



Thank you for purchasing our product. Before installing/operating the product, read the instructions carefully and retain them for future reference.

⚠ Attention!

- For installation, follow the steps described. Any damage caused by wrong installation shall be imputed to the users.
- Do not disassemble or change any parts. Opening and disassembling this unit will void any warranty.
- Maintenance and repairs should be executed by our professionals only.
- The Cylinder can be painted with High Heat Paint only. Under no circumstances should you apply any paint inside the cylinder or near the gasket surface.

NOTE

- ☞ Engine oil must be used during installation.
- ☞ Torque value required for fastening the screws.
- ⚠ Certain procedures must be followed in order to ensure proper installation of the components.
- ⚠ **WARNING!** Certain procedures must be followed to avoid injuries from occurring to the user or to others.
- ⚠ **CAUTION!** Certain procedures must be followed to avoid damages from occurring to the vehicle.

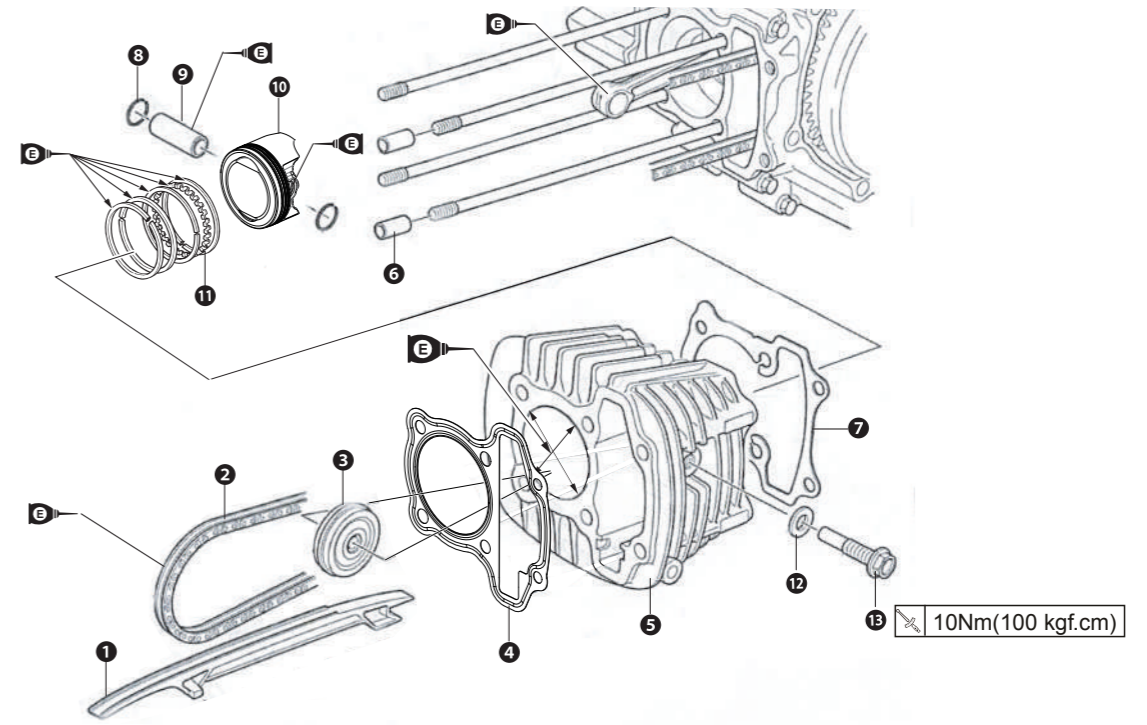
1-1 Accessories

1 Ceramic Coated Cylinder x1 	2 Cylinder Upper Gasket x1 	3 Cylinder Lower Gasket x1 	4 Piston x1
5 Piston Ring x1 	6 Forged Piston Pin x1 	7 C-Ring x2 	

