



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: 18mm
Battery Compartment Size: 380mm*68mm*70mm

Manual Release 1.0
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:

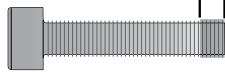
- ALWAYS check radio control system for proper operation before operating the model.
- ALWAYS check radio control system power levels before operating the model. Flying with low transmitter or receiver battery may cause loss of control.
- ALWAYS pay attention to your surroundings, and look out for others 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!

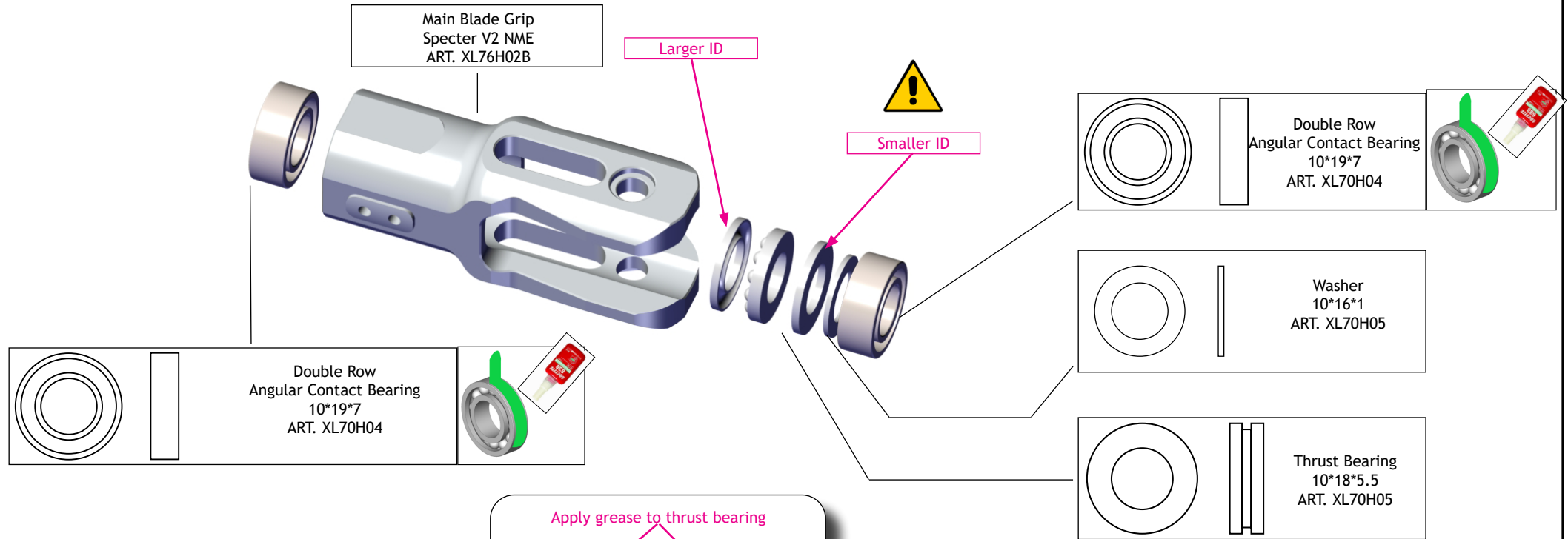
Equipment Required for Assembly



<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>Wicking compound bearing retainer</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>Thrust Bearing Grease Pitch Gauge</p>

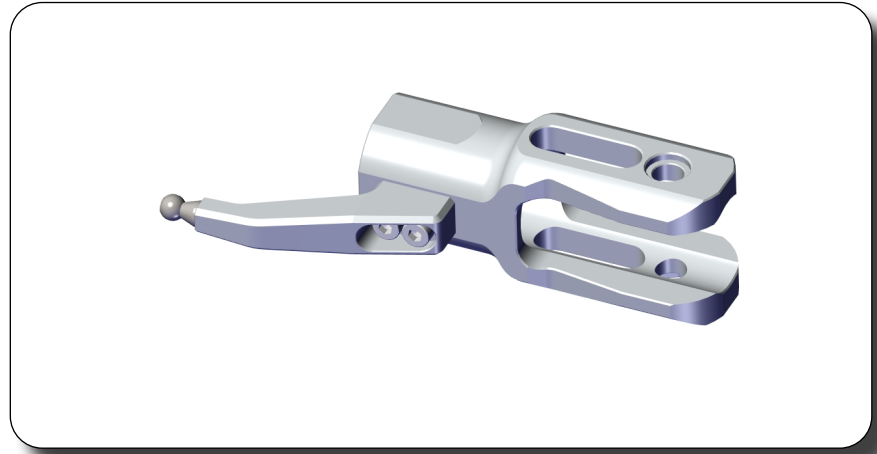
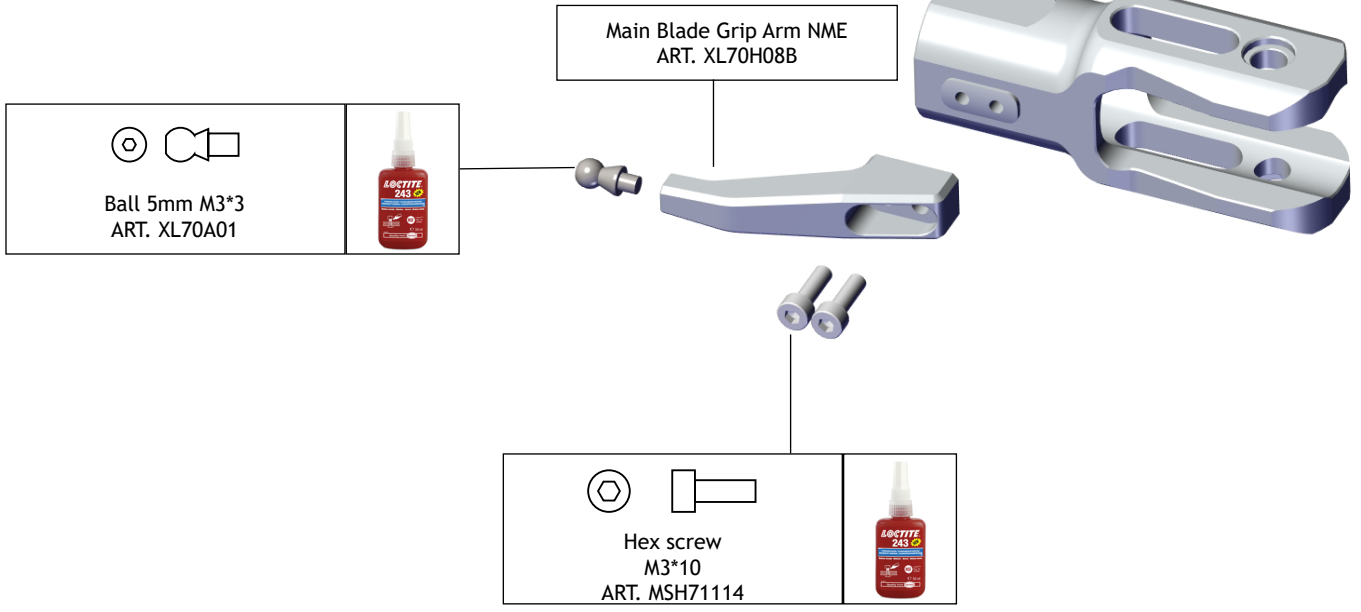


Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight





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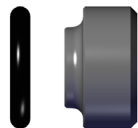


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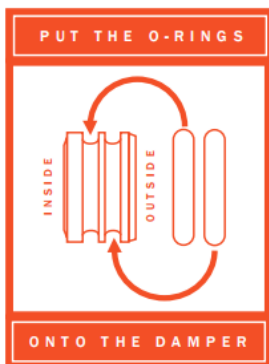
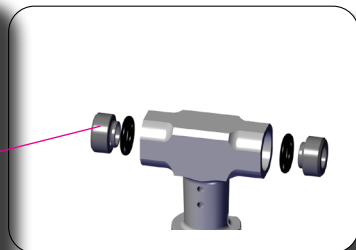
Head Dampeners



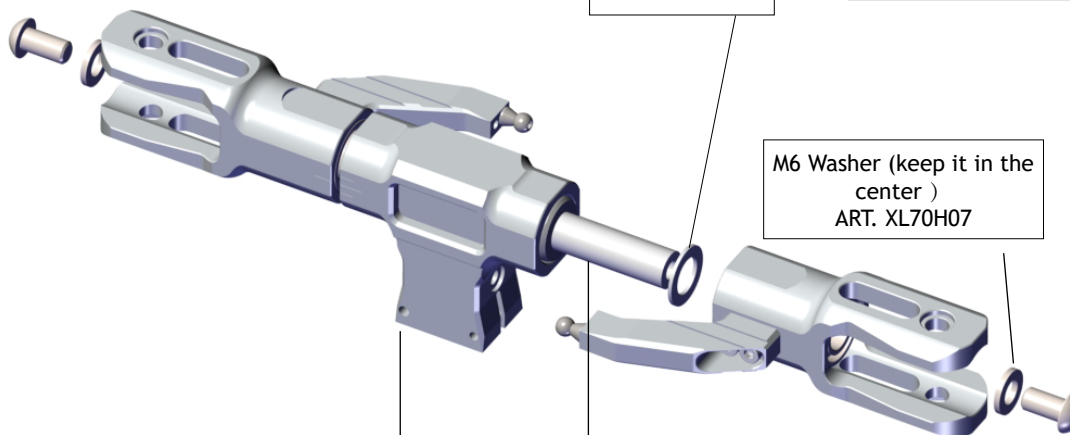
ART. XL70H02-3
Sport / 3D
(POM with two 80° O-Ring)



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



Apply silicon grease on the damper and Spindle



Washer
10°16*1
ART. XL70H05

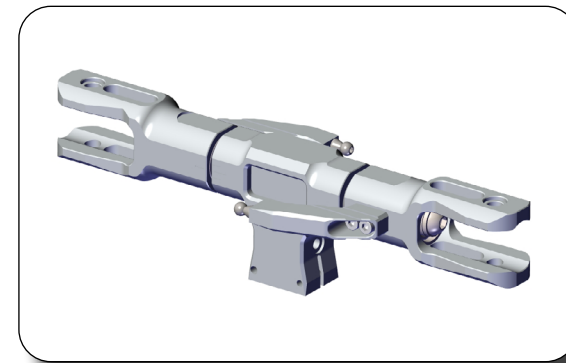


Screw M6*12
ART. XL70H07

M6 Washer (keep it in the center)
ART. XL70H07

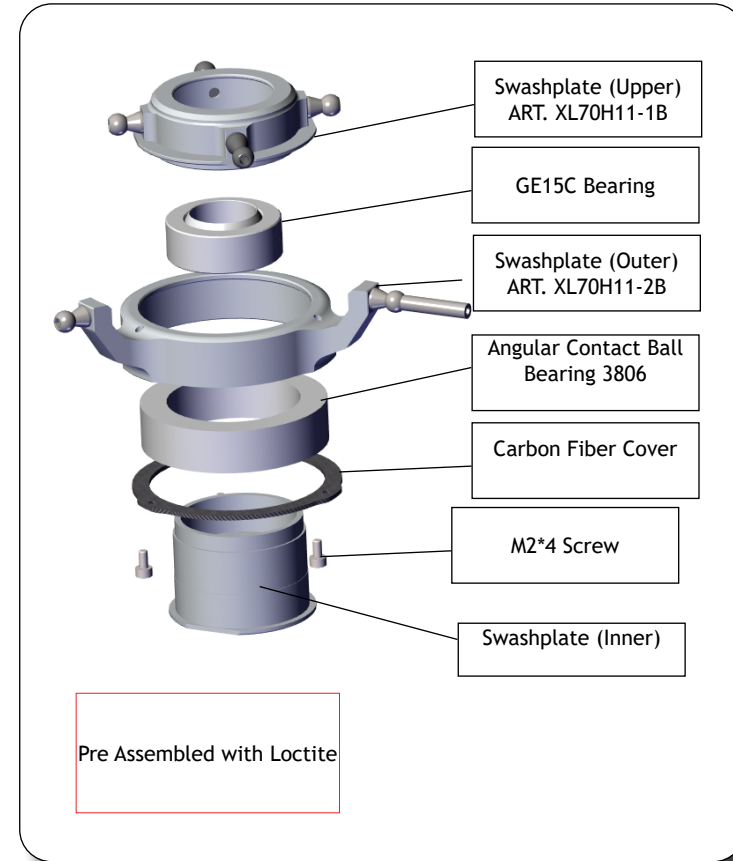
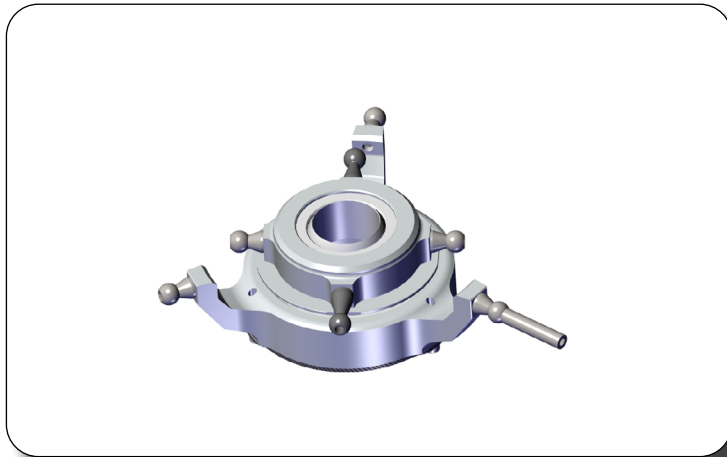
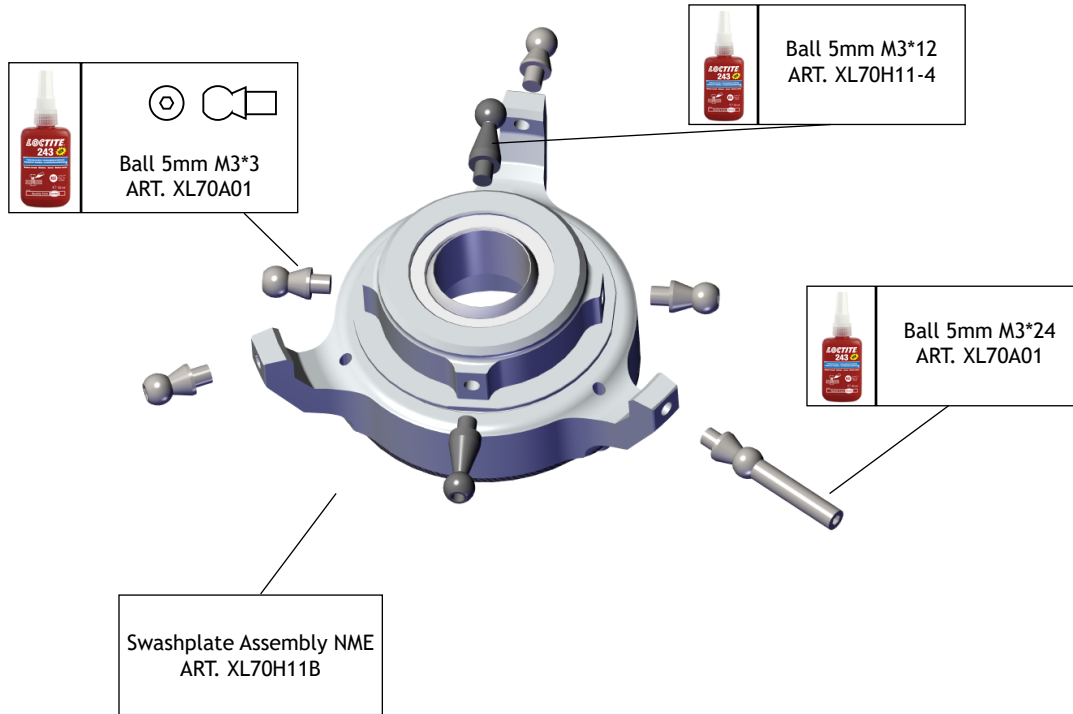
Spindle
ART. XL70H07

Main Rotor Hub NME
ART. XL70H01-1B



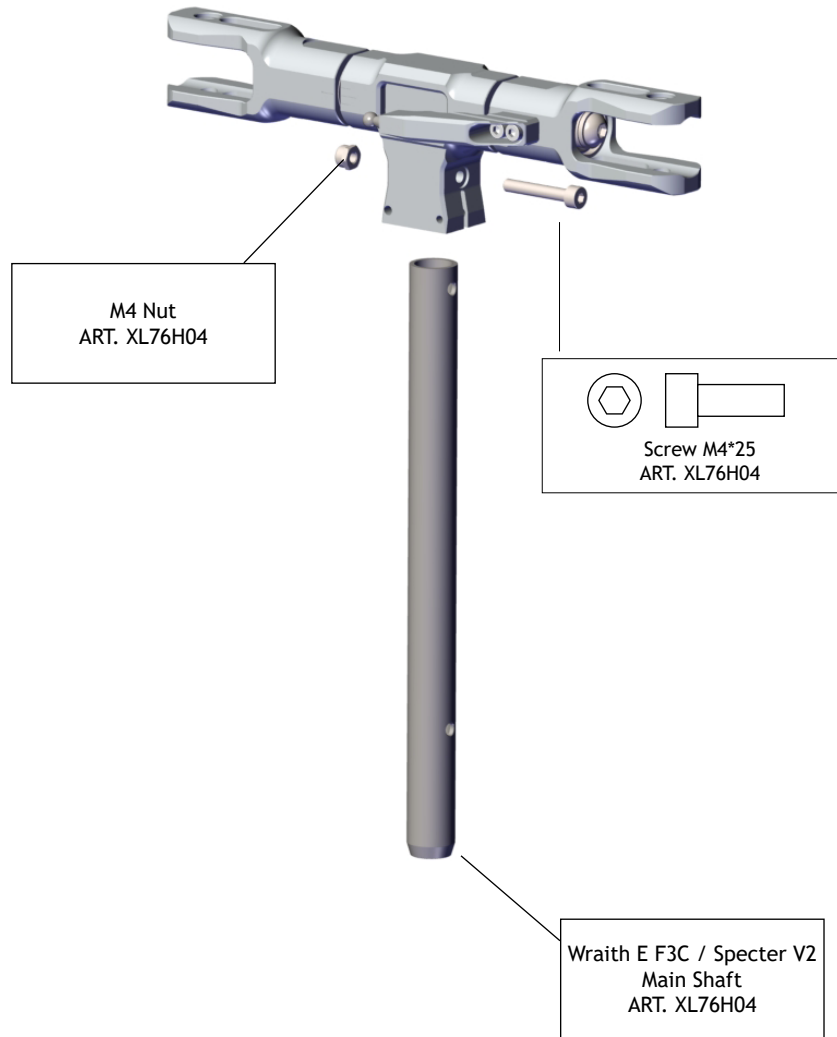


Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight








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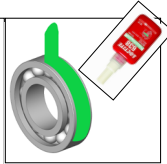




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 |
Spacer 3*5*0.5
ART. XL70H09B

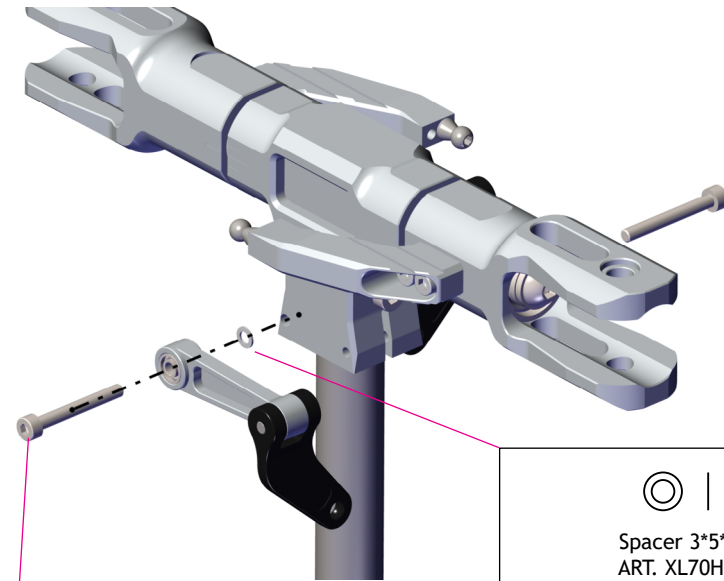
  |
Ball Bearing
3*7*3
ART. XL52A12
ART. XL70H09B





Pin 3*14
ART. XL70H09B

Control arm NME
ART. XL70H09B

Radius Arm
ART. XL70H09
ART. XL70H10



 |
Spacer 3*5*0.5
ART. XL70H09B

 Screw M3*25
ART. XL70H09B

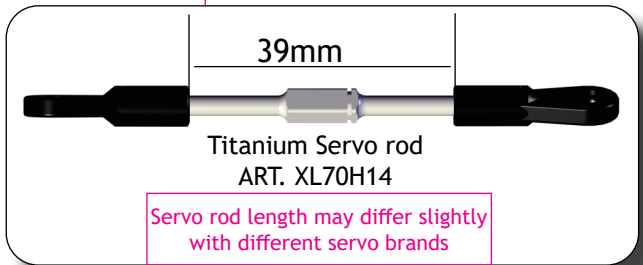
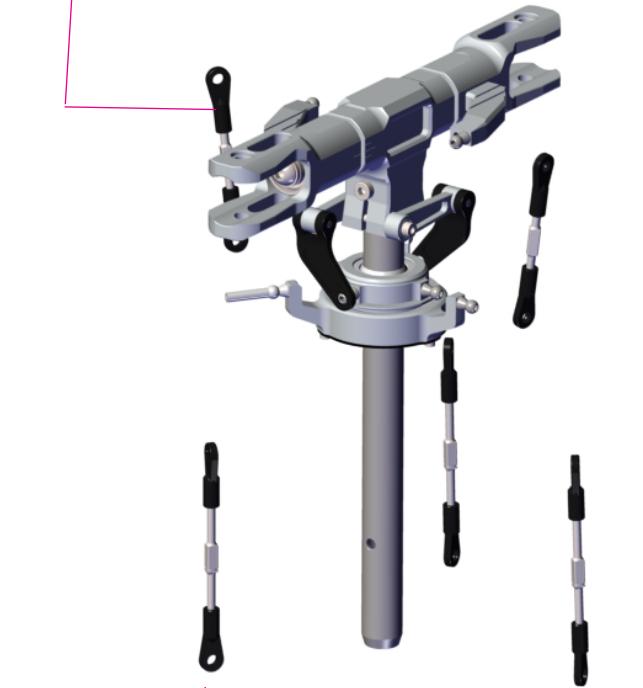
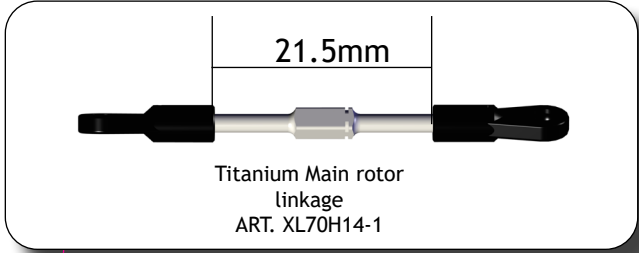
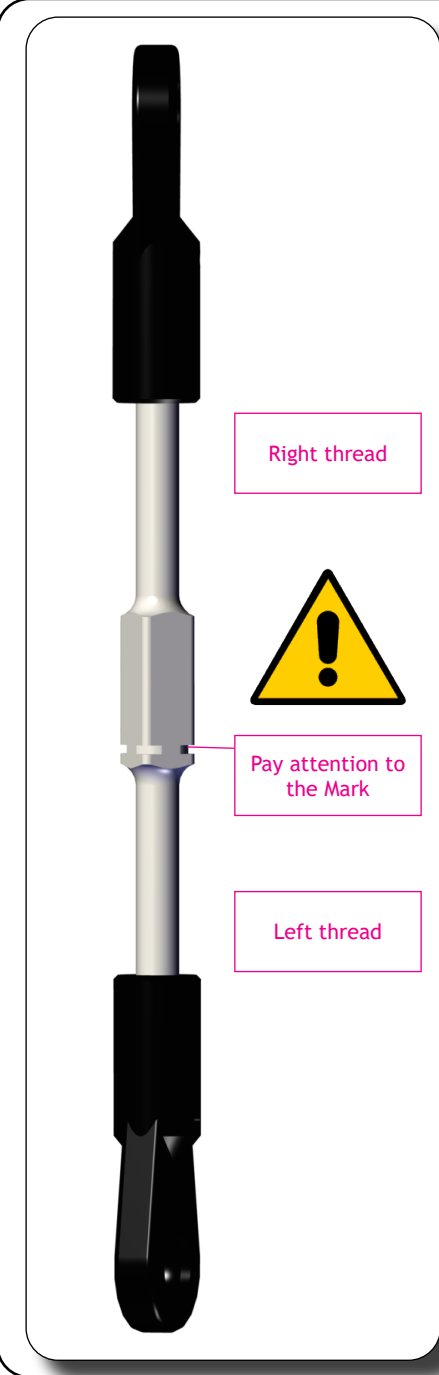
2X

