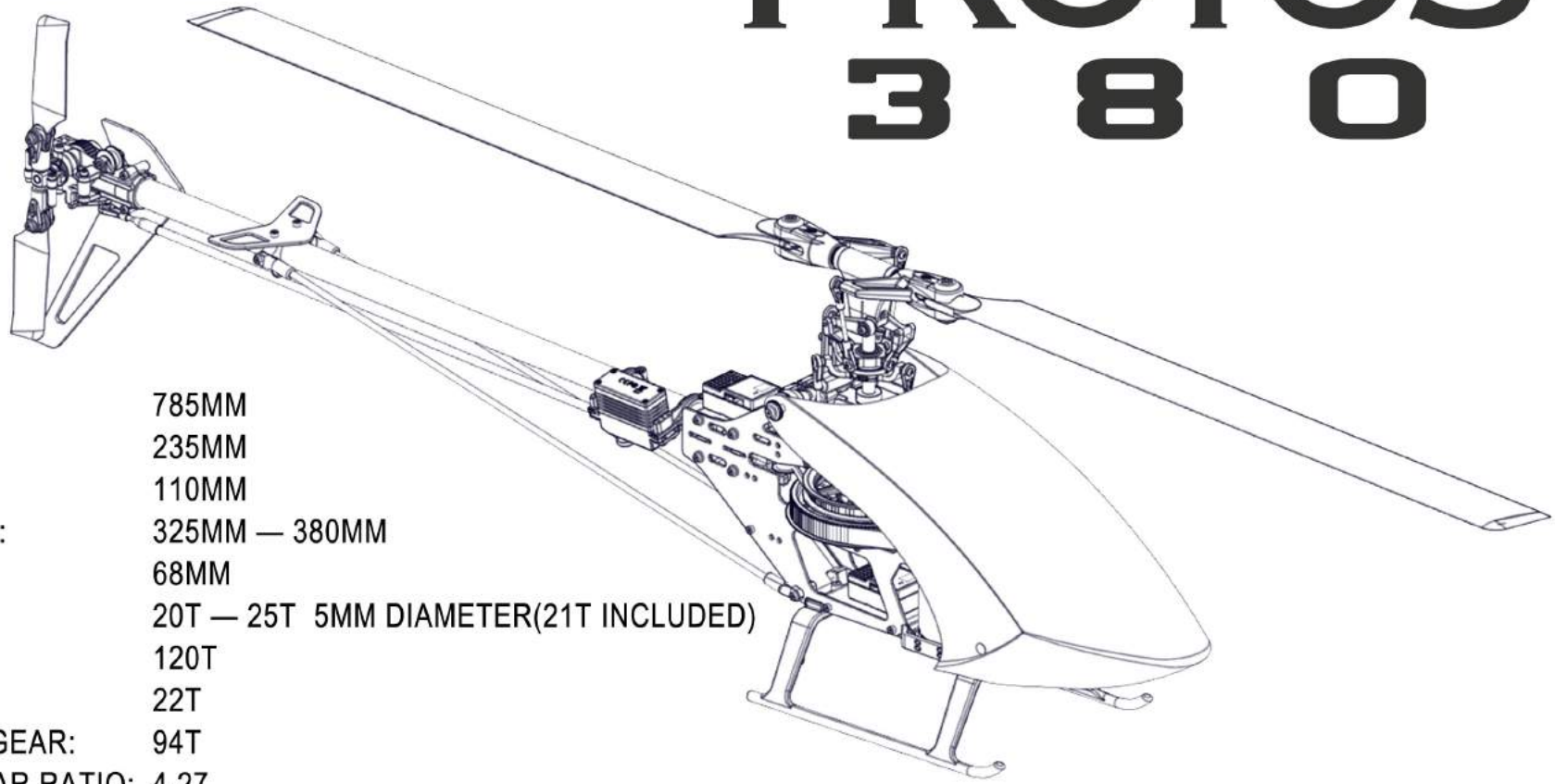
PRÔTOS 380



LENGHT:	785MM
HEIGHT:	235MM
WIDTH:	110MM
MAIN BLADE SIZE:	325MM — 380MM
TAILBLADE SIZE:	68MM
MOTOR PINION:	20T — 25T 5MM DIAMETER(21T INCLUDED)
MAIN GEAR:	120T
TAIL PINION:	22T
AUTOROTATION GEAR:	94T
MAIN TO TAIL GEAR RATIO:	4.27
RTF WEIGHT:	1100G
MAX BATTERY SIZE:	35*40*115MM
MOTOR TYPE:	5mm shaft 800kv-1200kv
CYCLIC SERVO:	micro servo
TAIL SERVO:	mini servo or micro servo
ESC:	40a-60a
BATTERY:	6s1200mah- 2200mah

XZ POWER

Always follow these rules for safety

Operate the helicopter in open areas with no people nearby.
Do NOT operate the helicopter in the following places and situations (or else you risk severe accidents):
-in places where children gather or people pass through
-in residential areas and parks
-indoors and in limited space
-in windy weather or when there is rain, snow, fog or other precipitation
If you do not observe these instructions you may be held liable for personal injury or property damage!
Always check the R/C system prior to operating your helicopter.
When the R/C system batteries get weaker,the operational range of the R/C system decreases.
Note that you may lose control of your model when operating it under such conditions.
Keep in mind that other people around you might also be operating a R/C model.
Never use a frequency which someone else is using at the same time.
Radio signals will be mixed and you will lose control of your model.
If the model shows irregular behavior, bring the model to a halt immediately and disconnect the batteries. Investigate the reason and fix the problem.
Do not operate the model again as long as the problem is not solved, as this may lead to further trouble and unforeseen accidents.
In order to prevent accidents and personal injury, be sure to observe the following:
Before flying the helicopter, ensure that all screws are tightened.
A single loose screw may cause a major accident.
Replace all broken or defective parts with new ones, as damaged parts lead to crashes.
Never approach a spinning rotor. Keep at least 10 meters/yards away from a spinning rotor blades.
Do not touch the motor immediately after use. It may be hot enough to cause burns.
Perform all necessary maintenance.
PRIOR TO ADJUSTING AND OPERATING YOUR MODEL, OBSERVE THE FOLLOWING
Operate the helicopter only outdoors and out of people's reach as the main rotor operates at high rpm!
While adjusting, stand at least 10 meters
Novice R/C helicopter pilots should always seek advice from experienced pilots to obtain hints with assembly and for pre-fight adjustments.
Note that a badly assembled or insuffciently adjusted helicopter is a safety hazard!
In the beginning, novice R/C helicopter pilots should always be assisted by an experienced pilot and never fly alone!

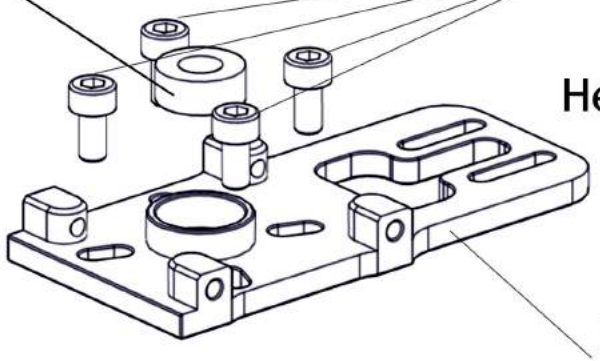
Bag 1

Bearing 5*10*4
ART.MSH51071

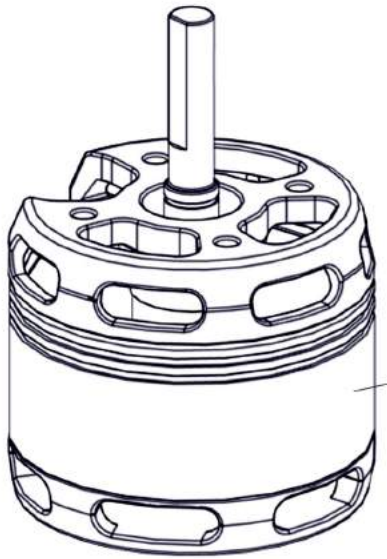
Hex Screw M3*6（Add Loctite 243）
ART.MSH41130

Pinion φ5 21T ART.MSH41223
(optional)
Pinion φ5 20T ART.MSH41222
Pinion φ5 22T ART.MSH41192
Pinion φ5 23T ART.MSH41224
Pinion φ5 24T ART.MSH41193
Pinion φ5 25T ART.MSH41194

Hex Grub Screw（Add Loctite 243）
ART.MSH41133



Motor Mount
ART.XL38B01



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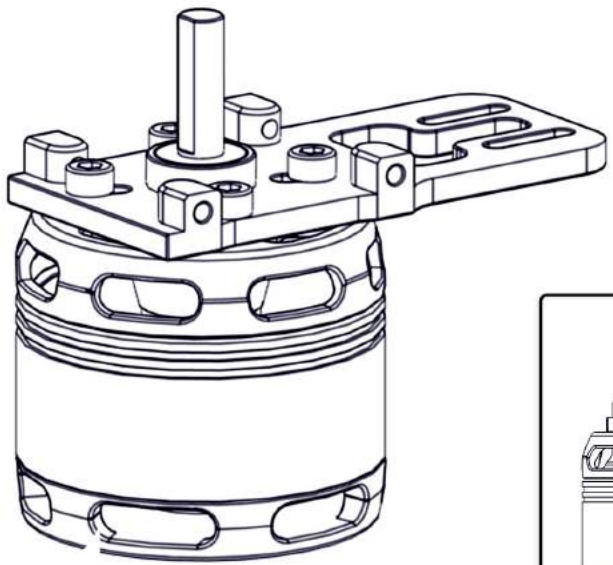
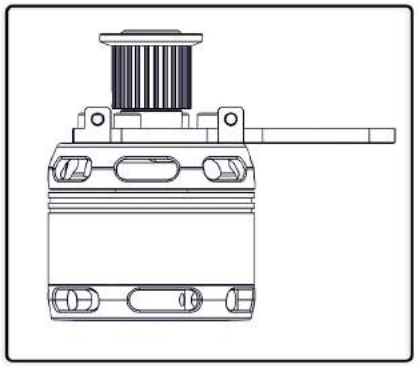
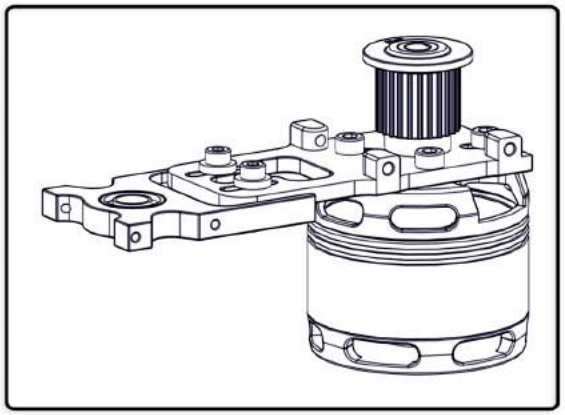




Bag 1



Screw M2.5*10
ART.MSH51143
(Do not fully tighten yet)

Washer 2.6*6.5*1.5
ART.MSH41217

Ball bearing 6*12*4
ART.MSH41074

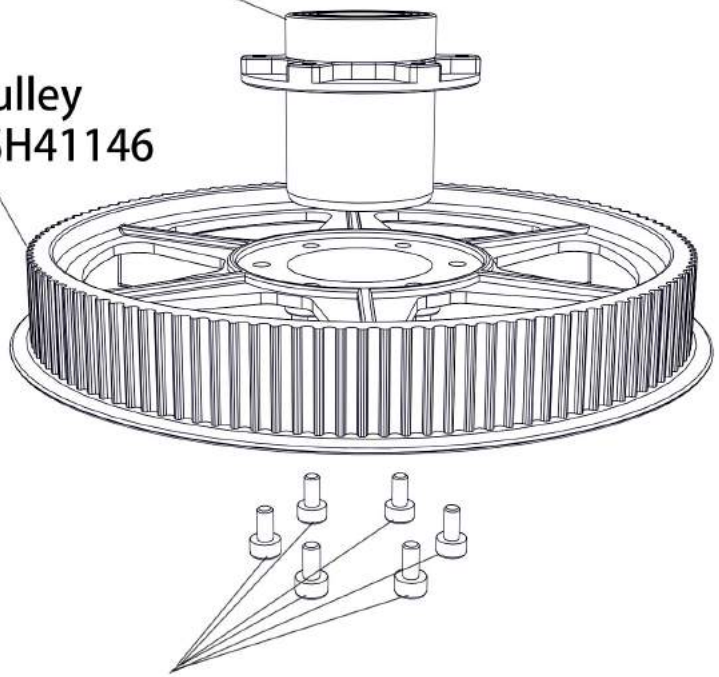
Third Bearing Block
ART.XL38B02

M2.5 Nut
ART.MSH51137

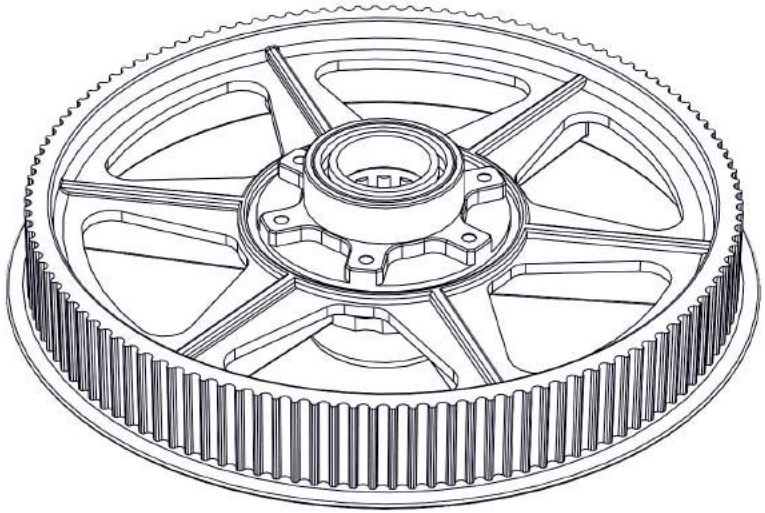
Bag 2

Oneway hub
ART.XL38B03

Main pulley
ART.MSH41146

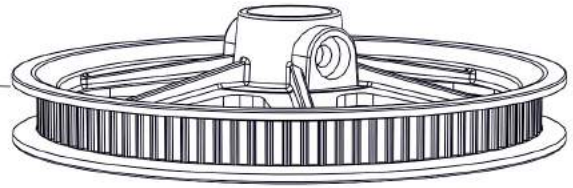


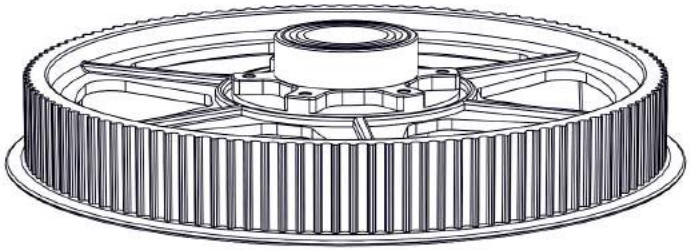
Hex screw M2*4（Add Loctite 243）
ART.MSH41141

