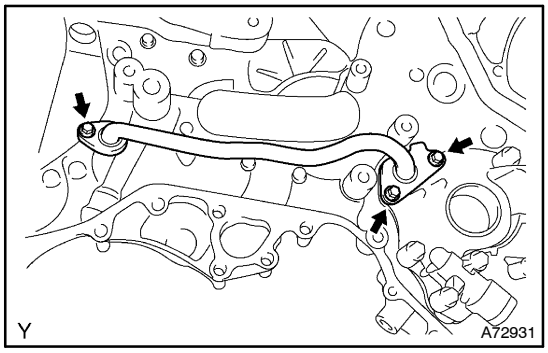
170DC–01

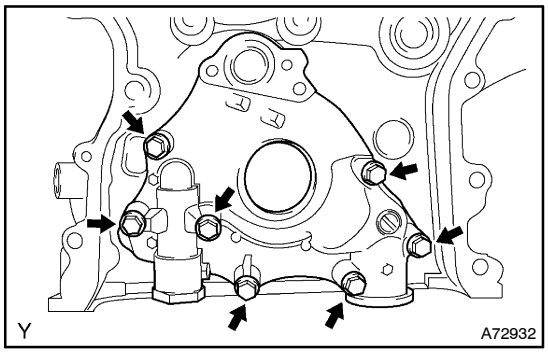
OVERHAUL



1. REMOVE OIL PUMP COVER

(a) Remove the 3 bolts and oil pipe.

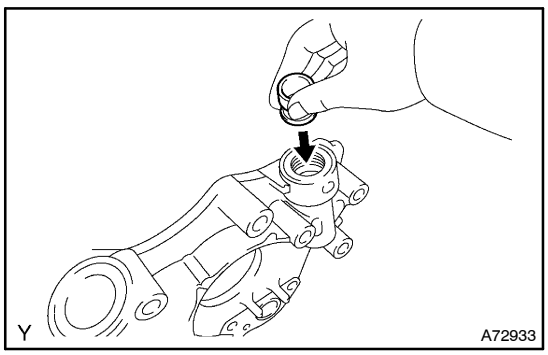
(b) Remove the 2 O–rings.



(c) Remove the 7 bolts, oil pump cover, drive rotor and driven rotor.

2. REMOVE OIL PUMP RELIEF VALVE

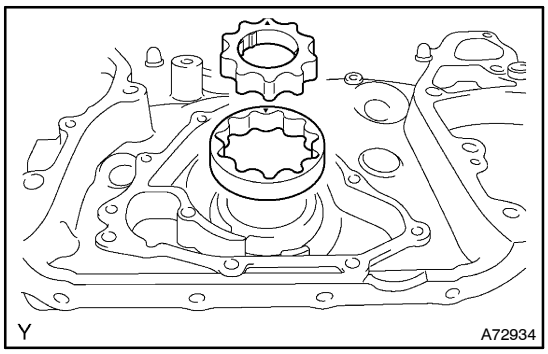
(a) Remove the plug, spring and relief valve.



3. INSPECT OIL PUMP RELIEF VALVE

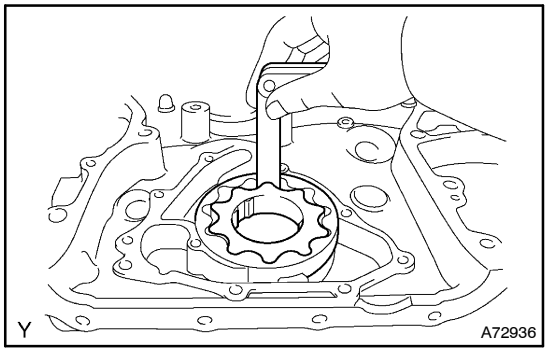
(a) Coat the valve with engine oil and check that it falls smoothly into the valve hole by its own weight.

If it does not, replace the relief valve. If necessary, replace the oil pump assembly.

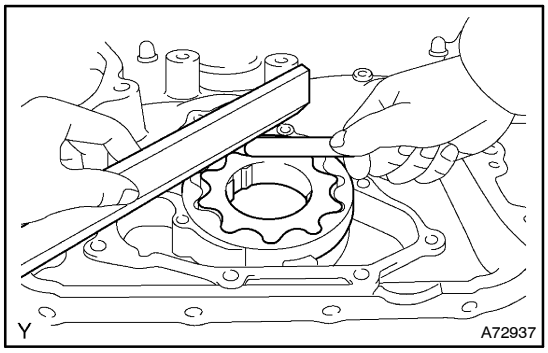


4. INSPECT OIL PUMP ROTOR SET

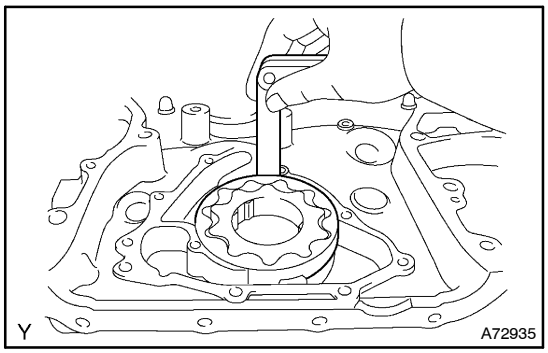
(a) Place the drive and driven rotors into the timing chain cover with the marks facing upward.



