



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

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:

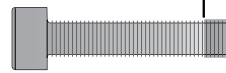
- ALWAYS check radio control system for proper operation before operating the model.
- ALWAYS check radio control system power levels before operating the model. Flying with low transmitter or receiver battery may cause loss of control.
- ALWAYS pay attention to your surroundings, and look out for others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

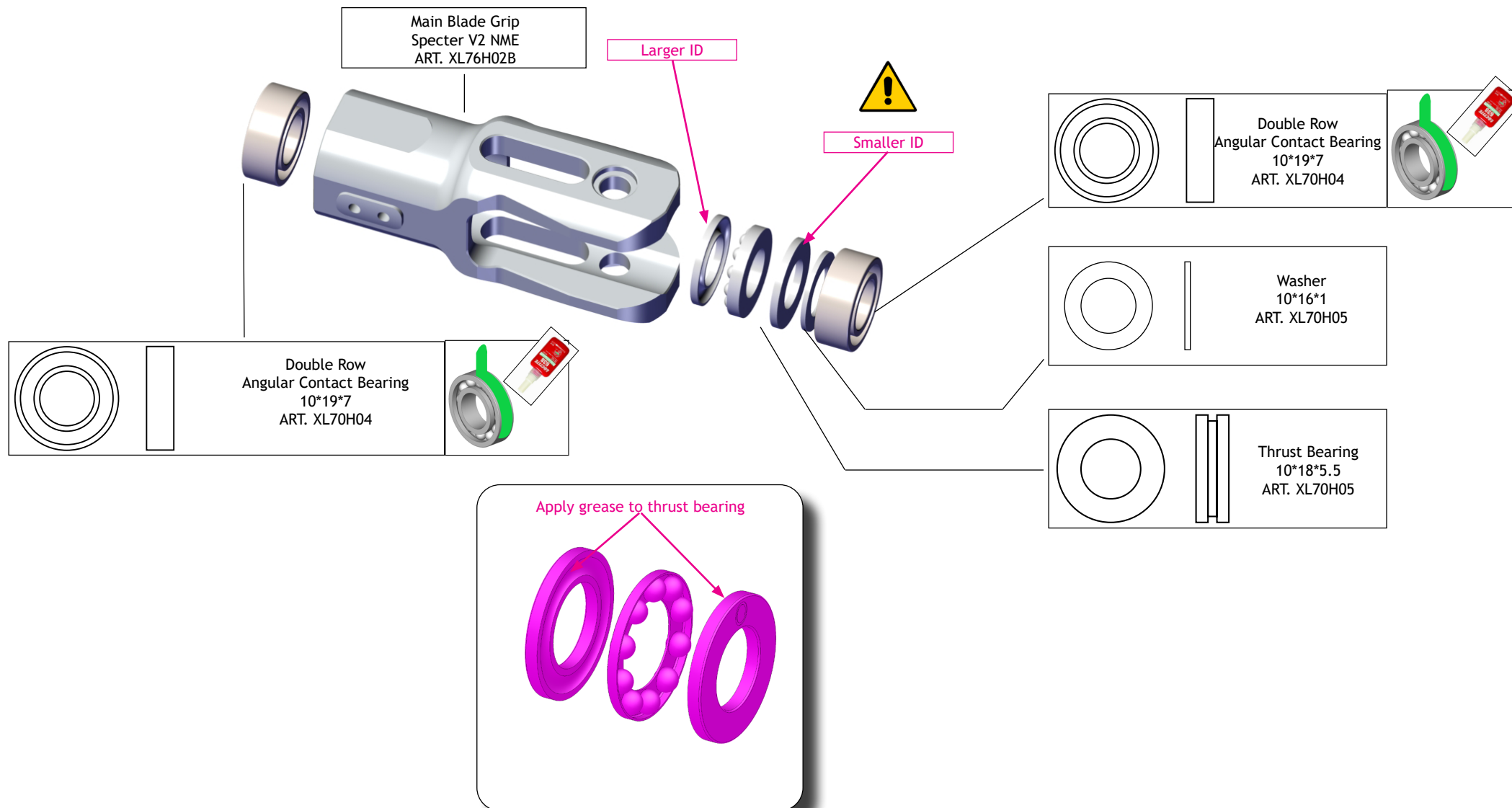
Equipment Required for Assembly

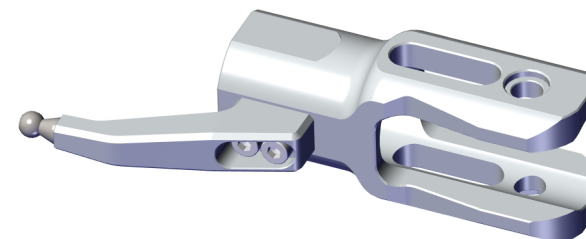
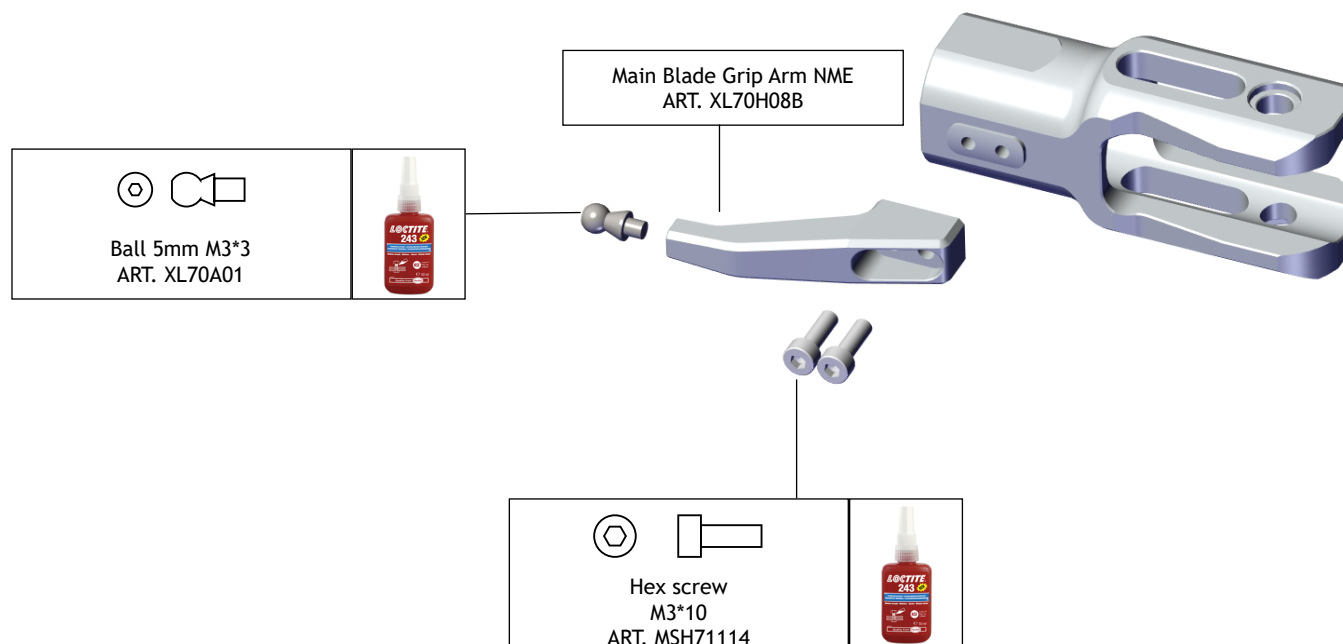


Swashplate Servos: Standard Size (Qty. 3)	ESC: 130HV-250HV Typical	Hex Screwdriver Sizes: 1.5mm 2mm 2.5mm * 2 3mm 4mm * 2
Tail Servo Standard Size (Qty. 1)	Main Blades: Carbon Fiber 690mm - 720mm	 Where indicated, use Thread lock MEDIUM 
Trasmitter Receiver/Satellites Flybarless Unit	Tail blades: Carbon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



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





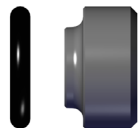


Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight

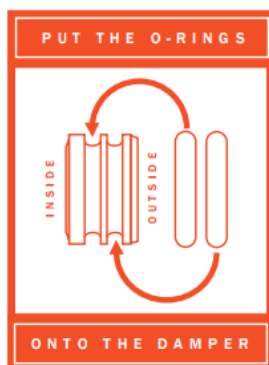
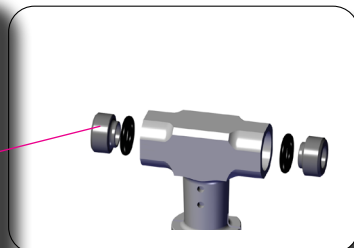
Head Dampeners



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



Main Rotor Hub NME
ART. XL70H01-1B

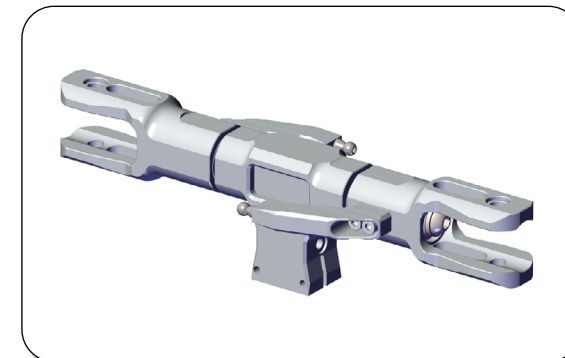
Washer
10*16*1
ART. XL70H05



Screw M6*12
ART.XL70H07

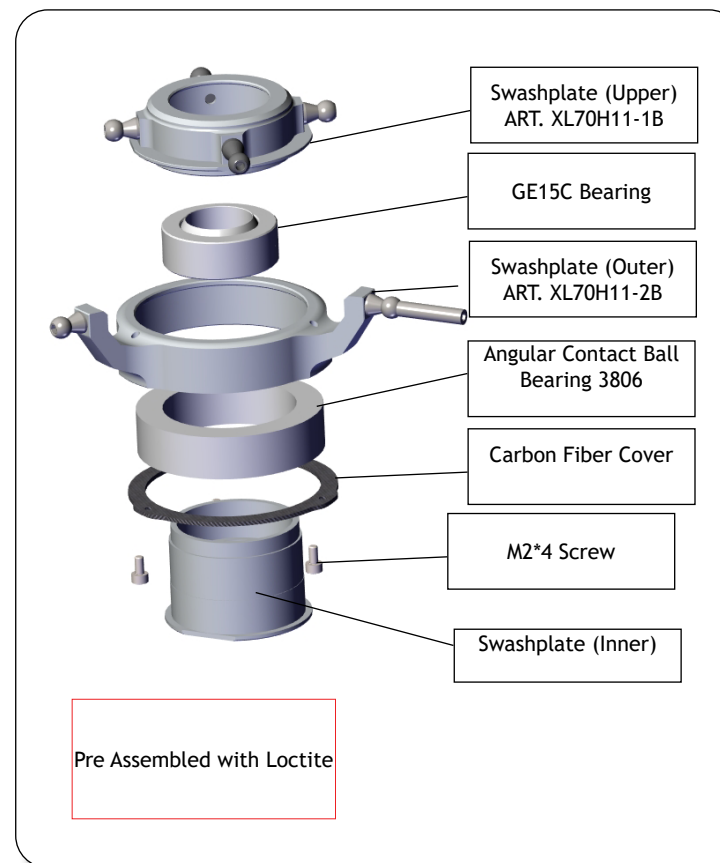
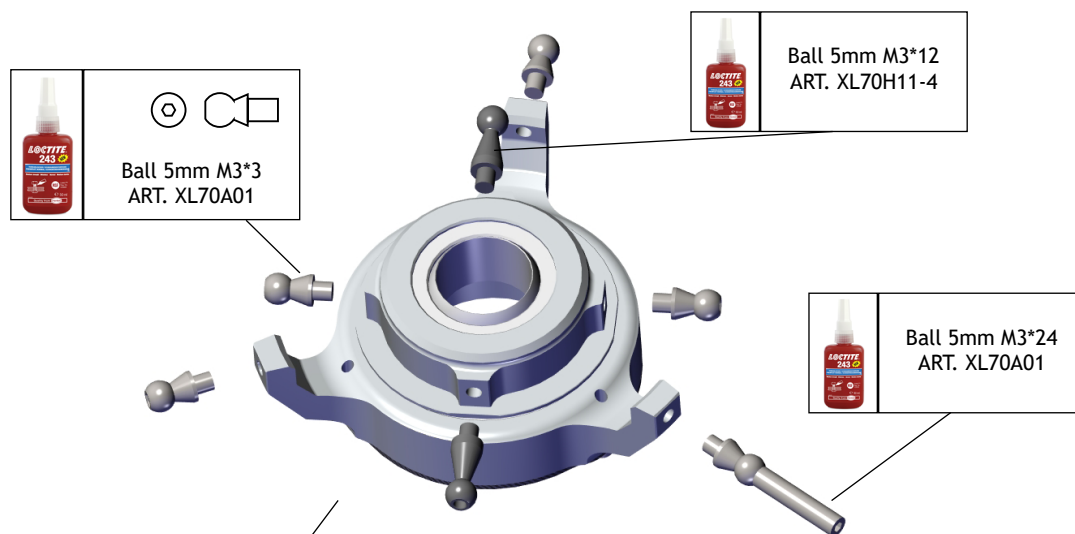
M6 Washer (keep it in the center)
ART. XL70H07

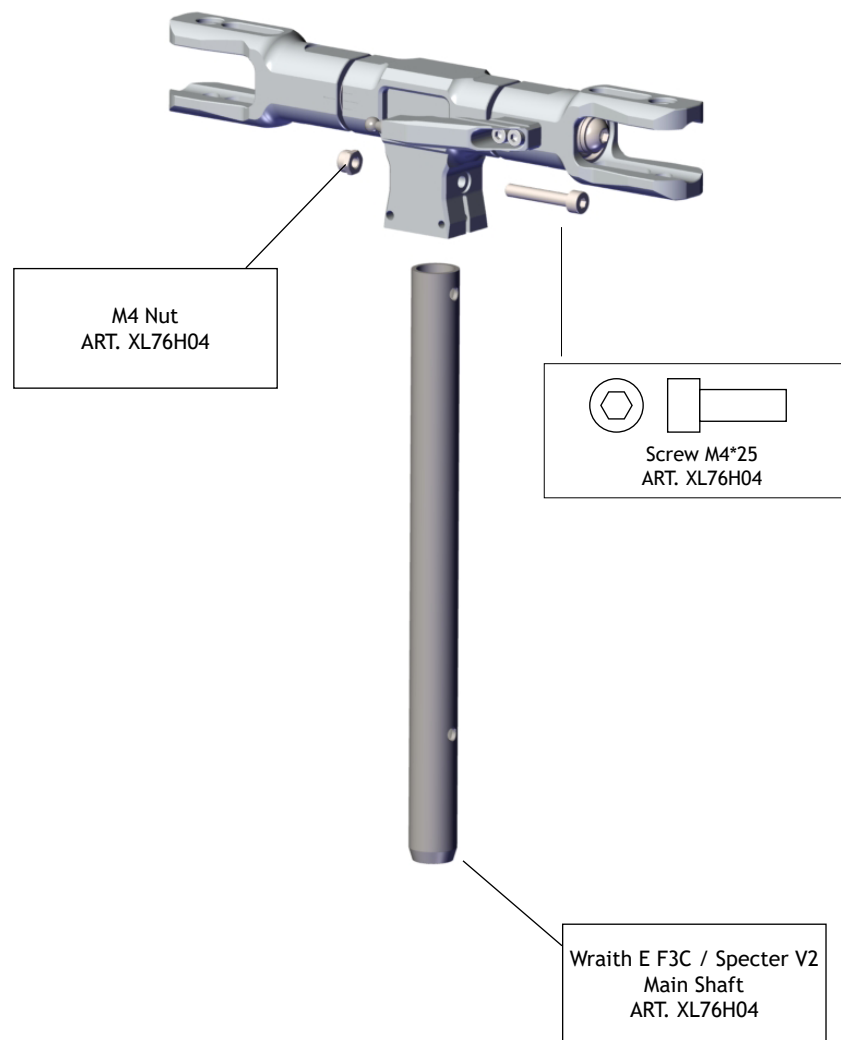
Spindle
ART. XL70H07





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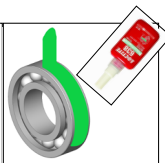




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Spacer 3*5*0.5
ART. XL70H09B

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



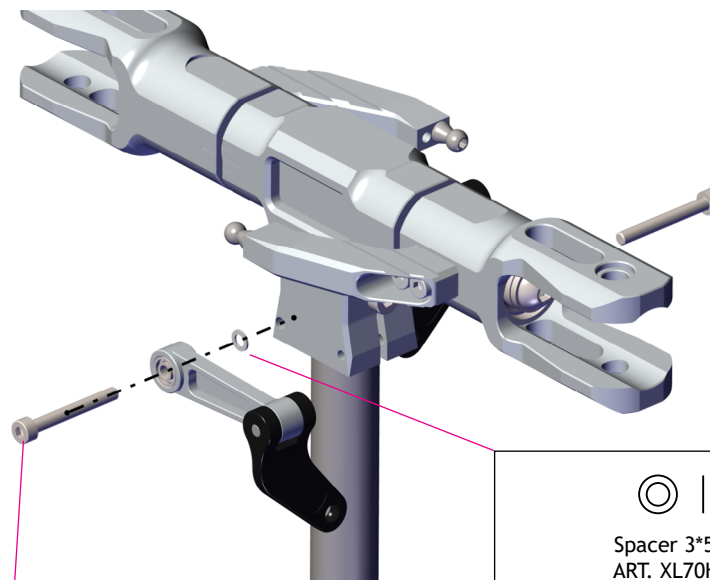
Pin 3*14
ART. XL70H09B

Control arm NME
ART. XL70H09B

Radius Arm
ART. XL70H09
ART. XL70H10

2X

Pre Assembled



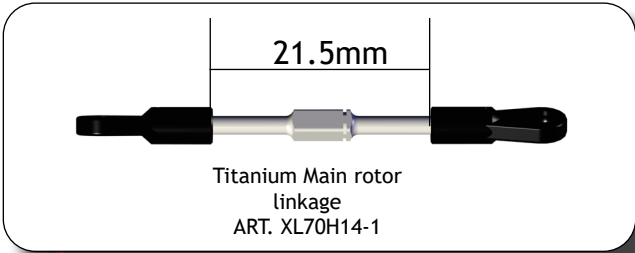
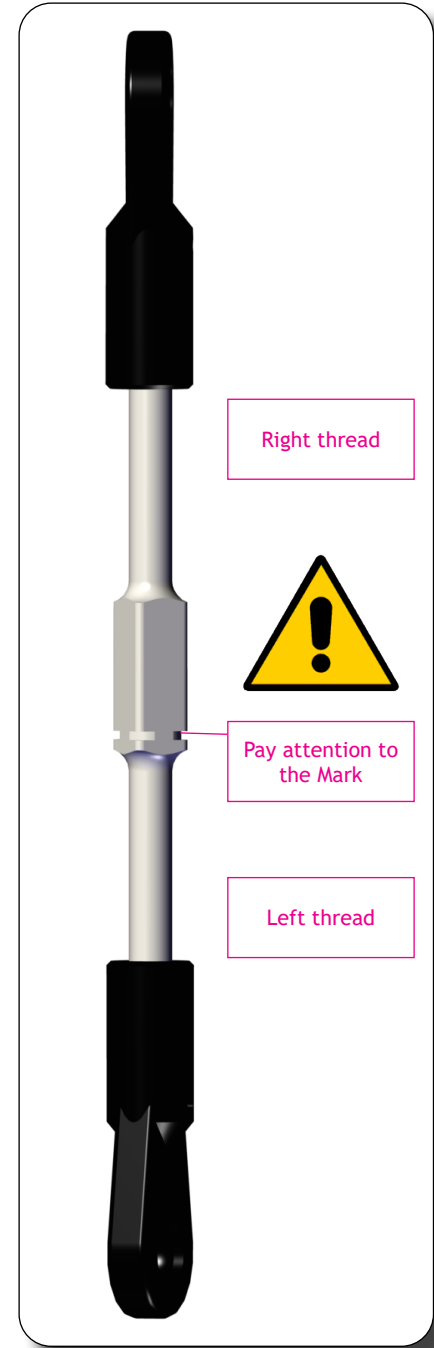
Spacer 3*5*0.5
ART. XL70H09B

