



- Length Without Main Blades: 1383mm
- Overall Height: 351mm
- Width: 217mm
- Main Gear: 106T Mod 1
- Pinion Gear: 11T (10-13T Optional)
- Motor Shaft Diameter: 6mm (Length 20-55mm)
- Main Gear Ratio: 9.636 (10.6 - 8.38 Optional)
- Front Tail Pulley: 100T
- Rear Tail Pulley: 21T (20T Optional)
- Tail Ratio: 4.767 (5.0 Optional)
- Frame Weight: 2060g
- Main Shaft Diameter: 15mm
- Feathering Shaft Diameter: 10mm
- Tail Boom Diameter: 32mm
- Tail Belt Width: 8mm
- Main Gear Thickness: 15mm(18mm Optional)
- Battery Compartment Size: 380mm*68mm*70mm

Manual Release 1.0.1

Always Check <http://xlpower-rc.com> for the latest version of this manual

Always Follow These Rules For Safety



If you do not observe these instructions, you may be held liable for injury or damage.

Operate the helicopter in open areas with no people nearby. Do NOT operate the helicopter in these situations or areas:

- In places where children gather or people pass through
- In residential areas and parks
- Indoors and in limited space
- Extremely windy weather or when there is rain, snow, fog or other precipitation

When operating and tuning/adjusting your model, keep the following in mind:

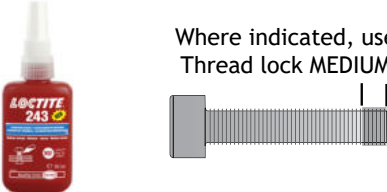
- ALWAYS check radio control system for proper operation before operating the model.
- ALWAYS check radio control system power levels before operating the model. Flying with low transmitter or receiver battery may cause loss of control.
- ALWAYS pay attention to your surroundings, and look out for others who are also operating a radio control model nearby.
- ALWAYS check that all screws are tight and not coming loose before flying the model. A single loose screw on the model may cause a major accident.
- ALWAYS perform necessary maintenance and preflight checks to keep the helicopter in a good and safe flying condition.

- NEVER use the same control frequency as someone else. Doing so may cause interference or loss of control of the model.
- NEVER continue flying if the model is displaying irregular behavior or noises. Bring the model to a halt immediately and disconnect the batteries.
- NEVER fly the model with known broken or defective parts. Always replace damaged parts before attempting to fly again.
- NEVER approach the model while the rotors are still spinning. Doing so can result in serious personal injury.
- NEVER touch the motor immediately after flying. It may be hot enough to cause moderate burns.

- Operate only outdoors and out of bystanders' reach, as the main rotor operates at high rpm and is very dangerous.
- While adjusting and testing, pilots and observers should stand at least 10 meters from the model.
- Novice pilots should be assisted by an experienced pilot and never fly alone!

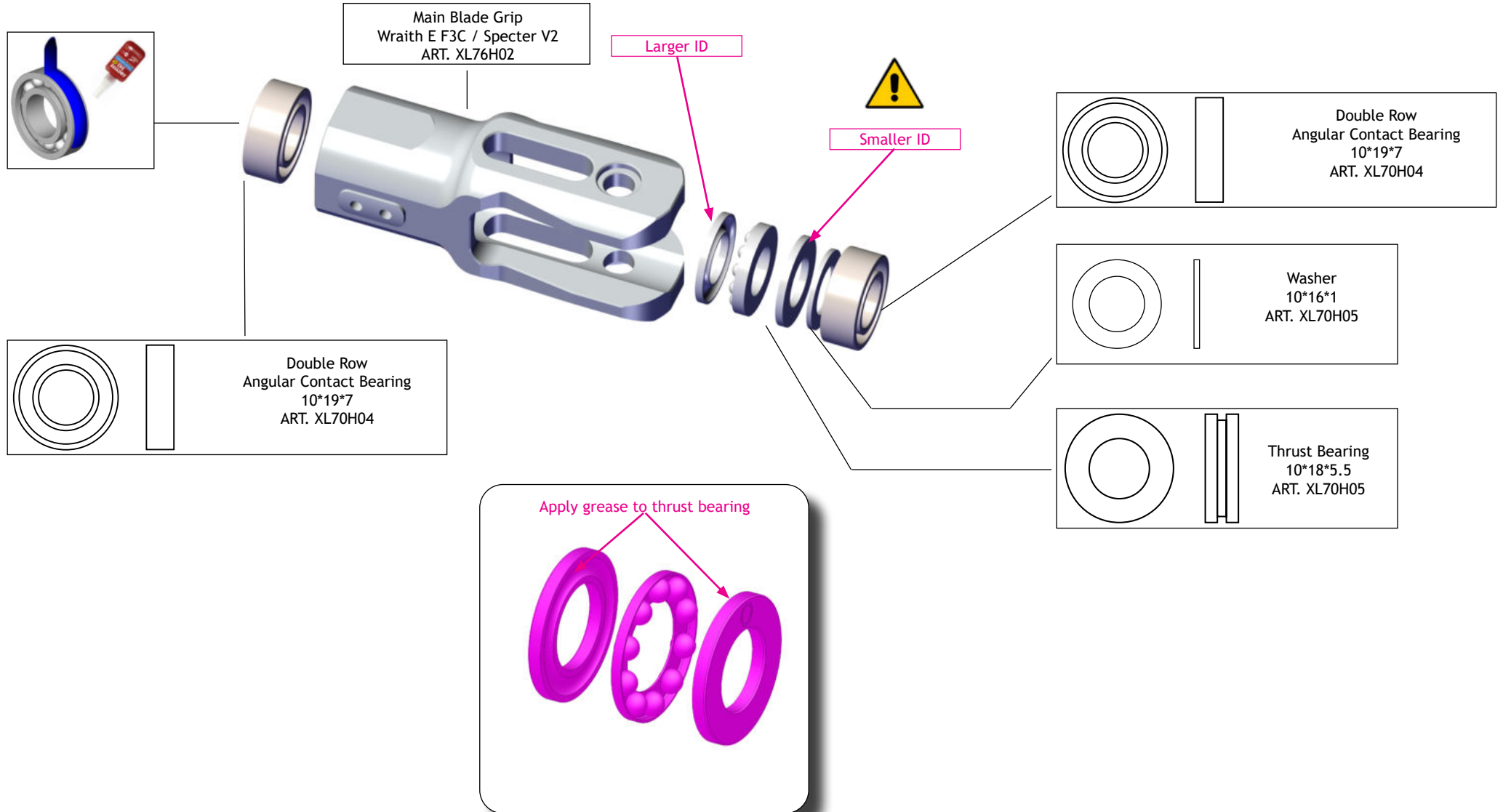
Equipment Required for Assembly



<p>Swashplate Servos: Standard Size (Qty. 3)</p>	<p>ESC: 130HV-250HV Typical</p>	<p>Hex Screwdriver Sizes: 1.5mm 2mm 2.5mm * 2 3mm 4mm * 2</p>
<p>Tail Servo Standard Size (Qty. 1)</p>	<p>Main Blades: Carbon Fiber 690mm - 720mm</p>	<p>Where indicated, use Thread lock MEDIUM</p> 
<p>Trasmitter Receiver/Satellites Flybarless Unit</p>	<p>Tail blades: Carbon Fiber 105mm to 116mm</p>	<p>Thrust Bearing Grease</p>
<p>Battery Pack (Typical): LiPo 6s 4000-5500mAh * 2 or LiPo 7s 4000-5500mAh * 2</p>	<p>Motor: 4525-4530 500kv-550kv Typical</p>	<p>Pitch Gauge</p>



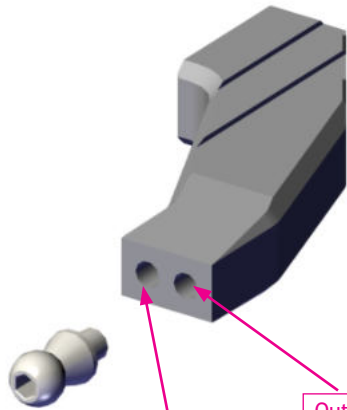
Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight





Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight

Main Blade Grip Arm
ART. XL70H08



Inner hole for agile

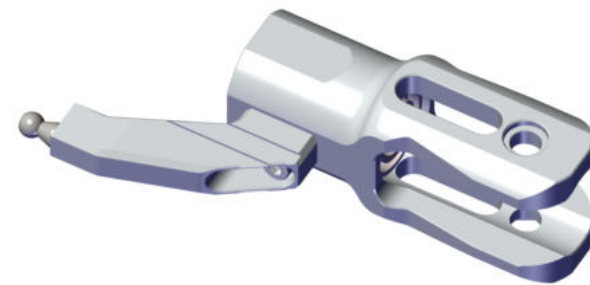
Outer hole for stable



Ball 5mm M3*3
ART. XL70A01



Hex screw
M3*10
ART. MSH71114



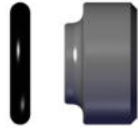


Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight

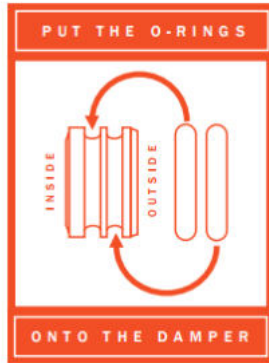
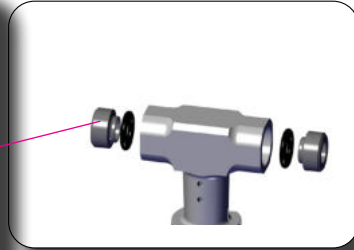
Head Dampeners



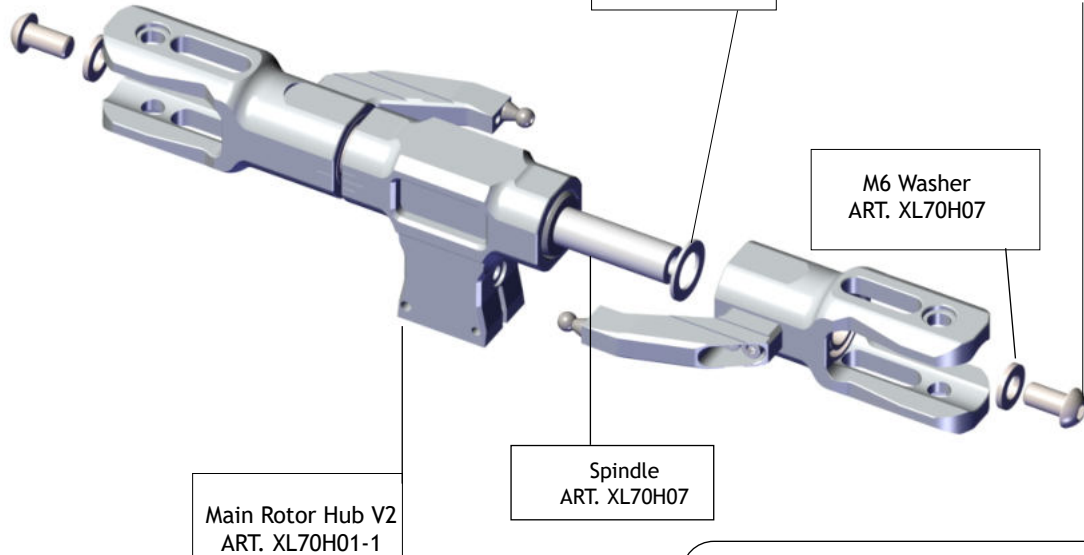
ART. XL70H02-3
Sport / 3D
(POM with two 80° O-Ring)



ART. XL70H02-4
For both low HS and Hardcore 3D
(POM with 70° O-Ring)
Optional

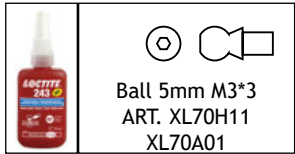


Apply silicon grease on the damper and Spindle

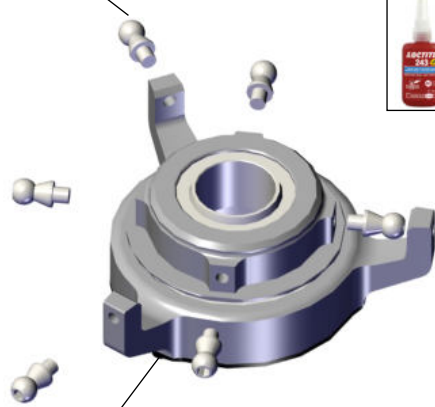




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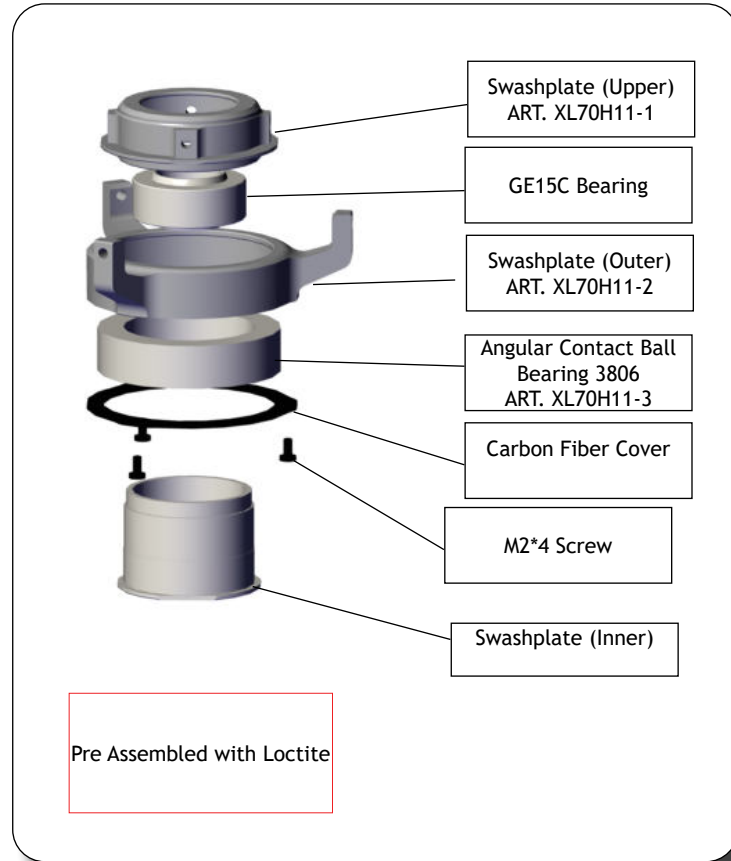
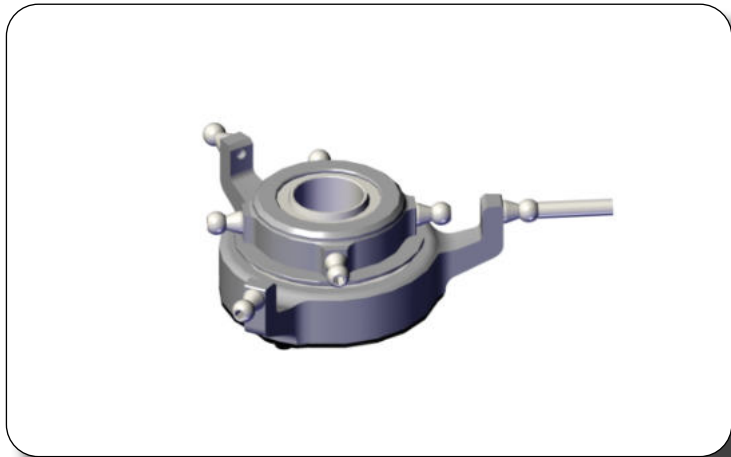
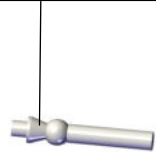
Ball 5mm M3*3
ART. XL70H11
XL70A01



Swashplate Assembly
ART. XL70H11

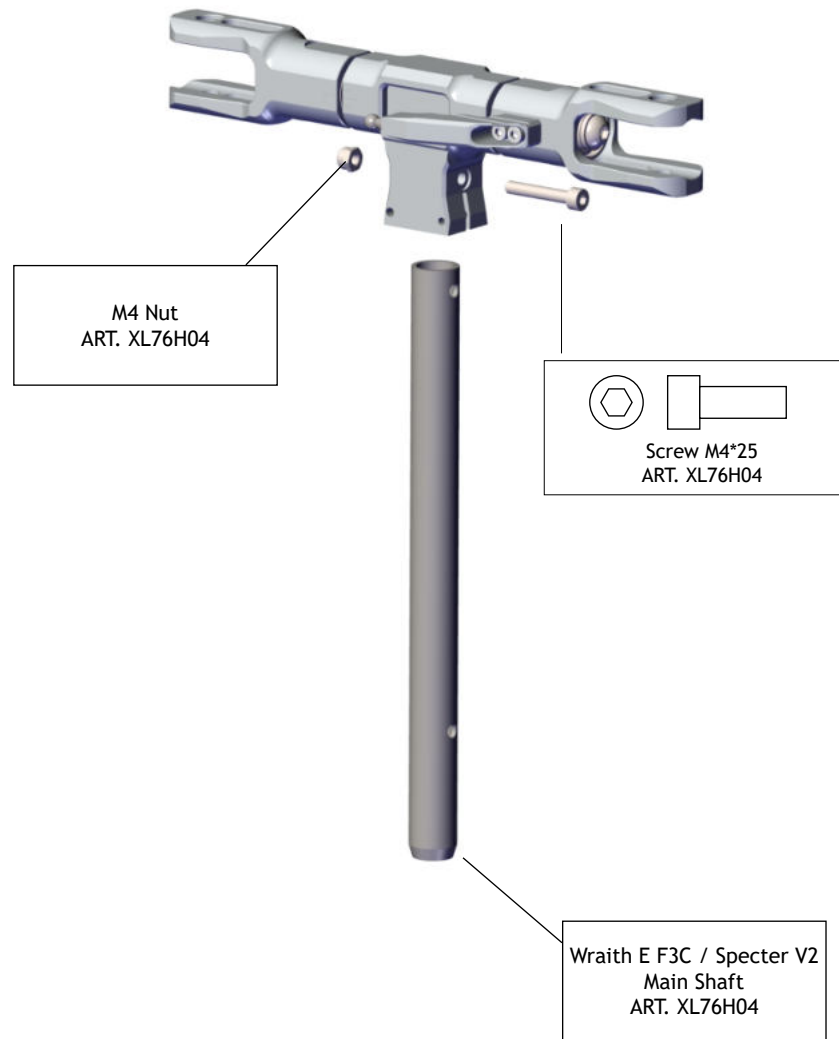


Ball 5mm M3*24
ART. XL70H11
XL70A01





Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight





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Spacer 3*5*0.5
ART. XL70H09

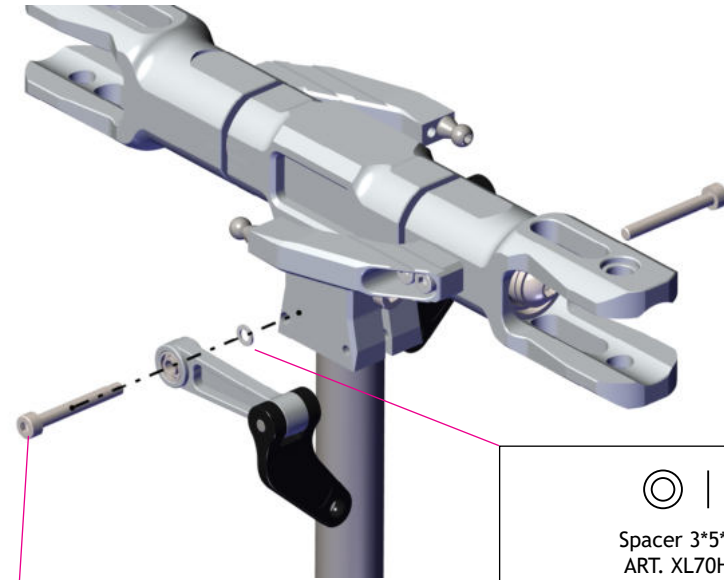
Ball Bearing
3*7*3
ART. XL52A12
ART. XL70H09



Pin 3*14
ART. XL70H09

Control arm
ART. XL70H09

Radius Arm
ART. XL70H09
ART. XL70H10



Spacer 3*5*0.5
ART. XL70H09



Screw M3*25
ART. XL70H09

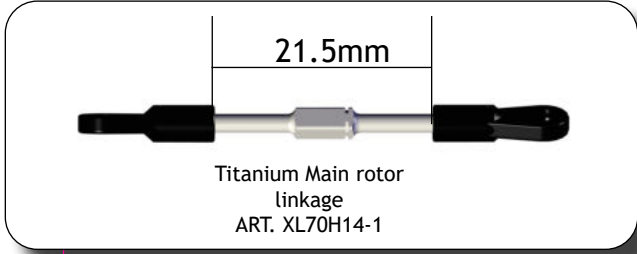
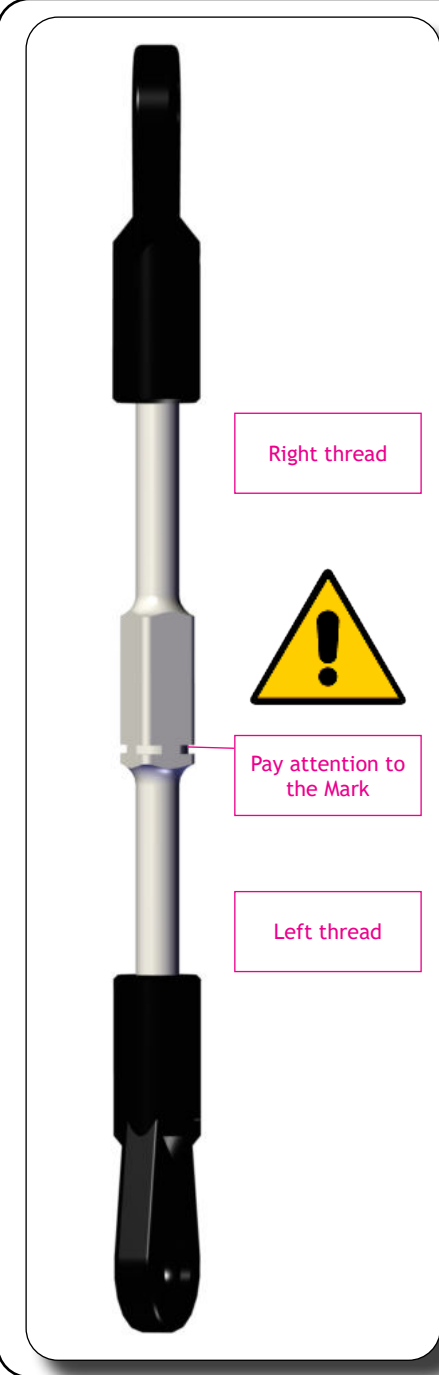
2X

