

LITTLE SWEETIE 10 & SWEET 16V2

LITTLE SWEETIE 10

**ASSEMBLY & MAINTENANCE
MANUAL**

Pro/Sport Helicopter

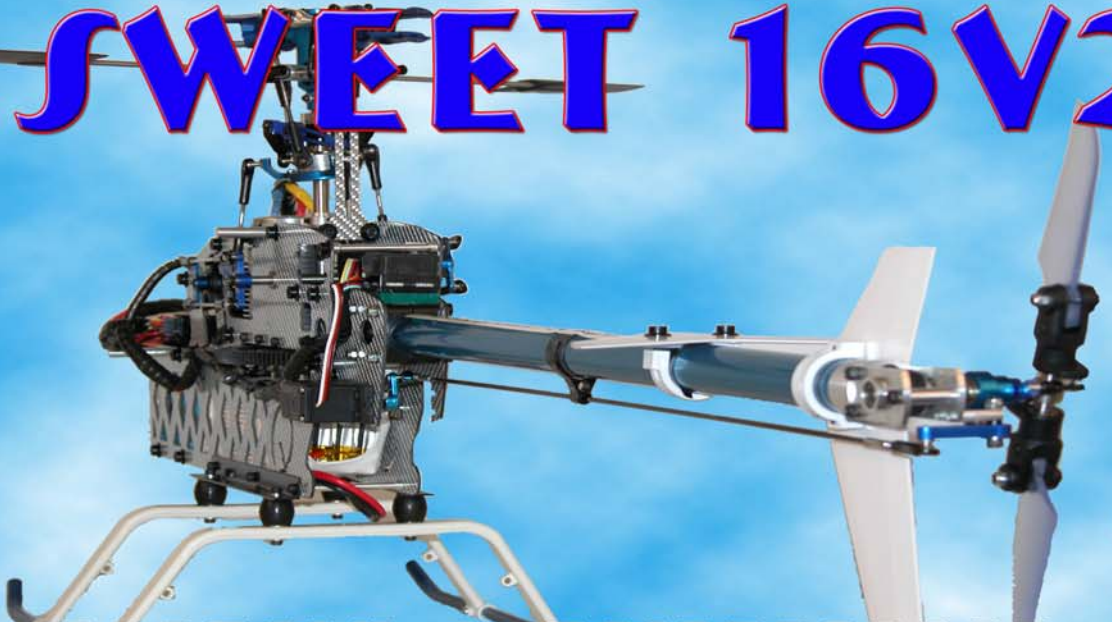


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INTRODUCTION

Congratulation and thank you for purchasing this great product! It is our sole desire for you to enjoy the quality workmanship and performance of any of our electric Li-Po powered helicopters. We believe we have the latest designs and technology incorporated into our model helicopters. Our CNC parts are produced using the best high density materials & anodized using material hardening finishes with the tightest of tolerances. Our new helicopters feature the latest advances in R/C helicopter design. The simple and mechanically superior EMS design (also known as CCPM) ensures a helicopter that will be more responsive and more stable than any other R/C helicopter you have ever flown. Three servos are attached directly to the Swashplate to ensure precise control. This kit features all metal construction, and a carbon or composite frames are standard. Along with great products, our staffs are RC people that fly and have hands on experience with total manufacturing & testing of our helicopters. In addition, we stand behind all our products 100% with satisfaction guaranteed.

For the past several years, we have been devoting ourselves to developing electric powered helicopters. We feel that our electrics now are more powerful, smoother, and more responsive than most of the nitro machines in the market. In addition, there is less time for maintenance and no longer getting dirty from oil and gas. With new technology of batteries and electric motors, the flying time and the efficiency increase significantly day by day. We believe so much in our electric helicopters that we have given out for reviews to our fellow hobbyists EP kits of four different motors and Li-Po battery classes. Electric powered helicopters are here now to stay and will in time be bigger than the current nitro market. The market has some very mixed ideas about electric and their safety. Our staff is here to answer all of your technical questions. Our kits will be shipped 100% complete and we can assure you that once you fly your EP helicopter you will love it.

The Little Sweetie 10 / Sweet 16V2

We believe you hold in your hands one of the best helicopters manufactured in the world today. The brand new **Little Sweetie 10 & Sweet 16V2** are the newest designs of our Quick line. These babies carry the power and punch of the **Q30** delivered smoothly throughout the entire range of their electric motor. The **Little Sweetie 10 & Sweet 16V2 Pro version** feature a fully machined head, metal grips, carbon fiber frames, and carbon fiber boom supports. The **Little Sweetie 10 & Sweet 16V2 Sport version** features a G10 fiberglass frame, and molded main blade grips and tail blade grips. Our helicopters are carefully designed and tested, and manufactured of the highest quality materials available.

In a short time, you can be flying.

We ask that you please read the entire manual before starting the construction of the **Little Sweetie 10 & Sweet 16V2**, and if you have any questions our technical support staff can be reached at

(610) 282-4811 M-F 9-6, S 9-4 Eastern time,
or by email at chuck@quickworldwide.com.

For the latest information and updates, please visit our website at

www.quickworldwide.com

CUSTOMER SERVICE

<p>Quickworldwide 201 South 3rd. St. & 309 N. Coopersburg, PA 18036</p> <p>Phone: (610)-282-4811</p> <p>Fax: (610)-282-4816</p>	<p><u>Websites:</u> http://www.hhiheli.com http://www.quickheli.com http://www.giantscaleplanes.com</p> <p><u>E-mail:</u> hhi@fast.net</p>
<p><u>Office Hours:</u></p> <p>Mon – Fri: 8:30 – 6:00 Sat: 8:30 – 1:30 (Eastern Daylight Time)</p>	
<p>Technical Support Personnel:</p> <p>Chuck – chuck@quickworldwide.com Jon – jon@quickworldwide.com</p>	

Little Sweetie 10 & Sweet 16V2

- 1. Frame Construction:** Little Sweetie 10 / Sweet 16v2 frames are made of the highest quality Carbon Fiber or Black G-10. These frames are not only rigid but will provide excellent vibration absorption.
- 2. Belt driven Tail:** Smooth, reliable, and low maintenance.
- 3. High Quality Ball Bearings:** Little Sweetie 10 / Sweet 16v2 offer ball bearings on all moving parts.
- 4. EMS Collective System:** The EMS Collective design allows ease of setup with fewer moving parts. EMS demonstrates overall design simplicity and represents the future of helicopter technology.
- 5. Control Linkages:** The control linkages provided with the Quick Learner Kit are high quality 2.3mm stainless steel rods with Delrin® acetal resin rod ends.
- 6. Single Blade Axle Design:** simple, very responsive, with exceptionally consistent flight characteristics.
- 7. Advanced Airfoil Fly-bar Paddles:** These paddles will provide the best flight characteristics for both 3D & Sport flying: Smooth forward flight, with quick response upon demand.
- 8. Low Cost:** Little Sweetie 10 / Sweet 16v2 have low cost replacement parts.

PRE-ASSEMBLY INFORMATION

Warning

The radio-controlled model helicopter contained in this kit is not a toy. Rather, it is a sophisticated piece of equipment. This product is not recommended for use by children without adult supervision. Radio controlled models such as this are capable of causing both property damage and/or bodily harm to both the operator/assembler and spectators if not properly assembled and operated. Hobbies & Helis International assumes no liability for damage that could occur from the mis-assembly and/or use/misuse of this product.

Academy of Model Aeronautics

We strongly encourage all prospective and current R/C aircraft pilots to join the Academy of Model Aeronautics. The AMA is a non-profit organization that provides services to model aircraft pilots. As an AMA member, you will receive a monthly magazine entitled Model Aviation, as well as a liability insurance plan to cover against possible accident or injury. All AMA charter aircraft clubs require individuals to hold a current AMA sporting license prior to the operation of their model. For further information, please contact AMA at:

Academy of Model Aeronautics

5161 East Memorial Drive

Muncie, IN 47302-9252

USA







Phone: (317) 287-1256

www.modelaircraft.org

Before you begin

Quick Helicopter kits are packaged with care and attention to detail. We recommend when you are ready to begin building this model that you examine the kit carefully, inspect the contents of each package, and read and understand these instructions thoroughly before starting assembly. It is suggested that you purchase a parts box for the small fasteners and hardware, or use small bowls or other containers.

REQUIRED TOOLS

 <p>Phillips Screw Driver</p>	 <p>Ball End Drivers HHI7050 or Bit Link Driver HHI7051</p>	 <p>Bubble Blade Balancer HHI7010 High Point Balancer DUB499</p>
 <p>Composite Paddle Gauges HHI7000</p>	 <p>HHI7320 – 6pc Nut & Allen Driver Set</p>  <p>Ball Link Pier MAT1001</p>	 <p>Pitch Gauge HHI7001</p>  <p>Universal FlybarLock HHI7040</p>
 <p>Ruler</p>	 <p>Hobby Knife</p>	 <p>Needle Nose Pliers</p>  <p>Scissors</p>

Dremel Tools and Sandpapers would be helpful for building.

HARDWARE & OPTIONAL ACCESSORIES

GLUES AND THREAD LOCK COMPOUNDS

		
<p>Ca Glue. ...GBG1</p>	<p>JB Weld...JBW8265S</p>	<p>Loctite.PT40</p>

RADIO MOUNTING ACCESSORIES

 <p>Single Sided Foam Tape... HHI2008</p>	 <p>Receiver Hold Down Straps HHI55** \$4.99 2 Per Bag & Colors: Red, White, Purple, Black</p>
 <p>Receiver Strong Box... HHI2200</p>	 <p>Spiral Wrap HHI2809 & HHI2810</p>
 <p>Wire Ties...HHIWT01</p>	

OTHER HARDWARE & OPTIONAL ACCESSORIES



3MM FLYBAR STIFFENERS
HHI 402



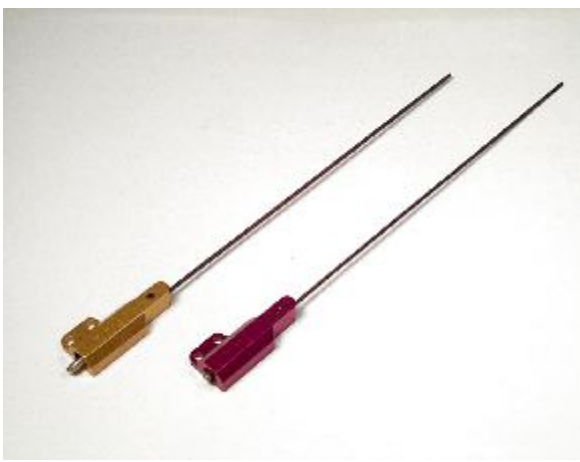
30 SIZE SKID STOPS
HHI 200 AVAILABLE IN COLORS



SERVO ARM SET



LANDING GEAR DAMPENERS
HHI 2004



BASE LOAD ANTENNA
HHI 53**

**AVAILABLE IN BLUE, GOLD,
PURPLE
AND IN 40, 50, AND 72 MHz**



FINISHING CAPS

- Adds color and style
- Distributes force across larger surface area

3mm **4mm**
 (20 pcs in a package) (8 pcs in a package)

BLACK	HHIM11100B	---
BLUE	HHIM11103	HHIM11108
GOLD	HHIM11101	HHIM11106
GREEN	HHIM11100G	---
PURPLE	HHIM11100	HHIM11105
RED	HHIM11100R	---
SILVER	HHIM11100	HHIM11107



OTHER REQUIREMENTS

Radios:

Any radio that supports EMS/CCPM Mixing will work fine. Hobbies & Helis International & its distributors carry various lines of helicopter radios.

Note: Please consult the instruction for your Gyro for setting the overall travel and limits to ensure proper operation and travel of Tail Pitch Slider.

Servos:

Any sport servo will offer acceptable performance. However, because servos operate all critical functions of the helicopter, they can be the single most important component that contributes to proper function of the helicopter. Due to the nature of EMS collective, we suggest the use of digital servos to enhance and ensure matched servo timing without servo interaction.

Loctite Warning (CRITICAL):

This is a general warning about the use of Loctite and its importance. **Loctite must be used anywhere that a metal fastener** i.e. (M2, M3, M4 Cap Head Bolts, Set Screws etc.) **is threaded into a metal part** i.e. (Bearing Blocks, Cross-members, etc.). Failure to use Loctite can result in loosening of critical operating components, loss of control of the model, and can lead to a crash.

PART LIST

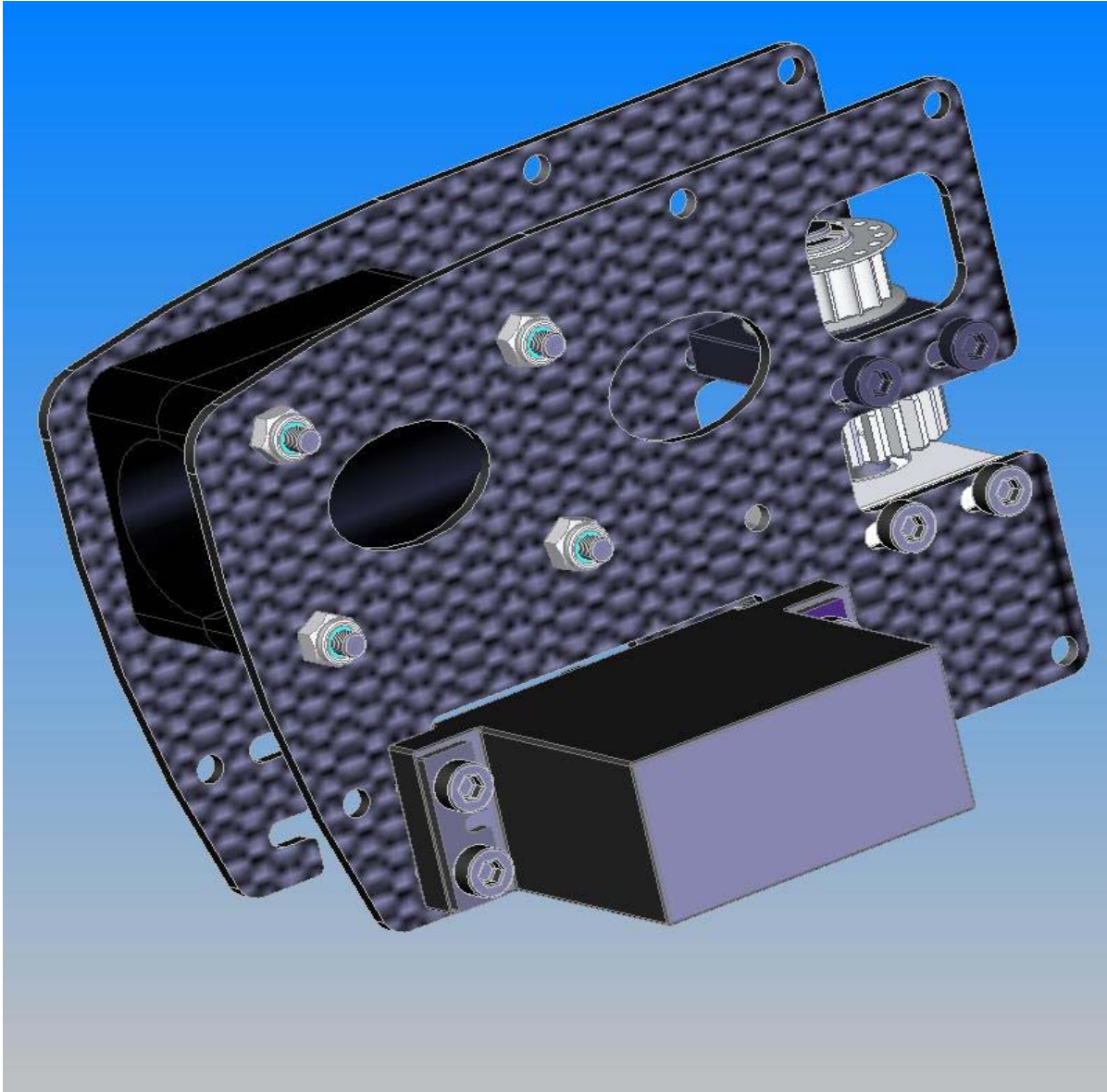
- In your kit, parts are bagged according to each major assembly and are labeled “Bag 1, Bag 2, Bag 2-10, etc.” You will note that the heading for each assembly indicates which bag correlates with each assembly.
- For a good installation, only open up the bag that you need for particular assembly.
- Please check the parts in that bag against the parts list shown for each assembly as well as each subassembly to make sure there are no missing parts.
- Small parts such as nuts and bolts can be put into containers or trays to prevent losing parts.
- No. with ***** means that part is not included in the kit.
- Colors of the drawings for parts in this manual may look differently from the real parts in the kit.
- Check out our website for latest information and updates: www.quickworldwide.com

No.	Bag No.	Description	Quantity	Check
1	Frame	Frame Bag	1	
2	Bag 1	For Rear Frame Assembly	1	
3	Bag 2	For Main Frame Assembly	1	
4	Bag 2-10	For Landing Gear Assembly	1	
5	Bag 3	For Tail Assembly	1	
6	Bag 4	Control System	1	
7	Bag 5	Rotor Head	1	
8	Bag 6	Linkage	1	
9	Bag 7	For Settings	1	
10	Loose in Box	Tail Boom with End	1	
		Timing Belt	1	
		Boom Support (only Sweet 16V2)	2	
		Standard Flybar	1	
		Canopy	1	
		Rudder Push Rod	1	
		Instruction CD	1	
		Decal Sheet	1	
		Extra Hardware Bag	1	
		Loctite Warning	1	
11	HB	Hardware Bag	1	

ASSEMBLY

SECTION 1: REAR FRAMES

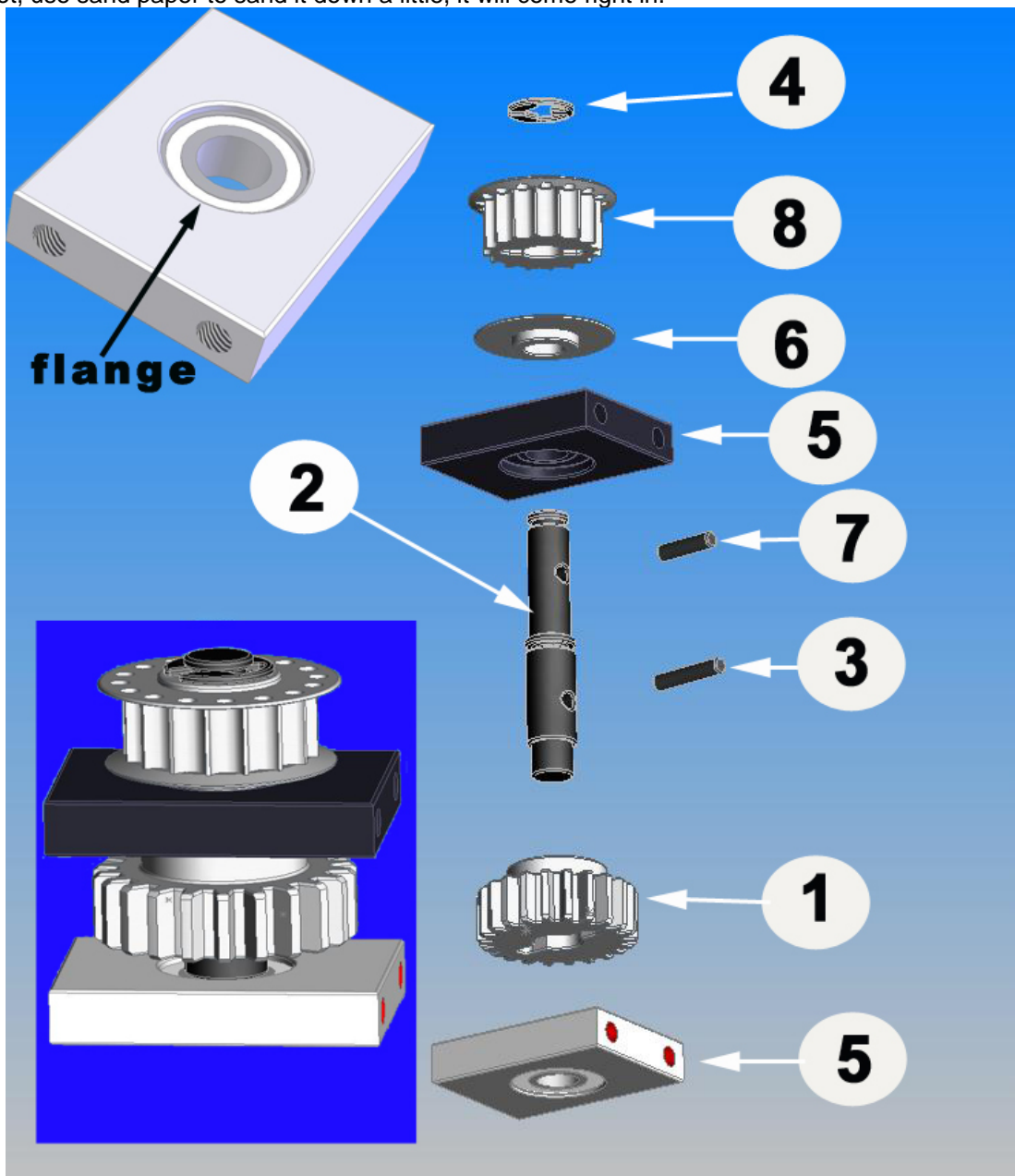
Bag 1



1-1 TAIL TRANSMISSION ASSEMBLY

No	Bag#	Description	Qty	
1	1	Counter Gear	1	-Install Counter Gear to Counter Gear Shaft using Counter Gear Lock Pin (No. 3) to secure it. Apply JP Weld around the pin -Put Counter Gear Bearing Block (Lower one) in with the Flange facing down -Install Counter Gear Bearing Block (Upper one) with the Flange facing down -Install Pulley Gear Plate (No. 6) -Insert Pulley Gear Lock Pin (No. 7). Apply JP Weld around the pin -Install Pulley Gear and retain with M4 E-clip
2	1	Counter Gear Shaft	1	
3	1	Counter Gear Lock Pin	1	
4	1	M4 E-clip	1	
5	1	Counter Gear Bearing Block	2	
6	1	Pulley Gear Plate	1	
7	1	Pulley Gear Block Pin	1	
8	1	Pulley Gear	1	
9	****	JP Weld glue	1	

Note: Ensure that the 2 x 10mm pin is seated all the way down in the slot in the Counter Gear. If it is not seated, it will not allow the Bearing Block to go to the proper position and will bind on the Pulley or Gear. Counter Gear Shaft is designed to fit tightly in bearings on the Bearing Blocks. So before you do the following assembly, check to see if the shaft can go in the bearings or not. If not, use sand paper to sand it down a little, it will come right in.

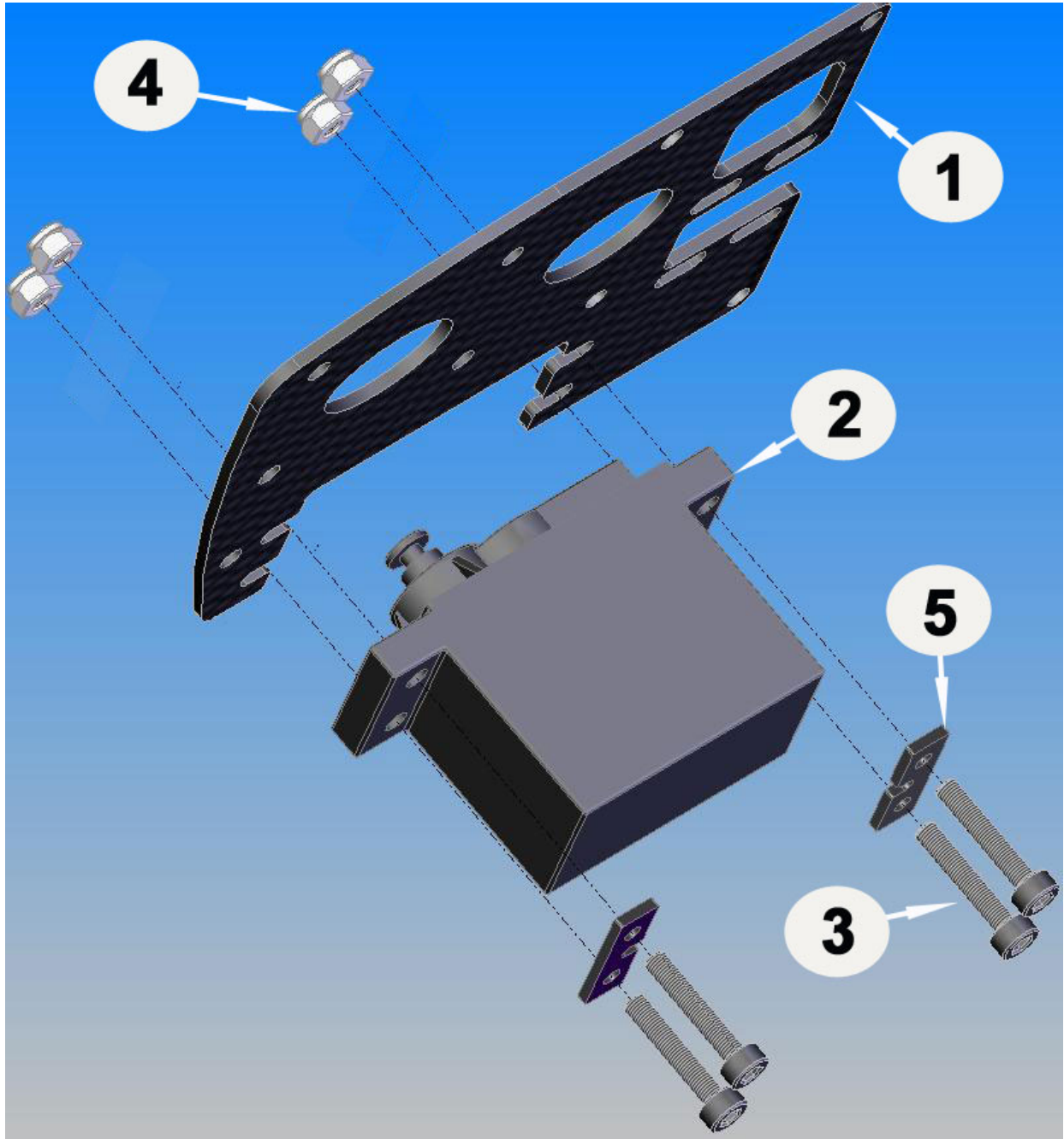


1-2 RUDDER SERVO ASSEMBLY

No.	Bag#	Description	Qty
1	Frame	Rear Frame (from Frame Bag)	1
2****		Servo	1
3	HB*	M2.5x14 Cap Head Bolt	4
4	HB	M2.5 Locknut	4
5	HB	Fixing Plate	2

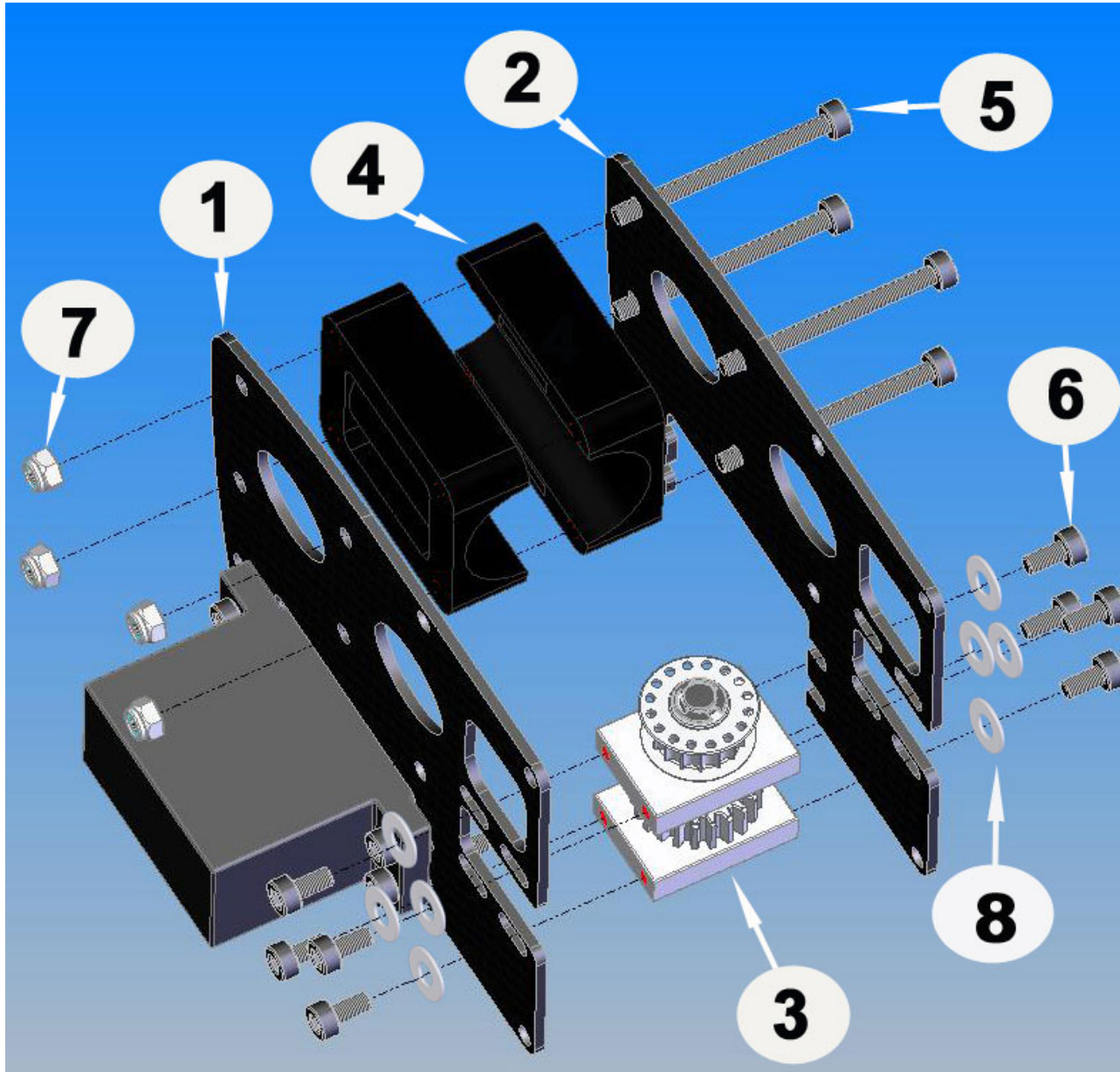
*HB: Hardware Bag

Note: Servos are not included in the kit. If the servos come with anti-vibrating rubber, insert them on the servos first. Remember to apply Loctite (see *Loctite Warning* in the *Other Requirement* Section)

