



WING-450V2 INSTRUCTION MANUAL



Thank you for buying Wing products. Please read this manual carefully before assembling and flying the new wing-450V2 helicopter. We recommend that you keep this manual for future reference regarding tuning and maintenance.

SHENZHEN WING MODEL CO.,LTD

[Http://www.wingmodel.com](http://www.wingmodel.com).

Thank you for buying WING Products. The Wing-450 V2 Helicopter is designed as an easy to use, full featured helicopter R/C model capable of all forms of rotary flight. Please read the manual carefully before assembling the model, and follow all precautions and recommendations located within the manual. Be sure to retain the manual for future reference, routine maintenance, and tuning. The WING-450V2 is a new product developed by WING MODEL. It features the best design available on the Micro-Heli market to date, providing flying stability for beginners, full aerobic capability for advanced fliers, and unsurpassed reliability for customer support.

THE MEANING OF SYMBOLS

 WARNING	Mishandling due to failure to follow these instructions may result in damage or injury.
 CAUTION	Mishandling due to failure to follow these instructions may result in danger.
 FORBIDDEN	DO not attempt under any circumstances.

IMPORTANT NOTES

R/C helicopters, including the WING-450V2 are not toys. R/C helicopters utilize various high-tech products and technologies to provide superior performance. Improper use of this product can result in serious injury or even death. Please read this manual carefully before using and make sure to be conscious of your own personal safety and the safety of others and your environment when operating all WING products. Manufacturer and seller assume no liability for the operation or the use of this product. Intended for use only by adults with experience flying remote control helicopters. After the sale of this product we cannot maintain any control over its operation or usage.

We recommend that you obtain the assistance of an experienced pilot before attempting to fly our products for the first time. A local expert is the best way to properly assemble, setup, and fly your model for the first time. The WING-450V2 requires a certain degree of skill to operate, and is a consumer item. Any damage or dissatisfaction as a result of accidents or modifications are not covered by any warranty and cannot be returned for repair or replacement. Please contact our distributors for free technical consultation and parts at discounted rates when you experience problems during operation or maintenance.

Fly only in safe areas, away from other people. Do not operate R/C aircraft within the vicinity of homes or crowds of people. R/C aircraft are prone to accidents, failures, and crashes due to a variety of reasons including, lack of maintenance, pilot error, and radio interference. Pilots are responsible for their actions and damage or injury occurring during the operation or as a result of R/C aircraft models.

FORBIDDEN LOCATE AN APPROPRIATE LOCATION

R/C helicopters fly at high speed, thus posing a certain degree of potential danger. Choose an appropriate flying site consisting of flat, smooth ground, a clear open field, or a large open room, such as gymnasium or warehouse without obstacles. Do not fly near buildings, high voltage cables, or trees to ensure the safety of yourself, others, and your model. Do not fly your model in inclement weather, such as rain, wind, snow or darkness.

WARNING OBTAIN THE ASSISTANCE OF AN EXPERIENCED PILOT

Before turning on your model and transmitter, check to make sure no one else is operating on the same frequency. Frequency interference can cause your model, or other models to crash. The guidance provided by an experienced pilot will be invaluable for the assembly, tuning, trimming, and actual first flight. (Recommend you to practice with computer-based flight simulator.)

FORBIDDEN ALWAYS BE AWARE OF THE ROTATING BLADES

During the operation of the helicopter, the main rotor and tail rotor will be spinning at a high rate of speed. The blades are capable of inflicting serious bodily injury and damage to the environment. Be conscious of your actions, and careful to keep your face, eyes, hands, and loose clothing away from the blades. Always fly the model a safe distance from yourself and others, as well as surrounding objects. Never take your eyes off the model or leave it unattended while it is turned on. Immediately turn off the model and transmitter when you have landed the model.

FORBIDDEN PREVENT MOISTURE

R/C models are composed of many precision electrical components. It is critical to keep the model and associated equipment away from moisture and other contaminants. The introduction or exposure to water or moisture in any form can cause the model to malfunction resulting in loss of use, or a crash. Do not operate or expose to rain or moisture.

CAUTION KEEP AWAY FROM HEAT

R/C models are made up various forms of plastic. Plastic is very susceptible to damage or deformation due to extreme heat and cold climate. Make sure not to store the model near any source of heat such as an oven, or heater. It is best to store the model indoors, in a climate-controlled, room temperature environment.

FORBIDDEN PROPER OPERATION

Please use the replacement of parts on the manual to ensure the safety of instructors. This product is for R/C model, so do not use for other purpose.

FORBIDDEN SAFE OPERATION

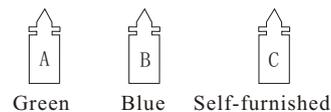
Operate this unit within your ability. Do not fly under tired condition and improper operation may cause in danger.

CAREFULLY INSPECT BEFORE REAL FLIGHT

- Before flying, please check to make sure no one else is operating on the same frequency for the safety.
- Before flight, please check if the batteries of transmitter and receiver are enough for the flight.
- Before turn on the transmitter, please check if the throttle stick is in the lowest position. IDLE switch is OFF.
- When turn off the unit, please follow the power on/off procedure. Power ON-Please turn on the transmitter first, and then turn on receiver. Power OFF-Please turn off the receiver first and then turn off the transmitter. Improper procedure may cause out of control, so please to have this correct habit.
- Before operation, check every movement is smooth and directions are correct. Carefully inspect servos for interference and broken gear.
- Check for missing or loose screws and nuts. See if there is any cracked and incomplete assembly of parts. Carefully check main rotor blades and rotor holders. Broken and premature failures of parts possibly cause resulting in a dangerous situation.
- Check all ball links to avoid excess play and replace as needed. Failure to do so will result in poor flight stability.
- Check the battery and power plug are fastened. Vibration and violent flight may cause the plug loose and result out of control.
- Check for the tension of tail drive belt.

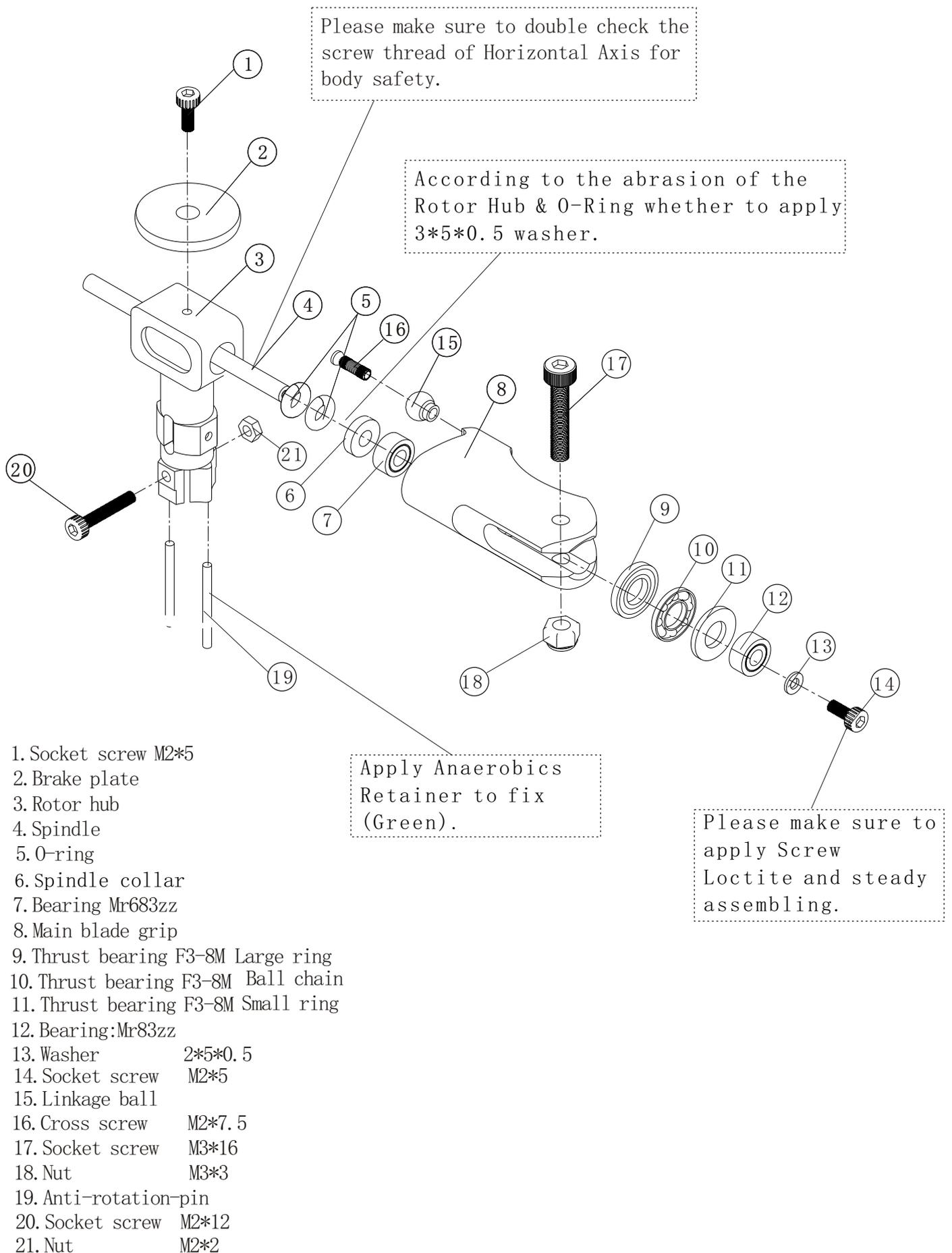
**KEEP AWAY FROM HEAT**

A: For Bearing.
 B: For Screw.
 C: Self-furnished.

