

RC Helicopter  
**PROTOS**  
Instructions Manual  
*Carbon*



Main rotor diameter : 965mm  
Tail rotor diameter : 192mm  
Lenght without main blades : 892mm  
Lenght with main blades : 1122mm  
Main blades lenght : 425mm  
Overall height : 282mm  
Tail rotor - Main rotor ratio : 4,65  
Main pulley : 93T  
Weight ready to fly with 6sLipo : 1550g (may vary with different electronics)

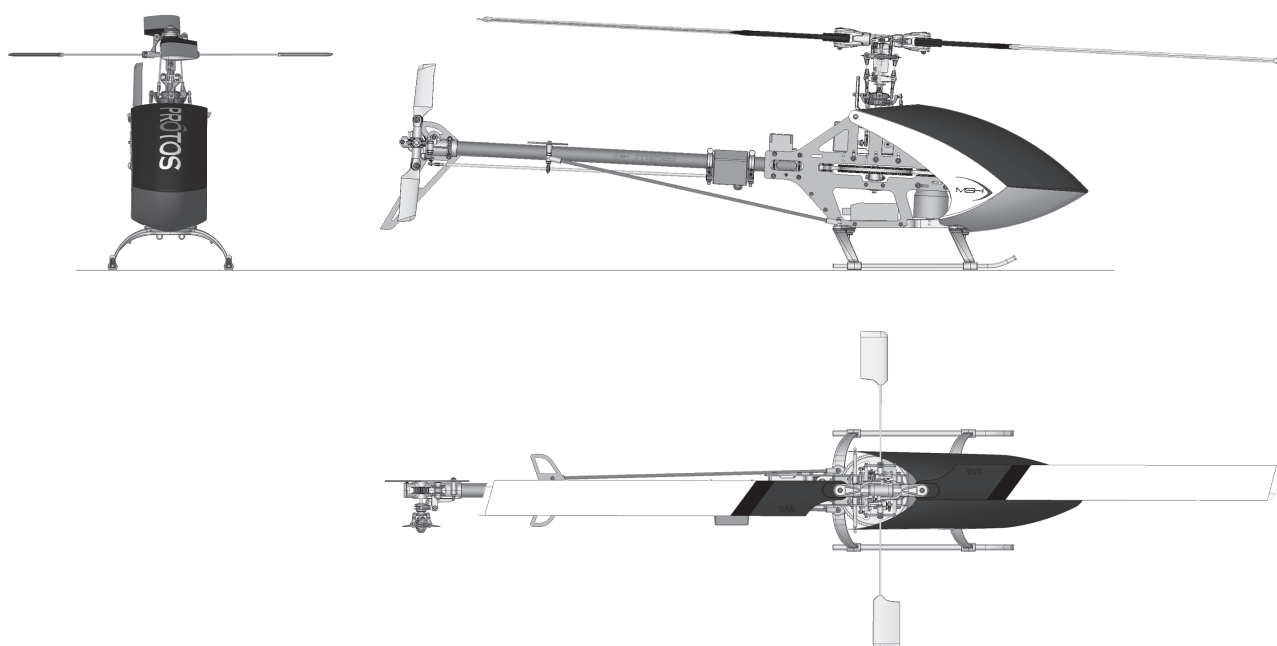
# RC Helicopter

# PRÔTOS

## Instructions Manual

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# Always follow these rules for safety

Operate the helicopter in open areas with no people nearby.

Do NOT operate the helicopter in the following places and situations (or else you risk severe accidents):

- in places where children gather or people pass through
- in residential areas and parks
- indoors and in limited space
- in windy weather or when there is rain, snow, fog or other precipitation

If you do not observe these instructions you may be held liable for personal injury or property damage!

Always check the R/C system prior to operating your helicopter.

When the R/C system batteries get weaker, the operational range of the R/C system decreases.

Note that you may lose control of your model when operating it under such conditions.

Keep in mind that other people around you might also be operating a R/C model.

Never use a frequency which someone else is using at the same time.

Radio signals will be mixed and you will lose control of your model.

If the model shows irregular behavior, bring the model to a halt immediately and disconnect the batteries. Investigate the reason and fix the problem.

Do not operate the model again as long as the problem is not solved, as this may lead to further trouble and unforeseen accidents.

In order to prevent accidents and personal injury, be sure to observe the following:

Before flying the helicopter, ensure that all screws are tightened.

A single loose screw may cause a major accident.

Replace all broken or defective parts with new ones, as damaged parts lead to crashes.

Never approach a spinning rotor. Keep at least 10 meters/yards away from a spinning rotor blades.

Do not touch the motor immediately after use. It may be hot enough to cause burns.

Perform all necessary maintenance.

**PRIOR TO ADJUSTING AND OPERATING YOUR MODEL, OBSERVE THE FOLLOWING**

Operate the helicopter only outdoors and out of people's reach as the main rotor operates at high rpm!

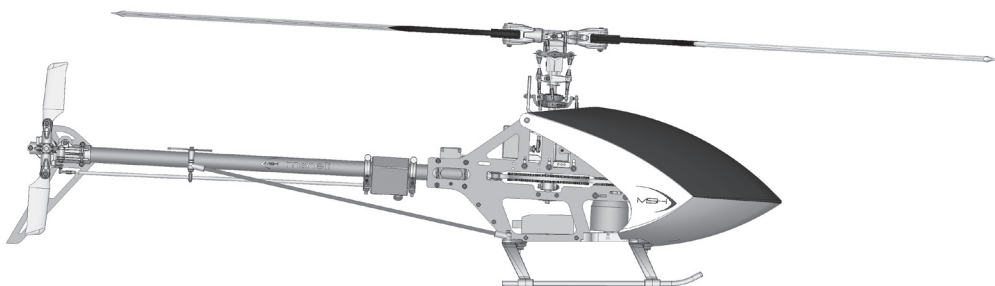
While adjusting, stand at least 10 meters

Novice R/C helicopter pilots should always seek advice from experienced pilots to obtain hints with assembly and for pre-flight adjustments.


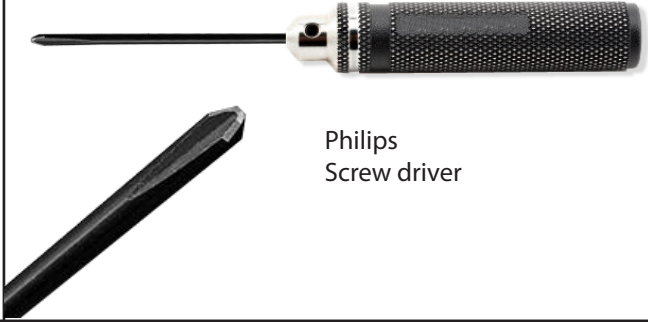

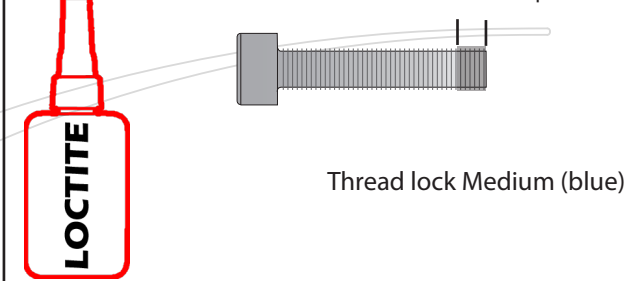
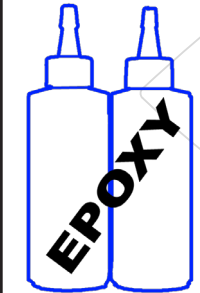

Note that a badly assembled or insufficiently adjusted helicopter is a safety hazard!

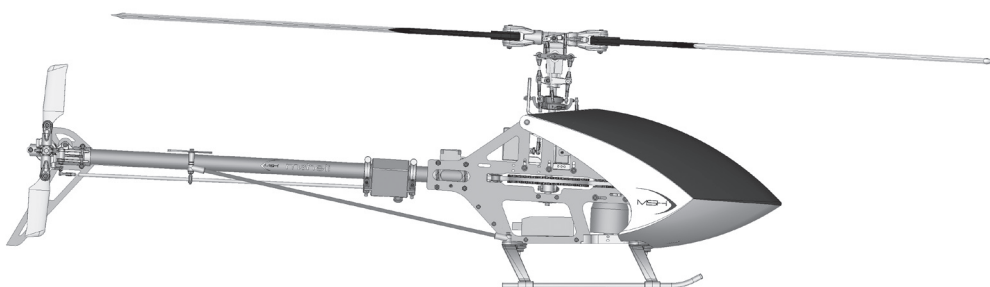
In the beginning, novice R/C helicopter pilots should always be assisted by an experienced pilot and never fly alone!

MSHeli Srl  
Italy



# Tools required for assembly

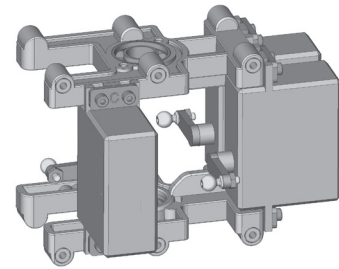
 <p>1.5 / 2 / 2.5 mm Hexagon screw drivers</p>	 <p>Philips Screw driver</p>
 <p>Needle nose pliers</p>	 <p>Glue width 2mm approx. Thread lock Medium (blue)</p>
 <p>Slow curing epoxy</p>	 <p>Soldering iron</p>



# R/C equipment required for assembly

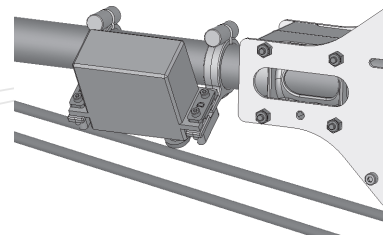
Swashplate servos supported:

Futaba : S3150, S3155(best for sport flyer), S9650(best for 3D)  
 JR : DS 388 BB, 351 Micro MG  
 Hitech : HS-5245MG, HS-5085MG, HS-85BB, HS-85MG  
 Savox : SH-1350

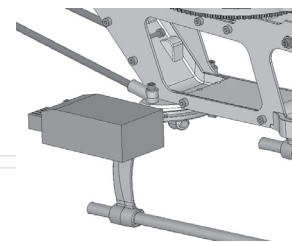


Tail servo supported:

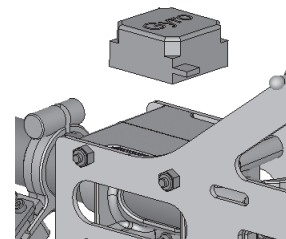
Futaba : S3150, S3155, S9257(best for sport flyer / 3D), all standard size  
 JR : all standard and mini size  
 Hitech : HS-5245MG, HS-5085MG, all standard size



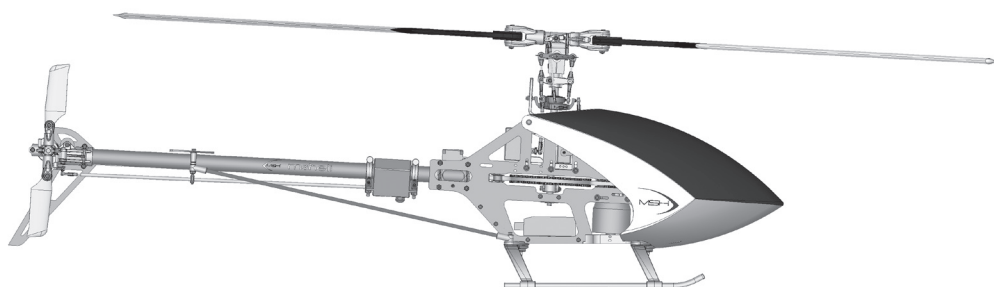
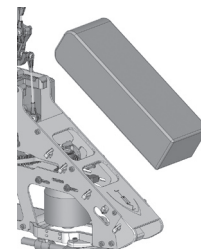
Trasmitter / Receiver:  
 6 Channel or more



Gyro:  
 Tail Lock gyro system

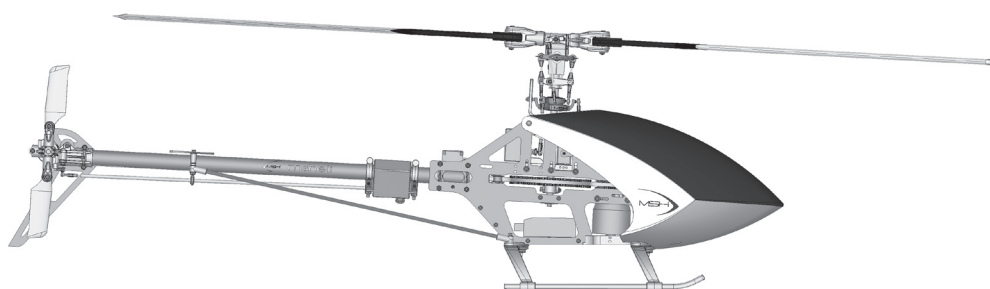
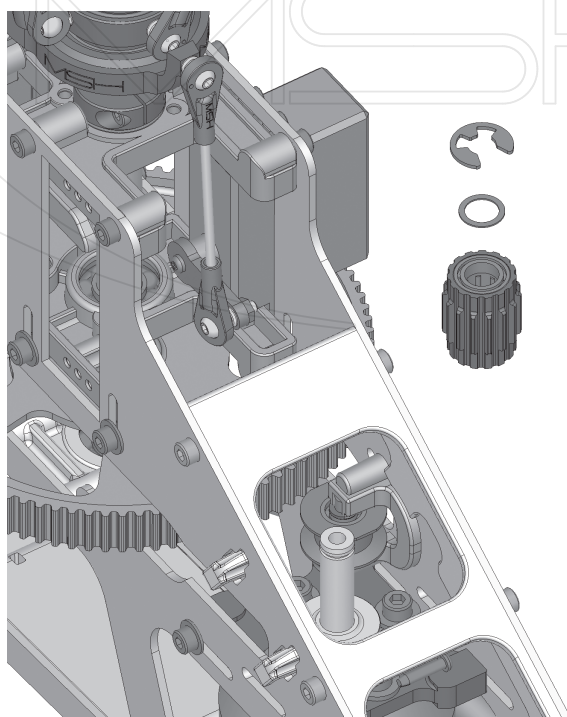


Battery pack:  
 LiPo 4s 3700mAh  
 LiPo 5s 3300/3700mAh  
 LiPo 6s 2500mAh







# Motor pinion teeth choice

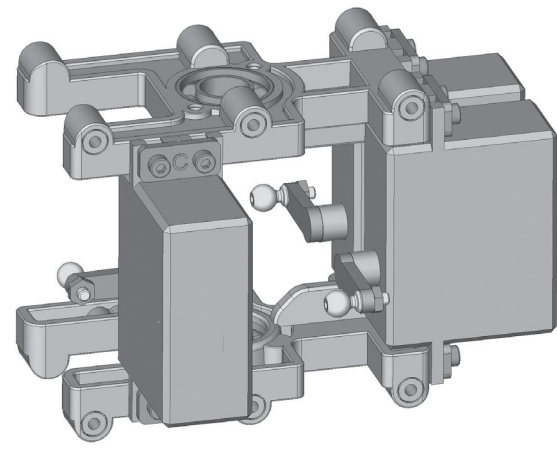
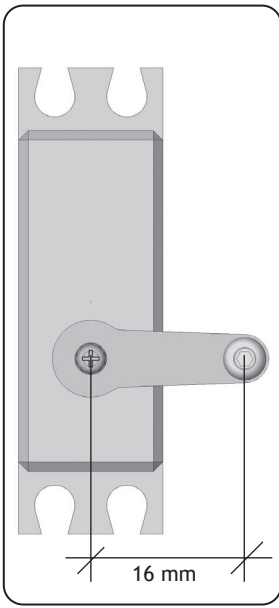
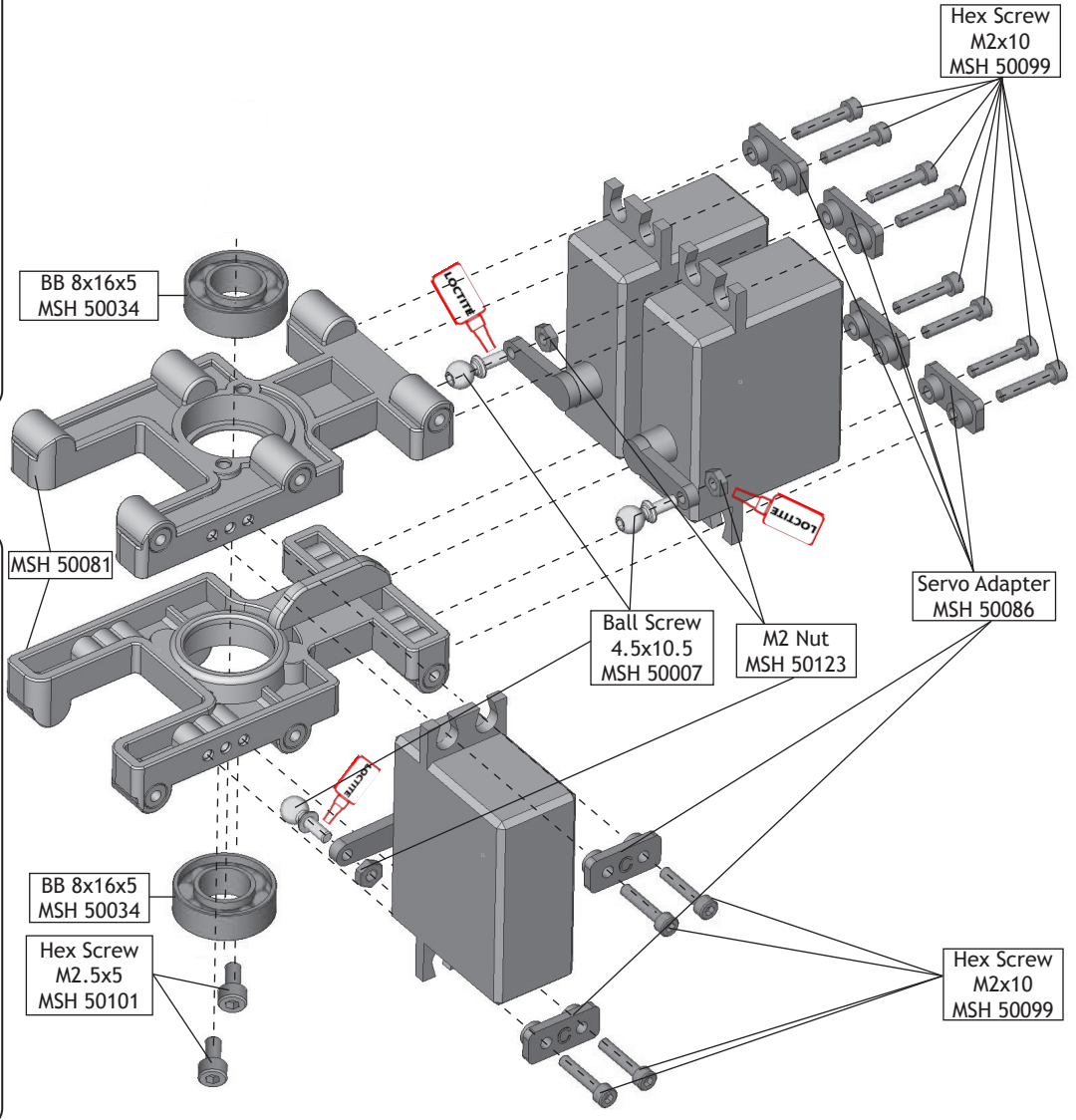
Fly Style \ Battery type	LiPo 4s 3700mAh	LiPo 5s 3700mAh	LiPo 6s 2500mAh
Beginner	18T (2400RPM)	15T (2500RPM)	-
Sport	19T (2550RPM)	16T (2650RPM)	13T (2550RPM)
Soft 3D	20T (2650RPM)	17T (2850RPM)	14T (2750RPM)
Hard 3D	-	18T (2950RPM)	15T (3000RPM)



**BAG-A**

-  Hex Screw M2x10  
MSH 50099
-  Hex Screw M2.5x5  
MSH 50101
-  Ball Screw M2x4.8  
MSH 50007
-  Nut  
M2 MSH 50123

