



SYNERGY 696

ASSEMBLY MANUAL AND PART REFERENCE

VERSION 1.1

WWW.SYNERGYRCHELICOPTERS.COM

SYNERGY 696

V1.1



Components that are factory assembled provide a reference for model assembly. Disassembly and application of thread lock is required where indicated.

SPECIFICATIONS

FRAME COMPONENTS

TRANSMISSION

MAIN FRAME

MAIN DRIVE UNIT

TORQUE TUBE

BOOM

BOOM SUPPORTS

TAIL ASSEMBLY

MOTOR INSTALL

SERVOS

TAIL CONTROL ROD

SWASH PLATE

CYCLIC LINKAGES

MAIN HEAD

PITCH LINKAGES

BATTERY TRAY

BLADES

CANOPY



Congratulations on your purchase of the **Synergy 696** model helicopter kit!

The **Synergy 696** was designed and developed by Matt Botos, a world class competition model helicopter pilot, and is the result of thousands of hours of research and experience.

Before you proceed please verify you have the latest version of this manual by visiting our website at <http://synergyrchicopters.com/manuals>. If you have any questions during then assembly process or need clarification on anything in this manual please visit our forums at <http://synergyrchicopters.com/forum> where you will find great tips and expert advice.

THIS RADIO CONTROLLED HELICOPTER IS NOT A TOY. IT IS A SOPHISTICATED PIECE OF EQUIPMENT DESIGNED AND INTENDED FOR RECREATIONAL USE ONLY. IF NOT PROPERLY ASSEMBLED, MAINTAINED, AND OPERATED, IT IS CAPABLE OF CAUSING PROPERTY DAMAGE AND BODILY HARM TO BOTH THE OPERATOR AND SPECTATORS. BOTOS DESIGN & DISTRIBUTION, ITS AFFILIATES, AND ITS AUTHORIZED DISTRIBUTORS ASSUME NO LIABILITY FOR DAMAGE THAT COULD OCCUR FROM THE ASSEMBLY OR USE OR MISUSE OF THIS PRODUCT. USE THIS PRODUCT AT YOUR OWN RISK.

Operating a model helicopter requires a high degree of diligence and skill. If you are new to model helicopters, it is your responsibility to seek help and guidance from experienced modelers. Having an experienced modeler inspect your model and provide instruction will both greatly speed up the learning process and make it much safer for you. For those pilots who will be operating their **Synergy 696** in the United States, we strongly recommend joining the AMA. The AMA is a non-profit organization that provides services to the model aircraft pilots. As an AMA member, you will receive a liability insurance plan to cover against a possible accident or injury. All AMA charter clubs require individuals to hold a current AMA membership prior to operation of their models at their facility.

For further information, you can contact the AMA at:

Academy of Model Aeronautics
5151 East Memorial Drive
Muncie, IN 47302
(800) 435-9262
<https://www.modelaircraft.org>

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FEATURES:

- CNC machined 6061-T6 aluminum and Delrin components
- 2mm Carbon Fiber frame components
- 182mm full head width
- Extra wide head block for quick cyclic response and high stability
- Machined Delrin helical main drive for quiet, efficient power transfer
- Machined Delrin helical tail drive
- One-piece aluminum front tail transmission
- Efficient torque tube tail drive
- 12mm main shaft with triple support radial bearings
- 10mm head axle with pivot rocker and quad progressive dampers
- 6mm tail shaft with HD tail hub and HD grips
- Turnbuckle linkages for quick/precise adjustments
- CG adjustable Quick-Change locking battery tray system

SPECIFICATIONS:

- Motor: 700+ class electric (62mm frame spacing)
- Main Blades: 696-716mm
- Tail Blades: 106-116mm
- Cyclic/Tail Servos: Full Size HV
- Main Ratio: 9.93-11.58 (13T included; 10.69:1)
- Tail Ratio: 4.70-5.08:1 (27T included; 4.70:1)
- Main Rotor Diameter: 1574mm (with Rail 696mm)
- Tail Rotor Diameter: 298mm (with Rail 116mm)



SYNERGY-TESTED EQUIPMENT*:

- Cyclic servos: Futaba BLS273 / 275 and MKS X6 / 575SL
- Tail servo: Narrowband (760us) - Futaba BLS276 and MKS HBL990
- Flybarless system: CGY750/760 and Vbar/NEO
- Main blades: Rail 696
- Tail blades: Rail 106
- Stock 13T pinion: 2050 RPM
- Stock 27T tail drive
- Motor: Scorpion HK4525-520
- ESC: Scorpion 200A and Hobbywing 130A Platinum
- All high-voltage capable servos powered via internal ESC BEC
- Flight battery pack: 4400-5000 12S

MAIN ROTOR RPM RECOMMENDATIONS:

- Sport 3D or basic/intermediate flying: Up to 1900 RPM with Rail **116mm** tail rotor blades
- Mild to Hard 3D: 1950-2150 with Rail **106mm** tail rotor blades
- For main rotor RPM's **less than** 1800: use optional 25T tail spur gear and Rail **116mm** rail rotor blades
- For main rotor RPM's **greater than** 2150: use optional 28T spur gear and Rail **106mm** tail rotor blades

*Equipment tested in the Synergy 696 during development with over 1000 flights. Proper setup is the sole responsibility of the builder and every pilot assumes all responsibility of the model. Using identical equipment is not a guarantee of performance. Please [visit](#) our technical forum for assistance and support.

SEE PAGE 47 FOR PHYSICAL DIMENSIONS



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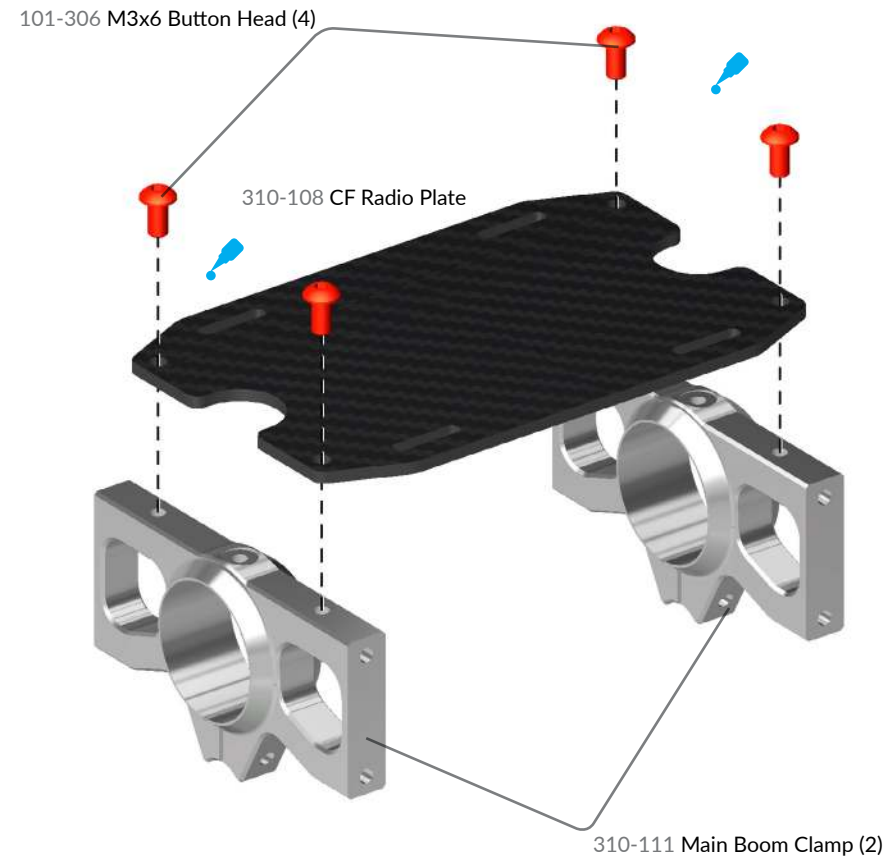
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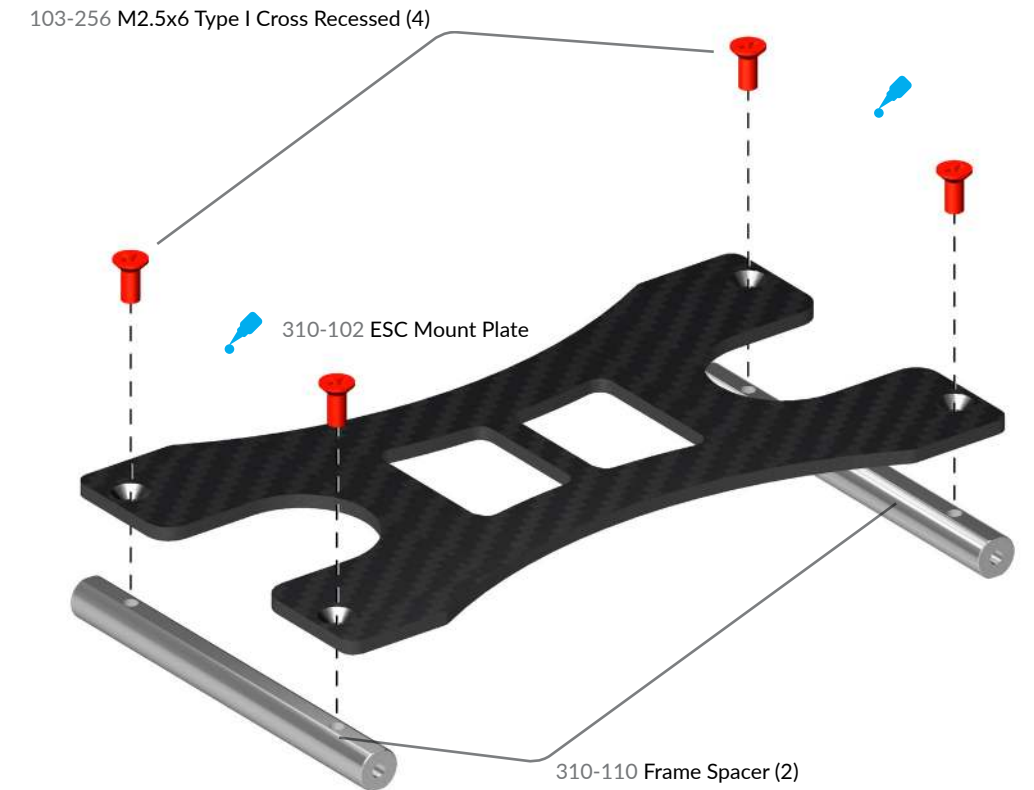



 **APPLY BLUE THREAD LOCK TO ALL BOLTS**

FLYBARLESS UNIT / RECEIVER TRAY BOOM BLOCKS



ESC TRAY



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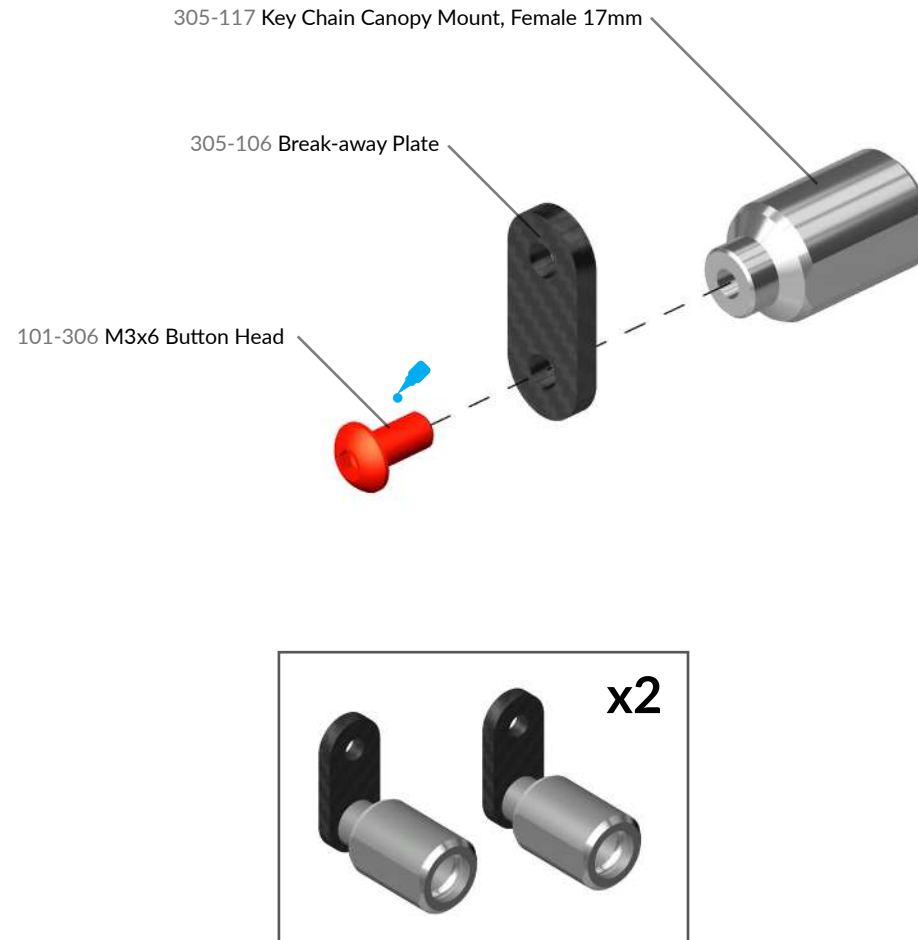
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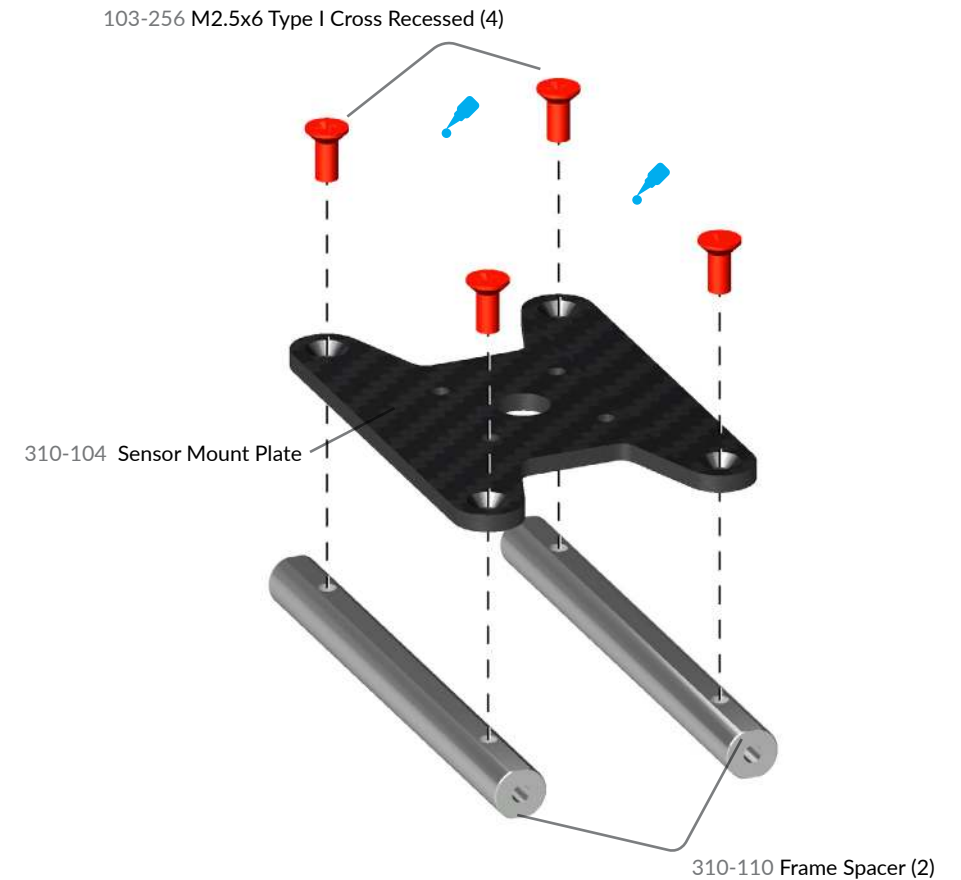


 **APPLY BLUE THREAD LOCK TO ALL BOLTS**

CANOPY MOUNTS



OPTIONAL REMOTE SENSOR TRAY



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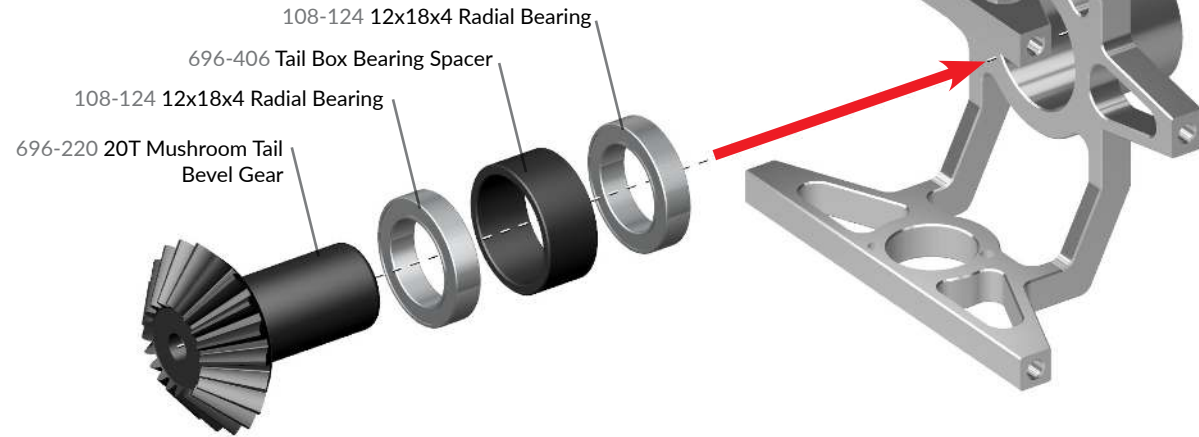
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! APPLY BLUE THREAD LOCK TO ALL BOLTS

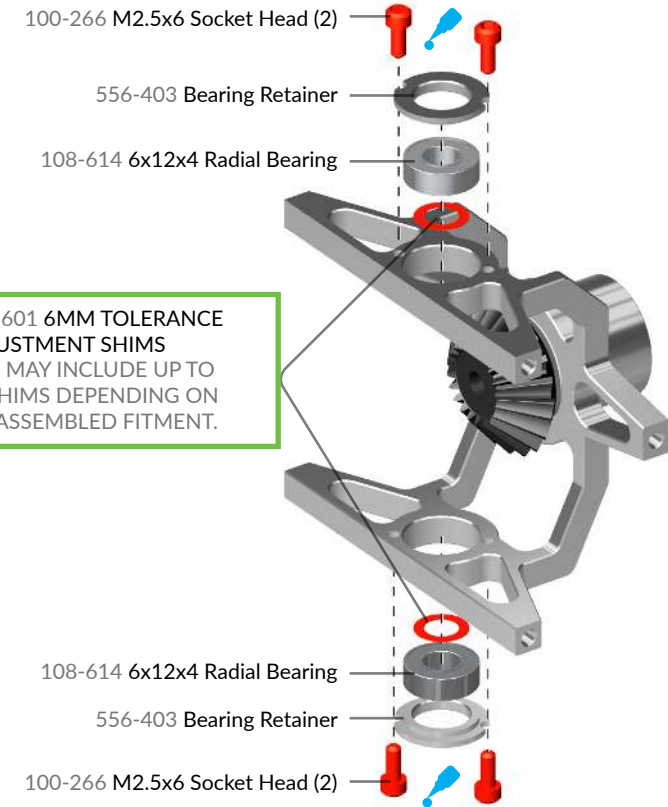
THE TRANSMISSION IS PREASSEMBLED FOR FITMENT VERIFICATION. FULLY DISASSEMBLE AND FOLLOW ASSEMBLY STEPS.

MUSHROOM TAIL GEAR IS PREASSEMBLED FROM THE FACTORY. PLEASE VERIFY IT IS FULLY SEATED.



1

2

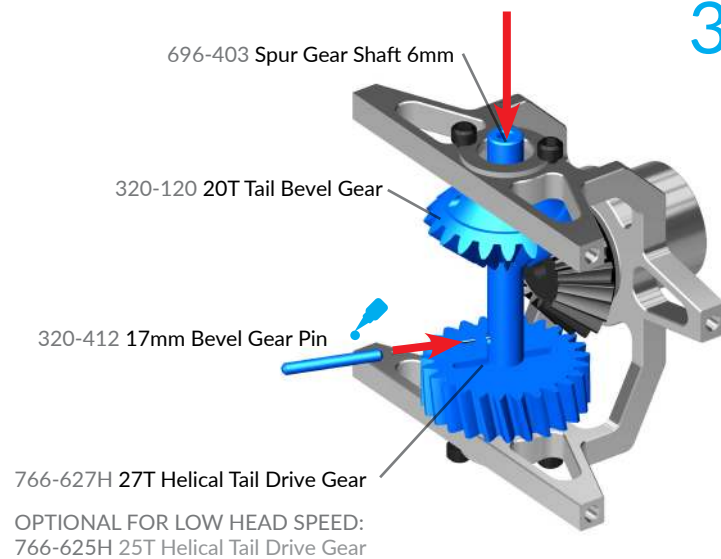


106-601 6MM TOLERANCE ADJUSTMENT SHIMS
KITS MAY INCLUDE UP TO (2) SHIMS DEPENDING ON PREASSEMBLED FITMENT.

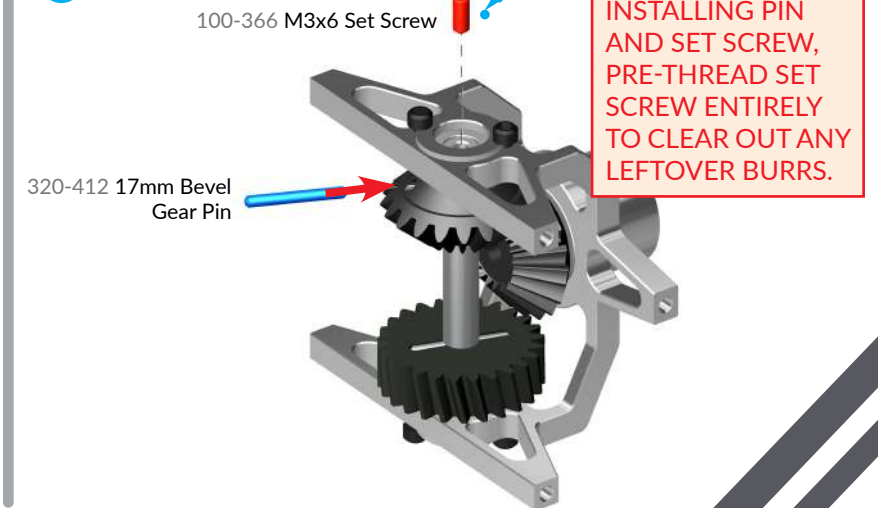
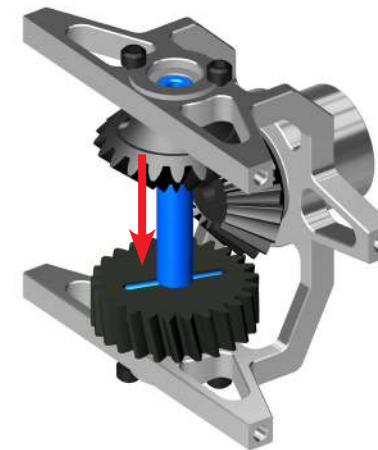
3

4

5




766-627H 27T Helical Tail Drive Gear
OPTIONAL FOR LOW HEAD SPEED:
766-625H 25T Helical Tail Drive Gear



PRIOR TO INSTALLING PIN AND SET SCREW, PRE-THREAD SET SCREW ENTIRELY TO CLEAR OUT ANY LEFTOVER BURRS.

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 **APPLY BLUE THREAD LOCK TO ALL BOLTS**

CANOPY MOUNT (See page 5)

100-351 M3 Nylock Nut

310-100 Servo Mount (2)

100-308 M3x8 Socket Head Bolt

100-266 M2.5x6 Socket Head (4)

766-106 Battery Tray Rail

696-201 CF Main Frame

101-306 M3x6 Button Head (4)

USE CA TO SECURE BATTERY TRAY RAIL BOLTS




BOLTS THREADED INTO THE DELRIN BATTERY TRAY RAIL REQUIRE VERY LITTLE TORQUE. DO NOT OVER TIGHTEN OR YOU WILL STRIP THE THREADS.

