

INFUSION 700N Platinum

***** Instruction Manual



Nigel Brown
DESIGNED BY
NIGEL BROWN



ENDLESS PURSUIT OF PERFECTION

Welcome to the TSA family and congratulations on your new purchase. Please read this instruction manual carefully to ensure you understand every step of the build process. Most of all happy building and we look forward to seeing you around the world at many events.

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- ★ 1~2. Introduction
- ★ 3. Safety instructions prior to assembly
- ★ 4~5. Tools required for assembly
- ★ 6~31. Parts assembly
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- ★ 33~34. Operation mode
- ★ 35. Flying notes
- ★ 36~42. Parts package list



***** **INFUSION 7000**
Platinum



While in flight

- 1: Beginners should obtain safety and technical guidance from an experienced individual, since learning alone to operate this machine is potentially dangerous.
- 2: Choose a safe flying area that is free of obstruction and people.
- 3: Do not fly in a potentially dangerous environment.
- 4: Do not operate while standing on tilted ground to avoid loss of balance.
- 5: Do not insert hands and objects in rotating parts.
- 6: Keep a safe distance from the unit and be sure to operate the unit within the limits of your ability. Failure to operate this unit properly may result in serious harm such as physical injury, damages to property, and even death.
- 7: Enjoy flying while observing safety rules and regulations. Fatigue brought upon by continuous operation may result in impaired judgment that may lead to accidents.
- 8: Inquiries regarding repairs and services should only be made to TSA authorized dealers or TSA technical support department. Individual lacking proper training or knowledge necessary for repair may not only impair the unit's performance, but also increases the risk of accidents or injury. The engine must be turned off before performing any repairs or adjustments. Repair damaged parts before storage using only TSA manufactured parts. When storing or transporting the units, secure the unit carefully to avoid fuel loss, damage, or injury.



Fuel for engine

- 1: Only use glow fuel for glow model engines.
Glow fuel is highly flammable and should be handled with care.
- 2: Before refueling, the engine should be turned off.
- 3: Do not refuel near a naked flame. Do not smoke while refueling. Avoid spillage and be sure to always completely wipe down any spilled fuel. Since fuel vapor and exhausted gas from the unit's operation are hazardous to health, this product is only intended to be used in an outdoor environment.
- 4: The fuel is hazardous. Do not consume and avoid getting fuel in the eyes. If an accident or swallowed occurs, obtain professional medical advice/treatment immediately.
- 5: Fasten the cap on the fuel bottle tightly and store in a cool shaded place. Keep the fuel out of reach of children. The ideal storage temperature should be around 10°C.



Pre-flight inspection

- 1: Check that tools used for assembly and maintenance has been put away.
- 2: Check that there are no loose screws and parts.
- 3: Check that the rotor blades are not damaged or cracked, especially in the vicinity of the blade holder.
- 4: Check the condition of the glow plugs and fuel, old glow plugs and fuel may not only cause difficulties to start the engine, but also the possibility of stalling and crashing in mid-flight.
- 5: Check that electronic equipment and servos operates smoothly.
- 6: Check that the position of the transmitter's throttle stick and engine carburetor are at their low position.
- 7: Check that the receiver receives signals properly.
- 8: Check and ensure that all necessary parts are sufficiently lubricated.
- 9: Check radio is assigned to the correct mode.



In-flight safety inspection

- 1: When starting the engine, be sure to hold the rotor head firmly so the rotor head does not rotate.
- 2: Since the engine and muffler is heated from the operation and remains extremely hot immediately after startup or shutdown, take extra precaution to prevent burns.
- 3: When taking off, the unit should be positioned at least 10 meters away from the operator. Be sure to check for people and dangerous object in the surrounding area before takeoff.
- 4: Adjust the blade tracking right before takeoff.
- 5: Land the unit immediately if abnormal noise or vibration is observed. Then stop the engine and perform complete check for cause of problem.
- 6: Be responsible when operating this unit, as reckless or improper behavior may cause accidents or injury to self or others. Observe all safety rules and regulation while enjoy operating this unit safely and responsibly.



After-flight safety inspection

- 1: Immediately inspect parts after every flight. Be sure to replace, retighten any missing or loose screws and replace any damaged parts.
- 2: Wipe down grease, oil, dirt and dust with a clean cloth.
- 3: If the unit is to be stored out of operation for a long period of time, completely drain remaining fuel from the fuel tank and carburetor.
- 4: Store the unit in an area free of direct sunlight, or other areas that may result in rise in temperature (e.g., car). Instead, store in a shaded and ventilated area, and keep out of reach of children.




Warning

- 1: To reduce the risk of accidents and injuries, do not use parts other than those found in this manual or TSA catalog. TSA will not be responsible for problems caused by using non-genuine TSA parts.
- 2: If the rotor blades should strike the ground during flight, there may be tiny cracks or loosening in various places even though damages may not be clearly visible to naked eyes. If damage to the rotor blade is not fixed before flight, cracks and loosening may increase during flight that would lead to severe consequences. The rotor head may disassemble from the blade holder, which spins at a speed of 1200/2000 rpm, and may fly off from the blade holder. If in doubt regarding the condition of any part, replace the part immediately using only genuine TSA parts.
- 3: TSA will not be held responsible for damages or crash as a result from any loose screws and/or improper maintenance.
- 4: Radio wave transmitting distance is approximately one kilometer or more, therefore operator must check no other operators in the surrounding vicinity are using the same radio frequency.
- 5: This remote control model is not a toy, rather a precise machine. Proper assembly and adjustments must be made in order to avoid the risk of injuries or accidents. Operator should operate this unit safely and properly. Failure to operate this unit properly may result in serious harm such as physical injury, damages to properties, and even death. The operator is responsible for all damages, because TSA cannot control how the unit was assembled and used.
- 6: Recommended 14+ years .



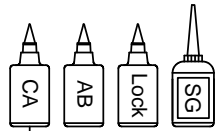
Caution

Please abide by regulations in your county while enjoying the pleasure brought to you by the  700N series.



Preassembly precautions

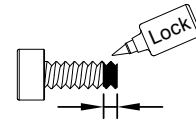
1. Before assembly, read the instruction manual thoroughly and familiarize yourself with the unit's structure and assembly procedures. Failure to assemble the unit properly may not only impair performance but also increases the risk of danger.
2. Before assembly, check description and quantity of parts. In the event of missing or defective items, contact retailer of original purchase where authorized distributor or TSA support department can be located.



Self-furnished

CA=Cynoacrylate adhesive
 AB=5 minute epoxy / A=3 : B=1
 Lock=Thread lock
 SG=Silicone grease

Diagram for applying thread lock



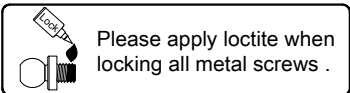
Glue width :1.5mm

3. Apply lubricant and retainers on locations as indicated .
4. In the instruction manual, refer to the left hand column to check the type and quantity of parts.

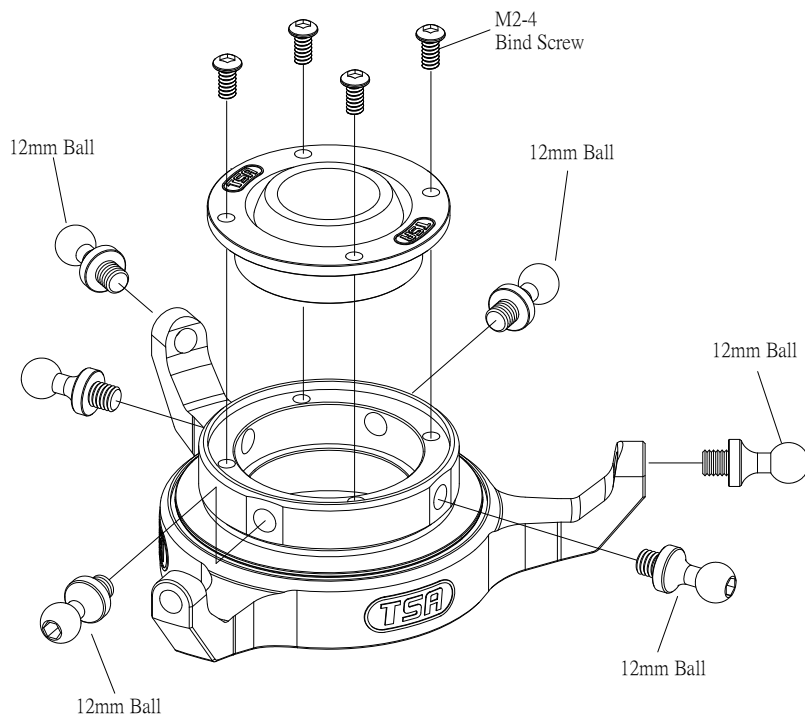
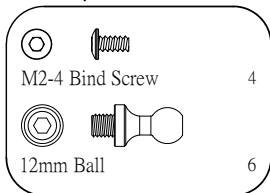
Swashplate Assembly

T-016-05

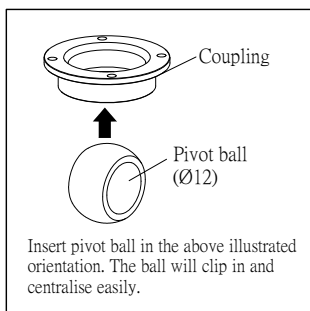
Parts order number



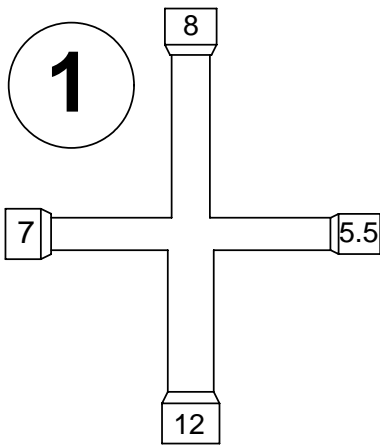
Part name and quantity in this diagram is to 1:1 ratio



Assembly Tip



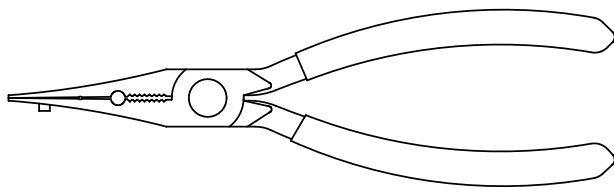
TOOLS REQUIRED FOR ASSEMBLY



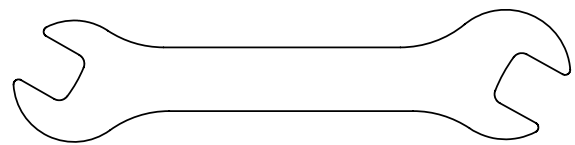
Cross wrench
(5.5~12)



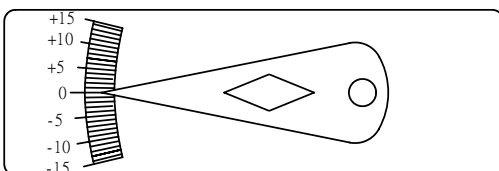
Metric ruler
(Over 30cm)



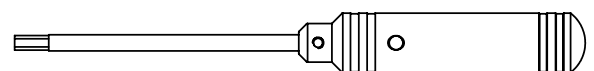
Universal ball link plier



Spanner
(6mm/8mm/12mm/21mm)



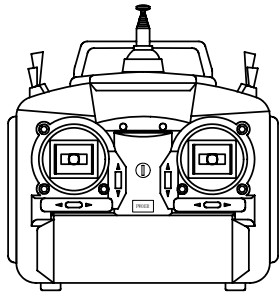
Pitch gauge



(Allen head) Screw drivers
(1.5mm/2mm/2.5mm/3mm/3.5mm/
4mm/5mm)

EQUIPMENT REQUIRED FOR OPERATION

1

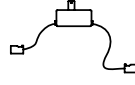


Transmitter(7 channels)

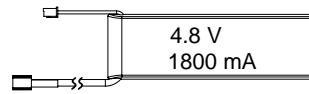
Receiver



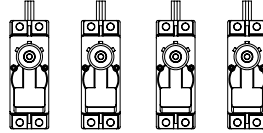
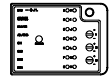
On/off switch



Receiver battery



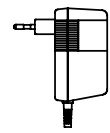
3 Axis gyro system



Servos



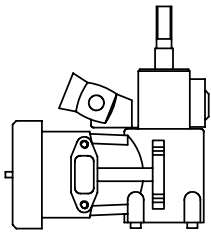
Rudder servo



Charger

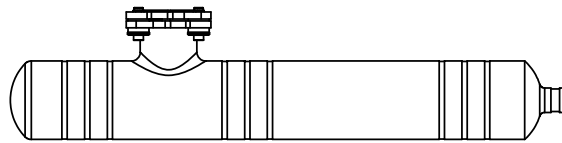
2

90 size helicopter engine



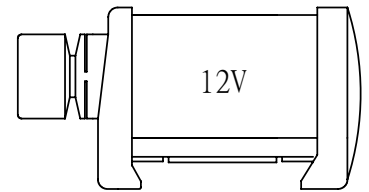
3

90 size helicopter muffler



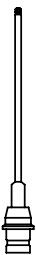
4

Starter



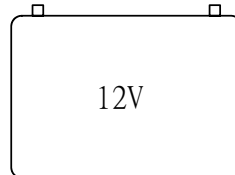
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Starter shaft



6

12V Battery



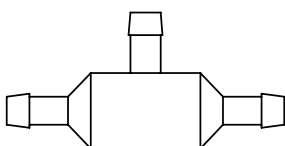
7

Remote glow plug adapter



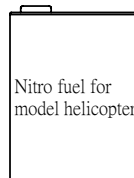
8

Fuel filter



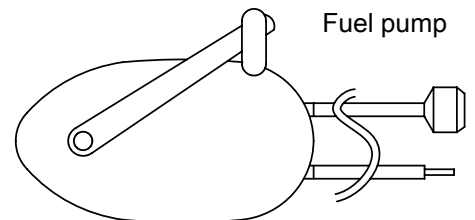
9

Nitro fuel for model helicopter (10~30%)



10

Fuel pump



1

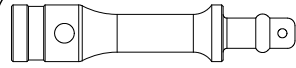
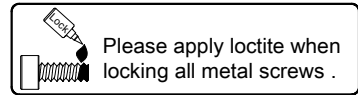
Main Frame Assembly-1

T-001-15

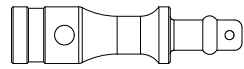
T-007-05

T-003-00

T-005-01



37.5mm Canopy rear support 1



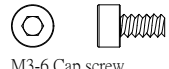
30.5mm Canopy front support 1



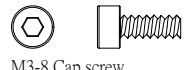
M2-4 Bind Screw 2



M3-6 Bind screw 5



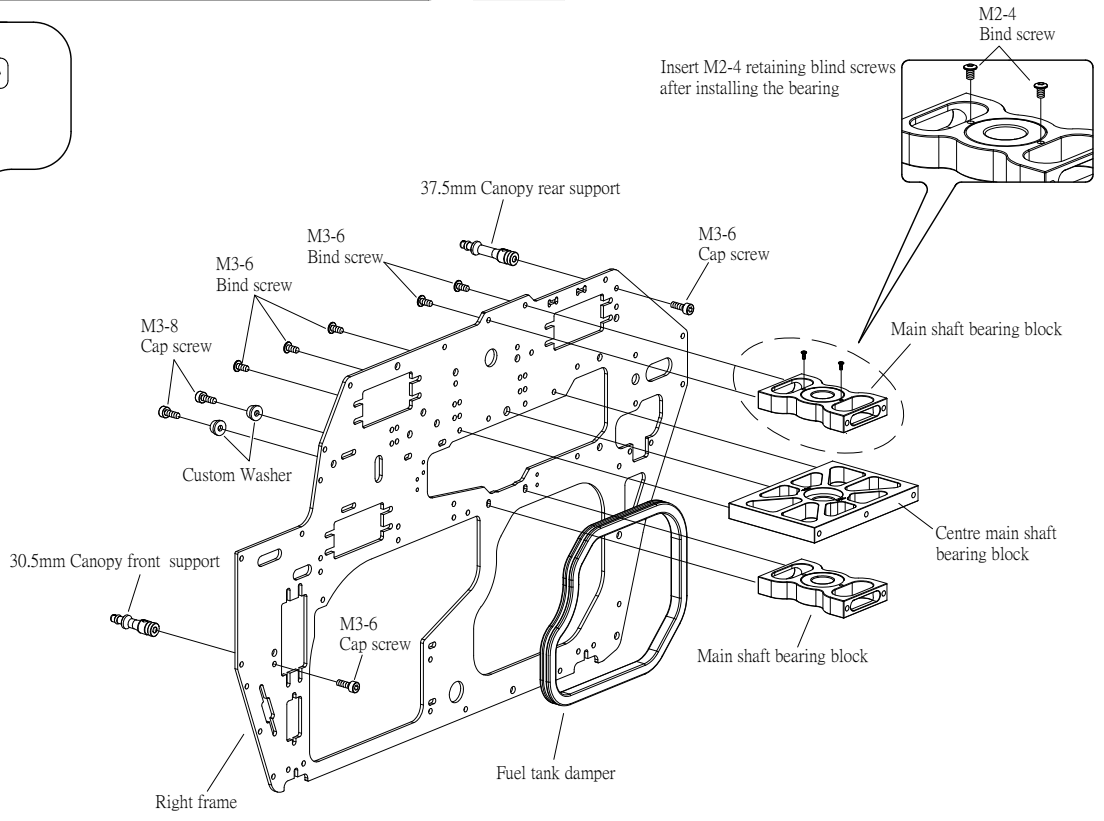
M3-6 Cap screw 2



M3-8 Cap screw 2



Custom Washer 2



2

Main Frame Assembly-2

T-001-15

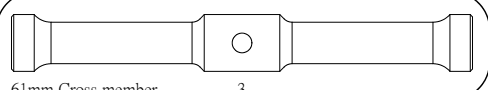
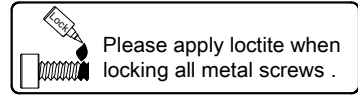
T-009-01

T-002-05

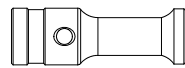
T-022-02

T-005-01

T-031-00



61mm Cross member 3



23mm Servo support 2



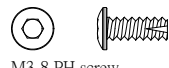
M3-6 Cap screw 2



M3-6 Bind screw 2



M3-10 Bind screw 1



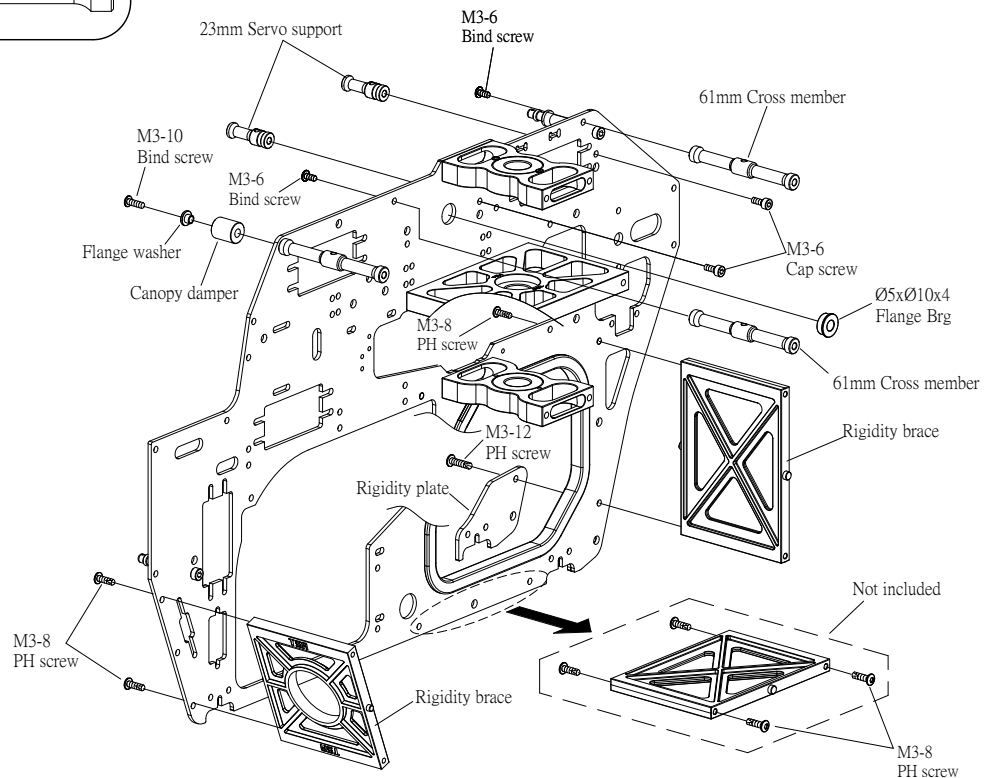
M3-8 PH screw 3



M3-12 PH screw 1



Ø5xØ10x4 Flange Brg 1



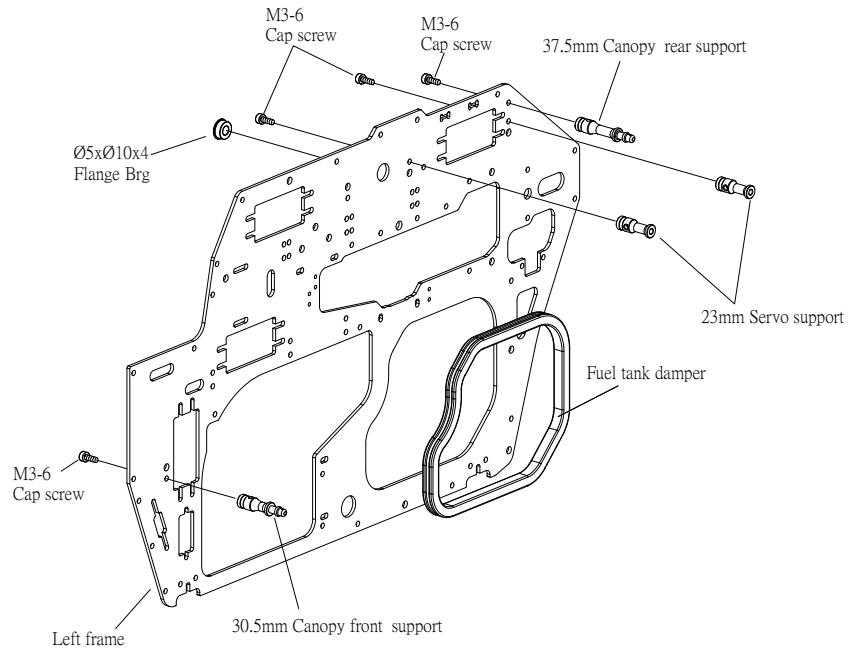
3

Main Frame Assembly-3

T-001-14
T-003-00
T-005-01

Please apply loctite when locking all metal screws .

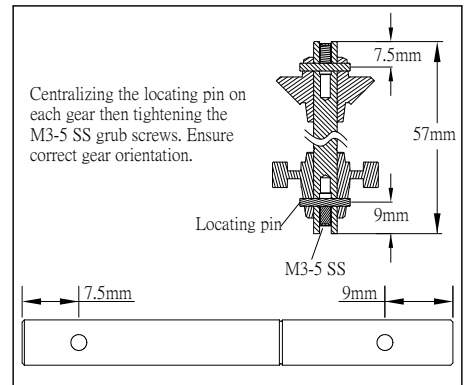
- 37.5mm Canopy rear support 1
- 30.5mm Canopy front support 1
- 23mm Servo support 2
- M3-6 Cap screw 4
- Ø5xØ10x4 Flange Brg 1



4

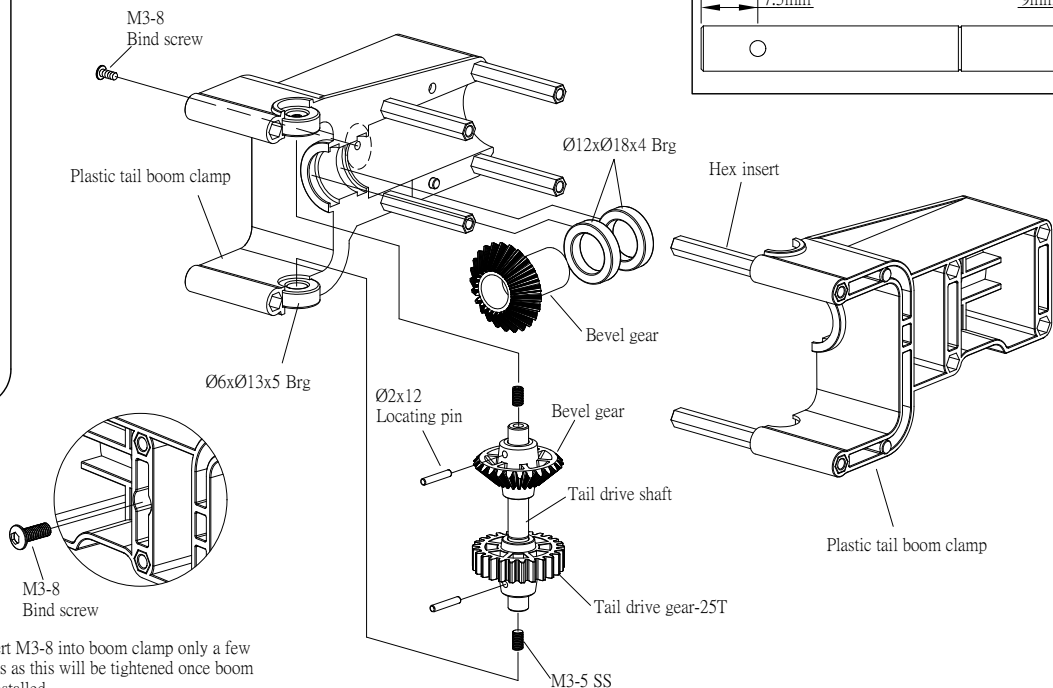
Tail Drive Gear Assembly

T-019-00



- Ø6xØ13x5 Brg 2
- Ø12xØ18x4 Brg 2
- Locating pin Ø2x12 2
- M3-5 SS 2
- M3-8 Bind screw 1

Please apply loctite when locking all metal screws .





