

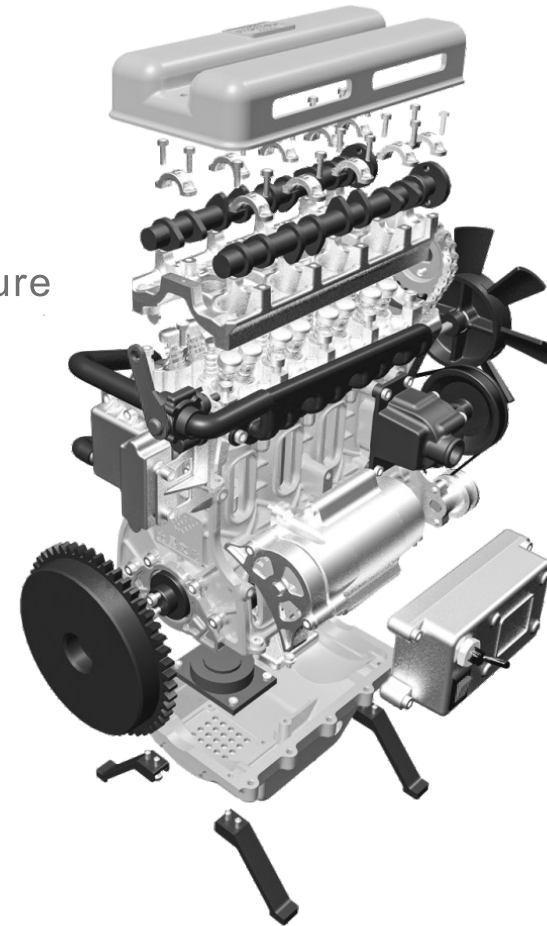
Metal Machine Assembly Model



Turbocharged
Four-Cylinder Engine

Structural Features

1. Four-cylinder straight line arrangement structure
2. A camshaft-mounted valve control mechanism
3. Cam chain transmission mechanism
4. Traditional crankshaft joining mechanism
5. Turbocharger mechanism



Real Models Real Worlds

General information about product

I. Product Data

Product name: Turbocharged Four-Cylinder Engine

Main materials: Anodic aluminum oxide + stainless steel + zinc alloy

Charging voltage: DC 5V

Battery capacity: 450mAh

Assembly difficulty: Level IV

Product standards: GB/T9254-2008

GB/T17626.2-2006

II. Product description

- ◆ Craftsman series of products are metal structure assembly models. Its primary material is aluminum alloy with anodized surface, and the product structure is a real industrial structure;
- ◆ Assemble parts using various tools with the installation procedures and methods substantially compliant with practical industrial requirements;
- ◆ This series of products are principally designed to improve users' hands-on ability and concentration, and to develop habits of "preciseness and stress on discipline";
- ◆ Learn about various industrial machines, and study various industrial structures to improve user's capability of research and innovation.

III. Assembly Requirements

- ◆ Be sure to read the Basics of Standard Parts Assembly carefully to master basic standard parts assembly procedure and the usage of tools before assembly;
- ◆ The table shall be kept tidy and clean during assembly to prevent parts being lost or incorrectly assembled. Assemble parts in a rigorous and orderly fashion, view the diagrams carefully, and avoid incorrect assembly;
- ◆ Pay attention to the prompt text in instruction manual, carefully view the part installation orientation, and avoid incorrect comprehension. Pay attention to the requirements on testing;
- ◆ Lubricating oil shall be applied to friction areas to the greatest extent to prevent jamming during operation. Fastening screws must be thoroughly mounted to prevent looseness of parts;
- ◆ If you have any doubt when adjusting any assembly clearance or tightness after the completion of assembly, please refer to our website or WeChat public account;
- ◆ Users are encouraged to optimize the parts using material removing tools like files and sand paper with adult care where the personal safety is guaranteed;

- ◆ Users are encouraged to perform part modification or overall modification of model without potential safety hazard so as to develop modification capability as soon as possible;
- ◆ The user may disassemble this model and put it in the package again according to the parts list attached hereto;
- ◆ If any part is lost, please inquire of or purchase it from us
- ◆ The model structure is subject to continual improvement. If the real object differs from the instruction manual, please refer to our latest assembly information.
- ◆ Once the product fails to function due to battery failure, lubricating oil shortage or dust accumulation in product gaps because it is left unused for long, it's advisable to change the battery or disassemble and clean its parts.

Precautions

I. Safety Instruction

- ◆ Please read this manual carefully so that you are in a position to use this product correctly and safely;
- ◆ This series of products are industrial-level metal models, so its assembly and use requires certain safety awareness; improvement of safety awareness is also a function of the model;
- ◆ This model is suitable for users aged 14 and over. Please read this manual carefully for relevant safety information;
- ◆ Strictly prohibit children or pets swallowing or biting this product or its spare parts, since this may cause injury/damage;
- ◆ Use assembly tools rationally, assemble the parts in strict conformity with the instruction manual, and avoid forcible handling to avoid scratches; keep sharp points of tools or parts away from the eyes to avoid contusions;

- ◆ This model is made up of metallic parts mainly, and has a certain level of hardness and a certain weight; please place it properly to avoid bodily injuries; Protect the products and accessories against intense shock and vibration so as to avoid personal injury and product damage;
- ◆ During mechanical movement, do not put a finger or any other part of the body within the movement range to avoid contusions;
- ◆ Wire connectors must be connected according to the marks specified in the instruction manual to avoid short-circuit or failure arising from wrong connection;
- ◆ Charge, discharge and place the battery as required; it is advised to replace the battery when it has not been used for 3 months or more;
- ◆ Do not prevent any part from running forcibly in any form; to do this, turn off the power directly;
- ◆ To refit this model, please pay attention to the relevant part parameters, and avoid using any high-power electric part or device that may result in an accident.
- ◆ Please use parts of this product properly as per instruction manual. Don't use them for other purposes.

II. Battery and charging precautions

- ◆ This product is delivered with dedicated charging cable. Users shall use their own power adapters; output DC voltage: 5V; output DC current $\geq 1000\text{mA}$;
- ◆ Please make sure the contact is dry and free of dirt before charging. Please don't charge the battery if the product is not in use or is in repair;
- ◆ Don't put the battery in fire or have it exposed to sunlight, fire or similar excessively hot environment, since this may lead to leakage, excessively high temperature, bursting or ignition of battery;
- ◆ If improper change of battery may cause explosion, the battery must be replaced with one of identical or equivalent type;

- ◆ Never disassemble, squeeze, heat and set fire to the lithium battery delivered with this product, and never touch and pry the battery using any sharp object or screwdriver, etc., since this may cause the battery to ignite or burn;
- ◆ In the case of excessively high temperature, discoloration, bulging, leakage and other anomalies during the use, charging or keeping of battery, please take it out of service and change it with a new one to avoid safety problem;
- ◆ Since the battery temperature rises when it's being charged, please don't have the battery to come into contact with inflammables (e.g. bedside, clothing and books, etc.) since this may result in a fire;
- ◆ Please don't charge the battery in a moist space with high temperature; the temperature is recommended to be 0~35° C, and the humidity shall not exceed 65%; the design max. ambient temperature for using the product is 45° C;
- ◆ To alleviate the risk of electric shock, children are not allowed to use the product without the help of their parents or other custodians.

III. Product Declaration

- ◆ Please carefully read and observe various instructions and warnings in this manual before using this product. Our company shall not be held responsible for any consequence of failure to properly use this product or observe related operating instructions;
- ◆ This product is suitable for users aged 14 and over. Our company shall not be held responsible for any safety problem arising from the use of this product by too young users or users who are not familiar with relevant safety requirements;
- ◆ As a model in industrial structure, this product is designed exclusively for learning and experience. Do not use this product for other purposes; otherwise, we will assume no responsibility for any consequence thereof;

- ◆ We have been improving the design and operation features of our product, so separate notice will not be given for slight difference between instruction manual and actual product. Hence, any claim for compensation filed based on the data, pictures or text of this instruction manual will be rejected;
- ◆ For constant improvement and sustainable development, our company reserves the right to modify and improve any product detail given in this manual without prior notice;
- ◆ The pictures in instruction manual guide users for operation, and are thus for indication only; the real product shall prevail;
- ◆ Our company and its suppliers shall not be held responsible for any special, incidental, collateral or indirect loss in any case to the greatest extent the law permits, regardless of its cause;
- ◆ Please keep this manual properly since it contains important information.

CATALOG

2

Inline four cylinder engine debugging

P61

3

The basic structure and characteristics of inline four cylinder engine

P61

4

The basic principles of the piston engine

P62

1

Instructions for assembly

P3

- P3. Crankshaft joint assembly
- P6. Oil shell assembly
- P7. Internal parts of oil bottom shell
- P8. Exhaust pipe assembly
- P9. Start the motor assembly
- P11. Pump assembly
- P12. Bearing seat assembly
- P13. Generator assembly
- P15. Air Filter
- P16. Capacitor assembly
- P19. Overall assembly

5

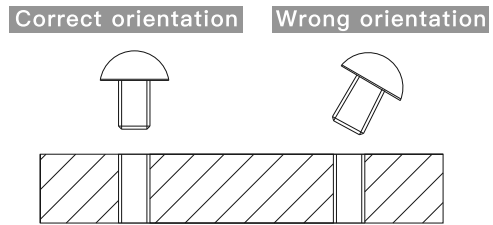
List of straight four engine parts

P63

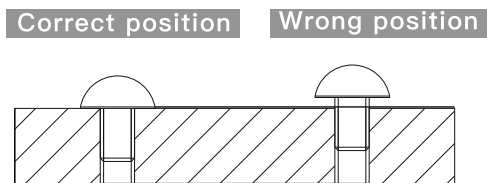
Basic knowledge of standard parts assembly

1、Screw installation

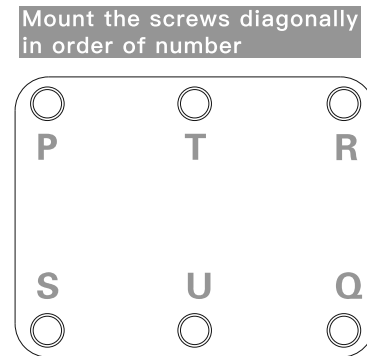
(1) Screw installation direction



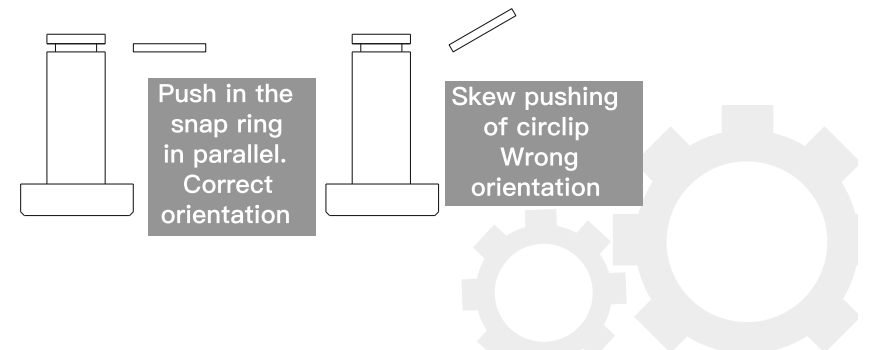
(2) Screw tightening depth



(3) Screw installation sequence

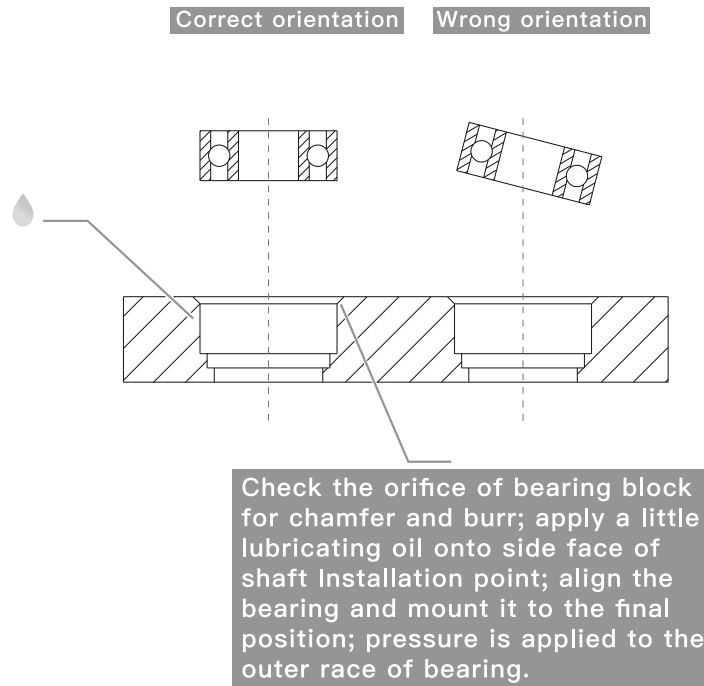


2、Circlip installation method

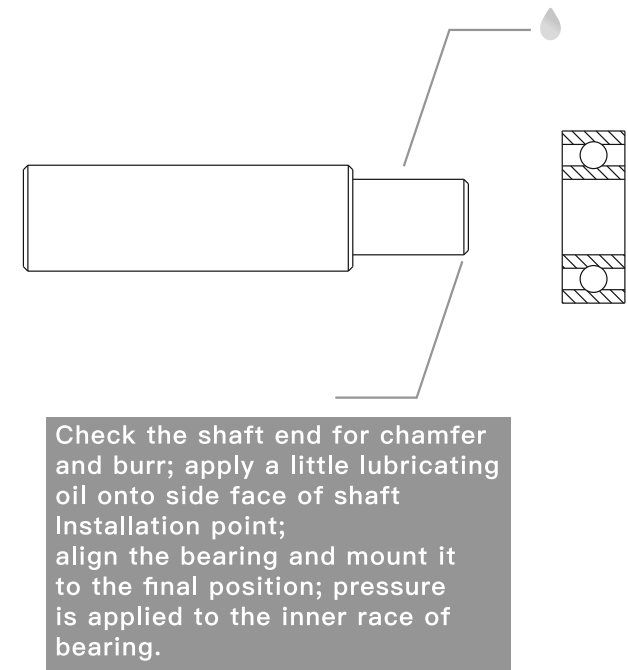


3. Bearing installation

(1) Insert the bearing into the bearing housing



(2) Bearing into the shaft



Important note: before assembly, find the bottled grease first, and be sure to apply enough grease on all grease marks, otherwise the machine is easy to get stuck.



Location identification of grease

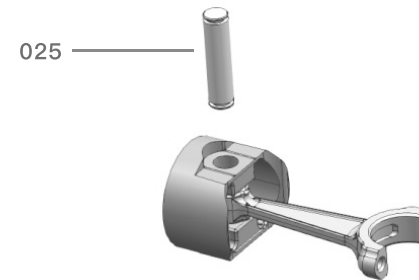
1 Instructions for assembly

1 Crankshaft joint assembly

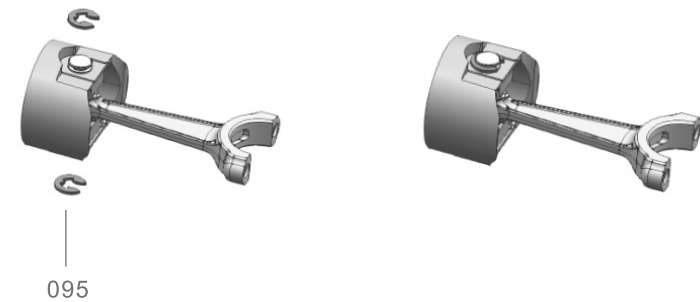
1.1 Assembling piston machinery



1.2 Install piston solder



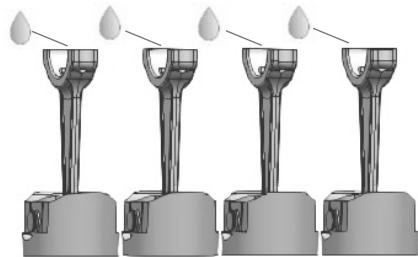
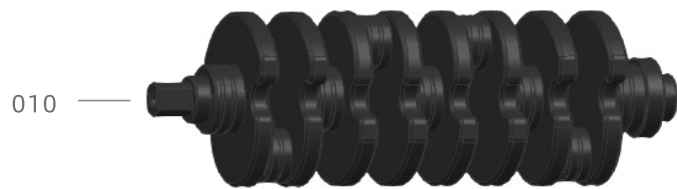
1.3 Installing M3 Circlip



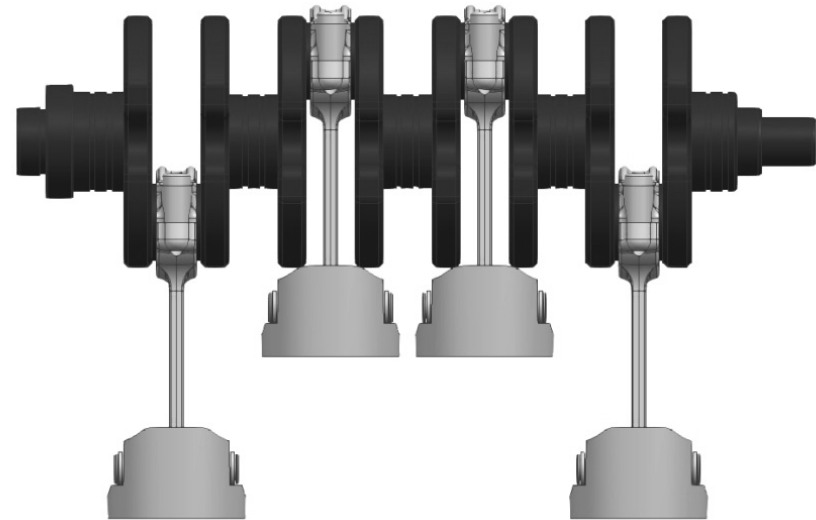
There are 4 sets in total



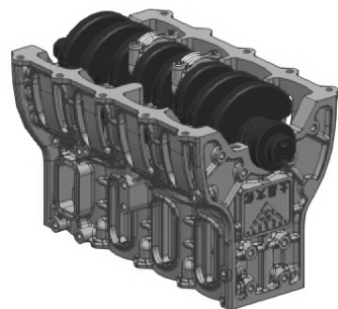
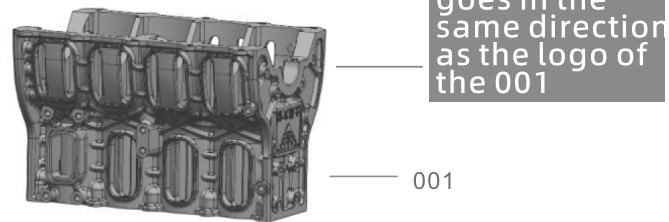
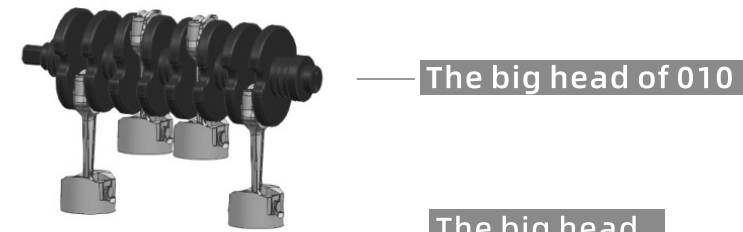
1.4 Install piston joints and crankshafts



If it is not convenient to install, you can turn 010 so that the installation position is up to facilitate installation



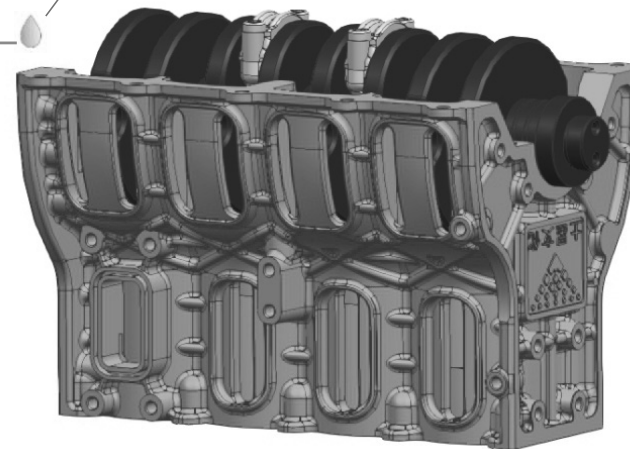
1.5 The crankshaft joins the cylinder



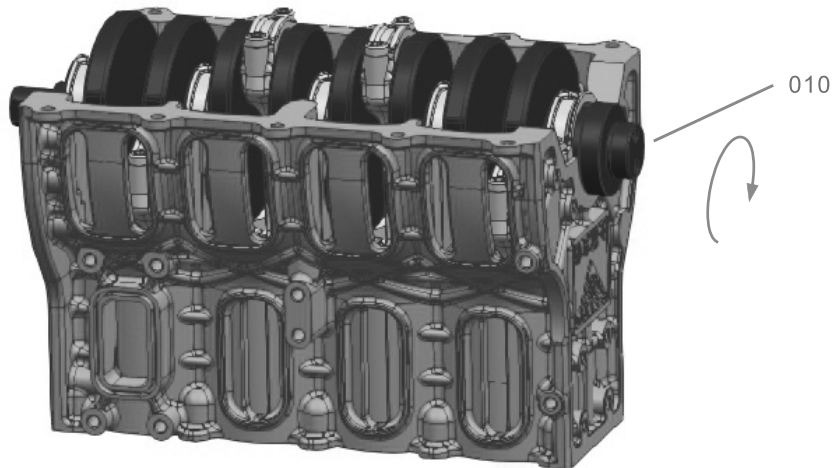
1.6 Bearing shell joins with cylinder



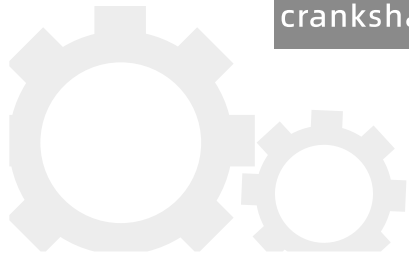
There are five refueling points at the base of the bearing shell



1.7 Check the transmission
where the piston is connected to the crankshaft

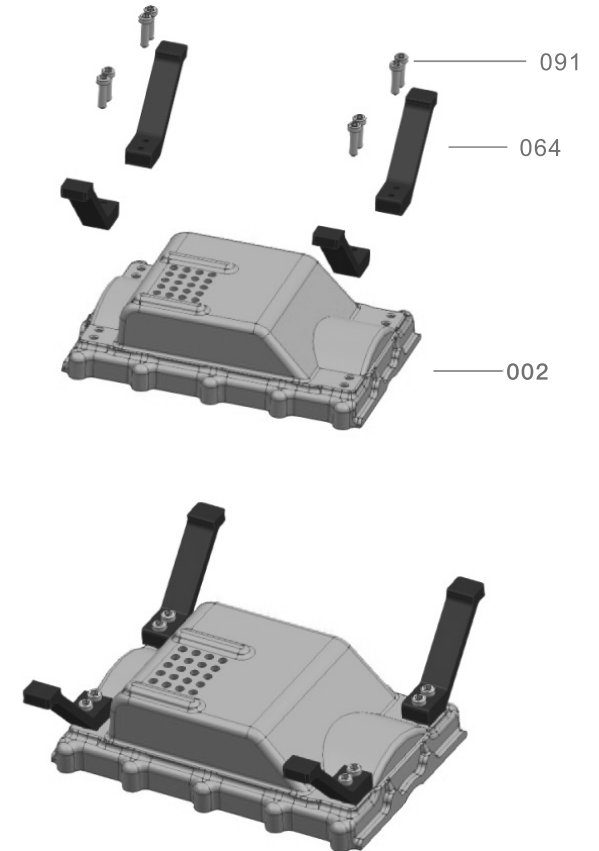


After you have installed the piston mechanism,
turn 010 to check that the piston and the
crankshaft are moving smoothly



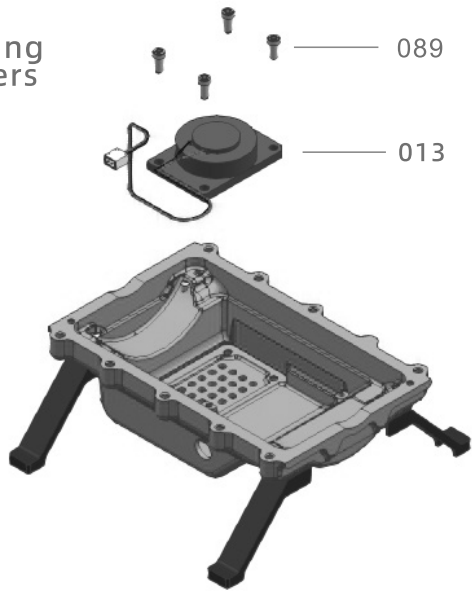
2 Oil shell assembly

2.1 Installation of engine mount

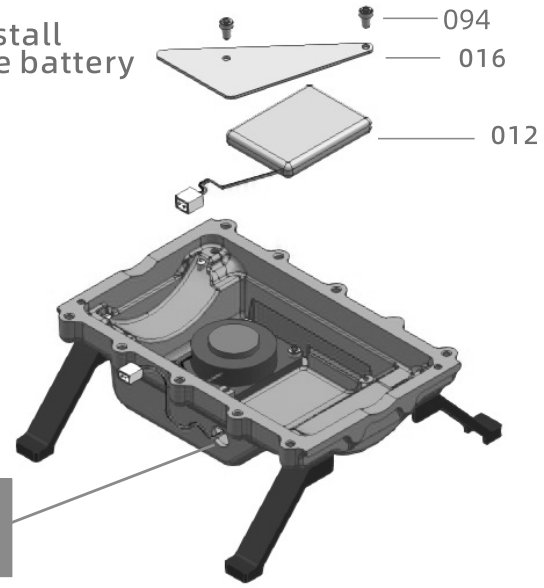


3 Internal parts of the oil baseboard

3.1 Installing speakers

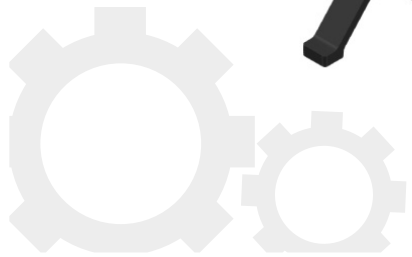
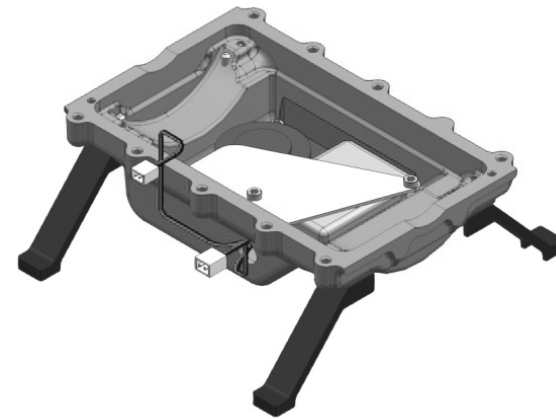
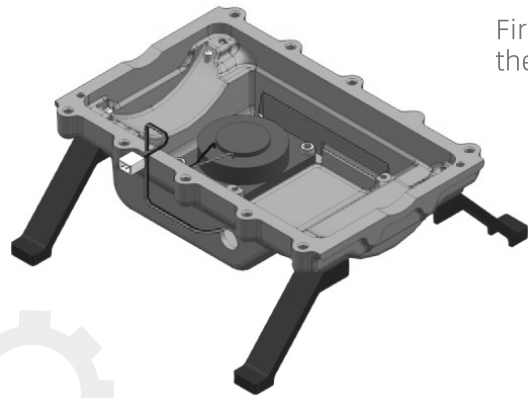


