

IMPORTANT NOTES

- *This radio controlled helicopter is not a toy.
- *This radio controlled helicopter can be very dangerous.
- *This radio controlled helicopter is a technically complex device which has to 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.
It is necessary to carefully follow all the instructions.
- *Inexperienced pilots must be monitored by expert pilots.
- *All operators must wear safety glasses and take appropriate safety precautions.
- *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 to property or persons.
- *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.

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

SAFETY GUIDELINES

- *Fly only in areas dedicated to the use of model helicopters.
- *Follow all control procedures for the radio frequency system.
- *It is necessary that you know your radio system well. Check all functions of the transmitter 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.

DAMAGE LIMITS

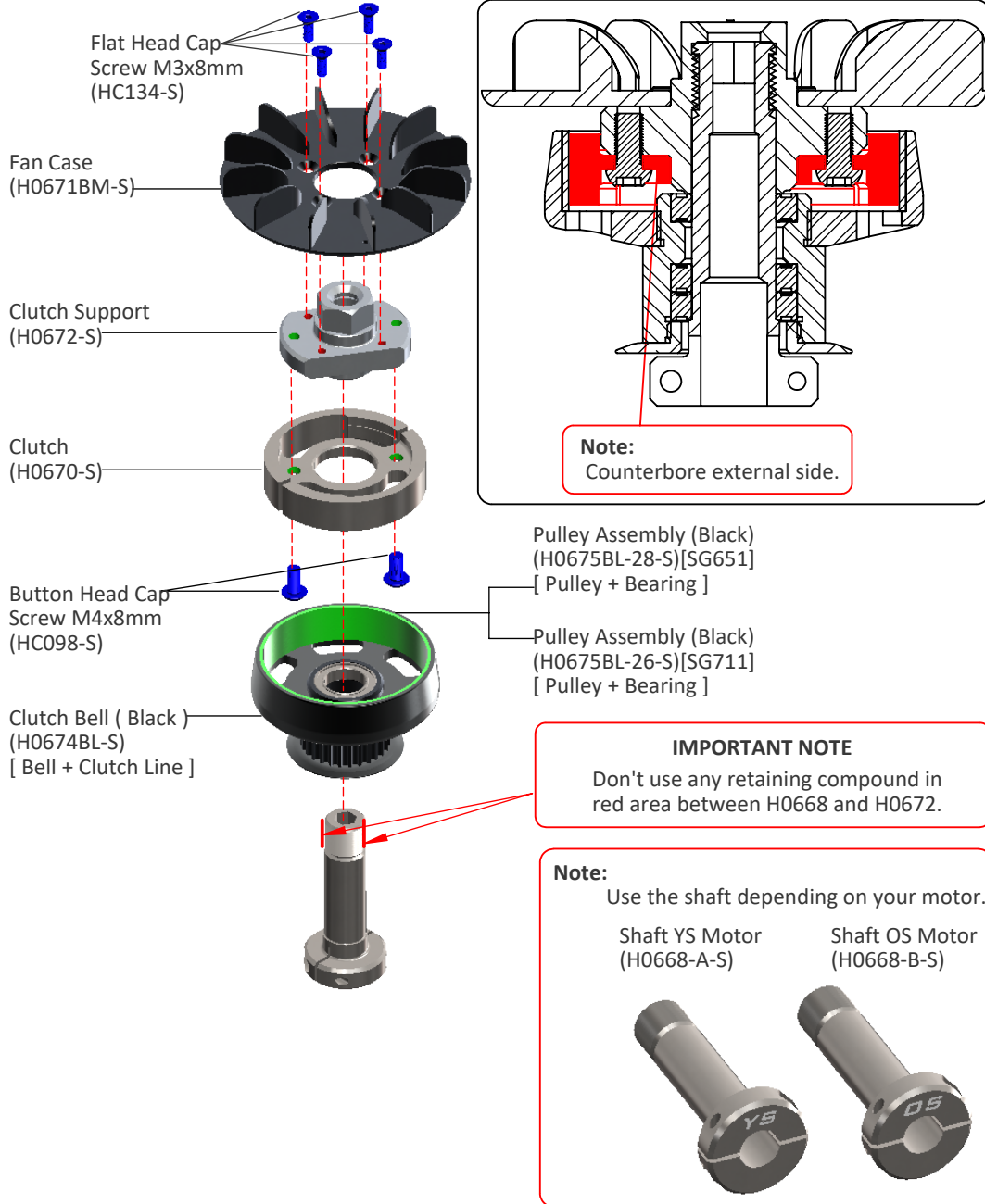
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LIMITED WARRANTY

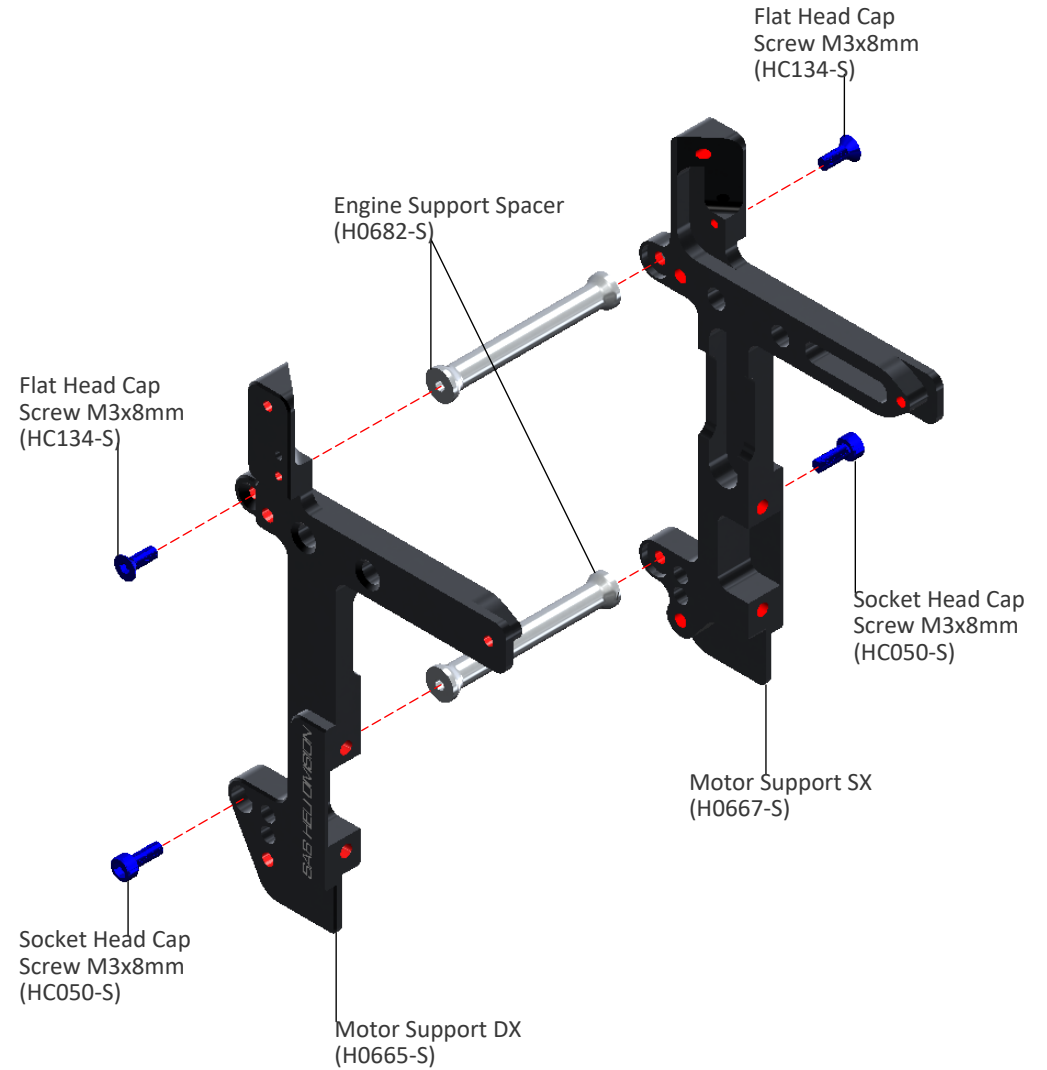
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- (c)** Purchaser Remedy- SAB Heli Division’s sole obligation hereunder shall be that SAB Heli Division will, at its option, replace any Product determined by SAB Heli Division to be defective. In the event of a defect, this is the Purchaser’s exclusive 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.

CLUTCH UNIT ASSEMBLY



ENGINE MOUNT ASSEMBLY



BAG 2

MOTOR ASSEMBLY

Note:
Do not add loctite on the engine shaft

Socket Head Cap
Screws M3x10mm
(HC056-S)

Clutch Unit

Engine

Washer $\varnothing 10 \times \varnothing 15 \times 0.75 \text{mm}$
(Supplied with The Engine)

Socket Head Cap Screws M3x10mm
(HC056-S)

NOTE:
Using H0726 (accessory not included in the kit) you can easily tighten the assembly onto the engine shaft.
With a 6mm hex driver, you can tighten the clutch unit.

