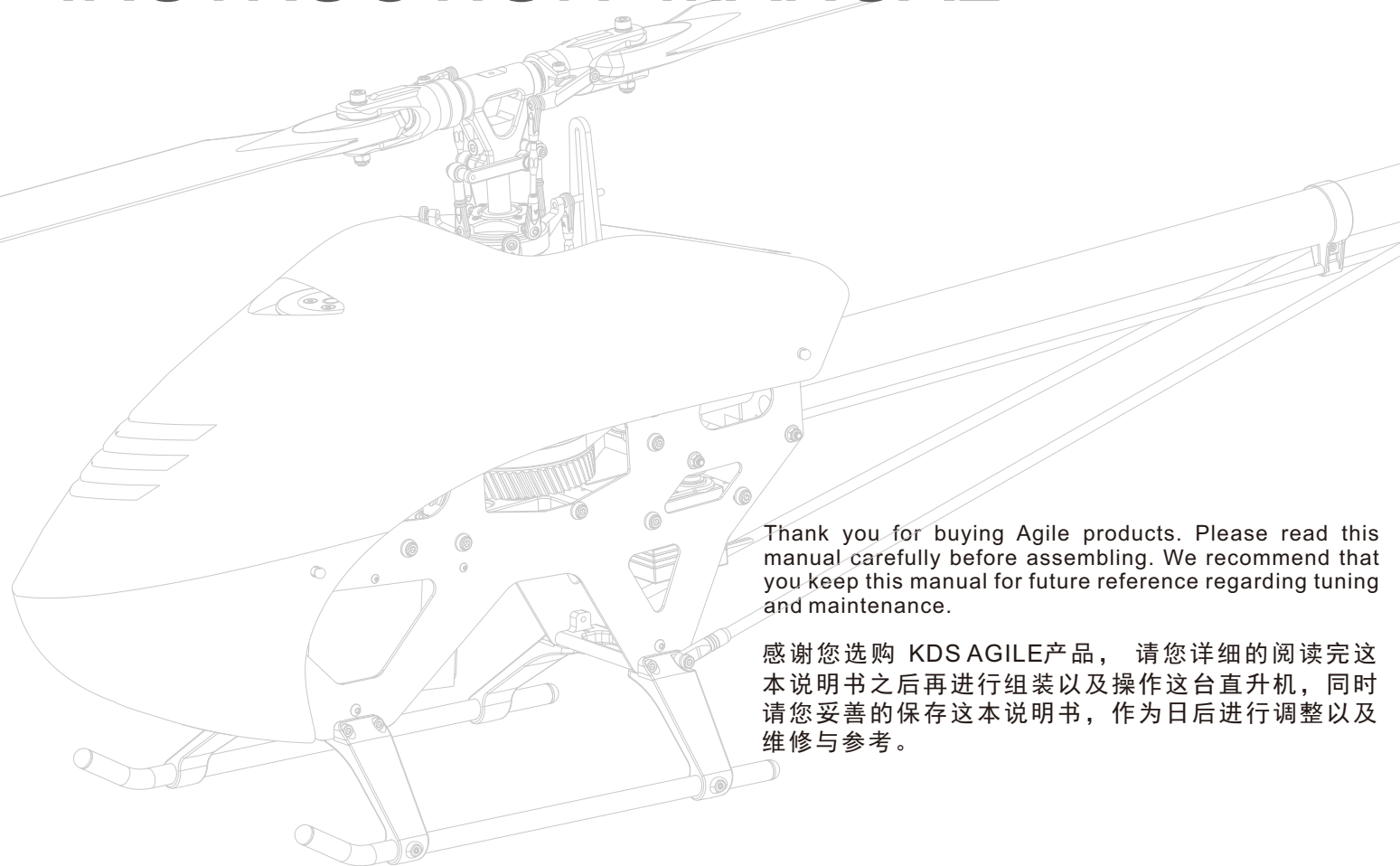


# AGILE A-5 HELICOPTER

## 使用说明书

## INSTRUCTION MANUAL



Thank you for buying Agile products. Please read this manual carefully before assembling. We recommend that you keep this manual for future reference regarding tuning and maintenance.

感谢您选购 KDS AGILE 产品，请您详细的阅读完这本说明书之后再进行组装以及操作这台直升机，同时请您妥善的保存这本说明书，作为日后进行调整以及维修与参考。

机身长度：1065mm  
机身高度：330mm  
机身宽度：182mm  
主旋翼直径：Ø1250  
主旋翼长度：550mm  
尾旋翼直径：Ø260mm  
尾旋翼长度：92mm  
马达齿：21T  
马达KV：1200KV  
传动齿轮：(21/54)(17/56)  
传动比：21T(8.89:1)  
尾传动比：3.86:1  
空机重量：2500g(含头罩/主桨/尾桨)  
起飞重量：3200g  
电池：22.2V 4500-5500MAH  
电调：120A

Length : 1065mm  
Height : 330mm  
Width : 182mm  
Main Rotor Diameter : Ø1250  
Main Blade Length : 550mm  
Tail Rotor Diameter : Ø260mm  
Tail Blade Length : 92mm  
Motor Pinion : 21T  
Motor KV : 1200KV  
Driving Gear : (21/54)(17/56)  
Gear Ratio : 21T(8.89:1)  
Tail Gear Ratio: 3.86:1  
Weight(w/o power) : 2500g (Incl canopy/ main blade/ tail blade)  
Flying Weight: 3200g  
Battery : 22.2V 4500-5500mAh  
ESC : 120A

## 1.INTRODUCTION

Congratulations on your purchase of the Agile A-5 radio controlled helicopter kit. Agile A-5 was designed in Europe by Eng. Gaziano Roberto and is proudly manufactured by KDS Model. Our goal was to offer you something different with a minimum of parts, easy maintenance, and outstanding flying performances. It's time to fly different!...



Enjoy the built and have a great time with you Agile A-5 !

### IMPORTANT NOTES

R/C helicopters, including the AGILE A-5 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 AGILE products. Agile A-5, KDS Model, their affiliates and authorized distributors are not responsible for personal injuries to the operators and others, and property damages that could occur from the assembly, maintenance or your use/misuse of this product. Always respect the rules provided by your local remote control aircraft organization.

### NOTE FOR ASSEMBLY

The following manual provide important instructions to correctly assemble the model. It is structured in a logical way, based on the work done in previous step. If you change the order, it may result in additional or unnecessary steps. So we suggest you to read this user manual very carefully to understand correctly the assembly procedure. Failure to do so may not only downgrade performances but also increase the risk of danger. Apply thread lock as indicated, allow the threadlock to cure before mounting parts. It is recommended to use threadlock on each bolt or screw that are engaged with metal parts.

## 2.SAFETY NOTES

### • 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 play your model in inclement weather, such as rain, wind, snow or darkness.



### • 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).



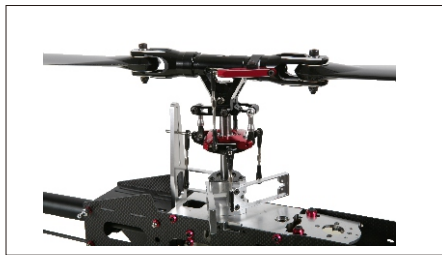
### • ALWAYS BE AWARE OF THE ROTATING BLADES

During the operation of the helicopter, the main rotor will be spinning at a high rate of speed. The blades are capable of inflicting serious bodily injury and damage 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.



## 1.简介

恭喜你购买 AGILE A-5 无线电遥控直升机，AGILE A-5 是来自欧洲的设计师ENG.Gaziano Roberto 设计，由 KDS 模型生产制造完成。我们的目标是用最少的配件，为客户提供高质量产品，容易维护以及达到出色的飞行



享受您的Agile A-5 直升机并玩得愉快！

### 重要声明：

KDS AGILE A-5 遥控直升机并非玩具，它是结合了许多高科技产品所设计出来的休闲用品，所以商品的使用不当或不熟悉都可能会造成严重伤害甚至死亡，使用之前请务必详读使用说明书，勿轻忽并注意自身安全，任何遥控直升机的使用，制造商和经销商是无法对使用者于零件使用的损耗异常或组装不当所发生之意外负任何责任，本产品是提供有操作过模型直升机经验的成人或者有相当技术的人员在旁指导，以确保安全无虞下操作使用，产品售出后本公司将不负任何操作和使用控制上的任何性能与安全责任。KDS公司，附属子公司和授权分销商不承担任何的个人伤害以及其他，永远遵守当地为遥控模型飞机提供的规范。

## 2. 安全注意事项

### • 远离障碍物及人群

直升机飞行时具有一定的速度，相对的也潜在一定危险性，场地的选择也相对的重要，请遵守法规到合适遥控飞行场地飞行。必须注意周围有没有人，高楼，建筑物，高压电线，树木等等，避免操控的不当造成自己与他人财产的损坏。初次练习时，务必选择在空旷合法专属飞行场地并适当搭配练习架飞行，这对飞行失误造成的损伤将会大幅的降低。请勿在下雨，打雷等恶劣天气下操作，以确保本身及机体的安全。



### • 避免独自操控

至飞行场飞行前，需确认是否有相同频率的同行正进行飞行，因为开启相同频率的发射机将导致自己与他人立即干扰等意外危险。遥控飞行操控技巧在学习初期有一定的难度，要尽量避免独自操作飞行，需有经验的人士在旁指导，才可以操控飞行。（勤练模拟器及老手指导是入门必要的选择）。



### • 远离运转中零件

当直升机主旋翼与尾旋翼运转时，切勿触摸并远离任何物件，以避免造成危险与损坏。



#### ● 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.



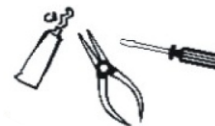
#### ● KEEP AWAY FROM HEAT

R/C models are made up of 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.



#### ● 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.



#### ● SAFE OPERATION

Operate this unit within your ability. Do not fly under tired condition or improper operation, which may cause danger.



### 3. Safety Check Before Flying

Before flying, for safety reasons, make sure that no one else is operating a R/C model on the same frequency as yours. Before flying, please check that the power of your transmitter and your helicopter are sufficient for the flight. Before turning on the transmitter, please check that the throttle stick is in its lowest position, IDLE UP switch must be on OFF position.

When turning off the model, please follow the power on/off procedure. Power ON: turn on the transmitter first, then turn on helicopter power. Power OFF: turn off the helicopter power first and then turn off the transmitter. Improper operating procedure

may cause the model to be out of control, so please do make this your habit.

Before operation, check that every movement is smooth and directions are correct. Inspect servos carefully for interferences and broken gears.

Check for missing or loose screws and nuts. See if there is any cracked and/or incomplete assembly of parts.

Check main rotor blades and rotor holders carefully. Broken and premature failures of parts might result in a dangerous situation or crash.

Check all ball links to avoid excess play and replace as needed. Failure to do so will result in poor flight stability.

Check that the battery and power plugs are fastened. Vibrations and violent flight might loosen the plugs and so lead to out of control.

Check for the tension of main drive belt.

### 4. Tools Required

- Hex drivers : 1.5, 2, 2.5, 3, 4mm
- Nut Drivers : 5, 5.5, 7mm
- Ball link pliers
- Diagonal cutting pliers
- Scissors
- Metric ruler
- Soldering iron + solder (for motor and ESC wiring)
- Pitch gauge (for set up)
- Swashplate leveller
- Threadlock blue \* (medium)
- Threadlock red \* (high strength)
- Bearing retainer compound
- Epoxy A+B Glue
- Grease
- Oil

\*Colors may vary depending on your area.



#### ● 远离潮湿环境

直升机内部也是由许多精密的电子零器件组成，所以必须绝对的防止潮湿或水气，避免在浴室或雨天时使用，防止水气进入机身内部而导致机件及电子零件故障而引发不可预期的意外！



#### 远离热源

- 遥控飞机多半是以PA维修或聚乙烯，电子商品为主要材质，因此要尽量远离热源，日晒以避免因高温而变形甚至熔毁损坏的可能。



#### ● 勿不当使用本产品

请勿自行改造加工，任何的升级改装或维修，请使用KDS产品目录中的零件，以确保结构的安全，请确认于产品界限内操作，请勿过载使用，并勿用于安全，法令外其它非法用途。



#### ● 安全操作

请于自己能力内及需要一定技术范围内操作这台直升机，过于疲劳，精神不佳或不当操作，意外风险可能会提高。



### 3. 飞行前安全检查重要事项

每次飞行前应先确认所使用的频率是否会干扰他人，已确保你自身与他人的安全。

每次飞行前确定你发射机与直升机电池的电量是否足够飞行的状态。

开机前确认油门摇杆是否位于最低点，熄火降落开关，定速开关（IDLE）是否于关闭状态。

关机时必须遵守电源开关机程序，开机时应先开启发射机后，再开启直升机电源，关机时应先关闭直升机电源，再关闭发射机电源，不正确的开关机程序会造成失控现象，影响自身与他人的安全，请养成正确的习惯。

开机请先确定直升机的各个动作是否顺畅，及方向是否正确，并检查伺服的动作是否有干涩或崩齿的情形，使用故障的伺服将会导致不可预期的危险。

飞行前确认没有缺少或者松眼的螺丝与螺帽，确认没有组装不完整或损毁的零件，仔细检查主旋翼是否有损坏，特别是接近主旋翼夹座的部位。

损坏或组装不完整的零件不仅影响飞行，更会造成不可预期的危险。

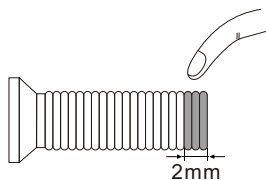
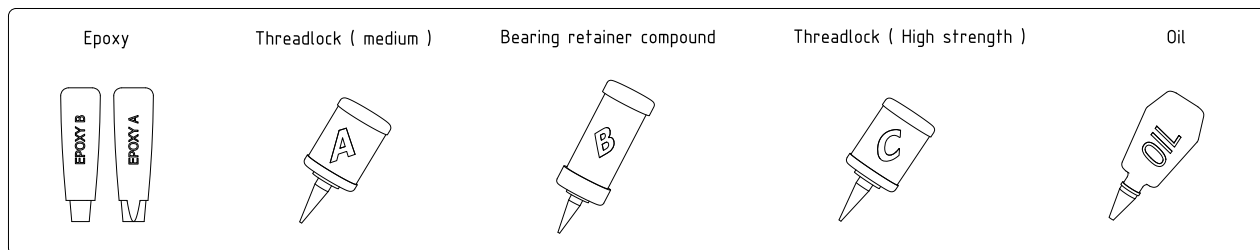
注意：对损坏，有裂痕零件更新及定期保养检查的要性，检查所有的连杆头是否有松脱的情形，过松的连杆头应先更新，否则将造成直升机无法操控的危险。

确认电池及电源接头是否固定牢靠，以及主传动皮带的拉力，飞行中的震动或激烈的飞行，可以造成接头松脱/皮带磨损及失控的危险。

### 4. 自行必备的工具

- 对边六角螺丝刀：1.5，2，2.5, 3, 4 MM
- 六角套筒：5. 5, 7 MM
- 球头钳
- 斜口钳
- 剪刀
- 直尺
- 焊铁+焊锡（焊马达+电调转接头）
- 螺距规
- 十字盘水平仪
- 蓝色螺丝胶（中等）
- 红色轴承胶（高强度）
- 环氧树脂A+B胶
- 润滑油

When you see the marks as below, please use glue or grease to ensure flying safety.



"A" Glue width: approx. 2mm

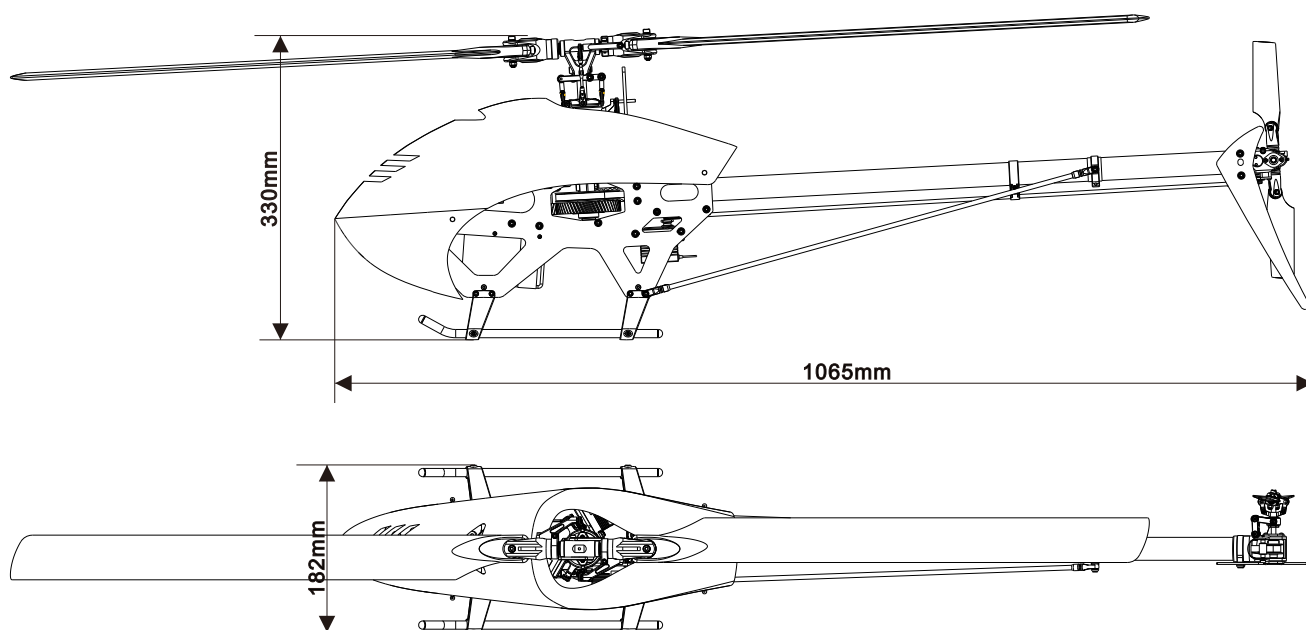
"OIL" Lubrication grease. "A" thread lock, apply a small amount on screws or metal parts and wipe surplus off. When disassembling, recommend to heat the metal joint about 15 seconds. (NOTE: Keep plastic parts away from heat.)

