

Manual

LOGO 800



Mikado
Model Helicopters

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Thank you very much for your purchase of the Mikado LOGO 800. Prior to assembly, 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, please 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.

This helicopter is not suitable for beginners. It is expected that you have some experience in assembling and operating an RC helicopter (model size LOGO 400 to LOGO 600, for example). You are required to adhere to the safety instructions of this manual.

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. 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. If you do not 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. Since one irregularity can cause other defects or problems, an increased risk of failure will ensue, if the problem is not fixed first.

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. Even just one single loose screw can cause the helicopter to become uncontrollable resulting in a crash or personnel injury.

Also it is very important that you must check the model frequently and exchange any parts that show signs of deterioration or wear. 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.

Perform overspeed maneuvers only at your own risk: overspeed maneuvers may overload the components on the helicopter and lead to damage/a crash/injury.

Before powering on the helicopter:

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 High Tension wires

Technical specifications which must be obeyed during the operation of the LOGO 800:

- maximum rotor head rpm: 1800 U/min.
- maximum pitch travel: +/- 12°
- Length of rotor blades: 750 to 810mm
- Lipo battery: 12-14S Lipo Batteries
- admissible temperature 5° - 35° Celsius

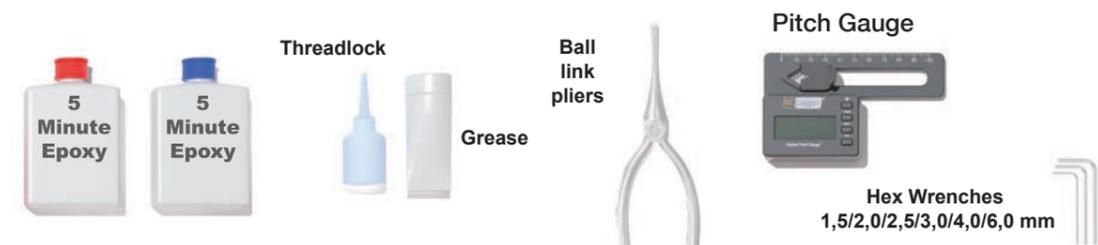
If these values are exceeded, the electronic components may experience overload. This may result in damage or a crash of the helicopter.

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.

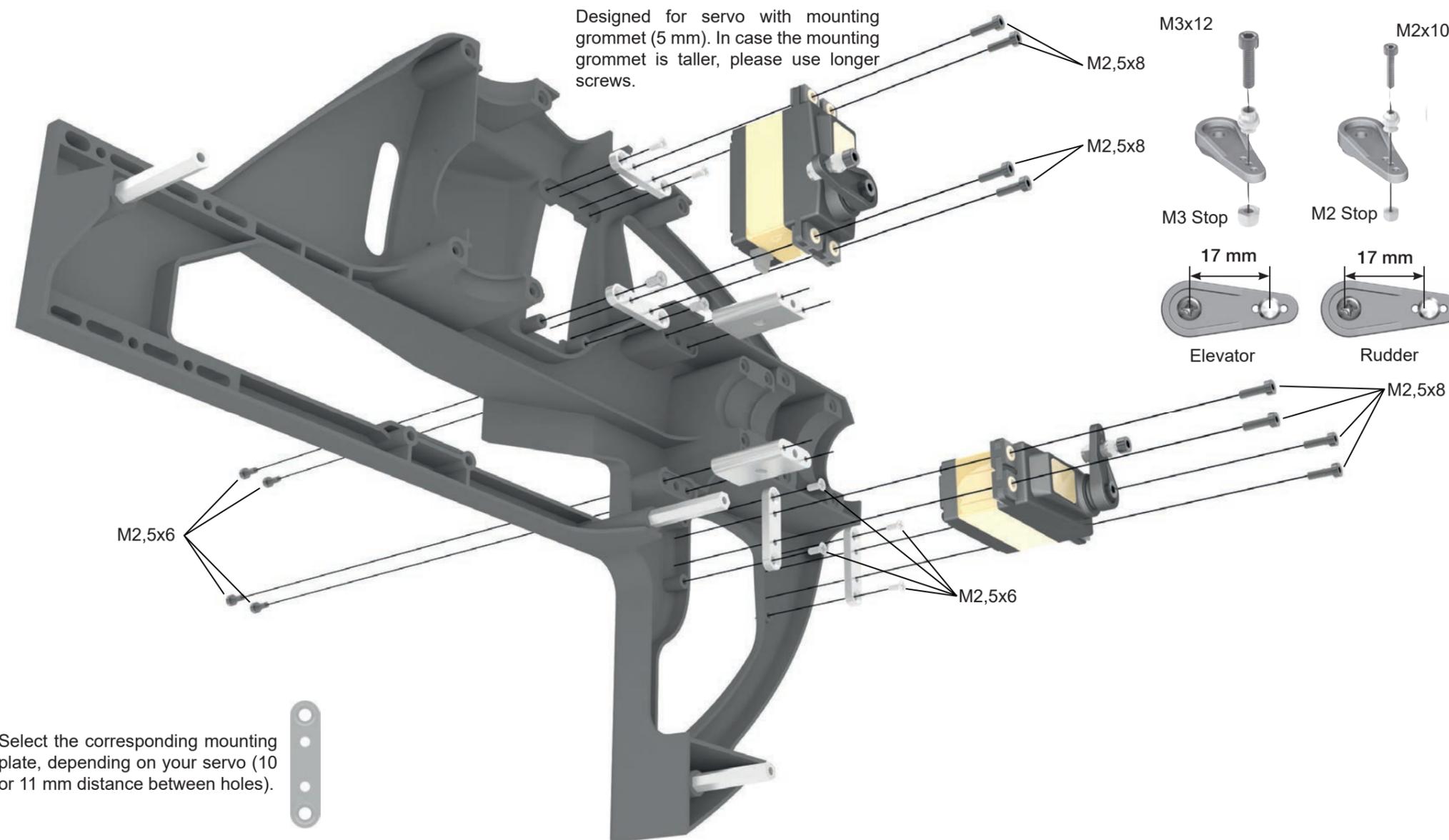
Tips for flying your Logo 800 in a safe way

In our rigorous testing we flew the Logo 800 in very aggressive maneuvers and did not find it to be susceptible to failure, or boom strikes. However, due to the size of this model it is our recommendation to you that it should not be flown in the same way which you fly a small helicopter or 700 size competition machine, particularly in aggressive 3D maneuvers. Please note the following tips on how to fly your 800 in order to ensure the long and healthy life of your model.

1. . If you will be flying aggressive 3D maneuvers, you MUST first install the 2 x 90 shore dampers in the "Hard Damper Configuration" Please note more about this on page #15.
2. Do not do maneuvers which give large amounts of backwards elevator, and negative collective pitch at the same time. Especially do not do this in a quick jab, or aggressive way. If you will give both of these commands at the same time you should do them more smoothly. Otherwise it may result in catastrophic boom strike.
3. Utilize good pitch management when flying this helicopter. When flying you should only give large amount of collective pitch, with low amount of cyclic, or high cyclic amount with low amount of collective pitch. But not both at the same time.
4. Do not attempt to do aggressive flying at low RPMs. If you want to fly aggressive maneuvers, please use at least 1800rpm of head speed. If you fly with lower RPM, then you must also fly the model in a smoother way.
5. High amounts of collective pitch with rapid right rudder inputs should be avoided. The increased torque from the collective pitch and the right tail rotor input (against torque) will put huge amounts of stress on the tail rotor drive train.
6. If you fly mainly with Low RPM (below 1400rpm), you can use longer tail rotor blades (120-130mm) to get a better tail authority. But do not attempt to fly higher 6. rpm with larger tail blades.



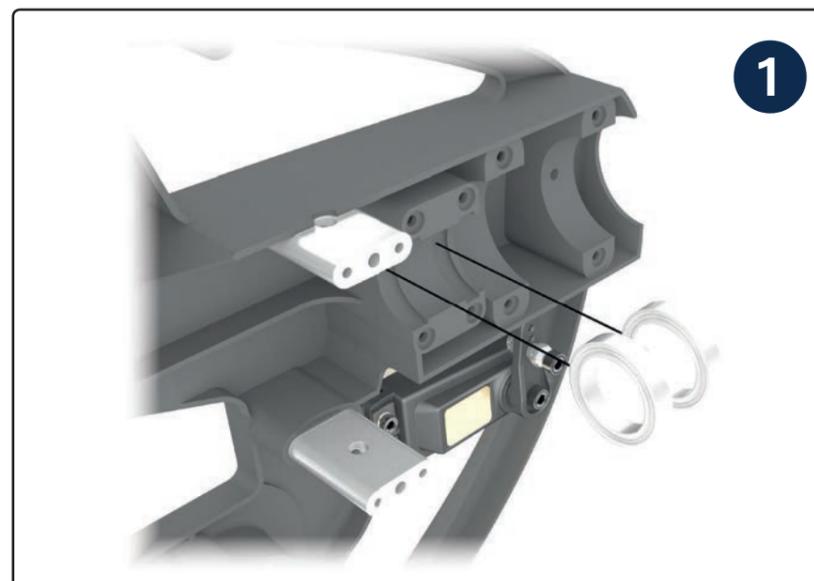
1 Chassis



Select the corresponding mounting plate, depending on your servo (10 or 11 mm distance between holes).



Bag 1+3		
8x		M2,5x6
4x		M2,5x6
8x		M2,5x8
1x		M3x12
1x		M2x10
1x		M3
1x		M2
1x		Ø6
1x		Ø4,8
2x		15x21x4
3x		5,5x59



1 Chassis

1

M2,5 Stop

Use the included 2.5 mm threaded rod to position the 2.5 mm hex lock nuts in the right hand side frame.

