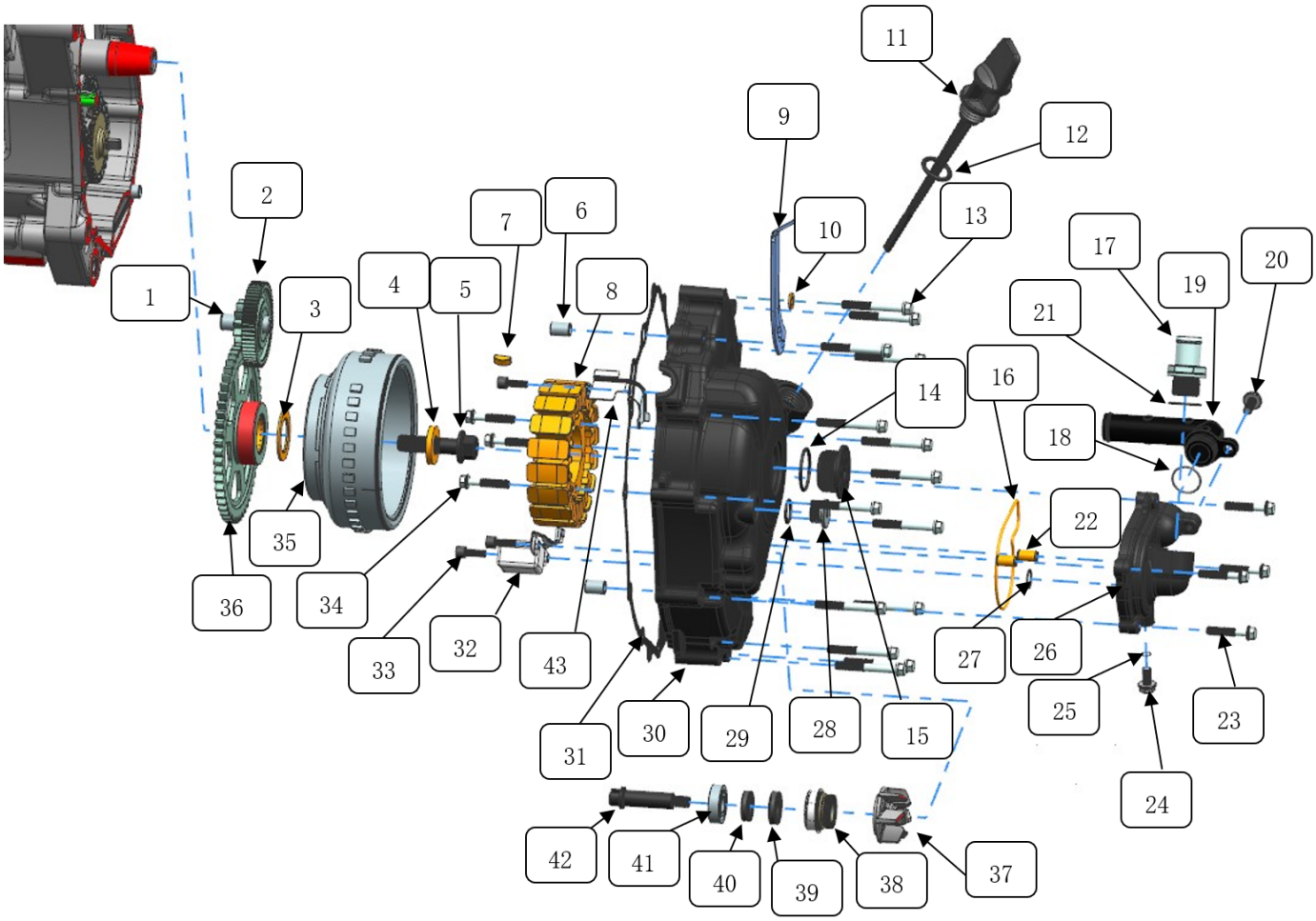
Right crankcase cover, magneto

1. System components



Parts information

Serial number	Part Name	Quantity	Serial number	Part Name	Quantity
1	ZT1P72MN electric start reduction gear shaft	1	23	M6×30 Hexagon Flange Face Bolt (Environmental Protection Color Zinc)	4
2	ZT1P72MN electrically started reduction gear assembly	1	24	GB5789M6×12 (Eco Color)	1
3	25.2×37×1.6 Thrust washers	1	25	φ5.6×φ1 EPDM O-ring	1
4	φ12.3×φ28×4 thrust washers	1	26	ZT1P79MP water pump cover (matte black)	1
5	GB16674 M12×45 (12.9 grade/phosphating)	1	27	φ11.5×φ1.8 EPDM O-rings	1
6	φ10×14 hollow dowel pin	2	28	M14×1.5×9.5 Hexagon Plug	1
7	5× 5.7×16 semicircular keys	1	29	13×2.8 acrylic glue O-ring	1
8	ZT1P79MP[Additional translation] magneto stator sub-parts	1	30	ZT1P79MP Right crankcase cover (matte black)	1
9	ZT350T-K air filter resonator mounting bracket	1	31	ZT1P77MP right crankcase cover gasket	1
10	φ6.3×φ12×1.6 copper gasket	1	32	Trigger	1
11	ZT1P79MP Oil dipstick	1	33	M5×15-5# Hexagon socket head screw(Oxide black)	3
12	18×3×3.5 acrylic glue O-ring	1	34	M6×30 Hexagon Flange Face Bolt (Environmental Protection Color Zinc)	3
13	M6×45 Hexagon Flange Face Bolt (Environmental Color Zinc)	14	35	ZT1P79MP magneto rotor sub-components	1

14	27.4×2.65 acrylic glue O-rings	1	36	ZT1P79MP electric start gear	1
15	M30×1.5 Aluminum Screw Plug Blank (Matte Black)	1	37	ZT1P79MP pump vanes	1
16	ZT1P72MN water pump cover O-rings	1	38	ZT180MN water seal sub-assembly	1
17	ZT1P72MN water pipe joints	1	39	FB12×24×5 hydrogenated nitrile rubber oil seal	1
18	18.7×1.9 EPDM O-rings	1	40	FB12×22×5 fluororubber oil seal	1
19	ZT1P79MP water pump cover outlet pipe fitting (matte black)	1	41	GB276-6001/P5C3 Deep Groove Ball Bearing(Nitriding)	1
20	GB5789M6×16 (Eco Color)	1	42	ZT1P72MN pump shaft	1
21	φ20.7×φ1.9 EPDM O-rings	1	43	ZT173YMM stator crimping plate	1
22	Φ8×14 hollow positioning pin	2			

2.Repair information

General information

- This section describes the removal and installation of the right crankcase cover, flywheel and magneto.
- These repairs can be carried out on the entire vehicle without the need to disassemble the engine.
- The engine oil and coolant should be cleaned before disassembly.

