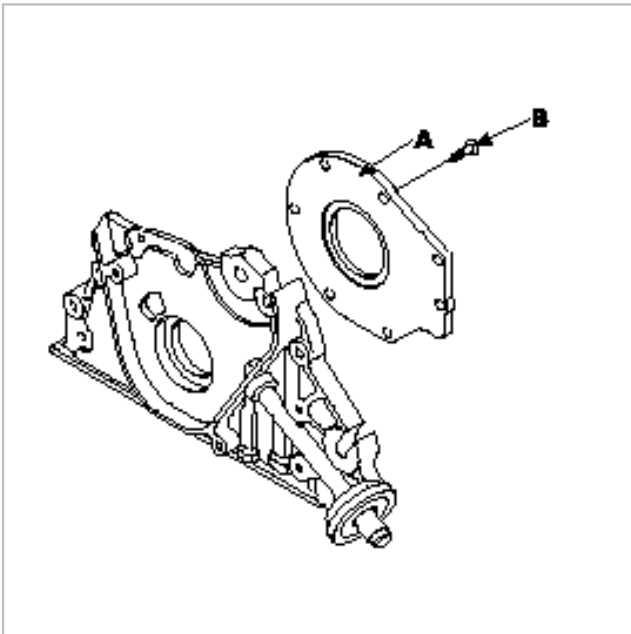


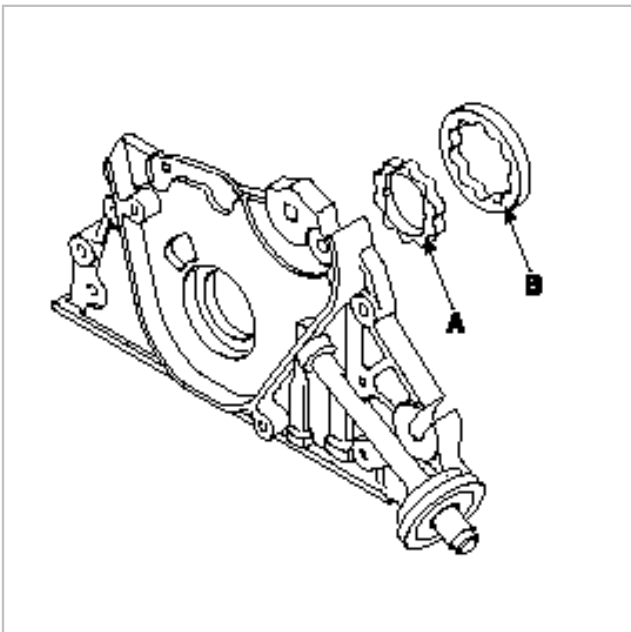


REMOVAL

1. Drain engine oil.
2. Remove the drive belts.
3. Turn the crankshaft and align the white groove on the crankshaft pulley with the pointer on the lower cover.
(see page-)
4. Remove the timing belt.(see page EM-13)
5. Remove the oil pan and oil screen.(see page EM-25)
6. Remove the front case.
 - (1) Remove the screws from the pump housing, then separate the housing and cover (A).



- (2) Remove the inner (A) and outer (B) rotors.



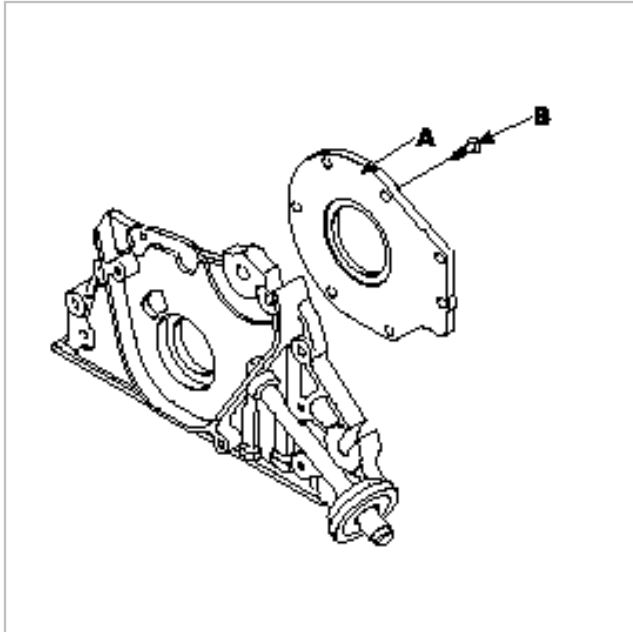
INSTALLATION

1. Install oil pump.

- (1) Place the inner and outer rotors into front case with the marks facing the oil pump cover side.
- (2) Install the oil pump cover (A) to front case with the 7 screws.