Insert M3-8 into boom clamp only a few turns as this will be tightened once boom is installed.

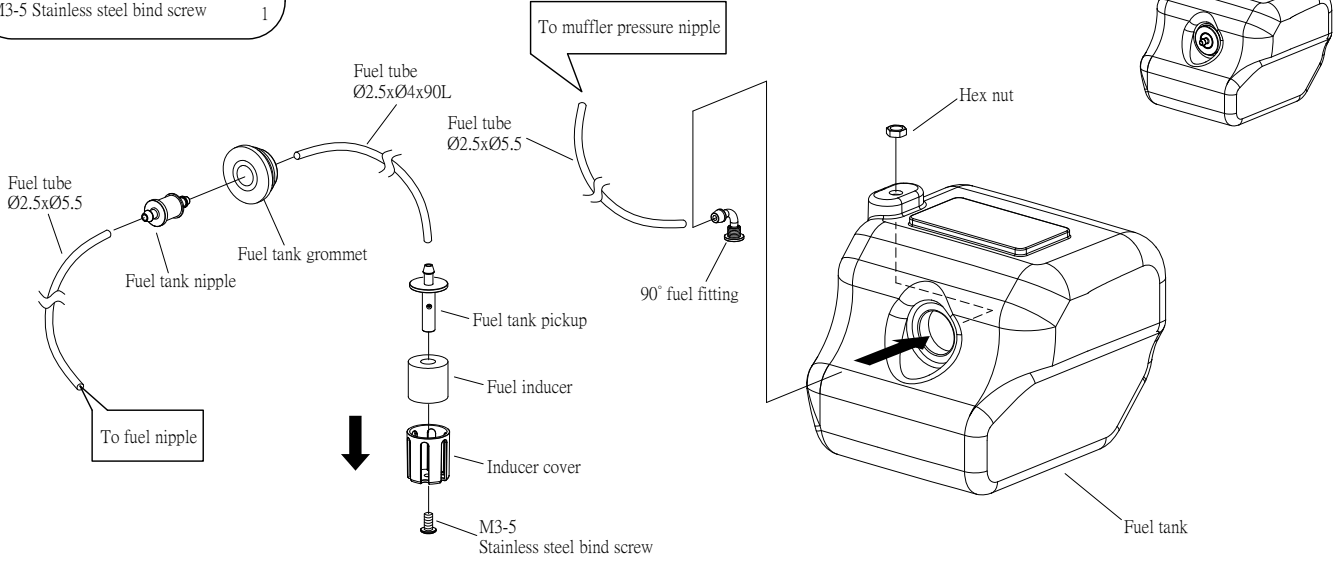
5

Fuel Tank Assembly

T-003-00

 Please apply loctite when locking all metal screws .

-  M3-5 Stainless steel bind screw 1




6







Main Frame Assembly-4

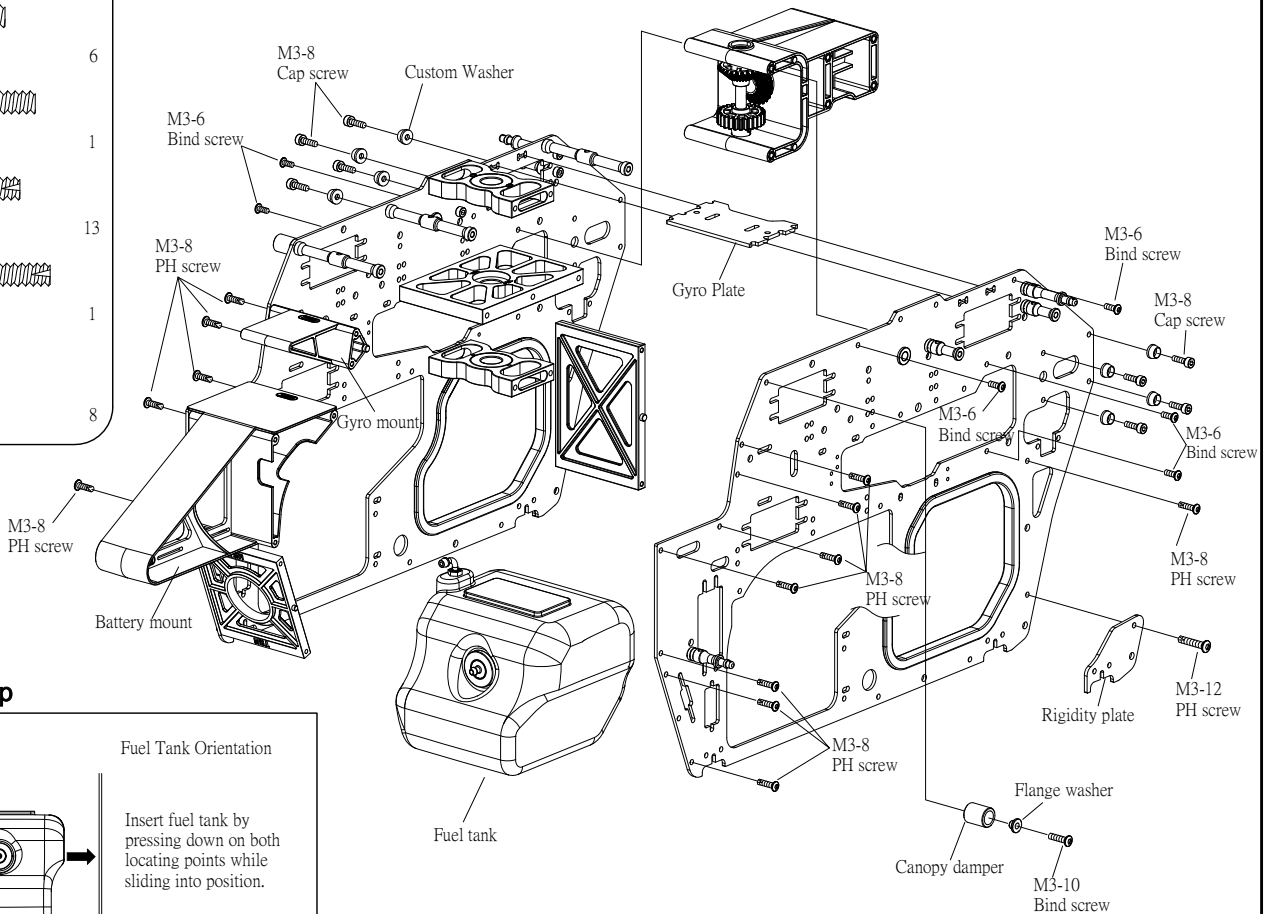
T-002-05 T-009-01

T-004-00 T-019-00

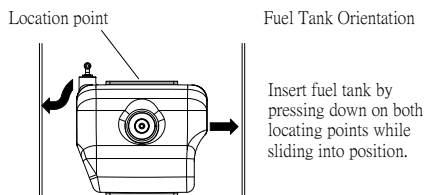
T-005-01 T-031-00

 Please apply loctite when locking all metal screws .

-  M3-8 Cap screw 8
-  M3-6 Bind screw 6
-  M3-10 Bind screw 1
-  M3-8 PH screw 13
-  M3-12 PH screw 1
-  Custom washer 8



Assembly Tip



7

Main Frame Assembly-5


T-002-05

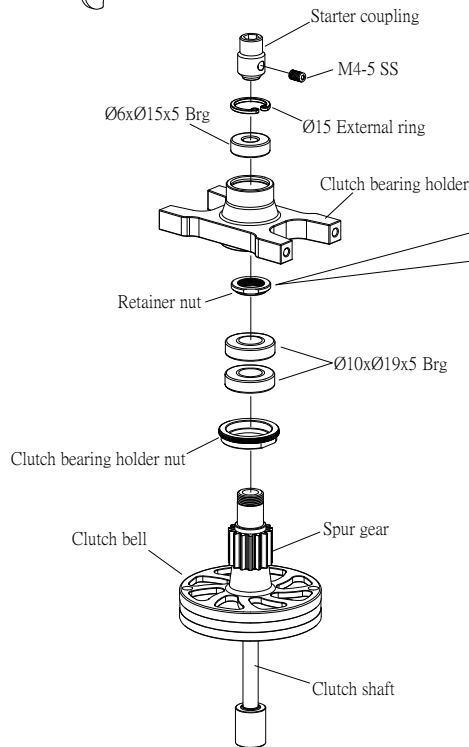
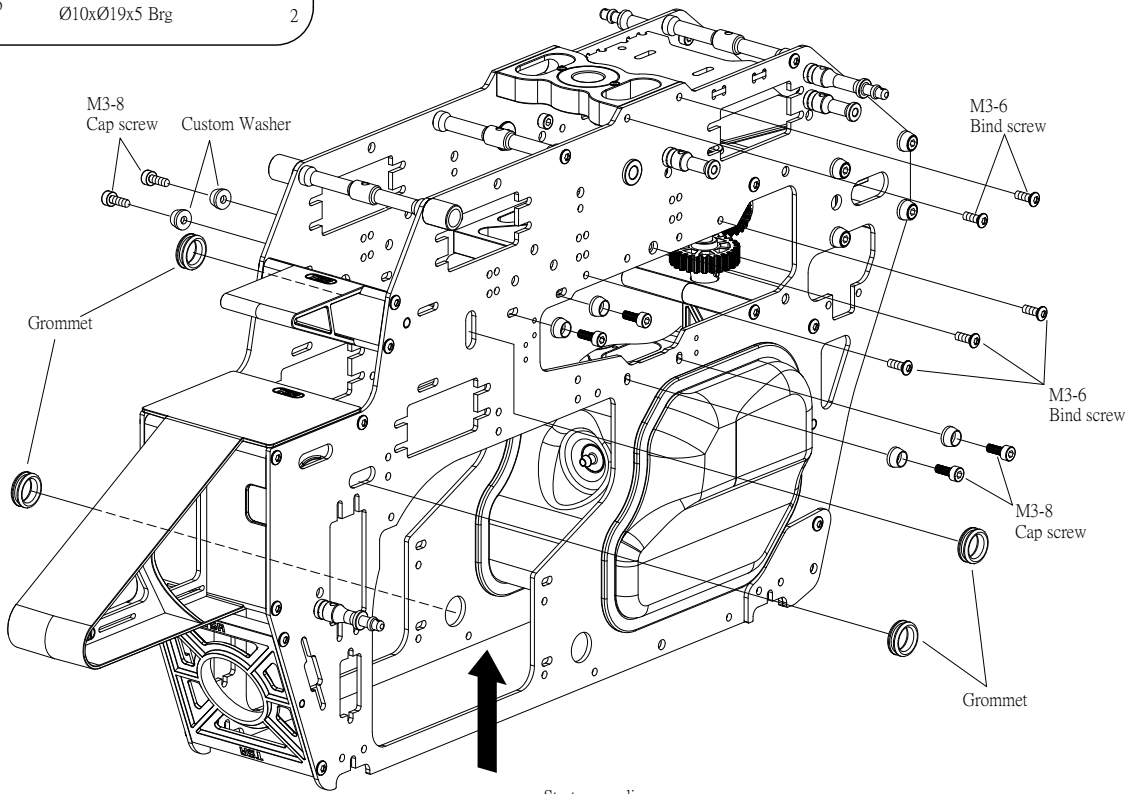
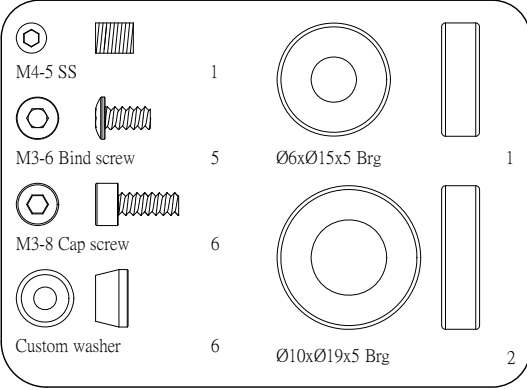
T-010-02

T-006-01

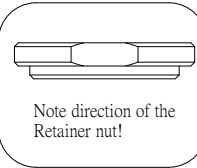
T-016-05

T-007-05

 Please apply loctite when locking all metal screws .



Assembly Tip











Note direction of the Retainer nut!

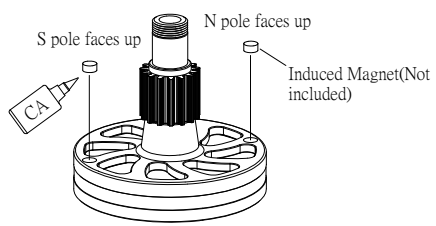
8

RPM Sensor Assembly

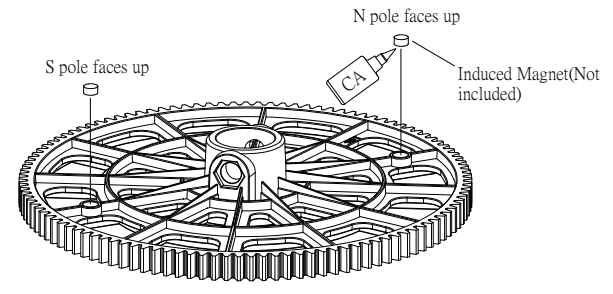
Two means of induced magnet RPM Sensor assembly are provided!

 Please apply loctite when locking all metal screws .

-   2
-   2
-   2
-  6



Suitable for both TSA and Futaba RPM Sensor assembly.



Only for TSA RPM Sensor assembly.

TSA RPM Sensor assembly means 1: (only for right main frame assembly)

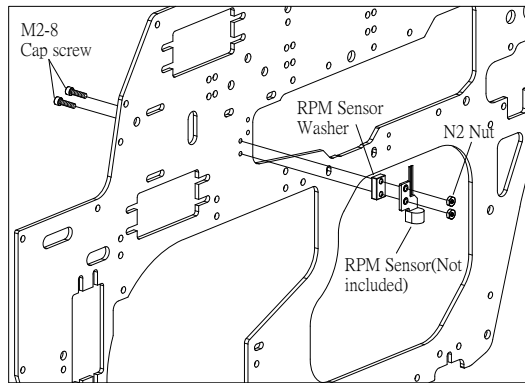
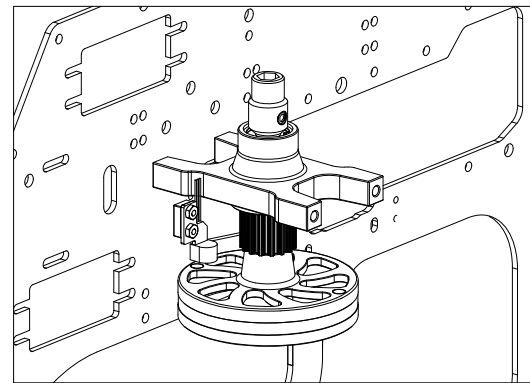


Diagram :



TSA RPM Sensor assembly means 2: (only for left main frame assembly)

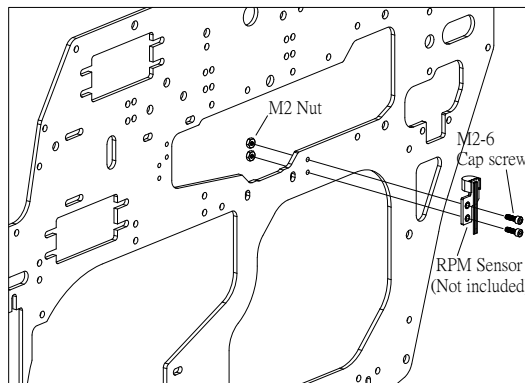
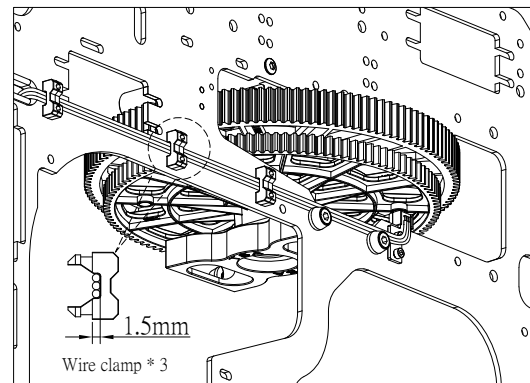


Diagram :



Futaba RPM Sensor assembly means : (for both right and left main frame assembly)

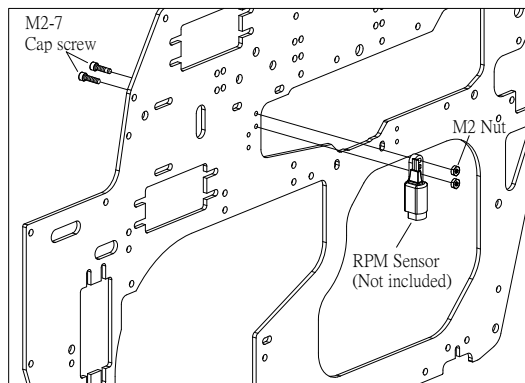
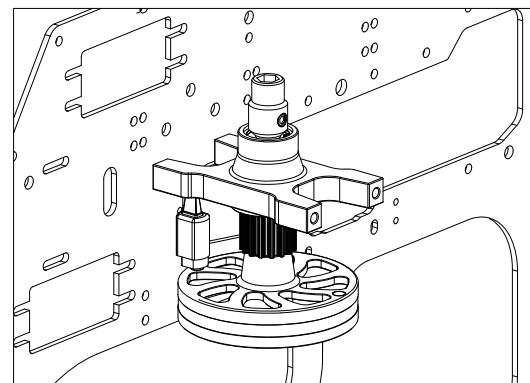


Diagram :




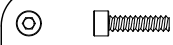

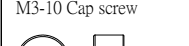



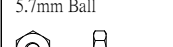
9

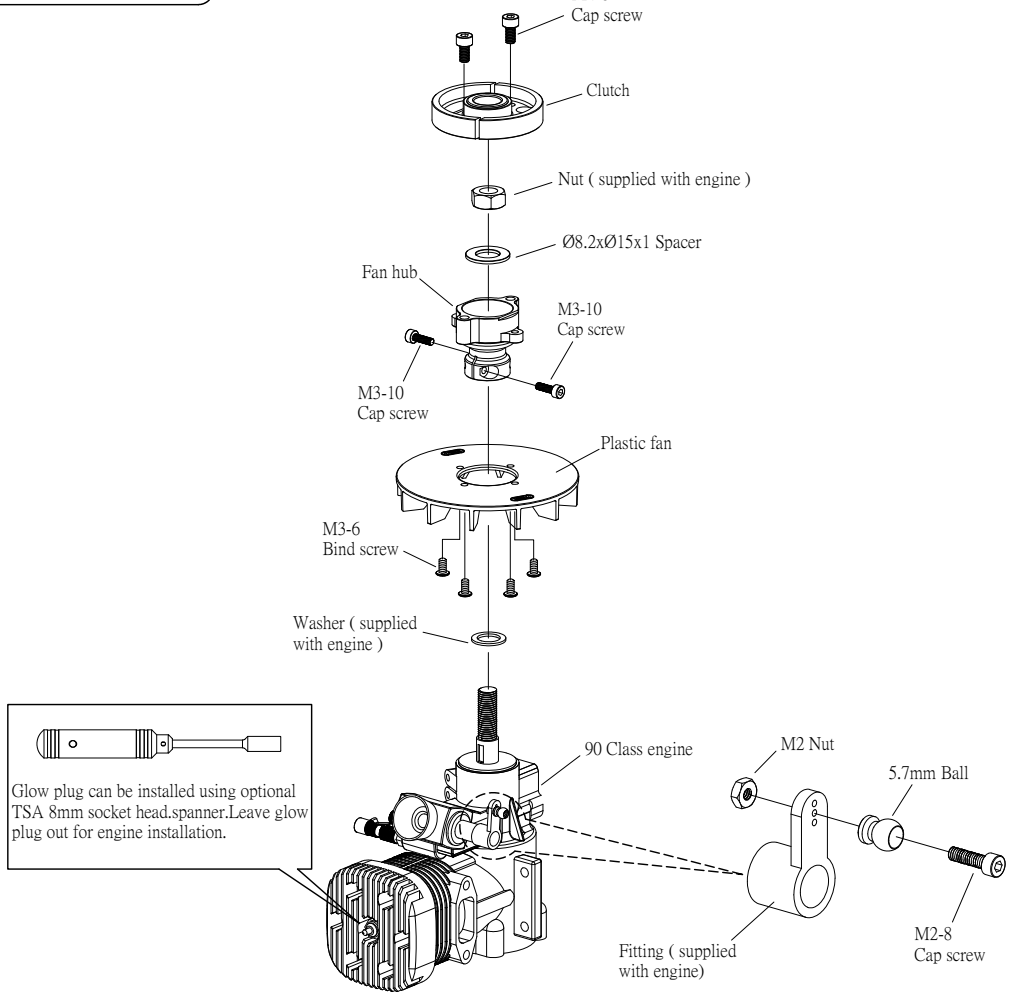
Engine Assembly

T-010-02

T-014-01

 Please apply loctite when locking all metal screws .

-  1
-  2
-  2
-  4
-  1
-  1
-  1


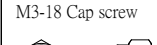




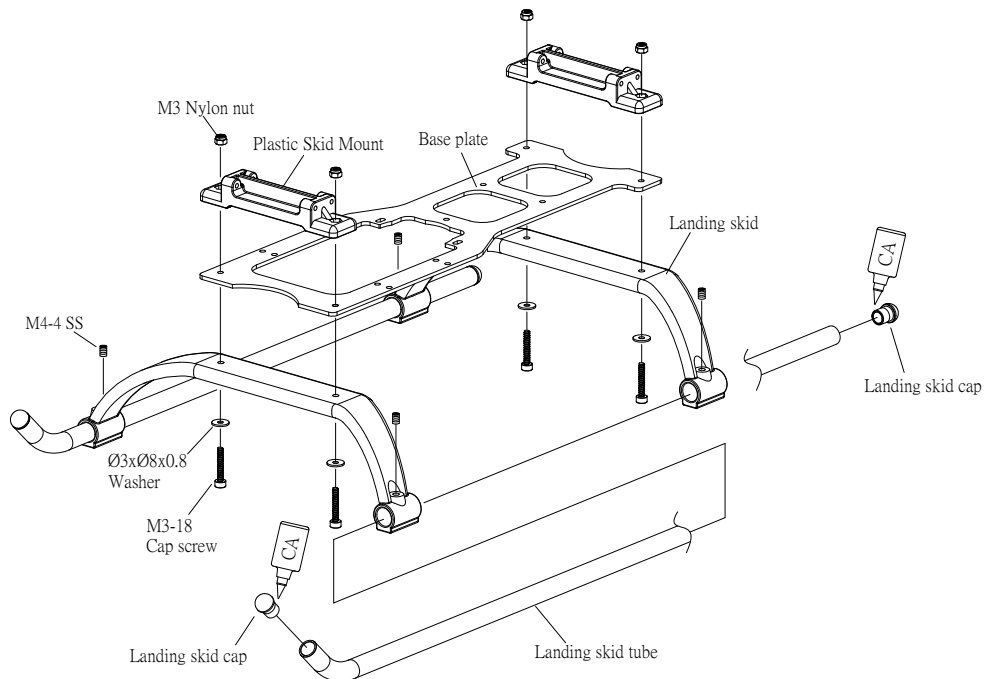
10

Landing Gear Assembly-1

T-012-00

T-013-01

-  4
-  4
-  4
-  4










11

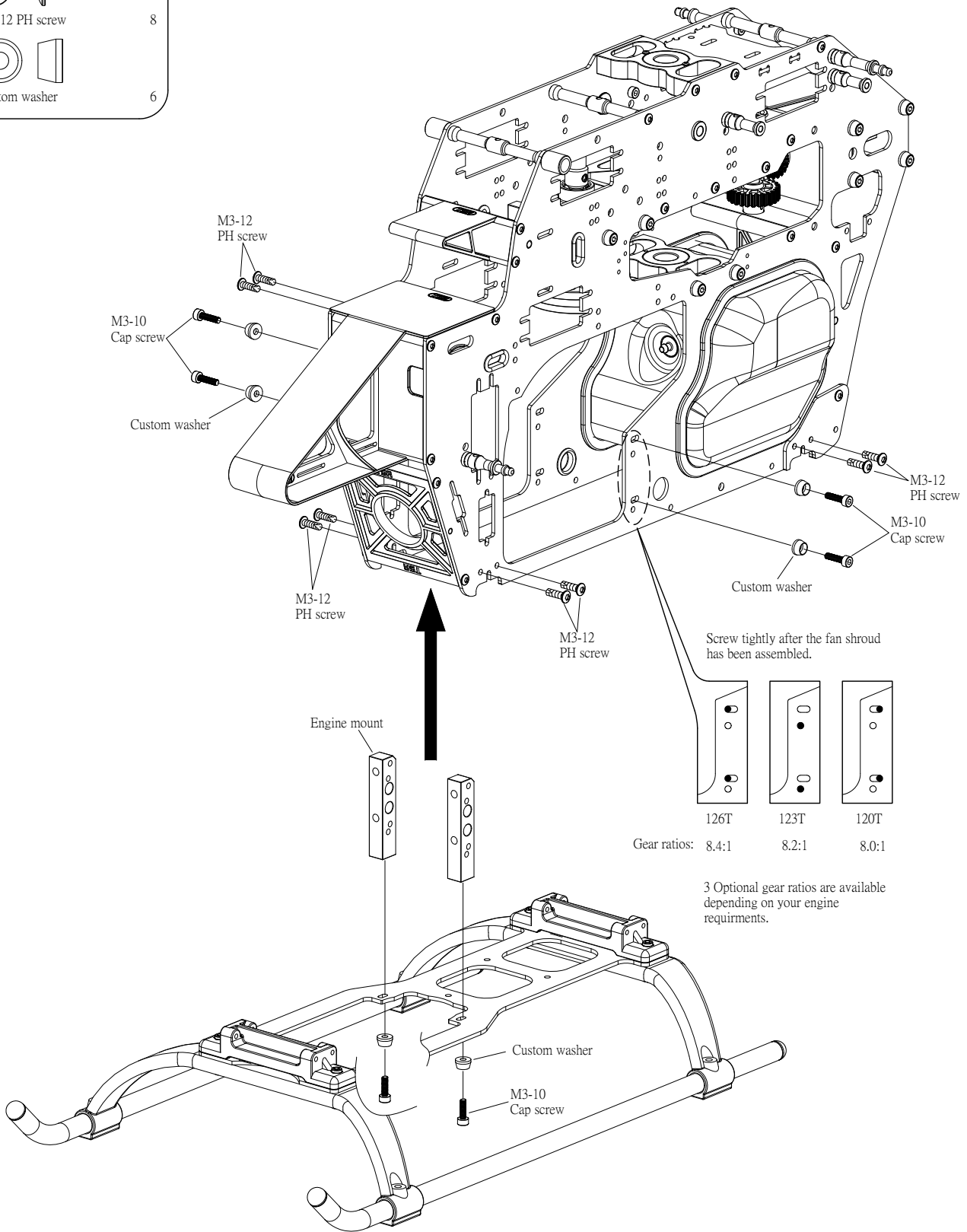
Landing Gear Assembly-2

T-012-00

T-014-01

 Please apply loctite when locking all metal screws .