NOTE BATTERY TRAY RAIL ORIENTATION



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NOTE BATTERY TRAY RAIL ORIENTATION



766-106 Battery Tray Rail


310-100 Servo Mount (2)

100-351 M3 Nylock Nut

CANOPY MOUNT (See page 5)

100-308 M3x8 Socket Head Bolt

100-266 M2.5x6 Socket Head (4)


 101-306 M3x6 Button Head (4)

USE CA TO SECURE BATTERY TRAY RAIL BOLTS



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696-201 CF Main Frame

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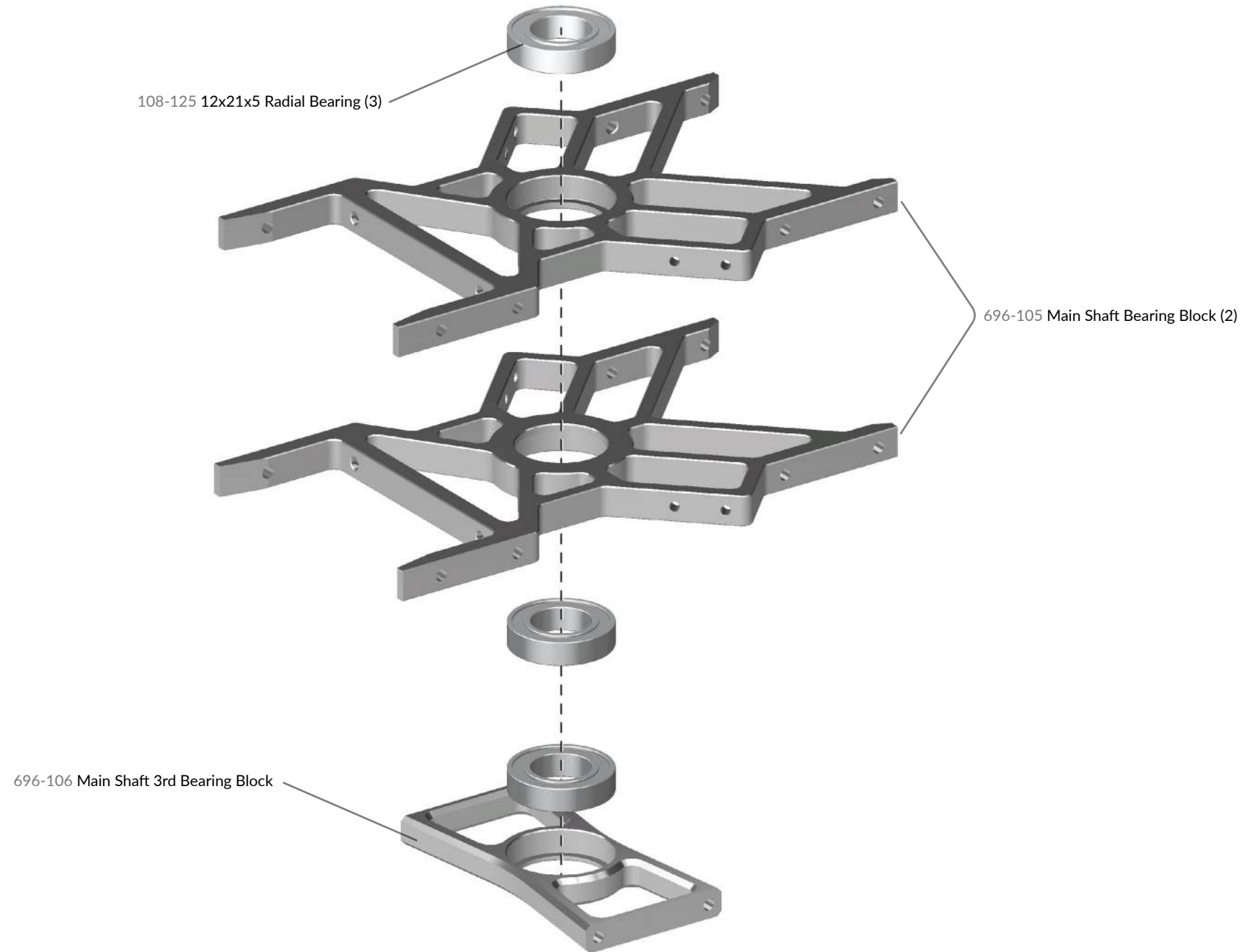
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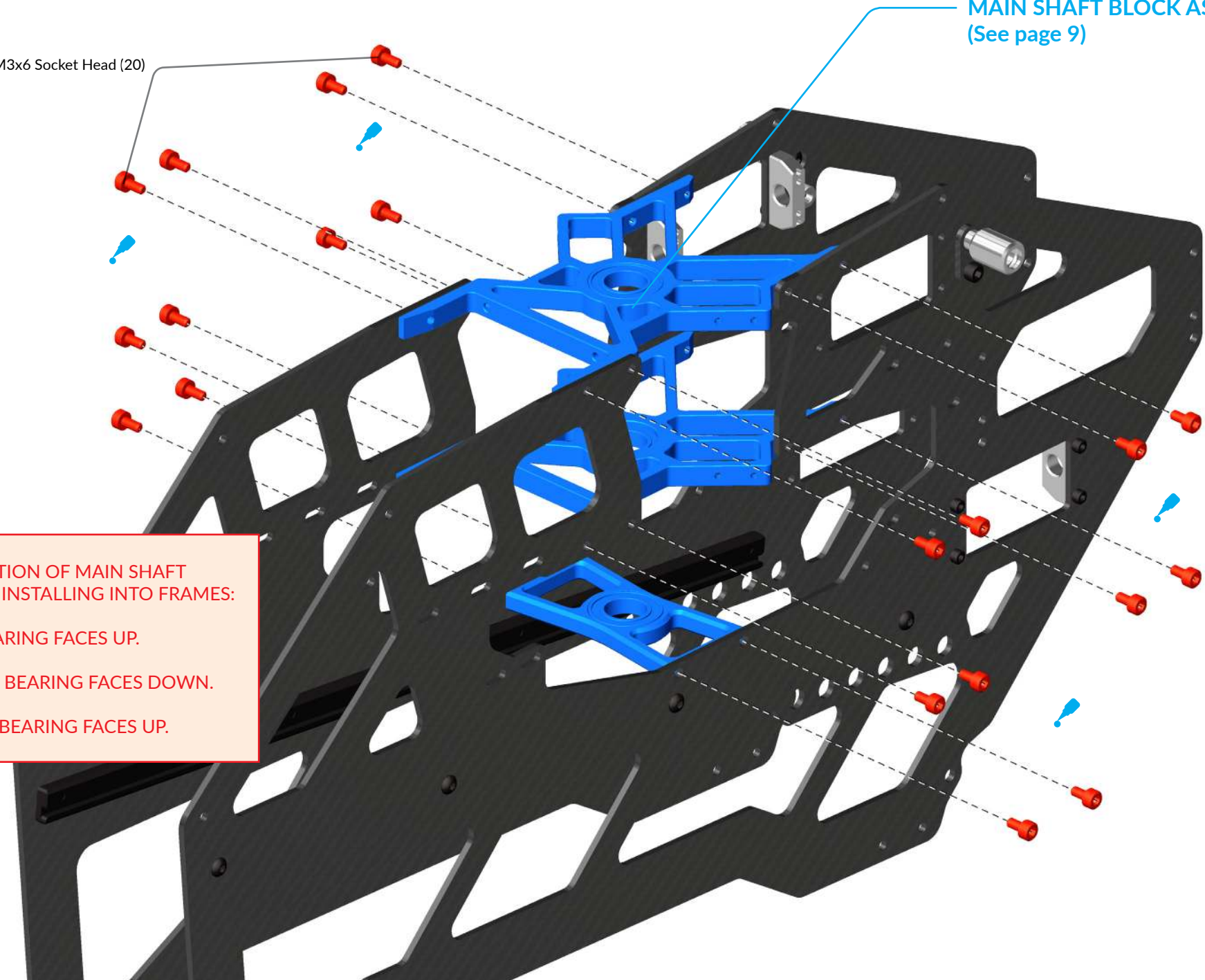
 **APPLY BLUE THREAD LOCK TO ALL BOLTS**

100-306 M3x6 Socket Head (20)

MAIN SHAFT BLOCK ASSEMBLIES
(See page 9)

 **NOTE ORIENTATION OF MAIN SHAFT BLOCKS WHEN INSTALLING INTO FRAMES:**

- TOP BLOCK BEARING FACES UP.
- MIDDLE BLOCK BEARING FACES DOWN.
- LOWER BLOCK BEARING FACES UP.



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APPLY BLUE THREAD LOCK TO ALL BOLTS

TRANSMISSION ASSEMBLY (See page 6)

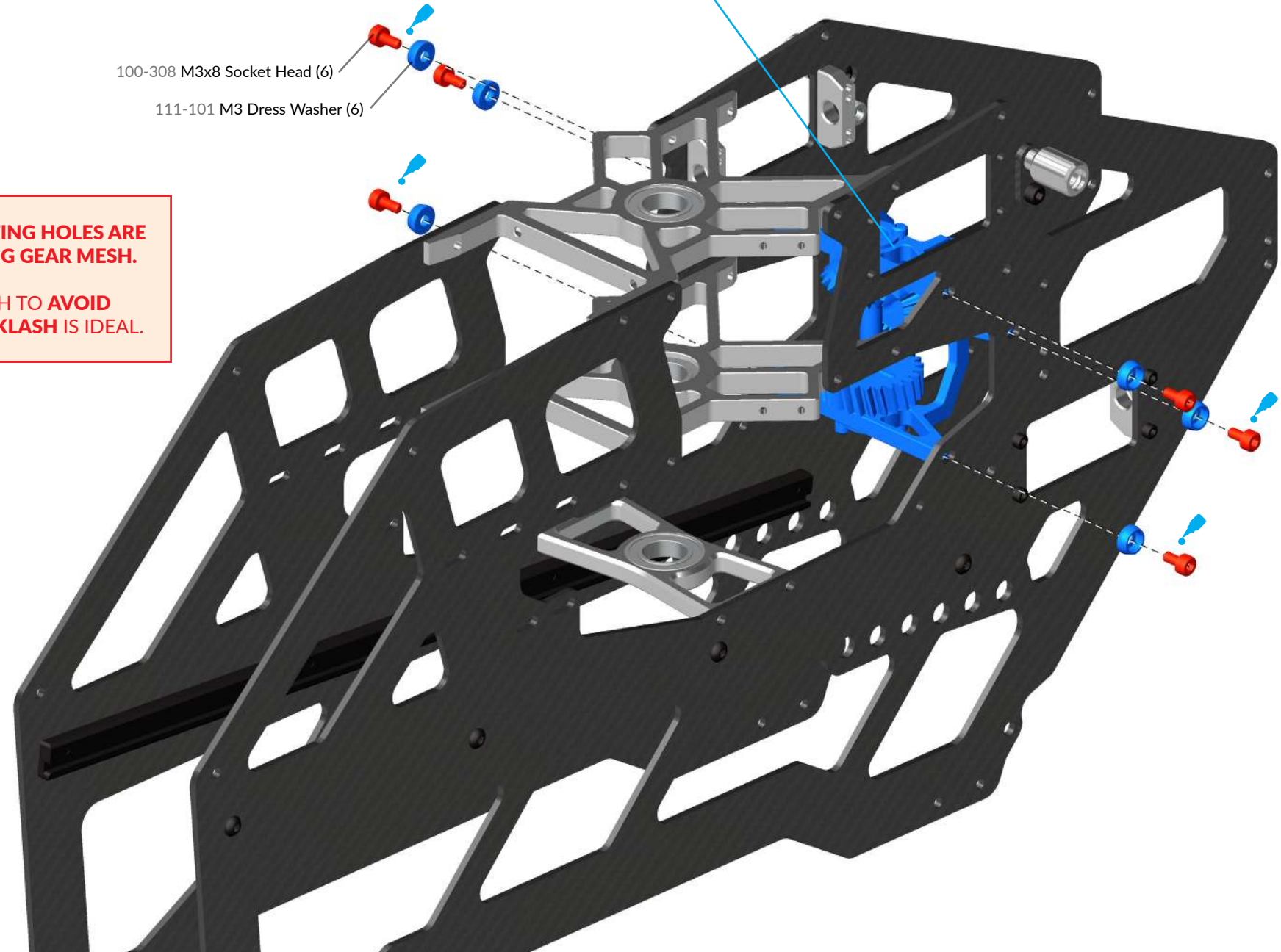
100-308 M3x8 Socket Head (6)


111-101 M3 Dress Washer (6)



TRANSMISSION MOUNTING HOLES ARE SLOTTED FOR ADJUSTING GEAR MESH.

PLEASE CHECK THE MESH TO AVOID BINDING. A SLIGHT BACKLASH IS IDEAL.



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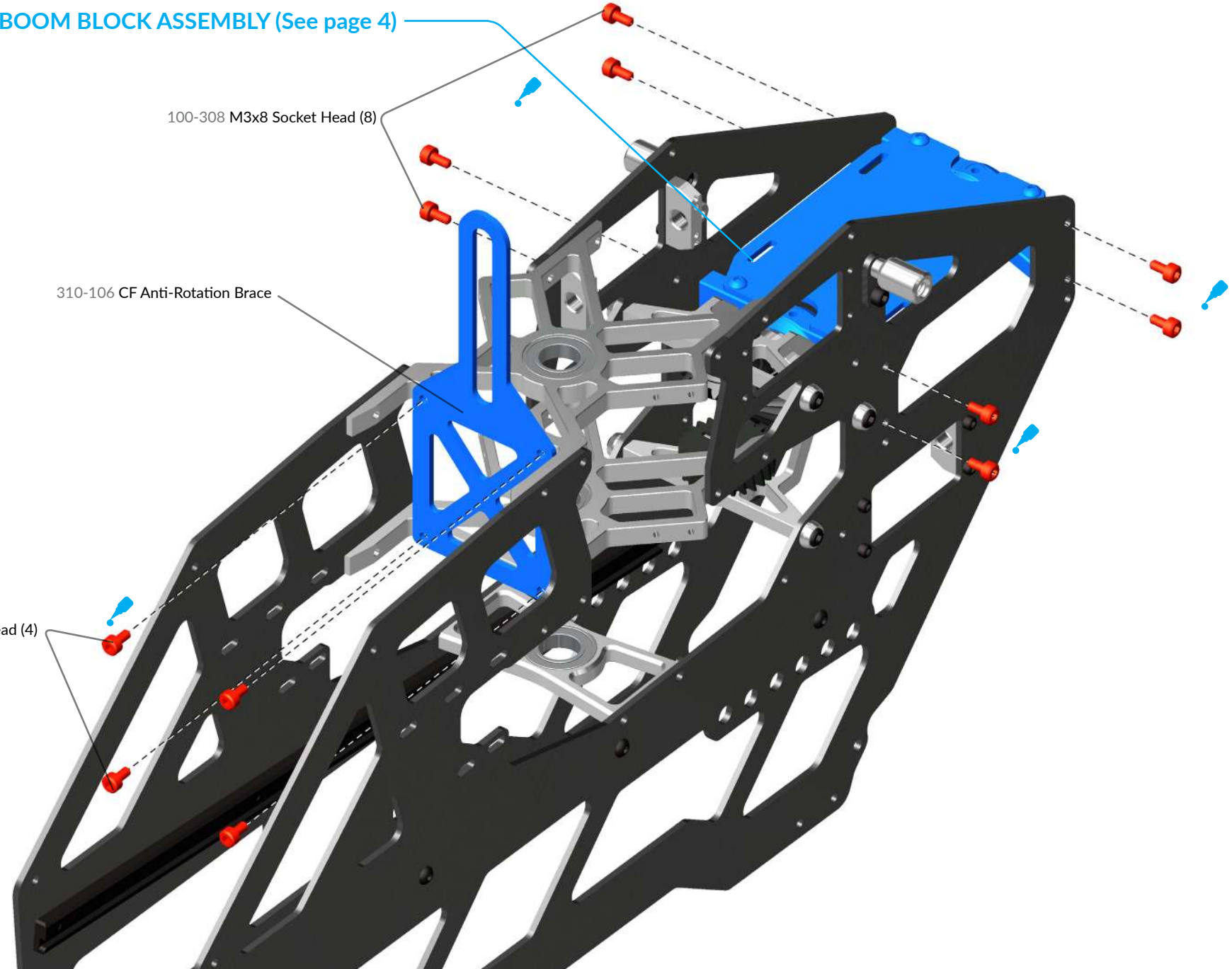
 **APPLY BLUE THREAD LOCK TO ALL BOLTS**


BOOM BLOCK ASSEMBLY (See page 4)

100-308 M3x8 Socket Head (8)

310-106 CF Anti-Rotation Brace

101-306 M3x6 Button Head (4)



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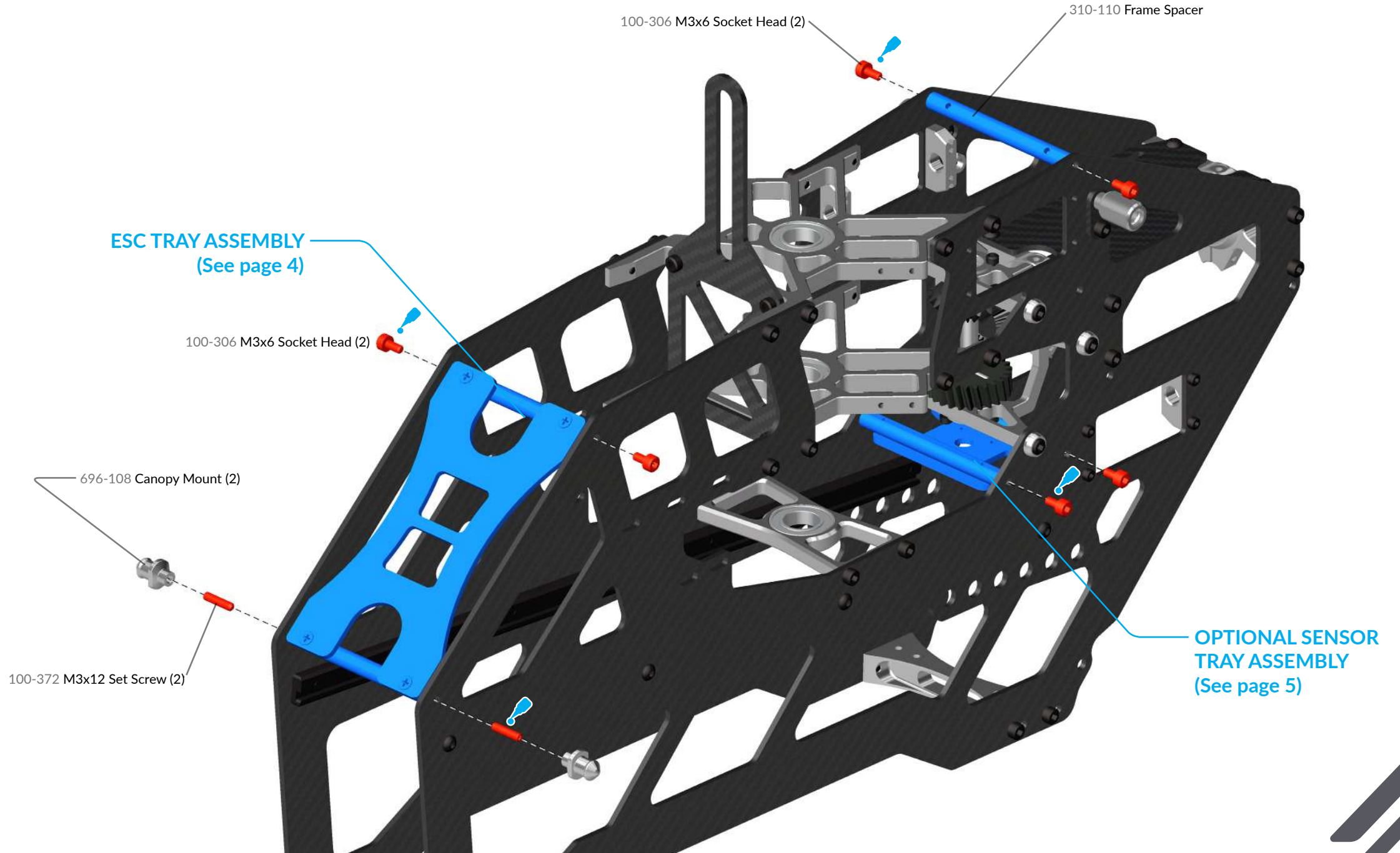
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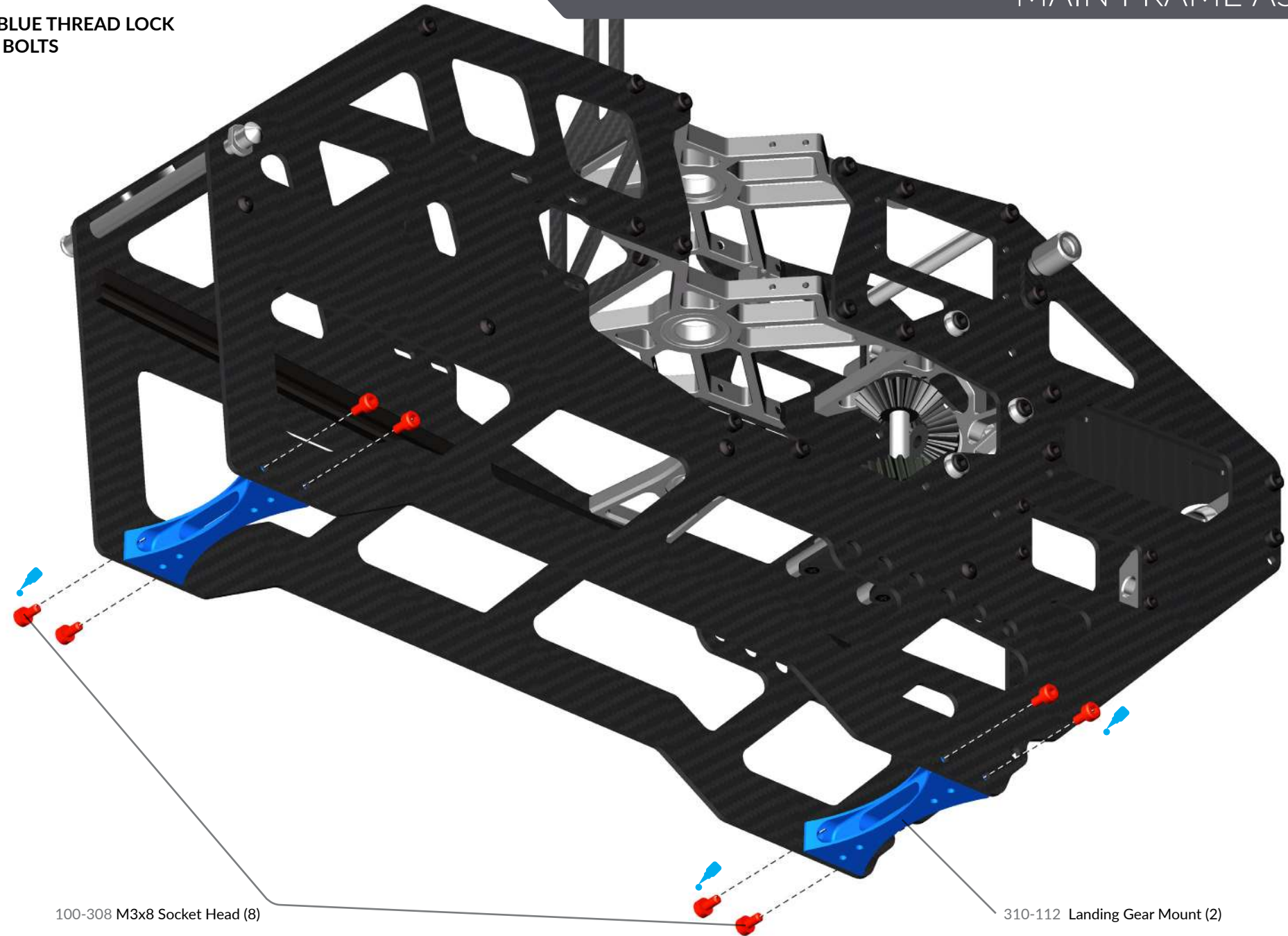
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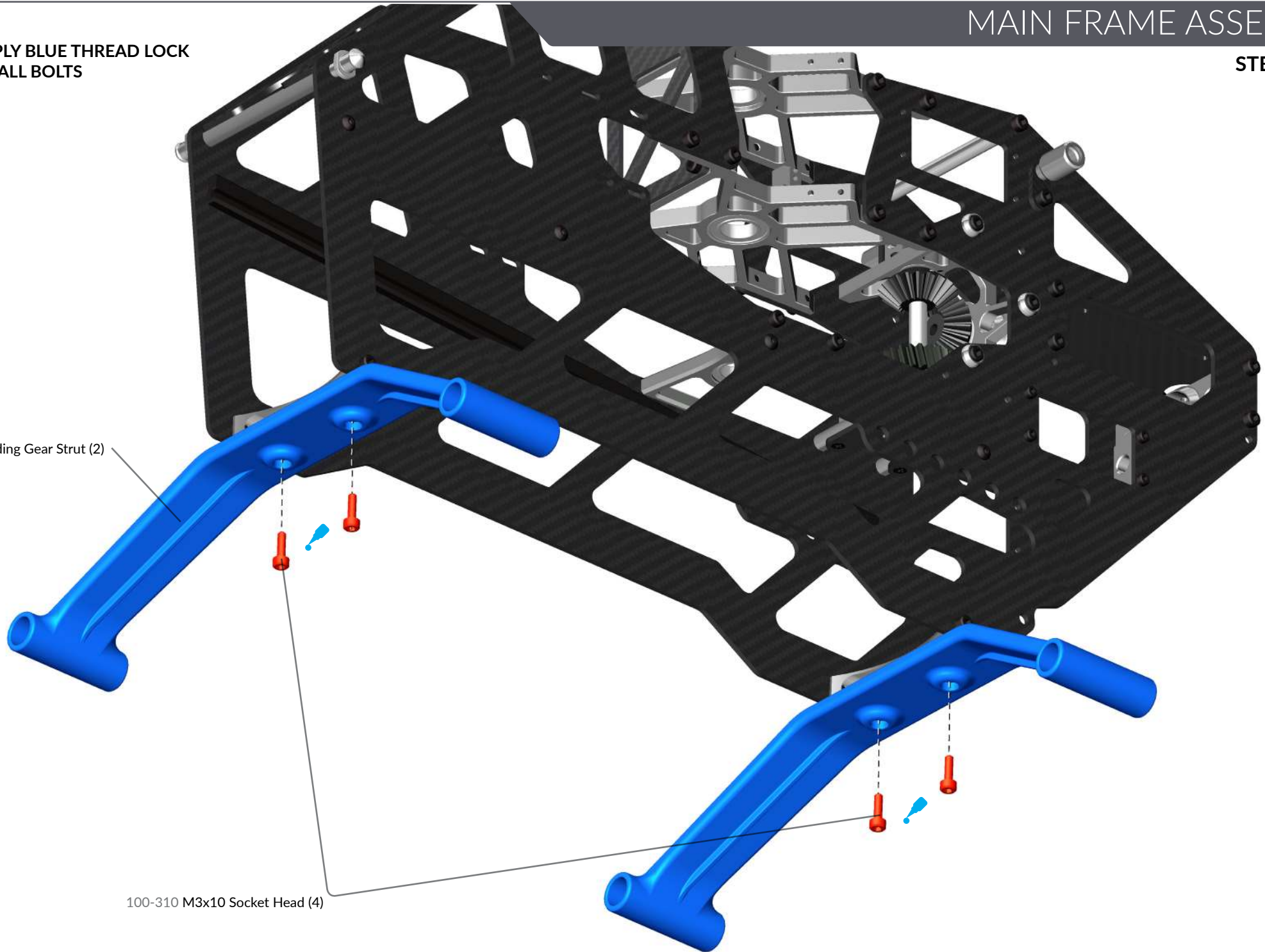
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 **APPLY BLUE THREAD LOCK TO ALL BOLTS**

766-118 Landing Gear Strut (2)

100-310 M3x10 Socket Head (4)



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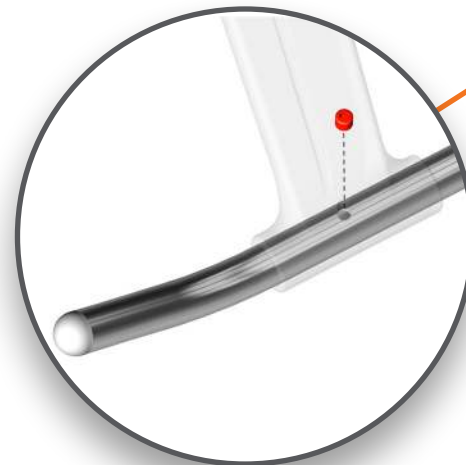
101-464 M4X4 Set Screw (4)


766-119 Skid Tube Plug (4)

SECURE SKID TUBE PLUGS WITH MEDIUM CA OR 30-MINUTE EPOXY

696-115 Skid Tube (2)

SECURE SKID PIPES USING SET SCREWS AND HOLES.



