

Assembly tutorial **——Mechanical wasp**

Parts List

Numbering	Quantity	Numbering	Quantity	Numbering	Quantity	Numbering	Quantity	Numbering	Quantity	name	Quantity
F1	2	F16	1	F31	8	F46	50	M3 gasket (black)	150	M3* 8 (black)	6
F2	2	F17	1	F32	1	F47	40	M2 gasket (black)	46	M2* 16 (black)	4
F3	1	F18	1	F33	26	F48	1	M3 gasket (silver)	40	M2* 12 (black)	10
F4	2	F19	3	F34	1	F49	4	Super large gasket	22	M2* 10 (black)	22
F5	2	F20	24	F35	8			M12 gasket (transparent)	2	M1.6* 10 (black)	24
F6	1	F21	1	F36	1			M10 gasket (transparent)	2	M1.6* 5 (black)	3
F7	2	F22	1	F37	1			Double-threaded M3*70	1	M3 common nut (black)	60
F8	2	F23	1	F38	2			Double-threaded M3*50	2	M3 common nut (yellow)	14
F9	4	F24	5	F39	4	screwdriver	1	Double-threaded M3*40	5	M3 locknut (black)	5
F10	4	F25	2	F40	4	pliers	1	Double-threaded M3*30	4	M3 locknut (silver)	10
F11	1	F26	3	F41	30	Sleeve	1	Double-threaded M3*25	16	M3 flange nut (black)	40
F12	1	F27	18	F42	1			Double-threaded M3*20	8	M2 common nut (black)	22
F13	2	F28	2	F43	6			Countersunk head M3*10	3	M2 locknut (black)	18
F14	1	F29	25	F44	20			M3* 10 (black)	64	M1.6 common nut	36
F15	1	F30	8	F45	5			M3* 6 (black)	6	Base	12

一、 wing

二、 body

三、 belly

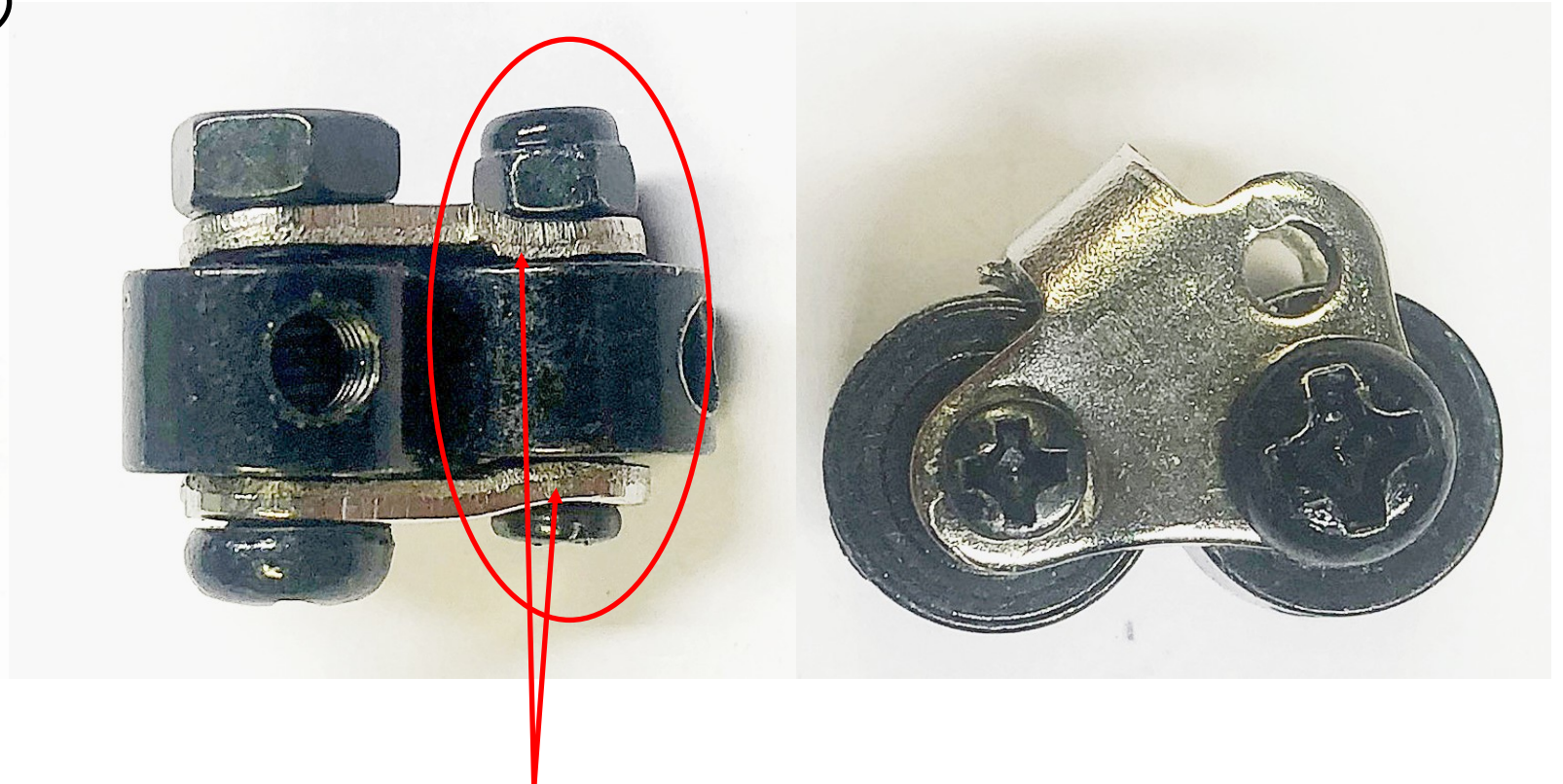
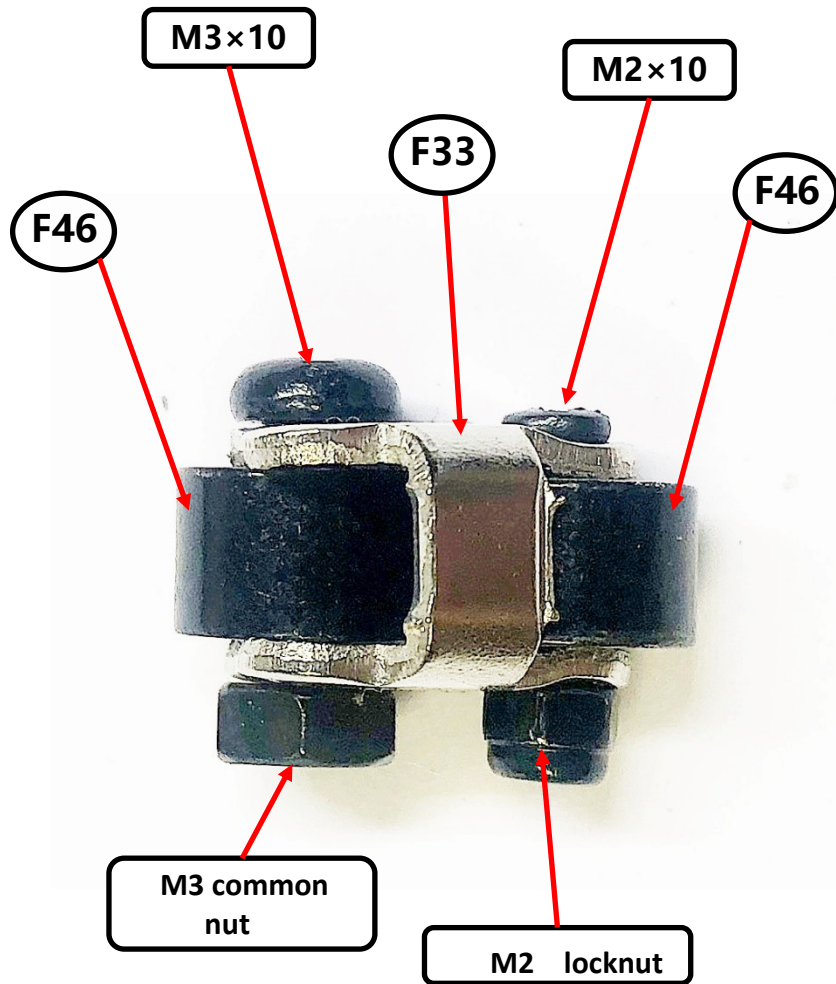
四、 leg

五、 head

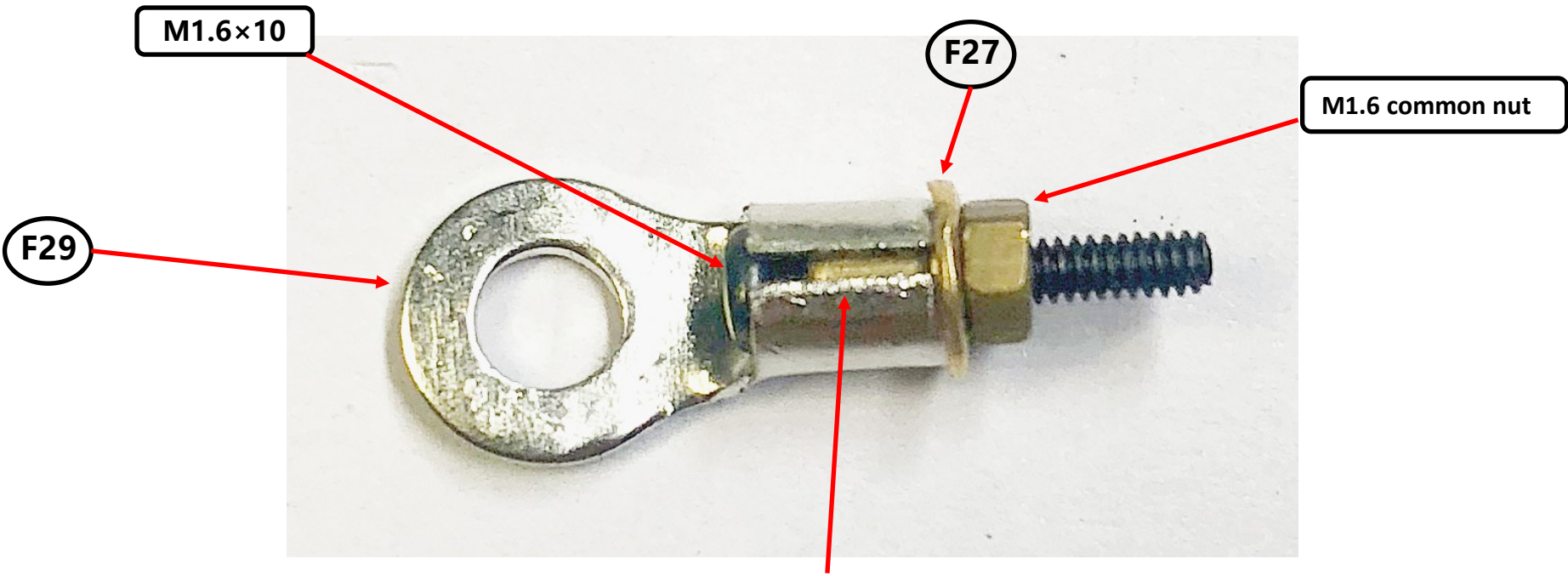
六、 overall

七、 Base

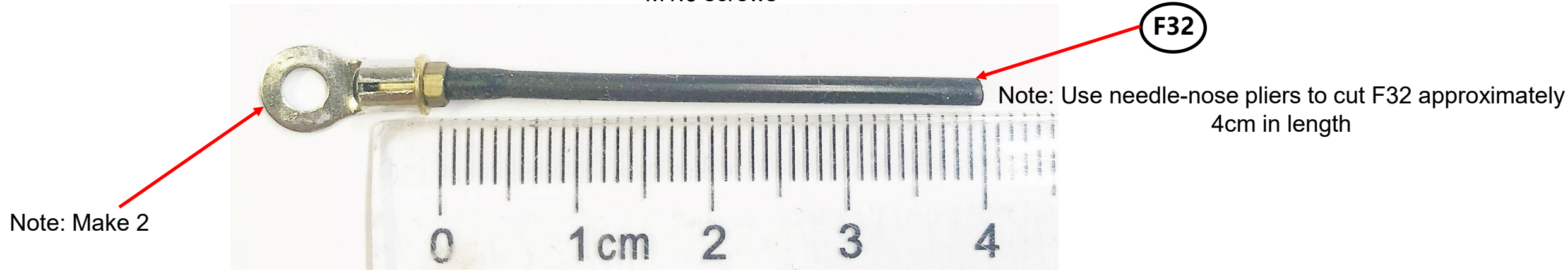


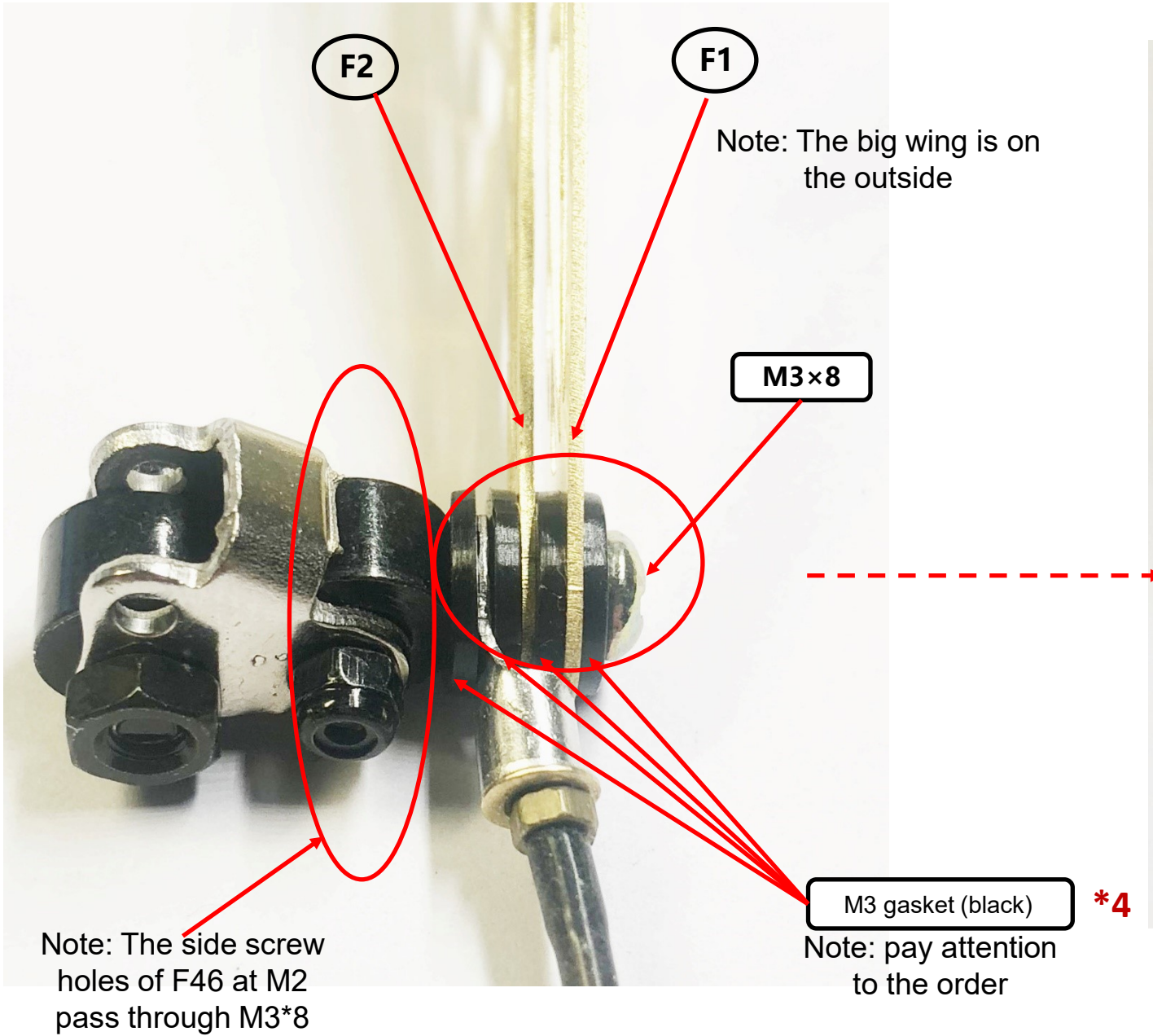


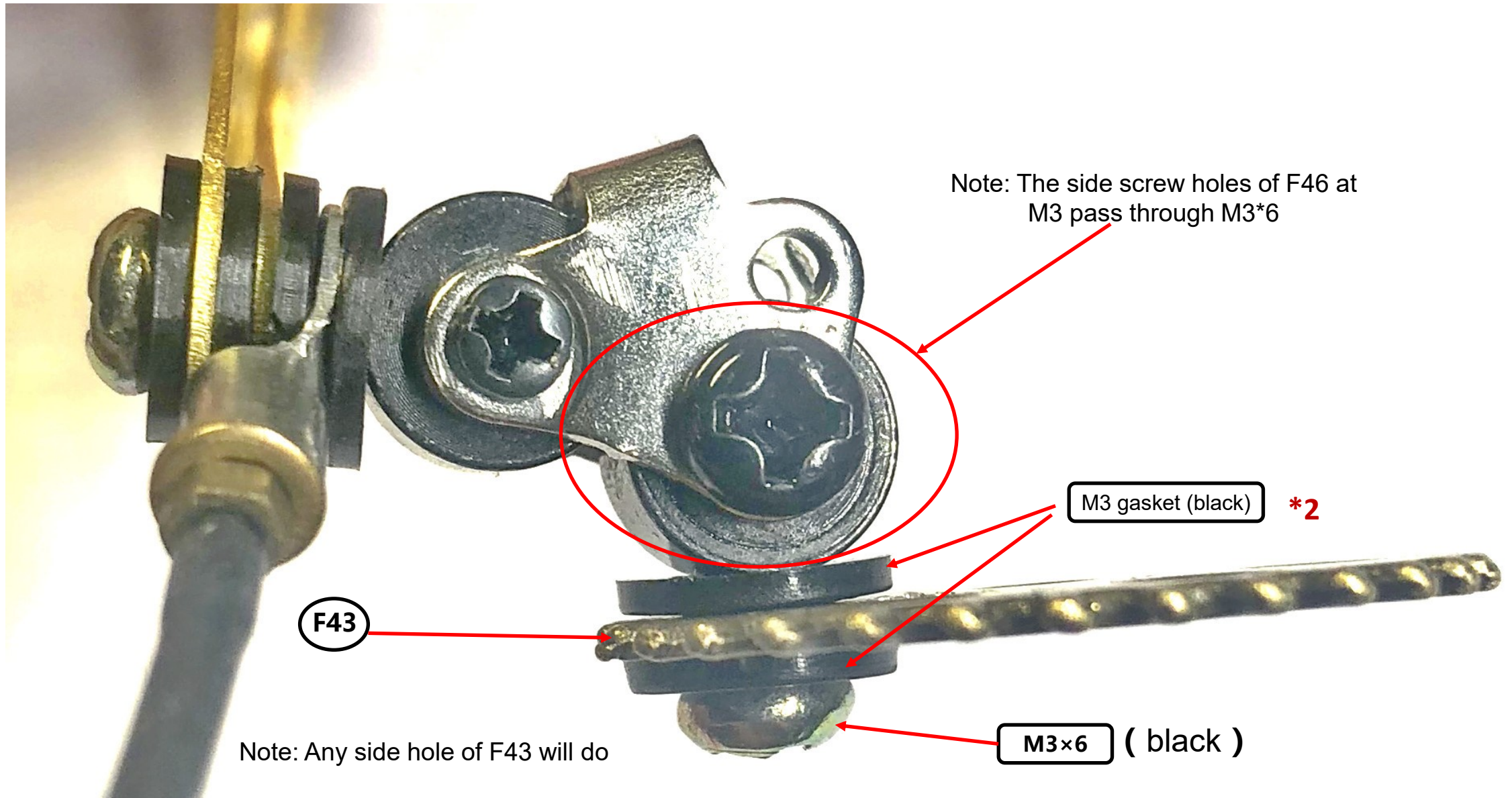
Note: Install F46 on the M2 side first, then install F46 on the other side of M3. If F46 cannot be inserted here, you can use pliers to break it.

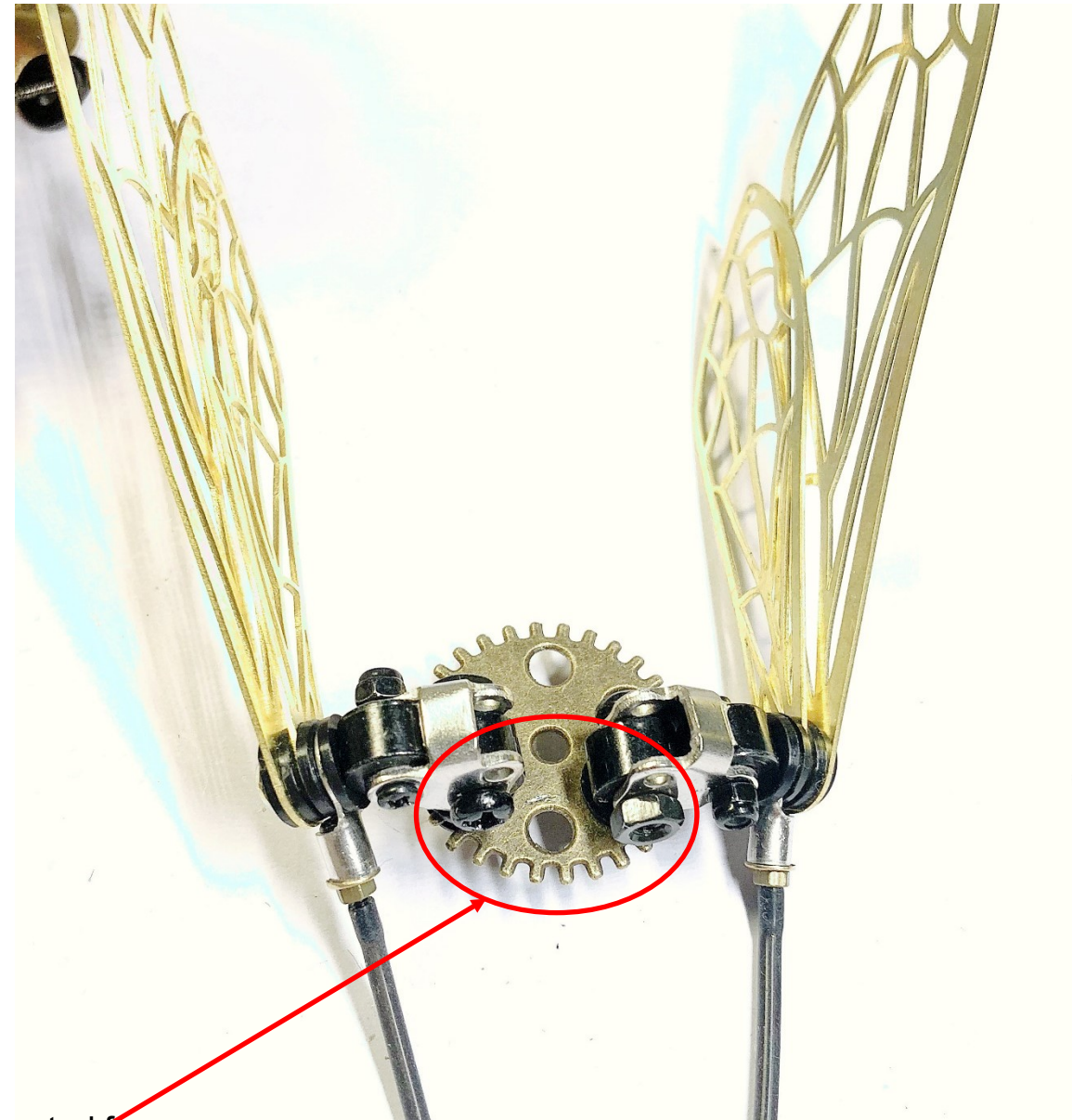
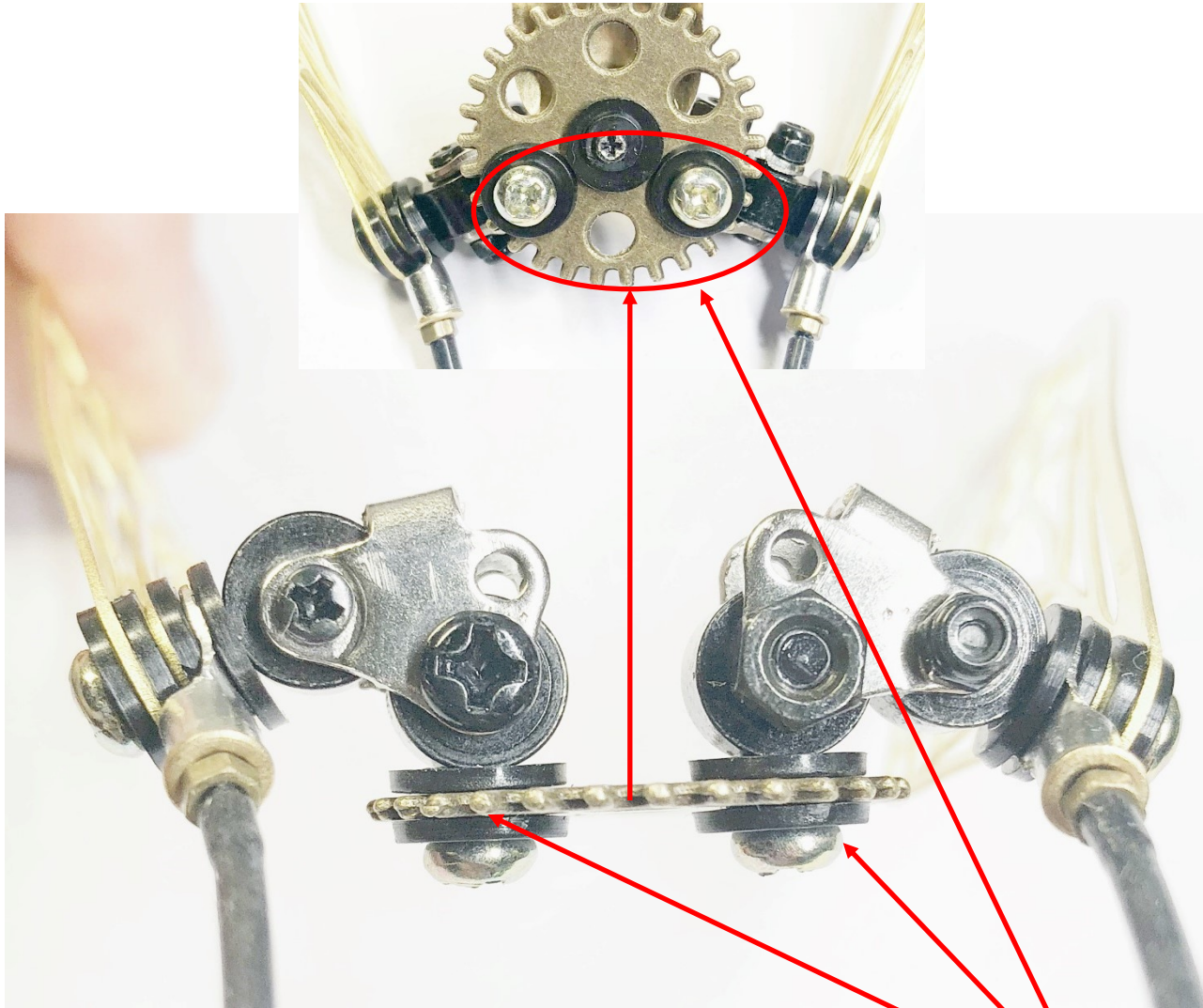


Note: First clamp F29 here with pliers, and then wear M1.6 screws

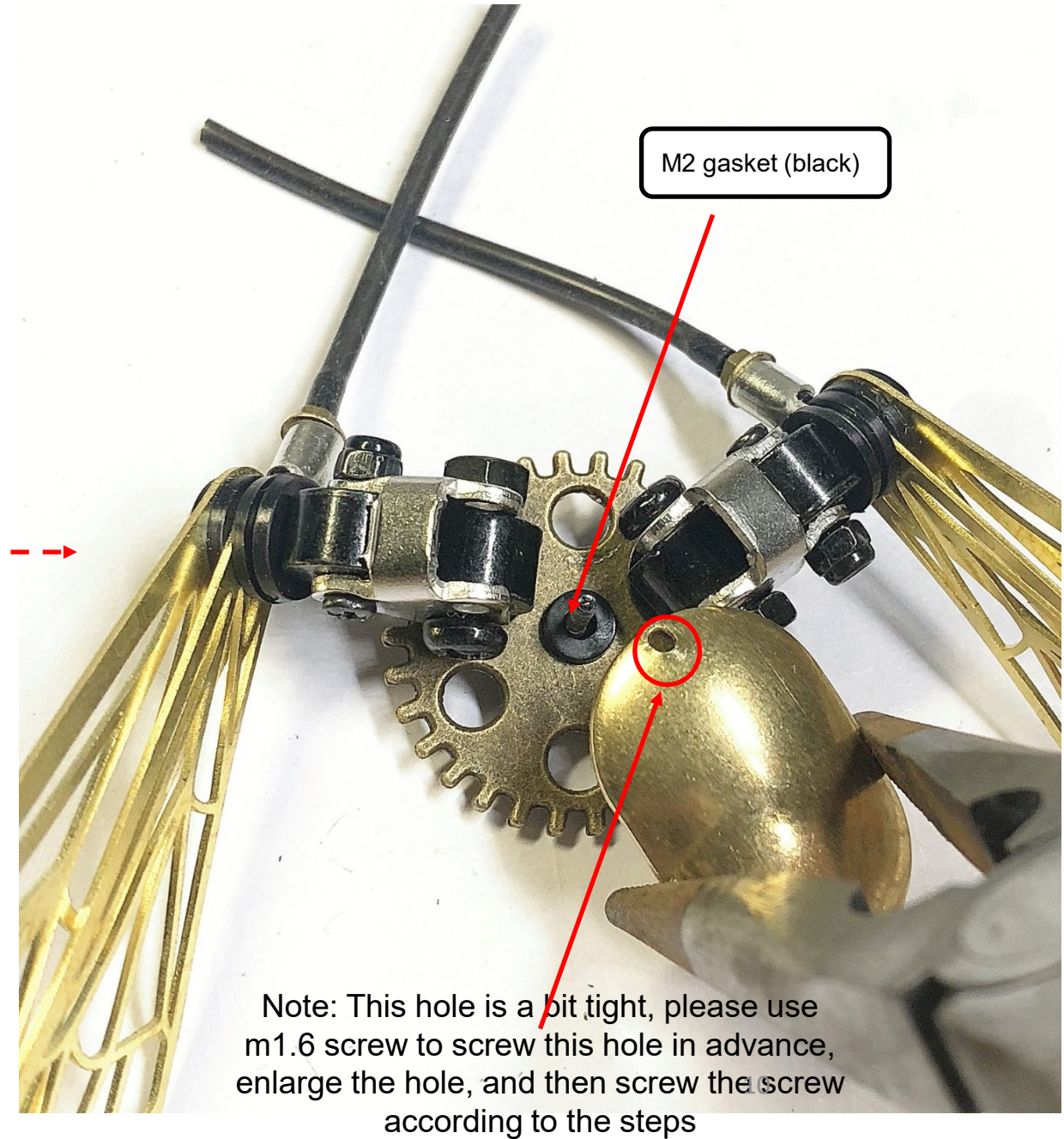
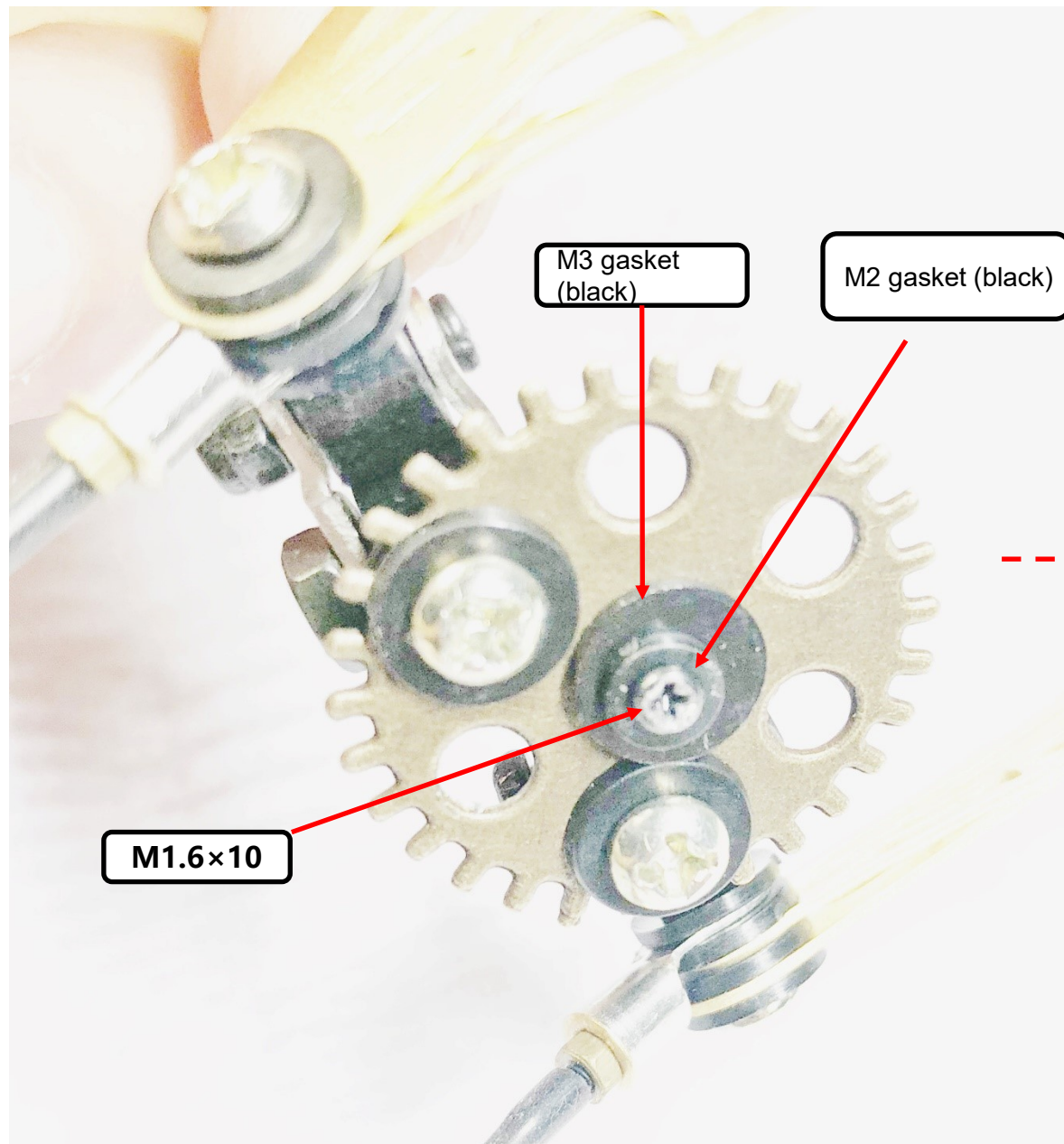




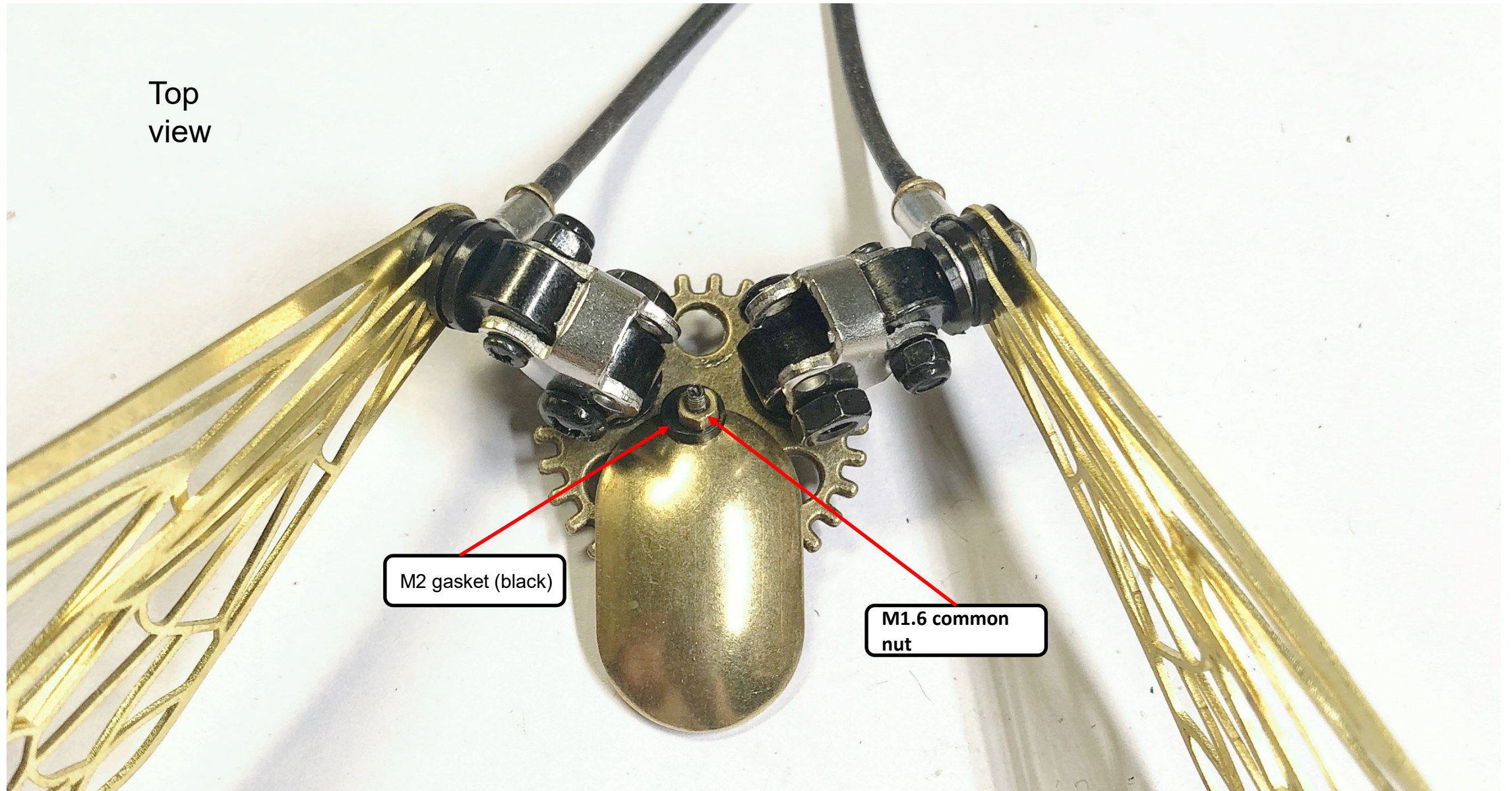




Note: The holes of F43 are separated from one side hole to fix the other wing



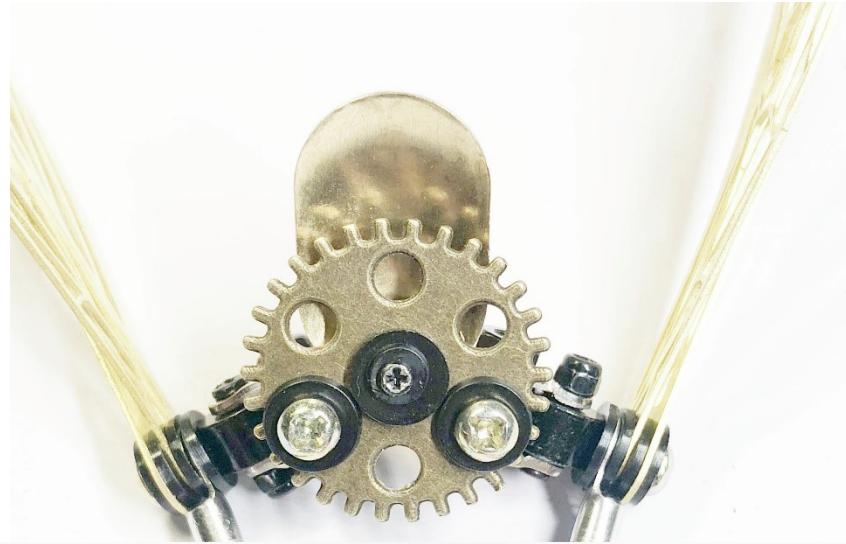
Top
view



M2 gasket (black)

M1.6 common
nut

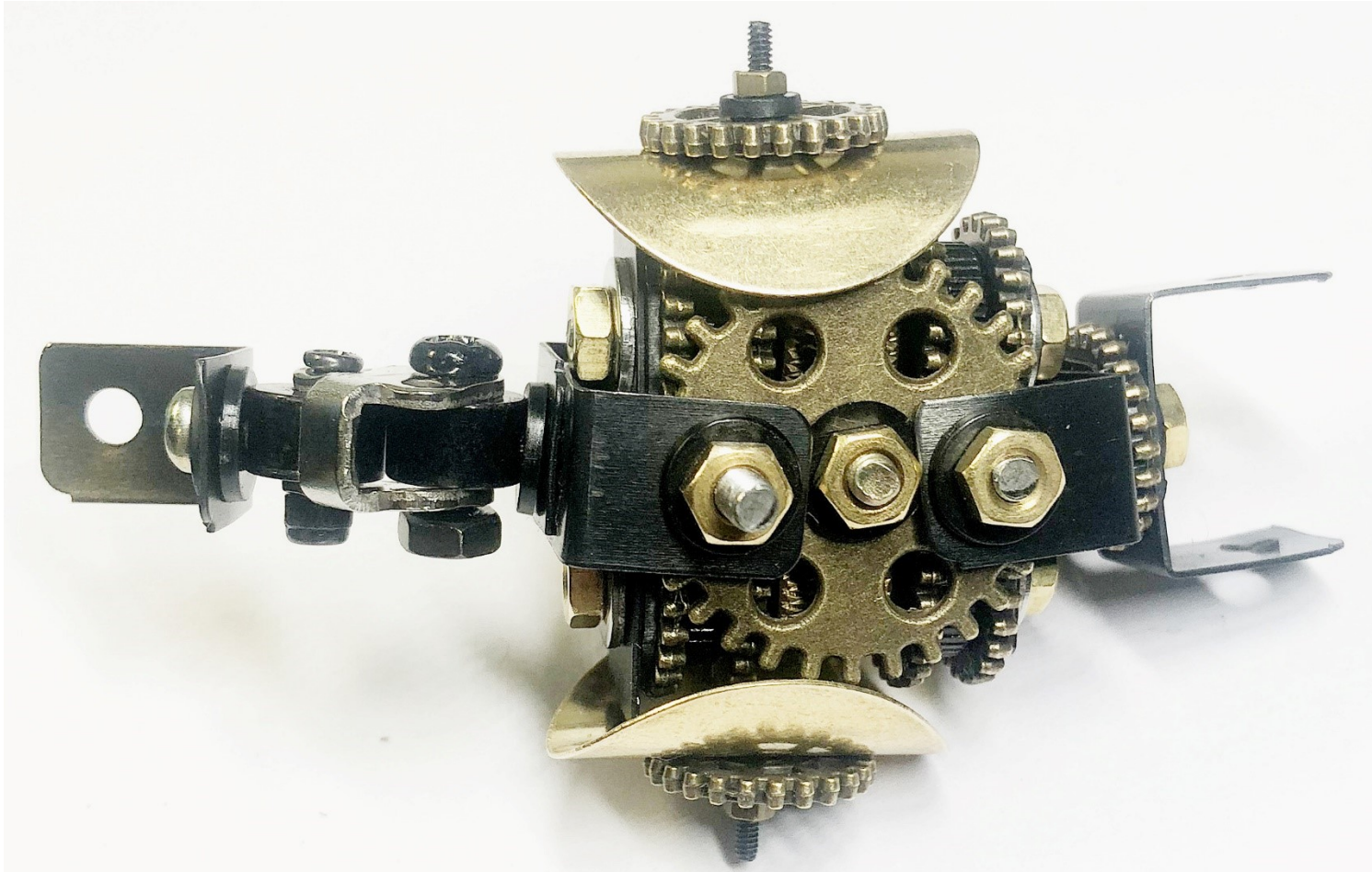
Look up from
the bottom

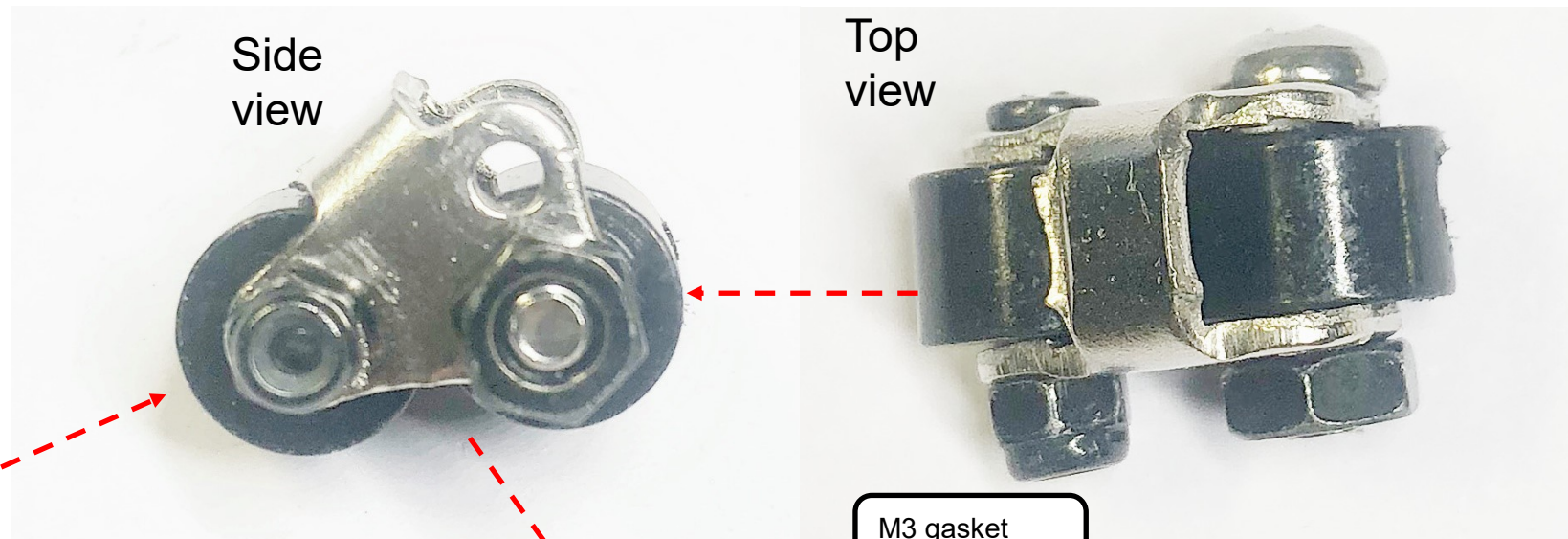
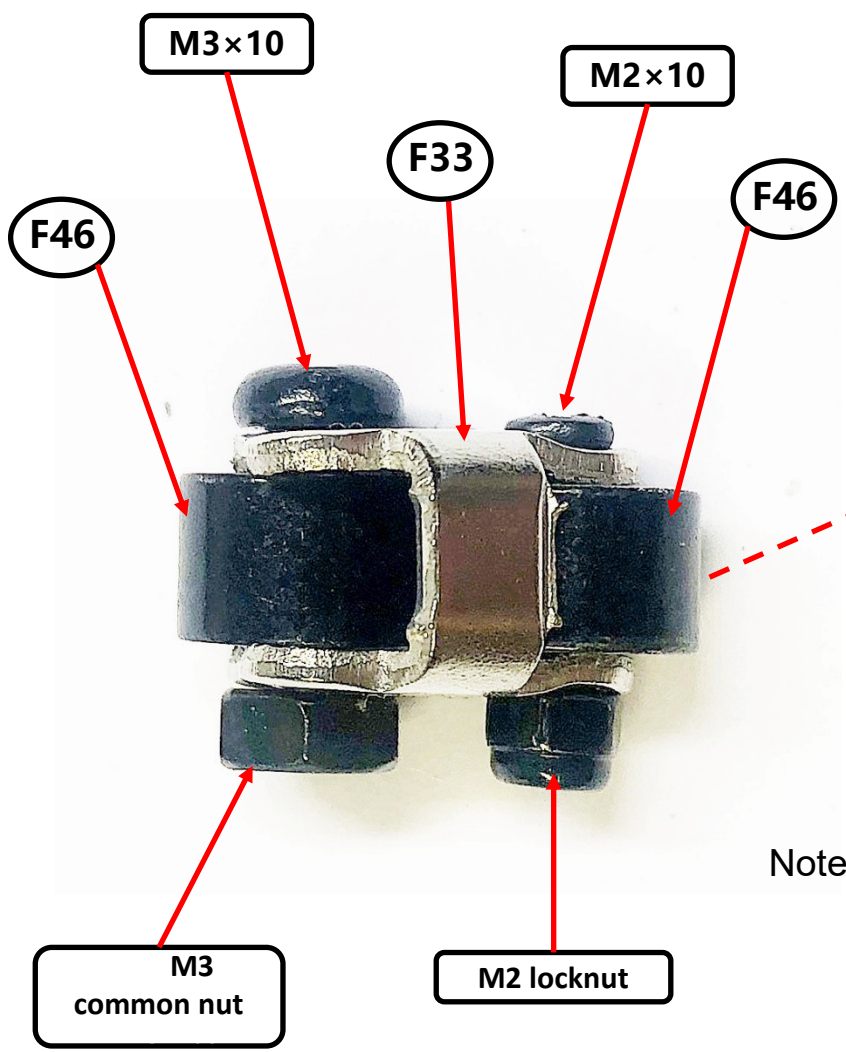


Side
view

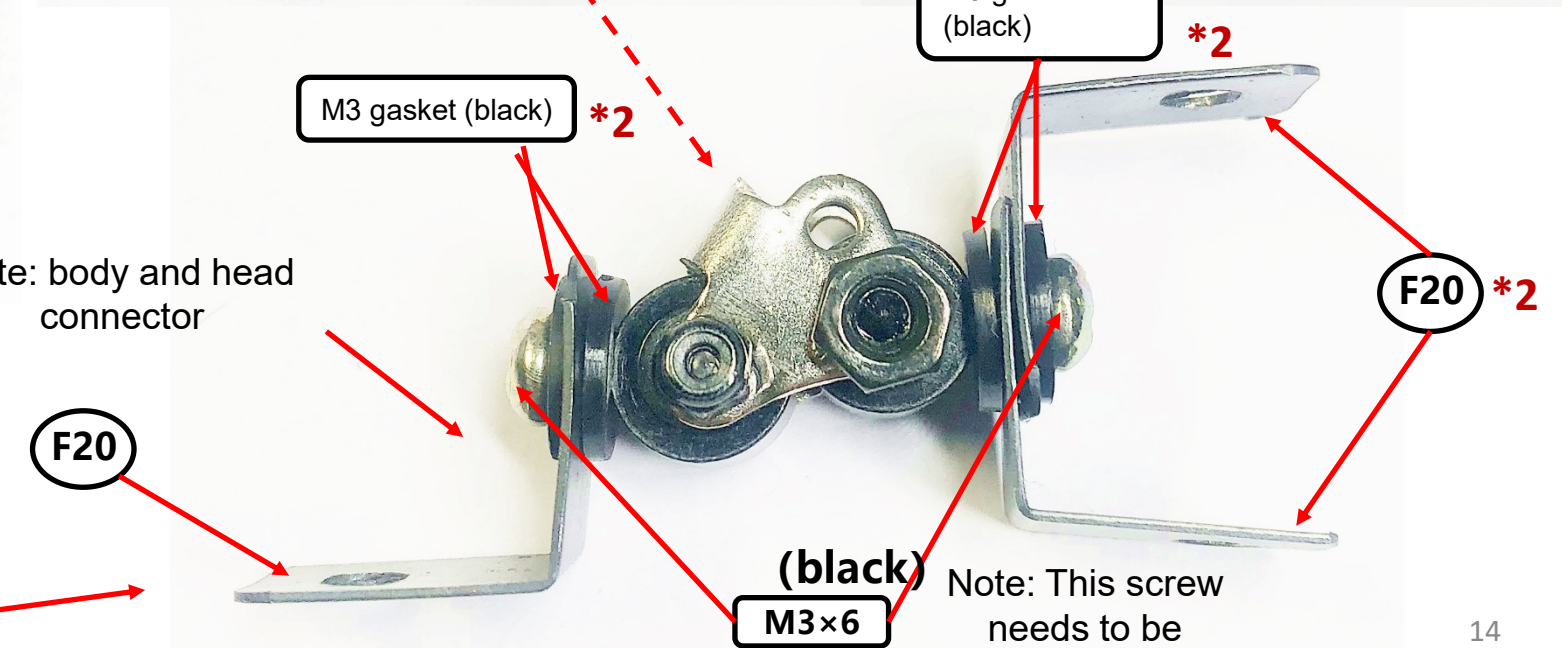


Congratulations, wing assembly has been achieved
Next part: 2. Body assembly

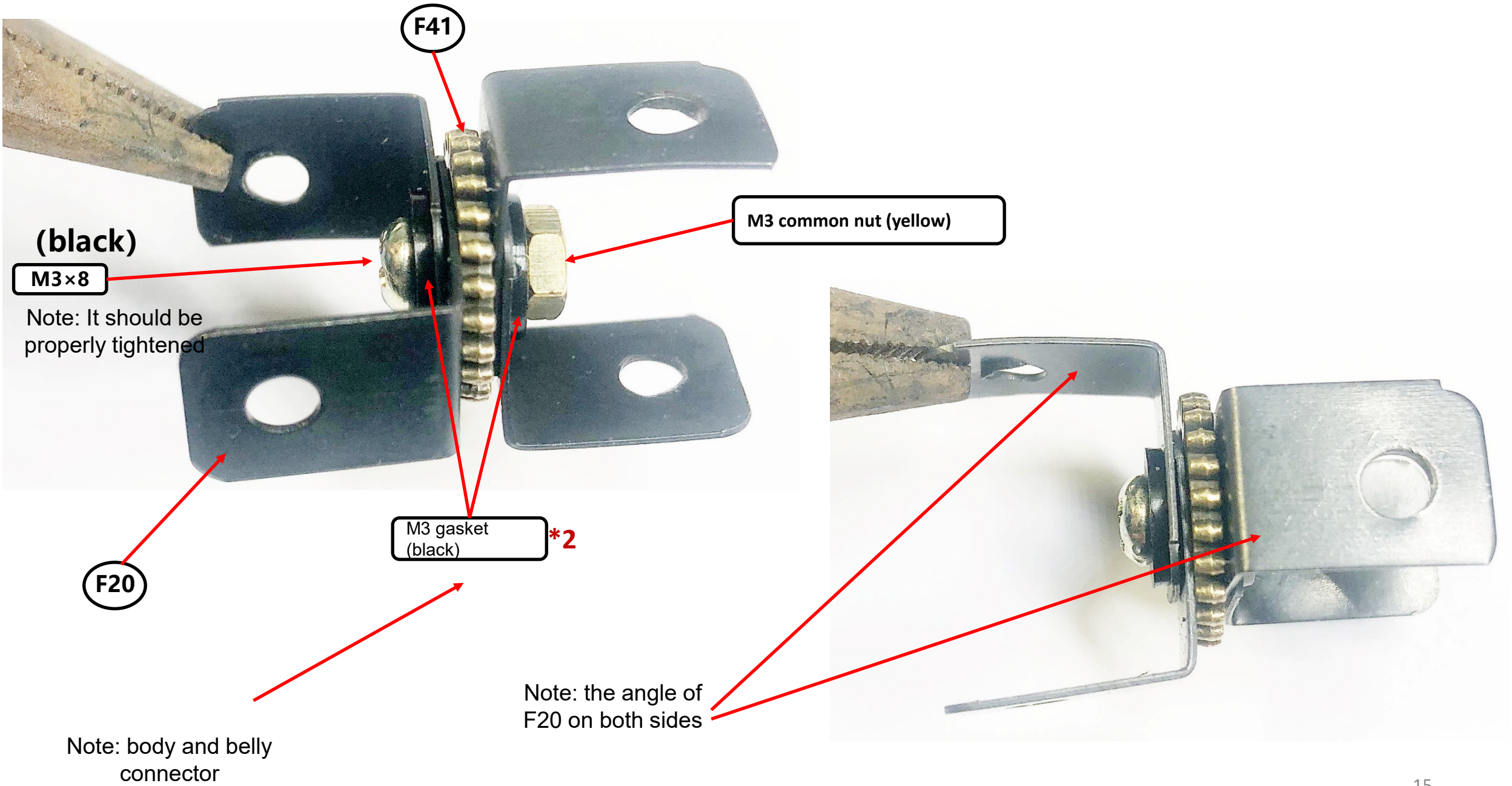


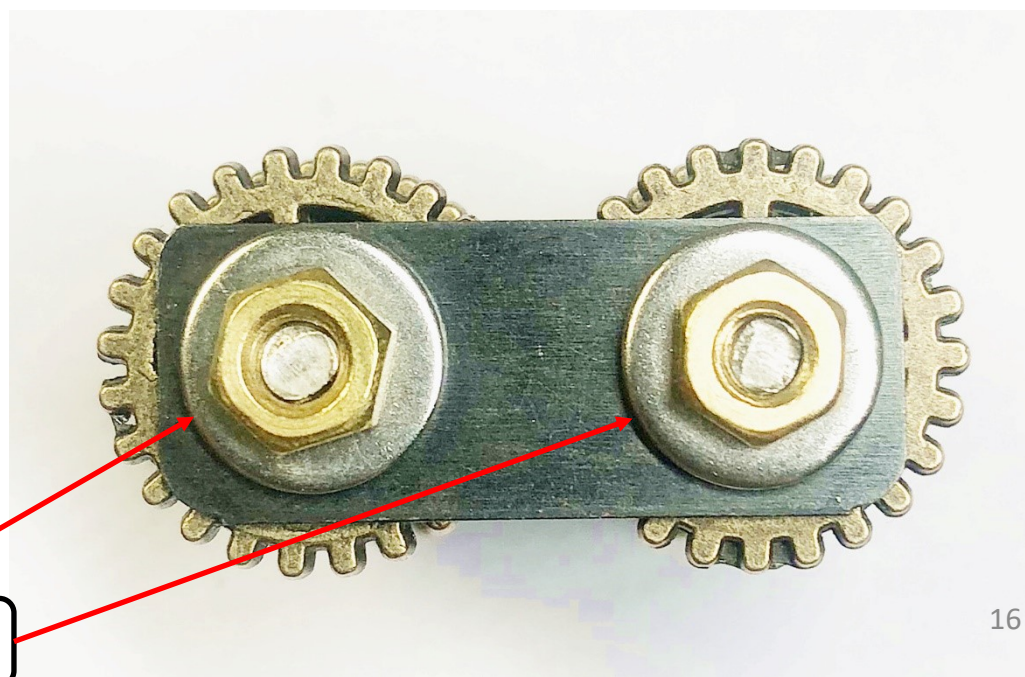
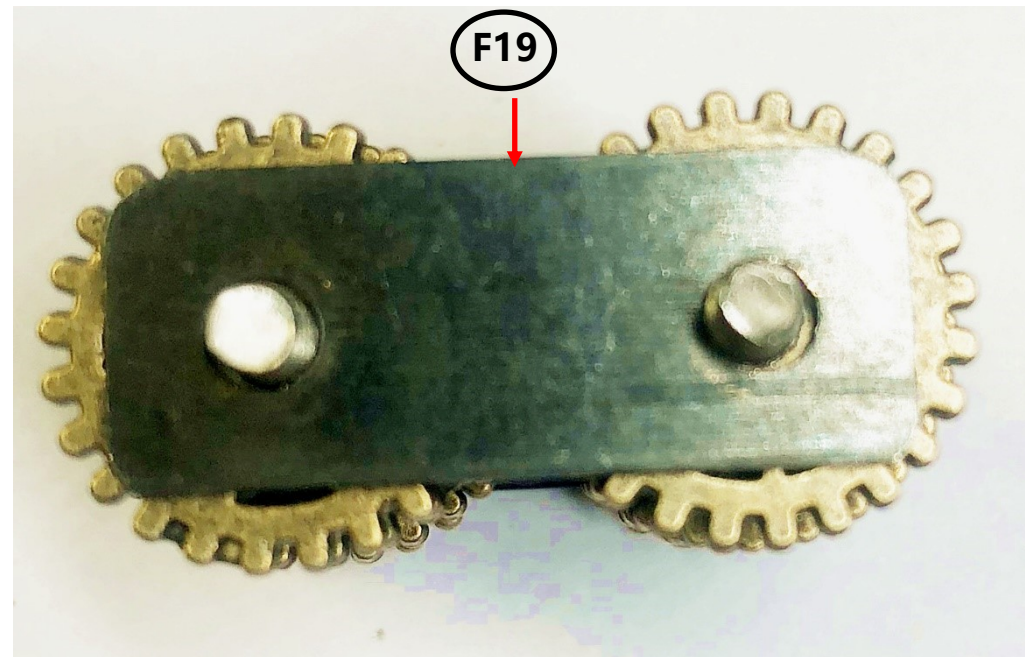
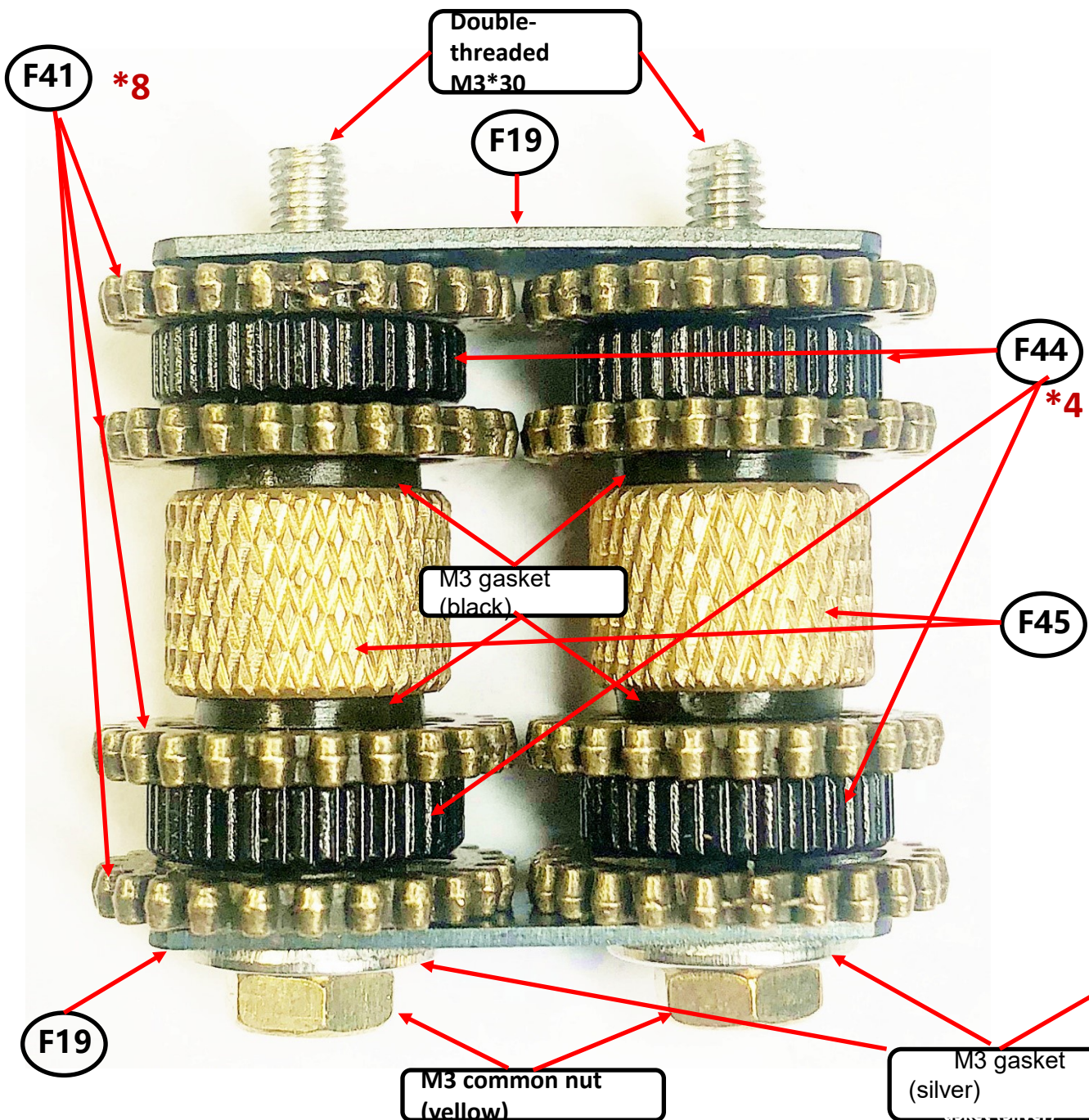


