

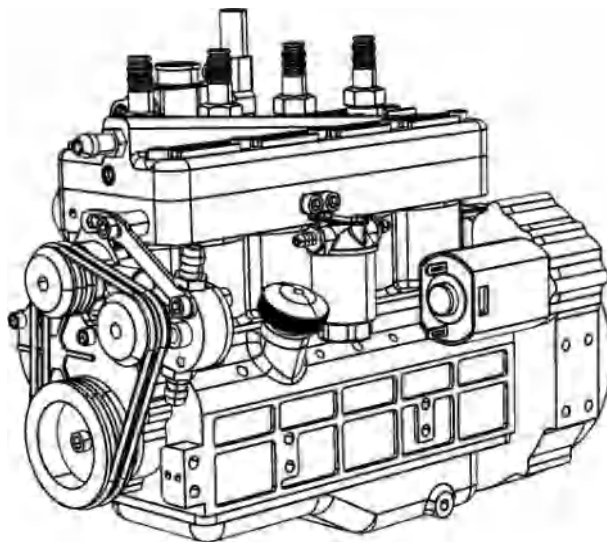
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# **CISON** *ENGINE*

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L4-175

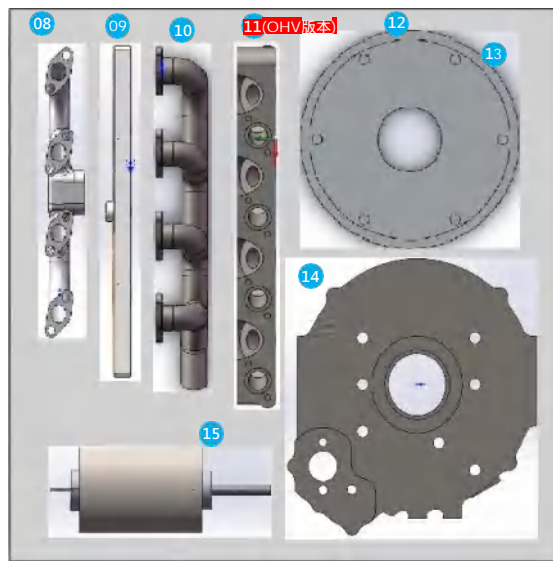
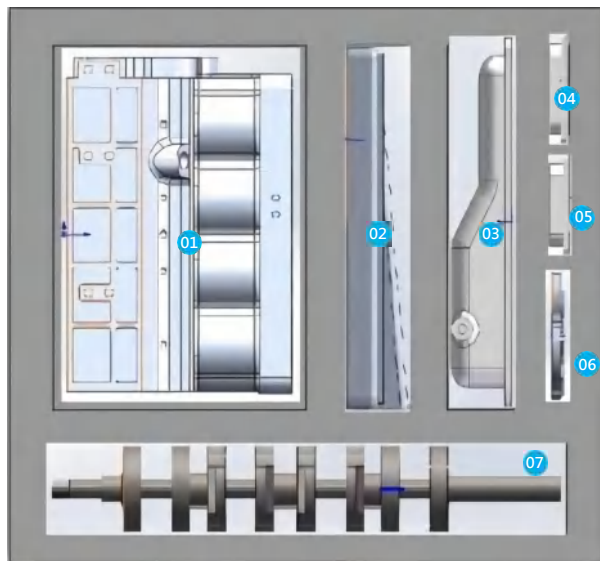
Operation manual



