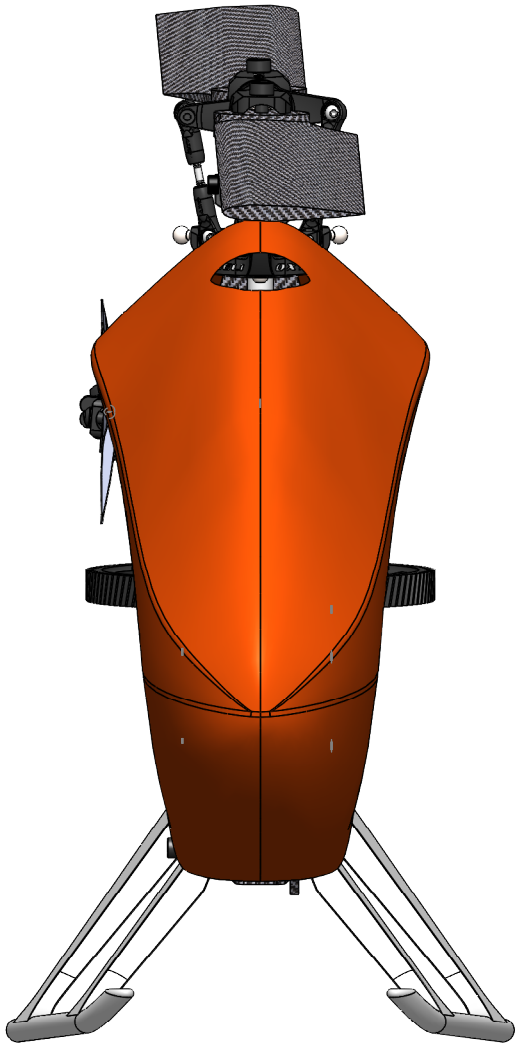
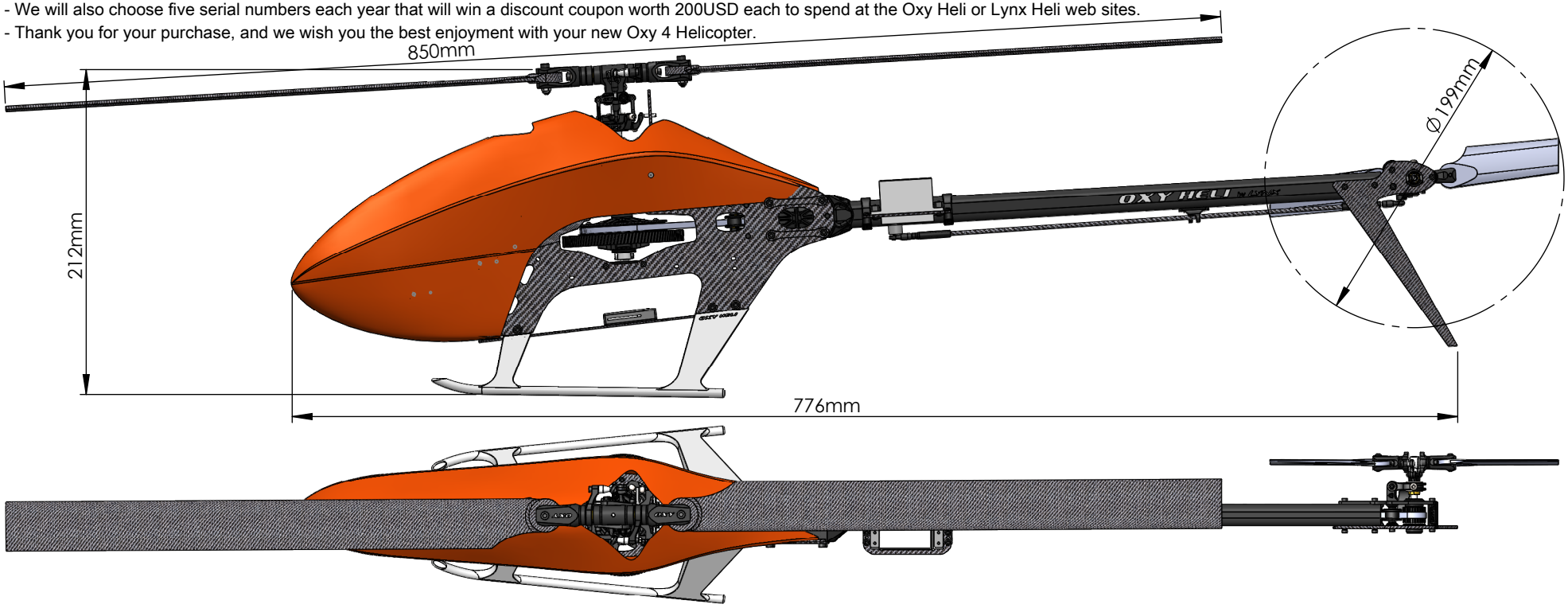
OXY 4 MAX

380-Instruction Manual



VERY IMPORTANT NOTE:

- Visit the Oxy Heli web site www.oxyheli.com to download the latest version of the manual.
- Inside Box 3 you will find your serial number card. Please take a moment to visit the Oxy Heli web site and follow the instructions to register your helicopter and serial number.
- It is important you take few minutes to register your helicopter and serial number with us. This is the only way to be in contact with us to receive news, promotional information and technical tips.
- We will also choose five serial numbers each year that will win a discount coupon worth 200USD each to spend at the Oxy Heli or Lynx Heli web sites.
- Thank you for your purchase, and we wish you the best enjoyment with your new Oxy 4 Helicopter.



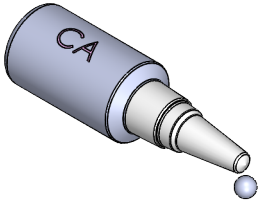
-Standard main rotor diameter	: 850mm (with 383mm blades).
-Standard main blade length	: 383mm
-Main Grip Clamping	: M3 / 6 mm root.
-Standard tail rotor diameter	: 199 mm.
-Standard tail blade length	: 70 mm.
-Standard Main Pulley	: 88T
-Standard tail Pulley	: 24T
-Tail Blade Clamping	: M2.5 / 3 mm root.
-Weight	: 800g (ready to fly excluding batteries)
-Maximum motor size	: diameter 41mm.
-Maximum battery size	: length 110mm, height 51mm, width 36mm, weight 380 gr
-Recommend battery	: max size.....

IMPORTANT NOTE:
This model helicopter has been designed and produced to be a high performance 3D machine. With its simple design and low parts count, pilots of all skill levels will appreciate its easy repairability. This is not a toy. Please take care assembling the model, and take care and responsibility when you fly it. We take no responsibility for any damage or injuries, either direct or consequential, from the use of this product. If you are not experienced in the assembly and flying of a high performance model helicopter we recommend you seek the assistance of an experienced pilot. Above all, fly safely and we hope you enjoy this model.

SAFETY GUIDELINES:
Only fly this model in areas designated for the use of model aircraft. Ensure you obtain indemnity insurance, normally available through your National model aircraft association. Remain at least 6 meters (20 feet) from the model at all times. Never allow spectators or animals any closer than 30 meters (100 feet) from the model.

NOTES FOR ASSEMBLY:
Please read this instruction manual fully before beginning assembly of this model helicopter. Be sure to use quality tools during the assembly process, and remember not to overtighten small fasteners. Note the following symbols which are used in this manual. Use thread lock sparingly where indicated. If you are unsure about an assembly step, please seek the advice of an experienced pilot. Warranty on any parts is only applicable prior to assembly of the part on the model. NONE OF THE PRE ASSEMBLED PARTS HAVE THREAD LOCK ON THE SCREWS. IS IMPORTANT TO READ AND FOLLOW THE ASSEMBLY NOTES IN EACH STEP. INCORRECT ASSEMBLY OR NOT USING THREAD LOCK WILL CAUSE A CRASH OR INJURY.

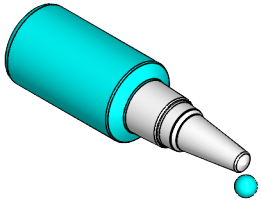
Important note



Use CA Glue

Use Loctite 243 Medium Strength

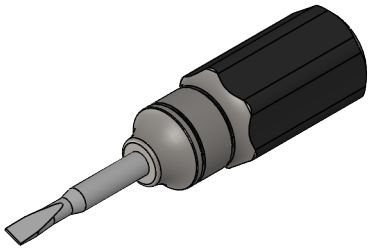
Use Loctite 648 Bonding



Use Silicone Grease

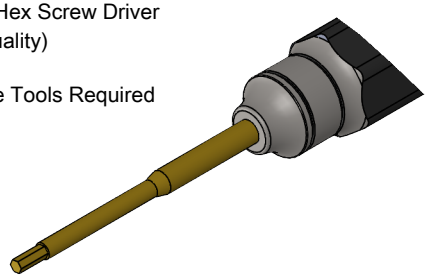
TOOLS REQUIRED

Small Tip - Flat Screw Driver



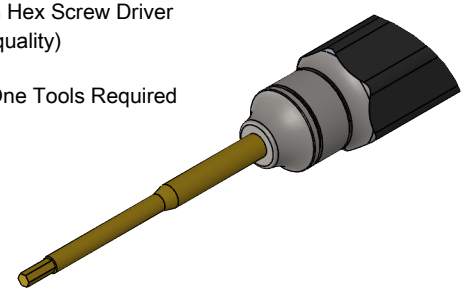
1.5mm Hex Screw Driver
(High quality)