Pre Assembled



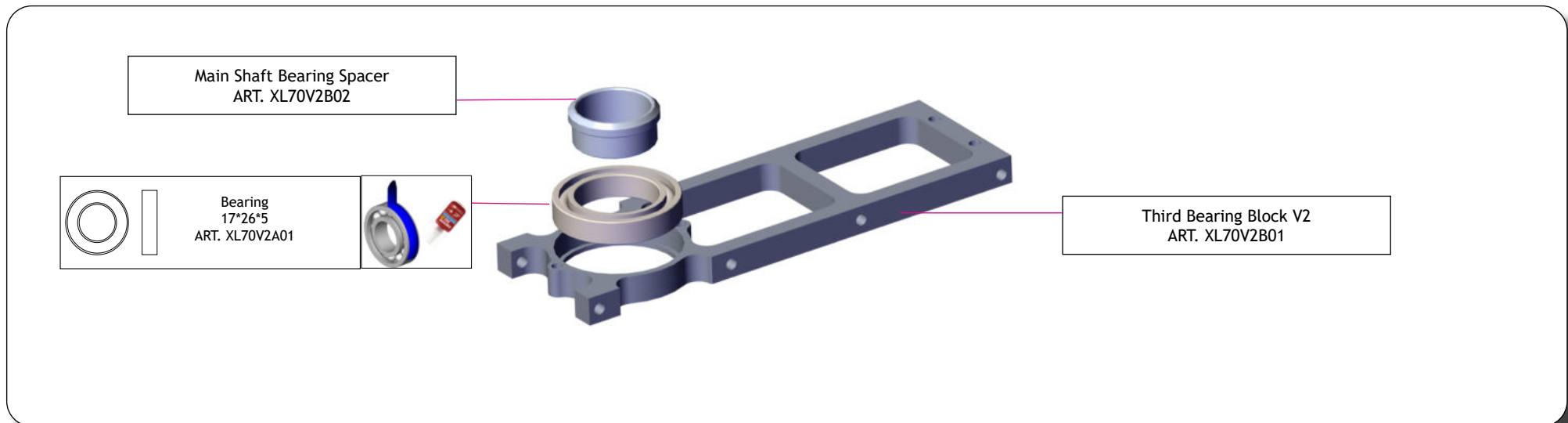
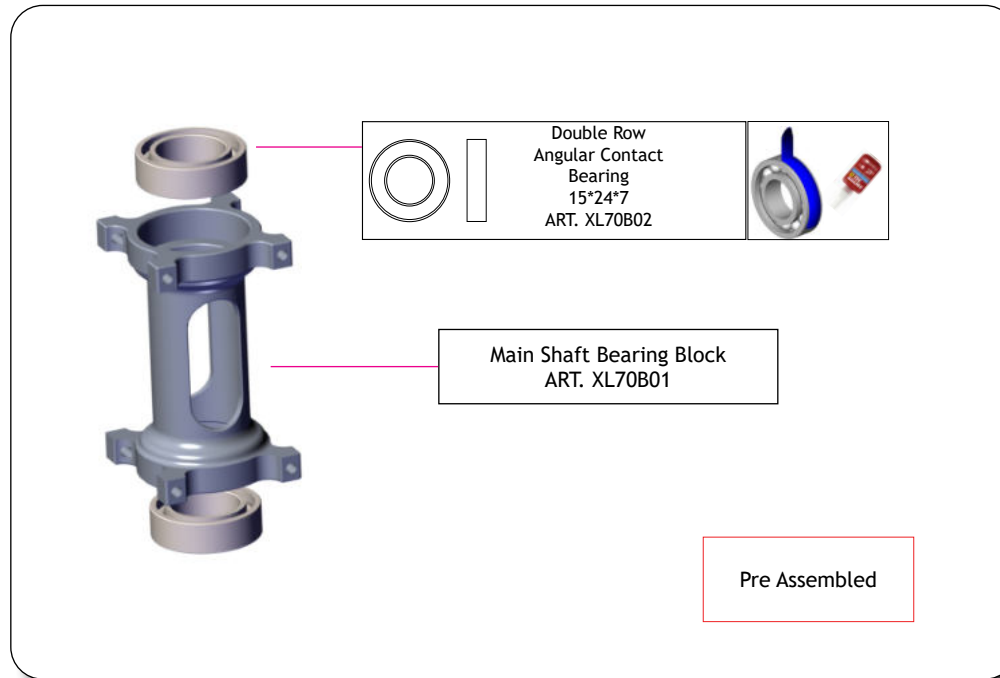


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Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight





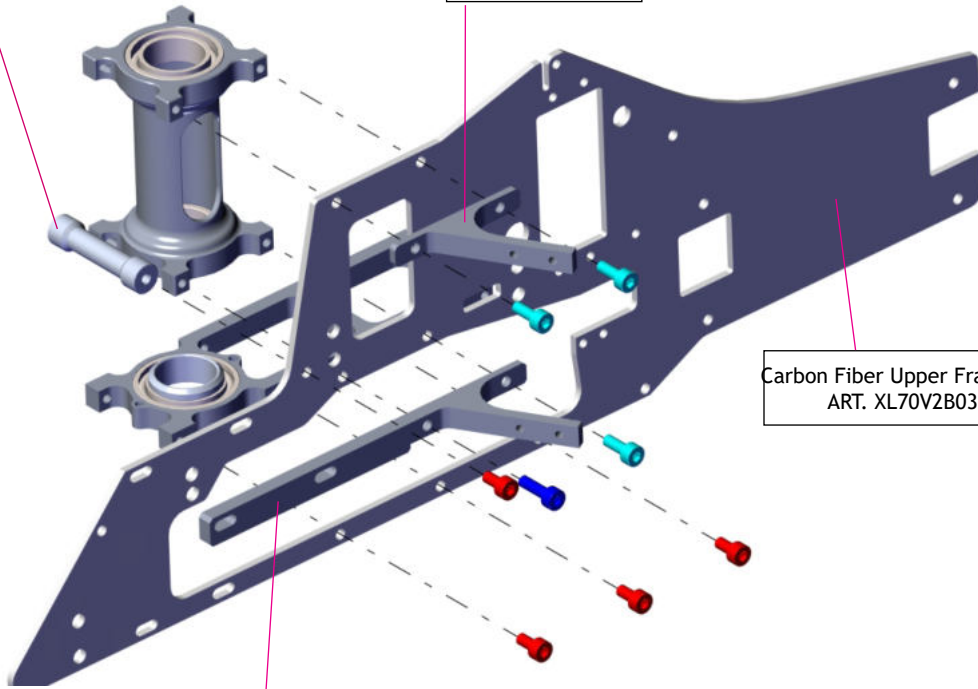
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


Aluminum Frame Spacer
ART. XL70B40

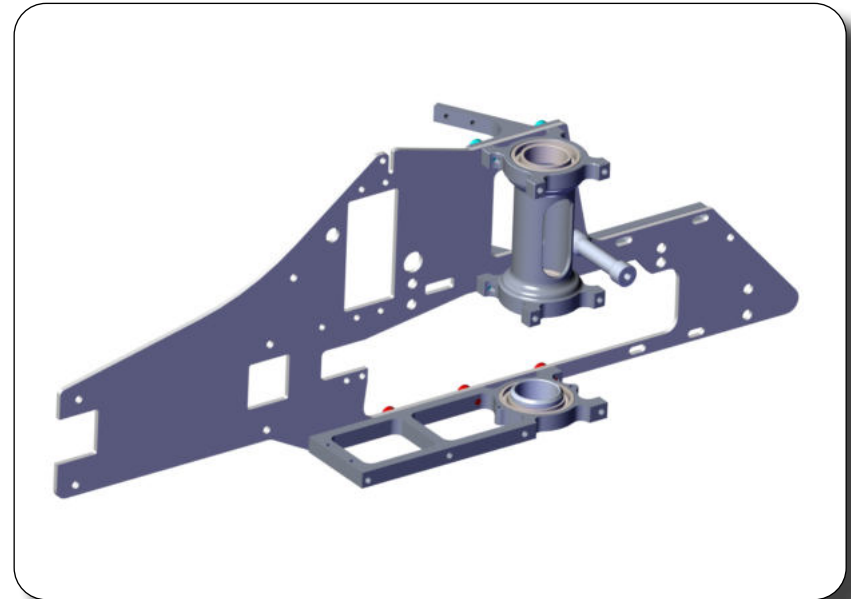
Upper Servo Mount
ART. XL70B03

Carbon Fiber Upper Frame V2
ART. XL70V2B03

Lower Servo Mount (L)
ART. XL70B04-1

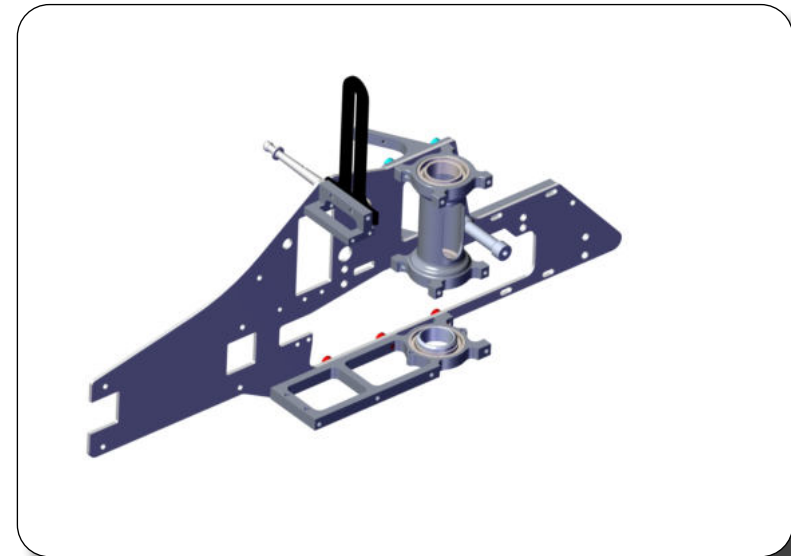
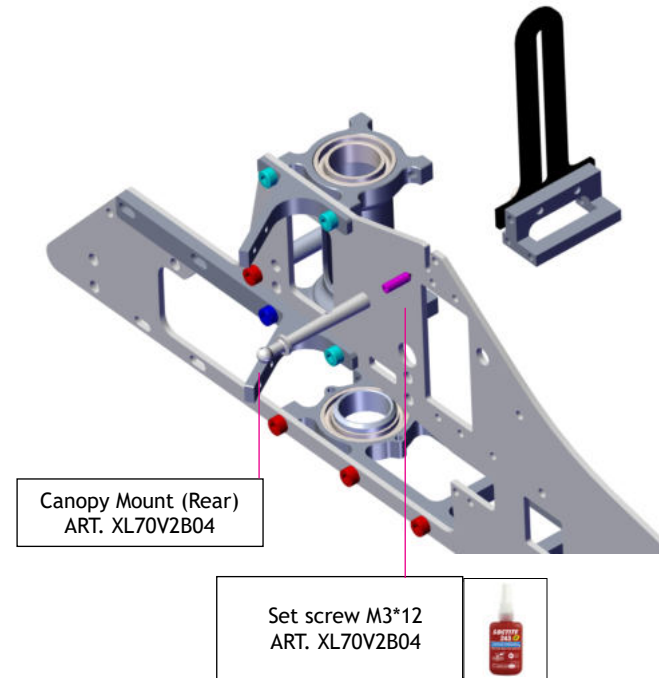
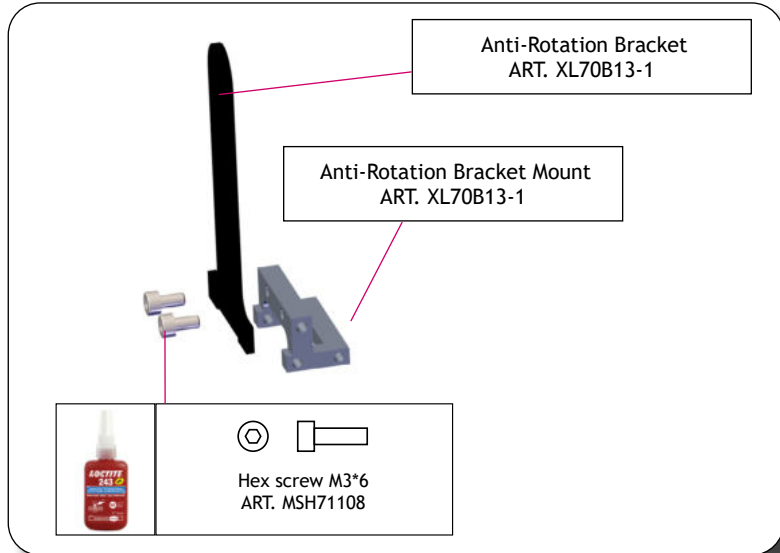


		
	Hex screw M3*6 (Red in picture) ART. MSH71108	
		
		Hex screw M3*8 (Tiffany Blue in picture) ART. MSH71109
		Hex screw M3*10 (Blue in picture) ART. MSH71114





Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight





Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight



Do Not Install This Silver Screw Yet

Flat screw M3*4
ART. XL70V2B05

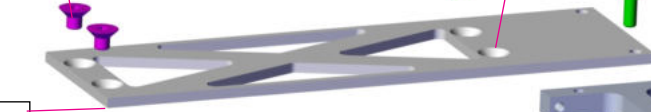


Hex screw M2.5*6
ART. MSH71110



Front Belt Idler Mount (Upper)
ART. XL70V2B06

Carbon Fiber Plate
ART. XL70V2B07



Ball bearing
3x9x4
ART. XL70A20



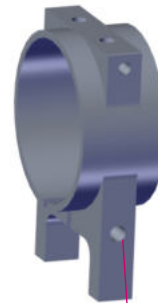
Belt Front Idler V2
ART. XL70V2B06



3*17 Pin
ART. XL70V2B06



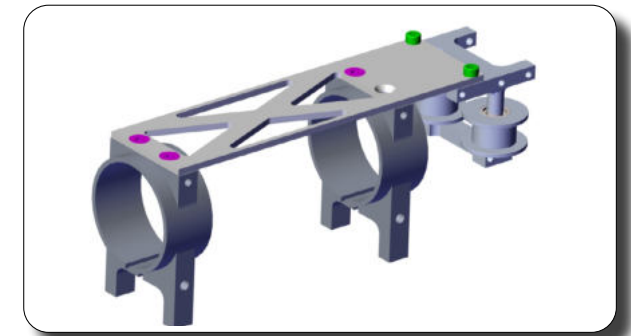
Front Belt Idler Mount (Lower)
ART. XL70V2B06



Tail Boom Clamp V2
ART. XL70V2B05

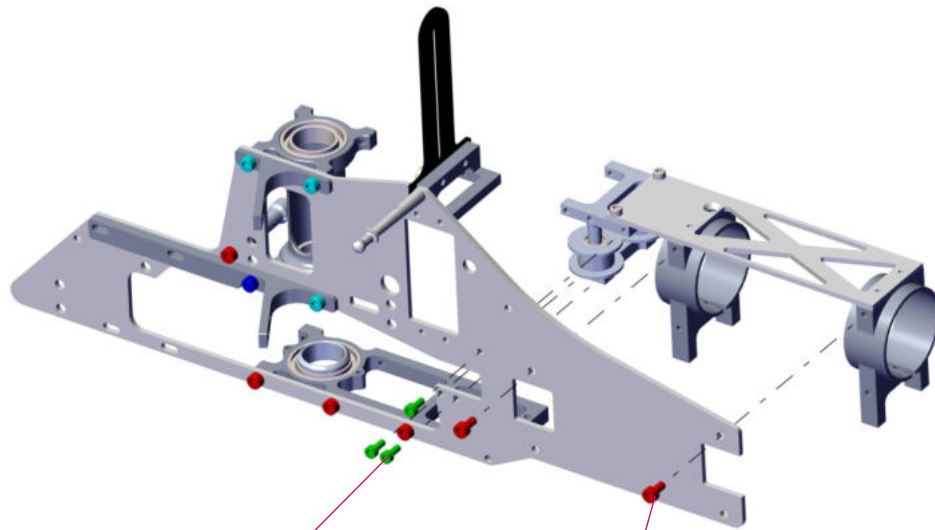


Unthreaded Hole Faces Right






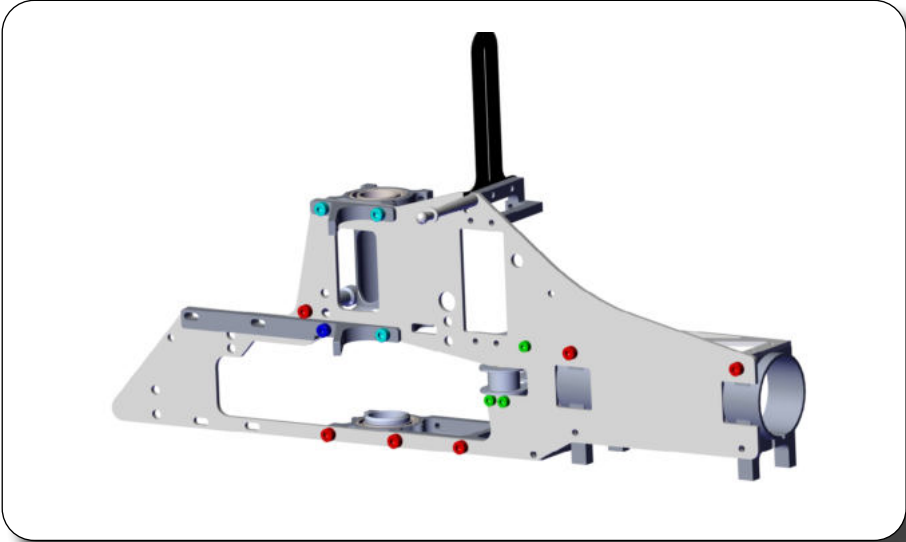
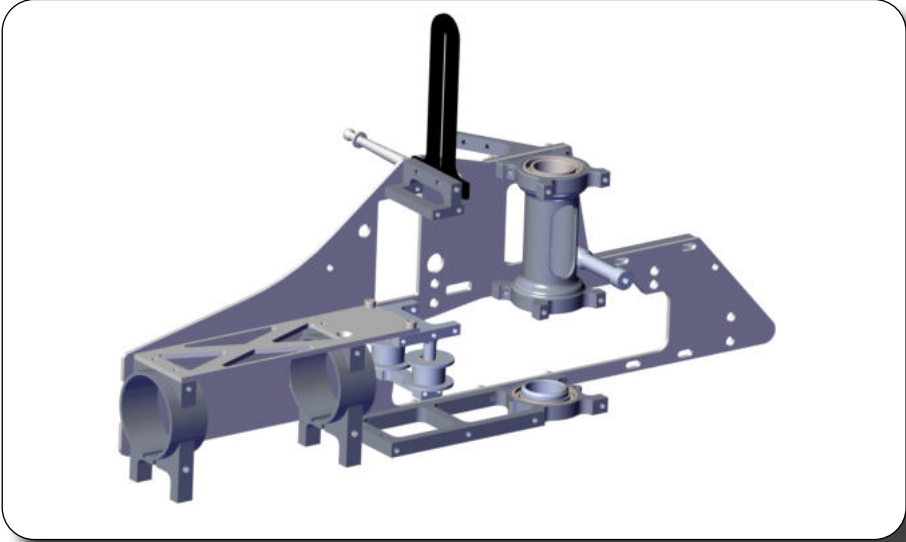
Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight



Hex screw M2.5*6
ART. MSH71110

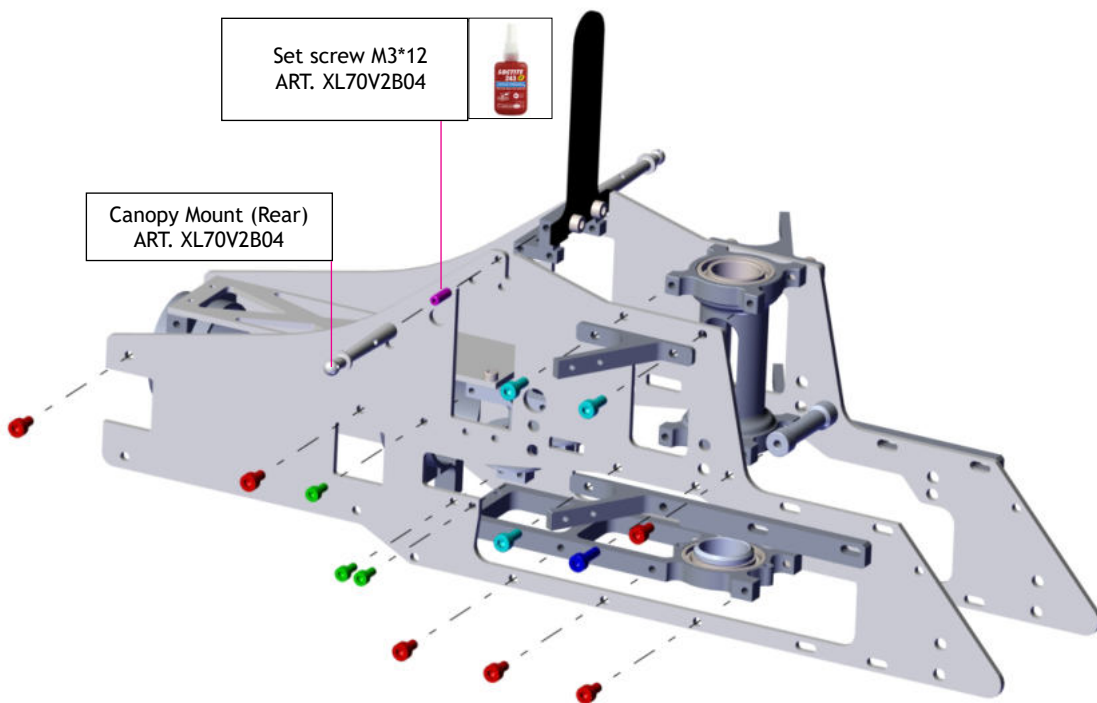









 
Hex screw M3*6
ART. MSH71108

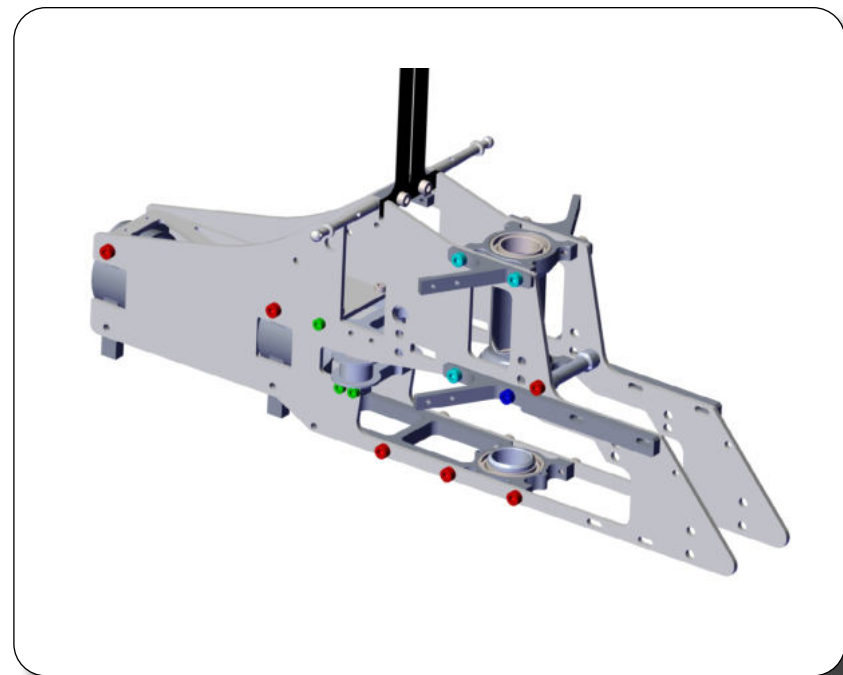




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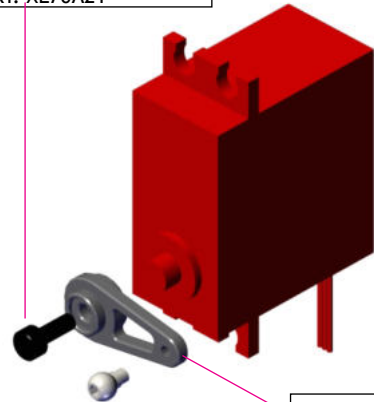
	  Hex screw M3*6 (Red in picture) ART. MSH71108
	  Hex screw M3*8 (Tiffany Blue in picture) ART. MSH71109
	  Hex screw M3*10 (Blue in picture) ART. MSH71114
	Hex screw M2.5*6 (Green in picture) ART. MSH71110