Bag 1

4x		M2,5x6
8x		M2,5x10
5x		M2,5x12
12x		M2,5
2x		14x25x6
1x		2,5x60

M2,5x6

M2,5x10

2

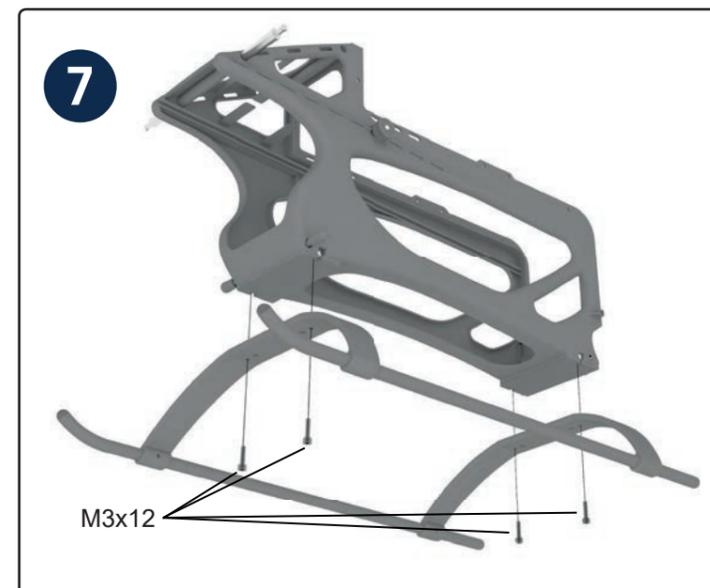
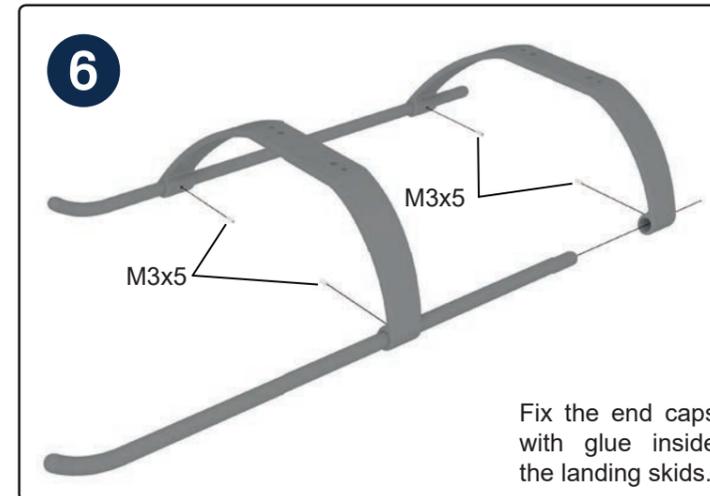
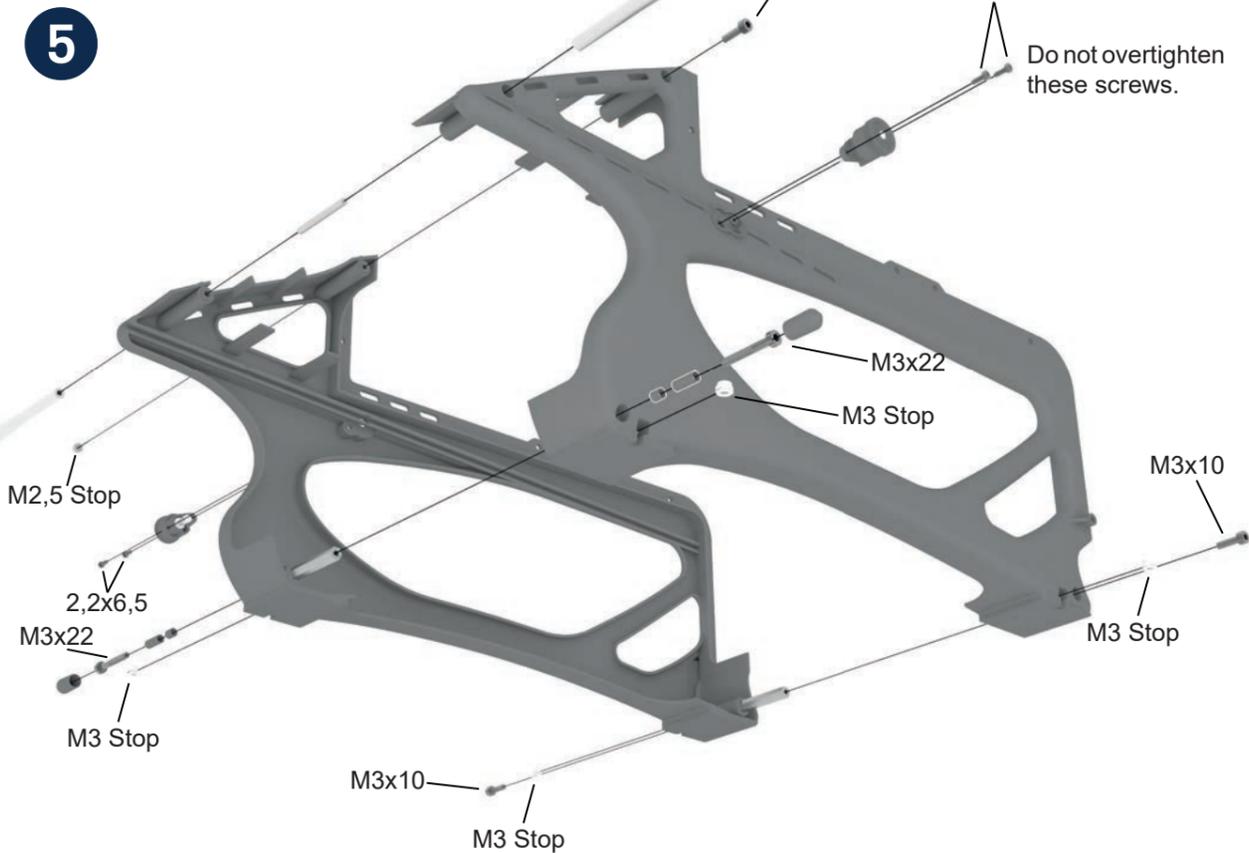
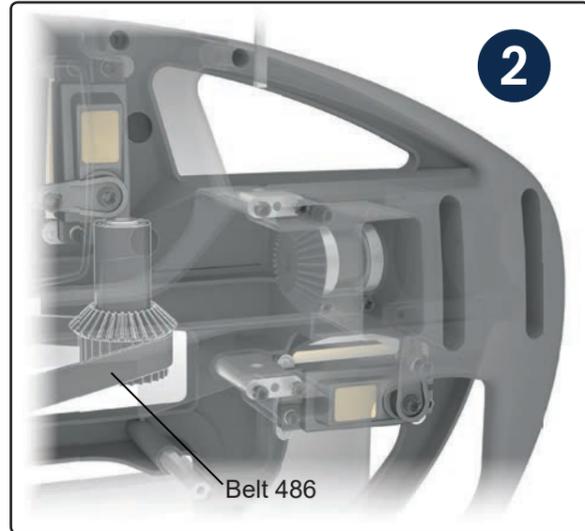
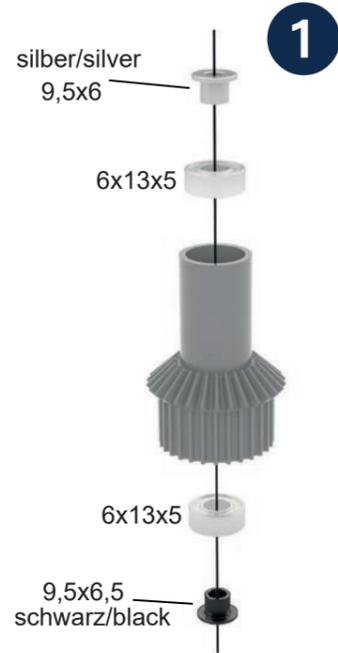
8x M2,5 Stop

Be sure to insert the adapters at this stage.

M2,5x10

M2,5x12

1 Chassis and Landing Struts

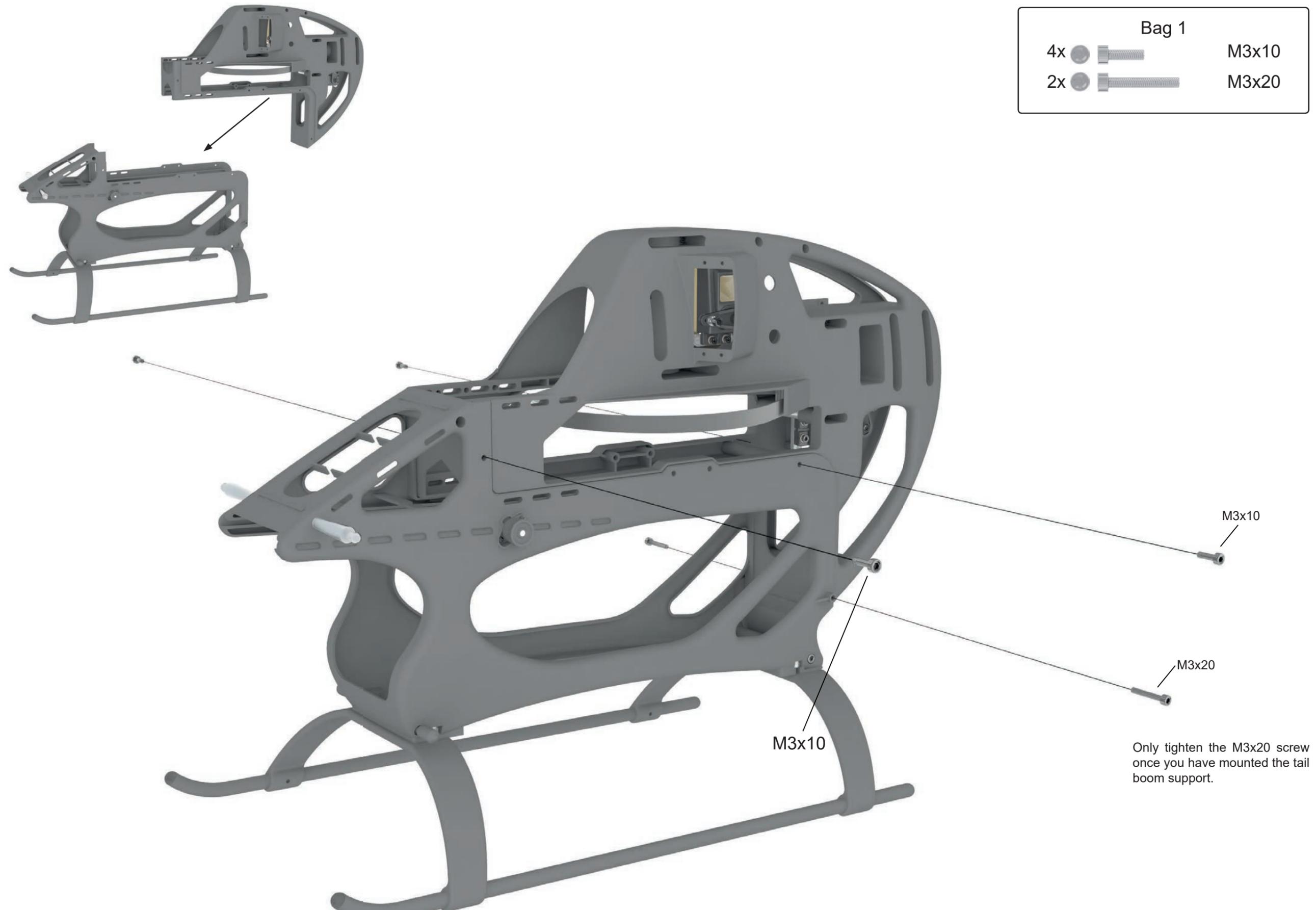


Bag 1+5	
4x	M2,2x6,5
2x	M3x10
4x	M3x3
4x	M3x5
4x	M3x12
1x	M2,5x12
4x	M3
1x	M2,5
2x	6x13x5
1x	9,5x6
1x	9,5x6,5
2x	5,5x59
1x	4x60
2x	M3x22
2x	3x5x4
2x	3x5x10
2x	

