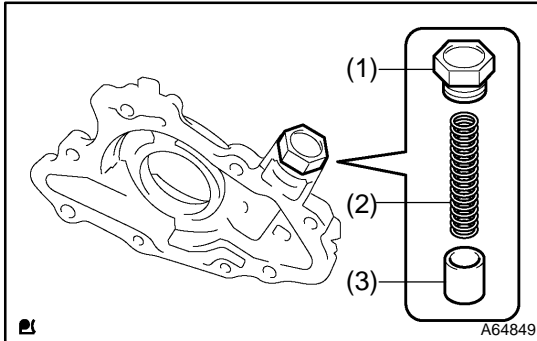
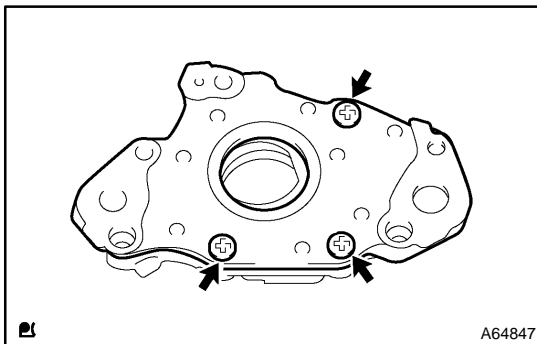


OVERHAUL



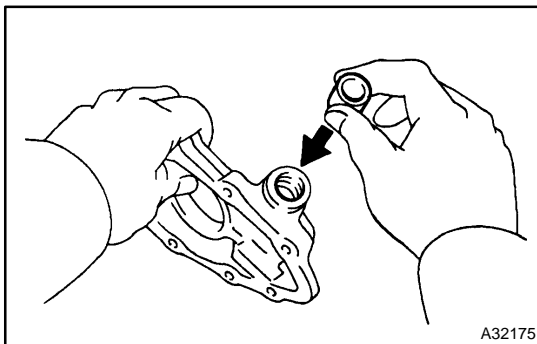
1. REMOVE OIL PUMP RELIEF VALVE

- (a) Remove the oil pump relief valve plug, oil pump relief valve spring and oil pump relief valve.
- (1) Oil pump relief valve plug
 - (2) Oil pump relief valve spring
 - (3) Oil pump relief valve

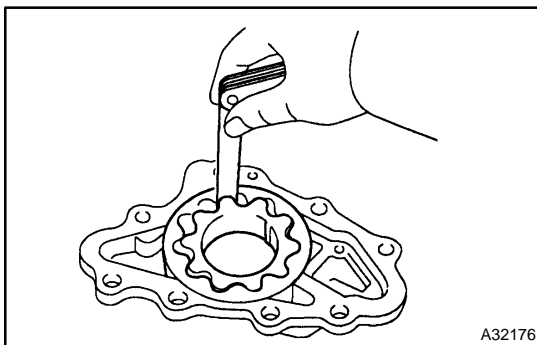


2. INSPECT OIL PUMP ASSY

- (a) Remove 3 screws and oil pump cover.



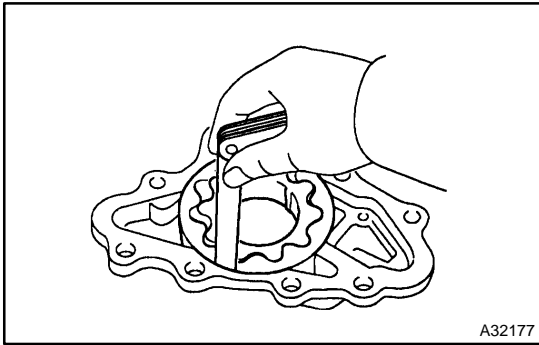
- (b) Inspect the oil pump relief valve.
- (1) Coat the valve with engine oil and check that it falls smoothly into the valve hole by its own weight.
- (c) Inspect the oil pump rotor sub-assembly.
- (1) Coat the oil pump gear set with engine oil and place them into the oil pump body. Check that the rotors revolve smoothly.