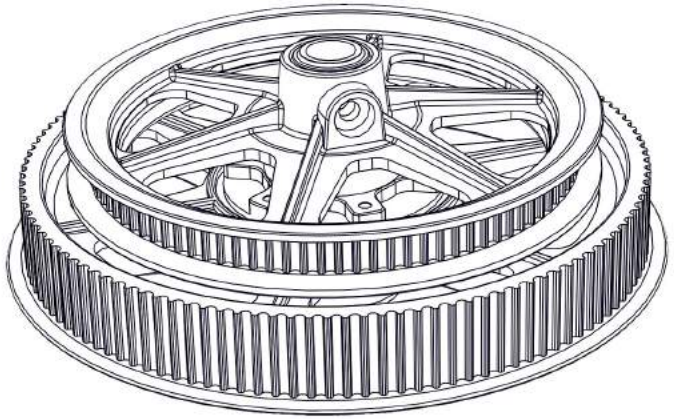


Bag 2

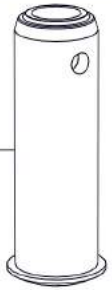
Autorotation pulley
ART.MSH41147



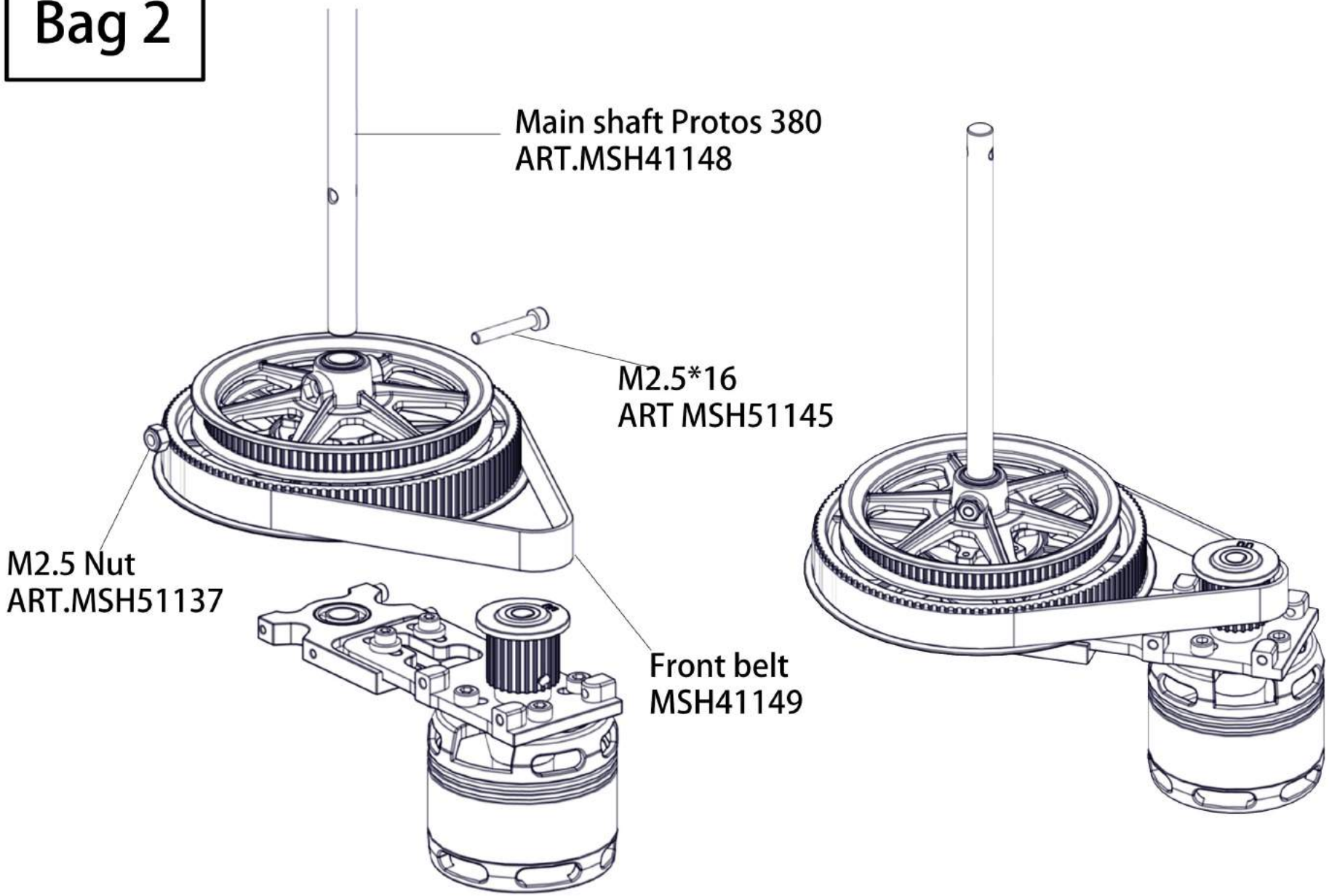




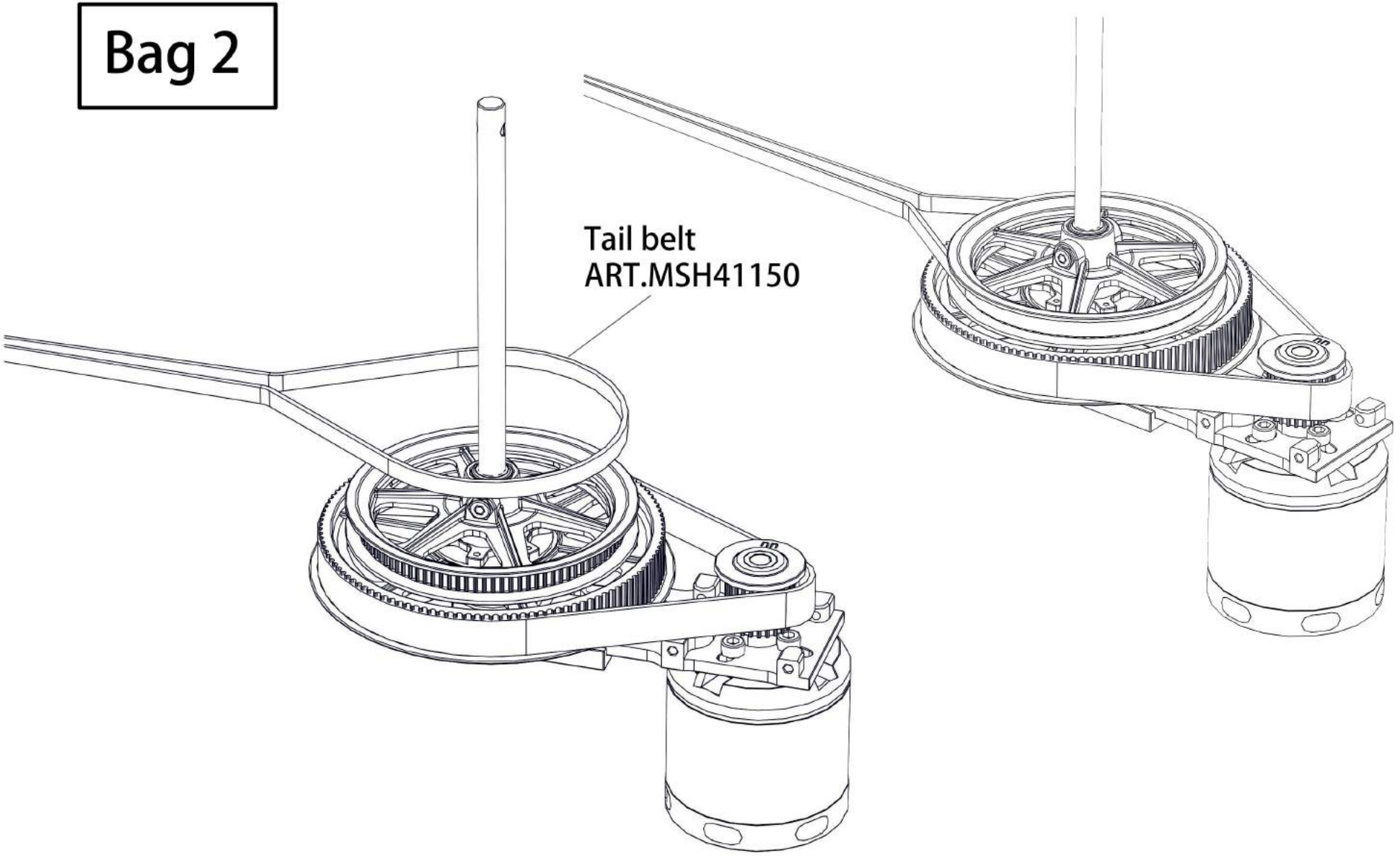
Oneway shaft
ART.XL38B04



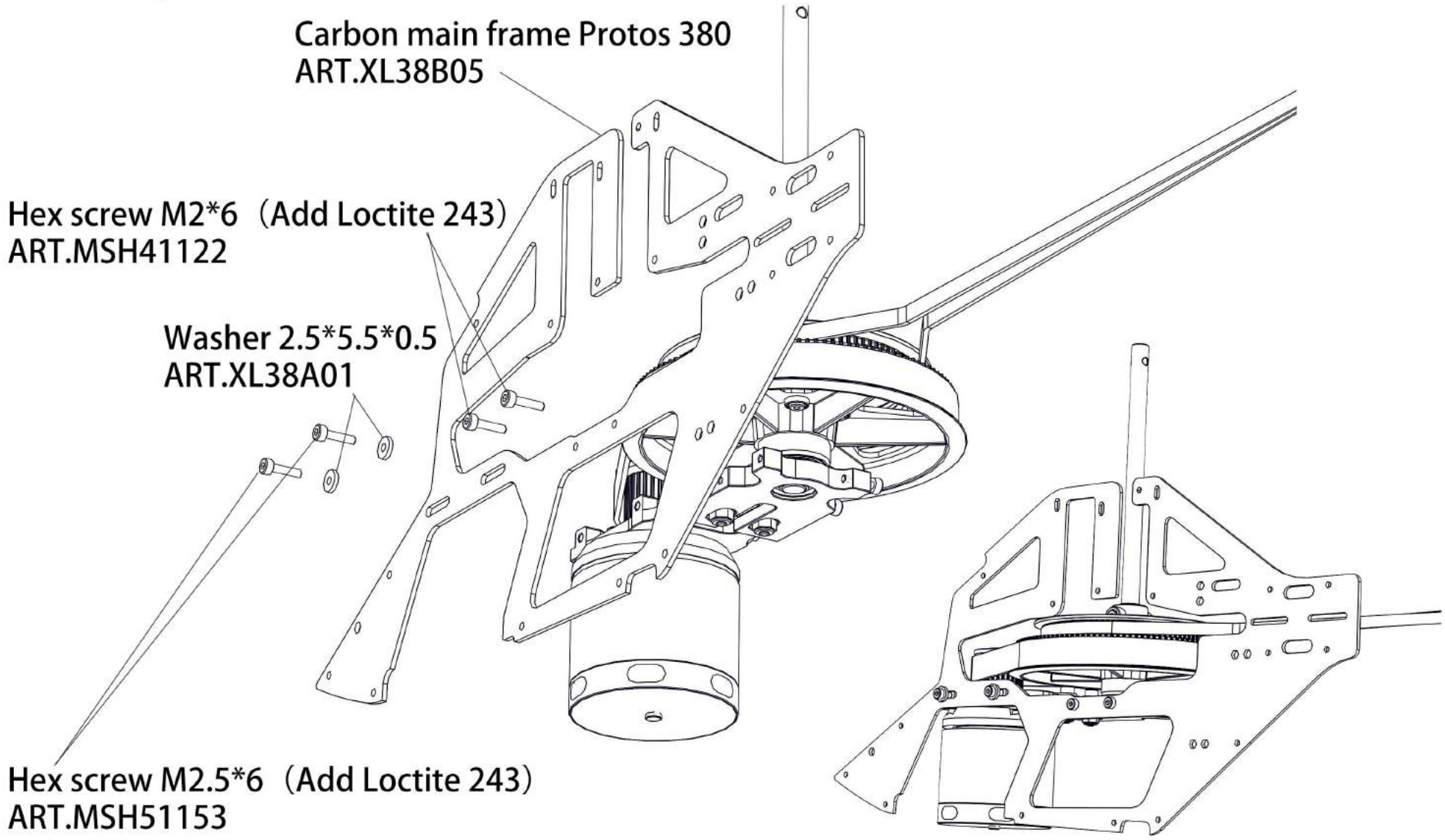
Bag 2


Main shaft Protos 380
ART.MSH41148
M2.5*16
ART MSH51145
M2.5 Nut
ART.MSH51137
Front belt
MSH41149

Bag 2



Bag 3


Carbon main frame Protos 380
ART.XL38B05
Hex screw M2*6（Add Loctite 243）
ART.MSH41122
Washer 2.5*5.5*0.5
ART.XL38A01
Hex screw M2.5*6（Add Loctite 243）
ART.MSH51153

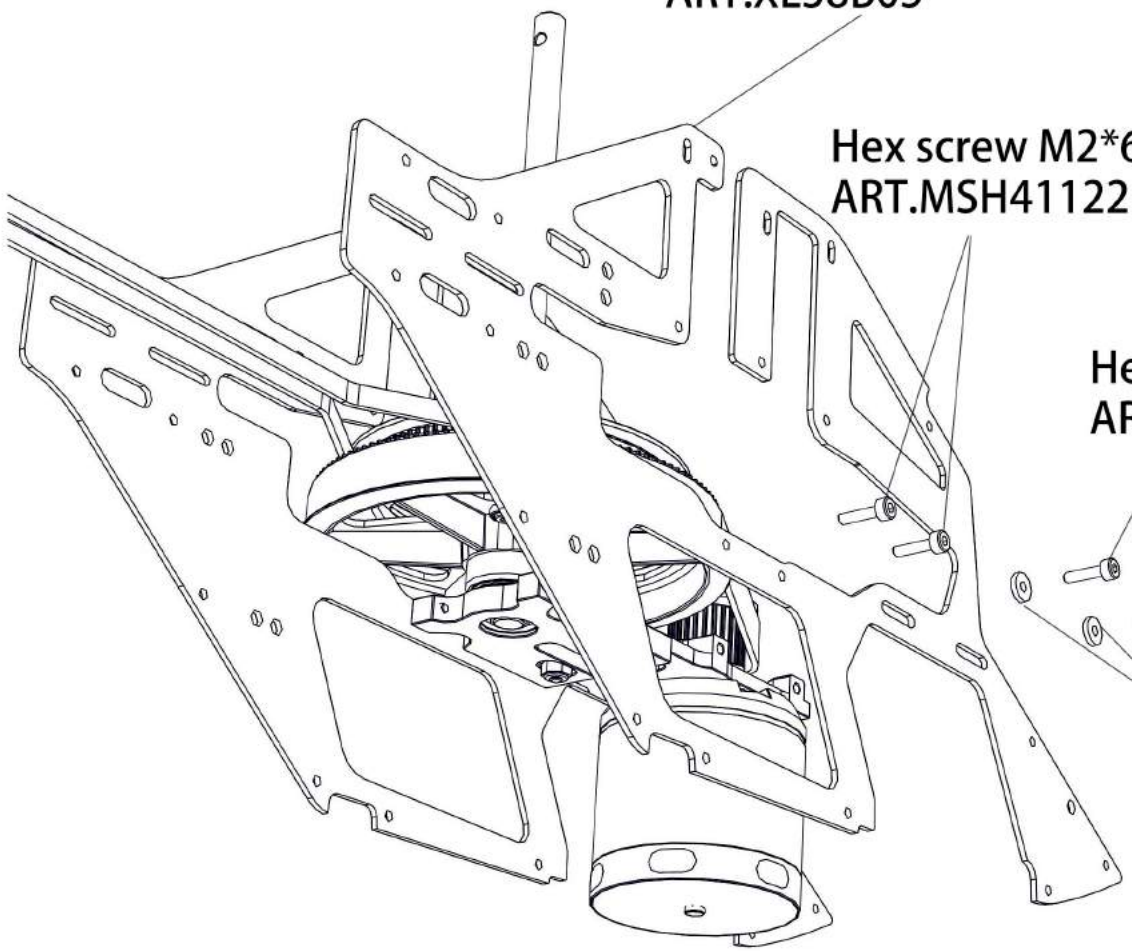
Bag 3

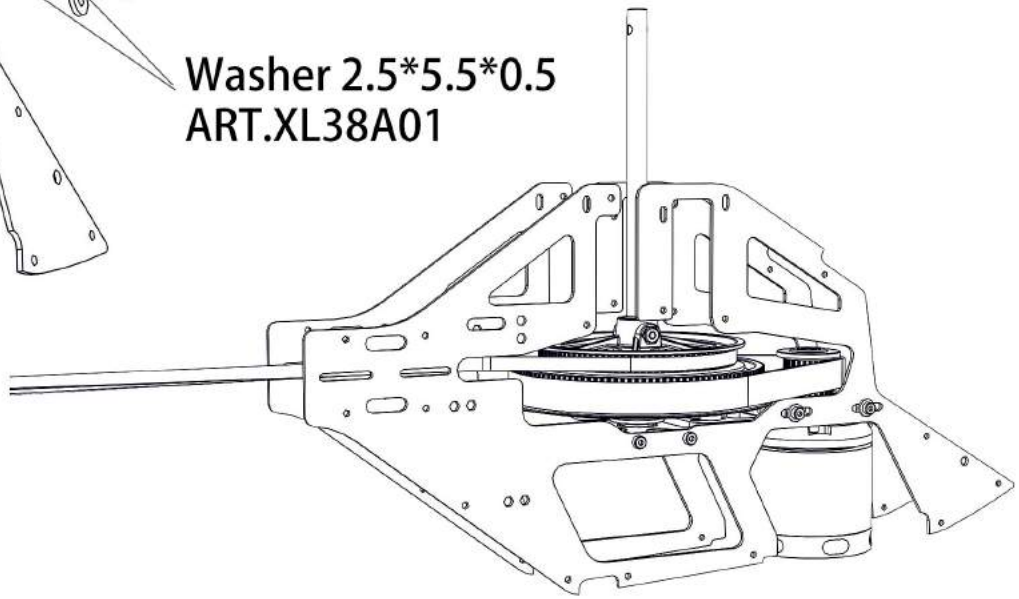
Carbon main frame Protos 380
ART.XL38B05

Hex screw M2*6（Add Loctite 243）
ART.MSH41122

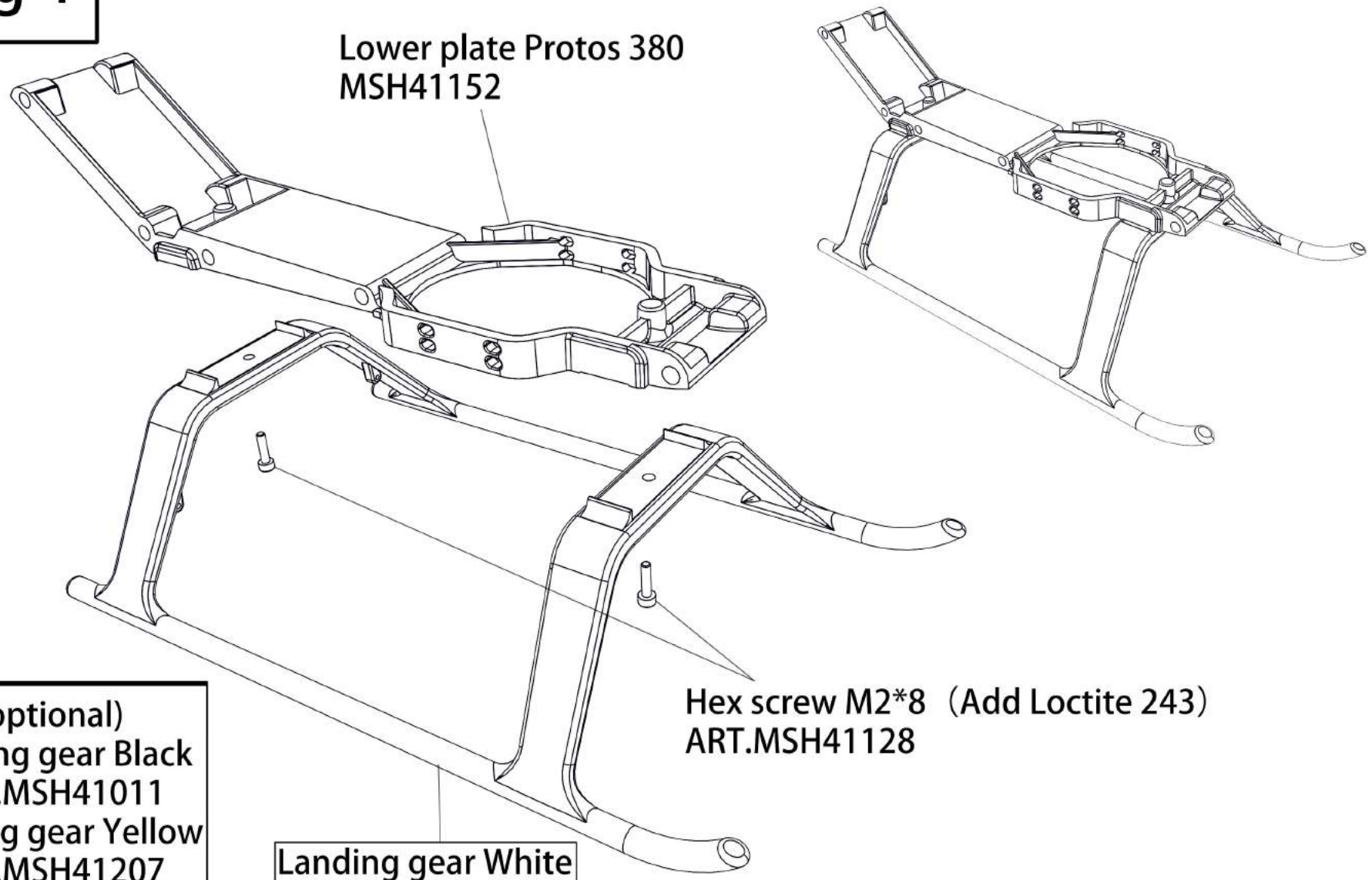
Hex screw M2.5*6（Add Loctite 243）
ART.MSH51153

Washer 2.5*5.5*0.5
ART.XL38A01

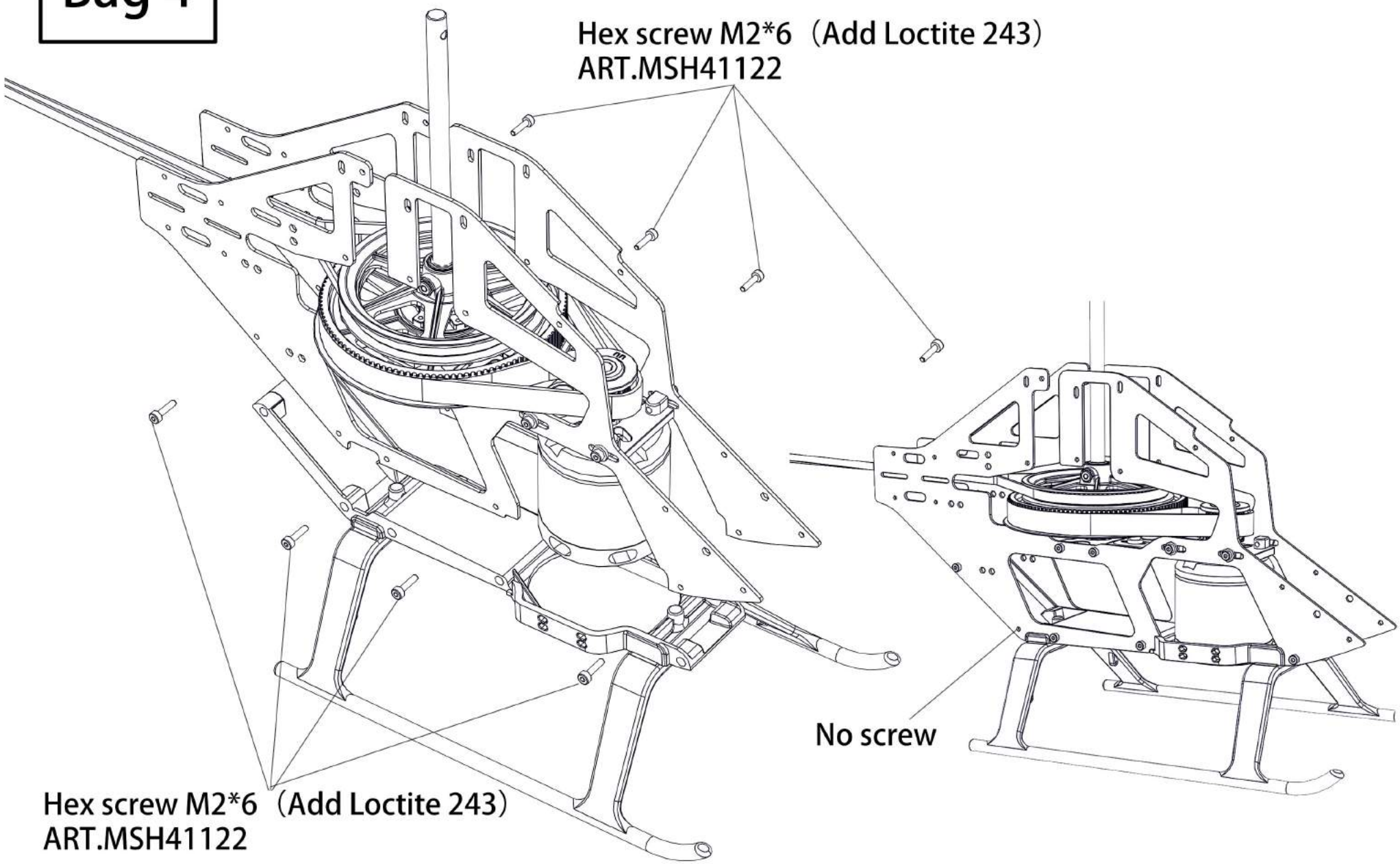




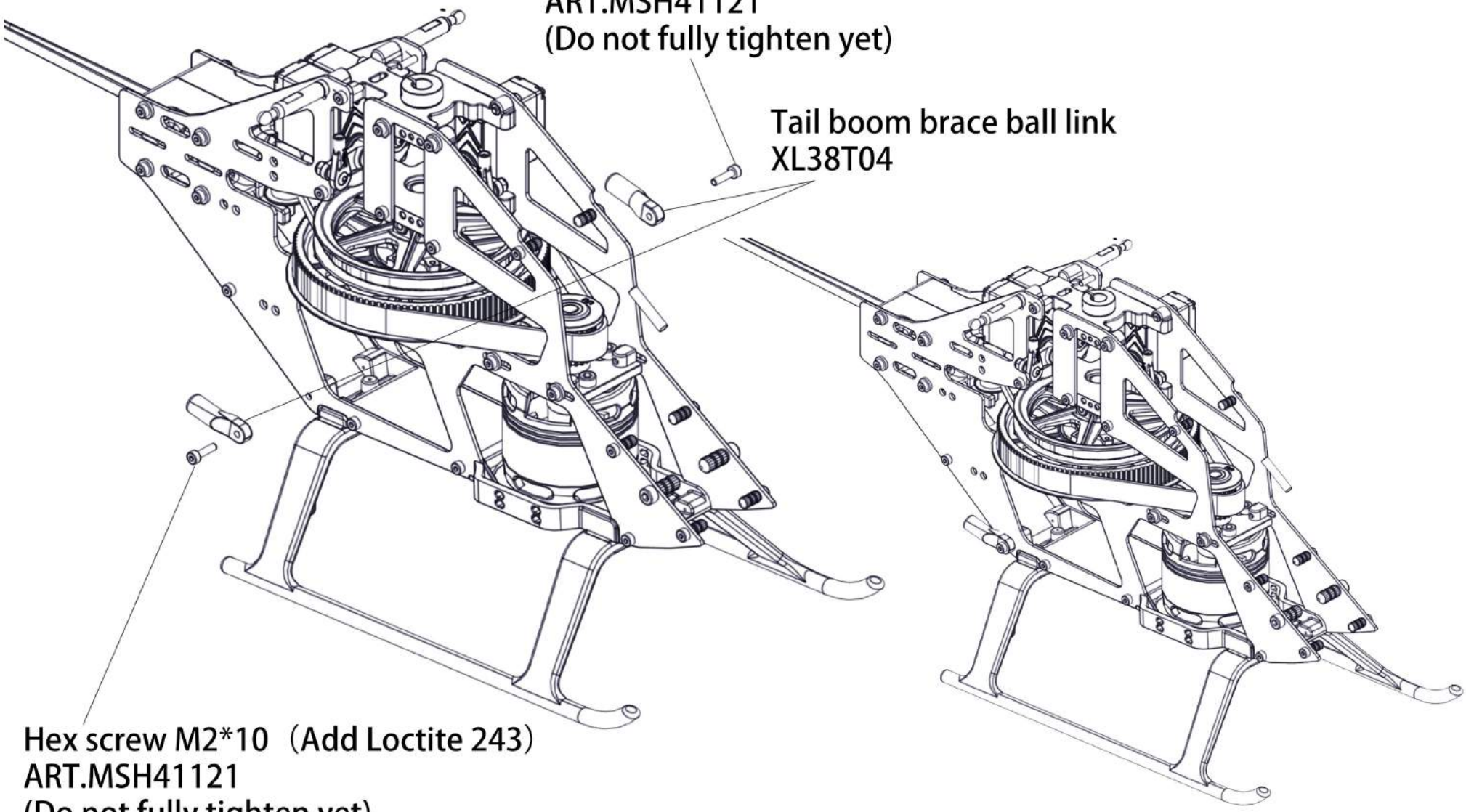
Bag 4


Lower plate Protos 380
MSH41152
Hex screw M2*8（Add Loctite 243）
ART.MSH41128
(optional)
Landing gear Black
ART.MSH41011
Landing gear Yellow
ART.MSH41207
Landing gear Red
ART.MSH41232
Landing gear White
ATR.MSH41214

Bag 4

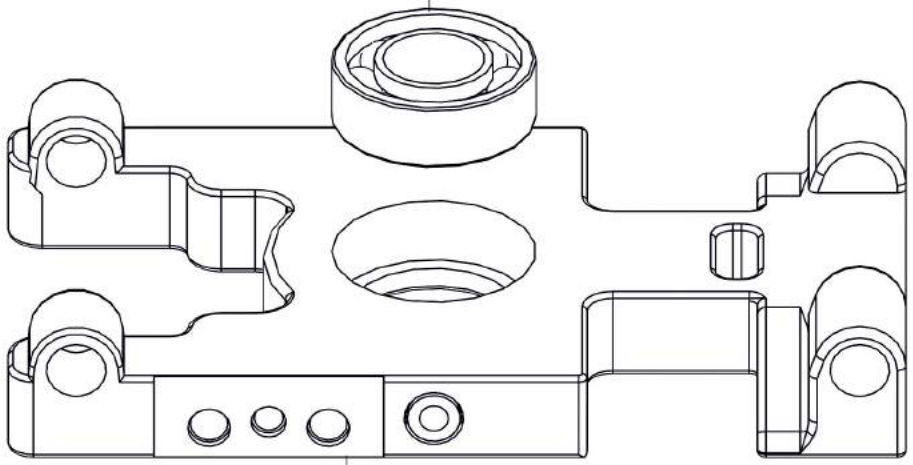

Hex screw M2*6（Add Loctite 243）
ART.MSH41122
No screw
Hex screw M2*6（Add Loctite 243）
ART.MSH41122

