

MANUAL

**IL GOBLIN**  
**58**

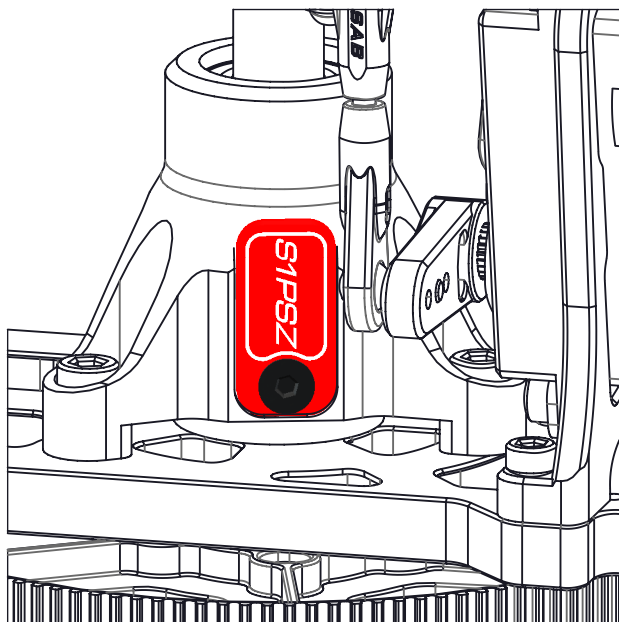
**IL GOBLIN**

THE ITALIAN HELI

**SAB HELI DIVISION**



Please read this user manual carefully, it contains instructions for the correct assembly of the model.  
Please refer to the web site [www.goblin-helicopter.com](http://www.goblin-helicopter.com) for updates and other important information.



## VERY IMPORTANT

You will find your serial number on the RED plate of the transmission module and on the product card included with your kit.

Please take a moment to register your kit online via our web site at:

<http://www.goblin-helicopter.com>

It is extremely important that you take a moment to register your helicopter with us. This is the only way to ensure that you are properly informed about changes to your kit, such as upgrades, retrofits and other important developments. SAB Heli Division cannot be held responsible for any issues with your model and will not provide support unless you register your model.

The serial number is also printed laser on the Aluminum part.

*Thank you for your purchase, we hope you enjoy your new Goblin helicopter!*

**SAB Heli Division**

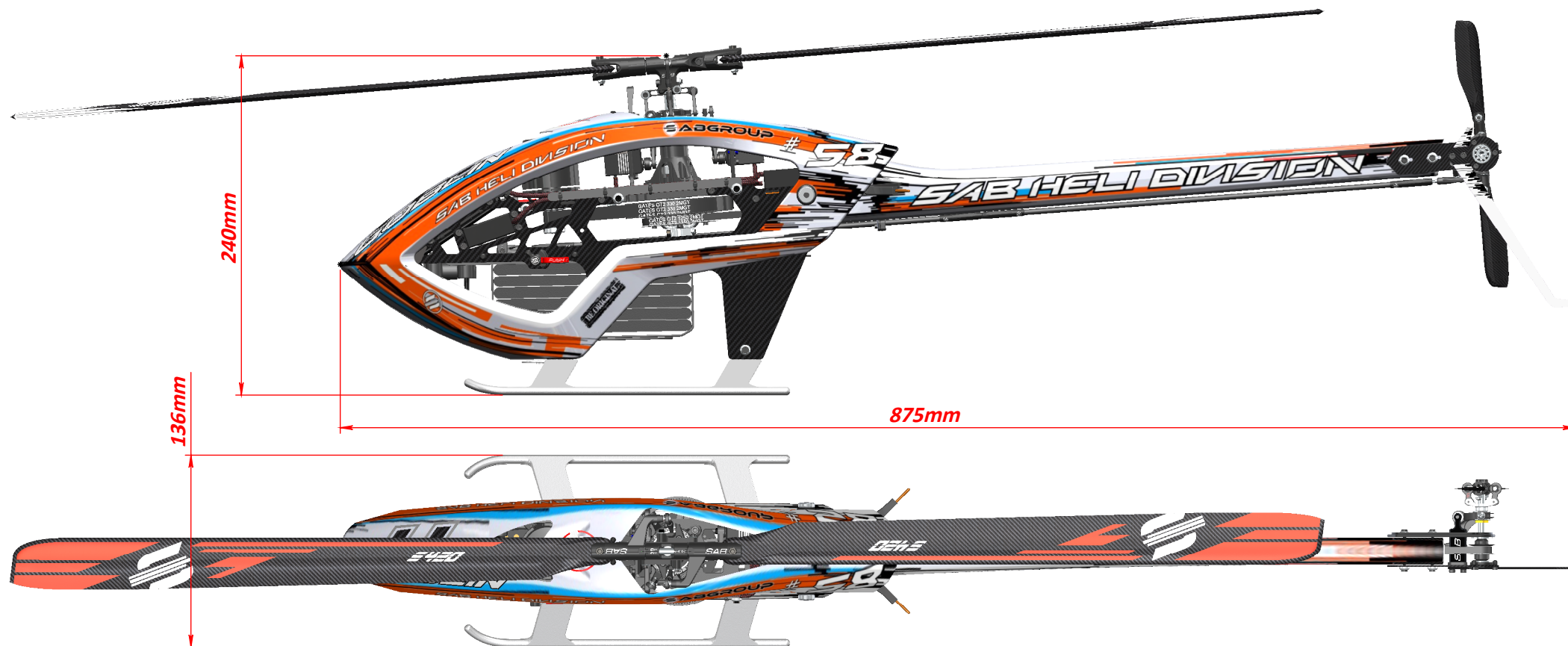
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## IL GOBLIN PRO 420 [ SG426 ] TECHNICAL SPECIFICATIONS



- **AIRFRAME weight:** 1080gr (with blades and motor, no battery and electronics).
- **Main rotor diameter:** 935mm (with 420 mm blades).
- **Main blade length:** 380 to 420 mm.
- **Tail rotor diameter:** 195 mm (with 72 mm tail blades).
- **Tail blade length:** 55 to 72 mm.
- **Main shaft 8 mm, Tail shaft 5 mm.**
- **Molded carbon tail boom.**

### KIT Includes:

- 1 Motor Pulley 20T.
- 1 Battery Tray with straps and connectors.

- **Cyclic Servos:** Micro size 23 mm.
- **Tail Servo:** Mini size 35 mm.
- **Main Rotor Ratio :** 1 : 6,3 to 1 : 5.
- **Tail Rotor Ratio :** 4 : 1.
- **Maximum battery size:** 40x51x135mm.
- **Recommended battery:** 6S 2200/2700 mAh.
- **Recommended battery weight:** approximately 350-420gr.

- 420mm Main Blades.
- 72mm Tail Blades.



## IMPORTANT SAFETY WARNING



- \* This radio-controlled helicopter is not a toy. It should only be assembled, setup and operated by an adult.
- \* This radio-controlled helicopter is a technically complex device which must be built and handled very carefully.
- \* This radio-controlled helicopter must be built following these instructions. This manual provides the necessary information to correctly assemble the model.
- \* Inexperienced pilots must be monitored by expert pilots.
- \* A radio-controlled helicopter must only be used in open spaces without obstacles, and far enough from people to minimize the possibility of accidents or of injury.
- \* A radio-controlled helicopter can behave in an unexpected manner, causing loss of control of the model, making it very dangerous.
- \* Lack of care with assembly or maintenance can result in an unreliable and dangerous model.
- \* Fly only in areas dedicated to the use of model helicopters.
- \* Follow all control procedures for your radio frequency system >>>> Follow instructions and information provided by radio system, electronic speed controller, flight control system (gyro) manufacturers regarding safety, radio frequency control, setup/configuration, operations and other best practices.
- \* It is necessary that you know your radio system well. Check all functions of the transmitter before every flight. >>>> It is crucial that you know your radio system, electronic speed controller and flight control system well. Properly check all their functions and connections before every flight.
- \* The blades of the model rotate at a very high speed; be aware of the danger they pose and the damage they may cause.
- \* Never fly in the vicinity of other people

## ASSUMPTION OF RISK

Neither SAB Heli Division nor its agents have any control over the assembly, maintenance, and use of this product.

For this reason, SAB Heli Division is not responsible for injury, death or damage to people, things and / or to the product.

By assembling any component of this product, the user declares to have read and understood the following terms and conditions and agrees to be bound by them.

Failure to observe the above warnings and precautions may increase the risk of serious injury or death to yourself or surrounding people, damage to the product, or both.

SAB Heli Division shall not even be liable for special, indirect, or consequential damages, loss of profits or production or commercial loss in any way connected with the product, whether such claim is based in contract, warranty, negligence, or strict liability.

Further, in no event shall the liability of SAB Heli Division exceed the individual price of the Product on which liability is asserted.

By the act of use, setup, or assembly the user accepts all resulting liability.

Therefore, no responsibility can be traced back to the manufacturer.

**You hereby agree to release SAB Heli Division from any responsibility or liability arising from the use of this product.**

If you as the Purchaser or user are not prepared to accept the liability associated with the use of this Product, you are advised to return this Product immediately in new an unused condition to the place of purchase.

## WARRANTY

SAB Heli Division reserves the right to change or modify this warranty without notice and disclaims all other warranties, express or implied.

**(a) This warranty is limited** to the original Purchaser ("Purchaser") and is not transferable. Replacement as provided under this warranty is the exclusive remedy of the purchaser. This warranty covers only those products purchased from an authorized SAB Heli Division dealer. Third party transactions are not covered by this warranty. Proof of purchase is required for warranty claims.

### **(b) Limitations**

SAB Heli Division makes no warranty or representation, express or implied, about non infringement, merchantability, or fitness for a particular purpose of the product. The purchaser acknowledges that they alone have determined that the product will suitably meet the requirements of the purchaser's intended use.

### **(c) Purchaser Remedy**

SAB Heli Division's sole obligation hereunder shall be that SAB Heli Division will, at its option, replace any Product determined by SAB Heli Division to be defective in the event of a defect, this is the Purchaser's exclusive remedy. Replacement decisions are at the sole discretion of SAB Heli Division. This warranty does not cover cosmetic damage or damage due to acts of God, accident, misuse, abuse, negligence, commercial use, or modification of or to any part of the Product. This warranty does not cover damage due to improper installation, operation, maintenance, or attempted repair by anyone.

## ADDITIONAL COMPONENTS REQUIRED


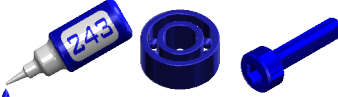
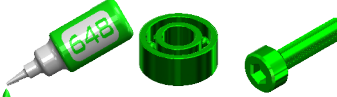


- \* Motor size: 3215-3220; 900-1000 Kv/V.
- \*Speed controller: 6S capable, 60-80 Amps.
- \*Batteries: 6S 2200/2700 mAh.
- \*1 flybarless 3 axis control unit.
- \*Radio power system.
- \*3 Micro cyclic servos.
- \*1 Mini tail rotor servo.
- \*6 channel radio control system on 2.4 GHz.

## TOOLS, LUBRICANTS, ADHESIVES

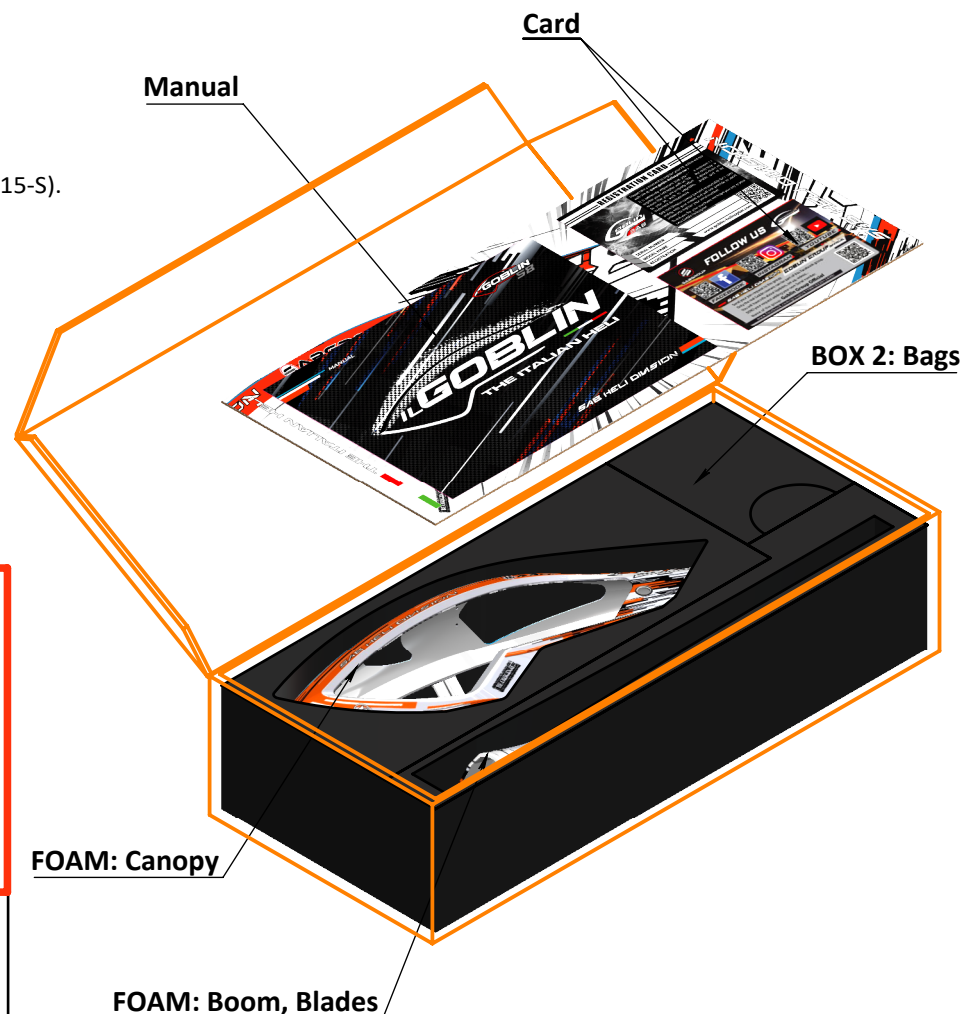
- \*Generic pliers.
- \*Hexagonal driver, size 1.5, 2, 2.5, 3mm.
- \*4/5mm T-Wrench.
- \*5.5mm Socket wrench (for M3 nuts).
- \*8mm Hex fork wrench (for M5 nuts).
- \*Medium threadlocker (SAB p/n HA116-S).
- \*Strong retaining compound (SAB p/n HA115-S).
- \*Spray lubricant (eg. Try-Flow Oil).
- \*Synthetic grease (eg. Microlube 261).
- \*Cyanoacrylate adhesive.
- \*Pitch Gauge (for set-up).
- \*Soldering equipment (for motor wiring).

## NOTES FOR ASSEMBLY

Please refer to this manual for assembly instructions for this model. Follow the order of assembly indicated. The instructions are divided into chapters, which are structured in a way that each step is based on the work done in the previous step. Changing the order of assembly may result in additional or unnecessary steps. Use thread lockers and retaining compounds as indicated. In general, each bolt or screw that engages with a metal part requires thread lock. It is necessary to pay attention to the symbols listed below:

 <p><b>Important</b></p>	 <p>Blue screw and blue bearing in the illustration means you need to use: <b>Thread Locker Medium Strength</b> ( SAB HA116-S)</p>	 <p>Green screw and Green bearing in the illustration means you need to use: <b>Retaining compound</b> ( SAB HA115-S)</p>
<p><b>Box xx, BAGxx</b></p> <p>Indicates that for this assembly phase you need materials that are: BOX xxx, BAG xxx.</p>	 <p>Use CA Glue</p>	 <p>Use Proper Lubricant</p>

## INSIDE THE MAIN BOX THERE ARE:



The assembly process is described in the following chapters. Each chapter provides you with the box, bag and/or foam numbers you will need for that chapter. The information is printed in a black box in the upper corner of the page.

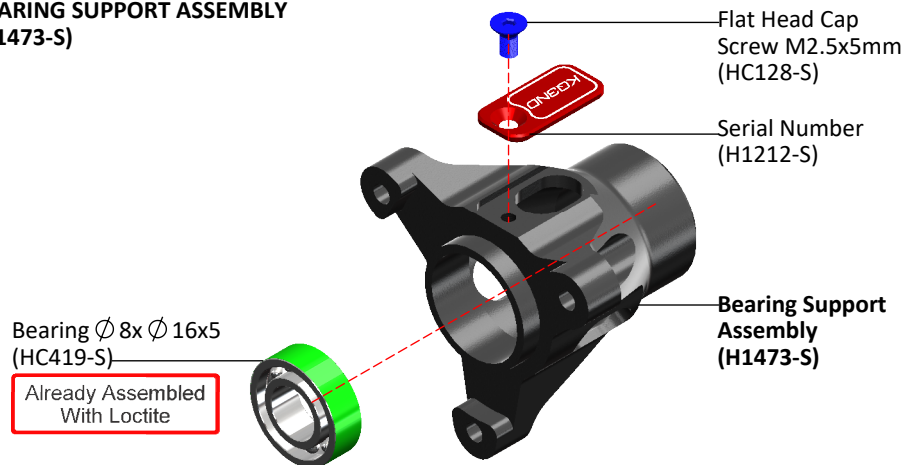
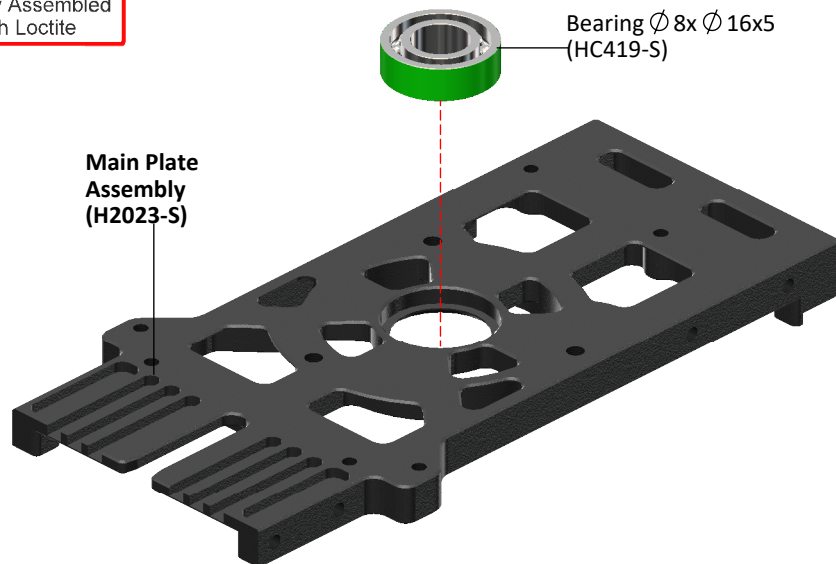


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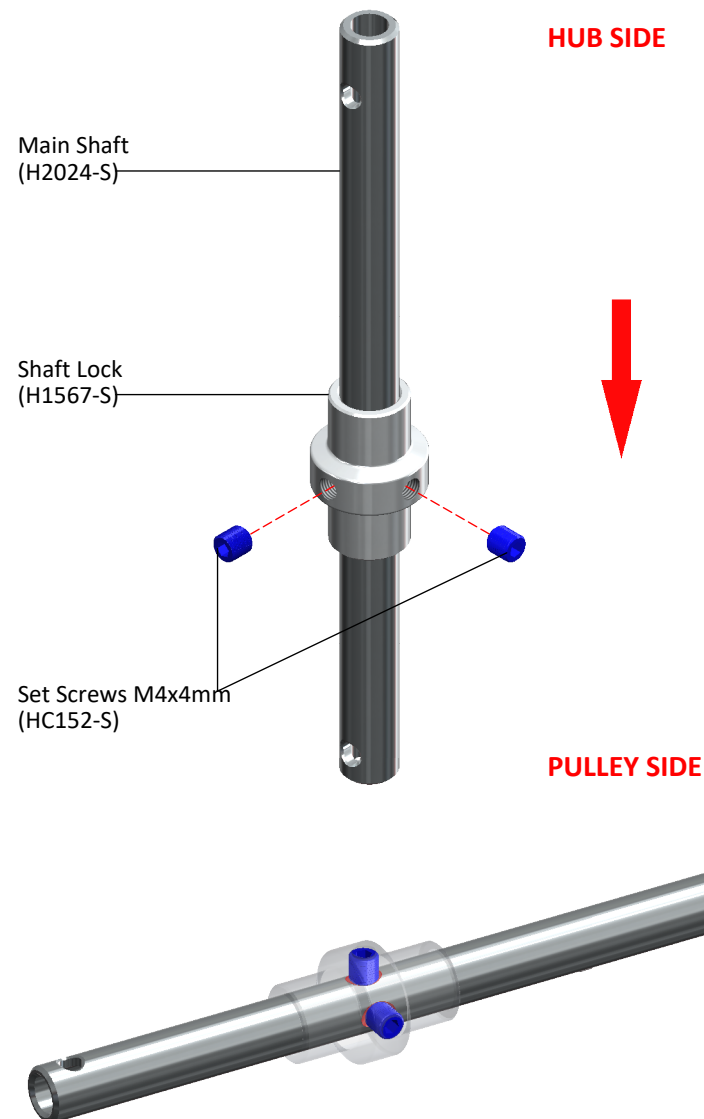
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## TRANSMISSION GROUP ASSEMBLY

## BOX 2, BAG FOR PAGE 5

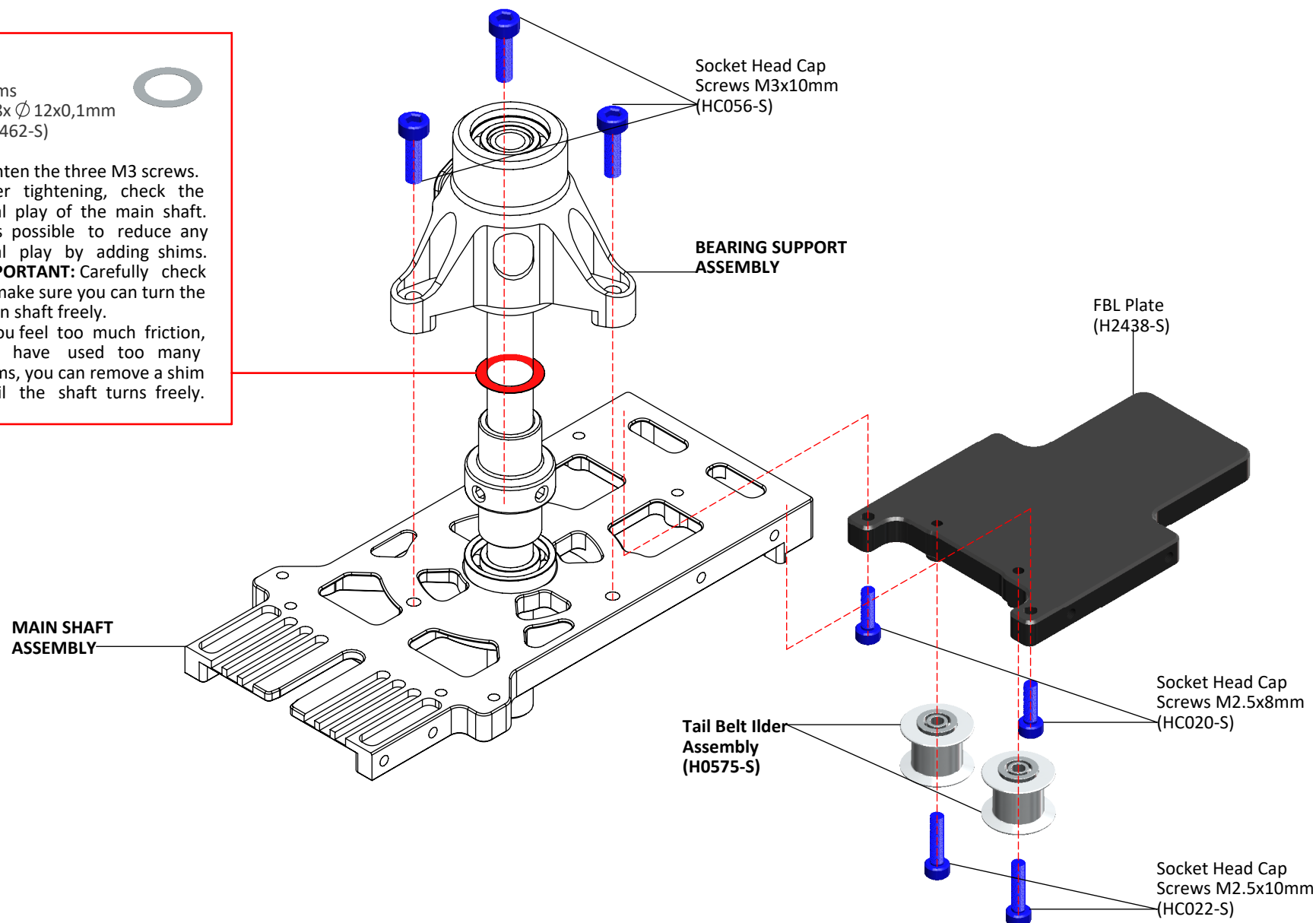
BEARING SUPPORT ASSEMBLY  
(H1473-S)MAIN PLATE ASSEMBLY  
(H2023-S)Already Assembled  
With Loctite

## MAIN SHAFT ASSEMBLY



Shims  
 $\varnothing 8 \times \varnothing 12 \times 0,1 \text{mm}$   
 (HC462-S)

Tighten the three M3 screws.  
 After tightening, check the  
 axial play of the main shaft.  
 It is possible to reduce any  
 axial play by adding shims.  
**IMPORTANT:** Carefully check  
 to make sure you can turn the  
 main shaft freely.  
 If you feel too much friction,  
 you have used too many  
 shims, you can remove a shim  
 until the shaft turns freely.





