

# FAST DEVIL 380

组装手册

INSTRUCTION MANUAL

RC HELICOPTERS

**ALZRC**  
WWW.ALZRC.COM

## 版本 EDITION

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## 前言 INTRODUCTION

感谢您选用ALZRC系列产品，谨表谢意。选入遥控世界之前必须告诉您许多相关的知识与注意事项，以确保您能够在学习的过程中得心应手。在开始操作之前，请务必详阅本说明书，相信一定能够给您带来相当大的帮助，也请您妥善保管这本说明书，以作为日后参考。

Thanks for choosing ALZRC, there's some matters need attention and knowledge you need to know, then just enjoy flying with remote control helicopter. Before you begin, please read this manual very carefully for your safety and also keep this manual properly for reference.

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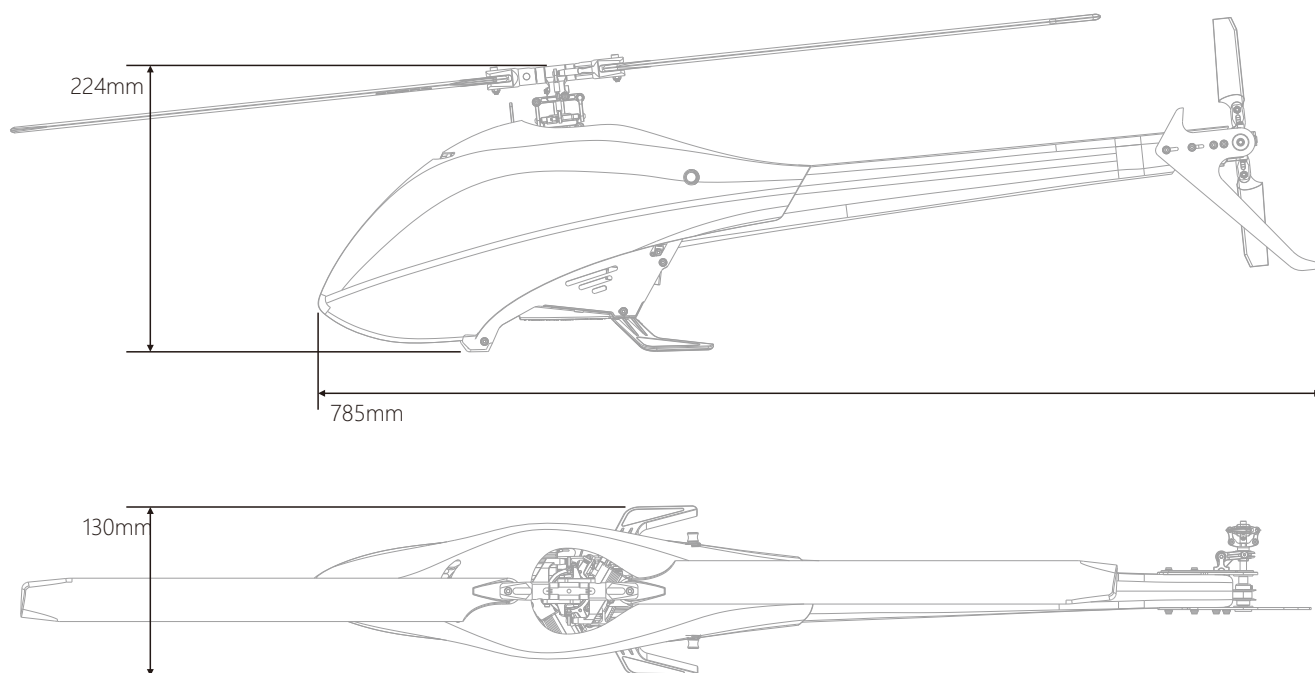
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## 规格说明 SPECIFICATION



主旋翼直径：856mm  
 主旋翼长度：380mm  
 尾旋翼直径：196mm  
 尾旋翼长度：75mm  
 主轴直径：8mm  
 尾旋翼主轴直径：5mm  
 主轴直径：5mm  
 电机尺寸：最大直径41mm，最大高度41mm  
 电池：44x44x130mm

Main Rotor Diameter : 856mm  
 Main Blade Length : 380mm  
 Tail Rotor Diameter : 196mm  
 Tail Blade Length : 75mm  
 Main Shaft Diameter : 8mm  
 Tail Shaft Diameter : 5mm  
 Spindle Diameter : 5mm  
 Motor Size: Maximum 41mm diameter, maximum height 41mm  
 Battery Compartment: 44x44x130mm

## 重要声明 IMPORTANT NOTES

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本说明书，勿轻忽并注意自身安全。注意！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，本产品是提供给有操作过模型直升机经验的成人或有相当技术的人员在旁指导于当地合法遥控飞行场飞行，以确保安全无误下操作使用，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。

RC helicopter is not a toy, it is used for leisure activities combined with many high-tech things, so it may cause serious injury or even death under inappropriate operations. Do read this instructions carefully before operating it and pay more attentions to the security. Warning! In the use of remote control helicopters, manufacturers and dealers are not in any responsibilities for the accidents caused by the loss of the parts in the abnormal operation or improperly assembling of the helicopter, this product is available for the experienced adults who have operated the helicopters before and the operators who have the substantial technical staff standing by in the local legitimate remote control flying field to ensure the safety. After the sale of the products, ALZRC shall have no responsibilities in the performance and security issues causing in the operations and uses.

模型商品属于需高操作技术且为消耗性之商品，如经拆装使用后，会造成不等情况零件损耗，任何使用情况所造成商品不良或不满意，将无法于保固条件下更换新产品或退货。

RC-model 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 warrantee and cannot be returned for repair or replacement.

ALZRC直升机公司及其代理机构皆对此产品的组装、维护及使用不具有任何控制力。因此，任何责任皆无法被回溯至本产品的制造者。您由此同意不向ALZRC直升机公司追究任何在使用本产品过程中所产生的责任。

Neither ALZRC Helicopter Division nor its agents have any control over the assembly, maintenance and use of this product. Therefore, no responsibility can be traced back to the manufacturer. You hereby agree to release ALZRC Helicopter Division from any responsibility or liability arising from the use of this product.

## 安全注意事项 SAFETY NOTES

- 遥控直升机属高危险性商品，飞行时务必远离人群，人为组装不当或机件损坏，电子控制设备不良，以及操控上的不熟悉，都有可能造成飞行失控损伤等不可预期的意外，请飞行者务必注意飞行安全，并需了解自负疏忽所造成任何意外之责任。
- 遥控直升机内部也是由许多精密的电子零组件组成，所以必须绝对的防治潮湿或水汽，避免在浴室或雨天时使用，防止水汽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。
- 在组装这架遥控直升机前，必须认真阅读本组装手册及各个设备商的使用手册。
- 初接触遥控直升机的人员，必须有专业人员陪同。
- 所有操作这架遥控直升机的人员，都必须采取适当的安全措施。
- 直升机飞行是具有一定的速度，相对的也潜在着危险性，场地的选择也相对的重要，请需遵守当地法规到合法遥控飞行场地飞行，必须注意周遭有没有人、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练习飞行，这对飞行失误所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，以确保本身及机身的安全。
- 操作遥控直升机可能有意想不到的危险行为发生，所以操作遥控直升机是非常危险的。
- 遥控直升机必须定期维护。
- 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.
- 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.
- This radio controlled helicopter must be built following these instructions. This manual provides the necessary information to correctly assemble the model. It is necessary to carefully follow all the instructions.
- Inexperienced pilots must be monitored by expert pilots.
- All operators must wear safety glasses and take appropriate safety precautions.
- R/C helicopters fly at high speed, thus posing a certain degree of potential danger. Choose an a legal flying field consisting of flat, smooth ground without obstacles. Do not fly near buildings, high voltage cables, or trees to ensure the safety of yourself, others and your model. For the first practice, please choose a legal flying field and can use a training skid to fly for reducing the damage. Do not fly your model in inclement weather, such as rain, wind, snow or darkness.
- A radio controlled helicopter can behave in an unexpected manner, causing loss of control of the model, making it very dangerous.
- Lack of care with assembly or maintenance can result in an unreliable and dangerous model.

## 实机飞行前请严格执行飞行前检查义务 CAREFULLY INSPECT BEFORE REAL FLIGHT

- 每次飞行前应先确认所使用的遥控发射频率是否会干扰他人，以确保你自身与他人的安全。
- 每次飞行前确定您遥控器与接收器电池的电量是在足够飞行的状态。
- 开机前确认遥控器油门摇杆是否位于最低点，熄火降落开关，定速开关(IDLE)是否于关闭位置。
- 关机时必须遵守电源开关机的程序，开机时应先开启遥控器后，再插上接收器电源；关机时应先拔出接收器电源后，再关闭遥控器。不正确的开关程序可能会造成失控的现象，影响自身与他人的安全，请养成正确的习惯。
- 开机请先确认遥控直升机的各个动作是否顺畅及方向是否正确，并检测舵机的动作是否有干涉或崩齿的情况，使用故障的舵机将导致不可预期的危险。
- 飞行前确认没有缺少或松脱的螺丝与螺帽，确认没有组装不完整或损毁的零件，仔细检测主旋翼是否有损坏，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：对损耗，有裂痕零件更新及定期保养检测的重要性。
- 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。
- 确认电池及电源插头是否固定牢靠，飞行中的震动或激烈的飞行，可能造成电源插头松脱而造成失控的危险。
- 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.

## 标符注释 LEGEND

在组装过程中，如果出现以下标符，请认真执行每个标符的操作。  
It is necessary to pay attention to the symbols listed below.



因为疏忽这些操作说明，可能造成不必要的麻烦。而安装错误可能造成危险。  
Mishandling due to failure to follow these instructions may result in danger.



螺丝胶  
THREAD LOCK

使用螺丝胶固定。  
Apply Thread Lock to fix.



轴承胶  
ANAEROBICS RETAIN

使用金属管状固定缺氧胶固定。  
Apply Anaerobics Retain to fix.



润滑油  
GREASE

涂上润滑油。  
Apply grease.



瞬间胶  
CA GLUE

使用瞬间胶固定。  
Apply CA glue to fix.



已经完成组装  
Already Assembled



螺丝胶涂于螺丝的螺纹上。  
长度约1mm。  
Glue width: approx.1mm



轴承胶涂于轴承的外圈。  
Glue width: approx.1mm

## 自备遥控及电子设备 RADIO TRANSMITTER AND ELECTRONIC EQUIPMENT REQUIRED FOR ASSEMBLY

- 遥控器 (六通道以上直升机模式遥控器)
- 接收器 (六通道以上)
- 数字螺距规
- 锂电池 (1500~2600mAh 22.2V 6S Li-Po) 宽高尺寸限制在 43x43mm 以内。
- 无刷马达 (1000KV 5.0mm 6S) 标准版配备/高级套装版配备
- 无刷电调 (50~80A) 标准版配备/高级套装版配备
- 倾斜盘舵机 x 3 (建议使用扭力 3KG\*cm 以上舵机) 高级套装版配备
- 锁尾舵机 (建议使用扭力 4Kg\*cm 以上、速度 0.06~0.04秒舵机) 高级套装版配备
- 无副翼陀螺系统 高级套装版配备
- Transmitter (6-channel or more, helicopter system)
- Receiver (6-channel or more)
- Digital Pitch Gauge
- Li-Po Battery (1500~2600mAh 22.2V 6S ) With the size within 43x43mm.
- Brushless Motor (1000kv 6S 5mm spindle) Combo/Super Combo
- Brushless ESC (50~80A) Combo/Super Combo
- Swashplate Servos x 3 (Recommend to use 3KG\*cm or higher torque servo) Super Combo
- Locked Rudder Servo (Recommend to use above 4kg\*cm torsion and with speed of 0.06~0.04s servo) Super Combo
- 3-Axis Gyro System Super Combo

## 自备工具 ADDITIONAL TOOLS REQUIRED FOR ASSEMBLY

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>● 内六角螺丝刀 (1.5mm/2.0mm/2.5mm)</li> <li>● 内六角套筒 (5.5mm/7.0mm)</li> <li>● 243 螺丝胶</li> <li>● 648 轴承胶</li> <li>● Grease 润滑油</li> <li>● CA 瞬间胶</li> <li>● Hexagon Screw Driver (1.5mm/2.0mm/2.5mm)</li> <li>● Hex Fork Wrench (5.5mm/7.0mm)</li> <li>● 243 Thread Lock</li> <li>● 648 Anaerobics Retain</li> <li>● Grease</li> <li>● CA Glue</li> </ul> | <ul style="list-style-type: none"> <li>● 剪刀</li> <li>● 刀子</li> <li>● 斜口钳</li> <li>● 尖嘴钳</li> <li>● 砂纸</li> <li>● 焊接工具</li> <li>● Scissors</li> <li>● Cutter Knife</li> <li>● Diagonal Cutting Pliers</li> <li>● Needle Nose Pliers</li> <li>● Sand Paper</li> <li>● Soldering Equipment</li> </ul> |
|---|--|

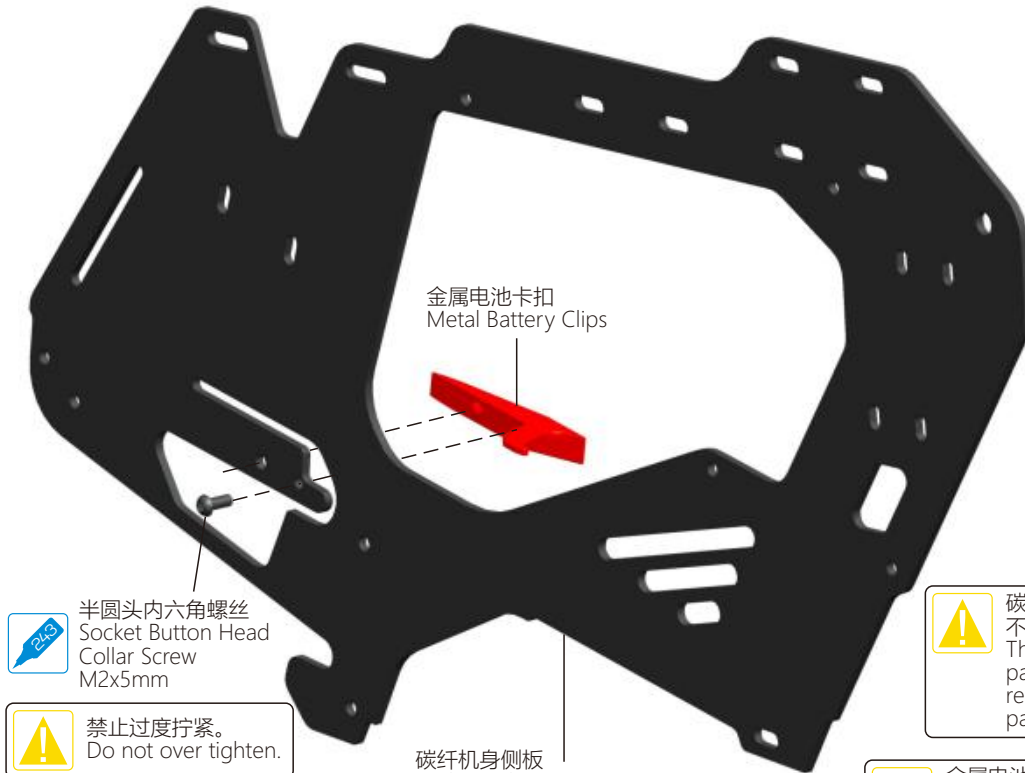
## 包装说明 PACKAGE ILLUSTRATION



D380F-G-1

D380F-H-2

碳纤维机身侧板-右  
Carbon Fiber Main Frame-R  
Chapter 1



半圆头内六角螺丝  
Socket Button Head  
Collar Screw  
M2x5mm



禁止过度拧紧。  
Do not over tighten.

碳纤维机身侧板  
Carbon Fiber Main Frame  
1.5mm



碳纤维配件的制造工艺会导致边缘非常锋利，为了不损伤电缆，我们建议用砂纸打磨边缘。  
The manufacturing process of the carbon fiber parts often leaves micro-burrs edges. We recommend de-burring the edges with sand paper to minimized the risks of cable cuts.

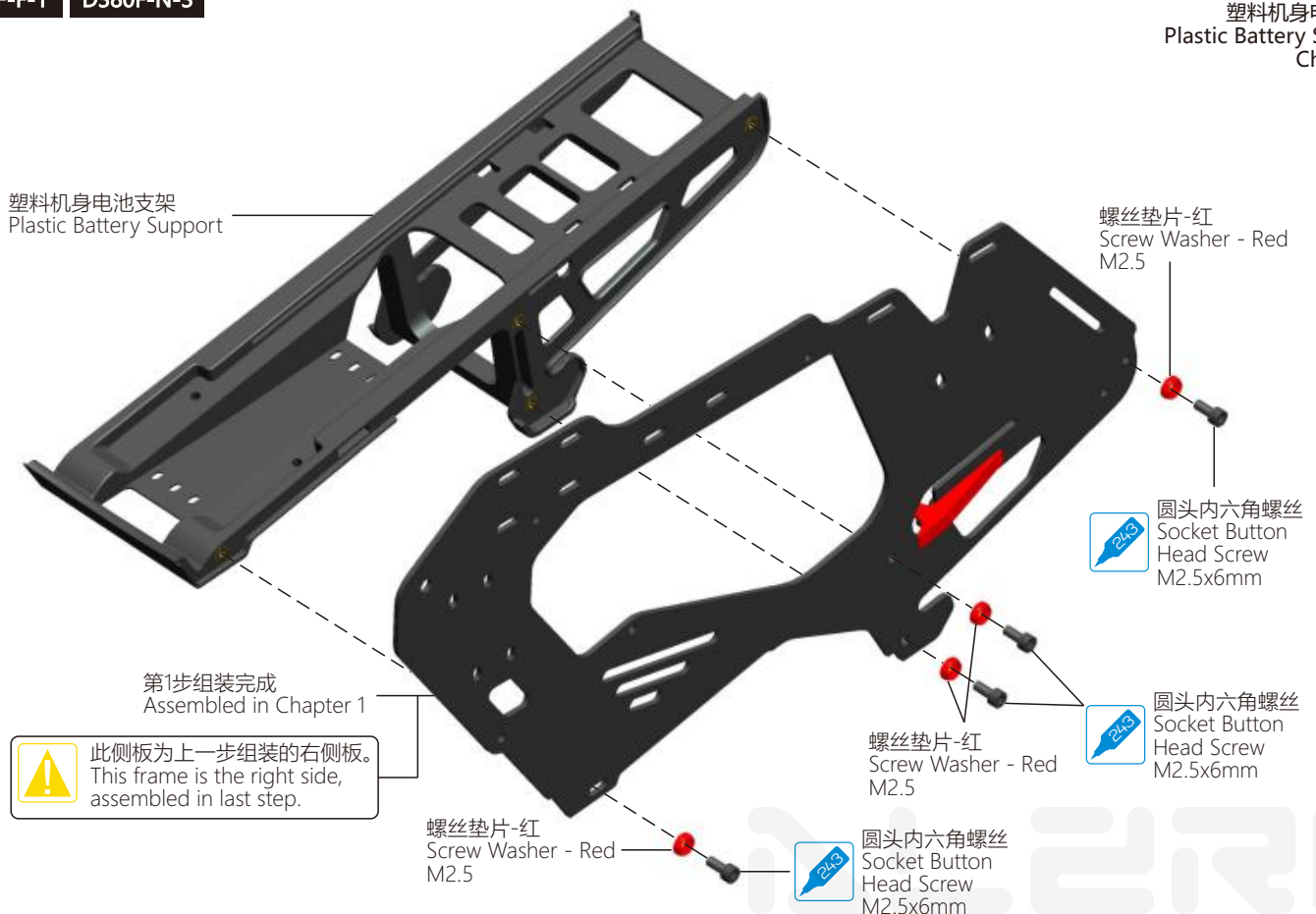


金属电池卡扣需安装于侧板右侧，安装完成后此侧板定为右侧板，另一侧板无需再安装。  
Metal battery clips need install on the right side of the carbon fiber main frame. After this step, this main frame as the right main frame. The left main frame doesn't need install the clips.

D380F-F-1

D380F-N-3

塑料机身电池支架  
Plastic Battery Support  
Chapter 2



此侧板为上一步组装的右侧板。  
This frame is the right side,  
assembled in last step.

螺丝垫片-红  
Screw Washer - Red  
M2.5



圆头内六角螺丝  
Socket Button  
Head Screw  
M2.5x6mm

螺丝垫片-红  
Screw Washer - Red  
M2.5



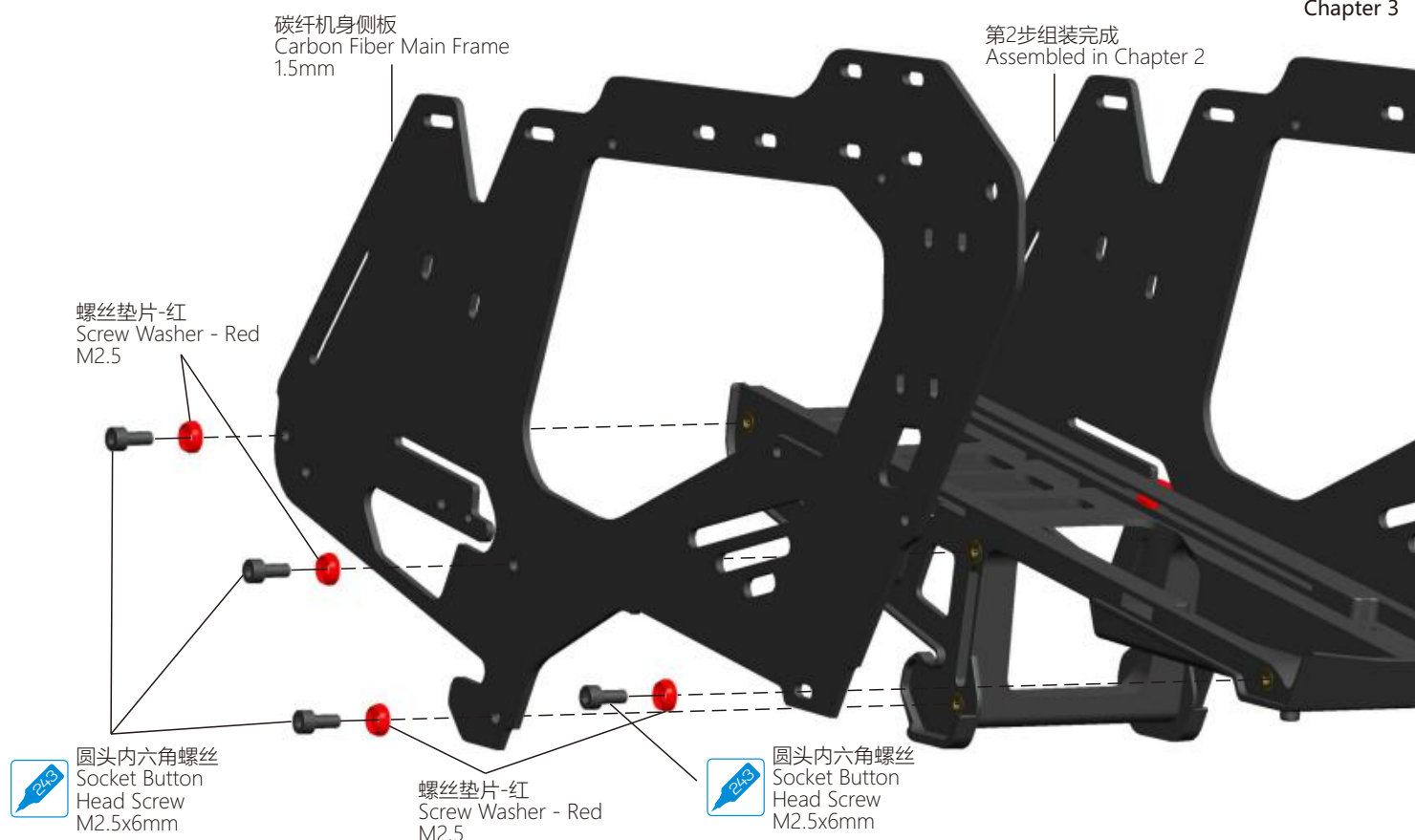
圆头内六角螺丝  
Socket Button  
Head Screw  
M2.5x6mm



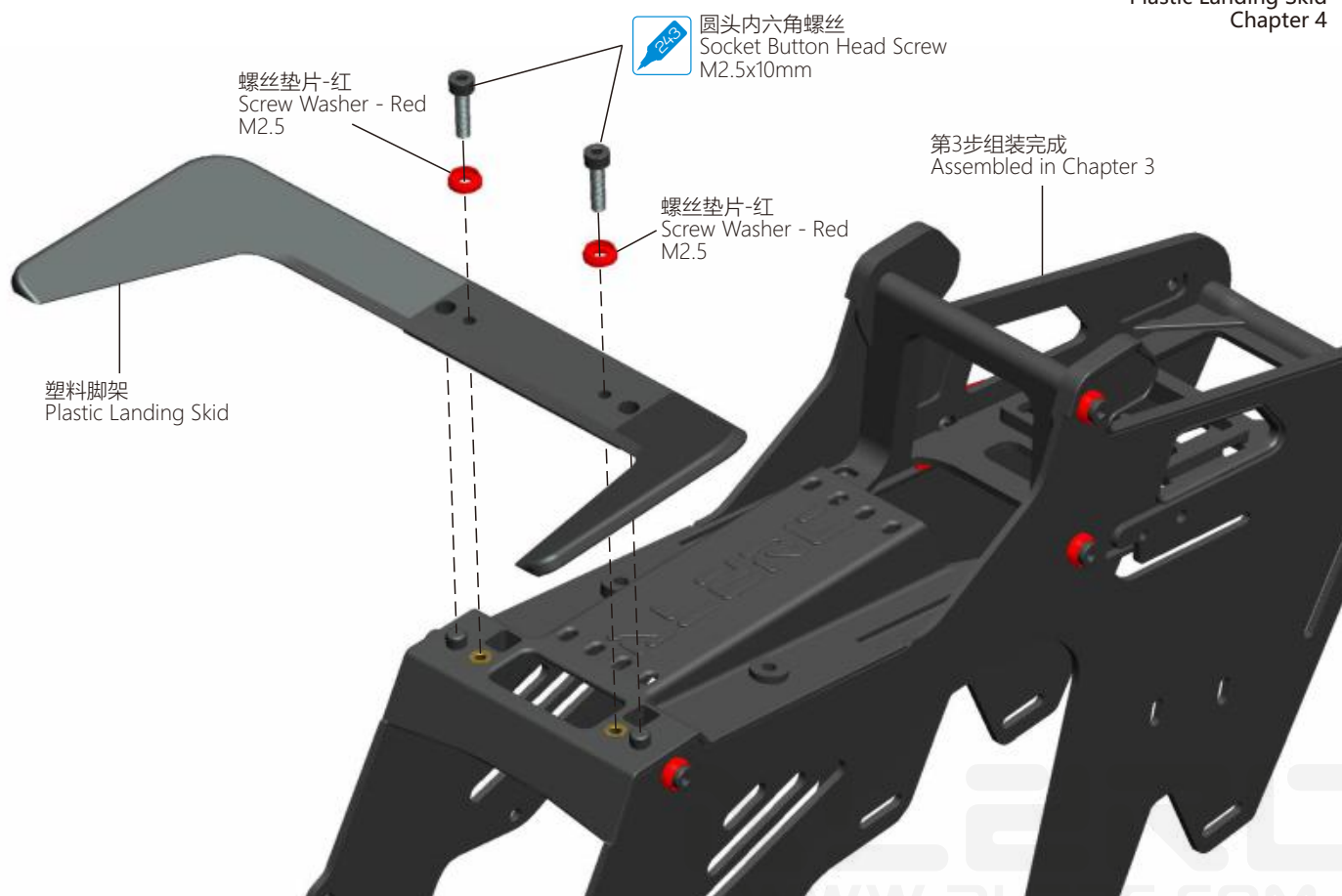
圆头内六角螺丝  
Socket Button  
Head Screw  
M2.5x6mm