Bag 4

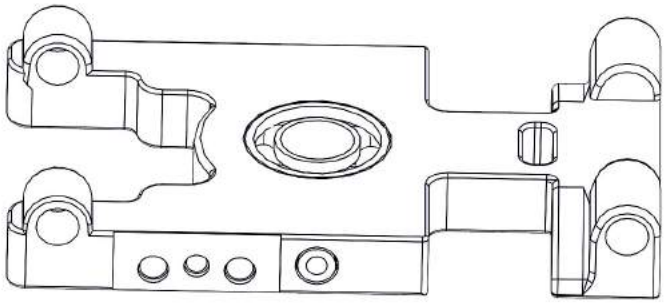

Hex screw M2*10（Add Loctite 243）
ART.MSH41121
(Do not fully tighten yet)
Tail boom brace ball link
XL38T04
Hex screw M2*10（Add Loctite 243）
ART.MSH41121
(Do not fully tighten yet)

Bag 4

Ball bearing 6*12*4
ART.MSH41074



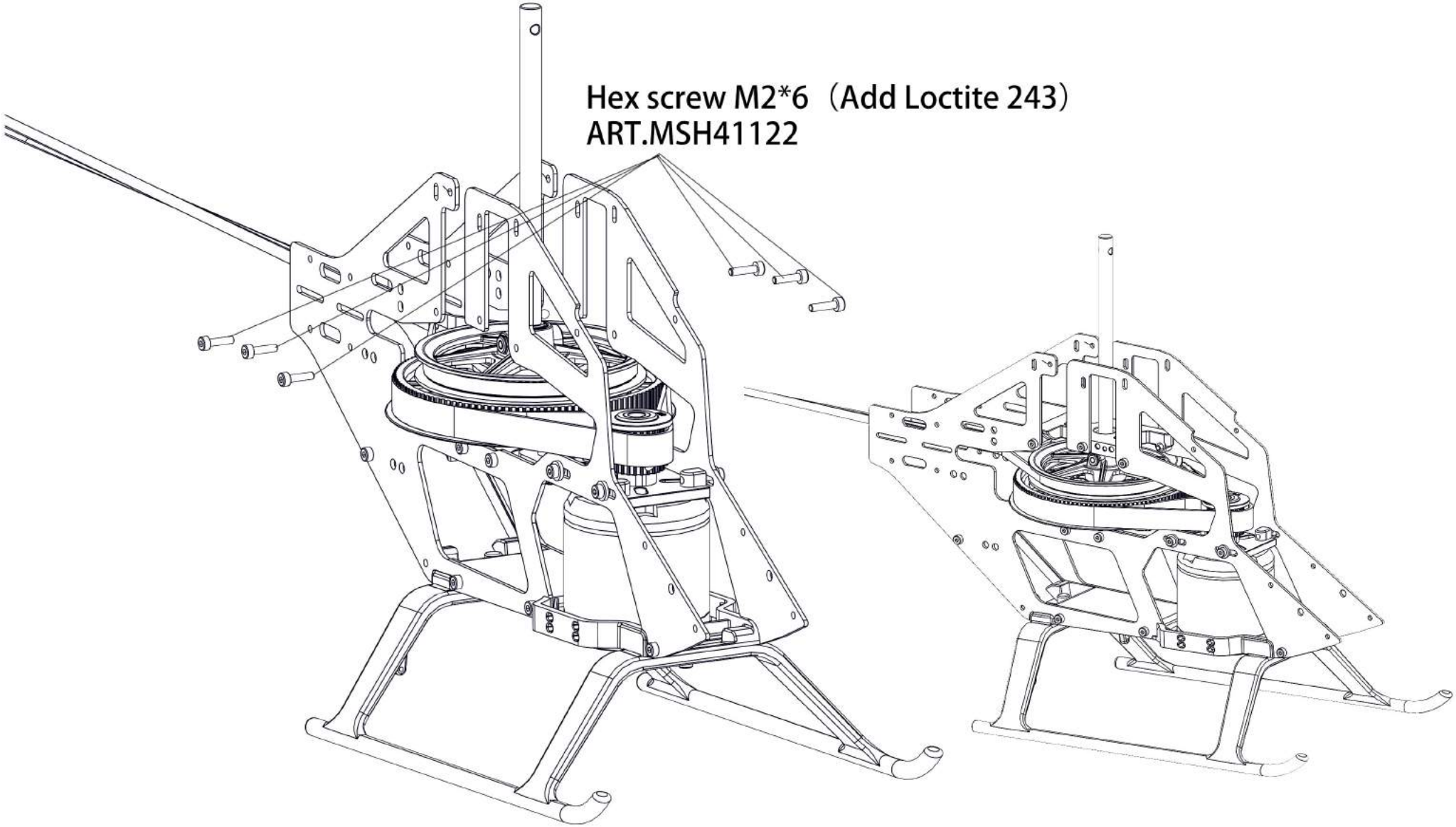
Servo frame Protos 380
ART.MSH41154



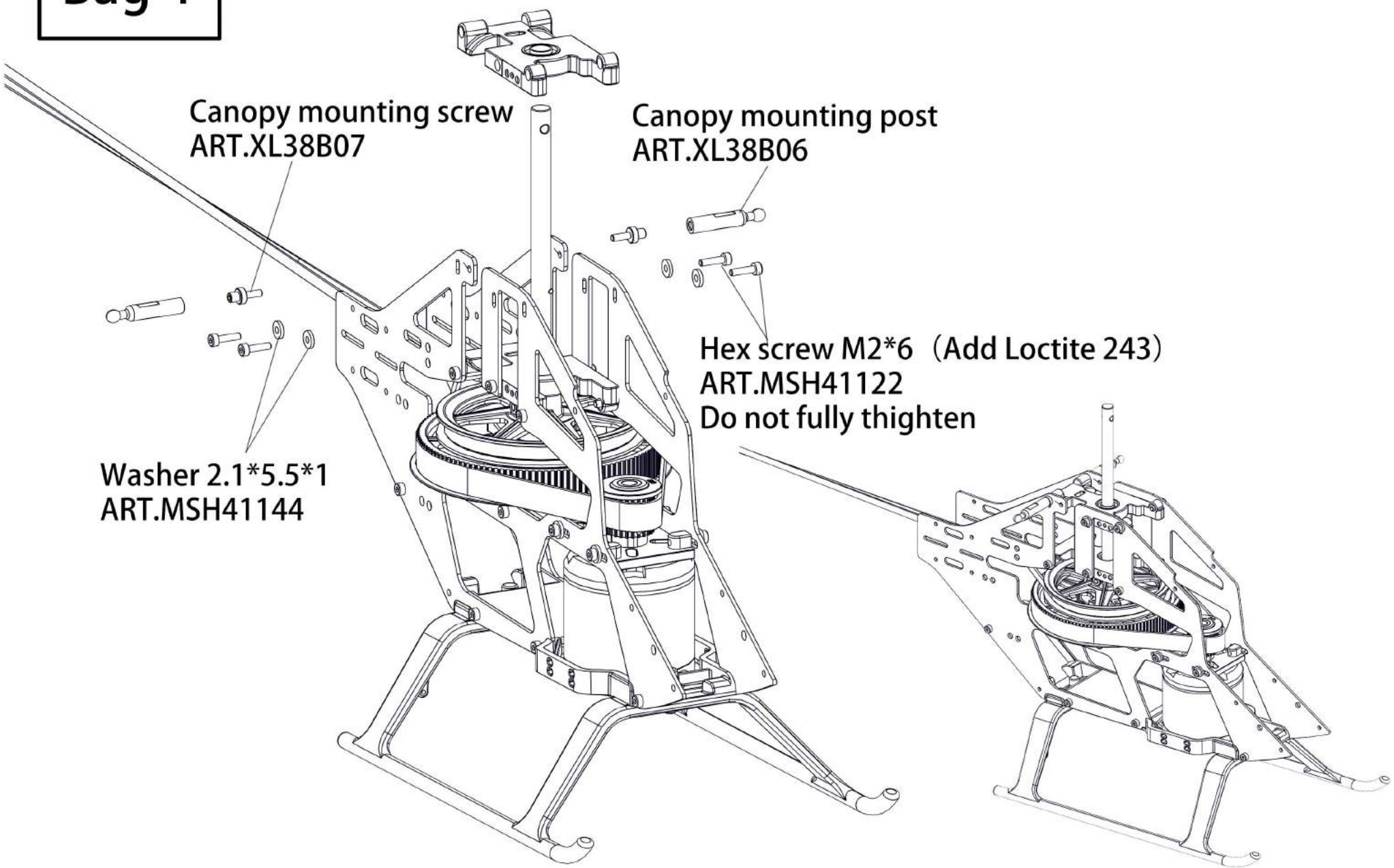
Bag 4

Servo frame Protos 380
ART.MSH41154

Hex screw M2*6（Add Loctite 243）
ART.MSH41122



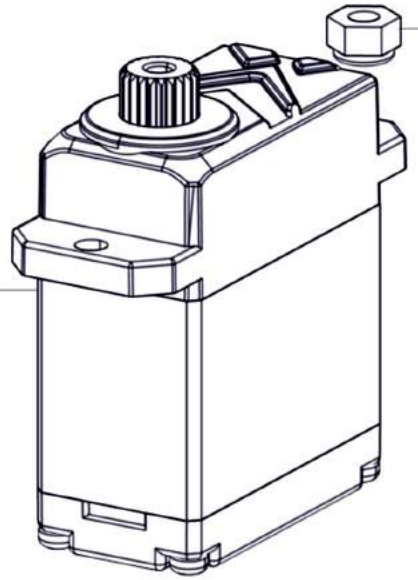
Bag 4


Canopy mounting screw
ART.XL38B07
Canopy mounting post
ART.XL38B06
Hex screw M2*6（Add Loctite 243）
ART.MSH41122
Do not fully thighten
Washer 2.1*5.5*1
ART.MSH41144

