both upper and lower inserts as a unit. When bearing cap is installed and clearance is less than 0.025 mm (0.001 inch), inspect for burrs or nicks.
7. A standard, 0.025 mm (0.001 inch) or 0.05 mm (0.002 inch) undersize bearing may produce proper clearance. If not, it will be necessary to regrind crankshaft journal for use with next undersize bearing. After selecting new bearing, recheck clearance.
8. Proceed to next bearing. When checking #1 crankshaft bearing, loosen accessory drive belt so as to prevent tapered reading with gauging plastic. After all bearings have been checked, rotate crankshaft to see that there is no excessive drag.

Install or Connect

NOTICE: Refer to "Notice" on page 6A3A-1.

1. Crankshaft bearings (110 and 111) into engine block (67) and crankshaft bearing caps (107) and rear crankshaft bearing cap (109).
 - A. Coat crankshaft bearings (110 and 111) with oil.
 - B. Insert plain (unnotched) end between crankshaft and indented or notched side of block. Rotate bearing into place using J 8080 as previously described, and remove J 8080 from oil hole in crankshaft journal.
2. Crankshaft bearing caps (107) and rear crankshaft bearing cap (109) with assembled crankshaft bearings (110 and 111) with arrows pointing toward front of engine.
3. Crankshaft bearing cap bolts/screws (108) and studs.
 - With crankshaft (98), crankshaft bearings (110 and 111) and crankshaft bearing caps (107) and rear crankshaft bearing cap (109) installed and bolts/screws (108) and studs started, thrust crankshaft (98) rearward to set and align bearing caps (107 and 109). Then thrust crankshaft forward to align rear faces of rear crankshaft bearings (111).

Tighten

- Crankshaft bearing cap bolts/screws (108) and studs to 105 N.m (77 lb. ft.).

Measure

- Crankshaft end play, using a dial indicator or feeler gage. Refer to "Specifications" in this section.
- If using a feeler gage, measure between the front of the rear crankshaft bearing cap (109) and the crankshaft thrust surface.

ENGINE FLYWHEEL

Figure 27

ENGINE FLYWHEEL REPLACEMENT

Remove or Disconnect

1. Transmission. Refer to SECTION 7A for an automatic transmission, SECTION 7B for a manual transmission and SECTION 7C for the clutch.
2. Engine flywheel bolts/screws (136 or 138) and engine flywheel (135 or 137).

Install or Connect

NOTICE: Refer to "Notice" on page 6A3A-1.

1. Engine flywheel (135 or 137) and engine flywheel bolts/screws (136 or 138).

Tighten

- Bolts/screws (136 or 138) to 100 N.m (74 lb. ft.).
2. Transmission. Refer to SECTION 7A for an automatic transmission, SECTION 7B for a manual transmission and SECTION 7C for the clutch.

ENGINE FLYWHEEL BALANCING

Figure 27

Inspect

- Engine flywheel (135 or 137) for missing or loose converter-to-flywheel bolts/screws. Tighten or replace as necessary.
- Converter for damage, or missing balance weights. If converter is damaged or balance weights are missing, replace converter. Refer to SECTION 7A.
- If engine flywheel is replaced, new balance weights (134) of the same size must be installed on new flywheel in same hole locations as old flywheel.

CRANKSHAFT REAR OIL SEAL

Figures 25, 28 and 29

Tool Required:

J 35621 Rear Main Seal Installer

1. Engine flywheel. Refer to "Engine Flywheel Replacement" under "Engine Flywheel" in this section.
 - Care should be taken not to nick crankshaft sealing surface when removing seal.
2. Crankshaft rear oil seal.
 - Using notches provided in crankshaft rear oil seal housing (114), pry out seal with a screwdriver.

Install or Connect

1. Coat new seal entirely with engine oil.
2. Seal onto J 35621.
3. J 35621 onto rear of crankshaft (98). Tighten screws snugly to ensure seal will be installed squarely over crankshaft (98).