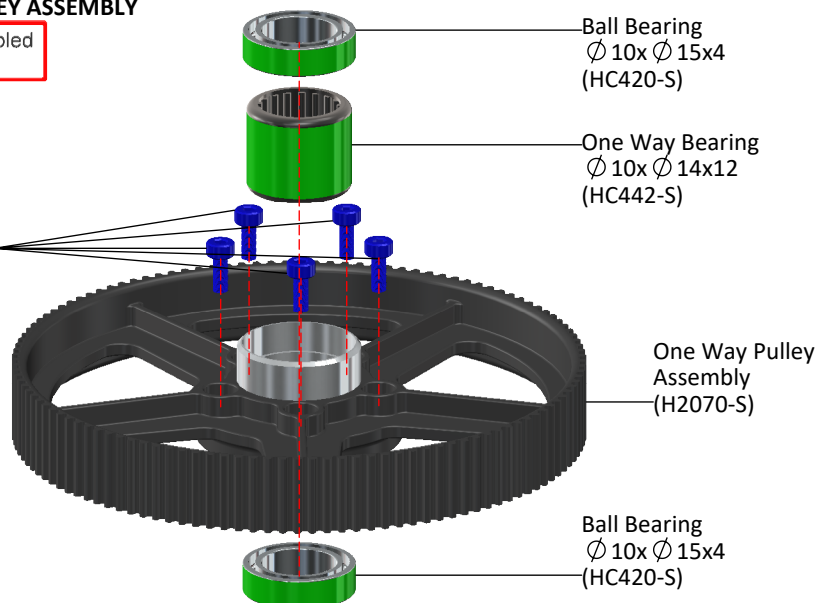
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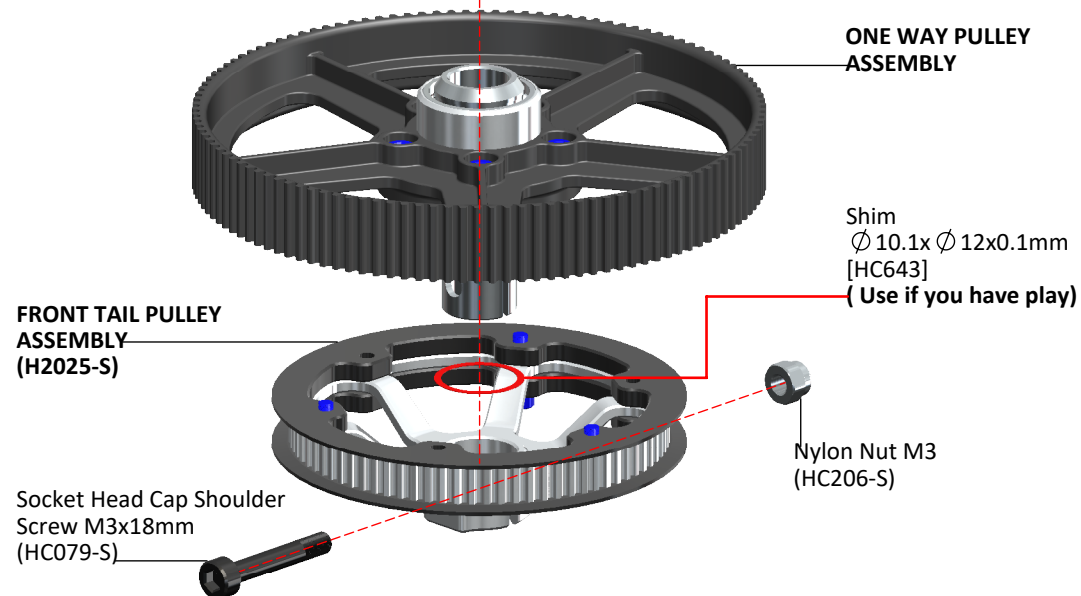
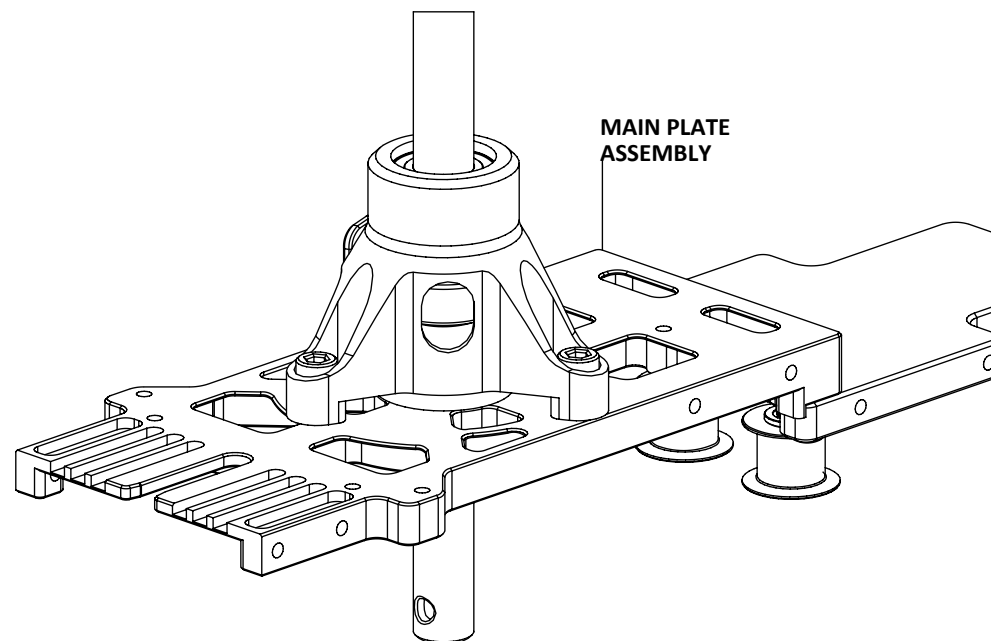
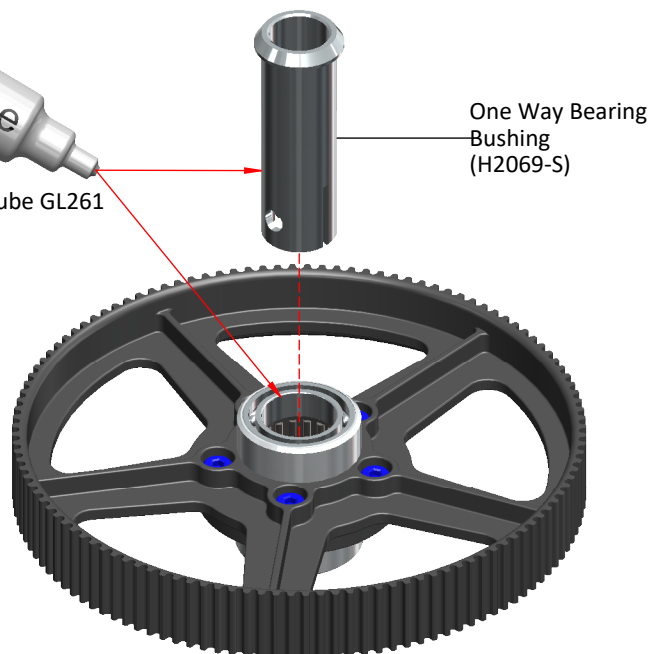
## TRANSMISSION GROUP ASSEMBLY

BOX 2, BAG FOR PAGE 7

## ONE WAY PULLEY ASSEMBLY

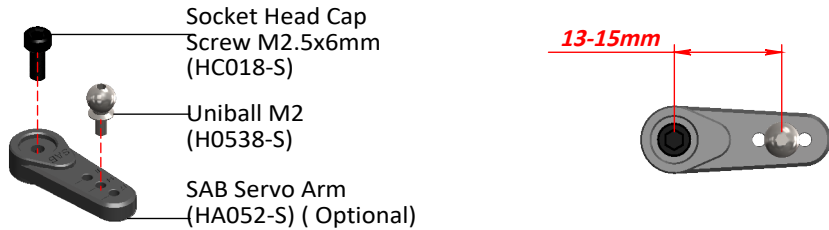
Already Assembled  
With LoctiteSocket Head Cap  
Screws M2x5mm  
(HC002-S)

eg: Microlube GL261

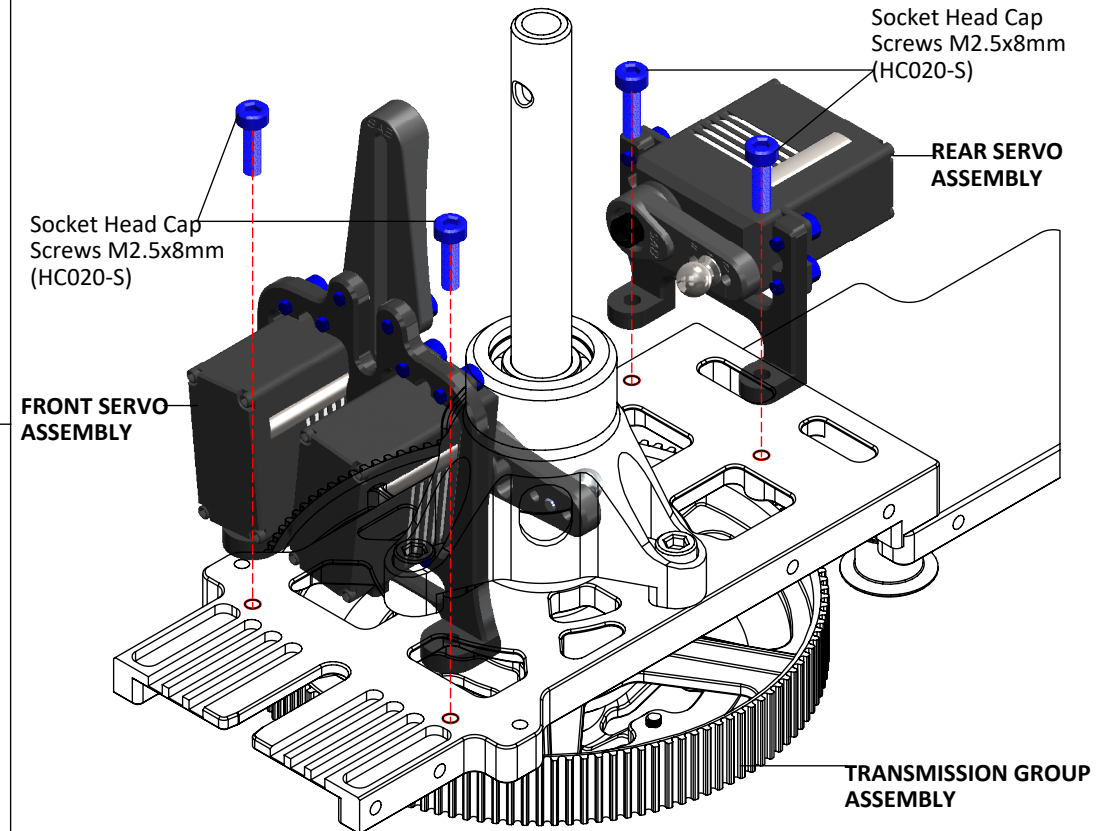
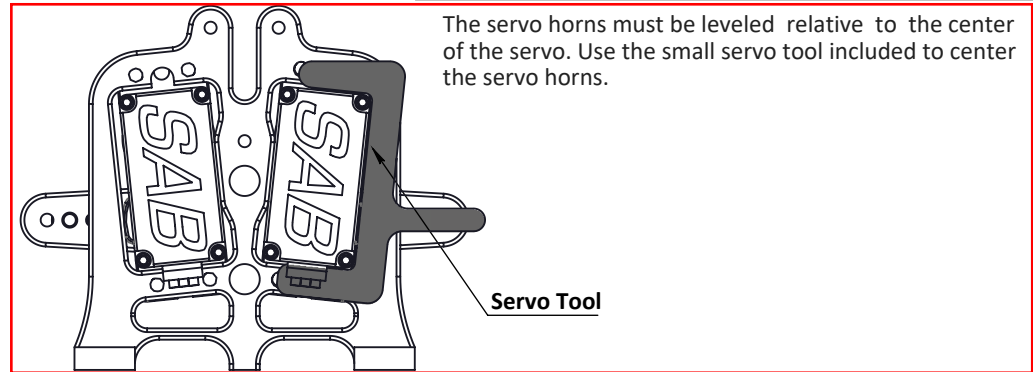
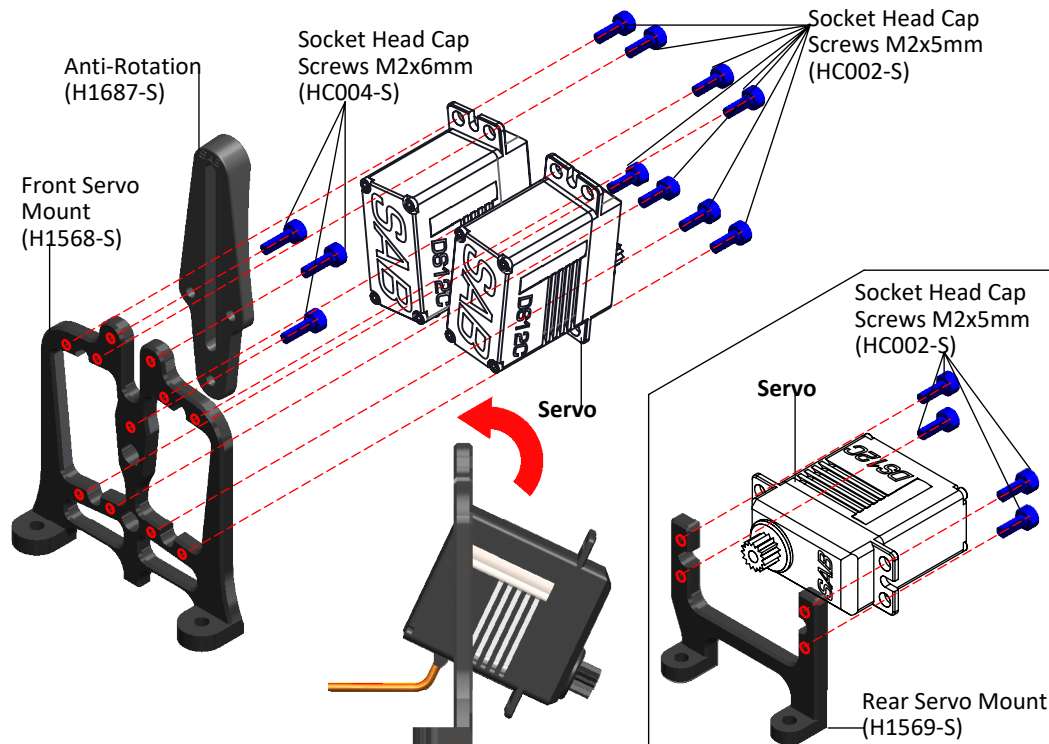


## SERVO ASSEMBLY

The linkage ball must be positioned 13-15mm out on the servo arm.  
The recommended servo arm to use is: SAB p/n [HA052].  
Ensure the alignment of the servo arms before installation of the servos in the model.  
Proceed with installation following the instructions below.



**Note:** Do not over tighten the uniball, be careful not to strip the plastic





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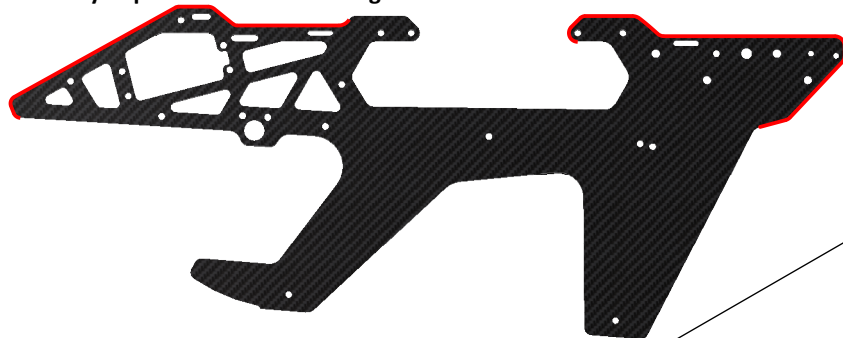
## FRAME GROUP ASSEMBLY

BOX 2, BAG FOR PAGE 9

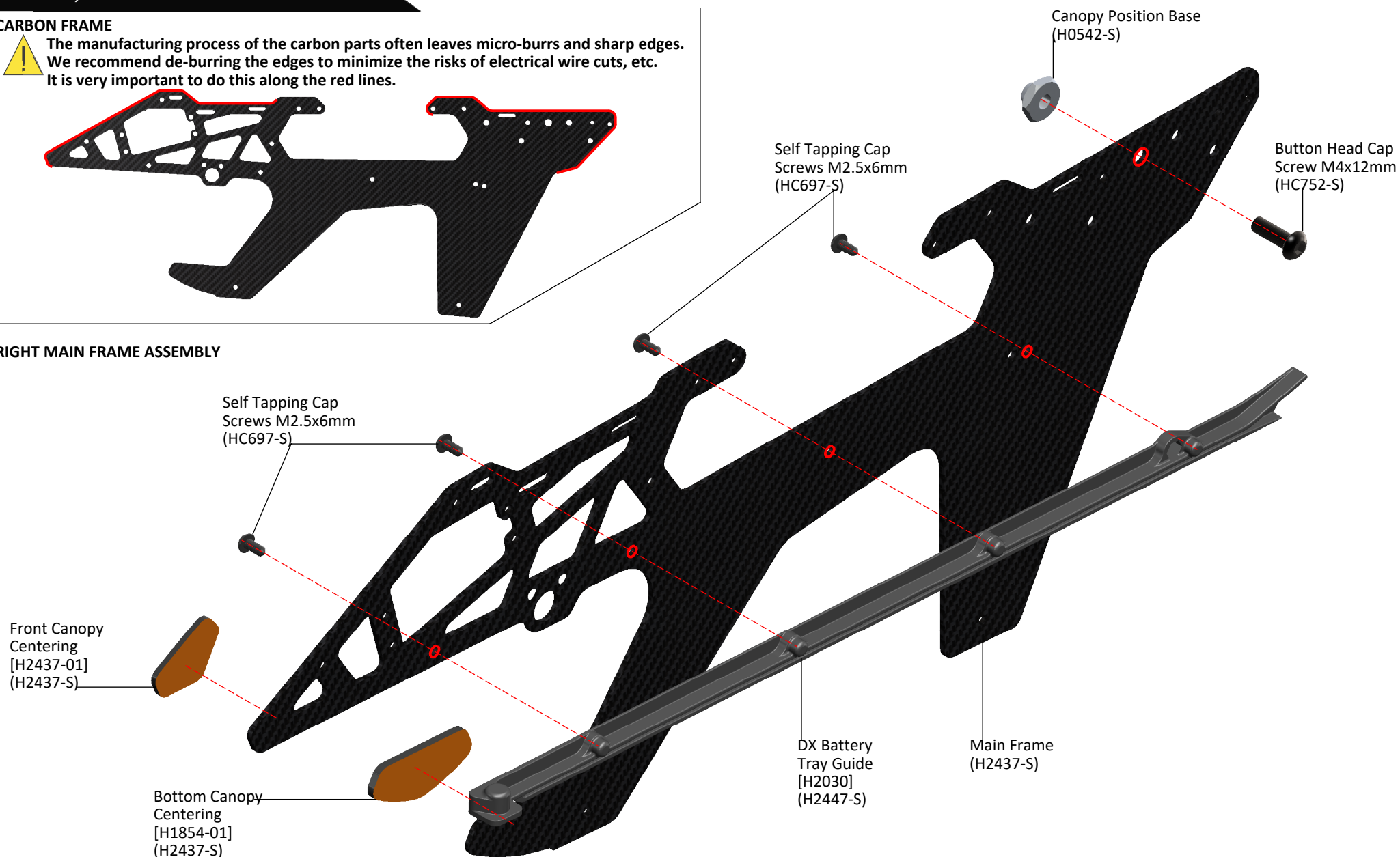
## CARBON FRAME



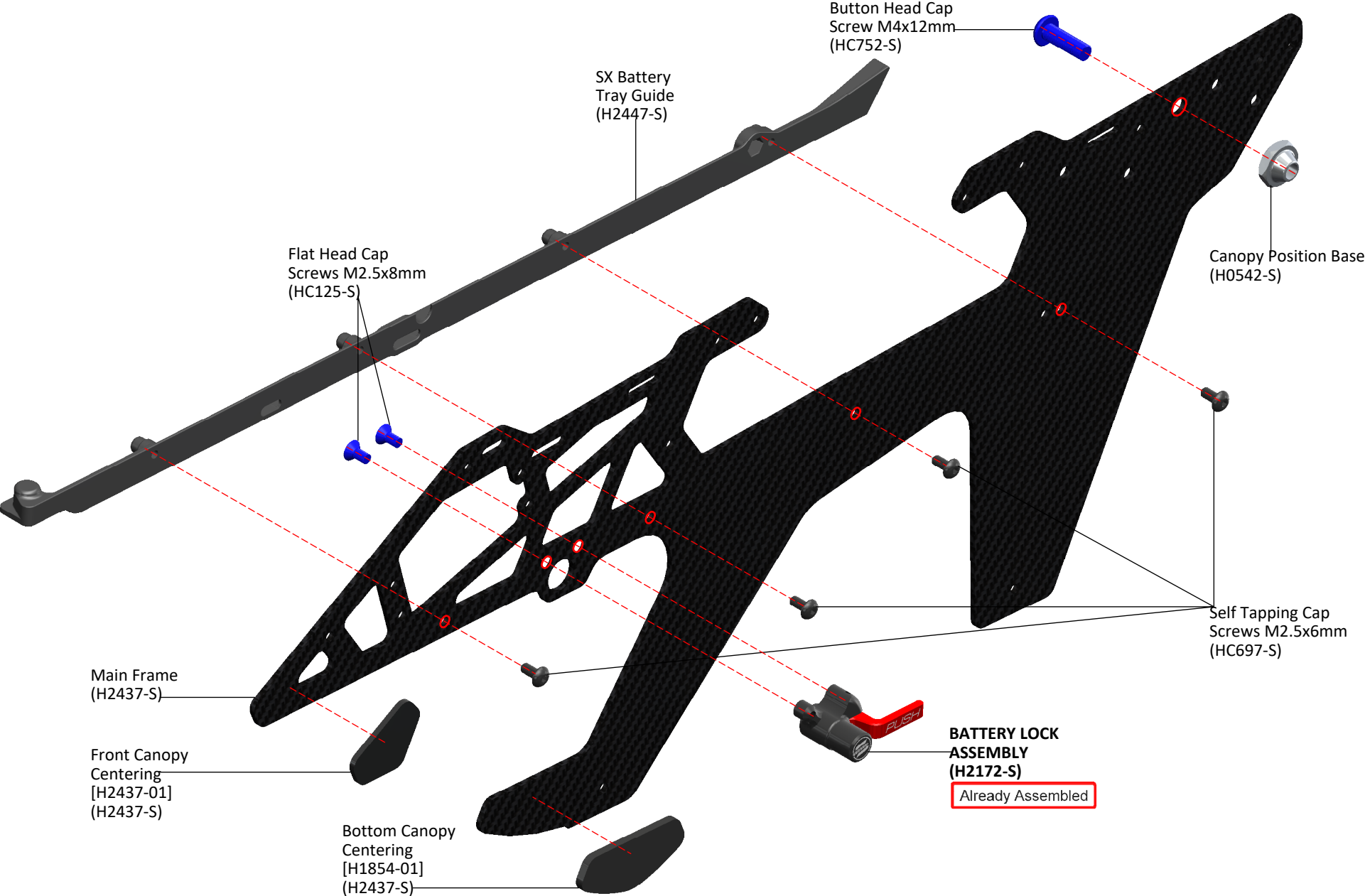
The manufacturing process of the carbon parts often leaves micro-burrs and sharp edges. We recommend de-burring the edges to minimize the risks of electrical wire cuts, etc. It is very important to do this along the red lines.