3.2 Install the battery



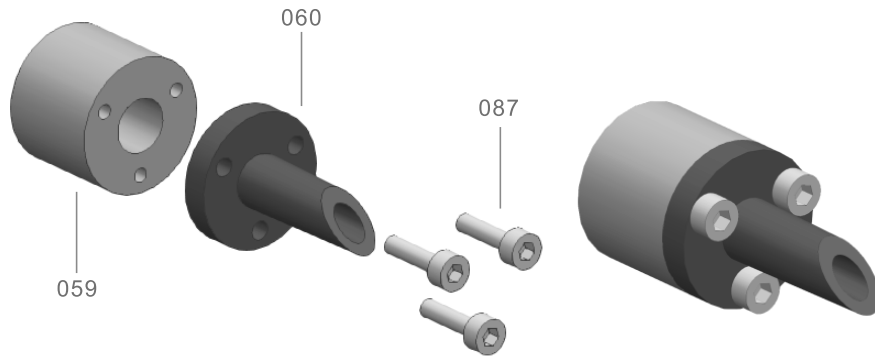
The horn wire and battery wire are threaded out of the base wire hole

First, thread the battery cable, then the speaker cable

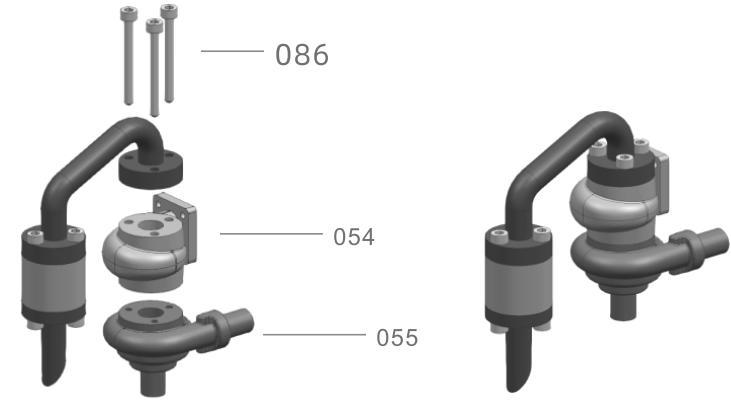


4 Exhaust pipe assembly

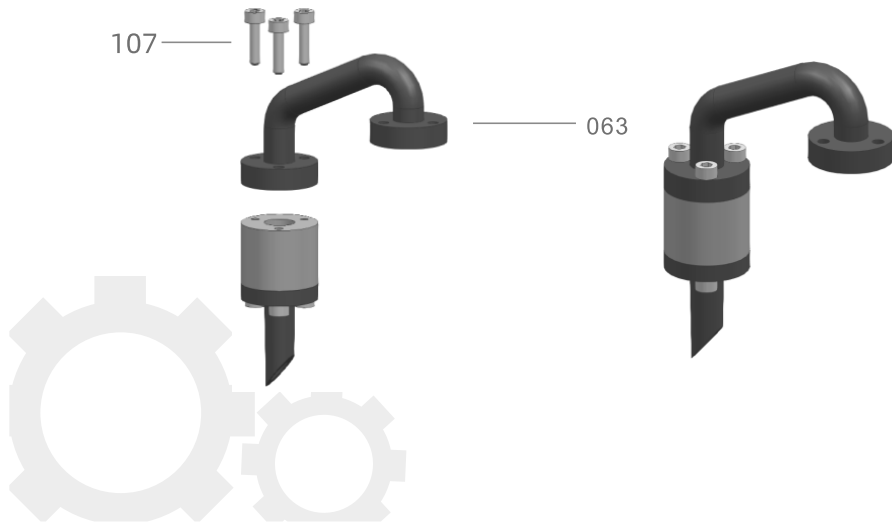
4.1 Composition of exhaust tailpipe, triad catalyst



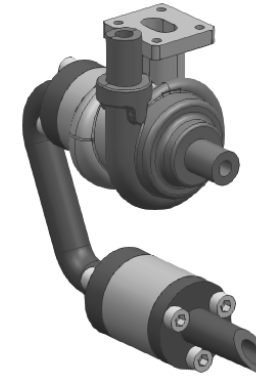
4.3 Assembly of exhaust pipe components, active turbines and passive turbines



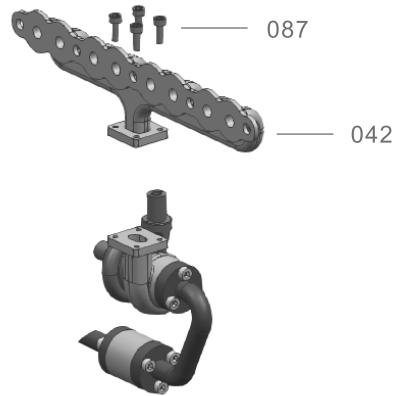
4.2 Composition of exhaust bending tubes, triad catalyst



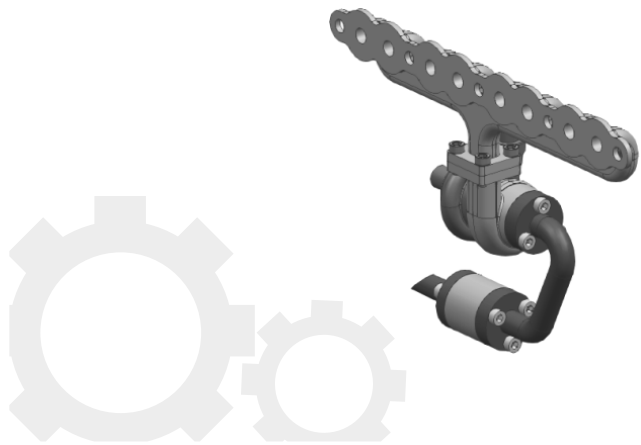
4.4 Exhaust pipe components



4.5 Assemble the exhaust pipe components

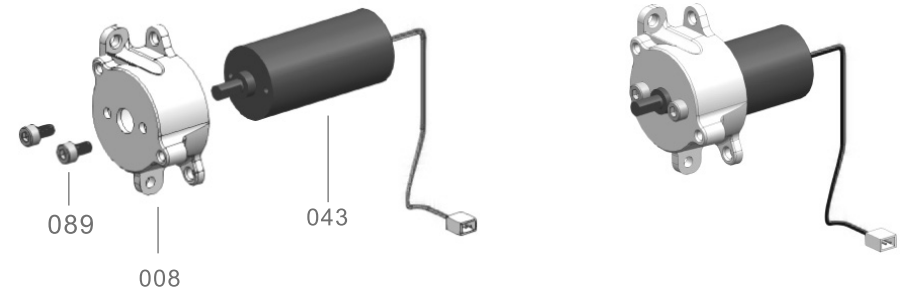


4.6 Exhaust pipe assembly

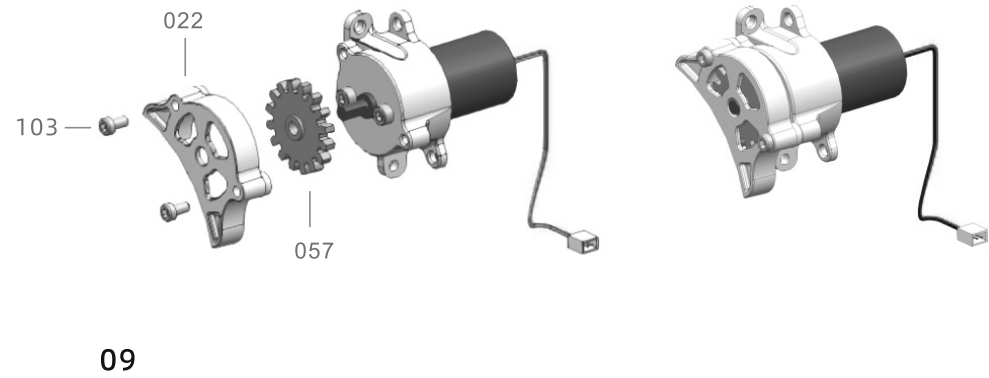


5 starter motor assembly

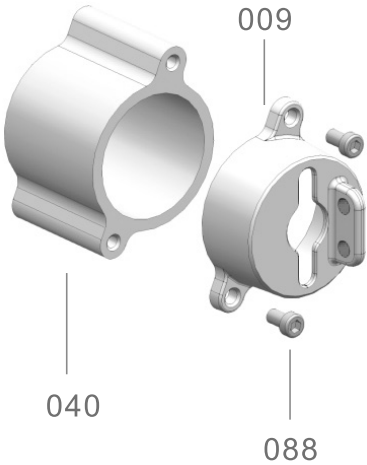
5.1 Install starter motor front cover



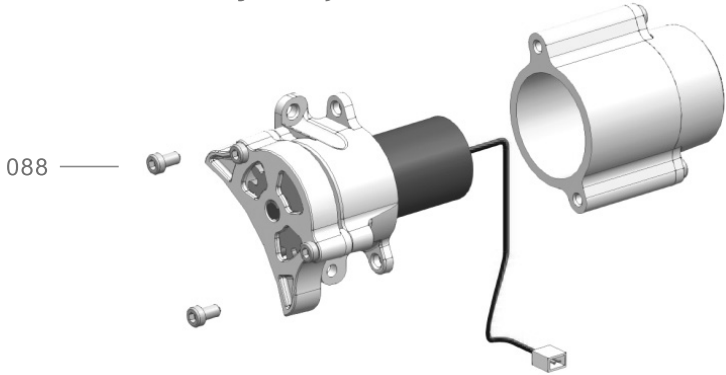
5.2 Install starter motor gear



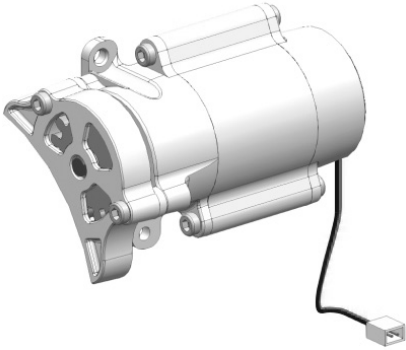
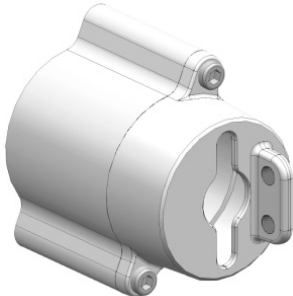
5.3 Install starter motor rear cover and middle cover



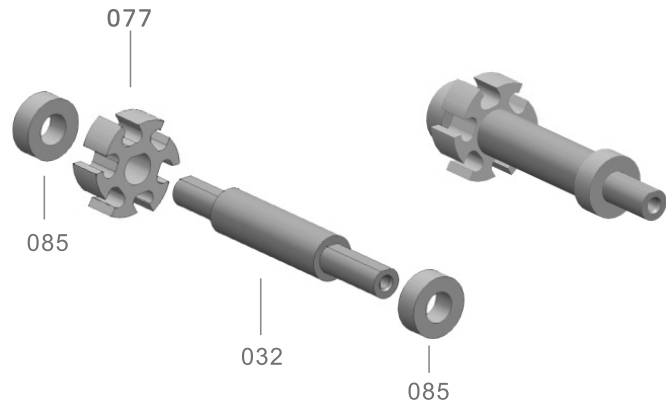
5.4 Front and rear components are jointly assembled



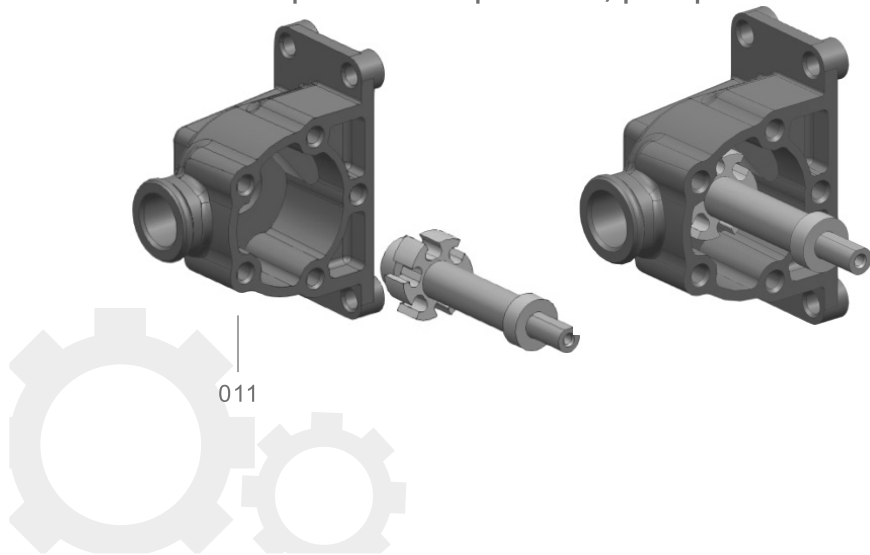
The motor wire passes through the back cover



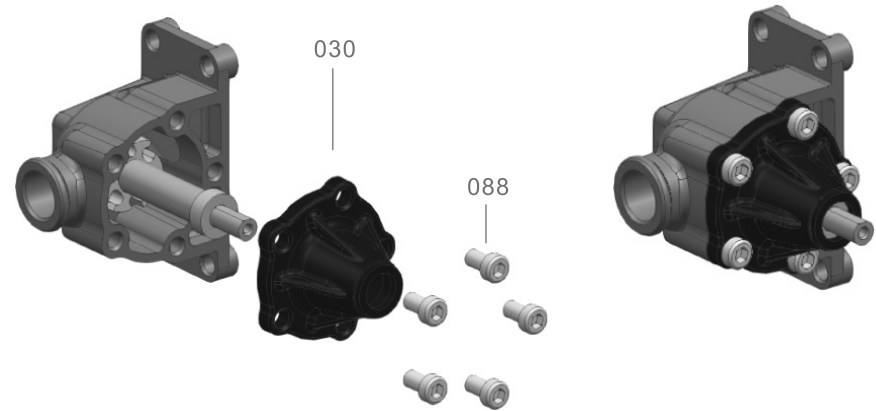
6 Pump assembly
6.1 Wheel and pump shaft docking



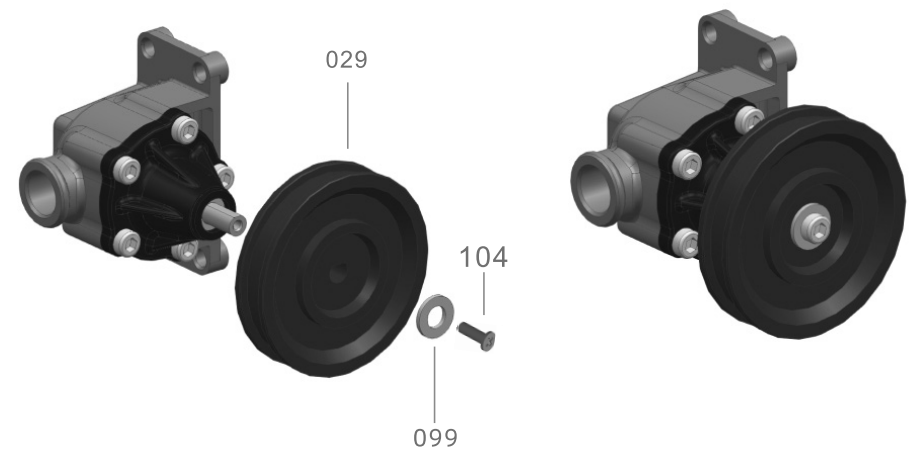
6.2 Pump shaft components, pump case



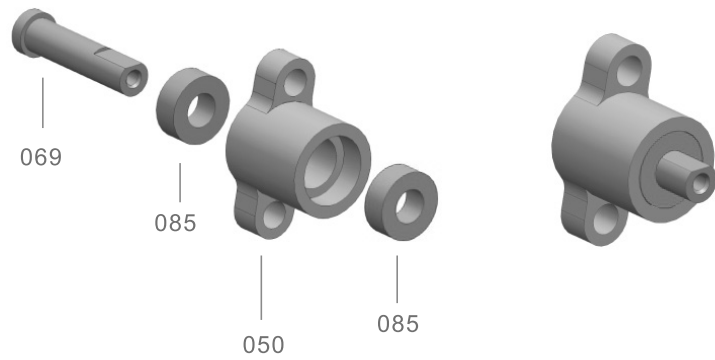
6.3 Install a water pump end cover



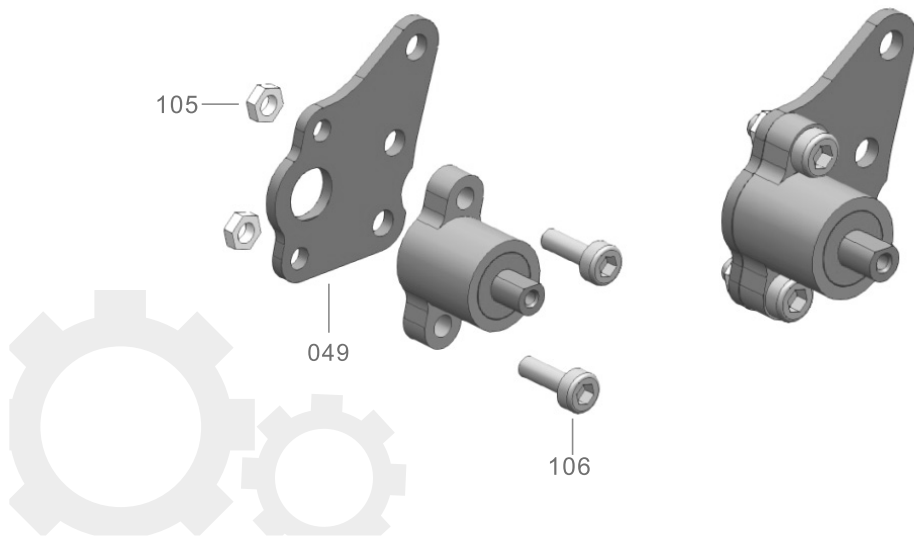
6.4 Install the water pump pulley



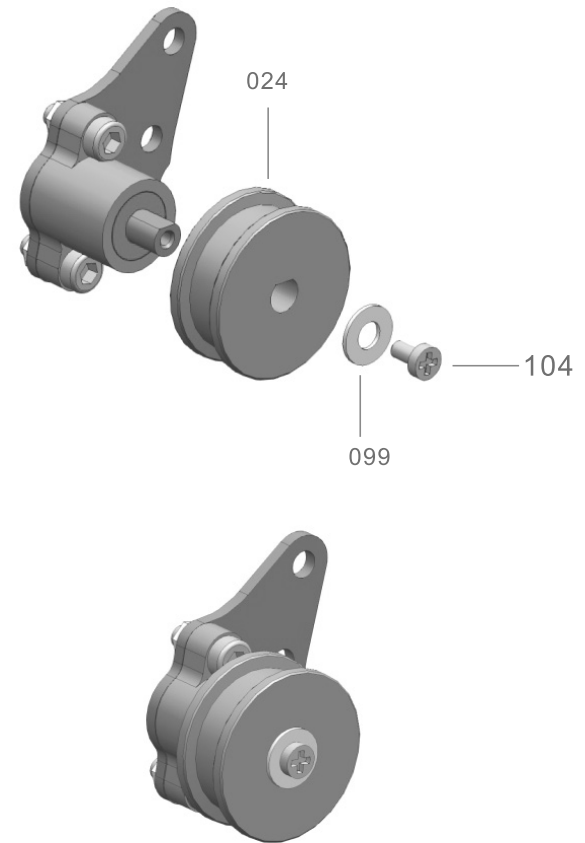
7 Bearing seat assembly
7.1 Group of tensioning shaft components



7.2 Bearing seat brackets

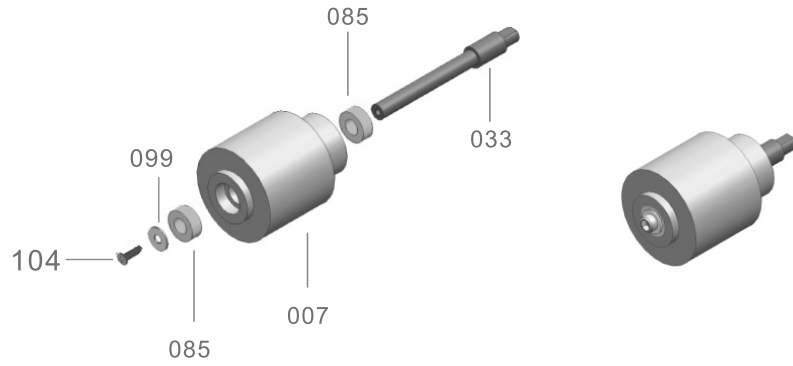


7.3 Install tight-shaft belt pulley

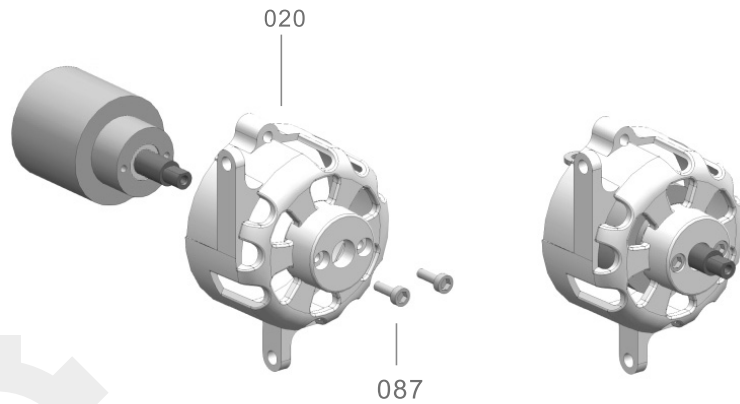


8 Generator assembly

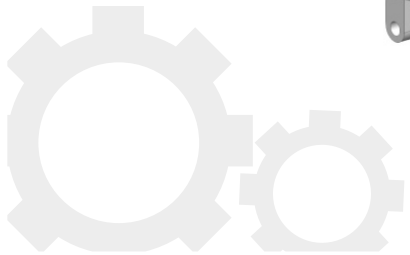
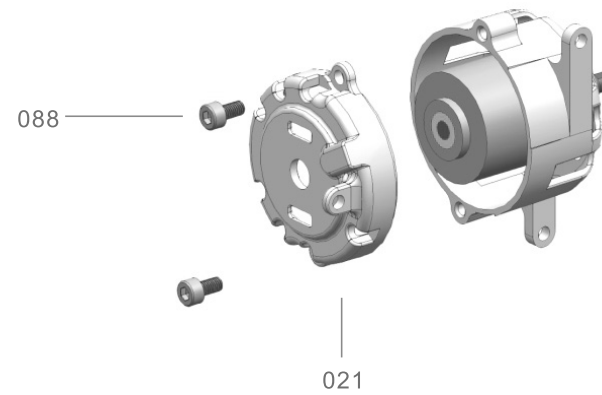
8.1 Docking generator shafts and bearings



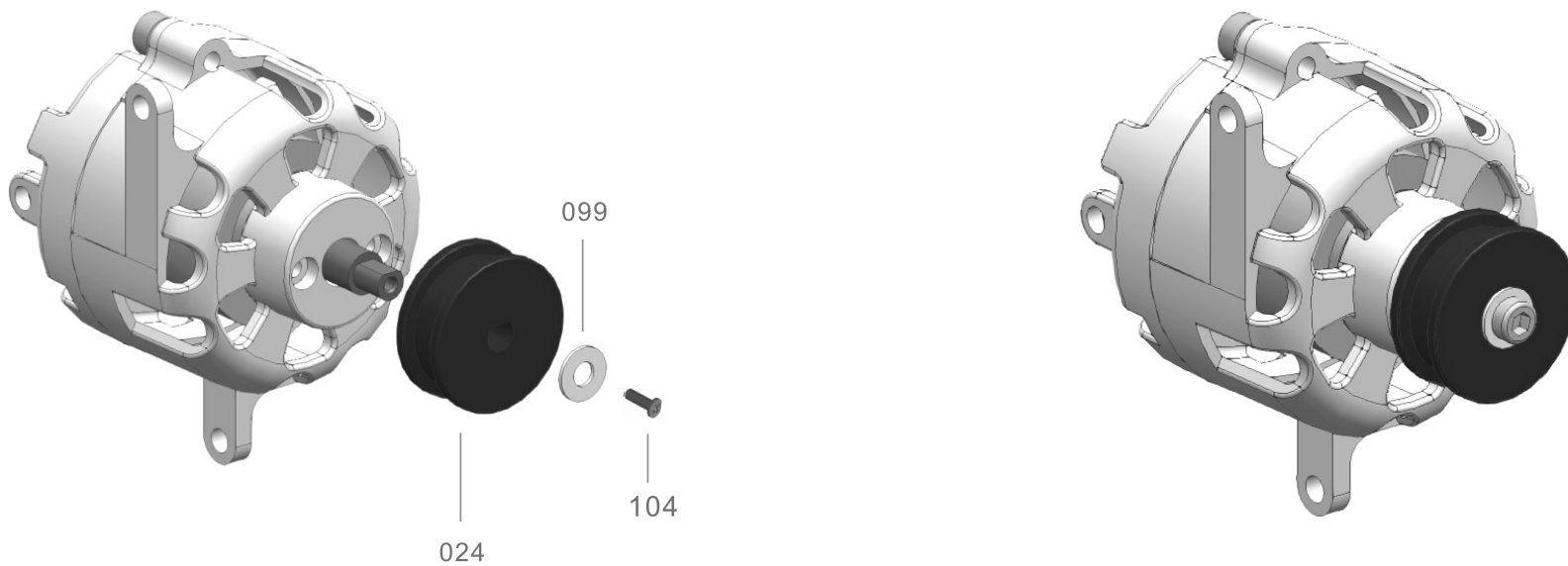
8.2 Docking generator and front cover



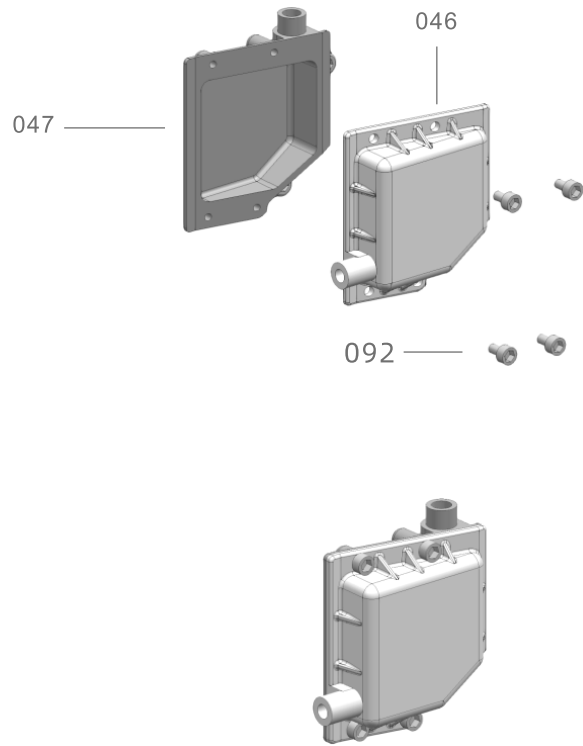
8.3 Assembled generator front cover and generator back cover