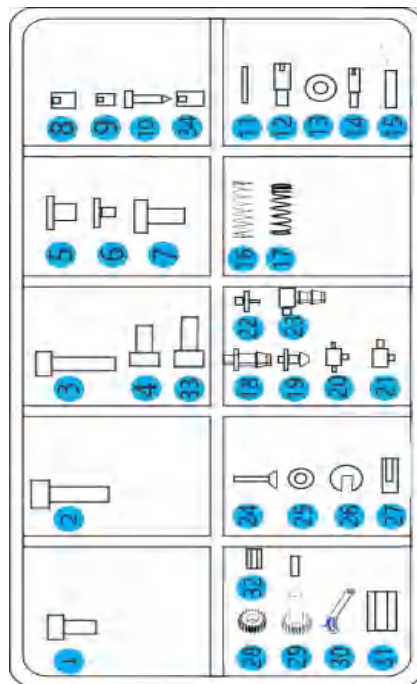
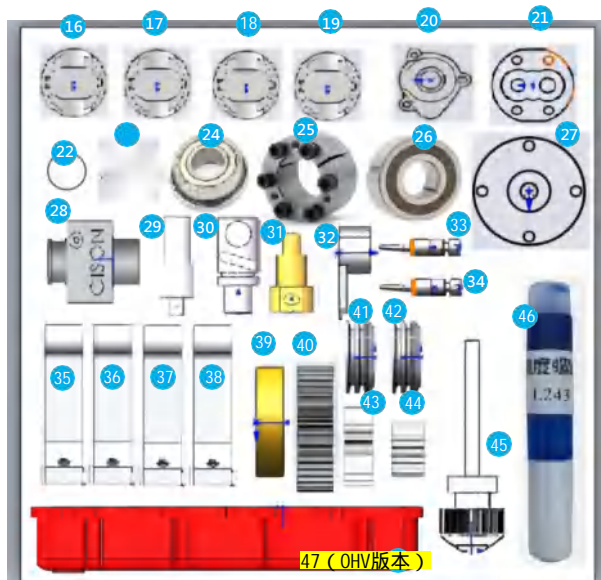
**be careful :**

1. Some parts may have been pre installed and may not exist in the parts box.
  2. Some gaskets and sealing rings may be used for backup and do not necessarily need to be installed.
  3. Please install in strict accordance with the installation requirements
  4. During installation, the rotating or sliding parts need to be lubricated in advance
  5. As the logistics cannot transport liquids, the 271 and 243 anaerobic adhesives we gave away have been seized and cannot be put into the parts box. Please purchase them yourself and use them as required.
  6. There may be upgrade accessories, which we may provide for free or purchase for a fee (please pay attention to the online disk information for details)
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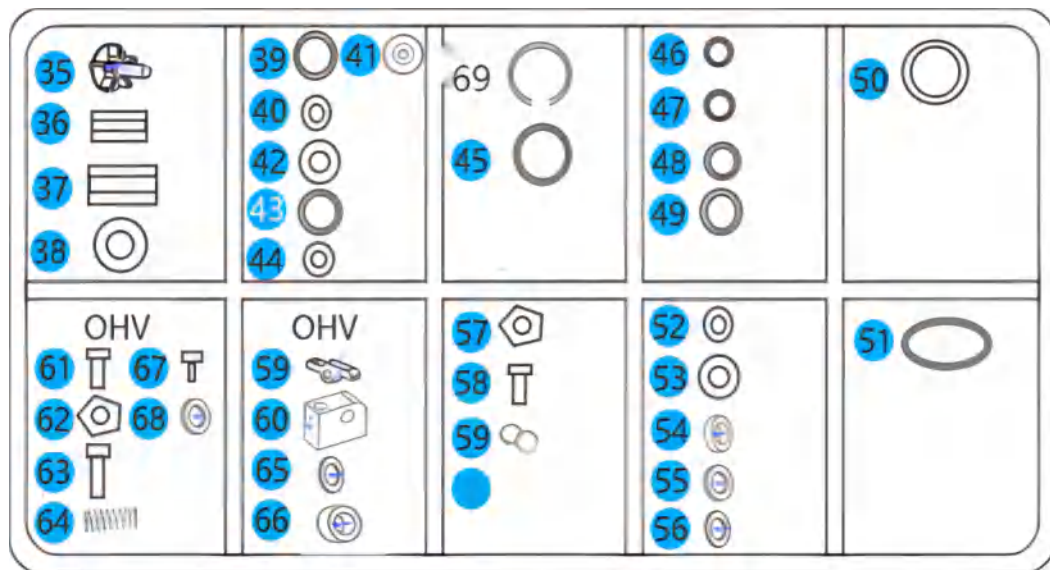
Part packaging distribution diagram (mixed diagram of flat head and OHV version, not all of which are actually displayed)