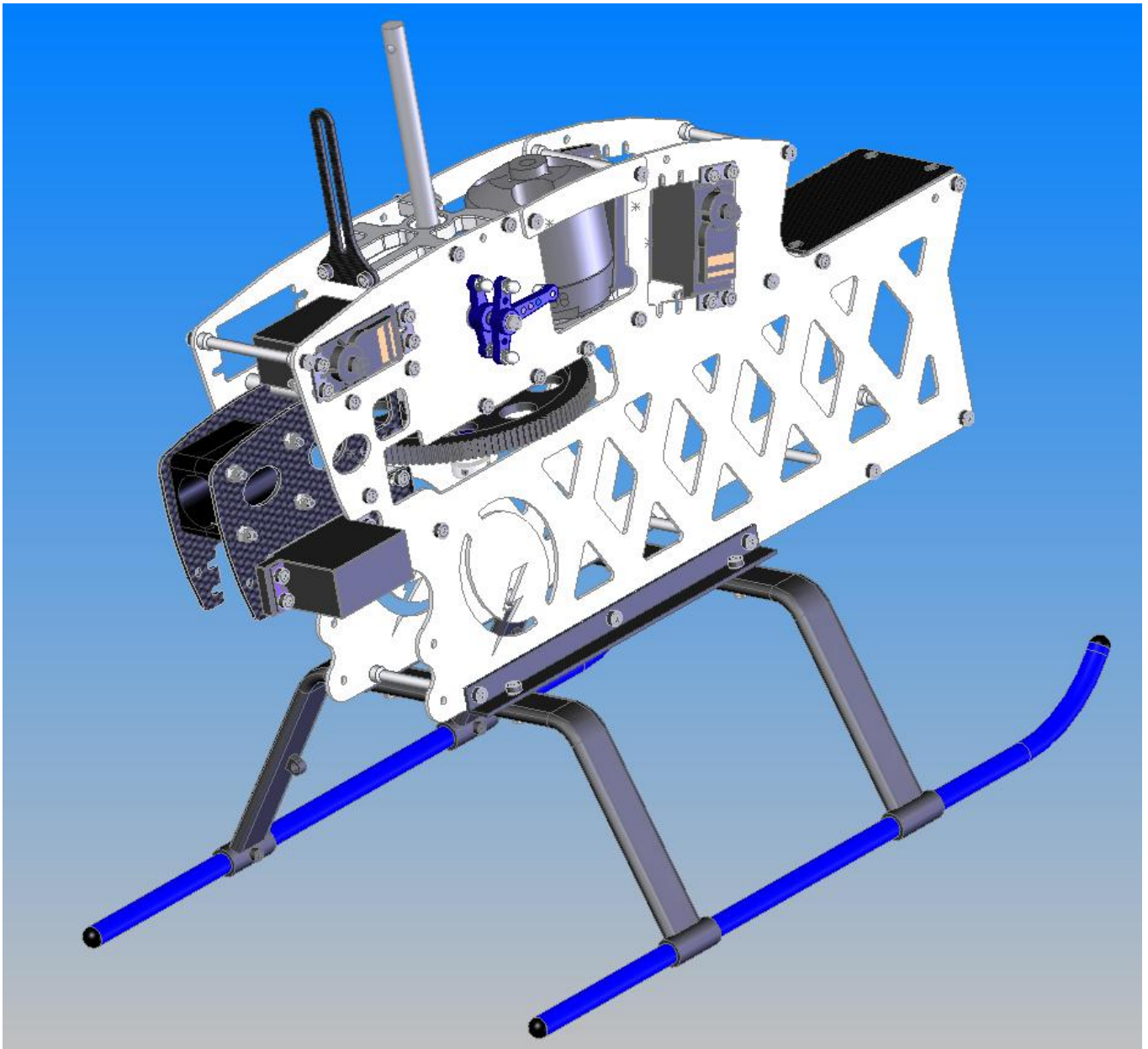


1-3 REAR FRAME INSTALLATION

No.	Bag#	Description	Qty	No.	Bag#	Description	Qty	Do not tighten four nuts at Tail Boom Holder Halves too tight since you are going to install the Tail later.
1		Step 1-2	1	5	HB	M3x35 Cap Head Bolt	4	
2	Frame	Rear Frame	1	6	HB	M3x8 Cap Head Bolt	8	
3		Step 1-1	1	7	HB	M3 Locknut	4	
4	1	Boom Holder	2	8	HB	M3x7 Flat Washer	8	



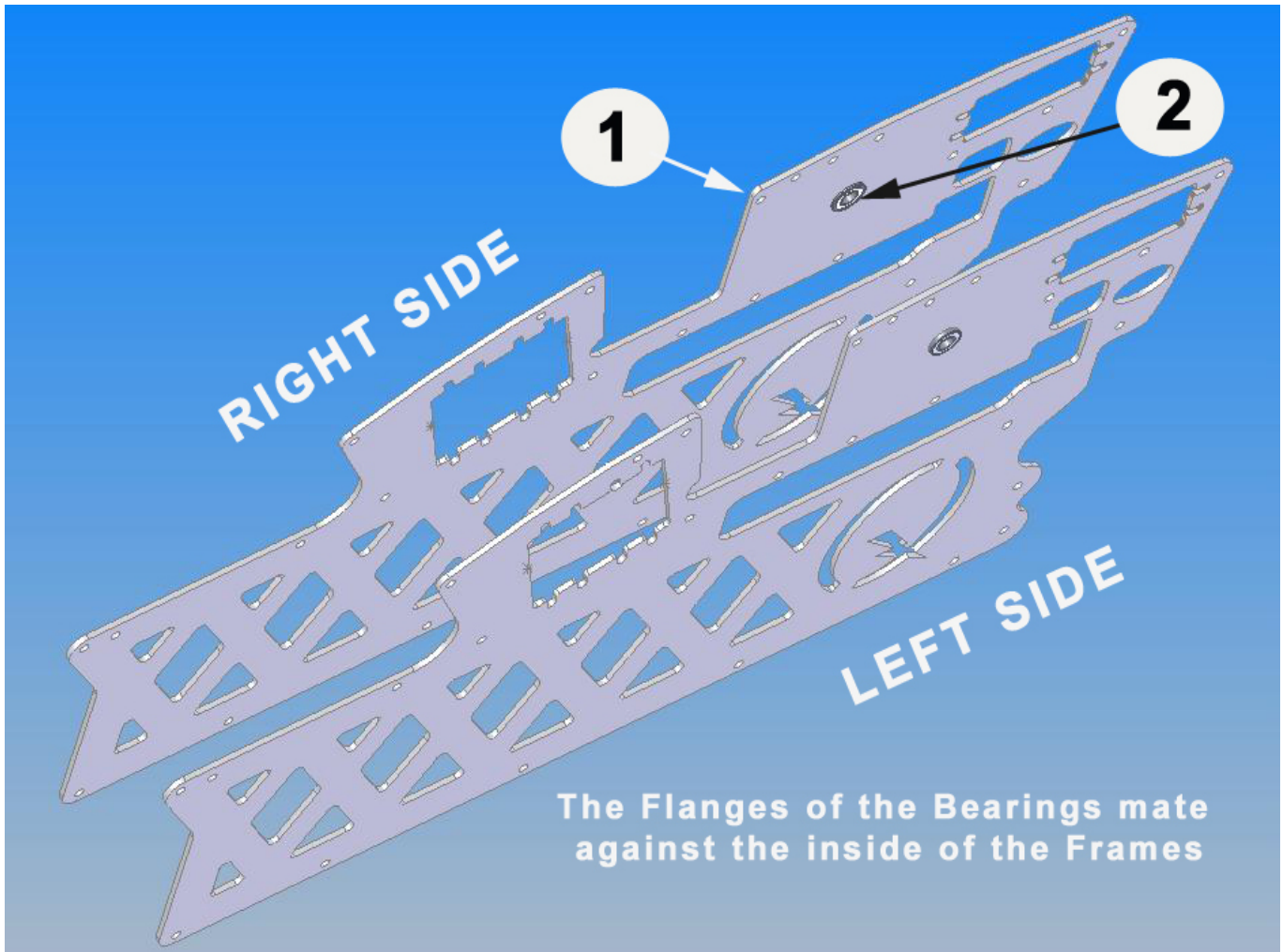
Note: If the holes on the Bearing Blocks do not line up to the ones on the Rear Frame, just grind the holes on the frames a little bit.



2-1 ELEVATOR SHAFT BEARINGS

No.	Bag#	Description	Qty
1	Frame	Main Frame	2
2	2	5x10x4 Flanged Bearing	2

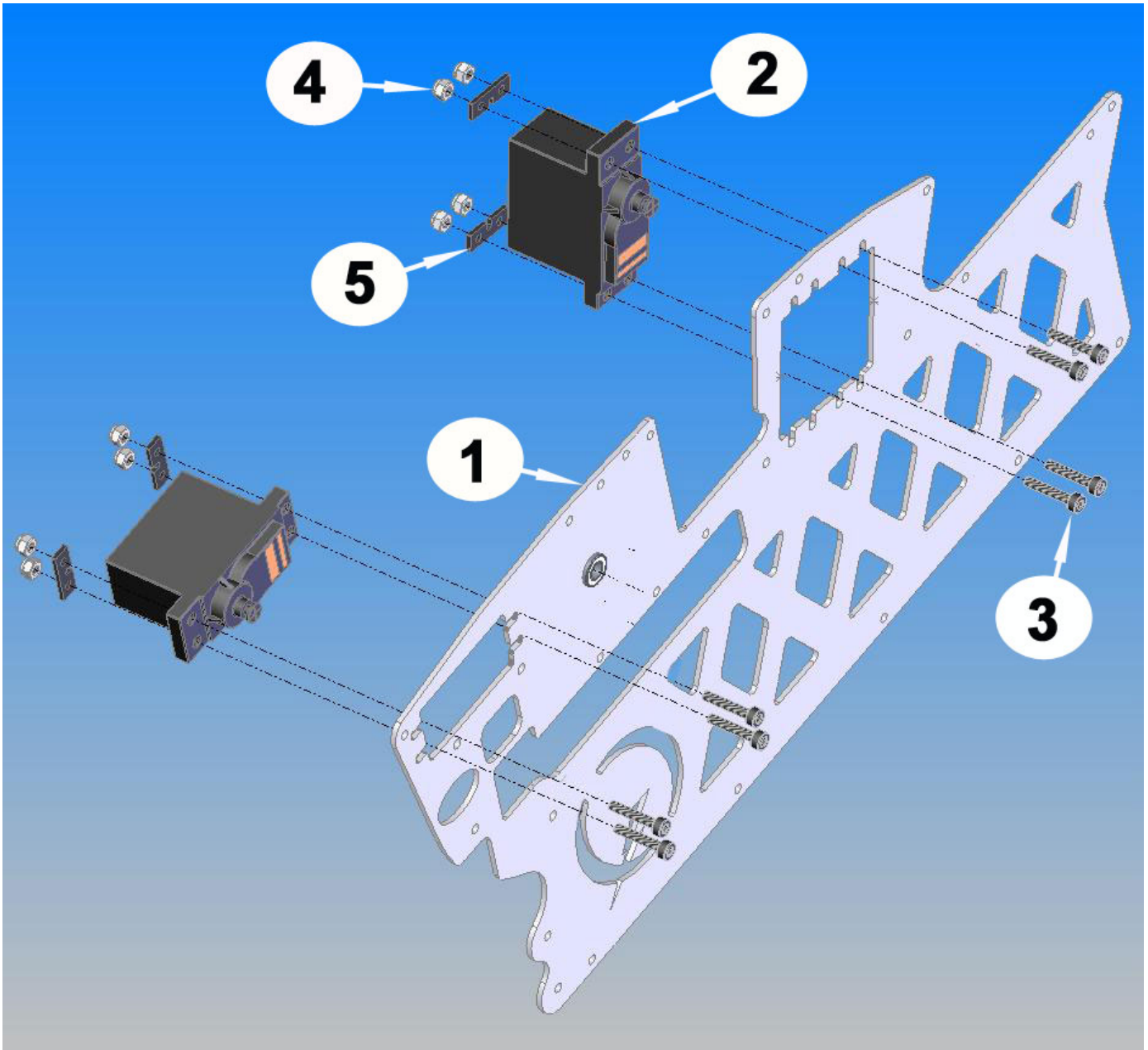
Note: The holes on the frames are designed for “push-fit” feature. Sometime you may have to sand them a little bit before pushing the bearings in.



2-2 RIGHT AILERON & ELEVATOR SERVO ASSEMBLY

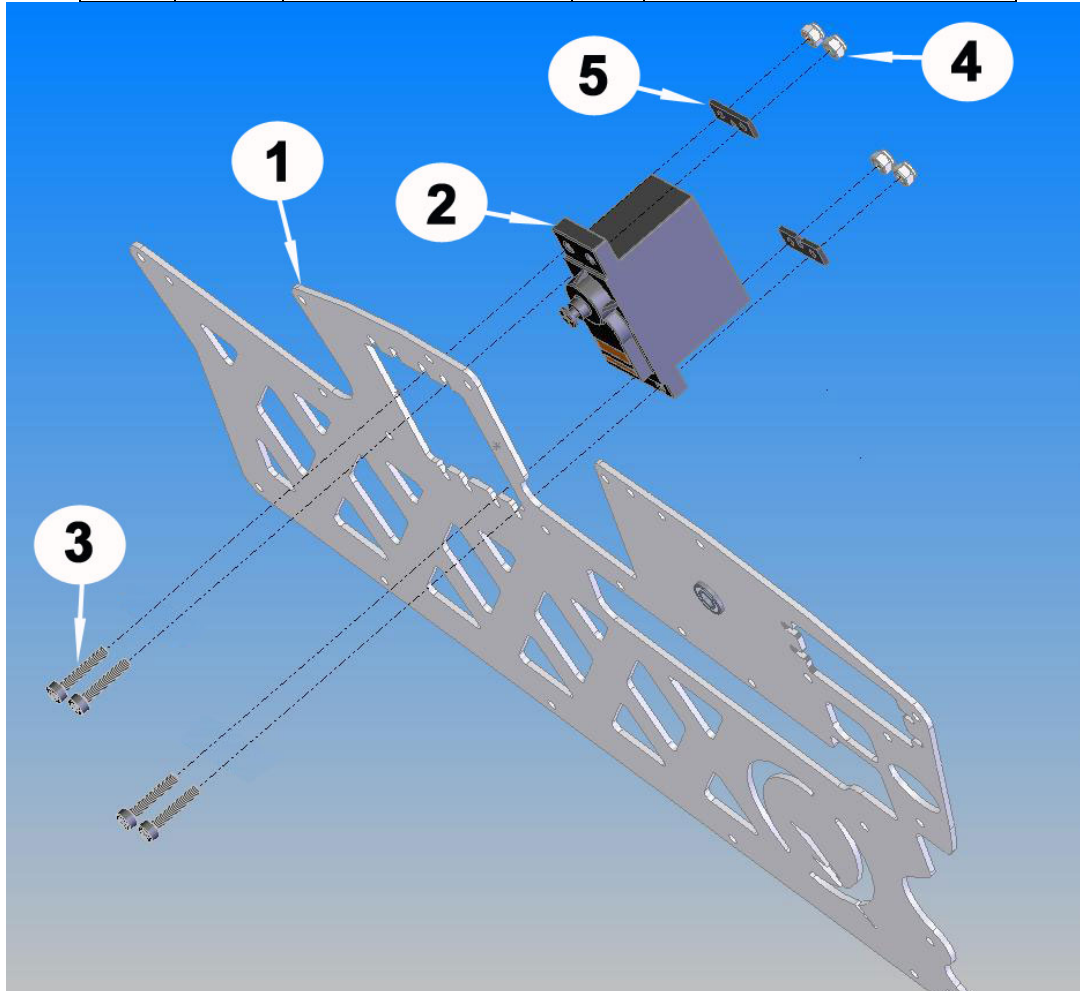
No.	Bag#	Description	Qty
1		Right Frame from Step 2-1	1
2****		Servo	2
3	HB	M2.5x14 Cap Head Bolt	8
4	HB	M2.5 Locknut	8
5	HB	Fixing Plate	4

Note: Servos are not included in the kit. If the servos come with anti-vibrating rubber, insert them on the servos first.



2-3 LEFT AILERON SERVO ASSEMBLY

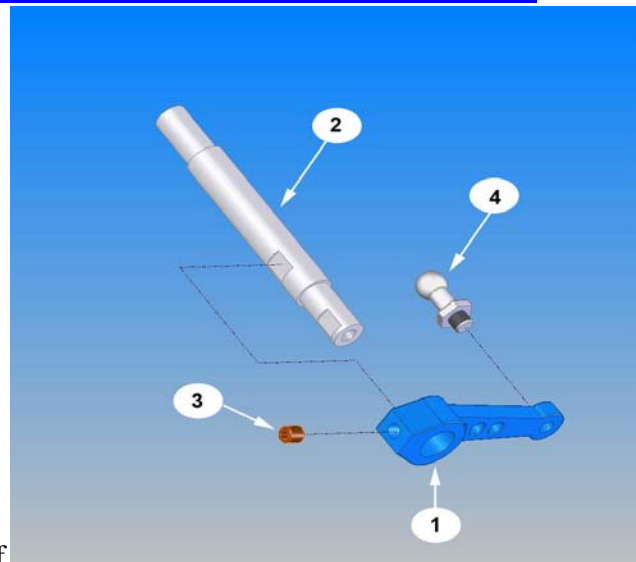
No.	Bag#	Description	Qty	Note: Servos are not included in the kit. If the servos come with anti-vibrating rubber, insert them on the servos first.
1		Left Frame from step 2-1	1	
2****		Servo	1	
3	HB	M2.5x14 Cap Head Bolt	4	
4	HB	M2.5 Locknut	4	
5	HB	Fixing Plate	2	



2-4 INNER ELEVATOR CONTROL ARM SUBASSEMBLY

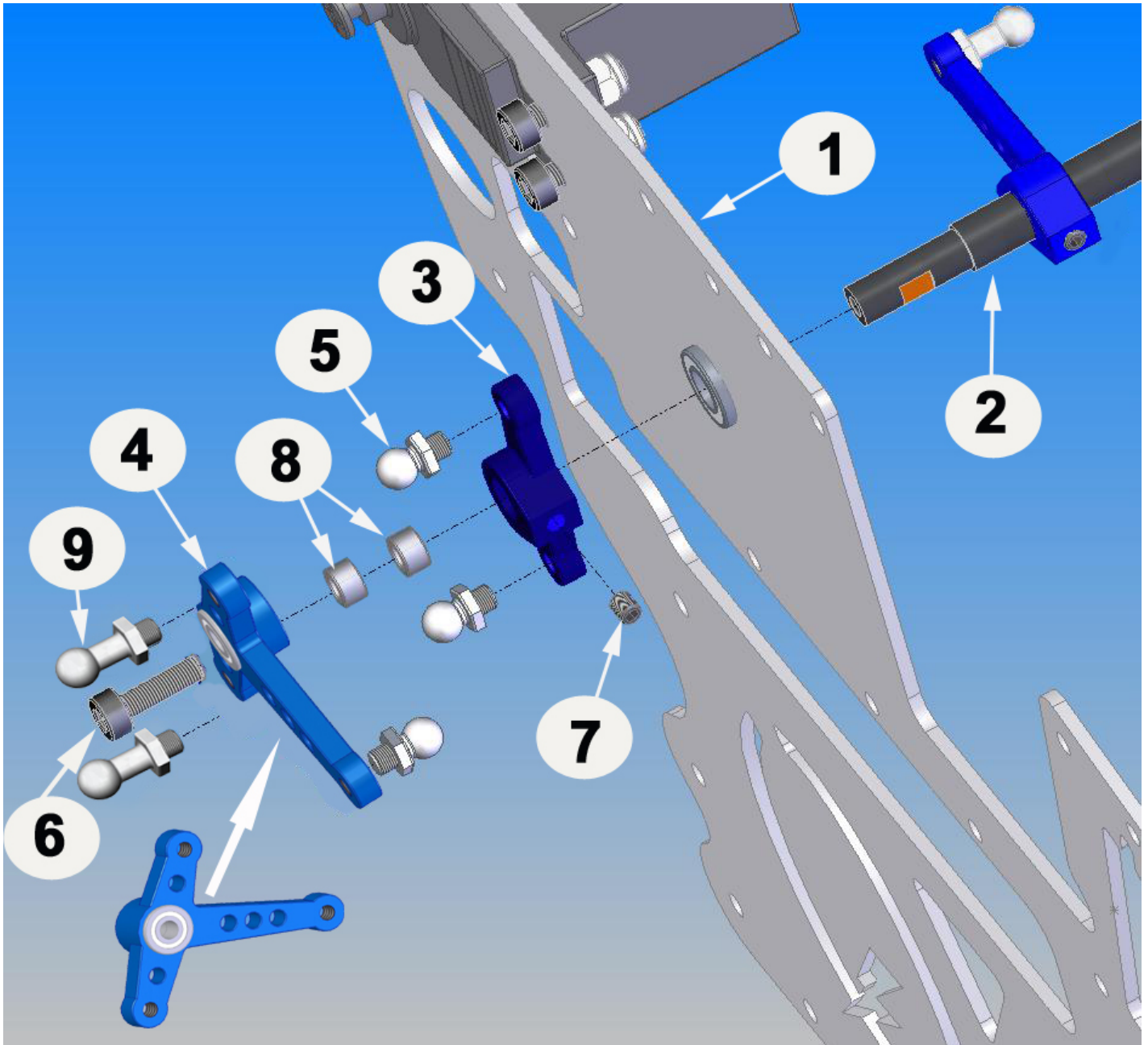
No	Bag#	Description	Qty
1	2	Inner Elevator Control Arm	1
2	2	Elevator Control Shaft	1
3	HB	M3x5 Set Screw	1
4	HB	M3x7 Pivot Ball Stud	1

Note: Elevator Control Shaft is designed to fit tightly in M5x11x4 Flange Bearings on the Upper Frames. So before you do the following assembly, check to see if the shaft can go in the bearings or not. If not, use sand paper to sand it down a little, it will come right in.



2-5 ELEVATOR CONTROL ARM-RIGHT SIDE

No.	Bag#	Description	Qty	No.	Bag#	Description	Qty
1		Step 2-2	1	6	HB	M3x16 Cap Head Bolt*	1
2		Step 2-4	1	7	HB	M3x5 Set Screw	1
3	2	Outer Elevator Control Arm	1	8	HB	M3x5x3 Spacer*	2
4	2	Right Aileron Control Lever	1	9	HB	M3x7 Pivot Ball Stud	2
5	HB	M3x4 Pivot Ball Stud	3				



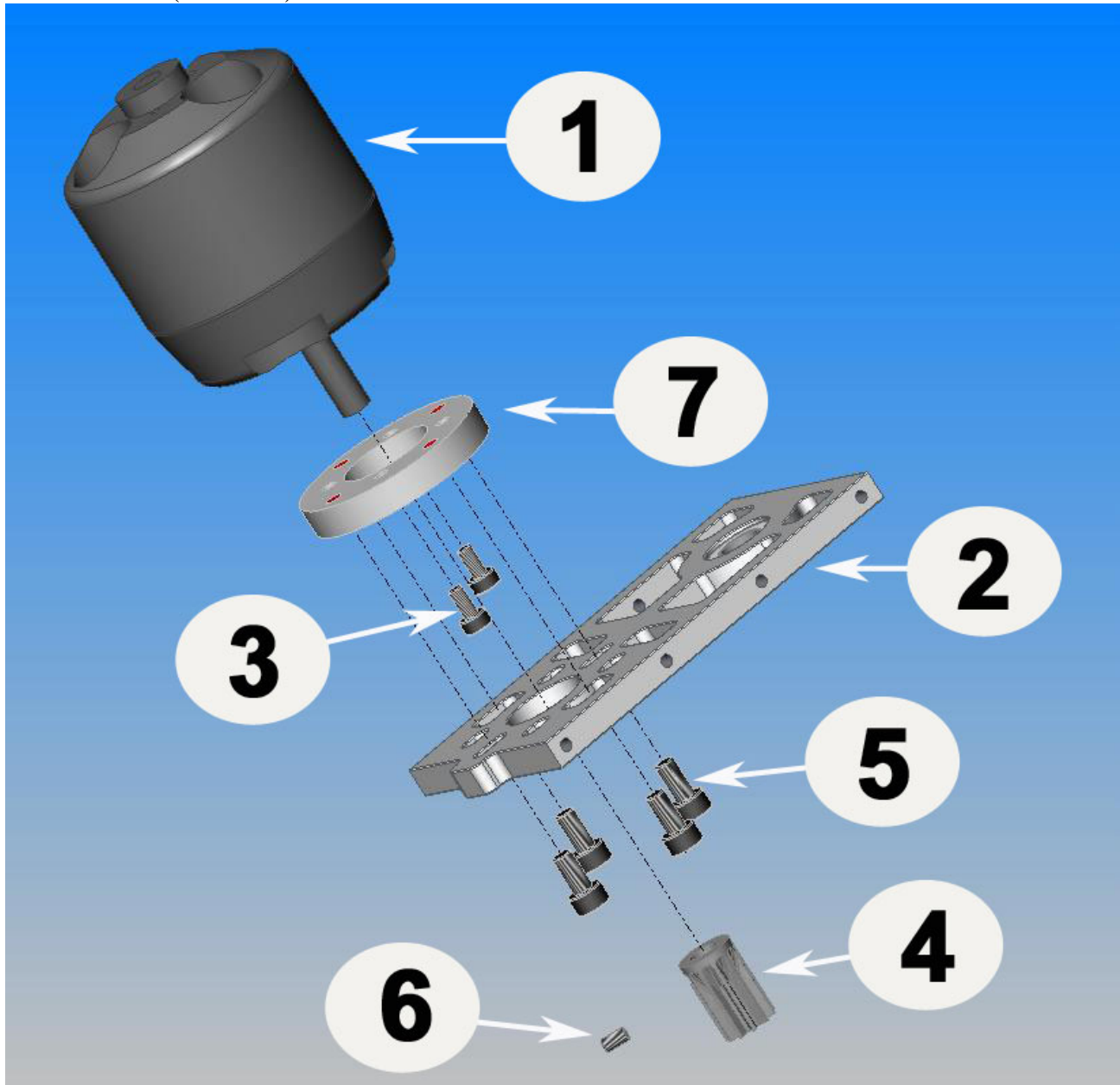
2-6 MOTOR MOUNT ASSEMBLY

No.	Bag#	Description	Qty	No.	Bag#	Description	Qty
1****		Motor	1	5	HB	M4x12 Cap Head Bolt**	4
2	Fram	Motor Mount	1	6****	HB	M3x5 Set Screw	1
3	HB	M3x6 Cap Head Bolt*	2	7	Frame	Motor Mount Spacer	1
4****		Pinion	1				

*For Little Sweetie 10 only. These screws may be M3x6 Flat Head Bolt.

**Little Sweetie 10 use M4x6 Cap Head Bolts

Note: it is very important to use a Dial Indicator to check the run out of the Pinion Gear shaft. Most of the vibration problems come from this. The run out should be no more than 0.002 inch (0.06 mm.)

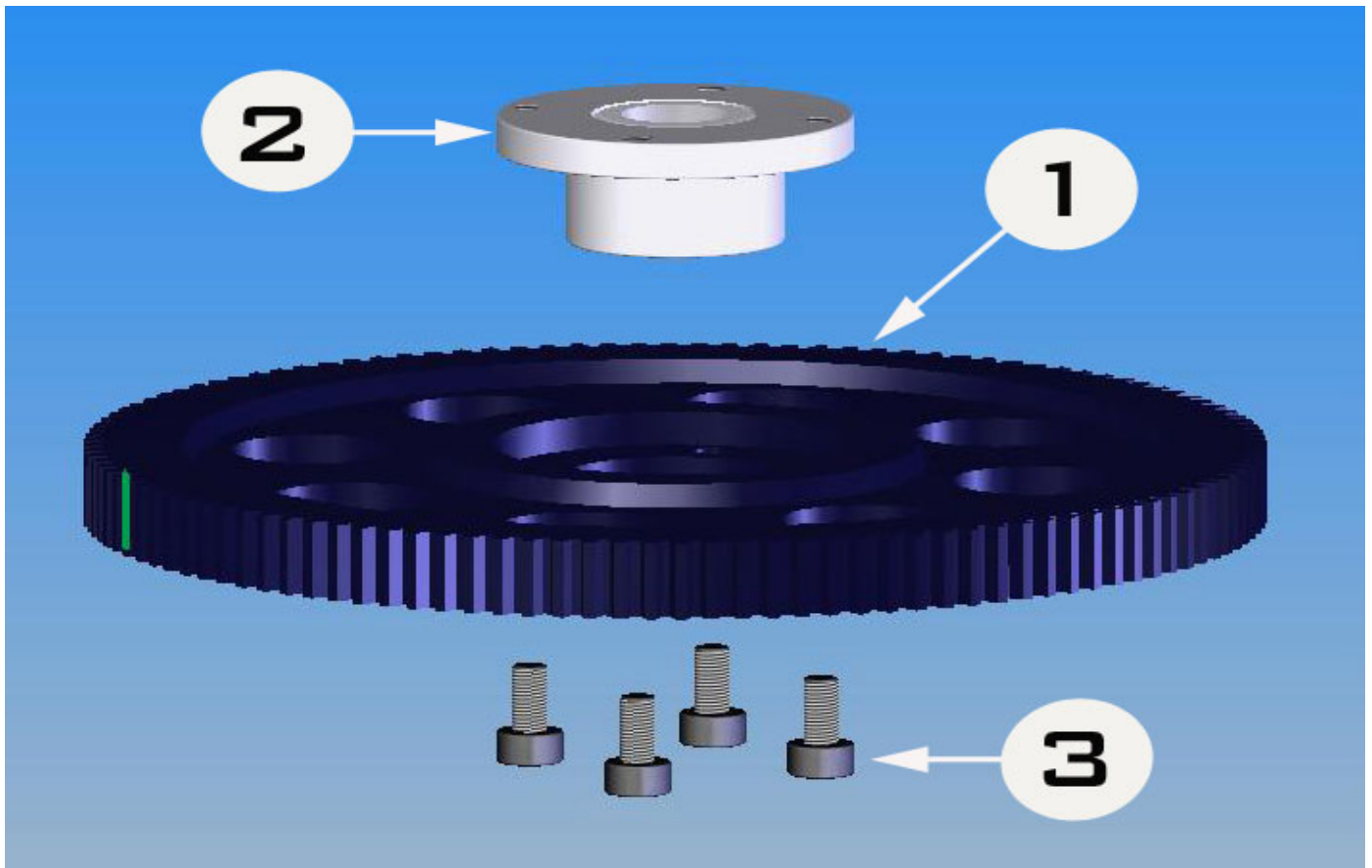


For Little Sweetie 10, use two M3x6 Cap Head Bolts (or M3x6 Flat Head Bolts) to mount the Motor Mount Spacer to the motor first. Then use four M4x6 Cap Head Bolts to mount the Motor Mount to the Motor Mount Spacer. For Sweet 16V2, use only four M4x12 to mount them together directly.

