

Manual

LOGO 480



Mikado
Model Helicopters

Index

Safety Instructions/ Tools for Assembly & RC Equipment	2
1 Mainframe + Servo Mounting	3
2 Mainframe	4
3 Landing Struts	5
4 Tail Rotor	6
5 Tail Boom	7
6 Tail Boom Brace	8
7 Main Gear	9
8 Swashplate	10
9 Rotor Head	11
10 Motor Installation	12
11 Wiring RC Components	13
12 Wiring RC Components + Battery Mounting	14
13 Canopy and Overview	15
14 Overview Spare Parts Mainframe	16
15 Overview Spare Parts Tail Boom	17
16 Overview Spare Parts Rotor Head	18

Thank you very much for your purchase of the Mikado LOGO 480. Prior to installation, please read and understand this manual completely and follow all instructions exactly. If any instructions are not clear to you or if you have any questions, you must contact us. You can reach Mikado on the LOGO-Forum on www.vstabi.info or contact the Mikado support hotline via email or phone. Do not under any circumstances fly this helicopter if you are unsure of setup or assembly.

Experience in handling and flying aRC Helicopter are required in order to operate a LOGO 480.
Minimum Age : 14 Years

The LOGO 480 comes partially pre-assembled, i.e. the structural components are already screwed together. However, the screws are not yet secured with Loctite. Throughout the manual you will not always be asked to secure each screw. Nevertheless, you must secure all screws in all components yourself. In addition, it is necessary that you secure all other screwed connection, by which you will assemble the different components of the LOGO 480. We recommended to use securing glue Loctite 243 (blue). Please follow the recommendations of the Loctite manufacture and allow proper curing time for the Loctite prior to flying the model.

Safety Instructions:

RC Helicopters are not toys and must be treated with due diligence. Unless you use this helicopter responsibly it can cause of severe injury and immense damage. Inappropriate use of this product can result in injury or death. Each user must have the appropriate knowledge and skill to operate any RC Helicopter. Manufacturer / reseller assumes no liability for the use or operation of this helicopter.

You are responsible for any injury and damage that may be caused by this helicopter. It is recommended that your radio components be tested prior to installing in this helicopter. Improper radio installation or inadequate battery voltage can result in the loss of control of the helicopter. Proper knowledge of your radio equipment is required prior to flying this helicopter. You must check if other persons are using an RC-controlled model or device simultaneously, as this may result in interference. If the helicopter behaves in an unusual or strange way, you must land it immediately and turn off the power. Please meticulously check all of your radio gear and find/fix the problem before you continue to operate the helicopter This is to avoid any accidents. As one irregularity can cause other defects or problems, an increased risk of failure will ensue, if the first problem is not fixed.

Additional precautions for the prevention of injuries or damage:

Before you power on the helicopter, you must ensure that all screws and associated hardware are secured. One single lose screw can cause the helicopter to become uncontrollable resulting in a crash or injury to personnel.

Also it is very important that you must check the model frequently and exchange any parts that show signs of deterioration or wear.wearing out. Failure to complete frequent pre and post flight inspections will result in flying an unsafe model and increasing the risk of damaging the helicopter and possibly injuring yourself and/or others. Use only original Mikado parts and electronic components which are recommended by Mikado.

Always keep a minimum of 10 yards away from a spinning rotor head. Components that run hot such as the ESC and Motor should never be touched until ample cool down time has been provided.

Before powering on:

Never operate the helicopter inside closed rooms as this helicopter is intended for operation outside and may only be operated in sites where operation of Radio Control models is permitted. . Keep the helicopter at safe distance to any persons or live animals at all times. When trimming, keep a minimum distance of 10 yards for safety and never operate the helicopter alone. Always take someone with you, who can help in emergency situations.

The helicopter must also not be operated in the following circumstances:

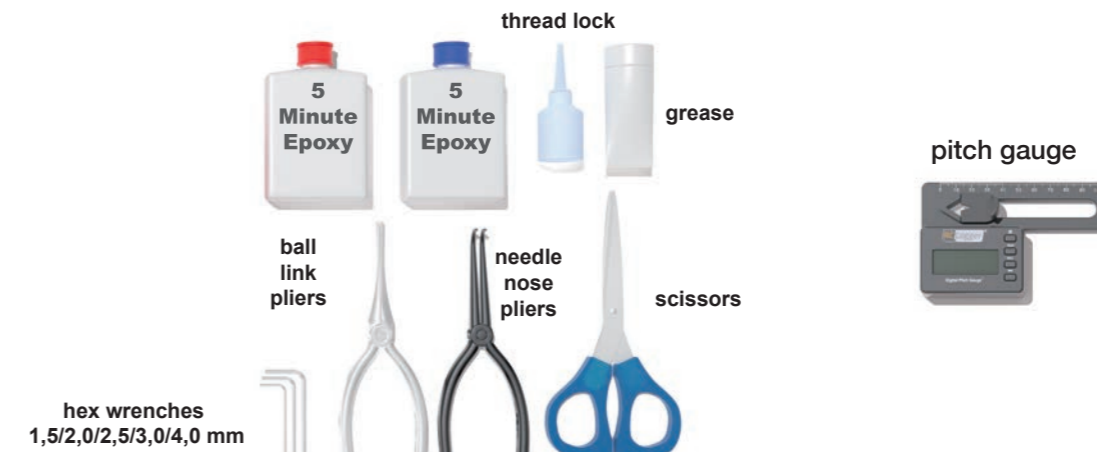
- when children are present or in places where people are gathering
- close to houses or in park areas
- inside any rooms or buildings
- places with limited space
- in adverse weather conditions, such as rain, snow, hail or during strong winds
- Near trees or power lines

Technical specifications which must be obeyed during the operation of the LOGO 480:

- maximum rotor head rpm: 2500 U/min.
- maximum pitch travel: +/- 12°
- Length of rotor blades: 473mm
- Lipo battery: 6S 3300-4000mAh
- admissible temperature 0° - 35° Celsius

If these values are exceeded, the electronic components may experience overload. This may result in damage or a crash of the helicopter.

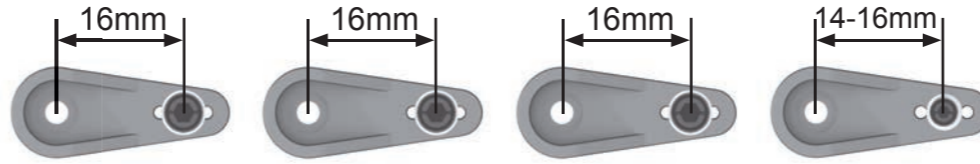
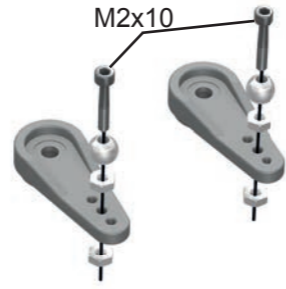
Before the first flight, you must check proper functioning of the motor, the ESC and the VBar. To do this, please refer to the respective manuals. For safety reasons, these tests should be performed without mounting the main rotor blades and the tail rotor blades. It is advisable to fly moderately during the first flights. This is because you need to get used to the new size of this helicopter during the first few flights. Do not underestimate the size and power of this helicopter. Keep a safe distance from the ground to provide for ample reaction time.