**Tips/Instructions**  
Hex screw M2.5x5 only on lower servo frame.



**BAG-B**

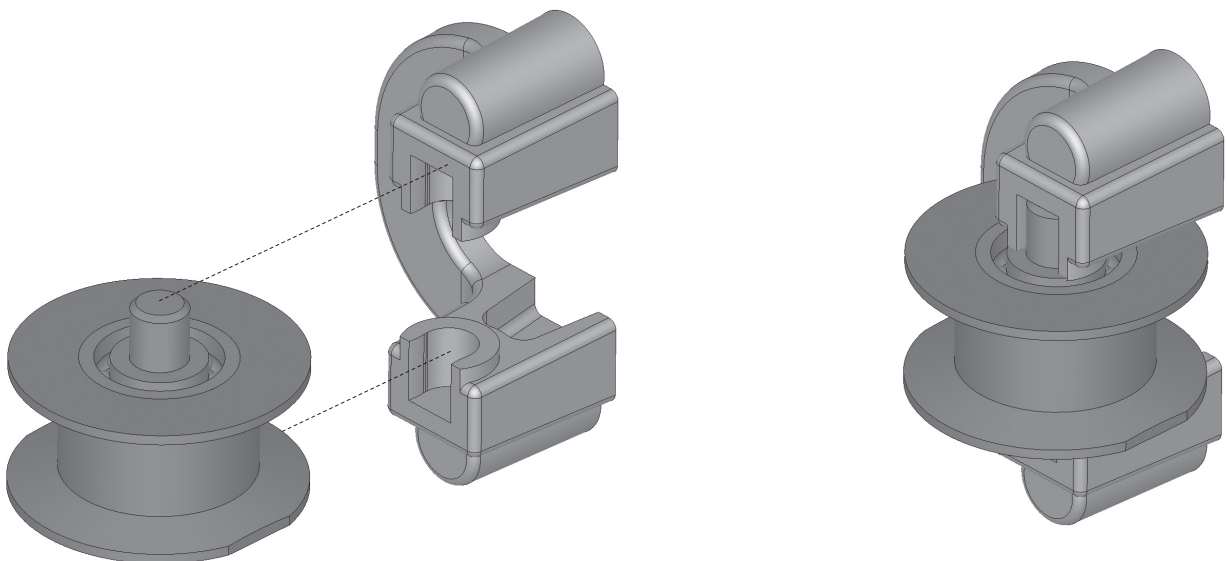


Pin 3x14  
MSH 50059

BB 3x8x3  
MSH 50033

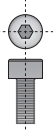
Guide Pulley  
MSH 50091

Pin 3x14  
MSH 50059





**BAG-B**



Hex Screw  
M2.5x6  
MSH 50102

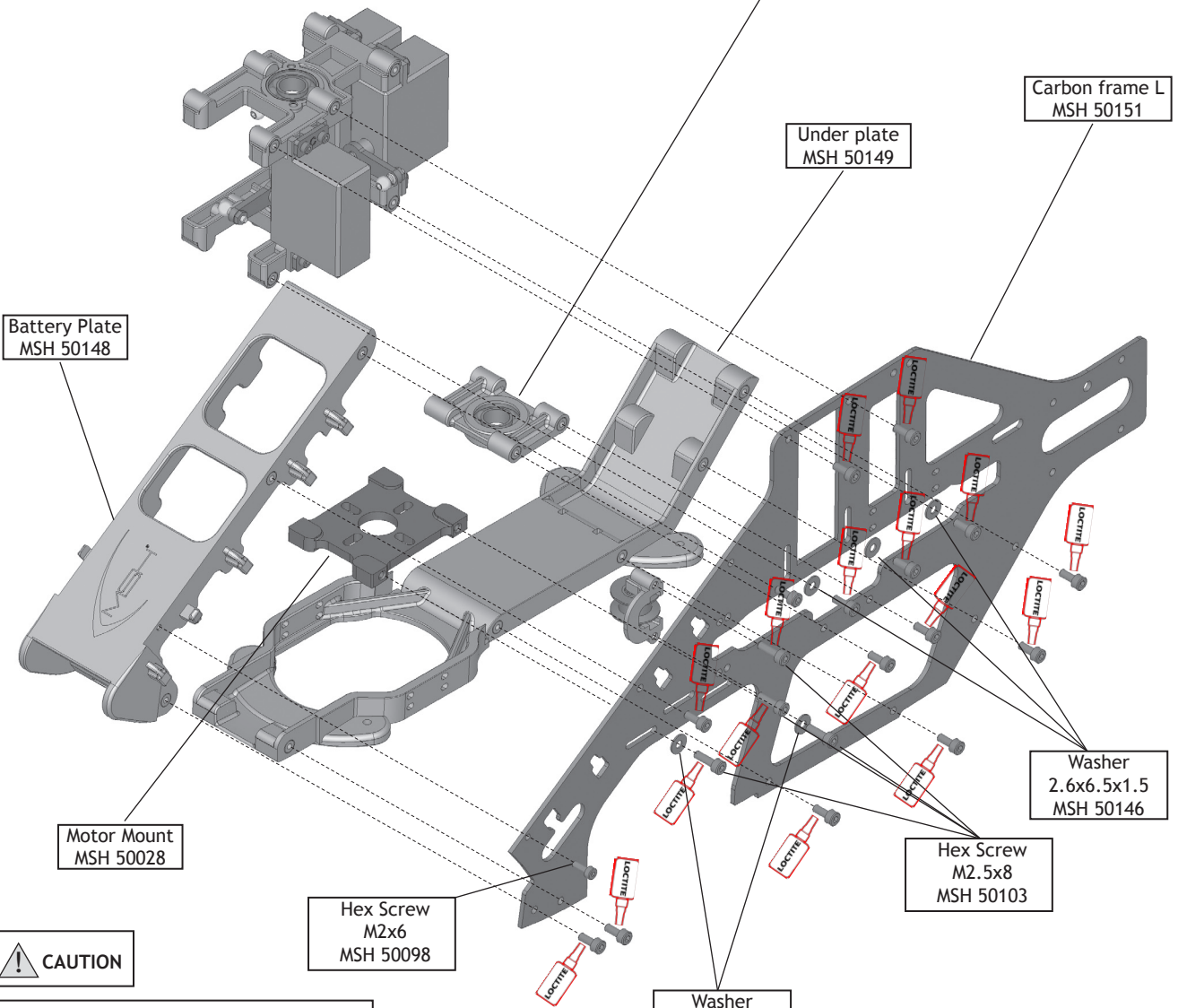
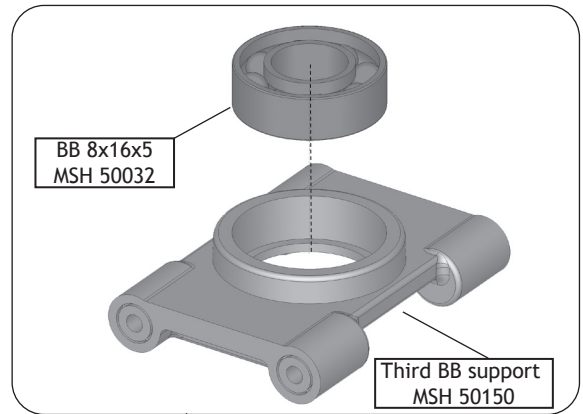


Hex Screw  
M2.5x8  
MSH 50103



Washer  
2.6x6.5x1.5  
MSH 50146

**Attention**



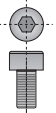




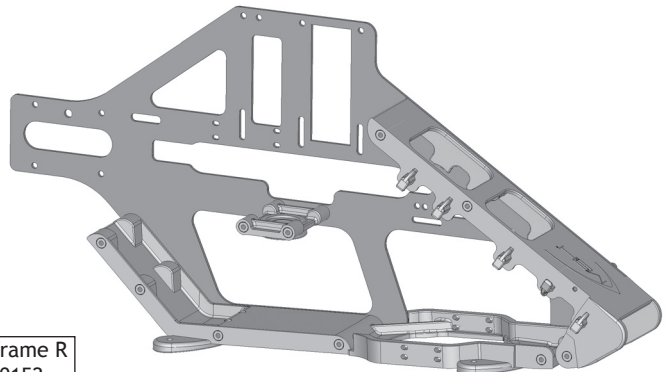
**CAUTION**

Use Thread lock on every screw metal/metal such as screws that keep the servo frame in place.

All Screws are M2.5x6 MSH 50102

**BAG-B**

-  M2.5 Nylon Nut  
MSH 50124
-  Hex Screw M2.5x16  
MSH 50106
-  Hex Screw M2.5x6  
MSH 50102
-  Washer 2.6x6.5x1.5  
MSH 50146
-  Self Tapping Screw  
2.2x9.5  
MSH 50118



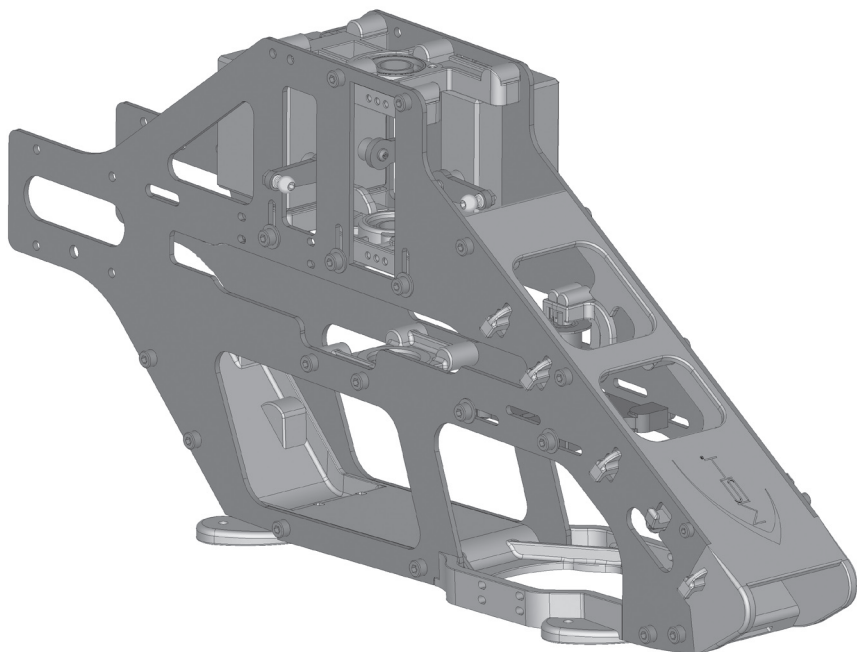
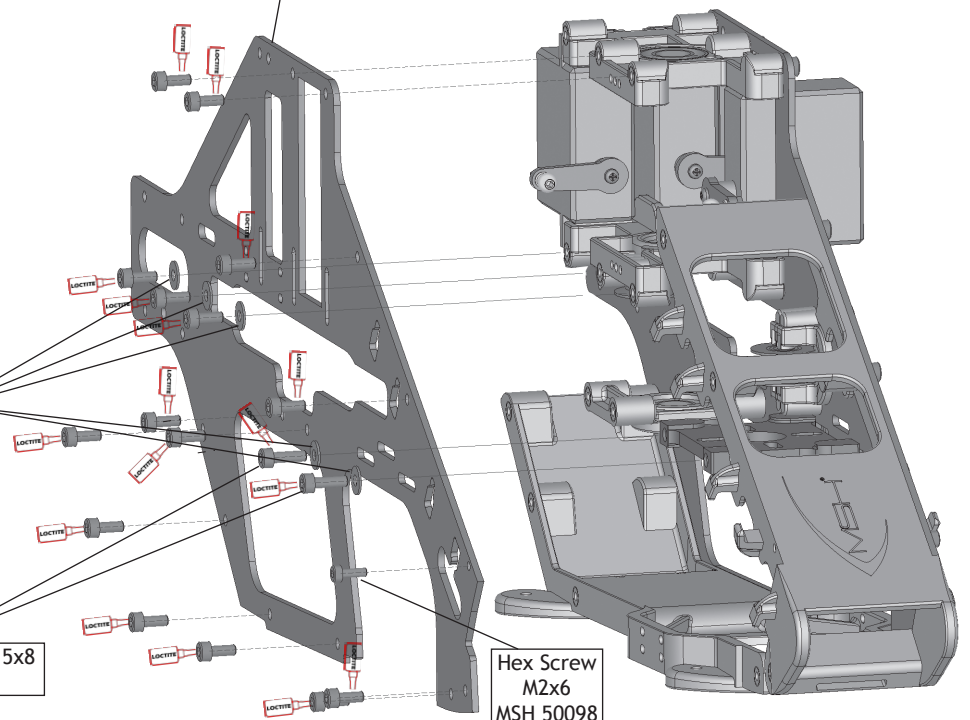
Carbon frame R  
MSH 50152

Washer 2.6x6.5x1.5  
MSH 50146

All screws  
are  
M2.5x6  
MSH 50102

Hex Screw M2.5x8  
MSH 50103

Hex Screw  
M2x6  
MSH 50098

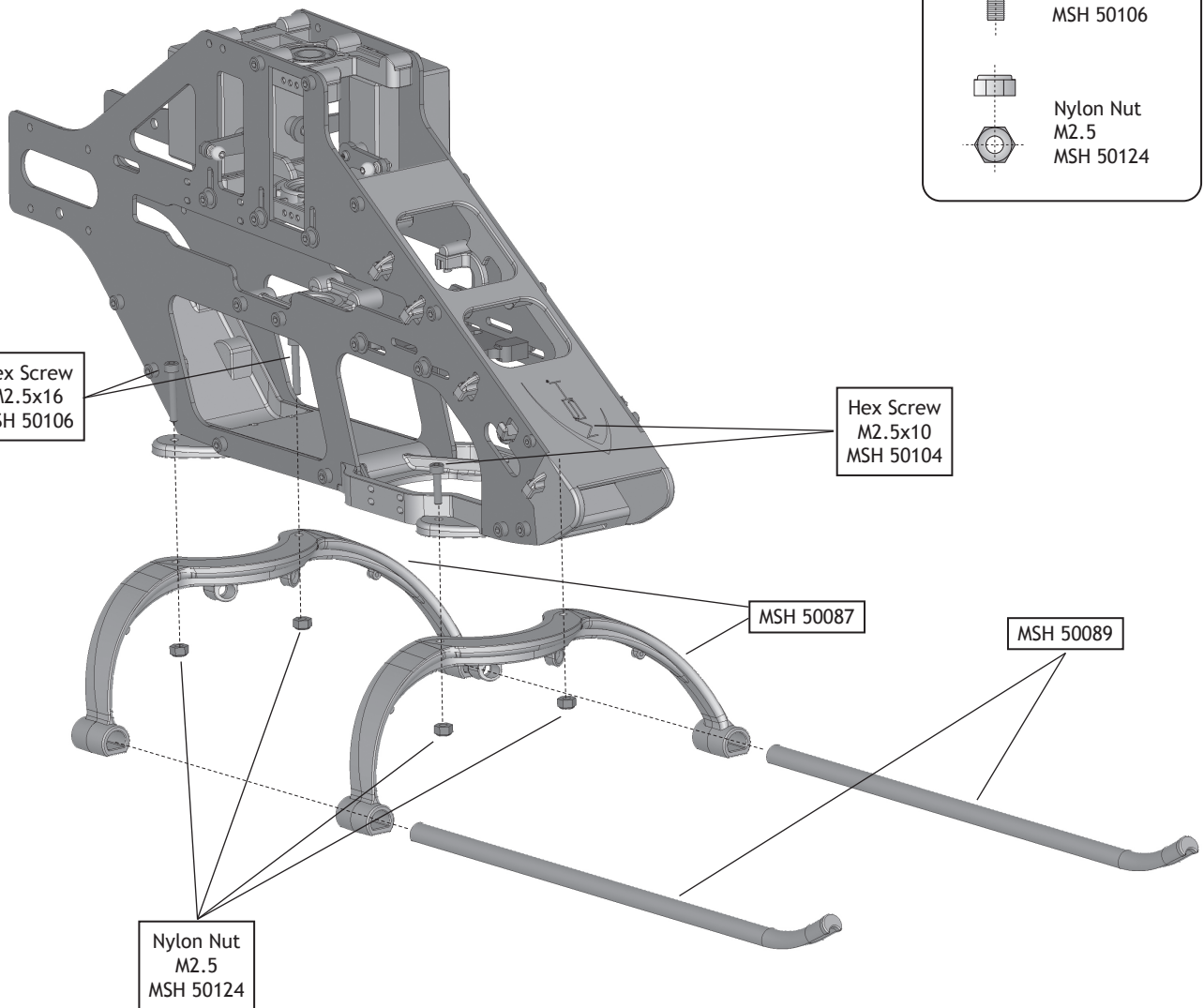
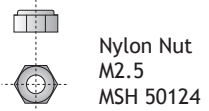
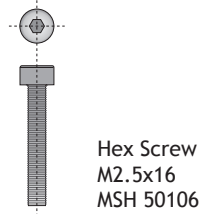
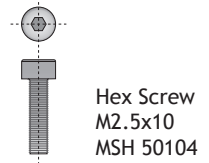


**Tips/Instructions**

Slide skids in both struts until "click" in position. Both struts should "click".

If Skids are hard to slide in position use an hair drier to heat struts holes.

**BAG-B**



**CAUTION**

Do not fully tighten hex screws 2.5x16 yet as they are used later to keep boom braces in position.

**BAG-B**



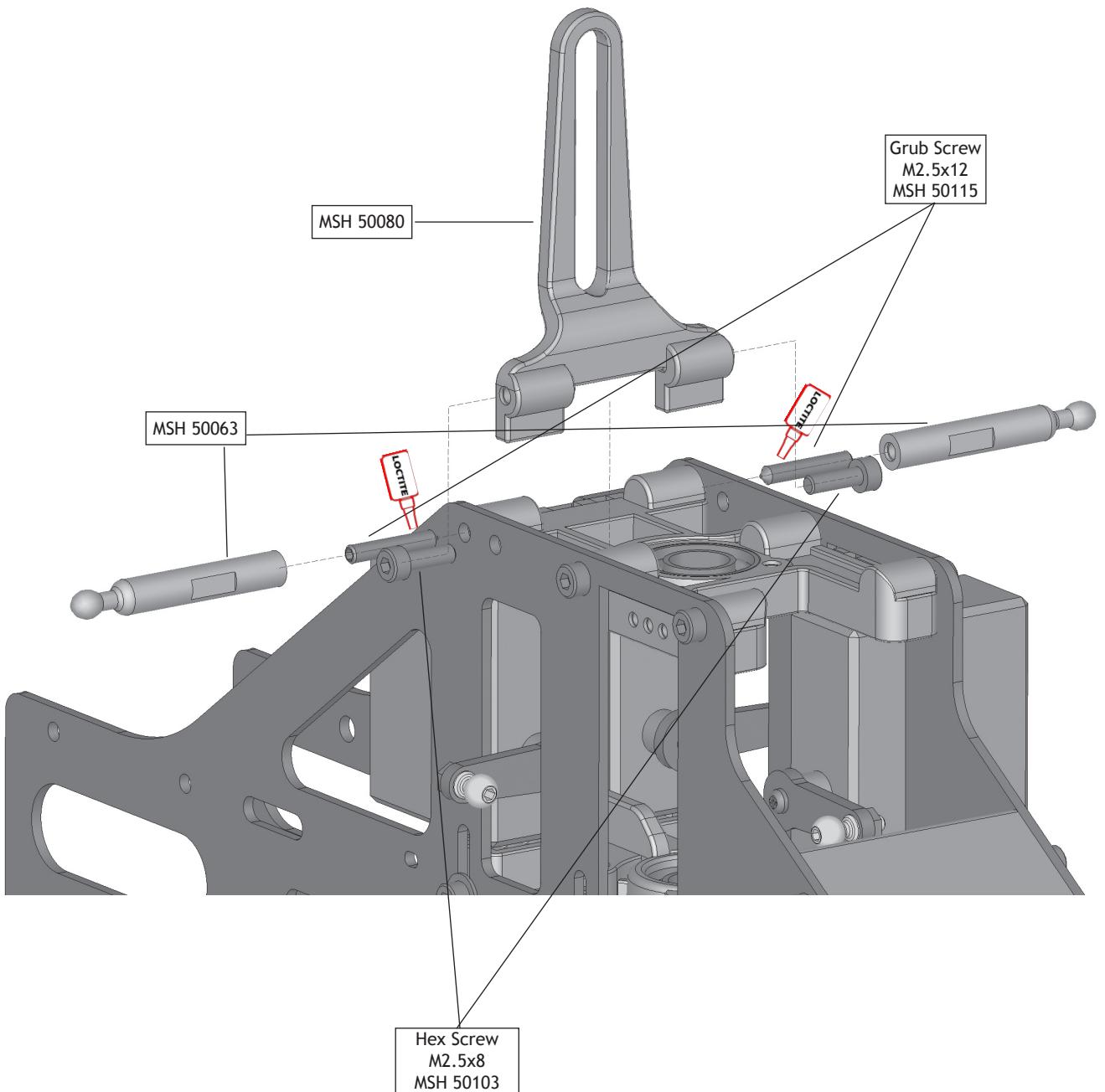
Grub Screw  
M2.5x12  
MSH 50115



Hex Screw  
M2.5x8  
MSH 50103

**Tips/Instructions**

Use thread lock on grub screw M2.5x12 on the side that goes in the servo frame.  
Grub screw can be screwed in by hand and tightened with MSH 50063 (Canopy post) using the two flat surfaces.



**BAG-C**  
Belt from box

Hex Screw  
M2x6  
MSH 50098

Hex Screw  
M3x20  
MSH 50112

Nylon Nut  
M3  
MSH 50125

Hex Screw  
M3x8  
MSH 50110

Washer  
3.1x10x1  
MSH 50121

**Tips/Instructions**

Make sure hex screw M3x8 is fully tightened on bottom of main shaft than pulling main shaft gently lock collar in position. Main shaft should not have any vertical play.

**Very Important !!**

After this step main shaft must not have any axial play !

Hole neder to side goes on top.

