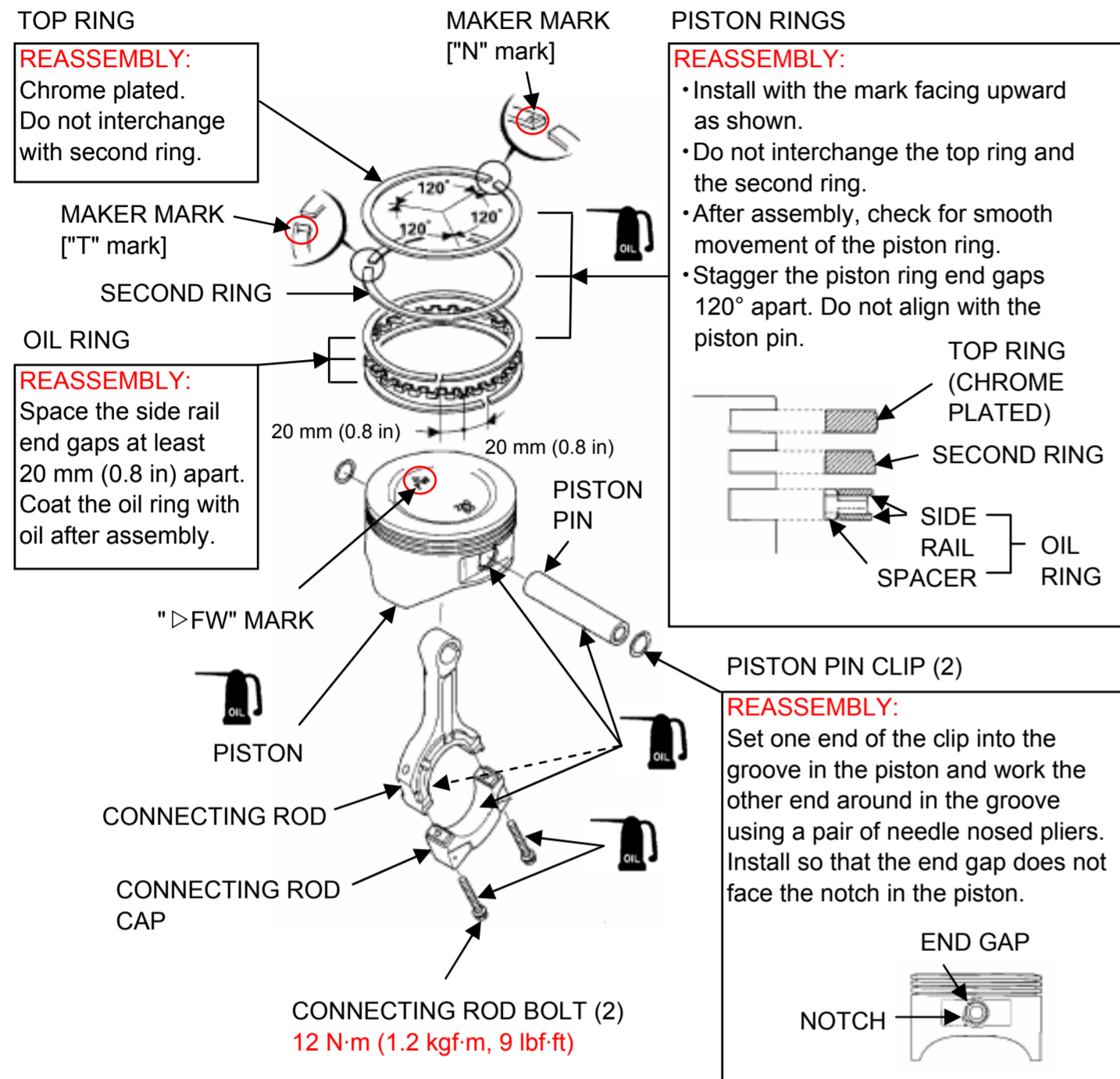




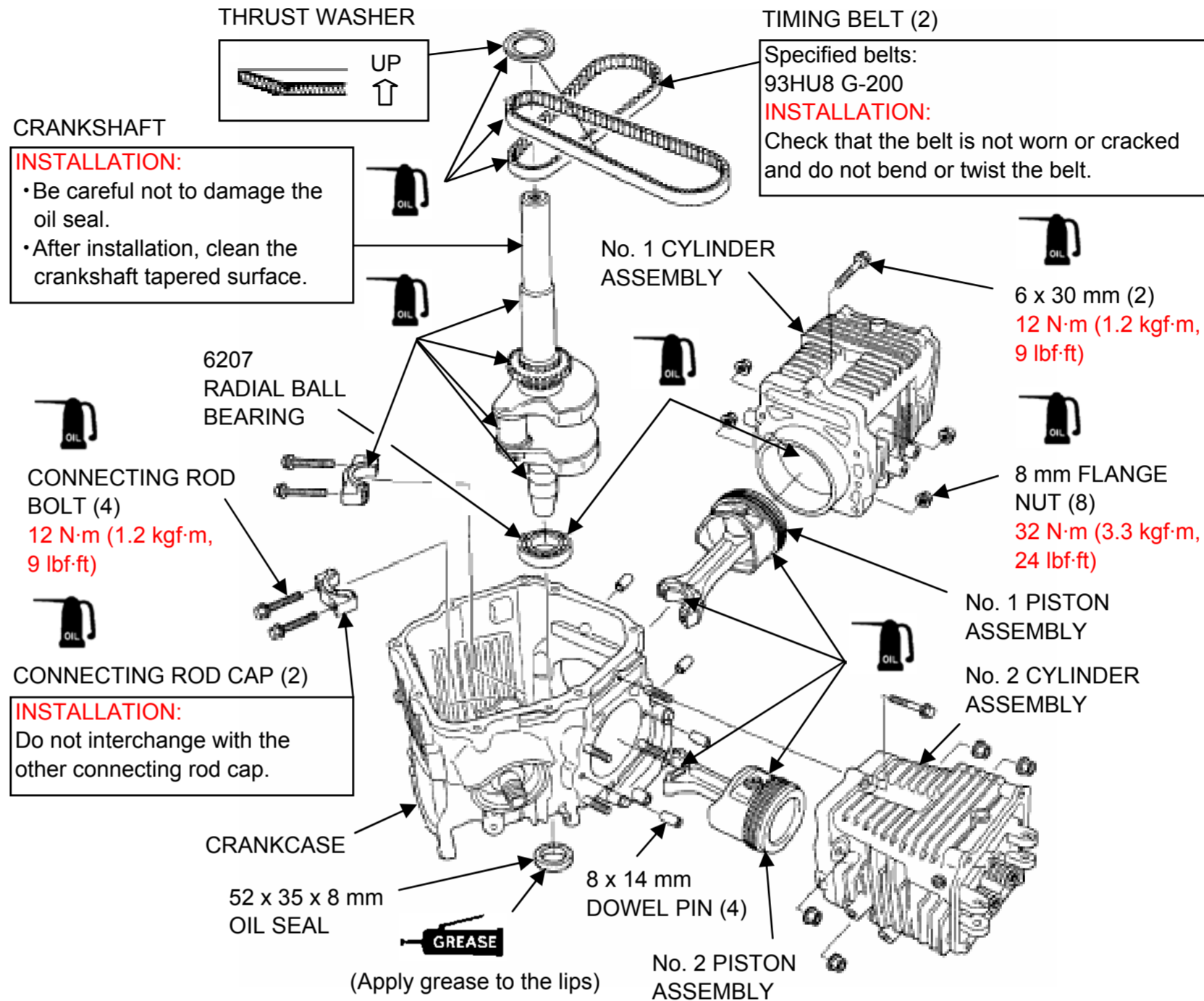
GCV530 - GXV530 Engine Assembly Information