Note: body and head connector

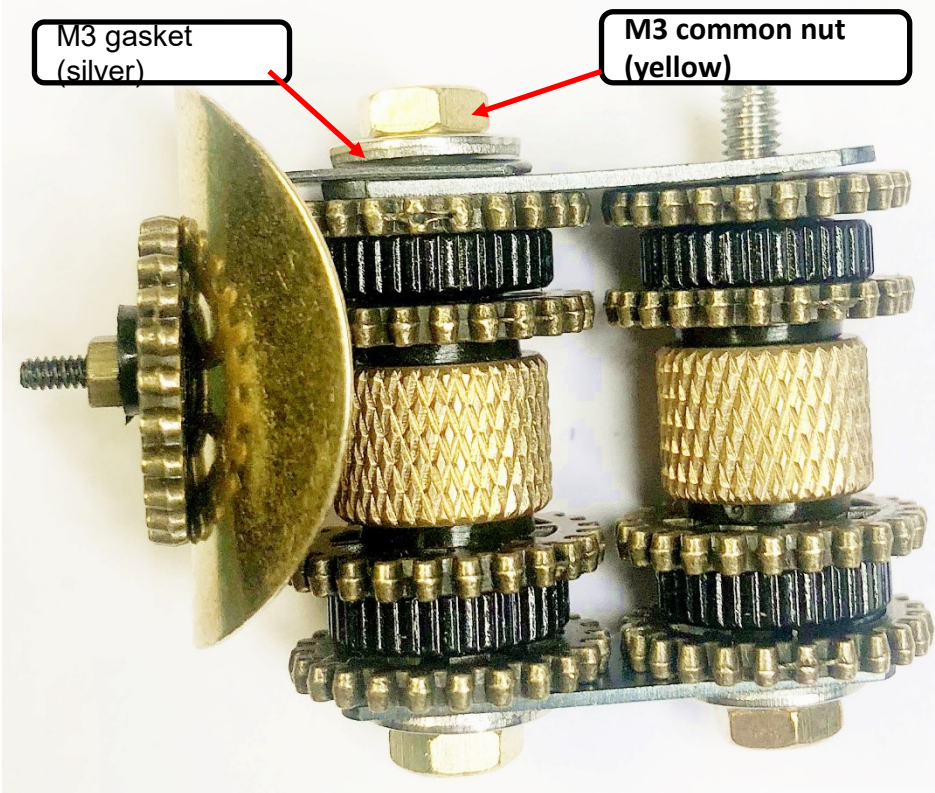


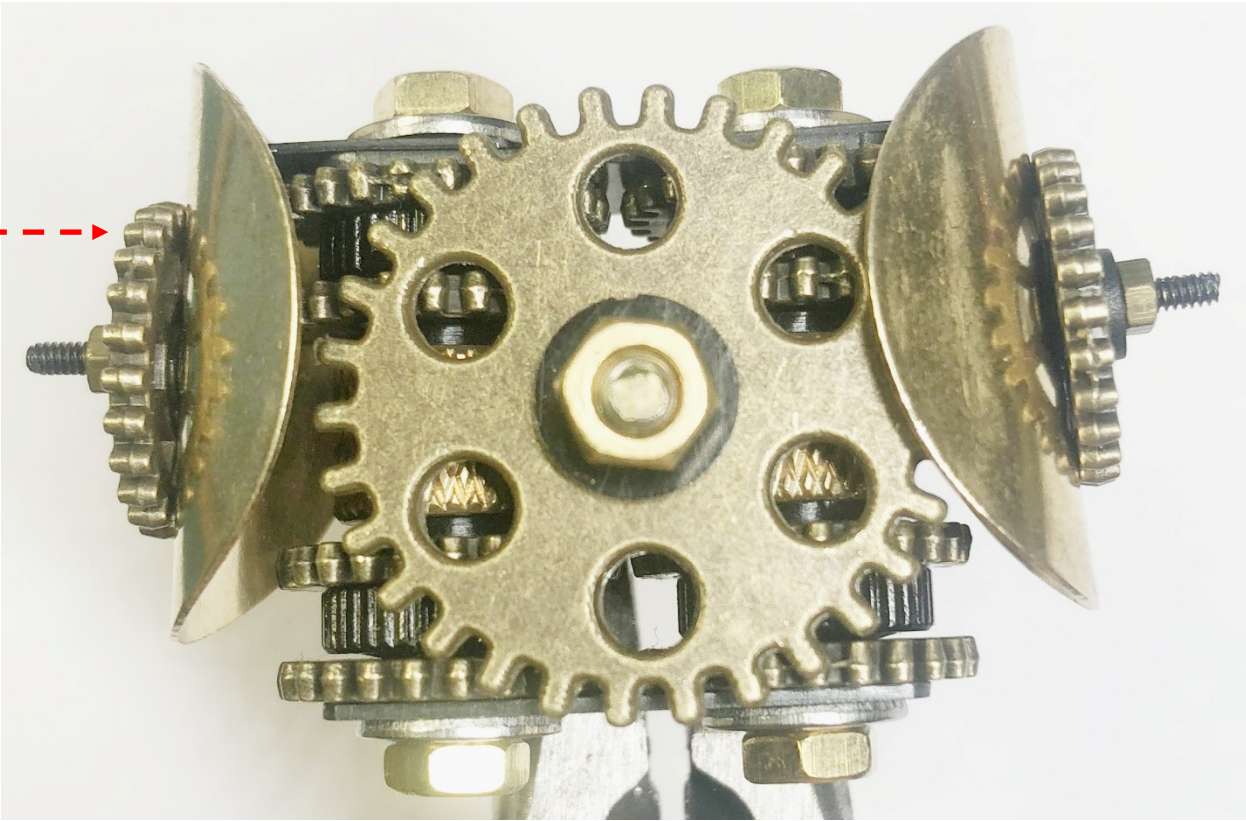
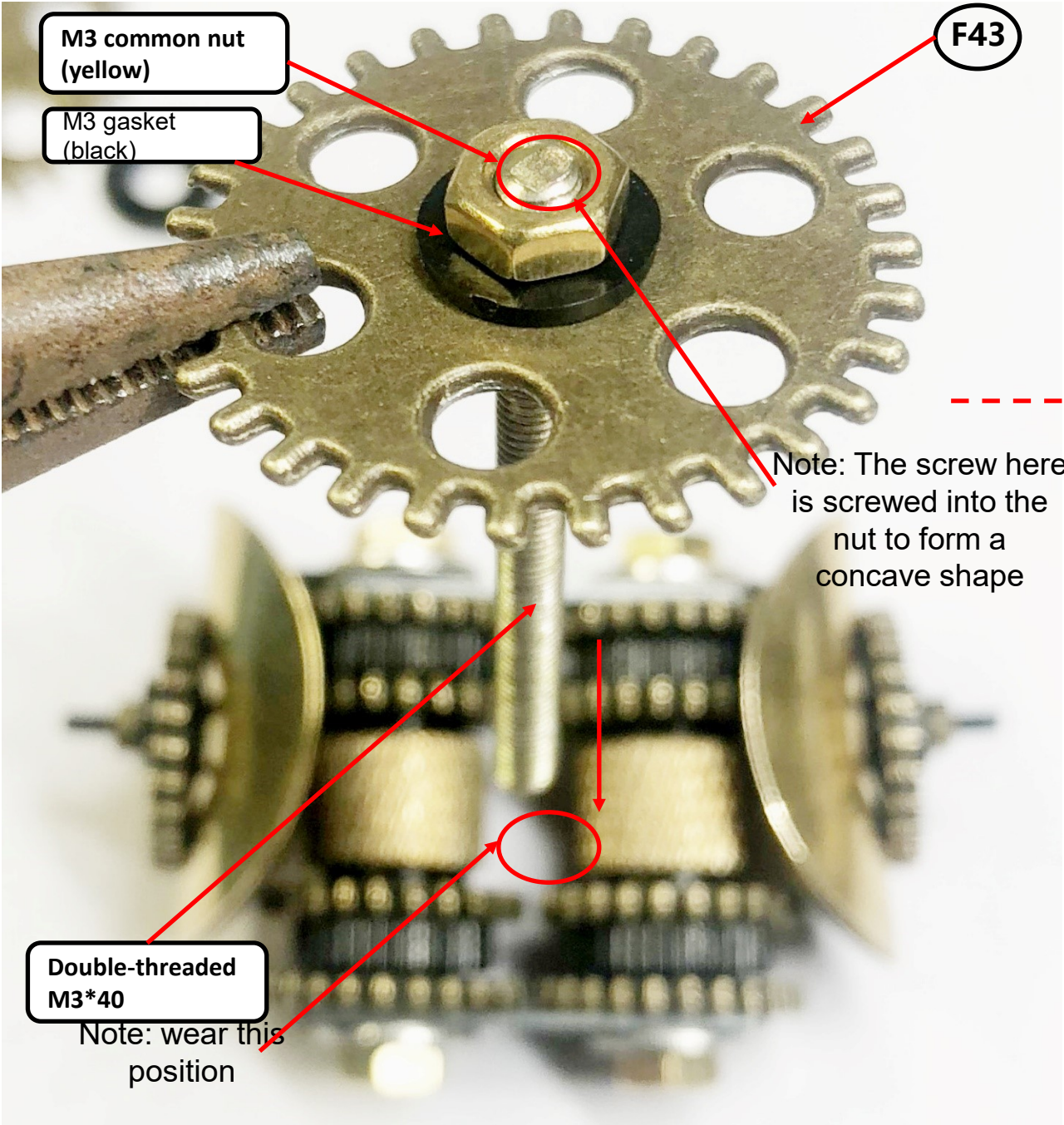
Note: spare after making

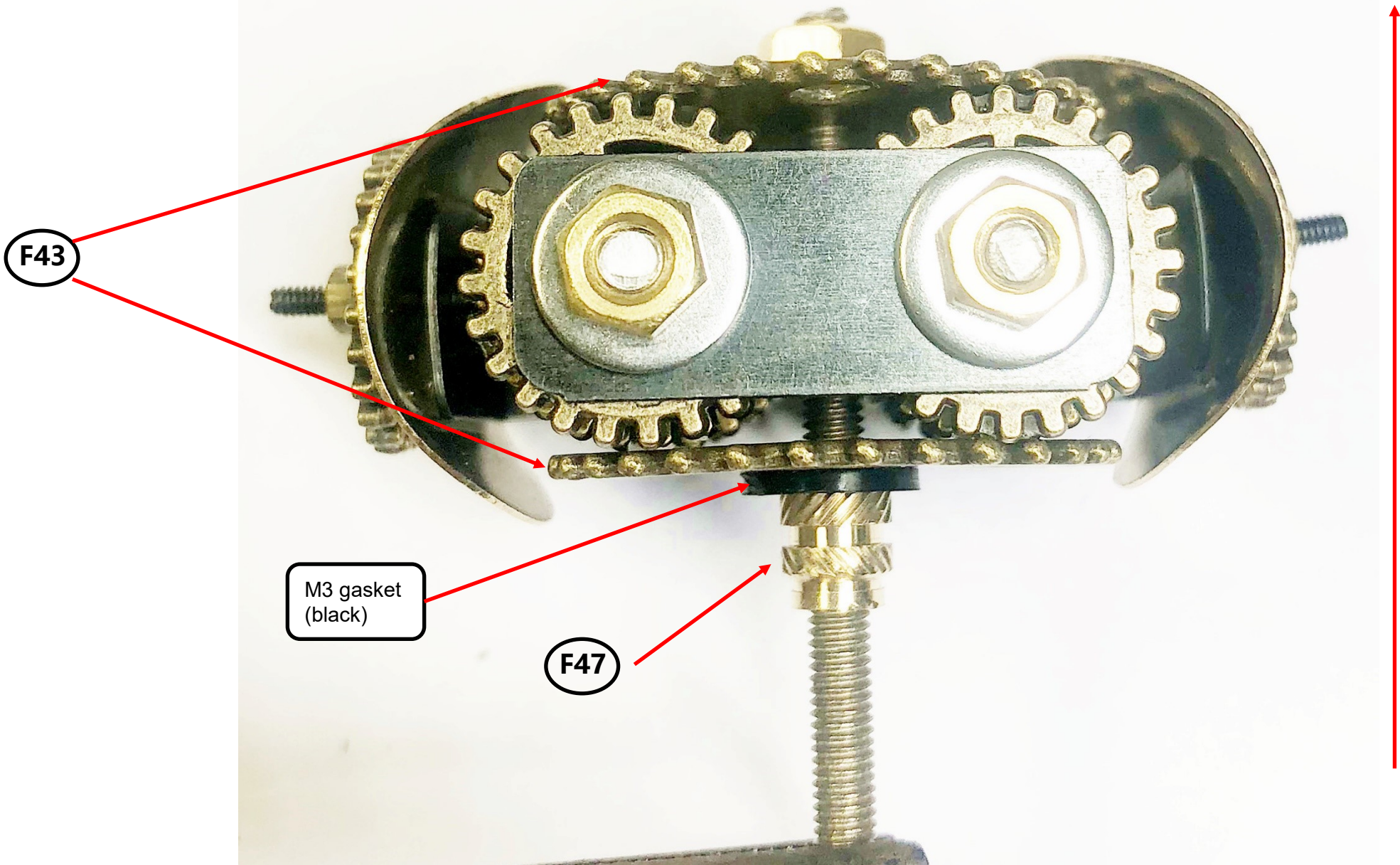






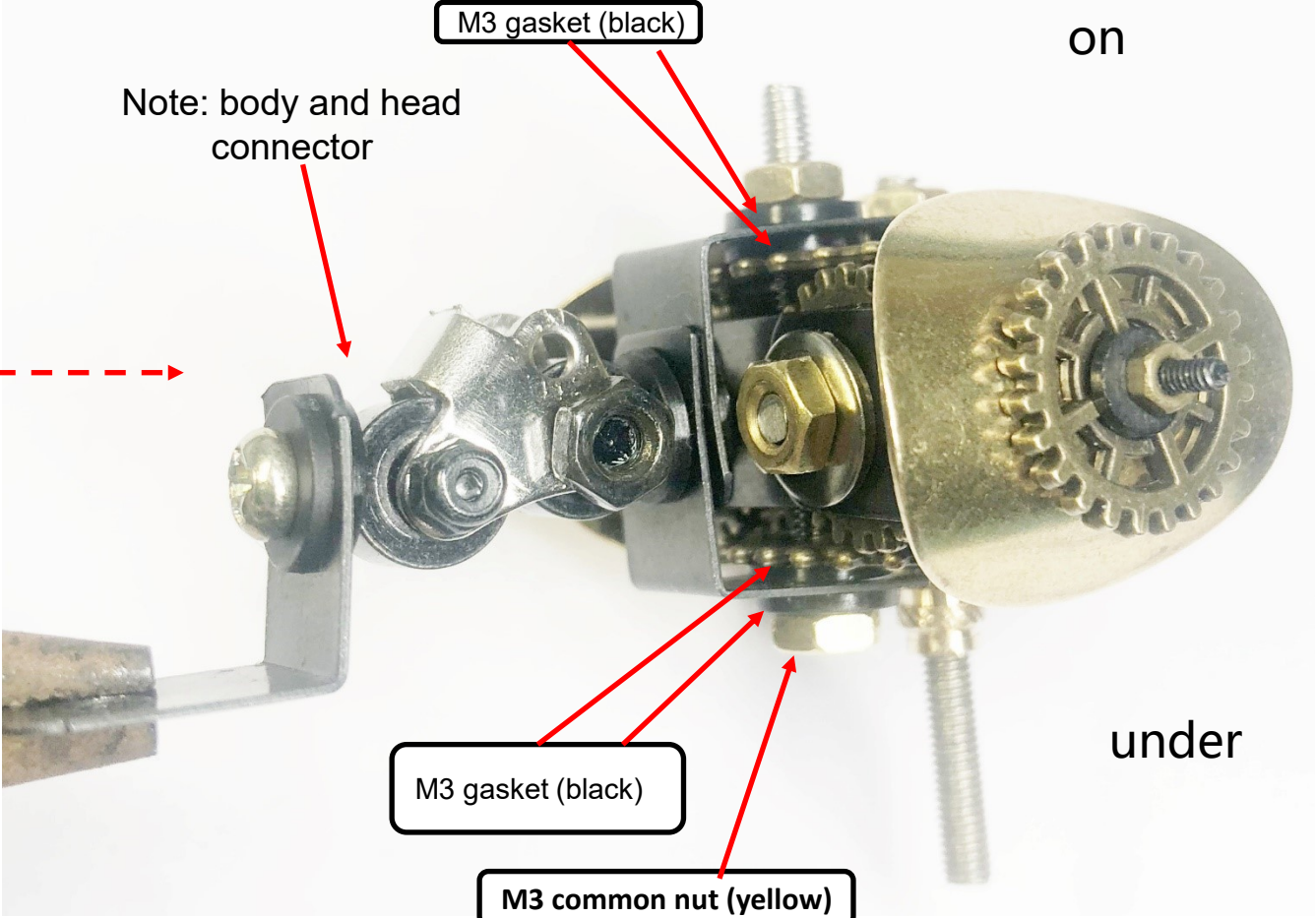
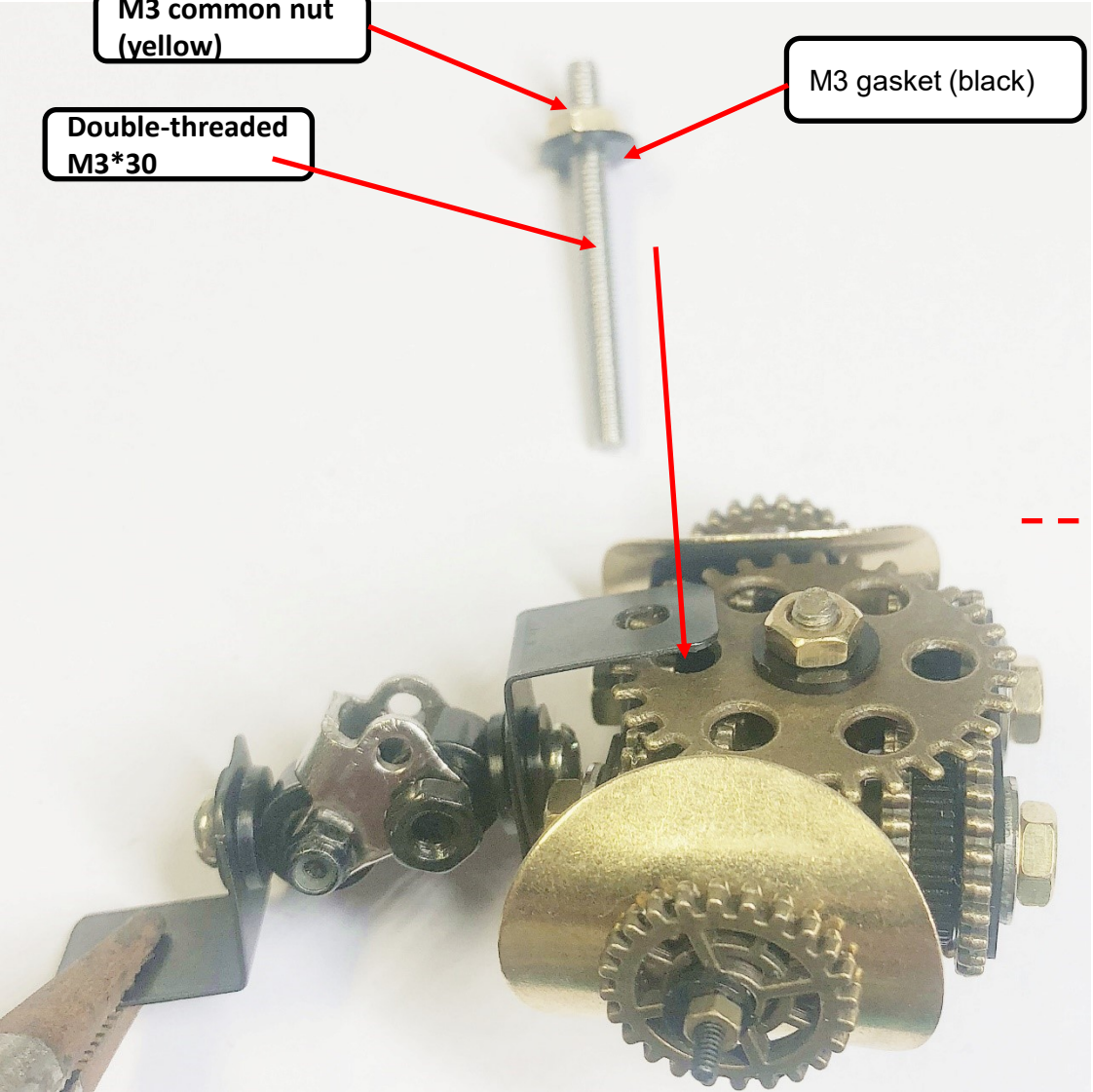


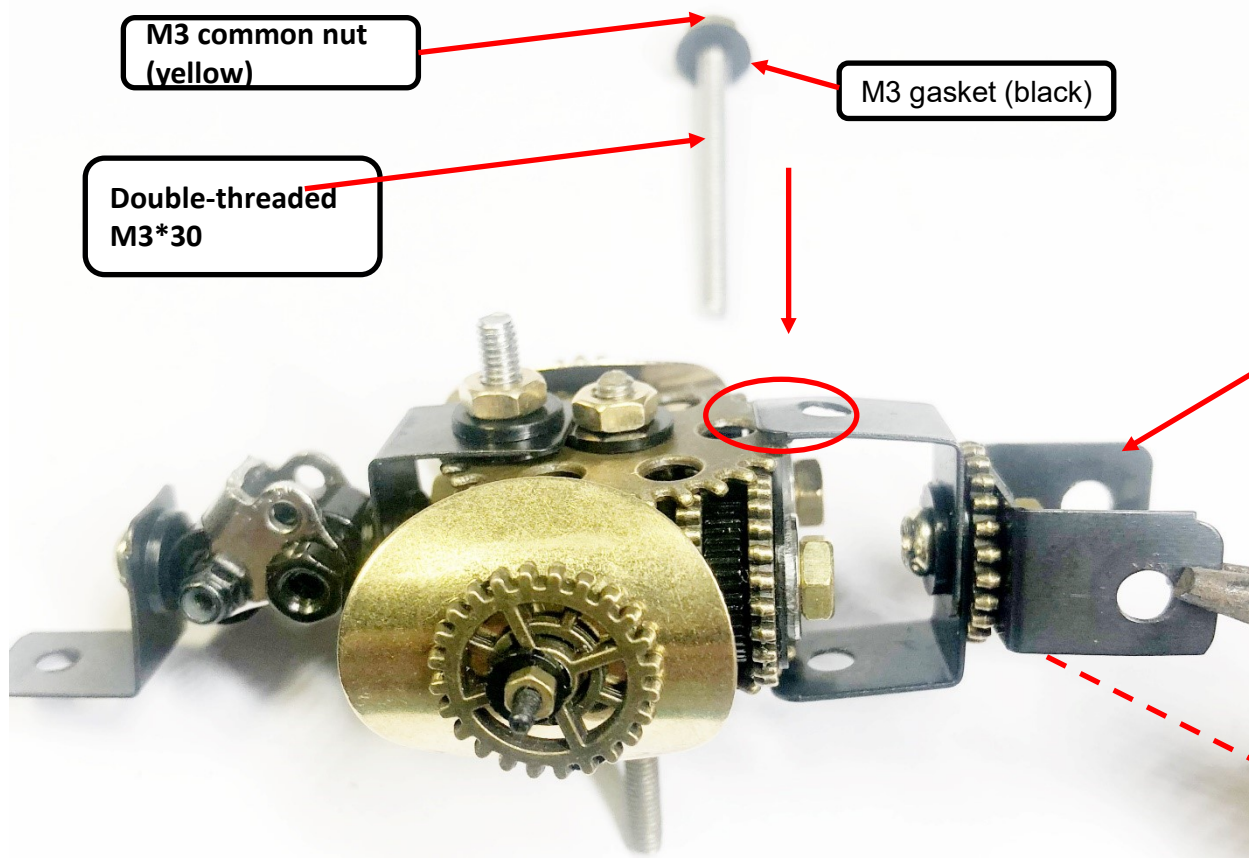




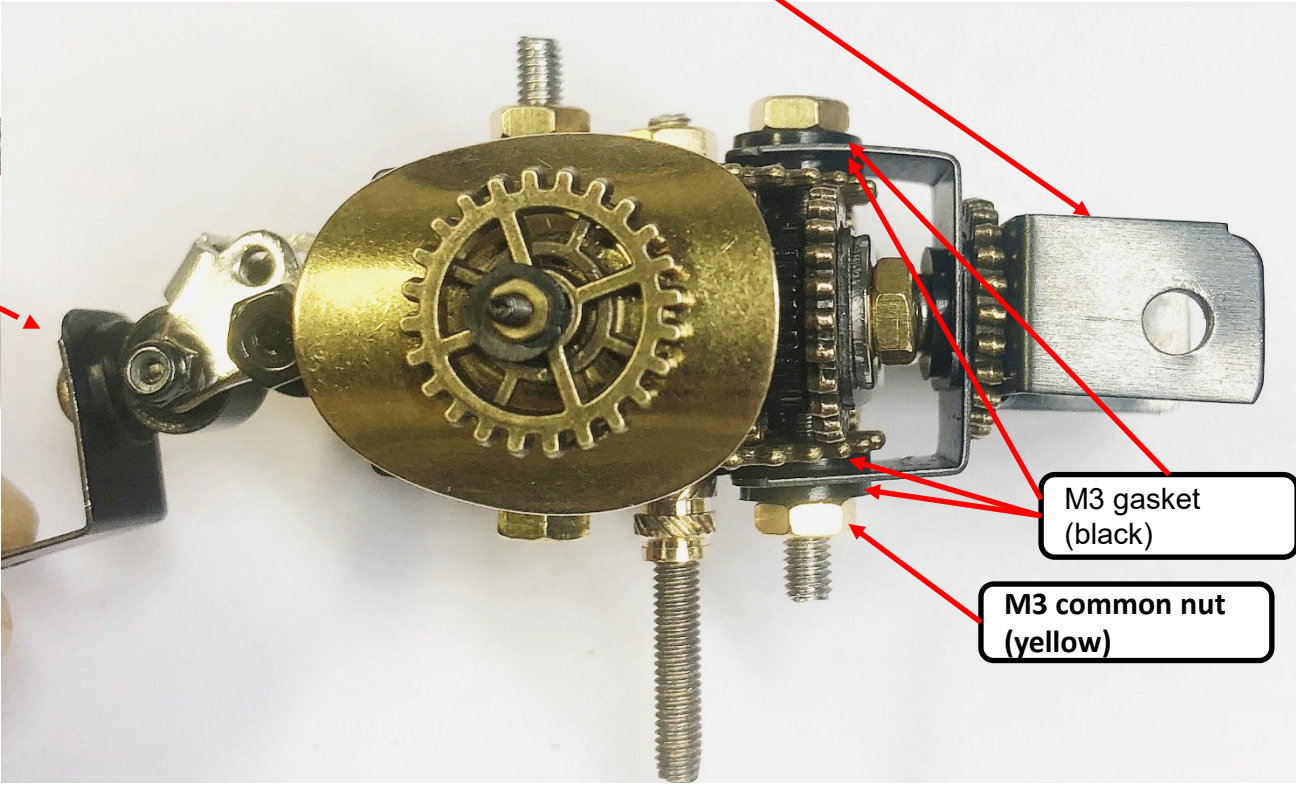
on

under

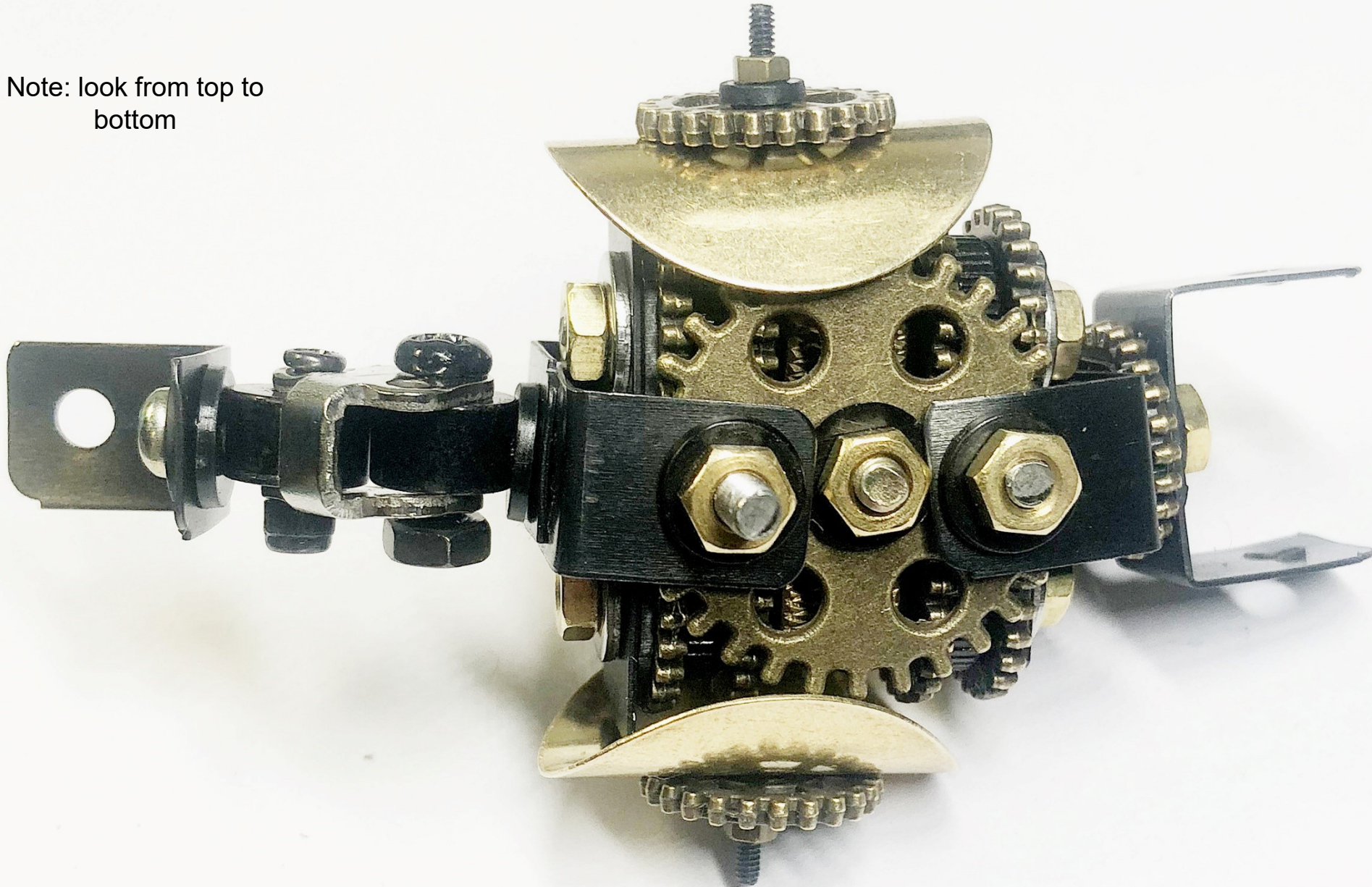


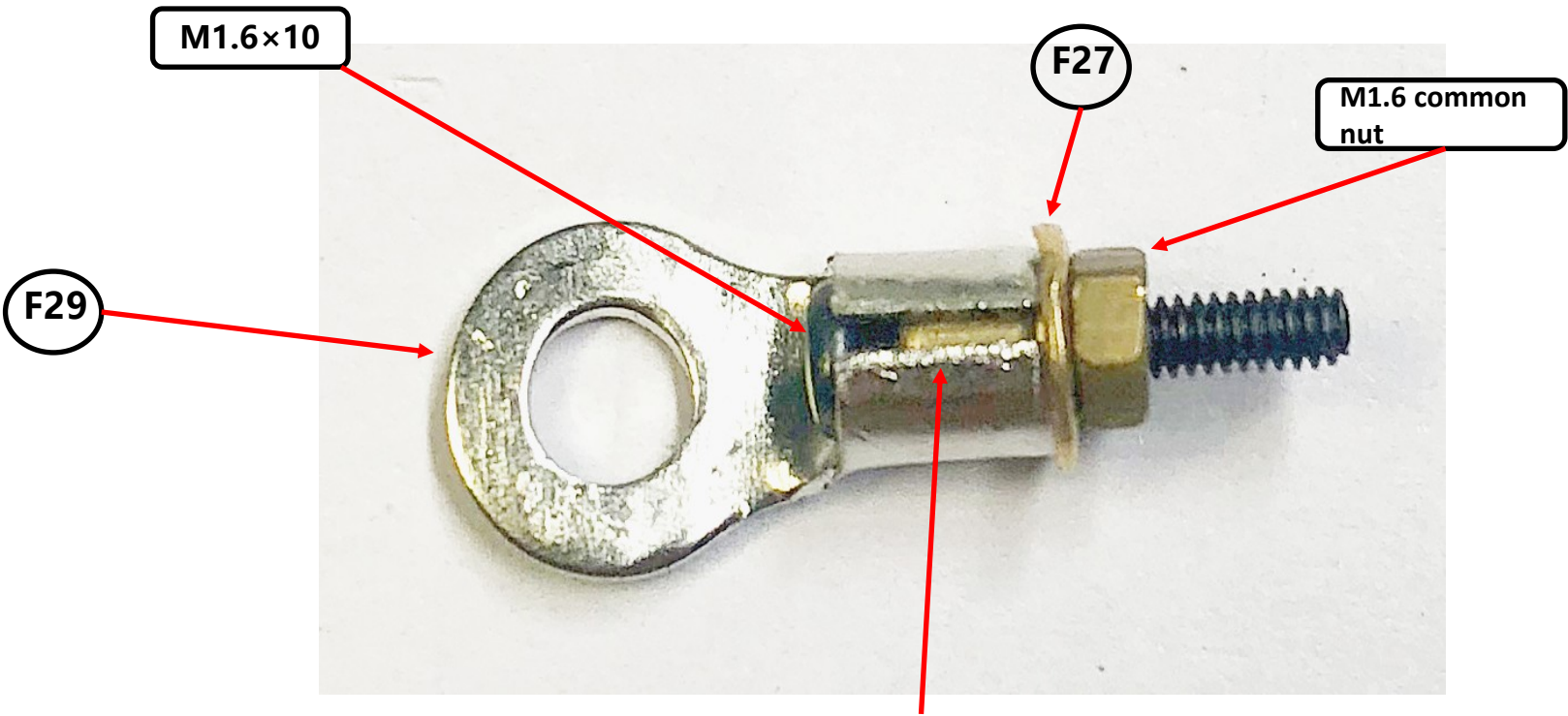


Note: body and belly connector

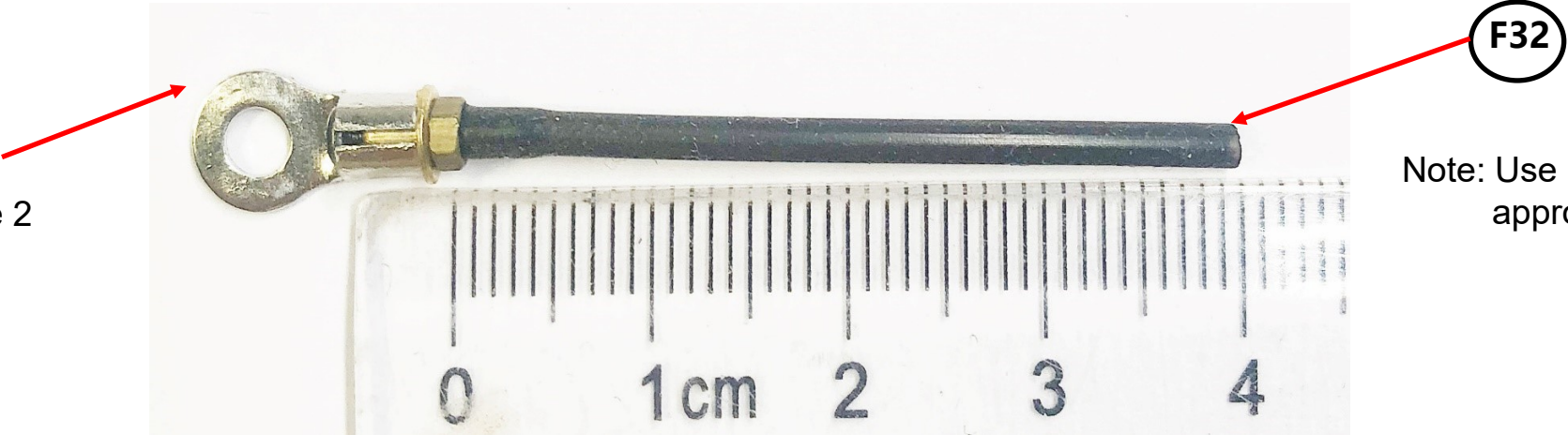


Note: look from top to
bottom





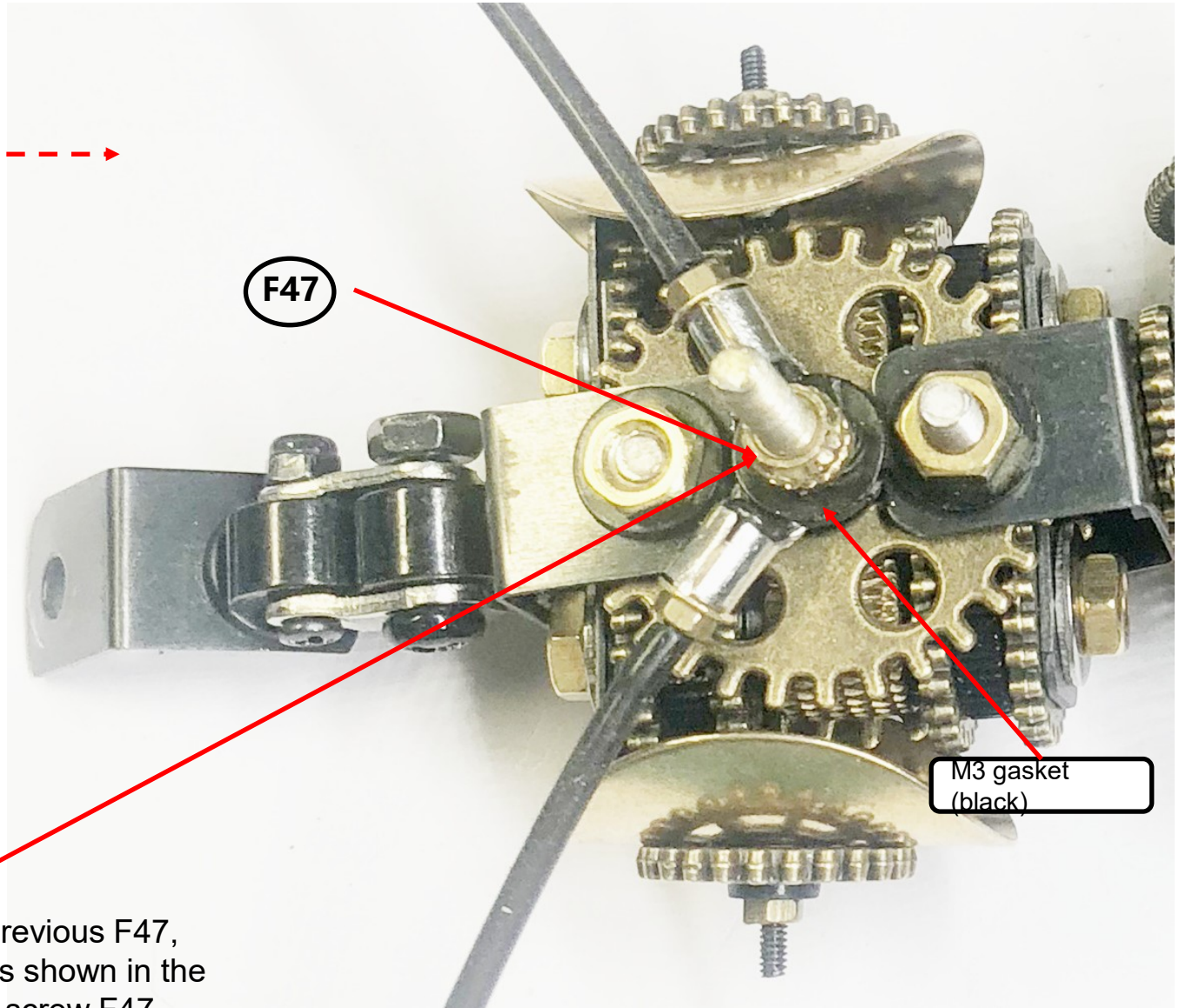
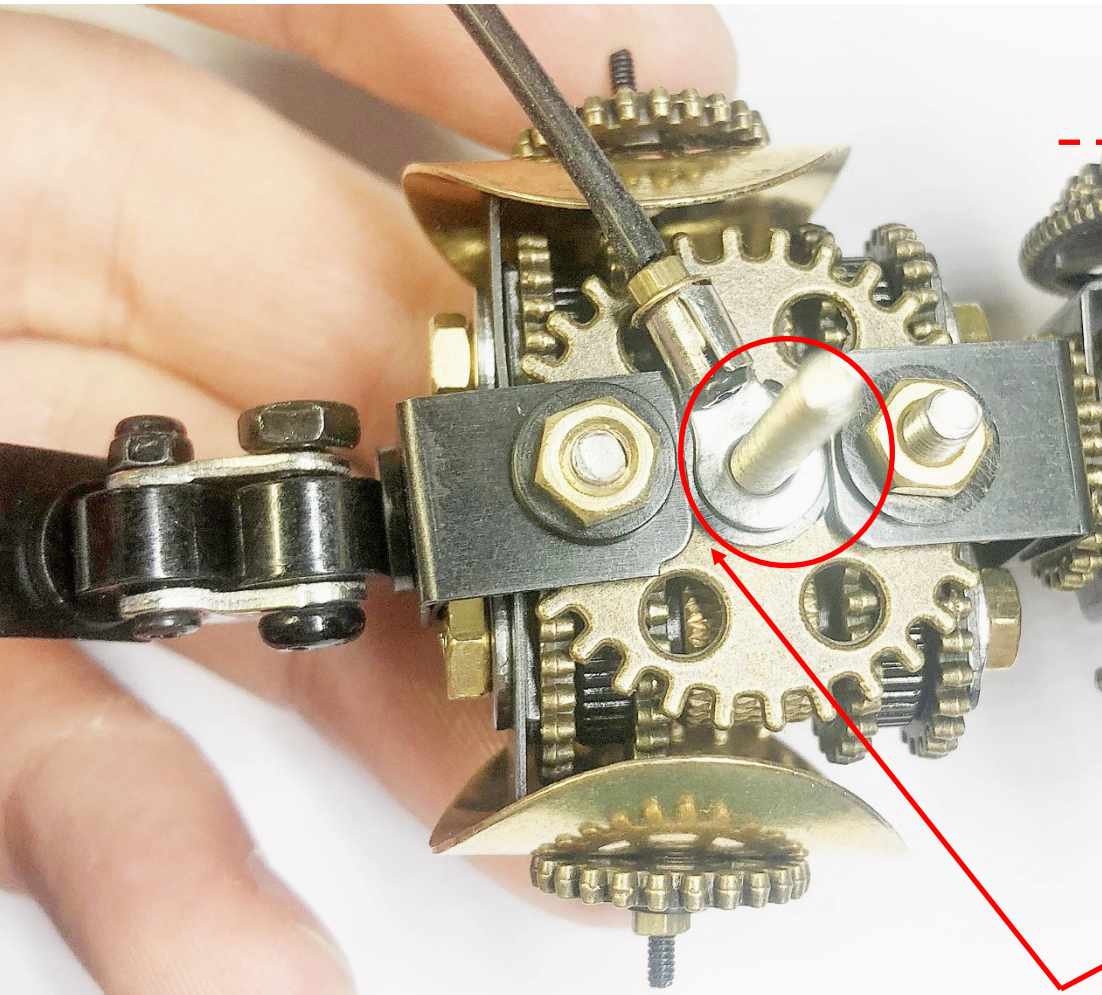
Note: First clamp F29 here with pliers, and then wear M1.6 screws



Note: Make 2

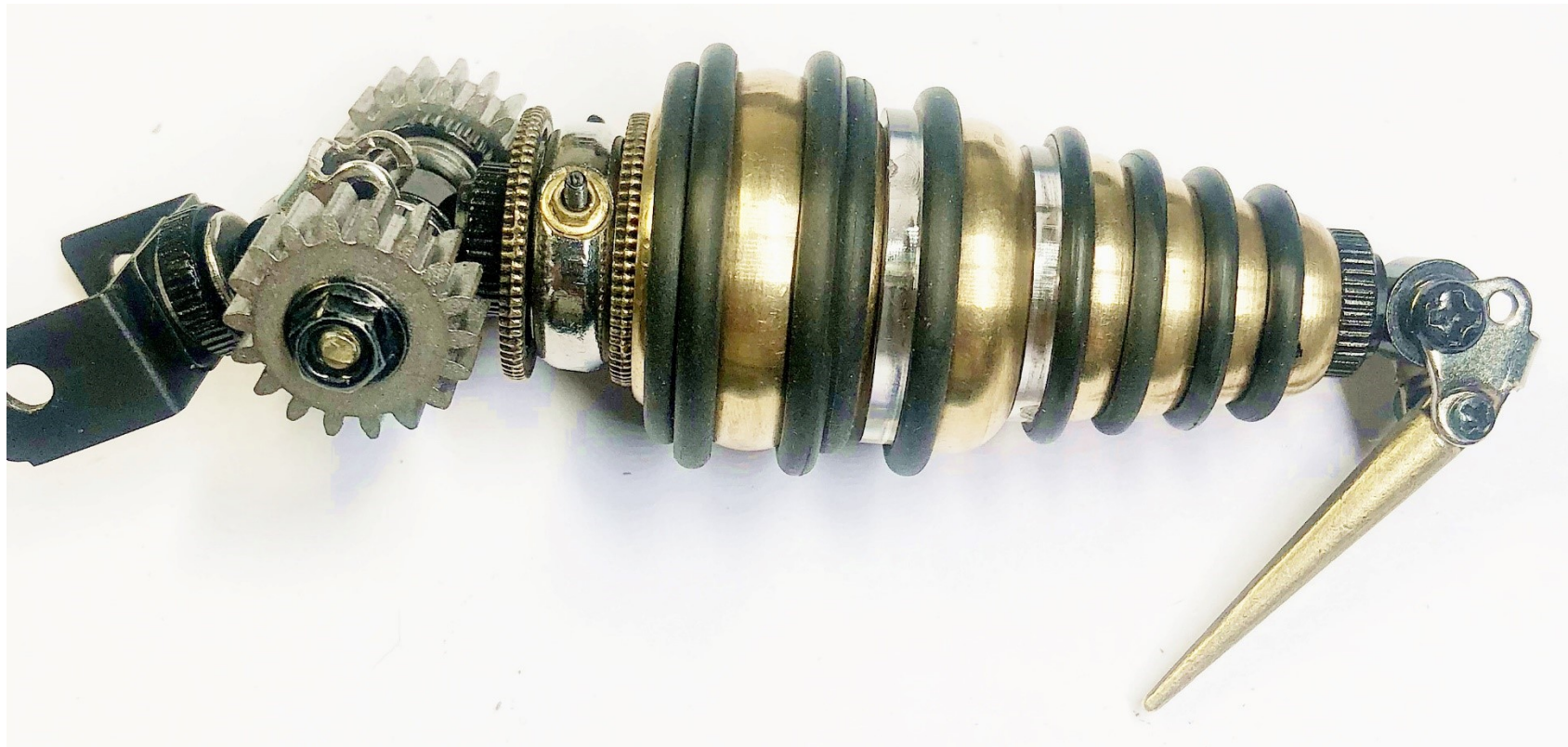
Note: Use needle-nose pliers to cut F32 approximately 4cm in length

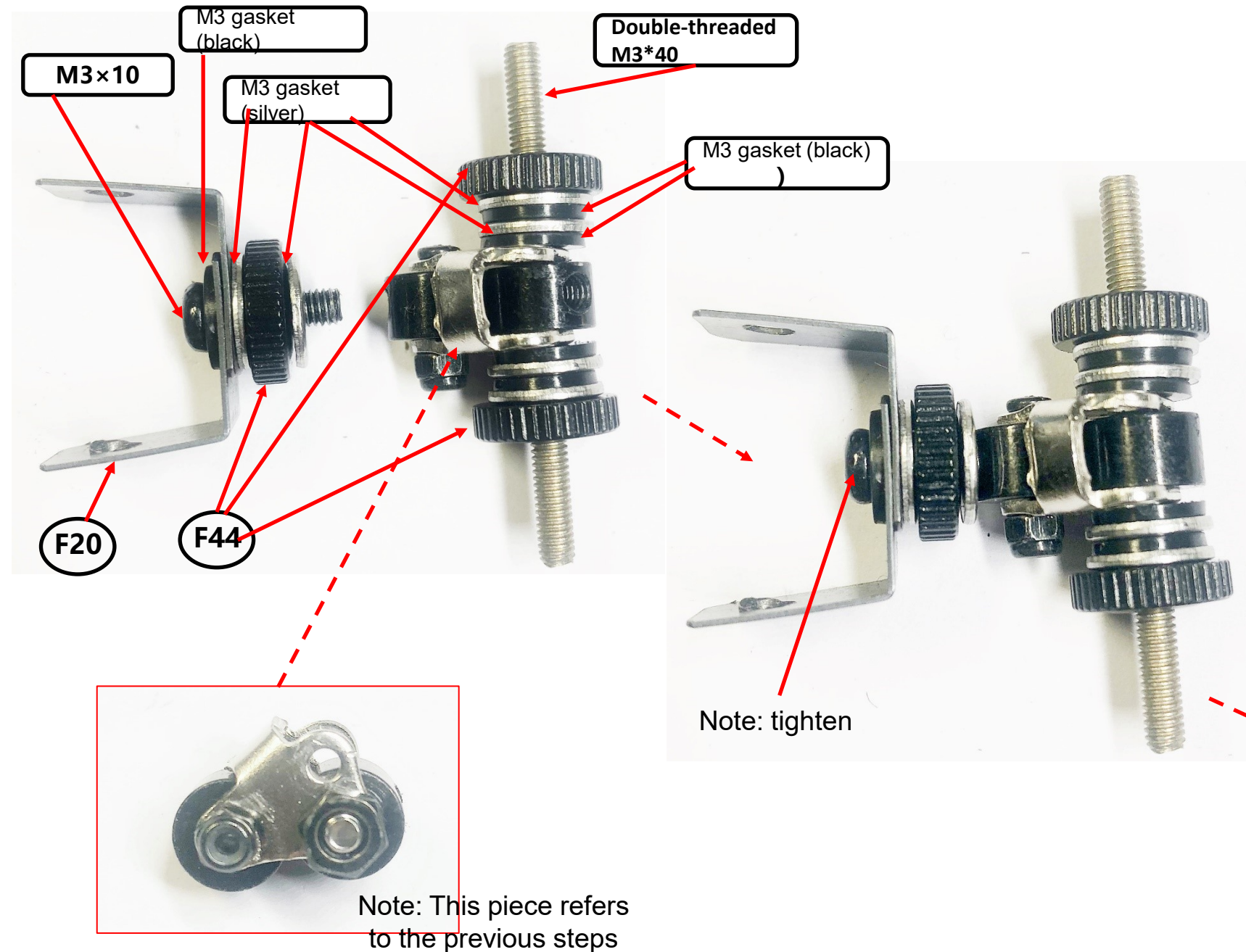
Note: below the body



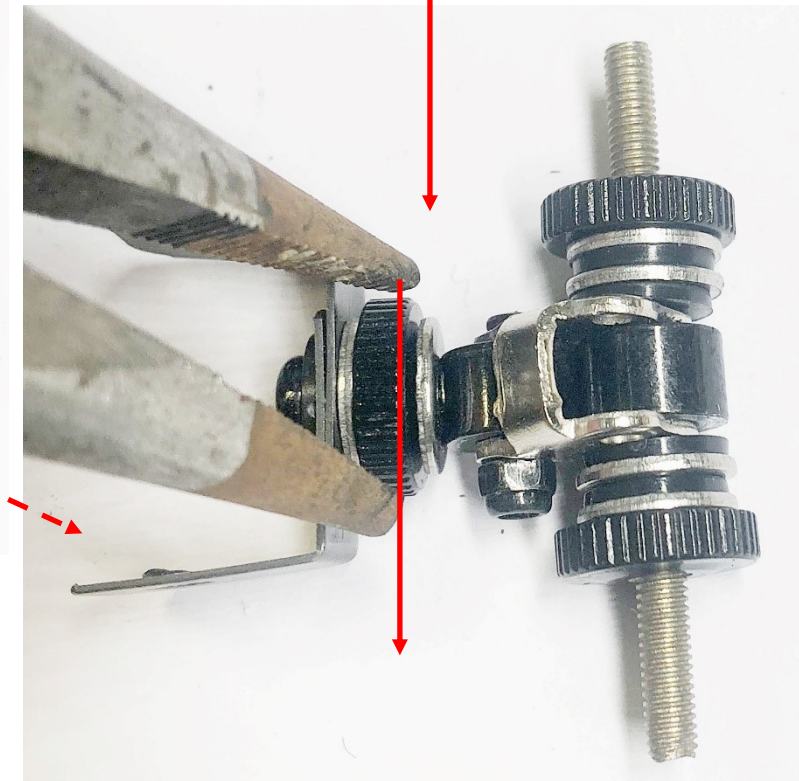
Note: Unscrew the previous F47,
install the 2 oil pipes as shown in the
figure, and then re-screw F47

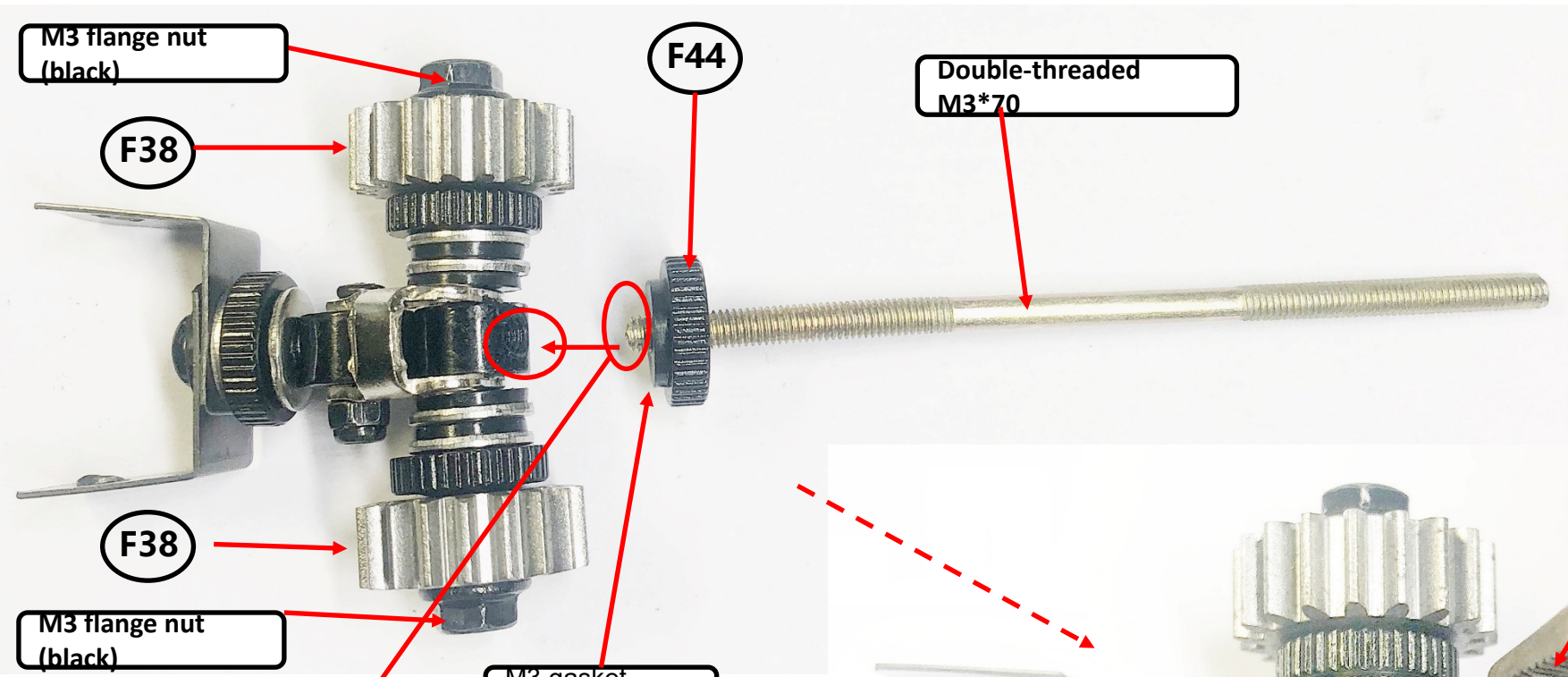
Congratulations, the body assembly is completed
Next part: 3. Belly assembly



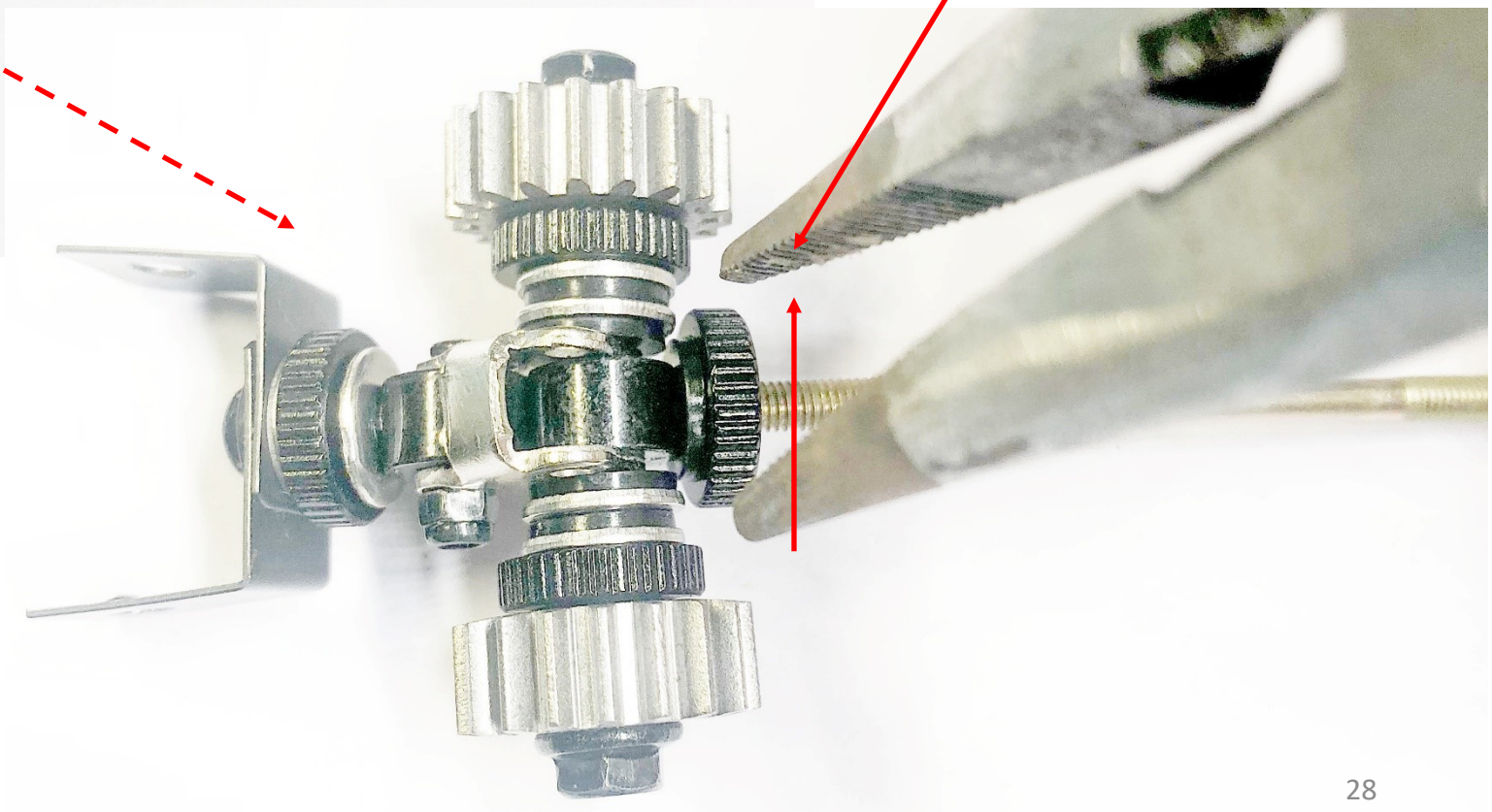


Note: Remember to use pliers to clamp F44 parts and tighten them in the direction of the arrow in the figure