## 5. Equipment Required for Assembly

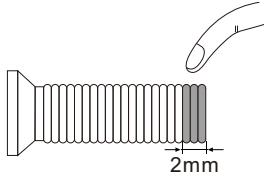
### RADIO TRANSMITTER AND ELECTRONIC EQUIPMENT REQUIRED FOR ASSEMBLY

- Brushless electric motor: 6s Lipo - 1200KV  
(4mm Bolt holes, 30mm mount width, 6mm \* 37mm motor shaft)
- Speed controller: minimum 120A  
(ESC specs limits should be rated accordingly to the maximum amps handling by the motor)
- Lipo Batteries: 6s 5000-5500 mAh
- Electronic flybarless system
- 3 pcs Metal standard servo's / 3 pcs Metal medium sized servo's
- 1 tail rotor servo, standard size, high speed required
- 550 mm main rotor blades
- 92 mm tail rotor blades (included)
- 6 channel or more helicopter transmitter system, 2.4 Ghz frequency preferred
- Receiver 6 channel or more (working with your transmitter specs)

## 6. Specification



当你看到如下标记, 请使用胶水或润滑脂, 以确保飞行安全。



“A”胶水宽度：大约-2MM

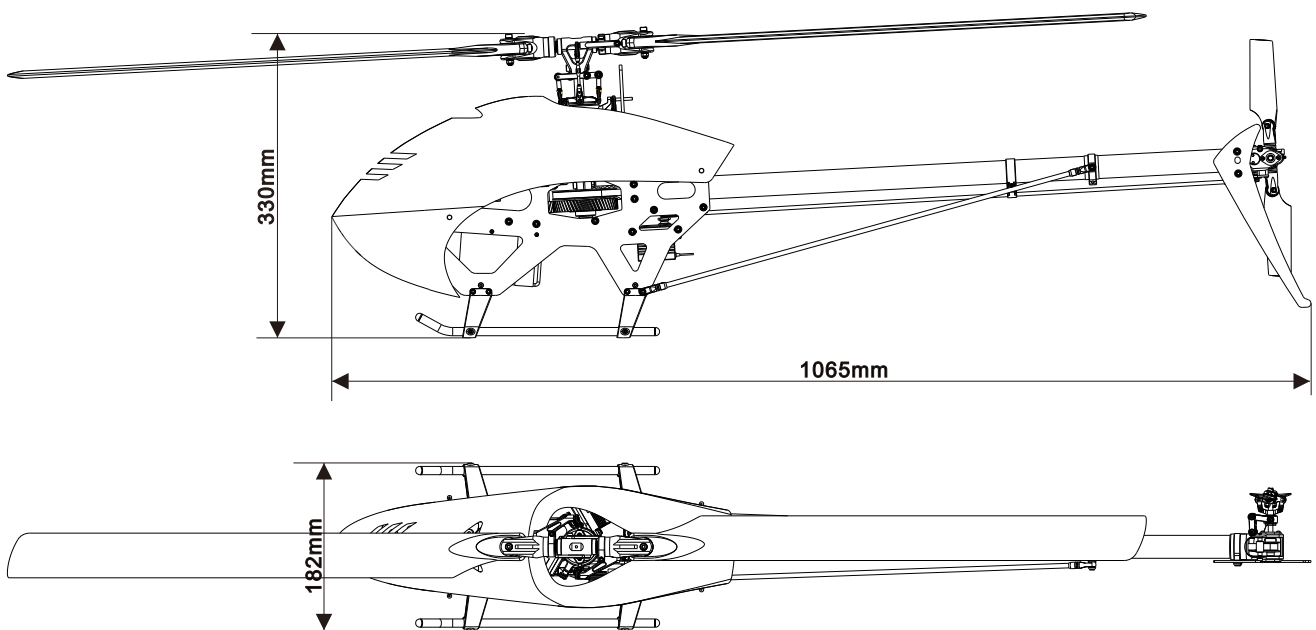
“油”润滑油。”A“螺丝胶应用少量涂敷于螺丝以及金属配件，多涂的应擦拭干净，拆卸时，建议先加热金属连接部分15秒。

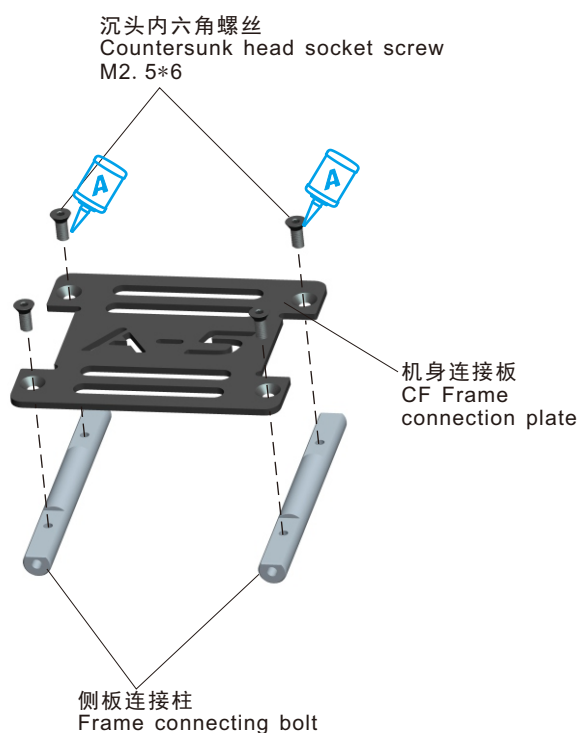
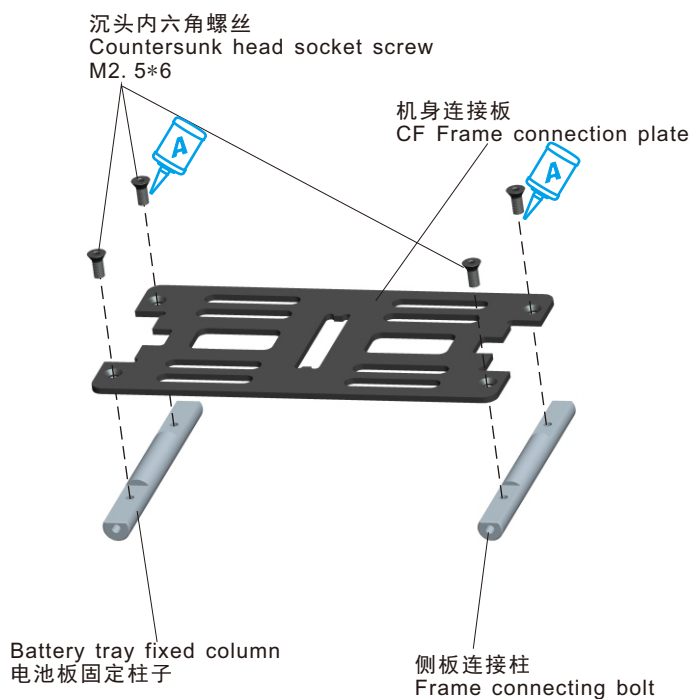
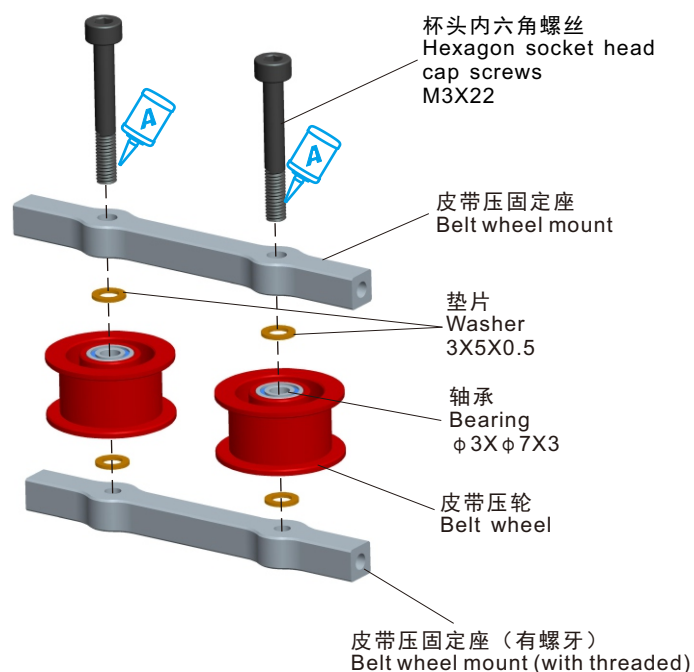
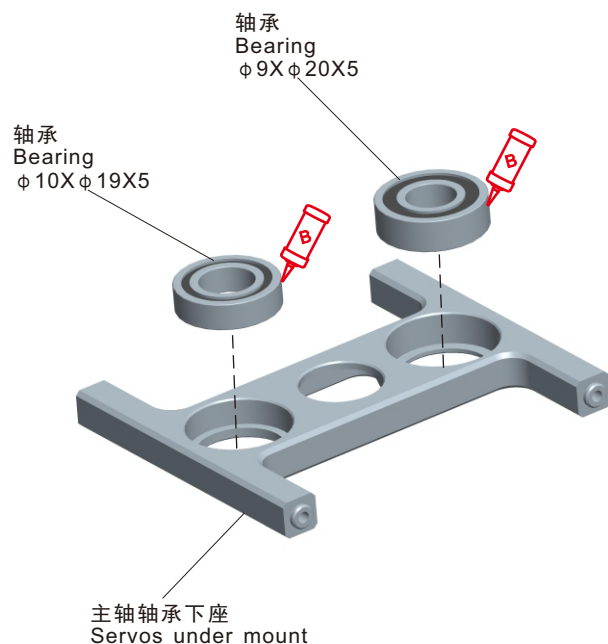
## 5. 飞机所需的配置

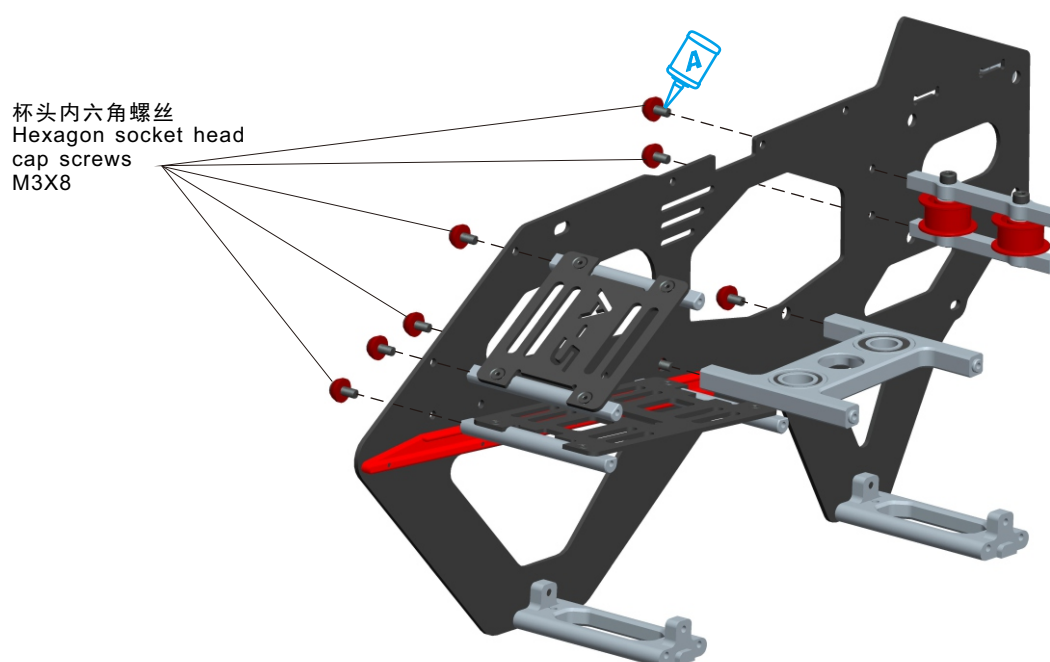
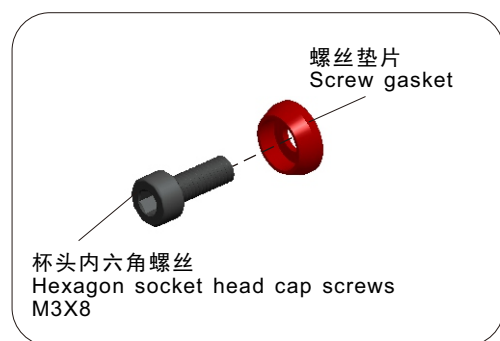
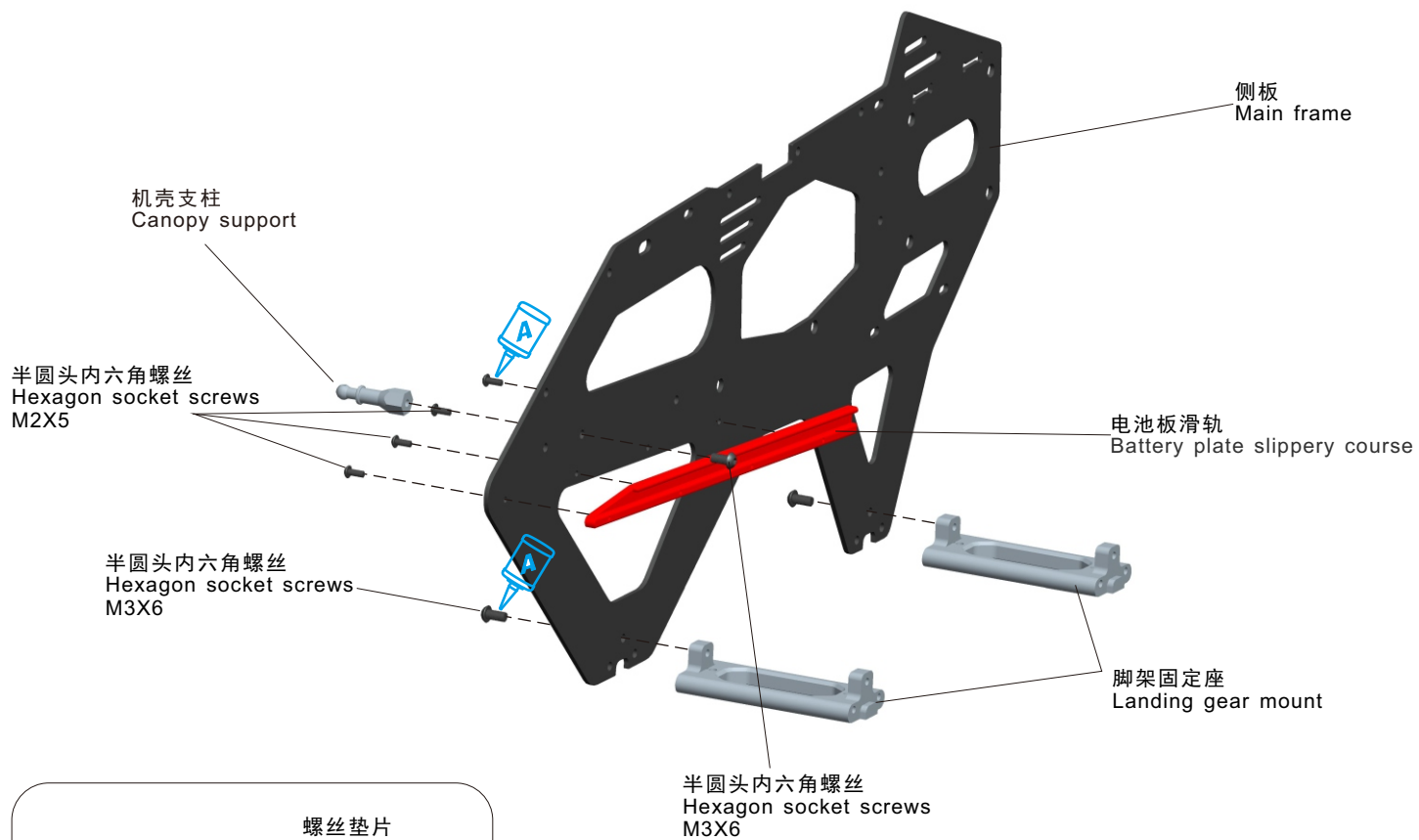
### 发射机和电子配件

- 无刷马达：6S LIPO-1200KV（4mm 螺丝孔，30mm安装宽度，6mm马达轴）
- 电子调速器：最低120A
- 锂电池：6S 5000-5500mAh
- 3个金属标准舵机或3个金属中型舵机
- 1个金属尾舵
- 550mm 主旋翼碳纤桨叶
- 92mm 尾旋翼碳纤桨叶
- 6通以上，2.4G 遥控器
- 6通以上接收机与发射机匹配