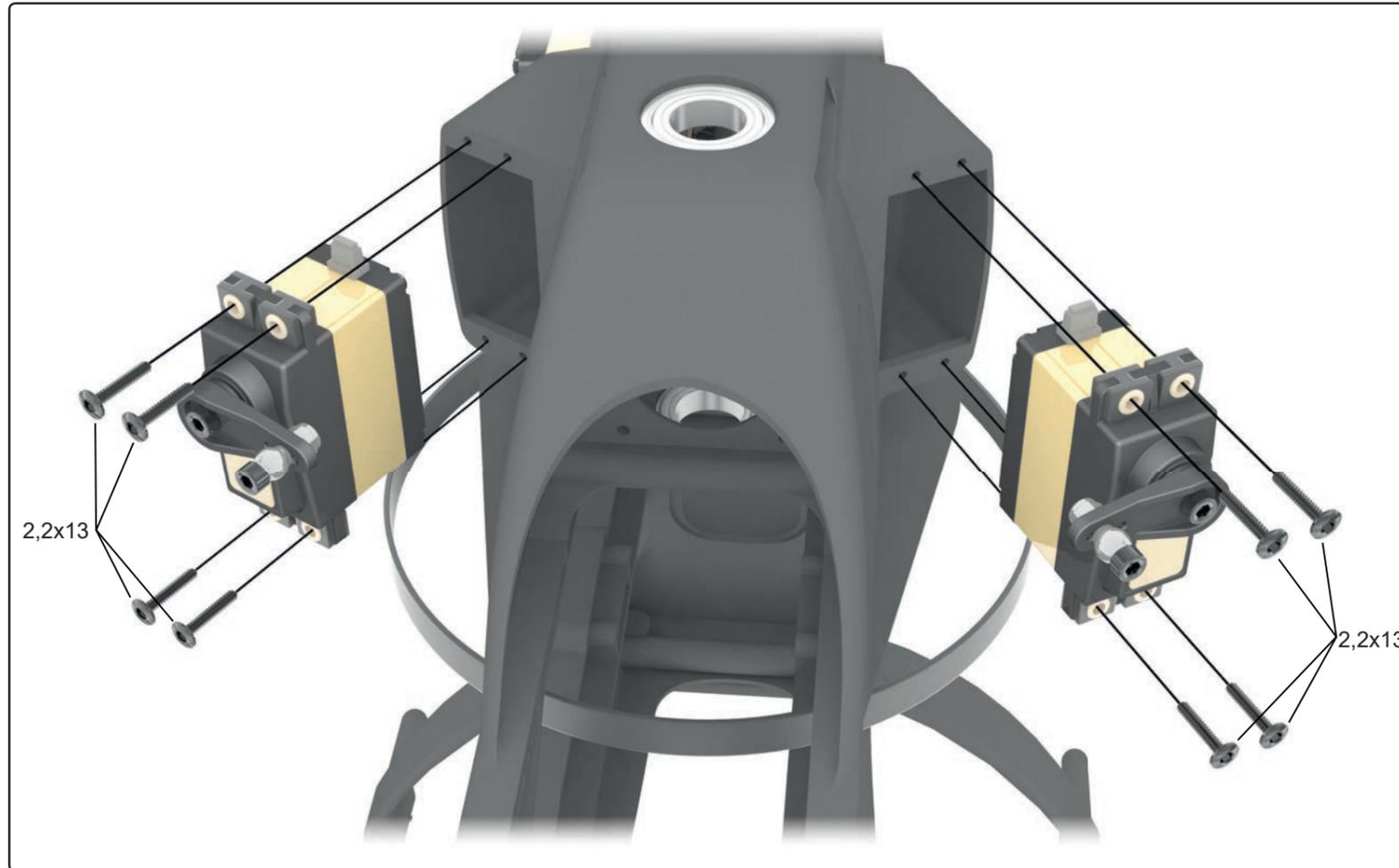
1 Chassis

Bag 1

4x		M3x10
2x		M3x20



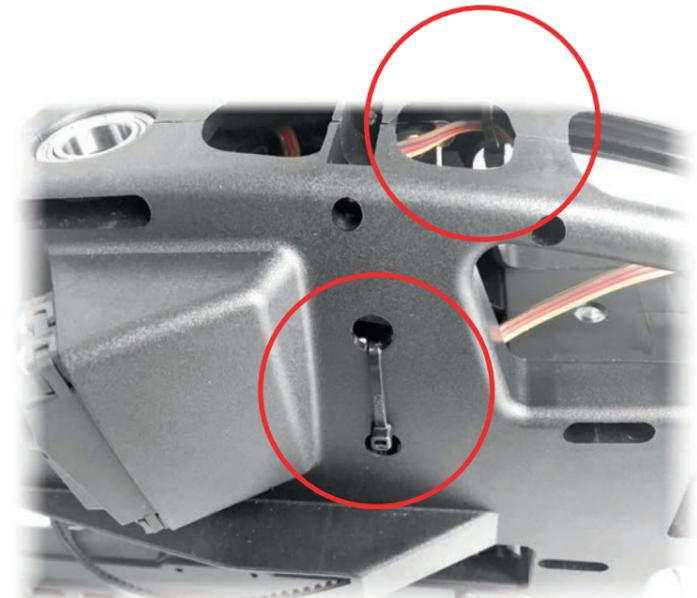
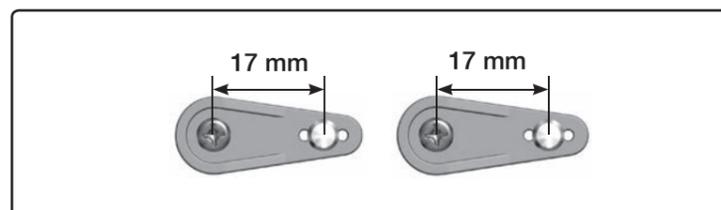
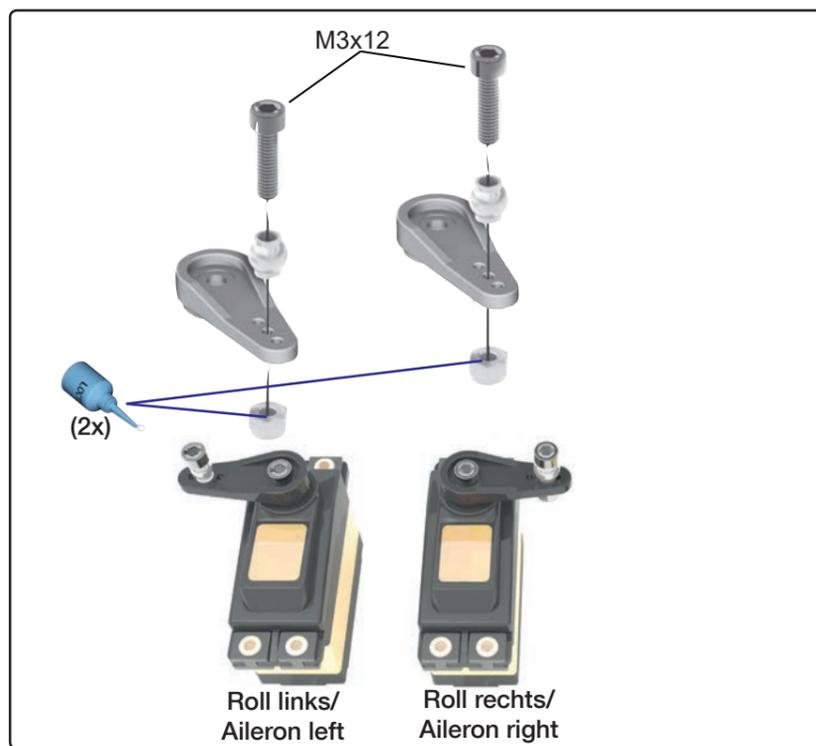
2 Servo Mounting



- Bag 3
- 8x M2,2x13
 - 2x M3x12
 - 2x Kugel/ball Ø6mm
 - 2x M3



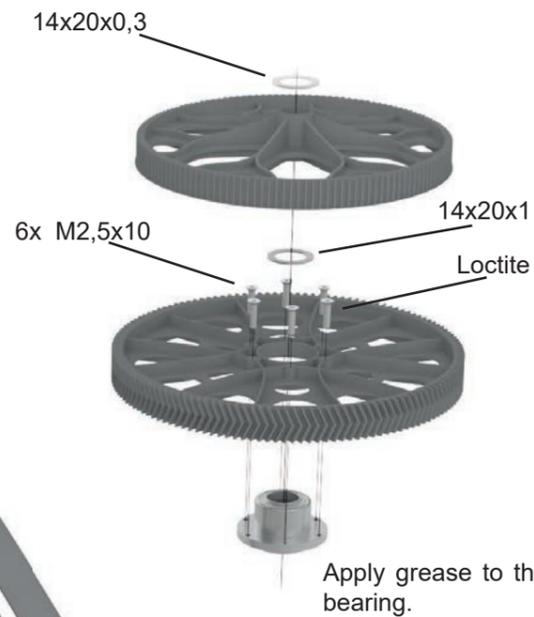
Roll links/ Aileron left
 Fix servo wire to the bottom side of the servo casing using electrical tape or scotch tape.



3 Main Gear

1

Prior to mounting the main gear, apply grease to both bevel gears in the tail drive.



2



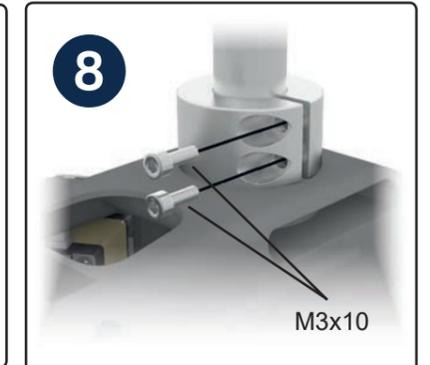
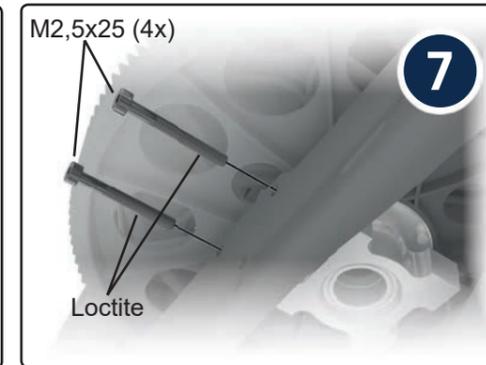
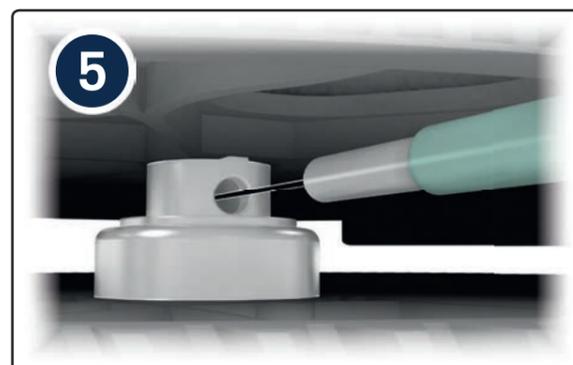
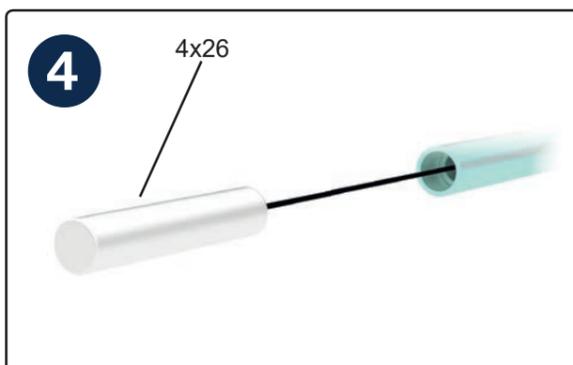
3

When mounted properly, the main gear has approx. 1 mm axial play.

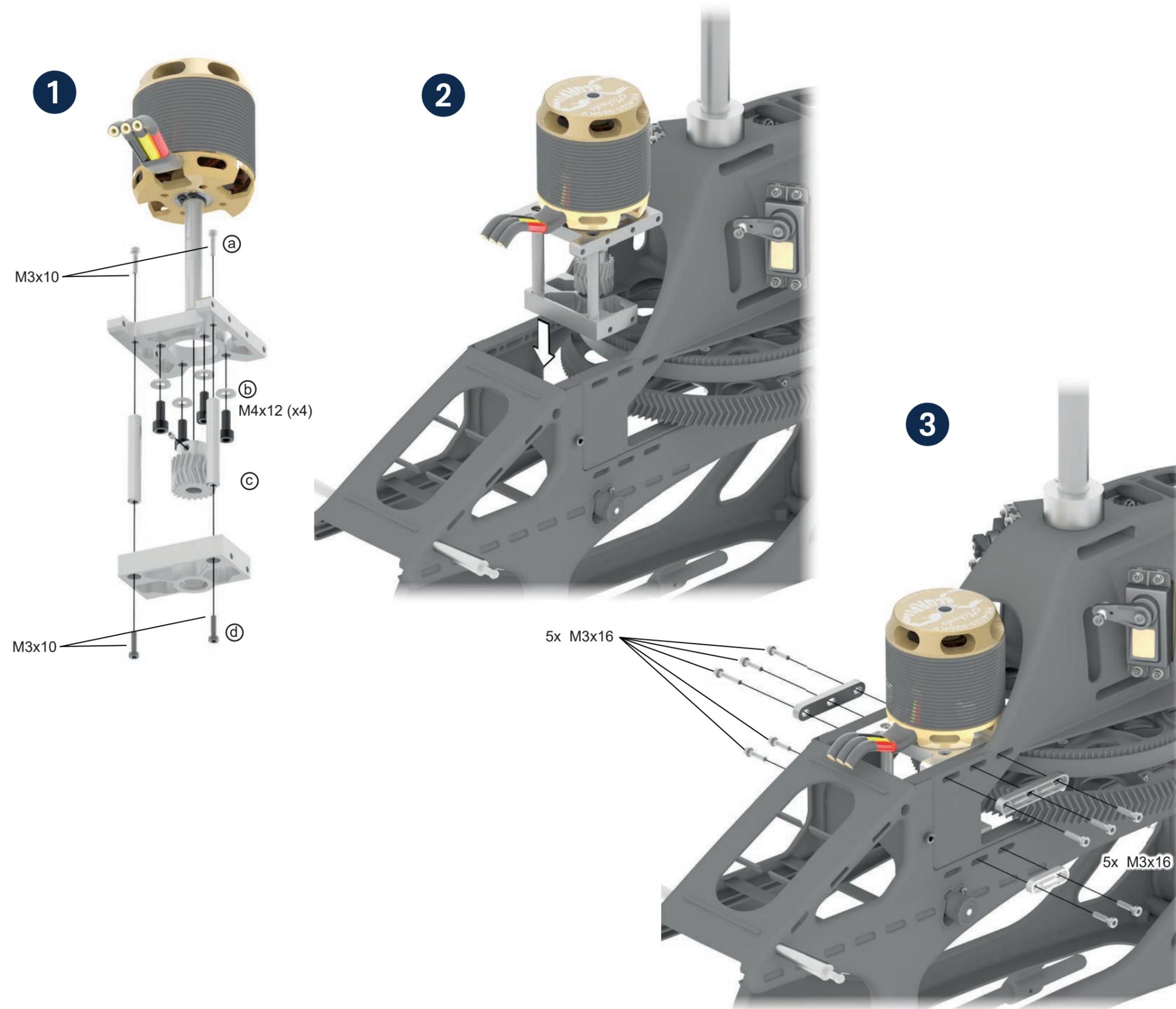


Bag 4		
6x		M2,5x10
2x		M3x10
4x		M2,5x25
1x		4x26
1x		14x20x1
1x		14x20x0,3

Use the silicone tube provided as a flexible extension, to easily mount the 4x26 mm bolt in the tail gear.