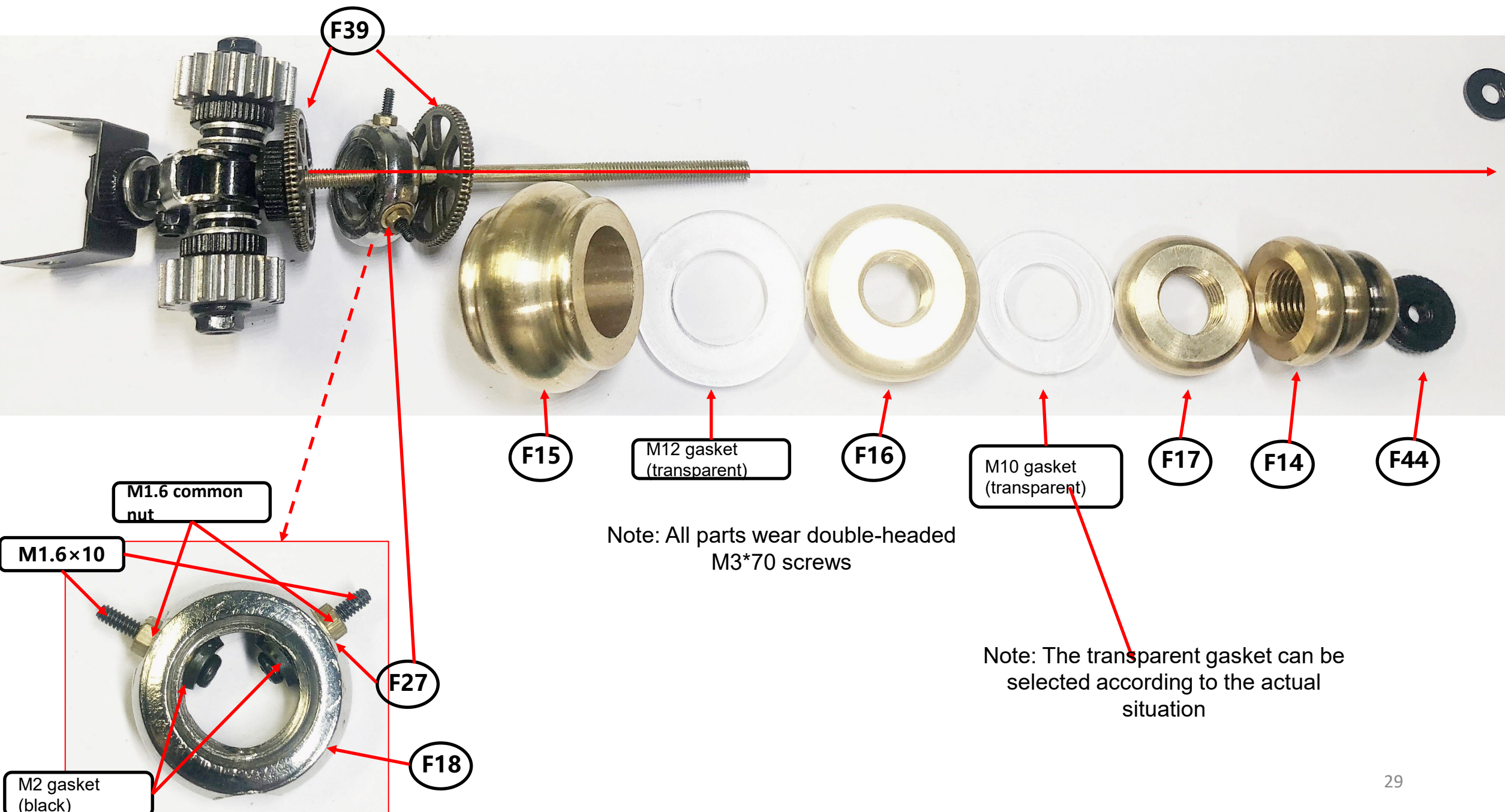


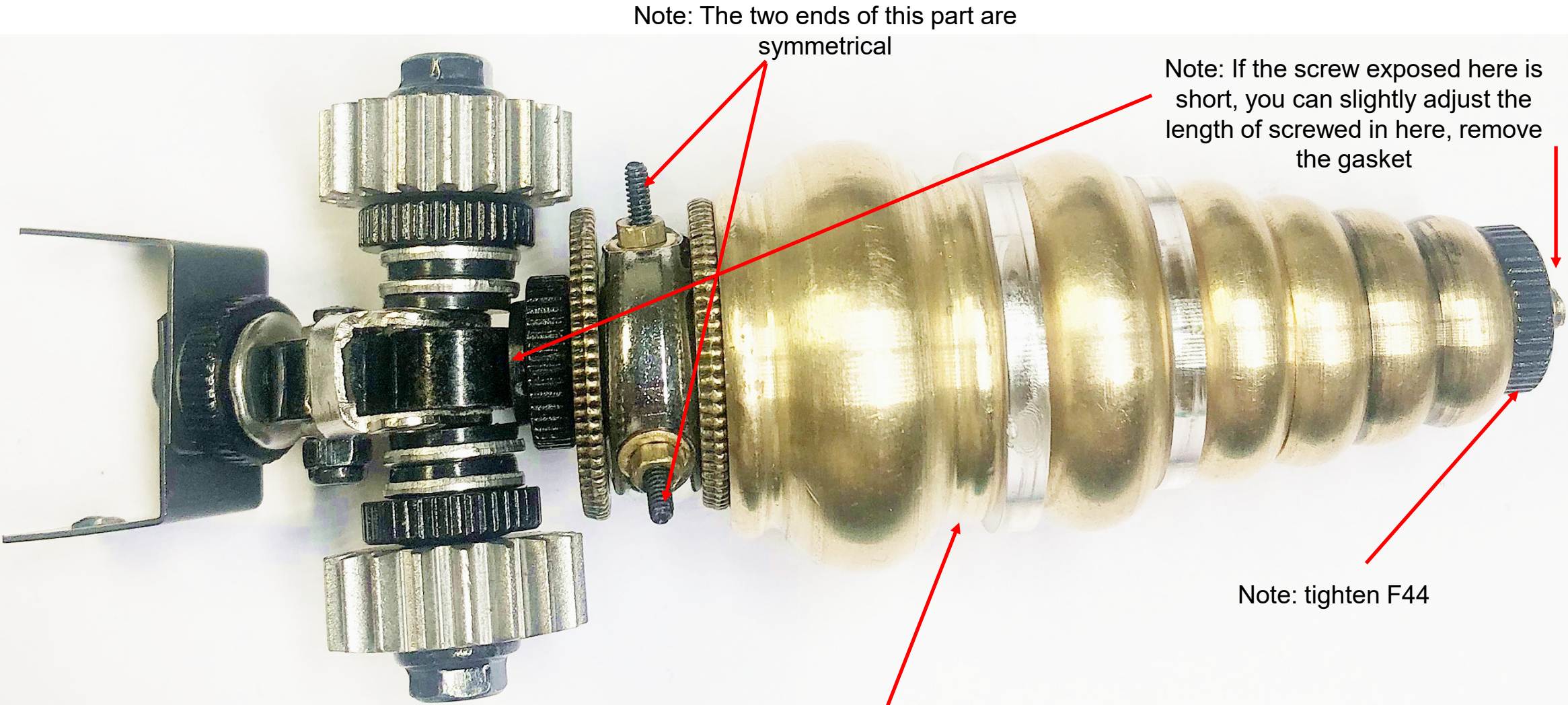
Note: Remember to use pliers to clamp F44 parts and tighten them in the direction of the arrow in the figure



M3 gasket (black)
Note: The gasket here can be removed according to the situation

Note: The screw head only needs to be exposed here, about 2mm, and can be screwed into F46. Do not screw in too much, otherwise the subsequent tail needles may be difficult to screw on





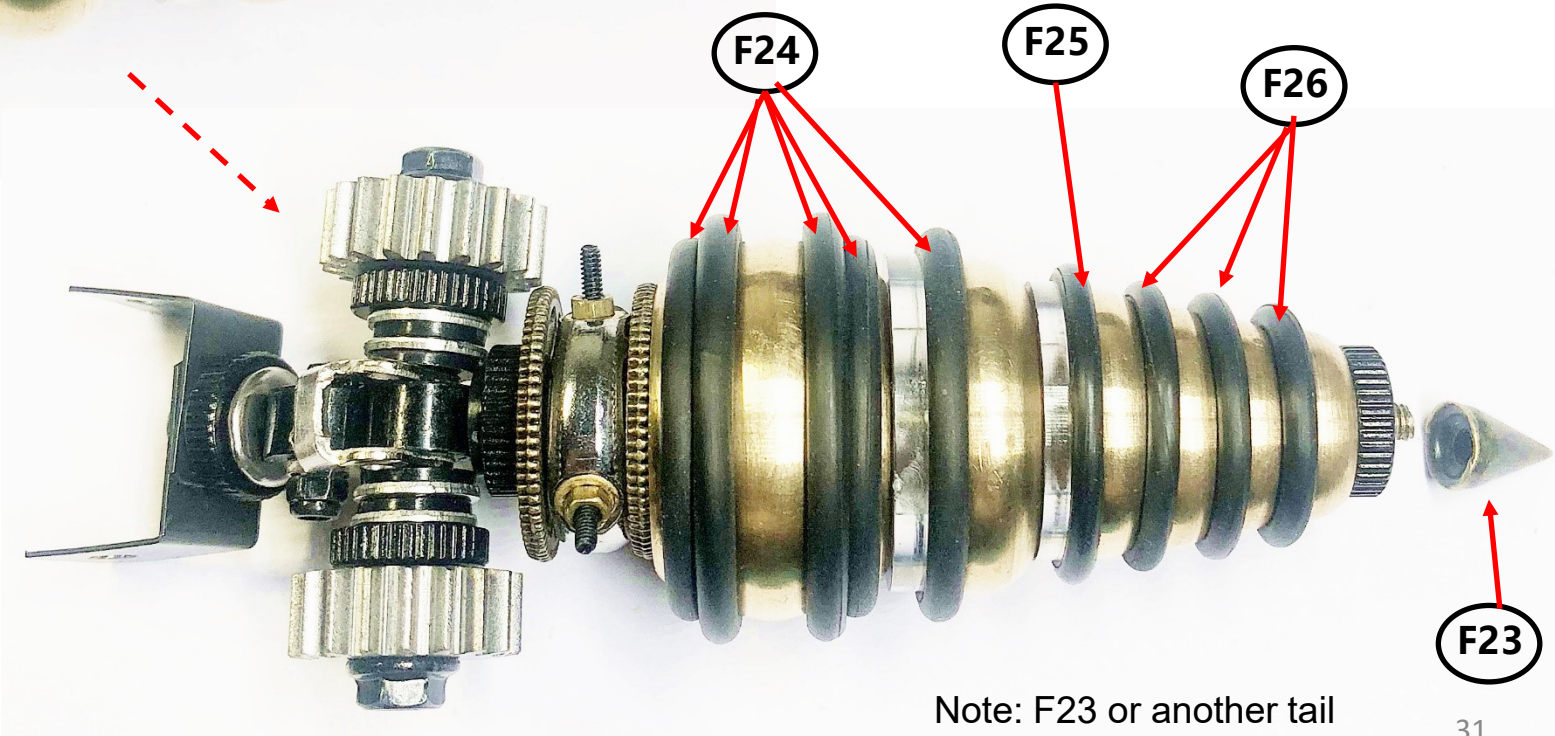
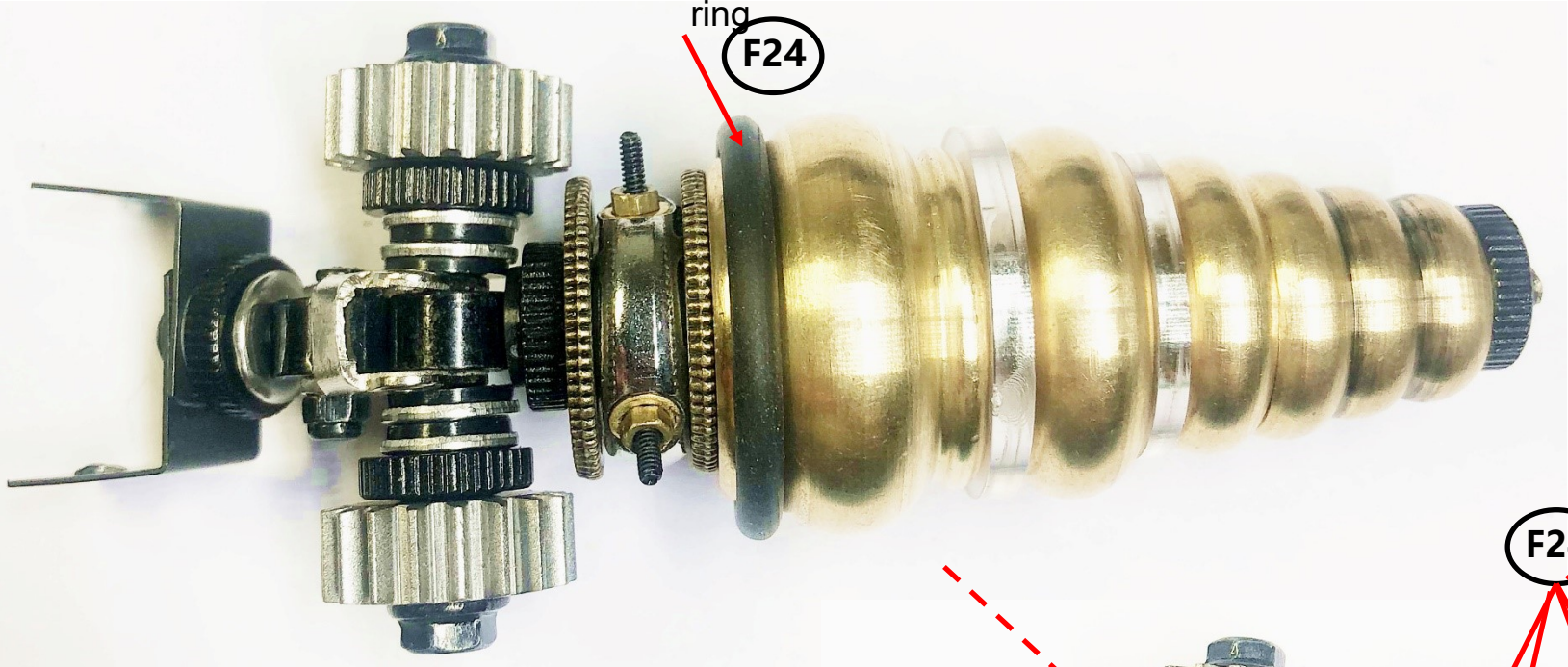
Note: The two ends of this part are symmetrical

Note: If the screw exposed here is short, you can slightly adjust the length of screwed in here, remove the gasket

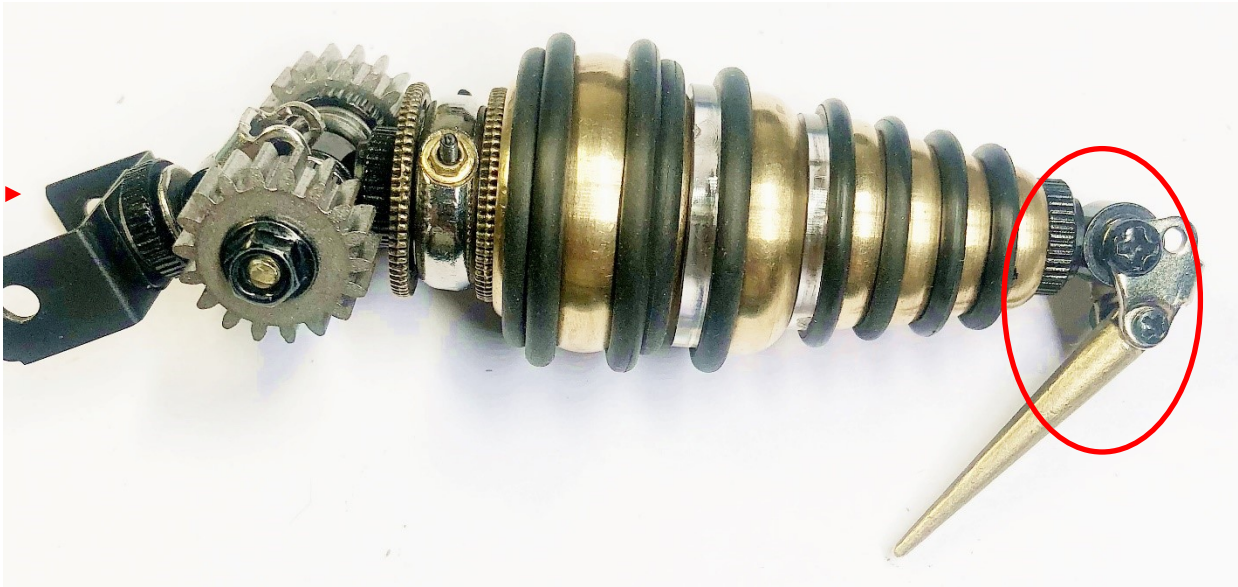
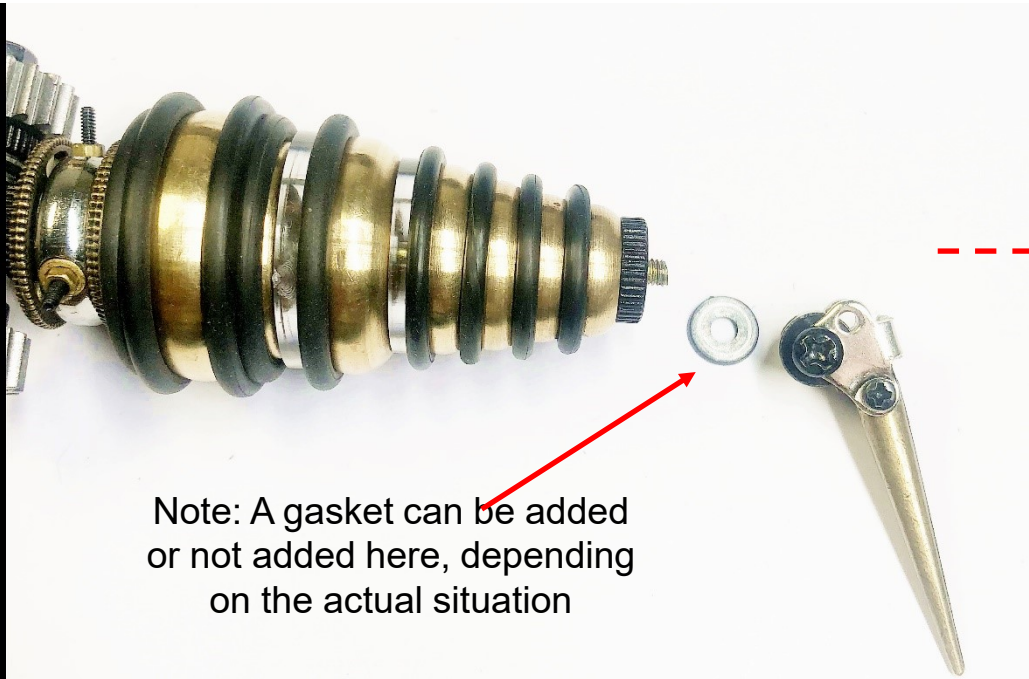
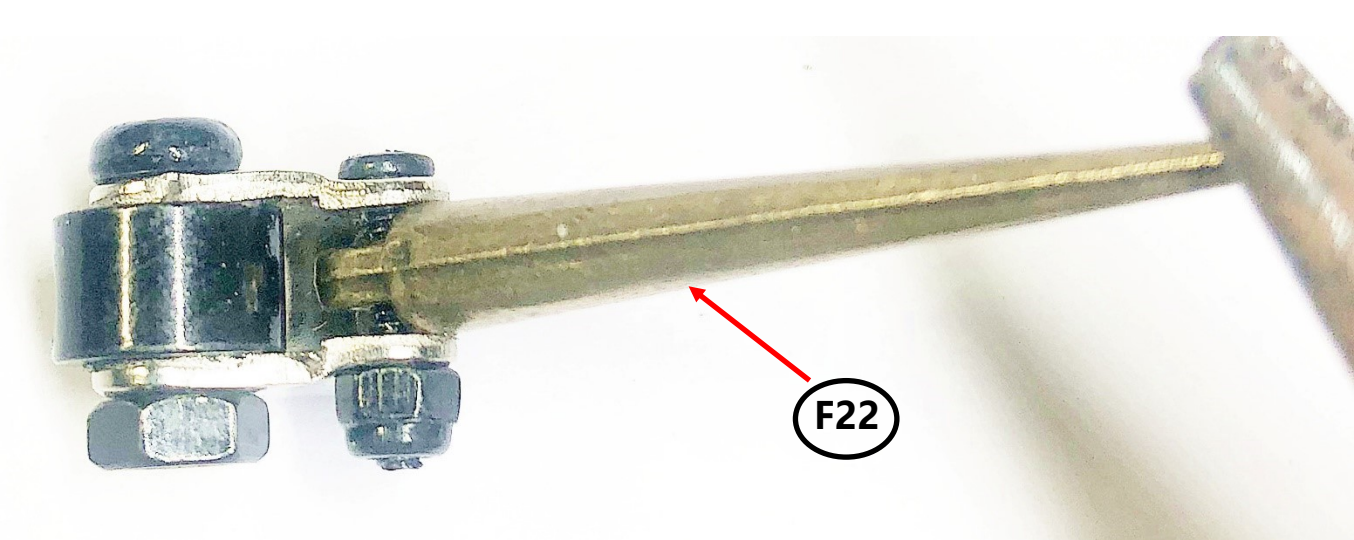
Note: tighten F44

Note: Adjust all parts in a straight line

Note: Put on the rubber
ring



Note: F23 or another tail
needle can be screwed



Congratulations, the belly assembly is completed
Next part: 4. Leg assembly



M3×10

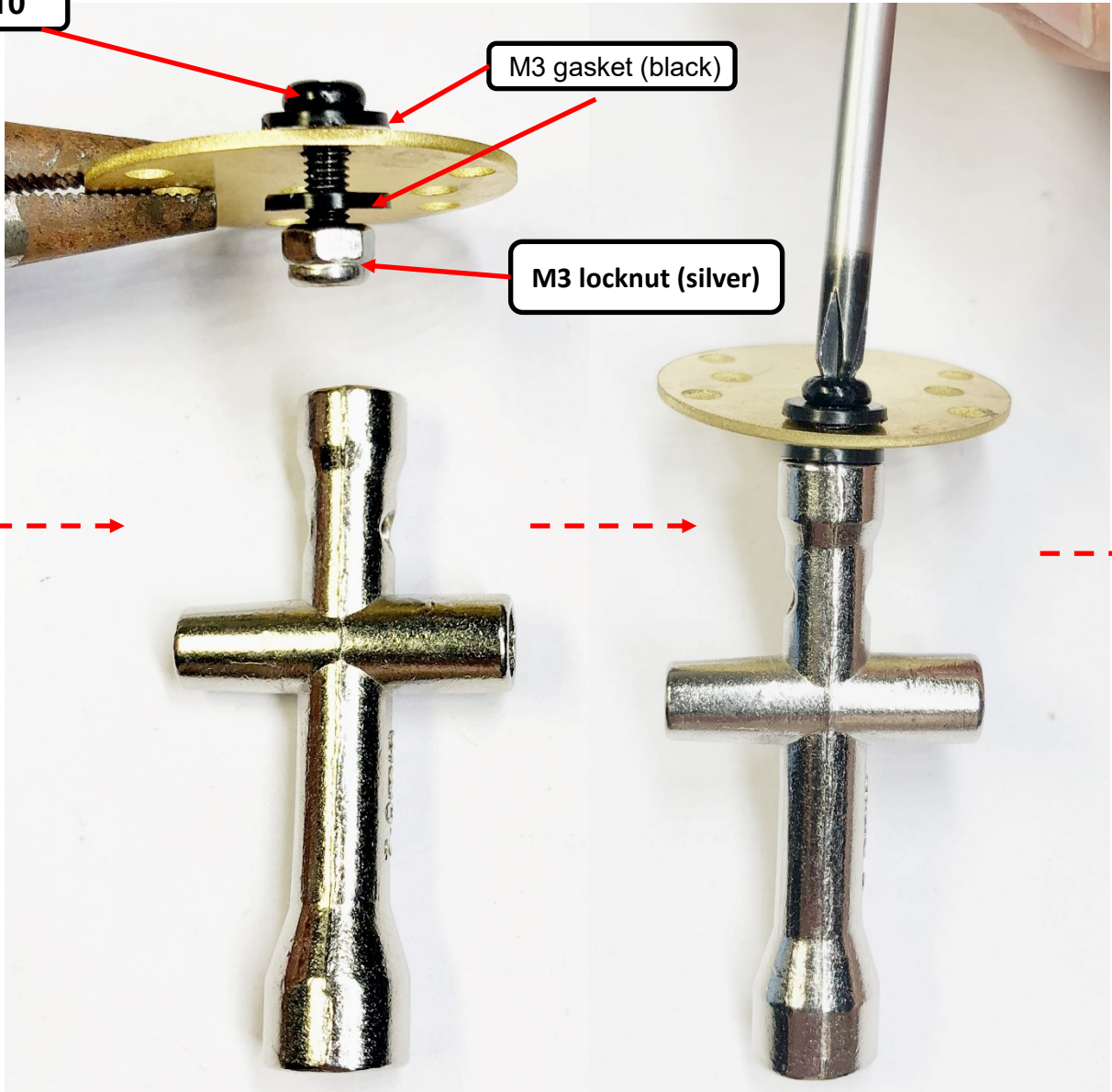
M3 gasket (black)

M3 locknut (silver)

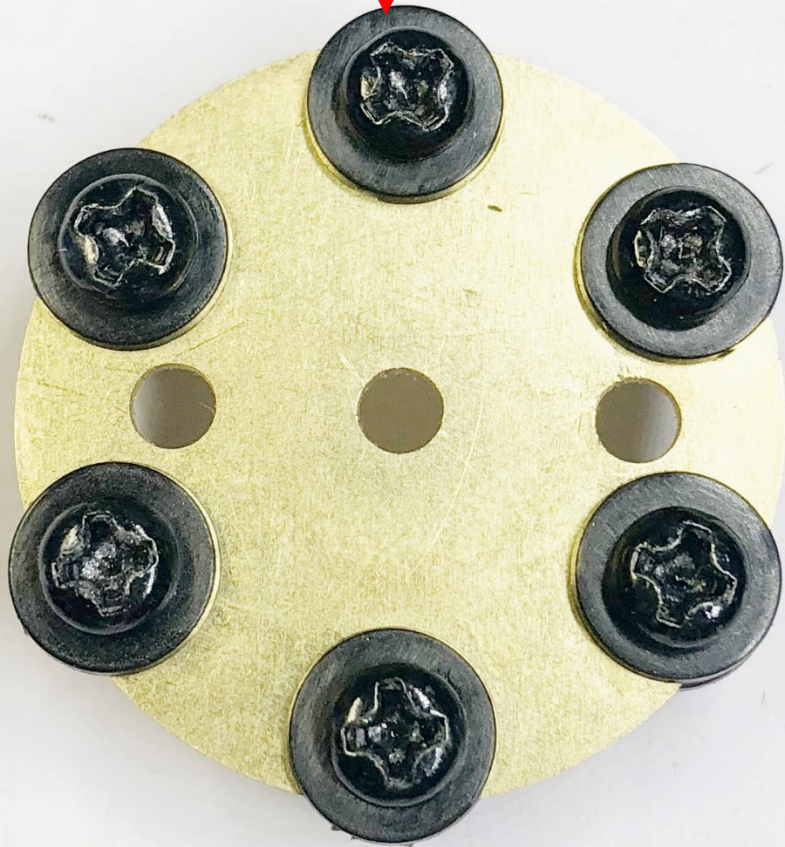
Note: Pay attention to the hole position of F3

F3

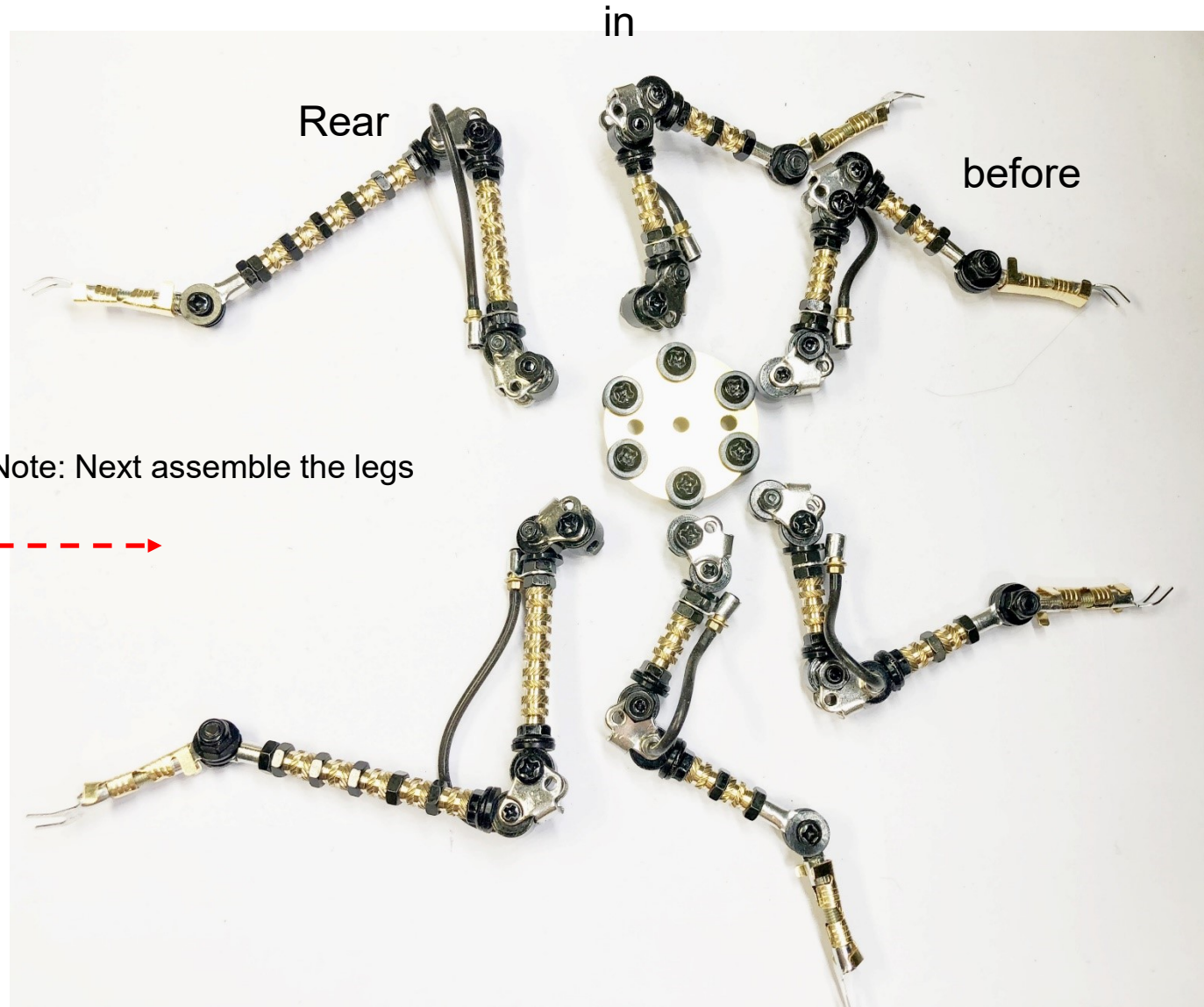
Note: The function of the anti-loosening nut is to prevent loosening, so it is more difficult to tighten the screw.



Note: Assemble according to the
above method as follows

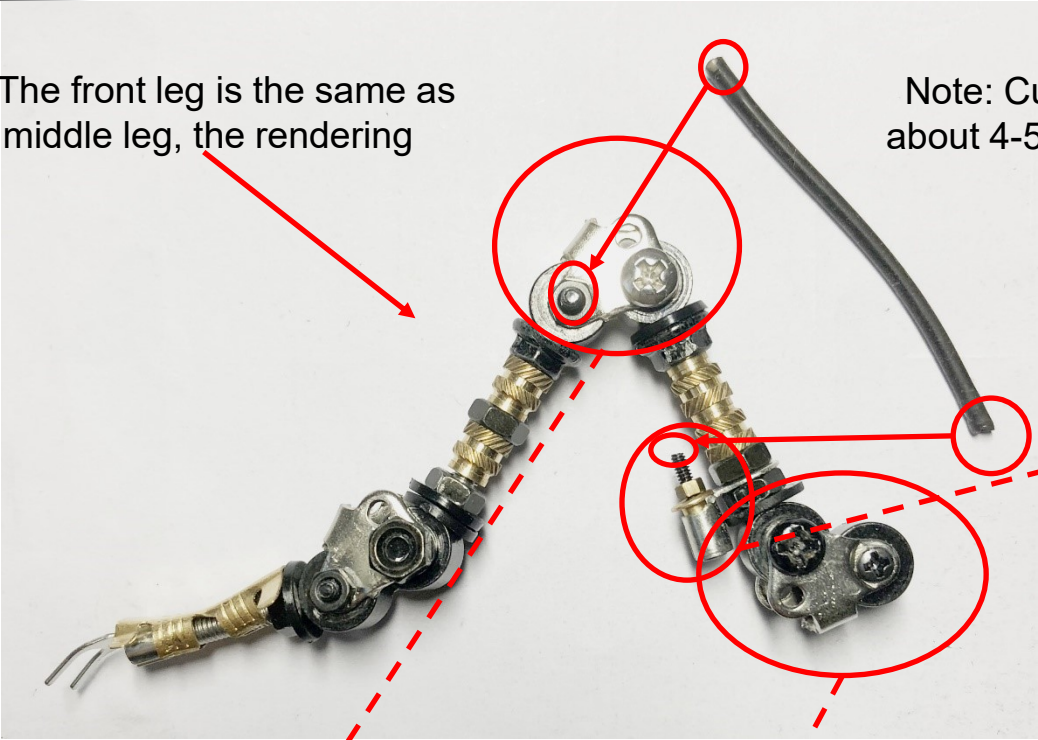


Note: Next assemble the legs



Note: The front leg is the same as the middle leg, the rendering

Note: Cut a suitable length of hose, about 4-5cm Insert the corresponding interface



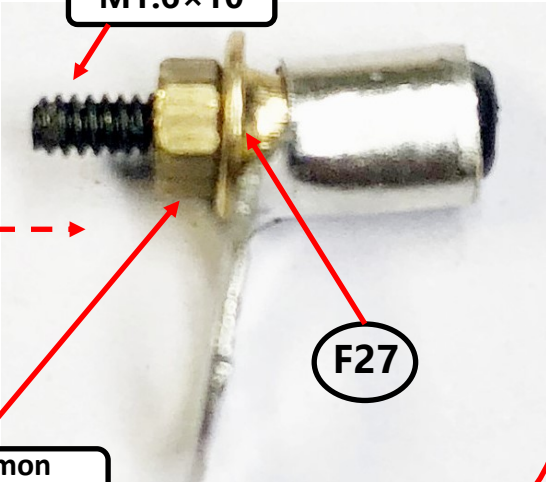
F29



Note: Clamp this place with needle-nose pliers and bend it as follows



M1.6×10



F27

M1.6 common nut

M2 locknut

M2×10

M2×12

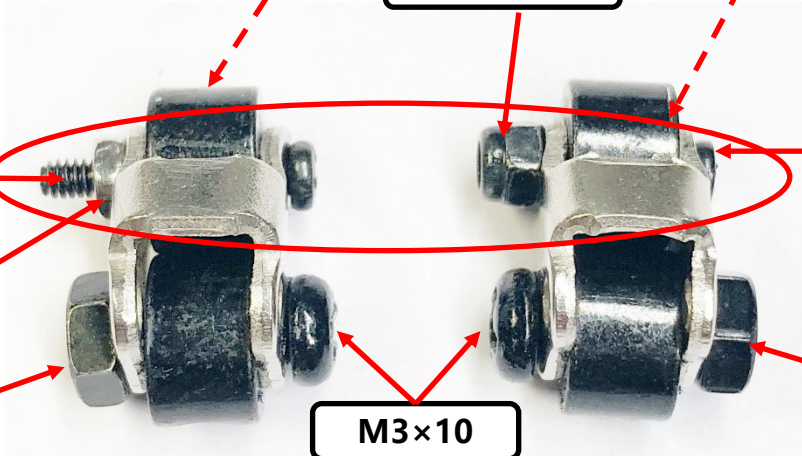
M2 common nut

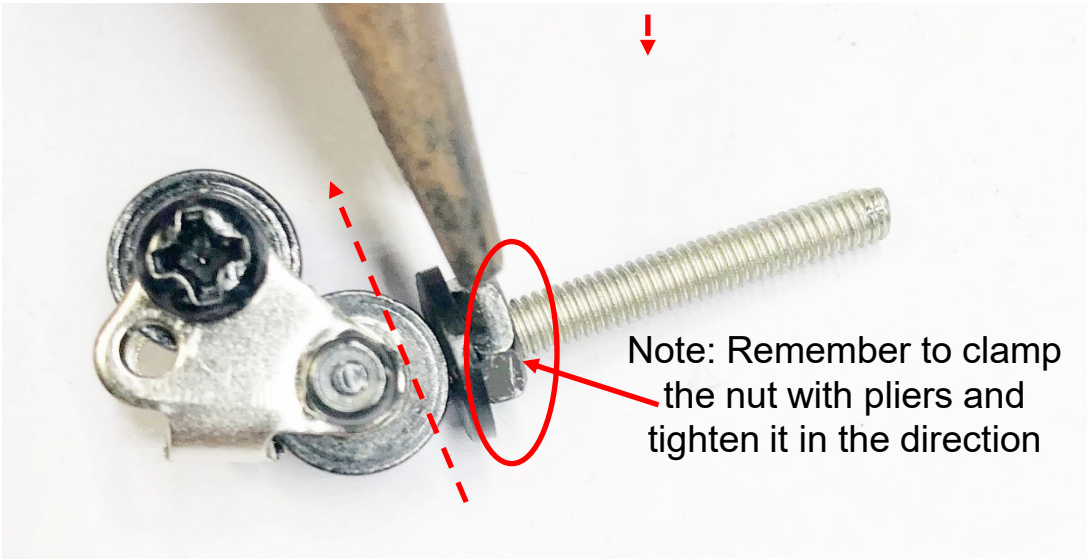
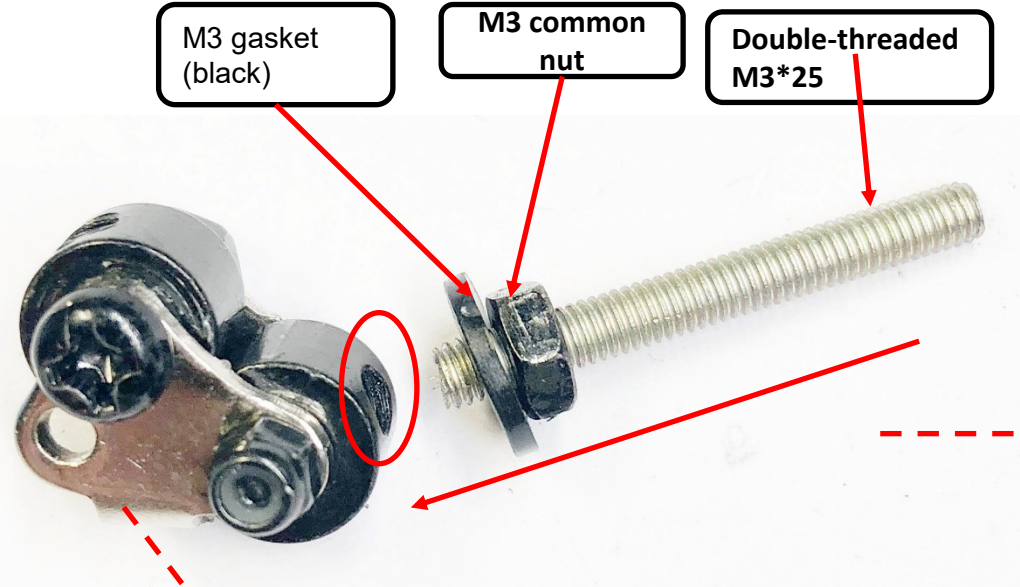
M3 common nut

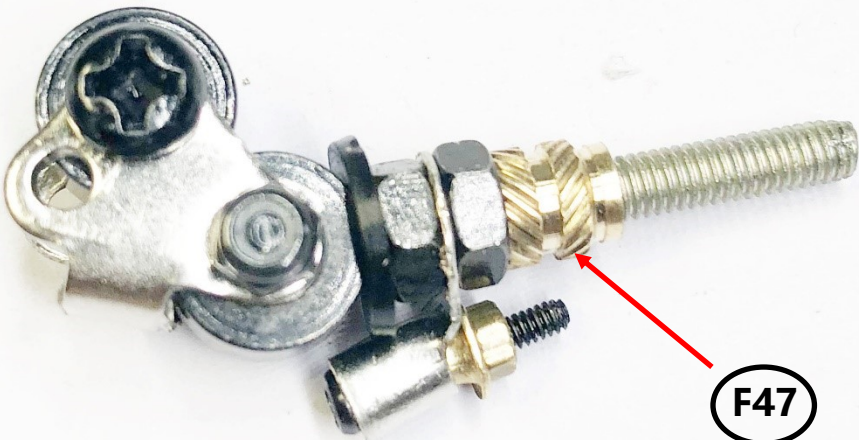
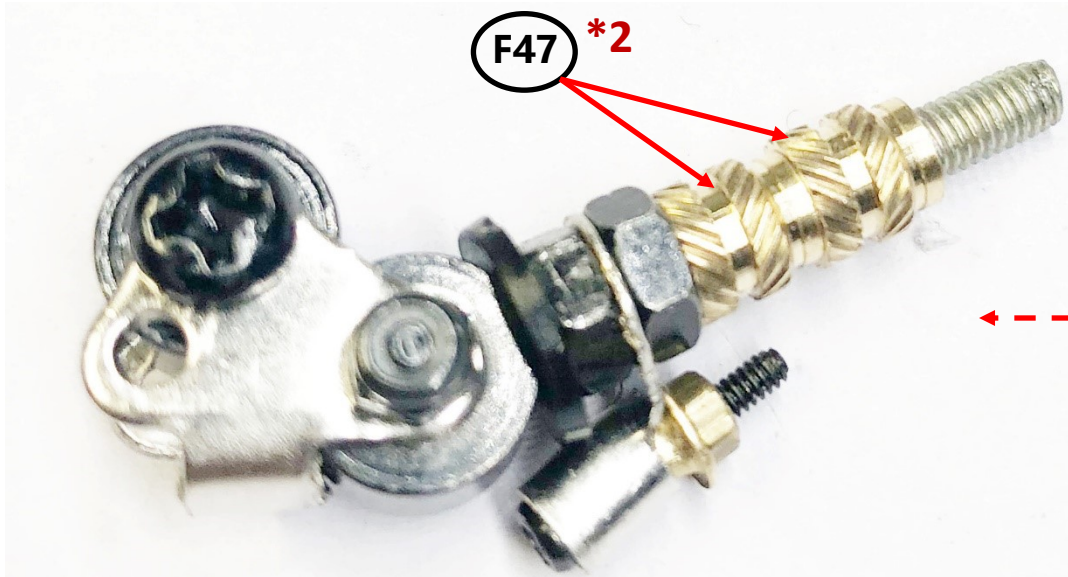
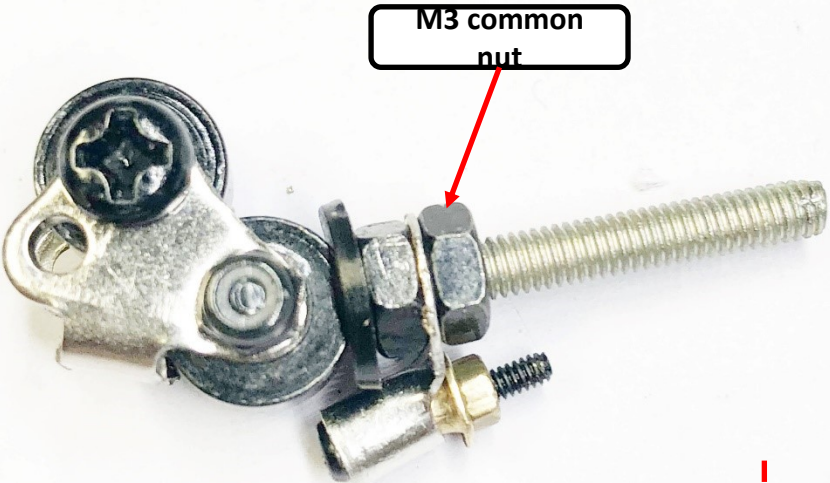
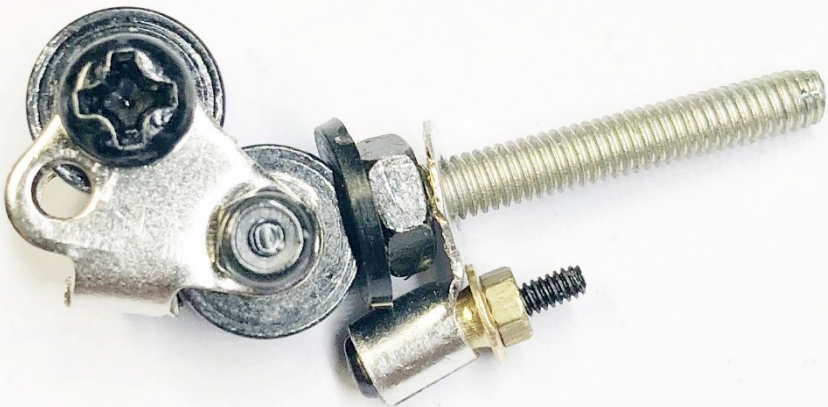
M3×10

M3 common nut

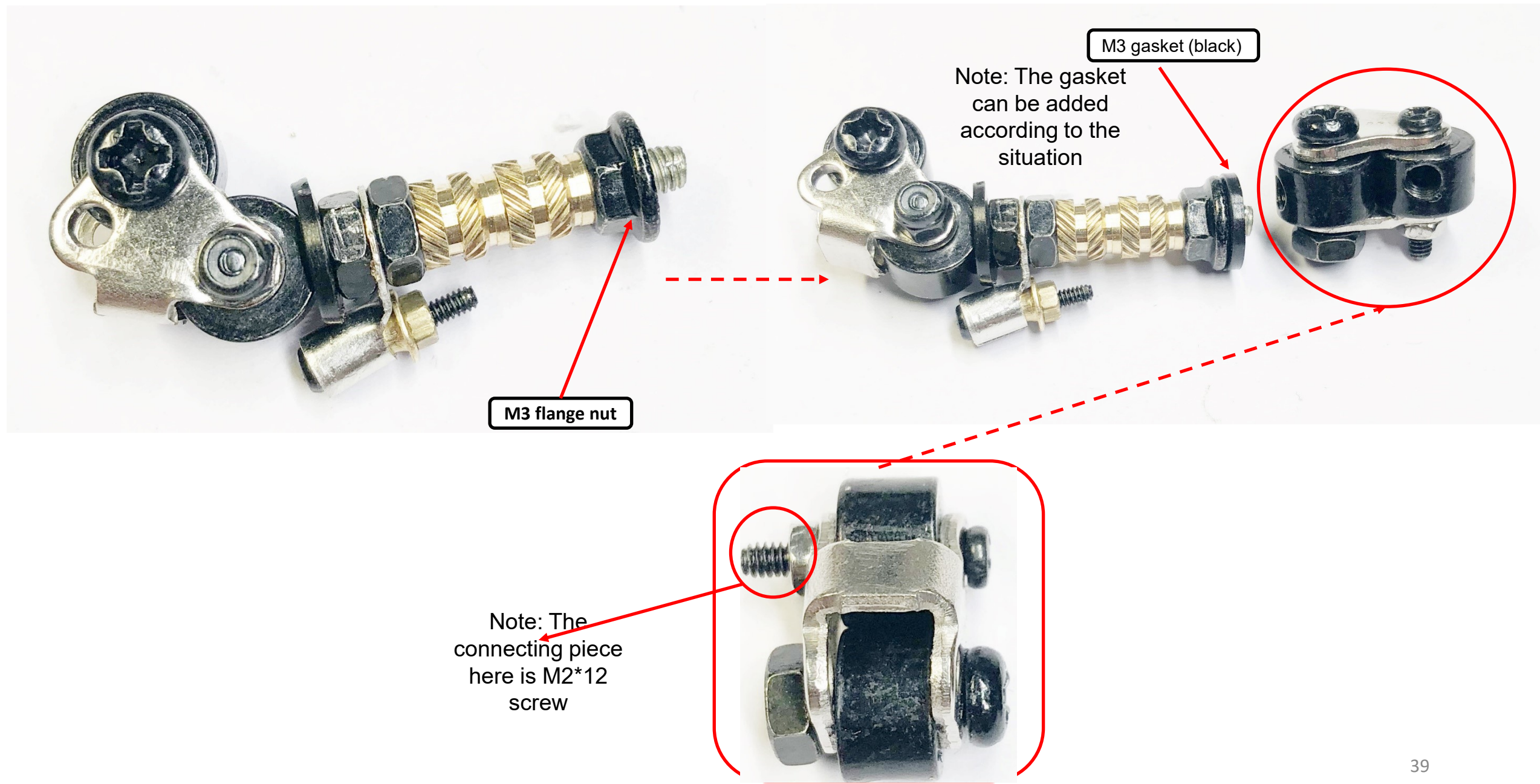
Note: The two connectors are different, the difference is that the length of the M2 screw and the nut used in the M2 hole are different

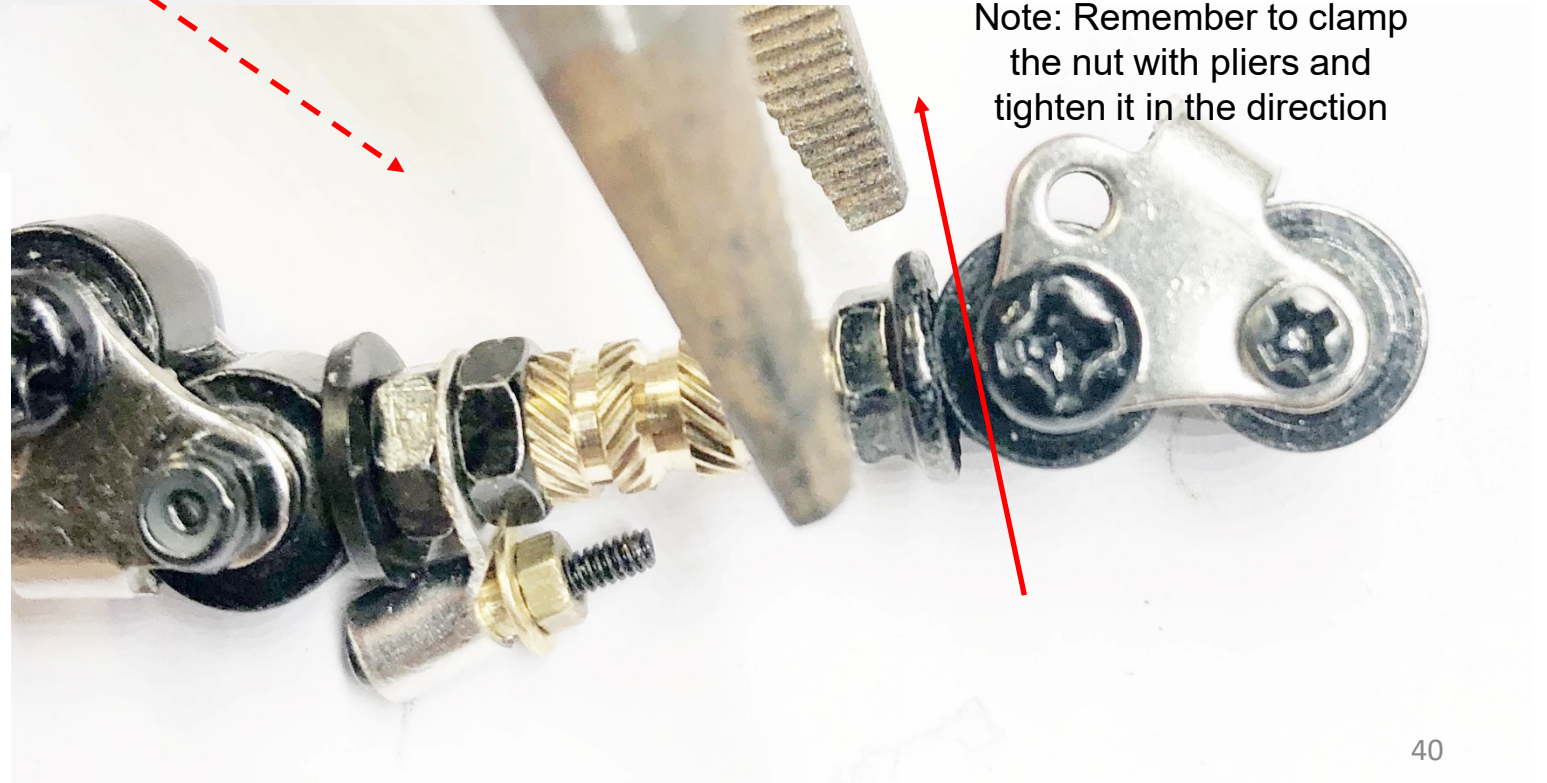




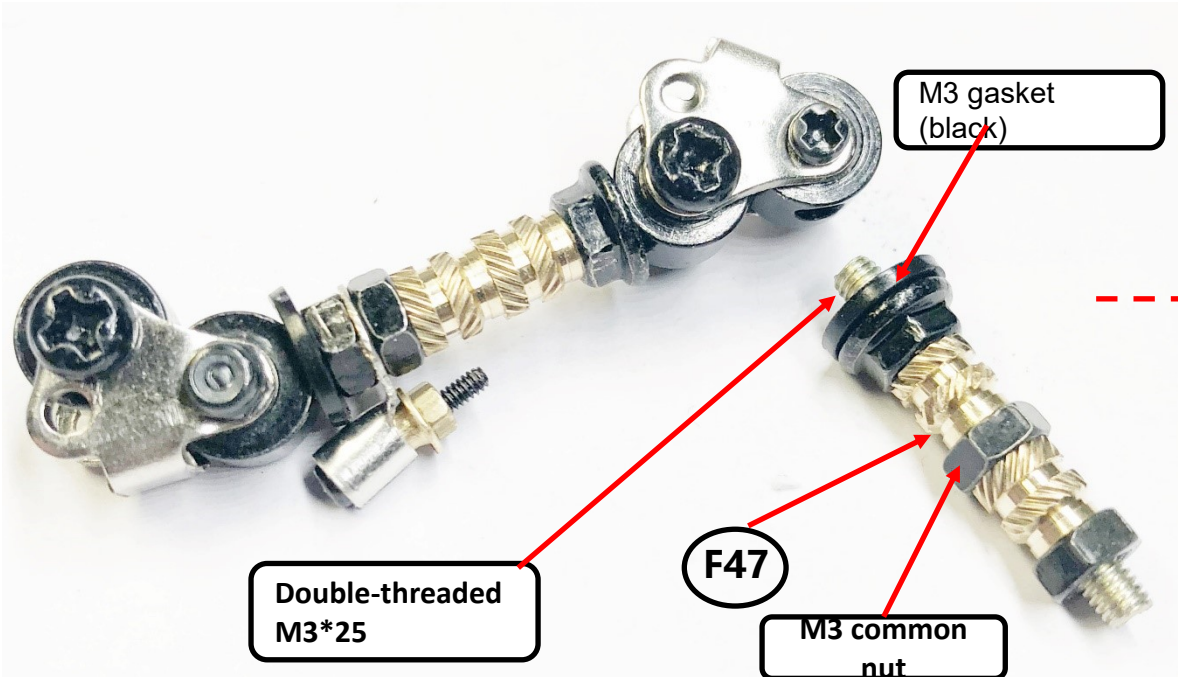


Note: the direction of F47

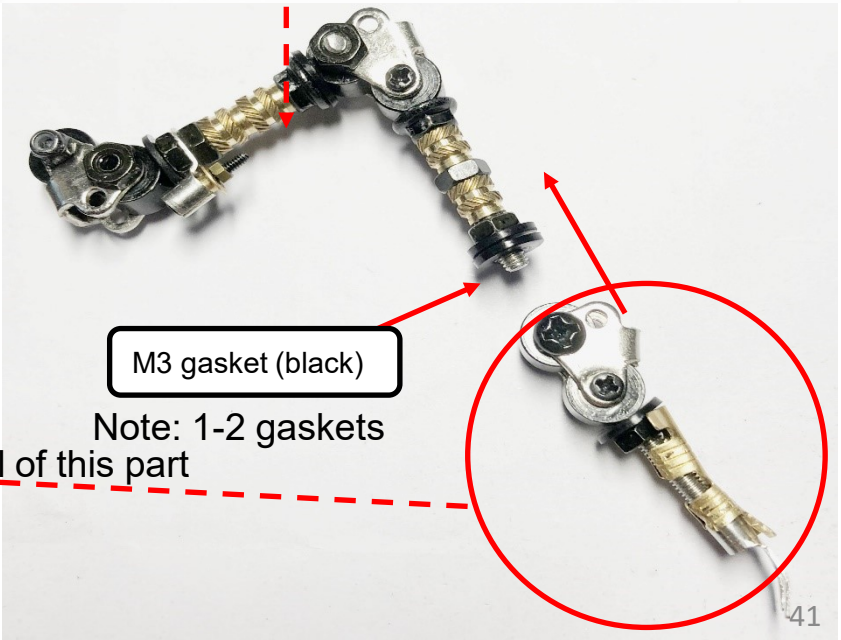
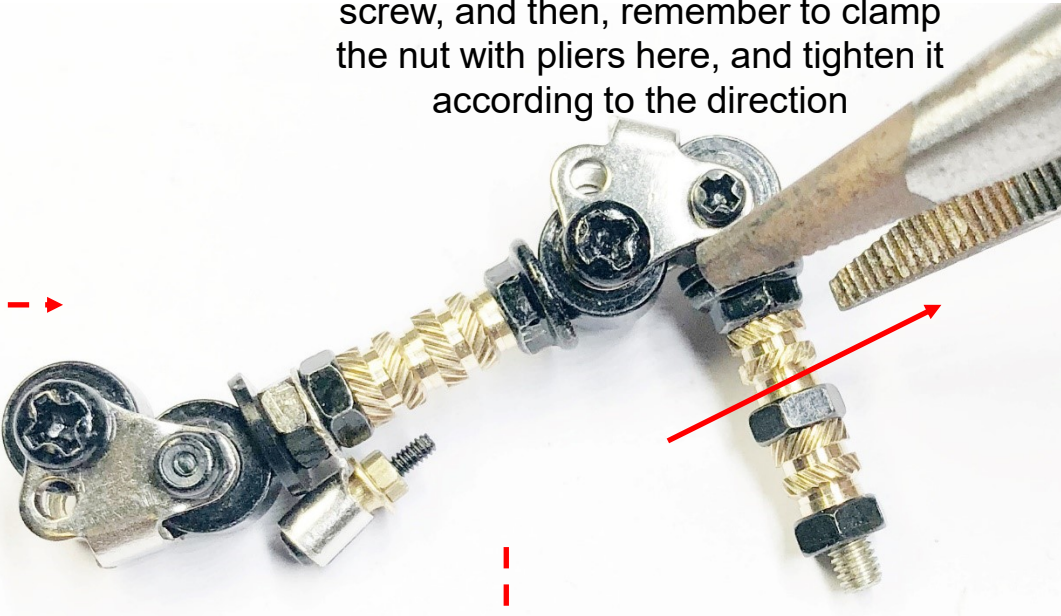




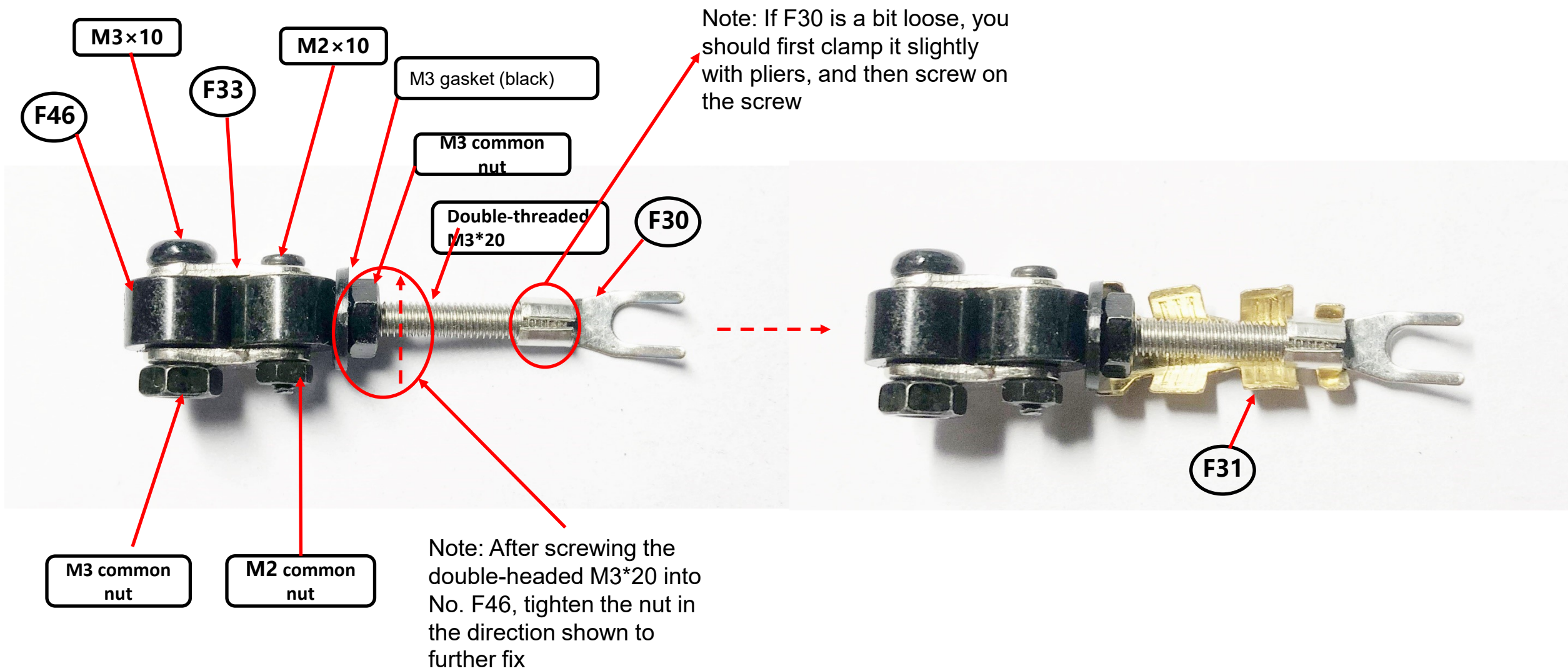
Note: Remember to clamp the nut with pliers and tighten it in the direction



Note: First screw in the double-head screw, and then, remember to clamp the nut with pliers here, and tighten it according to the direction



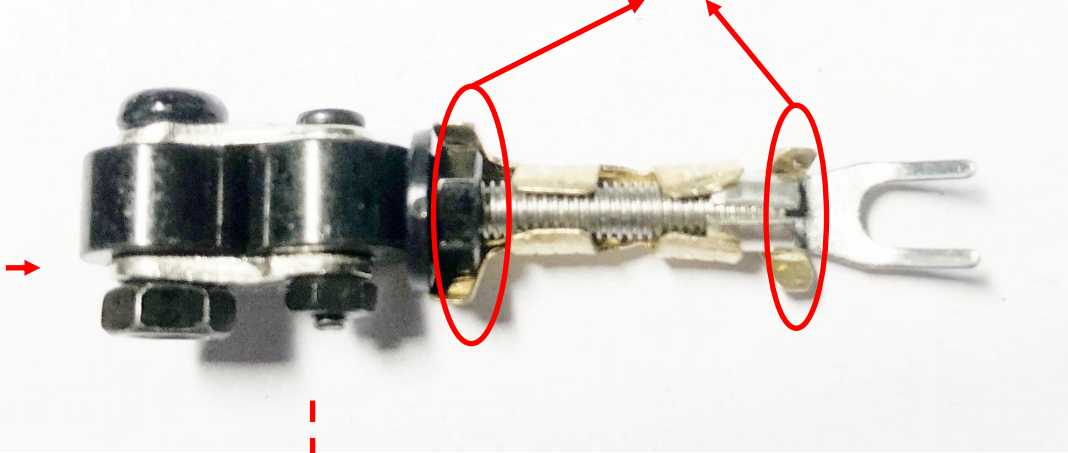
Note: See the next page for the tutorial of this part