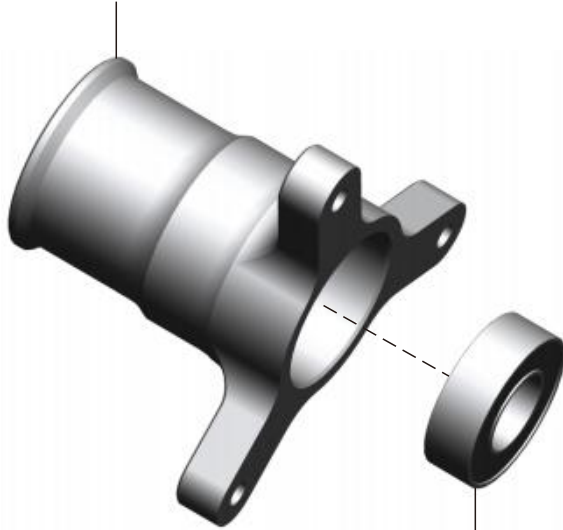
## D380F-G-1 | D380F-N-3

碳纤维机身侧板-左  
Carbon Fiber Main Frame-L  
Chapter 3

## D380F-F-2 | D380F-N-3

塑料脚架  
Plastic Landing Skid  
Chapter 4

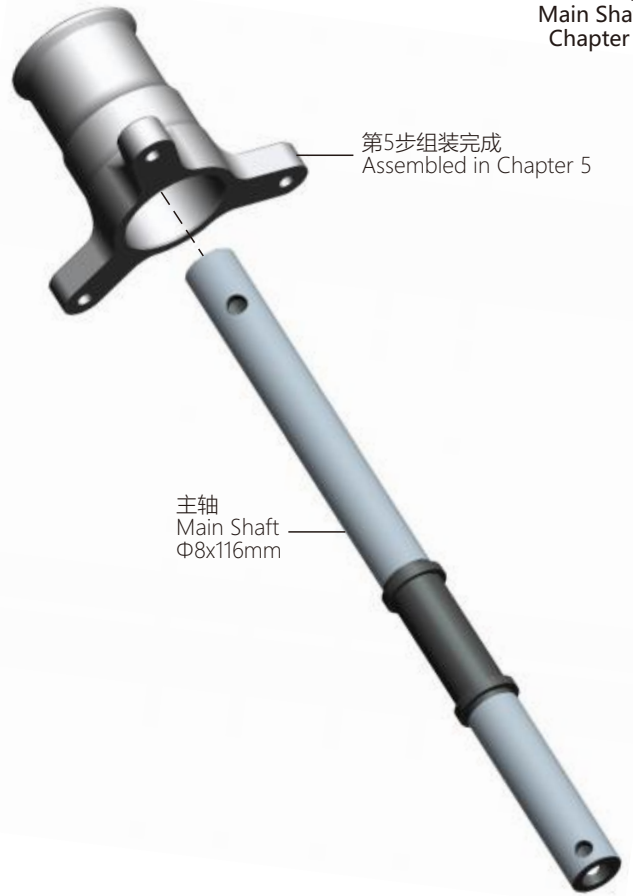
## D380F-D-1

主轴固定座  
Main Shaft Bearing Block  
Chapter 5主轴固定座  
Main Shaft Bearing Block已经完成组装  
Already Assembled轴承  
Bearing  
Φ8xΦ16x5mm

出厂零件包装如果是已组装品，请务必确认各部件是否锁紧上胶。

For original manufactory package, If the product is already assembled by Factory, please check again if parts are firmly secured and applied with some glue.

## D380F-D-1

主轴  
Main Shaft  
Chapter 6第5步组装完成  
Assembled in Chapter 5主轴  
Main Shaft  
Φ8x116mm

## D380F-D-1

## D380F-C-1

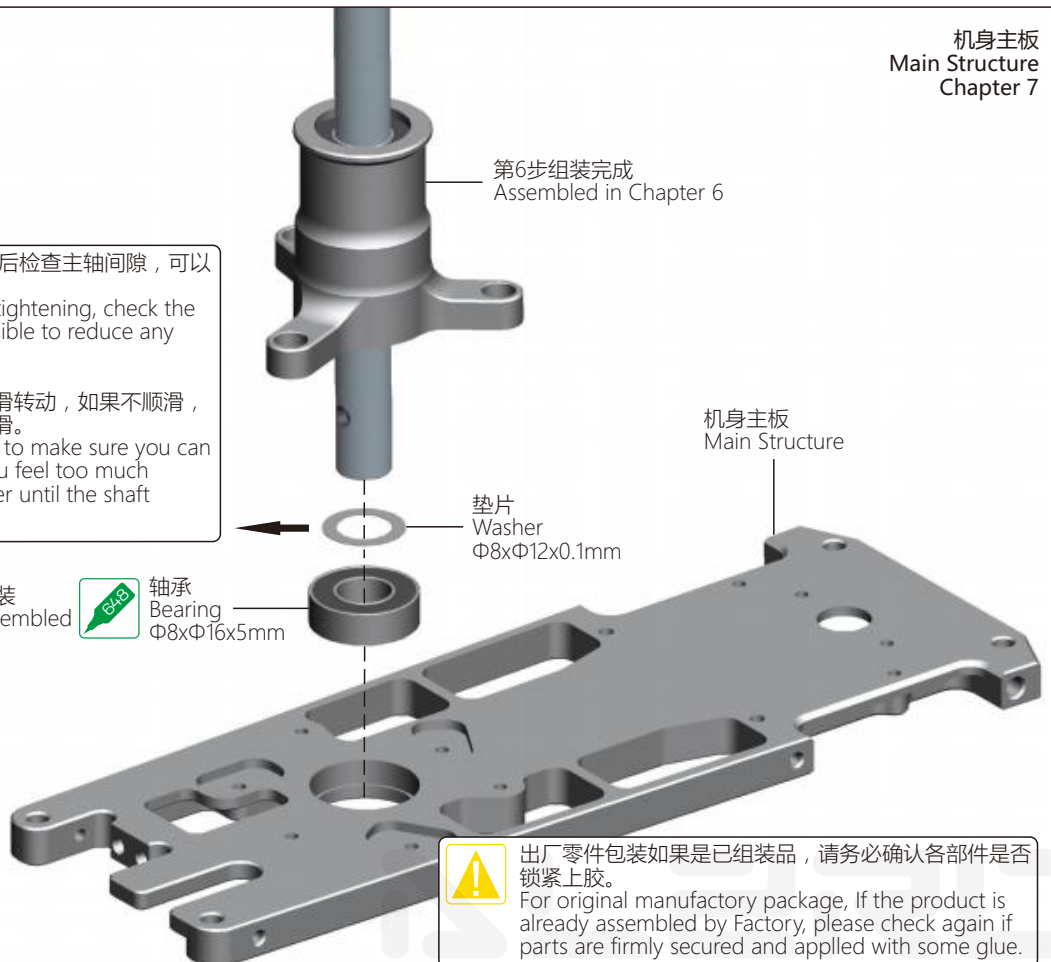
机身主板  
Main Structure  
Chapter 7

拧紧主轴固定座三颗M2.5螺丝，拧紧后检查主轴间隙，可以通过加垫片的方式来减少间隙。

Tighten the three M2.5 screw. After tightening, check the axial play of the main shaft. It is possible to reduce any axial play by adding washer.

注意：请认真检查，以确保主轴能顺滑转动，如果不顺滑，可以减少一片垫片，直到主轴确保顺滑。

Note: Check the main shaft carefully to make sure you can rotate the main shaft smoothly. If you feel too much friction, you have to remove a washer until the shaft can rotate smoothly.

已经完成组装  
Already Assembled轴承  
Bearing  
Φ8xΦ16x5mm第6步组装完成  
Assembled in Chapter 6机身主板  
Main Structure垫片  
Washer  
Φ8xΦ12x0.1mm

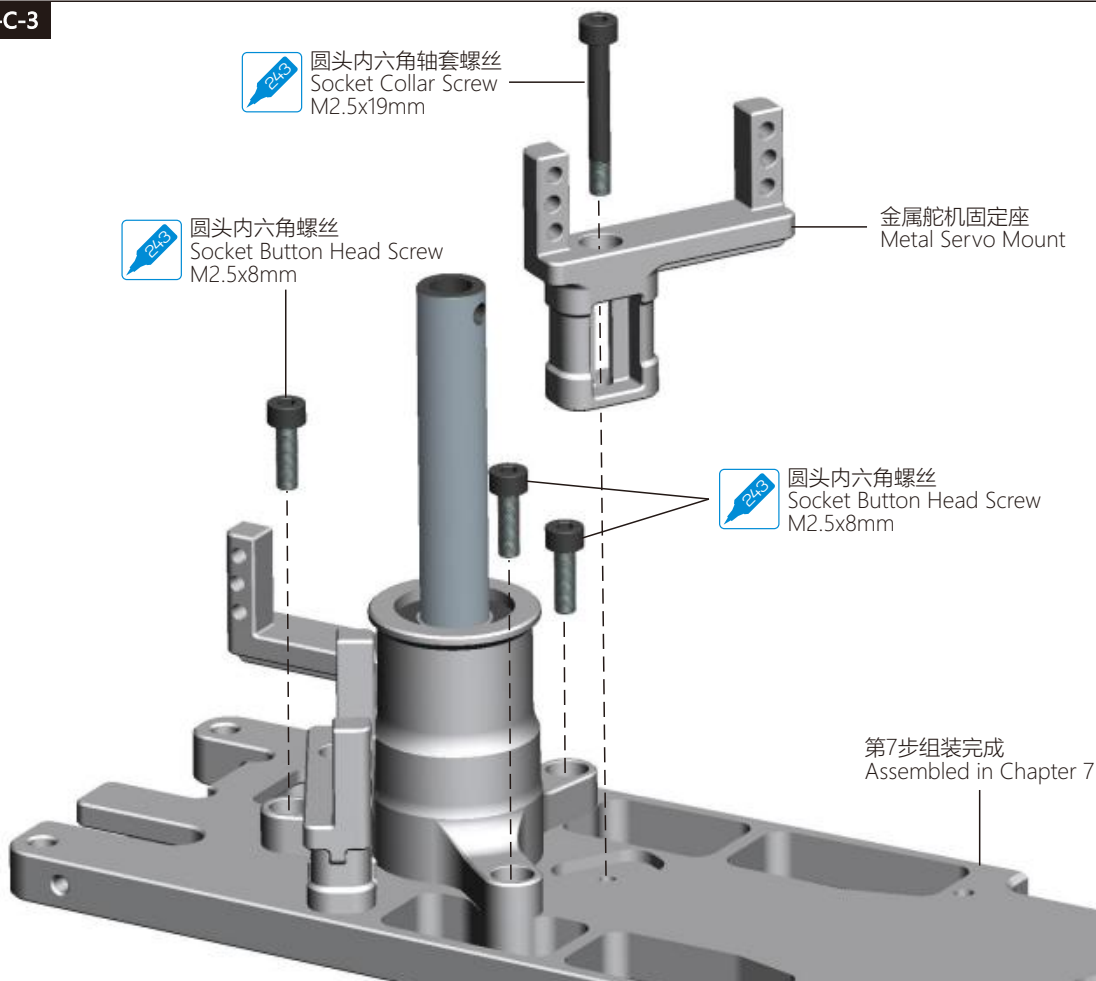
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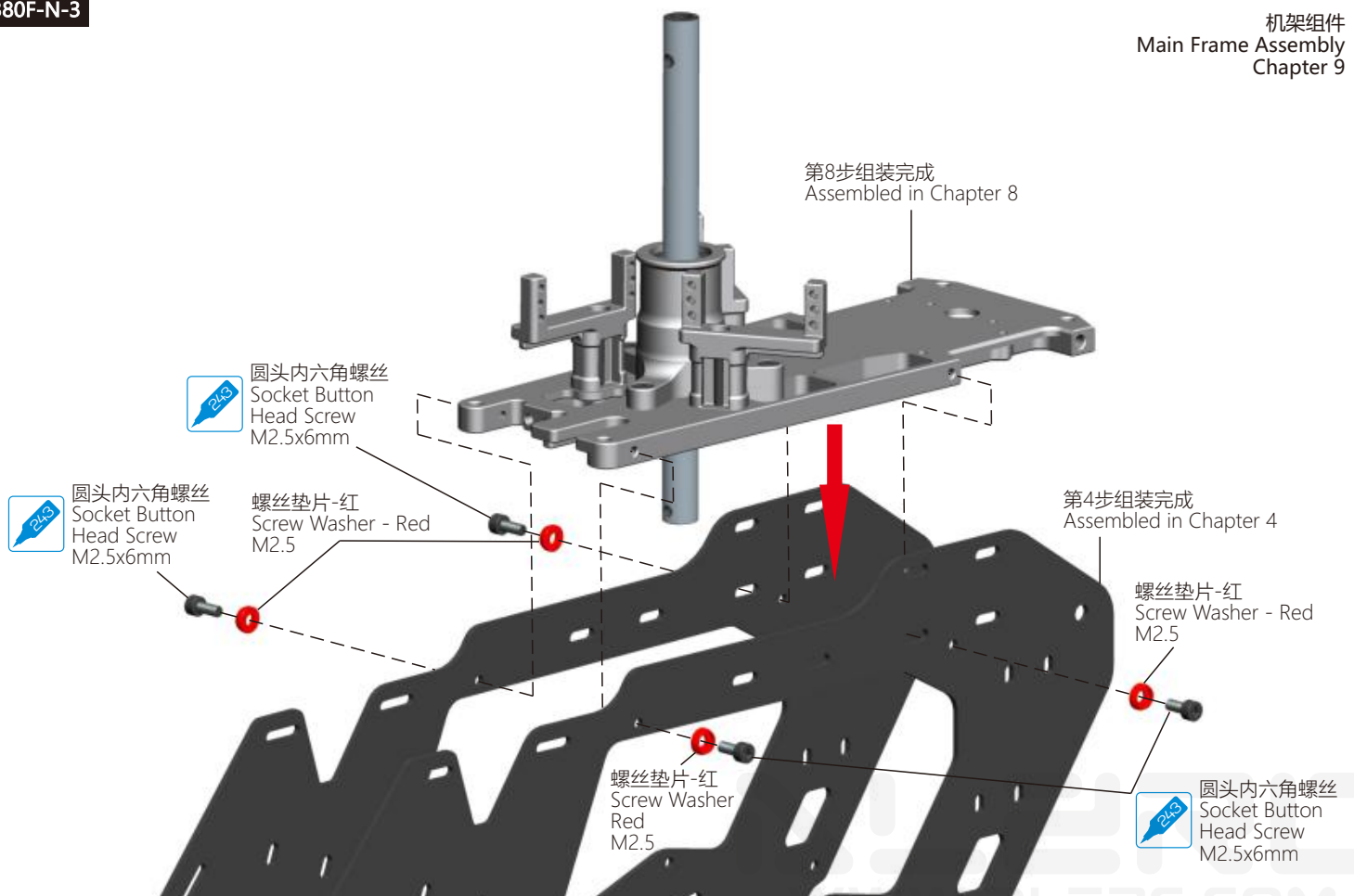
## D380F-C-3

金属舵机固定座 x 3  
Metal Servo Mount x 3  
Chapter 8



## D380F-N-3

机架组件  
Main Frame Assembly  
Chapter 9



## D380F-N-2

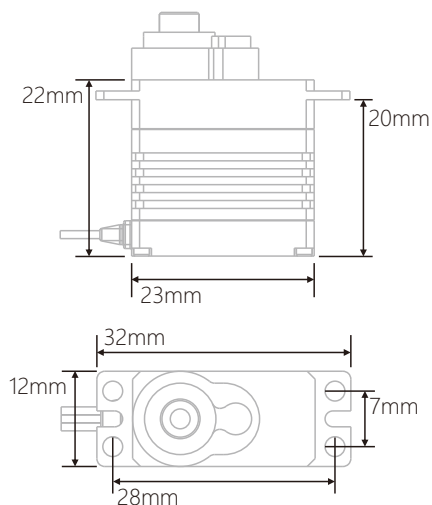
倾斜盘舵机  
Swashplate Servos  
Chapter 10

圆头内六角螺丝  
Socket Button Head Screw  
M2.5x6mm

球头 M2  
Linkage Ball M2  
Φ4.75x9.3mm

禁止过度拧紧。  
Do not over tighten.

建议使用扭力 3Kg\*cm 以上舵机。  
Recommend to use 3Kg\*cm or higher torque servo.

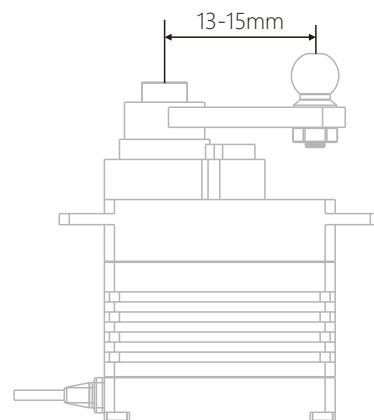


舵机臂  
Servo Arm

螺帽 M2  
Nut M2

舵机臂球头与螺丝中心距约：13-15mm。  
The distance between the central of linkage ball and servo arm screw about 13-15mm.

微型数字金属舵机  
Micro Digital Metal Servo



## D380F-N-2

倾斜盘舵机安装  
Installation Of Swashplate Servos  
Chapter 11

第10步组装完成  
Assembled in Chapter 10  
倾斜盘舵机 - 2  
Swashplate Servo - 2

固定方式一  
Fixed Way 1

圆头内六角螺丝  
Socket Button Head Screw  
M2x6mm

垫片  
Washer  
Φ2xΦ4.5x0.5mm

固定方式二  
Fixed Way 2

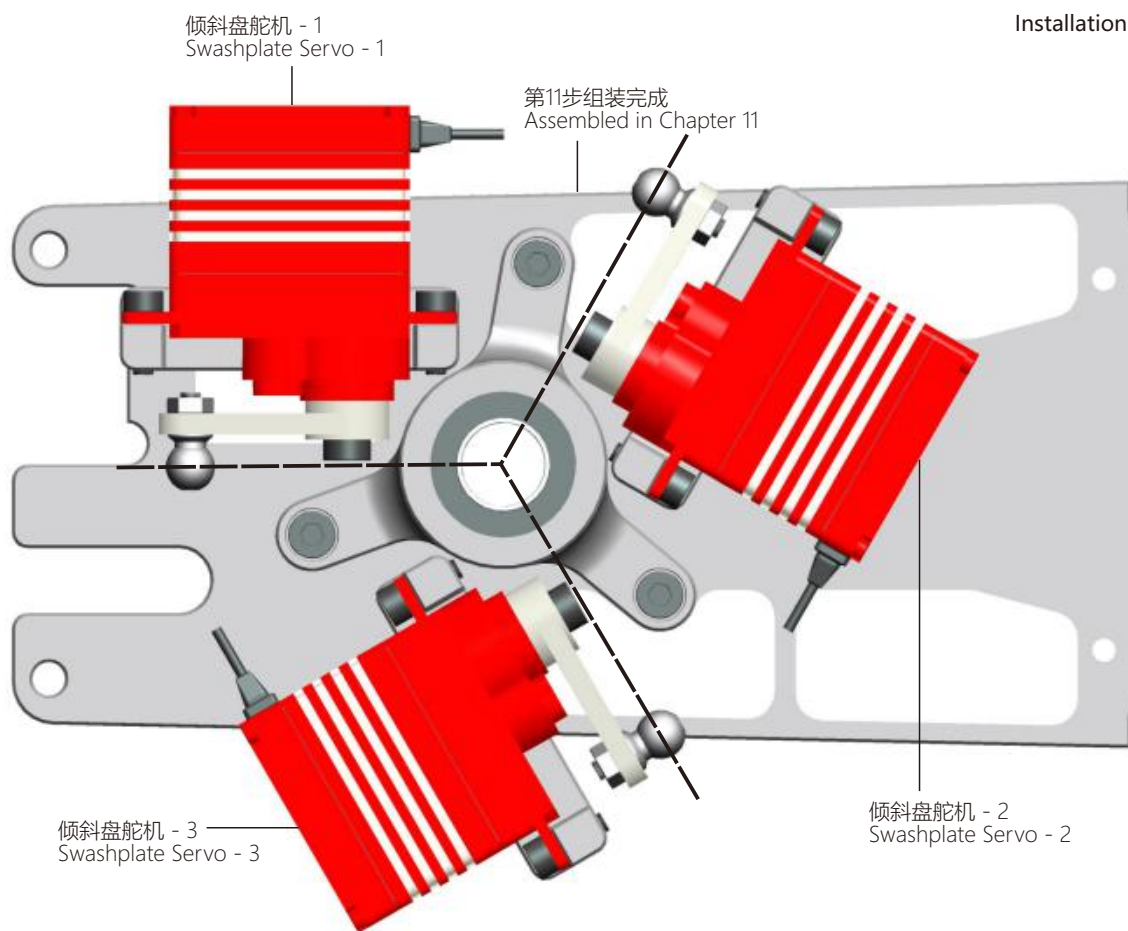
倾斜盘舵机 - 3  
Swashplate Servo - 3

圆头内六角螺丝  
Socket Button Head Screw  
M2x6mm

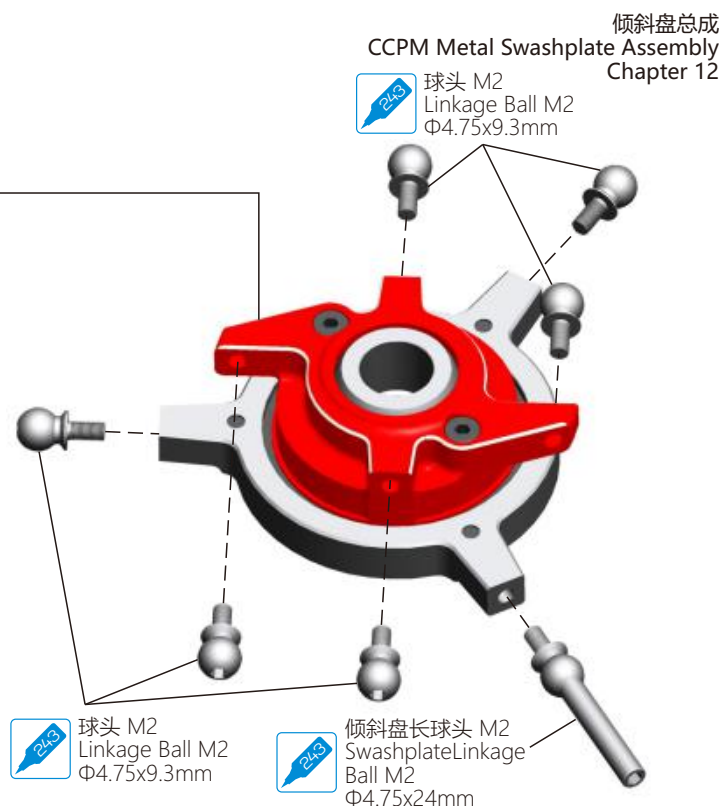
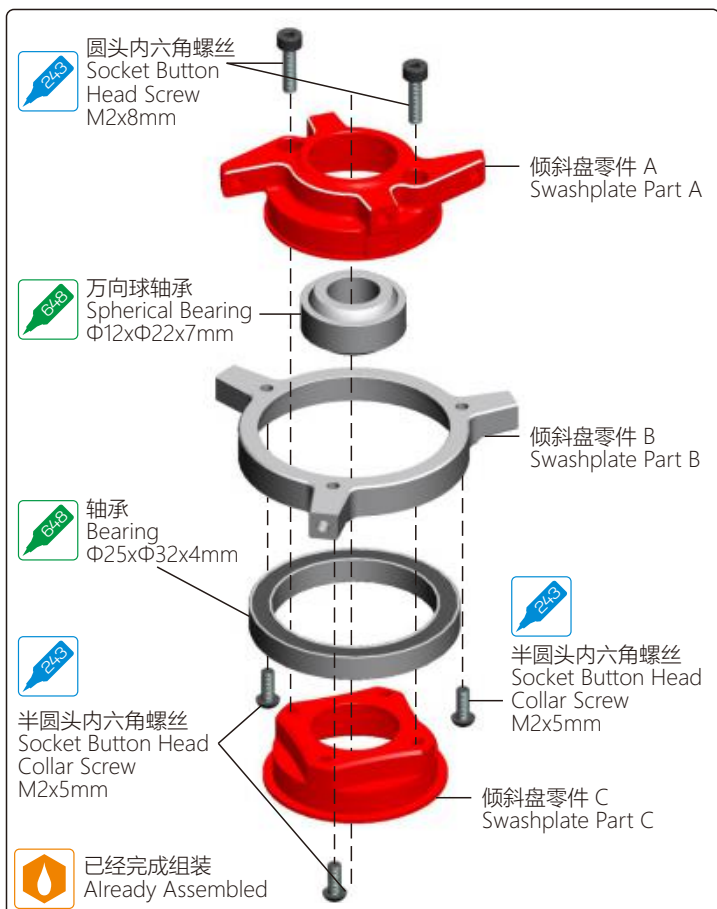
倾斜盘舵机 - 1  
Swashplate Servo - 1

第9步组装完成  
Assembled in Chapter 9

# 倾斜盘舵机安装 Installation Of Swashplate Servos



## D380F-B-1



出厂零件包装如果是已组装机，请务必确认各部件是否锁紧上胶。

For original manufactory package, If the product is already assembled by Factory, please check again if parts are firmly secured and applied with some glue.