⚠ One Tools Required



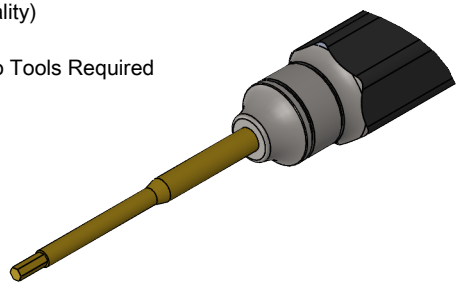
1.3mm Hex Screw Driver
(High quality)

⚠ One Tools Required

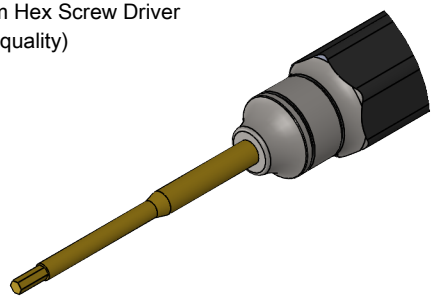


2mm Hex Screw Driver
(High quality)

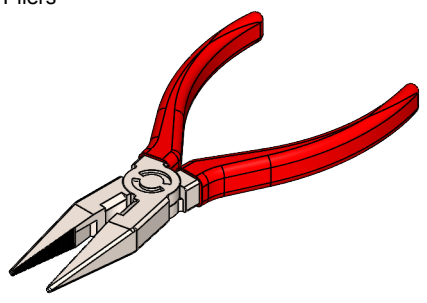
⚠ Two Tools Required



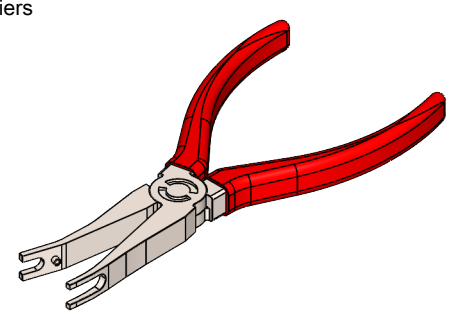
2.5mm Hex Screw Driver
(High quality)



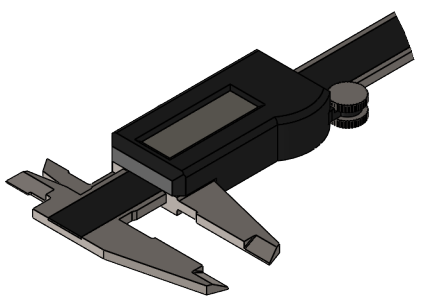
Needle Nose Pliers



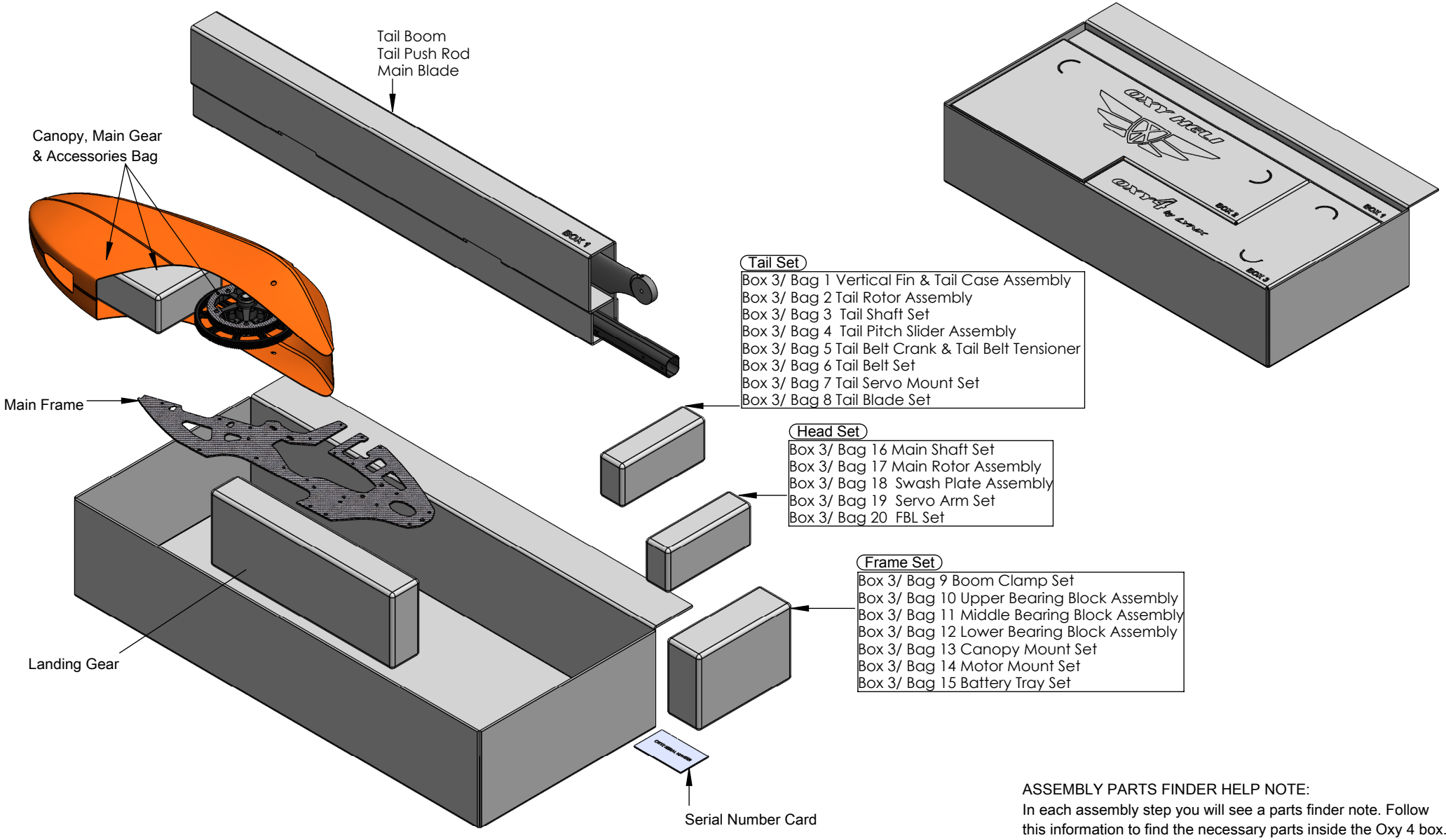
Uniball Pliers



Caliper



Note :
We recommend high quality steel tools during assembly.
Hex Screw driver in particular must have precise Tip
Hexagonal dimension.



ASSEMBLY PARTS FINDER HELP NOTE:
In each assembly step you will see a parts finder note. Follow this information to find the necessary parts inside the Oxy 4 box.

OXY 4 MAX - FLY STYLE / HEAD / TAIL SETTINGS

In order to choose the best setup for your OXY4 MAX, and optimize performance, it is important to know some basic information:
1- The Motor Kv - See your motor specifications.
2- Battery Pack - (3/4S or 6S)
3- Your target head speed, If you use a head speed calculator, use **110 Teeth** for the main gear and one of the available pinions.
Or use this simple formula:

$$\text{Theoric Max RPM} = \frac{((\text{N Cell} \times 3.74) \times \text{KV Motor})}{(\text{Main Gear T} / \text{Pinion T})}$$

If you use governor, in order to assure that RPM will be constant during the fly, set a gear ratio to have theoric Max RPM approx 10% higher than your expected governed RPM. Your TX Throttle value should be set between 75 to 85%
Example: Target RPM Governed at 80% throttle value = 3500, the theoric Max RPM should be approx. 3850.
This formula and value can be effected by many factors such: Battery quality, Battery C Rate, Motor Power and Fly Style. In any case can give you basic information choosing your Motor KV and Pinion (Gear Ratio).
Table below will give you basic suggestion about RPM and Tail Setting (tail pulley / tail ratio) in order to guide on your OXY4 MAX Fly Style needs.

	Fly Style	Head Speed		Main Blade	Pitch	Tail Blade	Tail Shaft Pulley
OXY4 MAX	Hover	2000	2500	380	+10/-3	70	23
	Fly 2D	2500	3000	380	+10/-5	70	23/24
	Soft 3D	3000	3500	380	+/-12	70	24 (STD)
	Hard 3D	3500	3800	380	+/-13	70	24 /25
	Extreme 3D	3800	4000	380	+/-13	70	25

OXY 4 MAX - ELECTRONICS AND POWER SUGGESTIONS

Head Speed Note: Although OXY 4 MAX can handle very high Head Speed, we suggest not to exceed 4000 RPM to maintain a good compromise between performances and efficiency. Our Test confirmed that OXY4 MAX can perform form 2000 up to 4000 RPM, for more information about your personal Fly Style need and relative Head and Tail Settings, see above Info and Table: “Fly Style - Head - Tail Settings”

CONFIGURATION EXAMPLES:

Since the OXY 4 MAX is a high performance 3D RC helicopter, we suggest using high quality electronics and power components including Servos, FBL , Motor, Battery and ESC. Remember that OXY 4 MAX is a 380 RC Heli - use light components to maximize flight time and performance. Always consider the acceleration G force in fly, few extra gram can become Kg during some maneuvers, compromising the best performance. Always choose the electronics and the power system suitable for your fly style, “more is not always better”!