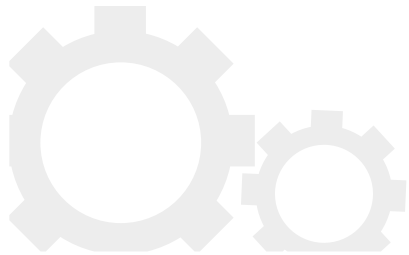
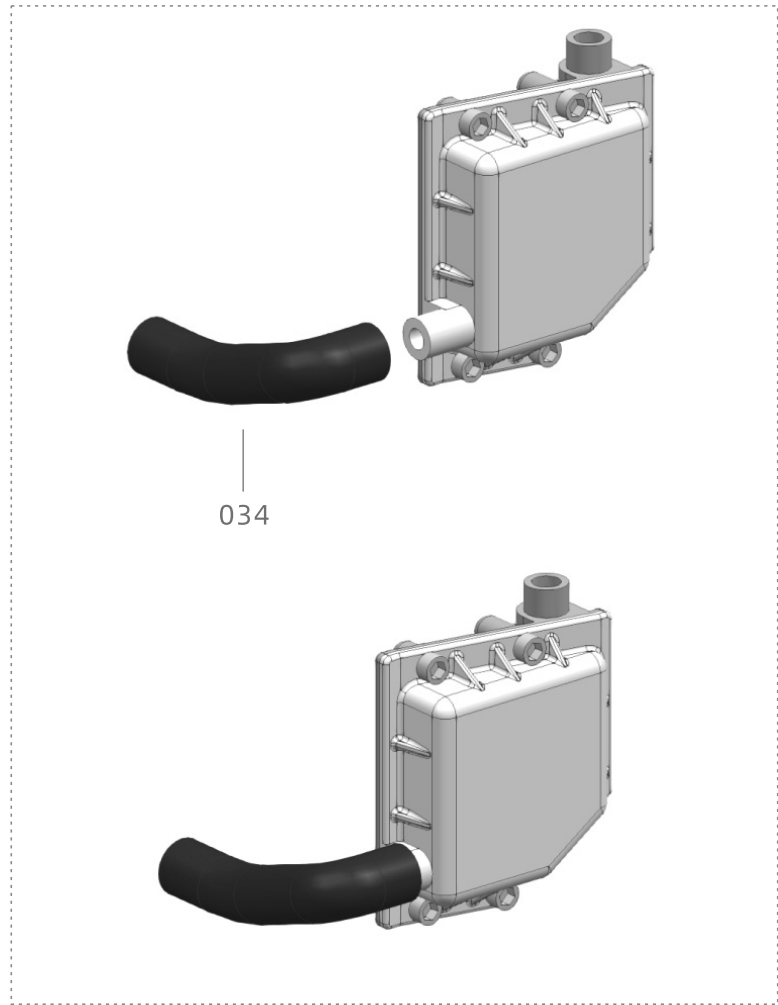
8.4 Install engine pulley



9 Air filter
9.1 Assembling air filter

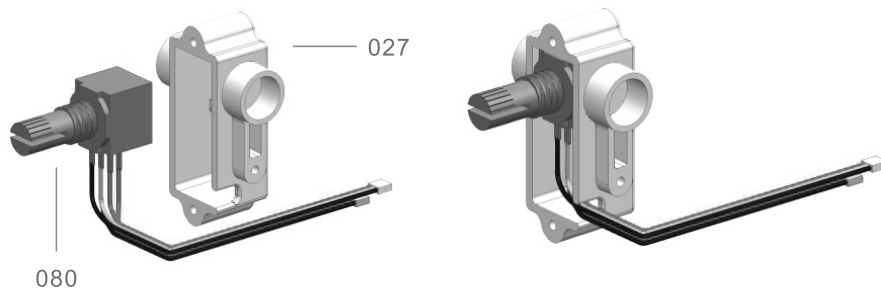


Air filters connect to the air inlet 1

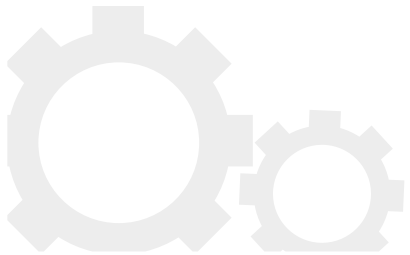
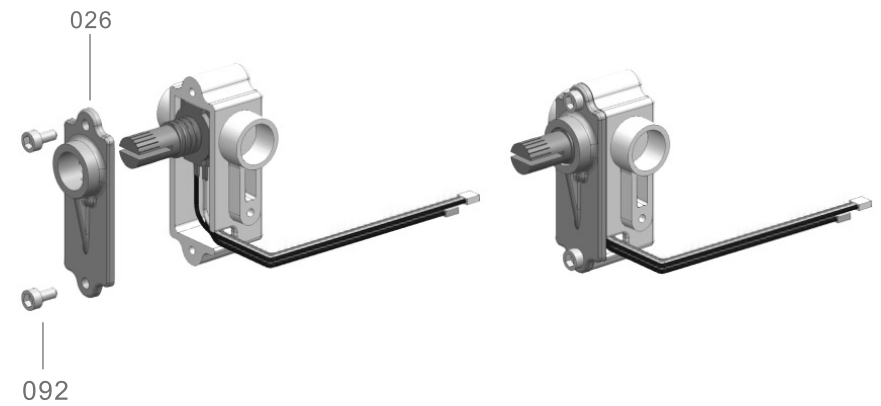


10 Potentiometer assembly

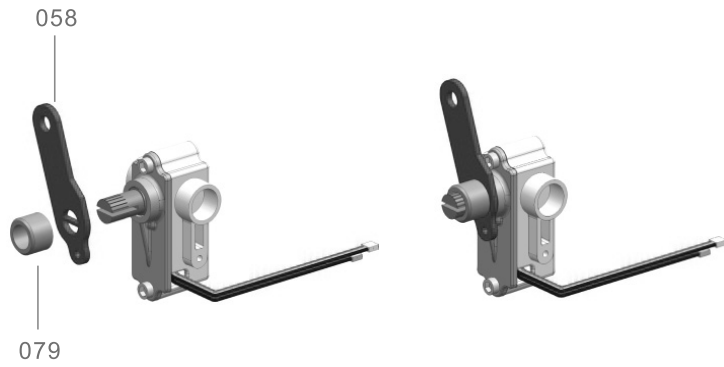
10.1 Docking potentiometer and lower potentiometer cover



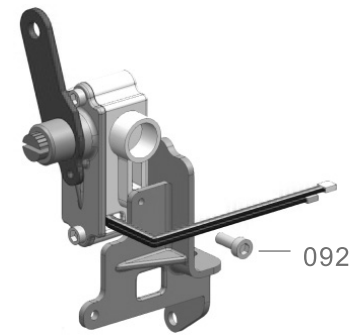
10.2 Assembly the potentiometer upper cover



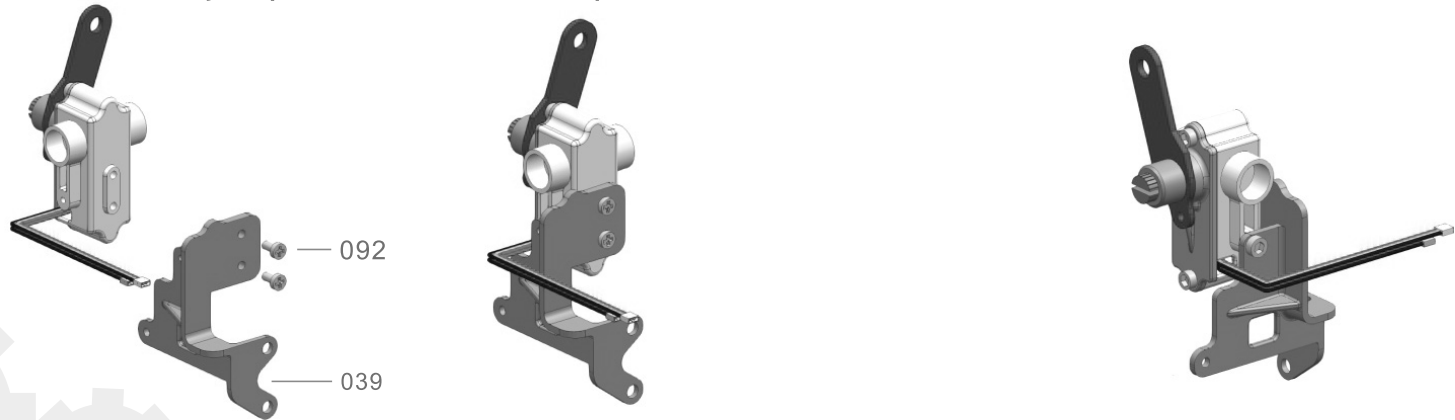
10.3 Fixed accelerator lever



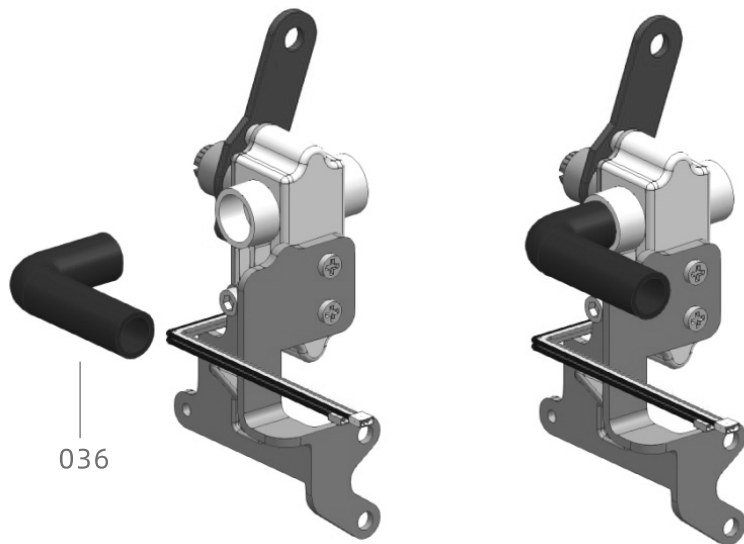
10.5 Lock potentiometer



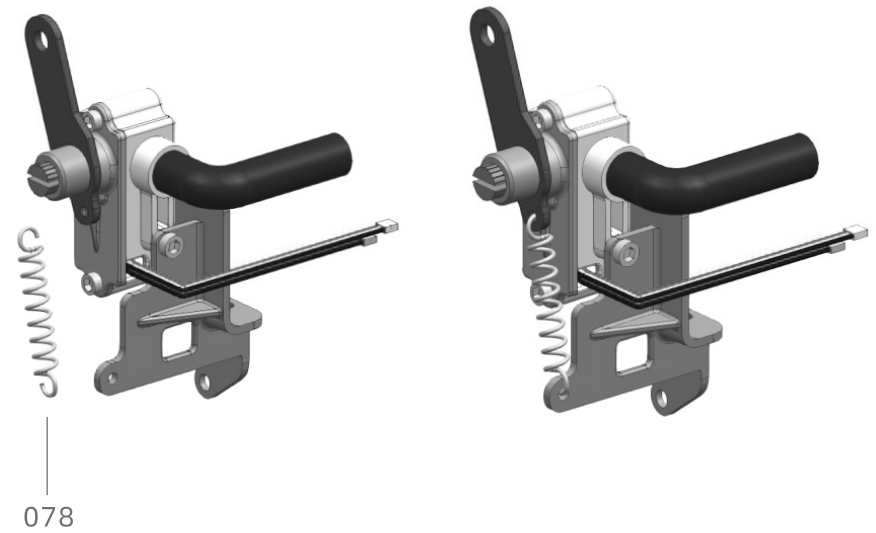
10.4 Assembly of potentiometer bracket, potentiometer



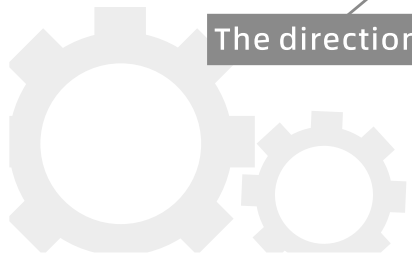
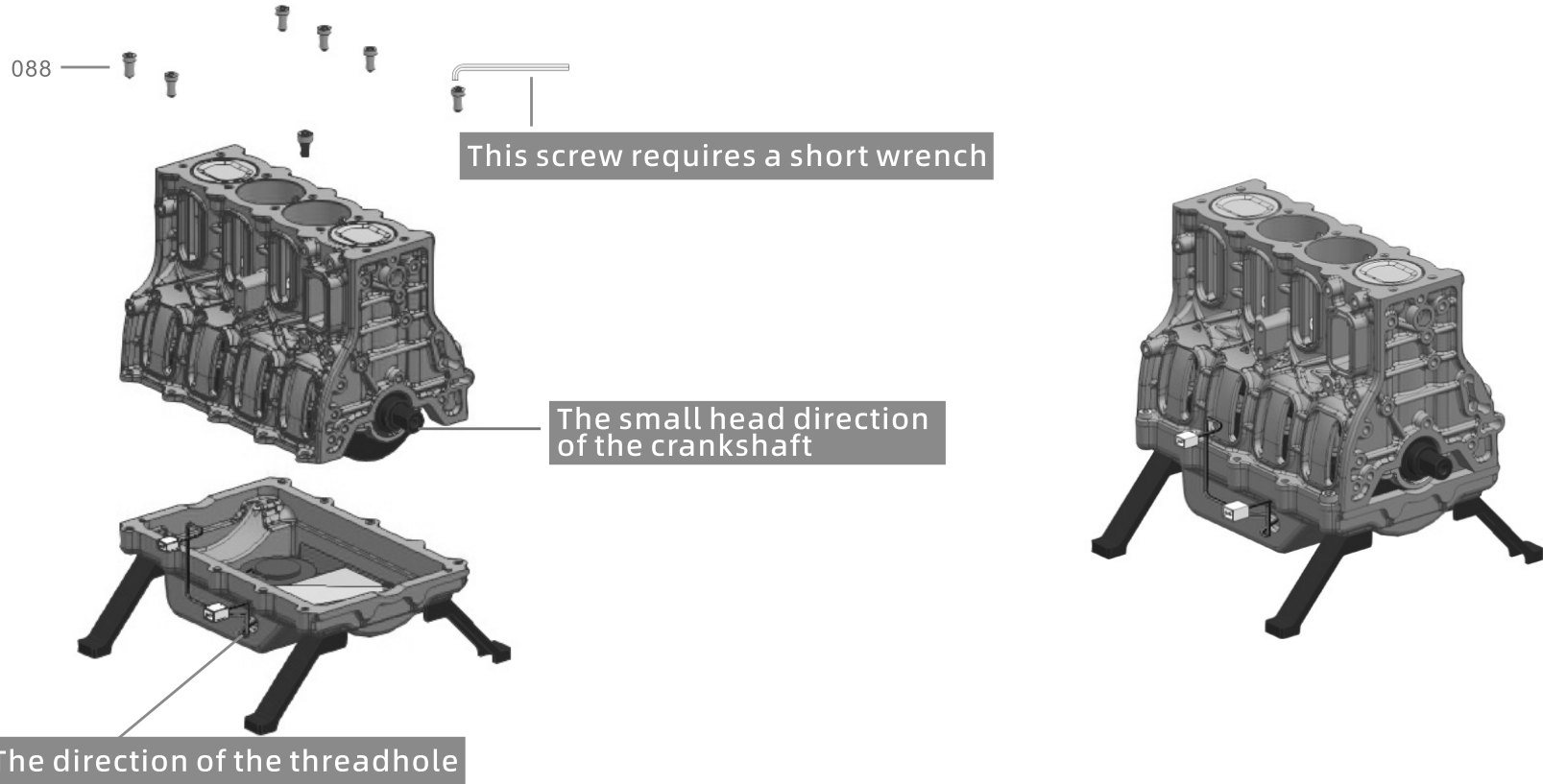
10.6 The potentiometer connects to the air inlet pipe 3



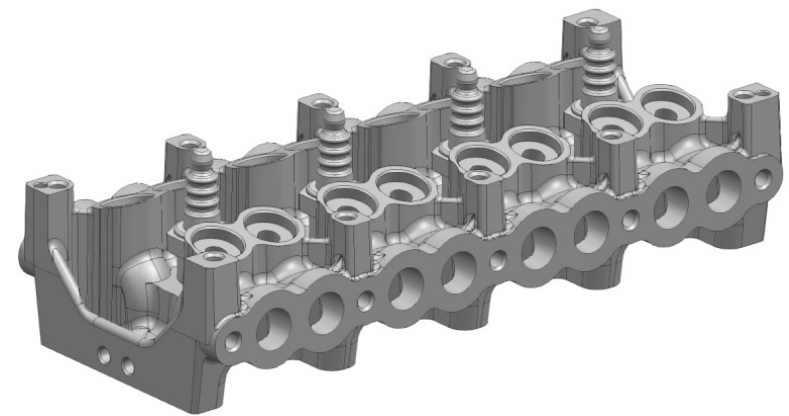
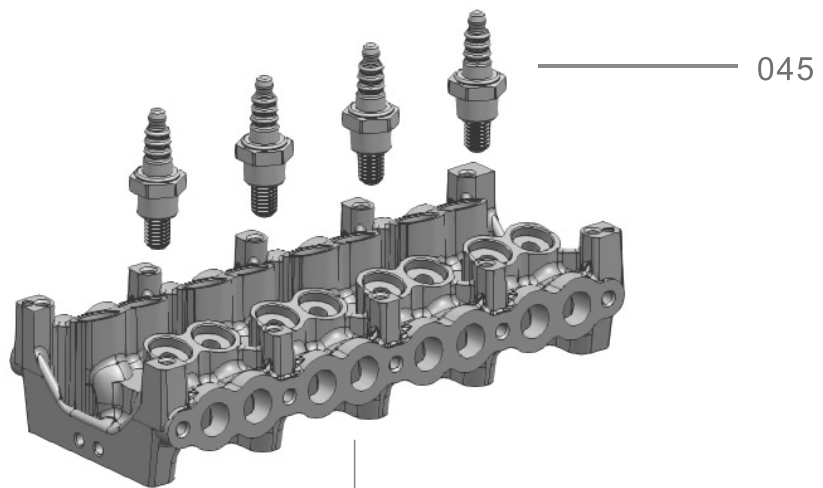
10.7 Install accelerator spring



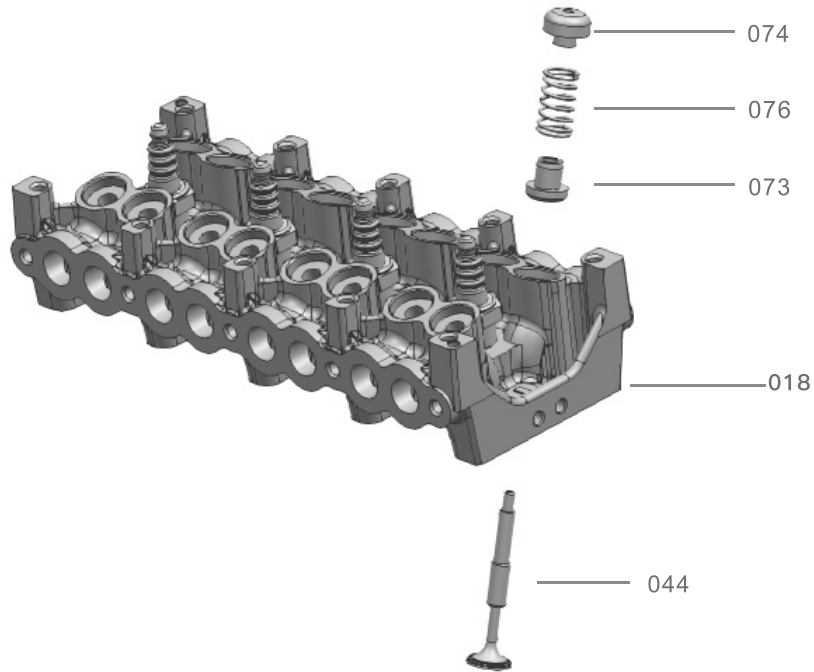
11.1 Assembly of cylinder assembly and casing assembly



11.2 Install spark plugs



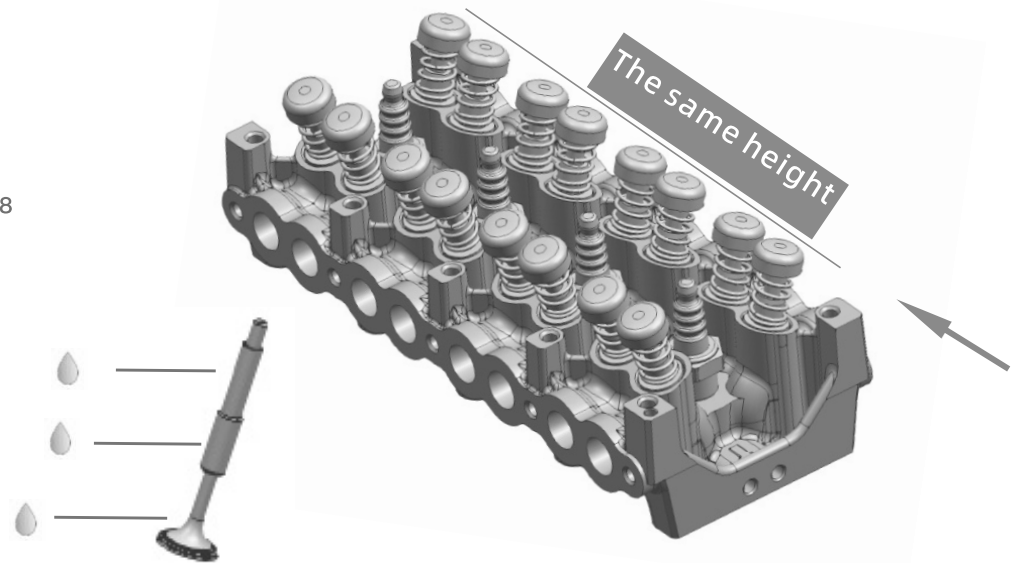
11.3 Cylinder assembly
11.3-1 Installing a ventilation valve



A total of 16 sets

11.3-2 Check whether the valve installation is in place

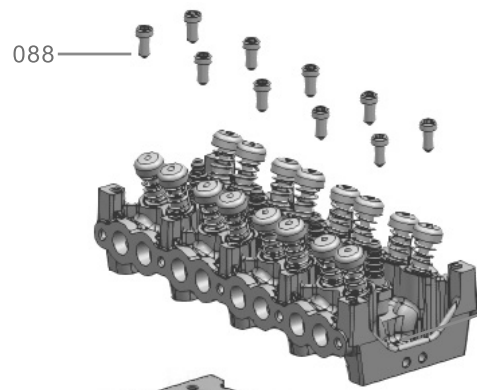
After the valve is installed, check whether each valve is tightened and whether the height of each valve remains at the same height



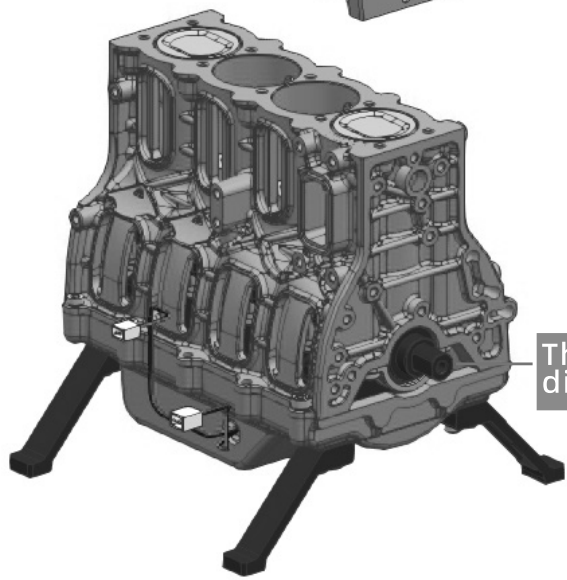
There are 16 pieces in three places.