IMPORTANT:
Tighten first the clutch unit with a hex tool against the engine bearing.
Only after this step, tighten the 2 M3x10 screws.

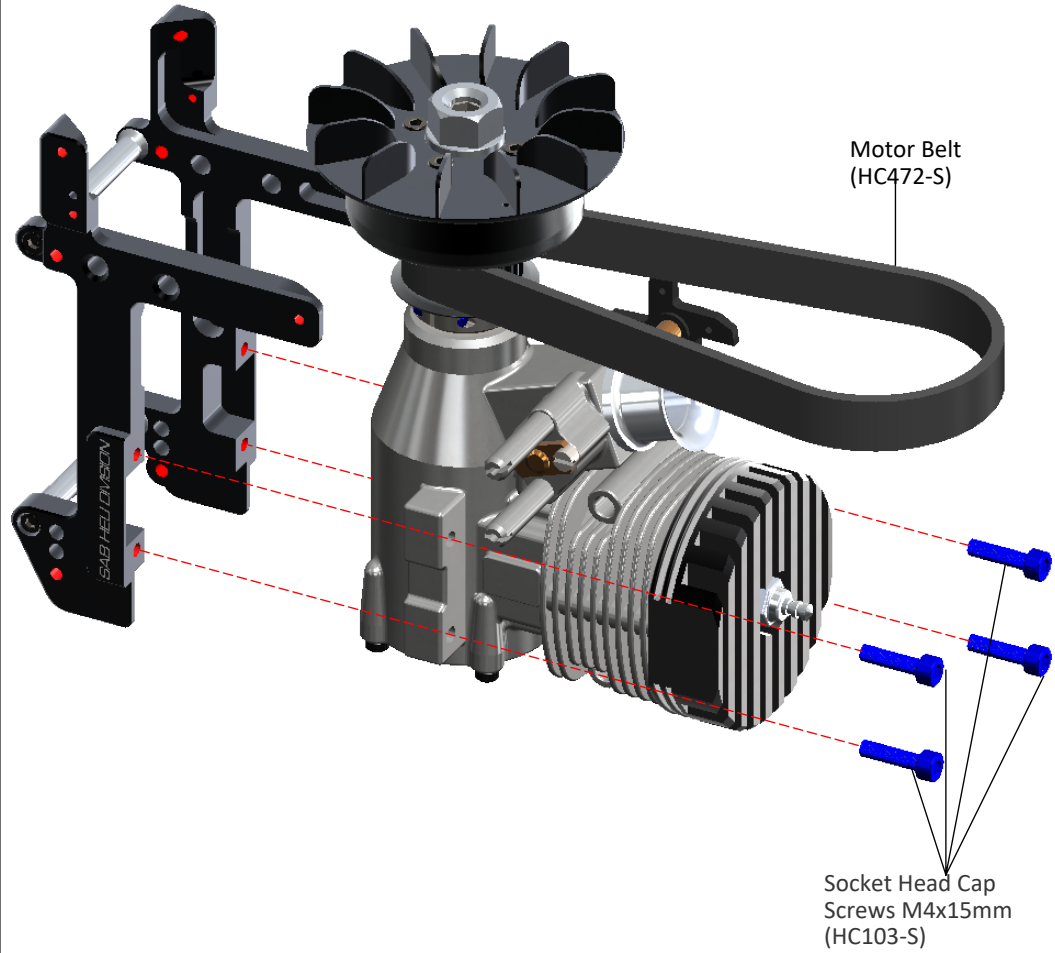
HEX 6mm

Clutch Unit

Washer

Crank Clamp
(H0726-S)

Engine



Motor Belt
(HC472-S)

Socket Head Cap
Screws M4x15mm
(HC103-S)

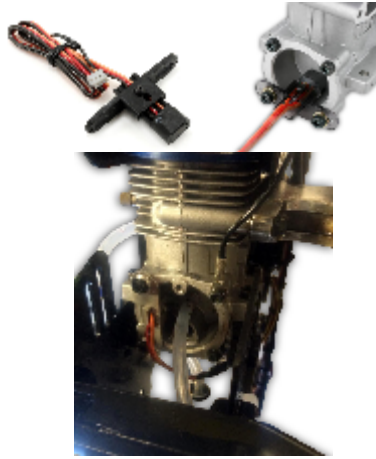
INSTALLATION OF THE RPM SENSOR

NOTE:

Standard Gear Ratio with 26T engine pulley >> 8.23

On the Goblin, you can use two different solutions to install an RPM sensor. The first is a backplate sensor, please look at the following pictures for how to install it.

P.S: Not all YS engines can support this style of sensor, please check with your specific engine.



The second is to use two magnets on the fan. Please install it in this way:

Install 2 magnets on the fan with epoxy glue (before, clean part with some degreaser [Fig. 4]). You have to cut open a small slot on the fan case. [Fig. 5].

To install the sensor, you can use the two M2.5 holes [Fig. 6]. Not all sensors are the same, so you can adapt the position with the carbon support (H0729).

With the Align sensor and the Spartan sensor, you can use the part of the support that already has holes in it. With any other sensor, you can use the part without holes and adapt as needed.

H0729-S RPM Sensor Support

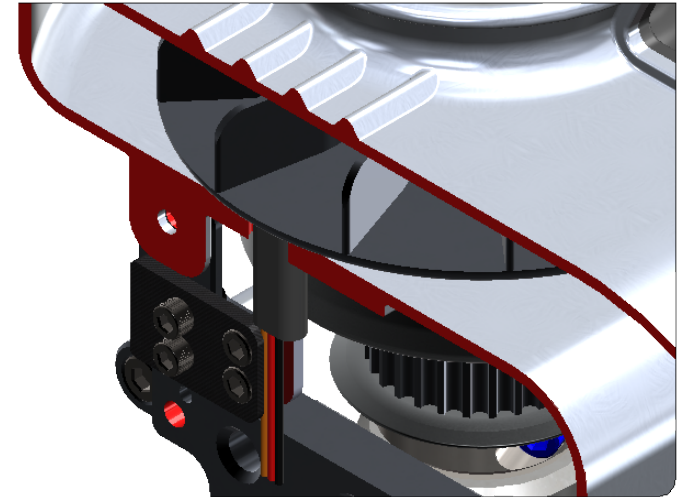
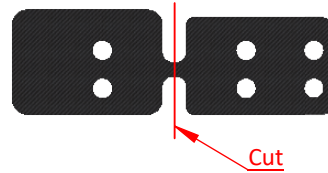
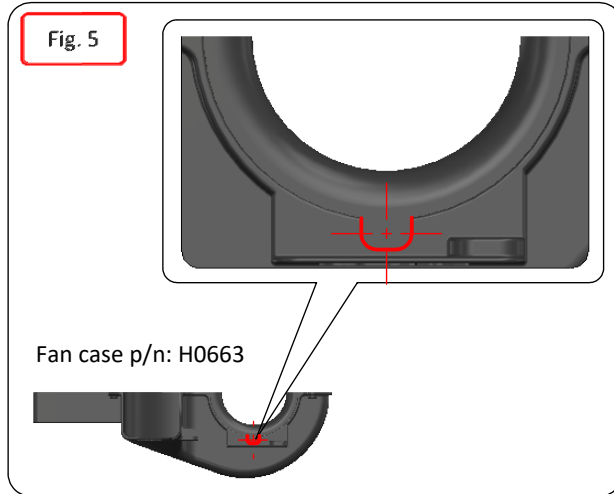
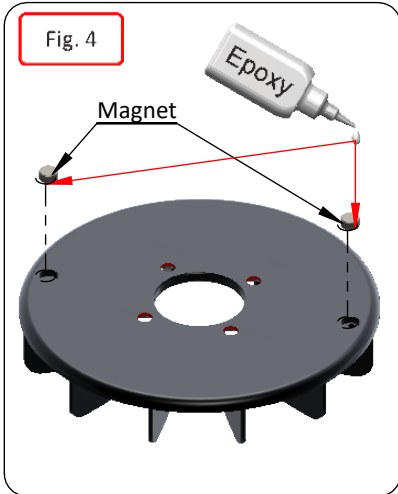
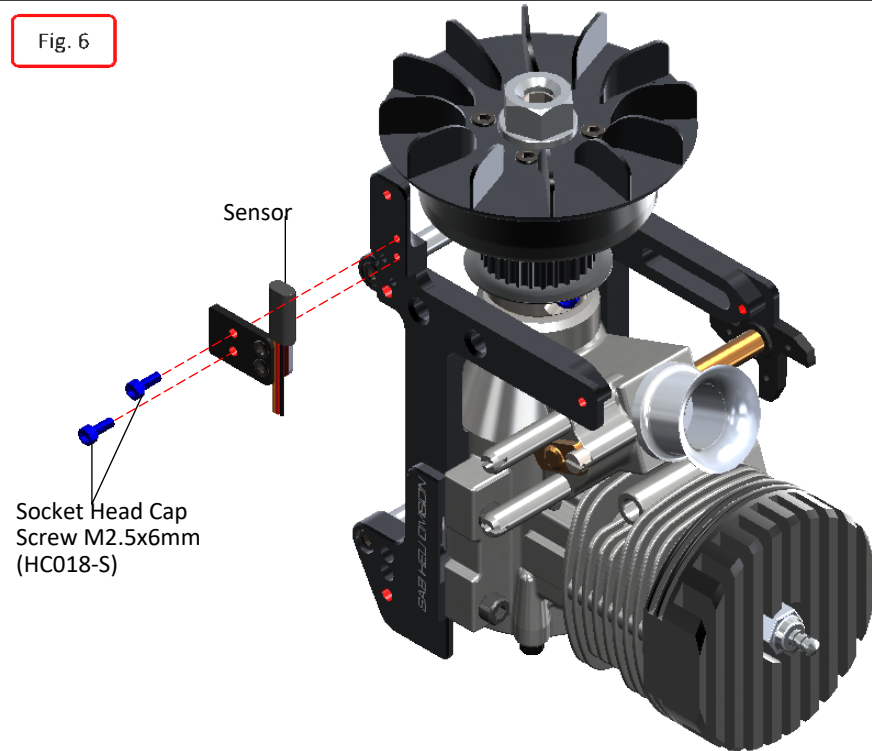
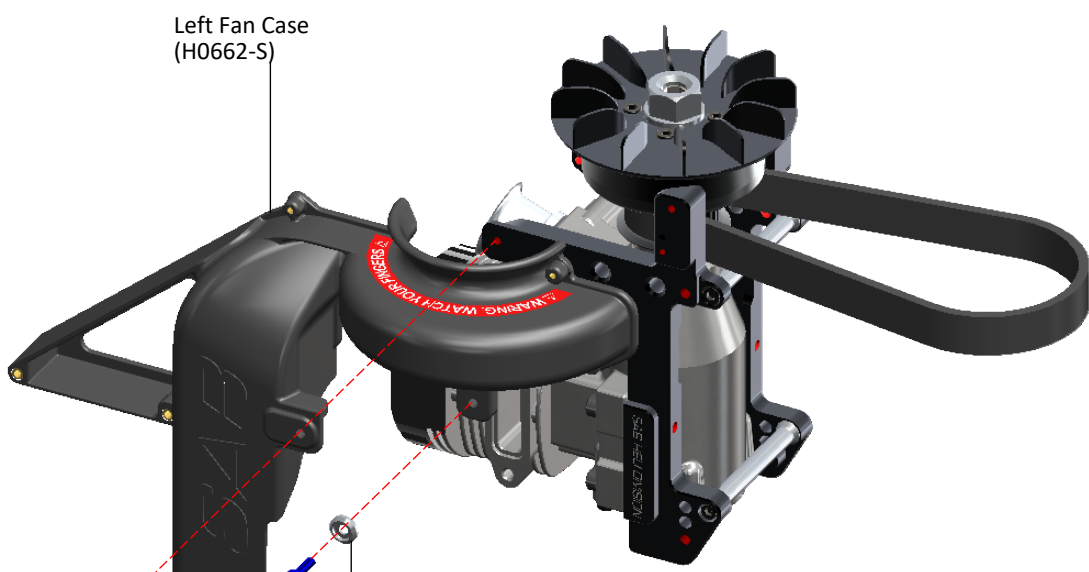