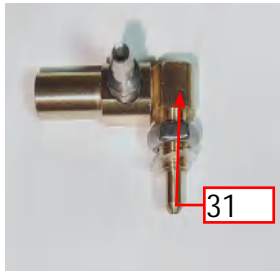
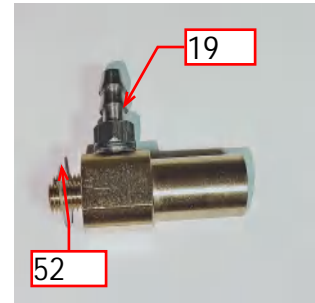
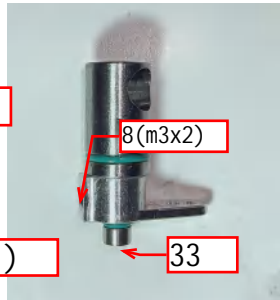
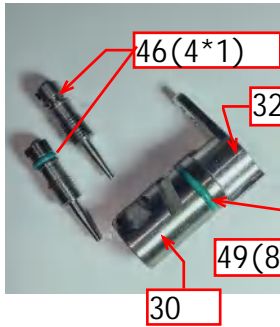


Part packaging layout



## Part packaging layout

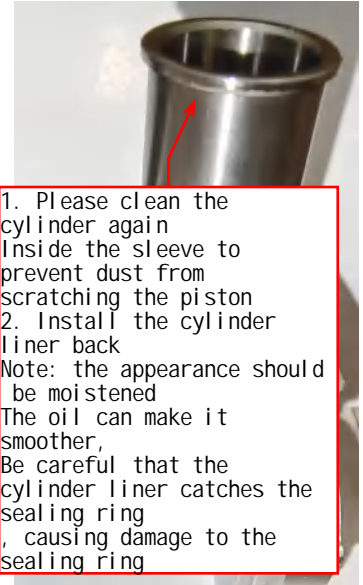
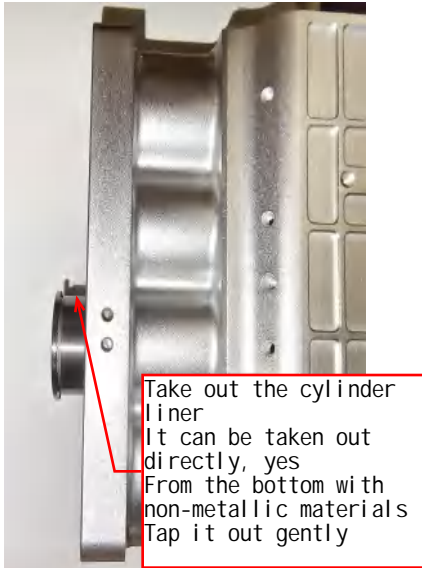




When installing the air valve screw, it must be aligned with the chute to avoid crushing the throttle valve

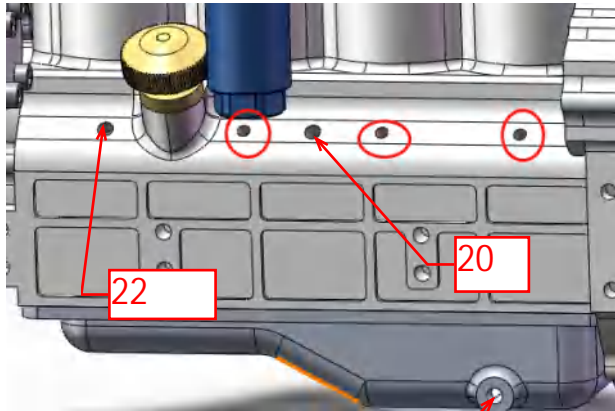
Installation to avoid excessive force fracture

## Product assembly steps



Use M2.5 screws in the red circle of part No. 9 (M2.5),  
Note that the screw is used to plug and adjust the oil  
volume to ensure that each oil outlet hole basically has  
the same oil volume. Test and regulate the flow before  
operation,

Note: the oil filter element is purchased additionally

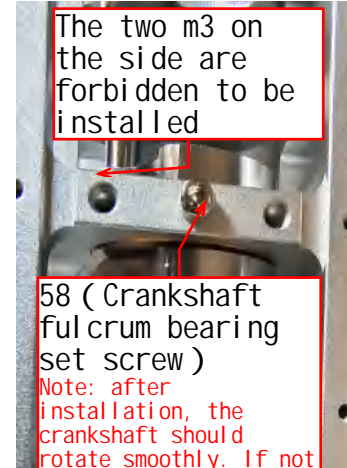
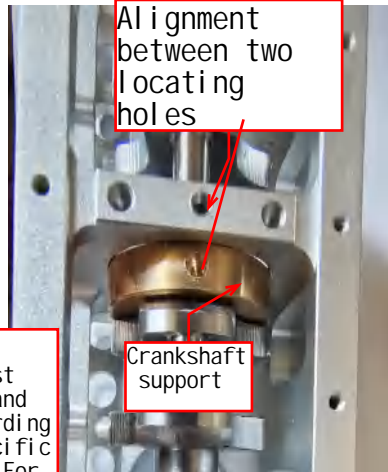