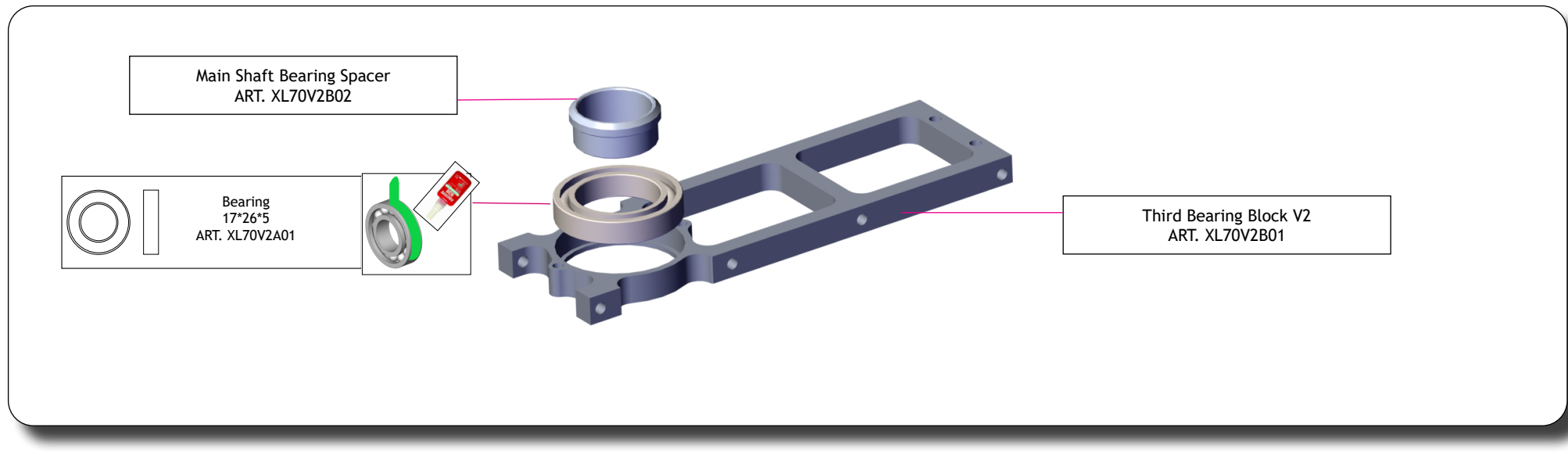
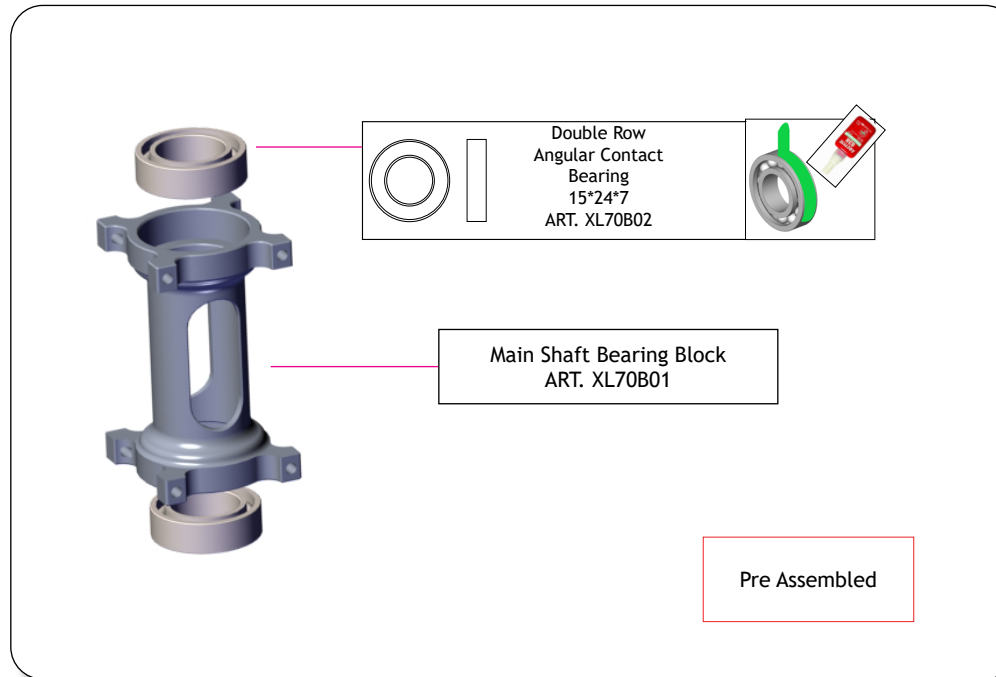
Screw M3*25
ART. XL70H09B





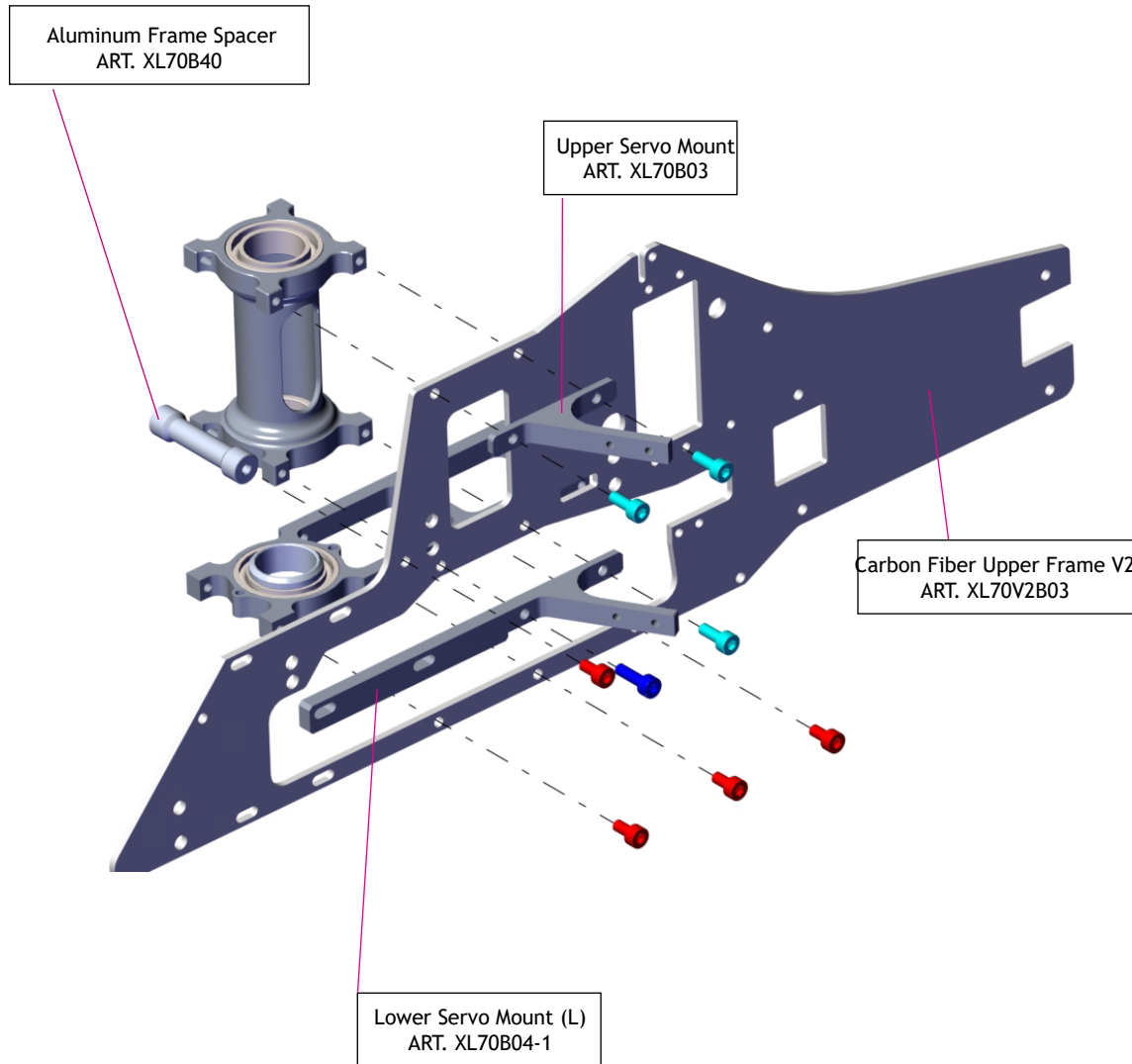
Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight



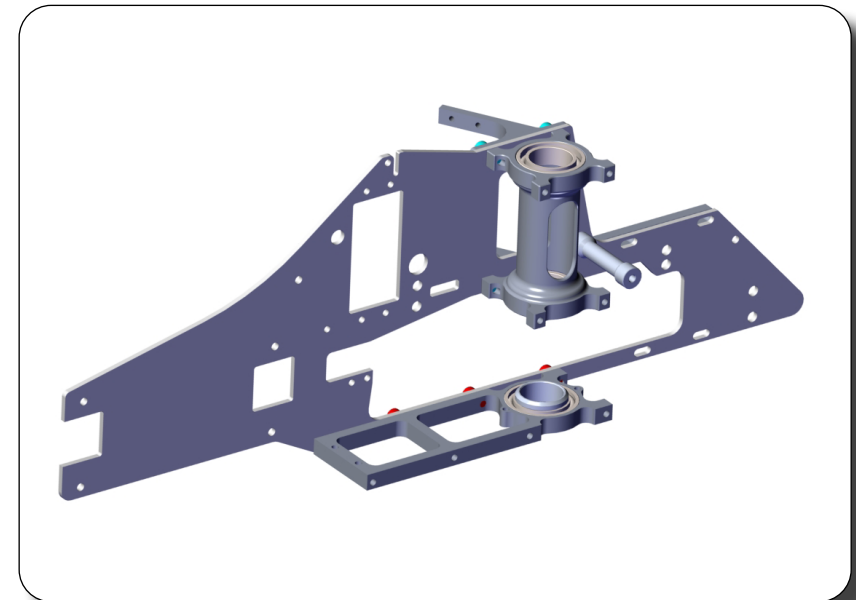




Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight

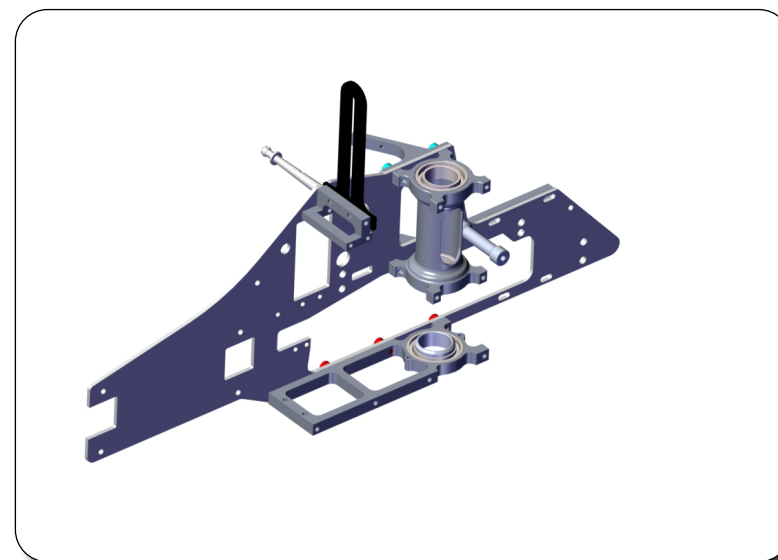
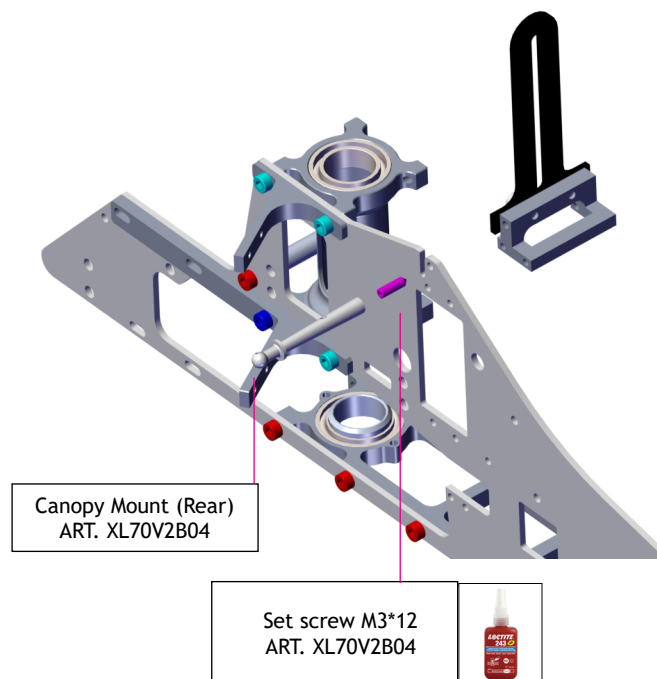
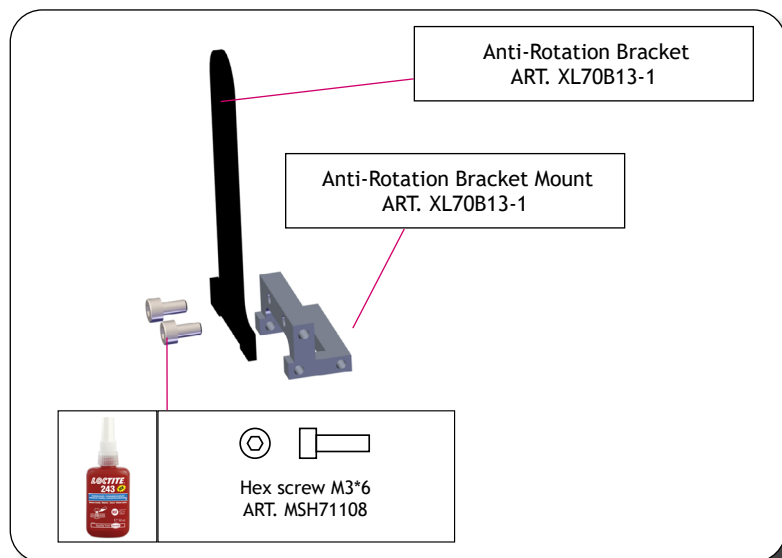


		
	Hex screw M3*6 (Red in picture) ART. MSH71108	
		
	Hex screw M3*8 (Tiffany Blue in picture) ART. MSH71109	
		
	Hex screw M3*10 (Blue in picture) ART. MSH71114	





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

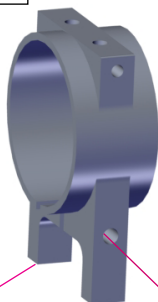


Hex screw M2.5*6
ART. MSH71110

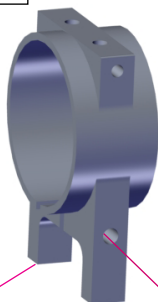


Front Belt Idler Mount (Upper)
ART. XL70V2B06

Carbon Fiber Plate
ART. XL70V2B07

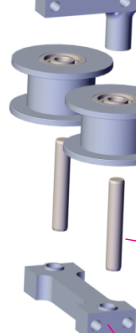


Tail Boom Clamp V2
ART. XL70V2B05

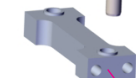


Unthreaded Hole Faces Right

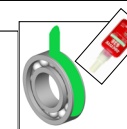
Front Belt Idler Mount (Lower)
ART. XL70V2B06



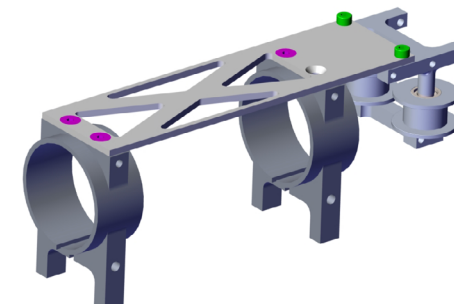
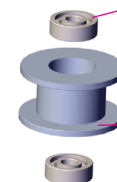
3*17 Pin
ART. XL70V2B06



Ball bearing
3x9x4
ART. XL70A20



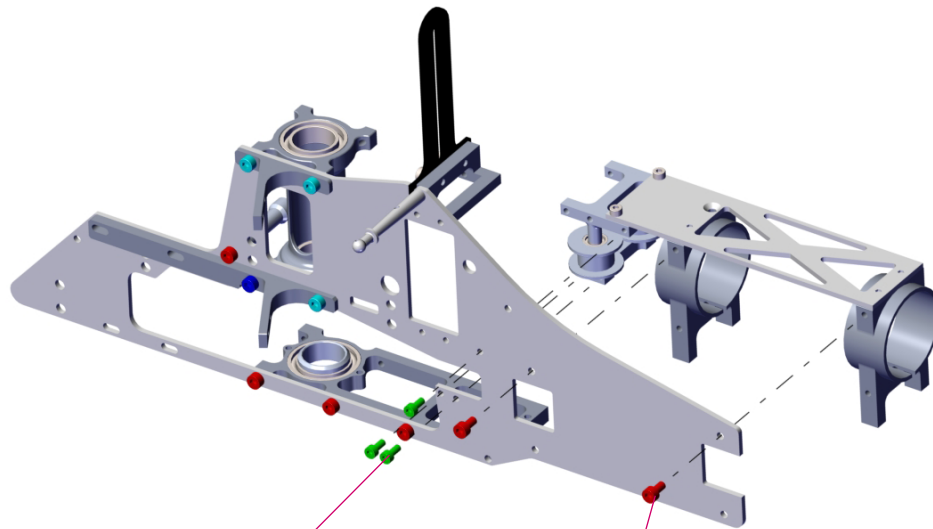
Belt Front Idler V2
ART. XL70V2B06



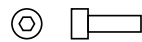


Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight

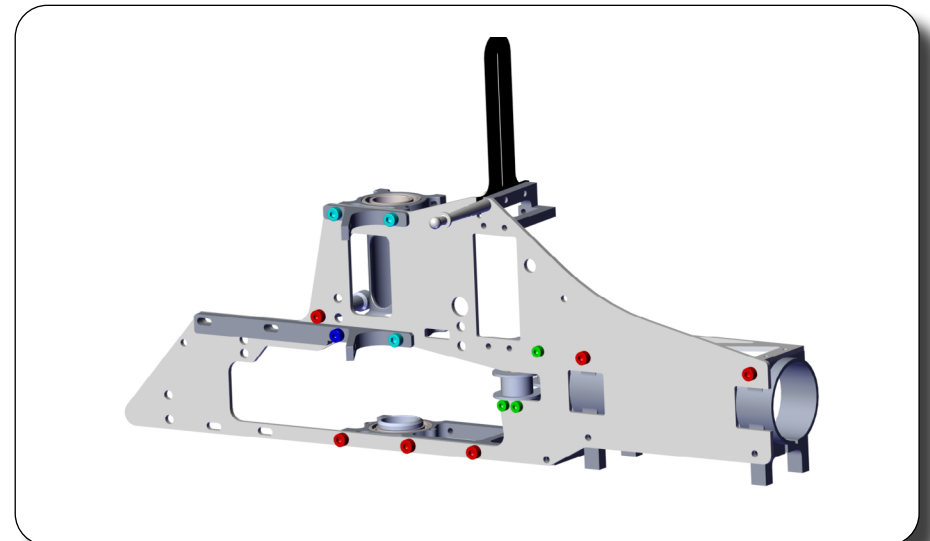
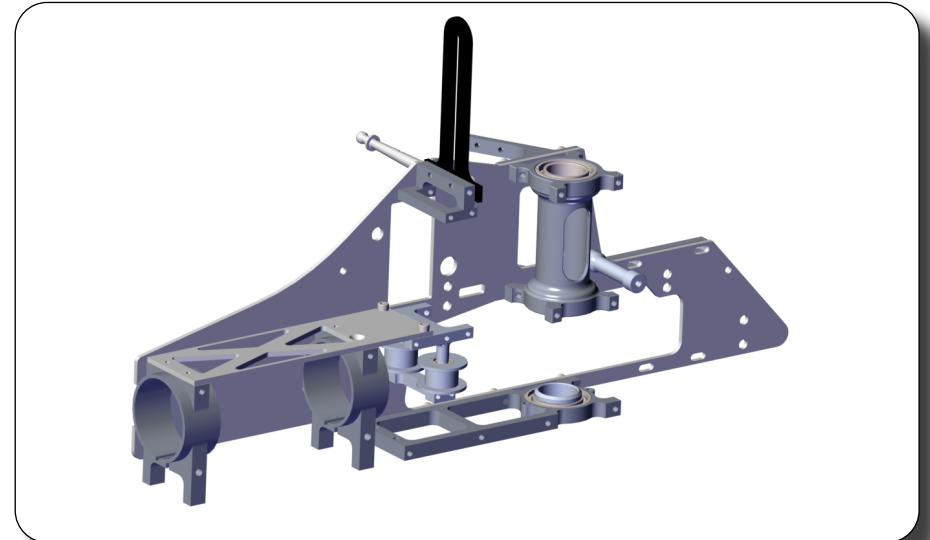
SPECTER 700 V2



Hex screw M2.5*6
ART. MSH71110

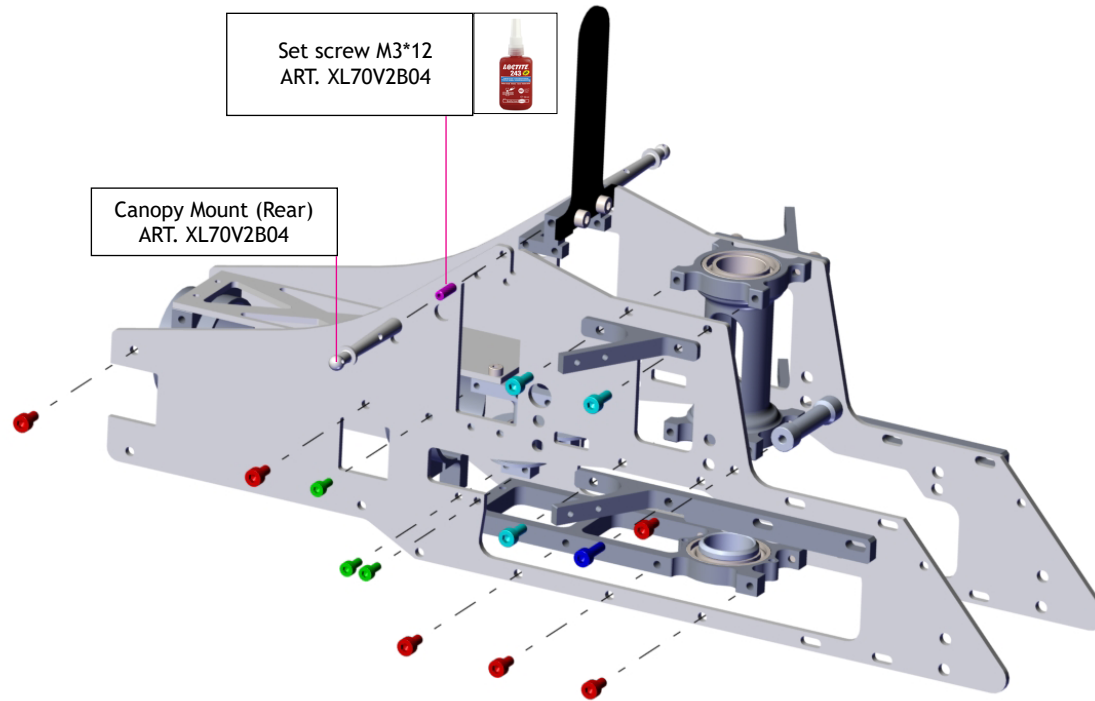


Hex screw M3*6
ART. MSH71108

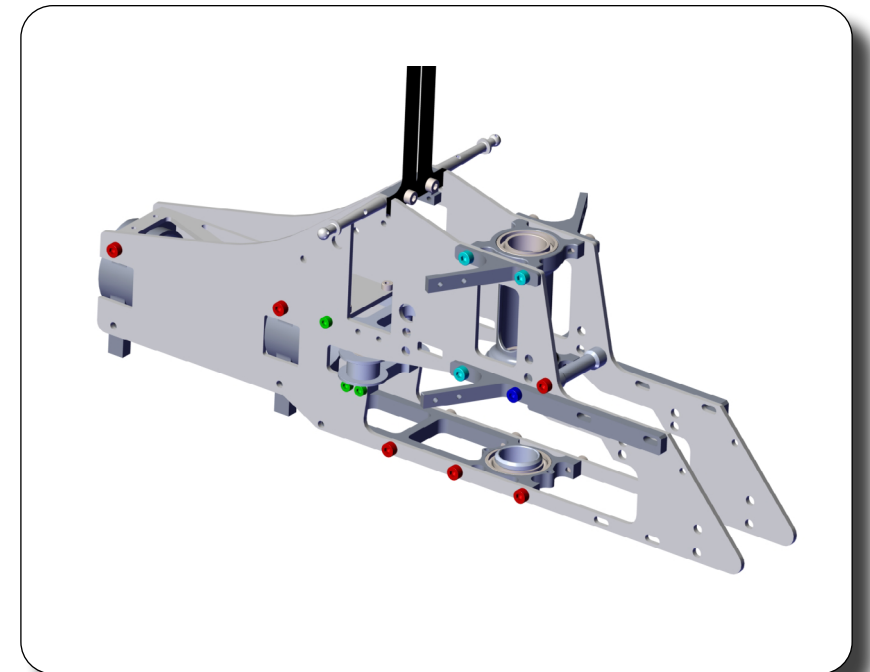




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	Hex screw M3*6 (Red in picture) ART. MSH71108
	 