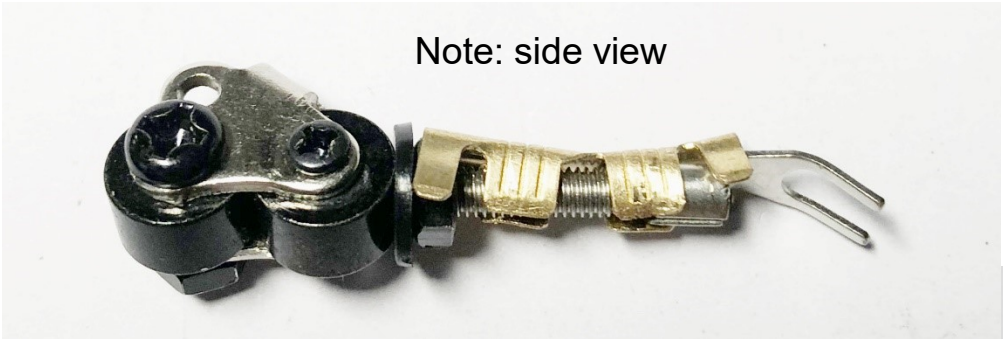
Note: Use pliers to clamp
two places



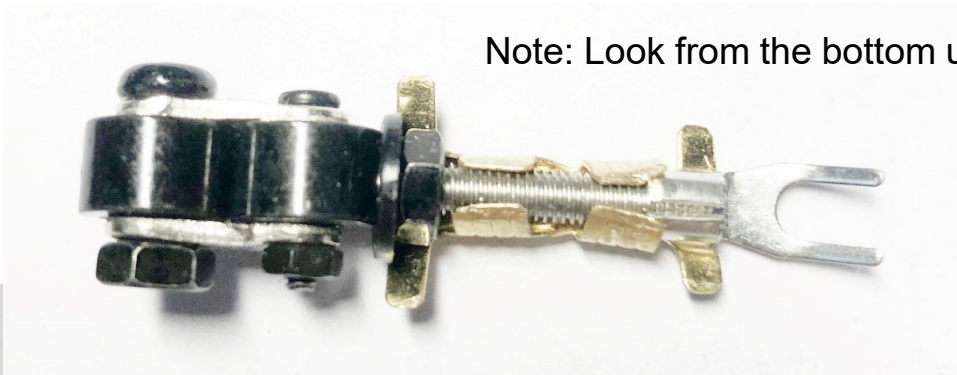
Note: Use pliers to separate
the two places a little bit



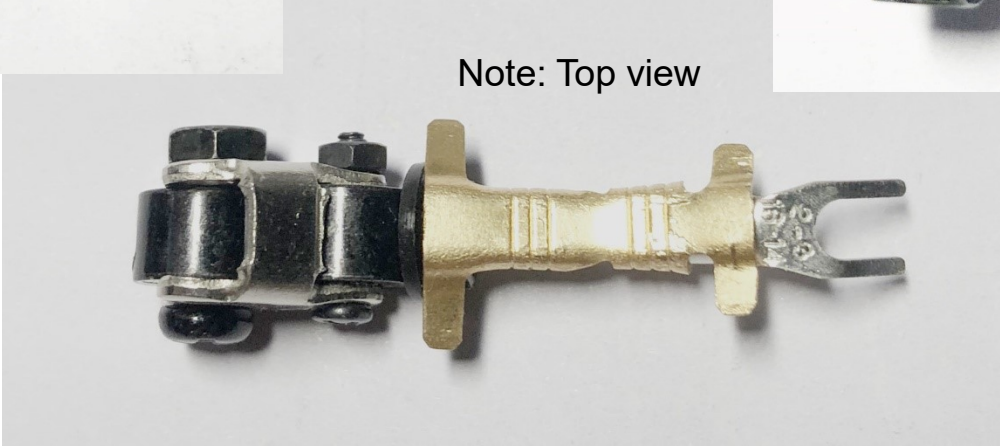
Note: side view



Note: Look from the bottom up



Note: Top view



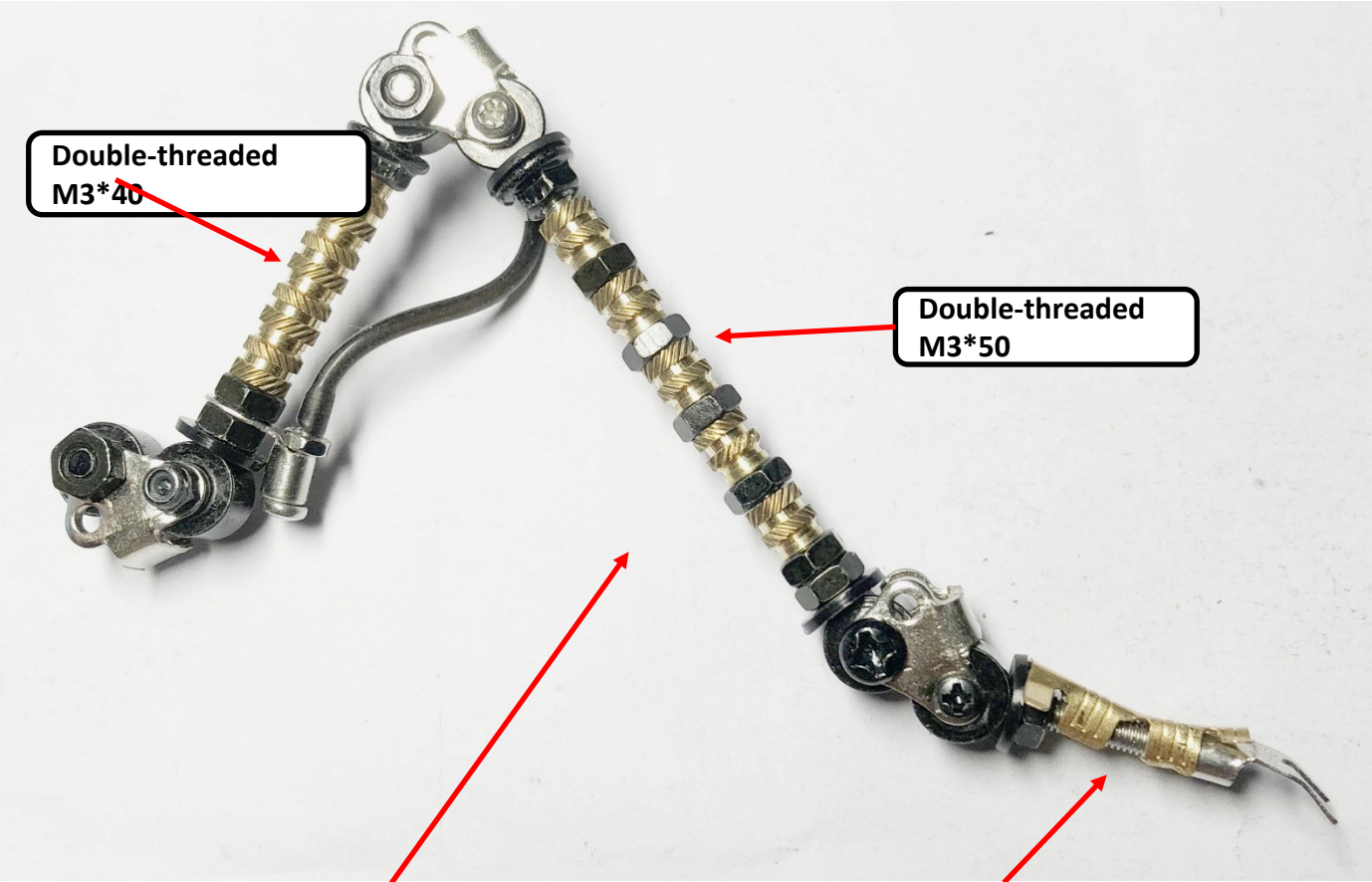
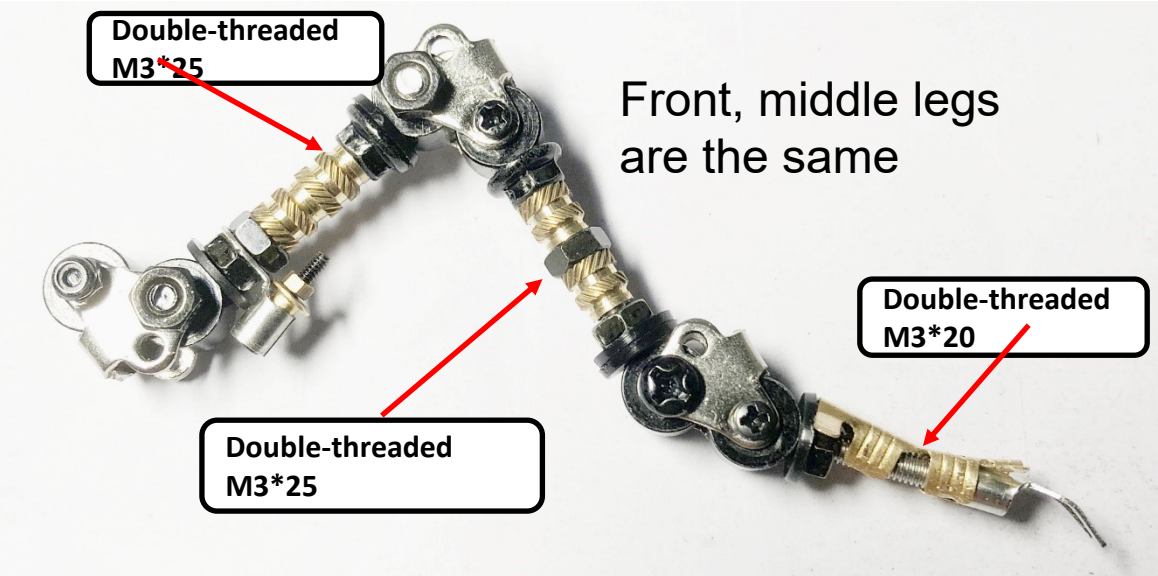


Note: Connect the joint of the previous step with the previous leg

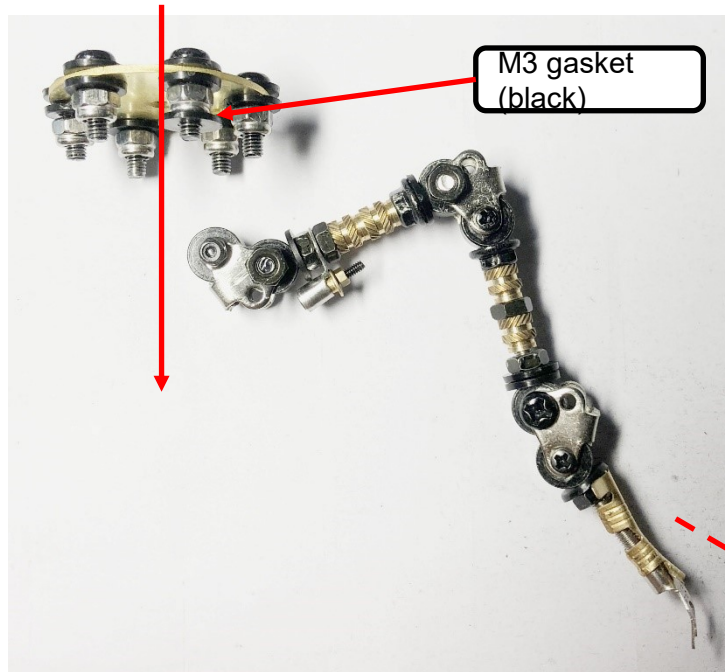
Note: Use pliers to tighten the nut in the direction shown to further fix



Note: Make 2 front legs and 2 middle legs in the same way



Note: Make 2 hind legs in the same way, the double-head screw of the hind legs is longer

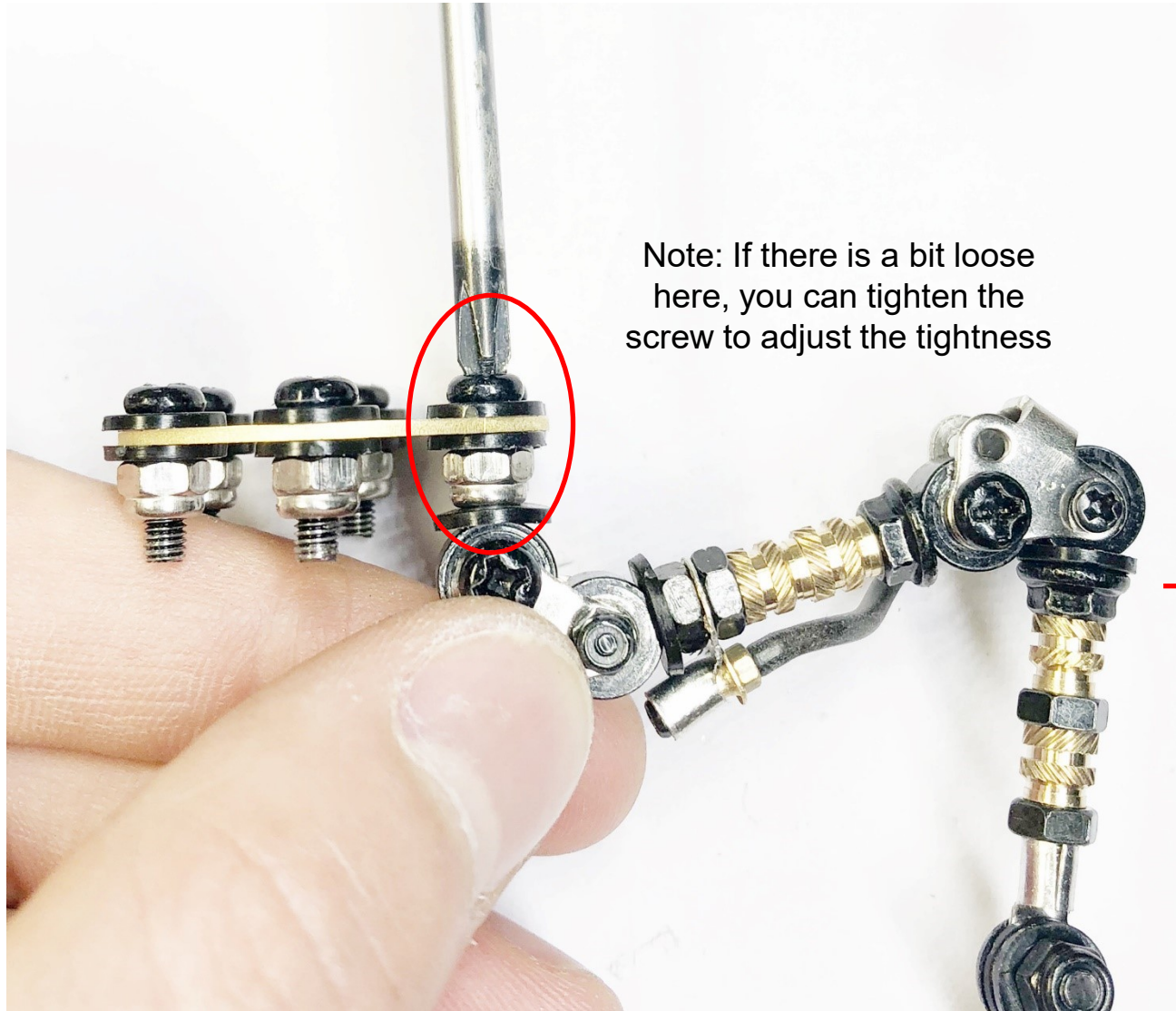


Note: first tighten with screws



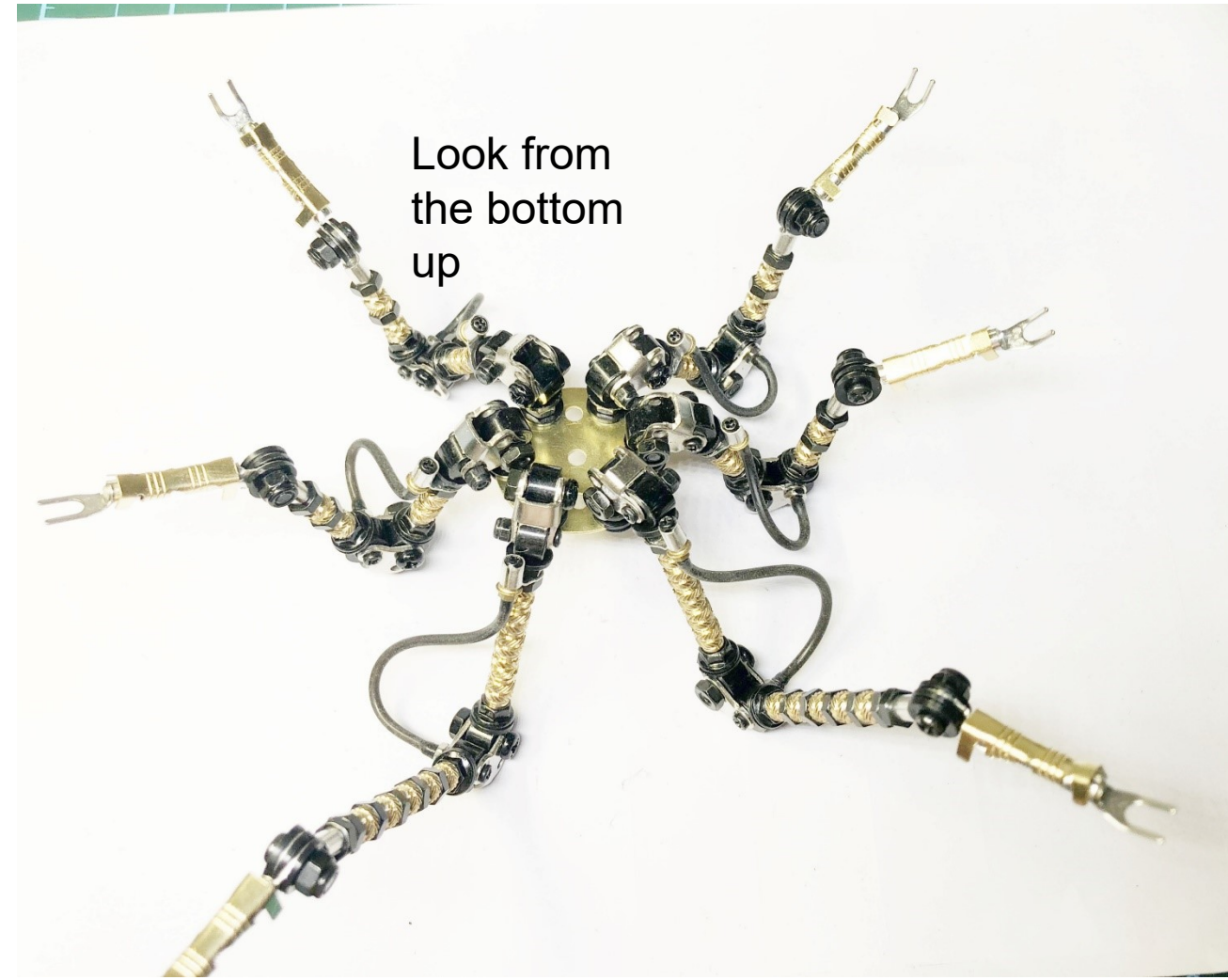
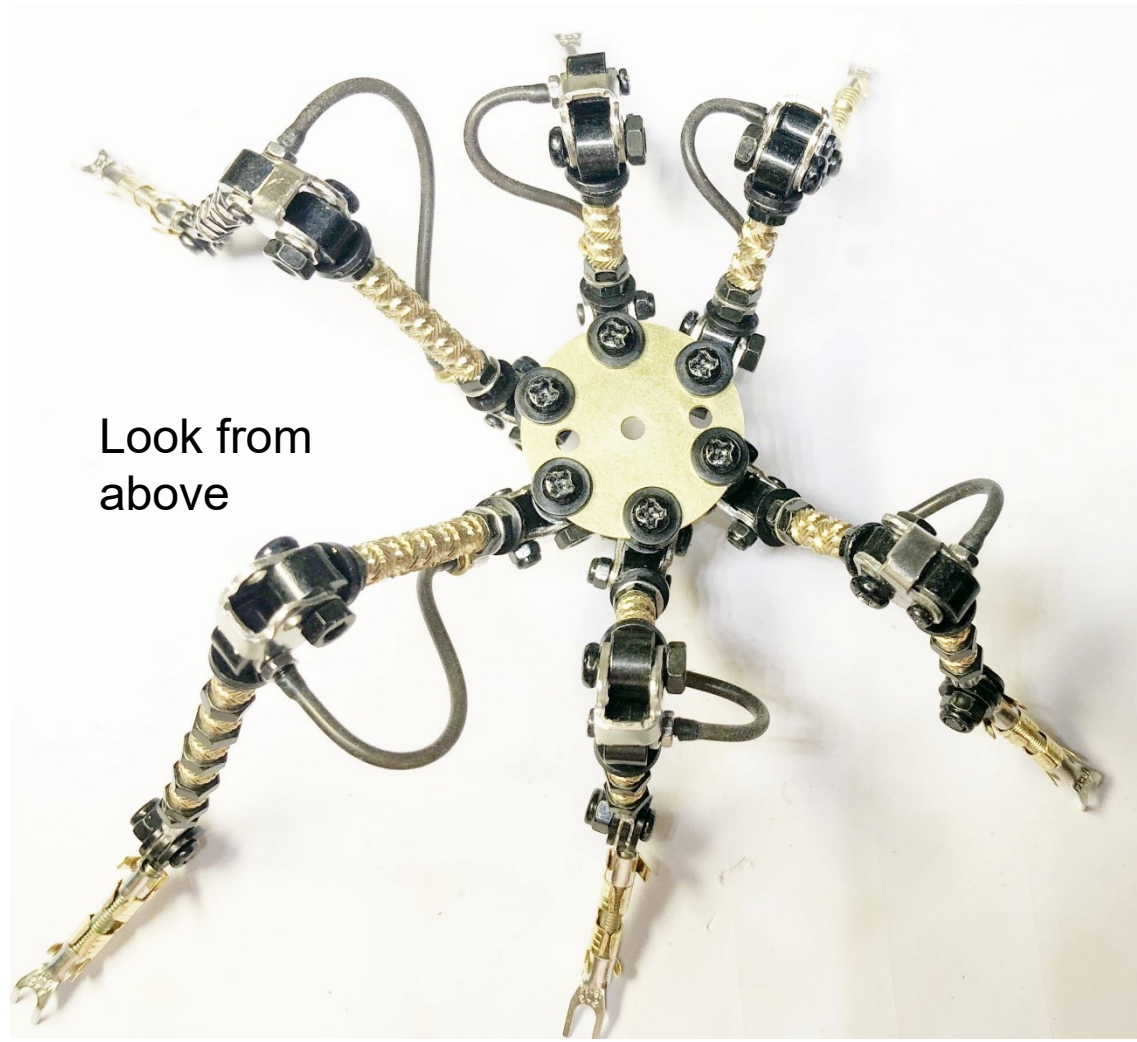
Note: Clamp the lock nut with pliers and tighten it in the direction indicated



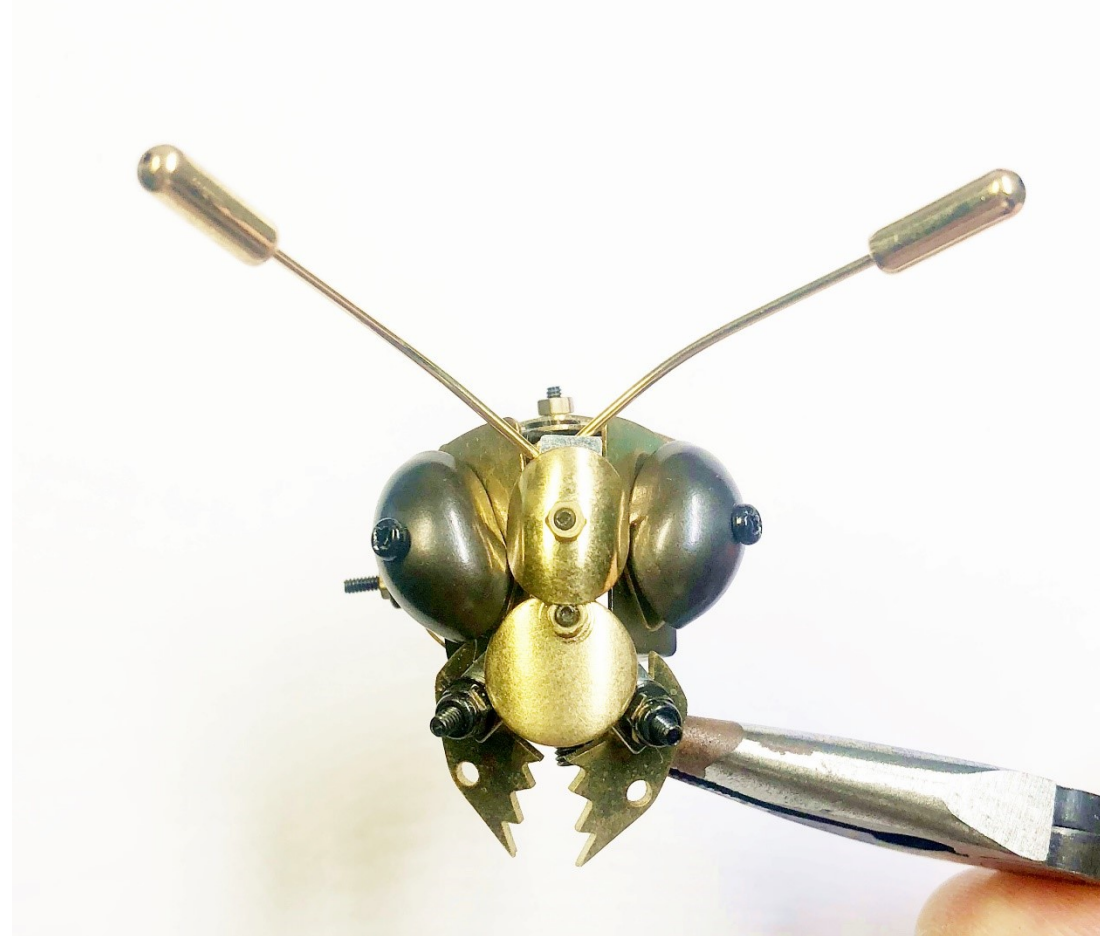


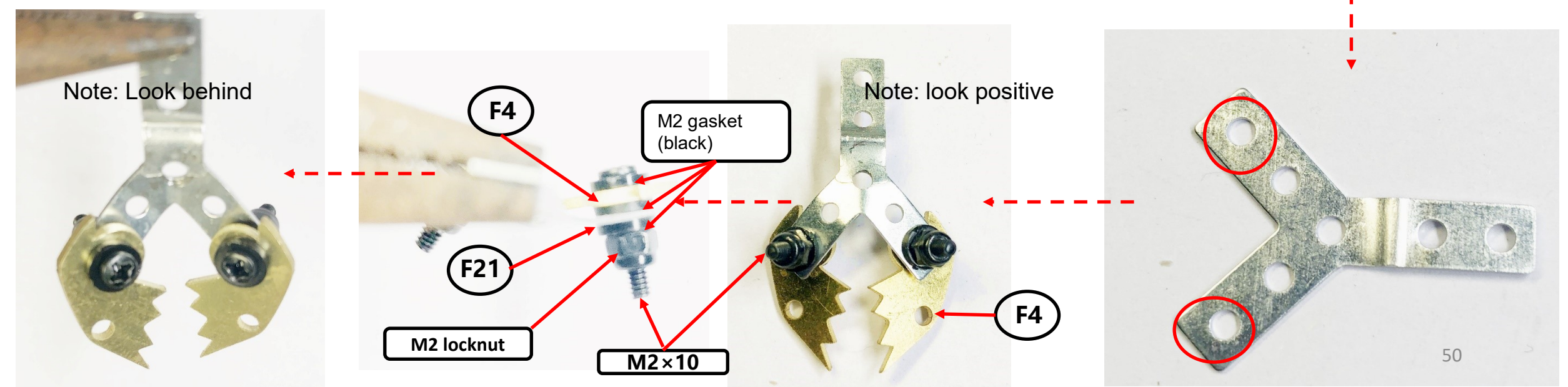
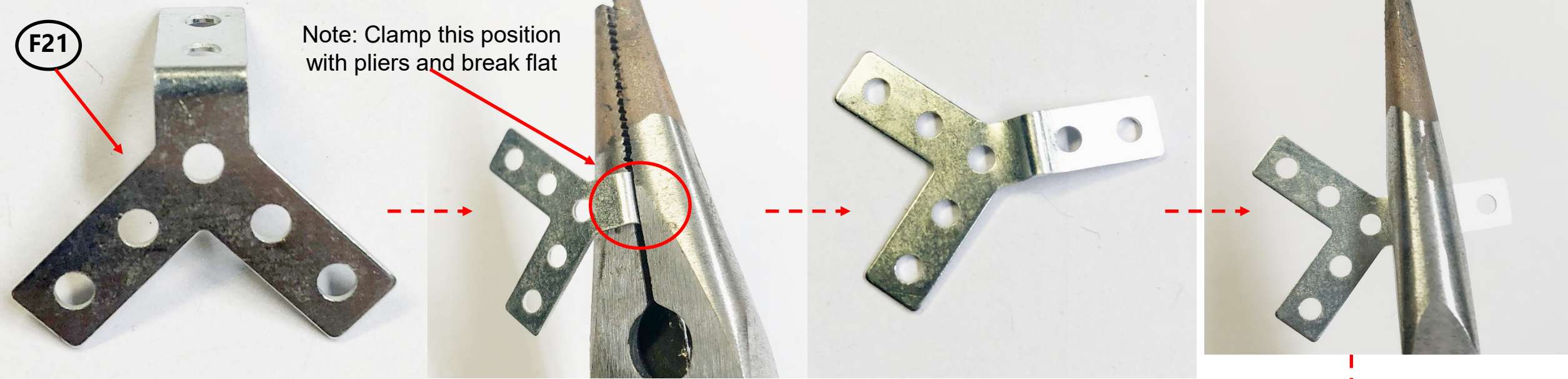
Note: Screw the other legs separately in the same way, remember to clamp the locknut with pliers and tighten this step

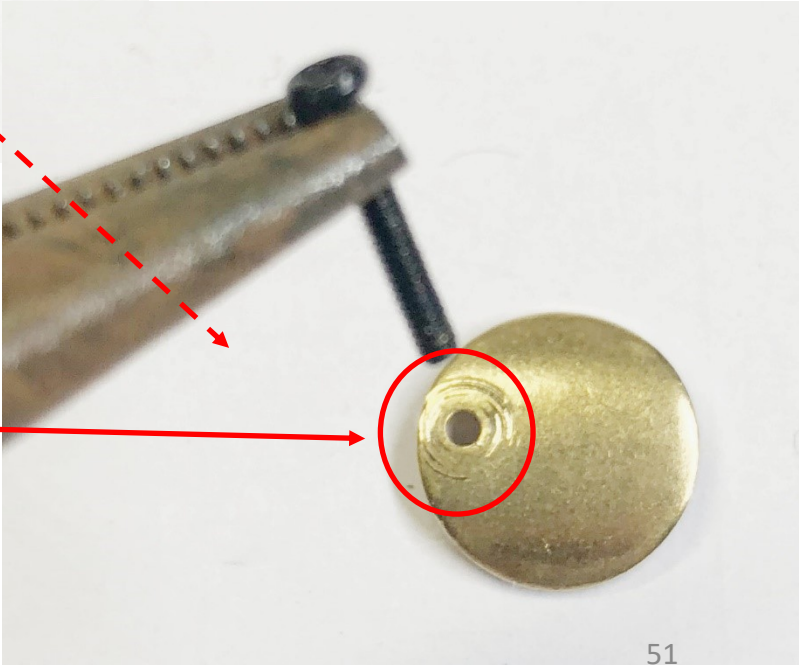
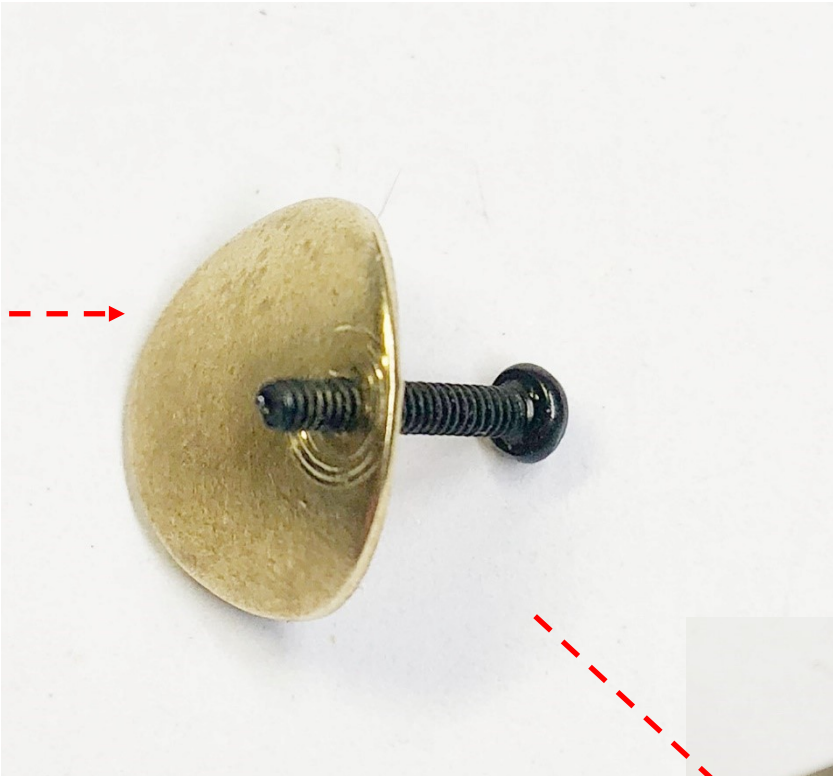
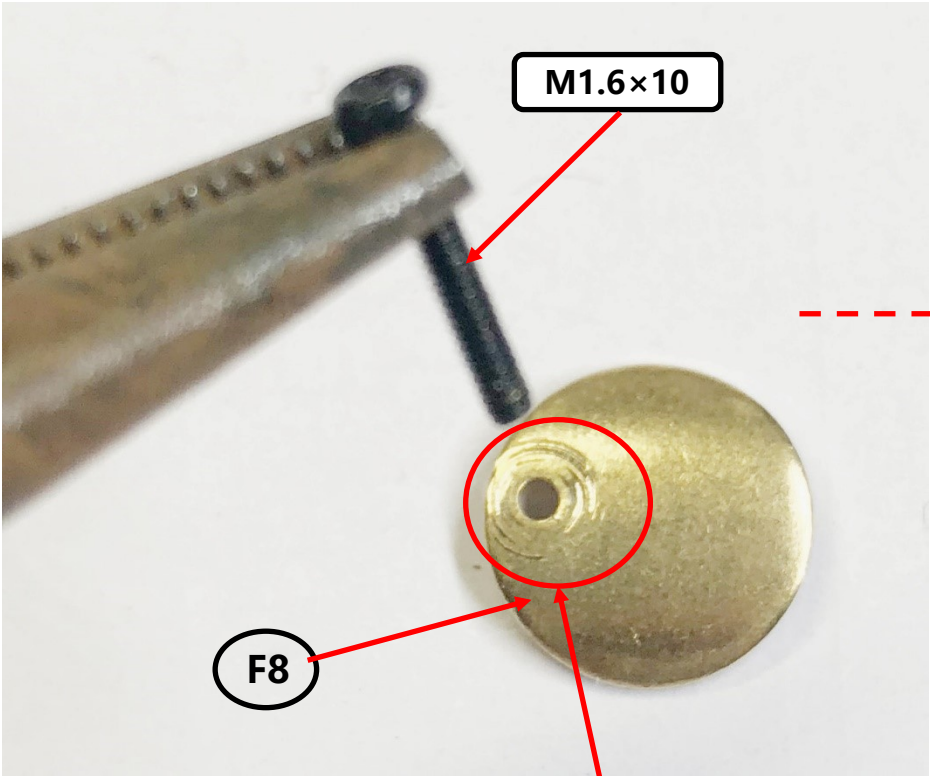




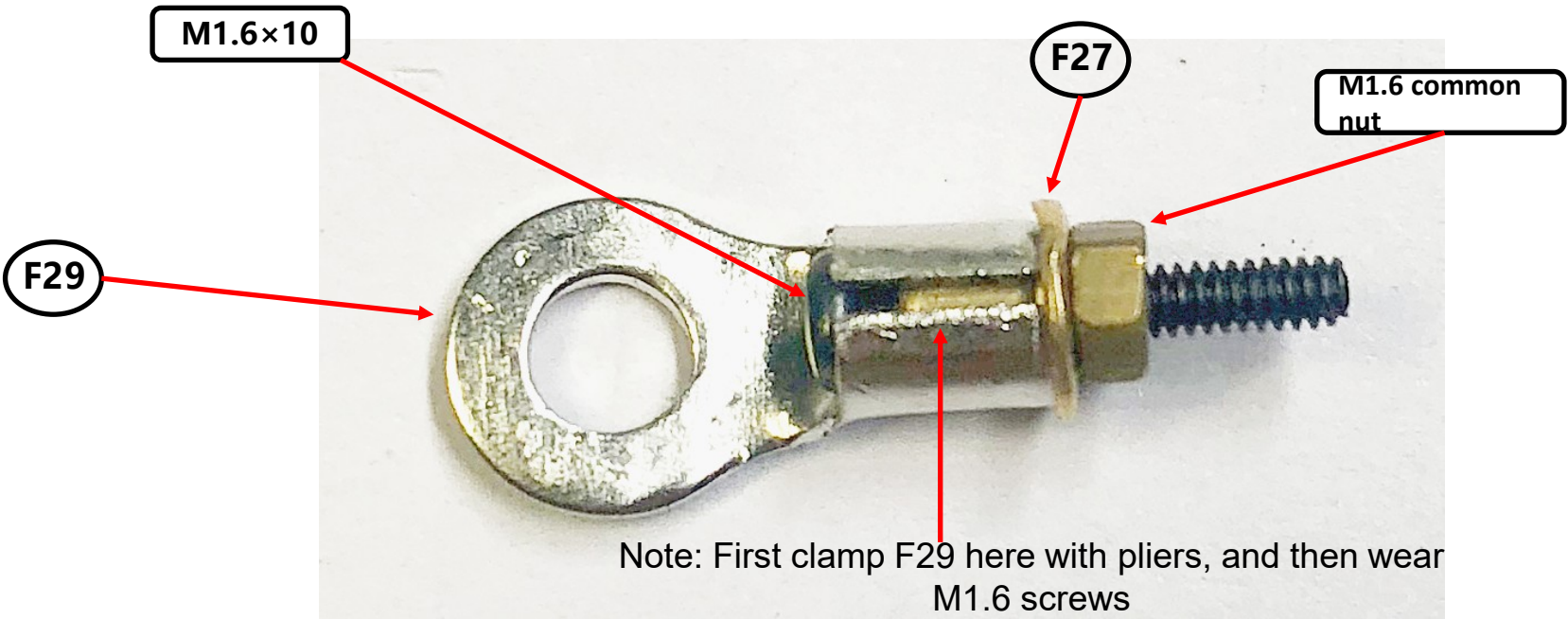
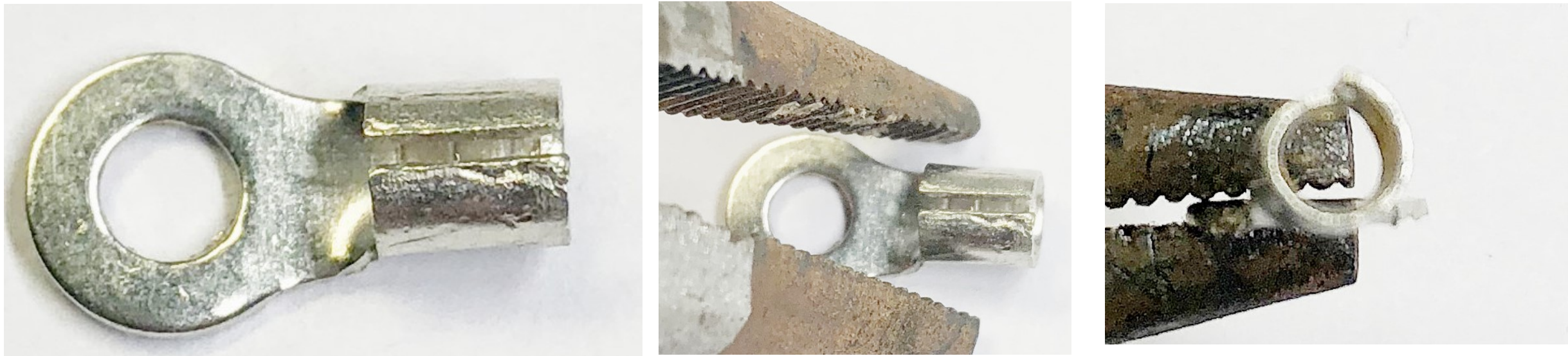
Congratulations, the leg assembly is completed
Next part: 5. Head assembly

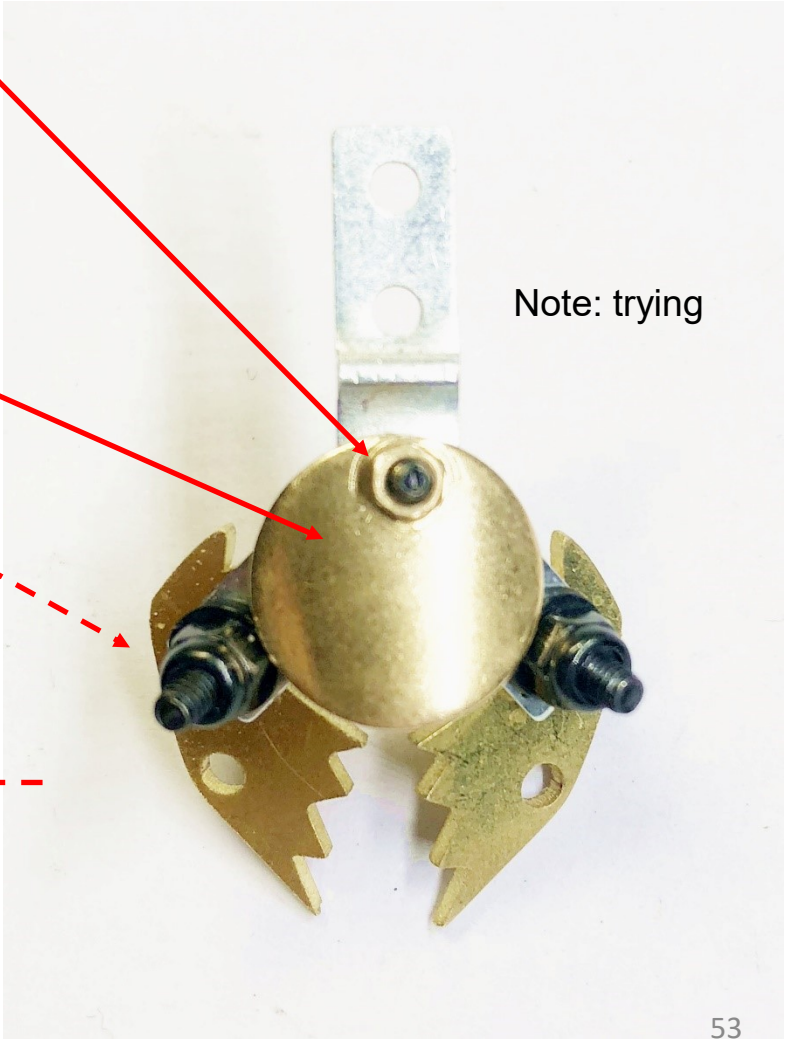
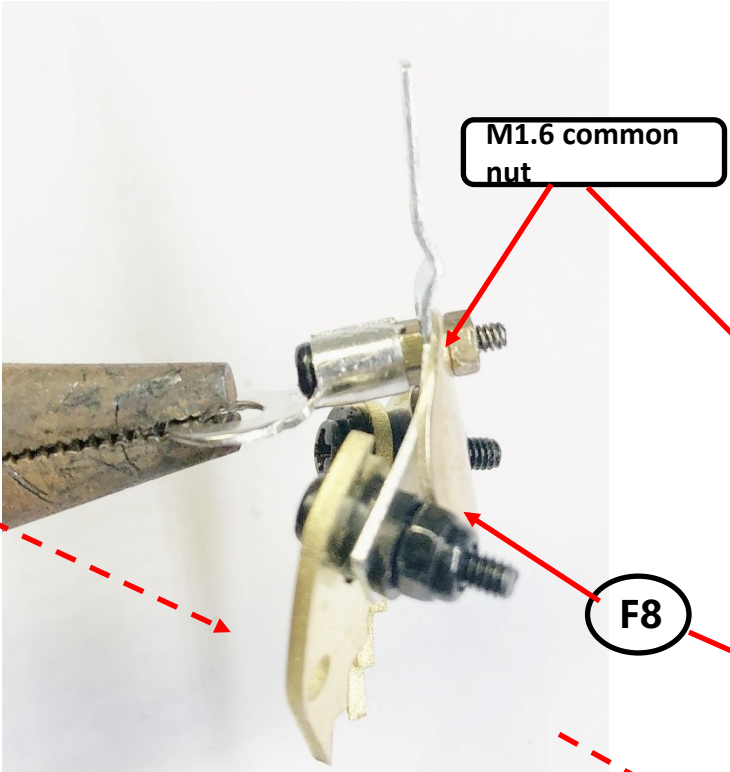
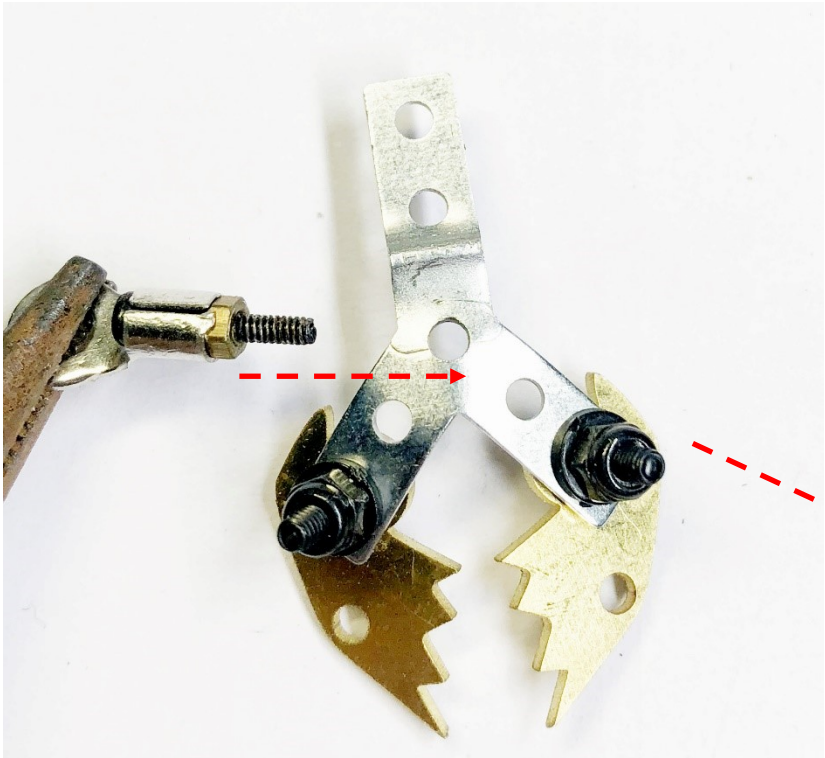




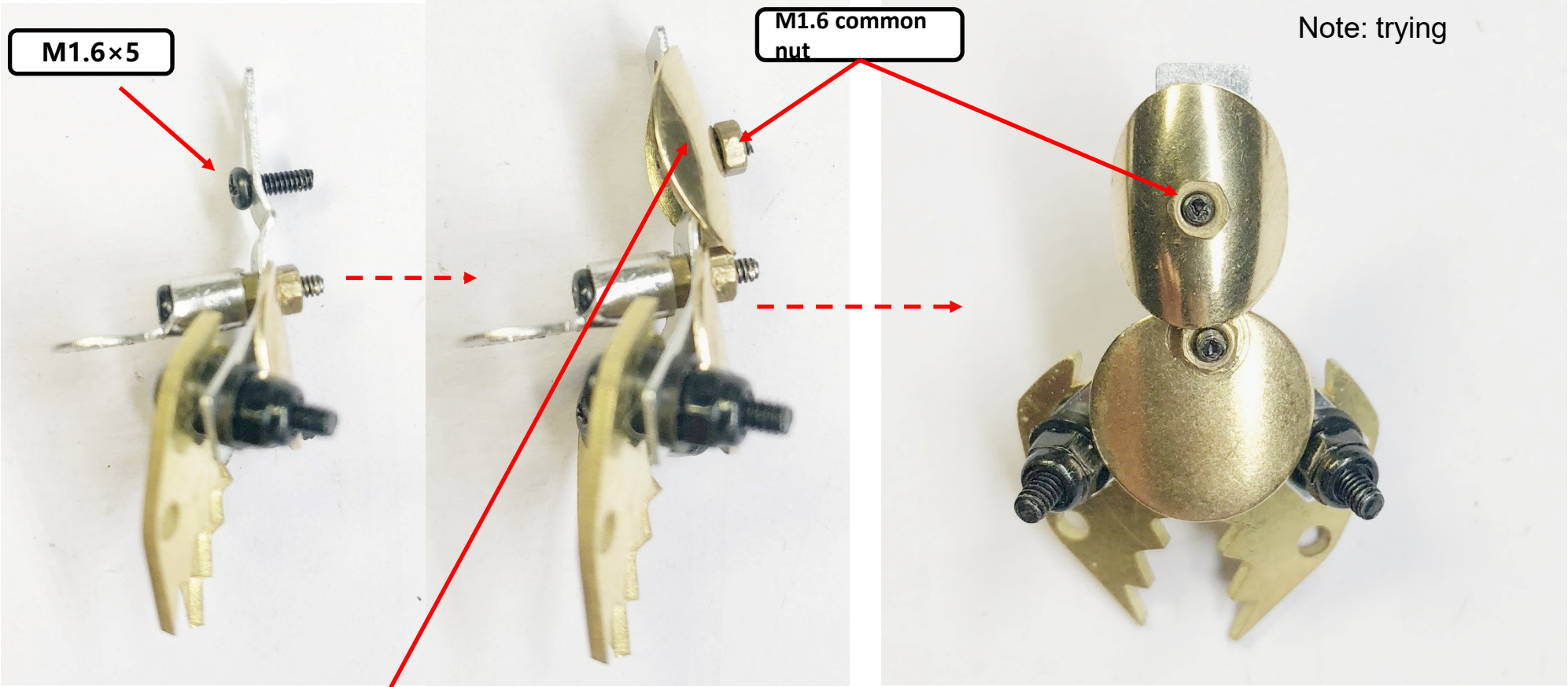


Note: First use M1.6*10 screws to penetrate this hole, screw in, and then screw out to achieve the effect of reaming

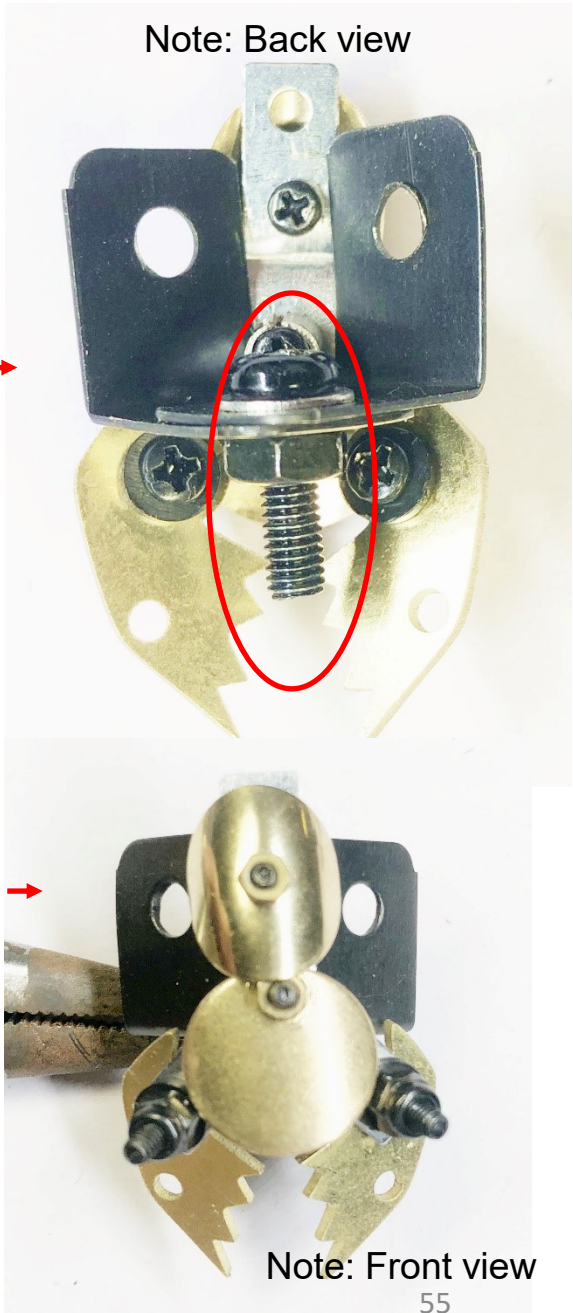
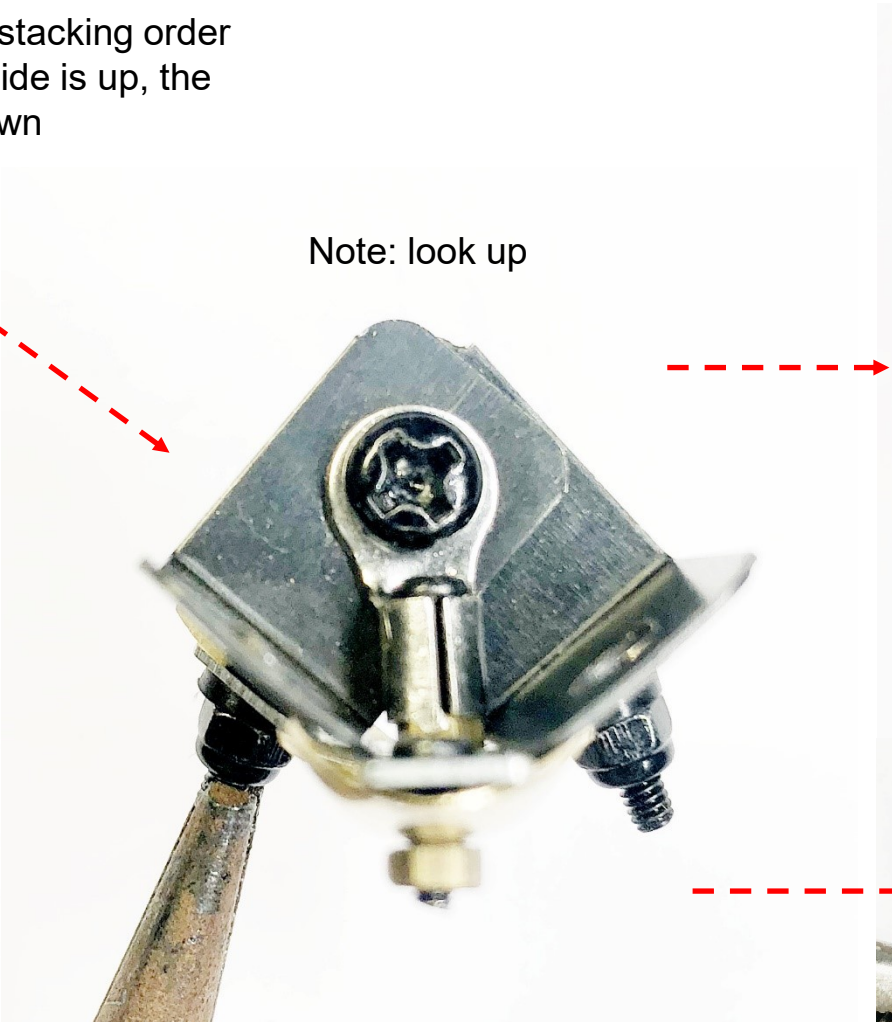
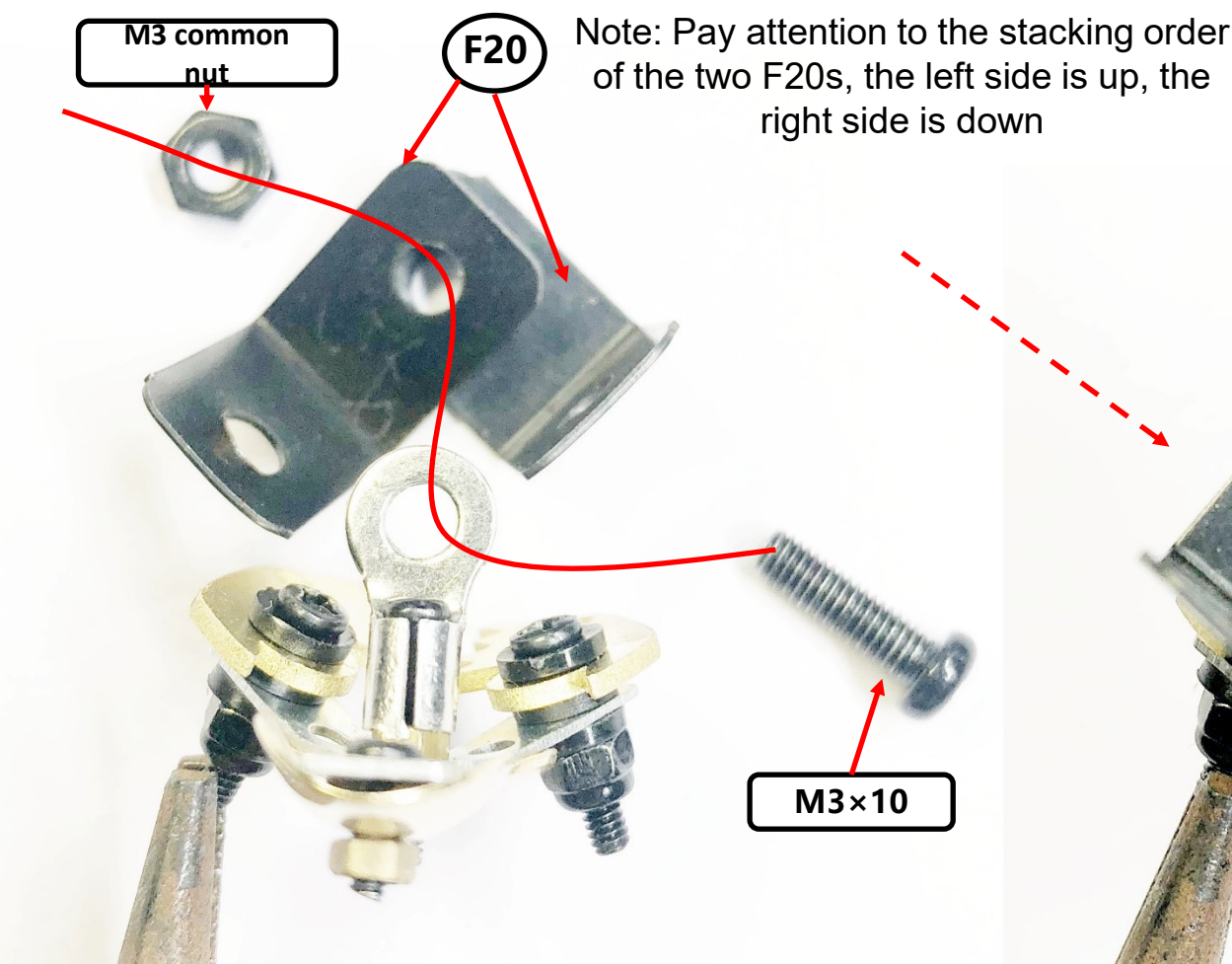