(b) Inspect rotor tip clearance.
(1) Using a feeler gauge, measure the clearance between the drive and driven rotor tips.
Standard tip clearance:
0.06 – 0.16 mm (0.0024 – 0.0063 in.)
Maximum tip clearance: 0.16 mm (0.0063 in.)
If the tip clearance is greater than maximum, replace the rotor as a set.



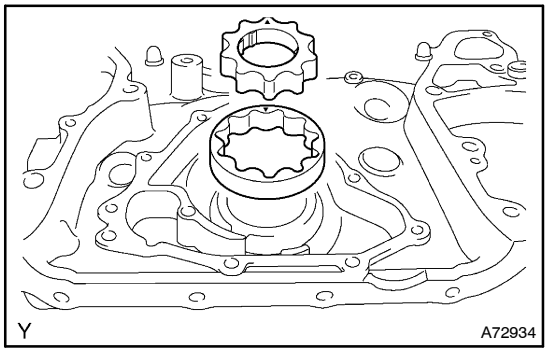
(c) Inspect rotor side clearance.
(1) Using a feeler gauge and precision straight edge, measure the clearance between the rotors and precision straight edge.
Standard side clearance:
0.03 – 0.09 mm (0.0012 – 0.0035 in.)
Maximum side clearance: 0.09 mm (0.0035 in.)
If the side clearance is greater than maximum, replace the rotors as a set. If necessary, replace the timing chain cover assembly.



(d) Inspect rotor body clearance.
(1) Using a feeler gauge, measure the clearance between the driven rotor and body.
Standard body clearance:
0.250 – 0.325 mm (0.0098 – 0.0128 in.)
Maximum body clearance: 0.325 mm (0.0128 in.)
If the body clearance is greater than maximum, replace the rotors as a set. If necessary, replace the timing chain cover assembly.

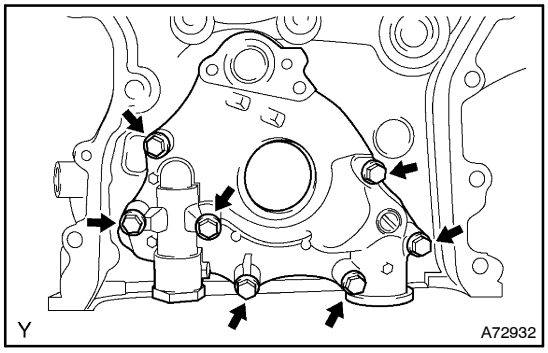
5. INSTALL OIL PUMP RELIEF VALVE

(a) Coat the relief valve with engine oil and insert the relief valve and spring into the valve hole.
(b) Install the relief valve plug.
Torque: 49 N·m (500 kgf·cm, 36 ft·lbf)

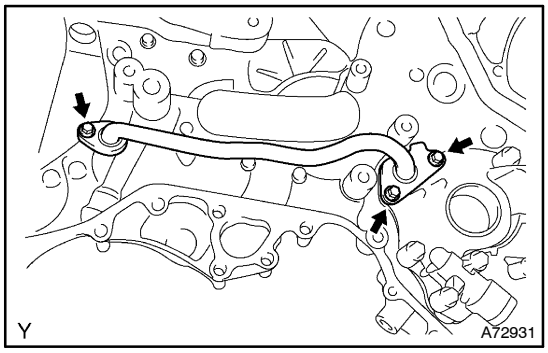


6. INSTALL OIL PUMP COVER

(a) Apply new engine oil to the drive and driven rotors.
(b) Place the drive and driven rotors into the timing chain cover with the marks facing the oil pump cover side.



(c) Install the oil pump cover with the 7 bolts.
Torque: 9.0 N·m (92 kgf·cm, 80 in.·lbf)
(d) Install a new O–ring to the oil pump cover.
(e) Install a new O–ring to the oil pipe.



(f) Install the oil pipe with the 3 bolts.
Torque: 9.0 N·m (92 kgf·cm, 80 in.·lbf)