21 (Connect oil pump inlet  
after installation)

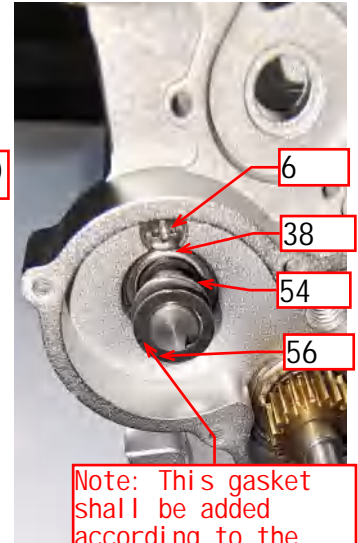
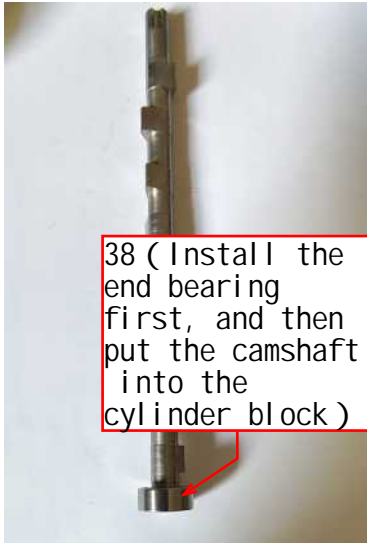




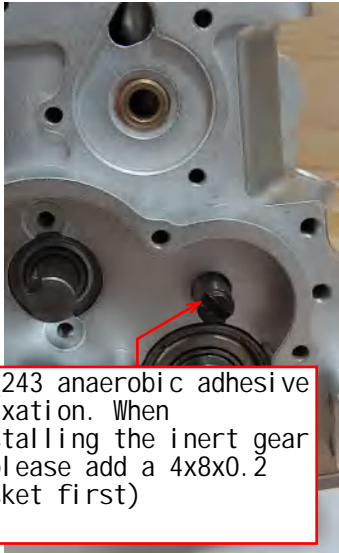
39  
(0.1mm/Adjust the gasket and add it according to the specific situation. For example, there is a gap between the front and rear when installing the crankshaft )



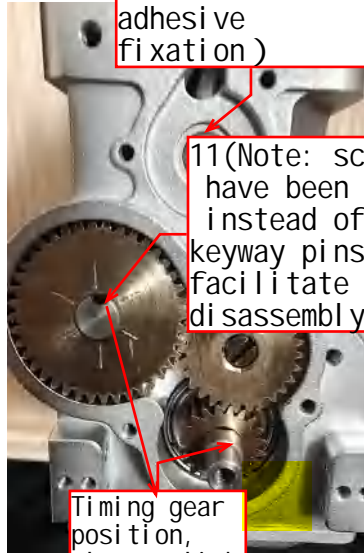
Note: after installation, the crankshaft should rotate smoothly. If not, please continue to check whether the screw completely blocks the copper sleeve, resulting in no clearance



Note: This gasket shall be added according to the actual situation. If the clearance is appropriate, it may not be added



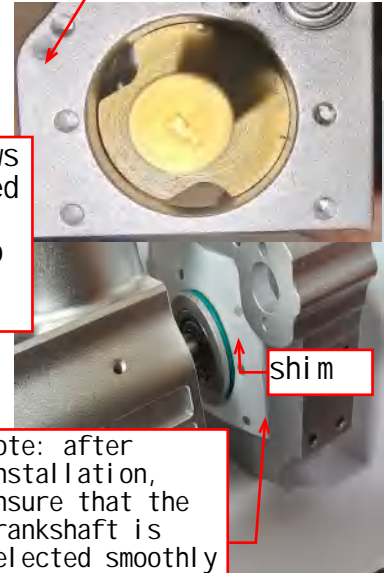
12(243 anaerobic adhesive fixation. When installing the inert gear , please add a 4x8x0.2 gasket first)