-   M3-10 Cap screw 6
-   M3-12 PH screw 8
-   Custom washer 6

























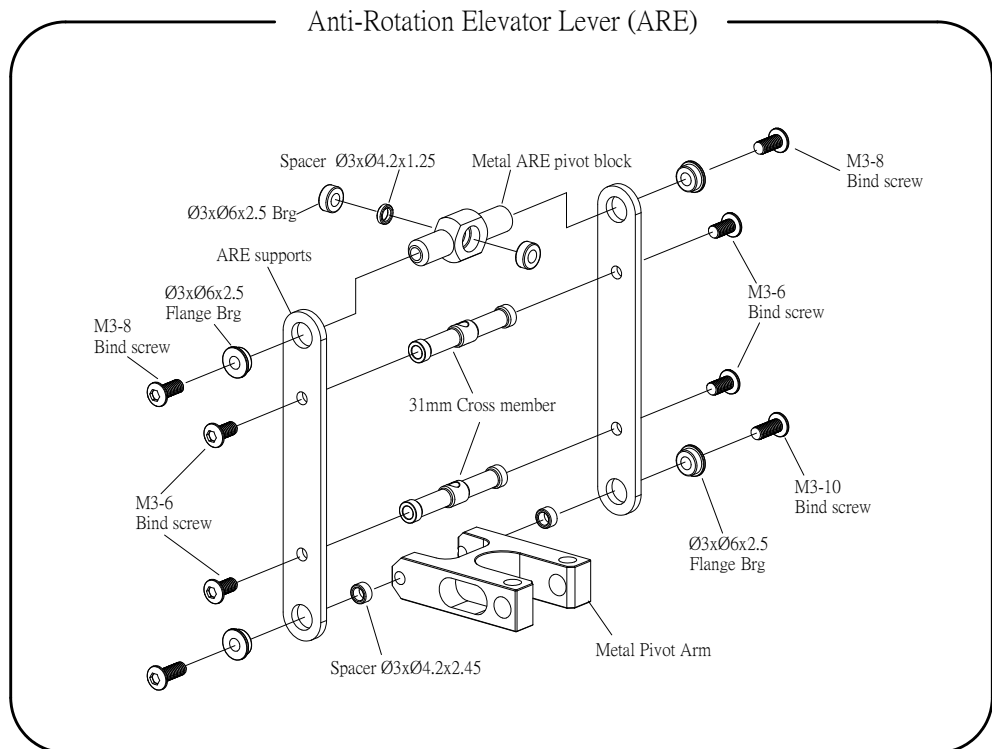
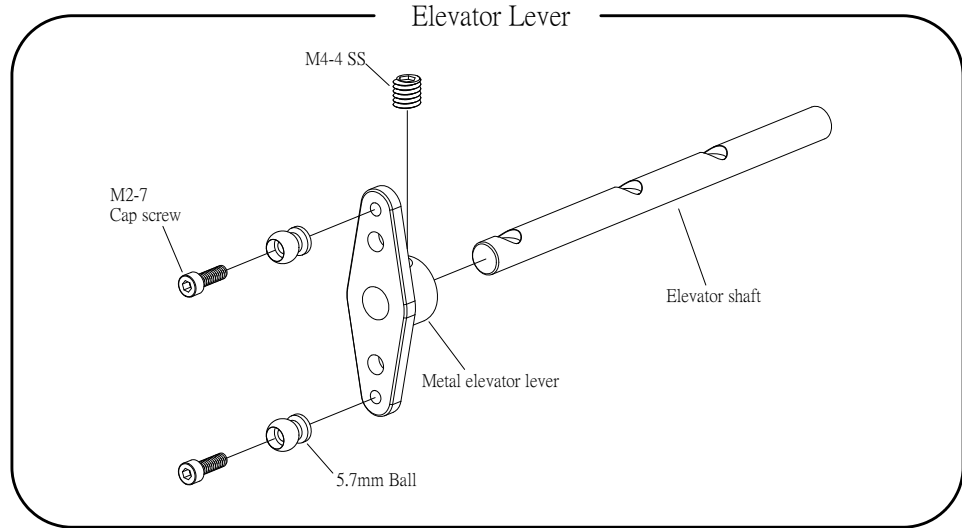
12

Elevator Lever Assembly

T-011-05

 Please apply loctite when locking all metal screws .

-   M2-7 Cap screw 2
-   M3-6 Bind screw 4
-   M3-8 Bind screw 2
-   M3-10 Bind screw 2
-   M4-4 SS 1
-   5.7mm Ball 2
-   Spacer Ø3xØ4.2x1.25 1
-   Spacer Ø3xØ4.2x2.45 2
-   Ø3xØ6x2.5 Brg 2
-   Ø3xØ6x2.5 Flange Brg 4
-   31mm Cross member 2





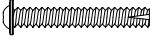





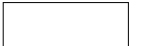
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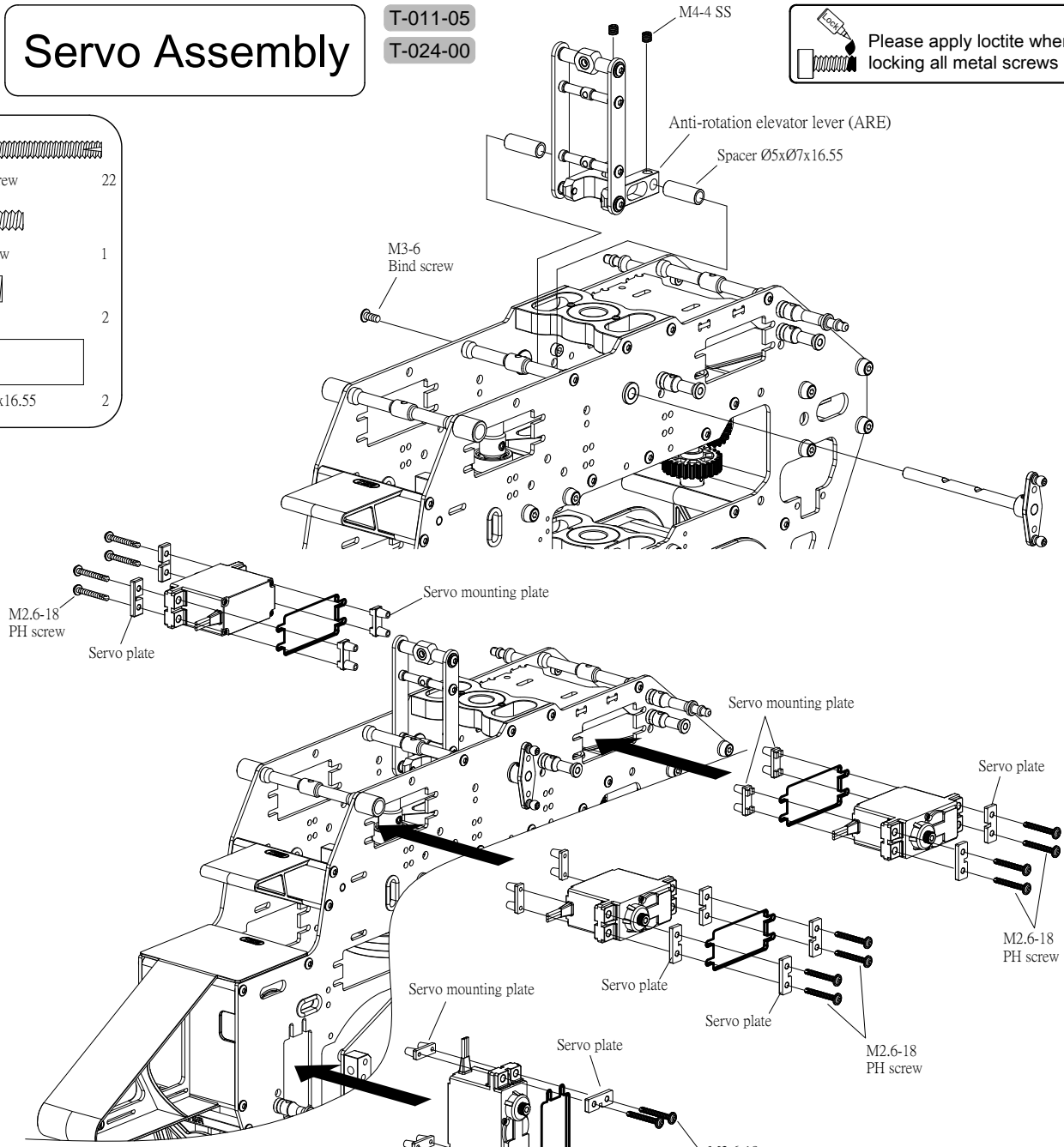
Servo Assembly

T-011-05

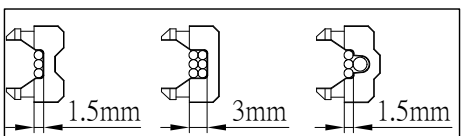
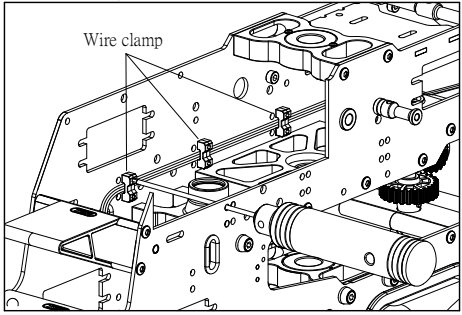
T-024-00

 Please apply loctite when locking all metal screws .

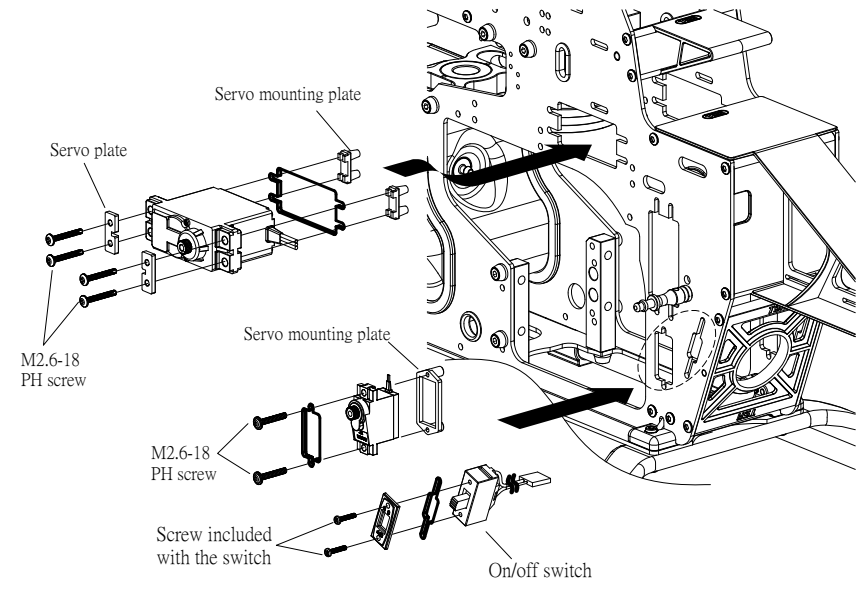
-   22
-   1
-   2
-   2



Assembly Tip



Use corresponding wire clamp according to the connecting means as shown in the diagram.



Caution

All servo wires should be segregated to avoid being cut by the the main frame.


14





















Servo Support Assembly

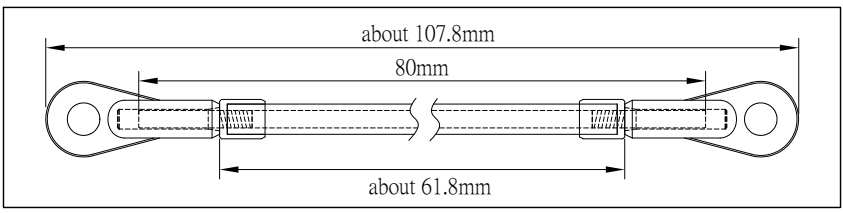
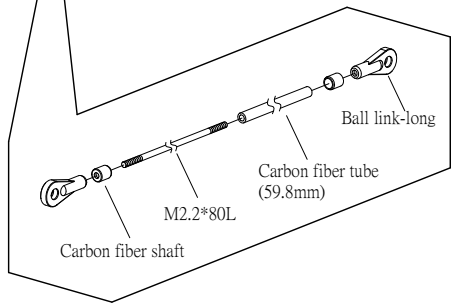
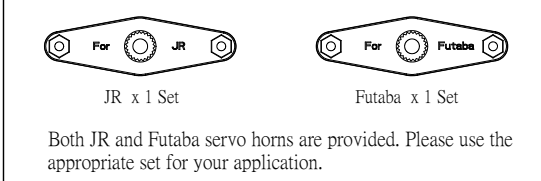
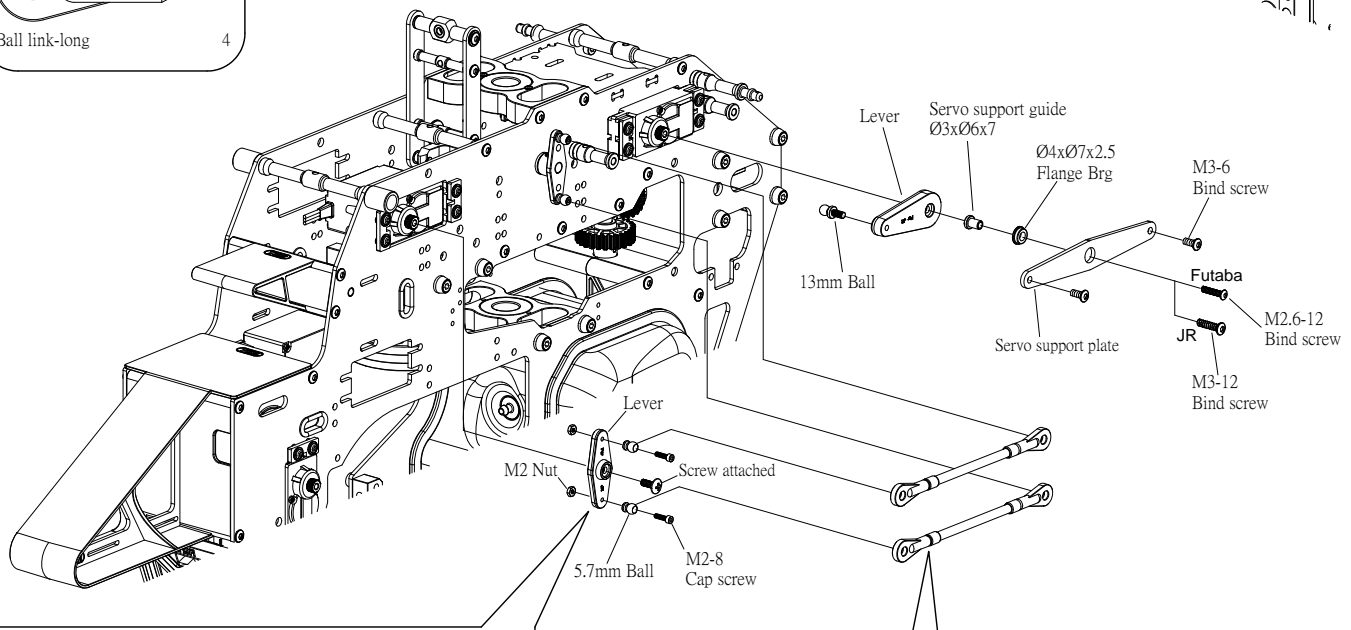
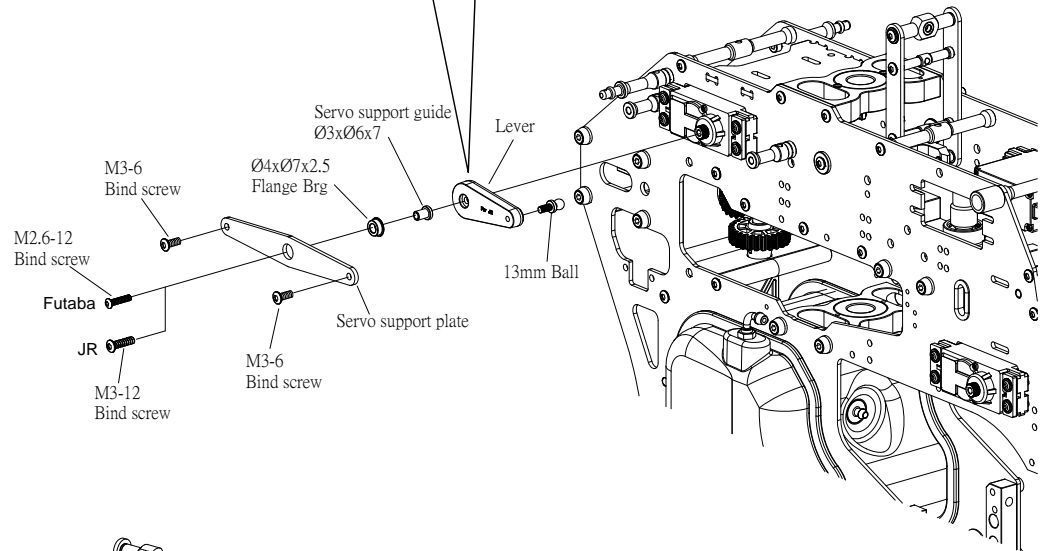
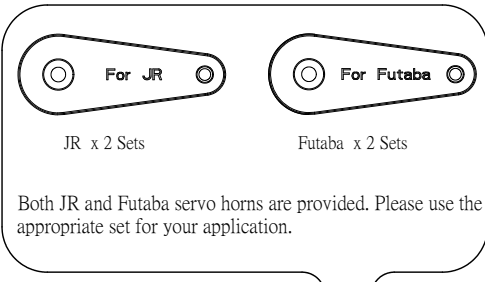
T-020-05

T-022-02

T-025-00

 Please apply loctite when locking all metal screws.

-   M2-8 Cap screw 2
-   M2.6-12 Bind screw 2
-   M3-6 Bind screw 4
-   M3-12 Bind screw 2
-   Ø4xØ7x2.5 Flange Brg 2
-   Servo support guide Ø3xØ6x7 2
-   5.7mm Ball 2
-   13mm Ball 2
-   M2 Nut 2
-   Ball link-long 4




15

Fan and Engine Assembly




T-010-02

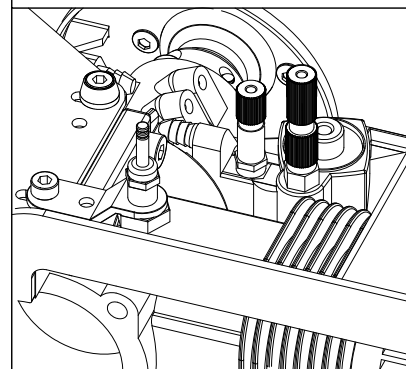
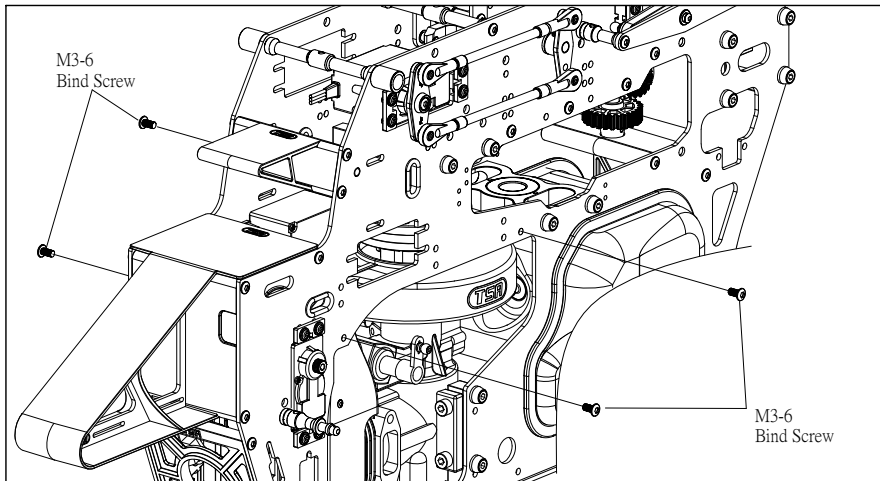
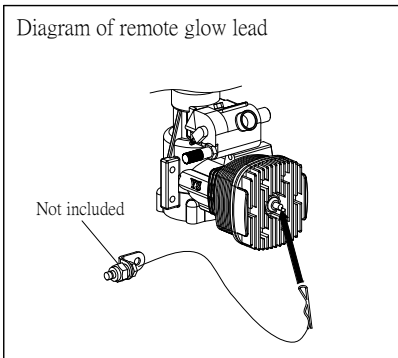
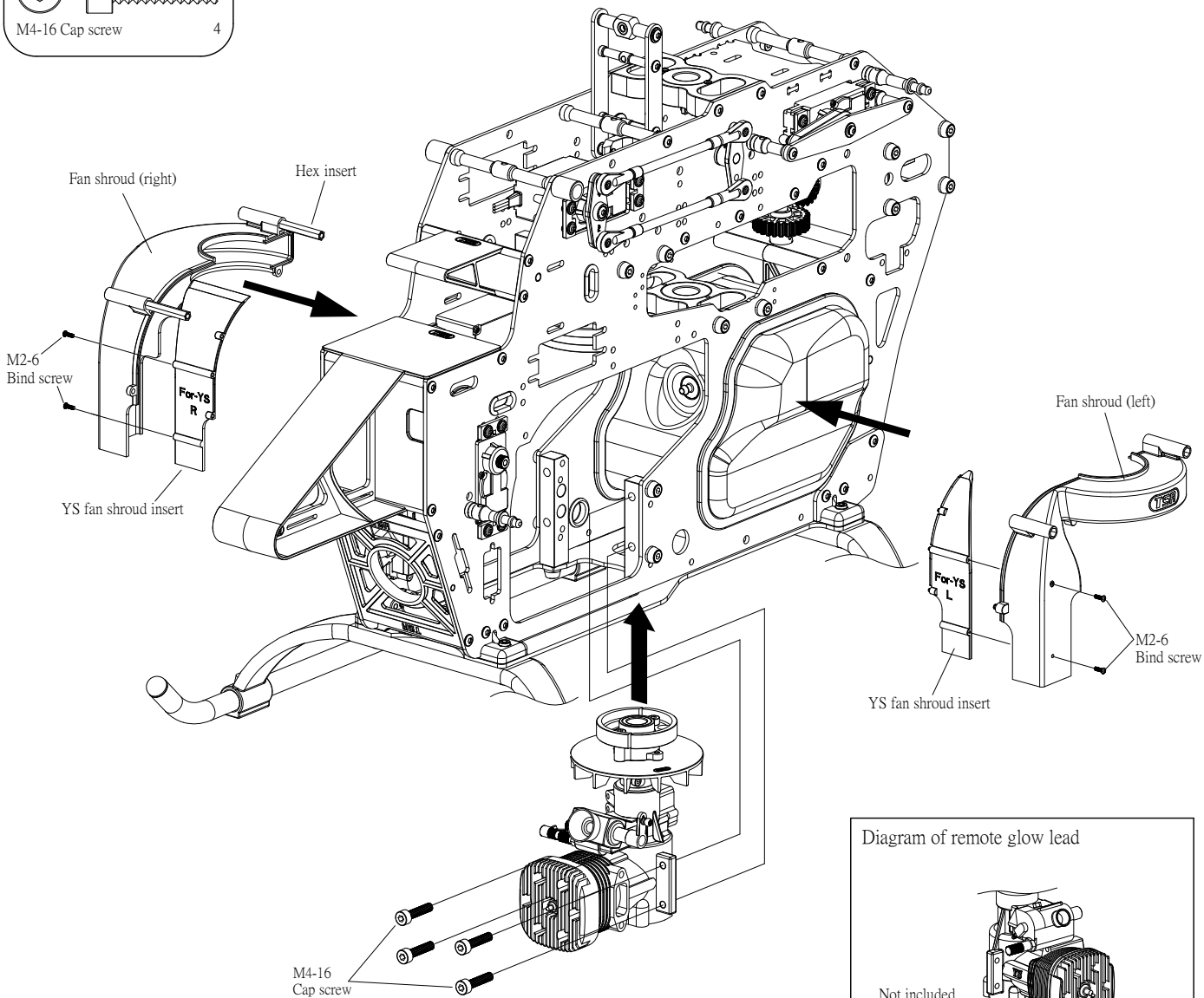
T-014-01

 Please apply loctite when locking all metal screws .