	Hex screw M3*8 (Tiffany Blue in picture) ART. MSH71109
	 
	Hex screw M3*10 (Blue in picture) ART. MSH71114
	Hex screw M2.5*6 (Green in picture) ART. MSH71110

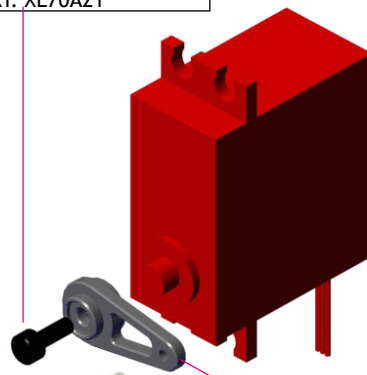




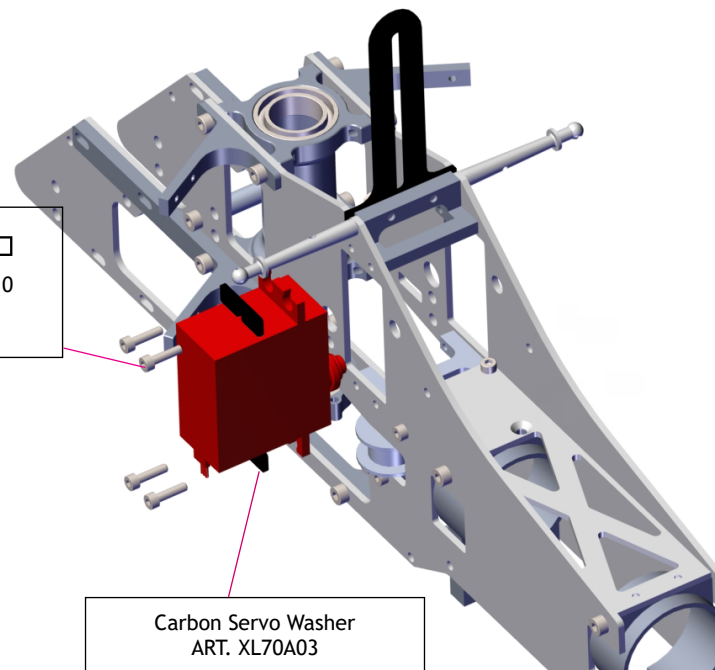
Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight



Button head screw
M3*6
ART. XL70A21



Hex Screw M2.5*10
ART. MSH71103
XL70A03



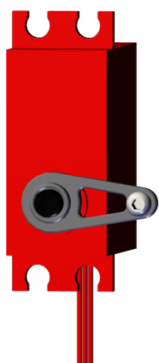
Carbon Servo Washer
ART. XL70A03



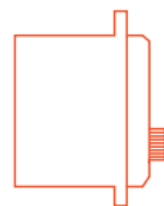
Ball 5mm M2.5*3
XL70A04



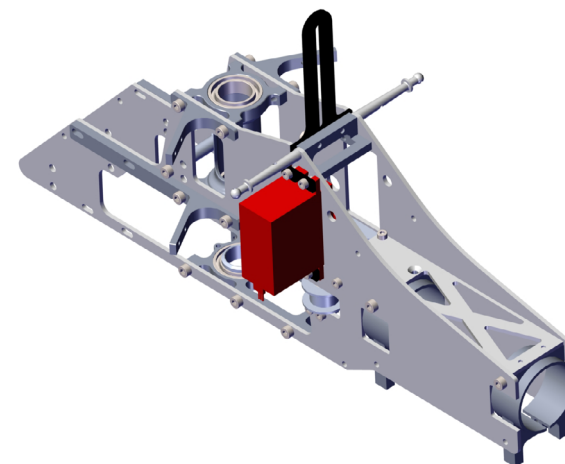
Servo Horn
XL70A04
Optioal: XL70A04-1



SERVO SHAFT

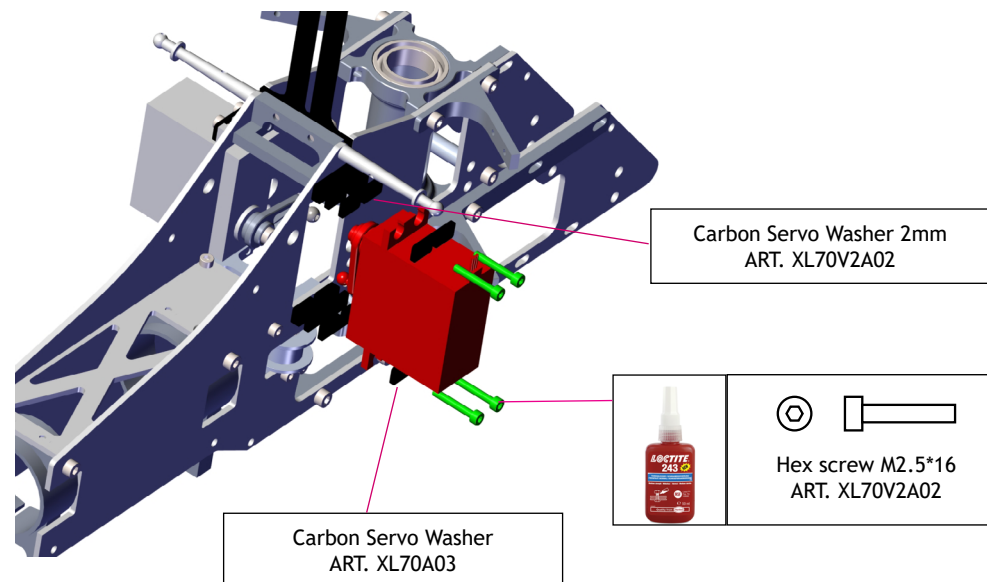
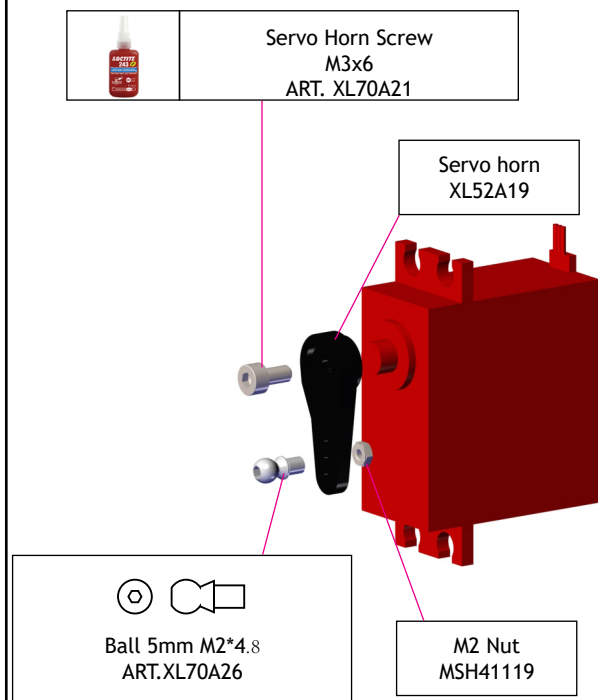


FACING DOWN

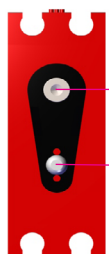




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Servo Spline facing up



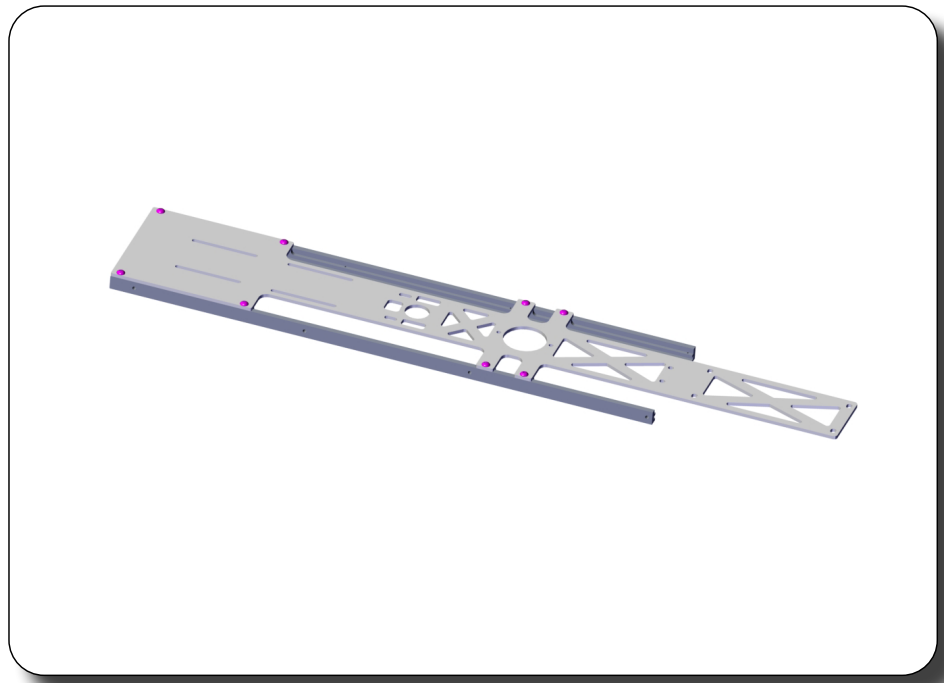
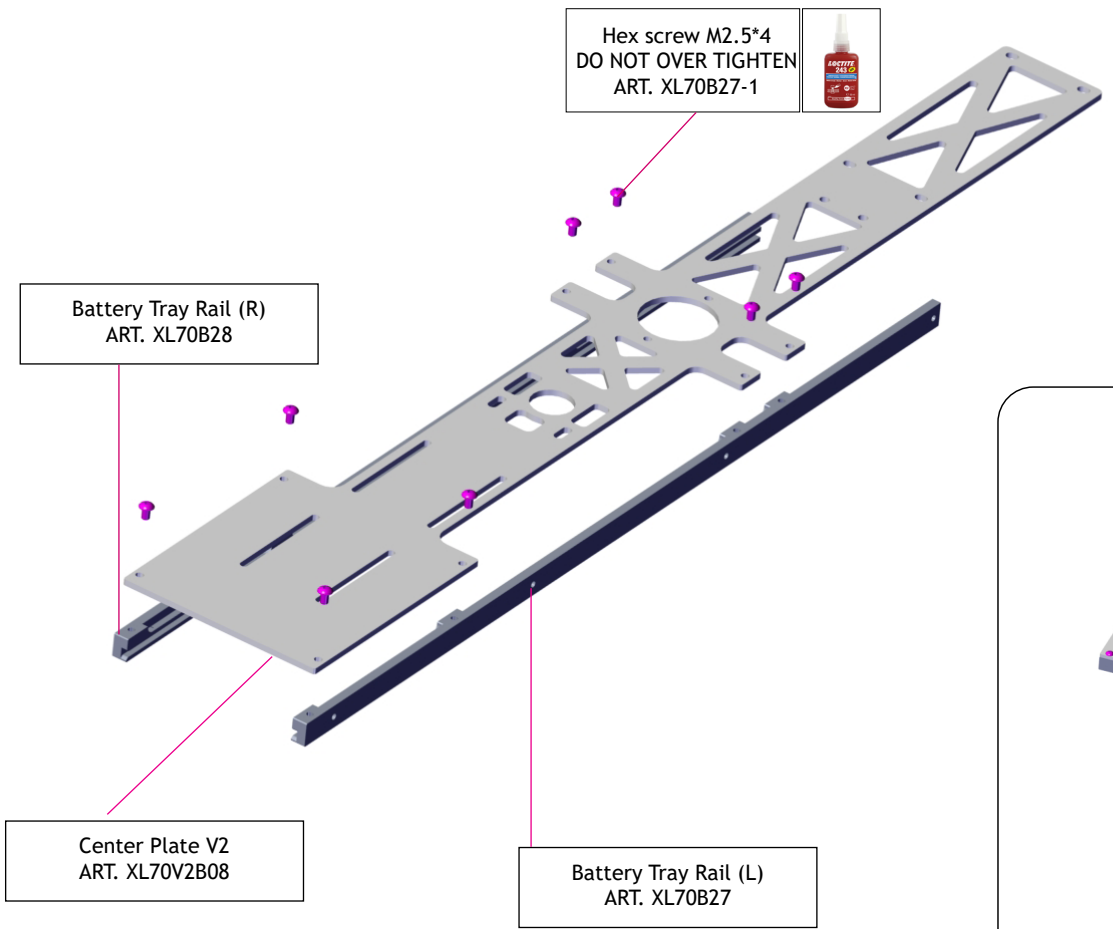
16-18MM



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.



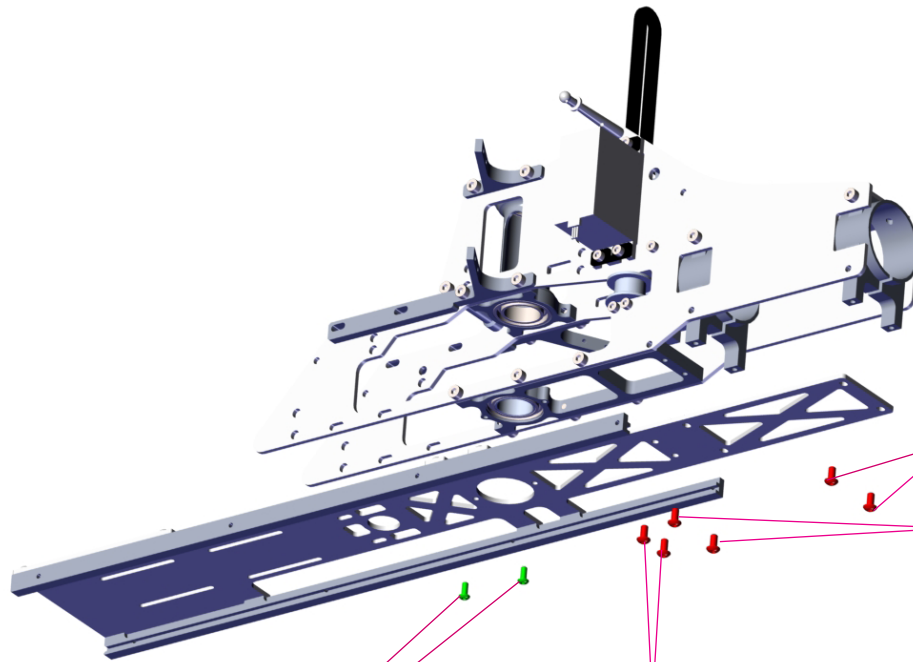
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SPECTER 700 V2



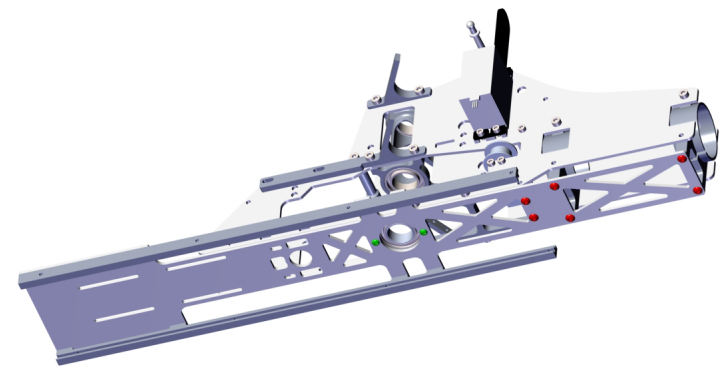
Hex screw M2.5*6
ART. MSH71110



Button head screw M3*6
Fully tighten

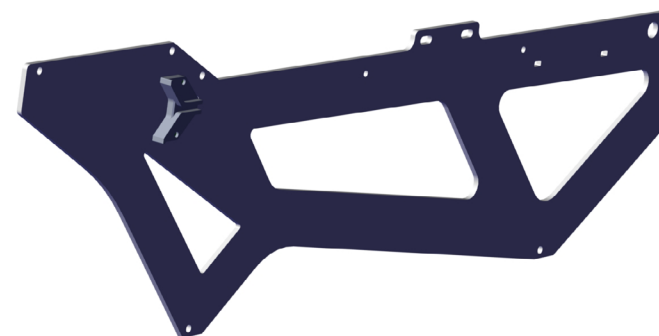
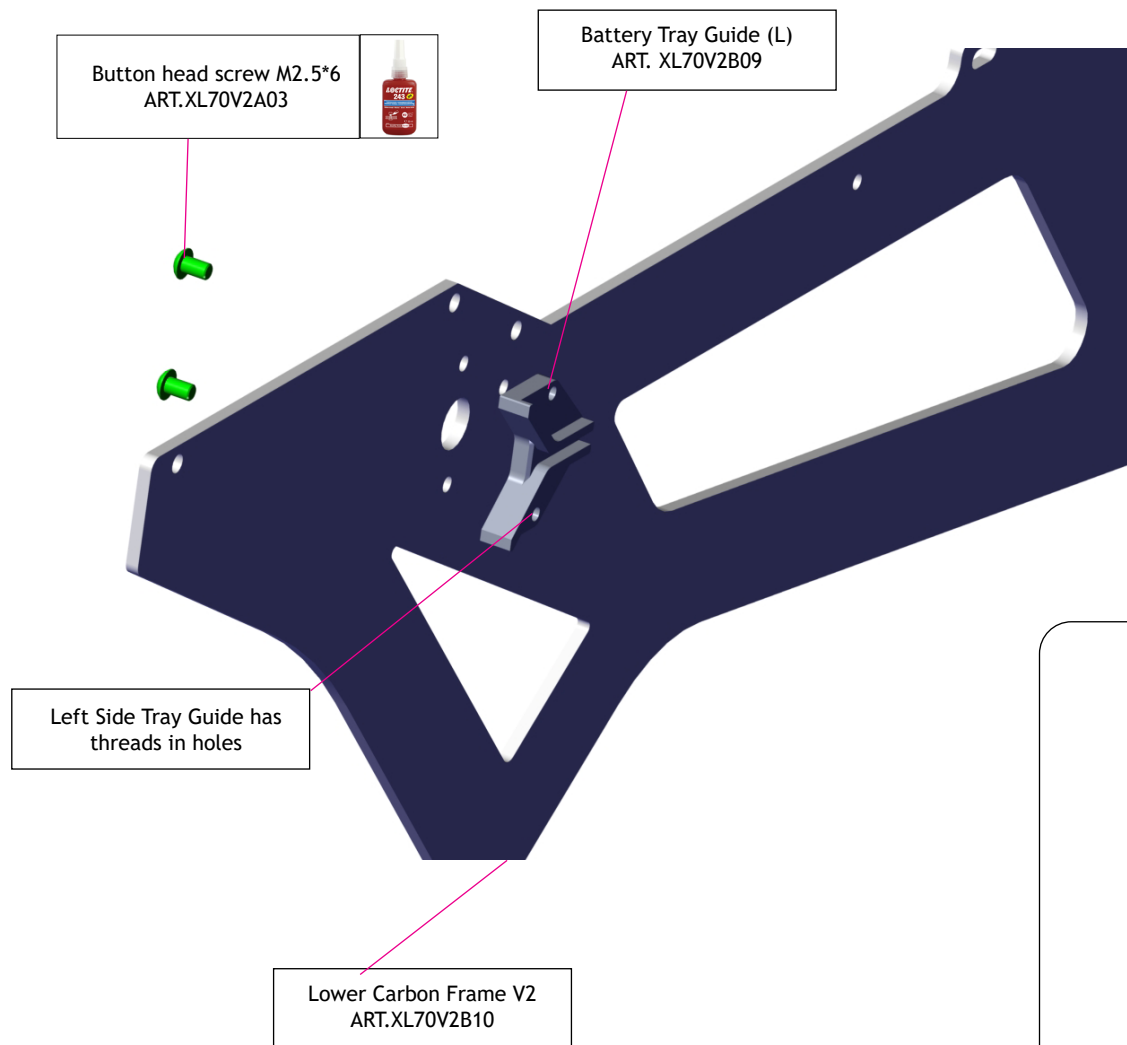