Pre Assembled



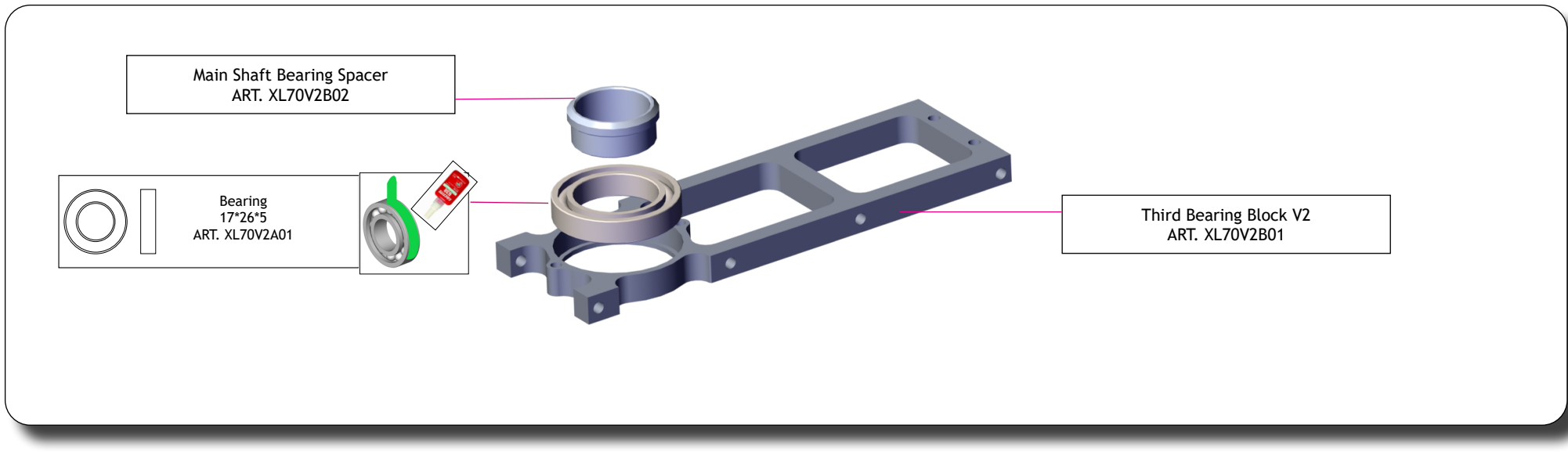
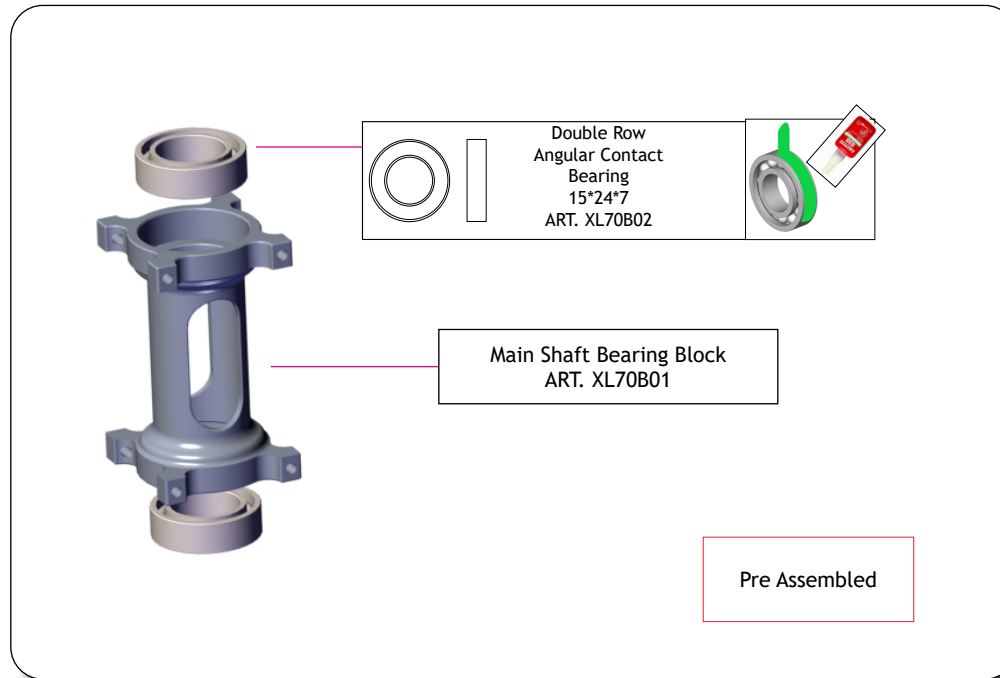


Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight



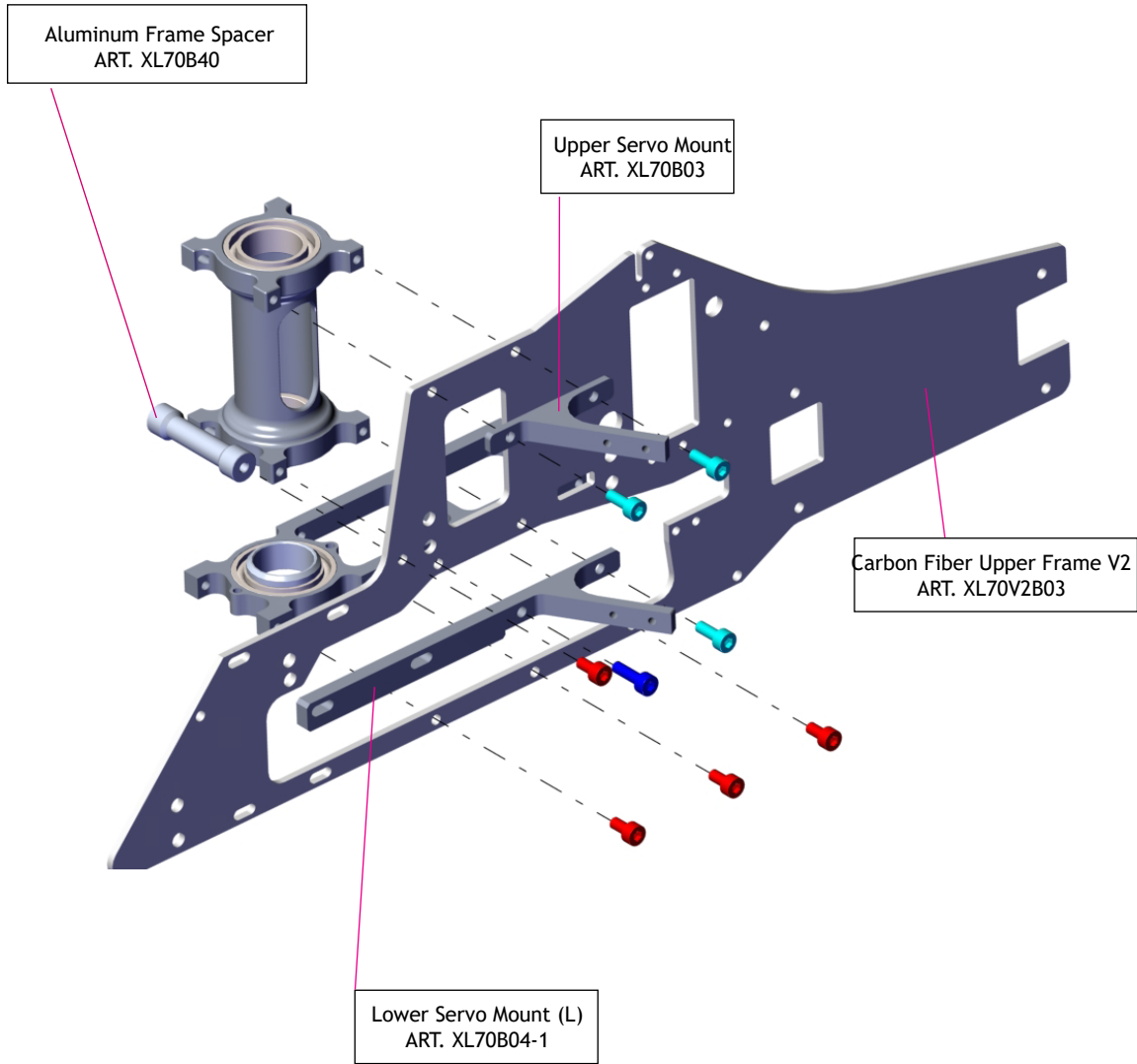


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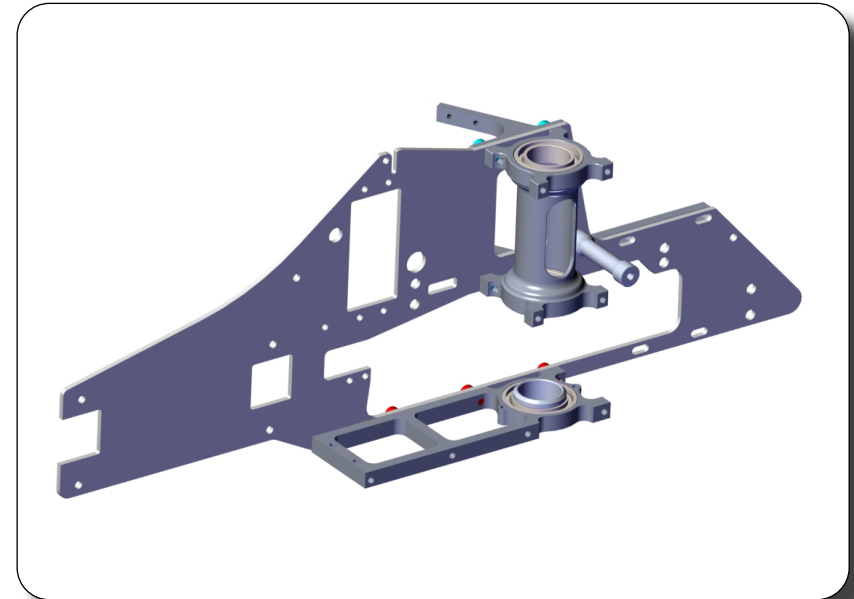




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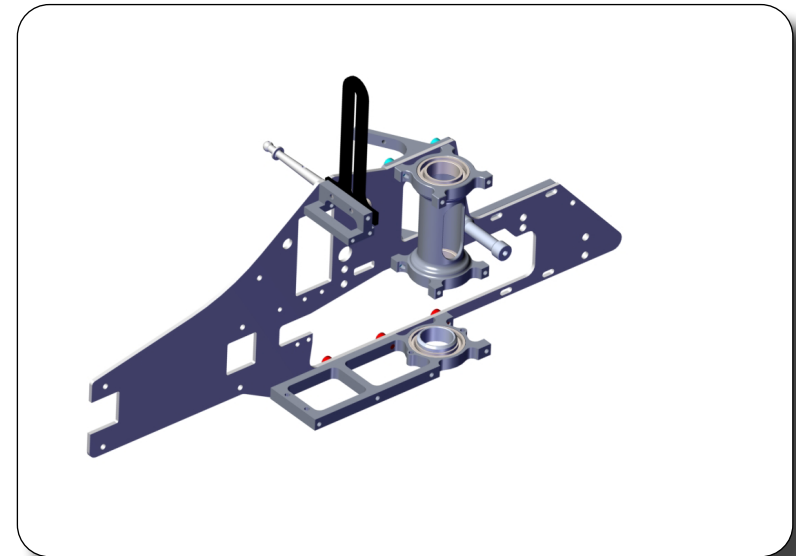
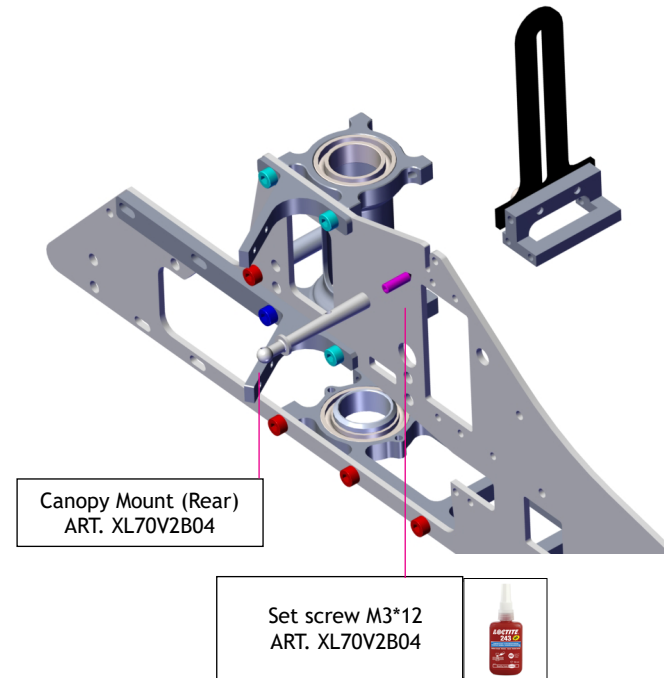
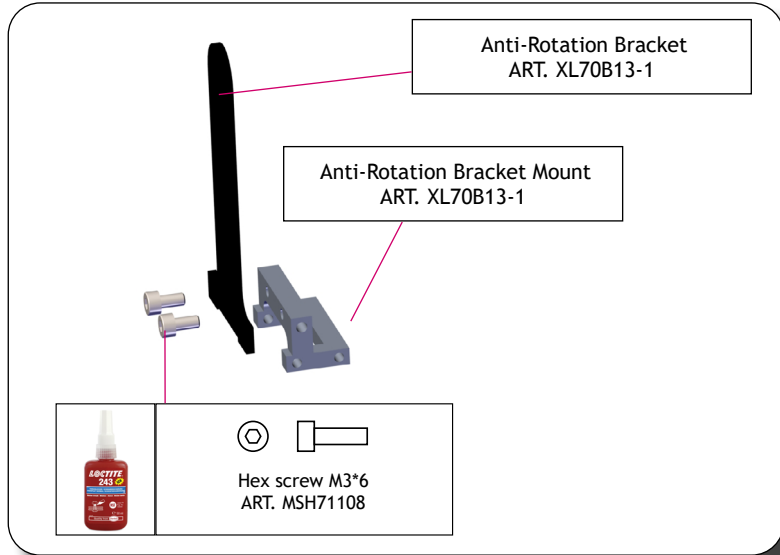


	 Hex screw M3*6 (Red in picture) ART. MSH71108
	 Hex screw M3*8 (Tiffany Blue in picture) ART. MSH71109
	 Hex screw M3*10 (Blue in picture) ART. MSH71114





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Do Not Install This Silver Screw Yet

Flat screw M3*4
ART. XL70V2B05

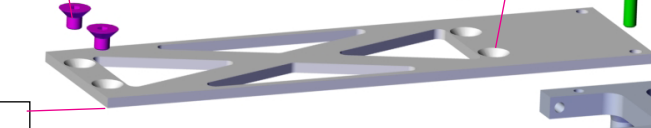


Hex screw M2.5*6
ART. MSH71110

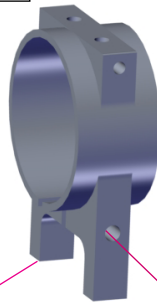


Front Belt Idler Mount (Upper)
ART. XL70V2B06

Carbon Fiber Plate
ART. XL70V2B07

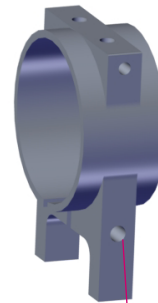


Tail Boom Clamp V2
ART. XL70V2B05

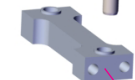


Unthreaded Hole Faces Right

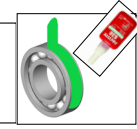
Front Belt Idler Mount (Lower)
ART. XL70V2B06



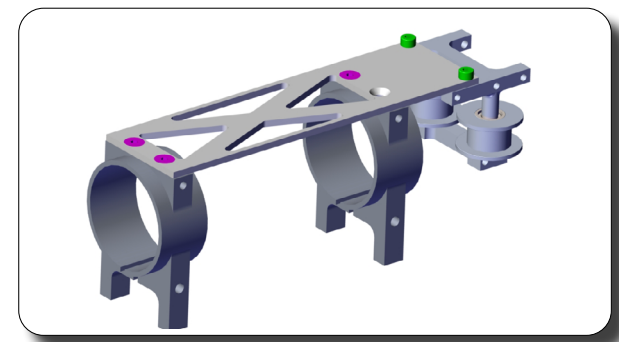
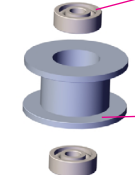
3*17 Pin
ART. XL70V2B06



Ball bearing
3x9x4
ART. XL70A20

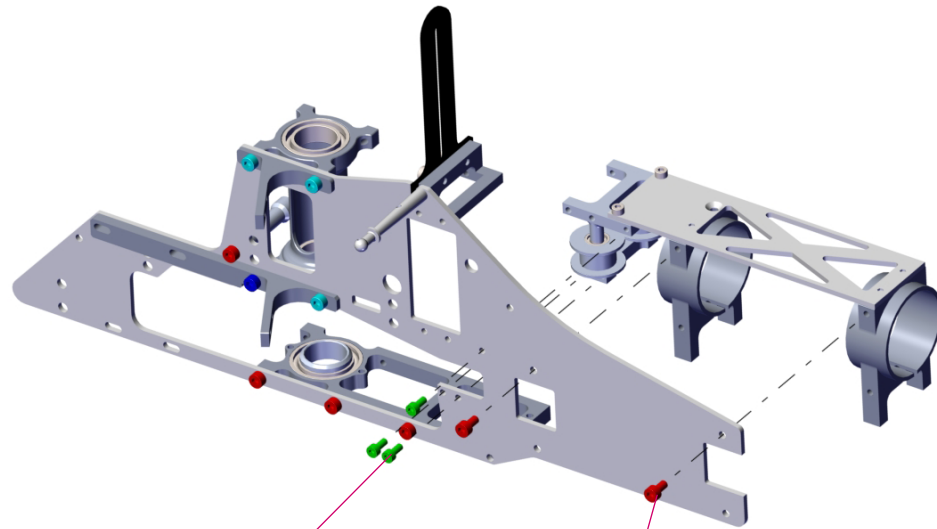


Belt Front Idler V2
ART. XL70V2B06






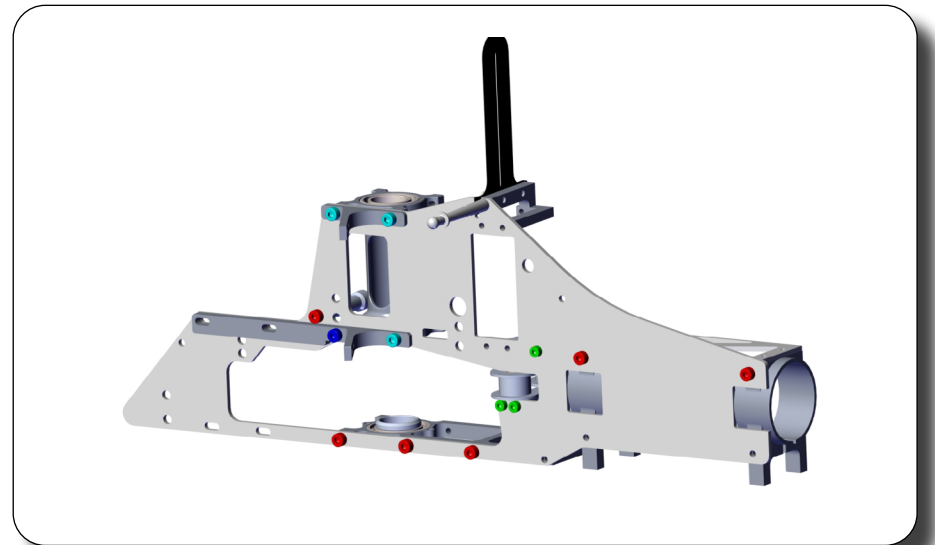
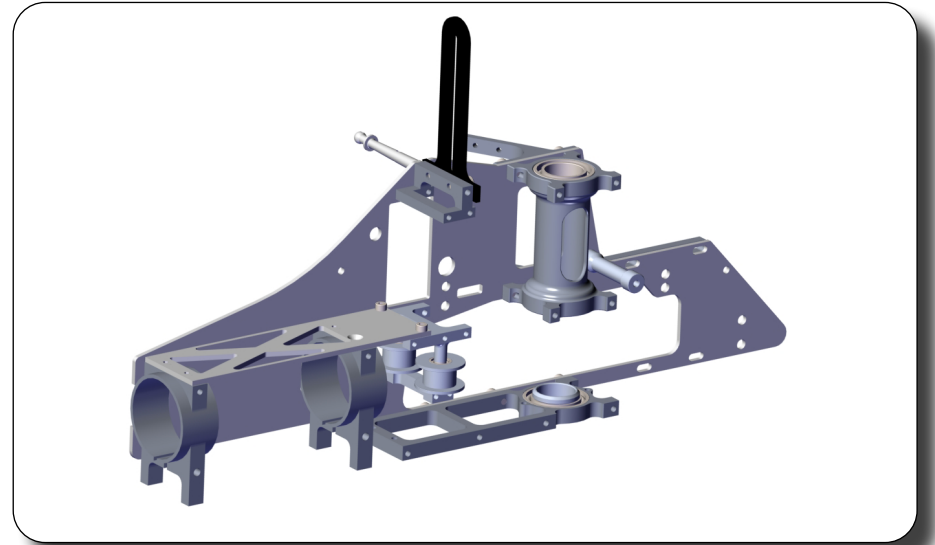
Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight



Hex screw M2.5*6
ART. MSH71110

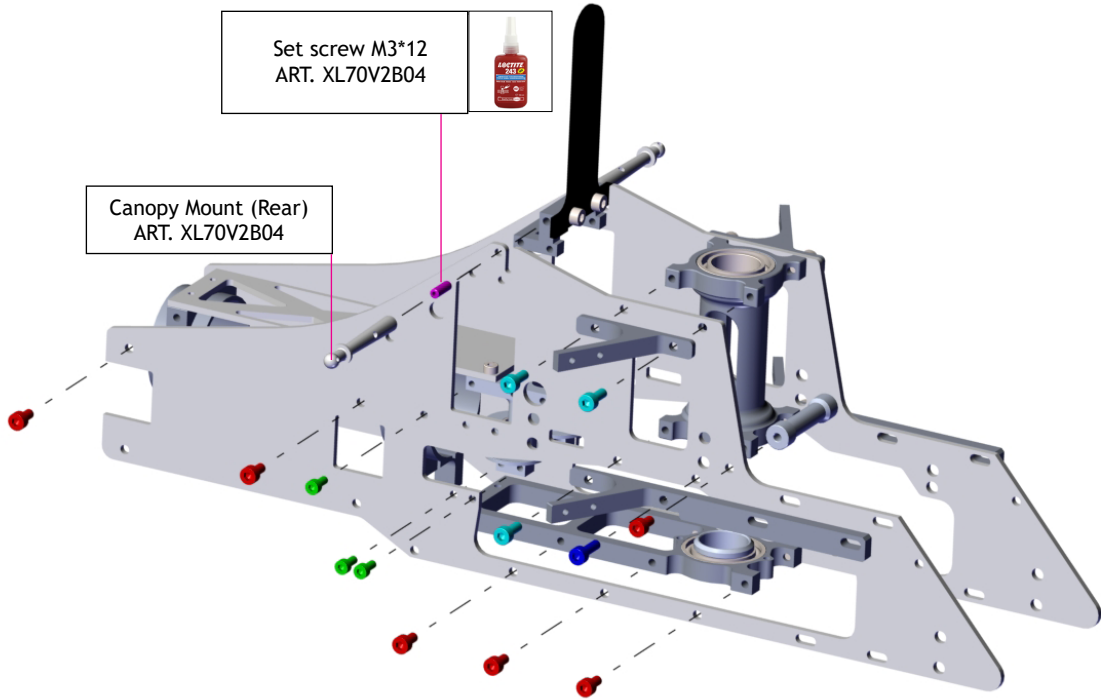


Hex screw M3*6
ART. MSH71108

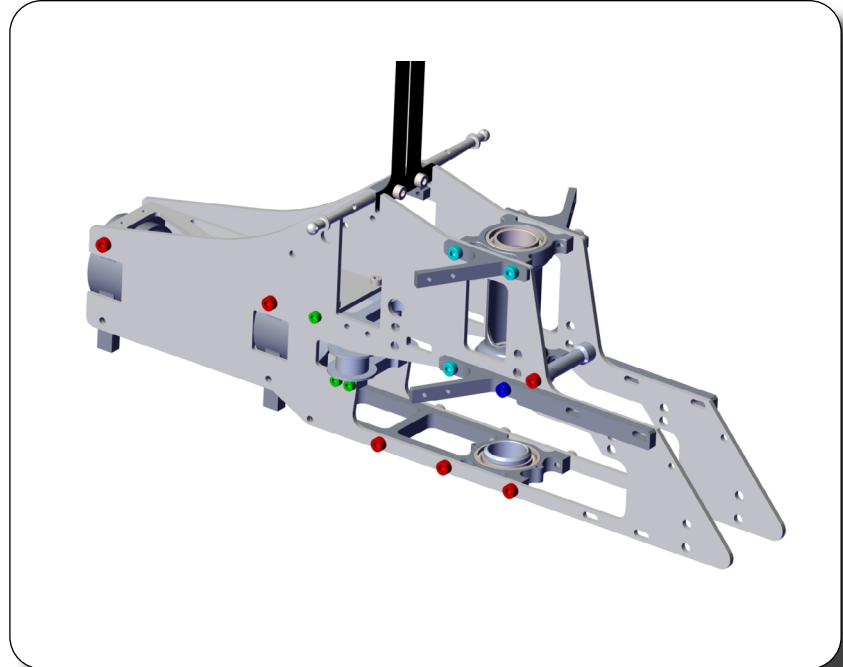




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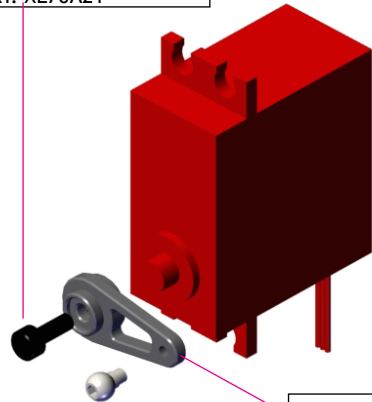
	 Hex screw M3*6 (Red in picture) ART. MSH71108
	 Hex screw M3*8 (Tiffany Blue in picture) ART. MSH71109
	 Hex screw M3*10 (Blue in picture) ART. MSH71114
	Hex screw M2.5*6 (Green in picture) ART. MSH71110





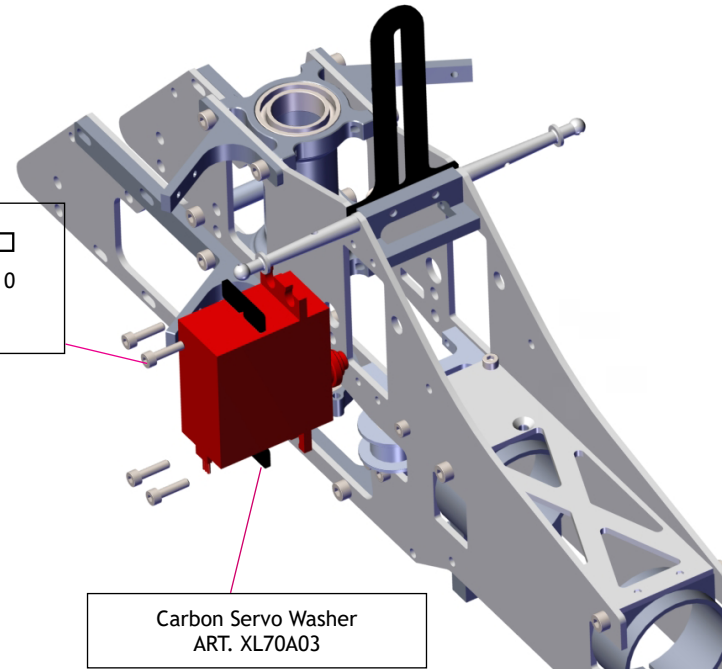
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Button head screw
M3*6
ART. XL70A21



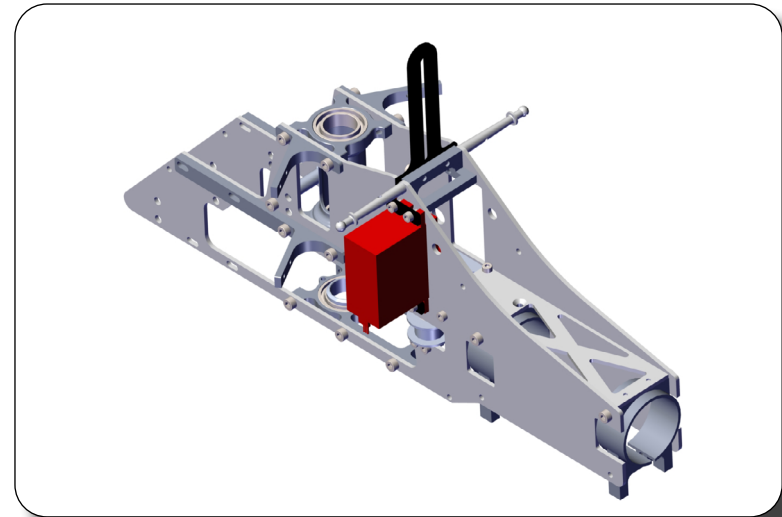
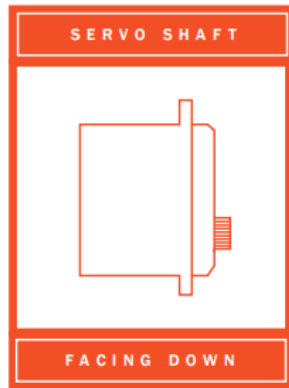
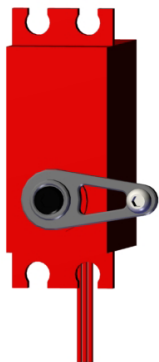
Servo Horn
XL70A04
Optioal: XL70A04-1

Hex Screw M2.5*10
ART. MSH71103
XL70A03




Carbon Servo Washer
ART. XL70A03

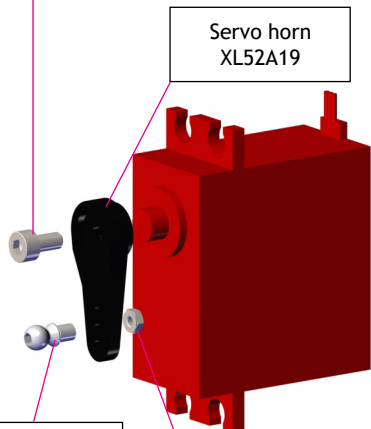
Ball 5mm M2.5*3
XL70A04






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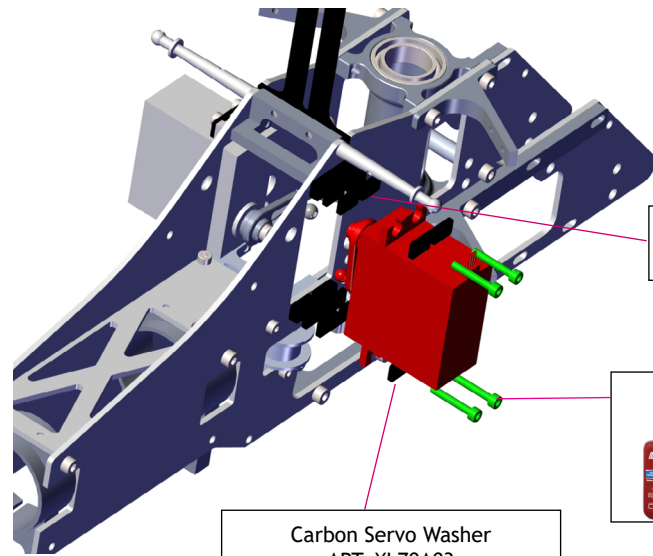
 Servo Horn Screw
M3x6
ART. XL70A21





Servo horn
XL52A19


Ball 5mm M2*4.8
ART.XL70A26


M2 Nut
MSH41119

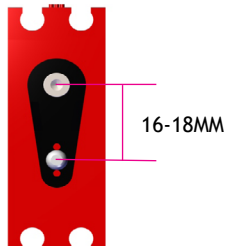


Carbon Servo Washer 2mm
ART. XL70V2A02


 
Hex screw M2.5*16
ART. XL70V2A02

Carbon Servo Washer
ART. XL70A03

 Servo Spline facing up

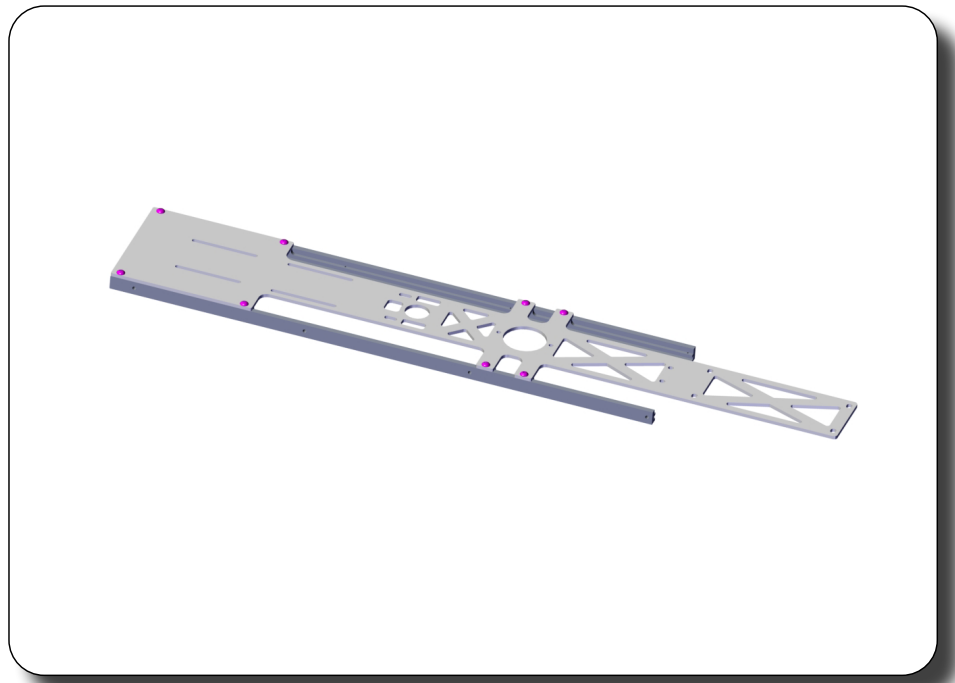
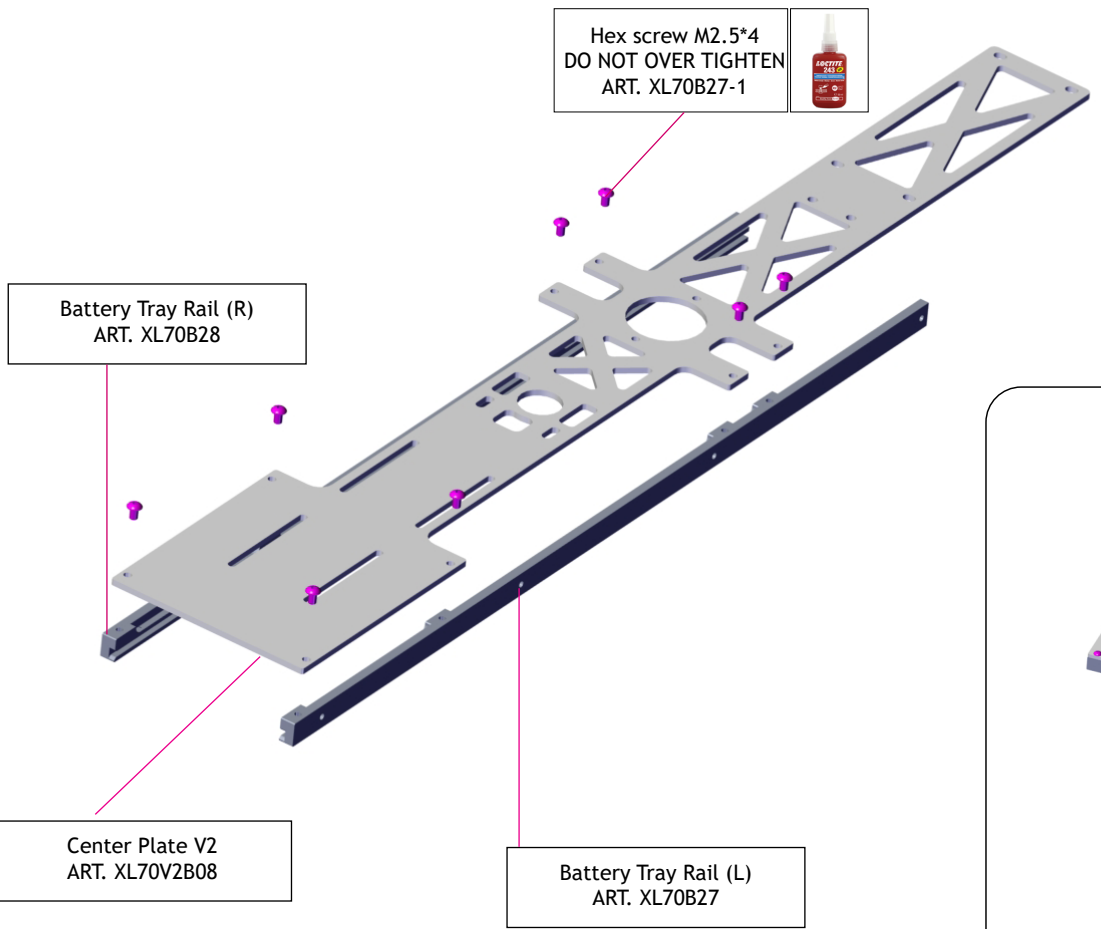


16-18MM

 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.

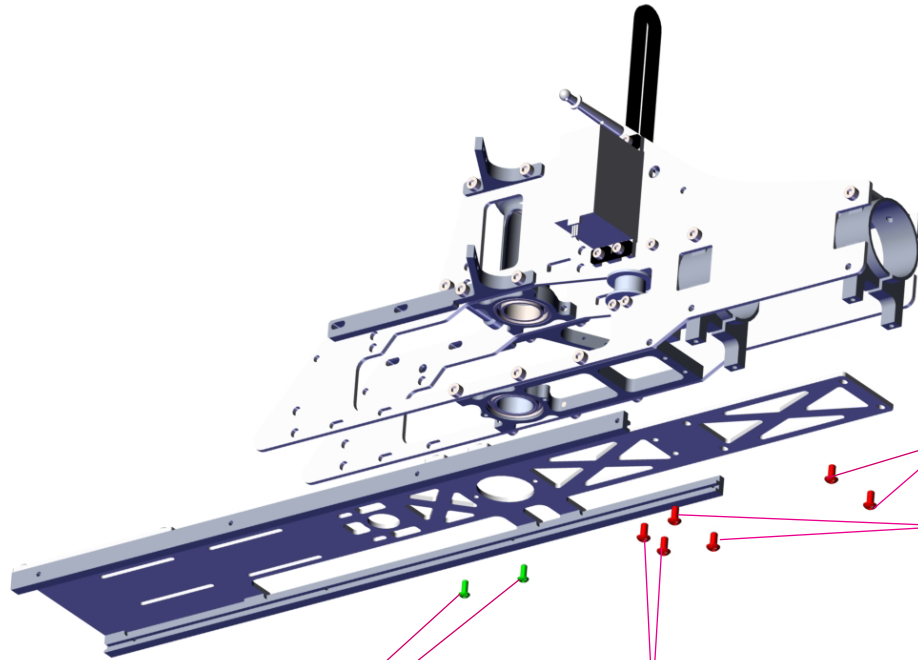



Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight







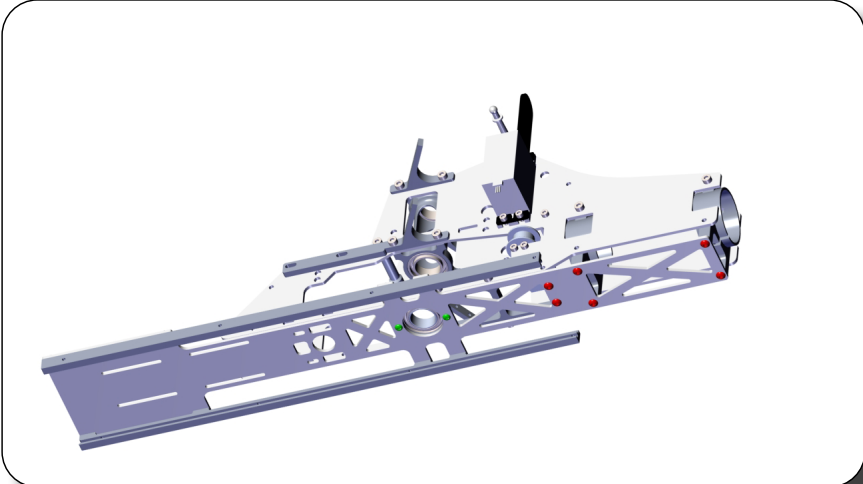
Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight



	Button head screw M3*6 Do not tighten yet ART.XL70A21
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Hex screw M2.5*6 ART. MSH71110	
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	Button head screw M3*6 Fully tighten
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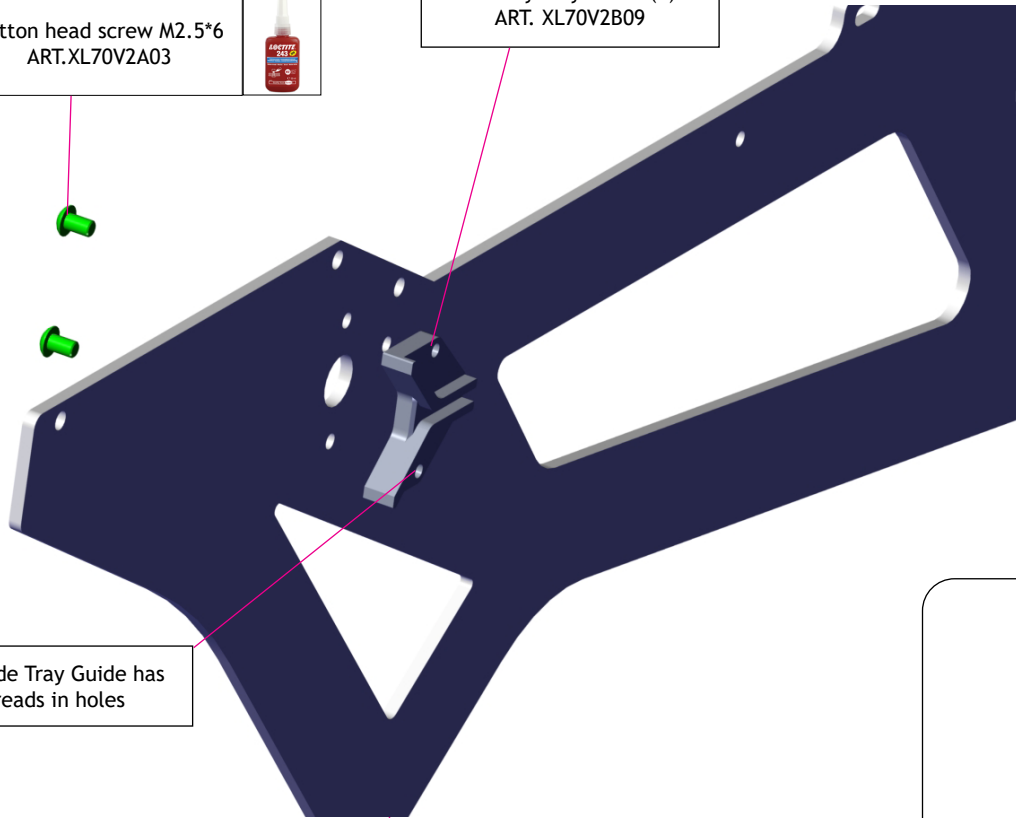


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Button head screw M2.5*6
ART.XL70V2A03