Torque value

Name	Assembly location	Quantity	Torque **(N·m)**	Remark
M6×45 hexagonal flange face 9.8 grade bolt (environmental color zinc)	Right crankcase lid locking bolt		12±1.5	-
M14×1.5×9.5 Hexagon Plug	Small AC cover on the right cover	1	12±1.5	-
Water pipe fittings	Water pump cover water pipe fittings	1	20±1.5	-
M6×30 Hexagon Flange Face Bolt (Environmental Protection Color Zinc)	Water pump cover locking bolts	4	12±1.5	-
GB5789M6×12 (Environmental Color [Supplementary Translation])	Water pump cover drain bolts	1	10±1	-
M30×1.5 Aluminum Screw Plug (Dark Grey)	Large AC cover on the right cover	1	16±1.5	-
	Magneto stator locking bolts	3	10±1	Apply thread glue
M5×15-5# Hexagon Socket Screw(Oxide Black)	Triggers, crimping plates, locking bolts	3	5±1	Apply thread glue
GB16674 M12×45 (12.9 grade/phosphating)	Flywheel locking bolts	1	103±10	-
GB5789M6×16 (Eco Color)	Bolts for the outlet pipe joint of the water pump cover	1	12±1.5	

Tool

1. Torque wrench
2. Extended hexagon socket - 8#/T-shaped socket-8#
3. Dedicated flywheel fixtures
4. Socket-10#, 15#, 17#
5. Flywheel puller
6. Open-end wrench - 10#
7. Hexagon tip - 5#
8. Slotted bolt cutter
9. Clamp pliers
10 . Copper rods
11. Flat sealant
12. Thread fastening glue
13. Stun gun

3. Right crankcase cover / magneto stator

Disassemble

Before removing the right crankcase cover：

·Disassemble the toilet bowl of the whole vehicle and disconnect the trigger cable and magneto stator cable connector.

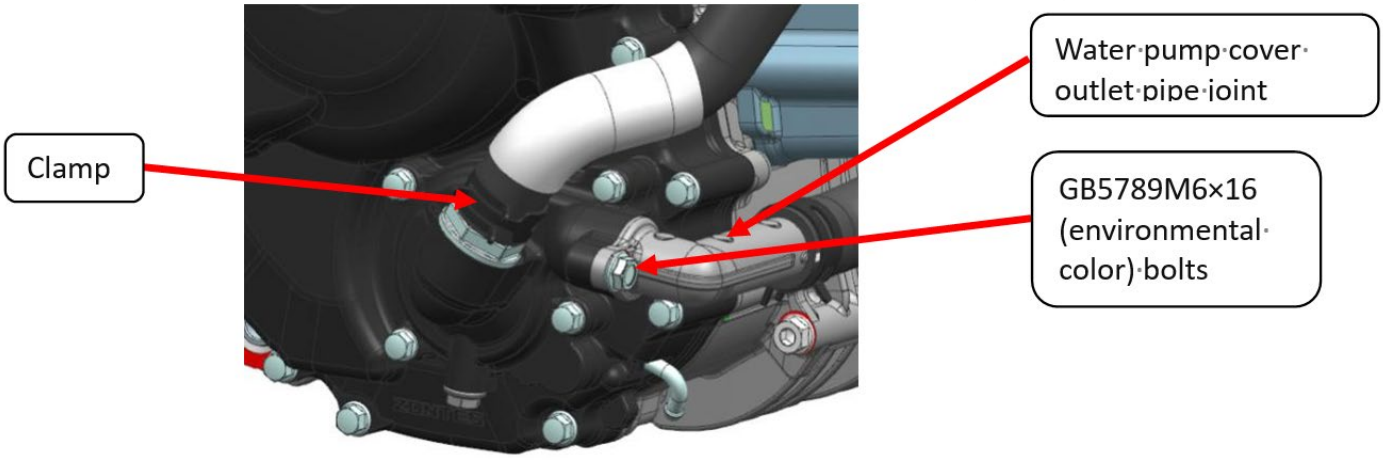
·Unscrew the drain bolt and drain the coolant clean.

Note: If only the right crankcase cover gasket is replaced, there is no need to put coolant and the water pipe does not need to be pulled out.

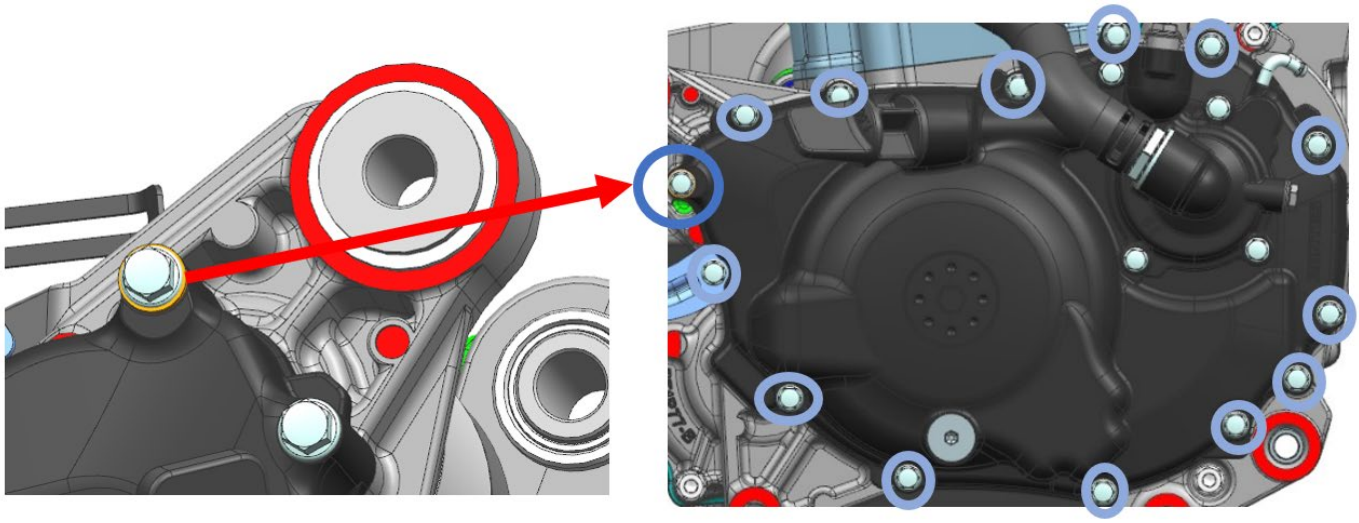
·Unscrew the oil drain bolt and drain the engine oil clean·

· Muffler.