## D380F-B-2

倾斜盘舵机拉杆 x 3  
Swashplate Servo Pull Rod x 3  
Chapter 13

第12步组装完成  
Assembled in Chapter 12

倾斜盘舵机拉杆  
Swashplate Servo  
Pull Rod

第11步组装完成  
Assembled in Chapter 11

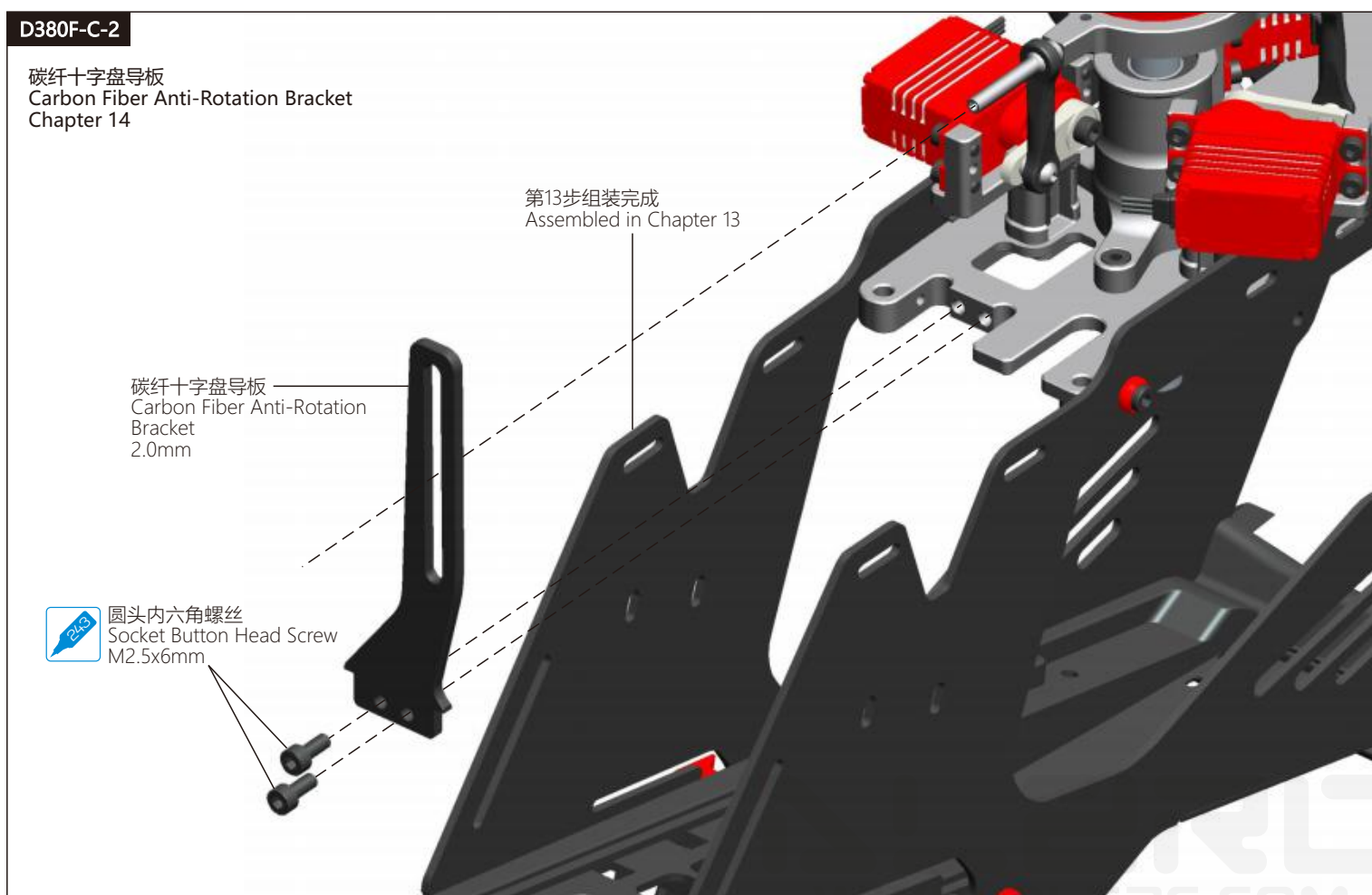
## D380F-C-2

碳纤十字盘导板  
Carbon Fiber Anti-Rotation Bracket  
Chapter 14

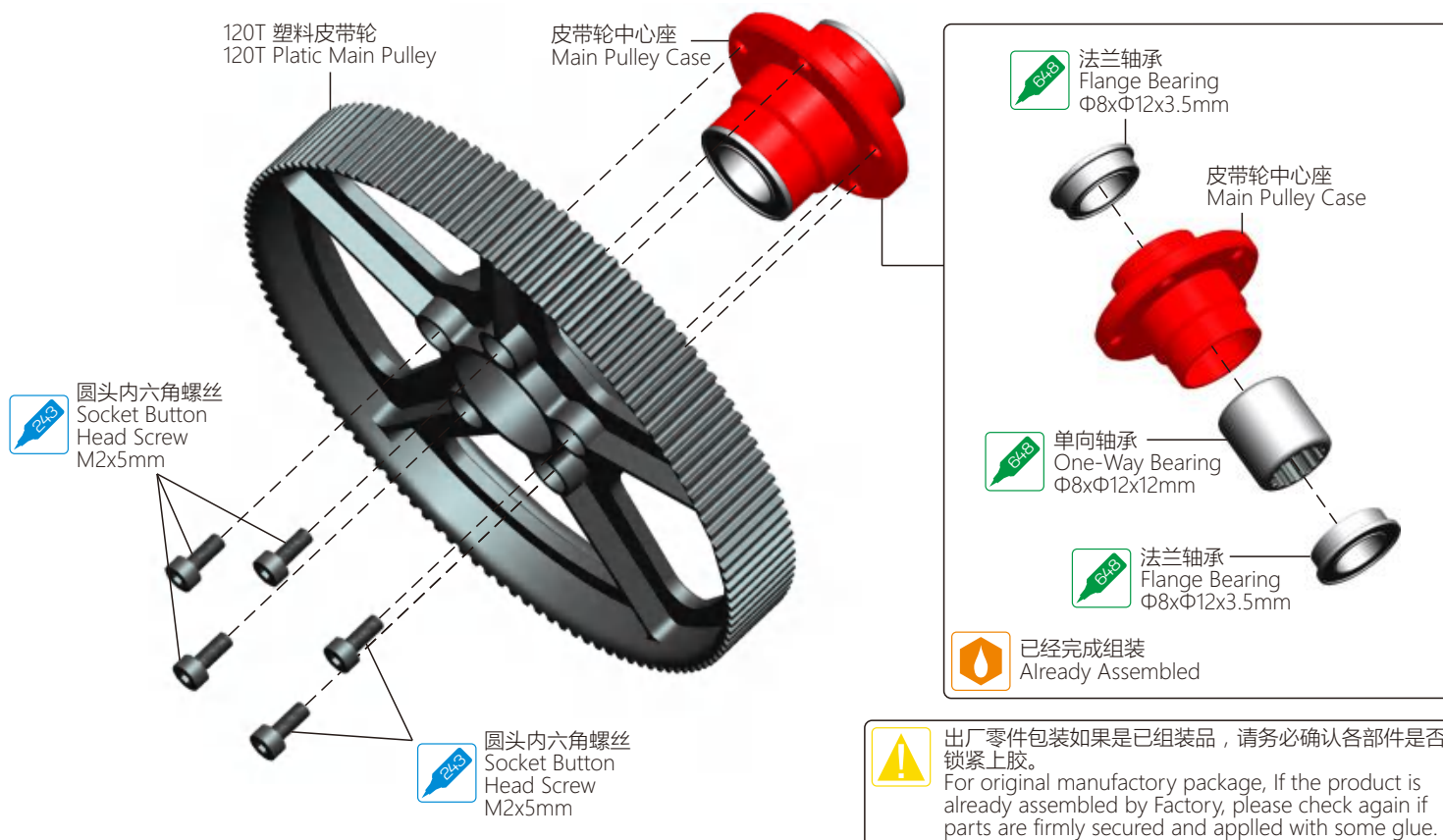
第13步组装完成  
Assembled in Chapter 13

碳纤十字盘导板  
Carbon Fiber Anti-Rotation  
Bracket  
2.0mm

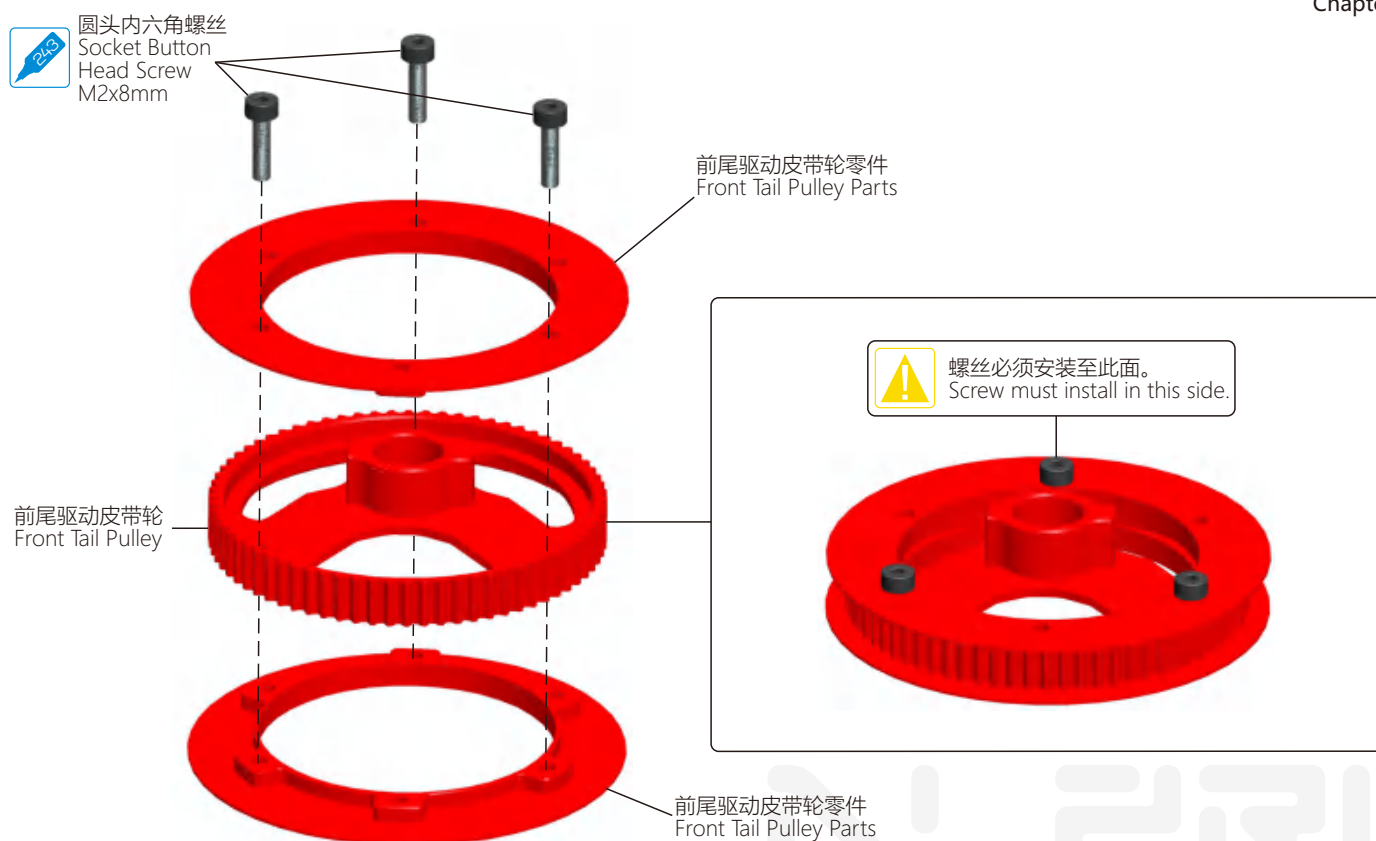
圆头内六角螺丝  
Socket Button Head Screw  
M2.5x6mm



## D380F-I-1

120T 塑料皮带轮  
120T Plastic Main Pulley  
Chapter 15

## D380F-I-2

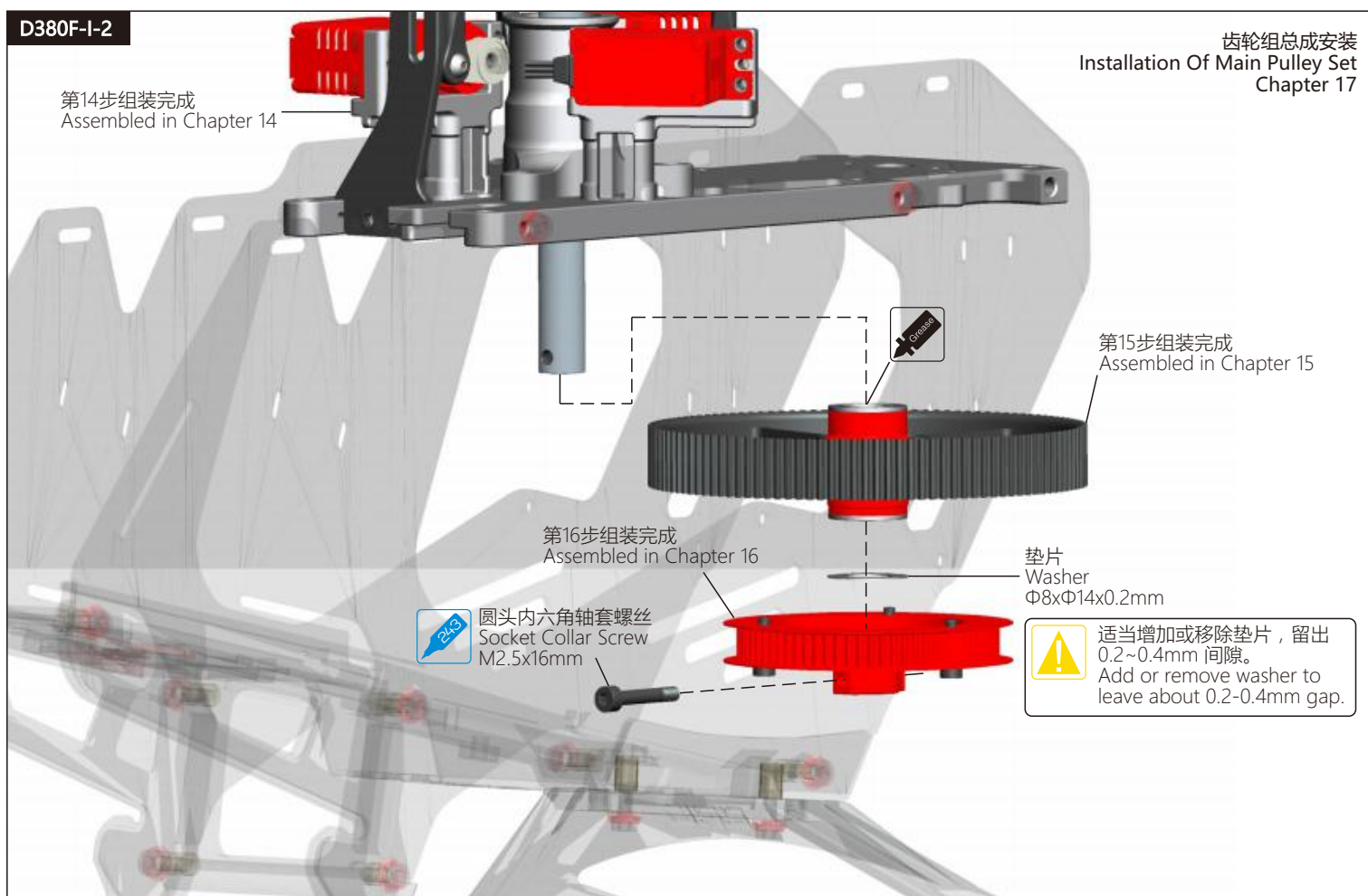
前尾驱动皮带轮  
Front Tail Pulley  
Chapter 16



## D380F-I-2

第14步组装完成  
Assembled in Chapter 14

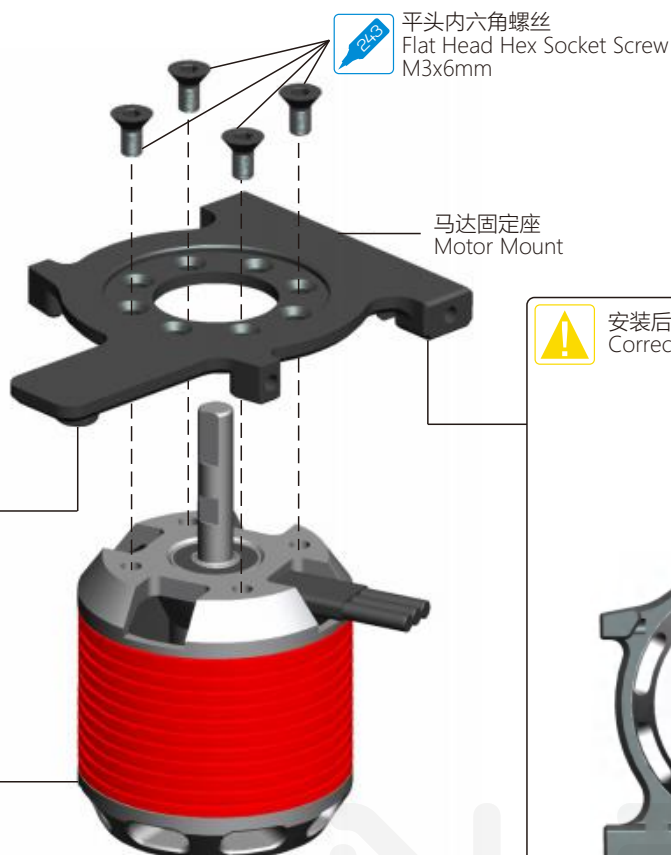
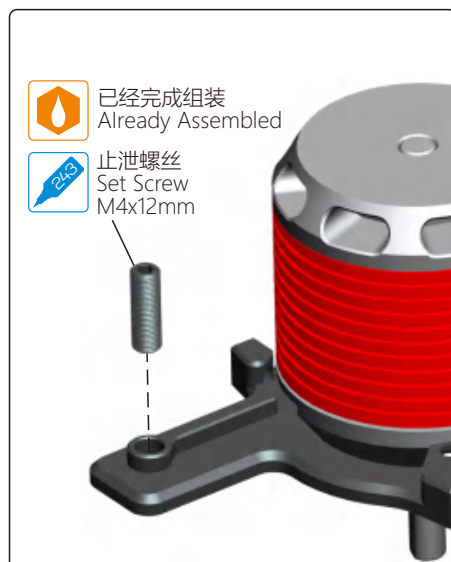
齿轮组总成安装  
Installation Of Main Pulley Set  
Chapter 17



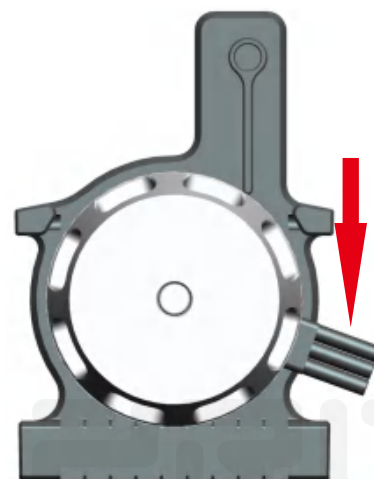
## D380F-E-1

## D380F-N-2

马达固定座  
Motor Mount  
Chapter 18



安装后，马达线的正确位置。  
Correct position for the motor wires.



ALZRC - 无刷马达  
ALZRC - Brushless Motor  
3120 - 1000KV

## D380F-E-2



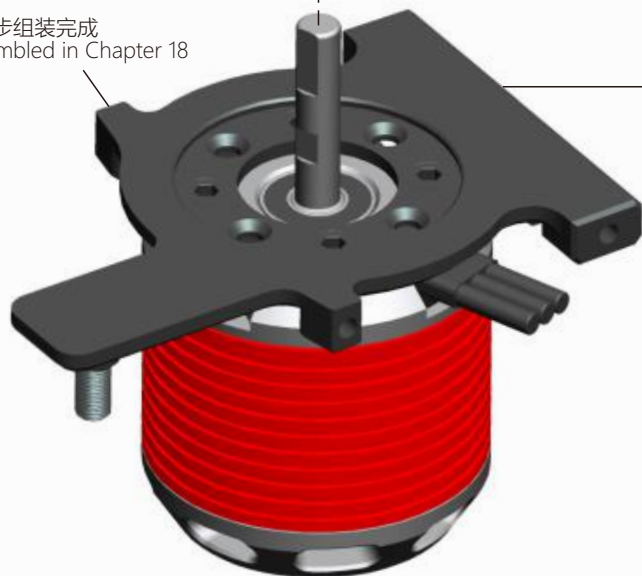
已经完成组装  
Already Assembled

21T 马达皮带轮  
21T Motor Pulley

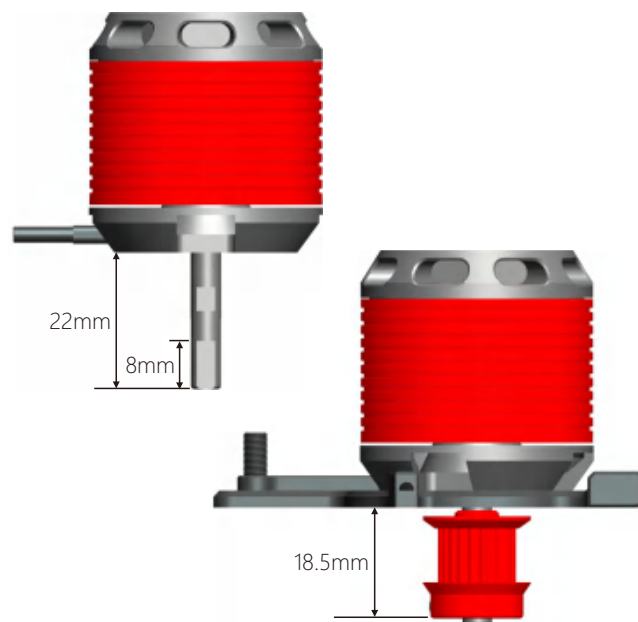


止泄螺丝  
Set Screw  
M3x6mm

第18步组装完成  
Assembled in Chapter 18



为了预留更多的电池安装空间, 建议使用马达轴较短的马达。请参考下图尺寸。此外, 请确保马达轴有适合安装止泄螺丝的固定位。To maximize space for the battery, it is advisable to choose a motor with short shaft. Follow the dimensions given in this figure as reference. Always make sure the motor shaft has an appropriate 'flat' the set screw.



## D380F-N-3

马达固定座总成安装  
Installation Of Motor Mount  
Chapter 20



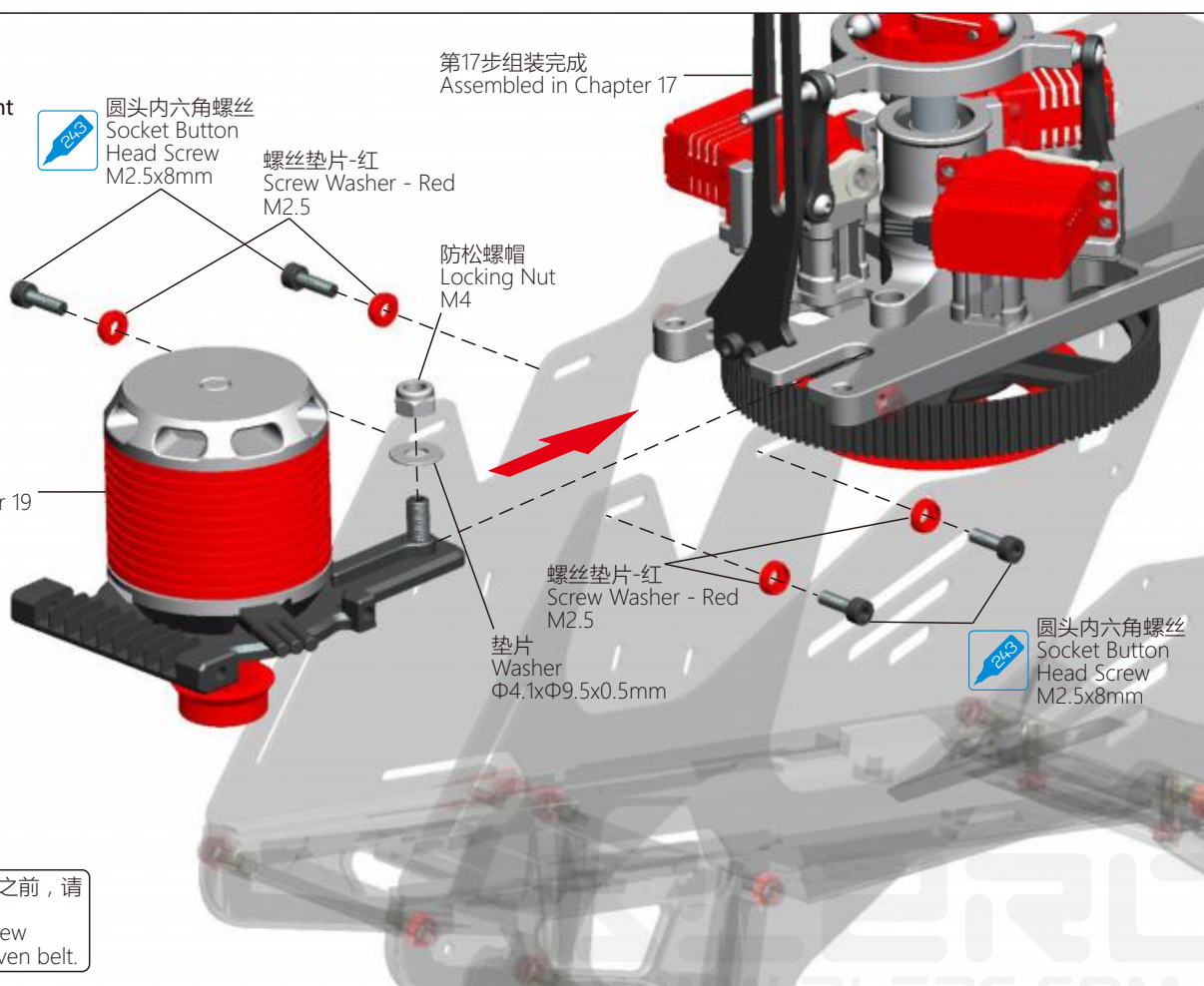
圆头内六角螺丝  
Socket Button  
Head Screw  
M2.5x8mm

螺丝垫片-红  
Screw Washer - Red  
M2.5

第17步组装完成  
Assembled in Chapter 17

防松螺帽  
Locking Nut  
M4

第19步组装完成  
Assembled in Chapter 19



螺丝垫片-红  
Screw Washer - Red  
M2.5

垫片  
Washer  
Φ4.1xΦ9.5x0.5mm



圆头内六角螺丝  
Socket Button  
Head Screw  
M2.5x8mm



未安装马达传动皮带之前, 请不要拧紧螺丝。  
Don't tighten the screw  
before install the driven belt.

