

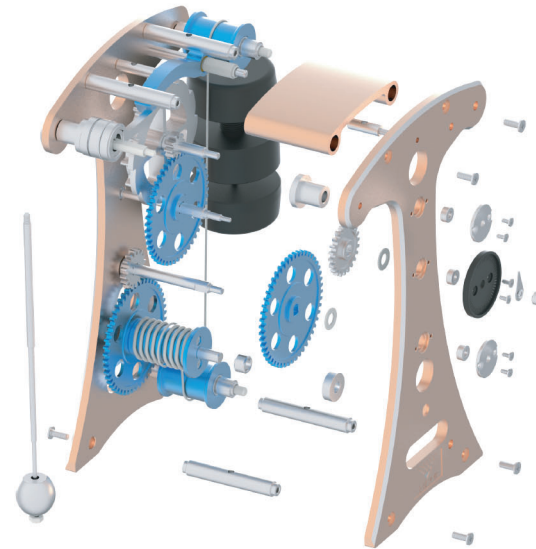


Galileo Pendulum Clock

Metal Assembly Model

Structural features:

1. Double escapement mechanism
2. Gravitational potential energy conversion system
3. Gravity ratchet mechanism



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Assembly of rear main board

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Assembly of pendulum

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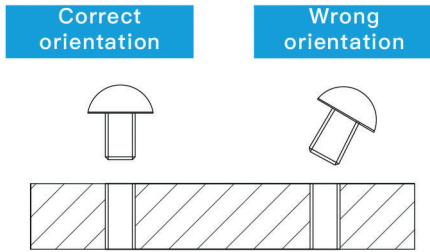
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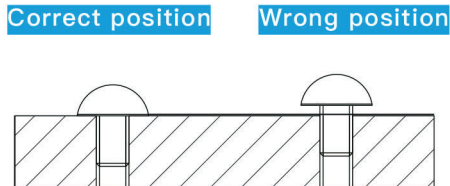
Basic knowledge on standard parts assembly

1.Installation of screws

(1) Installation of screws

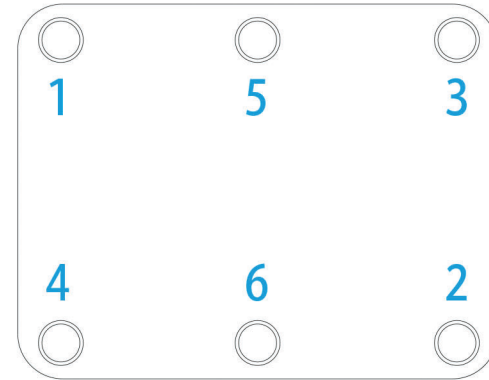


(2)Degree of screw tightening

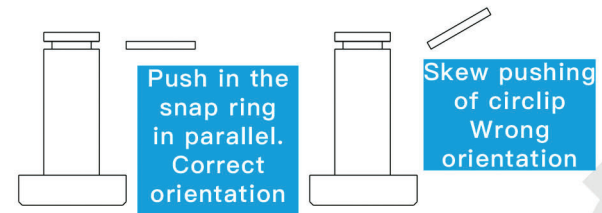


(3)Screw installation order

Mount the screws diagonally in order of number

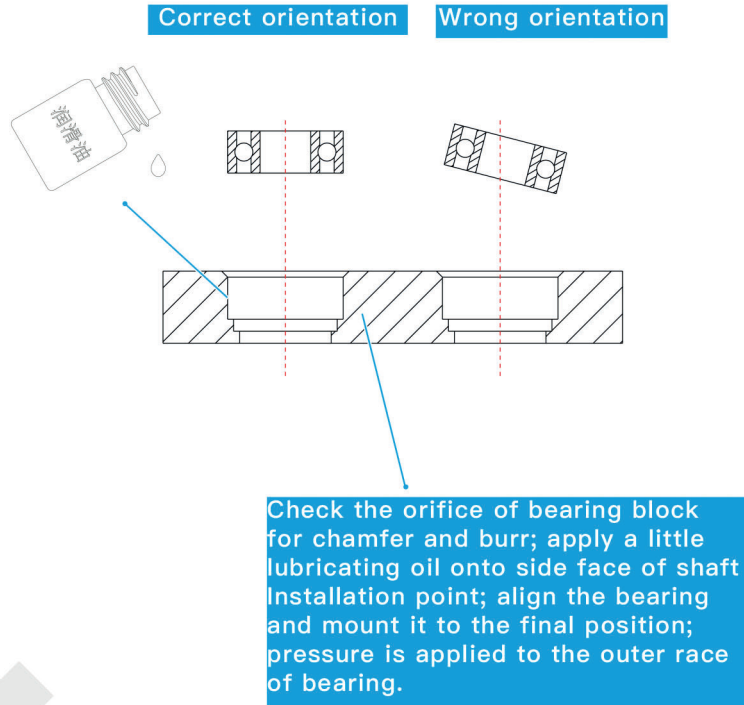


2.Installation of snap ring

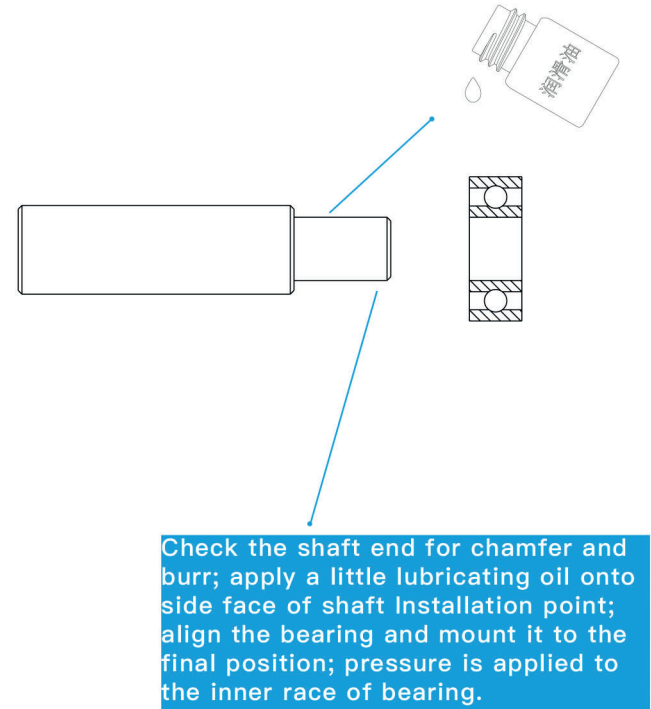


3.Installation of Bearing

(1)Install the bearing into the bearing seat hole



(2) Install the bearing onto the shaft

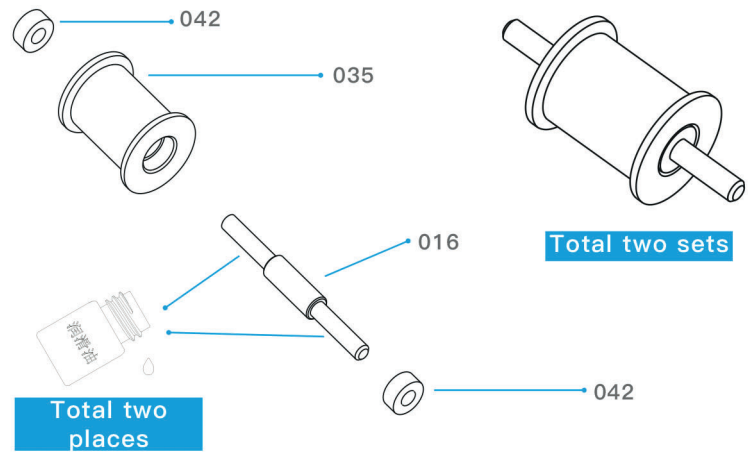


Important note: before assembly, find the bottled lubricating oil, be sure to put enough oil in all the places that need to be lubricated, otherwise the machine is easy to get stuck

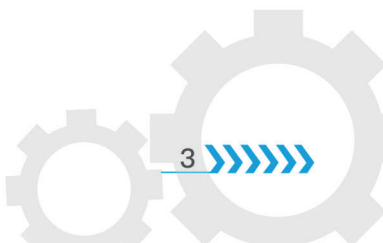
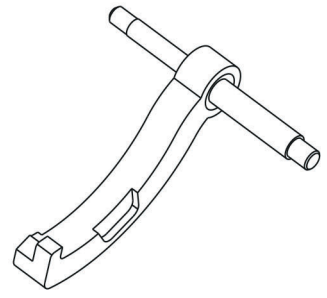
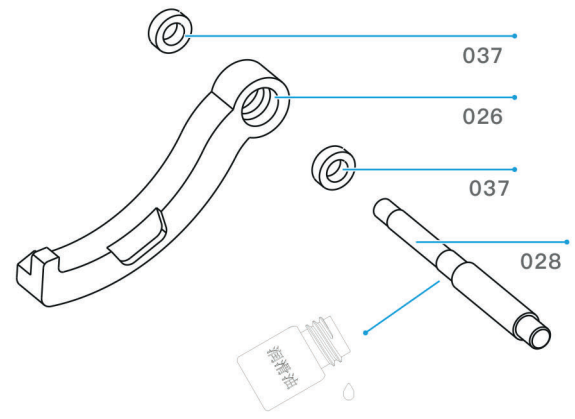