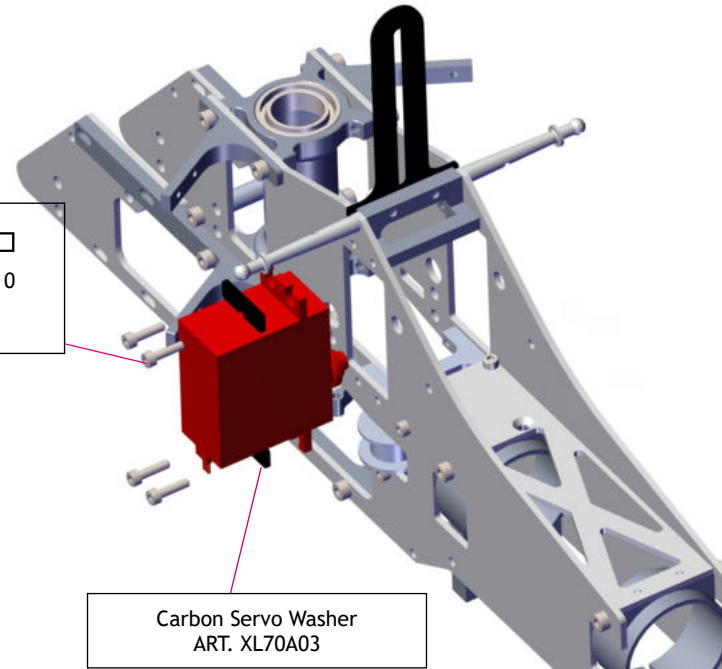
Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight

Button head screw
M3*6
ART. XL70A21



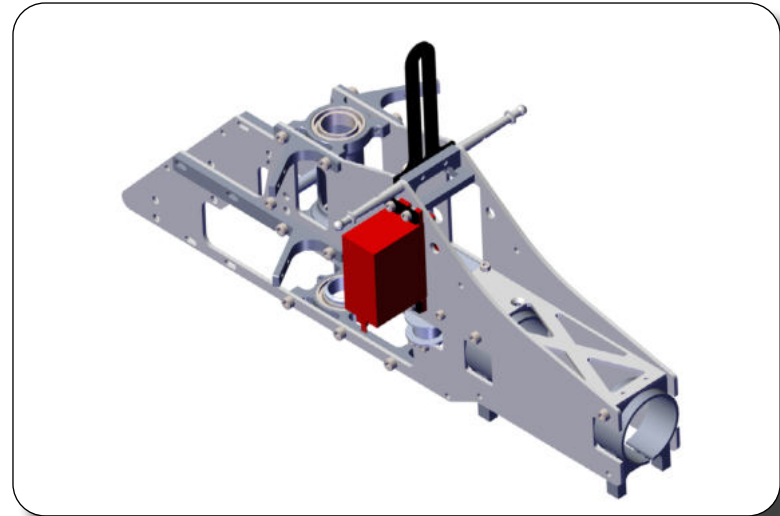
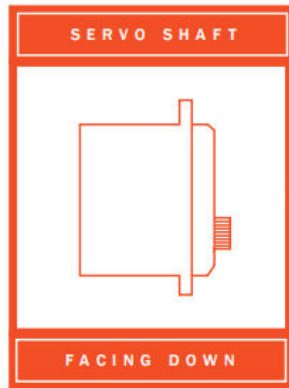
Servo Horn
XL70A04
Optioal: XL70A04-1

Hex Screw M2.5*10
ART. MSH71103
XL70A03



Carbon Servo Washer
ART. XL70A03

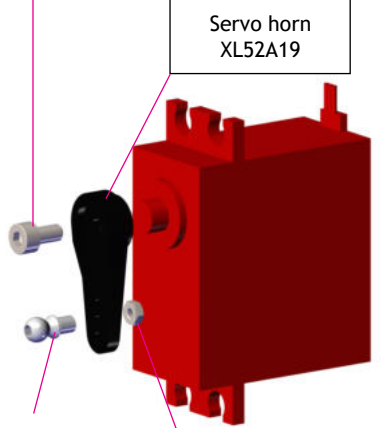
Ball 5mm M2.5*3
XL70A04





Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight


Servo Horn Screw
M3x6
ART. XL70A21

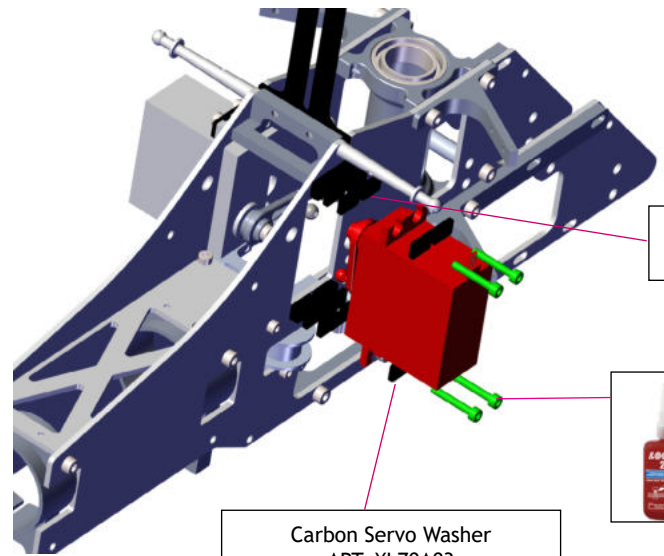
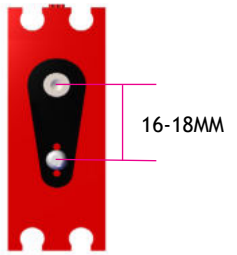


Servo horn
XL52A19



Ball 4.5mm M2*4.8
MSH41009

M2 Nut
MSH41119


 Servo Spline facing up



Carbon Servo Washer 2mm
ART. XL70V2A02

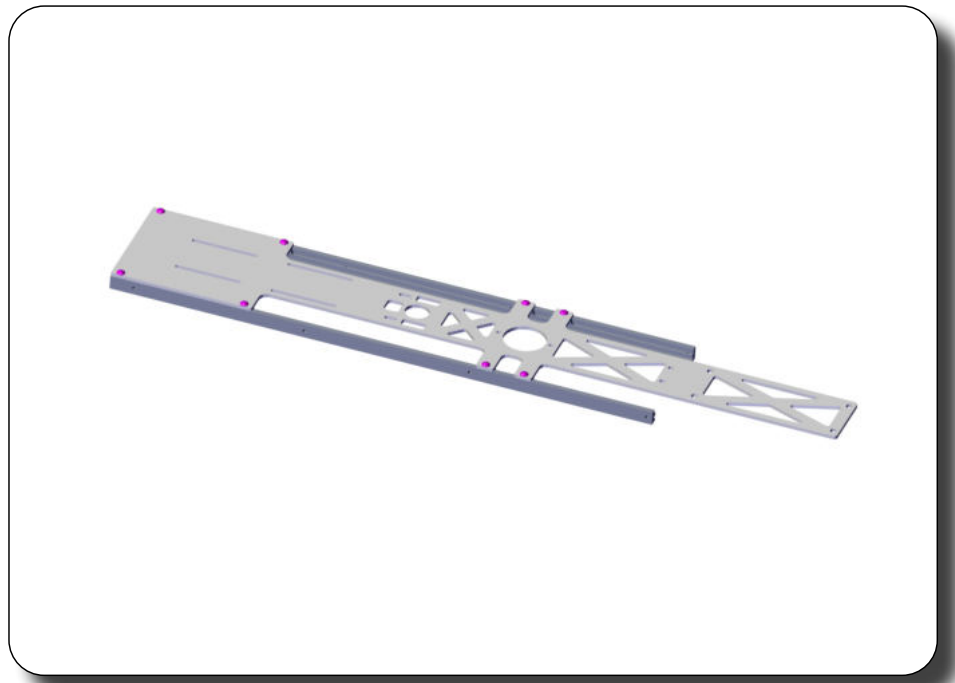
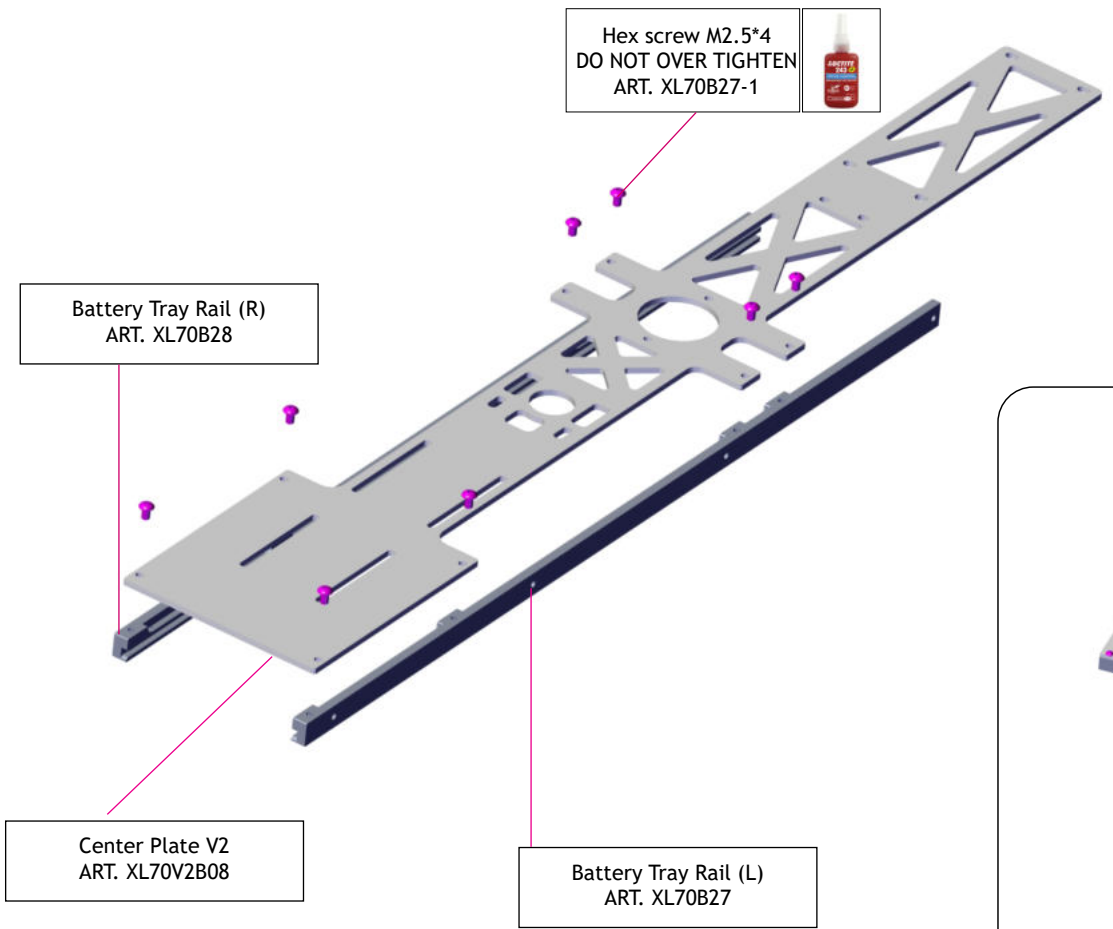
 
Hex screw M2.5*16
ART. XL70V2A02

Carbon Servo Washer
ART. XL70A03


The exact number of "Carbon Servo Washer 2mm" you use will vary depending on the exact servo and servo horn used. Only add enough spacers to prevent the tail servo from binding on the elevator servo arm/ball throughout it's full range of travel.

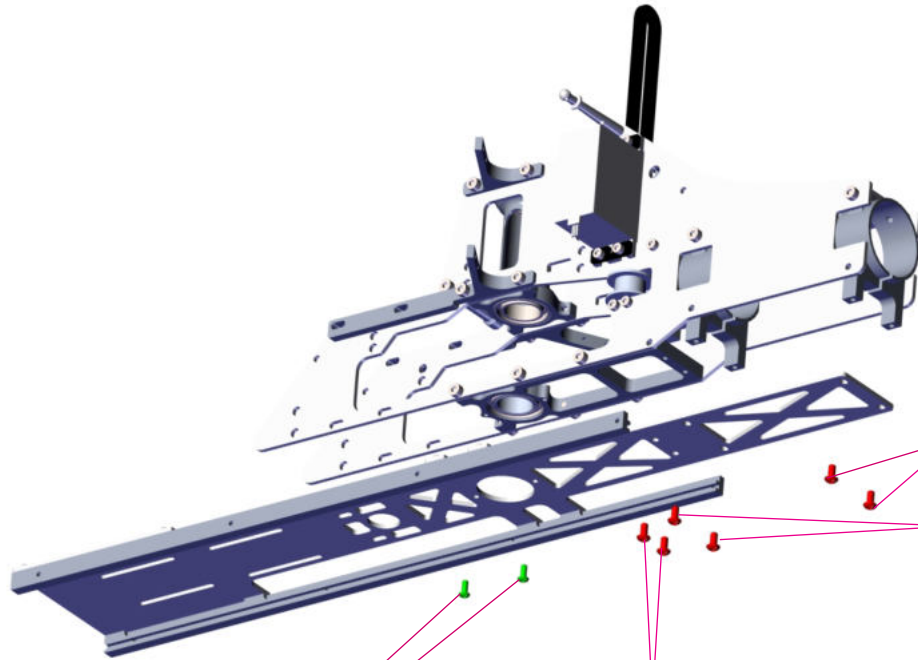


Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight






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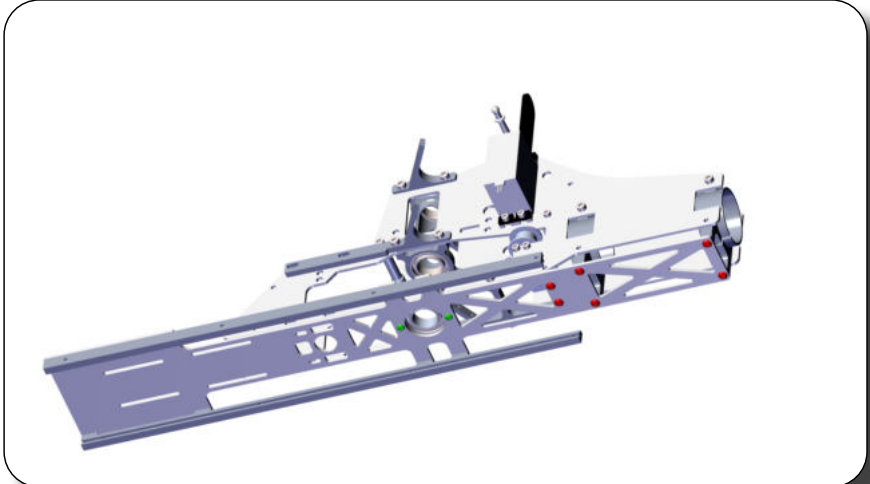
Hex screw M2.5*6
ART. MSH71110



Button head screw M3*6
Fully tighten

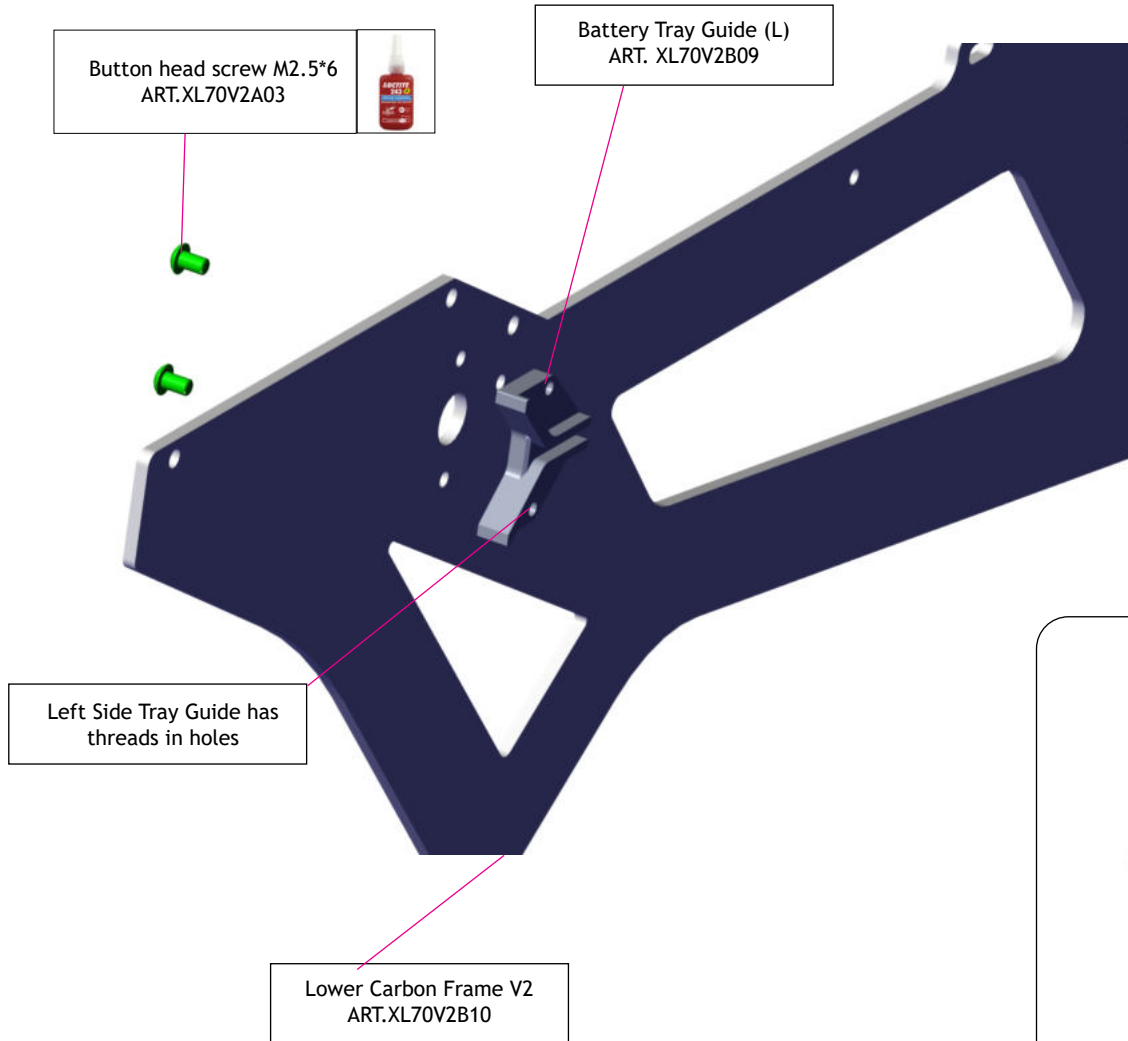


Button head screw M3*6
Do not tighten yet
ART.XL70A21



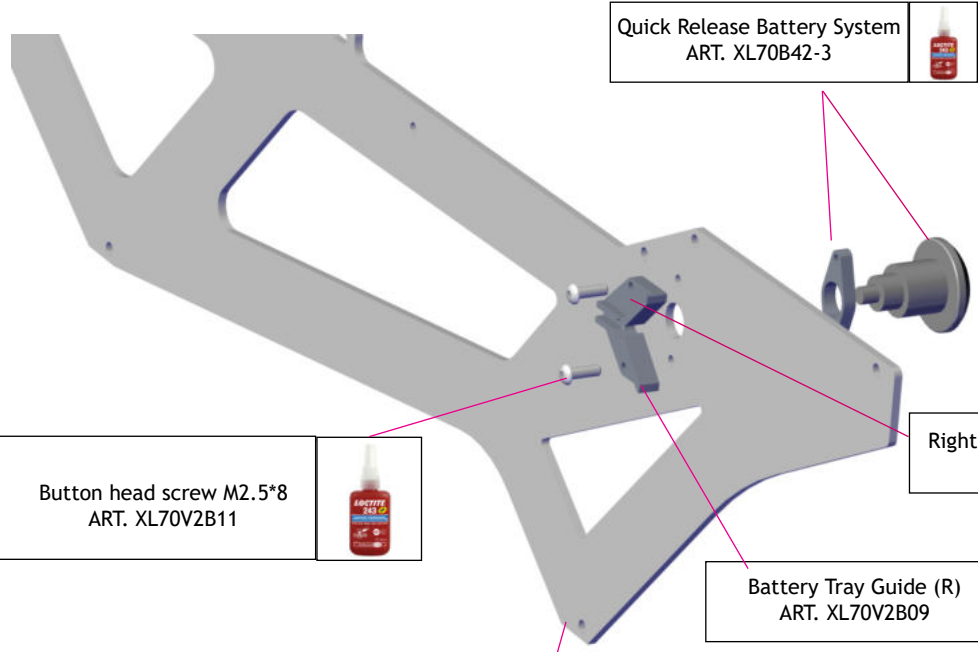


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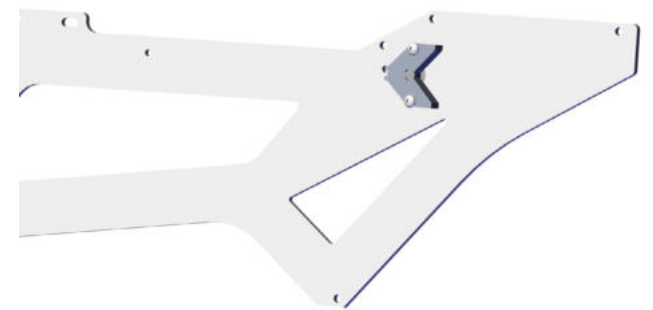




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Lower Carbon Frame V2
ART.XL70V2B10