Button head screw M3*6
Do not tighten yet
ART.XL70A21



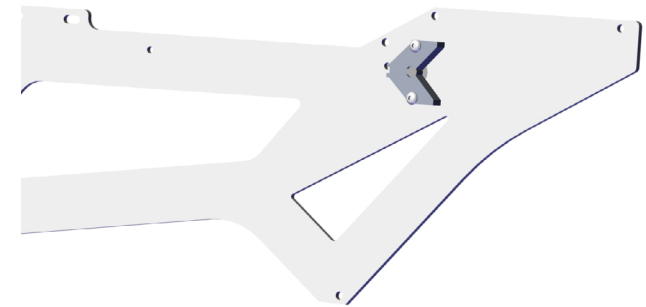
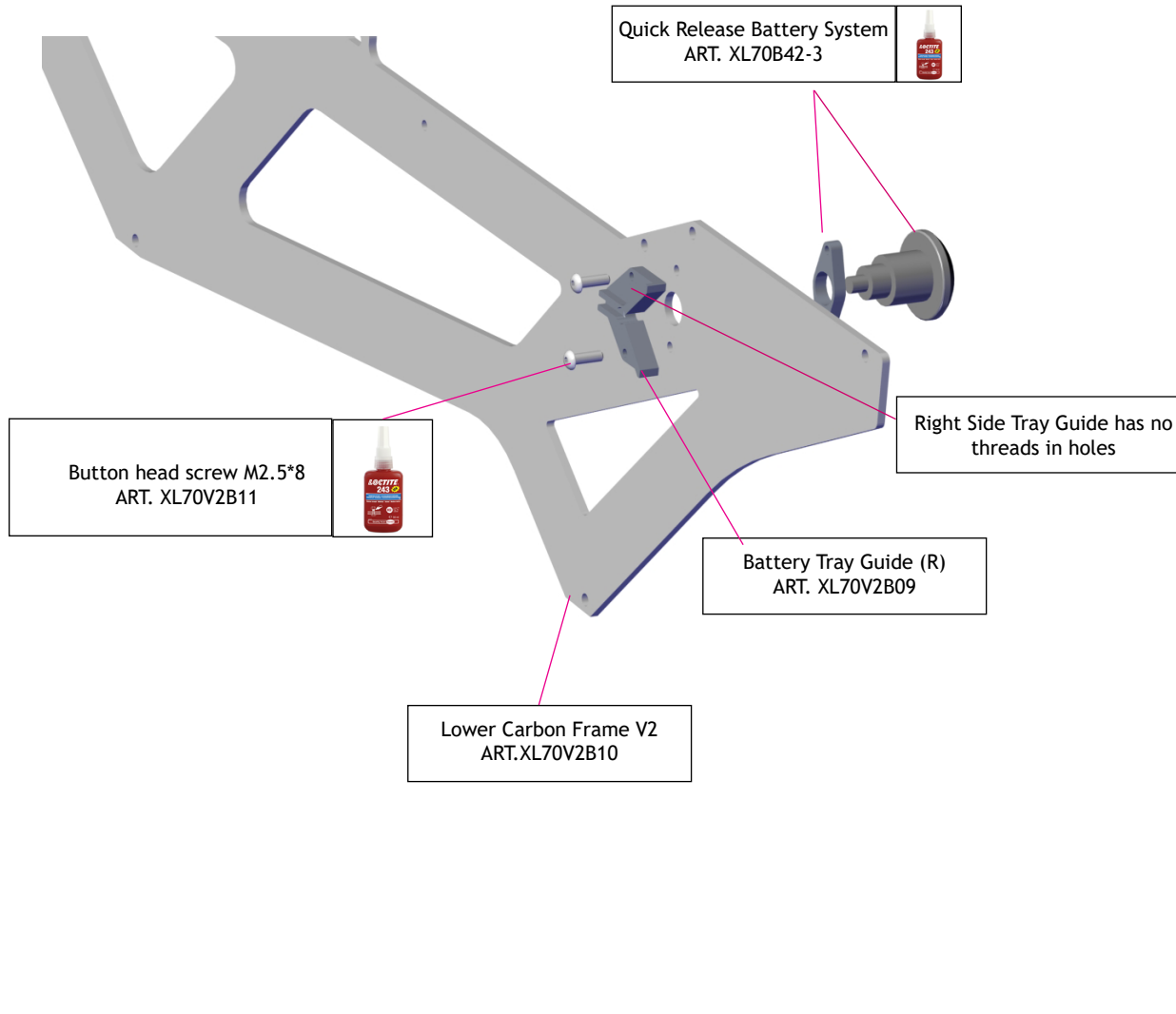


Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight





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Button head screw M3*6
ART.XL70A21



Aluminum Frame
Spacer
ART. XL70B39

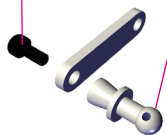
Button head screw M2.5*6
DO NOT OVERTIGHTEN
ART. XL70V2A03



Hex screw M3*6
ART. MSH71108



Canopy mount(Front)
ART. XL70V2B18



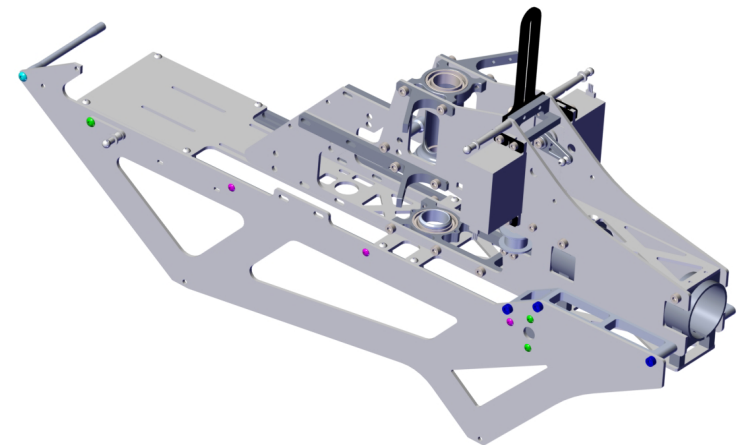
Hex screw M2.5*4
DO NOT OVERTIGHTEN
ART. XL70B27-1



Hex screw M3*25
ART. XL70B09-1



Rear frame Spacer
ART. XL70V2B17

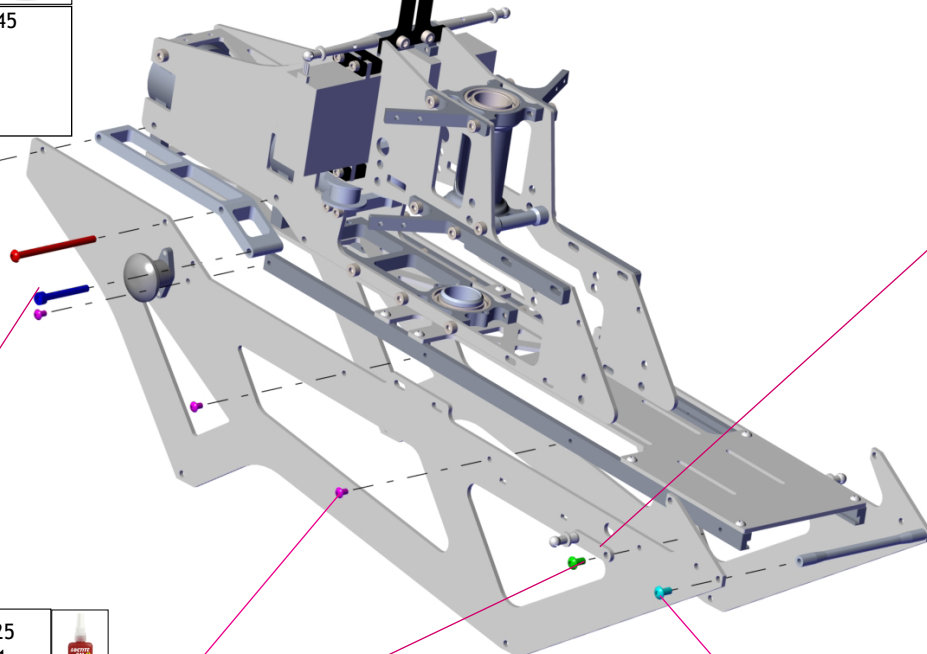




Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight



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



Hex screw M3*25
ART. XL70B09-1



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



Button head screw M3*6
ART. XL70A21

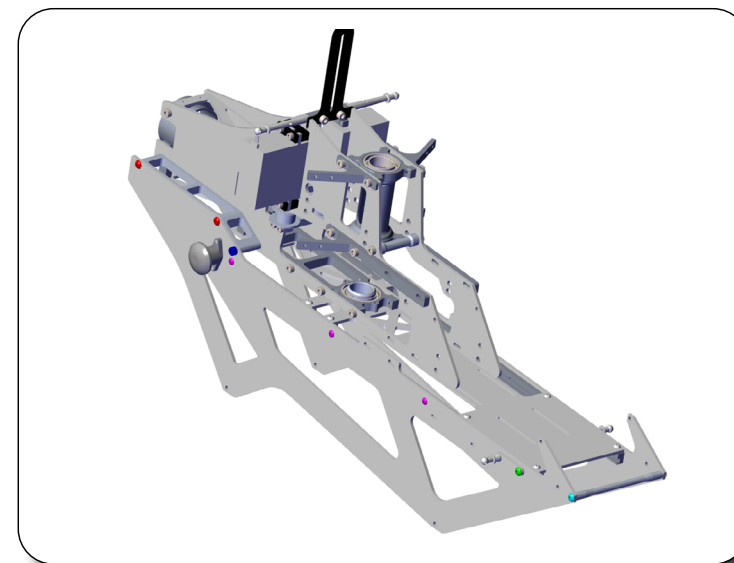
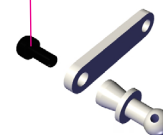


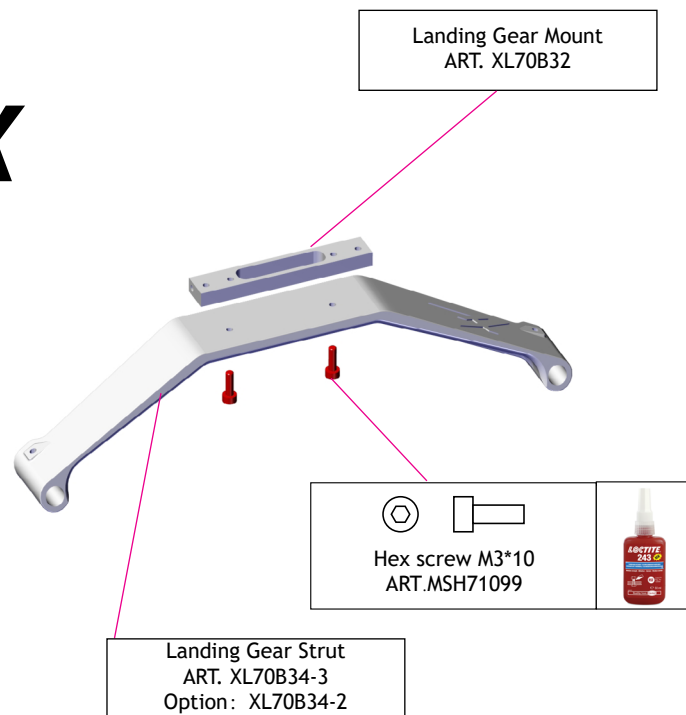
Hex screw M2.5*4
DO NOT OVER TIGHTEN
ART. XL70B27-1



Hex screw M3*6
ART. MSH71108

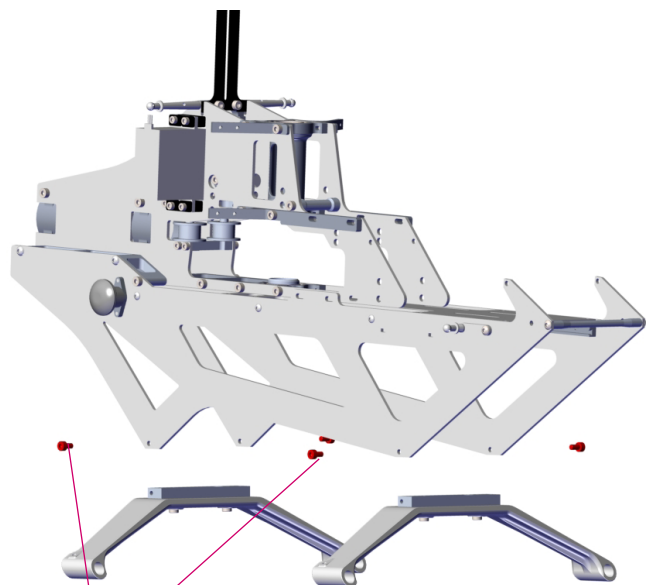
Canopy Mount (Front)
ART. XL70V2B18



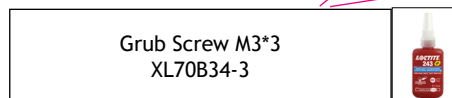
**2X**



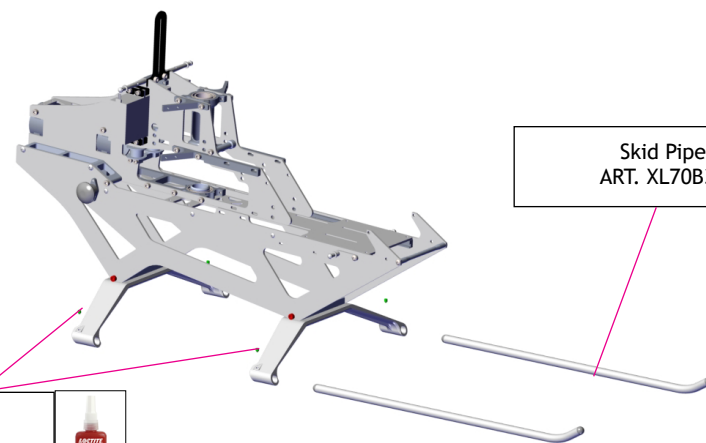
Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight



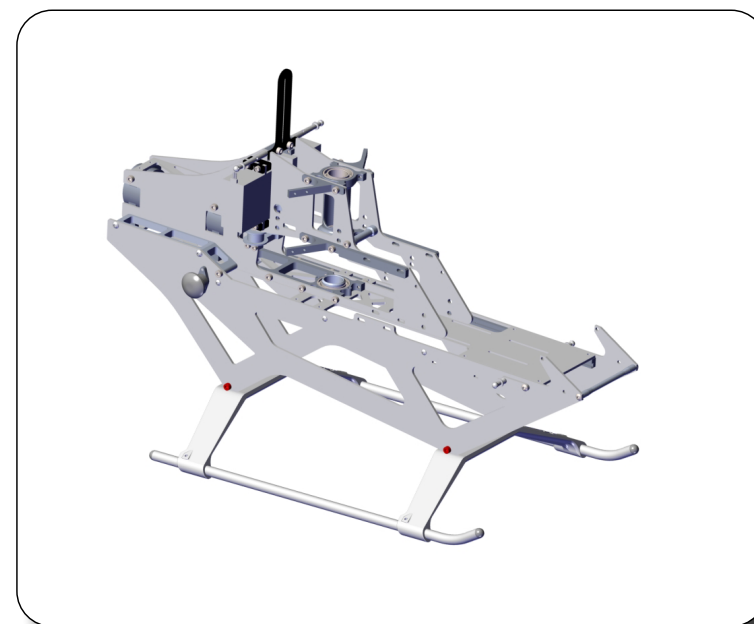
Hex screw M3*6
ART. MSH71108



Grub Screw M3*3
XL70B34-3

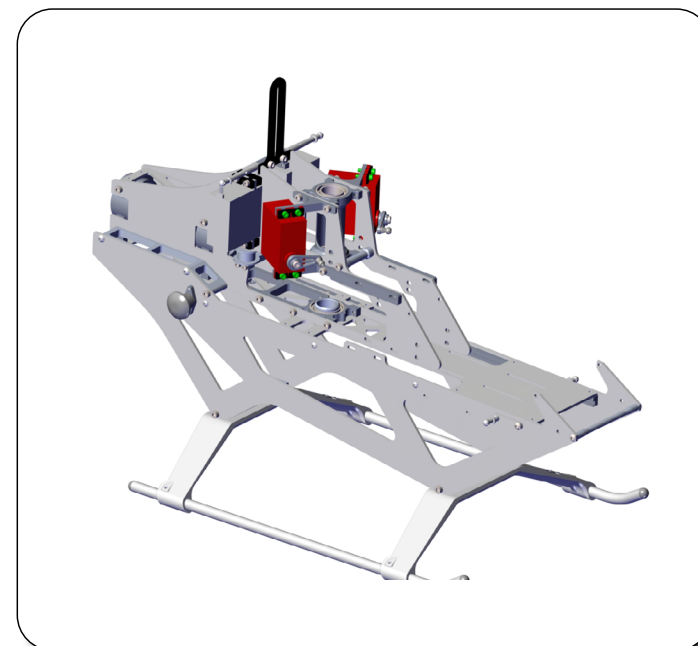
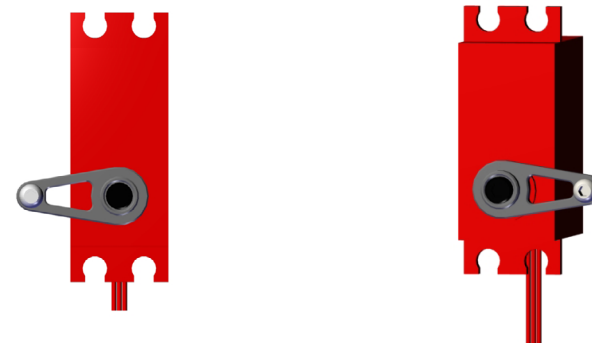
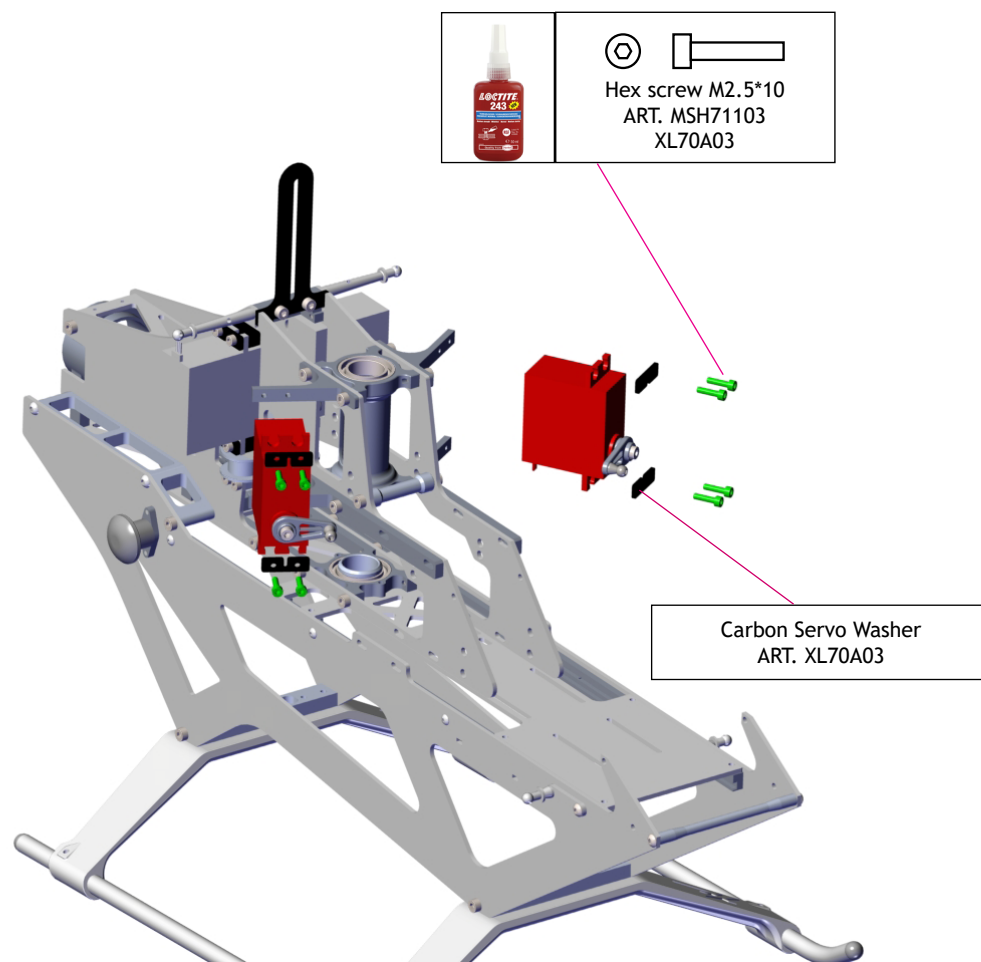