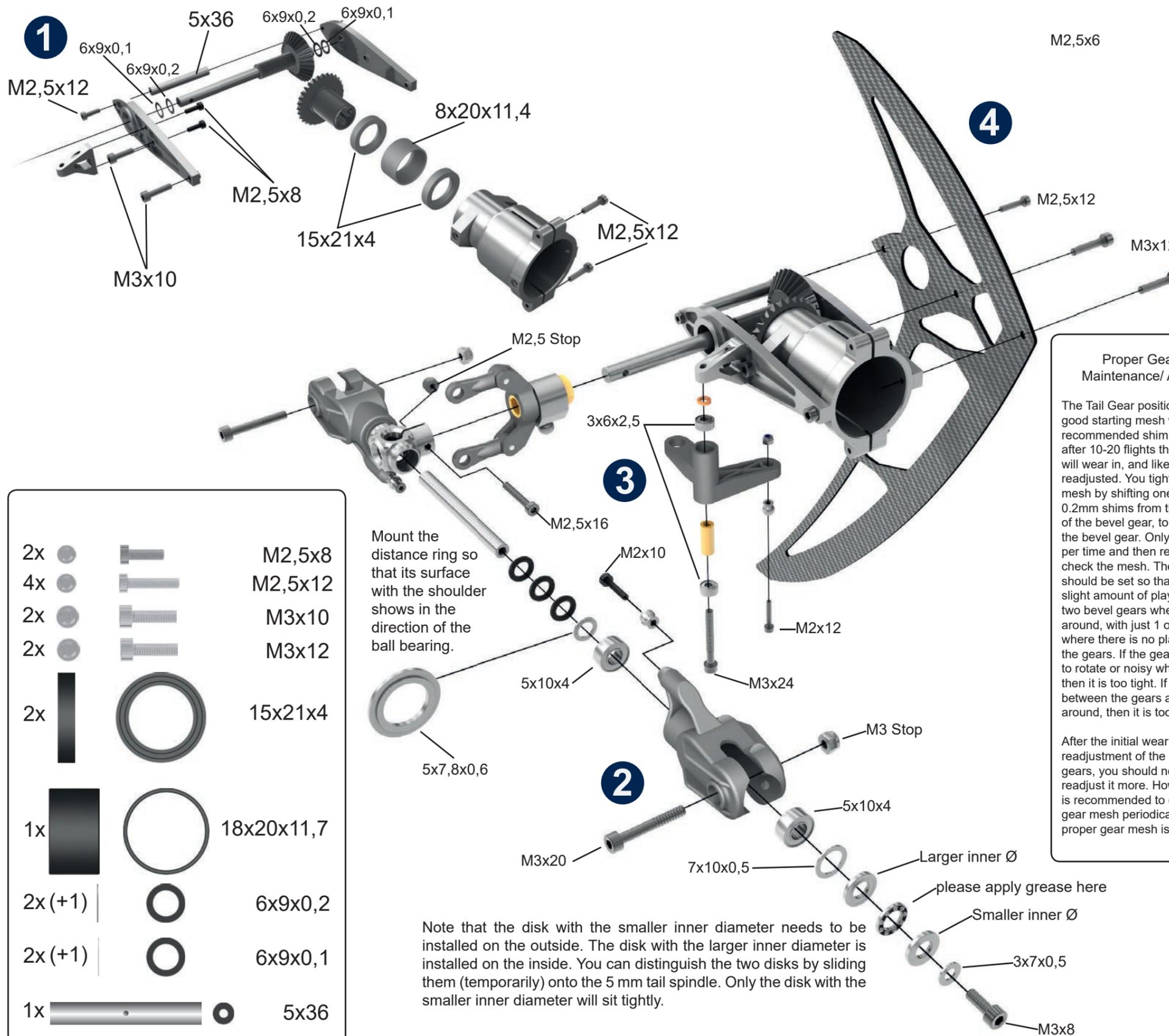
4 Motor Installation



Bag 6		
4x		M3x10
10x		M3x16
4x		M4x12
4x		4x8x1

Mounting the pinion:
 1) position the pinion on the motor shaft so the grub screw sits loosely in the flat spot on the motor shaft.
 2) Push motor and pinion against the main gear. The herring bone gear helps with the proper alignment of pinion and main gear.
 3) There must be next to no backlash between main gear and pinion. Check the gear mesh after the first couple of flights.

5 Tail Rotor



- | | | |
|---------|--|------------|
| 2x | | M2,5x8 |
| 4x | | M2,5x12 |
| 2x | | M3x10 |
| 2x | | M3x12 |
| 2x | | 15x21x4 |
| 1x | | 18x20x11,7 |
| 2x (+1) | | 6x9x0,2 |
| 2x (+1) | | 6x9x0,1 |
| 1x | | 5x36 |

Mount the distance ring so that its surface with the shoulder shows in the direction of the ball bearing.

Note that the disk with the smaller inner diameter needs to be installed on the outside. The disk with the larger inner diameter is installed on the inside. You can distinguish the two disks by sliding them (temporarily) onto the 5 mm tail spindle. Only the disk with the smaller inner diameter will sit tightly.

Proper Gear Mesh Maintenance/ Adjustment

The Tail Gear position is set to a good starting mesh with the factory recommended shim placement. But after 10-20 flights the gear mesh will wear in, and likely needs to be readjusted. You tighten the gear mesh by shifting one of the 0.1 or 0.2mm shims from the right side of the bevel gear, to the left side of the bevel gear. Only shift one shim per time and then reassemble and check the mesh. The gear mesh should be set so that there is a very slight amount of play between the two bevel gears when rotating them around, with just 1 or 2 positions where there is no play between the gears. If the gears are hard to rotate or noisy when spinning, then it is too tight. If there is play between the gears all the way around, then it is too loose.

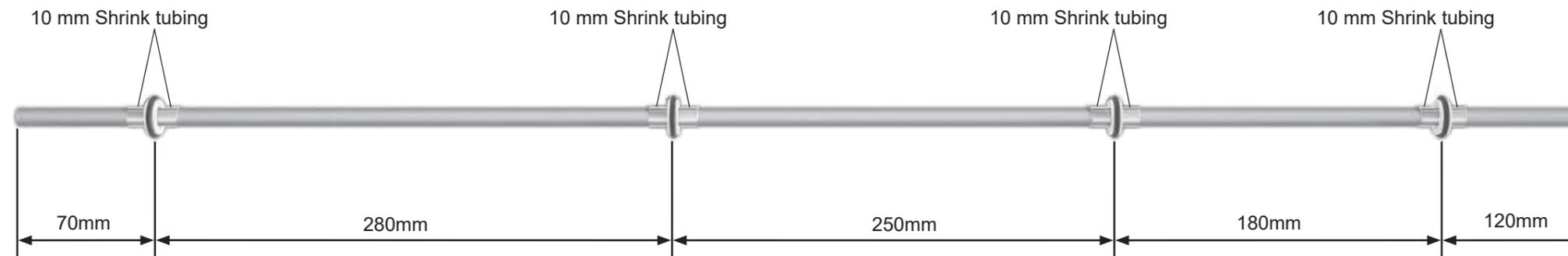
After the initial wear in and readjustment of the tail gears, you should not have to readjust it more. However, it is recommended to check the gear mesh periodically to ensure proper gear mesh is maintained.

- Bag 7**
- | | | |
|-------|--|-----------|
| 2x | | M3x8 |
| 2x | | M2x10 |
| 1x | | M2,5x16 |
| 2x | | M3x20 |
| 2x | | M3 |
| 1x | | M2,5 |
| 2x | | 3x7x0,5 |
| 2x | | 5x10x4 |
| 4x | | 5x10x4 |
| 6x | | 4,5x2 |
| 2x | | 7x10x0,5 |
| 2x | | 5x7,8x0,6 |
| 2x | | |
| | | |
| 1x | | M3x24 |
| 1x | | M2x12 |
| 1x | | 3x5x12,2 |
| 1x | | M2 |
| 2x | | 3x6x2,5 |
| 1x | | 3x5x0,5 |
| 1x | | |

6 Torque Tube

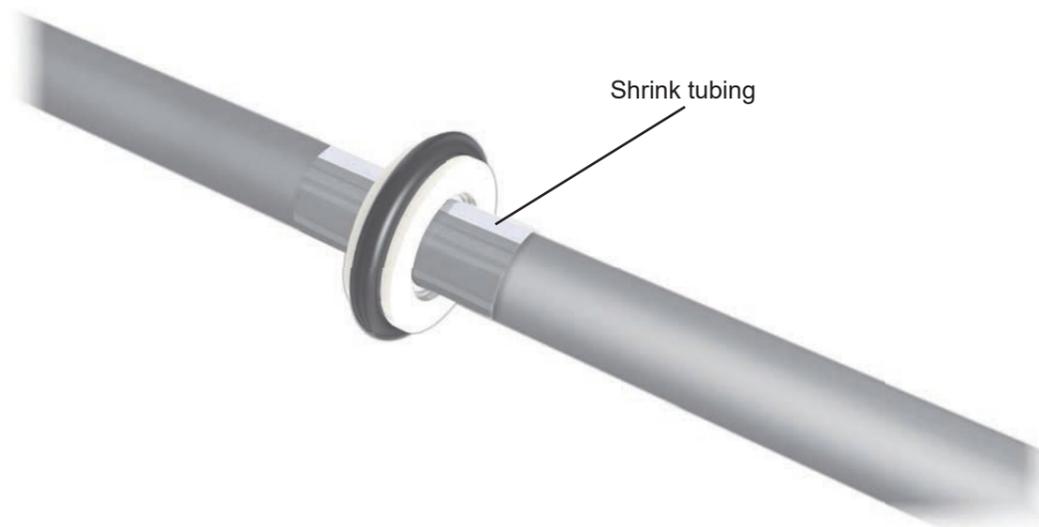
1 Torque Tube assembly

Push the four ball bearing mounted plastic sleeves to the torque tube, use the 10 mm adhesive shrink tubing to hold the bearings in position.

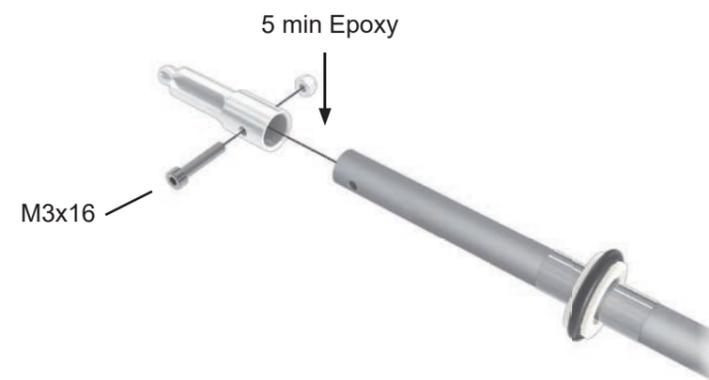


Bag 8 + 12	
2x	M3x16
2x	M3
2x	3mm
2x	M3x16

2



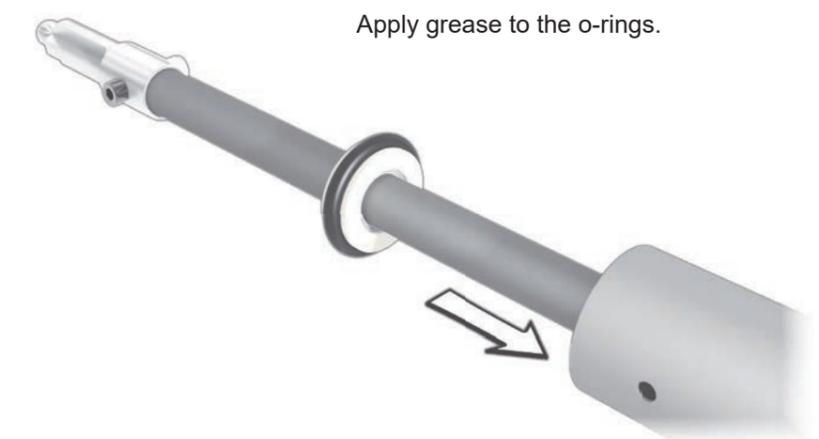
3



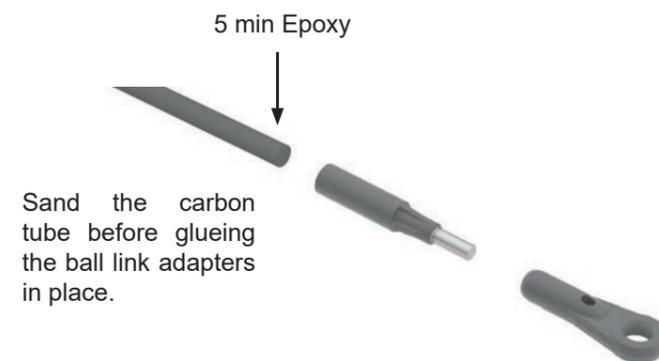
Please ensure prior to inserting the torque tube that the tail boom is dirt-free inside. If necessary clean it with a cloth.

Please apply a good amount of grease to the rubber o-rings and to the inside of the tail boom before inserting the torque tube assembly into the tail boom.