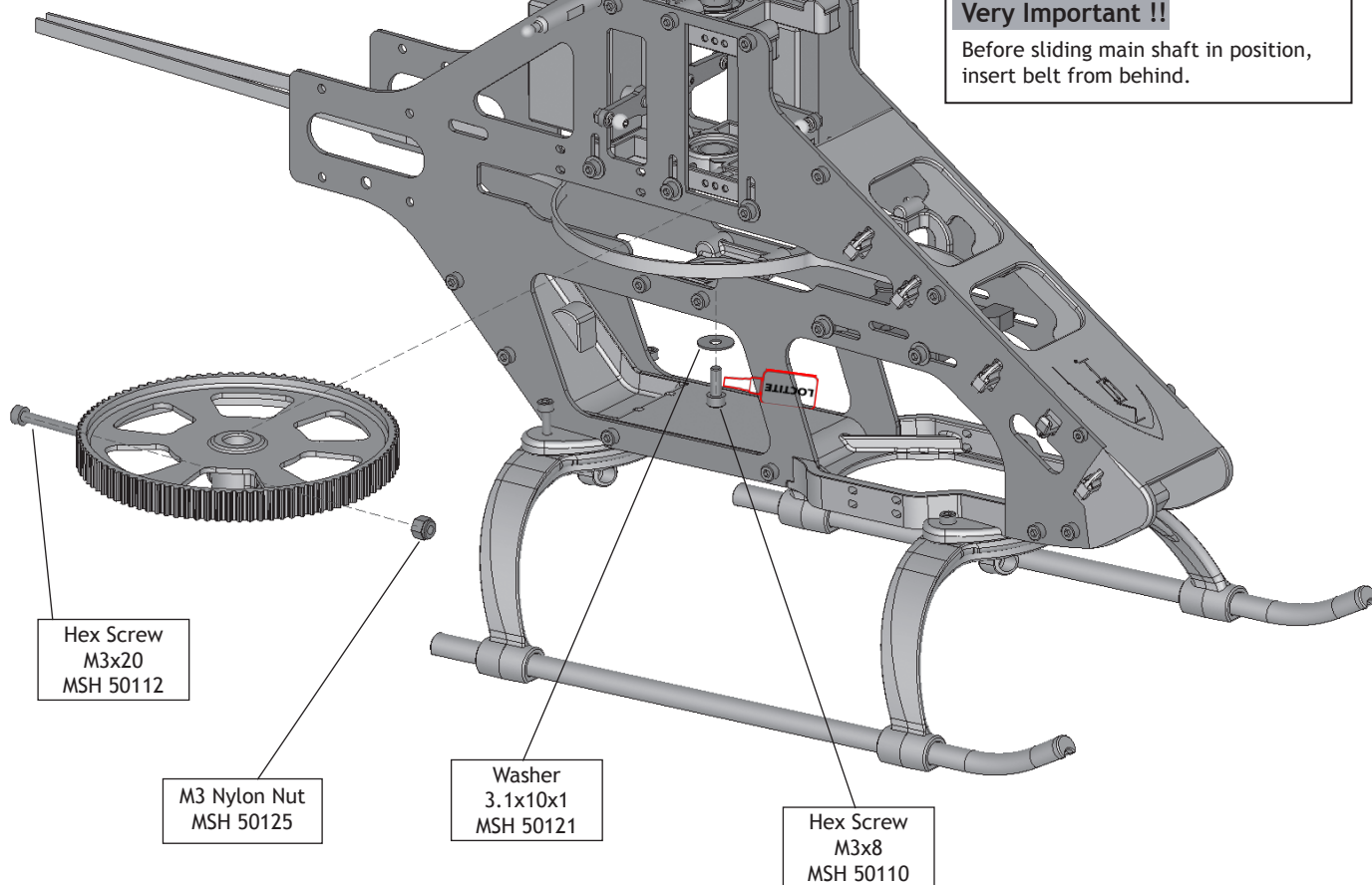
MSH 50004

MSH 50023

Hex Screw  
M2x6  
MSH 50098

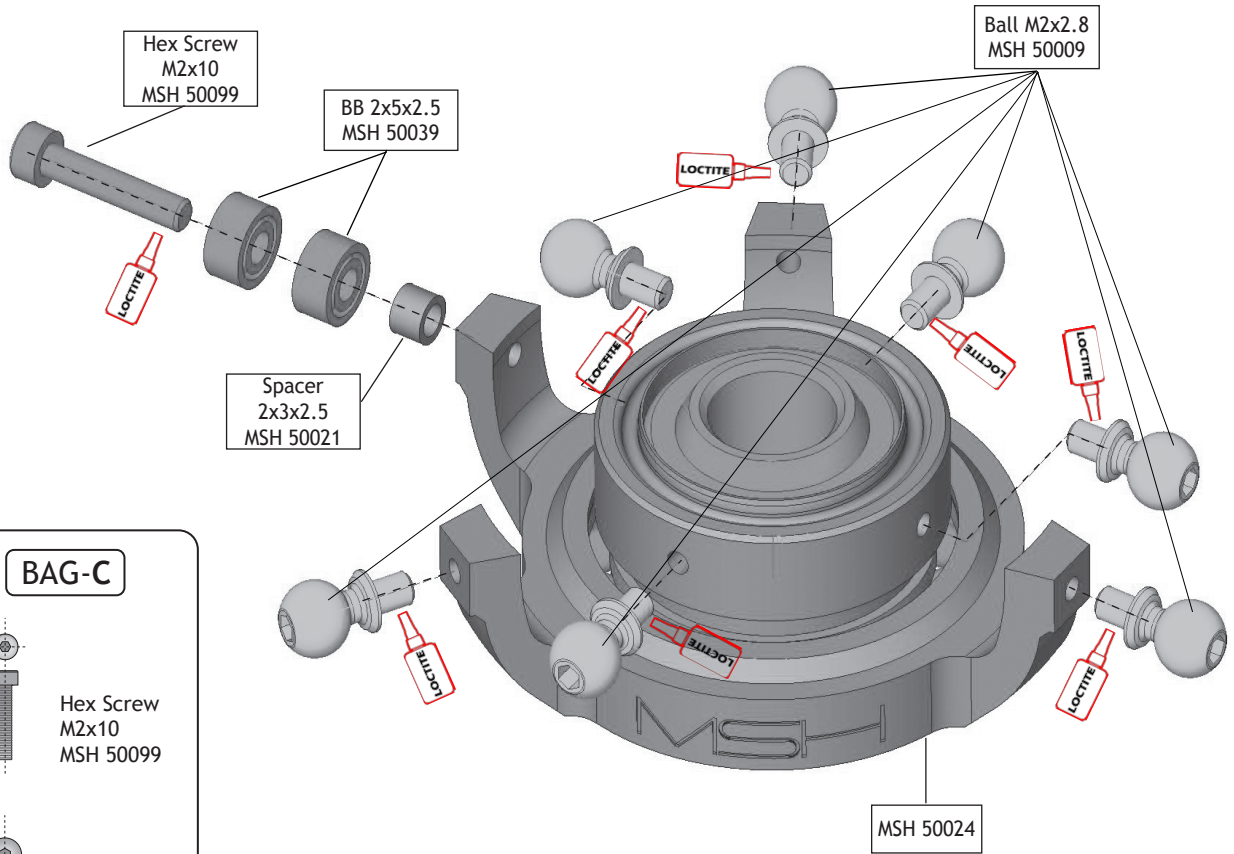
**Very Important !!**

Before sliding main shaft in position, insert belt from behind.



**Tips/Instructions**

Use Thread lock on balls and screw M2x10.



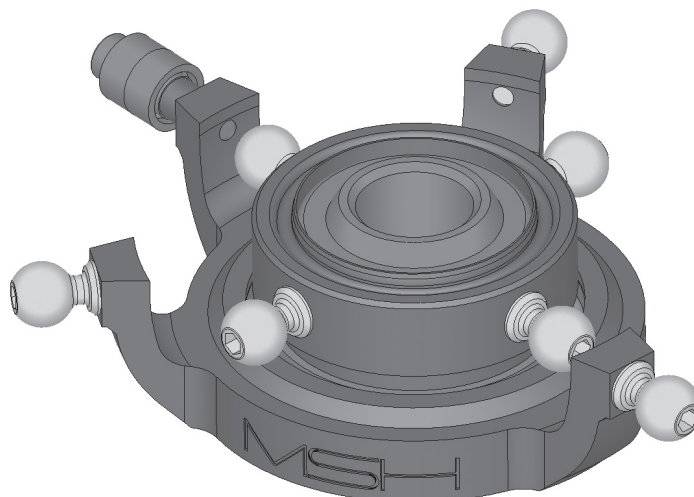
**BAG-C**



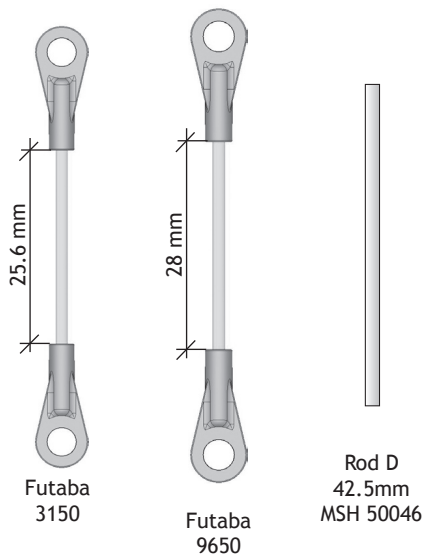
Hex Screw  
M2x10  
MSH 50099



Ball Screw  
M2x2.8  
MSH 50009

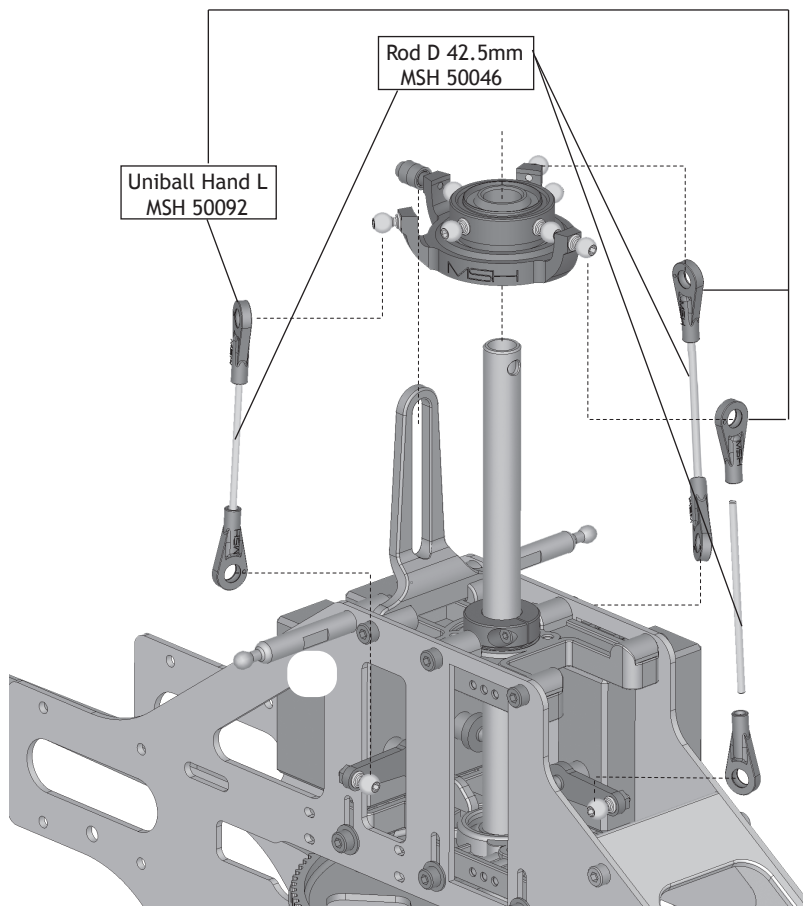


**BAG-C**



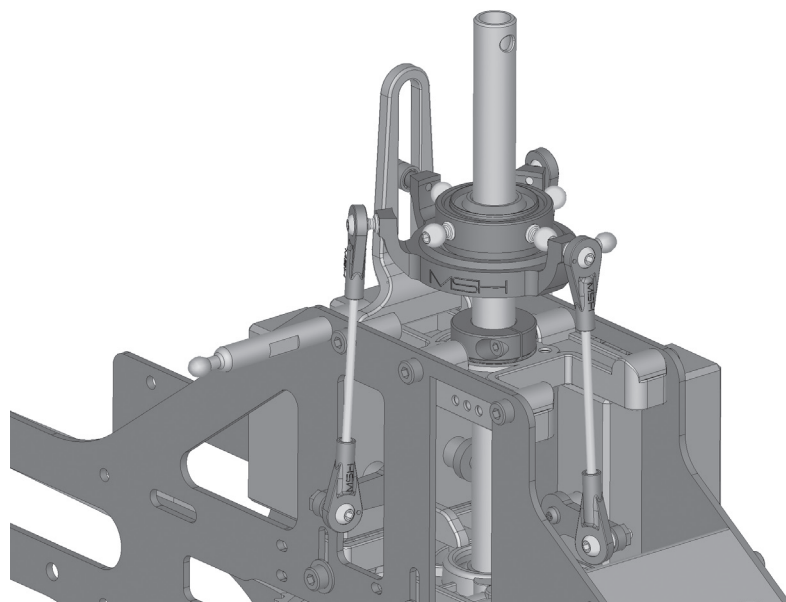
**Tips/Instructions**

Length of rods connecting servos to swashplate is correct if using 9650 or 3150 fut servo other servos might need adjustment.



**CAUTION**

Use provided ball sizer on plastic links in case joint is too stiff.



**BAG-D**



Ball Screw  
M2x4.8  
MSH 50007



Hex Screw  
M2x10  
MSH 50099



Washout Pin  
2x12  
MSH 50058

**CAUTION**

Do not over tighten screws and balls on plastic. Just 1/8 turn after completely seated.

BB 2x5x2.5  
Flanged  
MSH 50041

MSH 50084

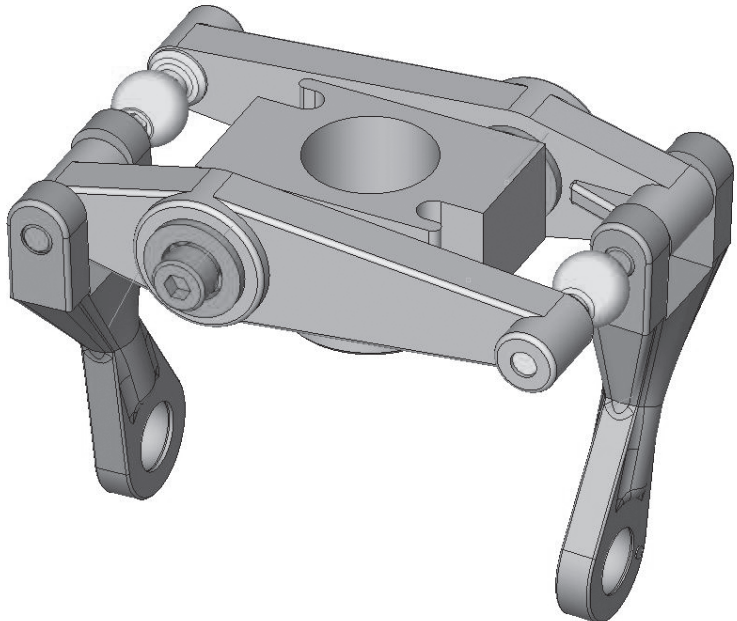
Ball Screw  
M2x4.8  
MSH 50007

MSH 50037

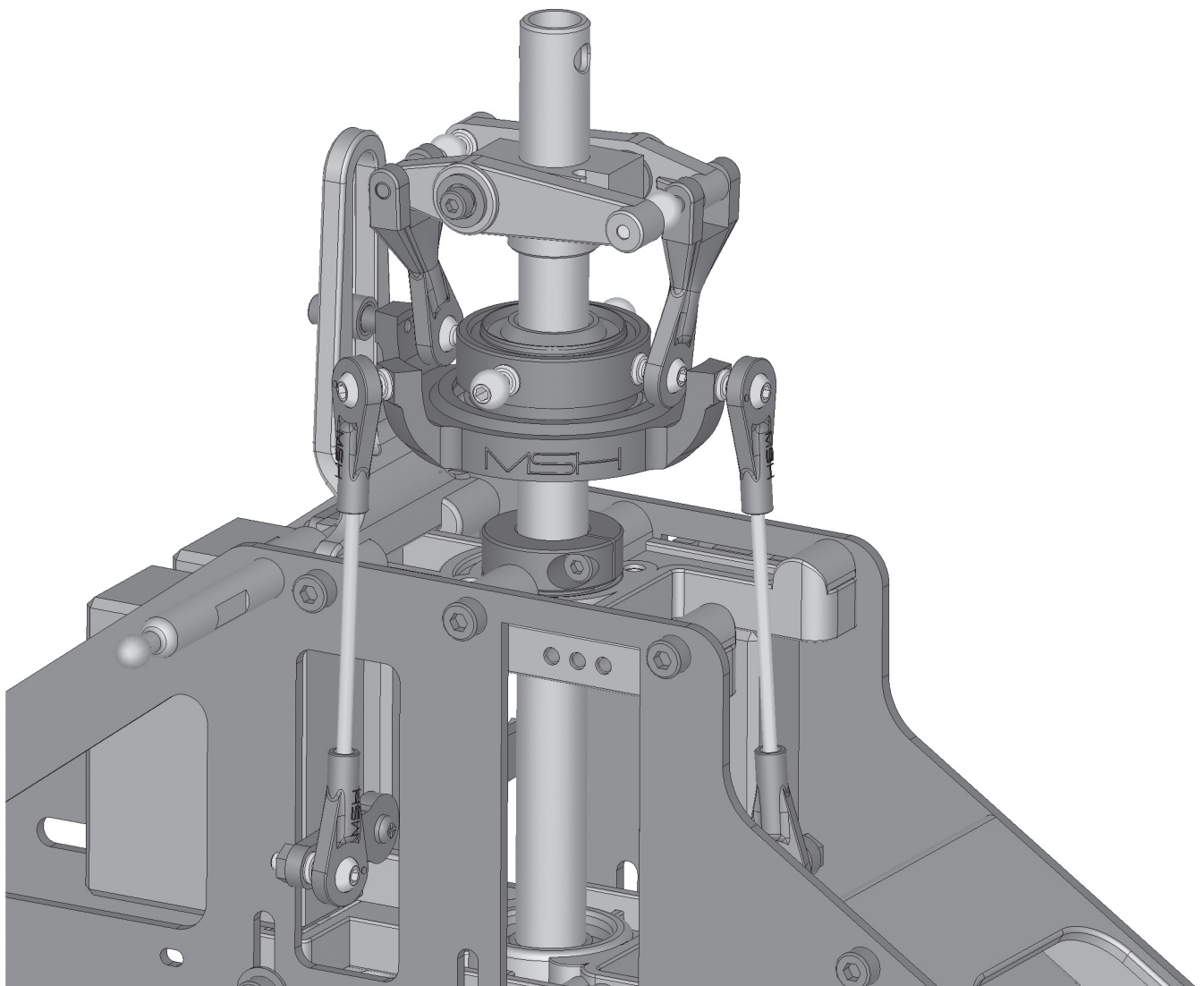
Pin  
2x12  
MSH 50058

MSH 50037

Hex Screw  
M2x10  
MSH 50099







**BAG-D**

Hex Screw  
M2.5x5  
MSH 50101

MSH 50027

**Tips/Instructions**  
Apply Thread lock on hex screw M2.5x5 and outside BB 2.5x6x2.5.

Hex Screw  
M2.5x5  
MSH 50101

MSH 50085

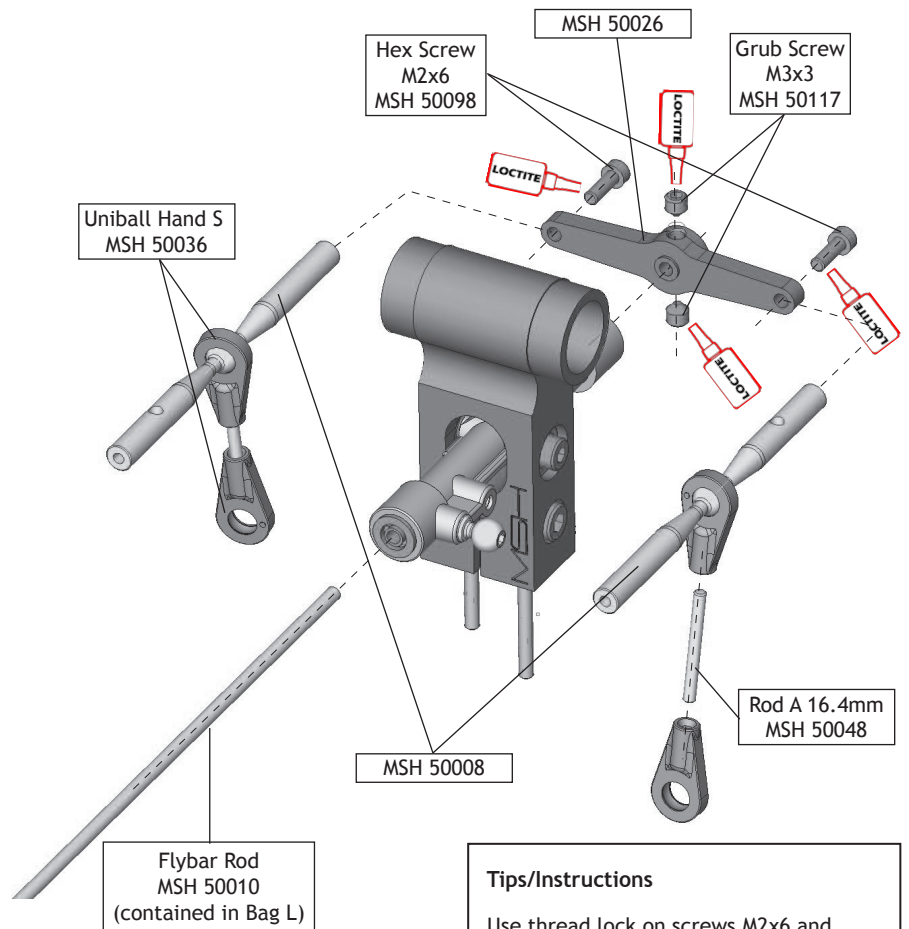
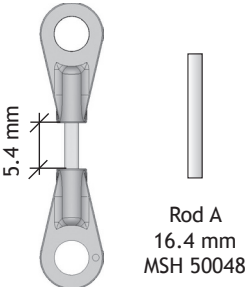
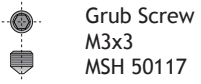
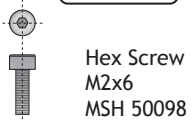
BB 2x5x2.5  
Flanged  
MSH 50091

BB 2.5x6x2.5  
Flanged  
MSH 50093

Ball Screw  
M2x4.8  
MSH 50007

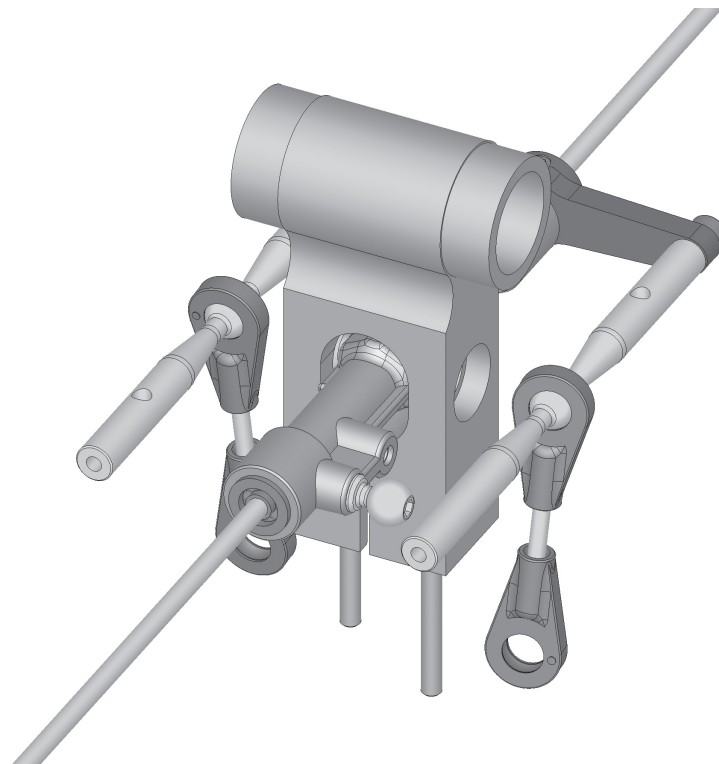
**Tips/Instructions**  
Do not over tighten balls. Just 1/8 turn after completely seated.

**BAG-D**



**Tips/Instructions**

Use thread lock on screws M2x6 and grub screws M3x3.