## RIGHT MAIN FRAME ASSEMBLY



LEFT MAIN FRAME ASSEMBLY



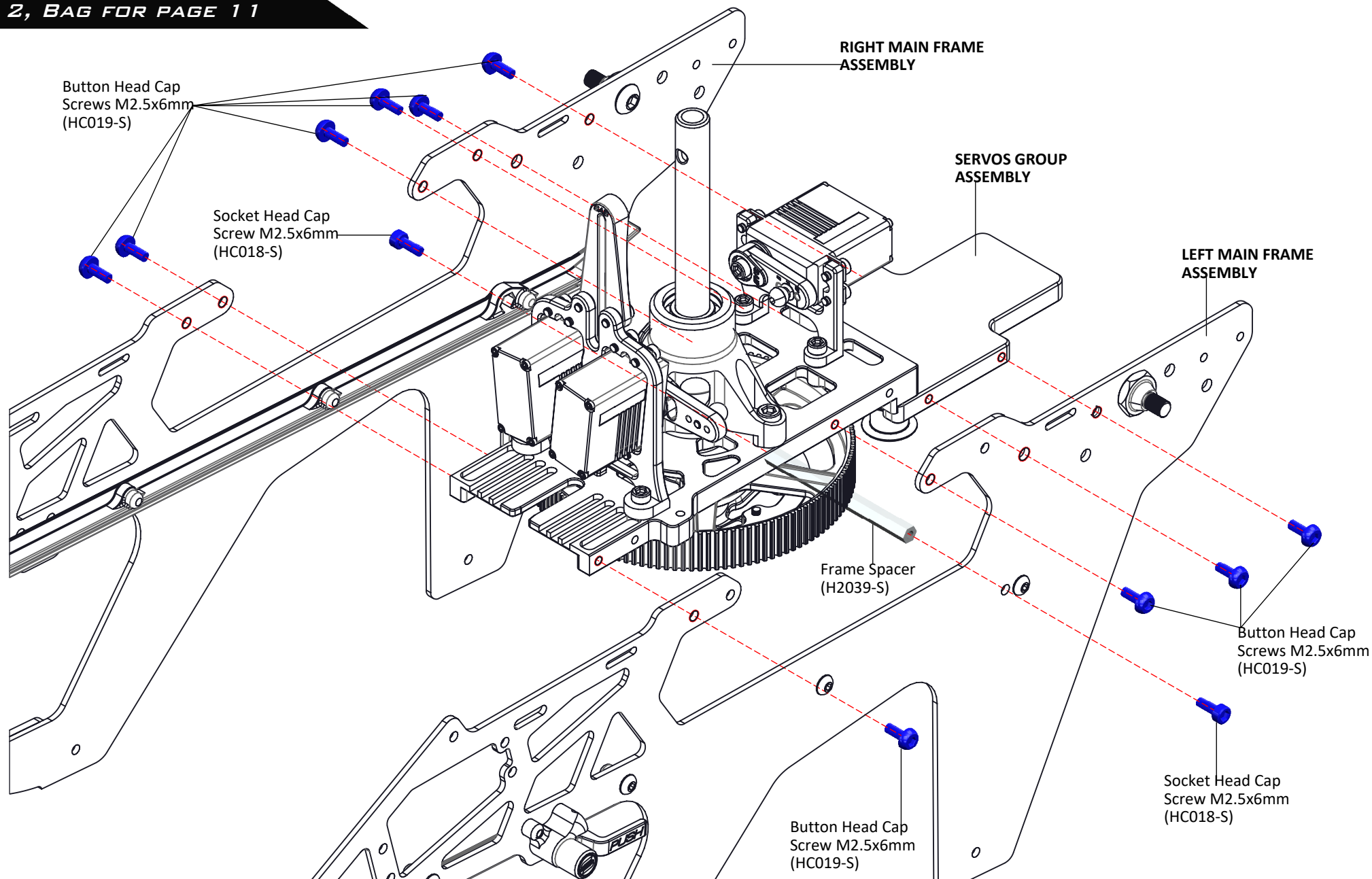


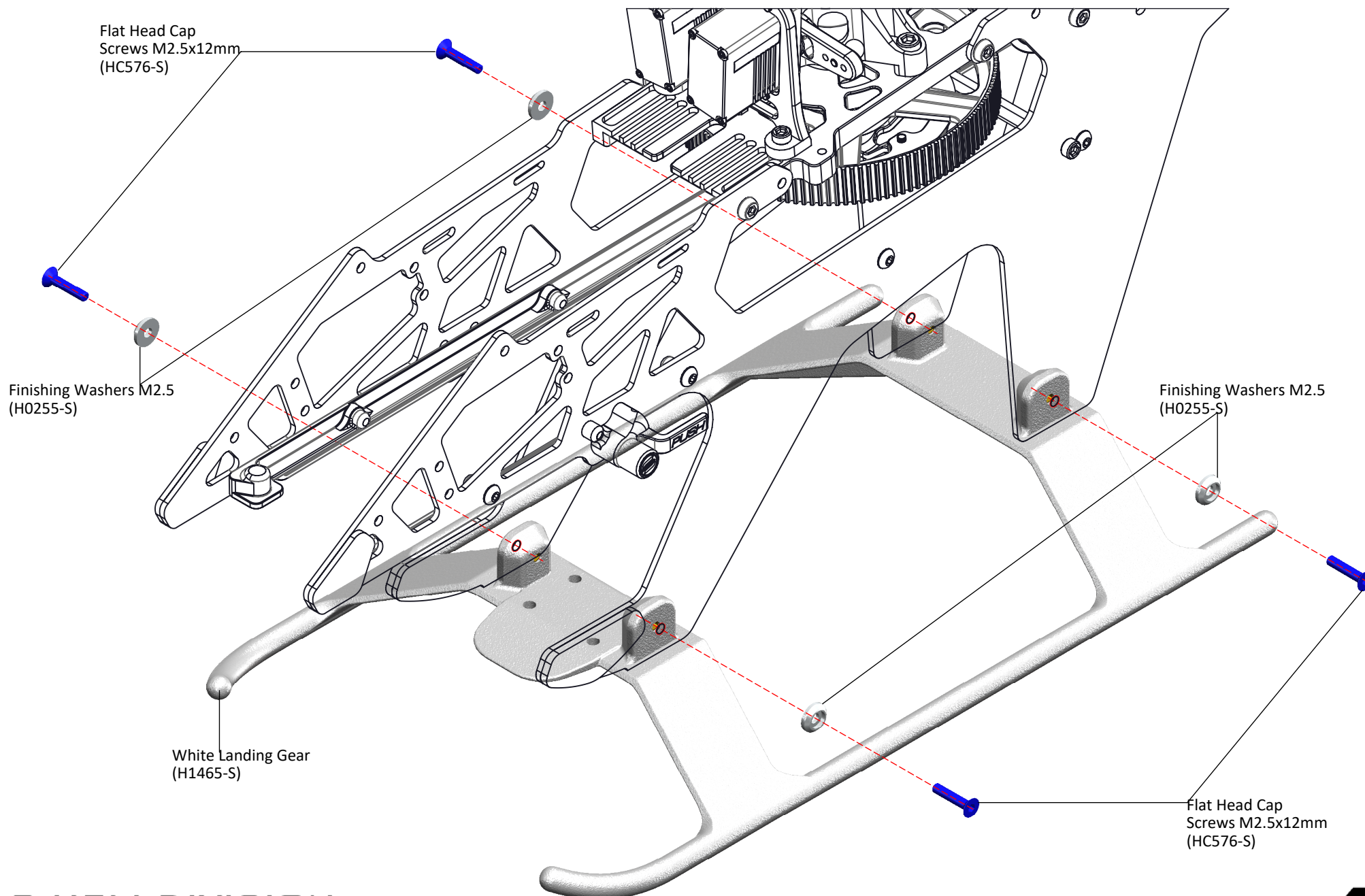
SG426

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## FRAME GROUP ASSEMBLY

BOX 2, BAG FOR PAGE 11







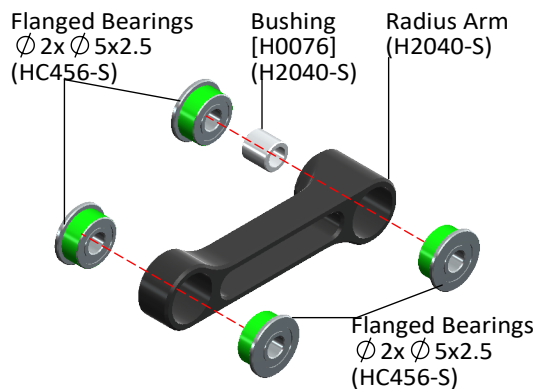
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## HEAD ASSEMBLY

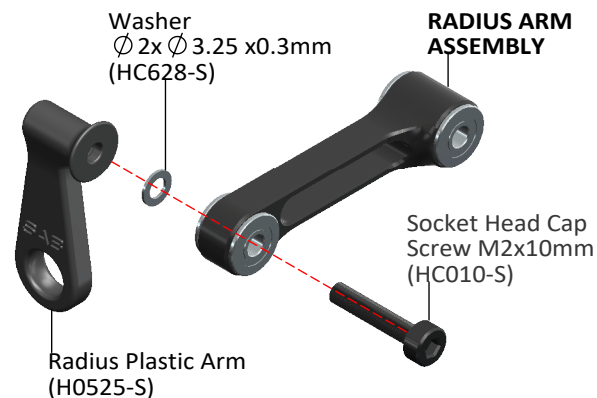
BOX 2, BAG FOR PAGE 13

## RADIUS ARM ASSEMBLY ... x2



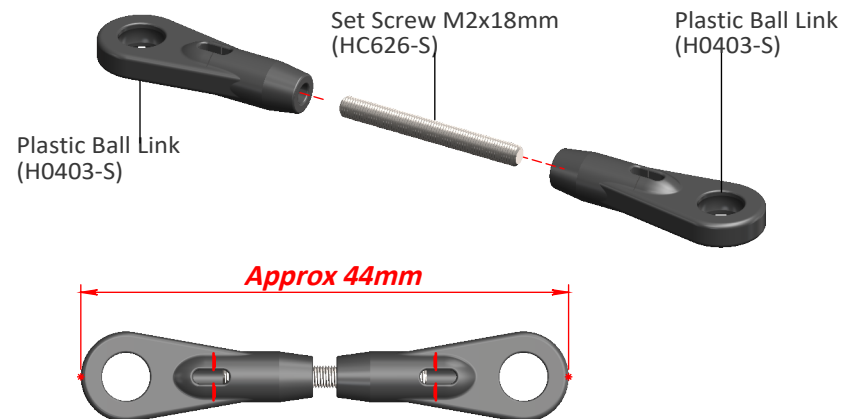
**PLEASE USE GREEN THREAD LOCK** to secure the bearings to the radius arms. Failure to secure the bearing will result in excessive slop/play.

## RADIUS PLASTIC ARM ASSEMBLY ... x2



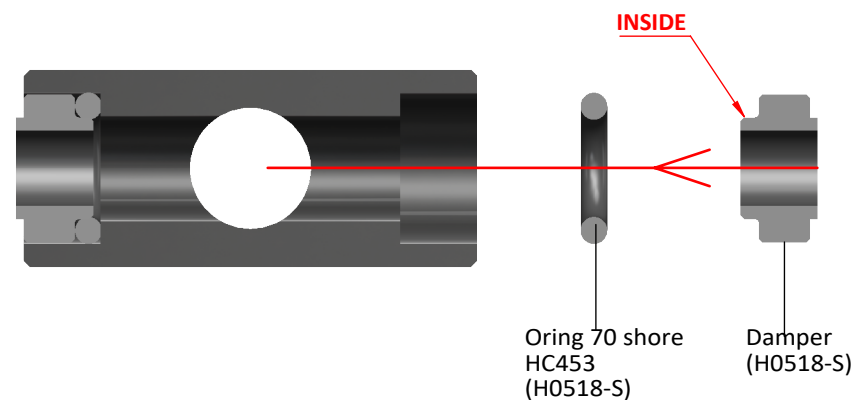
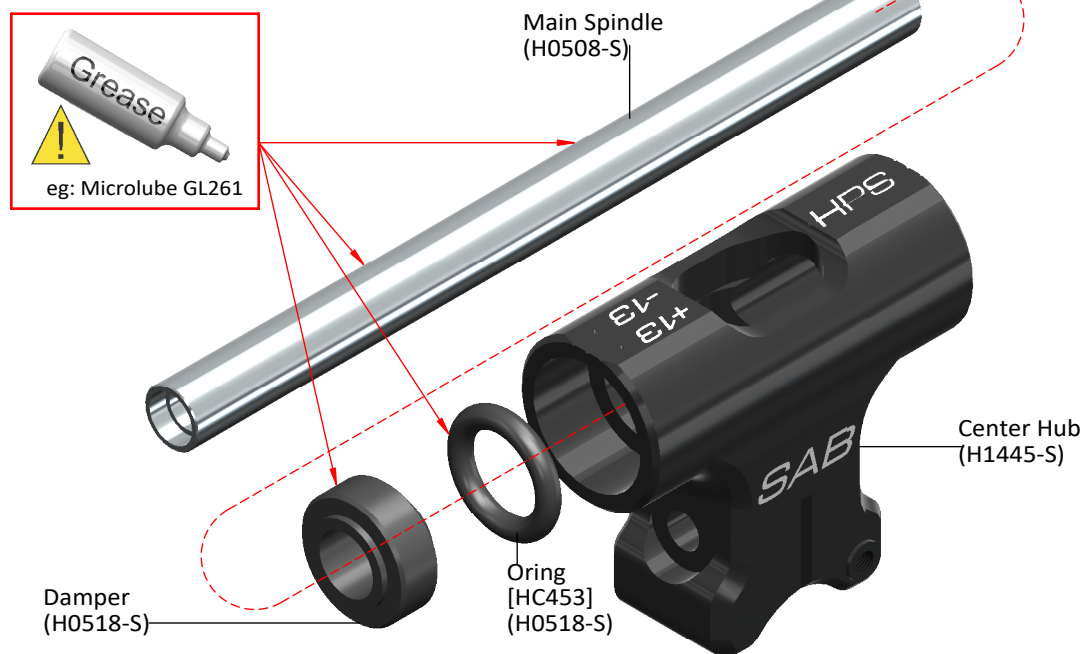
**NOTE:** Tighten with care, the arm must move freely.

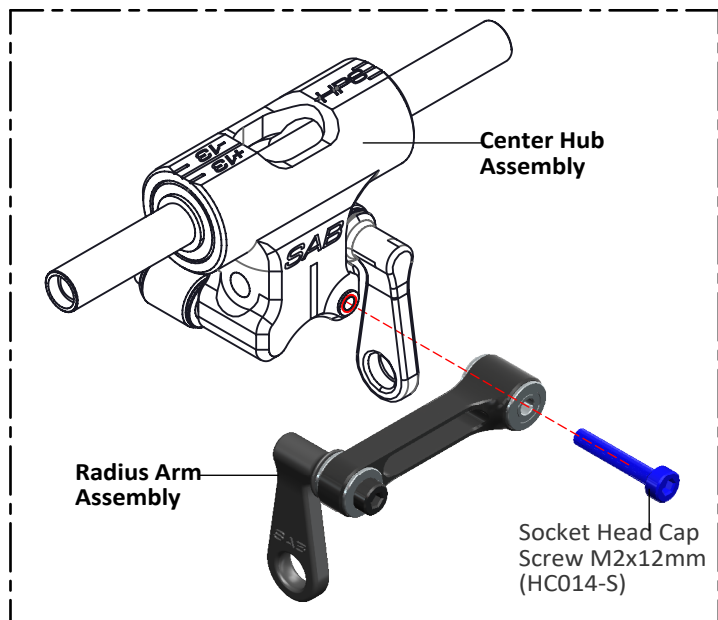
## LINKAGE ROD ASSEMBLY .....x2



(Initial length for the rods from the swashplate to the Blade Grip.)

## CENTER HUB ASSEMBLY





**NOTE:** We recommend assembling without shims. After approximately 20/30 flights, please manually check the head dampening, you can add one 0.1mm shim each side (HC450) if the dampening feels loose.

Washer  
Ø 5x Ø 7x0.1mm  
(HC450-S)

**Main Blade Grip Assembly (H1446-S)**

Thrust Bearing  
Ø 5x Ø 10x4  
(HC435-S)

Button Head Cap Screw M4x6mm (HC096-S)

**SMALLER ID**

**LARGER ID**

Washer  
Ø 7.5x Ø 10x0.5mm  
[H0349] (H1446-S)



Ball Bearing  
Ø 5x Ø 10x4  
(HC411-S)

Already Assembled With Loctite

Ball Bearing  
Ø 5x Ø 10x4  
(HC411-S)

Already Assembled With Loctite

Socket Head Cap Screw M3x6mm (HC044-S)

**Main Blade Grip Arm (H1701-S)**

The blade grim arms are made of carbon plastic, they provide high strength and rigidity, but are sacrificial in the event of the crash saving more expensive parts.

Do not over tighten the uniball and the screw.

Uniball M2 (H0538-S)

**Linkage Rod Assembly**



**NOTE:** Put a very small drop of CA glue.



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## ASSEMBLY OF THE MODULES

BOX 2, BAG FOR PAGE 15

## SWASHPLATE ASSEMBLY

Anti-Rotation Pin  
[H0790]  
(H1566-S)Uniball M2  
(H0538-S)Uniball M2  
(H0538-S)Swashplate Assembly  
(H1566-S)Socket Head Cap Shoulder  
Screw M3x16mm  
(HC074-S)HEAD GROUP  
ASSEMBLYNylon Nut M3  
(HC206-S)

eg: Microlube GL261

FRAME GROUP  
ASSEMBLY

## LINKAGE ROD B ASSEMBLY ... X3

Plastic ball link  
(H0403-S)

Plastic ball link  
(H0403-S)

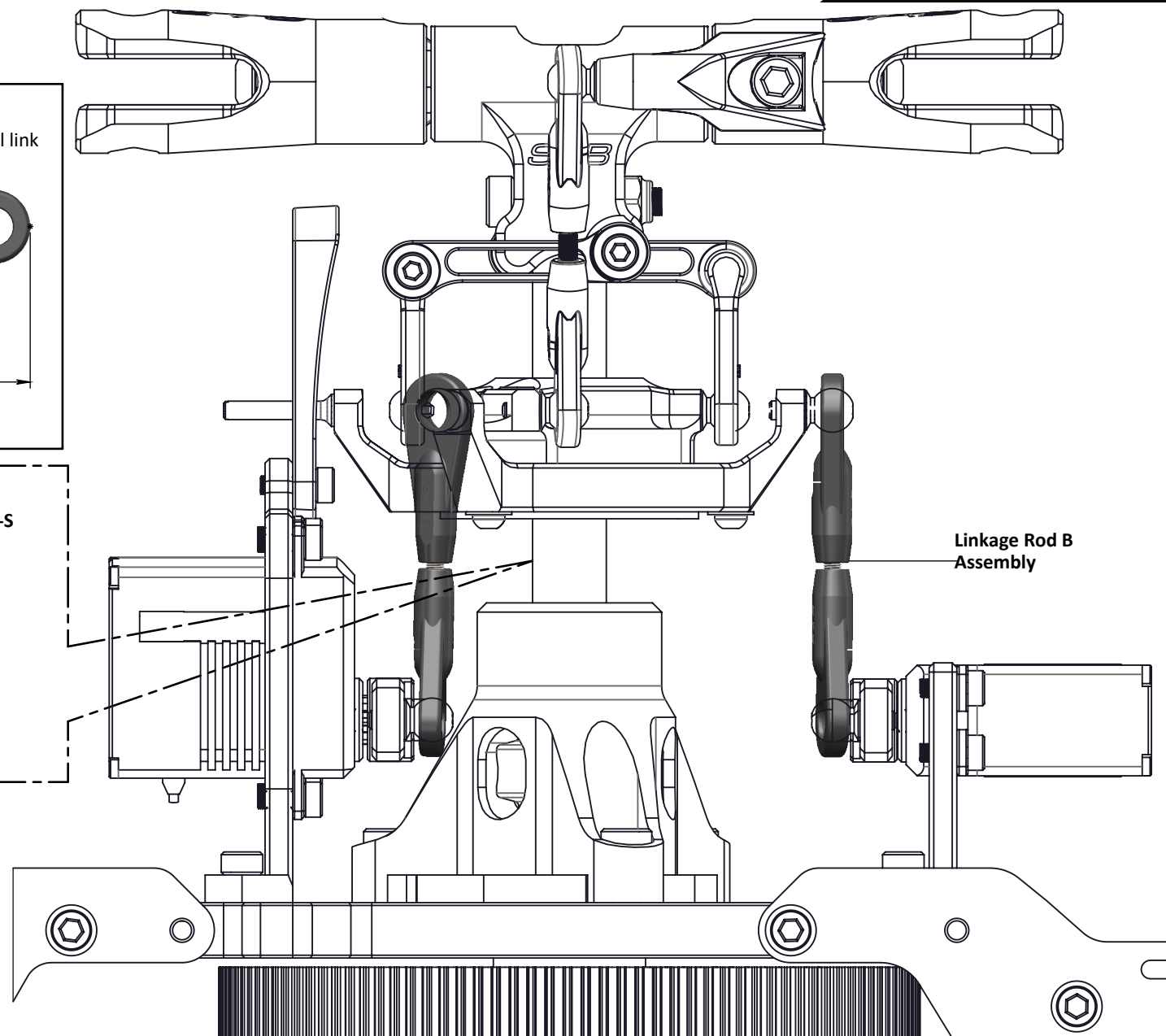
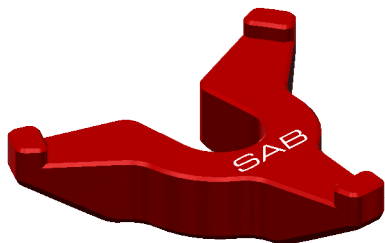
Set Screw M2x18mm  
(HC626-S)

Approx 41-42mm

Initial length for the rods from the servos  
to the swash plate.

## SUGGESTED:

You can use the Swashplate Leveler **H1686-S**  
( Not included KIT)





# INSTALLATION OF THE MOTOR

## BOX 2, BAG FOR PAGE 17

It is important to choose the right reduction ratio to maximize efficiency based on your required flight performance.

It is recommended to use wiring and connectors appropriate for the currents generated in a helicopter of this class.