Fig. 6





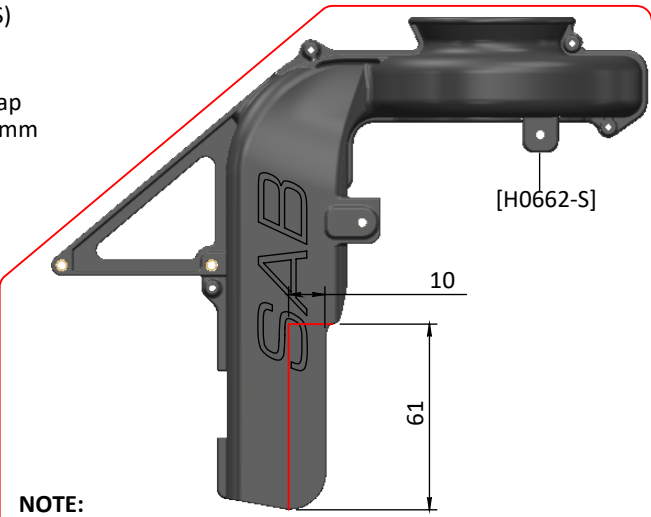
Left Fan Case
(H0662-S)

Finishing Washer M3
(H0007-S)

Socket Head Cap
Screws M3x10mm
(HC056-S)

Finishing
Washer M3
(H0007-S)

Socket Head Cap
Screws M3x10mm
(HC056-S)

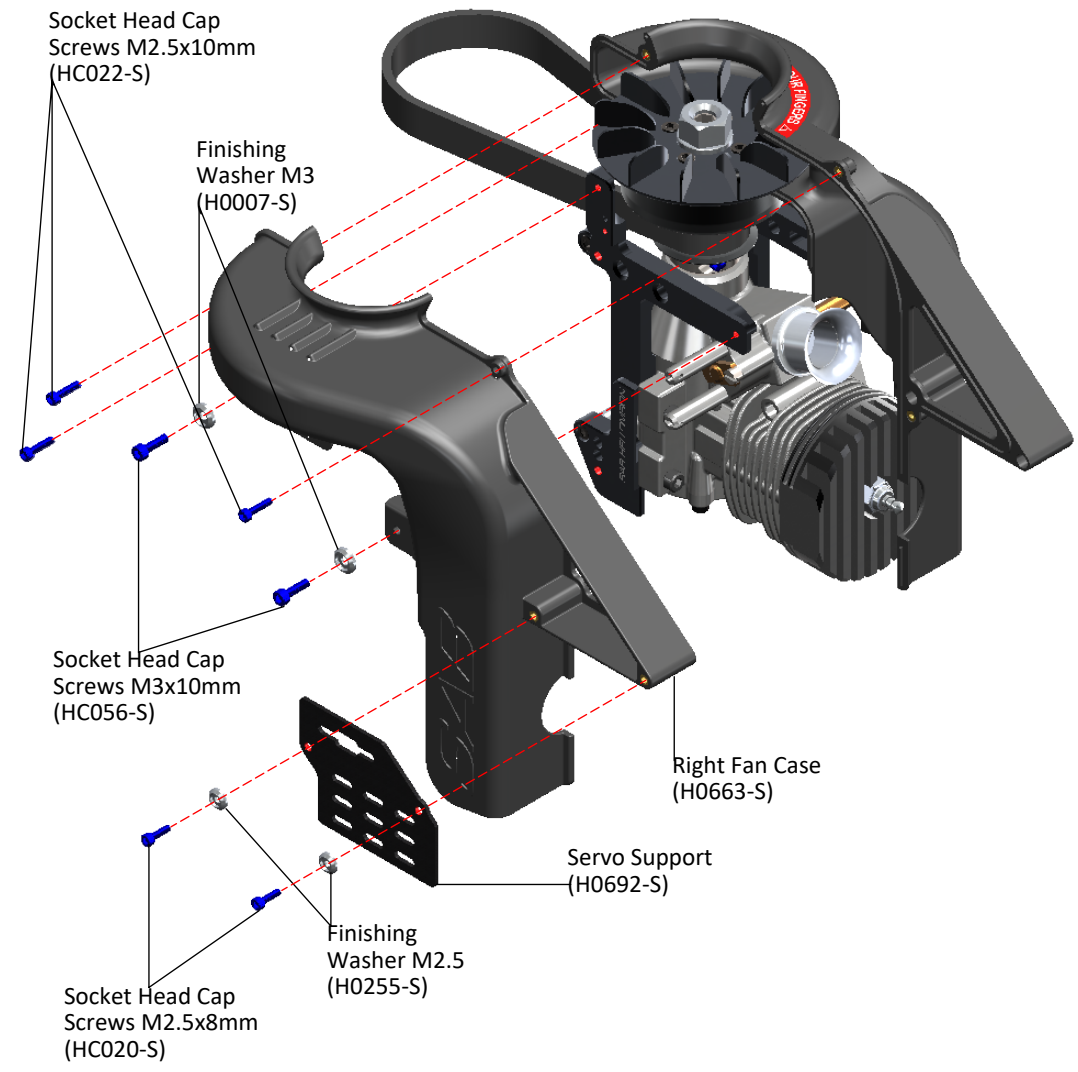


[H0662-S]

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NOTE:
If you want to use a muffler with a big gasket (Ex: Hatori),
you need to cut along the red line.