**BAG-D**



Hex Screw  
M2x6  
MSH 50098



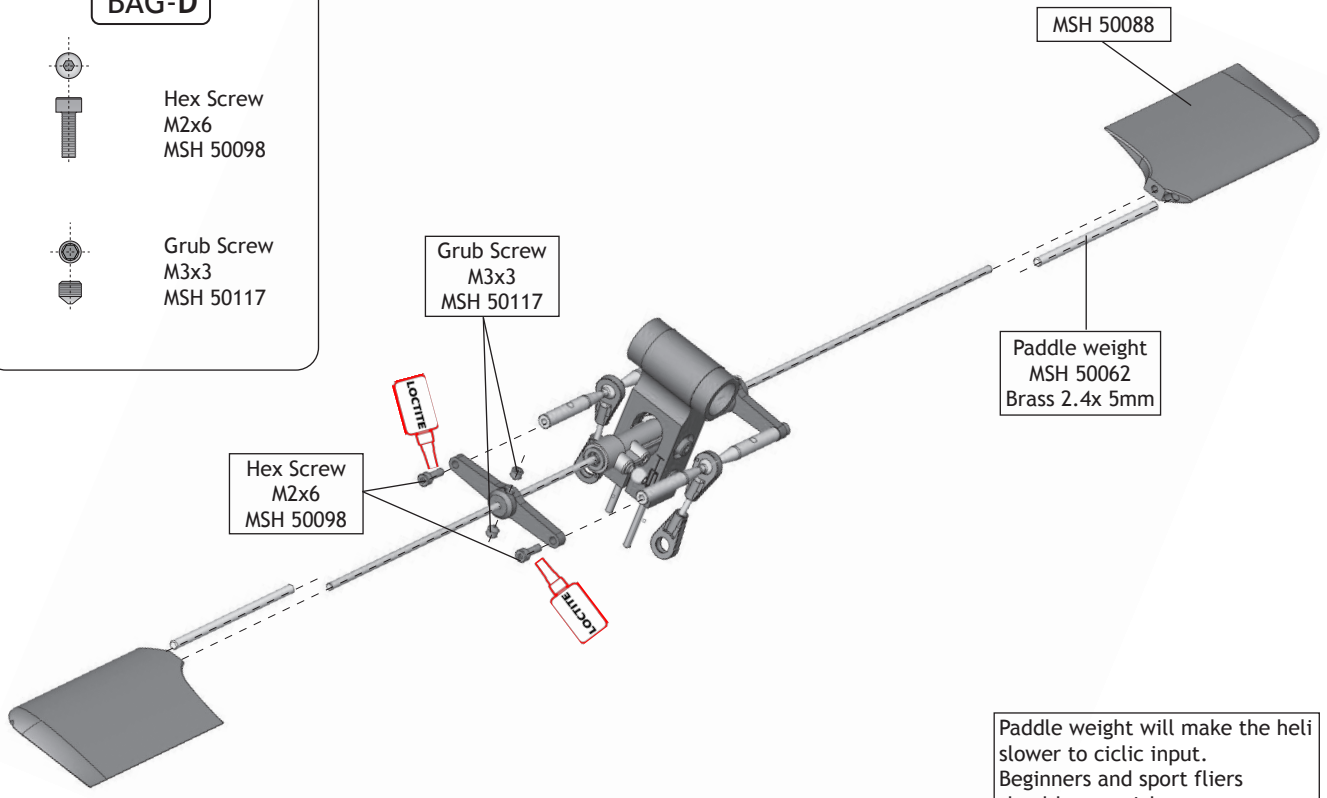
Grub Screw  
M3x3  
MSH 50117

Grub Screw  
M3x3  
MSH 50117

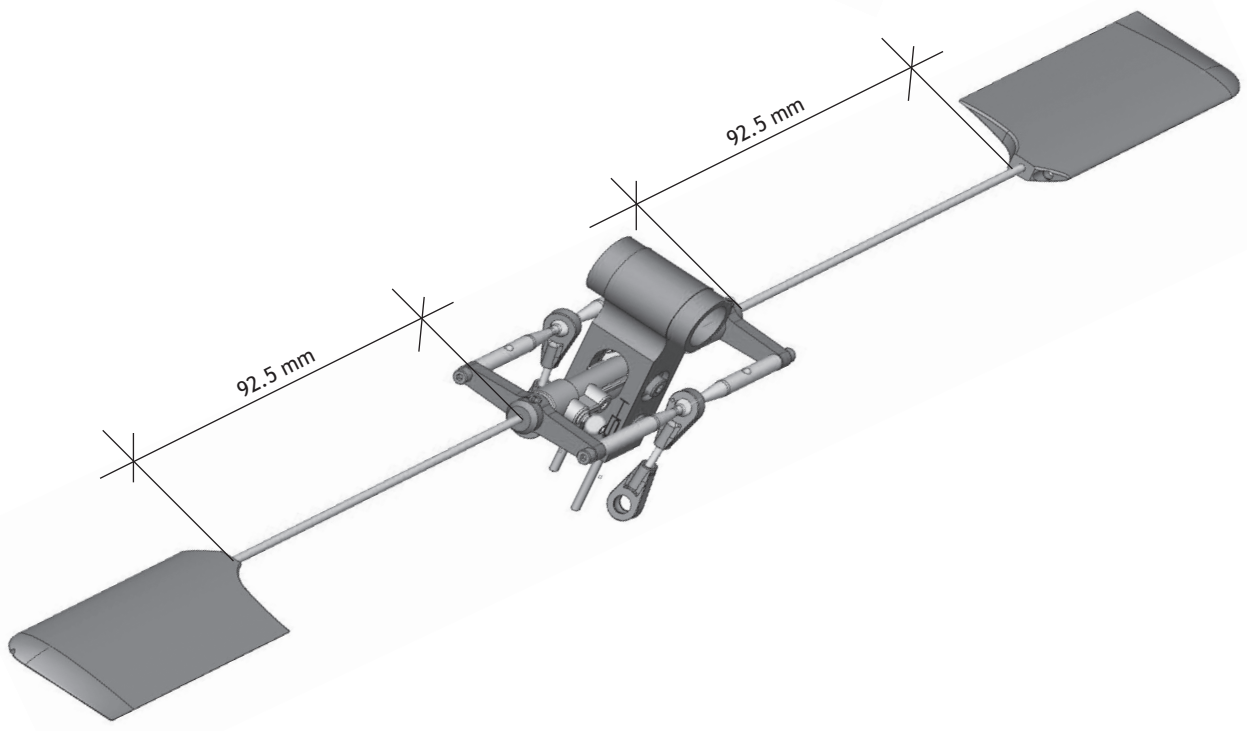
Hex Screw  
M2x6  
MSH 50098

MSH 50088

Paddle weight  
MSH 50062  
Brass 2.4x 5mm



Paddle weight will make the heli slower to cyclic input. Beginners and sport fliers should use weight.



**BAG-D**



Ball Screw  
M2x4.8  
MSH 50007



Hex Screw  
M2x10  
MSH 50099

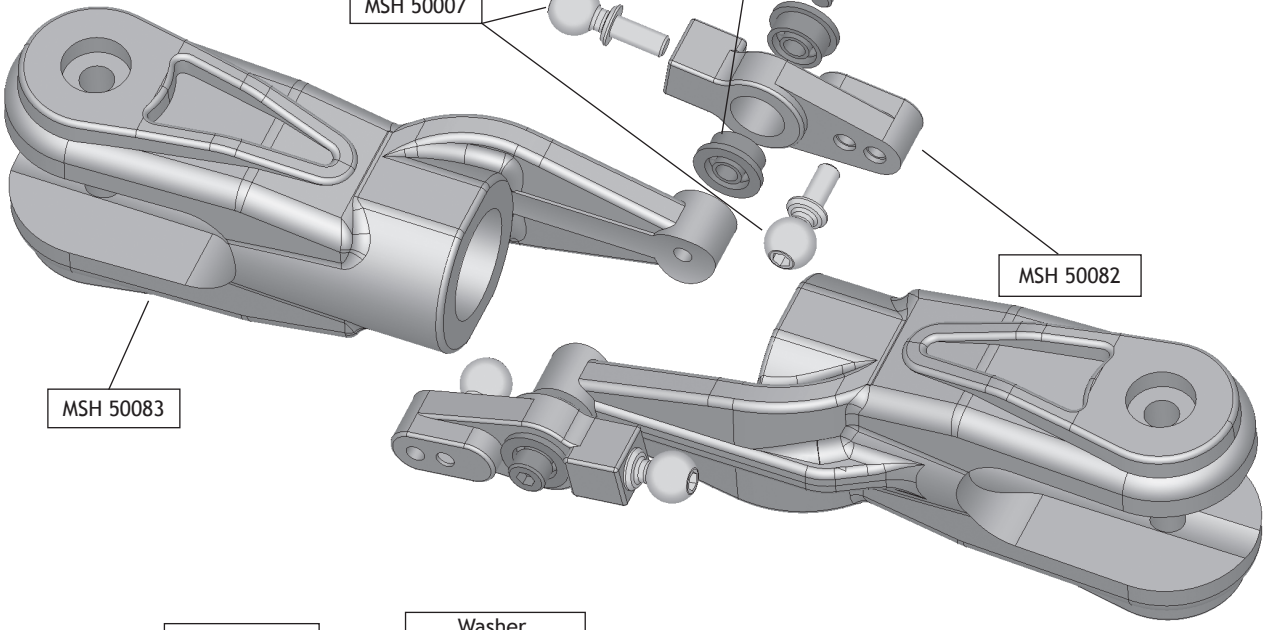
**Very Important !!**

Do not over tighten M2x10 until mixer has no play and spins freely.

BB 2x5x2.5  
Flanged  
MSH 50041

Hex Screw  
M2x10  
MSH 50099

Ball Screw  
M2x4.8  
MSH 50007



BB 5x10x4  
MSH 50034

Washer  
5x7.5x0.2  
MSH 50135

Thrust BB 5x10x4  
MSH 50042

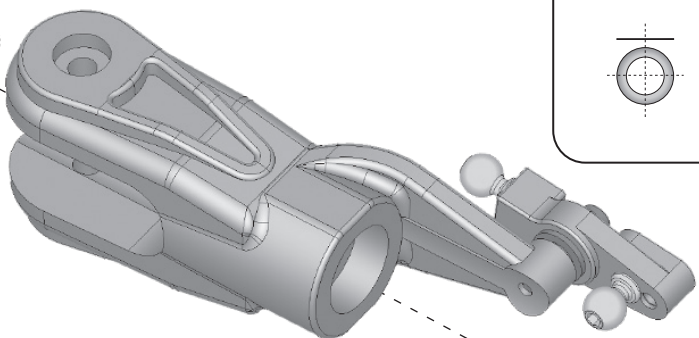
Outside (O)

Inside (I)

**BAG-D**



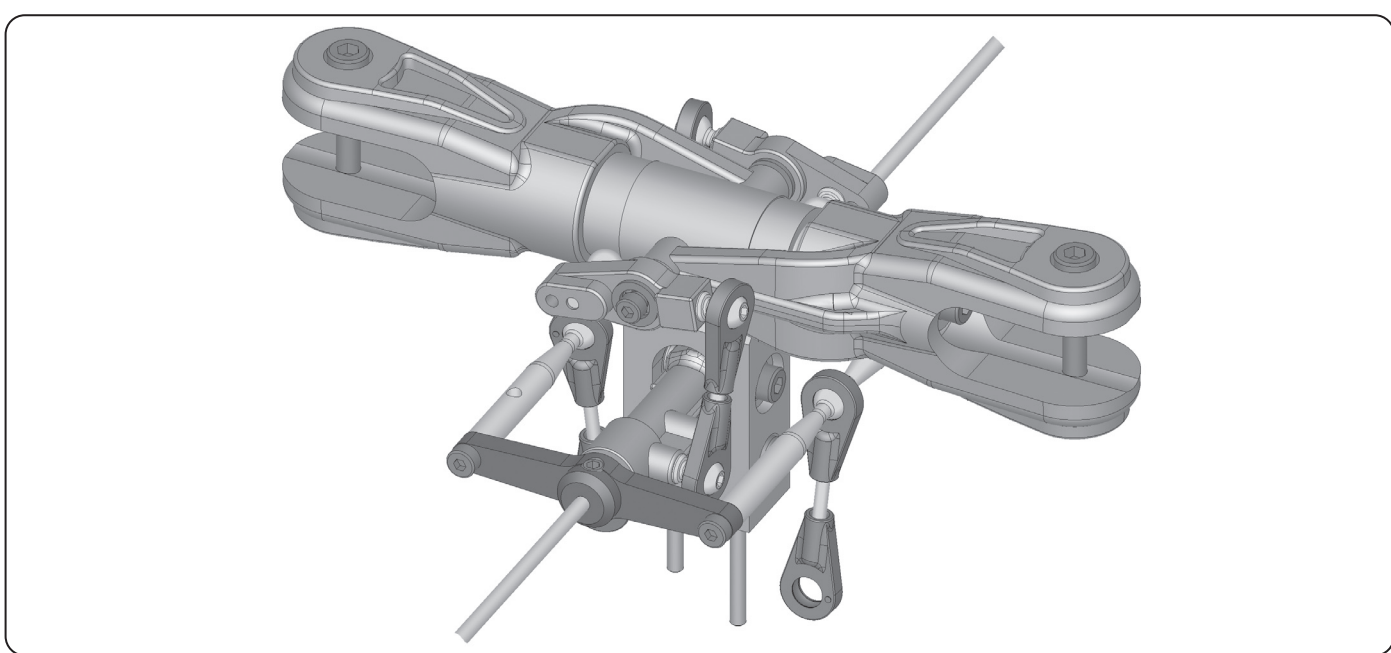
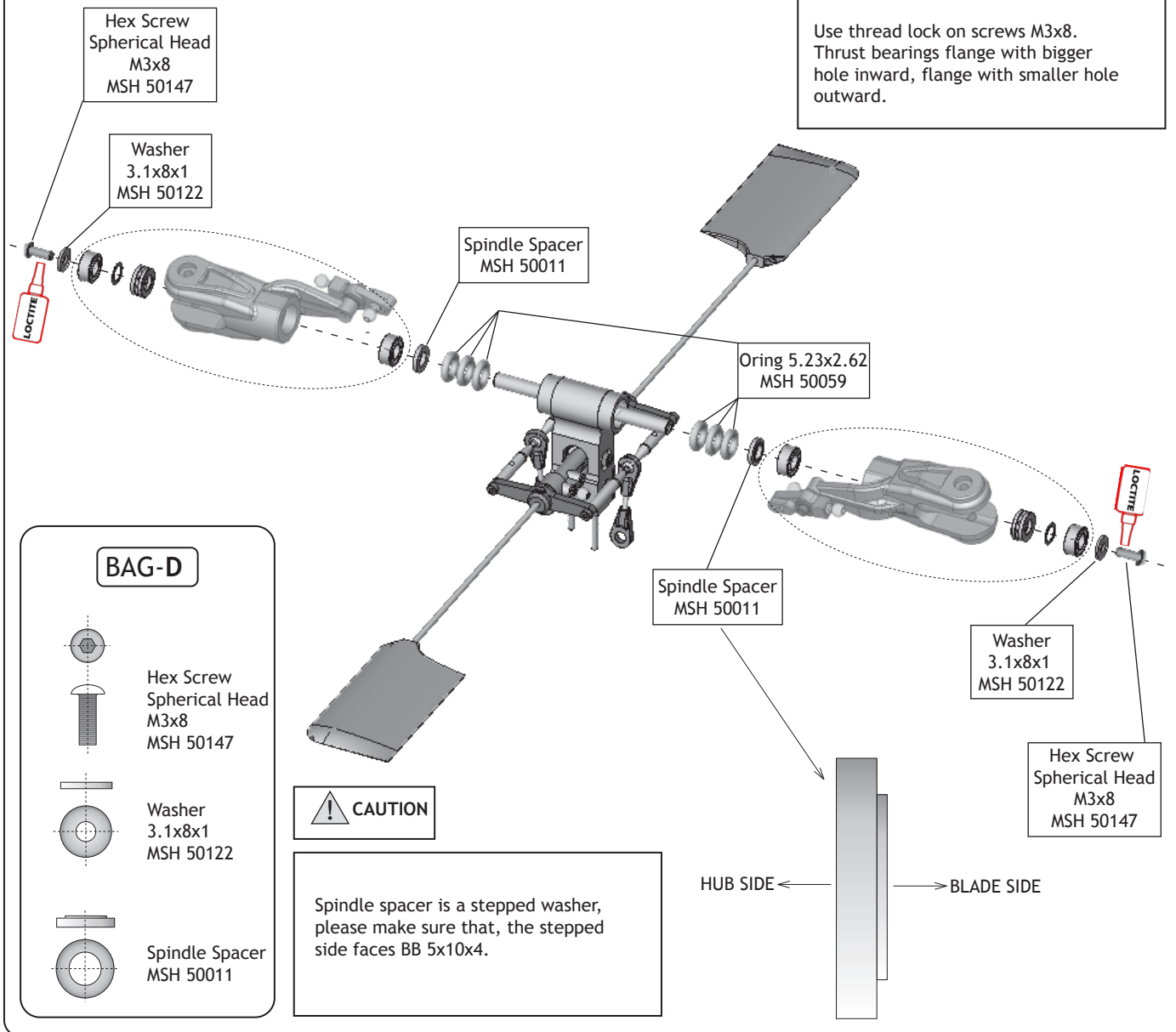
Washer  
5x7.5x0.2  
MSH 50135

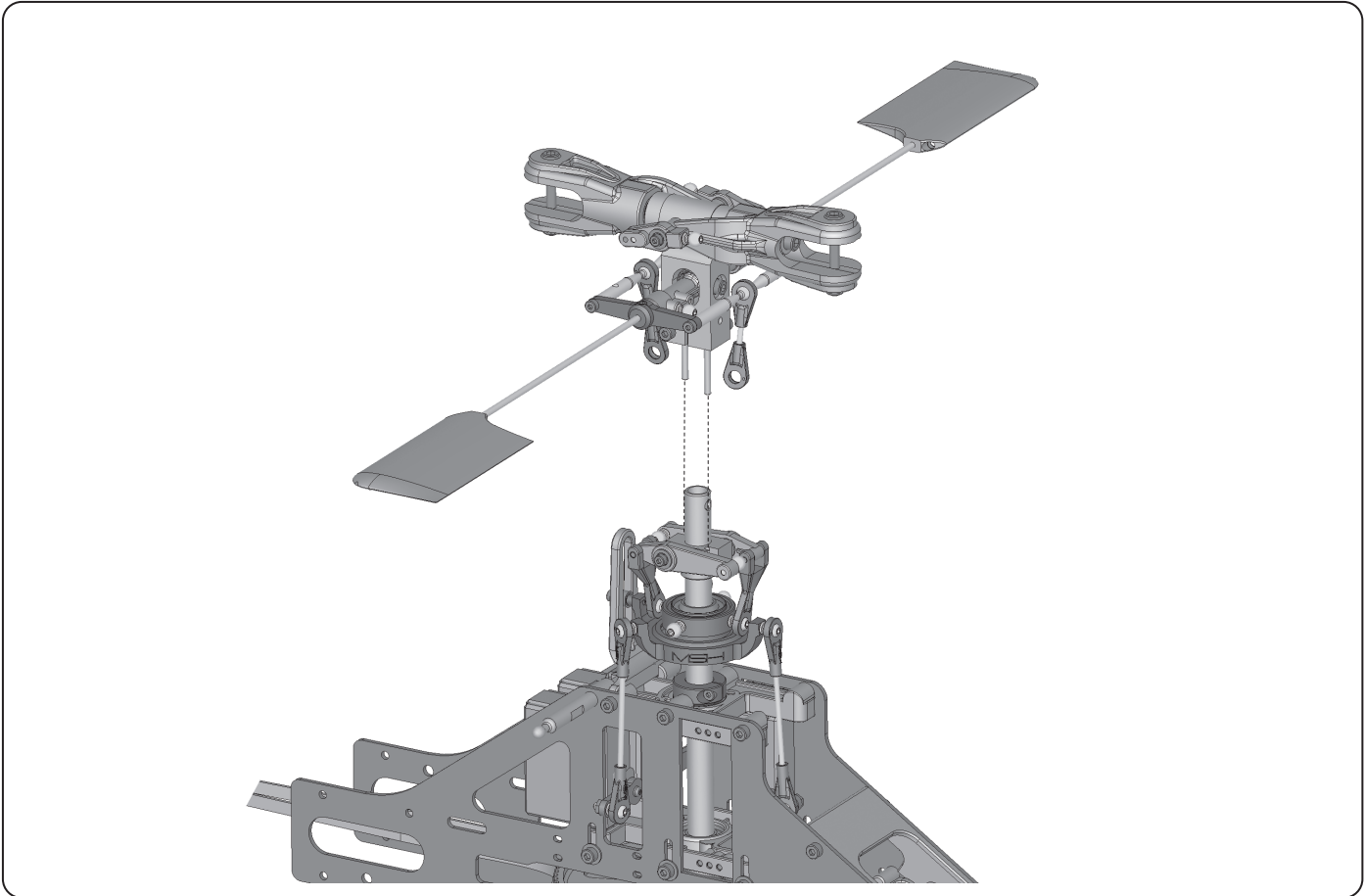


BB 5x10x4  
MSH 50034

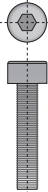
**Tips/Instructions**

Use thread lock on screws M3x8.  
Thrust bearings flange with bigger hole inward, flange with smaller hole outward.