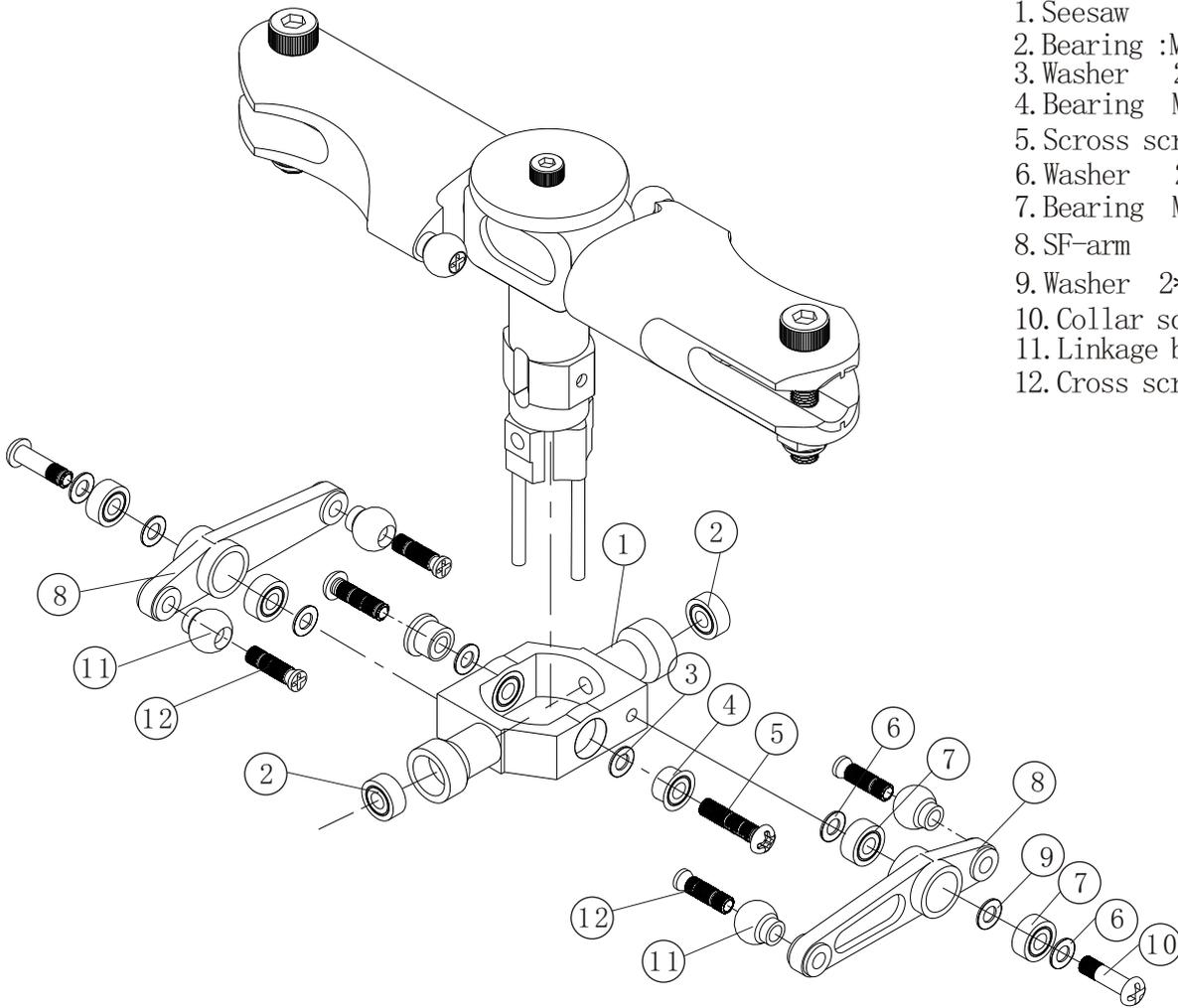


When disassembling screws, recommend to heat the metal joint about 15 seconds. (NOTE: Keep plastic parts away from heat.)

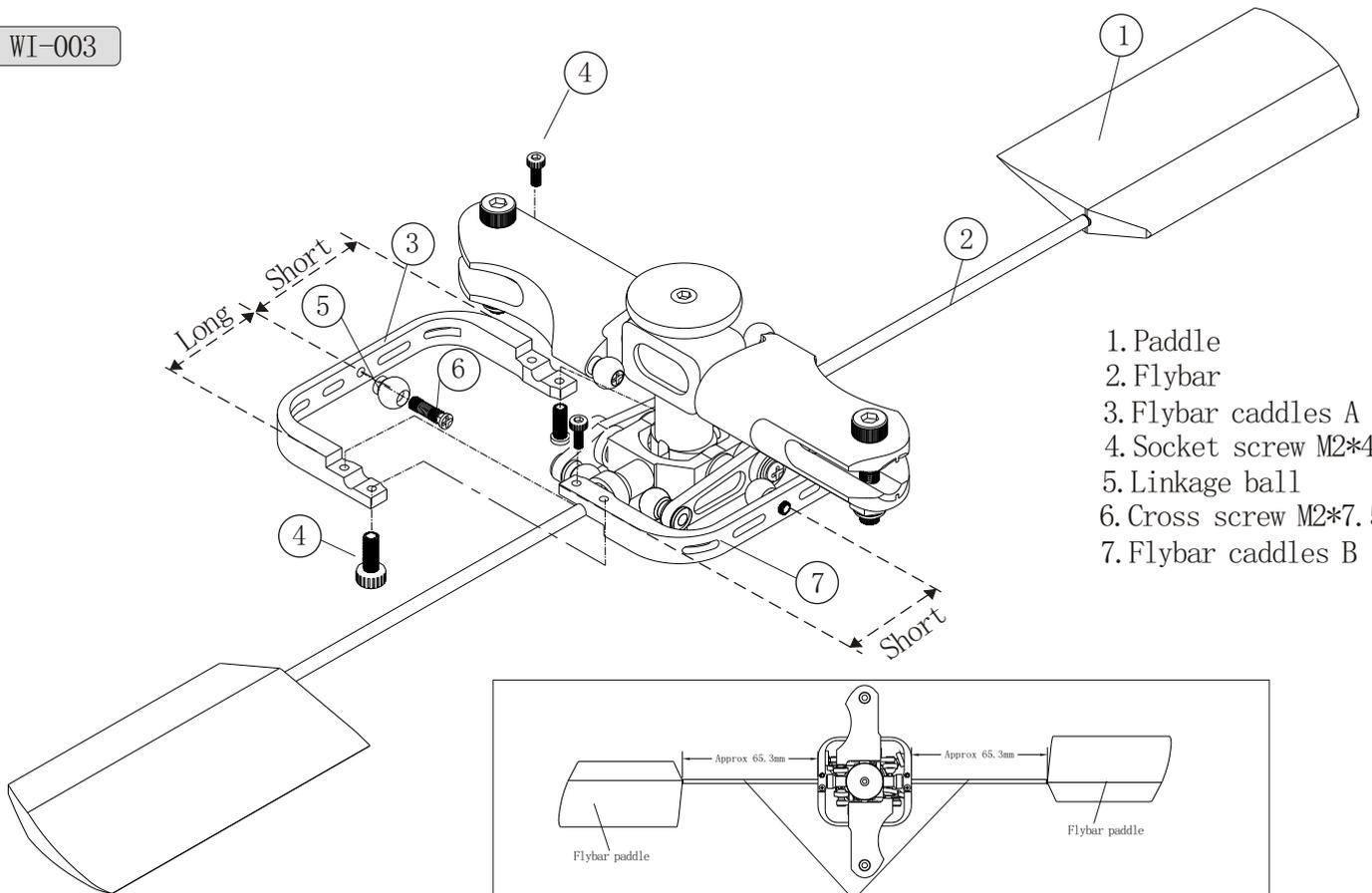
1. Please make sure your tools are good. Bad tools will destroy the screws.
2. Please make sure the parts that already assembled by factory applying some loctite on screws to avoid loose screw.
3. When assembling ball links, make sure the "A" character faces outside.
4. Apply a little amount of Screw Loctite when fixing a metal part.
5. Antirust oil will make Screw Loctite not available.



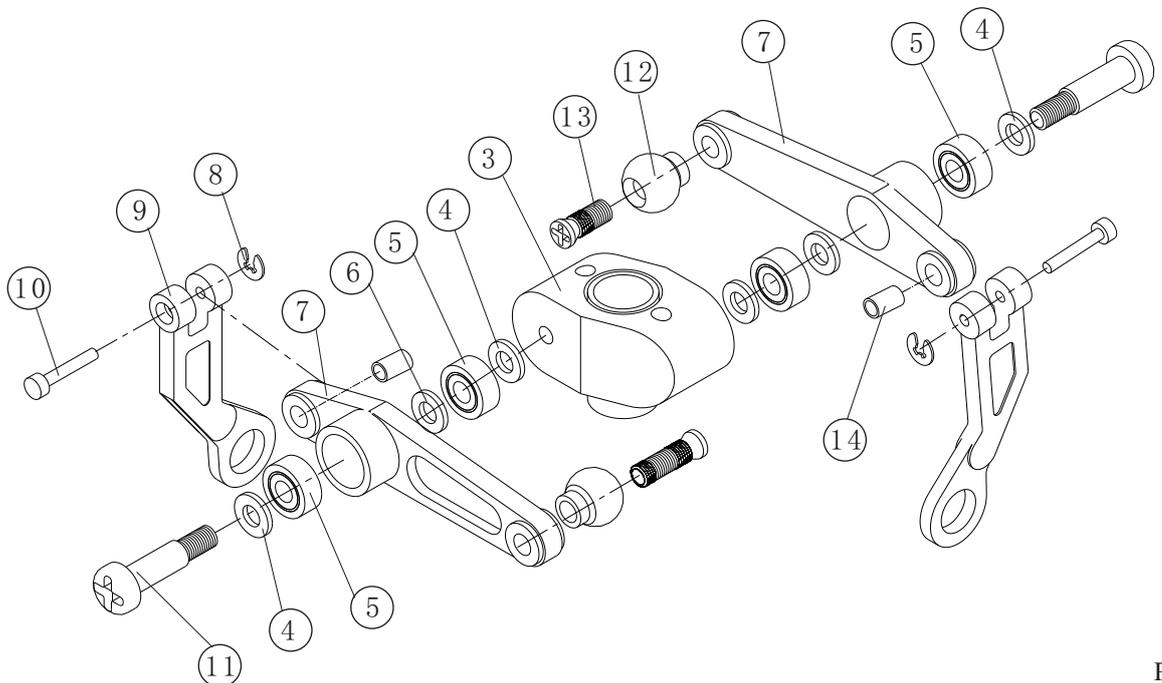
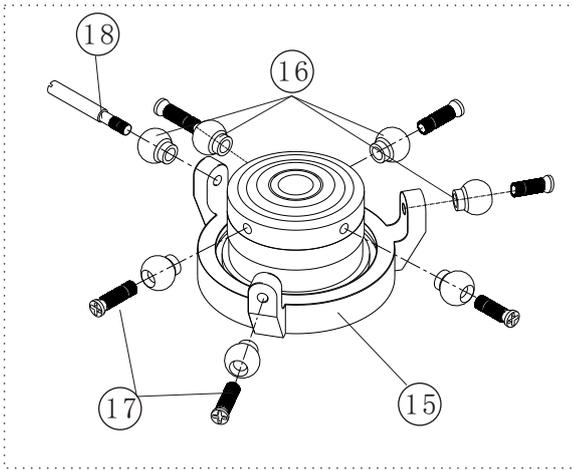
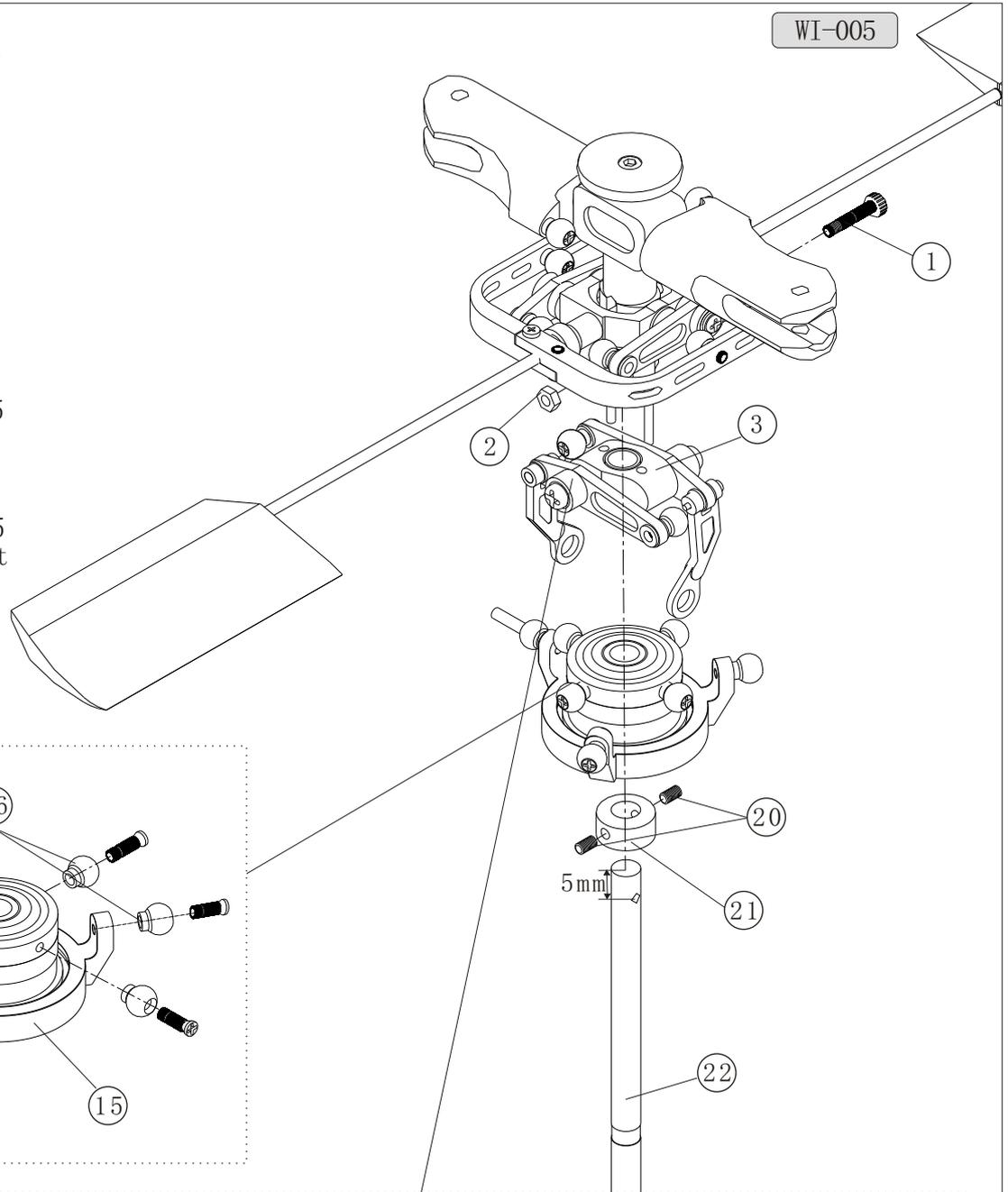
1. Seesaw
2. Bearing :Mr52zz
3. Washer 2*3.8*0.5
4. Bearing Mf52zz
5. Scross screw M2*7
6. Washer 2*3.8*0.2
7. Bearing Mr52zz
8. SF-arm
9. Washer 2*3.8*0.5
10. Collar screw M2*9
11. Linkage ball
12. Cross screw M2*7.5