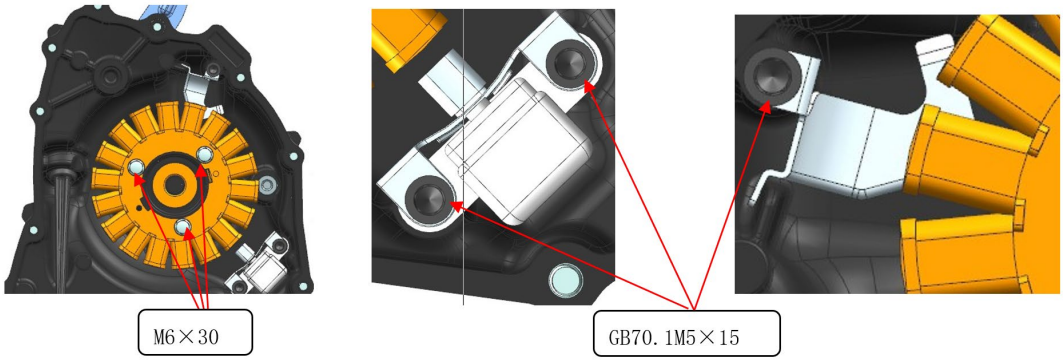
1. Use the clamp pliers to move the clamp on the water pipe fitting upwards and pull the water pipe out. Then use a 10# open-end wrench to remove the GB5789M6×16 (environmental color) bolts,And take out the water pump cover outlet pipe joint, and pull it out slowly and vertically when taking out the joint to prevent the O-ring inside from cutting the edge.



2. Remove 14 M6×45 hexagonal flange bolts on the right crankcase cover counterclockwise with a torque wrench (or air batch) and extended outer hexagon socket -8#, one of which has a 6.3 ×12×1.6 copper pad , remove the right crankcase cover, 2 ϕ10×14 hollow positioning pins and the right crankcase cover gasket.



3. After the right crankcase cover is removed from the engine, the magneto stator sub-assembly is on the right crankcase cover. Use a torque wrench (or air batch) and an inner hexagonal gun head -5# to fix three M6×30 bolts on the coil, two M5×15-5# inner hexagonal cylindrical screws on the trigger plate, and the stator Remove one M5×15-5# hexagon socket head screw on the pressure plate.



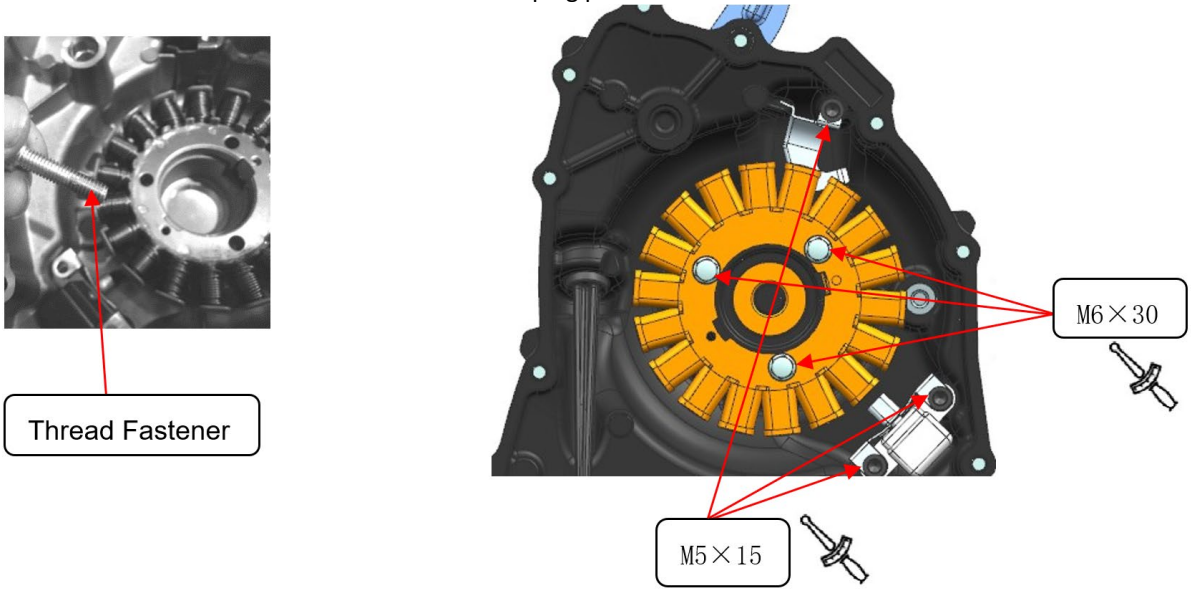
Install

1. Put the sub-components of the magneto stator on the corresponding position of the right crankcase cover, and install three M6×30 (environmentally friendly colored zinc) bolts and three M5×15-5# inner hexagon cylindrical screws (oxidized black) Apply an appropriate amount of thread glue on the thread of the thread, screw it into the corresponding threaded hole with a torque wrench and the inner hexagonal gun head -5# and tighten it. The torque standards are 12±1N·m and 5±1N·m respectively.

Remarks:

① The trigger cannot be installed backwards, and the side with the sensing point faces inward.

② The magneto wire is stuck at the bottom of the stator crimping plate.

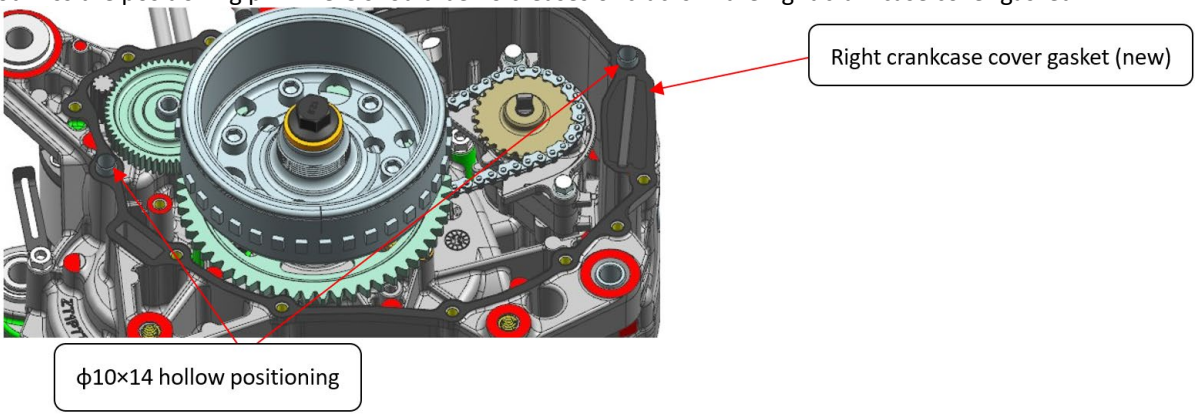


2. Install two ϕ10×14 hollow positioning pins and a new right crankcase cover gasket at the joint surface of the right crankcase and the right crankcase cover; Oil pump bump marks; use a slotted bolt cutter to turn the water pump shaft so that the slots are aligned with the raised marks on the right crankcase cover.