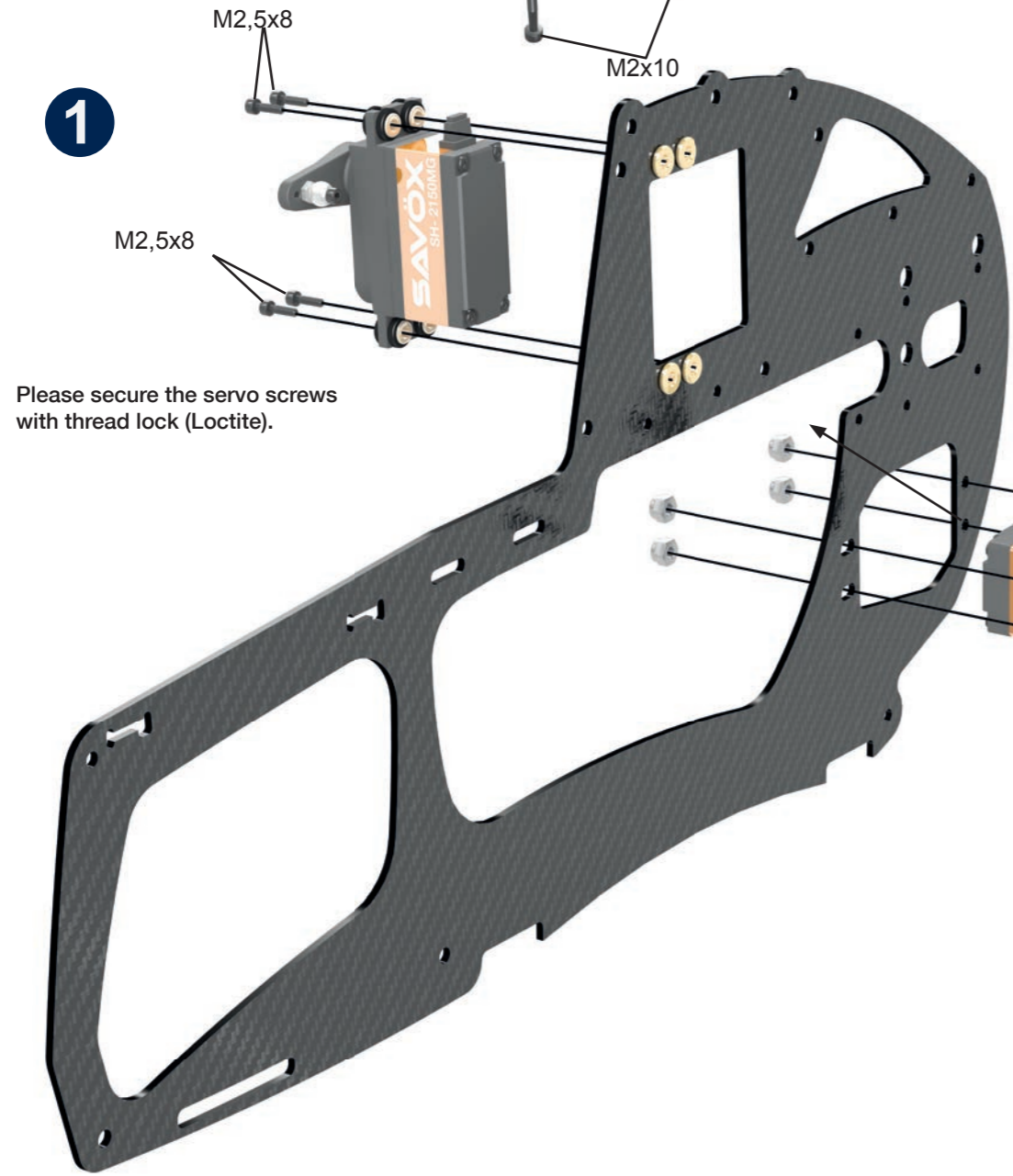
1 Mainframe + Servo Mounting

- Bag 1**
- 4x ● M2x10
 - 8x ○ M2

- Bag 3**
- 12x ● M2,5x8
 - 4x ● M2,5x12
 - 4x ○ M2,5 Stopp

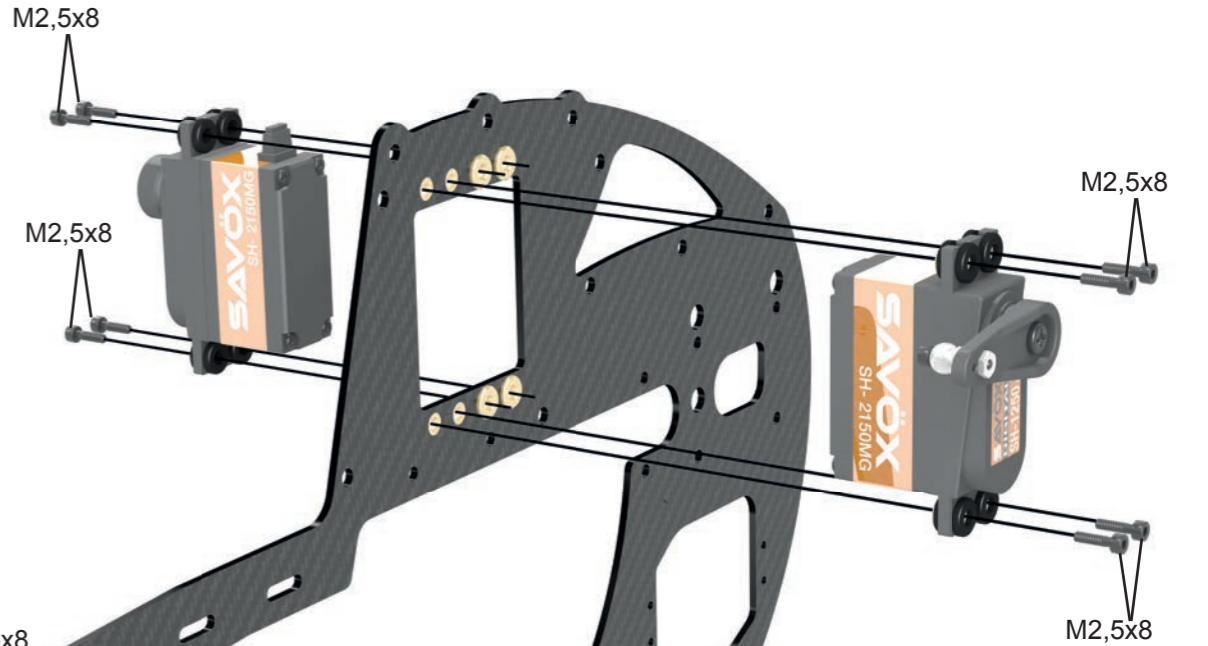


1



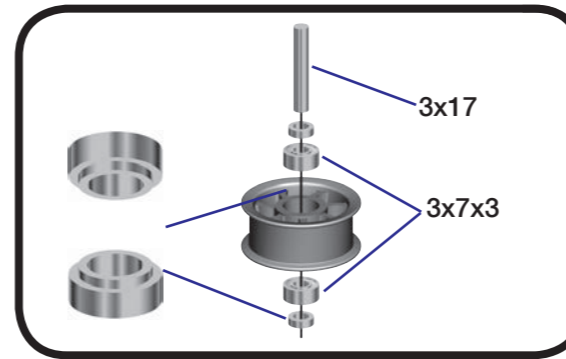
2

Please secure the servo screws with thread lock (Loctite).



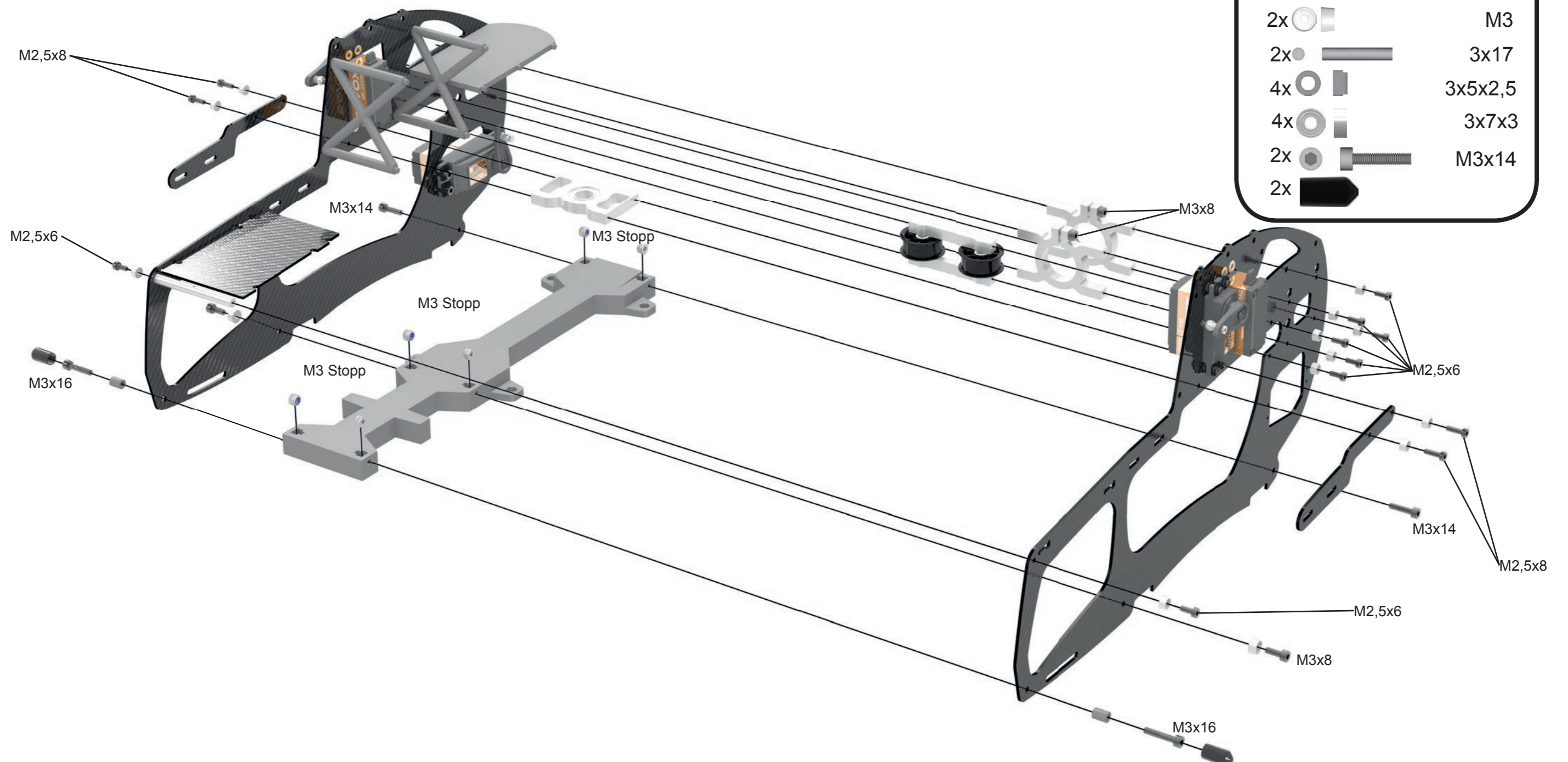
Please secure the servo screws with thread lock (Loctite).

2 Mainframe



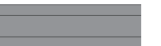




Bag 1		
4x		M3x8
6x		M3
14x		M2,5x6
4x		M2,5x8
2x		M3x18
2x		M3x5x7
18x		M2,5
2x		M3
2x		3x17
4x		3x5x2,5
4x		3x7x3
2x		M3x14
2x		







Secure all screws with thread lock!

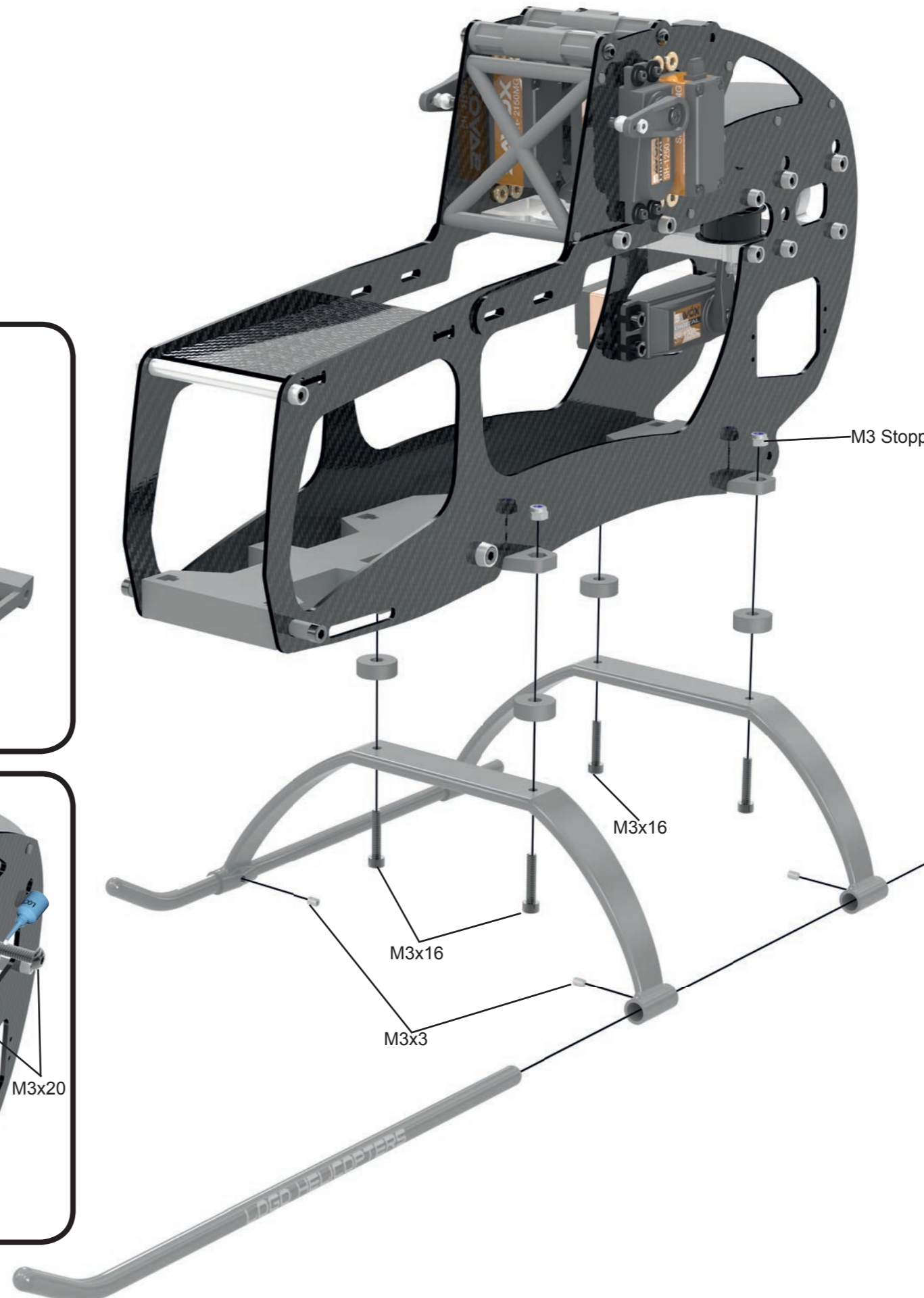
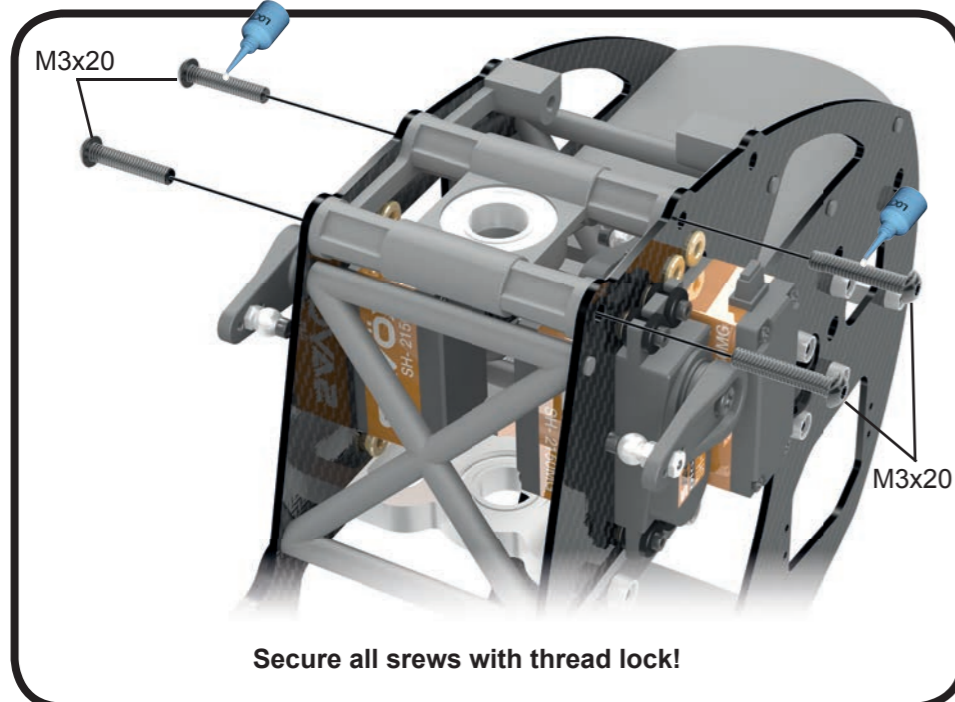
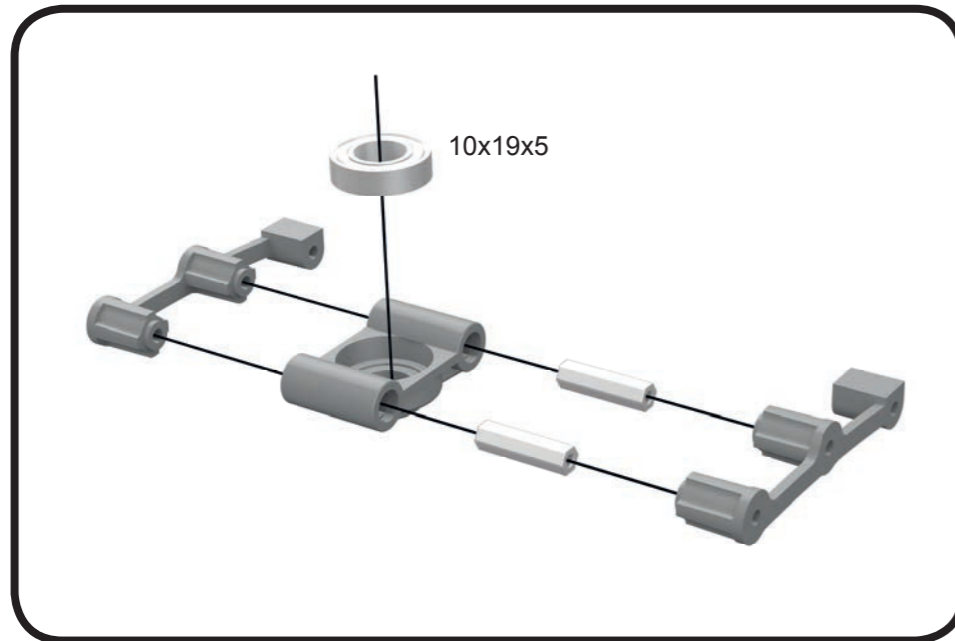