37 ( 271/243 Anaerobic adhesive fixation )

11(Note: screws have been used instead of keyway pins to facilitate disassembly)

Timing gear position, please click notes



34

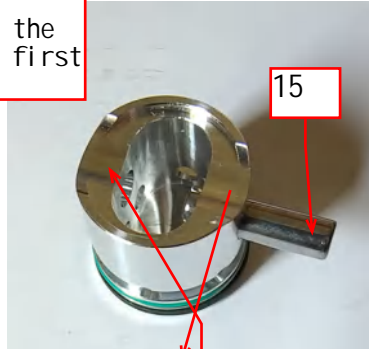
shim

Note: after installation, ensure that the crankshaft is selected smoothly , otherwise, please continue to check

Scheme 2: the use of a cast iron ring and a high-temperature and wear-resistant O-ring may lead to higher engine temperature and greater torque. It is not recommended to start the installation for the first time



Scheme 1 (recommended): two cast iron piston rings, and the ring mouth is staggered by 180°



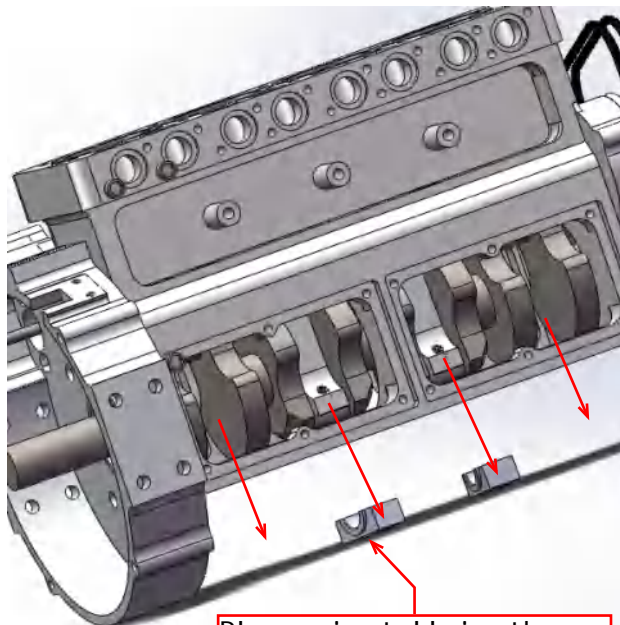
15

The piston pin bores on both sides are different in size. First place the piston pin slightly from the loose side, then the connecting rod, and then push in the piston pin. The piston pin is fixed with a small amount of 271/243 anaerobic adhesive. If the size is appropriate, anaerobic adhesive may not be applicable

Please add lubricating oil to the piston surface and connecting rod rotation position before installation



High strength Fe Al Cu alloy

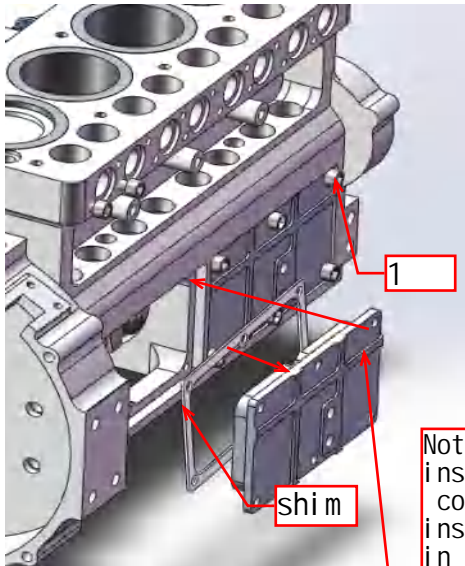


Please install in the marked order

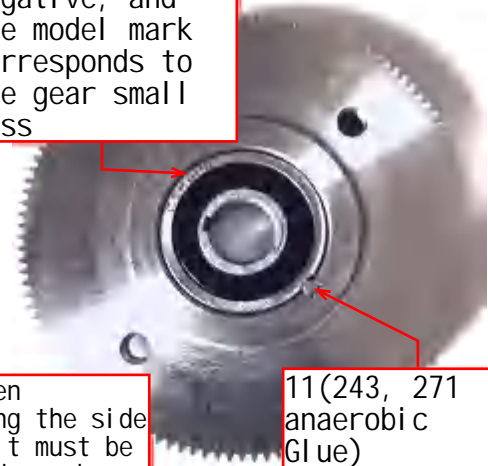
**注意！**

The original pairing shall be maintained during disassembly and shall not be confused. The concave point at the arrow shall also be kept corresponding during installation.