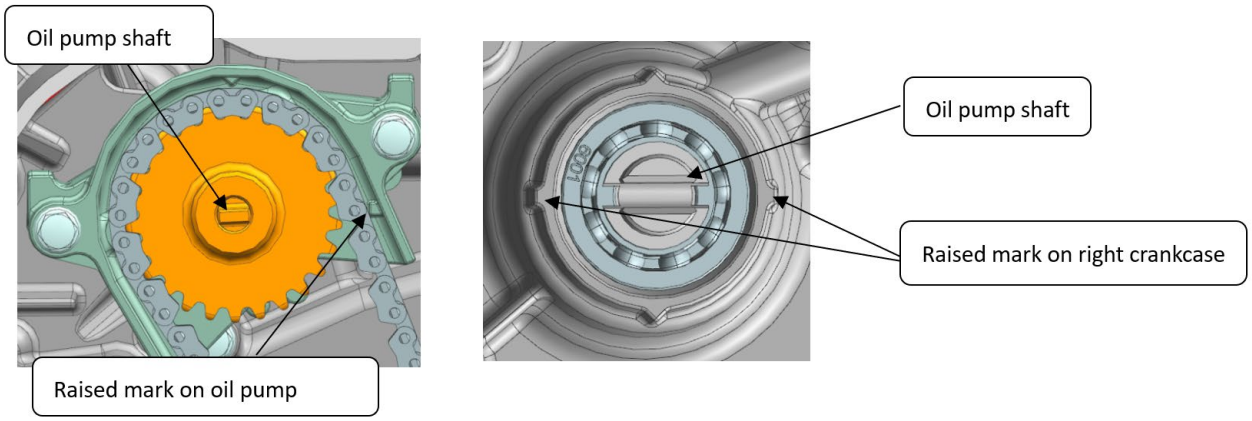
Remarks:

① When adjusting the oil pump shaft, turn the flywheel clockwise to drive the oil pump to rotate.

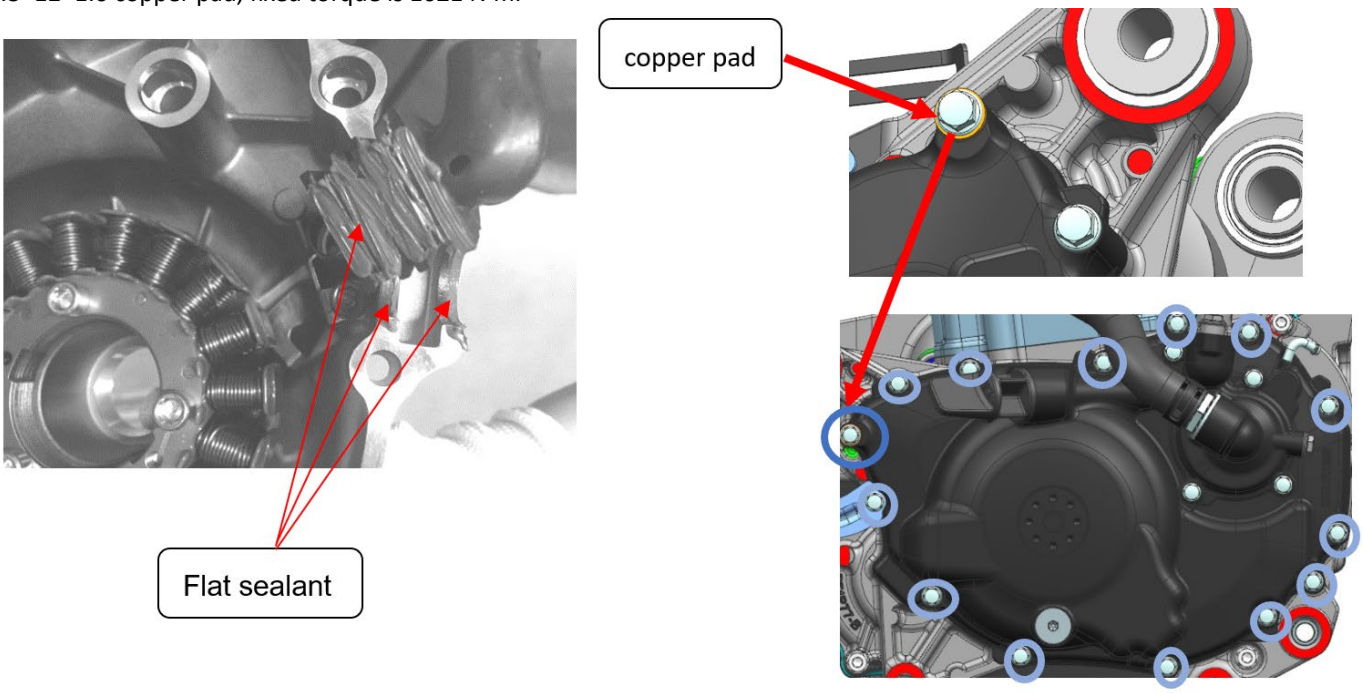
② Do not miss the positioning pin. There should be no creases or cracks in the right crankcase cover gasket.



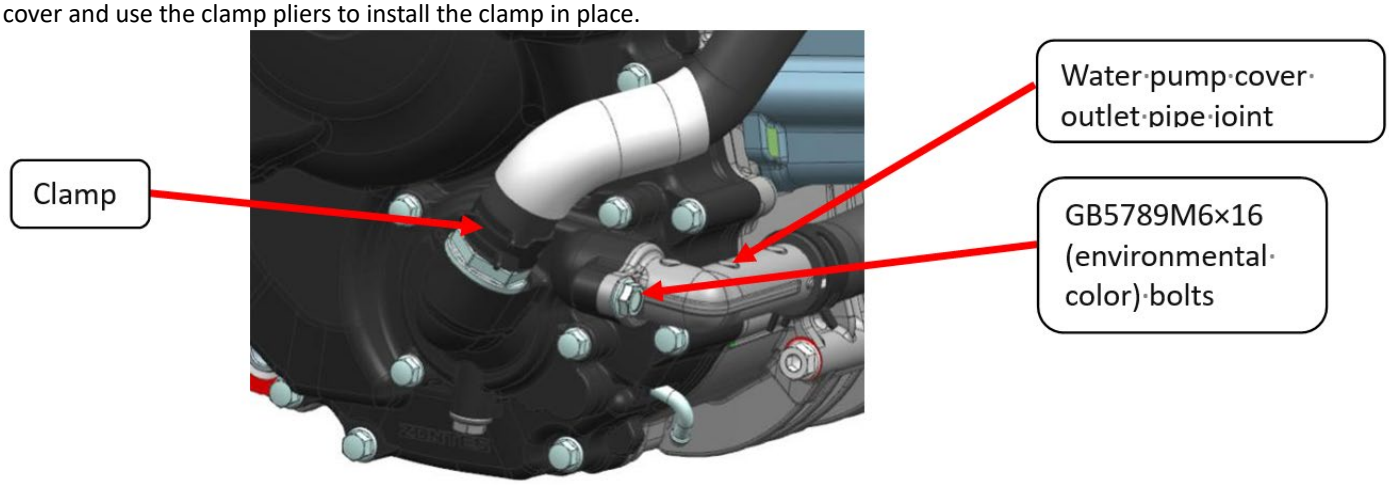
③ When adjusting the oil pump shaft, you can turn the flywheel clockwise to drive the oil pump to rotate.