2-7 MAIN GEAR ASSEMBLY

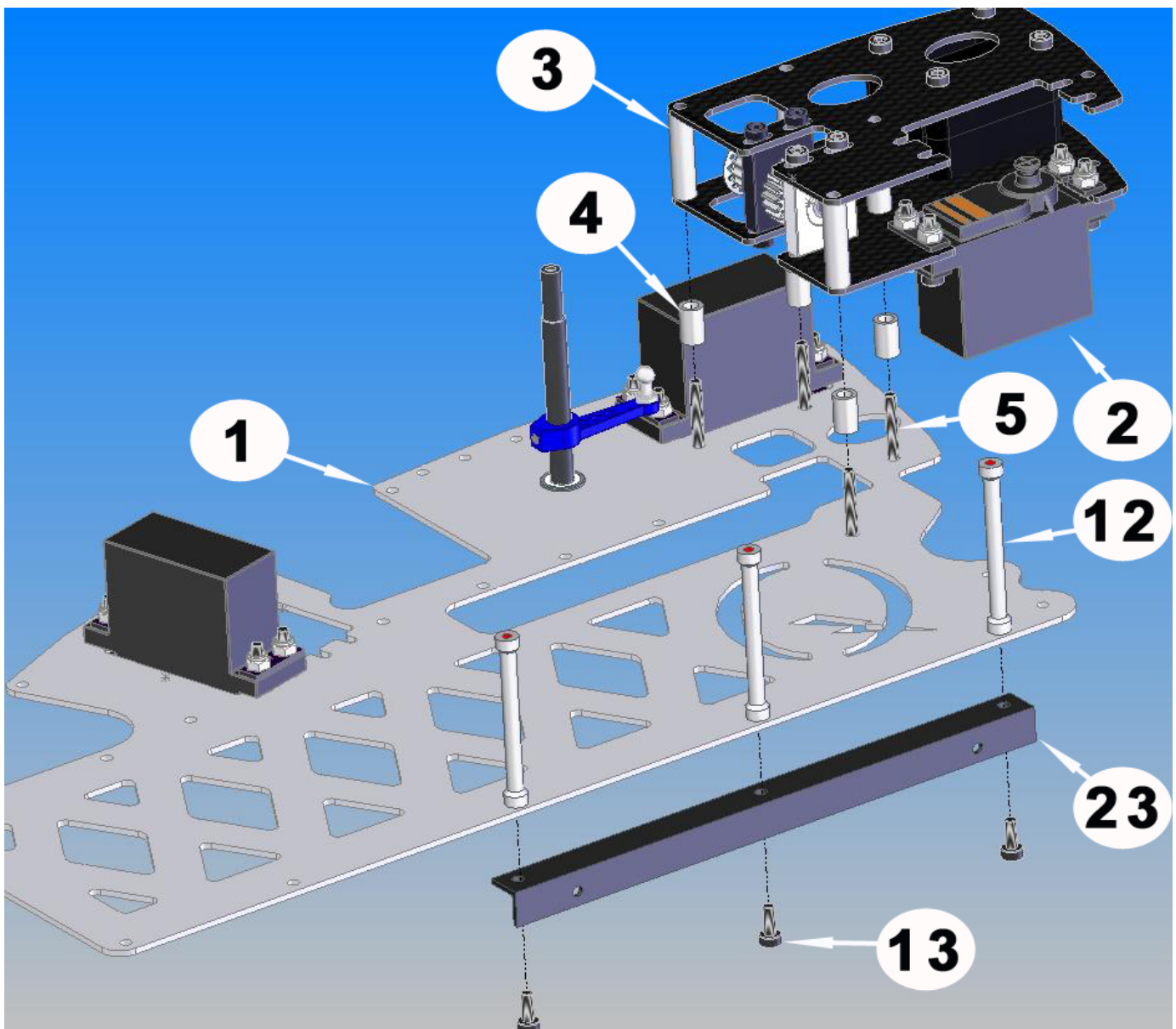
No.	Bag#	Description	Qty
1	2	Main Gear	1
2	2	Main Gear Hub*	1
3	HB	M3x 6 Cap Head Bolt	4

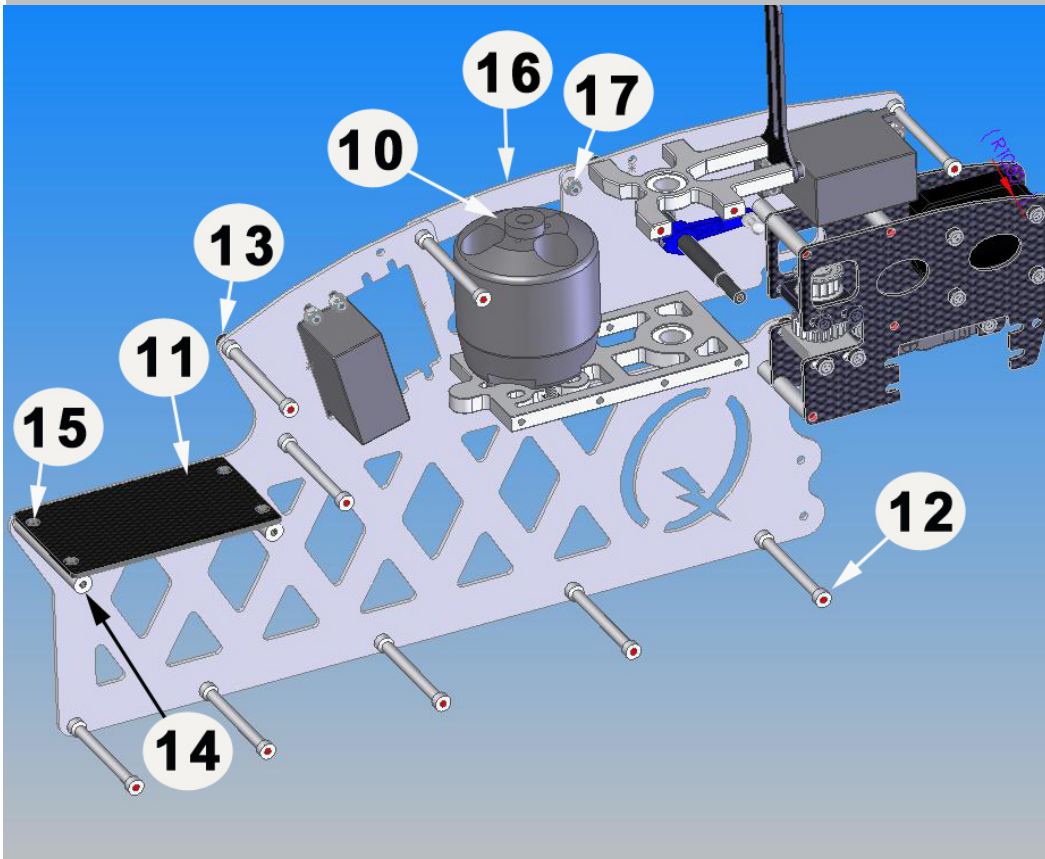
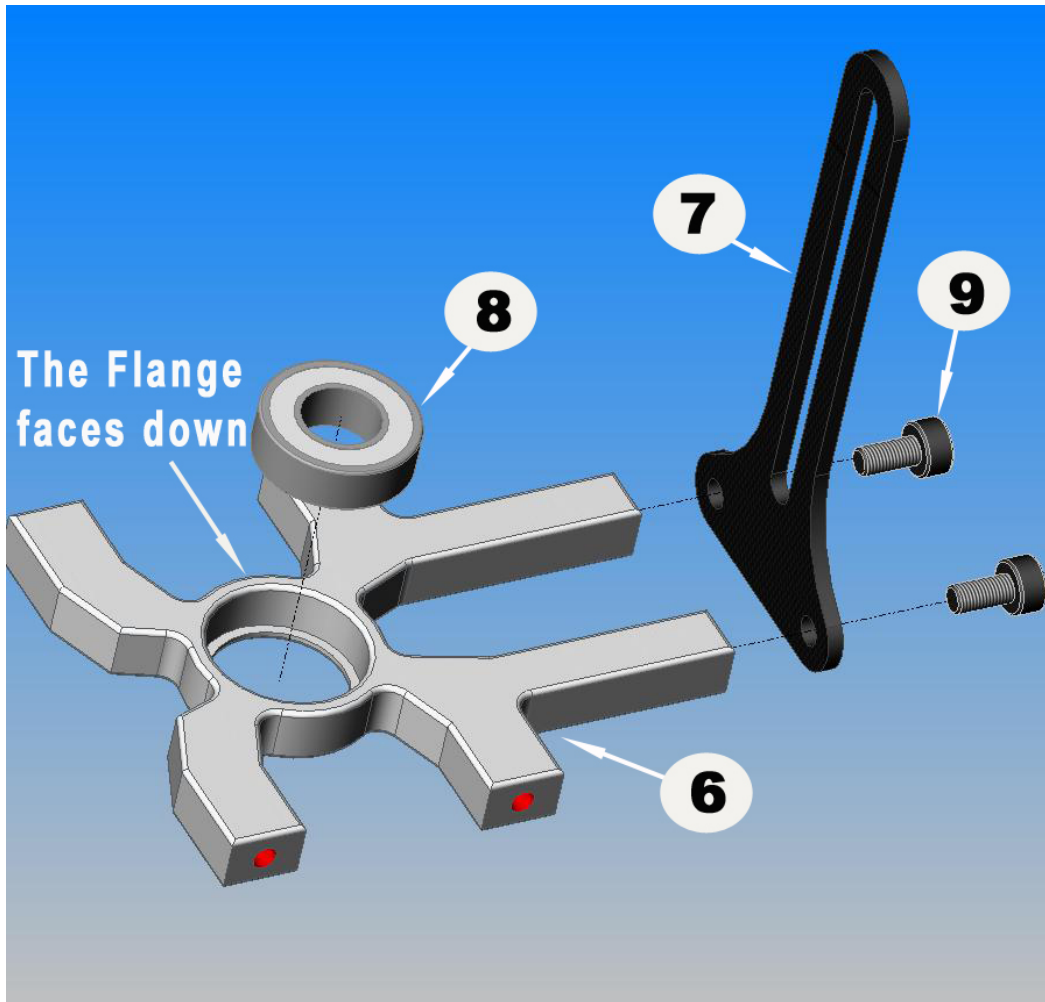
*Sport version is shown on the drawing. Pro version may look a little bit differently.



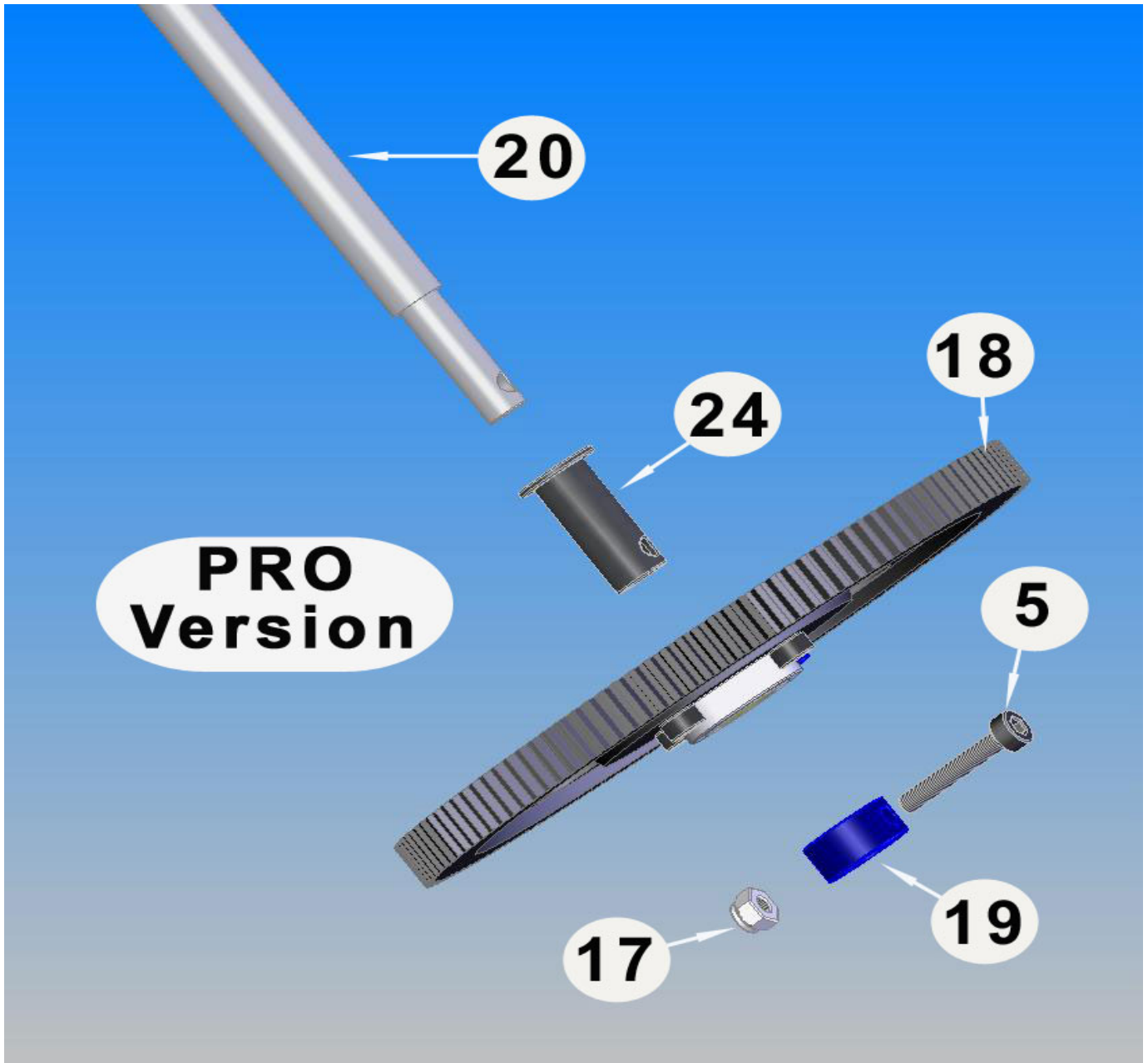
2-8 RIGHT SIDE SUBASSEMBLY

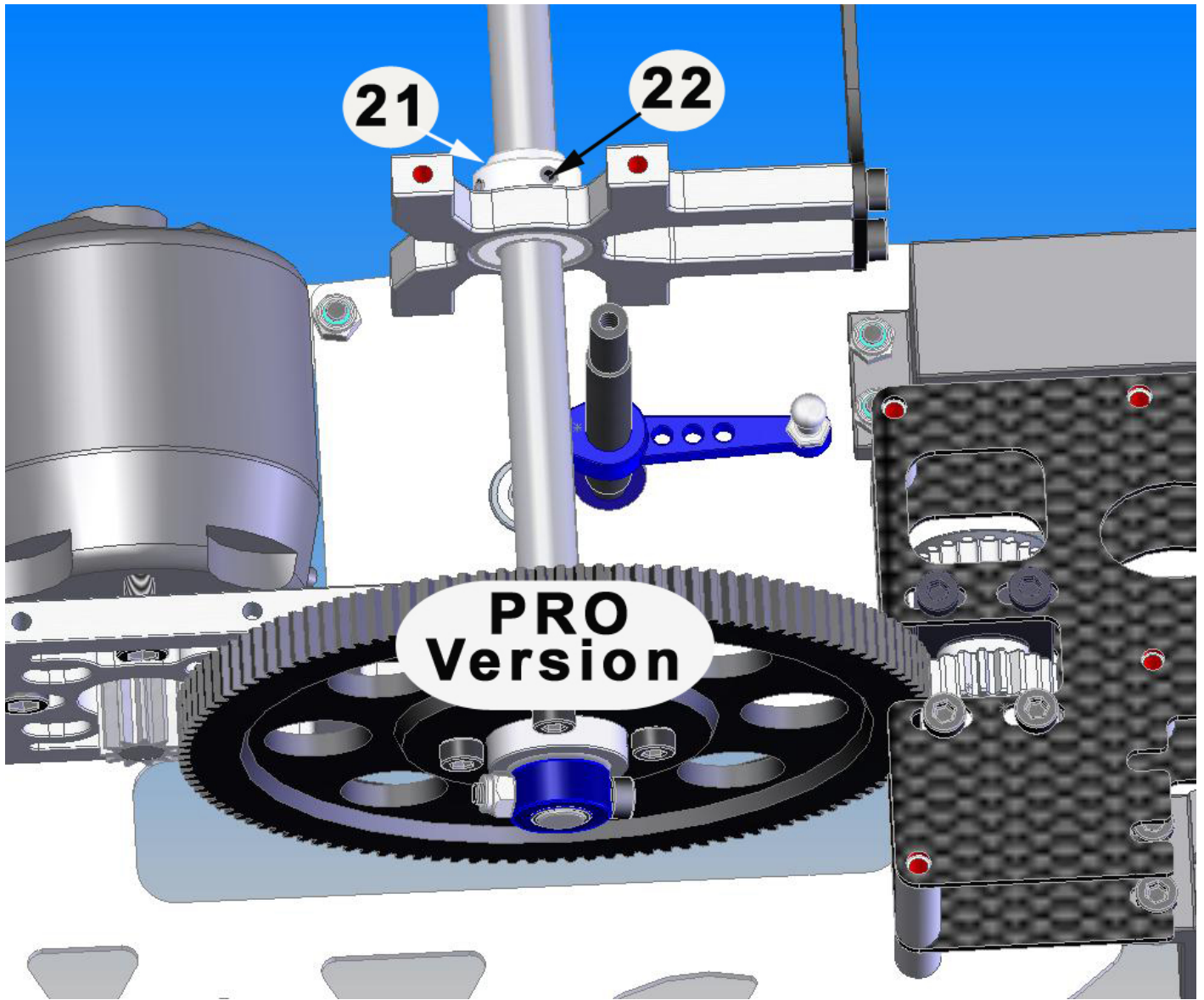
No.	Bag#	Description	Qty	No.	Bag#	Description	Qty	* Sport version does not have these parts
1		Main Frame from step 2-5	1	13	HB	M3x8 Cap Head Bolt	18	
2		Rear Frame from step 1	1	14	2	3x48 Half Round Cross Member	2	
3	2	3x24mm Cross Member	4	15	HB	M3x6 Philip Screw Flat Head	4	
4	2	3x10mm Cross Member	4	16	Frame	Motor Frame Doubler	1	
5	HB	M3x18 Cap Head Bolt	5	17	HB	M3 Locknut	2	
6	2	Main Shaft Bearing Block	1	18		Main Gear Assy (Step 2-7)	1	
7	Frame	Anti-rotation Guide	1	19	2	Lower Main Shaft Collar*	1	
8	2	8x16x5 Regular Bearing	1	20	2	Main Shaft	1	
9	HB	M3x6 Cap Head Bolt	2	21	2	Upper Main Shaft Collar	1	
10		Motor Mount Assy (Step 2-6)	1	22	HB	M3x5 Set Screw	4	
11	Frame	Radio Tray	1	23	Frame	Frame Angle	1	
12	2	3x48 Cross Member	9	24	2	Main Shaft Sleeve*	1	





- Sometime the Radio Tray is a little bit wider than the 48 mm Cross Members. You may need to sand it on either side.
- The four holes in the Radio Tray may be counter sunk for nicer finish.
- Slide the Main Gear Assembly in, insert the Main Shaft through the Main Shaft Bearing Blocks. Then secure the Gear with one M3x18 Cap Head Bolt and one M3 Locknut. For Pro version, put the Lower Main Shaft Collar on first before securing it.
- Put the Upper Main Shaft Collar on, and then secure it with four M3x5 Set Screws.



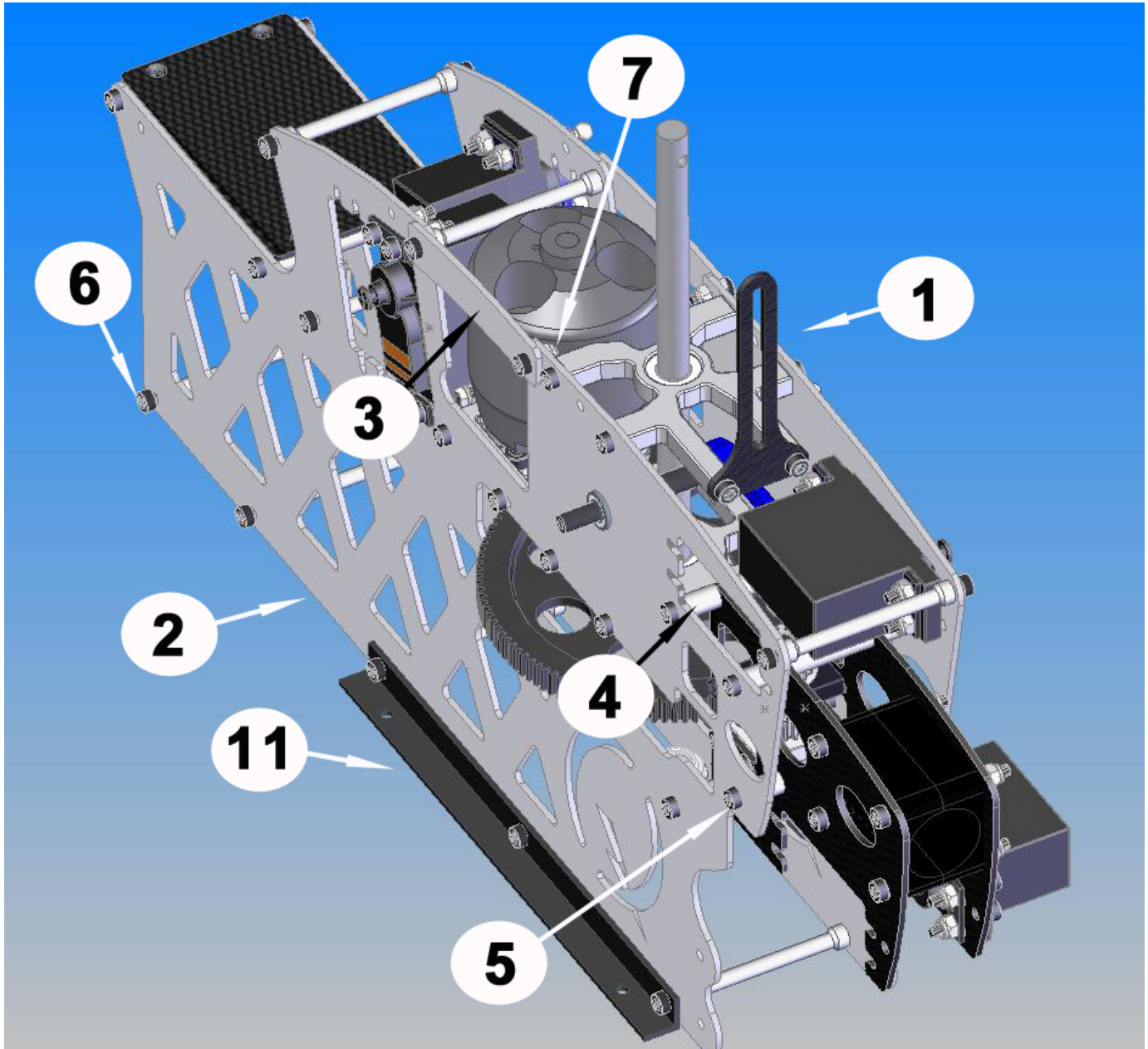




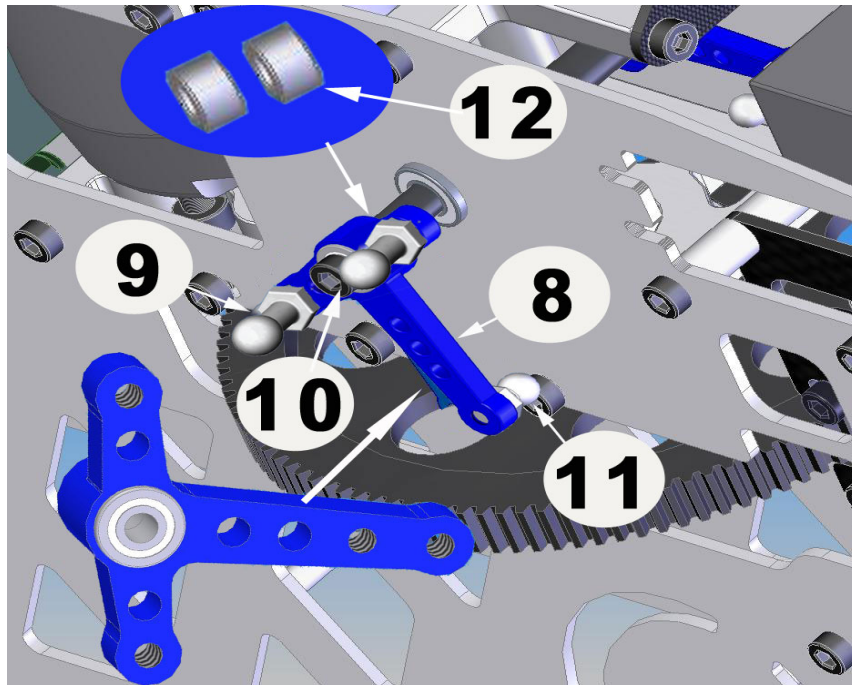
2-9 FRAME INSTALLATION

No.	Bag#	Description	Qty	No.	Bag#	Description	Qty
1		Right Side Subassembly from Step 2-8	1	8	2	Left Aileron Control Lever	1
2		Left Side Assembly from Step 2-3	1	9	HB	M3x7 Pivot Ball Stud	2
3	2	Motor Frame Doubler	1	10	HB	M3x16 Cap Head Bolt	1
4	2	3x10mm Cross Member	4	11	2	Frame Angle	1
5	HB	M3x18 Cap Head Bolt	4	12	HB	M3x5x3 Spacer	2
6	HB	M3x8 Cap Head Bolt	18		HB	M3x4 Pivot Ball Stud	1
7	HB	M3 Locknut	1				

Attach the Left Side Assembly and the Right Side Assembly together; secure them with Cap Head Bolts and Locknuts.



- Adjust the Tail Transmission and Start Shaft Bearing Block to get proper gear matches. Trick: fold a piece of tablet paper of 20x100mm (1x4 inch) along a long side and then insert it between the gears. Bring the gears together. Tighten the screws on the Tail Transmission/Start Shaft Bearing Block up and take the piece of paper off.