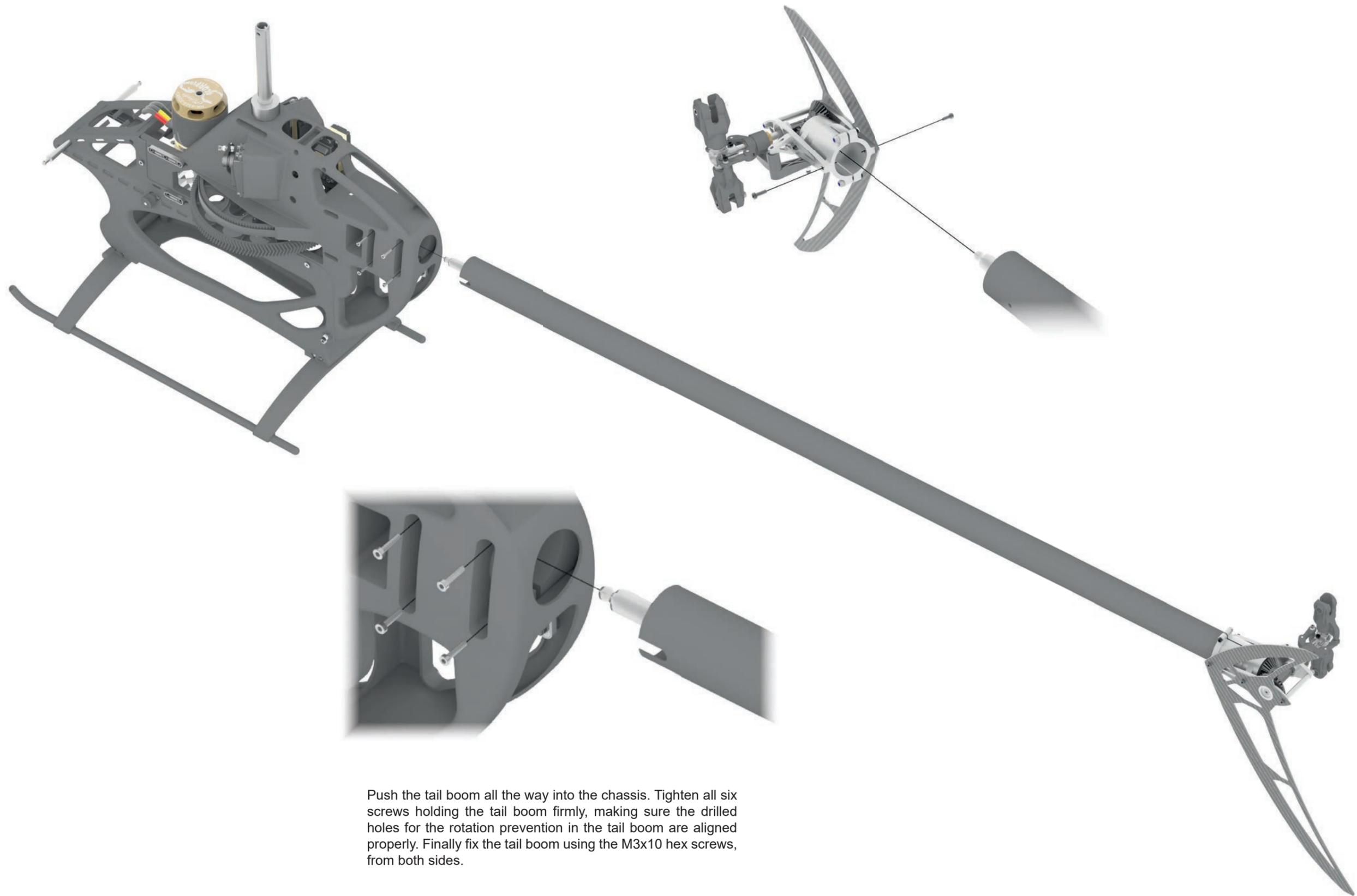
4



5 Carbon tail rotor push rod

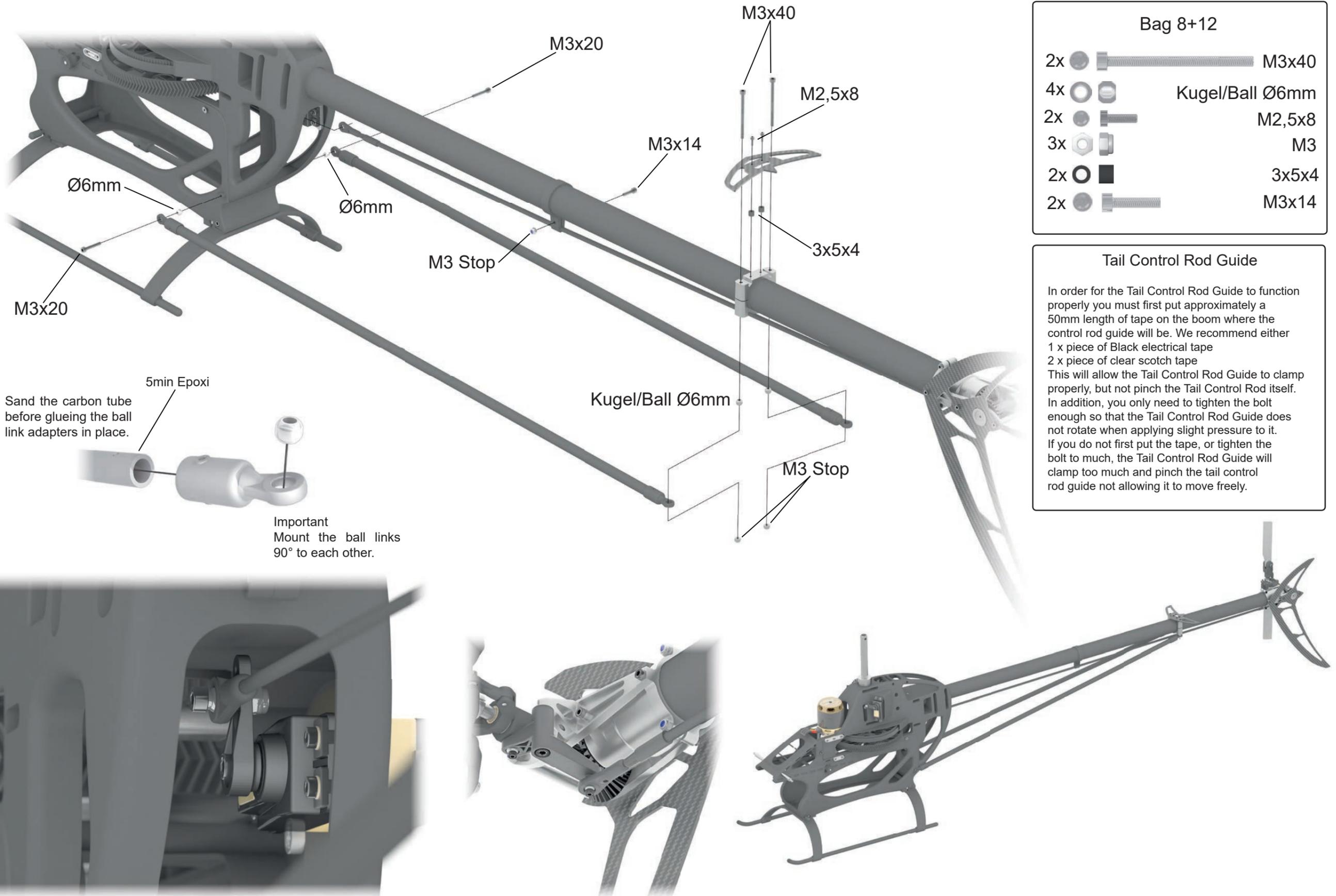


7 Tail Boom Mounting



Push the tail boom all the way into the chassis. Tighten all six screws holding the tail boom firmly, making sure the drilled holes for the rotation prevention in the tail boom are aligned properly. Finally fix the tail boom using the M3x10 hex screws, from both sides.

8 Tail Boom Brace



Bag 8+12

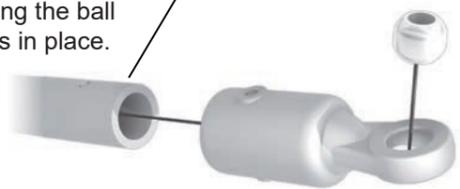
2x		M3x40
4x		Kugel/Ball Ø6mm
2x		M2,5x8
3x		M3
2x		3x5x4
2x		M3x14

Tail Control Rod Guide

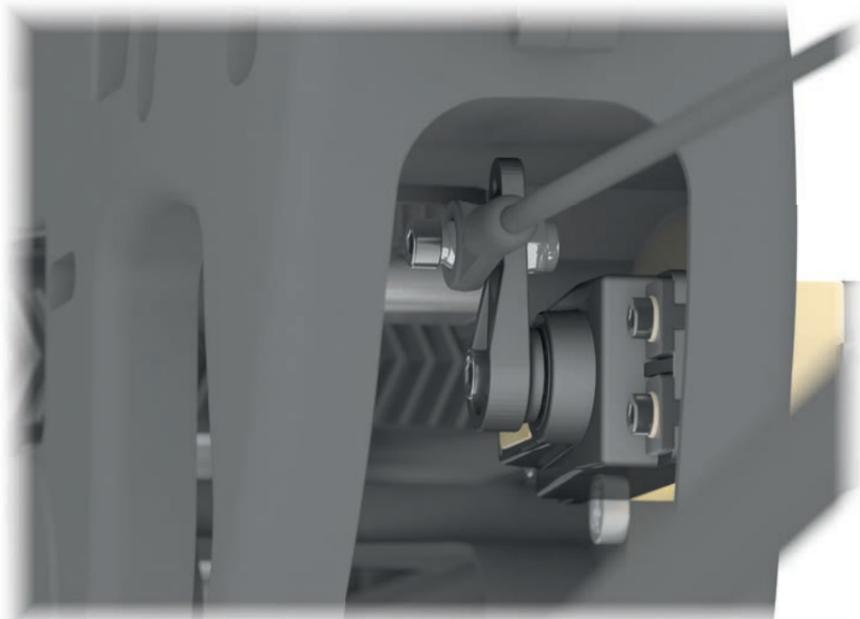
In order for the Tail Control Rod Guide to function properly you must first put approximately a 50mm length of tape on the boom where the control rod guide will be. We recommend either 1 x piece of Black electrical tape 2 x piece of clear scotch tape. This will allow the Tail Control Rod Guide to clamp properly, but not pinch the Tail Control Rod itself. In addition, you only need to tighten the bolt enough so that the Tail Control Rod Guide does not rotate when applying slight pressure to it. If you do not first put the tape, or tighten the bolt to much, the Tail Control Rod Guide will clamp too much and pinch the tail control rod guide not allowing it to move freely.

Sand the carbon tube before glueing the ball link adapters in place.

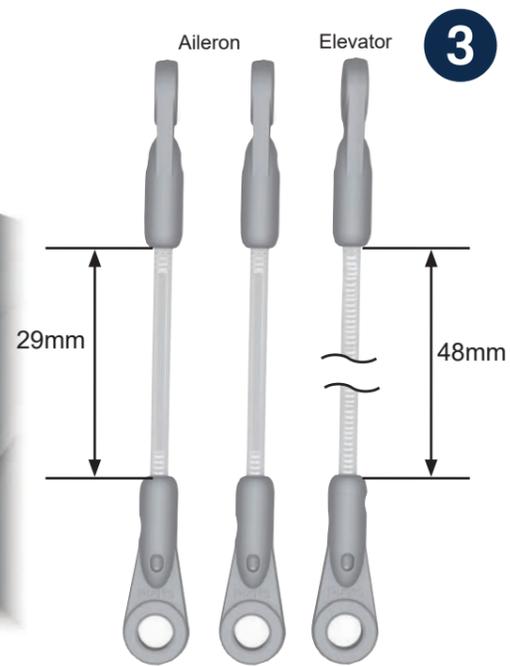
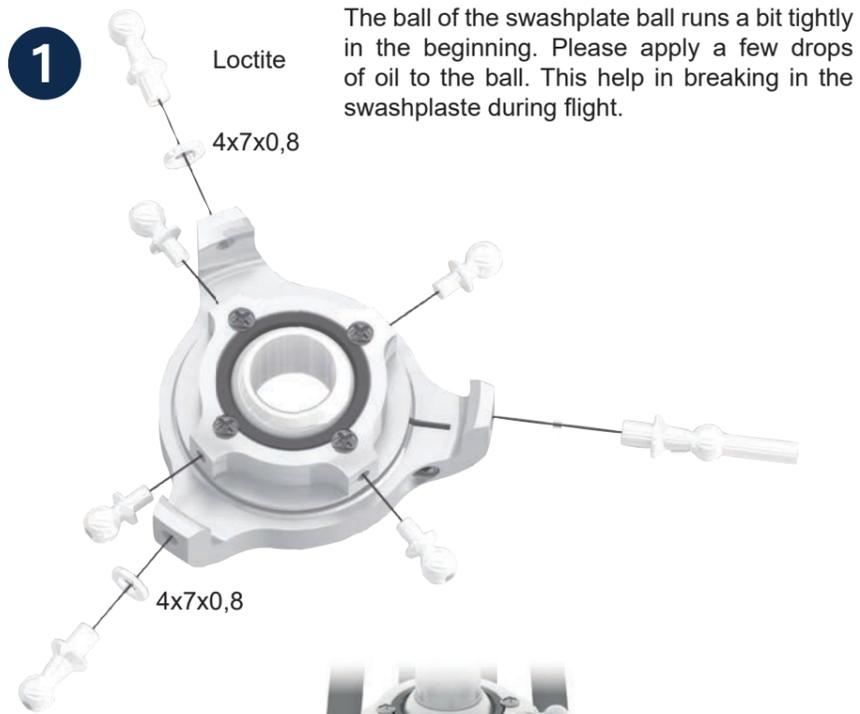
5min Epoxi



Important
Mount the ball links
90° to each other.