FROM OUR TEST HERE OUR ELECTRONICS SUGGESTIONS:

CYCLIC SERVO: Metal Gears MICRO Servos with speed: =>0.06 sec/60 at 6V. Lynx suggestion: LX2649 - KST Lynx DS215MG-V3 Servo,

RUDDER SERVO: Metal Gear MICRO or MINI Servo with speed =>0.06 sec/60 at 6V , Specific Rudder Servo with 760µs Pulse are suggested for best tail performance. Lynx suggestion: LX2650 KST Lynx DS213X - 760µs Micro Tail Servo, 1Pc.

BATTERY: 6S - 1800mAh up to 2200mAh - 45C rate or higher. Maximum sizes and weight: length 110mm, height 51mm, width 36mm, 380g.

ESC: 50A up to 80A - ESC can be installed in two position for the best CG configuration, under the Battery Tray or under Main Gear. Lynx suggestion: HW 60A or HW80A ESC

MOTOR with OXY 4 325 CNC Main Gear OSP-1079 and dedicated Pinions: Caliber 2520 / 2618 - 1800KV - ø3.5mm x L17.4mm Shaft. Possibility to use different motor with 3 mounting holes options: M2.5-25mm / M3-25mm / M3-16mmm.

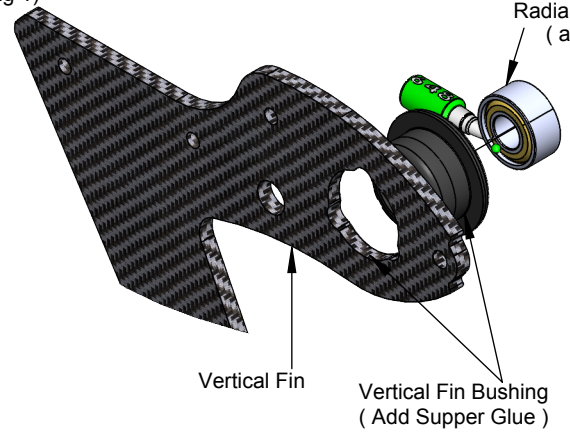
MOTOR with STD OXY4 MAX Main Gear and dedicated Pinions: Caliber 2822 up to 3215 - 890 to 1100KV - ø5mm x L20mm Shaft. Possibility to use different motor with 3 mounting holes options: M2.5-25mm / M3-25mm / M3-16mmm.*Is also possible (not recommended, just possible!) replacing Main Gear and Pinion use OXY 4 325 - 360 Motors.*

FBL System: The OXY 4 MAX is designed around the Ikon / Brain and Neo V-Bar Systems. Many other FBL systems can be used, depending on your personal choice. Max inner Frame dimension 33mm.

MAIN BLADE: OXY4 MAX Main Blade Zeal 380mm Energy (Kit Included), can fly with 360mm up to 386mm. Main Grips use M3 Screw and 6 mm Root.

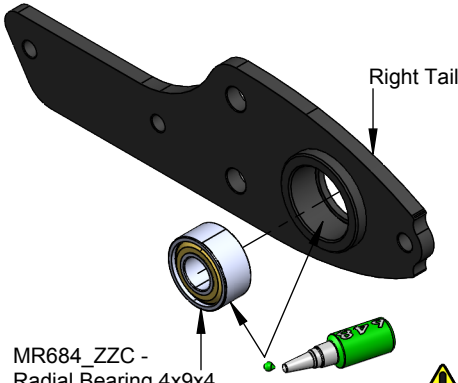
TAIL BLADE: OXY4 MAX Tail Blade Zeal 70mm (Kit Included), can fly with 70mm up to 72mm. Tail Grip use M2.5 Screw and 3mm Root.

Vertical Fin Assembly
(Box 3/Bag 1)



Important Note:
This part, for tuning reasons, comes factory pre assembled, it ready to us.

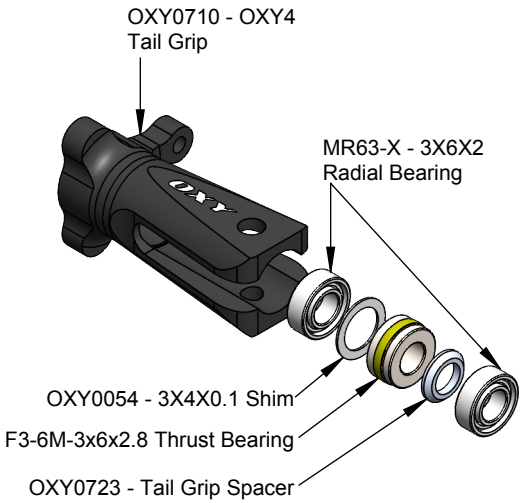
Vertical Fin Assembly
(Box 3/Bag 1)

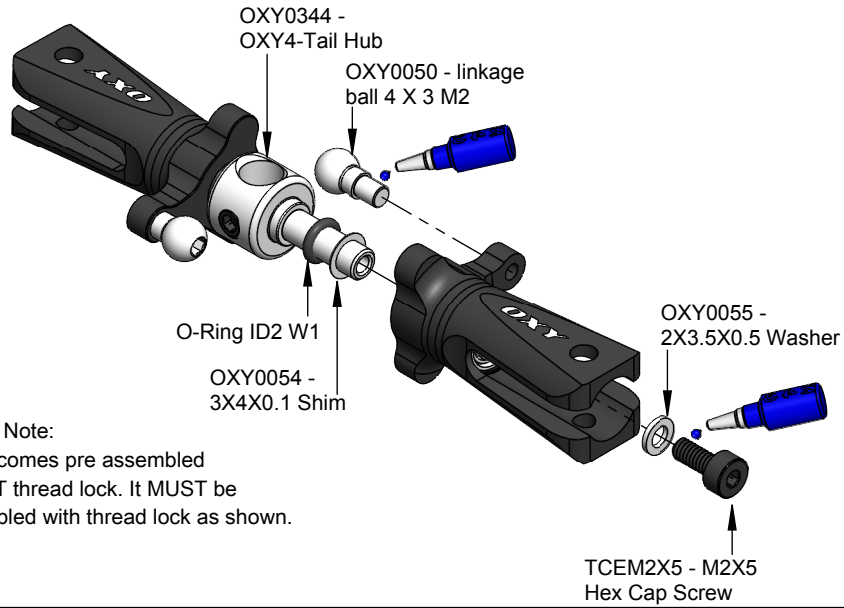


Important Note:
This part, for tuning reasons, comes factory pre assembled, it ready to use.

Tail Rotor Assembly
(Box 3/Bag 2)

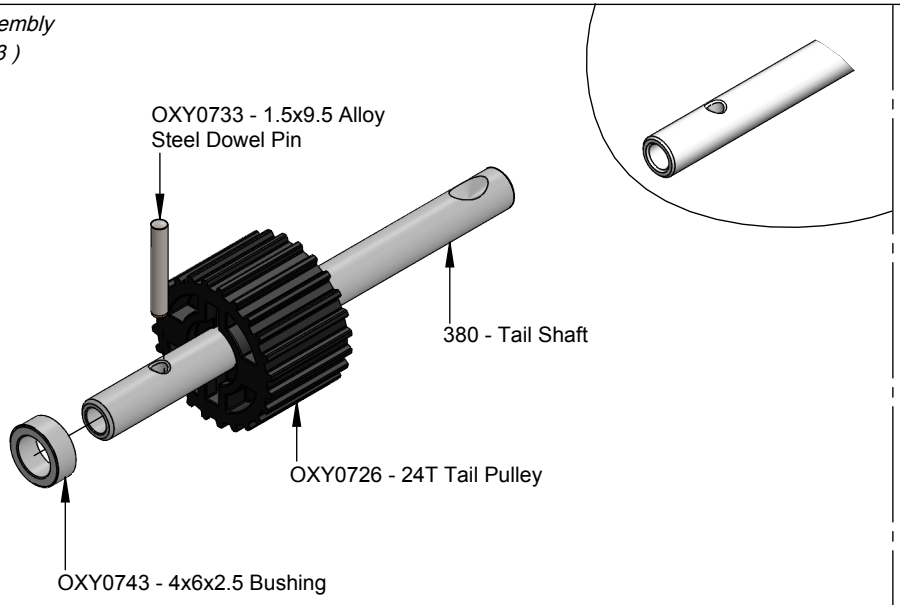
Important Note:
This part, for tuning reasons, comes factory pre assembled, it ready to use

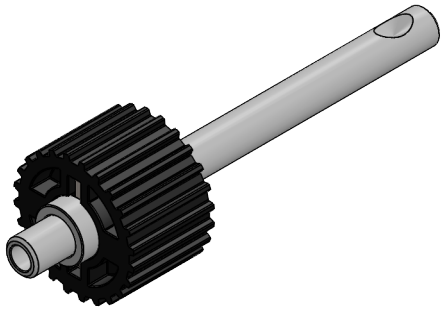




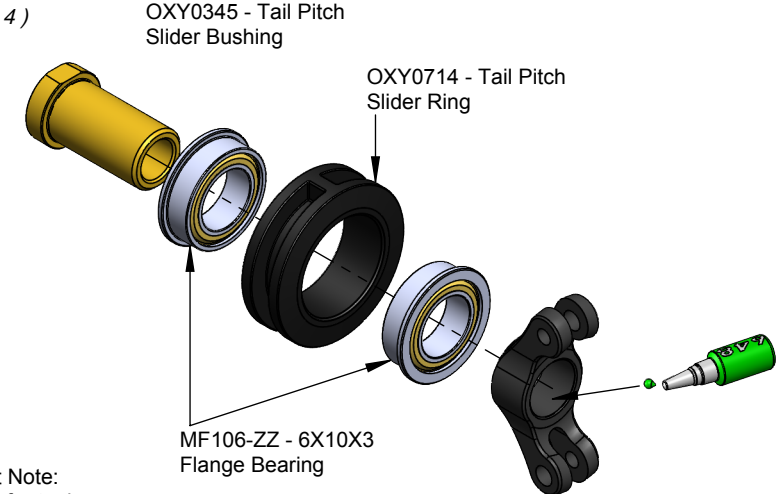
Important Note:
This part comes pre assembled WITHOUT thread lock. It MUST be re-assembled with thread lock as shown.