If you are using a head speed calculator which requires a main gear and pinion tooth count, use 120 teeth for the main gear

### BELOW IS A LIST OF AVAILABLE REDUCTION RATIOS:

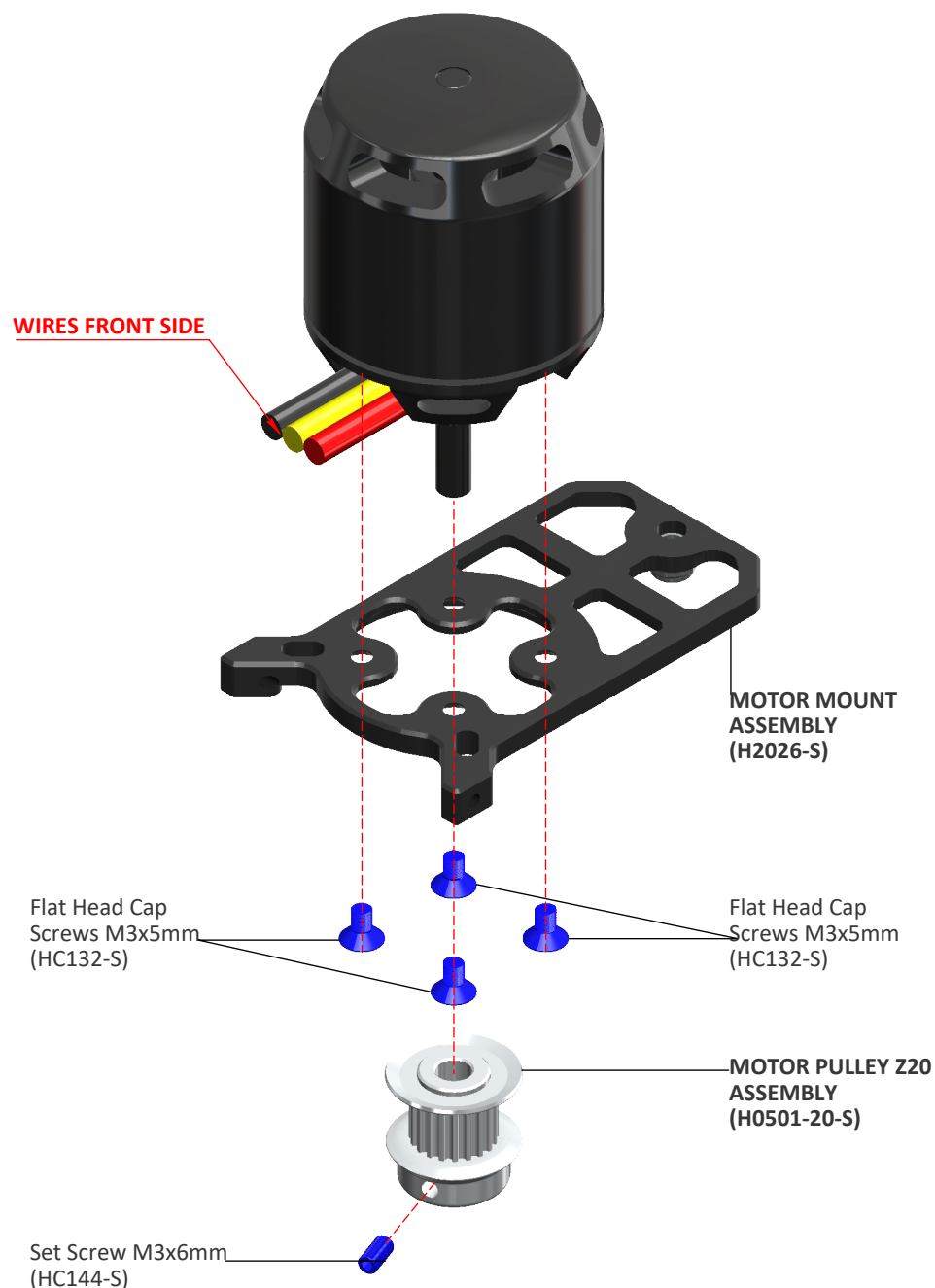
H0501-19-S - <b>19T</b> Pinion = ratio	<b>6.3 : 1</b>	H0501-22-S - <b>22T</b> Pinion = ratio	<b>5.5 : 1</b>
H0501-20-S - <b>20T</b> Pinion = ratio	<b>6.0 : 1</b>	H0501-23-S - <b>23T</b> Pinion = ratio	<b>5.2 : 1</b>
H0501-21-S - <b>21T</b> Pinion = ratio	<b>5.7 : 1</b>	H0501-24-S - <b>24T</b> Pinion = ratio	<b>5.0 : 1</b>

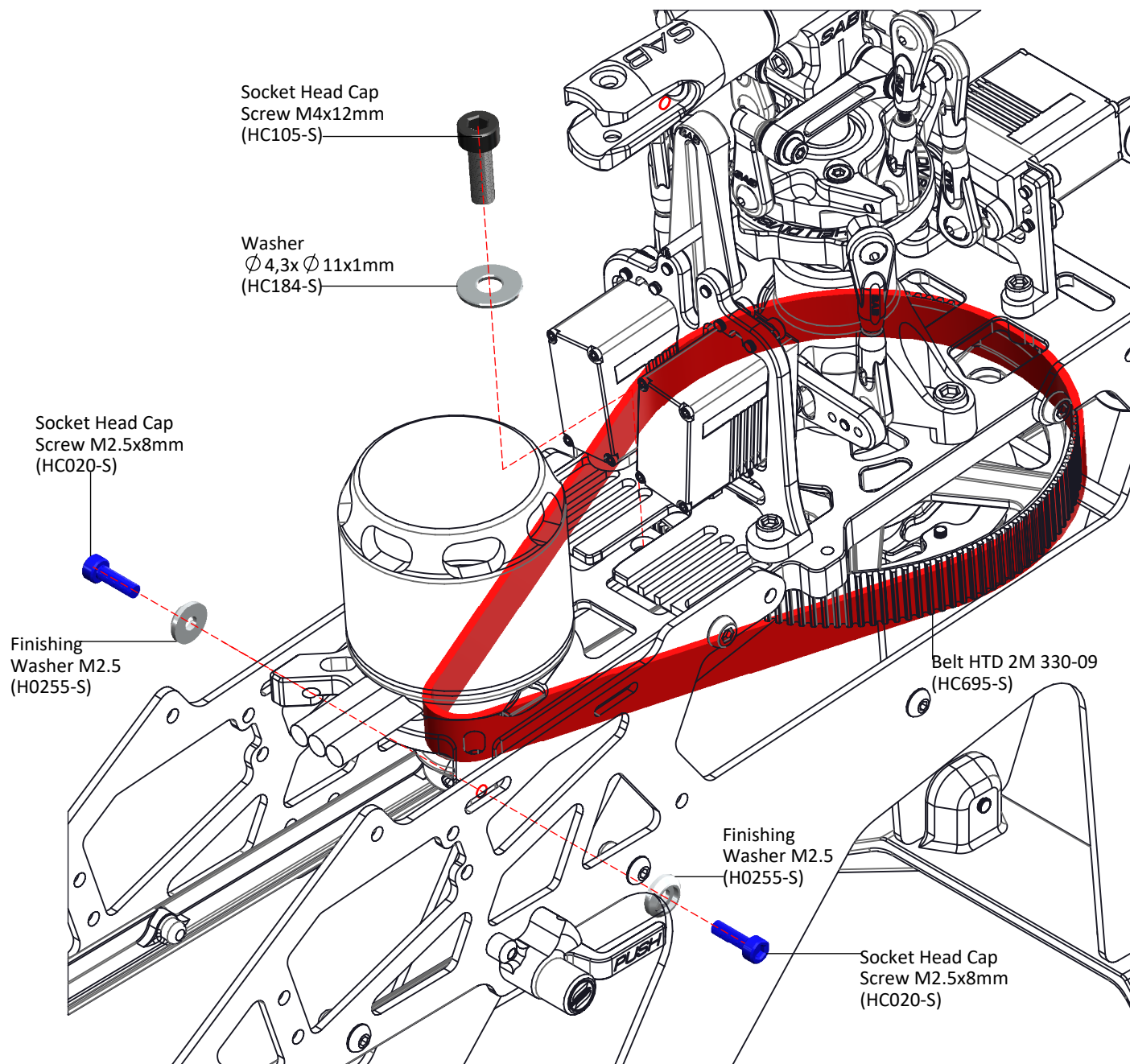
## ILGOBLIN PRO 426 CONFIGURATIONS ( BLADES 420mm )

MOTOR	ESC	Motor Pulley	RPM Max	Pitch
Scorpion HK5 3220-955	Scorpion Tribunus III 06-80A	<b>19T - 20T</b>	<b>3100 - 3200</b>	± 12.5
XNOVA 3220-950		<b>20T - 21T</b>	<b>3100 - 3200</b>	
TENGU 3220HS / 960KV		<b>19T - 20T</b>	<b>3100 - 3200</b>	
MINIPYRO 400-10	Platinum 80A V4	<b>18T - 19T</b>	<b>3100 - 3200</b>	
XNOVA 3215-945	KOLIBRI 90LV-I	<b>19T - 20T</b>	<b>3000 - 3100</b>	
XNOVA 2820-920		<b>20T - 21T</b>	<b>3000 - 3100</b>	
TENGU 3220HS / 900KV		<b>20T - 21T</b>	<b>3000 - 3100</b>	
	YGE 95LVT			

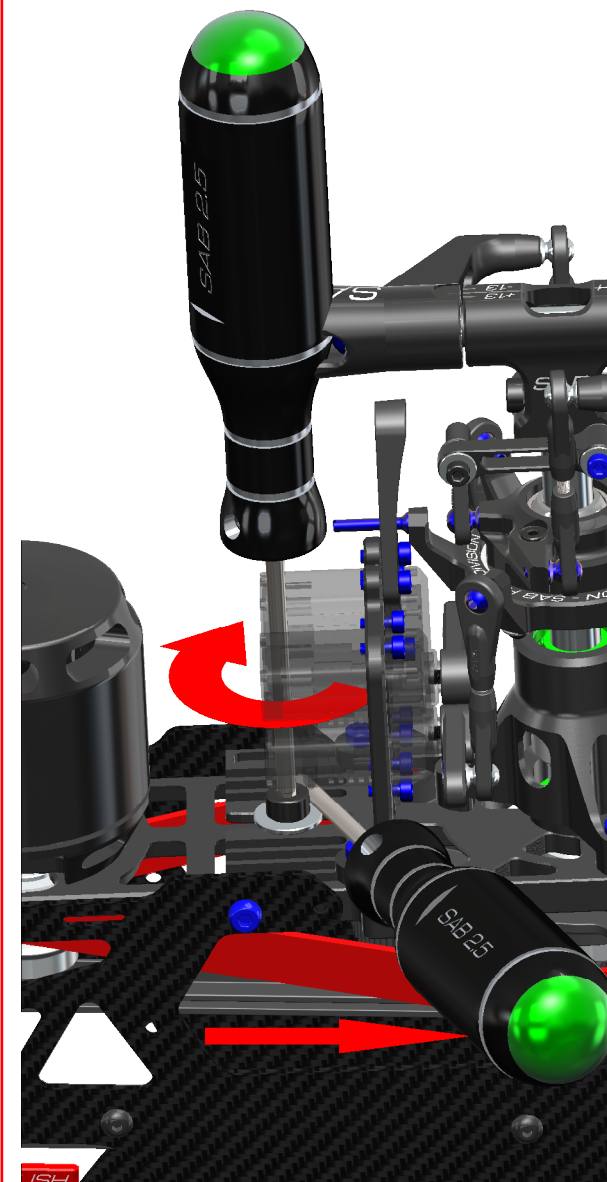


**NOTE: For safety reason we recommend not exceeding 3200 RPM.**





## MOTOR BELT TENSION





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## TAIL GROUP ASSEMBLY

BOX 2, BAG FOR PAGE 19

**NOTE:**

It is normal for the tail to feel a bit tight after initial assembly as the tail spindle preload is usually high when the helicopter is brand new. The preload will loosen up after 2-5 flights allowing the system to become smooth.



eg: Microlube GL261

Thrust Bearing  
 $\phi 3x \phi 6x2.8$   
 (HC448-S)

Washer  $\phi 4.5x \phi 5.9x0.5\text{mm}$   
 [H0541]  
 (H0540-S)

Tail Blade Grip  
 Assembly  
 (H1461-S)

Ball Bearing  $\phi 3x \phi 7x3$   
 (HC458-S)

Already Assembled  
 With Loctite

Washer  
 $\phi 3x \phi 4.75x0.5\text{mm}$   
 (H0540-S)

Tail Spindle  
 (H1689-S)

O-ring  
 [HC452]  
 (HC453-S)

Tail Shaft  
 Assembly  
 (H1460-S)

Ball Bearing  $\phi 3x \phi 6x2.5$   
 (HC457-S)

Already Assembled  
 With Loctite

Uniball M3  
 (H0065-S)

Socket Head Cap  
 Screw M2x6mm  
 (HC004-S)

Washer  
 $\phi 2.1x \phi 4.5x0.5\text{mm}$   
 (H0566-S)

LARGER ID

SMALLER ID

## TAIL PITCH SLIDER ASSEMBLY

Socket Head Cap  
 Screws M2x6mm  
 (HC004-S)

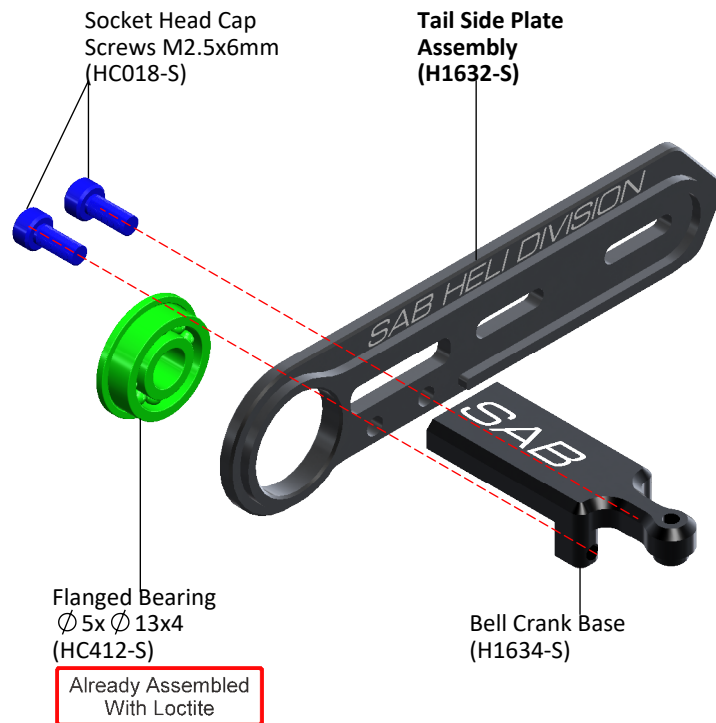
Spacer  $\phi 2x \phi 3x3\text{mm}$   
 [H0076]  
 (H0261-S)

Note: S >> Left Side

Tail Pitch Slider  
 Assembly  
 (H0512-S)

Note: S >> Right Side

Tail Pitch Slider Link  
 (H0261-S)



## Tail Pulley Z20 Assembly (H1459-S)

Already Assembled With Loctite

Set Screw M3x4mm (HC500-S)

**NOTE:**  
The set screw must align with the hole in the tail shaft

Socket Head Cap Screws M2x5mm (HC002-S)

Uniball M2 (H0064-S)

Flanged Bearing  $\phi 2.5 \times \phi 6 \times 2.6$  (HC400-S)

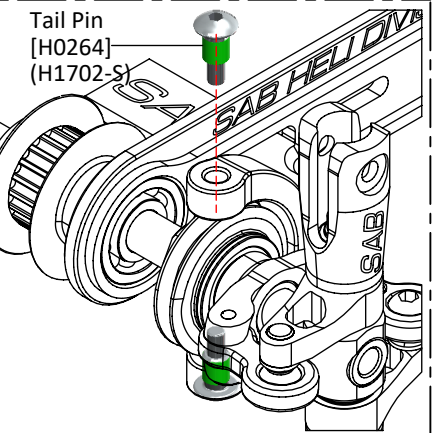
Flanged Bearing  $\phi 2.5 \times \phi 6 \times 2.6$  (HC400-S)

Bushing [H0253] (H1702-S)

Bell Crank (H1702-S)

Socket Head Cap Screw M2.5x18mm (HC032-S)

## TAIL BLADE GRIP ASSEMBLY



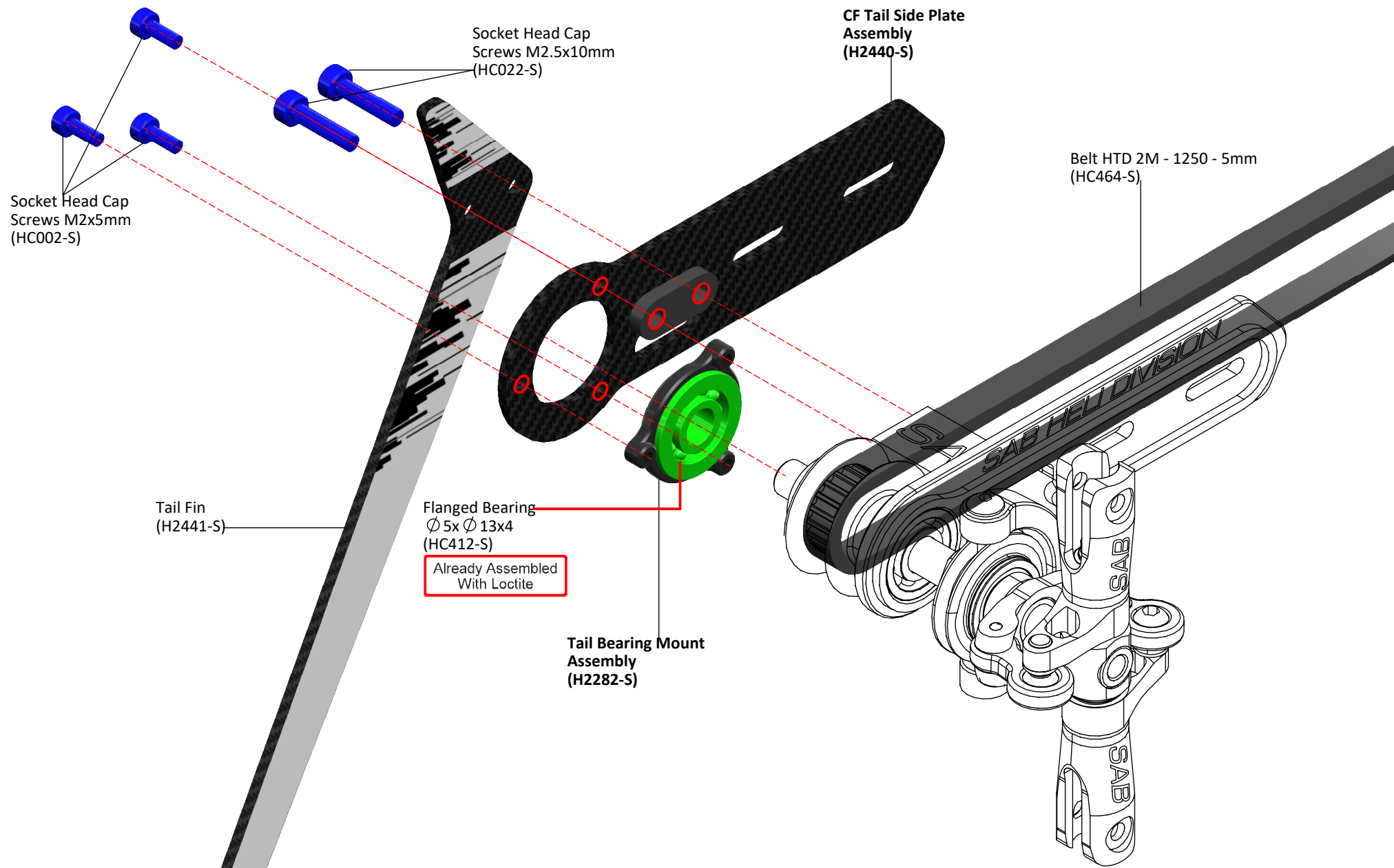


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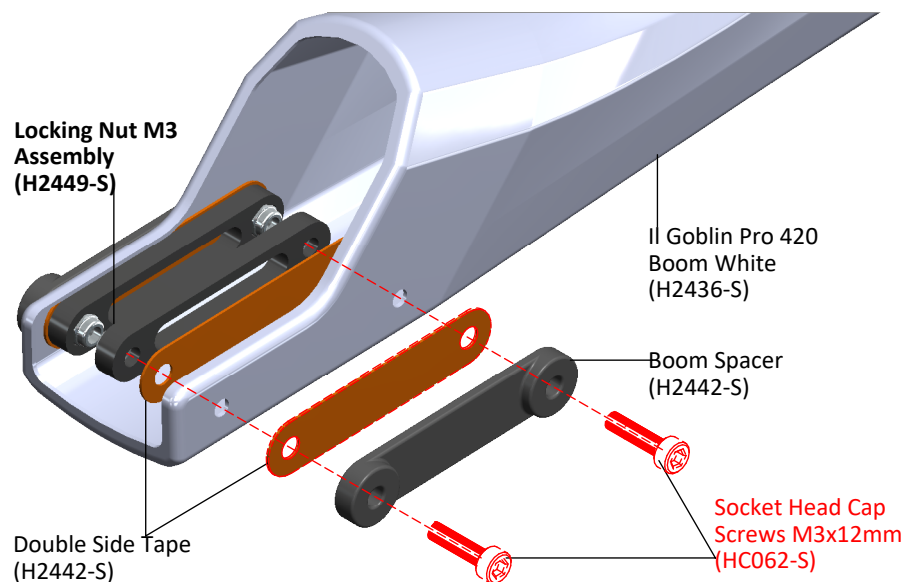
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## TAIL GROUP ASSEMBLY

BOX 2, BAG FOR PAGE 21



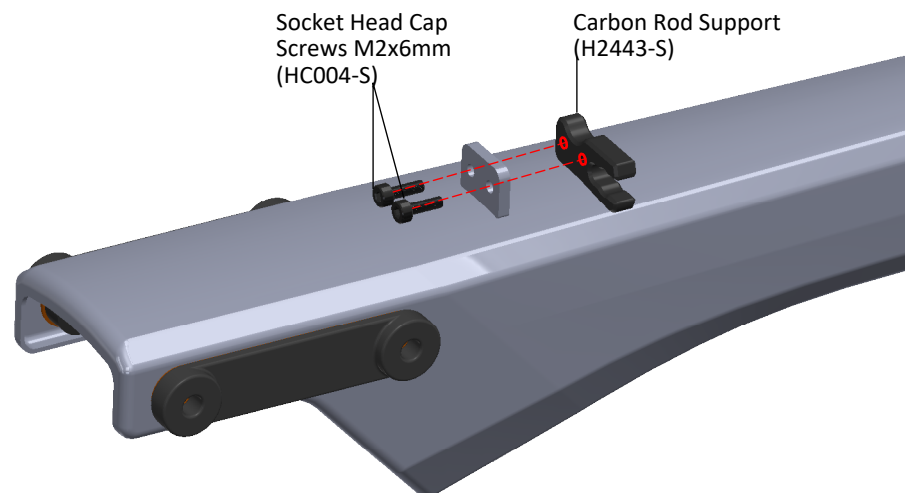
**SUGGESTION:** You can use M3x12 screws to aid in mounting the spacer and locking piece to the boom. Remove all screws after complete.



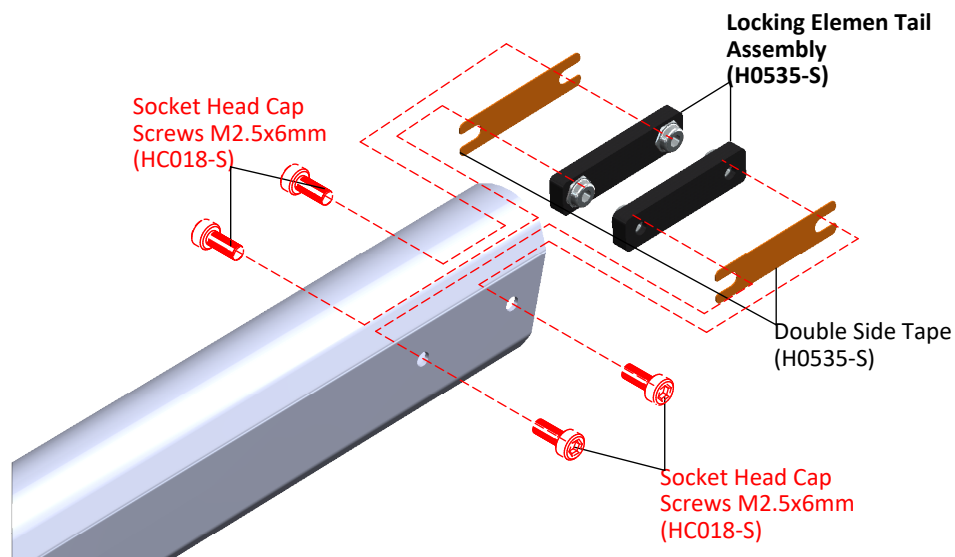
**NOTE:**

Use a small qty CA Glue in all M2 screws.  
Do not over tighten all M2 screws.

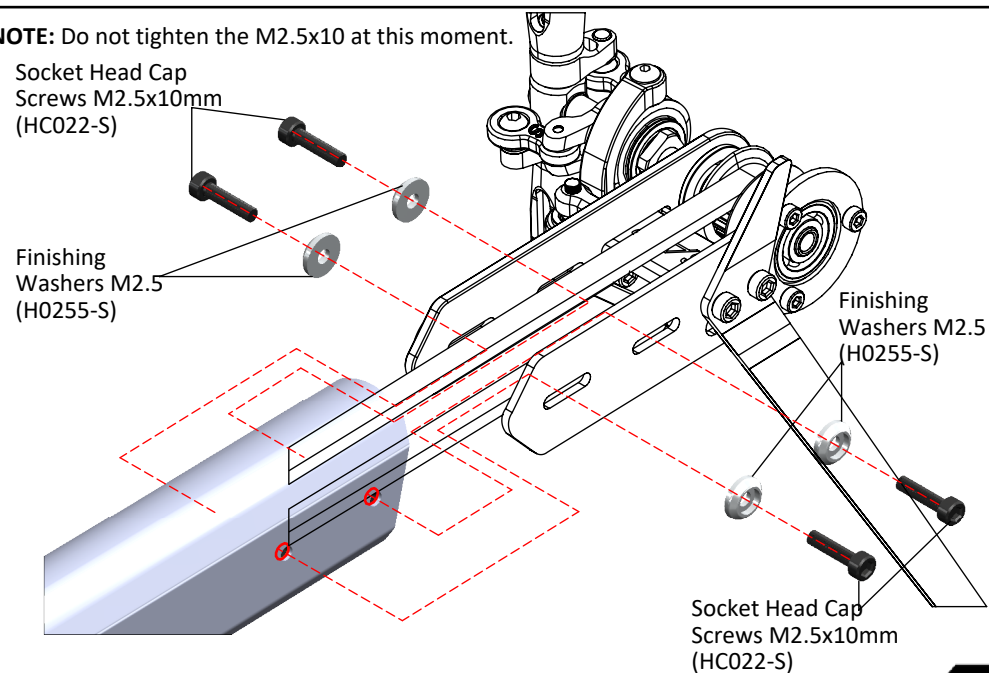
**BOX 2, BAG FOR PAGE 22**



**SUGGESTION:** You can use M2.5x6 screws to aid in mounting the spacer and locking piece to the boom. Remove all screws after complete.



**NOTE:** Do not tighten the M2.5x10 at this moment.





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## TAIL BOOM ASSEMBLY

BOX 2, BAG FOR PAGE 23

## TAIL BOOM ASSEMBLY

To fit the tail belt, loosen the tail case by loosening the 4 M3 screws (**Figure 1**).

\*Install the belt onto the tail front pulley, checking the direction of rotation.

\*Insert and tighten the 4 M3 screws.

\*Rotate the tail drive several times by hand.

\*Tension the tail case by hand and slowly tighten the 2 BLACK screws in (**Figure 2**).