BB-1-9+BB-4



Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight



Button head screw M3*6
ART.XL70A21



Aluminum Frame
Spacer
ART. XL70B39

Button head screw M2.5*6
DO NOT OVERTIGHTEN
ART. XL70V2A03



Hex screw M3*6
ART. MSH71108



Canopy mount(Front)
ART. XL70V2B18



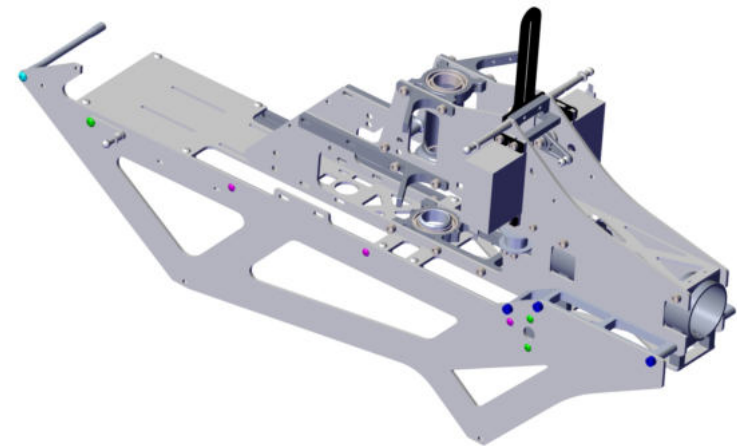
Hex screw M2.5*4
DO NOT OVERTIGHTEN
ART. XL70B27-1



Hex screw M3*25
ART. XL70B09-1



Rear frame Spacer
ART. XL70V2B17

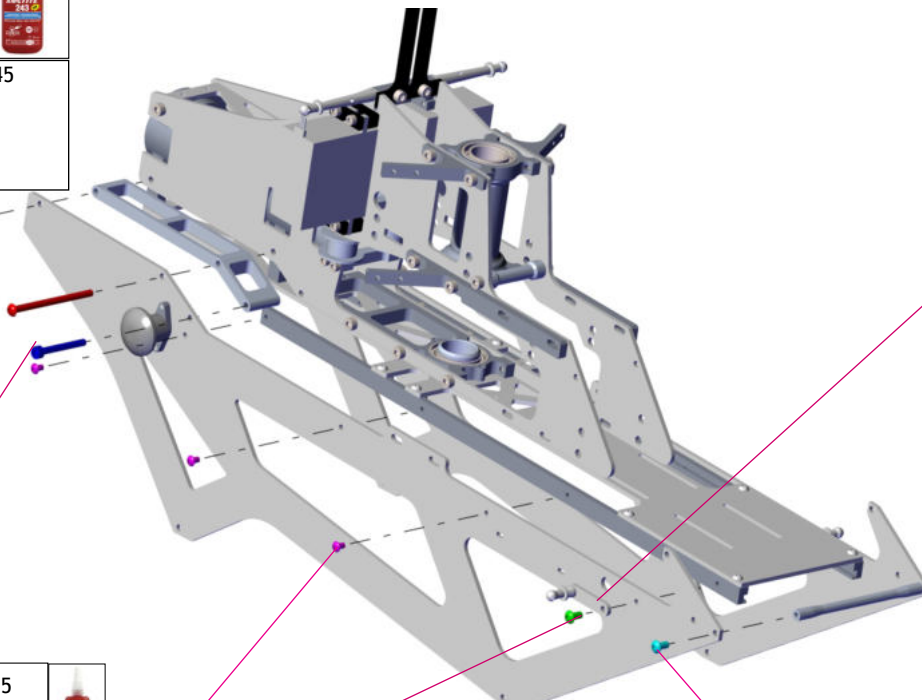




Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight



Button head screw M3*45
(Do not tighten yet)
ART. XL70V2B05
XL70A24



Hex screw M3*6
ART. MSH71108

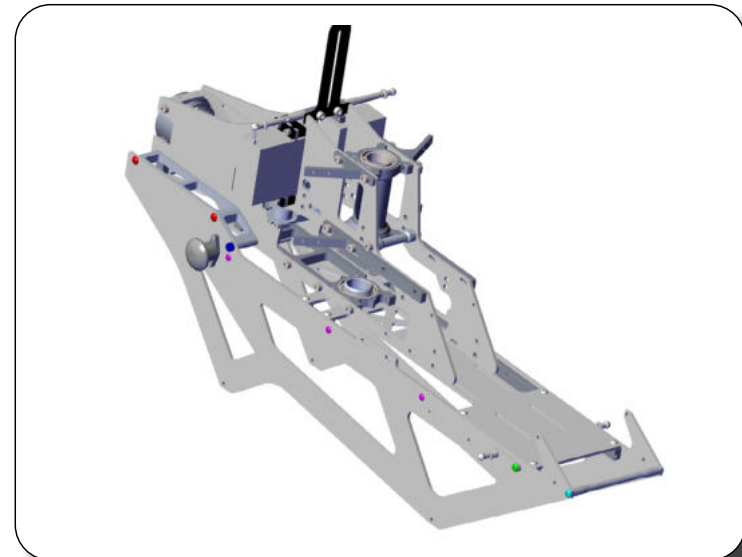
Canopy Mount (Front)
ART. XL70V2B18

Hex screw M3*25
ART. XL70B09-1

Button head screw M2.5*6
DO NOT OVER TIGHTEN
ART. XL70V2A03

Hex screw M2.5*4
DO NOT OVER TIGHTEN
ART. XL70B27-1

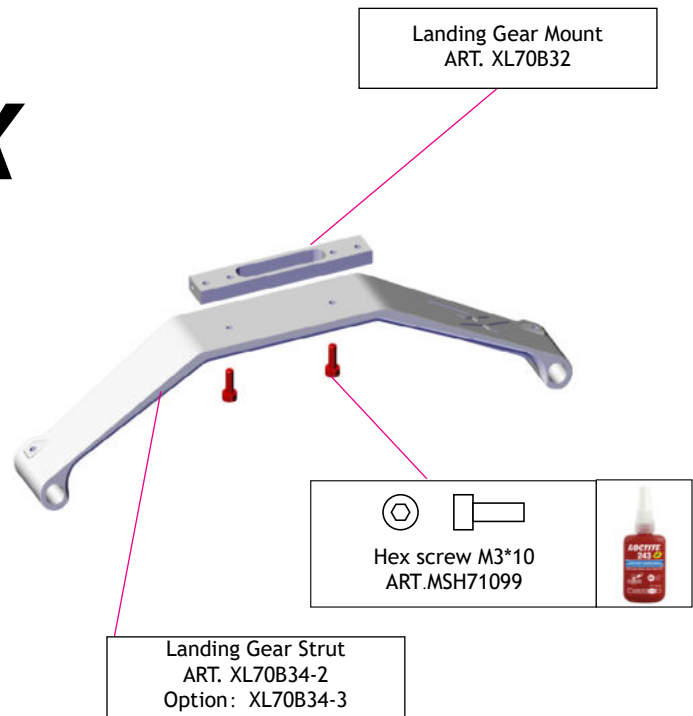
Button head screw M3*6
ART. XL70A21





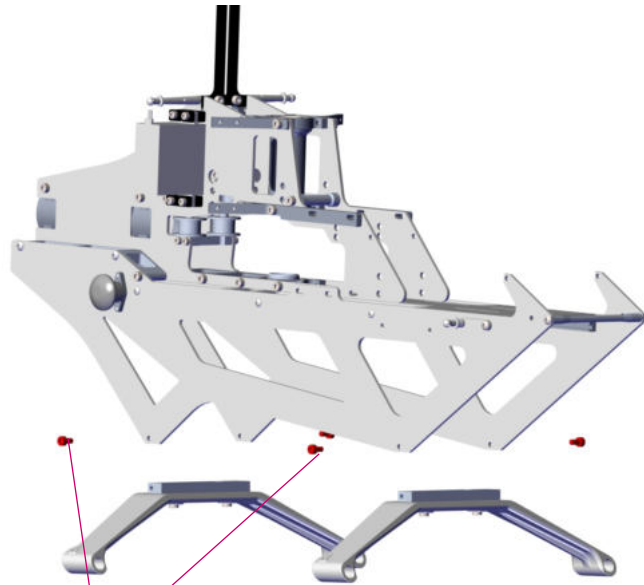
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2X




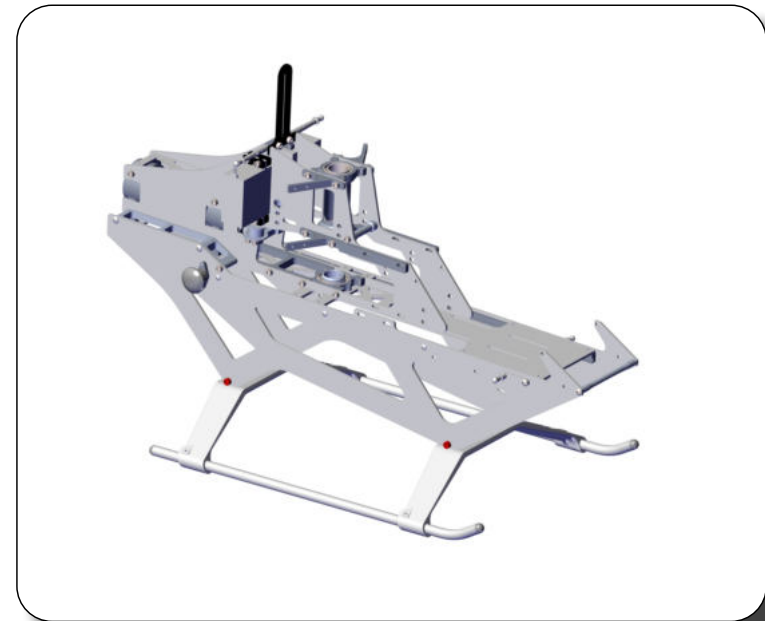
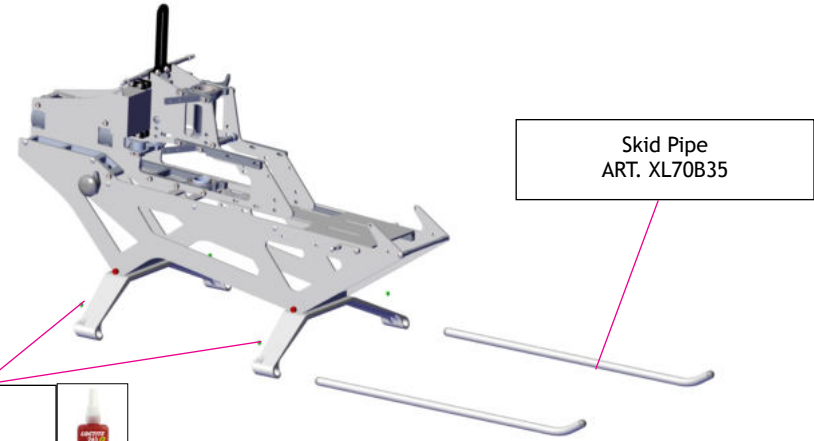


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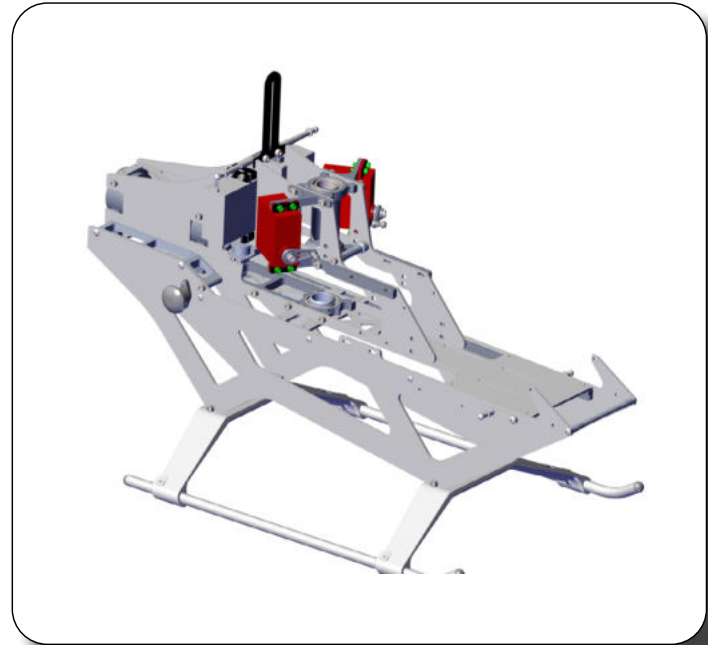
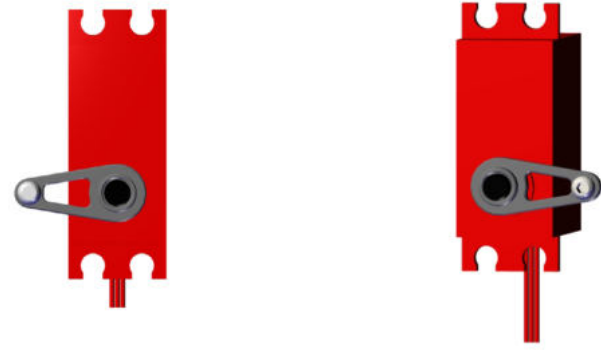
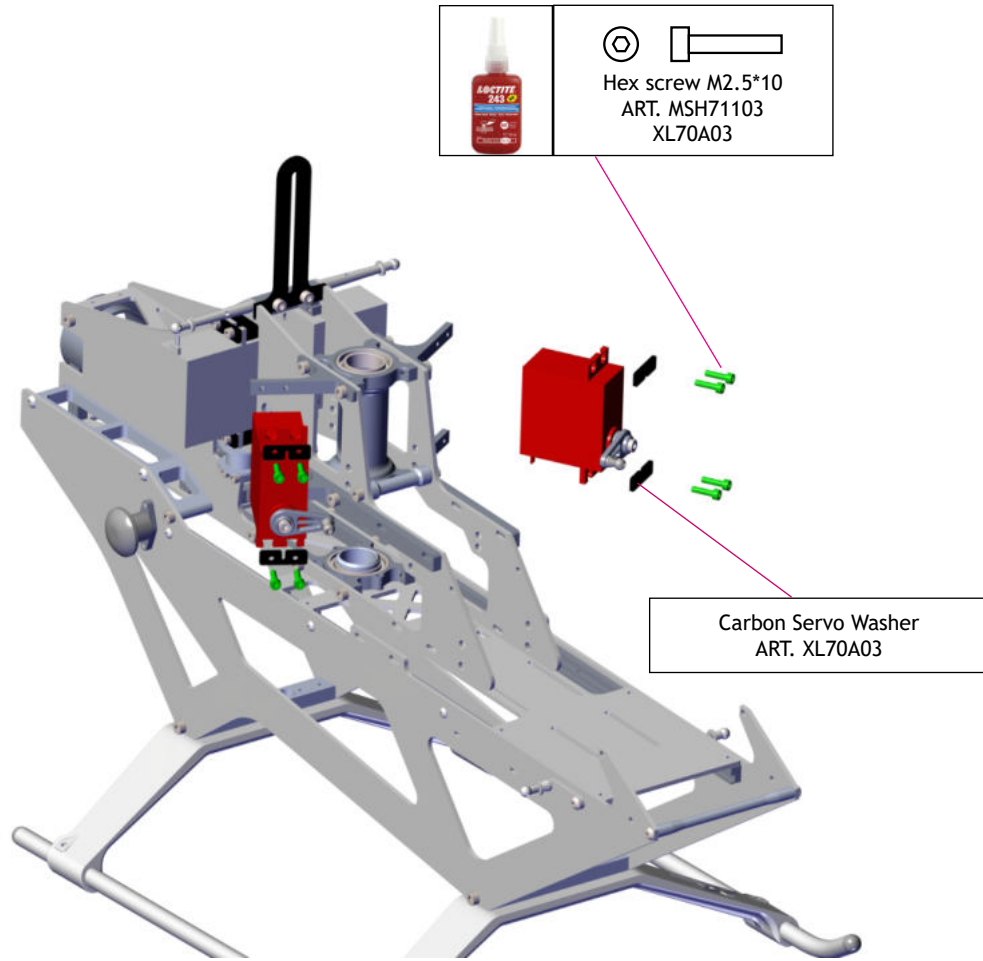
	
<p>Hex screw M3*6 ART. MSH71108</p>	

<p>Grub Screw M3*3 XL70B34-3</p>	
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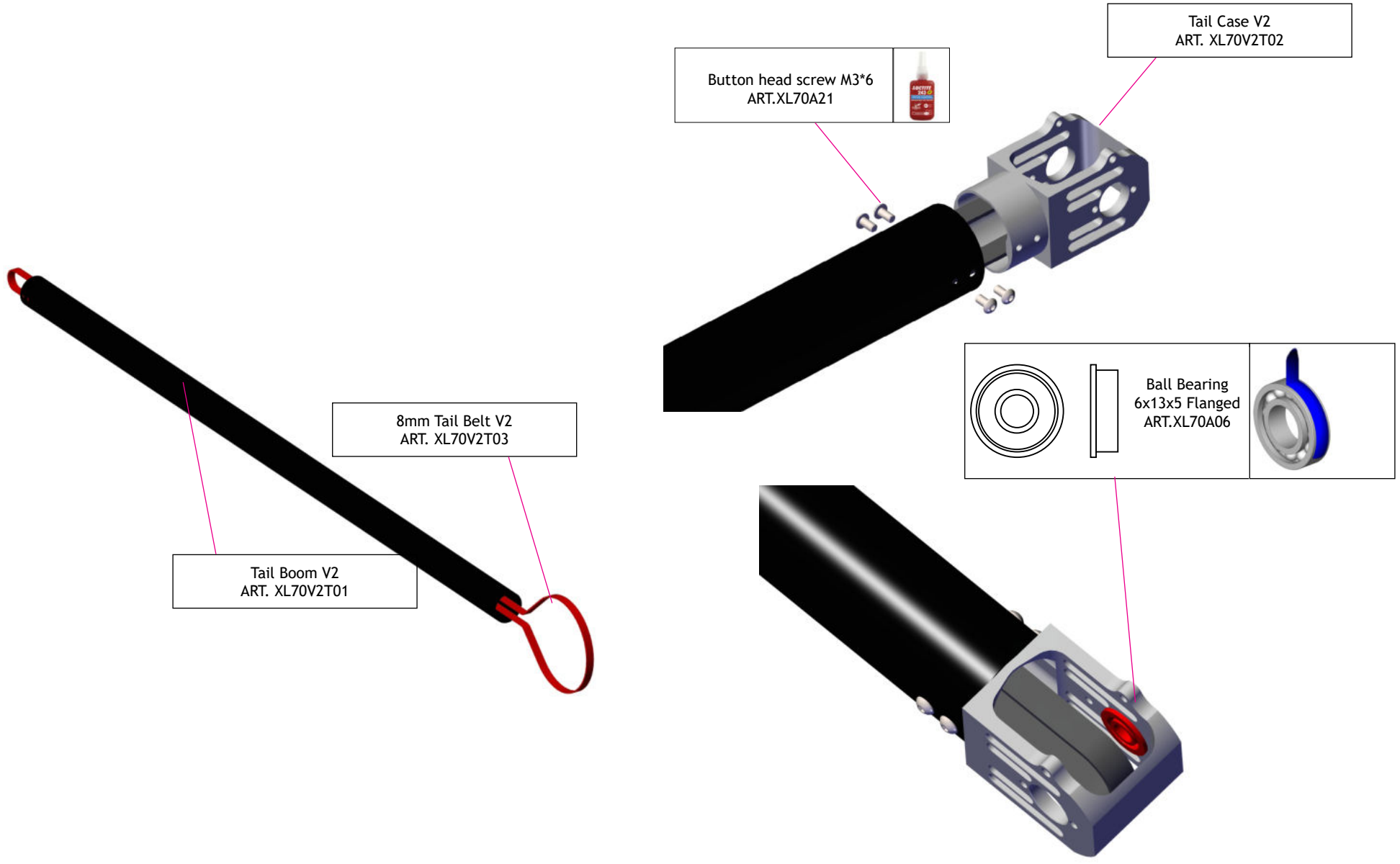
Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight



TB-1-2+TB-1-4+TB-2



Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight





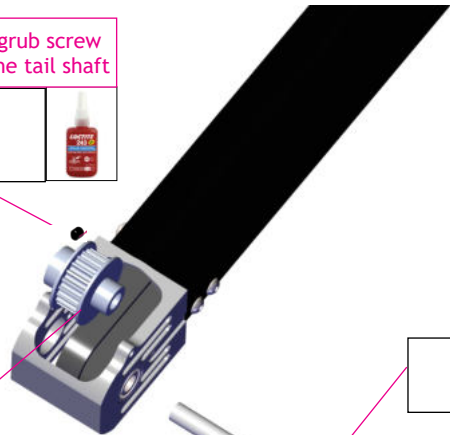
Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight

Tighten securely, and ensure the grub screw engages with the small recess in the tail shaft

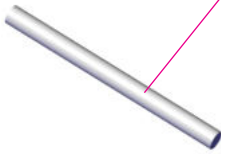
Grub screw M4*4
MSH71122



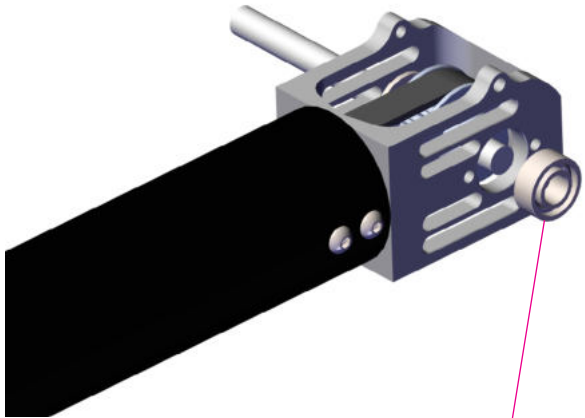
Tail Pulley 21T
ART. XL70V2T04
Option:XL70V2T04-1