Tail Shaft Assembly
(Box 3 / Bag 3)

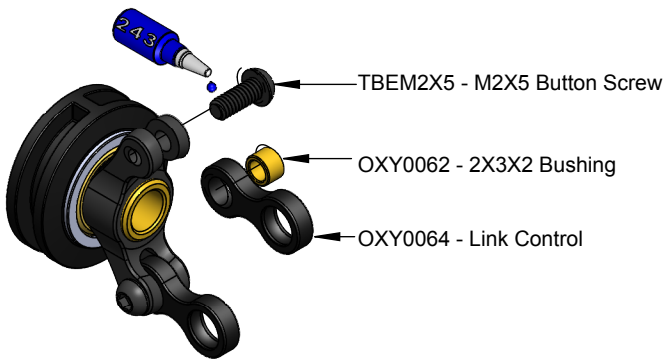




Tail Pitch Slider Assembly
(Box 3 / Bag 4)

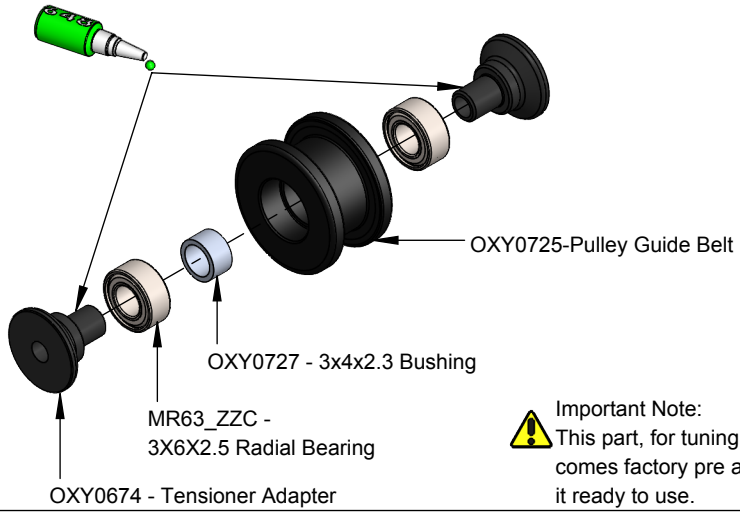


Important Note:
This part, for tuning reasons, comes factory pre assembled, it ready to use.



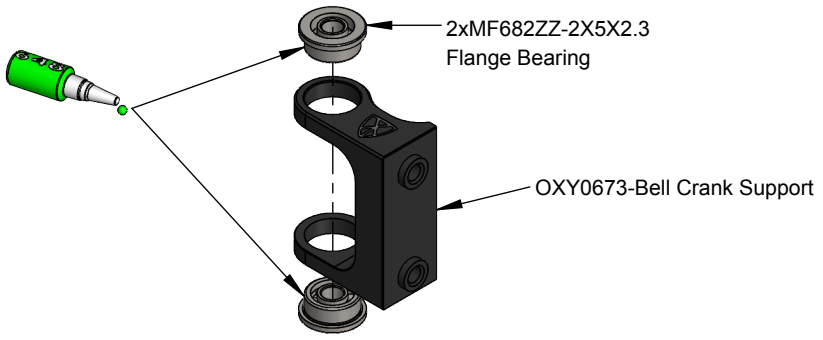
Important note:
This part comes pre assembled WITHOUT thread lock. It MUST be re-assembled with thread lock as shown.

Tail Belt Crank Support Assembly
(Box 3 / Bag 5)



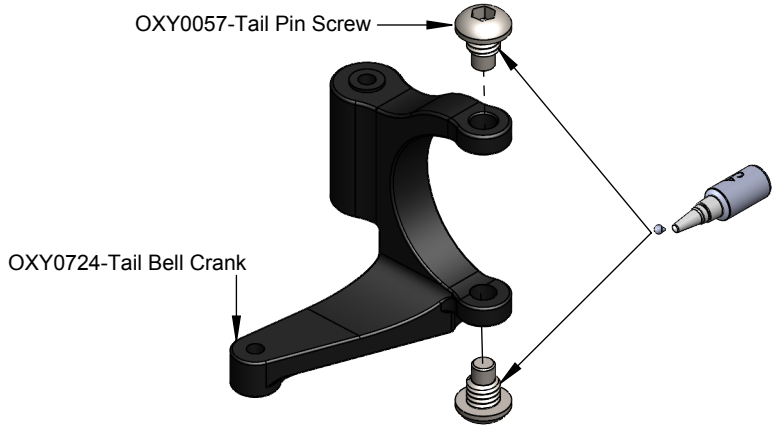
Important Note:
This part, for tuning reasons, comes factory pre assembled, it ready to use.

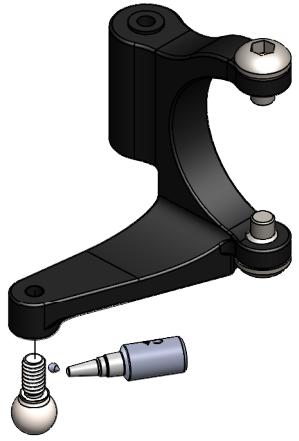
Tail Belt Crank Support Assembly
(Box 3 / Bag 5)



Important Note:
This part, for tuning reasons, comes factory pre assembled, it ready to use

Tail Belt Crank Support Assembly
(Box 3 / Bag 5)

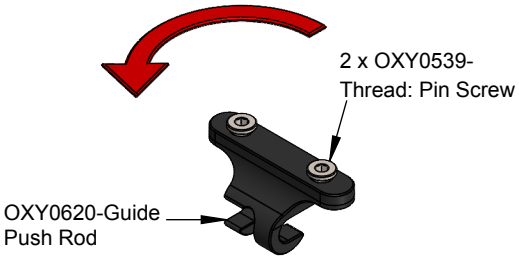




Step 1:

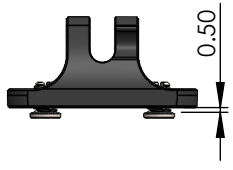
Note: to install this pin screw rotate counter clock wire

Note Pin Screw Thread: Pin Screw Oxy designed the Pin Screw with a counter clockwise thread. This will help on the final locking operation. Be careful to follow our instructions to get a perfect assembly



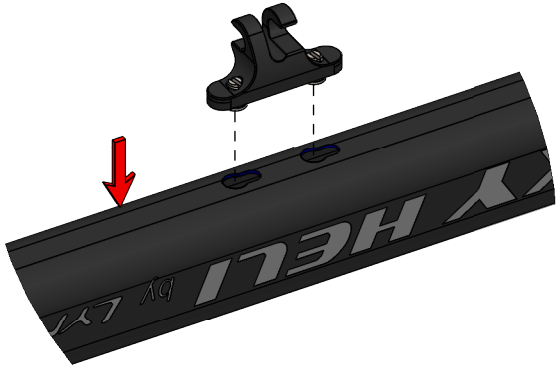
Step 2:

Note: Install the Pin Screw and leavea gap as shown.



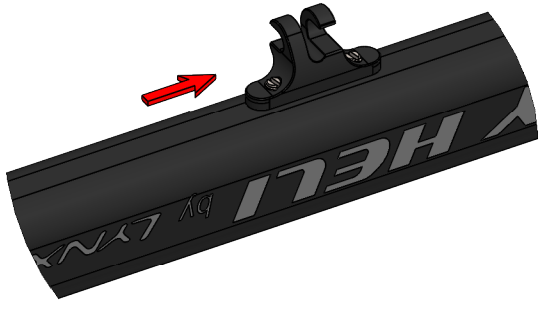
Step 3:

Push the part inside the boom sockets as shown



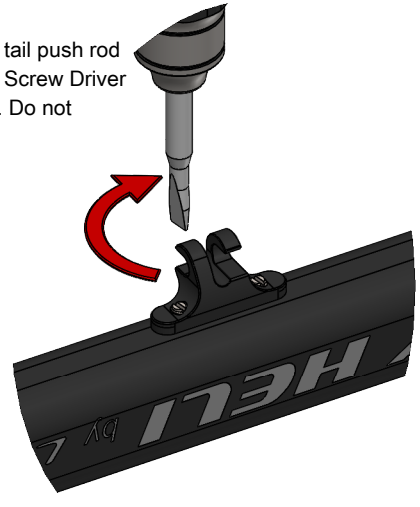
Step 4:

Slide the parts as shown

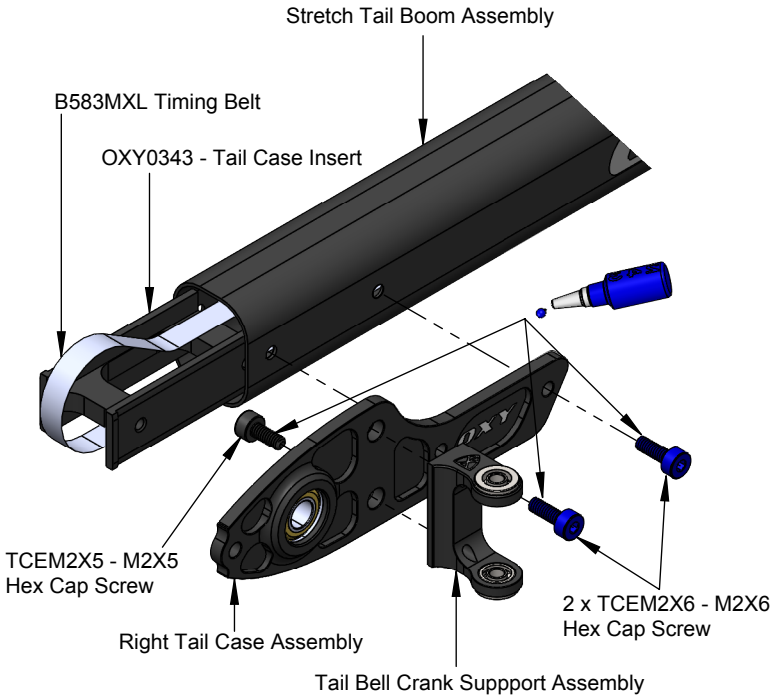


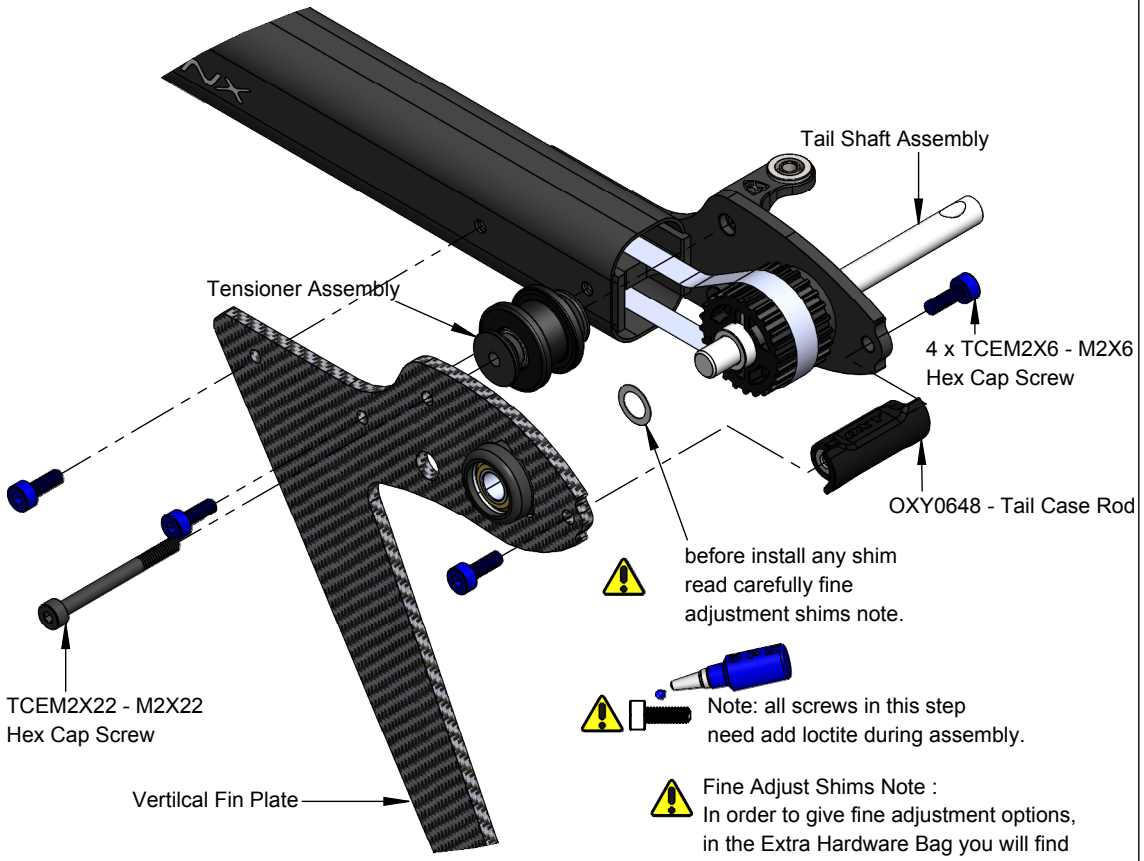
Step 4:

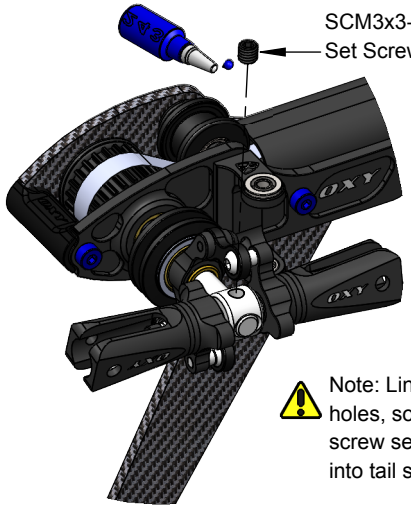
In order to lock the tail push rod support, use a Flat Screw Driver and turn clockwise. Do not over tighten.



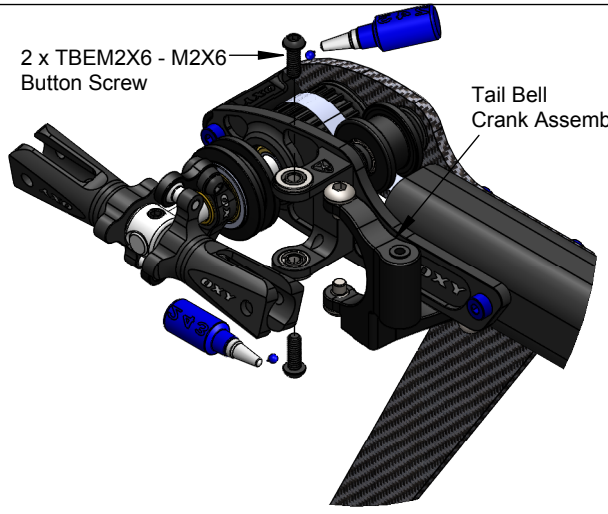
Important Note:
This part, for tuning reasons, comes factory pre assembly, it ready to use.


Stretch Tail Boom Assembly
B583MXL Timing Belt
OXY0343 - Tail Case Insert
TCEM2X5 - M2X5
Hex Cap Screw
Right Tail Case Assembly
Tail Bell Crank Suppport Assembly
2 x TCEM2X6 - M2X6
Hex Cap Screw


Tail Shaft Assembly
Tensioner Assembly
4 x TCEM2X6 - M2X6
Hex Cap Screw
OXY0648 - Tail Case Rod
TCEM2X22 - M2X22
Hex Cap Screw
Vertilcal Fin Plate
before install any shim
read carefully fine
adjustment shims note.
Note: all screws in this step
need add loctite during assembly.
Fine Adjust Shims Note :
In order to give fine adjustment options,
in the Extra Hardware Bag you will find
extra shims 4X6X0.1.
Start assembly WITHOUT any
shims. If Tail Shaft has sideways play
more than 0.2mm,
add shims as required, to one side, as shown.
PRO TIPS: For best Tail performances little
side play is recommended.