## D380F-E-2

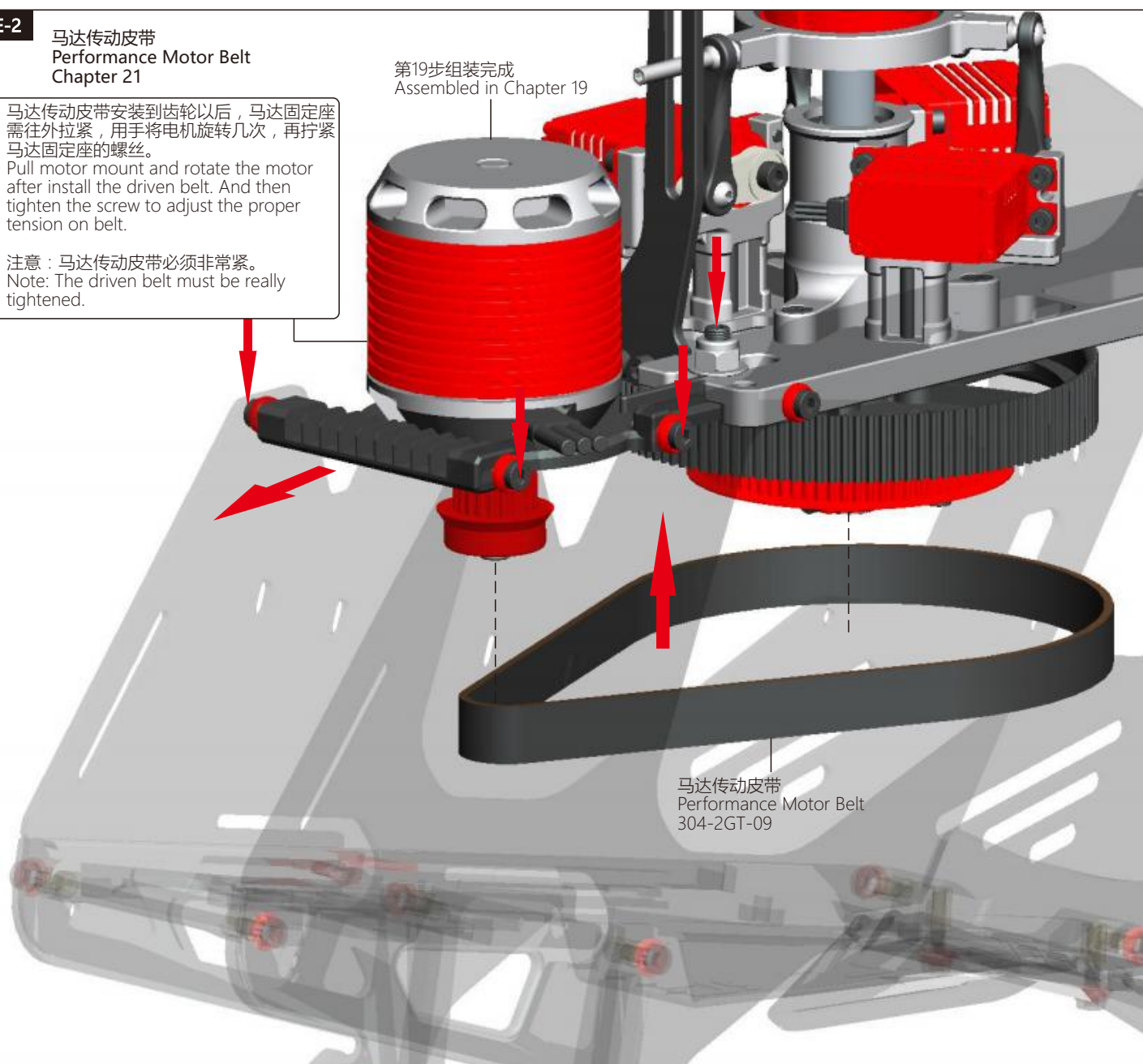
### 马达传动皮带 Performance Motor Belt Chapter 21

第19步组装完成  
Assembled in Chapter 19



马达传动皮带安装到齿轮以后，马达固定座需往外拉紧，用手将电机旋转几次，再拧紧马达固定座的螺丝。  
Pull motor mount and rotate the motor after install the driven belt. And then tighten the screw to adjust the proper tension on belt.

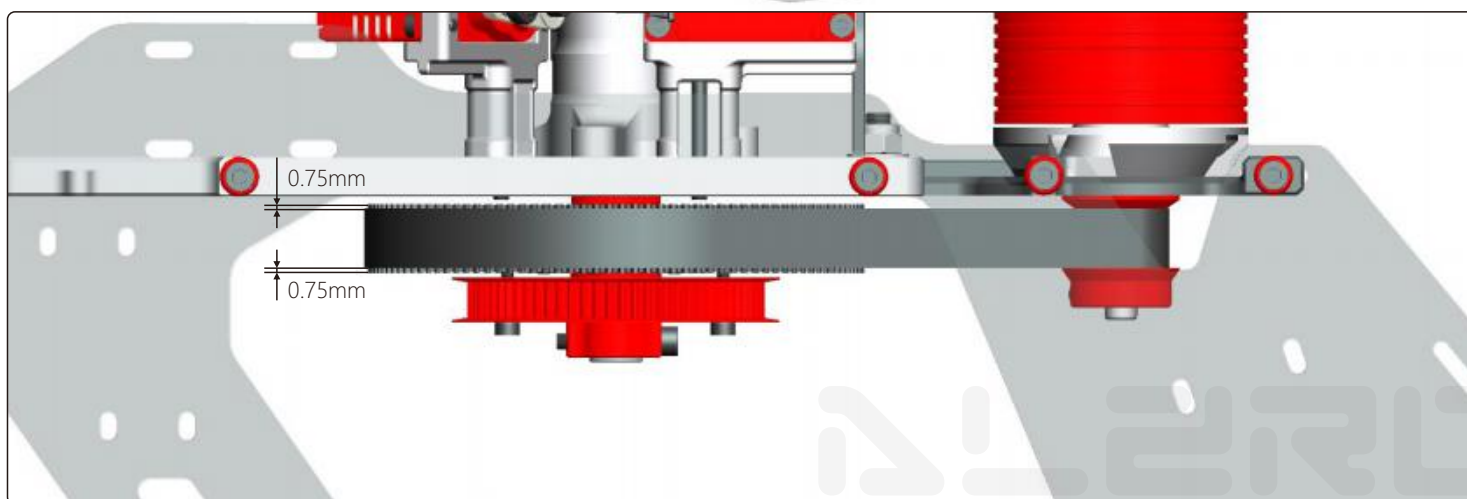
注意：马达传动皮带必须非常紧。  
Note: The driven belt must be really tightened.



马达传动皮带  
Performance Motor Belt  
304-2GT-09

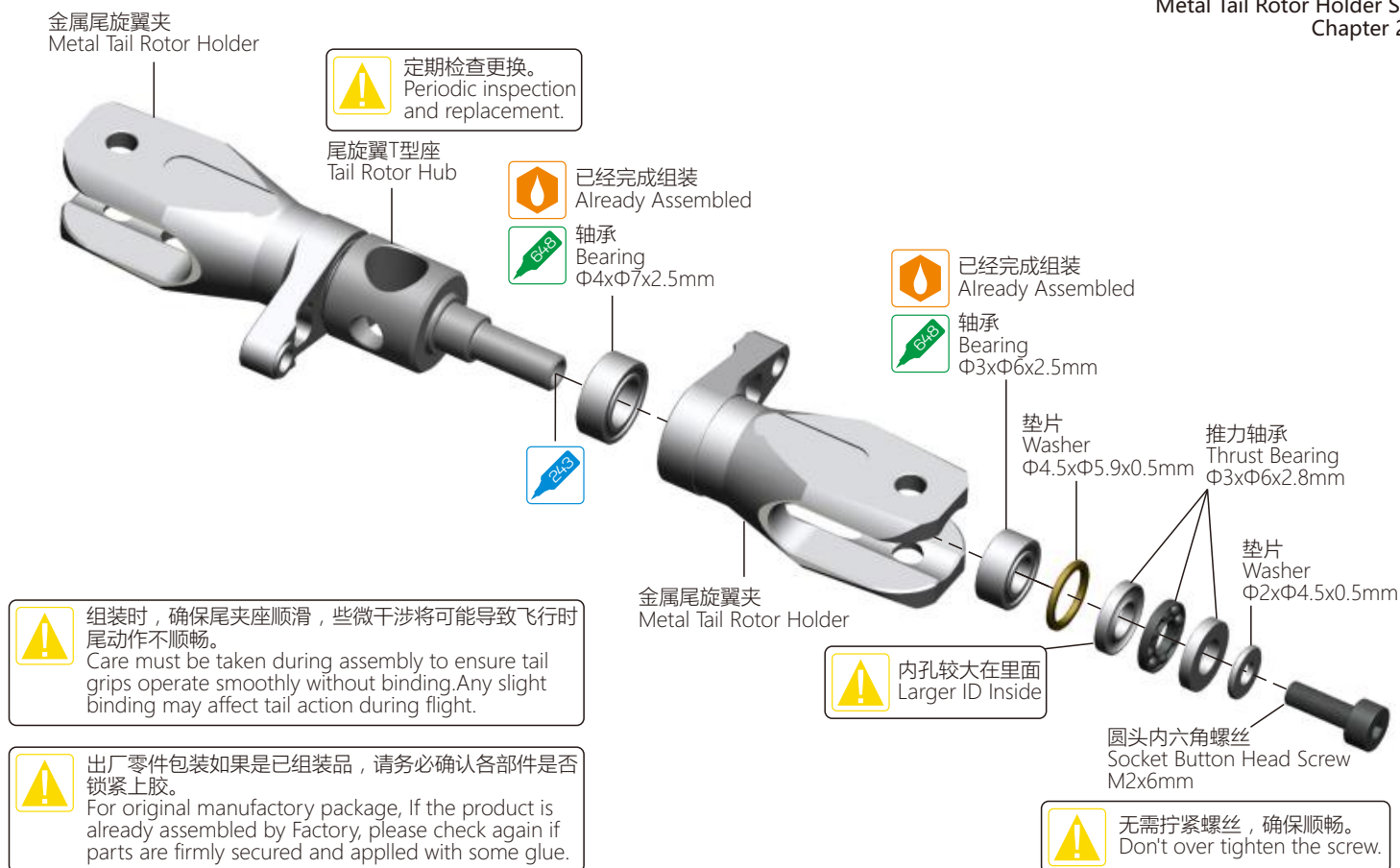


用手转动马达，检查马达传动皮带的垂直情况，皮带与皮带轮必须正确对齐(视下图)，上下间距0.75mm。  
如果转动后，皮带并非对齐，请检查马达皮带轮，皮带向上偏移，马达皮带轮向下调，皮带向下偏移，马达皮带轮向上调。  
Check for vertical alignment of the motor pulley. To do this, simply turn the motor several times by hand and check to you see if the belt is aligned properly with the big pulley (one way bearing pulley).  
If the belt is riding too high, simply loosen up the motor pulley and drop it just a little bit, if it is riding too low, loosen up the motor pulley and raise it a bit.

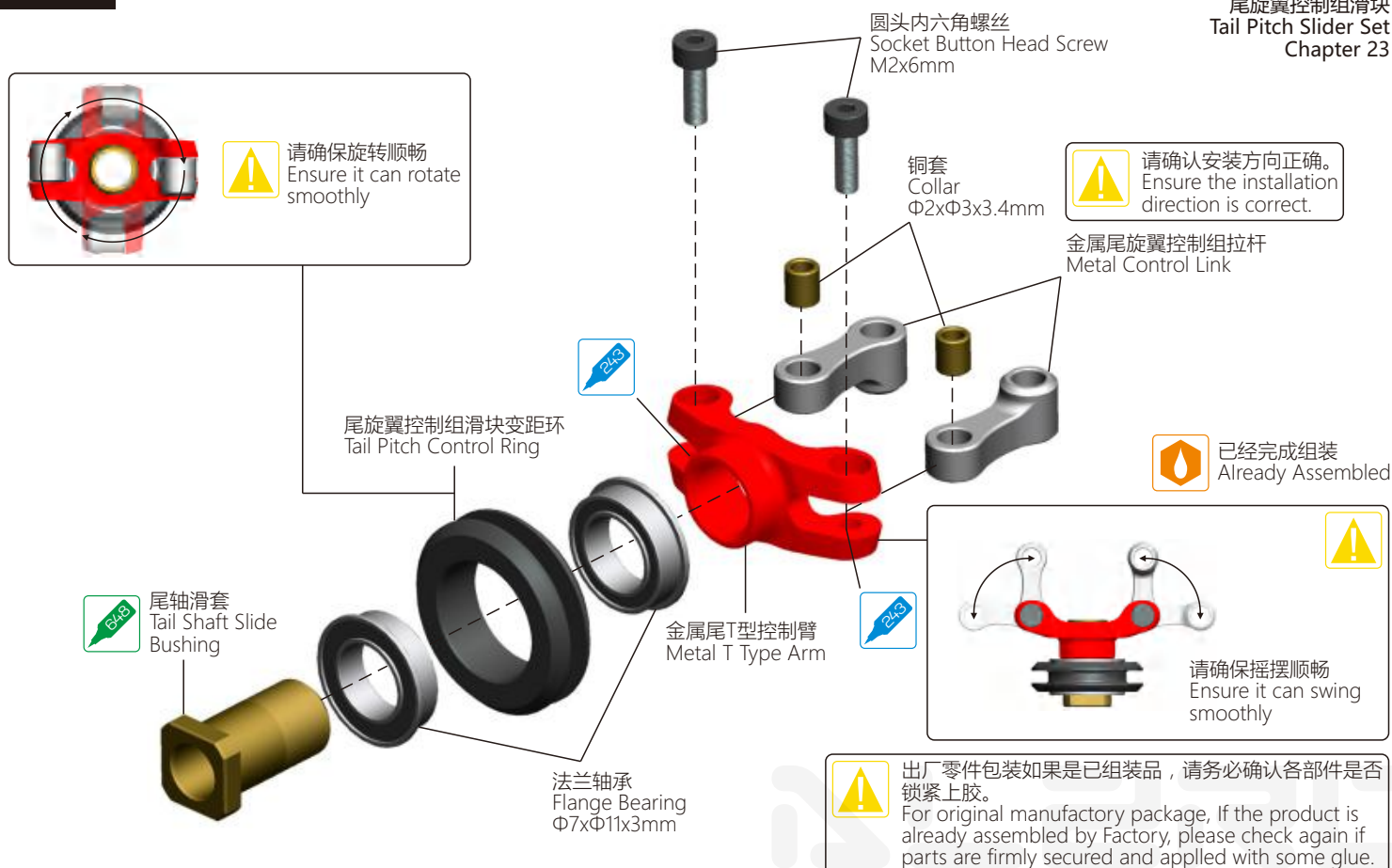




## D380F-L-1

金属尾旋翼夹座总成  
Metal Tail Rotor Holder Set  
Chapter 22

## D380F-L-3

尾旋翼控制组滑块  
Tail Pitch Slider Set  
Chapter 23

## D380F-L-2

尾旋翼主轴  
Tail Rotor Shaft  
Chapter 24止泄螺丝  
Set Screw  
M3x3mm尾旋翼主轴  
Tail Rotor Shaft  
Φ5x67mm

## D380F-L-1

尾旋翼总成  
Tail Rotor Assembly  
Chapter 25圆头内六角轴套螺丝  
Socket Collar Screw  
M2x9mm铜套  
Collar  
Φ2xΦ3x5.5mm第23步组装完成  
Assembled in Chapter 23圆头内六角轴套螺丝  
Socket Collar Screw  
M2x9mm铜套  
Collar  
Φ2xΦ3x5.5mm尾旋翼总成  
Tail Rotor Assembly

用手上下推动数次，确保摇摆和推动顺畅。如果感觉些微干涉，请调整拉杆螺丝松紧，直到顺畅为止。  
Push several times with hand to ensure it swing smooth. If it feels slightly interference, please adjust the tightness of screw rod, until smooth.

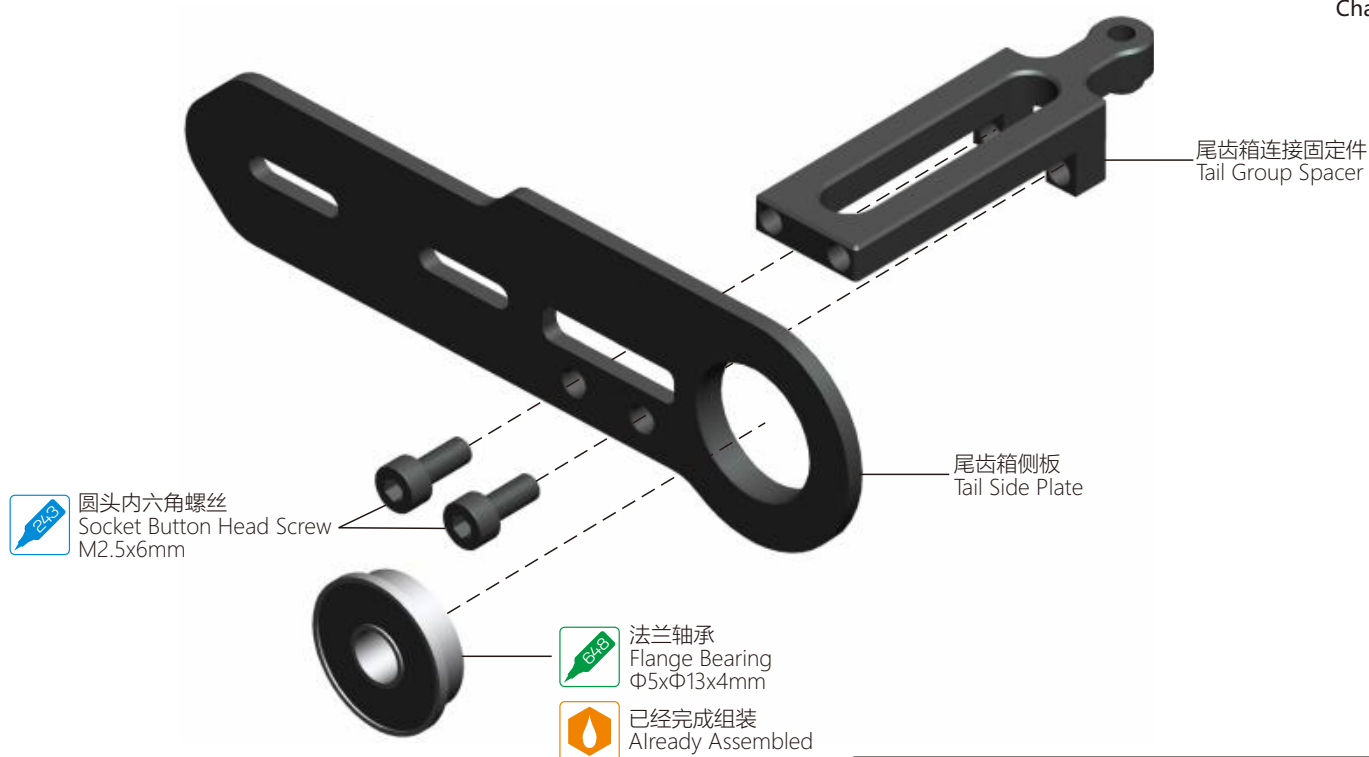
第25步组装完成  
Assembled in Chapter 25

## D380F-L-3

金属尾旋翼控制组摇臂  
Metal Bell Crank Lever  
Chapter 26法兰轴承  
Flange Bearing  
Φ2.5xΦ6x2.5mm变距环螺丝  
Tail Pin Screw铜套  
Collar  
Φ2.5xΦ4x6.3mm已经完成组装  
Already Assembled金属尾旋翼控制组摇臂  
Metal Bell Crank Lever球头 M2  
Linkage Ball M2  
Φ4.75x9.3mm垫片  
Washer  
Φ3xΦ4.8x0.5mm法兰轴承  
Flange Bearing  
Φ2.5xΦ6x2.5mm变距环螺丝  
Tail Pin Screw

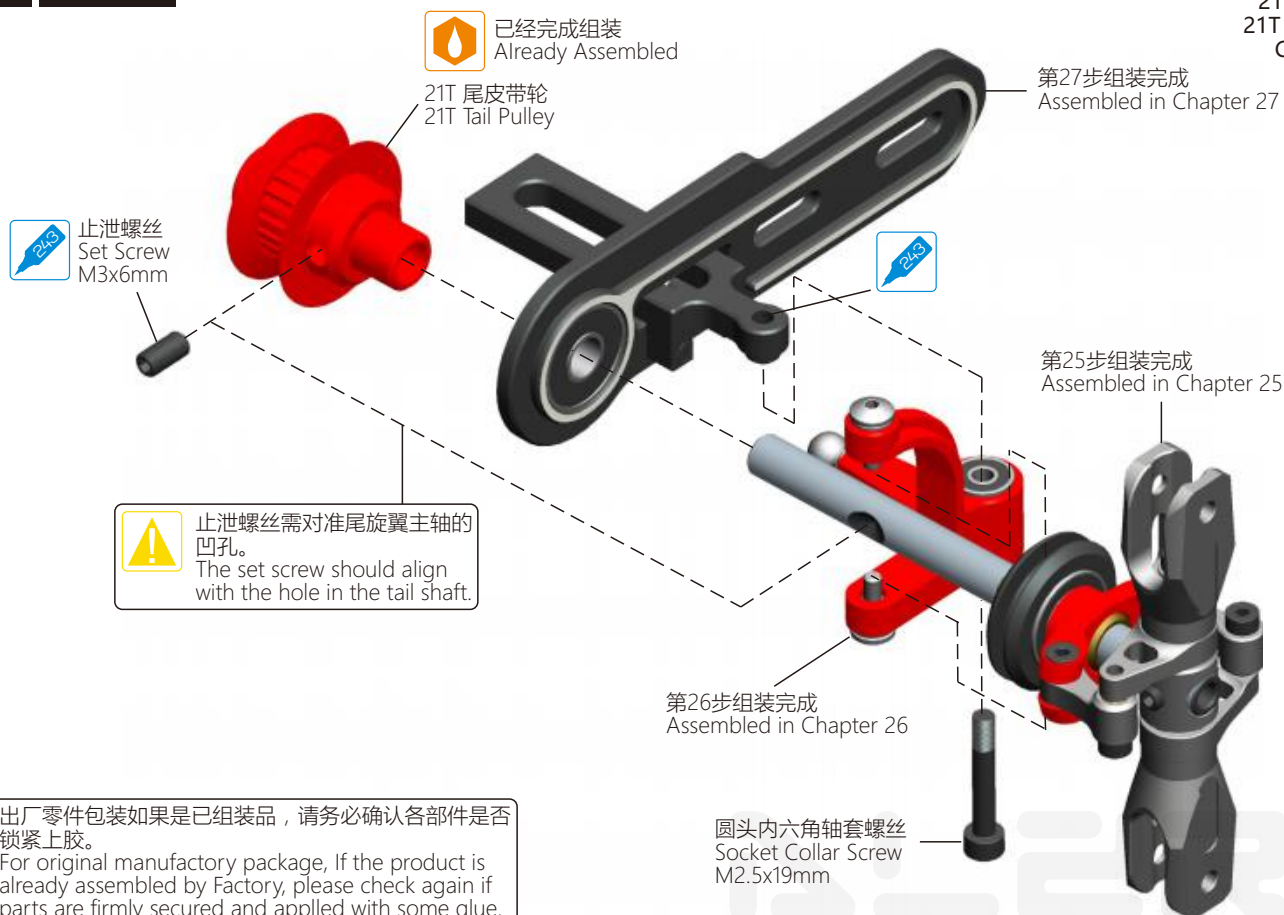


D380F-K-2 | D380F-K-3

尾齿箱侧板  
Tail Side Plate  
Chapter 27

出厂零件包装如果是已组装机，请务必确认各部件是否锁紧上胶。  
For original manufactory package, If the product is already assembled by Factory, please check again if parts are firmly secured and applied with some glue.

D380F-L-2 | D380F-L-3

21T 尾皮带轮  
21T Tail Pulley  
Chapter 28

出厂零件包装如果是已组装机，请务必确认各部件是否锁紧上胶。  
For original manufactory package, If the product is already assembled by Factory, please check again if parts are firmly secured and applied with some glue.

D380F-L-4 | D380F-K-1 | D380F-K-3 | D380F-N-3

碳纤维垂直尾翼  
Carbon Fiber Vertical Stabilizer  
Chapter 29尾齿传动皮带  
Performance Tail Drive Gear Belt  
1140-HTD-2第28步组装完成  
Assembled in Chapter 28

全新的尾旋翼总会感觉干涩，飞行2-5个起落后，将会变得更加顺畅。It is normal for the tail system to feel a bit tight after initial assembly when the helicopter is brand new. The system will become smooth after 2-5 flights.



圆头内六角螺丝  
Socket Button Head Screw  
M2.5x6mm



未安装碳纤维尾管之前，螺丝不要拧紧。  
Do not tighten the screw before install the tail boom.



出厂零件包装如果是已组装机，请务必确认各部件是否锁紧上胶。  
For original manufactory package, If the product is already assembled by Factory, please check again if parts are firmly secured and applied with some glue.

螺丝垫片-红  
Screw Washer - Red  
M2.5



法兰轴承  
Flange Bearing  
Φ5xΦ13x4mm



已经完成组装  
Already Assembled

垫片  
Washer  
Φ5xΦ7x0.1mm



装好螺丝后，如果感觉尾皮带齿左右有移动虚位，您可以增加1~2片垫片。  
After fixed the screw, if there still with a gap or movement of left and right for the Tail Pulley, you can increase 1 to 2 washer for it.

