


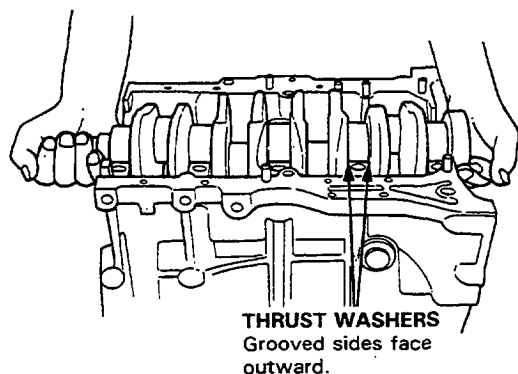


Crankshaft

Installation

-  Before installing the crankshaft, apply a coat of engine oil to the main bearings and rod bearings.

1. Insert bearing halves in the cylinder block and connecting rods.
2. Hold the crankshaft so rod journals for cylinders No. 2 and No. 3 are straight down.
3. Lower the crankshaft into the block, seating the rod journals into connecting rods No. 2 and No. 3, and install the rod caps and nuts finger-tight.



4. Rotate the crankshaft clockwise, seat journals into connecting rods No. 1 and No. 4, and install the rod caps and nuts finger-tight.

NOTE: Install caps so the bearing recess is on the same side as the recess in the rod.

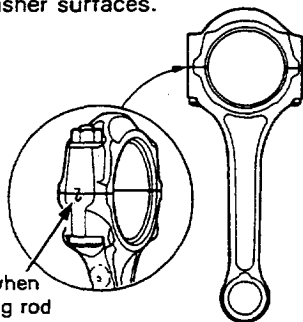
5. Check rod bearing clearance with plastigage (see page 7-7), then torque the capnuts.

Torque:

31 N·m (3.2 kgf·m, 23 lbf·ft)

NOTE: Reference numbers on connecting rod are for big-end bore tolerance and do not indicate the position of piston in the engine.

6. Install the thrust washers on the No. 4 journal. Oil the thrust washer surfaces.



Line up the mark when installing connecting rod cap.

7. Install the main bearing caps. Check clearance with plastigage (see page 7-6), then tighten the bearing cap bolts in 2 steps.

First step: 25 N·m (2.5 kgf·m, 18 lbf·ft)

Second step:

D16Y2, D16Y3 engines:

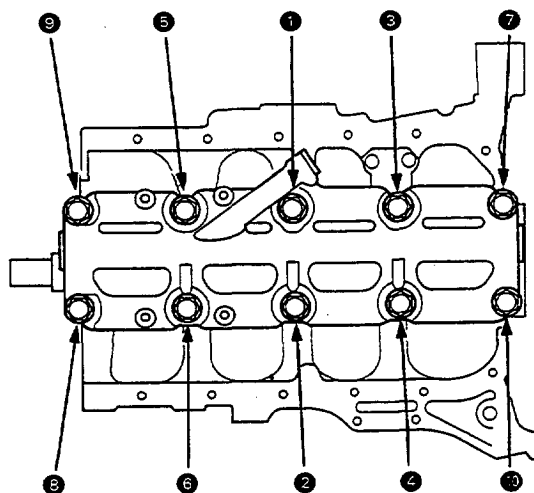
51 N·m (5.2 kgf·m, 38 lbf·ft)

D15Z3, D14A2 engines:

44 N·m (4.5 kgf·m, 33 lbf·ft)

NOTE: Coat the thrust washer surfaces and bolt threads with oil.