1-2 Optional Accessories

1 Camshaft 	2 Throttle body 	3 Intake manifold 	4 Air filter cover
5 Air filter 	6 Connection tube 		

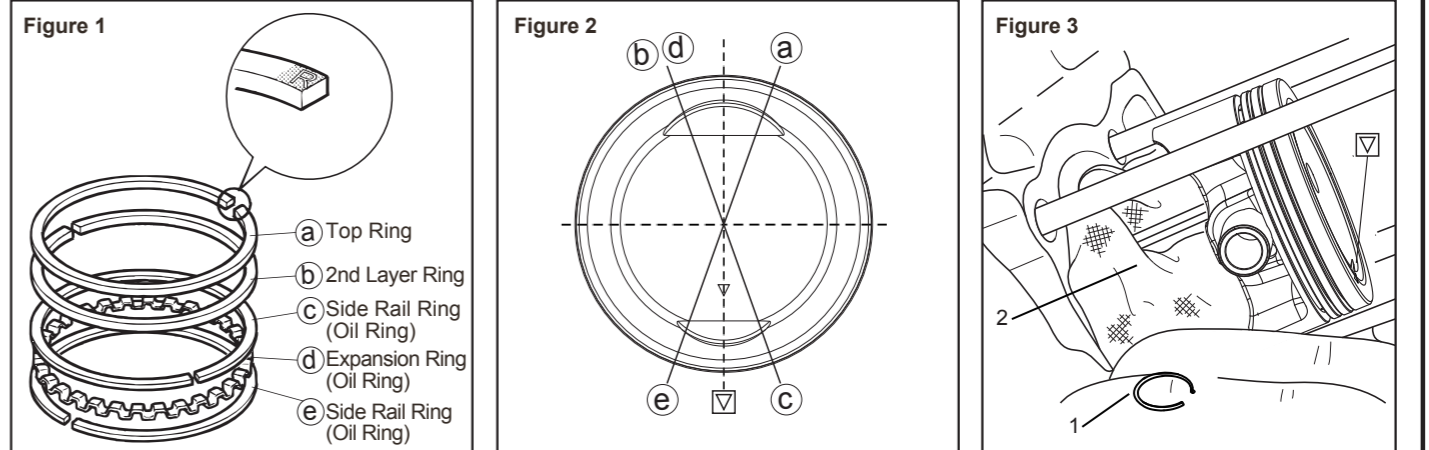
2-1 Instructions of Cylinder and Piston Dismantling and Disassembly



Proceed as follows

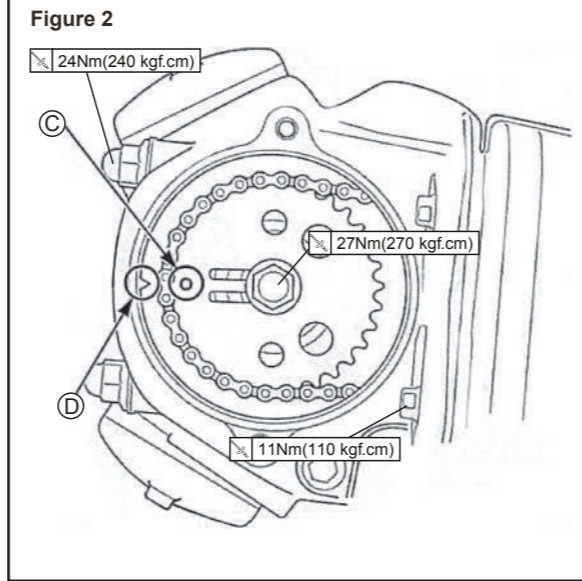
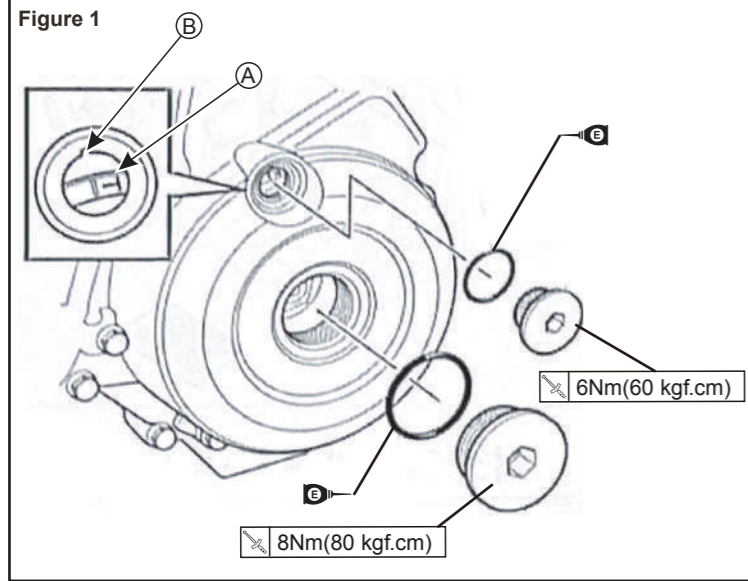
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|---|------------------------------------|--|--|
| ① Cam Chain | ② Chain | ③ Cam Chain Guide | ④ Cylinder Upper Gasket (Accessories2) |
| ⑤ Ceramic Coated Cylinder x1 (Accessories1) | ⑥ Std Dowel Pin | ⑦ Cylinder Lower Gasket (Accessories3) | |
| ⑧ C-Ring (Accessories7) | ⑨ Forged Piston Pin (Accessories6) | ⑩ Piston(Accessories4) | ⑪ Piston Ring (Accessories5) |
| ⑫ Washer | ⑬ Bolt | | |