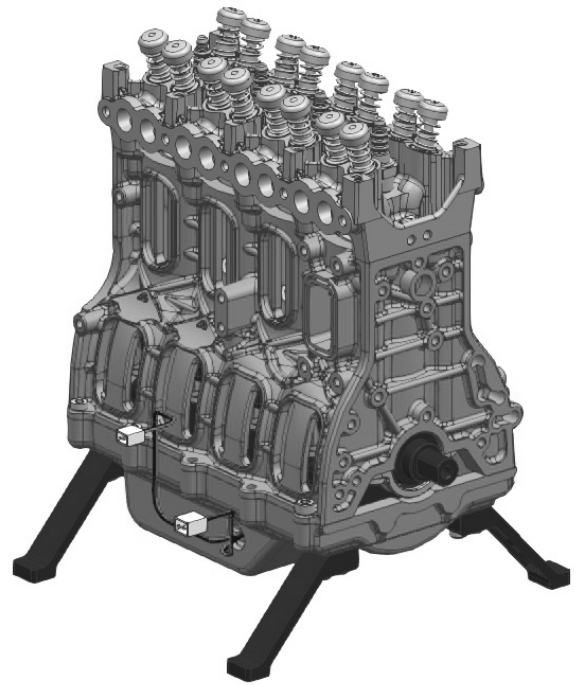
11.3-3 Fixed cylinder head



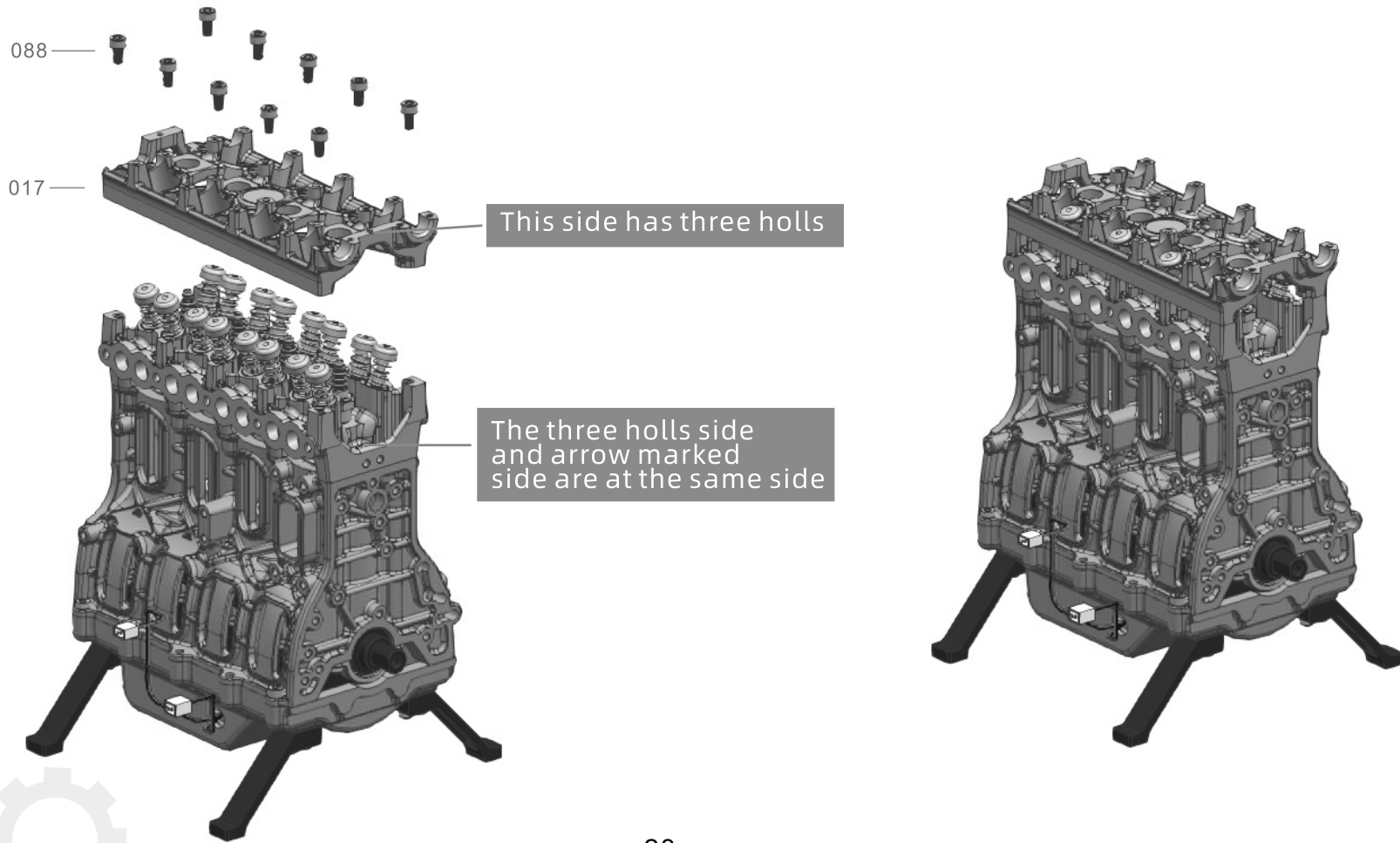
Notice the arrow indicating direction



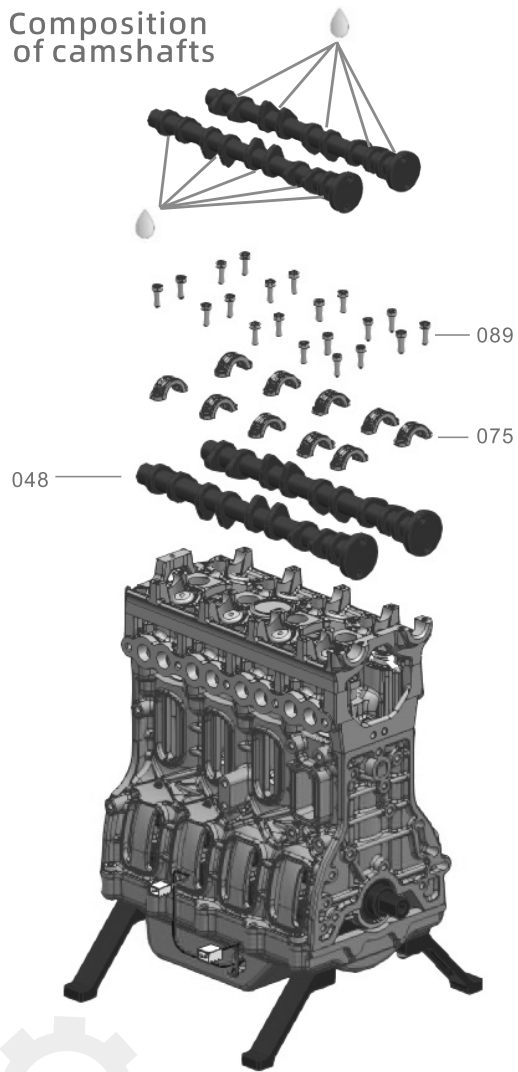
The small head direction of the crankshaft



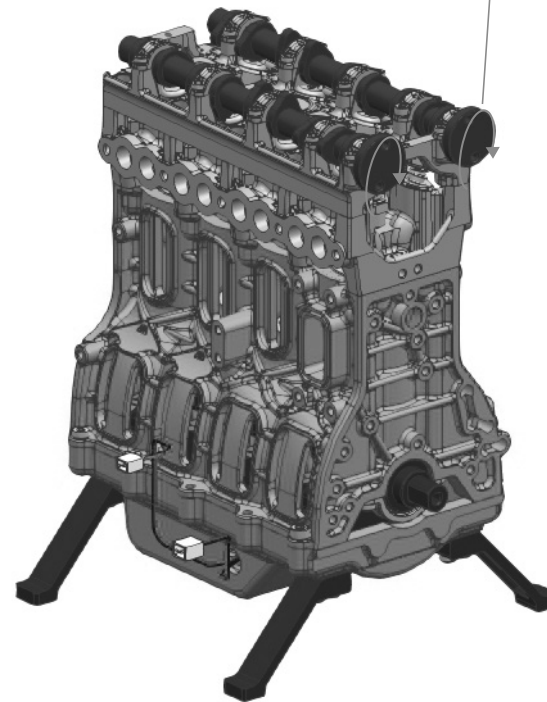
11.3-4 Fixed cam base



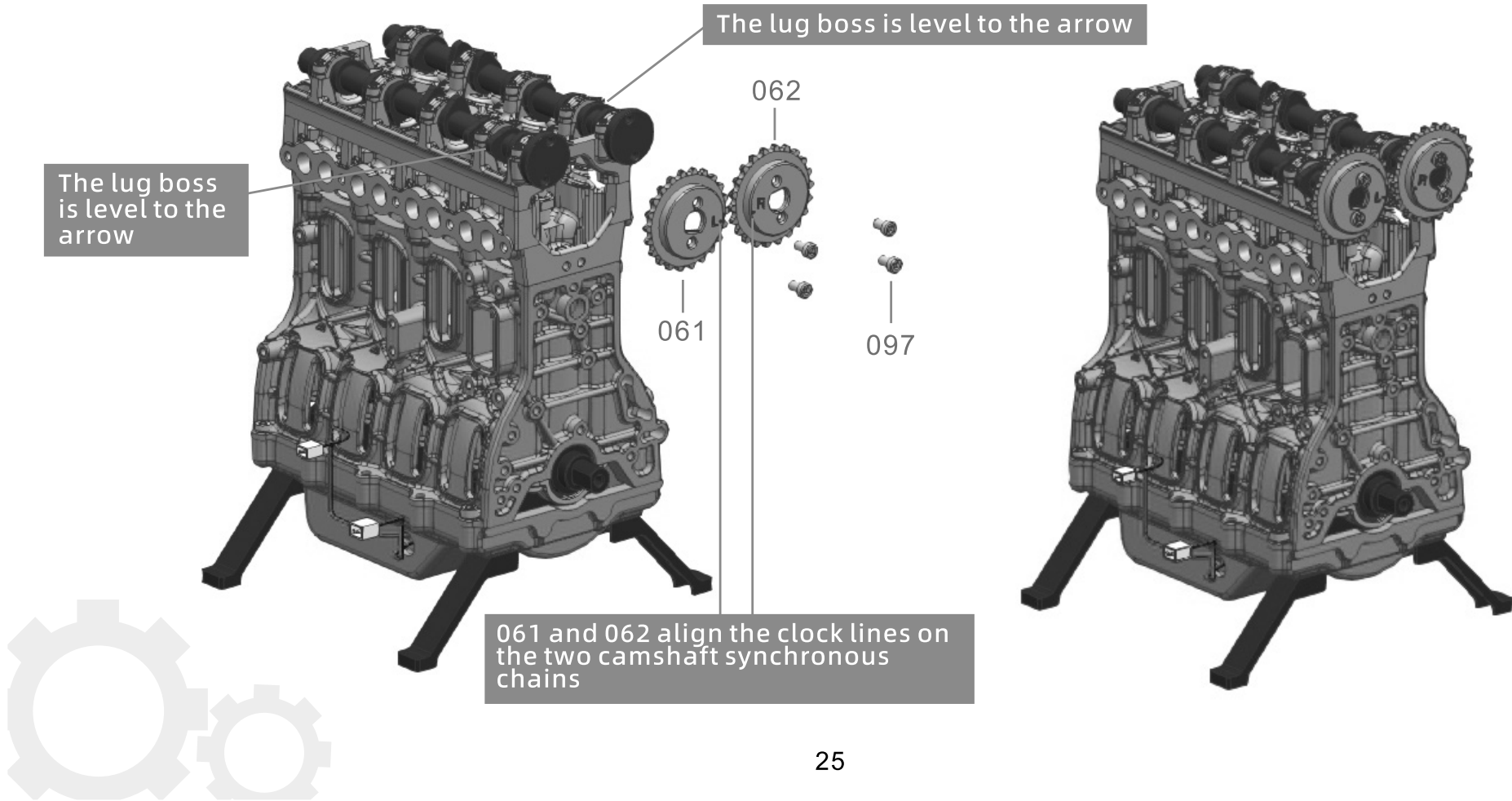
11. 3-5 Composition of camshafts



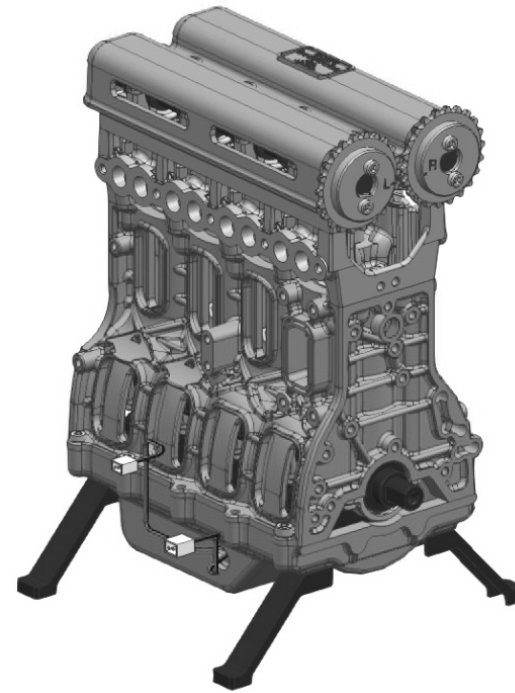
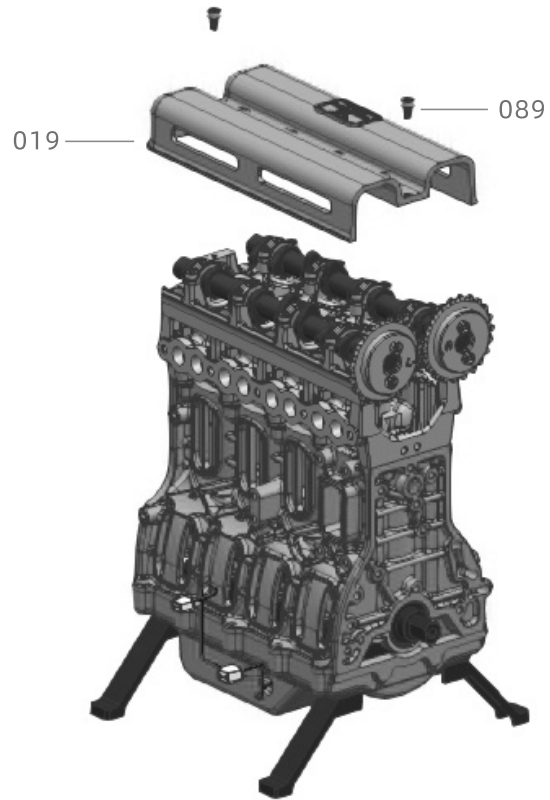
After installing the camshaft, turn 048. Check whether the camshaft is moving smoothly. If it is too tight, twist the screw in half a circle in the opposite direction to solve it



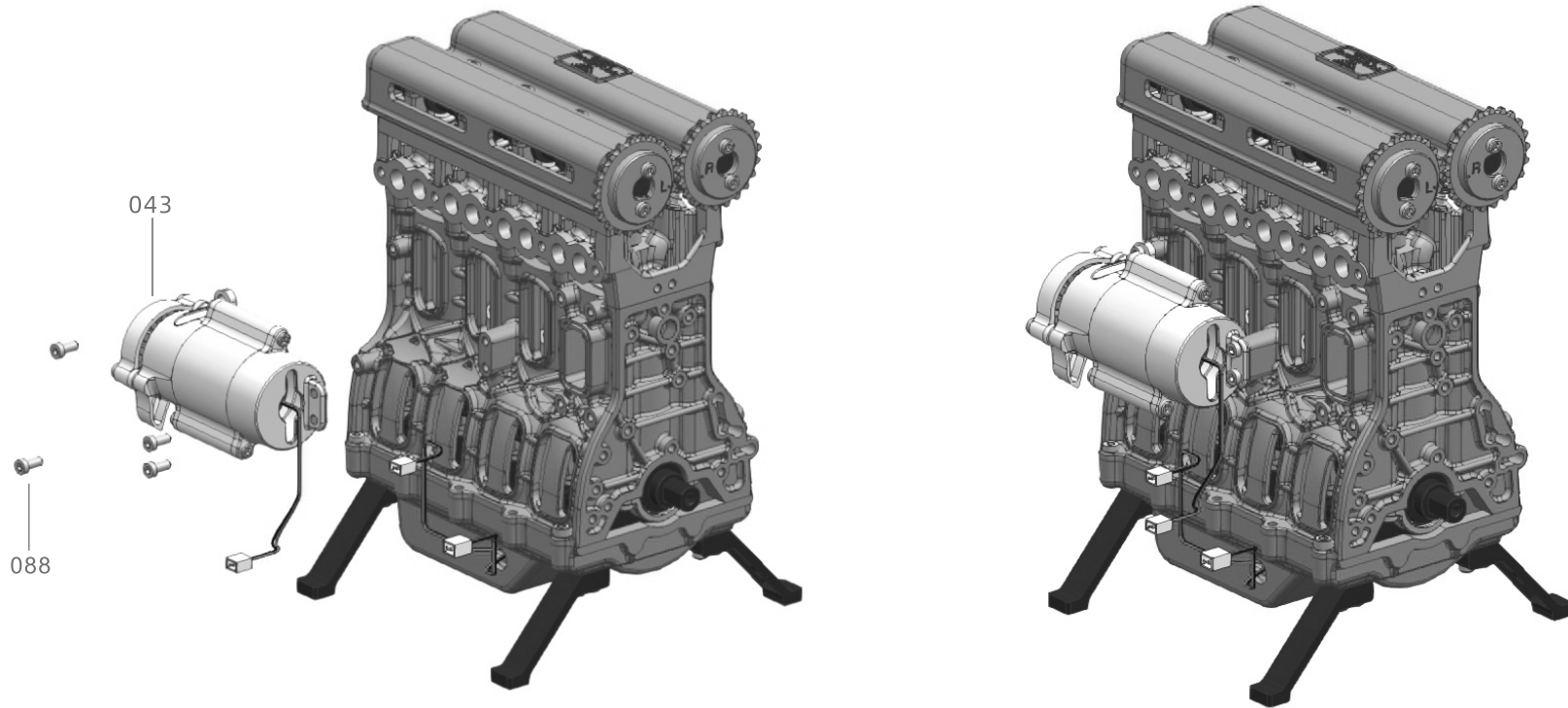
11.3-6 Assemble the left and right camshaft sprocket



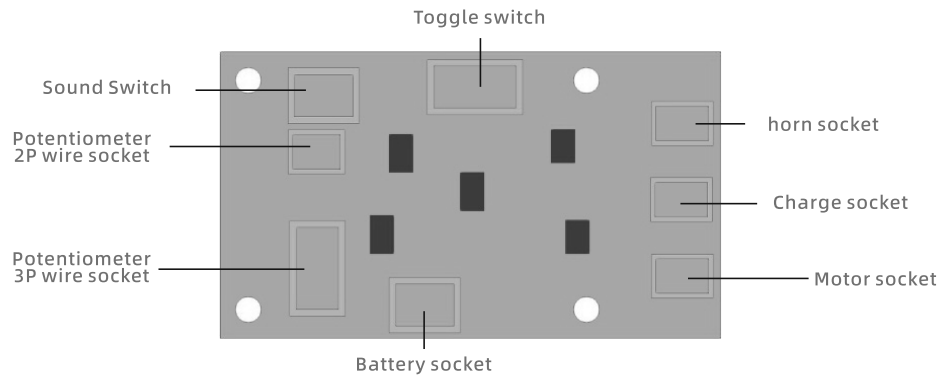
11.3-7 Install valve cover



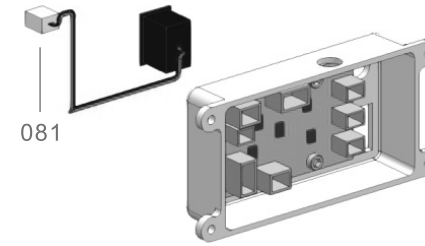
11.4 Install the starter motor



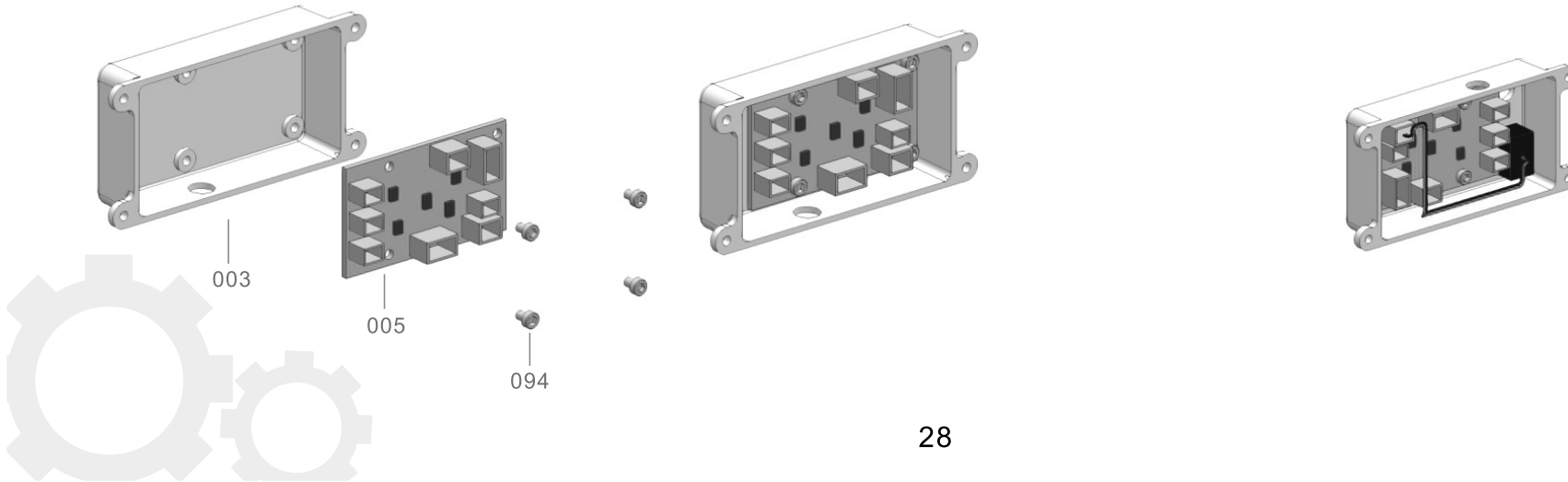
11.5 Circuit control board



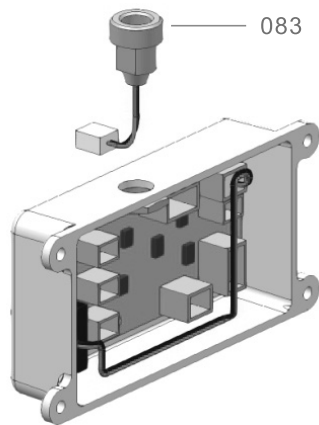
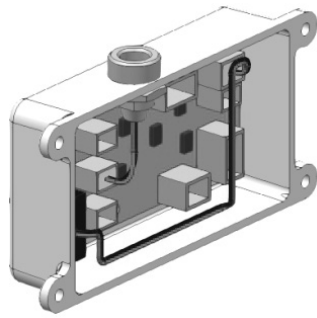
11.7 Install a sound switch



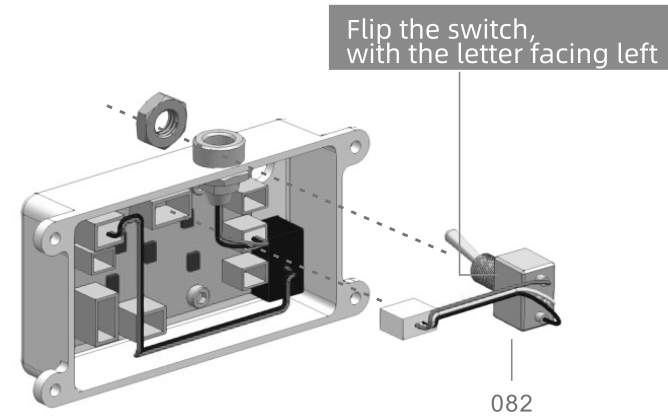
11.6 Install the control panel



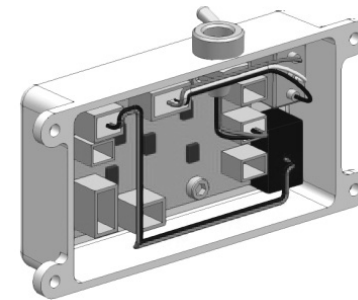
11.8 Install a charging interface



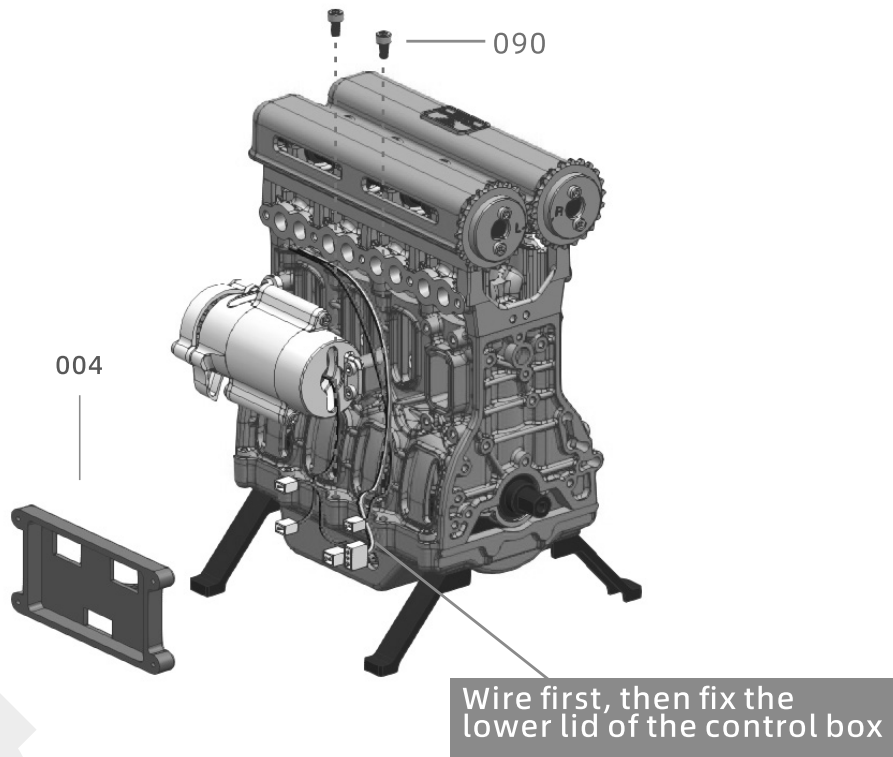
11.9 Installation of dial switch components



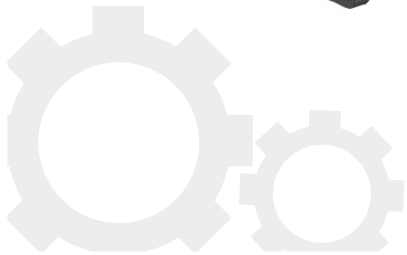
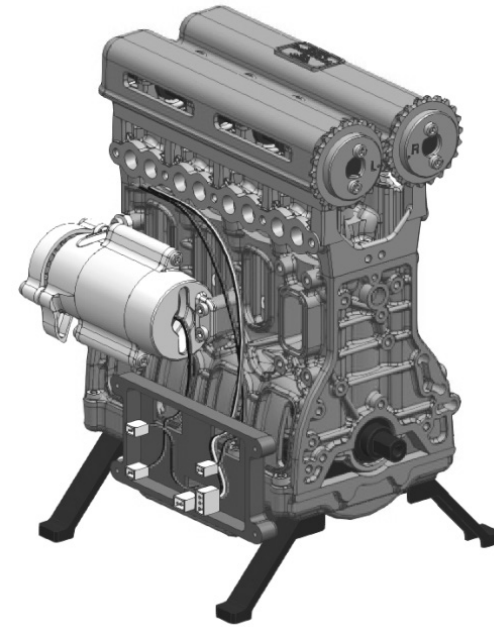
11.10 Demonstration of dial switch diagram



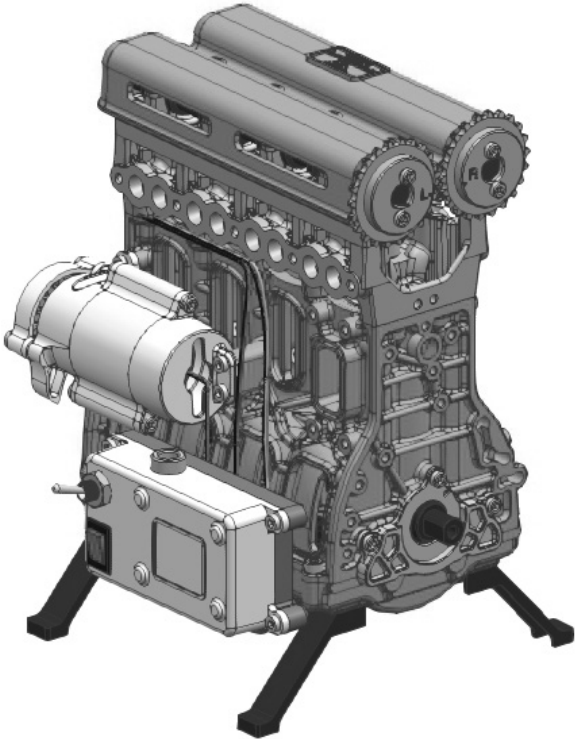
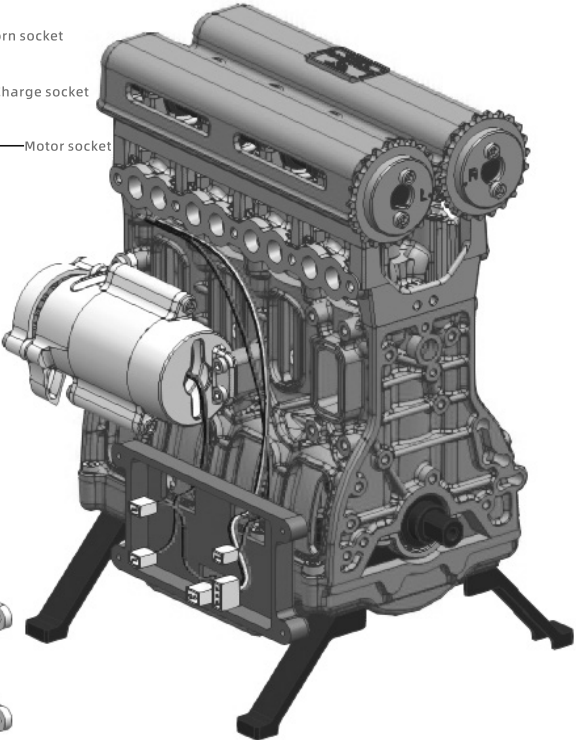
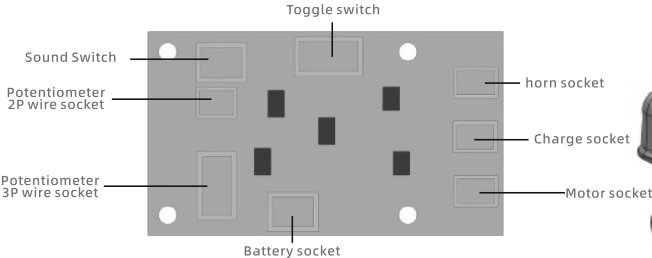
11.11 Install the lower lid of the control box