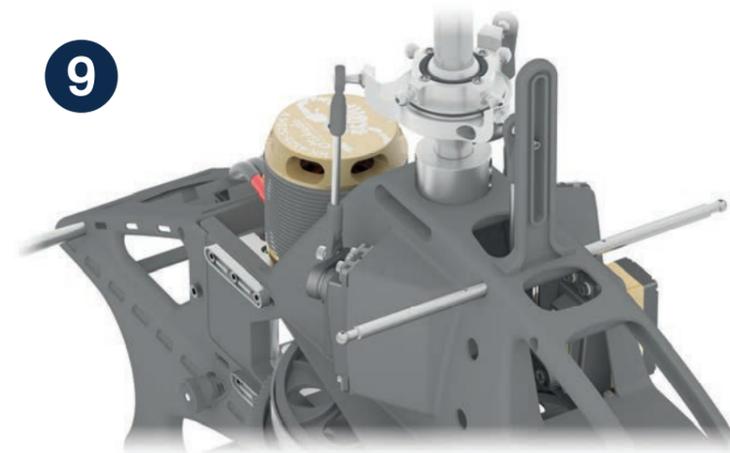
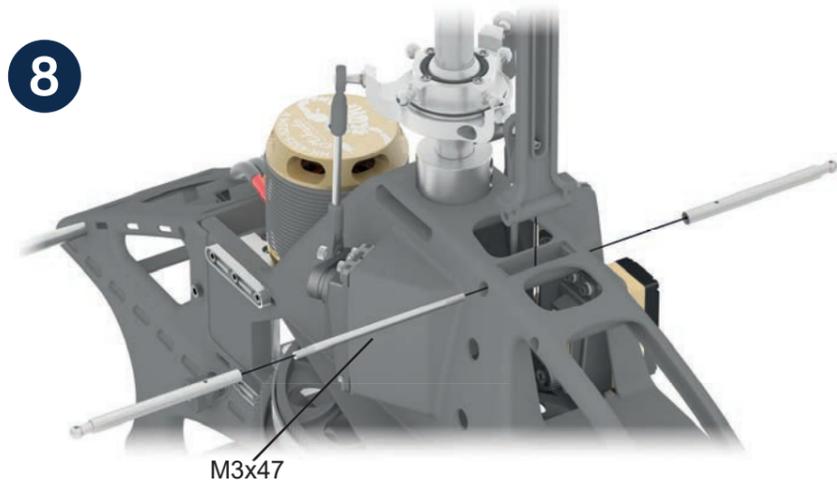
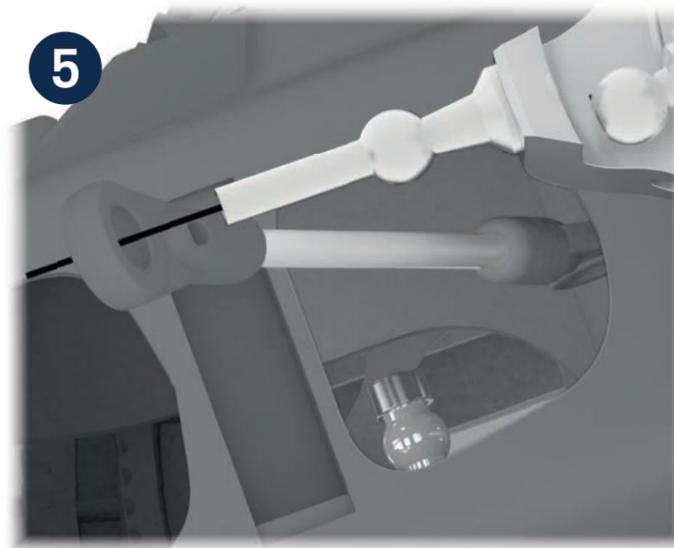
9 Swashplate



Bag 9

5x			M2,5x6
2x			4x7x1
6x			
1x			3x47
2x			

Note when mounting the ball links: One side of the ball link will clip on easily. The other one is too tight to clip on easily. The brand name Gabriel must point outwards.



10 Rotor Head

Head Dampeners for 3D Flying

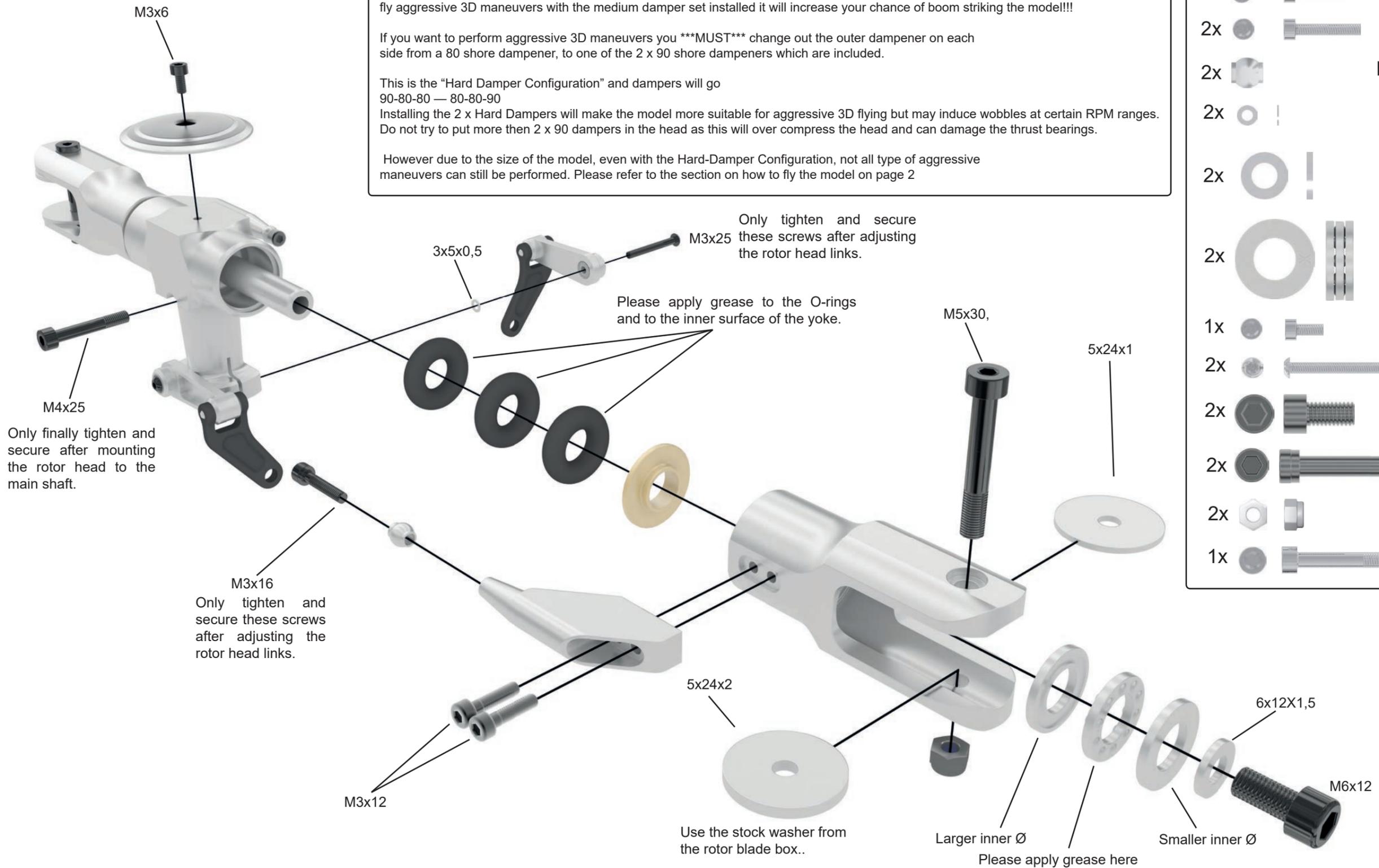
This kit comes standard with 6 x 80 shore dampers which is our "Medium Dampener Configuration". The medium dampers are great for smoother flying at all RPMs. You can use the Medium Dampers for Sport to gentle 3D flying at all RPM ranges. However, if you fly aggressive 3D maneuvers with the medium damper set installed it will increase your chance of boom striking the model!!!

If you want to perform aggressive 3D maneuvers you *****MUST***** change out the outer dampener on each side from a 80 shore dampener, to one of the 2 x 90 shore dampeners which are included.

This is the "Hard Damper Configuration" and dampers will go 90-80-80 — 80-80-90

Installing the 2 x Hard Dampers will make the model more suitable for aggressive 3D flying but may induce wobbles at certain RPM ranges. Do not try to put more then 2 x 90 dampers in the head as this will over compress the head and can damage the thrust bearings.

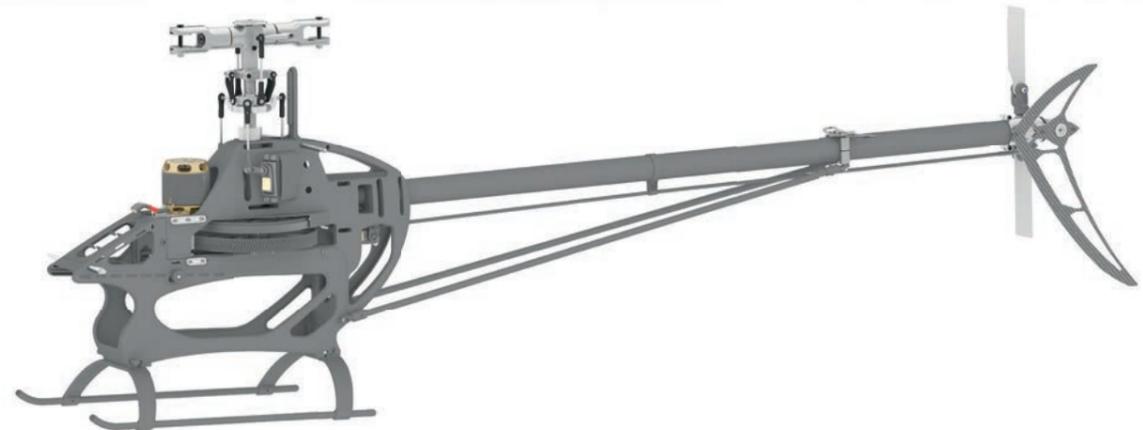
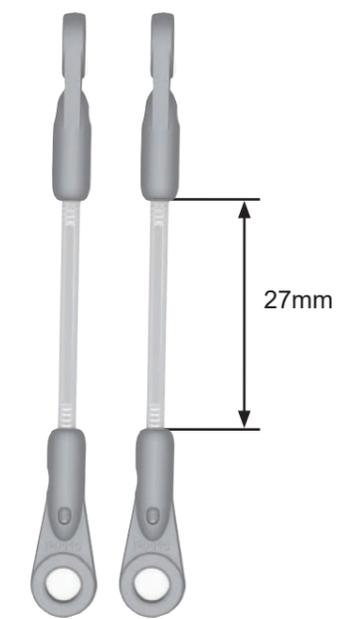
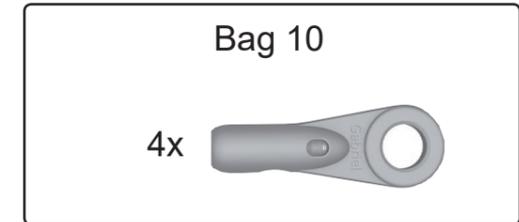
However due to the size of the model, even with the Hard-Damper Configuration, not all type of aggressive maneuvers can still be performed. Please refer to the section on how to fly the model on page 2



Bag 10

4x		M3x12
2x		M3x16
2x		Kugel/ball Ø6
2x		3x5x0,5
2x		6x12x1,5
2x		10x20x6,5
1x		M3x6
2x		M3x25
2x		M6x12
2x		M5x30
2x		M5
1x		M4x25