3. Apply an appropriate amount of flat sealant on the waterproof rubber sleeve of the right crankcase cover and press it tightly, install the right crankcase cover, use a torque wrench and an extended outer hexagon socket -8# to insert 14 M6×45 hexagonal flange surface 9.8 grade bolts (environmental protection color zinc) tighten, 13 bolts torque is 12±1.5 N·m , one bolt plus 6.3×12×1.6 copper pad, fixed torque is 10±1 N·m.



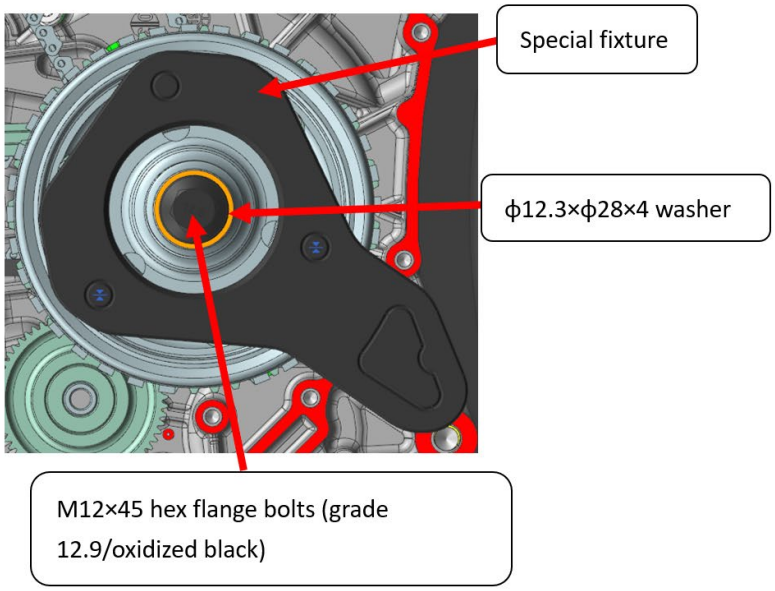
4. Install the outlet pipe joint of the water pump cover to the water pump cover, and keep the two joint surfaces fit, pay attention to the O-ring needs to be installed in place, can not be missed, cut the edge, and then use a 10# sleeve to tighten the GB5789M6×16 (environmental color) bolt, and the fixed twist is 12±1.5 N.m. Finally, reconnect the inlet pipe back to the pump cover and use the clamp pliers to install the clamp in place.

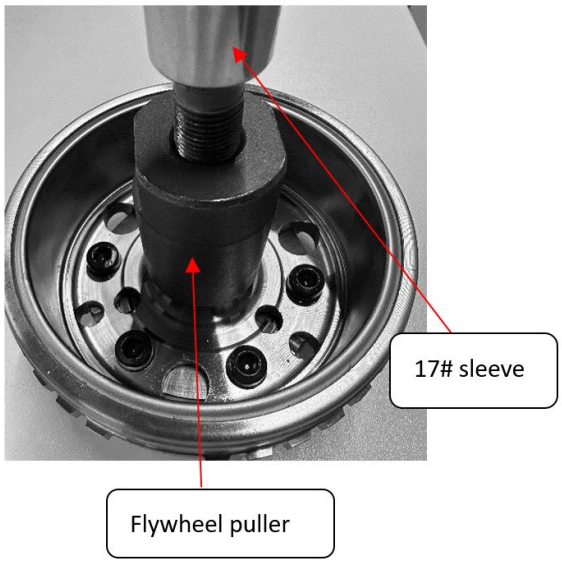


4. Magneto rotor

Disassemble

1. After the right crankcase cover is disassembled, use a special clamp to fix the flywheel so that the flywheel cannot rotate freely, use a torque wrench (or electric gun) and a socket -15# to remove the M12×45 hexagon flange bolt, and remove the ϕ12.3×ϕ28×4 washer; screw the flywheel puller into the thread on the flywheel, and remove the flywheel with an electric gun and sleeve -17#.



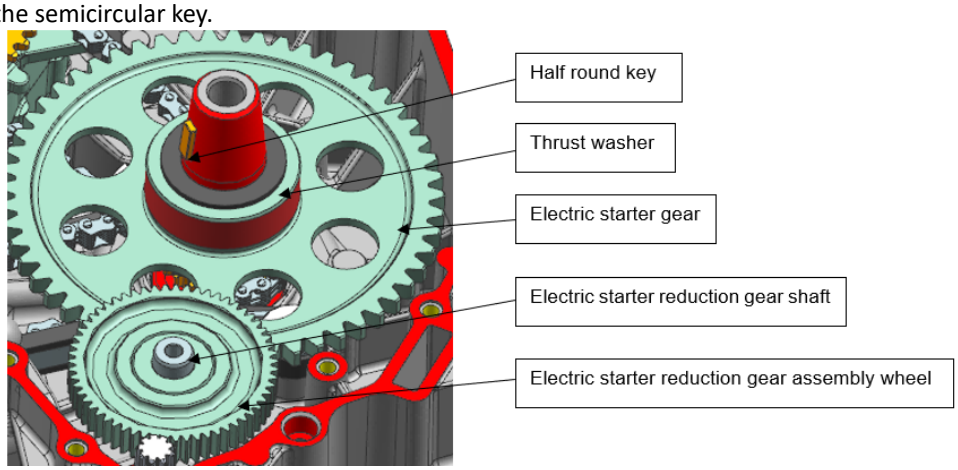


2. Knock out the half-round key in the crankshaft groove with a copper rod, take out the 25.2×37×1.6 thrust washer; the electric starter reduction gear assembly; the electric starter large gear; the electric starter reduction gear shaft.

Remarks:

① When tapping the half-round key, the pad cloth prevents the half-round key or burr from falling into the box.

② Do not deform the semicircular key.