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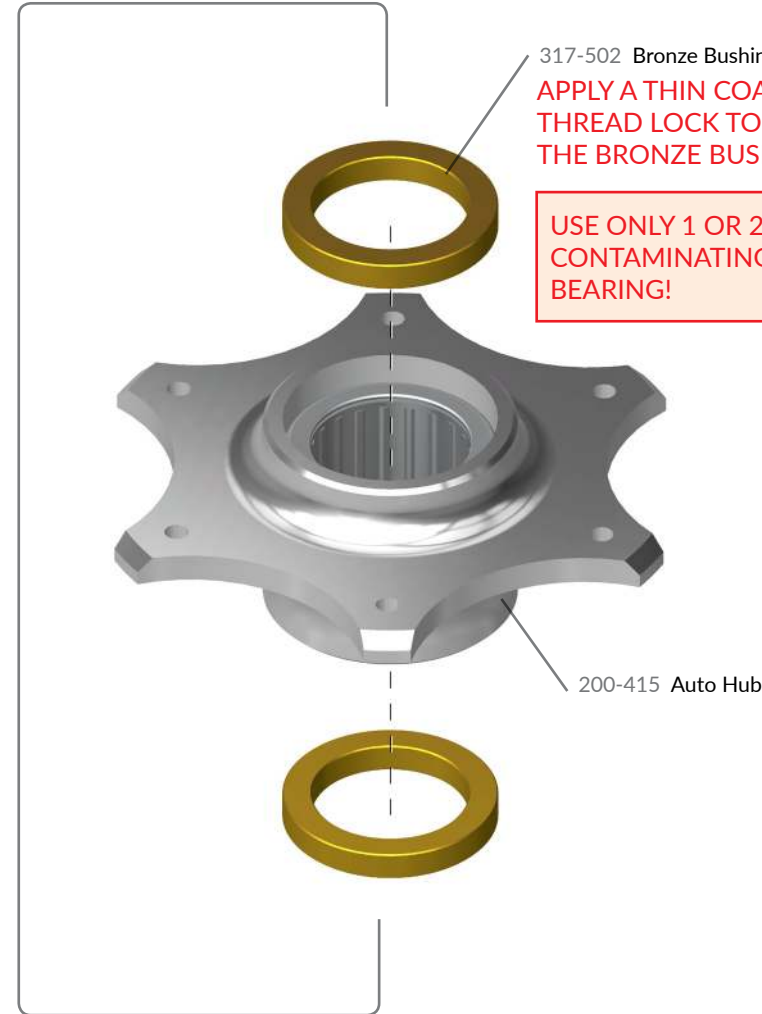
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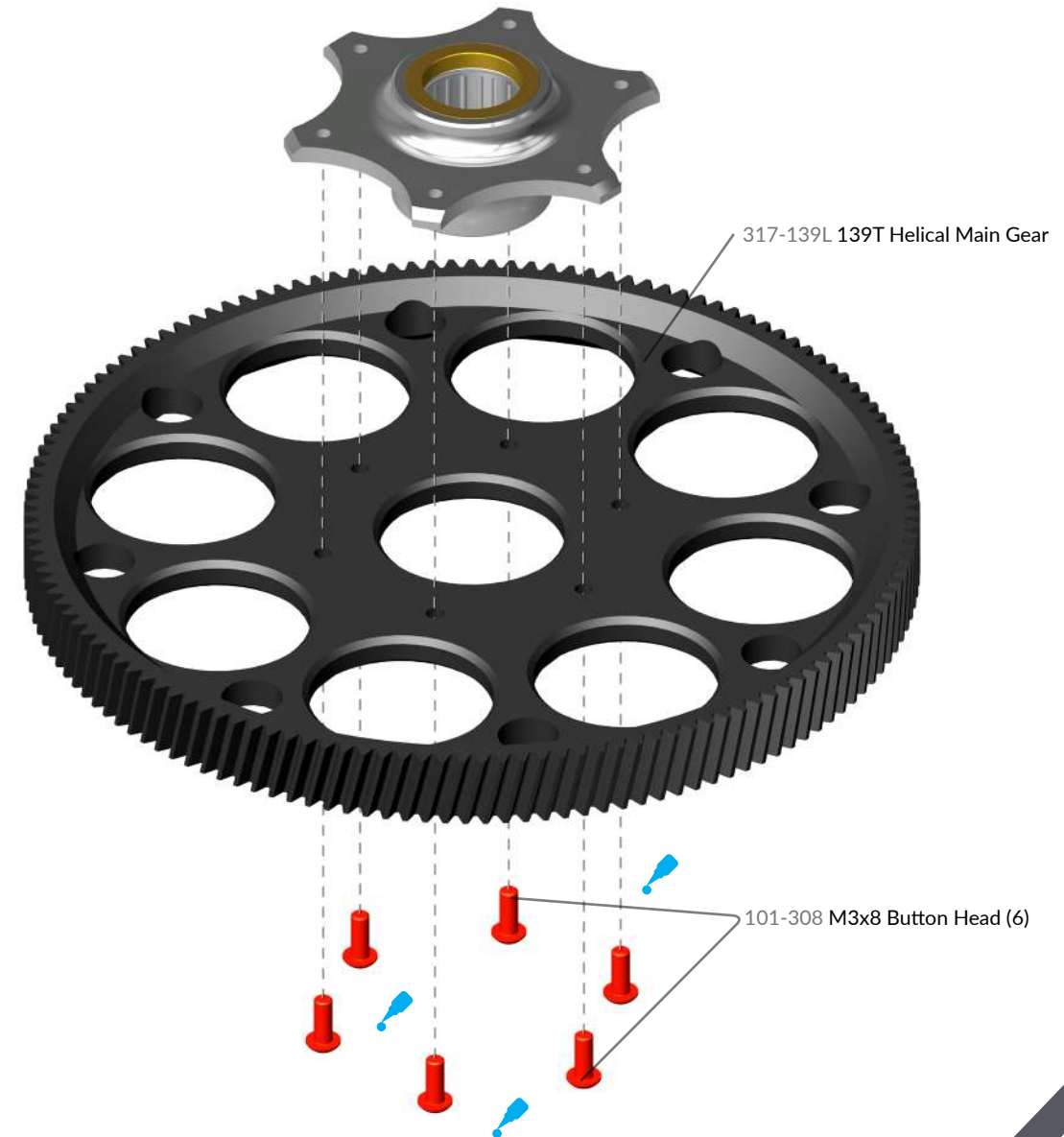
200-507 Auto Hub Assembly



317-502 Bronze Bushing (2)
**APPLY A THIN COATING OF RED
 THREAD LOCK TO THE OUTSIDE OF
 THE BRONZE BUSHING.**


**USE ONLY 1 OR 2 DROPS. AVOID
 CONTAMINATING THE ONE-WAY
 BEARING!**

200-415 Auto Hub



317-139L 139T Helical Main Gear

101-308 M3x8 Button Head (6)

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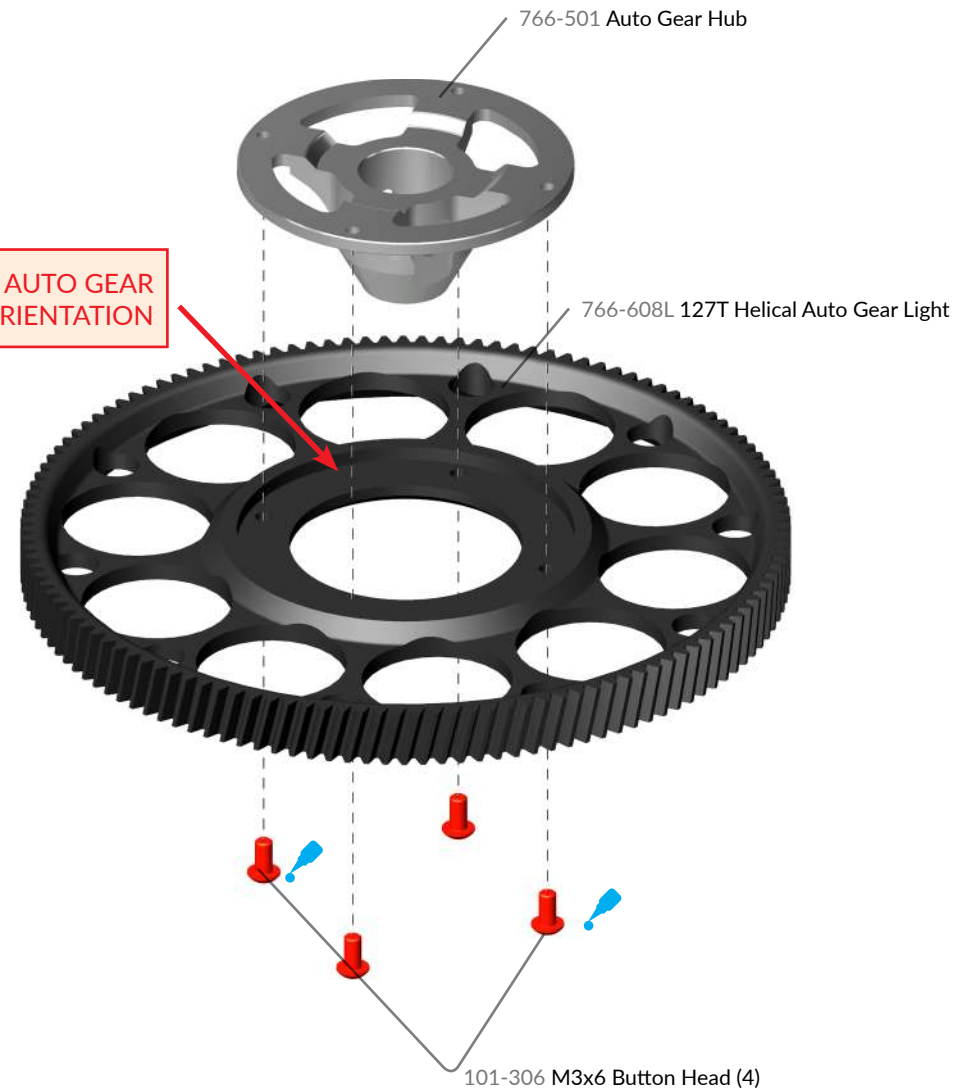
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  **APPLY BLUE THREAD LOCK TO ALL BOLTS**



NOTE AUTO GEAR ORIENTATION

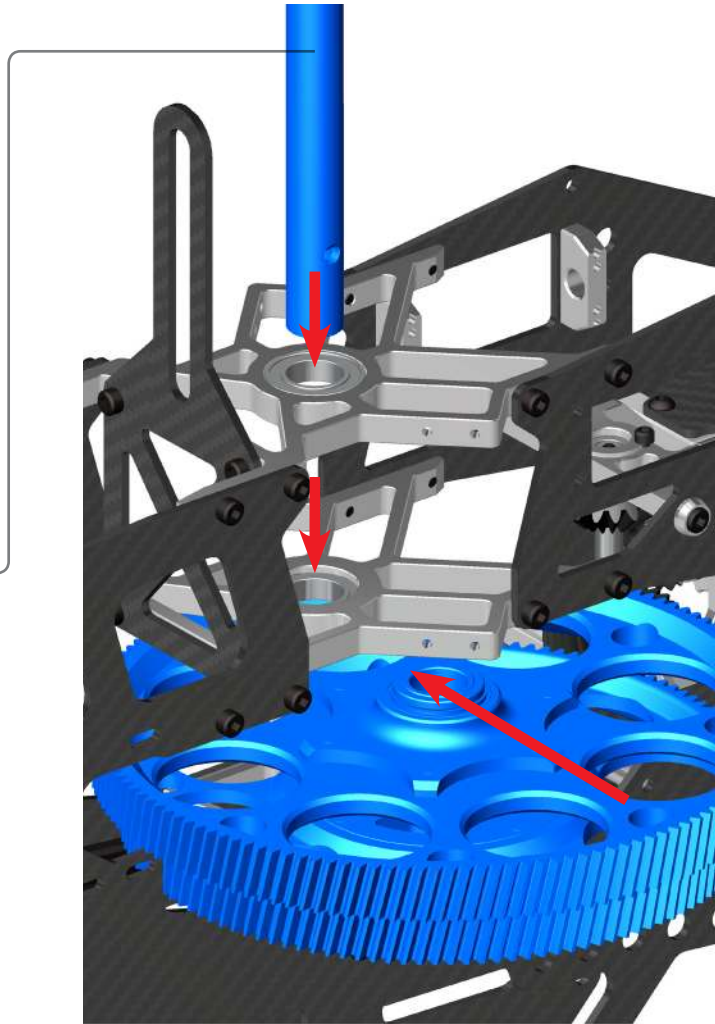
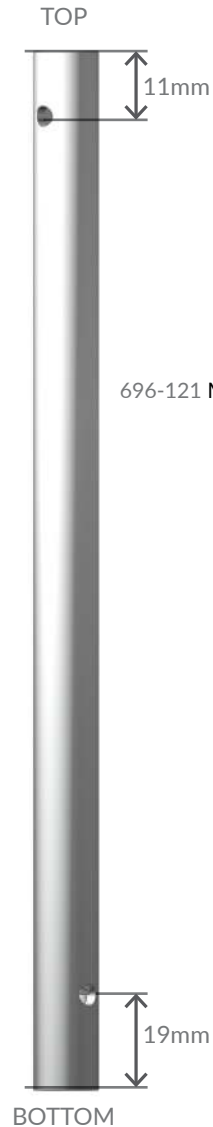


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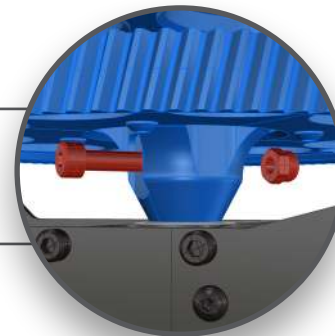


NOTE MAIN SHAFT ORIENTATION



NO SHIM IS REQUIRED BELOW OR ABOVE THE MAIN DRIVE ASSEMBLY

-  100-425 M4x25 Shouldered Bolt
-  100-451 M4 Nylock Nut



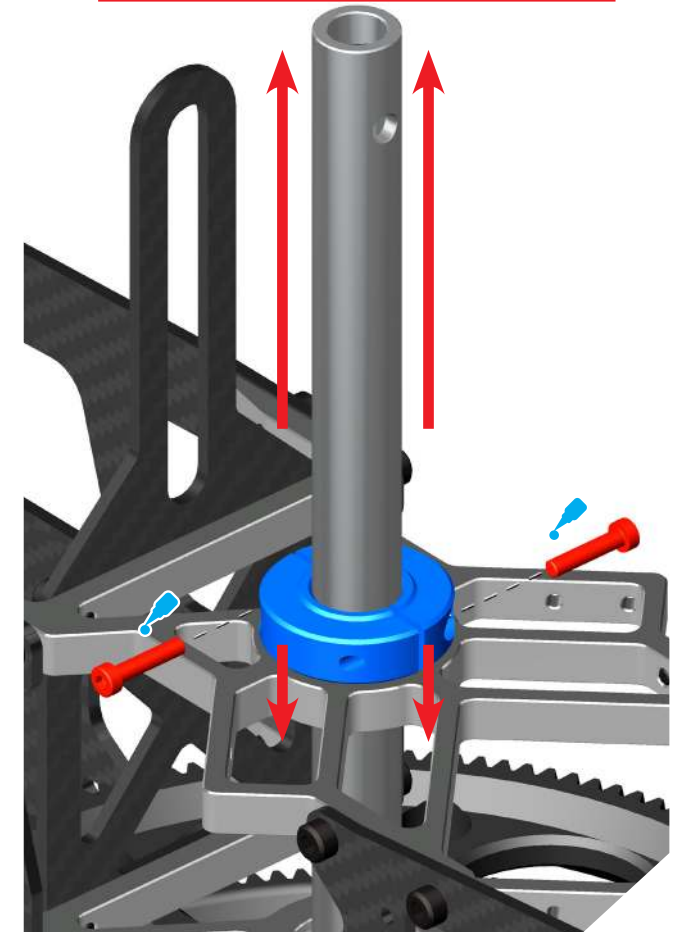
696-152 Main Shaft Collar 12mm




100-312 M3x12 Socket Head Bolts (2)



PULL UP MAIN SHAFT WHILE TIGHTENING COLLAR BOLTS FIRMLY



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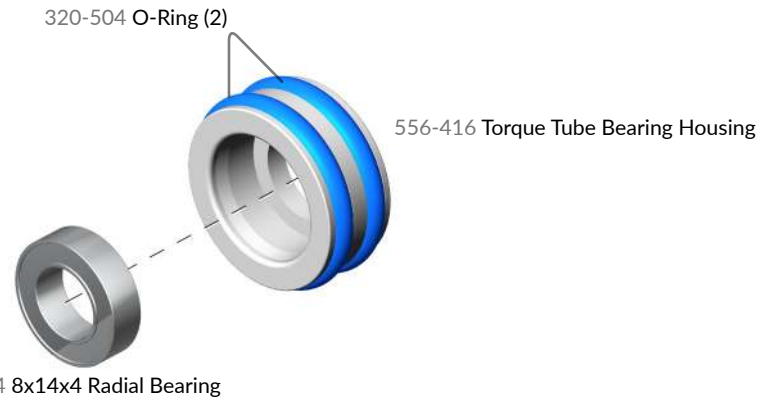
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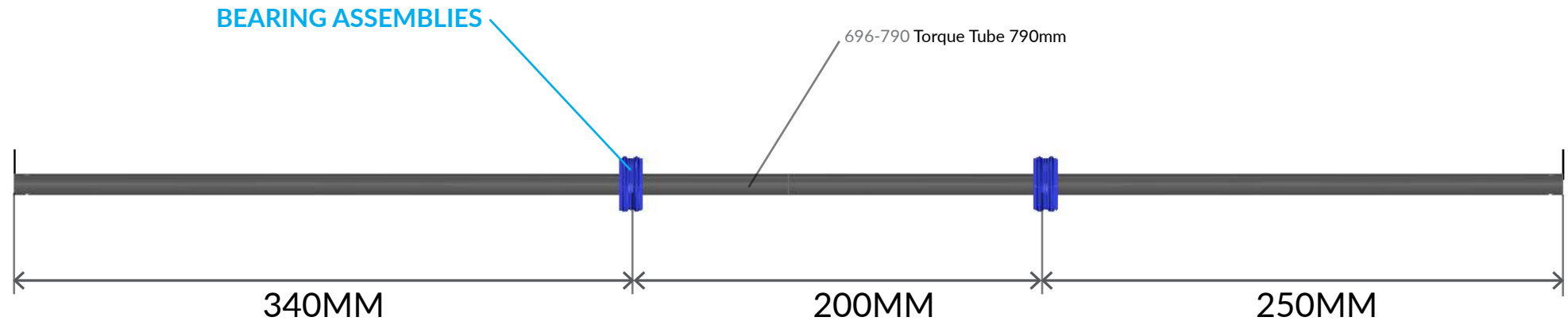
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USE CA OR RED/GREEN THREAD LOCK TO SECURE BEARING ASSEMBLIES



 CAUTION: AVOID CONTAMINATING BEARINGS WITH CA OR THREAD LOCK!



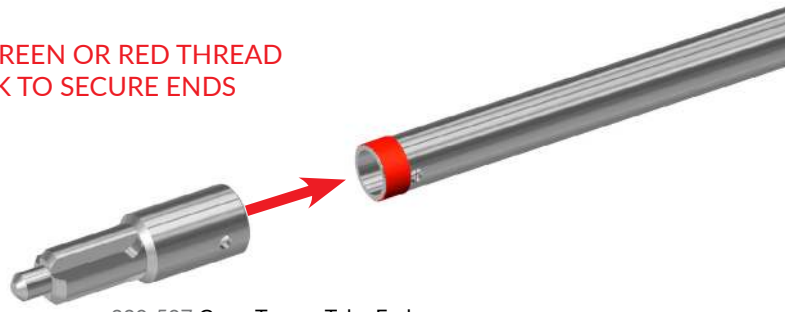
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- BLADES
- CANOPY



1

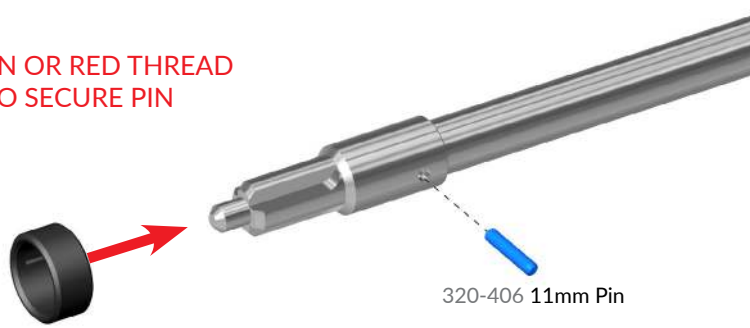
APPLY GREEN OR RED THREAD LOCK TO SECURE ENDS



320-507 Cross Torque Tube End

2

APPLY GREEN OR RED THREAD LOCK TO SECURE PIN

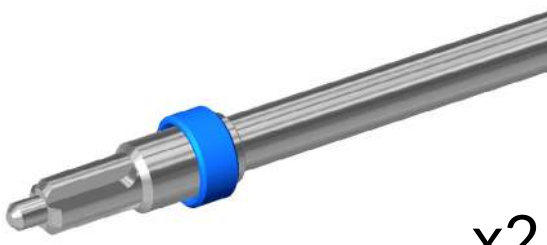


320-508 Torque Tube Pin Retainer

320-406 11mm Pin

3


APPLY CA OR EXPOXY TO SECURE RETAINER



x2

COMPLETED TORQUE TUBE ASSEMBLY



 Components that are factory assembled provide a reference for model assembly. Disassembly and application of thread lock is required where indicated.

- SPECIFICATIONS
- FRAME COMPONENTS
- TRANSMISSION
- MAIN FRAME
- MAIN DRIVE UNIT
- TORQUE TUBE
- BOOM**
- BOOM SUPPORTS
- TAIL ASSEMBLY
- MOTOR INSTALL
- SERVOS
- TAIL CONTROL ROD
- SWASH PLATE
- CYCLIC LINKAGES
- MAIN HEAD
- PITCH LINKAGES
- BATTERY TRAY
- BLADES
- CANOPY

TORQUE TUBE ASSEMBLY (See page 21)

INSERT TORQUE TUBE INTO BOOM

TIP: USE GREASE OR WINDEX TO EASE INSTALLATION

696-140 Tail Boom 812mm Light

INSTALL BOOM SUPPORT CLAMP AND TAIL CONTROL ROD GUIDES

610-128 Boom Support Clamp, Lite

115-114 Tail Control Guide


115-114 Tail Control Guide

COMPLETED BOOM ASSEMBLY



SYNERGY 696

V1.1

 Components that are factory assembled provide a reference for model assembly. Disassembly and application of thread lock is required where indicated.