MAIN BEARING CAP BOLTS TIGHTENING SEQUENCE



(cont'd)

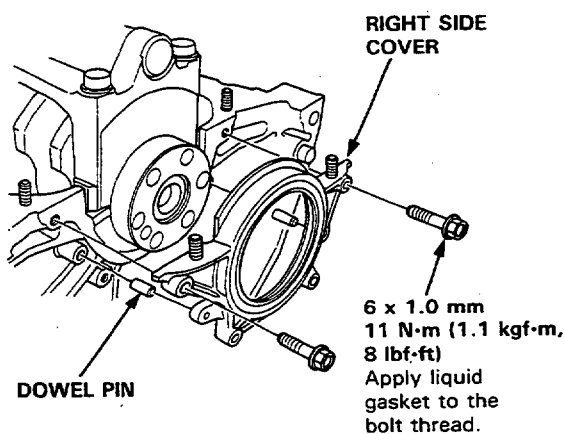
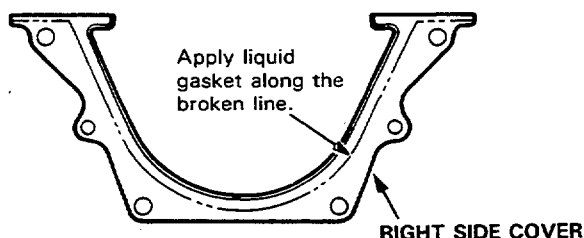
Crankshaft

Installation (cont'd)

NOTE:

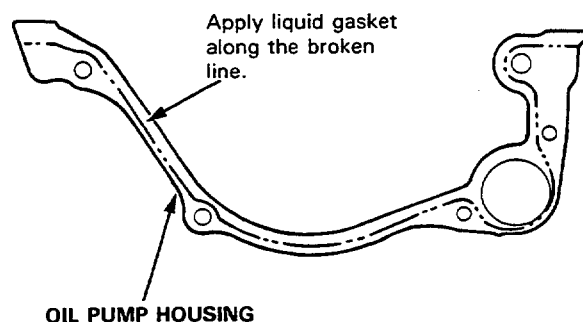
- Use liquid gasket, part No. 0Y740—99986.
- Check that the mating surfaces are clean and dry before applying liquid gasket.
- Apply liquid gasket evenly, being careful to cover all the mating surface.
- To prevent leakage of oil, apply liquid gasket to the inner threads of the bolt holes.
- Do not install the parts if 5 minutes or more have elapsed since applying the liquid gasket. Instead reapply liquid gasket after removing the old residue.
- After assembly, wait at least 20 minutes before filling the engine with oil.

8. Apply liquid gasket to the block mating surface of the right side cover, then install it on the cylinder block.



9. Apply liquid gasket to the oil pump mating surface of the block, then install the oil pump on the cylinder block.

- Apply grease to the lips of the oil seals. Then, install the oil pump while aligning the inner rotor with the crankshaft. When the pump is in place, clean any excess grease off the crankshaft, then check that the oil seal lips are not distorted.