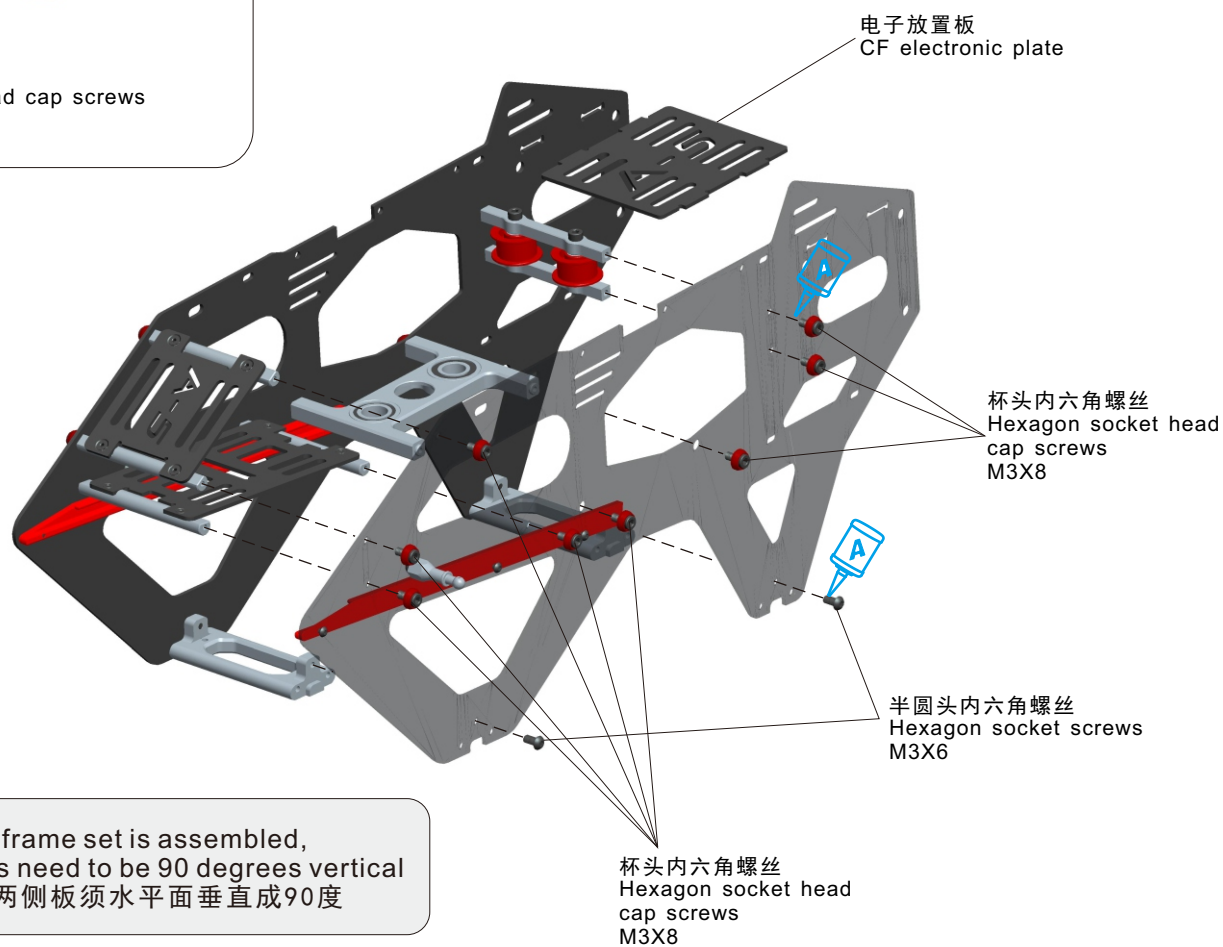
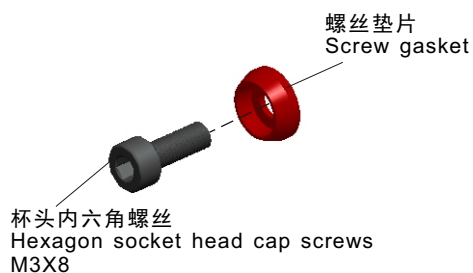
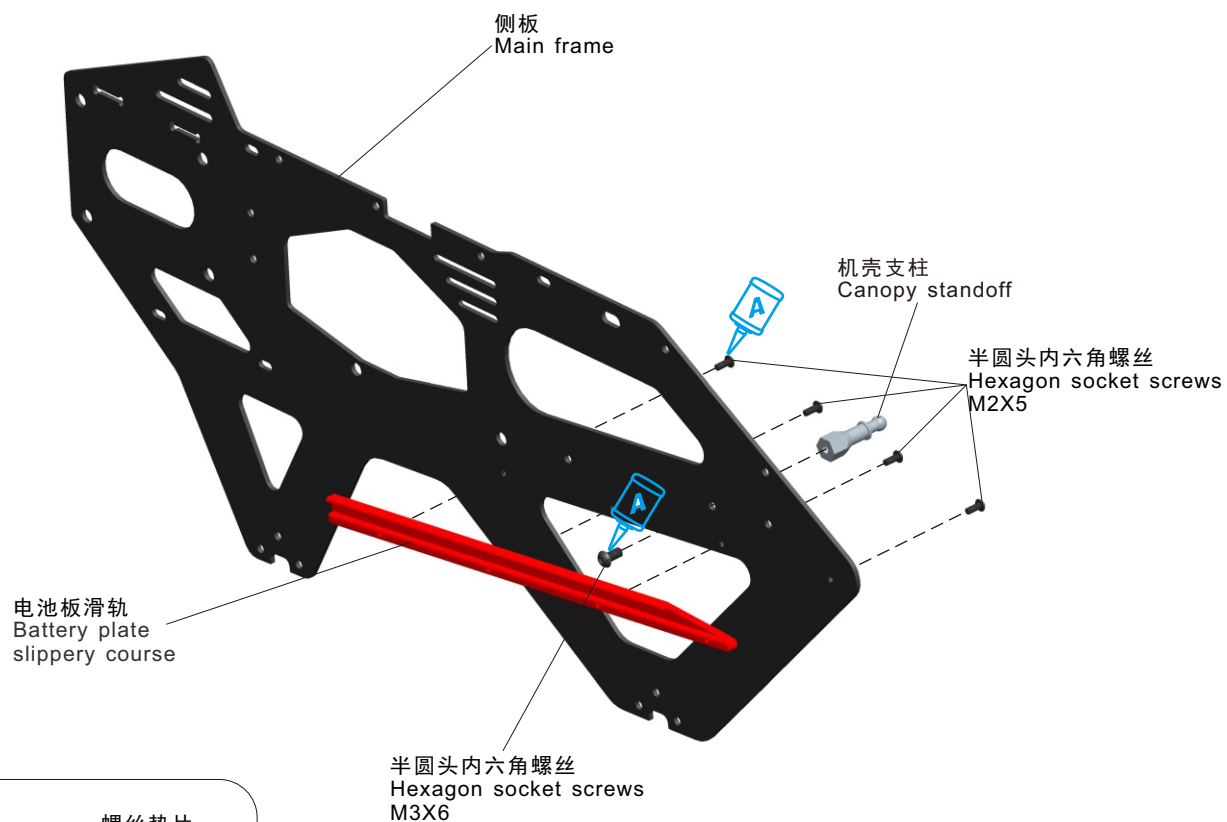
## 6. 规格说明



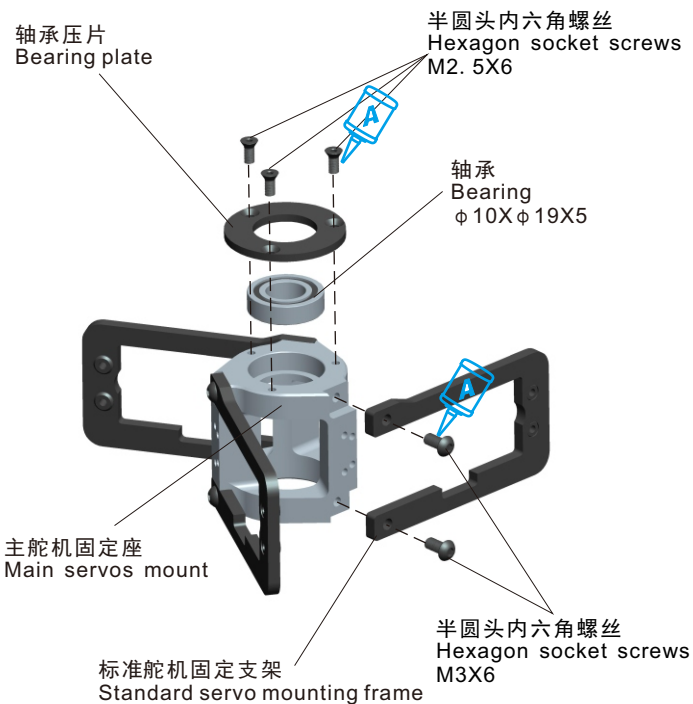
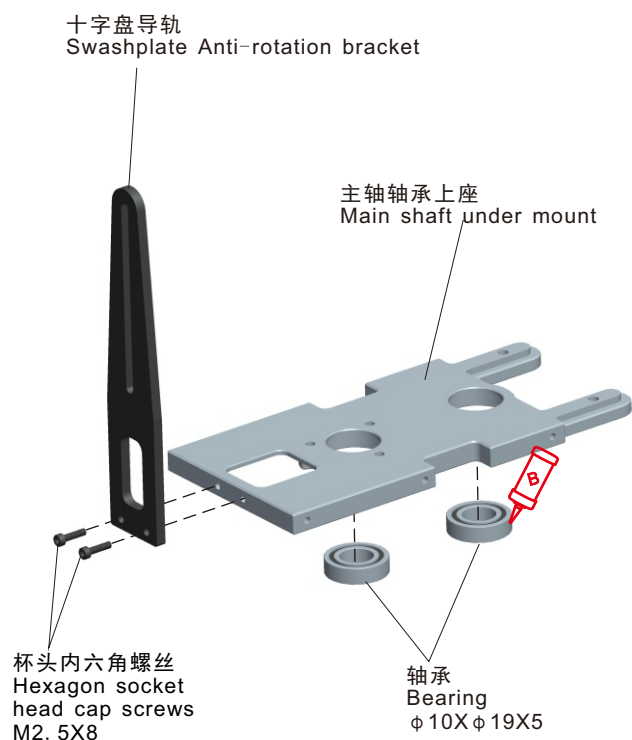








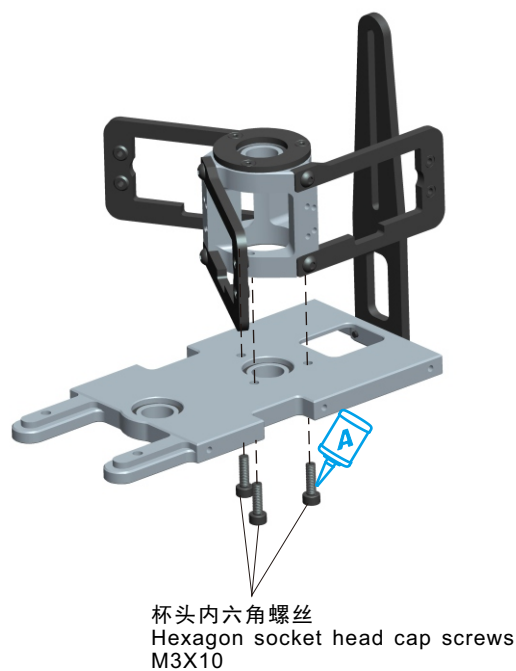
After the Main frame set is assembled, the side panels need to be 90 degrees vertical  
机身组装好后两侧板须水平面垂直成90度

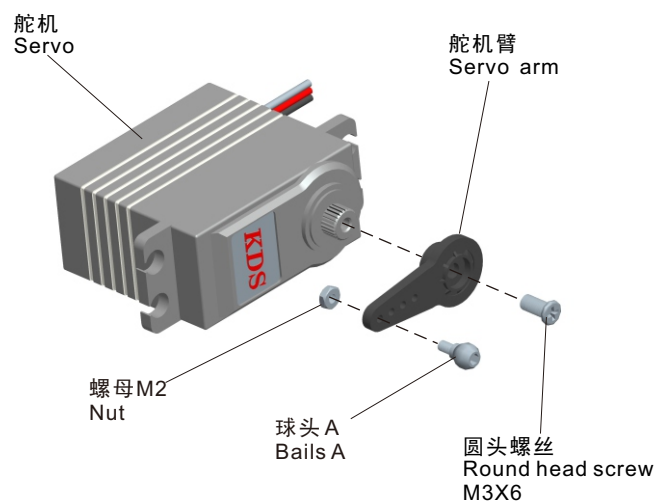
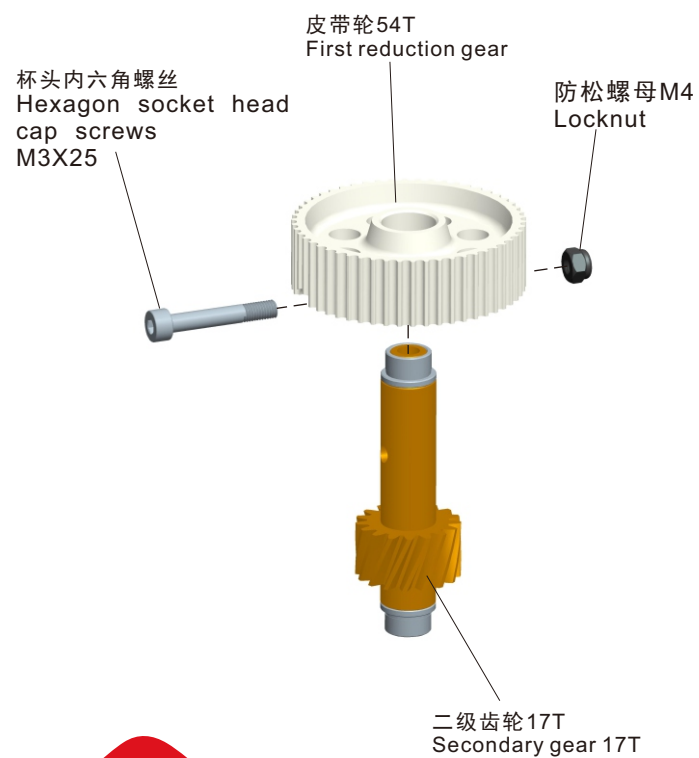
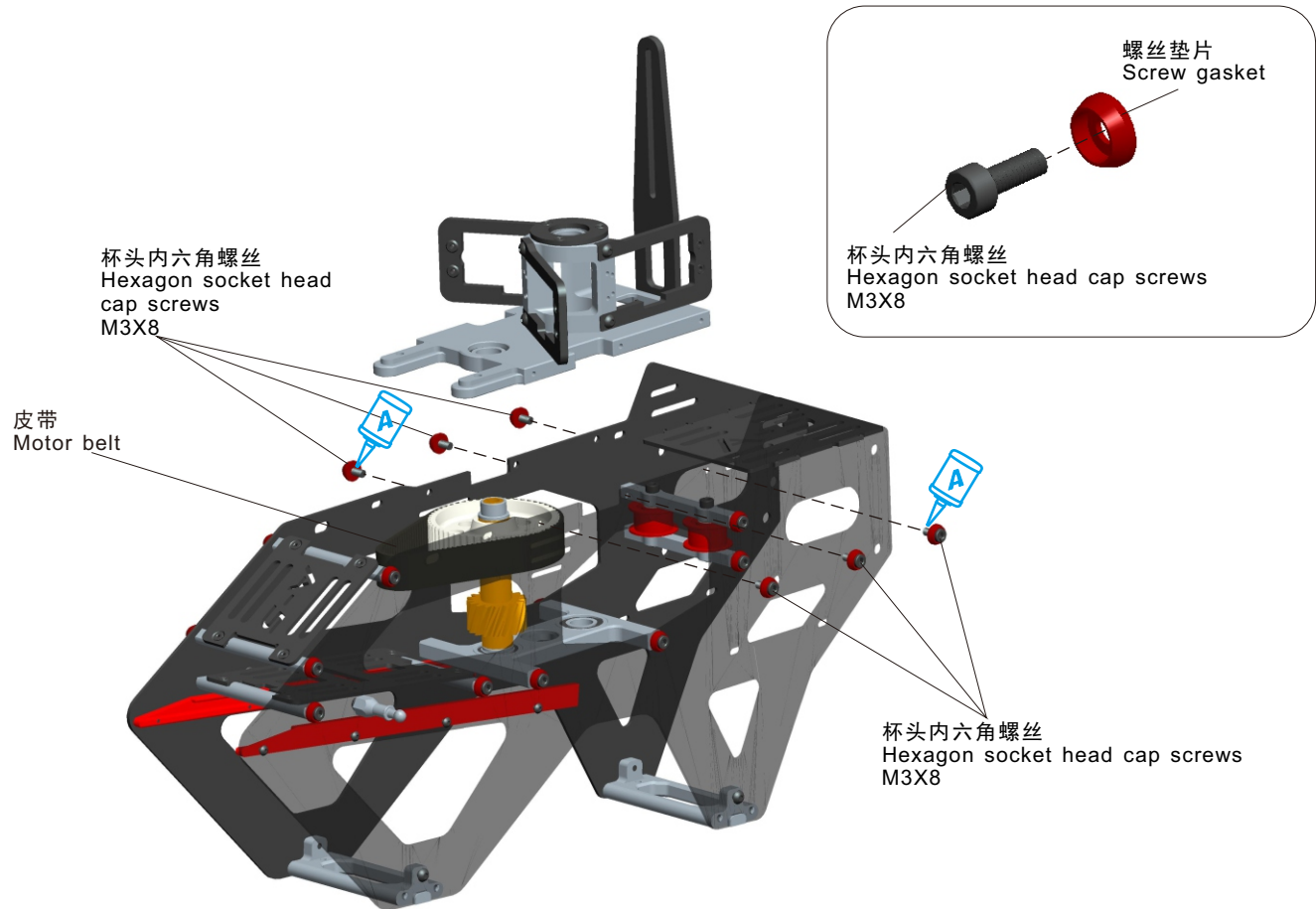