Bag 1

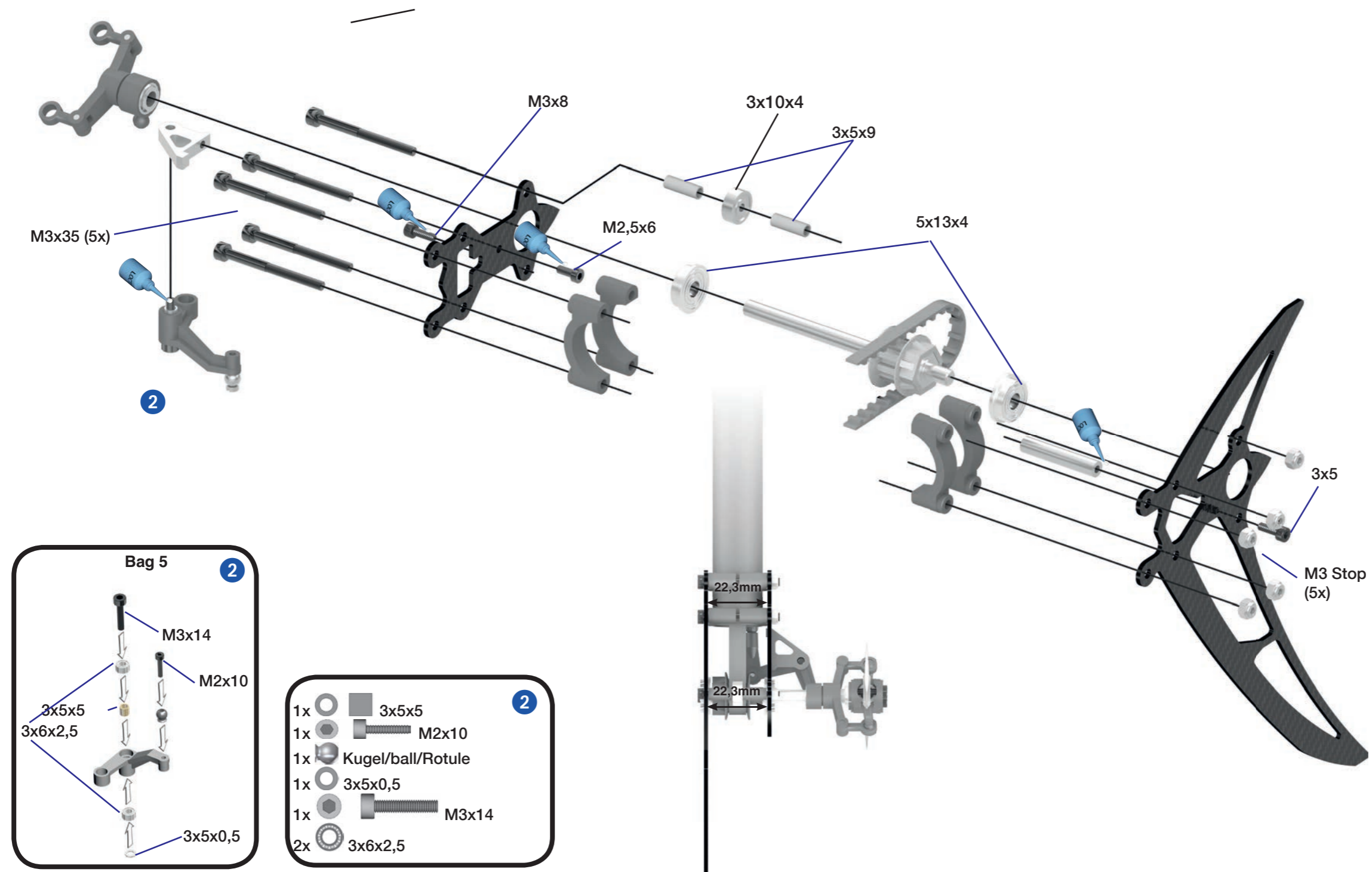
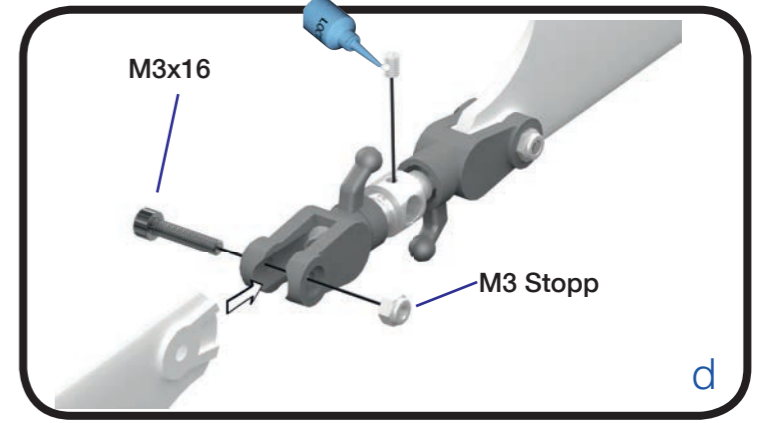
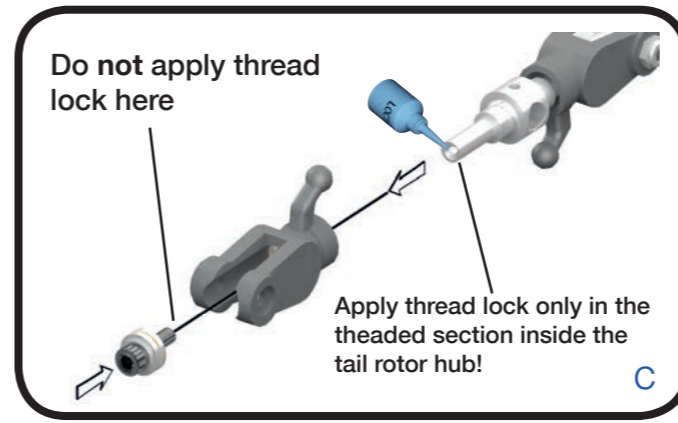
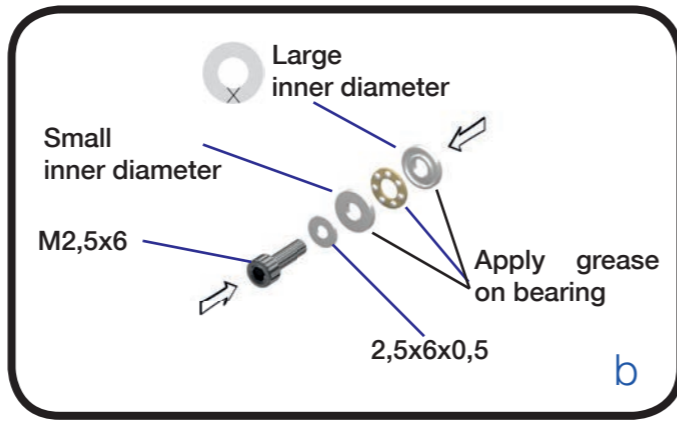
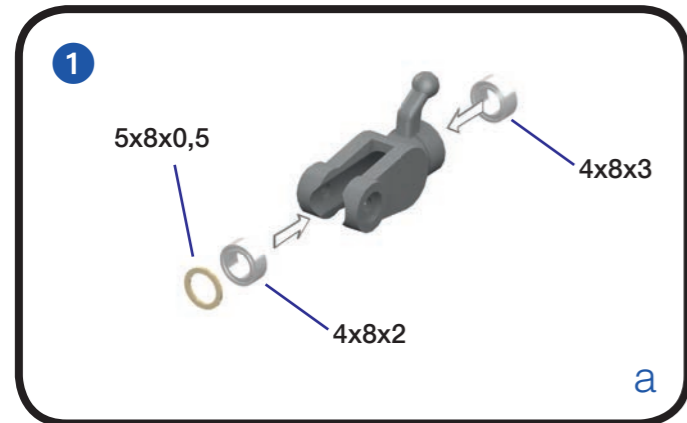
- 4x  10x19x5
- 4x   SW5x19
- 4x   M3x20