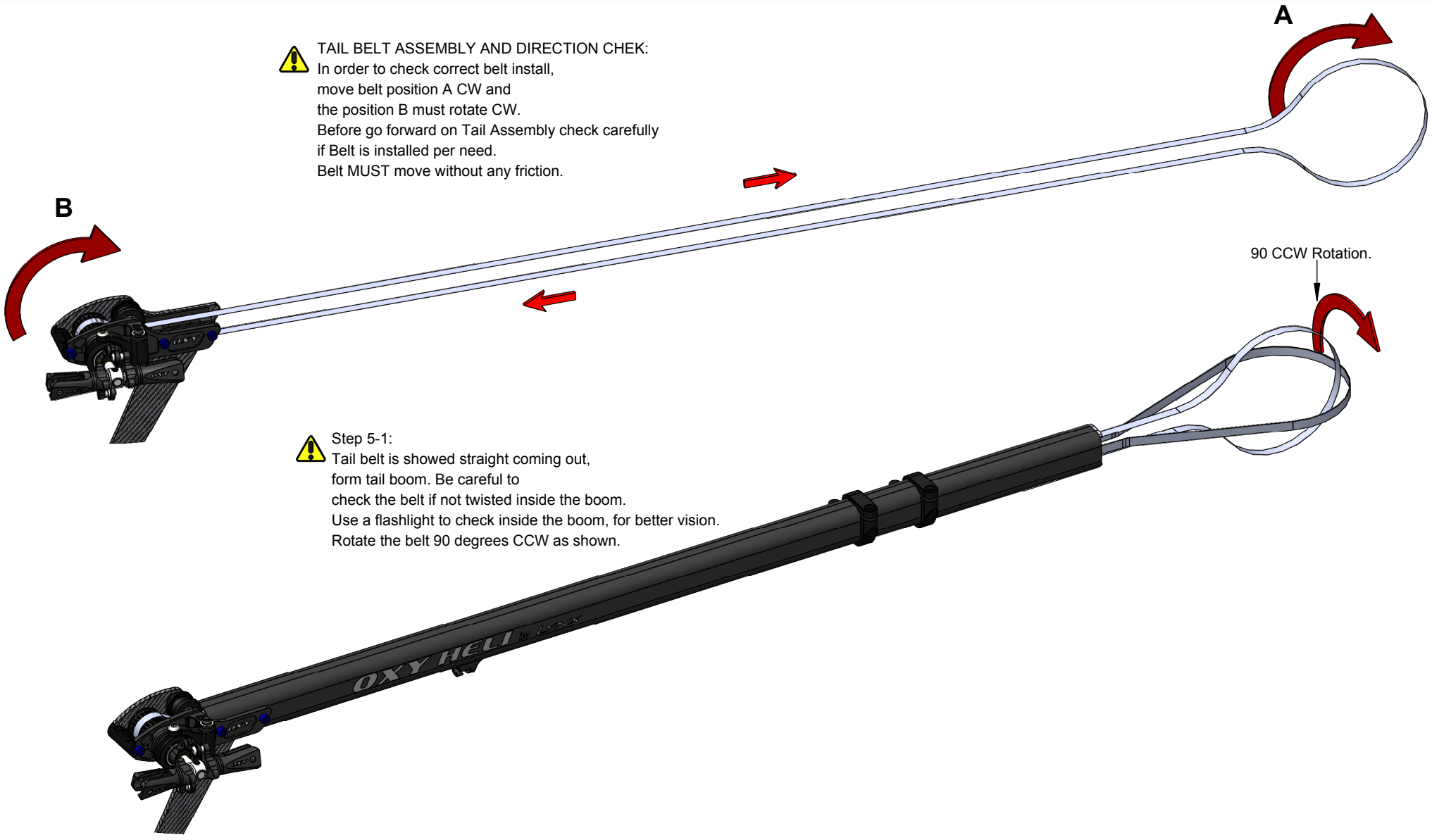


Note: Line up the holes, so the set screw seats correctly into tail shaft lock hole.



OXY0717 - PL
Tail Servo Support
(Box 3 / Bag 7)
Note: don't install any screw

TAIL BELT ASSEMBLY AND DIRECTION CHEK:
In order to check correct belt install,
move belt position A CW and
the position B must rotate CW.
Before go forward on Tail Assembly check carefully
if Belt is installed per need.
Belt MUST move without any friction.



Step 5-1:
Tail belt is showed straight coming out,
form tail boom. Be careful to
check the belt if not twisted inside the boom.
Use a flashlight to check inside the boom, for better vision.
Rotate the belt 90 degrees CCW as shown.

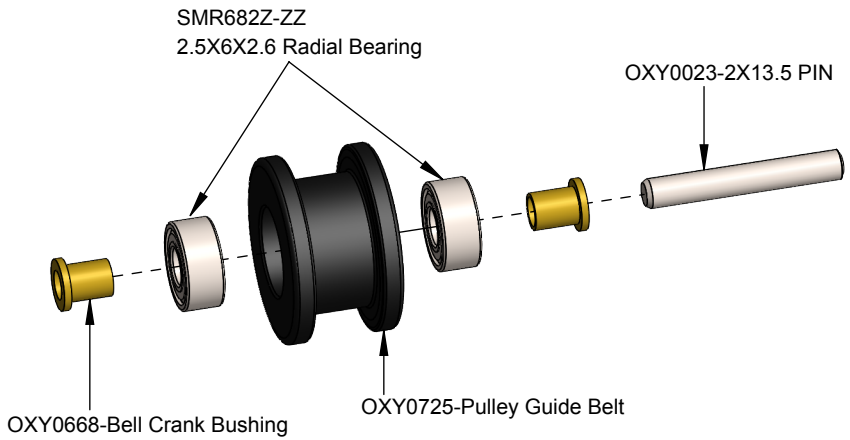
Step 5-2:
Hold carefully Tail Belt as showed and insert Front Boom Insert.A

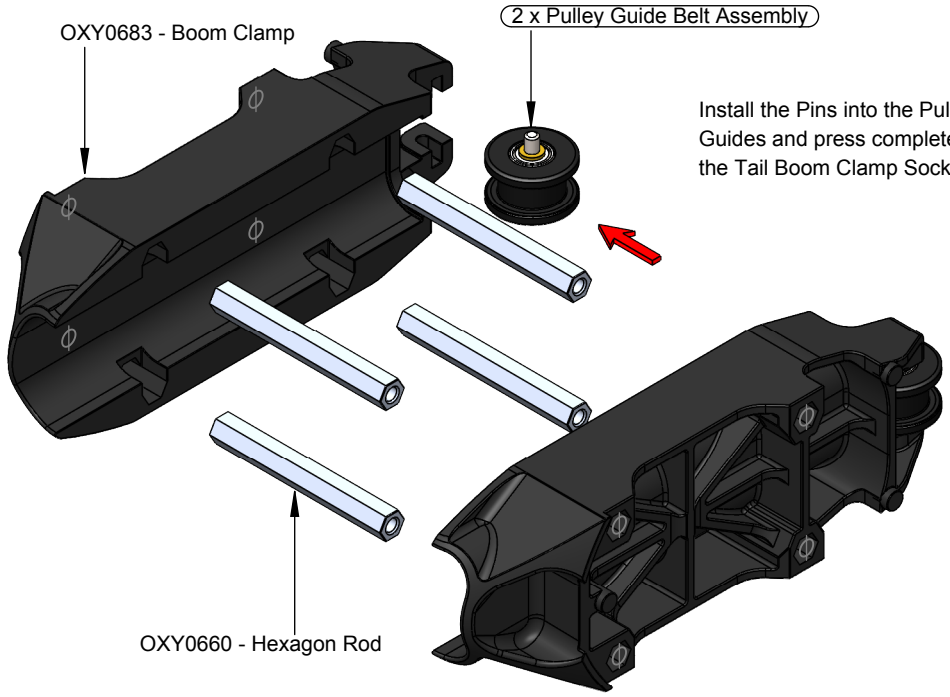
OXY0450-Front Boom Insert
(Box 3/Bag)
Press in this insert parts into Tail Boom to help Tail Belt doesn't twist in the next installation step

Step 5-3:
Final Tail Belt Direction Check:
Pull Tail Belt (as shown) and check the tail hub rotates in the direction shown. If the Tail Rotor rotates in the wrong direction, go back to the previous instructions and double check your assembly.

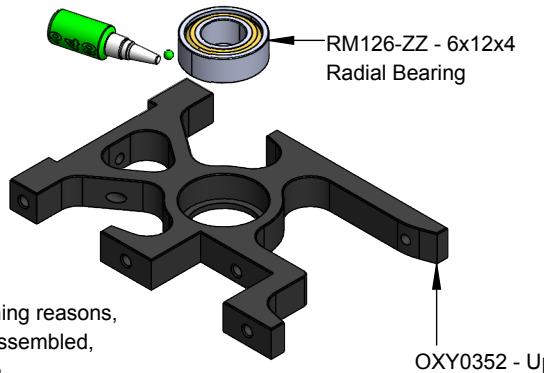
Pull Tail Belt here

Boom Clamp Assembly
(Box 3/ Bag 9)



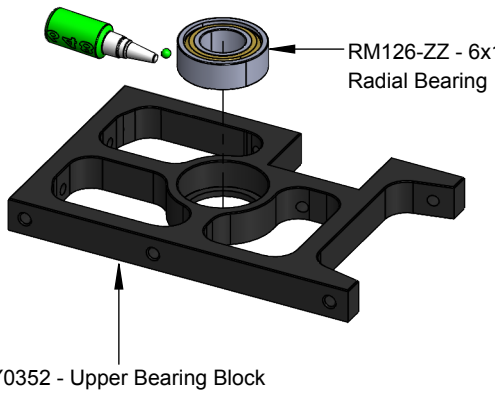


Upper Bearing Block Assembly
(Box 3/ Bag 10)



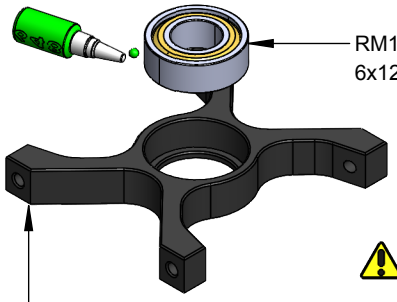
Important Note:
This part, for tuning reasons, comes factory assembled, it is ready to use.

Middle Bearing Block Assembly
(Box 3/ Bag 11)



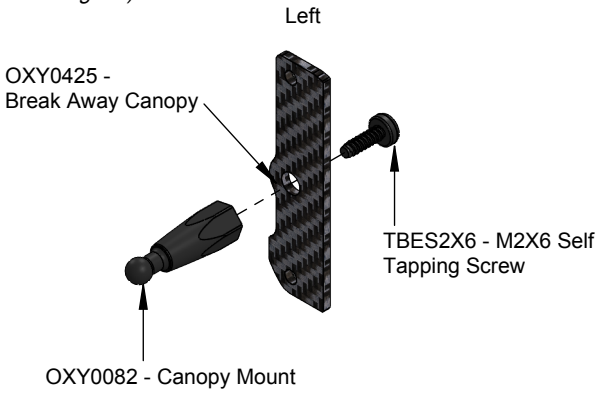
Important Note:
This part, for tuning reasons, comes factory assembled, it is ready to use.