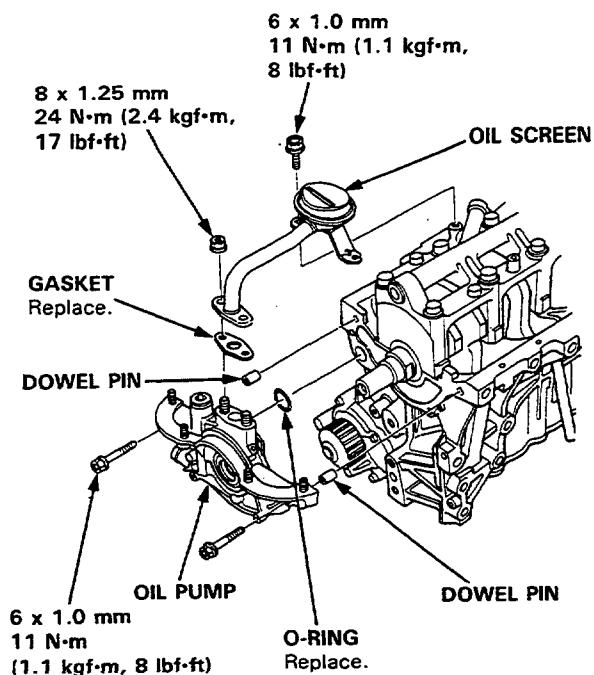




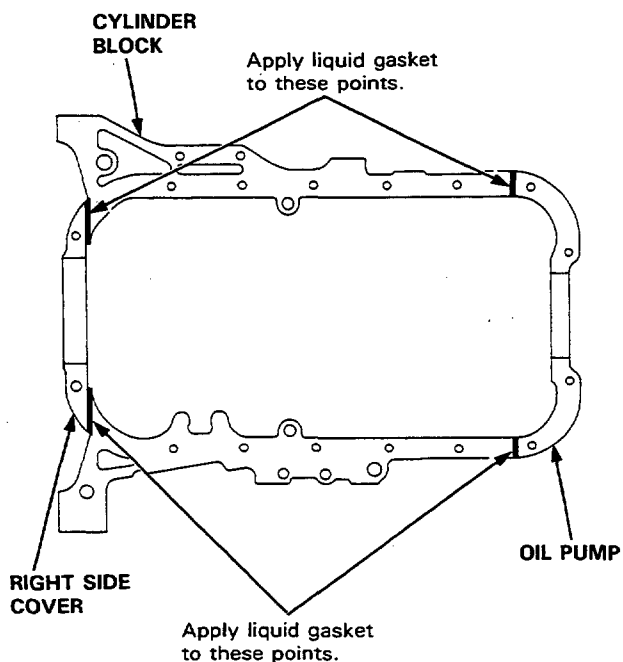
NOTE:

- Apply a light coat of oil to the crankshaft and to the lip of seal.
- Use new O-rings and apply oil when installing them.

10. Install the oil pump and oil screen.



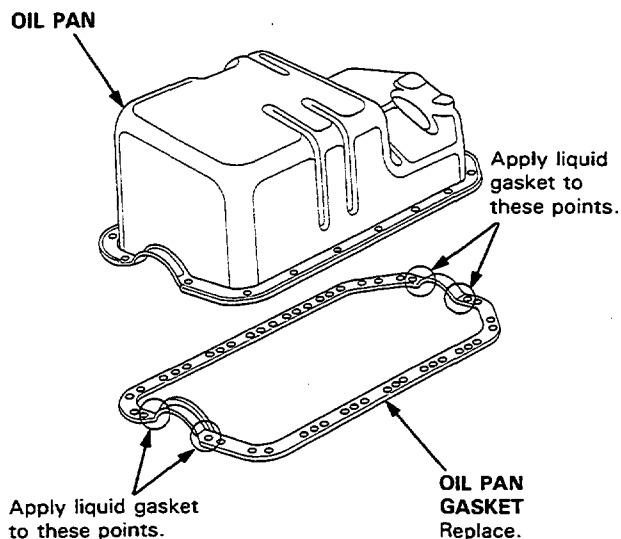
11. Apply liquid gasket on oil pump and right side cover mating areas as shown below.



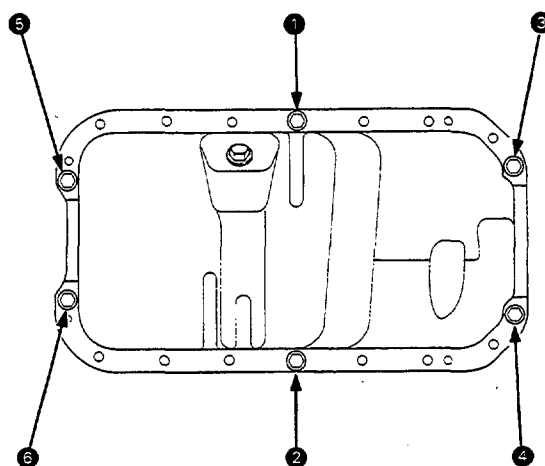
12. Install the oil pan gasket and oil pan.

NOTE:

- Use a new oil pan gasket.
- Install oil pan no more than five minutes after liquid gasket applied.



13. Tighten bolts and nuts finger tight at six points as shown below.



14. Tighten all bolts and nuts stating from bolt ① clockwise in three steps.

NOTE: Excessive tightening can cause distortion of oil pan gasket and oil leakage.

Torque: 14 N·m (1.4 kgf·m, 10 lbf·ft)