HONDA

PISTON

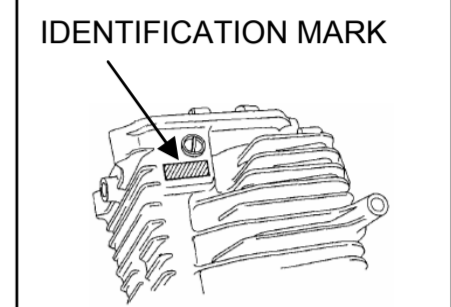


CYLINDER/PISTON ASSEMBLY

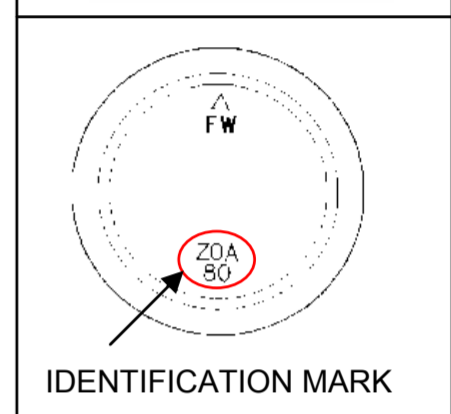


Identification of AL cylinder type and FC sleeve cylinder type:

<Cylinder>
 AL cylinder:
 • "Z0A0" is stamped at the illustrated position of the cylinder for identification.



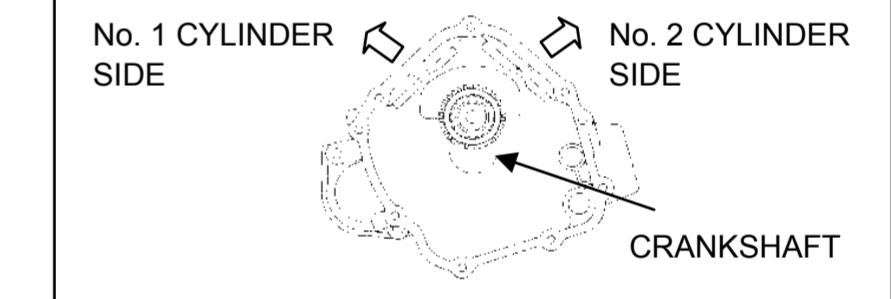
FC sleeve cylinder:
 • "Z0A8" is stamped at the illustrated position of the cylinder for identification.



<Piston>
 AL cylinder:
 • There is no ID mark stamped on the piston head.

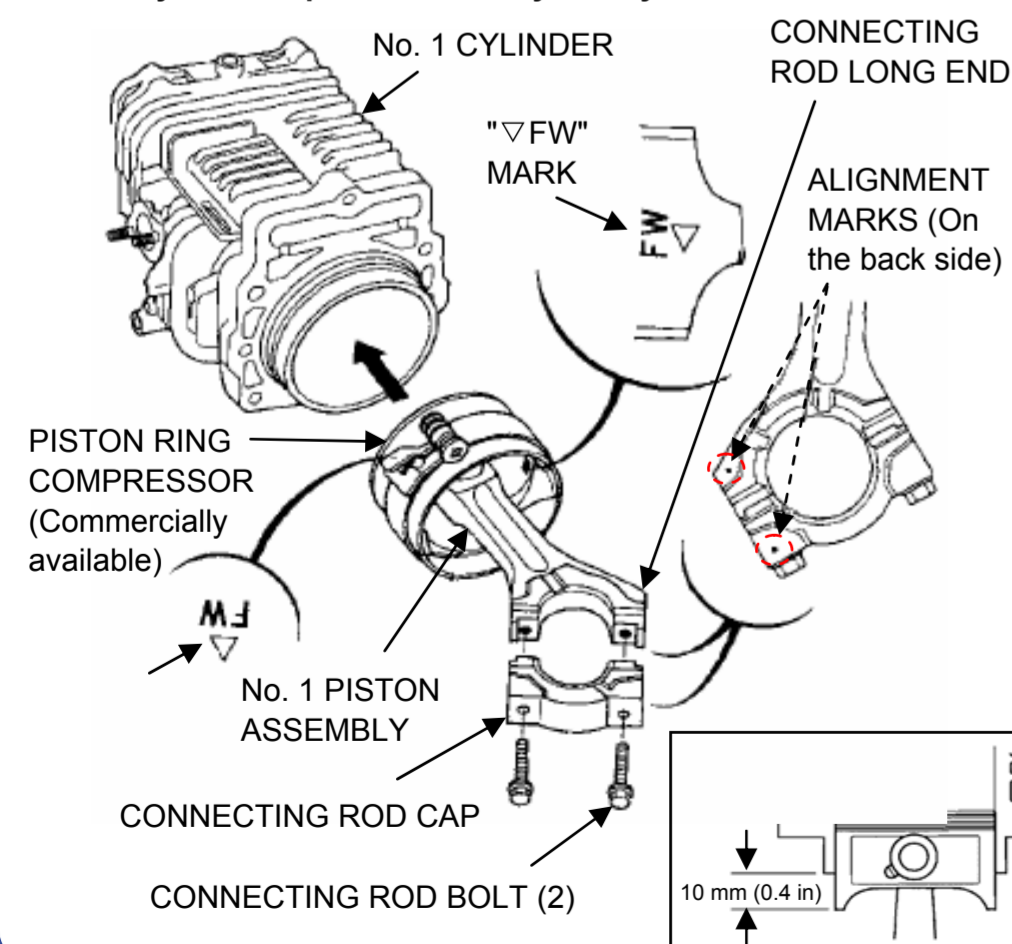
FC sleeve cylinder:
 • "Z0A80" is stamped on the piston head for identification.

Identification of No. 1 cylinder side and No. 2 cylinder side:

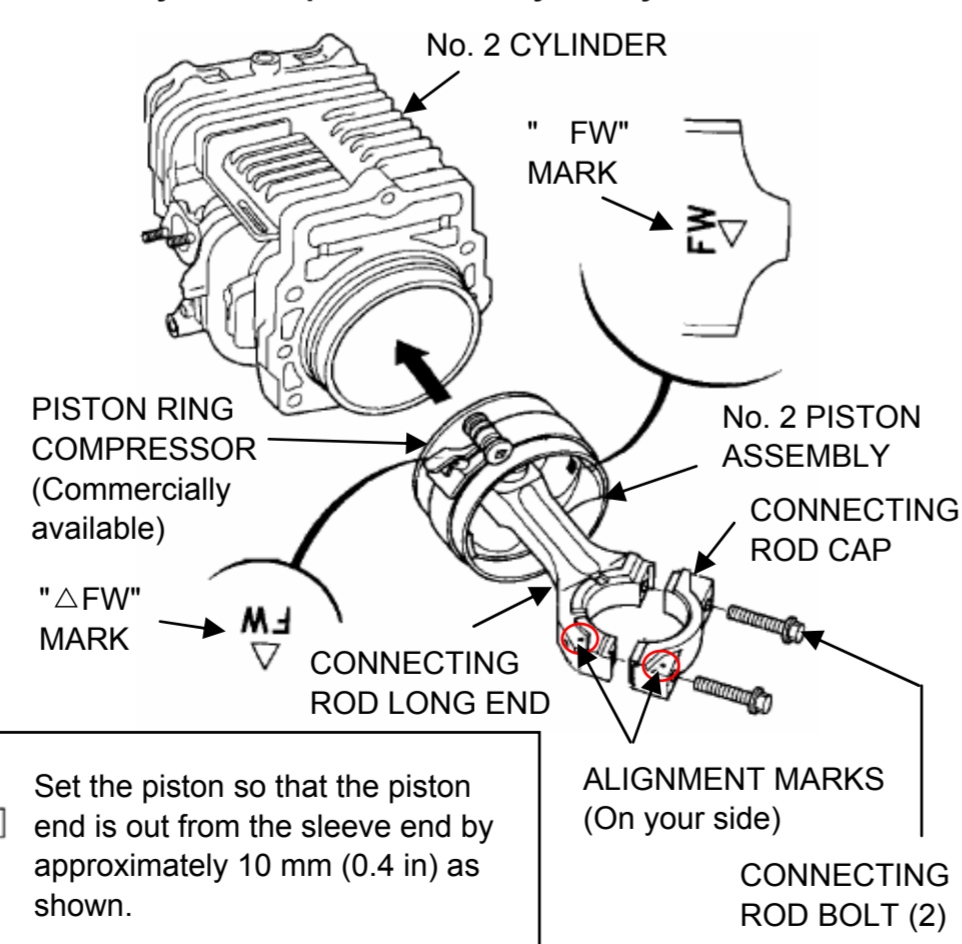


CYLINDER/PISTON ASSEMBLY

Assembly of No. 1 piston assembly and cylinder:

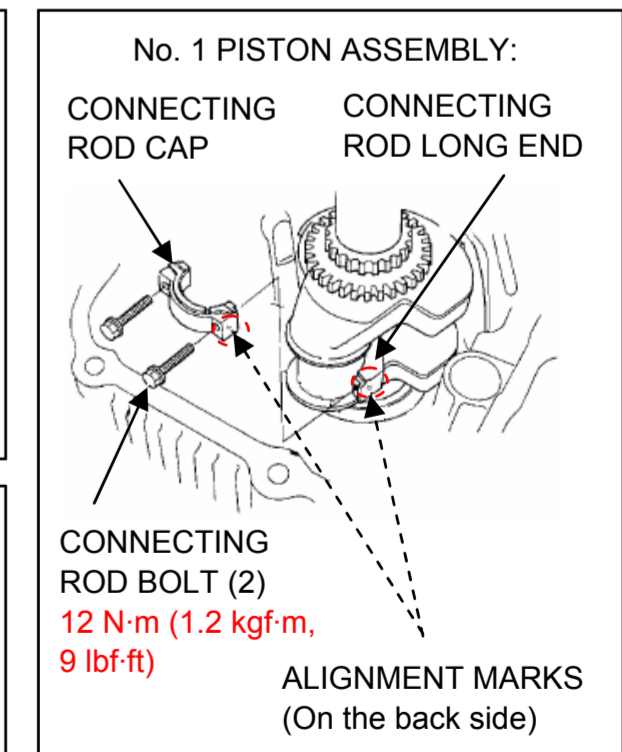
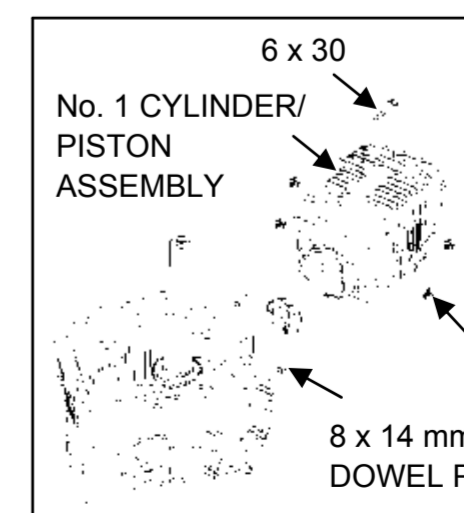
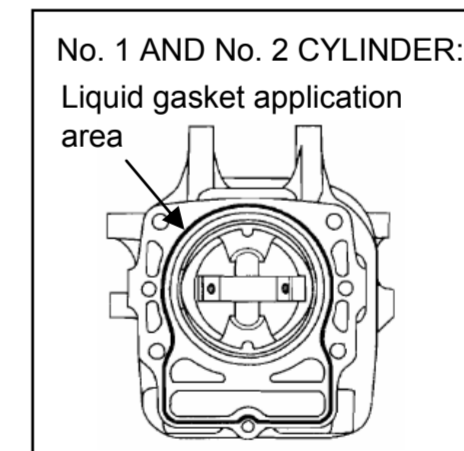


Assembly of No. 2 piston assembly and cylinder:



Installation of No. 1 (No. 2) cylinder/piston assembly:

- Clean the mating surfaces of the crankcase and No. 1 (No. 2) cylinder using a degreasing cleaning agent or a clean shop towel.
 - Apply a bead [ø 1.2 mm (0.05 in)] of liquid gasket (ThreeBond #1207B, Honda Bond #4 or equivalent) to the No. 1 (No. 2) cylinder; specifically, to the mating surface with the crankcase.
 - Take care not to put the liquid gasket on the sleeve of the No. 1 (No. 2) cylinder. Do not apply excessive amount of the liquid gasket to the threaded hole for the 6 x 30 mm flange bolt.
 - Assemble **within 10 minutes** after applying the liquid gasket.
- NOTICE:**
 Take care not to damage the inner wall of the cylinder and crank pin with the connecting rod big end.
- Apply oil to the threaded part and seat of the 8 mm flange nuts and 6 x 30 mm flange bolt. Loosely tighten the nuts and flange bolt against the cylinder.
 - Apply oil to the threaded part and seat of the connecting rod bolts. Tighten the connecting rod bolts to the specified torque.
 - After tightening the connecting rod bolts, tighten the four 8 mm flange nuts and the 6 x 30 mm flange bolt in several steps to the specified torque.

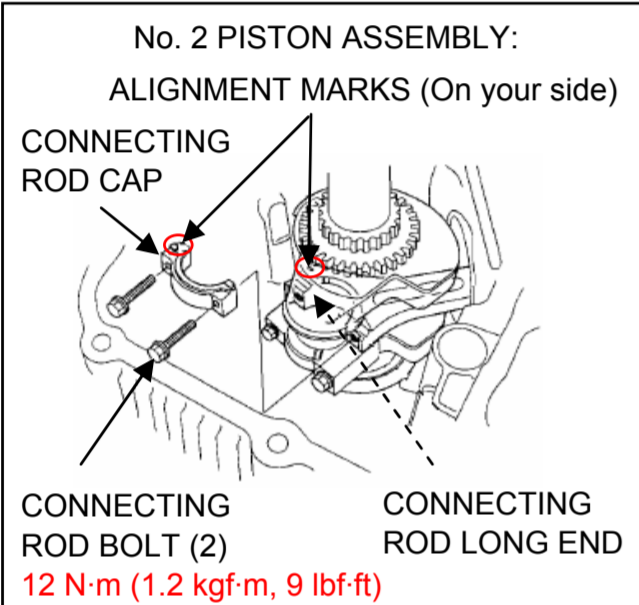
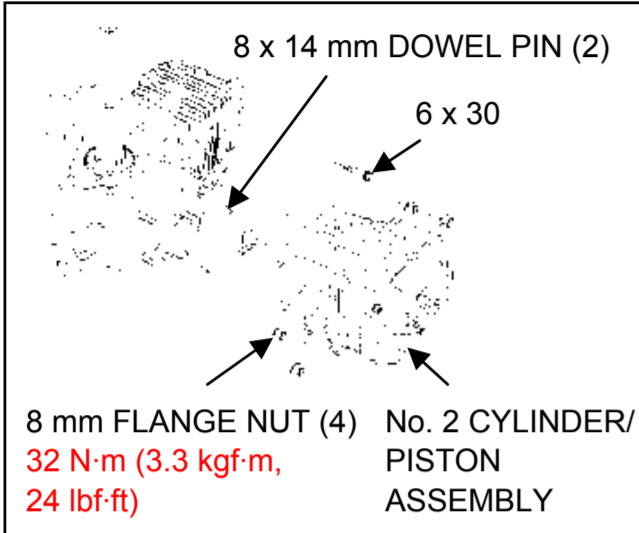