Tail Shaft
ART. XL70T13




O ring
ART. XL70A17



 Pay attention to the direction

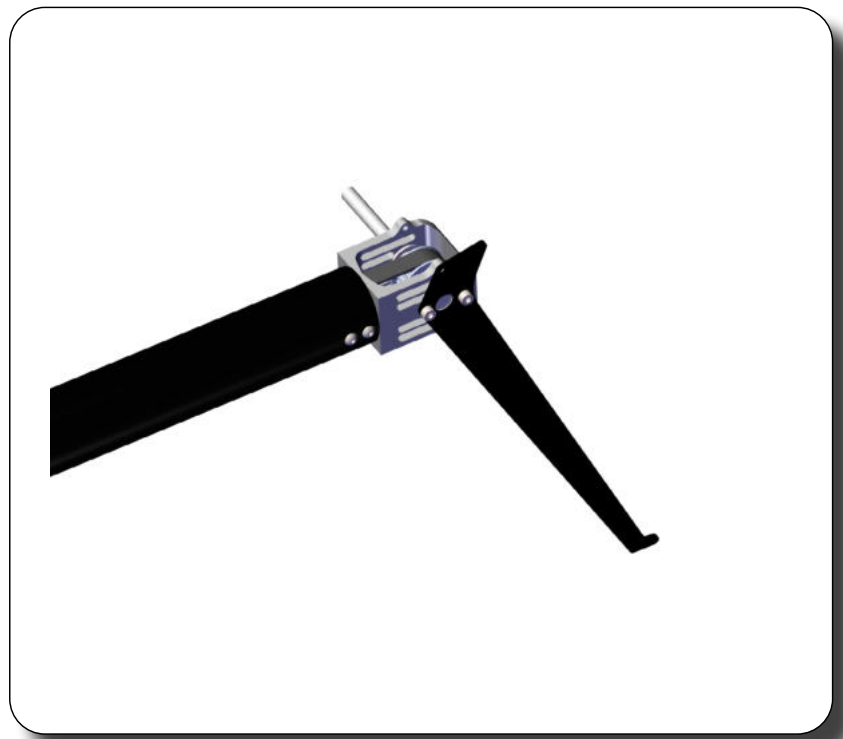
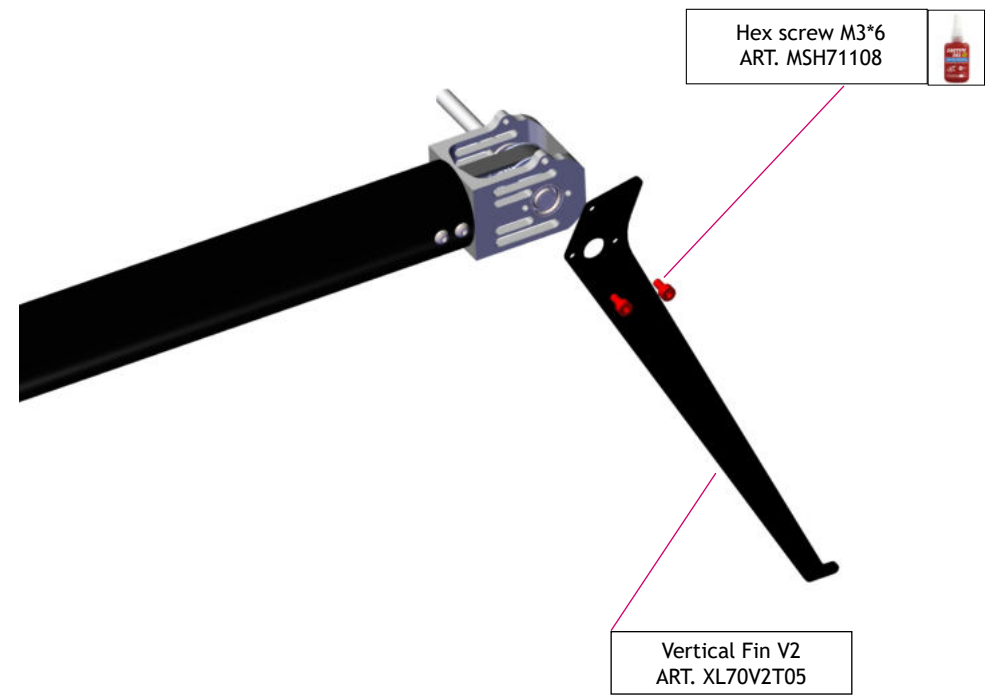


Ball bearing
6*13*5
ART. XL70A06-1

 Add 6*8*0.1 washer as needed for adjusting play

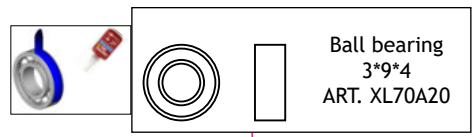


Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight

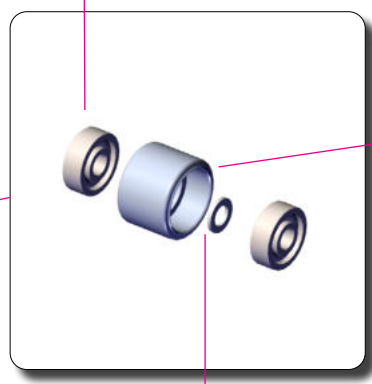




Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight

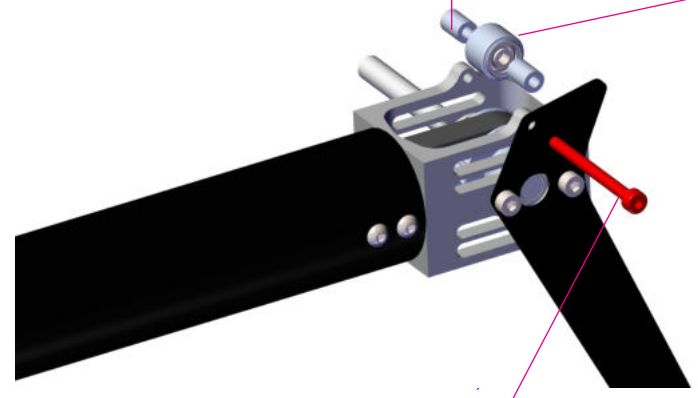


Spacer 3*5*9.75
ART. XL70V2T06

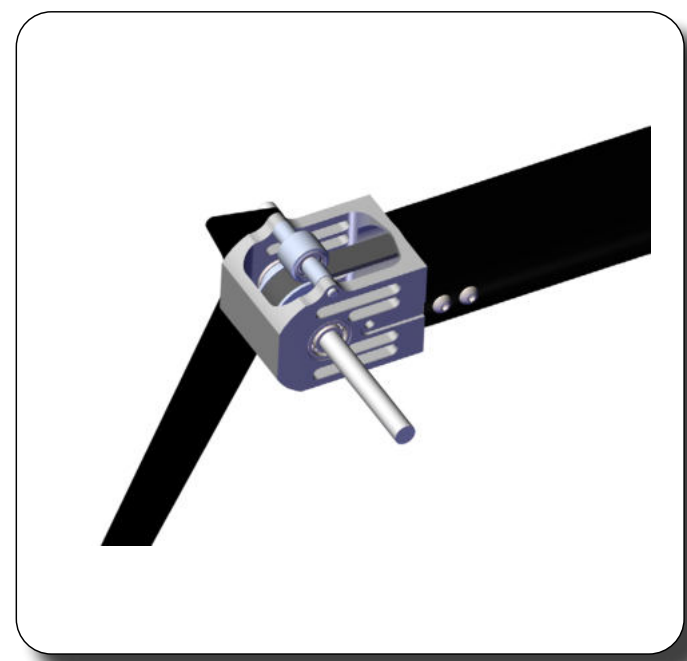


Rear Belt Idler Pulley V2
ART. XL70V2T06

Spacer 3*5*0.5
ART. XL70V2T06

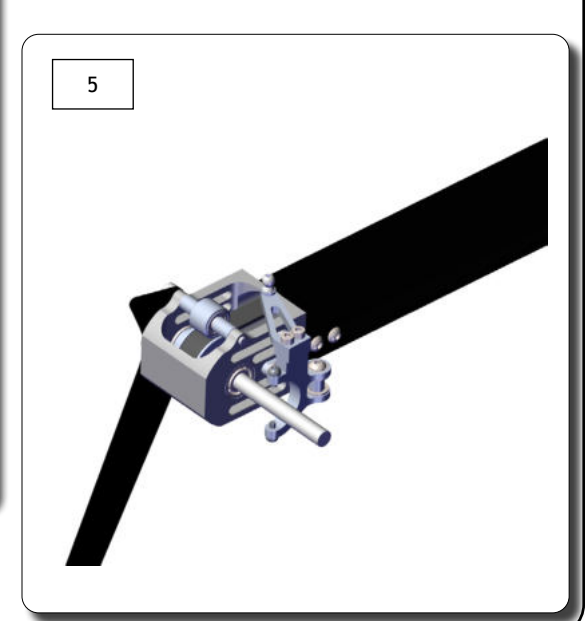
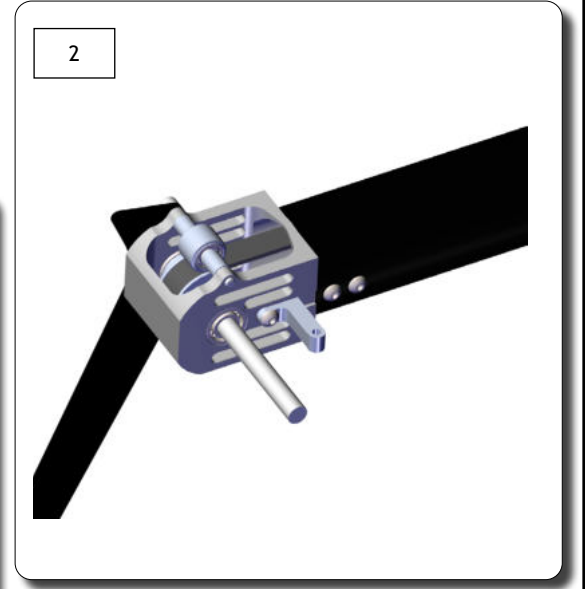
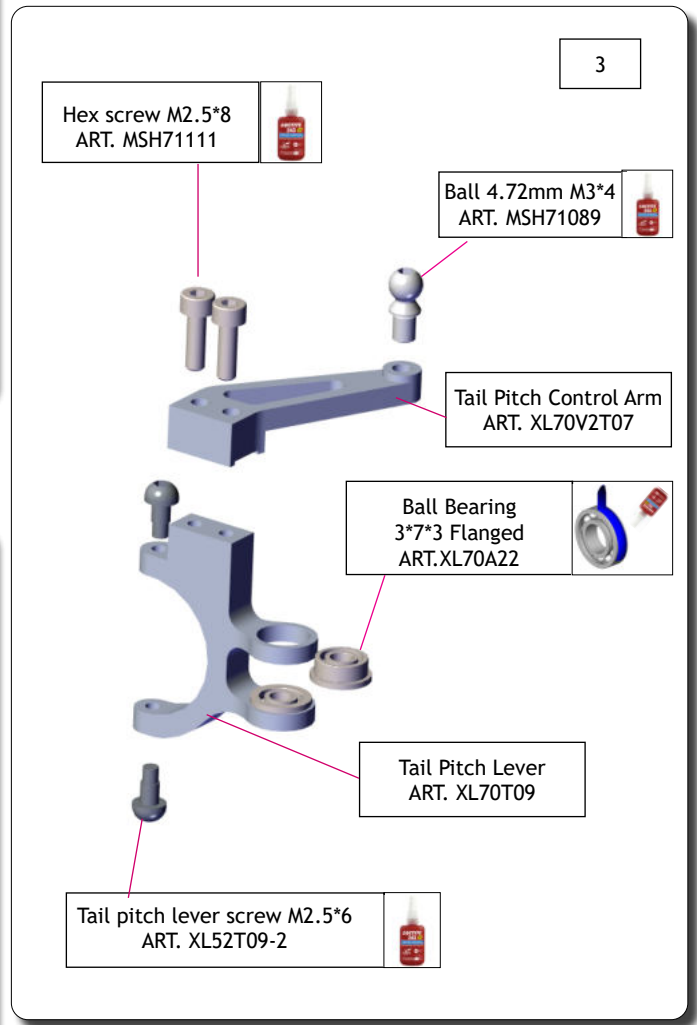
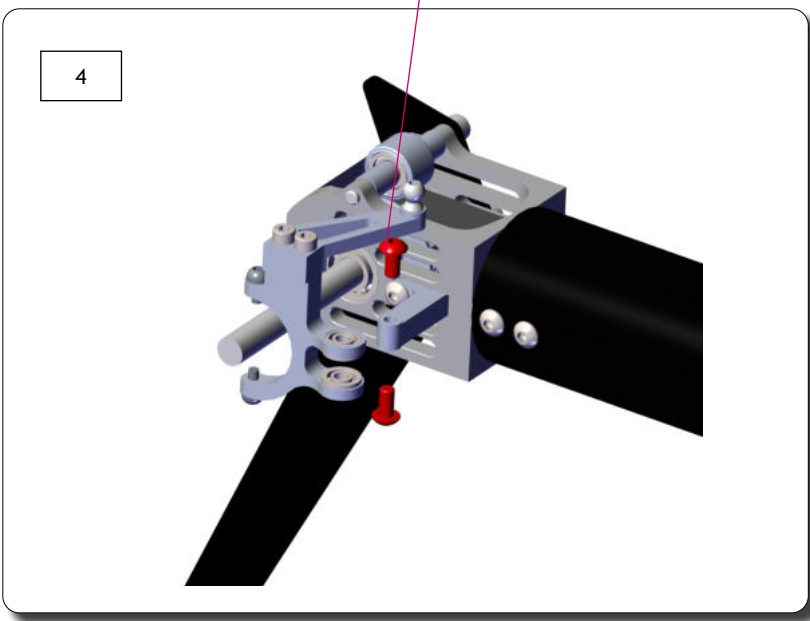
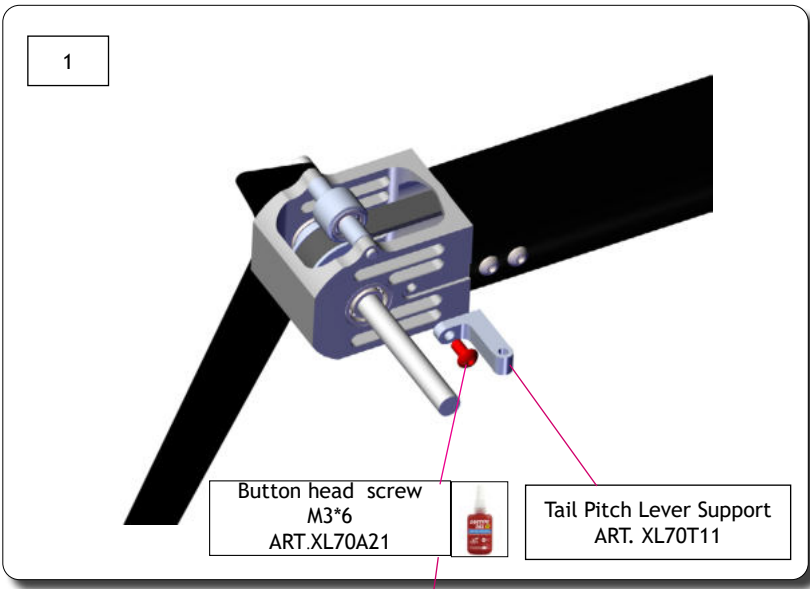


Hex screw M3*35
ART. XL70V2T02





Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight

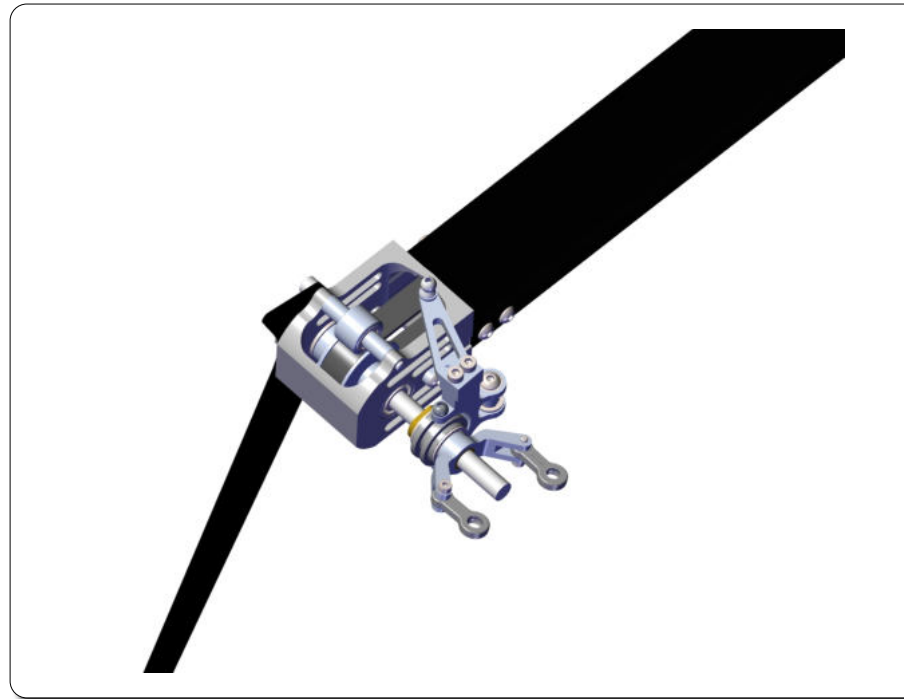
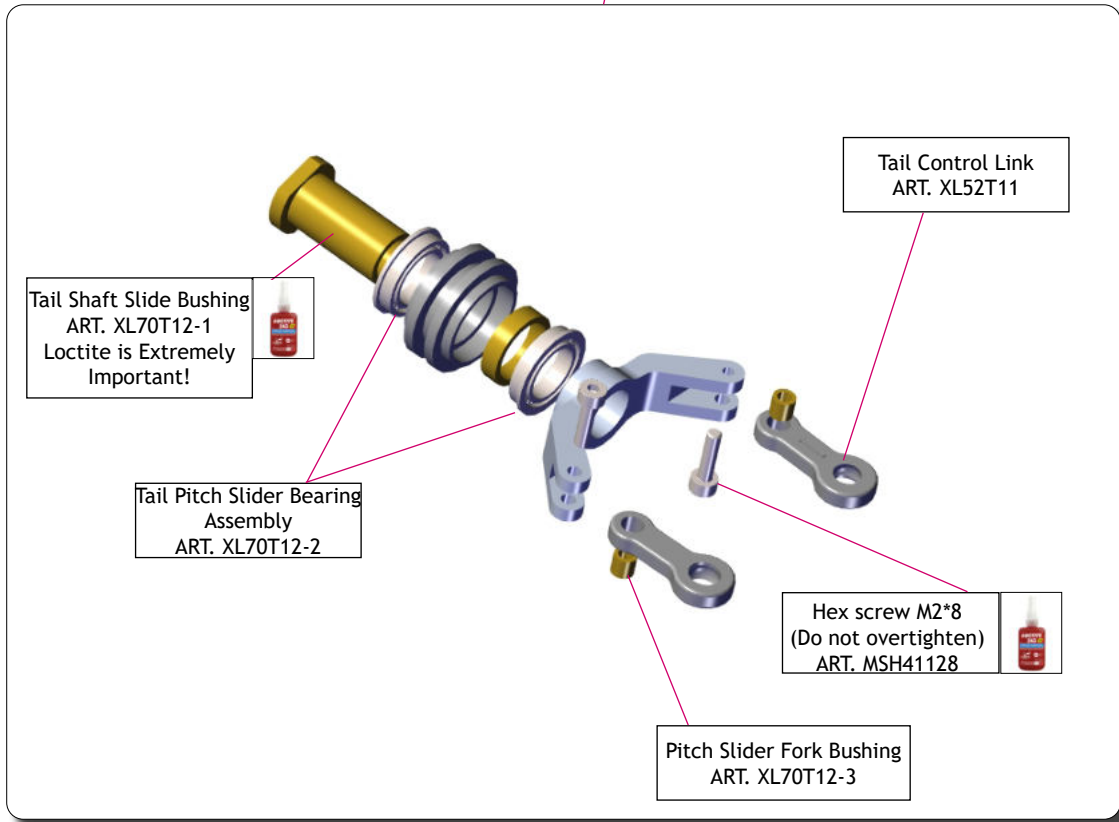
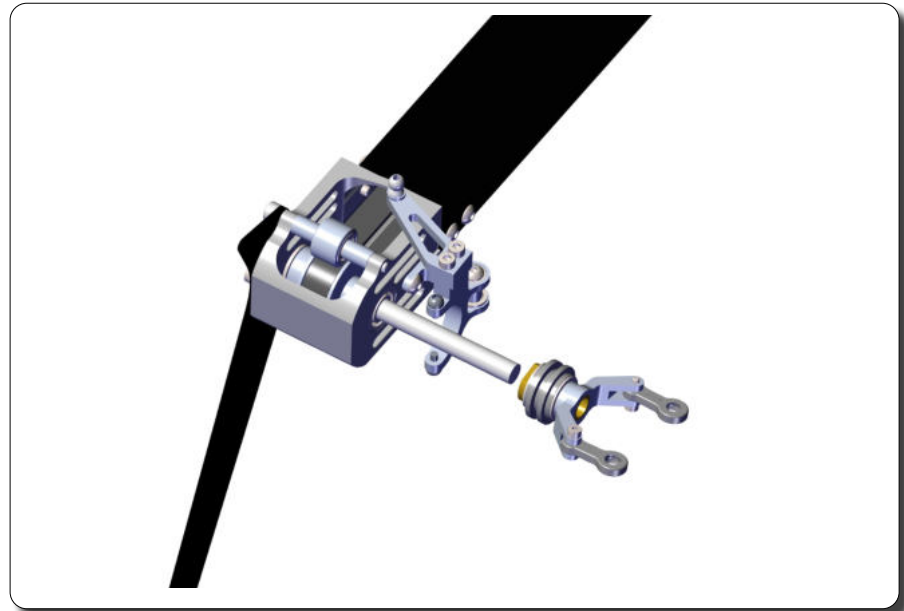




Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight



Tail pitch assembly
ART. XL70T12





Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight

Washer 8*10*0.3 ART. XL70T19

Thrust Bearing 5*10*4 ART. XL70T18

Tail grip ART. XL70T16

Ball 4.72mm M2.5 ART. XL70A01

Ball bearing 5*10*4 ART. XL70T17

Internal hole SMALLER

Internal hole BIGGER

Apply grease on thrust bearing

ID Bigger Towards Tail Hub
ID Smaller Towards Tail Blade

Tail Spindle ART. XL70T20

M4 Washer ART. XL70T20

Tail Center Hub ART. XL70T14

Hex screw M4*6 ART. XL70T20

CNC Washer 5*8*1 ART. XL70T19

Tail Damper ART. XL70T15

Tighten securely, and ensure the grub screw engages with the small recess in the tail shaft

Grub screw M4*4 ART. MSH71122

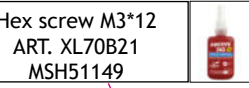
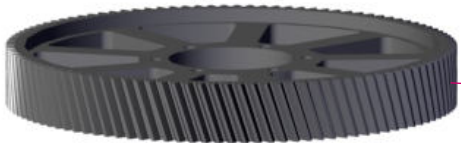
Pay attention to the direction of tail grip arms

If you have the latest one way version included in the kit. Pls check next page



Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight

Hex screw M3*12
ART. XL70B21
MSH51149





Main Gear 106T Mod1 (ART. XL70B20) Included in Kit

Option:

18mm Heavy Duty Main Gear 106T Mod1 (ART. XL70V2B11)
Must use V1 Pinions (ART. XL70G10, XL70G11, XL70G12)

Main Gear 109T Mod1 (ART. XL70B20-1)
Must use V2 Pinions (ART. XL70G11-1, XL70G12-1, XL70G13)


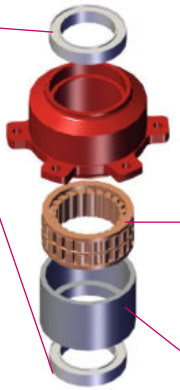


Main Gear Hub (Preassembled)
ART. XL70B21

You may add grease to one-way bearing



Ball bearing
15*21*4
ART. XL70B21-3

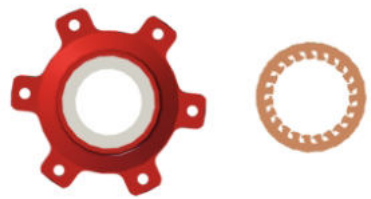



One way bearing (pay attention to the direction)
ART. XL70B21-1

To replace the bearing, heat up the assembly to soften the loctite and it will come out. Use Loctite 638 when reinstalling.