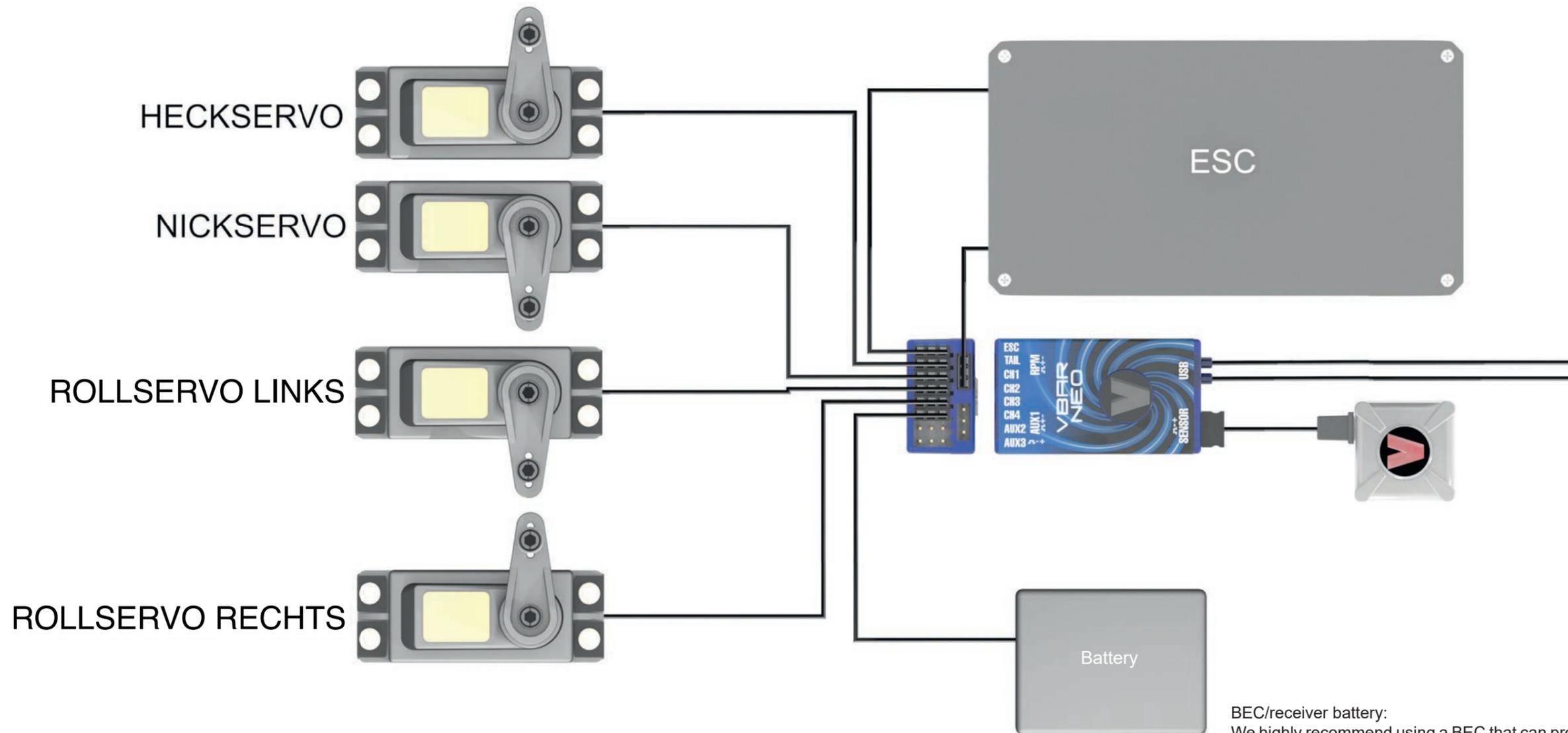
11 Rotor Head Linkage



Note when mounting the ball links: One side of the ball link will clip on easily. The other one is too tight to clip on easily. The brand name Gabriel must point outwards.

Tighten and secure the M4x25 screw in the main rotor head, the M3x30 in the blade holders and the M3x25 in the swash plate driver after mounting and adjusting the rotor head and the linkages.

12 Wiring RC Components

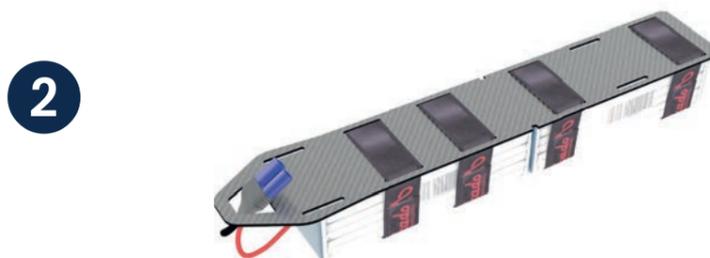
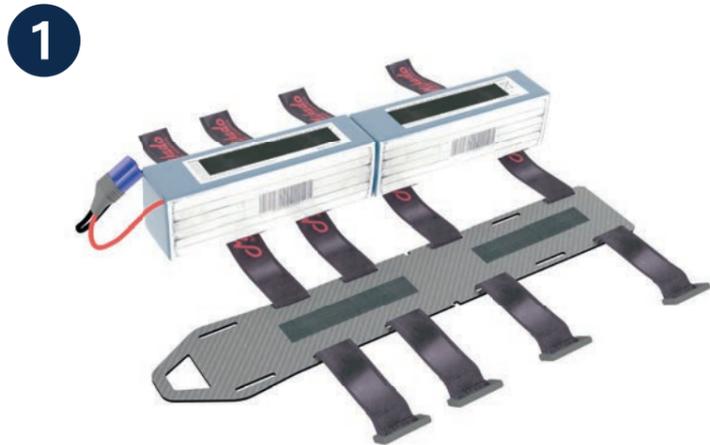


BEC/receiver battery:
We highly recommend using a BEC that can provide two power leads to the Receiver/RC Components.

Wiring:
Please note: All wires must be placed in such a way that they cannot be damaged by any sharp edges during operation of the helicopter. Please apply the fabric tube and the edge guard provided in this kit. Both types of protection are also available individually from Mikado.

13 Mounting ESC/ Battery

Bag 11



In case the battery plate can only be inserted into the chassis with difficulty in the beginning, please apply a small amount of silicone oil at the edges.

Before each flight make sure that the battery plate is secured with both quick release mechanisms.



14 Canopy and Overview

Canopy Mounting

The Canopy of the Logo 800 is very large, and therefore requires four mounting points, rather than the standard two mounting points. The 2 extra mounting points in the front ensure that the canopy mounts firmly on the chassis and does not move.

One special feature of the Logo 800 Canopy is that the wrap around canopy design. This back area is connected via two pins and magnets. Please take your time and be gentle when sliding the canopy around the main shaft during mounting and dismounting otherwise you may damage your canopy.

Before each flight you should check that the canopy is mounted properly and securely. If the canopy sits loosely it may interfere with the swashplate linkages, or wearout prematurely. If the canopy comes off in flight likely your model will crash.

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

IMPORTANT NOTE:

Taking the Canopy On and Off requires a quite specific procedure. Please scan this QR code and watch our informational video about the easiest way to take the canopy on and off. www.ueroehr.de/vtube/v/334 If you do not follow these steps, then you may find difficulties in mounting your canopy and may even damage it.

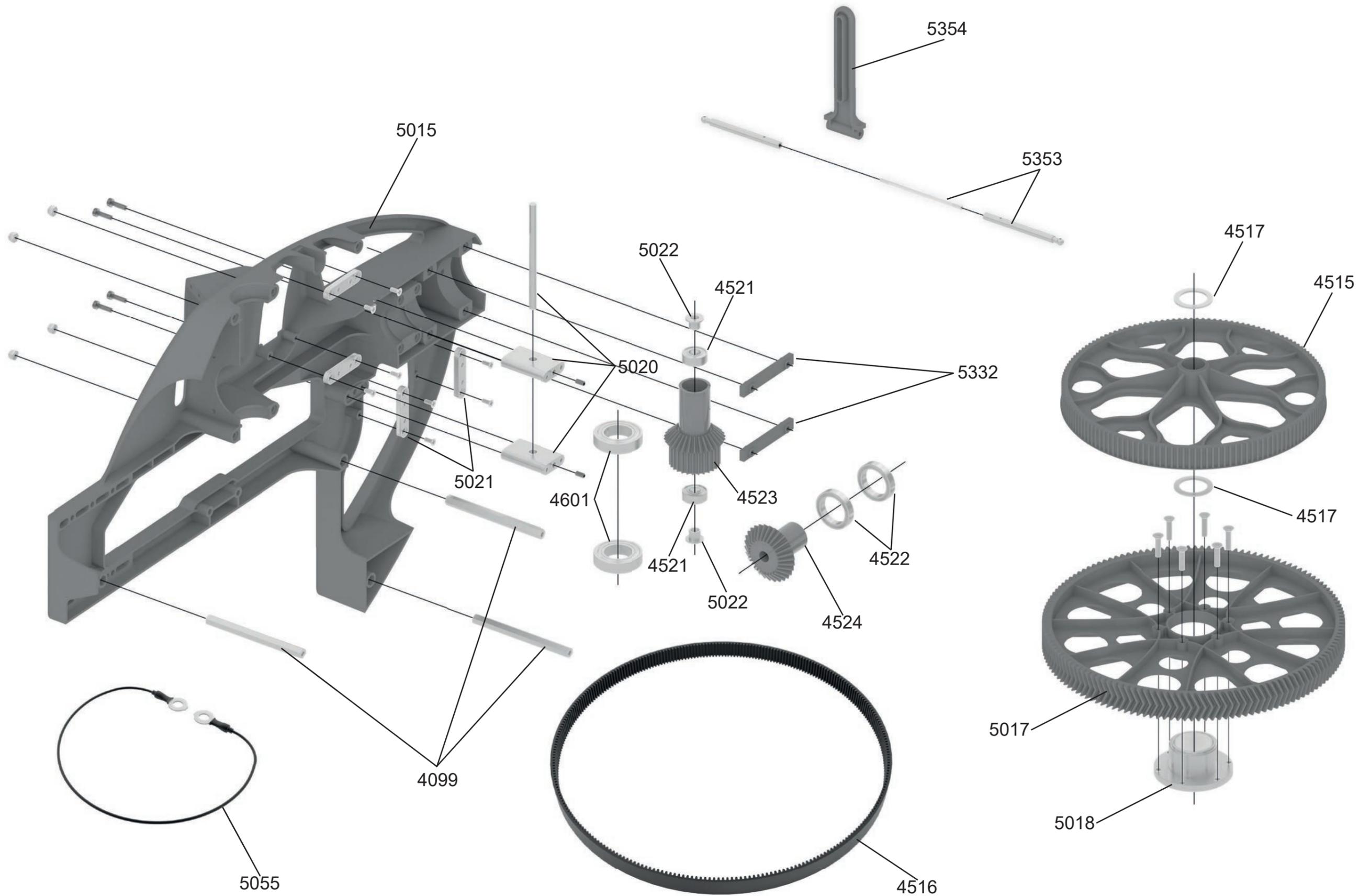


Bag 09		
4x		4,5x2
4x		

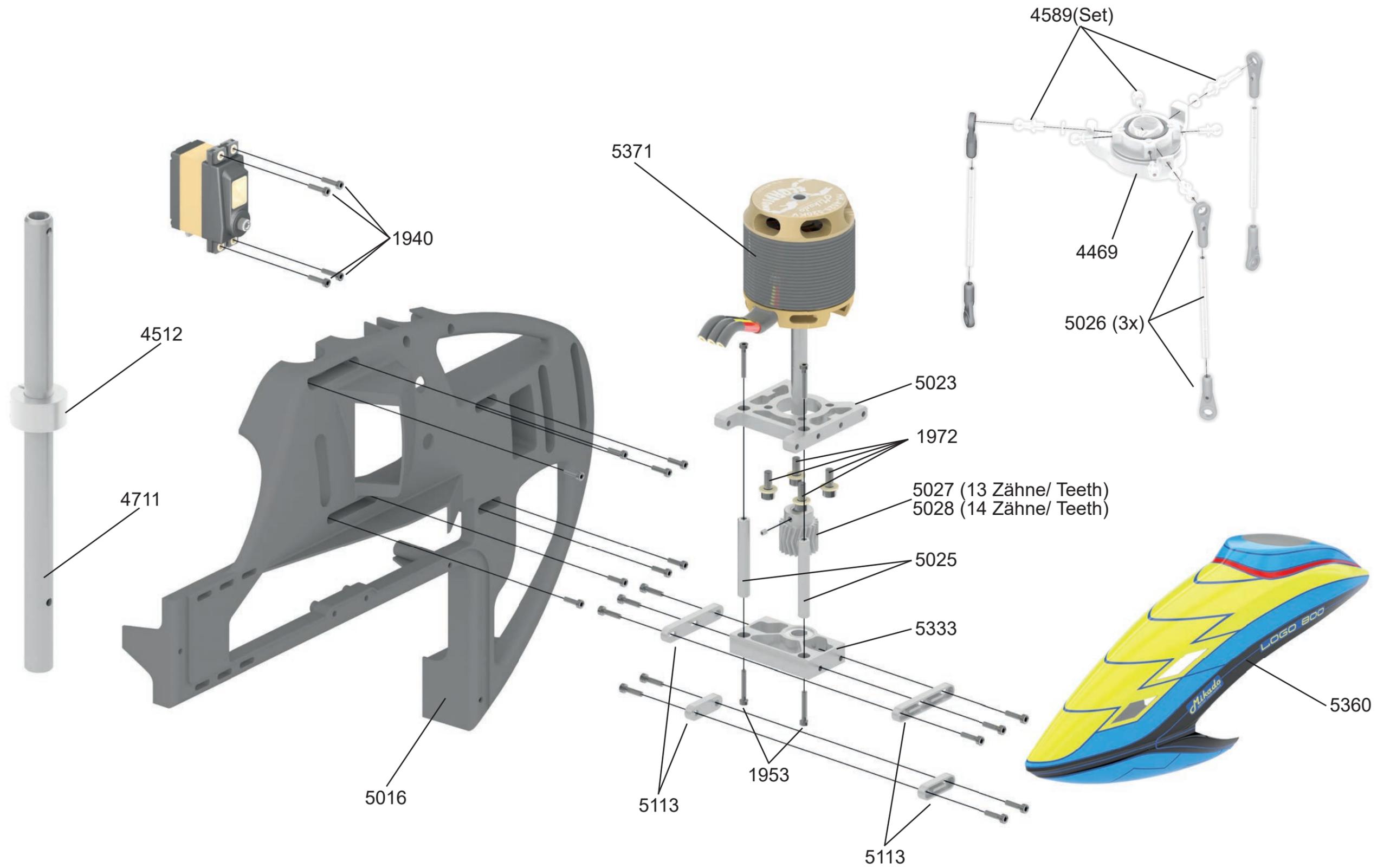


If you want to use the included edge protector, you have to enlarge the cut-outs, for a perfect fit. Do a couple of small iterations and check in between, until the canopy sits tightly and braceless. Only then glue the edge protector.