1 Assembly of rear main board

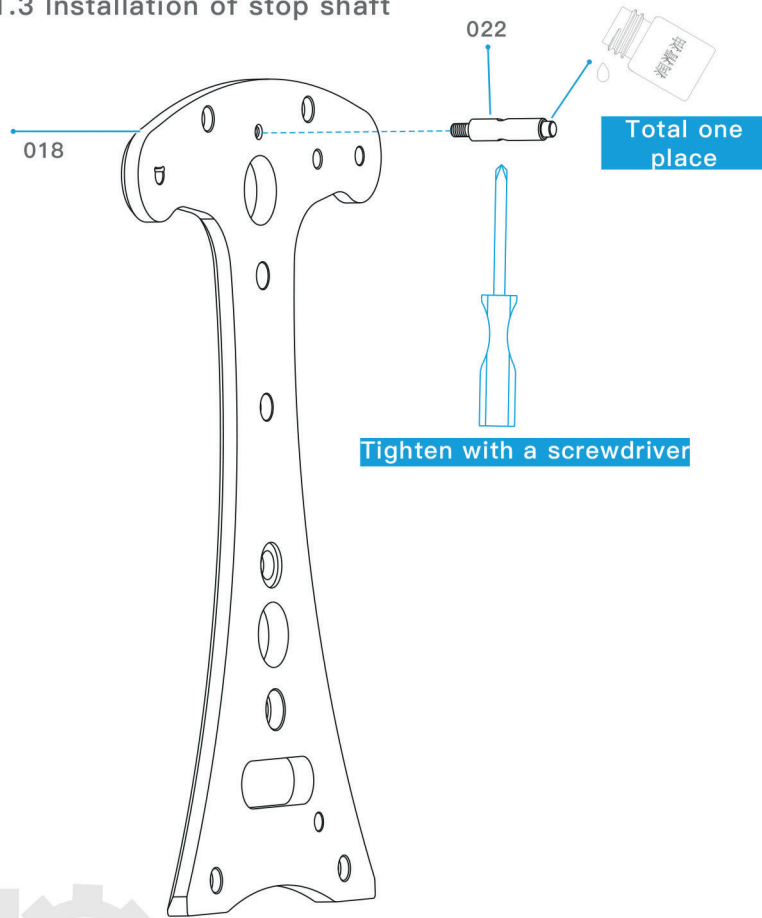
1.1 Installation of pulley



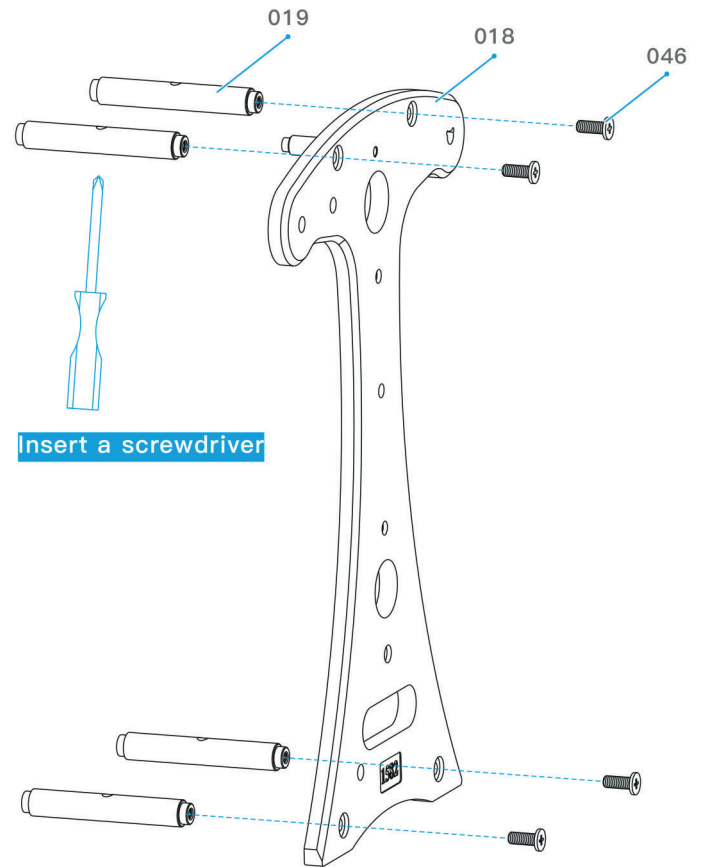
1.2 Installation of ratchet pawl



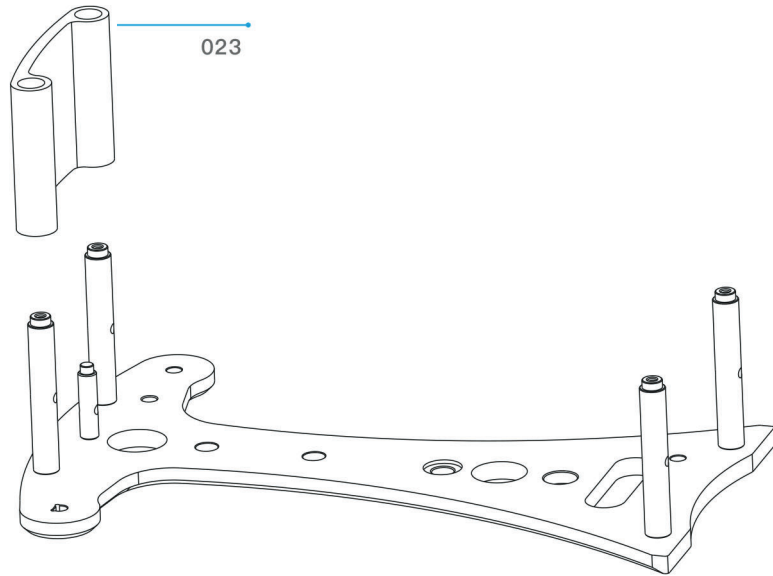
1.3 Installation of stop shaft



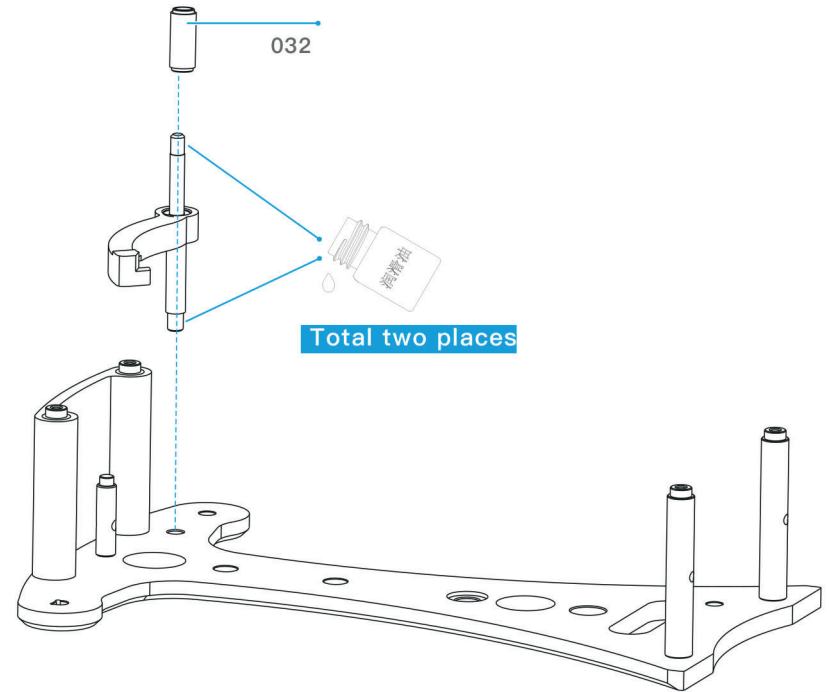
1.4 Installation of Support Shaft



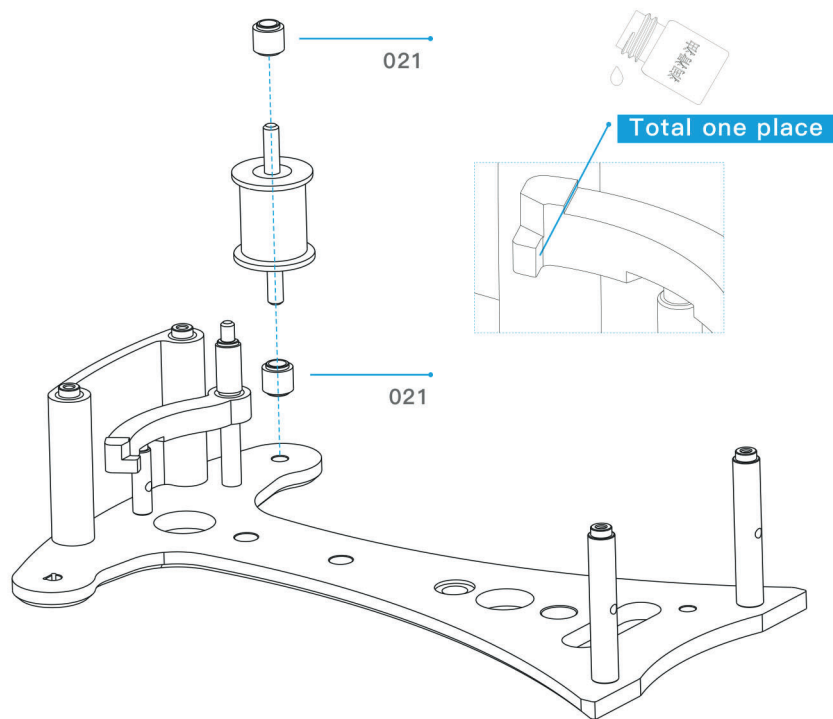
1.5 Installation of Support Board



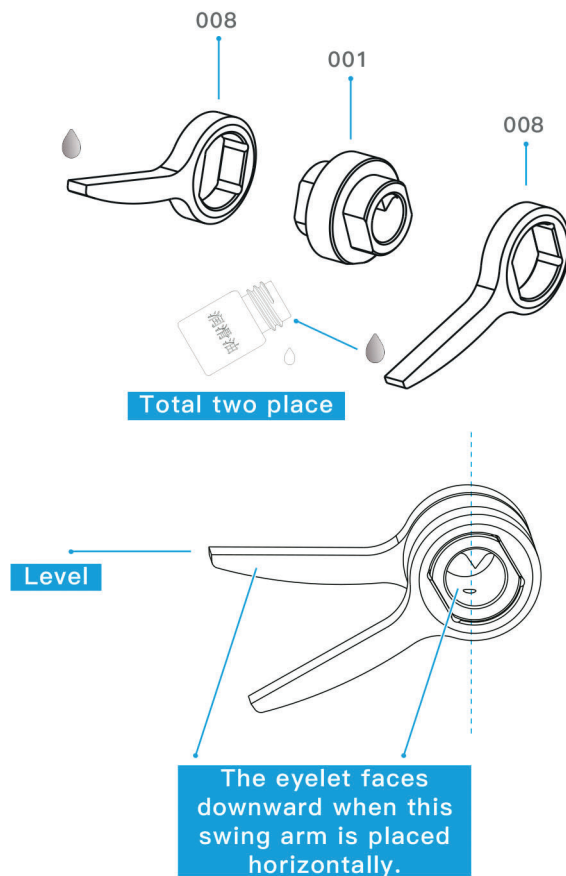
1.6 Installation of ratchet pawl



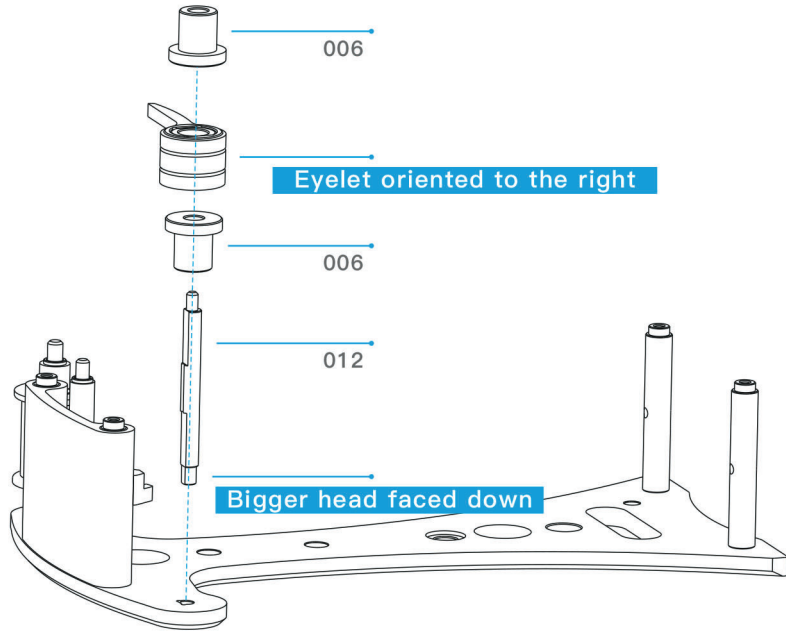