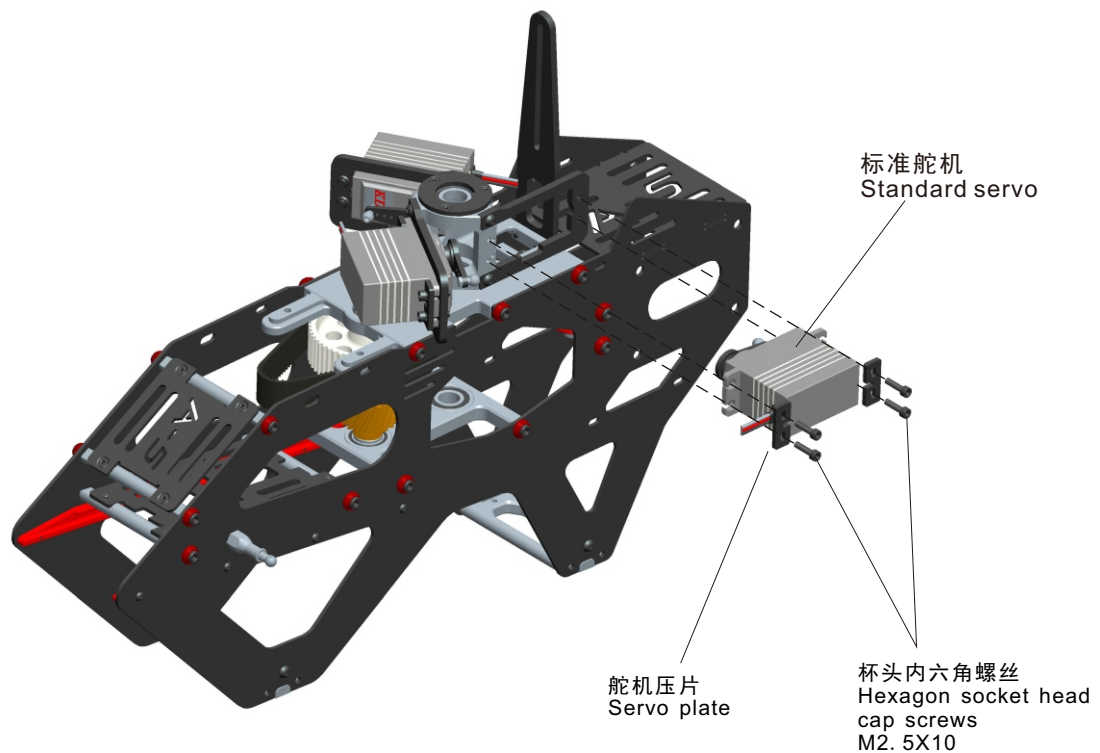
标准舵机安装架  
Standard servo mounting frame



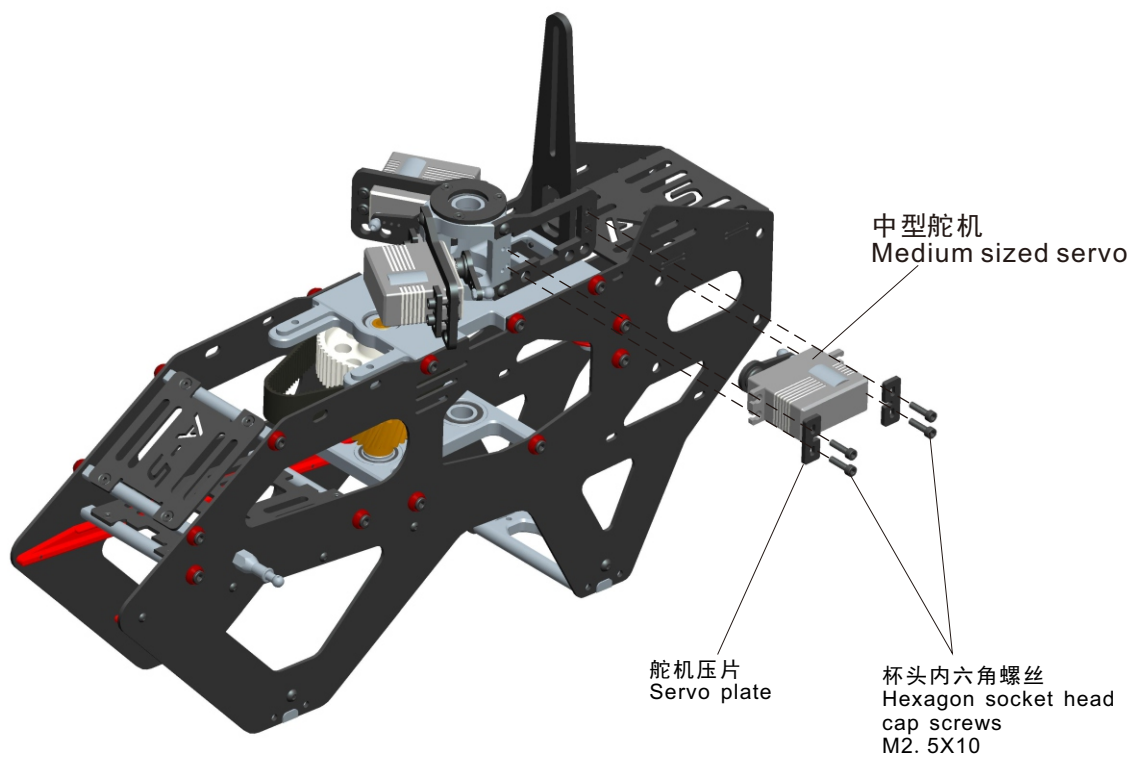
中型舵机固定支架  
Medium sized servo mounting frame

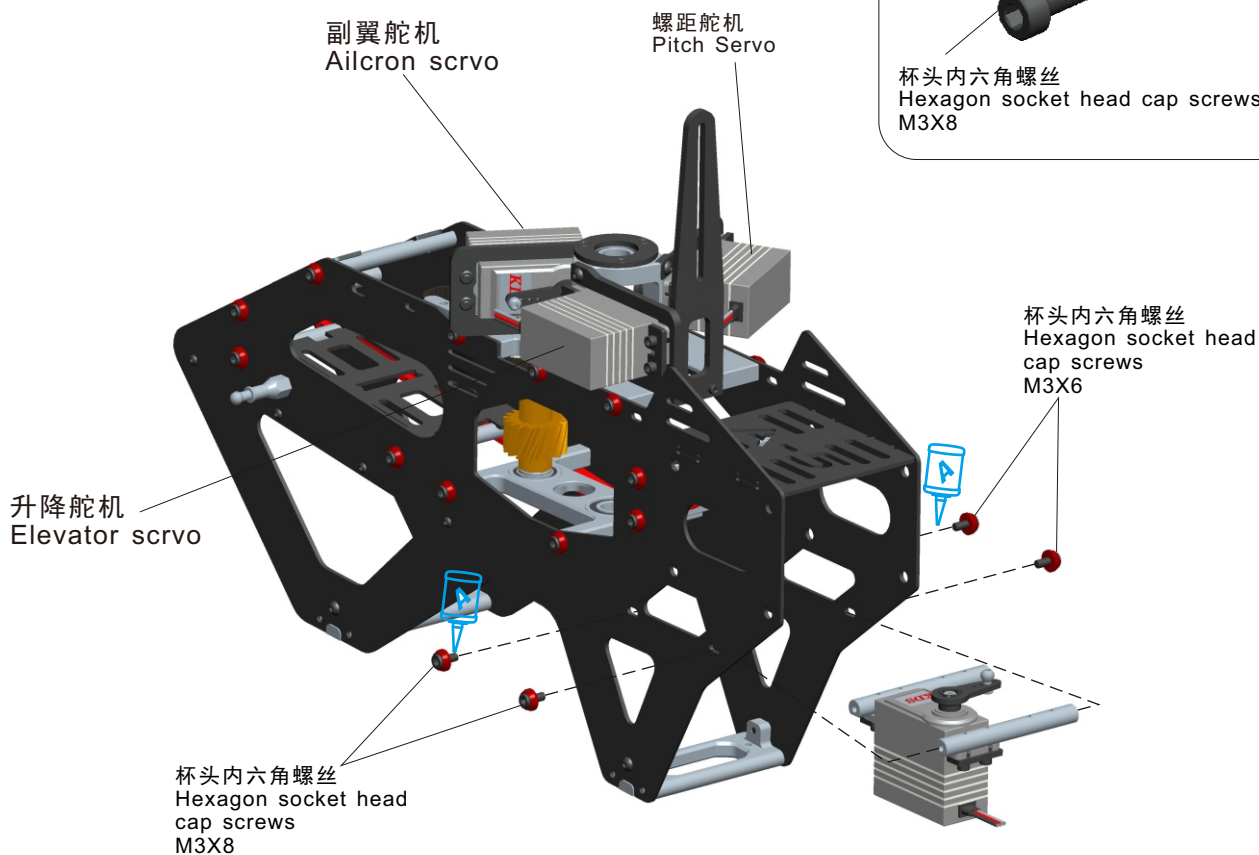
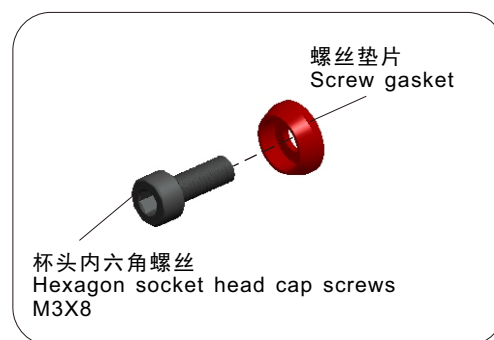
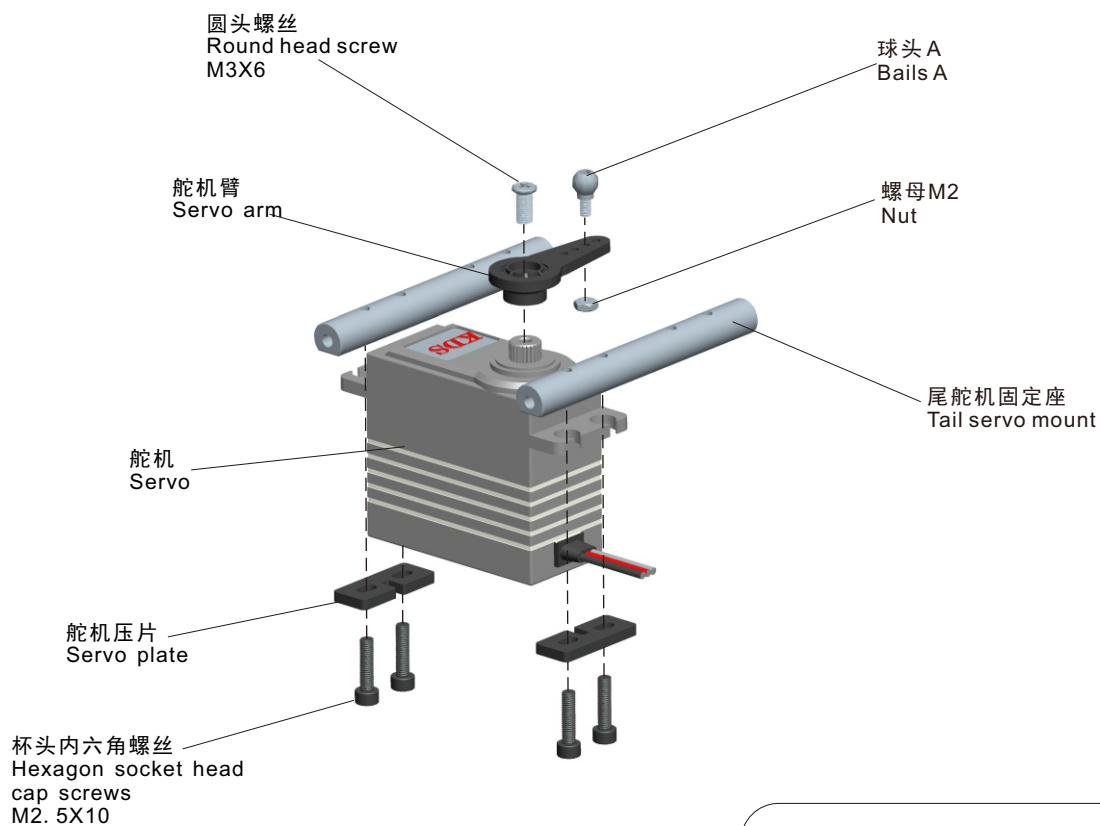






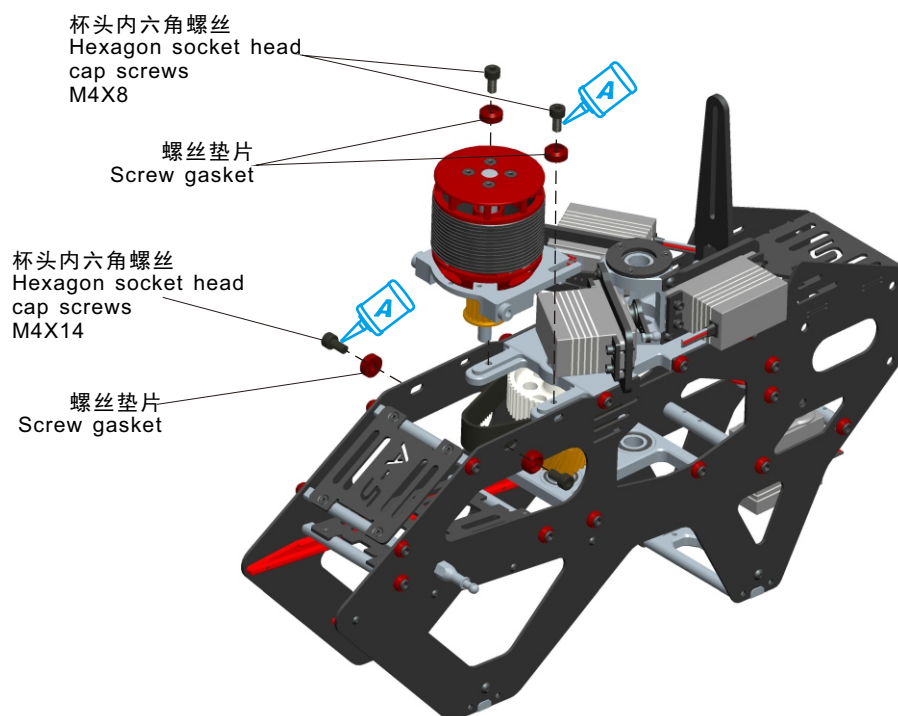
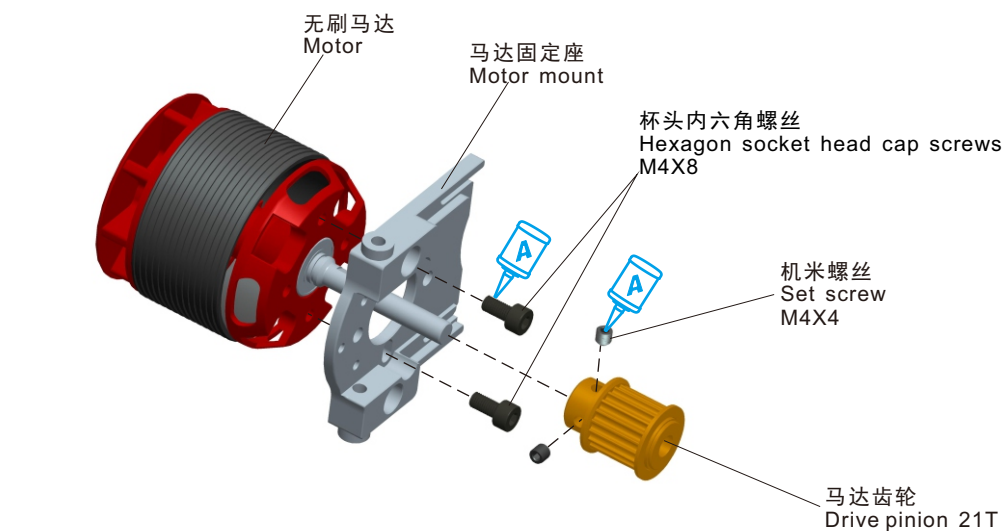
舵机装入机架前需调舵机中位设置好  
Please adjust the middle position of  
the servo's before installing it