碳纤维垂直尾翼  
Carbon Fiber Vertical Stabilizer  
1.5mm

D380F-J-1

尾管固定配件-B x 2  
Tail Boom Spare Part-B x 2  
Chapter 30

固定配件双面胶-B  
Boom Support Double Side Tape-B

尾管固定配件-B  
Tail Boom Spare Part-B

防松螺帽  
Locking Nut  
M2.5



我们建议用砂纸打磨黏贴表面。  
We suggest to clean the sticking surface with sand paper.

D380F-J-1

尾管固定配件-A  
Tail Boom Spare Part-A  
Chapter 31



注意螺帽正反面。  
Pay attention to the flat and chamfered side of plastic nut.

尼龙螺帽  
Nylon Nut  
M8



尾管固定配件-A  
Tail Boom Spare Part-A

固定配件双面胶-A  
Boom Support Double Side Tape-A



我们建议用砂纸打磨黏贴表面。  
We suggest to clean the sticking surface with sand paper.

D380F-P-1

碳纤维彩绘尾管  
Carbon Fiber Painting Tail Boom  
Chapter 32

碳纤维彩绘尾管  
Carbon Fiber Painting  
Tail Boom

第30步组装完成  
Assembled in Chapter 30



我们建议用砂纸打磨黏贴表面。  
We suggest to clean the sticking  
surface with sand paper.

D380F-P-1

碳纤维彩绘尾管  
Carbon Fiber Painting Tail Boom  
Chapter 33

第32步组装完成  
Assembled in Chapter 32

第31步组装完成  
Assembled in Chapter 31



我们建议用砂纸打磨黏贴表面。  
We suggest to clean the sticking  
surface with sand paper.

D380F-K-2

D380F-N-3

尾传动总成  
Tail System Assembly  
Chapter 34

第33步组装完成  
Assembled in Chapter 33

圆头内六角螺丝  
Socket Button Head Screw  
M2.5x10mm

螺丝垫片-红  
Screw Washer - Red  
M2.5

螺丝垫片-红  
Screw Washer - Red  
M2.5

圆头内六角螺丝  
Socket Button Head Screw  
M2.5x10mm

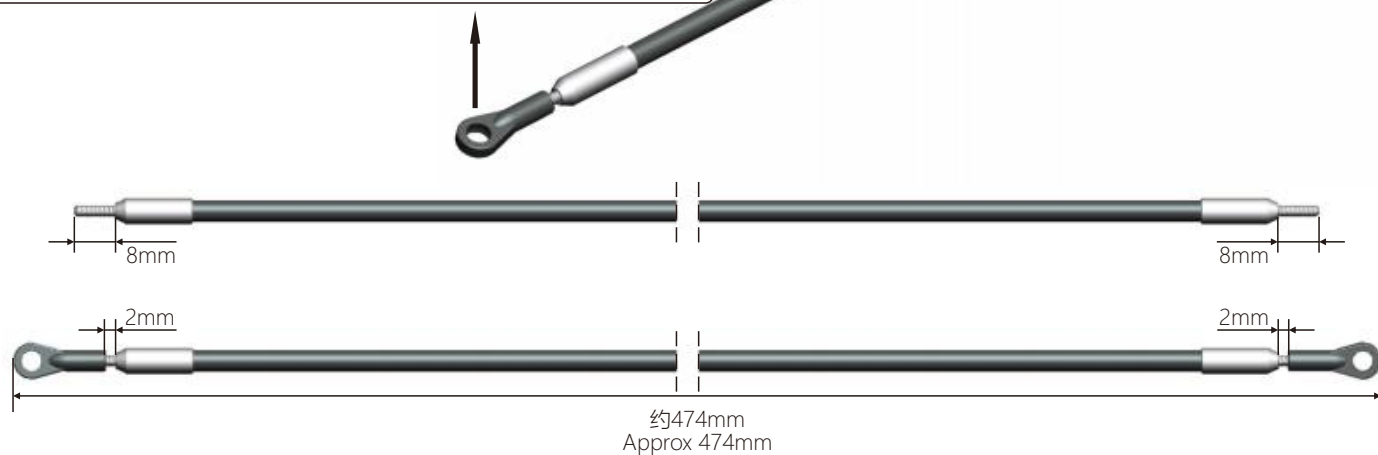
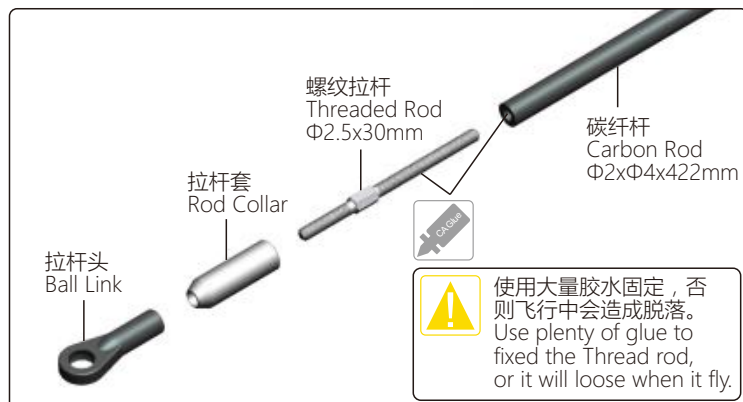
第29步组装完成  
Assembled in Chapter 29



未将皮带放装前皮带轮之前，螺  
丝不要拧紧。  
Do not tighten the screw  
before put the belt into pulley.

D380F-M-1

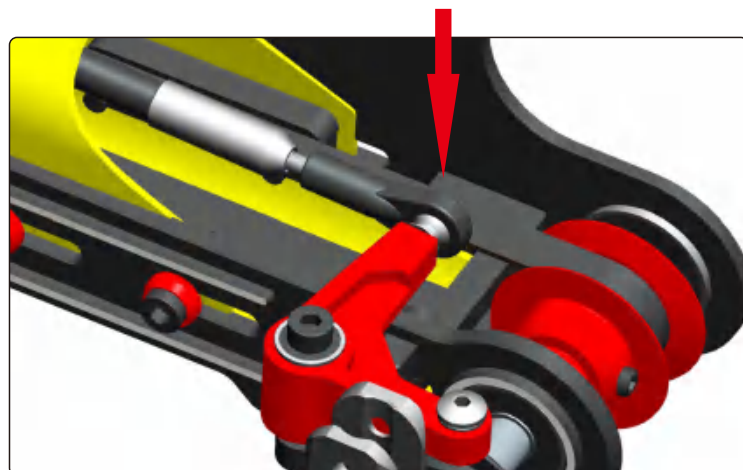
碳纤尾舵机控制连杆总成  
Carbon Fiber Tail Control Rod Assembly  
Chapter 35



第35步组装完成  
Assembled in Chapter 35

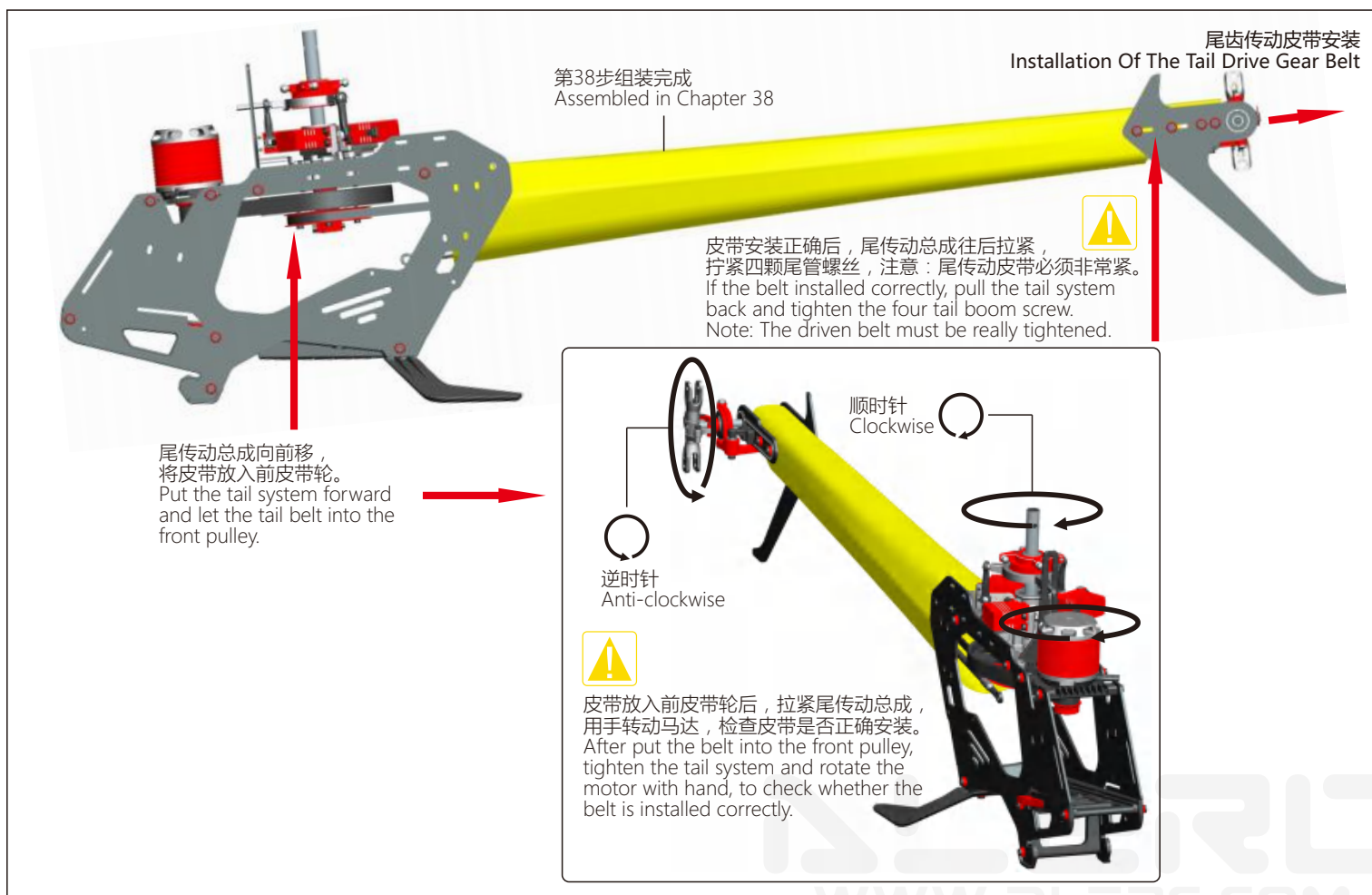
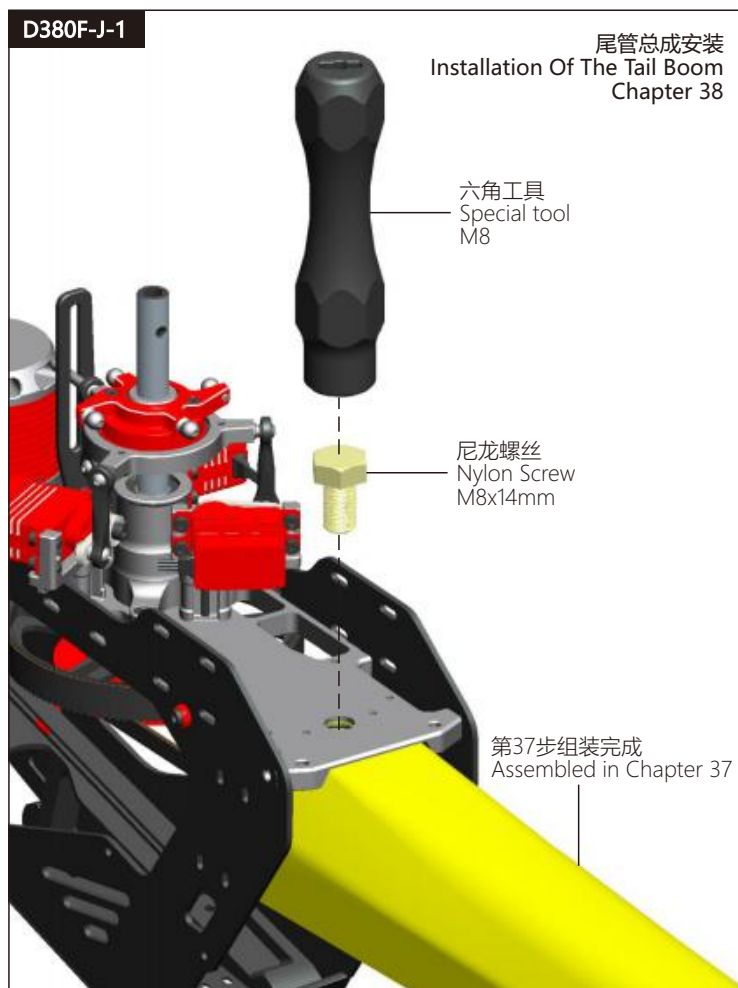
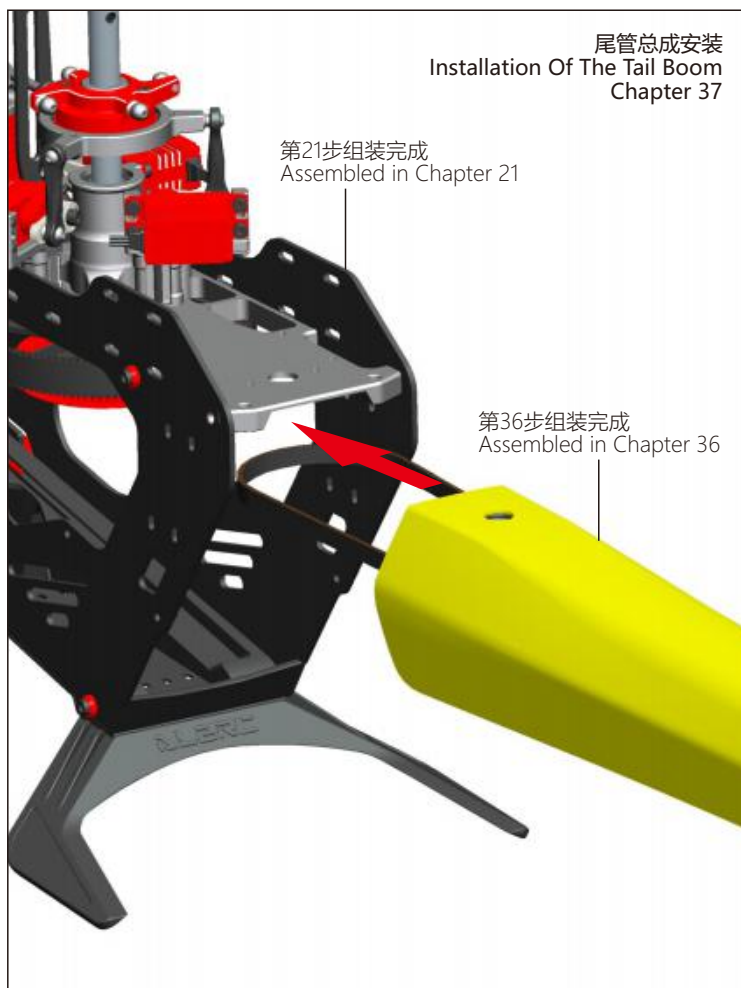
尾管总成  
Tail Boom Assembly  
Chapter 36

将尾舵机控制连杆套进尾旋翼控制组摇臂。  
Put the tail control rod link into the bell crank lever.



第34步组装完成  
Assembled in Chapter 34







D380F-H-1

金属陀螺仪固定座  
Metal Gyro Mount  
Chapter 39

第38步组装完成  
Assembled in Chapter 38

圆头内六角螺丝  
Socket Button  
Head Screw  
M2.5x8mm

金属陀螺仪固定座  
Metal Gyro Mount



D380F-N-2

锁尾舵机  
Locked Rudder Servo  
Chapter 40

圆头内六角螺丝  
Socket Button Head Screw  
M3x6mm

禁止过度拧紧。  
Do not over tighten.

球头 M2  
Linkage Ball M2  
Φ4.75x9.3mm

舵机臂  
Servo Arm

螺帽 M2  
Nut M2

舵机垫片  
Servo Washer

舵机垫片  
Servo Washer

中型数字金属舵机  
Medium Digital Metal Servo

D380F-F-2

D380F-N-2

尾舵机固定座  
Rudder Servo Mount  
Chapter 41

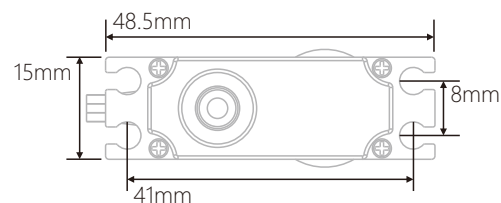
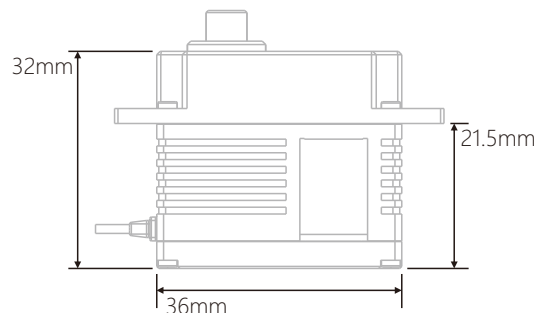
塑料尾舵机固定座  
Plastic Rudder Servo Mount

垫片  
Washer  
Φ2.5xΦ5.8x0.5mm

第40步组装完成  
Assembled in Chapter 40  
锁尾舵机  
Locked Rudder Servo

垫片  
Washer  
Φ2.5xΦ5.8x0.5mm

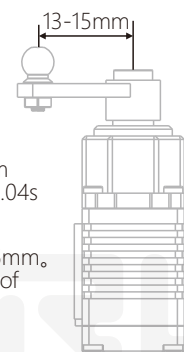
圆头内六角螺丝  
Socket Button  
Head Screw  
M2.5x8mm



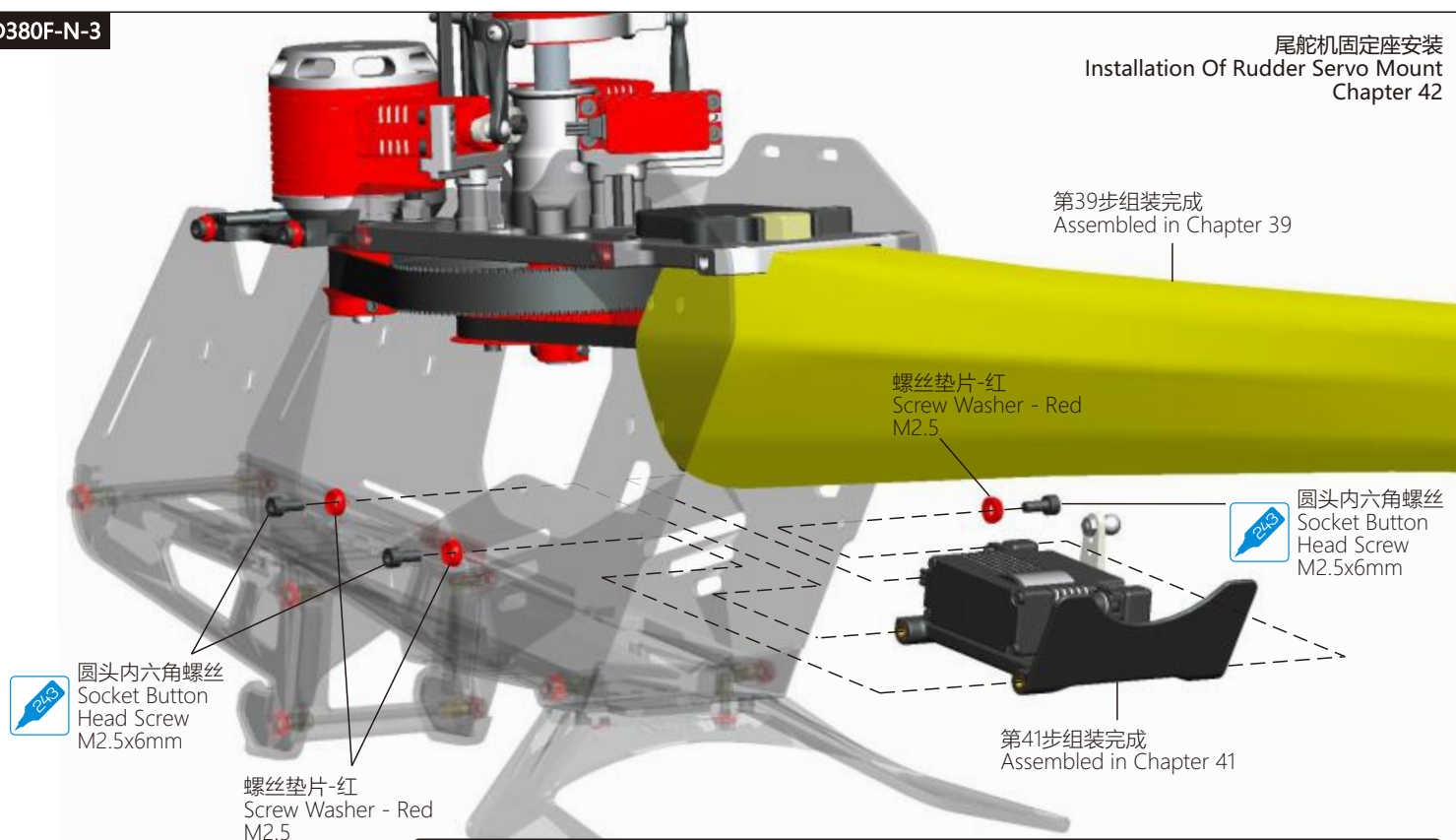
舵机尺寸参考  
Reference Size for Servo

建议使用扭力 4Kg\*cm 以上、  
速度 0.06~0.04秒/舵机。  
Recommend to use above 4Kg\*cm  
torsion and with speed of 0.06~0.04s  
servo.

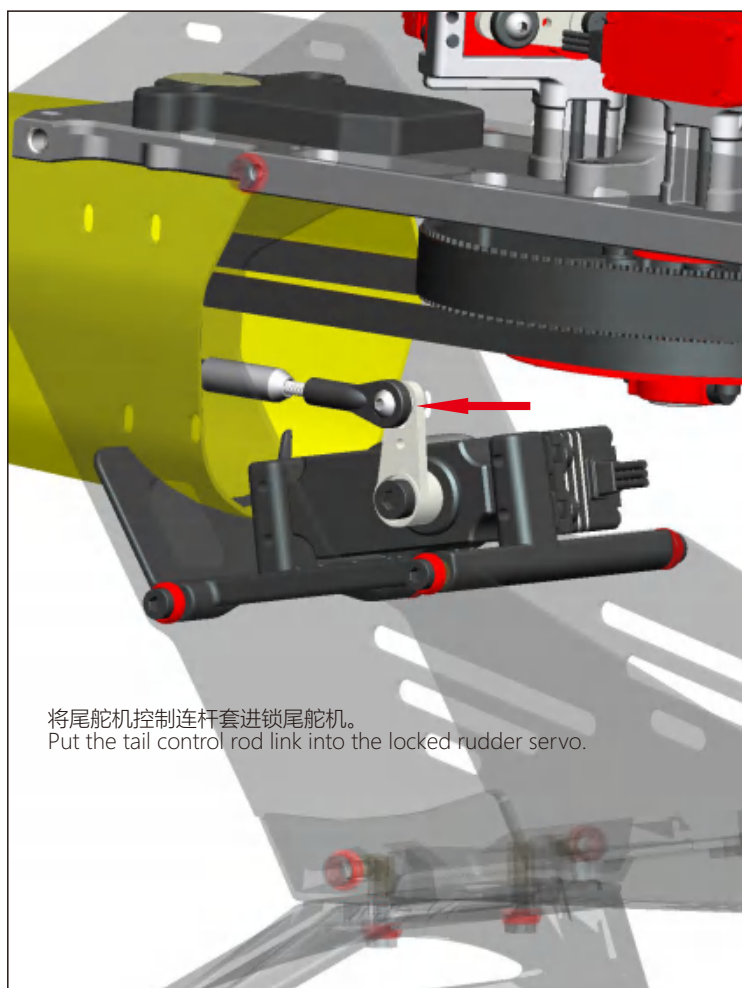
舵机臂球头与螺丝中心距约：13-15mm。  
The distance between the central of  
linkage ball and servo arm screw  
about 13-15mm.



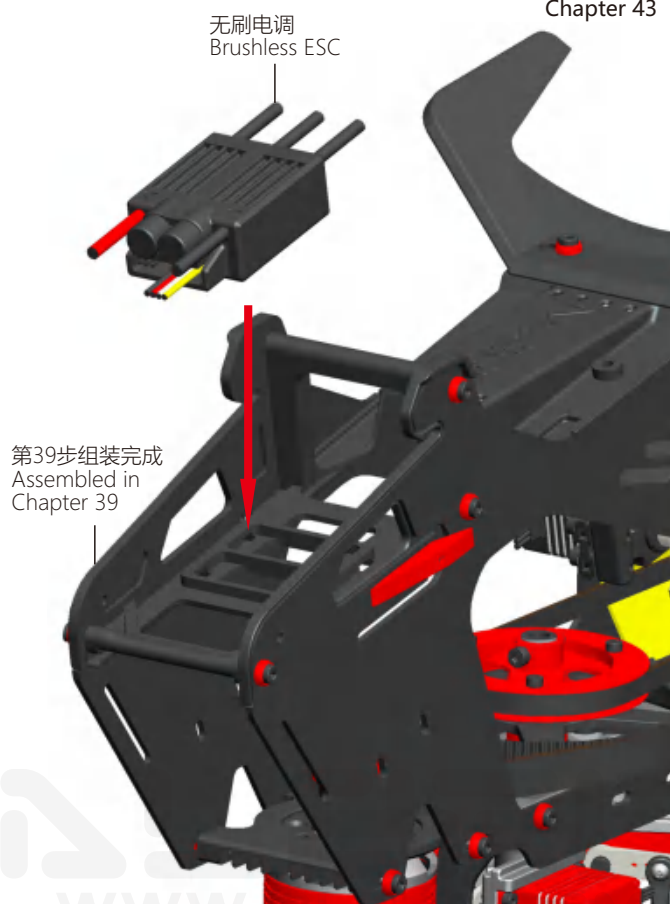
## D380F-N-3

尾舵机固定座安装  
Installation Of Rudder Servo Mount  
Chapter 42

为了方便安装，您可以先装前面的两颗螺丝后，往上挤压尾管，再装后面两个螺丝。挤压后的尾管会出现些微变形现象，属于正常现象。  
To facilitate boom installation, you can install the two front screw then pull up the boom to install the two rear screw.