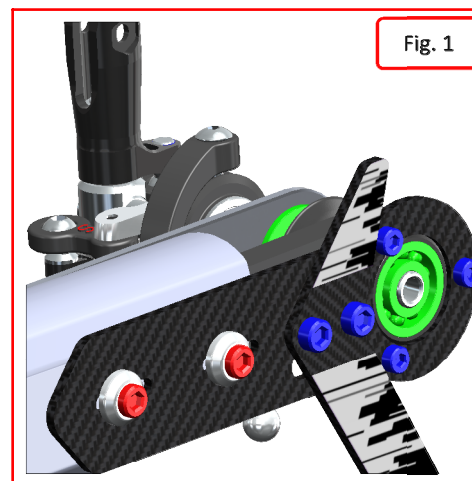
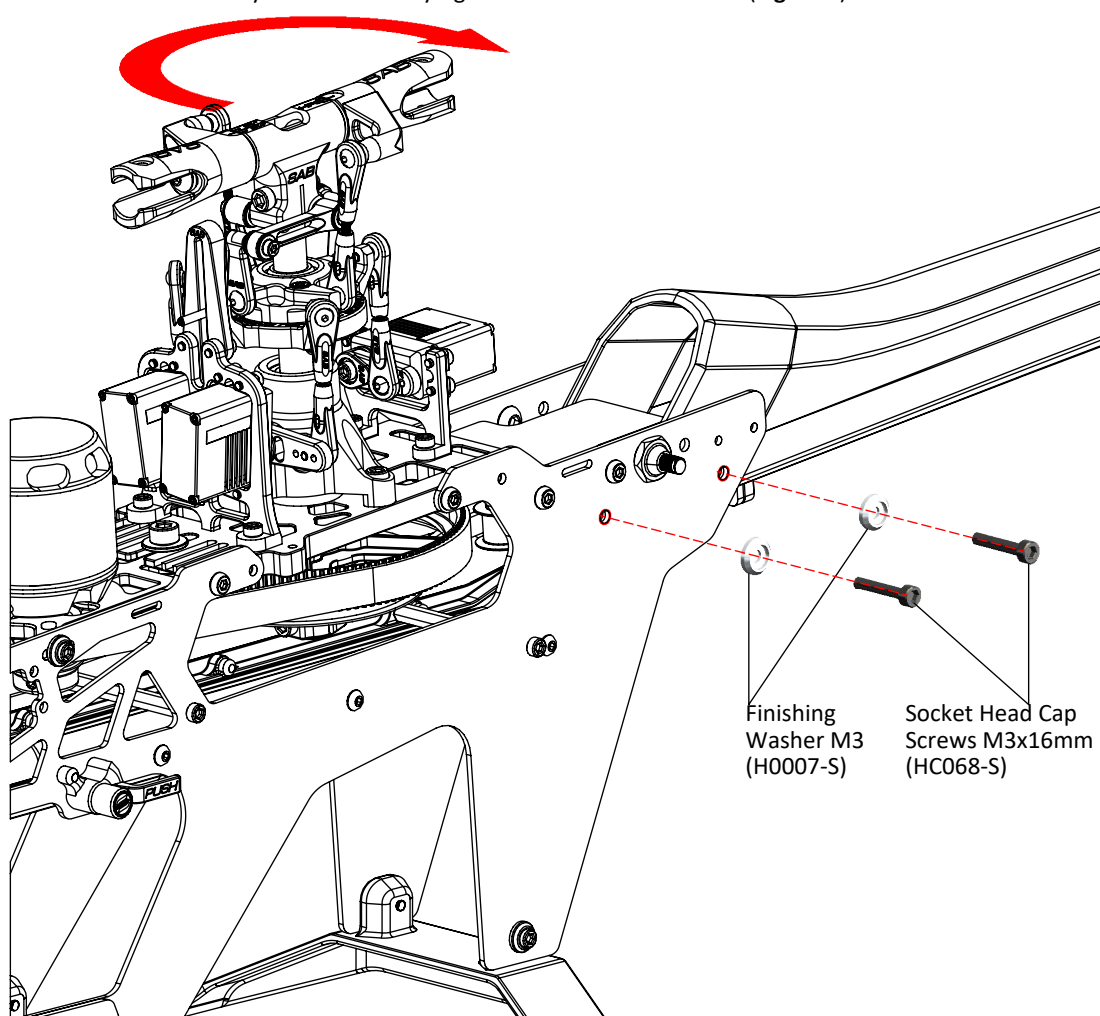


Fig. 1

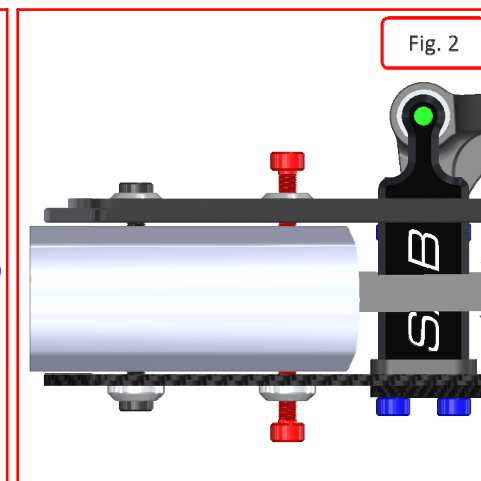


Fig. 2

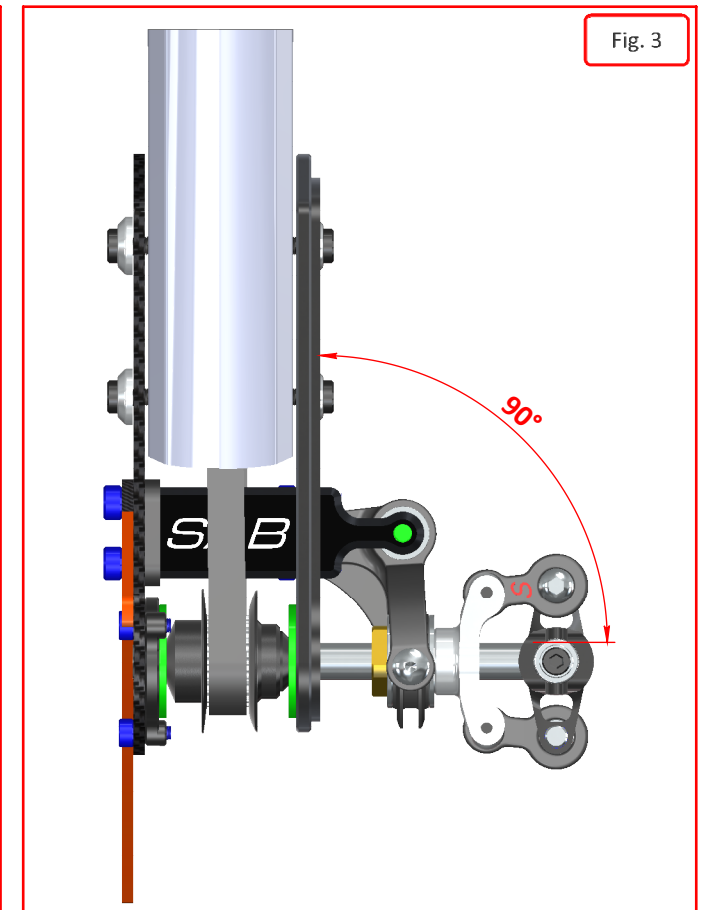
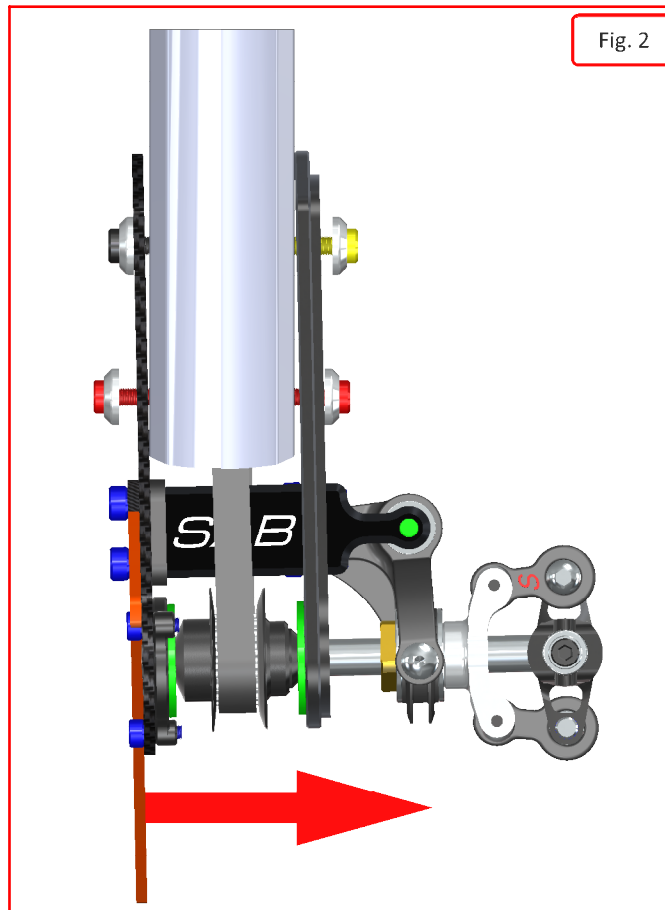
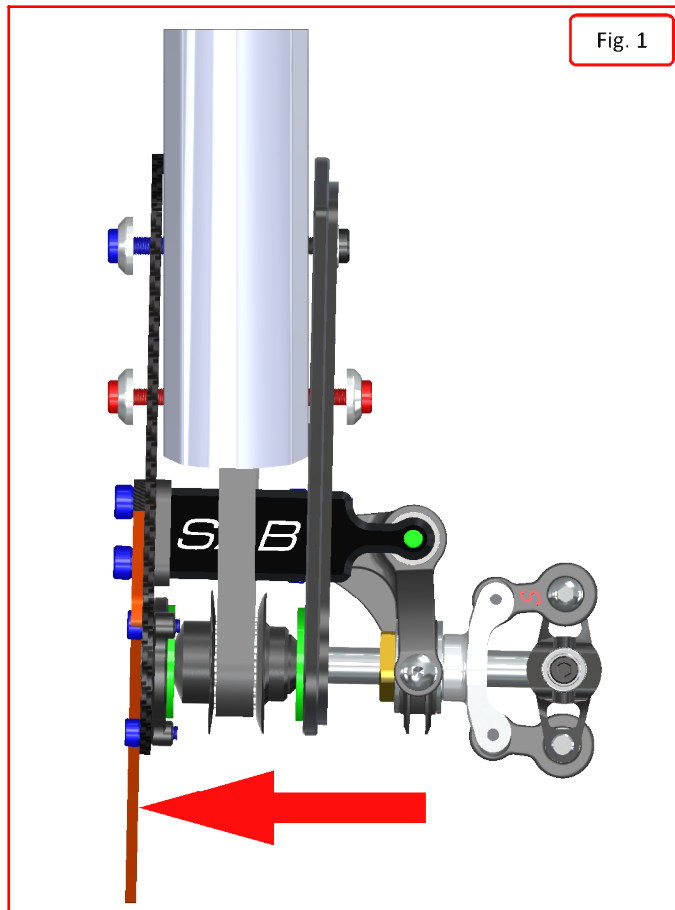
## TAIL BELT TENSION

To provide the correct tail belt tension, you can use the "zig-zag" method.

**Figure 1**, Loosen the 2 **RED** screws and the **BLUE** screw, then push the tail side in the direction indicated by the red arrow. While pushing, tighten the **BLUE** screw.

**Figure 2**, Loosen the 2 **RED** screws and the **YELLOW** screw, then push the tail side as indicated by the red arrow. While pushing, tighten the **YELLOW** screw. Continue adjusting step by step until the tail belt is sufficiently tight. Note that a Hard 3D flying style will require more tension; once you achieve the desired tension, ensure all screws are tight and the tail shaft is perfectly aligned and straight.

**Figure 3**, The tail output shaft must be perpendicular to the boom mid-line.



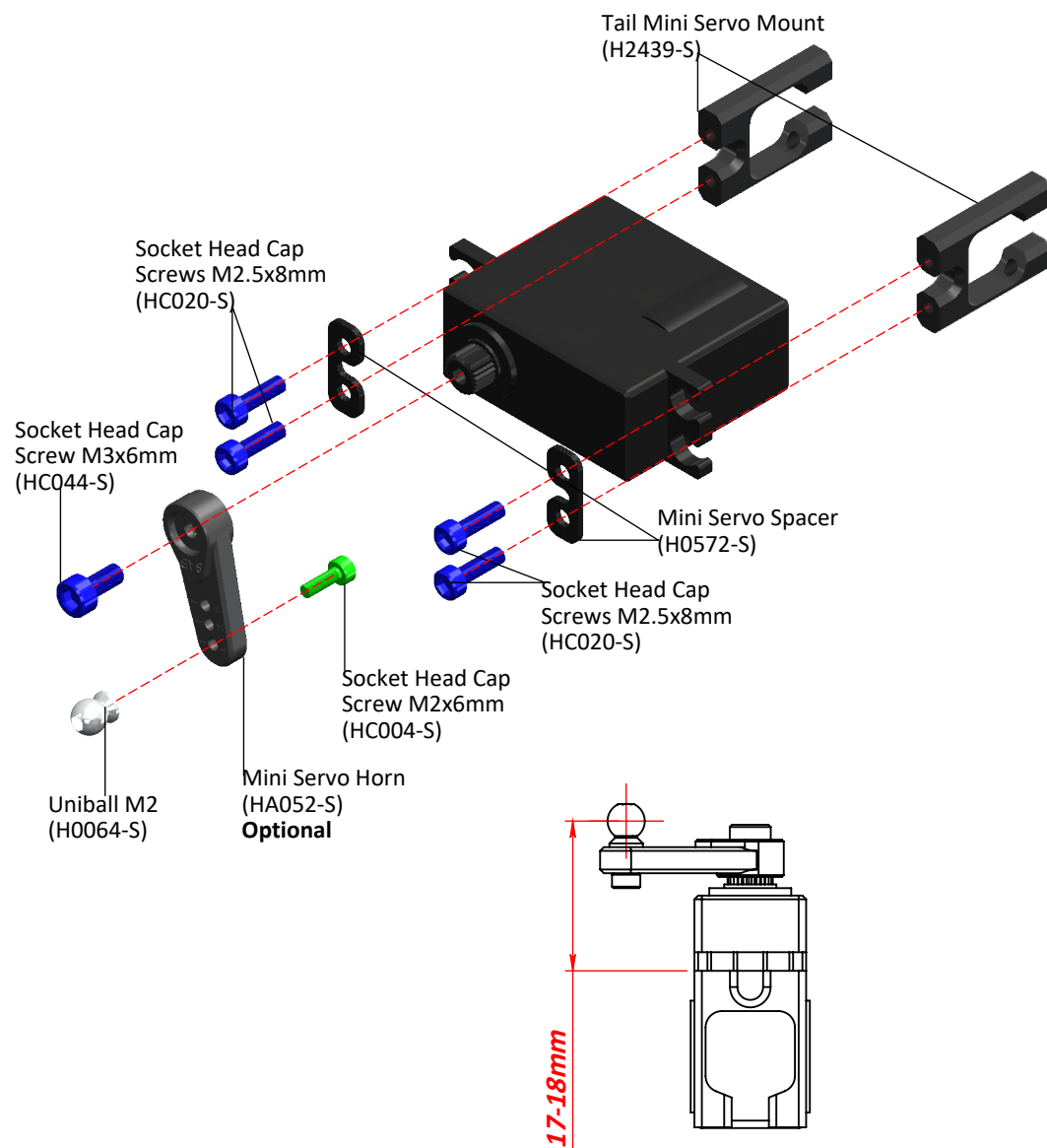


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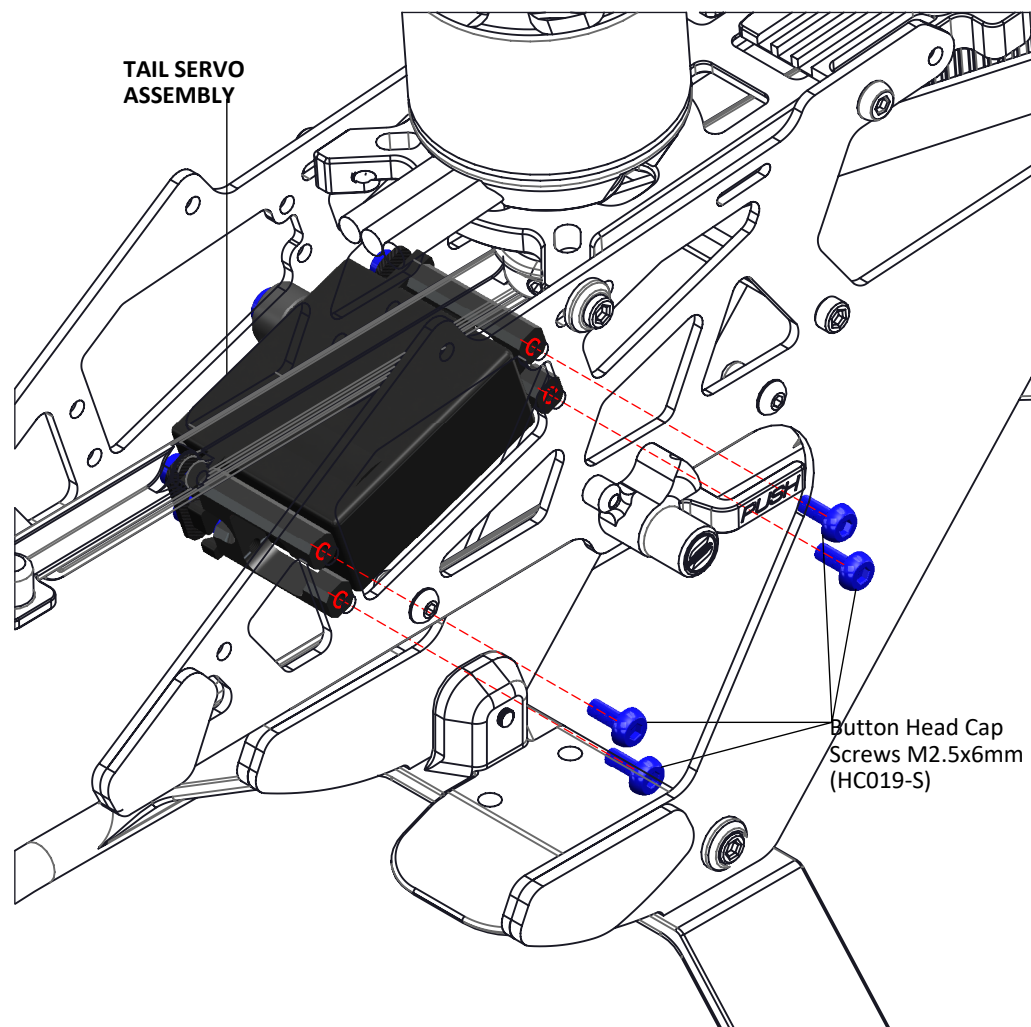
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BOX 2, BAG FOR PAGE 25