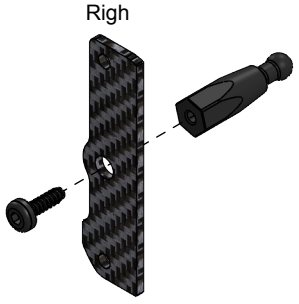
Lower Bearing Block Assembly
(Box 3/ Bag 12)



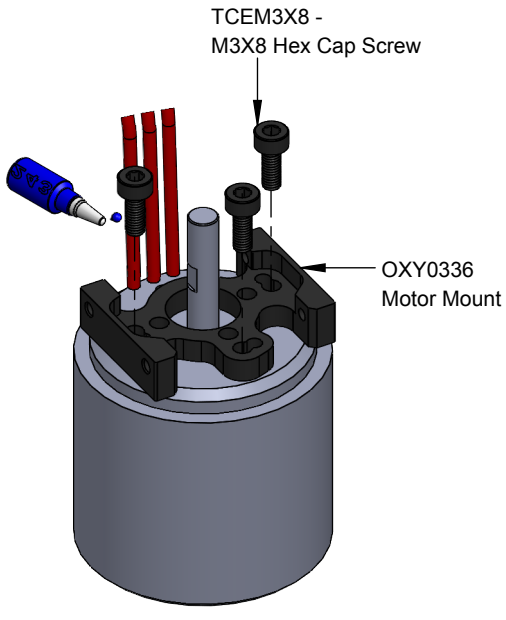
Important Note:
This part, for tuning reasons, comes factory assembled, it is ready to use.

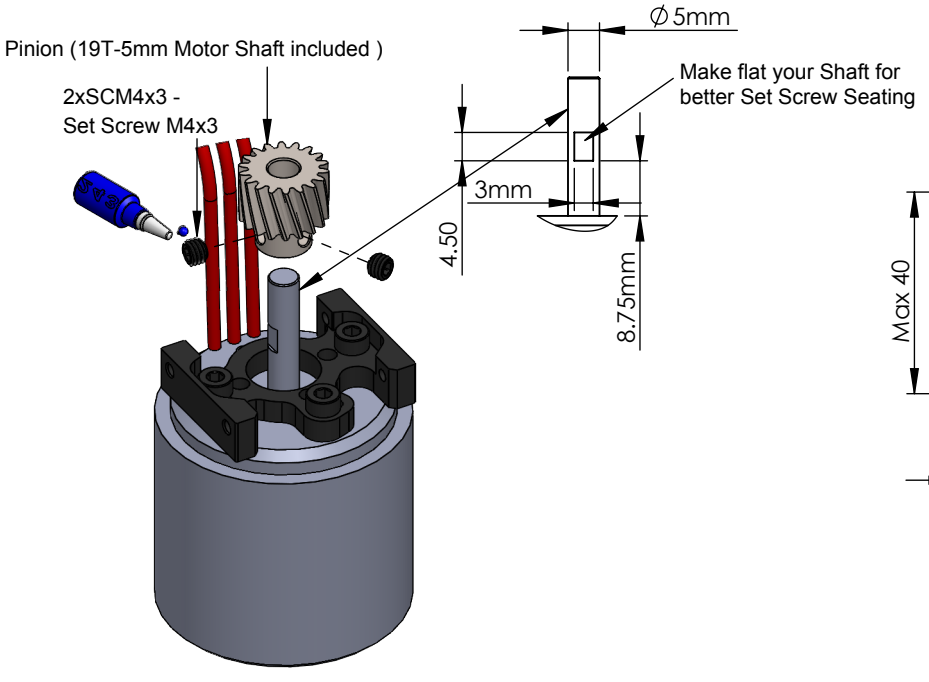
Break Away Canopy Assembly
(Box 3/ Bag 13)

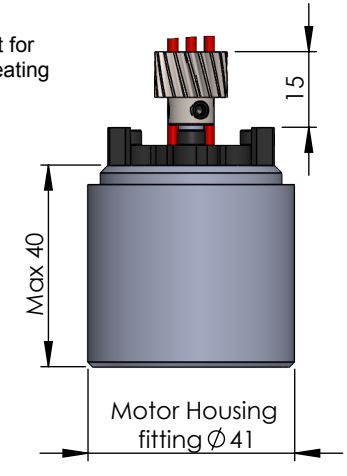


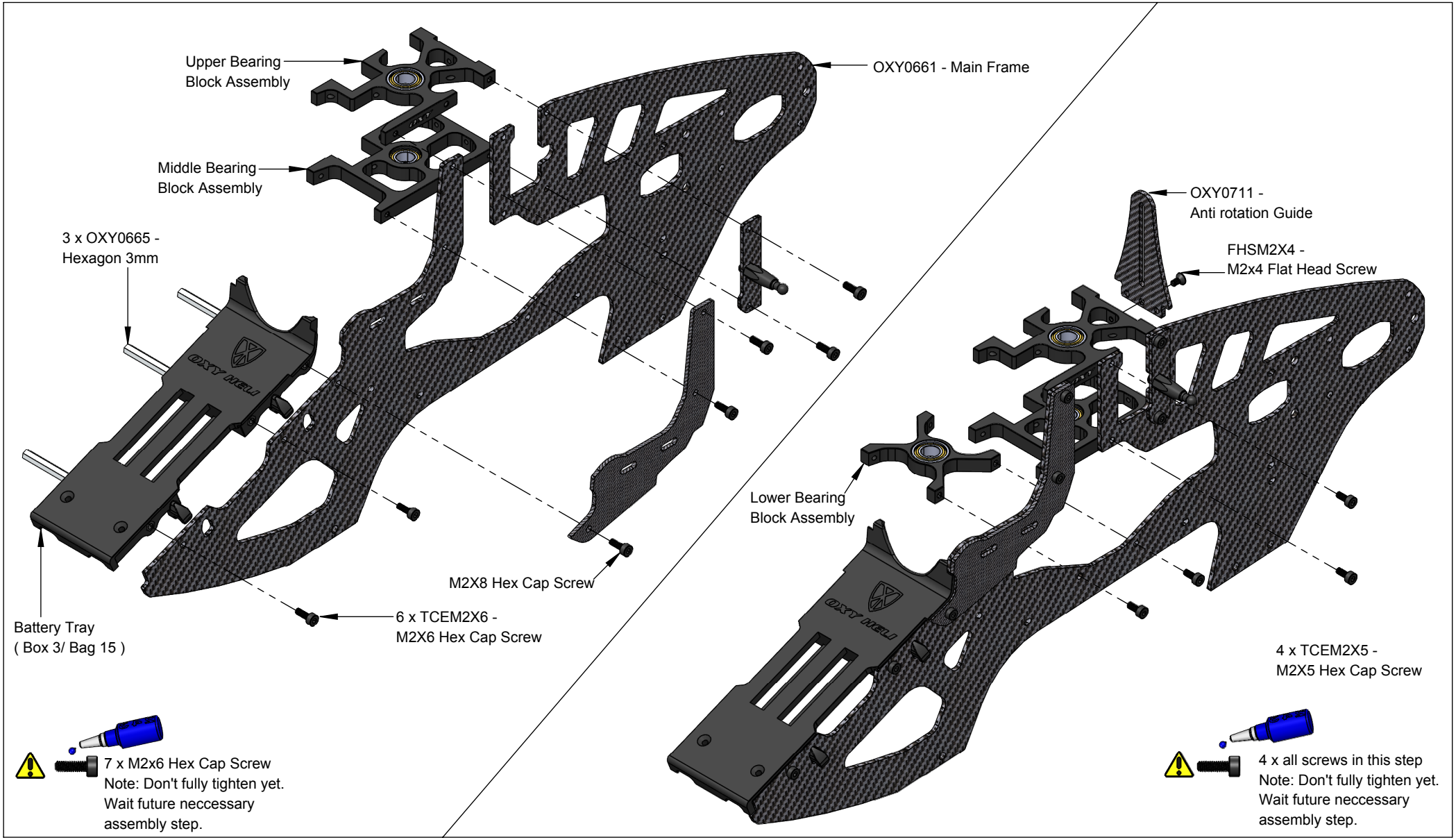


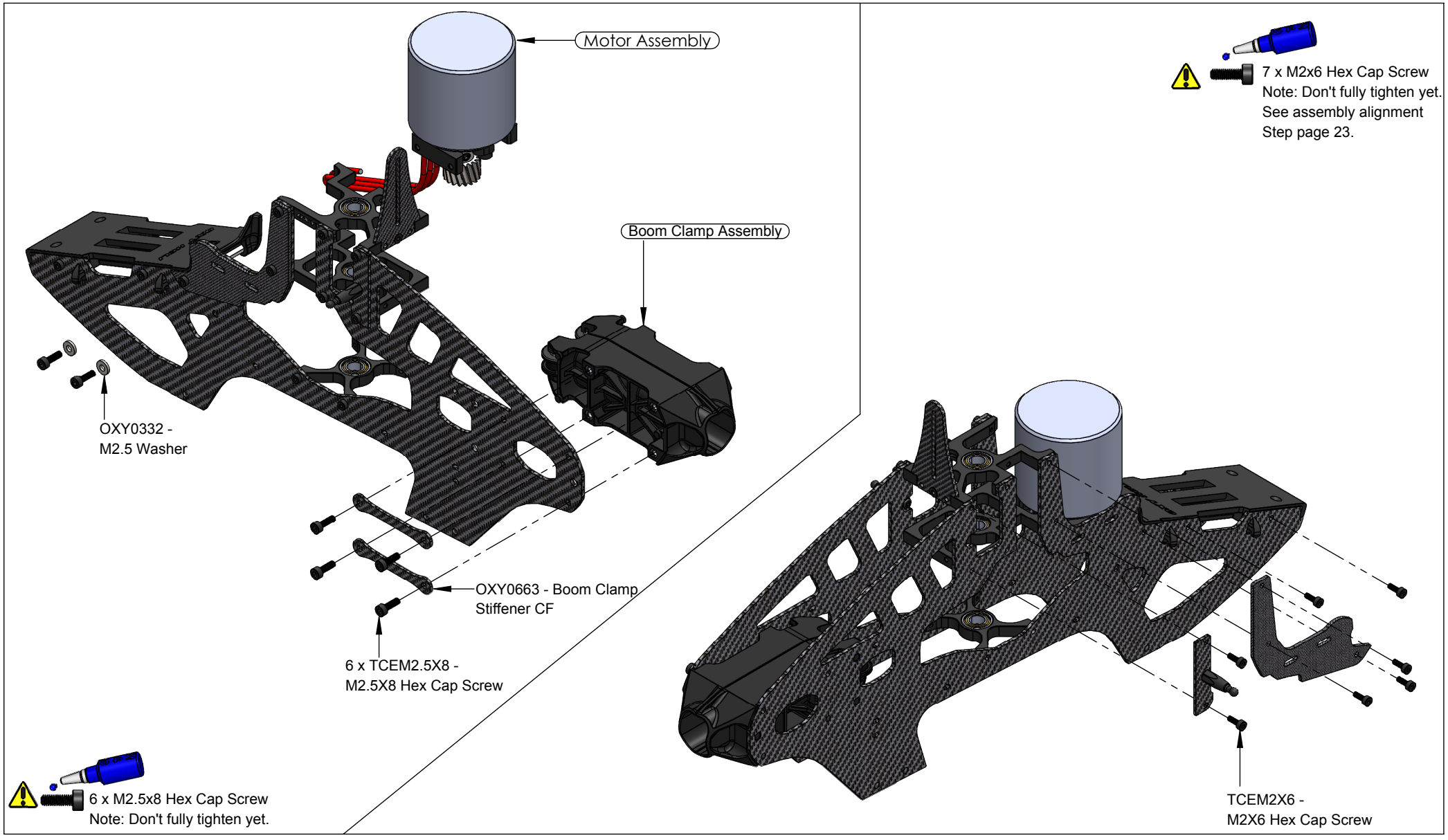
Motor Assembly
(Box 3/ Bag 14)

