

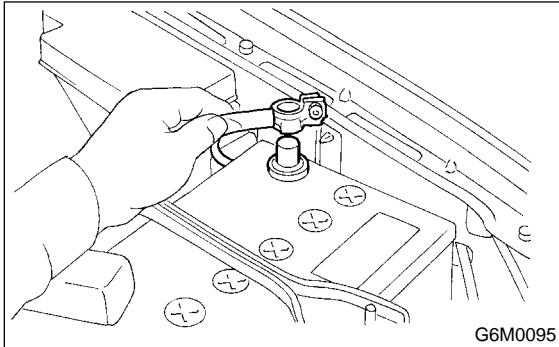
OIL PUMP

Lubrication

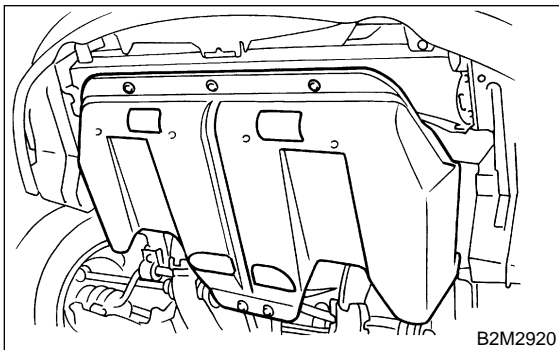
4. Oil Pump S148070

A: REMOVAL S148070A18

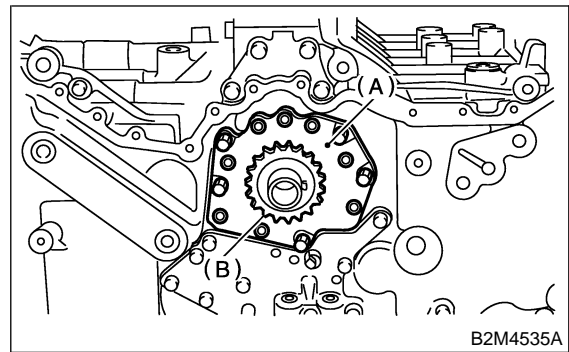
- 1) Disconnect battery ground cable.



- 2) Lift-up the vehicle.
- 3) Remove under cover.



- 4) Drain coolant. <Ref. to CO(H6)-18, DRAINING OF ENGINE COOLANT, REPLACEMENT, Engine Coolant.>
- 5) Lower the vehicle.
- 6) Remove radiator. <Ref. to CO(H6)-23, REMOVAL, Radiator.>
- 7) Remove V-belt. <Ref. to ME(H6)-31, REMOVAL, V-belt.>
- 8) Remove front chain cover. <Ref. to ME(H6)-43, REMOVAL, Front Chain Cover.>
- 9) Remove timing chain. <Ref. to ME(H6)-45, REMOVAL, Timing Chain.>
- 10) Remove oil pump cover and crankshaft sprocket.

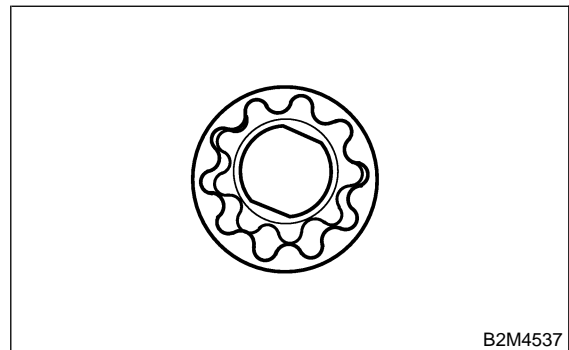


- (A) Oil pump cover
- (B) Crankshaft sprocket

- 11) Remove inner rotor and outer rotor.

B: INSTALLATION S148070A11

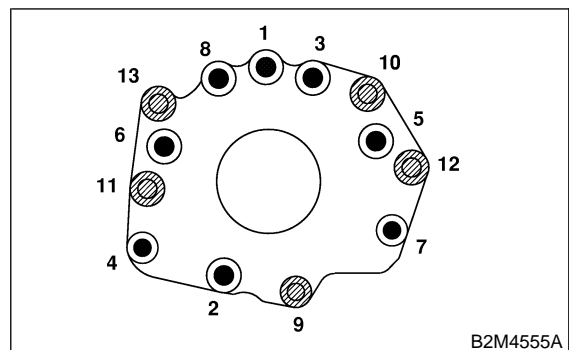
- 1) Apply engine oil to the entire surface area of both inner and outer rotor.