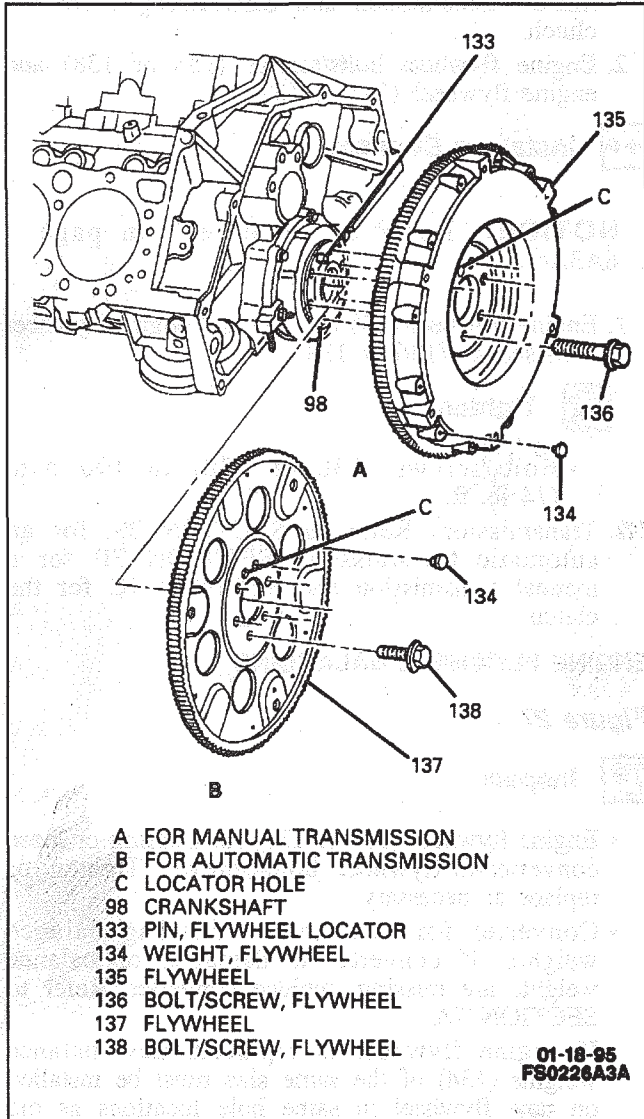


Figure 27 - Engine Flywheel

4. Crankshaft rear oil seal to crankshaft (98) and crankshaft rear oil seal housing (114).
5. Tighten wing nut on J 35621 until it bottoms.
6. Remove J 35621 from crankshaft rear oil seal housing (114).
7. Engine flywheel. Refer to "Engine Flywheel Replacement" under "Engine Flywheel" in this section.

CRANKSHAFT REAR OIL SEAL HOUSING AND GASKET

Figures 25 and 28

Remove or Disconnect

1. Engine flywheel. Refer to "Engine Flywheel Replacement" under "Engine Flywheel" in this section.

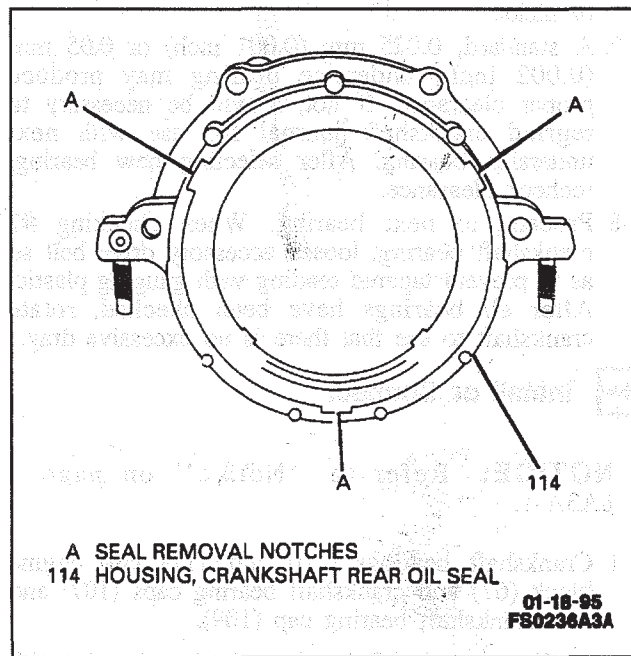


Figure 28 - Removing Crankshaft Rear Oil Seal

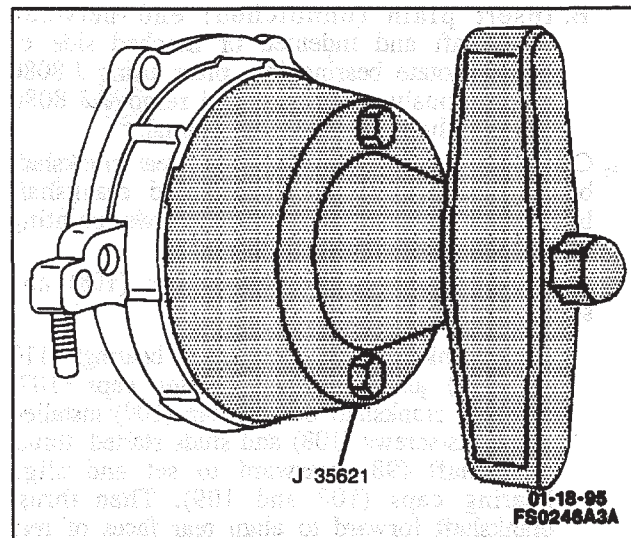


Figure 29 - Installing Crankshaft Rear Oil Seal