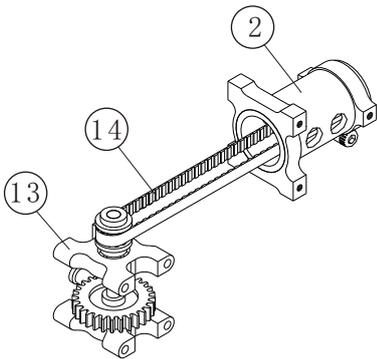
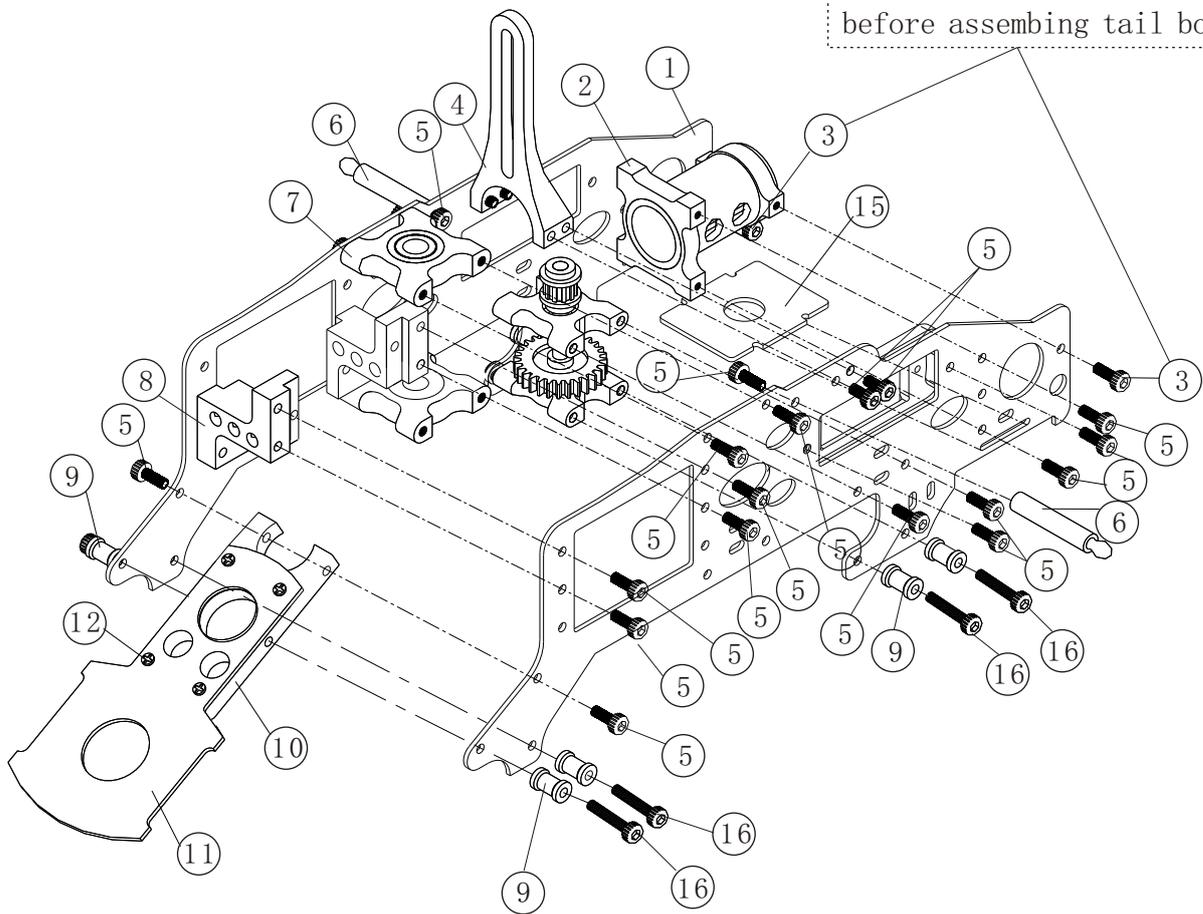
1. Paddle
2. Flybar
3. Flybar caddles A
4. Socket screw M2*4
5. Linkage ball
6. Cross screw M2*7.5
7. Flybar caddles B



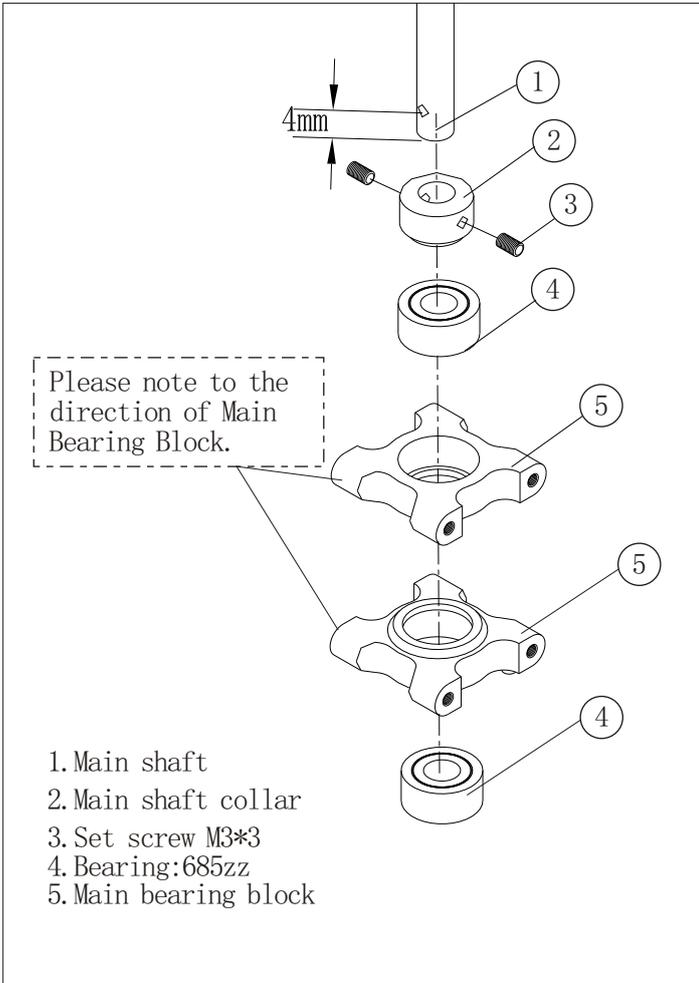
1. Socket screw M2*12
2. Nut M2*2
3. Washout base
4. Washer 2*3.8*0.2
5. Bearing: Mr52zz
6. Washer 2*3.8*0.5
7. SF-arm
8. E-ring
9. Radius arm
10. Radius arm axis
11. Collar screw M2*9
12. Linkage ball
13. Cross screw M2*7.5
14. Against tube
15. Swashplate
16. Linkage ball
17. Cross screw M2*7.5
18. anti-rotation bolt
19. Set screw M3*3
20. Main shaft collar
21. Main shaft



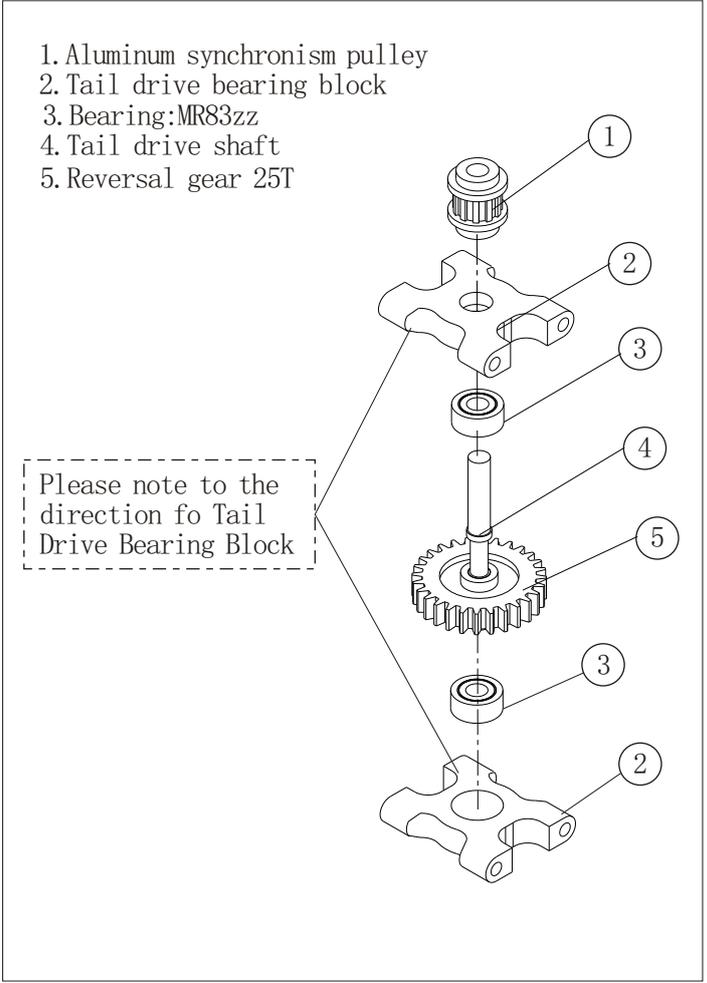
Please do not fix the screws
before assembling tail boom.