Socket Head Cap
Screws M2.5x10mm
(HC022-S)

Finishing
Washer M3
(H0007-S)

Socket Head Cap
Screws M3x10mm
(HC056-S)

Right Fan Case
(H0663-S)

Servo Support
(H0692-S)

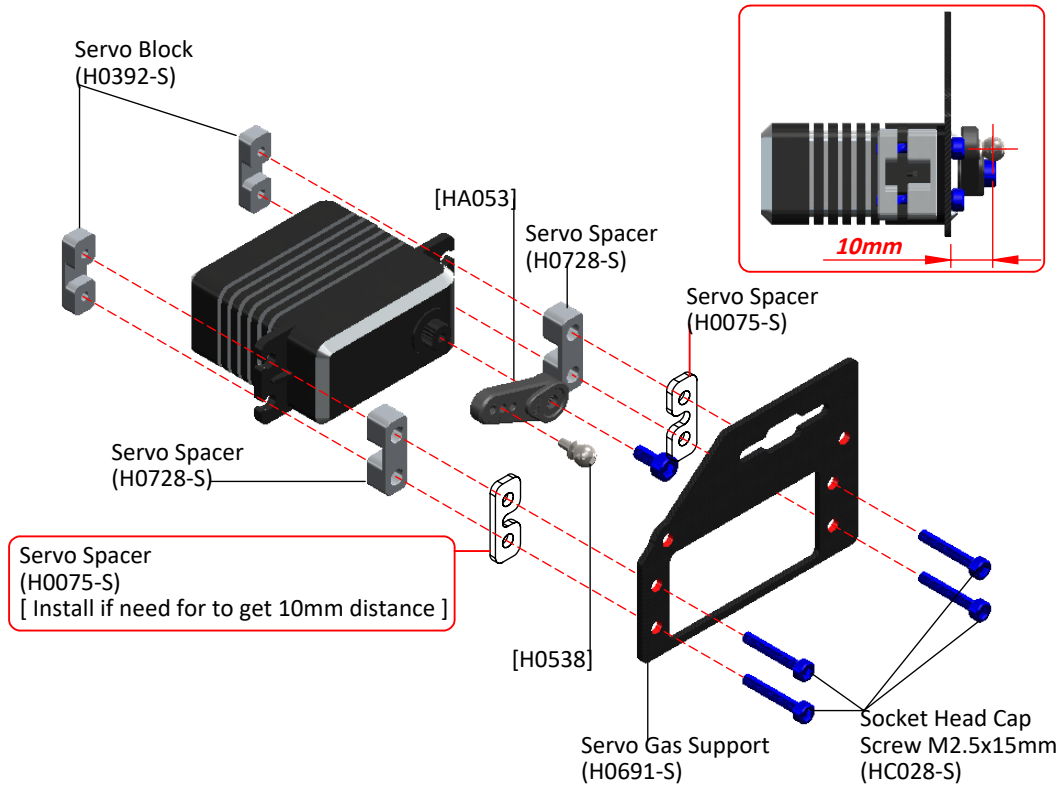
Finishing
Washer M2.5
(H0255-S)

Socket Head Cap
Screws M2.5x8mm
(HC020-S)

INSTALLATION OF THE THROTTLE SERVO

When installing the throttle servo, it is important to have the correct distance for the ball.

Using H0728 to get the correct servo spacing, you can also use H0075 if needed.



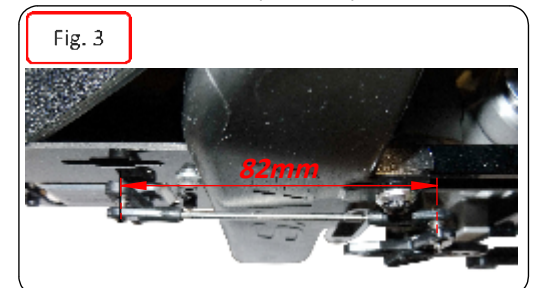
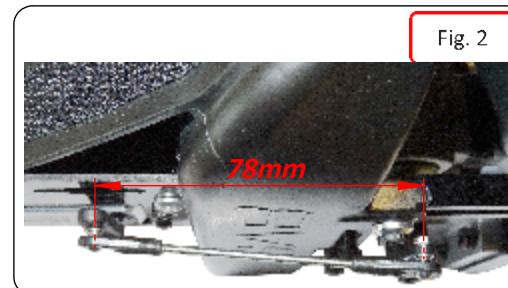
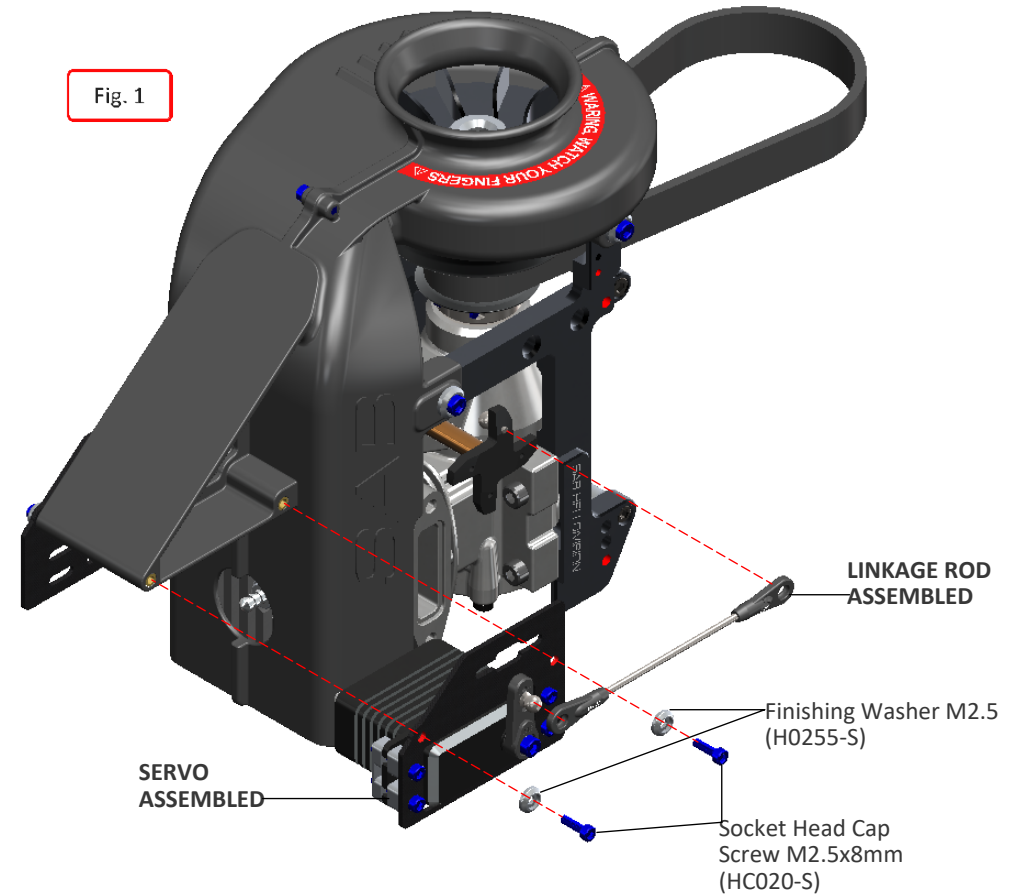
LINKAGE ASSEMBLY



Install the throttle servo support as shown in **Figure 1**.

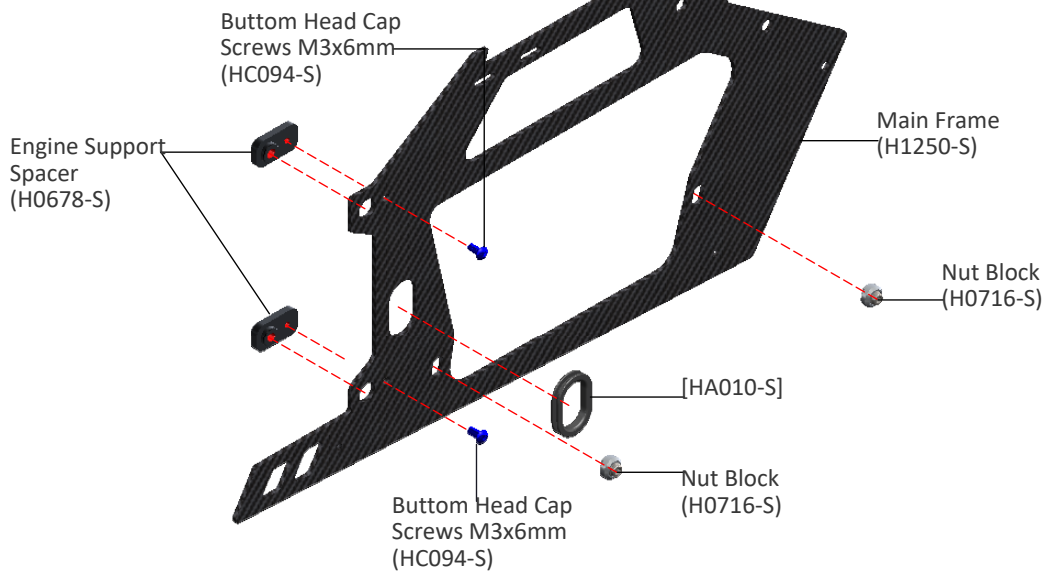
In **Figure 2** you can see a typical installation with YS engine.