- ⚠ Dismantle the entire engine and cylinder head to facilitate replacement the cylinder body.
- ⚠ Before the installation, apply lubricant oil on the cylinder wall to avoid unnecessary scratching or damaging of the cylinder.
- NOTE** Perform the dismantling according to the method indicated in the figure. The installation should be performed in reverse sequence for the dismantling procedure.
- NOTE** ☞ Engine Oil



- ⚠ The marking on the piston ring should face upward (Fig. 1) and the notches on the Piston Ring should also be aligned by intersecting with each other.
- NOTE** During the installation, confirm that the triangle marking ▽ on the piston is facing toward the discharge side of the cylinder (Fig. 2).
- ⚠ **CAUTION!** Before installing C-Ring (1), be sure to cover the opening of Crankcase (2) with a clean cloth to prevent the ring from bouncing back into the Crankcase as to cause unnecessary damage (Fig. 3).

2-2 Instructions of Timing Gear Adjustment



1. Rotate the Distribution Panel Rotor with appropriate tool and then adjust until the TDC marking (A) is correctly aligned with the marking (B) on the generator.
2. Confirm that the Camshaft Sprocket marking (C) is correctly aligned with marking (D) on the cylinder head.

NOTE Perform the dismantling according to the method indicated in the figure. The installation should be performed in reverse sequence for the dismantling procedure.