 **Caution**

Fan shroud insert is only for YS engine, it is not necessary for OS engine.


-  M2-6 Bind Screw 4
-  M3-6 Bind Screw 4
-  M4-16 Cap screw 4



16

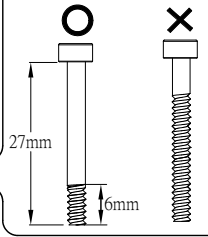
Main Gear Assembly

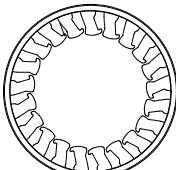
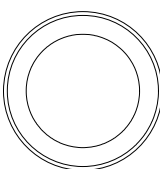
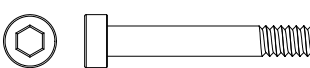
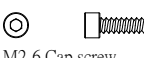



T-015-03

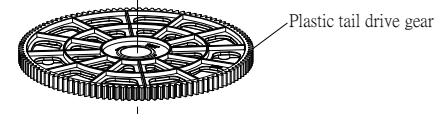
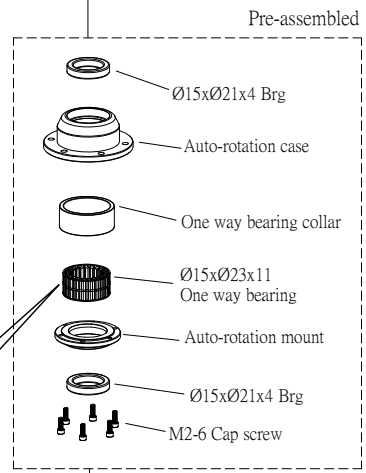
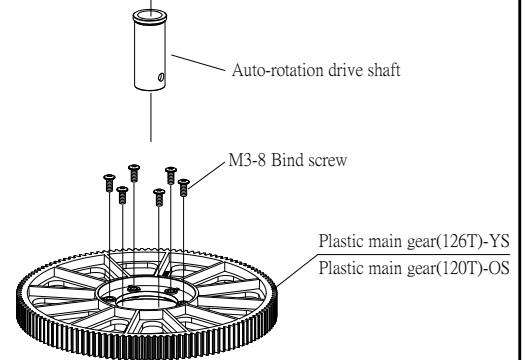
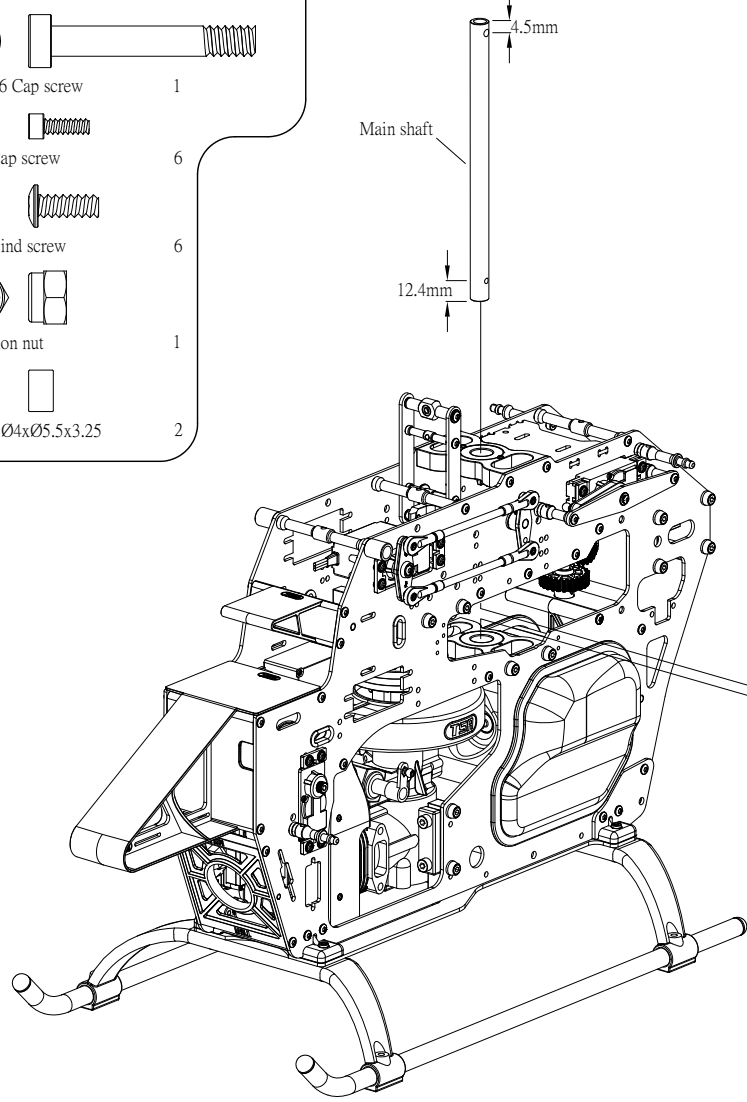
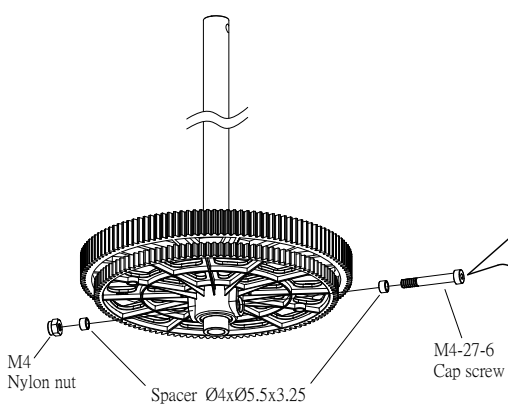
 Please apply loctite when locking all metal screws .

Caution

Only use long shank M4 mounting screw!

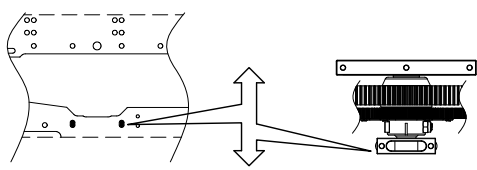


-  Ø15xØ23x11 One way bearing 1
-  Ø15xØ21x4 Brg 2
-  M4-27-6 Cap screw 1
-  M2-6 Cap screw 6
-  M3-8 Bind screw 6
-  M4 Nylon nut 1
-  Spacer Ø4xØ5.5x3.25 2



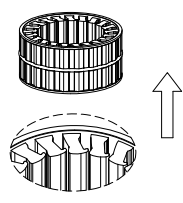
Caution

Main shaft free play adjustment



Loosen lower bearing block bolts. Insert main gear assembly and main shaft. While pressing up on the bearing block tighten the 4 lower bearing block bolts. Ensure no up/down free play by pulling on the main shaft.

Please note the direction of bearing .





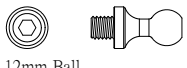
Top view

17

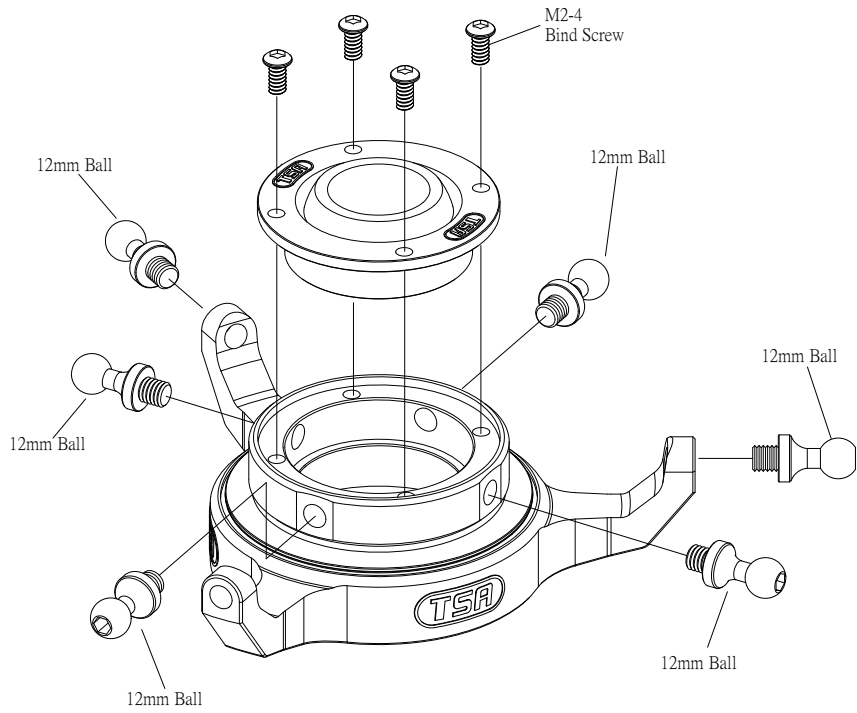
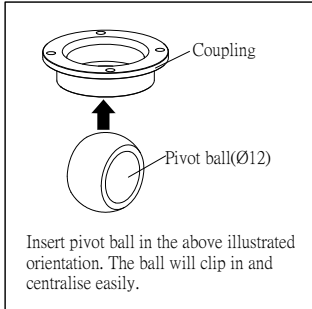
Swashplate Assembly

T-016-05

 Please apply loctite when locking all metal screws .

-  M2-4 Bind Screw 4
-  12mm Ball 6


Assembly Tip

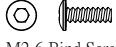
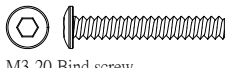
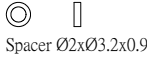
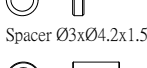
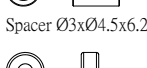
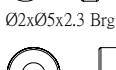
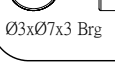


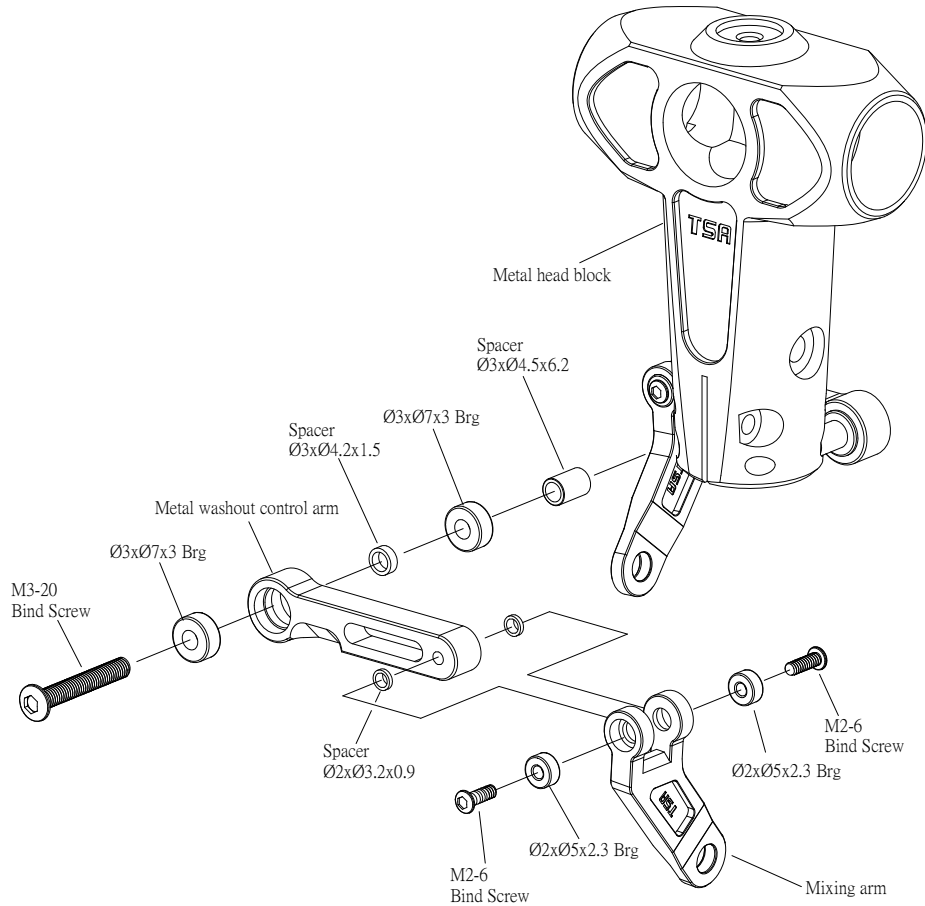
18

Washout Assembly

T-016-05

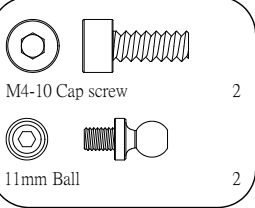
 Please apply loctite when locking all metal screws .

-  M2-6 Bind Screw 4
-  M3-20 Bind screw 2
-  Spacer Ø2xØ3.2x0.9 4
-  Spacer Ø3xØ4.2x1.5 2
-  Spacer Ø3xØ4.5x6.2 2
-  Ø2xØ5x2.3 Brg 4
-  Ø3xØ7x3 Brg 4

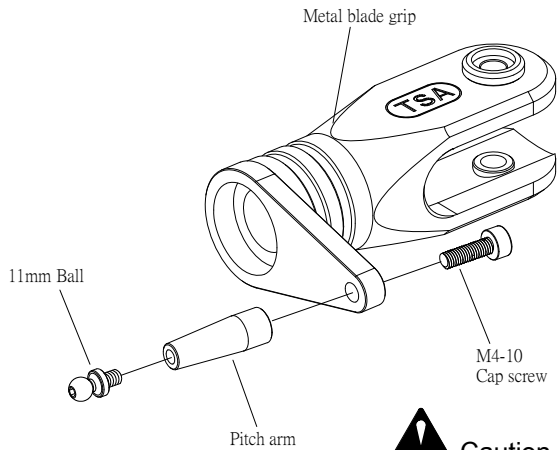


19

Pitch Arm Assembly



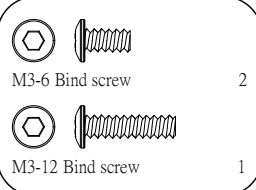
Please apply loctite when locking all metal screws .
T-016-05



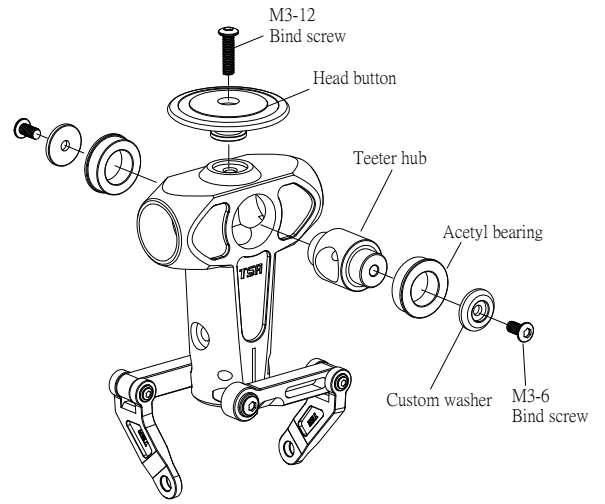
Caution
Two must be assembled

20

Head Block Assembly

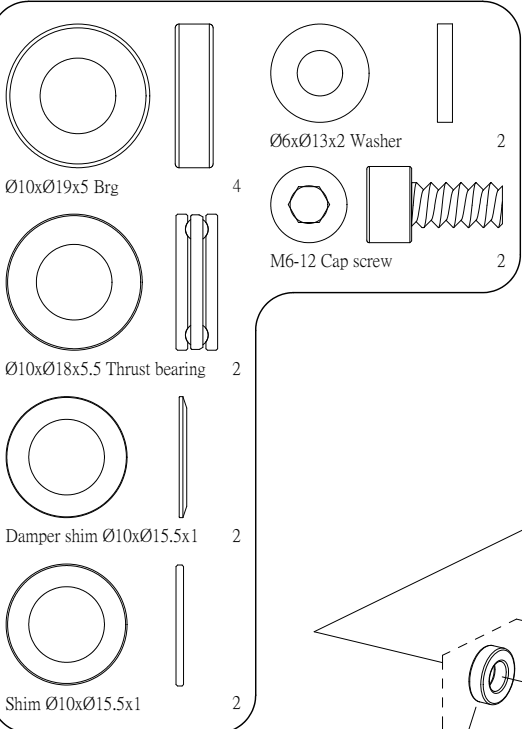


Please apply loctite when locking all metal screws .
T-016-05



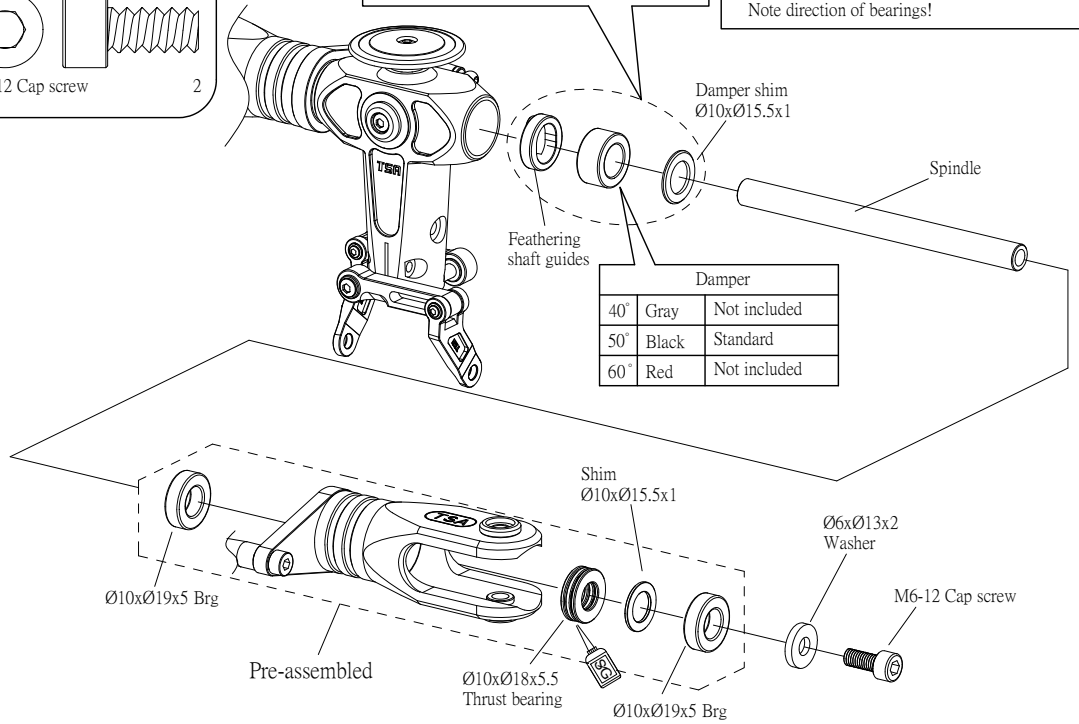
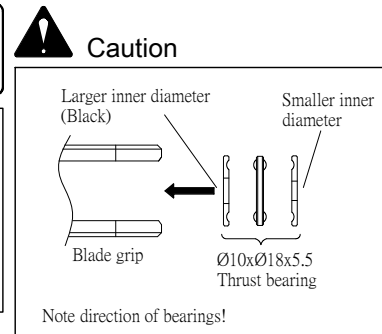
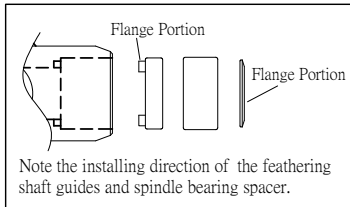
21

Blade Holder Assembly



T-016-05






Please apply loctite when locking all metal screws .




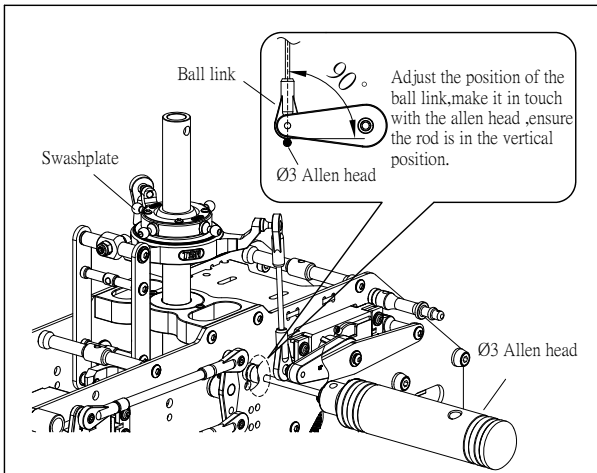
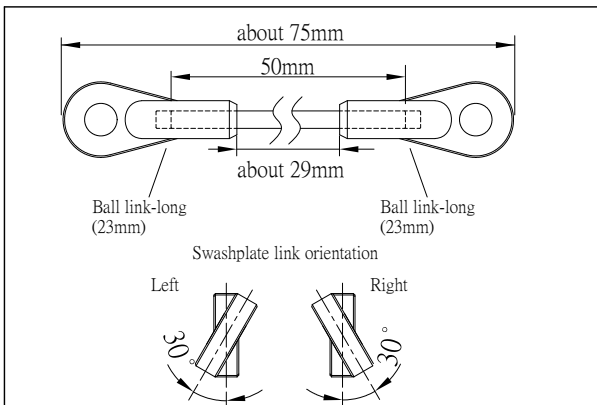
22

Rotor Head Complete Assembly

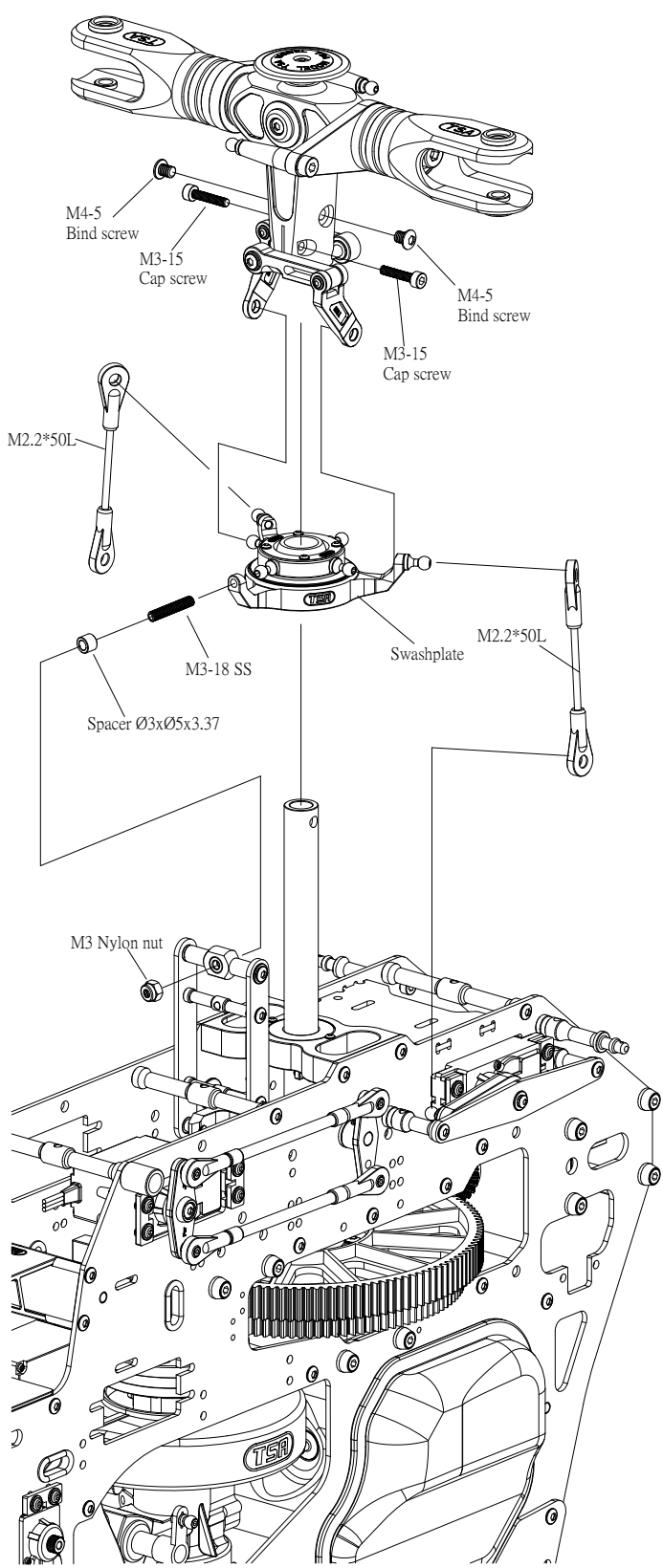
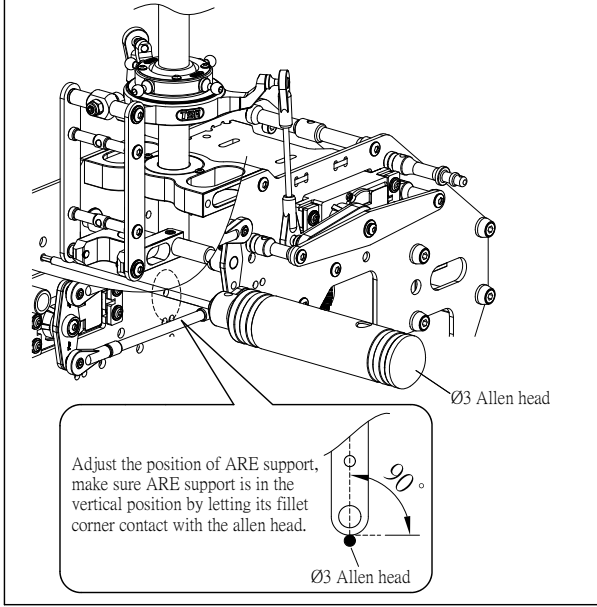
T-011-05
T-016-05
T-020-05

-  1
-  1
-  2
-  1
-  2

 Please apply loctite when locking all metal screws .



