

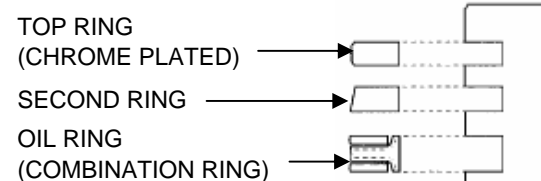


PISTON/CRANKSHAFT/BALANCER

PISTON RINGS

REASSEMBLY:

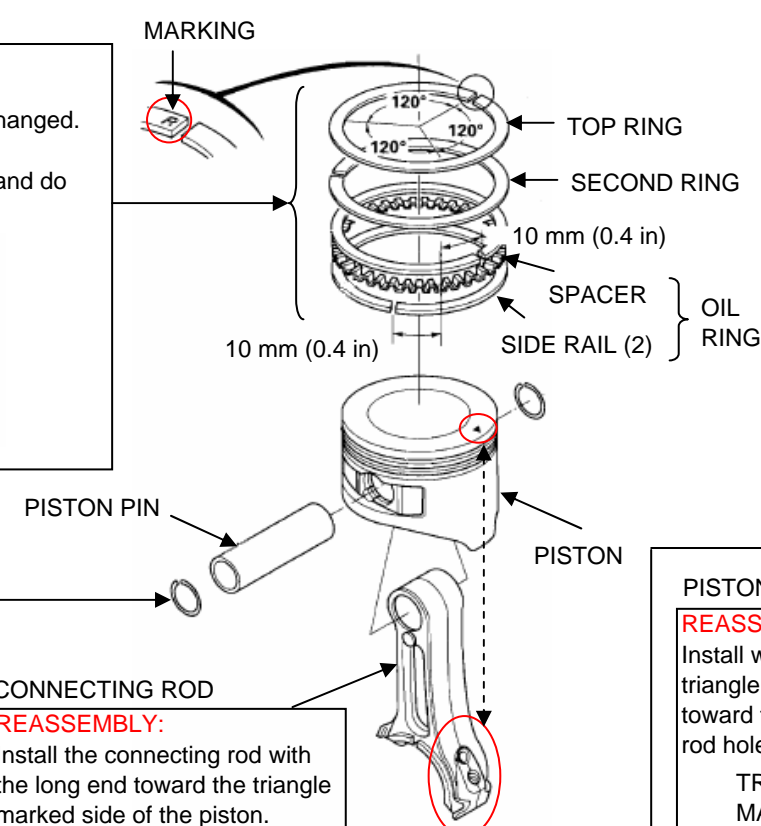
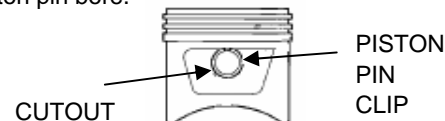
- Install all rings with the markings facing upward.
- Be sure that the top and second rings are not interchanged.
- Check that rings rotate smoothly after installation.
- Space the piston ring end gaps 120 degrees apart, and do not align the gaps with the piston pin bore.



PISTON PIN CLIP (2)

REASSEMBLY:

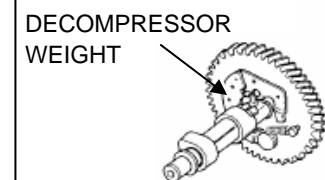
Install by setting one end of the clip in the piston groove, holding the other end with long needle nose pliers, and rotating the clip in. Do not align the end gap of the clip with the cutout in the piston pin bore.



CAMSHAFT

REASSEMBLY:

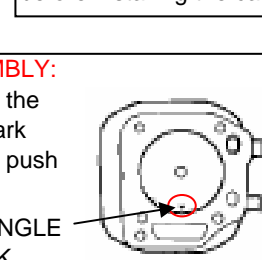
Check that the decompressor weight moves smoothly, and the spring is not weak or worn.



VALVE LIFTER

REASSEMBLY:

Install the lifters immediately before installing the camshaft.



PISTON

REASSEMBLY:

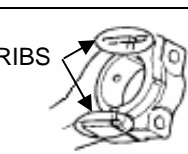
Install with the triangle mark toward the push rod hole.