1.7 Installation of pulley assembly



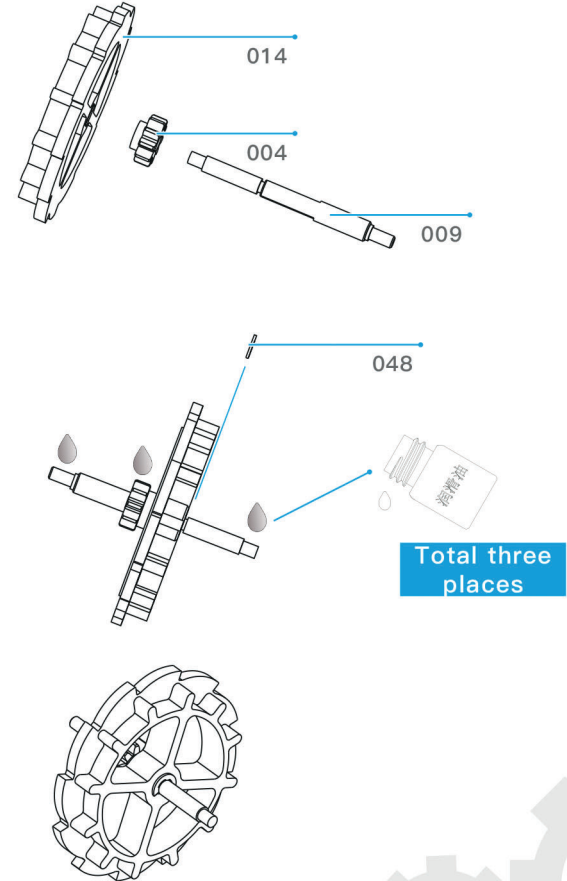
1.8 Installation of swing arm



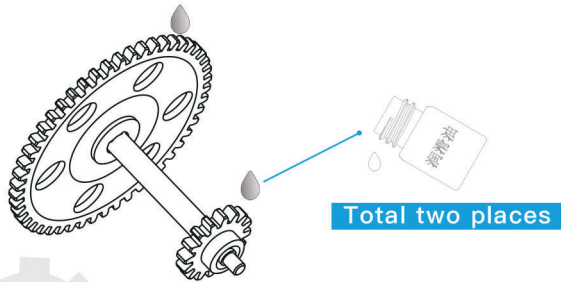
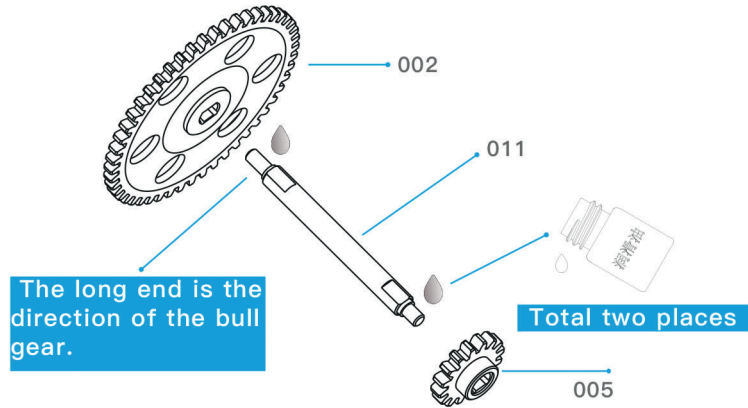
1.9 Installation of swing arm



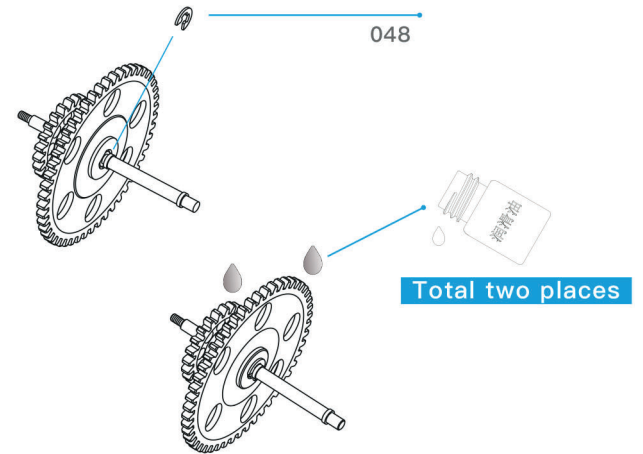
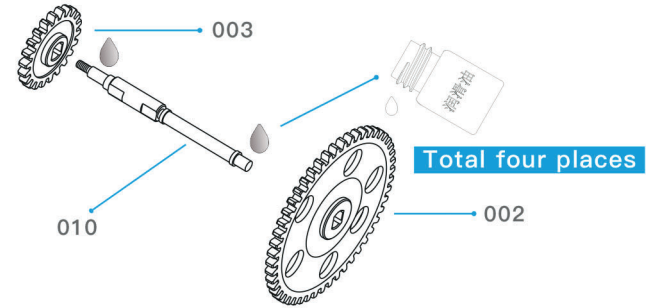
1.10 Installation of ratchet



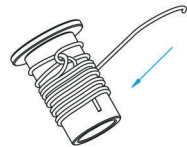
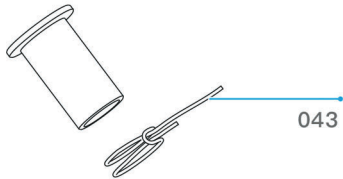
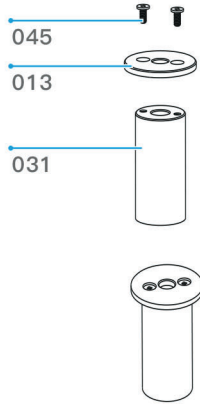
1.11 Installation of Shaft I and gear