Insert the allen head into the hole as shown in the diagram , make sure the rocker-arm is parallel with the swashplate.










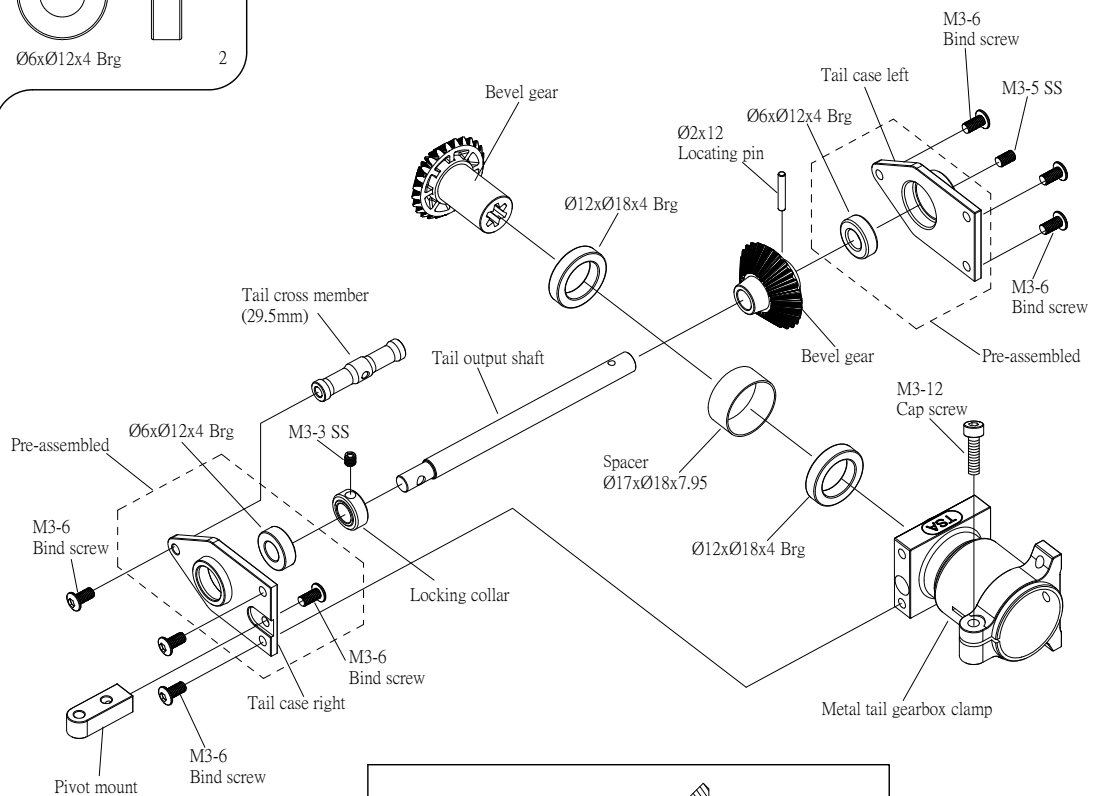
23

Tail Gearbox Assembly-1

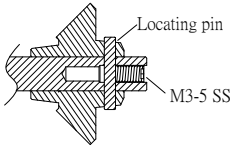
T-016-05

Please apply loctite when locking all metal screws .

-  M3-3 SS 1
-  M3-5 SS 1
-  M3-6 Bind screw 7
-  M3-12 Cap screw 1
-  Locating pin Ø2x12 1
-  Ø12xØ18x4 Brg 2
-  Spacer Ø17xØ18x7.95 1



Centralise the locating pin on each gear then tighten the M3-5SS grub screws. Ensure correct orientation.









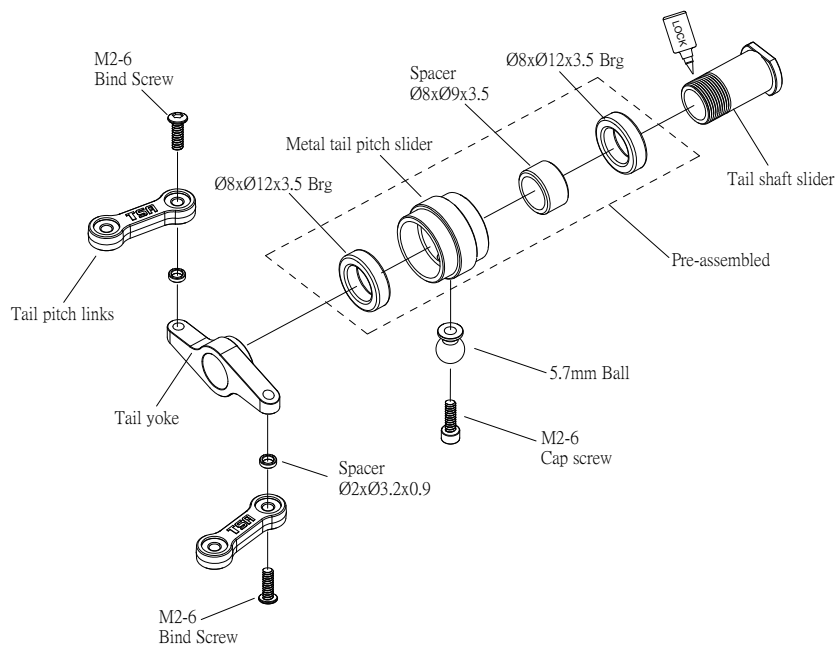
24

Tail Gearbox Assembly-2

T-017-02

Please apply loctite when locking all metal screws .

-  M2-6 Bind Screw 2
-  M2-6 Cap screw 1
-  5.7mm Ball 1
-  Spacer Ø2xØ3.2x0.9 2
-  Spacer Ø8xØ9x3.5 1
-  Ø8xØ12x3.5 Brg 2



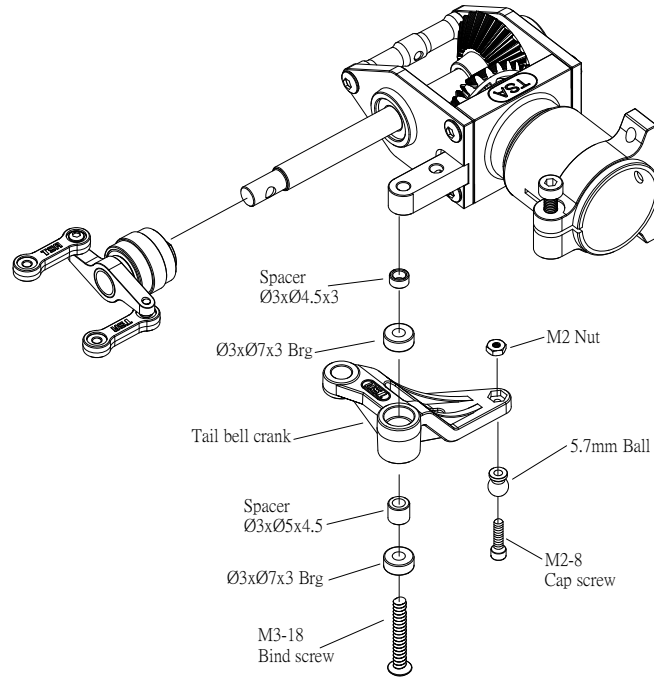
25

Tail Gearbox Assembly-3

T-018-00

Please apply loctite when locking all metal screws .

- M2-8 Cap screw 1
- M3-18 Bind screw 1
- 5.7mm Ball 1
- M2 Nut 1
- Spacer Ø3xØ5x4.5 1
- Spacer Ø3xØ4.5x3 1
- Ø3xØ7x3 Brg 2



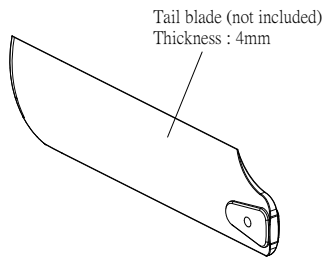
26

Tail Gearbox Assembly-4

T-016-05

Please apply loctite when locking all metal screws .

- M3-17-5 Cap screw 2
- M3 Nylon nut 2
- M4 Nylon nut 2
- Ø5xØ10x4 Thrust bearing 2
- Ø6xØ12x4 Brg 2
- Ø5xØ10x4 Brg 2



Caution

Smaller inner diameter

Larger inner diameter(Black)

Metal tail blade grip

Note direction of bearings!

Periodically check and perform necessary lubrication.

Caution

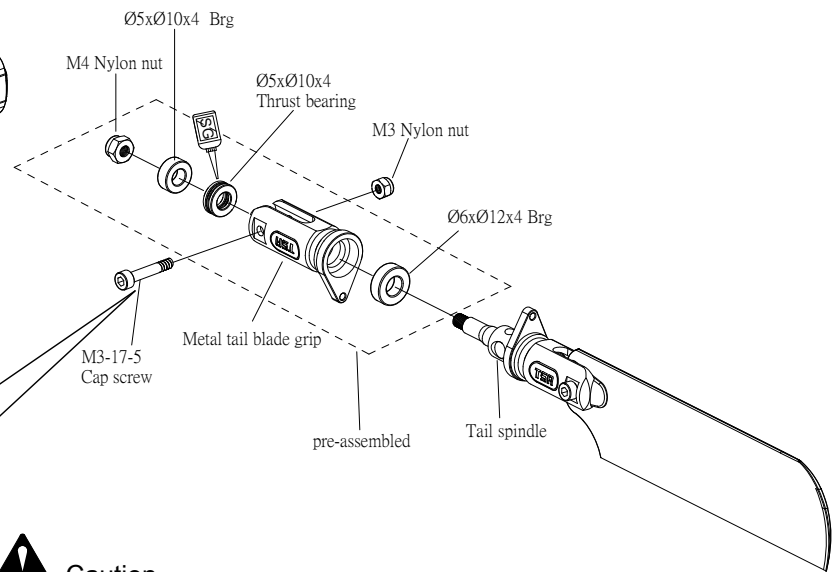
Only use long shank M3 mounting screw!

17mm

5mm

Caution

Fasten the tail blade to permit only slight movement .
Note the direction of the tail blade and the tail blade grip.






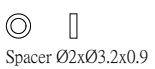
27

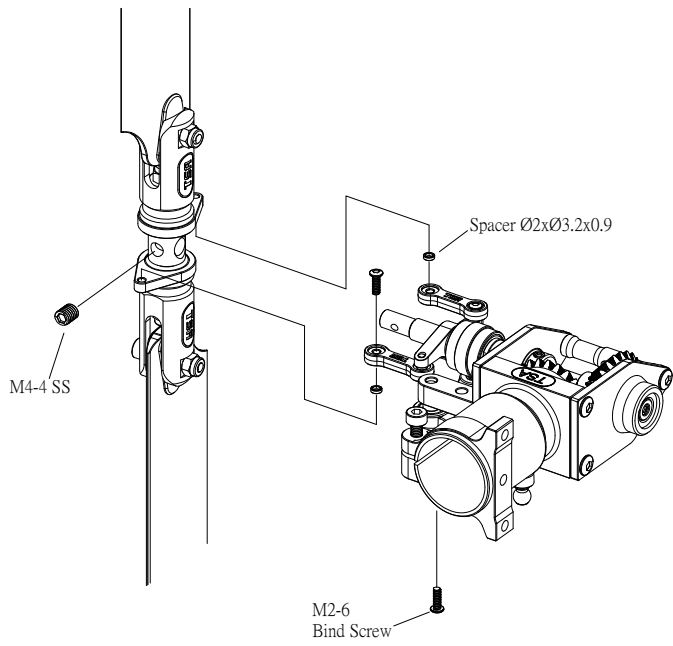
Tail Gearbox Assembly-5

T-016-05

T-017-02

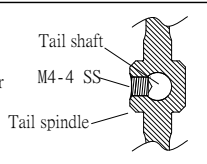
 Please apply loctite when locking all metal screws .

-  M4-4 SS 1
-  M2-6 Bind Screw 2
-  Spacer Ø2xØ3.2x0.9 2



Caution

Use the M4-4SS screw to fasten the tail shaft and spindle. Ensure grub screws are seated into receiver grooves.




28

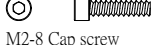



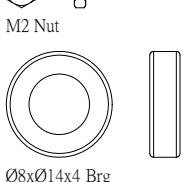
Tail Gearbox Assembly-6

T-026-01

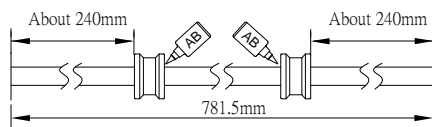
T-027-02

T-028-18

 Please apply loctite when locking all metal screws .

-  M2-8 Cap screw 4
-  M3-5 Bind screw 2
-  M3-10 Cap screw 1
-  M2 Nut 4
-  Ø8xØ14x4 Brg 2

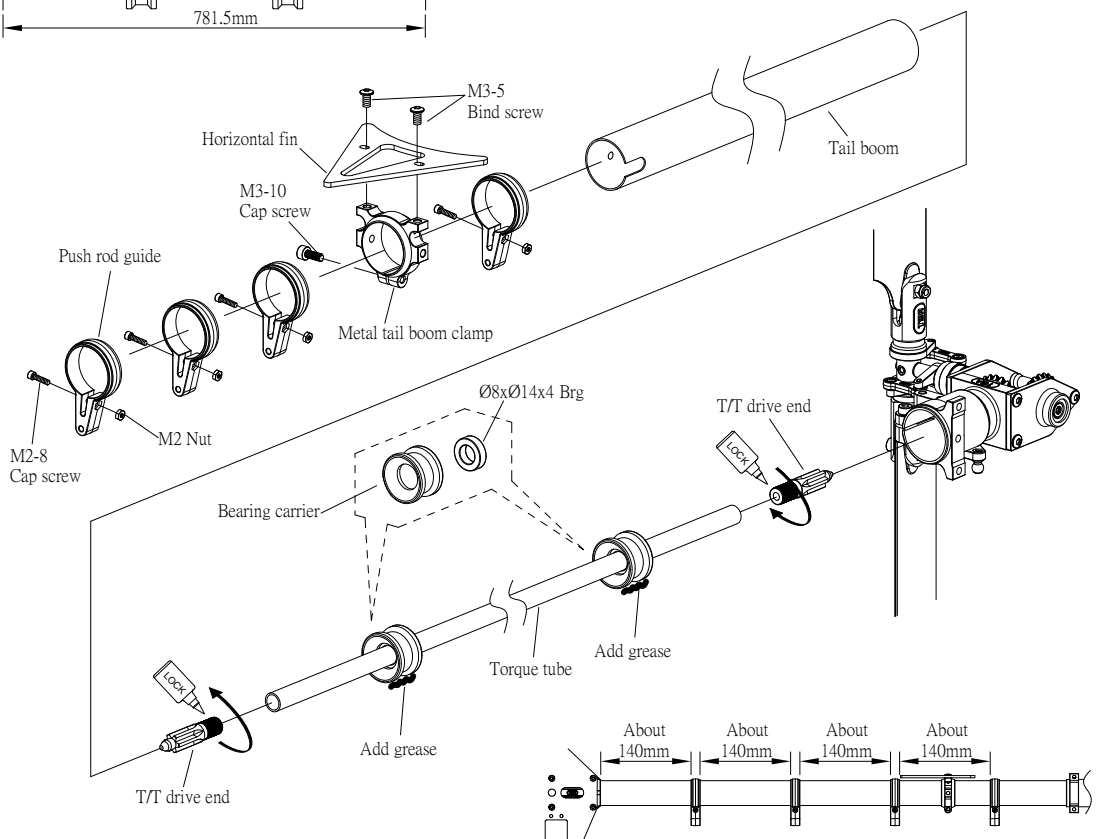
Torque tube bearing location :



Apply AB glue to shaft then slide bearing overtop and allow to dry.

Assembly Tip


Apply oil to tail boom bearing carrier and inside tail boom for easy T/T installation.








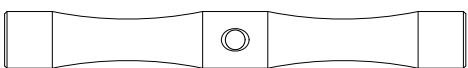












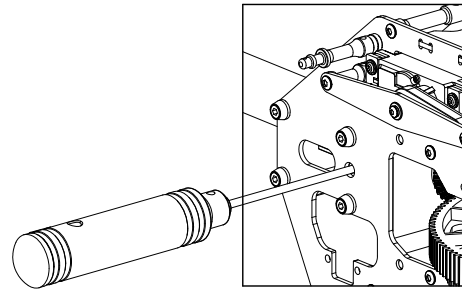
29

Tail Boom Support Assembly

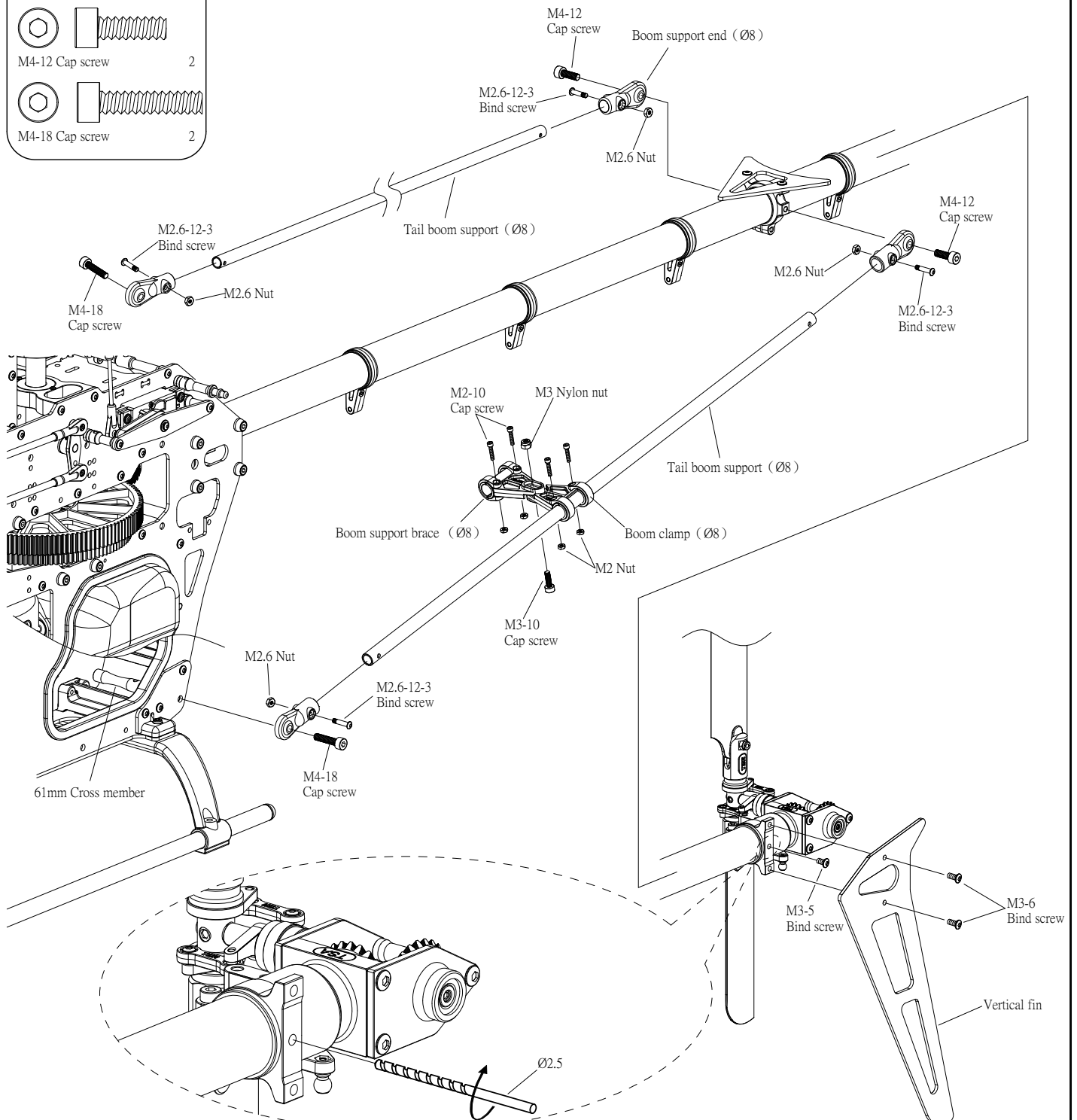
T-016-05
T-026-01
T-027-02
T-028-18

 Please apply loctite when locking all metal screws .

- | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
|  |  | 4 |  | 4 |  | 4 |  | 1 |
|  |  | 4 |  | | | | | |
|  |  | 1 | | | | | | |
|  |  | 2 | | | | | | |
|  |  | 1 | | | | | | |
|  |  | 2 | | | | | | |
|  |  | 2 | | | | | | |




After inserting the tail boom tighten the previously installed retaining screw.