In **Figure 3** you can see a typical installation with OS engine.

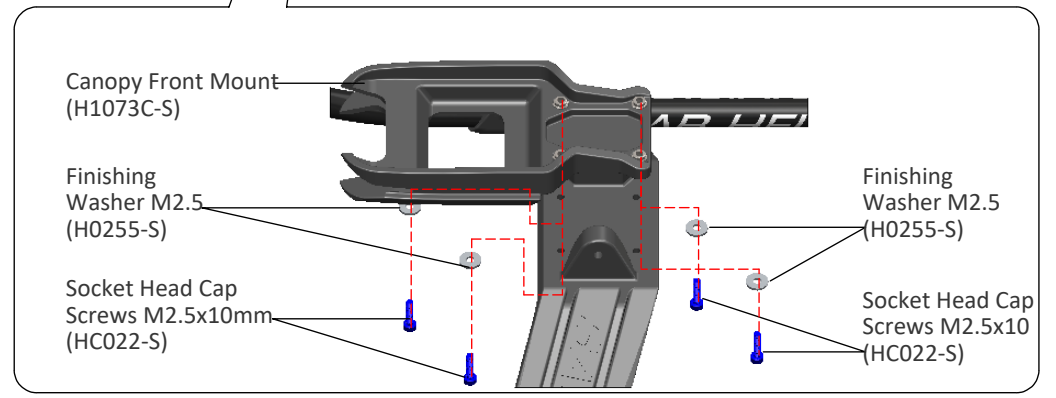
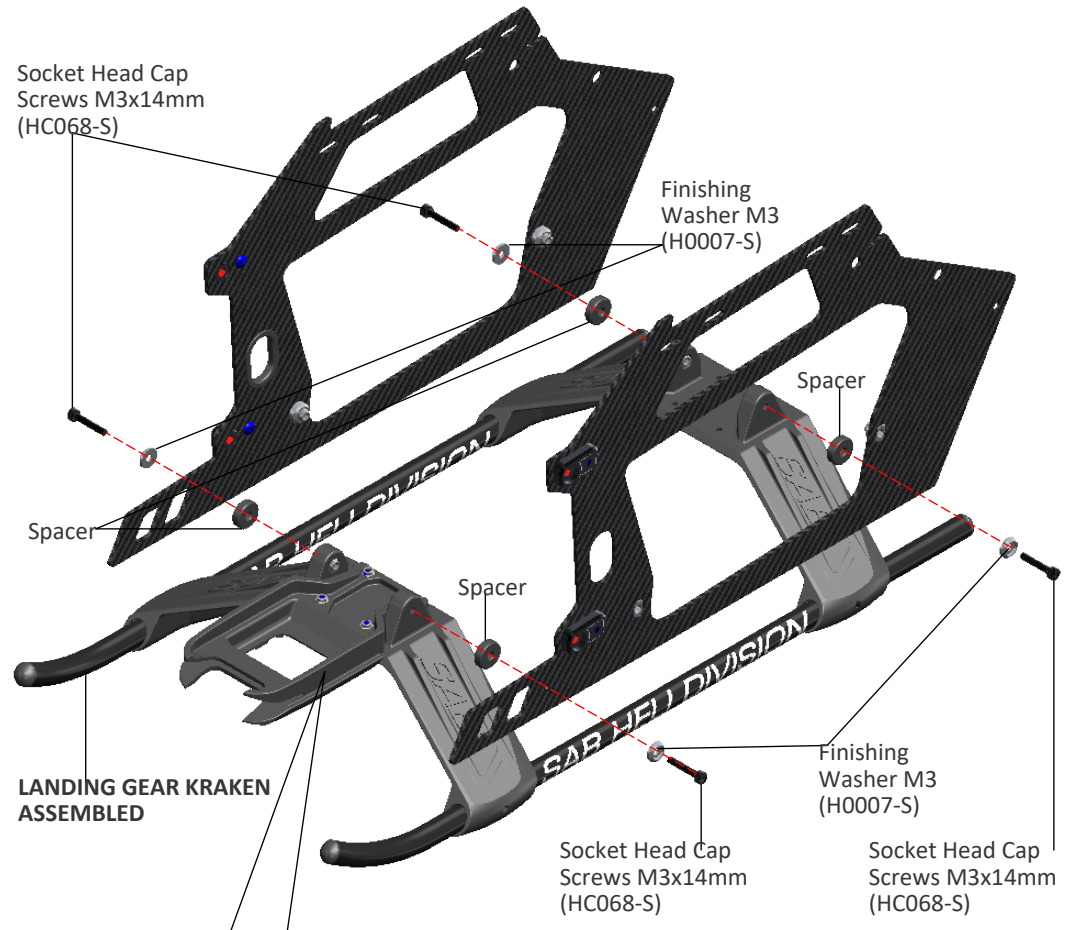
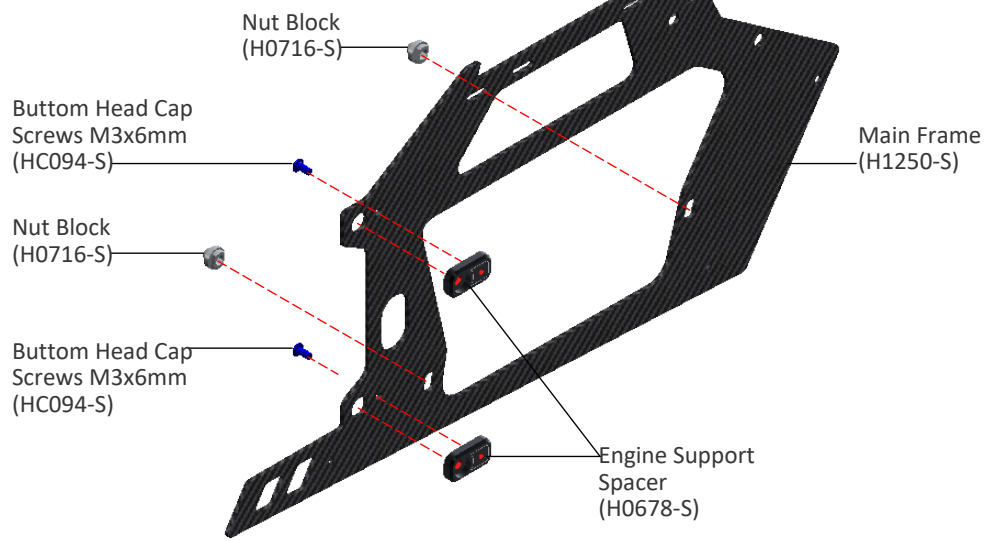