Bag 5

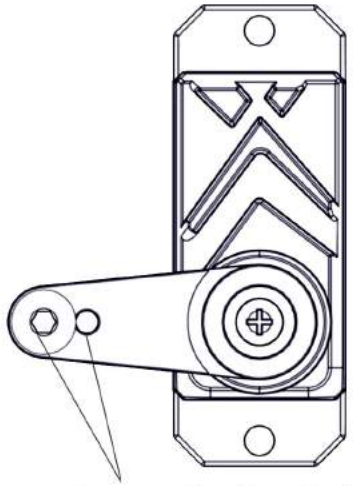
Servo horn
ART.XL38B08

Ball M2*4.8
ART.MSH41009



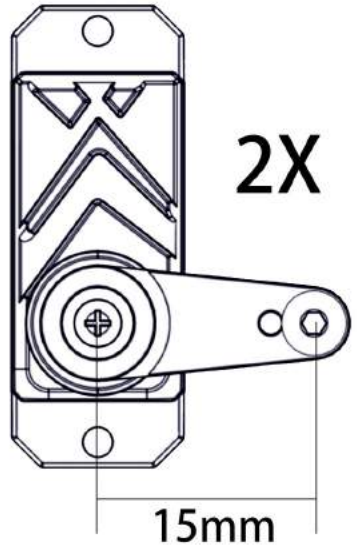
M2 Nut
ART.MSH41119

NOT INCLUDED



1X

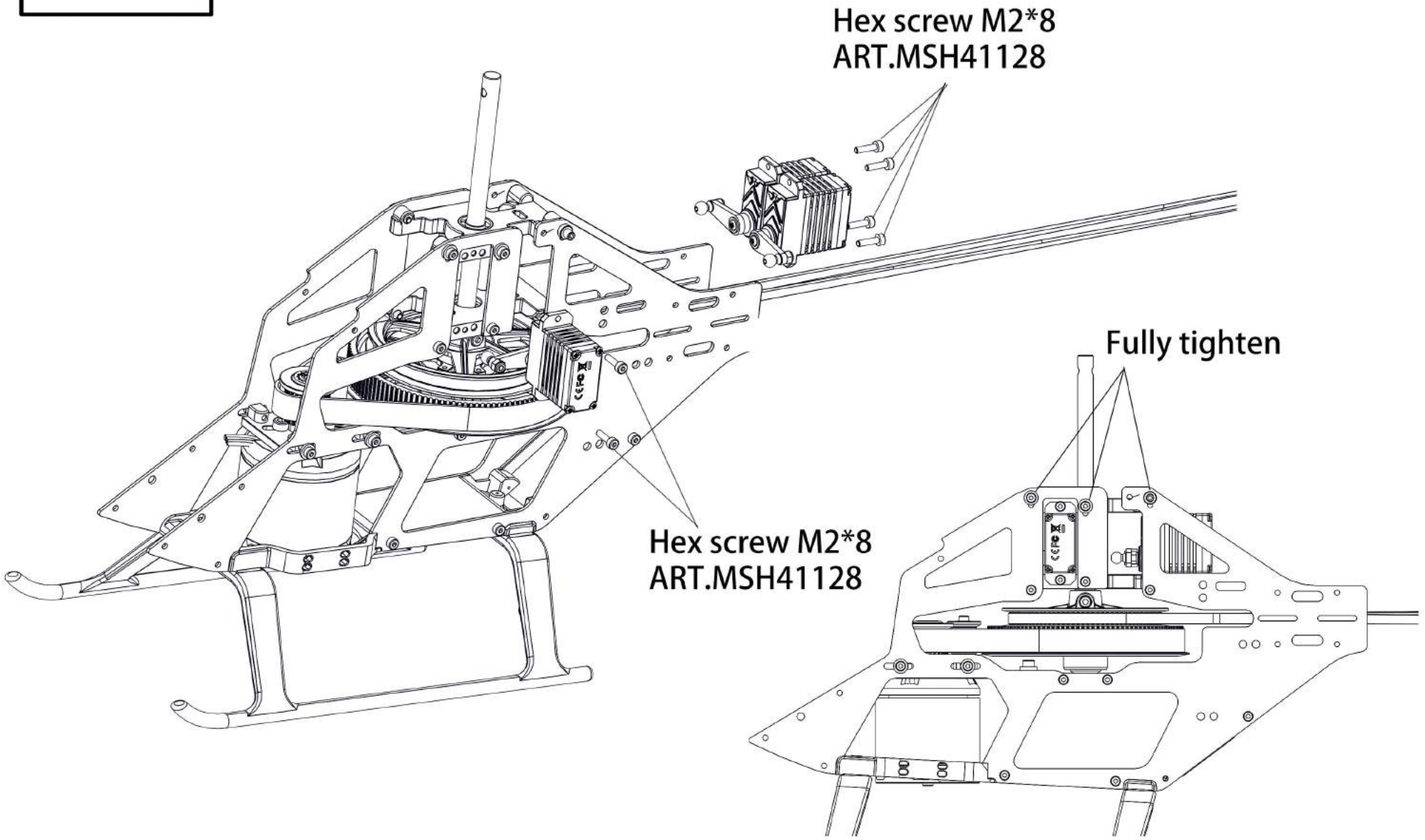
Inner hole stable
Outter hole agile



2X

15mm

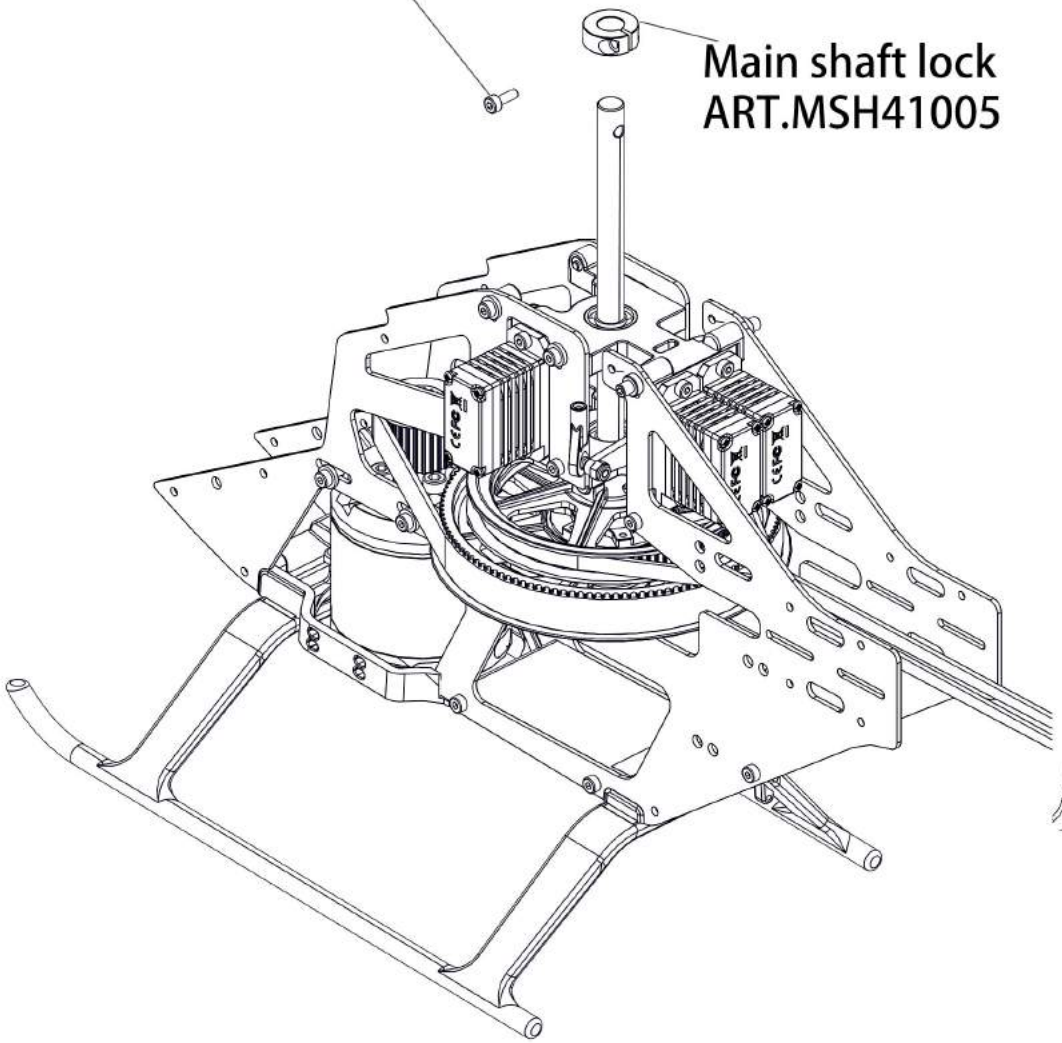
Bag 5


Hex screw M2*8
ART.MSH41128
Hex screw M2*8
ART.MSH41128
Fully tighten

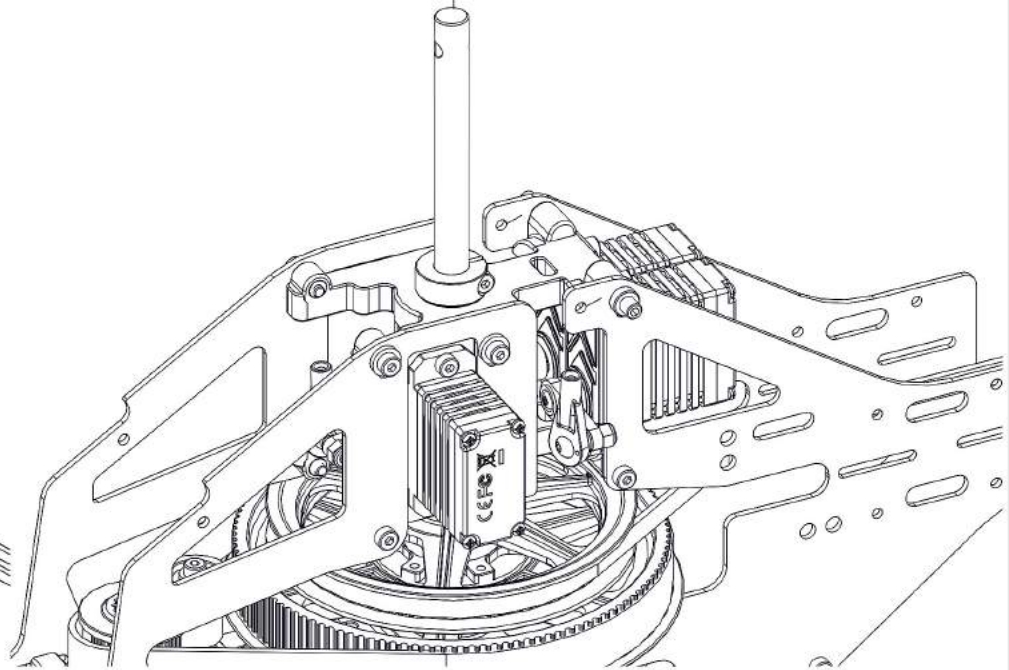
Bag 6

Hex screw M2*6 （Add Loctite 243）
ART.MSH41122

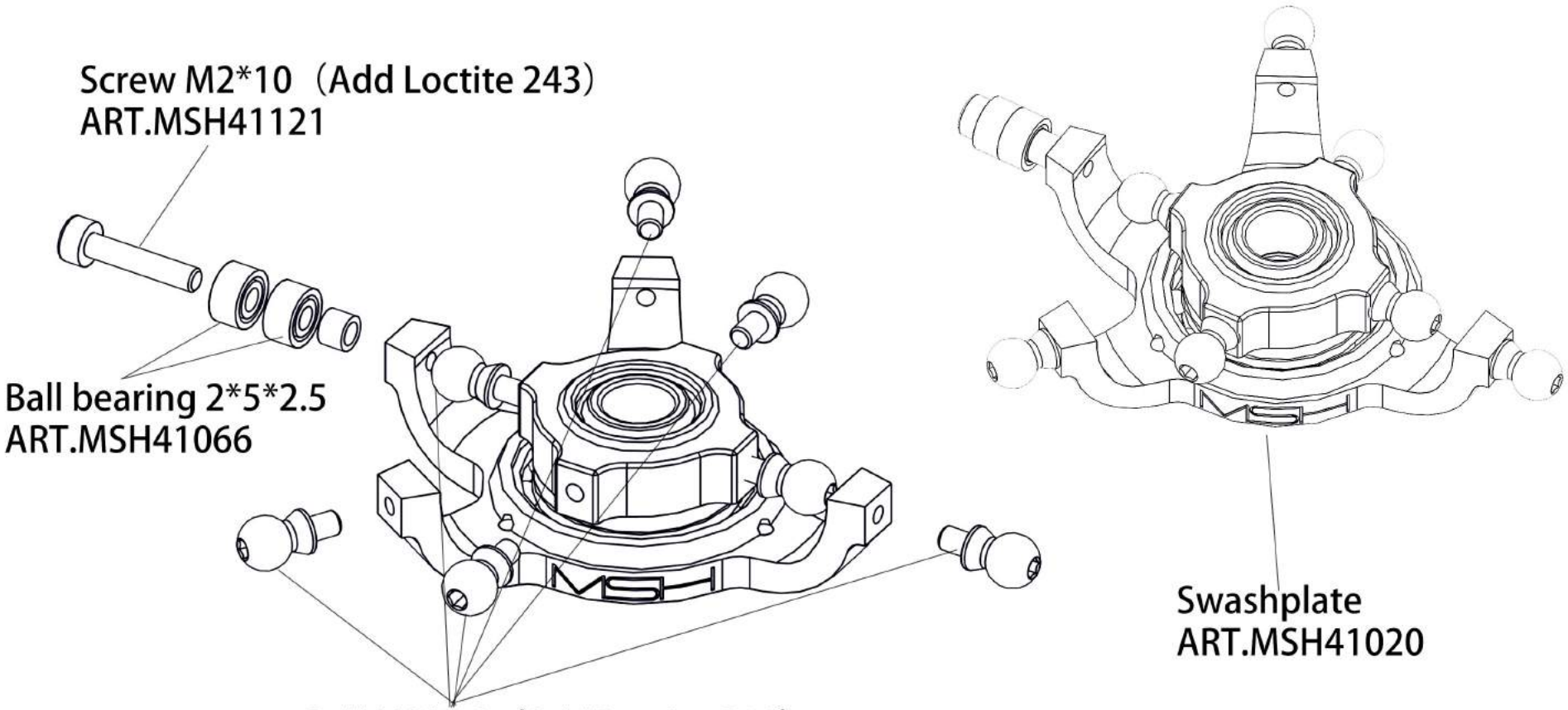
Main shaft lock
ART.MSH41005



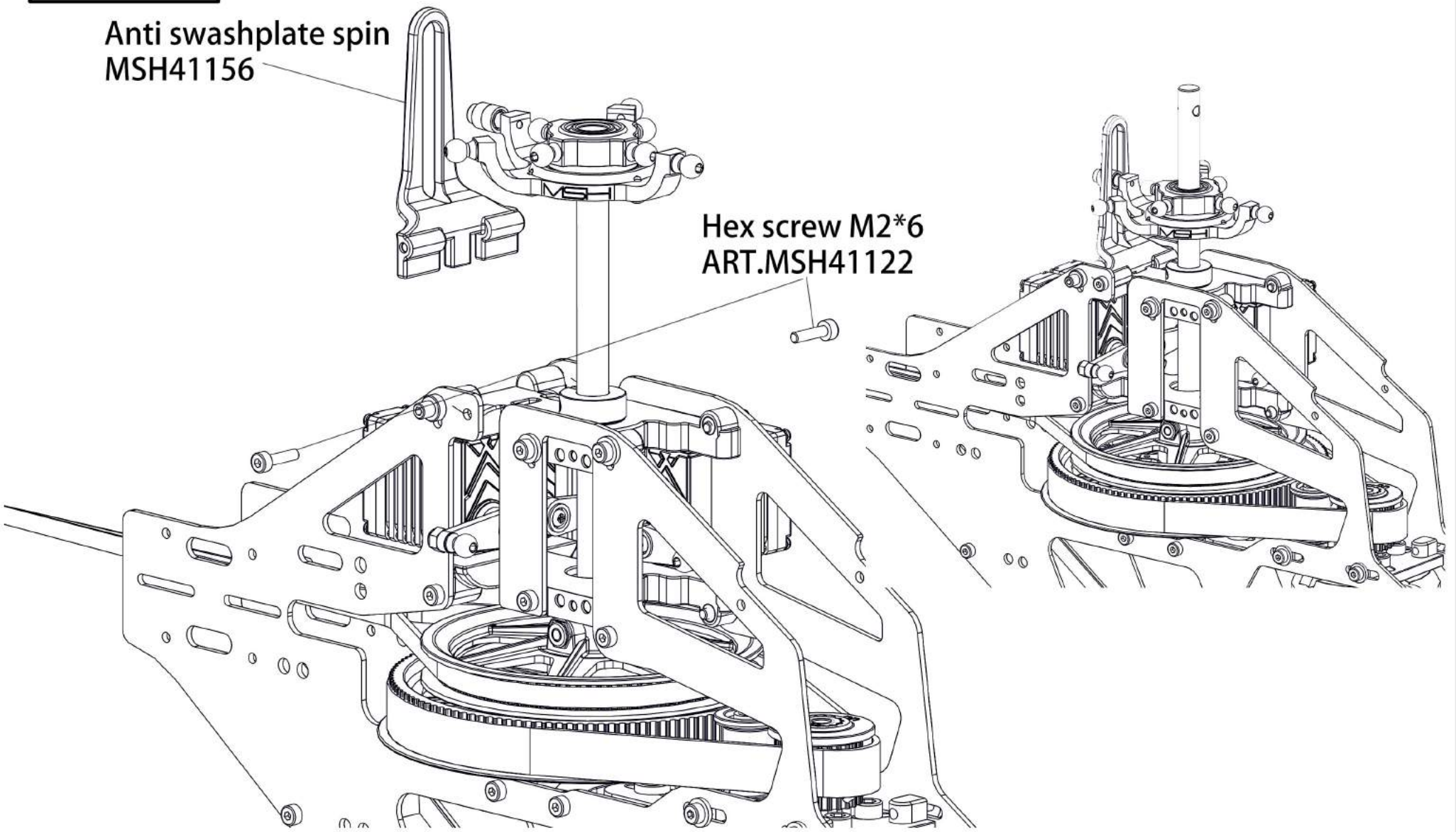
-Pull up main shaft
-Push down shaft lock
-Fully tighten



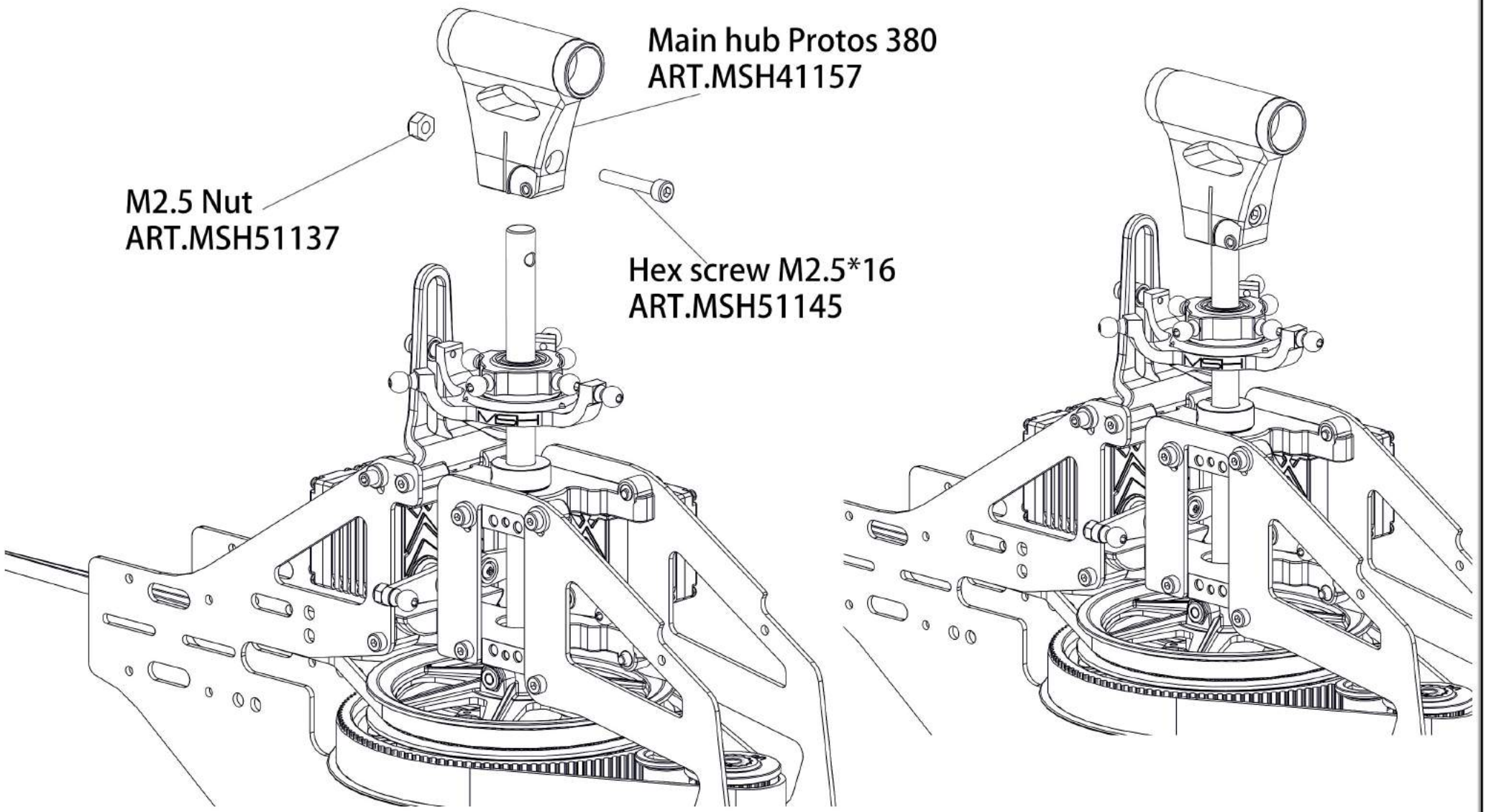
Bag 6


Screw M2*10（Add Loctite 243）
ART.MSH41121
Ball bearing 2*5*2.5
ART.MSH41066
Ball M2*2.8（Add Loctite 243）
ART.MSH41010
Swashplate
ART.MSH41020

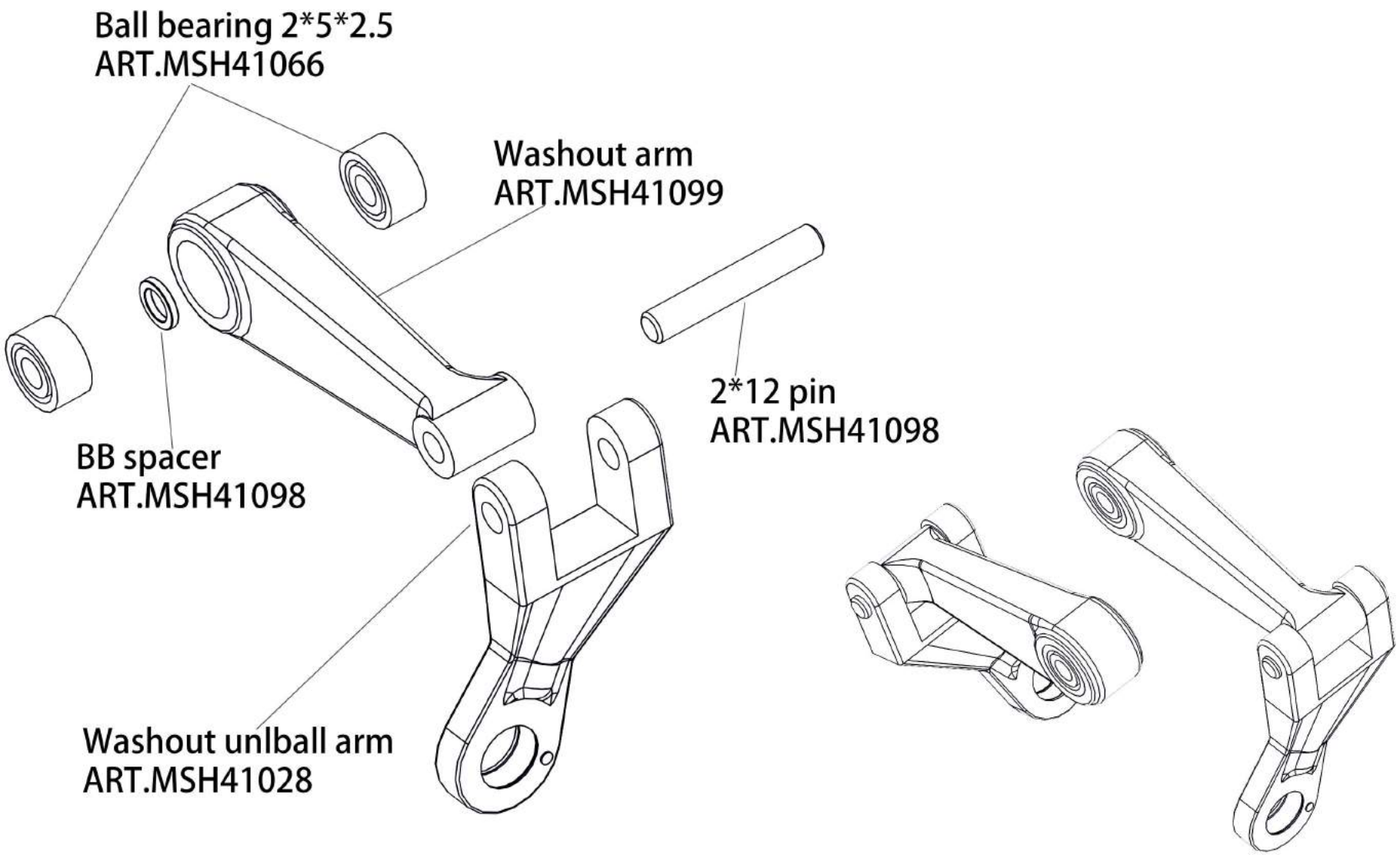
Bag 6



Bag 6

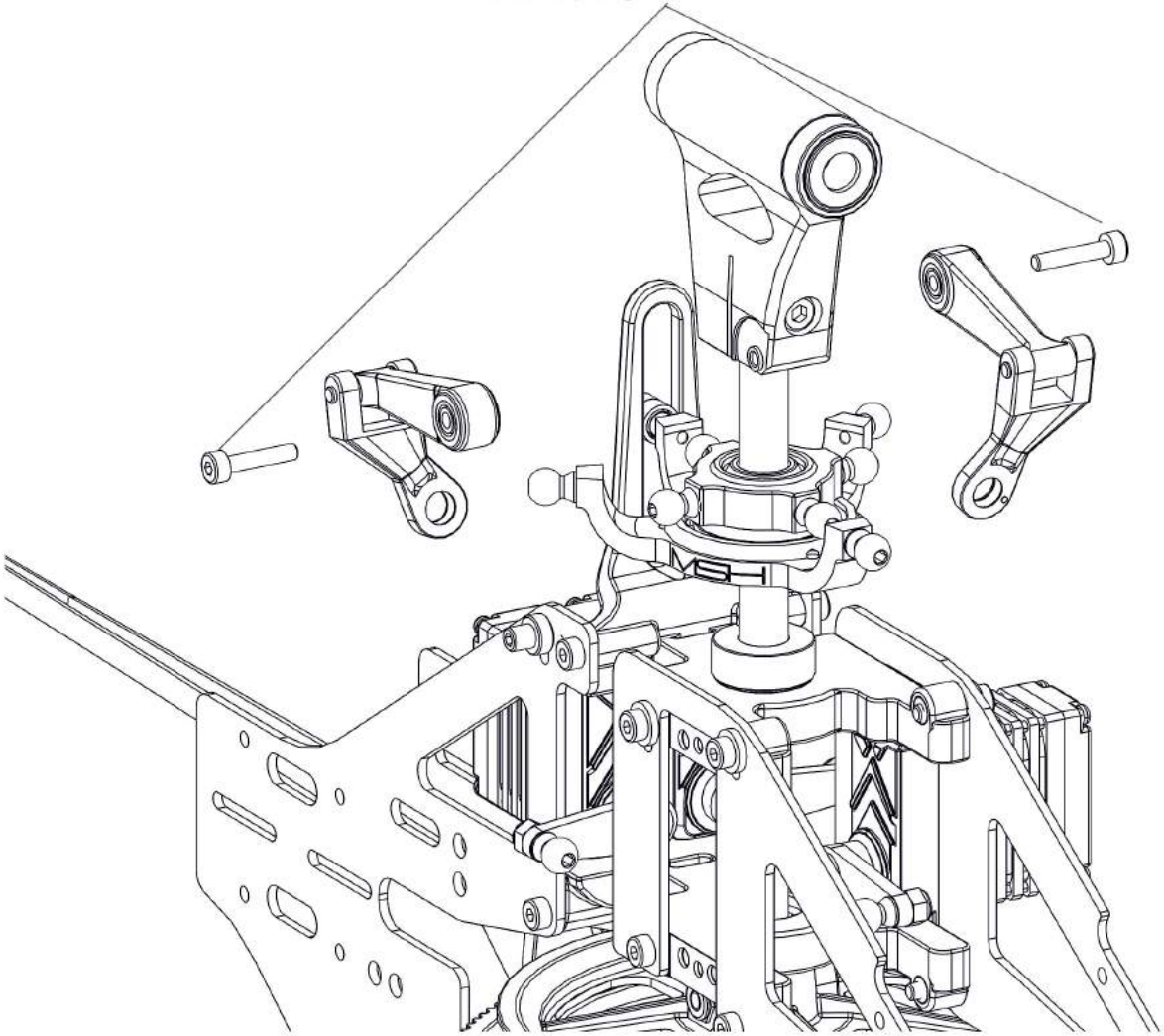

Main hub Protos 380
ART.MSH41157
M2.5 Nut
ART.MSH51137
Hex screw M2.5*16
ART.MSH51145

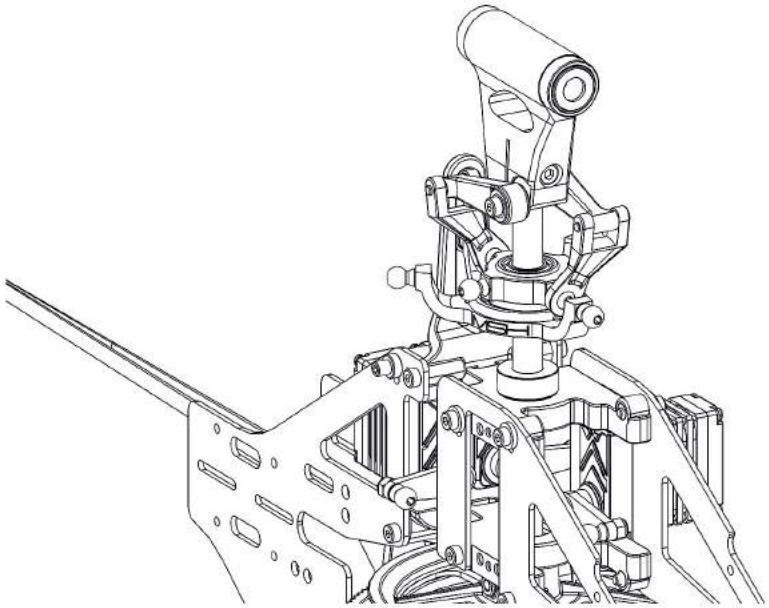
Bag 6


Ball bearing 2*5*2.5
ART.MSH41066
Washout arm
ART.MSH41099
2*12 pin
ART.MSH41098
BB spacer
ART.MSH41098
Washout unlball arm
ART.MSH41028