Battery Tray Guide (L)
ART. XL70V2B09



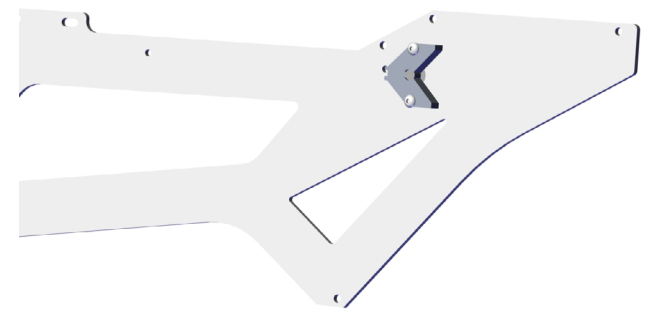
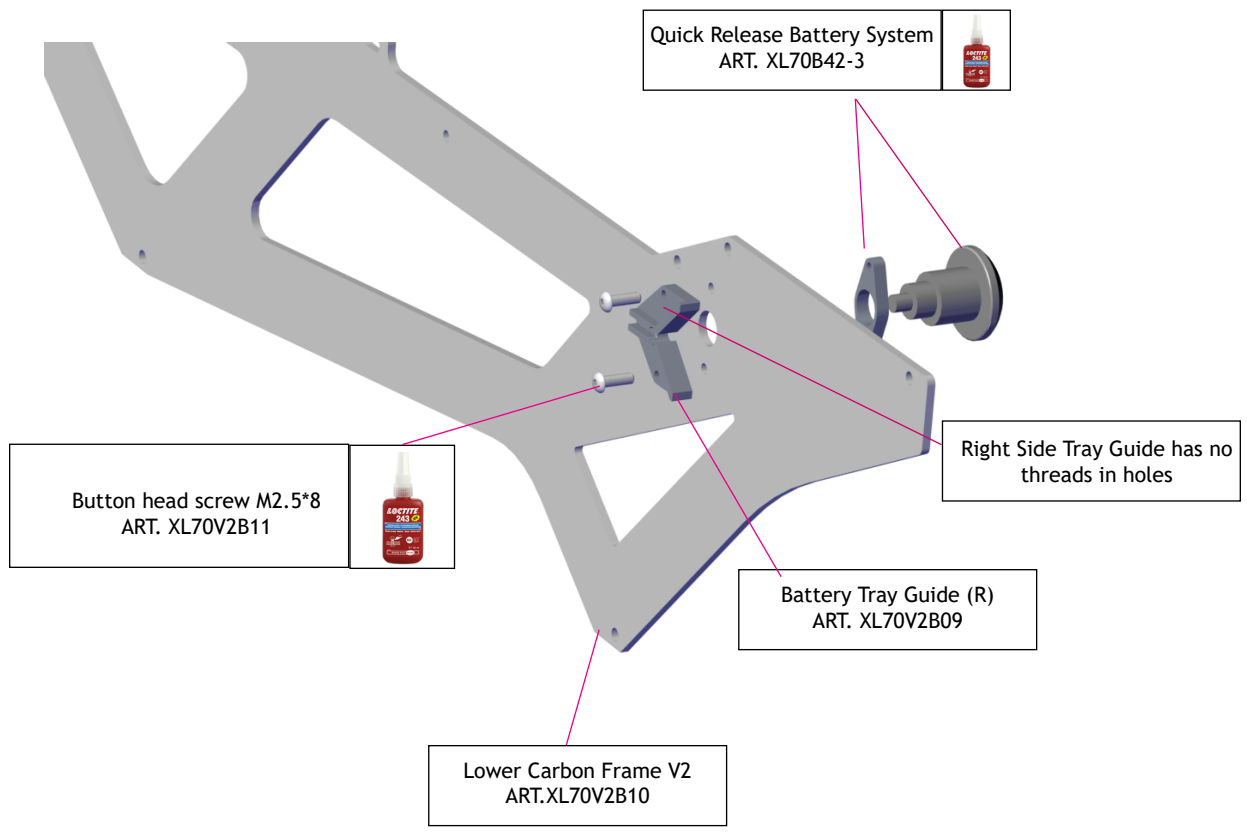
Left Side Tray Guide has
threads in holes

Lower Carbon Frame V2
ART.XL70V2B10





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BB-1-9+BB-4



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Button head screw M3*6
ART.XL70A21



Aluminum Frame
Spacer
ART. XL70B39

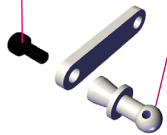
Button head screw M2.5*6
DO NOT OVERTIGHTEN
ART. XL70V2A03



Hex screw M3*6
ART. MSH71108



Canopy mount(Front)
ART. XL70V2B18



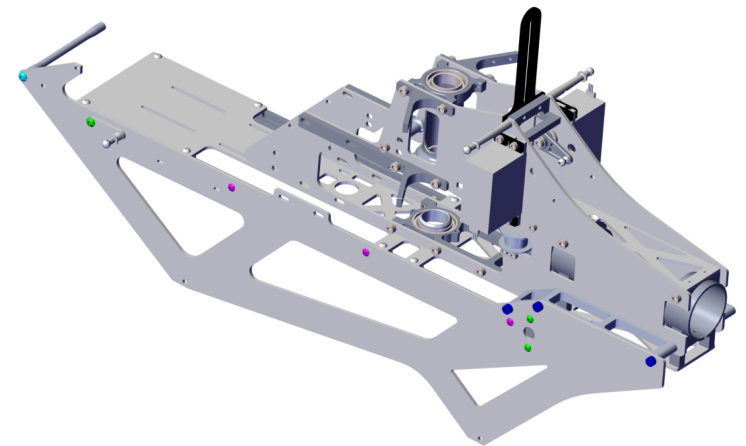
Hex screw M2.5*4
DO NOT OVERTIGHTEN
ART. XL70B27-1



Hex screw M3*25
ART. XL70B09-1



Rear frame Spacer
ART. XL70V2B17

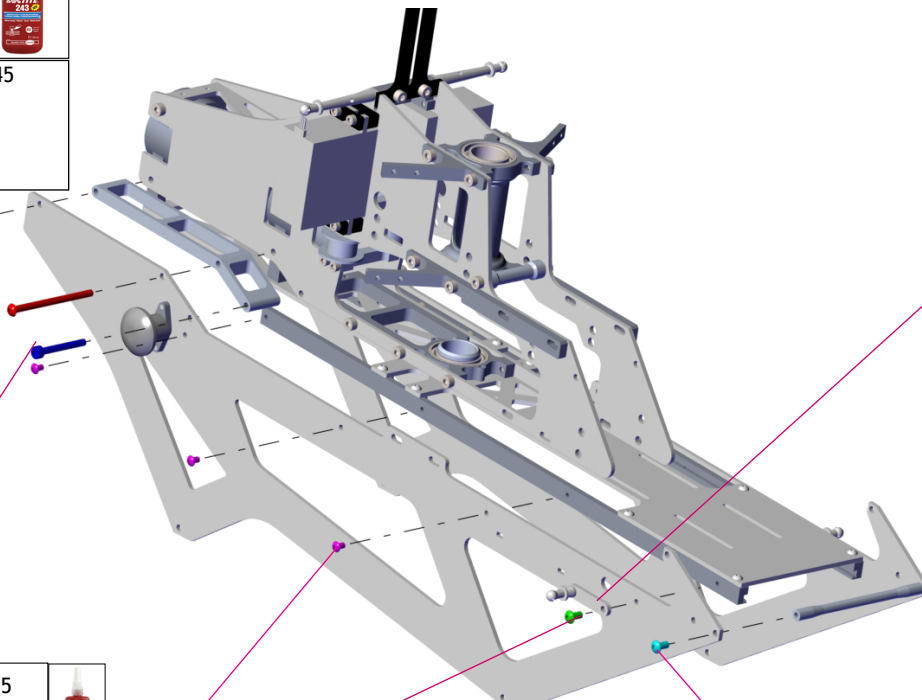




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Button head screw M3*45
(Do not tighten yet)
ART. XL70V2B05
XL70A24



Hex screw M3*6
ART. MSH71108

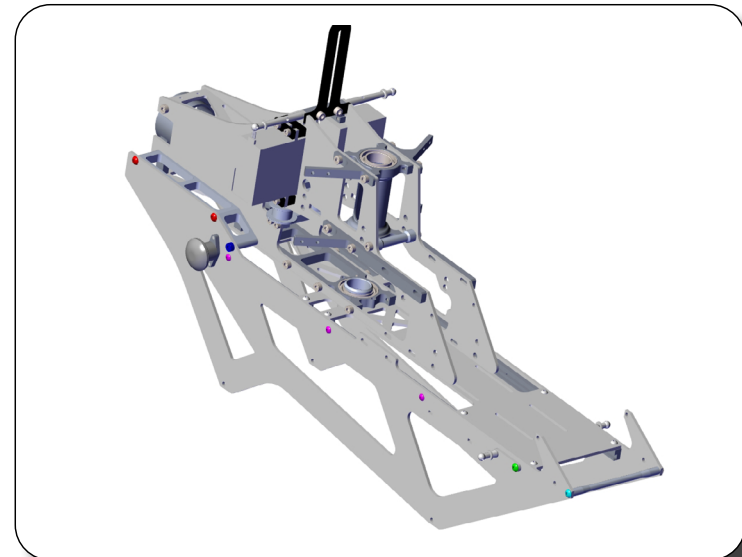
Canopy Mount (Front)
ART. XL70V2B18

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

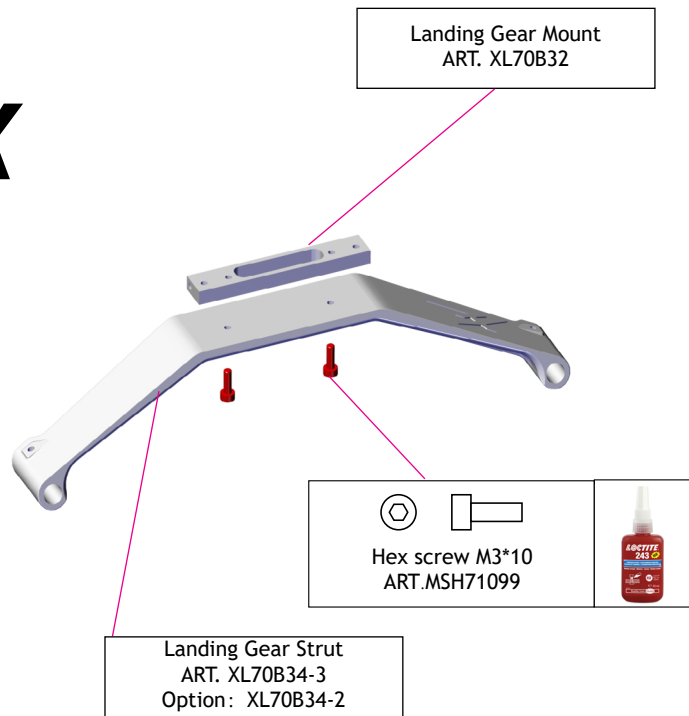
Button head screw M3*6
ART. XL70A21





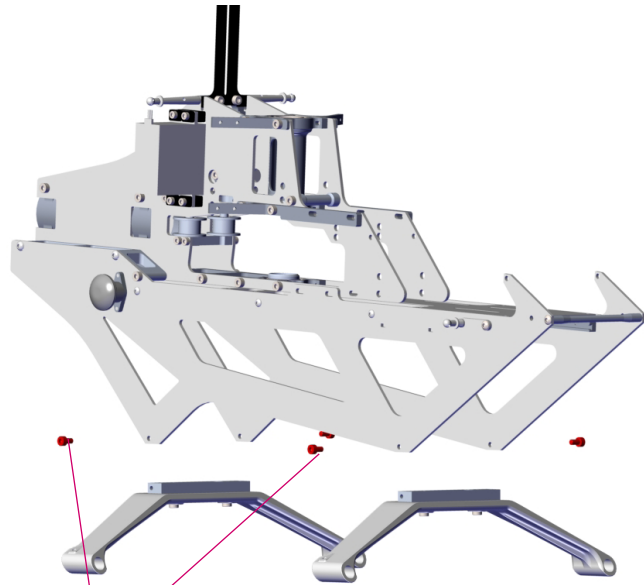
Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight


2X




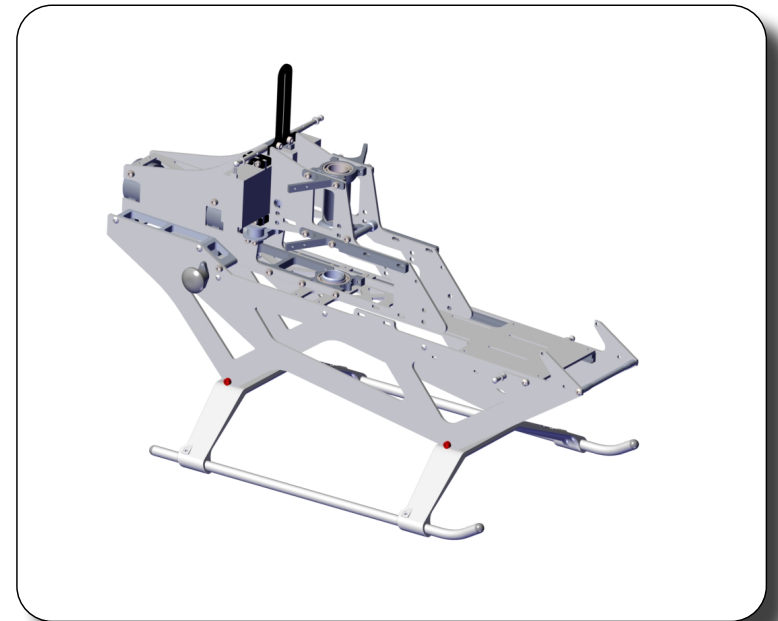
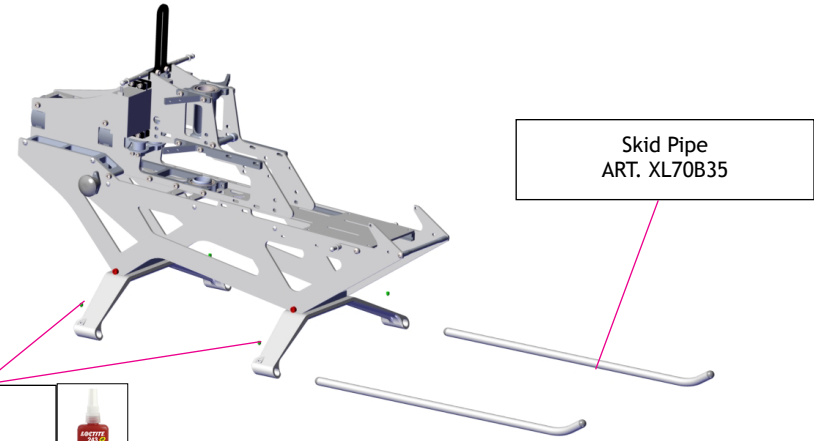


Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight



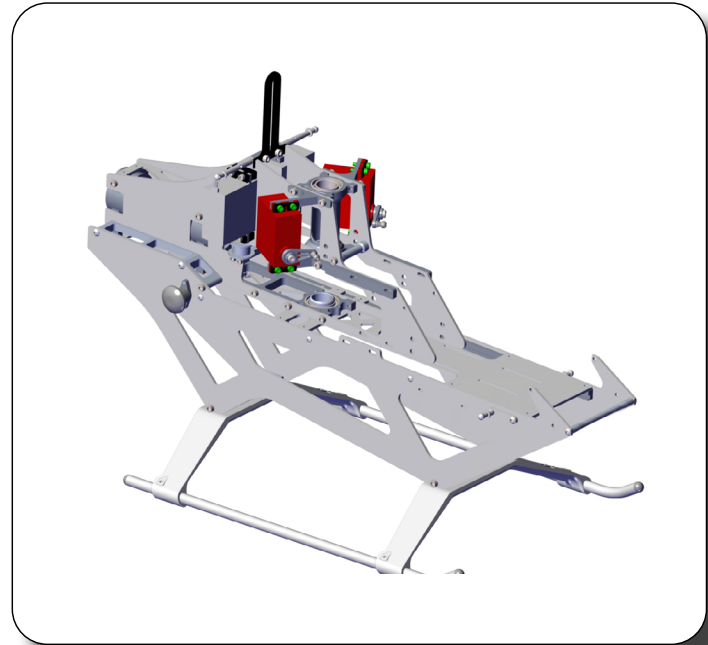
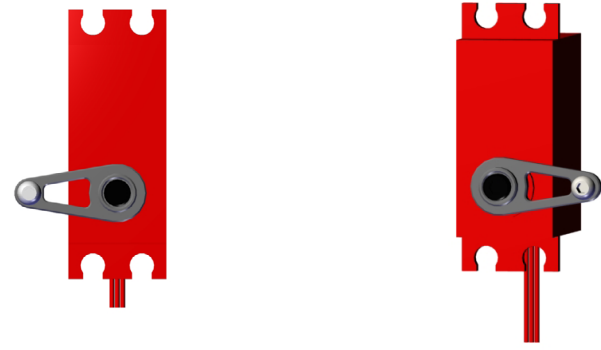
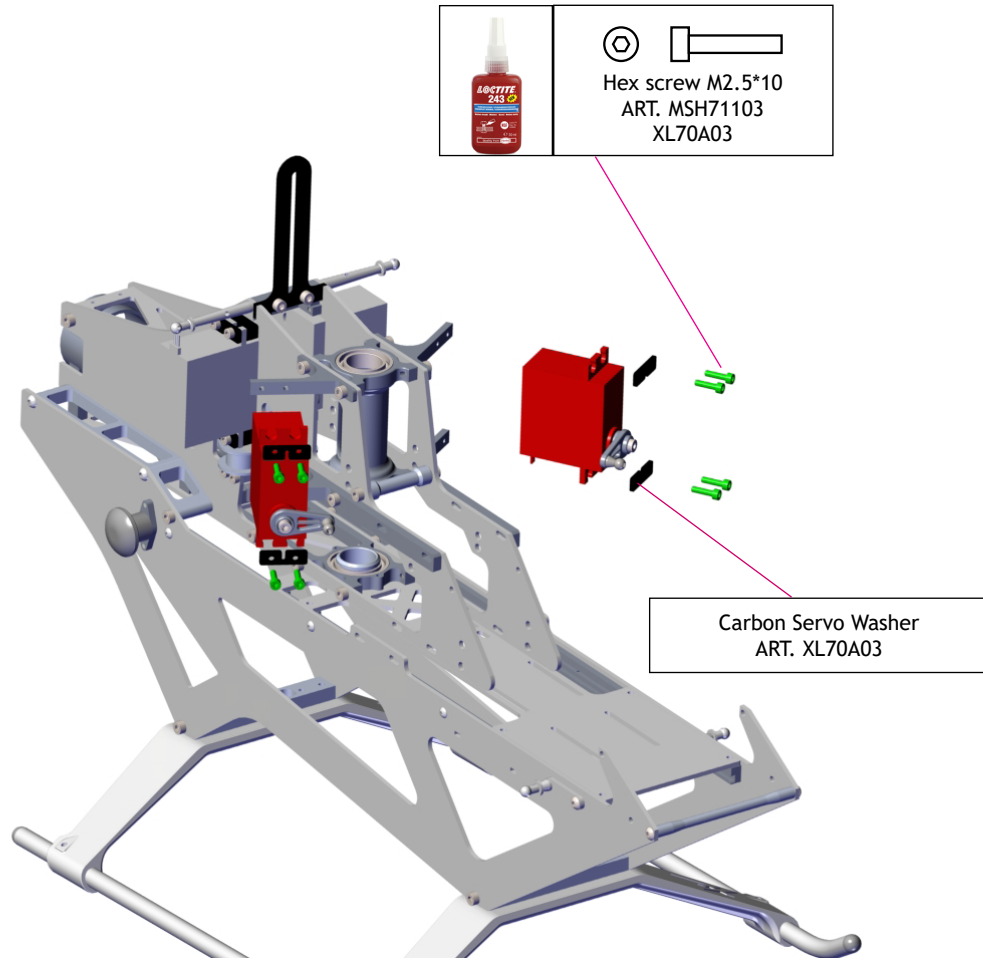
	
<p>Hex screw M3*6 ART. MSH71108</p>	

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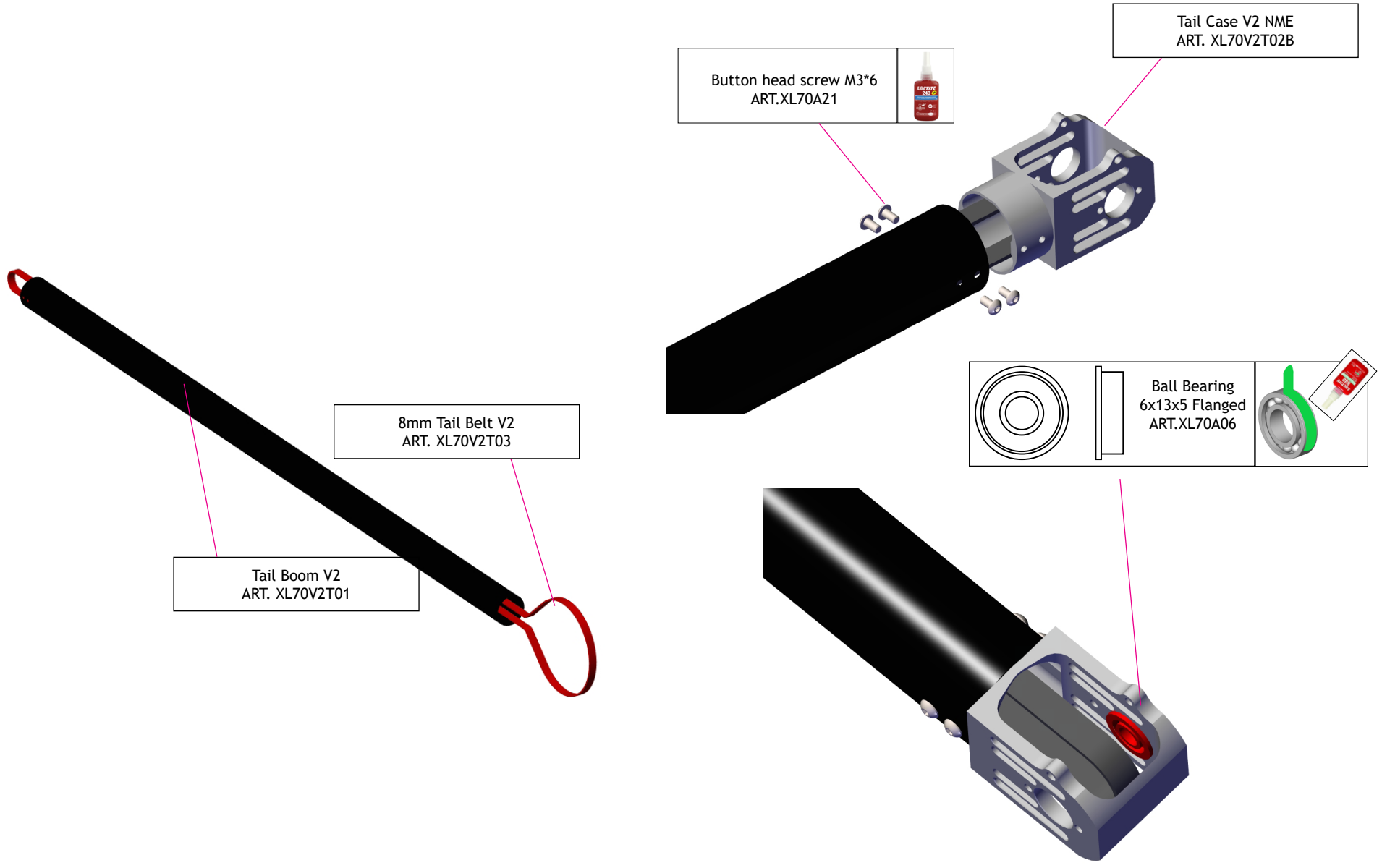
Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight



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

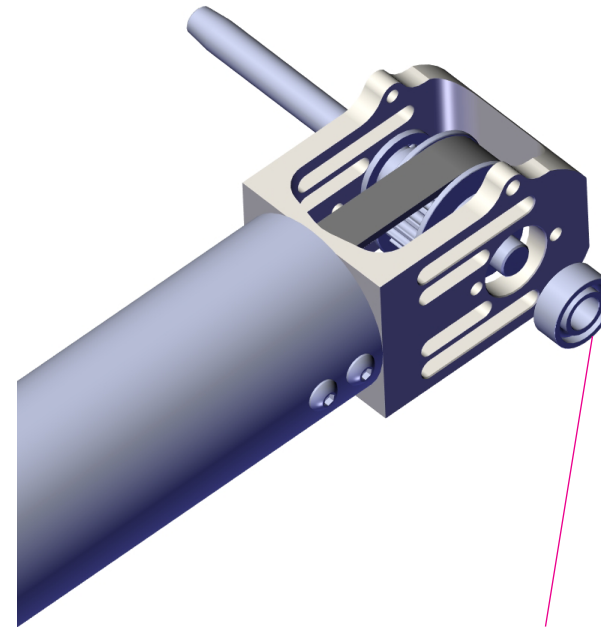
Grub screw M4*4
MSH71122



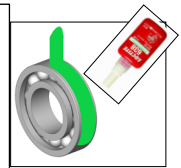
Tail Pulley 21T
ART. XL70V2T04
Option:XL70V2T04-1