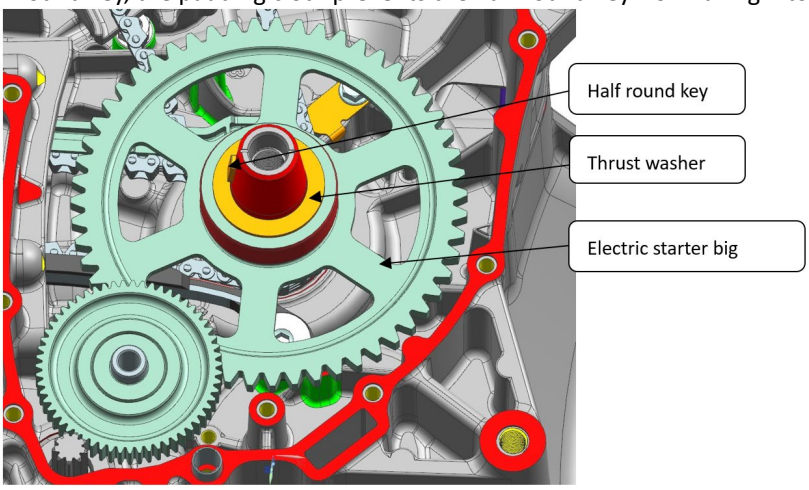


Install

1. After checking that the electric starter large gear, 25.2×37×1.6 thrust washer , electric starter reduction gear assembly , and electric starter reduction gear shaft are all installed correctly, use a copper rod to knock the half-round key into the crankshaft.

Remarks:

① When installing the half-round key, the padding cloth prevents the half-round key from falling into the box.

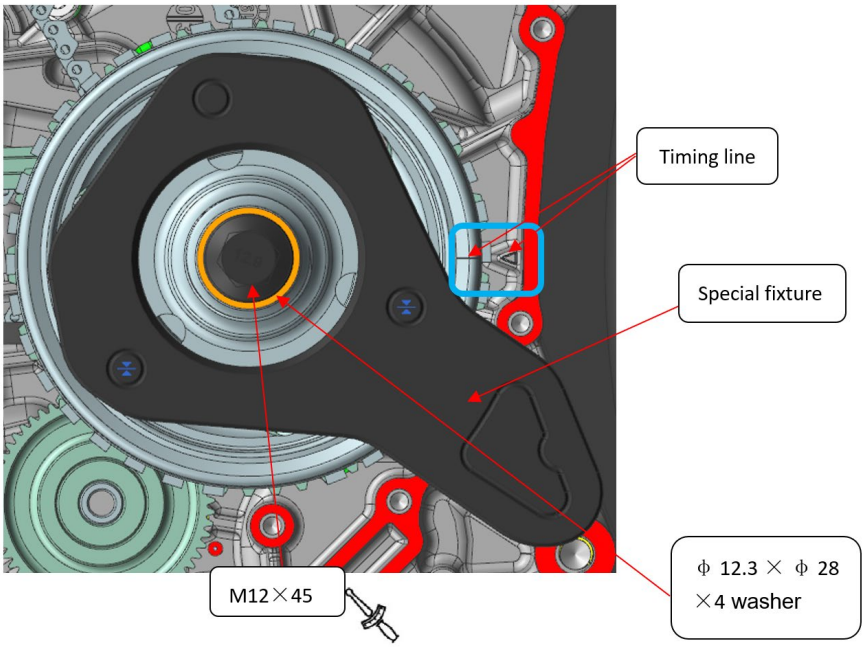


2. Install the flywheel in place, put in ϕ12.3×ϕ28×4 washers, M12×45 hexagonal flange bolts and screw them into the threads, turn the flywheel clockwise to make the mark next to the “T” mark on the flywheel Align the line with the triangular mark of the box, use a special fixed flywheel fixture to prevent the flywheel from rotating freely, use a torque wrench and a socket -15# to tighten the M12×45 hexagonal flange bolts, and tighten the torque The standard is 103±10 N·m.

Remarks:

① Apply engine oil on the joint surface of the large starting gear and the one-way device (integrated with the flywheel).

② After the flywheel is installed, check whether the large gear of the electric starter rotates counterclockwise smoothly (when the reduction gear is not installed), and move up and down by hand to check whether there is any axial play.



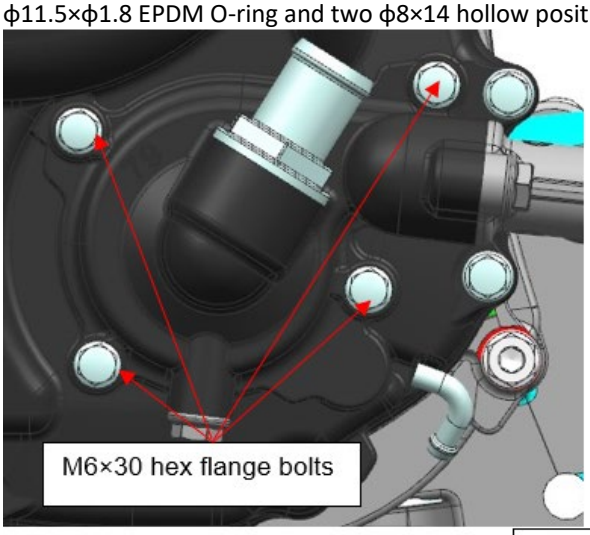
3. Install the right crankcase cover after the flywheel is installed.

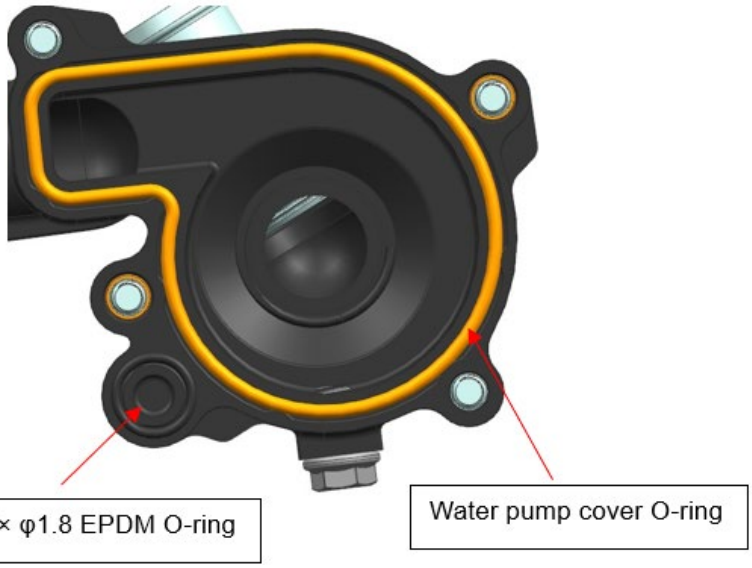
5. Water pump

Disassemble

The combined parts of the water pump are detailed in the system components and parts information table.

1. Use a torque wrench (or air batch) and an extended outer hexagonal sleeve -8# to disassemble the 4 M6×30 hexagonal flange bolts (environmental protection color zinc) on the water pump cover counterclockwise, and remove the water pump cover O-ring, ϕ11.5×ϕ1.8 EPDM O-ring and two ϕ8×14 hollow positioning pins.