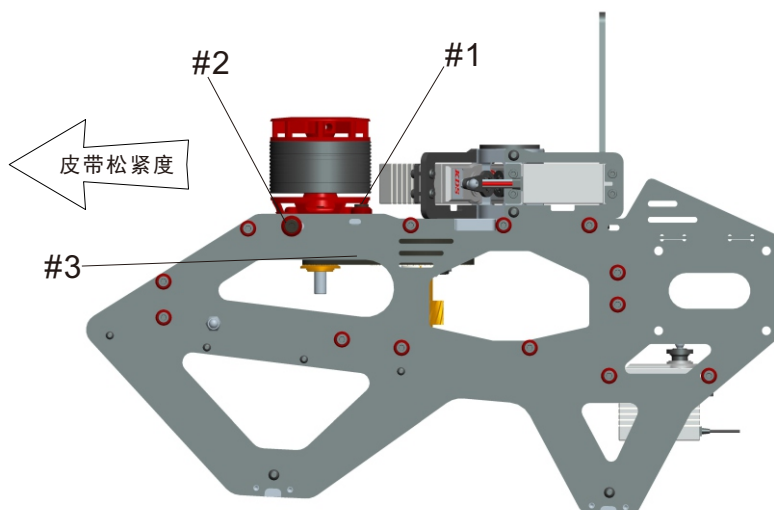
舵机装入机架前需调舵机中位设置好  
Please adjust the middle position of  
the servo's before installing it

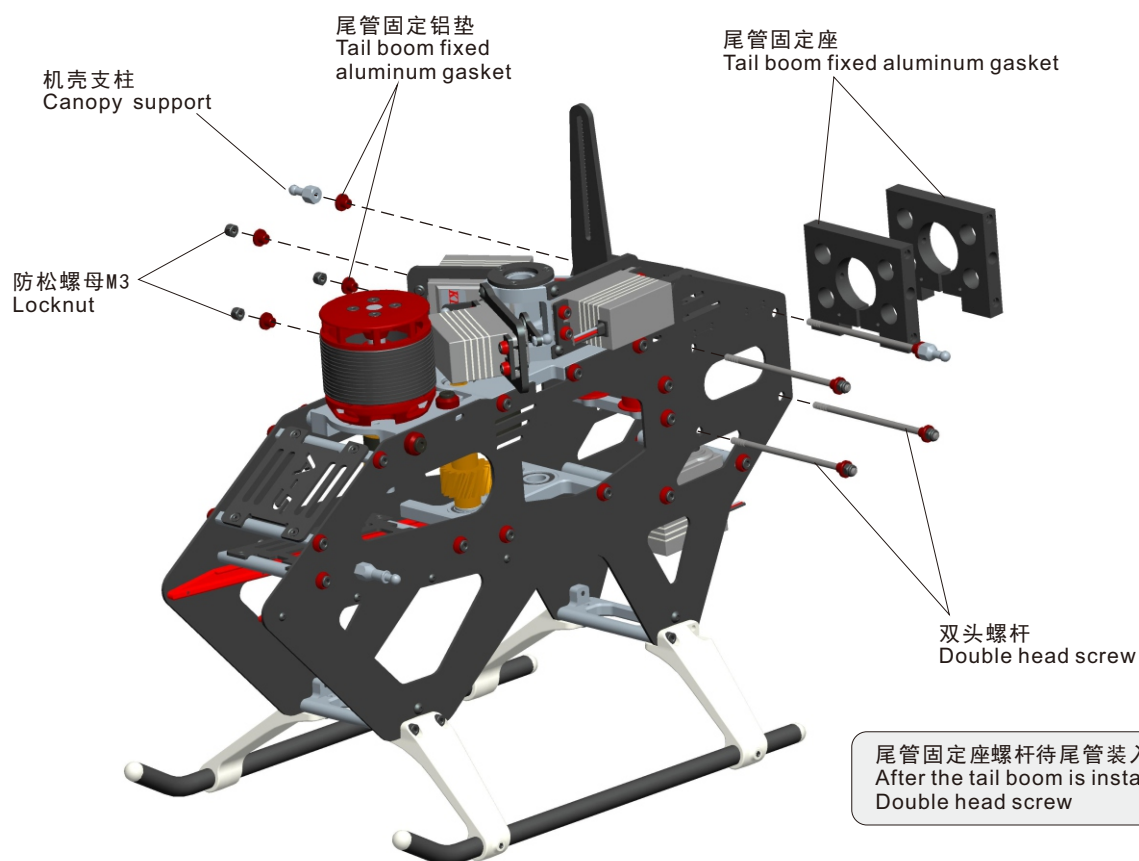
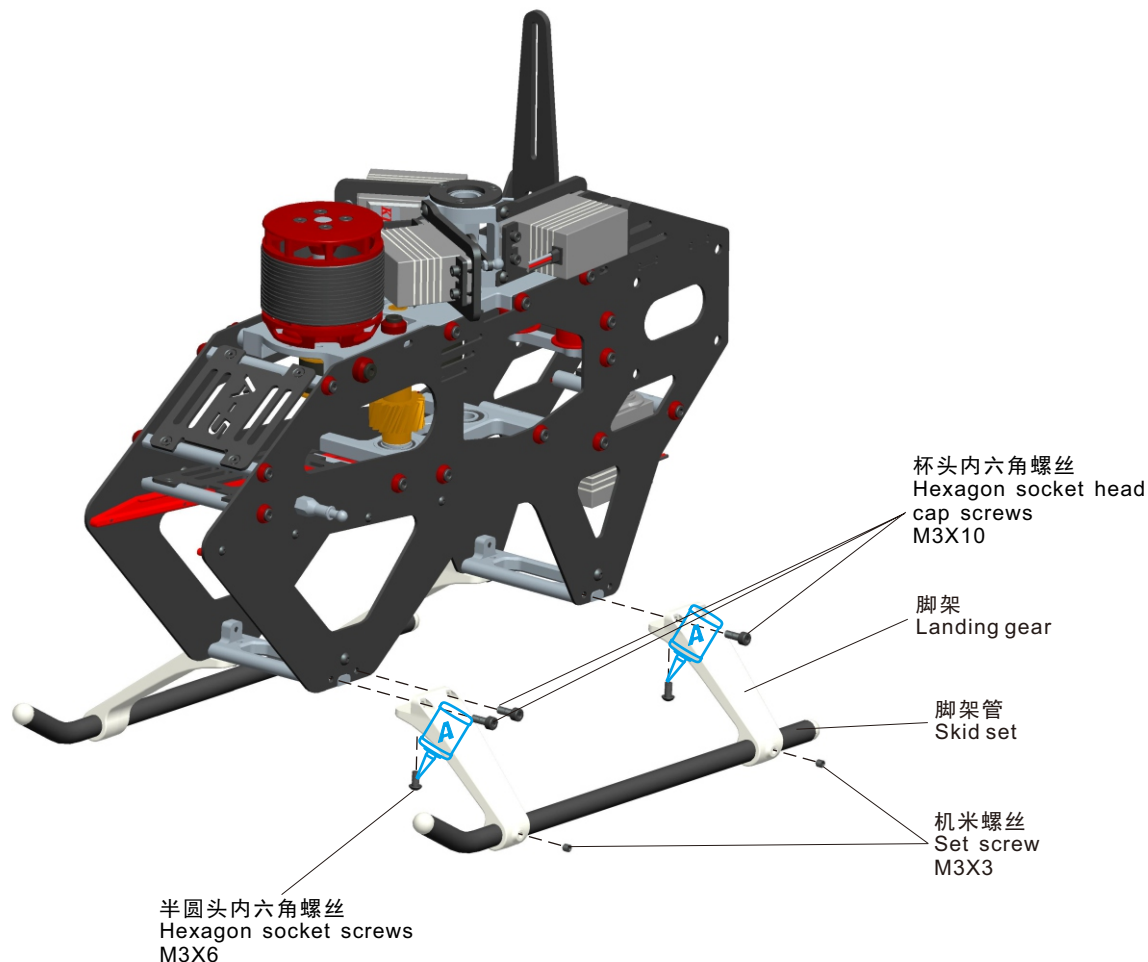




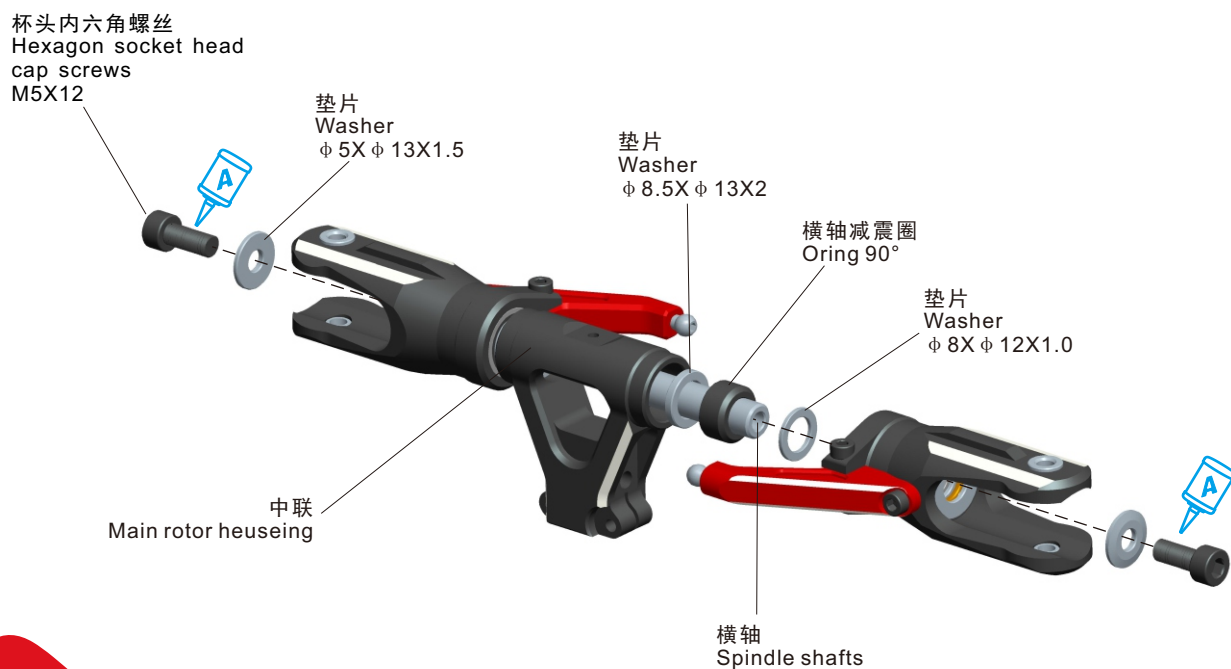
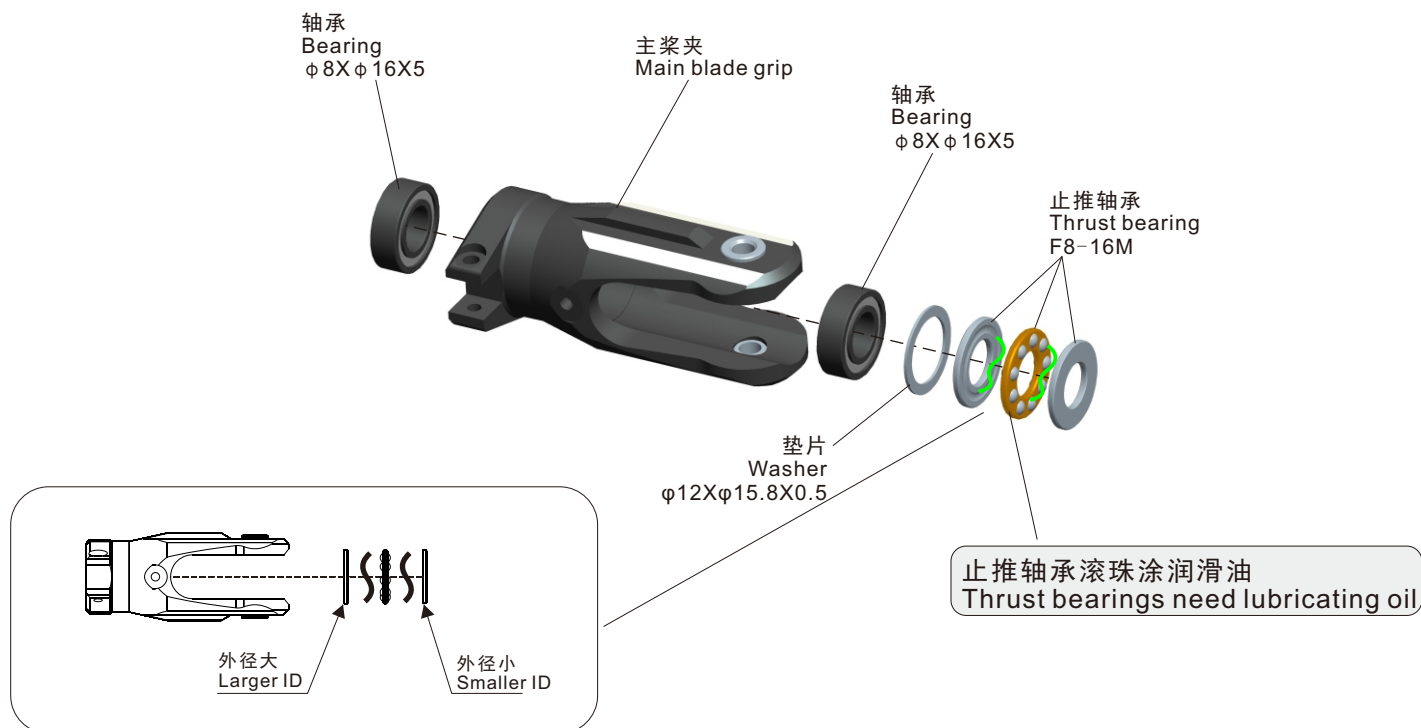
1. Push the motor in the opposite direction of the main shaft as far as you can (by hand).
2. Tighten slide screws #1
3. Tighten motor mount locking screws #2
4. Rotate the motor several times by hand. Ensure that belt is correctly aligned with the big pulley
5. You can check the belt tension by hand. you just have to push the belt with one of your finger through the round opening on frame #3. It should be difficult to push motor belt

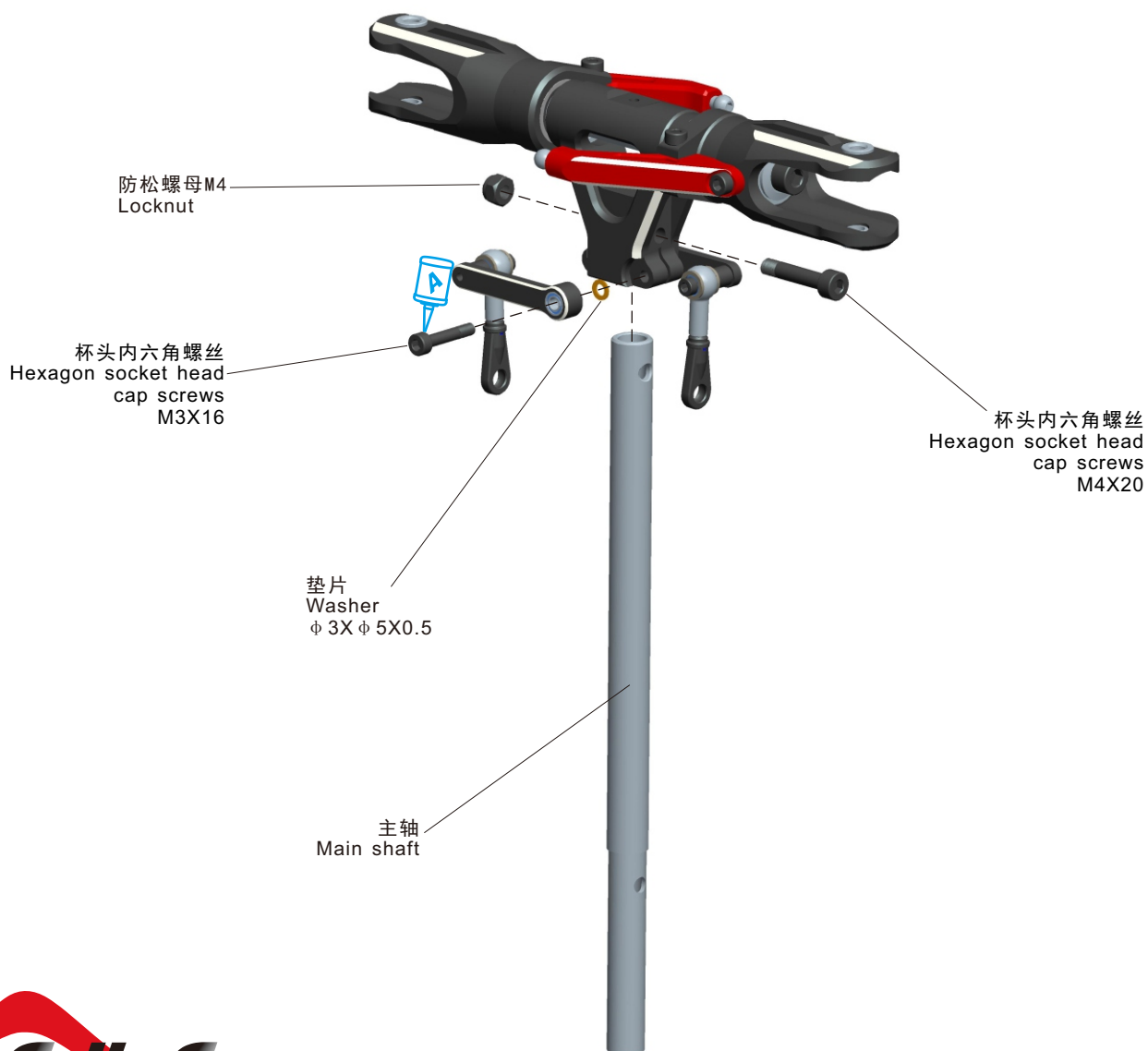
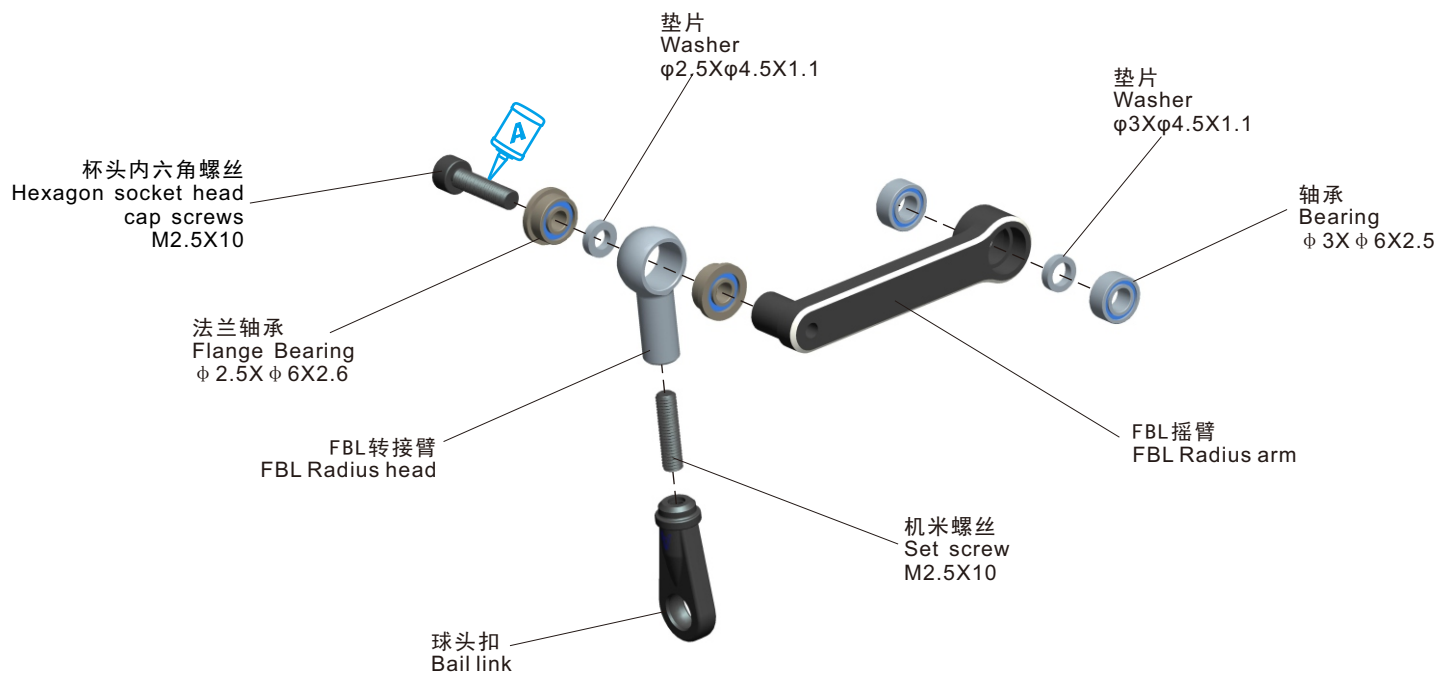
1. 将#1#2螺丝锁入相应螺丝孔  
用手沿着主轴反方向推动马达;
2. 锁紧螺丝#1;
3. 锁紧马达螺丝#2;
4. 用手转动马达, 确保皮带与大齿平行;
5. 最后检查马达皮带松紧, 用一个手指穿过孔推动皮带, 困难时需调整适合松紧度;