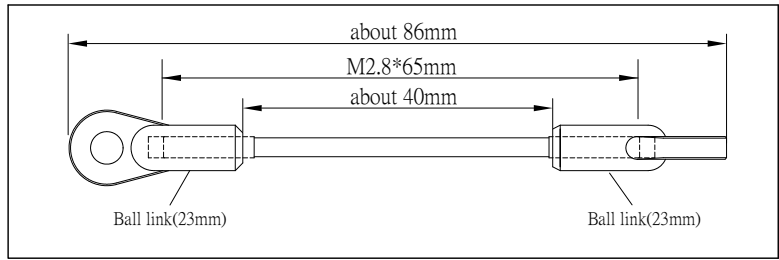
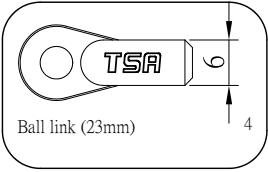


30

Rotor Head Linkage Assembly

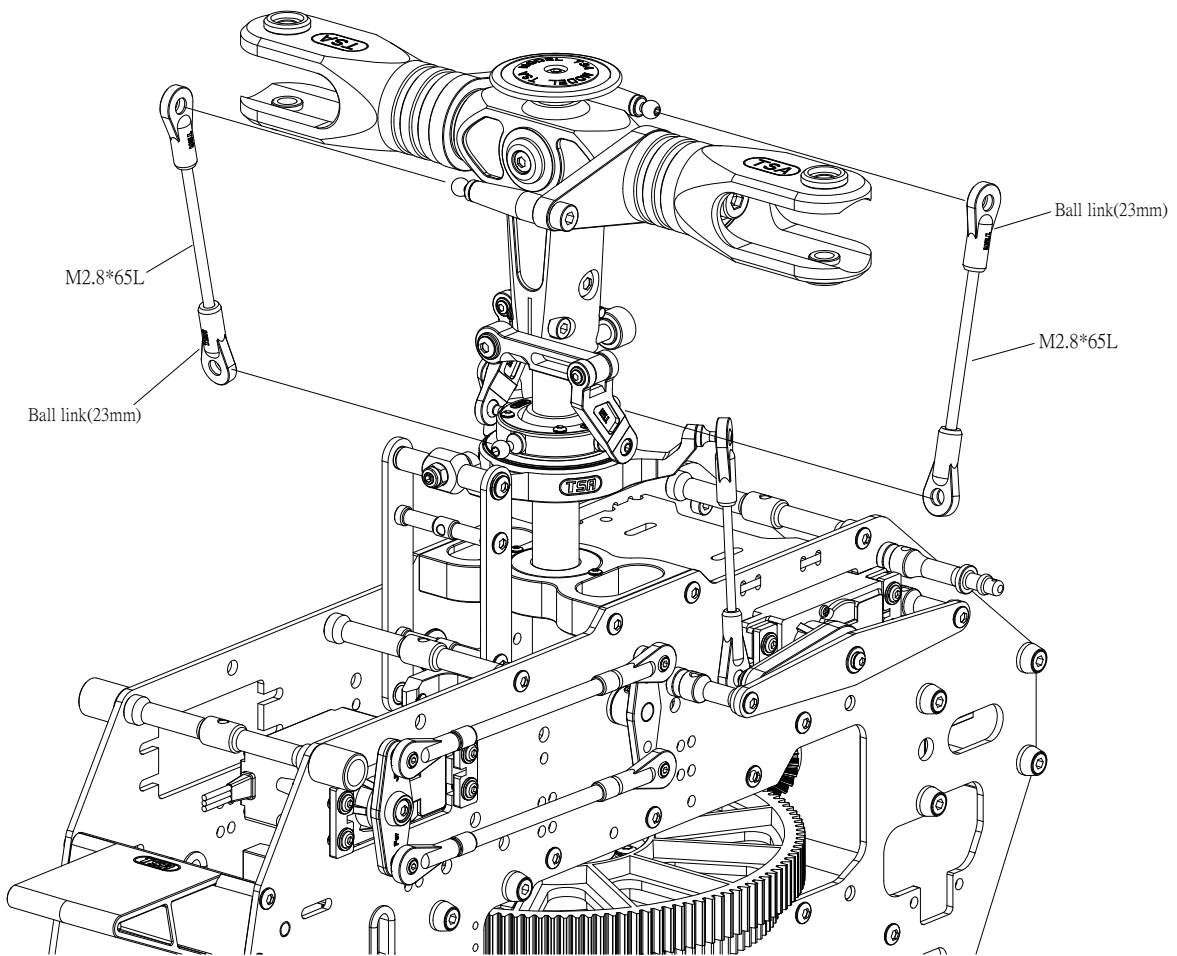
T-016-05

 Please apply loctite when locking all metal screws .



Caution

Measure the pitch angle after assembly of the blades, and then make the adjustment .




31









Linkage Rod Assembly

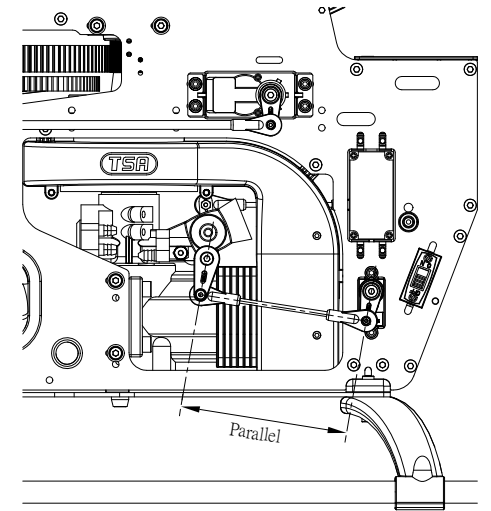
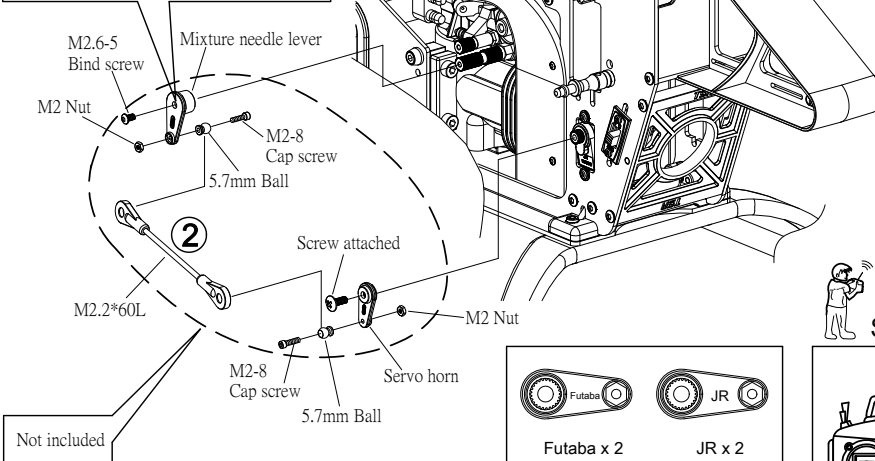
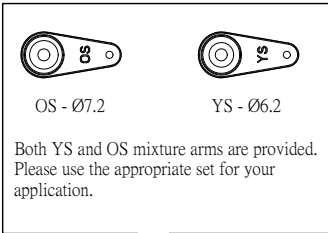
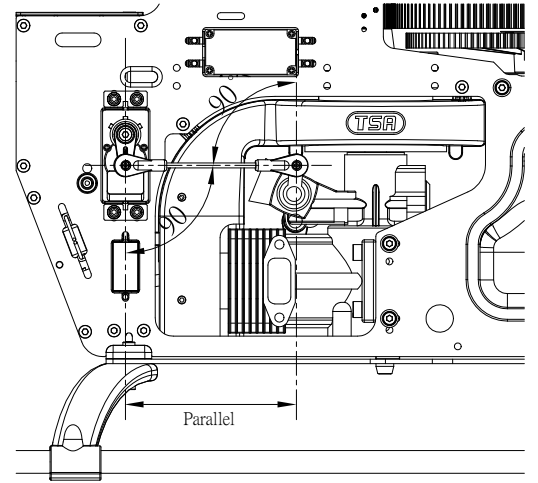
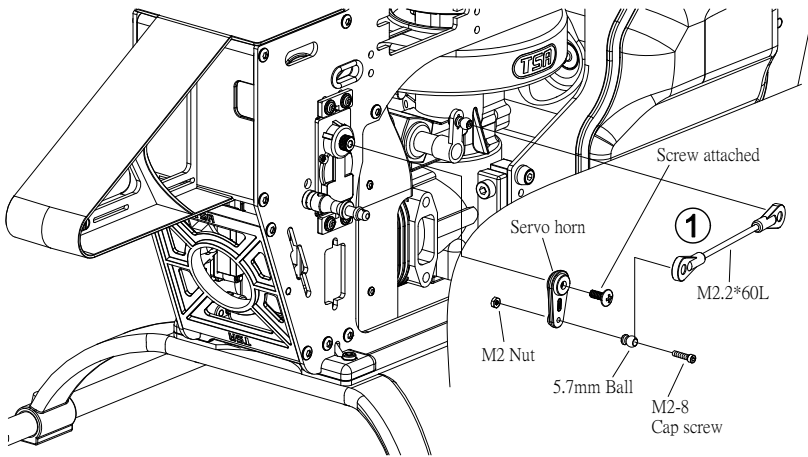
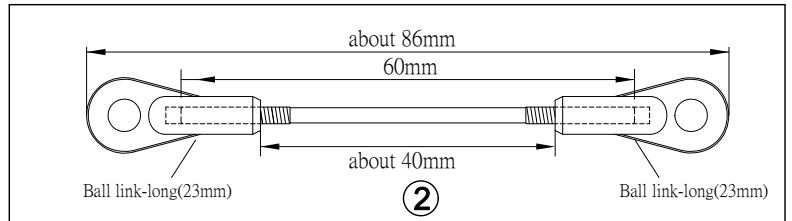
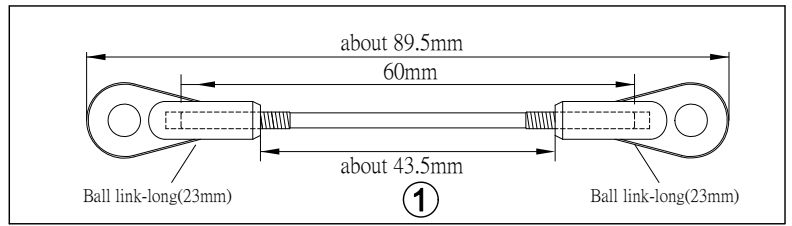
T-020-05

T-021-01

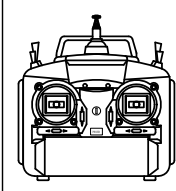
T-024-00

 Please apply loctite when locking all metal screws .

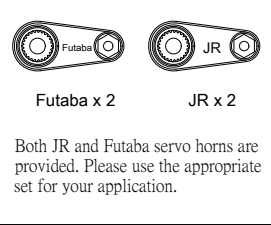
-   M2-8 Cap screw 3
-   M2.6-5 Bind screw 1
-   5.7mm Ball 3
-   M2 Nut 3



Setup Tips



Turn on the transmitter before installing the servo rod, ensure the radio has a linear throttle/pitch curve and the throttle is set to mid stick 50% travel. This will enable close to equal travel limits for high/low throttle.



The rod's length varies depending on the servo. Adjust the length according to the instructions and verify once fitted on the model.

32


Rudder Linkage Assembly

T-023-01

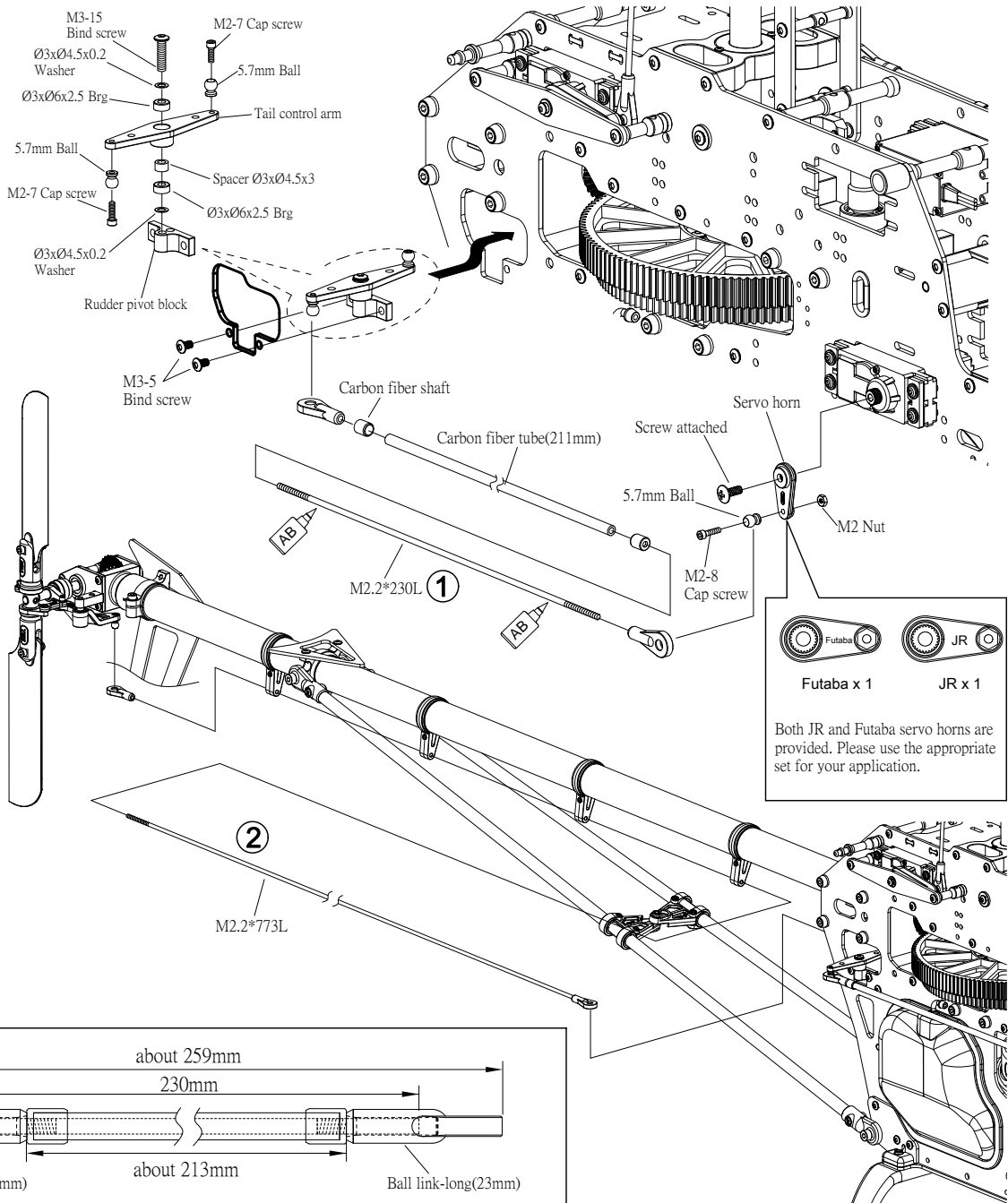
T-024-00



T-027-02

T-028-18

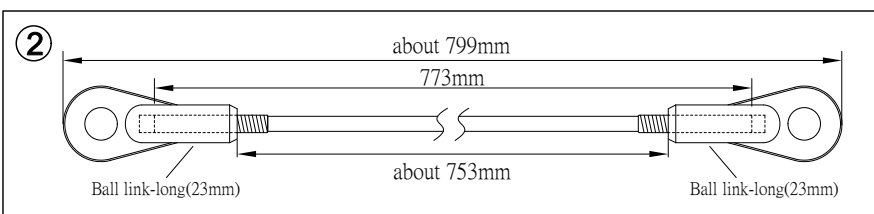
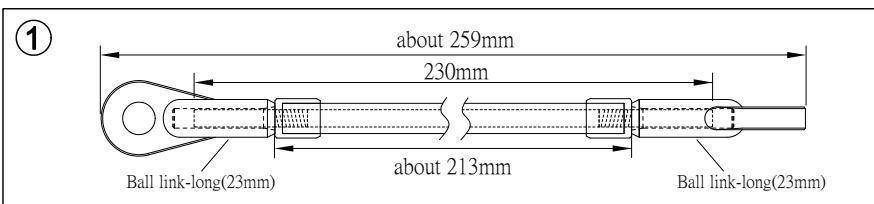
 Please apply loctite when locking all metal screws.

-   2
-   1
-   2
-   1
-   3
-   2
-   1
-   1
-   2

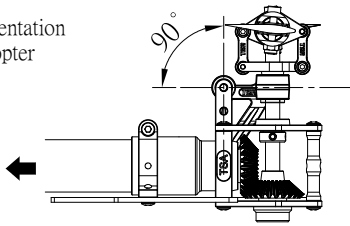


 Futaba x 1  JR x 1

Both JR and Futaba servo horns are provided. Please use the appropriate set for your application.



Note the orientation of the helicopter



During initial setup of the lever, adjust the tail blade as shown (left). Setup is different among gyro manufacturers, so consult manual before test flying.

33

Main Blade Assembly

T-016-05



M5-32-6 Cap screw

2



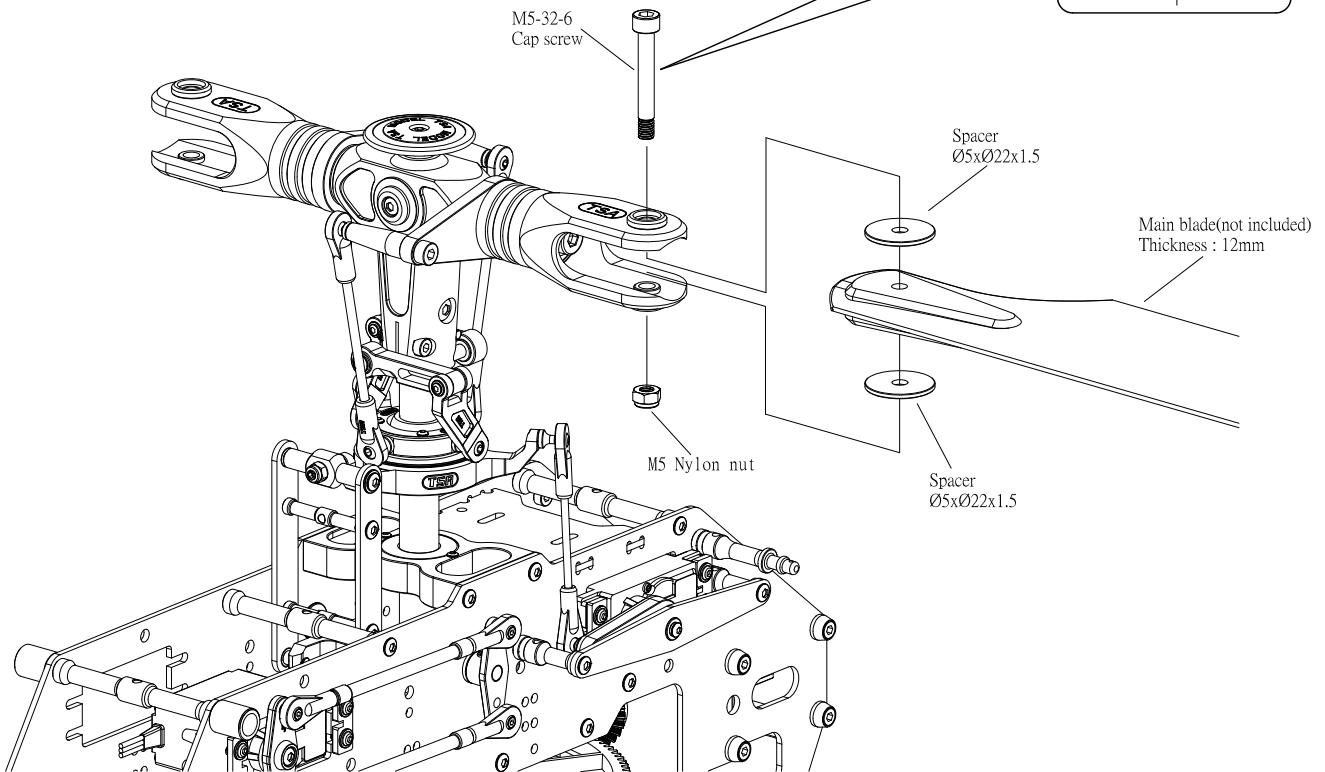
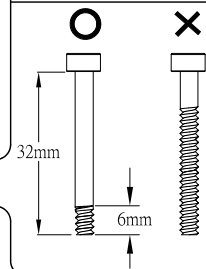
M5 Nylon nut

2



Caution

Only use long shank M5 mounting screw!



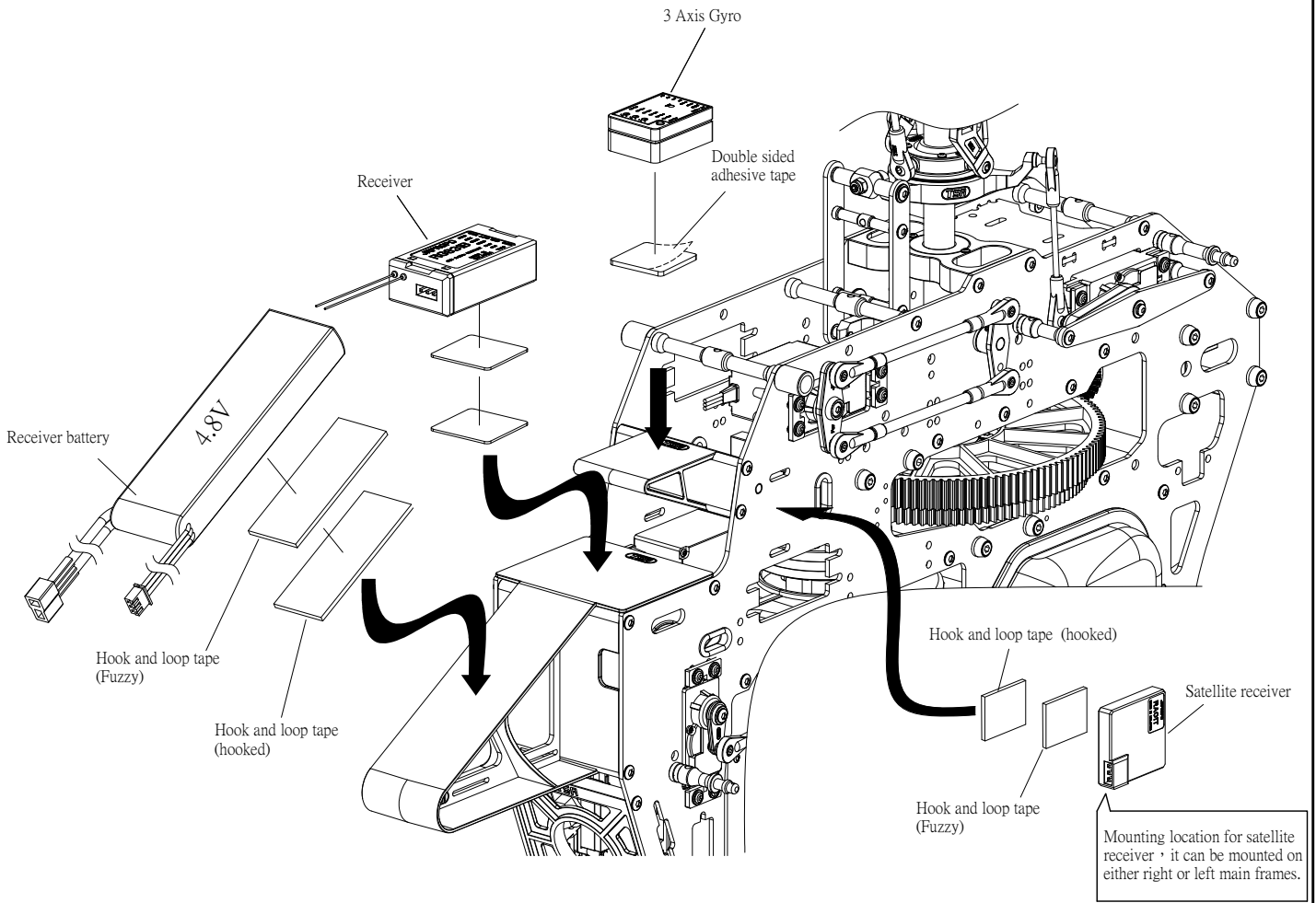
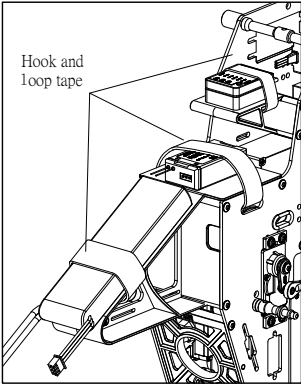
34

Receiver and Gyro Assembly

Caution

The gyro sensor has a special orientation when installed. Install it according to the gyro's instruction manual .

For JR



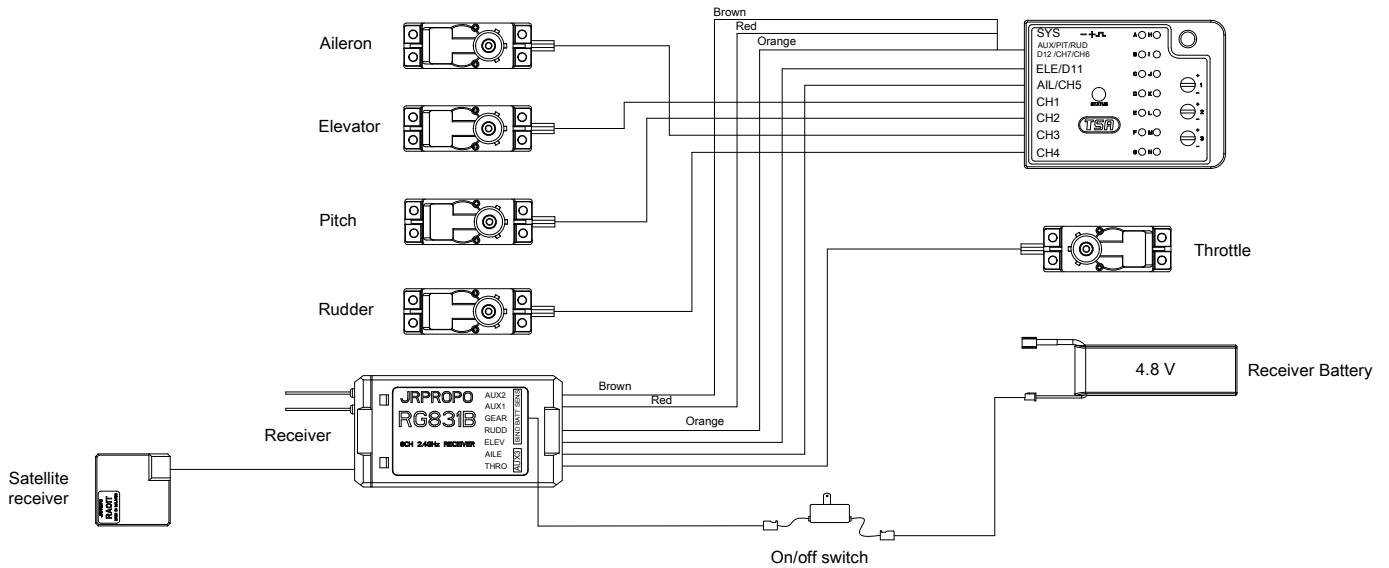
Caution

The electrical control system as stated above shall be assembled in according to its corresponding instruction manual.