1.12 Installation of Shaft II and gear

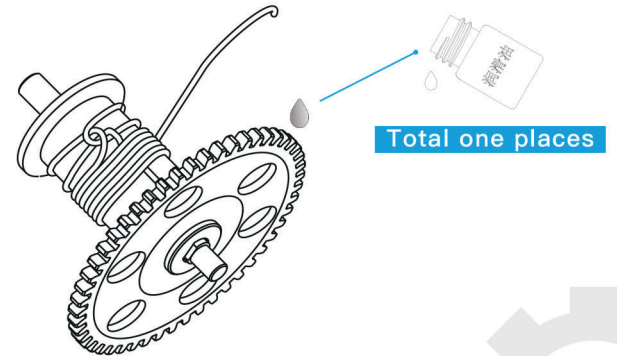
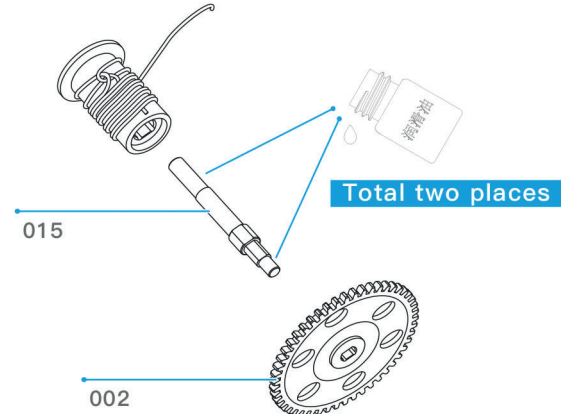


1.13 Installation of rope pulley

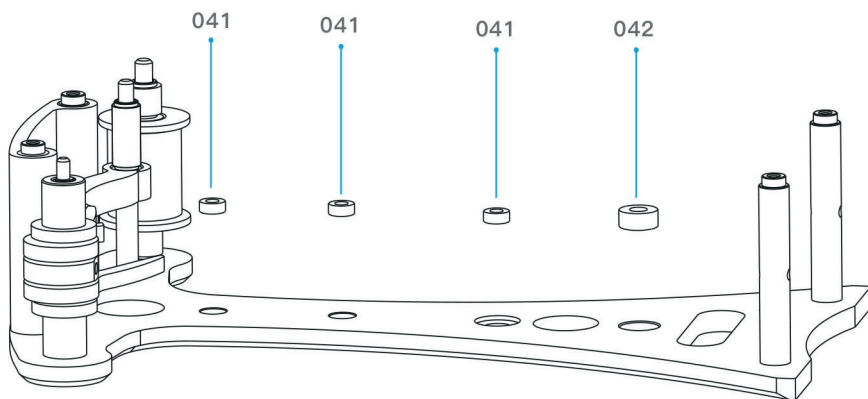


Wind the rope reversely and tighten the rope end to prevent the knot from loosening.

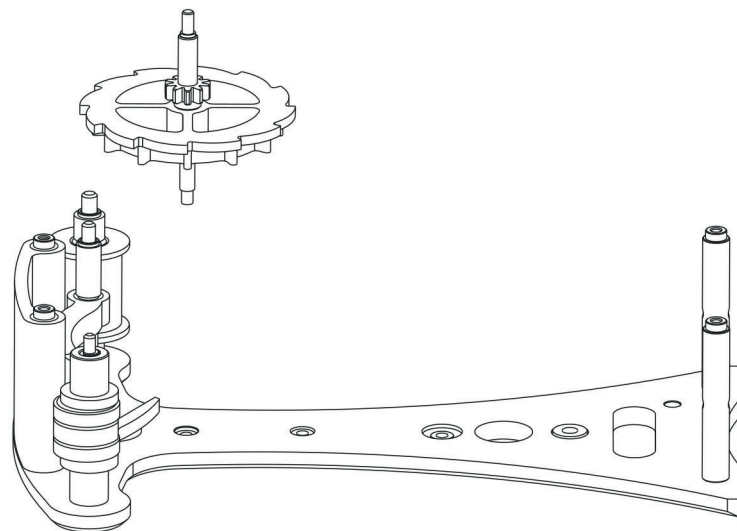
1.14 Installation of rope pulley, rope pulley shaft and gear