Bag 5

- 4x   M3x16
- 4x   M3
- 4x   M3x3



4 Tail Rotor

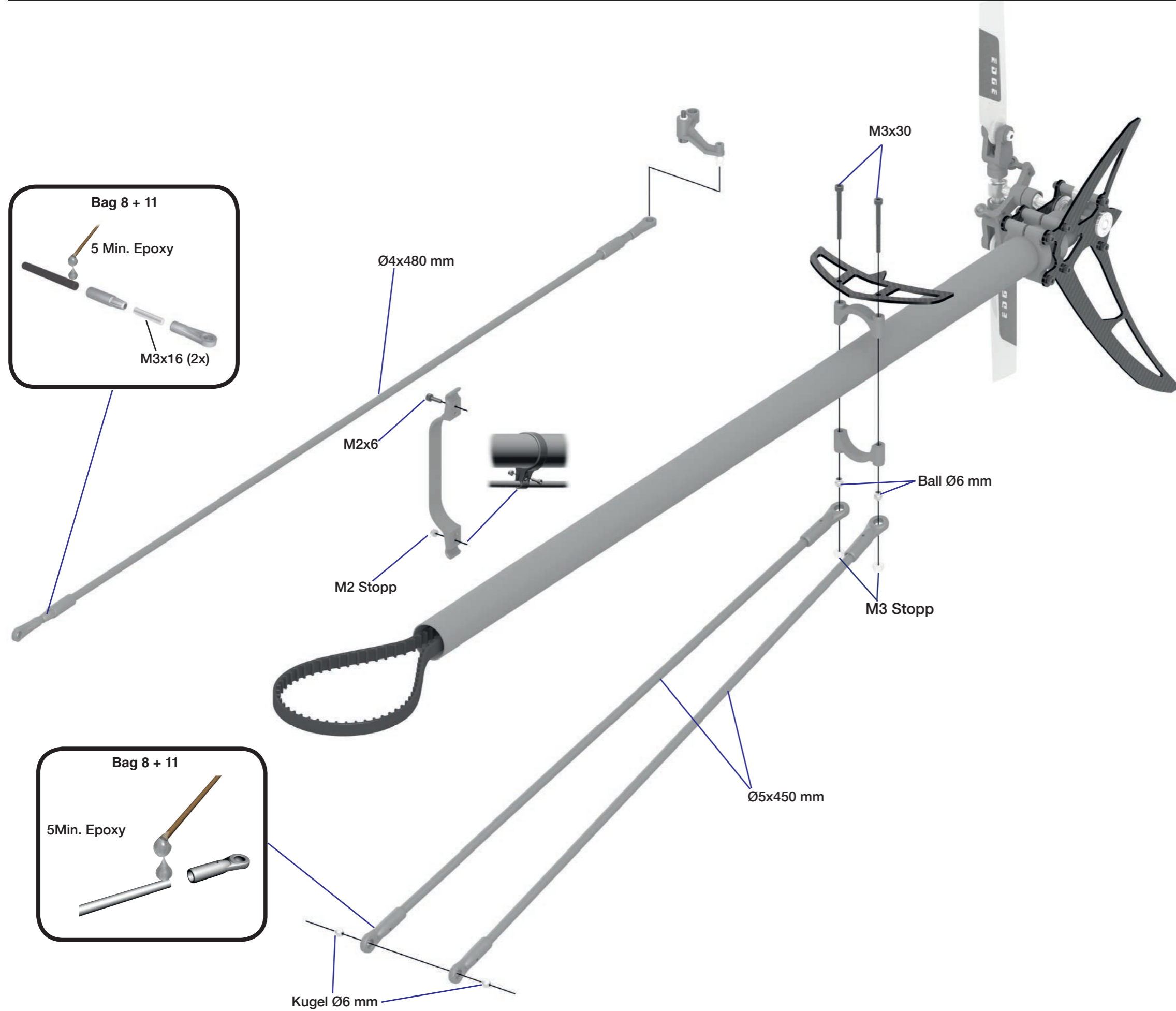


- Bag 7 1
- 2x 5x8x0,5
 - 2x 2,5x5x0,5
 - 2x M2,5x6
 - 2x 4x8x3
 - 2x 4x8x2
 - 2x M3x16
 - 2x 4x8x3,5
 - 2x M3
 - 1x M3x3

- Bag 5 2
- M3x14
 - M2x10
 - 3x5x5
 - 3x6x2,5
 - 3x5x0,5

- 2
- 1x 3x5x5
 - 1x M2x10
 - 1x Kugel/ball/Rotule
 - 1x 3x5x0,5
 - 1x M3x14
 - 2x 3x6x2,5

- Bag 7 3
- 5x M3
 - 1x M2,5x6
 - 1x 5x22,3
 - 2x M3x5
 - 5x M3x30
 - 2x 3x5x9
 - 1x 3x10x4
 - 2x 5x13x4



Bag 8 + 11

5 Min. Epoxy

M3x16 (2x)

Bag 8 + 11

5Min. Epoxy

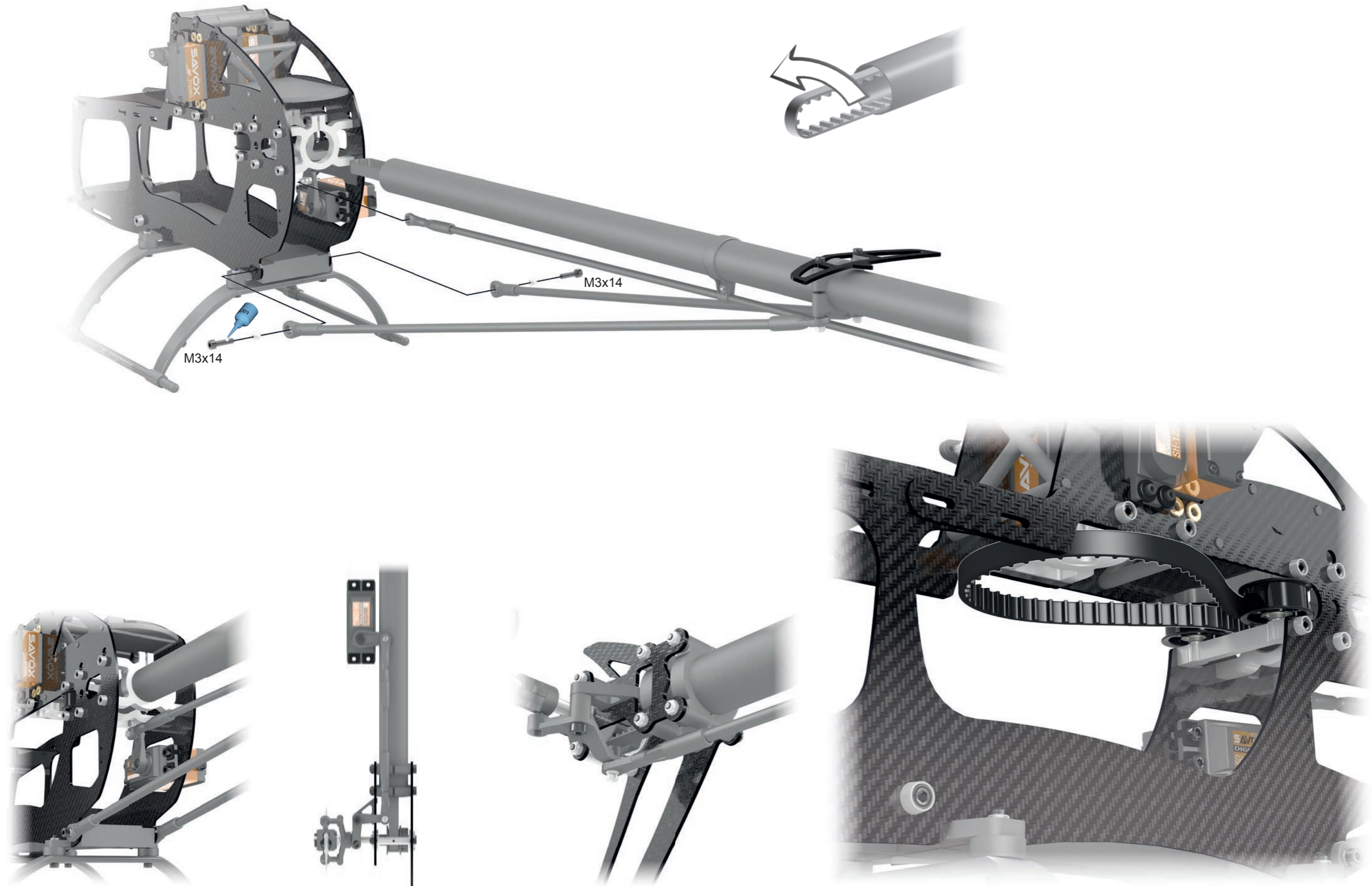
Bag 8

- 2x M3x30
- 2x M3
- 4x Kugel/ball/Rotule Ø6x3
- 4x
- 2x
- 2x M3x16
- 2x
- 1x M2x6
- 1x M2 Stopp