**BAG-D**



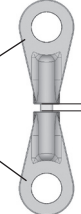
Hex Screw  
M3x14  
MSH 50113



Rod B  
12 mm  
MSH 50049



Rod C  
53 mm  
MSH 50047

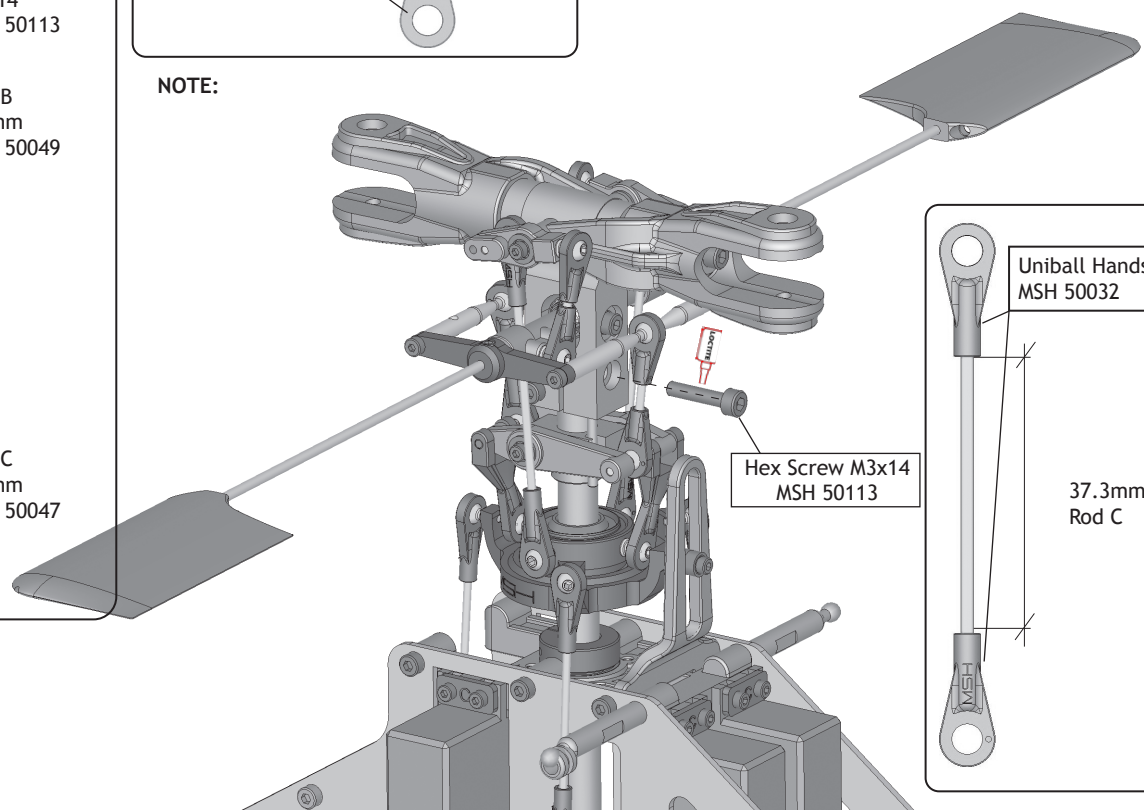


Uniball Hand S  
MSH 50036

1 mm  
Rod B

**Tips/Instructions**  
Use threadlock on M3x14 screw.

**NOTE:**



Uniball Hands  
MSH 50032

37.3mm  
Rod C

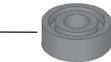
Hex Screw M3x14  
MSH 50113

**BAG-E**

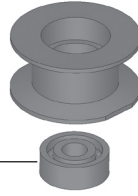


Pin 3x14  
MSH 50059

BB 3x8x3  
MSH 50033



Guide Pulley  
MSH 50091



Pin 3x14  
MSH 50059



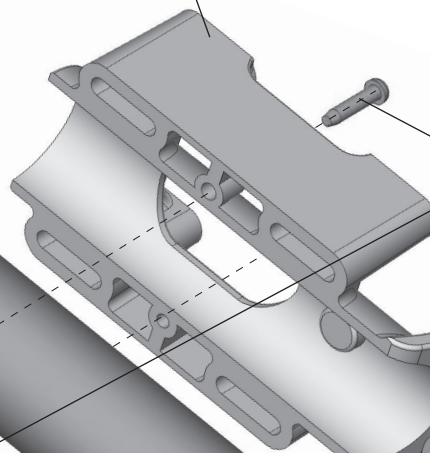
Guide Pulley Assembly

**BAG-E**



Self Tapping Screw  
2.2x9.5  
MSH 50118

MSH 50064



Self Tapping Screw  
2.2x9.5  
MSH 50118



Click pulley assembly  
in position



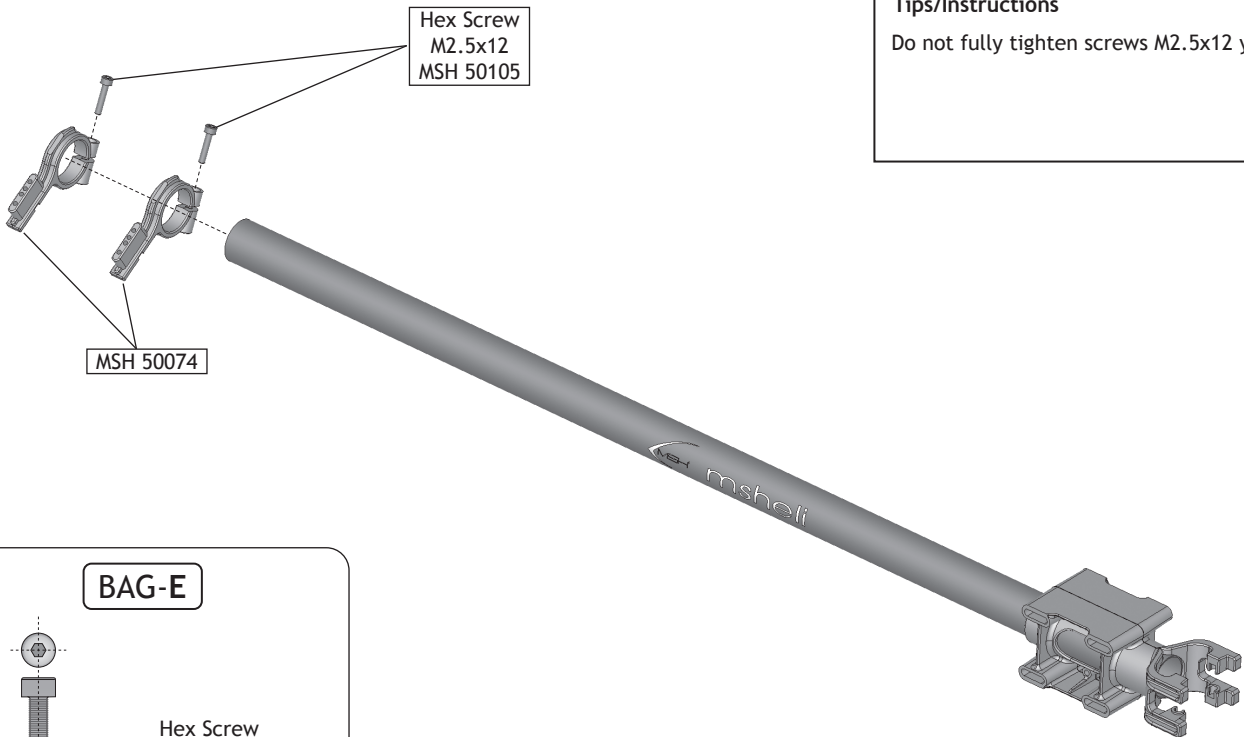
Click pulley assembly  
in position



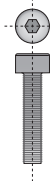


**Tips/Instructions**

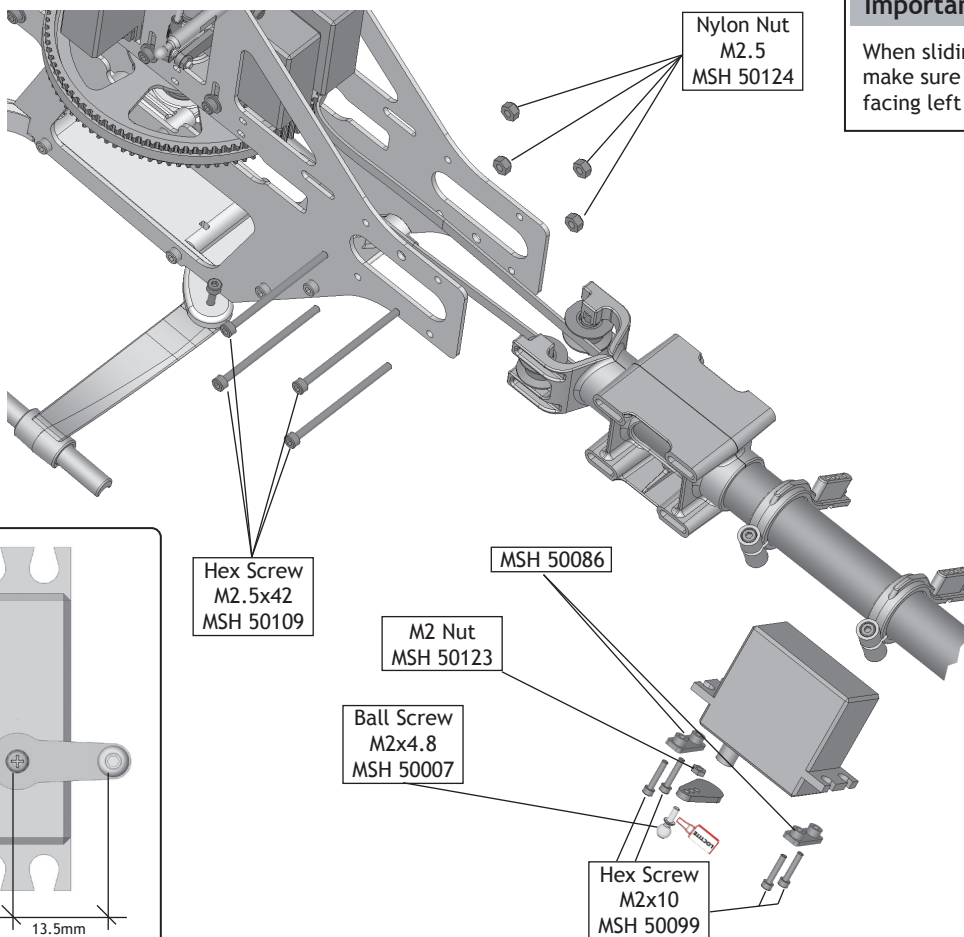
Do not fully tighten screws M2.5x12 yet.



**BAG-E**



Hex Screw  
M2.5x12  
MSH 50105



**Important !!**

When sliding boom assembly in position make sure that the hole on the rear is facing left when looking from behind.

**BAG-E**



Hex Screw M2x10  
MSH 50099



Hex Screw M2.5x42  
MSH 50109



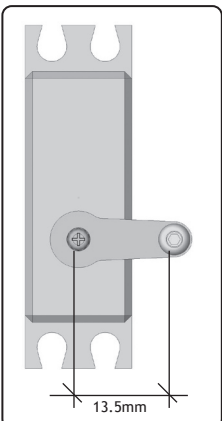
Nylon Nut  
M2.5  
MSH 50124








Ball Screw M2x4.8  
MSH 50007



Nut  
M2 MSH 50123

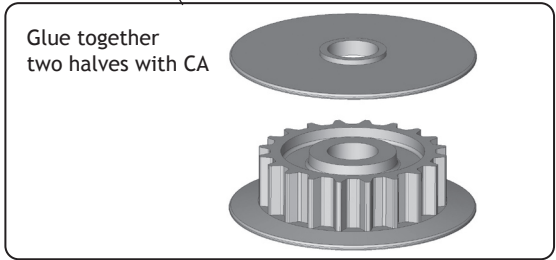
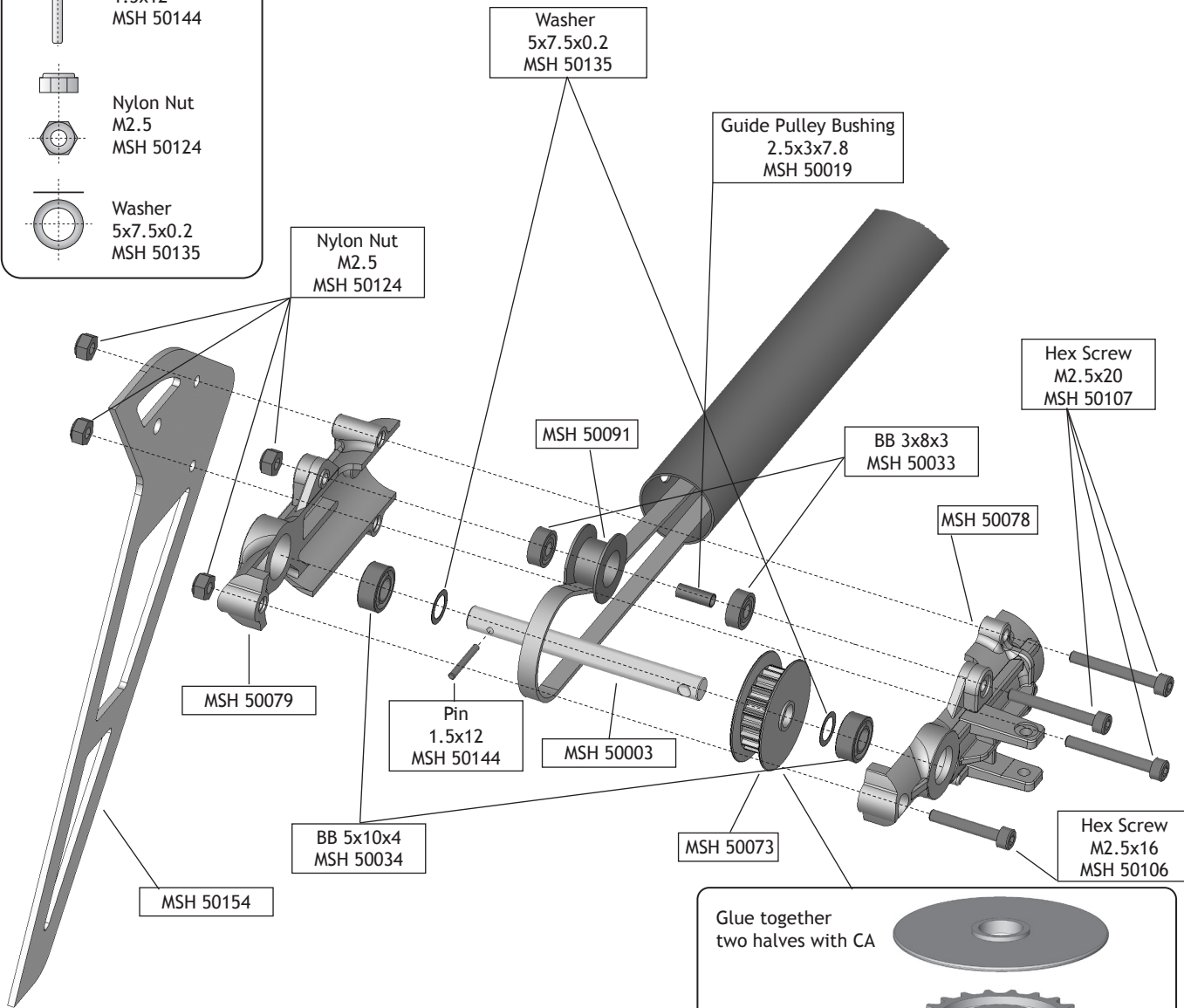


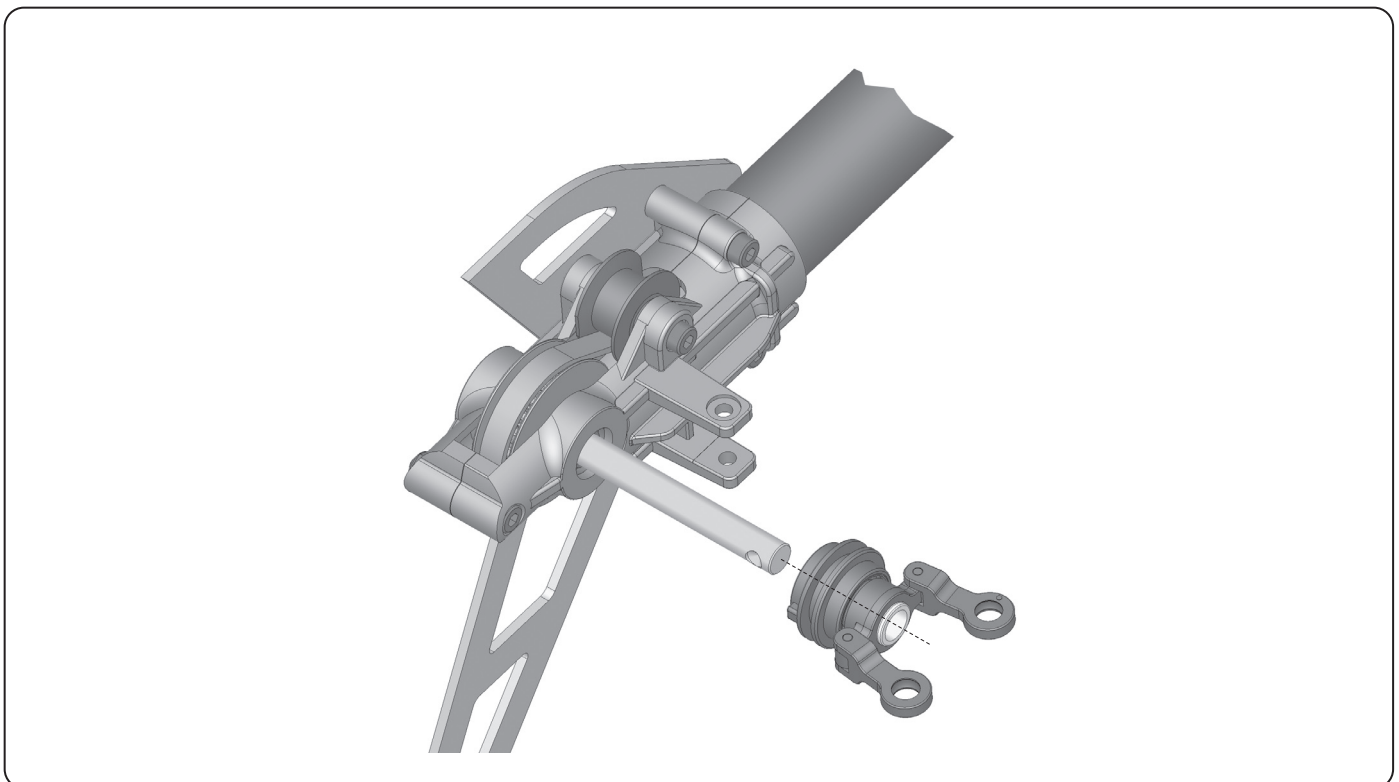
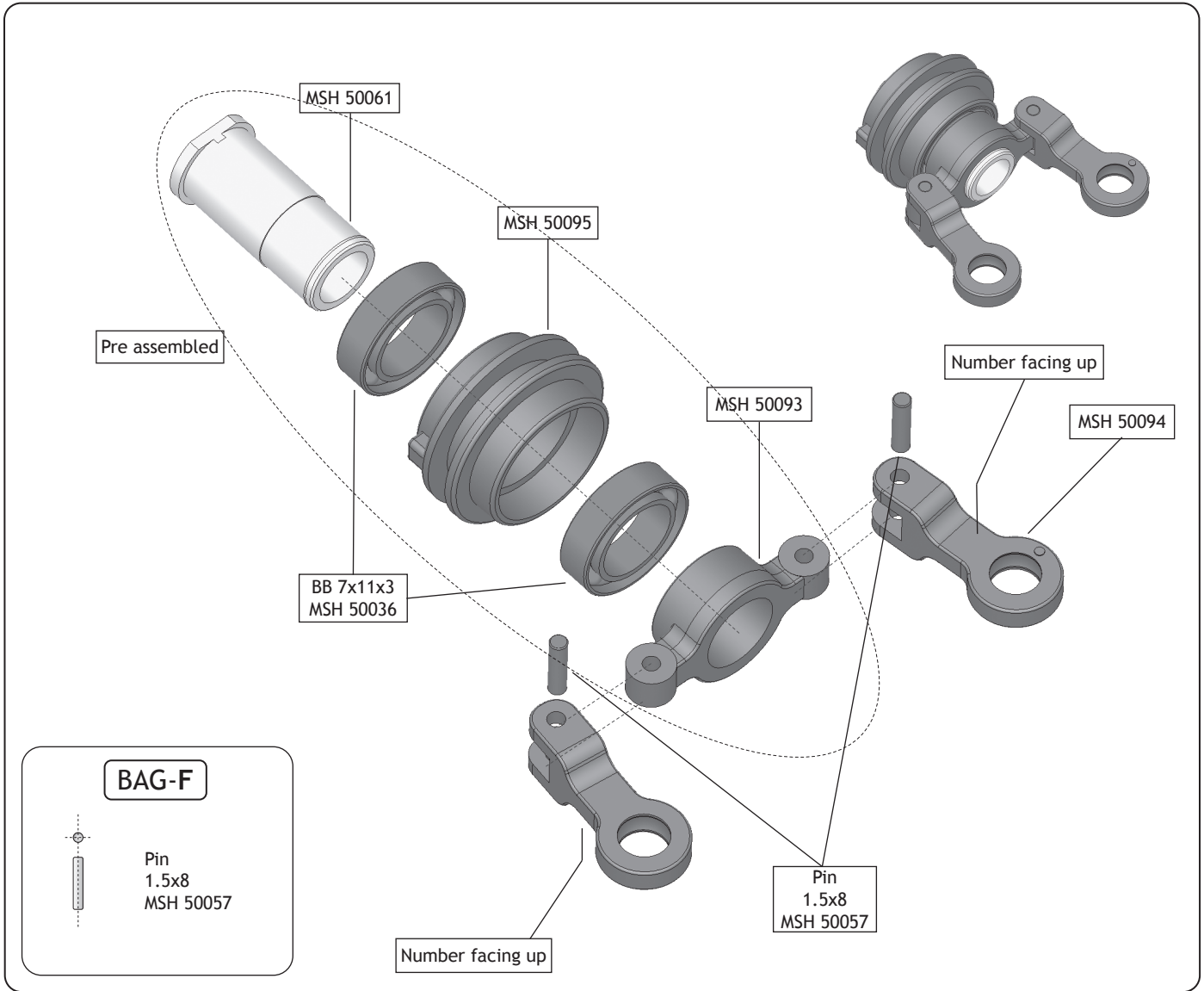
**BAG-F**

-  Hex Screw  
M2.5x20  
MSH 50107
-  Hex Screw  
M2.5x16  
MSH 50106
-  Pin  
1.5x12  
MSH 50144
-  Nylon Nut  
M2.5  
MSH 50124
-  Washer  
5x7.5x0.2  
MSH 50135



**Tips/Instructions**

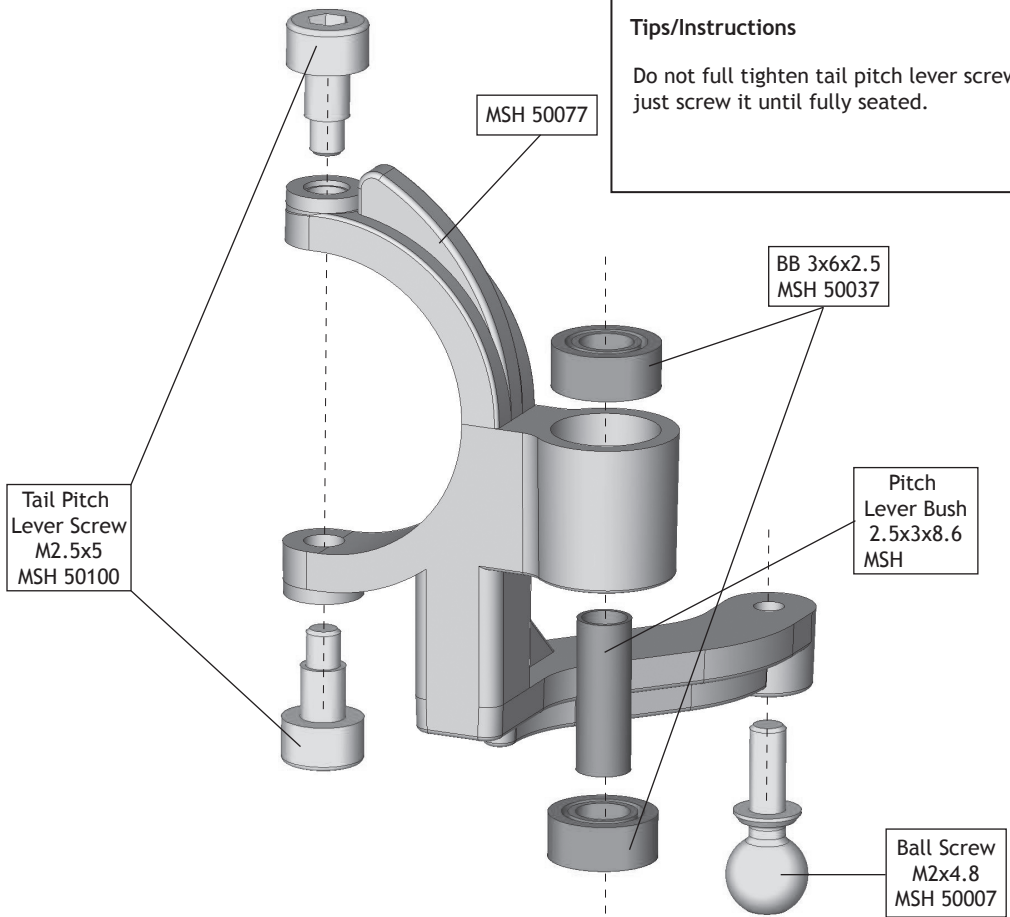
Do not over tight guide pulley screw, check that it turns freely after tightening the screw.