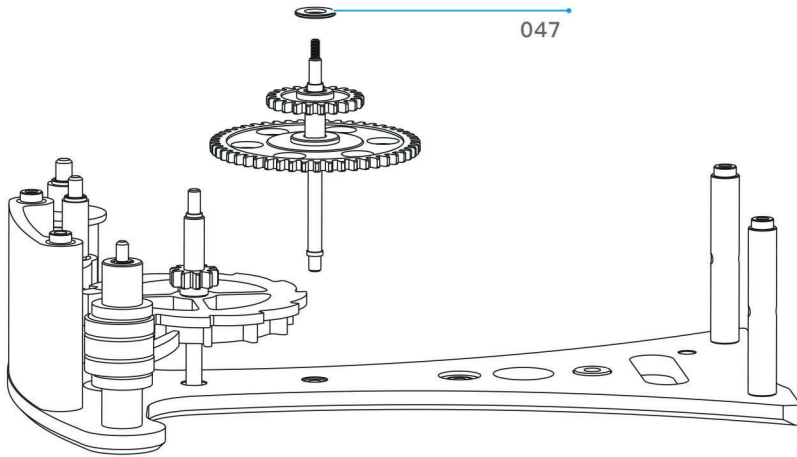
1.15 Installation of bearing



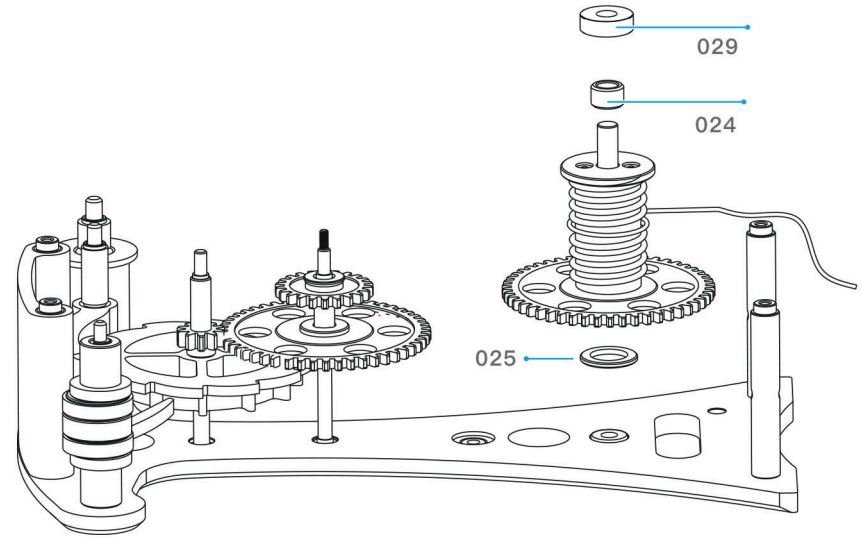
1.16 Installation of ratchet pawl



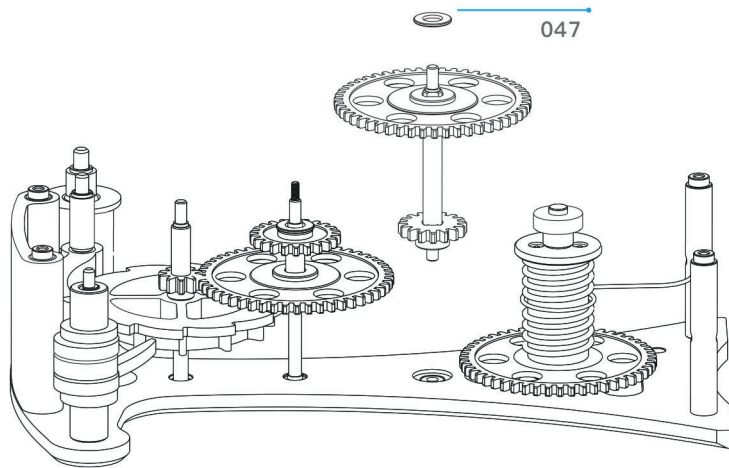
1.17 Installation of shaft II and gear



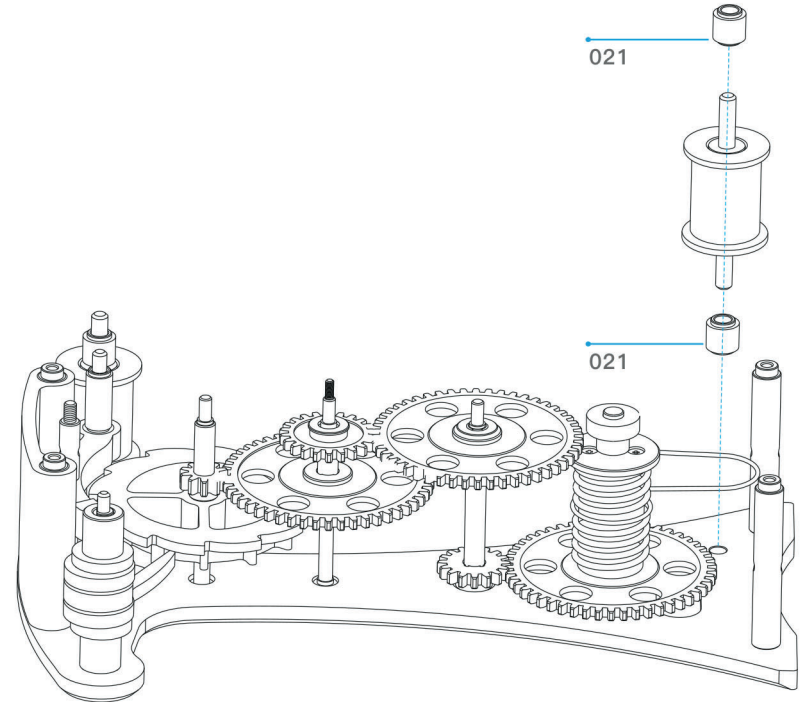
1.18 Installation of rope pulley



1.19 Installation of shaft I and gear

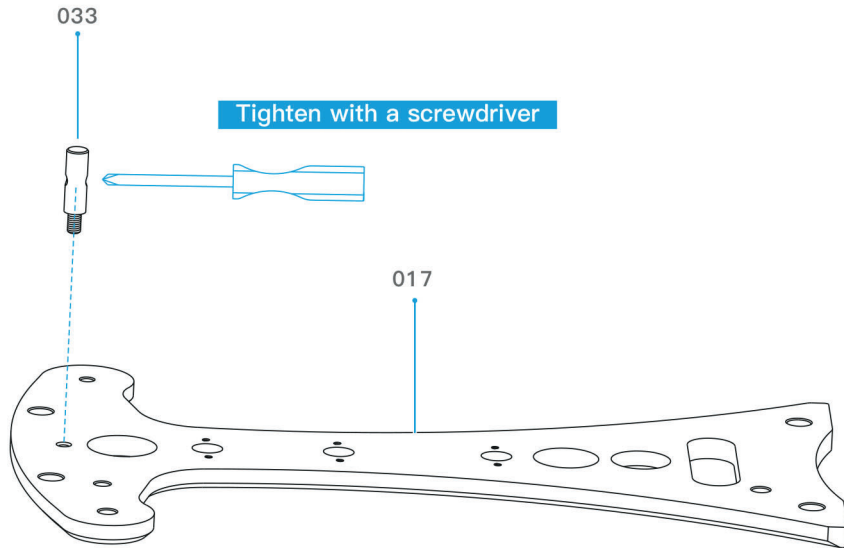


1.20 Installation of pulley

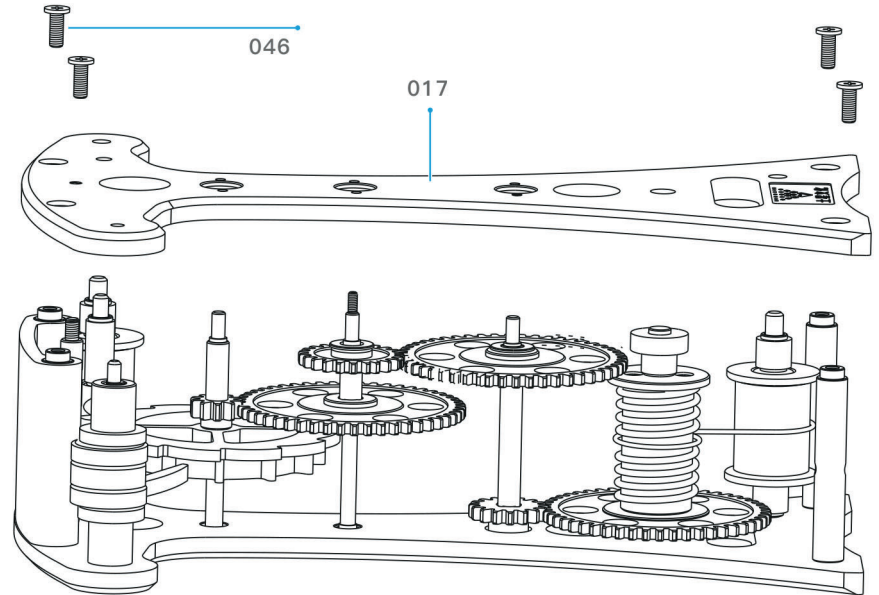


2 Assembly of front main board

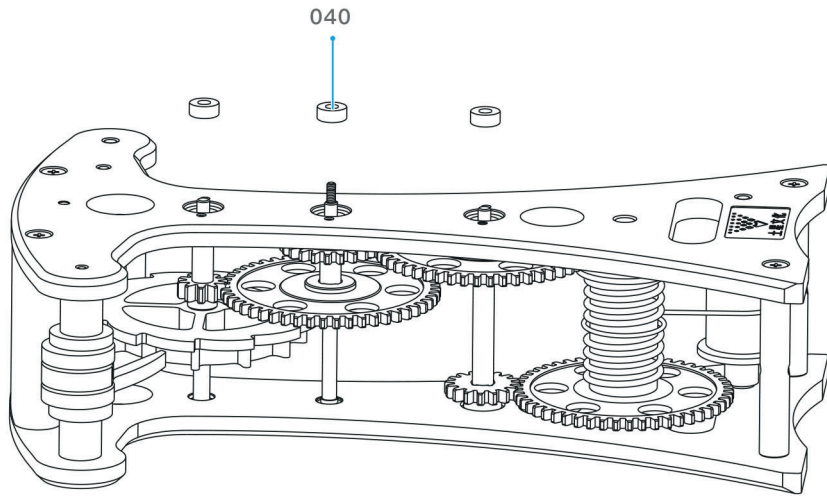
2.1 Installation of stop shaft



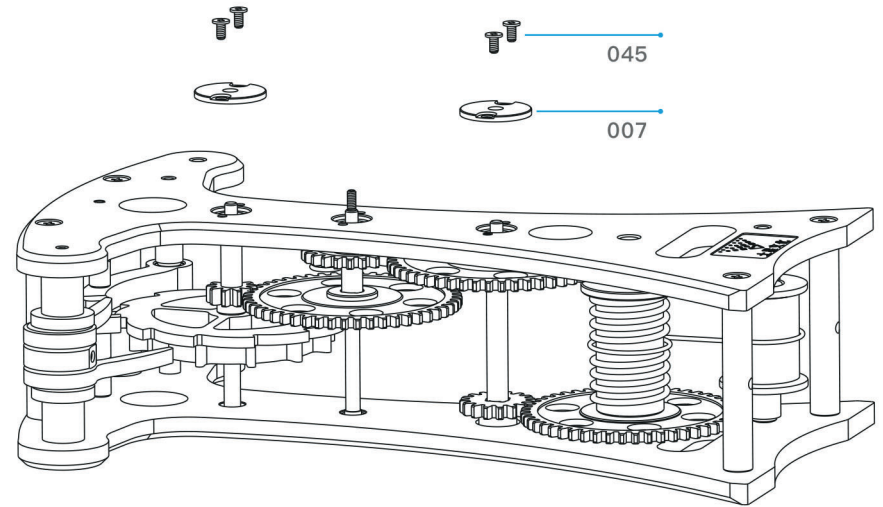
2.2 Installation of front and rear main board



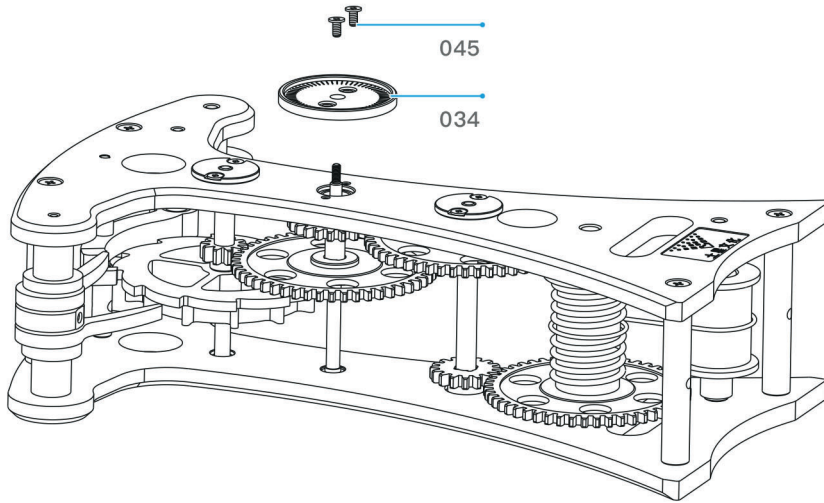
2.3 Installation of bearing



2.4 Installation of shaft cap



2.3 Installation of clock dial



3 Assembly of rope

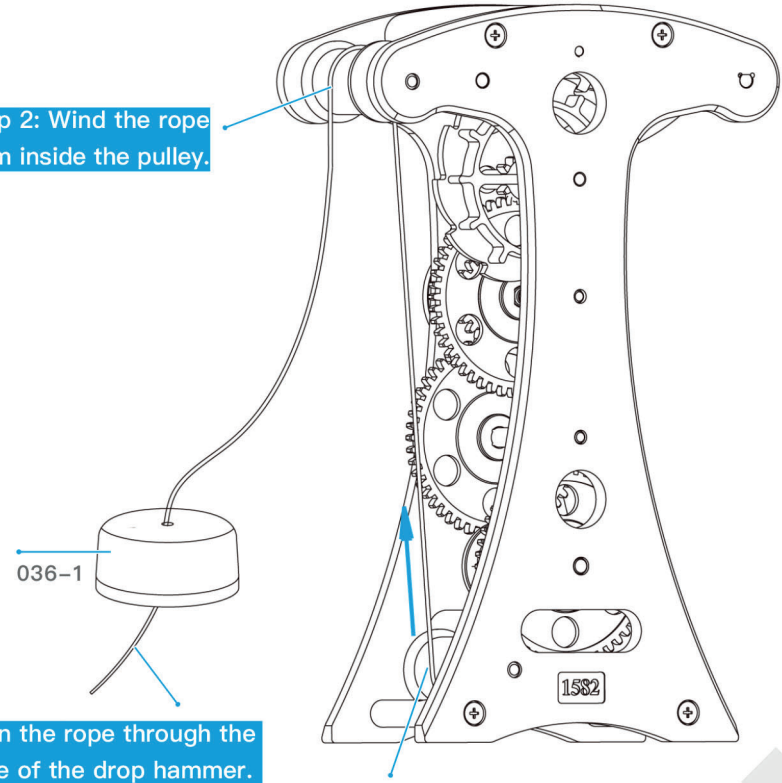
3.1 Installation of rope and pulley

Step 2: Wind the rope from inside the pulley.