SPECIFICATIONS

FRAME COMPONENTS

TRANSMISSION

MAIN FRAME

MAIN DRIVE UNIT

TORQUE TUBE

BOOM

BOOM SUPPORTS

TAIL ASSEMBLY

MOTOR INSTALL

SERVOS

TAIL CONTROL ROD

SWASH PLATE

CYCLIC LINKAGES

MAIN HEAD

PITCH LINKAGES

BATTERY TRAY

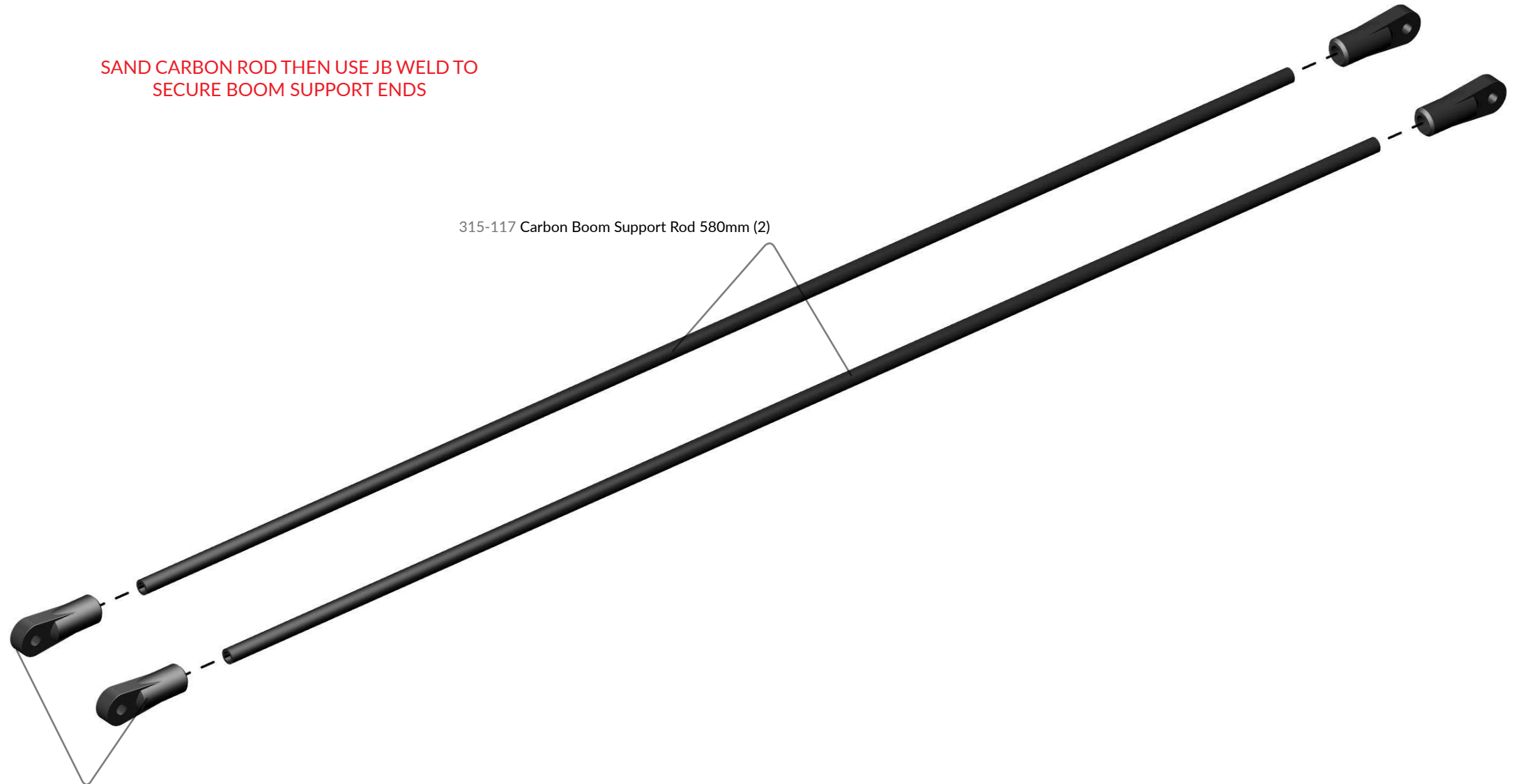
BLADES

CANOPY

SAND CARBON ROD THEN USE JB WELD TO
SECURE BOOM SUPPORT ENDS


315-117 Carbon Boom Support Rod 580mm (2)

115-119 Boom Support End (4)

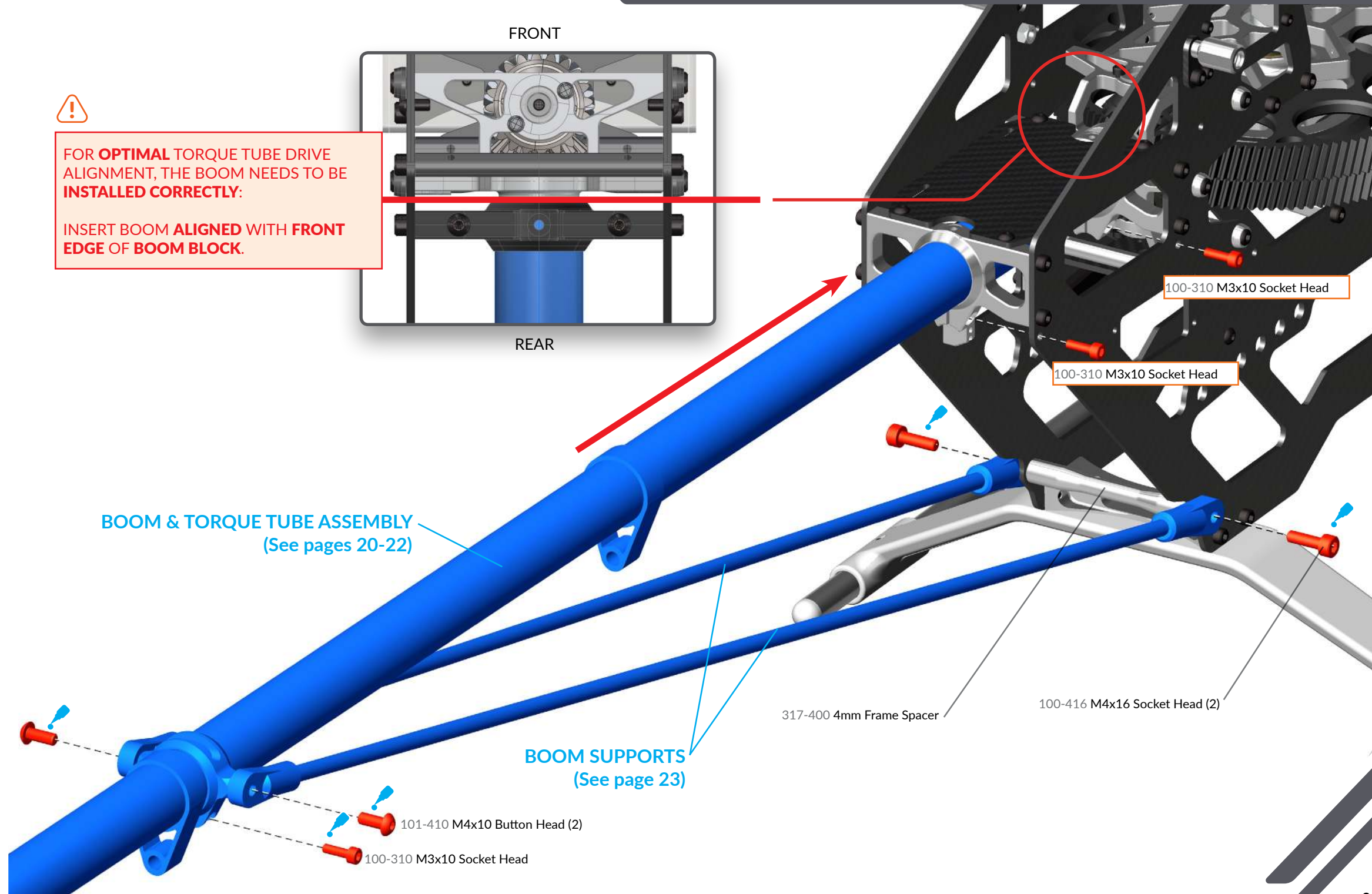


SYNERGY 696

V1.1


 Components that are factory assembled provide a reference for model assembly. Disassembly and application of thread lock is required where indicated.

- SPECIFICATIONS
- FRAME COMPONENTS
- TRANSMISSION
- MAIN FRAME
- MAIN DRIVE UNIT
- TORQUE TUBE
- BOOM
- BOOM SUPPORTS**
- TAIL ASSEMBLY
- MOTOR INSTALL
- SERVOS
- TAIL CONTROL ROD
- SWASH PLATE
- CYCLIC LINKAGES
- MAIN HEAD
- PITCH LINKAGES
- BATTERY TRAY
- BLADES
- CANOPY



SYNERGY 696

V1.1

 Components that are factory assembled provide a reference for model assembly. Disassembly and application of thread lock is required where indicated.

SPECIFICATIONS

FRAME COMPONENTS

TRANSMISSION

MAIN FRAME

MAIN DRIVE UNIT

TORQUE TUBE

BOOM

BOOM SUPPORTS

TAIL ASSEMBLY

MOTOR INSTALL

SERVOS

TAIL CONTROL ROD

SWASH PLATE

CYCLIC LINKAGES

MAIN HEAD

PITCH LINKAGES

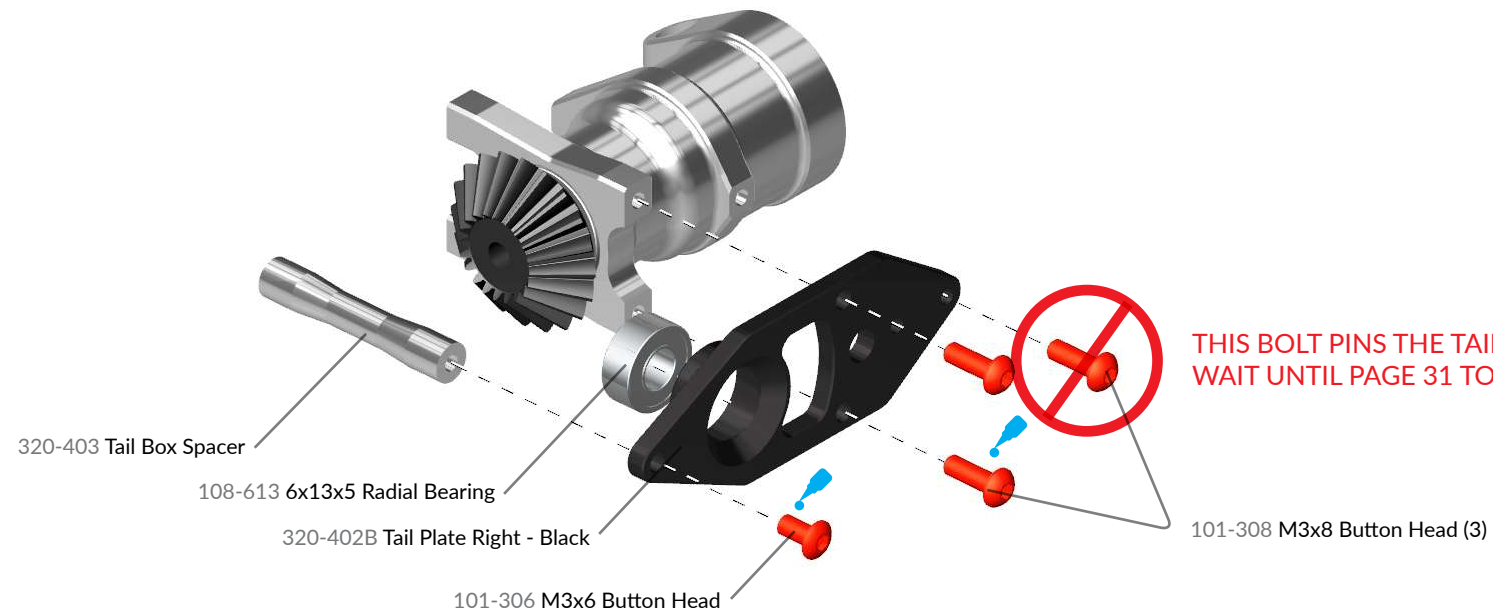
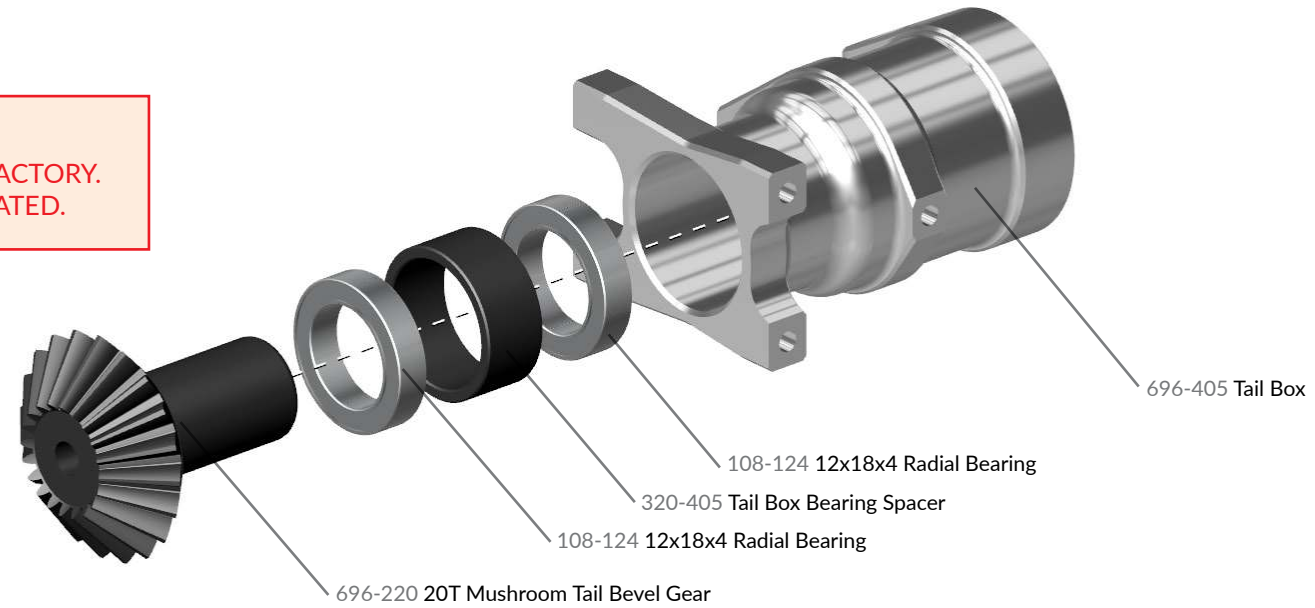
BATTERY TRAY


BLADES

CANOPY



MUSHROOM TAIL GEAR IS PREASSEMBLED FROM THE FACTORY. PLEASE VERIFY IT IS FULLY SEATED.



 Components that are factory assembled provide a reference for model assembly. Disassembly and application of thread lock is required where indicated.

SPECIFICATIONS

FRAME COMPONENTS

TRANSMISSION

MAIN FRAME

MAIN DRIVE UNIT

TORQUE TUBE

BOOM

BOOM SUPPORTS

TAIL ASSEMBLY

MOTOR INSTALL

SERVOS

TAIL CONTROL ROD

SWASH PLATE

CYCLIC LINKAGES

MAIN HEAD

PITCH LINKAGES

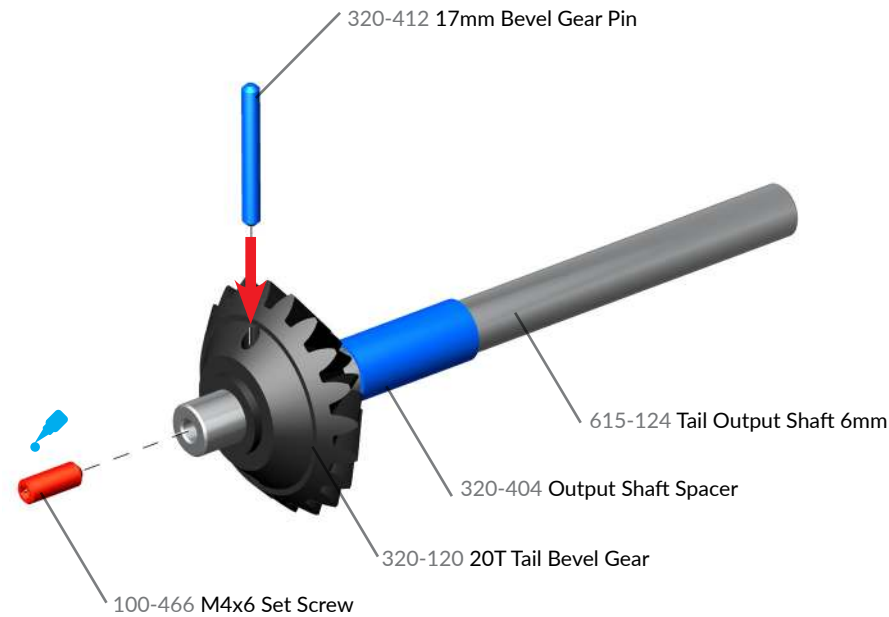
BATTERY TRAY

BLADES

CANOPY



PRIOR TO INSTALLING PIN AND SET SCREW, PRE-THREAD SET SCREW ENTIRELY TO CLEAR OUT ANY LEFTOVER BURRS.



106-601 6MM TOLERANCE ADJUSTMENT SHIMS
KITS MAY INCLUDE UP TO (2) SHIMS DEPENDING ON PREASSEMBLED FITMENT.

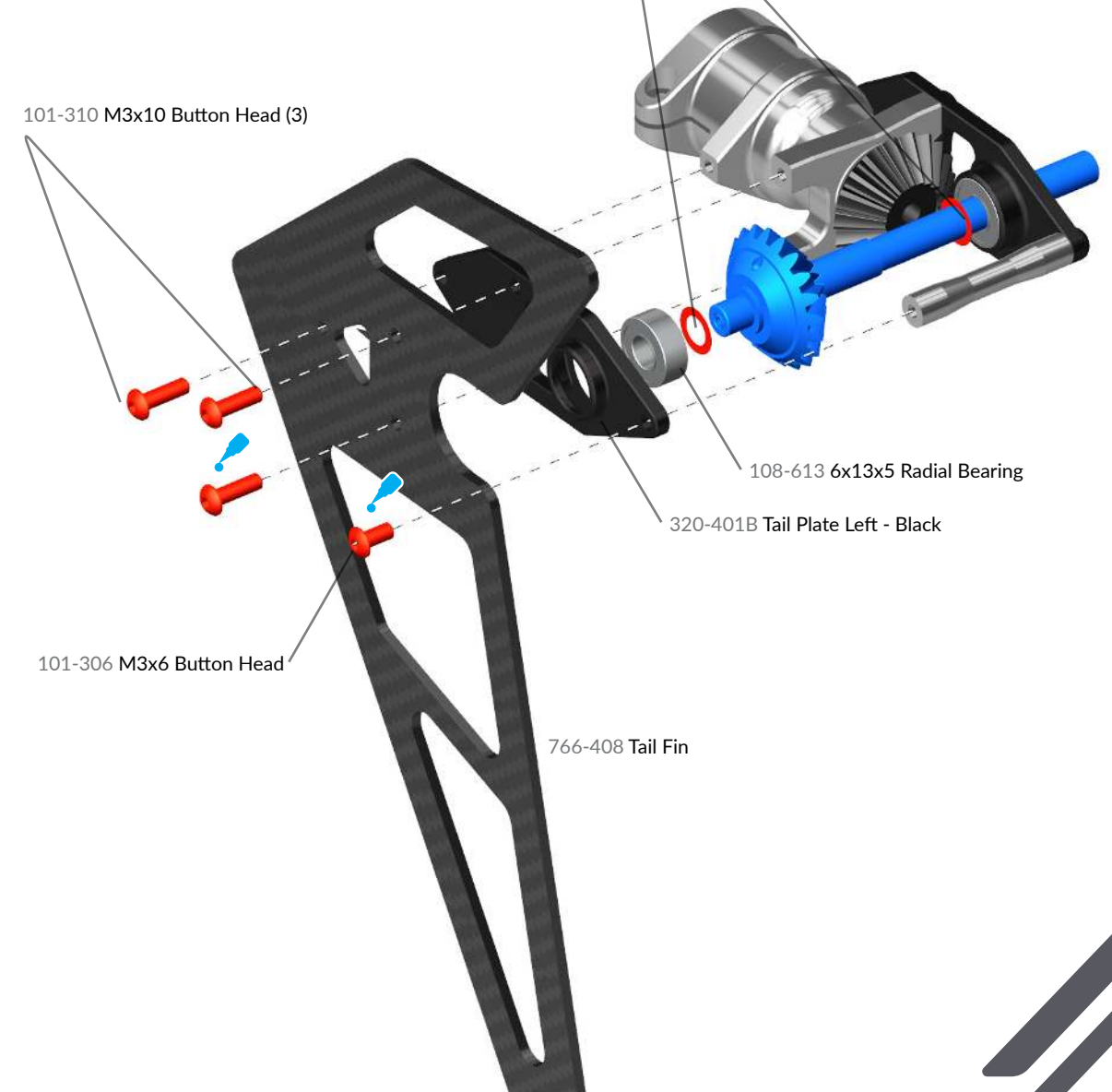
101-310 M3x10 Button Head (3)


101-306 M3x6 Button Head

766-408 Tail Fin

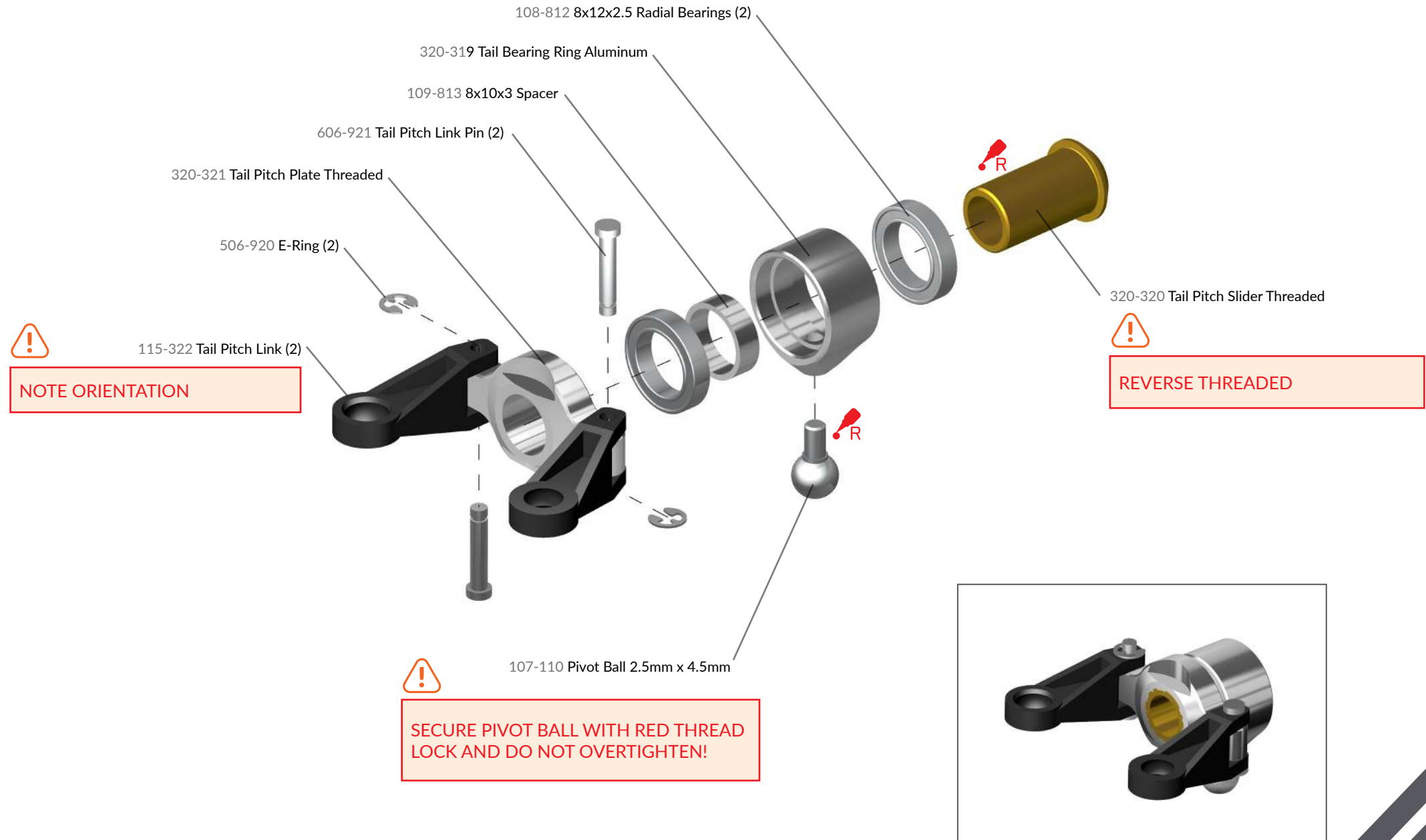
108-613 6x13x5 Radial Bearing

320-401B Tail Plate Left - Black




 Components that are factory assembled provide a reference for model assembly. Disassembly and application of thread lock is required where indicated.