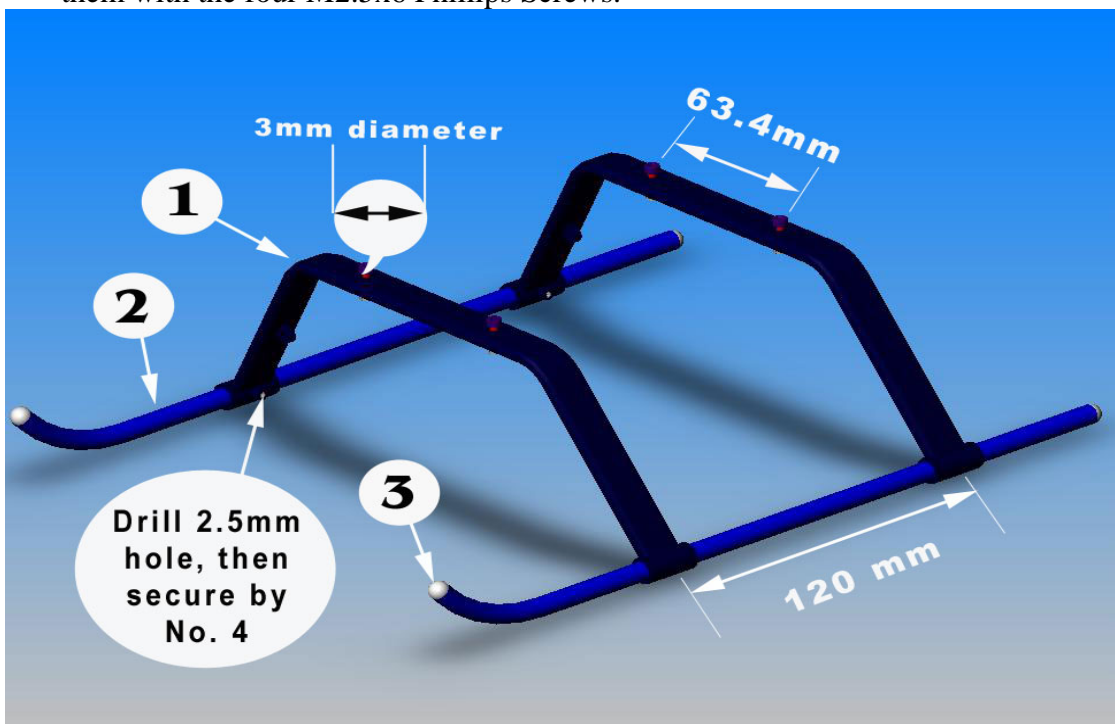


2-10 LANDING GEAR INSTALLATION

Bag 2-10

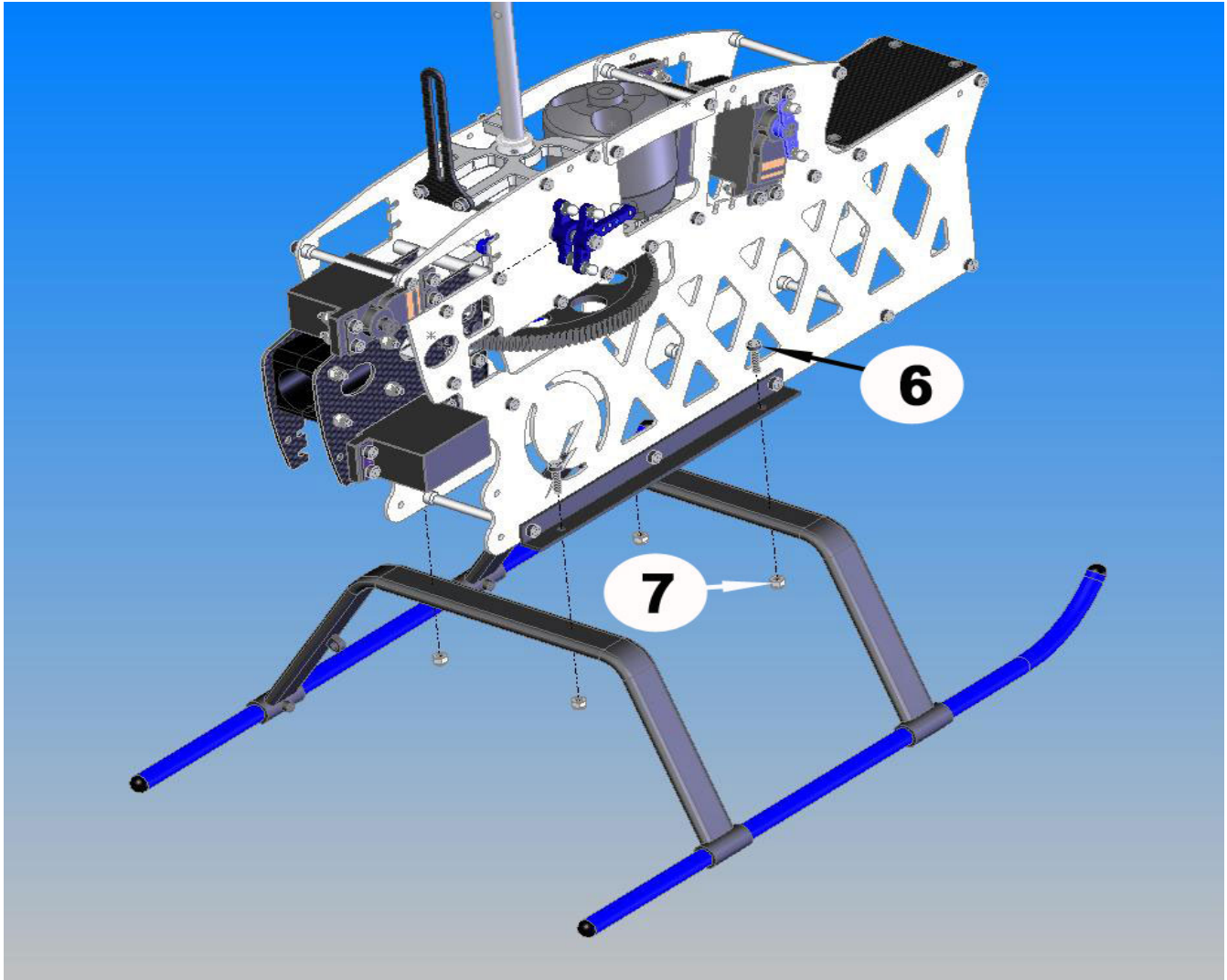
No.	Bag#	Description	Qty	No.	Bag#	Description	Qty
1	2-10	Landing Gear Strut	2	5****	2-10	CA Glue	1
2	2-10	Landing Gear Skid	2	6	2-10	M3x12 Cap Head Bolt	4
3	2-10	Landing Gear End Cap	4	7	2-10	M3 Locknut	4
4	2-10	M2.5x6 Self Tapping Screws	4				

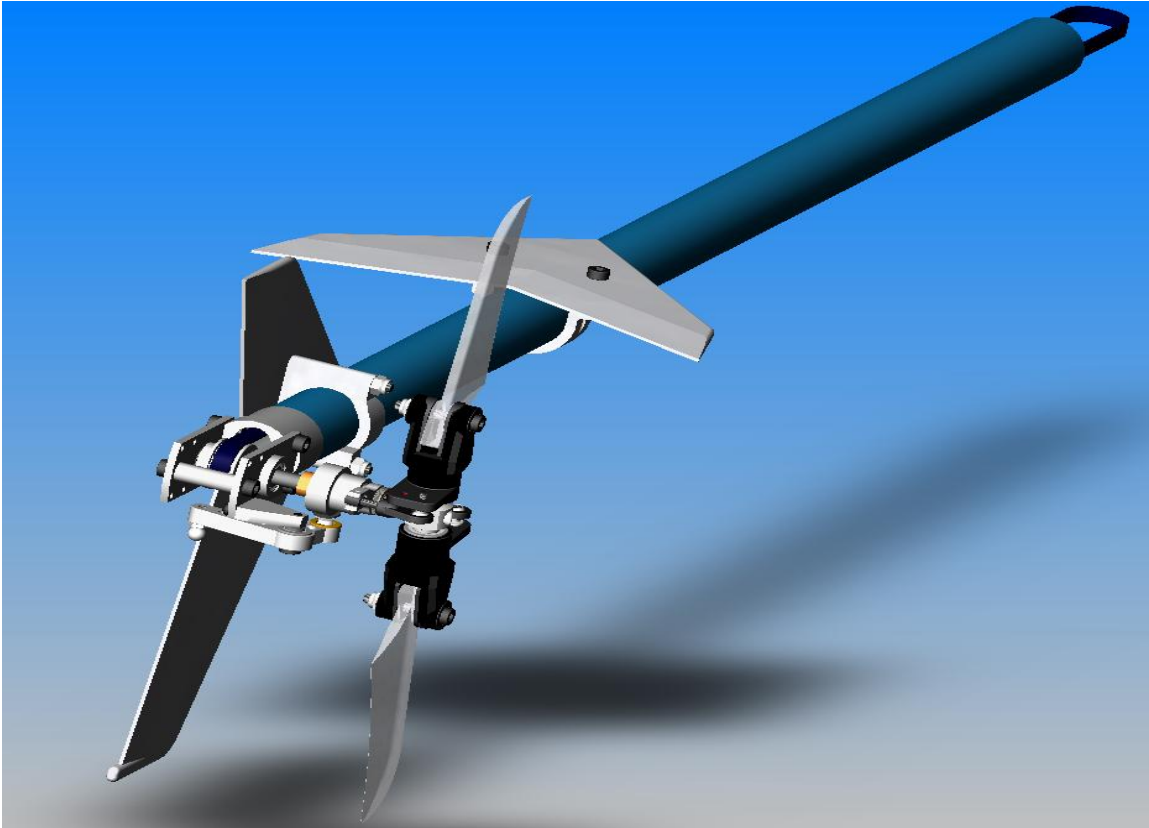
- Drill 4 holes in the Landing Gear Struts with a 3mm drill bit with a spacing of 63.5mm
- Install the Landing Gear Skids into the Struts.
- Apply CA Glue into the Landing Gear End Cap then insert them into the Skids.
- Drill four 2.5mm holes into the little rounds on the ends of the Struts then secure them with the four M2.5x6 Phillips Screws.



- Install the Main Frames onto the Landing Gear Assembly and secure them with four M3x12 Cap Head Bolts.

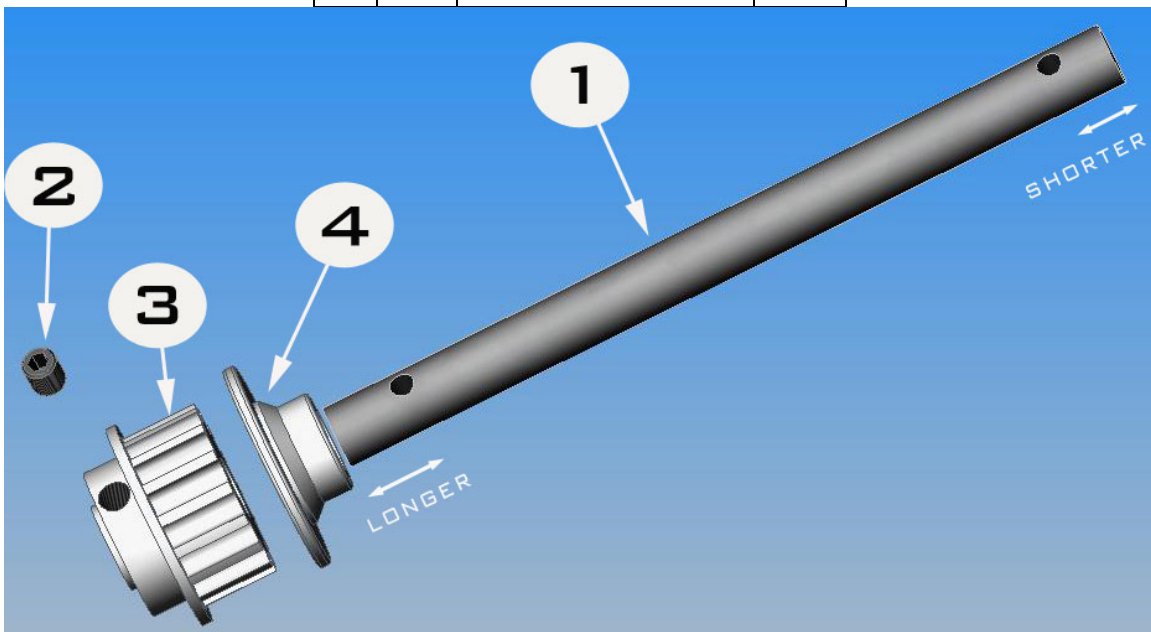
Note: It is recommended to use “*Landing Gear Dampener*” to reduce vibration. See “*Other Hardware & Optional Accessories*” to make order. Landing Gear Dampener is installed between the Landing Gear and the Landing Supports.





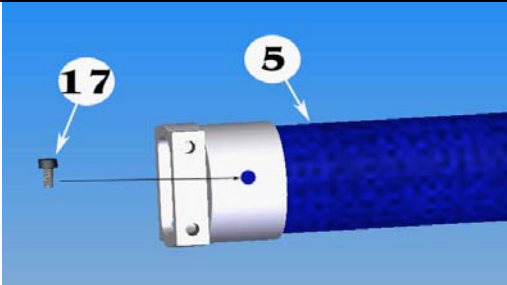
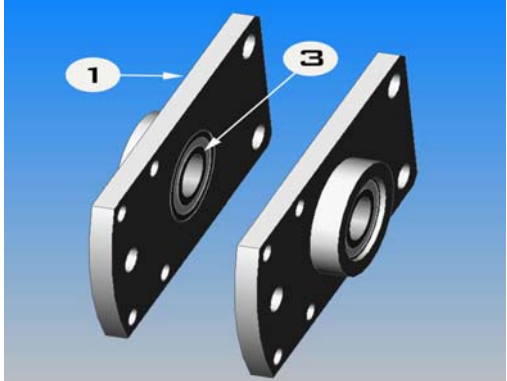
3-1 TAIL PULLEY GEAR SUBASSEMBLY

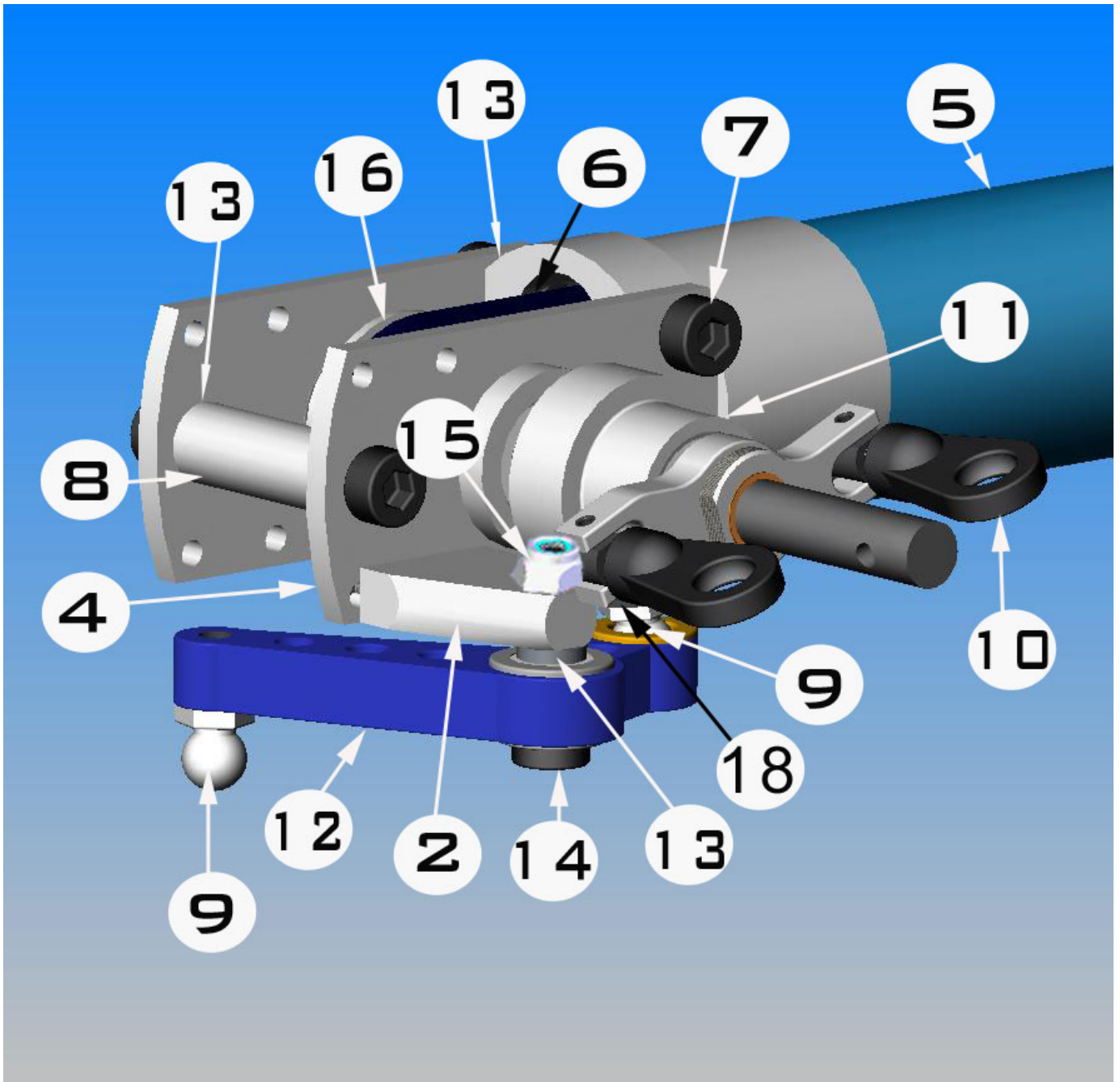
No.	Bag#	Description	Qty
1	3	Tail Output Shaft	1
2	HB	M3x5 Set Screw	1
3	3	Tail Pulley Gear	1
4	3	Tail Gear Side Plate	1



3-2 TAIL ROTOR SUBASSEMBLY

No.	Bag#	Description	Qty	No.	Bag#	Description	Qty
1	3	Tail Case Side Plate	2	10	3	M2.3 Medium Ball Link	2
2	3	Tail Pitch Lever Mount	1	11	3	Tail Pitch Slider	1
3	3	5X11X4 Bearing	2	12	3	Tail Pitch Control Lever	1
4	HB	M2x6 Phillips Screw	2	13	HB	M3x5x1 Spacer	4
5	In Box	Tail Boom	1	14	HB	M3x16 Cap Head Bolt	1
6	In Box	Timing Belt	1	15	HB	M3 Locknut	1
7	HB	M3x6 Cap Head Bolt	6	16	3-1	Tail Pulley Gear Subassy.	1
8	3	Tail Case Cross Member	1	17	HB	M2.5x6 Cap Head Bolt	1
9	HB	M3x4 Pivot Ball Stud	2	18	HB	M3x7 Flat Washer	1

<p>First, to prevent the Boom End from rotating, drill a 2.5mm hole in the side of the Boom End, then secure with an M2.5x6 Cap Head Bolt.</p>	
<p>Install the Bearings into the Tail Case Side Plates. The flanges should be inside.</p>	



Note: Put three M3x5x1 Spacers between the Left Tail Case Side Plate and the Boom End and Tail Cross Member. If your Tail Cross Member is long enough (16mm), you do not need the spacer for it. Normally you just need one M3x5x1 Spacer between the Tail Pitch Control Lever and Tail Pitch Lever Mount but you may need two of them in some cases (if you do not have enough clearance for the lever.)

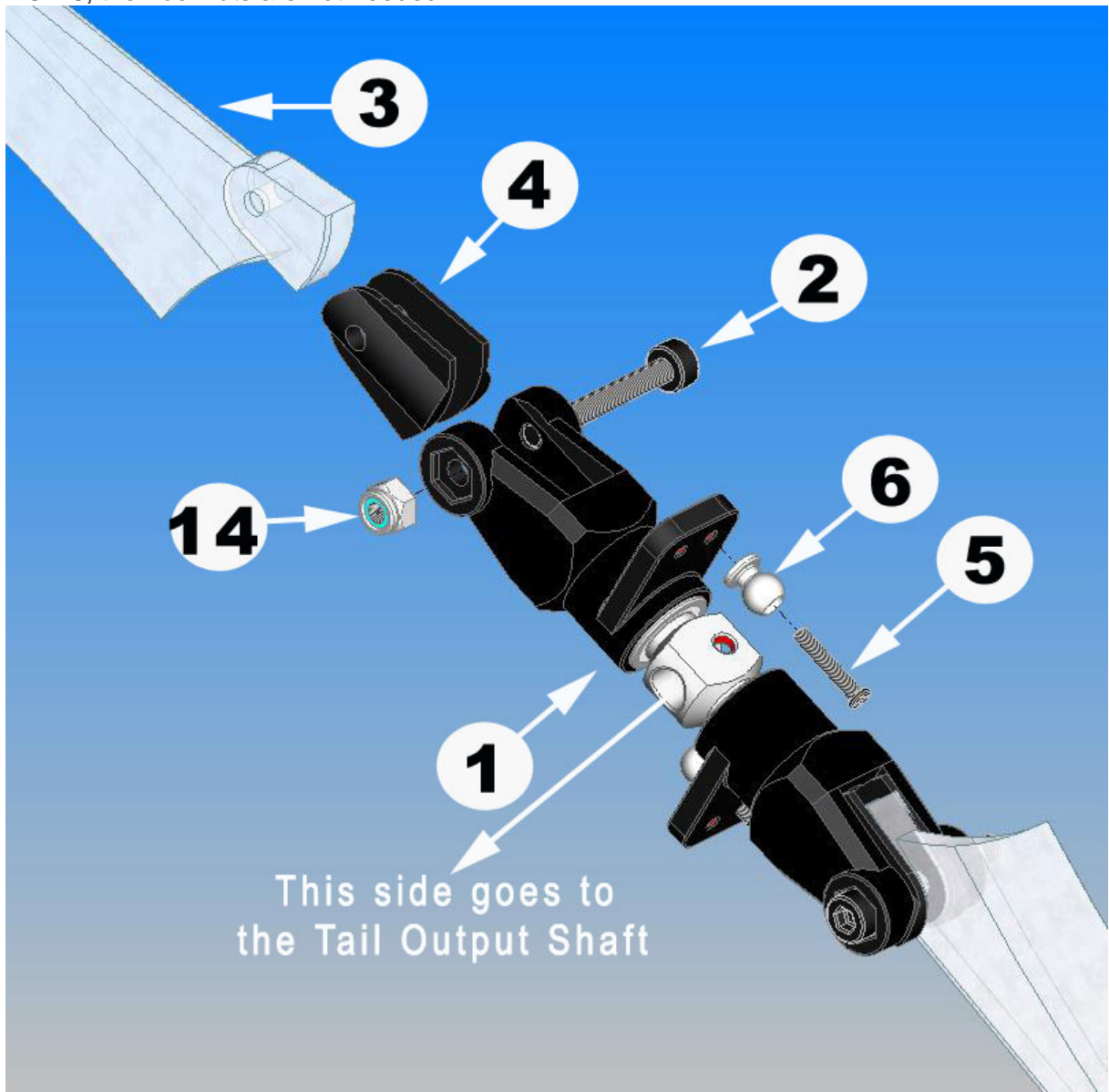
3-3 TAIL ROTOR INSTALLATION

No.	Bag#	Description	Qty	No.	Bag#	Description	Qty
1	3	Dual Bearing Tail Rotor	1	10	3	Vertical Fin Mount B**	1
2	HB	M3x20 Cap Head Bolt	2	11		Tail Rotor Subassembly	1
3	3	Tail Blade	2	12	3	Horizontal Fin	1
4	3	Tail Blade Spacer	4	13	3	Vertical Fin**	1
5	HB	M2x8 Phillips Screw	2	14	HB	M3 Locknut**	4
6	HB	Shim Ball	2	15	3	Horizontal Fin Mount	1
7	HB	M3x10 Cap Head Bolt*	2	16	HB	M3x30 Cap Head Bolt**	2
8	HB	M3x5 Set Screw	1	18****	3	Electric Tape	1
9	3	Vertical Fin Mount A**	1	Carbon Fin Set is also available for option.			

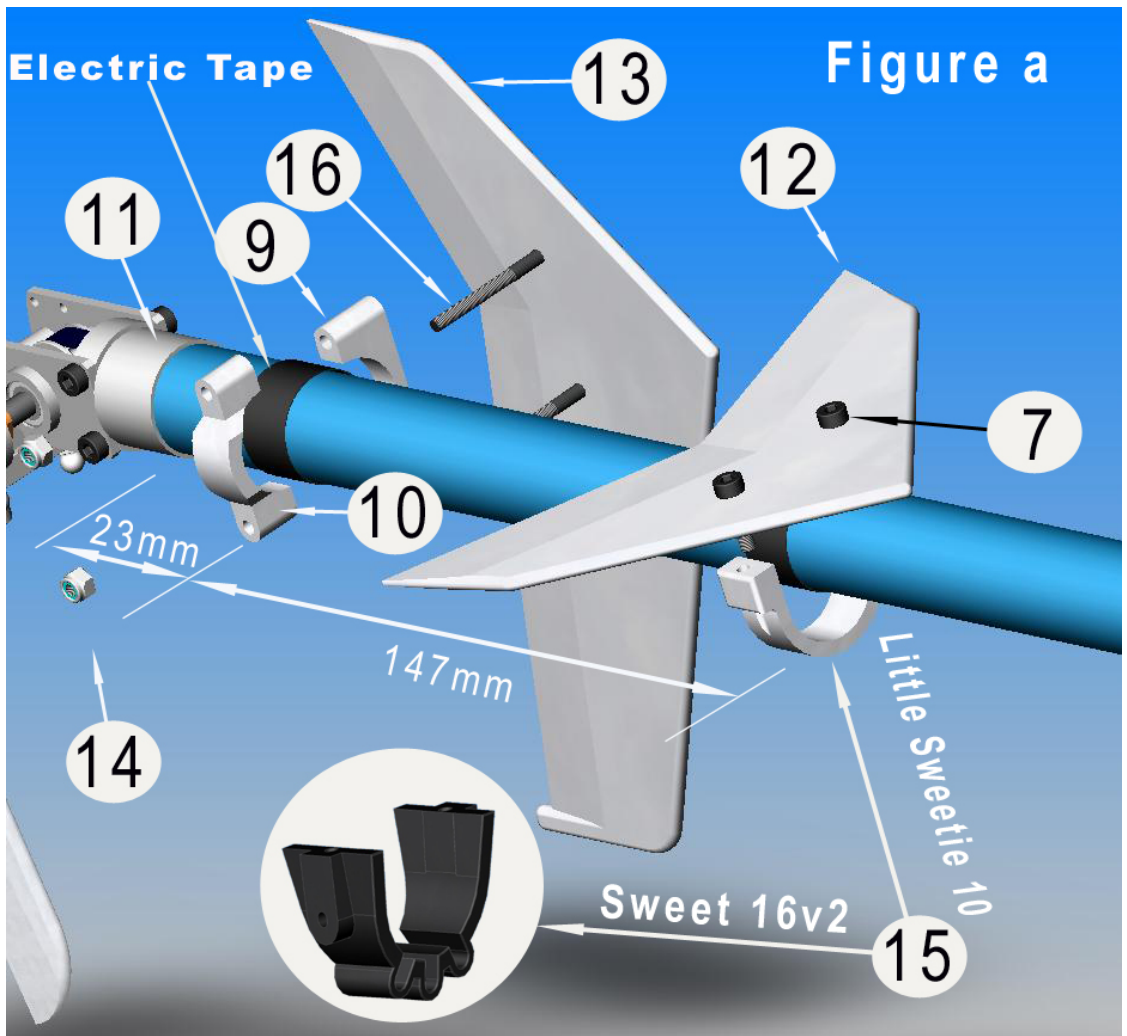
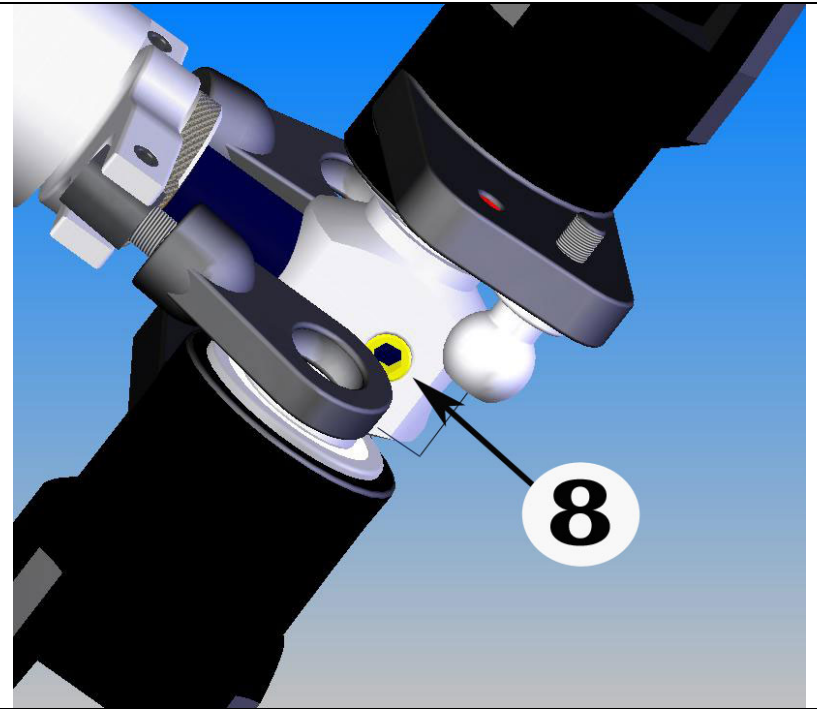
*Little Sweetie 10 uses two M3x16 Cap Head Bolts.

Wrap the electric tape around the boom couple rounds before you install the fins.

**Sometimes for the Vertical Fin Set, you may have one piece of Vertical Fin Mount and one Vertical Fin molded with other mount. It works same as the other but the way you install is a little bit different (see figure b). The Cap Head Bolt for this version should be M3x16; the Locknuts are not needed.



After installing all the parts as shown above, slide this subassembly on the output shaft then secure it with one M3x5 Set Screw. Now put the Ball Links on the Shim Balls.



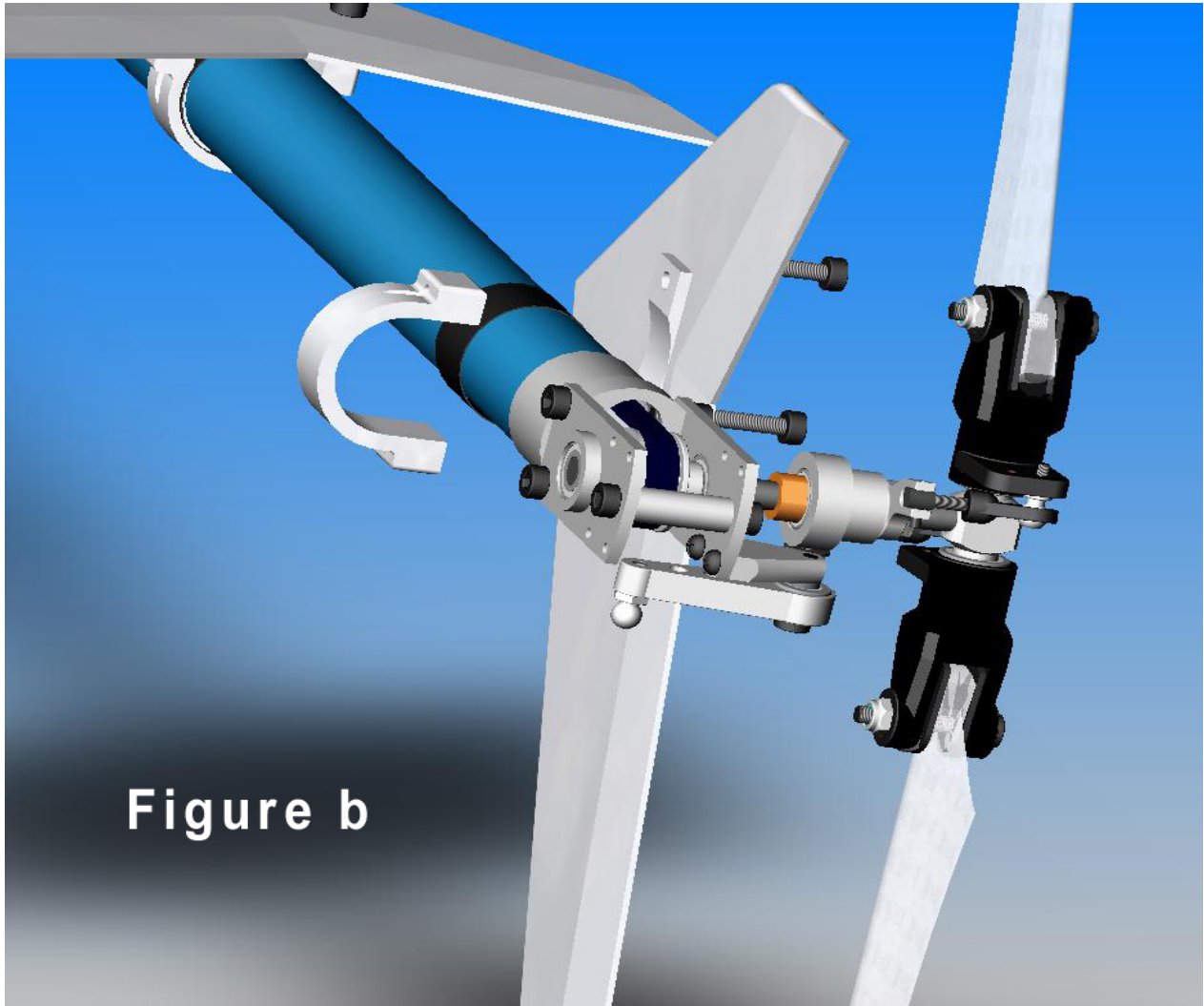
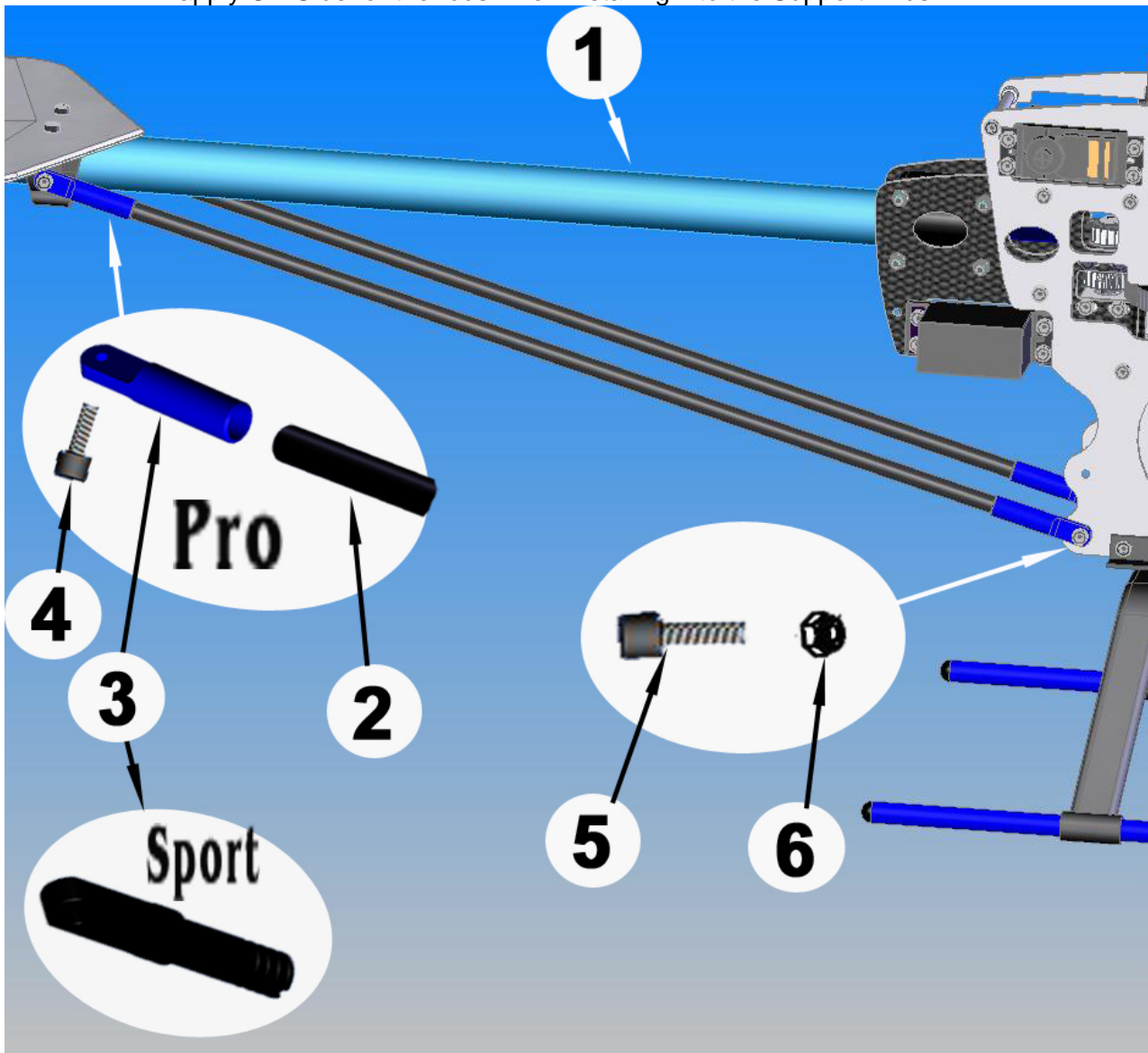