- 2) Install the inner rotor by fitting it into the groove on the crankshaft, and then assemble the outer rotor.
- 3) Install oil pump cover.
- 4) Tighten the bolts in the numerical sequence shown in the figure.

CAUTION:
Make sure that bolt mounting position is correct.

Tightening torque:
6.4 N·m (0.65 kgf·m, 4.7 ft·lb)



- 5) Install crank sprocket.

- 6) Install timing chain. <Ref. to ME(H6)-46, INSTALLATION, Timing Chain.>
- 7) Install front chain cover. <Ref. to ME(H6)-43, INSTALLATION, Front Chain Cover.>
- 8) Install V-belt. <Ref. to ME(H6)-31, INSTALLATION, V-belt.>
- 9) Install radiator. <Ref. to CO(H6)-24, INSTALLATION, Radiator.>
- 10) Fill coolant. <Ref. to CO(H6)-18, FILLING OF ENGINE COOLANT, REPLACEMENT, Engine Coolant.>

C: INSPECTION S148070A10

1. TIP CLEARANCE S148070A1001

Measure the tip clearance of rotors. If the clearance exceeds the limit, replace rotors as a matched set.

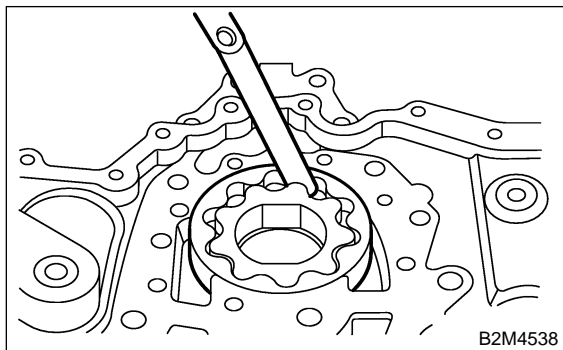
Tip clearance:

Standard

0.04 — 0.14 mm (0.0016 — 0.0055 in)

Limit

0.18 mm (0.0071 in)



2. CASE CLEARANCE S148070A1002

Measure the clearance between the outer rotor and the rear chain cover rotor housing. If the clearance exceeds the limit, replace the rotor.

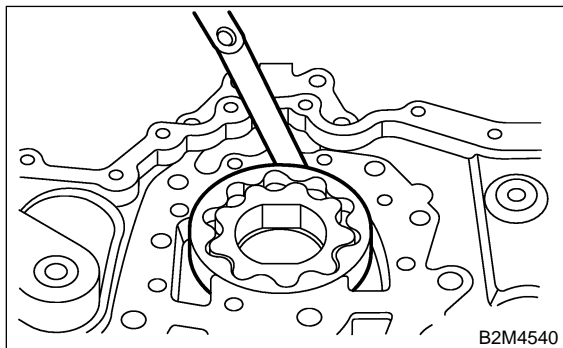
Case clearance:

Standard

0.10 — 0.18 mm (0.0039 — 0.0071 in)

Limit

0.25 mm (0.0098 in)



3. SIDE CLEARANCE S148070A1003

Measure clearance between oil pump inner rotor and rear chain cover. If the clearance exceeds the limit, replace rotor or pump body.

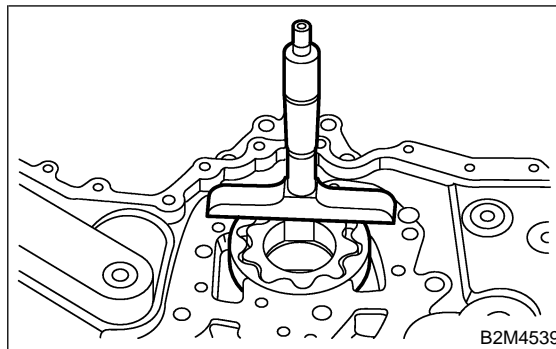
Side clearance:

Standard

0.02 — 0.07 mm (0.0008 — 0.0028 in)

Limit

0.15 mm (0.0059 in)



4. OIL PUMP CASE S148070A1004

Check the oil pump case for worn shaft hole, clogged oil passage, cracks and other faults.