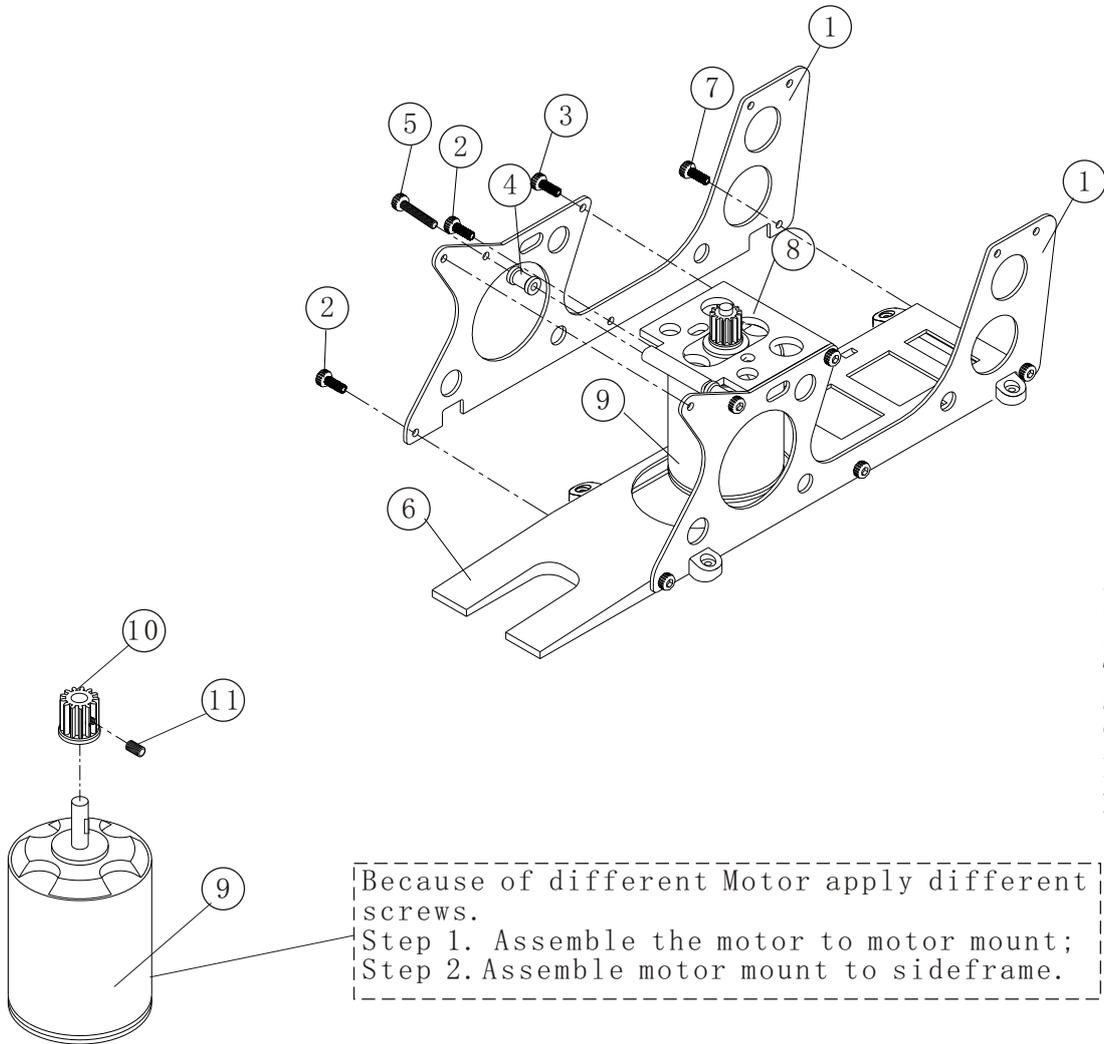
- 1. Upper sideframe
- 2. Tail boom holder
- 3. Socket screw M2*6
- 4. Anti-rotation bracket
- 5. Socket screw M2*4
- 6. Canopy bolt
- 7. Main bearing block
- 8. Front servo bracket
- 9. Short beam
- 10. Battery pad
- 11. Battery bond plate
- 12. C screw M2*4
- 13. Tail drive bearing block
- 14. Toothed synchronism belt
- 15. Gyro pad
- 16. Socket screw M2*12



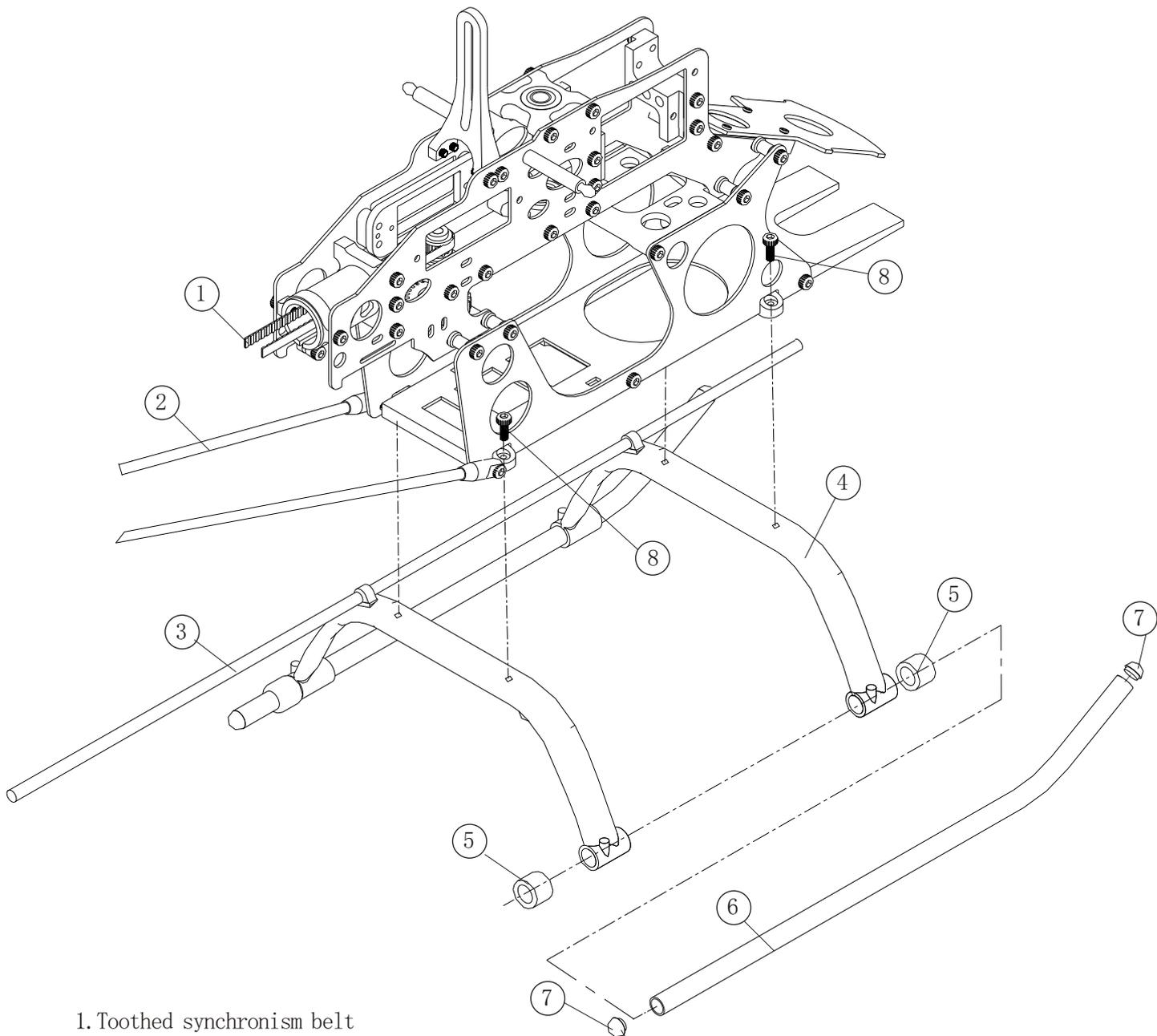
1. Main shaft
2. Main shaft collar
3. Set screw M3*3
4. Bearing:685zz
5. Main bearing block



1. Aluminum synchronism pulley
2. Tail drive bearing block
3. Bearing:MR83zz
4. Tail drive shaft
5. Reversal gear 25T



1. Lower sideframe
2. Socket screw M2*5
3. Socket screw M2*4
4. Short beam
5. Socket screw M2*12
6. Bottom plate
7. Socket screw M2*8
8. Motor mount
9. Brushless motor
10. Brass gear 13T
11. Set screw M3*3