- SPECIFICATIONS
- FRAME COMPONENTS
- TRANSMISSION
- MAIN FRAME
- MAIN DRIVE UNIT
- TORQUE TUBE
- BOOM
- BOOM SUPPORTS
- TAIL ASSEMBLY**
- MOTOR INSTALL
- SERVOS
- TAIL CONTROL ROD
- SWASH PLATE
- CYCLIC LINKAGES
- MAIN HEAD
- PITCH LINKAGES
- BATTERY TRAY
- BLADES
- CANOPY



SYNERGY 696

V1.1

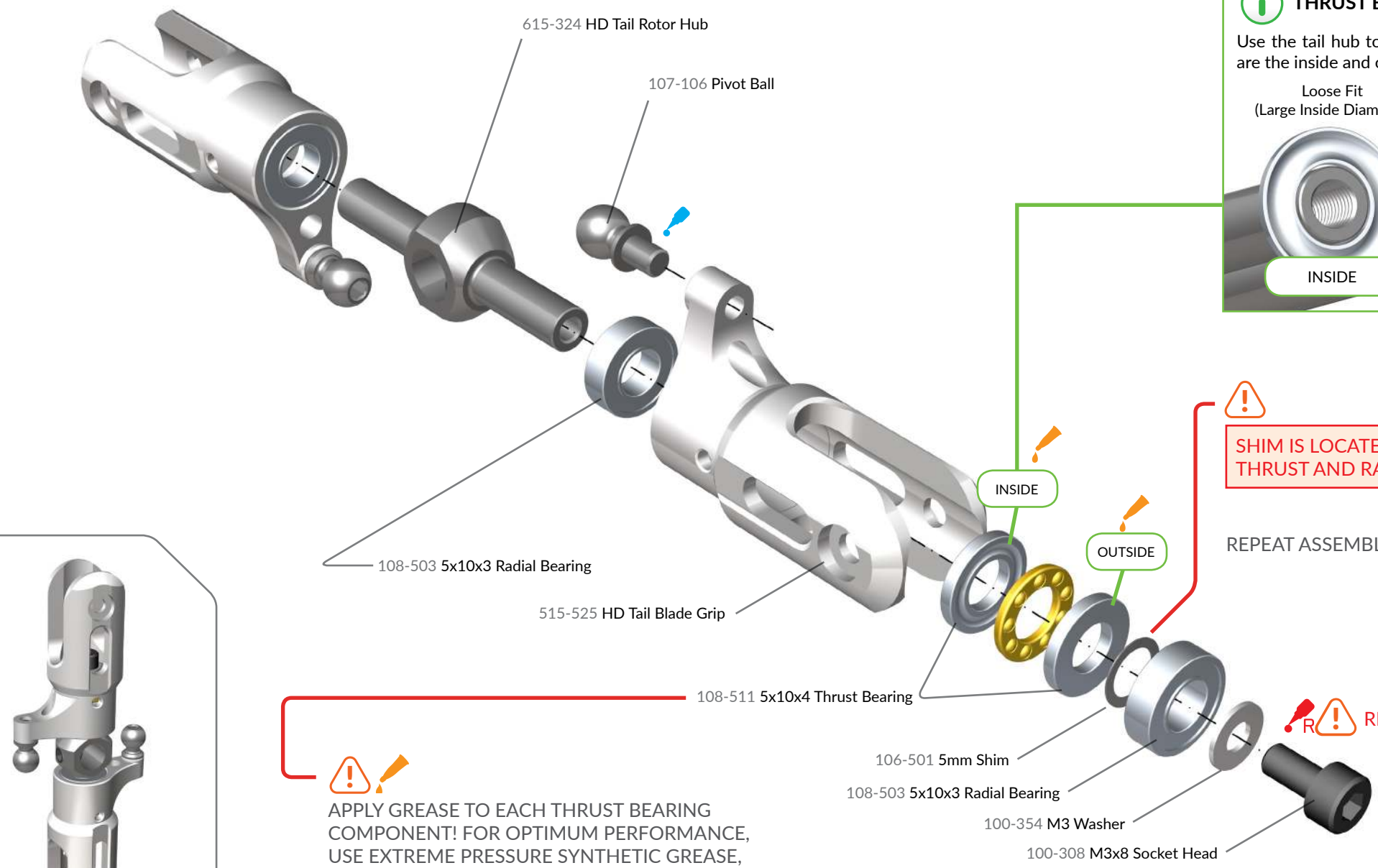
 Components that are factory assembled provide a reference for model assembly. Disassembly and application of thread lock is required where indicated.

- SPECIFICATIONS
- FRAME COMPONENTS
- TRANSMISSION
- MAIN FRAME
- MAIN DRIVE UNIT
- TORQUE TUBE
- BOOM
- BOOM SUPPORTS
- TAIL ASSEMBLY**
- MOTOR INSTALL
- SERVOS
- TAIL CONTROL ROD
- SWASH PLATE
- CYCLIC LINKAGES
- MAIN HEAD
- PITCH LINKAGES
- BATTERY TRAY
- BLADES
- CANOPY



TAIL ASSEMBLY

TAIL HUB AND TAIL GRIPS




 **THRUST BEARING TIP**

Use the tail hub to help determine which sides are the inside and outside halves:

Loose Fit (Large Inside Diameter)	Tight Fit (Small Inside Diameter)
	
INSIDE	OUTSIDE

 **SHIM IS LOCATED BETWEEN OUTSIDE THRUST AND RADIAL BEARINGS.**


REPEAT ASSEMBLY FOR BOTH GRIPS.

 **APPLY GREASE TO EACH THRUST BEARING COMPONENT! FOR OPTIMUM PERFORMANCE, USE EXTREME PRESSURE SYNTHETIC GREASE, BOTO-LUBE PART BD-001.**

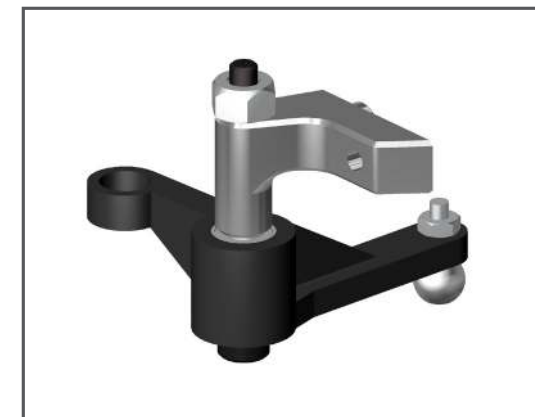
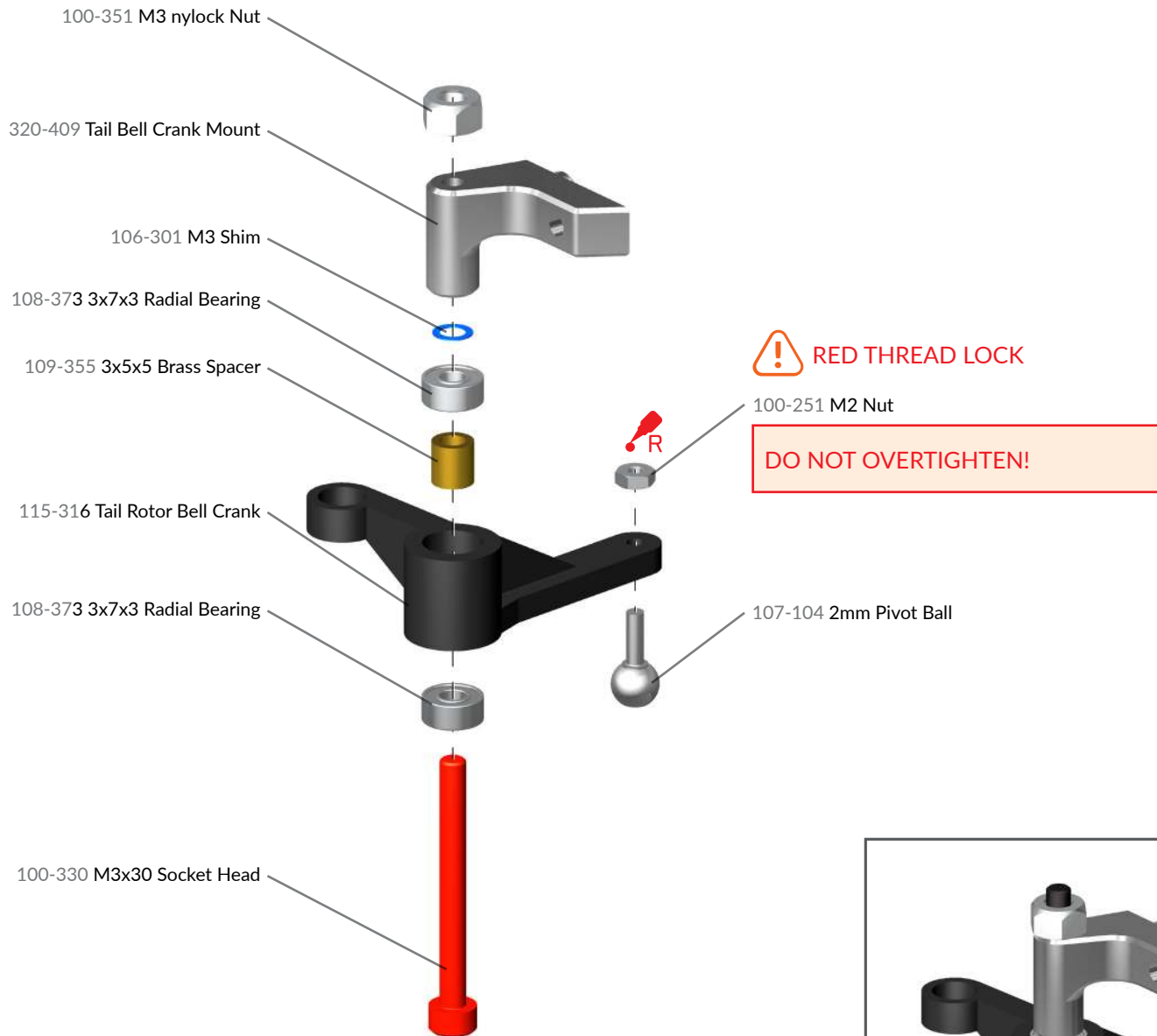
 **RED THREAD LOCK**


SYNERGY 696

V1.1

 Components that are factory assembled provide a reference for model assembly. Disassembly and application of thread lock is required where indicated.

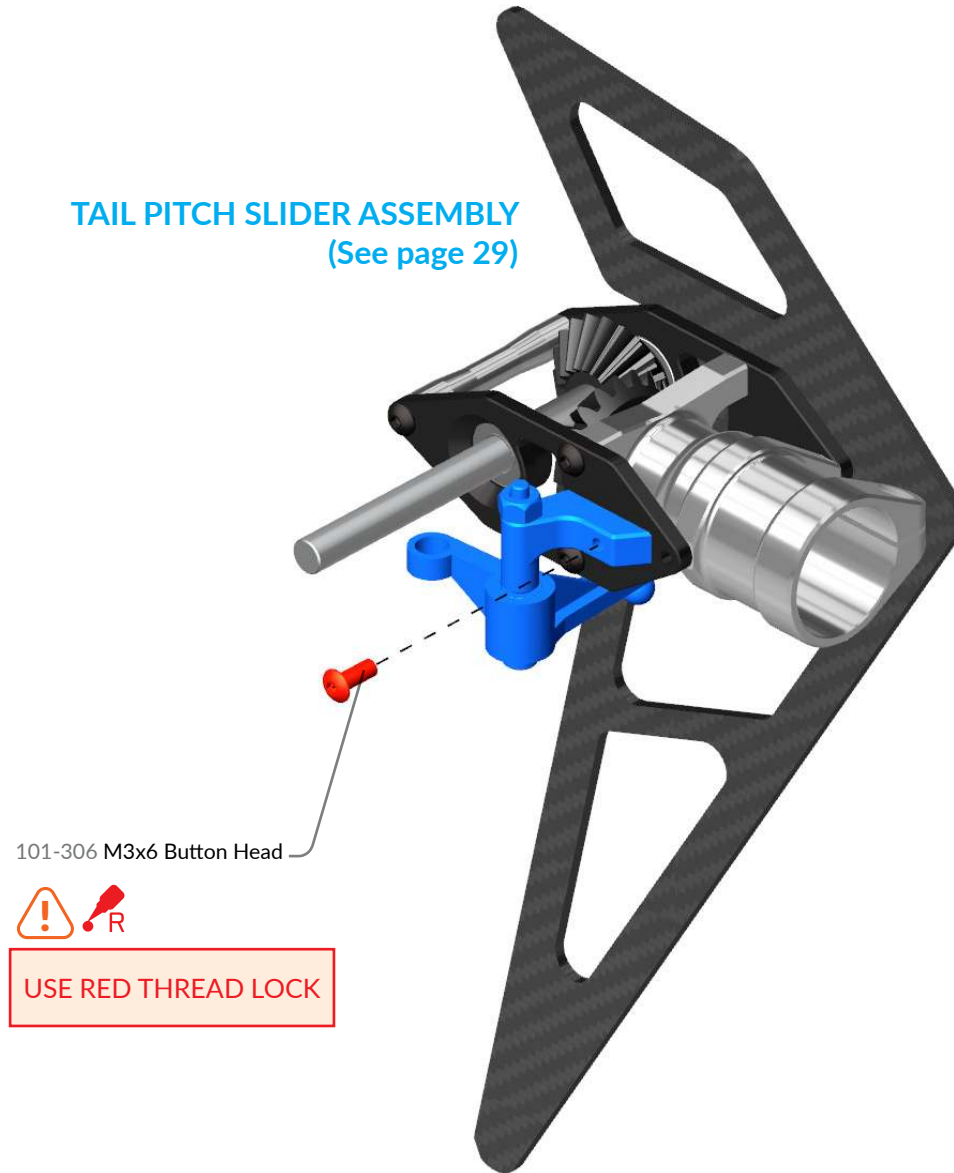
- SPECIFICATIONS
- FRAME COMPONENTS
- TRANSMISSION
- MAIN FRAME
- MAIN DRIVE UNIT
- TORQUE TUBE
- BOOM
- BOOM SUPPORTS
- TAIL ASSEMBLY**
- MOTOR INSTALL
- SERVOS
- TAIL CONTROL ROD
- SWASH PLATE
- CYCLIC LINKAGES
- MAIN HEAD
- PITCH LINKAGES
- BATTERY TRAY
- BLADES
- CANOPY



 Components that are factory assembled provide a reference for model assembly. Disassembly and application of thread lock is required where indicated.

- SPECIFICATIONS
- FRAME COMPONENTS
- TRANSMISSION
- MAIN FRAME
- MAIN DRIVE UNIT
- TORQUE TUBE
- BOOM
- BOOM SUPPORTS
- TAIL ASSEMBLY**
- MOTOR INSTALL
- SERVOS
- TAIL CONTROL ROD
- SWASH PLATE
- CYCLIC LINKAGES
- MAIN HEAD
- PITCH LINKAGES
- BATTERY TRAY
- BLADES
- CANOPY

TAIL PITCH SLIDER ASSEMBLY
(See page 29)




PITCH SLIDER ASSEMBLY
(See page 27)

TAIL HUB ASSEMBLY
(See page 28)



SYNERGY 696

V1.1

 Components that are factory assembled provide a reference for model assembly. Disassembly and application of thread lock is required where indicated.

SPECIFICATIONS

FRAME COMPONENTS

TRANSMISSION

MAIN FRAME

MAIN DRIVE UNIT

TORQUE TUBE

BOOM

BOOM SUPPORTS

TAIL ASSEMBLY

MOTOR INSTALL

SERVOS

TAIL CONTROL ROD

SWASH PLATE

CYCLIC LINKAGES

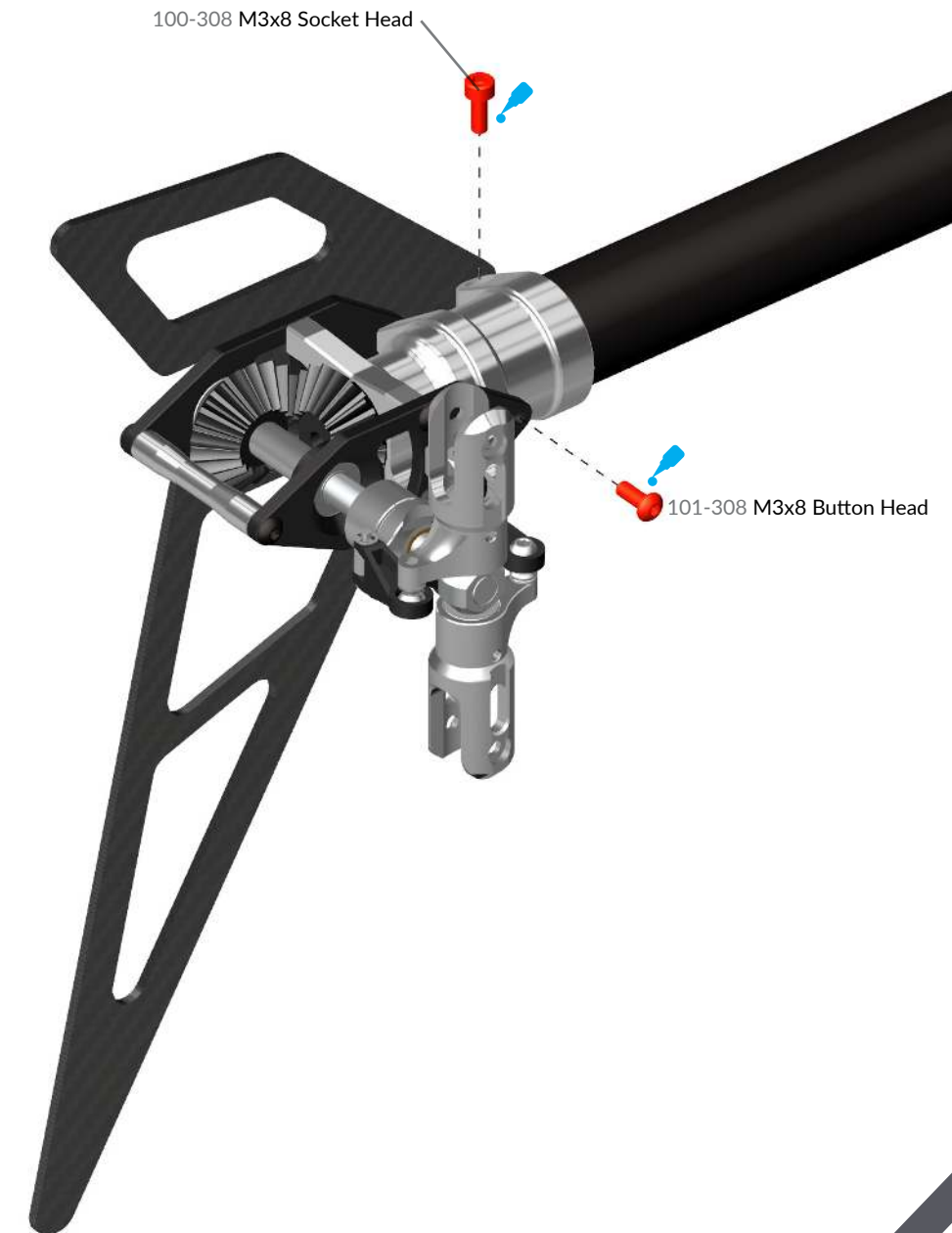
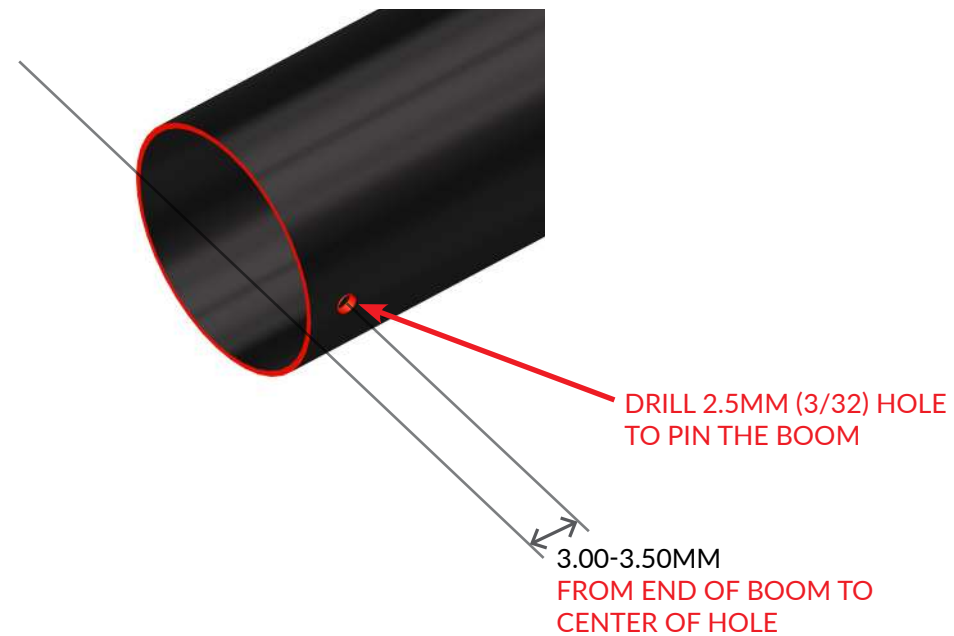
MAIN HEAD

PITCH LINKAGES

BATTERY TRAY


BLADES

CANOPY



SYNERGY 696

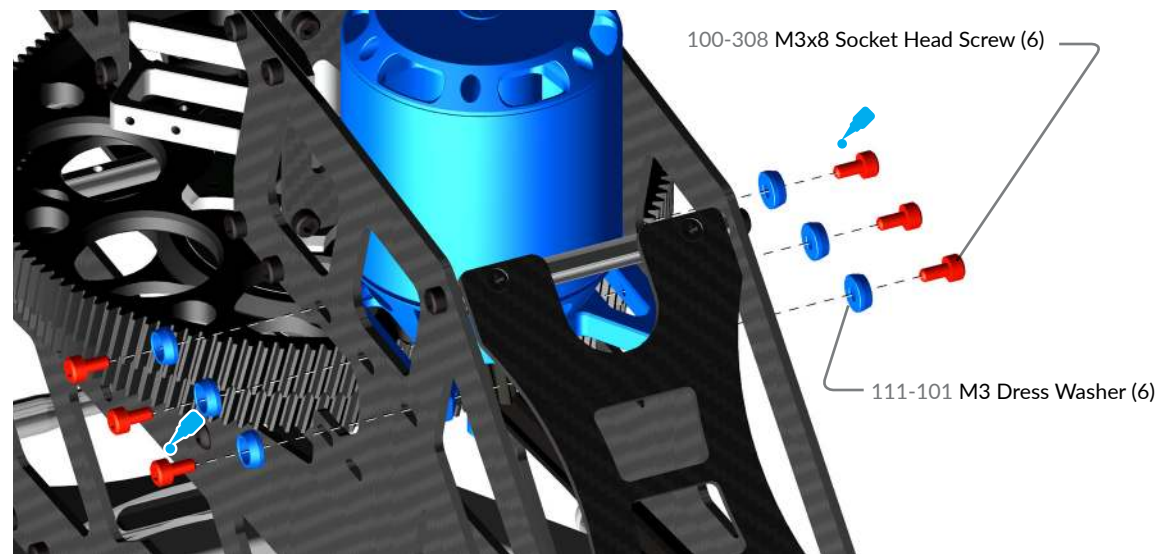
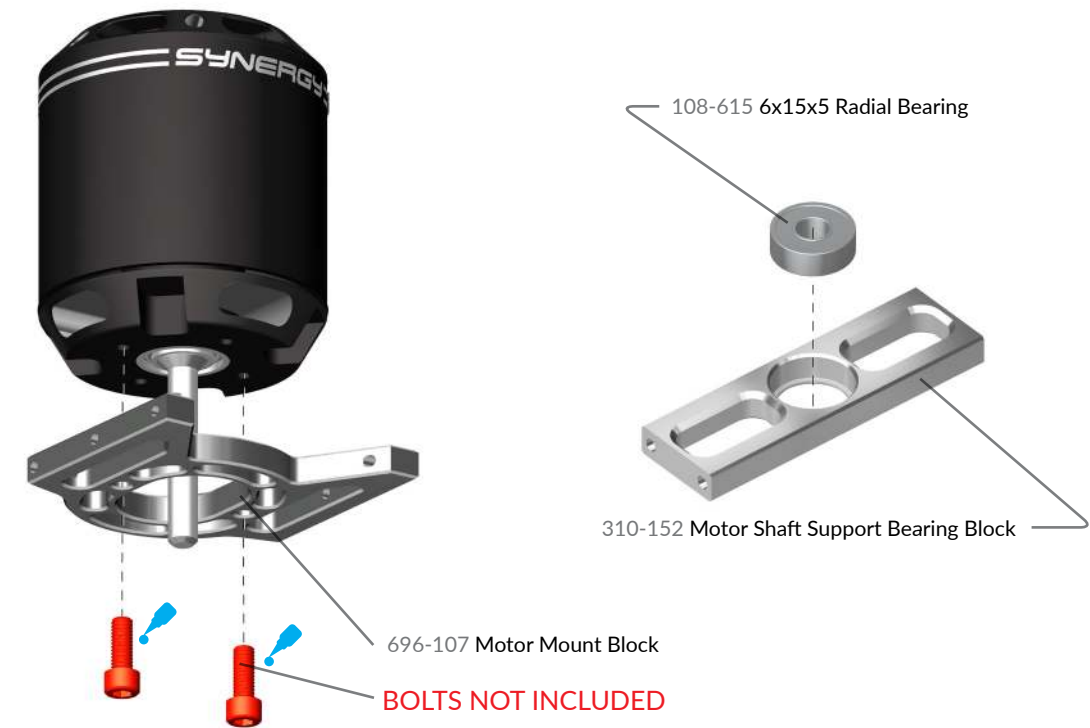
V1.1

 Components that are factory assembled provide a reference for model assembly. Disassembly and application of thread lock is required where indicated.