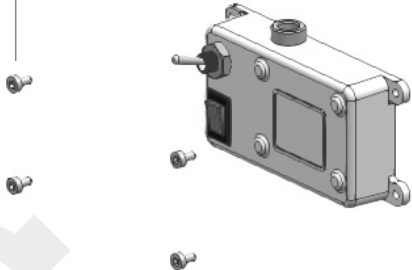
11.12 Butting potential line 2P and 3P interfaces



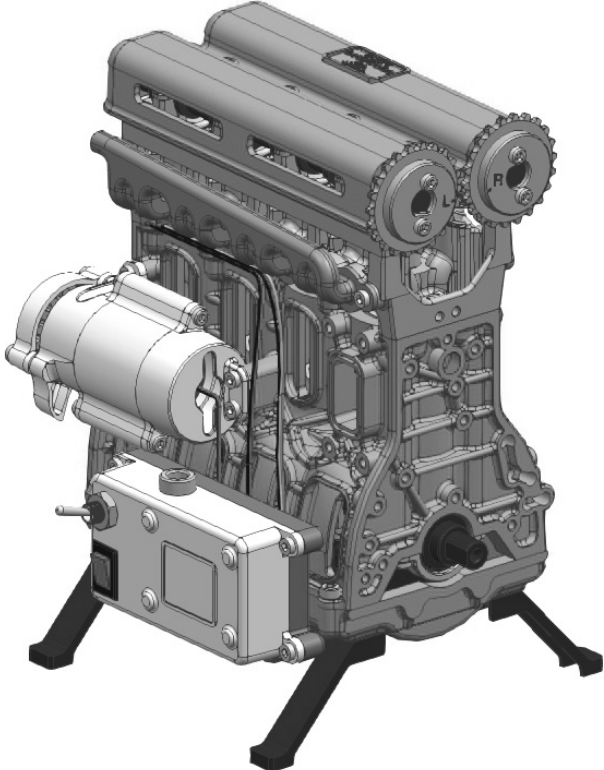
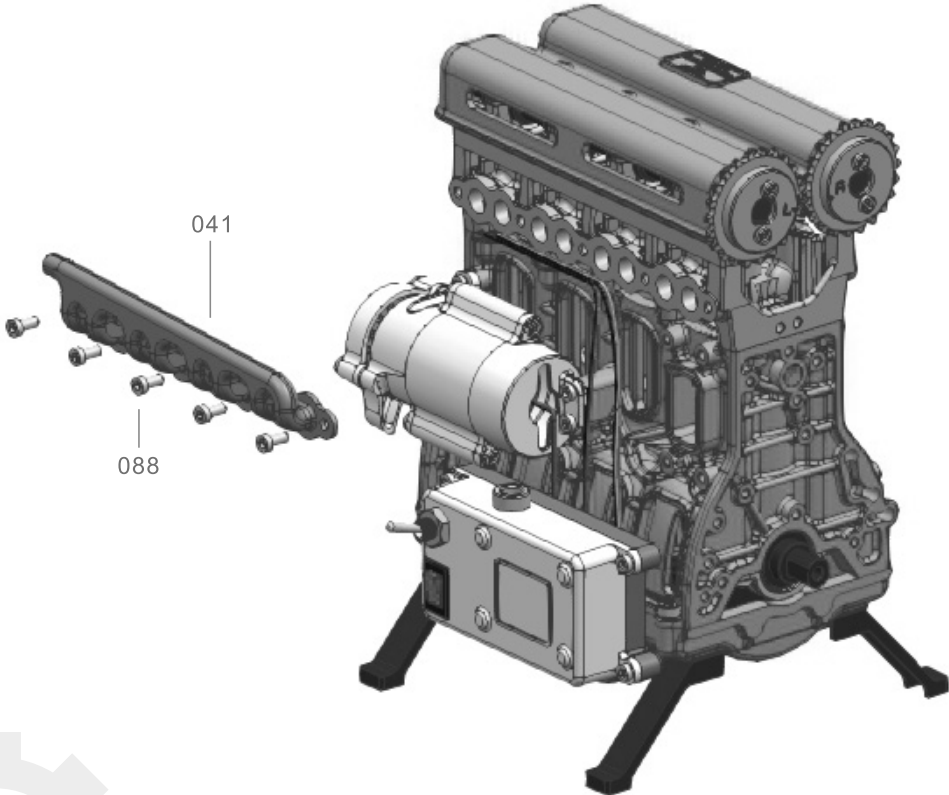
11.13 Install the upper lid of the control box



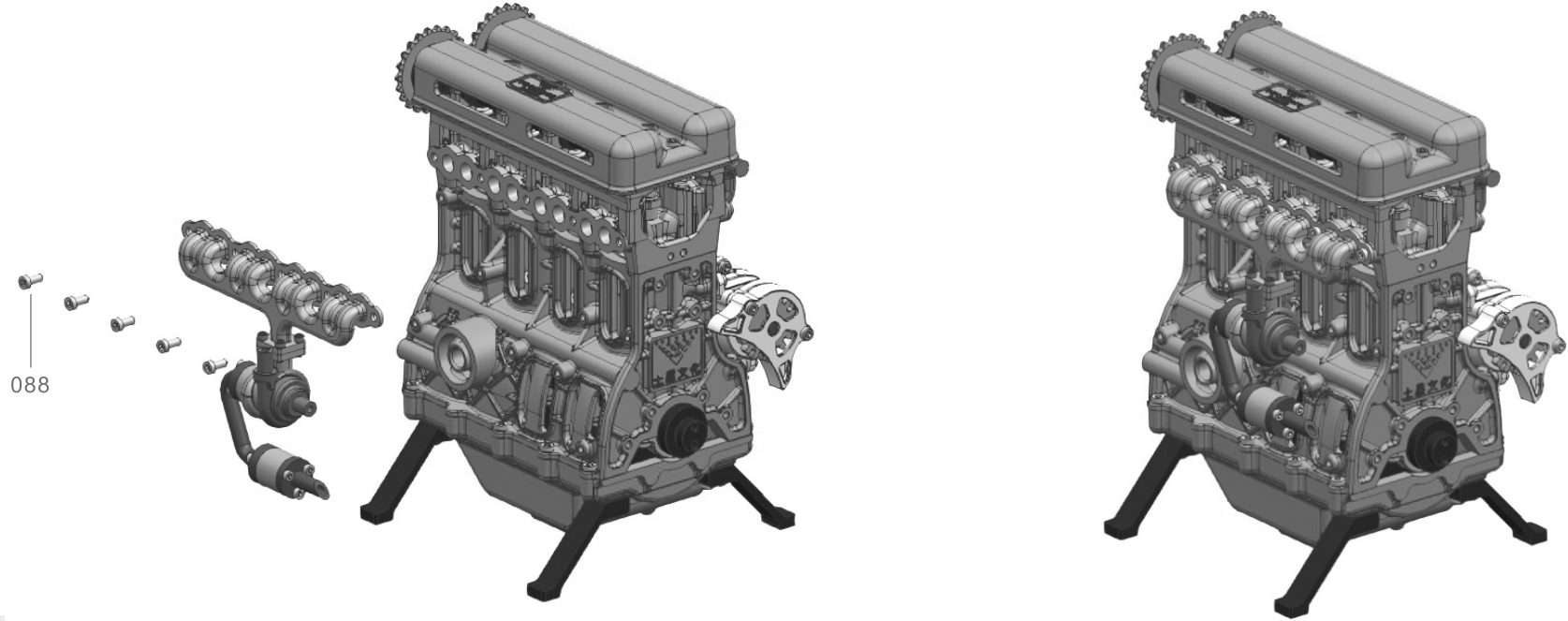
089



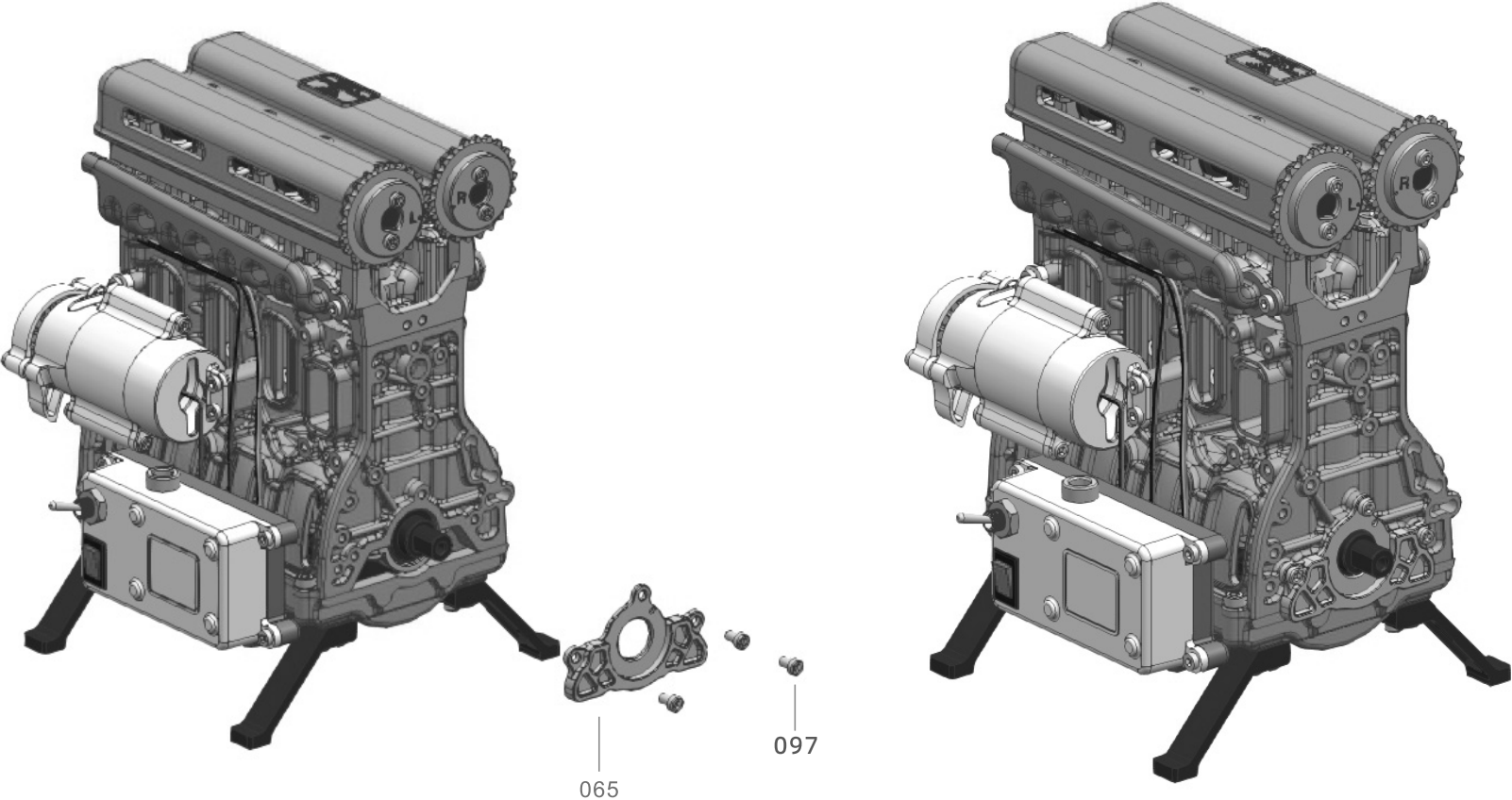
11.14 Install air inlet manifold



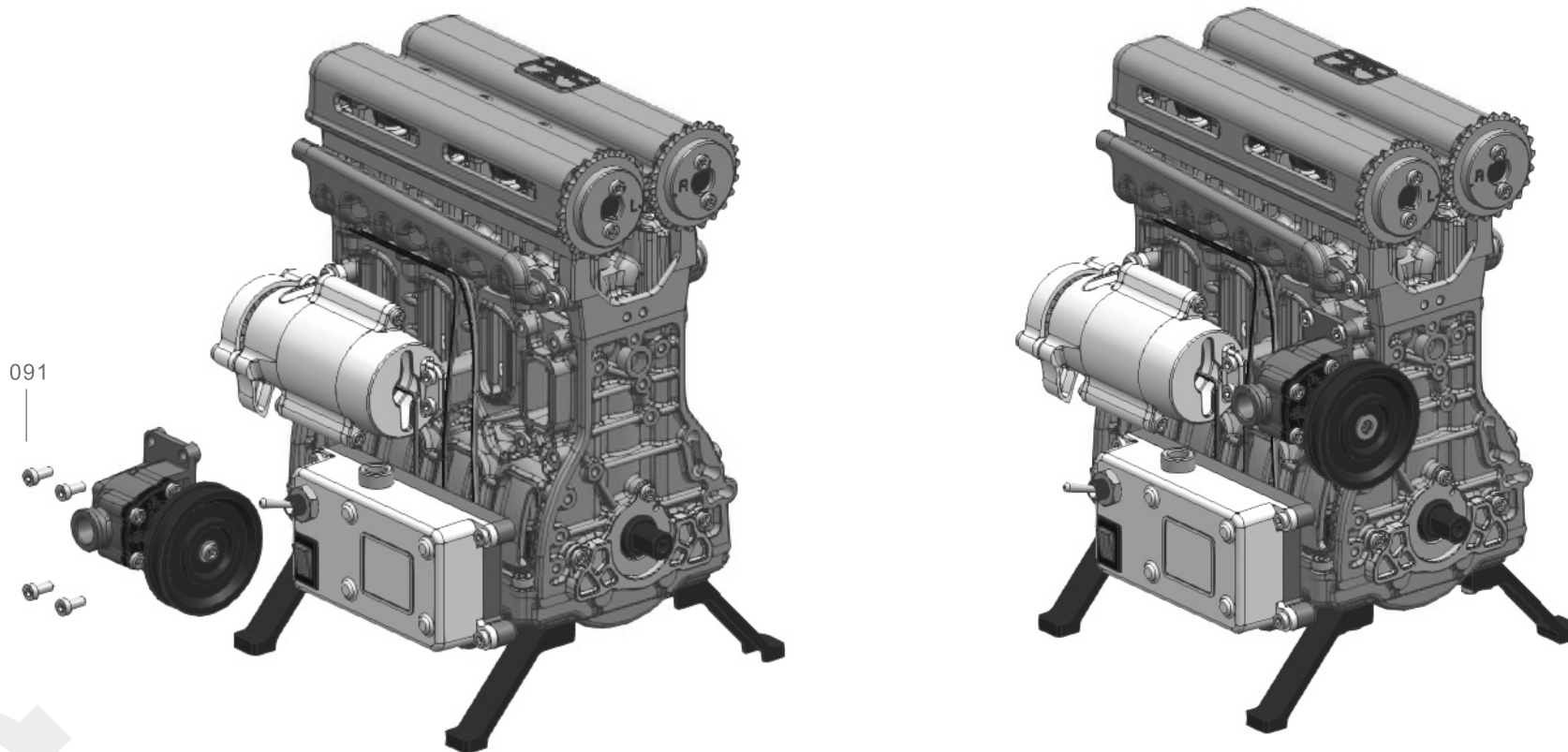
11.15 Installation of exhaust pipe components



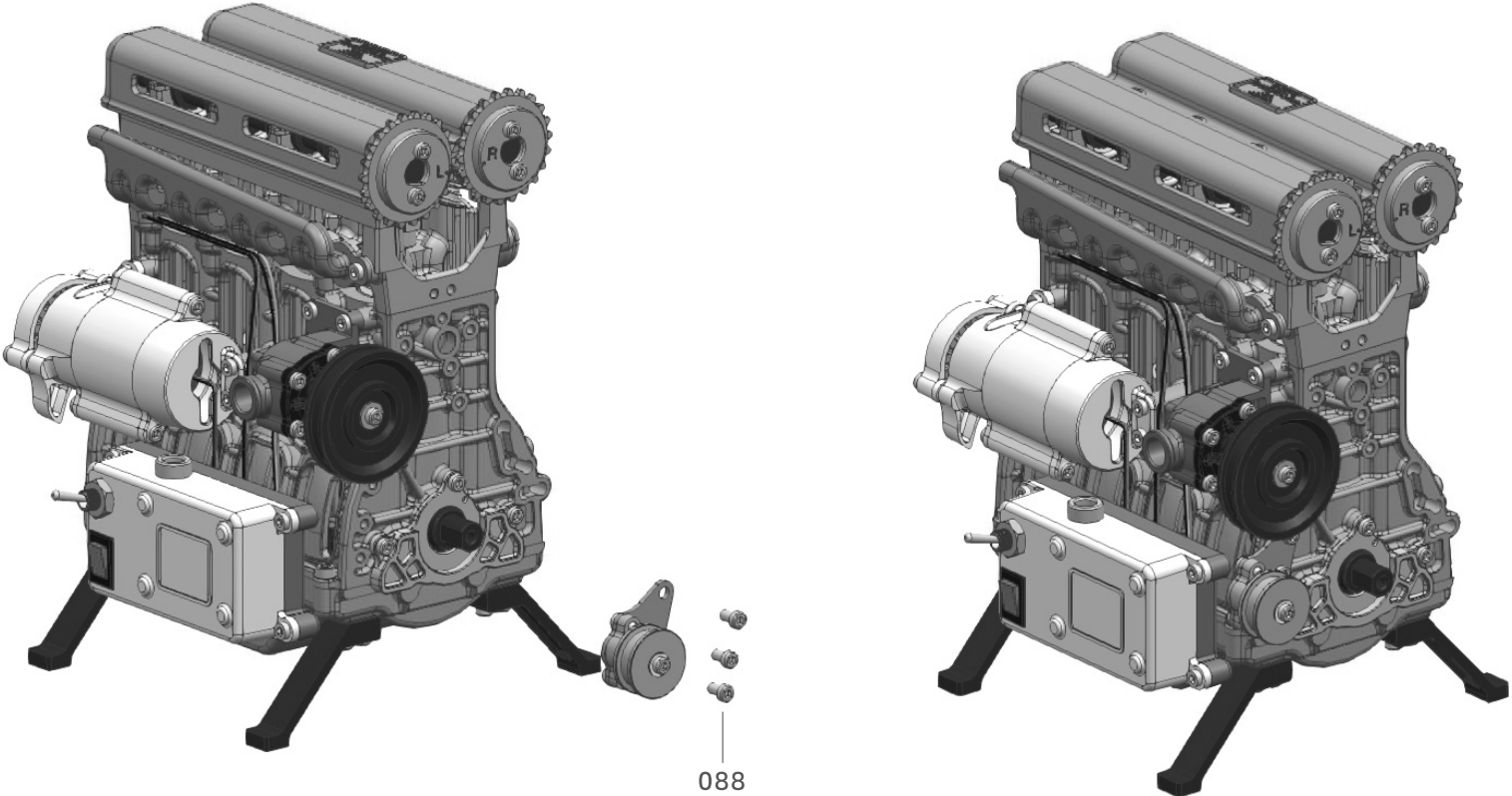
11.16 Install the back end covers



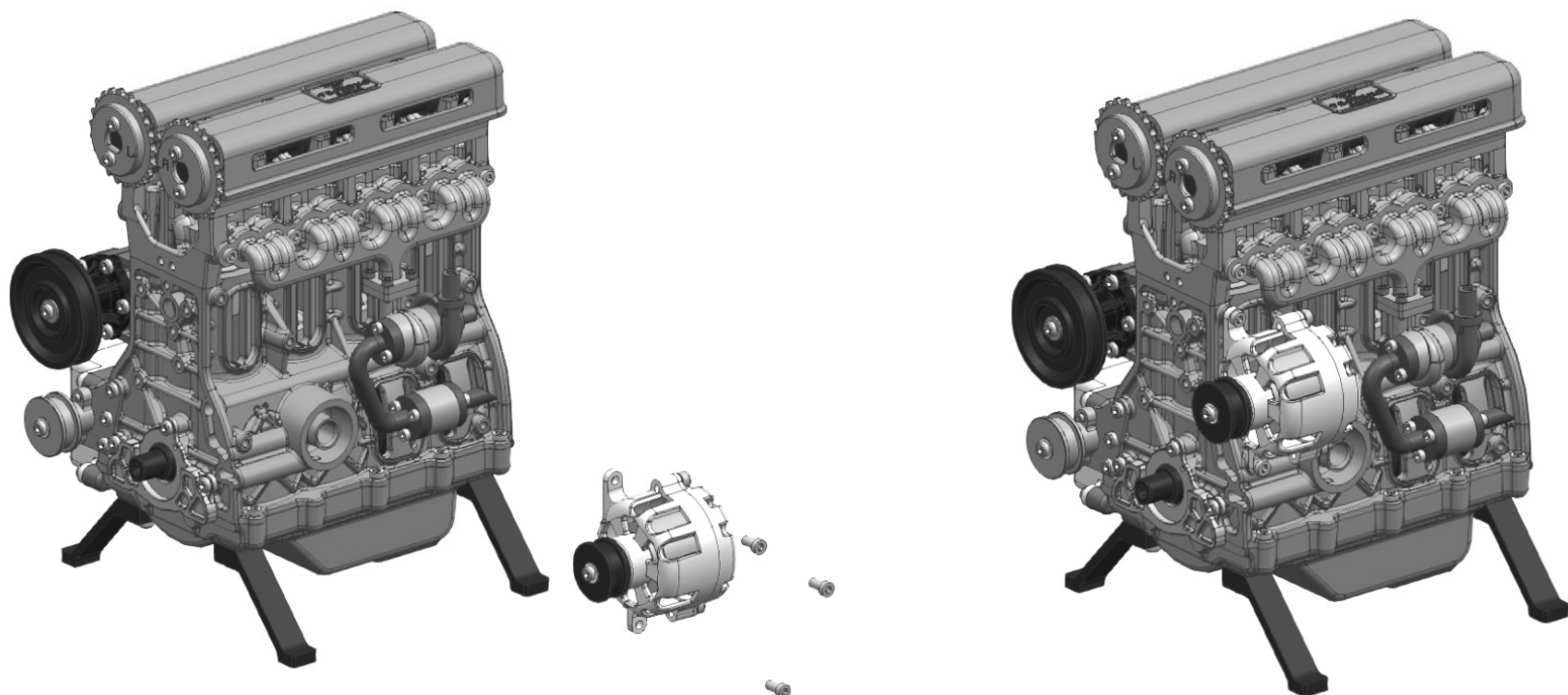
11.17 Installation of a pump assembly



11.18 Installing tensioning shaft assemblies



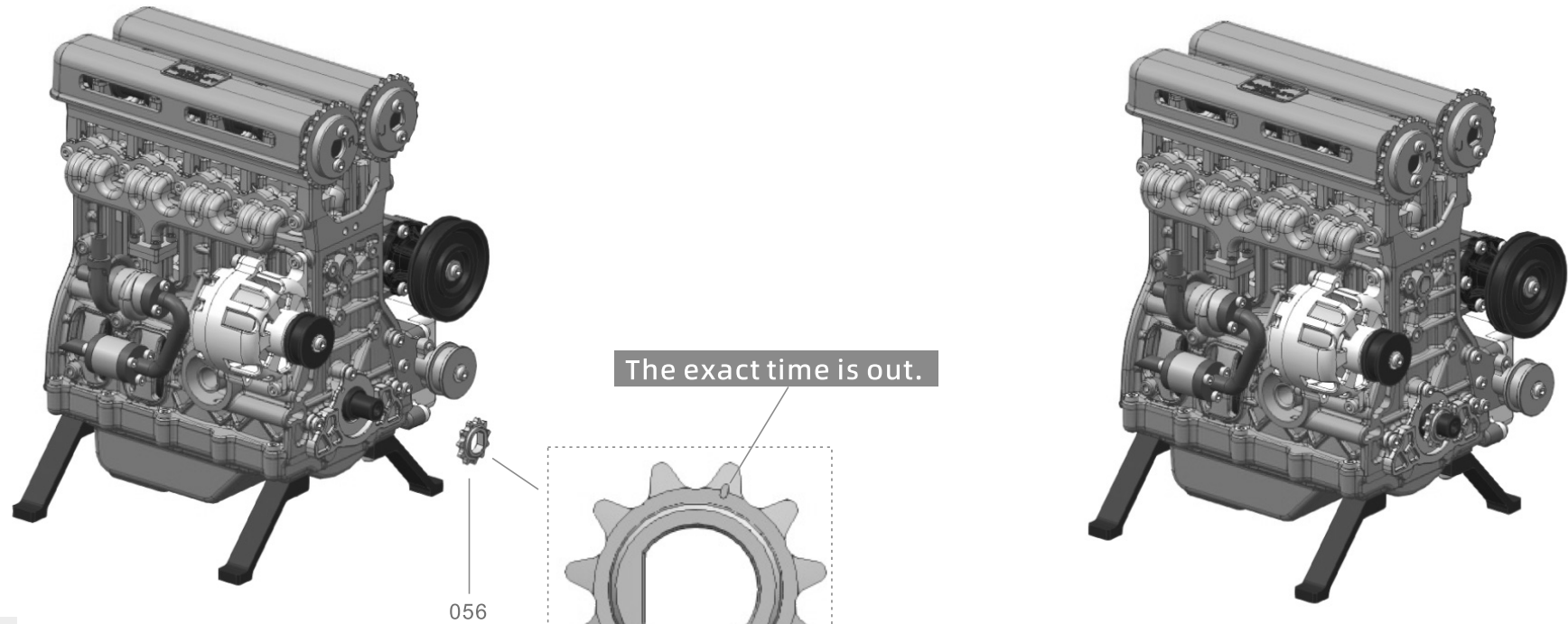
11.19 Installation of generator assembly