Figure b

3-4 INSTALLATION OF THE TAIL

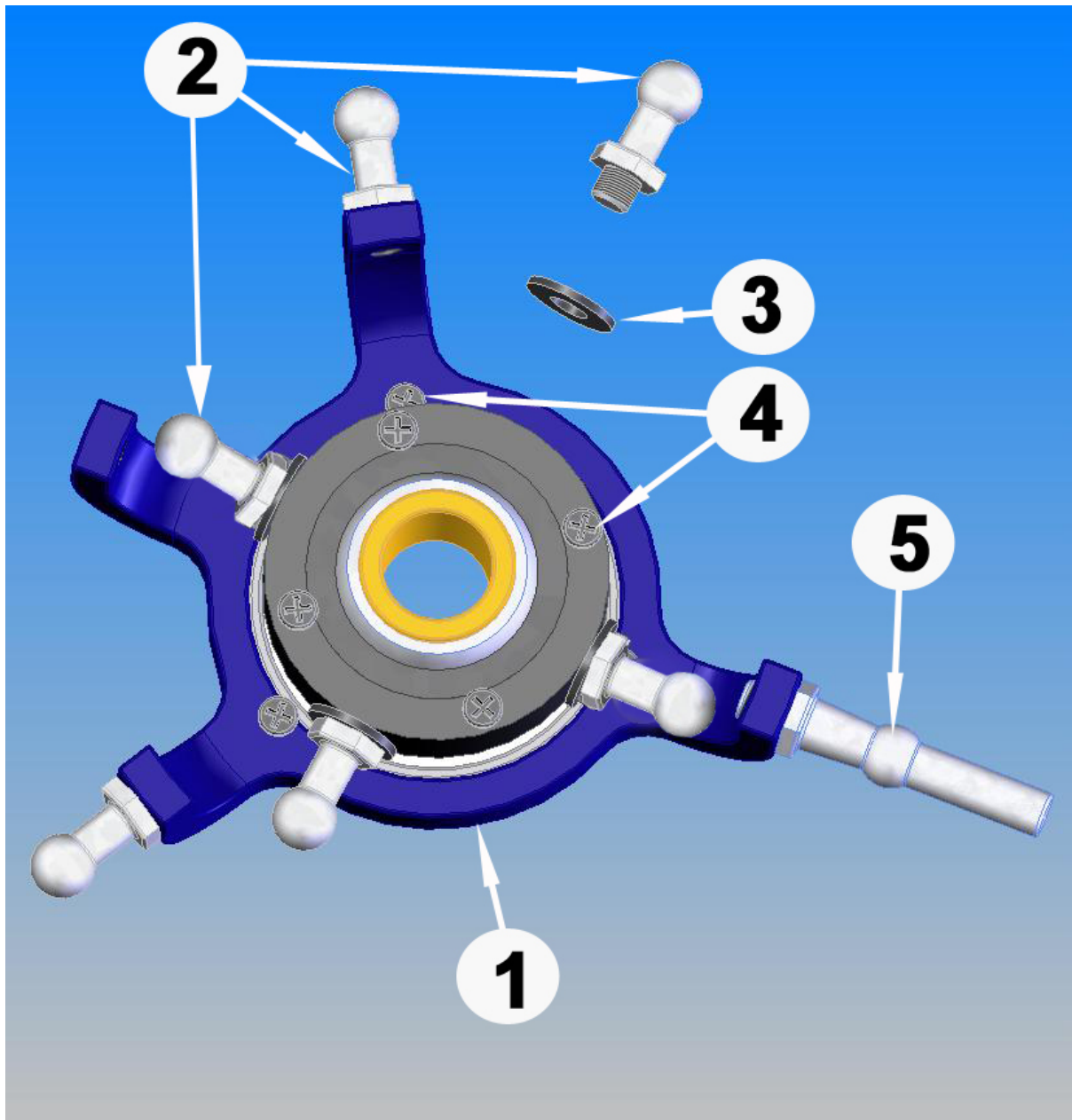
No.	Bag#	Description	Qty	No.	Bag#	Description	Qty
1		Tail Assembly	1	5	HB	M3x10 Cap Head Bolt	2
2	In Box	Boom Support	2	6	HB	M3 Locknut	2
3	3	Boom Support End	4	7****		CA Glue	1
4	HB	M3x8 Cap Head Bolt	2				

- Note for installing the timing belt: Turn the Tail assembly so that the Tail Output Shaft pointing upward put the belt onto the Transmission, then twist the Tail Assembly 90° to the right. Make sure the belt not too tight or loose. Tighten four locknuts.
- Measure the Boom Support carefully before cutting. It is a good idea if you install one end of the rod first, then make the measure then cut it. Remember apply CA Glue for the rods when installing into the Support Ends.



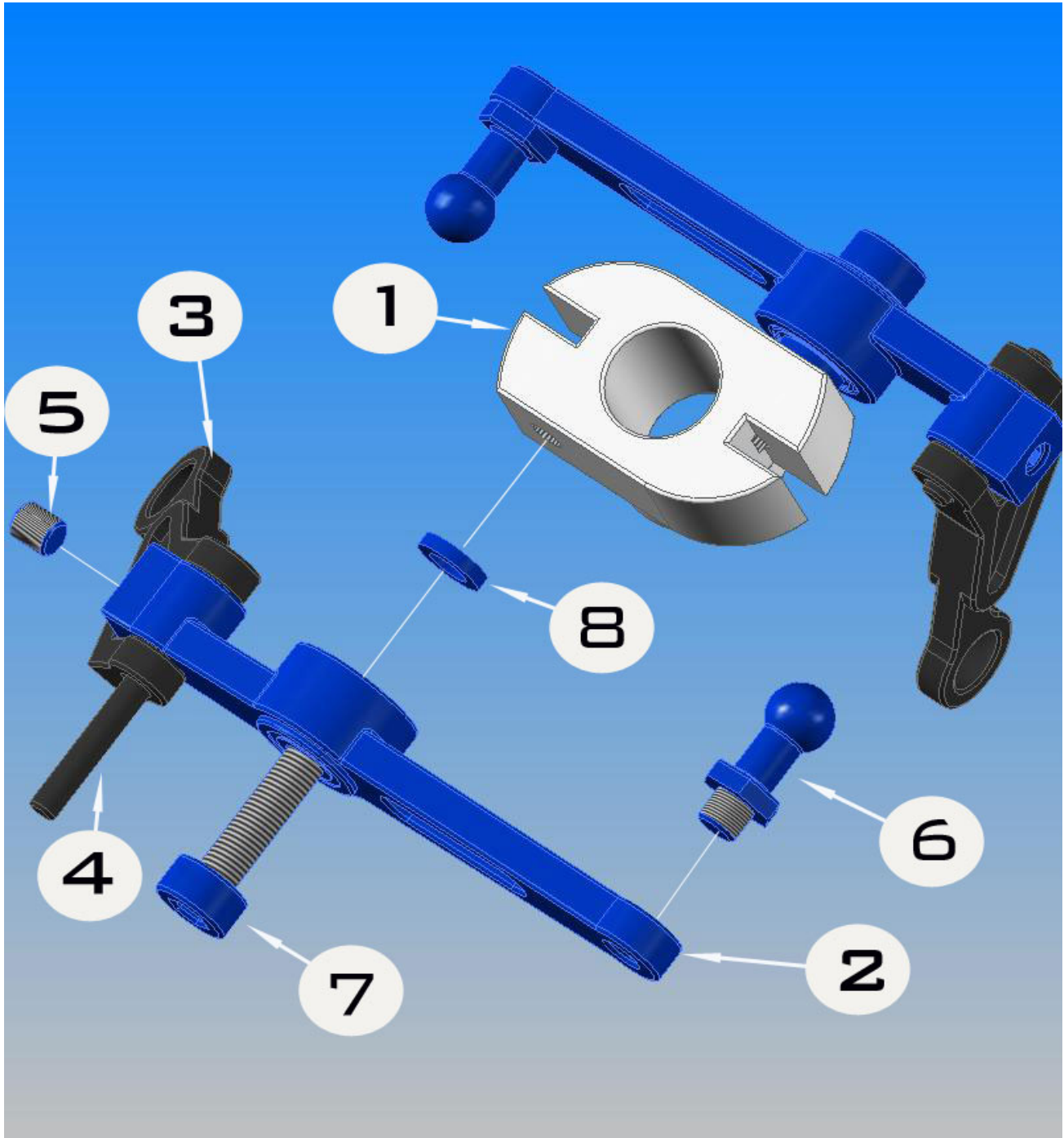
4-1 SWASHPLATE ASSEMBLY

No.	Bag#	Description	Qty
1	4	Swashplate Complete	1
2	HB	M3x7Pivot Ball Stud	6
3	HB	M3x 7Flat Washer	4
4	HB	M2X4 Phillips Screws	7
5	4	Anti-rotation Pin	1



4-2 WASHOUT ASSEMBLY

No.	Bag #	Description	Qty	No.	Bag #	Description	Qty
1	4	Washout Base	1	5	4	M3x5 Set Screw	2
2	4	Washout Arm	2	6	HB	M3x7Pivot Ball Stud	2
3	4	Washout Link	2	7	HB	M3x10 Cap Head Bolt	2
4	4	Washout Link Pin	2	8	HB	M3X5X1 Spacer	2

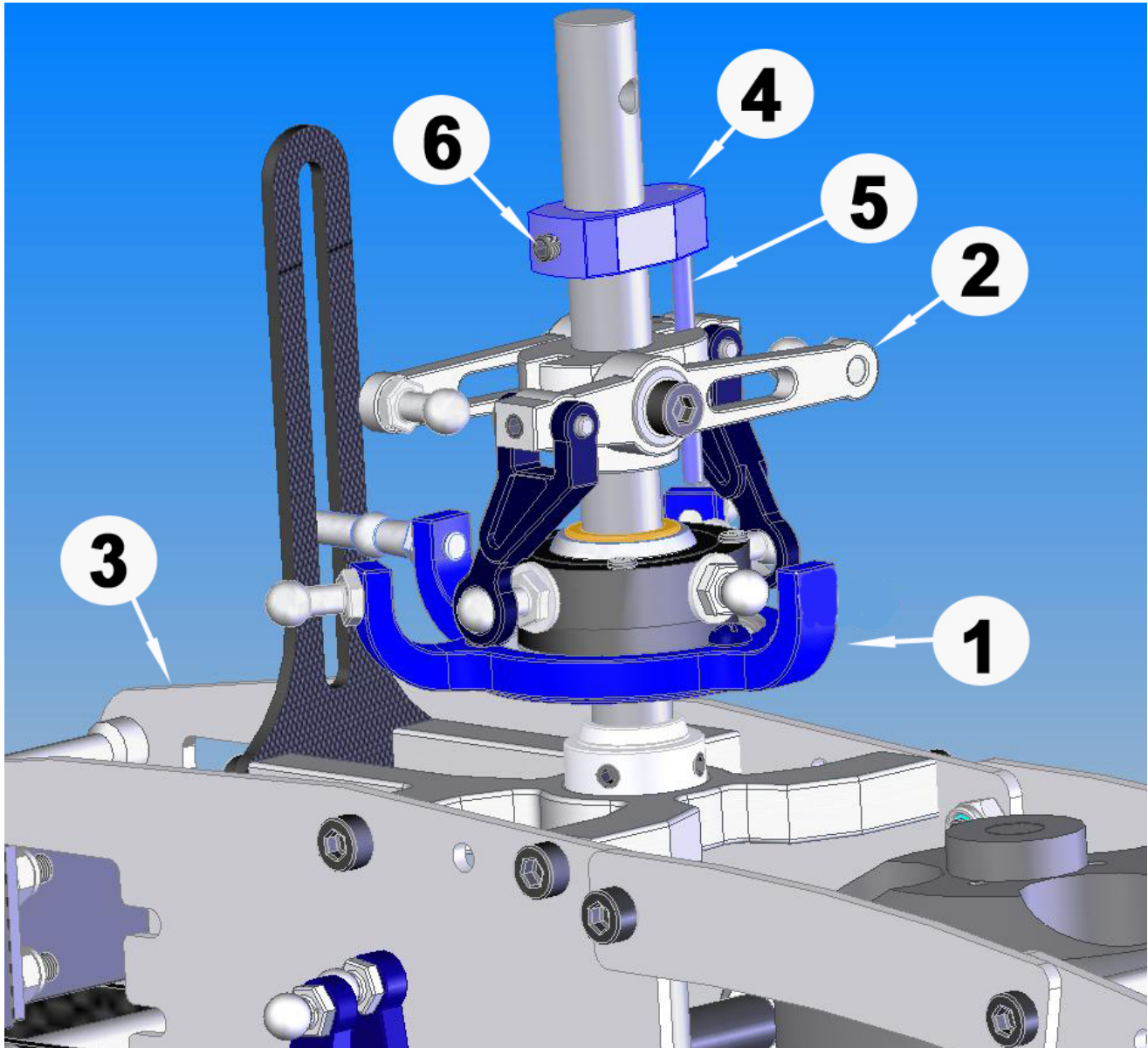


4-3 CONTROL SYSTEM INSTALLATION

No.	Bag#	Description	Qty
1		Swashplate Assembly	1
2		Washout Assembly	1
3		Helicopter (up to step 3)	1
4	4	Washout Anti-rotation Base*	1
5	4/5	Washout Anti-Rot Guide Pin**	1
6	HB	M3x5 Set Screw*	1

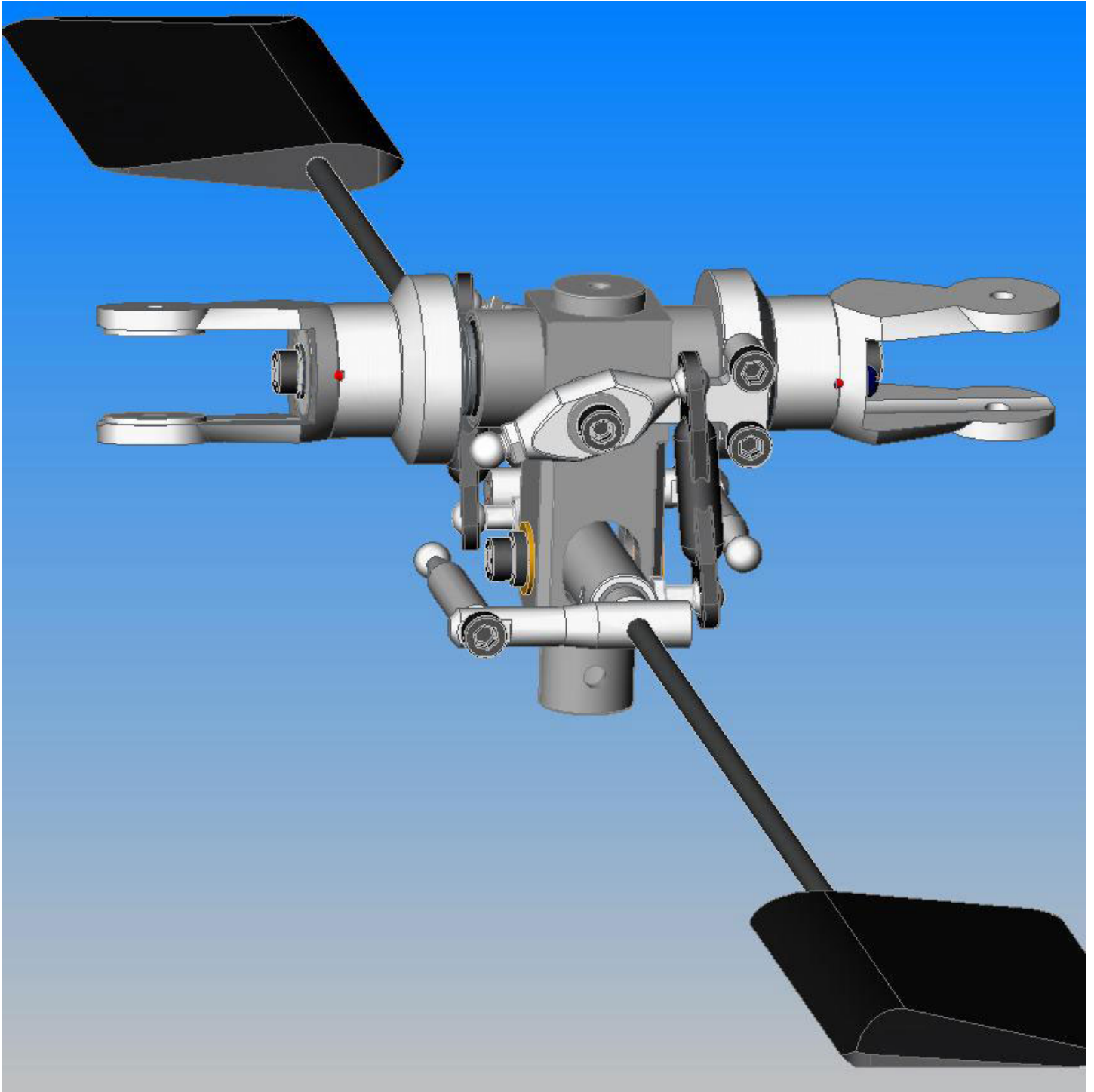
*Sweet 16V2 does not need these parts because Washout Anti-rotation Base is built in the Center Hub.

**Sweet 16V2 need two Washout Anti-rotation Guide Pins (see Section 5-B-2).



Note: Do not tighten the Set Screw too tight; wait until you put the Head on. Connect two Washout Links to the M3x7 Pivot Ball Studs. For the Little Sweetie 10, the gap between the Head and the Washout Anti-rotation Base will be about 2 mm and the Pin will be almost line up with one of the two little gaps of the Head (see Step 5-A-3).

SECTION 5-A: ROTOR HEAD for Little Quickie 10 Bag 5



5-A-1 MAIN ROTOR HUB ASSEMBLY

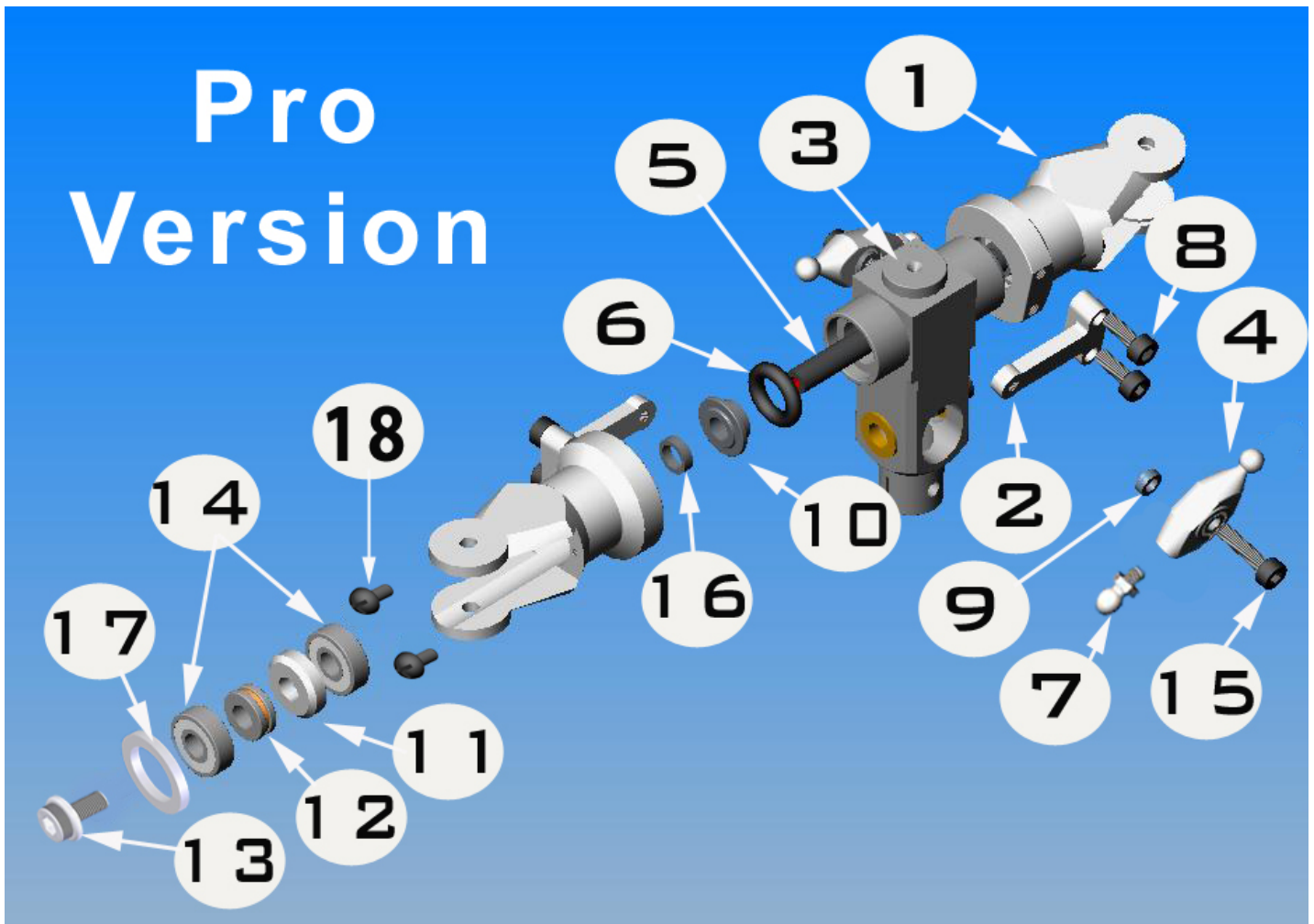
No.	Bag#	Description	Qty	No.	Bag#	Description	Qty
1	5	Main Blade Grip*	2	10	5	Head Spindle Spacer	2
2	5	Pitch Arm*	2	11	5	Thrust Bearing Spacer**	2
3	5	Center Hub	1	12	5	5x10x4 Thrust Bearing**	2
4	5	Hiller Arm	2	13	HB	M3x6 Flange Cap Head Bolt	2
5	5	Head Spindle	1	14	5	5x13x4 Regular Bearing***	4
6	5	Dampener O-Ring	2	15	HB	M3x12 Cap Head Bolt	2
7	HB	M3x7 Pivot Ball Stud	2	16	HB	5x7x2 Spacer**	2
8	HB	M3x8 Cap Head Bolt**	4	17	HB	M9x13x1.45 Thrust Bearing Spacer	2
9	HB	M3X5X3 Spacer	2	18	HB	M2x4 Phillips Screw	4

*Sport version: Pitch Arms is built in the Main Blade Grips so there are no M3x10 Cap Head Bolts.

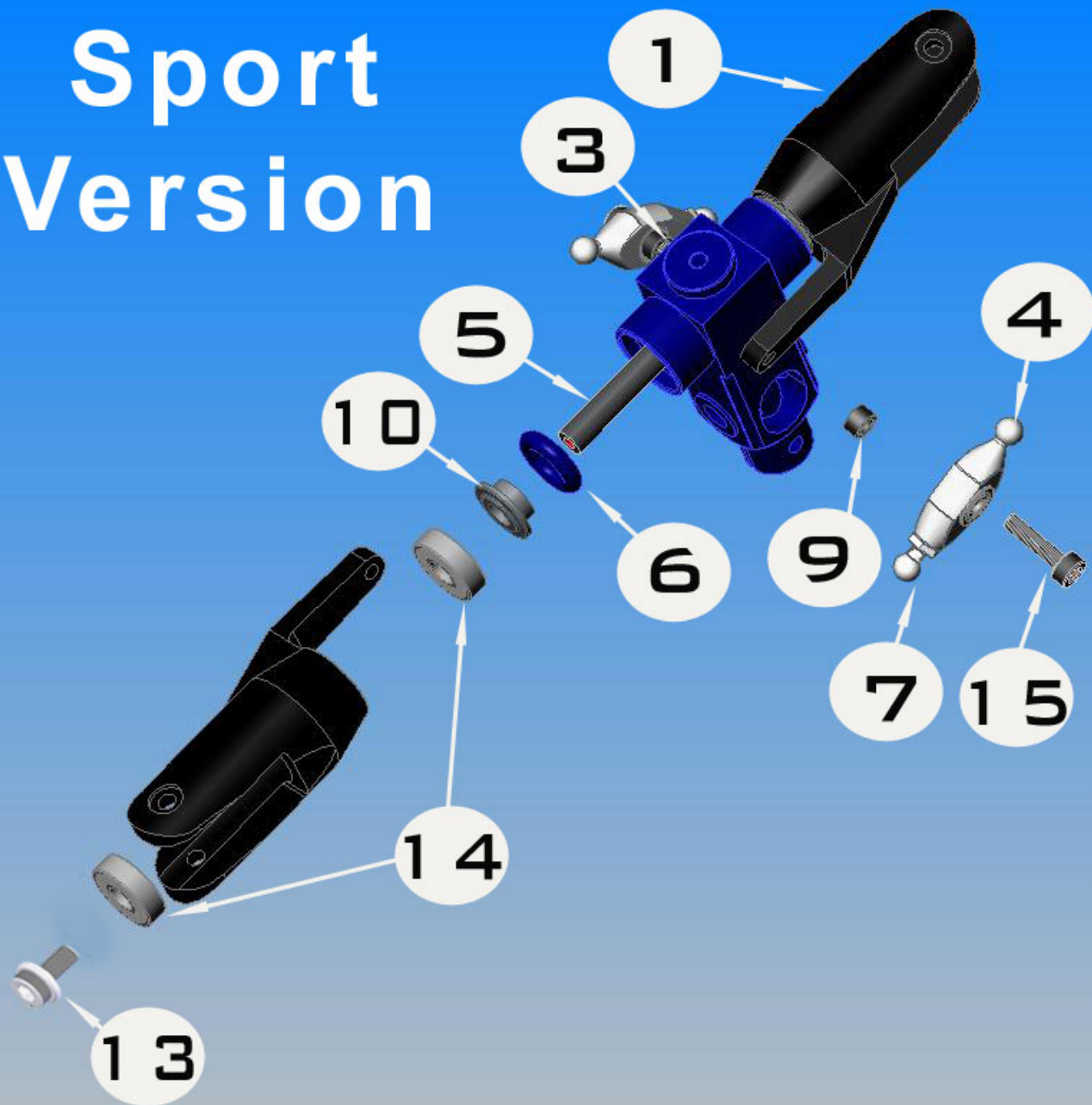
**Sport version does not have these parts.