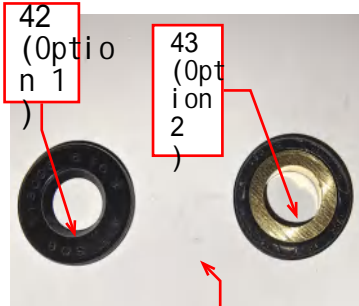
A diagram illustrating the correct pairing of a connecting rod and its corresponding crank pin. The top part shows a connecting rod with a red arrow pointing to a specific point on the crank pin. Below this, a red double-headed arrow indicates the pairing. The bottom part shows two screws of different lengths, representing the original pairing.



Note: the bearing is divided into positive and negative, and the model mark corresponds to the gear small boss



Note: when installing the side cover, it must be installed as shown in the figure, with the small grid upward, otherwise the crankshaft will be stuck



Recommendation: Option 1  
 Scheme 1: it is easy to install and disassemble without glue.  
 Scheme 2: there is a copper sleeve to position the starter gear, and the structure is reasonable.  
 Disadvantages: inconvenient disassembly and assembly



5  
 Scheme 2: the copper sleeve needs to be fixed and sealed with 243 anaerobic adhesive



M2.5 (Note: this hole is M2.5)

No.: 51 (2 gaskets.  
 Specification: inner hole 8mm, thickness: 0.1mm)

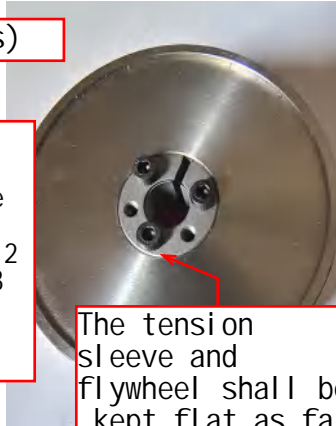
Note: please install the pinion before the big gear

The starting motor screw shall be put in before installing 41 (screw No.: 1)

14 (See Notes)

41 ( Before installation, please find the gasket with thickness of 0.2 in inner hole 3 in grid 51 and put it in )

11 (Pin)



The tension sleeve and flywheel shall be kept flat as far as possible



Slowly tighten the three screws in turn. Note: it is forbidden to tighten one of the screws at a time, otherwise the flywheel may not be locked or the tensioning sleeve may be damaged

Note: rotate the flywheel clockwise after installation, which should be very smooth with the reduction gear. Otherwise, readjust the gear clearance.



Before installation, I'm sorry to tell you a problem.

During our sample test, the starting motor never failed.  
It may be that the sample has been run in.

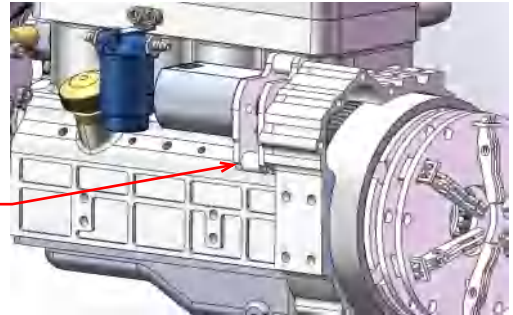
Now we have found that for the newly assembled engine,  
if you use two piston rings, the starting motor may not run or even burn out.

So we made a new patch. Add a deceleration to the starting motor.  
The original reduction ratio is 21 times, and the improved reduction ratio is about 33 times.