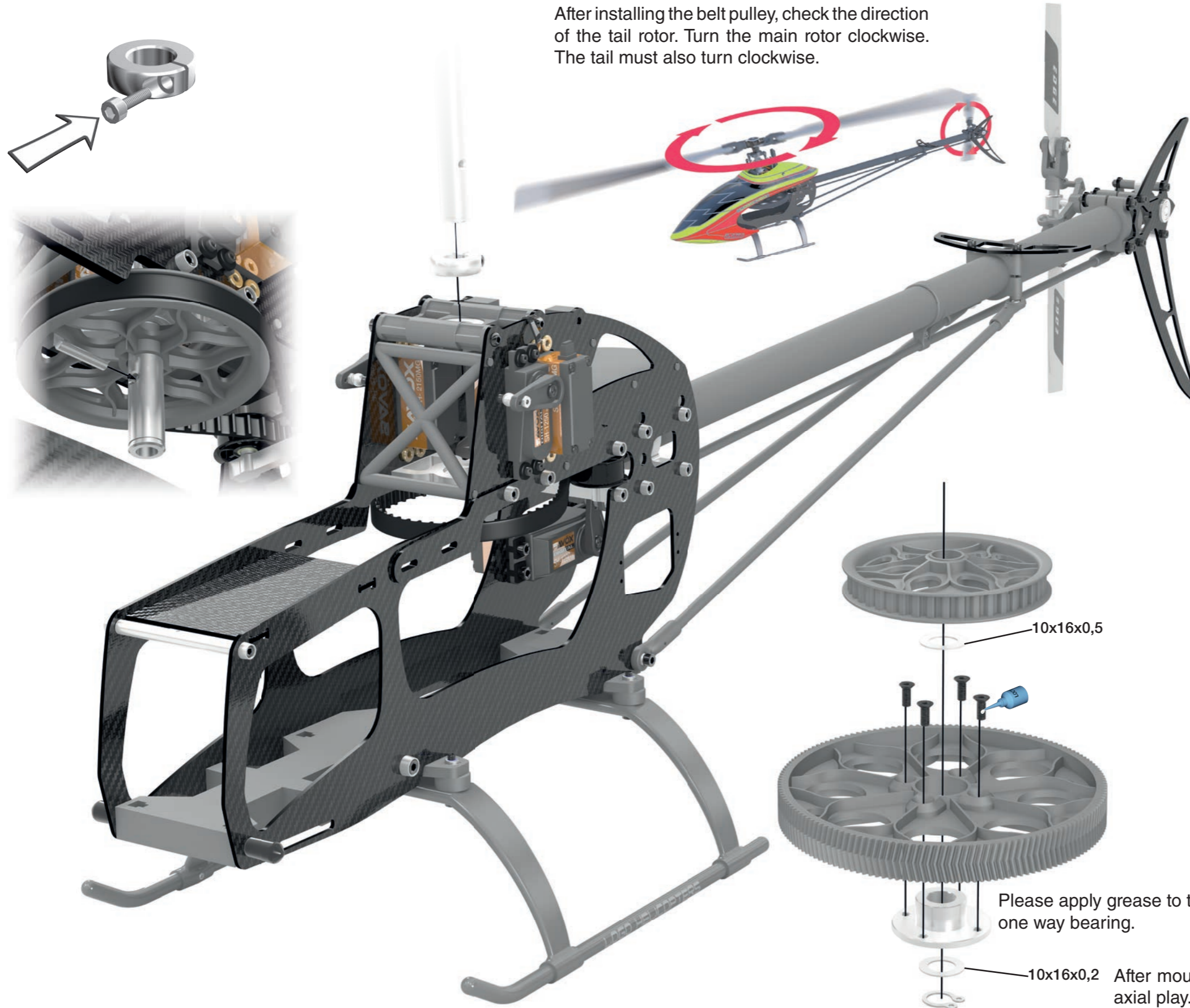
Bag 7

M3x3

6 Tail Boom Brace



After installing the belt pulley, check the direction of the tail rotor. Turn the main rotor clockwise. The tail must also turn clockwise.

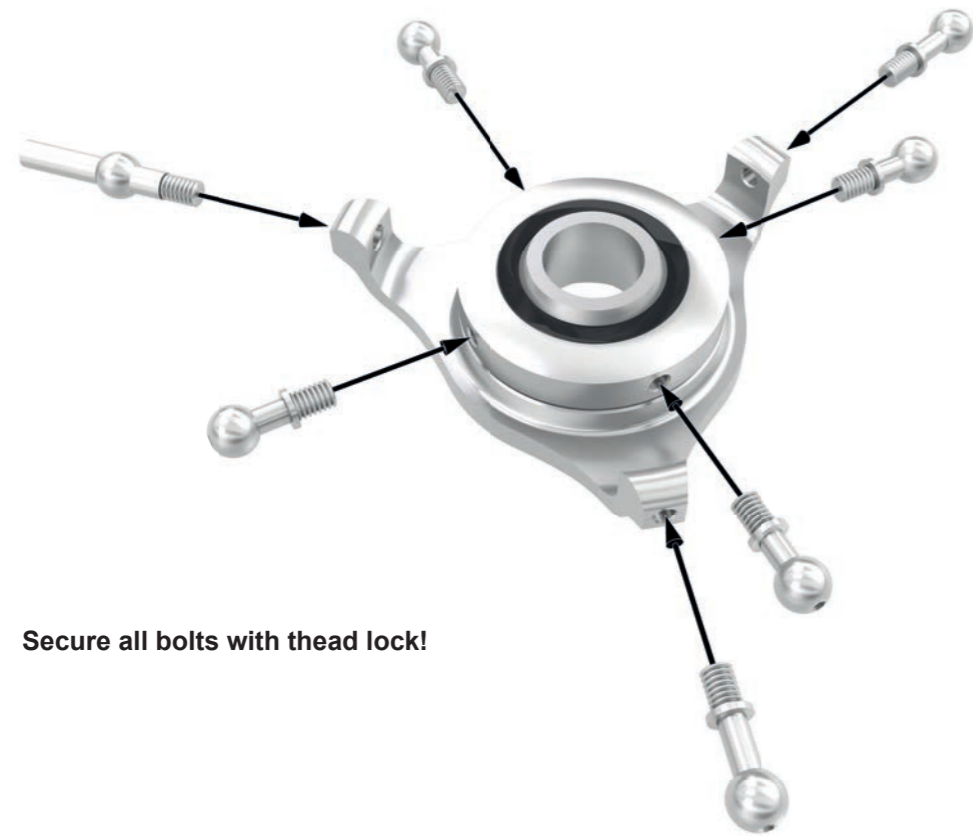


- Bag 4
- 1x
 - 4x M3x8
 - 1x 10x16x0,2
 - 1x 10x16x0,5
 - 1x 3x16
 - 1x M2,5x8

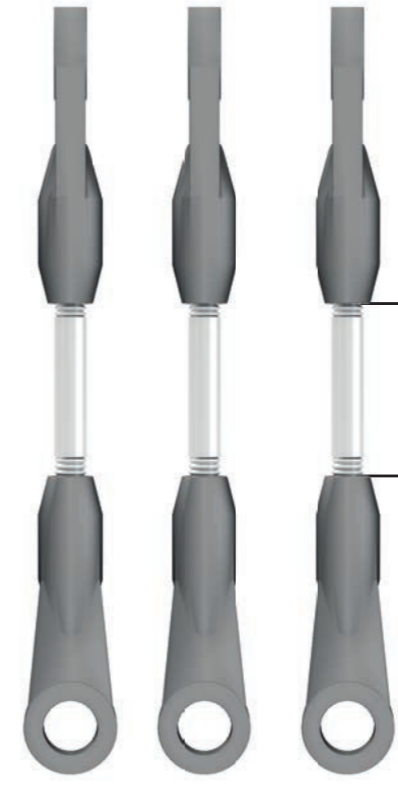
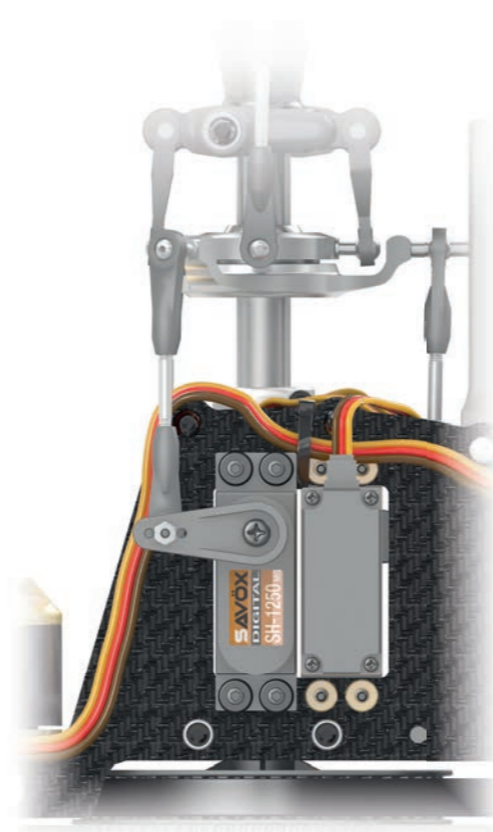
Please apply grease to the one way bearing.

10x16x0,2 After mounting the main gear, it will have 1 mm axial play.




8 Swashplate



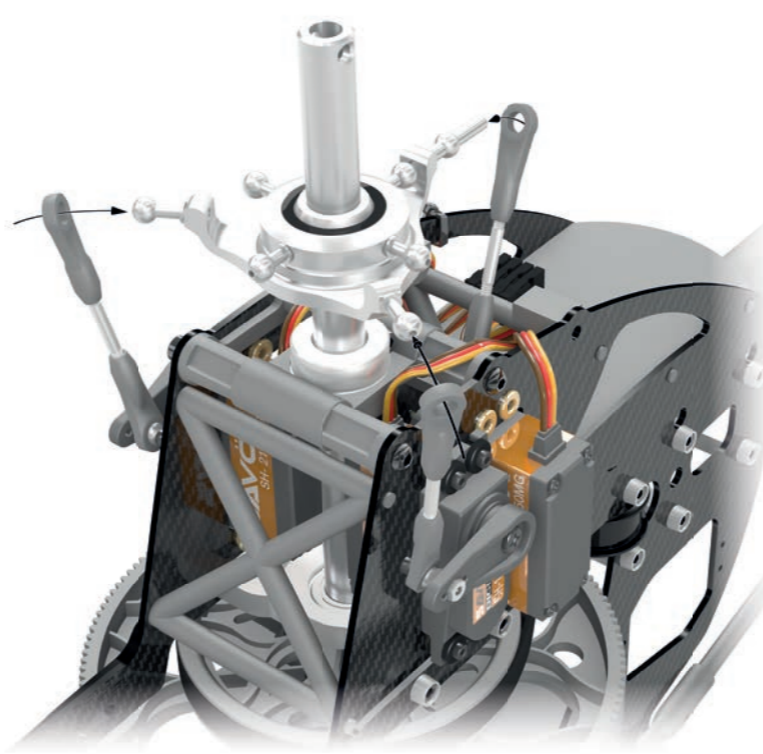
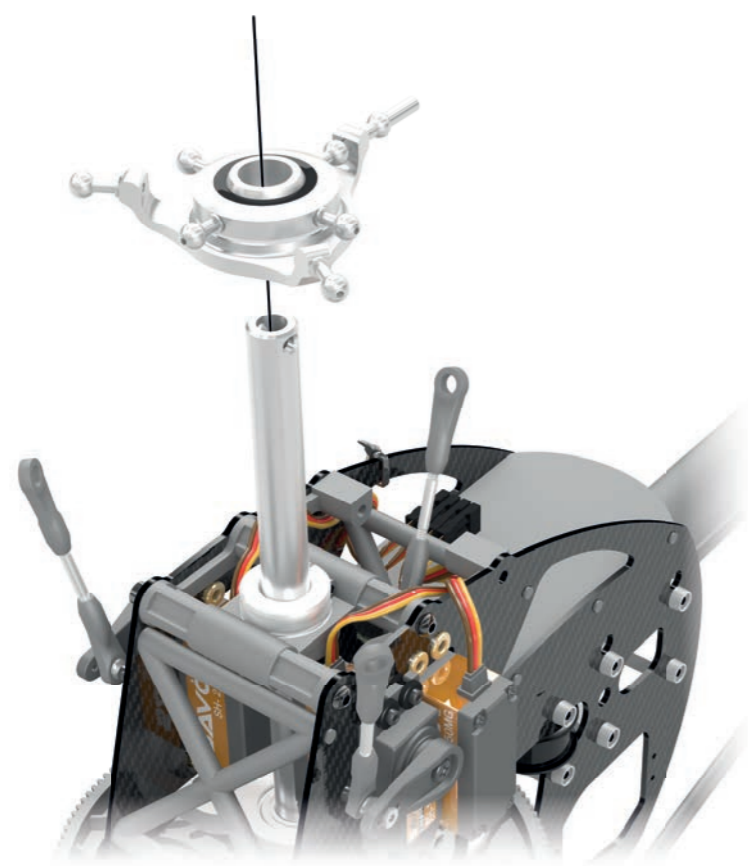
Secure all bolts with thread lock!



Bag 9

3x		M2,5x27
3x		M3x61
6x		

A hint for mounting the ball links:
One surface of the ball link is easier to clip on. If link is too hard to clip on, turn it by 180 degrees.