Note: Try it upright

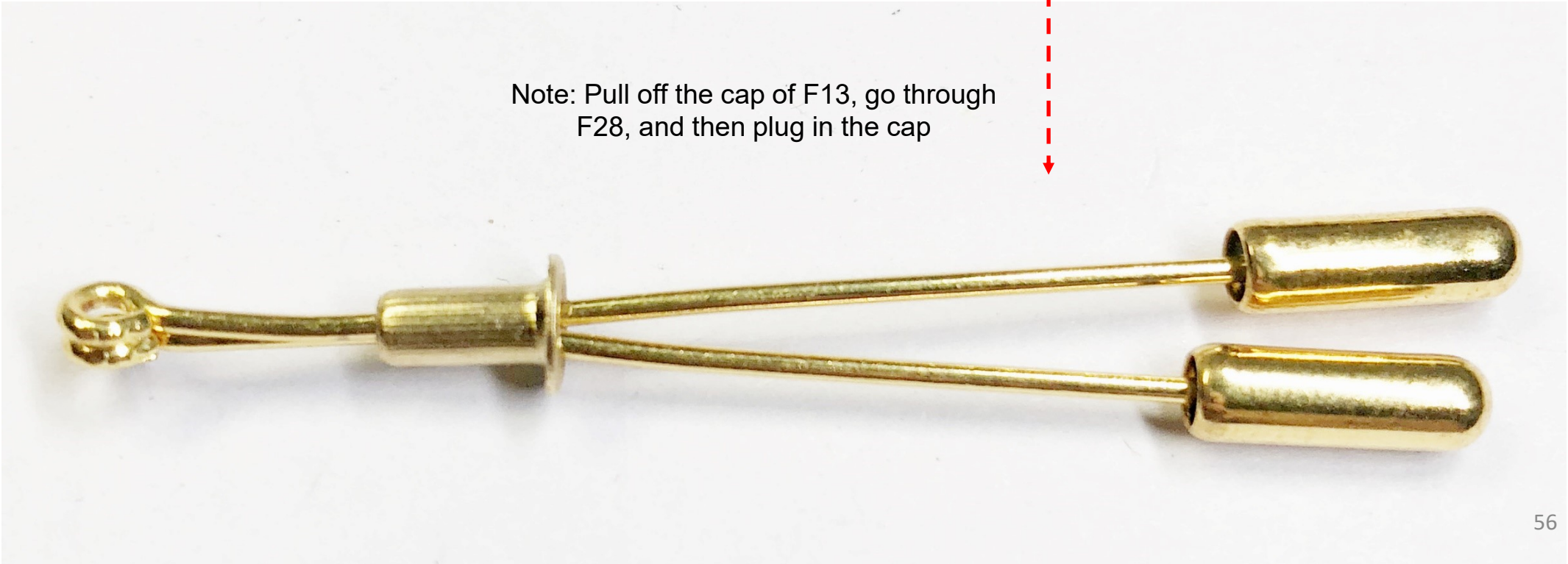


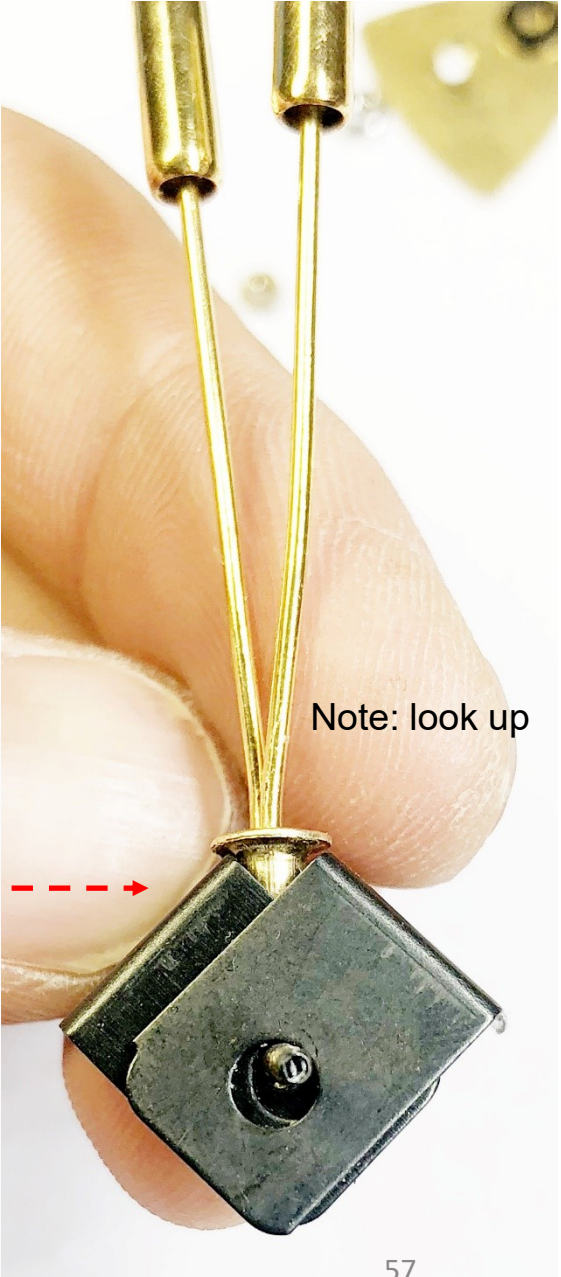
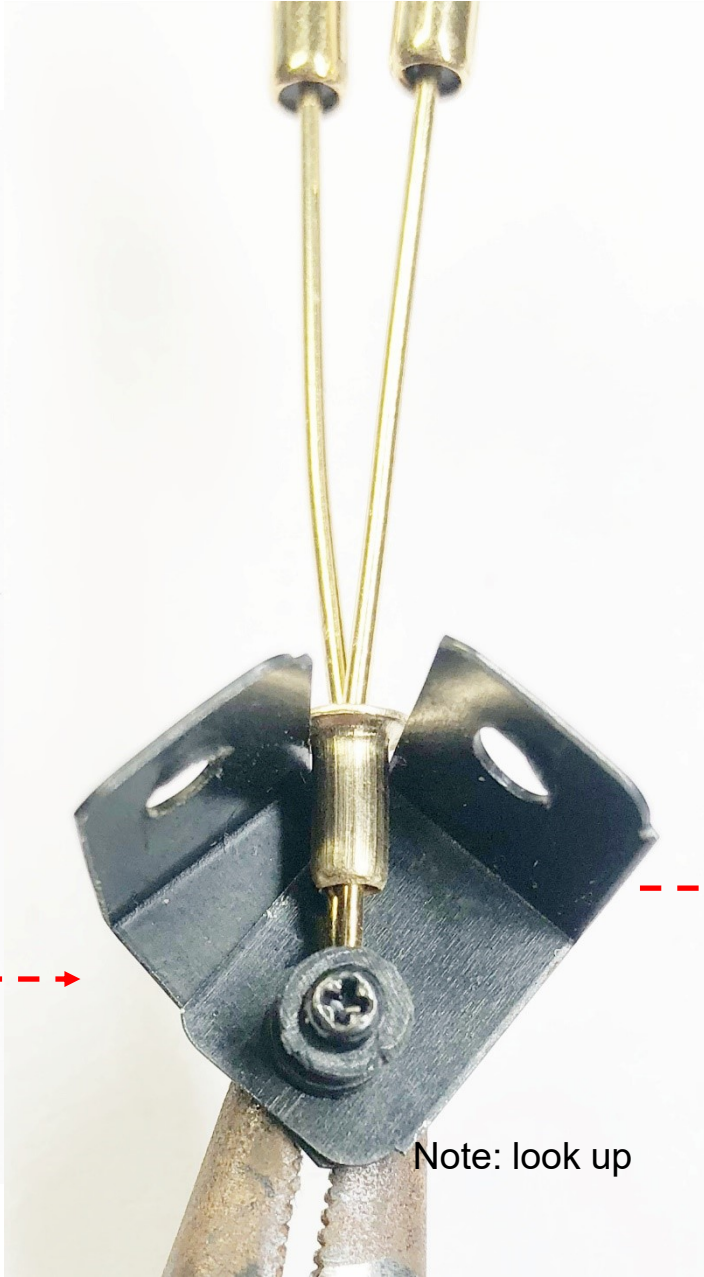
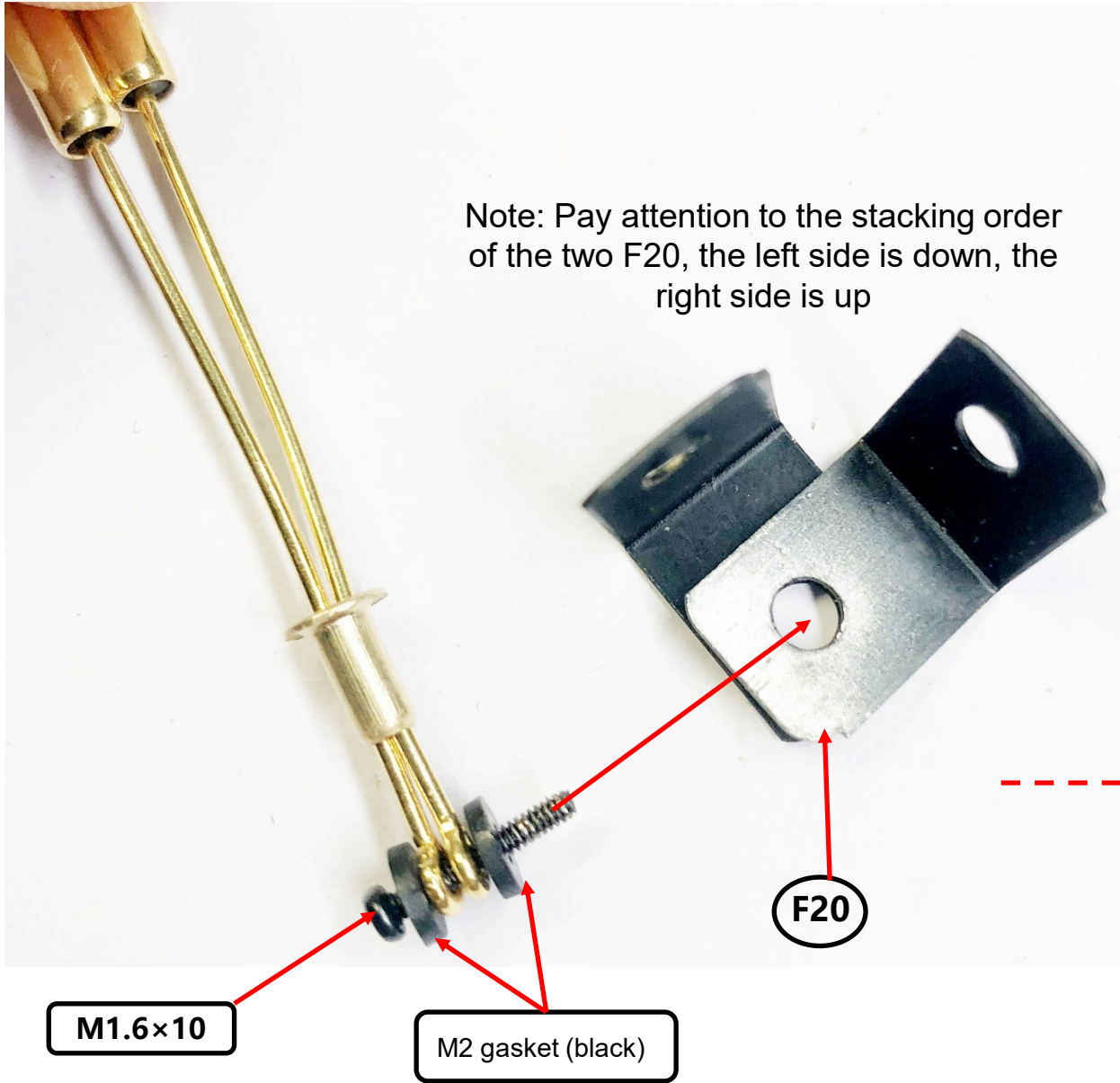
Note: Clamp F12 with pliers lightly, showing a certain arc

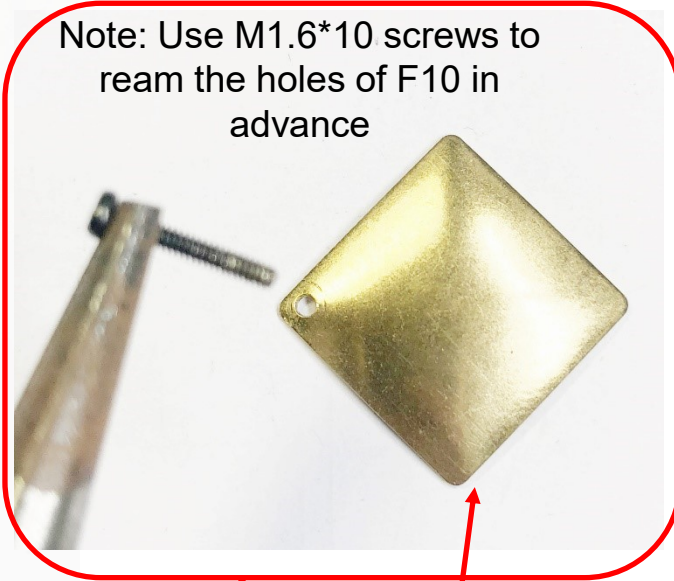
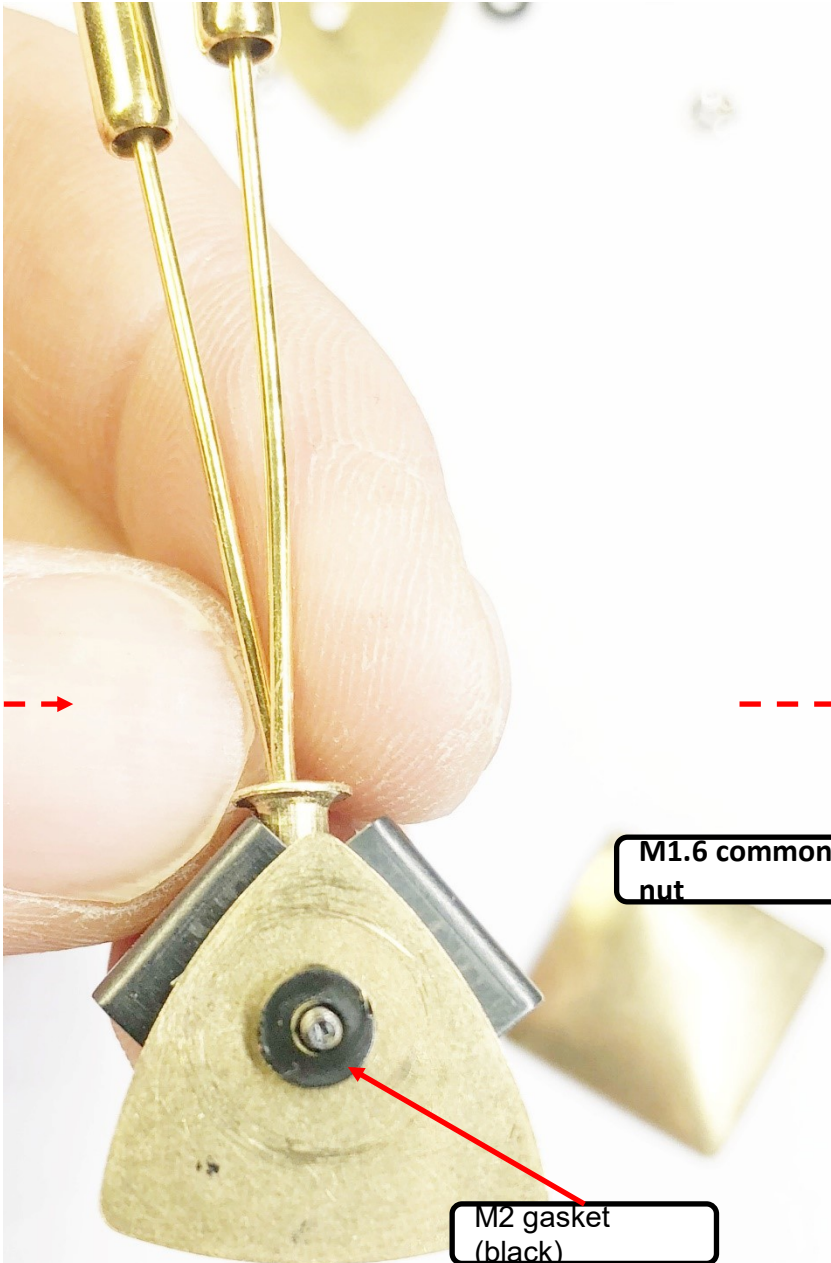
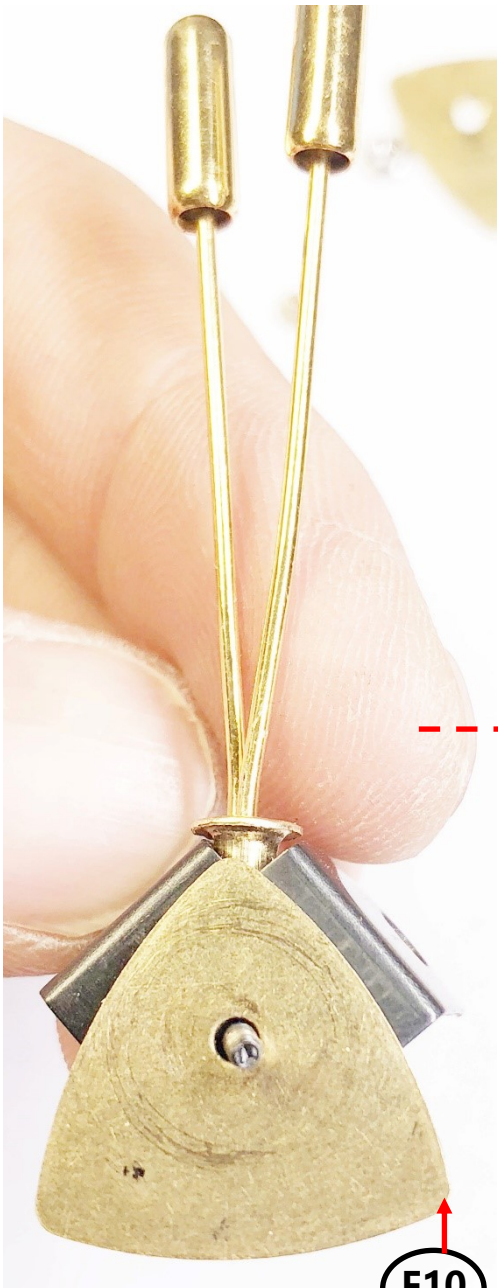




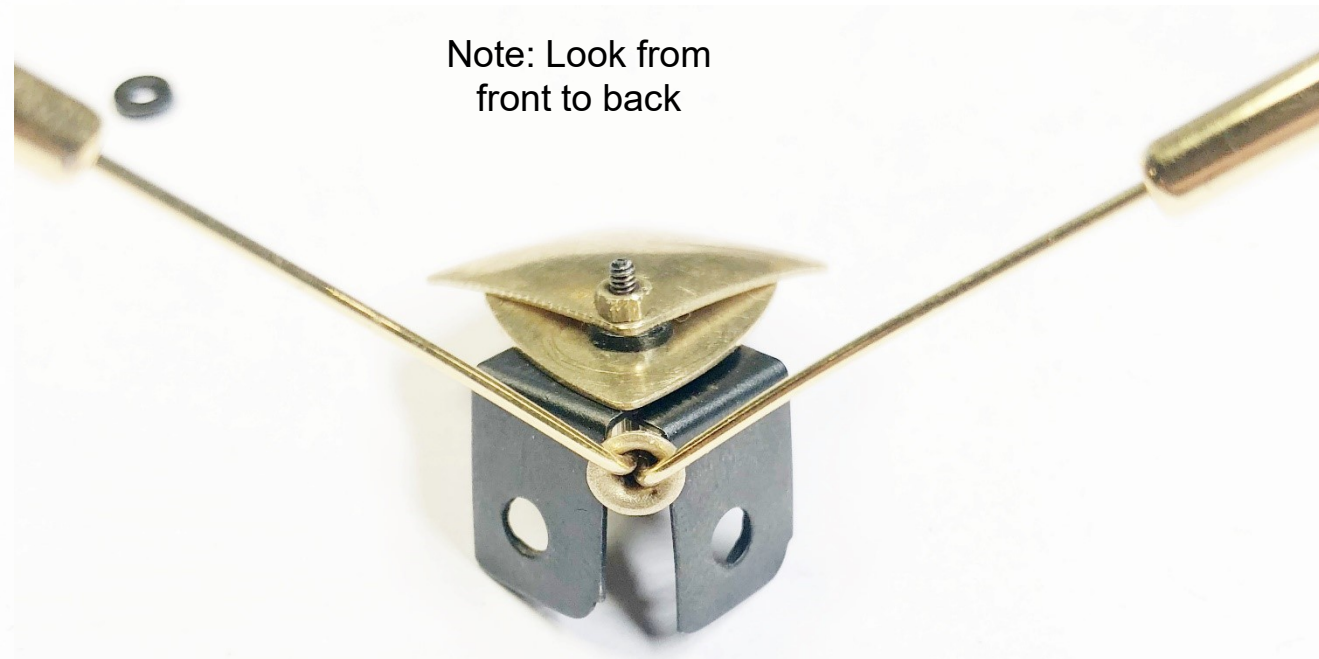
Note: Pull off the cap of F13, go through F28, and then plug in the cap

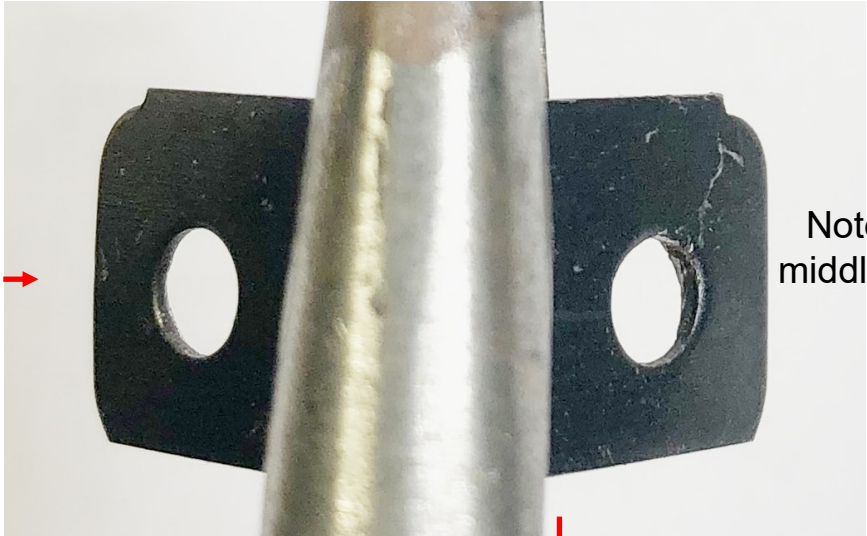
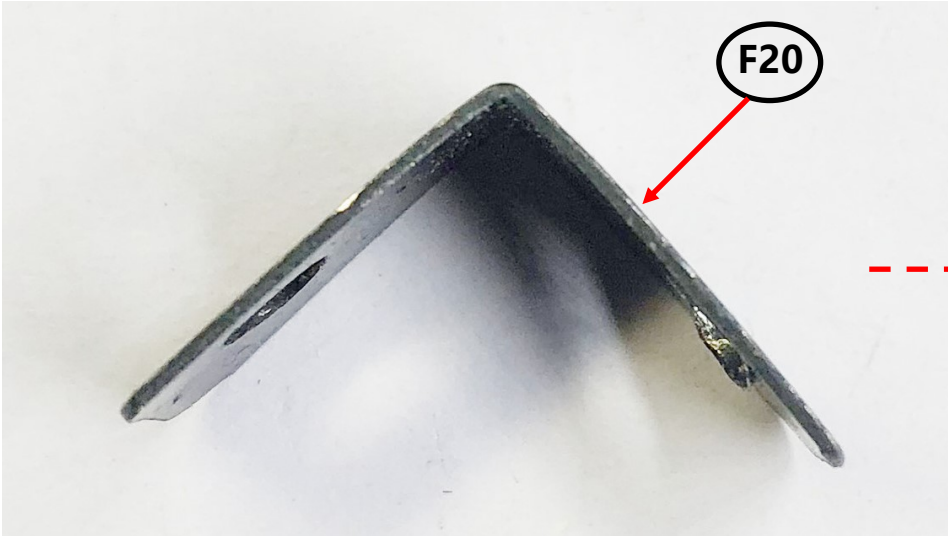




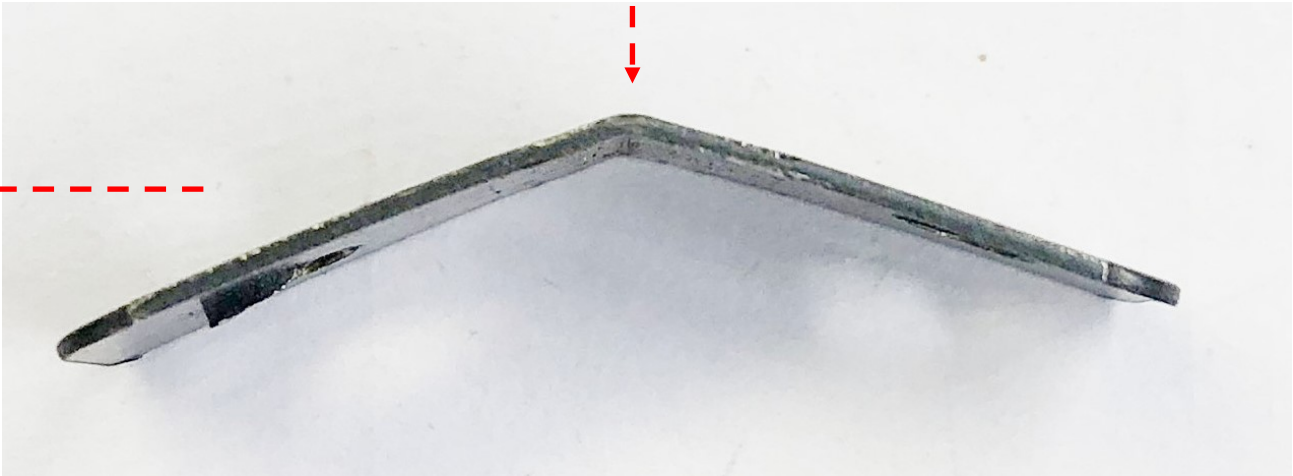
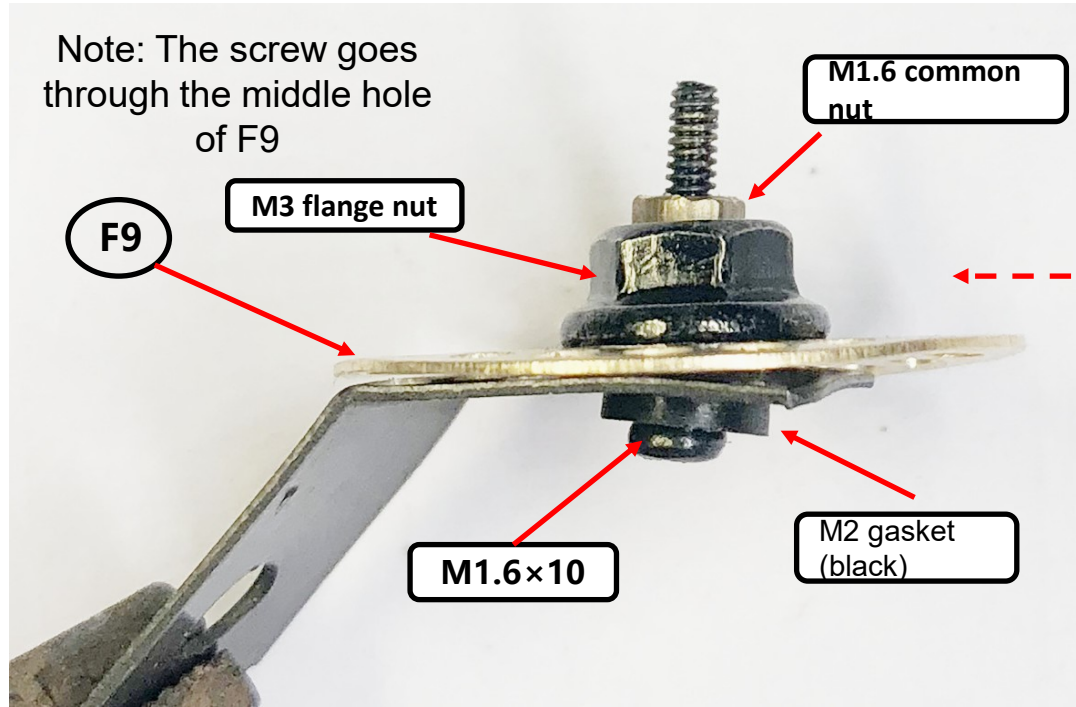


F11

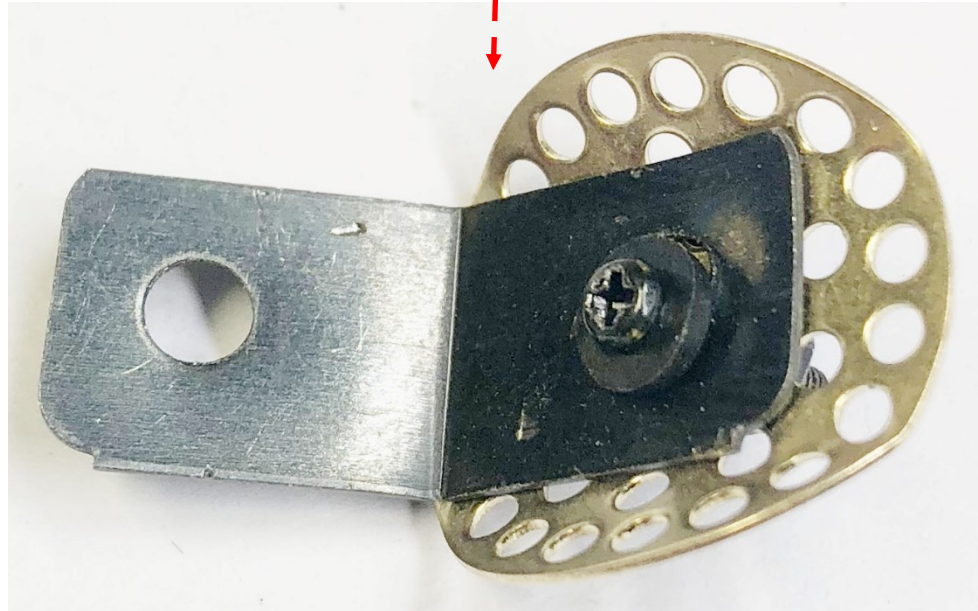
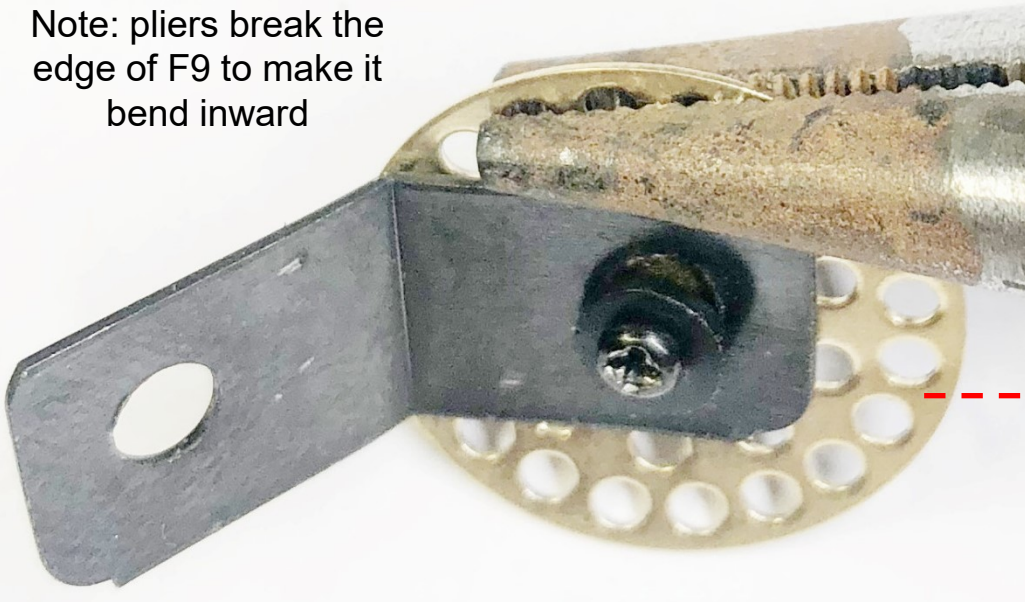


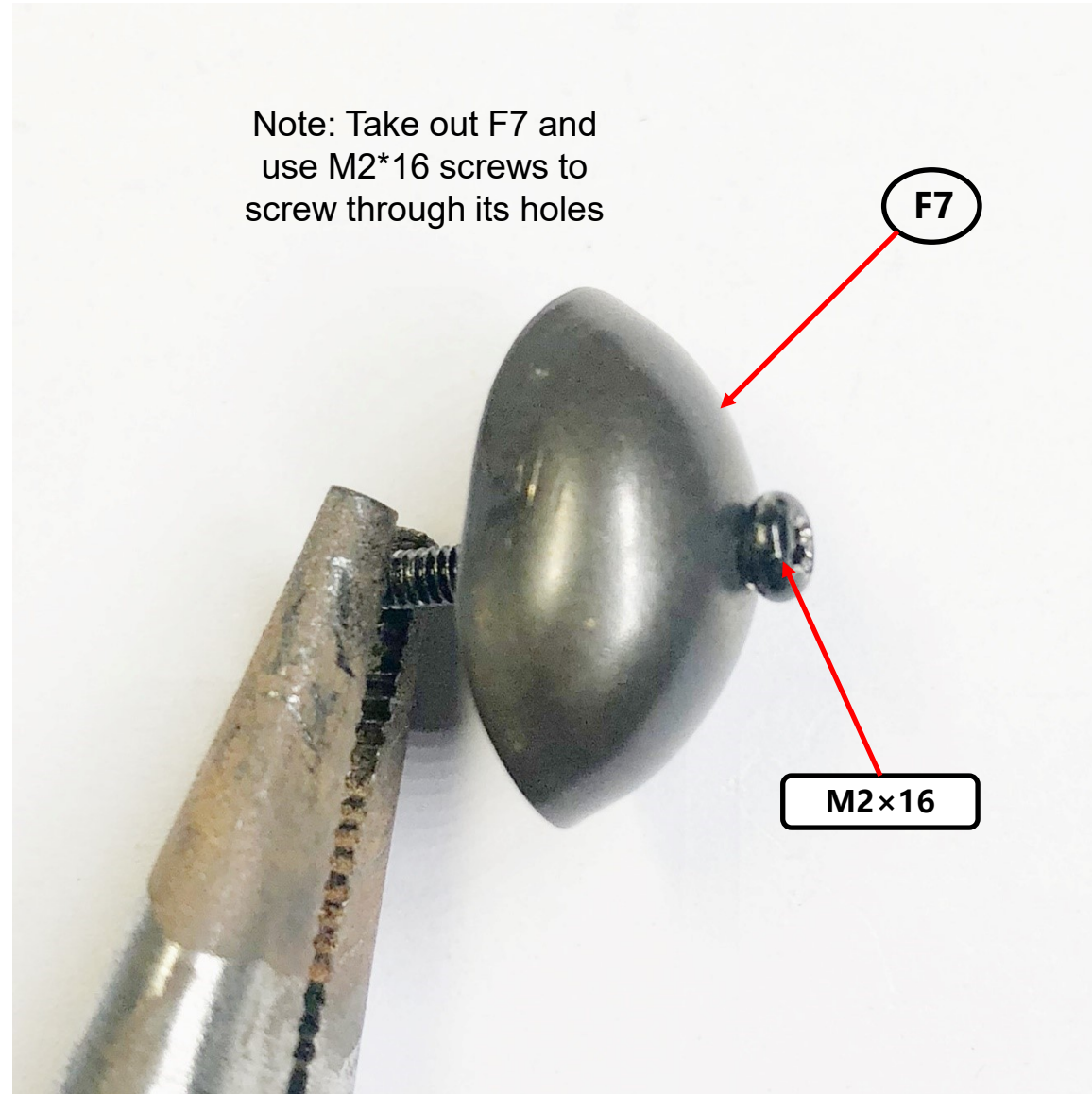


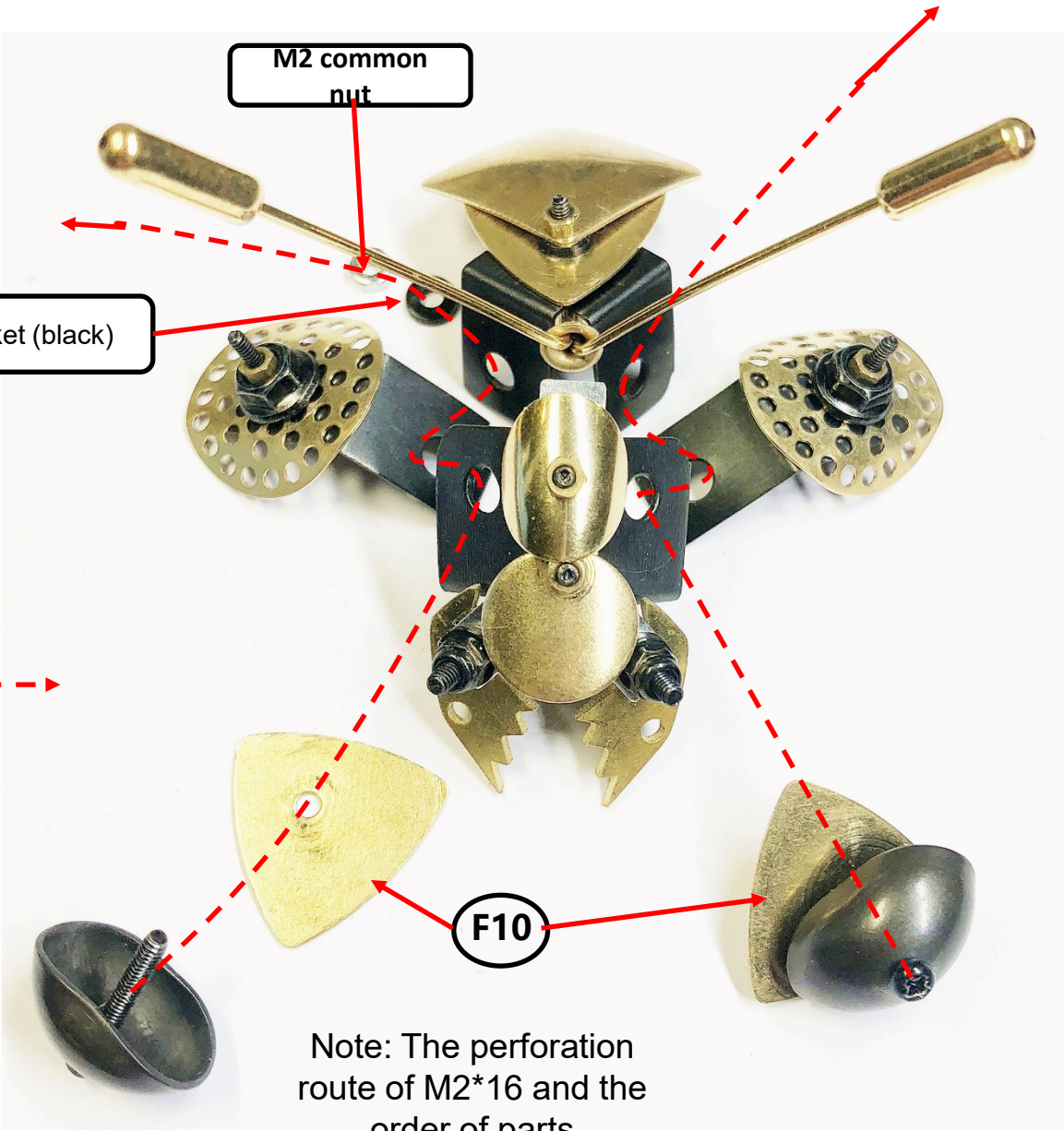
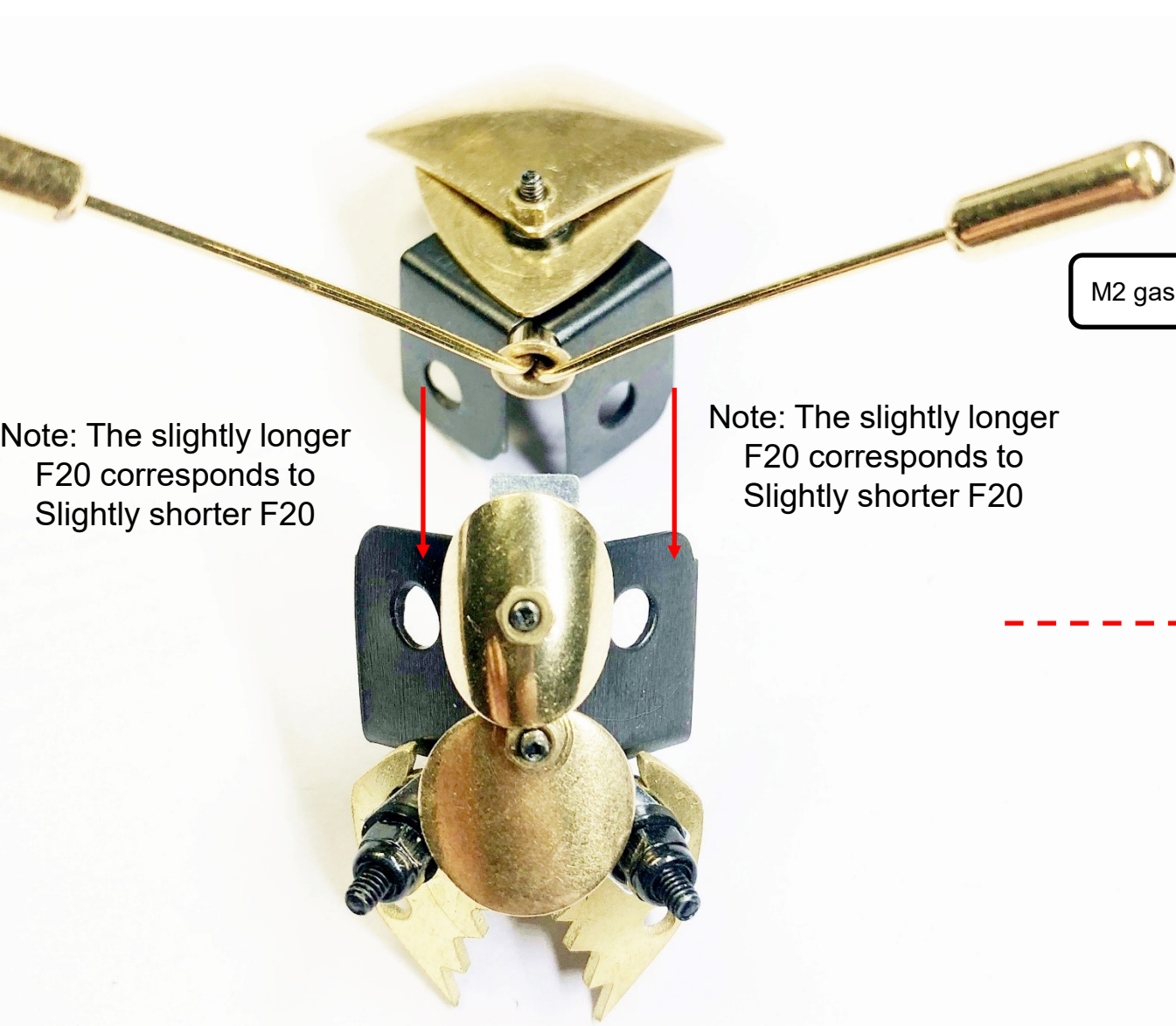
Note: Clamp the middle position with pliers

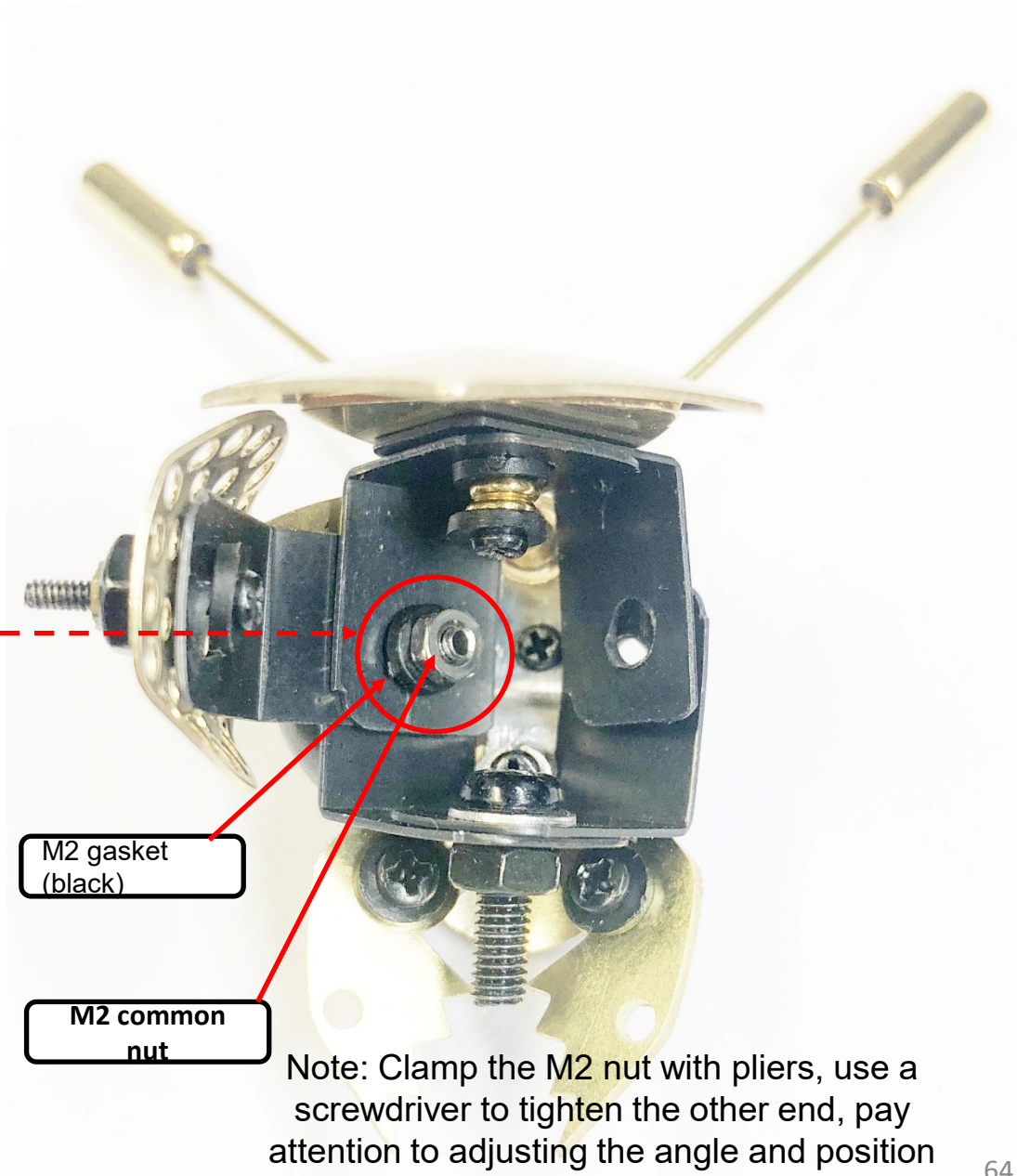
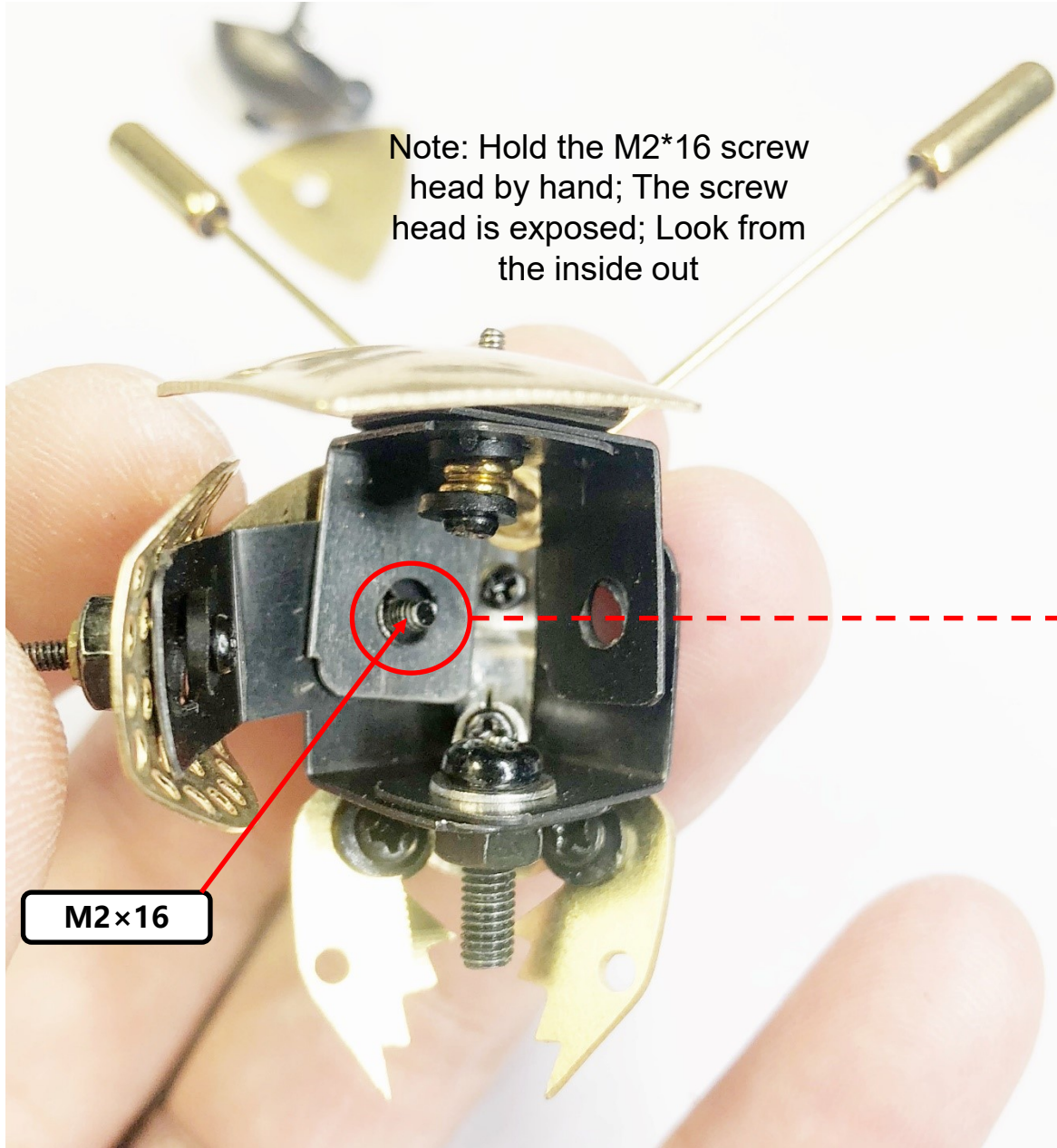


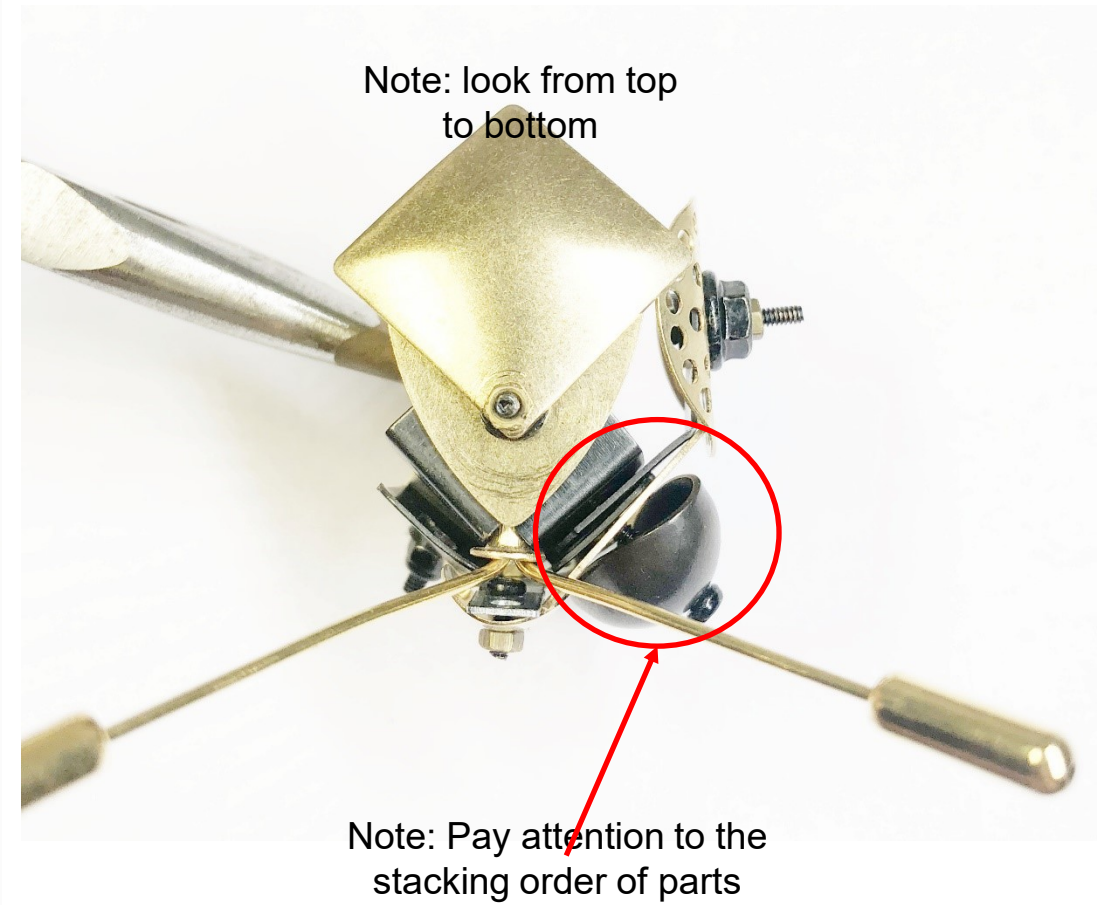
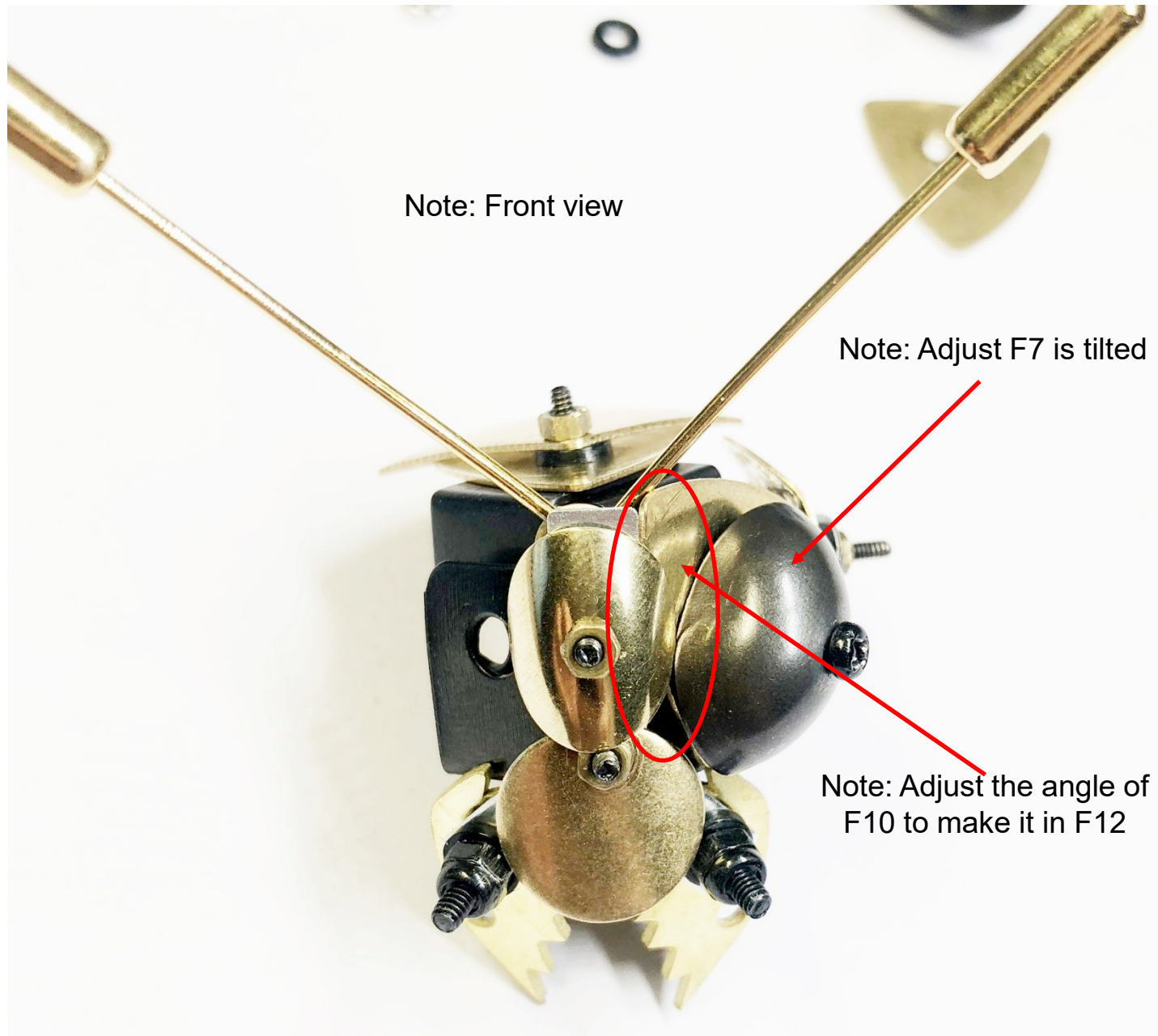
Note: pliers break the
edge of F9 to make it
bend inward

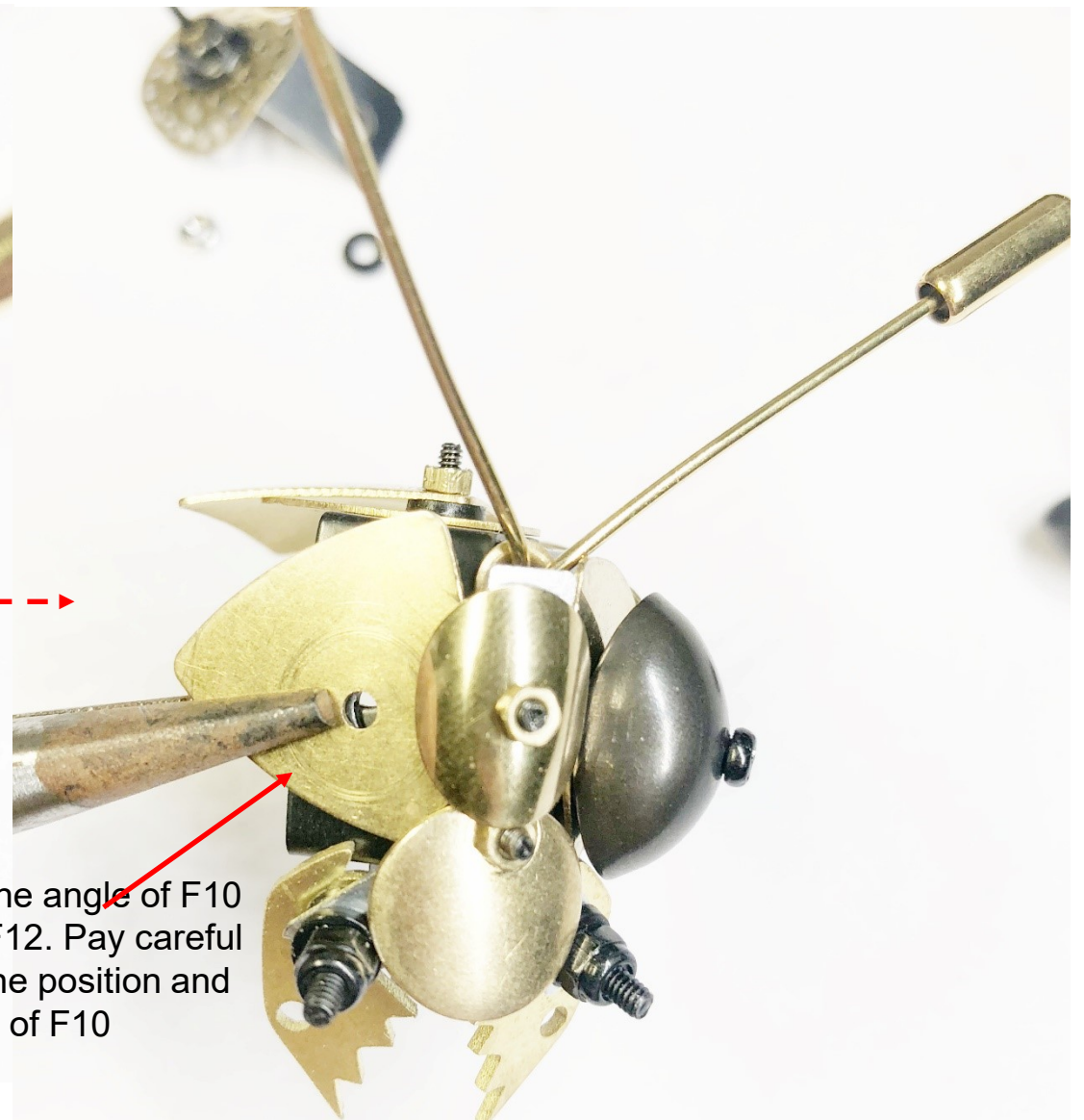
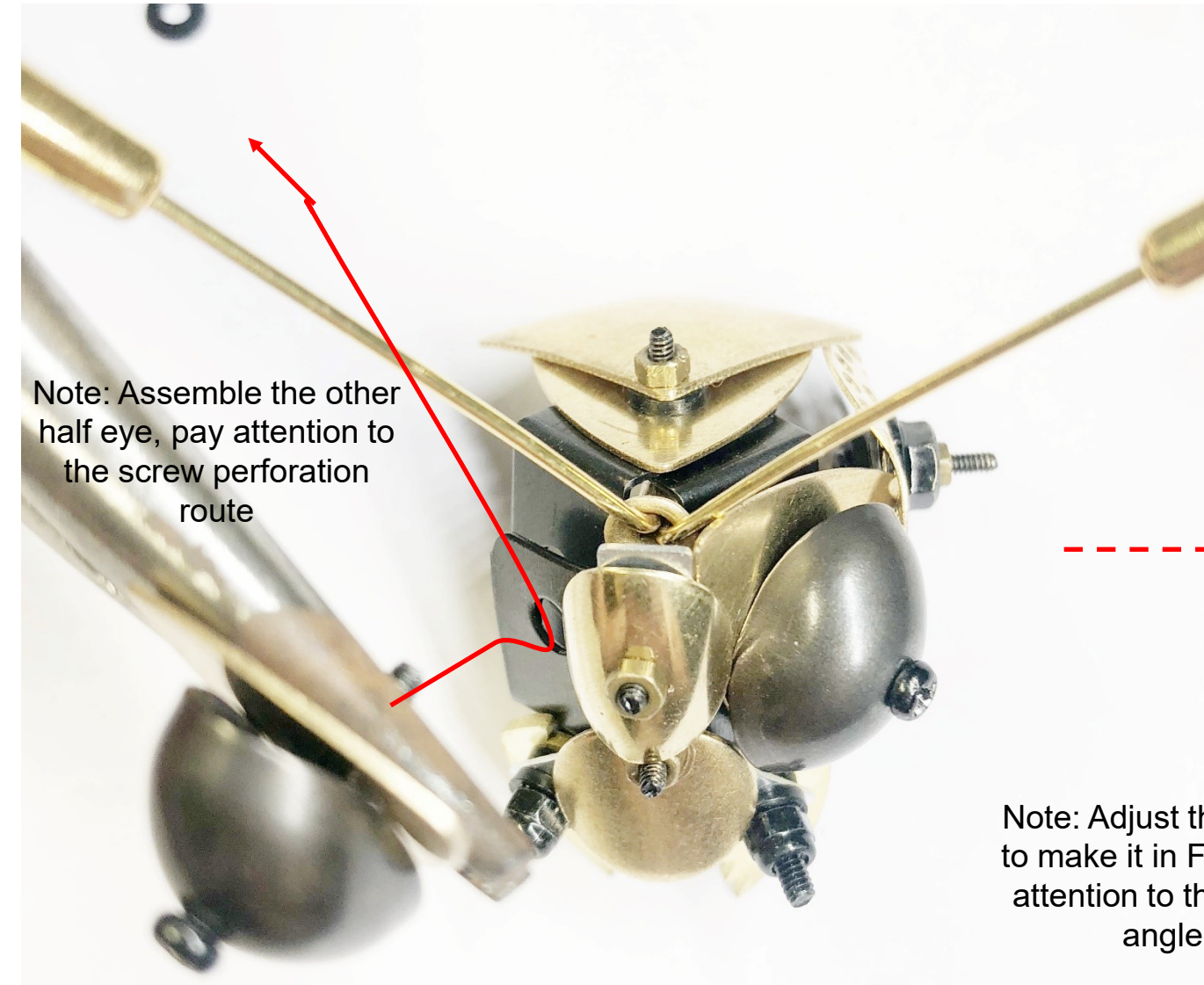