Bag 6

Hex Screw M2*10（Add Loctite 243）
ART.MSH41121





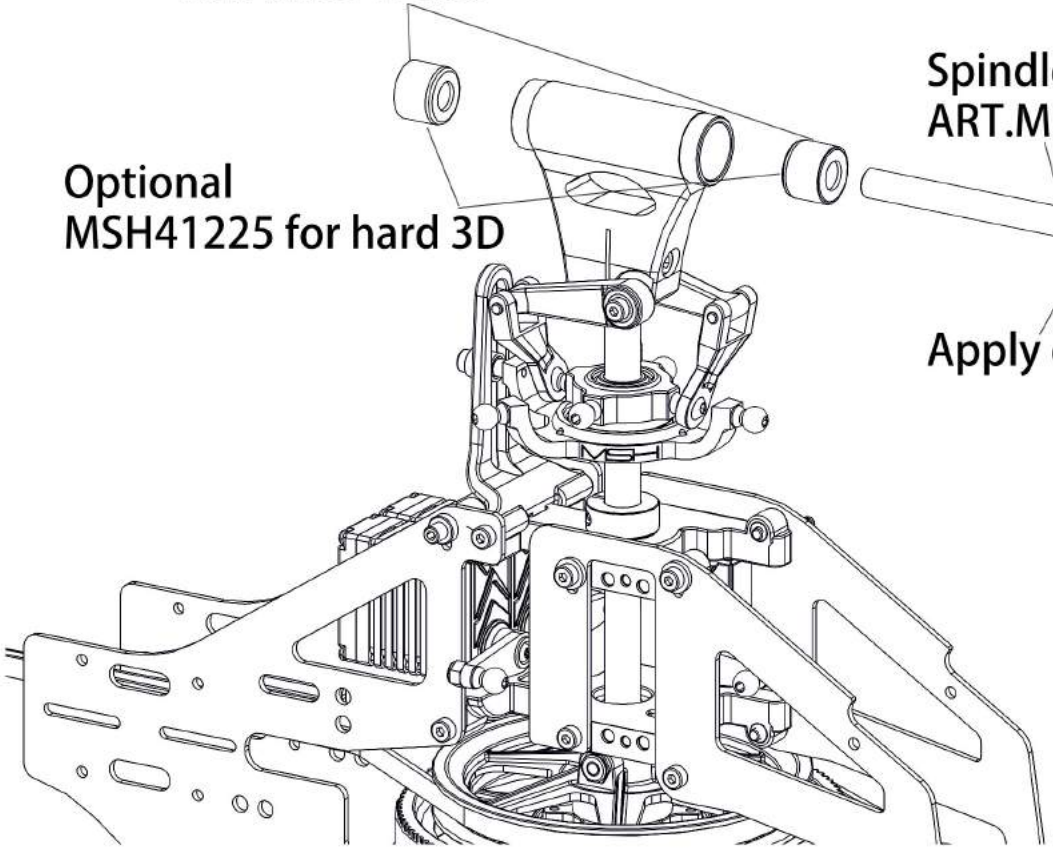
Bag 6

Head dampers Protos 380
ART.MSH41155

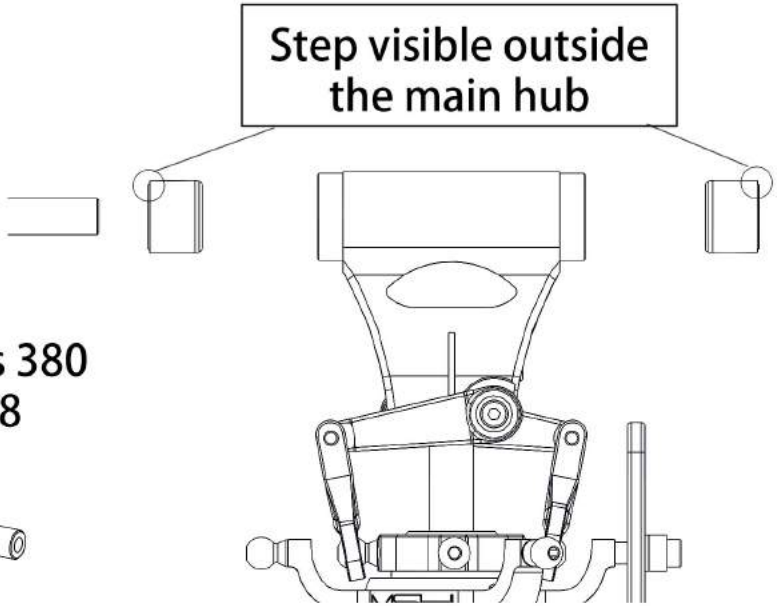
Optional
MSH41225 for hard 3D

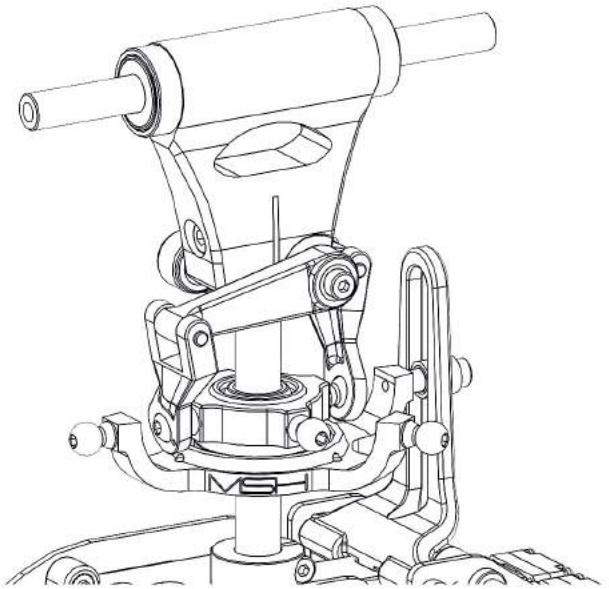
Spindle Protos 380
ART.MSH41158

Apply grease

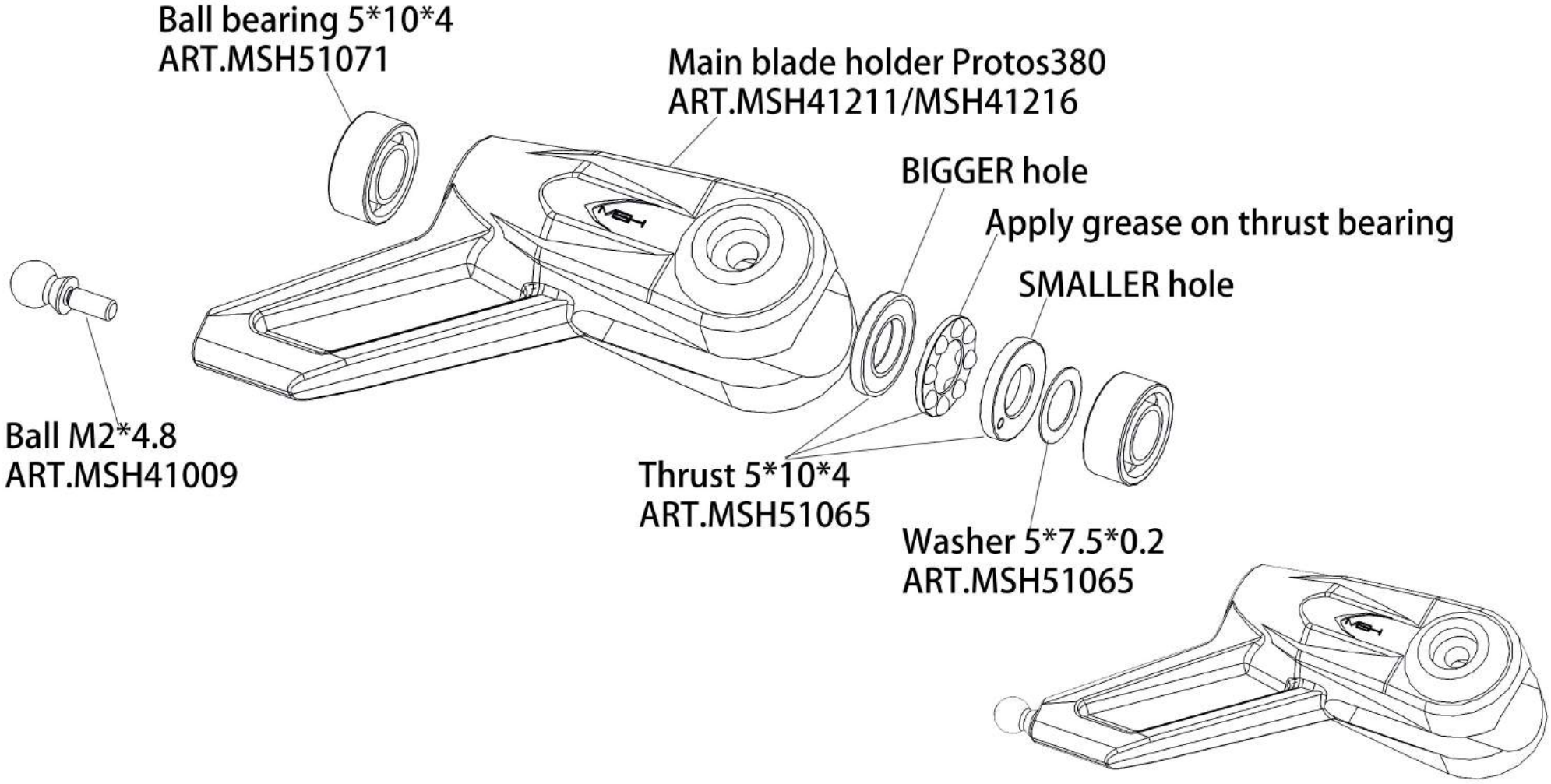


Step visible outside
the main hub

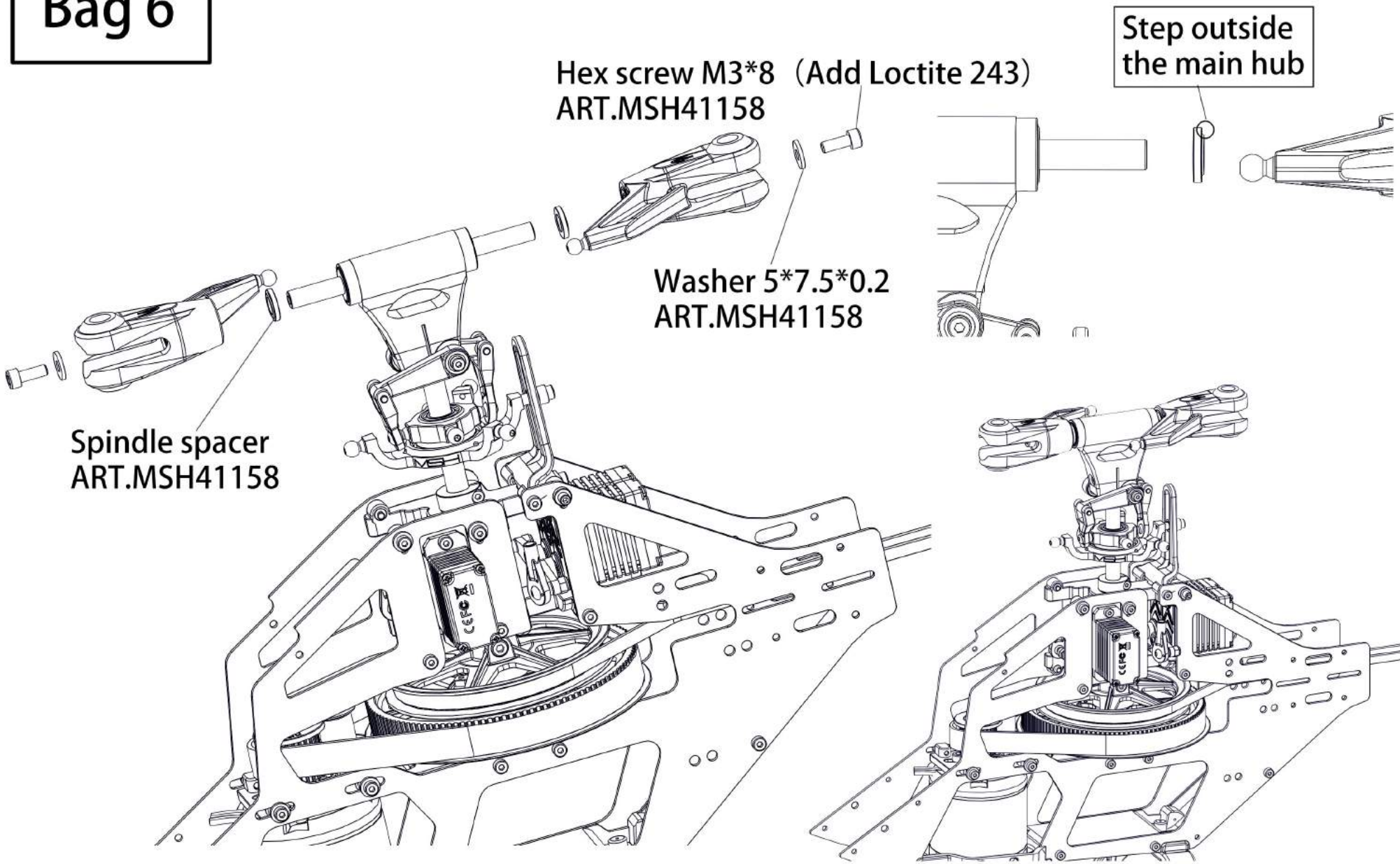




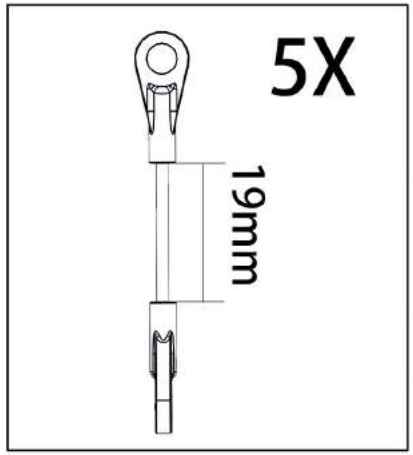
Bag 6


Ball bearing 5*10*4
ART.MSH51071
Main blade holder Protos380
ART.MSH41211/MSH41216
BIGGER hole
Apply grease on thrust bearing
SMALLER hole
Ball M2*4.8
ART.MSH41009
Thrust 5*10*4
ART.MSH51065
Washer 5*7.5*0.2
ART.MSH51065

Bag 6

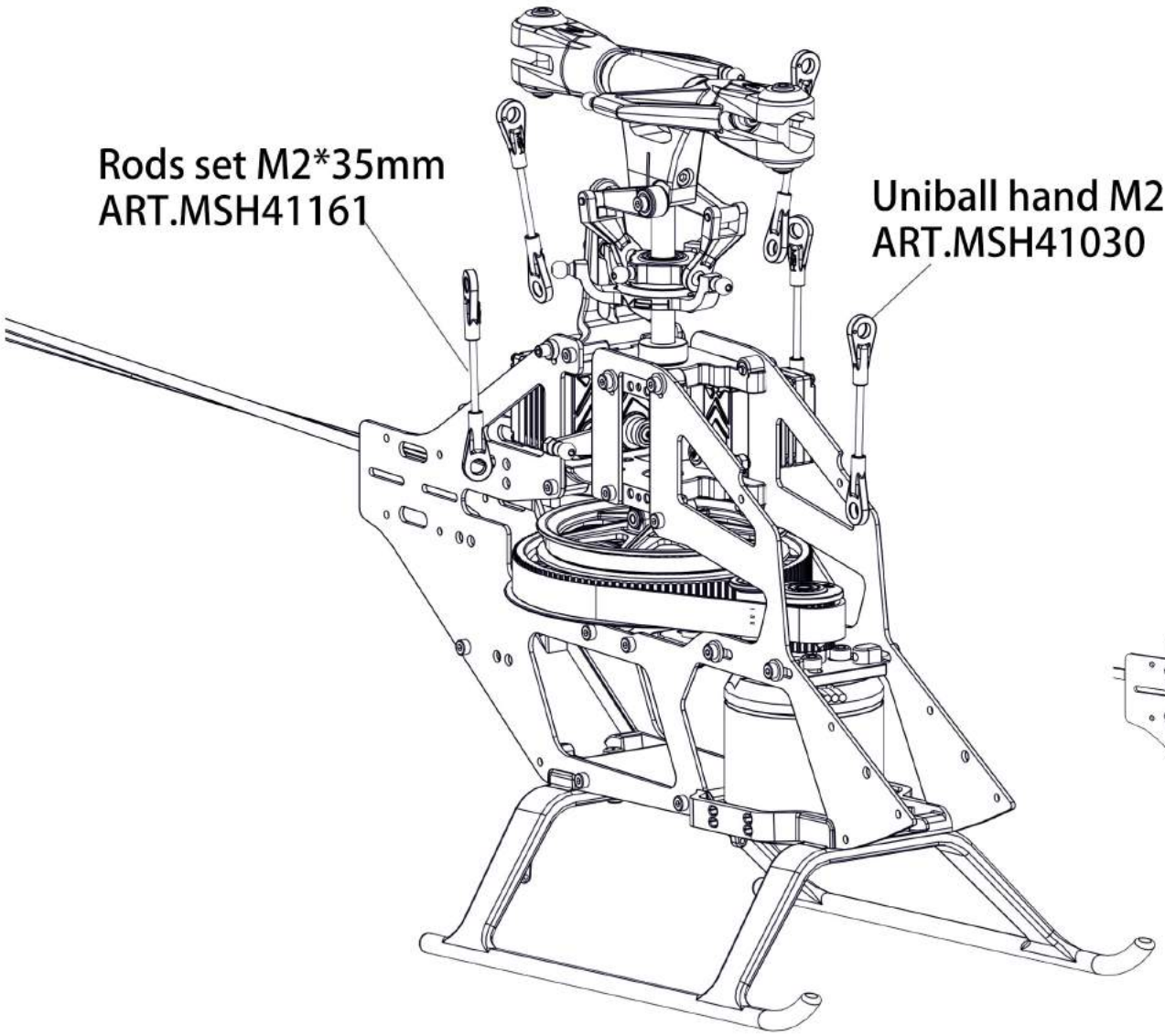

Hex screw M3*8 （Add Loctite 243）
ART.MSH41158
Step outside
the main hub
Washer 5*7.5*0.2
ART.MSH41158
Spindle spacer
ART.MSH41158