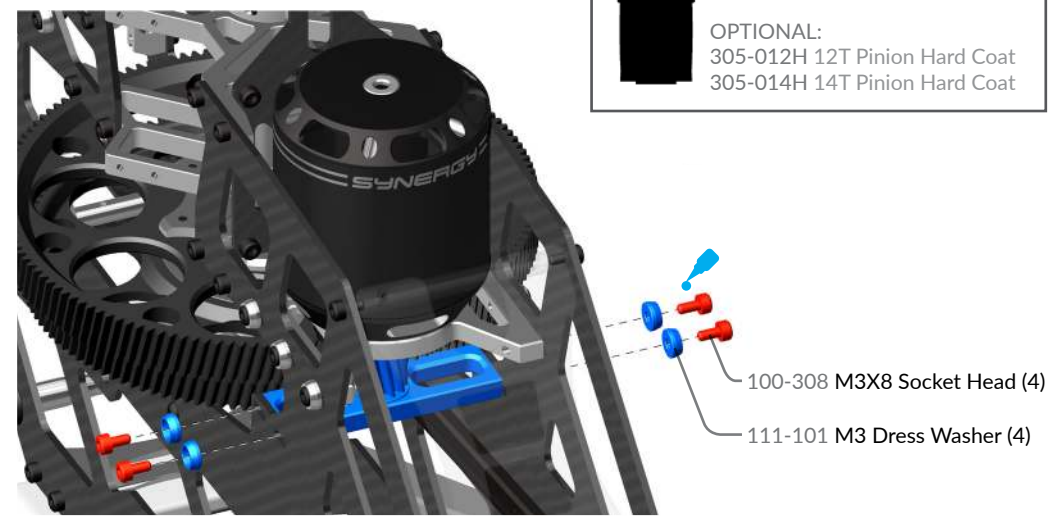
- SPECIFICATIONS
- FRAME COMPONENTS
- TRANSMISSION
- MAIN FRAME
- MAIN DRIVE UNIT
- TORQUE TUBE
- BOOM
- BOOM SUPPORTS
- TAIL ASSEMBLY
- MOTOR INSTALL**
- SERVOS
- TAIL CONTROL ROD
- SWASH PLATE
- CYCLIC LINKAGES
- MAIN HEAD
- PITCH LINKAGES
- BATTERY TRAY
- BLADES
- CANOPY



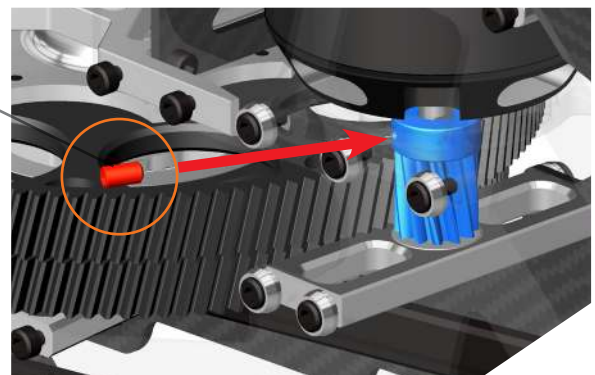
**RECOMMENDED:
700 CLASS MOTOR 4525 OR LARGER
MOTOR NOT INCLUDED**




MOTOR MOUNT



 **RED THREAD LOCK**
100-466 M4x6 Set Screw



**AFTER SECURING THE MOTOR PINION, ADJUST PINION TO MAIN GEAR MESH.
ALLOW SLIGHT BACKLASH TO AVOID PREMATURE WEAR.**

 Components that are factory assembled provide a reference for model assembly. Disassembly and application of thread lock is required where indicated.

SPECIFICATIONS

FRAME COMPONENTS

TRANSMISSION

MAIN FRAME

MAIN DRIVE UNIT

TORQUE TUBE

BOOM

BOOM SUPPORTS

TAIL ASSEMBLY

MOTOR INSTALL

SERVOS

TAIL CONTROL ROD

SWASH PLATE

CYCLIC LINKAGES

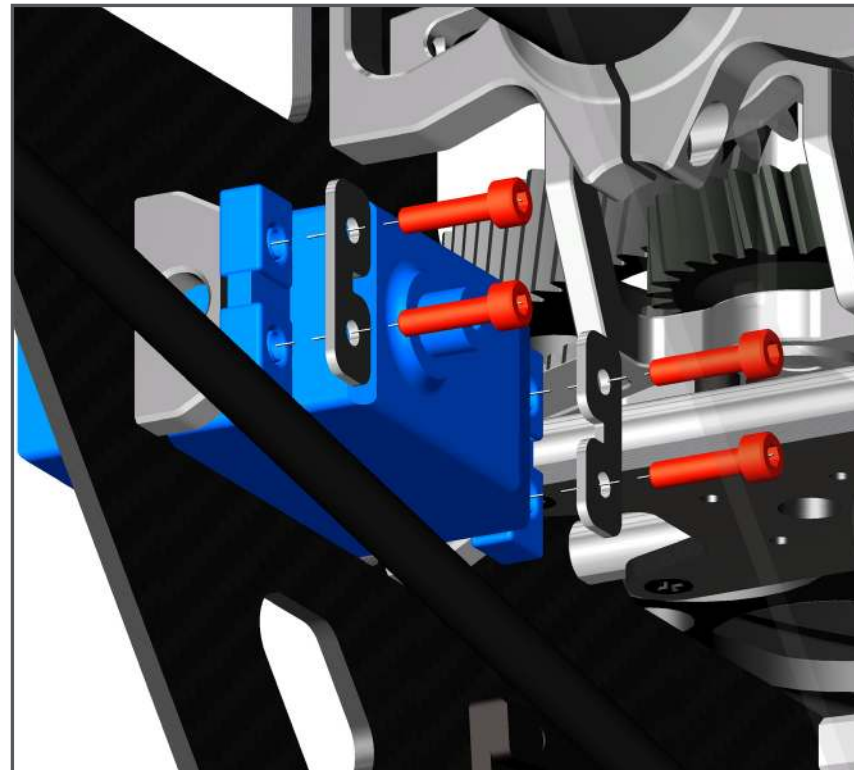
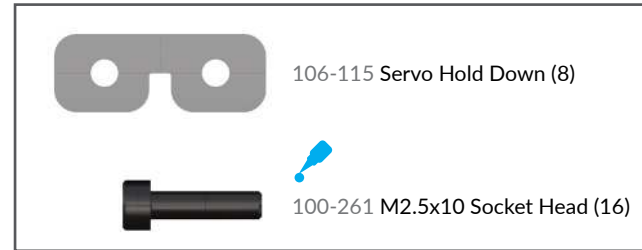
MAIN HEAD

PITCH LINKAGES

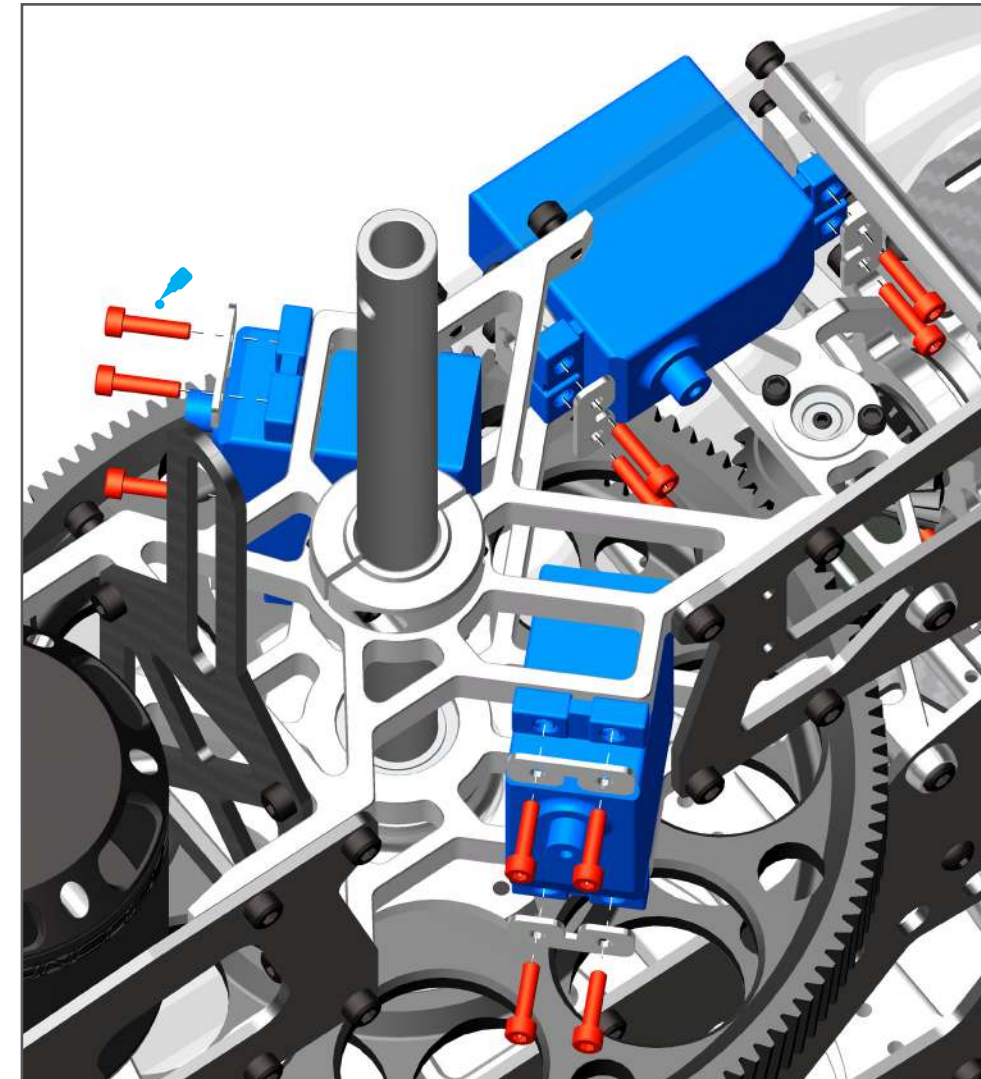
BATTERY TRAY

BLADES


CANOPY



TAIL SERVO NOT INCLUDED
SERVO GROMMETS ARE OPTIONAL



CYCLIC SERVOS ARE NOT INCLUDED
SERVO GROMMETS ARE OPTIONAL

 Components that are factory assembled provide a reference for model assembly. Disassembly and application of thread lock is required where indicated.

SPECIFICATIONS

FRAME COMPONENTS

TRANSMISSION

MAIN FRAME

MAIN DRIVE UNIT

TORQUE TUBE

BOOM

BOOM SUPPORTS

TAIL ASSEMBLY

MOTOR INSTALL

SERVOS

TAIL CONTROL ROD

SWASH PLATE

CYCLIC LINKAGES

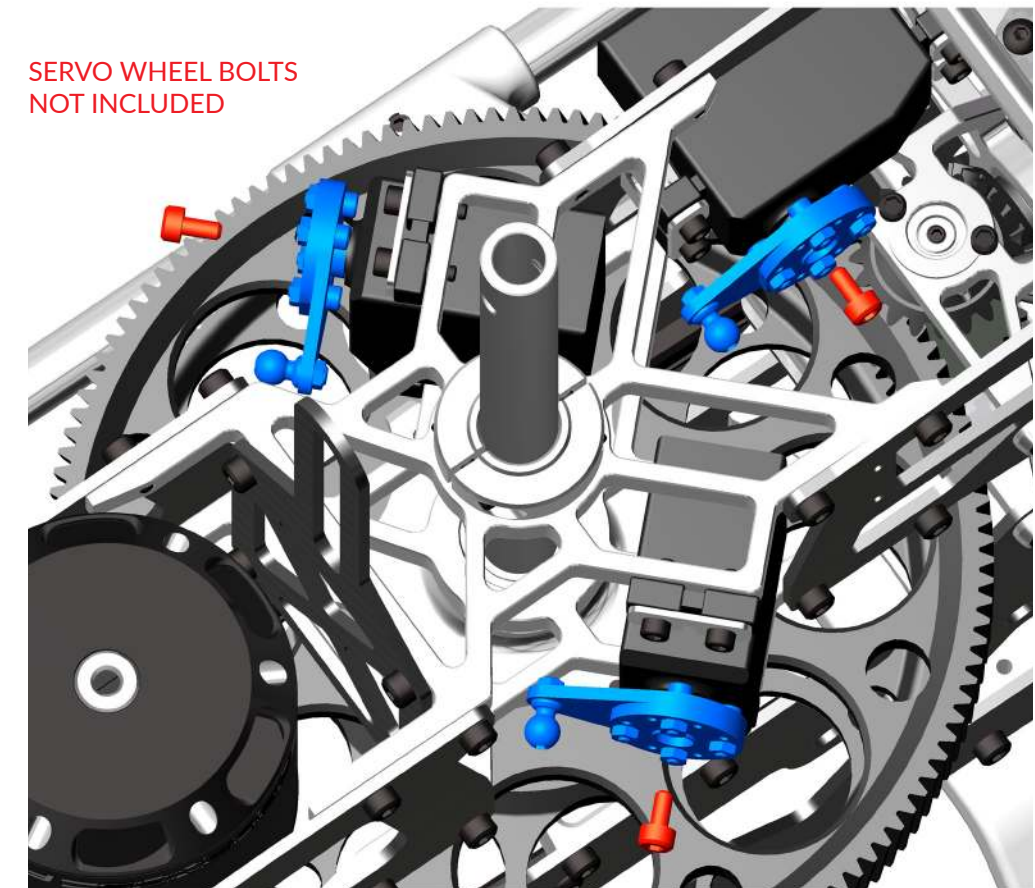
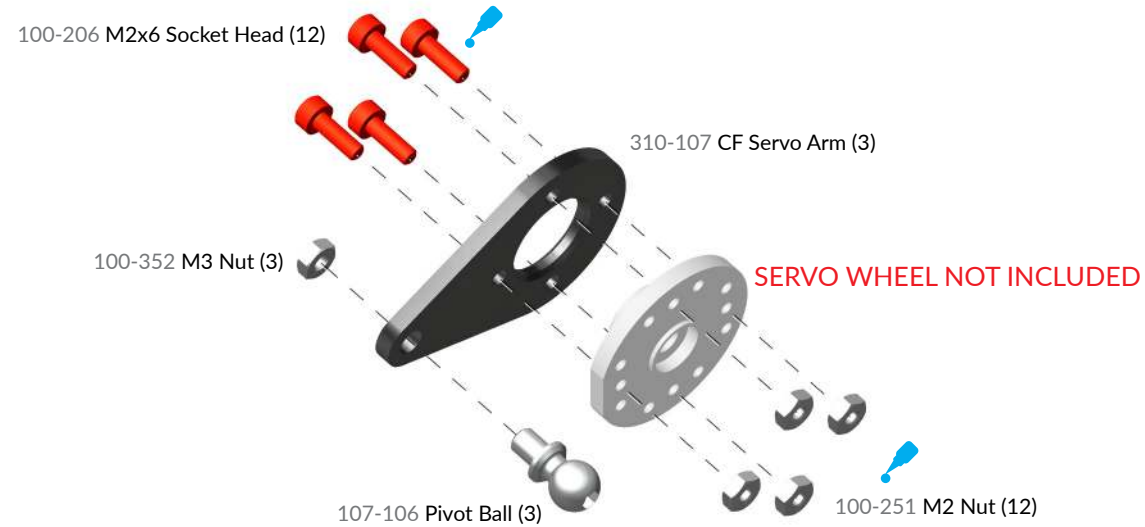
MAIN HEAD


PITCH LINKAGES

BATTERY TRAY

BLADES

CANOPY



 Components that are factory assembled provide a reference for model assembly. Disassembly and application of thread lock is required where indicated.

SPECIFICATIONS

FRAME COMPONENTS

TRANSMISSION

MAIN FRAME

MAIN DRIVE UNIT

TORQUE TUBE

BOOM

BOOM SUPPORTS

TAIL ASSEMBLY

MOTOR INSTALL

SERVOS

TAIL CONTROL ROD

SWASH PLATE

CYCLIC LINKAGES

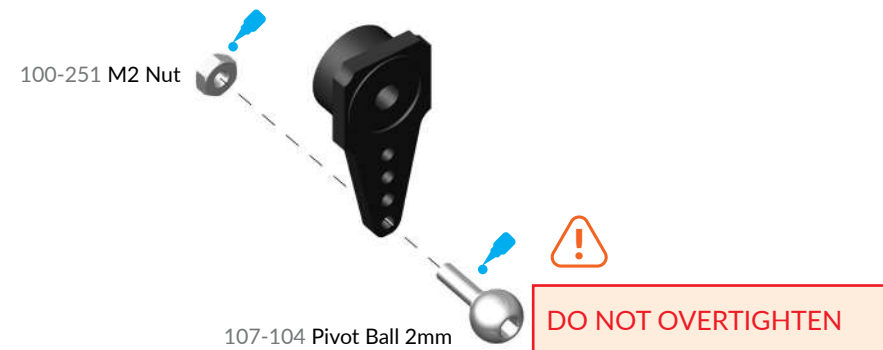
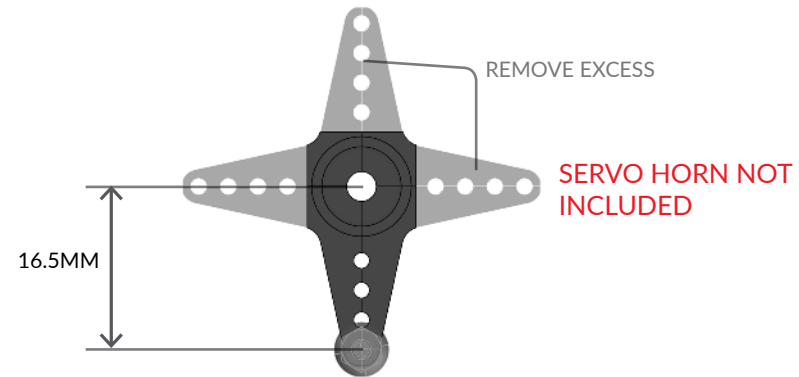
MAIN HEAD

PITCH LINKAGES

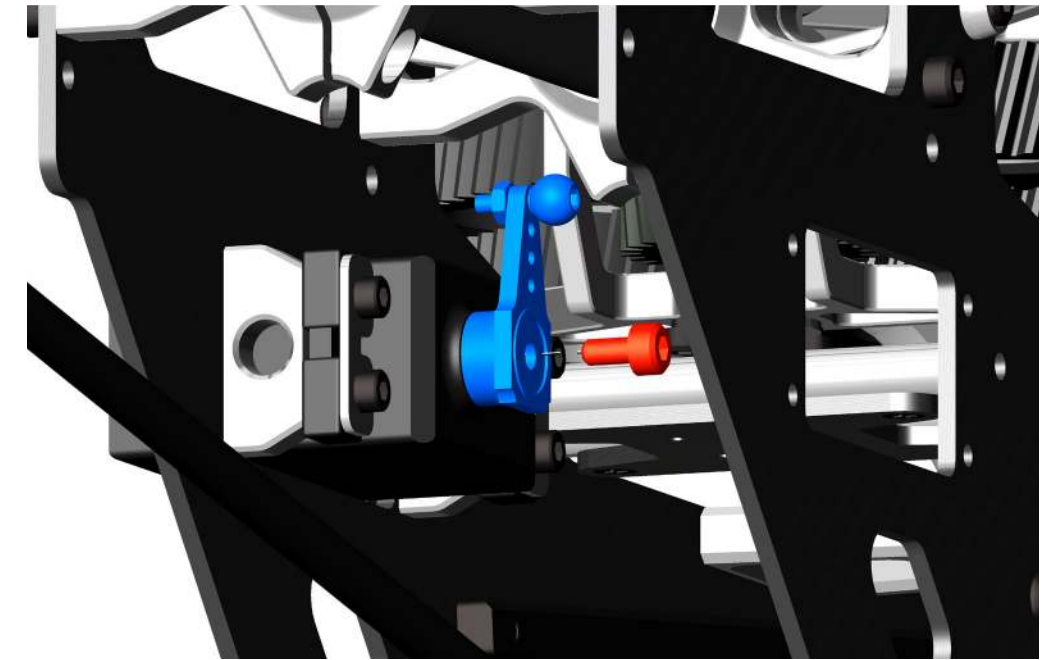
BATTERY TRAY


BLADES

CANOPY

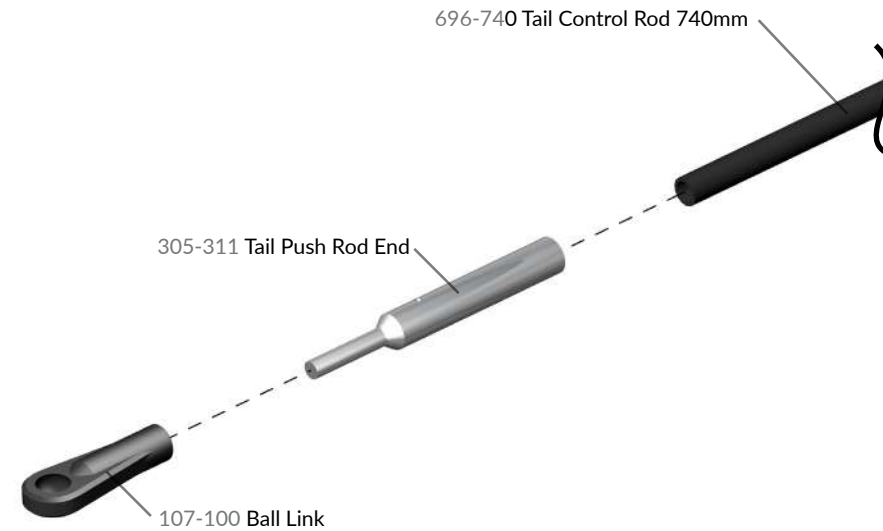


SERVO HORN BOLT NOT INCLUDED



 Components that are factory assembled provide a reference for model assembly. Disassembly and application of thread lock is required where indicated.

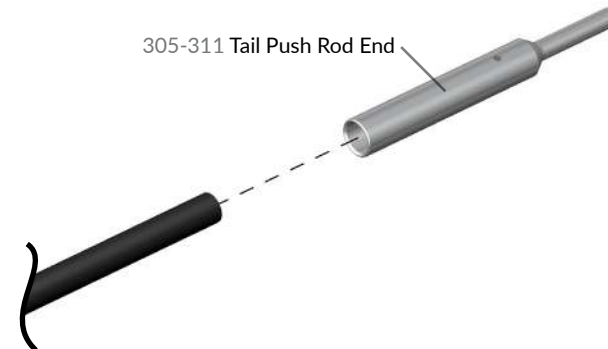
- SPECIFICATIONS
- FRAME COMPONENTS
- TRANSMISSION
- MAIN FRAME
- MAIN DRIVE UNIT
- TORQUE TUBE
- BOOM
- BOOM SUPPORTS
- TAIL ASSEMBLY
- MOTOR INSTALL
- SERVOS
- TAIL CONTROL ROD**
- SWASH PLATE
- CYCLIC LINKAGES
- MAIN HEAD
- PITCH LINKAGES
- BATTERY TRAY
- BLADES
- CANOPY



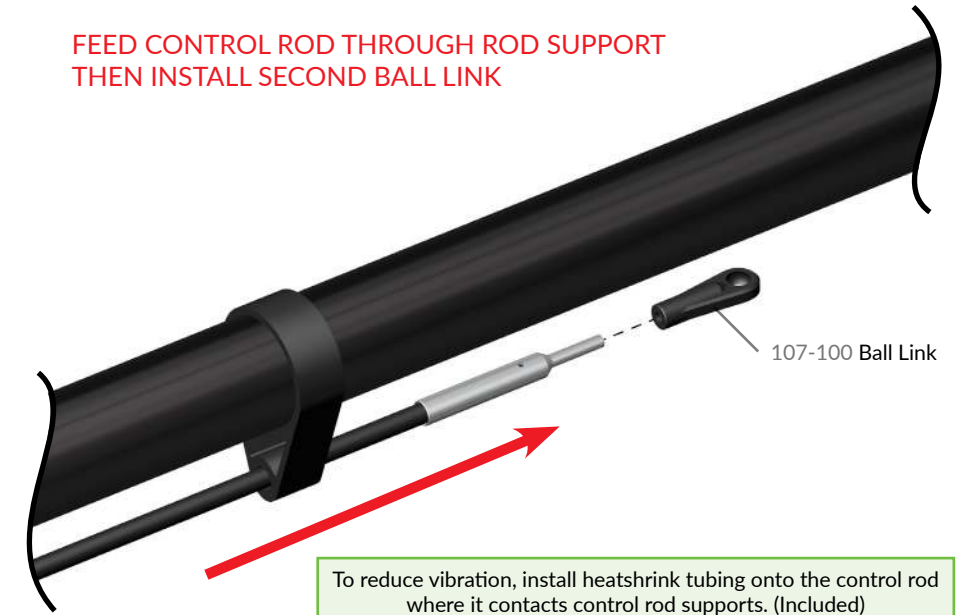
SAND CARBON WITH 400 GRIT SANDPAPER AND SECURE ENDS WITH 24-HOUR EPOXY OR JB WELD




WAIT UNTIL NEXT STEP TO INSTALL



FEED CONTROL ROD THROUGH ROD SUPPORT THEN INSTALL SECOND BALL LINK



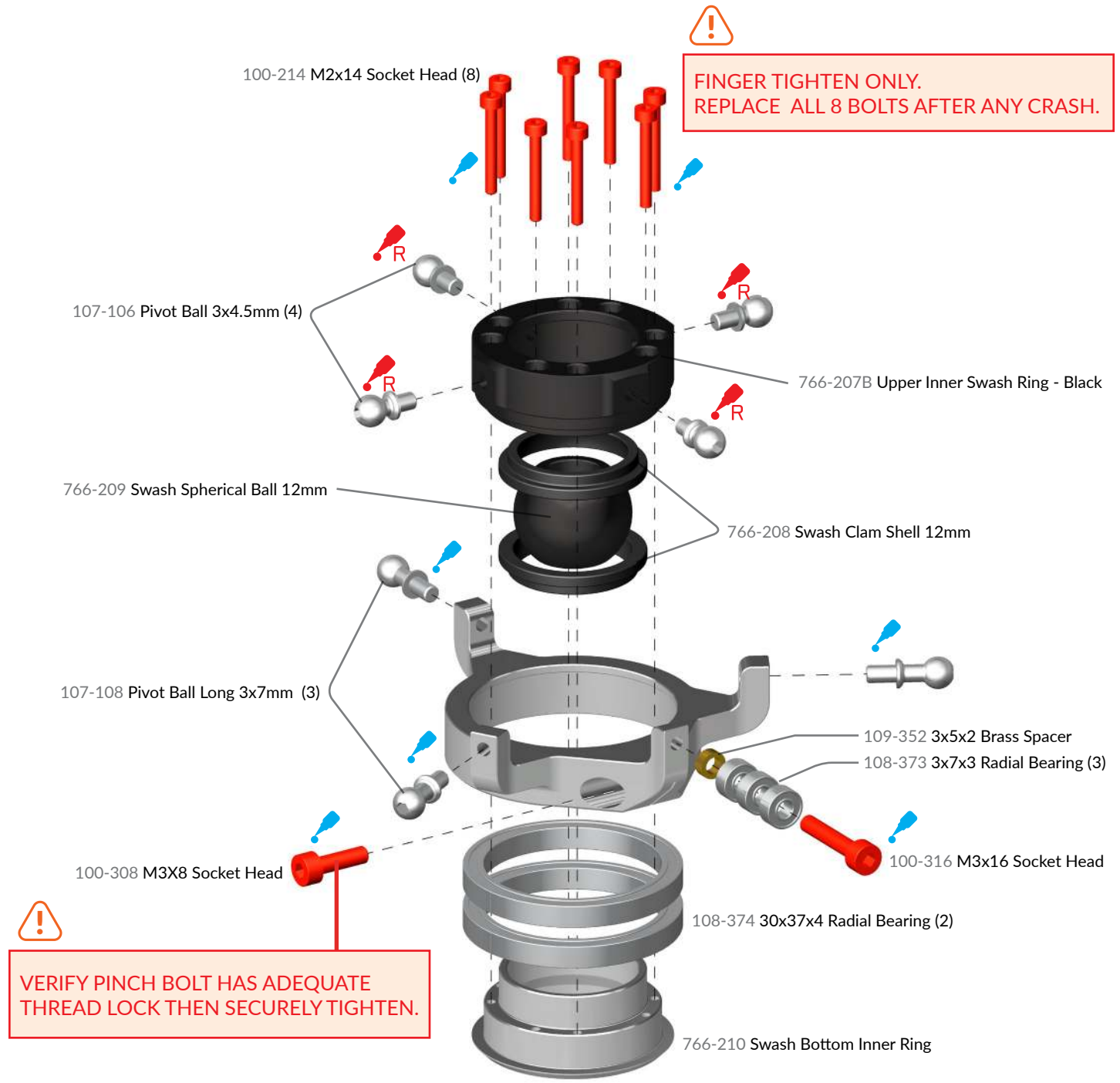
 Components that are factory assembled provide a reference for model assembly. Disassembly and application of thread lock is required where indicated.