## D380F-N-1

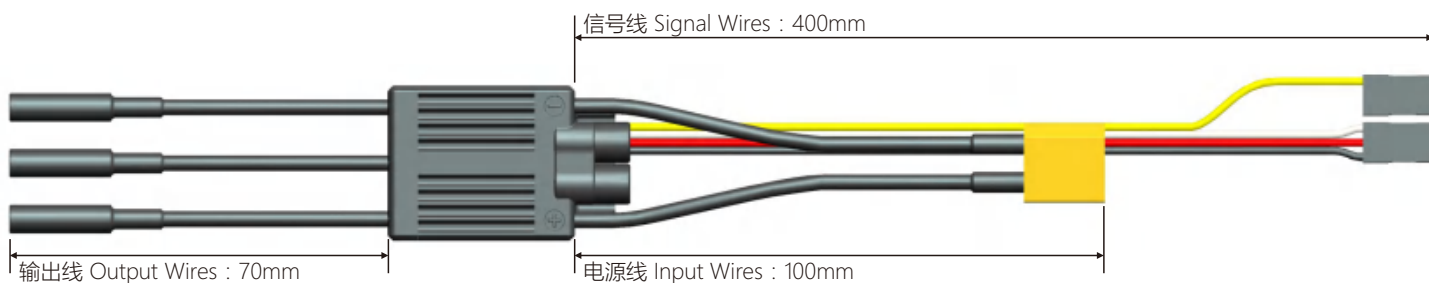
无刷电调  
Brushless ESC  
Chapter 43

D380F-N-1



为了方便安装，我们建议无刷电调的线缆需要的长度。  
To facilitate ESC wire installation, please apply the follows suggested length of the wire.

无刷电调  
Brushless ESC

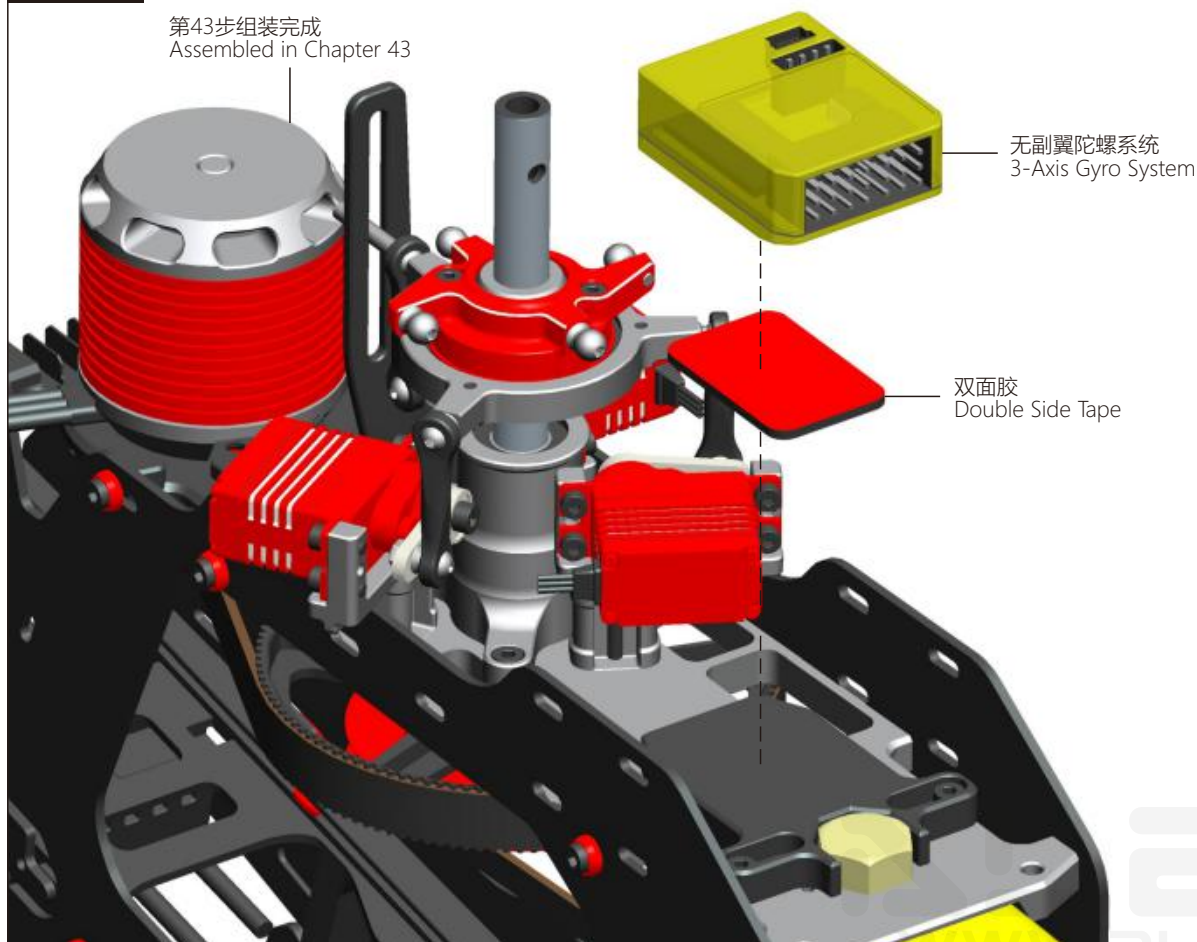


用扎带将无刷电调绑定在机身电池支架上。  
Fixed the ESC on the battery support with Zip ties.

D380F-N-1

第43步组装完成  
Assembled in Chapter 43

无副翼陀螺系统  
3-Axis Gyro System  
Chapter 44

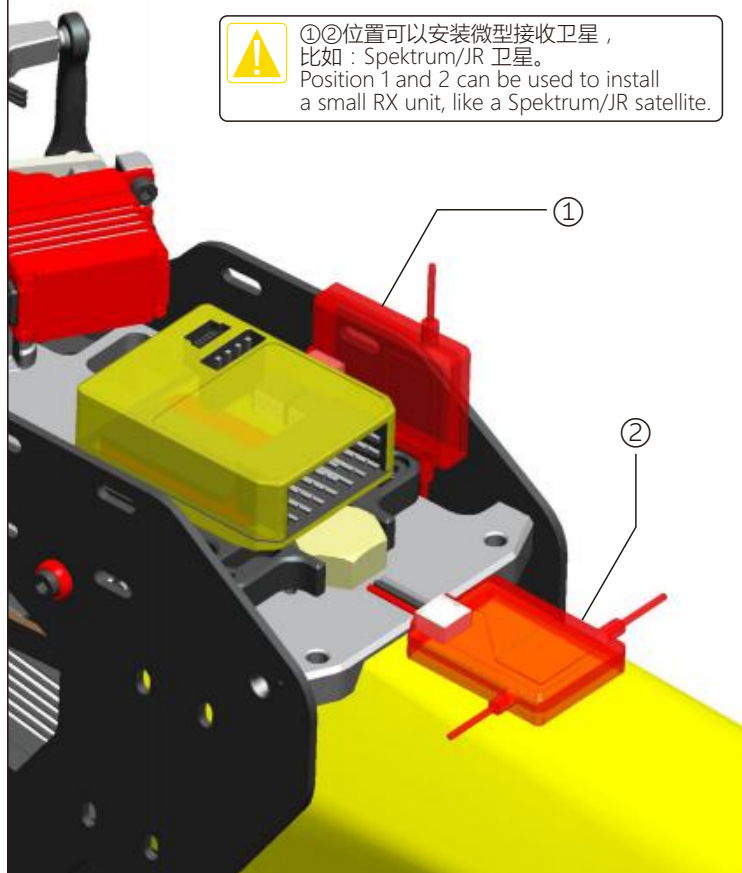




卫星接收  
Satellite



①②位置可以安装微型接收卫星，  
比如：Spektrum/JR 卫星。  
Position 1 and 2 can be used to install  
a small RX unit, like a Spektrum/JR satellite.



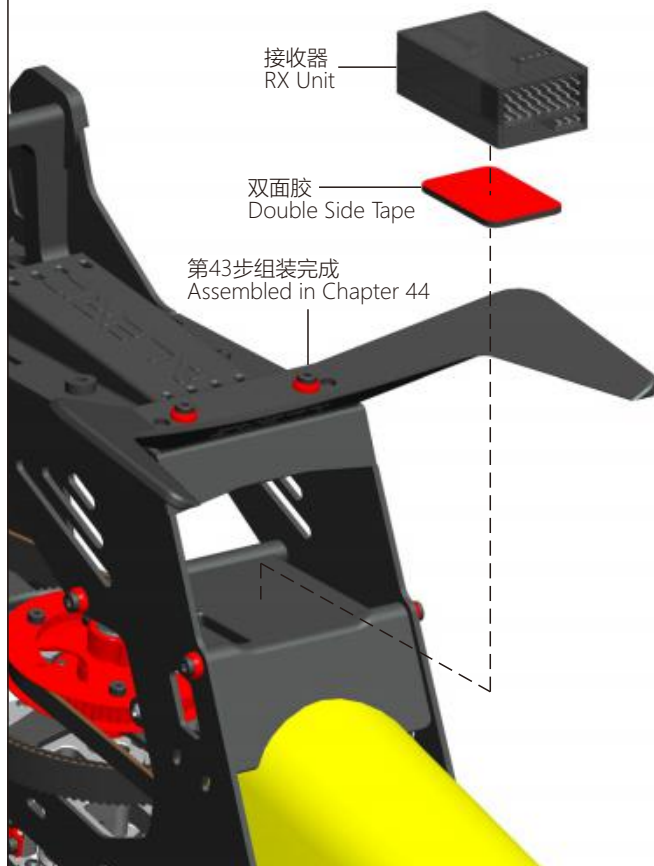
六通道以上直升机模式遥控器及接收器。  
6-channel or more, helicopter RC and RX unit.

接收器  
RX Unit  
Chapter 45

接收器  
RX Unit

双面胶  
Double Side Tape

第43步组装完成  
Assembled in Chapter 44

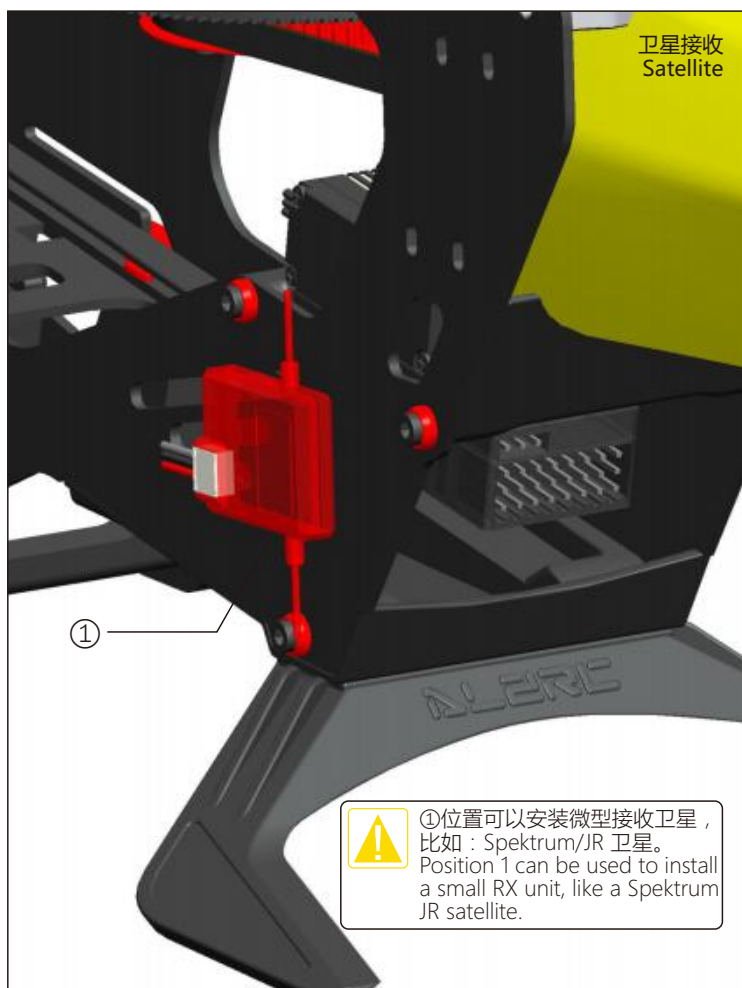


卫星接收  
Satellite

①



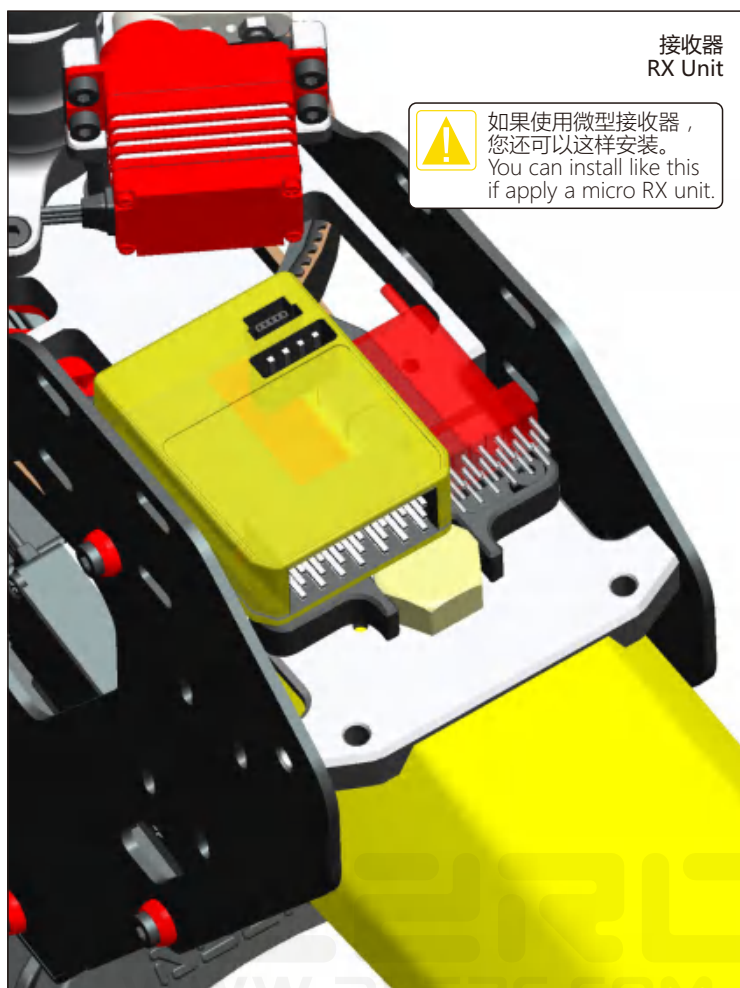
①位置可以安装微型接收卫星，  
比如：Spektrum/JR 卫星。  
Position 1 can be used to install  
a small RX unit, like a Spektrum  
JR satellite.



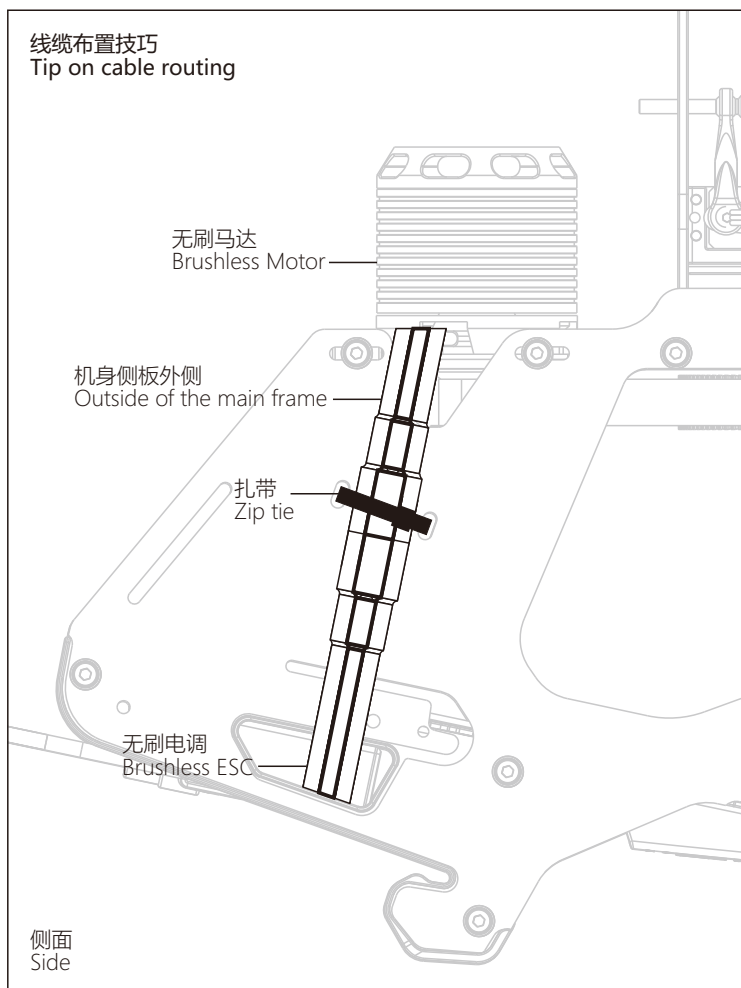
接收器  
RX Unit



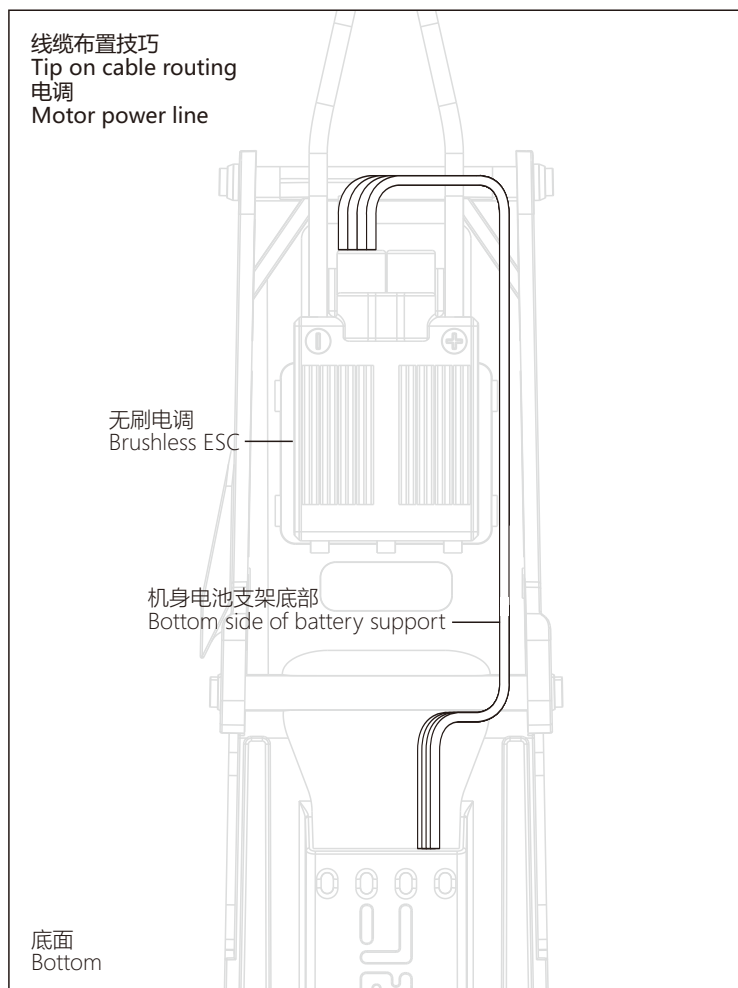
如果使用微型接收器，  
您还可以这样安装。  
You can install like this  
if apply a micro RX unit.



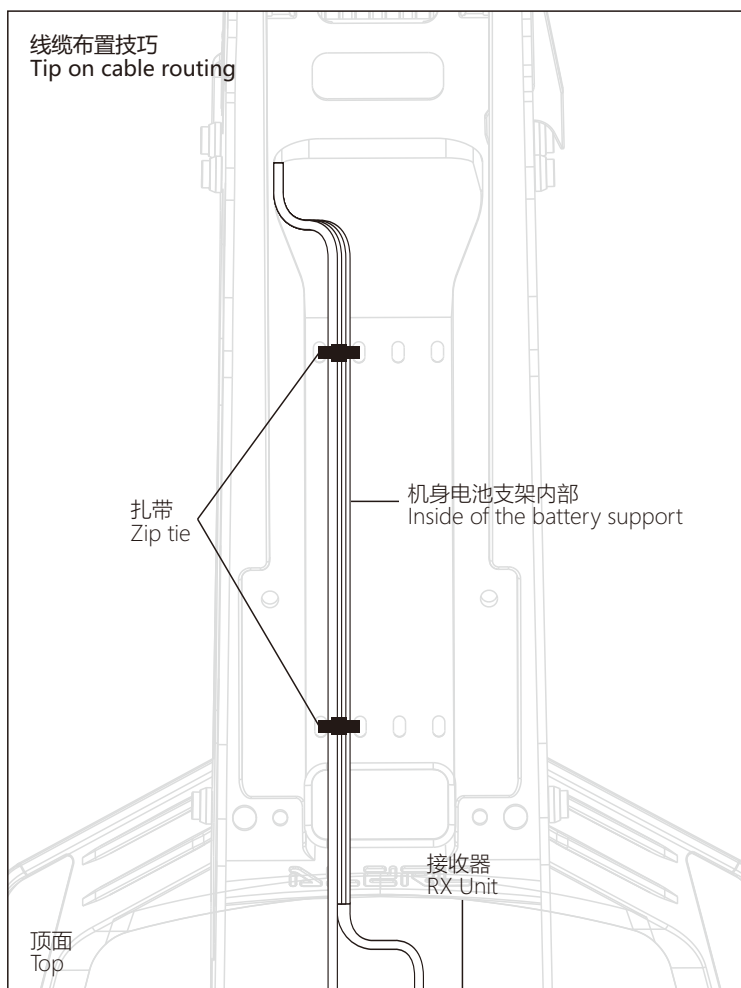
线缆布置技巧  
Tip on cable routing



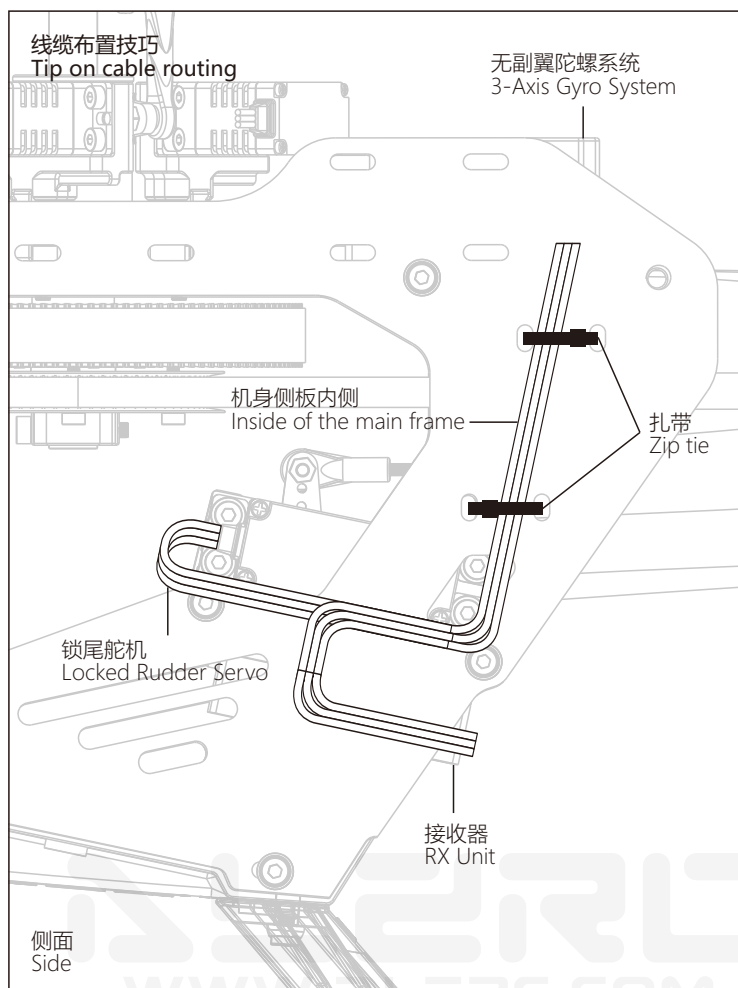
线缆布置技巧  
Tip on cable routing  
电调  
Motor power line