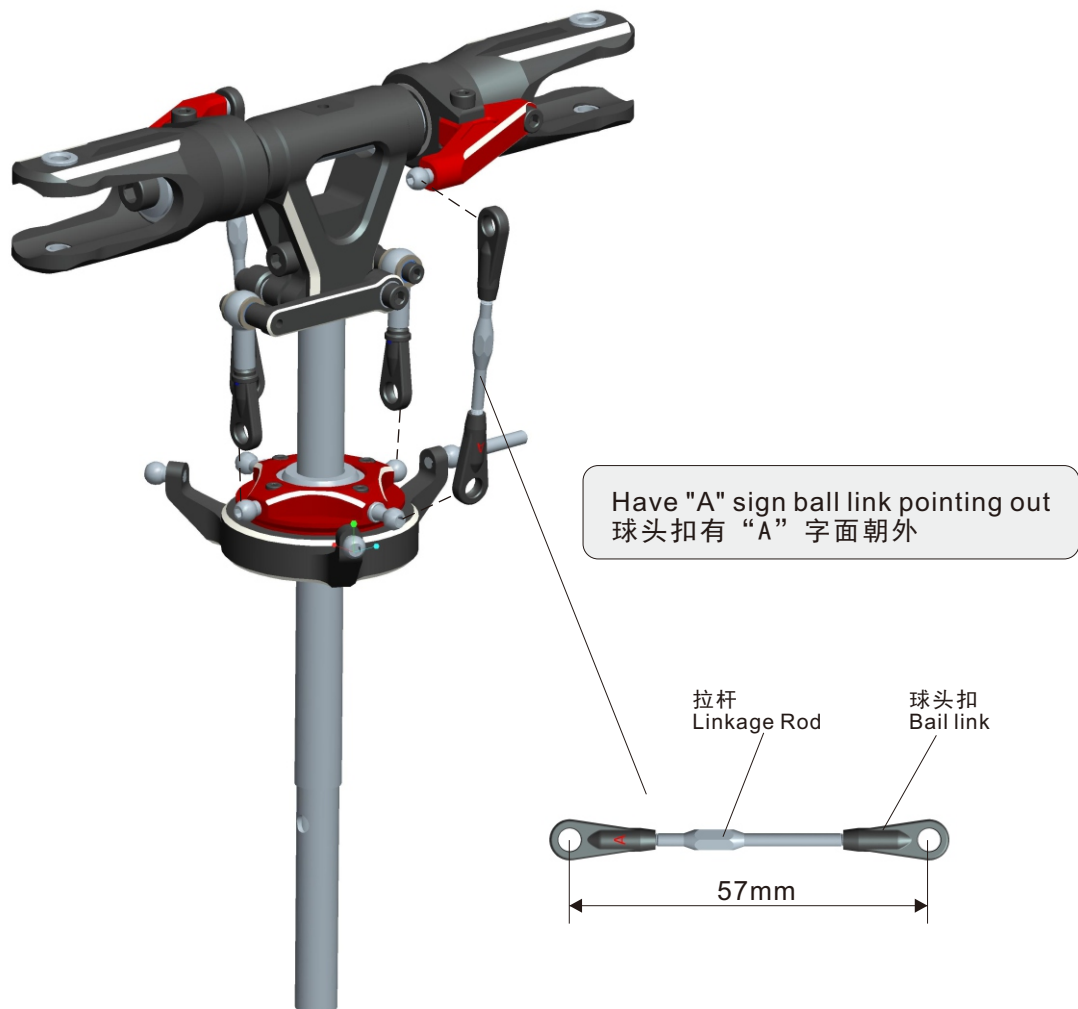
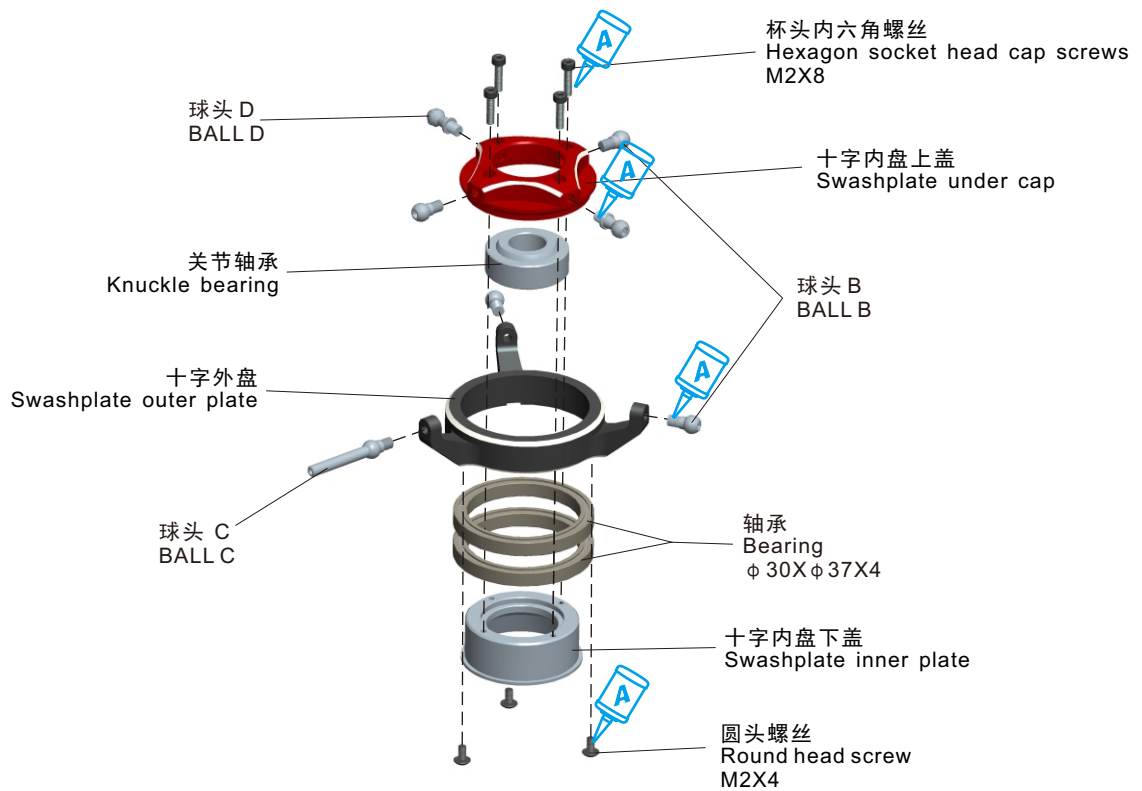




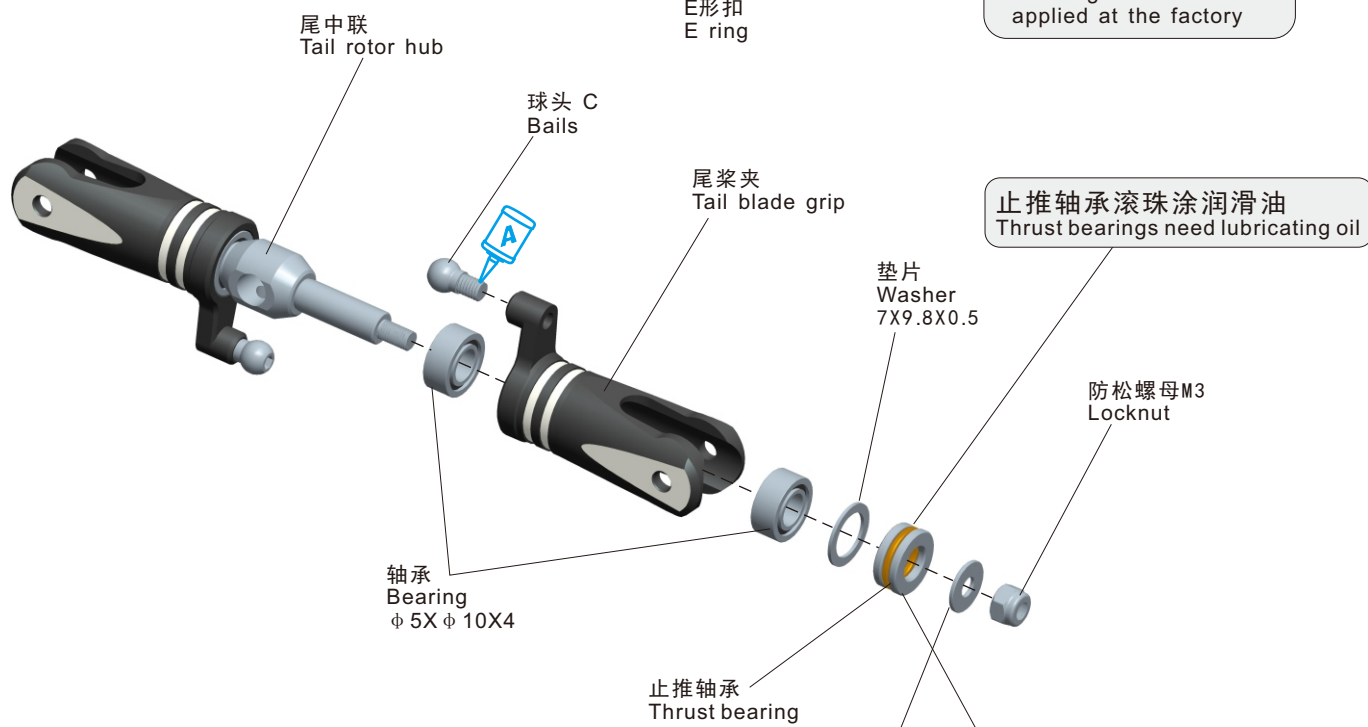
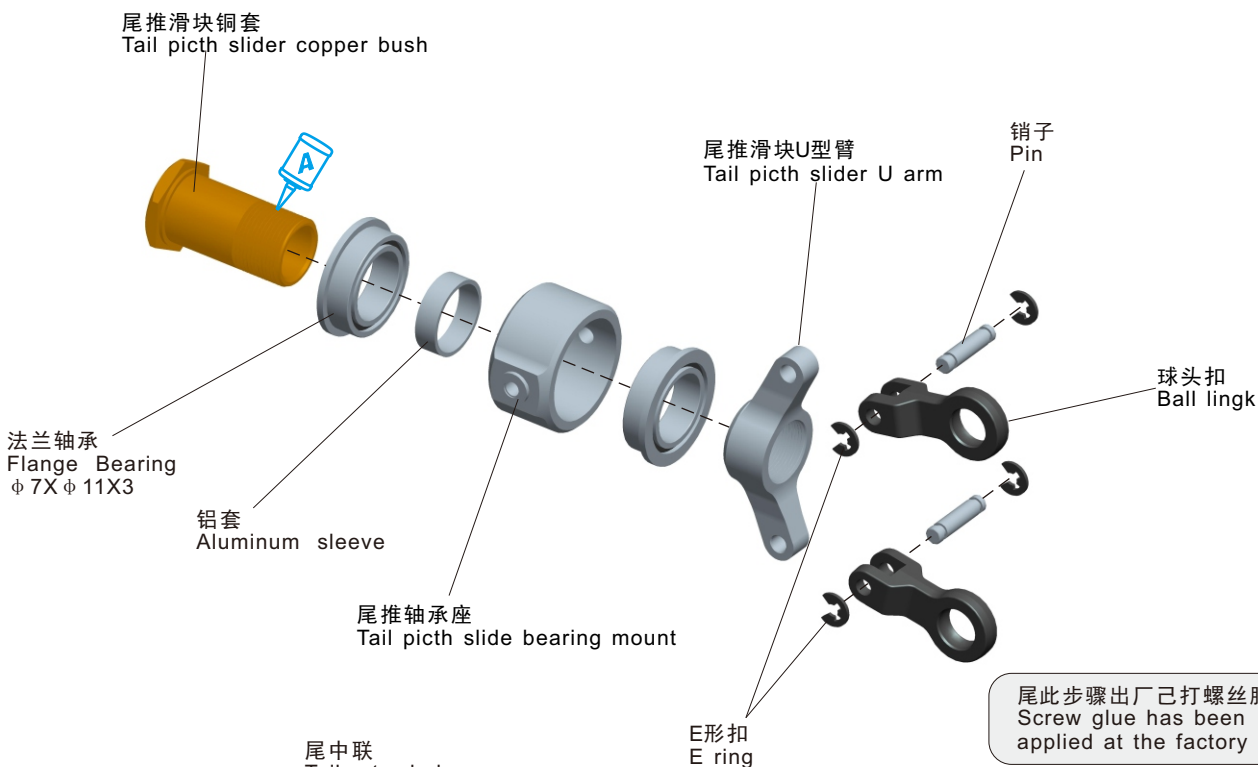
尾管固定座螺杆待尾管装入后再锁紧  
After the tail boom is installed, tighten  
Double head screw



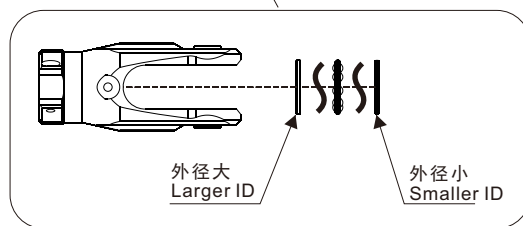
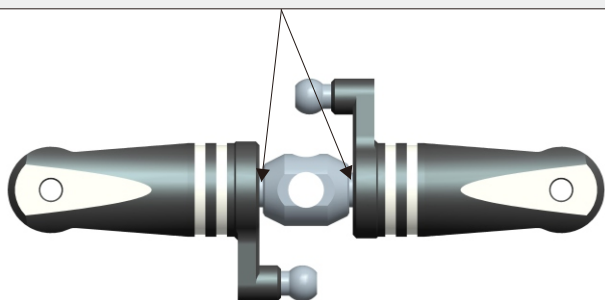