CONNECTING ROD CAP

REASSEMBLY:

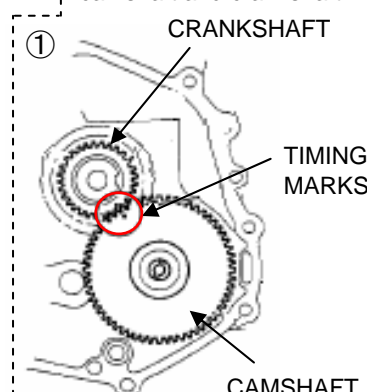
Install the connecting rod cap, aligning the ribs on the rod and cap.



CRANKSHAFT/CAMSHAFT/BALANCER

REASSEMBLY:

Insert the crankshaft into the crankcase, being careful not to damage the oil seal lips. Install the valve lifters into the cylinder block. Coat the camshaft with clean engine oil and install it into the crankcase, aligning the timing marks on the camshaft and crankshaft.



BALANCER/CRANKCASE COVER/GOVERNOR/OIL PUMP

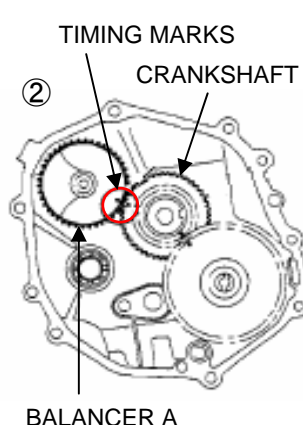
CRANKSHAFT/CAMSHAFT/BALANCER

REASSEMBLY:

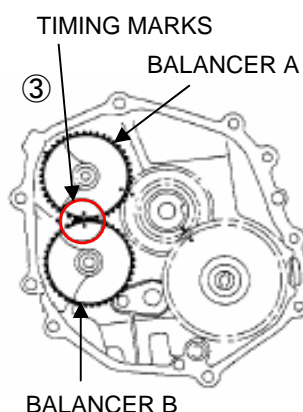
Install balancer A with the weight facing down, aligning the timing marks on balancer A and the crankshaft.

NOTE:

Do not interchange balancers A and B. Balancer A has two timing marks.



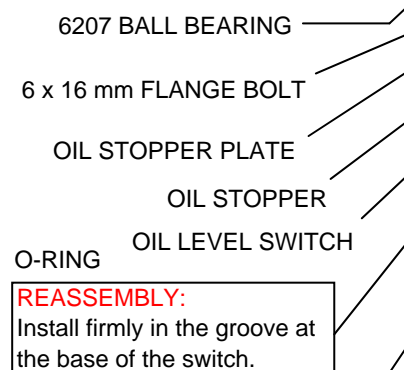
Install balancer B with the weight facing down, aligning the timing marks on balancers A and B. After installation, check that the crankshaft, camshaft, balancers A and B rotate smoothly.



CLIP

REASSEMBLY:

Open the governor weights, and install the clip, washer, and slider on the shaft. Make sure the clip is seated in the shaft groove.



GOVERNOR SLIDER

REASSEMBLY:

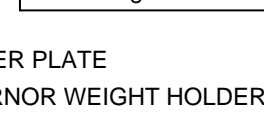
After installation, check for smooth operation.



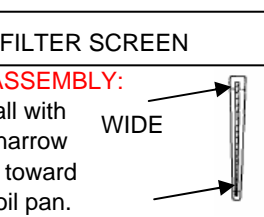
6 x 16 mm WASHER

REASSEMBLY:

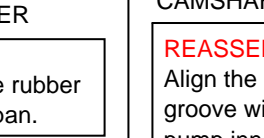
Do not forget to install.



Remember to place the washer on the shaft before installing the holder in the crankcase cover.



Install with the narrow side toward the oil pan.



Align the grooves in the rubber with the lugs of the oil pan.



8 x 40 mm FLANGE BOLT (7)

REASSEMBLY:

Install the O-ring into the groove in the oil pan properly.

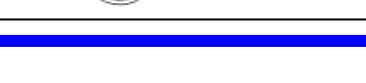
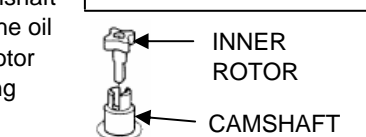
Clean thoroughly before installation.

Clean thoroughly before installation.

Do not forget to install.

Do not forget to install.

Install from the front.



OIL PUMP COVER

REASSEMBLY:

Install the O-ring into the groove in the oil pan properly.

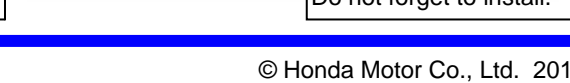
Clean thoroughly before installation.

Clean thoroughly before installation.

Do not forget to install.