线缆布置技巧  
Tip on cable routing

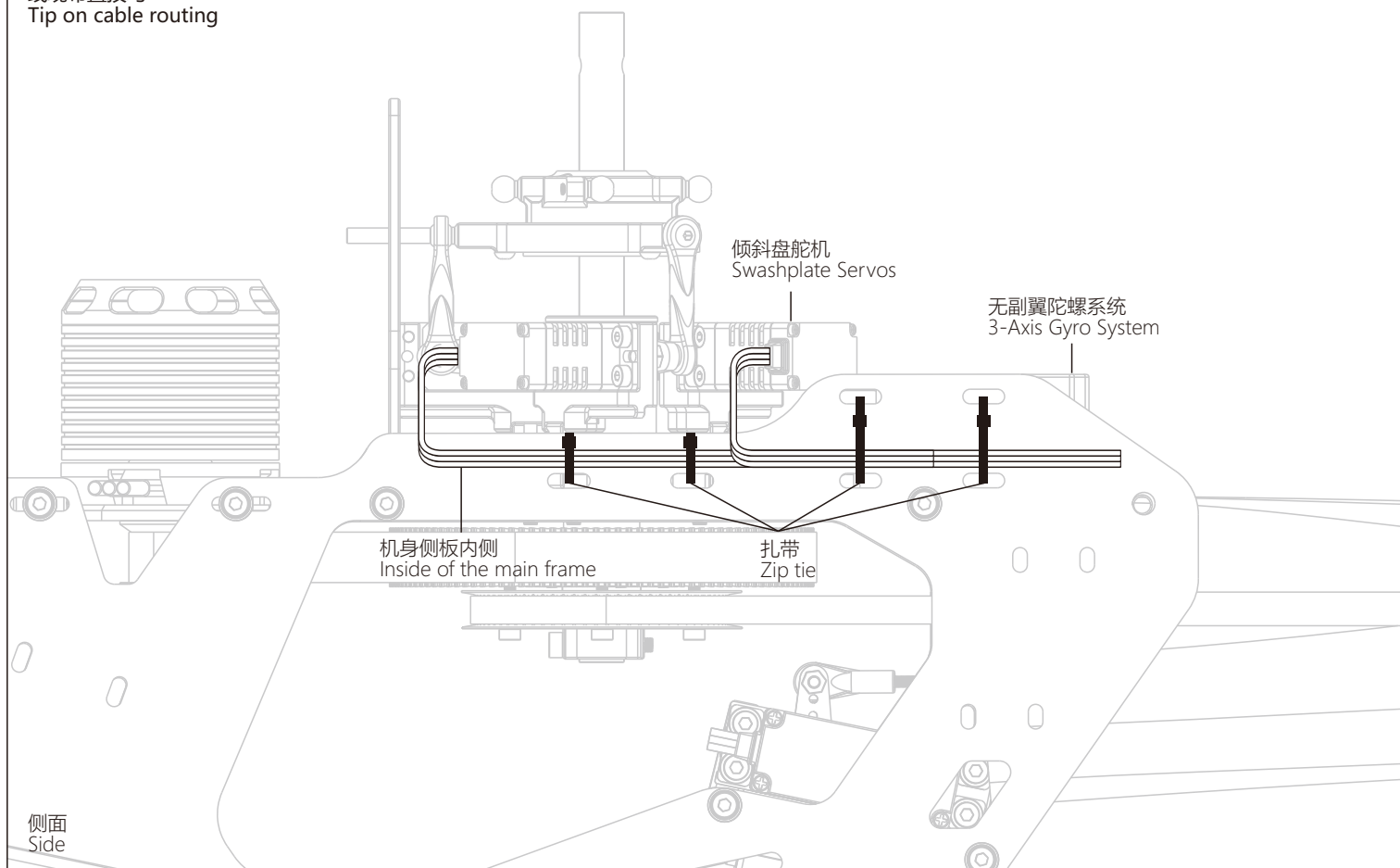


线缆布置技巧  
Tip on cable routing





线缆布置技巧  
Tip on cable routing

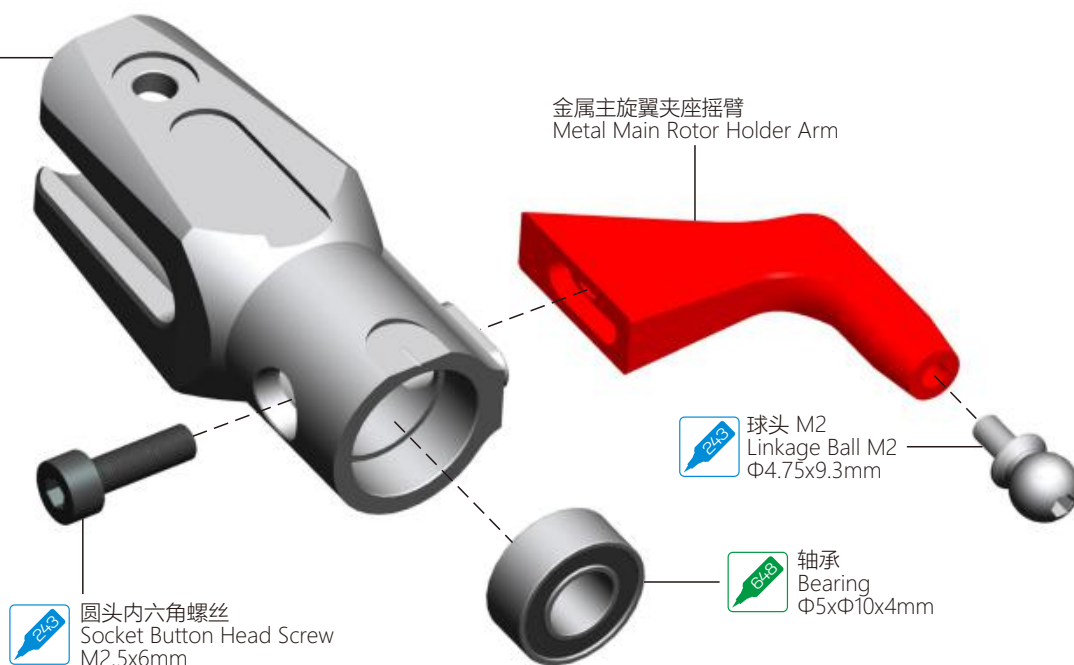


D380F-A-1

金属主旋翼夹座组 x 2  
Metal Main Rotor Holder Assembly x 2  
Chapter 46

金属主旋翼夹座  
Metal Main Rotor  
Holder

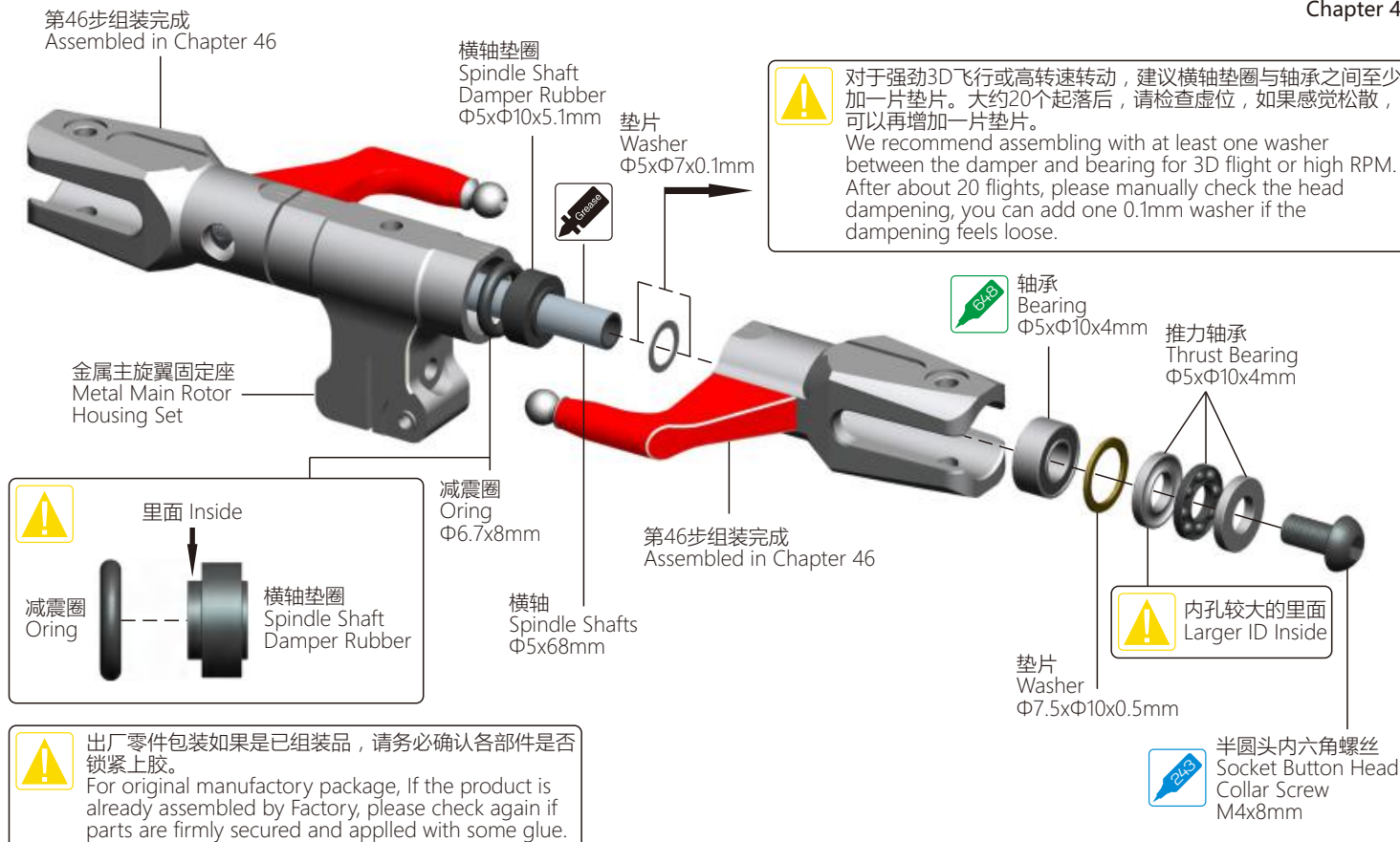
金属主旋翼夹座摇臂  
Metal Main Rotor Holder Arm



出厂零件包装如果是已组装机，请务必确认各部件是否锁紧上胶。  
For original manufactory package, If the product is already assembled by Factory, please check again if parts are firmly secured and applied with some glue.

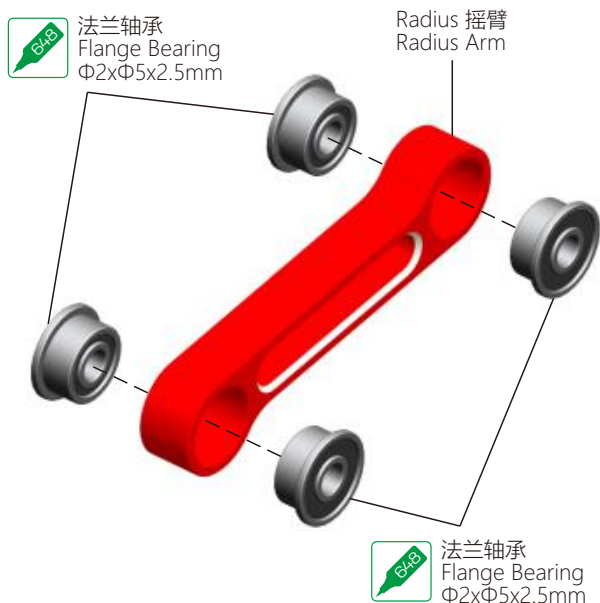
D380F-A-1 D380F-A-2

主旋翼组  
Main Rotor Head Assembly  
Chapter 47



D380F-A-1

Radius 摇臂 x 2  
Radius Arm x 2  
Chapter 48



D380F-A-1

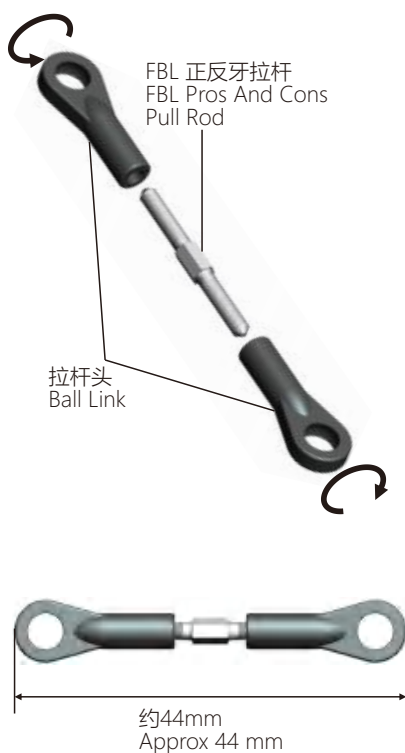
Radius 摇臂组 x 2  
Radius Arm Assembly x 2  
Chapter 49



D380F-A-1 D380F-A-2

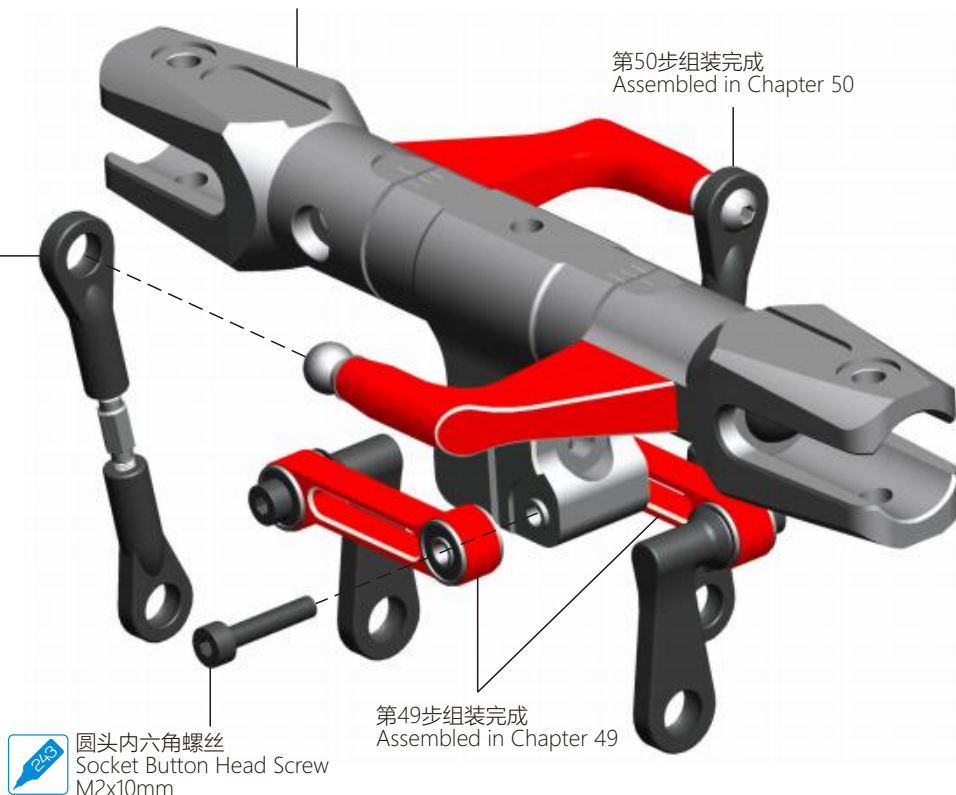
主旋翼组  
Main Rotor Head Assembly  
Chapter 51

FBL 正反牙拉杆组 x 2  
FBL Pros And Cons Pull Rod Set x 2  
Chapter 50



第47步组装完成  
Assembled in Chapter 47

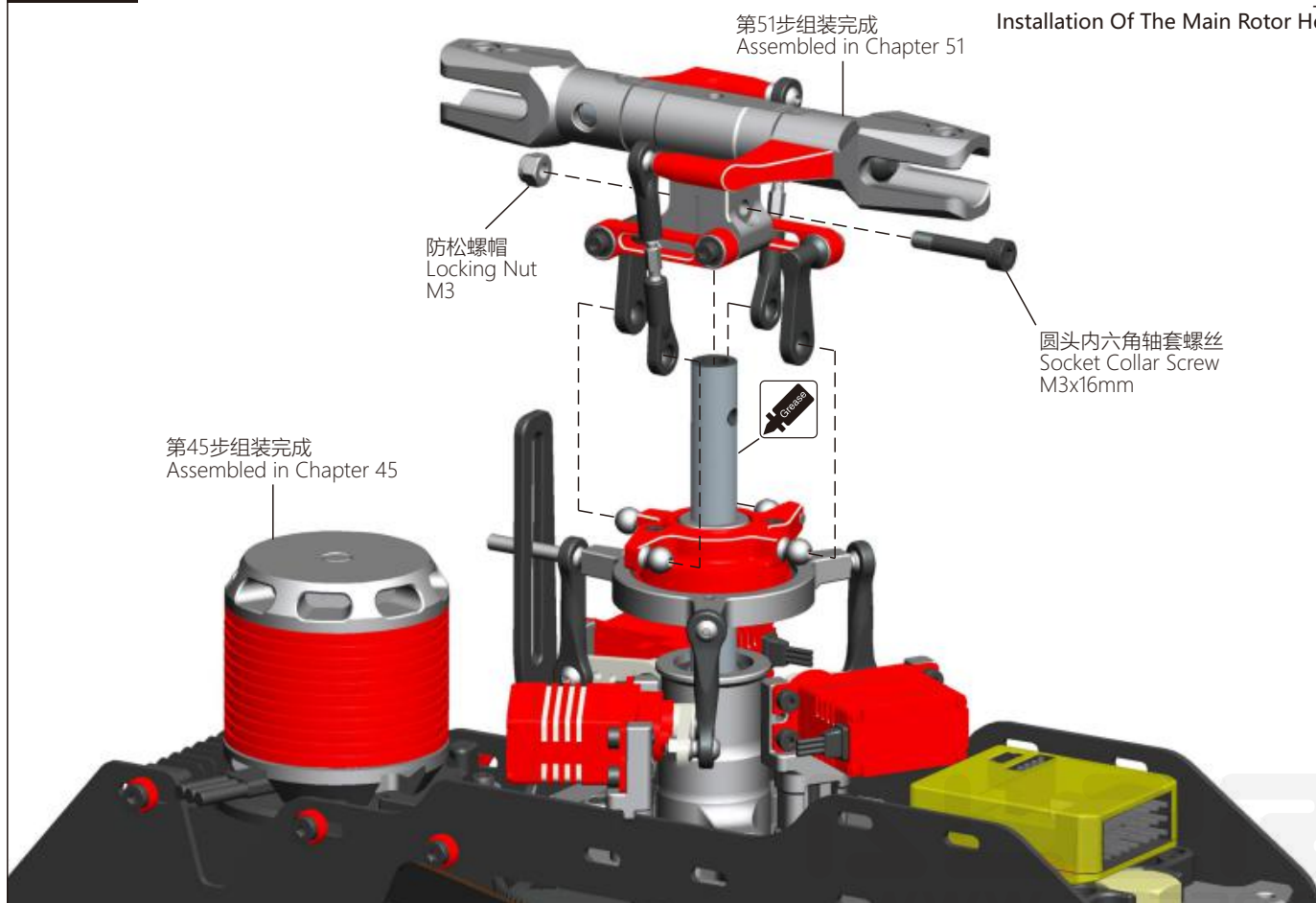
第50步组装完成  
Assembled in Chapter 50



第49步组装完成  
Assembled in Chapter 49

D380F-A-1

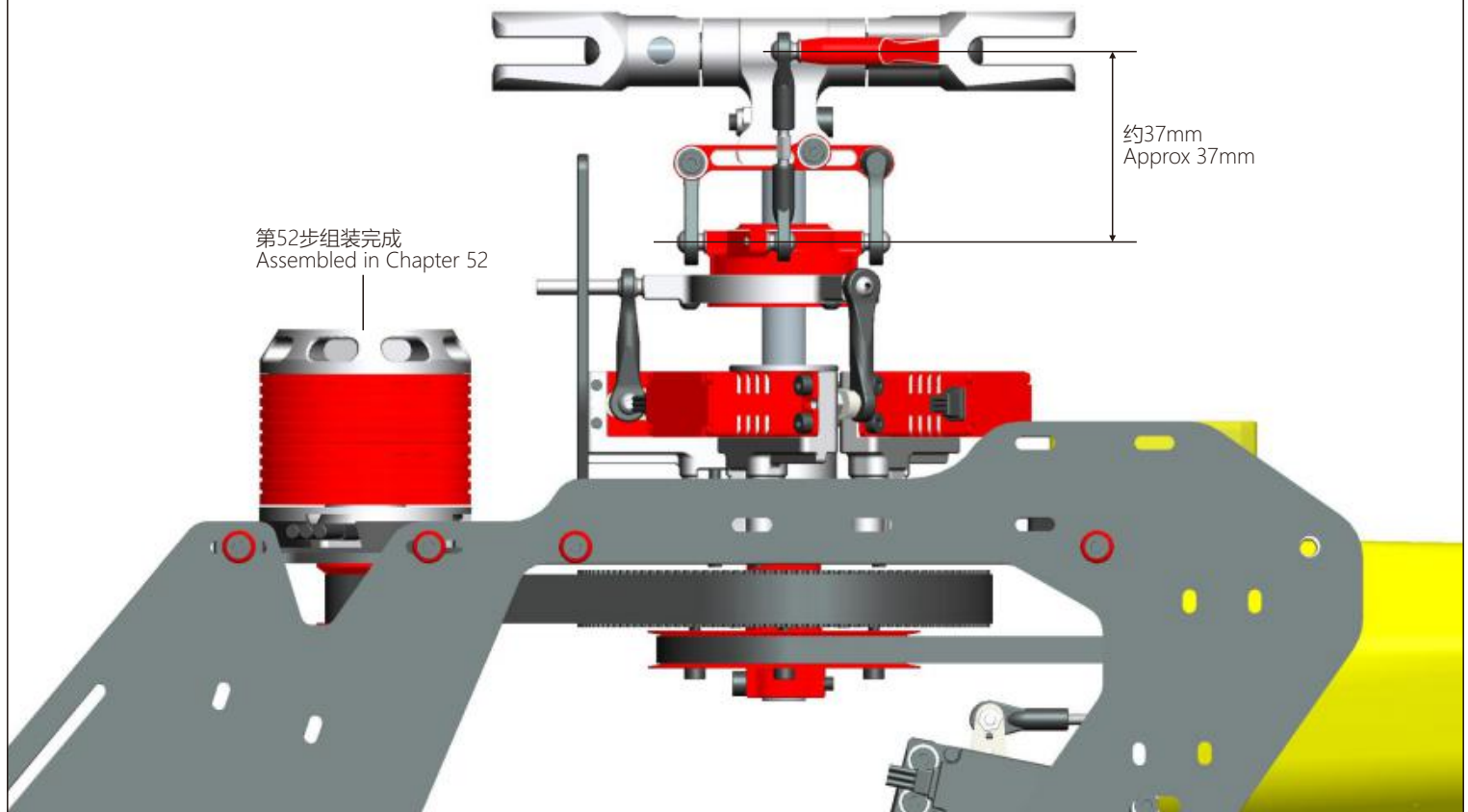
主旋翼组安装  
Installation Of The Main Rotor Head Assembly  
Chapter 52



第45步组装完成  
Assembled in Chapter 45

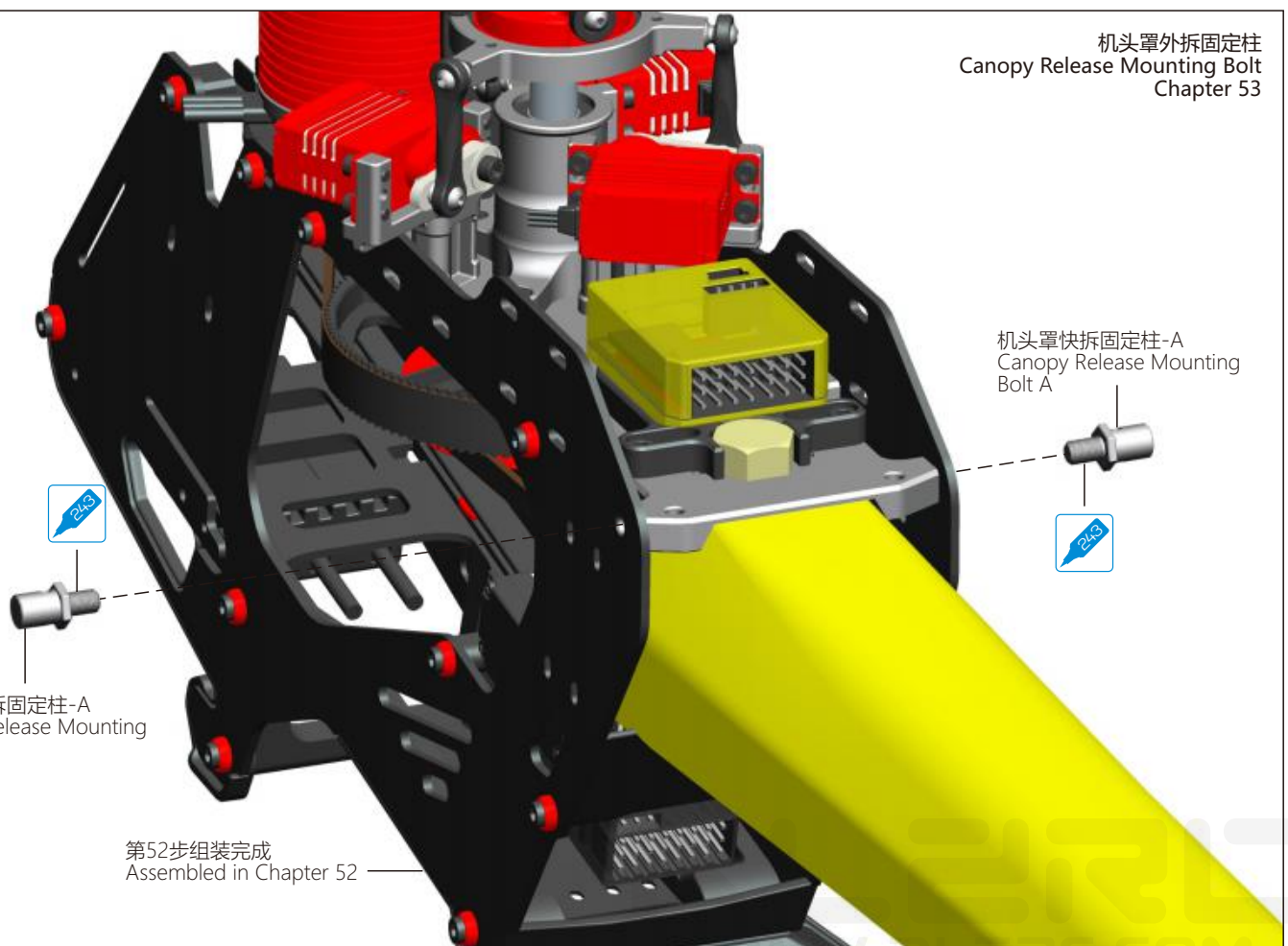
第51步组装完成  
Assembled in Chapter 51

主旋翼组初步设置  
Main Rotor Head Assembly Preliminary Setup



D380F-H-3

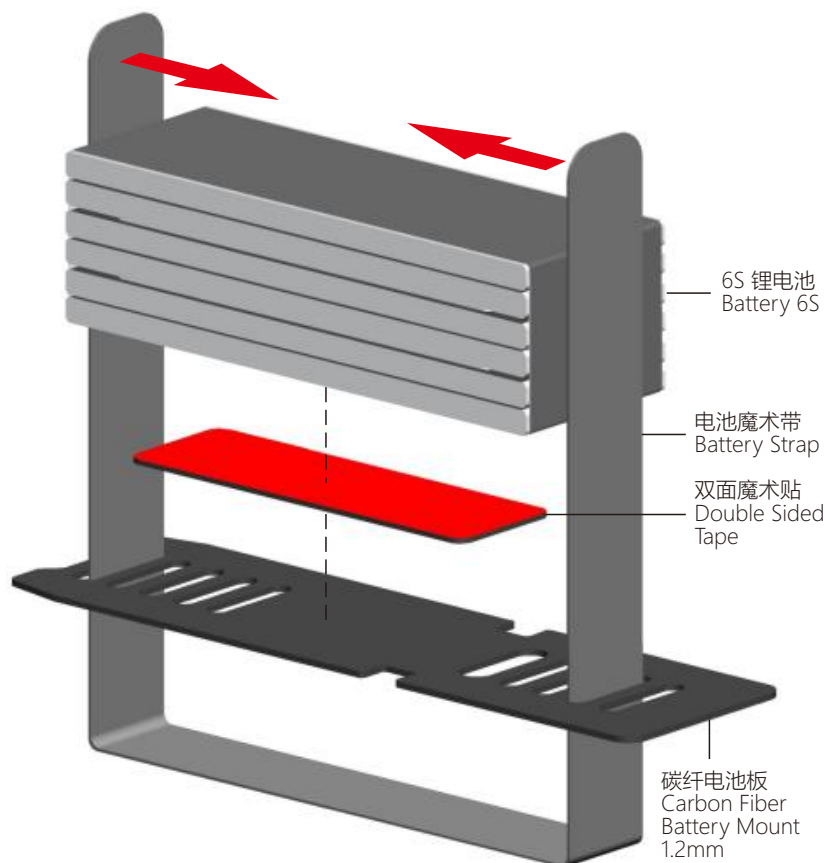
机头罩外拆固定柱  
Canopy Release Mounting Bolt  
Chapter 53





D380F-G-2 | D380F-N-1

碳纤维电池板  
Carbon Fiber Battery Mount  
Chapter 54



Devil 380 FAST 具有电池快拆系统。电池必须安装在碳纤维电池板上。电池在碳纤维电池板上可以前后移动，确认重心后，用双面魔术贴和电池魔术带固定到电池板上。建议使用 1500~2600mAh 6S 锂电池，宽高尺寸限制在 43x43mm 以内。

The Devil 380 Fast has a quick release battery tray system. The battery must be installed onto the battery tray. The battery can be moved forward and backward on the battery tray. Fix the battery with the double side tape and Velcro strap after make sure to find the right position of the battery to optimize the center of gravity. Recommend use 1500~2600 mAh 6S lithium battery with the size within 43x43mm.