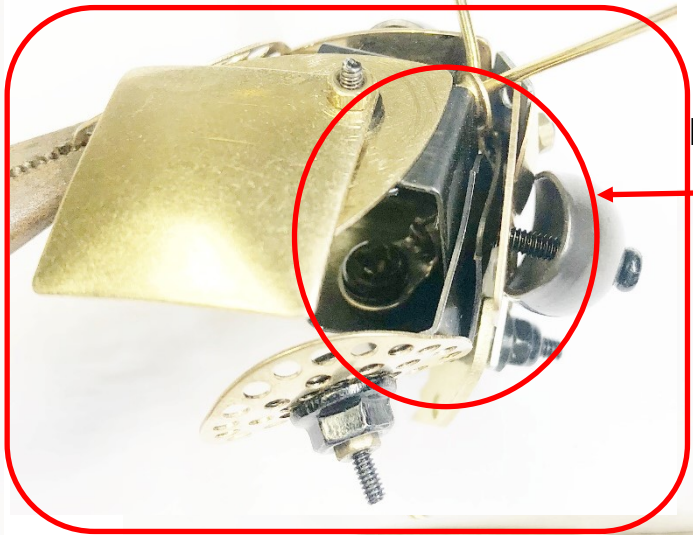
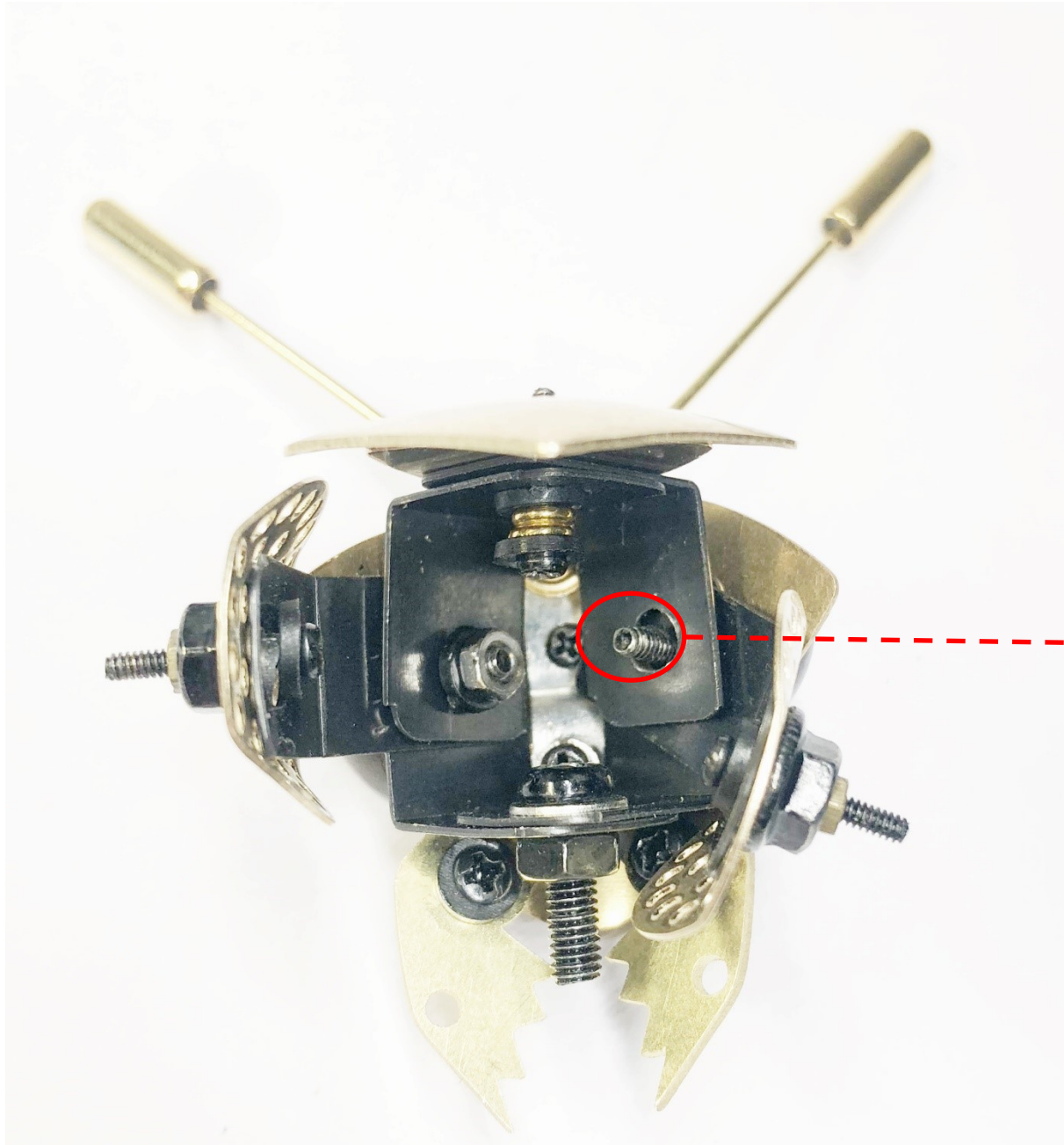




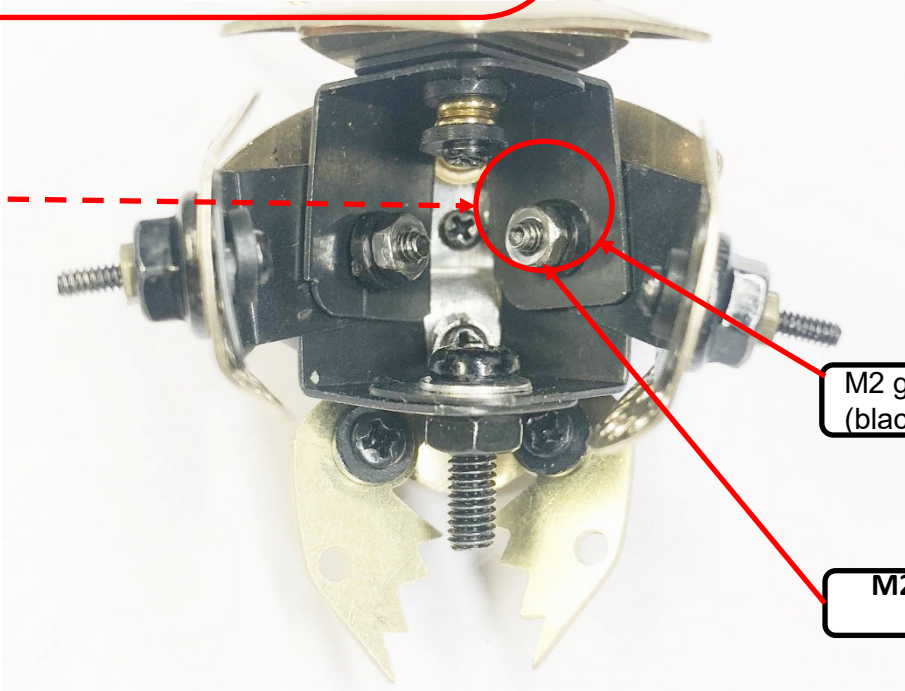








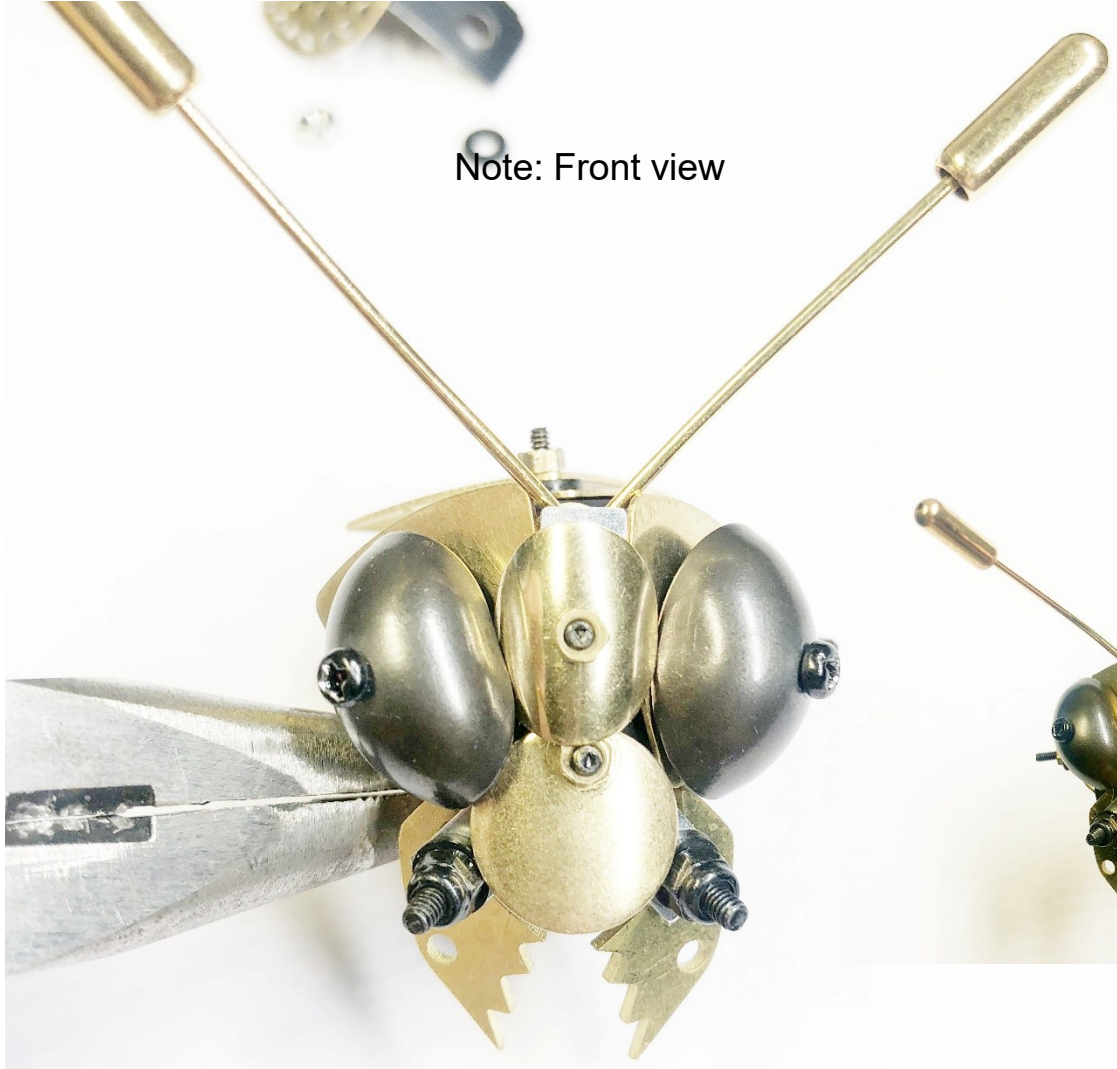
Note: Pay attention to the stacking order of parts



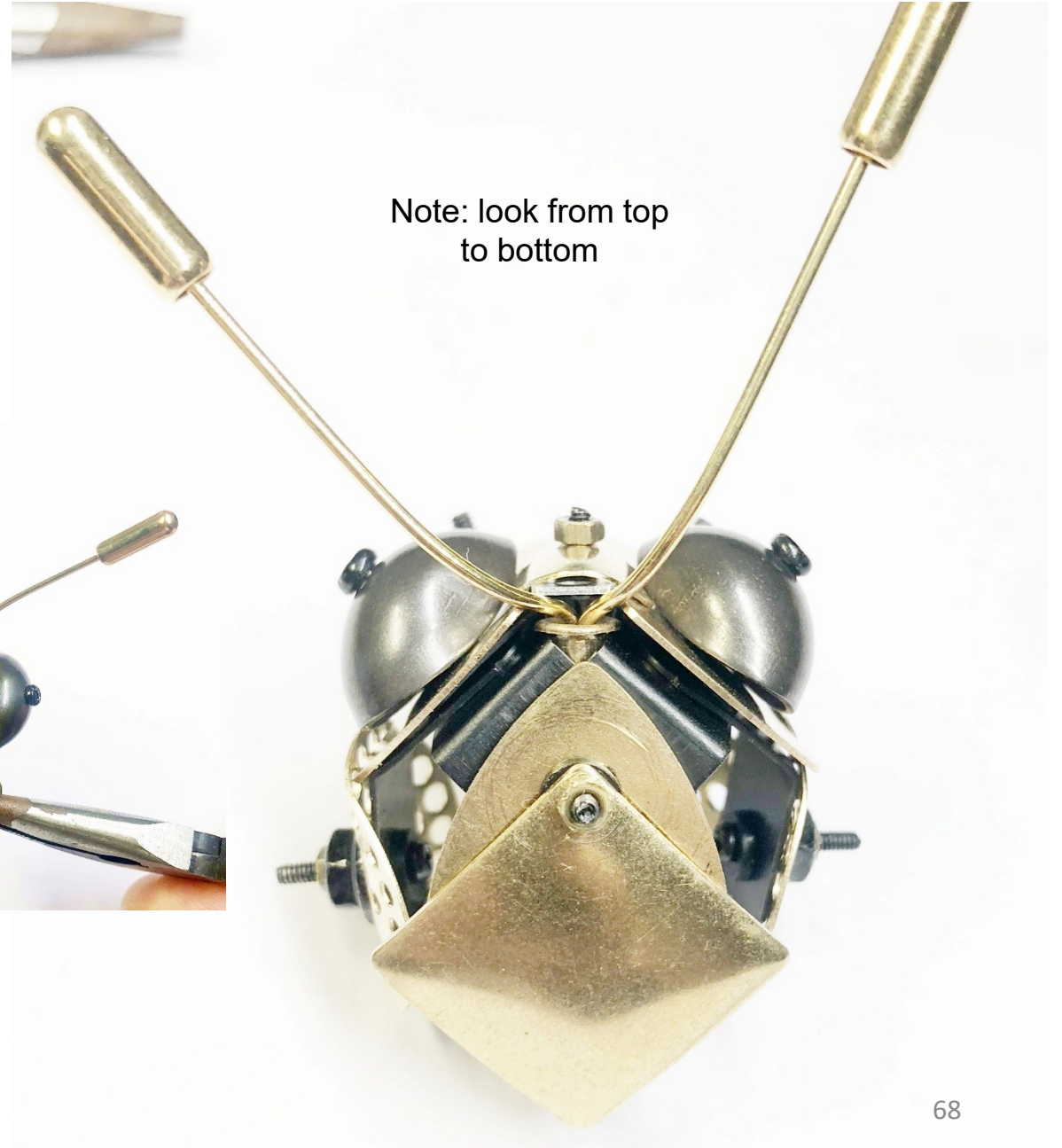
M2 gasket (black)

M2 common nut

Note: Front view

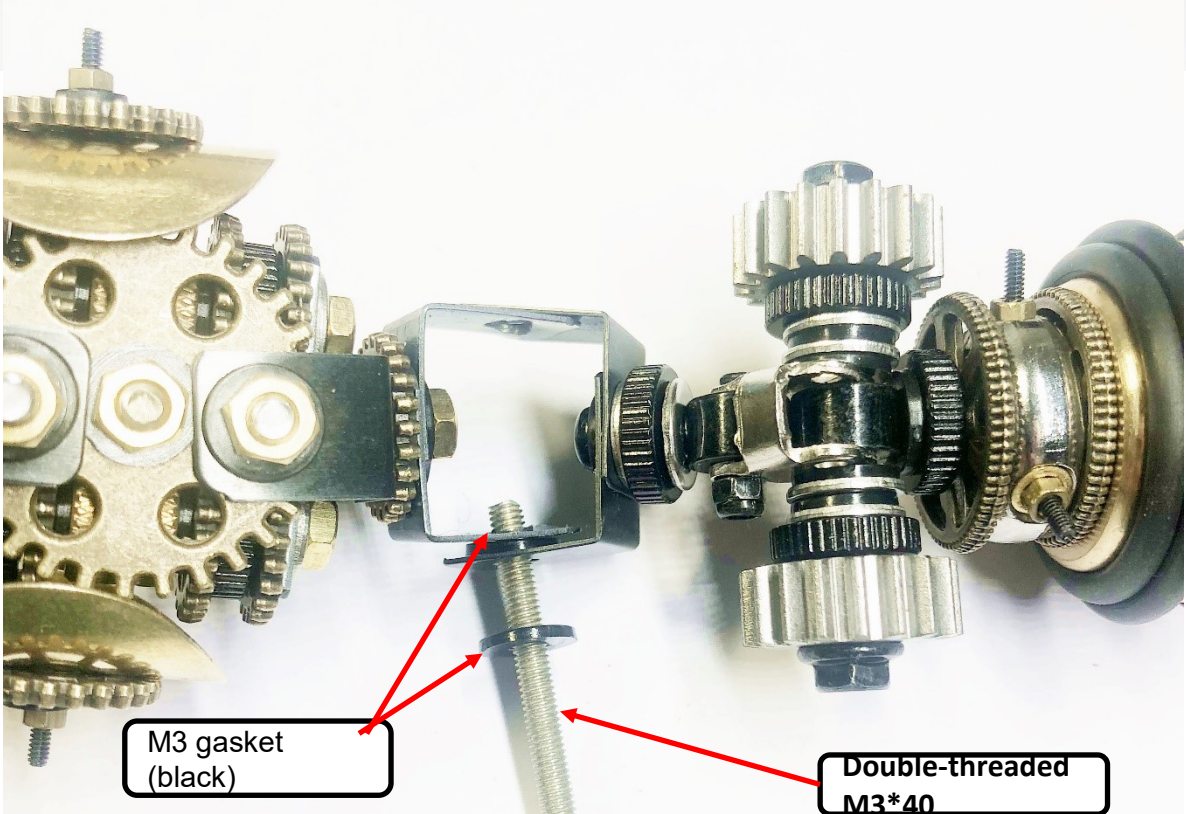
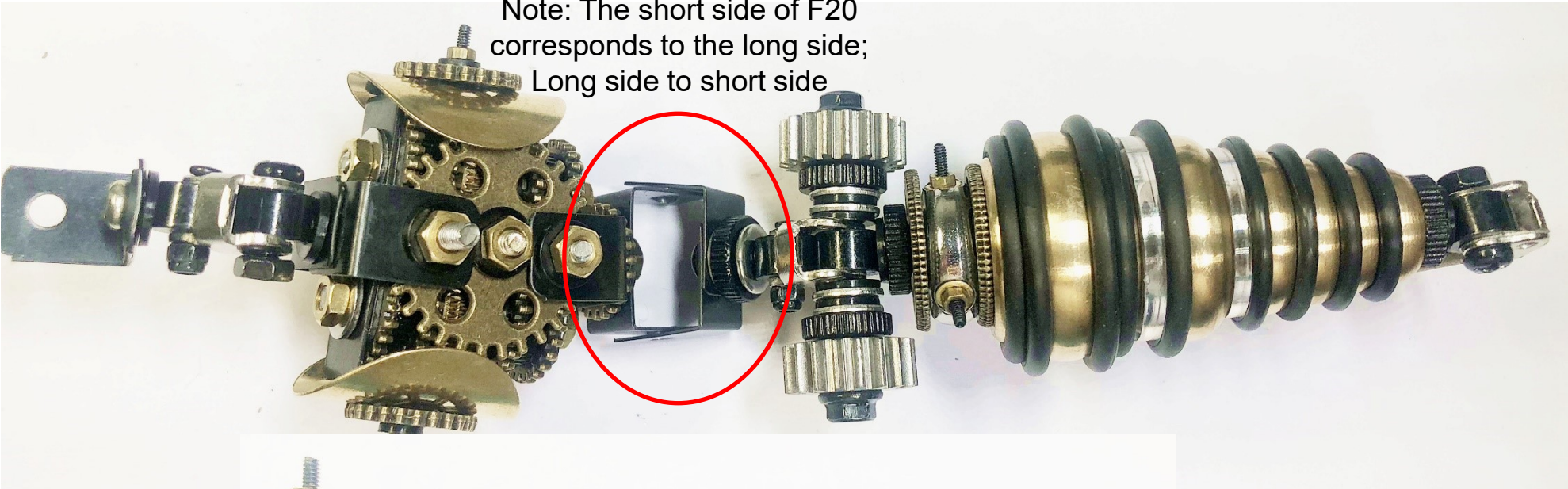


Note: look from top
to bottom



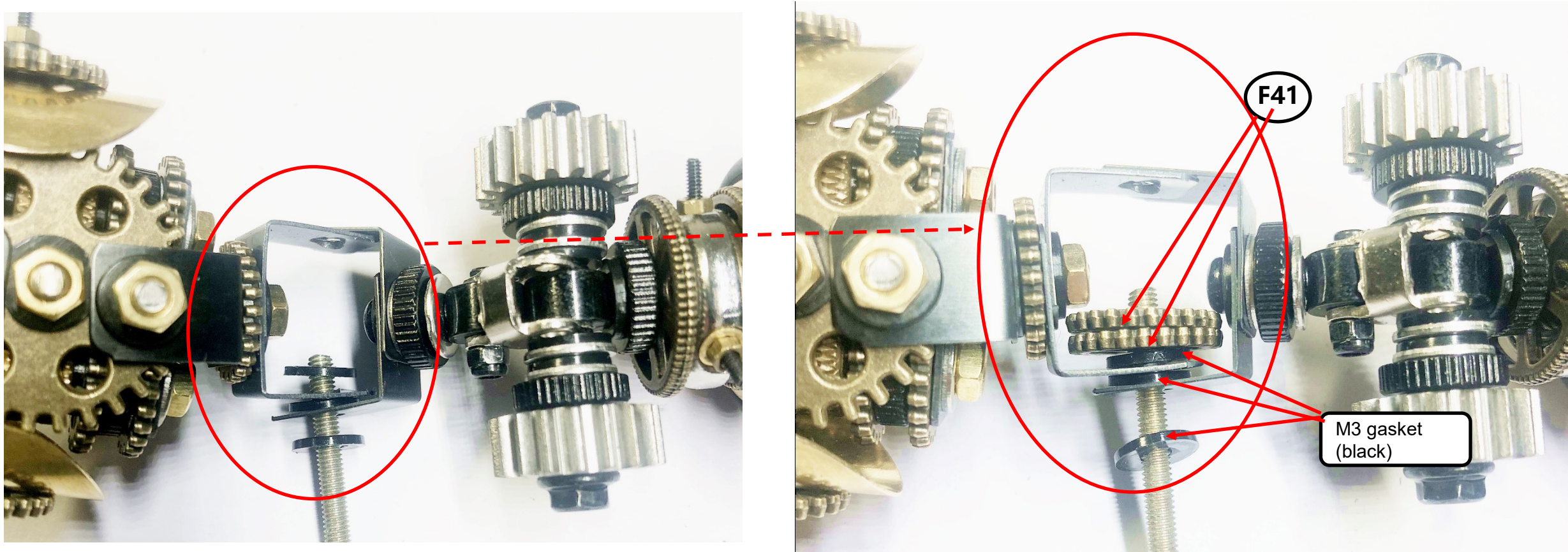
Congratulations, the head assembly is completed

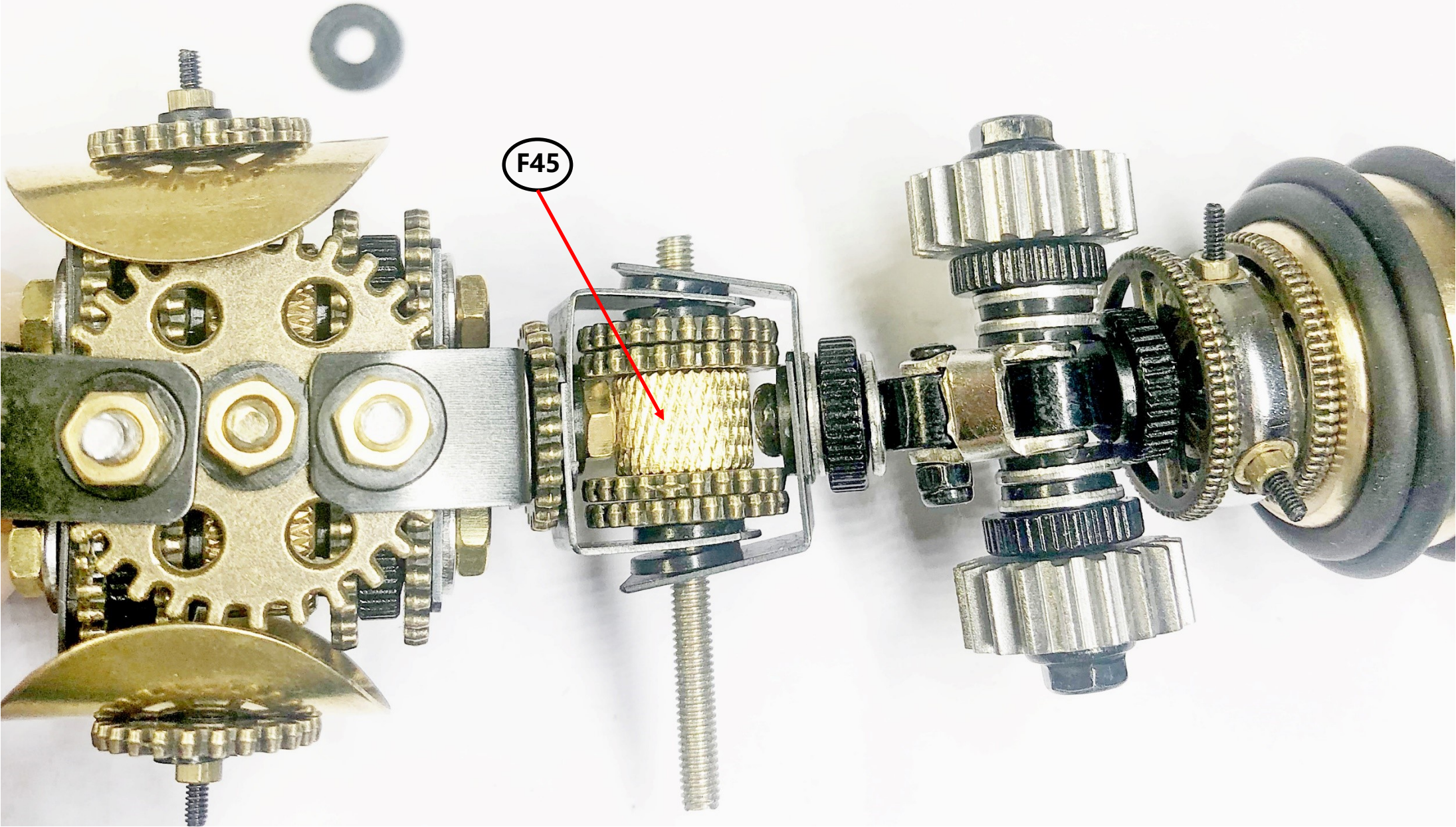
Next part: 6. Overall assembly

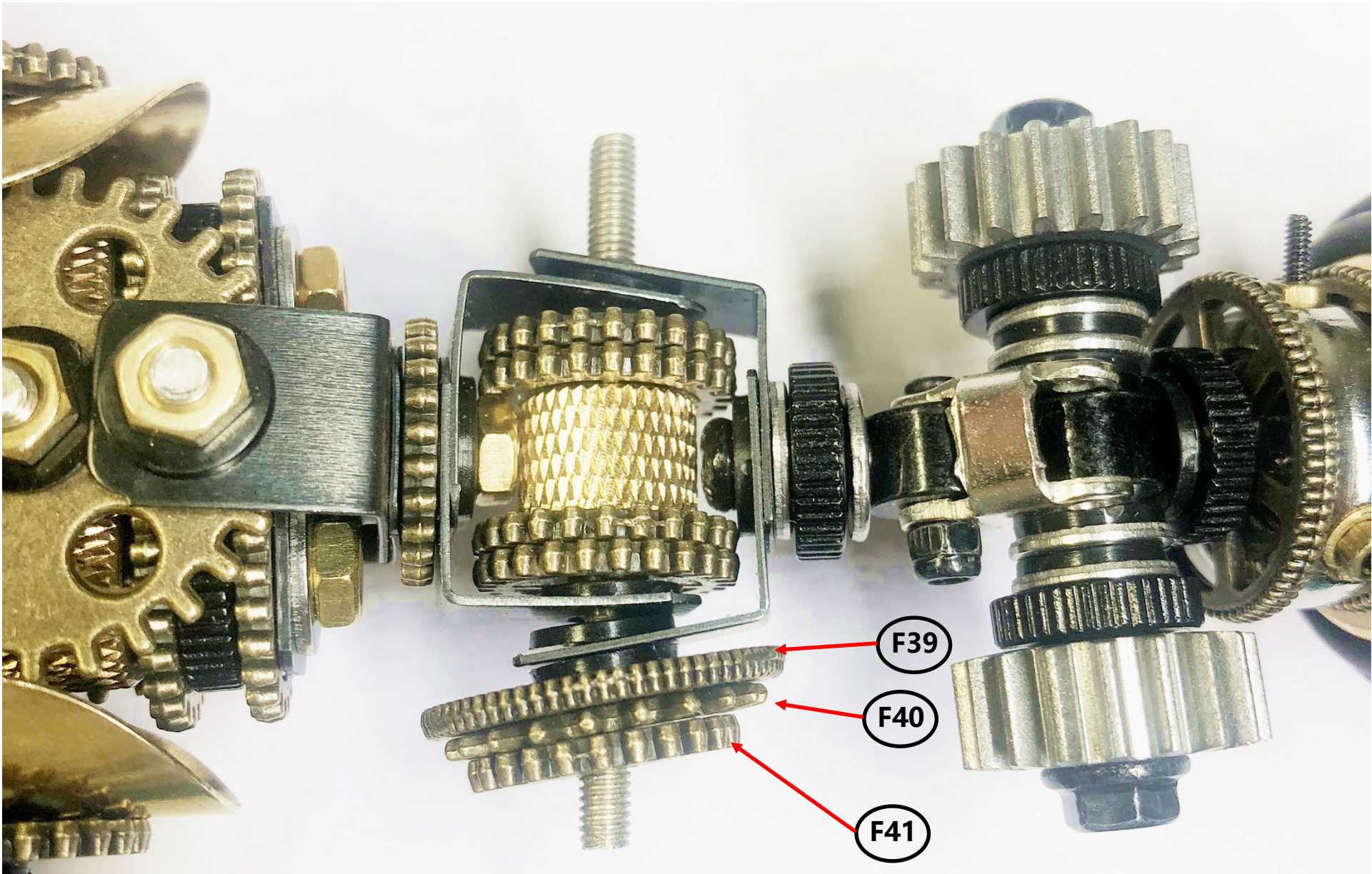


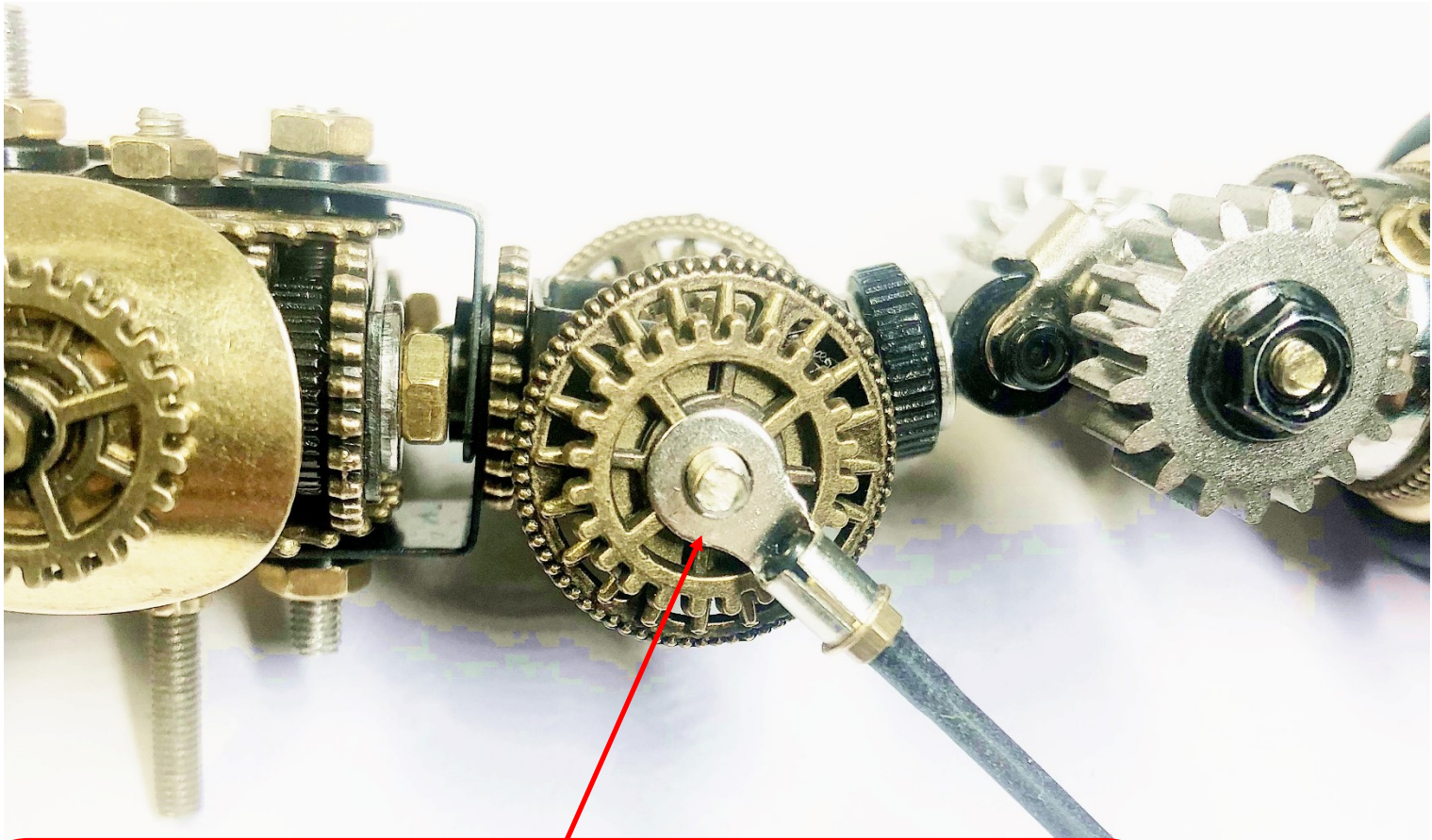
M3 gasket
(black)

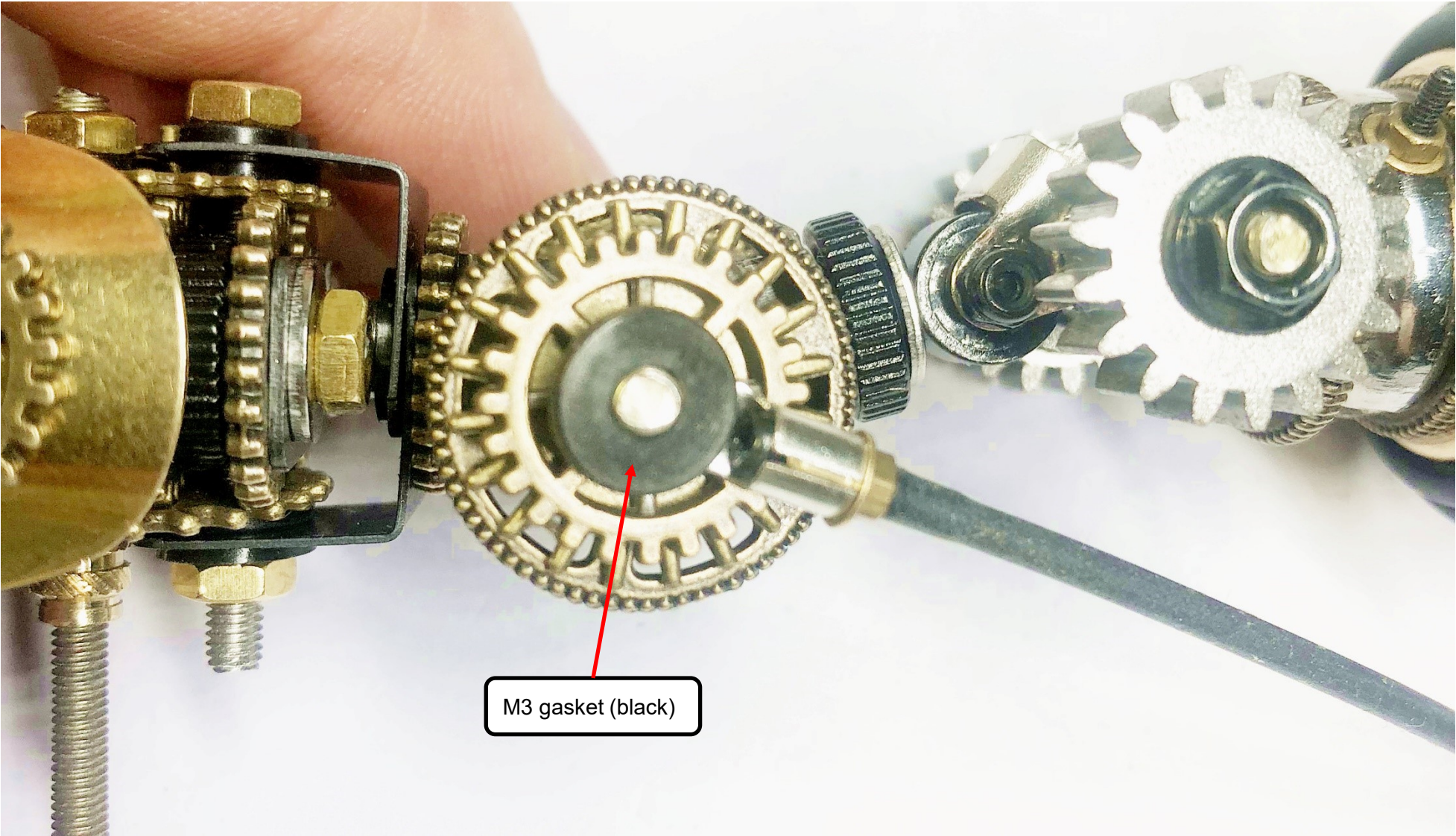
Double-threaded
M3*40



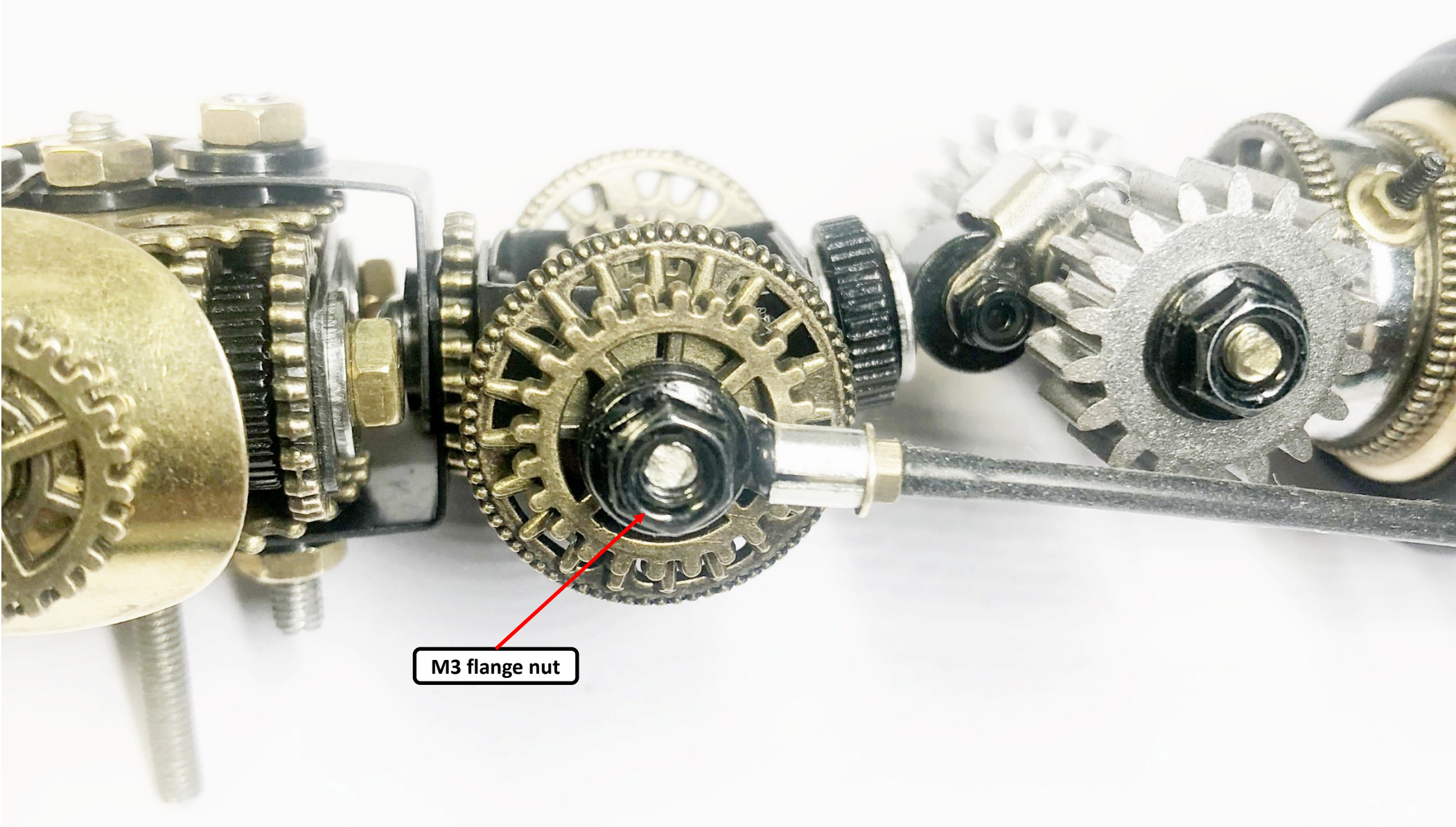




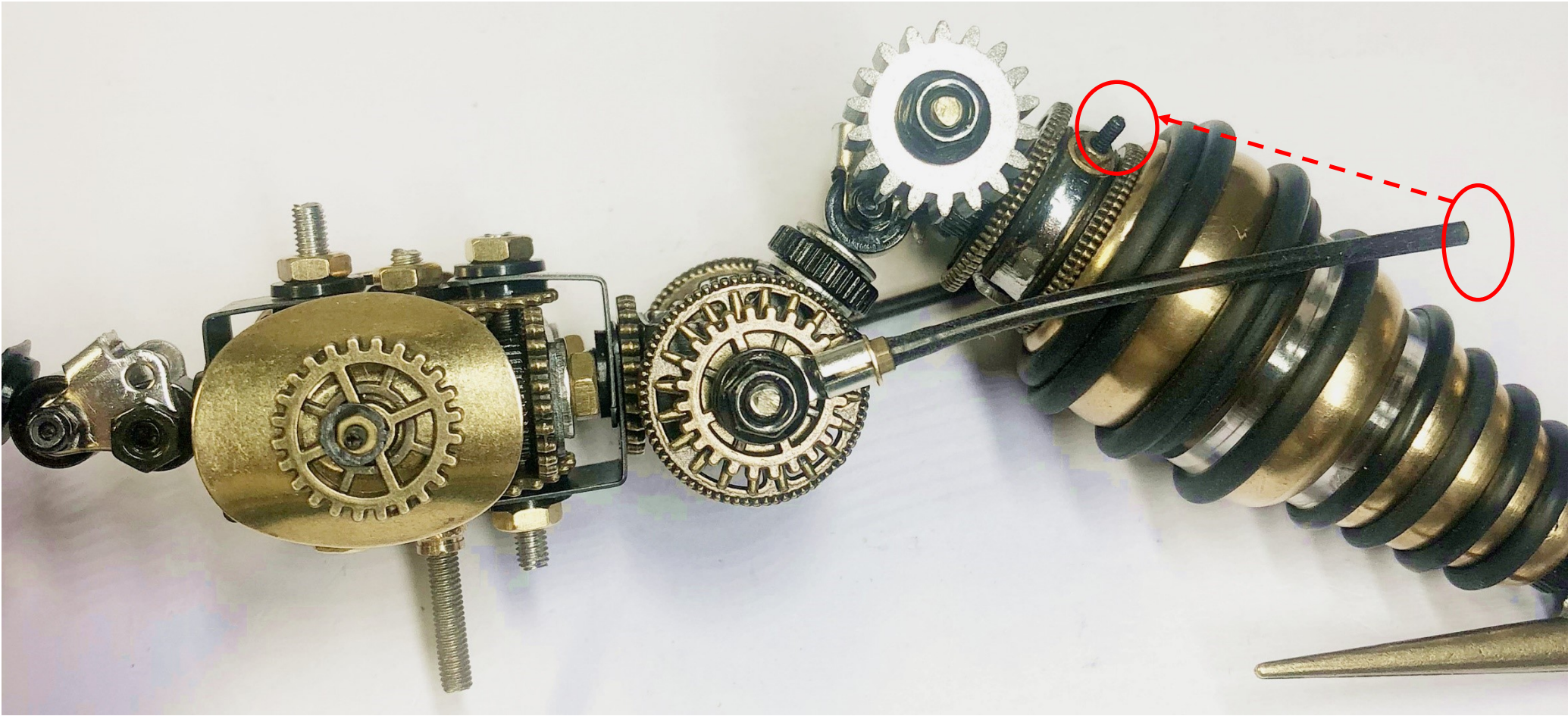


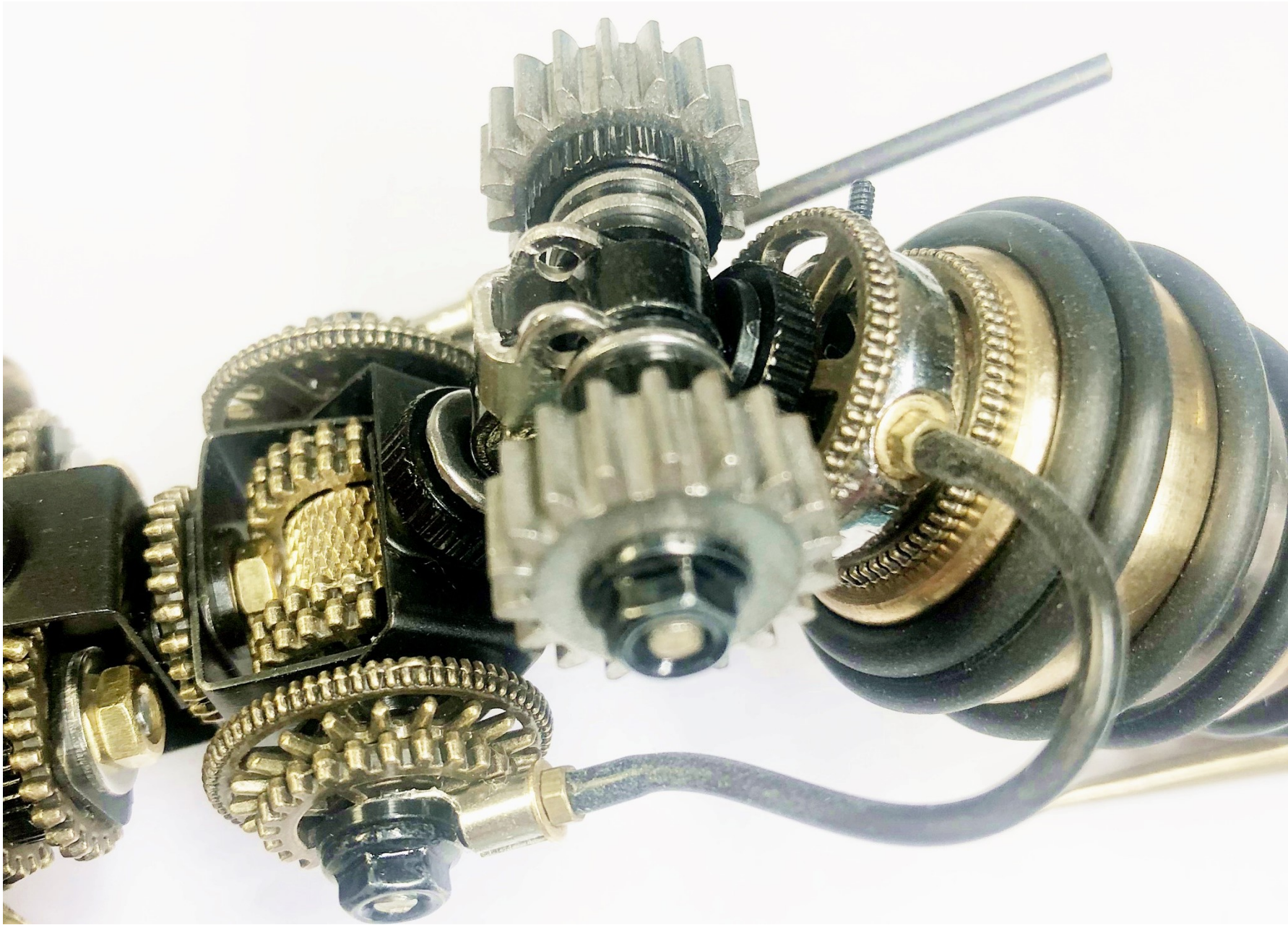


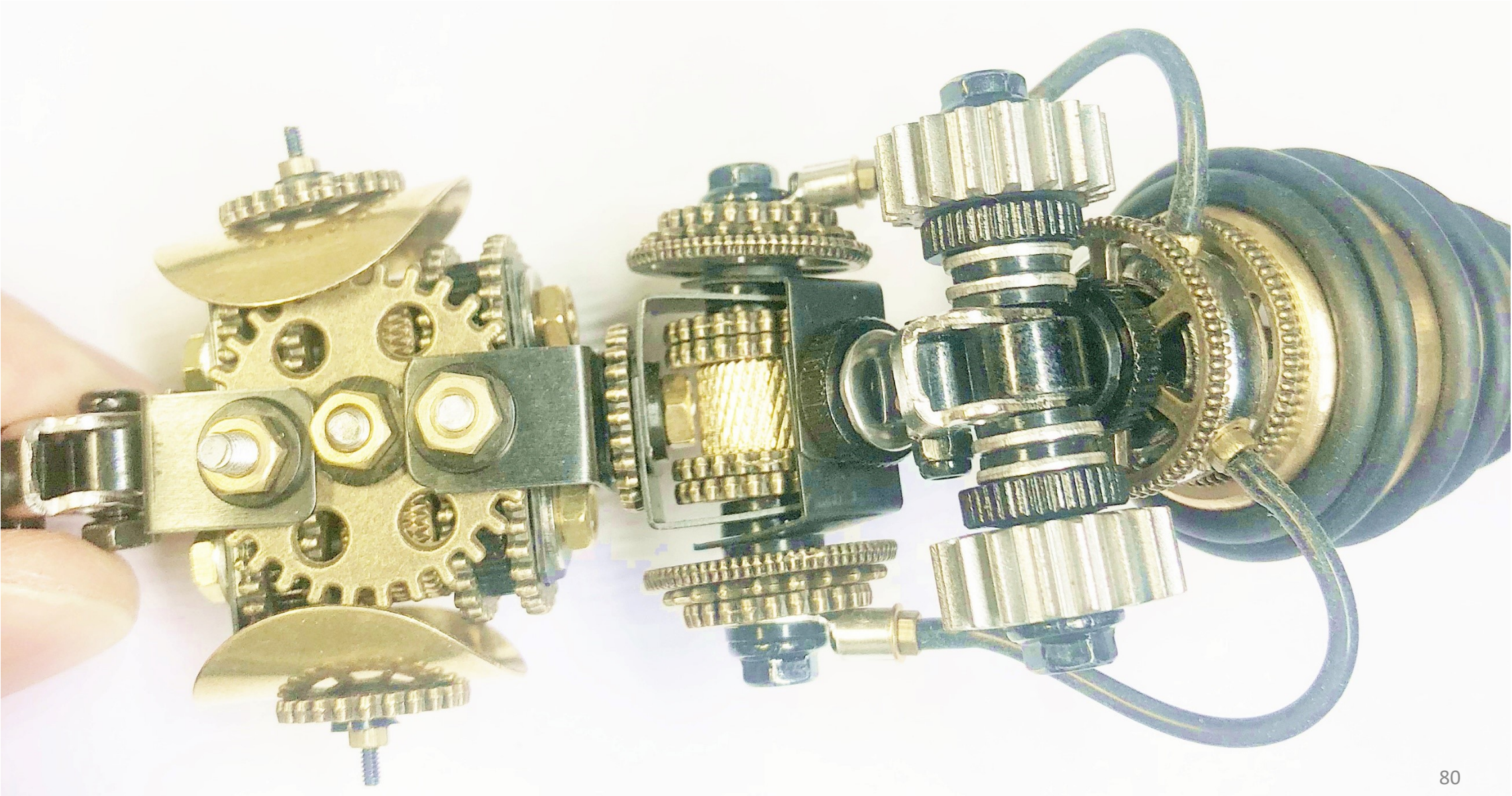
M3 gasket (black)