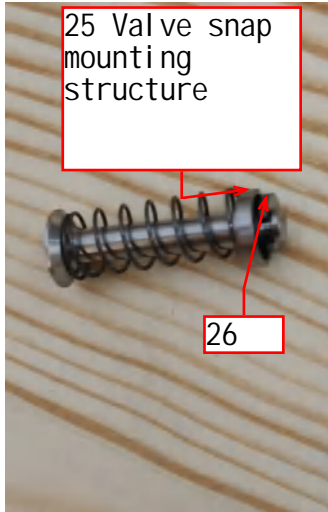
Note that this is a free patch provided by cison,  
but we can't guarantee whether the dealer will charge your freight.

If you don't need this patch, you can use a single piston ring during assembly,  
let it run for a period of time, and then change it to two piston rings, which is also OK.

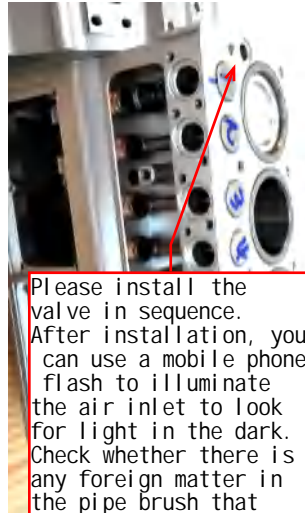
If you don't receive it, you may be the first to transport it. You can consult the dealer.



25 Valve snap mounting structure



26



Please install the valve in sequence. After installation, you can use a mobile phone flash to illuminate the air inlet to look for light in the dark. Check whether there is any foreign matter in the pipe brush that makes the valve not closed



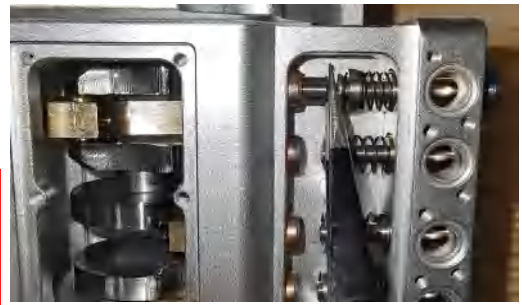
Adjust to 10.2~10.25 suggestions (can be adjusted according to your own experience)  
intake: 10.25  
exhaust: 10.2



27



243 anaerobic adhesive (warning, do not use high-strength screw adhesive)





No longer use  
locating pins



31



40



28、 29



3



Note: the oil  
pump base has an  
installation  
direction



36(243 anaerobic adhesive fixation)



40



35

3\*6\*0.2 shim



3\*5\*4.5Plastic guide sleeve

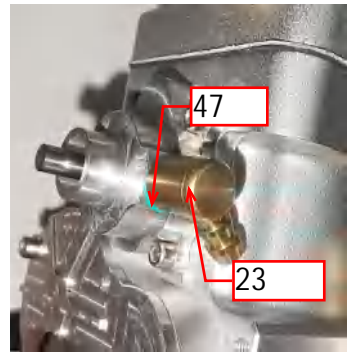


shim

The pulley is fixed with high-strength 271 anaerobic adhesive. Fix the pulley note: the pulley groove should be flat with the crankshaft pulley