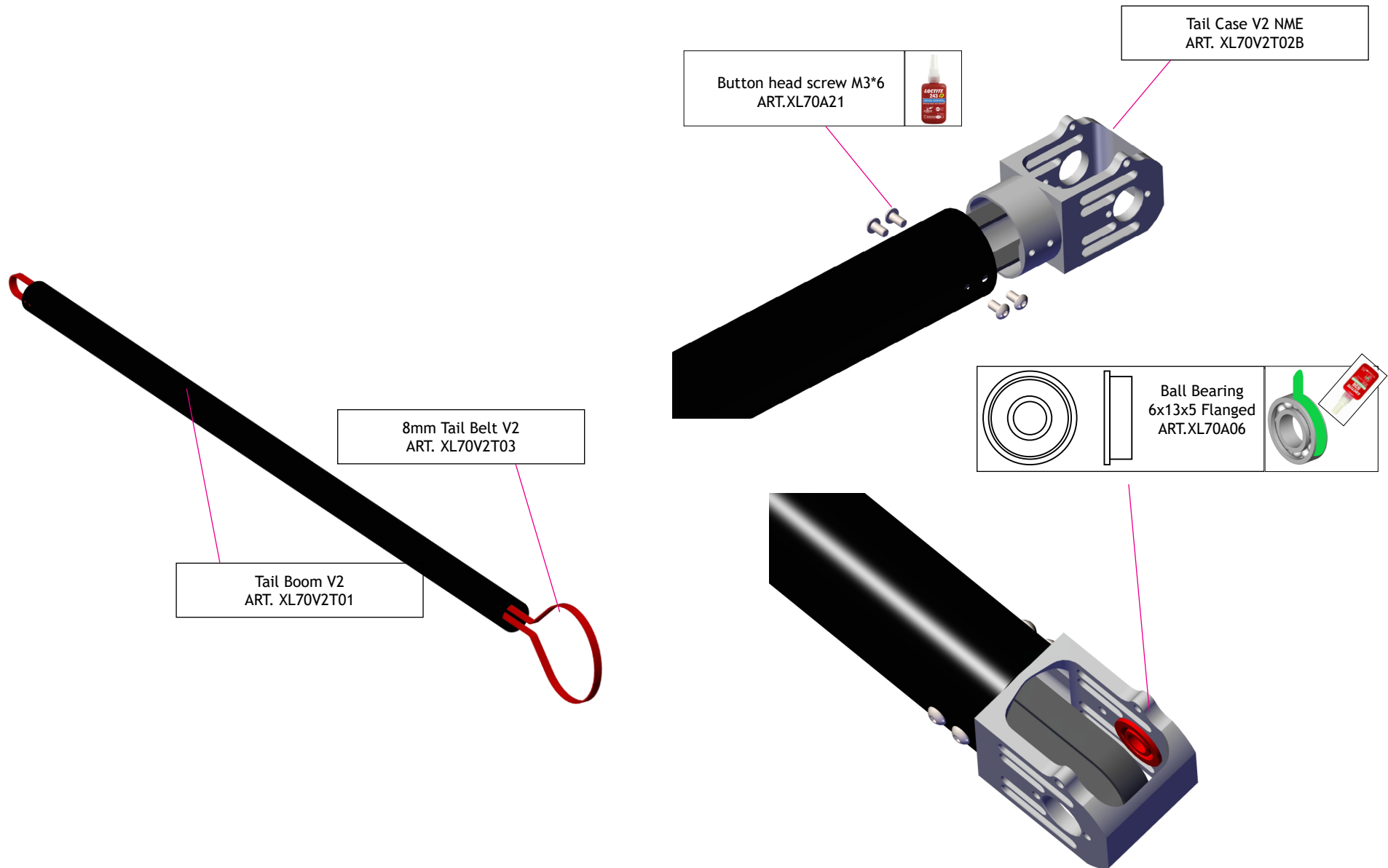
Skid Pipe
ART. XL70B35





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

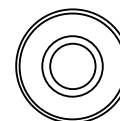
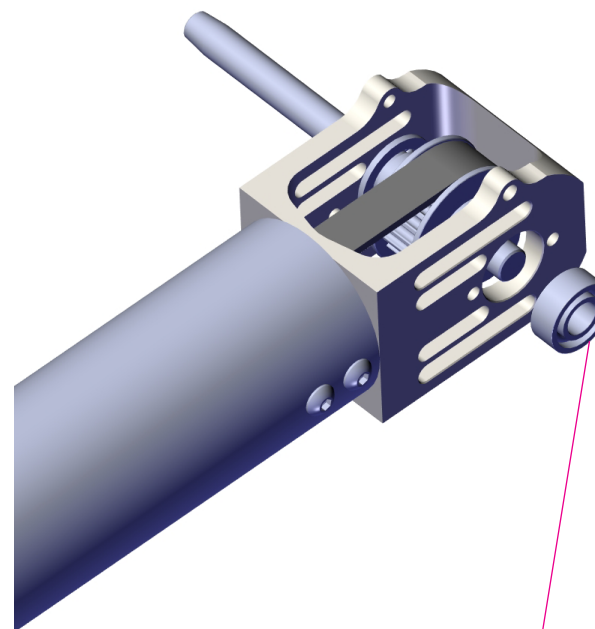
Grub screw M4*4
MSH71122



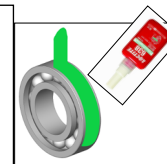
Tail Pulley 21T
ART. XL70V2T04
Option:XL70V2T04-1

Tapered End Tail Shaft
ART. XL70T13-1

O ring
ART. XL70A17



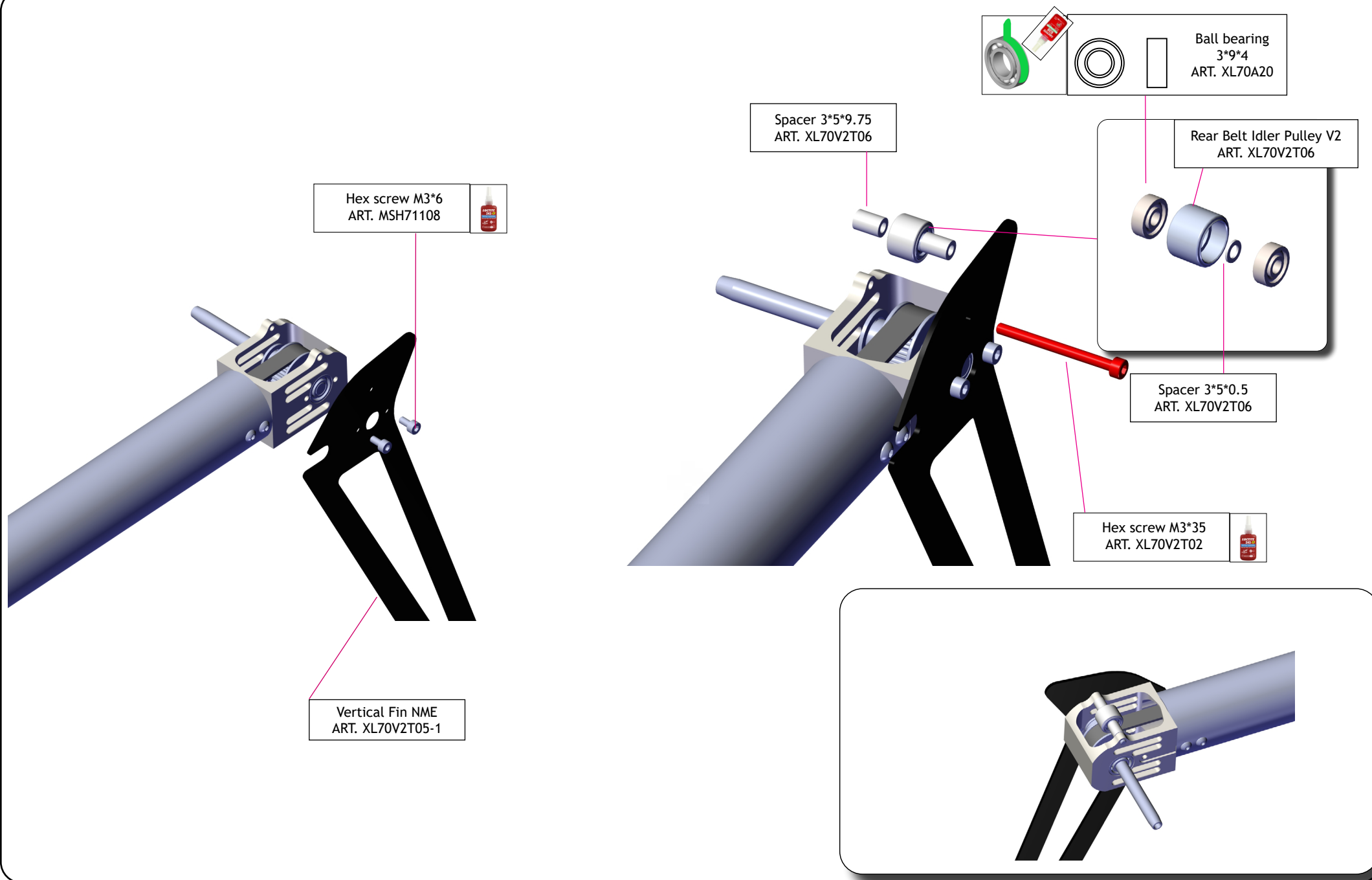
Ball bearing
6*13*5
ART. XL70A06-1



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



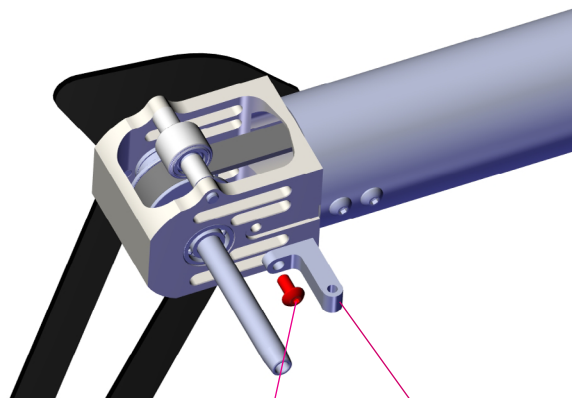
Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight





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

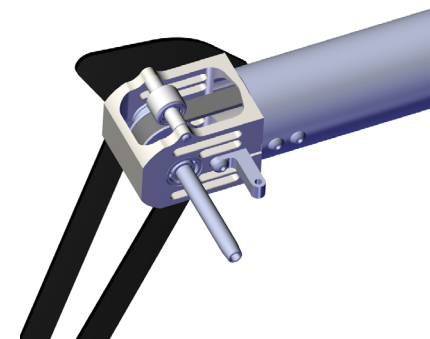
1



Button head screw
M3*6
ART.XL70A21

Tail Pitch Lever Support
NME
ART. XL70T11B

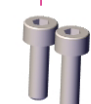
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3

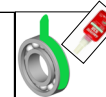
Hex screw M2.5*8
ART. MSH71111

Ball 5mm M3*3
ART.XL70A01



Tail Pitch Control Arm
NME
ART. XL70V2T07B

Ball Bearing
3*7*3 Flanged
ART.XL70A22

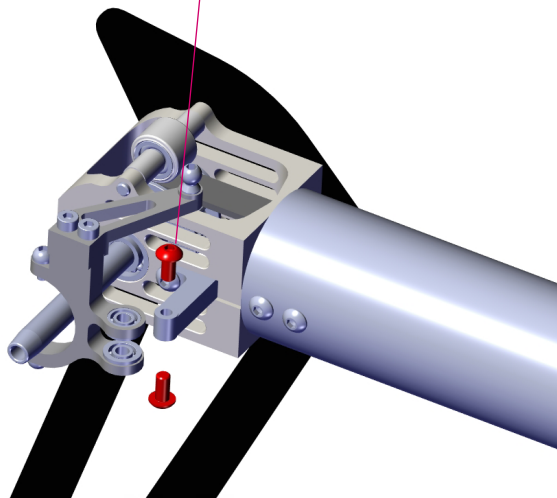


Tail Pitch Lever NME
ART. XL70T09B

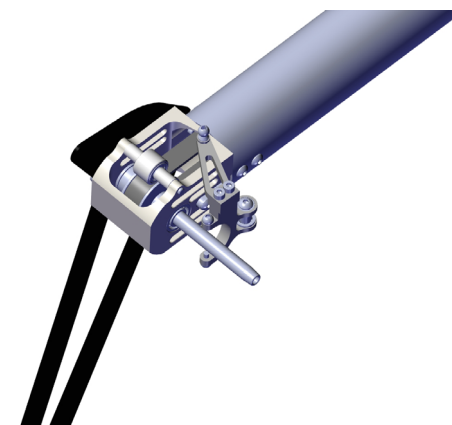
Tail pitch lever screw M2.5*6
ART. XL52T09-2



4



5

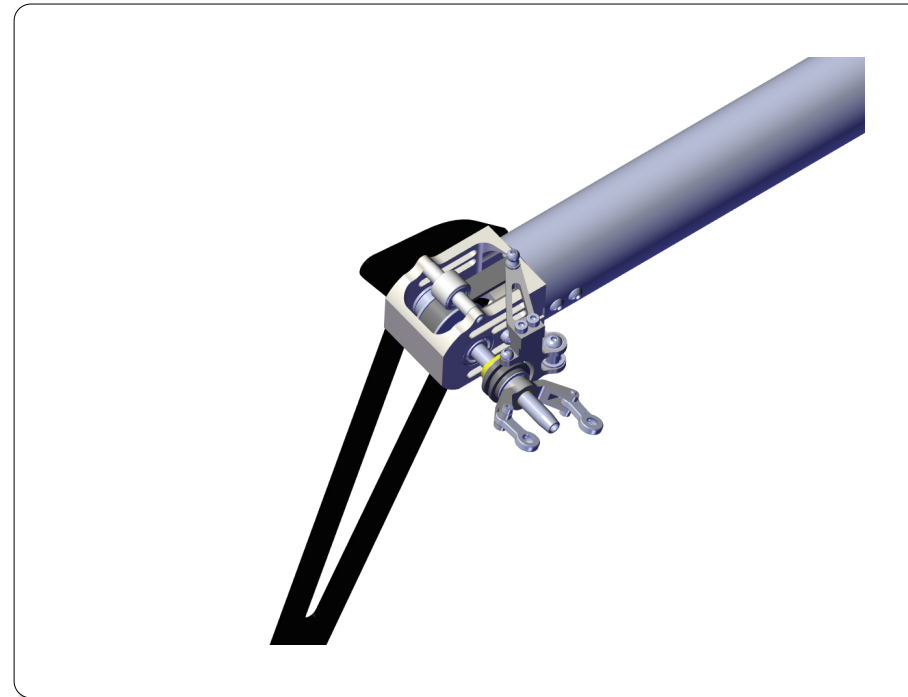
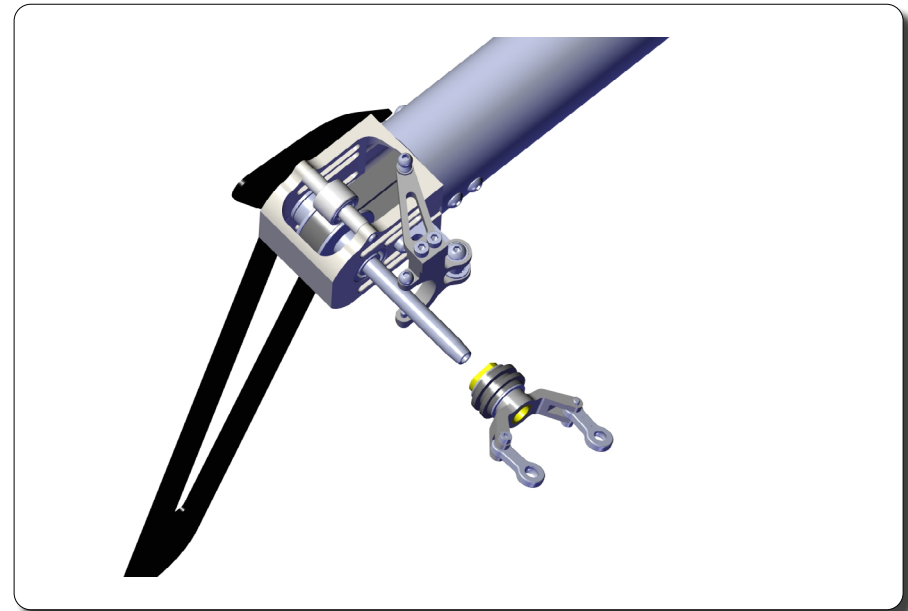
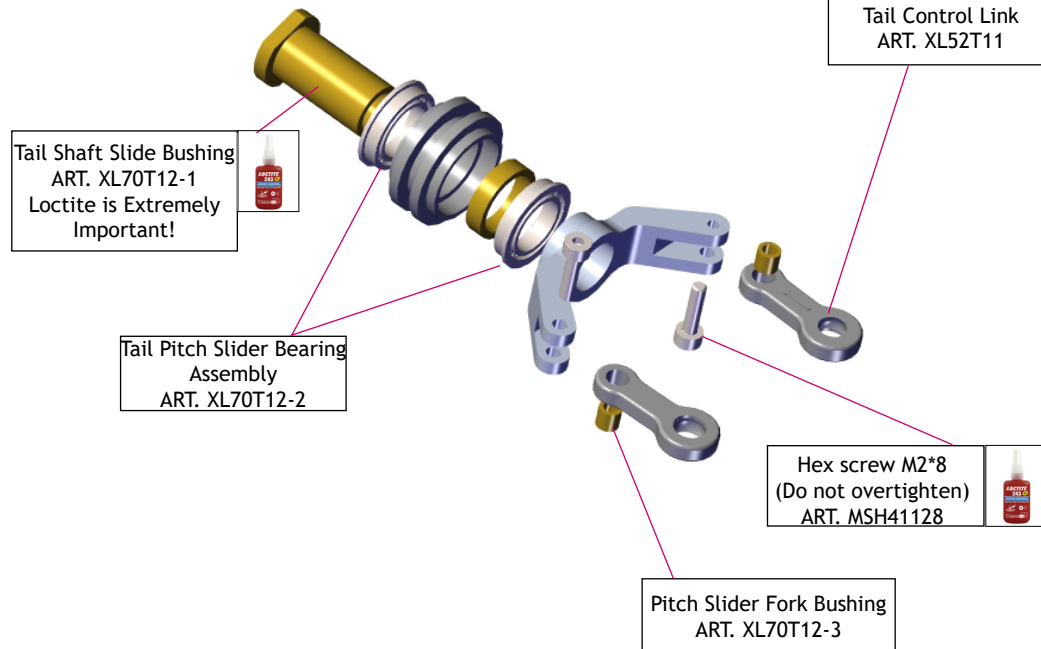




Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight

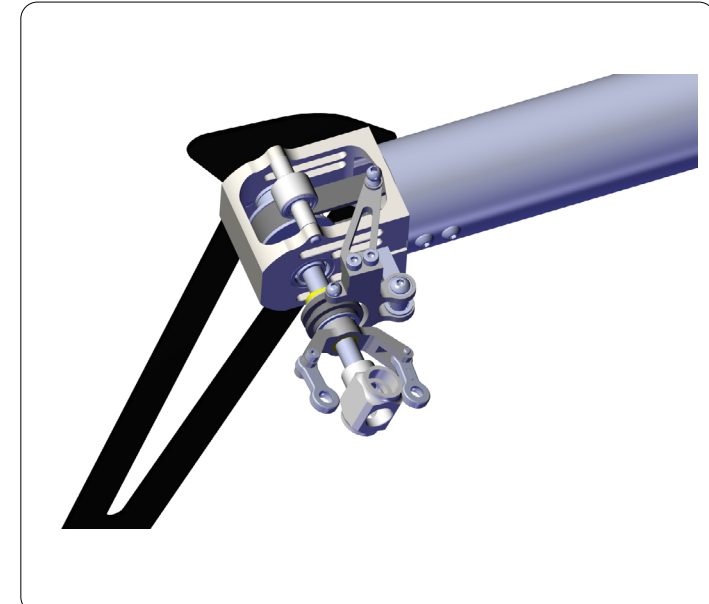
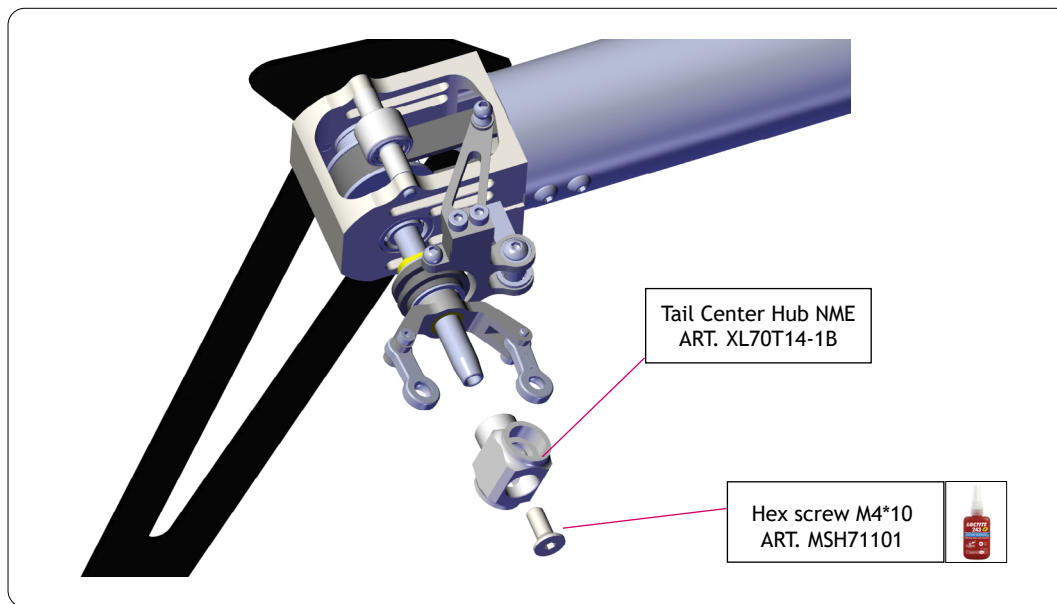
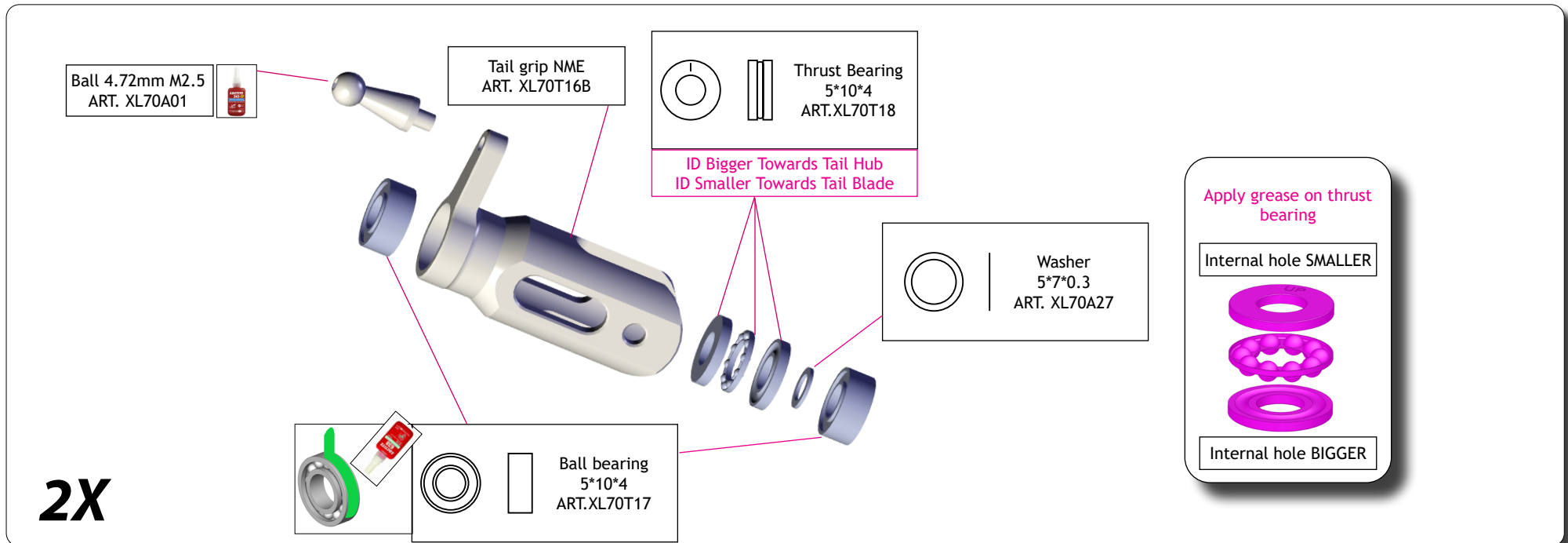