***Sport version: BRG05114R (5x11x4 Regular Bearing.)

Note: Remember to apply grease for bearings. Thrust Bearing has 3 parts: two races and bearing. The bigger race should be toward the Center Hub. The smaller race should be toward the blade. Parts may look differently from the ones you have in the kit

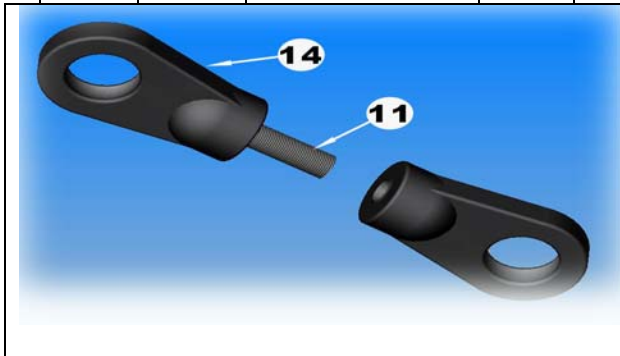


Sport Version

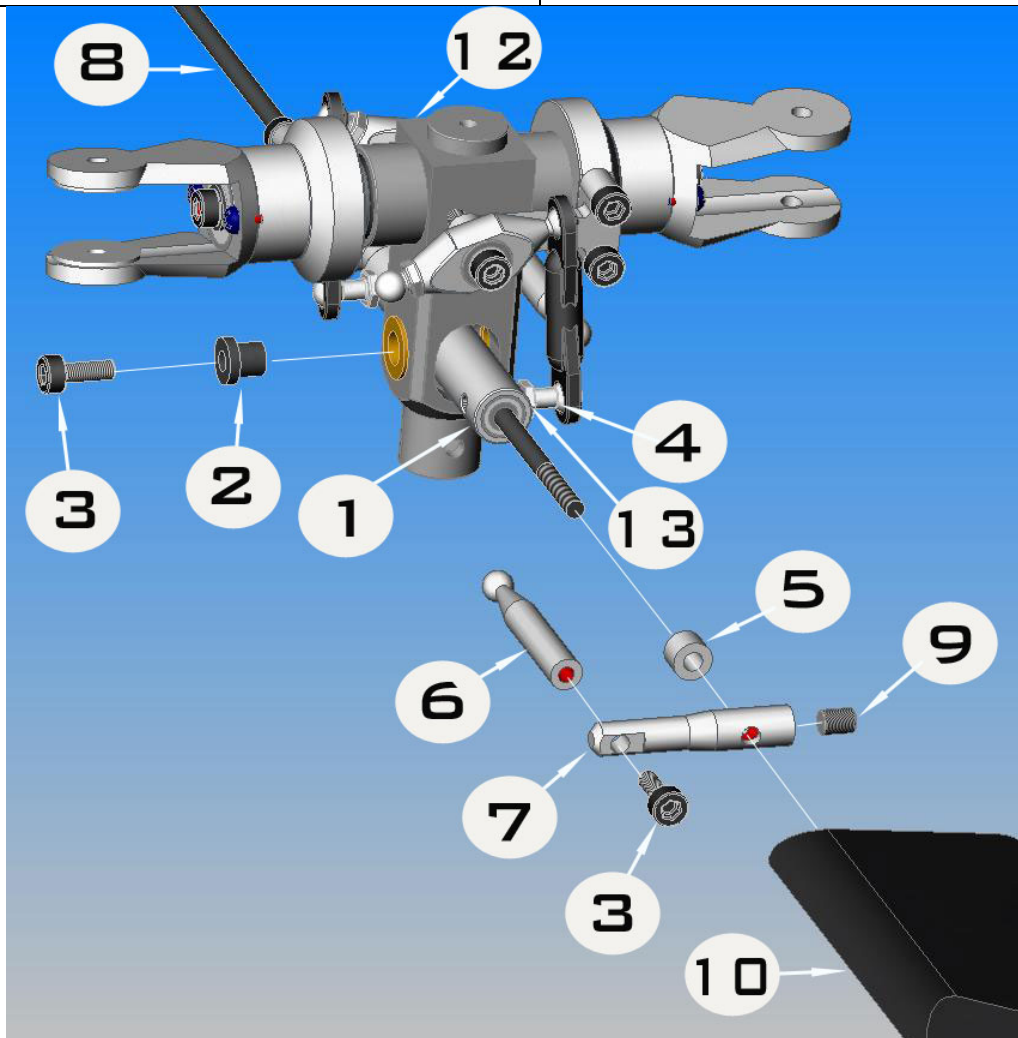


5-A-2 FLYBAR & SEESAW ASSEMBLY

No.	Bag#	Description	Qty	No.	Bag#	Description	Qty
1	5	Seesaw	1	8	In	3mm Standard	1
2	5	Seesaw Collar	2	9	HB	M4x4 Set	2
3	HB	M3x8 Cap Head Bolt	4	10	HB	3mm Fly-Bar	2
4	HB	M3x7 Pivot Ball Stud	2	11	5	2.3x10 Linkage	2
5	5	Flybar Spacer	2	12		Main Rotor Hub	1
6	5	Fly-Bar Control Arm	2	13	HB	M3 Flat Washer	2
7	5	Fly-Bar Control Arm	2	14	5	Short Ball End	4
				15	****	Epoxy Glue/JP	1



- Screw two Short Ball Ends until they hit each other.
- There are two holes in the paddles. For regular setup, use the hole that is further from the letter "Quick" on the paddles.
- Although the drawing does not show the other side of the head, you should repeat the same assembly for that side.
- Fly-bar should be balanced on the Seesaw.

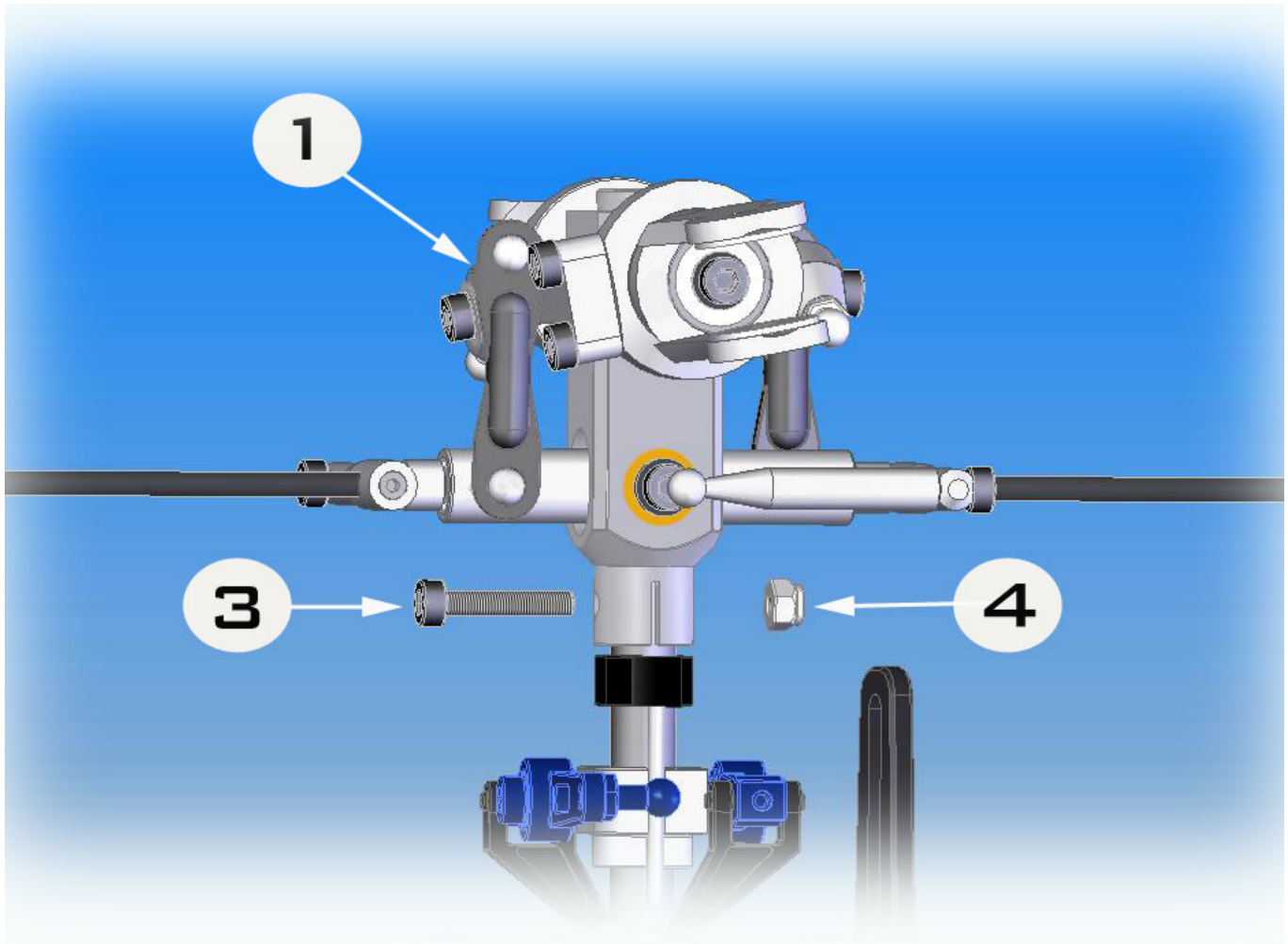


Warning: To prevent the Flybar Paddle from falling off the Flybar, make sure to apply Epoxy Glue/JP Weld to the thread on Flybar after Radio Setup.

5-A-3 ROTOR HEAD INSTALLATION

No.	Bag#	Description	Qty
1		Fly-Bar Seesaw Assembly	1
2		Helicopter (up to step 4)	1
3	HB	M3x20 Cap Head Bolt	1
4	HB	M3 Locknut	1

Install the Head Assembly into the Main Shaft, and then secure it by one M3x20 Cap Head Bolt and one M3 Locknut.

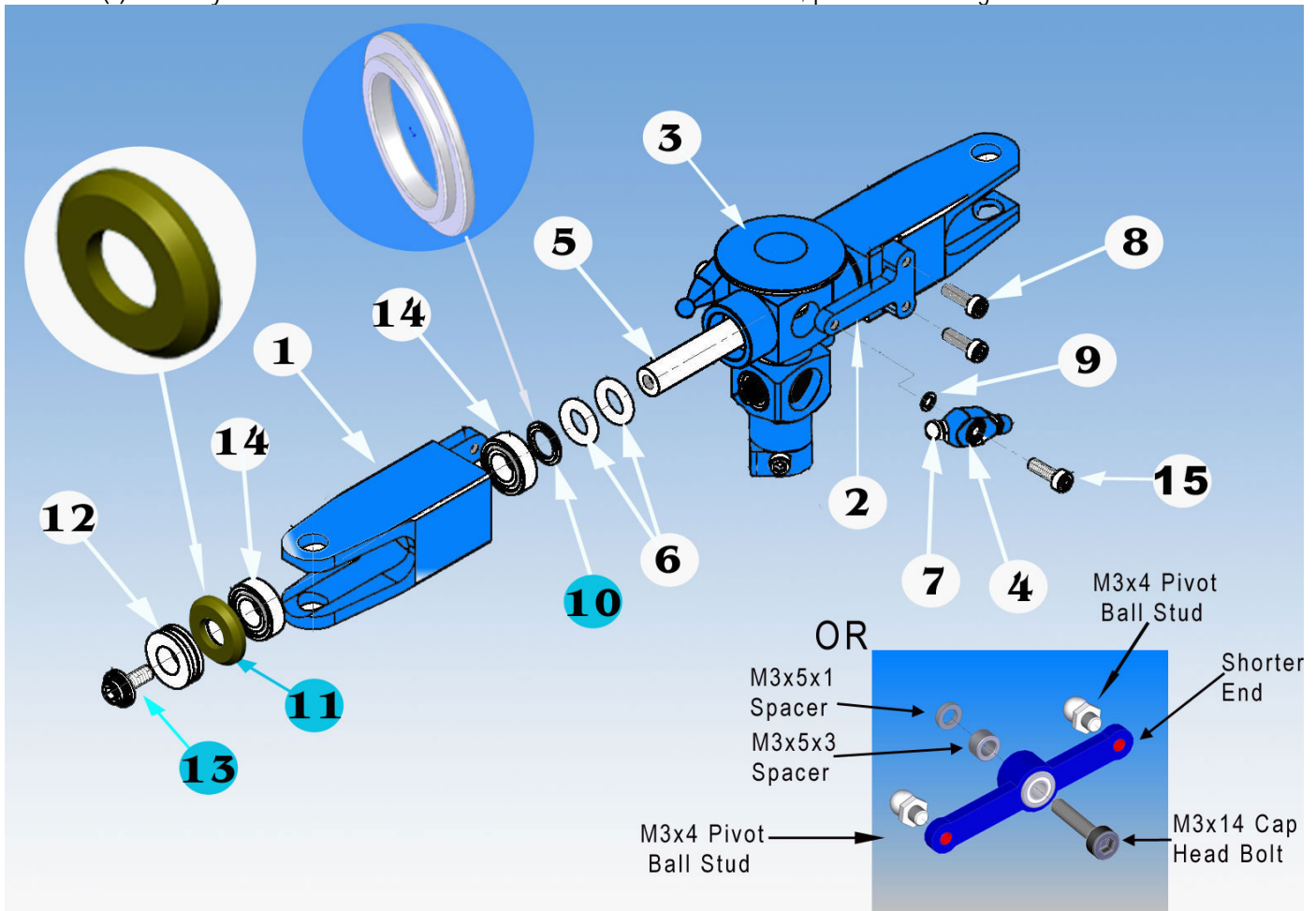


5-B-1 MAIN ROTOR HUB ASSEMBLY

No.	Bag#	Description	Qty	No.	Bag#	Description	Qty
1	5	Main Blade Grip	2	9	HB	M3X5X3 Spacer	2
2	5	Pitch Arm*	2	10	5	Head Spindle Spacer	2
3	5	Center Hub	1	11	5	Thrust Bearing Spacer	2
4	5	Hiller Arm (**)	2	12	5	8x16x5 Thrust Bearing	2
5	5	Head Spindle	1	13	5	M4x8 Flange Cap Head Bolt	2
6	5	Dampener O-Ring	4	14	5	8x16x5 Regular Bearing	4
7	HB	M3x7 Pivot Ball Stud	2	15	HB	M3x12 Cap Head Bolt	2
8	HB	M3x10 Cap Head Bolt*	4				

*Sport version: Pitch Arms is built in the Main Blade Grips so there is no M3x10 Cap Head Bolts

(**) You may have different version of the Hiller Arm. It works the same; please see the figure for installation

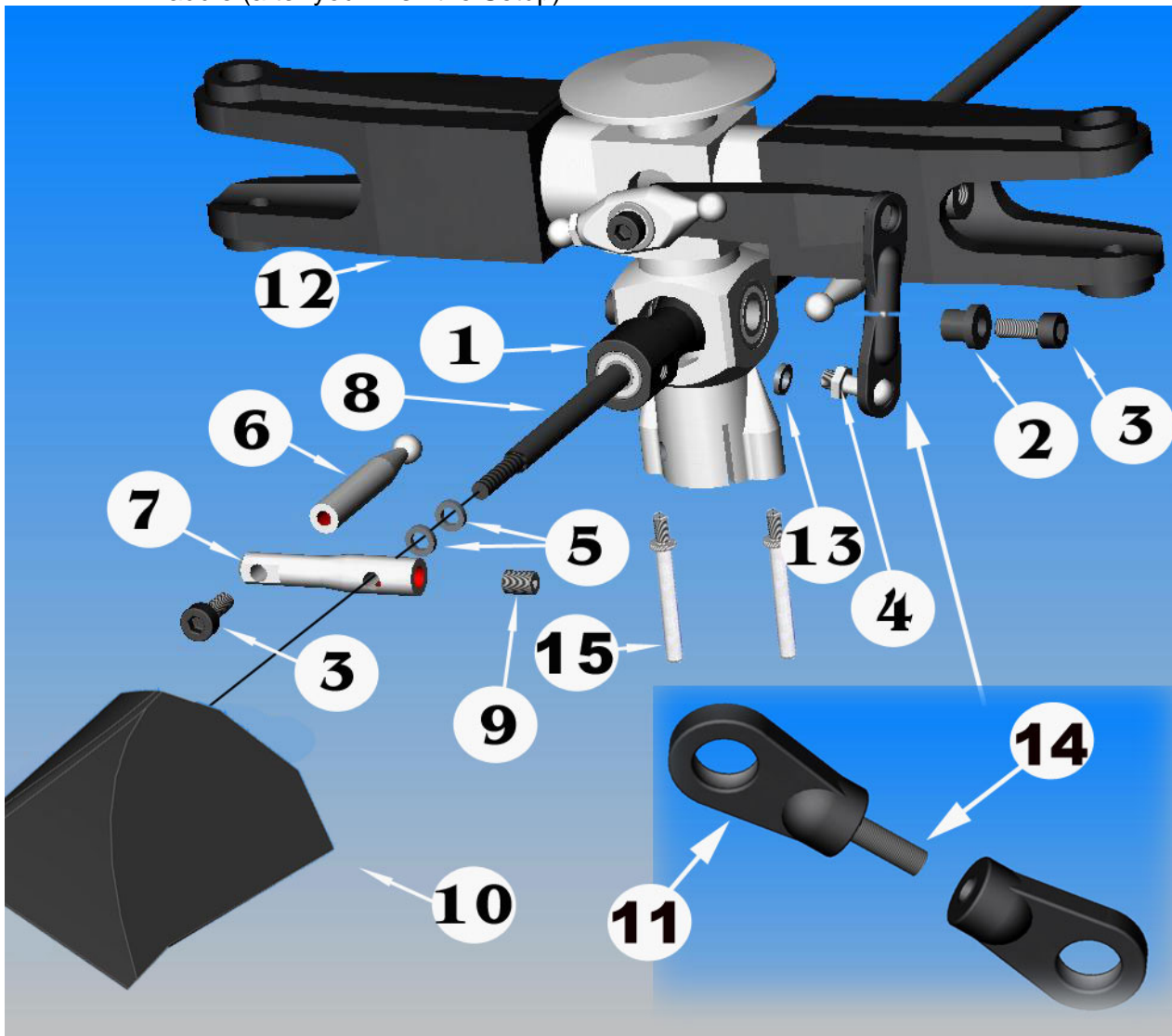


Note: Some Center Hubs are designed for one O-ring each side. If this is your case, use one O-ring each side. The beveled edge of the Thrust Bearing Spacer (No. 11) should be face away from the Center Hub. The flanges of the bearings of the Hiller Arms should face outside. Usually the Thrust Bearing has three parts: two race washers and caged ball bearings. The caged ball bearings will be between two race washers. In some cases, you may get different version of the Thrust Bearing: one race washer, one flat washer, and caged ball bearings in your kit. That is fine; it still works the same. In this case, you need to install the flat washer first (next to Thrust Bearing Spacer-No. 11), then the caged ball bearings, the race washer goes last. Remember to apply grease for bearings.

5-B-2 FLYBAR & SEESAW ASSEMBLY

No.	Bag#	Description	Qty	No.	Bag#	Description	Qty
1	5	Seesaw	1	9	HB	M3x5 Set Screw	2
2	5	Seesaw Collar	2	10	5	4mm Fly-Bar Paddle	2
3	HB	M3x8 Cap Head Bolt	4	11	5	Short Ball End	4
4	HB	M3x7 Pivot Ball Stud	2	12		Main Rotor Hub Assembly	1
5	HB	M4x6x1 Spacer	4	13	HB	M3 Flat Washer	2
6	5	Fly-Bar Control Arm A	2	14	5	10 mm Linkage Rod	2
7	5	Fly-Bar Control Arm B	2	15	5	Washout Anti-rotation Pin	2
8	In box	4mm Standard Flybar	1	16	*****	Epoxy Glue/JP Weld	1

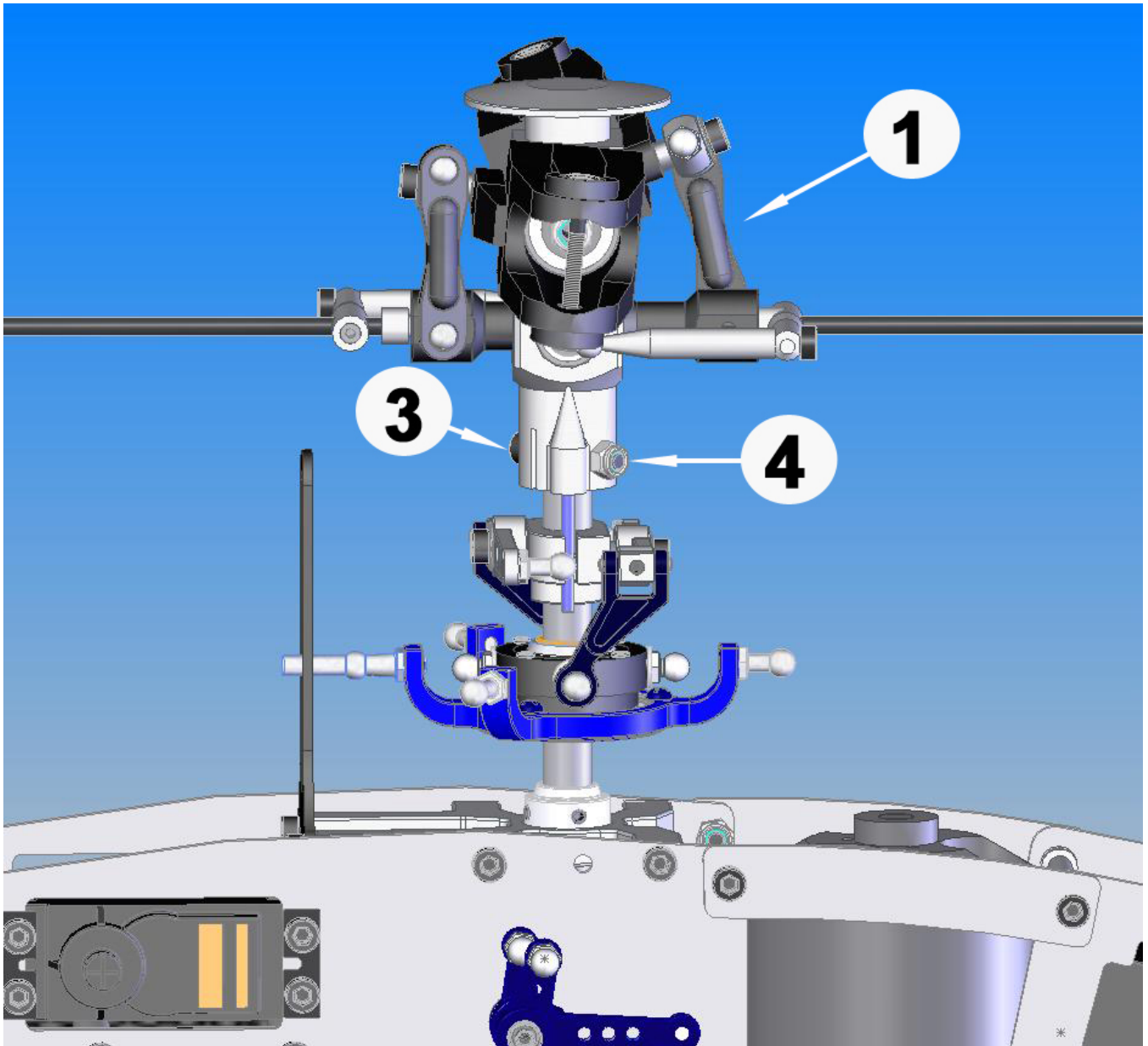
- There are two holes in the paddles. For regular setup, use the hole that is further from the letter "Quick" on the paddles.
- Although the drawing does not show the other side of the head, you should repeat the same assembly for that side.
- Fly-bar should be balanced on the Seesaw.
- Connect the Short Ball Ends to the cooperated ball of the Hiller Arms.
- Make sure to apply Epoxy Glue/JP Weld to the thread on Flybar and the Flybar Paddle (after you finish the Setup)



Note: The Center Hub and Flybar Control Arm shown may look differently from the ones in the kit.

5-B-3 ROTOR HEAD INSTALLATION

No.	Bag#	Description	Qty
1		Fly-Bar Seesaw Assembly	1
2		Helicopter (up to step 4)	1
3	HB	M3x20 Cap Head Bolt	1
4	HB	M3 Locknut	1

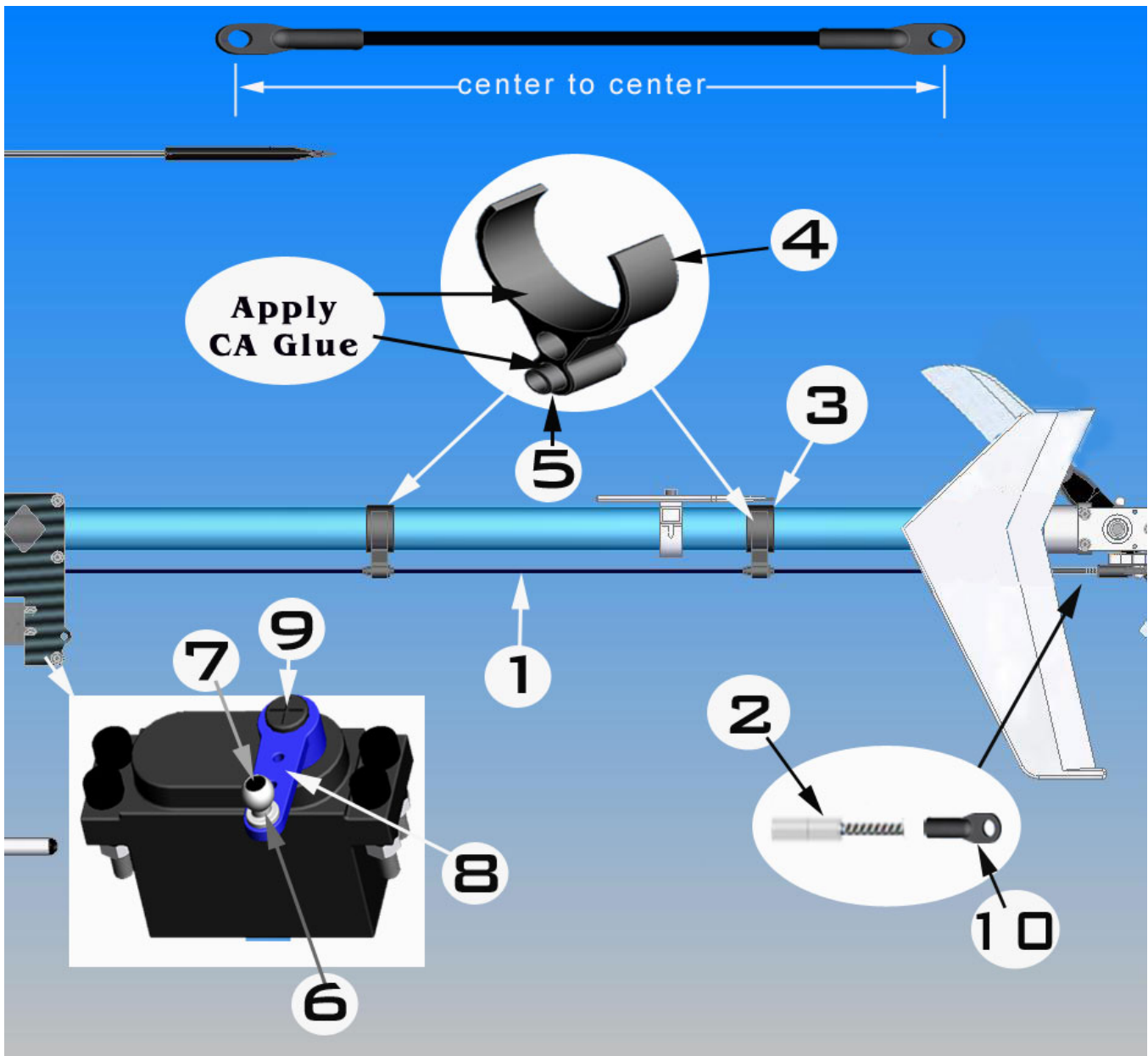


6-1 RUDDER PUSH ROD INSTALLATION

No.	Bag#	Description	Qty
1	In box	Rudder Push Rod (in Box)	1
2	6	Rudder Push Rod End	2
3****		Electric Tape	1
4	6	Rudder Pushrod Guide	2
5	6	Rudder Pushrod Guide Insert	2
6	HB	Shim Ball	1
7	HB	M2x8 Phillips Screw	1
8****		Servo Arm	1
9****		M3 Servo Phillips Screw	1
10	6	2.3 Long Ball End	2
11****		CA Glue	1

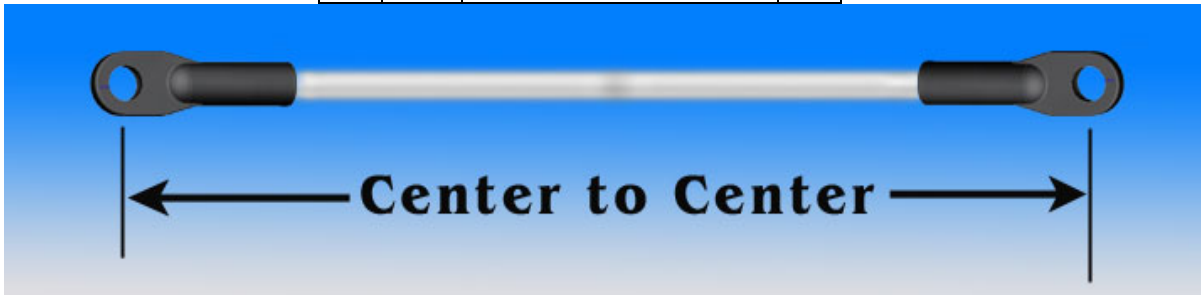
.The length of the Rudder Rod measured from center to center should be around 533 mm for Little Sweetie 10 and 554mm for Sweet 16V2.

.Put electric tape around the Boom before installing the Rudder Push Guide in, so you can remove them later.