GCV530 - GXV530 Engine Assembly Information

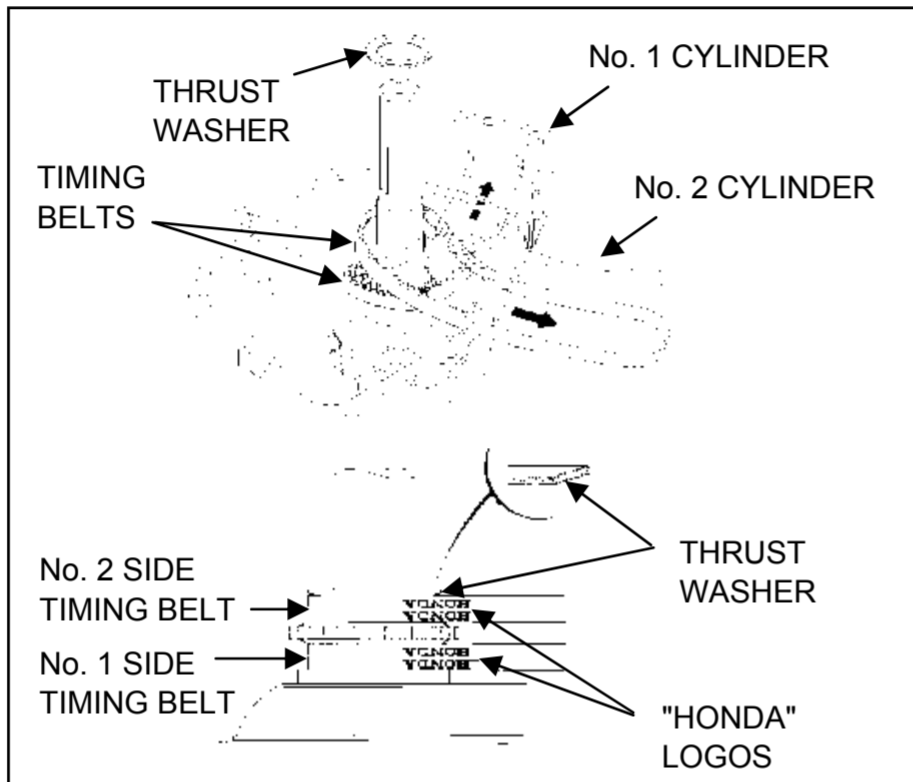
HONDA

CYLINDER/PISTON ASSEMBLY



Installation of No. 1 (No. 2) cylinder/piston assembly:

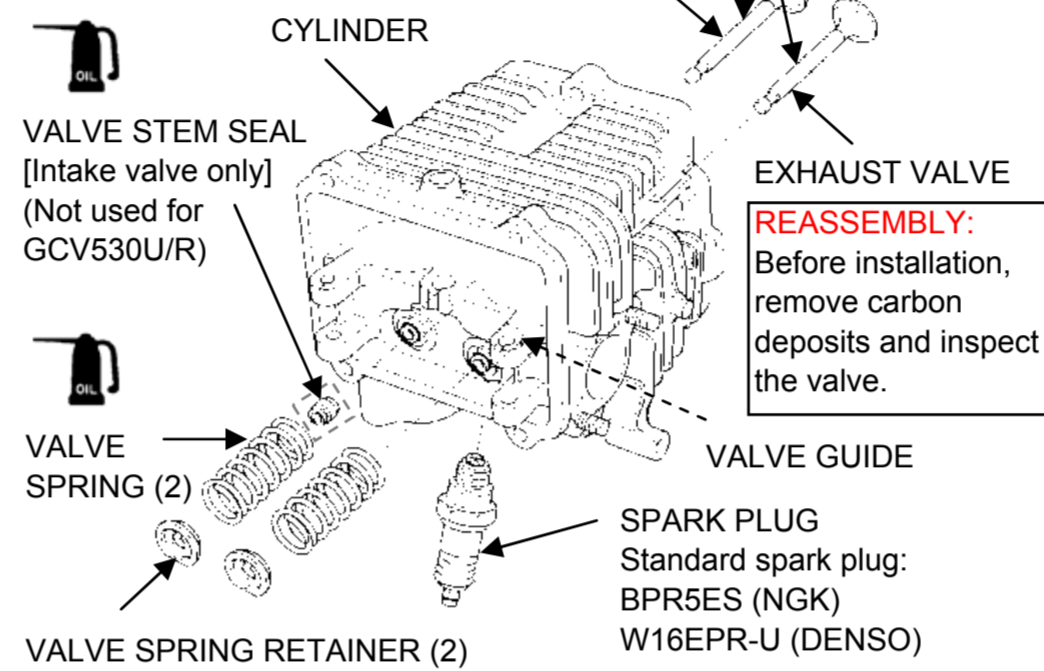
- Set the two timing belts on the timing belt drive pulley so that the "HONDA" logo on each timing belt is upside down as shown.
- Pass the lower belt on the timing belt drive pulley in the No. 1 cylinder, and pass the upper belt on the pulley in the No. 2 cylinder.
- Set the thrust washer on the crankshaft as shown.
- After installing the No. 1/No. 2 piston/cylinder, install the respective cam pulleys.



CYLINDER/VALVES

INTAKE VALVE

REASSEMBLY:
Do not interchange with the exhaust valve.
VALVE HEAD DIAMETER
IN: 30 mm (1.2 in) EX: 26 mm (1.0 in)



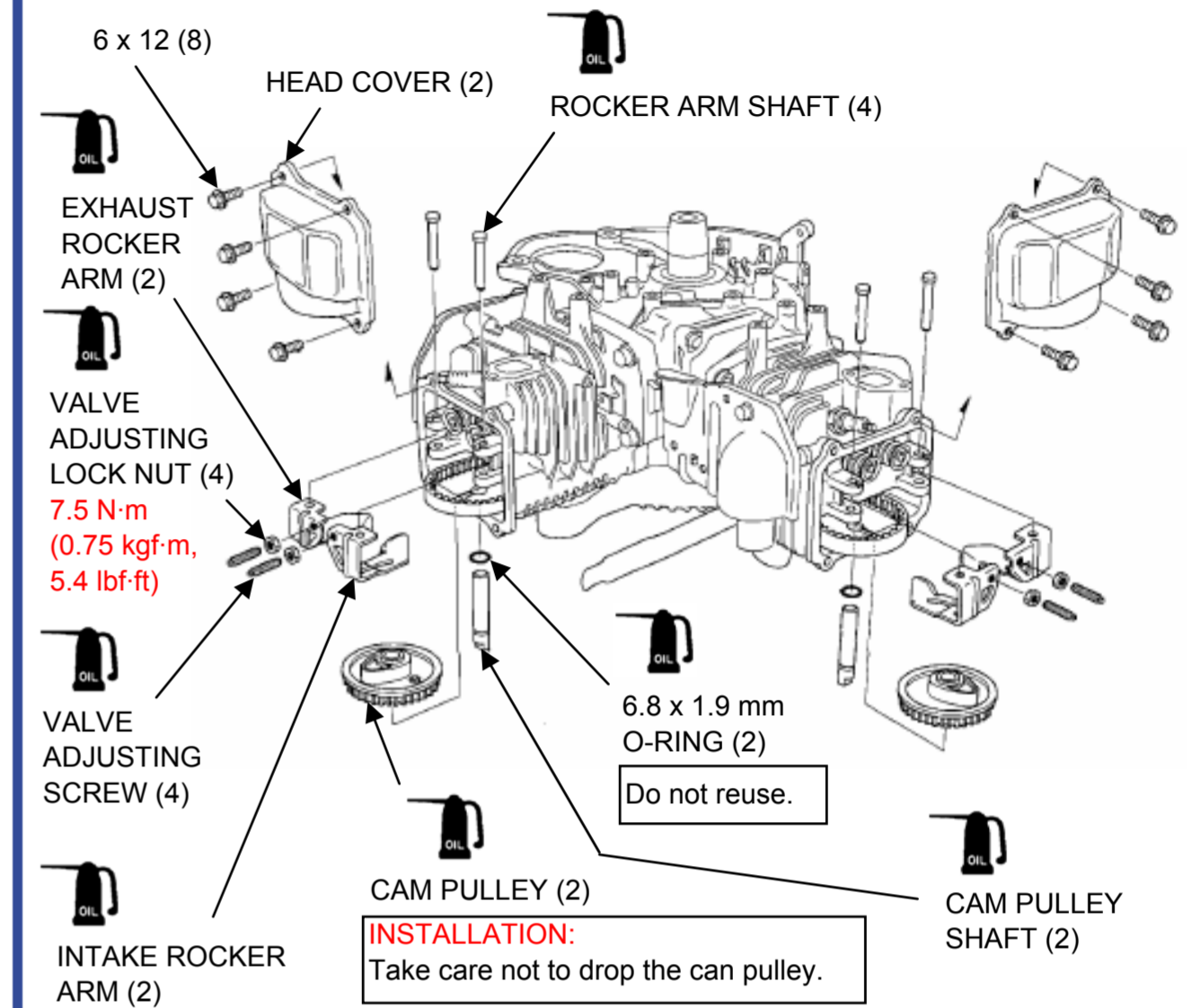
DISASSEMBLY:

Push down and slide the retainer to the side, so the valve stem slips through the hole at the side of the retainer.

NOTICE:

Do not remove the valve spring retainer while the piston is installed, or the valves will drop into the cylinder.

CAM PULLEY

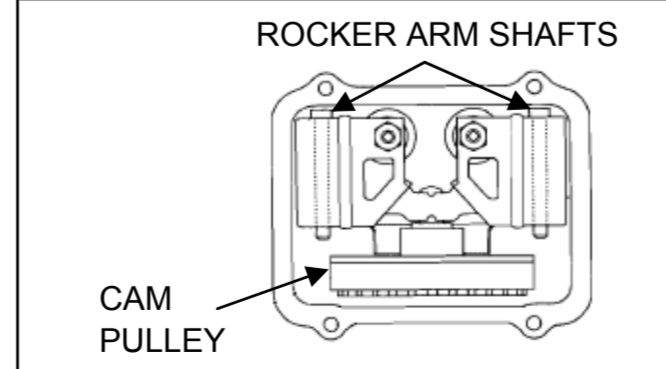
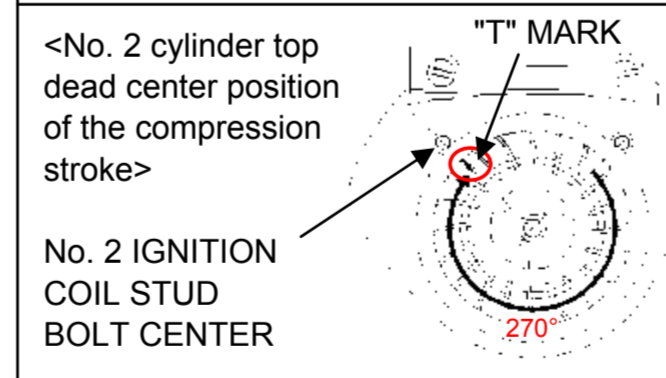
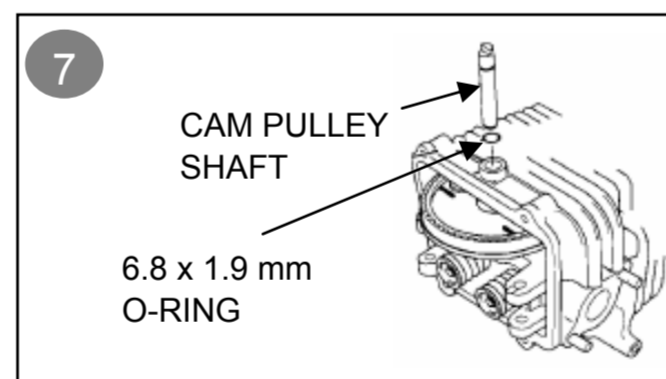
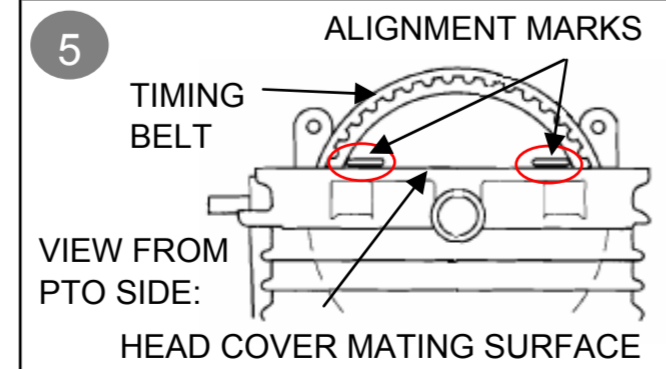
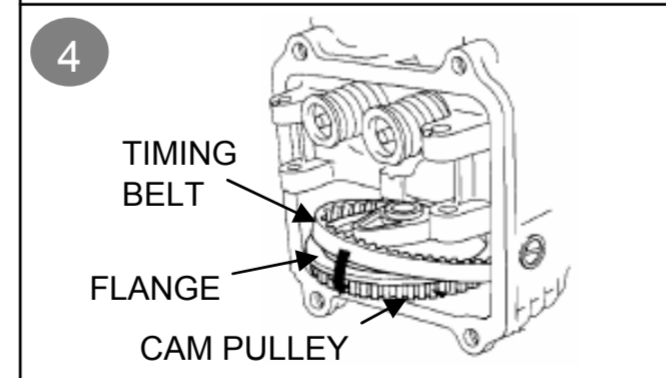
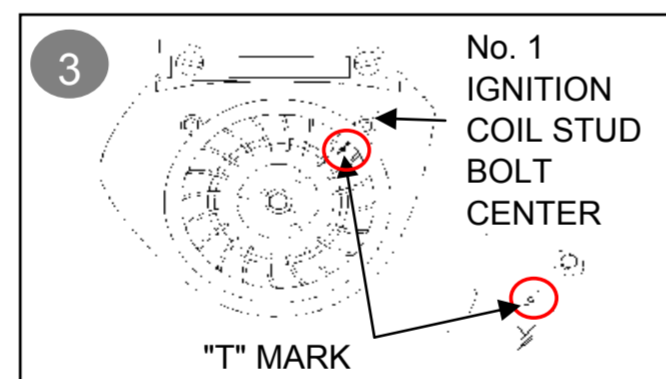


INSTALLATION:
Take care not to drop the cam pulley.

CAM PULLEY

Installation of cam pulley/rocker arm shaft:

- <No. 1 cylinder>
- 1) Set the engine upright (i.e. with the carburetor toward up).
 - 2) Remove the spark plugs.
 - 3) Rotate the flywheel clockwise until the "T" mark on the cooling fan aligns with center of the stud bolt of the No. 1 ignition coil. (This alignment point is the top dead center of the No. 1 cylinder.)
 - 4) Set the timing belt on the cam pulley from the flange side of the cam pulley.
 - 5) Align the alignment marks on the cam pulley so that they are in line with the head cover mating surface. The top dead center of the compression stroke is in the position where the head cover mating surface is in line with the cam pulley alignment marks. Be careful to avoid turning the crankshaft when installing.
 - 6) Apply oil to the 6.8 x 1.9 mm O-ring and install it on the cam pulley shaft.
 - 7) Install the cam pulley shaft in the cylinder.
 - 8) Holding the cam pulley alignment marks in line with the head cover mating surface, check again where the piston is at top dead center of the compression stroke.
 - 9) If the alignment marks and the head cover mating surface are out of alignment or if the piston is not at top dead center of the compression stroke, repeat the procedure from the step 3.
- <No. 2 cylinder>
- Rotate the crankshaft 270° to put the No. 2 cylinder at top dead center of its compression stroke. Be sure that the No. 2 cylinder is at top dead center of the compression stroke. Repeat the operation of the step 4 through step 9 explained above at the No. 2 cylinder, and install the cam pulley.
- <Rocker arm shaft>
- Install the rocker arm shaft from the opposite side of the cam pulley as shown.