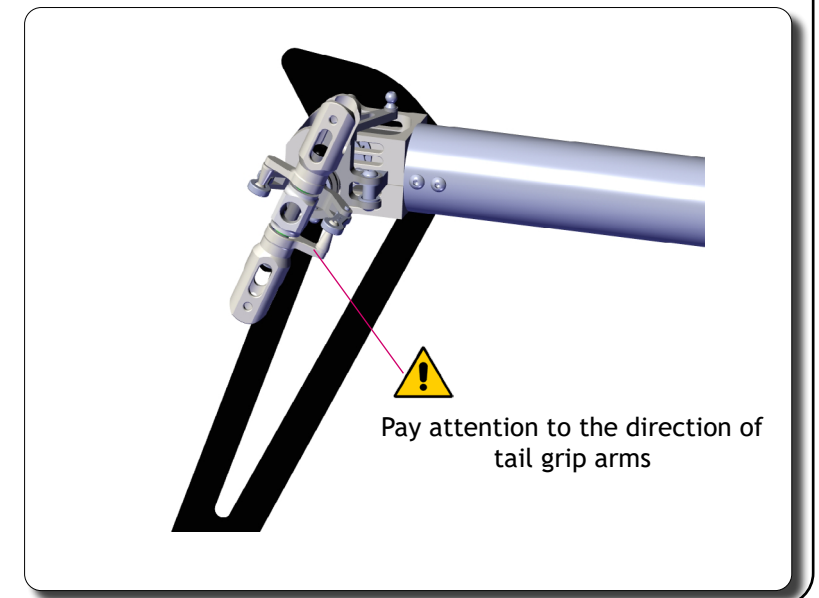
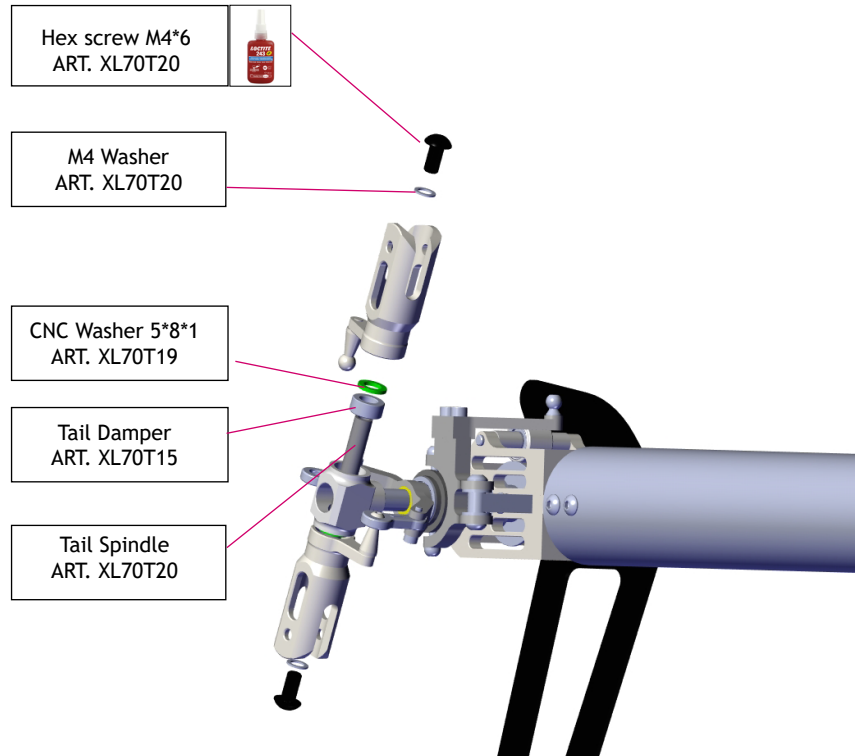
Tail pitch assembly
NME
ART. XL70T12B





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







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

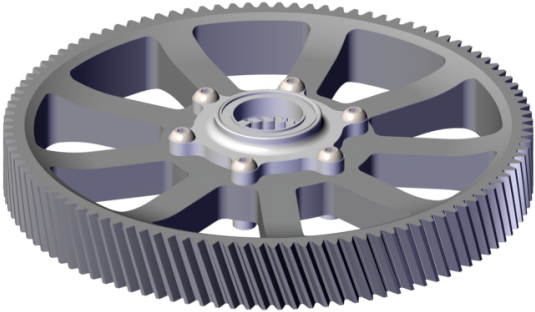
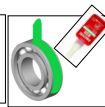
18mm Heavy Duty Main Gear 106T Mod1 (ART. XL70V2B11)
Included in Kit

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

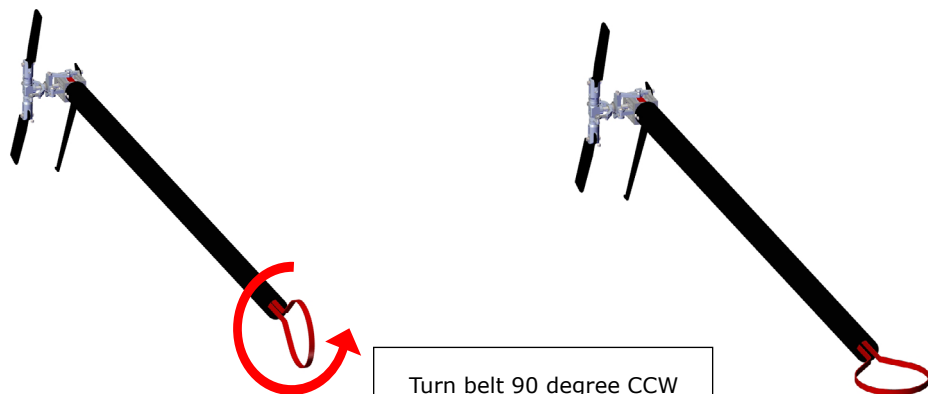


One way bearing direction (from upside)



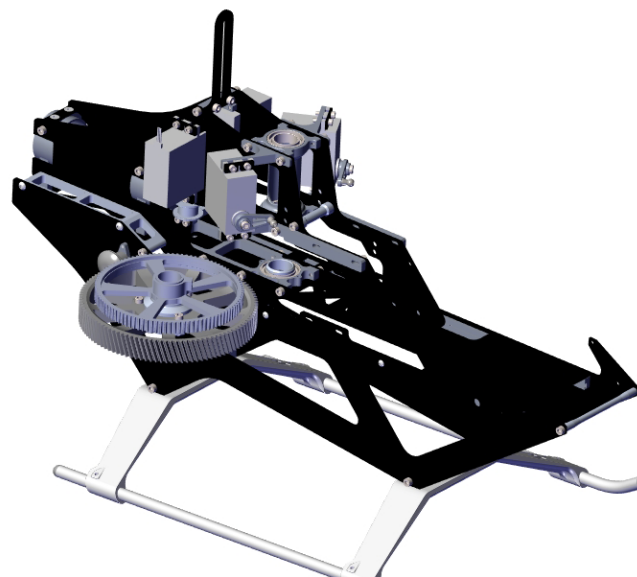
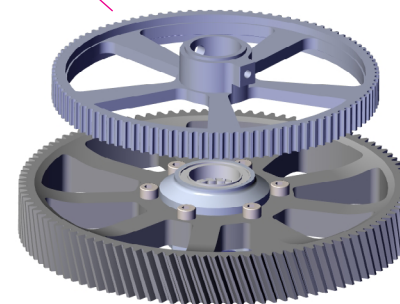


Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight



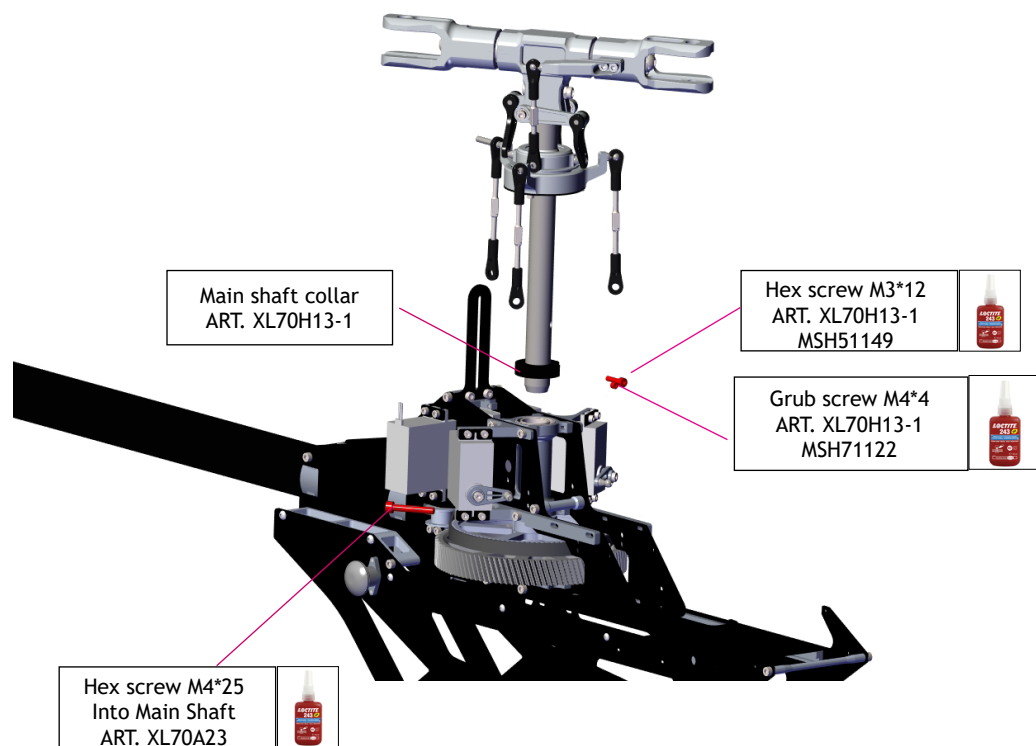
Turn belt 90 degree CCW

100T Front Pulley
ART. XL70V2B12

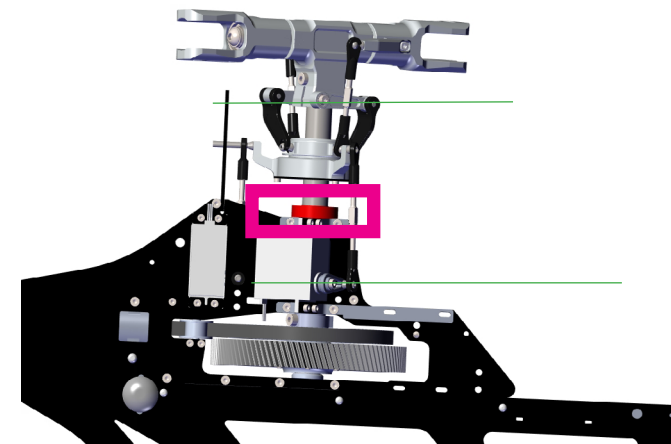




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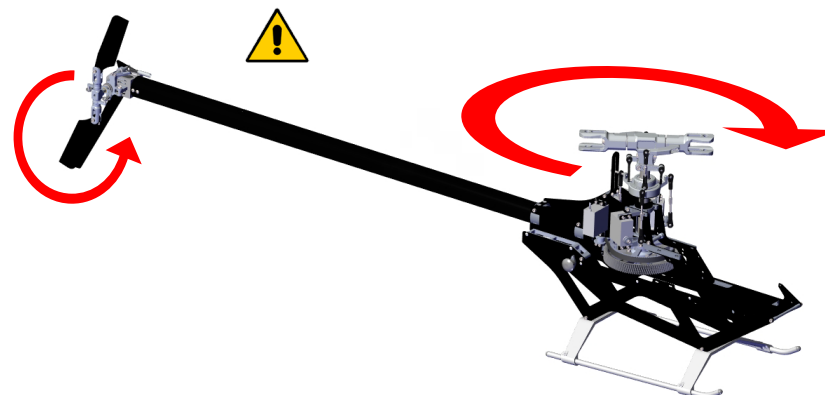


- Pull up main shaft
- Push down shaft collar
- Fully tighten M3*12 and M4*4



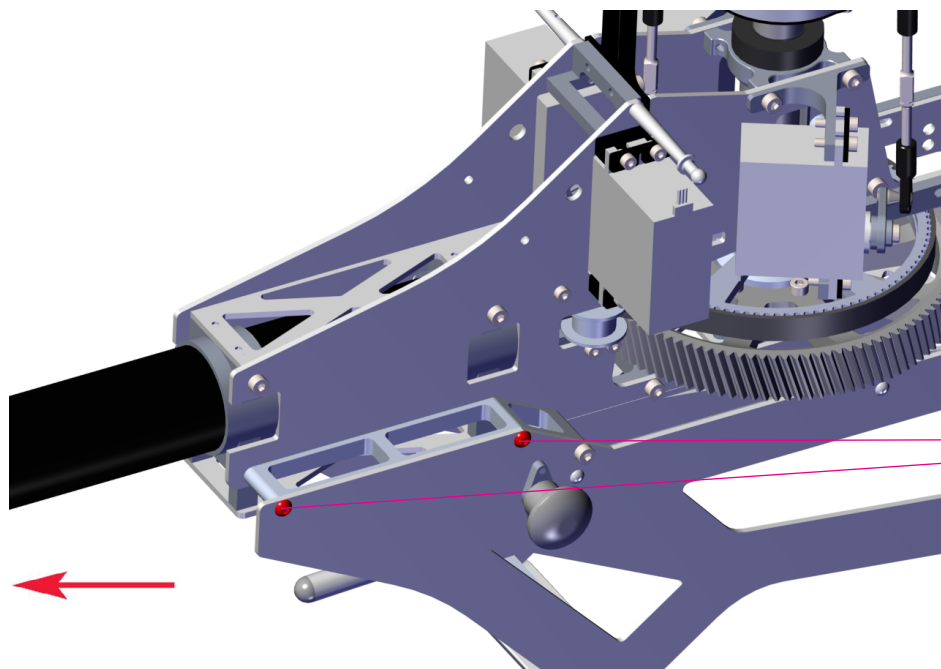
Make sure level when 0 pitch

Check the rotation direction during the installation of the belt





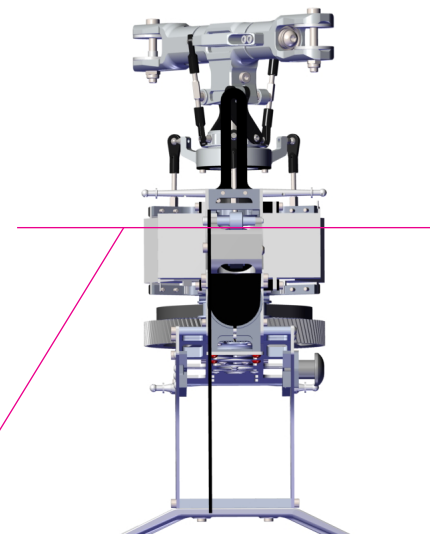
Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight



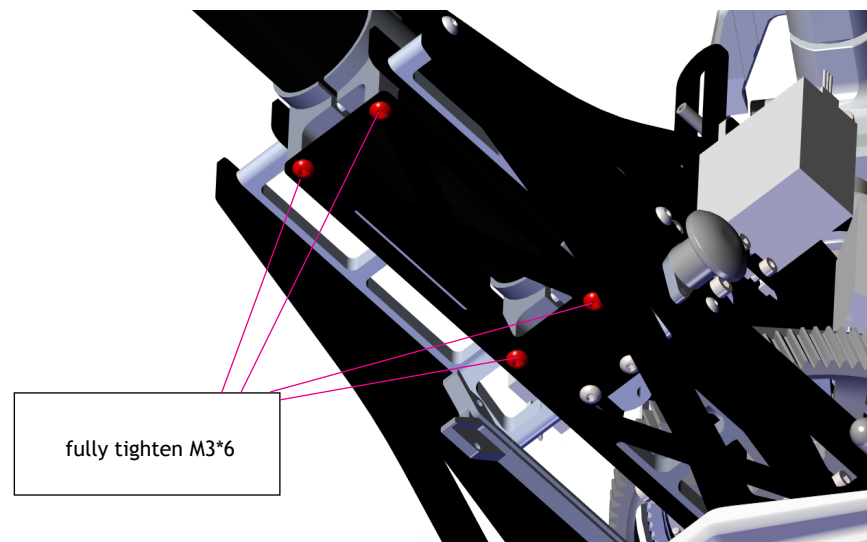
Button head screw M3x45
Set belt tension by pulling backwards on the tail boom. Ensure tail tail case is level, then tighten screws.



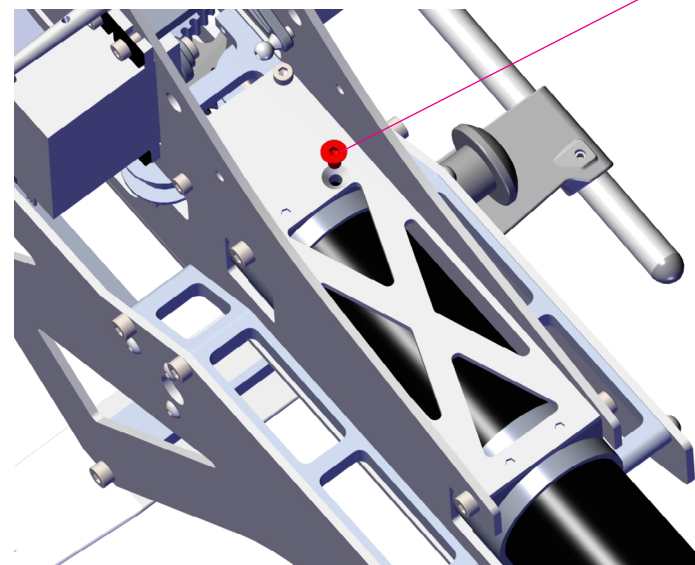
Check tail box lever before fully tightening M3*45 screw



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



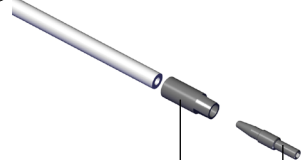
fully tighten M3*6





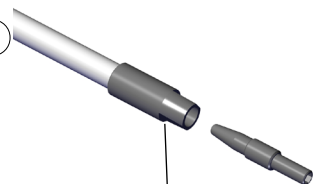
Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight

①



Tail pushrod end
ART. XL70V2T08-1

②



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

③



④

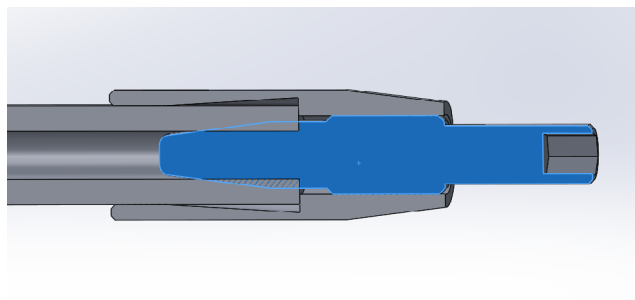


⑤



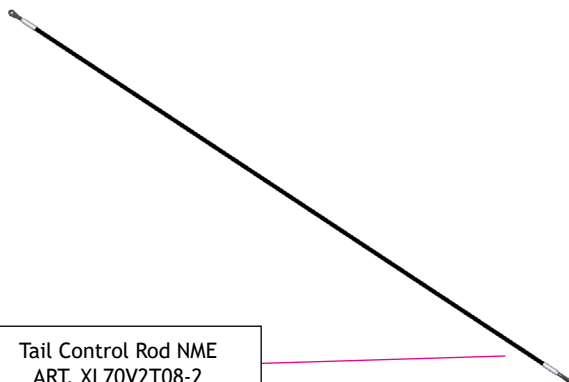
Exact length may vary depending
on rear tail pulley size