**BAG-F**



-  Tail Pitch Lever Screw  
M2.5x5  
MSH 50100
-  Ball Screw  
M2x4.8  
MSH 50007

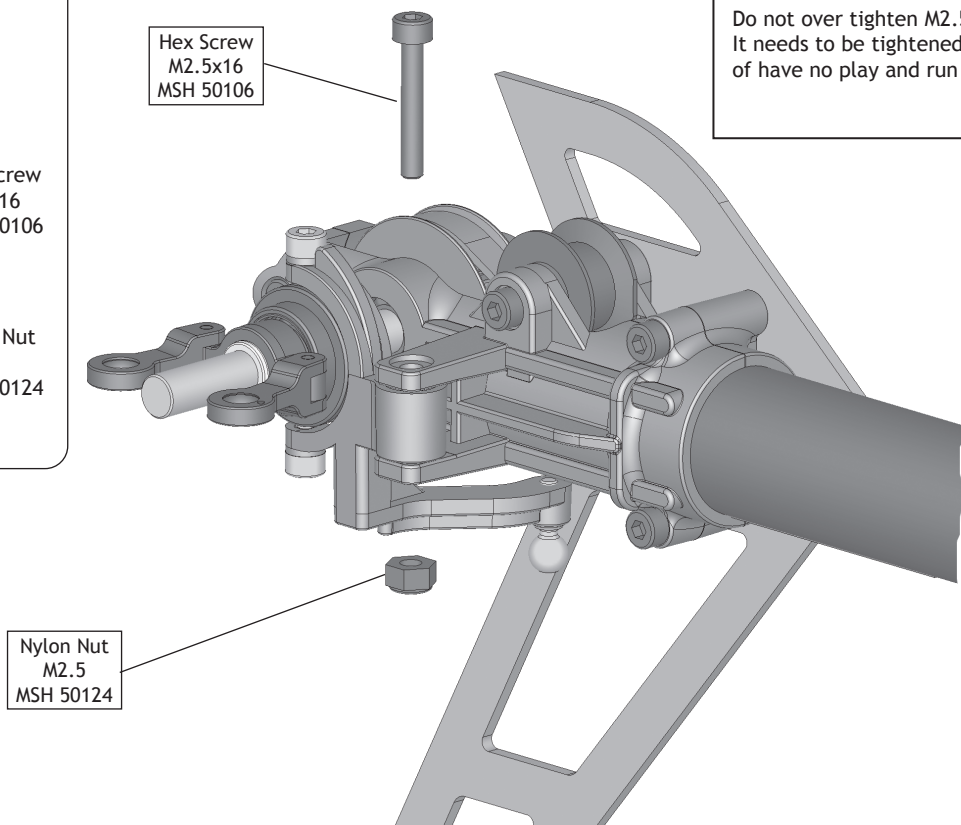


**Tips/Instructions**

Do not full tighten tail pitch lever screw, just screw it until fully seated.

**BAG-F**

-  Hex Screw  
M2.5x16  
MSH 50106
-  Nylon Nut  
M2.5  
MSH 50124

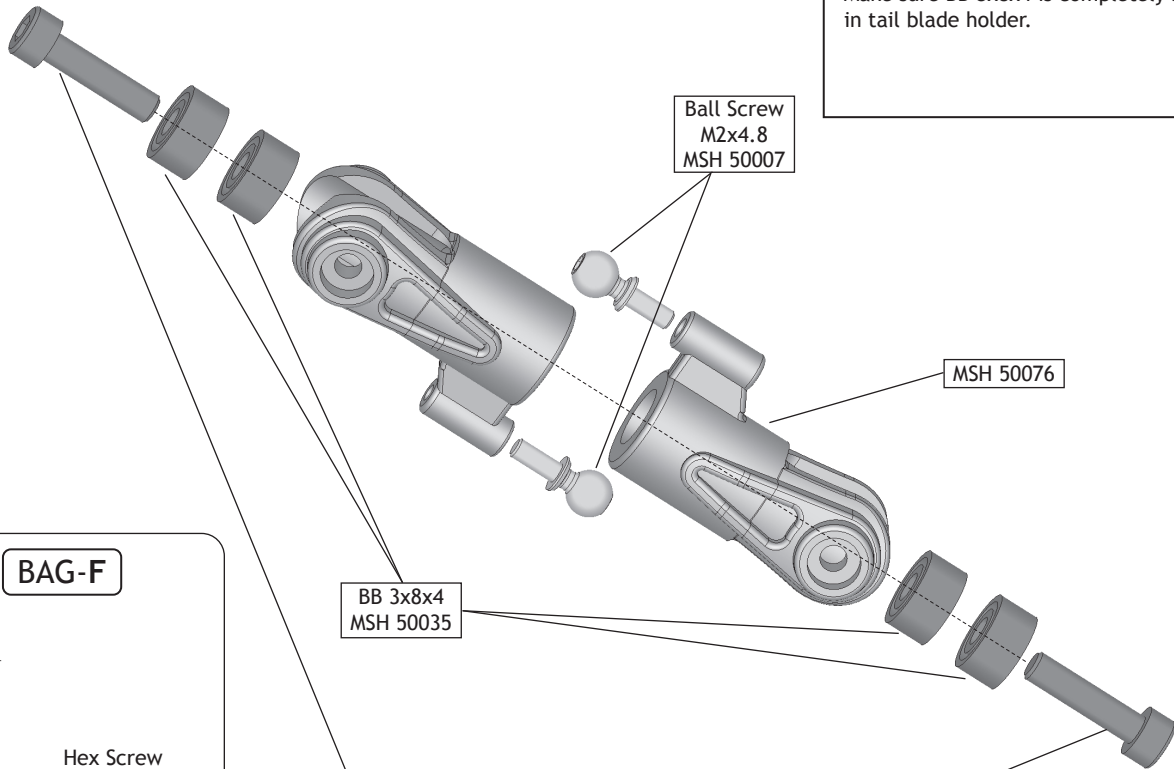


**Tips/Instructions**

Do not over tighten M2.5x16 screw. It needs to be tightened to the point of have no play and run freely.

**Tips/Instructions**

Make sure BB 3x8x4 is completely seated in tail blade holder.



Ball Screw  
M2x4.8  
MSH 50007

MSH 50076

BB 3x8x4  
MSH 50035

Hex Screw  
M3x12  
MSH 50111

**BAG-F**



Hex Screw  
M3x12  
MSH 50111

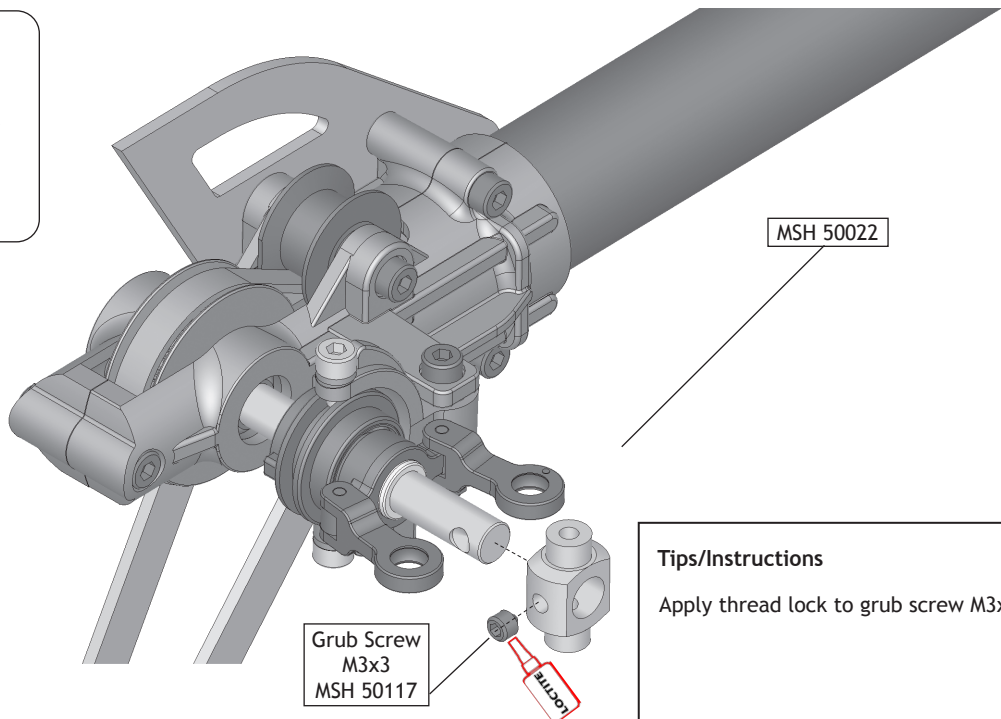


Ball Screw  
M2x4.8  
MSH 50007

**BAG-F**



Grub Screw  
M3x3  
MSH 50117

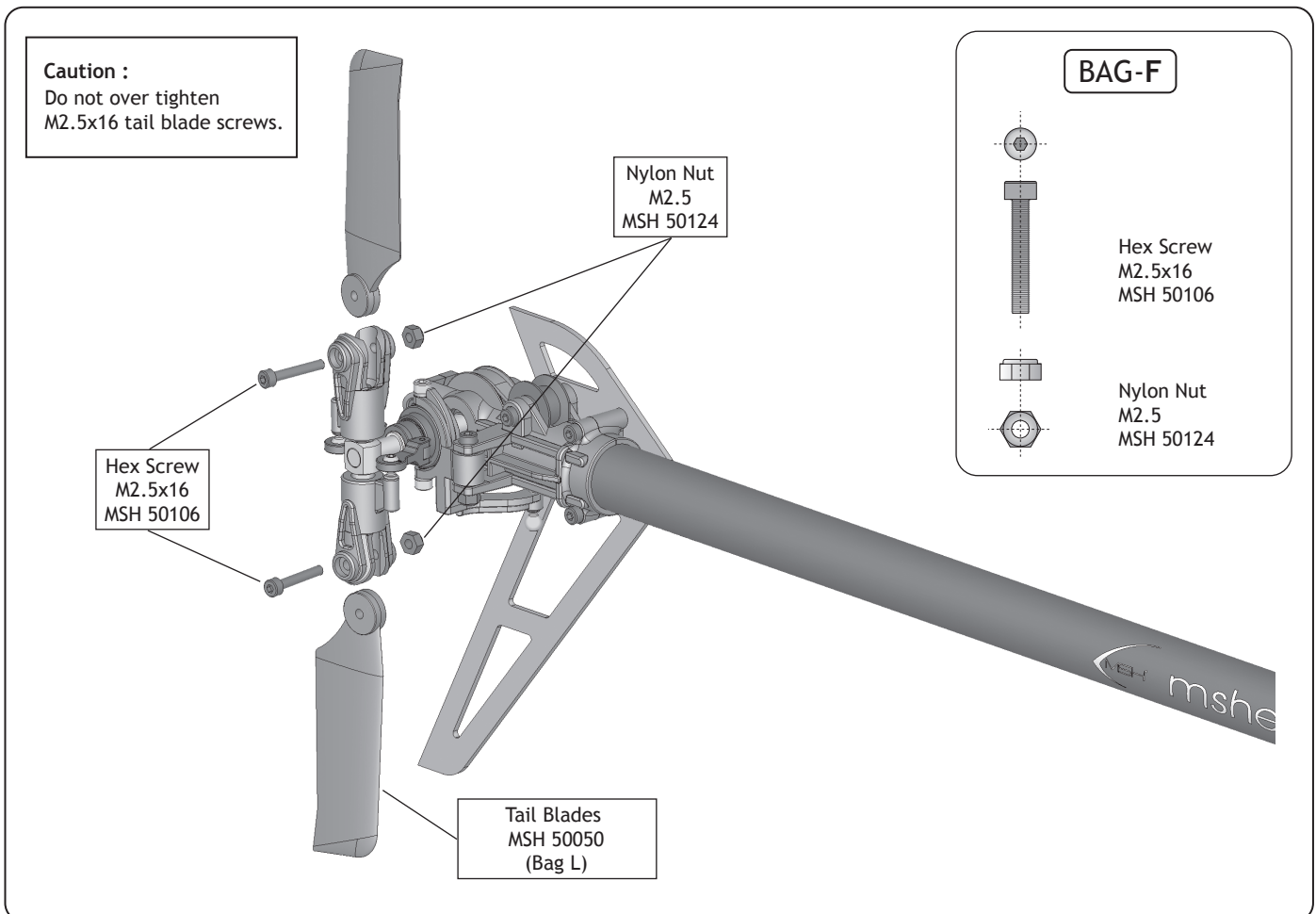
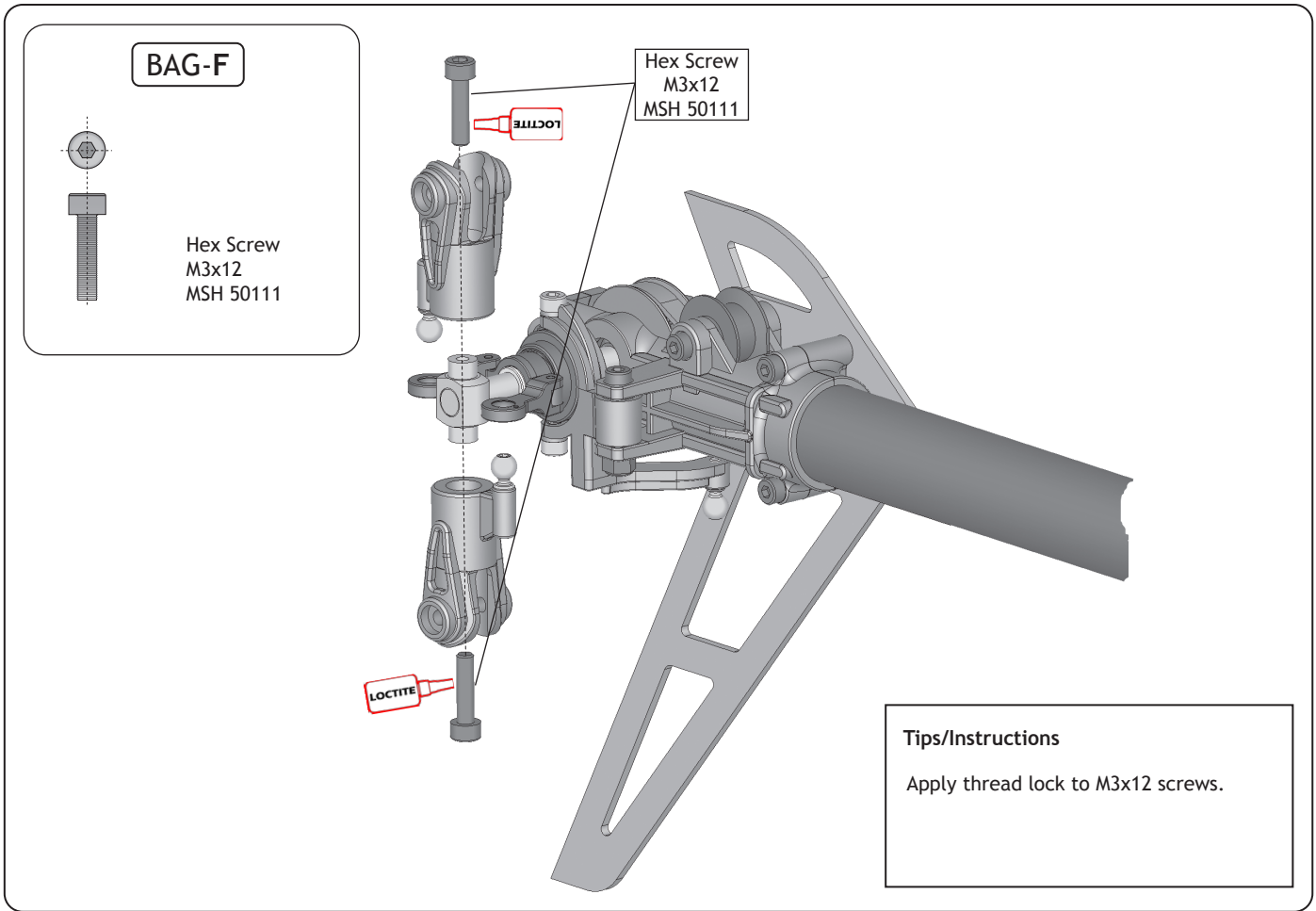


MSH 50022

Grub Screw  
M3x3  
MSH 50117

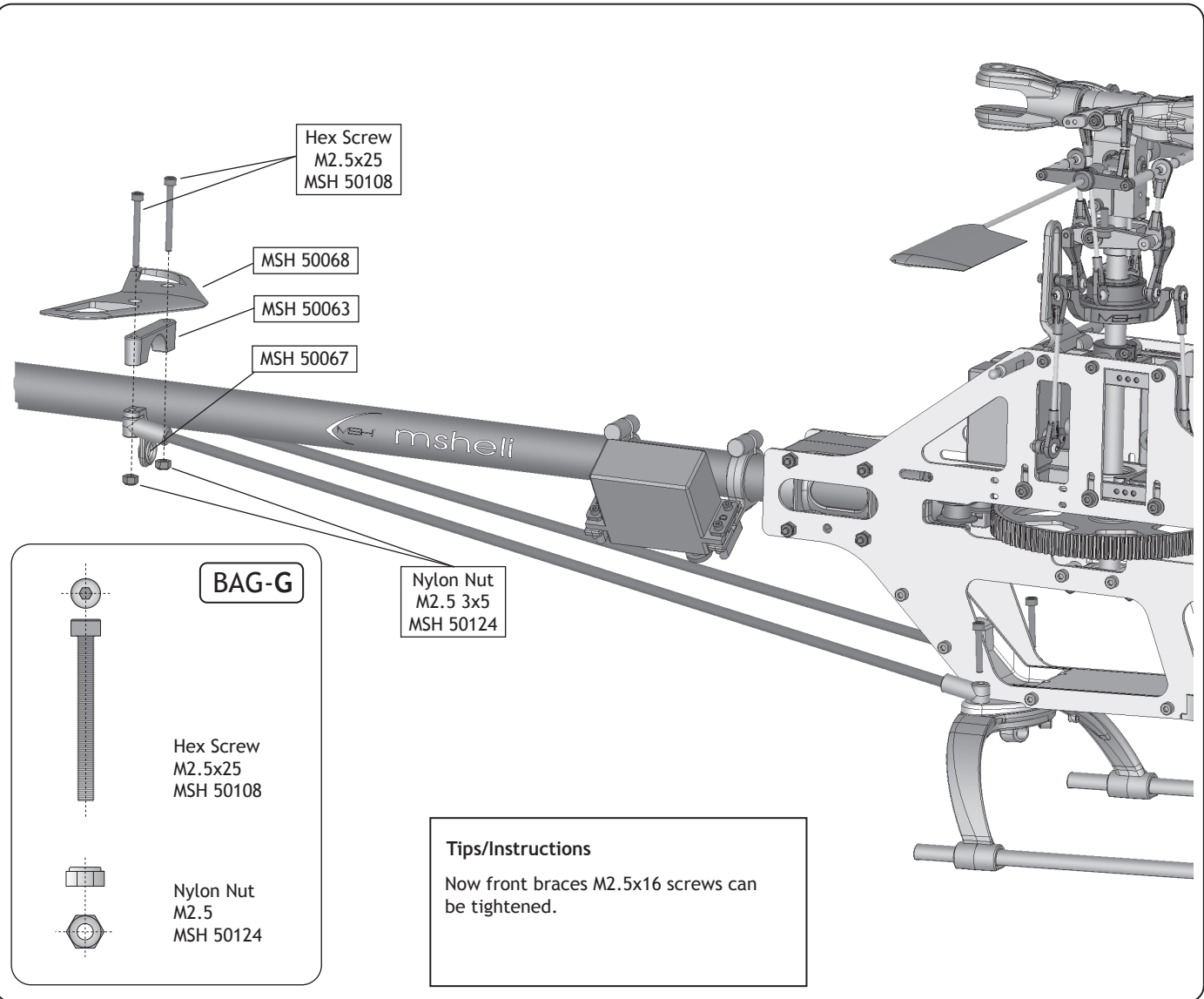
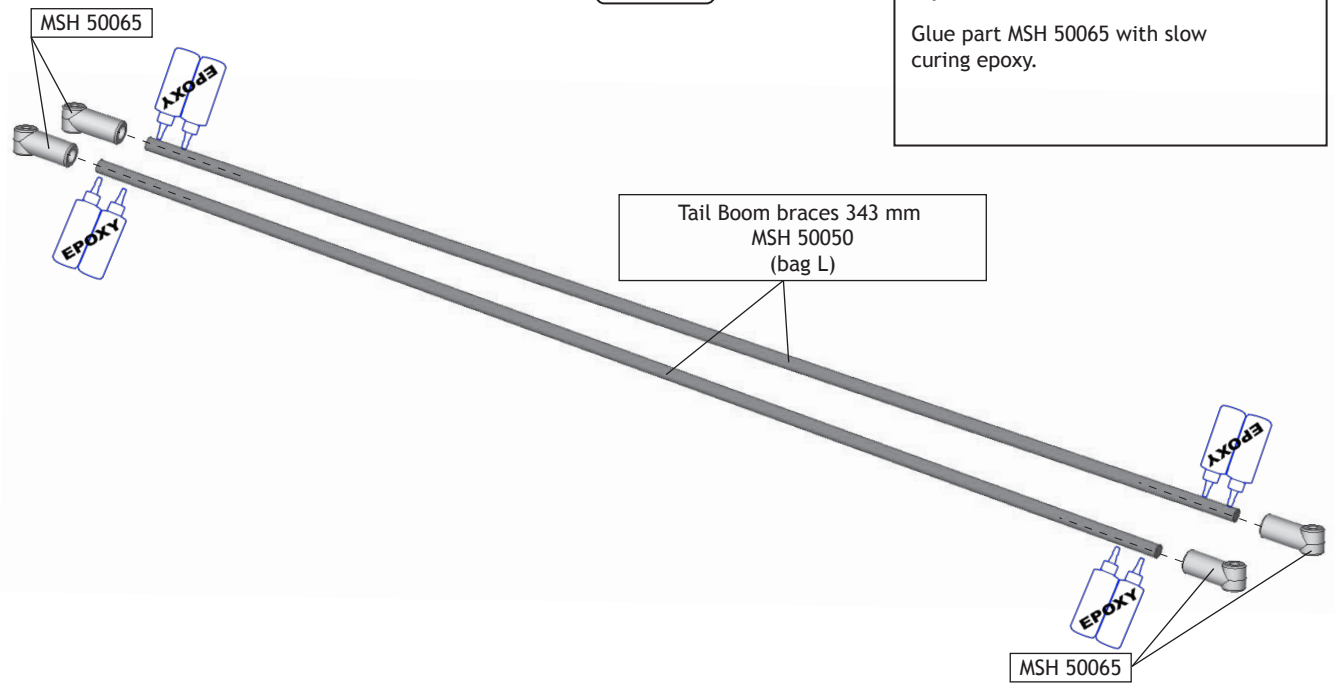
**Tips/Instructions**

Apply thread lock to grub screw M3x3.