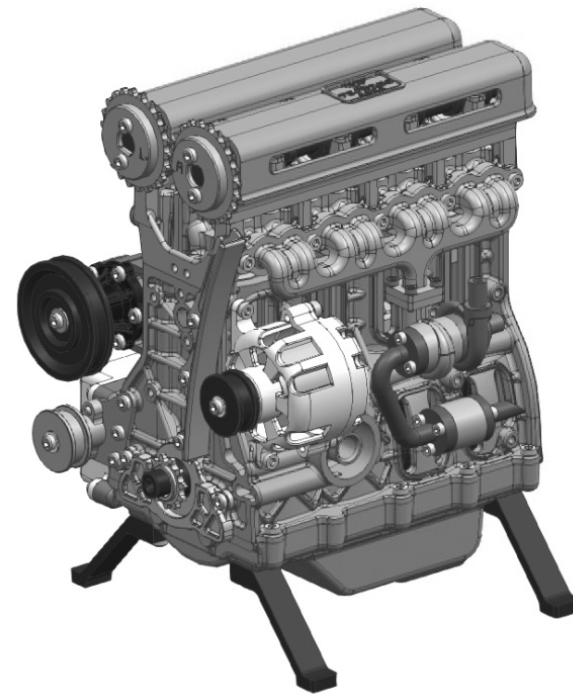
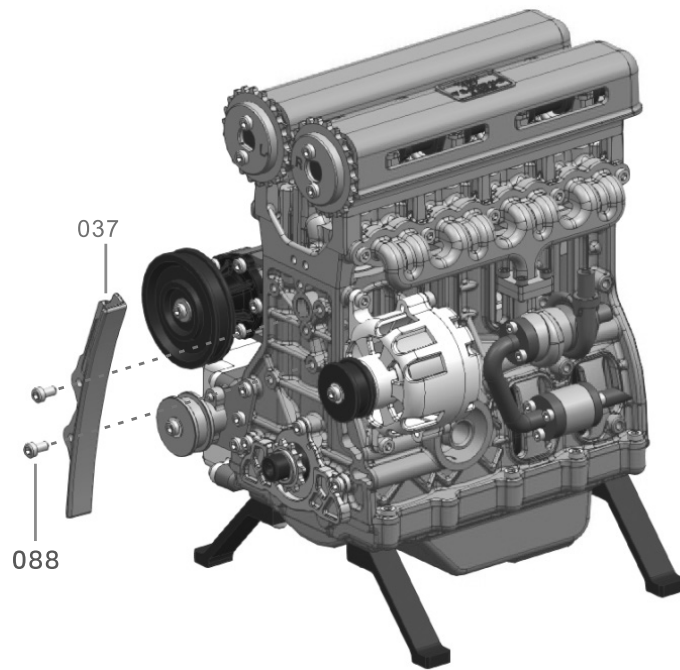
088



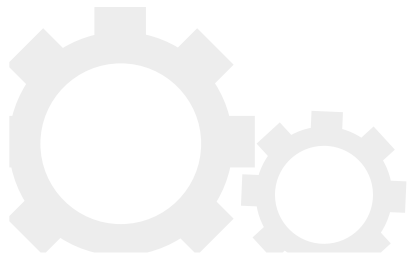
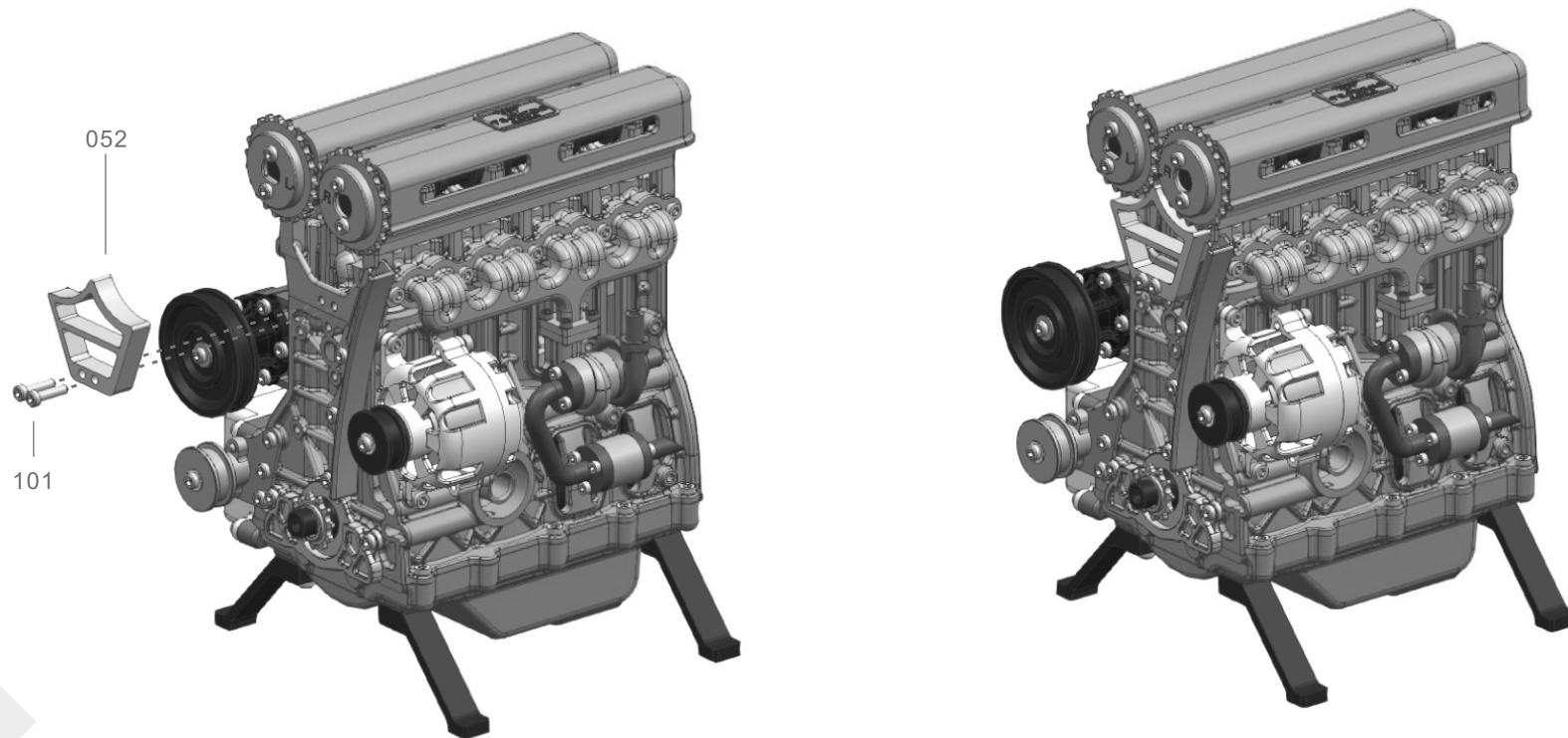
11.20 Docking crankshaft synchronous chain



11.21 Install chain guide block

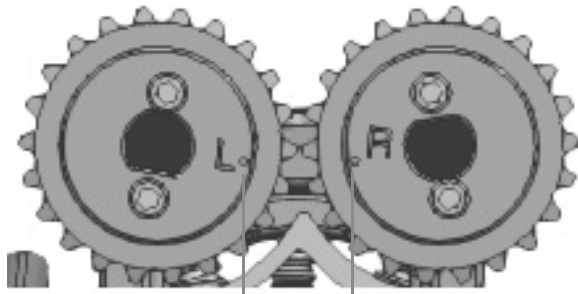


11.22 Install synchronous chain gear block



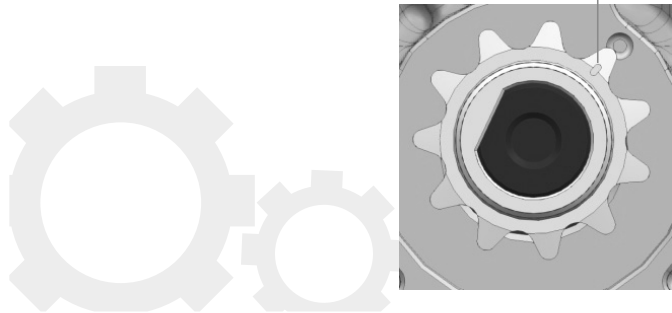
11.23 Installing crankshaft synchronization gear

Align the timing line on the left and right cranks on the synchronous chain wheel. Align the crankshaft. The timing point on the synchronously chain wheel should be aligned with the timing line on the back end cover. The three timing positions should be adjusted, then the chain should be fastened.

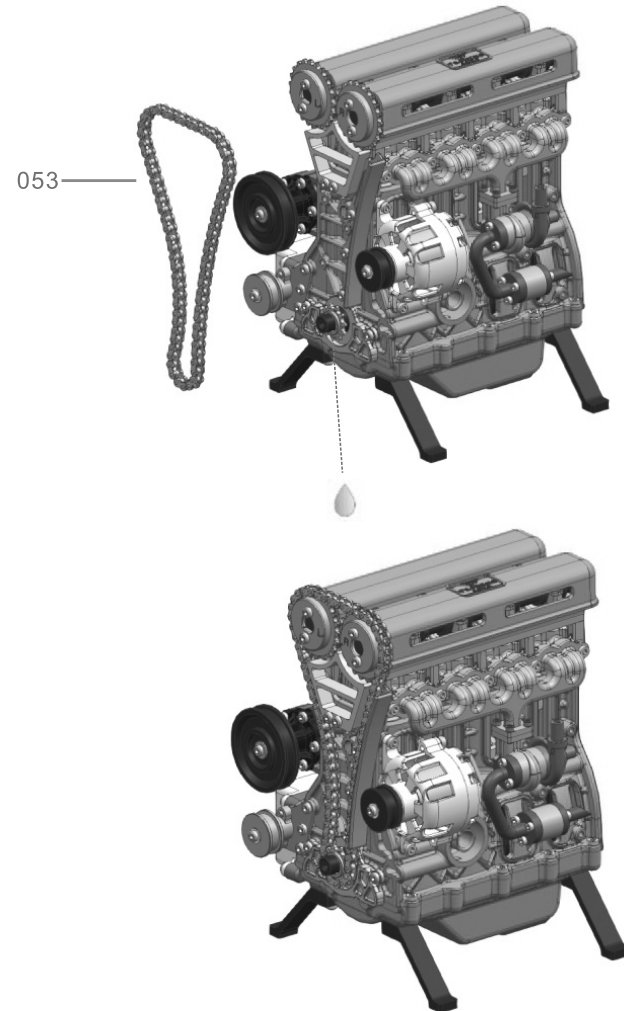


Camshaft synchronous chain clock line

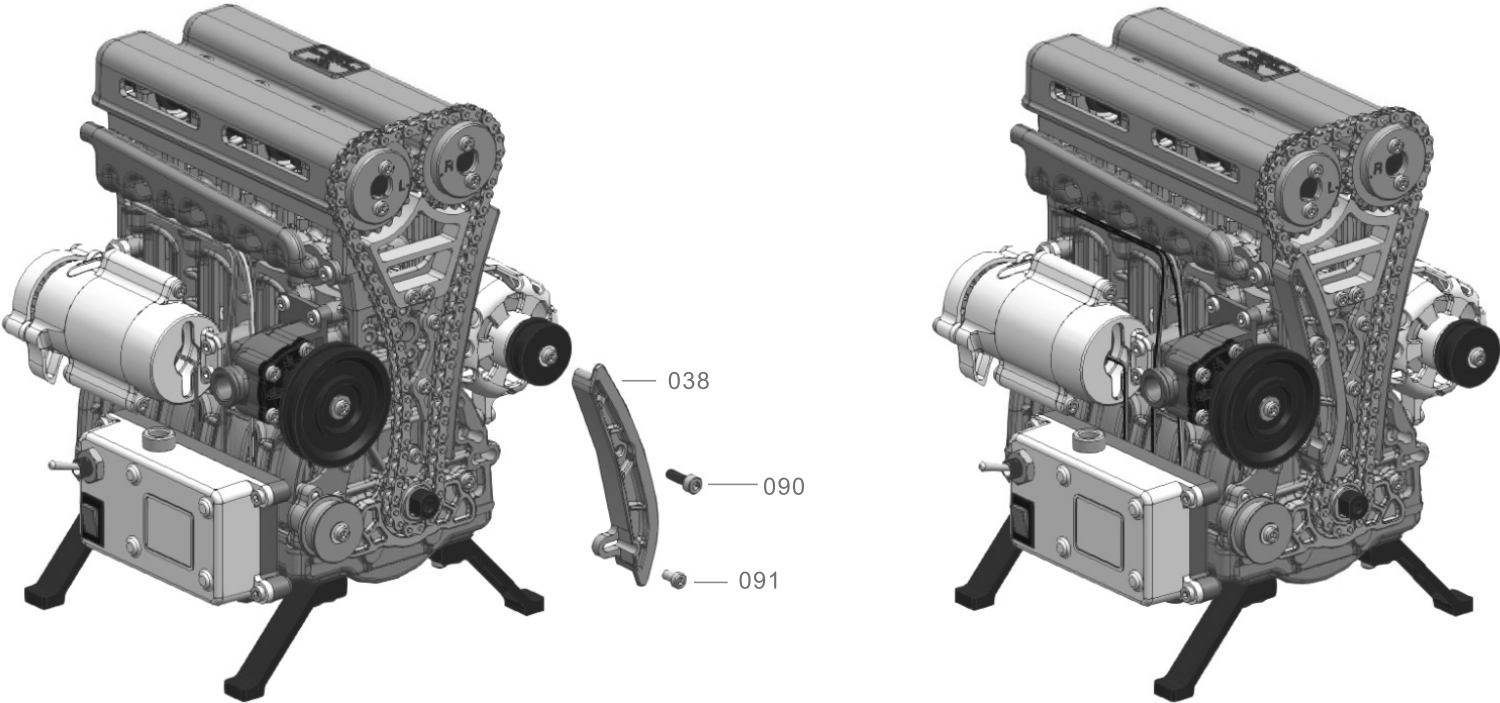
Crankshaft synchronization gear timing
(As shown in the picture)



11.24 Install timing chain

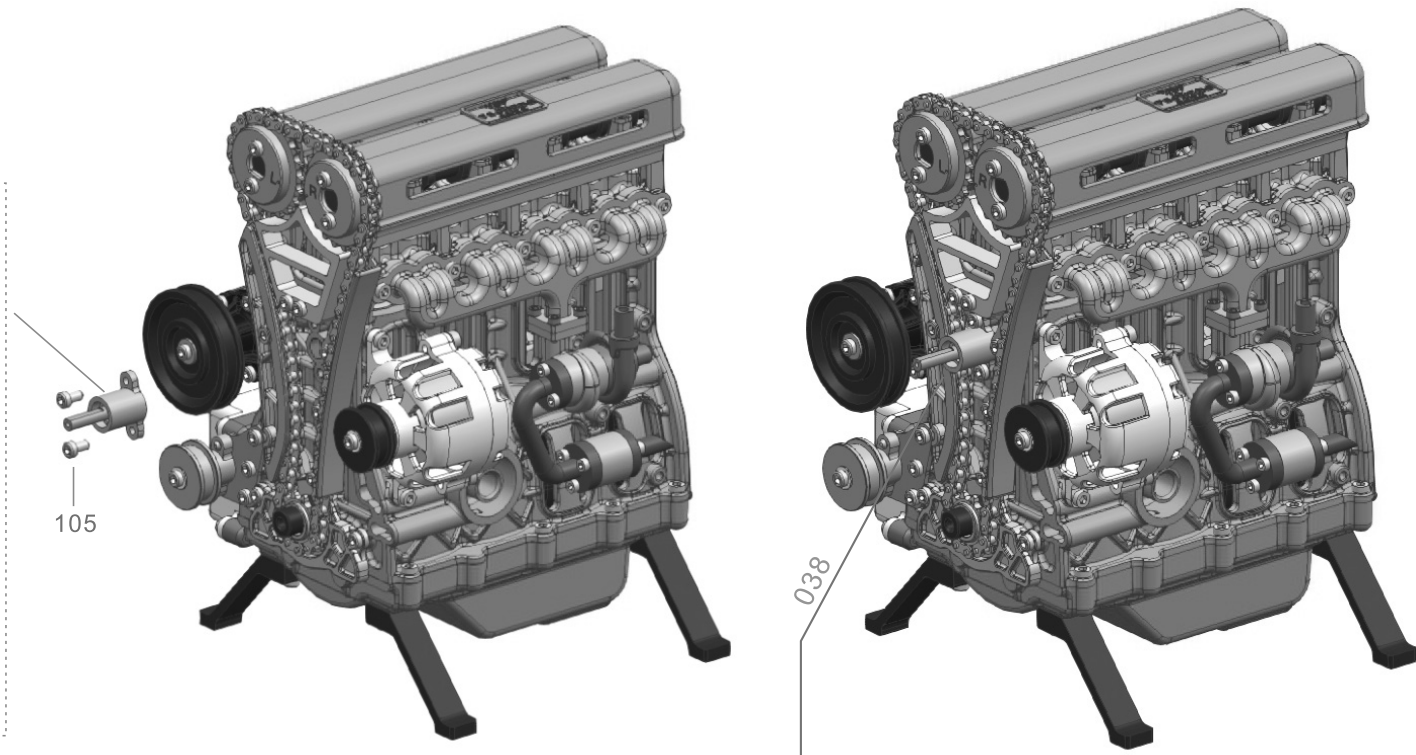
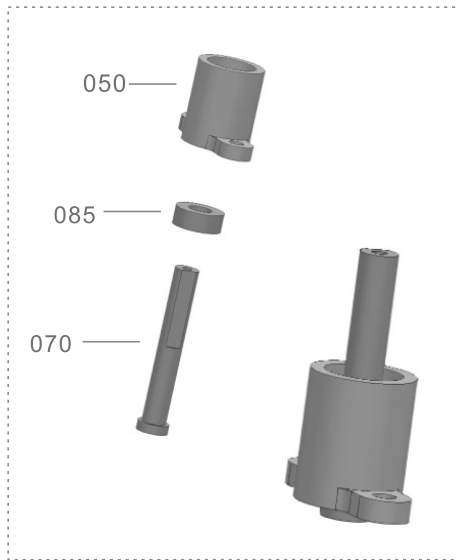


11.25 Install chain tensioner



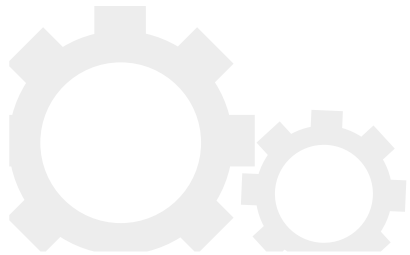
11.26 Installing bearing seats

Assemble fan shaft

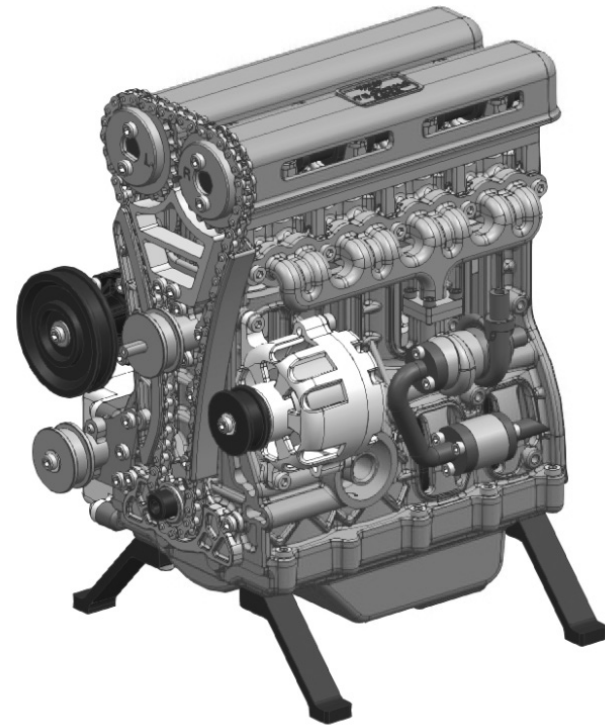
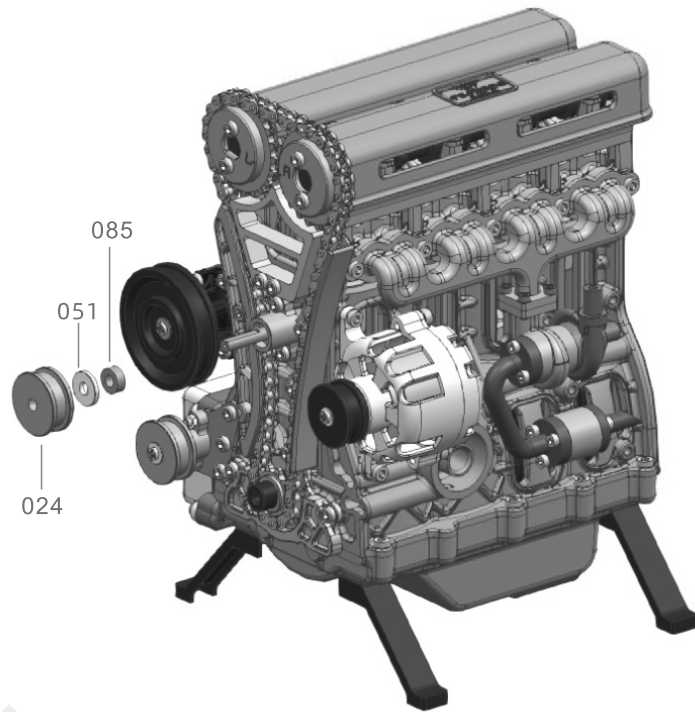


Be careful:

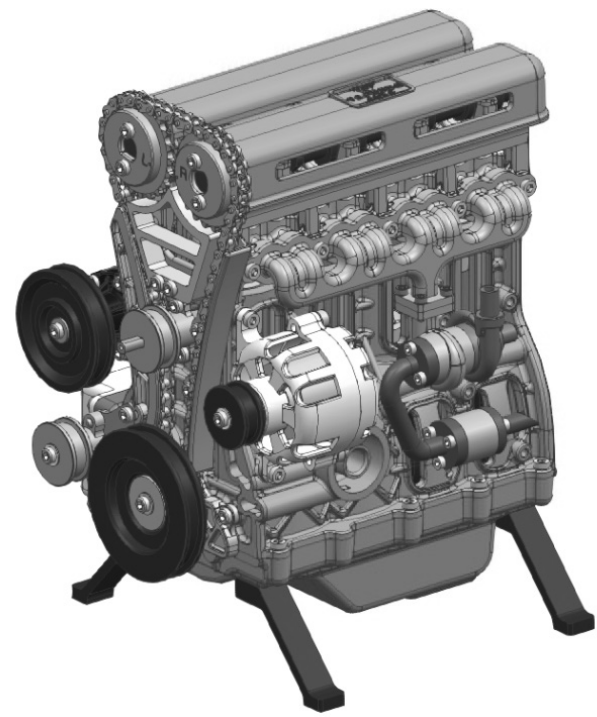
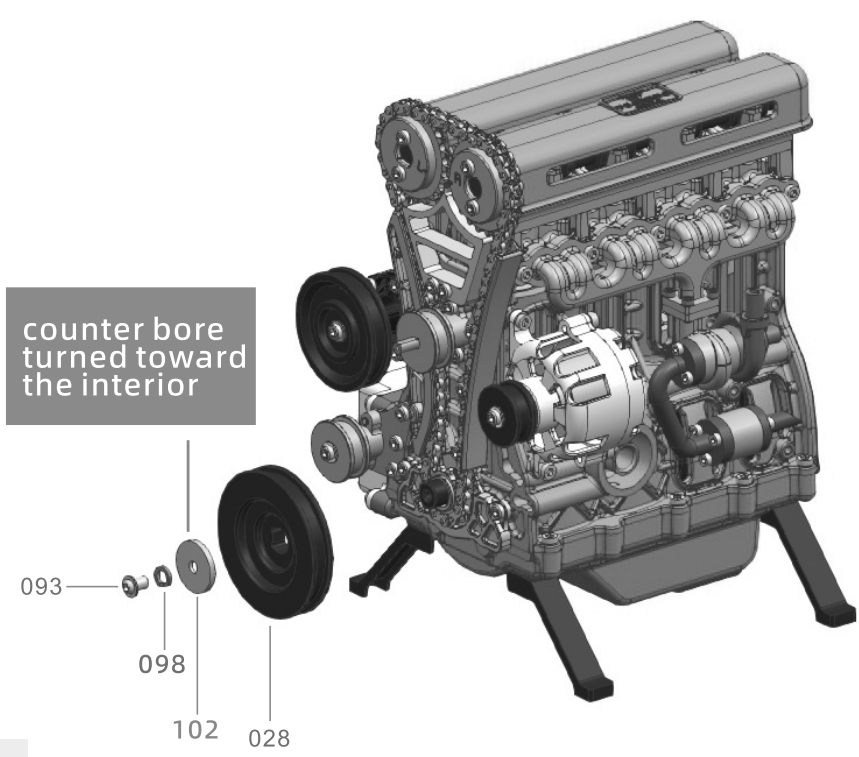
To avoid friction between the fan base (050) and the chain, loosen the tension screw of the chain tension block (038) and adjust the installation position of (038).