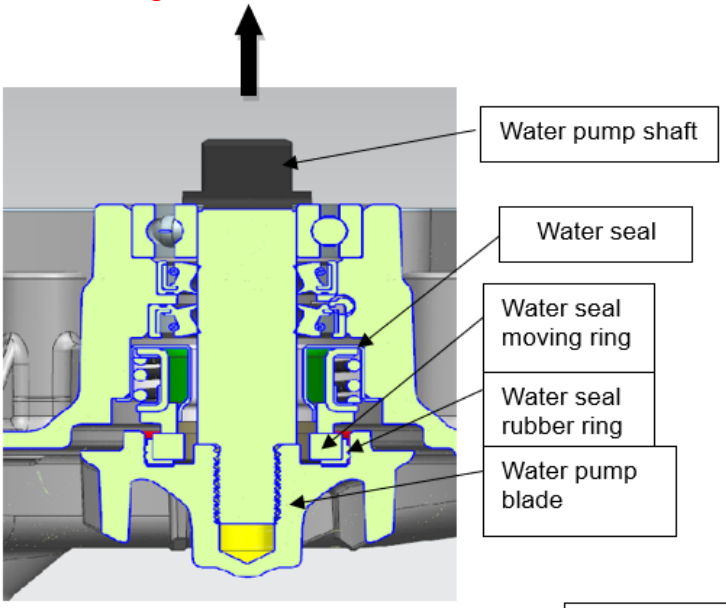


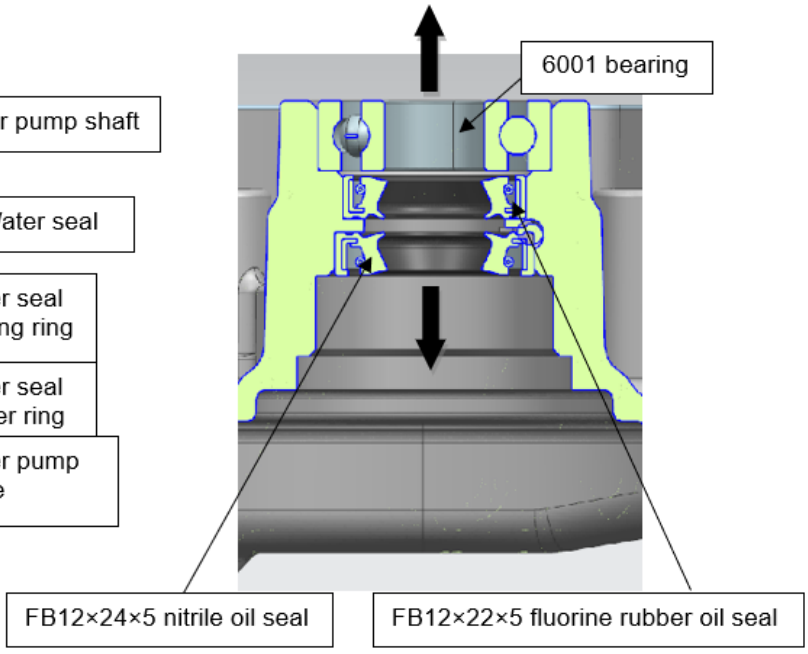


2. Use a flat-head screwdriver to limit the slot of the water pump shaft, use a 12# wrench to rotate clockwise to loosen and remove the water pump blade, and take out the water seal moving ring and rubber.

Press out the water pump shaft, use a flat-head screwdriver to extend from the bearing hole until it contacts the water seal, and then tap it slowly to knock out the water seal.

Use a flathead screwdriver to pry out the two oil seals, and then knock out the bearings to complete the disassembly of the water pump. **(Note: When the water pump is running normally without failure, it is not recommended to disassemble the water pump, internal bearings, oil seals, and water seals. The shaft thread of the water pump is a left-handed reverse thread.)**





Examine

1. Check the water pump cover O-ring and ϕ11.5×ϕ1.8 EPDM O-ring on the water pump cover. If there are any defects such as wear and trimming, replace the O-ring with a new one to prevent it from happening. Leakage due to poor sealing.
2. Check whether the threads of the water pump blades and the water pump shaft are slippery.
3. Check the water pump shaft and blades for cracks, damage, wear, etc. If they are defective, replace them with new ones.

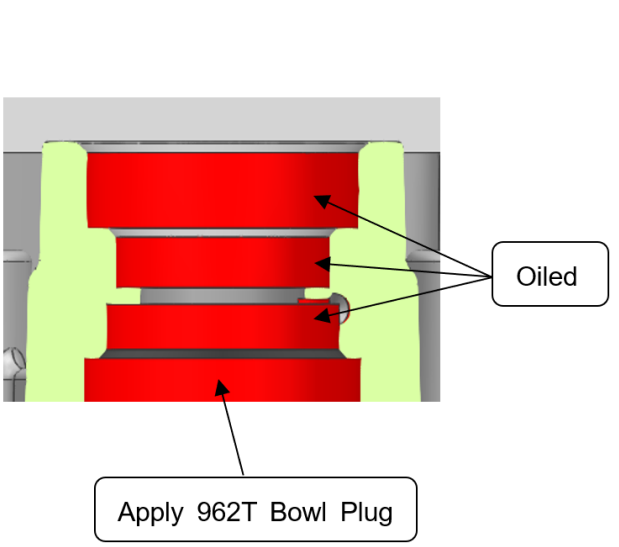
Install

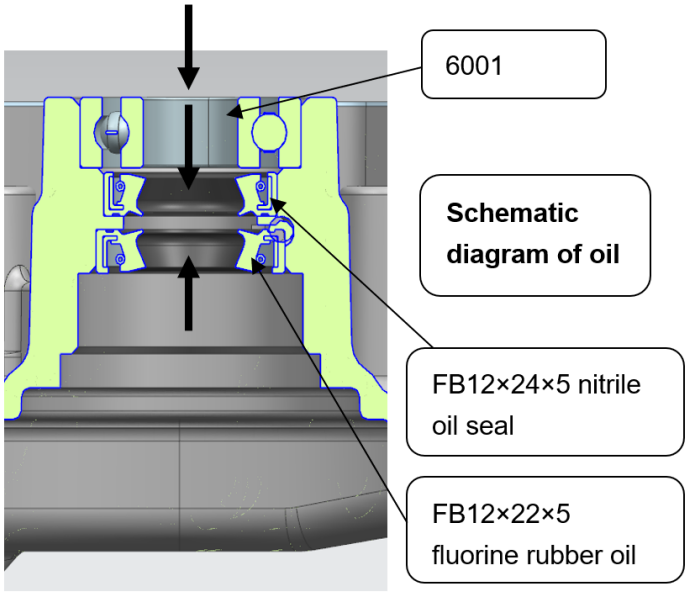
1. Take the new FB12×22×5 fluorine rubber oil seal and FB12×24×5 nitrile rubber oil seal (PTFE) and press them to the position shown in the figure below. After installation, measure the depth to confirm whether it is installed in place.