OIL PUMP [Equipped type only]

□ : Type without oil pump only

[*1]: Oil pump equipped type

[*1]: OIL PUMP BODY ASSEMBLY

- INSTALLATION:**
- 1) Apply oil to the inside of the oil pump body and inner rotor and outer rotor.
 - 2) Install the outer rotor on the body.
 - 3) Install the oil pump plate on the oil pump body.
 - 4) Install the oil pump body assembly by aligning the two alignment pins on the reverse side of the pump cover with the alignment holes in the oil pan.
 - 5) After installation, check for smooth rotation of the oil pump.

[*1]: OUTER ROTOR

INSTALLATION: Clean the rotor thoroughly.

[*1]: OIL PUMP PLATE

31 x 50 x 8 mm OIL SEAL

INSTALLATION:

• Do not reuse.

• Apply oil to the outer surface and install the oil seal. After installation, apply grease to the lip.

[*1]: OIL PUMP PIPE

[*1]: OIL PUMP BODY ASSEMBLY

[*1]: OIL PUMP PLATE

[*1]: OIL PUMP PIPE

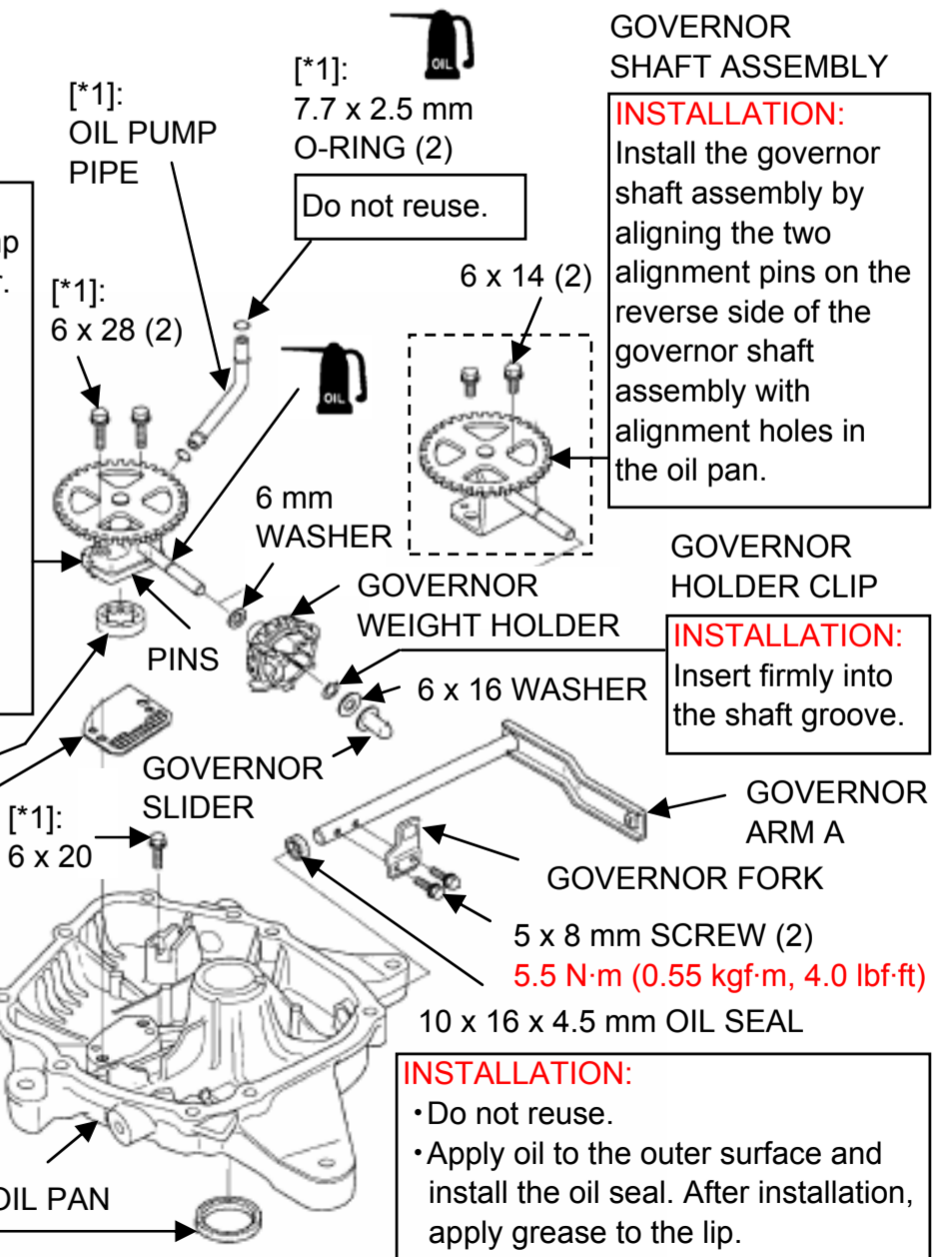
[*1]: OIL PUMP BODY ASSEMBLY

[*1]: OIL PUMP PIPE

[*1]: OIL PUMP BODY ASSEMBLY

[*1]: OIL PUMP PIPE

[*1]: OIL PUMP BODY ASSEMBLY



INSTALLATION:
Install the governor shaft assembly by aligning the two alignment pins on the reverse side of the governor shaft assembly with alignment holes in the oil pan.

INSTALLATION:
Insert firmly into the shaft groove.

INSTALLATION:
Do not reuse.

INSTALLATION:
Do not reuse.

INSTALLATION:
Do not reuse.

INSTALLATION:
Do not reuse.

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Do not reuse.

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INSTALLATION:
Do not reuse.



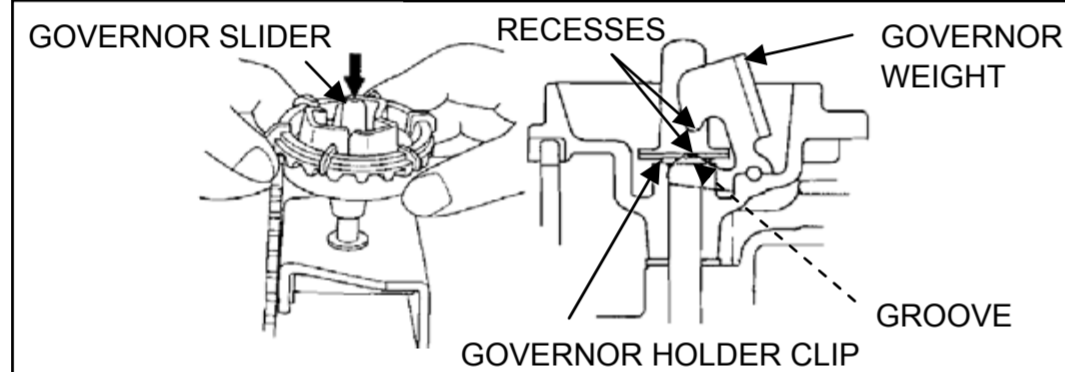
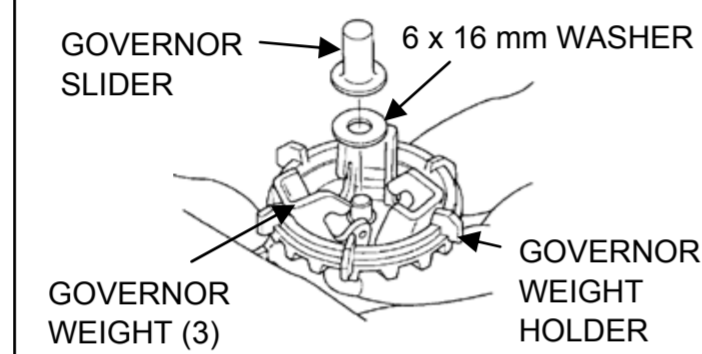
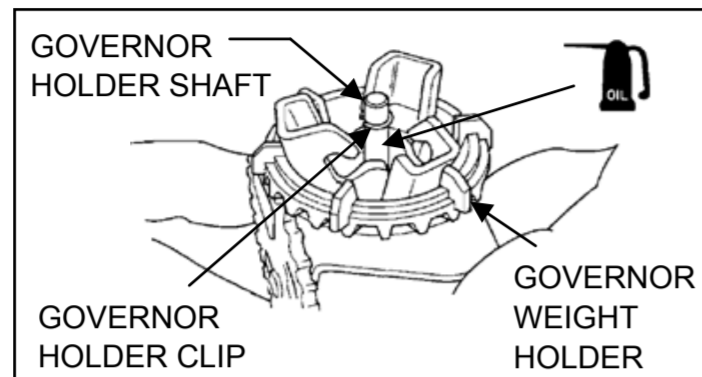
GCV530 - GXV530 Engine Assembly Information