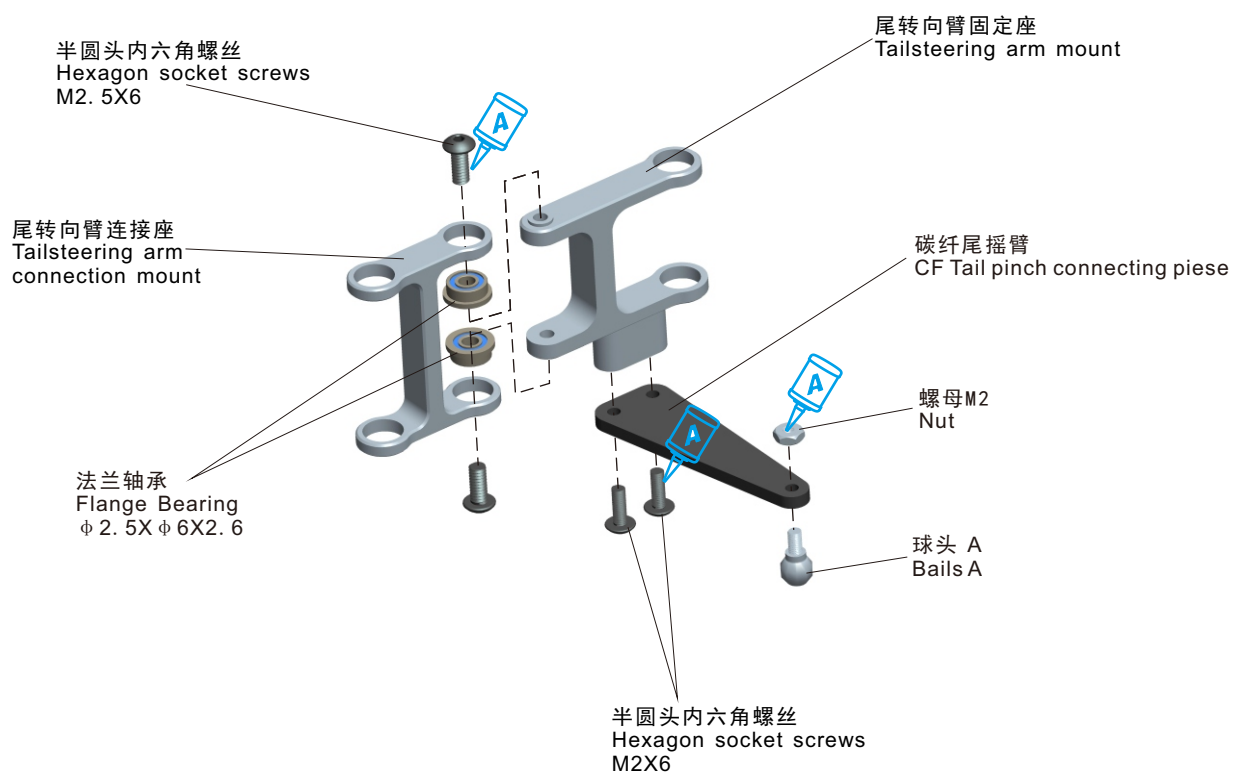
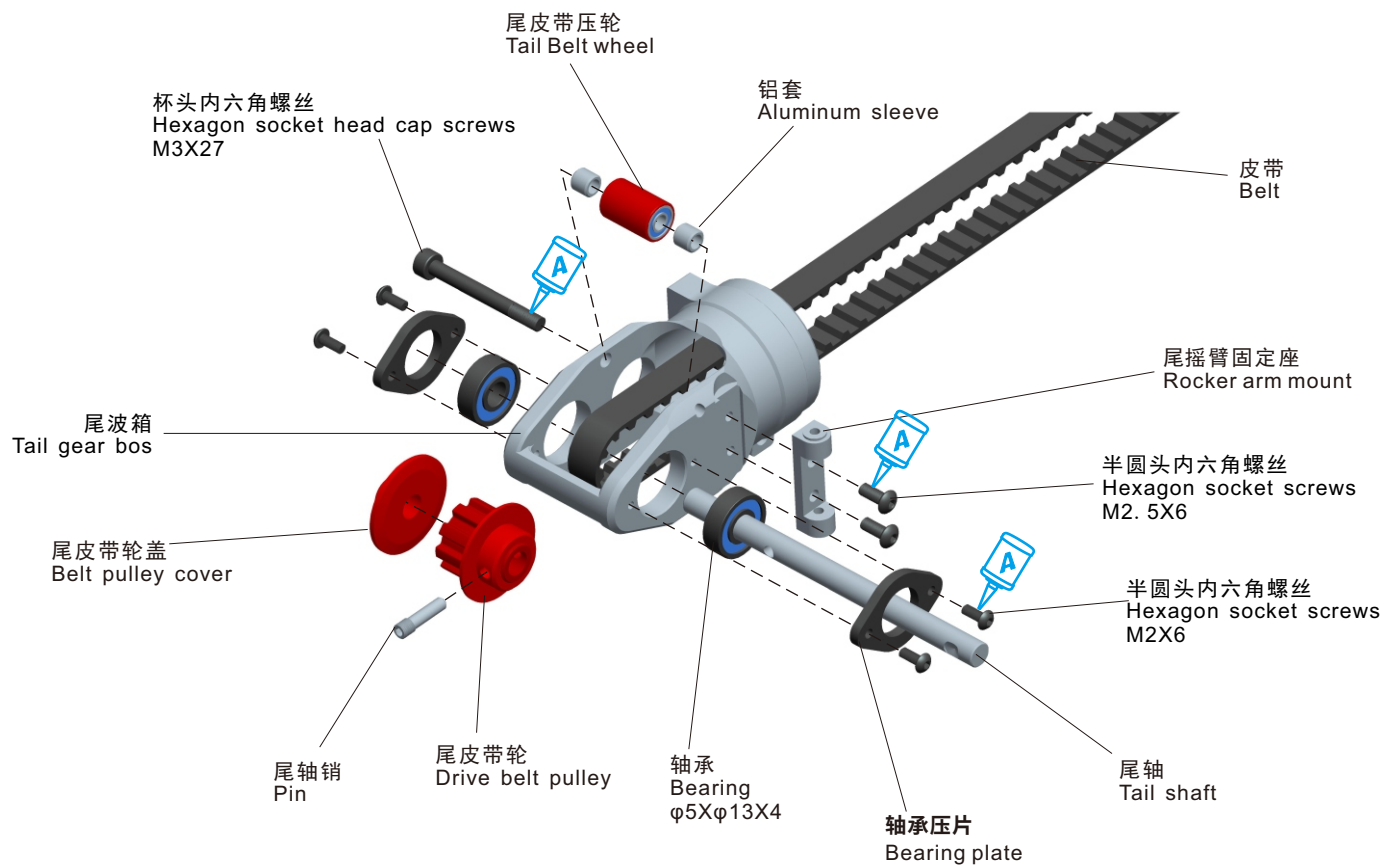


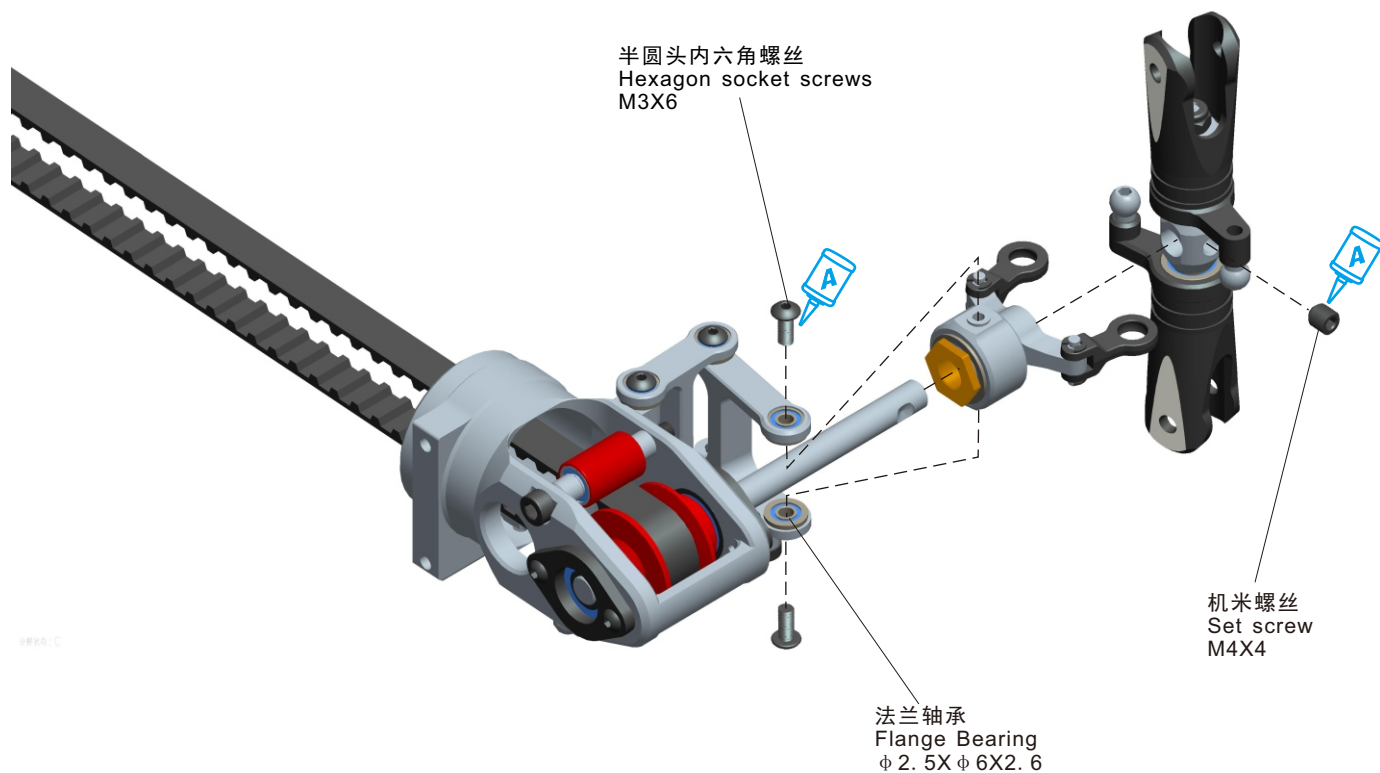
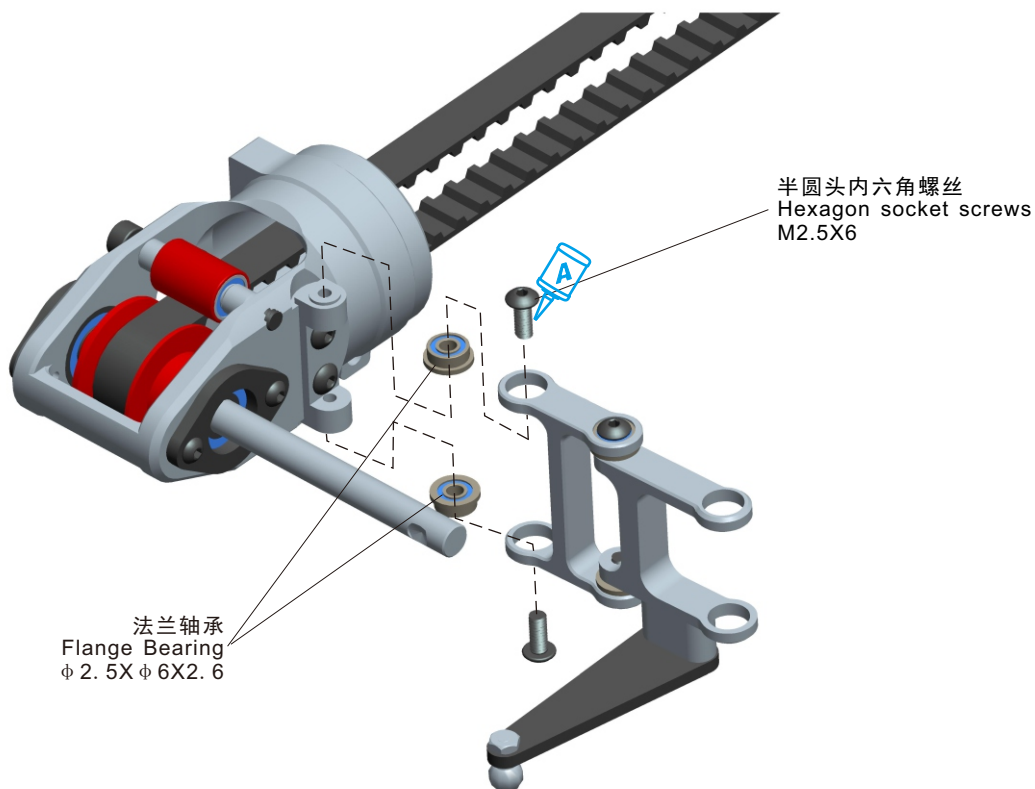


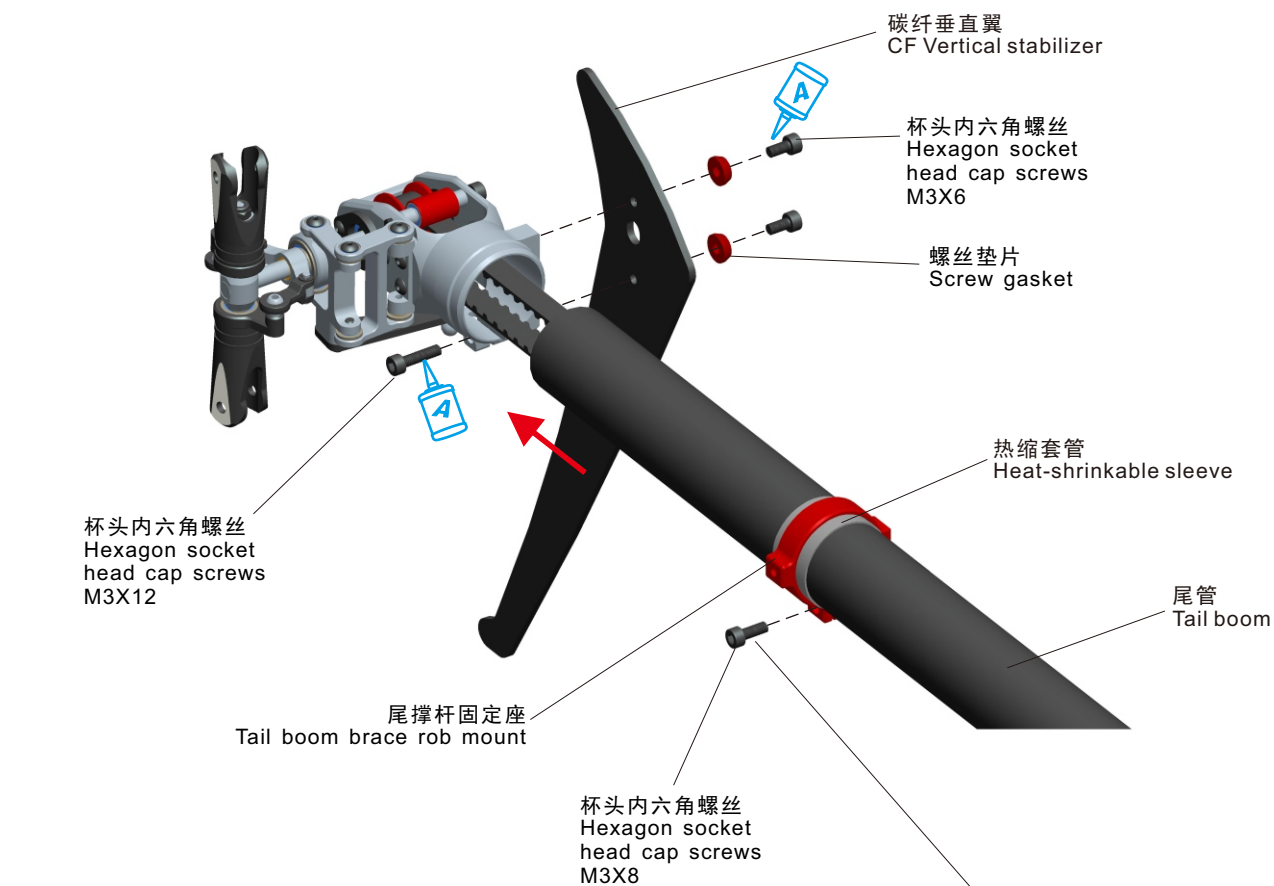


尾桨夹组装完成后向外拉紧, 此处有约0.5mm间隙属正常现象  
After the Tail blade grip is assembled, pull tight on both sides.  
The clearance of about 0.5mm in this position is normal.