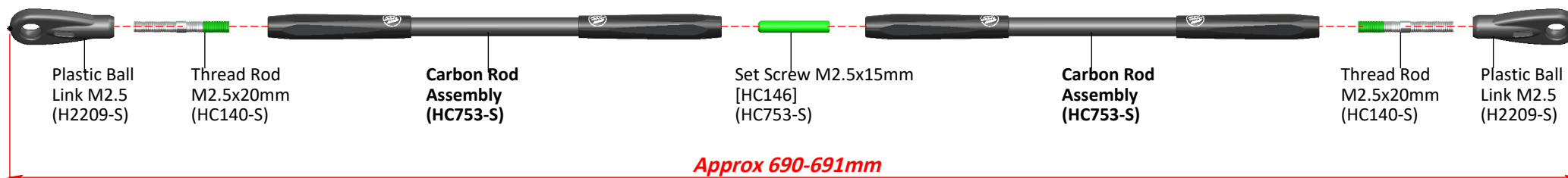
## TAIL MINI SERVO ASSEMBLY



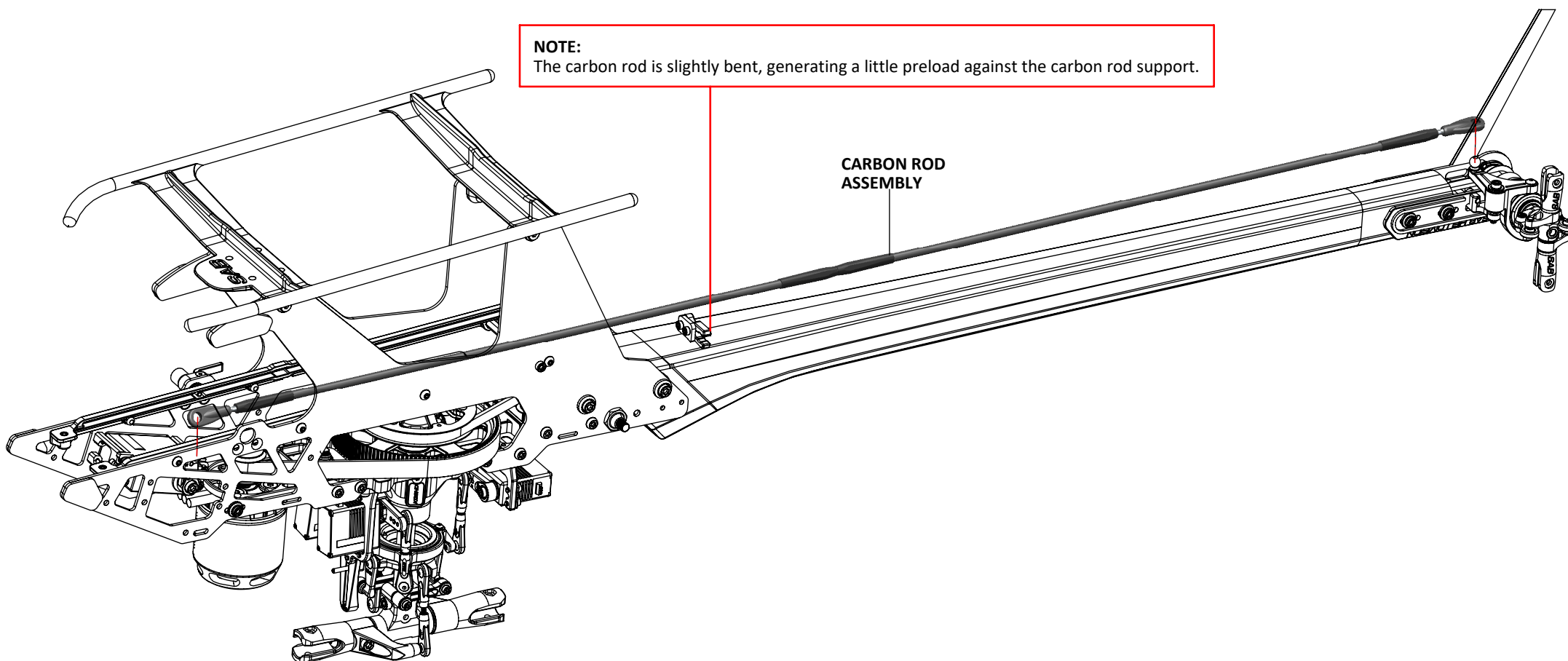
## TAIL SERVO ASSEMBLY



## CARBON ROD ASSEMBLY



**NOTE:**  
The carbon rod is slightly bent, generating a little preload against the carbon rod support.





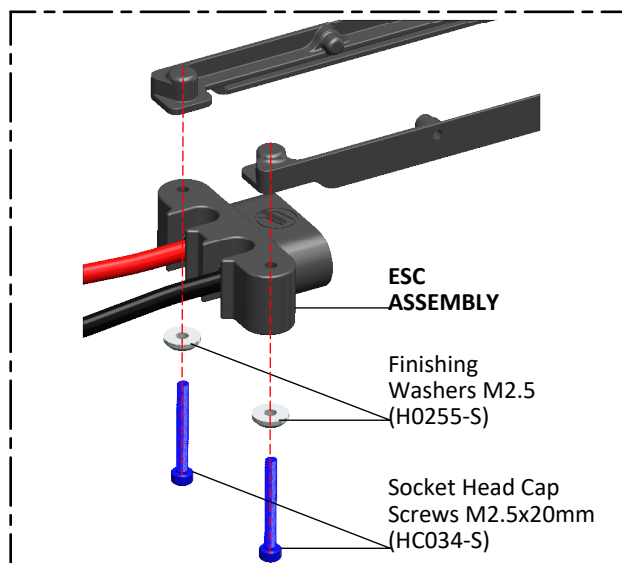
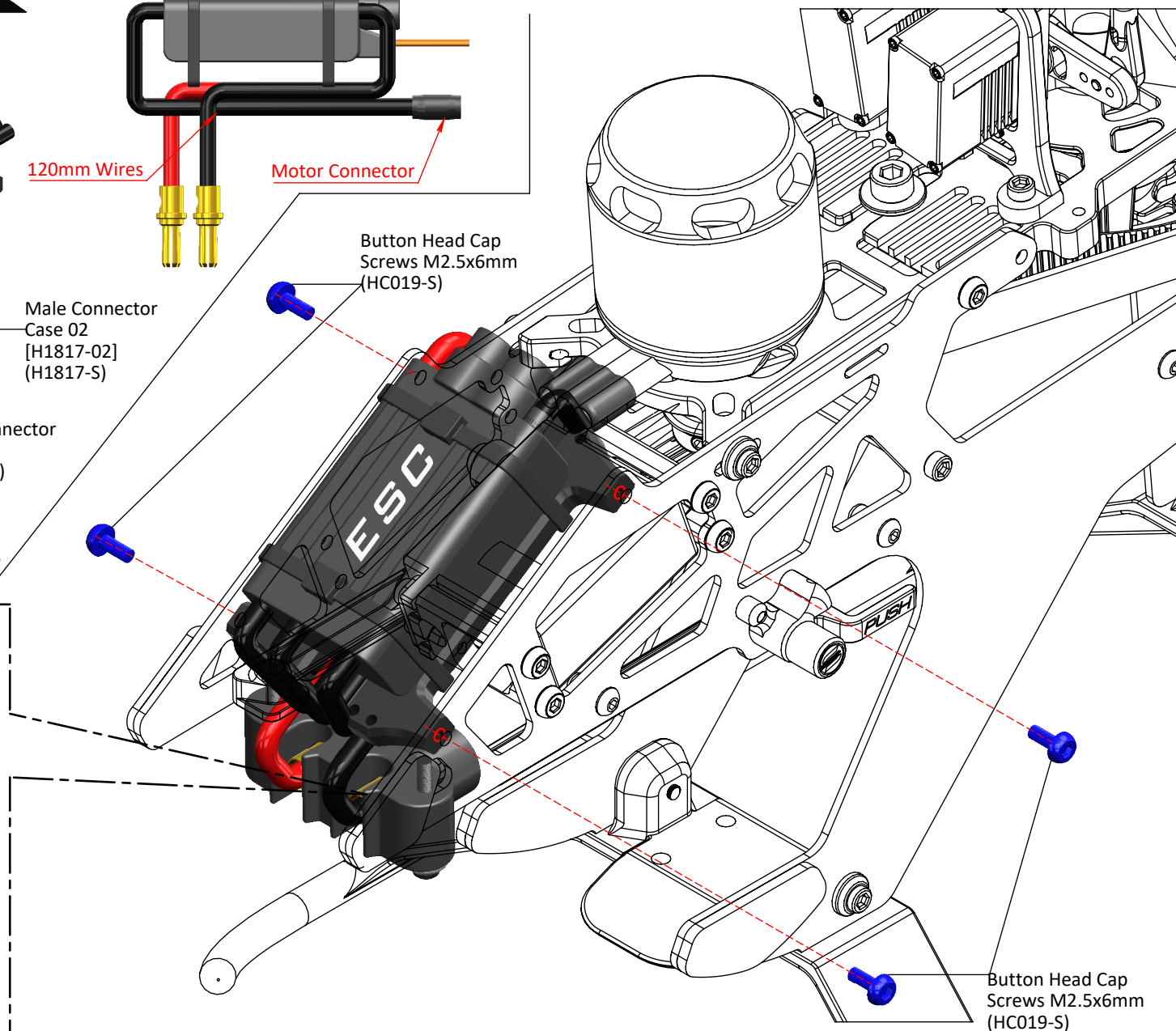
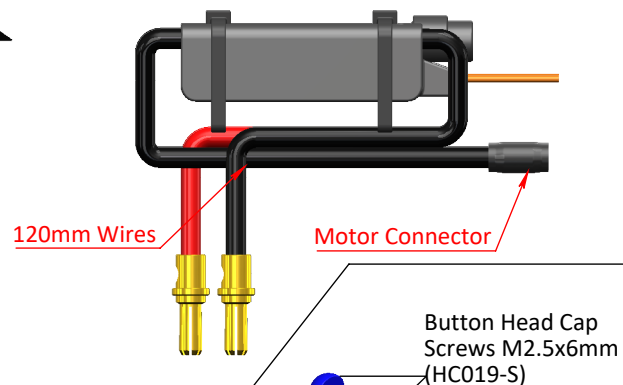
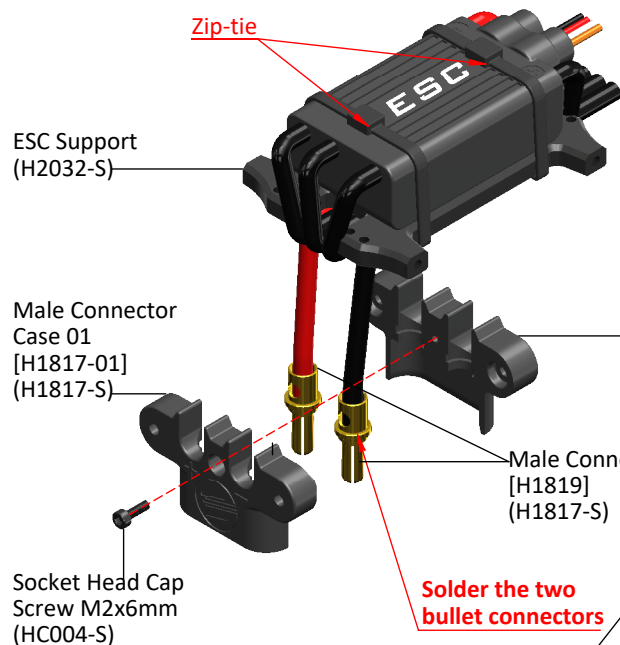
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## INSTALLATION OF THE ESC/FBL

BOX 2, BAG FOR PAGE 27

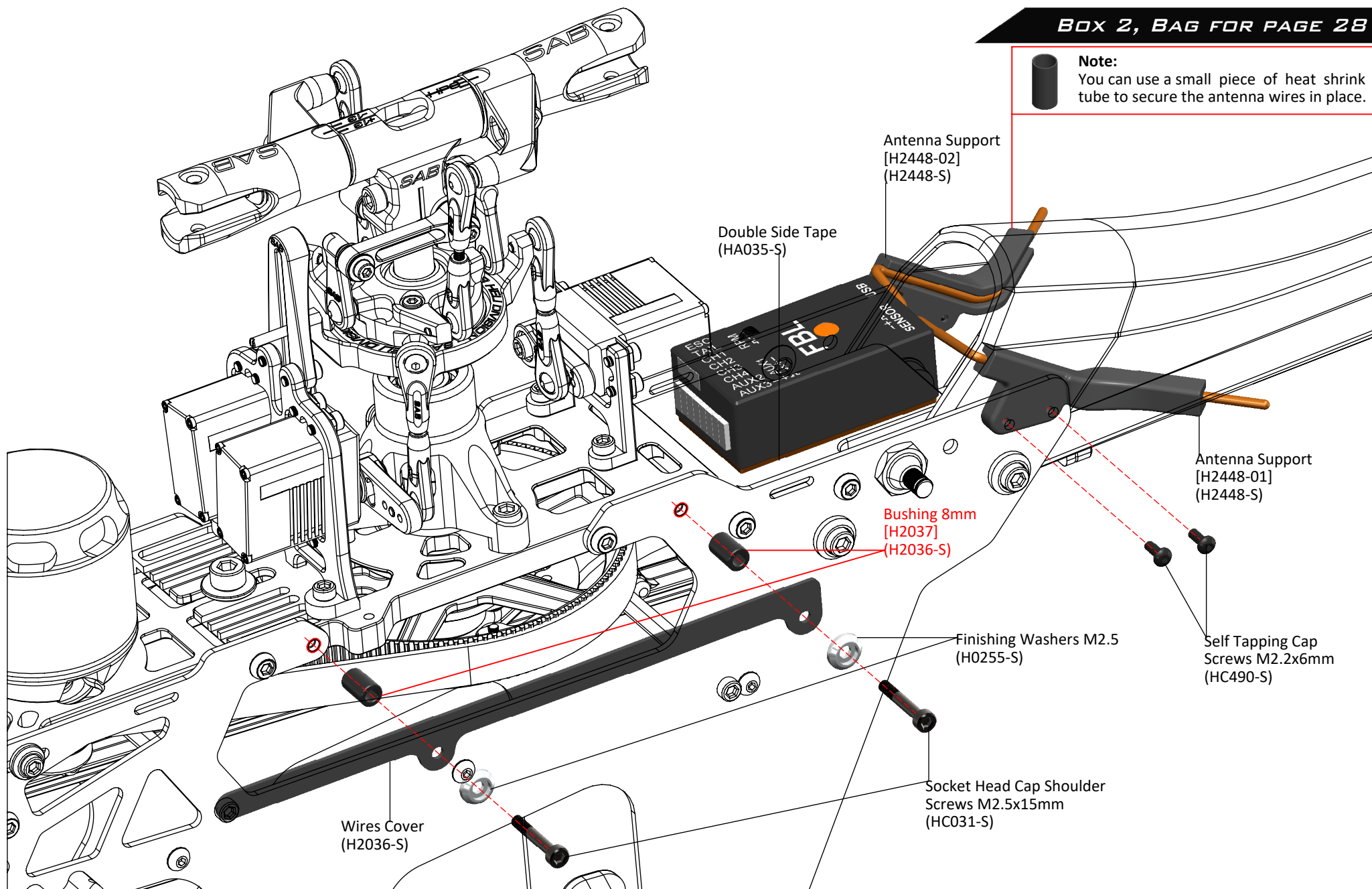
## ESC ASSEMBLY



BOX 2, BAG FOR PAGE 28



**Note:**  
You can use a small piece of heat shrink tube to secure the antenna wires in place.





**WIRES SUGGESTED**



## CANOPY

\*Install Canopy grommets (**Figure.1**). Install top centering ( **Figure.2**).

\*Fit the canopy ensuring it's correctly located in the areas as shown by the red arrows in **Fig 1**.



\*Confirm the canopy is secure prior to each flight.

Fig. 1

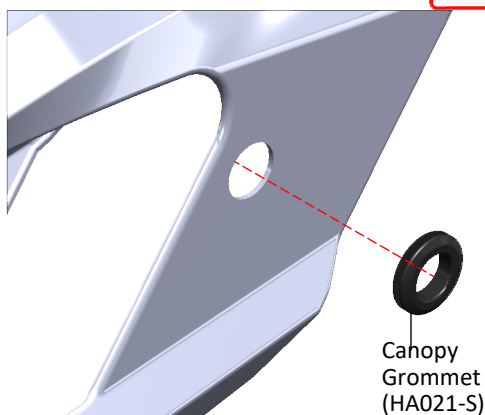
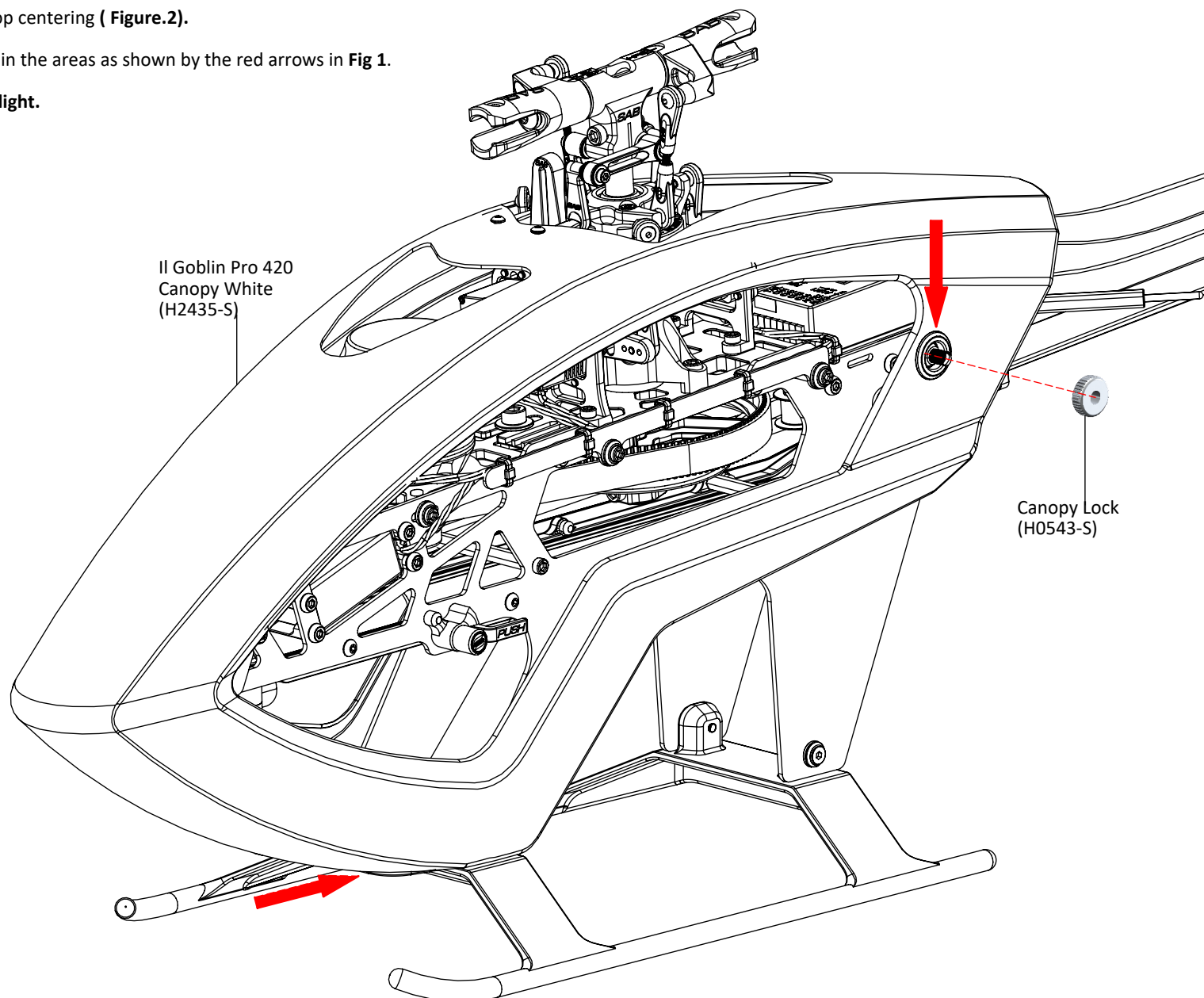
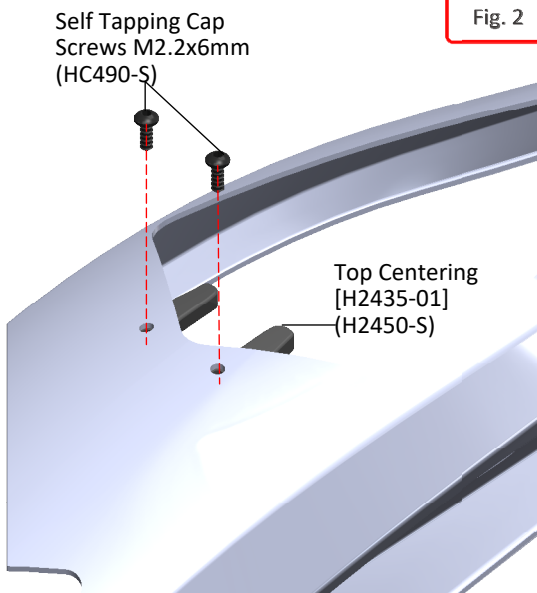


Fig. 2





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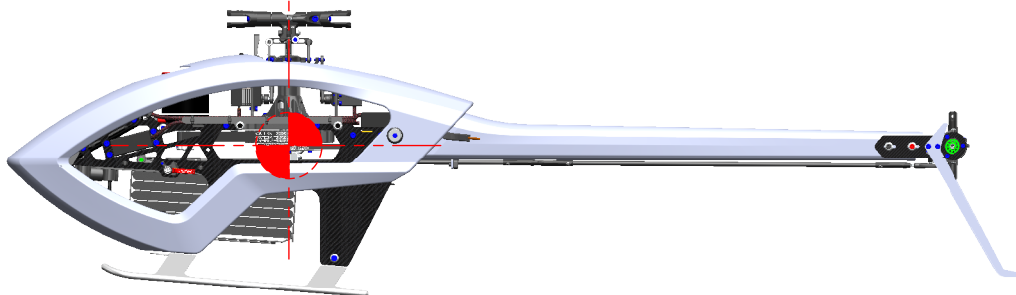
Pro  
GOBLIN

# INSTALLATION OF THE BATTERY

BOX 1, BAG FOR PAGE 31



Before permanently mounting the battery on the battery tray, check the ideal position for the best center of gravity.

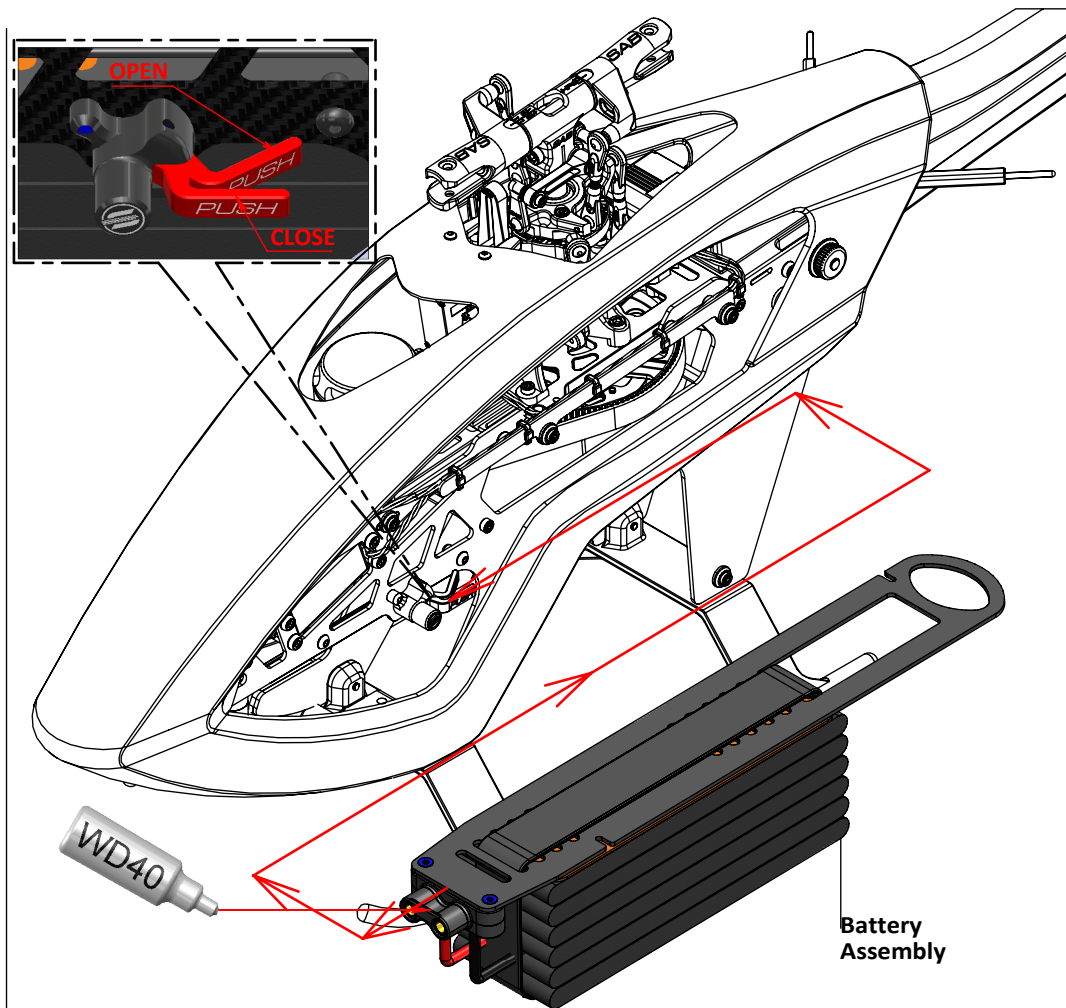
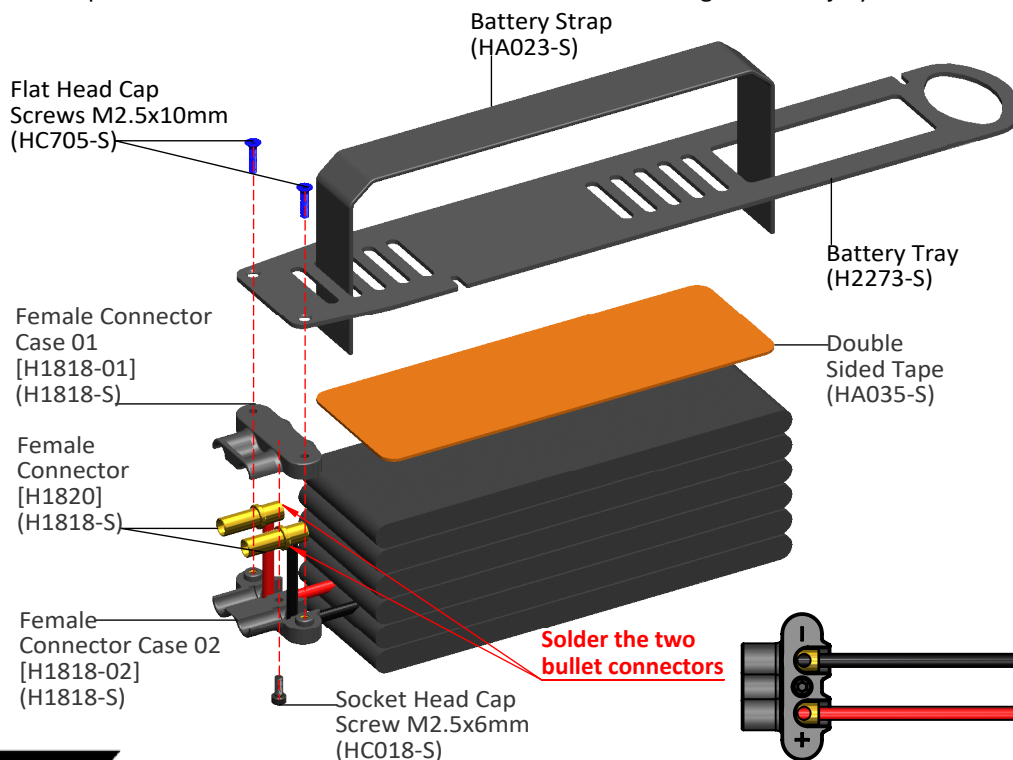


## BATTERY ASSEMBLY

Use the included double sided tape to secure the battery to the tray.  
Use the Velcro Strap [HA023-S].

## CAUTION:

Please be extremely careful when soldering and installing the female connectors to the battery and installing them on the connector case. Lack of diligence and carefulness during this step could cause the connectors to make contact causing severe injury or death.



- \* Lubricate the ESC and battery connectors with WD40. (If needed)
- \* The locking lever has 2 positions, Open and Closed.
- \* **The battery must be inserted with the lever in the closed position until a "click" is heard.**
- \* To remove the battery, rotate the lever 180 degrees to the open position and pull the tray out. We highly recommend to immediately turn the lever back to the closed position to avoid forgetting to lock the battery on the next flight.
- \* Always check that the battery is securely locked before each flight. You can check this by pulling on the battery, it should not come off if the lever is in the correct position and the battery tray is locked.



## OPERATIONS BEFORE FLIGHT

- \*Set up the remote control and the flybarless system with utmost care.
- \*It is advisable to test the correct settings of the remote and flybarless system without main blades or tail blades fitted.
- \*Check that all wiring is isolated from the carbon/aluminum parts. It is good practice to protect them at the points where they are at most risk.

**! Be sure of the gear ratio, verifying carefully the motor pulley in use. The forces acting on the mechanics increase enormously with increase of rpm. Although the Goblin can fly at high rpm, for safety reasons we suggest to not exceed 3400rpm.**

- \*Fit the main blades and tail blades. (Figure.1 and Figure.2)
- \*Please make sure the main blades are tight on the blade grips, you should be able to violently jerk the head in both directions and the blades should not fold. Failure to tighten the blades properly can result in a boom strike. To fold the blades for storage, it is advisable to loosen them.
- \*Check the collective and cyclic pitch. For 3D flight, set about +/-13°.
- \*It is important to check the correct tracking of the main blades.  
On the Goblin, in order to correct the tracking, adjust the main link rod. This is provided with a right/left thread system that allows continuous fine adjustments of the length of the control rod; for this adjustment it is not necessary to detach the ball link.

- \*Confirm the canopy is secure prior to each flight.
- \*Make sure that the battery locking pin is back in its resting position, blocking in correct way the battery tray.

**! Perform the first flight at a low headspeed, 2200/2300 RPM.**

After this first flight, do a general check of the helicopter. Verify that all screws are correctly tightened.

## FIRST FLIGHT

- \* Check that the connectors to the FBL / RX are all inserted correctly and secure.
- \* We suggest initially using a tail gain setting in your FBL system between 40 to 50%.