036-1

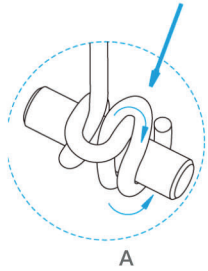
Step 3: Run the rope through the center hole of the drop hammer.

Step 1: Wind the rope up from the bottom of the pulley.



3.2 Installation of rope in drop hammer cap

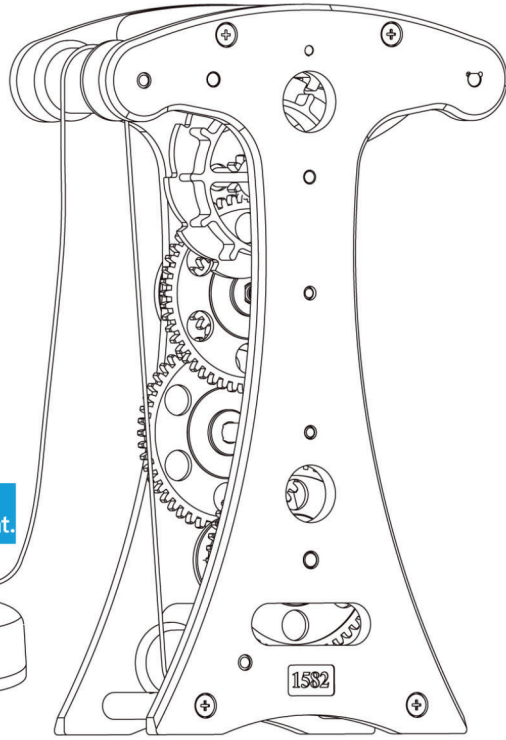
Wind the rope end reversely by one turn, and then tighten to prevent the knot from loosening.



This is a X5 schematic view of winding of Point.