1

M3x6

8x11x1 (hard dampening)
8x11x0,5 (soft dampening)

7x4,5

8x11x1

Prior to assembly, please supply silicon oil or grease on o-rings and spindle shaft.

2

M4x12

4x12x1

10,5x14x1

8x14x4

Small inner diameter (6,0mm)

Large inner diameter (6,2mm)

10,5x14x1

Note: The washer with the larger inner diameter has play on the spindle shaft. The washer with the smaller inner diameter fits tightly.

Center the spindle shaft exactly!

M4x12

After mounting, the blade holders will move a little bit tightly at first.

3

M3x16

4

16 mm

5

M3x22

6

3x12

3x7x3

3x6x2,5

3x5x2

2x

7

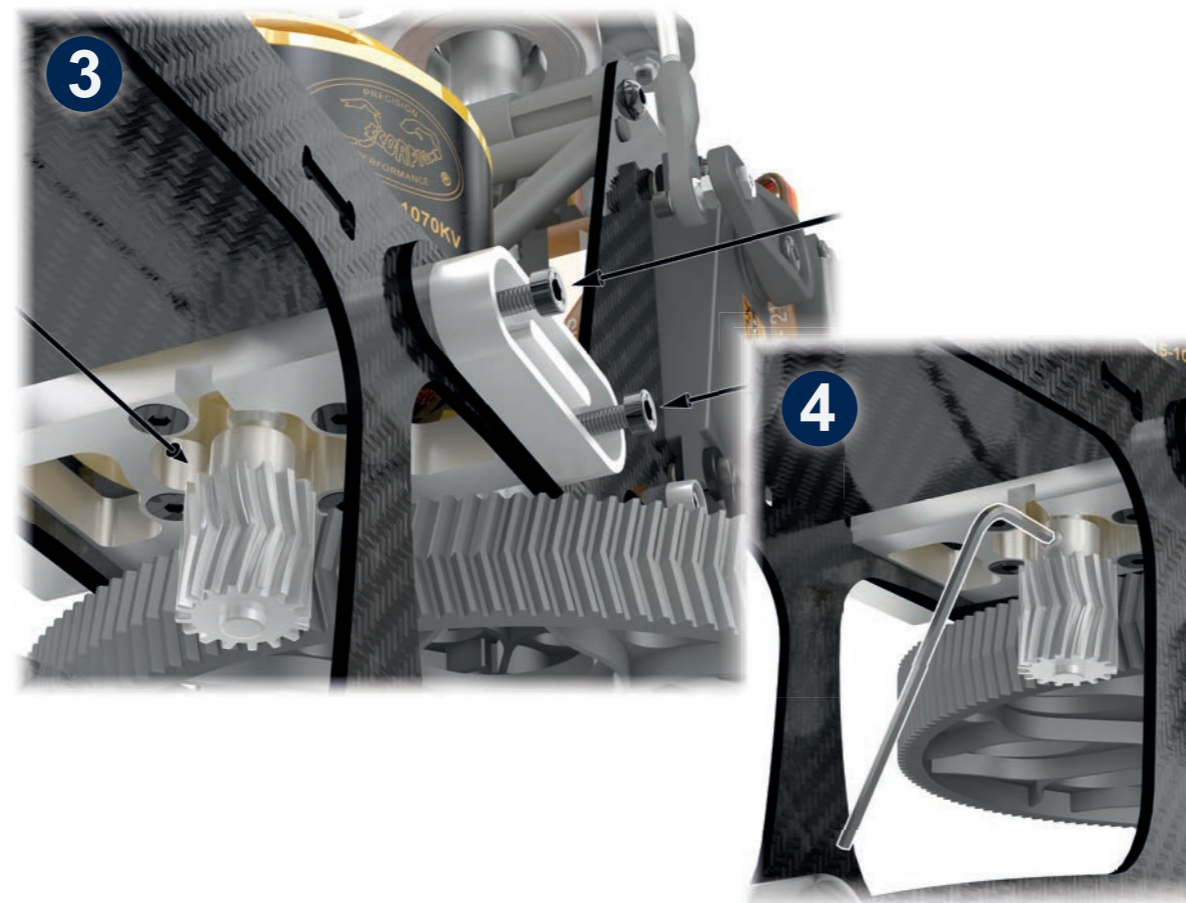
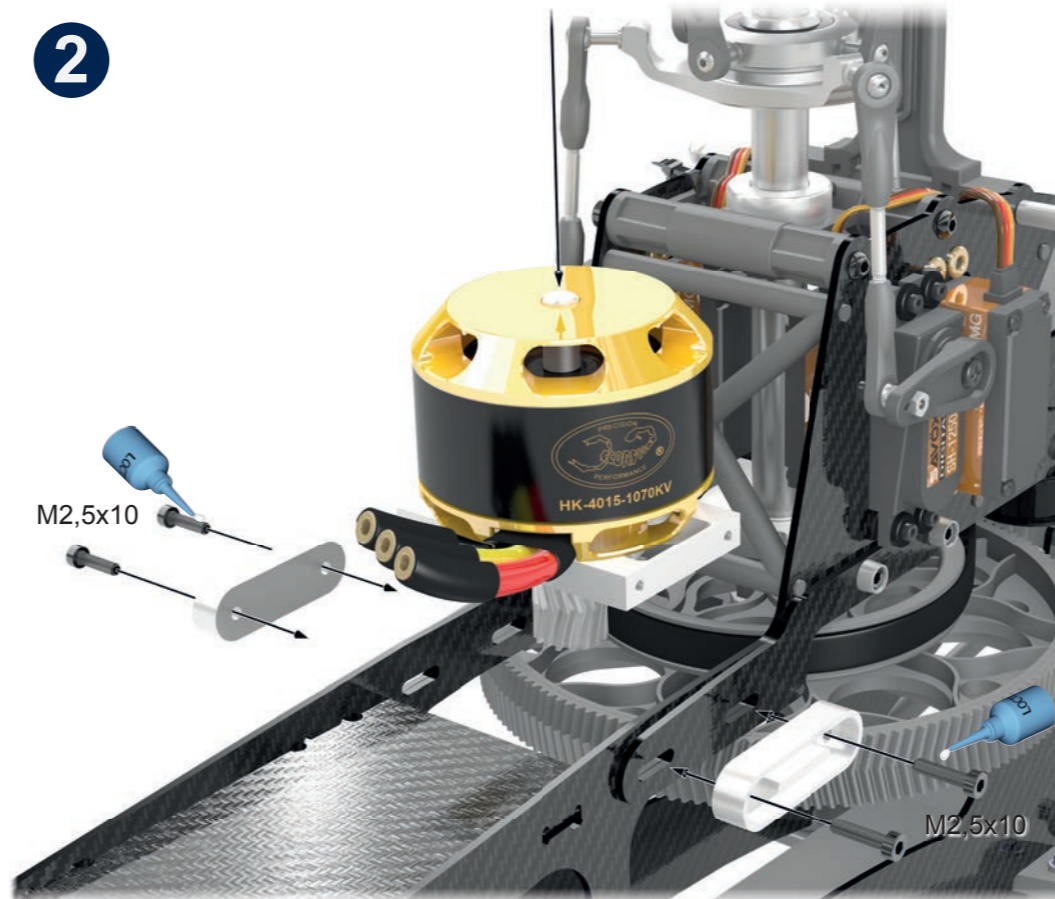
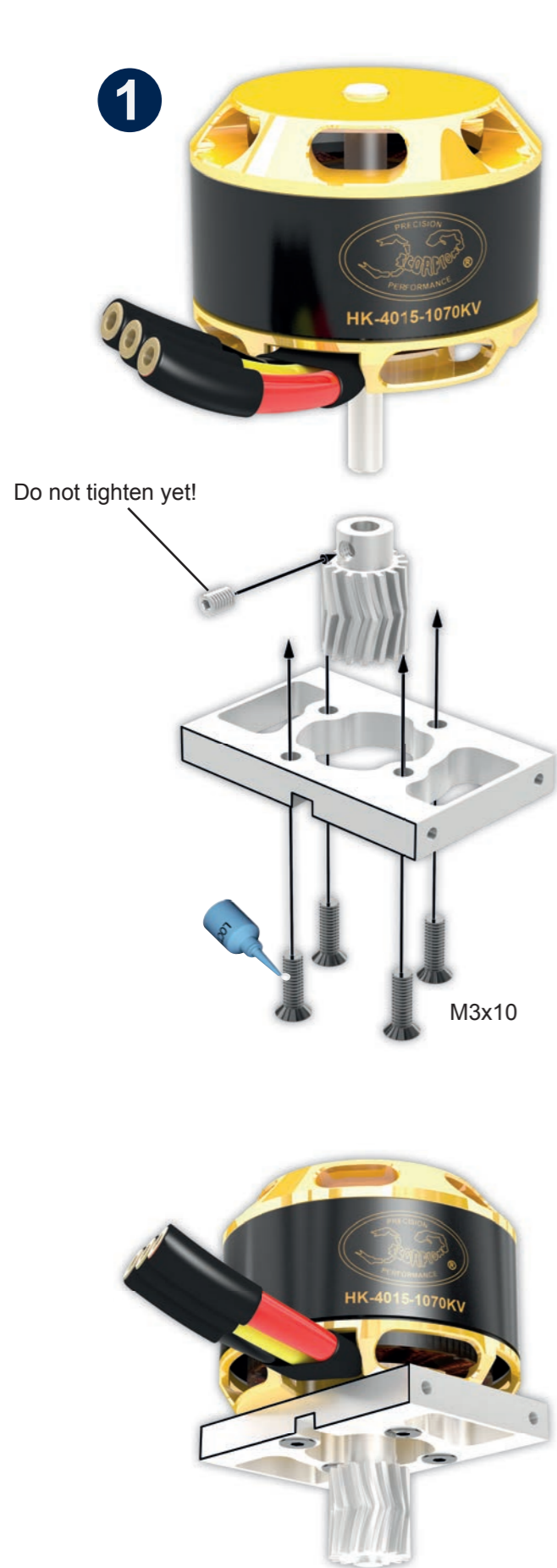
3x5x0,5

M3x20



Bag 10

- 1x M3x6
- 2x
- 6x 7x3 O-Ring
- 4x 8x11x1
- 2x 8x11x0,5
- 4x 8x14x4
- 2x 6x14x5
- 4x 10,5x14x1
- 1x M3x16
- 2x M3x22
- 2x M4x12
- 2x M3x25
- 2x 4x12x1
- 2x M3 Stop
- 2x Ø4,8x3
- 2x 3x12
- 4x 3x7x3
- 4x 3x6x2,5
- 2x 3x5x2
- 2x M3x20
- 2x M2,5x27
- 4x
- 2x 3x5x0,5



Bag 6		
6x		M3x10
1x		M3x3
4x		M2,5x10

Installation of Motor and Gear Mesh

1) Mount the motor as shown in image (1), using the four countersunk screws M3x10. Make sure that the M3x3 set screw is placed at the flattened area of the motor shaft. Do not fasten the set screw now (it can only be used once!) - the pinion will be positioned later.

2) Mount the motor plate, as shown in (2), using the four set screws M2.5x10 and the additional aluminum braces. Do not tighten the screws completely, as the entire motor plate should be still moveable.