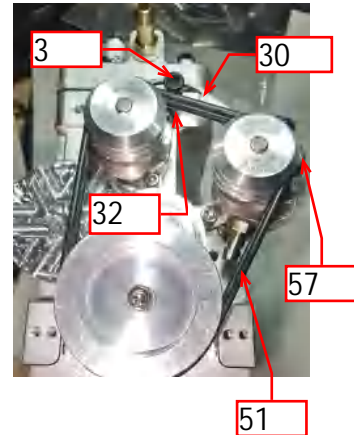
1



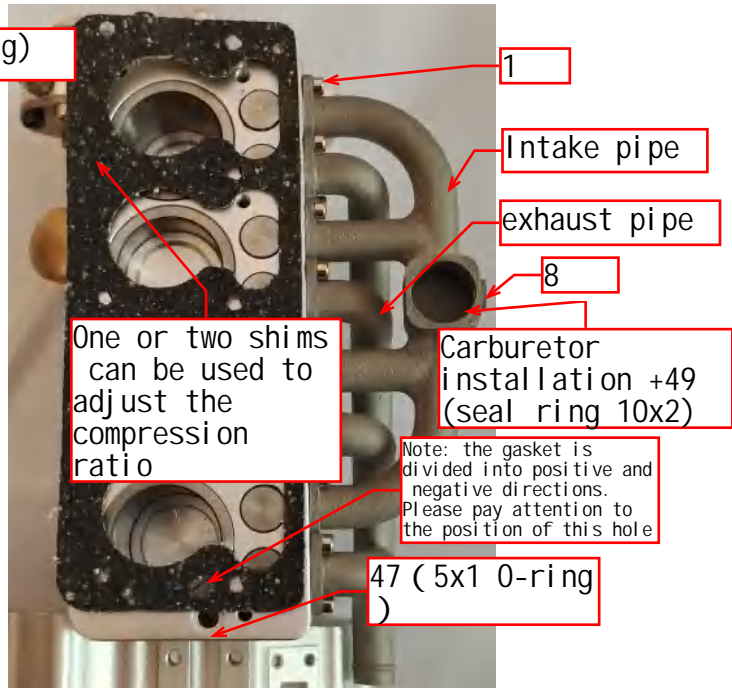
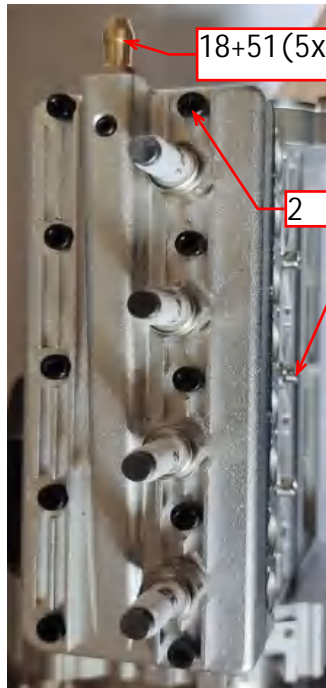
47

23

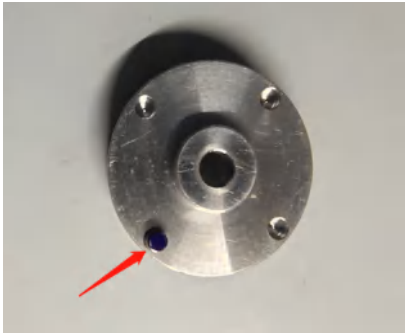
Note: water pump and oil pump pulley shall be adjusted before fixing with 271 anaerobic adhesive



The sensor magnet mounting hole (the magnet is in the CDI package) and the mounting magnet must be flat

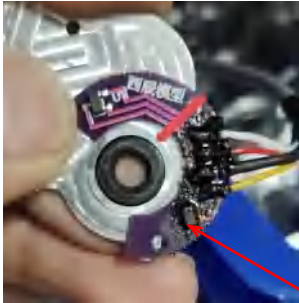


After you receive the CDI igniter, there is a very small magnet in the package. Please note that there are colors on one side of the magnet, and those with colors are installed outward, as shown in the figure

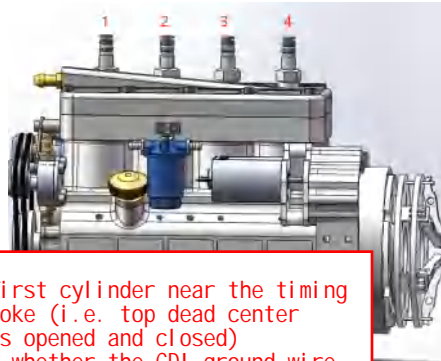


Just install a magnet in any mounting hole. It needs to be pressed in with a tool magnet. Or use a drill to enlarge the hole diameter, and then use glue to stick it  
Note: the magnet shall not protrude from the plane, otherwise it may touch the hall sensor





Hall installation position, as shown in the figure.  
Remove the two screws of the timing gear baffle, and then align the hall PCB board with the mounting hole



Insert the high-voltage line according to the high-voltage line number on the CDI

**Magnet position:**

Rotate the flywheel. Place the first cylinder near the timing gear side on the compression stroke (i.e. top dead center position after the inlet valve is opened and closed)

Before energizing the CDI, check whether the CDI ground wire (high-voltage return line) is connected to the cylinder block, and install the high-voltage wire.

After the power is turned on, loosen the pulley, and then rotate the pulley magnet to the point where the arrow points to the hall, and observe whether there is high-voltage spark on the high-voltage line of the cylinder. Then rotate the pulley counterclockwise by 0-10 ° as the ignition advance angle.