Tapered End Tail Shaft
ART. XL70T13-1

O ring
ART. XL70A17



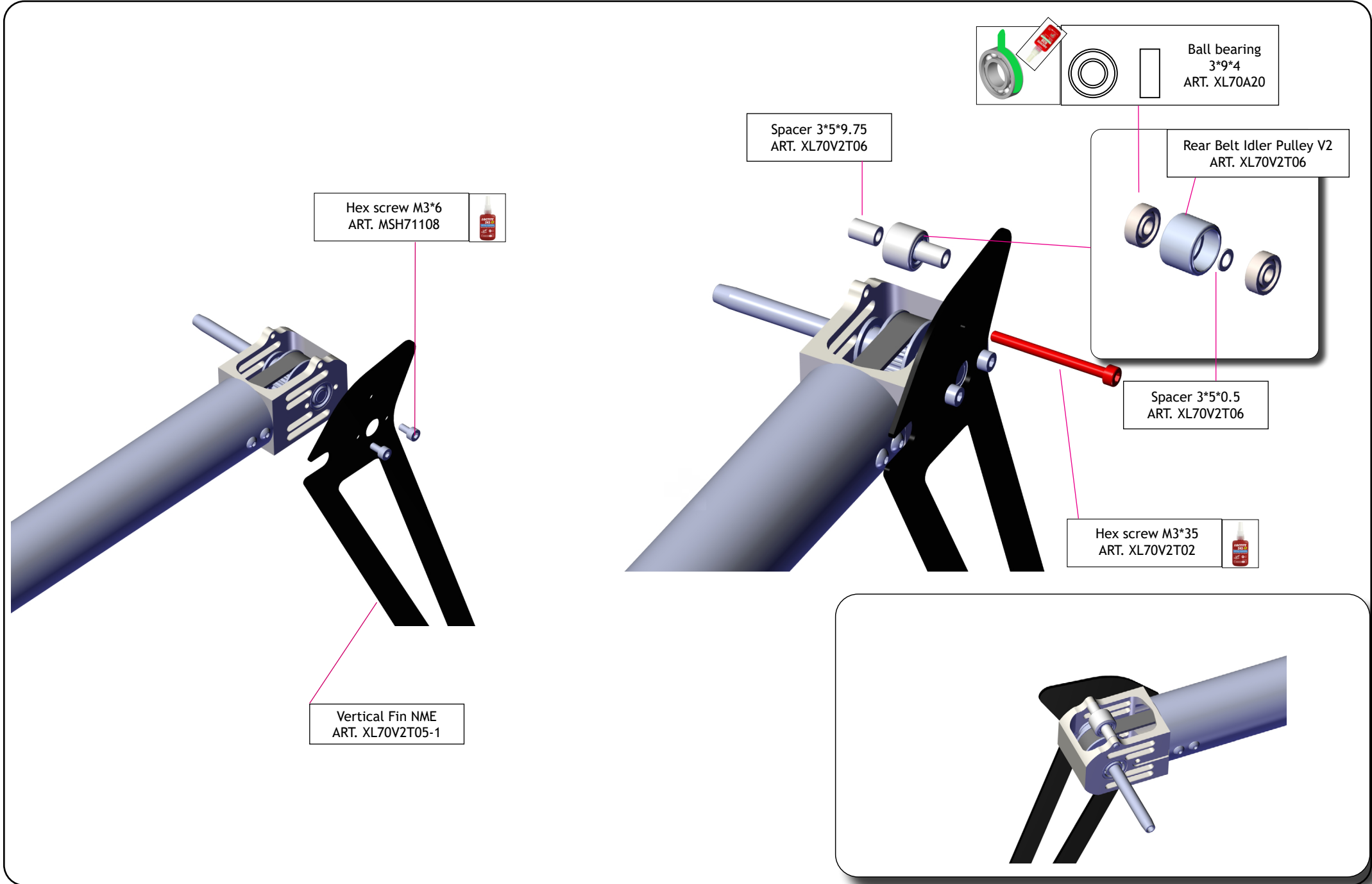
Ball bearing
6*13*5
ART. XL70A06-1



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

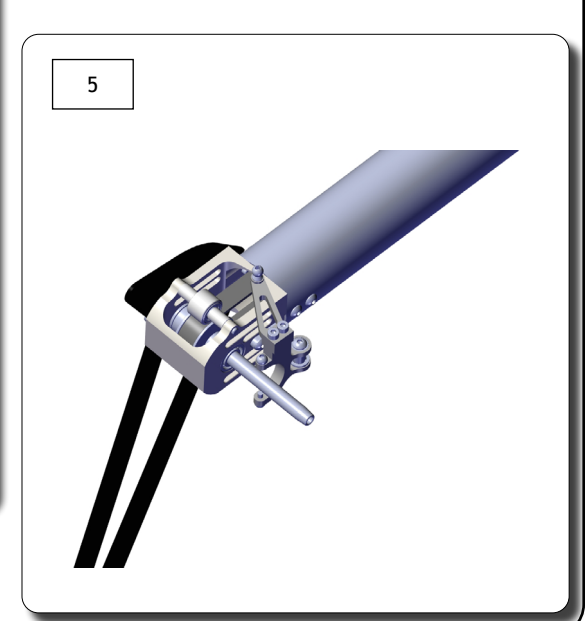
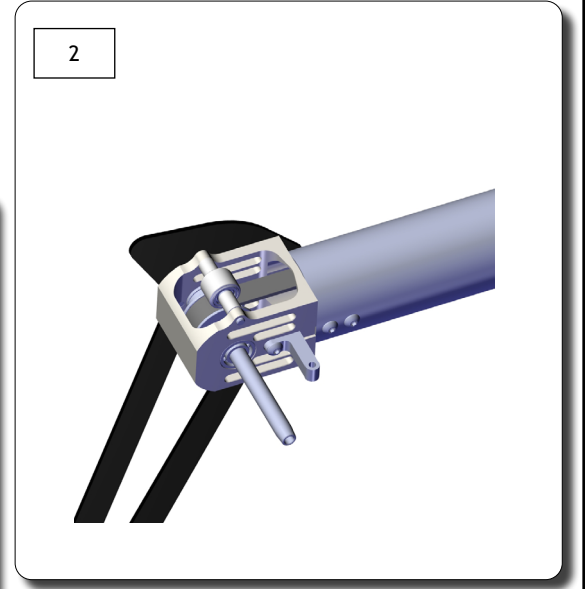
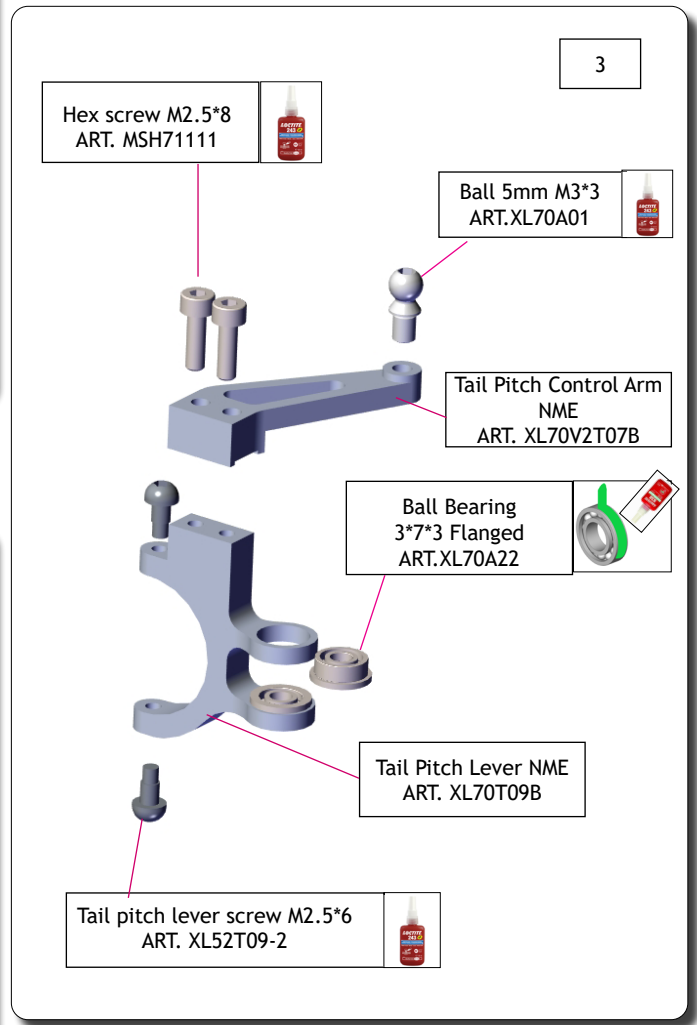
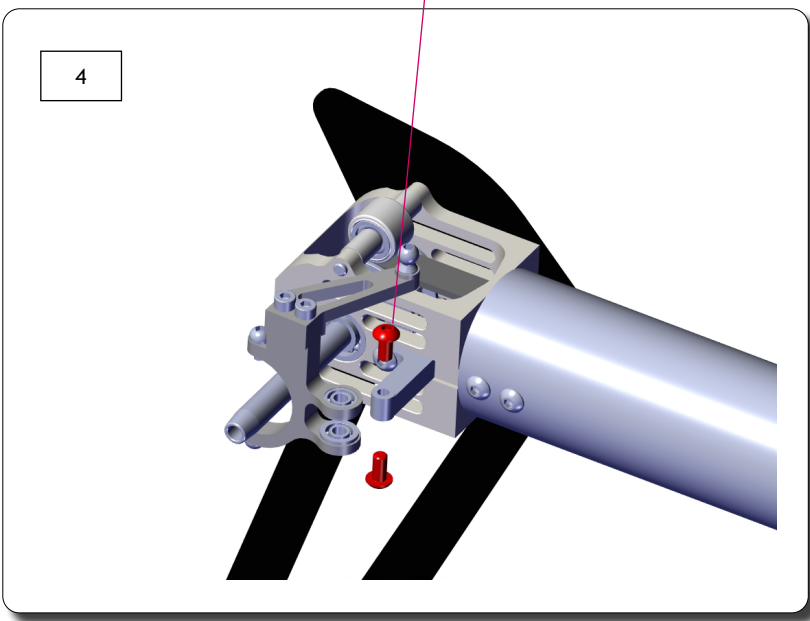
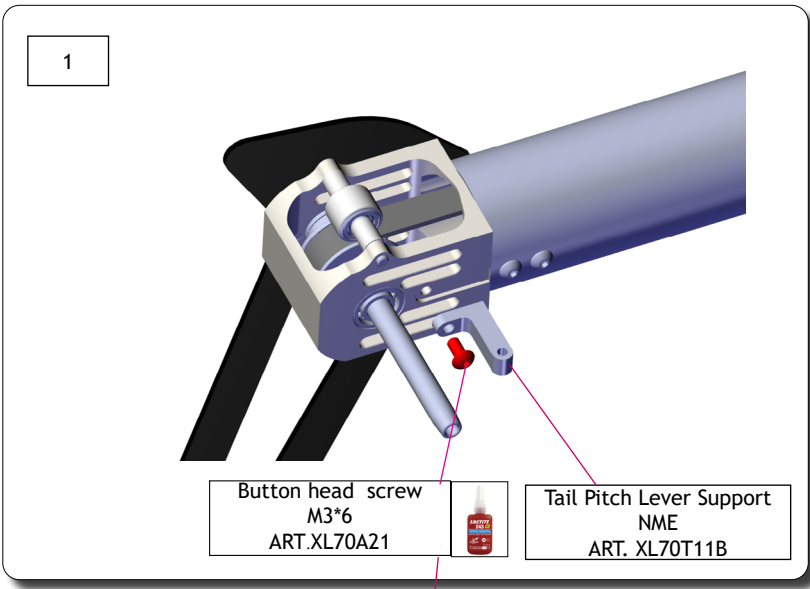


Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight





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

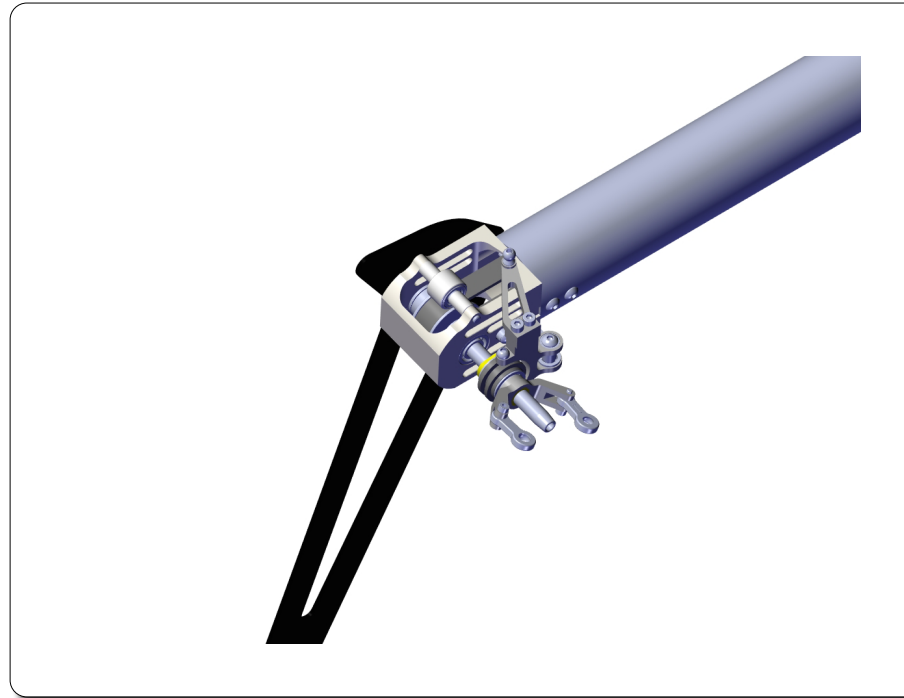
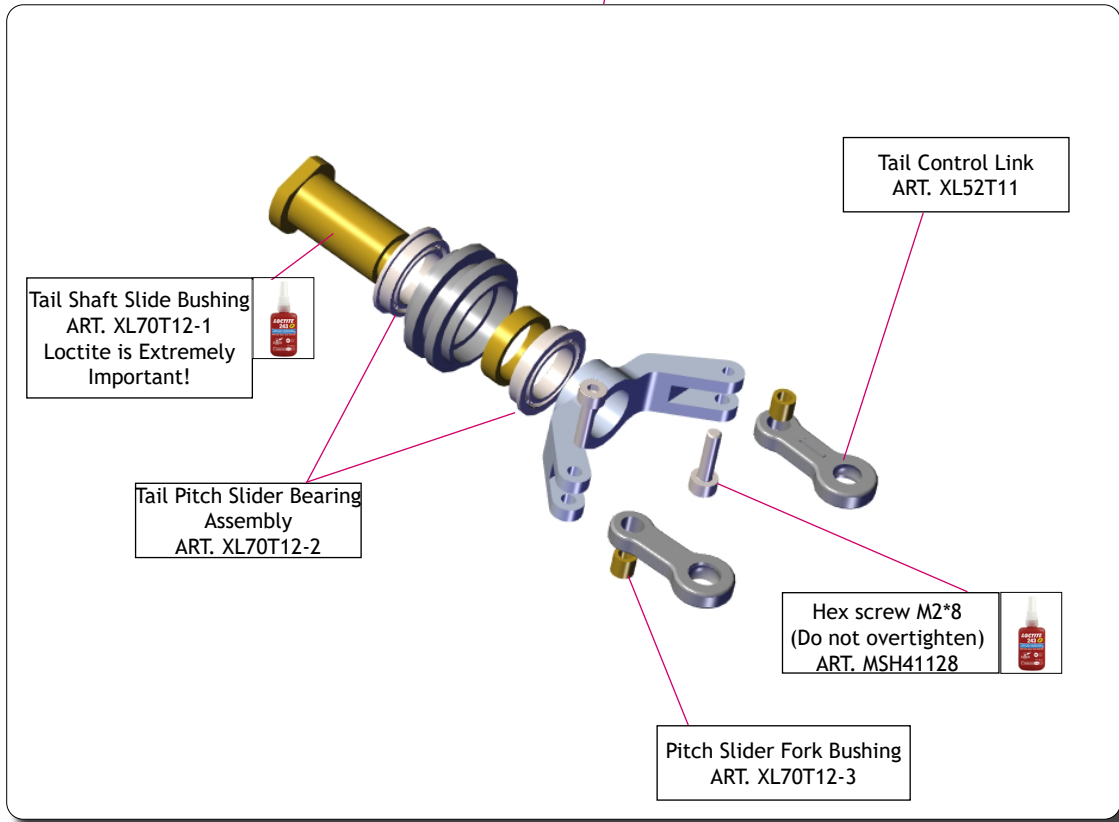
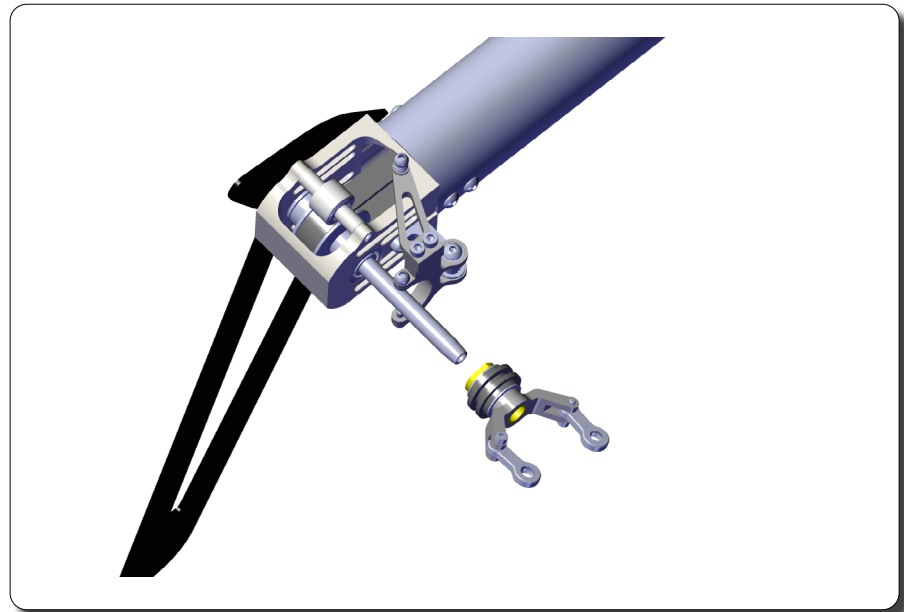




Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight



Tail pitch assembly
NME
ART. XL70T12B





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

Ball 4.72mm M2.5
ART. XL70A01

Tail grip NME
ART. XL70T16B

Thrust Bearing
5*10*4
ART.XL70T18

ID Bigger Towards Tail Hub
ID Smaller Towards Tail Blade

Washer
5*7*0.3
ART. XL70A27

Ball bearing
5*10*4
ART.XL70T17

Apply grease on thrust bearing

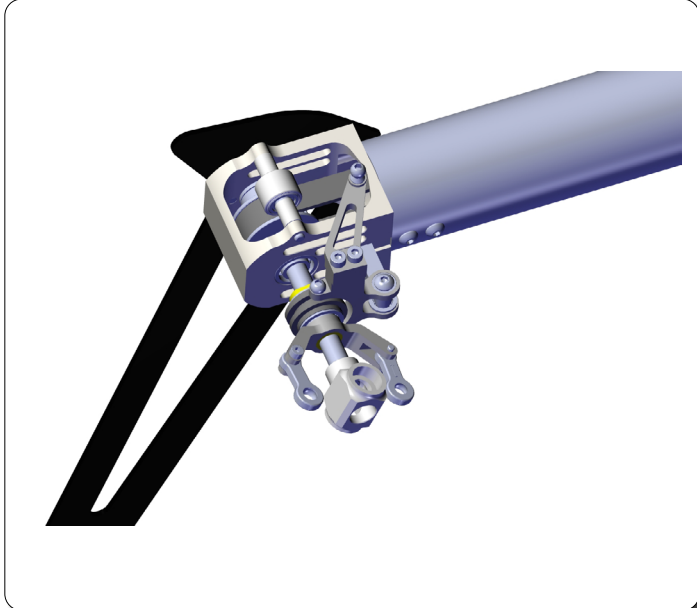
Internal hole SMALLER

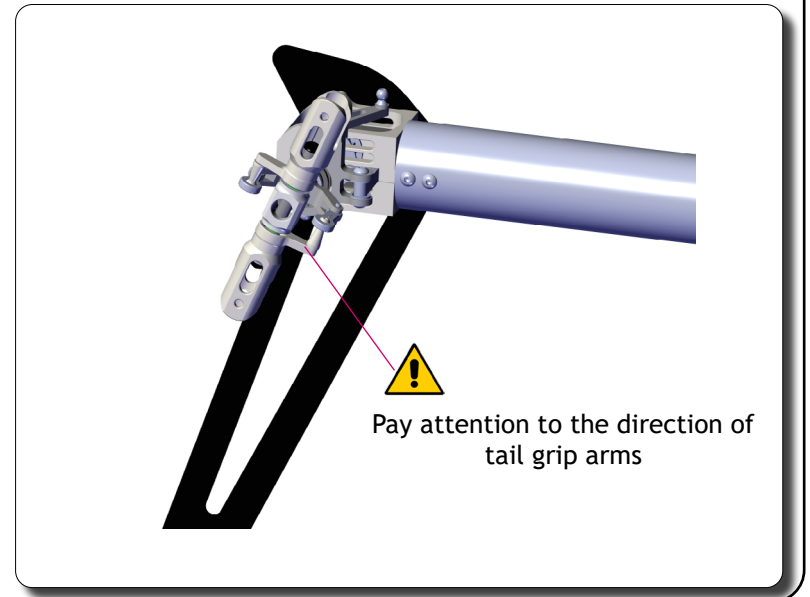
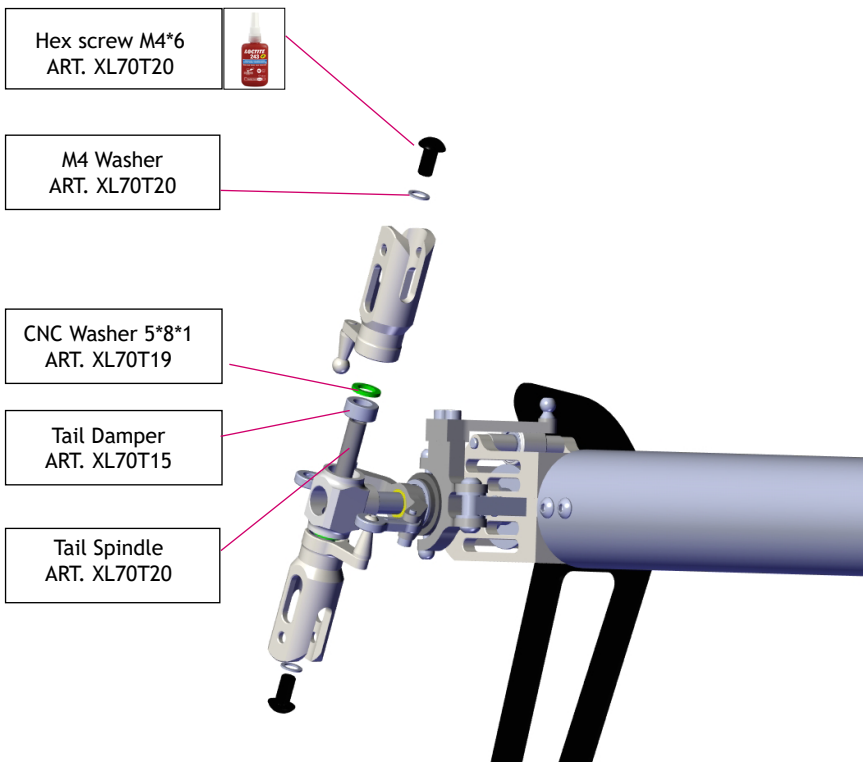
Internal hole BIGGER