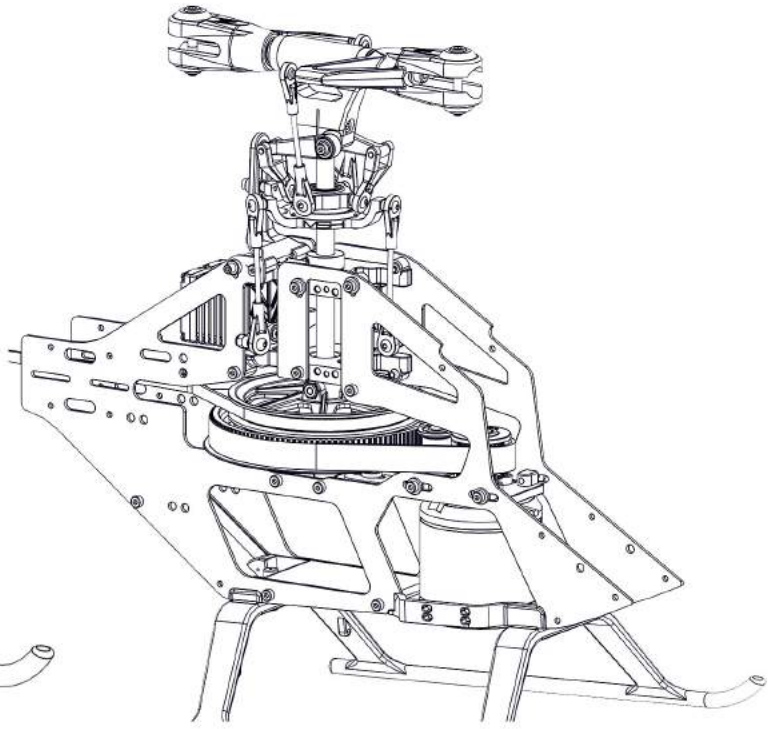
Bag 6



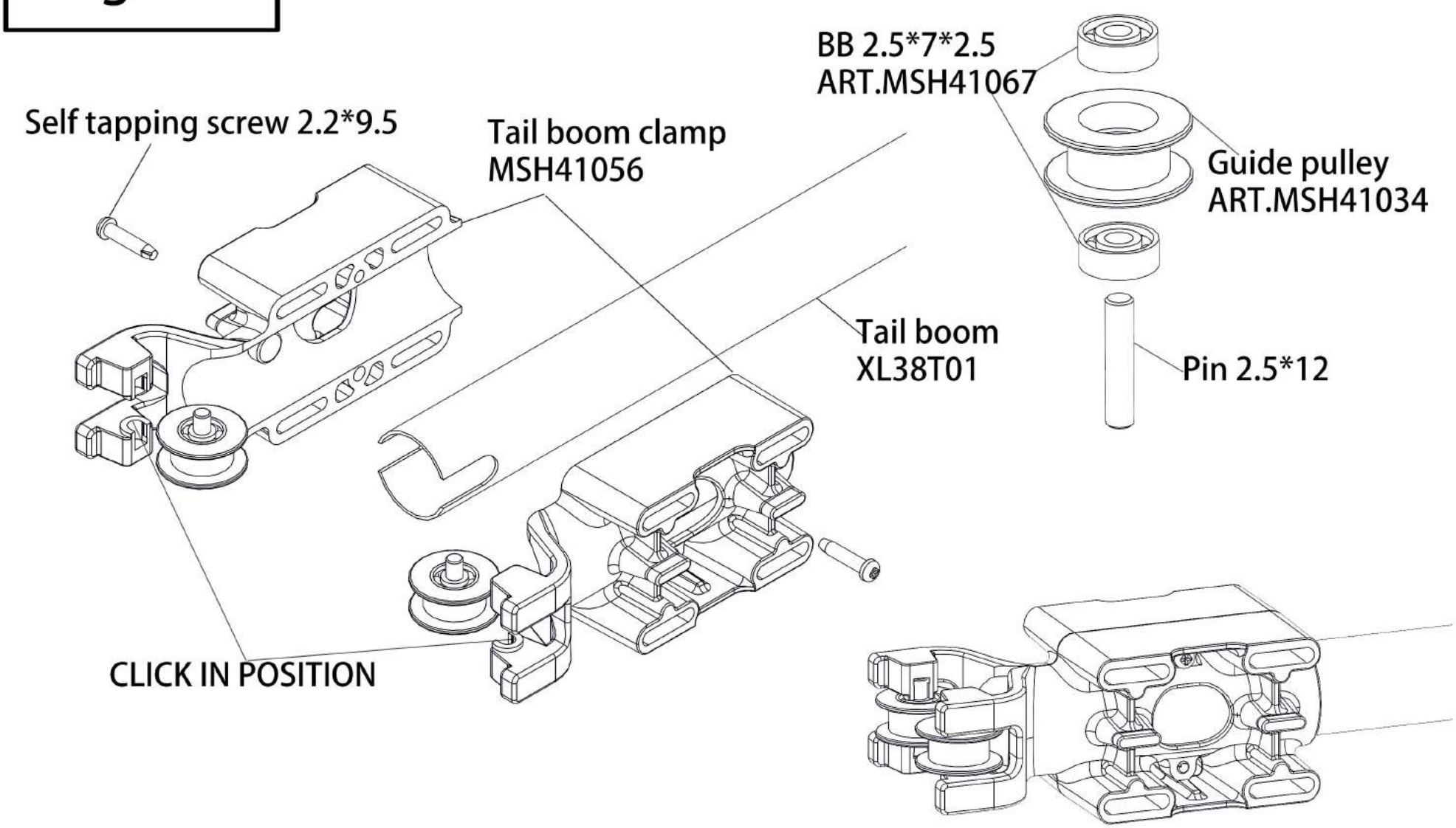
Rods set M2*35mm
ART.MSH41161

Uniball hand M2
ART.MSH41030

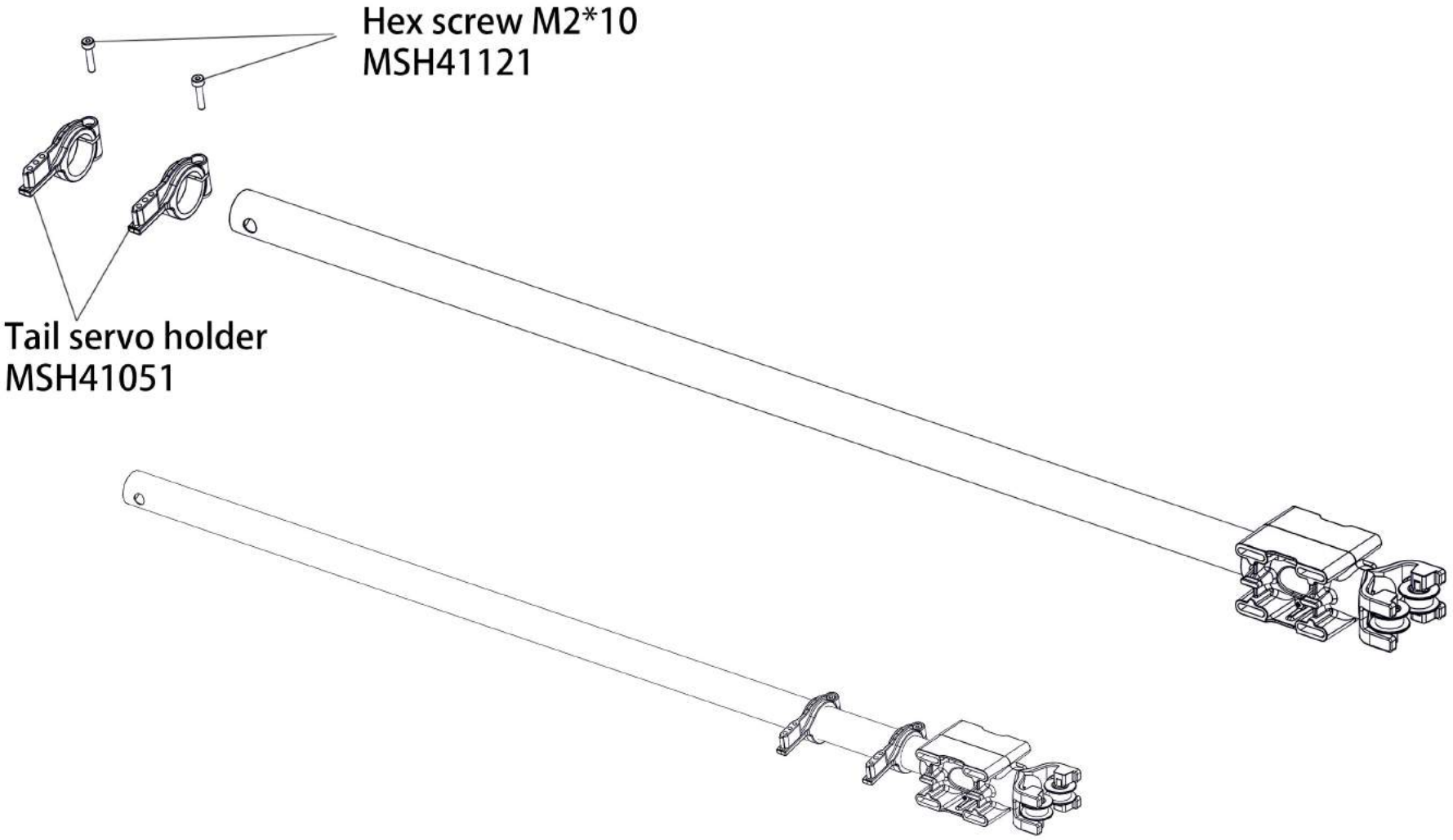




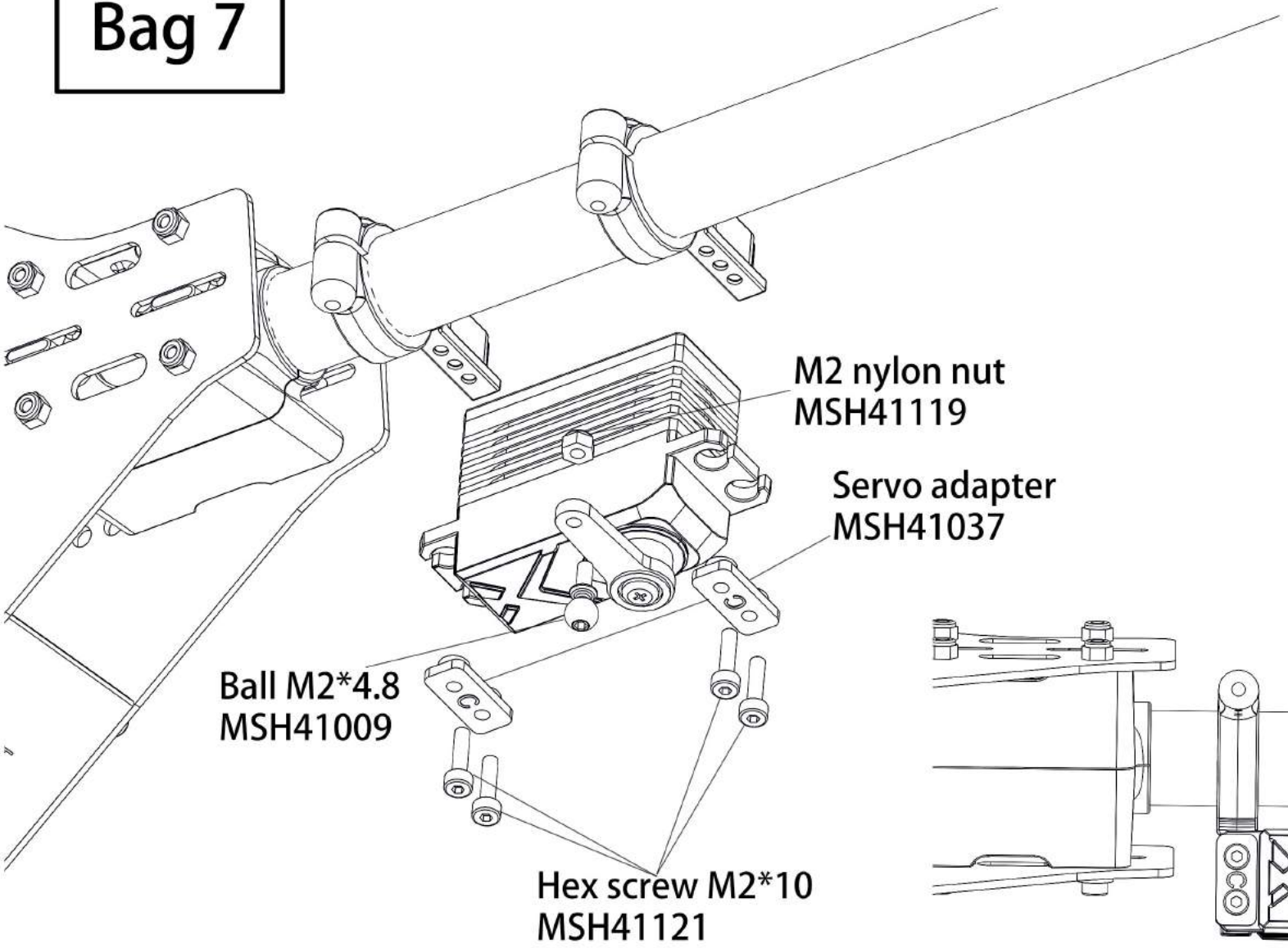
Bag 7+8

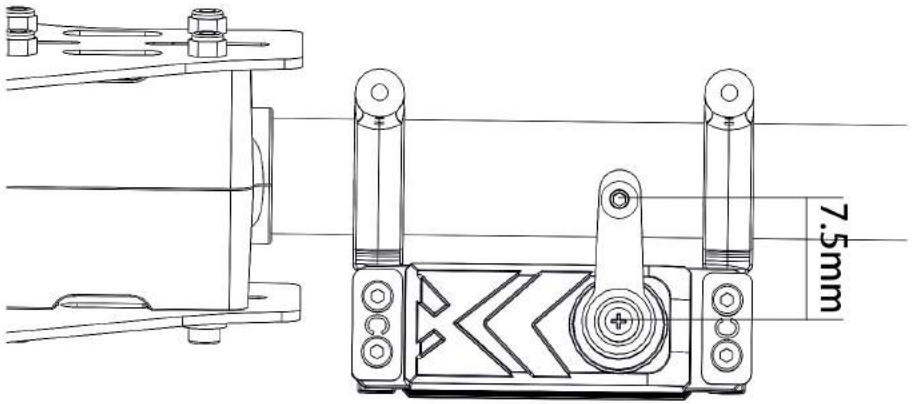

BB 2.5*7*2.5
ART.MSH41067
Guide pulley
ART.MSH41034
Self tapping screw 2.2*9.5
Tail boom clamp
MSH41056
Tail boom
XL38T01
Pin 2.5*12
CLICK IN POSITION

Bag 7

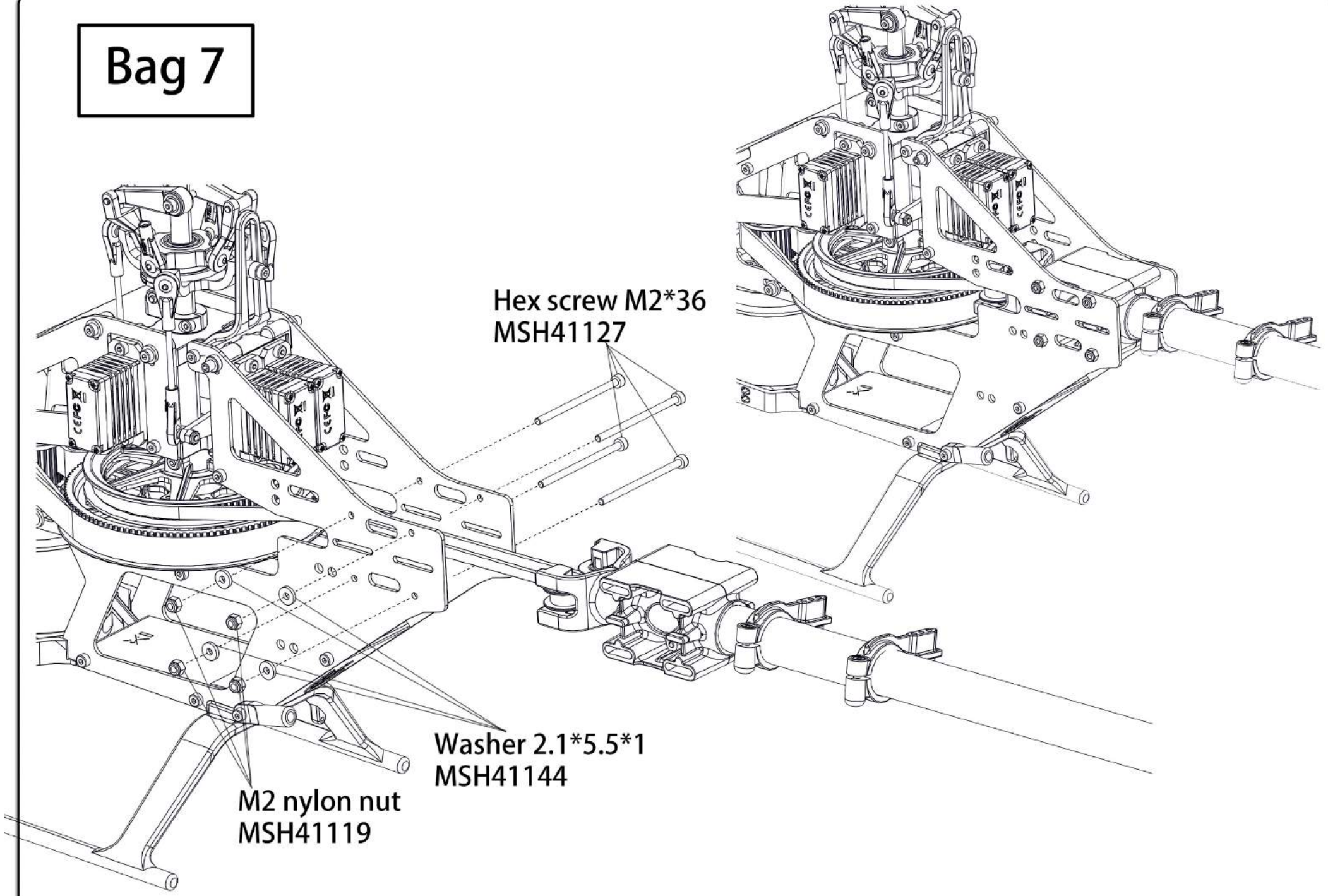


Bag 7

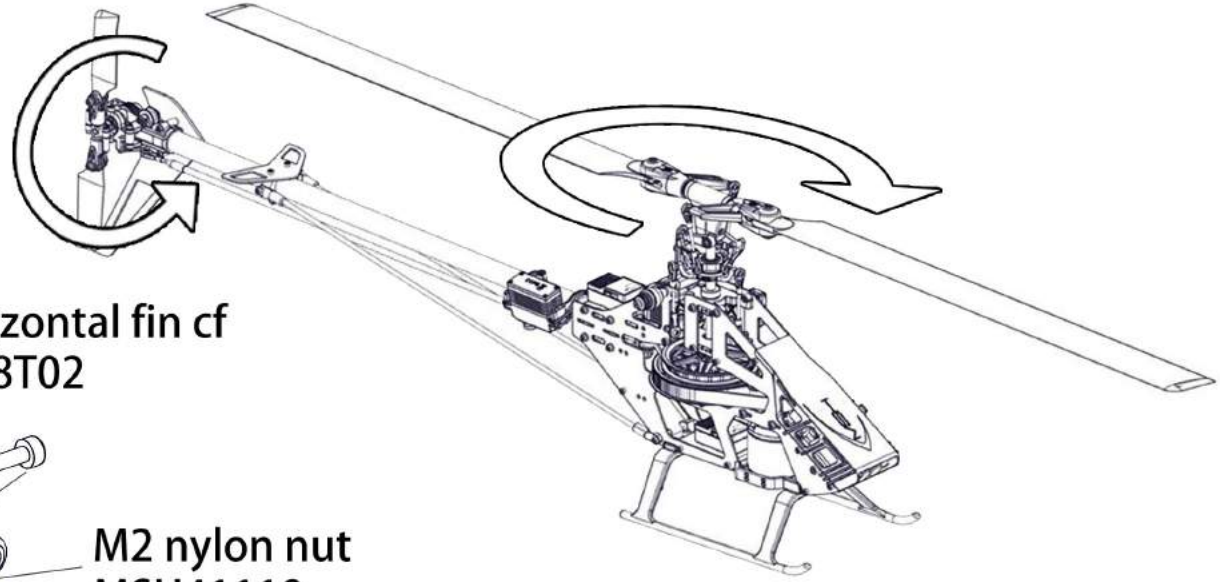

M2 nylon nut
MSH41119
Servo adapter
MSH41037
Ball M2*4.8
MSH41009
Hex screw M2*10
MSH41121