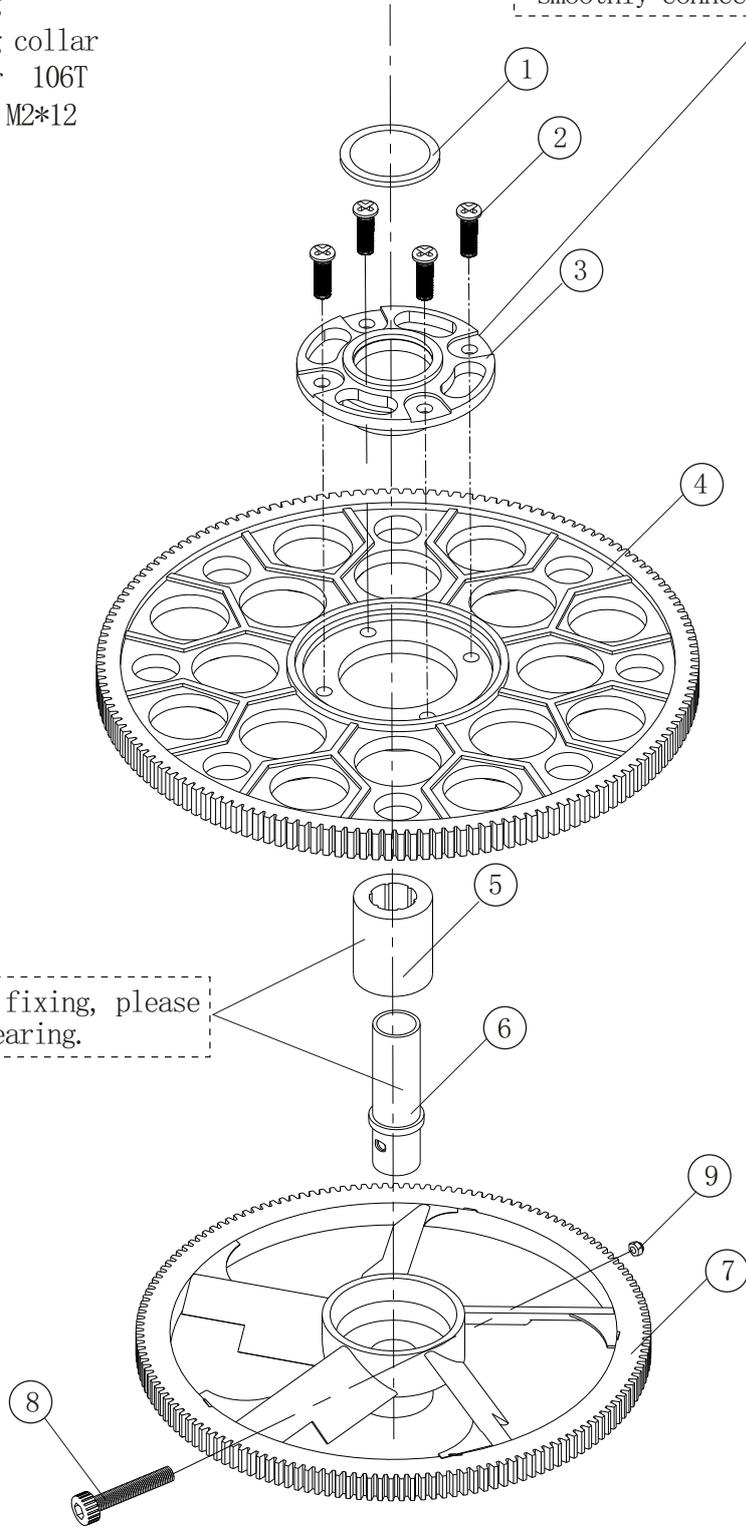
- 1. Toothed synchronism belt
- 2. Brace rod
- 3. Antenna tube
- 4. Skid landing
- 5. Silica gel collar
- 6. Sledge
- 7. Casing cap
- 8. Socket screw M2*5

Apply Self-Furnished loctite.

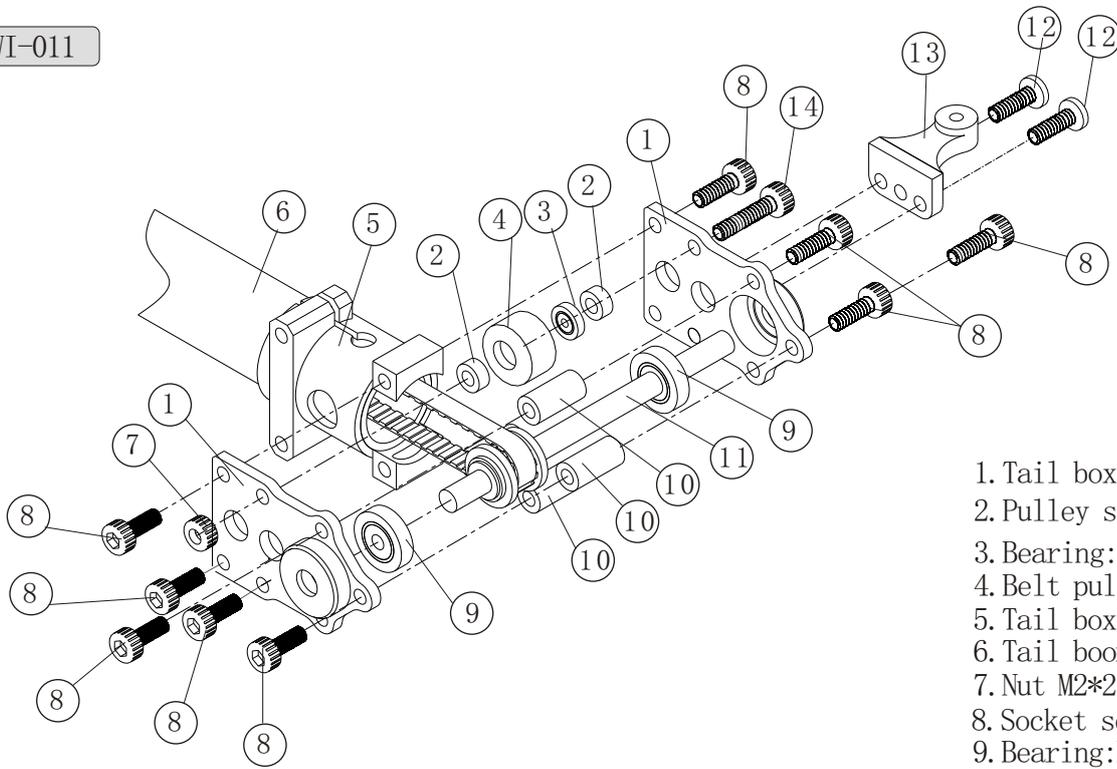
- 1. Main gear locating ring
- 2. C Screw M2*4
- 3. Main gear centre holder
- 4. Main gear 150T
- 5. One way bearing
- 6. One way bearing collar
- 7. Tail drive gear 106T
- 8. Socket screw M2*12
- 9. Hex nut M2*2

Please note to use a little Self-Furnished Loctite and tighten it firmly, but not over tightened, or they will strip. But make sure Main Gear Centre Holder and Main Gear smoothly connected.

During the fixing, please roll the bearing.



WI-011

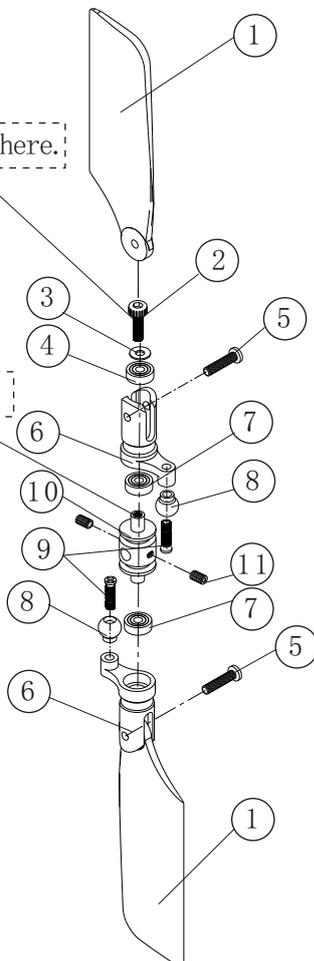


1. Tail box plate
2. Pulley side
3. Bearing:MR52zz
4. Belt pulley
5. Tail box
6. Tail boom
7. Nut M2*2
8. Socket screw M2*4
9. Bearing:MR83zz
10. Tail box beam
11. Tail shaft
12. Collar screw M2*7
13. Tail pitch mount
14. Socket screw M2*13

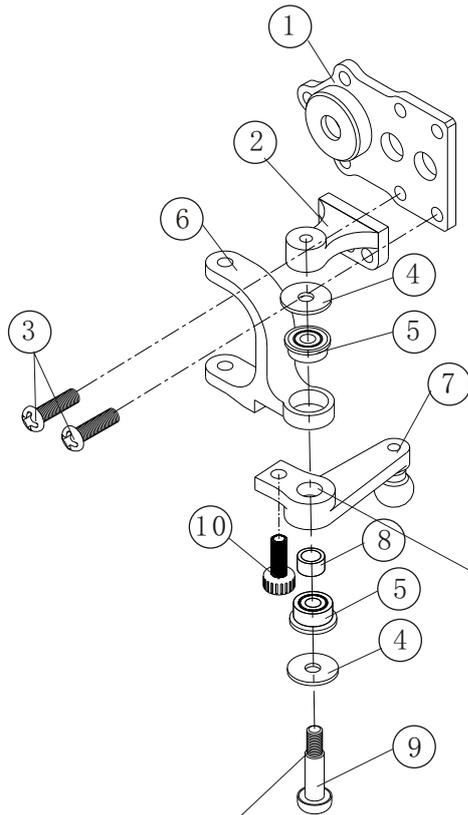
WI-012

Not apply Screw Loctite here.

Apply Screw Loctite here.



1. Tail rotor blade
2. Socket screw M2*8
3. Washer: 2*3. 8*0.2
4. Bearing: MR52ZZ
5. Scross screw M2*9
6. Tail blade grip
7. Bearing: MR63ZZ
8. Linkage ball
9. Collar screw M2*7.5
10. Tail hub
11. Set screw M3*3

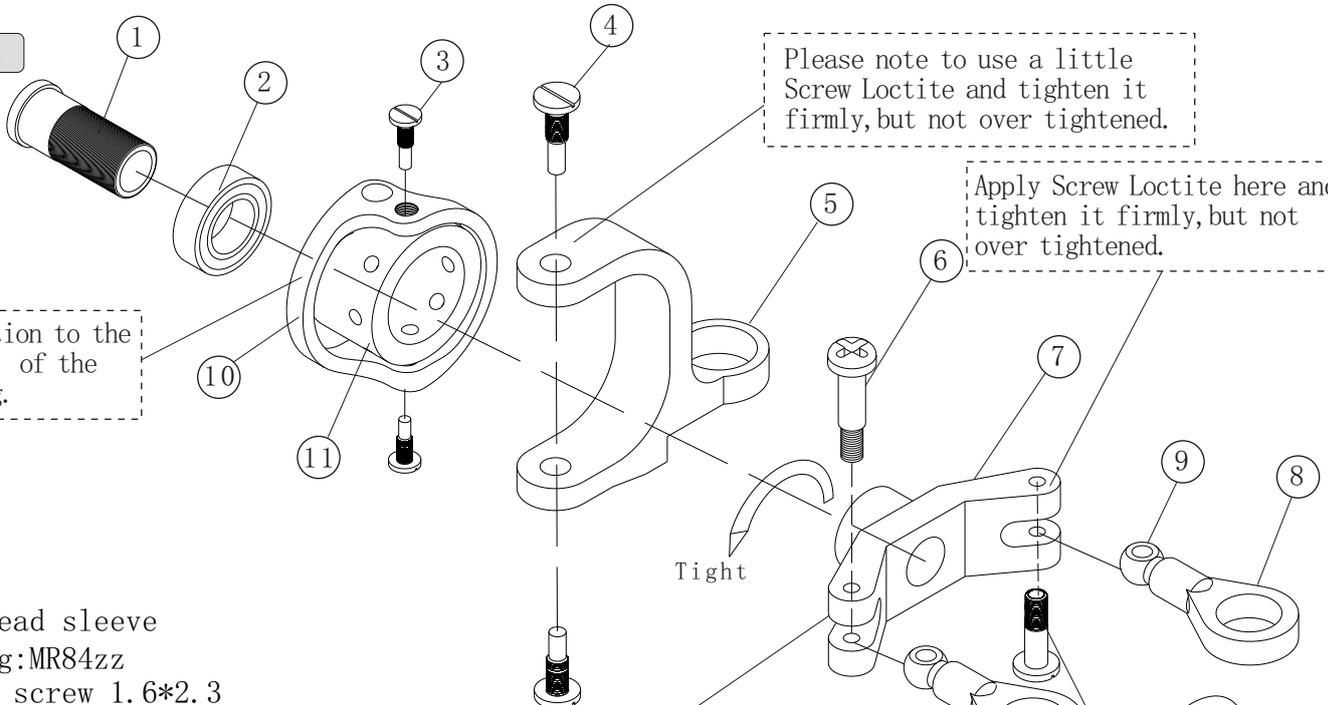


- 1. Tail box plate
- 2. Tail pitch mount
- 3. Collar screw M2*7
- 4. washer 2*3.8*0.2
- 5. Frank bearing:MF52zz
- 6. Tailpitch fork
- 7. Tail control arm
- 8. Brass collar
- 9. Collar screw M2*12
- 10. Socket serew M2*4

Apply Screw Loctite here.