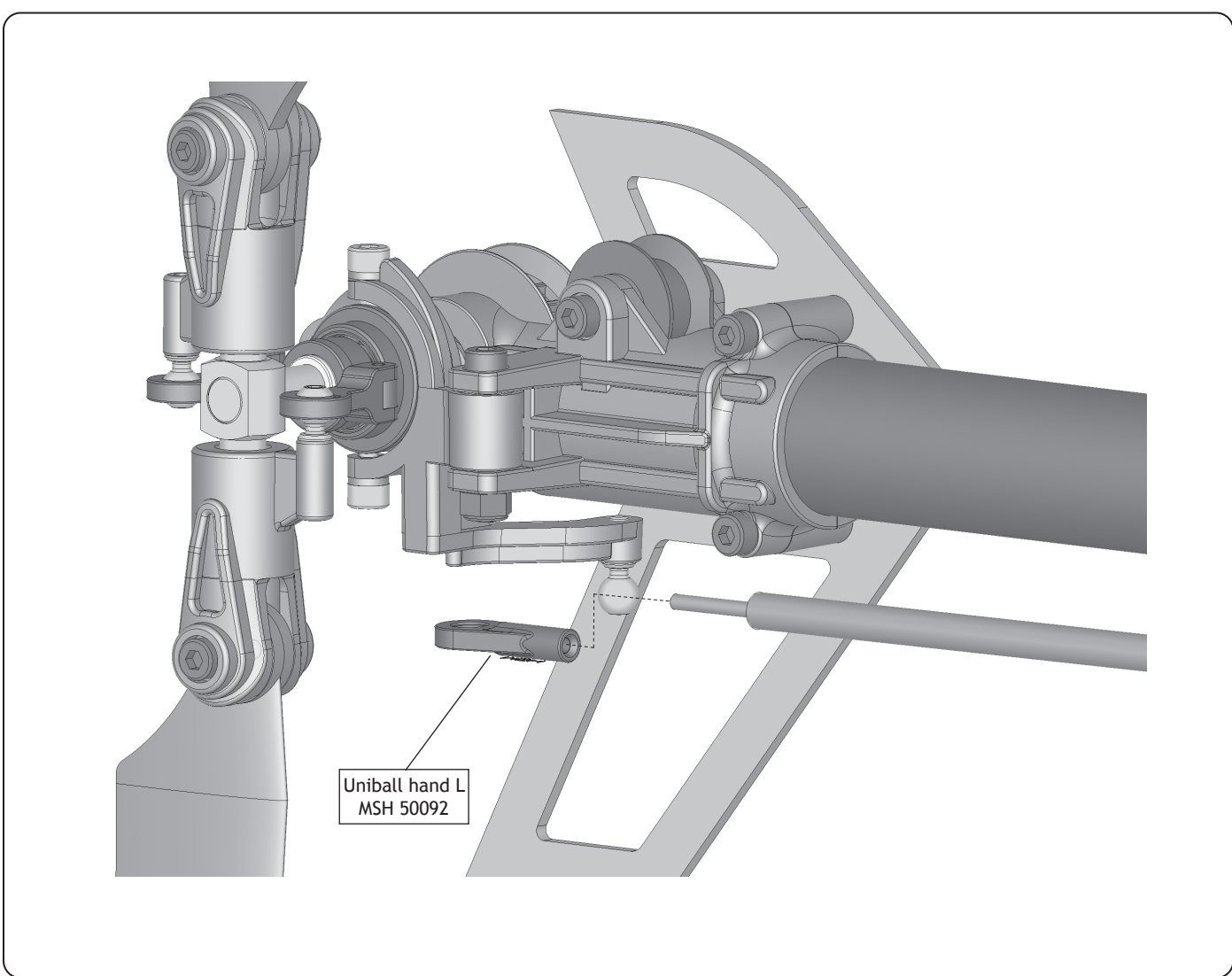
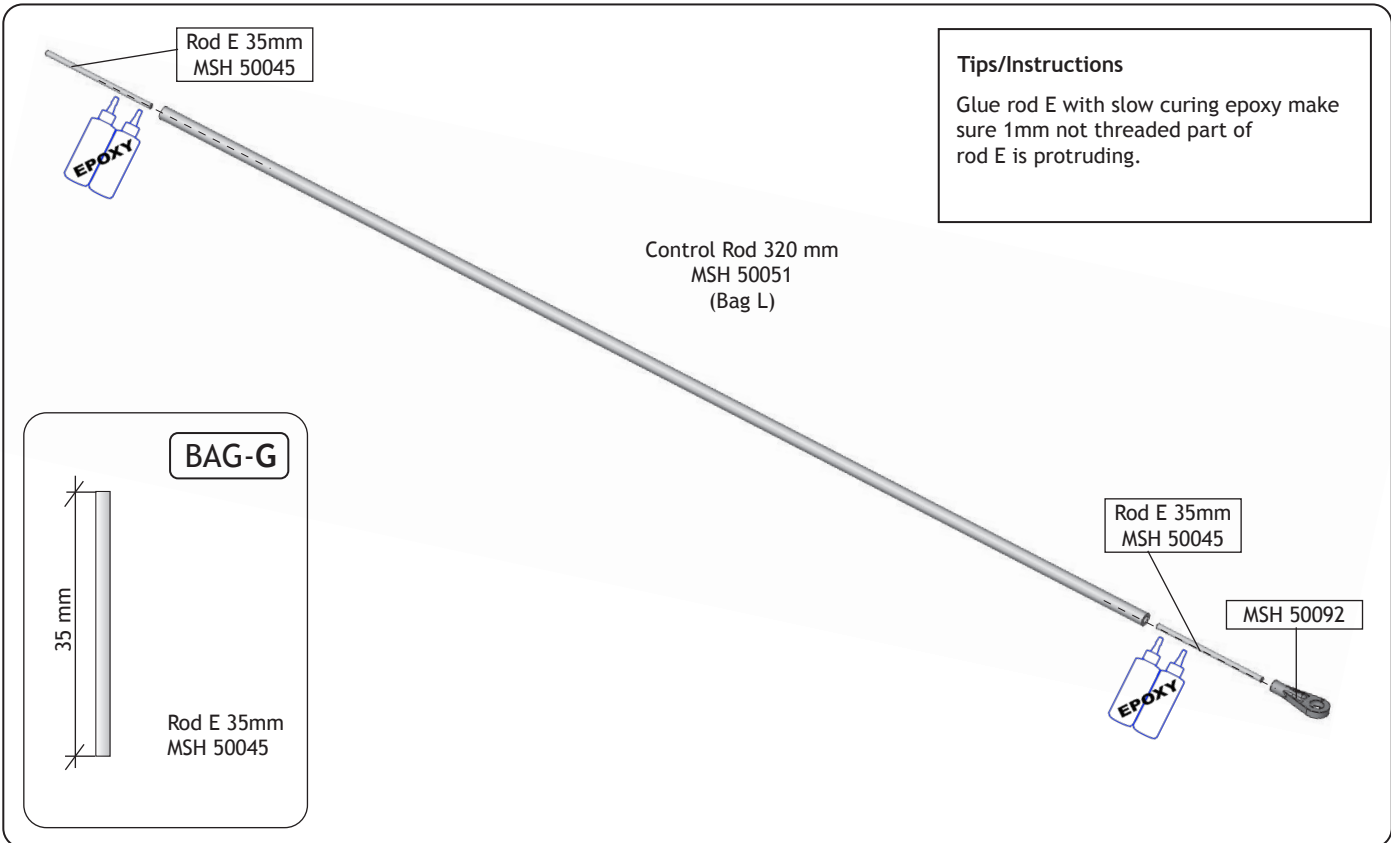
**BAG-G**

**Tips/Instructions**  
 Glue part MSH 50065 with slow curing epoxy.



**BAG-G**

**Tips/Instructions**  
 Now front braces M2.5x16 screws can be tightened.



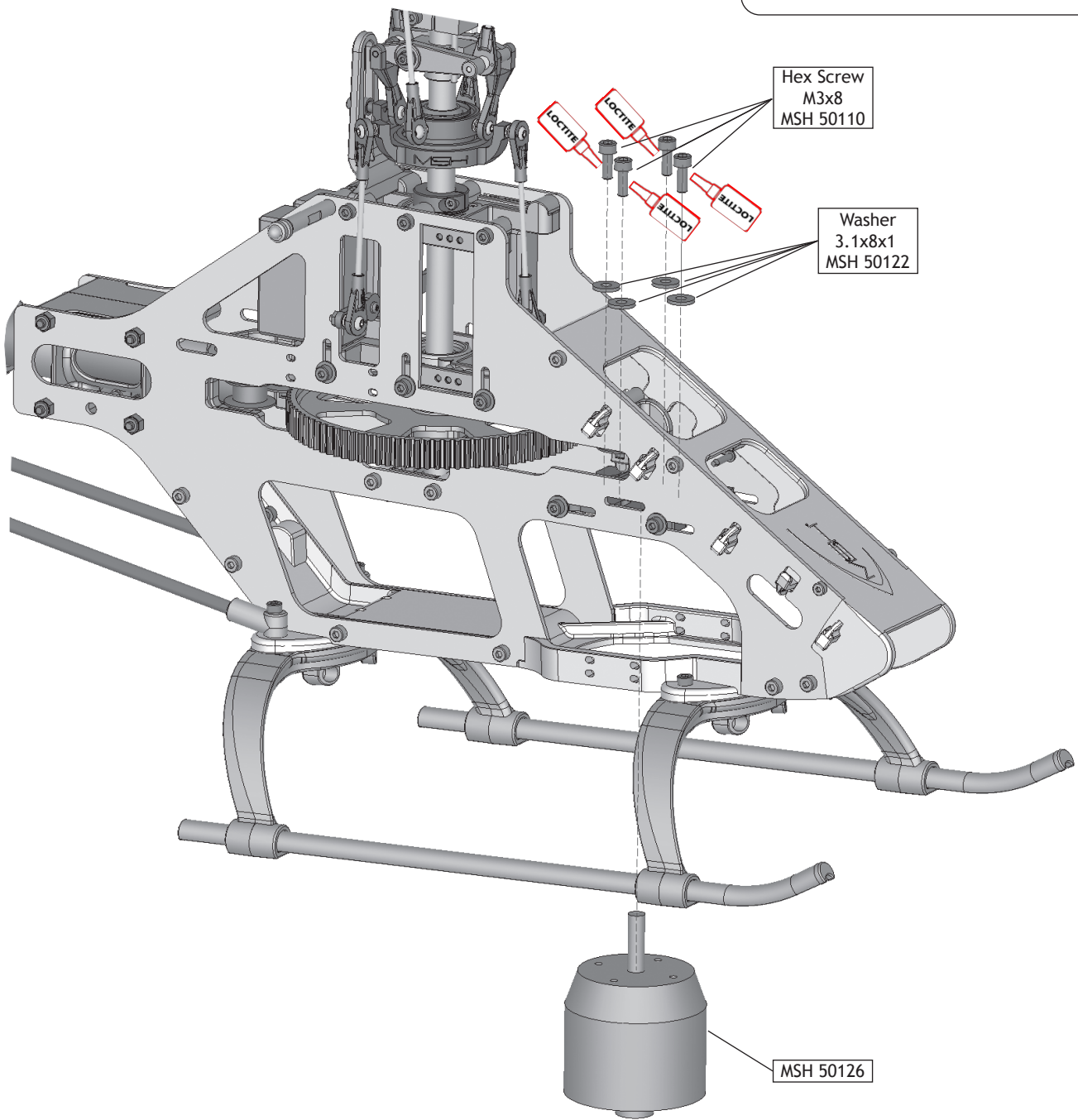



**Tips/Instructions**

Apply thread lock to M3x8 hex screw.

Hex Screw  
M3x8  
MSH 50110

Washer  
3.1x8x1  
MSH 50122

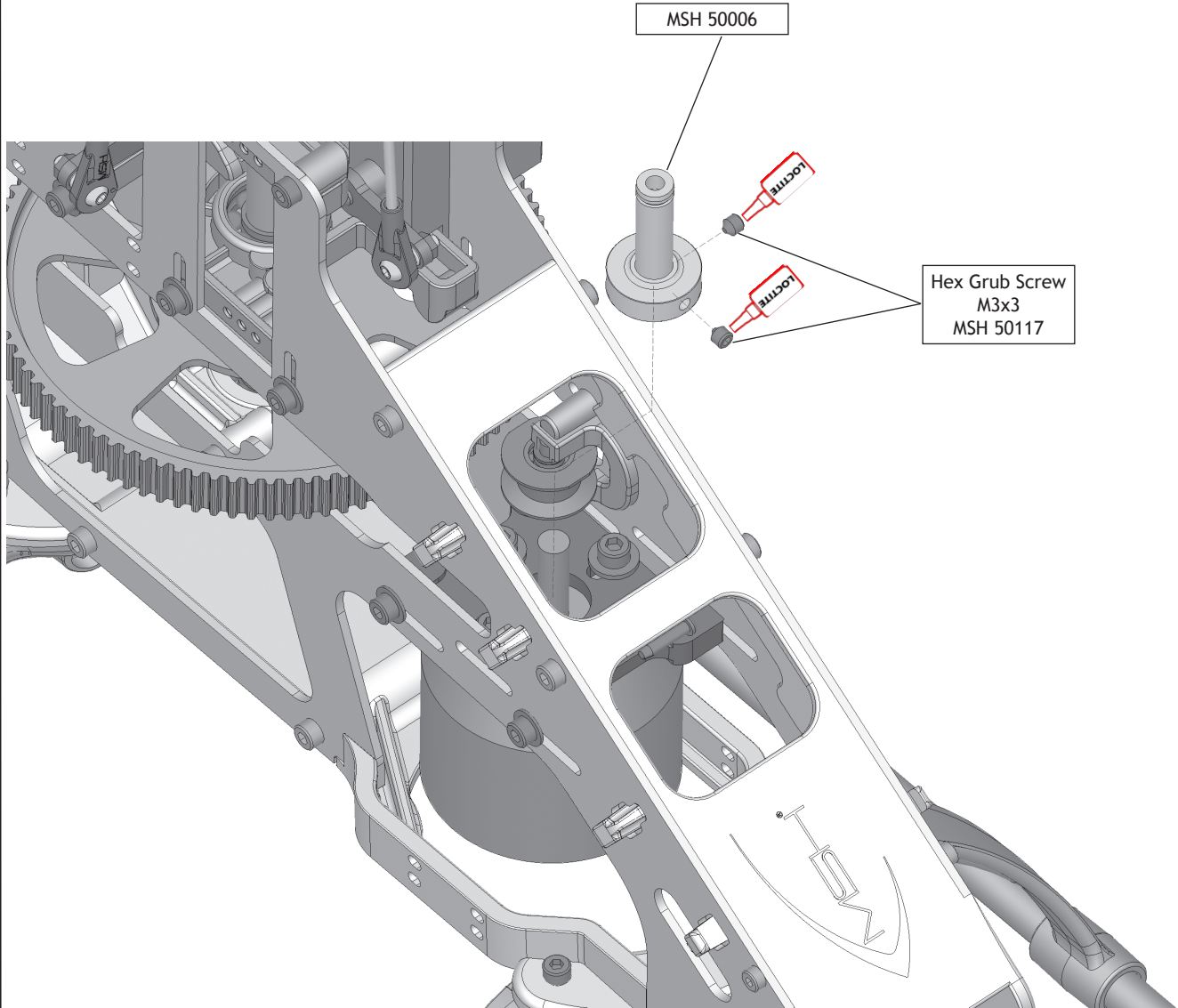




Grub Screw  
M3x3  
MSH 50117

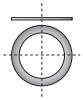
**Tips/Instructions**  
Apply thread lock to M3x5 grub screw.

**Tips/Instructions**  
Make sure that one of the two adapter grub screws lays on motor shaft flat spot.

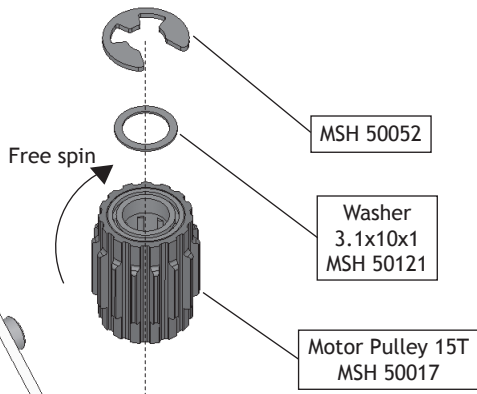
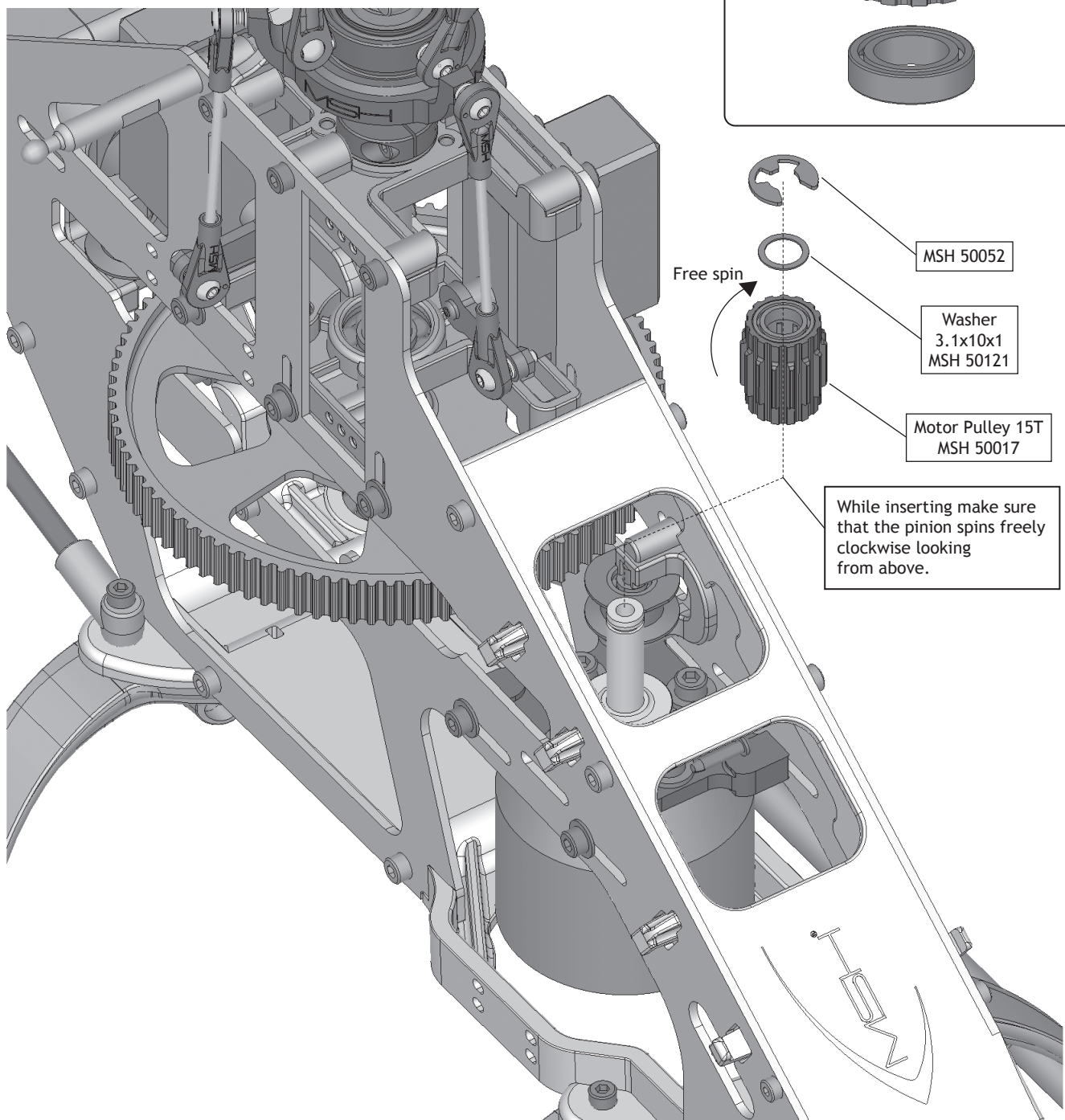
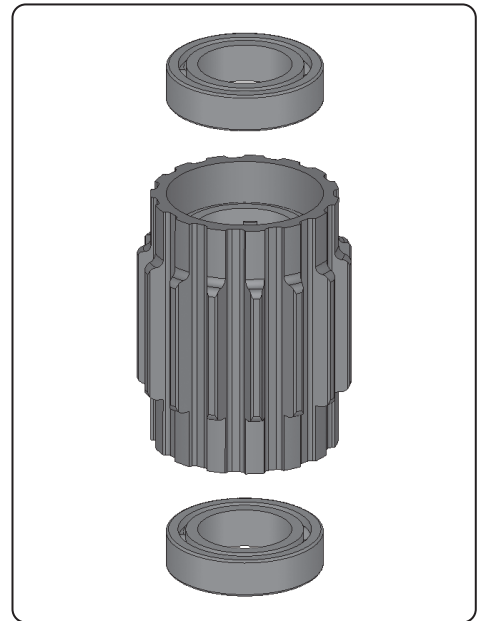


 **CAUTION**

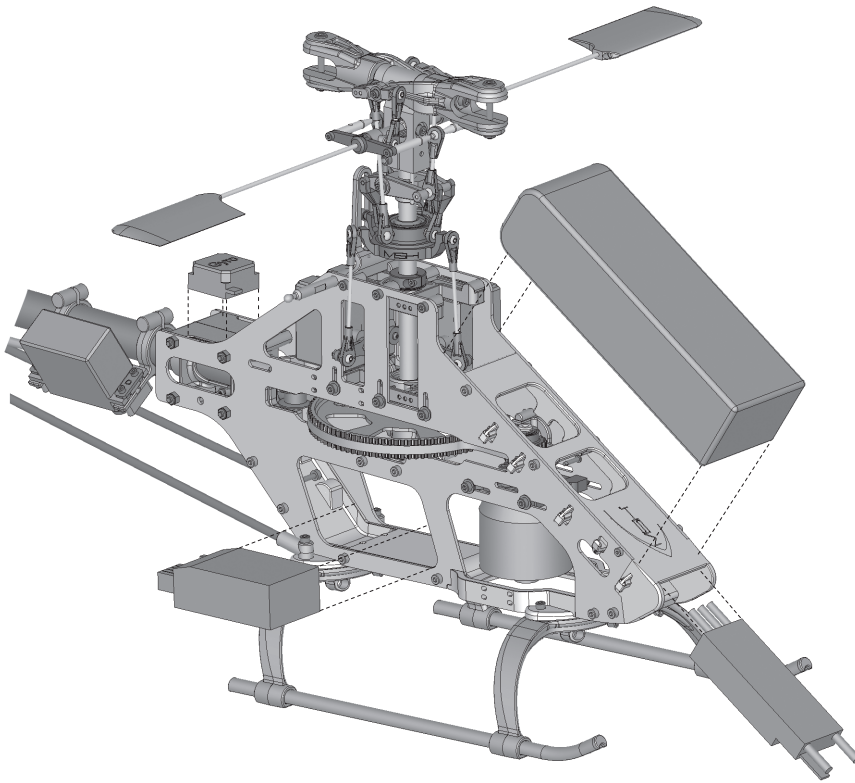
Make sure there is about 1mm gap between bottom of motor adapter (MSH 50006) and motor mount (MSH 50028) when tightened in position.