BAG 5

RIGHT MAIN FRAME ASSEMBLY

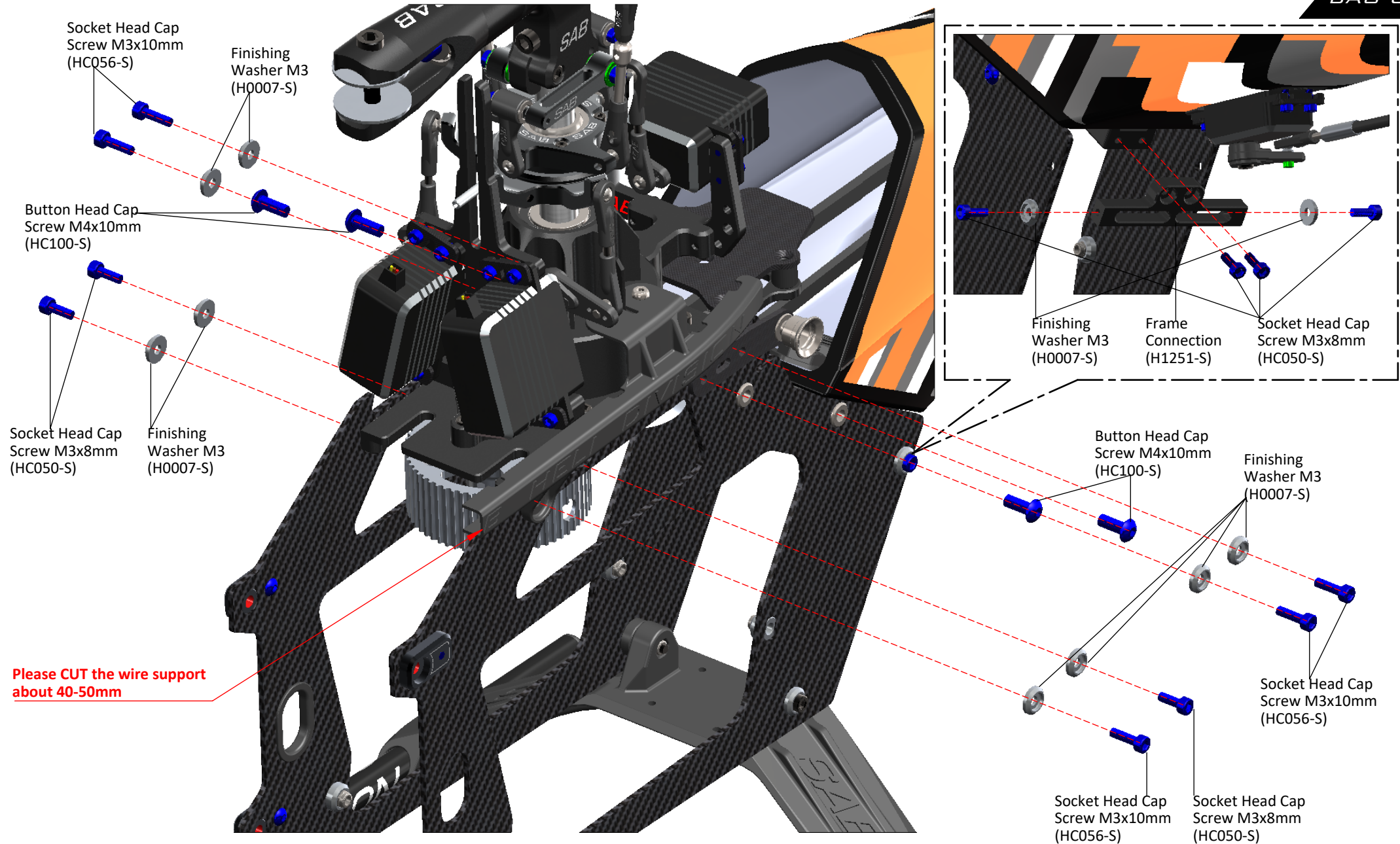


LEFT MAIN FRAME ASSEMBLY



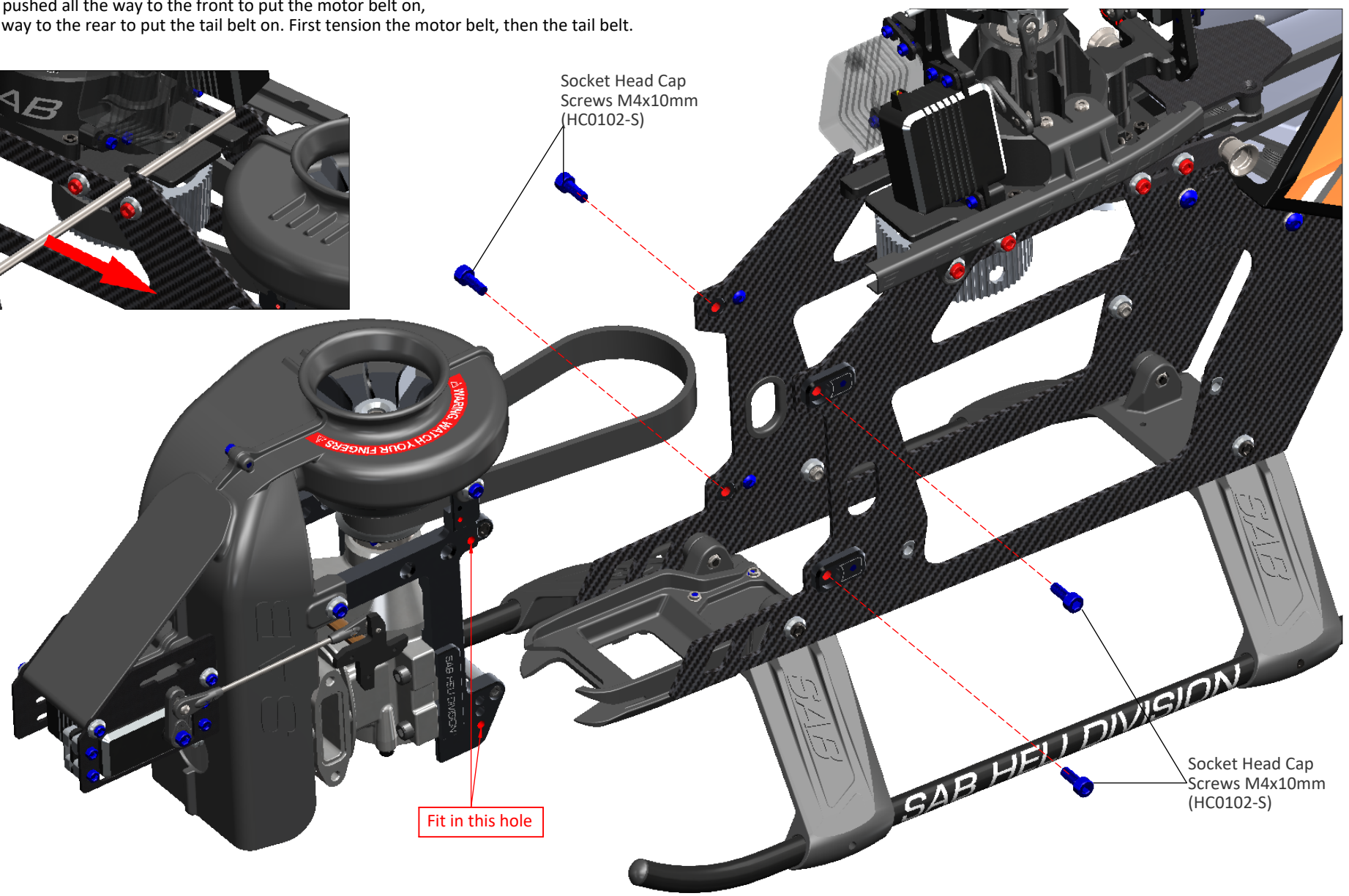
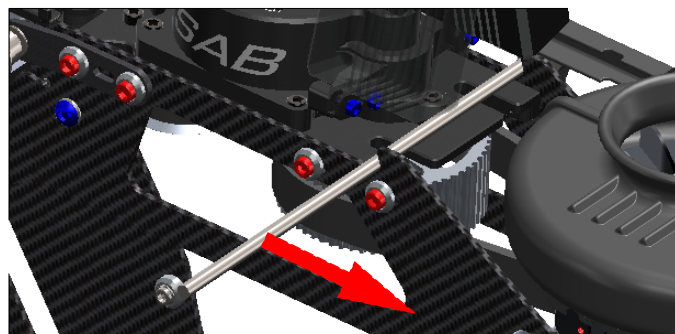
FRAME GROUP ASSEMBLY