HONDA

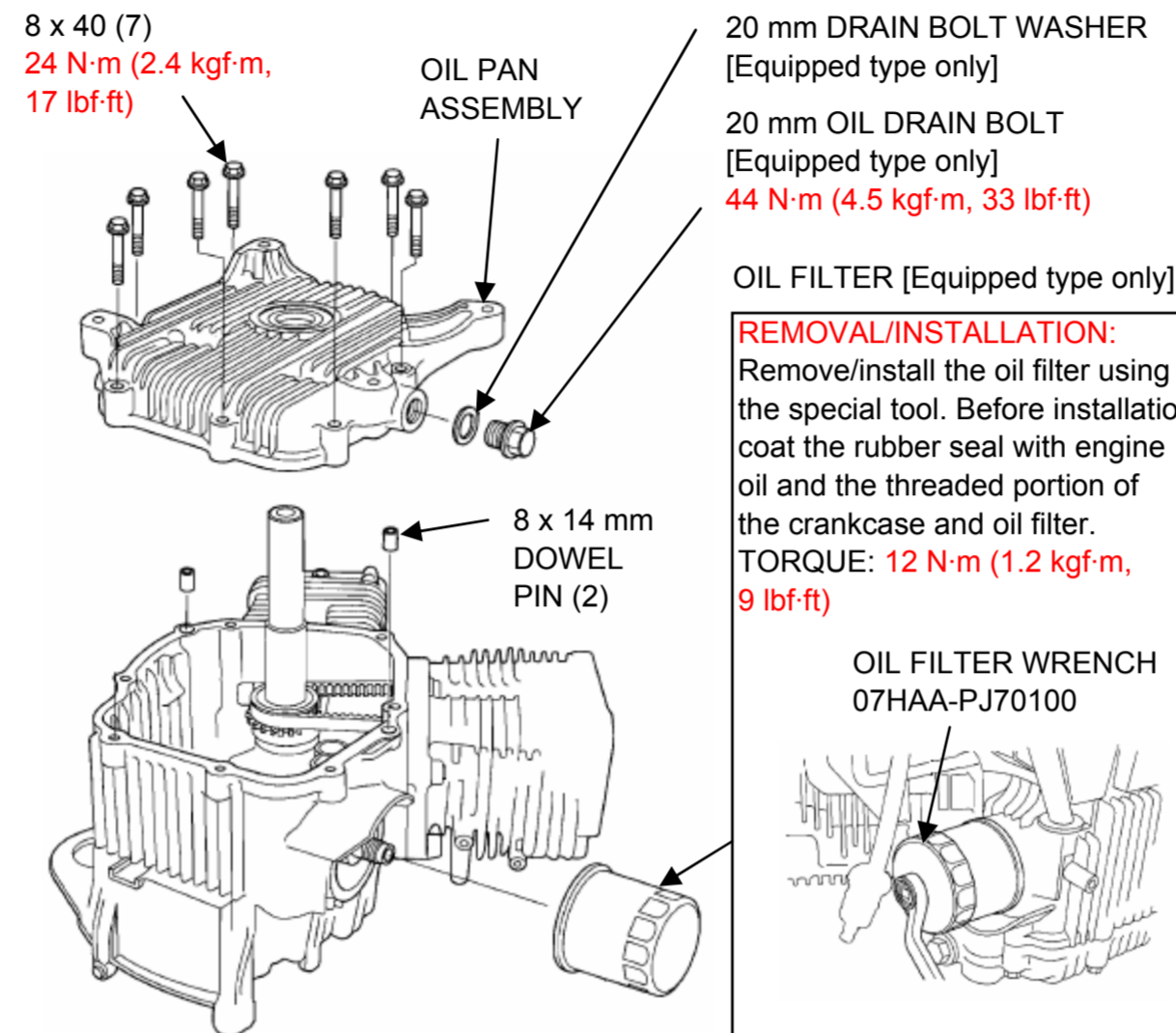
GOVERNOR

Installation of governor weight holder/clip/governor slider:

- 1) Apply oil to the governor holder shaft and install the 6 mm washer and governor weight holder shaft.
- 2) Set the clip at the end of the governor holder shaft.
- 3) Raise the governor weight holder toward the clip.
- 4) Holding the governor weight open, set the 6 x 16 mm washer and governor slider on the governor holder shaft.
- 5) Check that the washer and slider are securely set in recesses in the governor weight. Push in the governor slider and set the clip securely in the groove in the governor holder shaft.
- 6) After assembly, check that the governor weight and governor slider operate smoothly.