Washer  
3.1x10x1  
MSH 50121

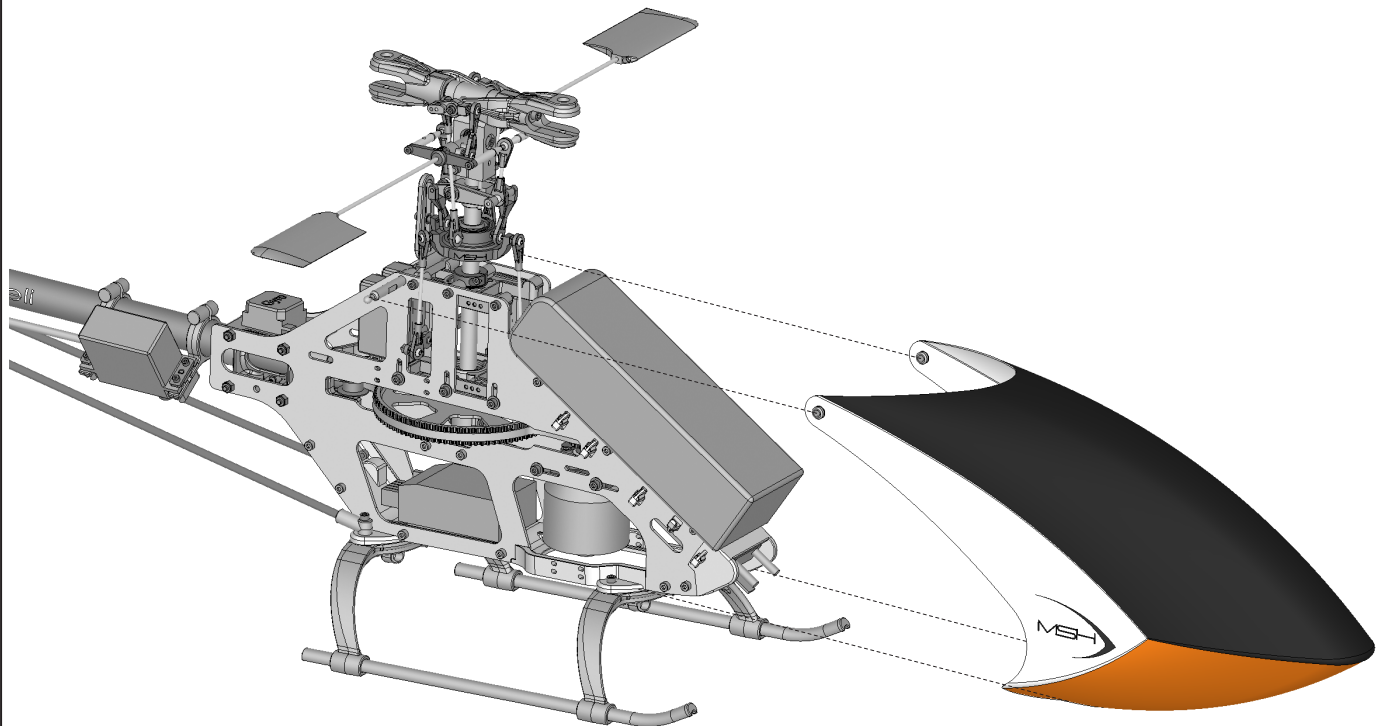


While inserting make sure that the pinion spins freely clockwise looking from above.



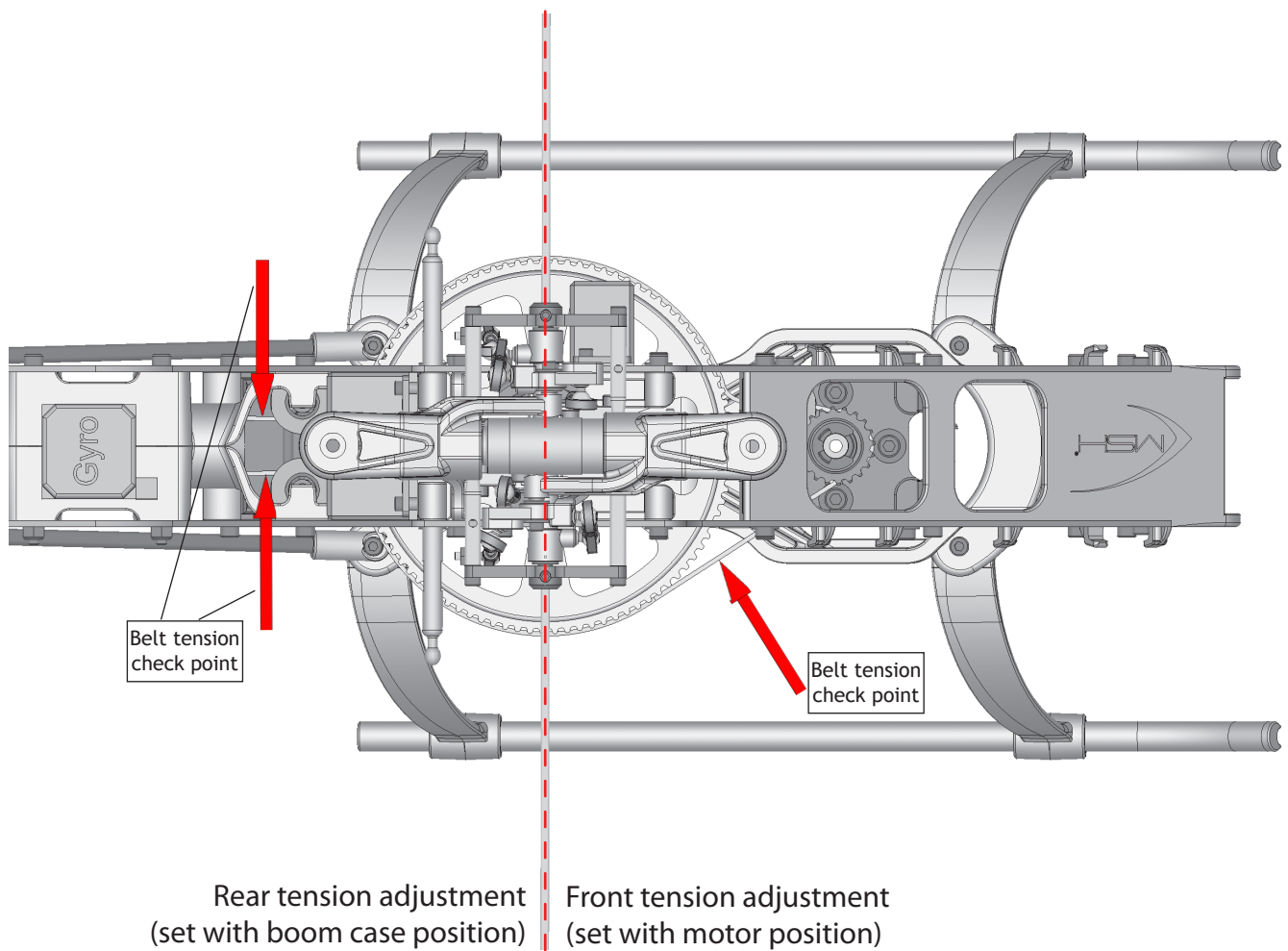
**Tips/Instructions**

Use O ring MSH 50053 to secure battery in place.  
Use O ring MSH 50060 to secure ESC in place.



## Belt Tension Adjustment

Please make sure that belt tension is set properly on both sides. Front and Rear tension is set independently !!



Pressing the belt moderately, it should move 2-3 mm. Test tension as indicated in the picture.

Spare Code	Spare Description	Part Code	Part Description	Part Qty
MSH51001	Metal flybar control arm	MSH50008	Cross ball	2
		MSH50026	Flybar arm	2
		MSH50098	Hex screw M2x6	4
		MSH50117	Hex grub screw M3x3	4
MSH51002	Spindle	MSH50005	Spindle	2
		MSH50147	Hex screw spherical head M3x8	2
		MSH50122	Spindle washer 3.1x8x1	2
MSH51003	Head dampeners	MSH50011	Spindle spacer	2
		MSH50059	Oring 5.23x2.62	6
MSH51004	Main shaft	MSH50004	Main_shaft	2
		MSH50110	Hex screw M3x8	1
		MSH50121	Main shaft locking washer 3.1x10x1	1
MSH51005	Main shaft locking ring	MSH50023	Main shaft lock	1
		MSH50098	Hex screw M2x6	1
MSH51006	Tail shaft	MSH50003	Tail shaft	1
		MSH50144	Pin 1.5x12	1
		MSH50073	Tail pulley	1
		MSH50135	Waher 5x7.5x0.2	4
MSH51007	Motor adapter	MSH50006	Motor adapter	1
		MSH50052	E ring 5	1
		MSH50119	Washer 6x8x0.3	1
MSH51008	Flybar rod	MSH50010	Flybar rod	2
MSH51009	Ball M2x4.8	MSH50007	Ball M2x4.8	5
MSH51010	Ball M2x2.8	MSH50009	Ball M2x2.8	5
MSH51011	Landing gear struts	MSH50087	Landing gear struts	2
MSH51012	Landing gear set	MSH50087	Landing gear struts	2
		MSH50089	Skid	2

Spare Code	Spare Description	Part Code	Part Description	Part Qty
MSH51013	Pinion 15T	MSH50017	Motor pulley 15T	1
		MSH50030	Oneway BB 6x10x12	1
		MSH50031	BB 6x10x2.5	2
		MSH50052	E ring 5	1
		MSH50119	Washer 6x8x0.3	1
MSH51014	Pinion 16T	MSH50016	Motor pulley 16T	1
		MSH50030	Oneway BB 6x10x12	1
		MSH50031	BB 6x10x2.5	2
		MSH50052	E ring 5	1
		MSH50119	Washer 6x8x0.3	1
MSH51015	Pinion 17T	MSH50015	Motor pulley 17T	1
		MSH50030	Oneway BB 6x10x12	1
		MSH50031	BB 6x10x2.5	2
		MSH50052	E ring 5	1
		MSH50119	Washer 6x8x0.3	1
MSH51016	Pinion 18T	MSH50014	Motor pulley 18T	1
		MSH50030	Oneway BB 6x10x12	1
		MSH50031	BB 6x10x2.5	2
		MSH50052	E ring 5	1
		MSH50119	Washer 6x8x0.3	1
MSH51017	Pinion 19T	MSH50013	Motor pulley 19T	1
		MSH50030	Oneway BB 6x10x12	1
		MSH50031	BB 6x10x2.5	2
		MSH50052	E ring 5	1
		MSH50119	Washer 6x8x0.3	1
MSH51018	Pinion 20T	MSH50012	Motor pulley 20T	1
		MSH50030	Oneway BB 6x10x12	1
		MSH50031	BB 6x10x2.5	2
		MSH50052	E ring 5	1
		MSH50119	Washer 6x8x0.3	1
MSH51019	Main hub	MSH50027	Main hub	1
		MSH50043	BB 2.5x6x2,5 Flanged	2
		MSH50059	Oring 5.23x2.62	6
		MSH50112	Hex screw M3x14	1
MSH51020	Swashplate	MSH50009	Ball M2x2.8	7
		MSH50021	Swashplate bushing	1
		MSH50024	Swashplate	1
		MSH50039	BB 2x5x2.5	2
		MSH50099	Hex screw M2x10	1

Spare Code	Spare Description	Part Code	Part Description	Part Qty
MSH51021	Washout hub	MSH50044	Washout hub	1
		MSH50099	Hex screw M2x10	2
MSH51022	Head rods set	MSH50047	Rod C 53mm	2
		MSH50048	Rod A 16.4mm	2
		MSH50049	Rod B 12mm	2
MSH51023	Servo rods set	MSH50046	Rod D 42.5mm	3
MSH51024	Tail control rod set	MSH50045	Rod E 35mm	2
		MSH50051	Tail control rod CF 320mm	1
		MSH50092	Uniball hand L	2
MSH51025	Boom	MSH50029	Boom alu	2
MSH51026	Tail boom brace	MSH50050	Tail boom brace 343mm	2
		MSH50065	Brace rod end	4
MSH51027	Washout control arm	MSH50007	Ball M2x4.8	2
		MSH50041	BB 2x5x2.5 Flanged	4
		MSH50058	Wash out pin 2x12	2
		MSH50084	Wash_out_arm	2
		MSH50097	Wash out uniball arm	2
MSH51028	Washout uniball arm	MSH50097	Wash out uniball arm	2
MSH51029	Washout arm	MSH50084	Wash_out_arm	2
MSH51030	Uniball Link L	MSH50092	Uniball hand L	10
MSH51031	Uniball Link S	MSH50096	Uniball hand S	10
MSH51032	Tail pitch assembly	MSH50036	BB 7x11x3	2
		MSH50057	Pin 1.5x8	2
		MSH50061	Slide_shaft	1
		MSH50093	Tail pitch plate	1
		MSH50094	Tail uniball hand	2
MSH50095	Tail pitch plate boss	1		
MSH51033	Tail guide pulley	MSH50019	Tail guide pulley bushing	1
		MSH50033	BB 3x8x3	2
		MSH50091	Guide pulley	1



Spare Code	Spare Description	Part Code	Part Description	Part Qty
MSH51034	Guide pulleys	MSH50018	Guide pulley frame spacer 3x5x0.6	6
		MSH50033	BB 3x8x3	6
		MSH50054	Pin 3x14	3
		MSH50091	Guide pulley	3
MSH51035	Belt	MSH50055	Belt	1
MSH51036	Paddles	MSH50062	paddle weight	2
		MSH50088	paddle	2
MSH51037	Servo adapter set	MSH50086	Servo adapter complete	1
MSH51038	Tail blades	MSH50090	Tail blade	2
MSH51039	Main blade holders	MSH50135	Washer 5x7.5x0.2	2
		MSH50034	BB 5x10x4	4
		MSH50042	Thrust BB 5x10x4	2
		MSH50083	Main blade holder	2
		MSH50099	Hex screw M2x10	2
		MSH50114	Hex screw M3x23	2
MSH51040	Mixers	MSH50007	Ball M2x4,8	4
		MSH50041	BB 2x5x2.5 Flanged	4
		MSH50082	Mixer	2
		MSH50099	Hex screw M2x10	2
		MSH51041	Servo frames	MSH50032
MSH50081	Servo frame comolded			2
MSH50086	Servo adapter complete			1
MSH50099	Hex screw M2x10			12
MSH50101	Hex screw M2.5x5			2
MSH50102	Hex screw M2.5x6			10
MSH50115	Hex grub screw M2.5x12			2
MSH50146	Washer 2.6x6.5x1.5			6
MSH51042	Antispin and front pulley holder	MSH50071	Guide pulley holder	1
		MSH50080	Anti swashplate spin	1
		MSH50103	Hex screw M2.5x8	4
MSH51043	Flybar carrier	MSH50041	BB 2x5x2.5 Flanged	2
		MSH50085	Flybar carrier	1
		MSH50101	Hex screw M2.5x5	2

Spare Code	Spare Description	Part Code	Part Description	Part Qty
MSH51044	Tail box	MSH50034	BB 5x10x4	2
		MSH50078	Tail box R	1
		MSH50079	Tail box L	1
		MSH50106	Hex screw M2.5x16	1
		MSH50107	Hex screw M2.5x20	3
		MSH50124	M2.5 nylon nut	4
MSH51045	Tail pitch lever	MSH50007	Ball M2x4.8	1
		MSH50020	Tail pitch lever bushing	1
		MSH50037	BB 3x6x2.5	2
		MSH50077	Tail pitch lever	1
		MSH50100	M2.5x5 Special tail pitch lever screw	2
		MSH50106	Hex screw M2.5x16	1
MSH51046	Tail rotor	MSH50007	Ball M2x4.8	2
		MSH50022	Tail spindle	1
		MSH50035	BB 3x8x4	4
		MSH50076	Tail blade holder	2
		MSH50106	Hex screw M2.5x16	2
		MSH50111	Hex screw M3x12	2
		MSH50117	Hex grub screw M3x3	1
		MSH50124	M2.5 nylon nut	2
MSH51047	Tail blade holders	MSH50076	Tail blade holder	2
MSH51048	Tail spindle	MSH50022	Tail spindle	1
		MSH50111	Hex screw M3x12	2
		MSH50117	Hex grub screw M3x3	1
MSH51049	Fin set assembly	MSH50067	Horizontal fin clamp L	1
		MSH50068	Horizontal fin	1
		MSH50069	Horizontal fin clamp U	1
		MSH50075	Vertical fin	1
		MSH50108	Hex screw M2.5x25	2
		MSH50124	M2.5 nylon nut	2
MSH51050	Fin set	MSH50068	Horizontal fin	1
		MSH50075	Vertical fin	1
MSH51051	Tail servo holder	MSH50074	Tail servo holder	2
		MSH50086	Servo adapter complete	1
		MSH50099	Hex screw M2x10	4
		MSH50105	Hex screw M2.5x12	2

Spare Code	Spare Description	Part Code	Part Description	Part Qty
MSH51052	Main Pulley	MSH50072	Main gear	1
		MSH50113	Hex screw M3x20	1
		MSH50125	M3 nylon nut	1
MSH51053	Main frame assembly	MSH50066	Main frame R	1
		MSH50070	Main frame L	1
		MSH50071	Guide pulley holder	1
		MSH50080	Anti swashplate spin	1
		MSH50103	Hex screw M2.5x8	4
		MSH50106	Hex screw M2.5x16	5
		MSH50109	Hex screw M2.5x42	4
		MSH50118	Self tapping screw d2.2x9.5	1
		MSH50124	M2.5 nylon nut	9
MSH51054	Canopy grommets	MSH50128	Canopy grommet	4
MSH51055	Canopy mounting post	MSH50063	Canopy stand	2
		MSH50115	Hex grub screw M2.5x12	2
MSH51056	Tail boom case	MSH50064	Tail boom case	2
		MSH50109	Hex screw M2.5x42	4
		MSH50118	Self tapping screw d2.2x9.5	2
		MSH50124	M2.5 nylon nut	4
MSH51057	Motor mount	MSH50028	Motor mount	1
		MSH50103	Hex screw M2.5x8	4
		MSH50110	Hex screw M3x8	4
		MSH50146	Washer 2.6x6.5x1.5	4
		MSH50122	Spindle washer 3.1x8x1	4
MSH51058	Painted canopy	MSH50001	Painted canopy	1
		MSH50128	Canopy grommet	2
MSH51059	White canopy	MSH50002	White canopy	1
		MSH50128	Canopy grommet	2
MSH51061	Blade sponge holder	MSH50130	Main Blade Sponge Holder	1
MSH51062	SAB main blades CF	MSH50131	CF_SAB_Blades	1
MSH51063	Motor	MSH50126	Motor	1
		MSH50128	Canopy grommet	10

Spare Code	Spare Description	Part Code	Part Description	Part Qty
MSH51064	Spare screw set	MSH50098	Hex screw M2x6	1
		MSH50099	Hex screw M2x10	1
		MSH50100	M2.5x5 Special tail pitch lever screw	1
		MSH50101	Hex screw M2.5x5	1
		MSH50102	Hex screw M2.5x6	1
		MSH50103	Hex screw M2.5x8	1
		MSH50104	Hex screw M2.5x10	1
		MSH50105	Hex screw M2.5x12	1
		MSH50106	Hex screw M2.5x16	1
		MSH50107	Hex screw M2.5x20	1
		MSH50108	Hex screw M2.5x25	1
		MSH50109	Hex screw M2.5x42	1
		MSH50110	Hex screw M3x8	1
		MSH50111	Hex screw M3x12	1
		MSH50112	Hex screw M3x14	1
		MSH50113	Hex screw M3x20	1
		MSH50114	Hex screw M3x23	1
		MSH50115	Hex grub screw M2,5x12	1
		MSH50116	Hex grub screw M3x5	1
		MSH50117	Hex grub screw M3x3	1
		MSH50118	Self tapping screw d2.2x9.5	1
		MSH50119	Washer 6x8x0.3	1
		MSH50120	Washer 2.6x6.5x0.5	1
		MSH50121	Main shaft locking washer 3.1x10x1	1
		MSH50122	Spindle washer 3.1x8x1	1
MSH50123	M2 nut	1		
MSH50124	M2.5 nylon nut	1		
MSH50125	M3 nylon nut	1		
MSH51000	Battery and ESC oring set	MSH50053	Oring 73.03x3.53	4
		MSH50060	Oring ESC	2
MSH51065	Thrust BB 5x10x4	MSH50042	Thrust BB 5x10x4	2
MSH51066	BB 2x5x2.5 Flanged	MSH50041	BB 2x5x2.5 Flanged	2
MSH51067	BB 8x16x5	MSH50032	BB 8x16x5	3
MSH51068	BB 3x6x2.5	MSH50037	BB 3x6x2.5	2
MSH51069	BB 7x11x3	MSH50036	BB 7x11x3	2
MSH51070	BB 3x8x4	MSH50035	BB 3x8x4	4
MSH51071	BB 5x10x4	MSH50034	BB 5x10x4	4

Spare Code	Spare Description	Part Code	Part Description	Part Qty
MSH51072	BB 3x8x3	MSH50033	BB 3x8x3	2
MSH51073	BB 6x10x2.5	MSH50031	BB 6x10x2.5	2
MSH51074	BB 2x5x2.5	MSH50039	BB 2x5x2.5	2
MSH51075	BB 2.5x6x2.5 Flanged	MSH50043	BB 2.5x6x2.5 Flanged	2