030

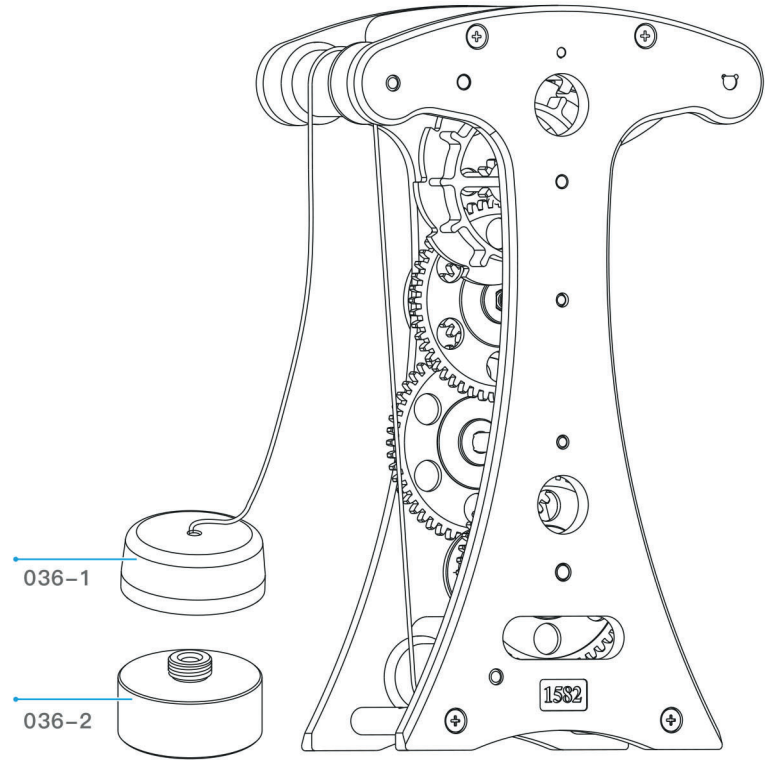
A
16



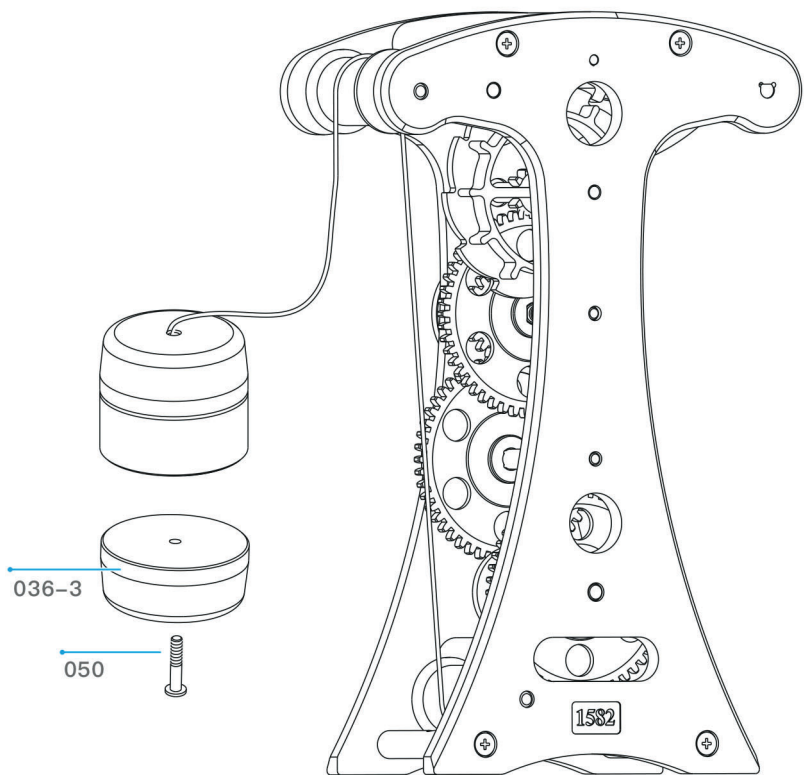
3.3 Assembly of drop hammer

036-1

036-2

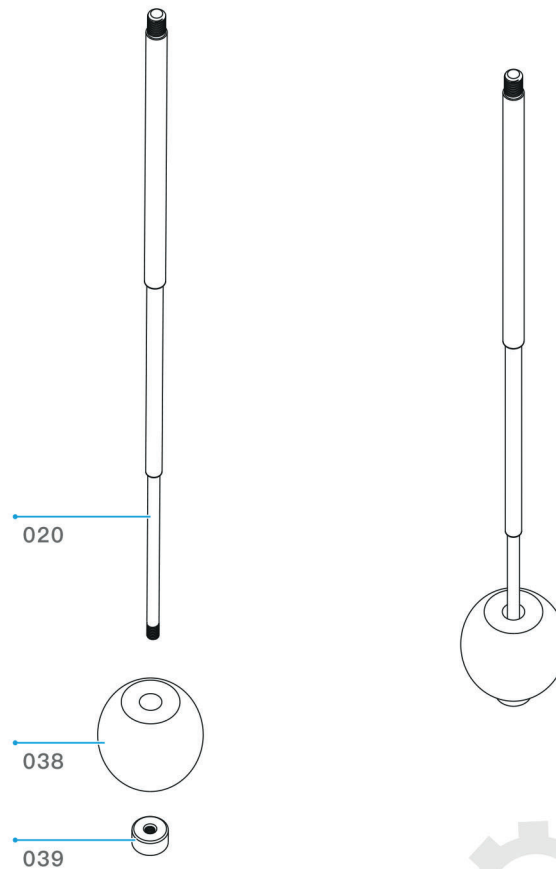


3.4 Installation of drop hammer

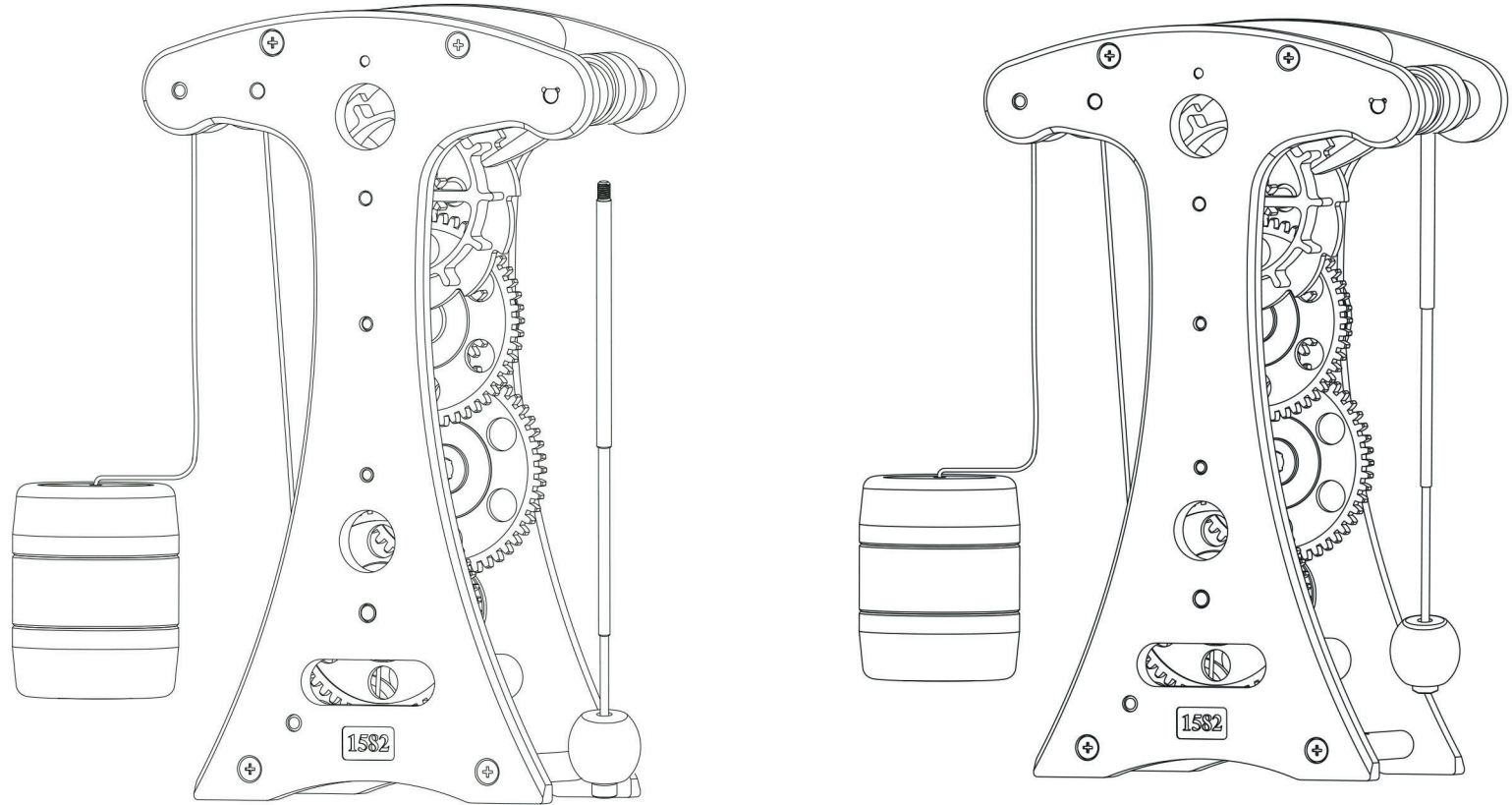


4 Assembly of pendulum

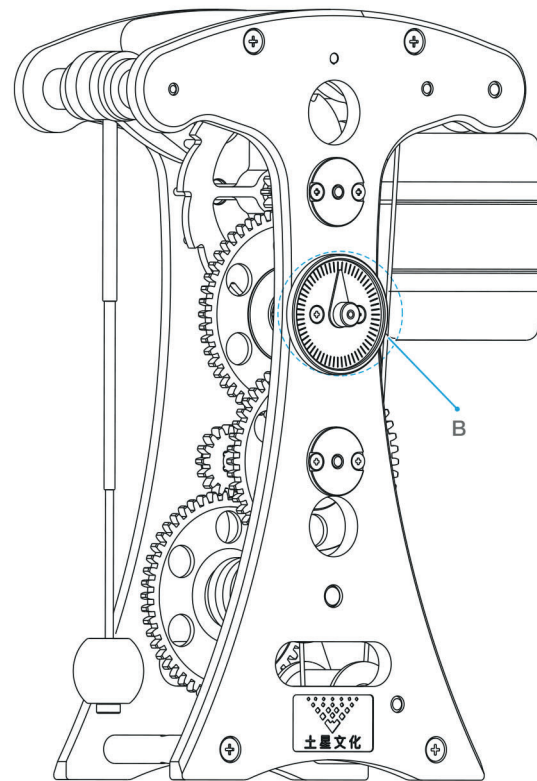
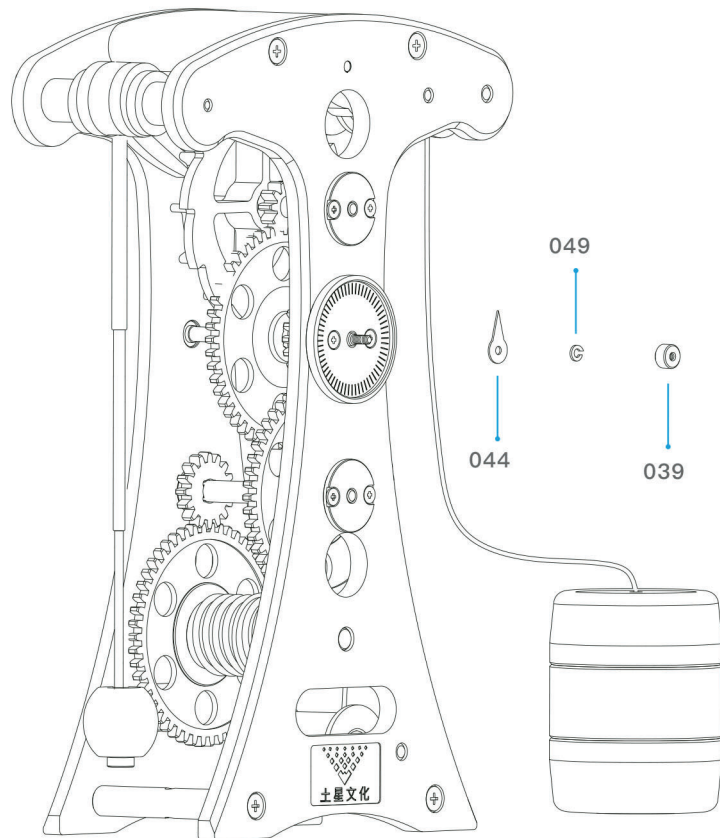
4.1 Installation of pendulum



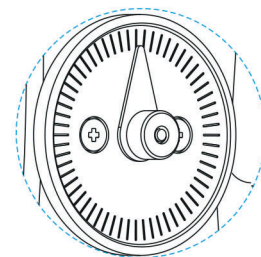
4.2 Installation of pendulum and swing arm



5 Assembly of pointer

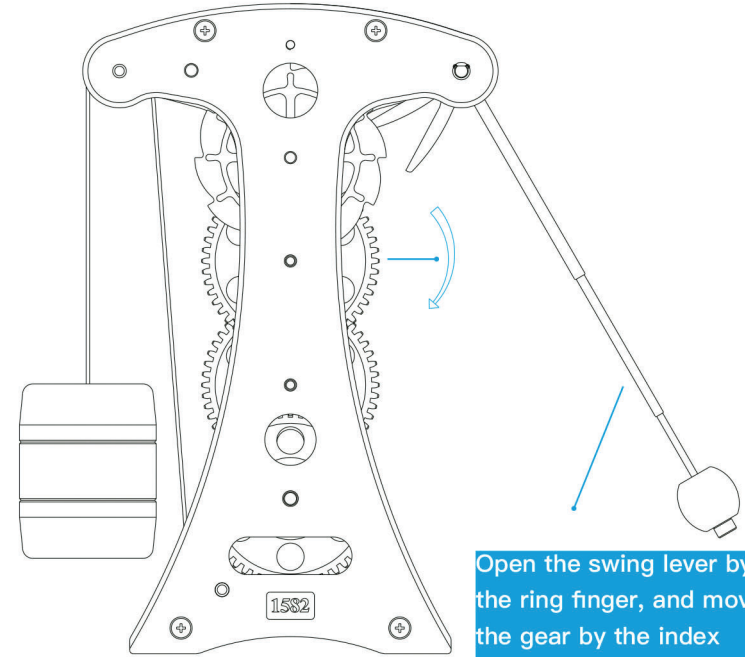
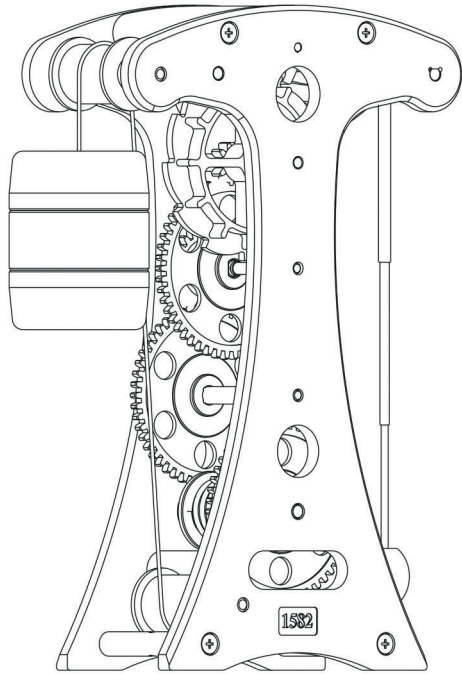


Raise the drop hammer to the highest point, and align the tip of the pointer with the center mark, then tighten the pointer.