Do not forget to install.

Install from the front.





CYLINDER HEAD/VALVES

INTAKE VALVE
REASSEMBLY:
 Do not interchange with the exhaust valve.
 VALVE HEAD DIAMETER:
 IN: 35 mm (1.38 in)
 EX: 31 mm (1.22 in)

EXHAUST VALVE
REASSEMBLY:
 Before installation, remove carbon deposits and inspect the valve.

VALVE SPRING RETAINER (2)
DISASSEMBLY:
 Push down and slide the retainer to the side, so the valve stem slips through the hole at the side of the retainer.
REASSEMBLY:
 The exhaust valve retainer has a larger center recess than the intake valve retainer, so it can accept the valve rotator.

CAUTION:
 Do not remove the valve spring retainers while the cylinder head is installed, or the valves will drop into the cylinder.

CYLINDER HEAD
DISASSEMBLY/REASSEMBLY:
 • Loosen and tighten the bolts in a crisscross pattern in 2-3 steps.
 • Before installation, remove carbon deposits from the combustion chamber and inspect the valve seats.
 • Measure the cylinder compression after reassembly.

ONE-WAY VALVE PLATE
REASSEMBLY:
 Install the valve plate with the lug on the plate toward the cylinder block.

CYLINDER HEAD COVER
REASSEMBLY:
 Note the installation direction.

HEAD COVER BOLT
 8.3 N·m (0.85 kgf·m, 6.1 lbf·ft)

8 x 85 (4)
 34 N·m (3.5 kgf·m, 25 lbf·ft)

HEAD COVER WASHER

Labels and Components:
 INTAKE VALVE, EXHAUST VALVE, VALVE SPRING RETAINER (2), SPARK PLUG, CYLINDER HEAD, VALVE SPRING SEAT (2), VALVE GUIDE (2), CLIP (2), PUSH ROD (2), PUSH ROD GUIDE, VALVE ROCKER ARM (2), ROCKER ARM PIVOT (2), VALVE STEM SEAL (2), VALVE SPRING (2), VALVE ROTATOR (Exhaust valve only), PIVOT BOLT (2), PIVOT ADJUSTING NUT (2), ONE-WAY VALVE, DOWEL PIN (2), CYLINDER HEAD GASKET, CYLINDER HEAD COVER GASKET, CYLINDER HEAD COVER, CYLINDER BLOCK SIDE.

REASSEMBLY:
 Check both ends for wear and check the rod for straightness. Make sure the rod ends are firmly seated in the lifters.

CAUTION:
 If the valve rotator is not installed, the exhaust valve may drop into the cylinder when starting the engine.

REASSEMBLY:
 24 N·m (2.4 kgf·m, 17 lbf·ft)

REASSEMBLY:
 10 N·m (1.0 kgf·m, 7 lbf·ft)

FLYWHEEL

FLYWHEEL
DISASSEMBLY:
 Do not hit the flywheel with a hammer. Remove with a special tool.
FLYWHEEL PULLER
 07935-8050004

REASSEMBLY:
 Make certain there are no metal objects stuck to the magnets. Clean the crankshaft tapered surface before installation.

CHARGE COIL
REASSEMBLY:
 Route the charging coil wire between the coil mounting boss and starter gear cover flange.

WOODRUFF KEY
REASSEMBLY:
 After installing the flywheel, check to be sure that the woodruff key is still in its slot on the crankshaft.

BREATHING VALVE

BREATHING CAP GASKET

BREATHING CAP
REASSEMBLY:
 Install with the lug toward the crankcase.

Labels and Components:
 16 mm SPECIAL NUT, SPECIFIED TORQUE: 113 N·m (11.5 kgf·m, 83 lbf·ft), DISASSEMBLY/REASSEMBLY: Hold the flywheel by placing a screwdriver into the pulley, STARTER PULLEY, COOLING FAN, FLYWHEEL, ALIGN, HOLE, LUG, 5 x 8 mm PAN SCREW (3), SCREEN GRID, SCREEN GRID HOLDER, 6 x 28 (2), 6 x 32 (2), 6 x 12 (2), LAMP COIL, BREATHING VALVE, BREATHING CAP GASKET.

STARTER PULLEY
REASSEMBLY:
 Install by aligning the hole in the pulley with the lug on the cooling fan.

COOLING FAN
REASSEMBLY:
 Attach by aligning the three lugs on the rear side of the fan with the small holes in the flywheel.

<TYPES WITHOUT RECOIL STARTER>