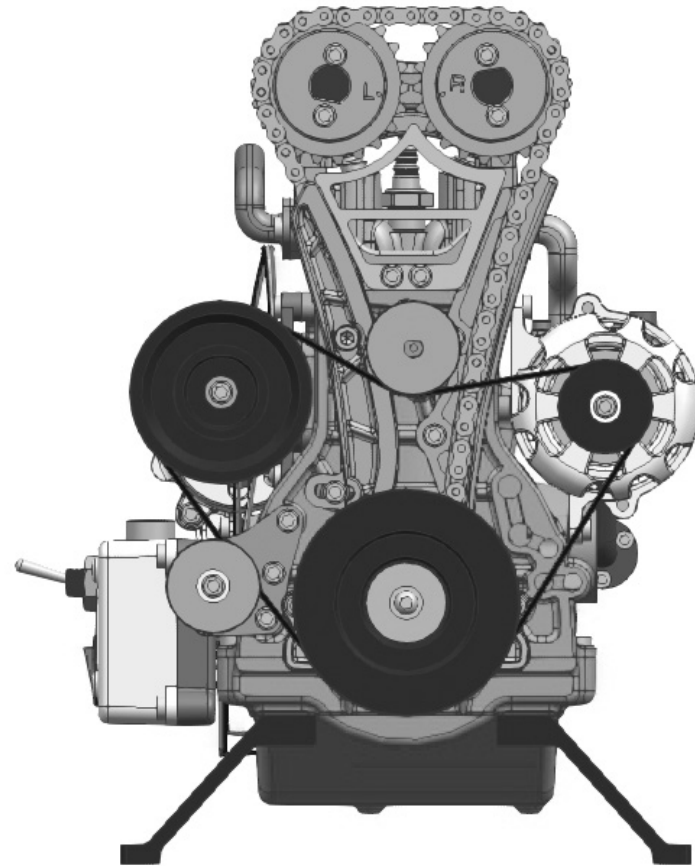
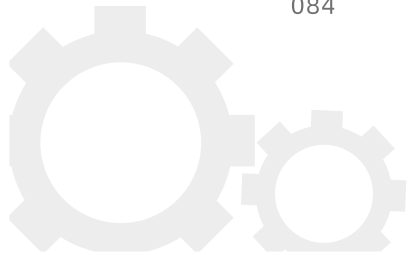
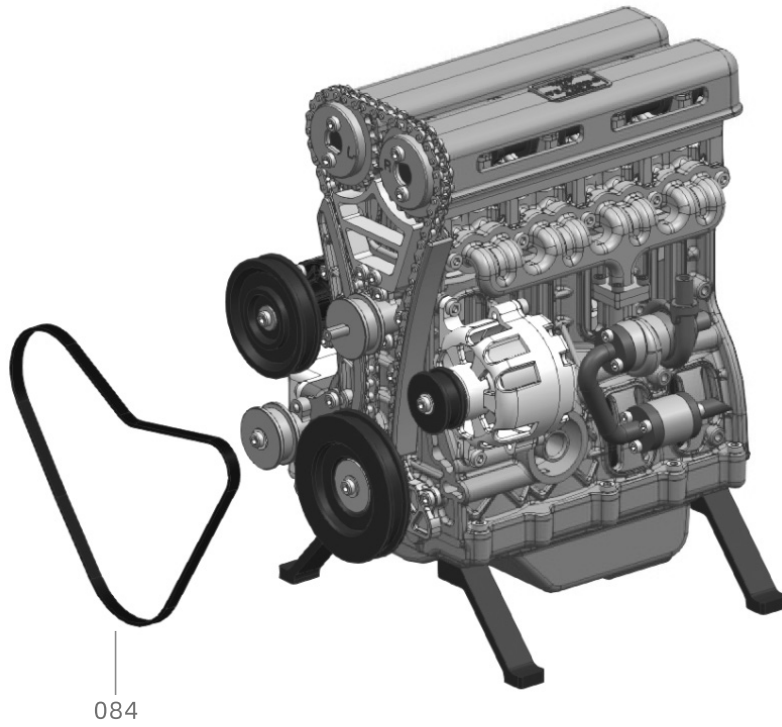
11.27 Docking bearings, universal pulley



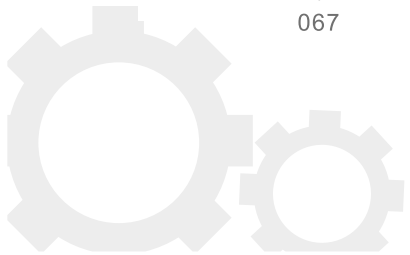
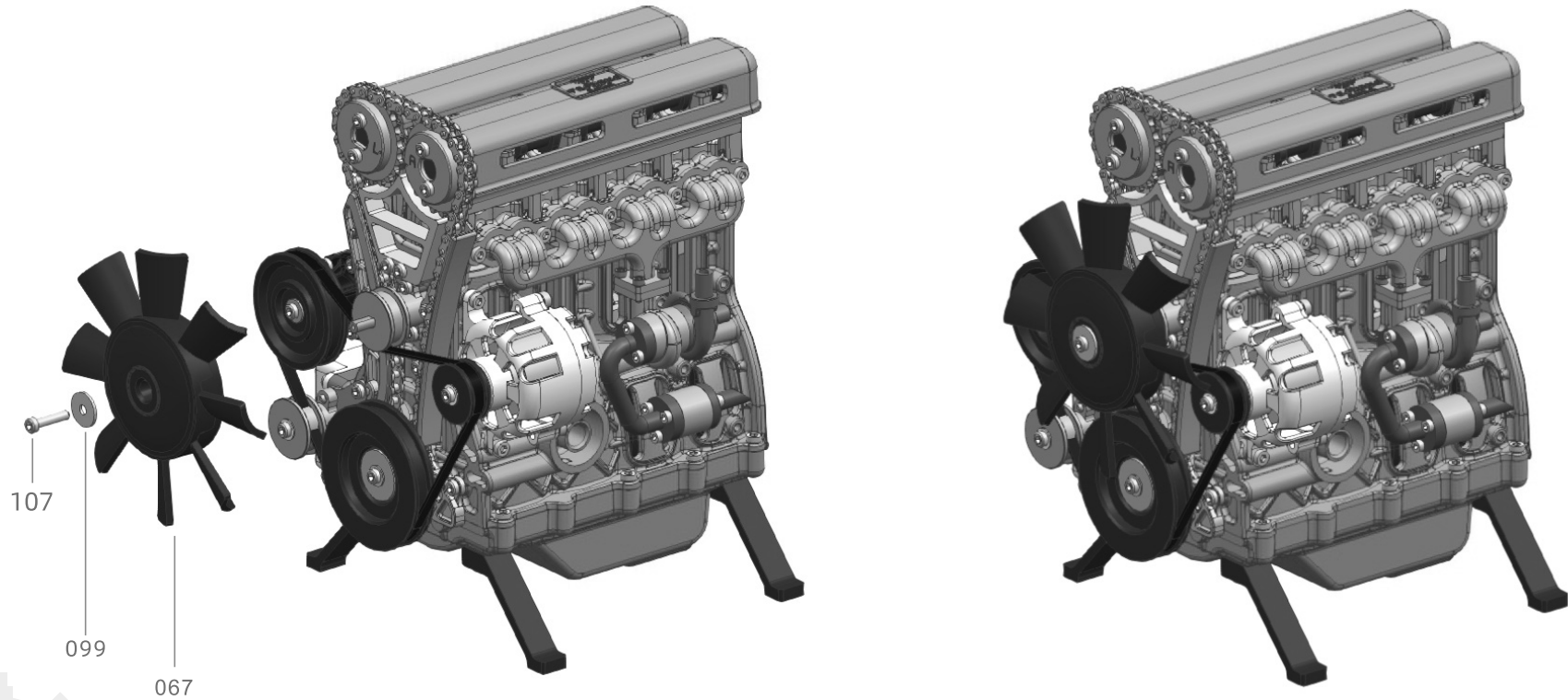
11.28 Fixed crankshaft pulley



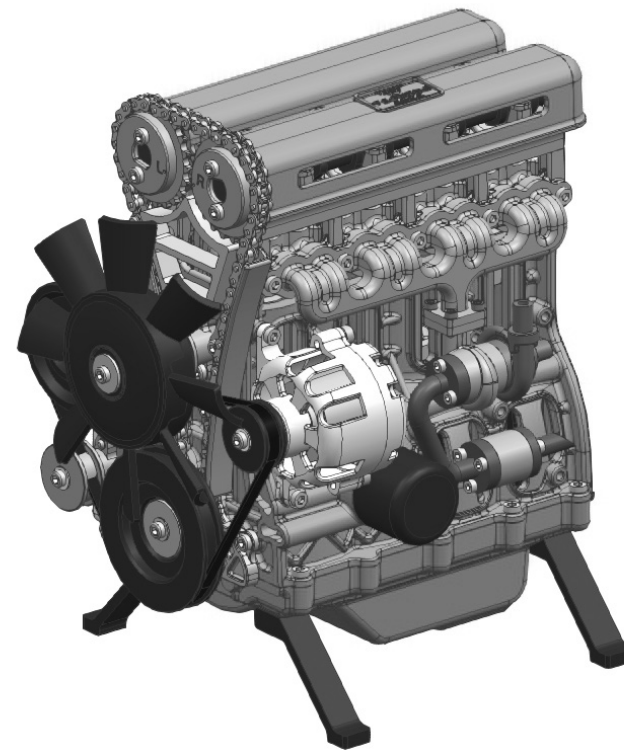
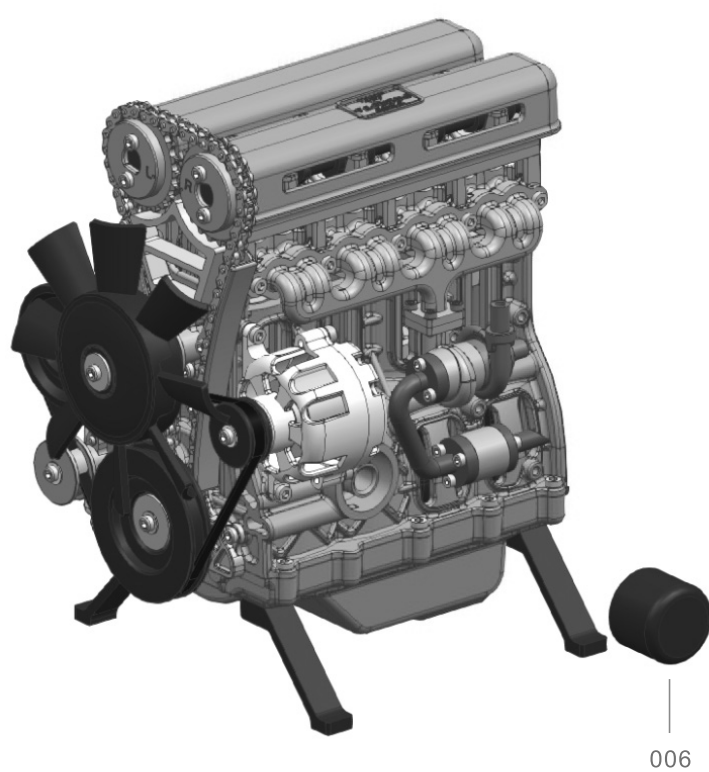
11.29 Install belt



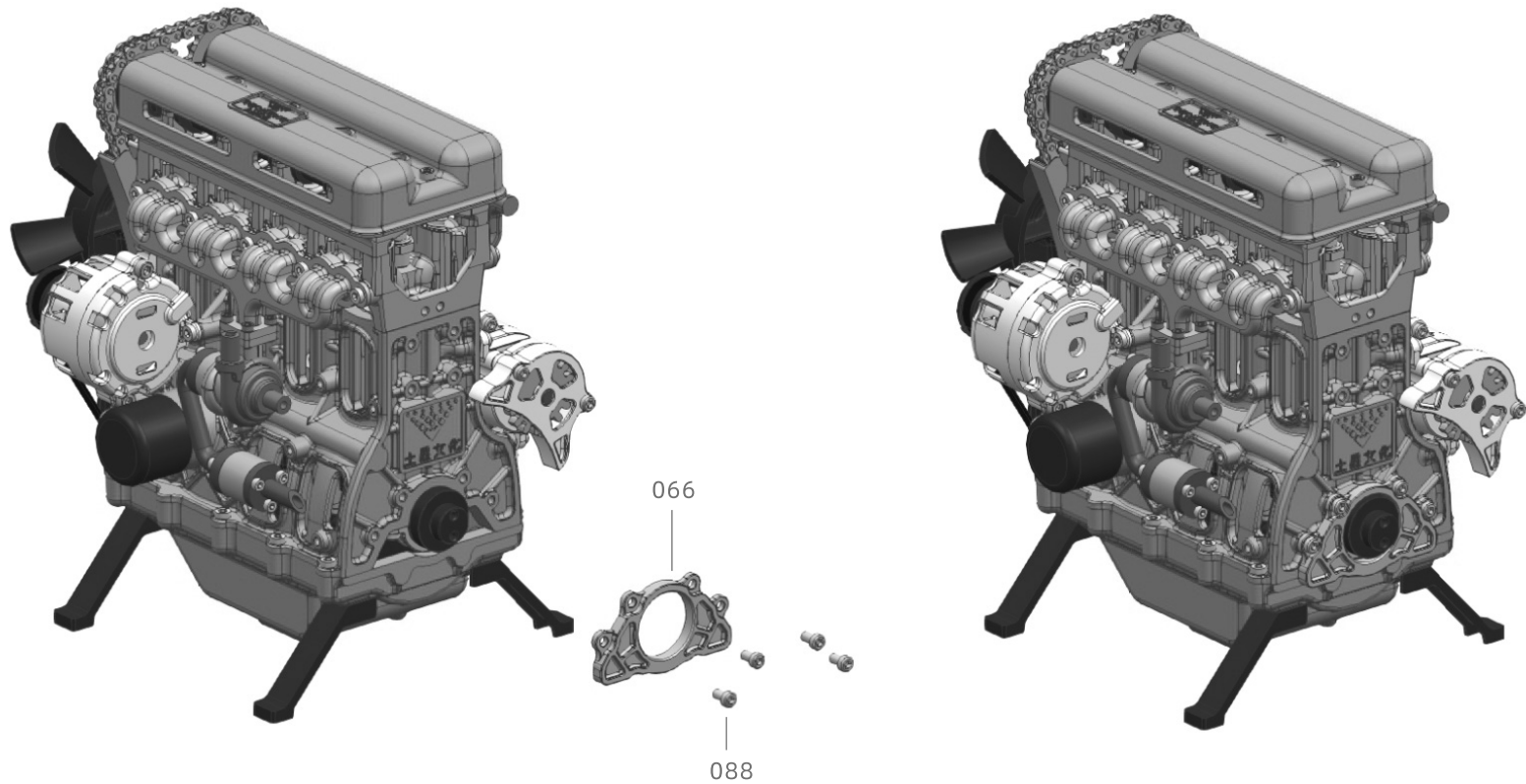
11.30 Fixed fan



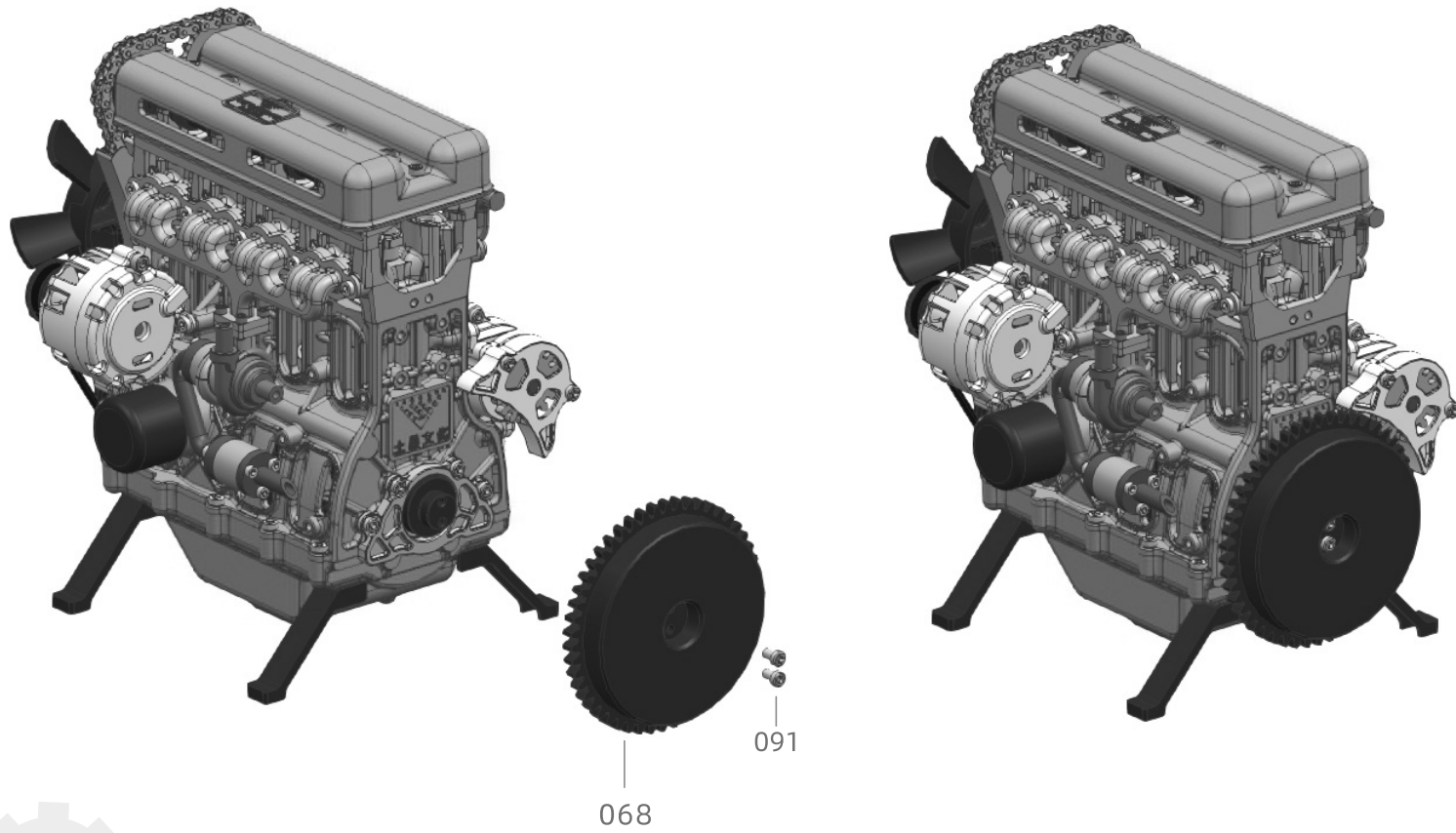
11.31 Installation of oil filter



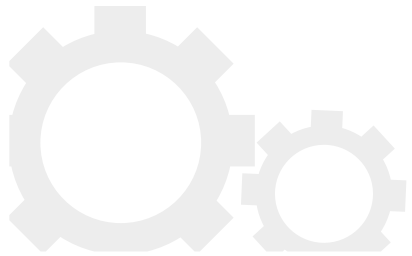
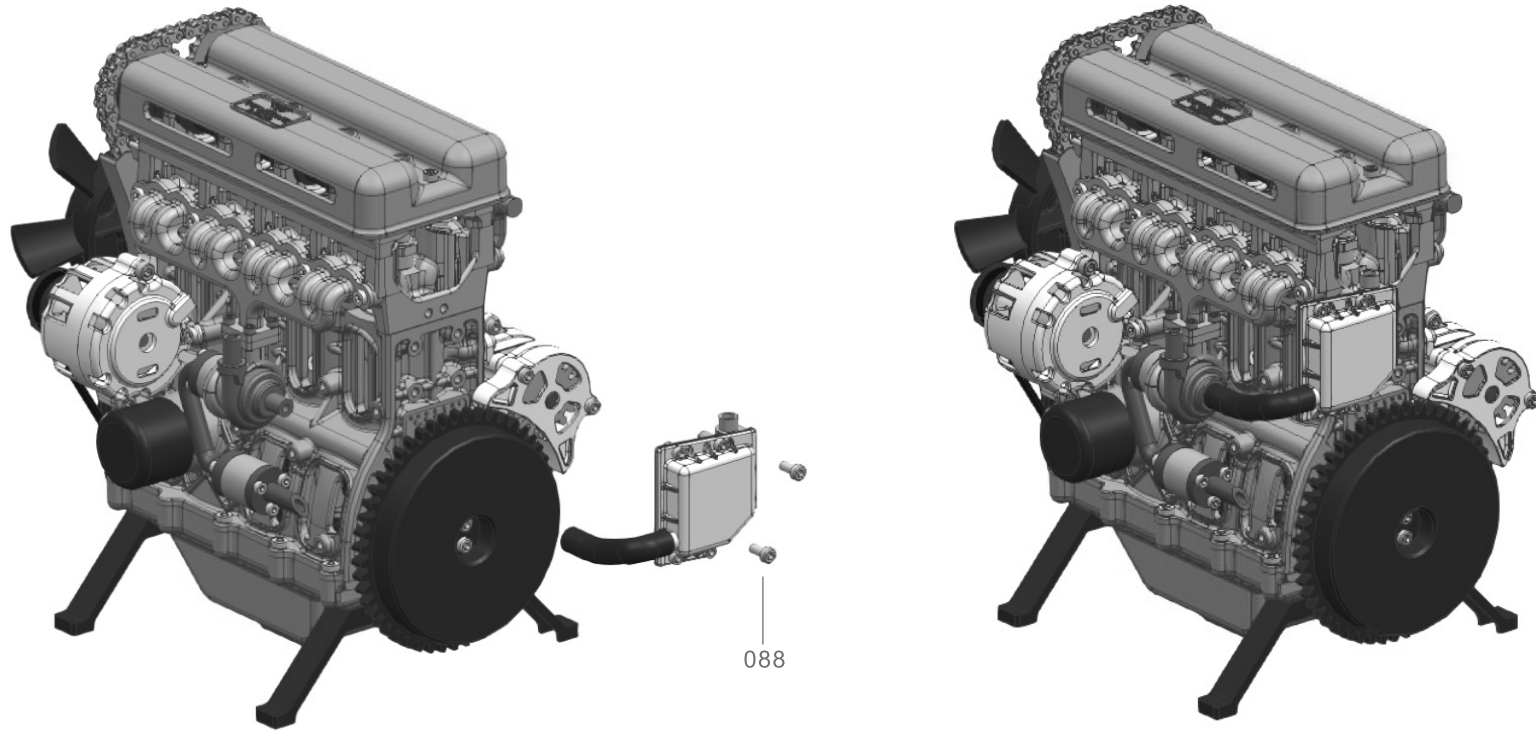
11.32 Install the front end cover



11.33 Install the flywheel

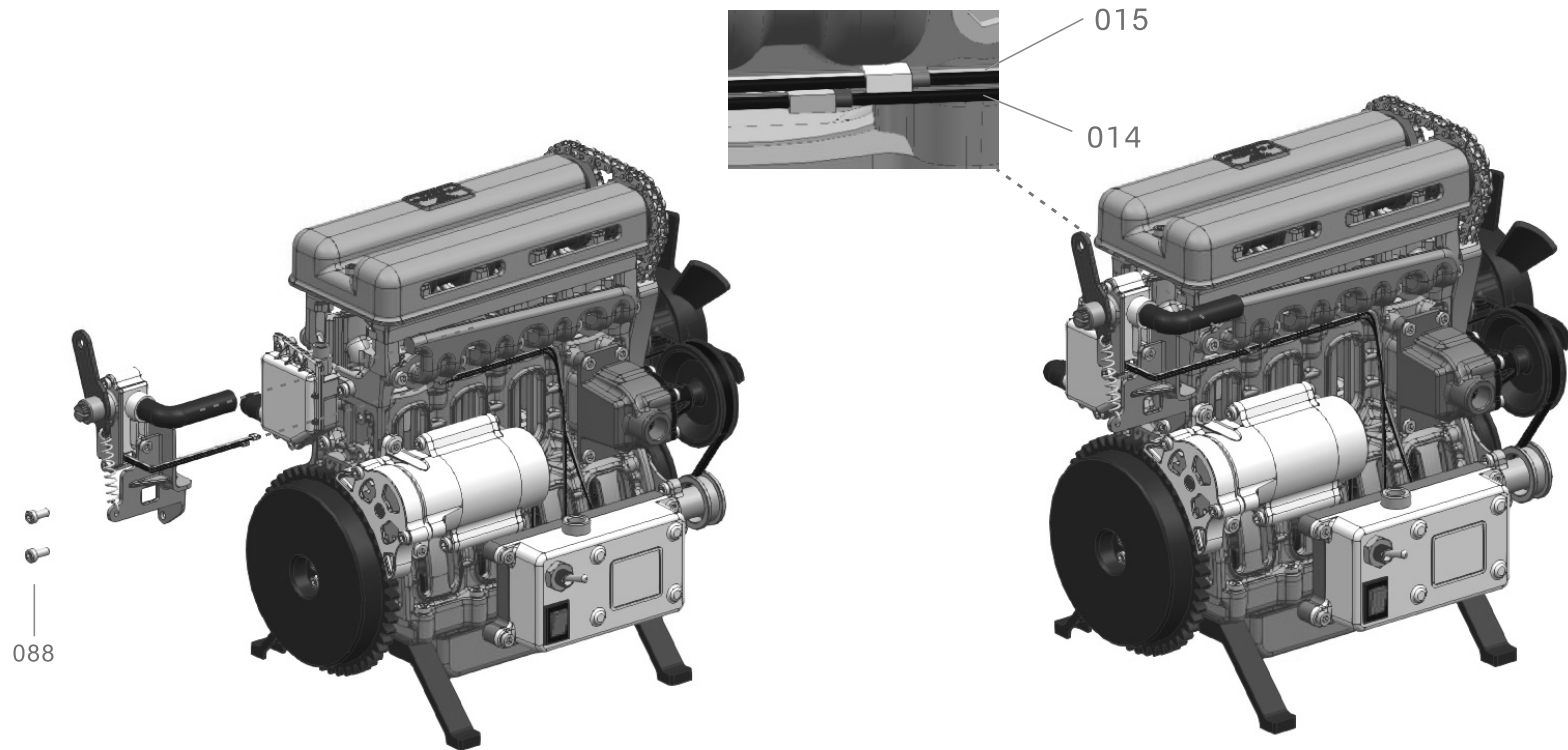


11.34 Install air filter

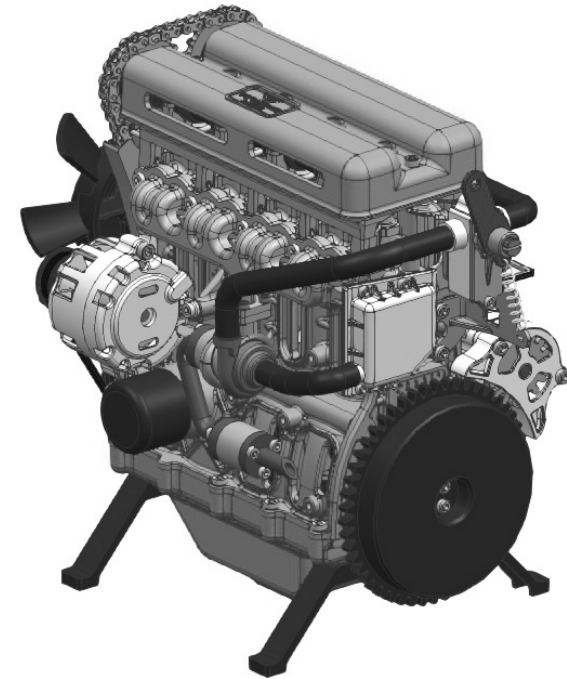
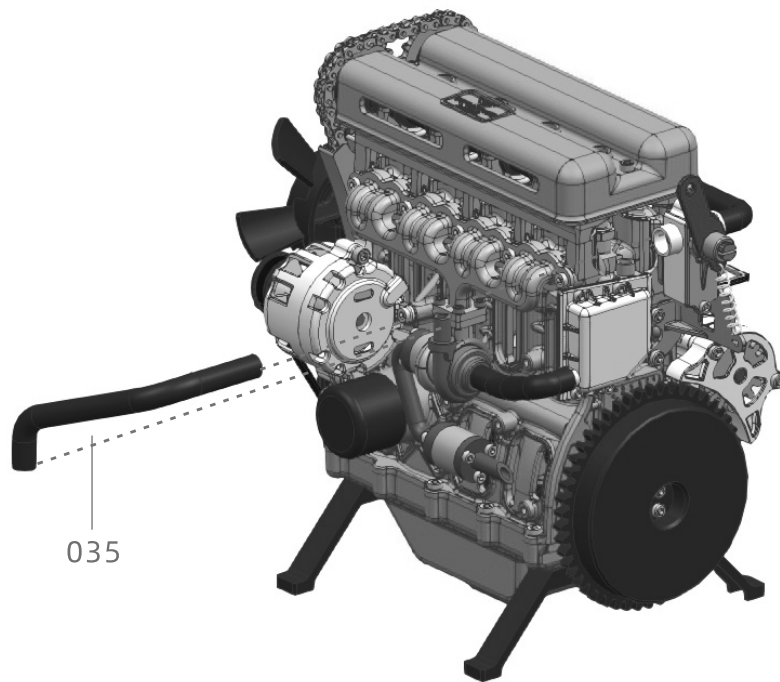


11.35 Install potentiometer

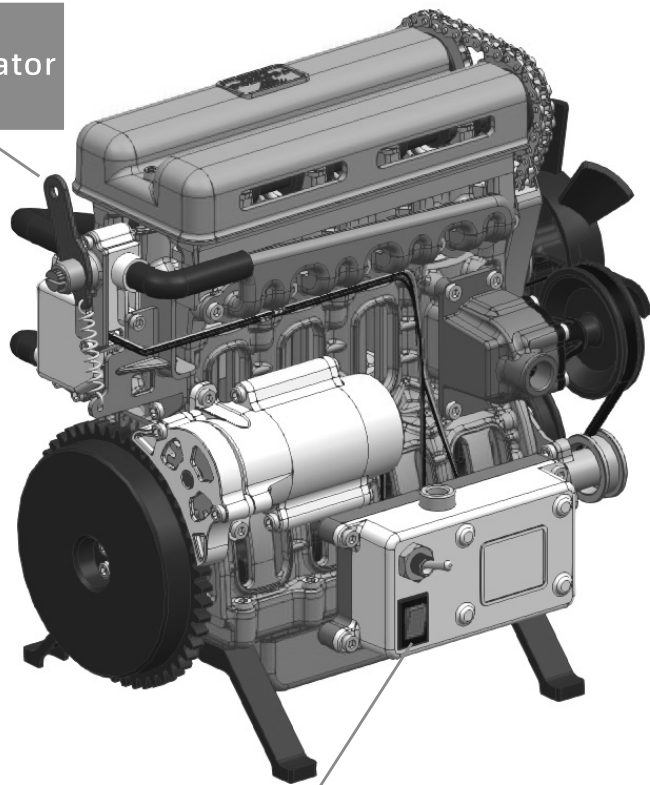
A schematic diagram of the potentiometer line docking



11.36. Docking of air inlet pipe 2



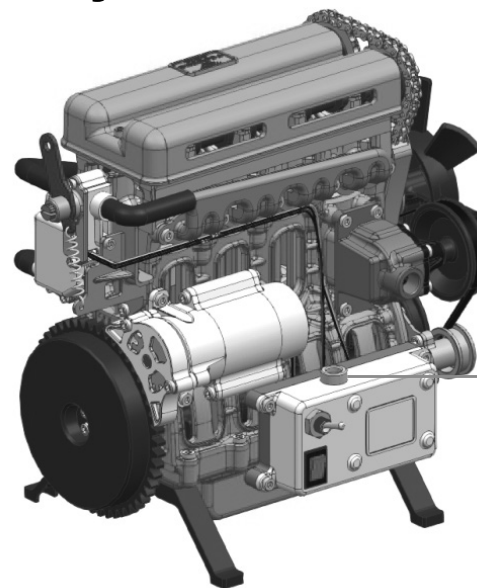
The accelerator pedal



Sound Switch

Switch direction:
a: toggle switch ON1,
using power source
adapter
b: toggle switch to
ON2, using battery power

Charge instructions



Charge Port

1 > this product is equipped with a special charging line. User provided power adapter DC voltage needs 5V and its output is DC. The current shall not be less than 1000mA. Do not use adapters higher than 6V Product charging;

2 > see the description for other precautions Book "precautions" column II. The contents of this article;

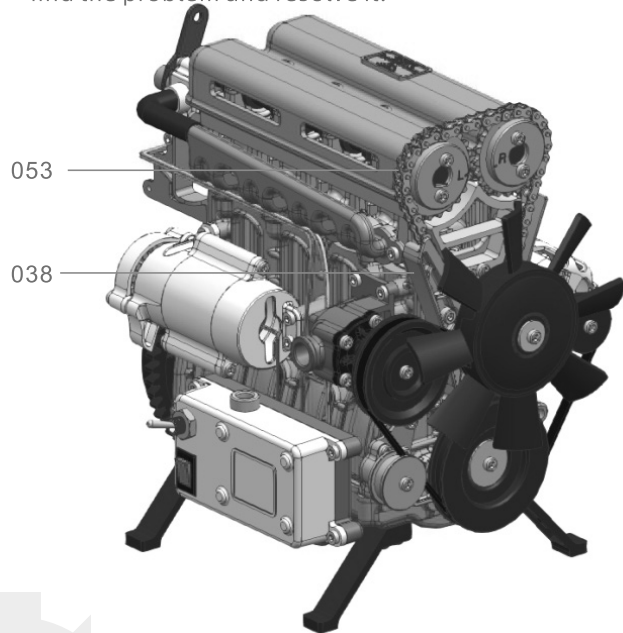
3 > normal charging state:

- ◇ when charging, the red light is on for a long time;
- ◇ when fully charged, the blue light is on for a long time;
- ◇ the maximum charging time is 2 hours.