Not apply Screw Loctite here.

WI-014



Please note to use a little Screw Loctite and tighten it firmly, but not over tightened.

Apply Screw Loctite here and tighten it firmly, but not over tightened.

Pay attention to the direction of the swing ring.

Tight

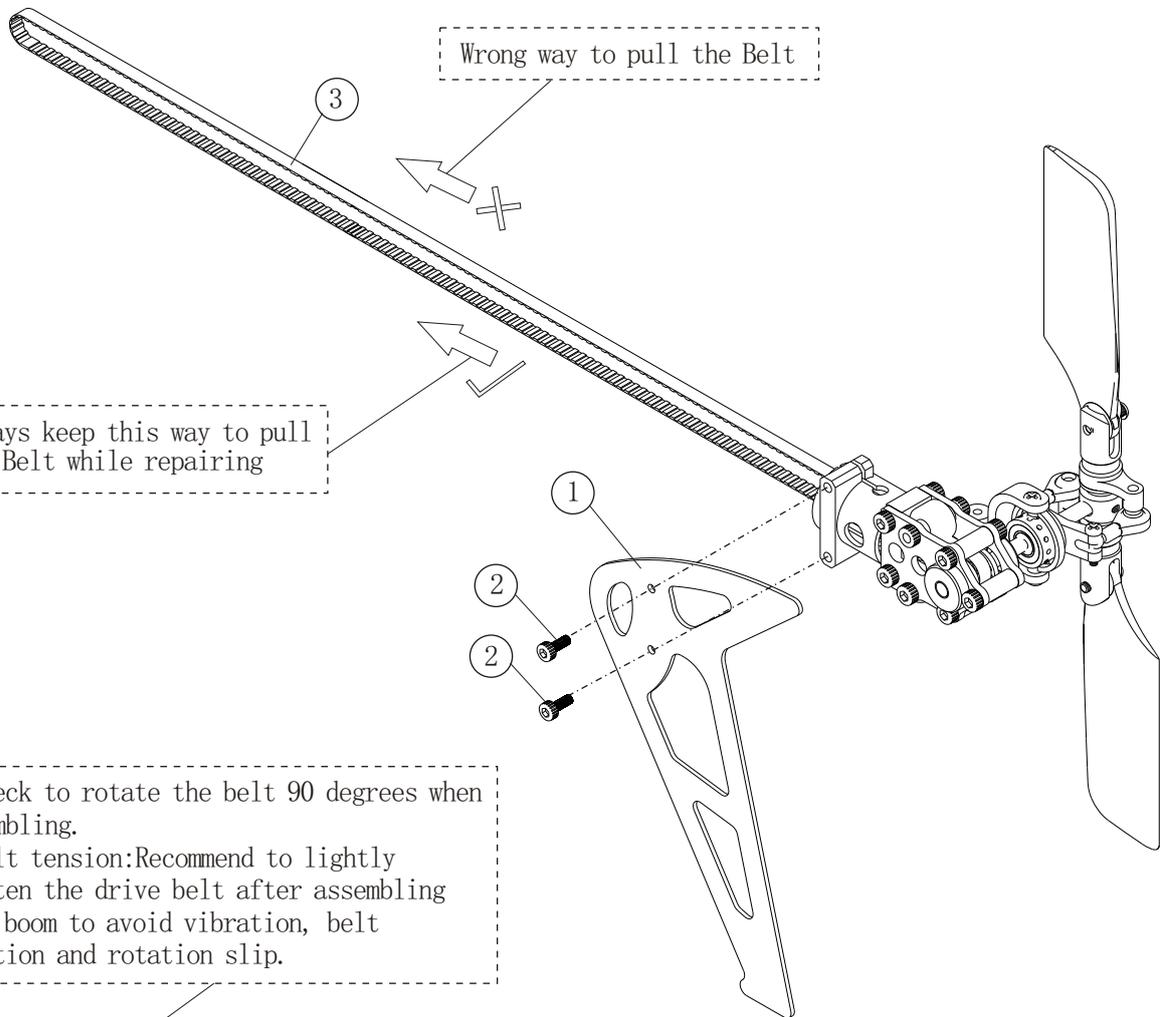
Loose

Pay attention to the direction of rotation.

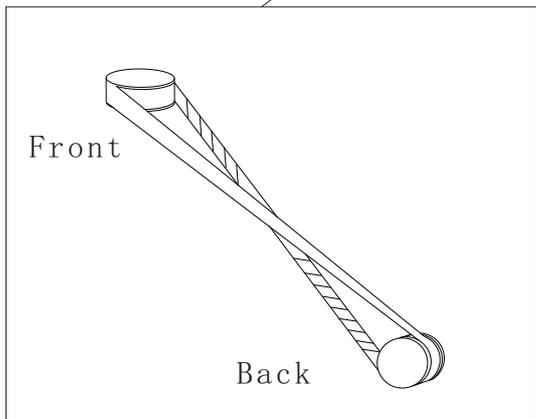
Ball Link must be assembled to Linkage Ball first and then lock the screw. While repairing, please be make sure un-lock the screw first.

Not apply Screw Loctite here.

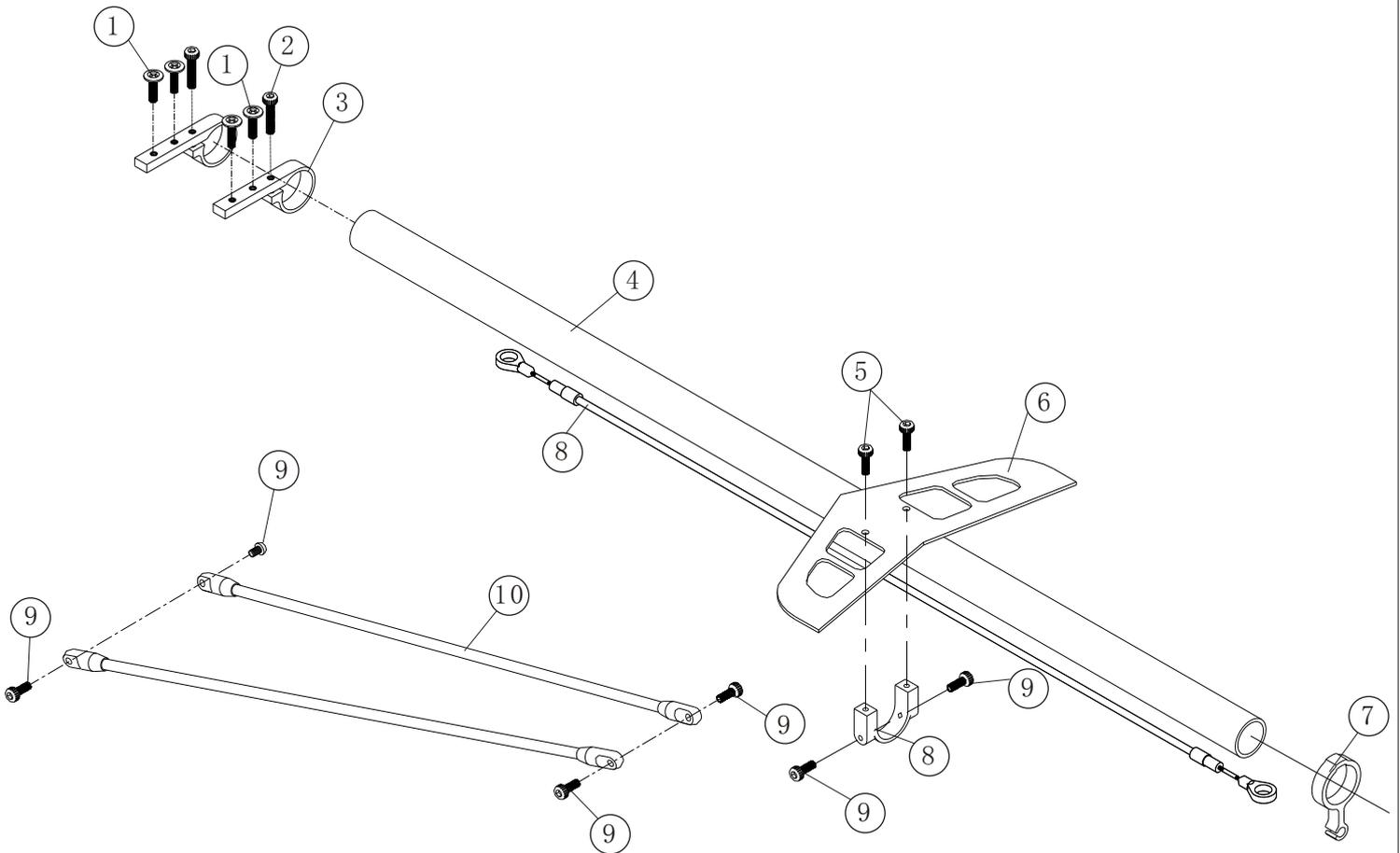
- 1. L-thread sleeve
- 2. Bearing:MR84zz
- 3. Collar screw 1.6*2.3
- 4. Collar screw M2*2
- 5. Tailpitch fork
- 6. Collar screw M1.4*6
- 7. Tail pusher
- 8. Short ball link
- 9. Single ear screw
- 10. Swing ring
- 11. Slider ring