**! Check that the battery is securely locked and properly seated in the guides. The locking lever must always be oriented with the word closed facing upwards.**

- \* Perform the first flight at a low head speed, not exceeding 2200 rpm. After this first flight, do a general check of the helicopter. Verify that all the screws and bolts are correctly tightened.
- \* It's very important to check the model over before every flight, check all bolts, screws, belts, ball links, etc.
- \* If the model is making any strange noises check the blades balance.  
If you want to fly high RPM (over 3000 rpm) you can replace the tail pulley with H1742-S 21T.

Fig. 1

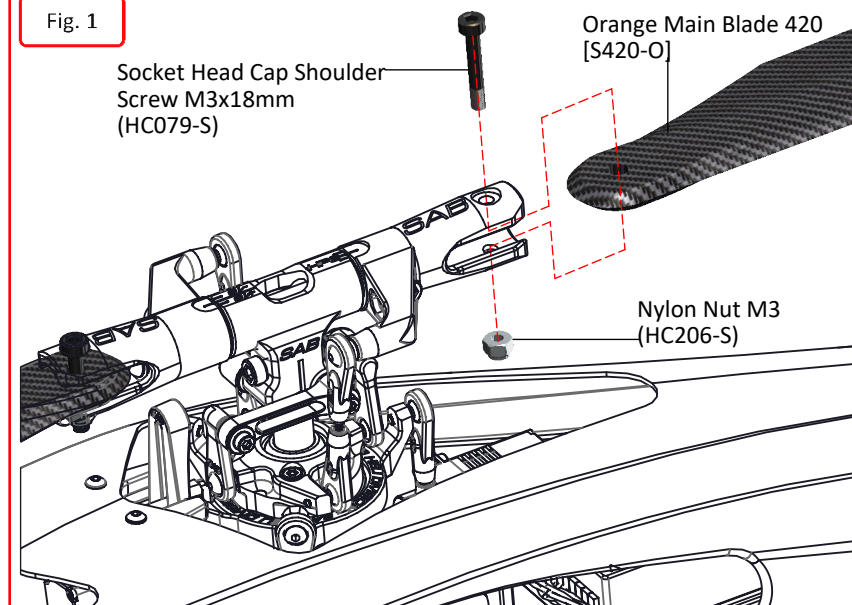
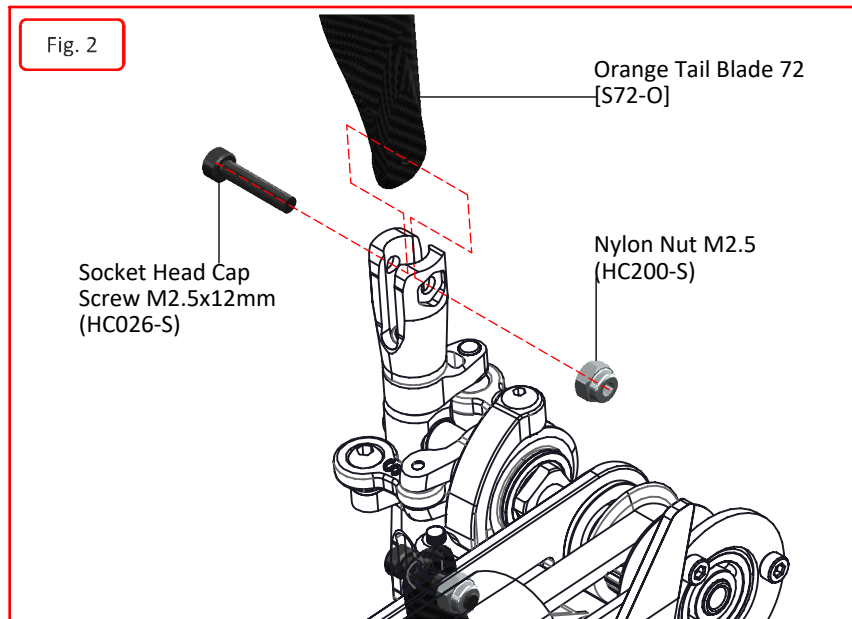


Fig. 2





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## MAINTENANCE

Take a look at the red parts.

Check them frequently. All other parts are not particularly subject to wear.

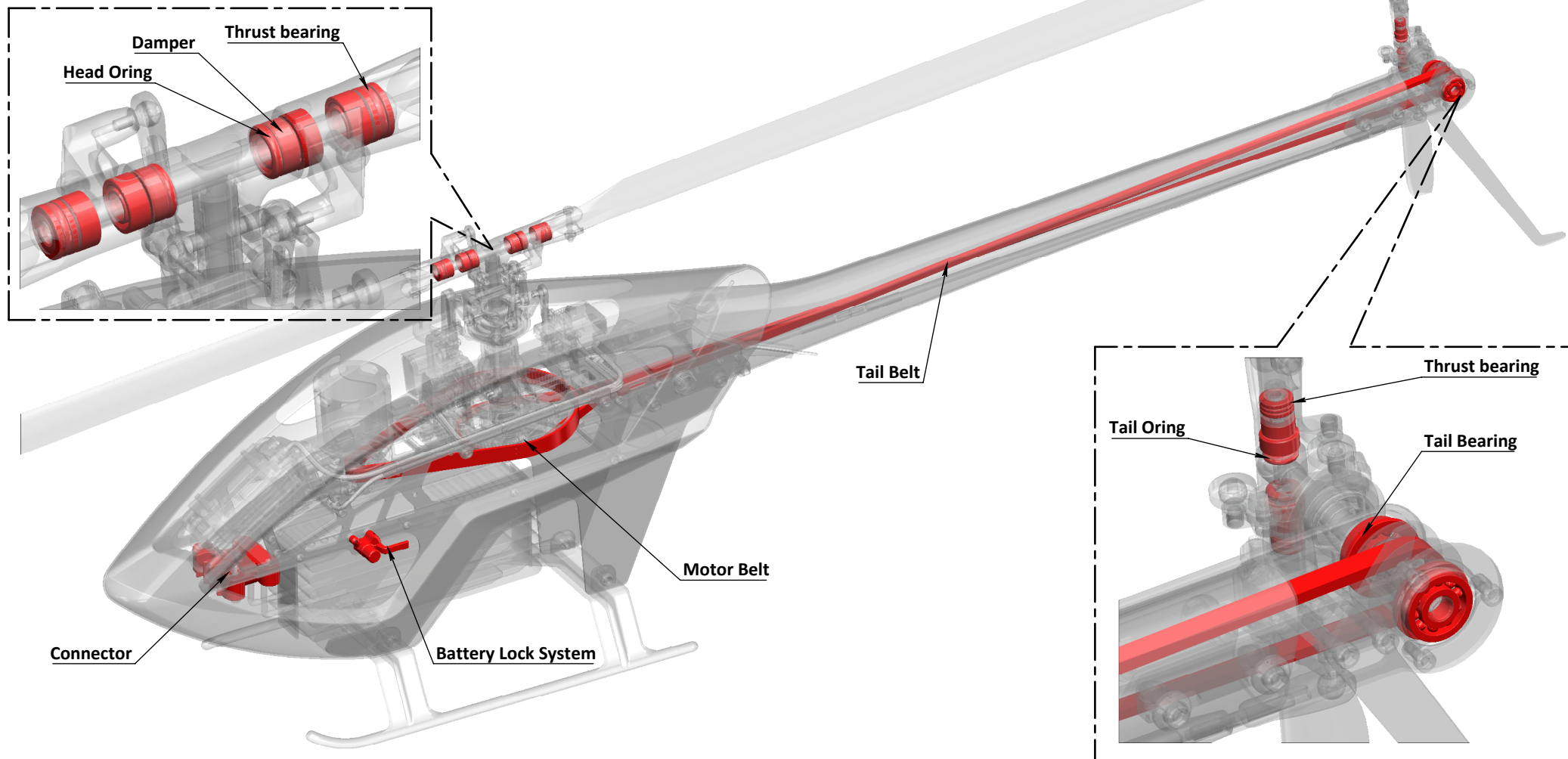
The lifespan of these components varies according to the type of flying.

On average it is recommended to check these parts every 20 flights. In some instances, based on wear, these parts should be replaced every 100 flights.

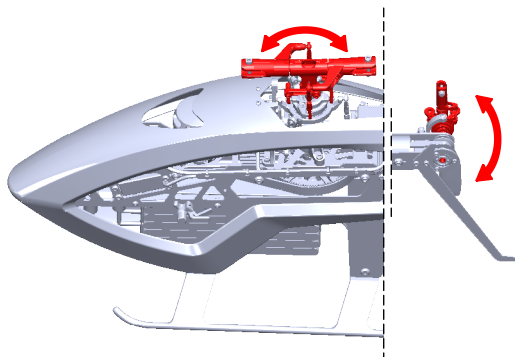
Periodically lubricate the tail slider movement and its linkages as well as the swash plate movement and its linkages.

To ensure safety you should do a general inspection of the helicopter after each flight. You should check:

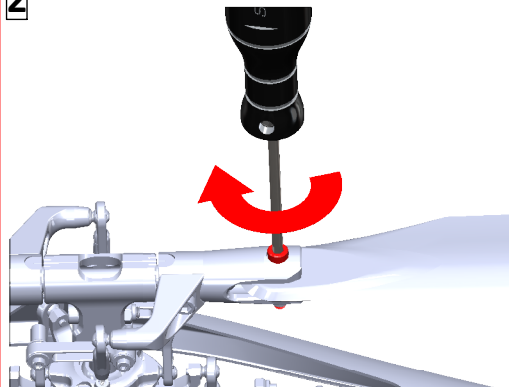
- Proper belt tension (engine belt and tail belt).
- Proper isolation of the wires from the carbon and aluminum parts.
- All screws and bolts remain tight.



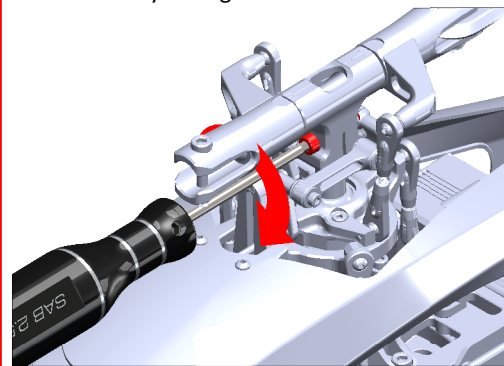
- 1** Check the dampening on the main and tail rotor to be the same as always.



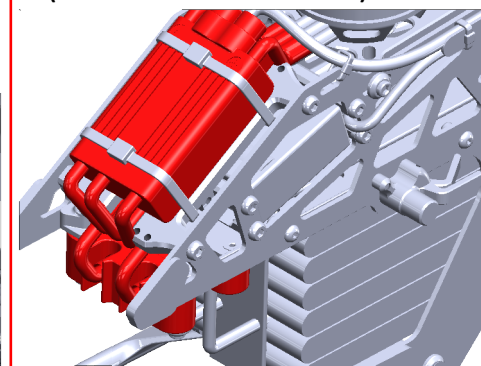
- 2** Tighten the main blades before flight.



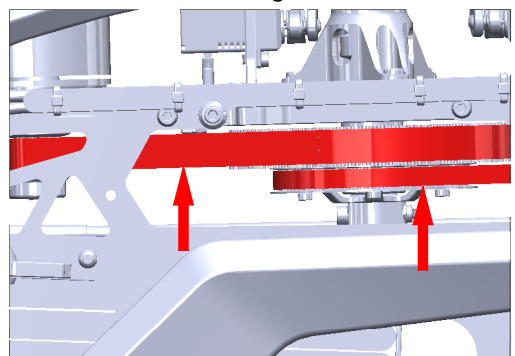
- 3** Check main hub screws M3  
Ensure they are tight.



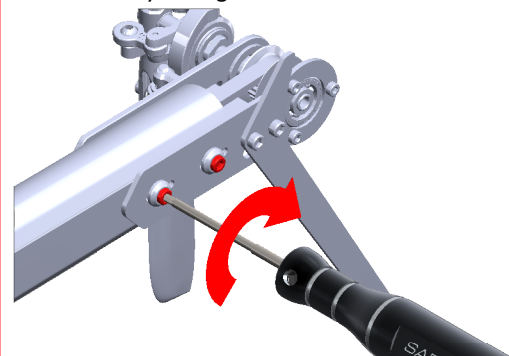
- 4** Check all power connectors  
(Good mechanical connection).



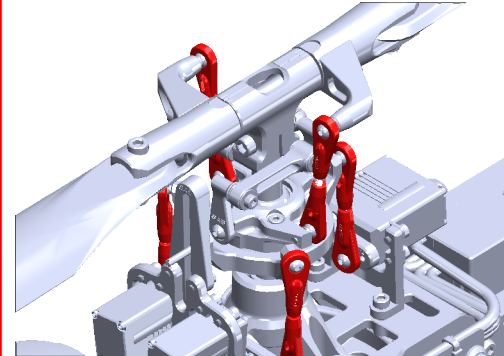
- 5** Check Tail belt tension.  
The tension has to be tight.



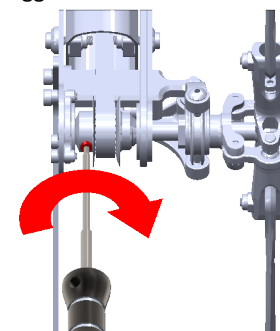
- 6** Check the 4 M2.5 Tail group screws.  
Ensure they are tight.



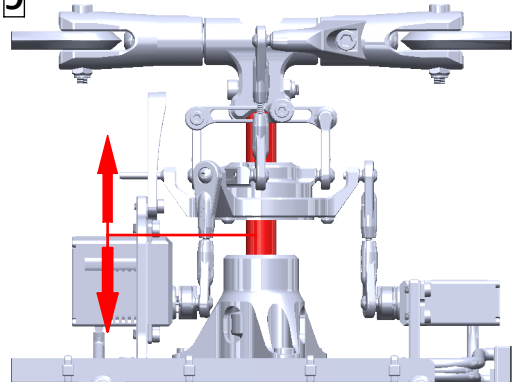
- 7** Check the Main Linkages & Servo Linkages



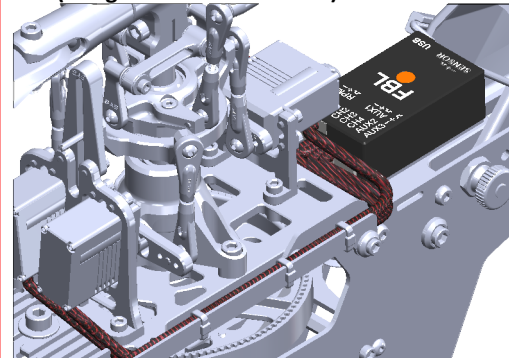
- 8** Check tail pulley set screw:  
Ensure it is tight.  
( It is suggested use a bit of Green Loctite.)



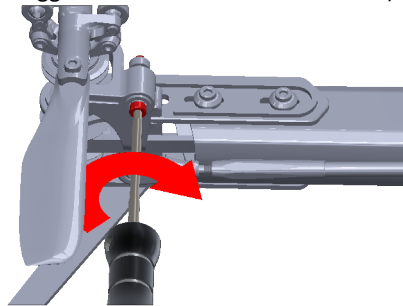
- 9** Check for vertical play of the main shaft.



- 10** Check if the FBL-RX connectors are OK  
(hot glue is recommended).














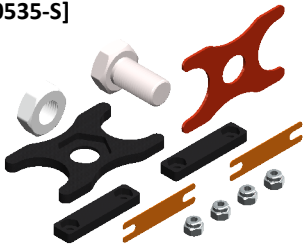


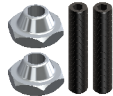
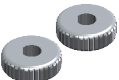




- 11** Check the M2.5 bell crank:  
Bell crank movement must be smooth  
and the screw locked.  
( It is suggested use a bit of Green Loctite.)

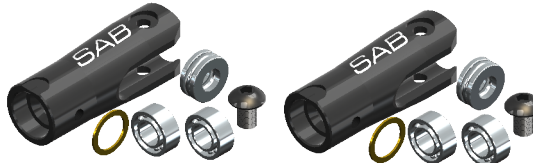





- 12** Be sure the following parts are properly lubricated  
\*Main shaft/swashplate  
\*Tail slider/tail shaft  
\*Carbon rod/carbon rod support  
\*All thrust bearings  
\*All plastic balls connections



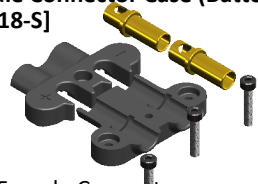


<b>Finishing Washer M3</b> [H0007-S]  - 10 x Finishing Washer M3.	<b>Uniball M2</b> [H0064-S]  - 5 x Uniballs M2. - 5 x Uniball Spacers. - 5 x Socket Head Cap Screws M2x6mm. - 5 x Socket Head Cap Screws M2x8mm.	<b>Uniball M3</b> [H0065-S]  - 5 x Uniball M3.	<b>Finishing Washer M2.5</b> [H0255-S]  - 10 x Finishing Washer M2.5.	<b>Plastic Linkage</b> [H0261-S]  - 2 x Plastic Linkage. - 2 x Spacers. - 2 x Socket Head Cap Screws M2x6mm.
<b>Plastic Ball Link M2</b> [H0403-S]  - 5 x Plastic Ball Link M2.	<b>Motor Pulley 19T-24T</b> [H0501-19-24-S]  - 1 x Motor Pulley Assembly 19T-24T. - 1 x Set Screw M3x6mm.	<b>Main Spindle</b> [H0508-S]  - 1 x Main Spindle. - 2 x Button Head Cap Screws M4x6mm.	<b>Tail Spitch Slider</b> [H0512-S]  - 1 x Tail Spitch Slider 01. - 1 x Tail Spitch Slider 02. - 1 x Tail Spitch Slider 03. - 2 x Flanged Bearing $\varnothing 7 \times \varnothing 11 \times 2.5$ .	<b>Damper Set</b> [H0518-S]  - 2 x Damper. - 2 x Oring 106, 1.78 x 6.75. - 2 x Shims $\varnothing 5 \times \varnothing 7 \times 0.1 \text{mm}$ . - 2 x Washer $\varnothing 7.5 \times \varnothing 10 \times 0.5$ . - 2 x Button Head Cap Screws M4x6mm.
<b>Radius Plastic Arm</b> [H0525-S]  - 2 x Radius Plastic Arm. - 2 x Washer $\varnothing 2.2 \times \varnothing 5 \times 0.3 \text{mm}$ .	<b>Tail Element Locking</b> [H0535-S]  - 1 x Tail Element Locking SET.	<b>Uniball M2</b> [H0538-S]  - 5 x Uniball M2.	<b>Tail Spacers Set</b> [H0540-S]  - 2 x Washer $\varnothing 3 \times \varnothing 4.75 \times 0.5$ . - 2 x Washer $\varnothing 4.5 \times \varnothing 5.9 \times 0.5$ . - 2 x Washer $\varnothing 2.1 \times \varnothing 4.5 \times 0.5$ . - 2 x Socket Head Cap Screws M2x6mm. - 2 x Oring 2012, DI=2.9, S=1.78.	<b>Canopy Position</b> [H0542-S]  - 2 x Canopy Position. - 2 x Set Screws M4x20mm.
<b>Canopy Knob</b> [H0543-S]  - 2 x Canopy Knob.	<b>Washer <math>\varnothing 2.1 \times \varnothing 4.5 \times 0.5</math></b> [H0566-S]  - 10 x Washer $\varnothing 2.1 \times \varnothing 4.5 \times 0.5$ .	<b>Servo Spacer</b> [H0572-S]  - 4 x Servo Spacer.	<b>Tail Belt Ilder</b> [H0575-S]  - 1 x Tail Belt Ilder. - 2 x Flanged Bearing $\varnothing 2.5 \times \varnothing 6 \times 2.6$ .	<b>Serial Number</b> [H1212-S]  - 1 x Serial Number. - 1 x Flat Head Cap Screw M2.5x5mm.

<b>Center Hub</b> [H1445-S]	<b>Main Blade Grip</b> [H1446-S]		<b>Tail Pulley 20T</b> [H1459-S]	<b>Tail Shaft</b> [H1460-S]
				
<ul style="list-style-type: none"><li>- 1 x Center Hub.</li><li>- 1 x Socket Head Shoulder Screw M3x16mm.</li><li>- 1 x Nylon Nut M3.</li></ul>	<ul style="list-style-type: none"><li>- 2 x Main Blade Grip.</li><li>- 4 x Bearing <math>\varnothing 5 \times \varnothing 10 \times 4</math>.</li><li>- 2 x Washer <math>\varnothing 7.5 \times \varnothing 10 \times 0.5</math>.</li><li>- 2 x Thrust Bearing <math>\varnothing 5 \times \varnothing 10 \times 4</math>.</li><li>- 2 x Button Head Cap Screws M4x6mm.</li></ul>		<ul style="list-style-type: none"><li>- 1 x Tail Pulley 20T.</li><li>- 1 x Set Screw M3x4mm.</li></ul>	<ul style="list-style-type: none"><li>- 1 x Tail Shaft.</li><li>- 1 x Tail Hub.</li><li>- 2 x Tail Oring.</li></ul>
<b>Tail Blade Grip</b> [H1461-S]	<b>Plastic Landing Gear</b> [H1465-W-S]		<b>Bearing Support</b> [H1473-S]	<b>Swashplate</b> [H1566-S]
				
<ul style="list-style-type: none"><li>- 2 x Tail Blade Grip.</li><li>- 2 x Bearing <math>\varnothing 3 \times \varnothing 7 \times 3</math>.</li><li>- 2 x Bearing <math>\varnothing 3 \times \varnothing 6 \times 2.5</math>.</li><li>- 2 x Washer <math>\varnothing 4,5 \times \varnothing 5.9 \times 0,5</math>.</li><li>- 2 x Washer <math>\varnothing 2.1 \times \varnothing 4.5 \times 0,5</math>.</li><li>- 2 x Socket Head Cap Screws M2x6mm.</li><li>- 2 x Thrust Bearing <math>\varnothing 3 \times \varnothing 6 \times 2.8</math>.</li></ul>	<ul style="list-style-type: none"><li>- 1 x Plastic Landing Gear.</li><li>- 4 x Finishing Washer M2.5.</li><li>- 4 x Socket Head Cap Screws M2.5x8mm.</li></ul>		<ul style="list-style-type: none"><li>- 1 x Bearing Support.</li><li>- 1 x Bearing <math>\varnothing 8 \times \varnothing 16 \times 5</math>.</li><li>- 3 x Socket Head Cap Screws M3x10.</li></ul>	<ul style="list-style-type: none"><li>- 7 x Uniball M2.</li><li>- 1 x Reference Pin.</li><li>- 1 x Swashplate ASM.</li></ul>
<b>Main Shaft Block</b> [H1567-S]	<b>Front Servo Mount</b> [H1568-S]	<b>Rear Servo Mount</b> [H1569-S]	<b>Alu Tail Side Plate</b> [H1632-S]	<b>Tail Case Spacer</b> [H1634-S]
				
<ul style="list-style-type: none"><li>- 1 x Main Shaft Block.</li><li>- 2 x Set Screws M4x4mm.</li></ul>	<ul style="list-style-type: none"><li>- 1 x Front Servo Mount.</li><li>- 1 x Micro Servo Tool.</li><li>- 2 x Socket Head Cap Screws M2.5x8.</li></ul>	<ul style="list-style-type: none"><li>- 1 x Rear Servo Mount.</li><li>- 2 x Socket Head Cap Screws M2.5x8.</li></ul>	<ul style="list-style-type: none"><li>- 1 x Alu Tail Side Plate.</li><li>- 1 x Flanged Bearing <math>\varnothing 5 \times \varnothing 13 \times 4</math>.</li></ul>	<ul style="list-style-type: none"><li>- 1 x Tail Case Spacer.</li><li>- 2 x Socket Head Cap Screws M2.5x6.</li></ul>
<b>Anti-rotation</b> [H1687-S]	<b>Tail Spindle</b> [H1689-S]	<b>Blade Grip Arm</b> [H1701-S]	<b>Bell Crank Clever</b> [H1702-S]	<b>Male Connector Case ( ESC Side )</b> [H1817-S]
				
<ul style="list-style-type: none"><li>- 1 x Anti-Rotation.</li><li>- 3 x Socket Head Cap Screws M2x6.</li></ul>	<ul style="list-style-type: none"><li>- 1 x Main Spindle.</li><li>- 2 x Socket Head Cap Screws M2x6mm.</li><li>- 2 x Washer <math>\varnothing 2.1 \times \varnothing 4.5 \times 0.5</math>.</li></ul>	<ul style="list-style-type: none"><li>- 2 x Blade Grip Arm.</li><li>- 2 x Uniball M2.</li><li>- 2 x Socket Head Cap Screws M3x6mm.</li></ul>	<ul style="list-style-type: none"><li>- 1 x Bushing.</li><li>- 2 x Tail Pin.</li><li>- 1 x Uniball M2.</li><li>- 1 x Bell Crank Clever.</li><li>- 1 x Socket Head Cap Screw M2x5mm.</li><li>- 2 x Flanged Bearing <math>\varnothing 2.6 \times \varnothing 6 \times 2.6</math>.</li><li>- 1 x Socket Head Cap Screw M2.5x18.</li></ul>	<ul style="list-style-type: none"><li>- 2 x Male Connector.</li><li>- 1 x Male Connector Case UP.</li><li>- 1 x Male Connector Case DOWN.</li><li>- 2 x Finishing Washer M2.5.</li><li>- 1 x Socket Head Cap Screw M2x6mm.</li><li>- 2 x Socket Head Cap Screws M2.5x20.</li></ul>

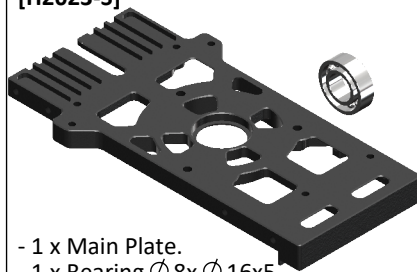


**Female Connector Case (Battery Side)**  
[H1818-S]



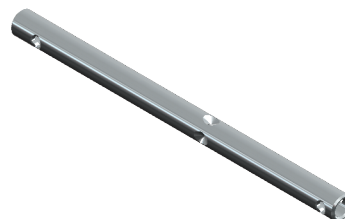
- 2 x Female Connector.
- 1 x Female Connector Case UP.
- 1 x Female Connector Case DOWN.
- 1 x Socket Head Cap Screw M2.5x6.
- 2 x Socket Head Cap Screws M2.5x12.