- SPECIFICATIONS
- FRAME COMPONENTS
- TRANSMISSION
- MAIN FRAME
- MAIN DRIVE UNIT
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- BOOM
- BOOM SUPPORTS
- TAIL ASSEMBLY
- MOTOR INSTALL
- SERVOS
- TAIL CONTROL ROD
- SWASH PLATE
- CYCLIC LINKAGES
- MAIN HEAD
- PITCH LINKAGES
- BATTERY TRAY
- BLADES
- CANOPY




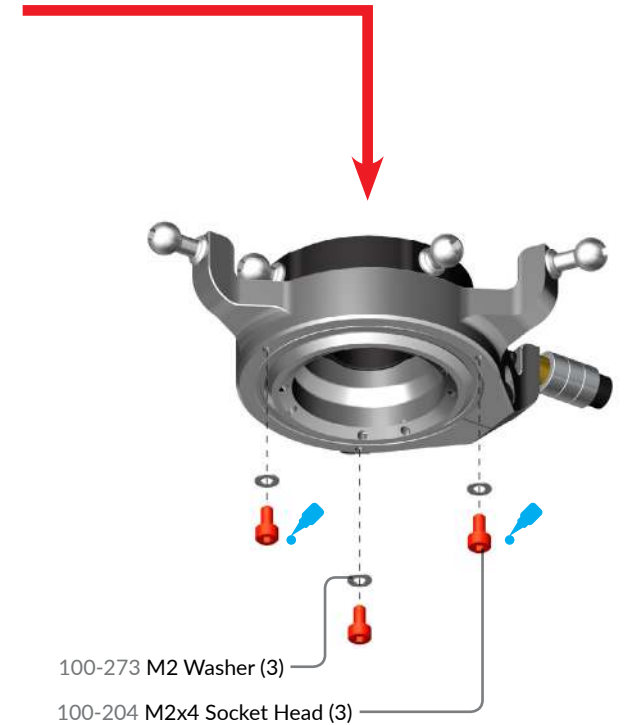
COMPLETE SWASH ASSEMBLY:

200-402 Swash Plate Assembly 12mm




 **FINGER TIGHTEN ONLY. REPLACE ALL 8 BOLTS AFTER ANY CRASH.**

 **VERIFY PINCH BOLT HAS ADEQUATE THREAD LOCK THEN SECURELY TIGHTEN.**



SYNERGY 696

V1.1

 Components that are factory assembled provide a reference for model assembly. Disassembly and application of thread lock is required where indicated.

SPECIFICATIONS

FRAME COMPONENTS

TRANSMISSION

MAIN FRAME

MAIN DRIVE UNIT

TORQUE TUBE

BOOM

BOOM SUPPORTS

TAIL ASSEMBLY

MOTOR INSTALL

SERVOS

TAIL CONTROL ROD

SWASH PLATE

CYCLIC LINKAGES

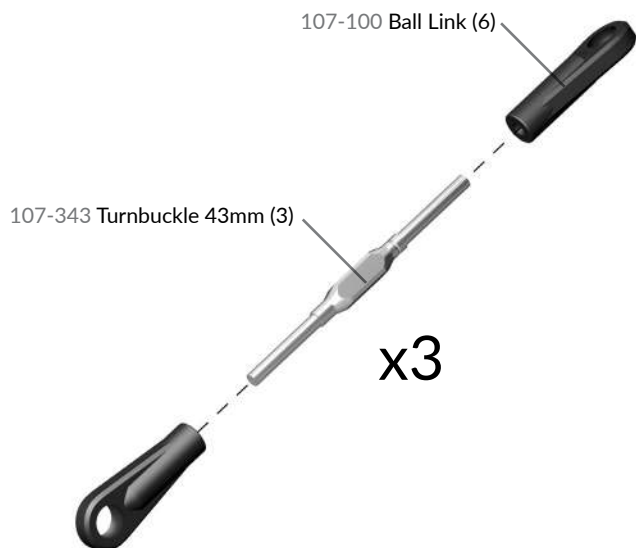
MAIN HEAD

PITCH LINKAGES

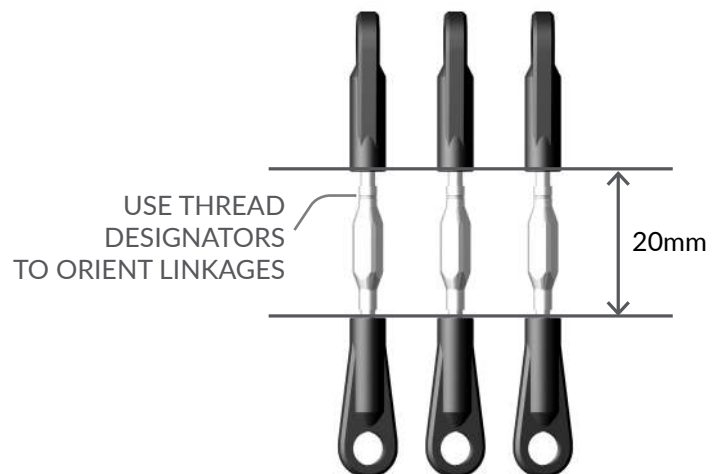
BATTERY TRAY

BLADES

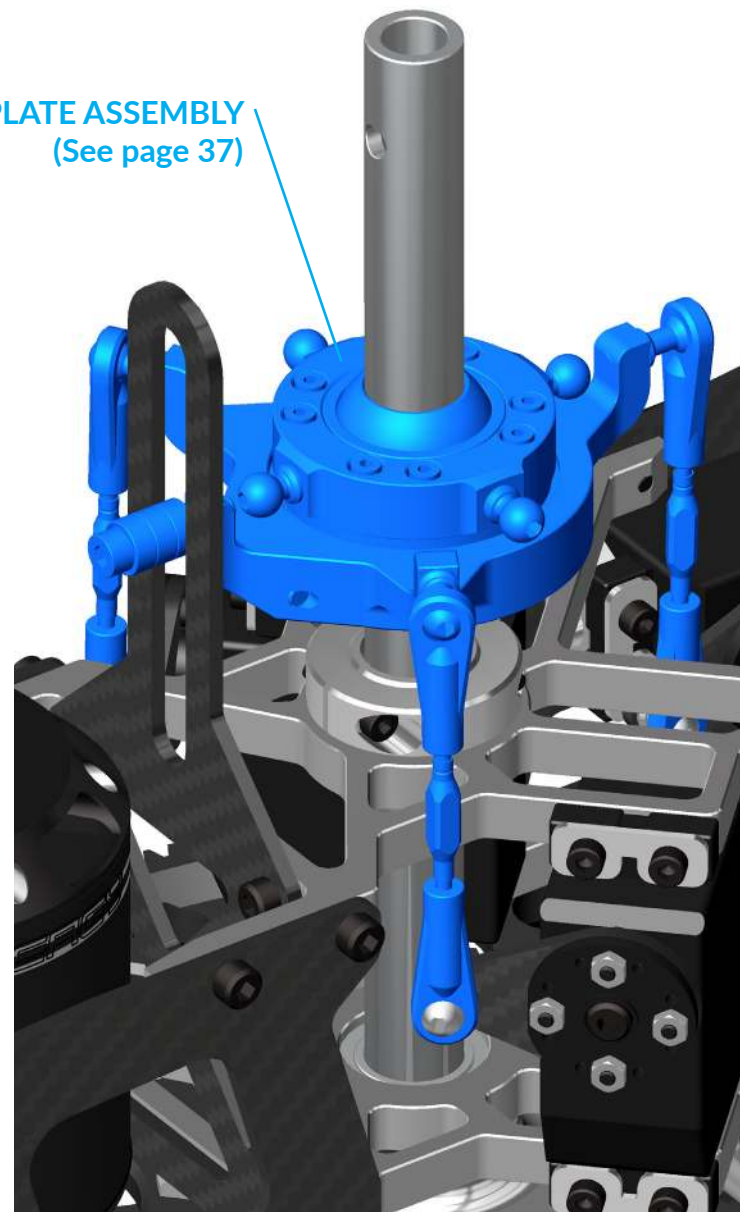
CANOPY




IF LINKS REQUIRE SIZING, USE PART# 700-001A



SWASH PLATE ASSEMBLY
(See page 37)



 Components that are factory assembled provide a reference for model assembly. Disassembly and application of thread lock is required where indicated.

- SPECIFICATIONS
- FRAME COMPONENTS
- TRANSMISSION
- MAIN FRAME
- MAIN DRIVE UNIT
- TORQUE TUBE
- BOOM
- BOOM SUPPORTS
- TAIL ASSEMBLY
- MOTOR INSTALL
- SERVOS
- TAIL CONTROL ROD
- SWASH PLATE
- CYCLIC LINKAGES
- MAIN HEAD
- PITCH LINKAGES
- BATTERY TRAY
- BLADES
- CANOPY



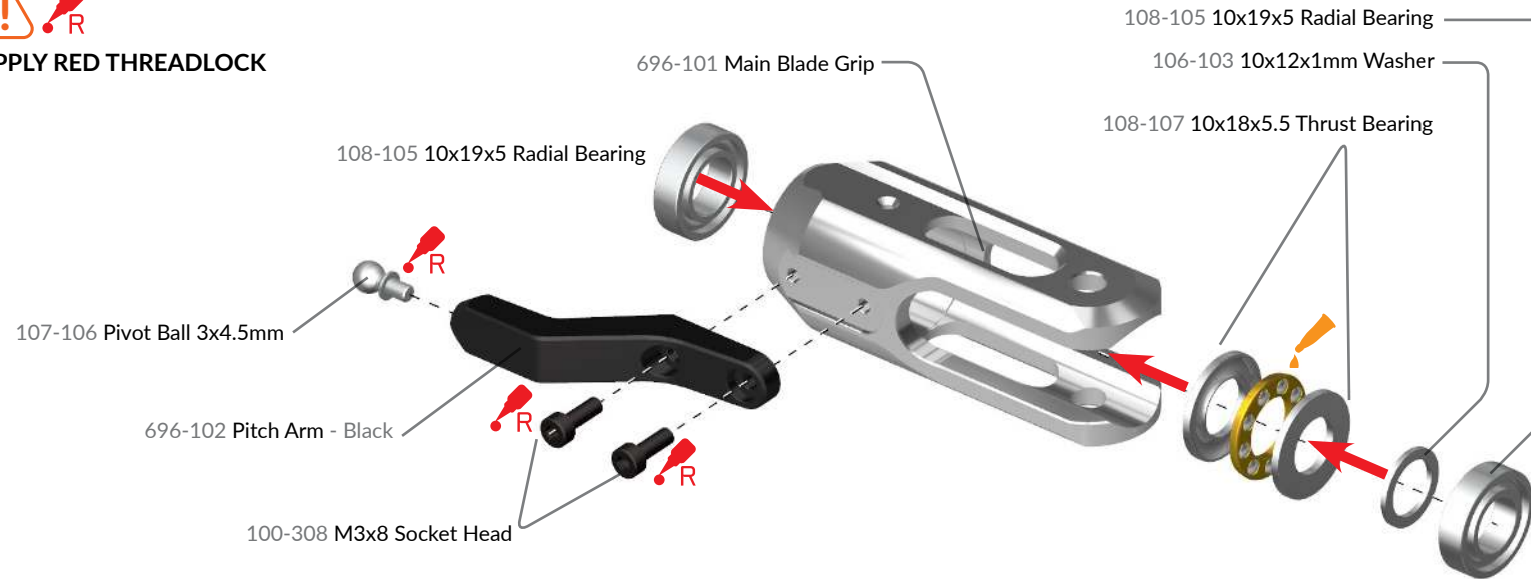
MAIN GRIPS AND HEAD AXLE




GREASE ALL COMPONENTS WHERE INDICATED





APPLY RED THREADLOCK



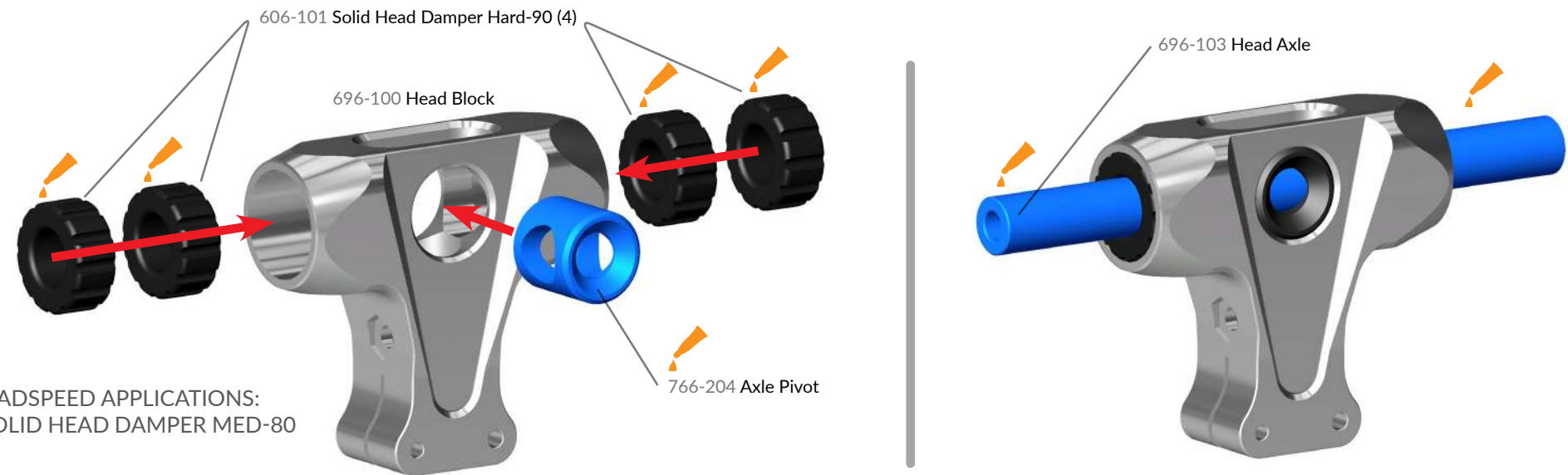
 **THRUST BEARING TIP**

Use the head axle to help determine inside and outside halves:

<p>Loose Fit (Large Inside Diameter)</p> 	<p>Tight Fit (Small Inside Diameter)</p> 
INSIDE	OUTSIDE



GREASE ALL DAMPERS, HEAD AXLE, AND AXLE PIVOT



TIP: FOR LOW HEADSPEED APPLICATIONS:
USE (4) 606-102 SOLID HEAD DAMPER MED-80

⚠ Components that are factory assembled provide a reference for model assembly. Disassembly and application of thread lock is required where indicated.

SPECIFICATIONS

FRAME COMPONENTS

TRANSMISSION

MAIN FRAME

MAIN DRIVE UNIT

TORQUE TUBE

BOOM

BOOM SUPPORTS

TAIL ASSEMBLY

MOTOR INSTALL

SERVOS

TAIL CONTROL ROD

SWASH PLATE

CYCLIC LINKAGES

MAIN HEAD

PITCH LINKAGES

BATTERY TRAY

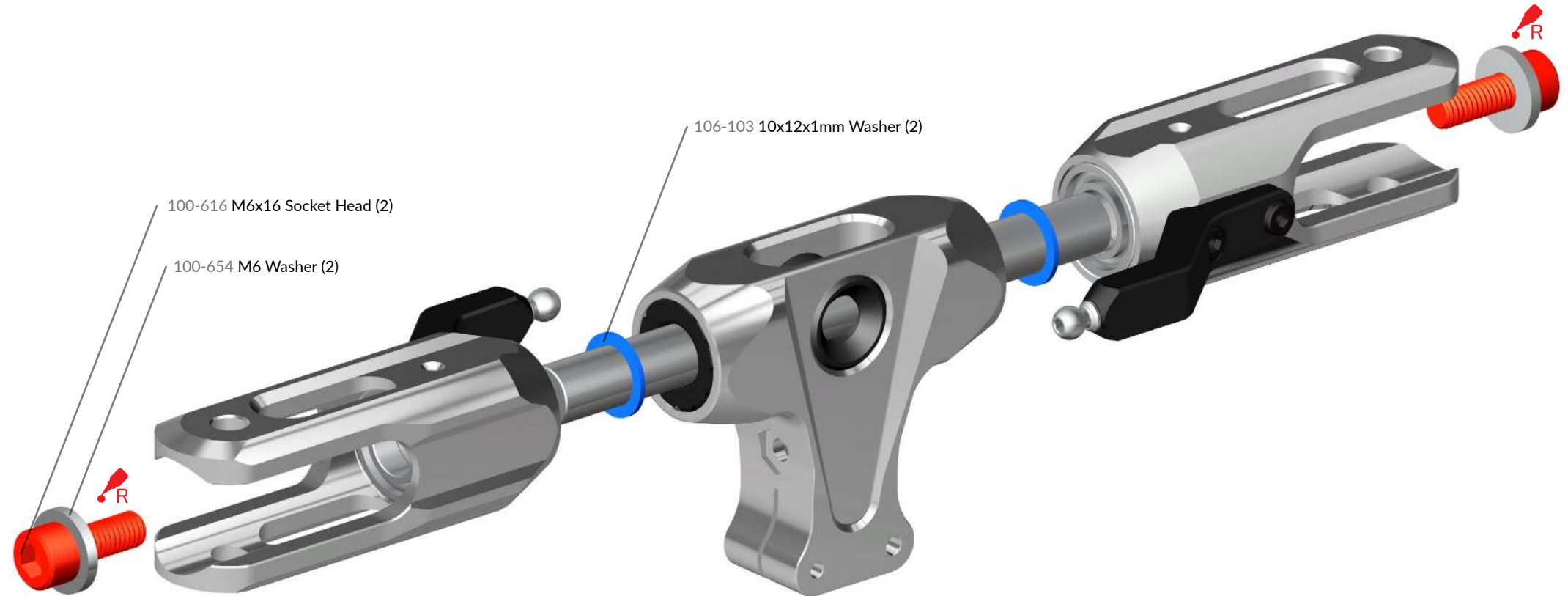
BLADES


CANOPY



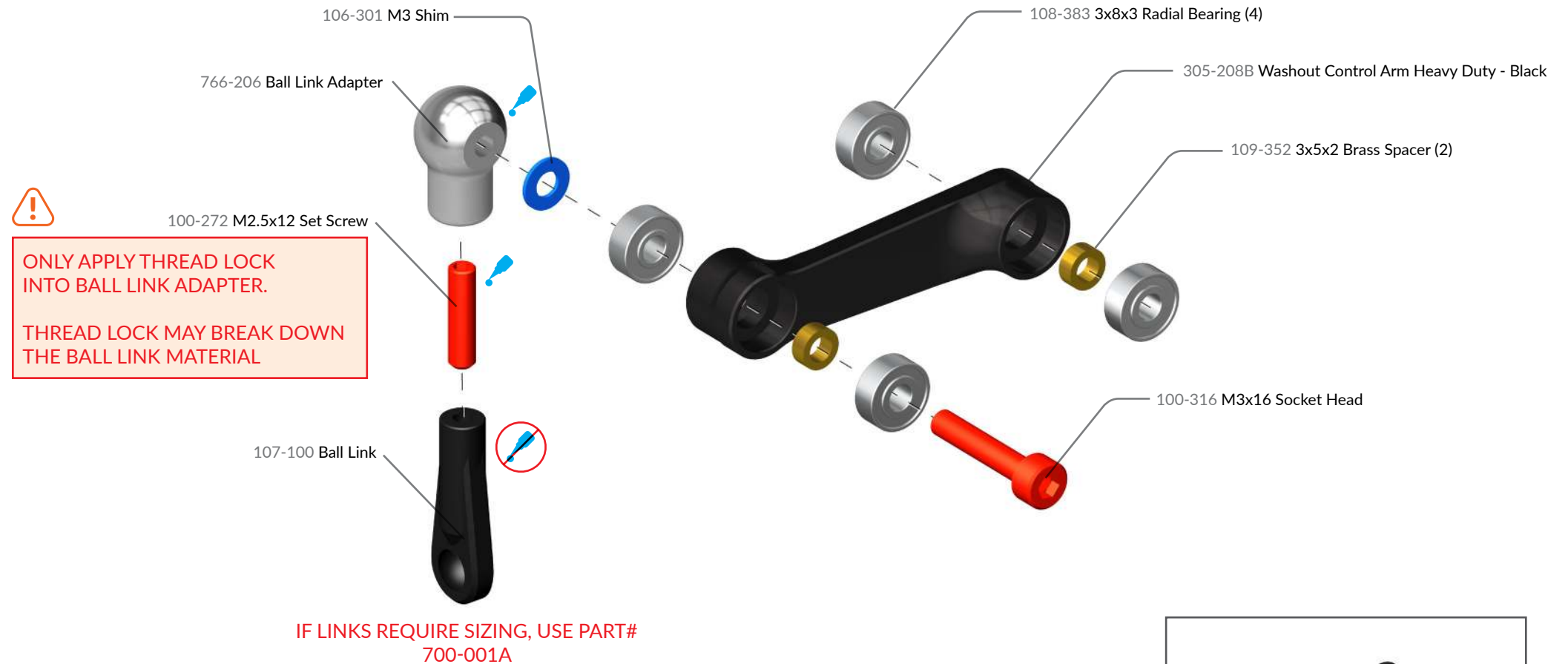
APPLY THREAD LOCK


SECURE BOLTS WITH THREAD LOCK AND TIGHTEN



 Components that are factory assembled provide a reference for model assembly. Disassembly and application of thread lock is required where indicated.

