KOSO Feel The Speed

INSTRUCTIONS

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

⚠ NOTICE

- Correct tools must be used for installation.
- 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 dissassembling this unit will void any warranty.
- Maintenance and repairs should be executed by our professionals only.

◎ **Symbol description:**

NOTE	Read this information carefully regarding the essential features.
	To smear engine oil before installation.
	To smear molybdenum disulfide oil before installation.
	To smear screw glue before installation.
	To smear grease before installation.
	Represents wear limit and gap.
INSTALLATION CAUTION!	Make sure all screws are tightened properly before starting the engine.
READ CAREFULLY !	If any information dealt with in the manual remains unclear seek professional assistance.

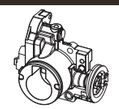
1-1 Accessories

1 Camshaft X1

1-2 Optional Accessories

1 Ceramic Coated Cylinder

2 Throttle body



3 Intake manifold

4 Air filter cover

5 Air filter

6 Connection tube

2-1 Removing The Camshaft

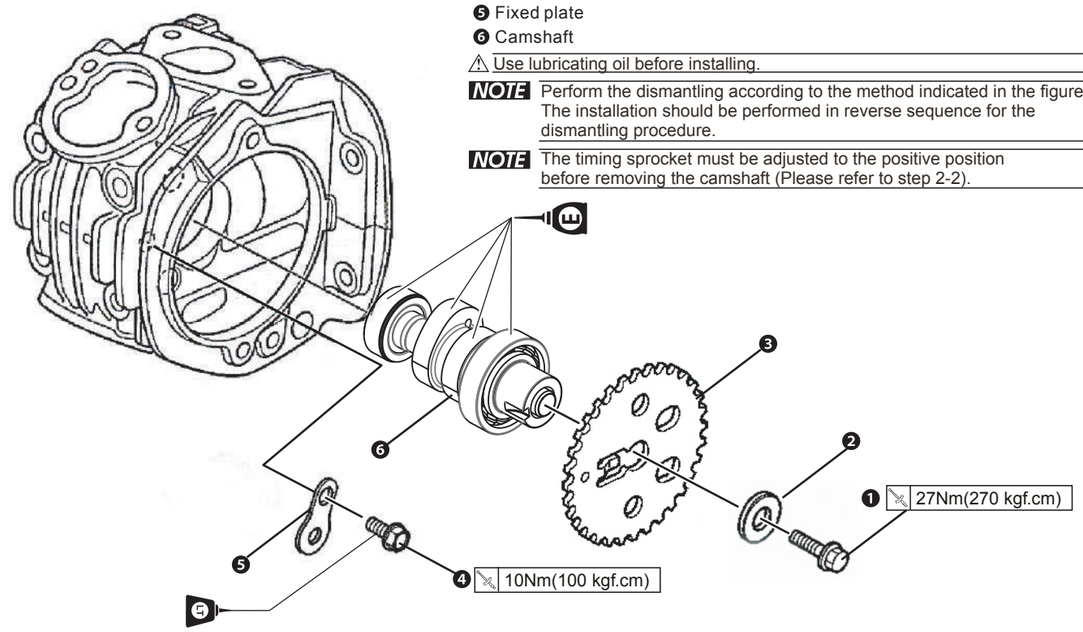
Follow the instructions

1. Fixed screw
2. Washer
3. Timing sprocket (camshaft sprocket)
4. Fixed screw
5. Fixed plate
6. Camshaft

⚠ Use lubricating oil before installing.

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 The timing sprocket must be adjusted to the positive position before removing the camshaft (Please refer to step 2-2).