B
2:1

Hammer lifting method:



Open the swing lever by the ring finger, and move the gear by the index finger clockwise to lift the hammer.

Assembly completed

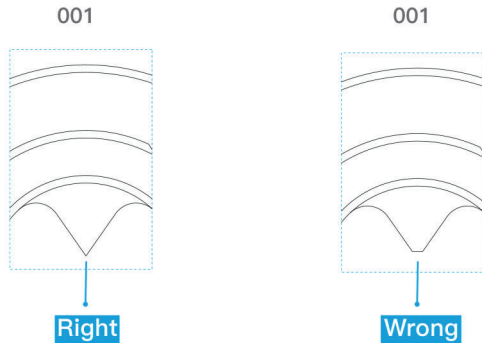
6

Troubleshooting

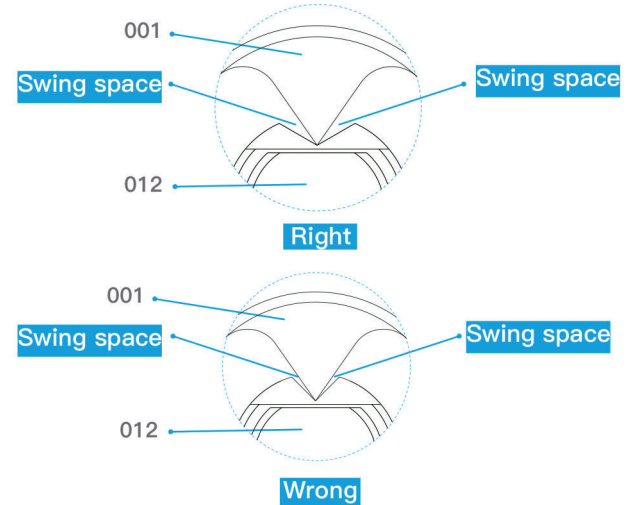
After assembly, if the motion is abnormal, please check whether the relevant moving parts are coated with lubricating oil and the parts are missing or misplaced according to the instructions. If not, please follow the steps below to find the problem and solve it.

- 1>whether the installation direction of the parts is correct.
- 2>Whether the screw is tightened or not, is it loose?
- 3>check similar parts for reverse assembly
- 4>Gently swing the pendulum and check whether the positioning plate (001) swings smoothly. If not, please remove the positioning plate.

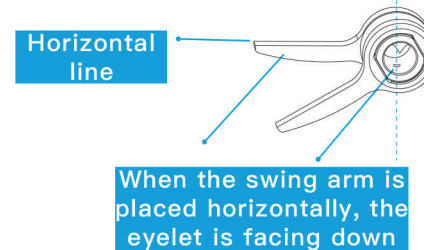
4-1 As shown in the figure, please check whether the 001 positioning panel is correct.



4-2 please check the swing space of the swing arm axis is same as shown in figure or not.

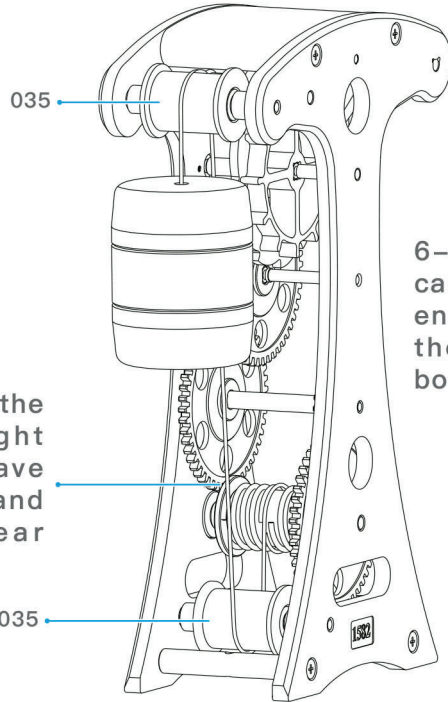


4-3: Please follow the instructions to assemble the 008 swing arm and the 001 positioning plate.



5>Please check whether the sling is wrapped correctly

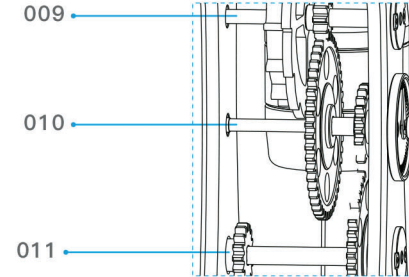
6>Please check whether the rope is stuck.



6-2:Check if the rope is caught between sheave cover (013) and 50-tooth gear (002)

6-1:Check if the rope is caught in the gaps at both ends of pulley (035) and the front and rear main boards

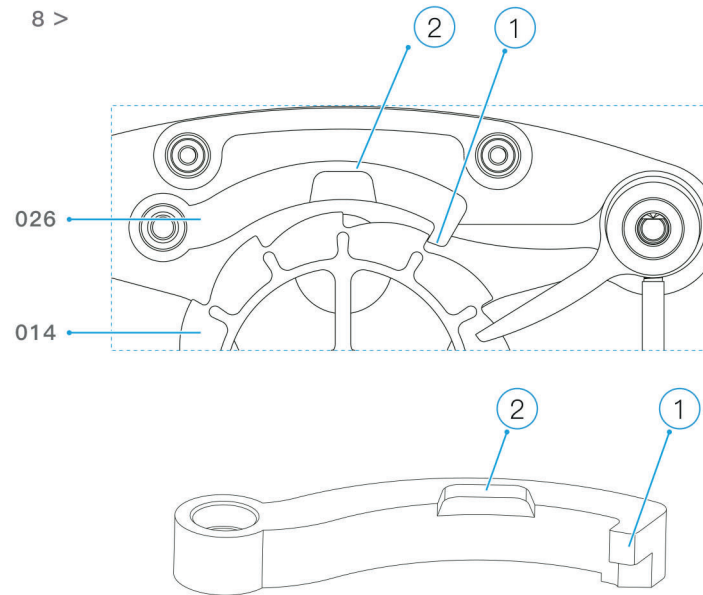
7 >











Check whether the front and rear main boards installation holes corresponding to ratchet shaft (009), shaft I (011) and shaft II (010) have burrs; if yes, remove the burrs using appropriate tools.Reassemble.









8 > Jumping teeth appear anywhere in the process of swinging the pendulum hammer to the lowest point. It's necessary to remove ratchet pawl 026, and scrape point 8> ② in working diagram with a knife to ensure the fit length between ratchet pawl 026 and ratchet 014 is large enough.









In the swinging pendulum state, the slinger stops falling before reaching the lowest point. It needs to remove the 026 ratchet pawl and scrape it with a knife (026 ratchet claw material is aluminum alloy, softer). Reduce the mating length of the 026 ratchet and the 014 ratchet (normal fit length is 0.8–1.0MM)



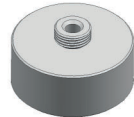
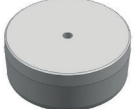



No.	Product picture	Product name	Qty.
001		Positioning disc	1
002		50-tooth gear	3
003		22-tooth gear	1
004		10-tooth gear	1
005		16-tooth gear	1
006		Swing arm shaft sleeve	2
007		Shaft cap	2
008		Swing arm	2








No.	Product picture	Product name	Qty.
009		Ratchet shaft	1
010		Shaft II	1
011		Shaft I	1
012		Swing arm shaft	1
013		Rope pulley cap	1
014		Ratchet	1
015		Rope pulley shaft	1
016		Pulley shaft	2

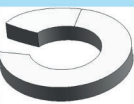
No.	Product picture	Product name	Qty.
017		Front main board	1
018		Rear main board	1
019		Support shaft	4
020		Telescopic swing lever	1
021		Pulley sleeve	4
022		Limiting shaft	1
023		Support board	1
024		Rope pulley sleeve II	1

No.	Product picture	Product name	Qty.
025		Rope pulley sleeve 1.3	1
026		Ratchet pawl	1
028		Pawl shaft	1
029		Bearing Ø13*Ø5*4	1
030		Cylindrical pin Ø2.5*10	1
031		Rope pulley	1
032		Pawl shaft sleeve	1
033		Stop shaft	1



No.	Product picture	Product name	Qty.
034		Clock dial	1
035		Pulley	2
036-1		Drop hammer-1	1
036-2		Drop hammer-2	1
036-3		Drop hammer-3	1
037		Bearing Ø7*Ø4*2.5	2
038		Pendulum	1
039		Hand nut	2

No.	Product picture	Product name	Qty.
040		Bearing Ø7*Ø3*3	3
041		Bearing Ø6*Ø3*2.5	3
042		Bearing Ø9*Ø4*4	5
043		Non-elastic rope Ø 1.5MM*1.1M	1
044		Pointer	1
045		Screw CM2.0*4*4	8
046		Screw CM3.0*8*6	10
047		φ 5.3/φ 10X0.8 washer	2

No.	Product picture	Product name	Qty.
048		E-shaped snap ring Ø7*Ø3*0.6	2
049		M2.0 spring washer	2
050		Screw CM3.0*16*6	1
		Screwdriver	2