- SPECIFICATIONS
- FRAME COMPONENTS
- TRANSMISSION
- MAIN FRAME
- MAIN DRIVE UNIT
- TORQUE TUBE
- BOOM
- BOOM SUPPORTS
- TAIL ASSEMBLY
- MOTOR INSTALL
- SERVOS
- TAIL CONTROL ROD
- SWASH PLATE
- CYCLIC LINKAGES
- MAIN HEAD
- PITCH LINKAGES
- BATTERY TRAY
- BLADES
- CANOPY



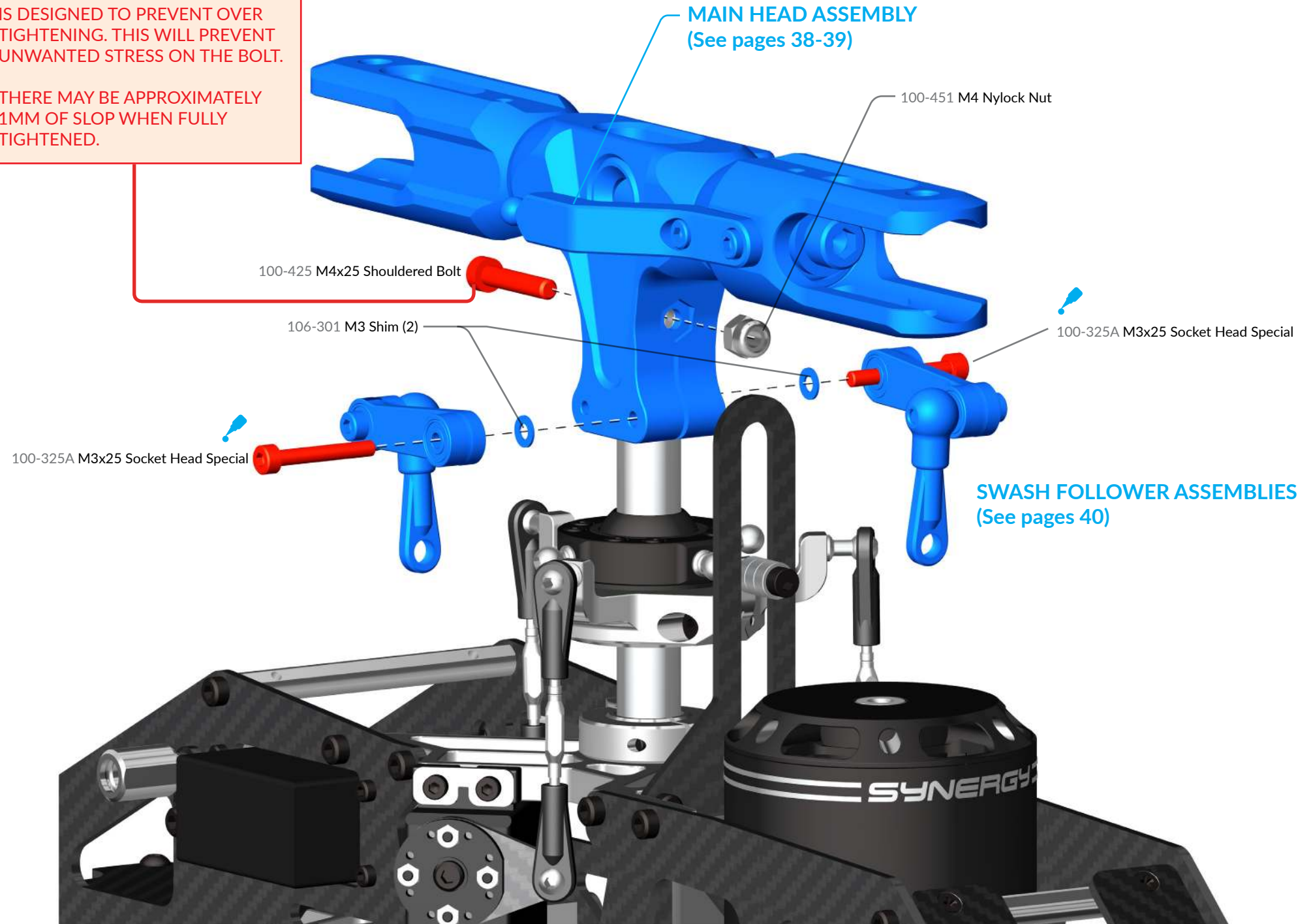
 Components that are factory assembled provide a reference for model assembly. Disassembly and application of thread lock is required where indicated.

- SPECIFICATIONS
- FRAME COMPONENTS
- TRANSMISSION
- MAIN FRAME
- MAIN DRIVE UNIT
- TORQUE TUBE
- BOOM
- BOOM SUPPORTS
- TAIL ASSEMBLY
- MOTOR INSTALL
- SERVOS
- TAIL CONTROL ROD
- SWASH PLATE
- CYCLIC LINKAGES
- MAIN HEAD**
- PITCH LINKAGES
- BATTERY TRAY
- BLADES
- CANOPY




JESUS BOLT SHOULDER LENGTH IS DESIGNED TO PREVENT OVER TIGHTENING. THIS WILL PREVENT UNWANTED STRESS ON THE BOLT.

THERE MAY BE APPROXIMATELY 1MM OF SLOP WHEN FULLY TIGHTENED.



SYNERGY 696

V1.1

 Components that are factory assembled provide a reference for model assembly. Disassembly and application of thread lock is required where indicated.

SPECIFICATIONS

FRAME COMPONENTS

TRANSMISSION

MAIN FRAME

MAIN DRIVE UNIT

TORQUE TUBE

BOOM

BOOM SUPPORTS

TAIL ASSEMBLY

MOTOR INSTALL

SERVOS

TAIL CONTROL ROD

SWASH PLATE

CYCLIC LINKAGES

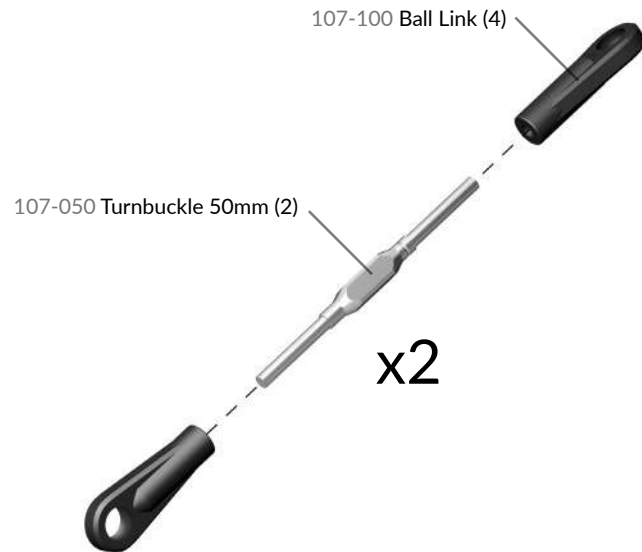
MAIN HEAD

PITCH LINKAGES

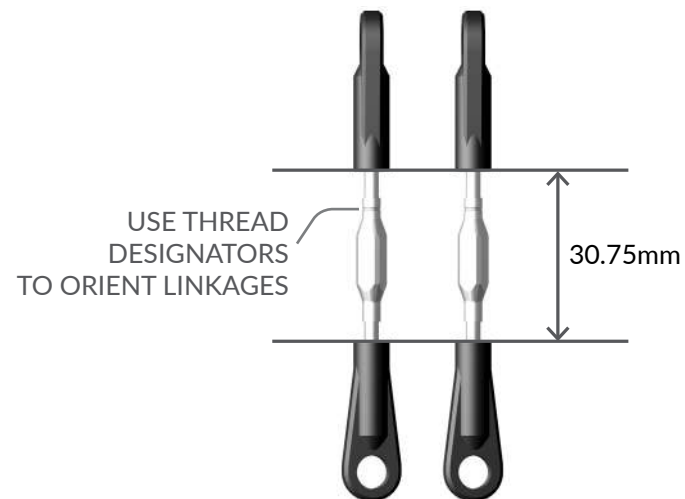
BATTERY TRAY

BLADES

CANOPY



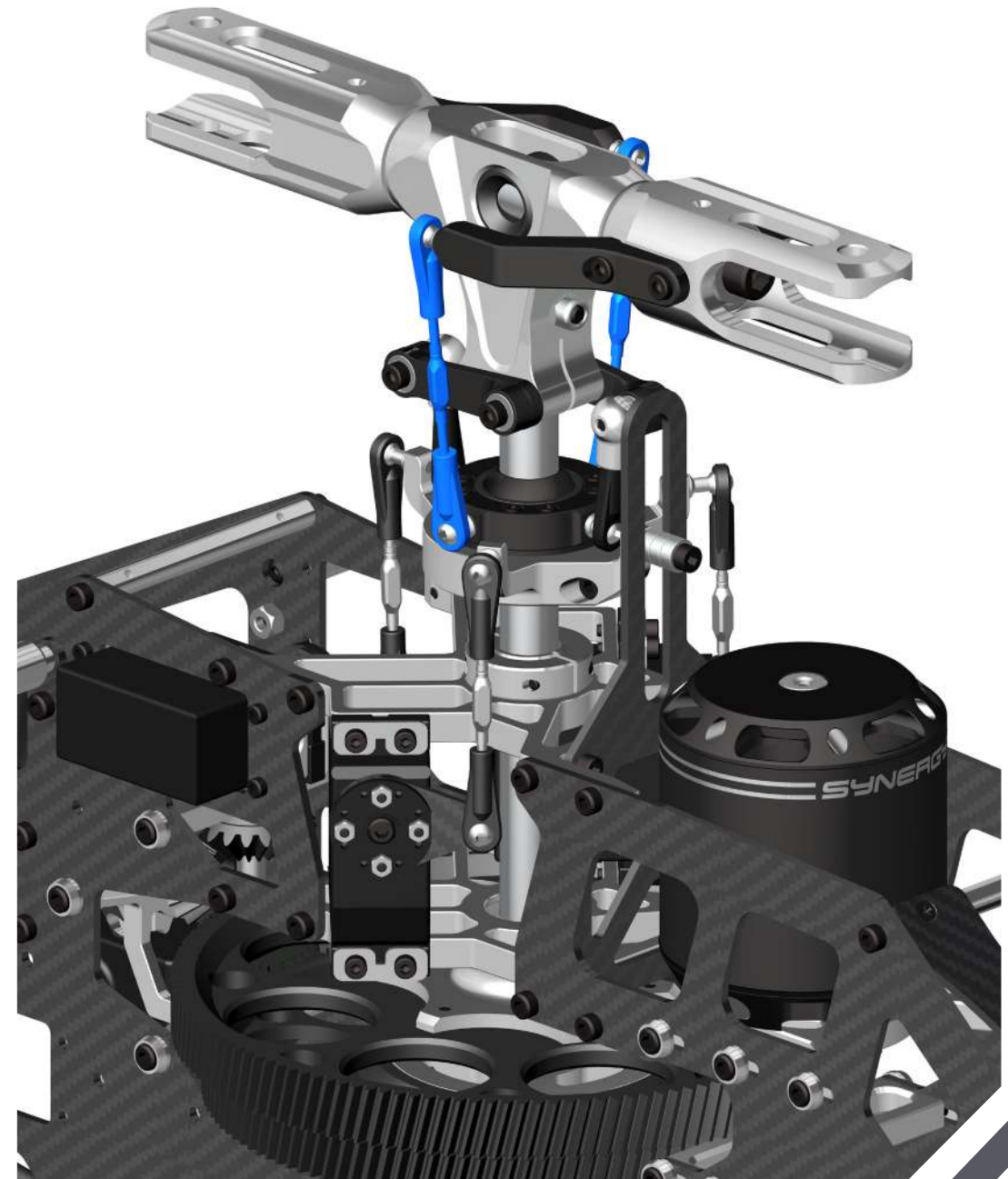
IF LINKS REQUIRE SIZING,
USE PART# 700-001A



EQUAL MEASUREMENT
ON BOTH LINKAGES.


LENGTH MAY VARY
DEPENDING ON SWASH
POSITION.

USE AS A GENERAL
STARTING POINT.



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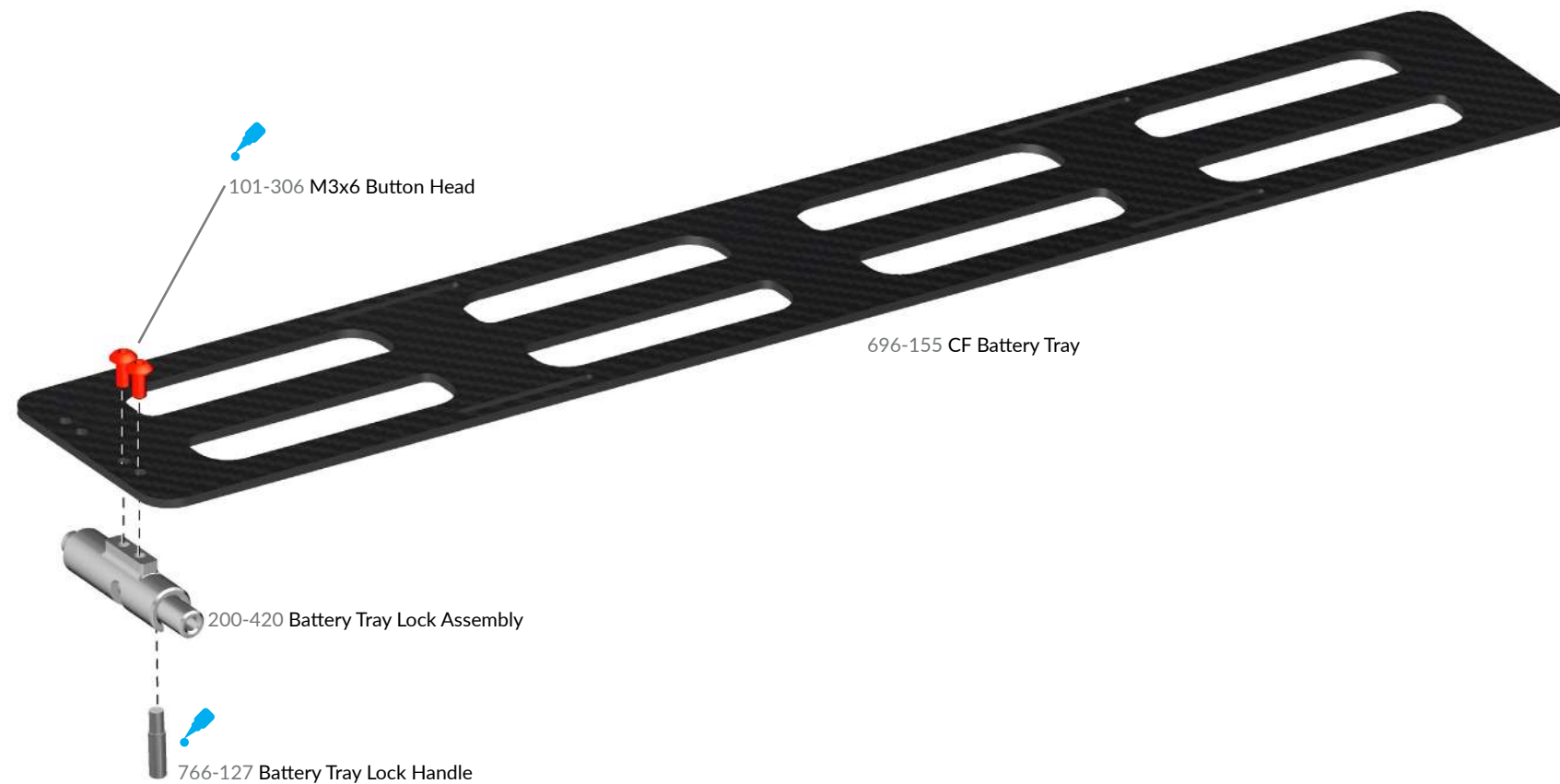
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APPLY THREAD LOCK TO BATTERY LOCK HANDLE!!



SYNERGY 696

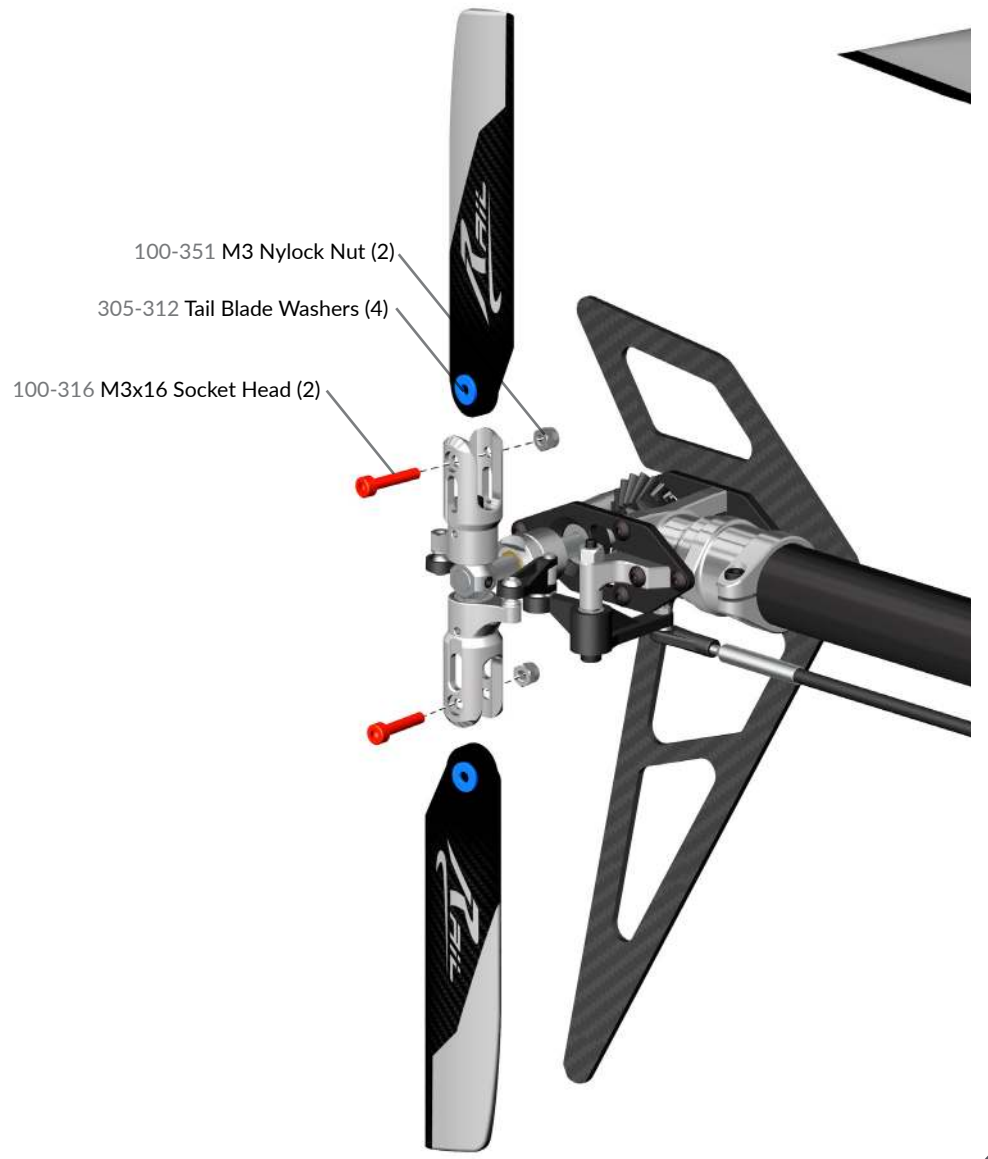
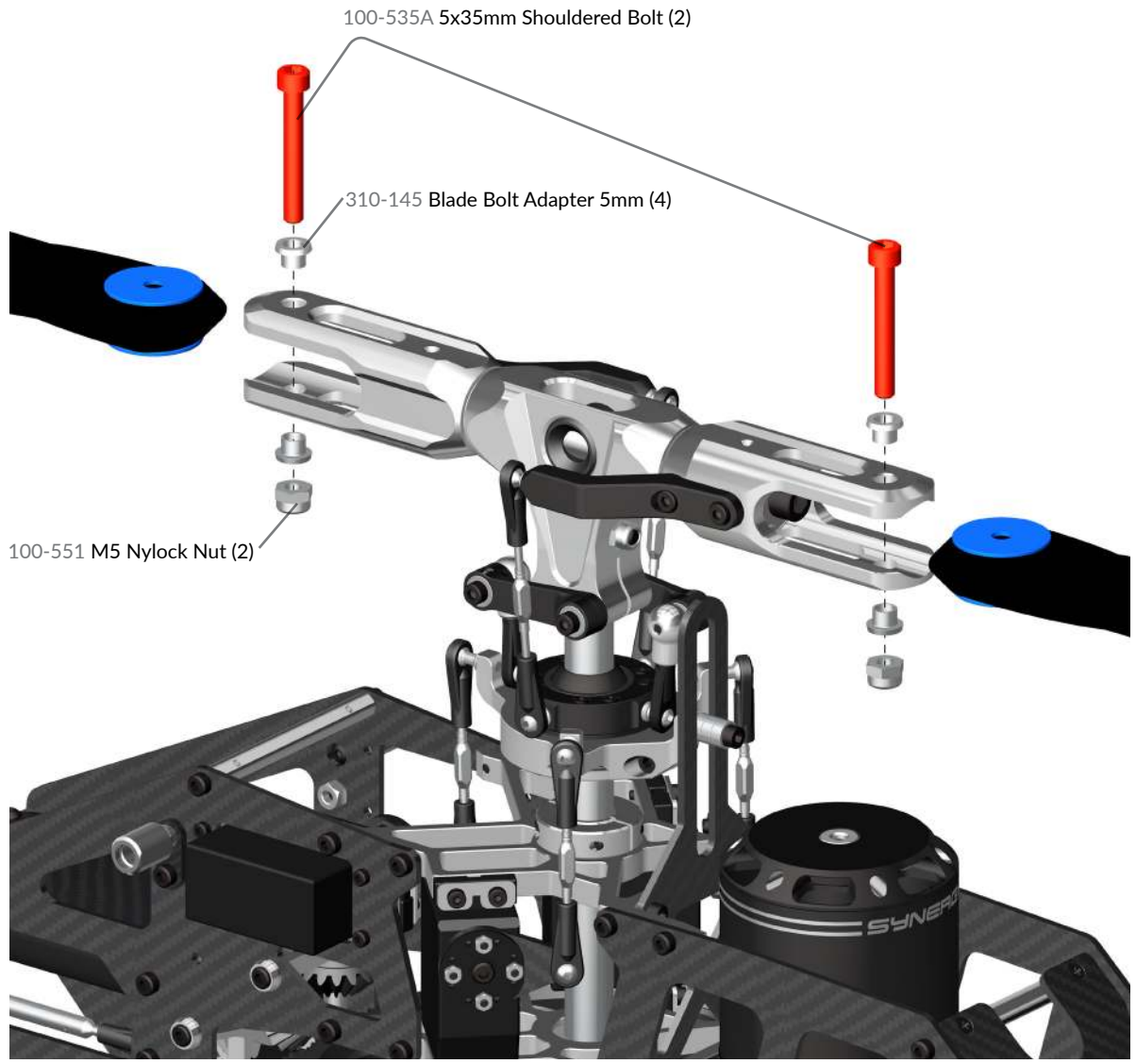
V1.1

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MAIN BLADE SPACERS NOT INCLUDED


NOTE: RAIL 696 AND 716 BLADES SETS INCLUDE SPACERS

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- BOOM SUPPORTS
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- MOTOR INSTALL
- SERVOS
- TAIL CONTROL ROD
- SWASH PLATE
- CYCLIC LINKAGES
- MAIN HEAD
- PITCH LINKAGES
- BATTERY TRAY
- BLADES
- CANOPY

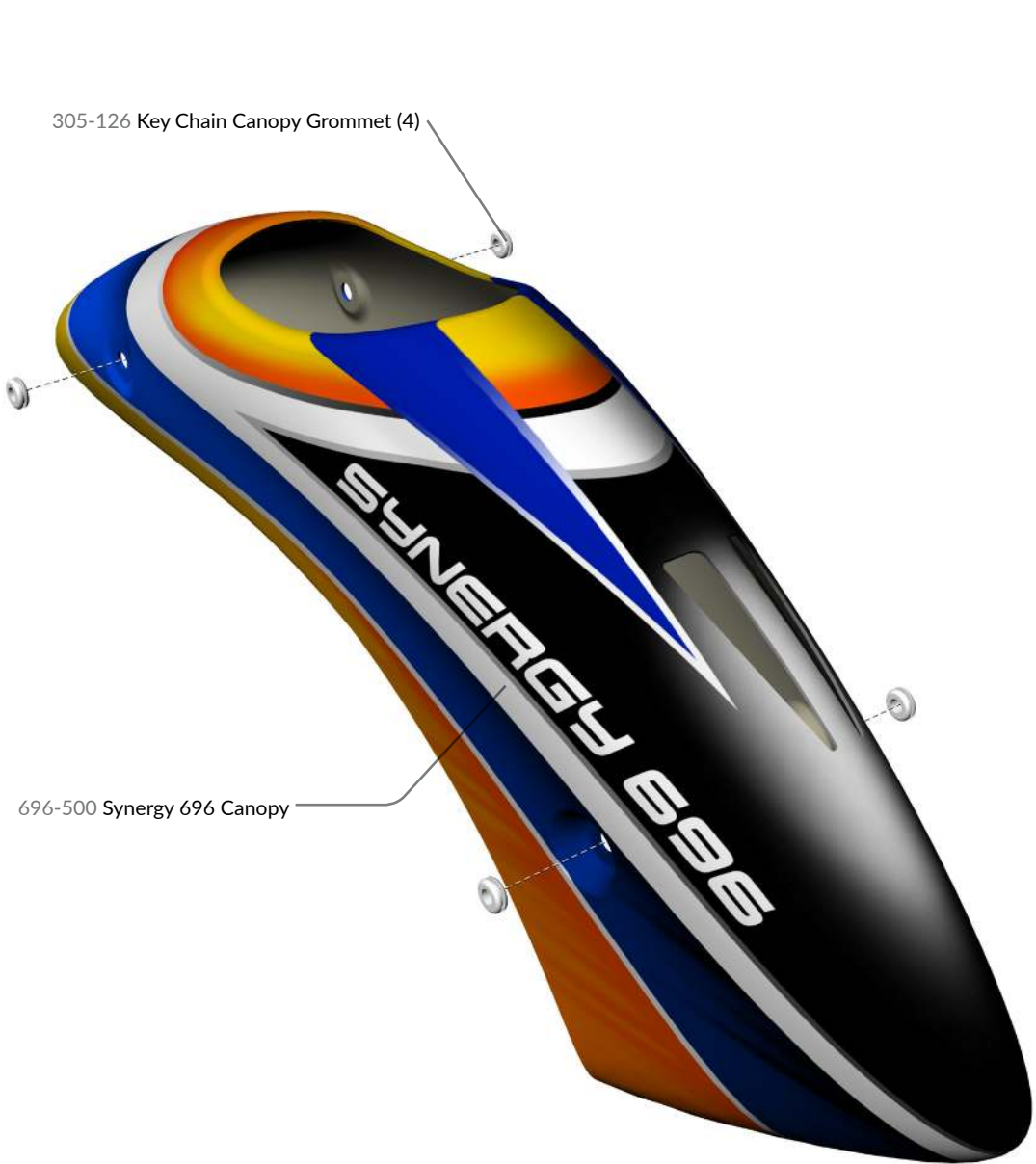


SYNERGY 696

V1.1


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SYNERGY 696

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PHYSICAL SPECIFICATIONS