6-2 LINKAGE ASSEMBLY

No.	Bag#	Description	Qty
1	6	2.3 Long Ball End	26
2	6	2.3 Medium Ball End	4
3	6	2.3x25mm Rod	2
4	6	2.3x35mm Rod	3
5	6	2.3x45mm Rod	2
6	6	2.3x50mm Rod	2
7	6	2.3x80mm Rod	2
8	6	2.3x100mm Rod	2

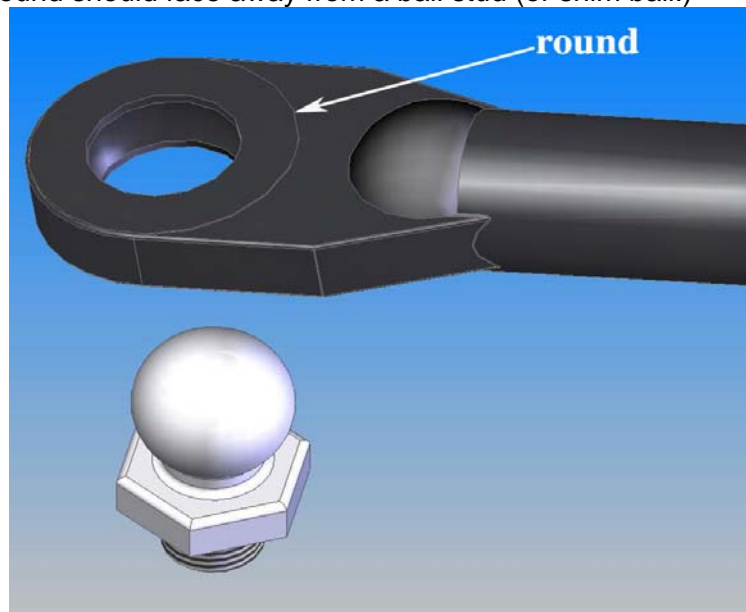


Coding the Rod Assembly:

All the Linkage should be assembled with dimensions measured center to center and coded as followings:

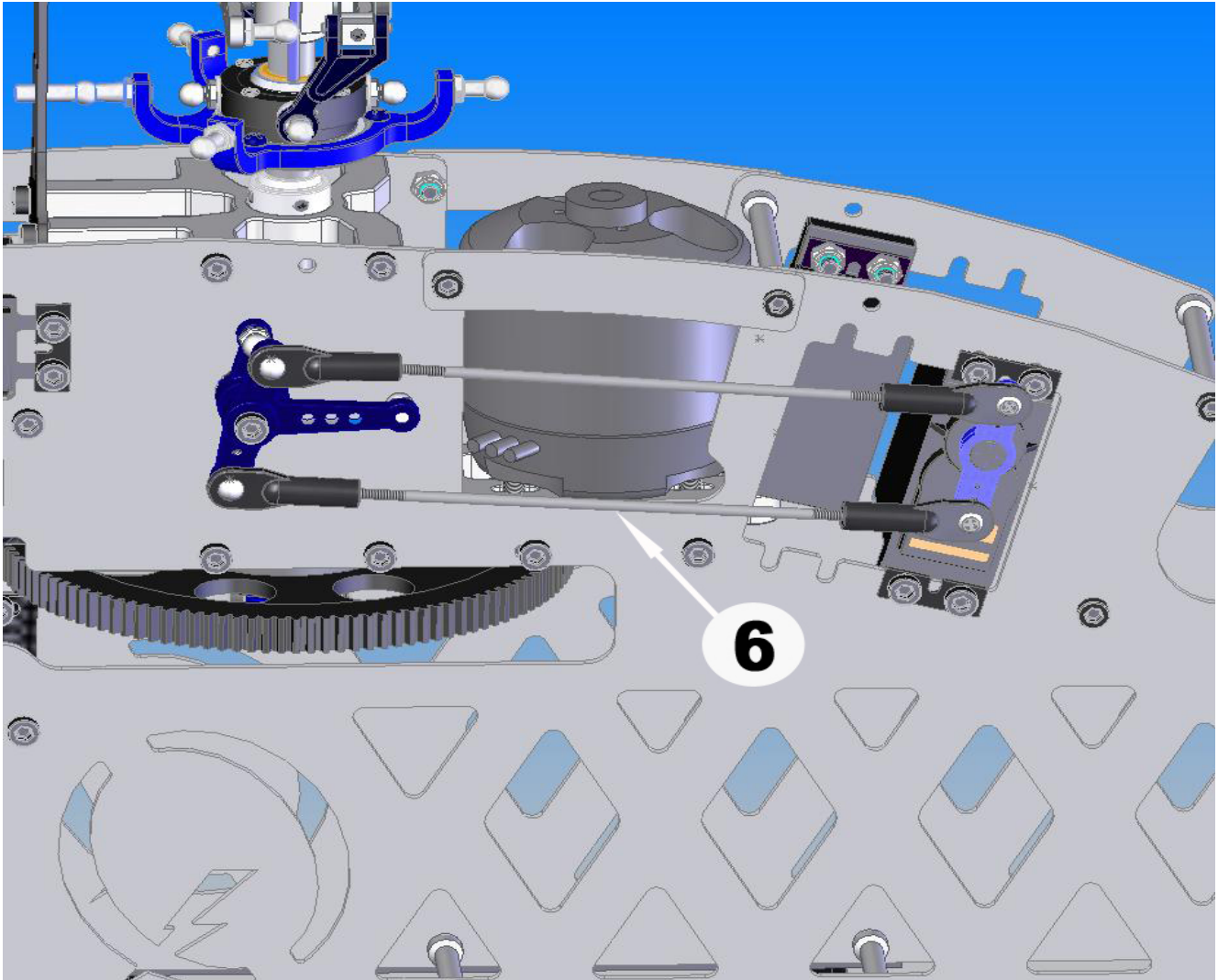
No.	Rod Description	Link Ball End used	Center to Center	Qty	
1	2.3x25mm Rod	Medium	42 mm	2	The lengths of linkages are used for reference only. Final adjustments might need to be made after setup.
2	2.3x35mm Rod	Long	58 mm	3	
3	2.3x45mm Rod	Long	70 mm	2	
4	2.3x50mm Rod	Long	82 mm	2	
5	2.3x80mm Rod	Long	105 mm	2	
6	2.3x100mm Rod	Long	127 mm	2	

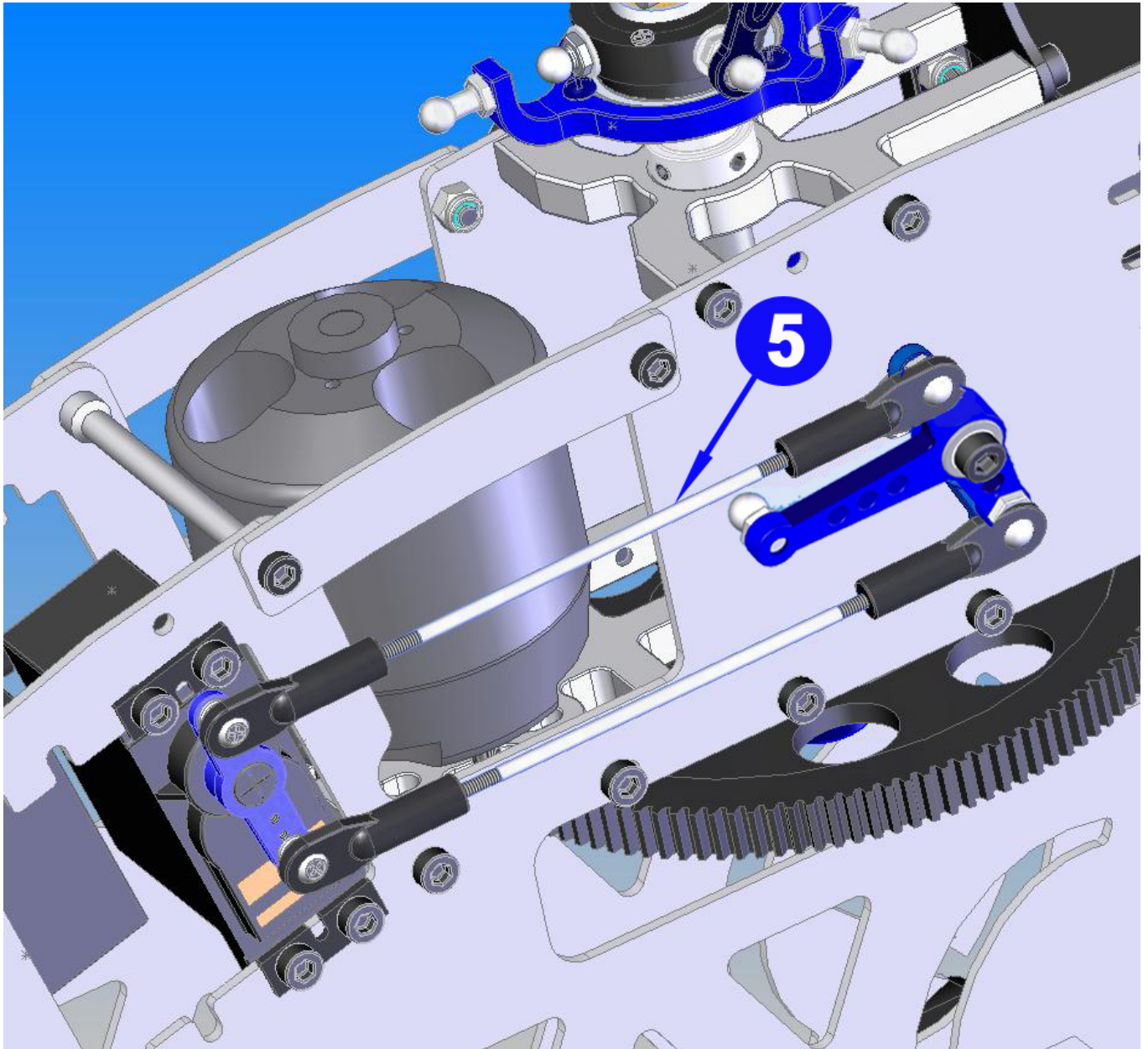
Note: Look close to a ball end; you will see one side is different from the other. One has a round marked on it. The other is just plain. When installing a ball link into a pivot ball stud (or a shim ball) the side with a round should face away from a ball stud (or shim ball.)

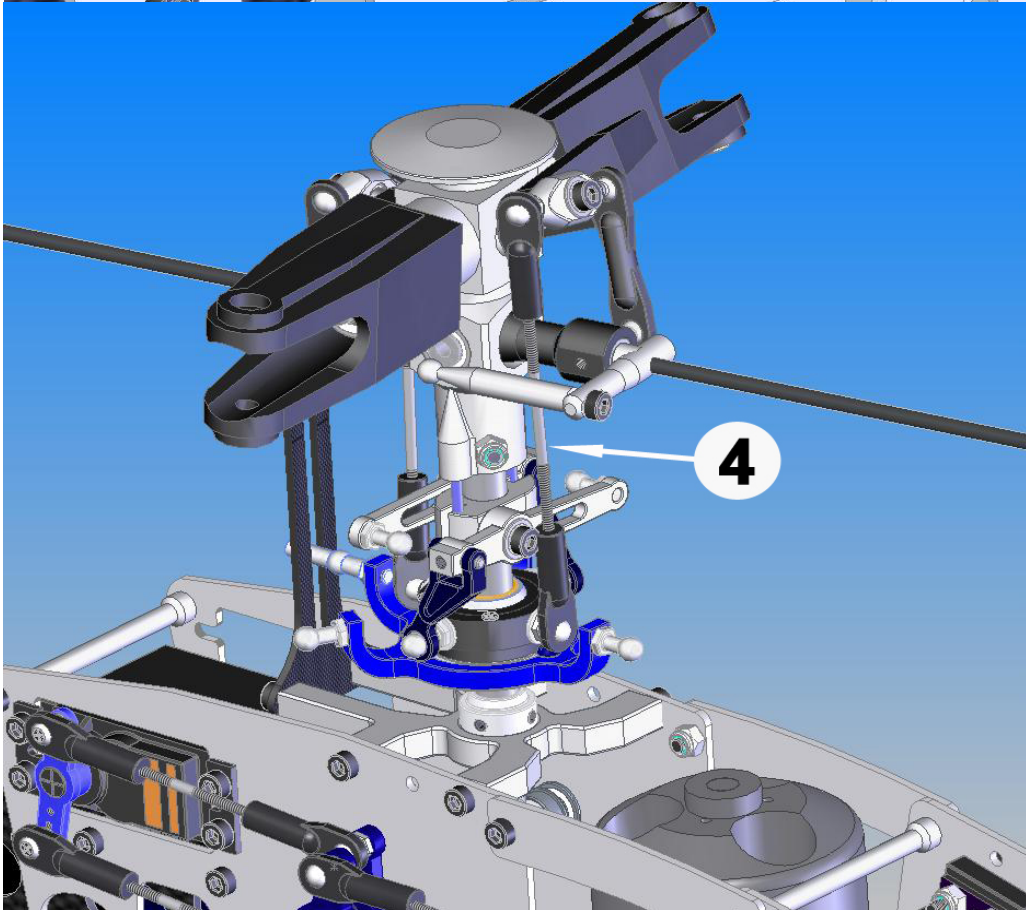
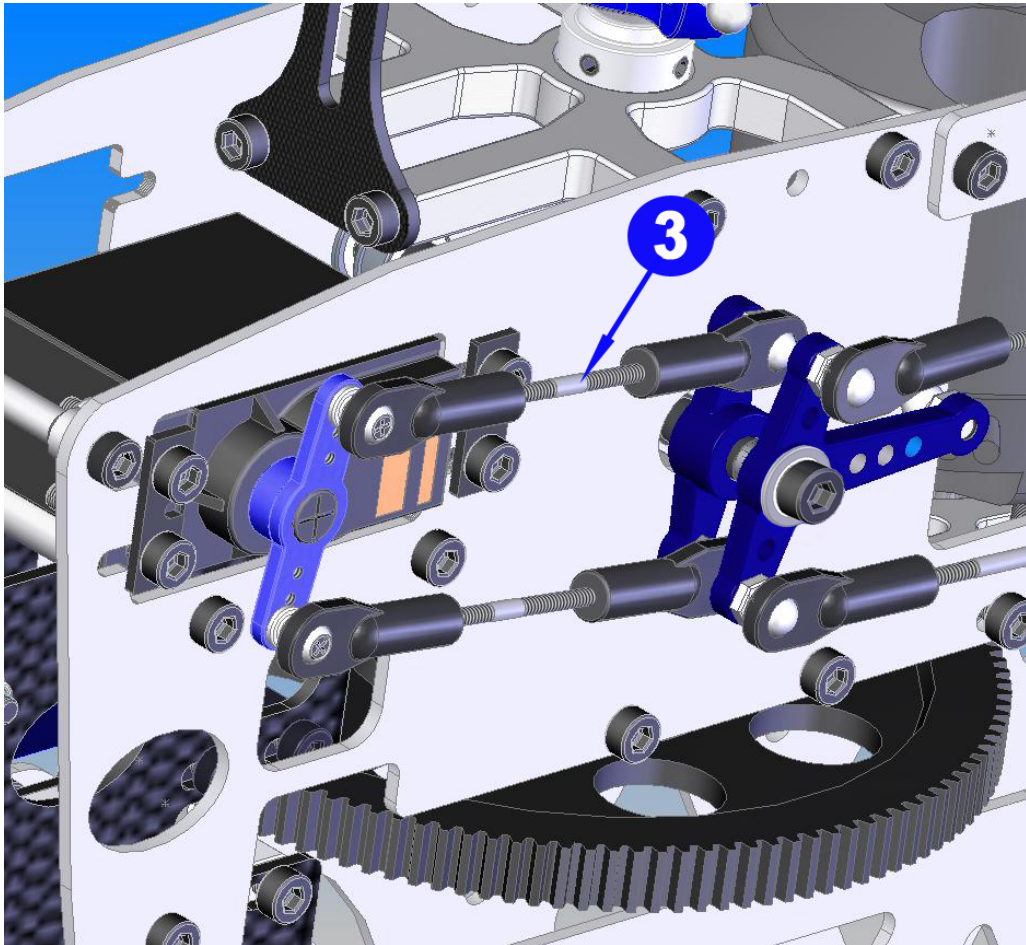


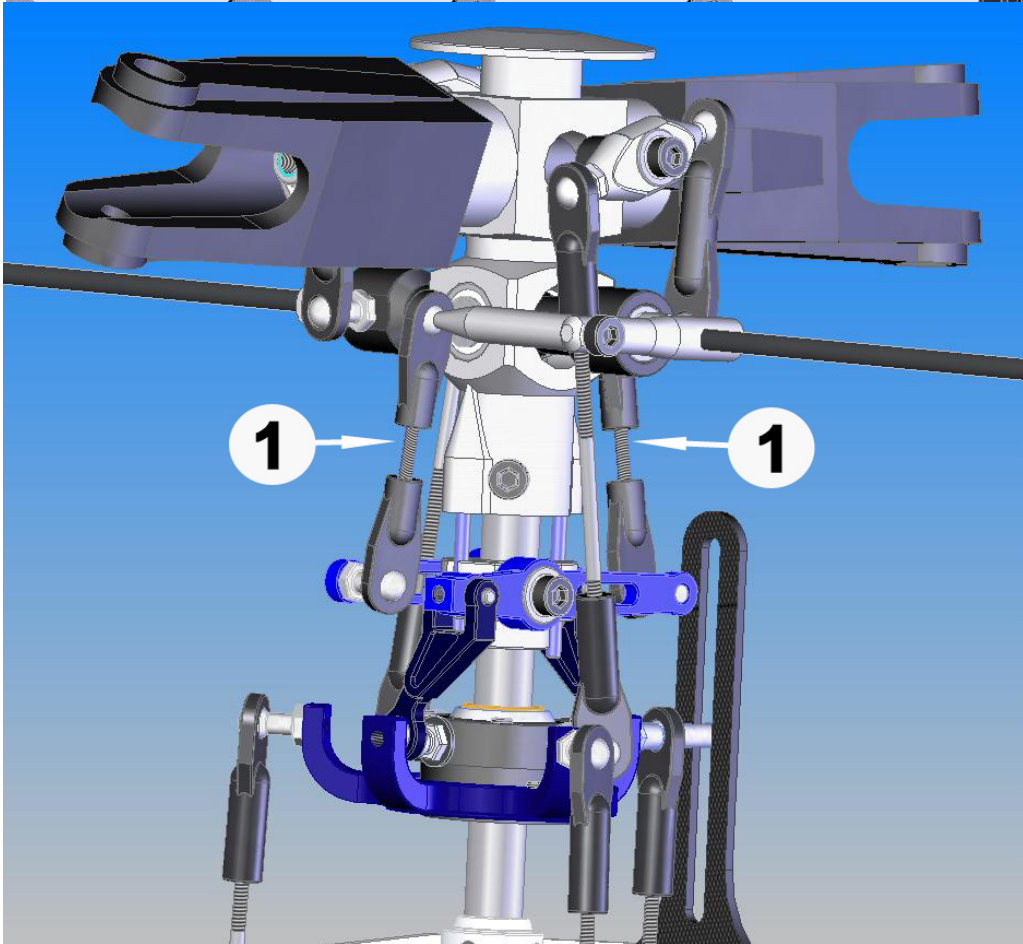
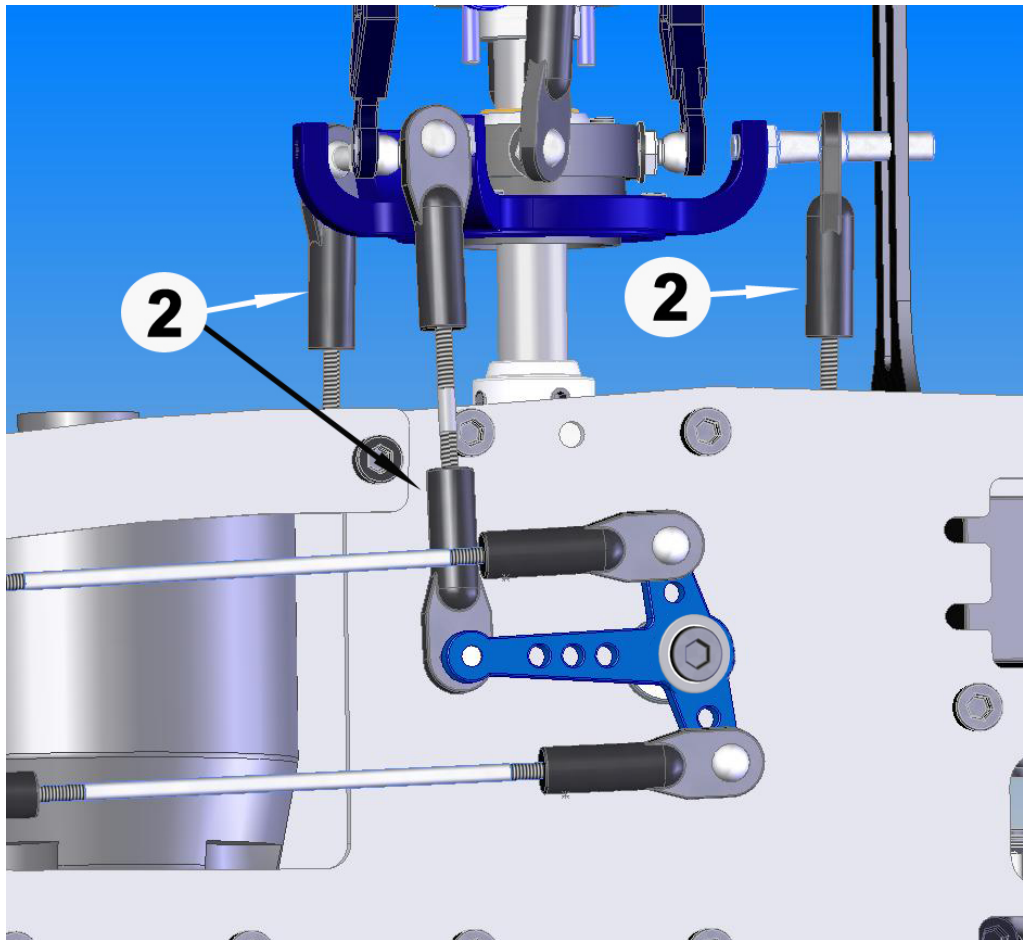
6-3 LINKAGE INSTALLATION

No.	Description	Qty	No.	Bag#	Description	Qty
1	2.3x25mm Rod Assembly	2	7		Helicopter (up to step 6-1)	1
2	2.3x35mm Rod Assembly	3	8****		Servo Arm	3
3	2.3x45mm Rod Assembly	2	9	HB	Shim Ball	6
4	2.3x50mm Rod Assembly	2	10	HB	M2x8 Phillips Screw	6
5	2.3x80mm Rod Assembly	2	11****		M3 Servo Phillips Screw	3
6	2.3x100mm Rod Assembly	2				



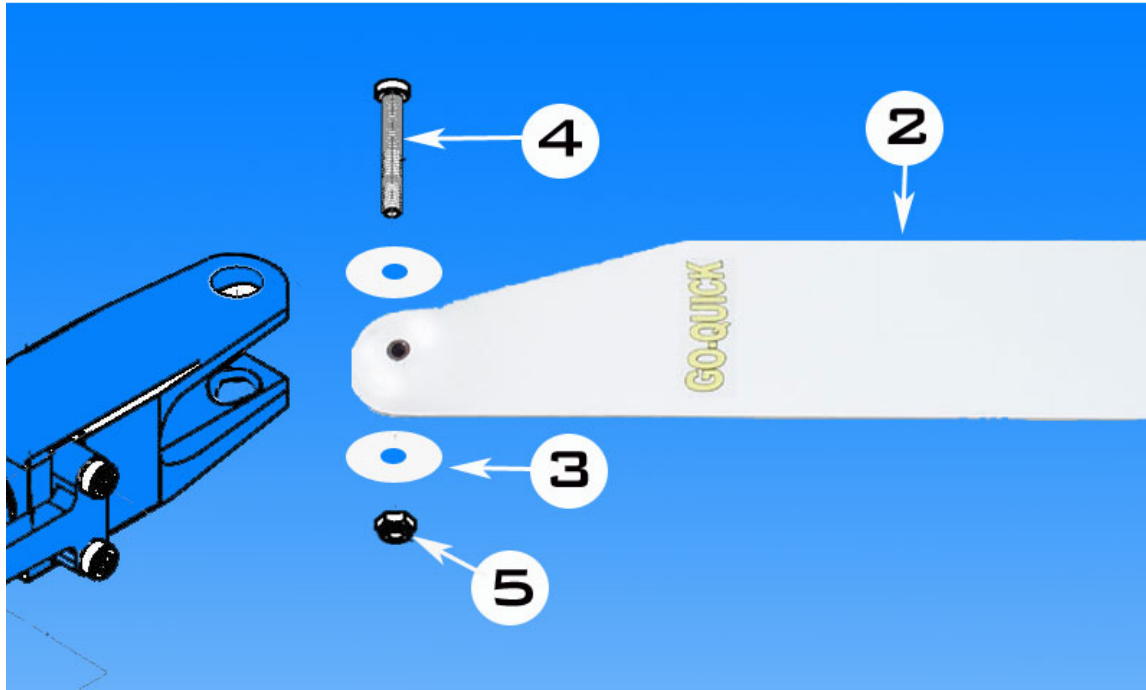






7-1 MAIN BLADE INSTALLATION

No.	Bag#	Description	Qty	*Little Sweetie 10 uses M3x22 Cap Head Bolt and M3 Locknut
1		Helicopter (up to step 6)	1	
2****		Main Blade	2	
3****		Main Blade Washer	4	
4	HB	M4x30 Cap Head Bolt*	2	
5	HB	M4 Locknut*	2	



7-2 SETTING UP RADIO

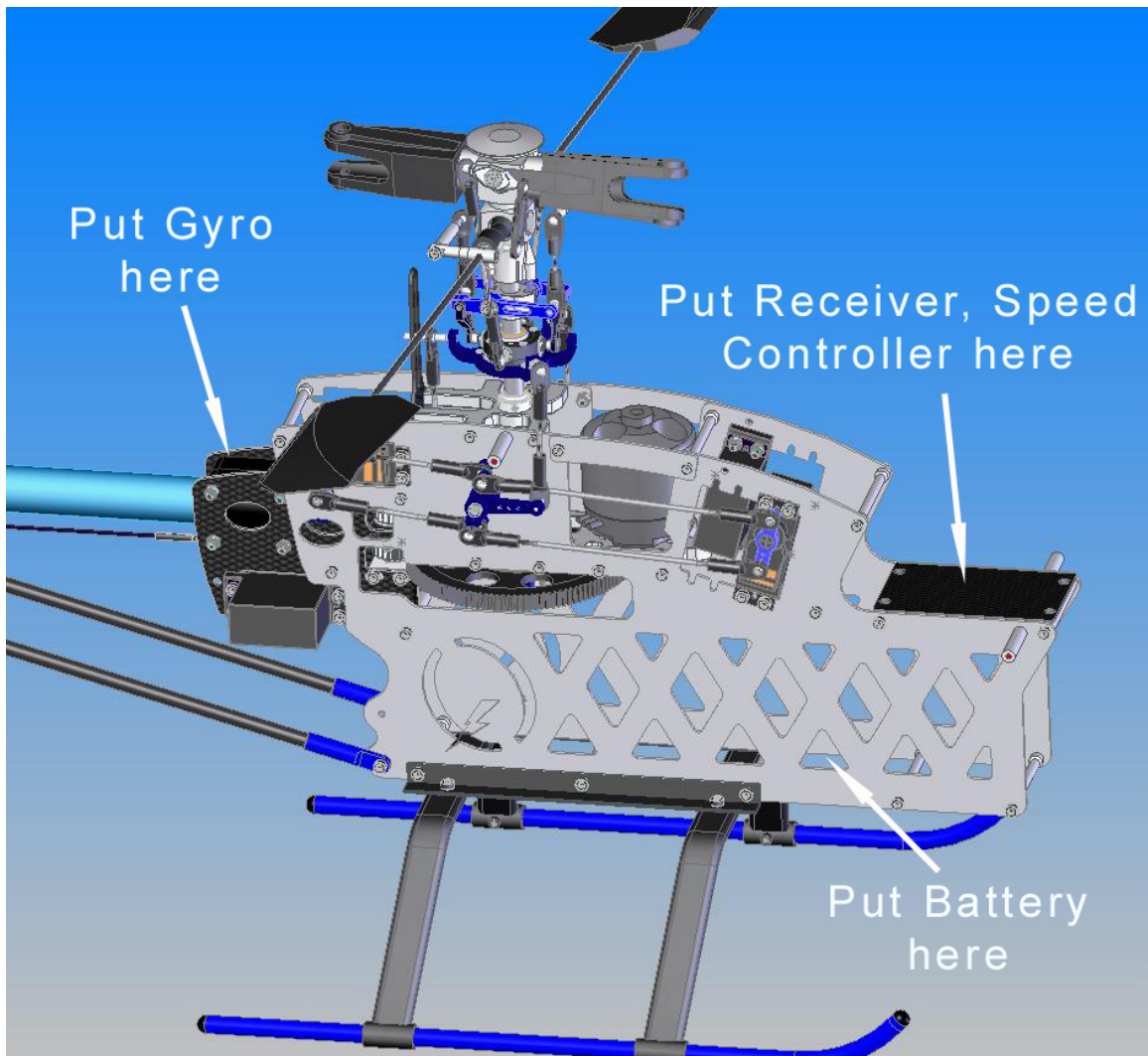
No.	Description	Qty
1	Helicopter (up to step 7-1)	1
2****	Radio	1
3****	Receiver	1
4****	Gyro	1
5****	Speed Controller	1
6****	Battery for Receiver	1
7****	Main Battery	***
8****	Battery Connector	1

CCPM Helicopter Setup (for all Quick Helicopters)

Before setting up the radio, you have to install the receiver, gyro, speed controller, and batteries for your helicopter. See your radio, receiver, speed controller, and gyro manuals for how to hook up.

General

Instead of giving you the exact length of each linkage rod we will explain to you what you are trying to achieve. This is the same for all Quick helicopters. Another thing worth mentioning is that all controls on our helicopters are leading edge controlled. We have



three such controls on our helicopter and they are Main blades, Tail blade and flybar control arms. For example the main blade pitch arms should be mounted so they are in front of the blades in the direction of travel, clockwise if you look at the helicopter from above, see picture 4.

Your radio manual will be needed during this set up.

Swashplate

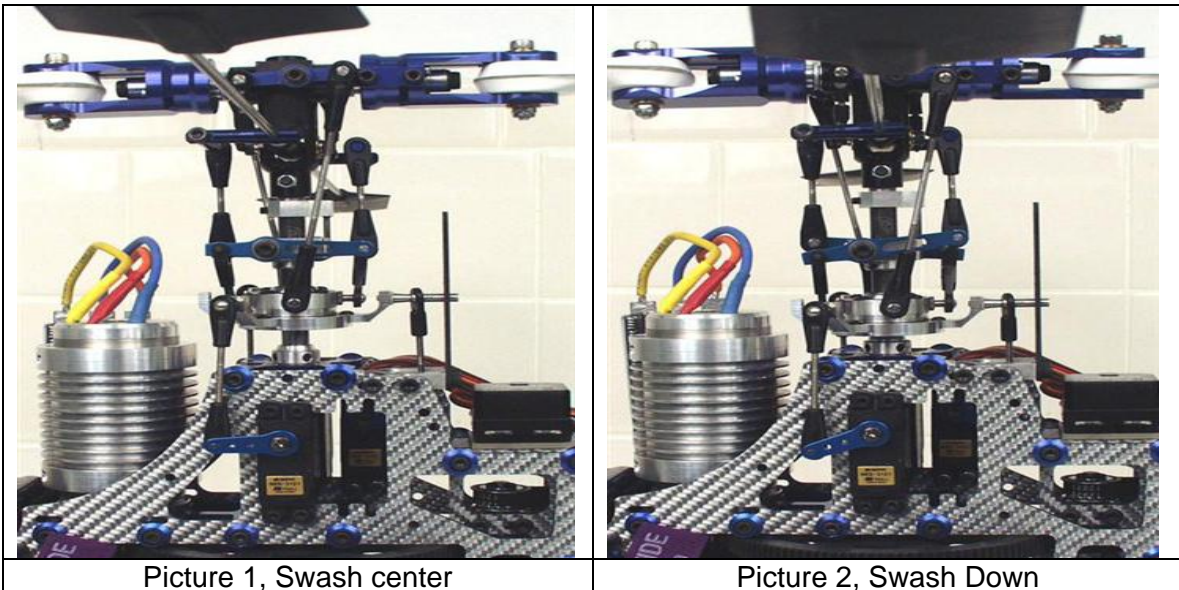
First, set your radio so that all travel values are at 100%. If you have a radio with Swash Mixing set, set those values to 50% (Aileron, Elevator, and Pitch.) Then use servo reversing so that all servos are moving in the right direction. If Pitch operates reversed, change the value in the Swash Mixing from + to -.

Step 1: First set your radio up so that all servos are moving in the right direction and adjust all travel values to 100%. If you have a radio with Swash mixing values set those to 50% (Pitch, Aileron and Elevator).

Now center both radio sticks (including “throttle”) and center all trim and sub-trim values. When this is done turn your receiver pack on. Now mount the servo arms at a 90° angle towards the linkage rod. In our non push pull helis this will be horizontal. Use the mounting position on the servo arm that will be closest to 90°, not all servos will line up 100% correct. If they are visible off from the 90° position the use the sub-trim function in your radio for fine tuning, do not use regular trim for this, see picture 1.

