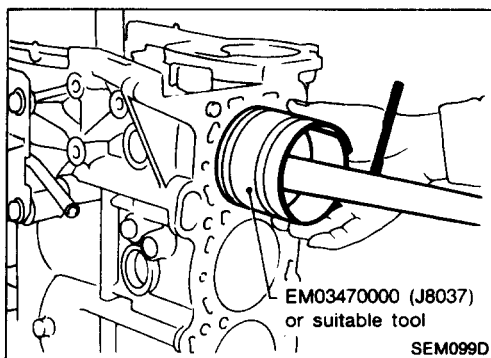
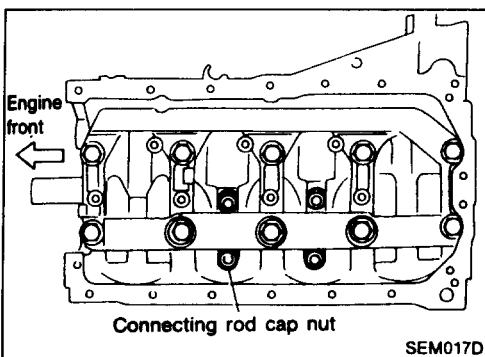


Assembly (Cont'd)



5. Install pistons with connecting rods.
 - a. Install them into corresponding cylinders with Tool.
 - Be careful not to scratch cylinder wall by connecting rod.
 - Arrange so that front mark on piston head faces toward front of engine.
 - Be careful not to hit oil jet with connecting rod. (SR20DET only)



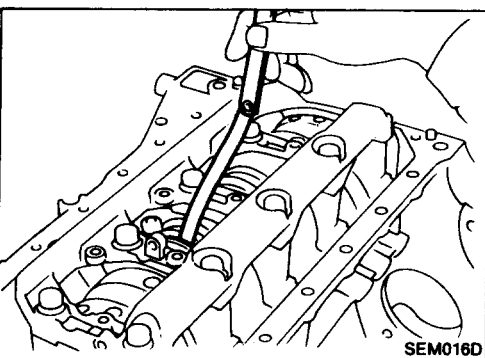
- b. Install connecting rod caps.
Tighten connecting rod cap nuts to the specified torque.

Tightening procedure:
(SR20DE)

- 1) Tighten nuts to 14 to 16 N·m (1.4 to 1.6 kg-m, 10 to 12 ft-lb).
- 2) Turn nuts 60 to 65 degrees clockwise or if angle wrench is not available, tighten nuts to 38 to 44 N·m (3.9 to 4.5 kg-m, 28 to 33 ft-lb).

(SR20DET)

- 1) Tighten nuts to 19 to 21 N·m (1.9 to 2.1 kg-m, 14 to 15 ft-lb).
- 2) Turn nuts 60 to 65 degrees clockwise or if angle wrench is not available, tighten nuts to 46 to 52 N·m (4.7 to 5.3 kg-m, 34 to 38 ft-lb).



6. Measure connecting rod side clearance.

Connecting rod side clearance:

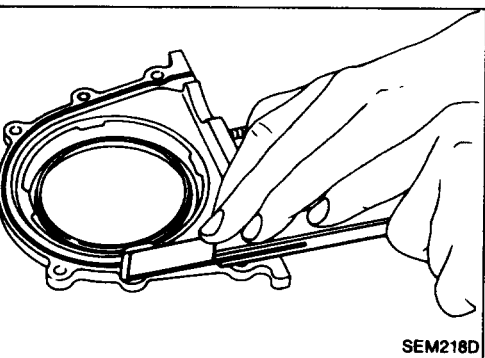
Standard

0.20 - 0.35 mm (0.0079 - 0.0138 in)

Limit

0.50 mm (0.0197 in)