BAG 6

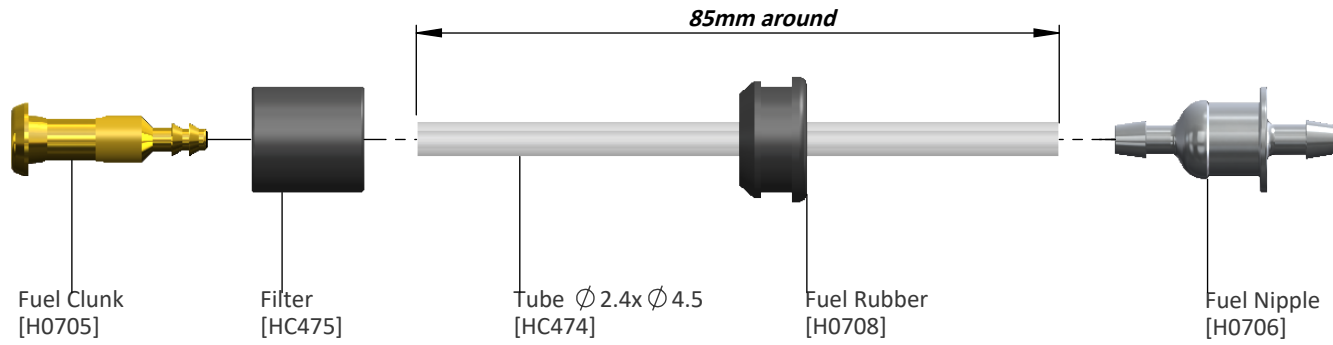


BAG 6

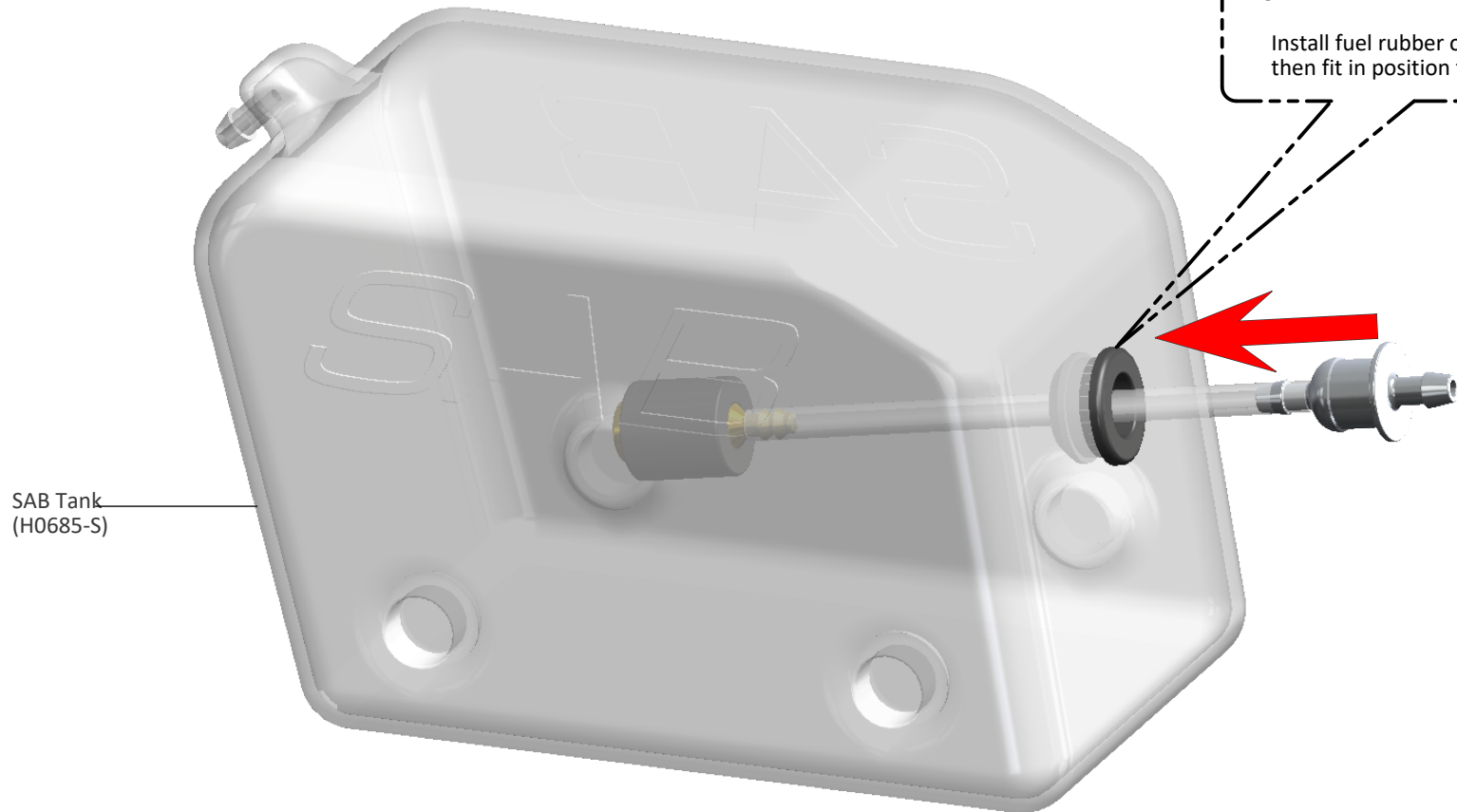
Note: Main plate must be pushed all the way to the front to put the motor belt on, then pushed all the way to the rear to put the tail belt on. First tension the motor belt, then the tail belt.



TANK LINE ASSEMBLY

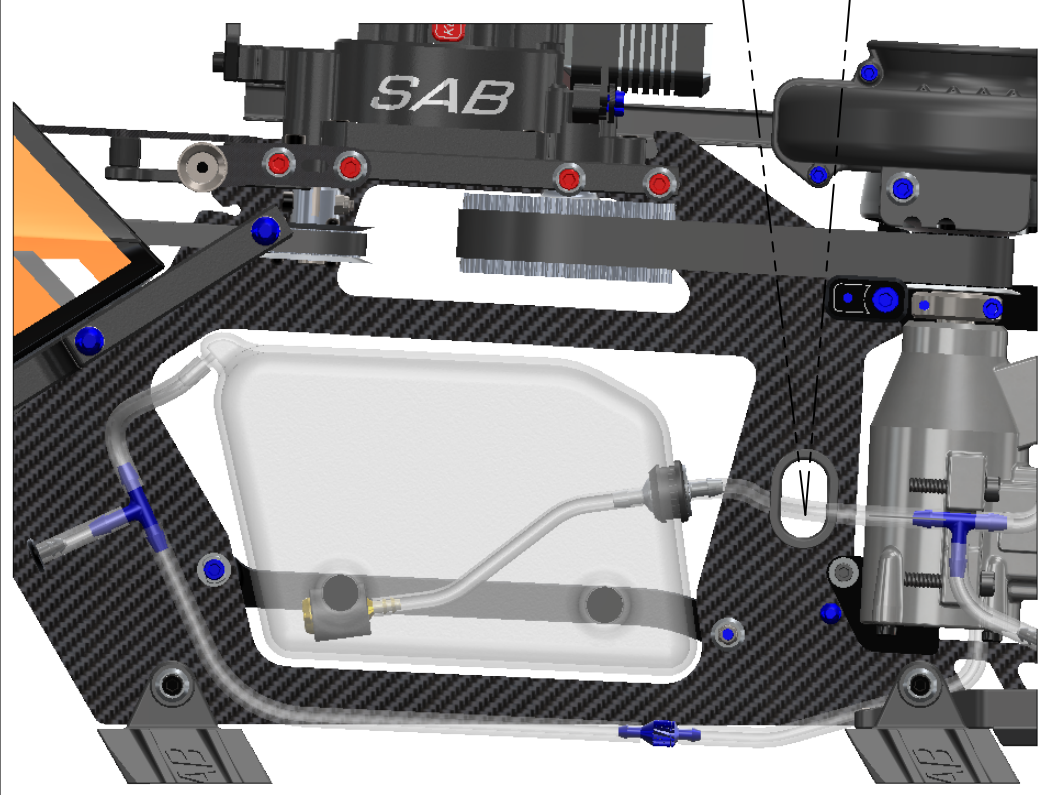
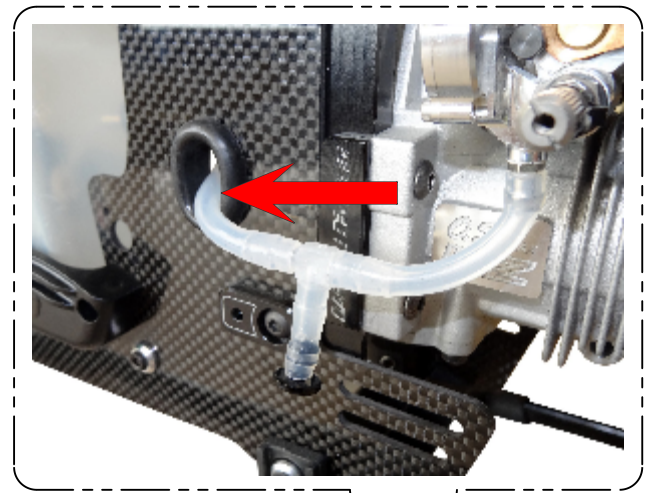
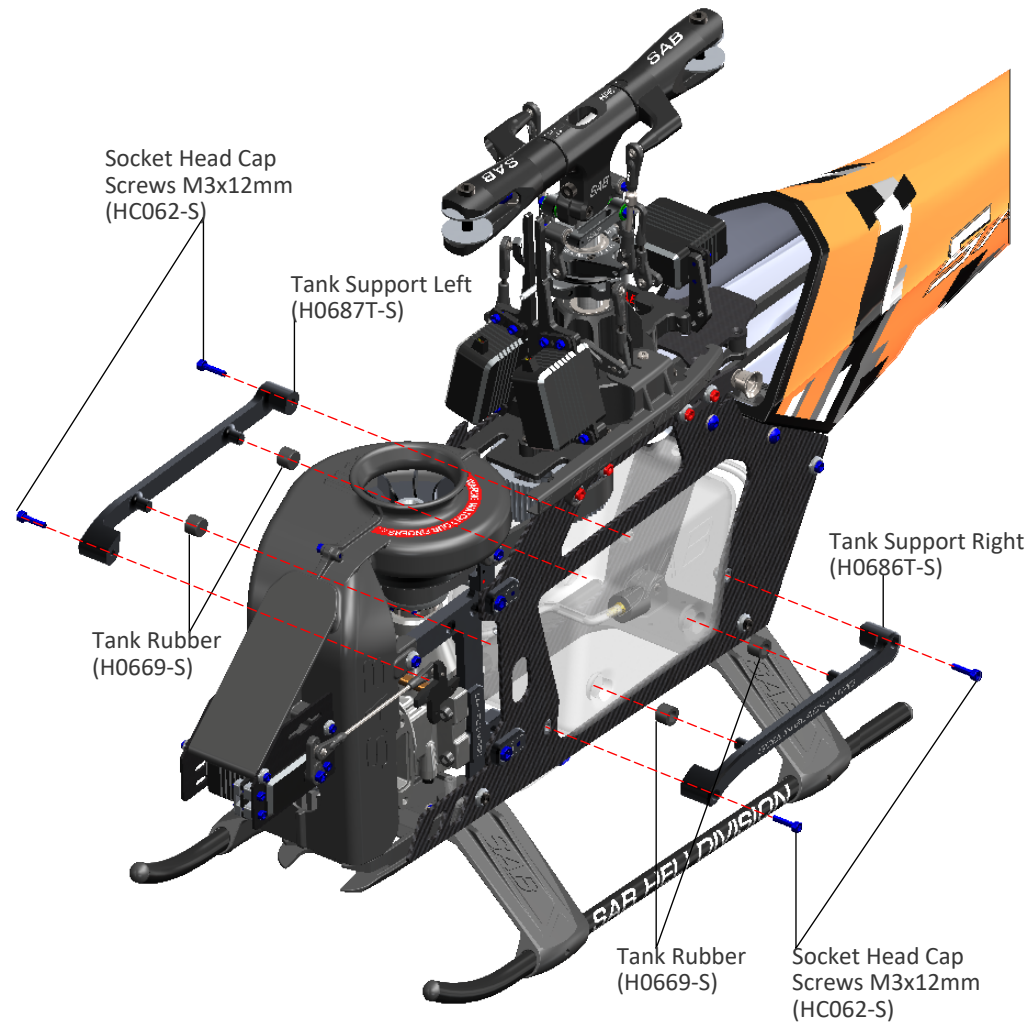