Tightening torque

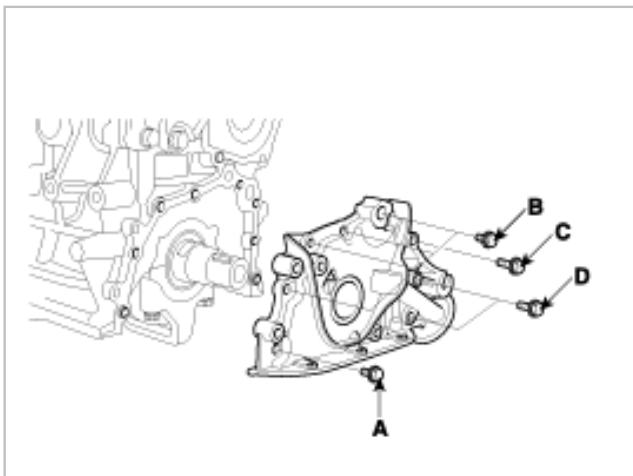
6 ~ 9Nm (60 ~ 90kgf.cm, 4.4 ~ 6.6lb.ft)



2. Check that the oil pump turns freely.

3. Install the oil pump on the cylinder block.

Place a new front case gasket on the cylinder block. Apply engine oil 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.



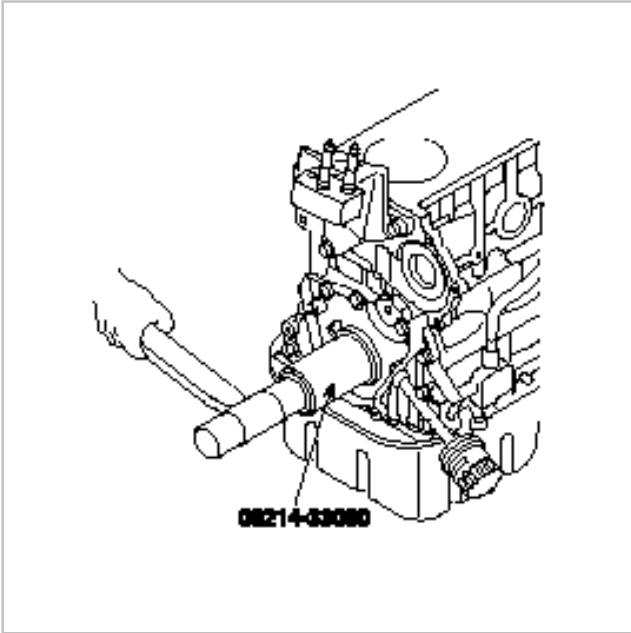
Body length

- (A) : 25mm (0.98 in)
- (B) : 20mm (0.787 in)
- (C) : 38mm (1.496 in)
- (D) : 45mm (1.771 in)

Tightening torque

20 ~ 27Nm (200 ~ 270kg.cm, 14.5 ~ 19.8 lb.ft)

4. Apply a light coat of oil to the seal lip.
5. Using the special tool(09214-33000), install the oil seal.



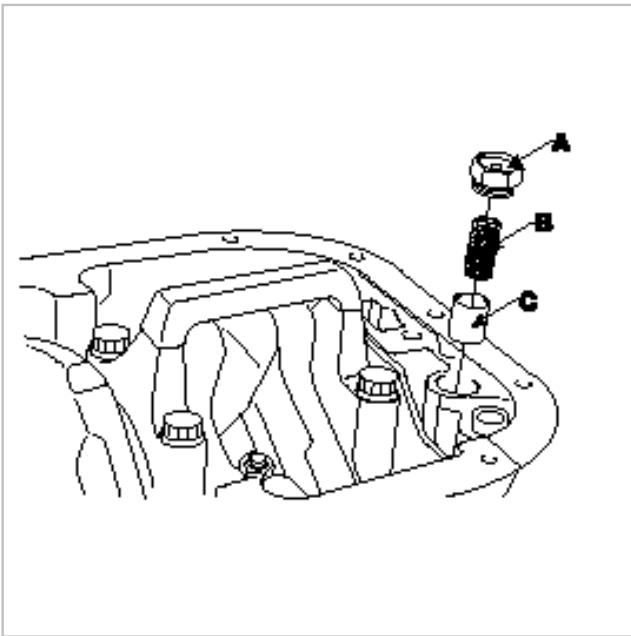
6. Install the oil screen.(see page-)
7. Install the oil pan.(see page-)

NOTE

Clean the oil pan gasket mating surfaces.

DISASSEMBLY

1. Remove the relief plunger.
Remove the plug(A), spring (B)and relief plunger (C).



INSPECTION

1. Inspect relief plunger.

Coat the valve with engine oil and check that it falls smoothly into the plunger hole by its own weight. If it does not, replace the relief plunger. If necessary, replace the front case.

2. Inspect relief valve spring.

Inspect for distorted or broken relief valve spring.