2-2 Instructions of Timing Gear Adjustment

Figure 1

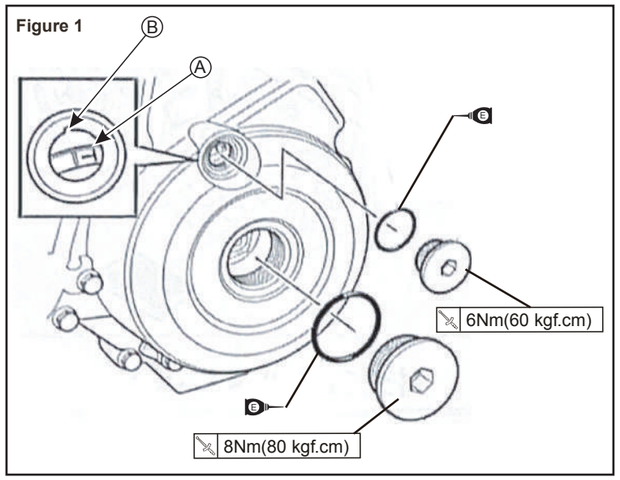
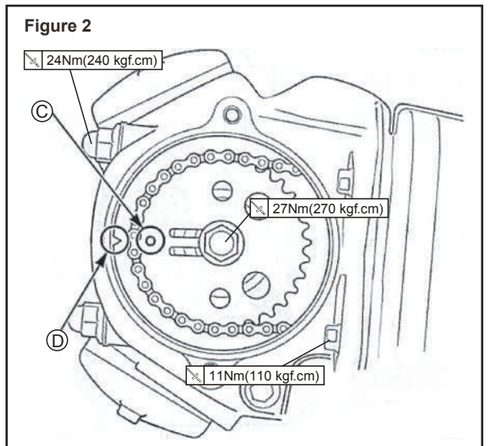


Figure 2



1.Rotate the Distribution Panel Rotor with appropriate tool and then adjust till the TDC marking Ⓐ is correctly aligned with the marking Ⓑ on the generator.
2. Confirm that the Cam Shaft Sprocket markingⒸ is correctly aligned with markingⒹ 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 Can Shaft, the chain should be kept tight.

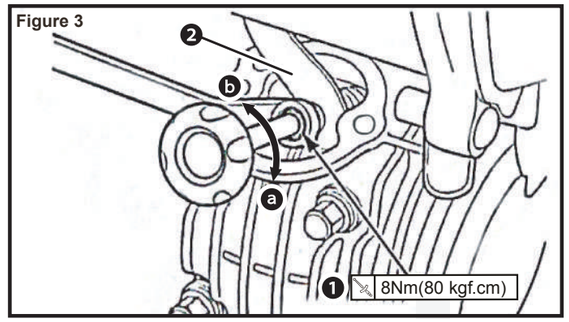
⚠CAUTION! When dismantling, be sure to adjust the Timing Gear marking first and then proceed with the dismantling operation.

⚠CAUTION! When installing the Cam Shaft, do not attempt to turn the crank to avoid damaging the value or causing a timing error of the valve.

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

2-3 Adjusting Valve Clearance

Figure 3



1. First loosen fixing nut ❶.
2. Insert feeler ❷ between the adjustment screw and valve terminal.
3. Use the valve adjustment tool to rotate the adjustment screw with direction ⓐ or ⓑ until you get the specified valve clearance.
4. Properly lock the fixing nut after adjusting the clearance and then insert the feeler again to confirm the clearance value.
5. If the value is not correct, repeat steps 1-4 until the clearance value is within the standard.

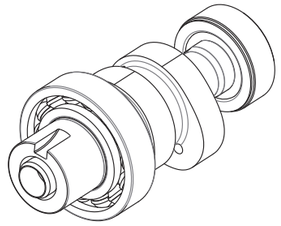
Valve clearance → intake valve 0.08±0.02mm
→exhaust valve 0.20±0.02mm

NOTE Direction ⓐ → valve clearance increases;
Direction ⓑ → valve clearance reduces.

⚠ WARNING! The measurement and adjustment of the valve clearance can only be executed when the engine is cold (room temperature).

⚠ WARNING! When measuring or adjusting valve lash, the piston must be at compression top dead center (TDC) Location

