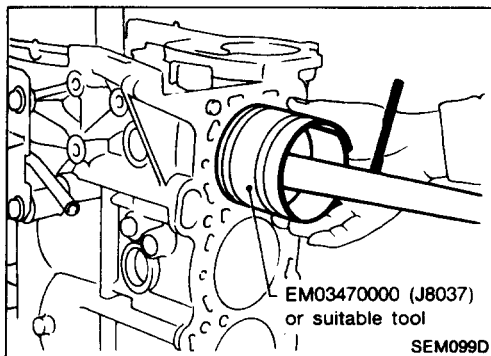
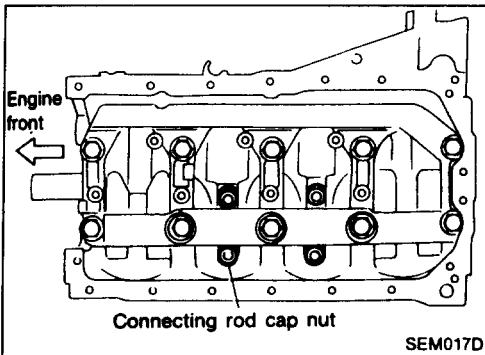


Assembly (Cont'd)



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.

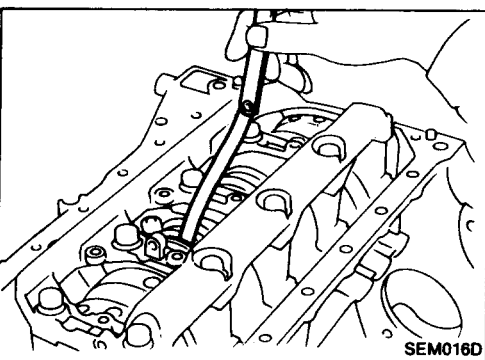
Tightening procedure:

(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:

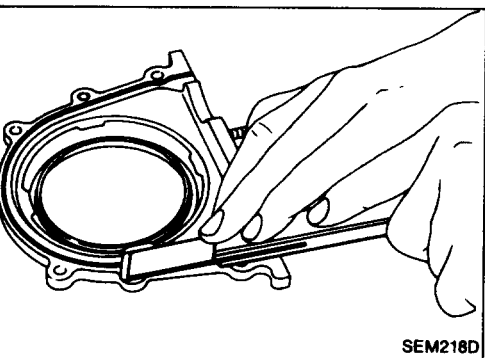
Standard

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.

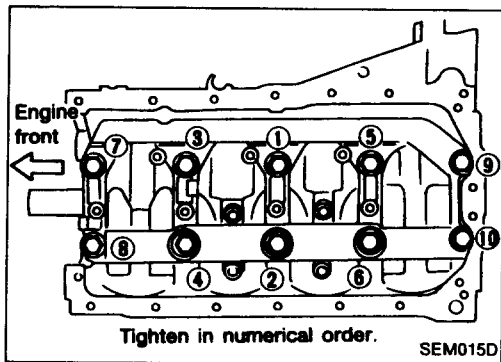
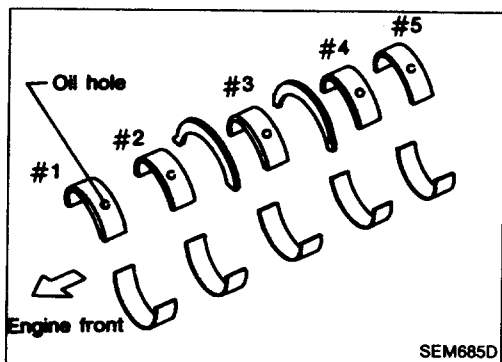


7. Install rear oil seal retainer.

- (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:

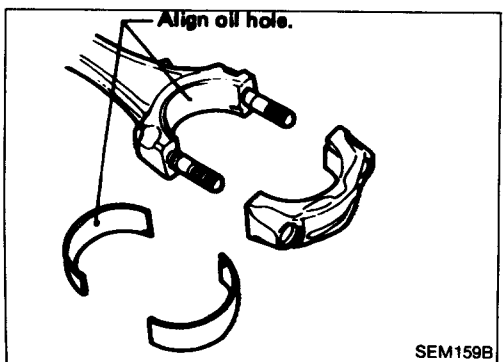
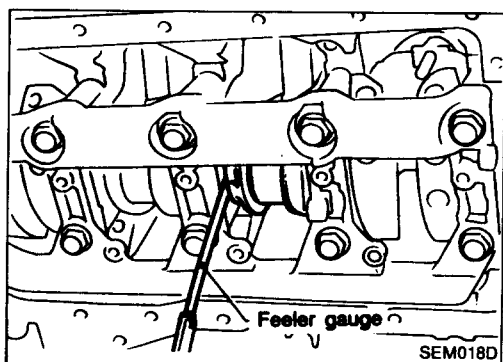
Standard

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.**