Remarks:

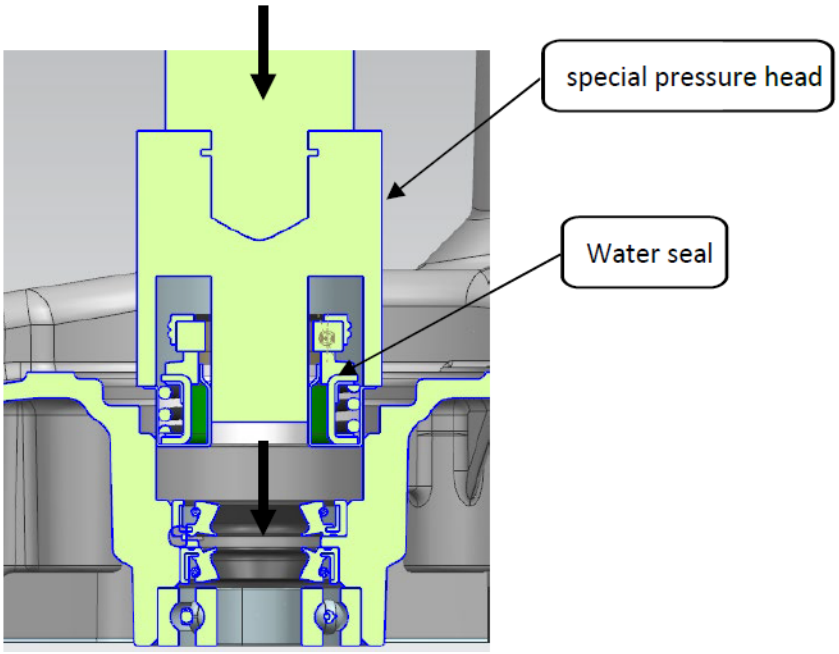
① Apply engine oil to the oil seal installation hole and install the oil seal.
② The height of the FB12×22×5 fluorine rubber oil seal is 0.3-0.5mm shorter than the limit surface of the bearing. FB12×24×5The distance between the joint surface of the nitrile rubber oil seal and the water pump cover is 17.6 (0~+0.1) mm.

2. Check whether the bearing rotates smoothly. If the bearing rotates stuck, replace it with a new one. After oiling the bearing hole, use a special pressure head to press the bearing into place.
Remarks:
① Bearing model: GB276-6001/P5C3 deep groove ball bearing.
②Measure whether the diameter of the bearing hole increases, the diameter of the bearing hole standard: ϕ28 (-0.014, -0.027).

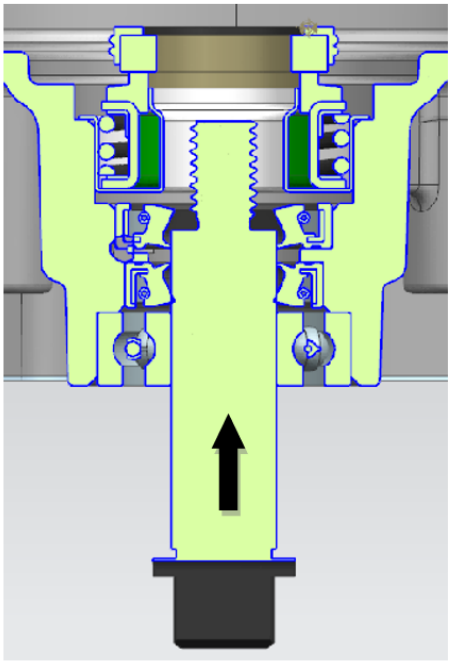


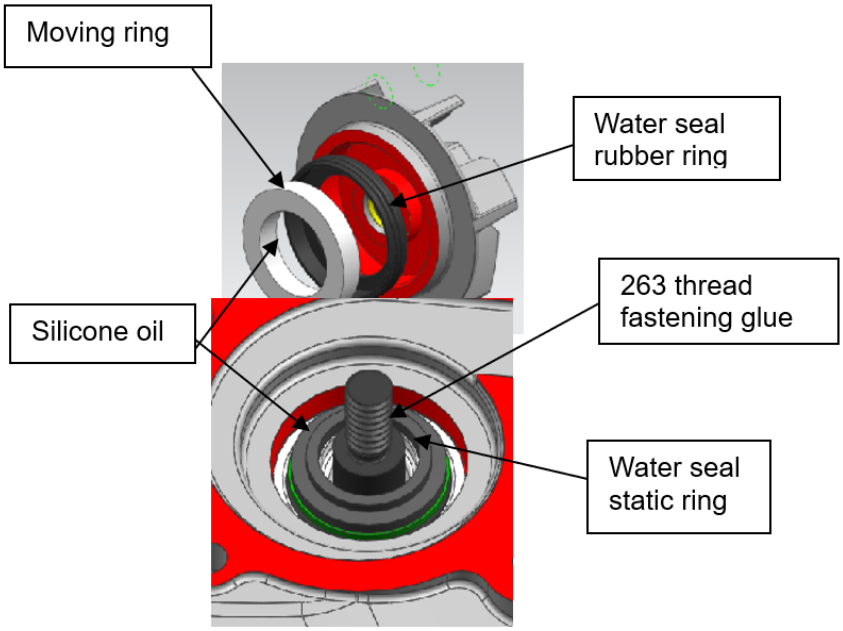


3. Take a new water seal, check to make sure that the surface of the water seal is clean and free of debris, apply 962T bowl-shaped plug sealant on the hole where the water seal is installed, and press the water seal in place with the special pressure head for installing the water seal.



4. After checking that the water pump shaft has no abnormal wear, press it into the bearing hole. If the flange surface of the water pump shaft touches the inner ring of the bearing, it is pressed into place.
Remarks:
After the water pump shaft is installed in place, apply an appropriate amount of thread fastening glue to the thread.





5. As shown in the figure above, disassemble the moving ring of the water seal, first put the rubber into the water pump blade, and then put the ceramic moving ring into the water pump blade (Note: You can apply a proper amount of silicone oil on the outer ring of the moving ring to make it easier to put it into the water seal in the rubber ring).
Remarks:
① Assembled in place, the ceramic scribe line faces inward, and the glossy surface faces outward.
② Apply an appropriate amount of water-soluble silicone oil on the static and dynamic rings of the water seal.
6. Limit the water pump shaft with a flat-head screwdriver, take a water pump blade, use a 12# wrench to turn left to tighten the water pump blade to the water pump shaft, and tighten it with a 12# sleeve and torque wrench. Torque standard: 20±1.5 N·m.
7. Take two ϕ8×14 hollow positioning pins and put them into the corresponding holes, and put the water pump cover O-ring and ϕ11.5×ϕ1.8 EPDM rubber O-ring on the water pump cover groove (if the O-ring occurs If the edge is trimmed or worn, replace it with a new one), pre-tighten the 4 bolts first, and finally tighten all the bolts clockwise with a torque wrench (or air batch) and an extended external hexagon socket -8#. Bolt torque standard: 12±1.5 N.m.