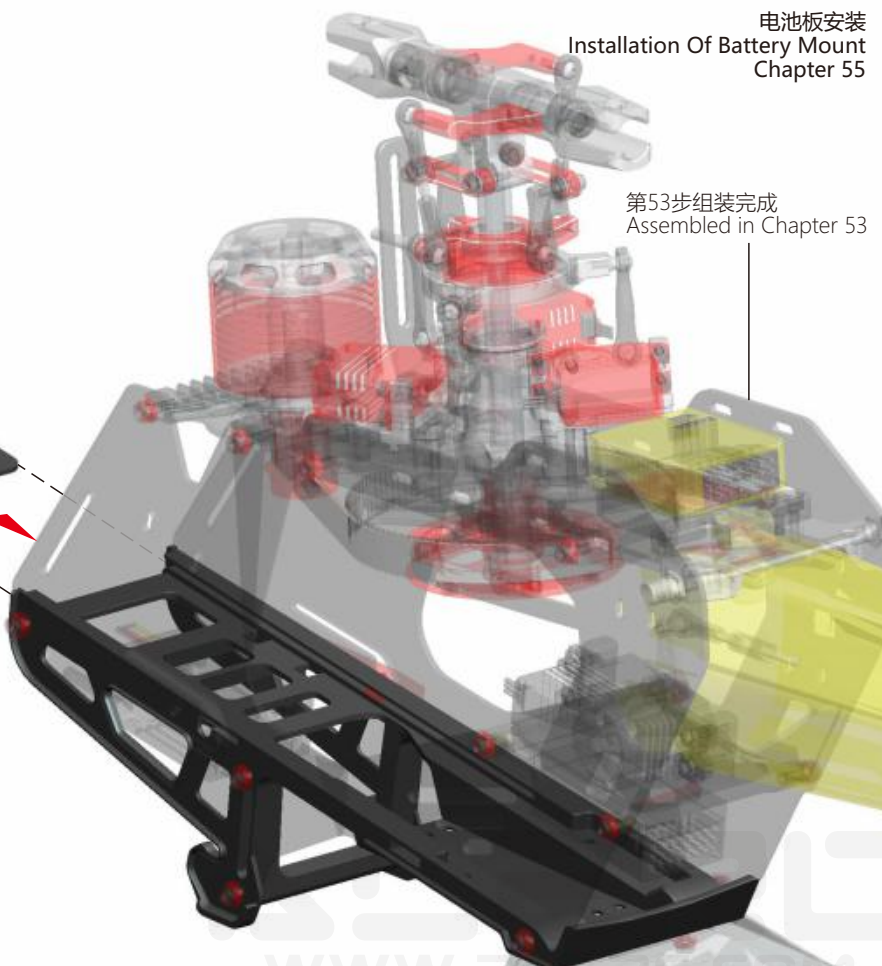
电池板安装  
Installation Of Battery Mount  
Chapter 55

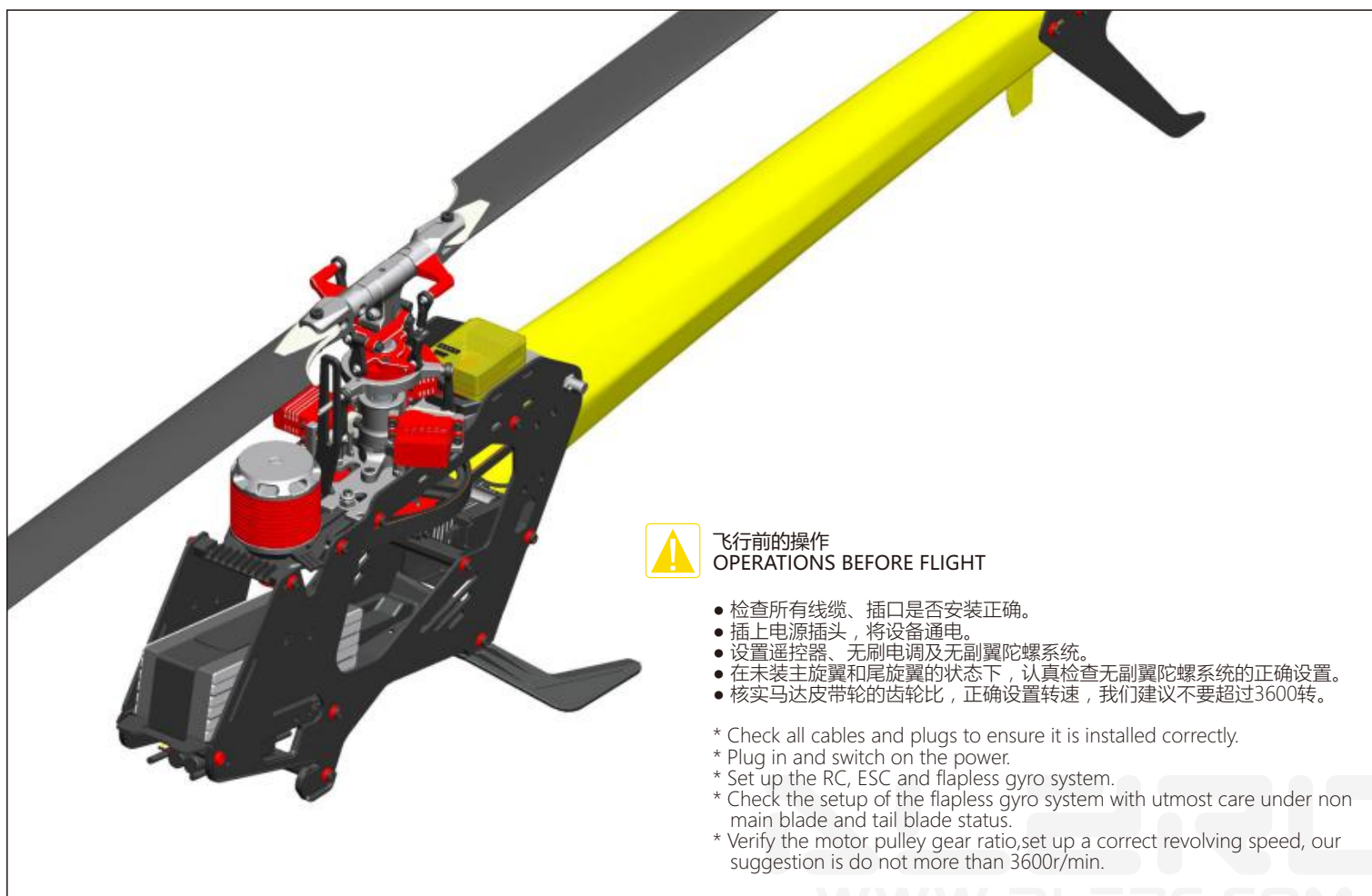
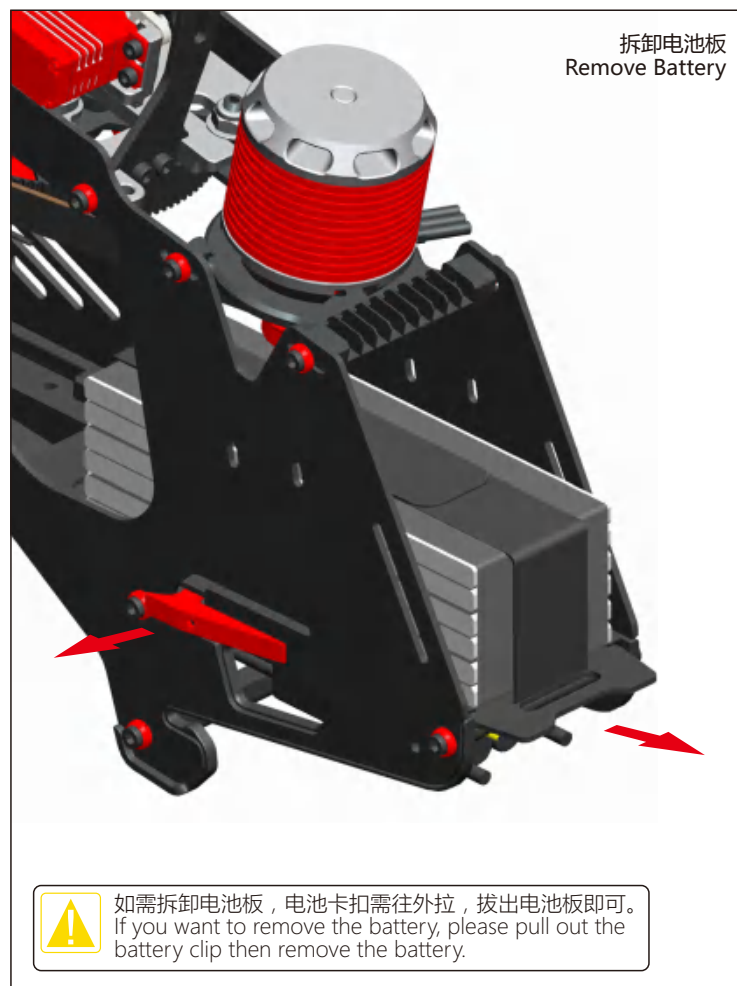
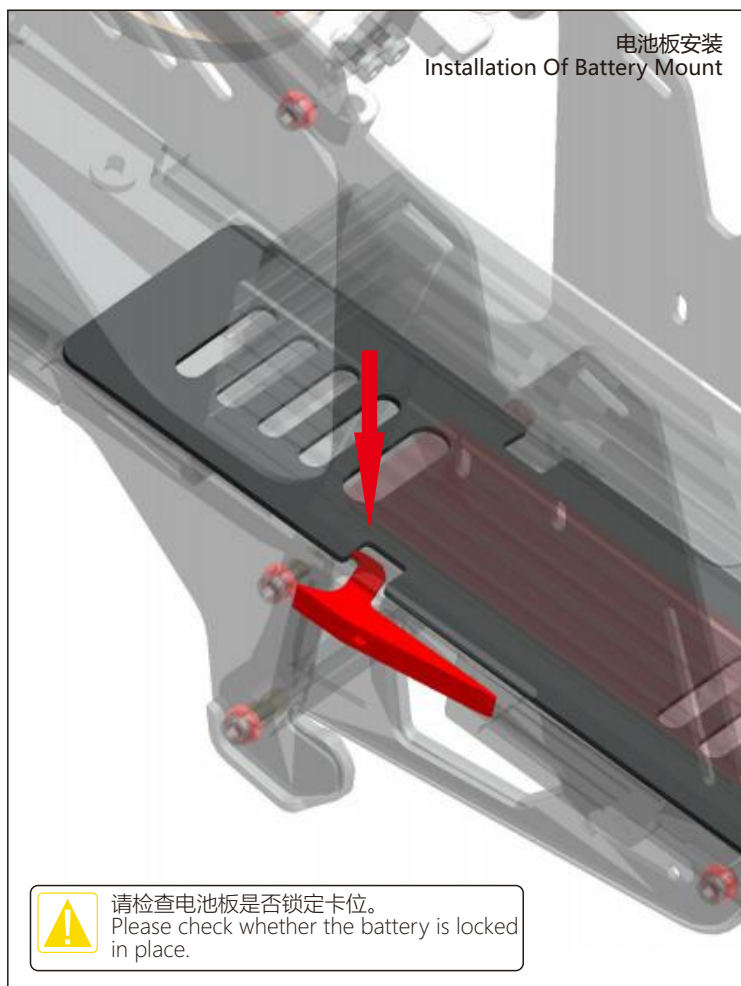
第54步组装完成  
Assembled in Chapter 54

第53步组装完成  
Assembled in Chapter 53



请将电池板插进机身电池支架的卡槽里。  
Please insert the battery into the battery mount.





D380F-A-1 D380F-O-1



请按顺时针方向正确安装主旋翼  
Please install the main blades correctly by  
clockwise direction.

圆头内六角轴套螺丝  
Socket Collar Screw  
M3x18mm

碳纤维主旋翼  
Carbon Fiber Blades  
Chapter 56

碳纤维主旋翼  
Carbon Fiber Blades  
380mm

碳纤维主旋翼  
Carbon Fiber Blades  
380mm

防松螺帽  
Locking Nut  
M3

防松螺帽  
Locking Nut  
M3

第55步组装完成  
Assembled in Chapter 55

D380F-L-1 D380F-L-2

尾旋翼  
Tail Blade  
Chapter 57

铜套  
Collar  
Φ2.5xΦ3x5mm

尾旋翼  
Tail Blade

防松螺帽  
Locking Nut  
M2.5

第56步组装完成  
Assembled in Chapter 56

圆头内六角螺丝  
Socket Button Head Screw  
M2.5x12mm

防松螺帽  
Locking Nut  
M2.5

铜套  
Collar  
Φ2.5xΦ3x5mm

尾旋翼  
Tail Blade

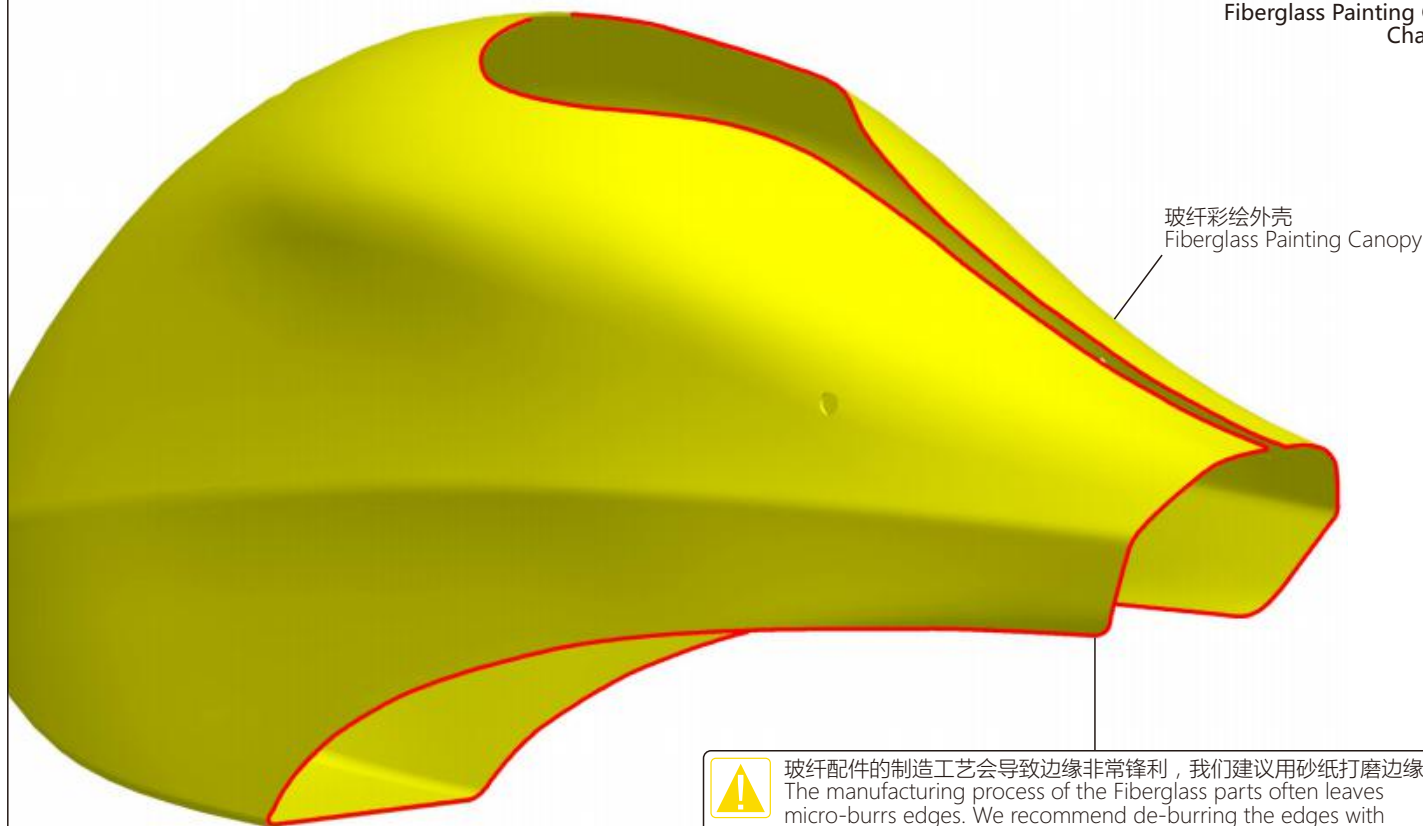


请按逆时针方向正确安装尾旋翼。  
Please install the tail blades correctly by  
anticlockwise direction.



D380F-P-1

玻纤彩绘机头罩  
Fiberglass Painting Canopy  
Chapter 58



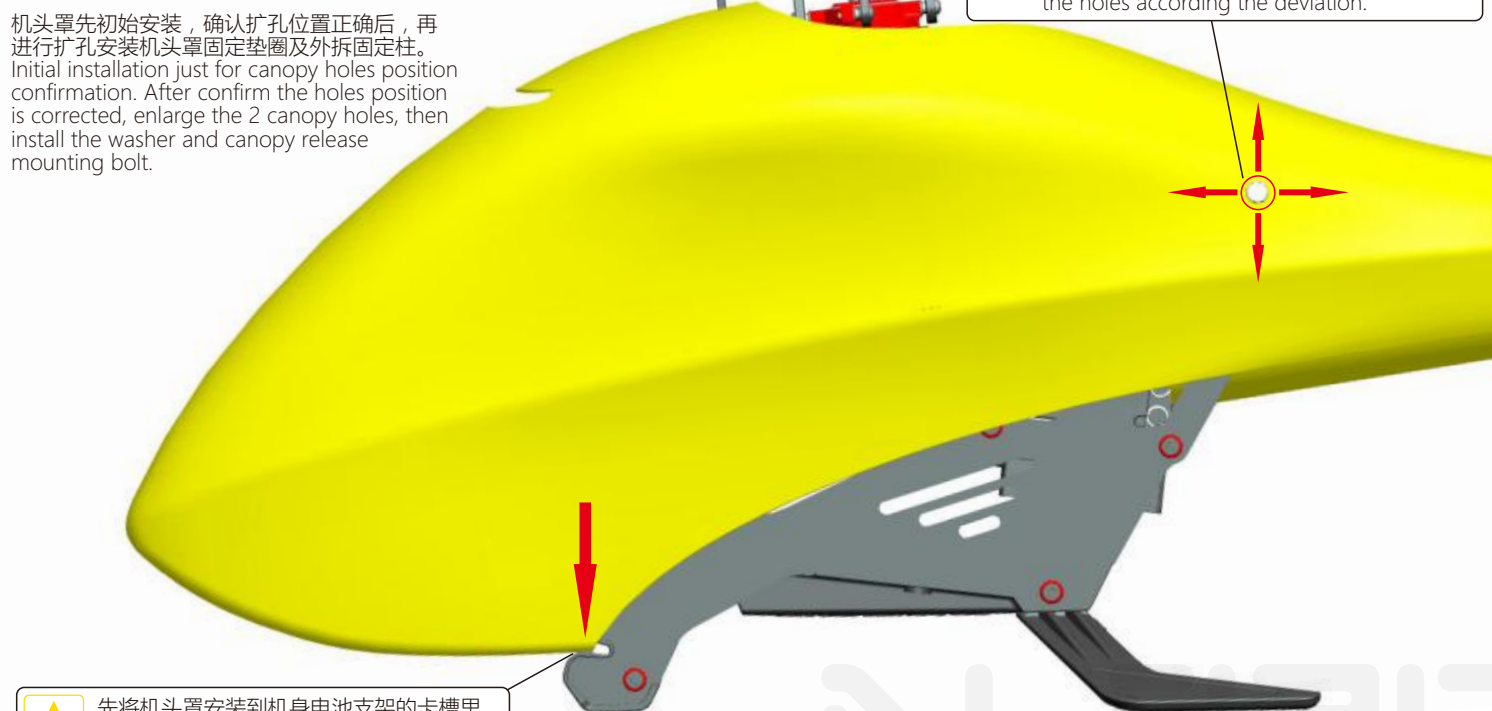
玻纤配件的制造工艺会导致边缘非常锋利，我们建议用砂纸打磨边缘。  
The manufacturing process of the Fiberglass parts often leaves micro-burrs edges. We recommend de-burring the edges with sand paper.

#### 玻纤彩绘机头罩的初始安装 Initial Installation Of Painting Fiberglass Canopy

机头罩先初始安装，确认扩孔位置正确后，再进行扩孔安装机头罩固定垫圈及外拆固定柱。  
Initial installation just for canopy holes position confirmation. After confirm the holes position is corrected, enlarge the 2 canopy holes, then install the washer and canopy release mounting bolt.



如果固定孔位正确，将固定孔扩大至8-10mm。  
如果有些微偏差，扩孔时则按照偏差定位扩孔。  
If the canopy holes was on the correct position, please enlarge the hole's diameter to 8-10mm.  
If there is a slight deviation, please enlarge the holes according the deviation.

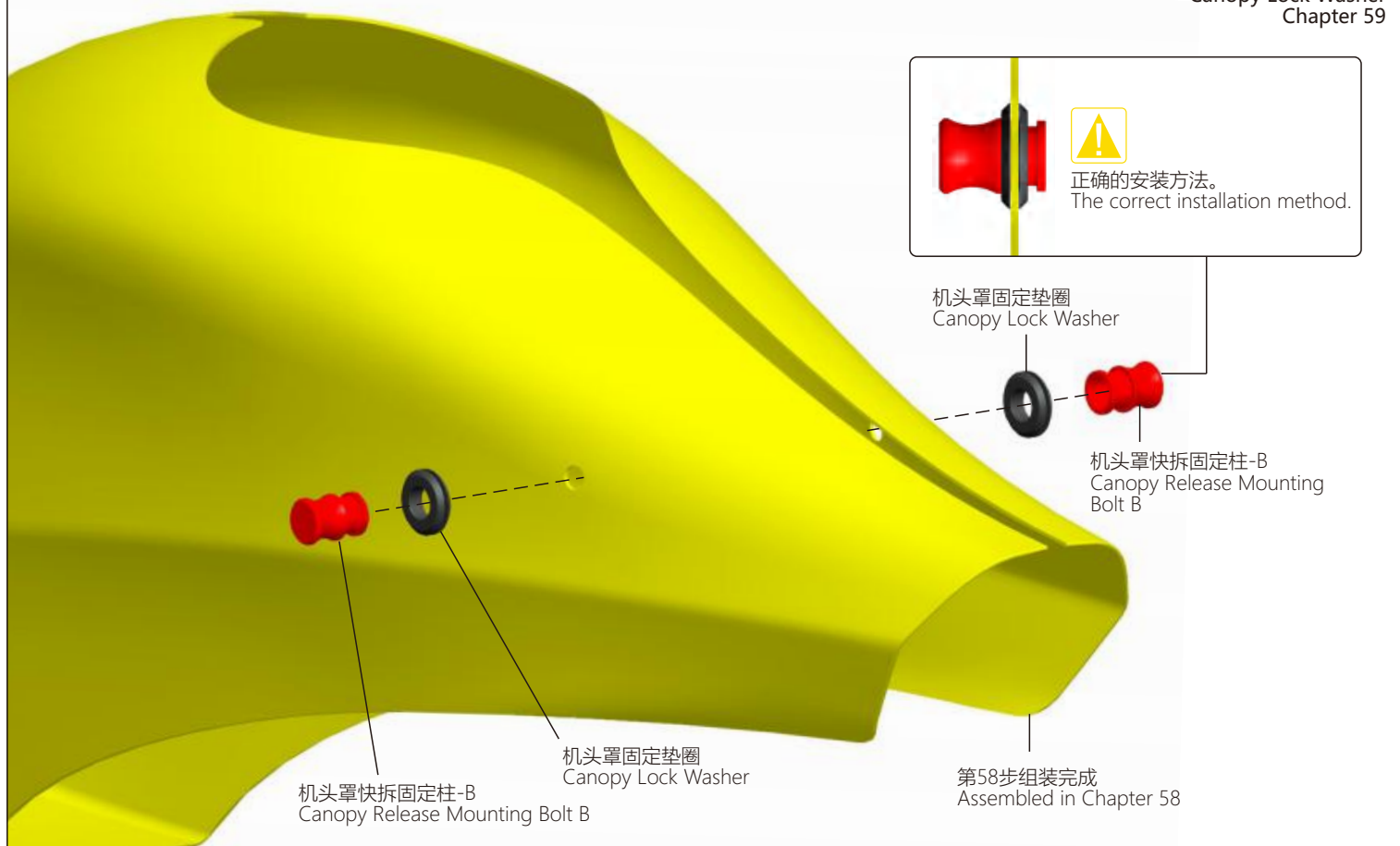


先将机头罩安装到机身电池支架的卡槽里。  
Put the canopy into battery support's slot at first.



D380F-H-3

机头罩固定垫圈  
Canopy Lock Washer  
Chapter 59



*FAST*  
**Devil 380**  
RC HELICOPTERS

**AL2RC**  
[WWW.AL2RC.COM](http://WWW.AL2RC.COM)