Standard value

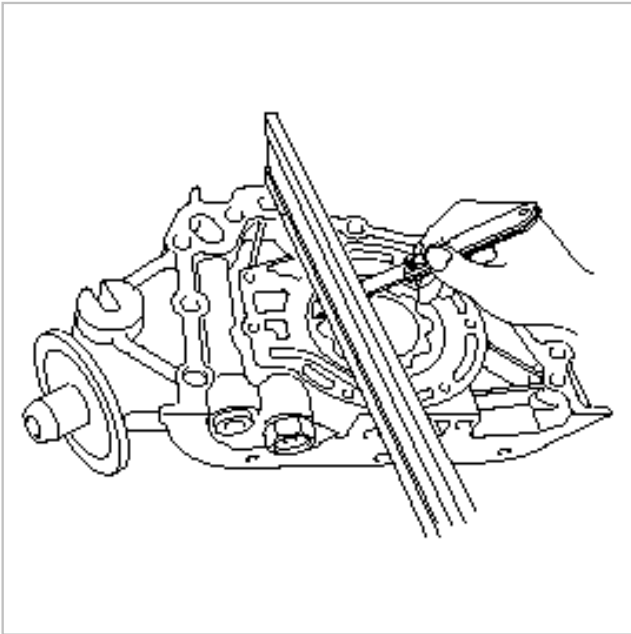
Free height : 43.8mm (91.724 in.)

Load : 3.7kg/40.1mm (8.14 lb/1.579 in.)

3. Inspect rotor side clearance.

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

Side clearance	Outer gear	0.04 ~ 0.09mm (0.0016 ~ 0.0035in.)
	Inner gear	0.04 ~ 0.085mm (0.0016 ~ 0.0033in.)



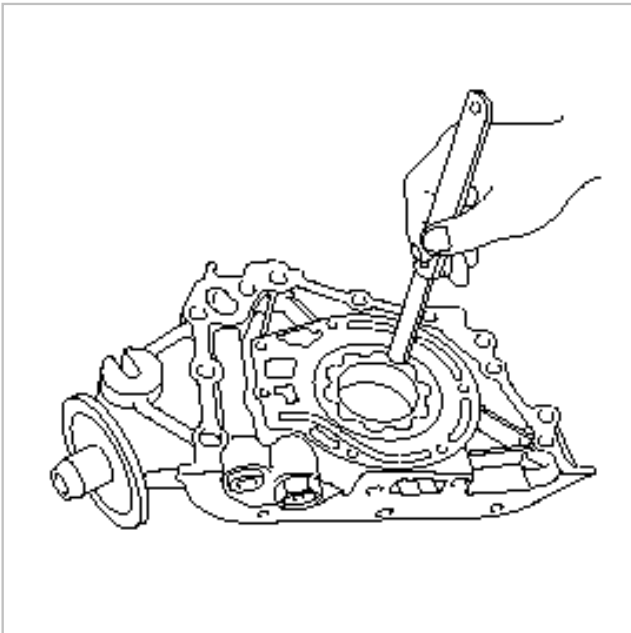
If the side clearance is greater than maximum, replace the rotors as a set. If necessary, replace the front case.

4. Inspect rotor tip clearance.

Using a feeler gauge, measure the tip clearance between the inner and outer rotor tips.

Tip clearance

0.025 ~ 0.069 mm(0.0010 ~ 0.0027 in.)



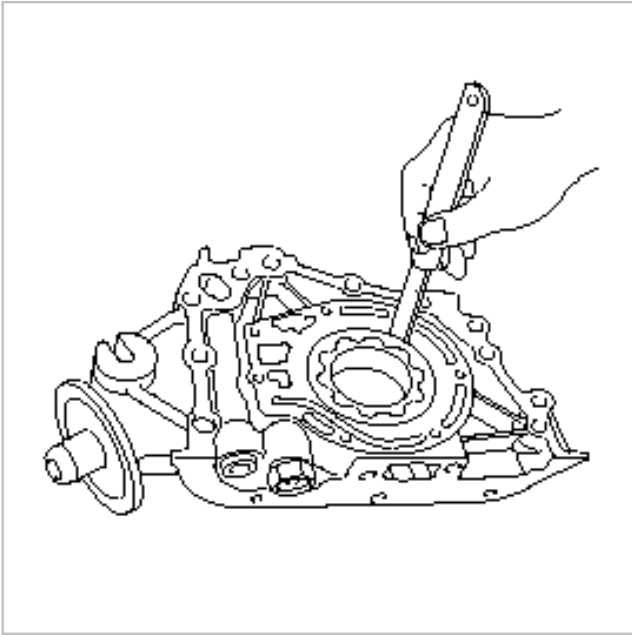
If the tip clearance is greater than maximum, replace the rotor as a set.

5. Inspect rotor body clearance.

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

Body clearance

0.12 ~ 0.185 mm(0.0047 ~ 0.0073 in.)



If the body clearance is greater than maximum, replace the rotors as a set. If necessary, replace the front case.

REASSEMBLY

1. Install relief plunger.

Install relief plunger (C) and spring (B) into the front case hole, and install the plug (A).

Tightening torque

40 ~ 50Nm (400 ~ 500kgf.cm, 30 ~ 37lb.ft)