7.5mm

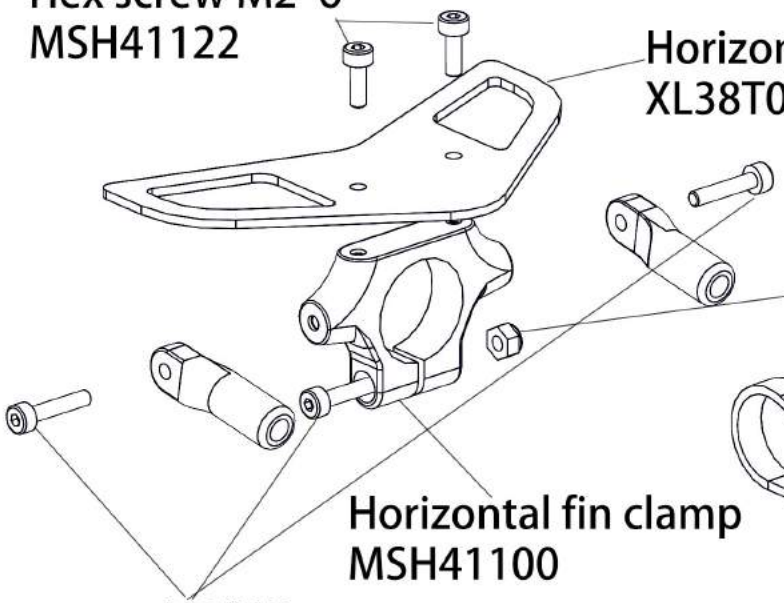
Bag 7

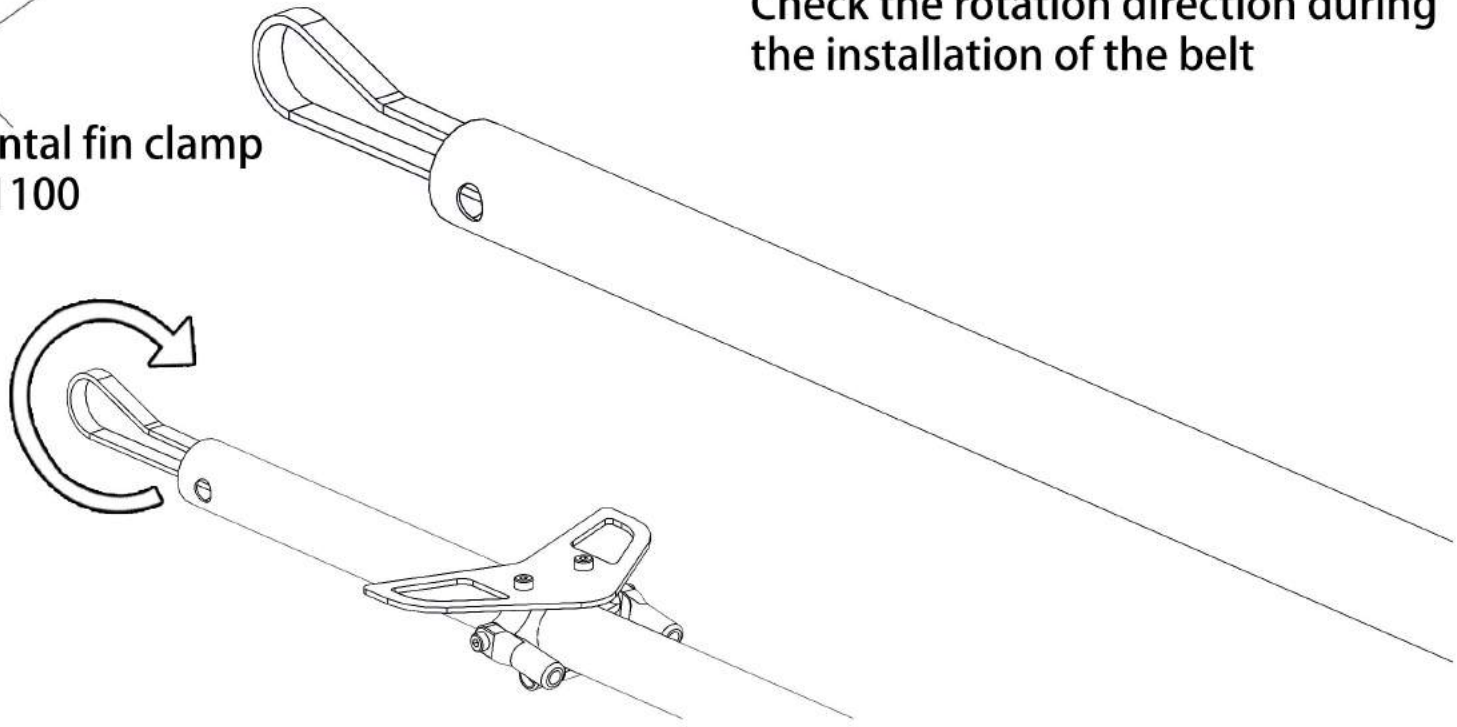

Hex screw M2*36
MSH41127
Washer 2.1*5.5*1
MSH41144
M2 nylon nut
MSH41119

Bag 9

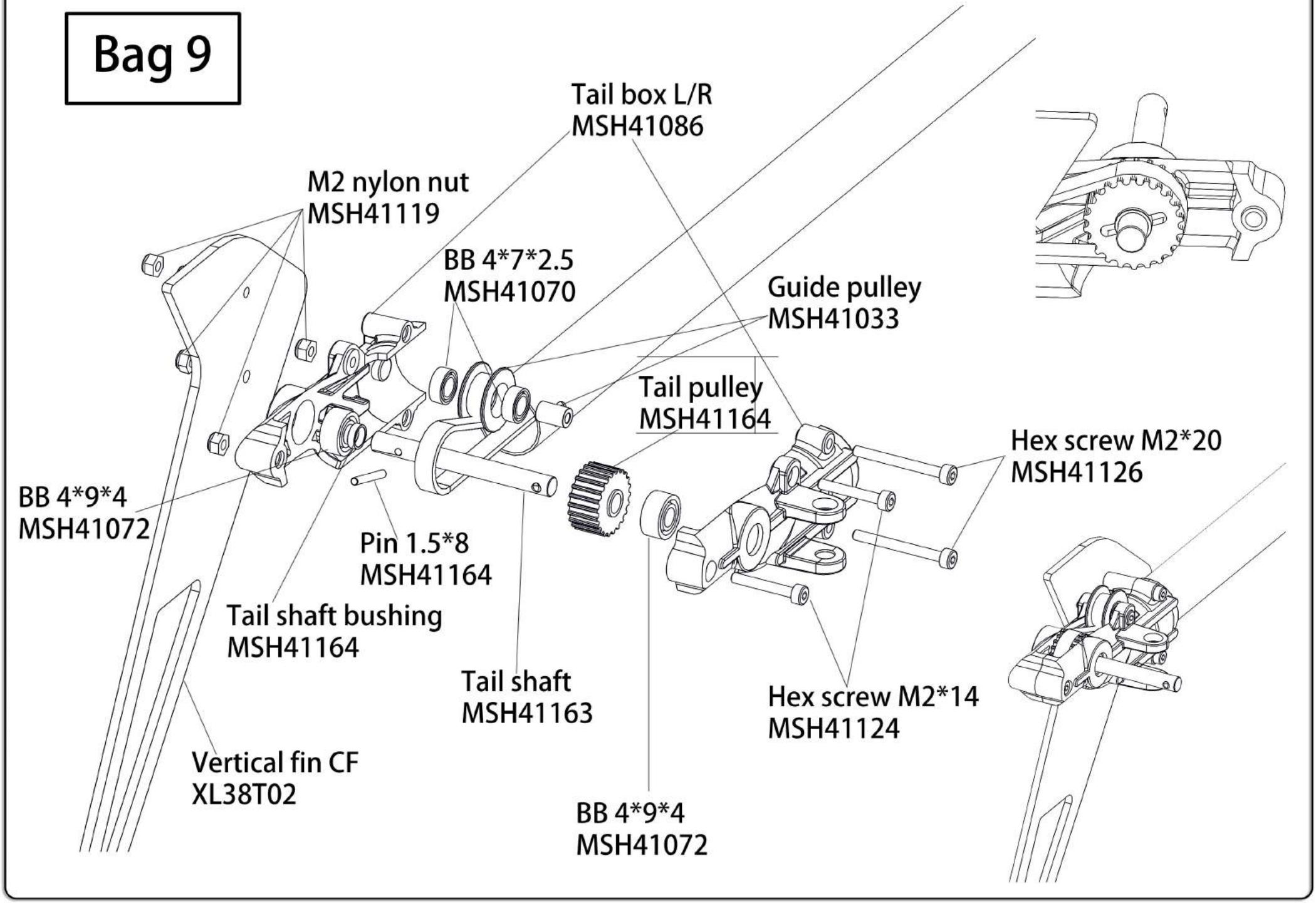


Check the rotation direction during the installation of the belt

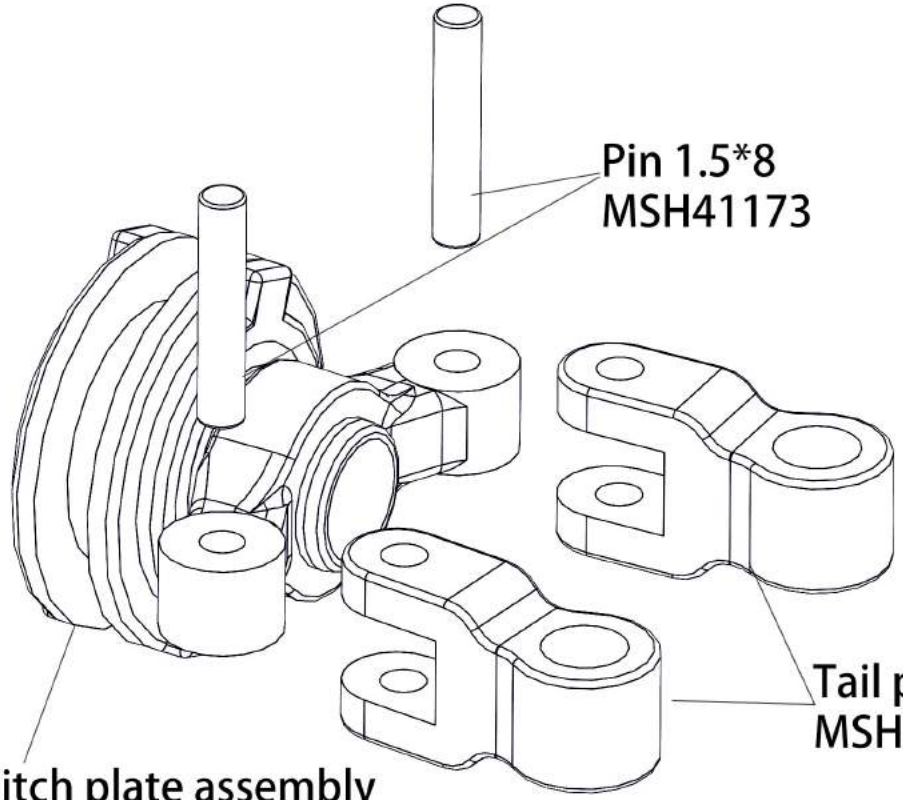


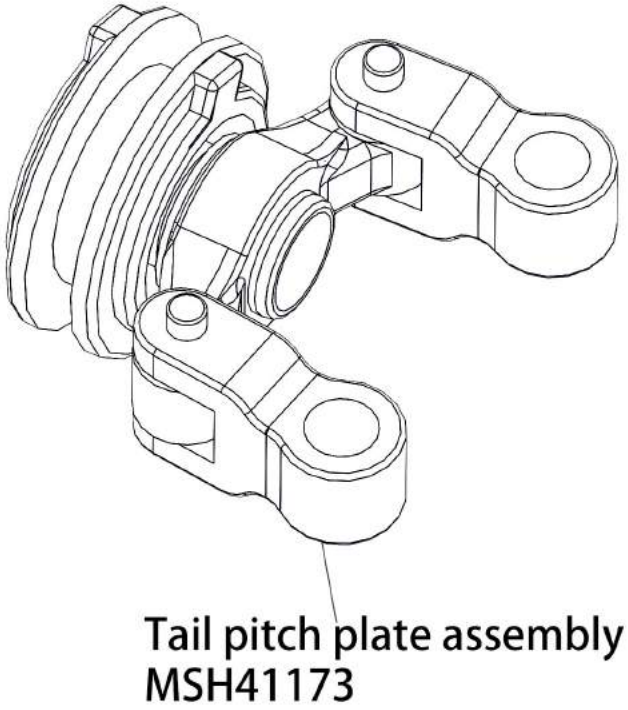


Bag 9

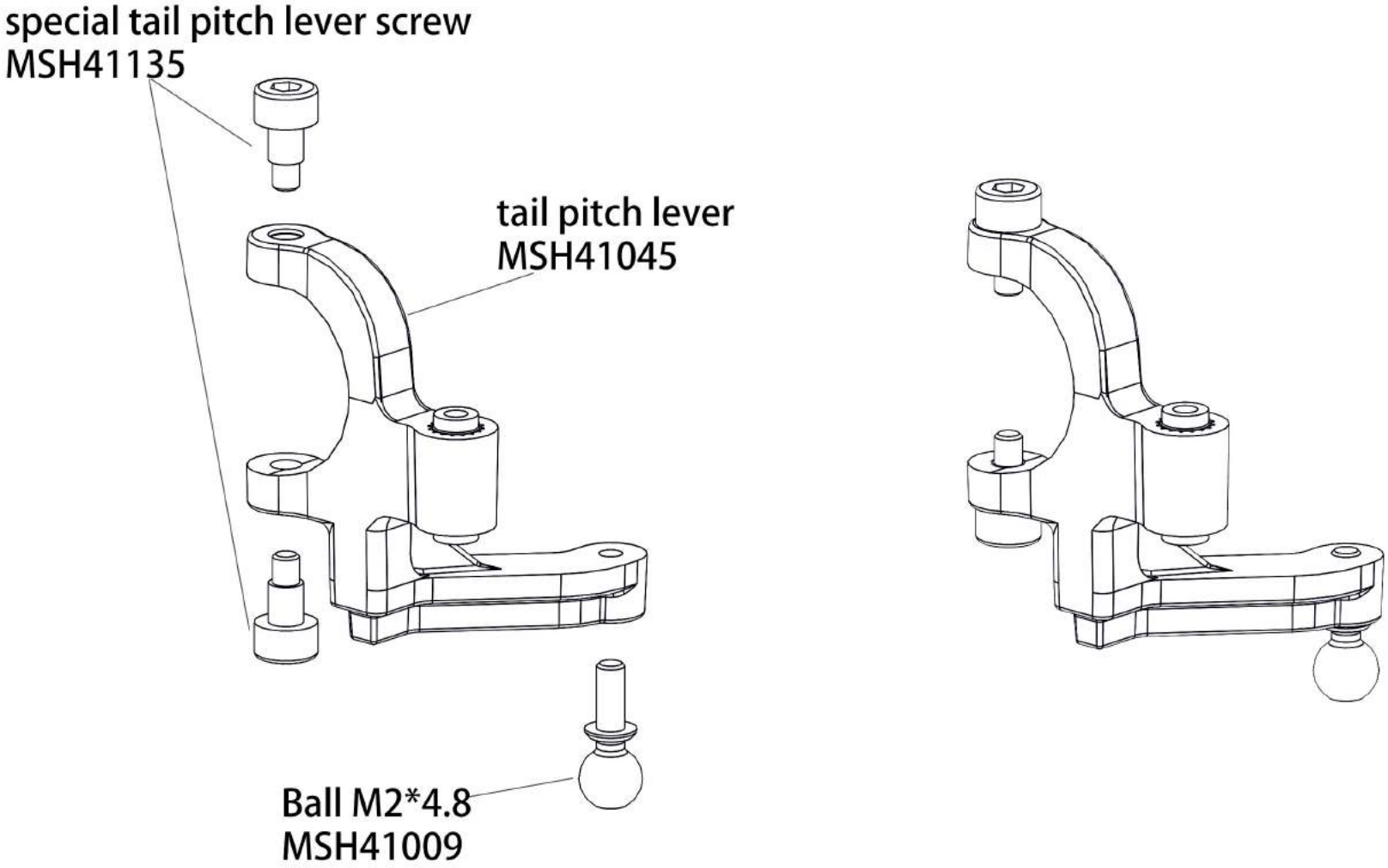

Tail box L/R
MSH41086
M2 nylon nut
MSH41119
BB 4*7*2.5
MSH41070
Guide pulley
MSH41033
Tail pulley
MSH41164
Hex screw M2*20
MSH41126
BB 4*9*4
MSH41072
Pin 1.5*8
MSH41164
Tail shaft bushing
MSH41164
Tail shaft
MSH41163
Hex screw M2*14
MSH41124
Vertical fin CF
XL38T02
BB 4*9*4
MSH41072

Bag 9

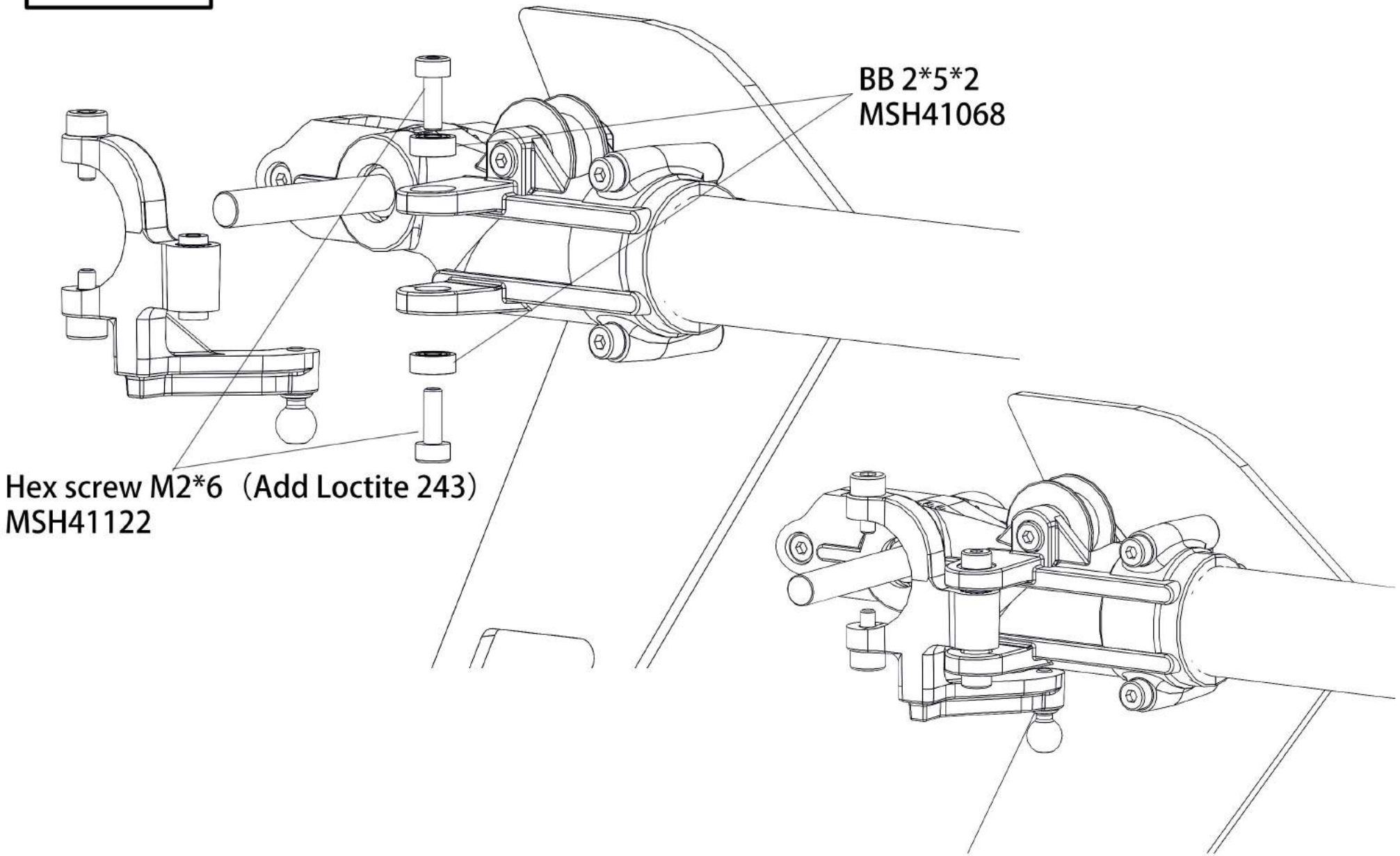

Pin 1.5*8
MSH41173
Tail plastic rod
MSH41173
Tail pitch plate assembly
MSH41173


Tail pitch plate assembly
MSH41173

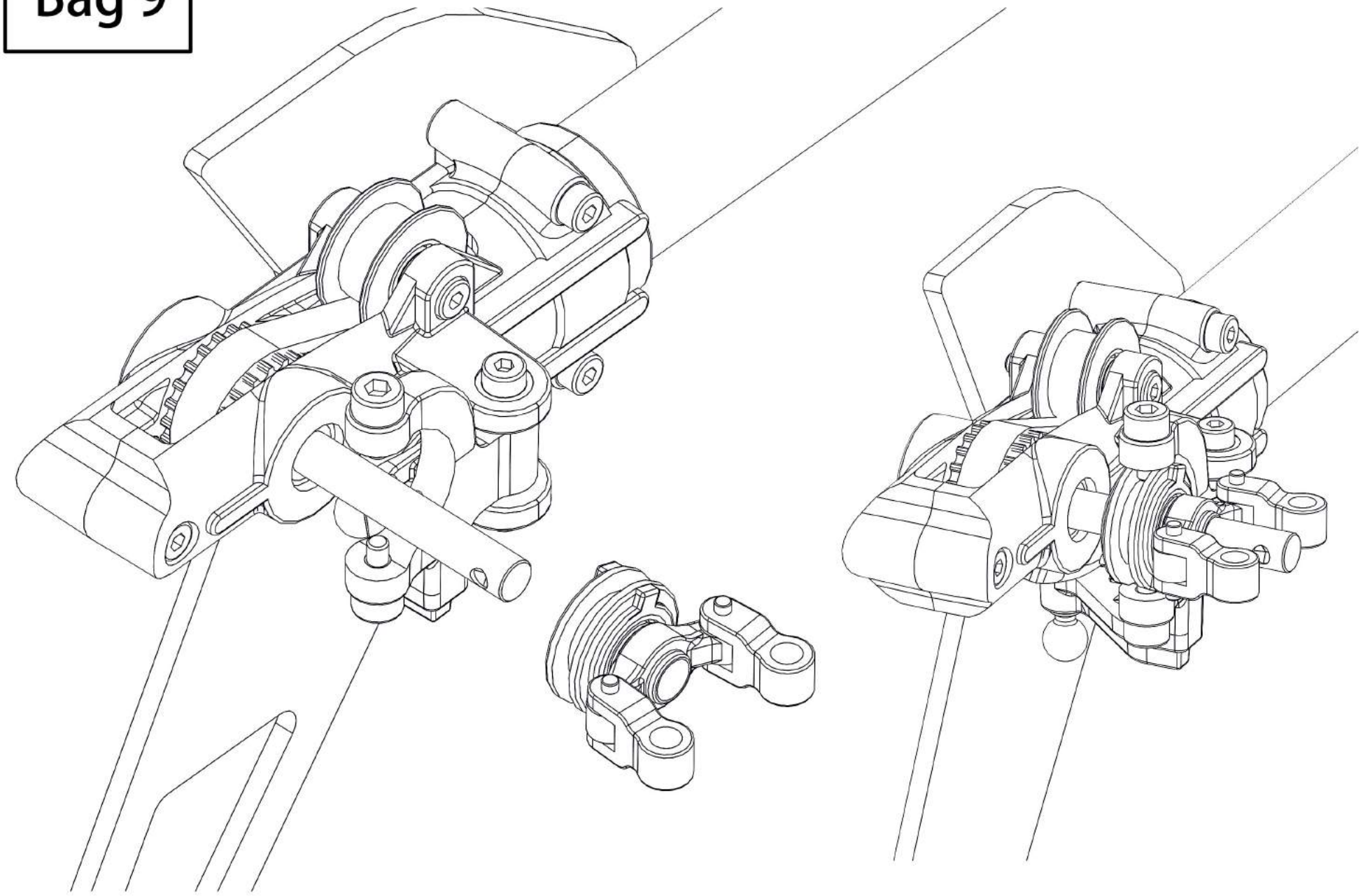
Bag 9


special tail pitch lever screw
MSH41135
tail pitch lever
MSH41045
Ball M2*4.8
MSH41009

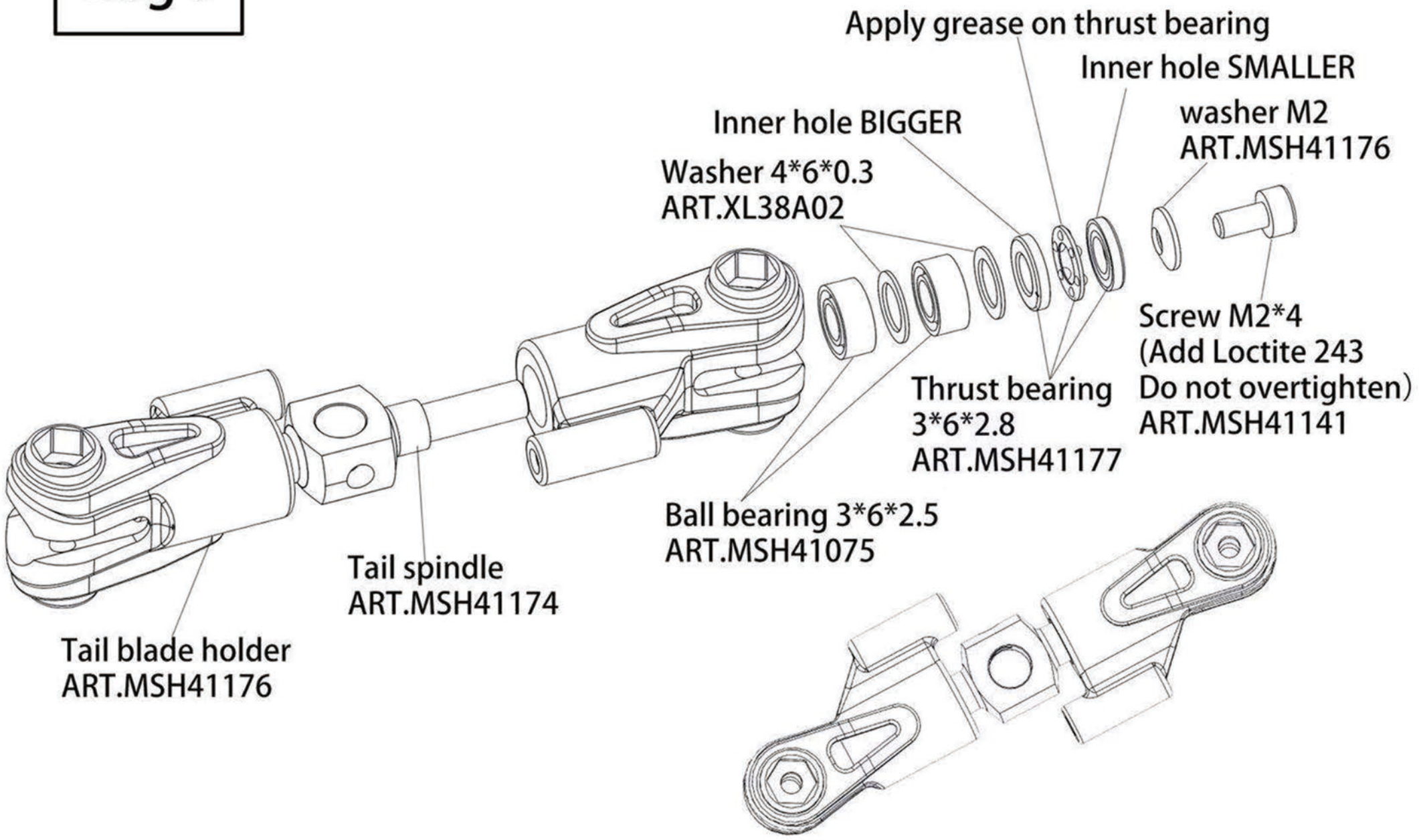
Bag 9



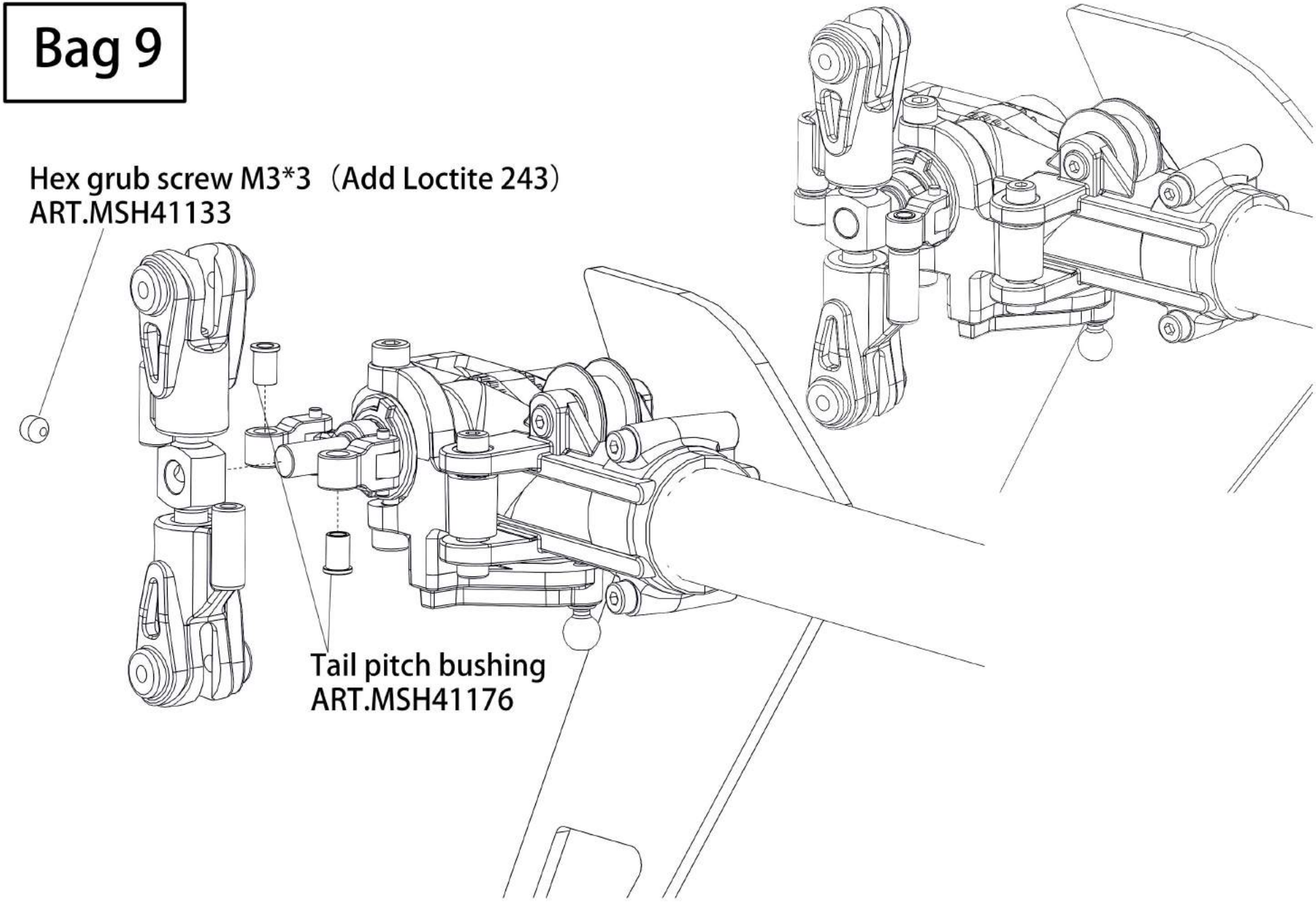
Bag 9



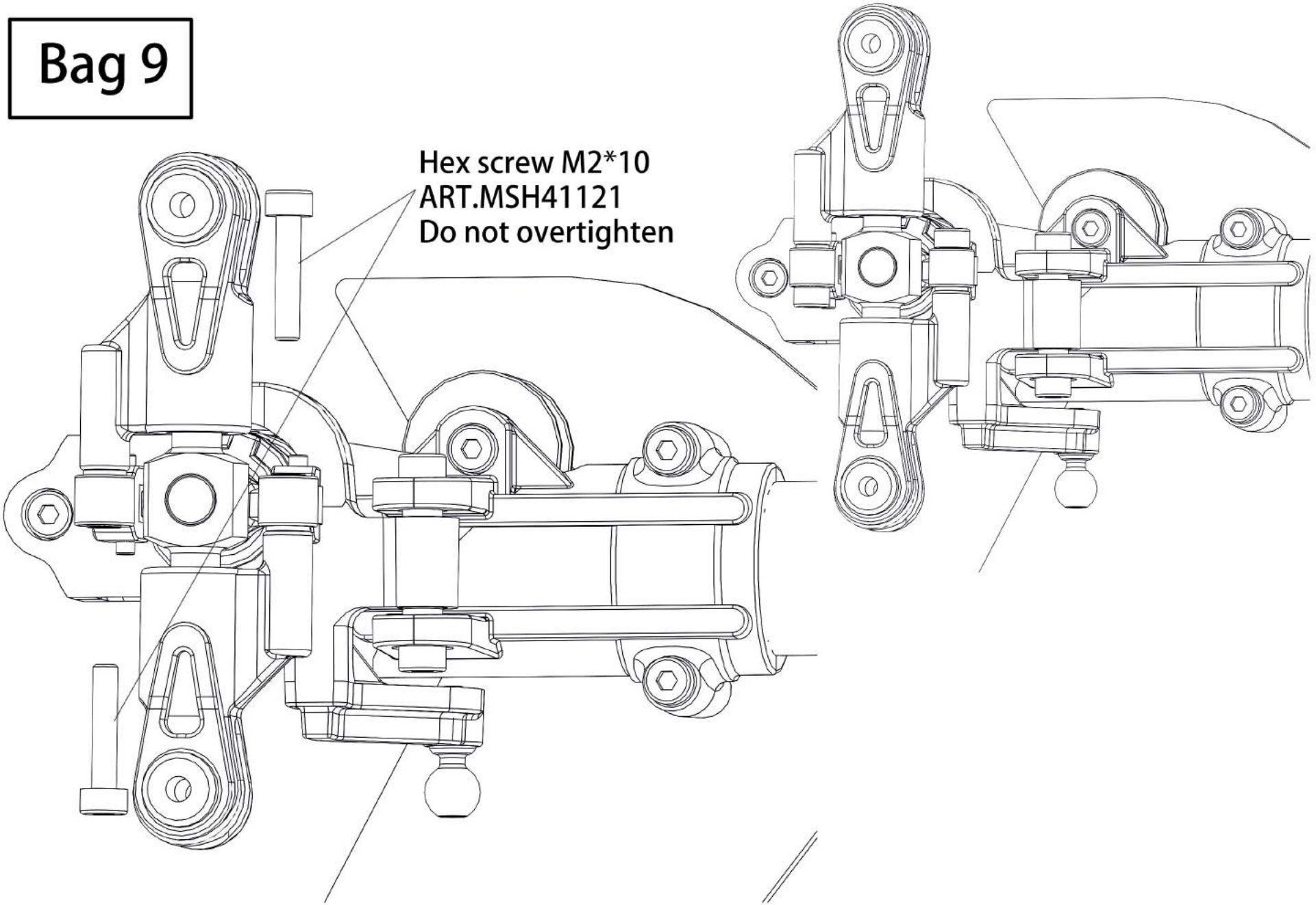
Bag 9


Apply grease on thrust bearing
Inner hole SMALLER
Inner hole BIGGER
washer M2
ART.MSH41176
Washer 4*6*0.3
ART.XL38A02
Screw M2*4
(Add Loctite 243
Do not overtighten)
ART.MSH41141
Thrust bearing
3*6*2.8
ART.MSH41177
Ball bearing 3*6*2.5
ART.MSH41075
Tail spindle
ART.MSH41174
Tail blade holder
ART.MSH41176