2X

Tail Center Hub NME
ART. XL70T14-1B

Hex screw M4*10
ART. MSH71101

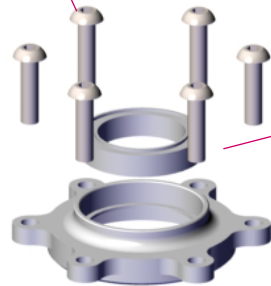






Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight

Button Head screw M3*14
ART. XL70V2B21

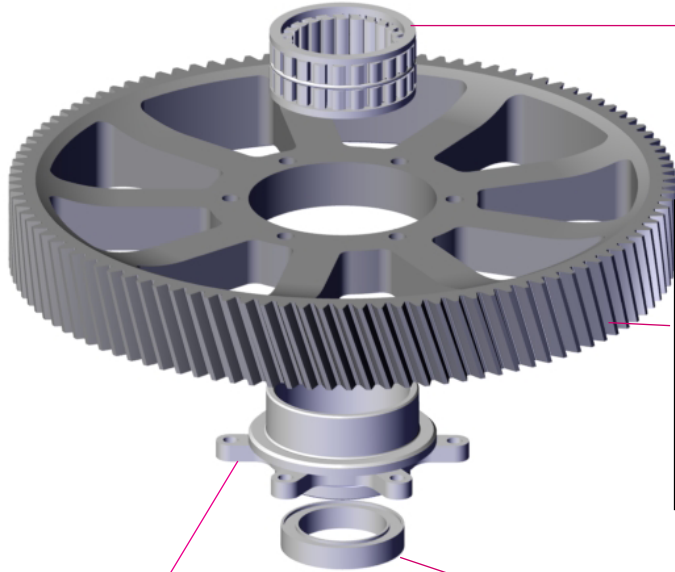


Ball bearing
15*21*4
ART. XL70B21-3



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



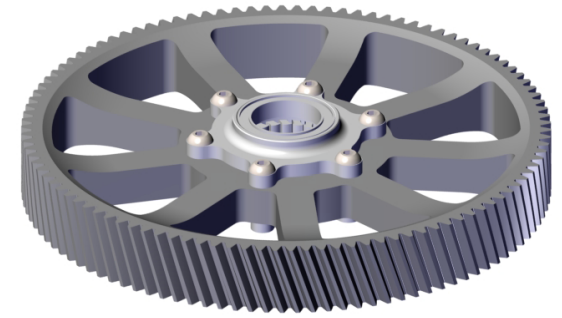
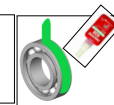
18mm Heavy Duty Main Gear 106T Mod1 (ART. XL70V2B11)
Included in Kit


Option:
Main Gear 106T Mod1 (ART. XL70B20)
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

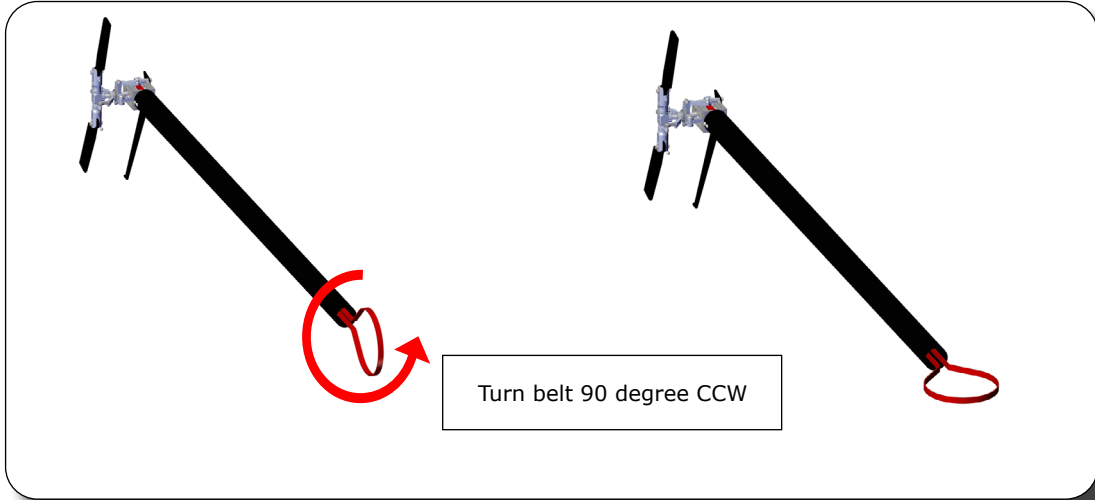


 One way bearing direction (from upside)

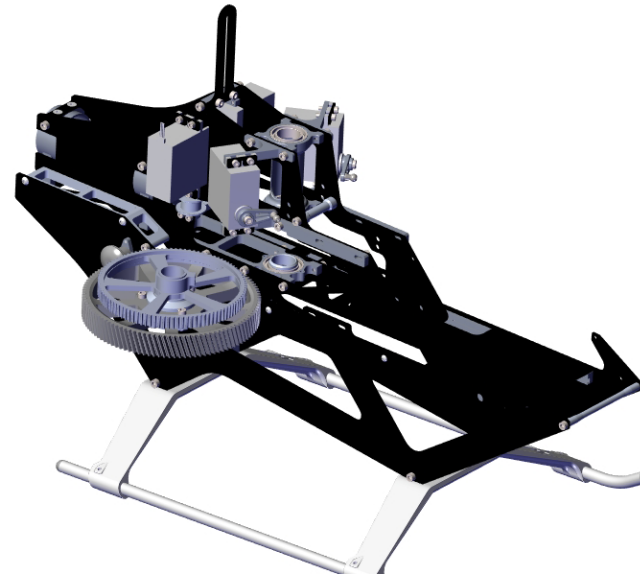
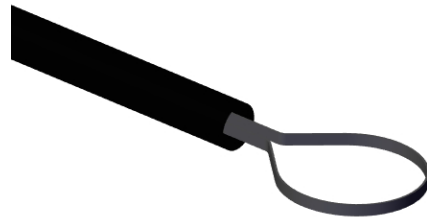
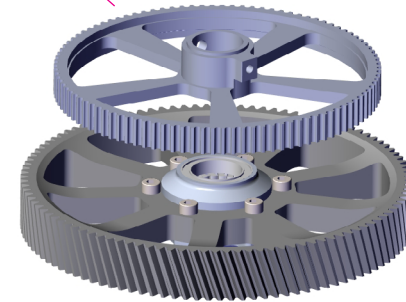




Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight

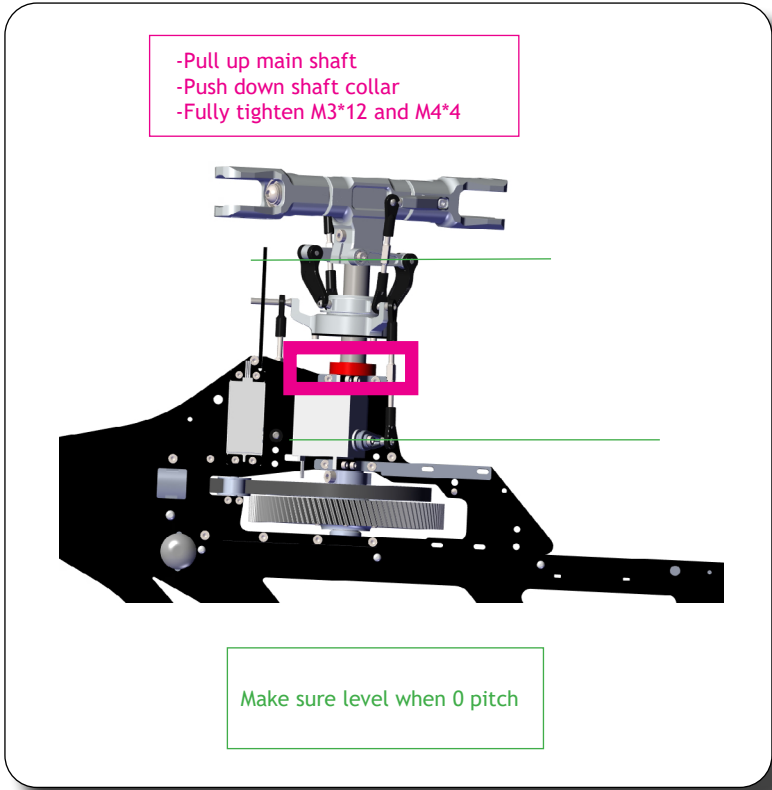
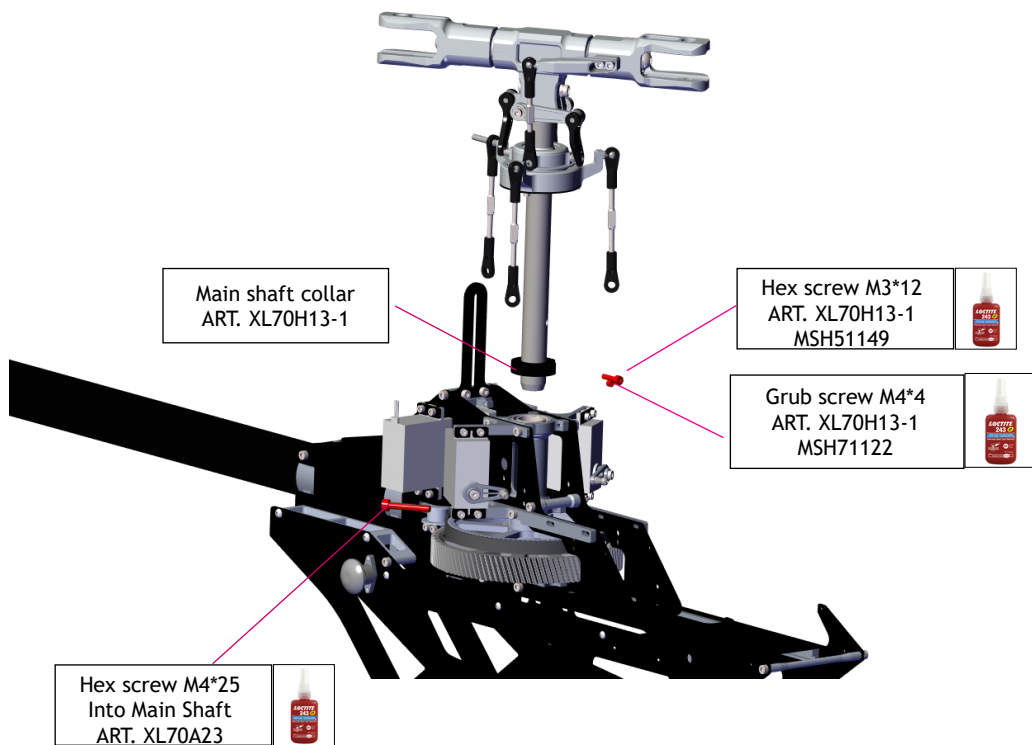


100T Front Pulley
ART. XL70V2B12

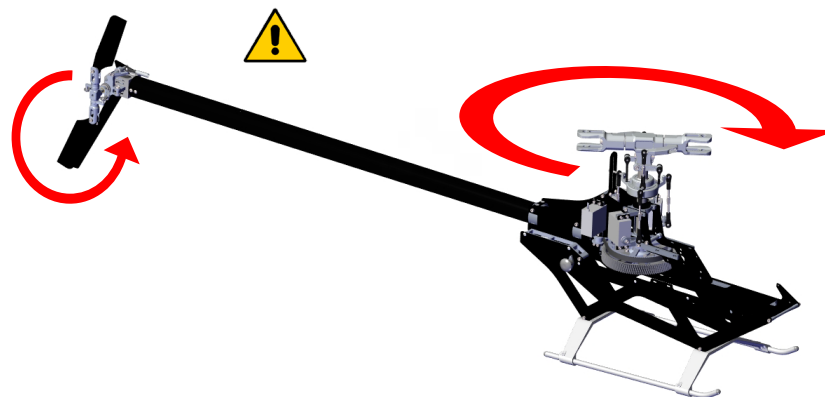




Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight

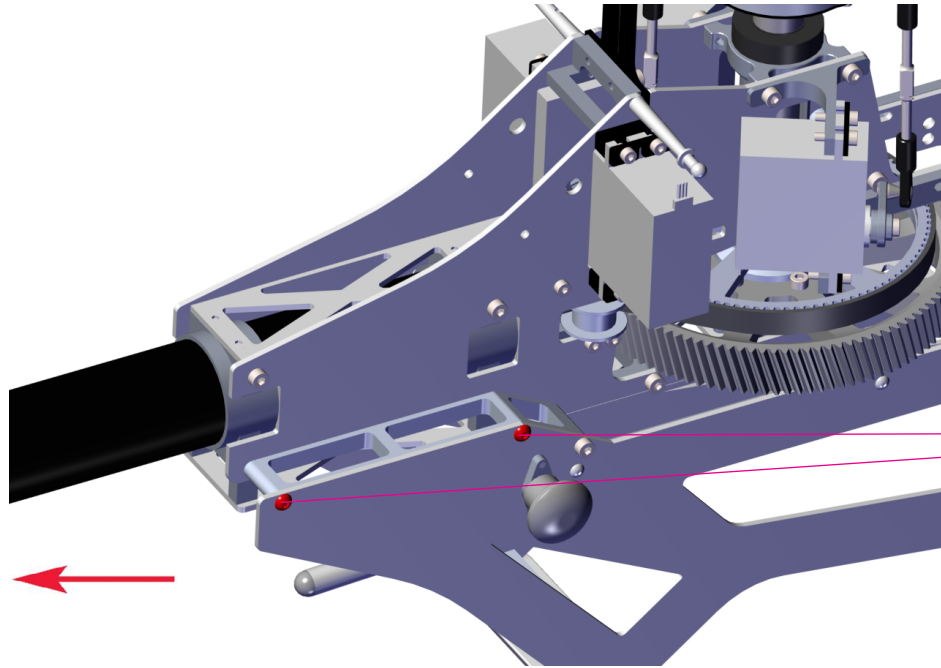


Check the rotation direction during the installation of the belt

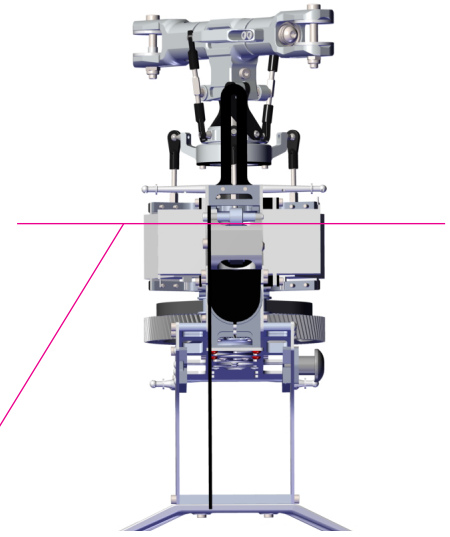




Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight

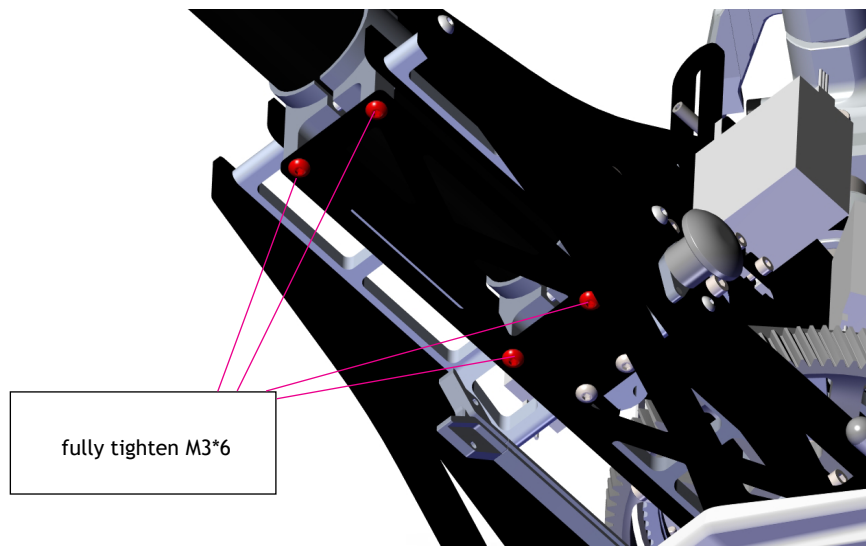


Button head screw M3x45
Set belt tension by pulling backwards on the tail boom. Ensure tail tail case is level, then tighten screws.

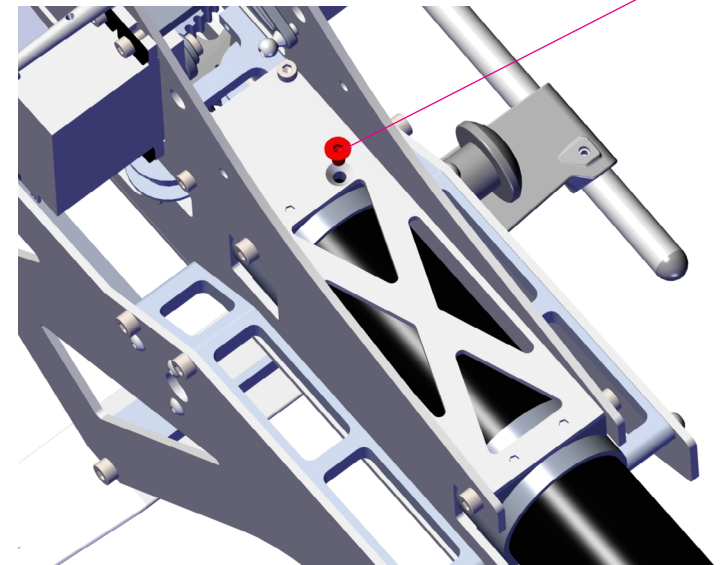


Check tail box lever before fully tightening M3*45 screw

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

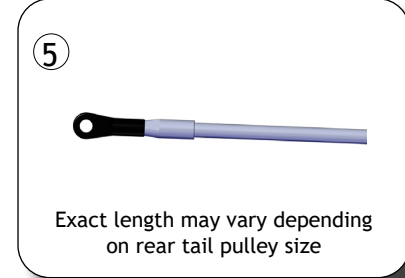
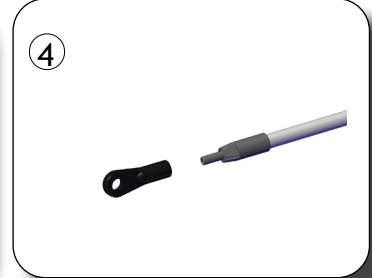
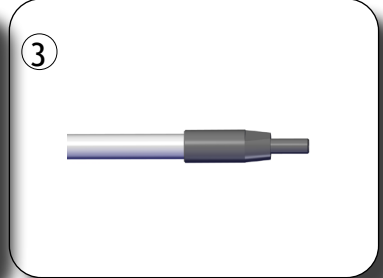
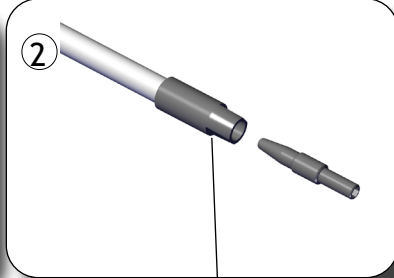
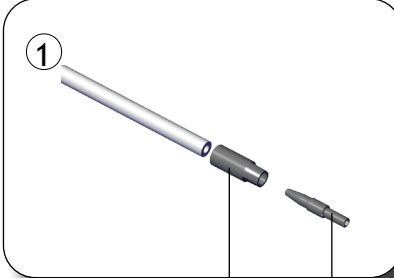


fully tighten M3*6





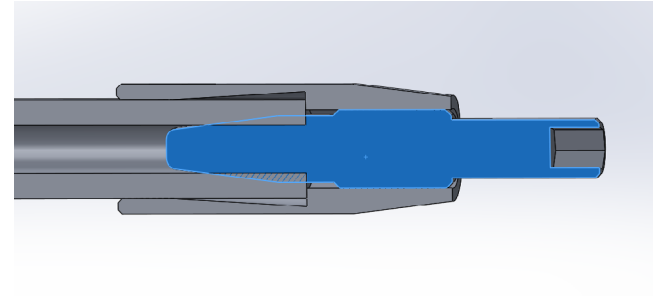
Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight



Tail pushrod end
ART. XL70V2T08-1

Apply pressure pushing the end onto
the carbon rod while tightening the end
screw

Tail pushrod end linkage screw
ART. XL70V2T08-1



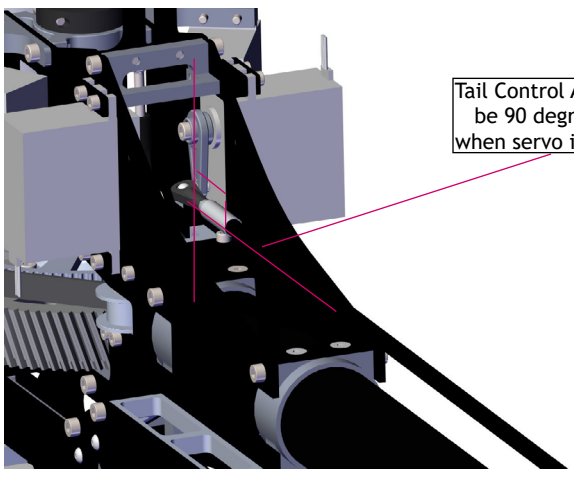
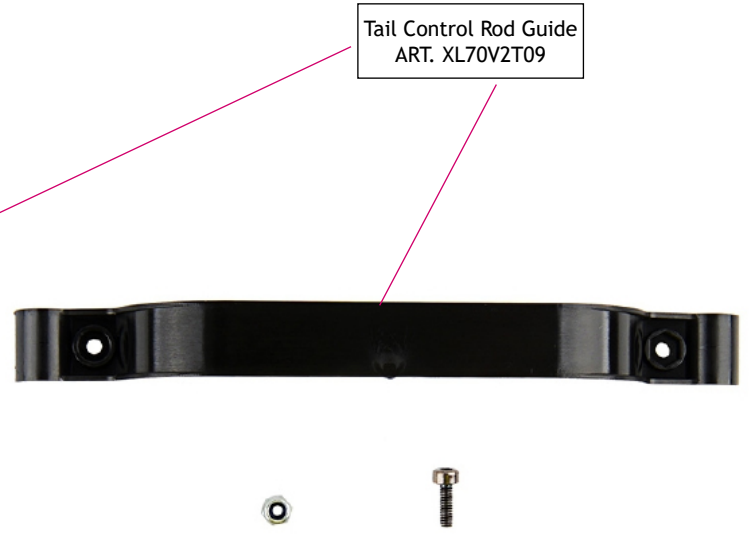
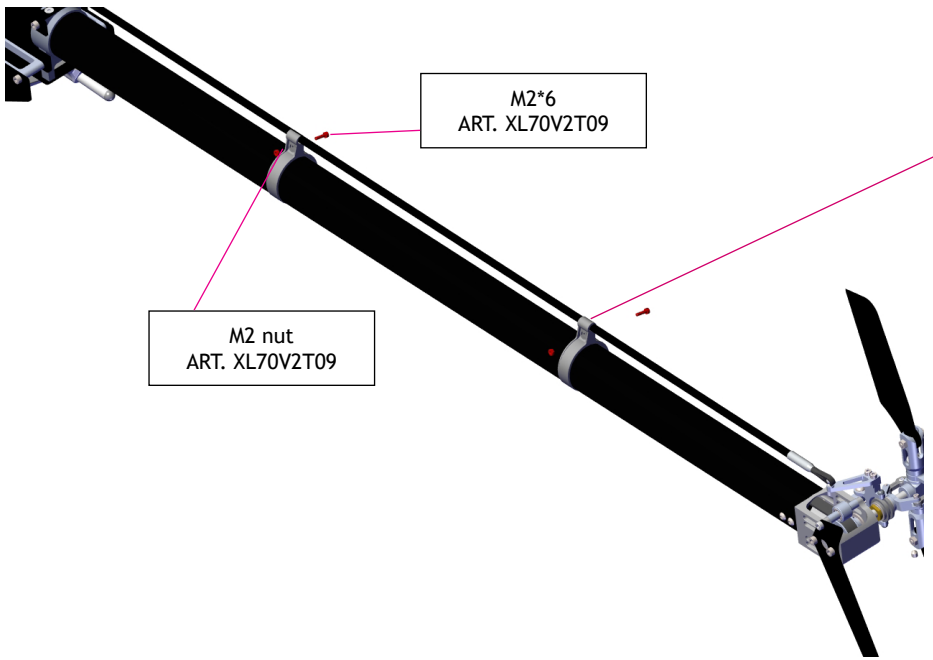
Ball Link 5mm M3
ART.XL70A02