Now you have a good start and the rest of the setup will become easier.

Step 2: Connecting the Swashplate at the right distance. This is done by moving your Pitch (throttle) stick all the way down, see picture 2. When the servos are in this position adjust the length of the linkage rods so the Swashplate is located towards the bottom, but still leaves enough room for left/right (aileron) and front/back (elevator) travel. During such travel, portions of the Swashplate will move below the Swashplate position archived during Pitch full down radio stick position. So make sure you leave enough room for this extra travel, see picture 2 for recommended height. Also make sure that all 3 linkage rods between the servo arms and the Swashplate are the same, so the Swashplate is level. It should not tilt in any direction; unless your right radio stick is moved. If it tilts, and all linkage rods are the same length, then go back to step one and make sure your three servo arms have the same neutral position (horizontal on non push pull helis).

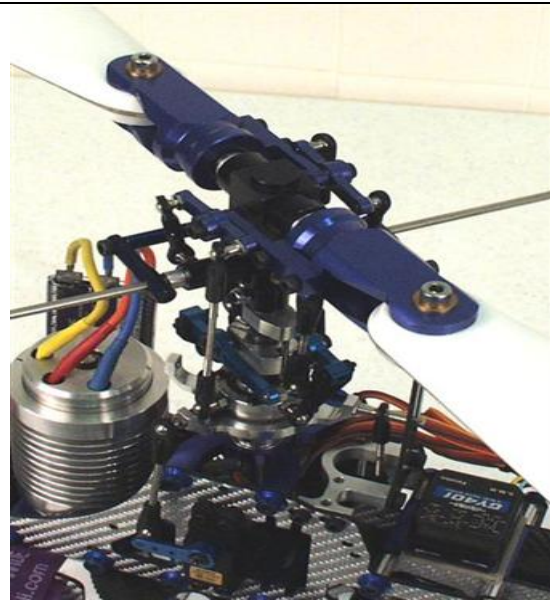


Step 3: Connecting the Washout assembly. Connect the fixed length plastic “A” arms to the Swashplate, connect to the two longer pivot studs, if all four are the same length then any two will do. The next step is to adjust the length of the linkage rod between the Washout Arm and the Flybar connection point. Turn your radio and receiver back on and center both sticks. Now adjust the length of the flybar linkage so the washout arms are level (horizontal), see picture 1. Also make sure your flybar arms and flybar-paddles are level (horizontal), when adjusting the linkage. After the length is adjusted make sure that you have free travel in all directions and stick positions. When the Pitch stick is all the way up it should look like picture 3. As you can see there is still plenty of room for aileron and elevator travel. Now adjust the Washout Anti-rotation pin height so the pin is still in the guide slot of the washout base during all travel positions. For the Left/Right Washout Anti-rotation position, line the attachment point of the plastic washout “A” arm on the Swashplate up with flybar linkage connection point. The imaginary line between these points should be vertical.

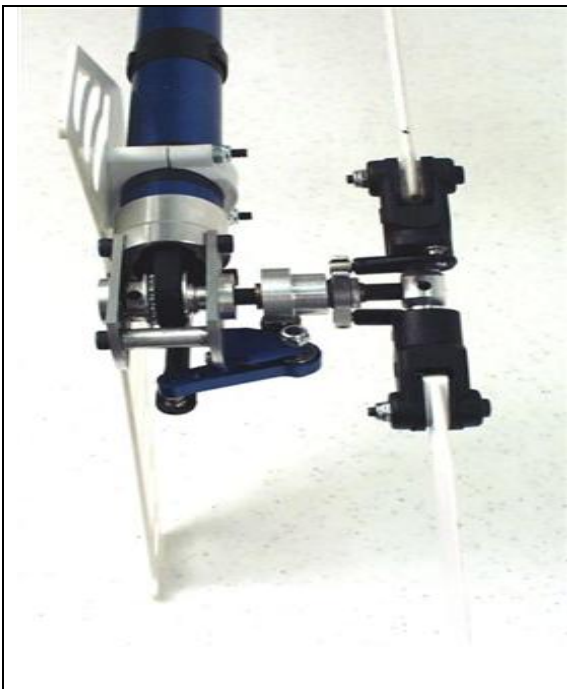
Now you are almost done, only one set of links left, and the length of those links will be depending on your desired setup whether it's Aerobatic or normal flying. Please refer to the Pitch travel setup table for this final link length.



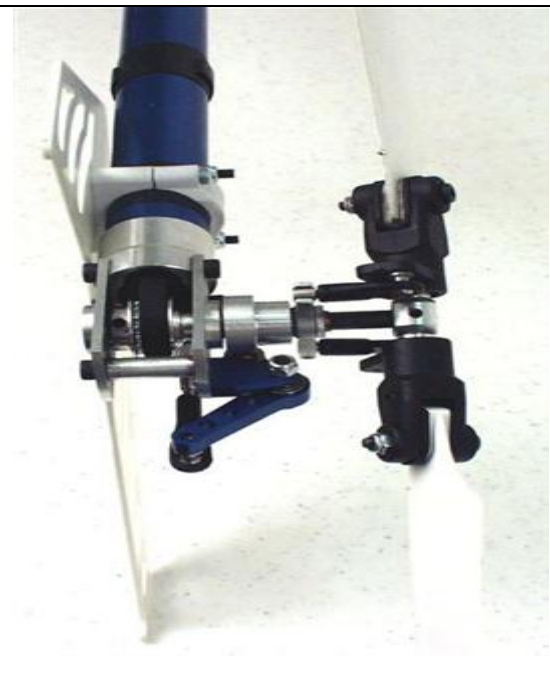
Picture 3, Swash Up



Picture 4, Head



Picture 5, Tail Center



Picture 6, Tail Positive Thrust



Picture 7, Tail Negative Thrust



Picture 8, Tail

Pitch Travel Setup		
Collective Position	Normal Flying	Aerobatic
Up (100%)	+10°	+10°
Center (50%)	+5°	+0°
Down (0%)	-3°	-10°

Throttle Curve Setup				
Collective Position	Fuel		Electric (non governor mode)	
	Normal Flying	Aerobatic	Normal Flying	Aerobatic
Up (100%)	100%	100%	85%	85%
Center (50%)	70%	60%	75%	75%
Down (0%)	10%	100%	0%	85%

Tail

First adjust the servo arm position like you did with the swash, make sure your trim and sub-trim values are centered. Attach the servo arm so it's 90° to the tail pushrod (vertical). Now adjust your two plastic ball ends, for the push rod, so they are screwed on about half way onto the threaded pushrod guide end piece. This will allow you have maximum amount of adjustment available in both directions. Use the outer holes on the tail blade grips for the ball link attachments. When this is done cut the carbon pushrod to a length that will achieve about 3° of positive pitch on your tail blades, when the servo is in its neutral (vertical) position. Then glue the two end pieces on to the pushrod with CA glue, don't forget to insert the pushrod guides first.

When this is done you should have 3° of positive tail blade pitch. The tail should spin counter clockwise looking at the right side of the helicopter with the nose to your right and tail to your left. See pictures 5-8.

Note: Please consult the instruction for your Gyro for setting the overall travel and limits to ensure proper operation and travel of Tail Pitch Slider.

Throttle

The throttle curve will be affected by several conditions; some of them are, motor choice, blades choice, elevation, temperature, helicopter weight and type of helicopter. So in order to explain this I will explain what you are looking for. Your goal is to achieve a constant head speed once the helicopter is airborne. If you add pitch (climb) you need to add power (throttle) to compensate for the added resistance a higher blade pitch creates. If during climb your head speed drops, then you need to add throttle to that particular stick position, and reversed if you have an increase in rpm. If during max climb out you experience an increase in head speed then you need to give the blades a higher pitch, do not try to adjust the max climb rpm by reducing throttle. There are other ways of achieving this by using cyclic mixing, however we will stay away from this for now. Follow the pitch guidelines in the table above, and if you need more pitch at max power because the rpm is increasing, then add pitch. 10° is just a guideline and will work in most setups, but a powerful motor or a light helicopter might need more. For rpm adjustment during anything other than full stick deflection you should use the throttle.

A short recap, adjust throttle to adjust rpm during anything other than full collective. At full collective adjust the pitch. See the Throttle table for general setup.

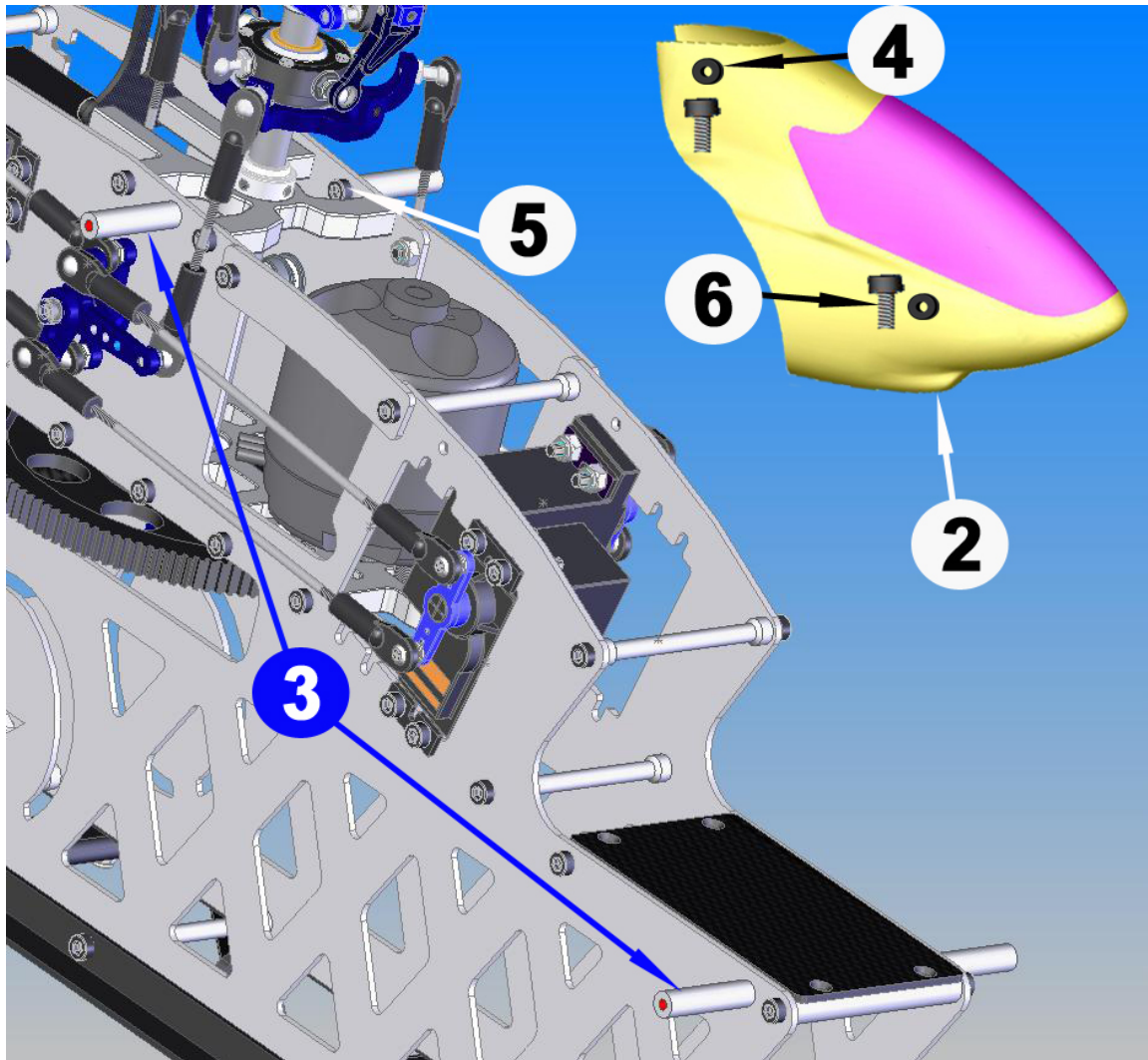
Final Words

These are guidelines and will get you going but might not be 100% accurate in regards to all helicopters. Especially the throttle curve table should be considered as initial guidelines. As mentioned before it's greatly affected by your equipment. As you become more familiar and proficient with your helicopter you can change the pitch and throttle curves to your flying style.

7-3 MOUNTING CANOPY

No.	Bag#	Description	Qty
1		Helicopter (up to step 7-2)	1
2	In box	Canopy (in box)	1
3	6	Canopy Stand-off	4
4	6	Canopy Grommet	4
5	HB	M3x6 Cap Head Bolt	4
6	HB	M3x12 Cap Head Bolt	4

- Install the 4 Canopy Standoff using 4 M3x6 Cap Head Bolts.
- Put the Canopy on the helicopter, mark the right positions for 4 holes, and then drill four 5.5mm holes.
- Install the Canopy Grommets on the Canopy.
- Secure the Canopy by 4 M3x12 Cap Head Bolts.



FRE-FLIGHT CHECKS

- The rotor flybar and shaft must be straight.
- The flybar and control paddles must tilt in the proper direction and operates smoothly throughout the whole range.
- Check the swashplate to make sure it move smoothly and clean.
- When control input are given to tilt the swashplate, make sure no control arms or pushrods are binding.
- Check the two control paddles for level, parallel, and proper direction.
- Make sure the batteries are fully charged.
- Make sure the radio and receiver are on and all controls operate properly before flight.
- There should be no interference of radio signal in your flying zone. Range check the radio.

Always grab onto the helicopter main rotor head when turning on the helicopter.

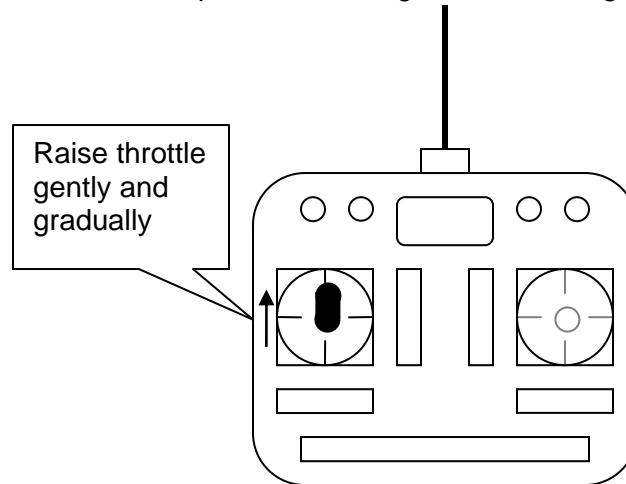
WARNINGS

- Do not operate helicopters in rainy, windy, or snowy condition.
- Operate helicopter in a safe zone away from crowds, traffic, or distractions.
- Use the proper batteries to prevent damage to the motor and equipment.
- Make sure all the batteries are fully and properly charged.
- Make sure all the controls operate properly before flight.
- The main and tail rotors blades operate at very high speed (rpm); therefore, make sure nothing can come into contact with them while they are spinning.
- Perform a range check on the radio before flying.
- Make sure the transmitter and receiver are turned on before plugging in the main power battery/batteries.
- Keep a safe distance when operating a helicopter.
- Do not fly for a long period of time. Take some rests during flights.
- Motors are often very hot after operation. So be careful when handling or touching them immediately after flying.

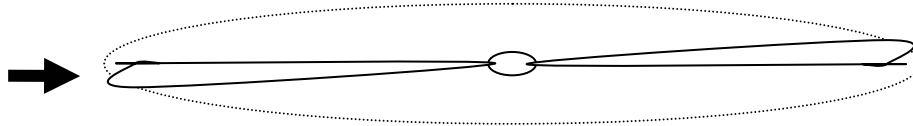
ADJUSTMENTS

Tracking Adjustment: The tips of the main rotor blades should follow the same path when they rotate. We call the main rotor blades are in track.

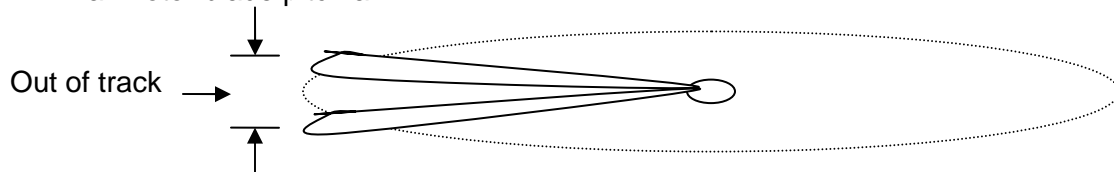
- (a) Rev up the motor until the helicopter becomes light on its landing gear.



- (b) If the main rotor blades are in track, it's good.



- (c) If the blades are out of track, then adjust one of the pushrods that connect to the main rotor blade pitch arm.

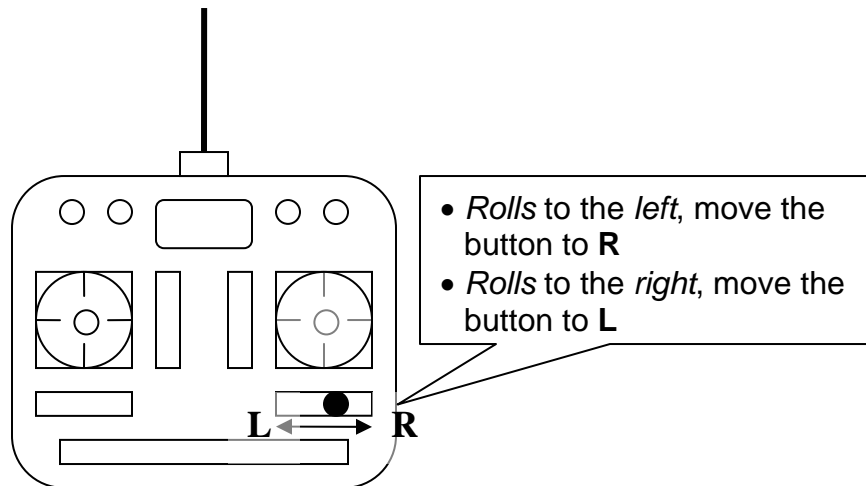


Repeat steps (a) to (c) until the blades are in track.

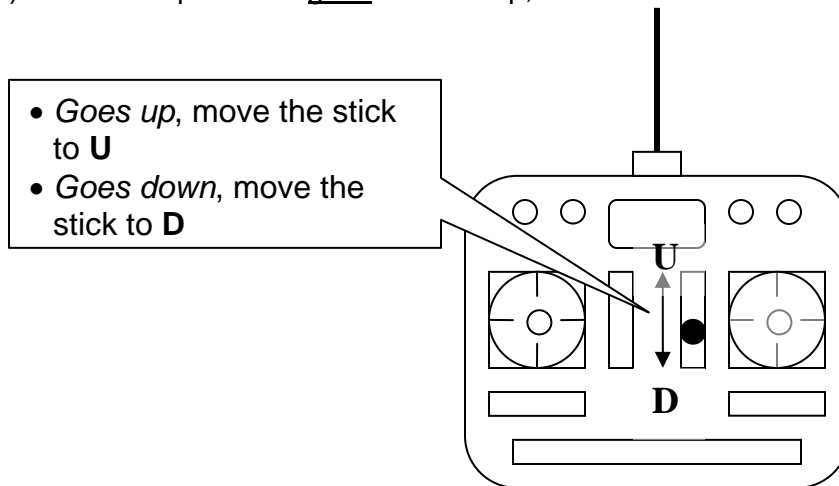
Trimming: Most of new built helicopters are unstable. But if you trim your helicopter properly, you will stop it from drifting away or yawing by itself quickly. Followings are instructions for trimming your helicopter.

- (a) If the helicopter nose starts to yaw left or right, adjust the tail rotor push rod to compensate. If using a Heading Hold Gyro, do not adjust the trim lever on the radio.

- (b) If the helicopter rolls to left or right, then:



(c) If the helicopter nose goes down or up, then:



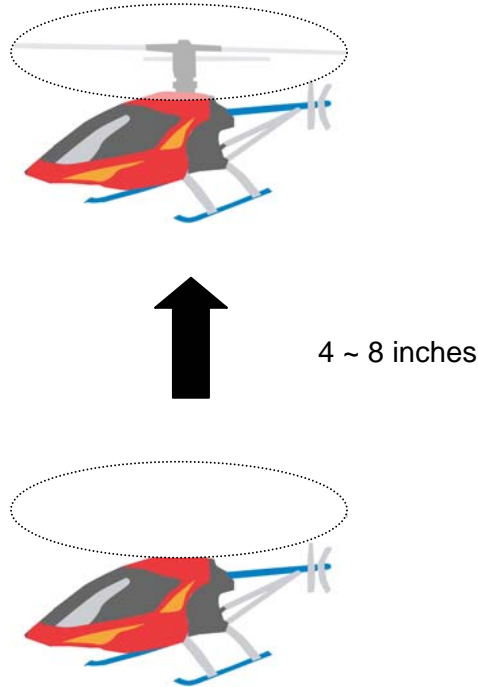
HOW TO HOVER

Basic maneuver for a pilot is learning how to hover a helicopter. When the helicopter is floating in a stationary position in the air, we call that hovering. Use the following procedure to practice your hovering:

- (a) Make sure everything is clear in the flying zone. Stand at least 30 feet (10 meters) behind the helicopter.
- (b) Check the main rotor fore/aft and left/right cyclic to make sure the main rotor is following to your cyclic command before taking off. Make sure the helicopter nose will swing in your desired directions by moving the tail rotor control stick.
- (c) Now, increase the throttle/collective gently to lift the helicopter landing gear off the ground to no more than 4 inches (10 cm). At the beginning, it is very difficult for the

pilot to keep the helicopter from moving. It will also be difficult to know if the helicopter is in trim or not for a beginner. Keep going on the practice close to ground you will develop your skills.

- (d) Keep practicing lifting your helicopter no more than 8 inches (20cm) from the ground until you feel comfortable with control commands. Once you can keep it at one place, then it is time to slowly increase the height a few inches in each flight. Soon, you will be able to hover the helicopter confidently at a few feet high. Beginners should always practice hovering close to ground since in an emergency situation; you can drop the throttle and collective quickly without making any big damage.

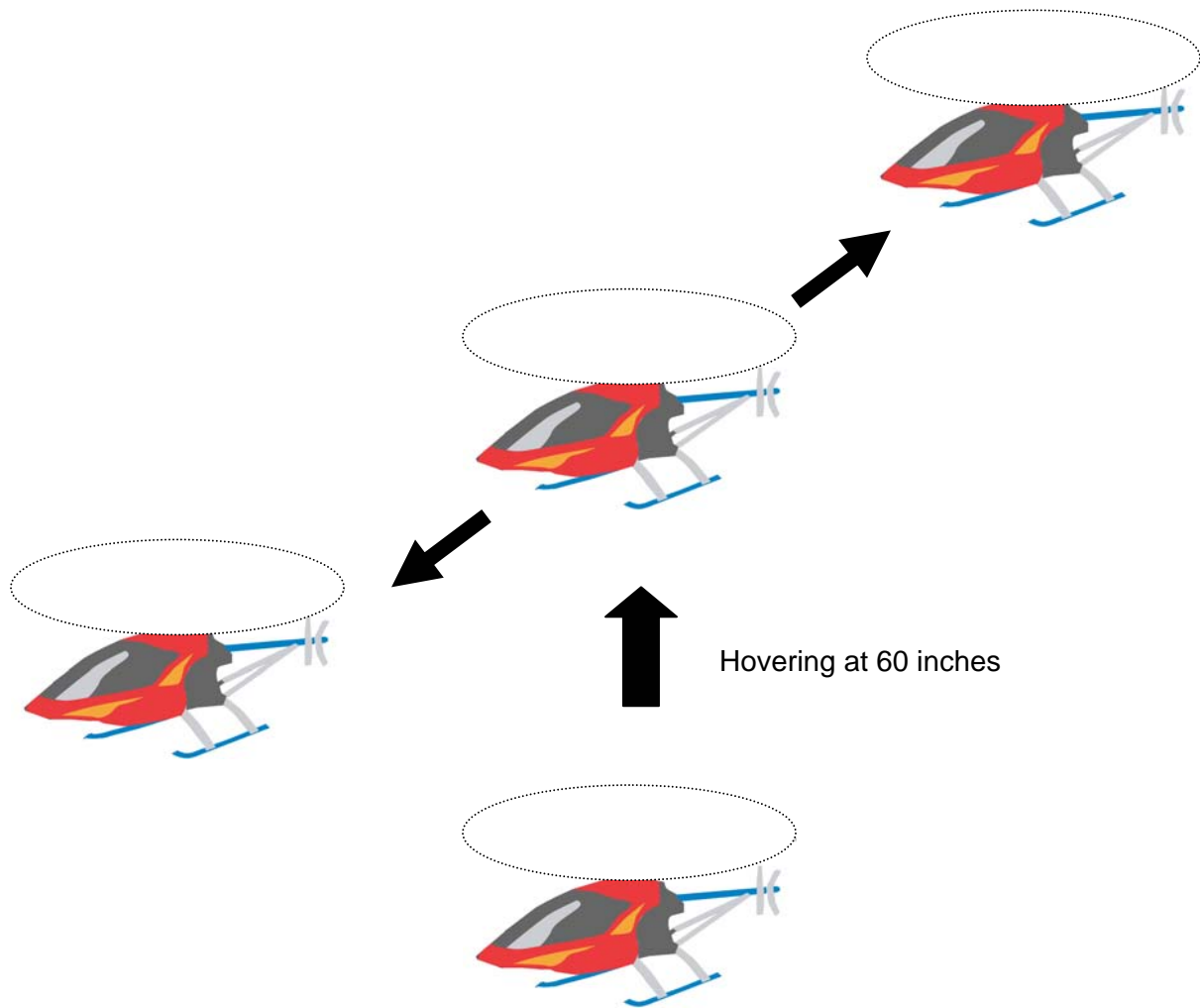


- (e) Stand behind the helicopter so you can watch the nose of the helicopter. A left tail rotor command will yaw the helicopter nose to the left, and a right command will yaw to the right. Also, a left cyclic command will cause the helicopter to translate left., Start practice hovering while standing to either side of the model after you can comfortably hover the helicopter at 3 feet (1m) high without drifting. Finally, you need to learn hovering the model from any positions. When you can confidently hover a helicopter at any altitude and at any position, you have mastered most of the fundamental control movements of a helicopter.

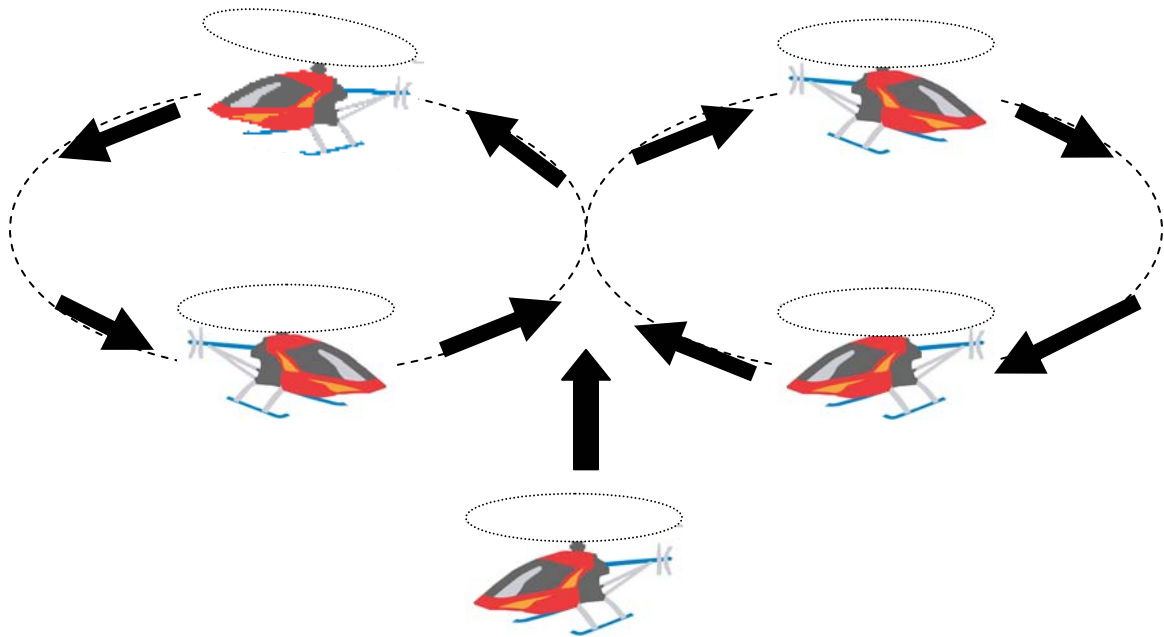
HOW TO FLY FORWARD

Once you have mastered hovering flight:

- (a) Let's begin the exercise of changing positions by practice moving the helicopter to the left or right slowly from 60 inches (1.5 m) above the ground.



(b) Once you have been comfortable with all the movements and controls in the previous step, start using some tail rotor control to make the helicopter point slightly to the left or right as you fly it to the left or right. Keep practicing the figure-eight path as shown below, you will master all basic control movements of a helicopter.



AFTER FLIGHT CHECKS

After each flight, the helicopter should be thoroughly inspected:

- (a) Unplug the batteries.
- (b) Check every bolt, nut, and screw to make sure none has loosened due to vibration.
- (c) Check every rotating and movable part like head rotor, swashplate, tail rotor...to ensure they still move smoothly and properly.
- (d) Check all movable parts, such as gears, ball links, belt, etc. for unusual wear.
- (e) Clean up the helicopter then lubricate every moving part with oil to ensure a smooth operation in the future.
- (f) Keep the helicopter in a cool and dry place. Avoid storage under direct sun light or near heat.
- (g) Please replace any damaged parts if they are discovered during maintenance.

WHAT IF THE HELICOPTER CRASHED

Turn off everything and check the helicopter immediately. If any item is damaged, replace the damaged parts to ensure safe operation. Do not try to glue any broken or damaged plastic or carbon parts specially broken rotor blades. The followings are parts that should be inspected right away:

- Main and tail rotor blades.
- Flybar, main shaft, head spindle, and tail output shaft.
- All the gears.
- Tail boom and supports for cracks.
- Vertical and horizontal fins.
- Frames.
- All pushrods.
- Servos, motor, and batteries.

SPECIFICATION

Specification	Little Sweetie 10	Sweet 16V2
Blades	Quick 475-520 mm	Quick 550-580 mm
Length	890 mm (35 inch)	1000 mm (39.4 inch)
Height	325.5 mm (13 inch)	355 mm (14 inch)
Weight	~3.8 lbs(1.7 kg)	~4.0 lbs (1.8 kg)
Batteries	Li-Po 4S4P	Li-Po 4S3P x 2
Motor	Aveox 36/30/2 -	Axi 4120/14
Frame Thickness	1.6-1.7 mm	2.0-2.6 mm
Spindle	5mm	8mm
Main Shaft	8mm	8mm
Canopy	Fiberglass	Fiberglass
Flying	Aerobatic / 3D	Aerobatic / 3D