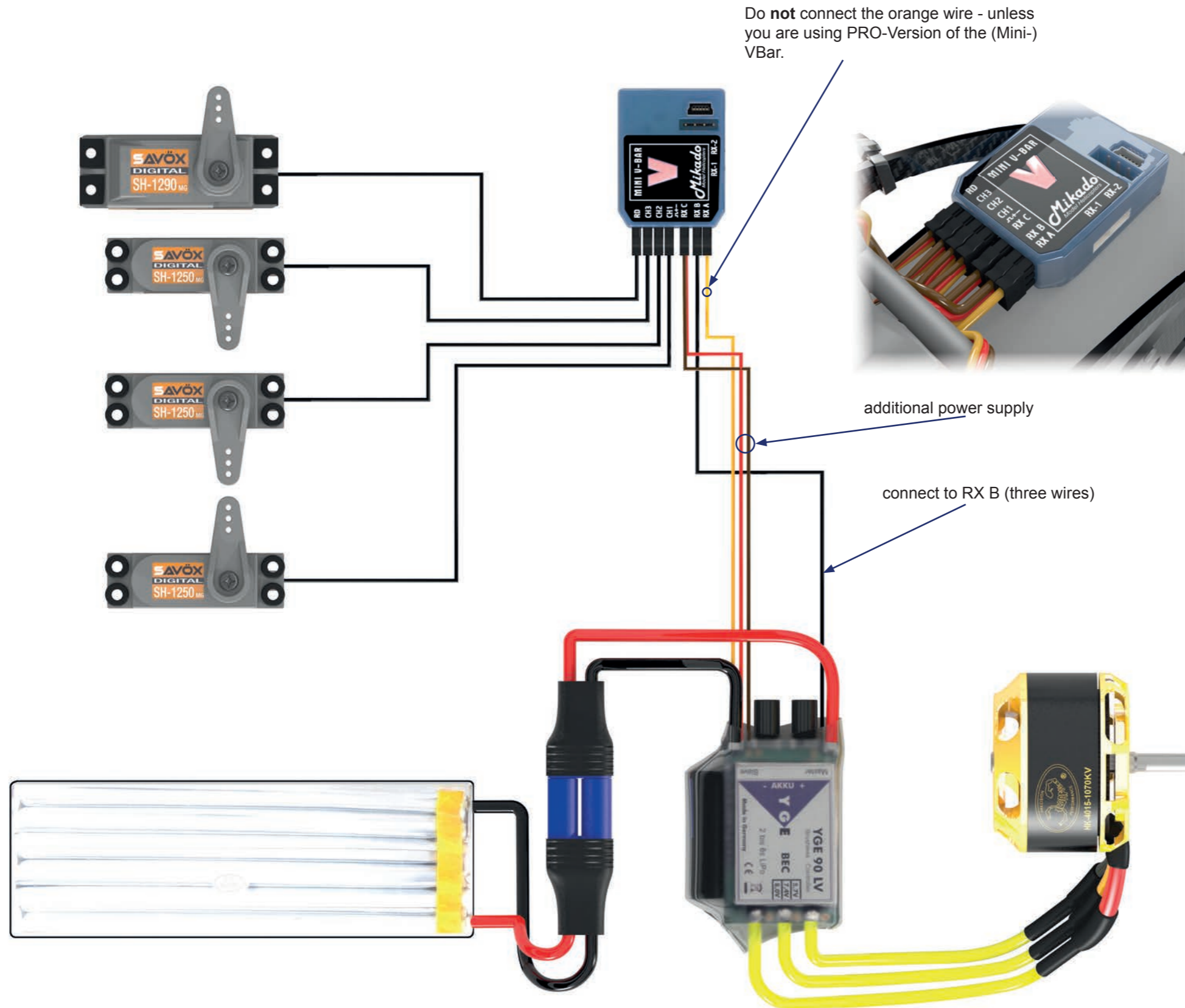
3) Push the motor with pinion as close to the main gear as possible, see image (3). The centers of the herringbone of pinion and main gear must be aligned exactly. The main gear has a slight axial play for easy adjustment.

4) Now fix the pinion to its final position by tightening the M3x3 set screw. This set screw can only be used once. You must secure it by using thread lock!

5) Pinion and main gear should have minimal gear mesh. The main gear is not 100 % round (due to the free wheel unit). Therefore there will be a small area without any gear mesh. This is normal. Do not use paper for setting the gear mesh (this does not work with the herringbone gear!). Now secure the M2.5 socket head cap screw with thread lock.

6) During pre-flight check, before each flight, the gear backlash must be checked! Also, the gear must be checked for wear and tear. If necessary, adjust the gear mesh and/or replace the gears. Note that the motor ball bearing can also be subject to wear and tear, as well as to excess play.

11 Wiring RC Components



Installation and Operation of the YGE controller in LOGO 480

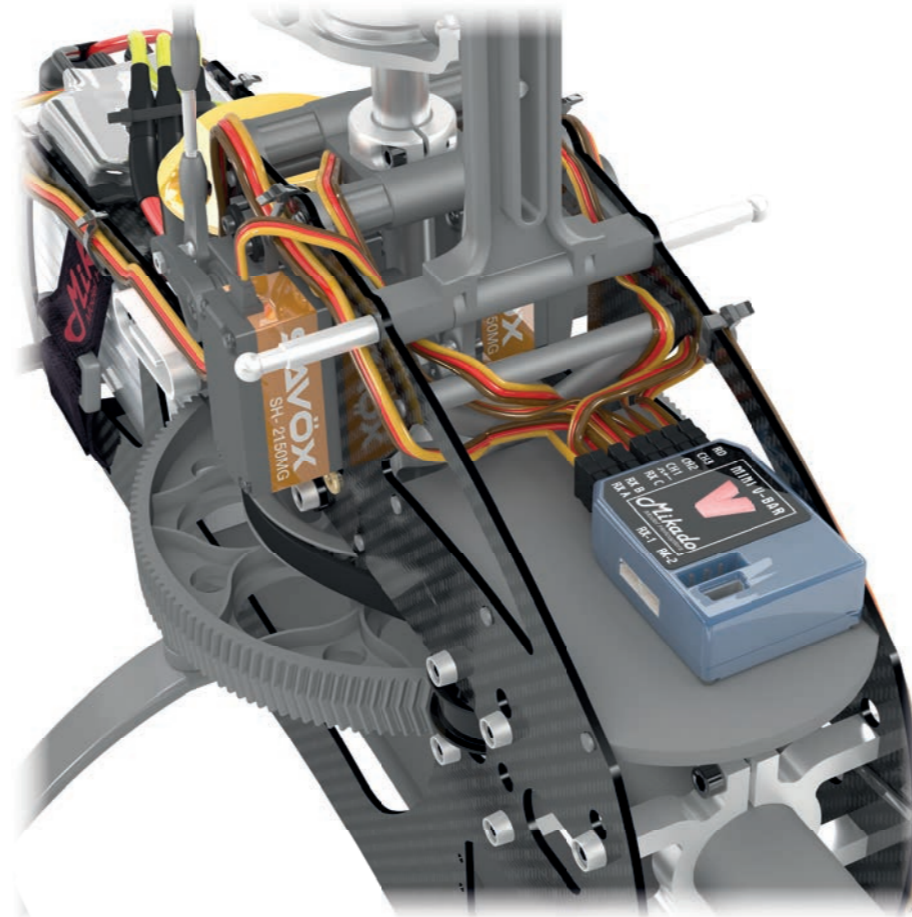
This YGE 90 LV controller is a special edition for Mikado Model Helicopters. The controller has a Power-BEC and its software is pre-programmed for LOGO helicopters. The current version contains the internal governor (constant head speed) and has a pre-programmed BEC voltage of 5.7 V. This YGE 90LV controller can be used with 6S lipo batteries in the LOGO 480 without any adjustments. In its current state, this controller can only be used in LOGO helicopters operated by Lipo batteries of size 6S or less.

- 1) Position the controller on the carbon plate in front of the motor. In this way you can measure the correct length of the three cables connecting the motor. Then shorten the cables as necessary. Solder the three 4 mm gold connectors and secure the connectors with shrinking tube against short-circuiting.
- 2) Now attach the controller in its final position on the carbon plate, using velcro and cable straps. Make sure that the printed sticker faces upwards, as it contains the heat sink.
- 3) Connect the master wire of the YGE controller to the RX B socket on the Mini-VBar. The slave wire (+/-) serves as an additional power supply. It can be placed into any free channel, **but not RX A**. The single signal wire is used only in connection with the VBar governor (PRO-Version necessary). Instructions for this can be found on www.vstabi.info.
- 4) Before powering up the motor and controller for the first time, you must remove the main and tail rotor blades!
- 5) Please read the additional information and safety warnings included to the controller by YGE. This controller can be re-programmed using a YGE programming card. After re-programming it can be used in other applications.

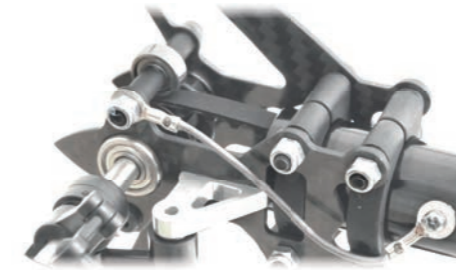
12 Wiring RC Components + Battery Mounting



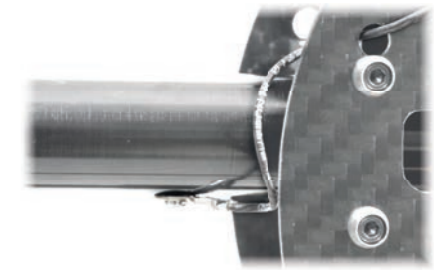
During flight, all cables and connections are subject to vibration and acceleration forces. This is why it is necessary to place all wires and cables carefully. All connectors must be firmly connected. Use only connectors with protection against reversing. If wires are too short, they can get disconnected during flight. This must be absolutely avoided.



We recommend the use of the anti-static kit (item no. 4358 included here). This reduces potential effects of static discharge of the belt.



Step 1: Connect one eye of the short wire to the tail boom and the other to the tail drive pulley.