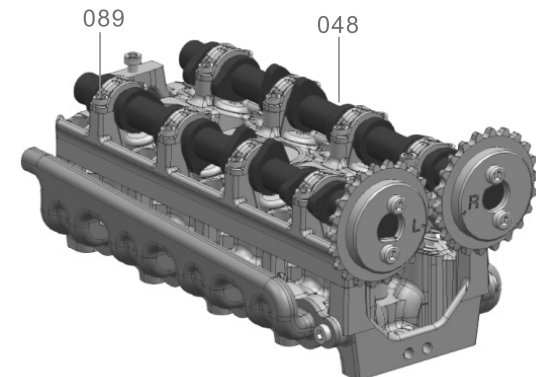


Fault analysis and Troubleshooting

Mechanical troubleshooting table: After the assembly is complete, check the appropriate parts against the corresponding parts and follow the instructions again to see if there are any abnormalities in motion. Follow the steps below to find the problem and resolve it.



1. Are the parts being installed in the correct direction
2. Whether the screw is fixed tightly or not is loose.
3. Check whether similar parts are counter-assembled,
4. If there is an abnormality, the screw on the tightening of the 038 chain can be loosened to adjust the tightness to make the motion normal.
5. Check 043 Whether the shaft of the starter motor is frictionless when moving 022 If the central hole of the starter engine front cover is frictional, you can loose the screw on the starter motor front cover to fine-tune the position.
6. If the 048 shaft is not spinning properly, remove the 053 chain and rotate the 048 wheel by hand whether it is spinning proper. If it is not, loose the 089 screw halfway in the opposite direction.



2 Electronic troubleshooting table

1) No charging

① Charger mismatch

Resolvent:

Use a standard USB charger to charge the product. The charger is required to output DC 5V1A. Operation method: insert the USB head of TCHING special charging cable into the mobile phone. The USB hole of the charger and the round plug are inserted into the charging port of the product to charge.

As shown in Figure 1-1

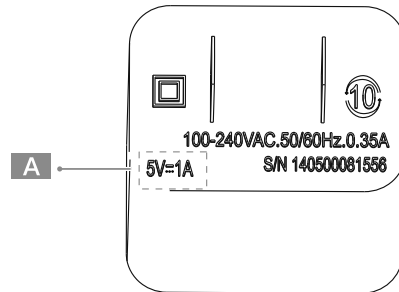
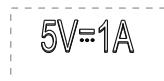


Figure 1-1



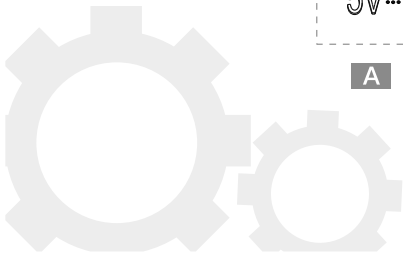
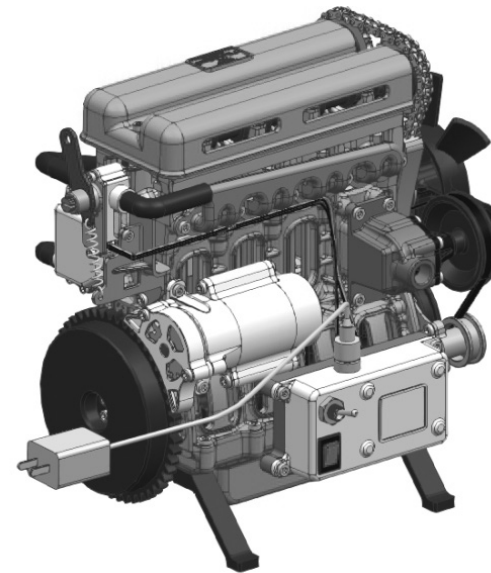
A

② The round plug of the charging line is not fully inserted

Resolvent:

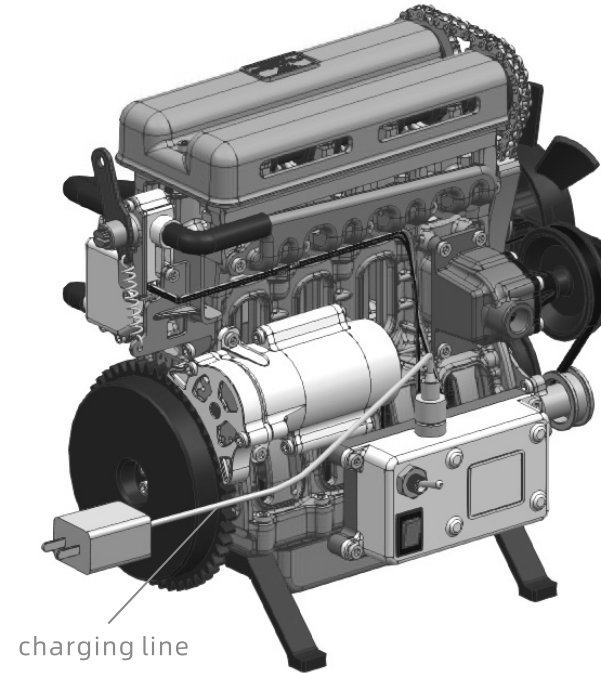
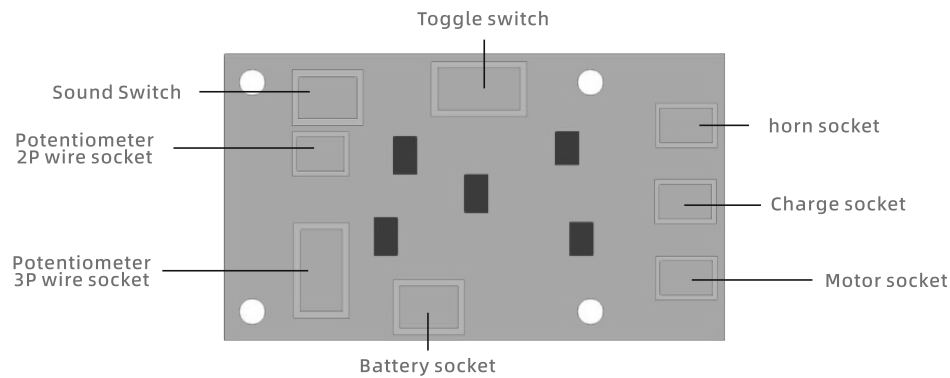
Check the round plug of teching special charging line and the round hole of charging port of the product Whether it is inserted to the bottom;

As shown in Figure 1-2



3) Wrong Position of Charging Plug Solution:
Remove the circuit board, then insert the charging plug into the charging interface of the circuit board correctly DC 5V, then charge the product, observe the charging lamp indication on the circuit board, the red light will be on when charging, the blue light will be on when full charge.

Figures 1-3 show



Figures 1-3



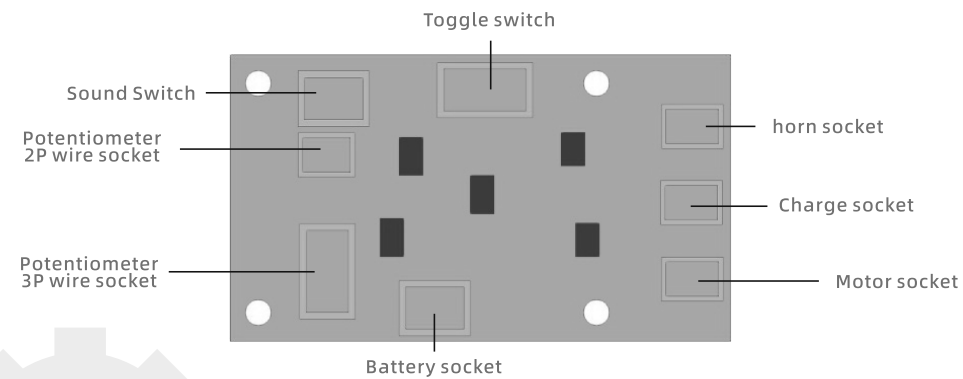
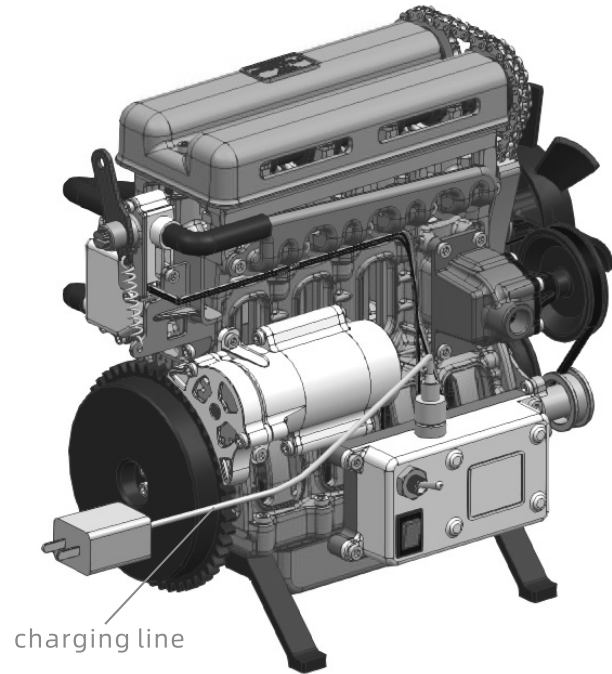
2) Motor does not rotate

① The battery is dead

Resolvent:

Plug the teching special charging cable into the USB hole of the computer and the USB port of the mobile phone charger to charge the product, When charging, the red light is on for a long time, and when fully charged, the blue light is on for a long time. When fully charged, turn the power switch to one Check the position of the motor to see whether the motor can operate normally.

As shown in Figure 2-1



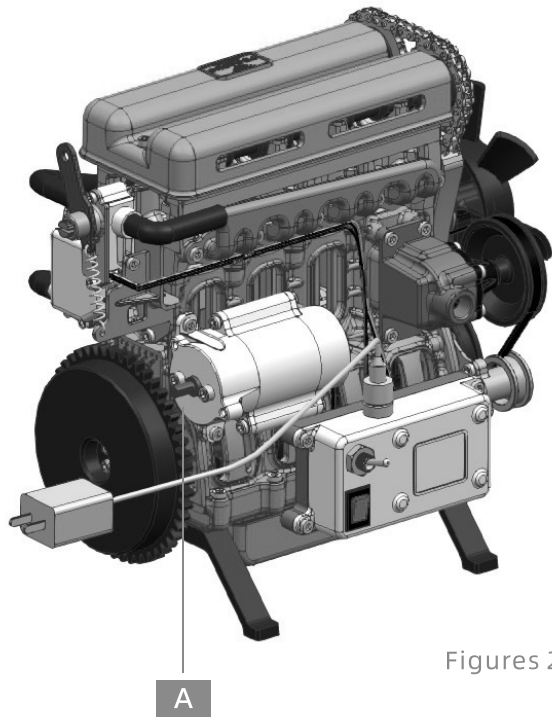
Figures 2-1



2 > Mechanical causes the motor not to turn.

Solution:

Remove the starter motor gear(057) and test whether the motor can run smoothly. Figure 2-2. Note: If it can run smoothly, please check the mechanical part according to the method of exclusion. If it still can't work, please consult our after-sales support or return to the factory.

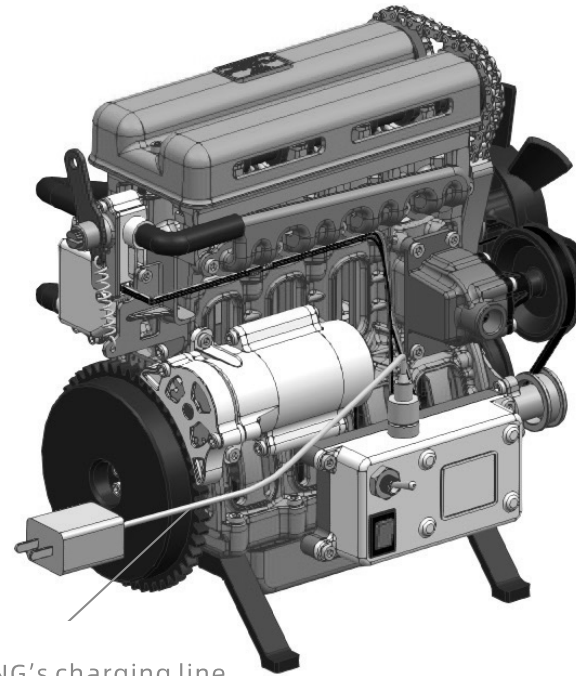
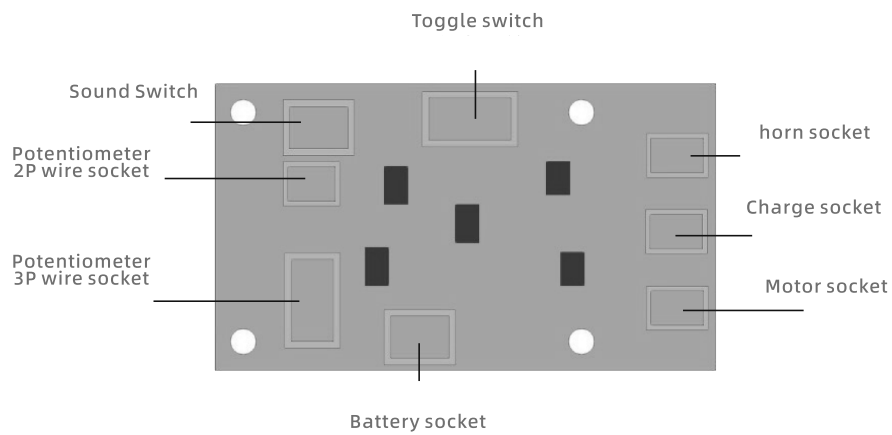


Figures 2-2



A

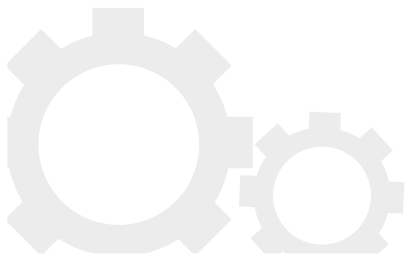




Figures 2-3

3 Other :

If the above solutions do not resolve the problem, please consult our aftersales support or return to factory repair



2 Inline four cylinder engine debugging

1. Coordinate gaps

Attention is paid to the matching gap between the moving parts, and the user is urged to make a small adjustment to the moving gap of the parts based on his own observation and judgment, including the use of sandpaper and card meters.

The main sites are as follows:

- 1.1 Crankshafts and related moving parts
- 1.2 Crankshaft and related parts
- 1.3 Start motor related parts
- 1.4 piston joints and associated parts

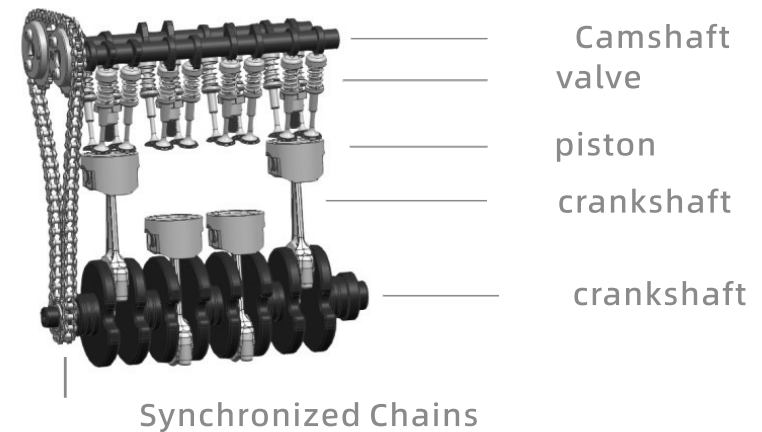
2. lubrication

Since this product is a model of metal machinery, the shaft motion does not have oil, which may cause excessive friction when the various parts move, or even cause stuck death. The user is encouraged to increase the lubrication cream appropriately at the axle assembly site and observe the effect of the lubricated cream after it is added.

3. noise reduction

The axial moving parts are aluminum alloy and have anode oxidized surfaces, and some parts have loose gaps, so the newly assembled product will have a lot of noise. Encourage users to observe and analyze the noise-producing area, and also use tools such as sandpaper, erasers, and polishes to clean and observe the noise reduction effect.

3 The basic structure and characteristics of a inline four cylinder engine



Inline four cylinders, is one of the internal combustion engine cylinder arrangement. Because its four cylinders are arranged in straight lines, it is also called coaxial four cylinder. In this assembly model of a four-cylinder engine, each cylinder has two inlet doors and two exhaust doors. The valve is driven by a synchronous chain, and most car engines with a displacement of less than 2.5 liters use this straight-line four-cylinder engine. Generally, under the same cylinder diameter, the more cylinders, the larger the displacement, and the higher the power. At the same displacement, the more cylinders there are, the smaller the bore is, and the higher the rotational speed is, thus the larger the power per liter is.

4

1. Piston moves downward → inhale air and gasoline;
2. The piston moves upward → compresses the mixed gas;
3. The piston moves downward → ignites the compressed gas; Gas combustion expands to push the piston;
4. Piston moves upward → exhaust gas.

As shown :



to breathe in







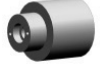

compress









Doing work

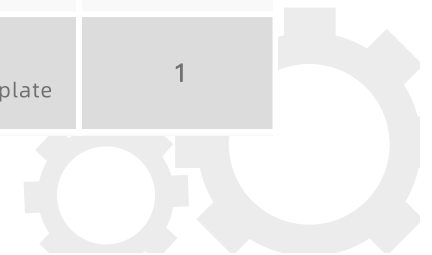
exhaust








When a straight four engine is operating, the shaft rotates every two times, the piston moves in a straight line in the cylinder four times to complete a piston working procedure (four strokes), and the mixture inside the cylinder is ignited and burned once. The explosive gas pushes the live piston through the crankshaft joining mechanism to make the crank shaft rotate and achieve the repeated straight motion of the piston in the cylinder, the continuous up-and-down movement of the live cylinder turns into the continuous rotation of the crank, and the power is constantly exported to make the engine work normally.



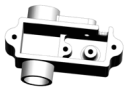






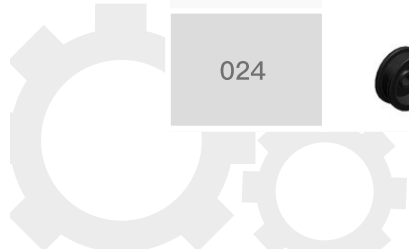
Serial number	Parts Photo	Component Name	Number
001		Cylinder block	1
002		Oil pan	1
003		Control Box upper Cove	1
004		Control box lower cover	1
005		Circuit board	1
006		Oil filter	1
007		Generator	1
008		Starter motor front cover	1









Serial number	Parts Photo	Component Name	Number
009		Starter motor rear cover	1
010		Crankshaft	1
011		Water pump case	1
012		Battery	1
013		Horn	1
014		Potentiometer 2P wire	1
015		Potentiometer 3P wire	1
016		Battery cover plate	1






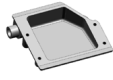
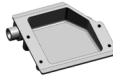



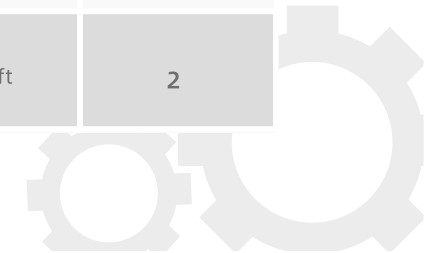
Serial number	Parts Photo	Component Name	Number
017		Cam base	1
018		Cylinder head	1
019		Valve cover	1
020		Generator front cover	1
021		Generator back cover	1
022		Starter motor front end cover	1
023		Piston	4
024		Universal pulley	3









Serial number	Parts Photo	Component Name	Number
025		Piston pin	4
026		Potentiometer upper cover	1
027		Potentiometer lower cover	1
028		Crankshaft pulley	1
029		Water pump pulley	1
030		Water pump end cover	1
031		Connecting rod	4
032		Water pump shaft	1



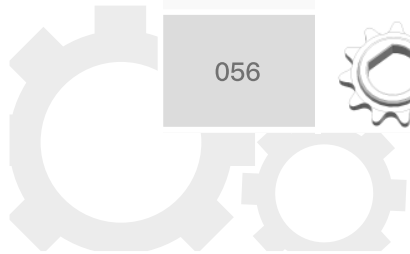
Serial number	Parts Photo	Component Name	Number
033		Generator shaft	1
034		Air inlet pipe 1	1
035		Air inlet pipe 2	1
036		Air inlet pipe 3	1
037		Chain guide block	1
038		Chain tensioner	1
039		Potentiator bracket	1
040		Starter motor middle cover	1









Serial number	Parts Photo	Component Name	Number
041		Inlet manifold	1
042		Exhaust manifold	1
043		Starter motor	1
044		Valve	16
045		Spark plug	4
046		Air filter upper cover	1
047		Air filter lower cover	1
048		Camshaft	2









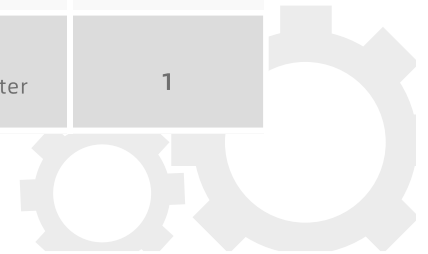
Serial number	Parts Photo	Component Name	Number
049		Tensioning shaft bracket	1
050		bearing seat	2
051		Bearing pads	1
052		Synchronized chain gear block	1
053		Timing chain	1
054		Active turbine	1
055		Passive turbine	1
056		Crankshaft synchronous chain	1









Serial number	Parts Photo	Component Name	Number
057		Start motor gear	1
058		The accelerator lever	1
059		Triad catalyst	1
060		Exhaust tailpipe	1
061		Left camshaft sprocket	1
062		Right camshaft sprocket	1
063		Exhaust bending pipe	1
064		Engine mount	4











Serial number	Parts Photo	Component Name	Number
065		Back end cover	1
066		Front end cover	1
067		Fan	1
068		Fly wheel	1
069		Tensioning shaft	1
070		Fan shaft	1
071		Connecting rod bearing shell	4
072		Crankshaft bearing shell	5




Serial number	Parts Photo	Component Name	Number
073		Valve sleeve	16+3
074		Valve cap	16+3
075		Camshaft	10
076		Valve spring	16+4
077		Water pump impeller	1
078		Accelerator spring	1
079		Push bar plug	1
080		Potentiometer	1



Serial number	Parts Photo	Component Name	Number
81		Sound Switch	1
82		Switch	1
83		Charge plug	1
84		Belt	1
85		4X8X3 Bearing 4 X8X3	8
86		M2X22 Hexagon socket screw M2X22	3+2
87		M2X6 Hexagon socket screw M2X6	10+2
88		M3X6 Hexagon socket screw M3X6	72+10

Serial number	Parts Photo	Component Name	Number
89		M2.5X6 Hexagon socket screw M2.5X6	34+5
90		M3X10 Hexagon socket screw M3X10	5+1
91		M3X8 Hexagon socket screw M3X8	16+4
92		M2X4 Hexagon socket screw M2X4	14+2
93		M4X6 screw with pad	1+1
94		CM2.5X4 Flathead screw CM2.5X4	6+2
95		M3 circlip	8+6
96		CM3X14 Flathead screw CM3X14	8+2

Serial number	Parts Photo	Component Name	Number
97		M3X5 Hexagon socket screw M3X5	7+2
98		M4 cushion	1+1
99		M2 * 0.4 gasket	4+2
100		M3 cushion	8+2
101		M3X12 Hexagon socket screw M3X12	2+1
102		Crankshaft pads	1
103		M3X14 Hexagon socket screw M3X14	2+1
104		CM2X4 Flathead screw CM2X4	4+2

Serial number	Parts Photo	Component Name	Number
105		M2.5X8 Internal hexagon screw M2.5X8	4+2
106		M2.5 Nut	2+1
107		M2X8 Internal hexagon screw M2X8	5