Pre Assembled with Loctite

One way bearing direction (from upside)

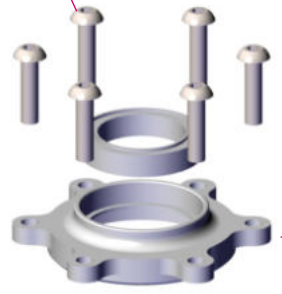


You may have the latest one way version included in the kit.



Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight

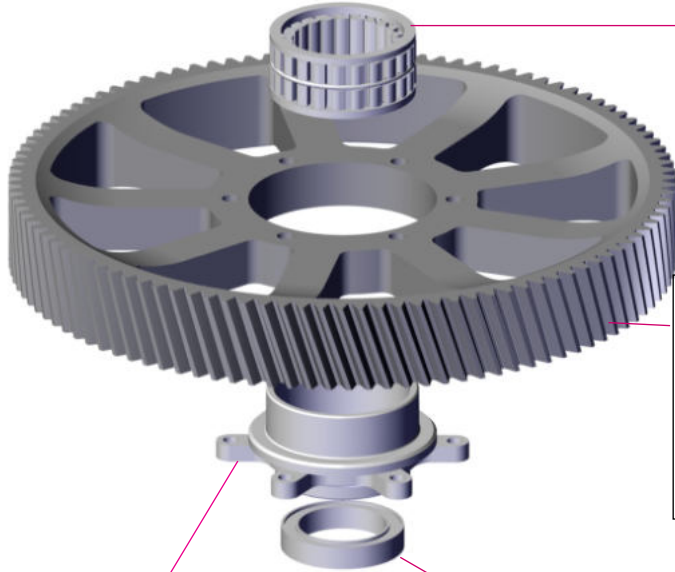
Button Head screw M3*14
ART. XL70V2B21



Ball bearing
15*21*4
ART. XL70B21-3

Upper one way hub
ART. XL70V2B21

One way bearing (pay attention to the direction)
You may add grease to one-way bearing
ART. XL70B21-1

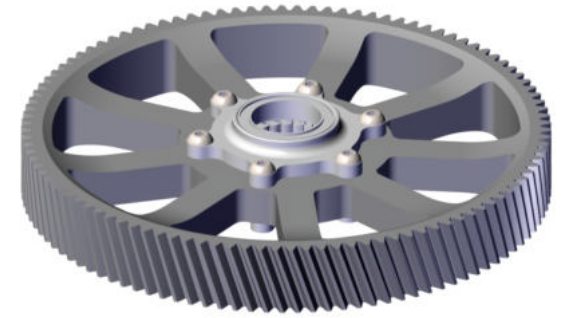



Main Gear 106T Mod1 (ART. XL70B20) Included in Kit
Option:
18mm Heavy Duty Main Gear 106T Mod1 (ART. XL70V2B11)
Must use V1 Pinions (ART. XL70G10, XL70G11, XL70G12)
Main Gear 109T Mod1 (ART. XL70B20-1)
Must use V2 Pinions (ART. XL70G11-1, XL70G12-1, XL70G13)


Lower one way hub
ART. XL70V2B21



Ball bearing
15*21*4
ART. XL70B21-3

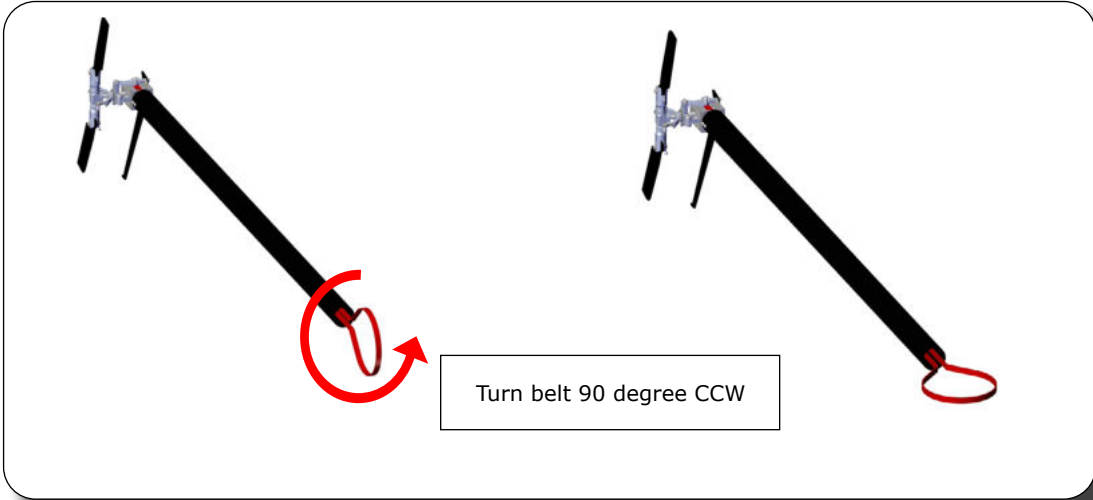


 One way bearing direction (from upside)

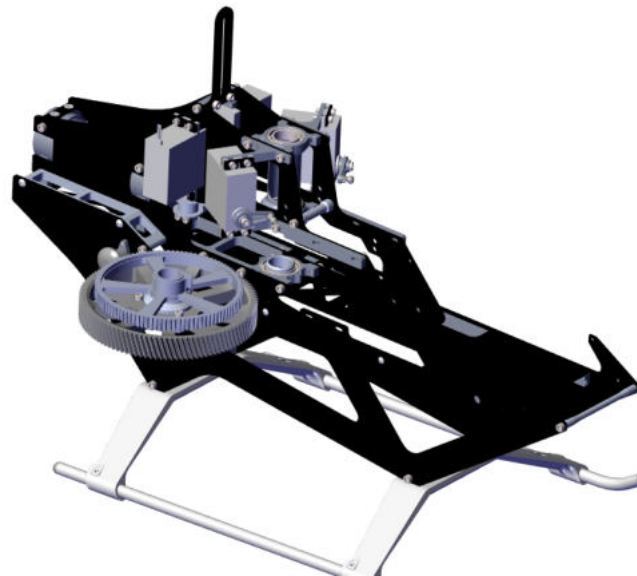
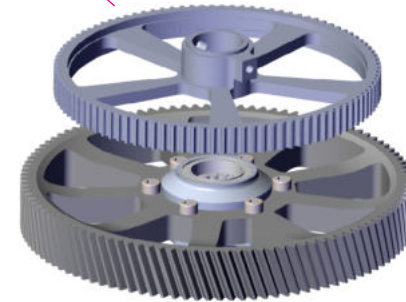




Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight

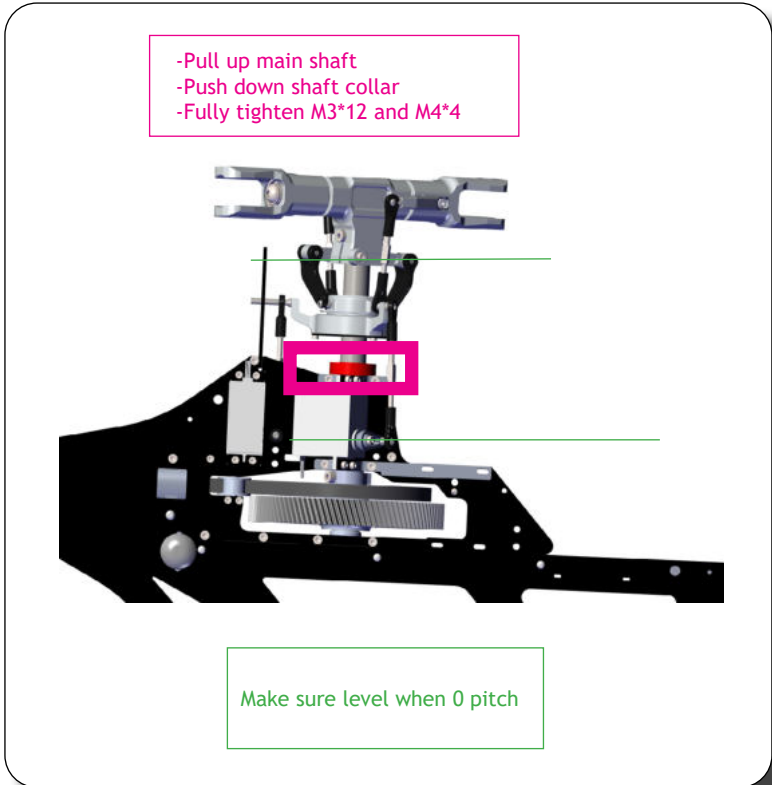
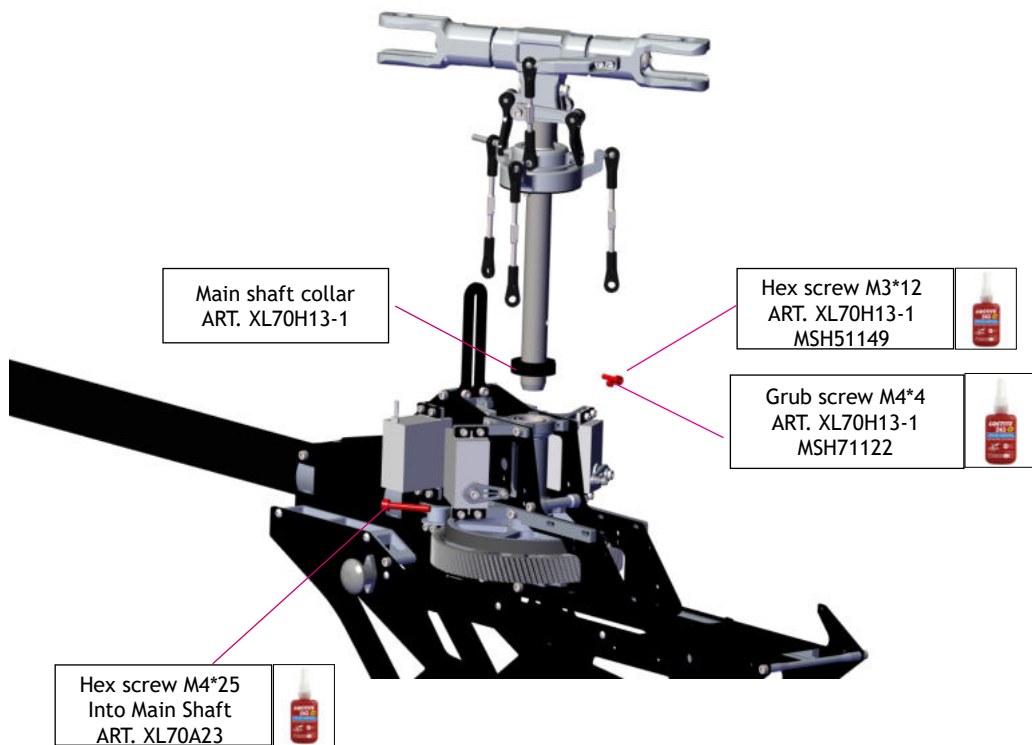


100T Front Pulley
ART. XL70V2B12

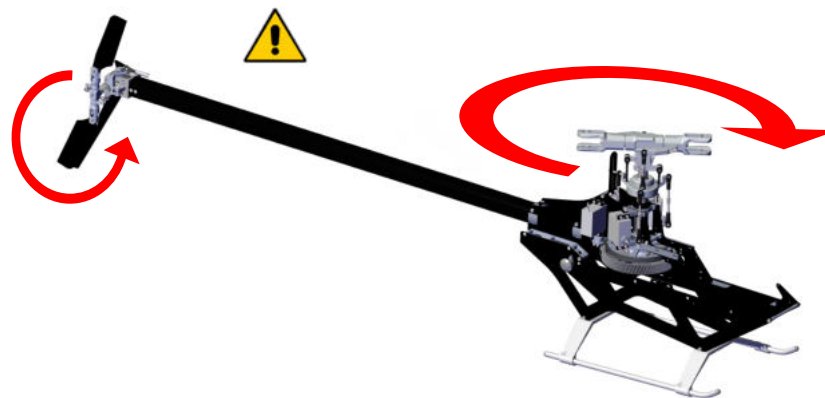




Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight

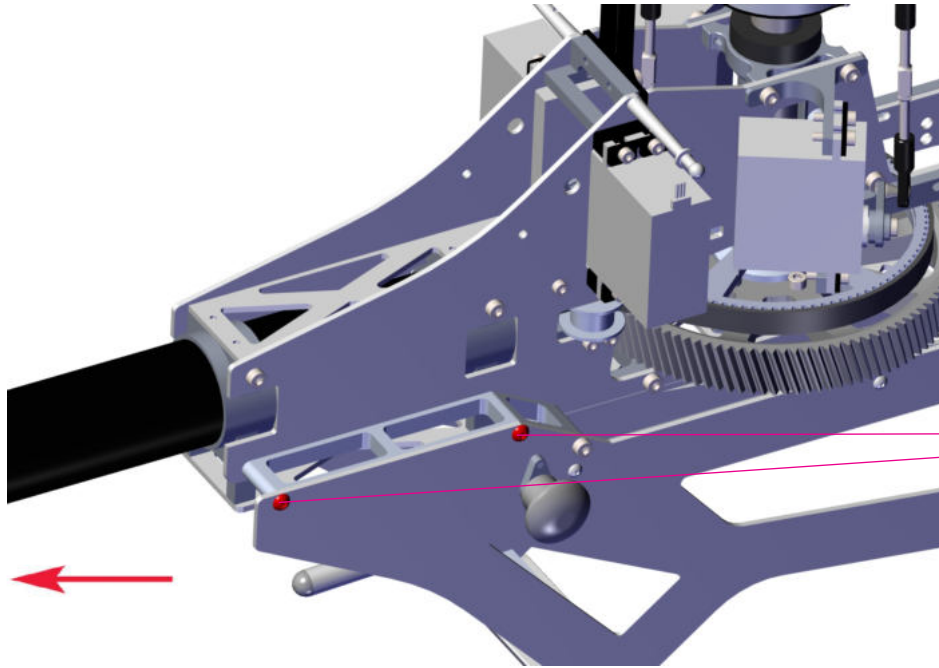


Check the rotation direction during the installation of the belt

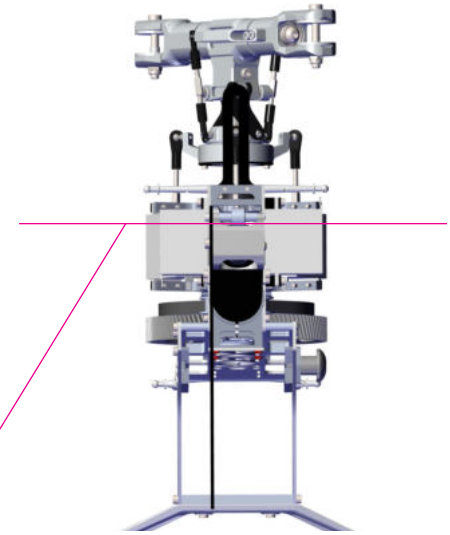




Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight

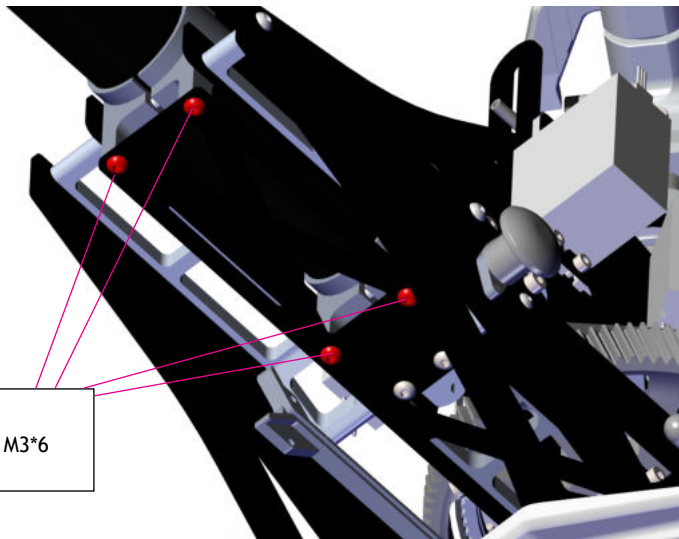


Button head screw M3x45
Set belt tension by pulling backwards on the tail boom. Ensure tail tail case is level, then tighten screws.

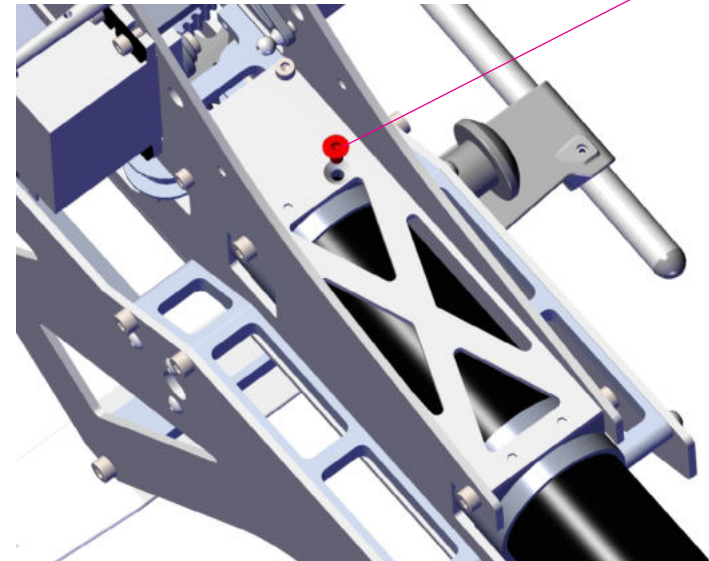


Check tail box lever before fully tightening M3*45 screw

Silver Flat screw M3*6
Goes Through Wall of Tail Boom
ART. XL70A25-1

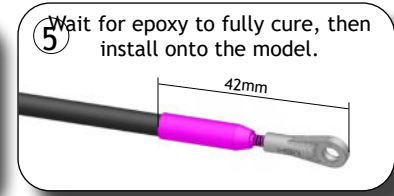
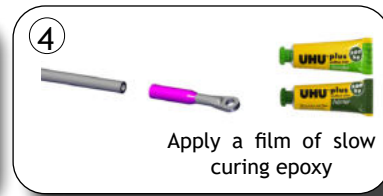
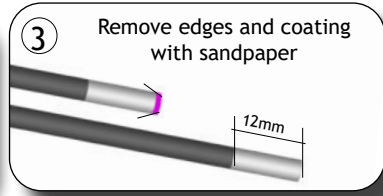
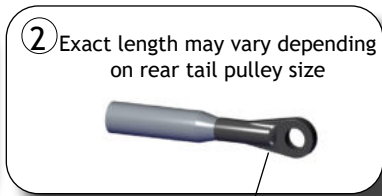
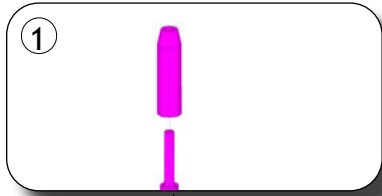


fully tighten M3*6





Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight



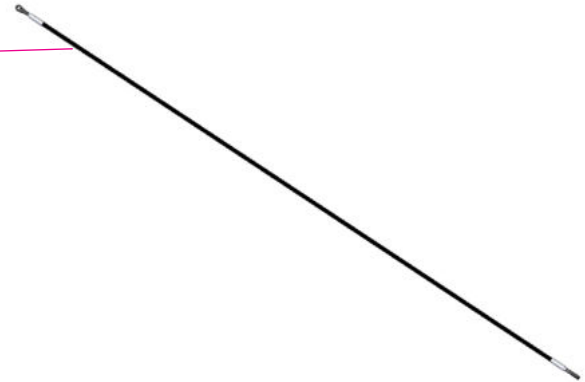
Hex screw
M2.5*12
ART. MSH71104



Uniball Link
4.8mm M2.5
ART. MSH71083

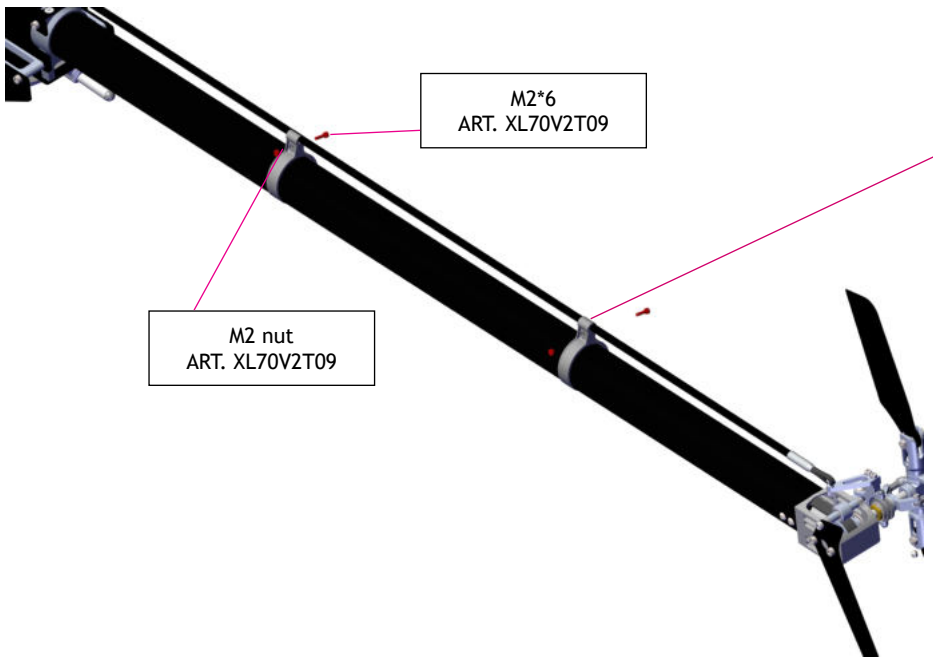


Tail Control Rod V2
ART. XL70V2T08





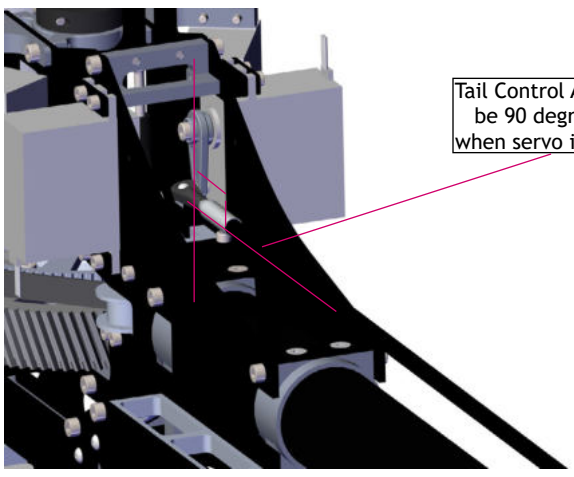
Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight



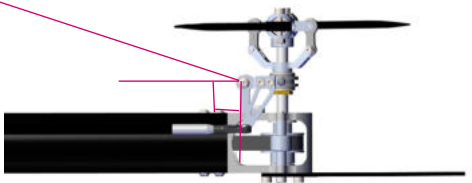
M2*6
ART. XL70V2T09

M2 nut
ART. XL70V2T09

Tail Control Rod Guide
ART. XL70V2T09

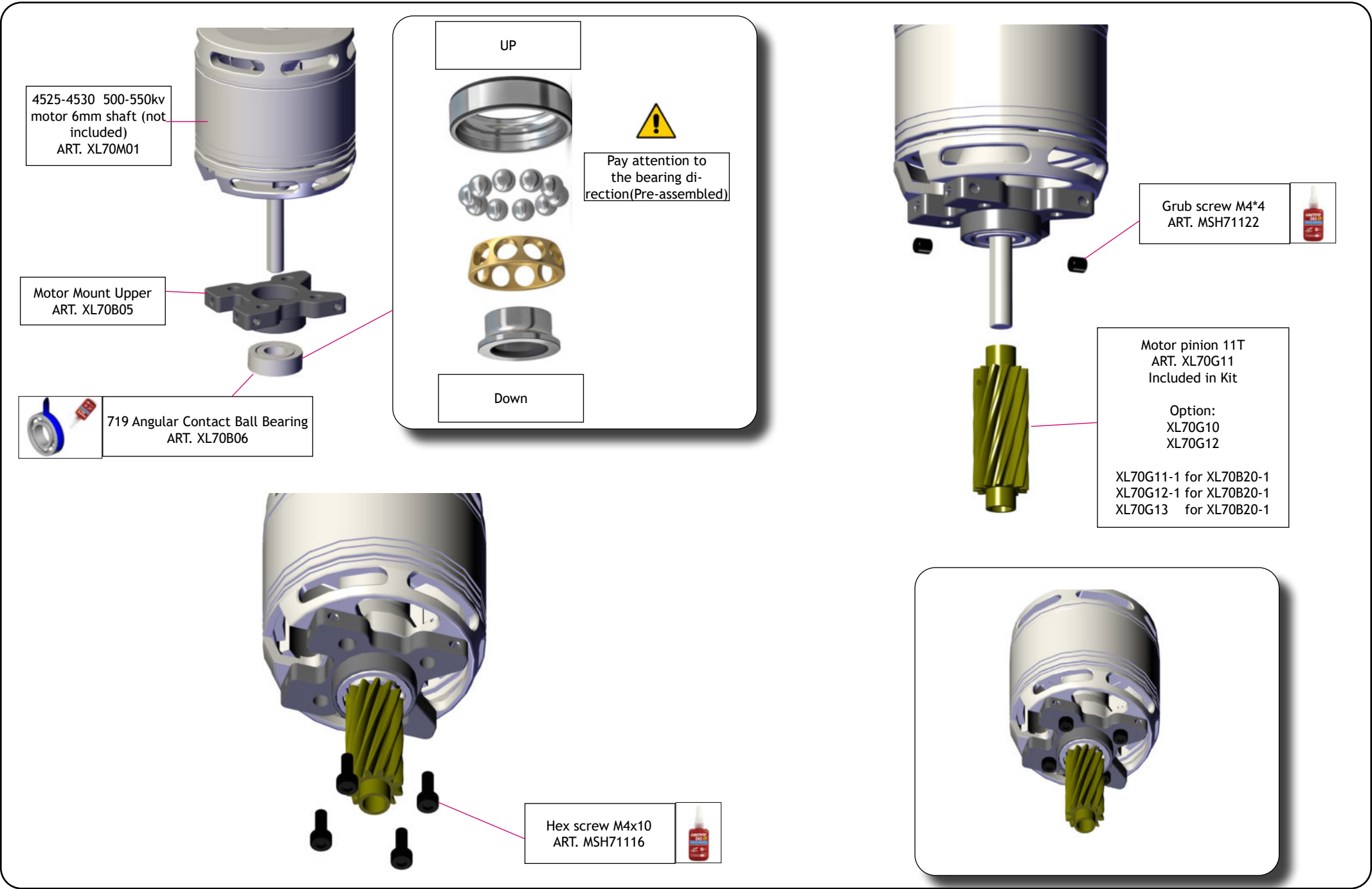


Tail Control Arm should
be 90 degree angle
when servo is centered





Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight





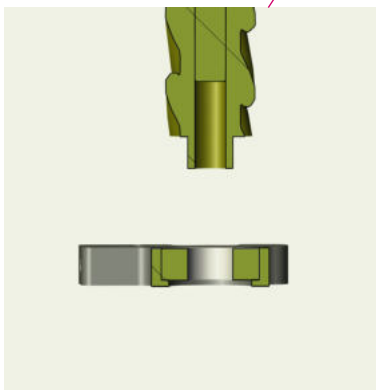
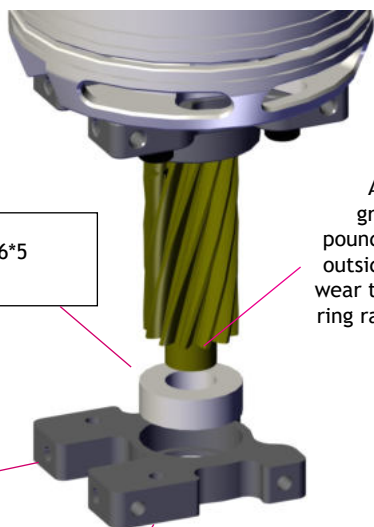
Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight



Ball Bearing 8*16*5
ART. XL70A16

Add a small dab of green retaining compound (638/648/680/620) to outside of pinion to prevent wear to pinion and inner bearing race. Use heat to remove for maintenance.

Lower Motor Mount
ART. XL70B07



Pay attention to the bearing direction (Pre-assembled)

Hex screw M3x6
ART. MSH71108

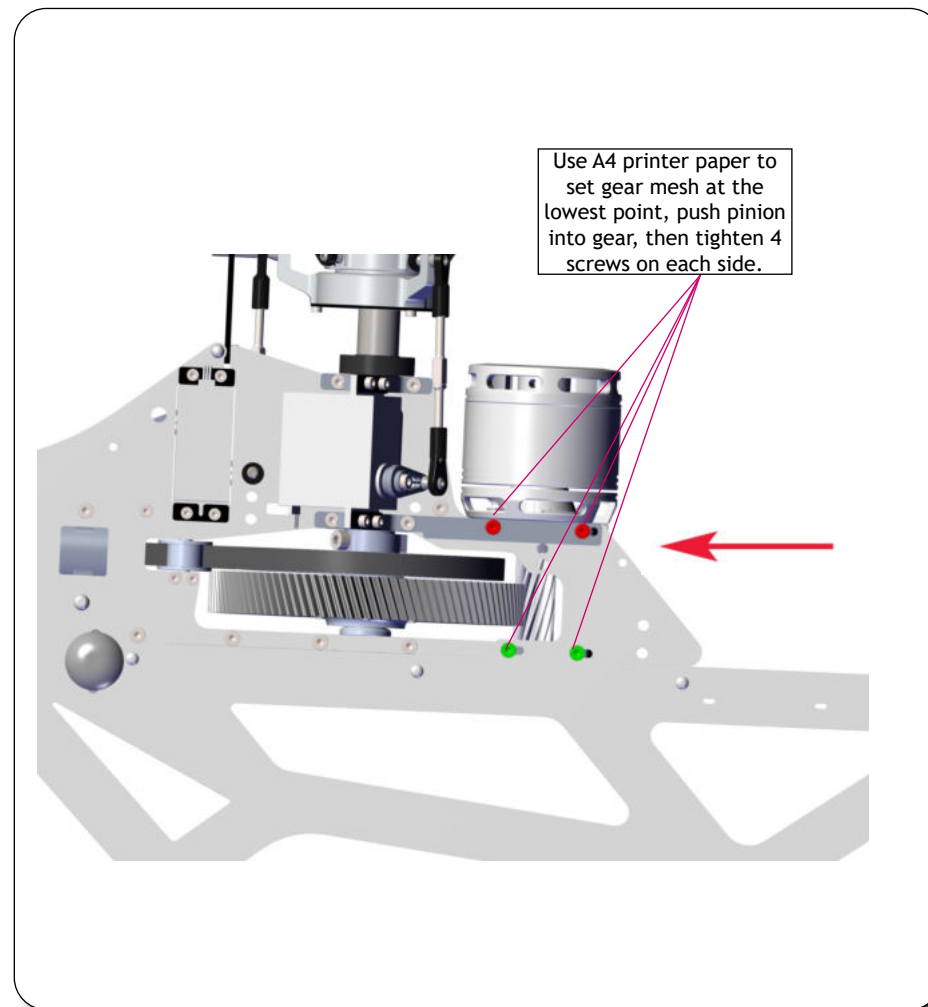
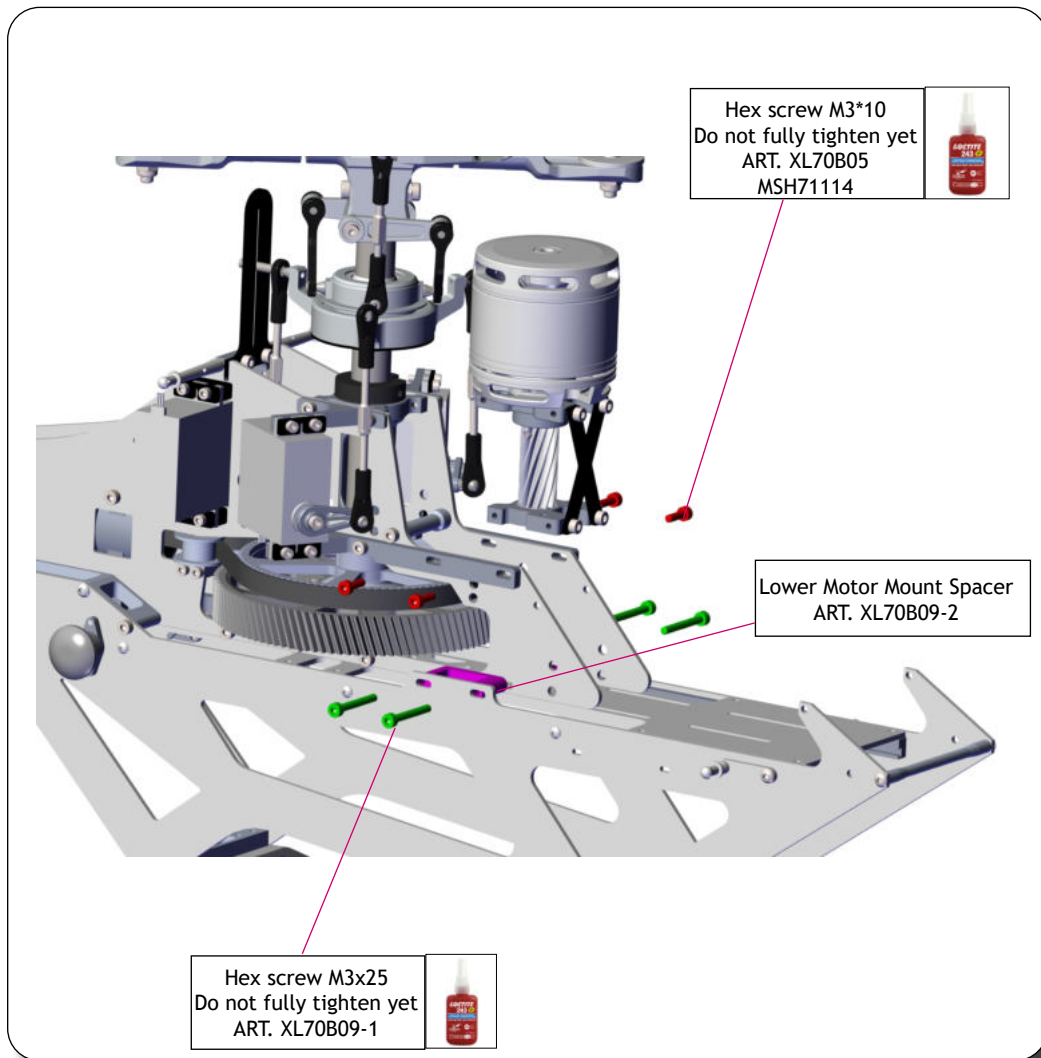