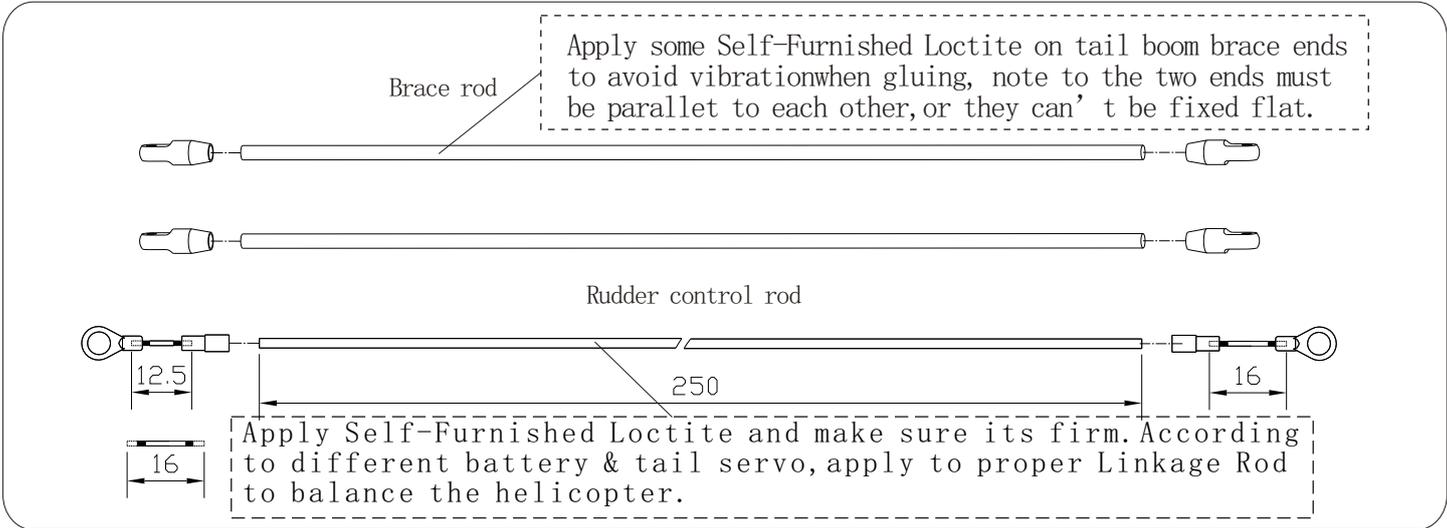
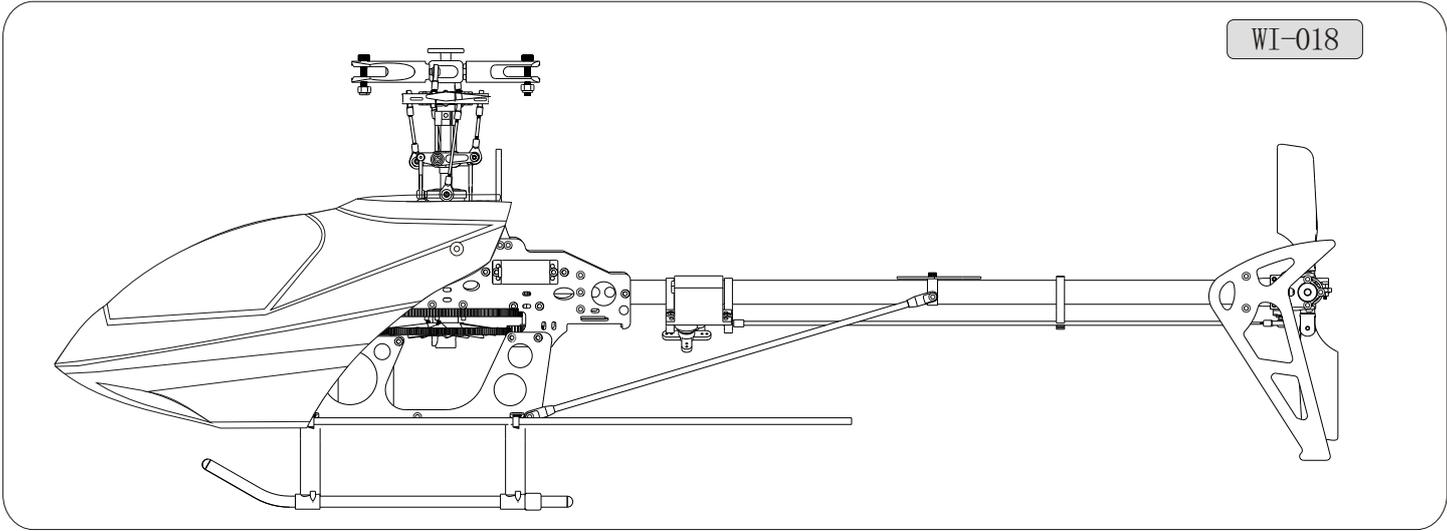
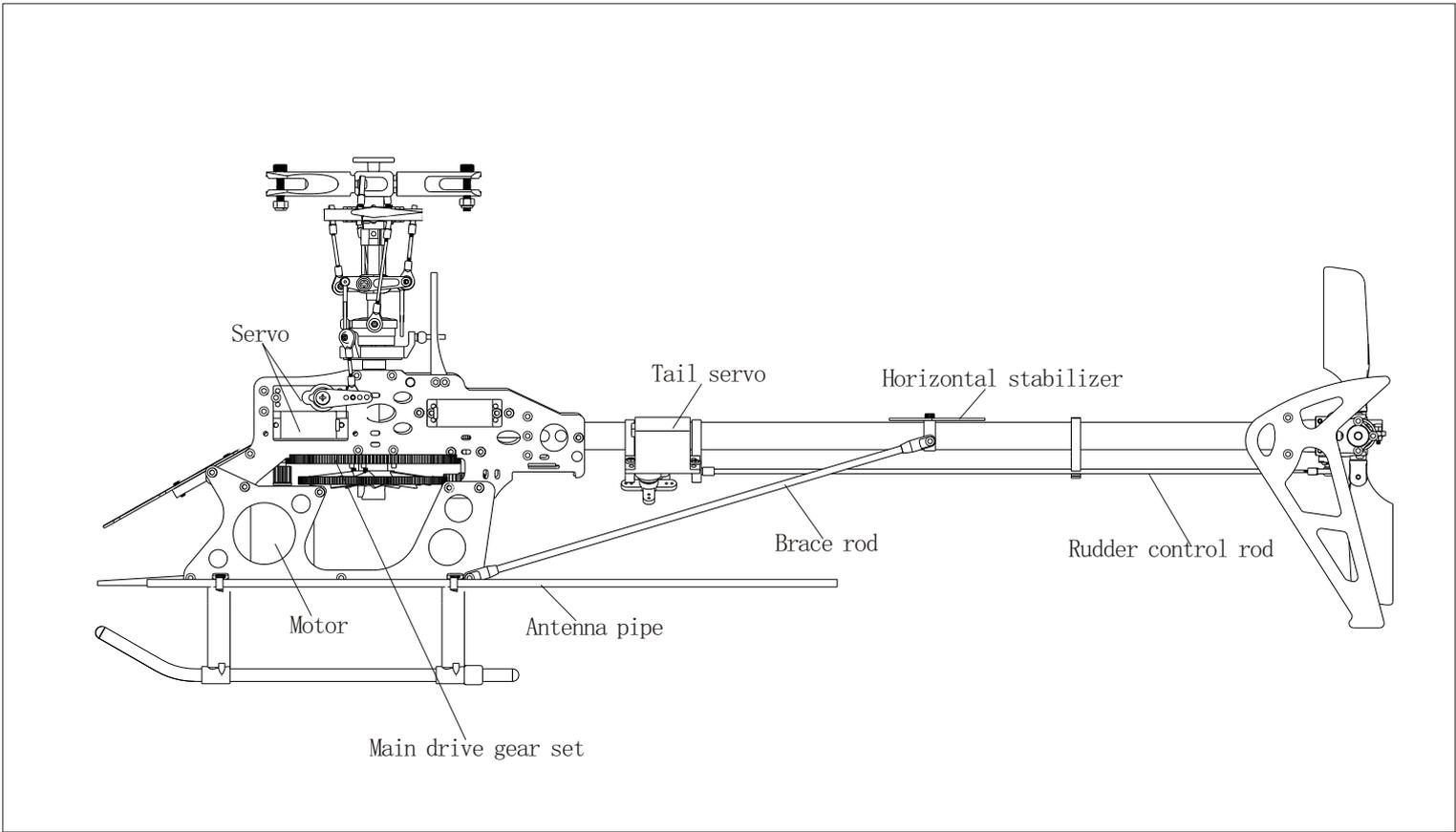
- 1. Check to rotate the belt 90 degrees when assembling.
- 2. Belt tension: Recommend to lightly tighten the drive belt after assembling tail boom to avoid vibration, belt friction and rotation slip.



- 1. Vertical stabilizer
- 2. Socket serew M2*9
- 3. Toothed synchronism belt



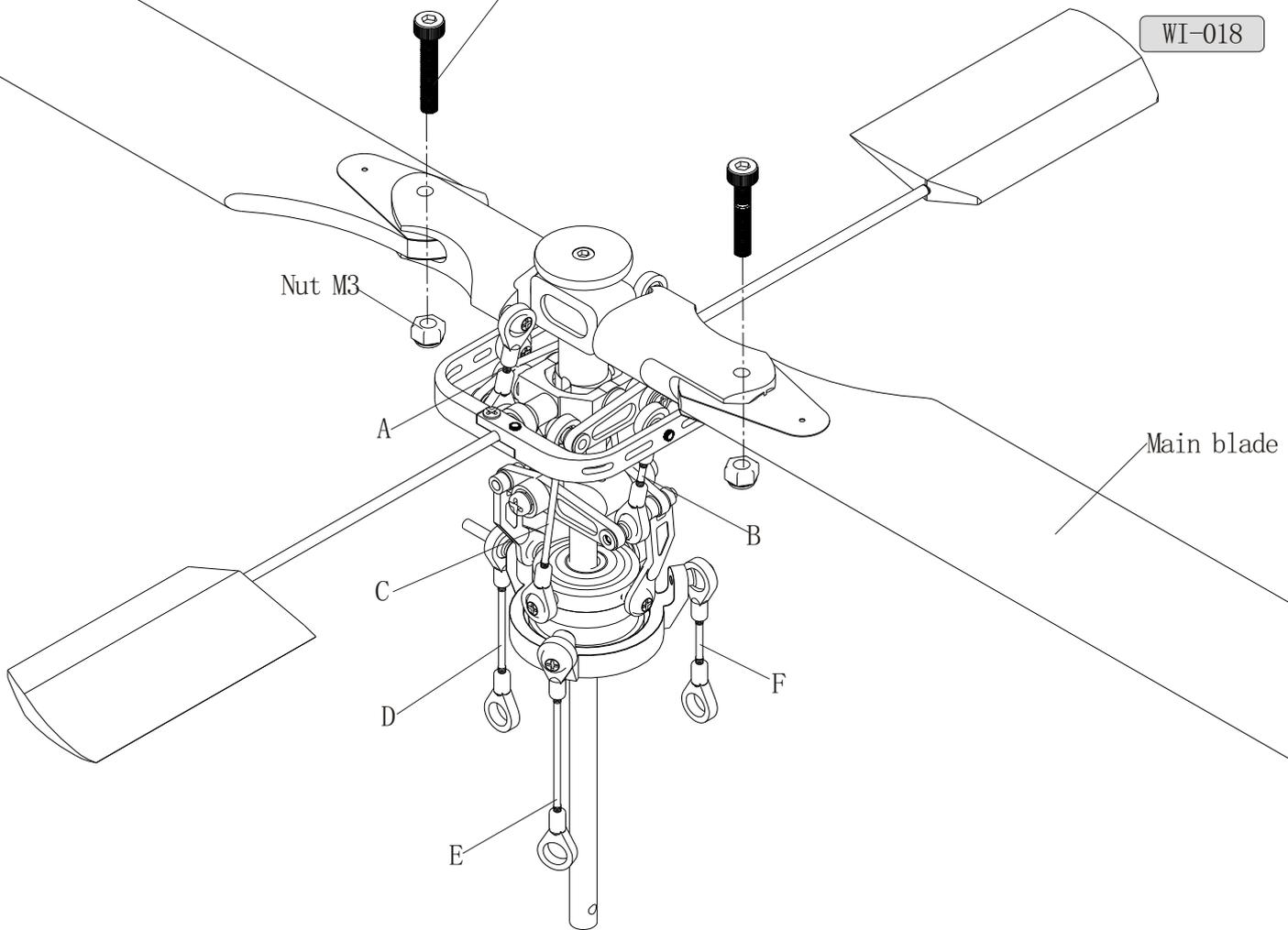
1. Cross screw M2*8
2. Socket screw M2*8
3. Tail servo mount
4. Tail boom
5. Cross screw M2*5
6. Horizontal stabilizer
7. Anti-vibration ring
8. Stabilizer mount
9. Socket screw M2*8
10. Rudder control rod



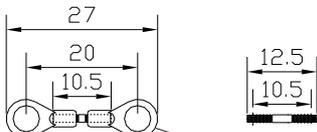
Socket screw M3*16

Nut M3

Main blade



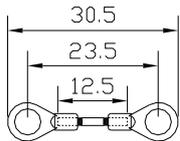
A*2



main blade grips and SF-arm

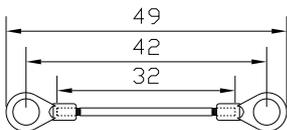
Apply Self-Furnished Loctite is recommended when second use.