Tail Control Rod NME
ART. XL70V2T08-2

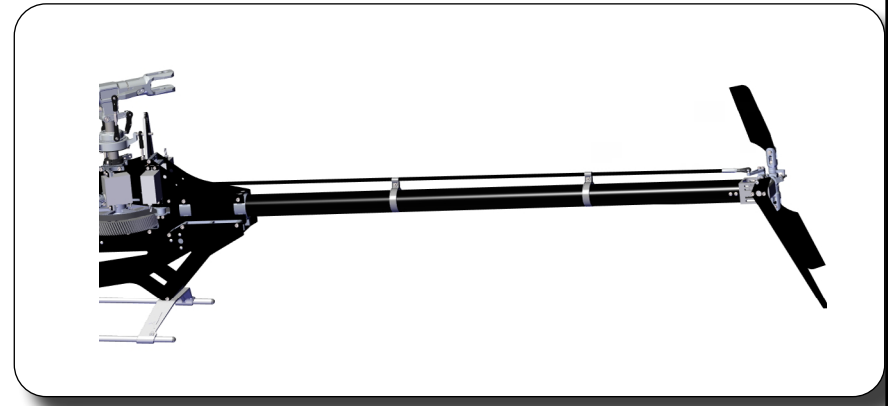
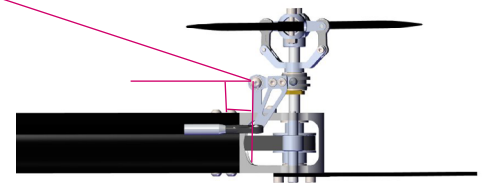




Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight



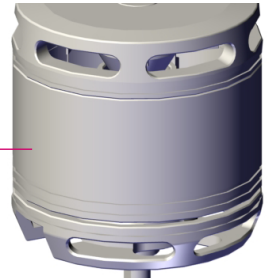
Tail Control Arm should be 90 degree angle when servo is centered



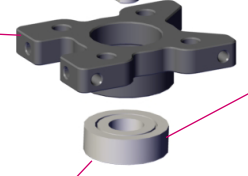


Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight

4525-4530 500-550kv motor 6mm shaft (not included)
ART. XL70M01

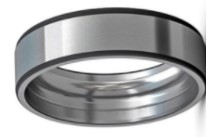


Motor Mount Upper
ART. XL70B05



719 Angular Contact Ball Bearing
ART. XL70B06

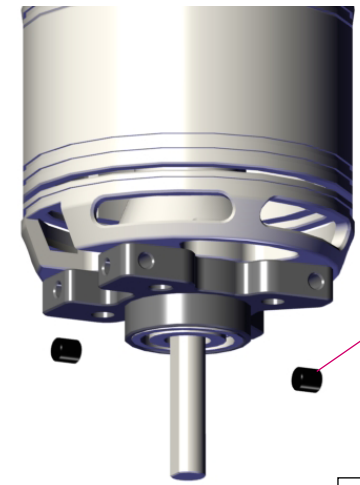
UP



Down



Pay attention to the bearing direction (Pre-assembled)



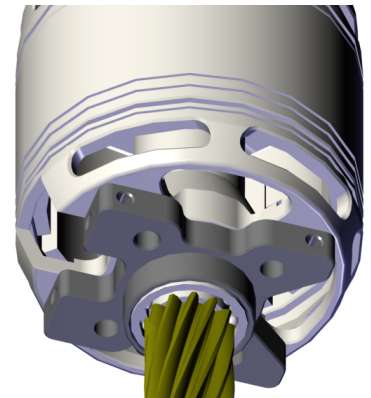
Grub screw M4*4
ART. MSH71122



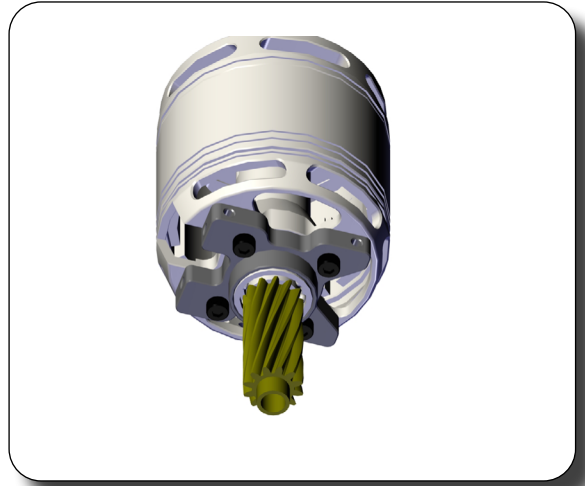
Motor pinion 11T
ART. XL70G11
Included in Kit

Option:
XL70G10
XL70G12

XL70G11-1 for XL70B20-1
XL70G12-1 for XL70B20-1
XL70G13 for XL70B20-1



Hex screw M4x10
ART. MSH71116





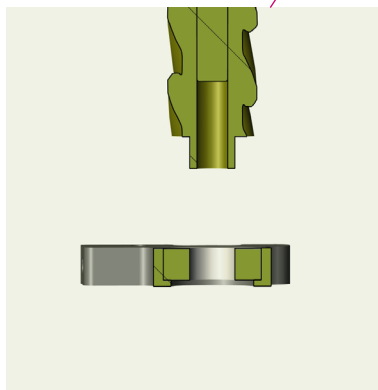
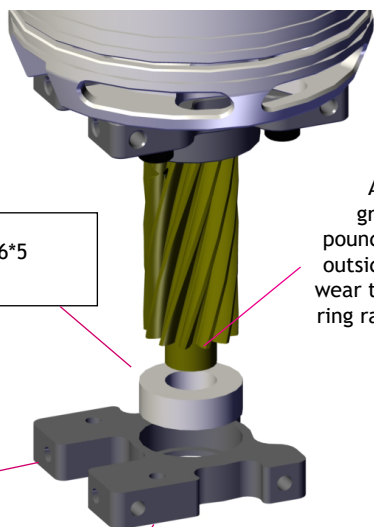
Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight



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

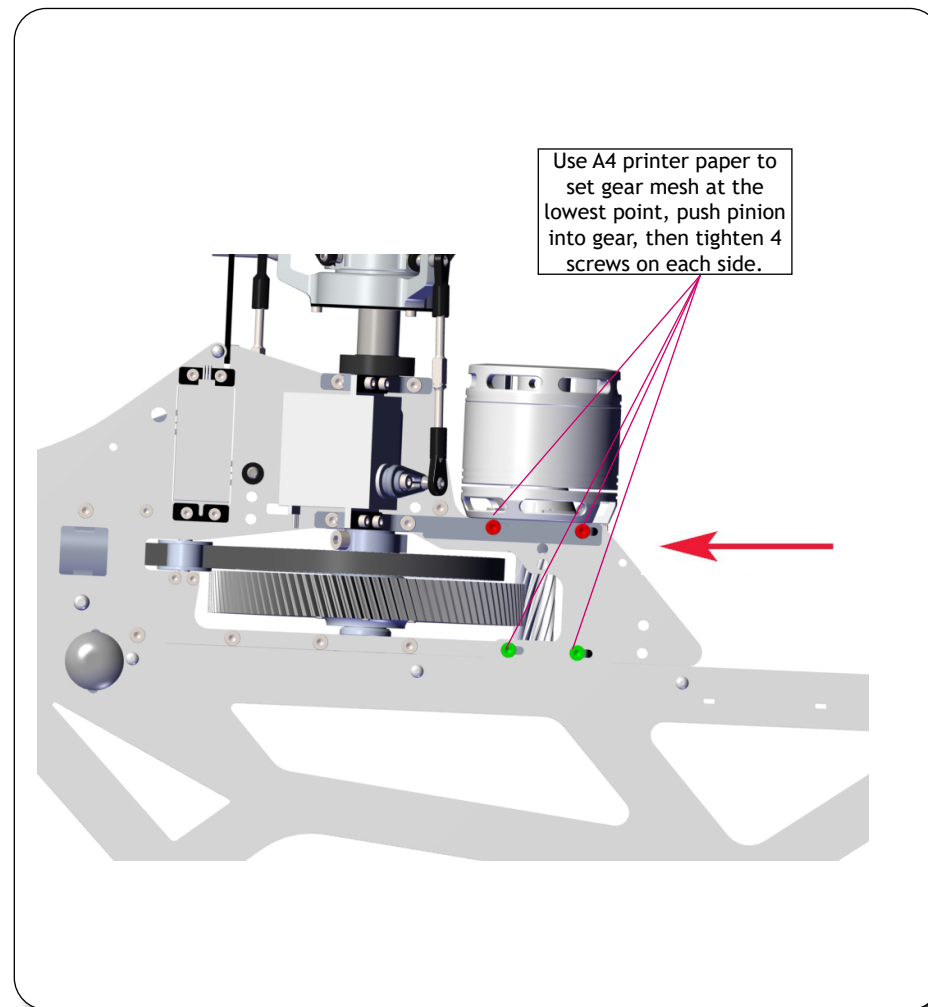
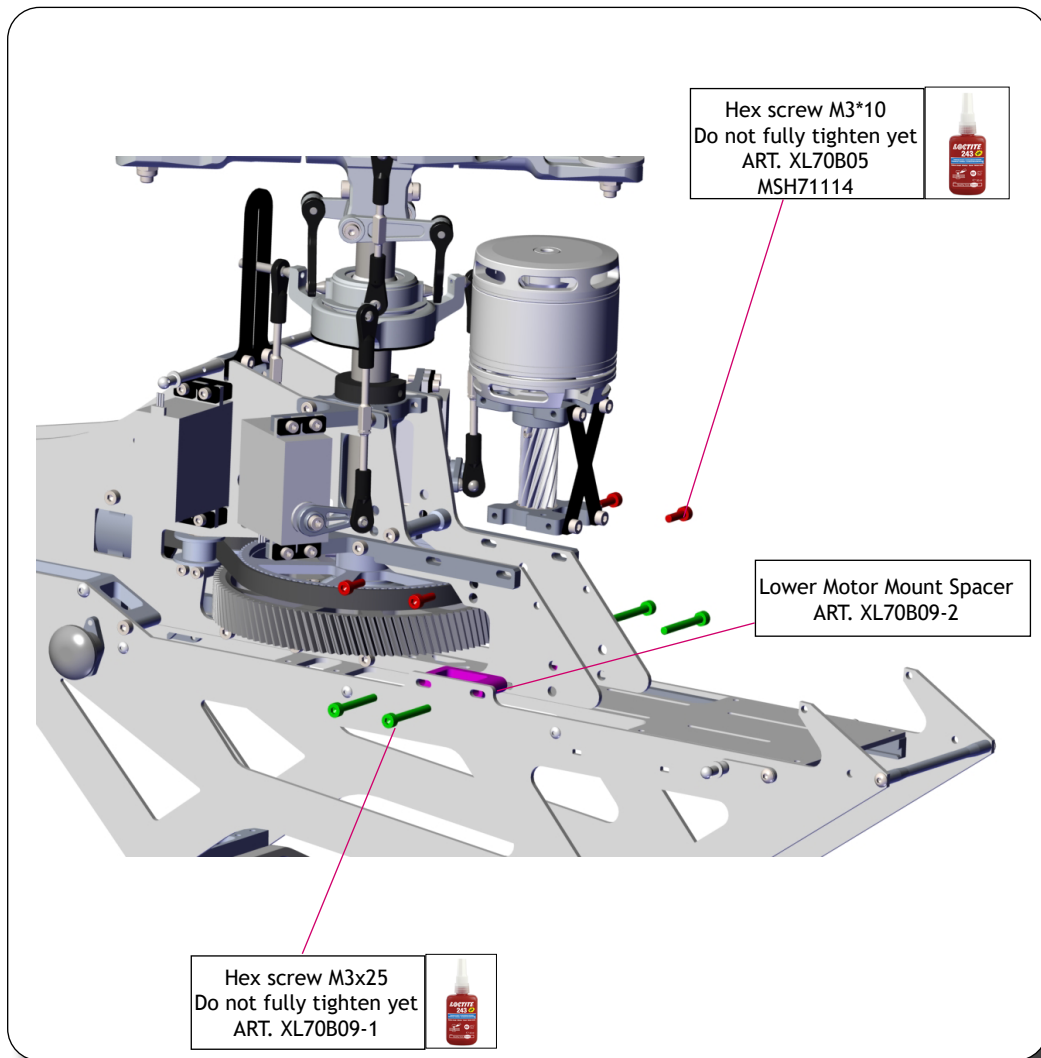


X Carbon Fiber Brace
ART. XL70B08



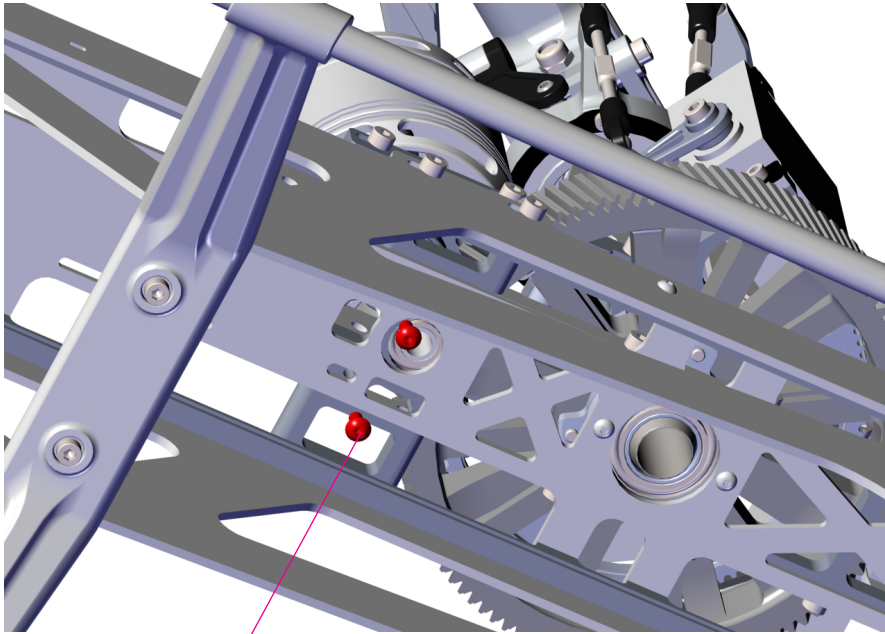


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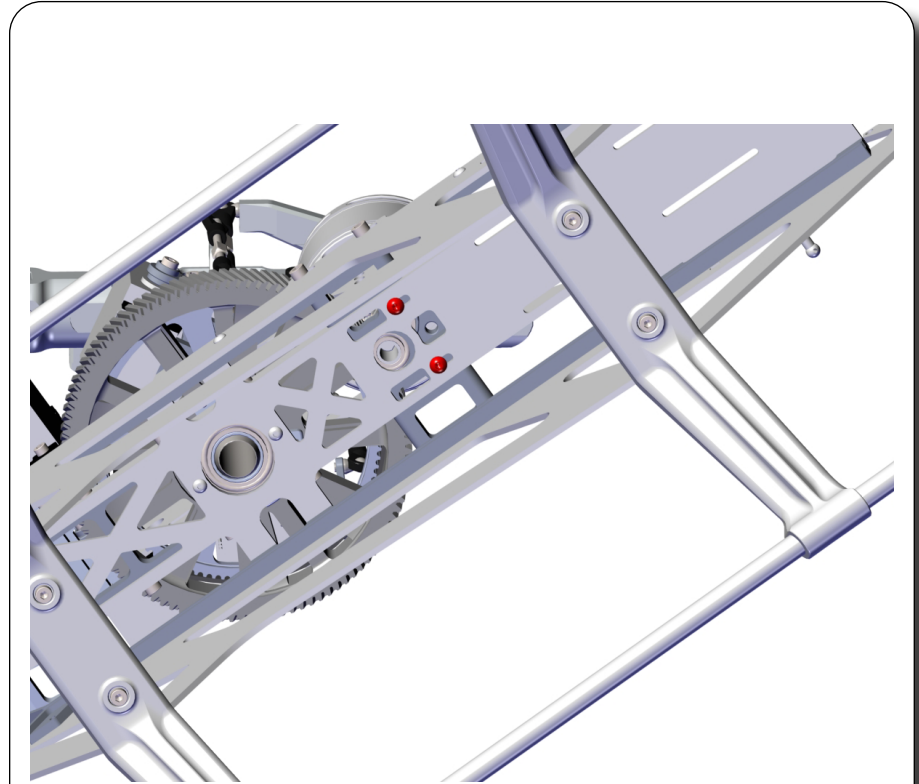