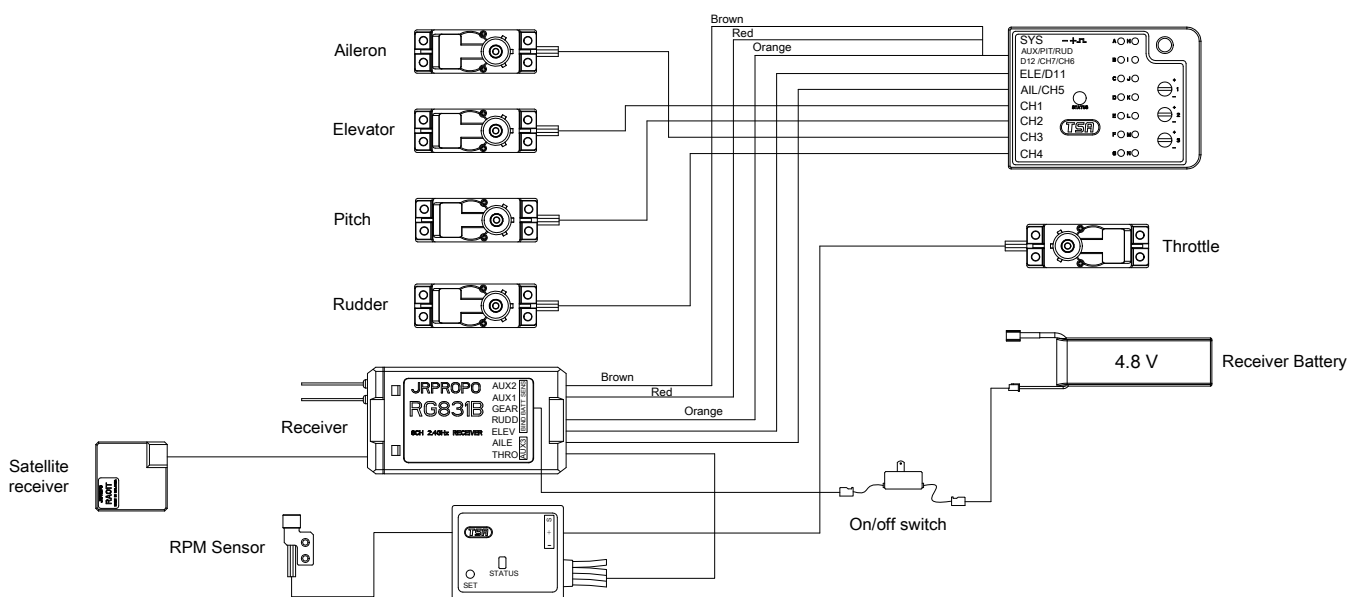
35

Electrical Control System Wiring Diagram

JR / 7CH receiver wiring

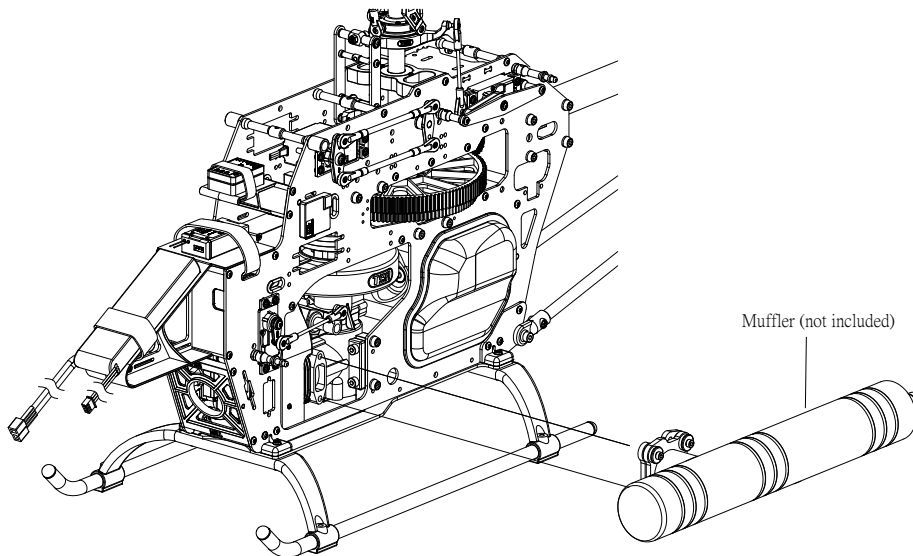


JR / 7CH receiver wiring/Governor



36

Muffler Assembly

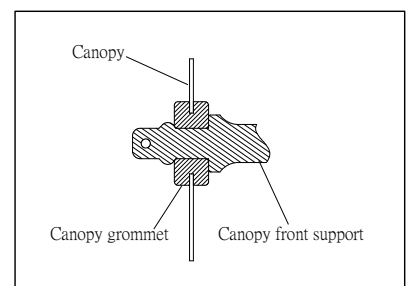
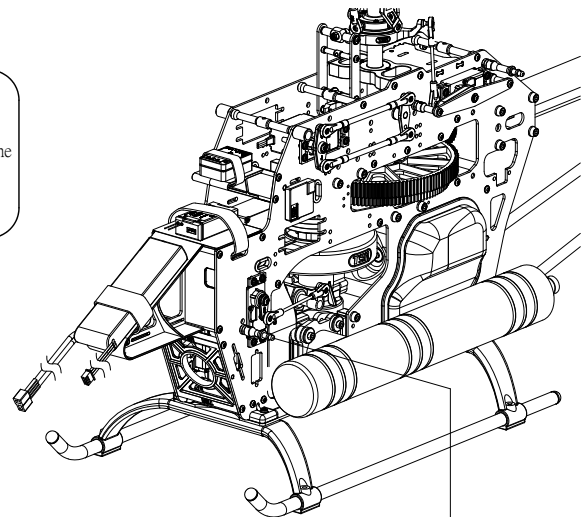
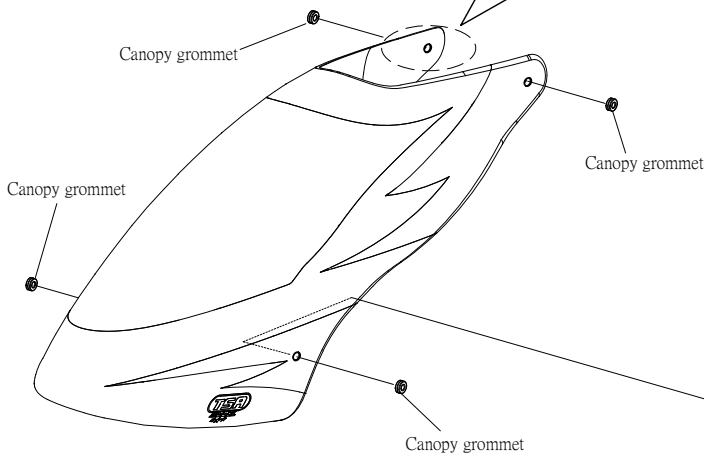
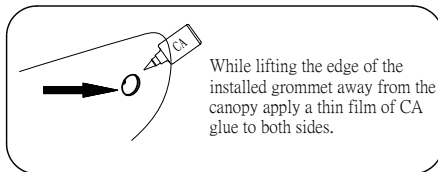
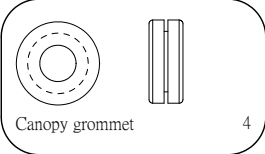


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Canopy Assembly

T-005-01

Optional custom designed canopies are available. Please check website for availability.





Flybarless gyro setup-3 Axis gyros

Caution

Please refer to the Flybarless gyro instruction manual for setting up the cyclic and tail servo along with the rotor head. This will be specific for each system.



Main blade adjustment

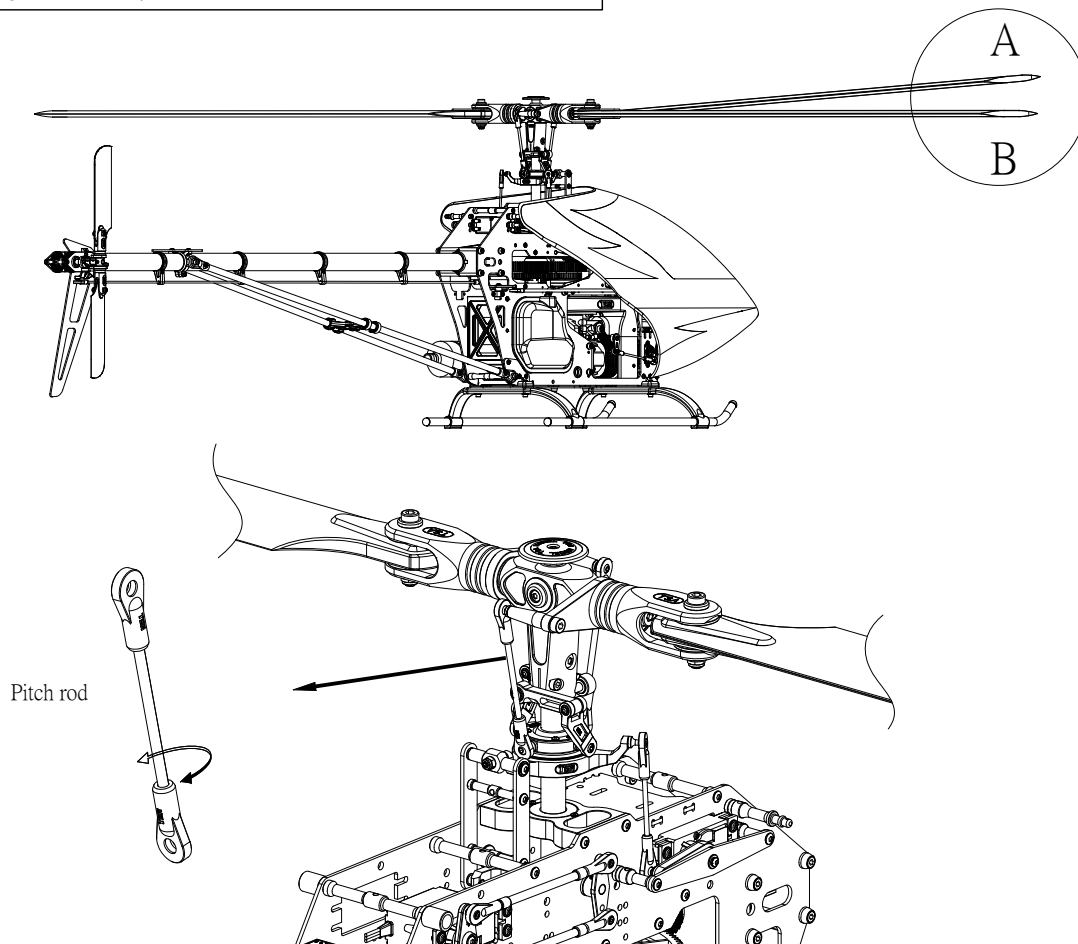
Caution

Precaution during initial setup is for the safety of yourself and others, so please make sure the heli is flying at least 10m away from any person.

1. Increase pitch slowly until the helicopter comes to a stable hover. Note any separation in the rotor blades.
2. Observe the blade tracking:
If main blades are in the same track, then no adjustment required. However, if one blade appears higher than the another blade, then adjustments must be made.
3. Adjust pitch rod tracking:
A. Main blade is higher → reduce length of linkage rod
B. Main blade is lower → add the length of linkage rod

Caution

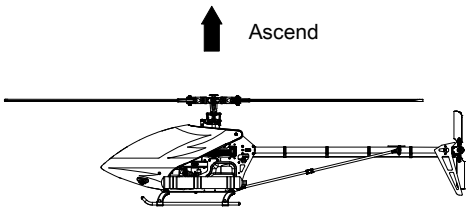
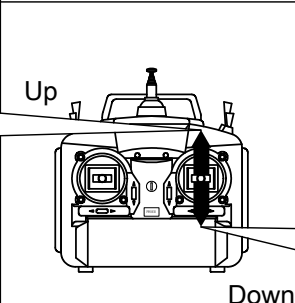
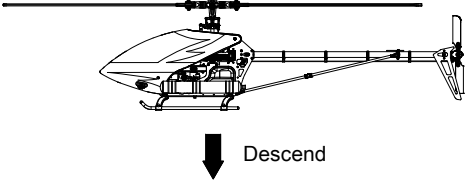
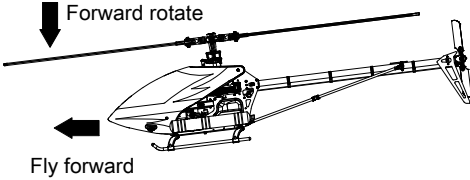
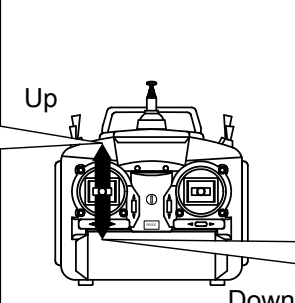
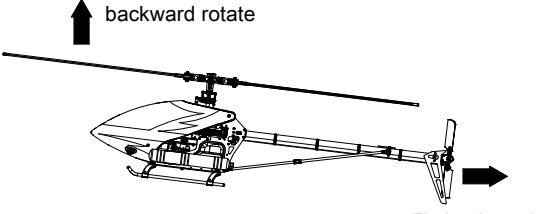
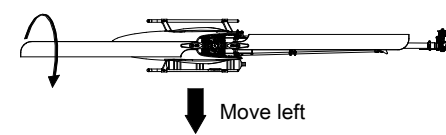
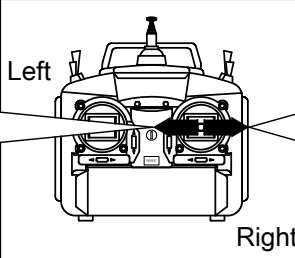
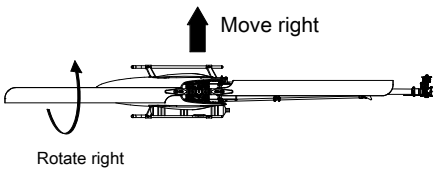
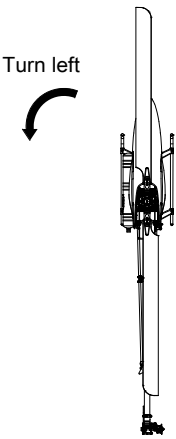
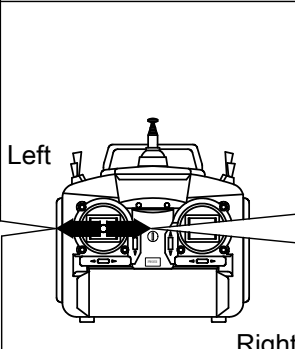
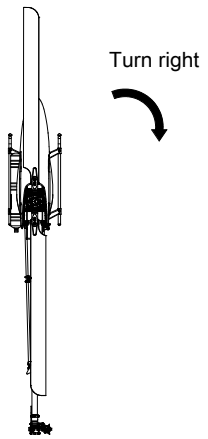
Improper tracking will result in vibration, Adjust track until both blades are tracking in the same plane.





Caution Beginners should know the designated operating mode of (TSA)700N-3D before operating to avoid accidents

(Mode 1)

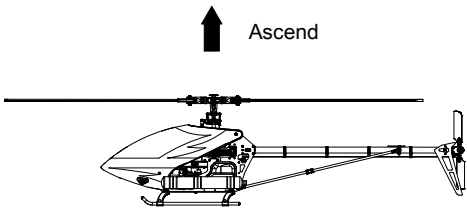
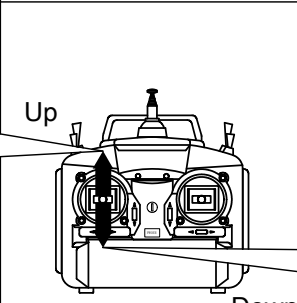
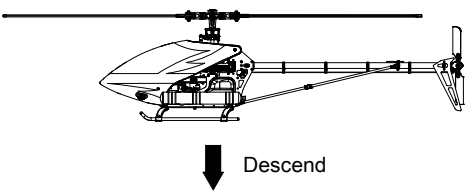
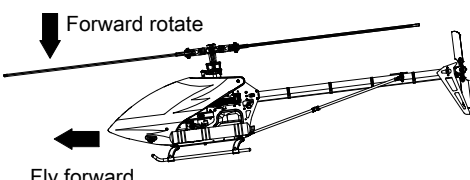
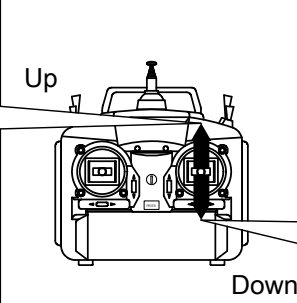
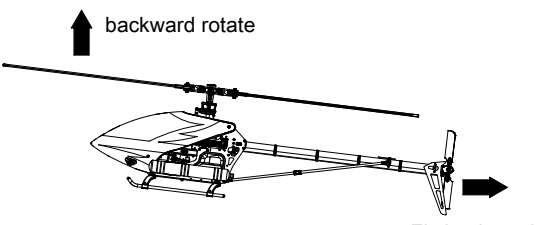
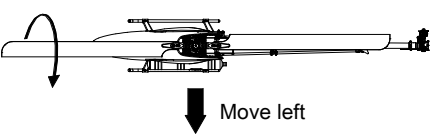
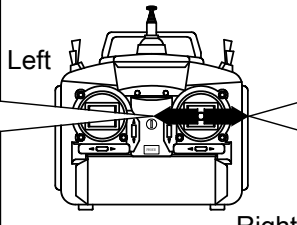
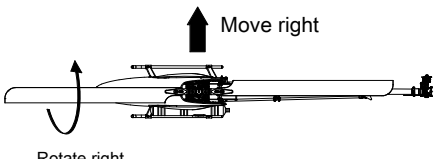
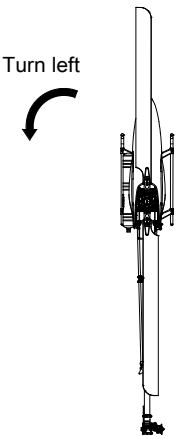
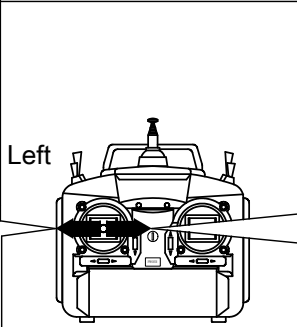
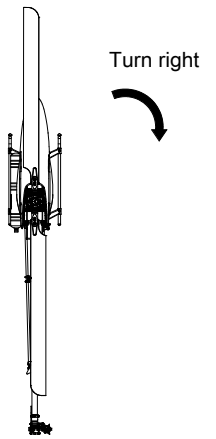
 <p>Pushing the pitch control upward will cause the unit to ascend.</p>	<p>Throttle / Pitch</p> 	 <p>Push the pitch control down, then the unit will descend.</p>
 <p>Pushing the elevator control up, then the unit will go forward.</p>	<p>Elevator</p> 	 <p>Push the elevator control down, then the unit will go backward.</p>
 <p>Push the aileron control left, the unit will move to the left.</p>	<p>Aileron</p> 	 <p>Push the aileron control right, then the unit will move to the right.</p>
 <p>Push the rudder control to the left, the body and nose of unit will rotate to the left.</p>	<p>Rudder</p> 	 <p>Push the rudder control to the right, the body and nose of unit will rotate to the right.</p>



Caution

Beginners should know the designated operating mode of (TSA)700N-3D before operating to avoid accidents

(Mode 2)

 <p>Pushing the pitch control upward will cause the unit to ascend.</p>	<p>Throttle / Pitch</p>  <p>Up Down</p>	 <p>Push the pitch control down, then the unit will descend.</p>
 <p>Pushing the elevator control up, then the unit will go forward.</p>	<p>Elevator</p>  <p>Up Down</p>	 <p>Push the elevator control down, then the unit will go backward.</p>
 <p>Push the aileron control left, the unit will move to the left.</p>	<p>Aileron</p>  <p>Left Right</p>	 <p>Push the aileron control right, then the unit will move to the right.</p>
 <p>Push the rudder control to the left, the body and nose of unit will rotate to the left.</p>	<p>Rudder</p>  <p>Left Right</p>	 <p>Push the rudder control to the right, the body and nose of unit will rotate to the right.</p>

The helicopter's main and tail rotors spin at very high speed. Make sure to follow these instructions to ensure a safe and enjoyable flight.

Transporting the unit

When transporting the unit to an airfield, secure it to prevent the unit from tipping over. Avoid causing damage to the components which may adversely affect flight performance and safety.

Check the unit before flight

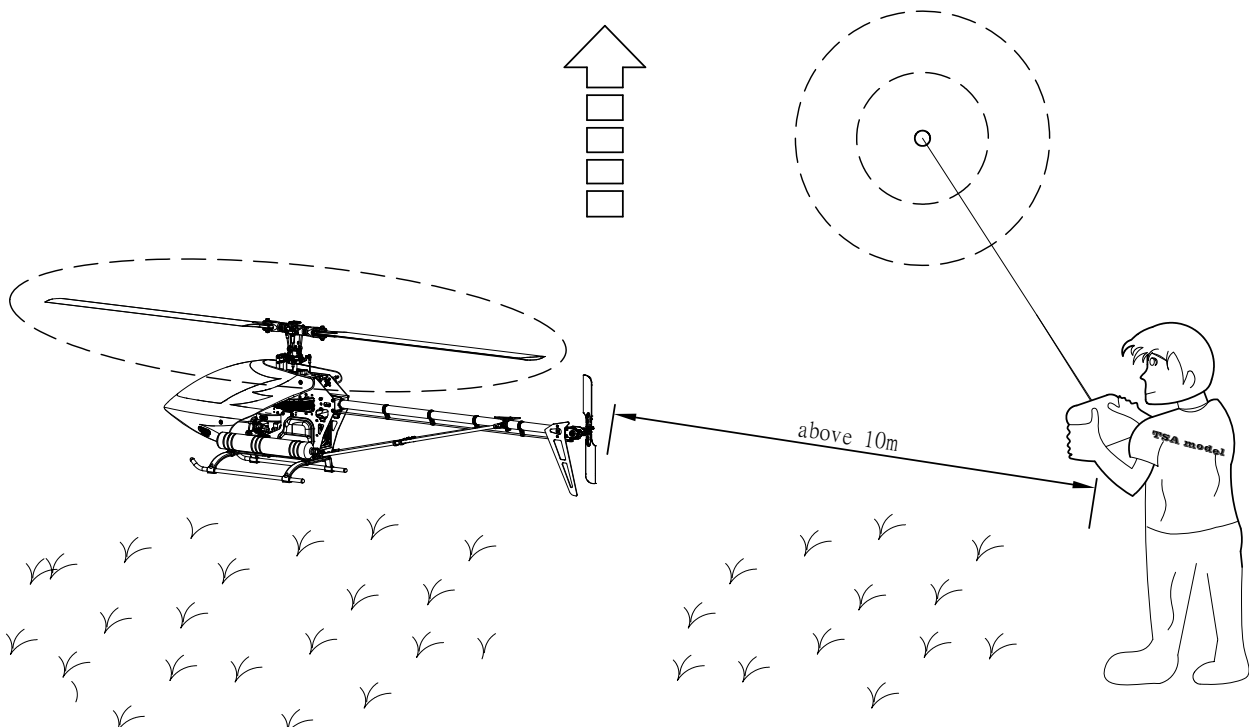
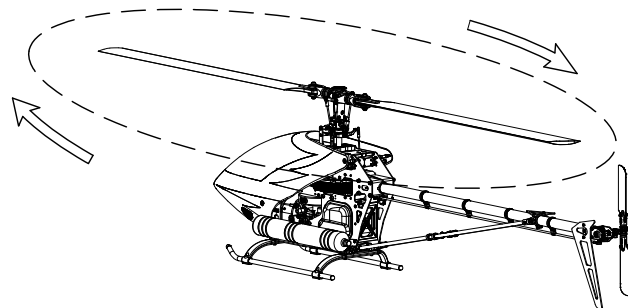
Check that all of the screws are securely fastened. New unit tends to have loose screws. Make sure to check them all before each flight. Check that the transmitter and receiver batteries are fully charged.