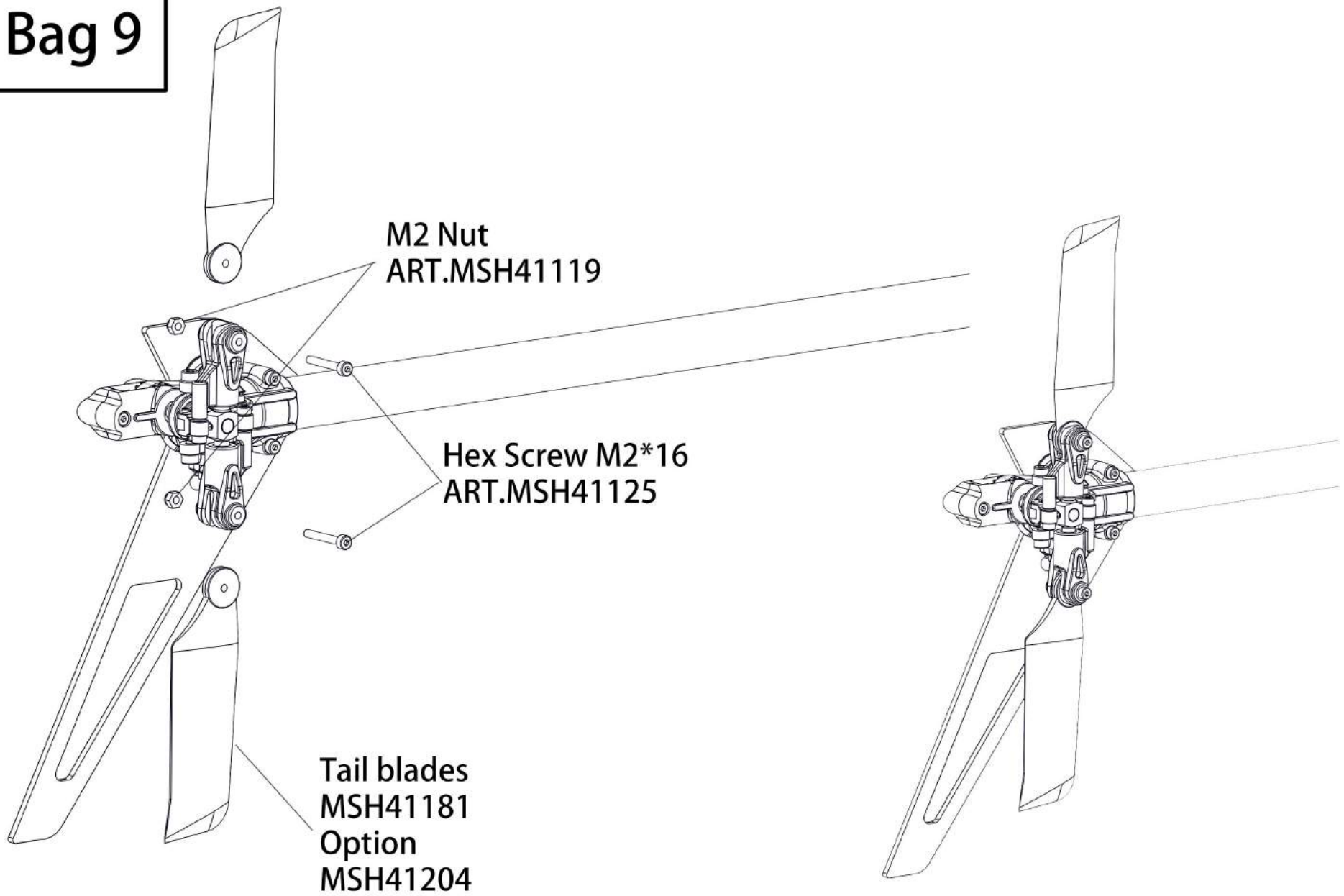
Bag 9


Hex grub screw M3*3 （Add Loctite 243）
ART.MSH41133
Tail pitch bushing
ART.MSH41176

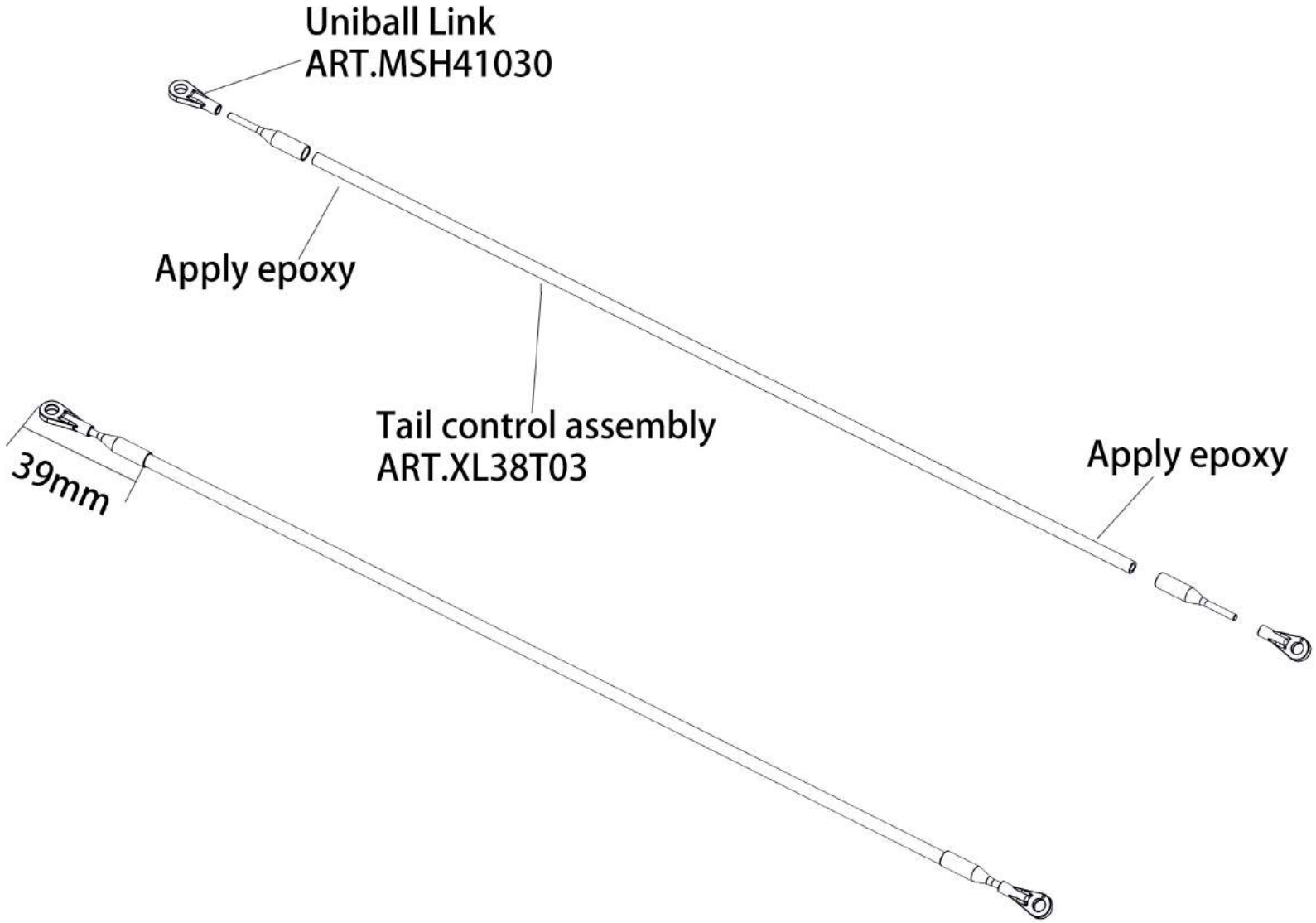
Bag 9



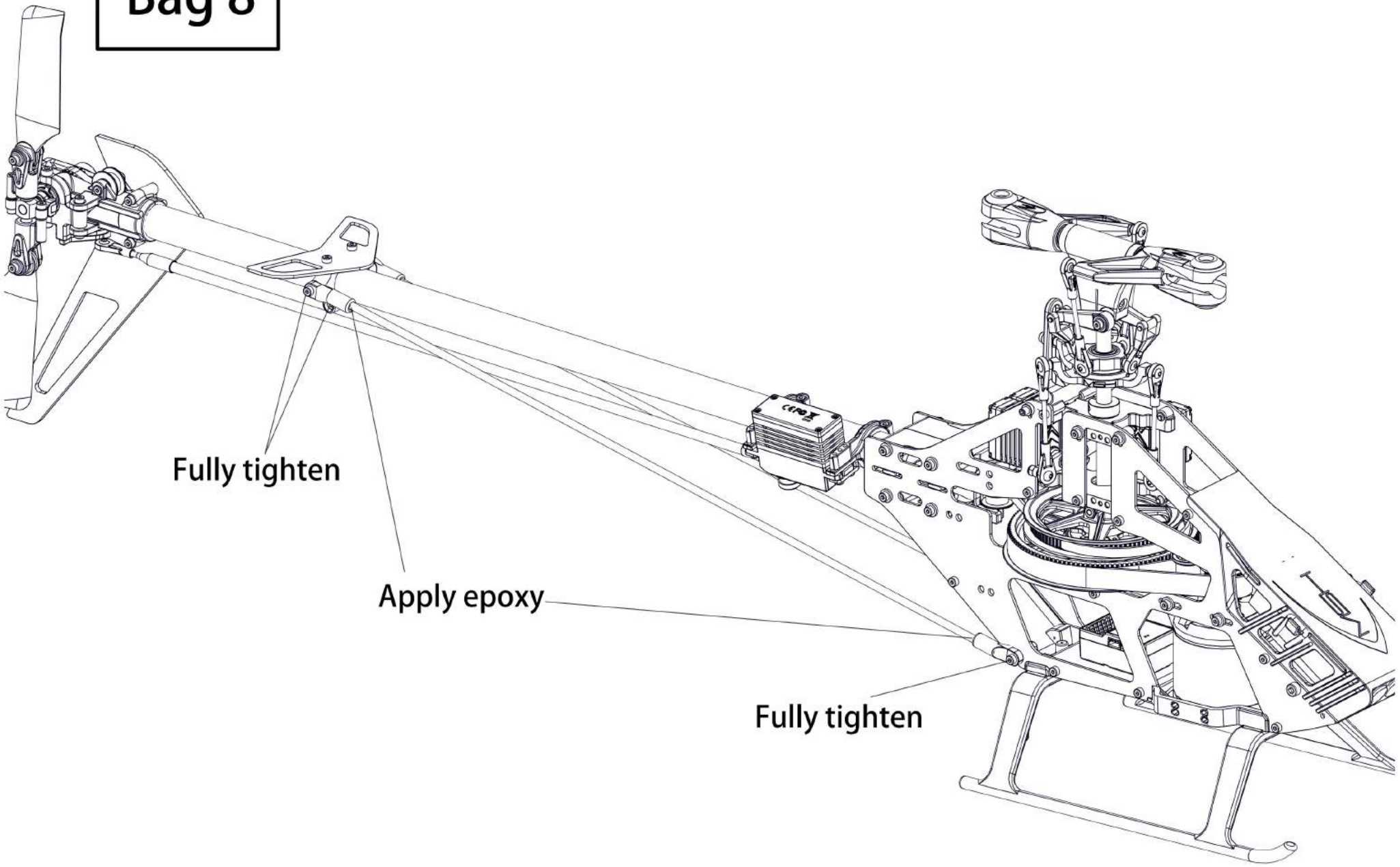
Bag 9


M2 Nut
ART.MSH41119
Hex Screw M2*16
ART.MSH41125
Tail blades
MSH41181
Option
MSH41204

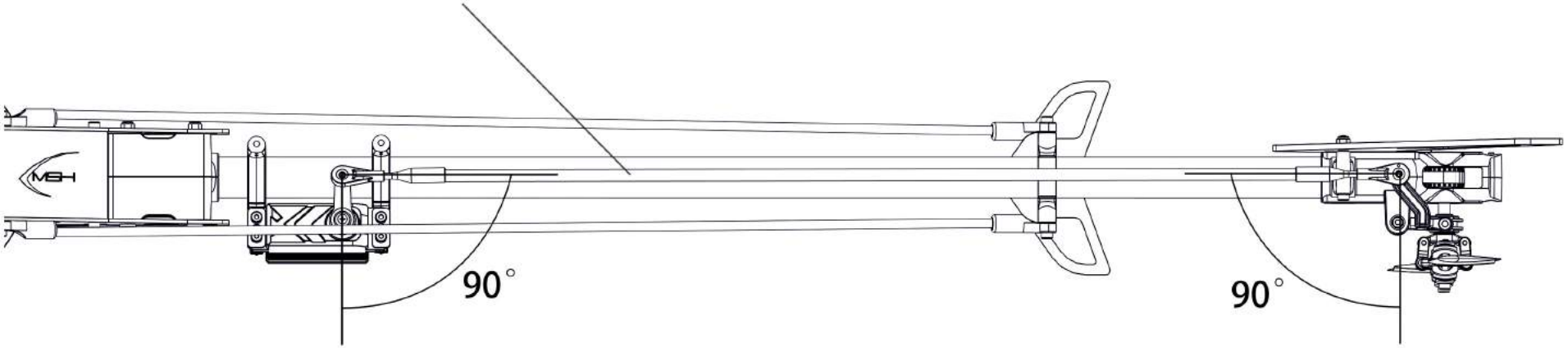
Bag 8+9


Uniball Link
ART.MSH41030
Apply epoxy
Tail control assembly
ART.XL38T03
Apply epoxy
39mm

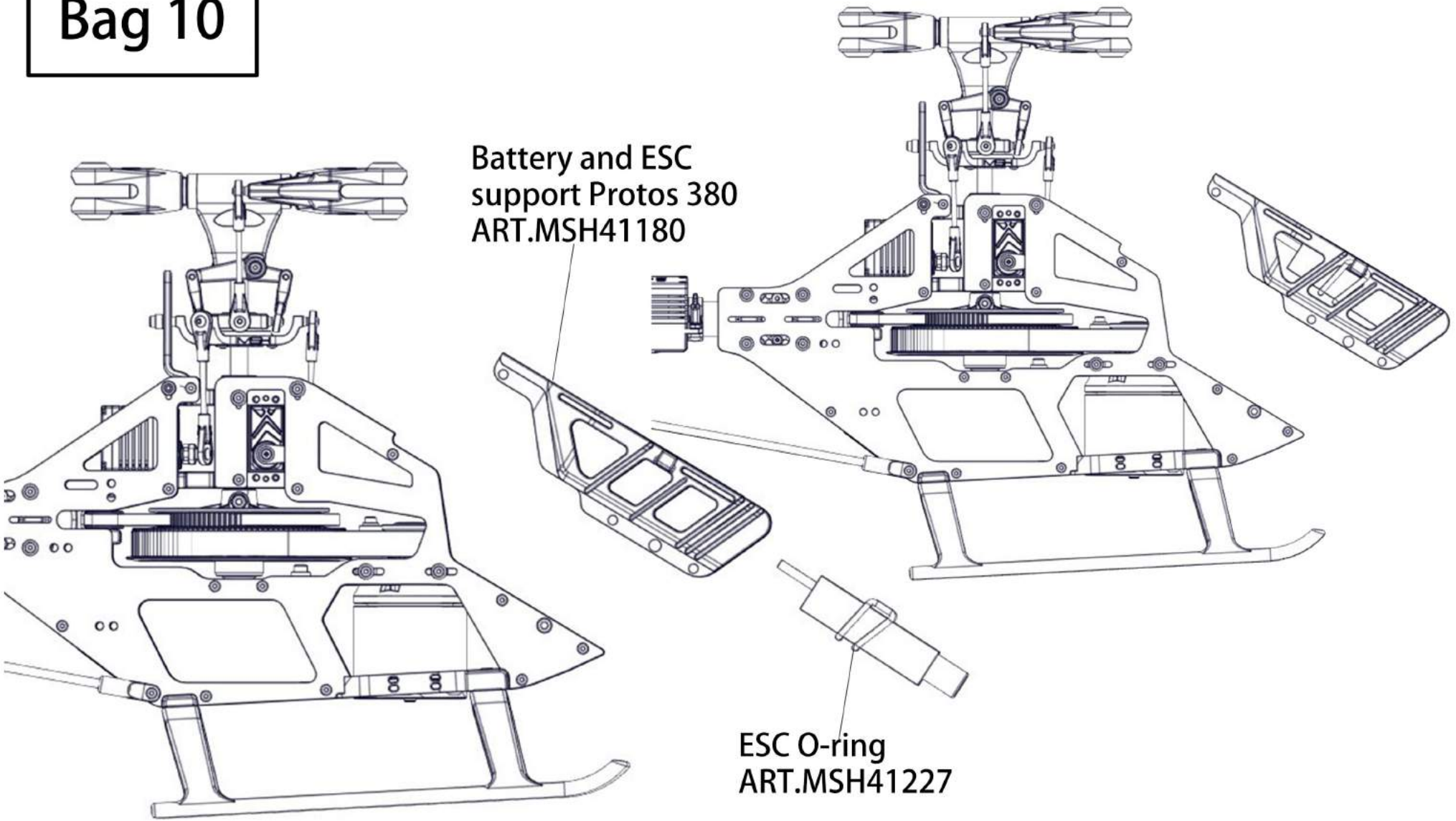
Bag 8



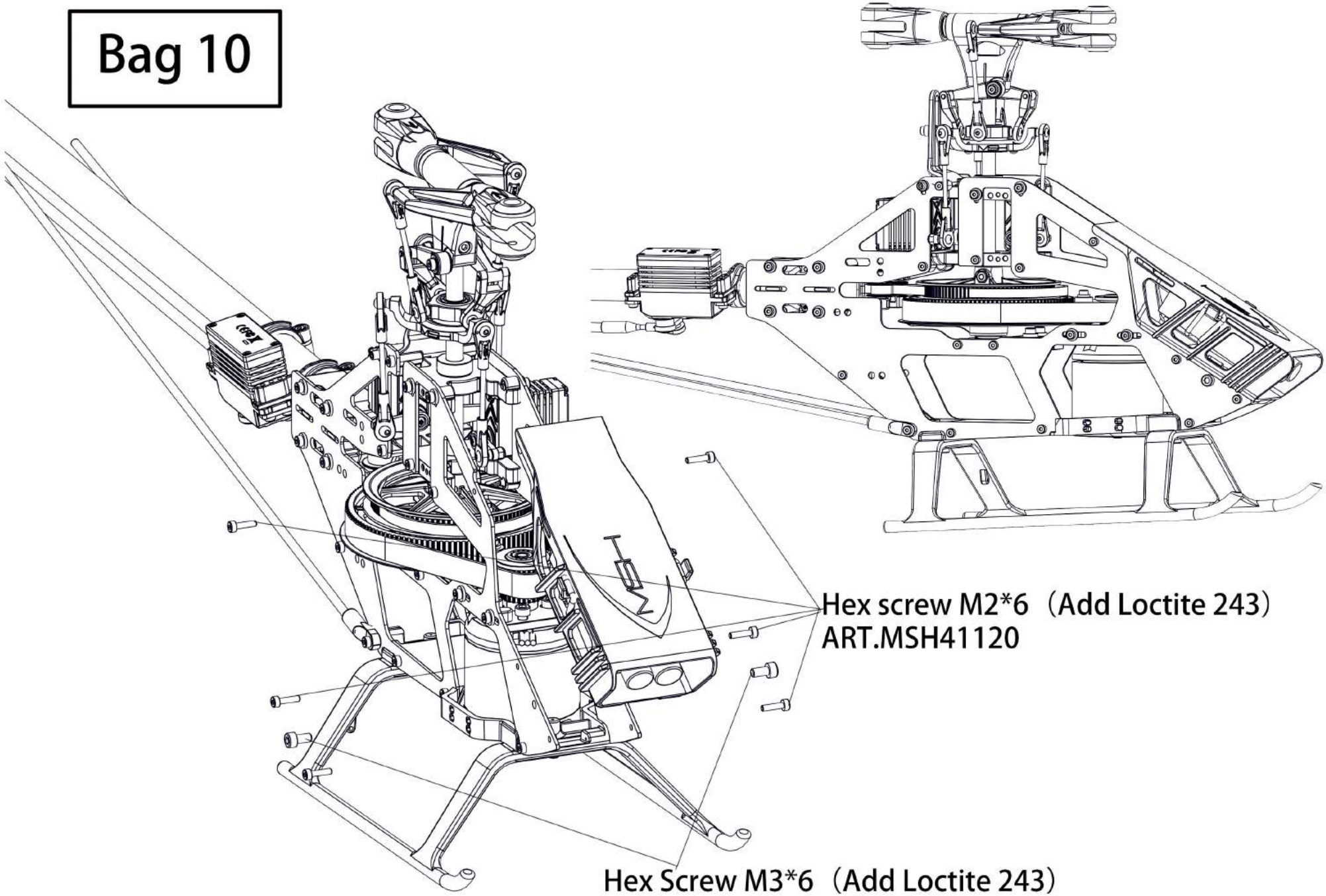
Servo neutral
Move the servo position to let Linkage vertial



Bag 10


Battery and ESC
support Protos 380
ART.MSH41180
ESC O-ring
ART.MSH41227

Bag 10



Hex screw M2*6（Add Loctite 243）
ART.MSH41120

Hex Screw M3*6（Add Loctite 243）
ART.MSH41130