3 Camshaft features description

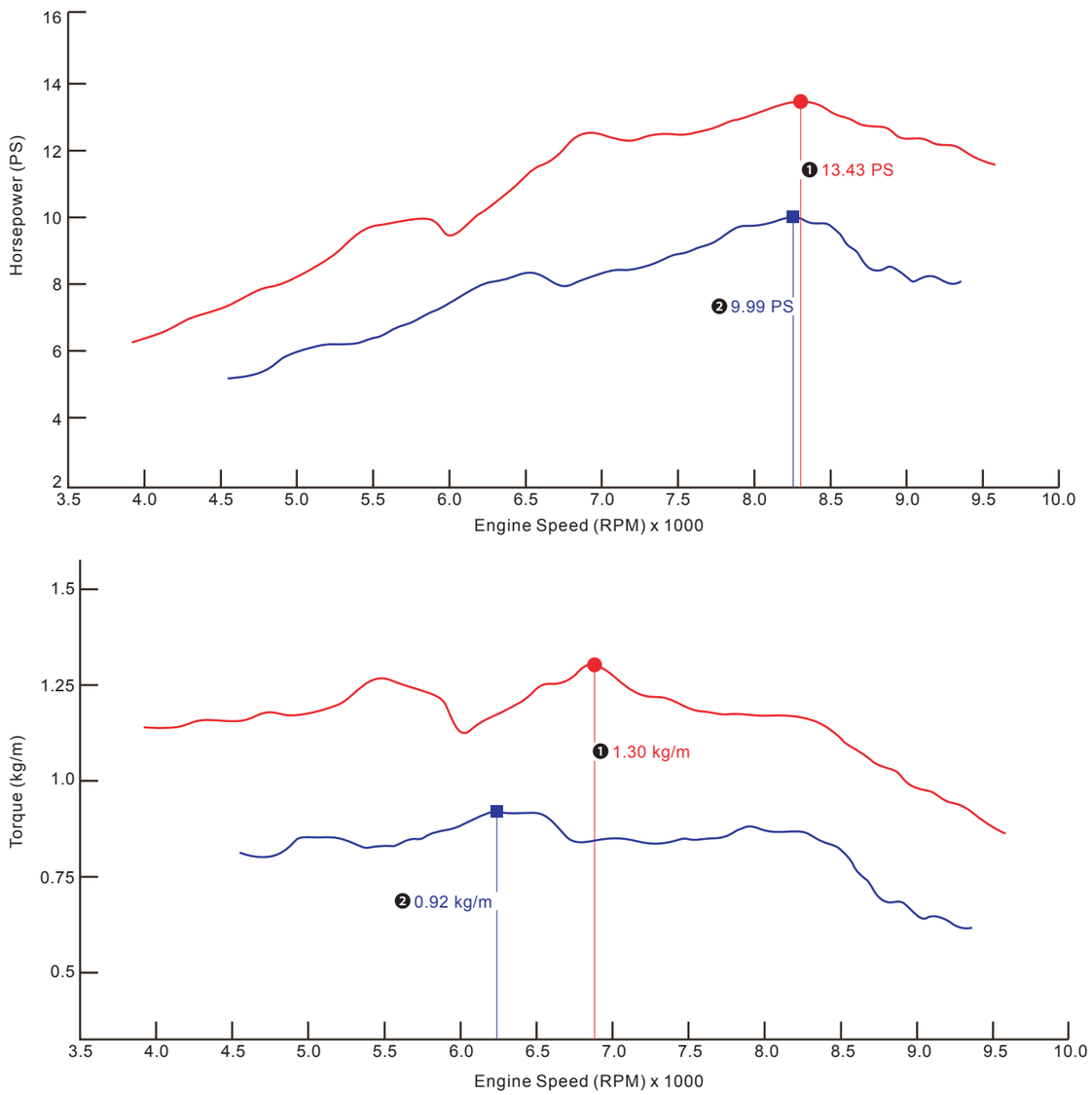


DURATION AT1.0mm	VALVE LIFT	LOBE CENTER	RUNNING CLEARANCE
IN-230 / **EX**-230	**IN**-0.8mm / **EX**-7.5mm	**IN**-105 / **EX**-105	**IN**-0.08mm / **EX**-0.20mm

Noun commentary

1.TDC 2.BTDC 3.ATDC 4.BDC 5.BBDC 6.ABDC 7.OVER LAP
8.LOBE CENTER 9.DURATION 10.VALVE LIFT

4 DYNO Acceleration Test Diagram



NOTE ❶ KOSO 54mm Cylinder+KOSO Camshaft+KOSO Piston.

NOTE ❷ Stock

NOTE Test results vary with testing environment and weather. This test chart is for reference only.