Tail pushrod end linkage screw
ART. XL70V2T08-1



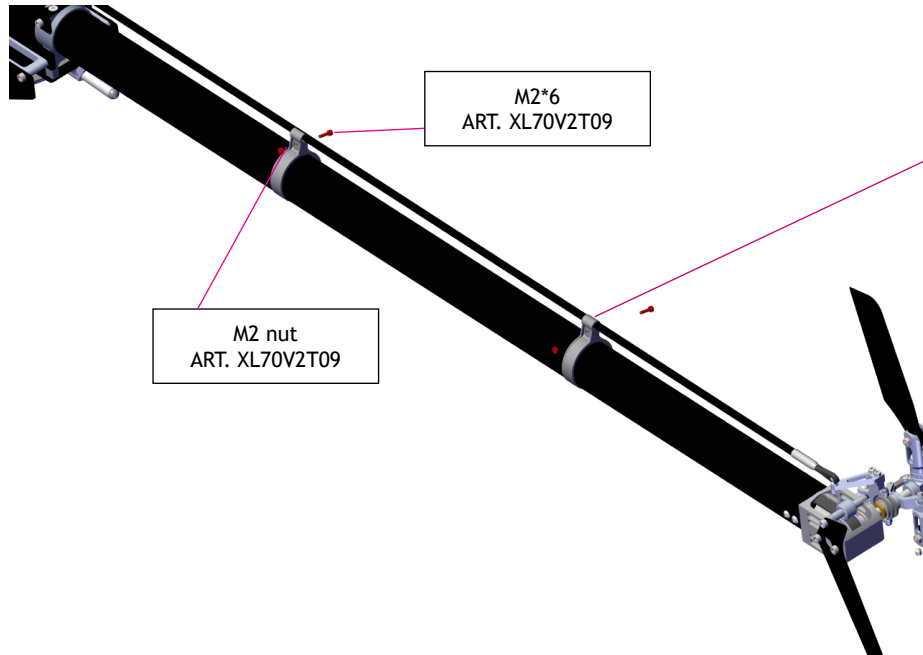
Ball Link 5mm M3
ART. XL70A02

Tail Control Rod NME
ART. XL70V2T08-2





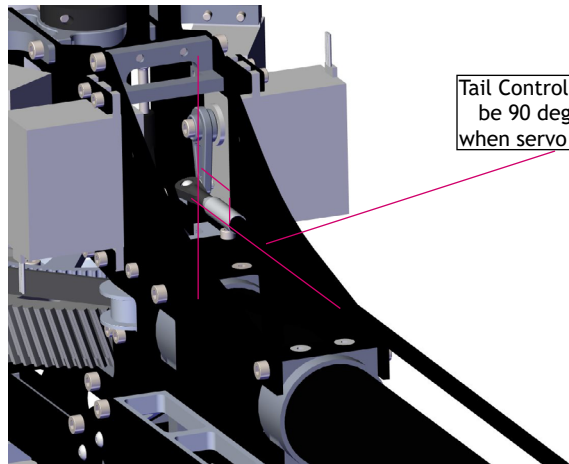
Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight



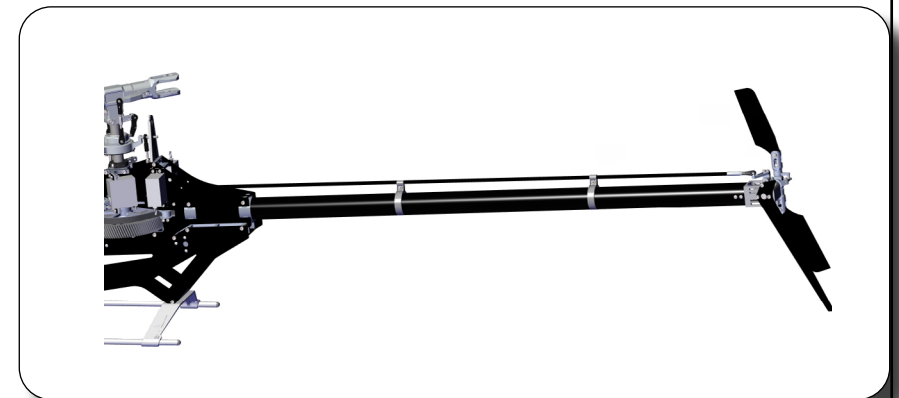
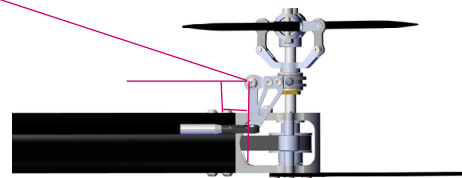
Tail Control Rod Guide
ART. XL70V2T09

M2*6
ART. XL70V2T09

M2 nut
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

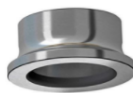
4525-4530 500-550kv
motor 6mm shaft (not
included)
ART. XL70M01

Motor Mount Upper
ART. XL70B05



719 Angular Contact Ball Bearing
ART. XL70B06

UP



Down

Pay attention to
the bearing di-
rection (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





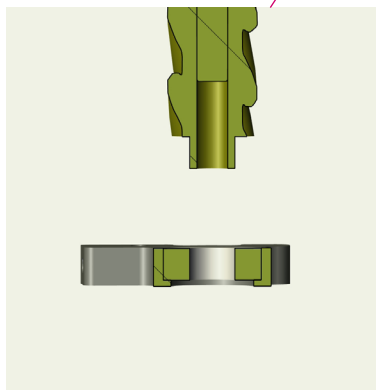
Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight



Ball Bearing 8*16*5
ART. XL70A16

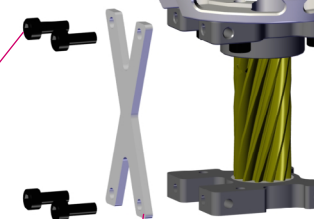
Add a small dab of green retaining compound (638/648/680/620) to outside of pinion to prevent wear to pinion and inner bearing race. Use heat to remove for maintenance.

Lower Motor Mount
ART. XL70B07



Pay attention to the bearing direction (Pre-assembled)

Hex screw M3x6
ART. MSH71108

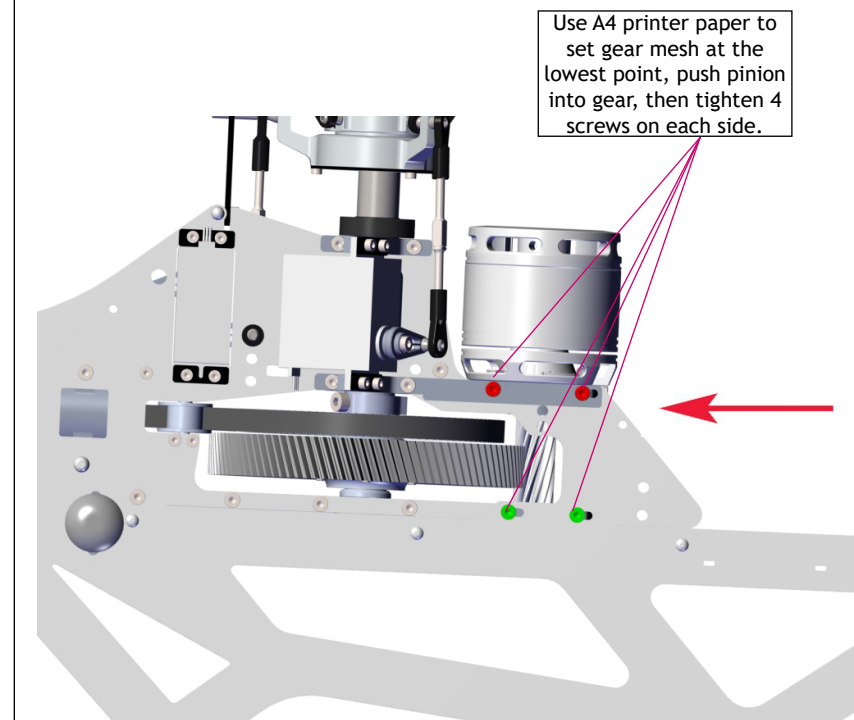
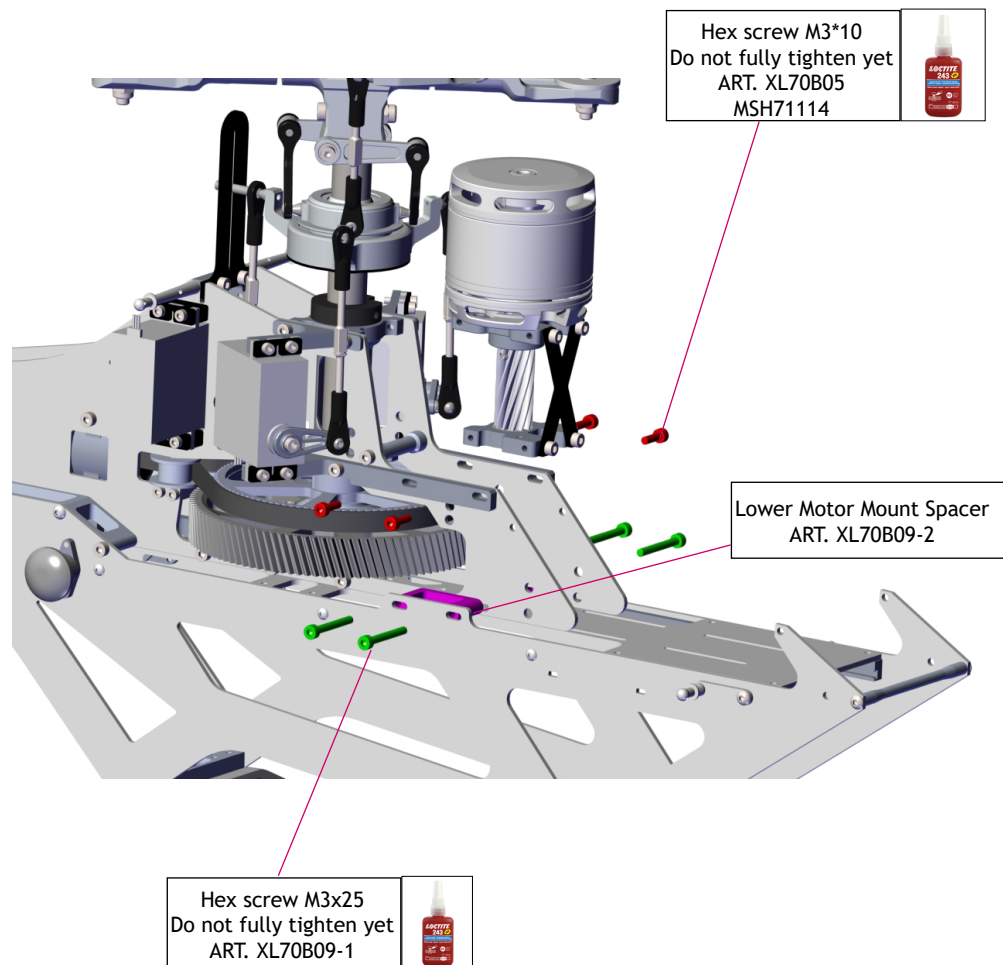


X Carbon Fiber Brace
ART. XL70B08





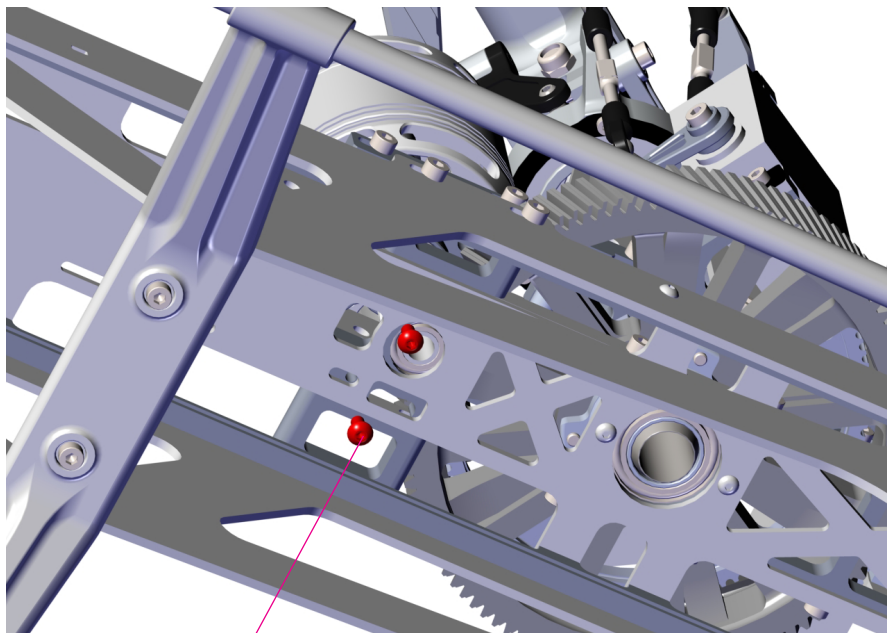
Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight



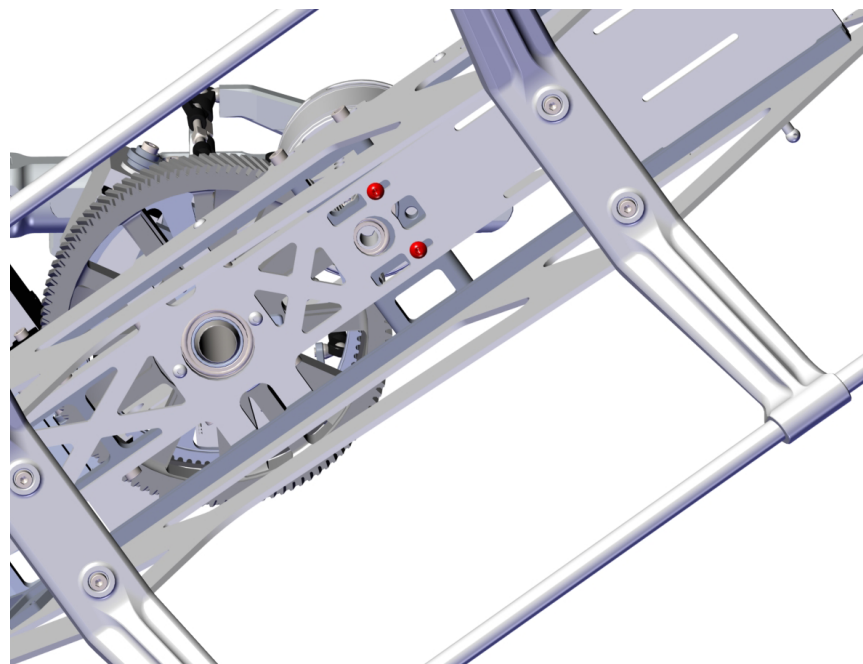


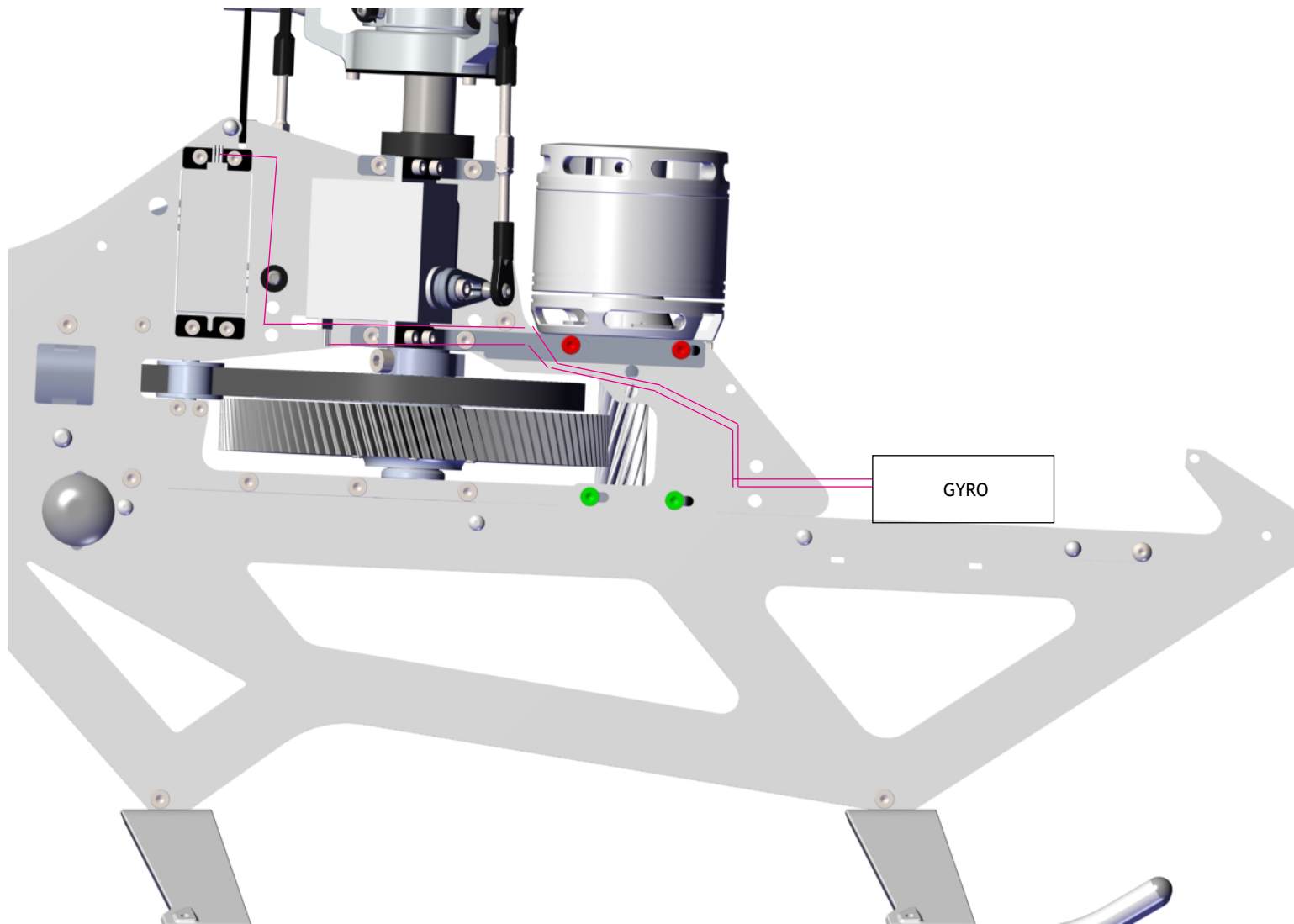
Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight

SPECTER 700 V2



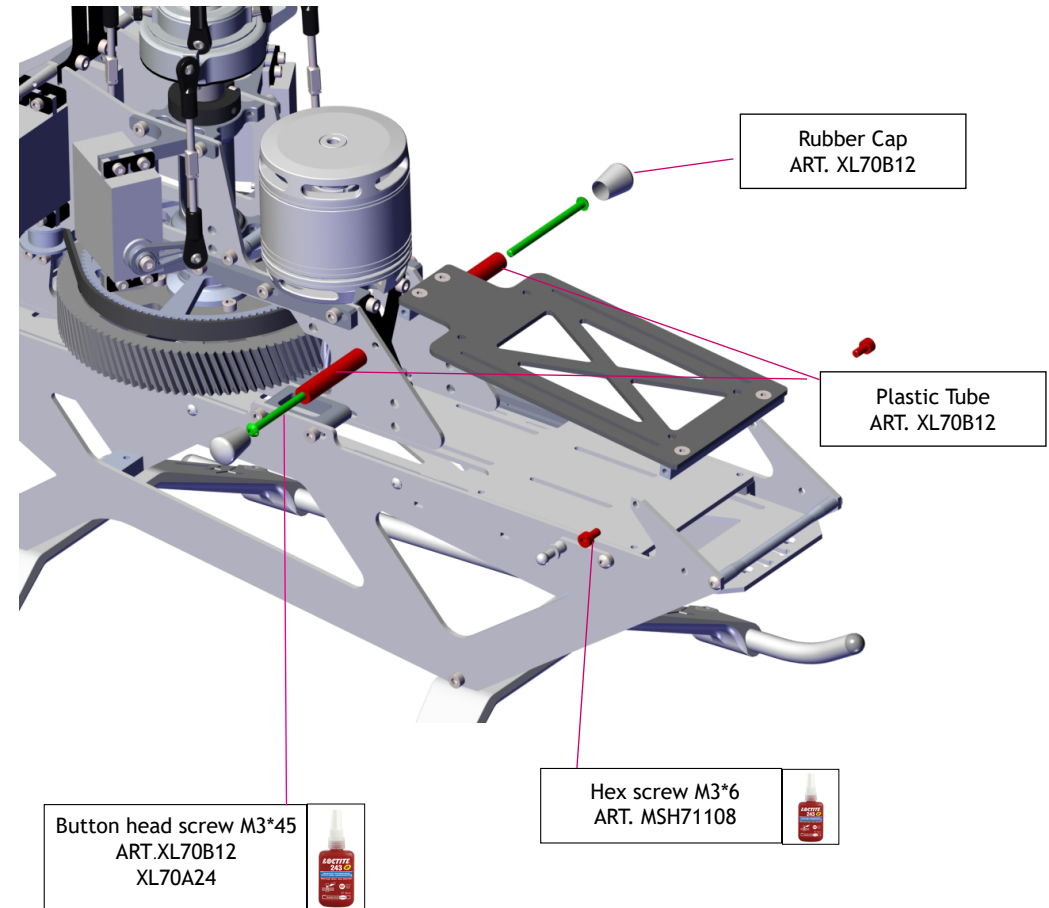
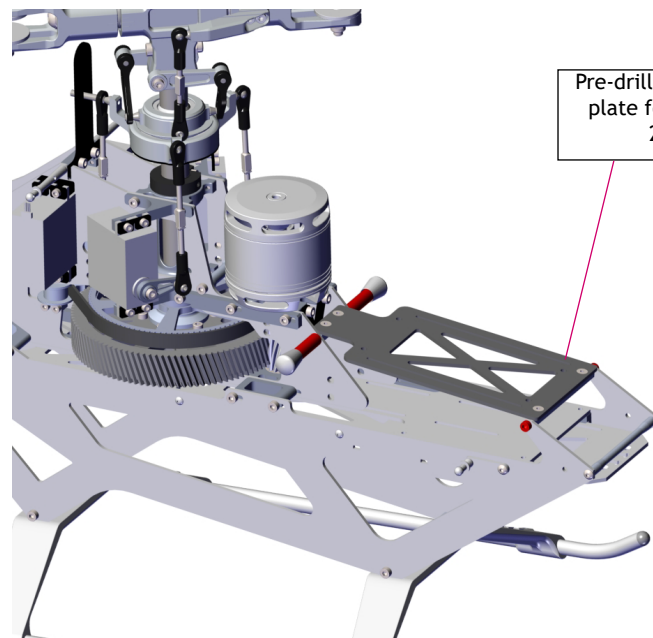
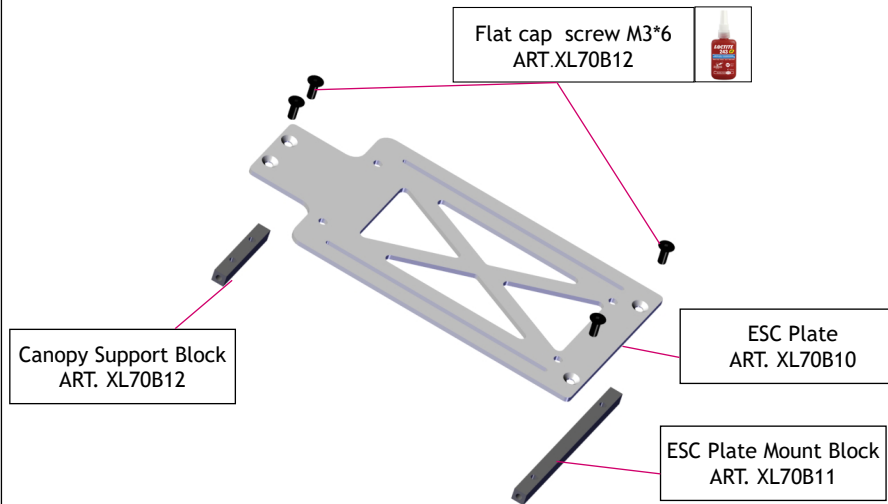
Button head screw
M3*6
ART.XL70A21







