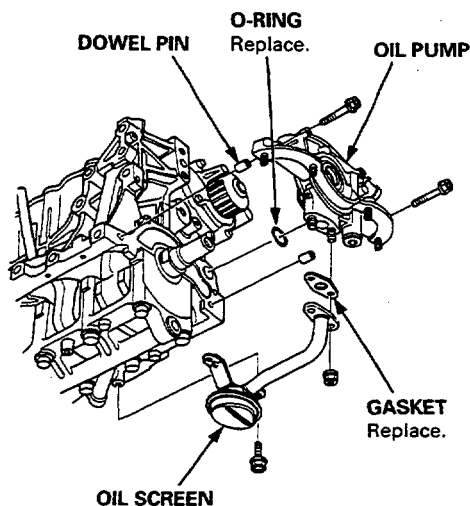




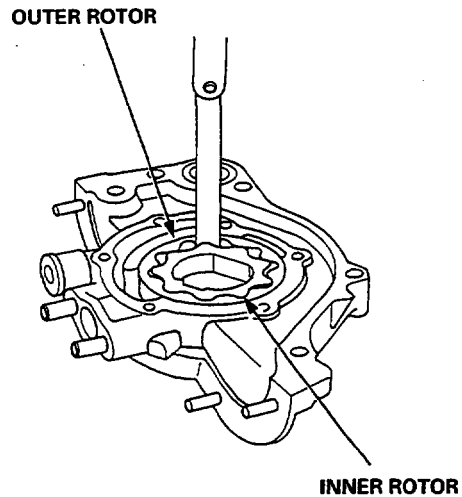
Removal/Inspection/Installation

1. Drain the engine oil.
2. Turn the crankshaft and align the white groove on the crankshaft pulley with the pointer on the lower cover.
3. Remove the cylinder head cover and upper cover.
4. Remove the power steering pump belt, air conditioner belt and the alternator belt.
5. Remove the crankshaft pulley and remove the lower cover.
6. Remove the timing belt.
7. Remove the drive pulley.
8. Remove the oil pan and oil screen.
9. Remove the oil pump.



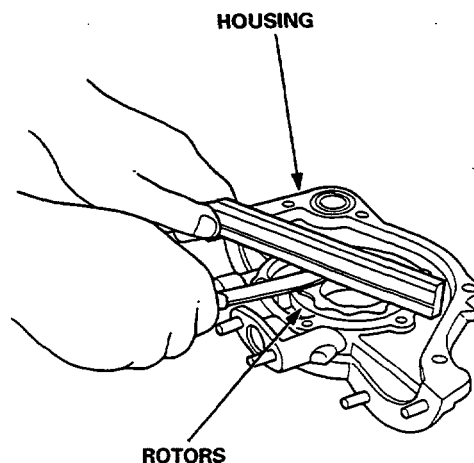
10. Remove the screws from the pump housing, then separate the housing and cover.
11. Check the inner-to-outer rotor radial clearance on the pump rotor.

Inner Rotor-to-Outer Rotor Radial Clearance
Standard (New): 0.02 – 0.14 mm
(0.001 – 0.006 in)
Service Limit: 0.20 mm (0.008 in)



12. Check the housing-to-rotor axial clearance on the pump rotor.

Housing-to-Rotor Axial Clearance
Standard (New): 0.03 – 0.08 mm
(0.001 – 0.003 in)
Service Limit: 0.15 mm (0.006 in)



(cont'd)

Oil Pump

Removal/Inspection/Installation (cont'd)

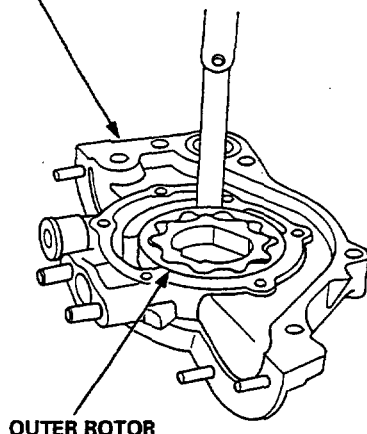
13. Check the housing-to-outer rotor radial clearance.

Housing-to-Outer Rotor Radial Clearance:

Standard (New): 0.10 – 0.18 mm
(0.004 – 0.007 in)

Service Limit: 0.20 mm (0.008 in)

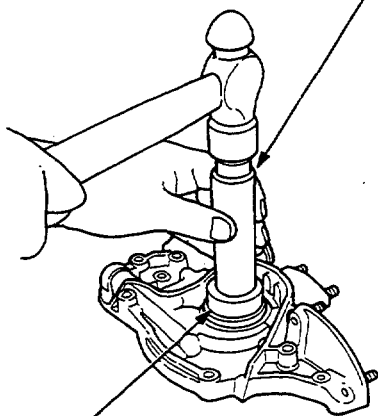
HOUSING



14. Inspect both rotors and pump housing for scoring or other damage. Replace parts if necessary.
15. Remove the old oil seal from the oil pump.
16. Gently tap in the new oil seal until the special tool bottoms on the pump.

NOTE: The oil seal alone can be replaced without removing the oil pump.

HANDLE DRIVER
07749 – 0010000



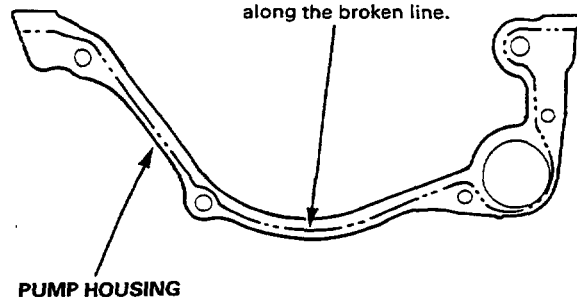
DRIVER ATTACHMENT,
52 x 55 mm
07746 – 0010400

17. Reassemble the oil pump, applying thread lock to the pump housing screws.
18. Check that the oil pump turns freely.
19. Apply a light coat of oil to the seal lip.
20. Install the two dowel pins and new O-ring on the oil pump.
21. Apply liquid gasket to the cylinder block mating surface of the oil pump.

NOTE:

- Use liquid gasket, Part No. 0Y740 – 99986.
- Check that the mating surfaces are clean and dry before applying liquid gasket.
- Apply liquid gasket evenly, in a narrow bead centered on the mating surface.
- To prevent leakage of oil, apply liquid gasket to the inner threads of the bolt holes.
- Do not install the parts if 5 minutes or more have elapsed since applying liquid gasket. Instead reapply liquid gasket after removing the old residue.
- After assembly, wait at least 20 minutes before filling the engine with oil.

Apply liquid gasket
along the broken line.





22. Install the oil pump on the cylinder block.
- Apply grease to the lip of the oil pump seal. Then, install the oil pump onto the crankshaft. When the pump is in place, clean any excess grease off the crankshaft and check that the oil seal lip is not distorted.

23. Install the oil screen.

24. Install the oil pan (see page 7-21).

NOTE: Clean the oil pan gasket mating surfaces.

