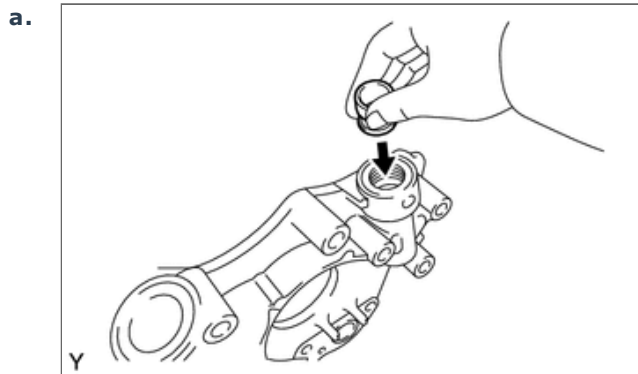


PROCEDURE

1.INSPECT OIL PUMP RELIEF VALVE

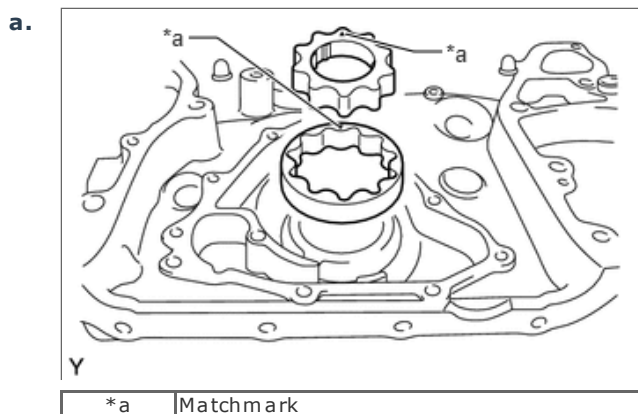
15131



Coat the oil pump relief valve with engine oil, and then check that it falls smoothly into the valve hole by its own weight.
If the valve does not fall smoothly into the valve hole, replace the oil pump relief valve. If necessary, replace the timing chain cover sub-assembly.

2.INSPECT OIL PUMP ROTOR SET

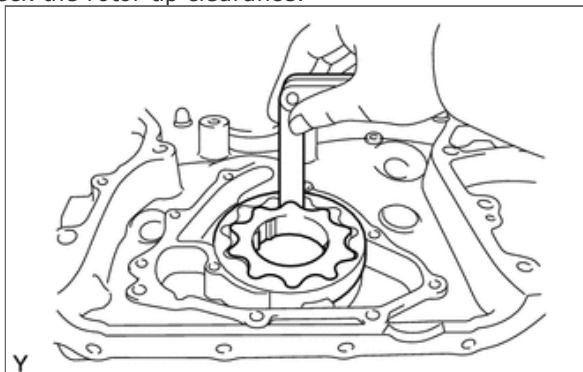
15102



Place the drive rotor and driven rotor into the timing chain cover sub-assembly with the matchmarks facing upward.

b. Check the rotor tip clearance.

i.



Using a feeler gauge, measure the clearance between the drive rotor and driven rotor tips.

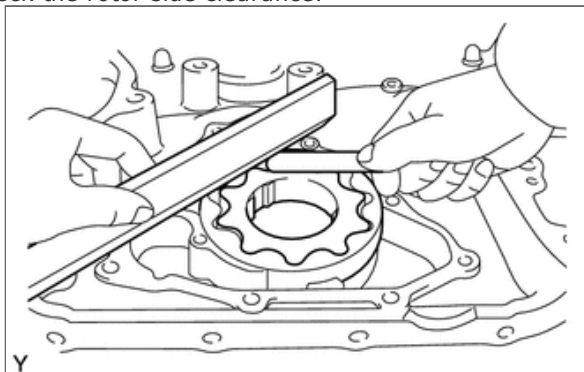
Standard tip clearance:
0.06 to 0.16 mm (0.00236 to 0.00630 in.)

Maximum tip clearance:
0.16 mm (0.00630 in.)

If the tip clearance is more than the maximum, replace the oil pump rotor set.

c. Check the rotor side clearance.

i.



Using a feeler gauge and precision straightedge, measure the clearance between the rotors and precision straightedge.

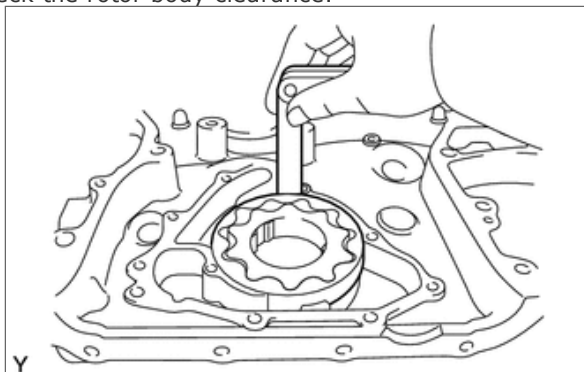
Standard side clearance:
0.03 to 0.09 mm (0.00118 to 0.00354 in.)

Maximum side clearance:
0.09 mm (0.00354 in.)

If the side clearance is more than the maximum, replace the oil pump rotor set. If necessary, replace the timing chain cover sub-assembly.

d. Check the rotor body clearance.

i.



Using a feeler gauge, measure the clearance between the driven rotor and body.

Standard body clearance:
0.250 to 0.325 mm (0.00984 to 0.0128 in.)

Maximum body clearance:
0.325 mm (0.0128 in.)

If the body clearance is more than the maximum, replace the oil pump rotor set. If necessary, replace the timing chain cover sub-assembly.