B*2



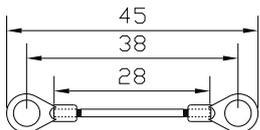
washout control arm and flybar caddles

C*2



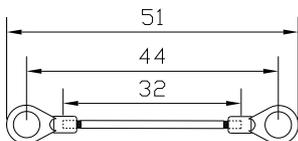
swashplate and SF-arm

D*1



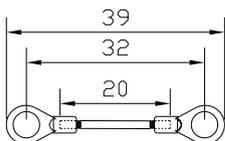
back servo and swashplate

E*1

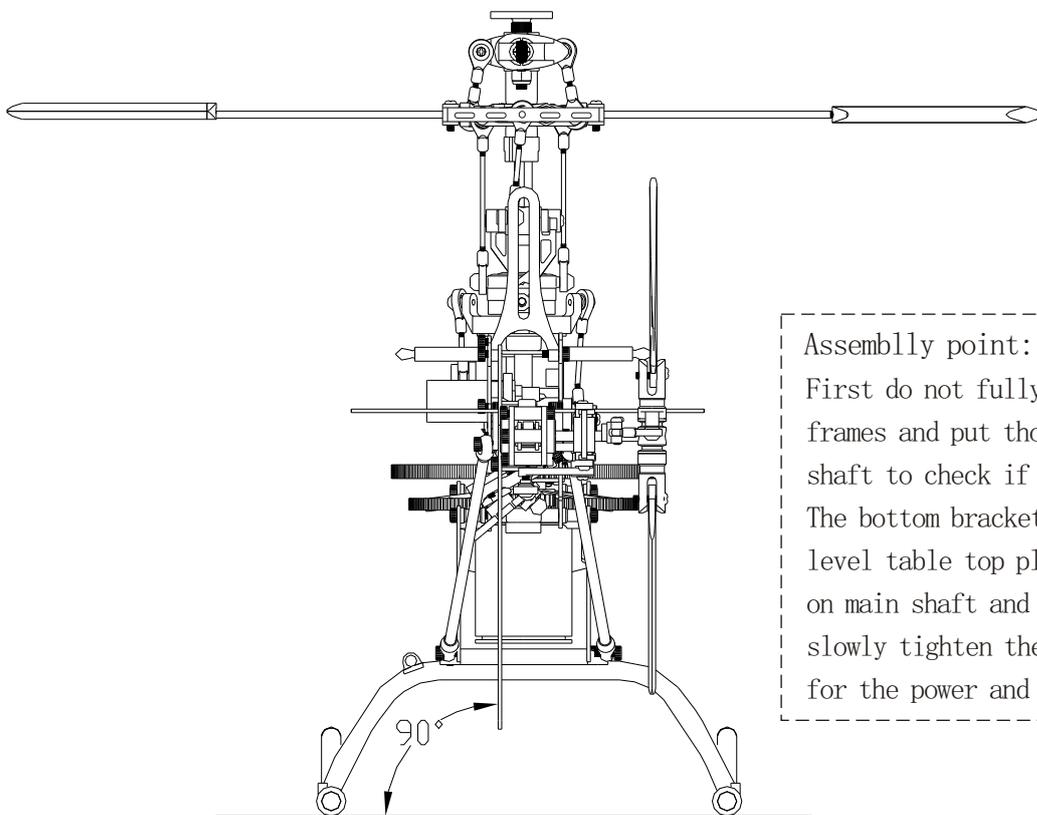
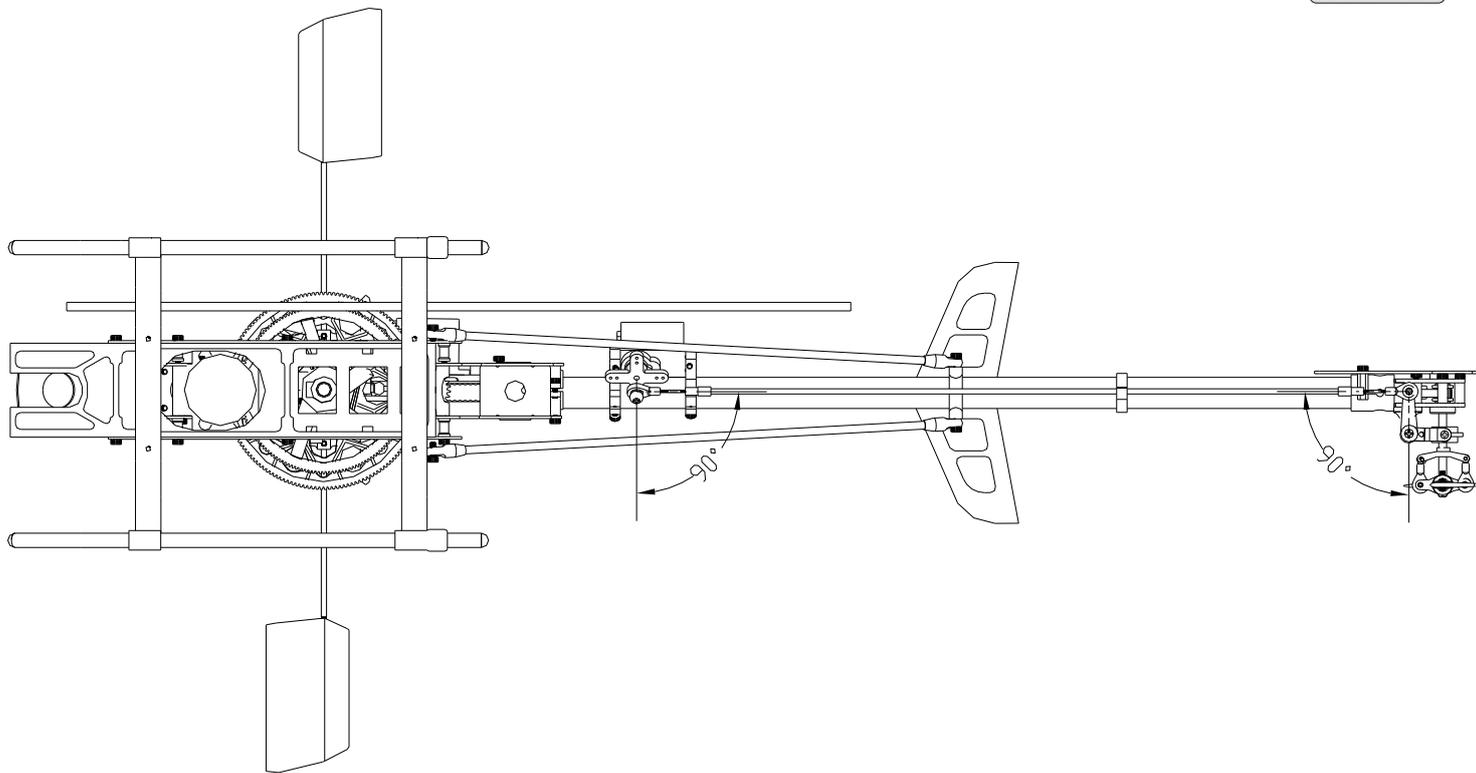


lower front servo and swashplate

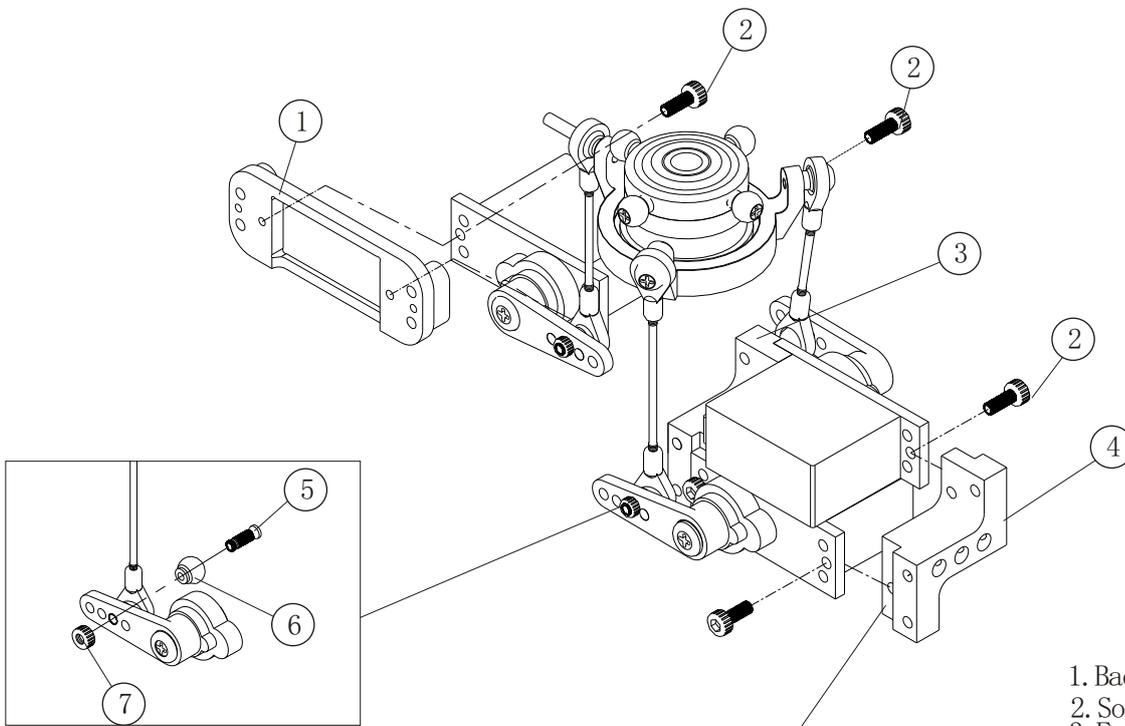
F*1



upper front servo and swashplate



Assembly point:
 First do not fully tighten the screws of main frames and put the bearings through the main shaft to check if the movements are smooth. The bottom bracket must be firmly touched the level table top please keep the smooth movements on main shaft and level bottom bracket, then slowly tighten the screws. This assembly can help for the power and flight performance.



After finish fixing the servo and adjusting the space between Main Gear and Motor Brass Gear, then assemble the servo mount B. (Note: Servo Mount A & B is different.)

1. Back servo bracket
2. Socket screw M2*4
3. Front servo mount A
4. Front servo mount B
5. Scross screw M1. 7*8
6. Linkage ball
7. Net M1. 7

If you have any questions, please contact us:

[Http://www.wingmodel.com](http://www.wingmodel.com)