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



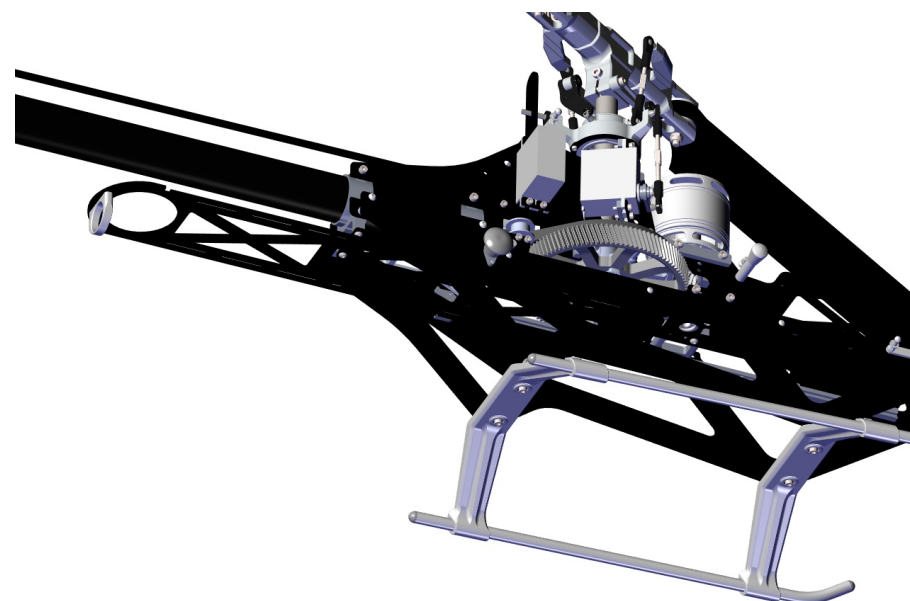


Battery Tray V2
ART. XL70V2B13

Flat screw M2.5*6
ART.XL70V2B13



Battery Tray Puller
ART. XL70V2B14

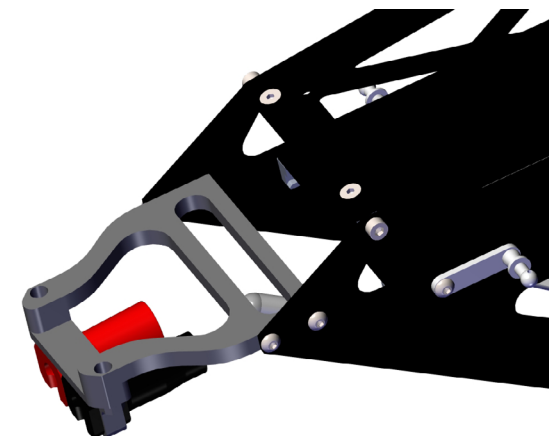
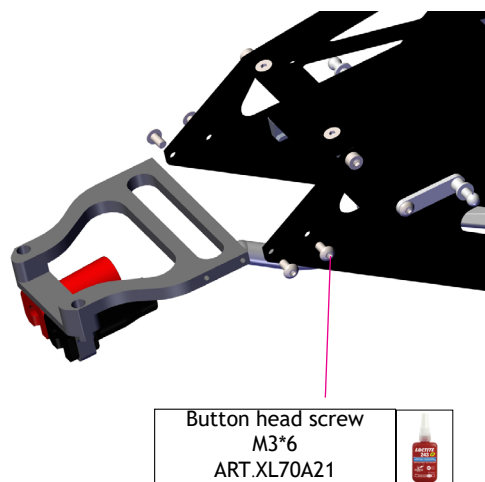
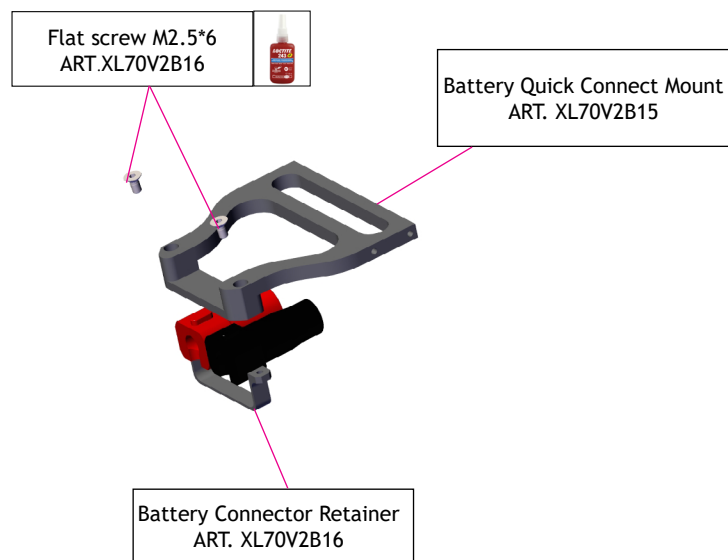
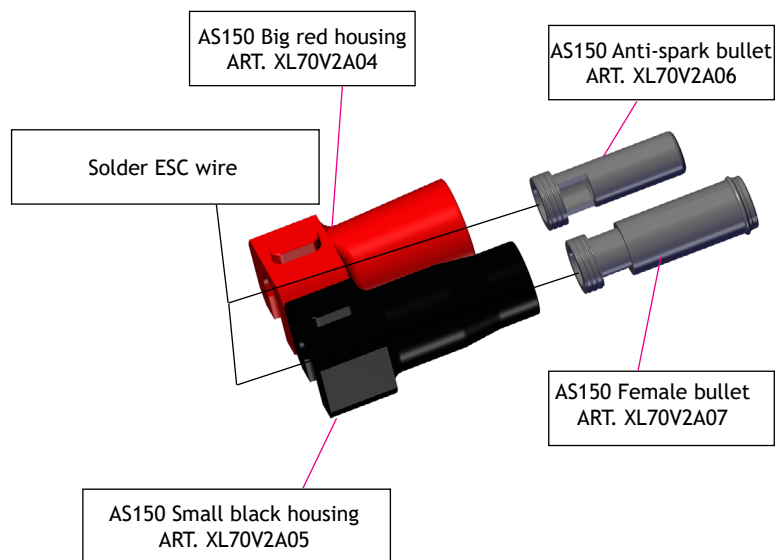


Optional



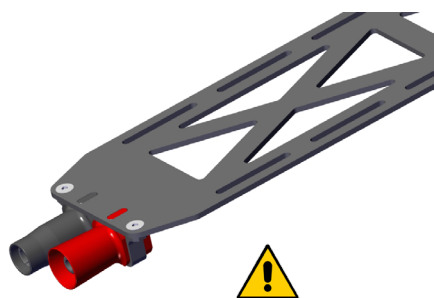
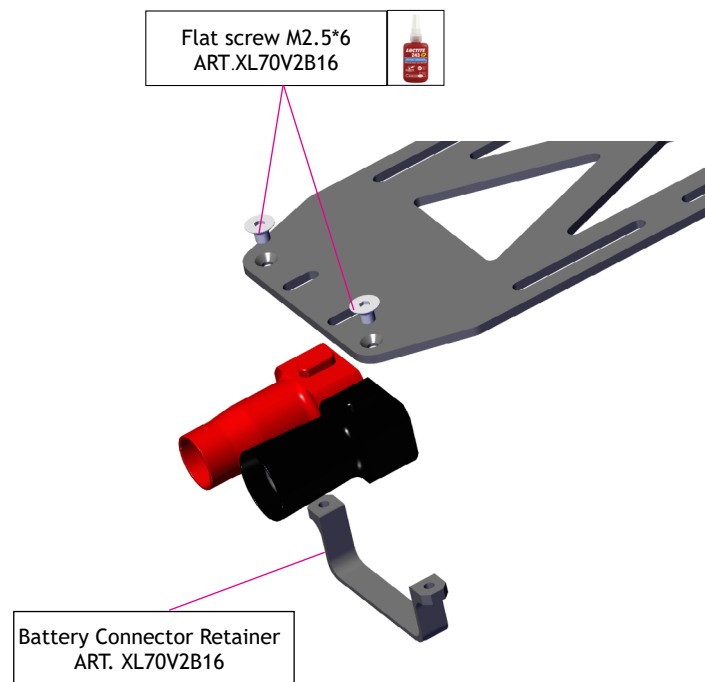
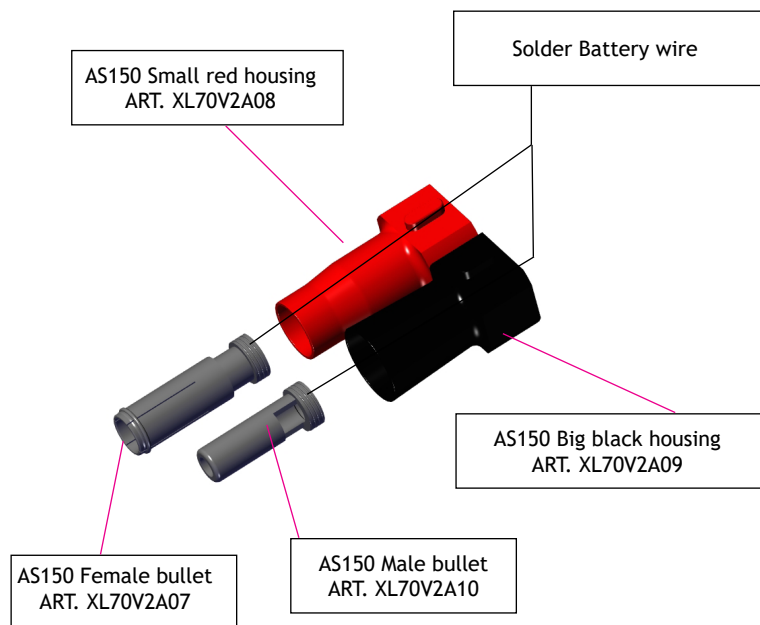
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SPECTER 700V2

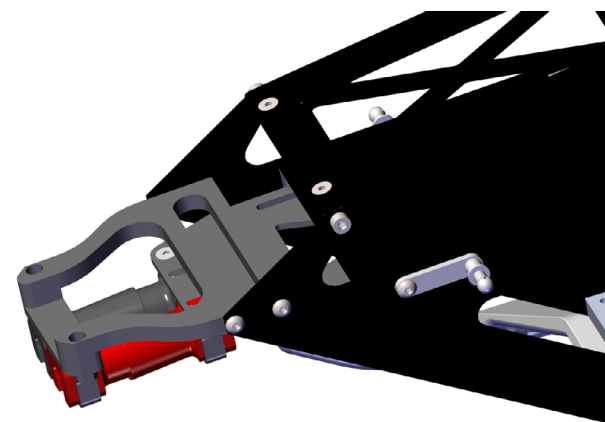




Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight

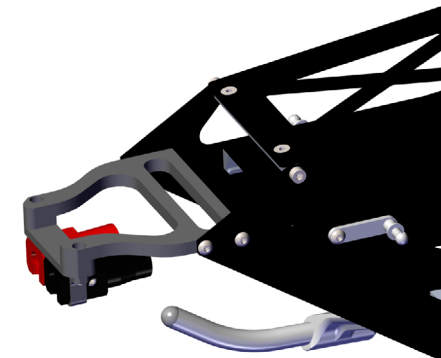
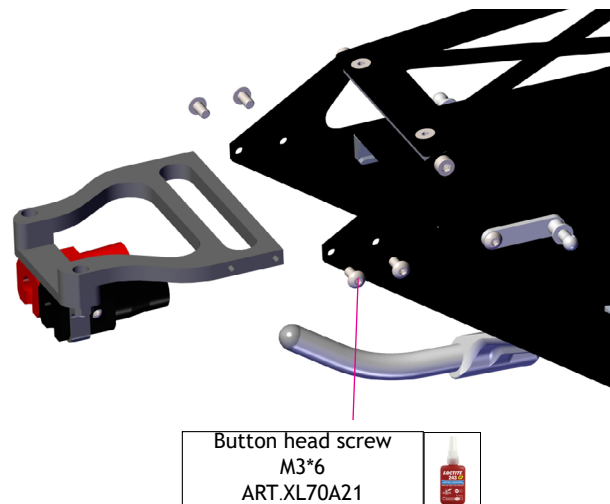
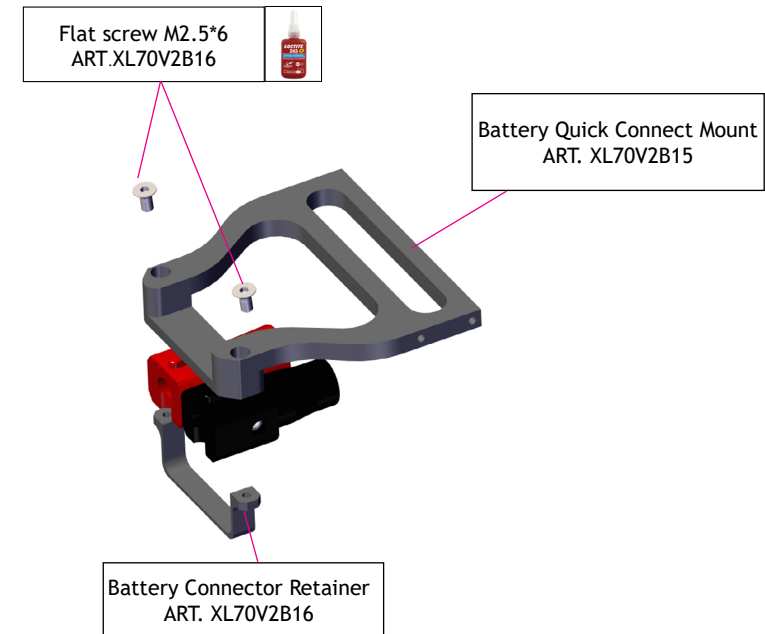
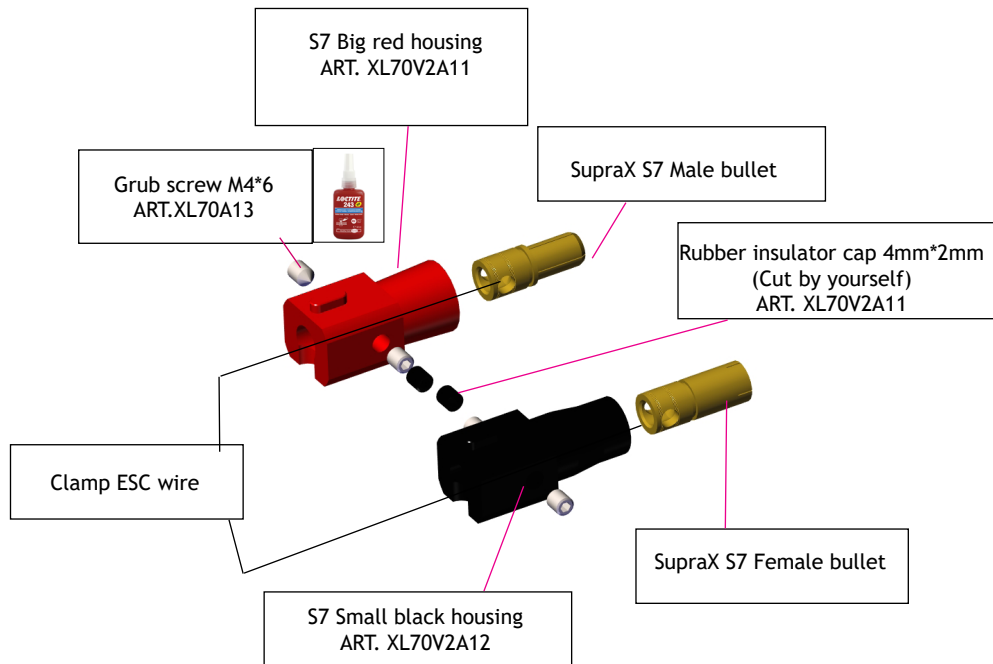


Make sure the connectors are fully mated before flying



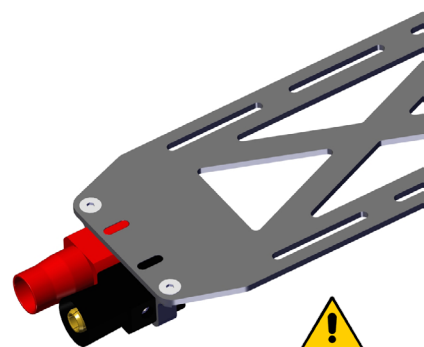
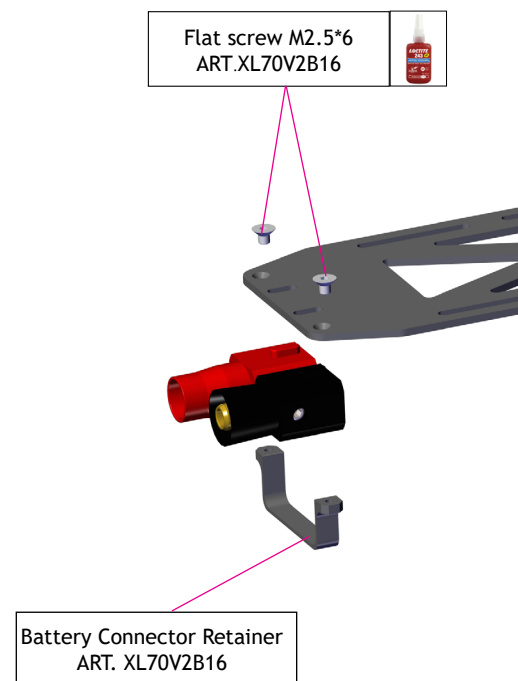
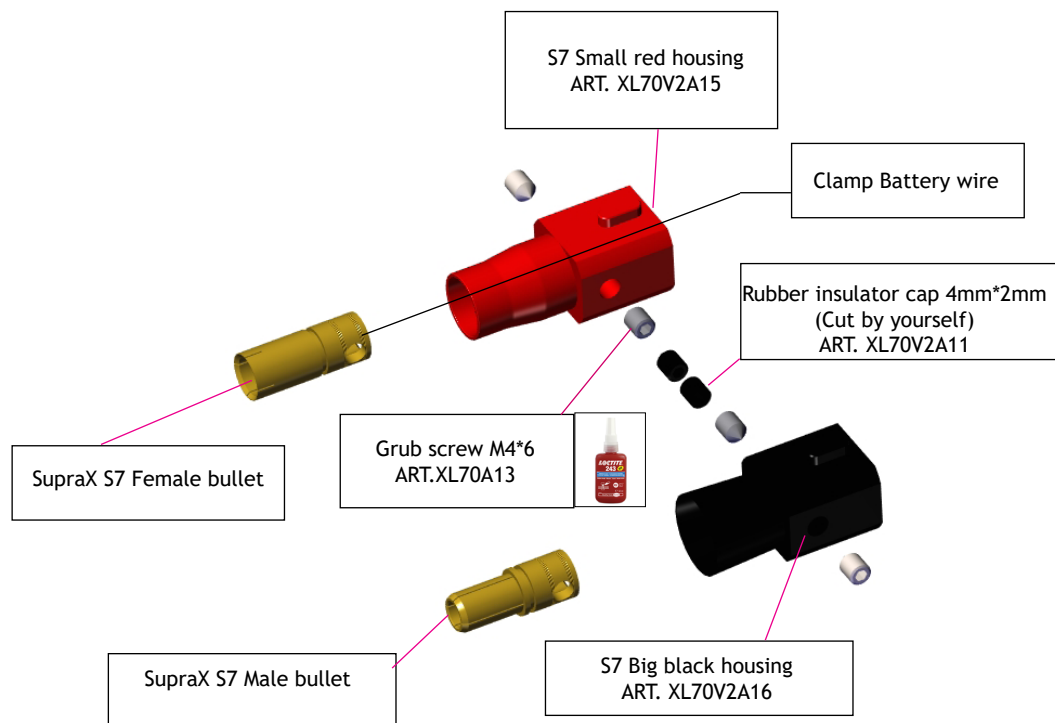


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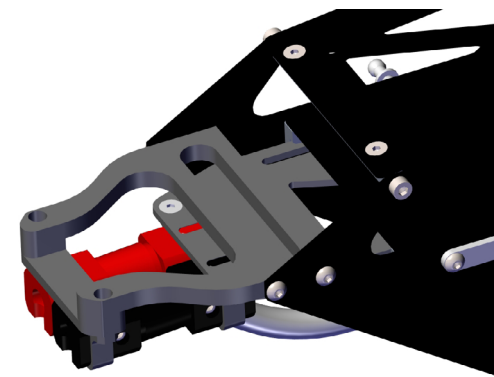




Clean all screws and threads with isopropyl alcohol (90% or above) to ensure threadlocker bonds properly and prevent screws from loosening in flight



Make sure the connectors are fully mated before flying



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