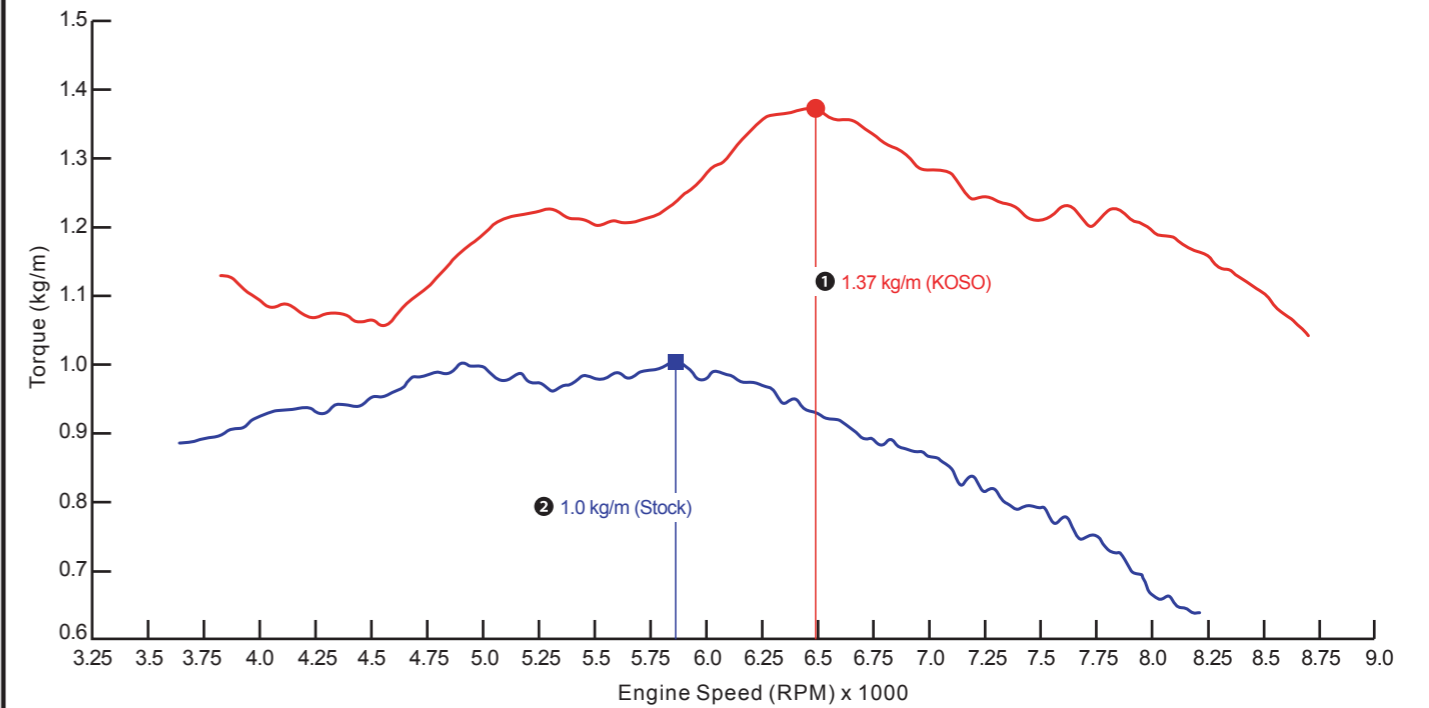
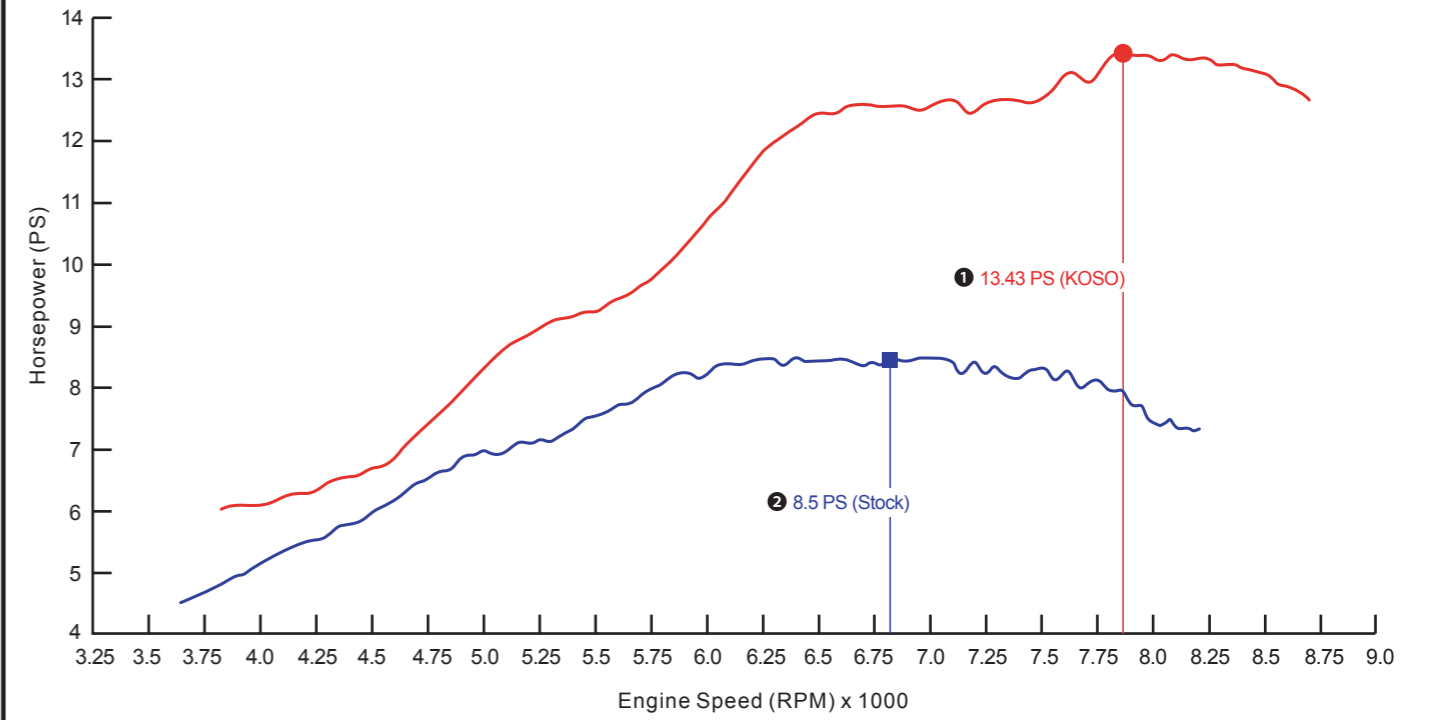
NOTE When installing the Camshaft, the chain should be kept with a tension.

CAUTION! When dismantling, be sure to adjust the Timing Gear marking first and then proceed with the dismantling operation.

CAUTION! When installing the Camshaft, do not attempt to turn the crank to avoid damaging the valve or causing timing error of the valve.

WARNING! After completing the installation of Timing Gear and chain, check if the relative markings are correctly aligned. Before starting the machine, perform a running test to ensure that the machine is correctly installed.

3 DYNO Acceleration Test Diagram



NOTE ① KOSO 54mm Cylinder(144.51cc)+KOSO Camshaft+KOSO manifold+KOSO throttle+KOSO connecting tube+KOSO Air filter+KOSO Air filter cover+Injector.

NOTE ② Stock.