**Main Plate**  
[H2023-S]



- 1 x Main Plate.
- 1 x Bearing  $\varnothing 8 \times \varnothing 16 \times 5$ .

**Main Shaft**  
[H2024-S]



- 1 x Main Shaft.

**Front Tail Pulley**  
[H2025-S]



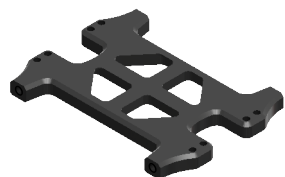
- 1 x Front Tail Pulley ASM.
- 1 x Socket Head Cap Shoulder Screw M3x16.
- 1 x Nylon Nut M3.

**Motor Mount**  
[H2026-S]



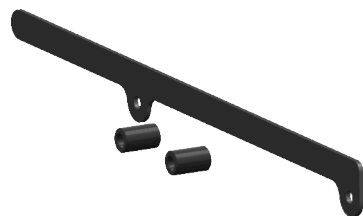
- 1 x Motor Mount.
- 2 x Finishing Washer M2.5.
- 2 x Socket Head Cap Screws M2.5x8.
- 1 x Socket Head Cap Screw M4x15.
- 1 x Washer  $\varnothing 4.3 \times \varnothing 11 \times 1$ .

**ESC Mount**  
[H2032-S]



- 1 x ESC Plate.

**Wire Cover**  
[H2036-S]



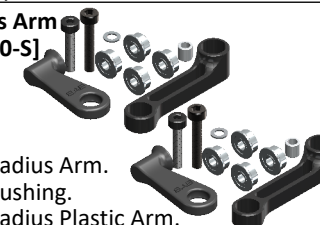
- 1 x Wire Cover.
- 2 x Bushing.

**Hex Spacer M2.5x46**  
[H2039-S]



- 1 x Hex Spacer M2.5x46.
- 4 x Socket Head Cap Screws M2.5x8.

**Radius Arm**  
[H2040-S]



- 2 x Radius Arm.
- 2 x Bushing.
- 2 x Radius Plastic Arm.
- 2 x Socket Head Cap Screws M2x10.
- 2 x Socket Head Cap Screws M2x12.
- 2 x Shims  $\varnothing 2 \times \varnothing 3.5 \times 0.3$ .
- 4 x Flanged Bearing  $\varnothing 2 \times \varnothing 5 \times 2.5$ .

**One Way Bearing Bushing**  
[H2069-S]



- 1 x One Way Bearing Bushing.

**Main Pulley**  
[H2070-S]



- 1 x Main Pulley Assembly.
- 2 x Shims  $\varnothing 10.1 \times \varnothing 12 \times 0.1 \text{mm}$ .

**Battery Lock**  
[H2172-S]



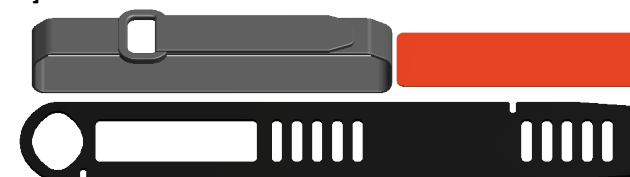
- 1 x Battery Lock Base.
- 1 x Battery Lock Push.
- 1 x Battery Lock Pin.
- 1 x Battery Lock Spring.
- 1 x Bushing.
- 2 x Flat Head Cap Screws M2.5x5mm.
- 1 x Flat Head Cap Screw M2x8mm.

**Plastic Ball Linkage M2.5**  
[H2209-S]



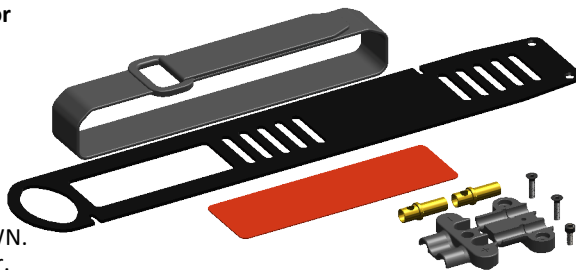
- 10 x Plastic Ball Linkage M2.5.

**Battery Tray**  
[H2273-S]



- 1 x Battery Tray.
- 1 x Battery Strap.
- 1 x Double Side Tape.

**Battery Tray Connector**  
[H2471-S]



- 1 x Battery Tray.
- 1 x Battery Strap.
- 1 x Double Side Tape.
- 1 x Female Case UP.
- 1 x Female Case DOWN.
- 2 x Female Connector.
- 1 x Socket Head Cap Screw M2.5x6mm.
- 2 x Flat Head Cap Screws M2.5x10mm.

**Tail Bearing Mount**  
[H2282-S]



- 1 x Tail Bearing Mount.
- 3 x Head Cap Screws M2x5mm.
- 1 x Flanged Bearing  $\varnothing 5 \times \varnothing 13 \times 4 \text{mm}$ .

**ILGoblin Pro 420 Canopy White**  
[H2435-S]



- 1 x Top Centering.
- 2 x Canopy Grommet.
- 1 x ILGoblin Pro 420 Canopy White.
- 2 x Self Tapping Screws M2.2x6mm.

**ILGoblin Pro 420 Boom White**  
[H2436-S]



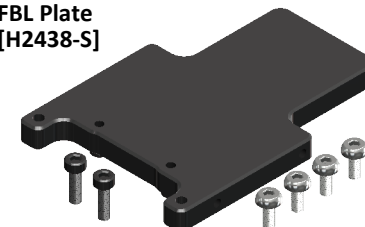
- 1 x ILGoblin Pro 420 Boom White.
- 1 x Boom Hardware SET.

**Main Frame**  
[H2437-S]



- 1 x Main Frame.
- 1 x Front Canopy Centering.
- 1 x Bottom Canopy Centering.

**FBL Plate**  
[H2438-S]



- 1 x FBL Plate.
- 4 x Button Head Cap Screws Special M2.5x6mm.
- 2 x Head Cap Screws M2.5x8mm.

**Tail Servo Mount**  
[H2439-S]



- 2 x Tail Servo Mount.
- 4 x Button Head Cap Screws Special M2.5x6mm.

**CF Tail Side Plate**  
[H2440-S]



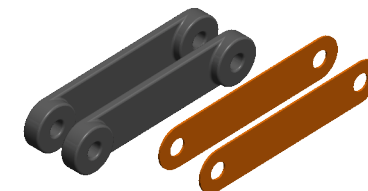
- 1 x CF Tail Side Plate.

**CF Tail Fin**  
[H2441-S]



- 1 x Tail Fin.
- 1 x Sticker.

**G10 Tail Boom Space**  
[H2442-S]



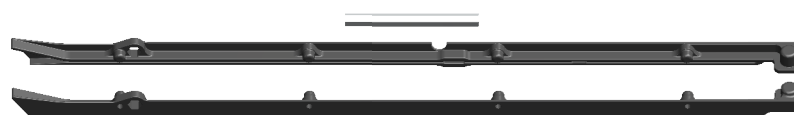
- 2 x G10 Tail Boom Spacer.
- 2 x Double Side Tape.

**Carbon Rod Support**  
[H2443-S]



- 1 x Carbon Rod Support.
- 2 x Head Cap Screws M2x6mm.

**SG426 Battery Tray Guide**  
[H2447-S]



- 1 x SX Battery Guide.
- 1 x DX Battery Guide.
- 1 x HEX Spacer.

**SG426 Antenna Support**  
[H2448-S]



- 1 x SX Antenna Support.
- 1 x DX Antenna Support.
- 4 x Self Tapping Head Cap Screws M2.2x6mm.

**G10 Lock Nut M3**  
[H2449-S]



- 2 x G10 Lock Nut M3.
- 4 x Nylon Nut M3.
- 2 x Double Side Tape.

**SG426 Canopy Centering SET**  
[H2450-S]



- 1 x Top Canopy Centering.
- 2 x Front Canopy Centering.
- 2 x Bottom Canopy Centering.
- 2 x Self Tapping Head Cap Screws M2.2x6mm.

**ILGoblin Pro 420 Canopy Yellow**  
[H2472-S]














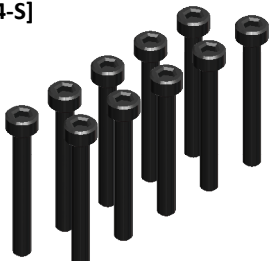








- 1 x Top Centering.
- 2 x Canopy Grommet.
- 1 x ILGoblin Pro 420 Canopy Yellow.
- 2 x Self Tapping Screws M2.2x6mm.

**ILGoblin Pro 420 Boom Yellow**  
[H2473-S]



- 1 x ILGoblin Pro 420 Boom Yellow.
- 1 x Boom Hardware SET.



<b>Socket Head Cap Screws M2x5mm</b> [HC002-S]   - 10 x Head Cap Screws M2x5mm.	<b>Socket Head Cap Screws M2x6mm</b> [HC004-S]   - 10 x Head Cap Screws M2x6mm.	<b>Socket Head Cap Screws M2x10mm</b> [HC010-S]   - 10 x Head Cap Screws M2x10mm.	<b>Socket Head Cap Screws M2x12mm</b> [HC014-S]   - 10 x Head Cap Screws M2x12mm.	<b>Socket Head Cap Screws M2.5x6mm</b> [HC018-S]   - 10 x Head Cap Screws M2.5x6mm.
<b>Button Head Cap Screws M2.5x6mm</b> [HC019-S]   - 10 x Button Cap Screws M2.5x6mm.	<b>Socket Head Cap Screws M2.5x8mm</b> [HC020-S]   - 10 x Head Cap Screws M2.5x8mm.	<b>Socket Head Cap Screws M2.5x10mm</b> [HC022-S]   - 10 x Head Cap Screws M2.5x10mm.	<b>Socket Head Cap Screws M2.5x12mm</b> [HC026-S]   - 10 x Head Cap Screws M2.5x12mm.	<b>Socket Head Shoulder Screws M2.5x15</b> [HC031-S]   - 10 x Head Shoulder Screws M2.5x15.
<b>Socket Head Cap Screws M2.5x18mm</b> [HC032-S]   - 10 x Head Cap Screws M2.5x18mm.	<b>Socket Head Cap Screws M2.5x20mm</b> [HC034-S]   - 10 x Head Cap Screws M2.5x20mm.	<b>Socket Head Cap Screws M3x6mm</b> [HC044-S]   - 10 x Head Cap Screws M3x6mm.	<b>Socket Head Cap Screws M3x10mm</b> [HC056-S]   - 10 x Head Cap Screws M3x10mm.	<b>Socket Head Cap Screws M3x12mm</b> [HC062-S]   - 10 x Head Cap Screws M3x12mm.
<b>Socket Head Cap Screws M3x16mm</b> [HC068-S]   - 10 x Head Cap Screws M3x16mm.	<b>Socket Head Shoulder Screws M3x16</b> [HC074-S]   - 2 x Head Shoulder Screws M3x16. - 2 x Nylon Nut M3.	<b>Socket Head Shoulder Screws M3x18</b> [HC079-S]   - 2 x Head Shoulder Screws M3x18. - 2 x Nylon Nut M3.	<b>Button Head Cap Screws M4x6mm</b> [HC096-S]   - 10 x Button Cap Screws M4x6mm.	<b>Socket Head Cap Screws M4x12mm</b> [HC105-S]   - 10 x Head Cap Screws M4x12mm.

<b>Flat Head Cap Screws M2.5x5mm</b> [HC128-S]  <p>- 10 x Flat Cap Screws M2.5x5mm.</p>	<b>Flat Head Cap Screws M3x5mm</b> [HC132-S]  <p>- 10 x Flat Cap Screws M3x5mm.</p>	<b>Thread Rod M2.5x20mm</b> [HC140-S]  <p>- 10 x Thread Rod M2.5x10mm.</p>	<b>Set Screws M3x6mm</b> [HC144-S]  <p>- 10 x Set Screws M3x6mm.</p>	<b>Set Screws M4x4mm</b> [HC152-S]  <p>- 10 x Set Screws M4x4mm.</p>
<b>Washer <math>\phi 4,3 \times \phi 11 \times 1</math>mm</b> [HC184-S]  <p>- 10 x Washer <math>\phi 4,3 \times \phi 11 \times 1</math>mm.</p>	<b>Metric Hex Nylon Nut M2.5</b> [HC200-S]  <p>- 10 x Nylon Nut M2.5.</p>	<b>Metric Hex Nylon Nut M3</b> [HC206-S]  <p>- 10 x Nylon Nut M3.</p>	<b>Flanged Bearing <math>\phi 2,5 \times \phi 6 \times 2,6</math>mm</b> [HC400-S]  <p>- 4 x Flanged Bearing <math>\phi 2,5 \times \phi 6 \times 2,6</math>mm.</p>	<b>Ball Bearing <math>\phi 5 \times \phi 10 \times 4</math>mm</b> [HC411-S]  <p>- 4 x Ball Bearing <math>\phi 5 \times \phi 10 \times 4</math>mm.</p>
<b>Flanged Bearing <math>\phi 5 \times \phi 13 \times 4</math>mm</b> [HC412-S]  <p>- 4 x Flanged Bearing <math>\phi 5 \times \phi 13 \times 4</math>mm.</p>	<b>Ball Bearing <math>\phi 8 \times \phi 16 \times 5</math>mm</b> [HC419-S]  <p>- 2 x Ball Bearing <math>\phi 8 \times \phi 16 \times 5</math>mm.</p>	<b>Ball Bearing <math>\phi 10 \times \phi 15 \times 4</math>mm</b> [HC420-S]  <p>- 2 x Ball Bearing <math>\phi 10 \times \phi 15 \times 4</math>mm.</p>	<b>Thrust Bearing <math>\phi 5 \times \phi 10 \times 4</math>mm</b> [HC435-S]  <p>- 2 x Thrust Bearing <math>\phi 5 \times \phi 10 \times 4</math>mm.</p>	<b>One Way Bearing <math>\phi 10 \times \phi 14 \times 12</math>mm</b> [HC442-S]  <p>- 1 x One Way Bearing <math>\phi 10 \times \phi 14 \times 12</math>mm.</p>
<b>Thrust Bearing <math>\phi 3 \times \phi 6 \times 2,8</math>mm</b> [HC448-S]  <p>- 2 x Thrust Bearing <math>\phi 3 \times \phi 6 \times 2,8</math>mm.</p>	<b>Shims <math>\phi 5 \times \phi 7 \times 0,1</math>mm</b> [HC450-S]  <p>- 10 x Shims <math>\phi 5 \times \phi 10 \times 0,1</math>mm.</p>	<b>O-ring CS1.78x6.75, Shore 70</b> [HC453-S]  <p>- 2 x O-ring CS1.78x6.75, Shore 70. - 2 x O-ring CS1.78x2.9, Shore 70.</p>	<b>Flanged Bearing <math>\phi 2 \times \phi 5 \times 2,5</math>mm</b> [HC456-S]  <p>- 4 x Flanged Bearing <math>\phi 2 \times \phi 5 \times 2,5</math>mm.</p>	<b>Ball Bearing <math>\phi 3 \times \phi 6 \times 2,5</math>mm</b> [HC457-S]  <p>- 4 x Ball Bearing <math>\phi 3 \times \phi 6 \times 2,5</math>mm.</p>

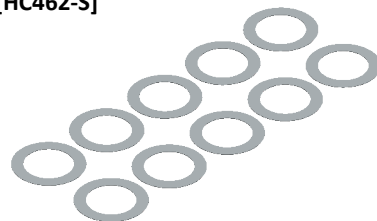


**Ball Bearing  $\phi 3x \phi 7x3mm$**   
[HC458-S]



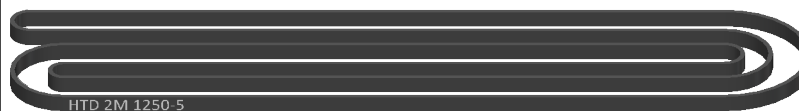
- 4 x Ball Bearing  $\phi 3x \phi 7x3mm$ .

**Shims  $\phi 8x \phi 12x0.1mm$**   
[HC462-S]



- 10 x Shims  $\phi 8x \phi 12x0.1mm$ .

**Belt HTD 2M 1250-5**  
[HC464-S]



- 1 x Belt HTD 2M 1250-5.

**Self Tapping Screws M2.2x6mm**  
[HC490-S]



- 10 x Self Tapping Screws M2.2x6mm.

**Set Screws M3x4mm**  
[HC500-S]



- 10 x Set Screws M3x4mm.

**Set Screws M2x18mm**  
[HC626-S]



- 10 x Set Screws M2x18mm.

**Shims  $\phi 2x \phi 3.5x0.3mm$**   
[HC628-S]



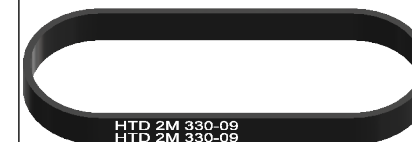
- 10 x Shims  $\phi 2x \phi 3.5x0.3mm$ .

**Flat Head Cap Screws M2x8mm**  
[HC685-S]



- 10 x Flat Cap Screws M2x8mm.

**Belt HTD 2M 330-09**  
[HC695-S]



- 1 x Belt HTD 2M 330-09.

**Self Tapping Screws M2.5x6mm**  
[HC697-S]



- 10 x Self Tapping Screws M2.5x6mm.

**Flat Head Cap Screws M2.5x10mm**  
[HC705-S]



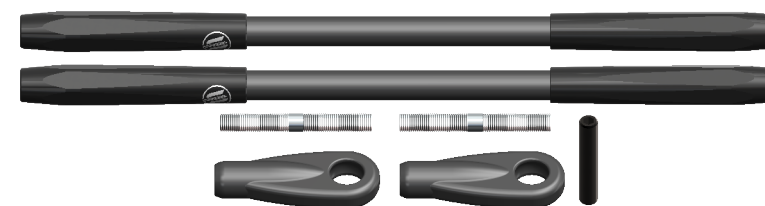
- 10 x Flat Cap Screws M2.5x10mm.

**Button Head Cap Screws M4x12mm**  
[HC752-S]



- 10 x Button Cap Screws M4x12mm.

**Carbon Rod  $\phi 2.5x \phi 4x300mm$**   
[HC753-S]



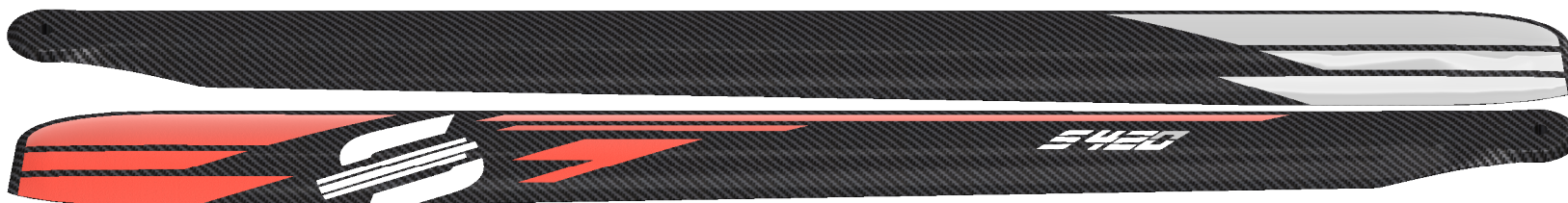
- 1 x Carbon Rod SET.

**Orange Tail Blade 72mm**  
[S72-O]


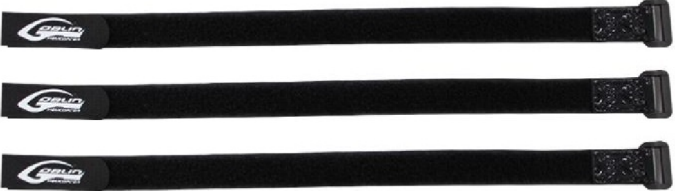
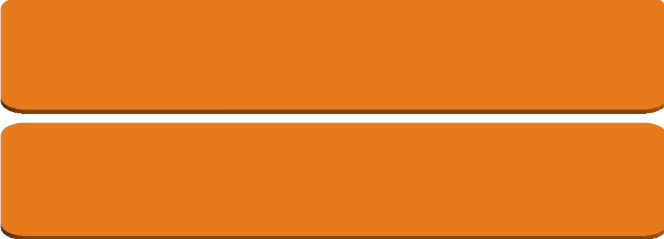





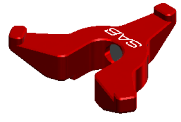
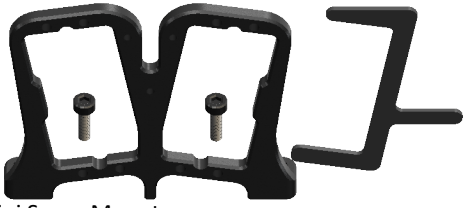

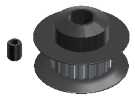


- 1 x Orange Tail Blade 72mm.

**Orange Main Blade 420mm**  
[S420-O]



- 1 x Orange Main Blade 420mm.

<p><b>Canopy Grommet</b> [HA021-S]</p>  <p>- 5 x Canopy Grommet.</p>	<p><b>Battery Velcro Strap 440x20</b> [HA023-S]</p>  <p>- 3 x Battery Velcro Strap 440x20.</p>	<p><b>Double Side Tape 1mm</b> [HA035-S]</p>  <p>- 2 x Double Side Tape 1mm.</p>
<p><b>Servo Arm</b> [HA052-S]</p>  <p>- 1 x Servo Arm SET.</p>	<p><b>Zip Tie</b> [HA058-S]</p>  <p>- 1 x Zip Tie.</p>	<p><b>Blade Holder</b> [HA119-S]</p>  <p>- 1 x Blade Holder.</p>
<h2>UPGRADES</h2>		
<p><b>Aluminum Blade Grip Arm</b> [H1447-S]</p>  <p>- 2 x Aluminum Blade Grip Arm. - 2 x Uniball M2. - 2 x Socket Head Cap Screw M3x6mm.</p>	<p><b>Aluminum Bell Crank Clever</b> [H1458-S]</p>  <p>- 1 x Uniball M2. - 1 x Bushing <math>\varnothing 2.5 \times \varnothing 4 \times 6.3</math>mm. - 2 x Tail Pin. - 1 x Aluminum Bell Crank. - 1 x Socket Head Cap Screw M2x5mm. - 1 x Socket Head Cap Screw M2.5x18mm. - 2 x Flanged Bearing <math>\varnothing 3 \times \varnothing 7 \times 3</math>.</p>	<p><b>Swashplate Leveler</b> [H1686-S]</p>  <p>- 1 x Swashplate Leveler.</p>
<p><b>Front Mini Servo Mount</b> [H1699-S]</p>  <p>- 1 x Front Mini Servo Mount. - 1 x Servo Tool Aligned. - 2 x Socket Head Cap Screw M2.5x8mm.</p>	<p><b>Rear Mini Servo Mount</b> [H1700-S]</p>  <p>- 1 x Rear Mini Servo Mount. - 2 x Socket Head Cap Screw M2.5x8mm.</p>	<p><b>Tail Pulley Z21</b> [H1736-S]</p>  <p>- 1 x Tail Pulley Z21. - 1 x Set Screw M3x4mm.</p>

The manual can be downloaded here



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**IL GOBLIN SG426**  
Release 1.0 - September 2025

**WORLD DISTRIBUTION**

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[sales@goblin-helicopter.com](mailto:sales@goblin-helicopter.com)

For info inquiries, please email:

[support@goblin-helicopter.com](mailto:support@goblin-helicopter.com)

Attention: If you are a customer and have questions or need of assistance, please contact in a first time the Goblin retailer where you made the purchase.

**EUROPEAN DISTRIBUTION**

[www.sabgroup.it](http://www.sabgroup.it)

For sales inquiries, please email:

[sale@sabgroup.it](mailto:sale@sabgroup.it)

For info inquiries, please email:

[support@sabgroup.it](mailto:support@sabgroup.it)

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