The airfield

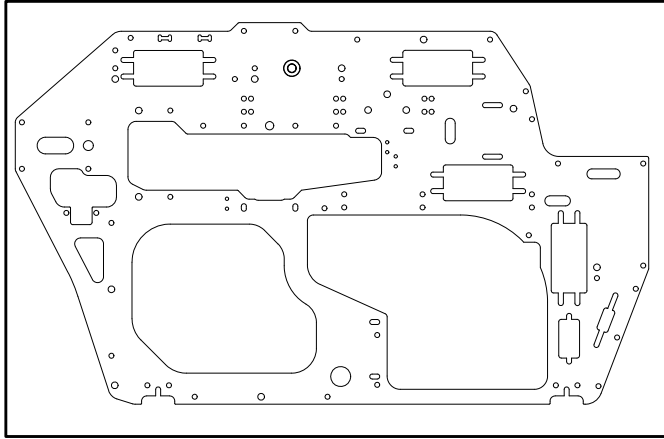
Do not fly

1. Near people ,
2. Near buildings ,
3. Near roads, railway tracks, or power lines .

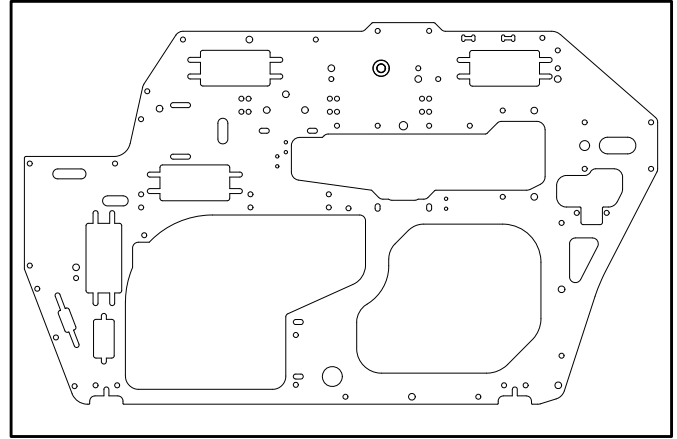
The distance of flight



✳️ Order Number: TPA00120XX(Left)



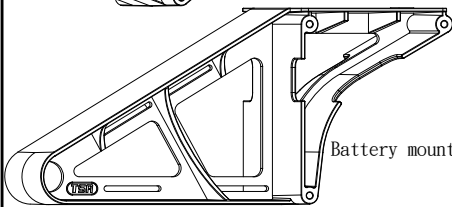
✳️ Order Number: TPA00121XX(Right)



Order Number: TPA00500XX



Gyro mount

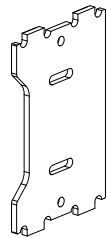


Battery mount



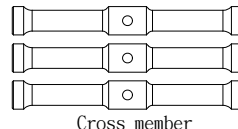
M3-8 PH screw

Order Number: TPA0276001

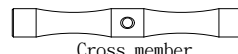


Gyro Plate

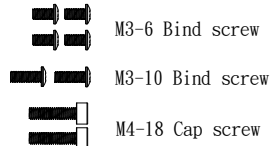
Order Number: TPA00301XX



Cross member



Cross member

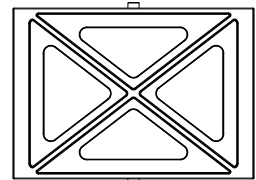


M3-6 Bind screw

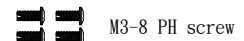
M3-10 Bind screw

M4-18 Cap screw

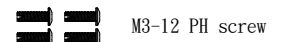
Order Number: TPA00400XX



Rigidity brace * 2

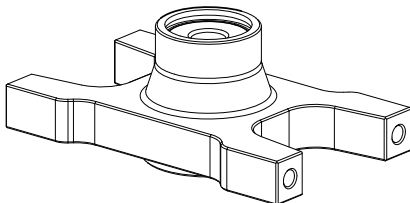


M3-8 PH screw



M3-12 PH screw

✳️ Order Number: TPA00601XX

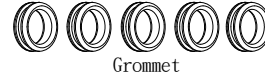


Custom Washer



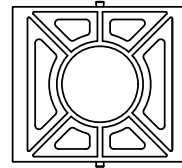
M3-8 Cap screw

Order Number: TPA0145000

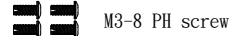


Grommet

Order Number: TPA00402XX

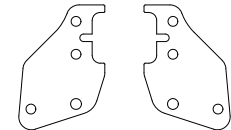


Rigidity brace



M3-8 PH screw

Order Number: TPA0283107



Rigidity plate

Order Number: TPA01301XX

Order Number: TPA01001XX

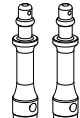


Canopy front support



M3-6 Cap screw

Order Number: TPA01201XX



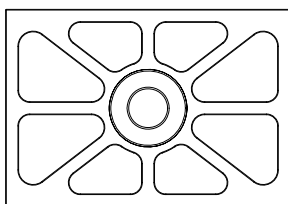
Canopy rear support



M3-6 Cap screw

✳️ Order Number: TPA00902XX

✳️ Order Number: TPA00701XX

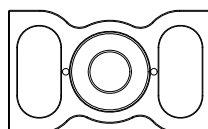


Centre bearing block



M3-6 Bind screw

✳️ Order Number: TPA00802XX



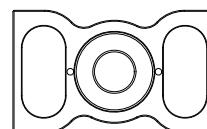
Main bearing holder



M3-6 Bind screw



M2-4 Bind screw



Main bearing holder



Custom Washer

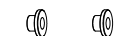


M3-8 Cap screw

Order Number: TPA01100XX



Canopy damper



Flange washer

✳️ Parts with this symbol have been assembled by the bearing factory.

Spare parts

Order Number: TPA01601XX

Order Number: TPA01400XX

Landing skid

M4-4 SS

Order Number: TPA01501XX

Landing skid tube

Order Number: TPA01801XX

Fan shroud

Hex insert

M3-6 Bind screw

Order Number: TPA01700XX

fan shroud insert

M2-6 Bind screw

Order Number: TPA01900XX

Plastic Skid Mount

M3-12 PH screw

M3-18 Cap screw

M3 Nut

Washer(Ø3x08x0.8)

Order Number: TPA02200XX

Fuel tank (600CC)

Fuel fitting

Hex nut

Fuel tank grommet

Order Number: TPA02010XX

Fuel tube(Ø2.5x04x90mm)

Fuel tube(Ø2.5x05.5x500mm)

Order Number: TPA02000XX

Fuel tank pickup

Fuel inducer

Fuel tank nipple

Inducer cover

M3-5 Stainless steel bind screw

Order Number: TPA0147000

Fuel tank guard

Order Number: TPA0262001

Base plate

Order Number: TPA0340000

Plastic tail boom clamp

Order Number: TPA02700XX

Ø6x013x5 Bearing

Ø12x018x4 Bearing

Order Number: TPA02500XX

Hex insert

Custom Washer

M3-8 Cap screw

M3-6 Bind screw

M3-8 Bind screw

Order Number: TPA02600XX

Bevel gear

Locating pin (Ø2*12mm)

M3-5 SS

Order Number: TPA02901XX

M3-6 Bind screw

Fan hub

M3-10 Cap screw

Spacer Ø8.2*Ø15*1

M4-8 Cap screw

Order Number: TPA03001XX

Clutch

Order Number: TPA0325001

Plastic fan

Order Number: TPA03401XX

Clutch shaft

Starter coupling

M4-5 SS

Order Number: TPA03102XX

Retainer nut

Spur gear

❖ Order Number: TPA03201XX

Clutch bell

Order Number: TPA0380001

Clutch liner

❖ Order Number: TPA03302XX

Order Number: TPA0043000

Plastic main gear(126T)

Order Number: TPA0121003

Main shaft

❖ Order Number: TPA03501

M3-8 Bind screw

Order Number: TPA0122000

Auto-rotation drive shaft

Order Number: TPA0123000

One way bearing collar

Order Number: TPAB01608X

Ø15xØ23x11
One way bearing

Order Number: TPA03600XX

Plastic tail drive gear(113T)

Spacer(Ø4*Ø5.5*3.25)

Order Number: TPA03901XX

Engine mount

Custom Washer

M3-10 Cap screw

M4-16 Cap screw

Order Number: TPA03800XX

M4 Nylon nut

M4-27-6 Cap screw

Spare parts

✱ Order Number: TPA04605XX

M3-18 SS
 Spacer (03*05*3.37)
 M3 Nylon nut

Order Number: TPA04001XX

Metal Pivot Arm
 M4-4 SS
 M3-10 Bind screw
 Spacer (03*04.2*2.45)

Order Number: TPA04101XX

Elevator shaft
 M3-6 Bind screw

Order Number: TPA04201XX

Metal elevator lever
 5.7mm Ball
 M4-4 SS
 M2-7 Cap screw

Order Number: TPA04301XX

Cross member (31mm)
 M3-6 Bind screw

✱ Order Number: TPA04404XX

ARE supports

✱ Order Number: TPA04501XX

Metal Pivot block
 M3-8 Bind screw
 Spacer (03*05*3.37)
 M3-18 SS
 M3 Nylon nut

Order Number: TPA0210001

Spacer (05*07*16.55)

✱ Order Number: TPA20100XX

12mm Ball
 M2-4 Bind screw

Order Number: TPA20000XX

Coupling
 Pivot ball

Order Number: TPA20201XX

11mm Ball
 12mm Ball
 13mm Ball

✱ Order Number: TPA20401XX

✱ Order Number: TPA20301XX

Washout control arm
 Spacer (02*03.2*0.9)
 M2-6 Bind screw

Order Number: TPA0306000

Mixing arm

Order Number: TPAB00100X

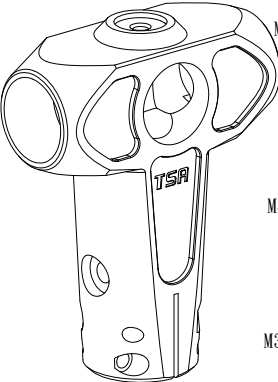
Bearing (02x05x2.3)

Order Number: TPA04700XX


5.7mm Ball
 M2 Nut
 M2-8 Cap screw

Order Number: TPA20901XX


Order Number: TPA20801XX




Metal head block




M4-5 Bind screw



M3-15 Cap screw




Spacer(Ø3*Ø4.5*6.2mm)




M3-20 Bind screw


Order Number: TPA20601XX




Teeter hub



Acetyl bearing




Custom washer



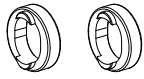
M3-6 Bind screw

Order Number: TPA0201001




Damper shim (Ø10*Ø15.5*1mm)

Order Number: TPA0302001




Feathering shaft guides

Order Number: TPA0141001




Damper50° (black)

Order Number: TPA20700XX

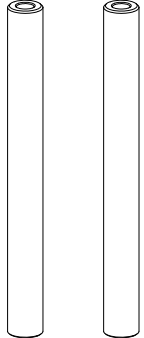


Head button

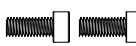


M3-12 Bind screw


Order Number: TPA20501XX



Spindle(Ø10*111.2mm)

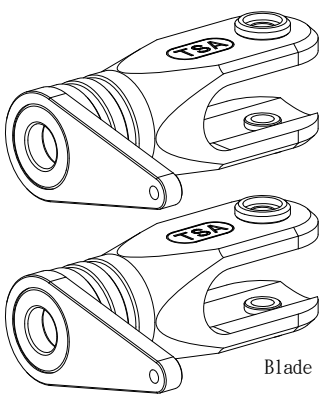


M6-12 Cap screw




Washer
Ø6xØ13x2


✳ Order Number: TPA21203XX




Blade grip




M5 Nylon nut




M5-32-6
Cap screw



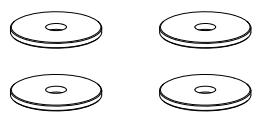
Pitch arm



11mm Ball




M4-10 Cap screw

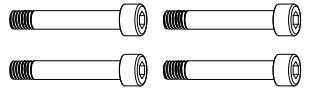


Spacer(Ø5*Ø22*1.5mm)

Order Number: TPA21002XX

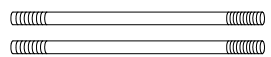


M5 Nylon nut




M5-32-6 Cap screw

Order Number: TPA21301XX




Rod(M2.8*65mm)




Ball link


✳ Order Number: TPA42001XX



M3 Nylon nut

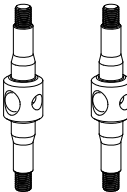


M3-17-5 Cap screw




M4-4 SS


Order Number: TPA41700XX



Tail spindle

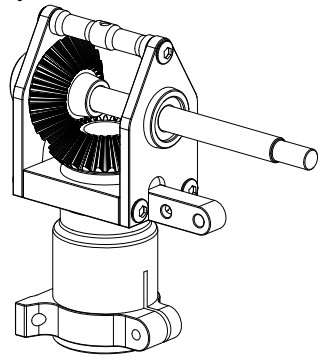



M4-4 SS




M4 Nylon nut


✳ Order Number: TPA42101XX


M3-5 Bind screw



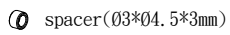
M3-6 Bind screw



M3-12 Cap screw




M3-18 Bind screw




spacer(Ø3*Ø4.5*3mm)

✳ Order Number: TPA41901XX

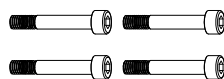


Metal tail blade grip

Order Number: TPA41801XX

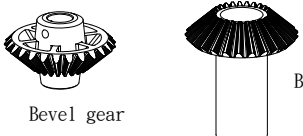


M3 Nylon nut



M3-17-5 Cap screw

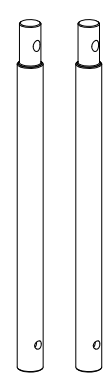
Order Number:TPA02300XX



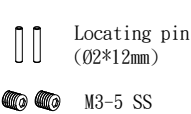
Bevel gear

Bevel gear

Order Number:TPA40900XX



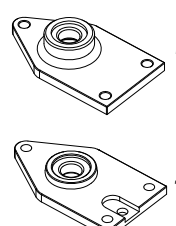
Metal tail output shaft



Locating pin (Ø2*12mm)

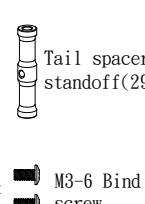
M3-5 SS

✳️Order Number:TPA41200XX



Tail case left

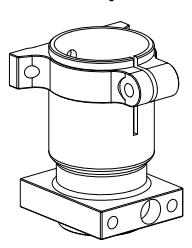
Tail case right



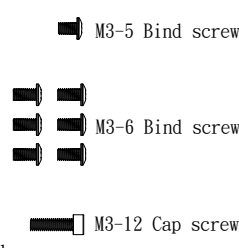
Tail spacer standoff(29.5mm)

M3-6 Bind screw

✳️Order Number:TPA41301XX



Metal tail gearbox clamp

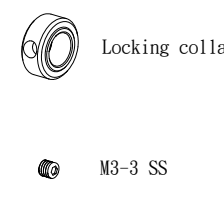


M3-5 Bind screw

M3-6 Bind screw

M3-12 Cap screw

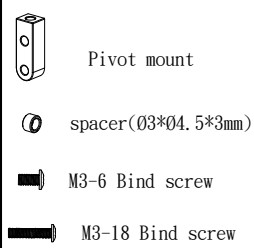
Order Number:TPA40800XX



Locking collar

M3-3 SS

Order Number:TPA41100XX



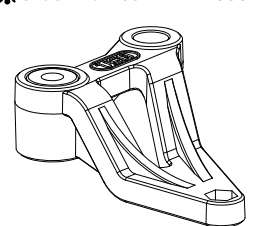
Pivot mount

spacer(Ø3*Ø4.5*3mm)

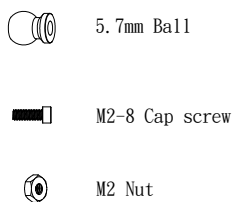
M3-6 Bind screw

M3-18 Bind screw

✳️Order Number:TPA41000XX



Tail bell crank

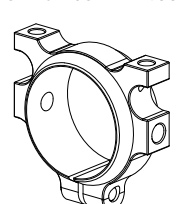


5.7mm Ball

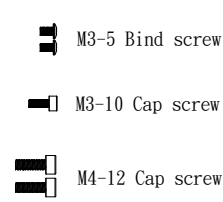
M2-8 Cap screw

M2 Nut

Order Number:TPA40001XX



Metal tail boom clamp

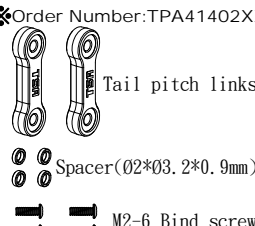


M3-5 Bind screw

M3-10 Cap screw

M4-12 Cap screw

✳️Order Number:TPA41402XX

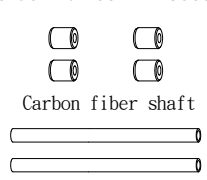


Tail pitch links

Spacer(Ø2*Ø3.2*0.9mm)

M2-6 Bind screw

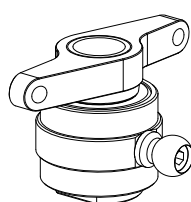
Order Number:TPA06600XX



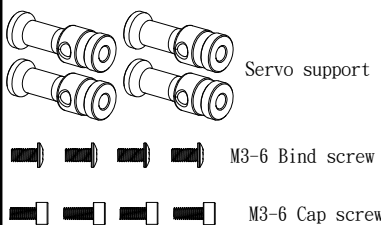
Carbon fiber shaft

Carbon fiber tube(59.8mm)

✳️Order Number:TPA41601XX



Order Number:TPA04801XX

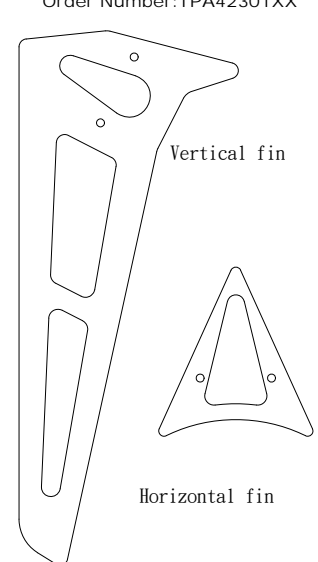


Servo support

M3-6 Bind screw

M3-6 Cap screw

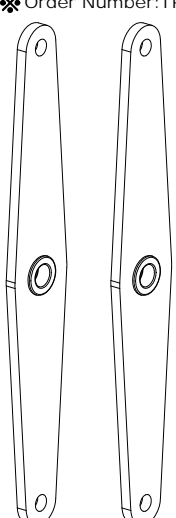
Order Number:TPA42301XX



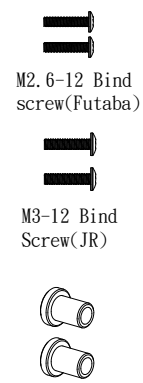
Vertical fin

Horizontal fin

✳️Order Number:TPA04901XX



Servo support plate

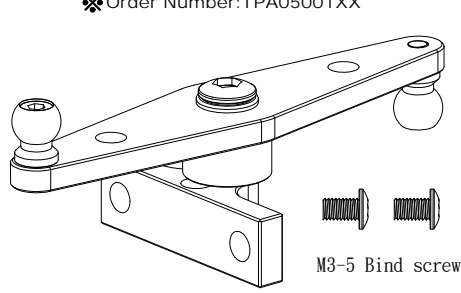


M2.6-12 Bind screw(Futaba)

M3-12 Bind Screw(JR)

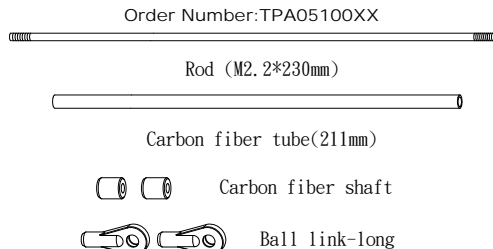
Servo support guide

✳️Order Number:TPA05001XX



M3-5 Bind screw

Order Number:TPA05100XX



Rod (M2.2*230mm)

Carbon fiber tube(211mm)

Carbon fiber shaft

Ball link-long

Spare parts

<p>Order Number: TPA05202XX</p> <p>Rod (M2. 2*50mm)</p> <p>Rod (M2. 2*60mm)</p> <p>Rod (M2. 8*65mm)</p> <p>Rod (M2. 2*80mm)</p>	<p>Order Number: TPA05300XX</p> <p>Ball link</p> <p>Ball link-long</p>	<p>Order Number: TPA05400XX</p> <p>Lever(JR)</p> <p>13mm Ball</p> <p>Order Number: TPA05401XX</p> <p>Lever(Futaba)</p> <p>13mm Ball</p>	<p>Order Number: TPA05700XX</p> <p>Servo mounting plate</p> <p>M2. 6-18 PH screw</p>	<p>Order Number: TPA06500XX</p> <p>Wire clamp</p> <p>Wire clamp</p> <p>Wire clamp</p> <p>Order Number: TPA033000</p> <p>Servo plate</p>
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<p>Order Number: TPA05500XX</p> <p>Servo horn(JR)</p> <p>Lever(JR)</p> <p>5.7mm Ball</p> <p>M2 Nut</p> <p>M2-8 Cap screw</p>	<p>Order Number: TPA40100XX</p> <p>Push rod guide</p> <p>M2 Nut</p> <p>M2-8 Cap screw</p>	<p>Order Number: TPA40301XX</p> <p>Boom support ends(Ø8)</p> <p>M2. 6-12-3 Bind screw</p> <p>M2. 6 Nut</p>	<p>Order Number: TPA40600XX</p> <p>Bearing carrier</p>
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<p>Order Number: TPA05501XX</p> <p>Servo horn (Futaba)</p> <p>Lever(Futaba)</p> <p>5.7mm Ball</p> <p>M2 Nut</p> <p>M2-8 Cap screw</p>	<p>Order Number: TPA40201XX</p> <p>Boom support brace(Ø8)</p> <p>Boom clamp (Ø8)</p> <p>M2-10 Cap screw</p> <p>M2 Nut</p> <p>M3 Nylon nut</p> <p>M3-10 Cap screw</p>	<p>Order Number: TPA0172000</p> <p>T/T drive end</p>	<p>bearing(Ø8*Ø14*4)</p>
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Order Number: TPA40701XX

Topque tube(781.5mm)

Order Number: TPA40502XX

Ball link-long(23mm)

Rudder rod (M2. 2*773mm)

Order Number: TPA40410XX

Tail boom support(Ø8*597mm)

Order Number: TPA0084002

tail boom(788mm)

Order Number: TPA90000XX

Silicone grease

Retainer

5 minute epoxy

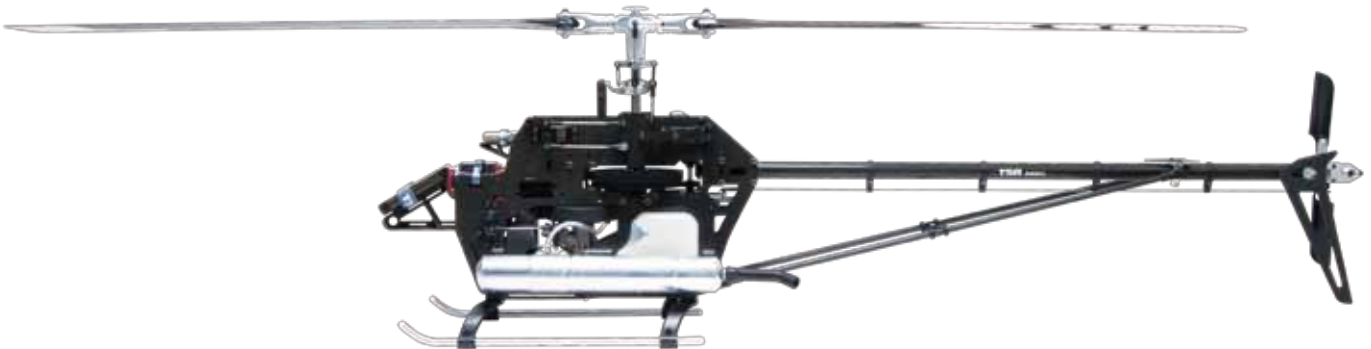
Order Number: TPA60201XX

Canopy

Canopy grommet

Specifications

- ★ Full length of fuselage ----- 1368mm
- ★ Full width of fuselage ----- 215mm
- ★ Height ----- 419mm
- ★ Flying weight (approx) ----- 4390g
- ★ Main rotor diameter ----- 1580mm
- ★ Tail rotor diameter ----- 262mm
- ★ Engine class ----- 90~120 Nitro
- ★ Gear ratio ----- 8.0~8.4:1:4.52
- ★ Main gear ratio ----- 15T:120T/126T
- ★ Tail gear ratio ----- 113T:25T
- ★ Full tank capacity ----- 650cc
- ★ Main blade (not included) ----- 680~710mm
- ★ Tail blade (not included) ----- 90~110mm



INFUSION 7000
Platinum

Customer Support: sales@tsamodel.com



Safety Precautions

Helicopter spinning blades are potential dangerous. Please ensure to maintain a minimum distance of 10m from the aircraft at all times. It is the responsibility of the builder to ensure the aircraft is airworthy and safe to operate in the designated area. On going maintenance is required by the operator to ensure continuous safe use and all damaged parts should be replaced immediately.

Small components are included in the kit, please ensure the kit parts are kept out of children's reach, as they are small enough to swallow.

Use only TSA Model genuine parts, failure to do so could result in damage to both the aircraft and personal in the area. TSA Model takes no responsibility for the operational use of the aircraft.



Caution

Reproduction of the manual and any TSA components are strictly prohibited.

The contents of this manual are subject to change without prior notice.

Every effort has been made to ensure that this manual is complete and correct.