X Carbon Fiber Brace
ART. XL70B08



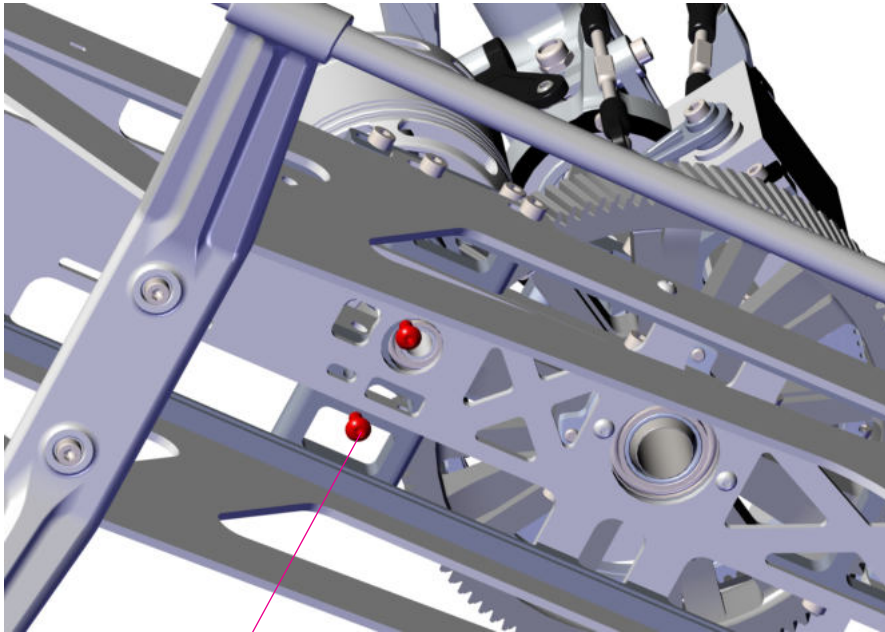


Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight

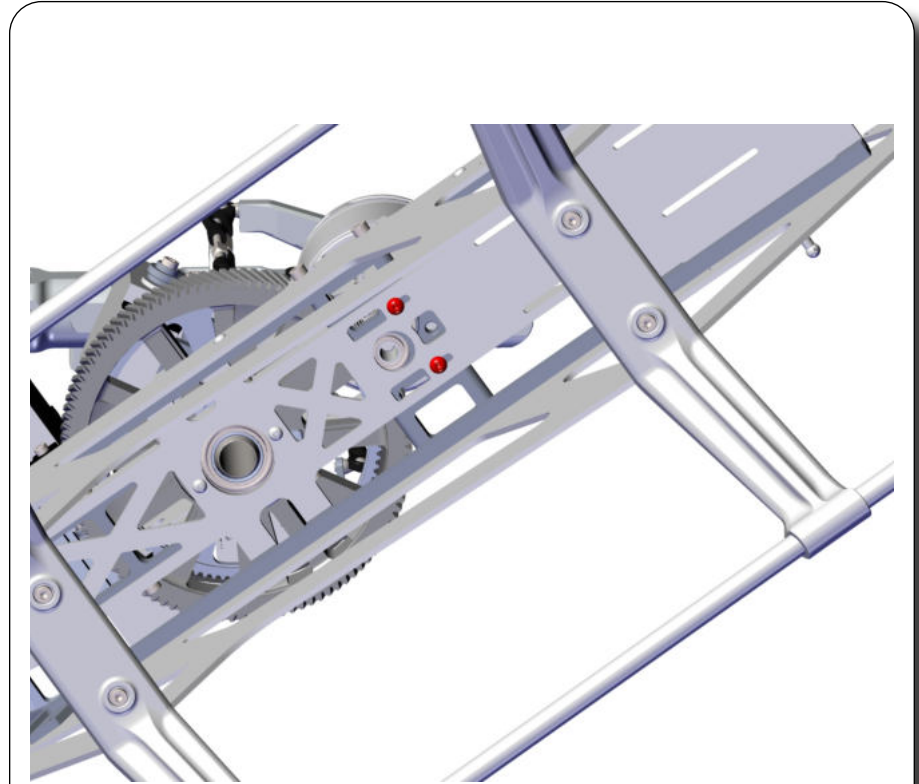


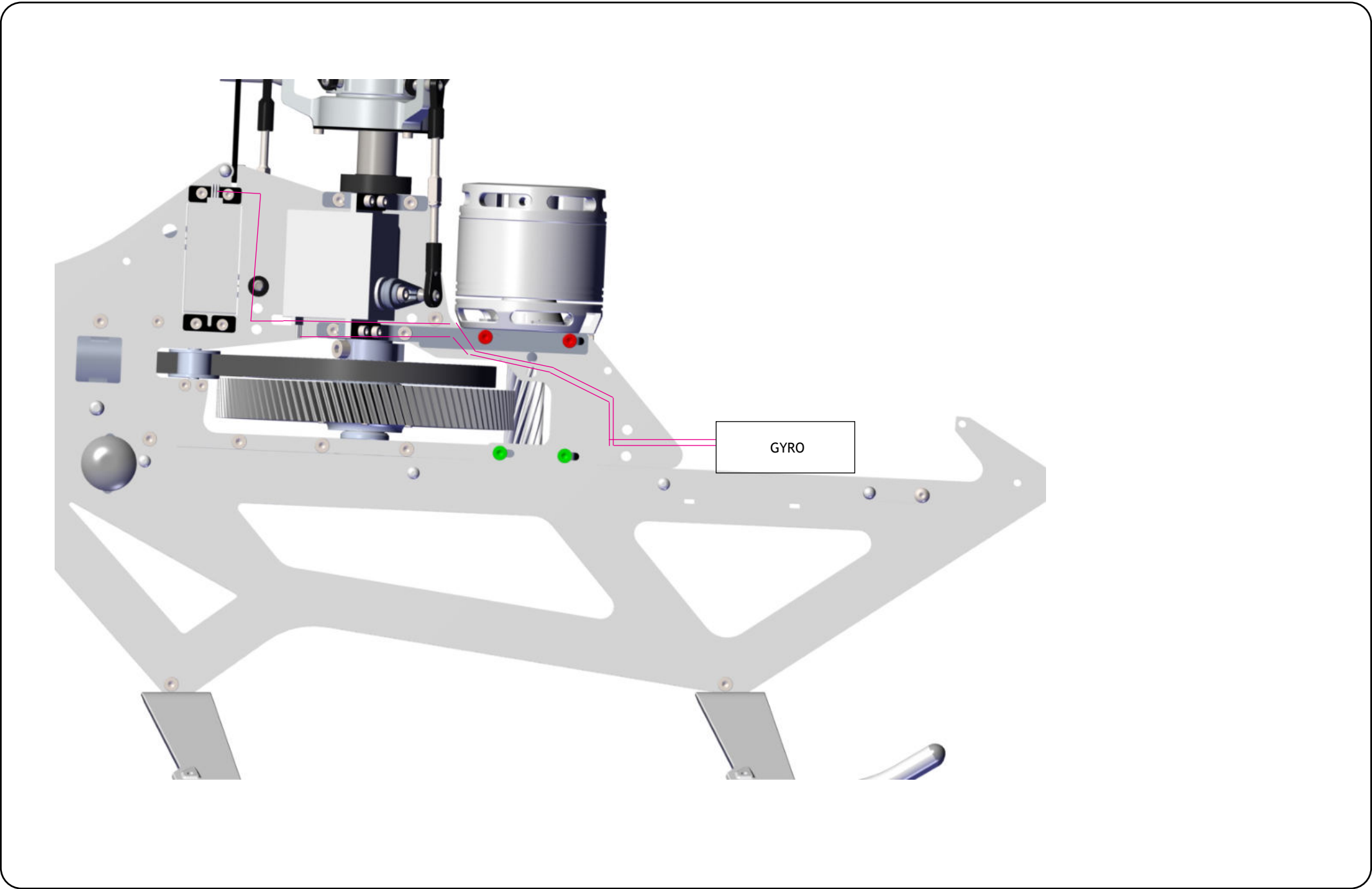


Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight



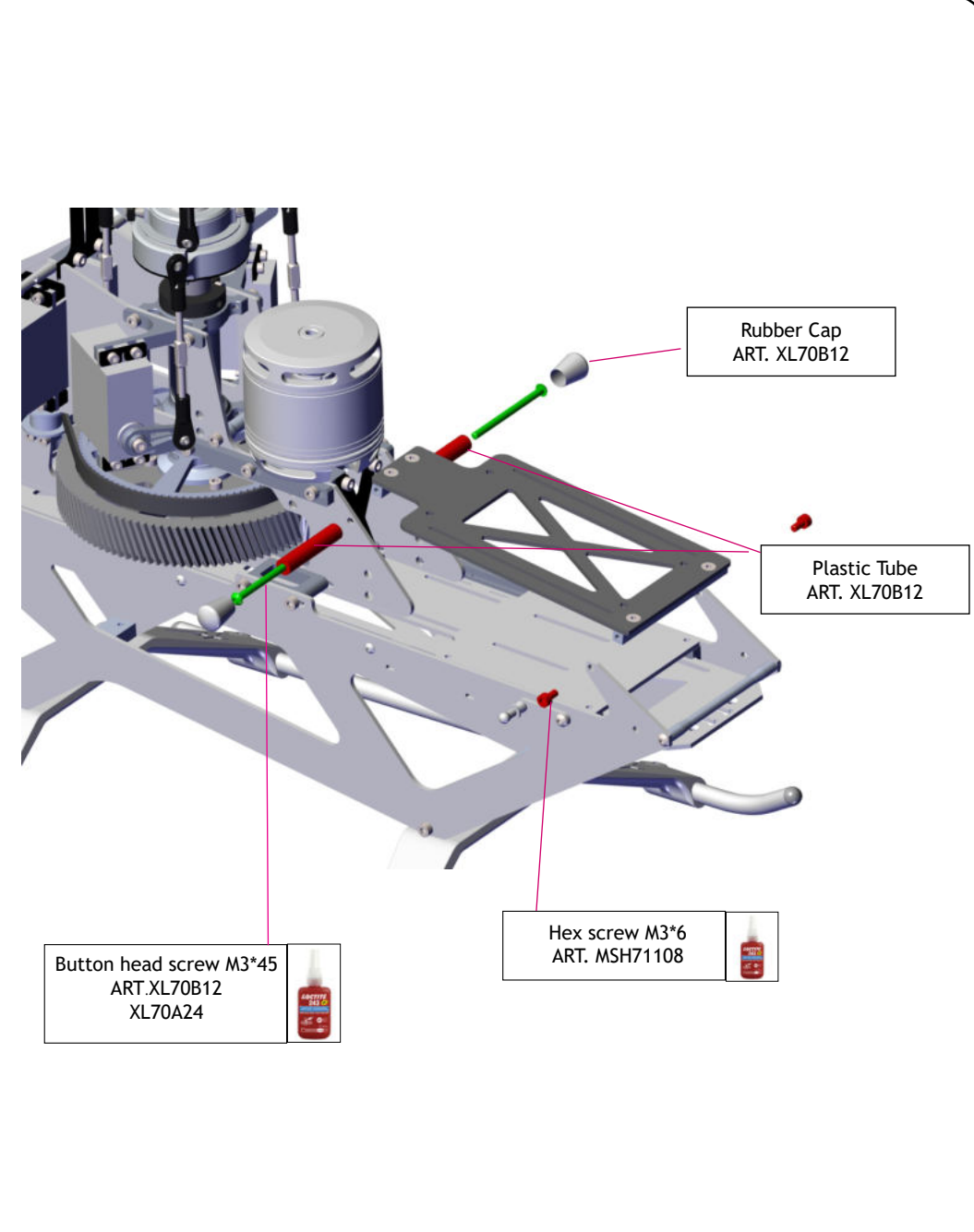
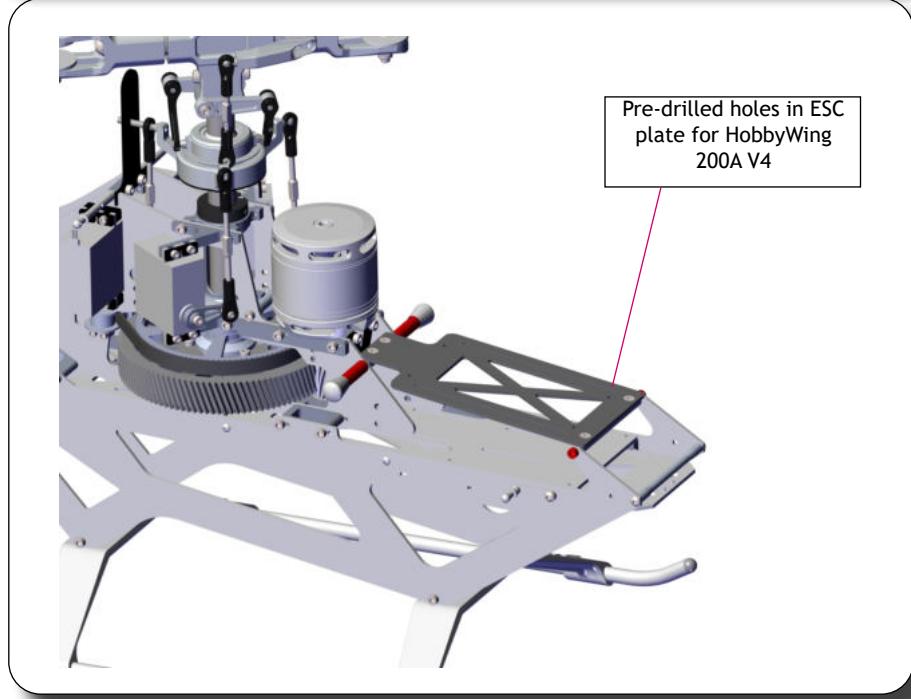
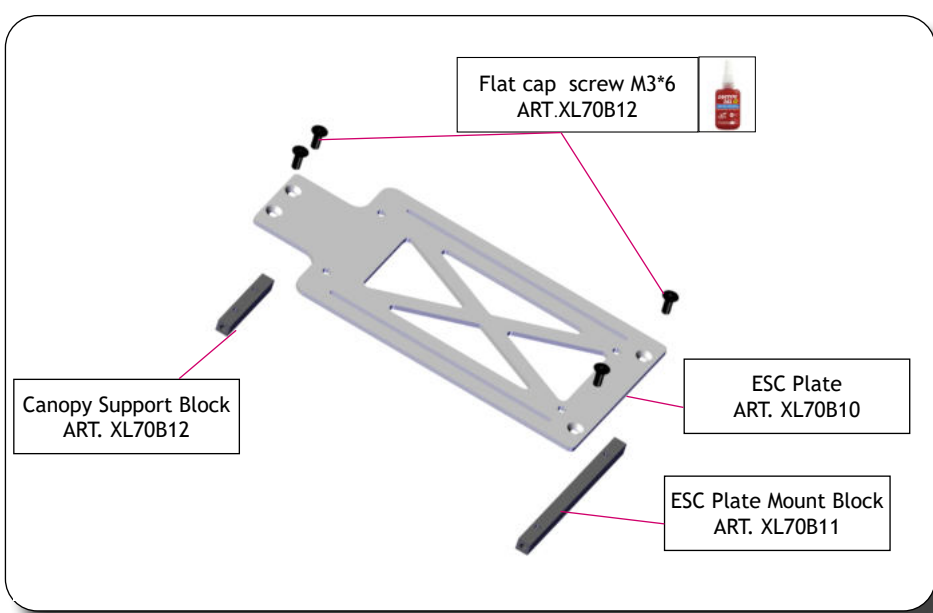
Button head screw
M3*6
ART.XL70A21







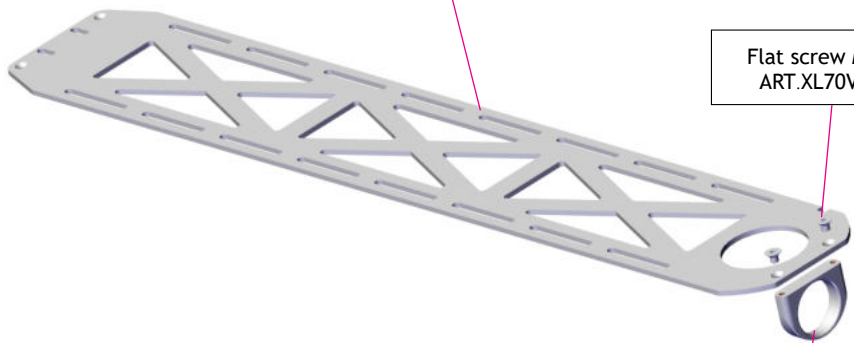
Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight





Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight

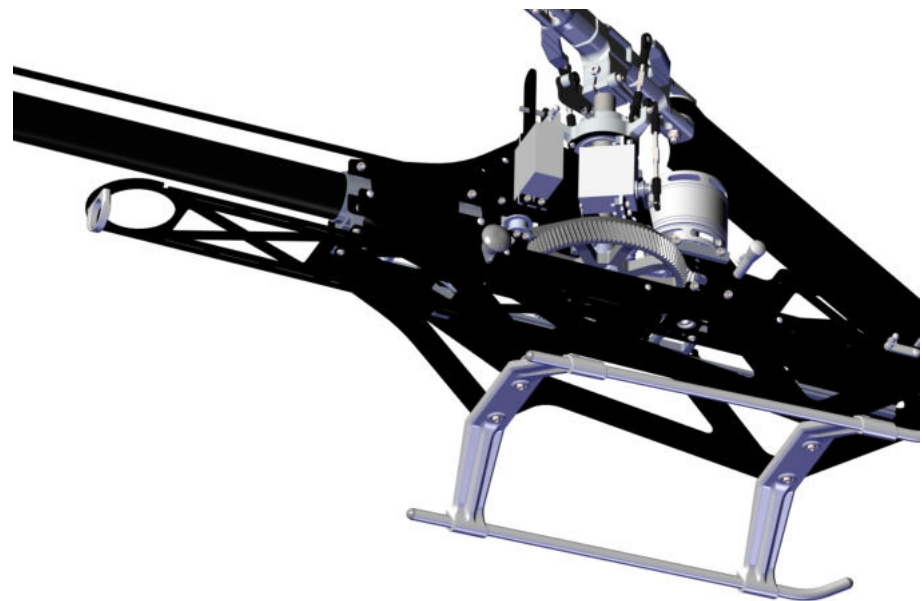
Battery Tray V2
ART. XL70V2B13



Flat screw M2.5*6
ART.XL70V2B13



Battery Tray Puller
ART. XL70V2B14



Optional



Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight



AS150 Big red housing
ART. XL70V2A04

AS150 Anti-spark bullet
ART. XL70V2A06

Flat screw M2.5*6
ART.XL70V2B16



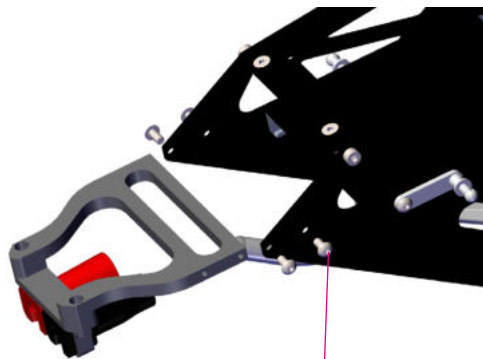
Battery Quick Connect Mount
ART. XL70V2B15

Solder ESC wire

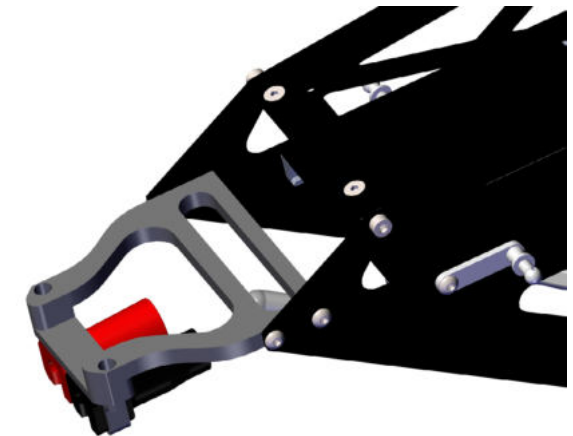
AS150 Female bullet
ART. XL70V2A07

AS150 Small black housing
ART. XL70V2A05

Battery Connector Retainer
ART. XL70V2B16

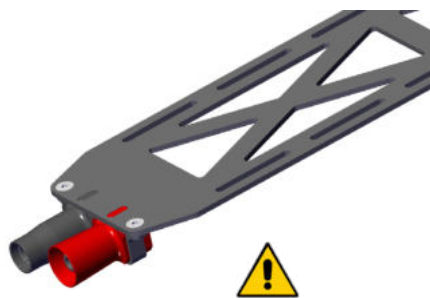
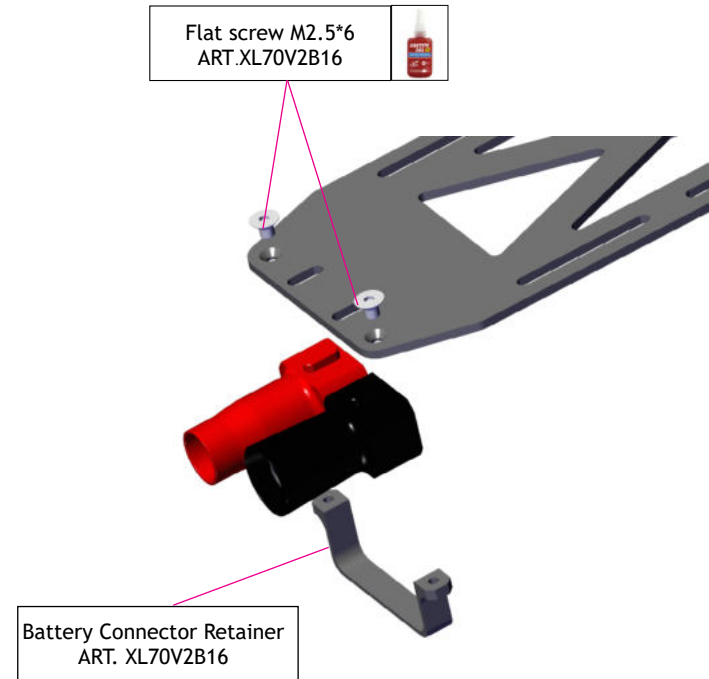
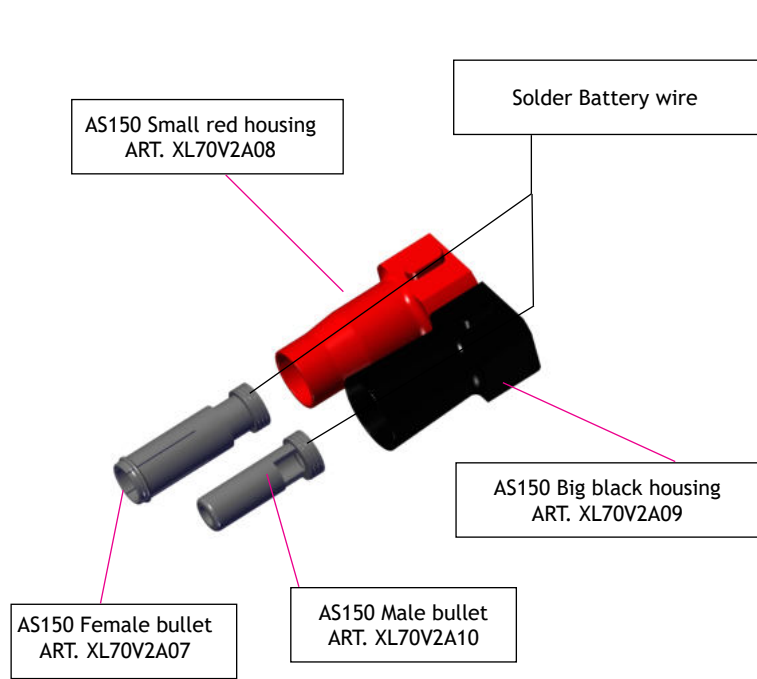


Button head screw
M3*6
ART.XL70A21

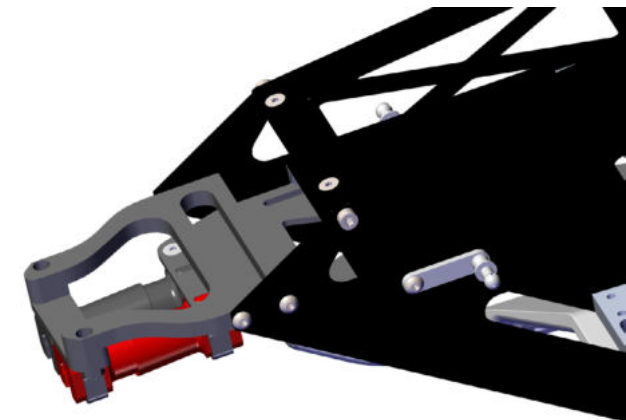




Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight

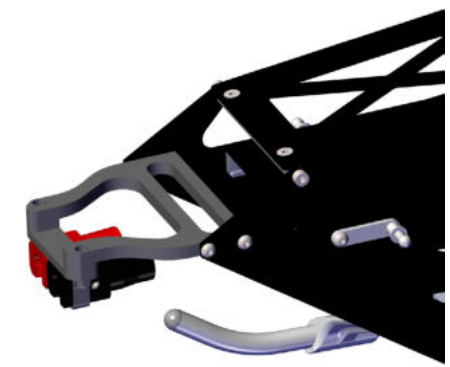
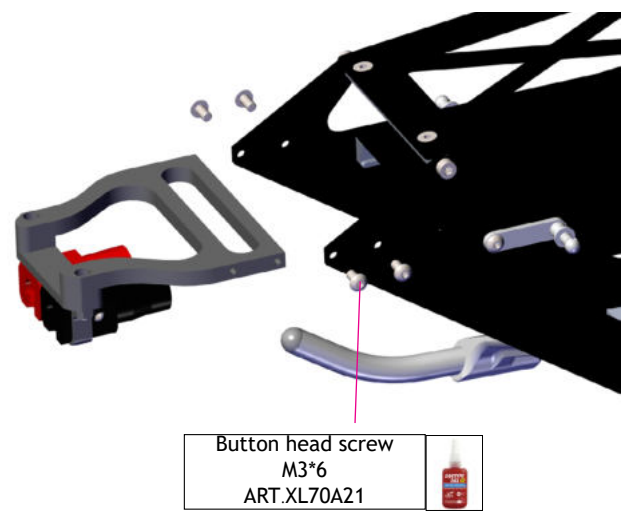
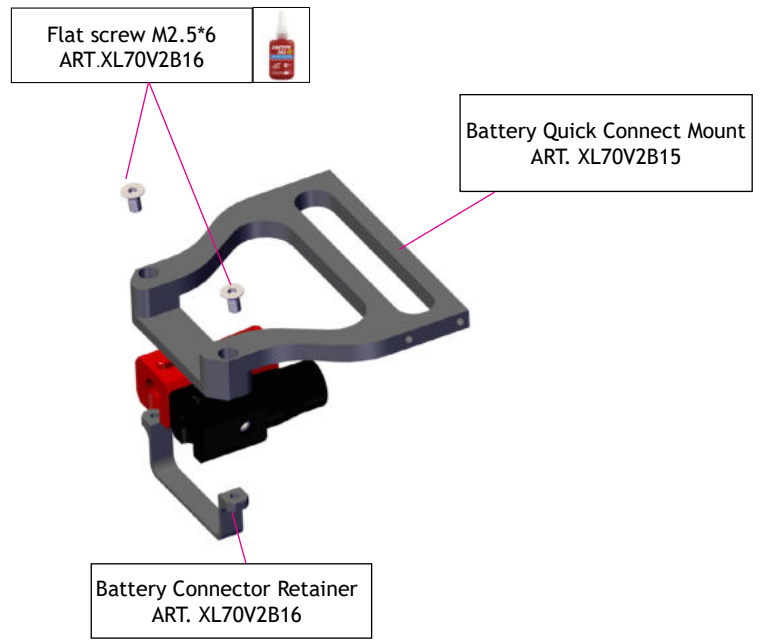
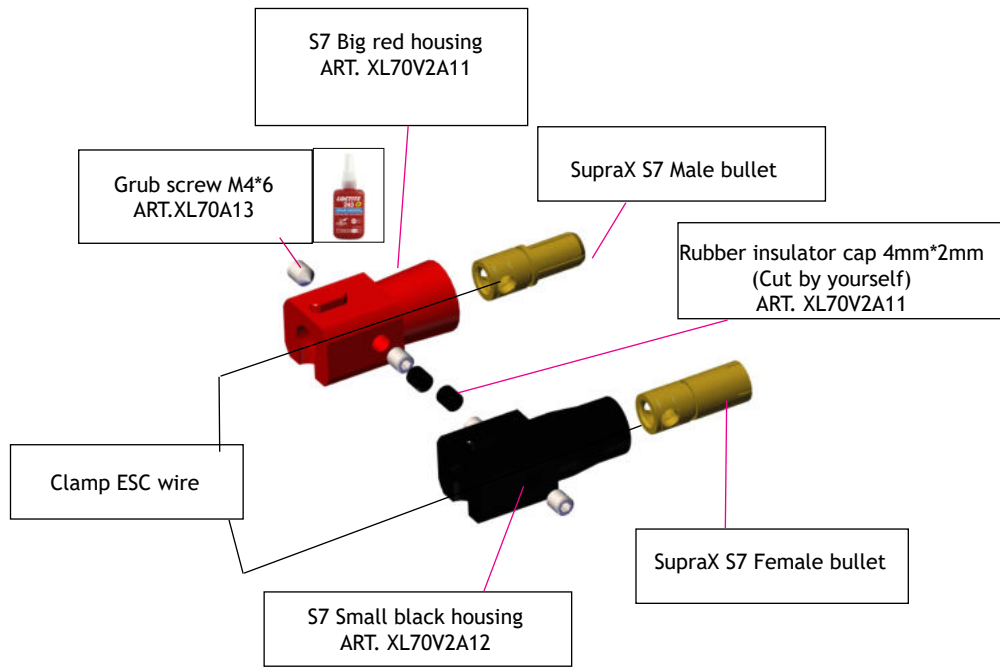


Make sure the connectors are fully mated before flying



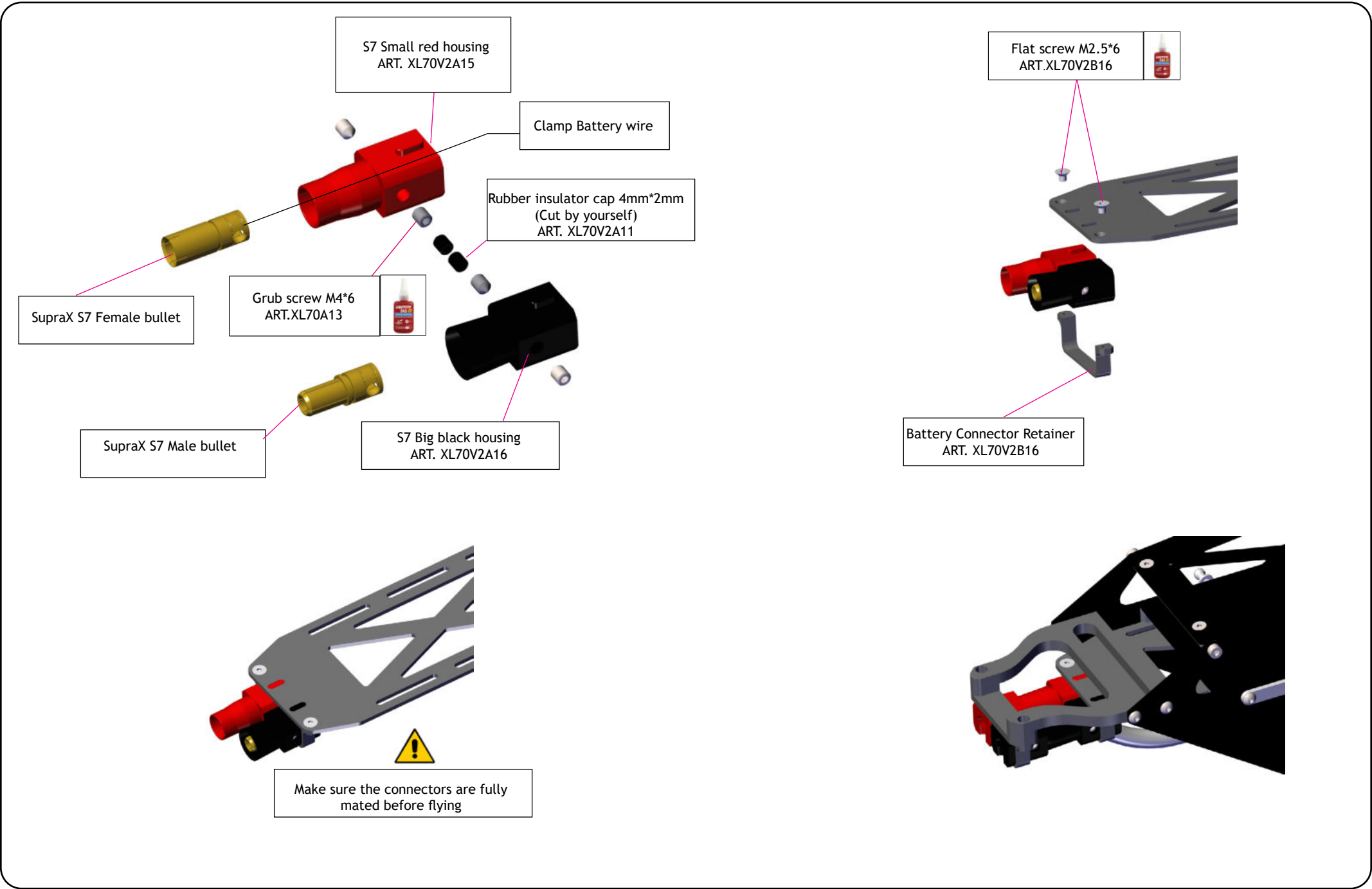


Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight





Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight



S7 Small red housing
ART. XL70V2A15

Clamp Battery wire

Rubber insulator cap 4mm*2mm
(Cut by yourself)
ART. XL70V2A11

Flat screw M2.5*6
ART. XL70V2B16

SupraX S7 Female bullet

Grub screw M4*6
ART. XL70A13

SupraX S7 Male bullet

S7 Big black housing
ART. XL70V2A16

Battery Connector Retainer
ART. XL70V2B16

Make sure the connectors are fully mated before flying

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