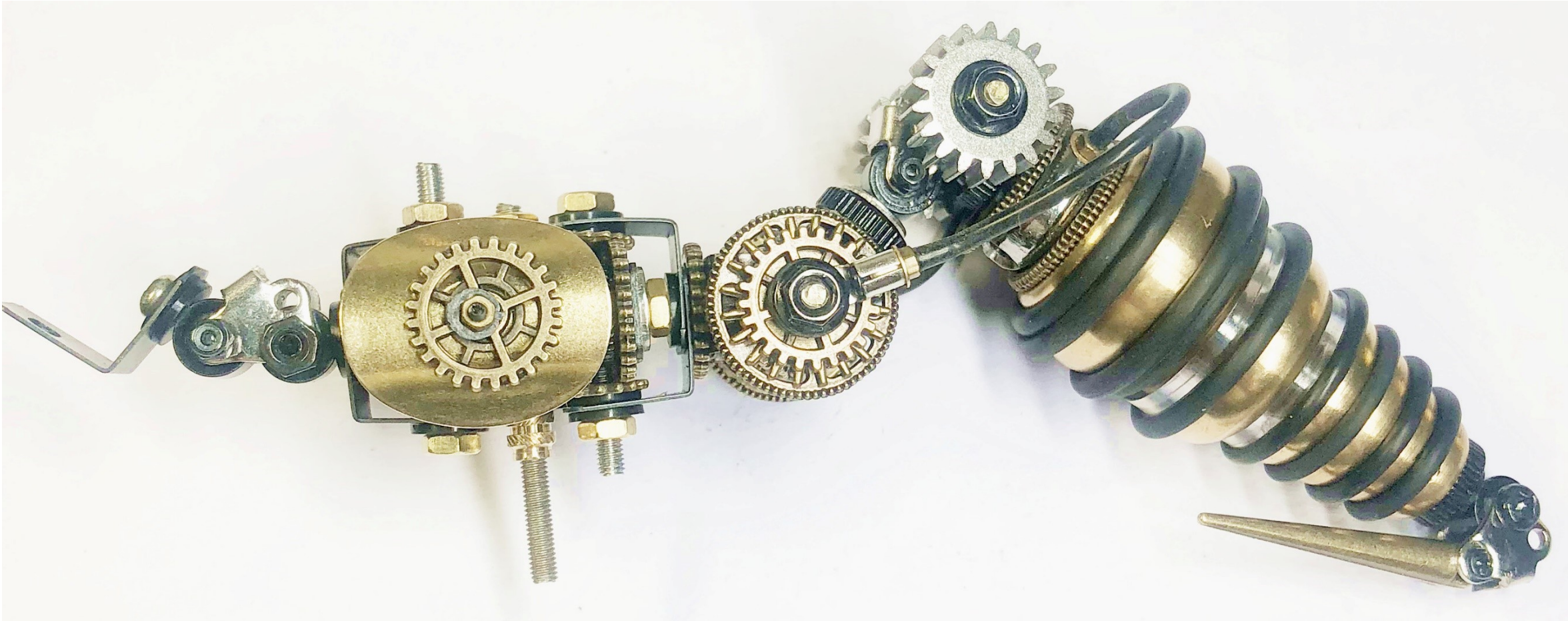






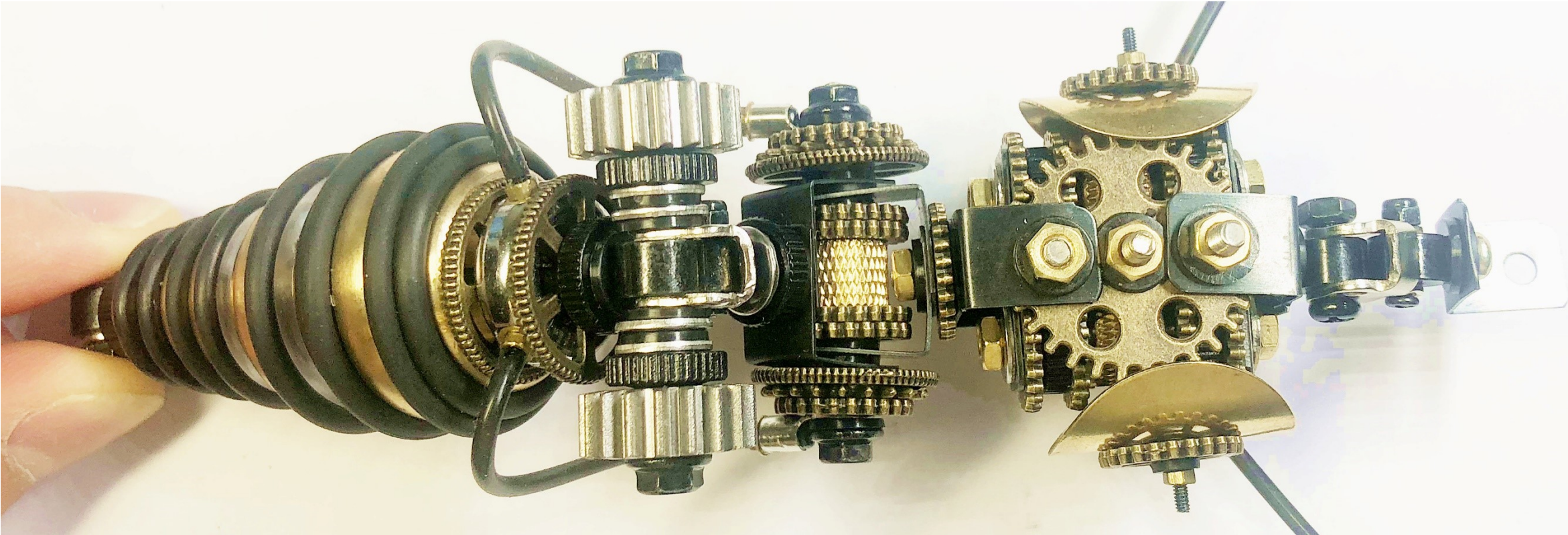


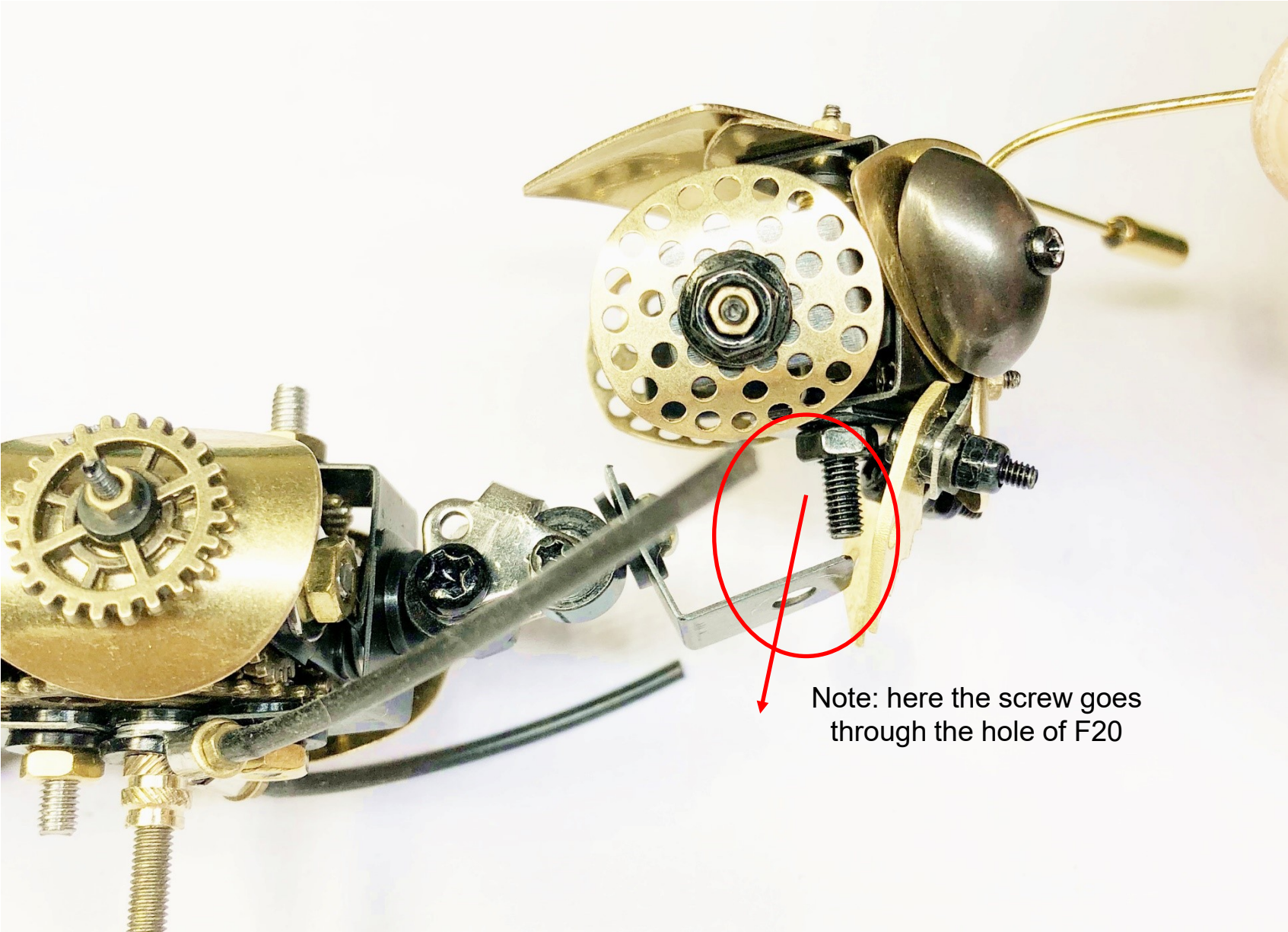




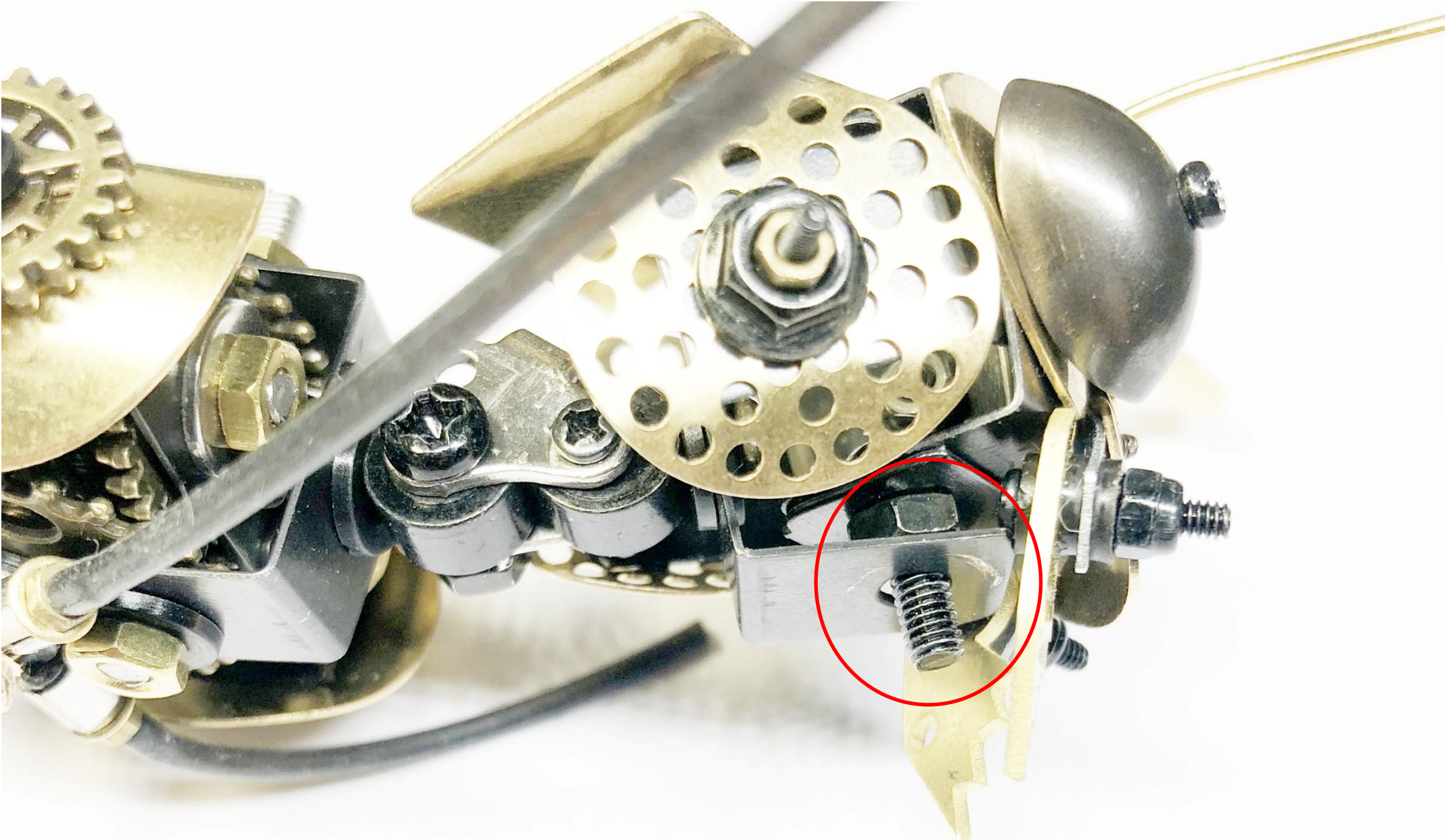


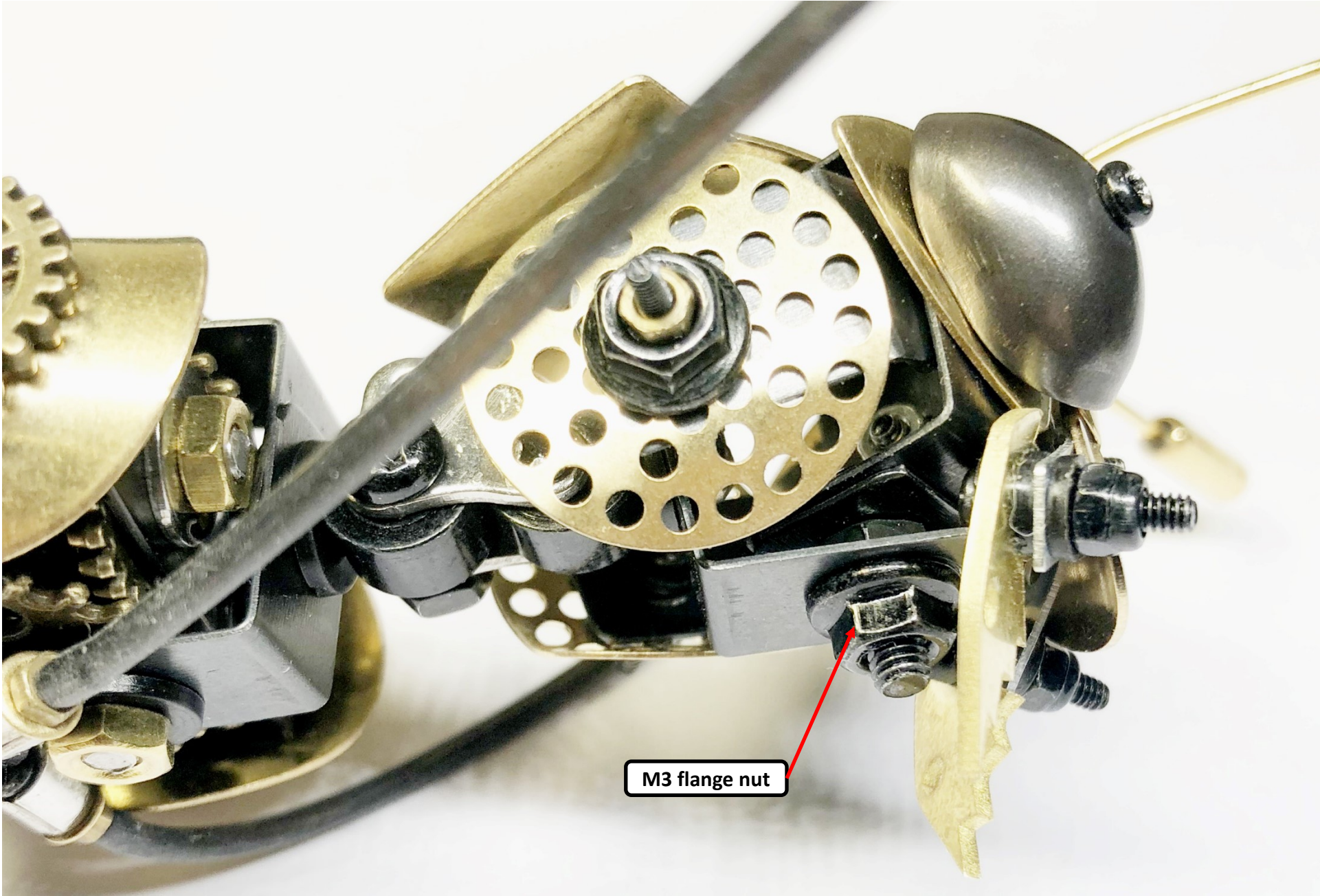


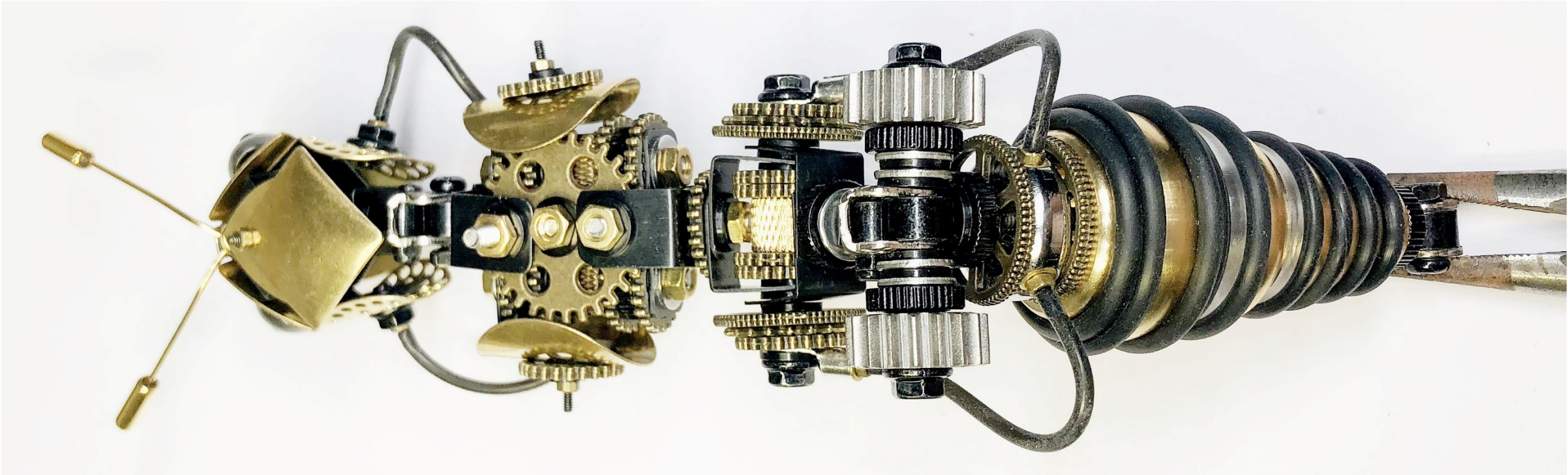




Note: here the screw goes through the hole of F20

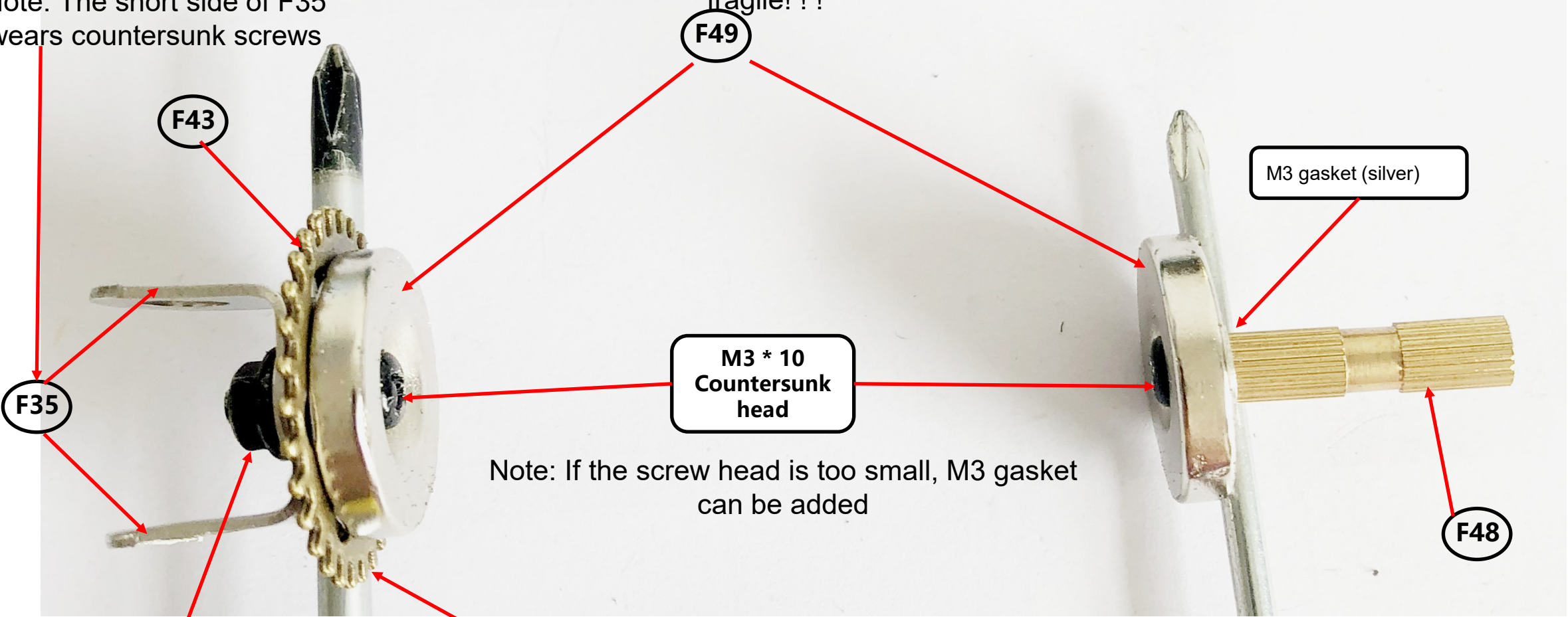






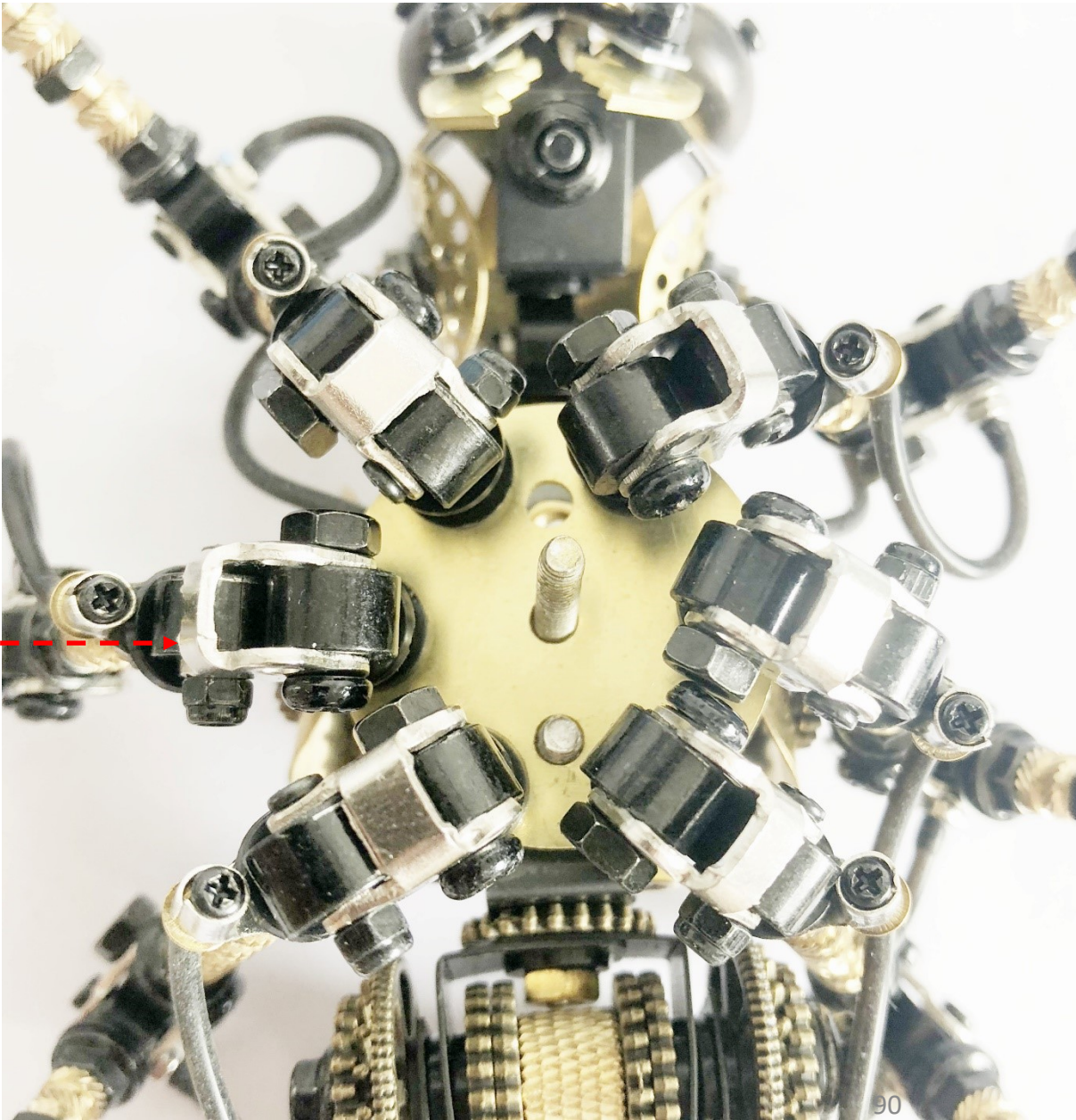
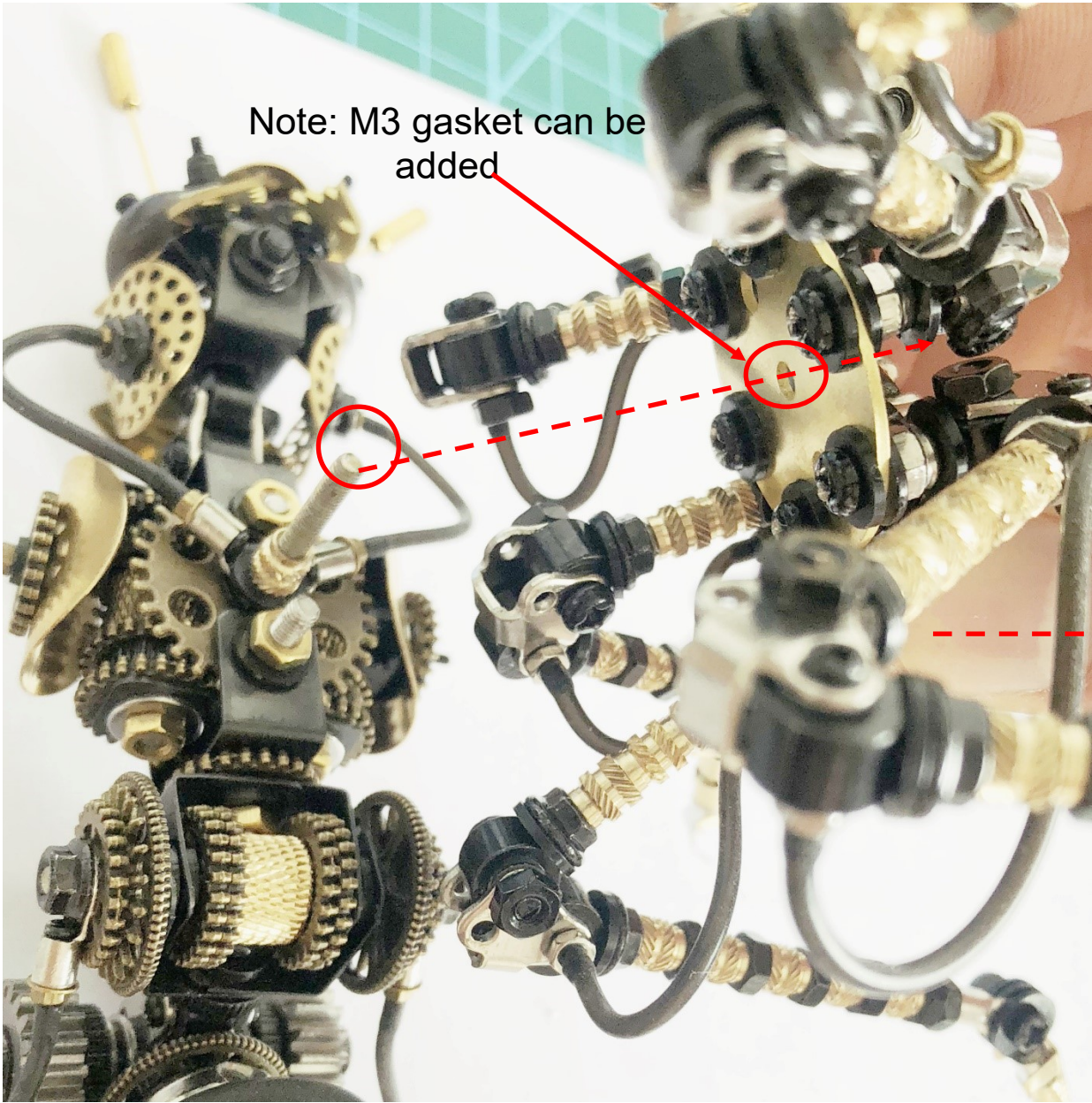
Note: Take the two F49s that are sucked on the concave surface and separate them carefully. The magnetic force is strong, do not collide, they are fragile!!

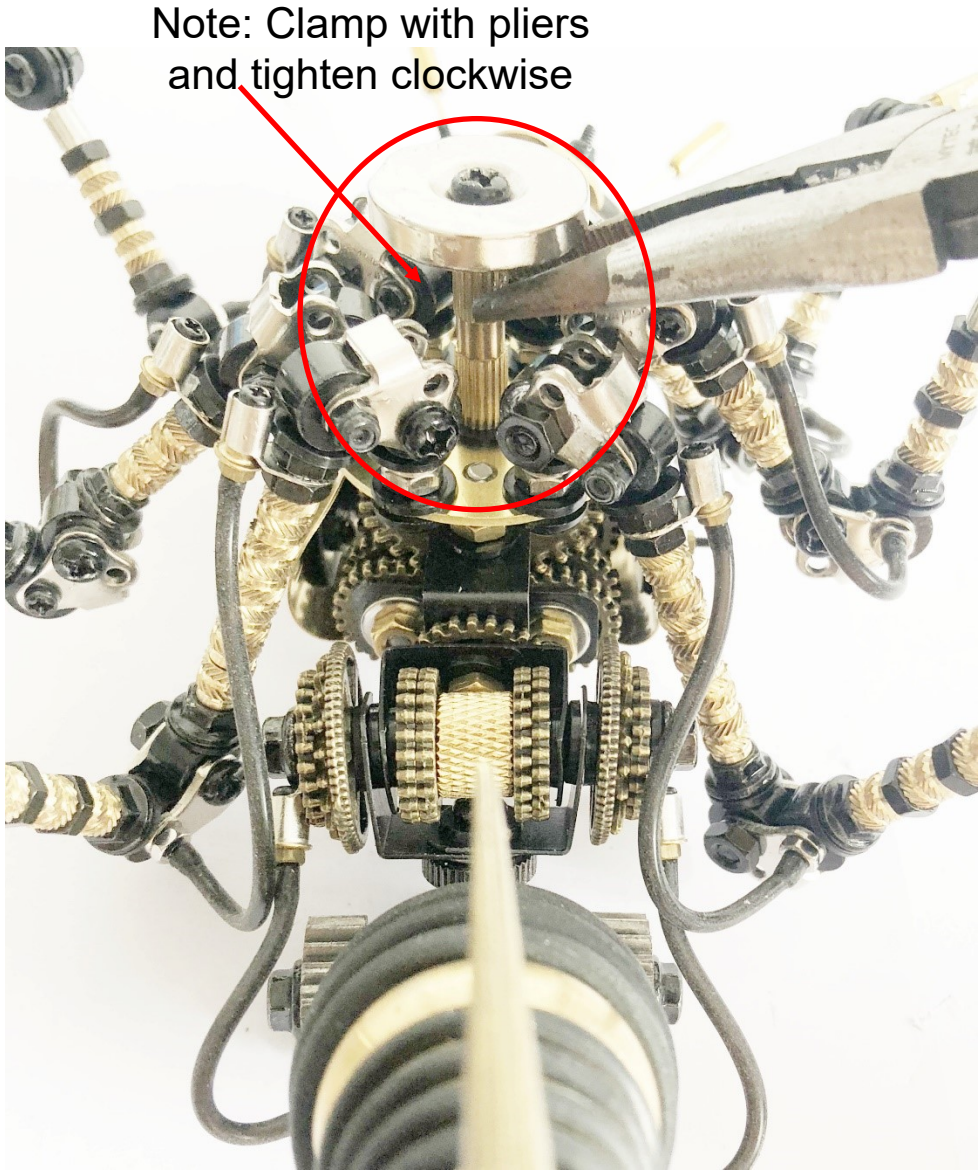
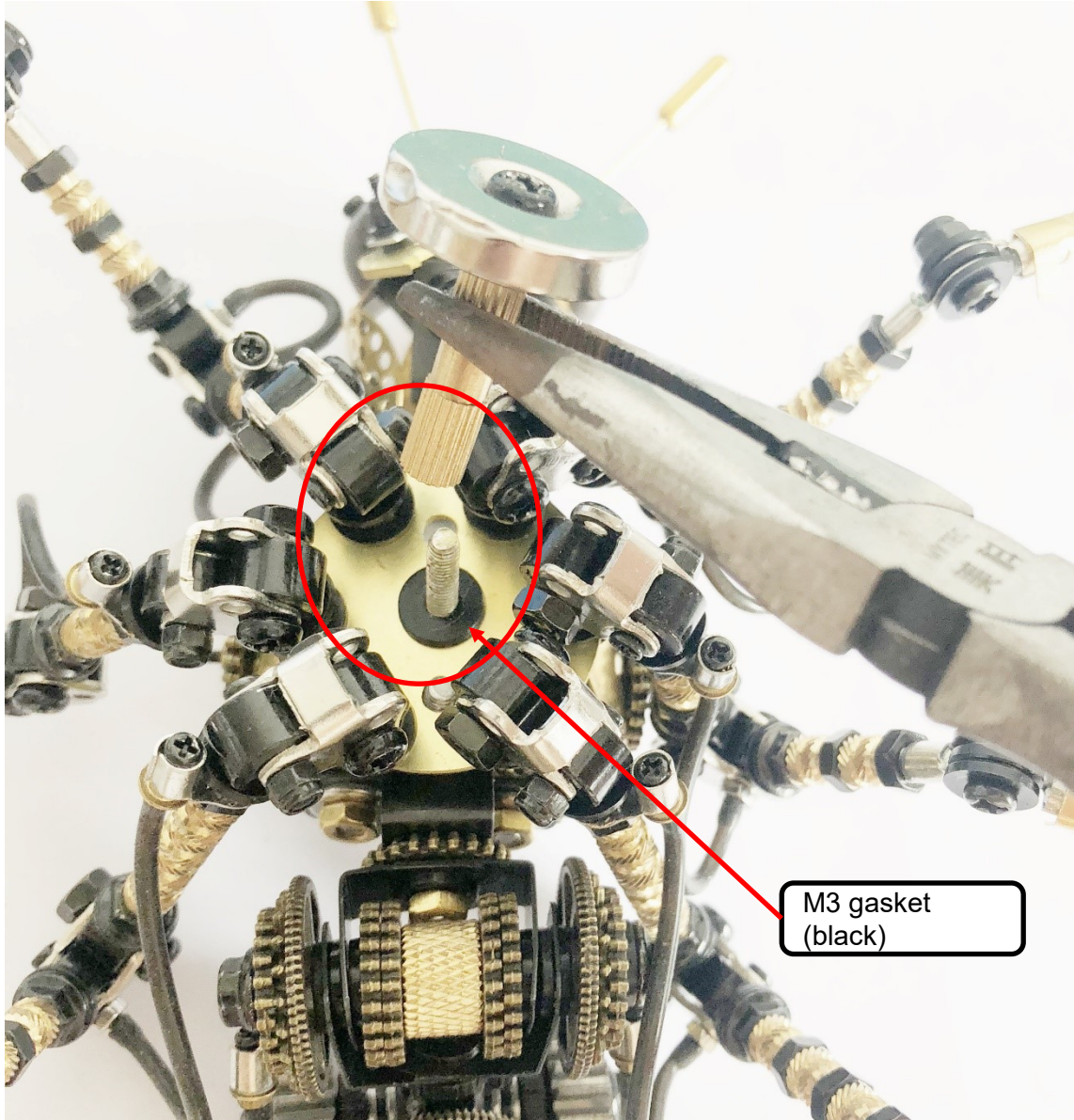
Note: The short side of F35 wears countersunk screws

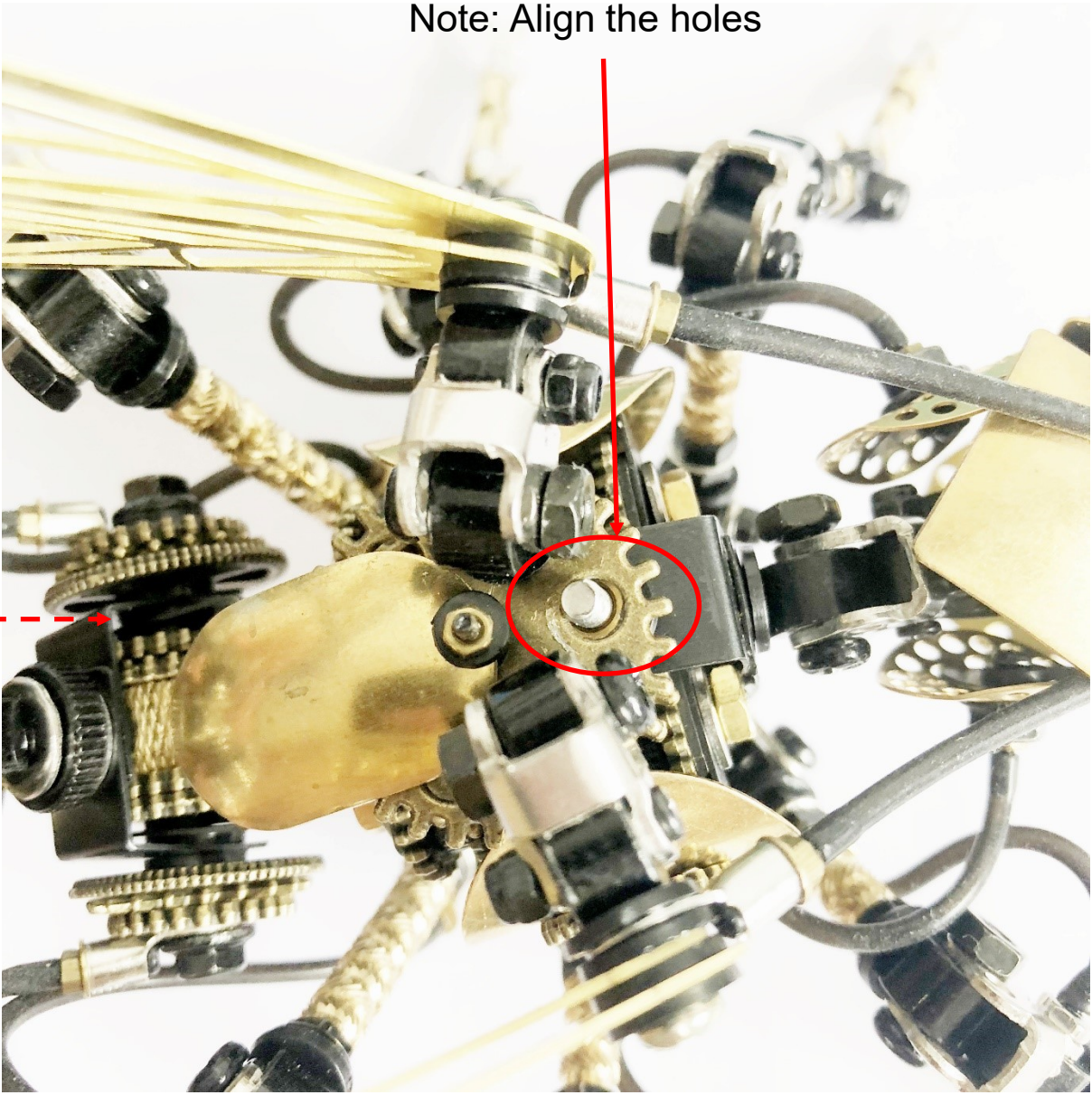
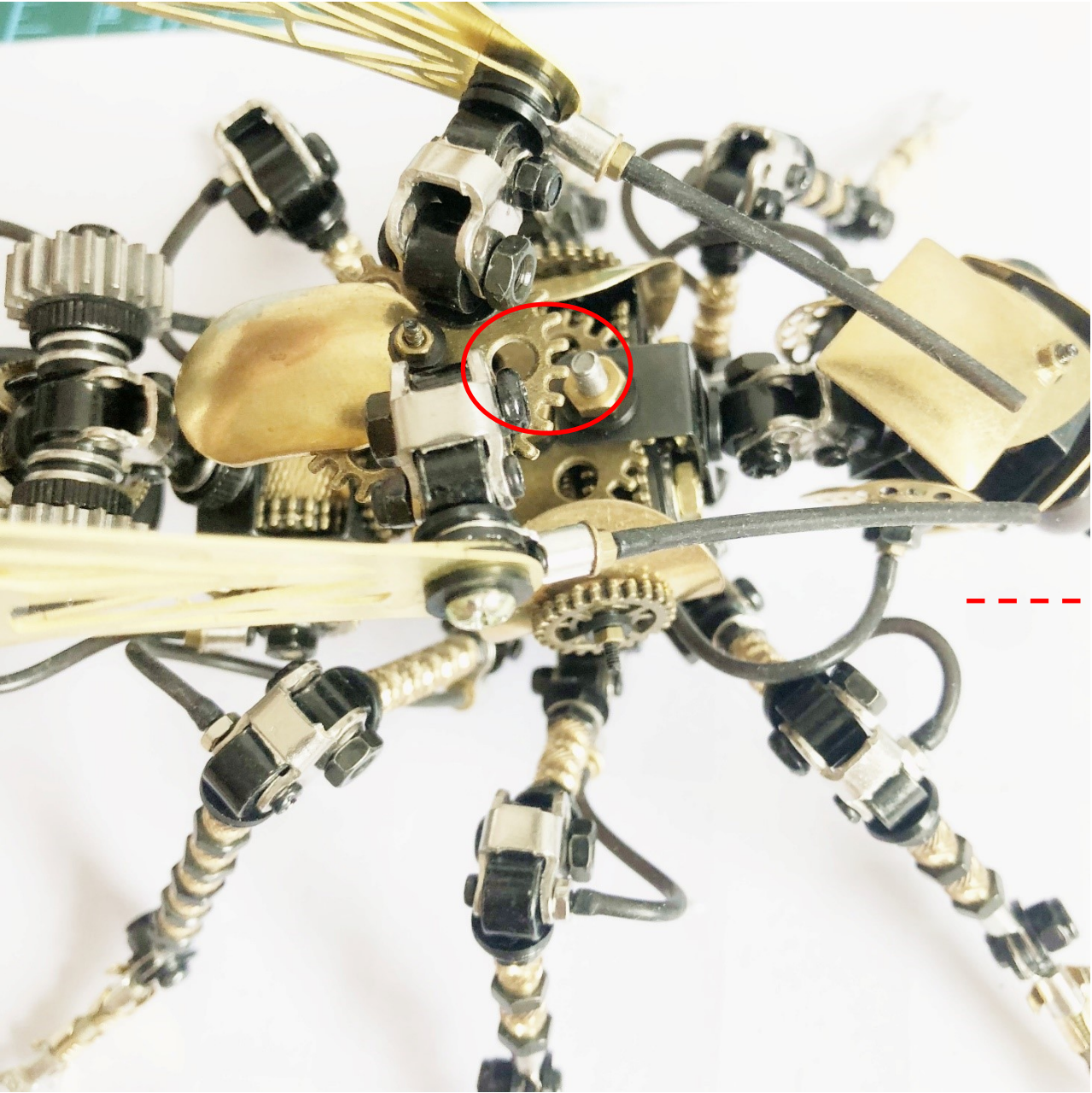


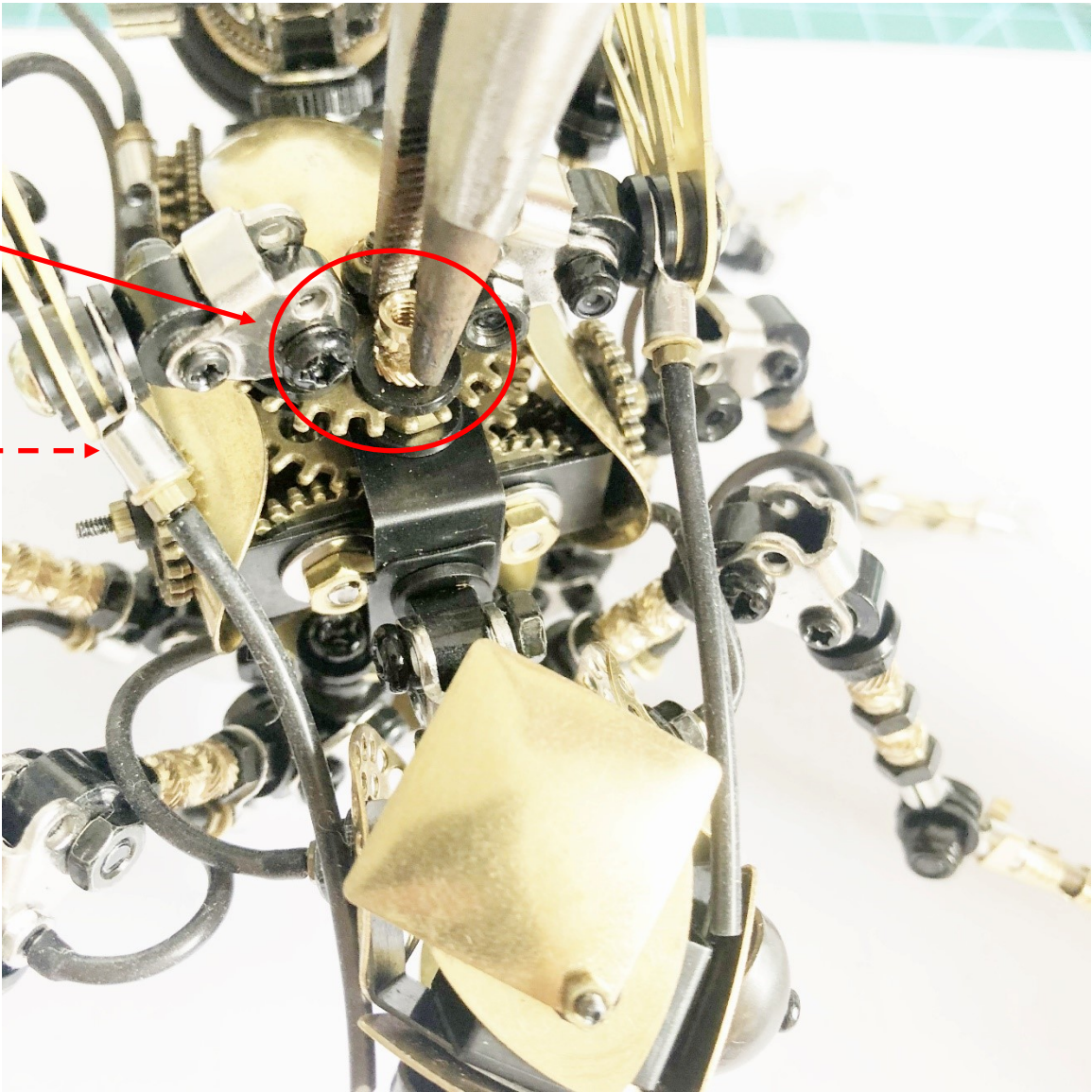
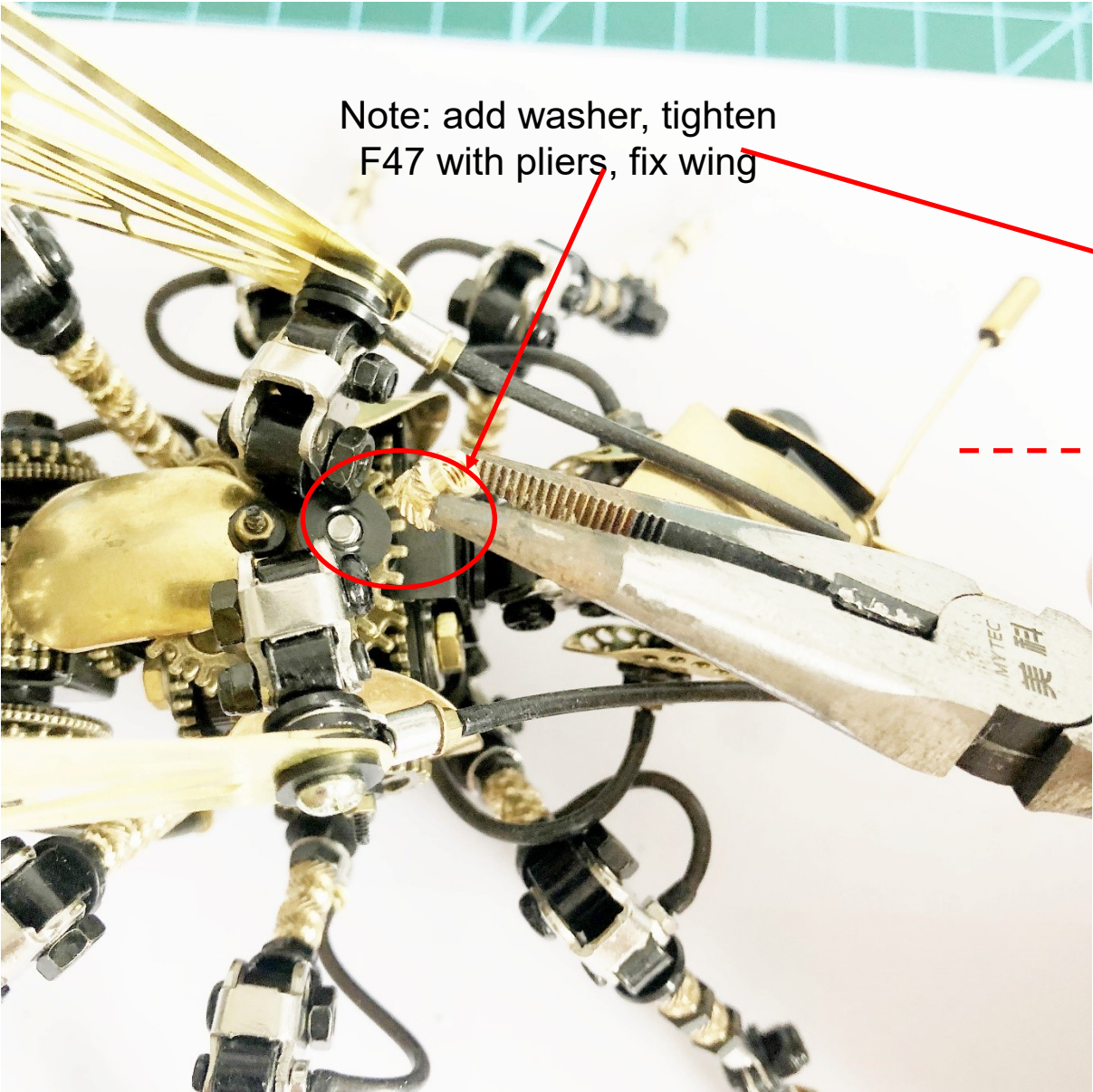
Note: If the screw head is too small, M3 gasket can be added

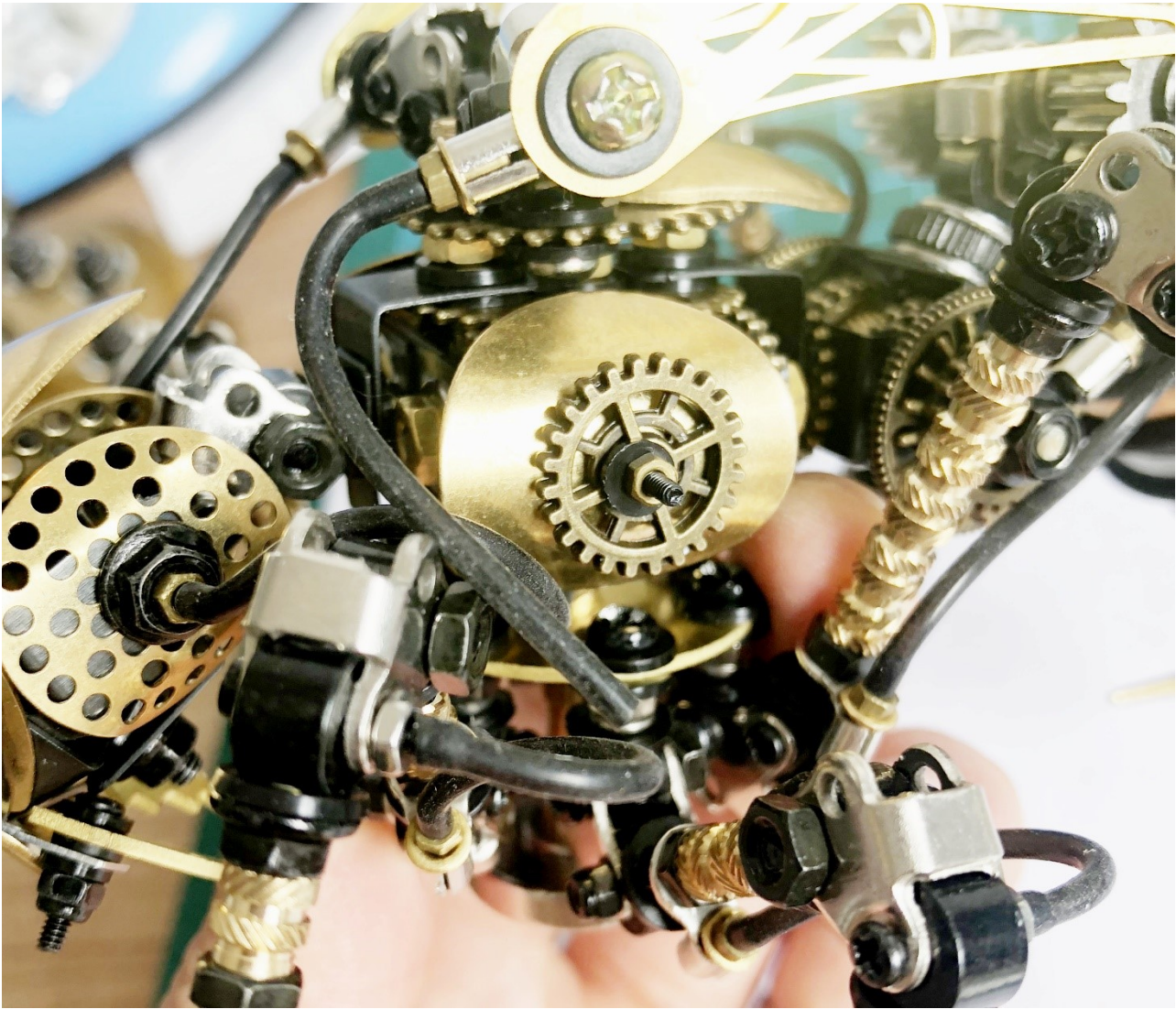
Note: This piece is spare, used to make the base





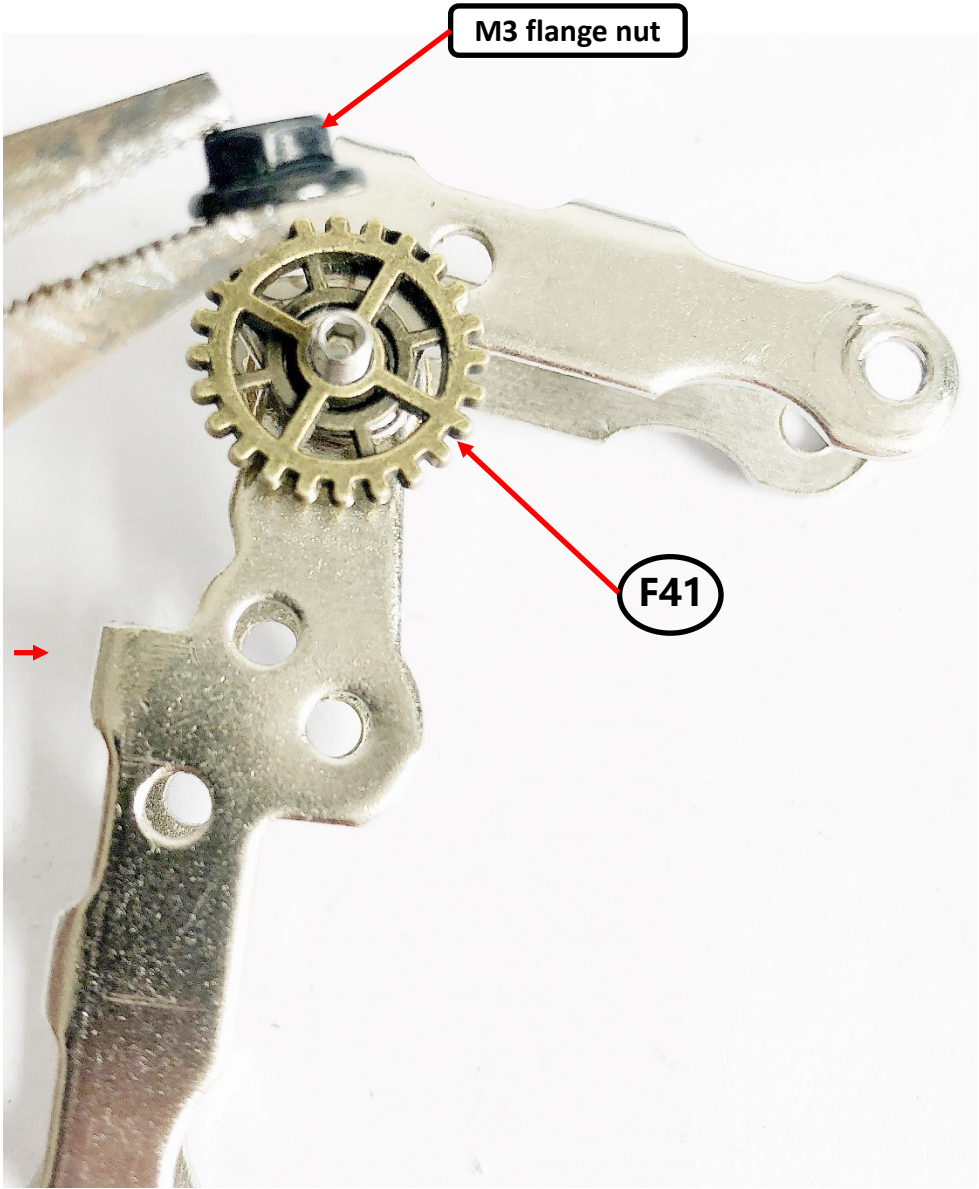
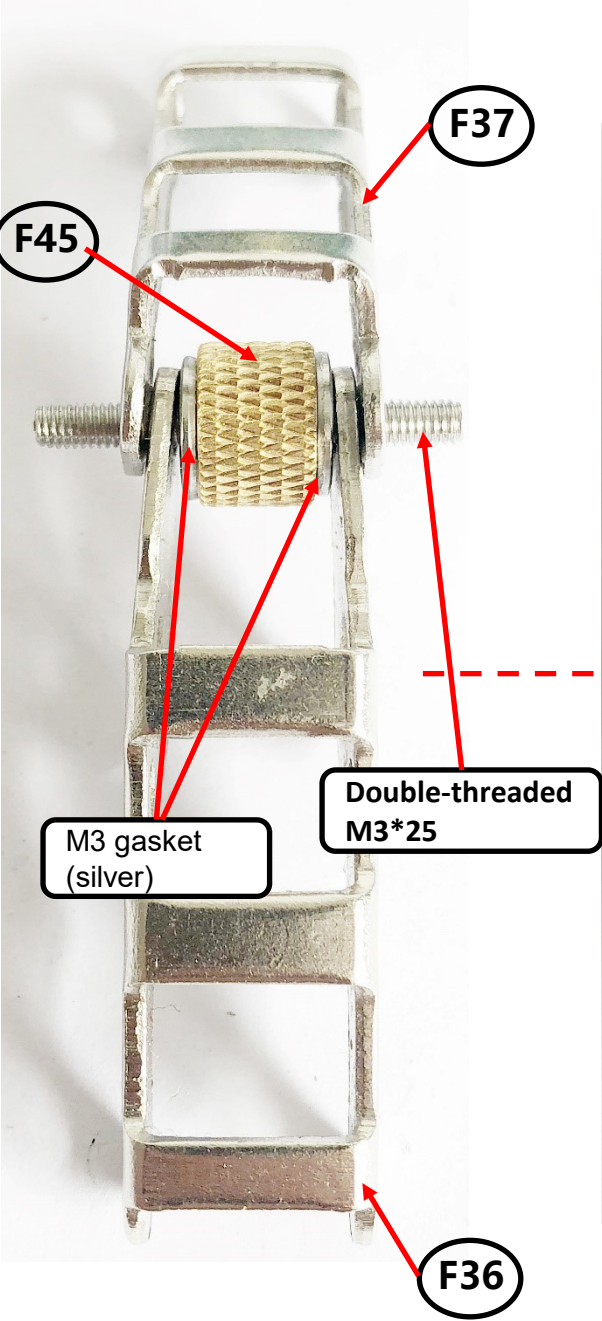


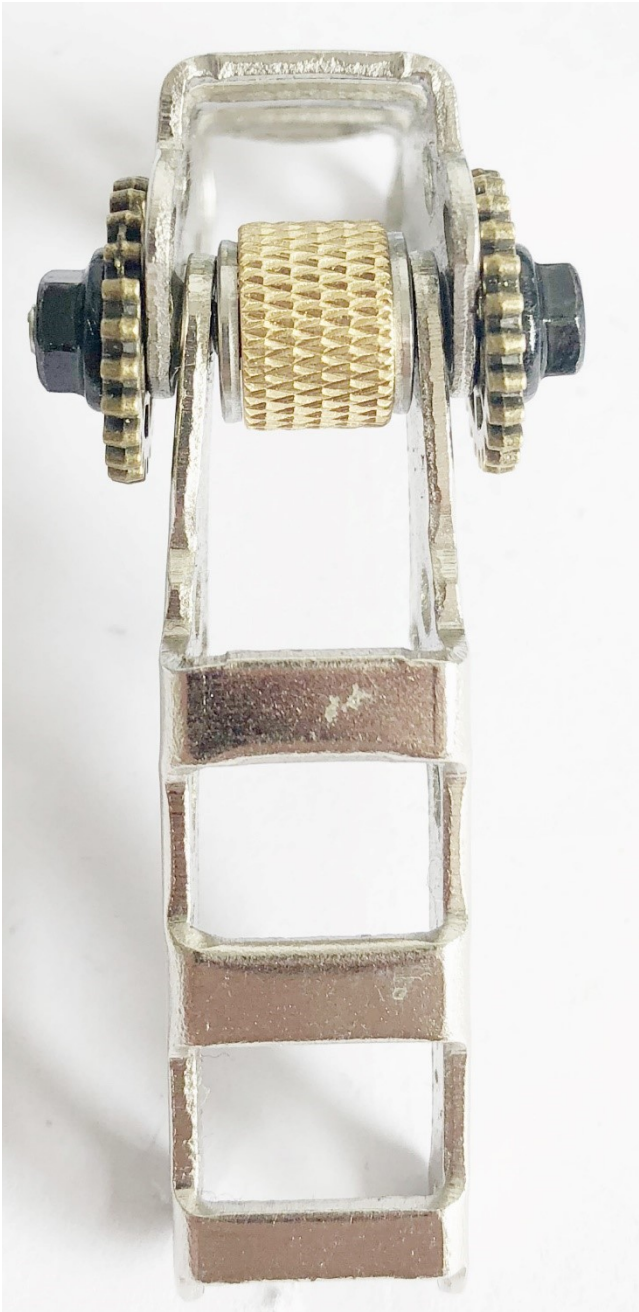


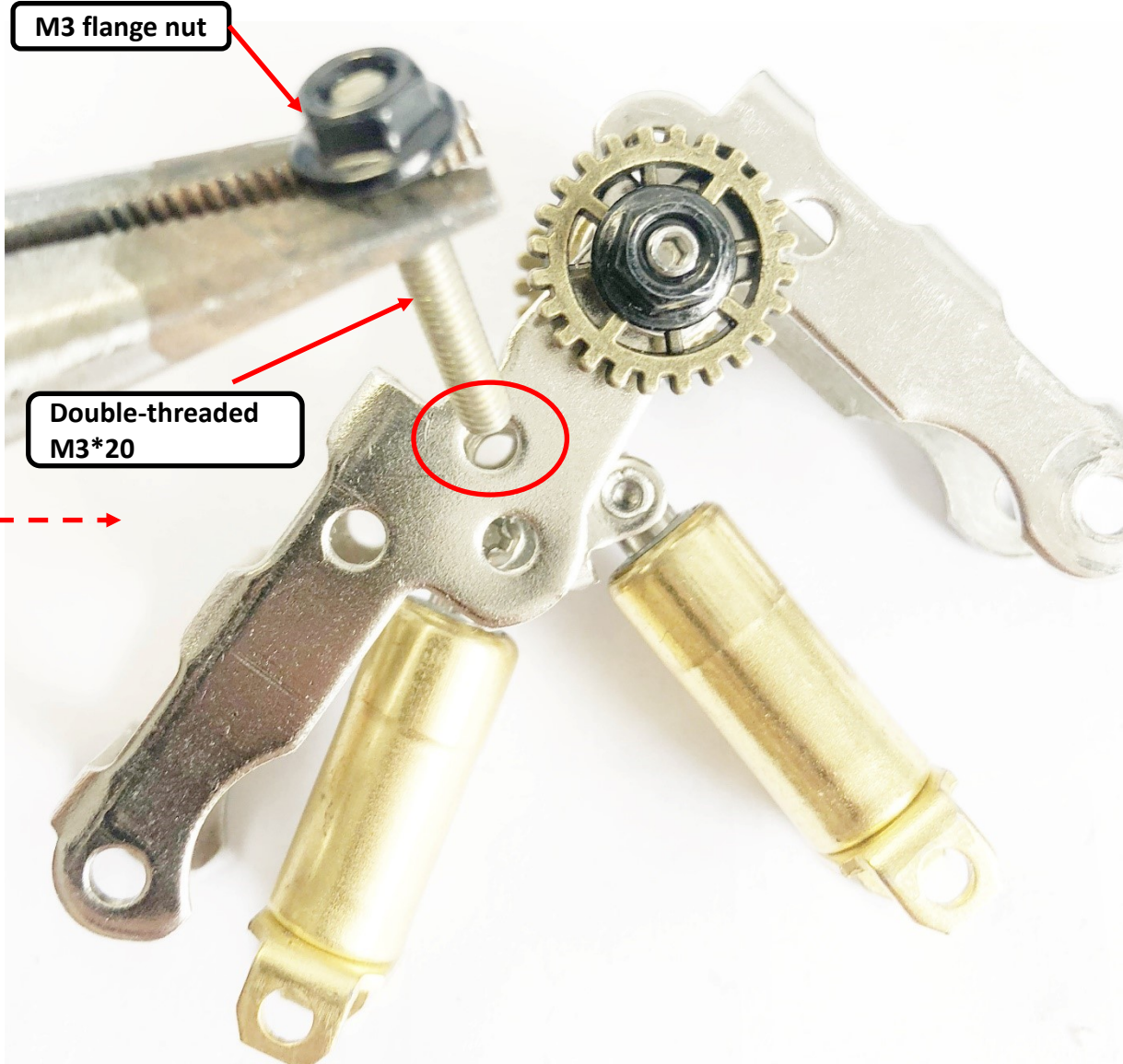
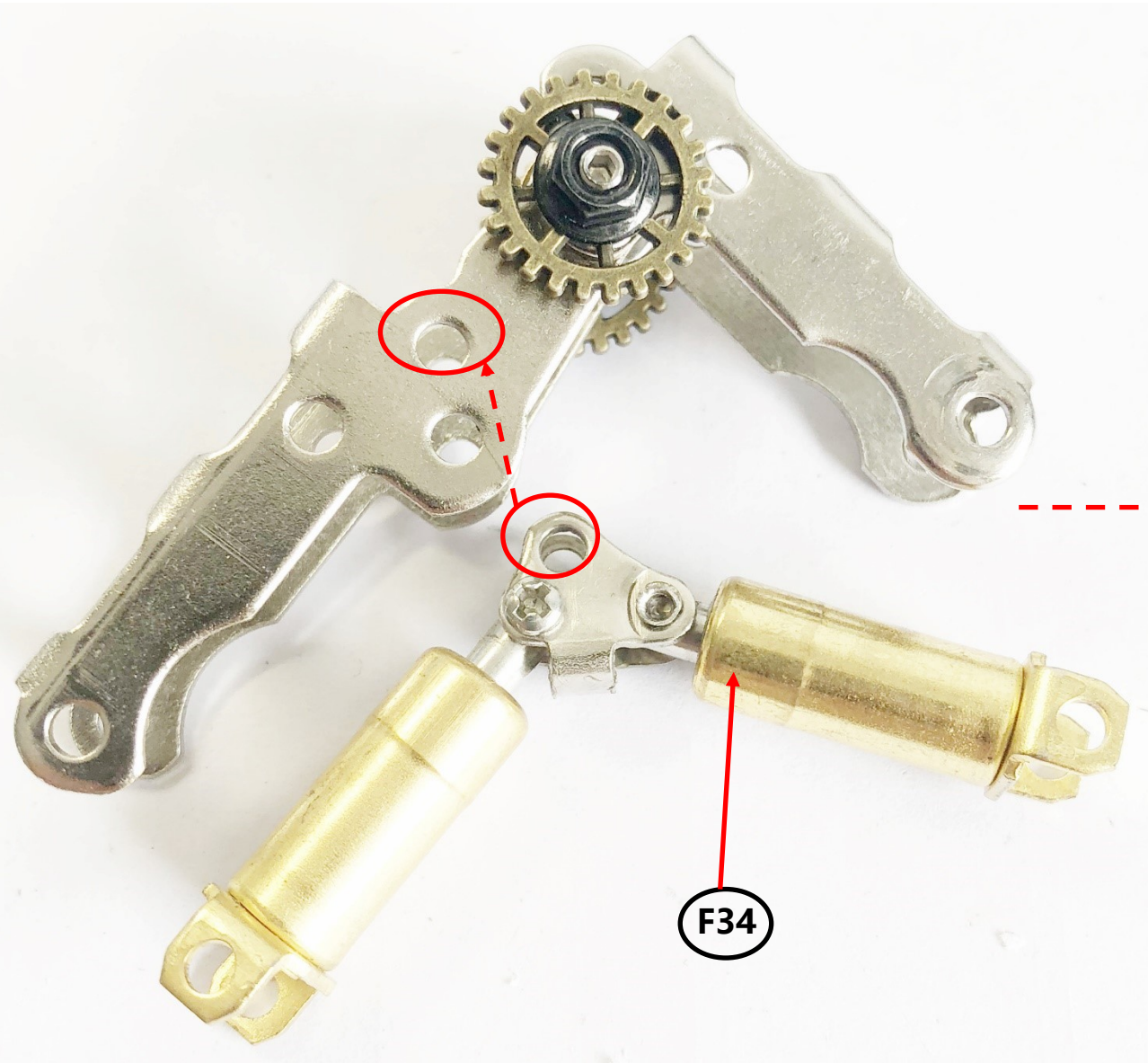