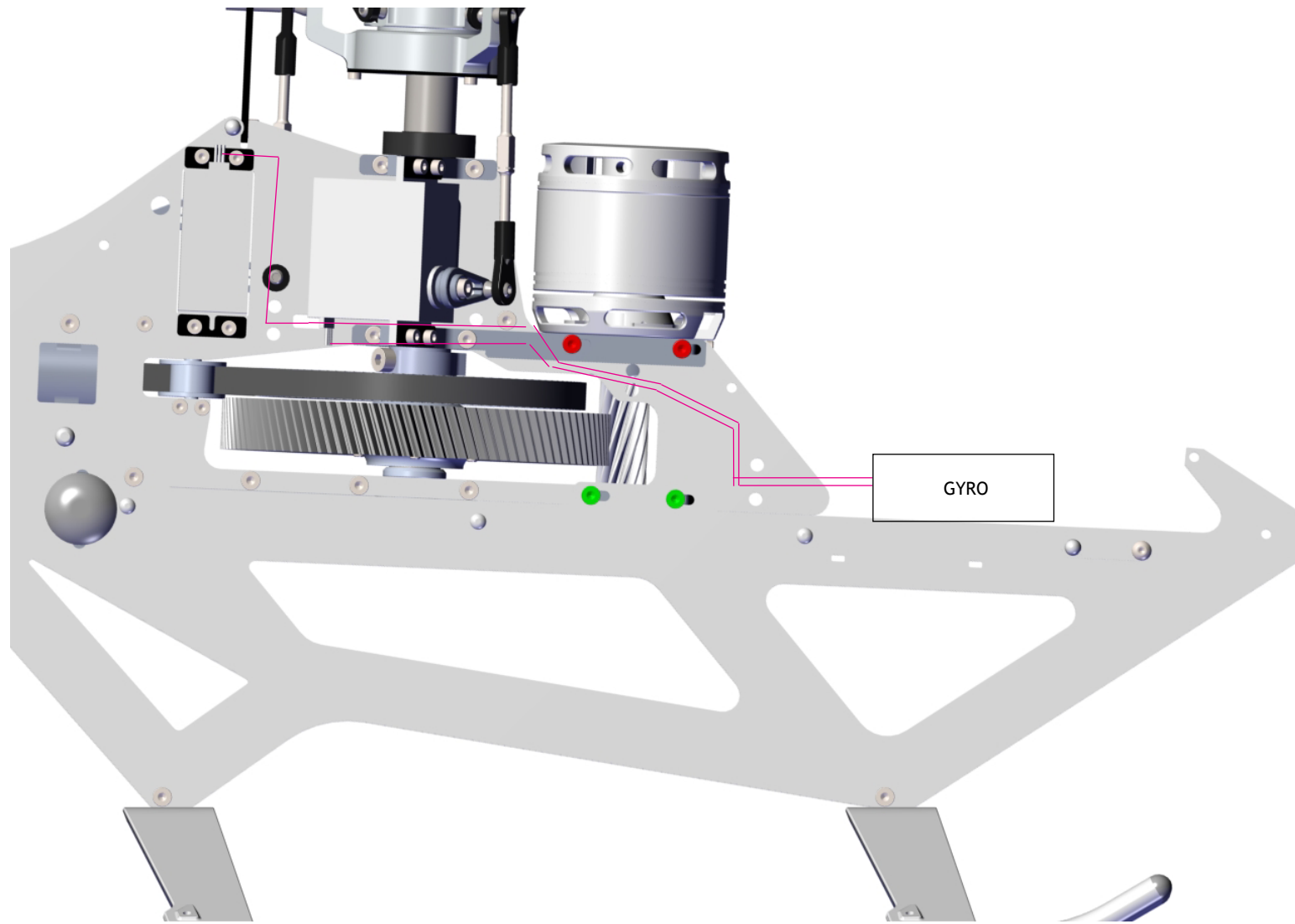


Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight



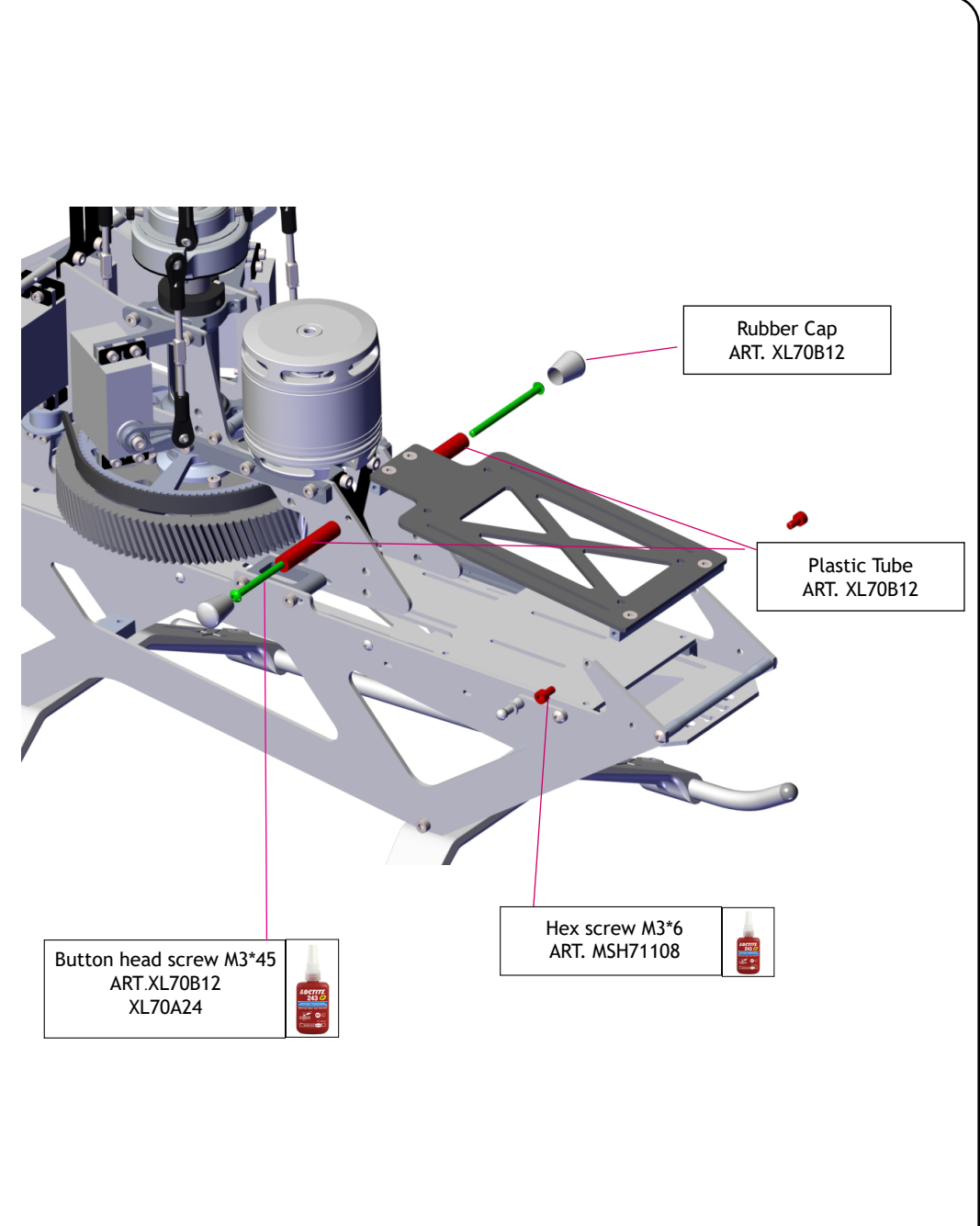
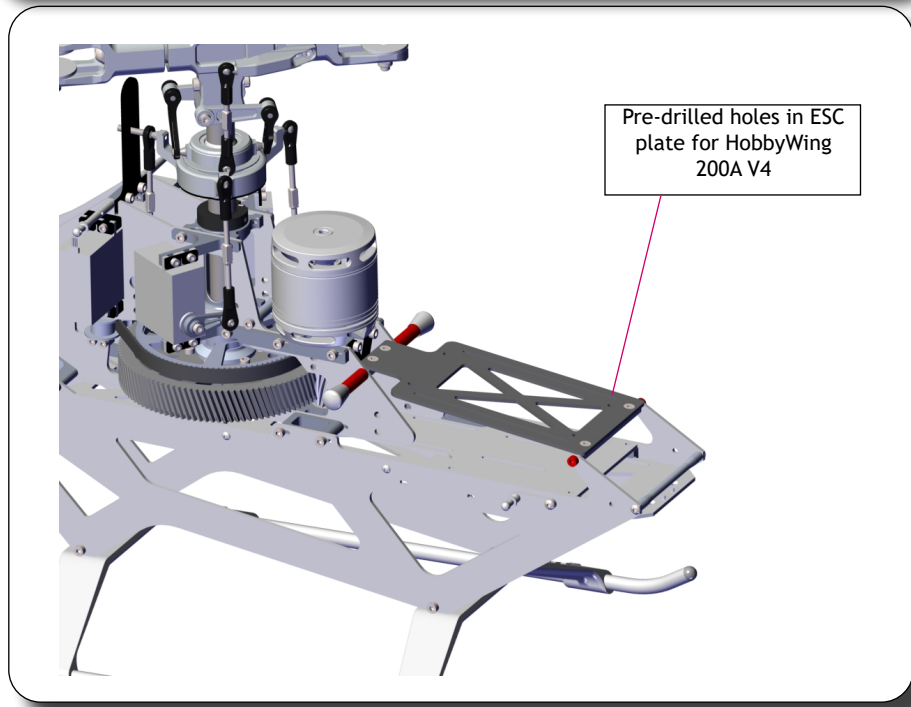
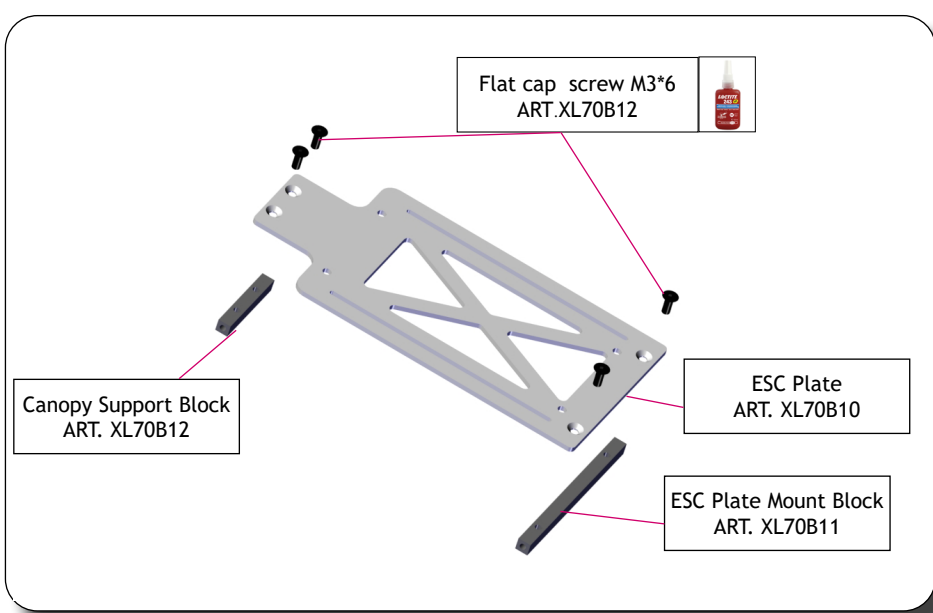
Button head screw
M3*6
ART.XL70A21







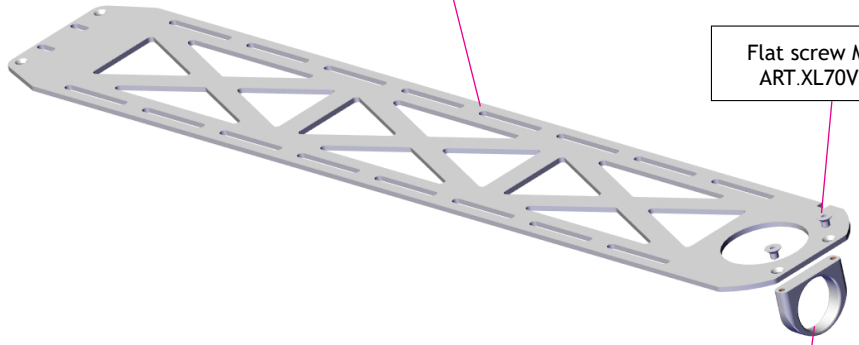
Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight





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

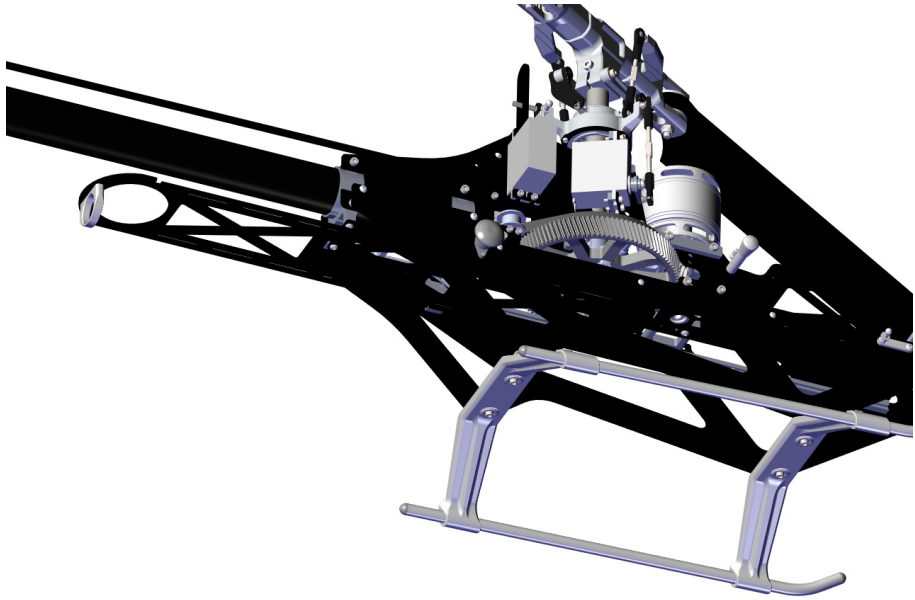
Battery Tray V2
ART. XL70V2B13



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



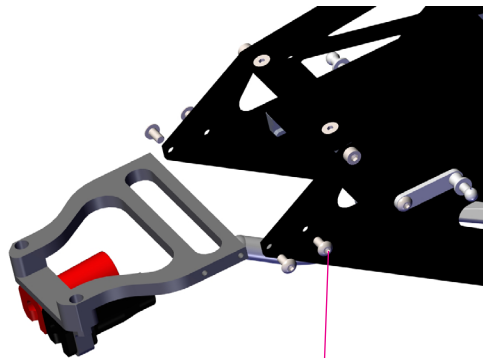
Battery Quick Connect Mount
ART. XL70V2B15

Solder ESC wire

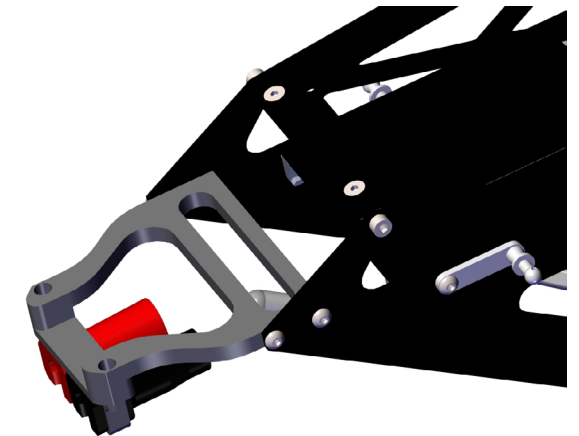
AS150 Female bullet
ART. XL70V2A07

AS150 Small black housing
ART. XL70V2A05

Battery Connector Retainer
ART. XL70V2B16

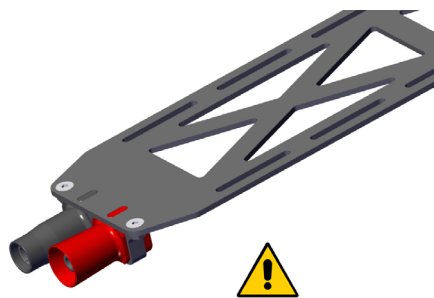
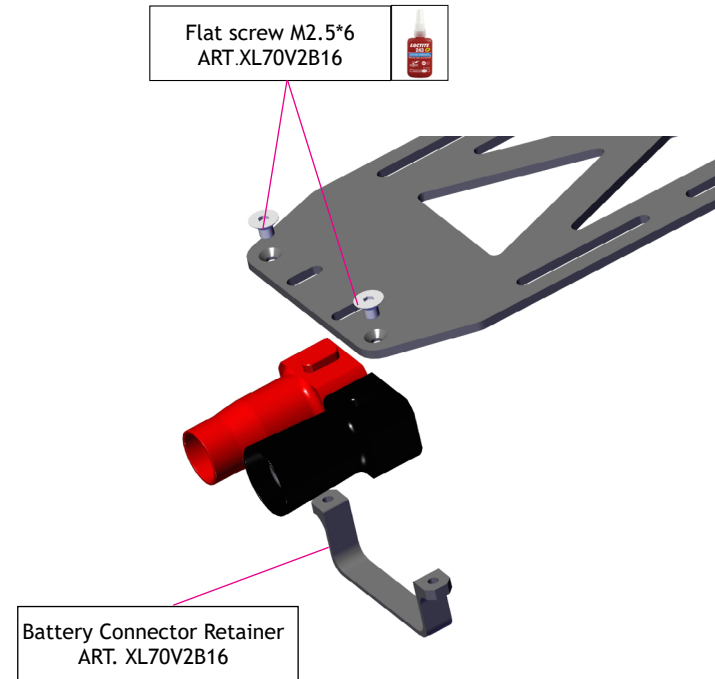
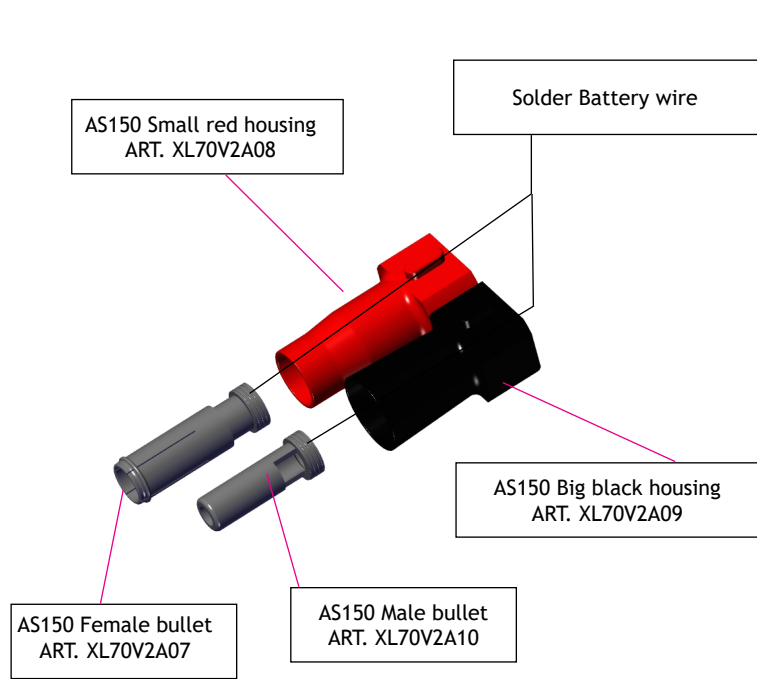



Button head screw
M3*6
ART.XL70A21

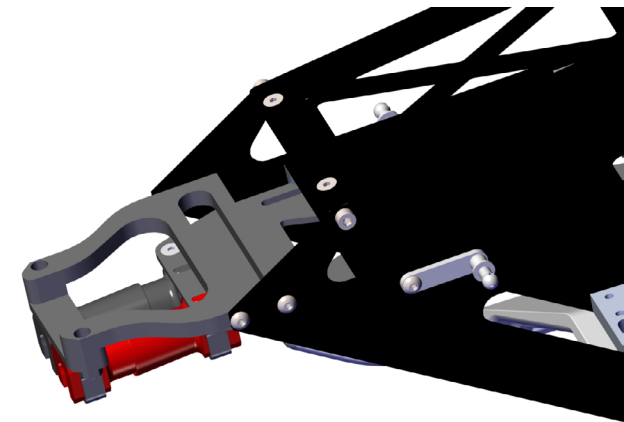




Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight

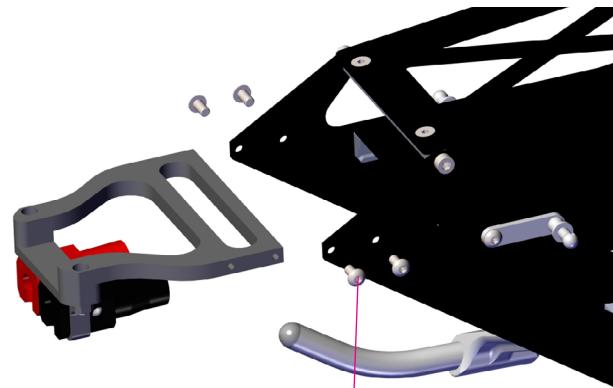
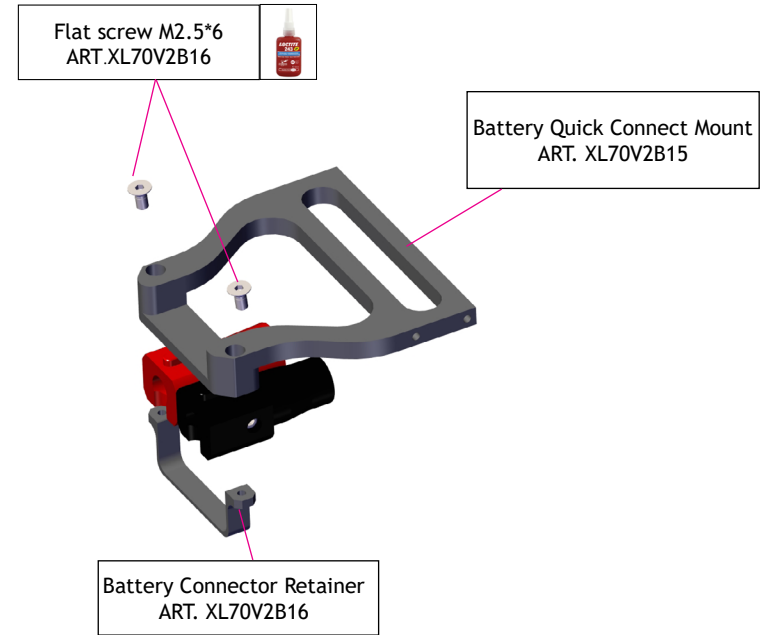
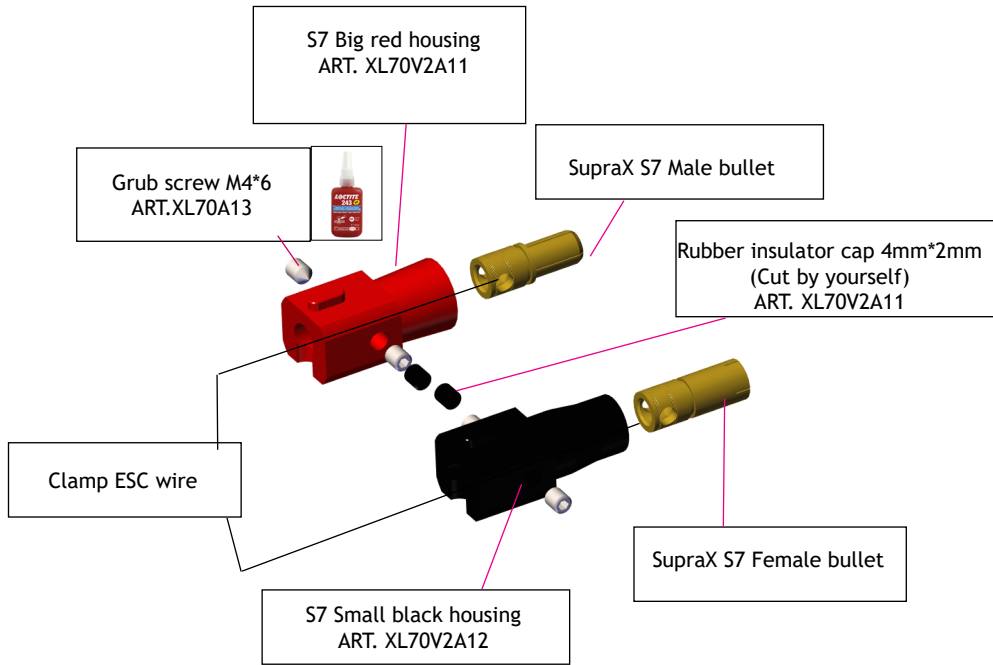


 Make sure the connectors are fully mated before flying

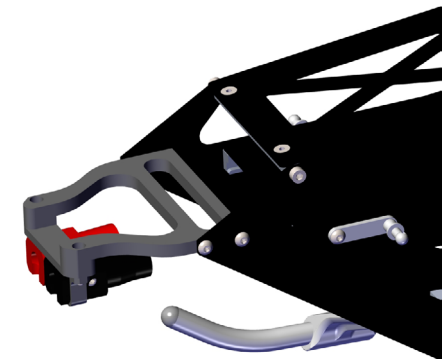




Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight

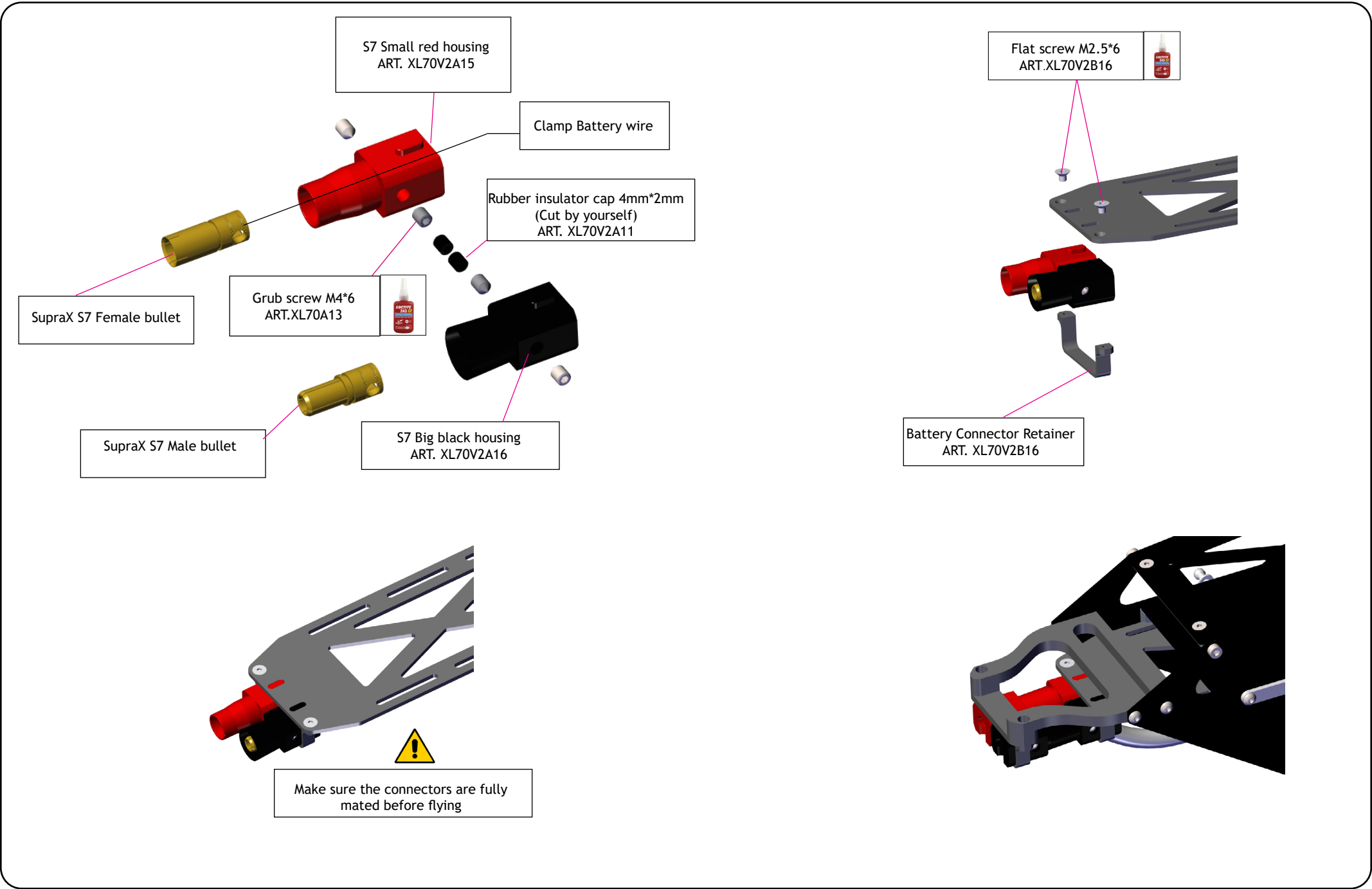


Button head screw
M3*6
ART. XL70A21





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



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