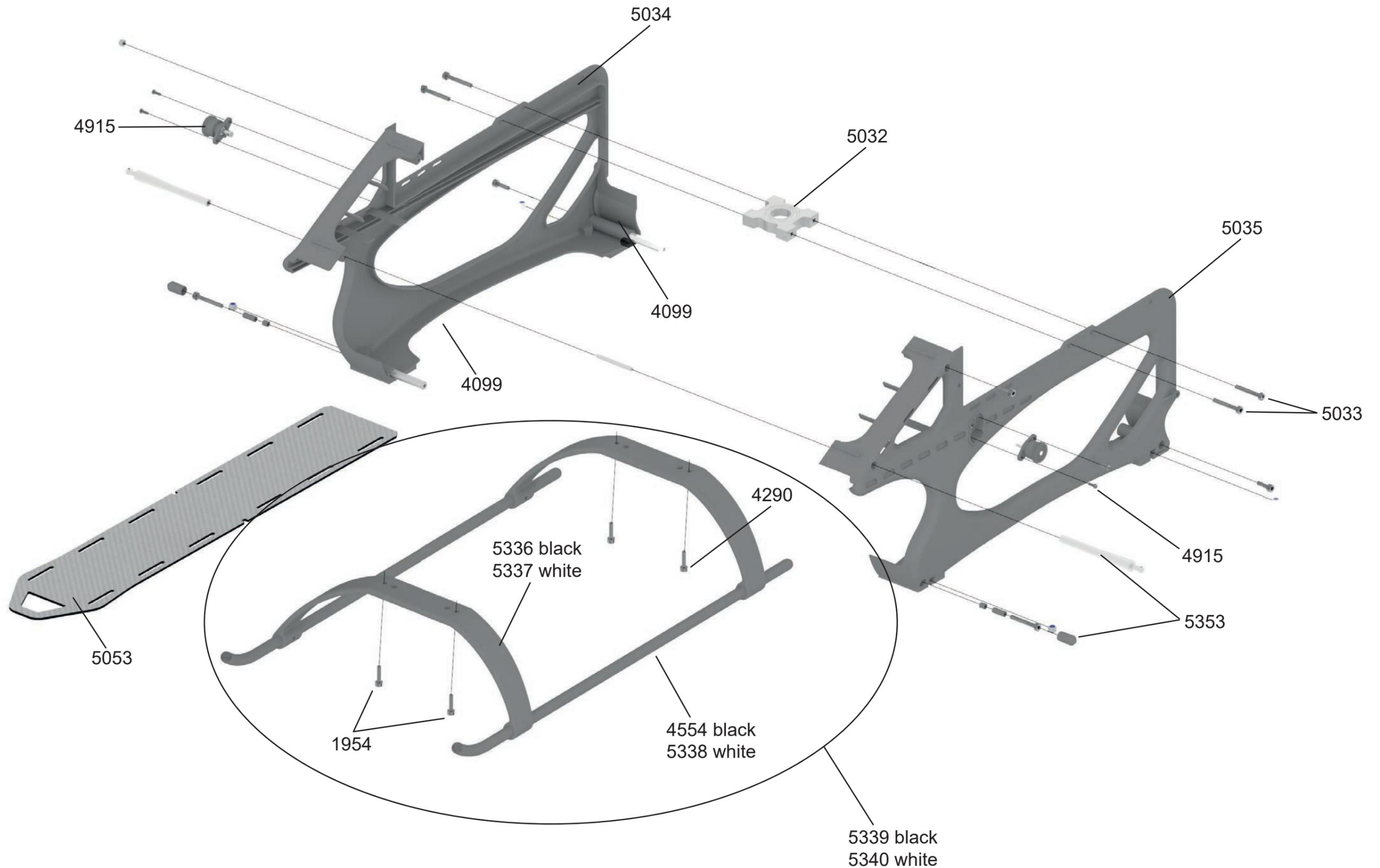
15 Overview Spare Parts Mainframe



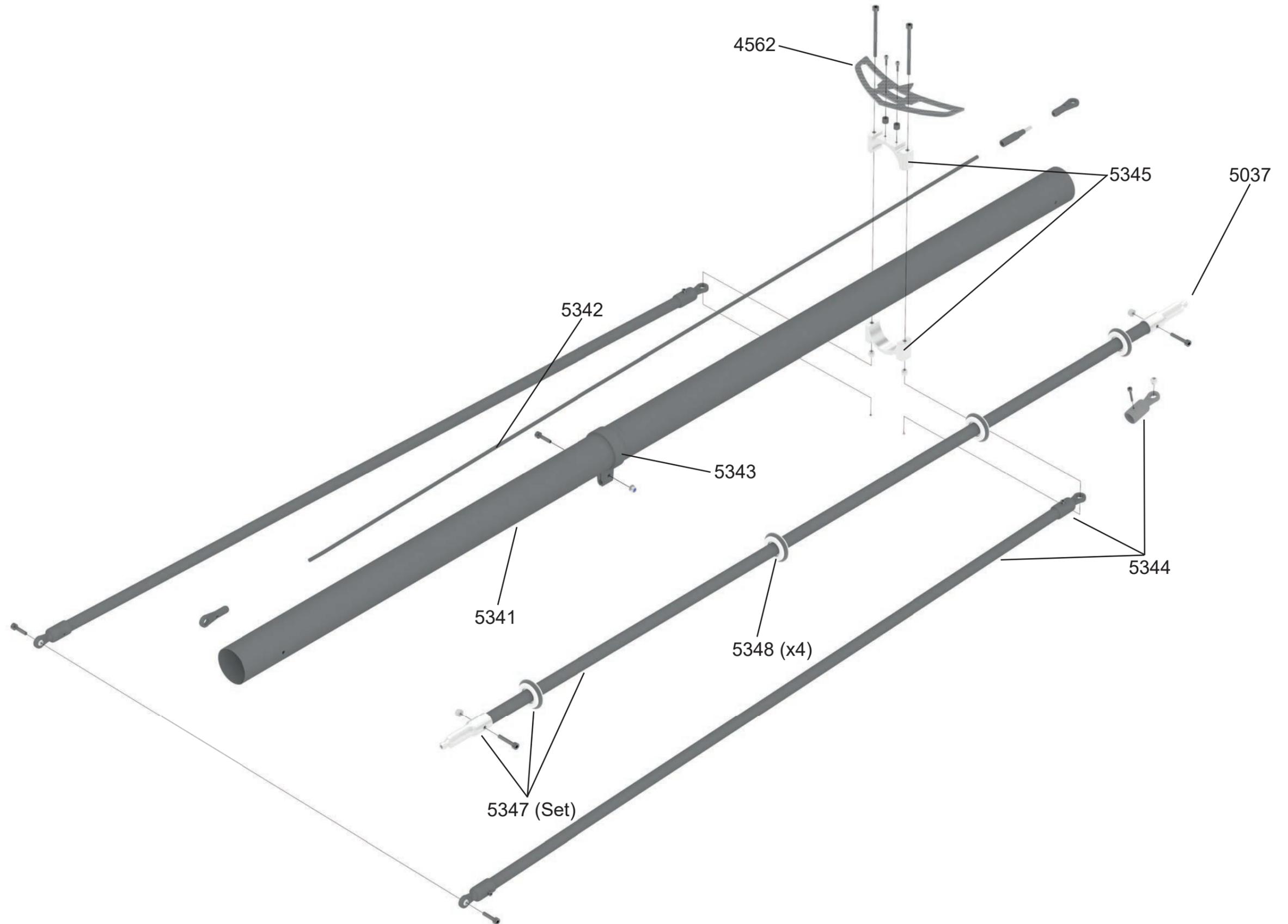
15 Overview Spare Parts Mainframe



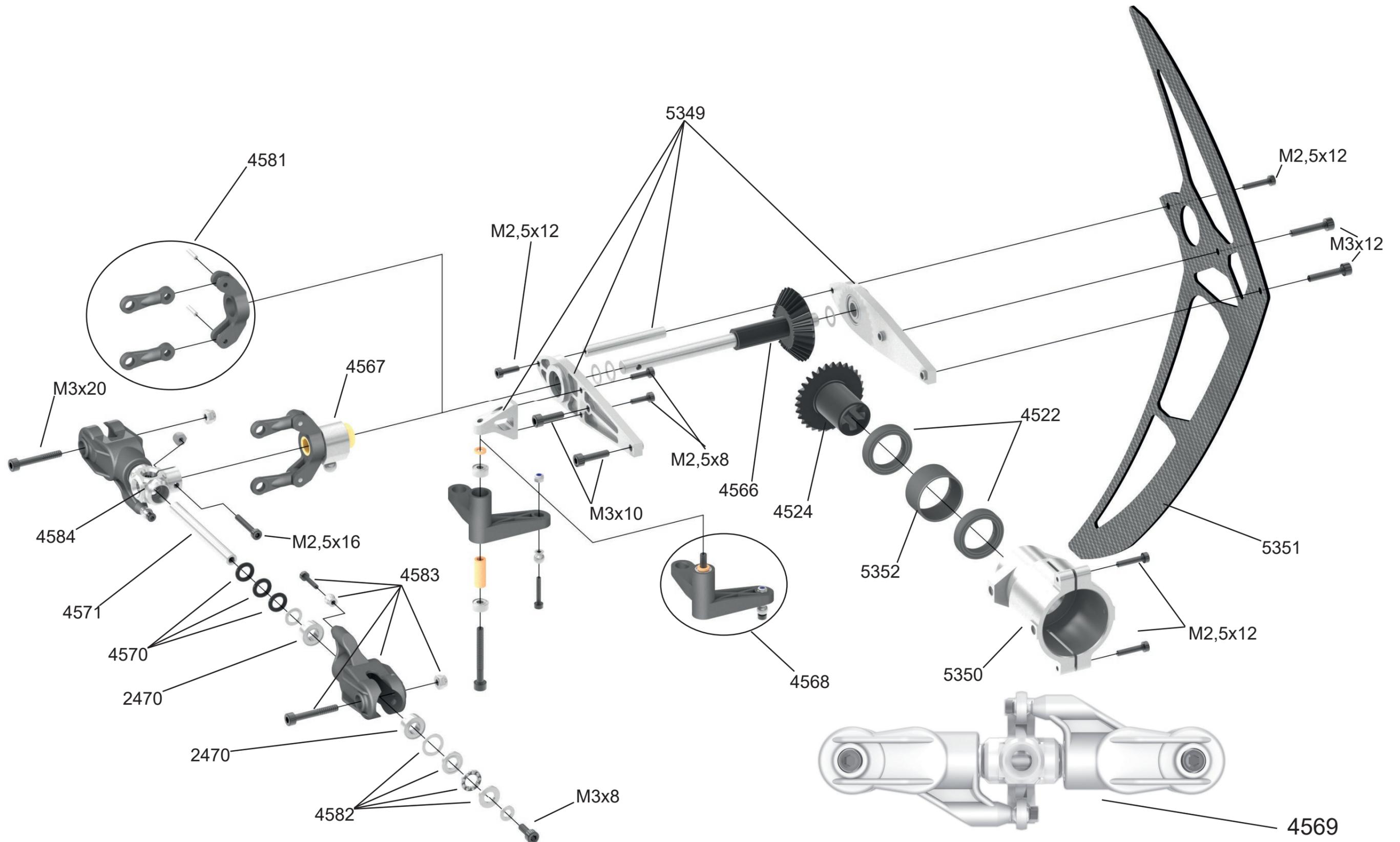
15 Overview Spare Parts Mainframe



16 Overview Spare Parts Tail Boom



17 Overview Spare Parts Tail Rotor



18 Overview Spare Parts Rotor Head