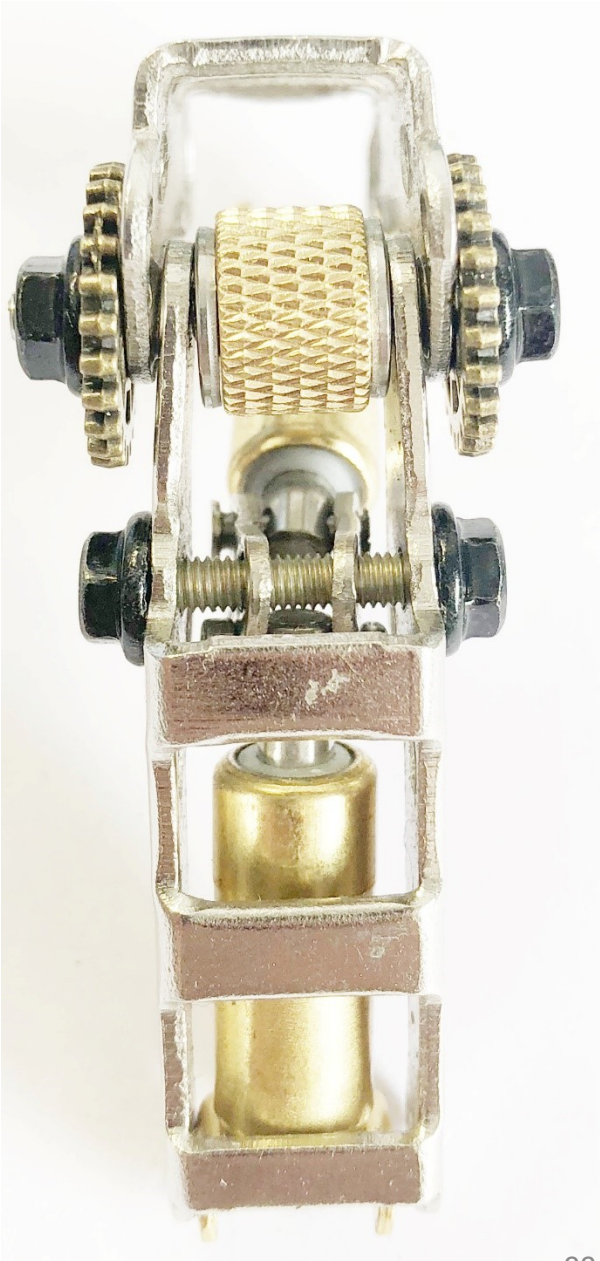
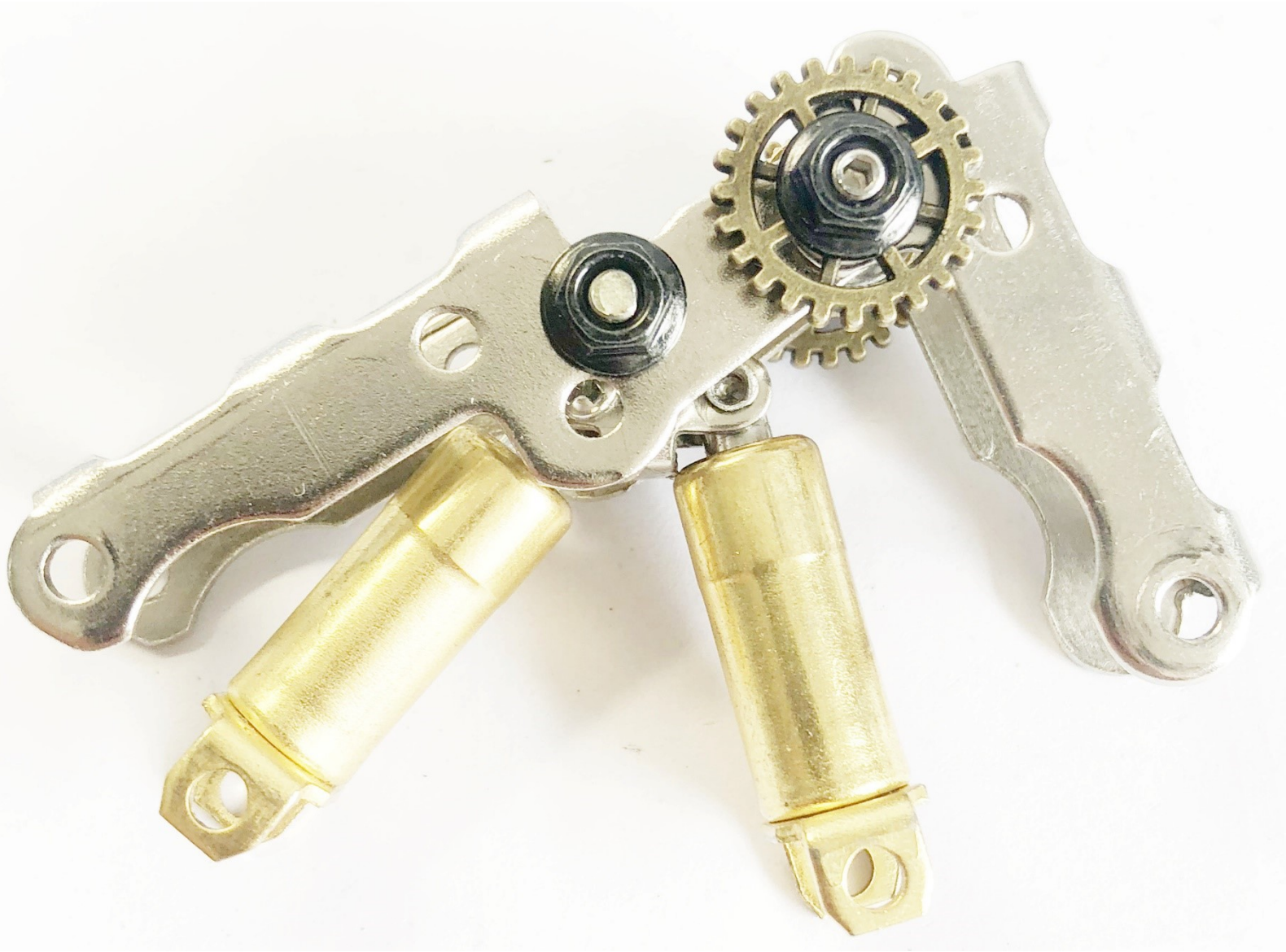
Congratulations, the entire assembly of the Hornets is completed
Next part: 7. Base



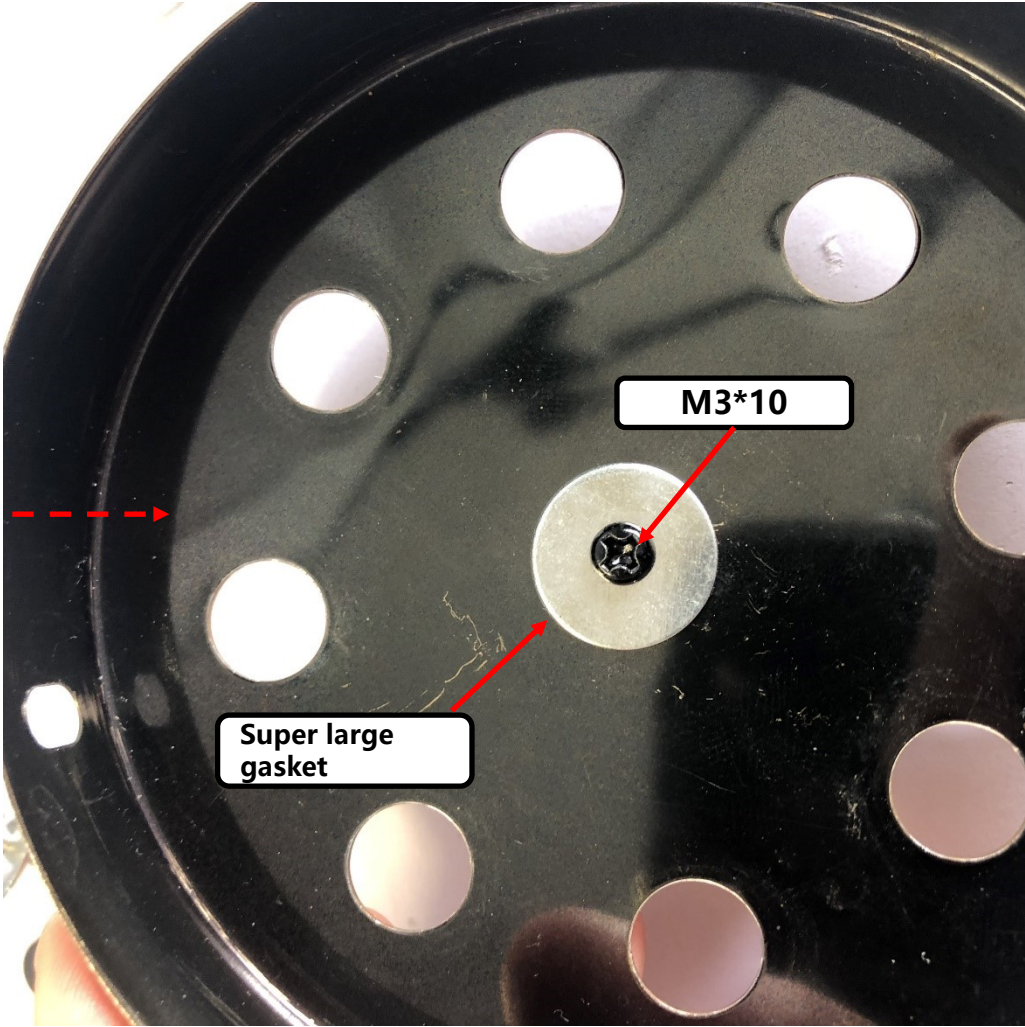


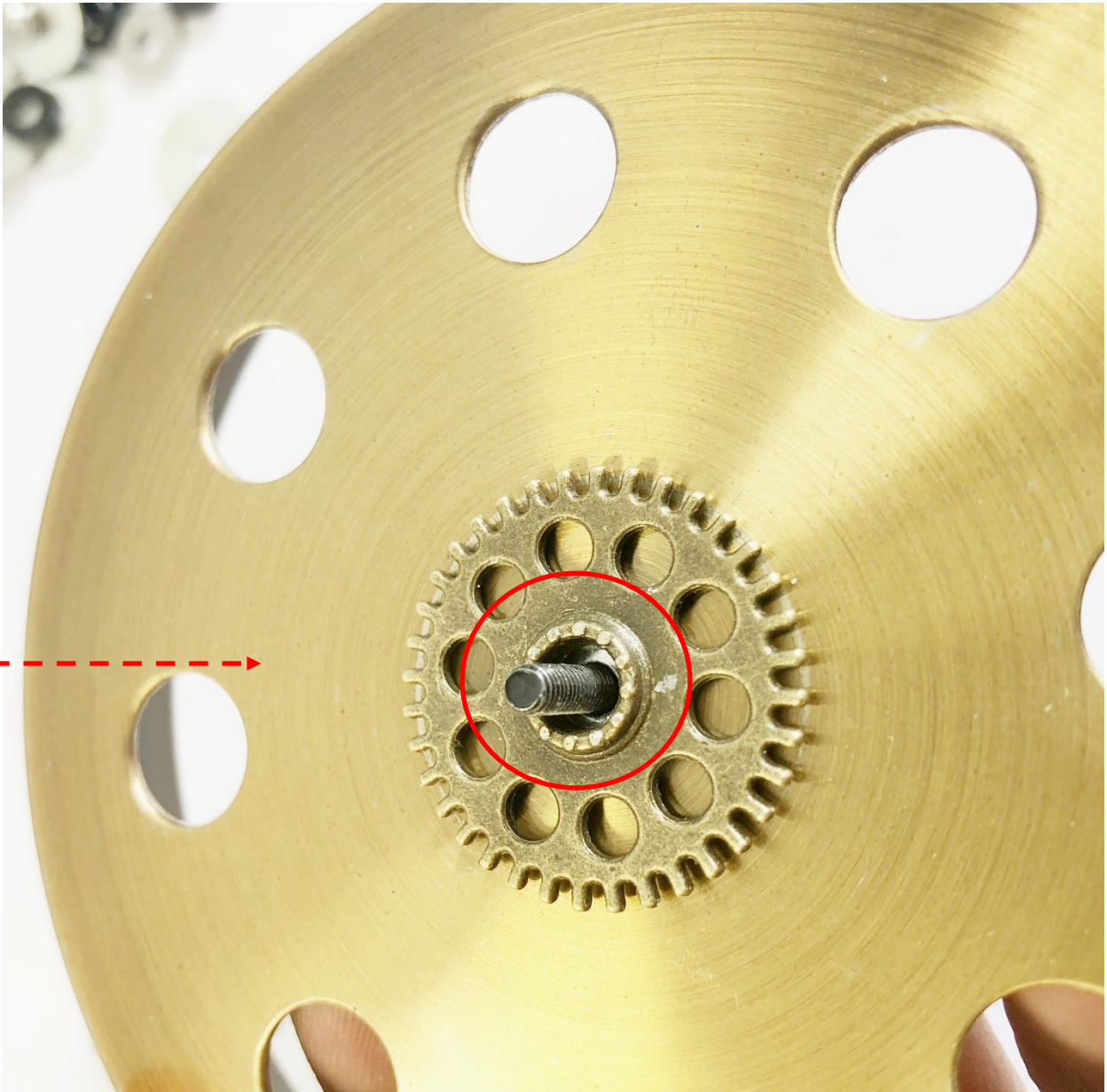
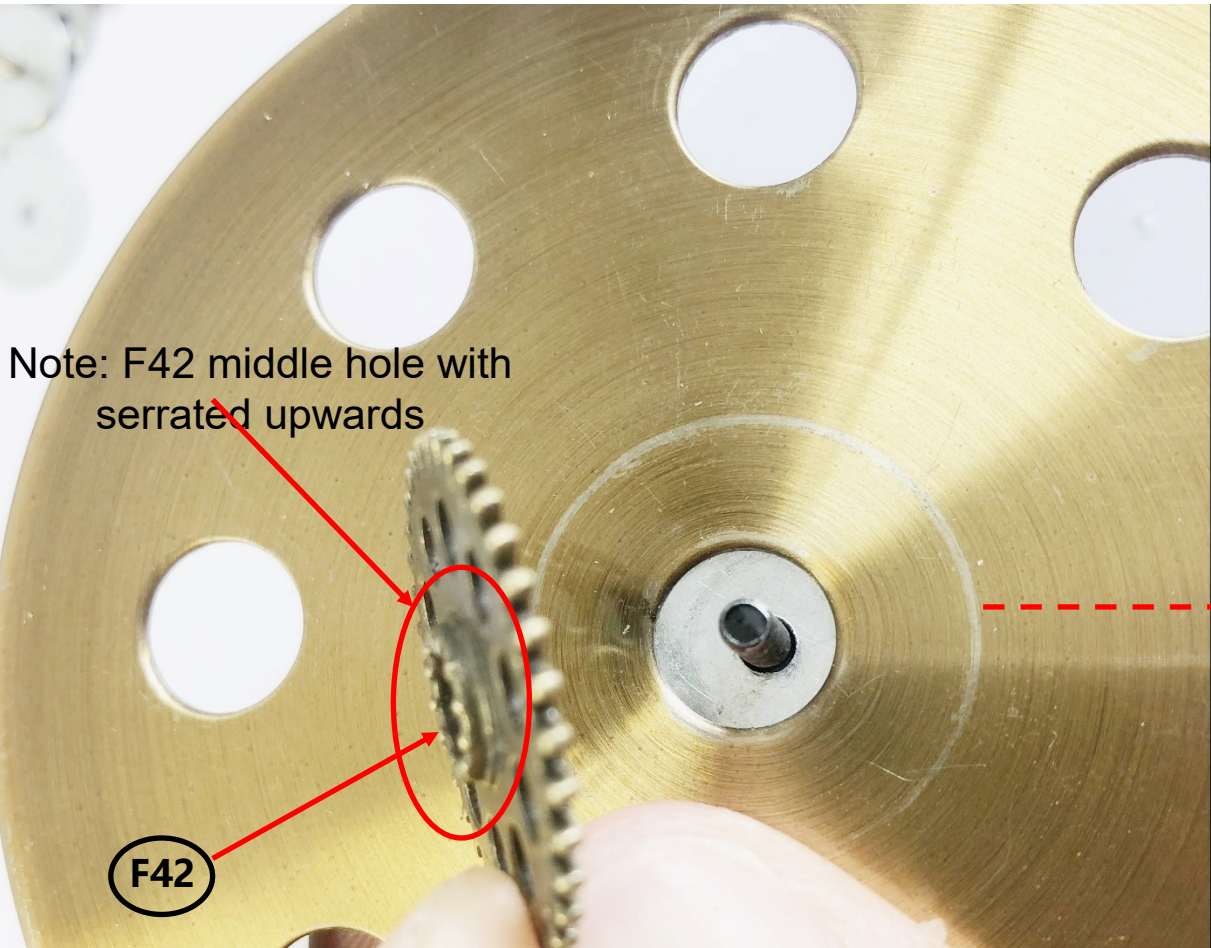


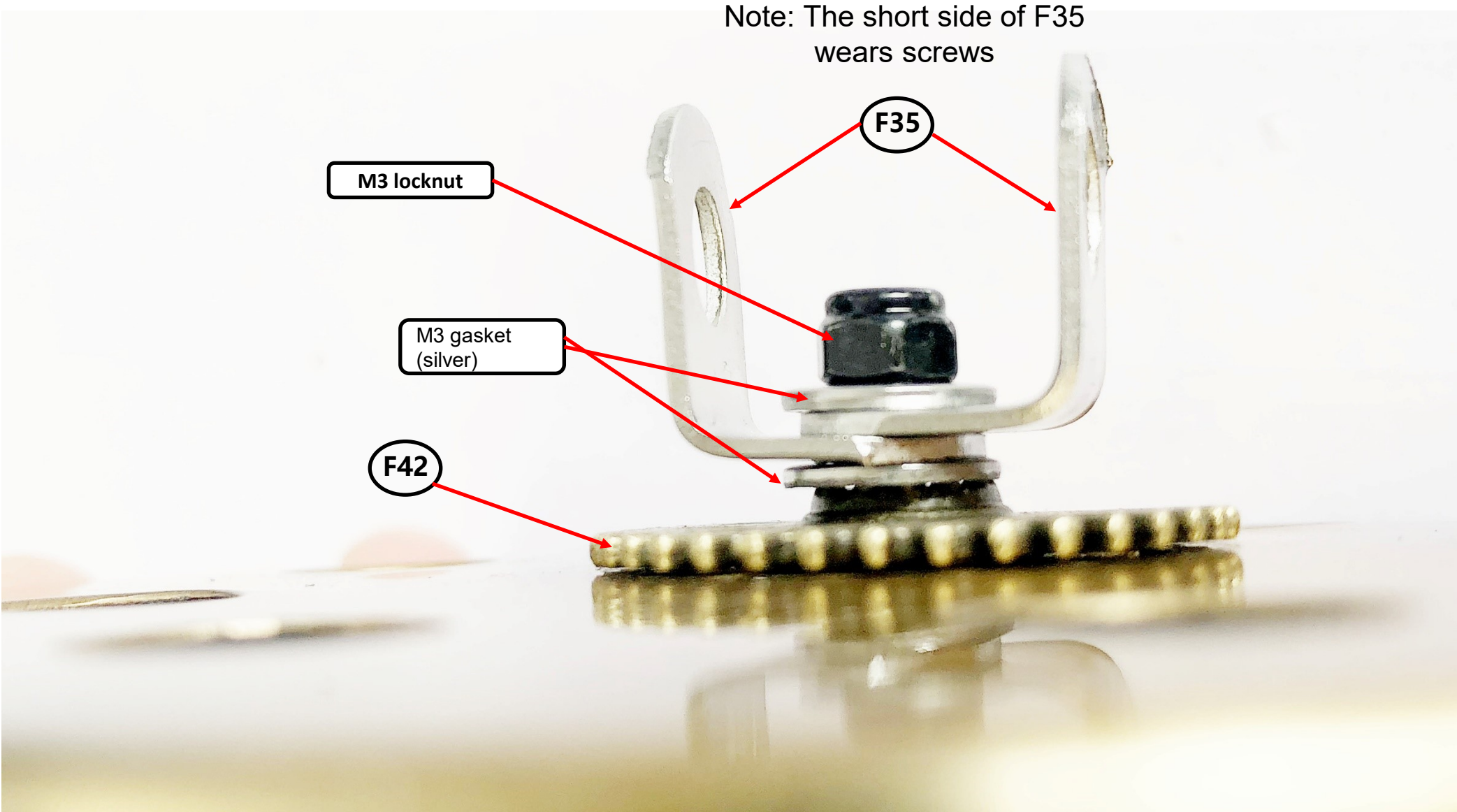


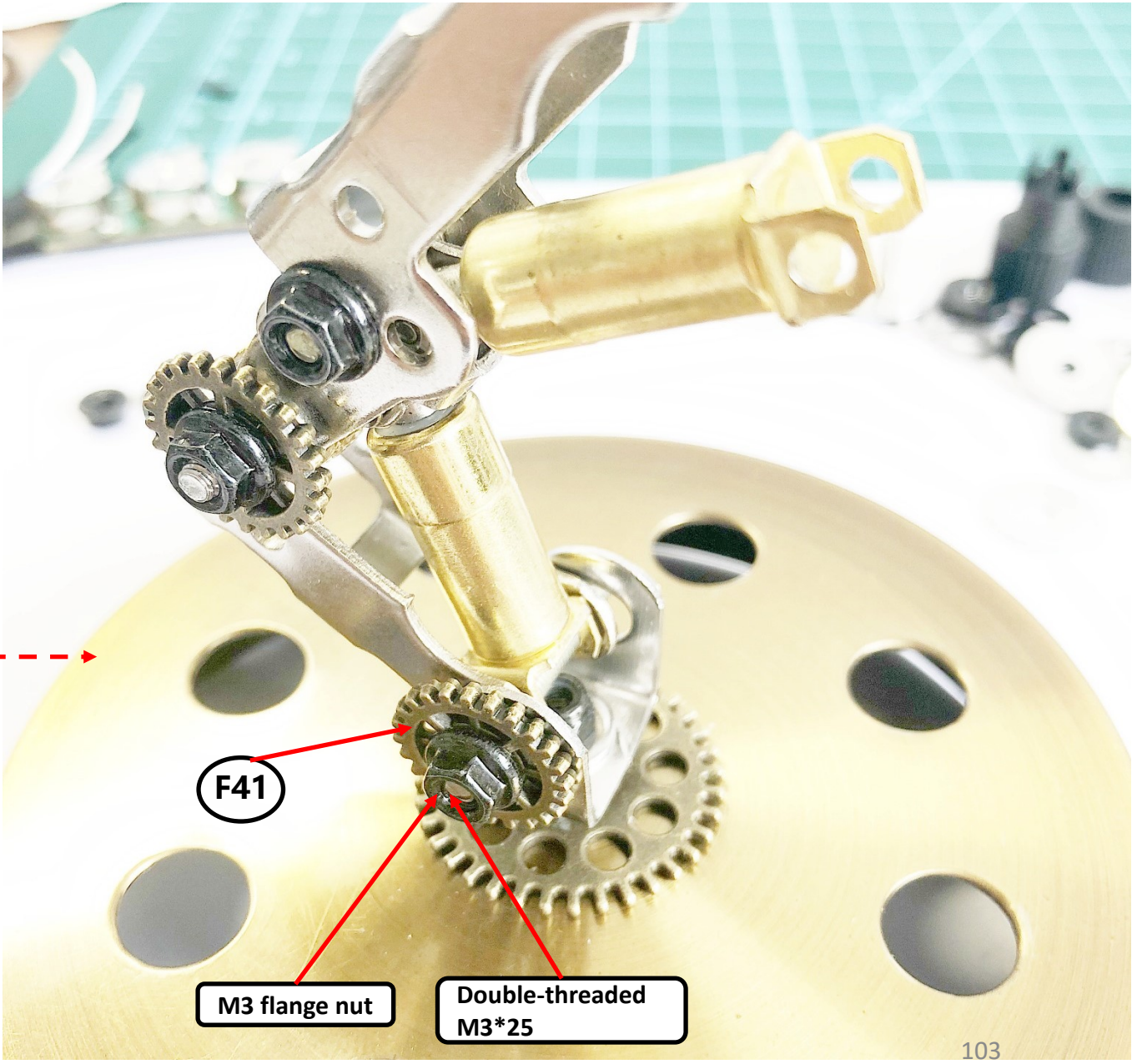
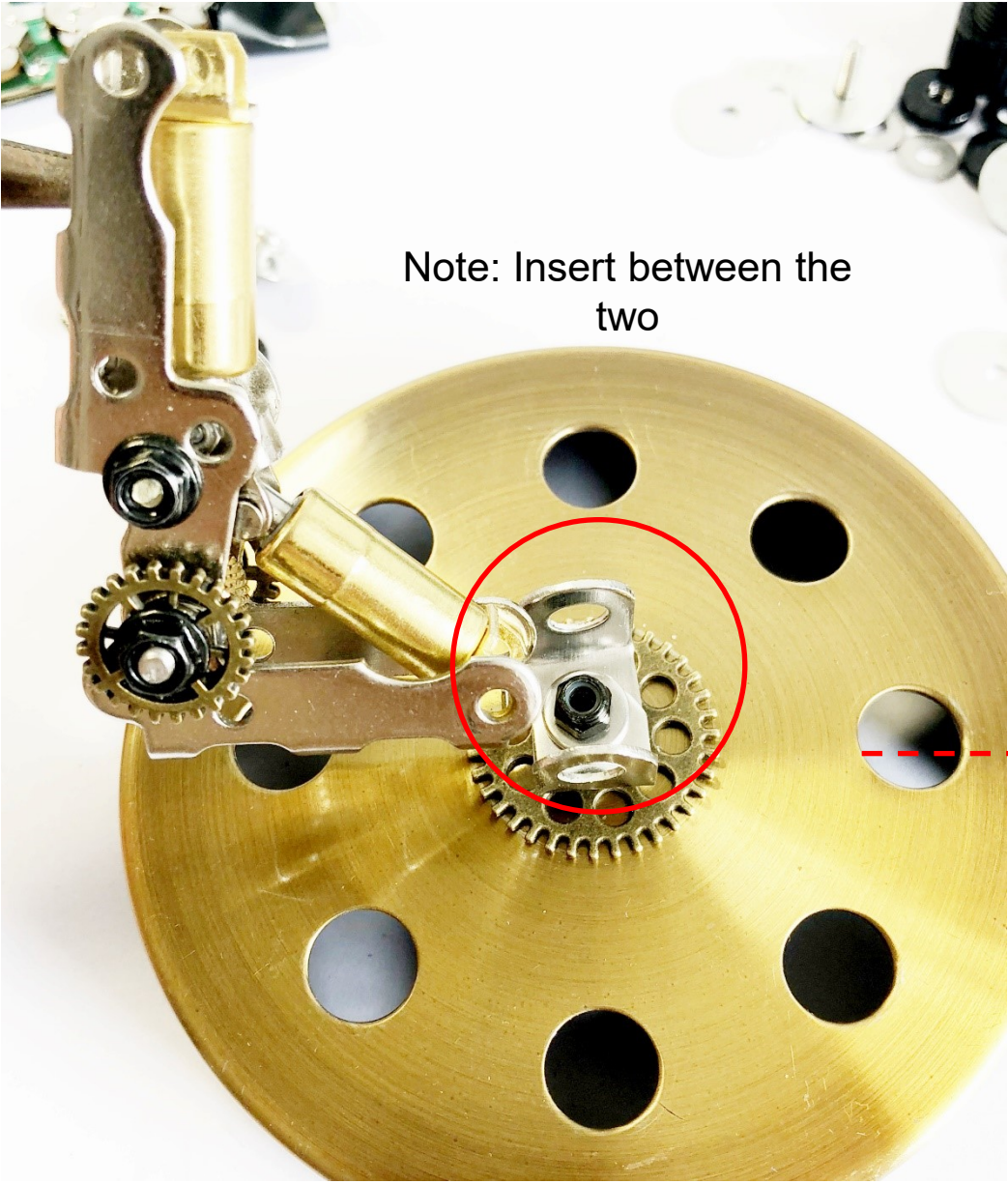


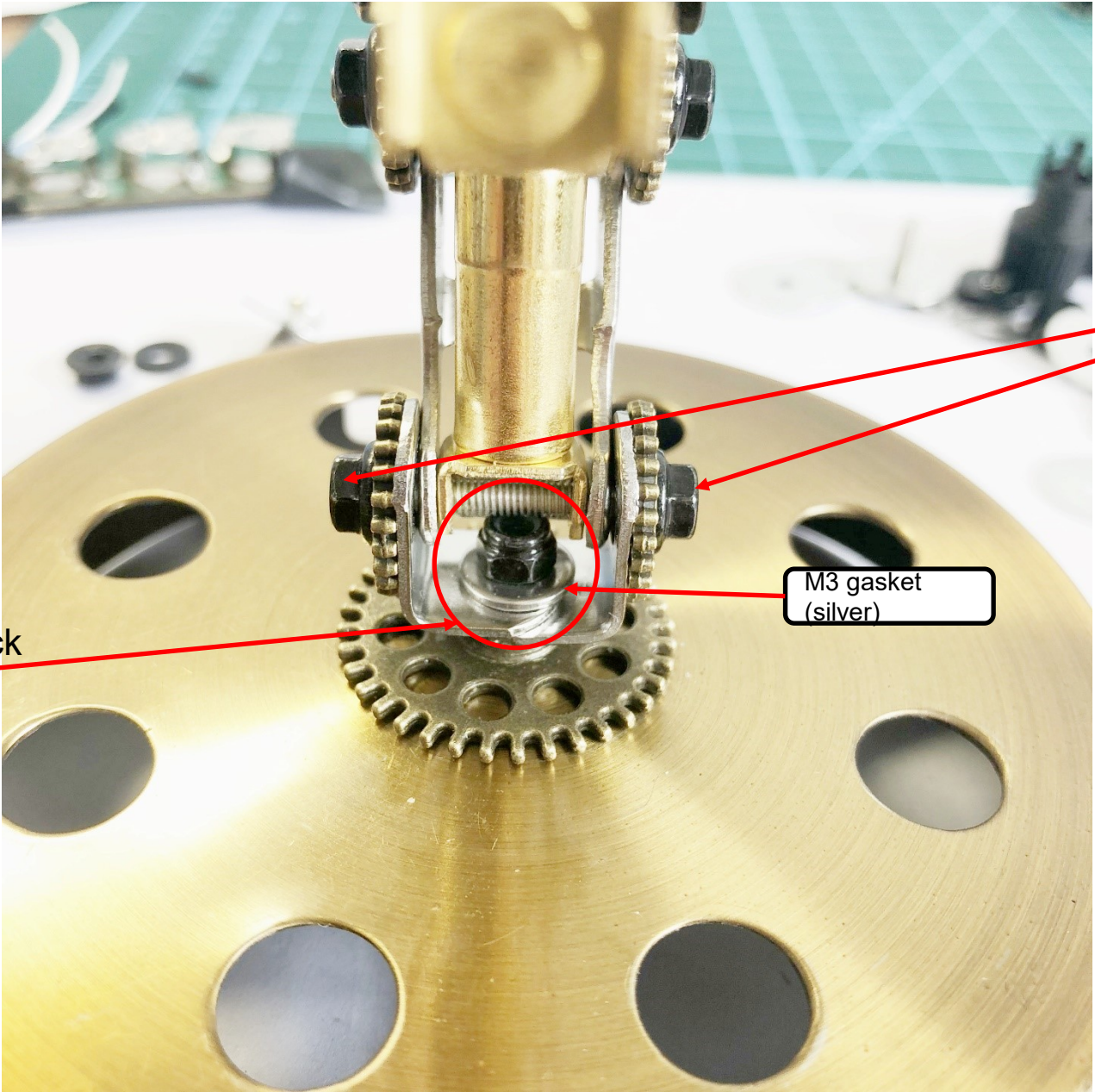
Note: the bottom of the base, the middle hole







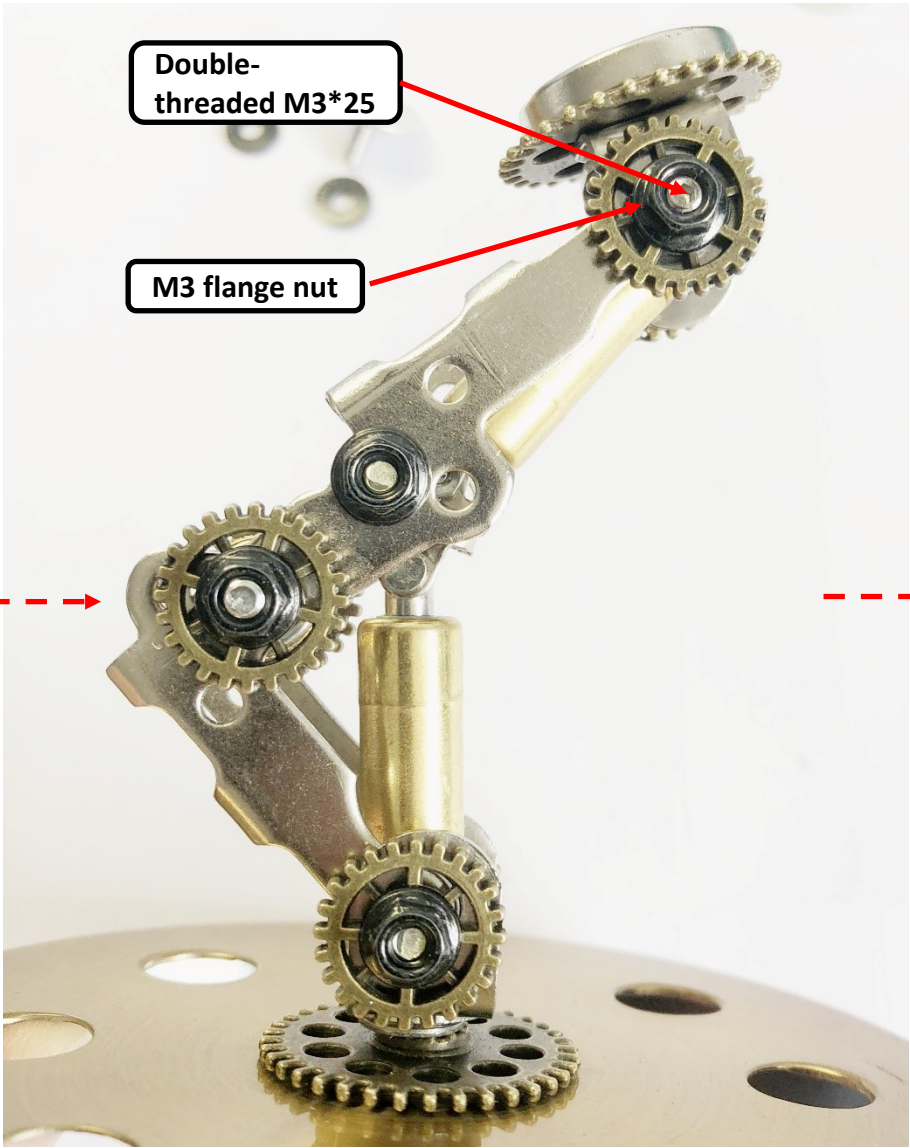
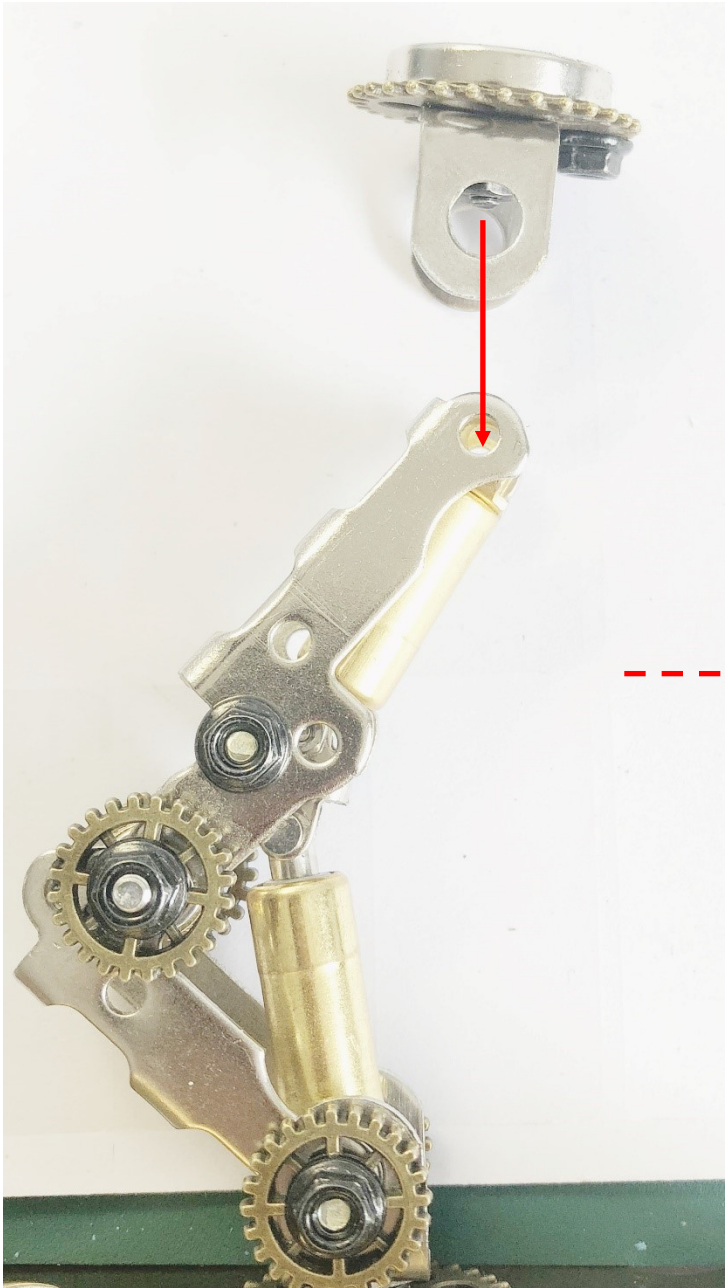




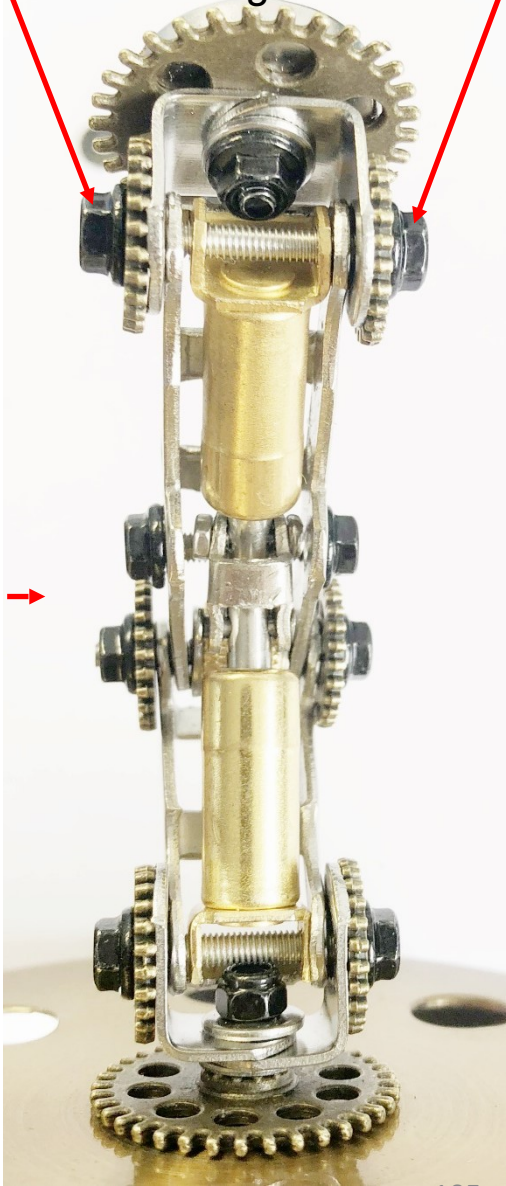
Note: Considering the load, the nut should be tightened here

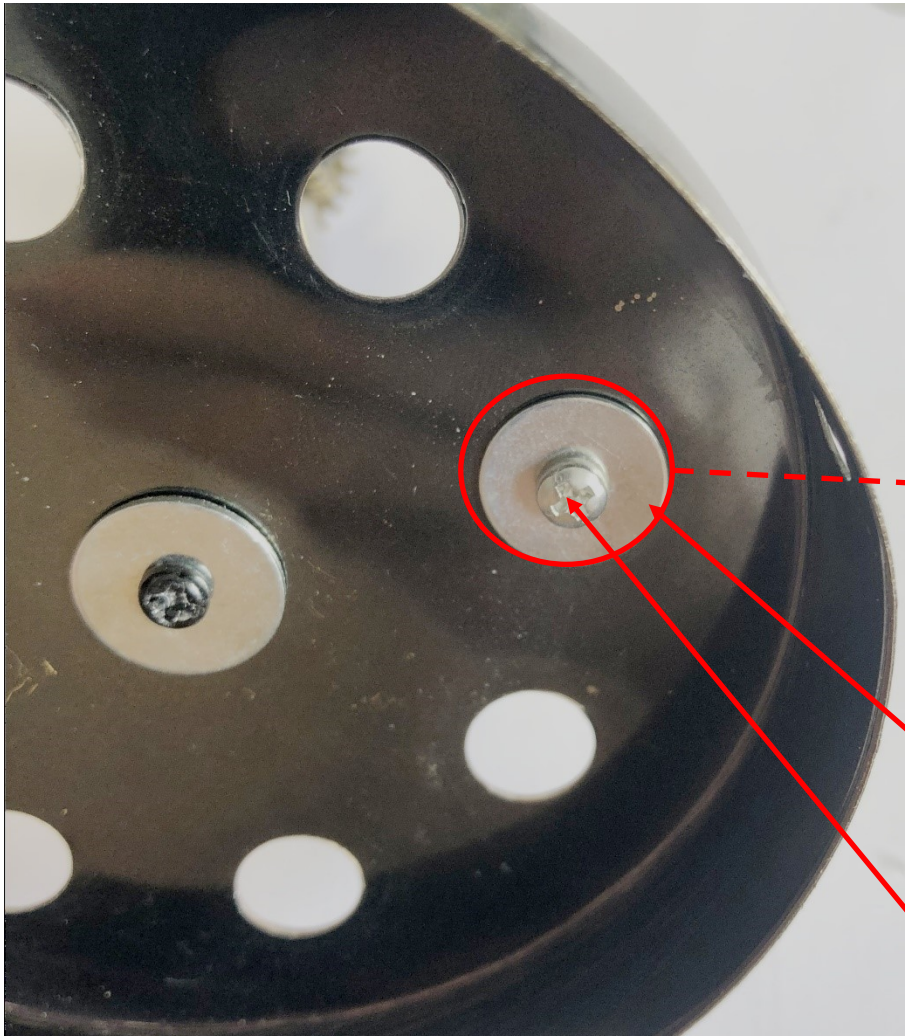
M3 gasket (silver)

Note: Use this nut to lock



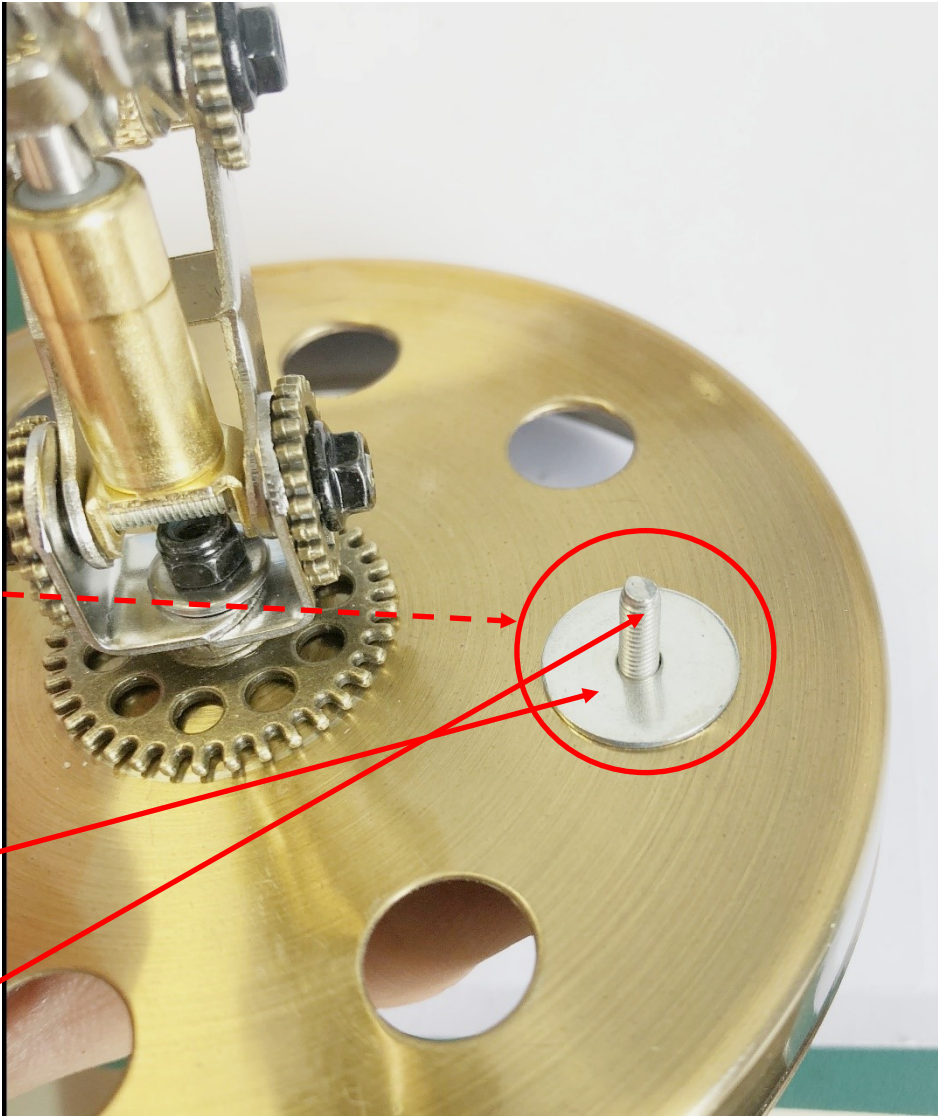
Note: Considering the load, the nut should be tightened here

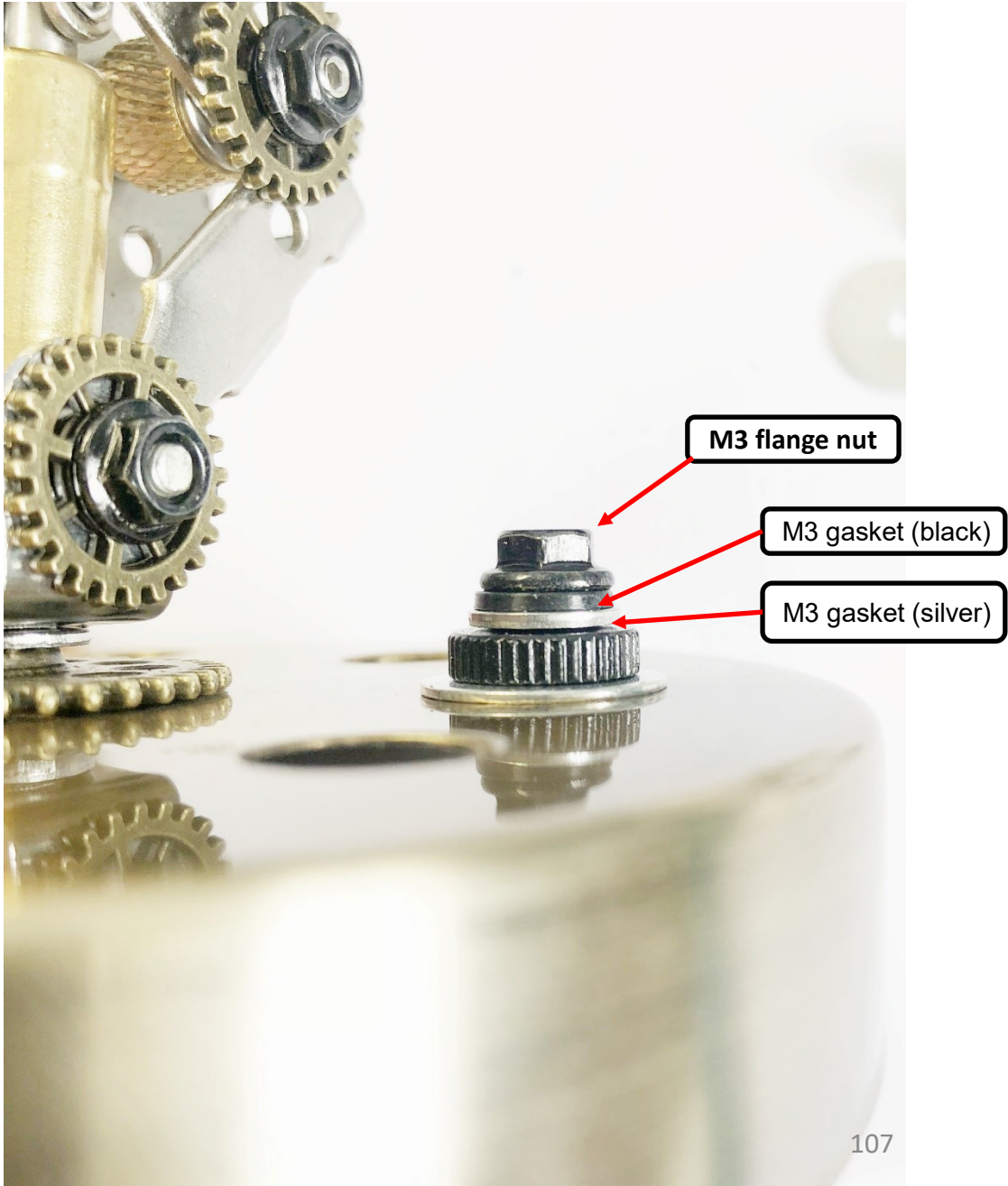
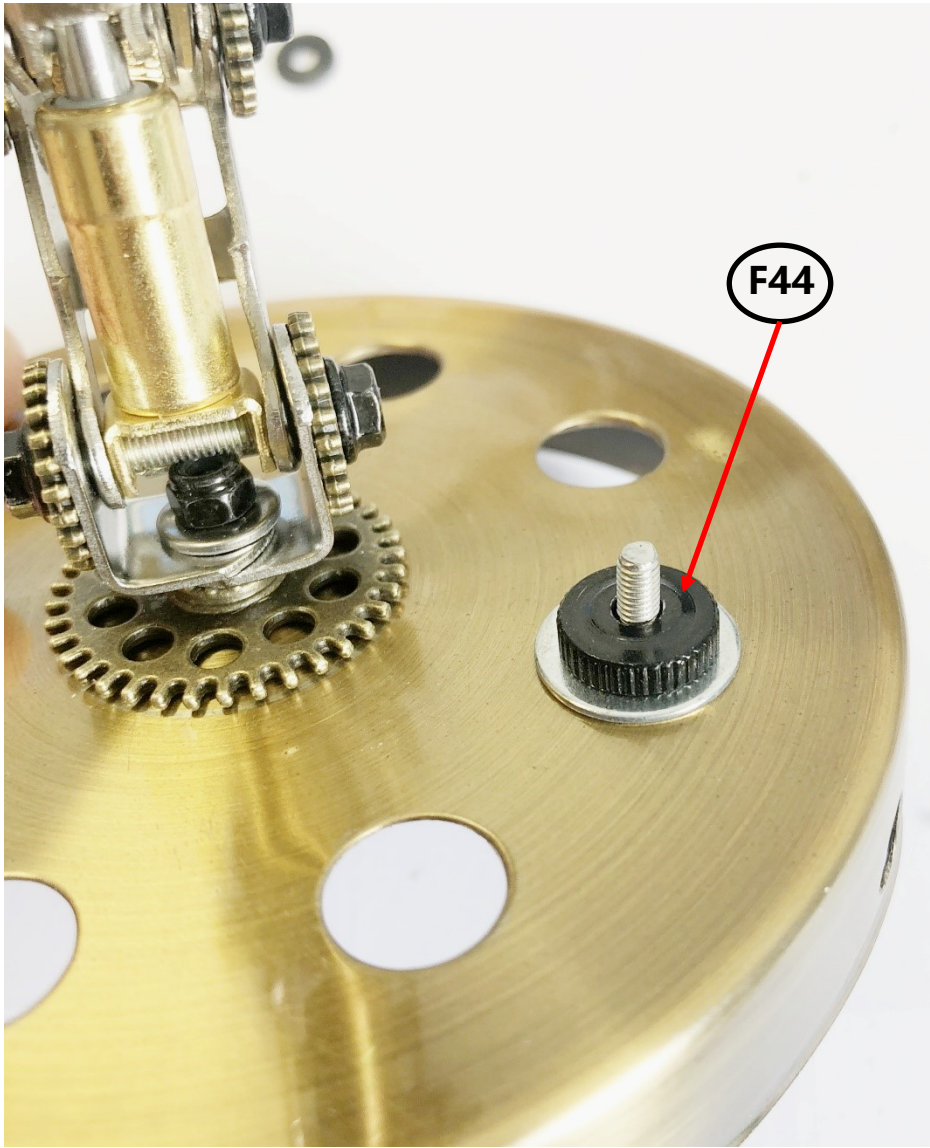




Super large
gasket

M3*10

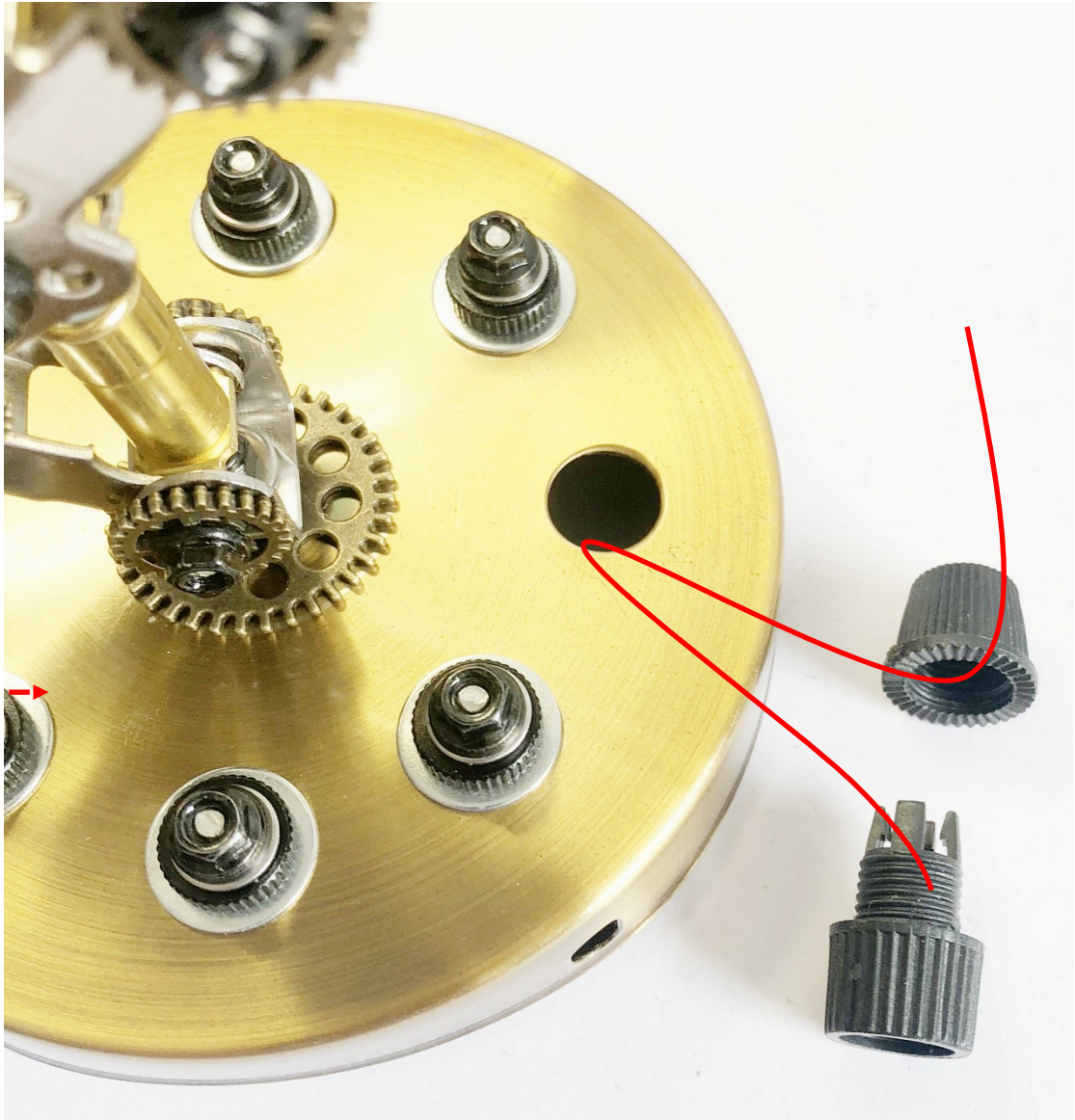
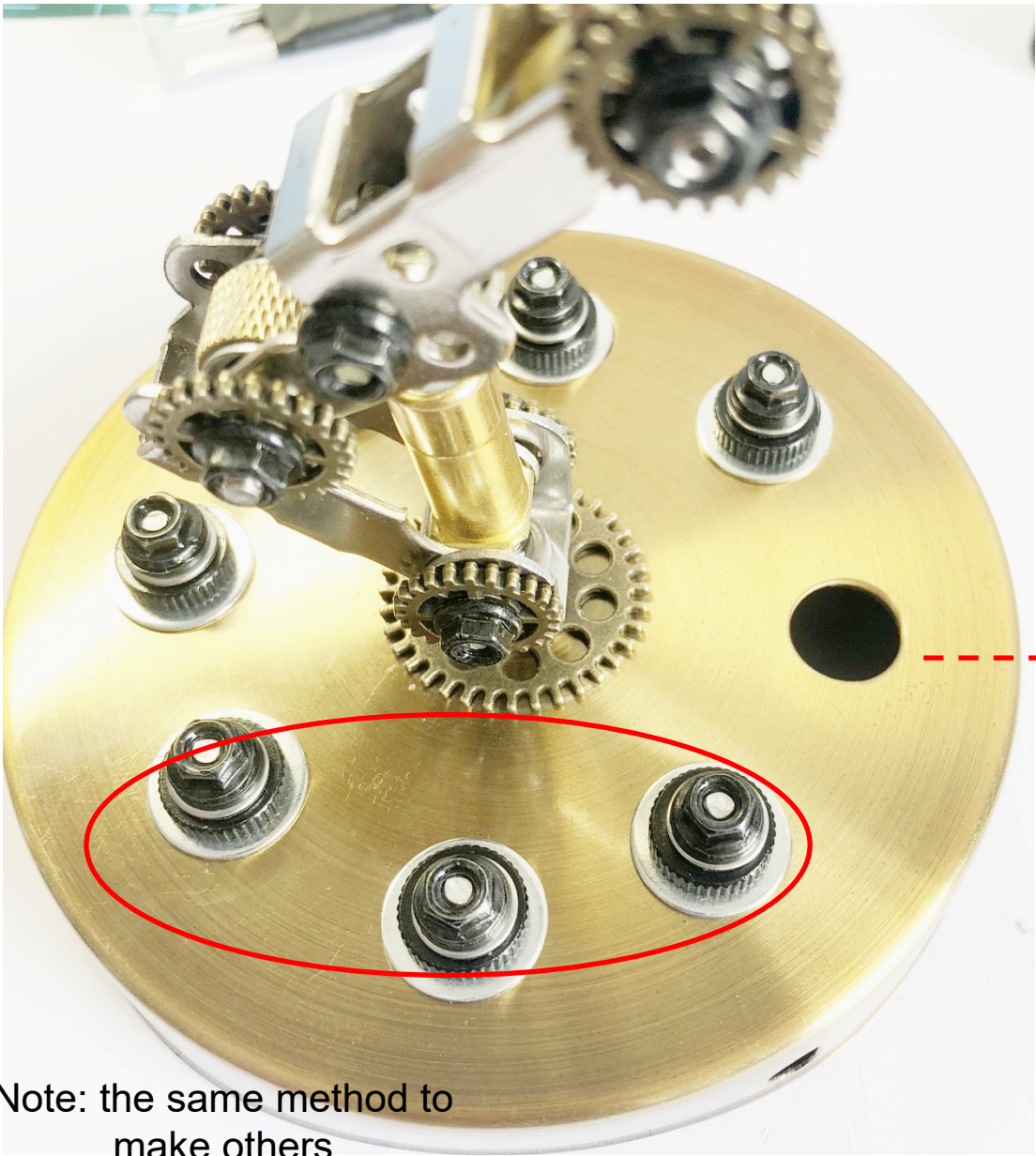




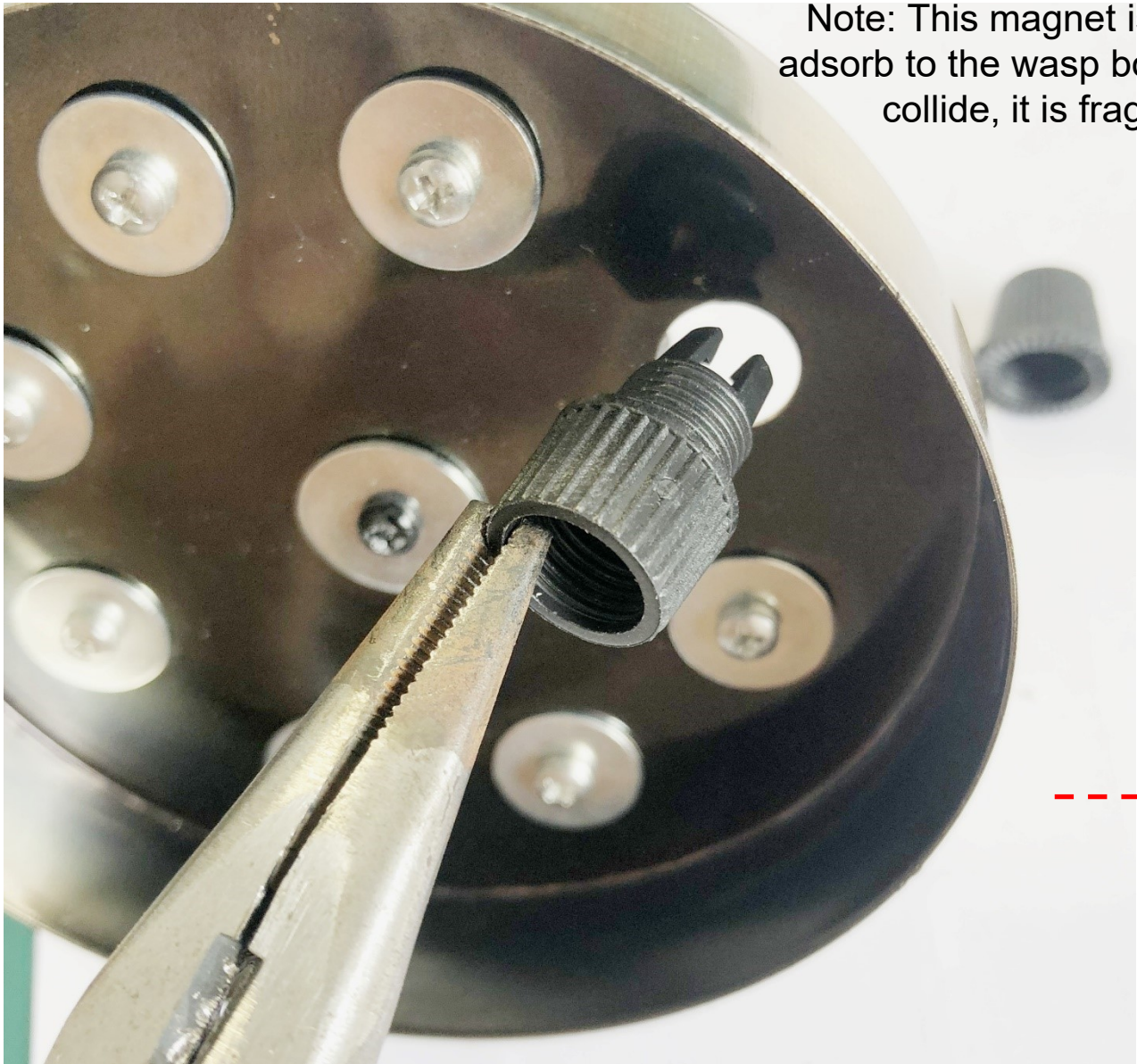
M3 flange nut

M3 gasket (black)

M3 gasket (silver)



Note: the same method to
make others



Note: This magnet is used to adsorb to the wasp body, do not collide, it is fragile! !



Note: tighten

Congratulations, the Hornets have been assembled

Use screws to ignite the spark of thought and create your own DIY!