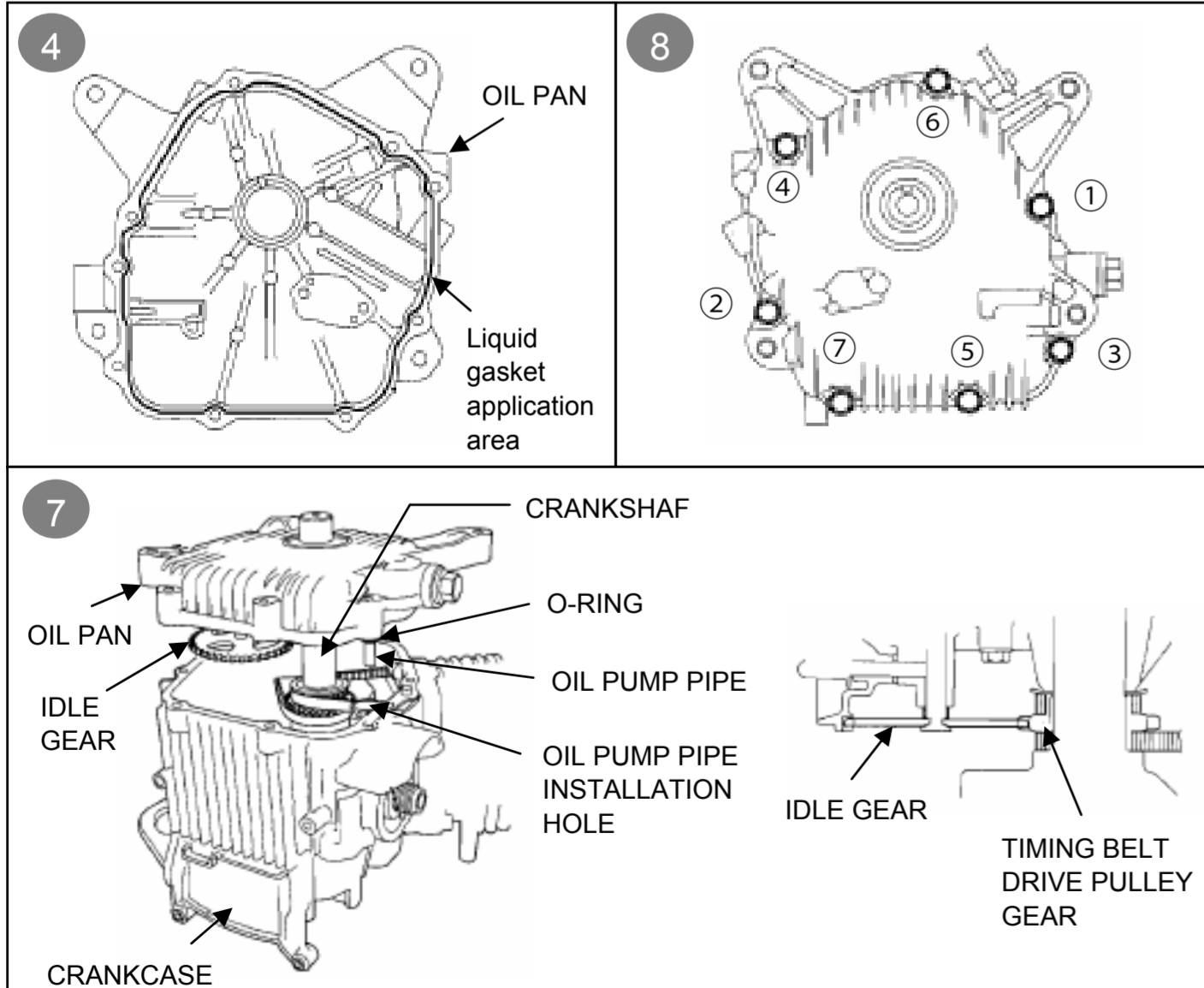
OIL PAN ASSEMBLY



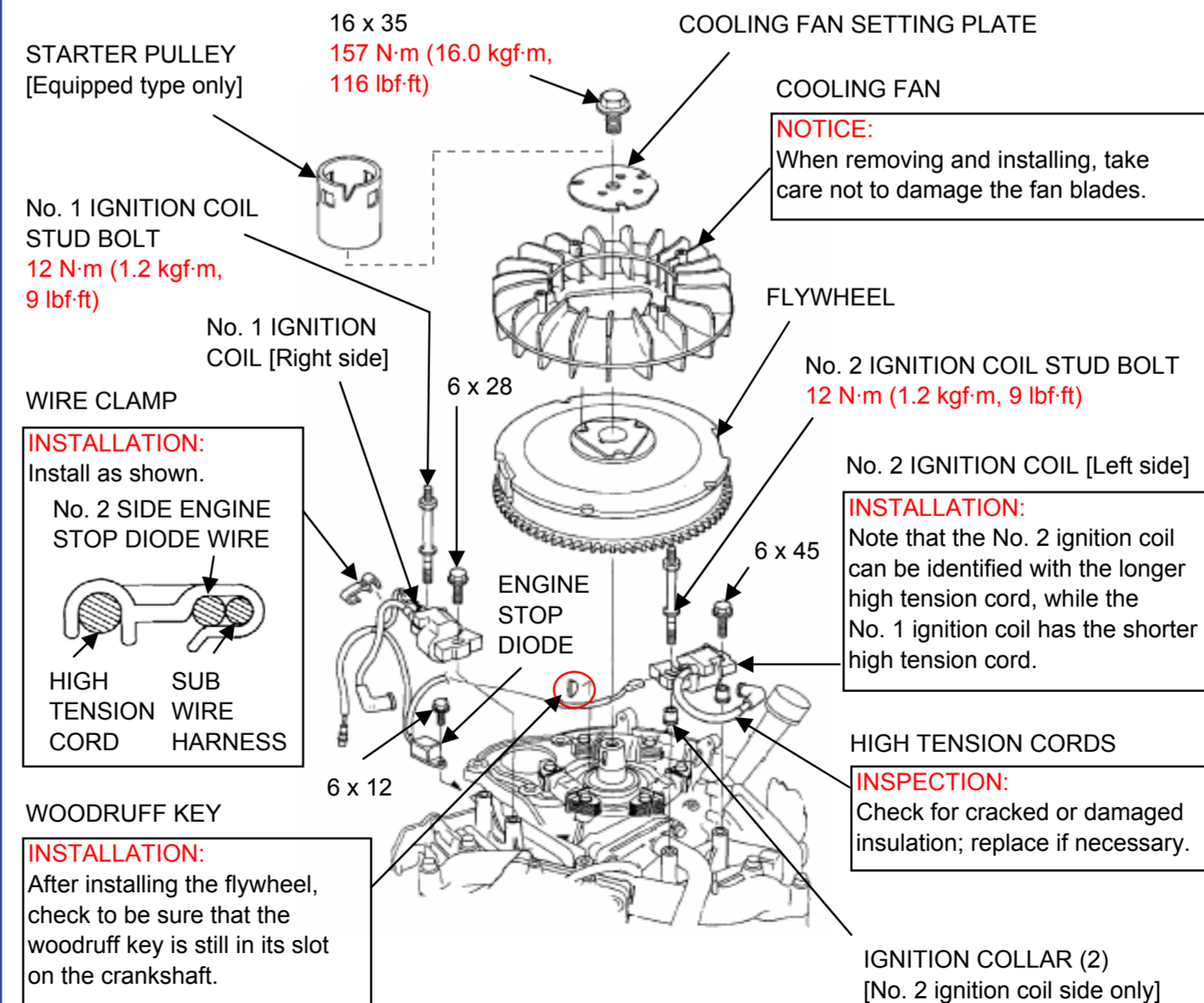
Installation of oil pan:

- Check that the thrust washer is set on the crankshaft properly.
- 1) Install the cam pulley on the timing belt of the No. 1/No. 2 cylinder.
 - 2) Clean the mating surfaces of the crankcase and oil pan using a degreasing cleaning agent or a clean shop towel.
 - 3) Set the two 8 x 14 mm dowel pins on the crankcase.
 - 4) Apply a bead [ϕ 1.2 mm (0.05 in)] of liquid gasket (ThreeBond #1207B, Honda Bond #4 or equivalent) to the oil pan; specifically, to the mating surface with the crankcase. Assemble **within 10 minutes** after applying the liquid gasket.
 - 5) Apply grease to the 31 x 50 x 8 mm oil seal lip and set the oil pan on the crankshaft.
 - 6) Apply oil to the oil pump pipe O-ring. Align the end of the oil pump pipe with the pipe installation hole in the crankcase (Oil pump equipped type only).
 - 7) Align the mating surfaces of the oil pan and crankcase securely by turning the crankshaft and tapping on the oil pan with the hand. Turn the crankshaft until the oil pan and crankcase mate with each other securely.
- NOTICE:**
Do not tighten the bolt without aligning the mating surfaces. It can damage the idle gear and/or timing belt drive pulley gear.
- 8) Loosely tighten each 8 x 40 mm flange bolts, then tighten to the specified torque in the numbered sequence. TORQUE: 24 N·m (2.4 kgf·m, 17 lbf·ft)
 - 9) Wait for **approximately 20 minutes** after assembly before filling oil and starting the engine.

OIL PAN ASSEMBLY



COOLING FAN/FLYWHEEL/IGNITION COILS



Installation of cooling fan/flywheel:

- 1) Clean the taper on the crankshaft and the tapered hole in the flywheel, then install the flywheel. **NOTICE:** The flywheel may push the key out of its slot; check after installation.
- 2) Attach by aligning the three lugs on the rear side of the fan with the small holes in the flywheel.
- 3) Align the three cutouts in the cooling fan setting plate with the three projections on the cooling fan, and install the cooling fan setting plate with the projection on the cooling fan toward the flywheel. Attach by aligning the two lugs on the rear side of the starter pulley with the small holes in the cooling fan cover (Equipped type only).
- 4) Apply oil to the seat and the threaded part of the 16 x 35 mm flange bolt.
- 5) Install the 16 x 35 mm flange bolt using a commercially available strap wrench.
- 6) Tighten to the specified torque. TORQUE: 157 N·m (16.0 kgf·m, 116 lbf·ft)