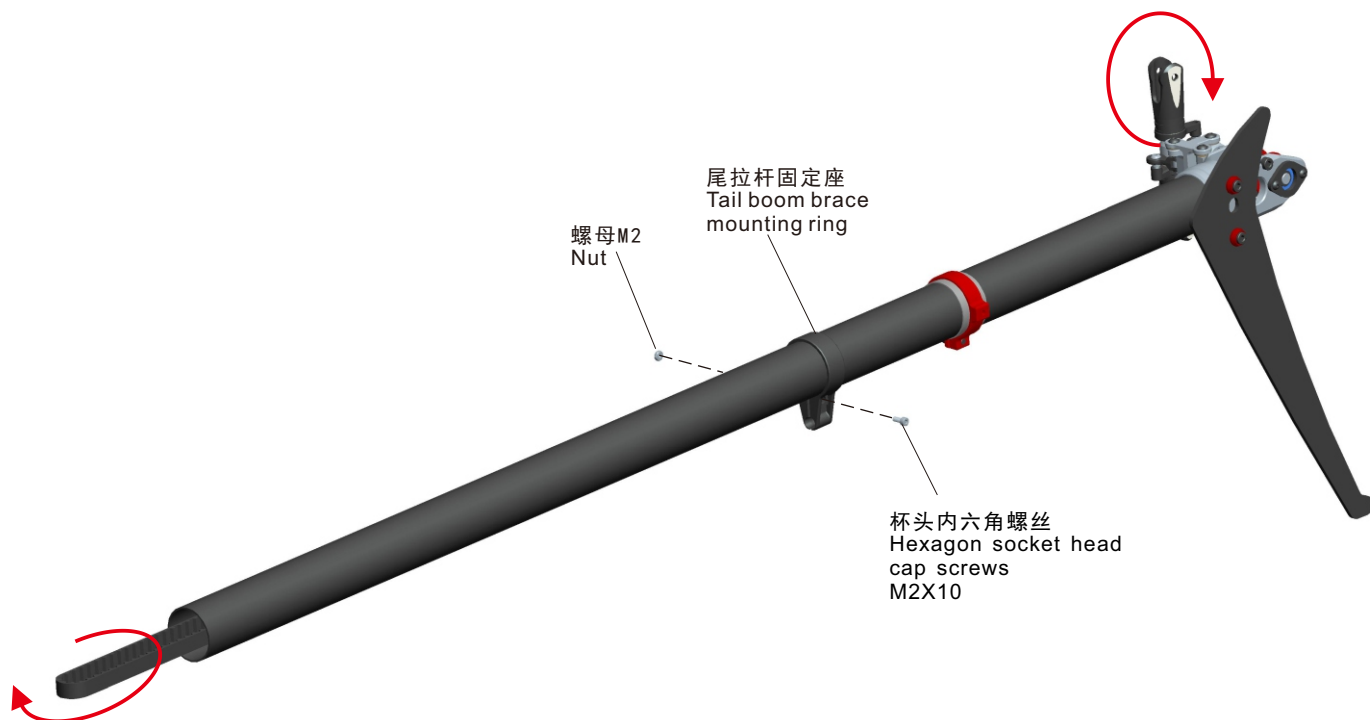




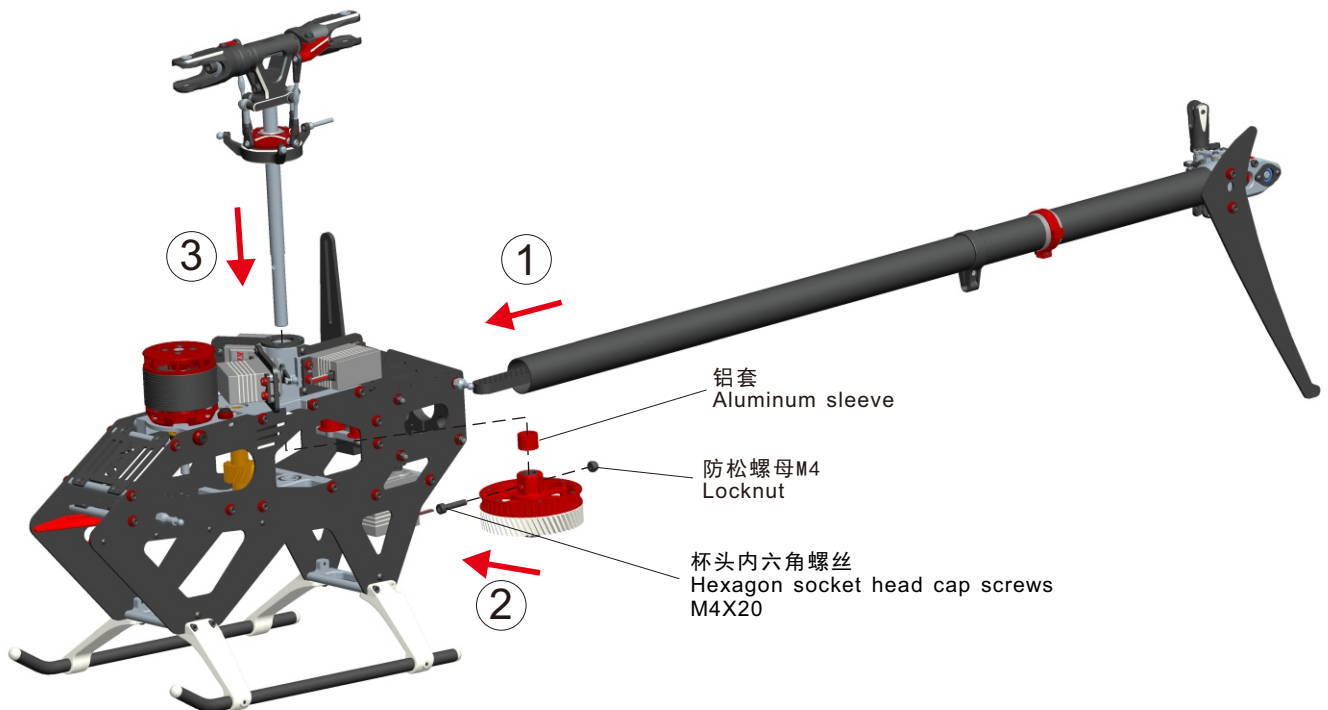
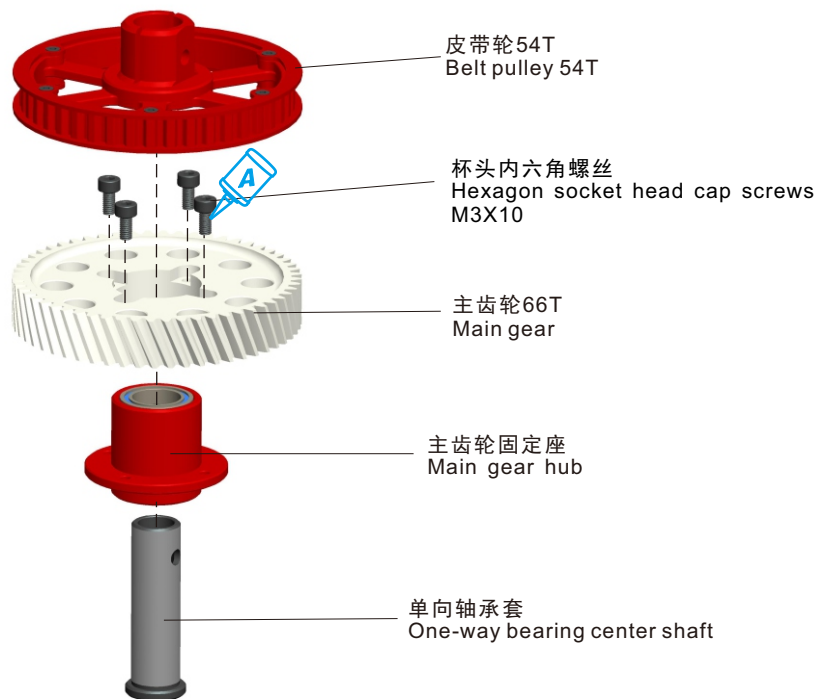




尾撑杆装好再锁紧此螺丝  
After the Tail boom brace rod is installed, tighten the screw

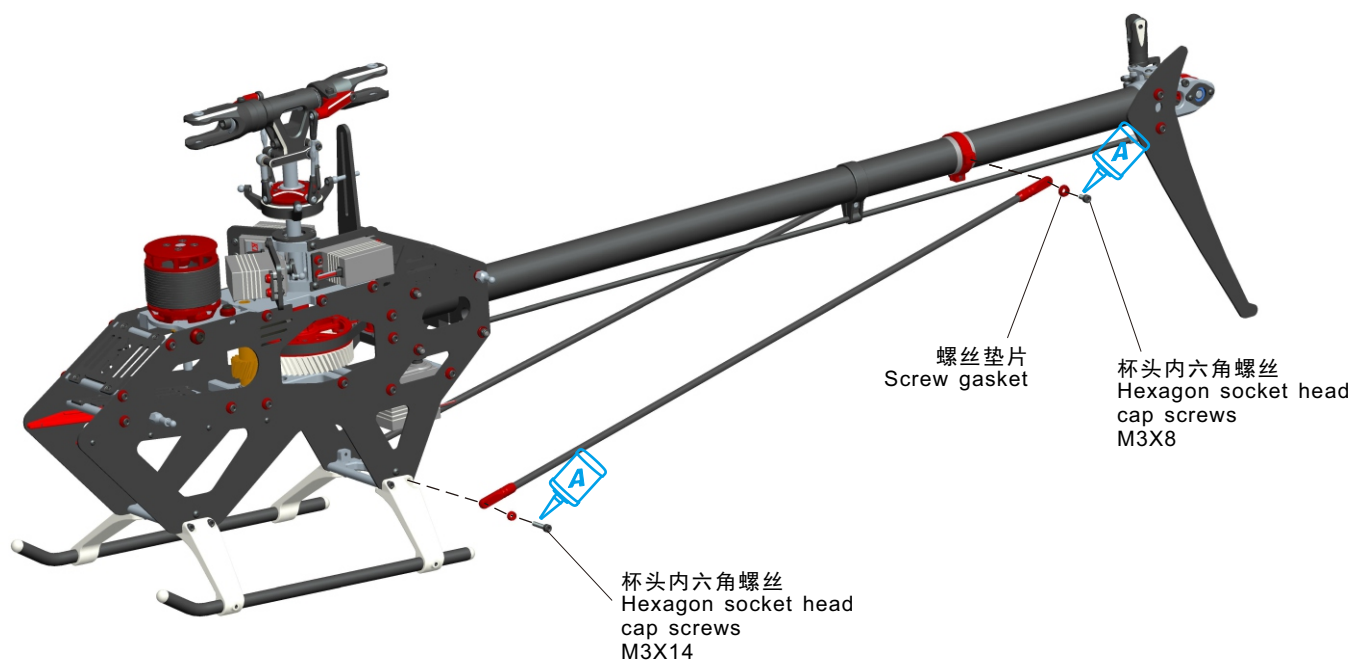
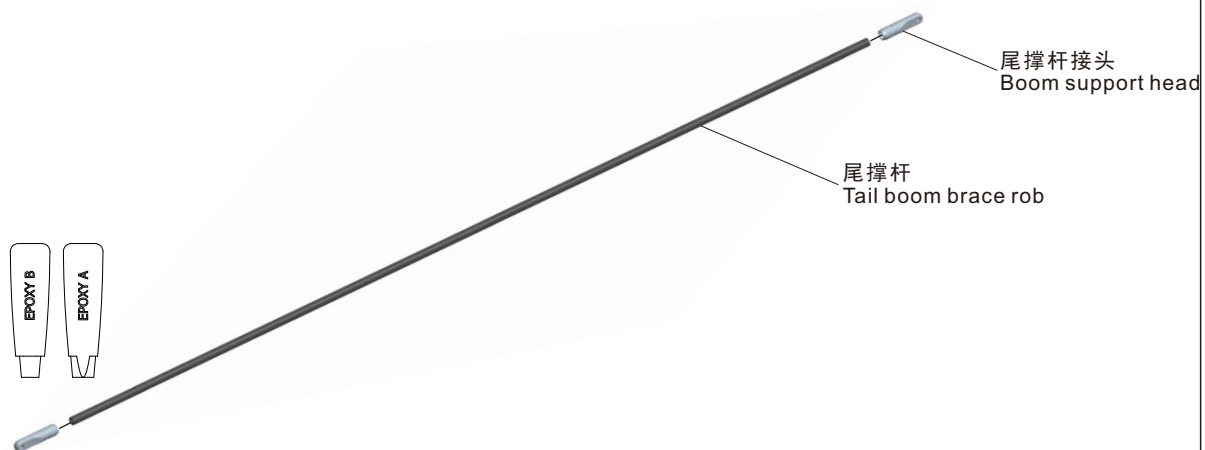
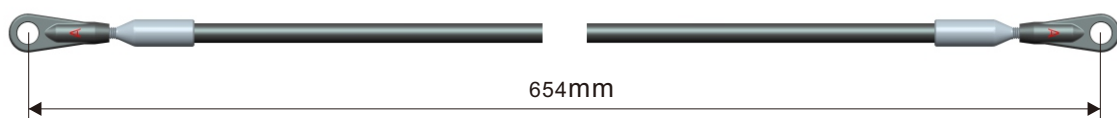
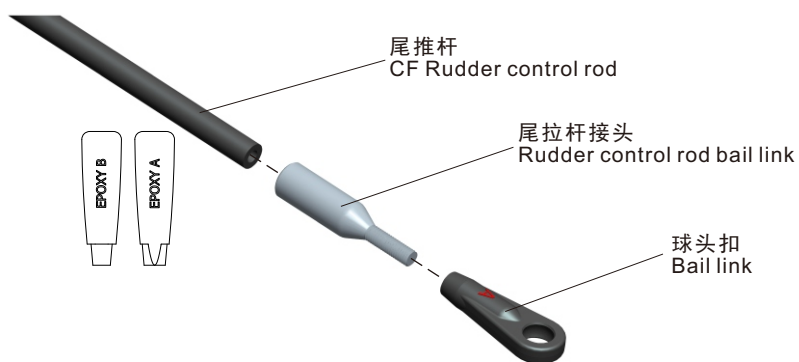


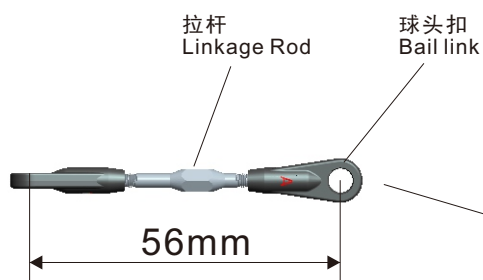
皮带在尾管内不能有扭绕现象，尾管前端皮带和尾桨转动如图示为正确方向  
Belt shall not be crossed twisted in the tail boom, the front end and tail rotor shall rotate correctly as shown



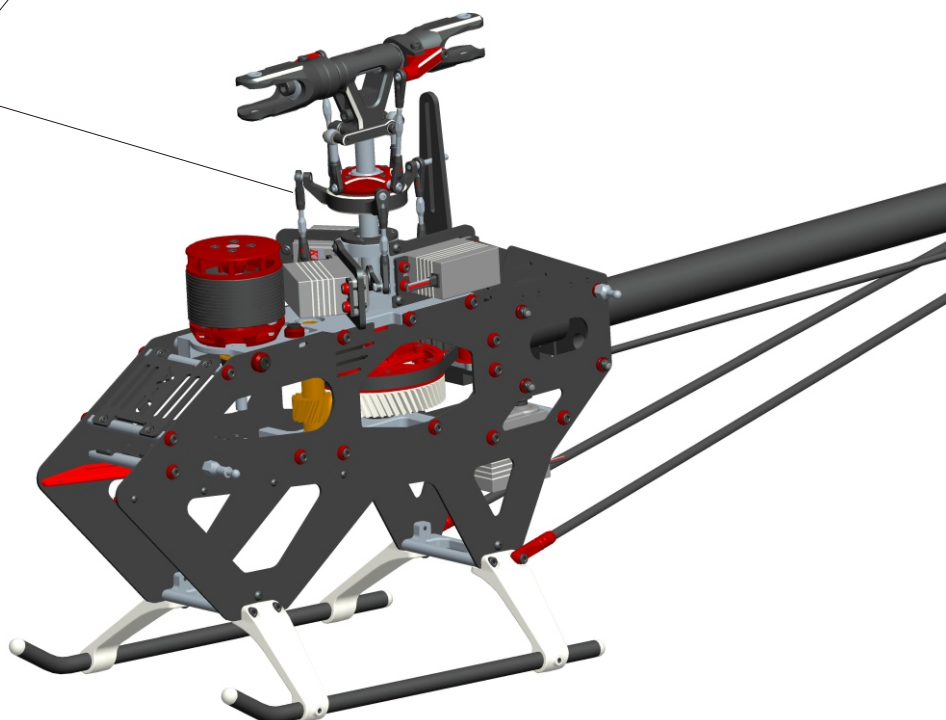
尾管装入机身前检查皮带方向是否正确  
Please check whether the belt rotation is correct before installing the tail boom .







Have "A" sign ball link pointing out  
球头扣有“A”字面朝外



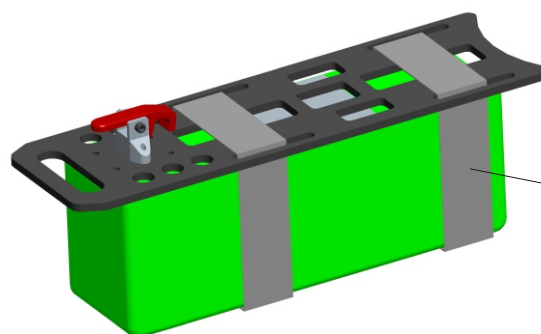
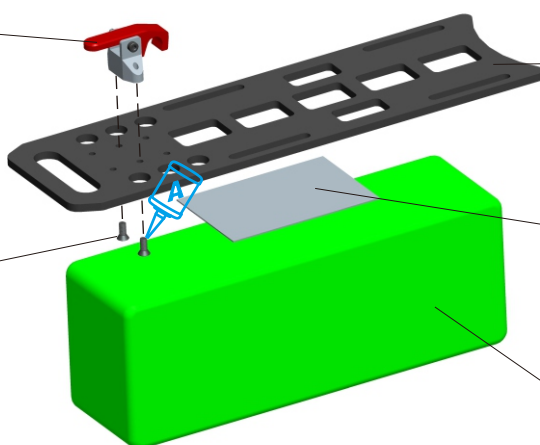
电池板固定座  
Battery plate buckle mount

沉头内六角螺丝  
Bcountersunk head  
socket screw  
M2. 5\*6

碳纤电池板  
CF Battery plate

Velcro

电池  
Battery



电池绑带  
Battery Velcro