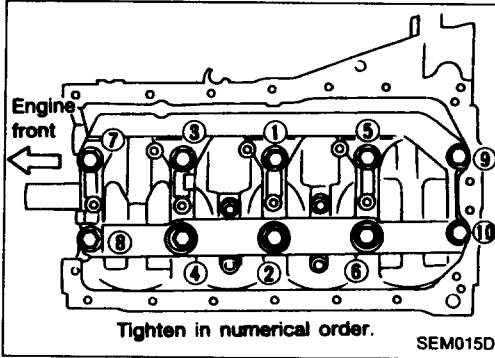
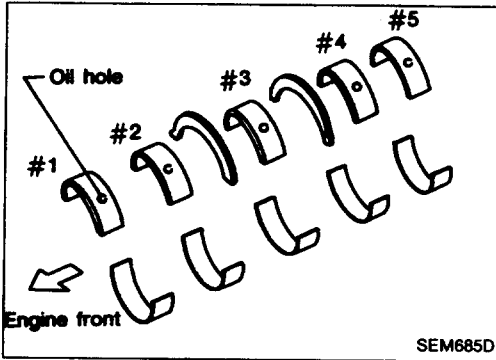
If beyond the limit, replace connecting rod and/or crankshaft.



7. Install rear oil seal retainer.
 - (1) Before installing rear oil seal retainer, remove all traces of liquid gasket from mating surface using a scraper.
 - Also remove traces of liquid gasket from mating surface of cylinder block.

Assembly (Cont'd)

CRANKSHAFT



1. Set main bearings in their proper positions on cylinder block and main bearing cap.
 - Confirm that correct main bearings are used. Refer to "Inspection" of this section.

2. Install crankshaft, main bearing caps and beam and tighten bolts to the specified torque.
 - Prior to tightening bearing cap bolts, place bearing cap in its proper position by shifting crankshaft in the axial direction.

● Tightening procedure
(SR20DE)

- 1) Tighten bolts to 32 to 38 N·m (3.3 to 3.9 kg-m, 24 to 28 ft-lb).
- 2) Turn bolts 45 to 50 degrees clockwise or if angle wrench is not available, tighten bolts to 73 to 82 N·m (7.4 to 8.4 kg-m, 54 to 61 ft-lb).

(SR20DET)

- 1) Tighten bolts to 38 to 44 N·m (3.9 to 4.5 kg-m, 28 to 33 ft-lb).
- 2) Turn bolts 60 to 65 degrees clockwise or if angle wrench is not available, tighten bolts to 84 to 114 N·m (8.6 to 11.6 kg-m, 62 to 84 ft-lb).

- After securing bearing cap bolts, make sure crankshaft turns smoothly by hand.

3. Measure crankshaft end play.

Crankshaft end play:

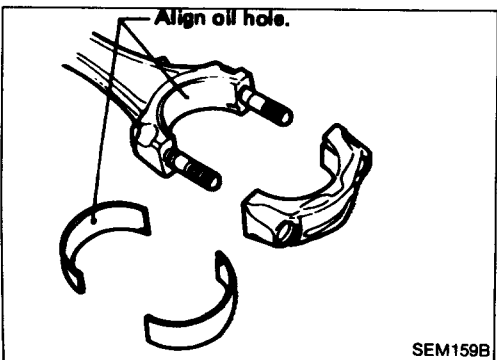
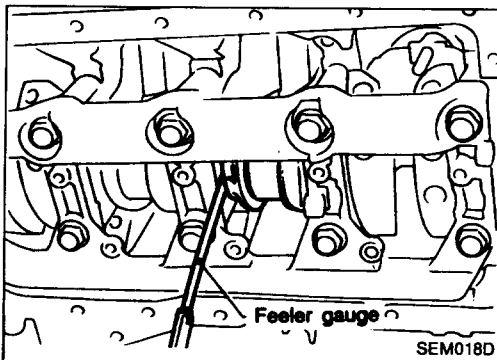
Standard

0.10 - 0.26 mm (0.0039 - 0.0102 in)

Limit

0.30 mm (0.0118 in)

If beyond the limit, replace thrust bearings with new ones.



4. Install connecting rod bearings in connecting rods and connecting rod caps.

- Confirm that correct bearings are used. Refer to "Inspection".
- Install bearings so that oil hole in connecting rod aligns with oil hole of bearing.