NOTE:
Install fuel rubber on the tank,
then fit in position the Fuel Nipple.



BAG 8

TANK ASSEMBLY



Making the conversion you will not need these Parts:

- Carter connection
- Carters
- Side frames
- Motor mount
- Motor belt
- Motor pulley
- ESC Mount
- Battery tray system/battery trays

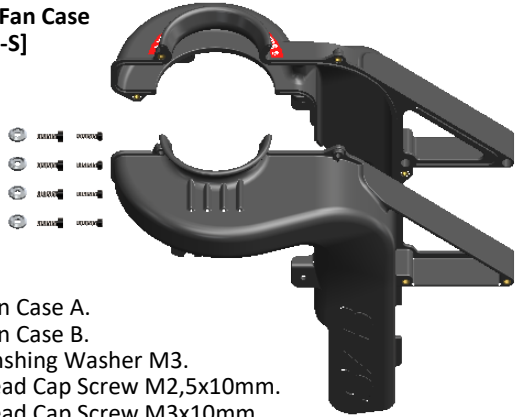
It is important that you trim the canopy in order for it to clear the muffler, you can use the template provided, but we highly recommend that you check the fitment as the amount of trimming might be different depending on the muffler to be used. It is also important that you trim the bottom of the canopy as shown below to improve air flow. Finally, you can also trim the canopy for easier access to the carburetor needles as well as the starter rod. However, this is optional and for convenience of starting and tuning.

You can use the mask included to trim the canopy:

- Muffler
- Air flow
- Carburetor needles
- Starter rod



**Plastic Fan Case
[H0662-S]**



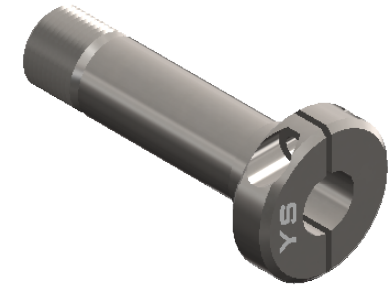
- 1 x Fan Case A.
- 1 x Fan Case B.
- 4 x Finishing Washer M3.
- 4 x Head Cap Screw M2,5x10mm.
- 4 x Head Cap Screw M3x10mm.

**Motor Support
[H0665-S]**



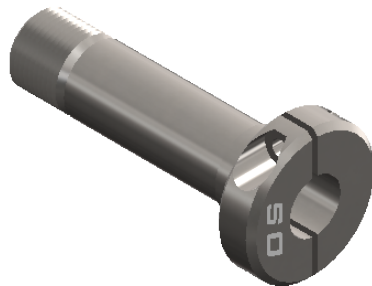
- 1 x Motor Support DX.
- 1 x Motor Support LX.

**Motor YS Shaft
[H0668-A-S]**



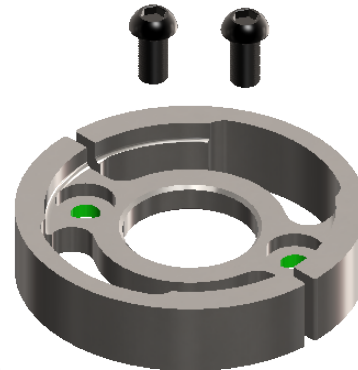
- 1 x Motor YS Shaft.

**Motor OS Shaft
[H0668-B-S]**



- 1 x Motor OS Shaft.

**Steel Clutch
[H0670-S]**



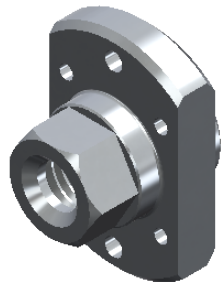
- 1 x Steel Clutch.
- 2 x Button Cap Screw M4x8mm.

**Aluminum Engine Fan
[H0671BM-S]**



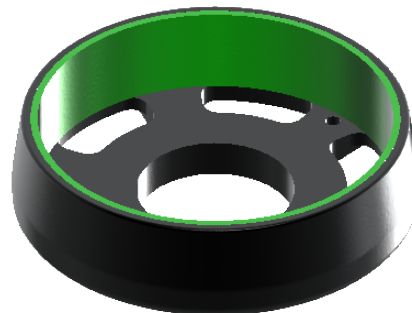
- 1 x Aluminum Engine Fan.
- 4 x Flat Head Cap M3x8mm.

**Aluminum Clutch Support
[H0672-S]**



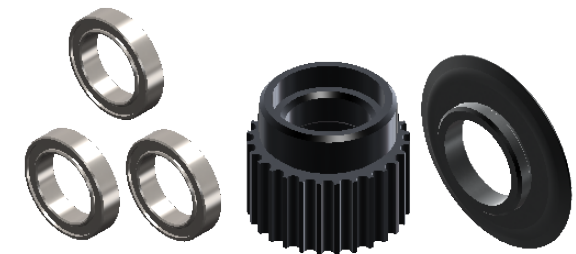
- 1 x Aluminum Clutch Support.

**Aluminum Clutch Bell
[H0674BL-S]**



- 1 x Aluminum Clutch Bell.
- 1 x Clutch Line.

**Aluminum Engine Pulley 26T-28T
[H0675BL-26-28-S]**



- 1 x Z26-Z28 Nitro Pulley.
- 1 x Nitro Pulley Flange.
- 3 x Radial Bearing $\varnothing 12 \times \varnothing 18 \times 4 \text{mm}$.

| | | | |
|--|---|--|---|
| <p>Aluminum Engine Frame Spacer [H0678BM-S]</p> <p>- 4 x Engine Frame Spacer. - 4 x Button Cap Screw M3x6mm.</p> | <p>SAB Fuel Tank [H0685-S]</p> <p>- 1 x SAB Fuel Tank. - 1 x Fuel Rubber 60 Shore.</p> | <p>Aluminum Fuel Tank Support Black [H0686T-S]</p> <p>- 1 x Tank Support Right. - 1 x Tank Support Left. - 4 x Socket Head Cap M3x12mm. - 4 x Tank Rubber 50 shore.</p> | |
| <p>Carbon Fiber Support Set [H0690-S]</p> <p>- 1 x CF Botton Plate. - 1 x CF Wire Support. - 1 x CF Servo Gas Support. - 1 x CF Accessories Support. - 1 x Cf Sensor Support.</p> | <p>SAB Fuel Sucker [H0705-S]</p> <p>- 1 x Fuel Clunk. - 1 x Tube \varnothing 2.4x \varnothing 4.5x100mm. - 1 x Filter \varnothing 6 x \varnothing 13.5x15mm.</p> | <p>SAB Fuel Nipple [H0708-S]</p> <p>- 1 x Fuel Nipple. - 1 x Fuel Rubber 60 Shore.</p> | <p>SAB Fuel Stop [H0715-S]</p> <p>- 2 x SAB Fuel Stop. - 2 x T Connector.</p> |
| <p>Carbon Insert M3 [H0716-S]</p> <p>- 4 x Carbon Insert M3. - 4 x Nylon Nut M3.</p> | <p>Aluminum Servo Spacer [H0728-S]</p> <p>- 2 x Aluminum Servo Spacer. - 2 x CF Servo Spacer.</p> | <p>Kraken Nitro Main Frame [H1250-S]</p> <p>- 1 x Kraken Nitro Main Frame.</p> | <p>Kraken Nitro Main Frame Spacer SET [H1251-S]</p> <p>- 1 x Kraken Nitro Main Frame Spacer SET.</p> |