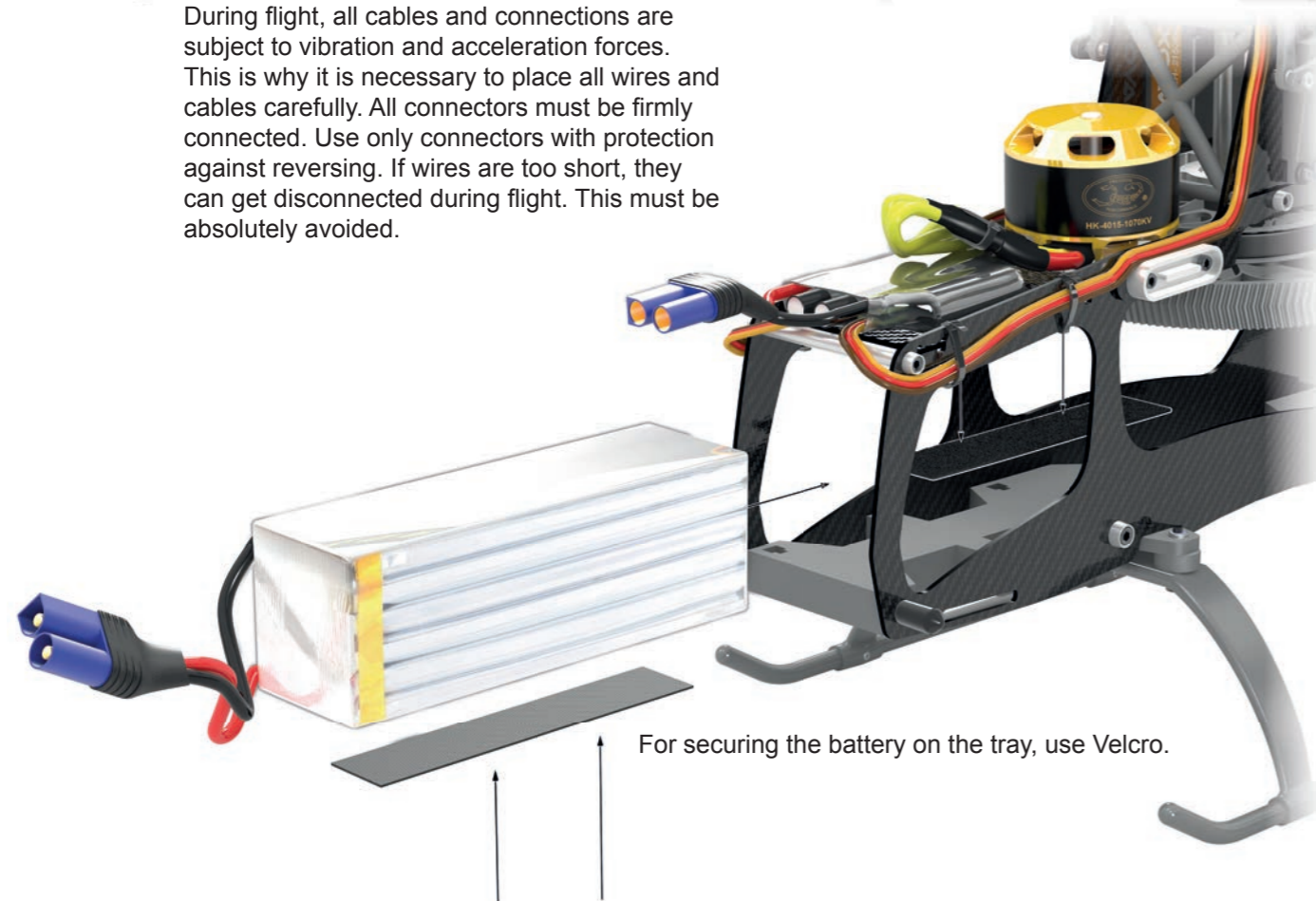


Step 2: Attach the eye of the long wire to the upper or the lower surface of the tail boom.



Step 3: Attach the second short wire to the motor plate and connect it to the wire on the tail boom.

Make sure that no cables can rub against any sharp edges. For protecting the cables use edge protector item no. 4594 and braided sleeving wrap, item no. 4593. Prior to each flight, check all cables to make sure they are whole and not damaged. Prior to each flight, check that all connectors firmly connected.



For securing the battery on the tray, use Velcro.



13 Canopy and Overview

The canopy of the LOGO 480 is mounted via four attachment points. The two attachment points in the front ensure that the canopy sits well on the chassis during flight. In the back, the canopy is attached by two rubber grommets.

Important note: A special feature of the Logo 480 canopy is that its back part is fully closed. Take your time when mounting and dismounting the canopy. Use proper care when sliding the canopy over the rotor shaft, to avoid damage on the surface of the canopy.

Before each flight, check that the canopy sits securely. If the canopy sits too loose, this can deteriorate the flight performance of the helicopter. If the canopy becomes loose during flight, the helicopter will crash.

This canopy is 100% hand-made. Small irregularities in the surface, the airbrush design or color are normal. They do not constitute a reason for complaint.

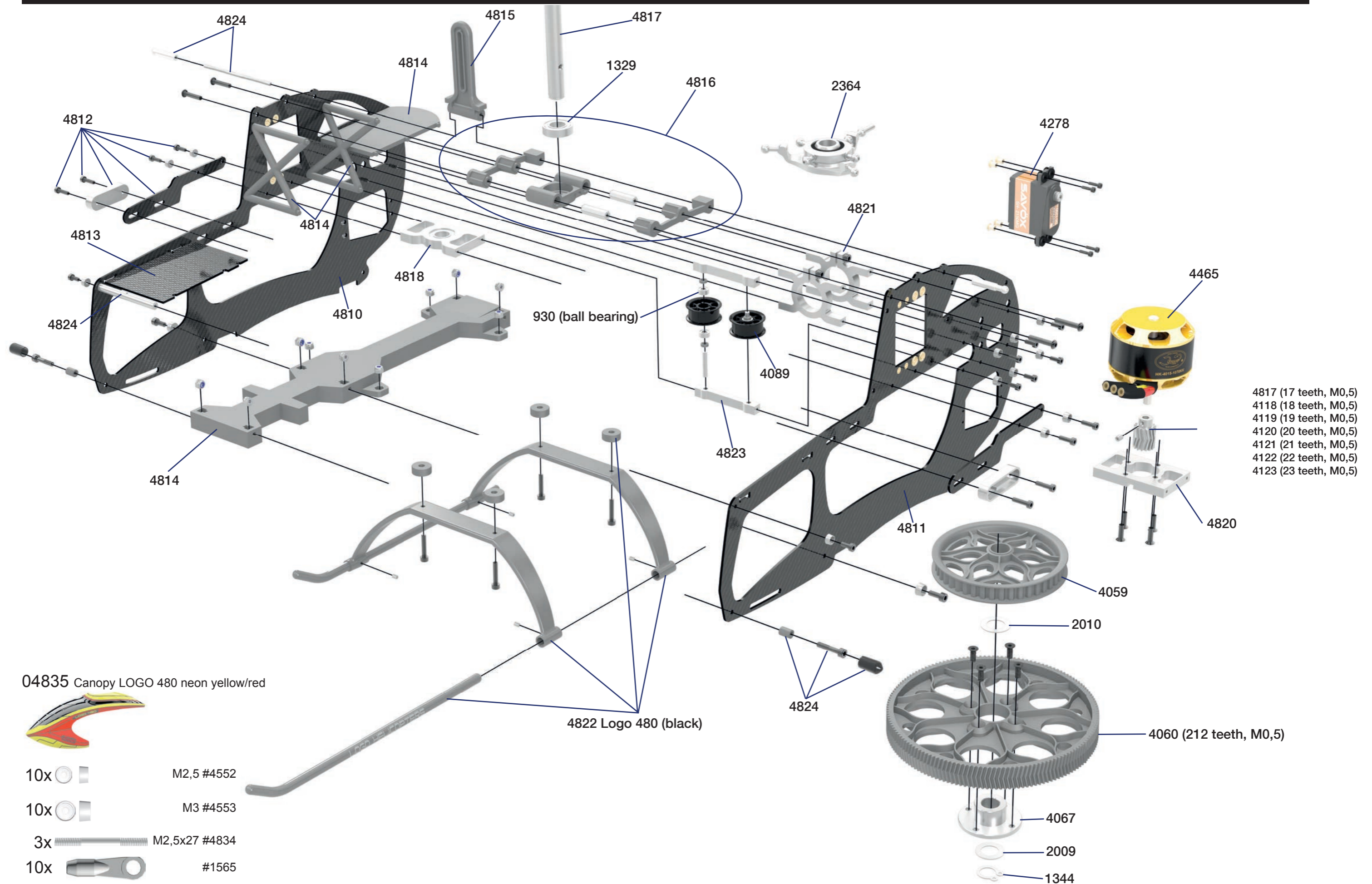


Prior to the first flight, check the direction of the main rotor and the tail rotor. Both must turn clockwise.

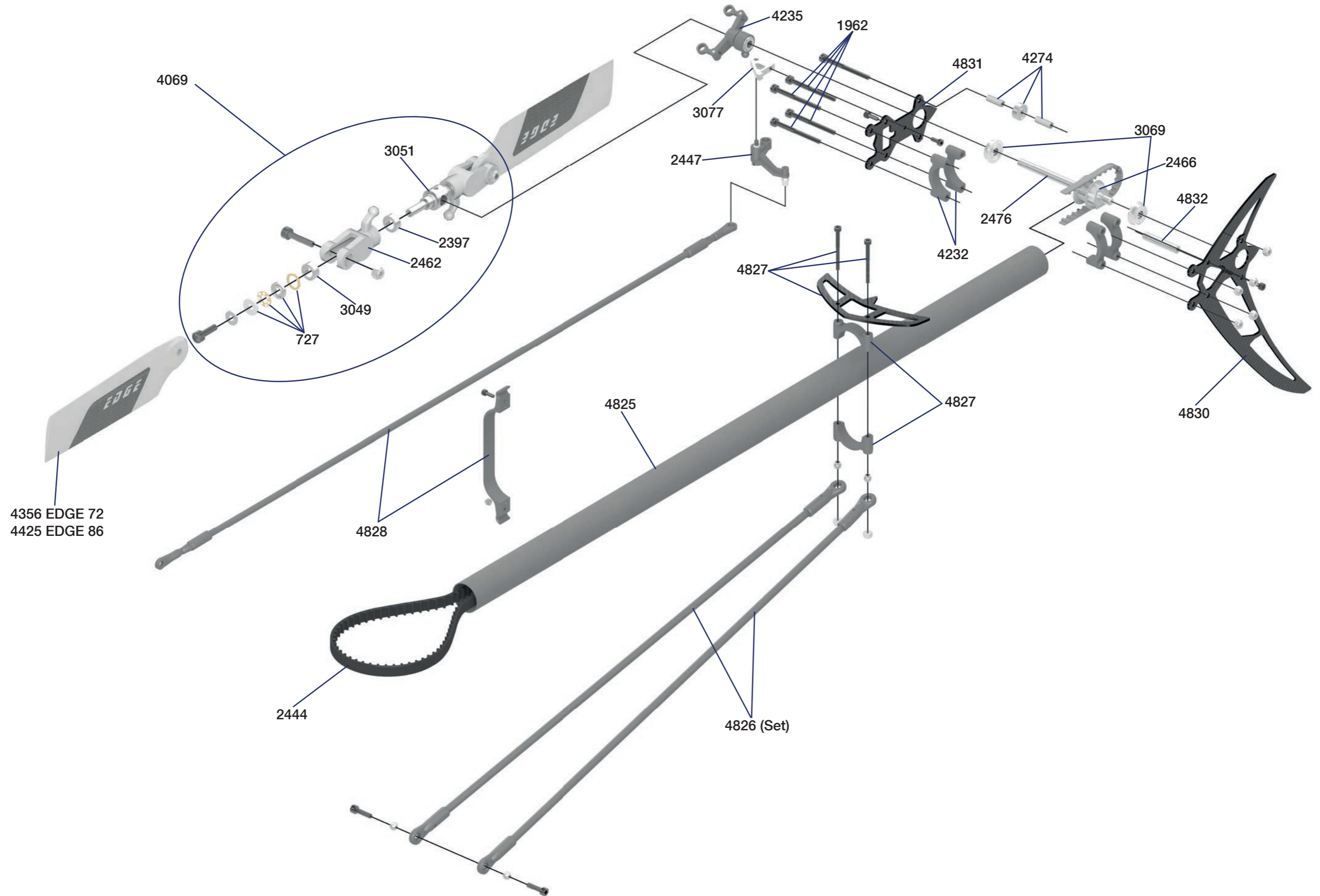
For extra protection of the canopy, you may mount edge protector, item no. 4594. You may need to enlarge the cut-outs.



14 Overview Spare Parts Mainframe



15 Overview Spare Parts Tail Boom



16 Overview Spare Parts Rotor Head