- (d) Inspect rotor tip clearance.
- (1) Using a feeler gauge, measure the clearance between the drive and driven rotor tips.

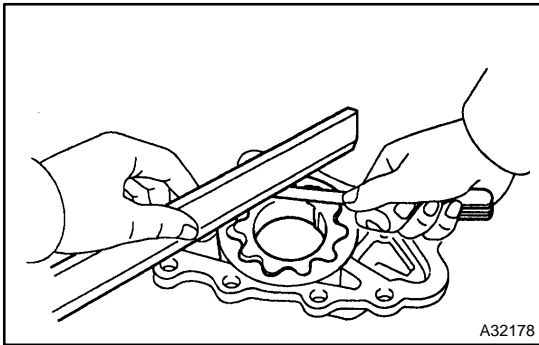
Standard tip clearance:

0.040 – 0.160 mm (0.0016 – 0.0063 in.)



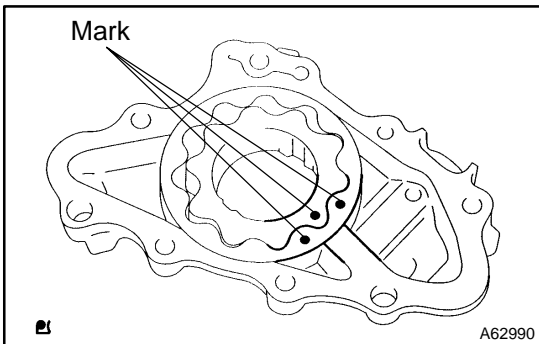
- (e) Inspect body clearance.
 - (1) Using a feeler gauge, measure the clearance between the driven rotor and body.

Standard body clearance:
0.260 – 0.325 mm (0.0102 – 0.0128 in.)

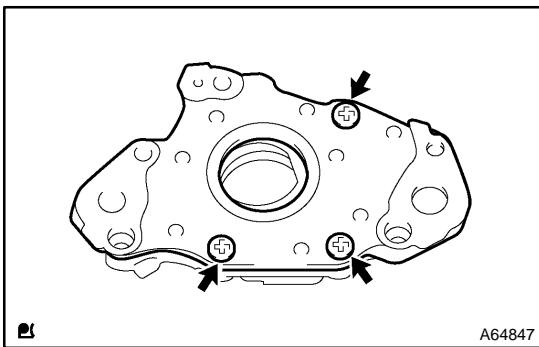


- (f) Inspect rotor side clearance.
 - (1) Using a feeler gauge and precision straight edge, measure the clearance between the rotors and precision straight edge.

Standard side clearance:
0.025 – 0.071 mm (0.0010 – 0.0028 in.)

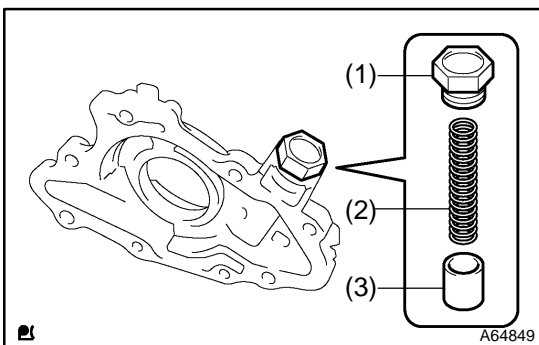


- (g) Install oil pump rotor sub-assembly.
 - (1) Coat the oil pump gear set with engine oil and place it into pump body with the marks facing the pump body cover side.



- (h) Install the oil pump cover with 3 screws.

Torque: 10 N·m (105 kgf·cm, 8.0 ft·lbf)



- 3. INSTALL OIL PUMP RELIEF VALVE**
- (a) Install the oil pump relief valve plug, oil pump relief valve spring and oil pump relief valve.

Torque: 37 N·m (375 kgf·cm, 27 ft·lbf)

 - (1) Oil pump relief valve plug
 - (2) Oil pump relief valve spring
 - (3) Oil pump relief valve