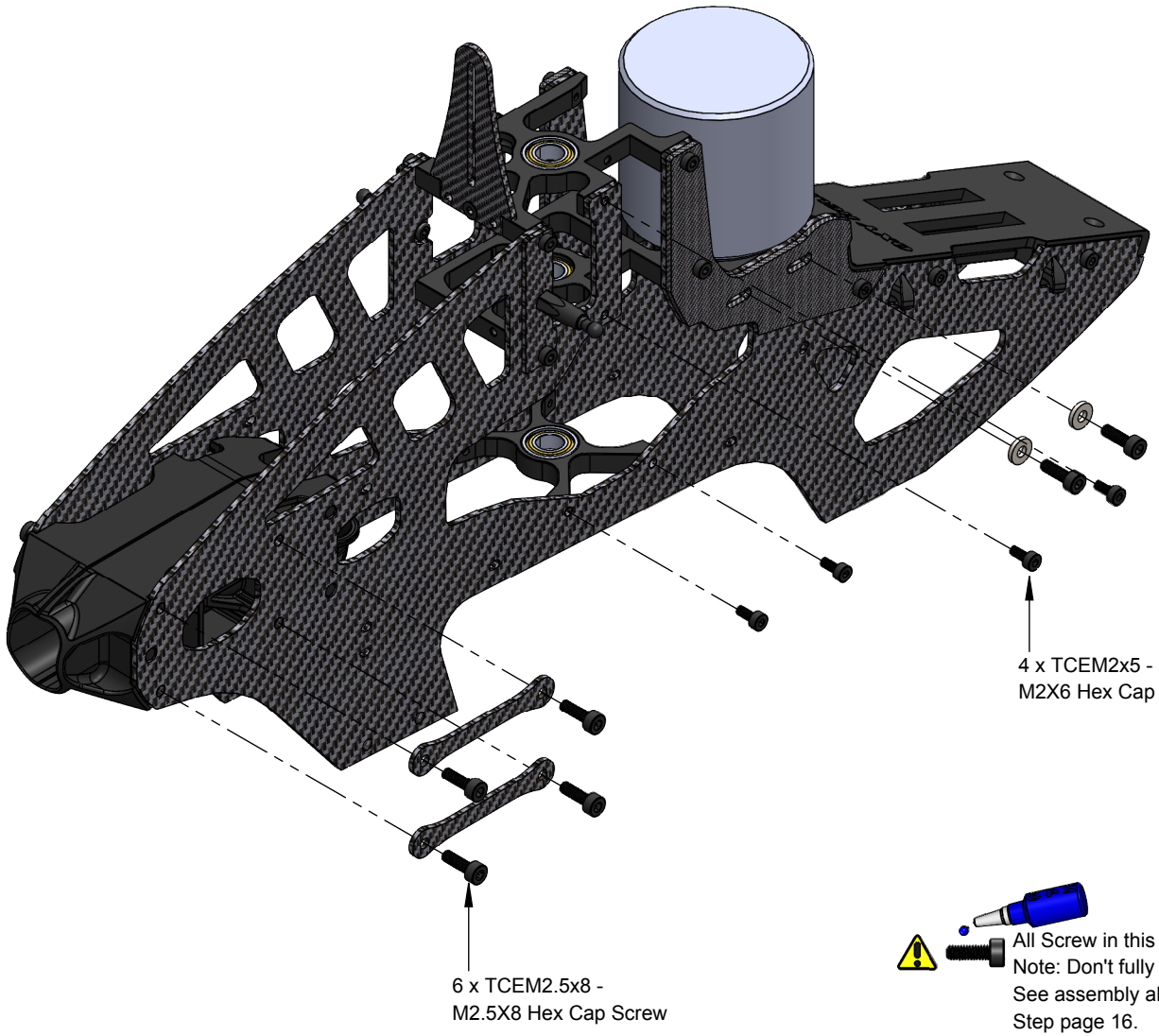






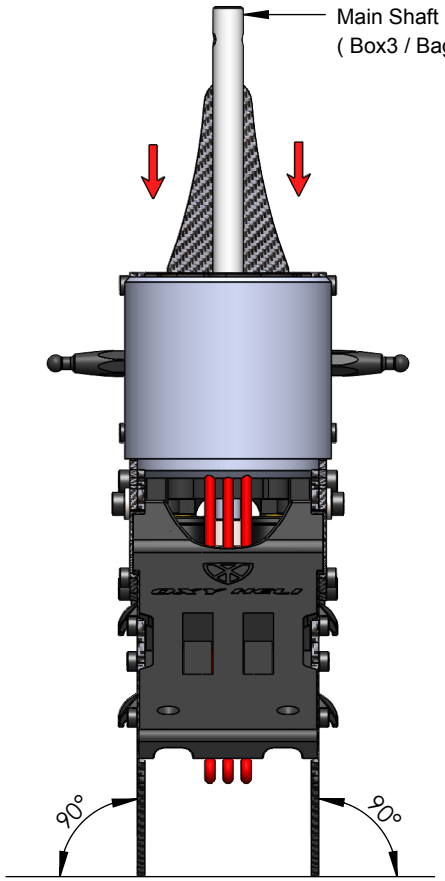

Upper Bearing
Block Assembly
OXY0661 - Main Frame
Middle Bearing
Block Assembly
3 x OXY0665 -
Hexagon 3mm
OXY0711 -
Anti rotation Guide
FHSM2X4 -
M2x4 Flat Head Screw
Lower Bearing
Block Assembly
M2X8 Hex Cap Screw
6 x TCEM2X6 -
M2X6 Hex Cap Screw
Battery Tray
(Box 3/ Bag 15)
4 x TCEM2X5 -
M2X5 Hex Cap Screw
7 x M2x6 Hex Cap Screw
Note: Don't fully tighten yet.
Wait future neccessary
assembly step.
4 x all screws in this step
Note: Don't fully tighten yet.
Wait future neccessary
assembly step.


Motor Assembly
Boom Clamp Assembly
OXY0332 -
M2.5 Washer
OXY0663 - Boom Clamp
Stiffener CF
6 x TCEM2.5X8 -
M2.5X8 Hex Cap Screw
6 x M2.5x8 Hex Cap Screw
Note: Don't fully tighten yet.
7 x M2x6 Hex Cap Screw
Note: Don't fully tighten yet.
See assembly alignment
Step page 23.
TCEM2X6 -
M2X6 Hex Cap Screw



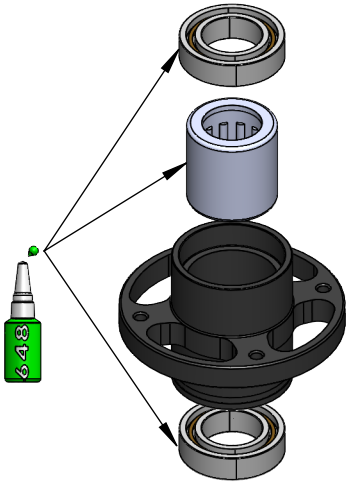
All Screw in this step
Note: Don't fully tighten yet.
See assembly alignment
Step page 16.

Install main shaft with frame assembly on a flat surface, push down on both frames together and then fully tighten all M2 Hex Cap Screws (x22) holding the bearing blocks.



Main Gear Assembly

(Box2 / Bag 1)

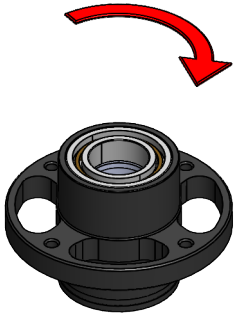


MR148ZZ
8x14x3.5 Radial Bearing

HF0812
One Way 8x12x12

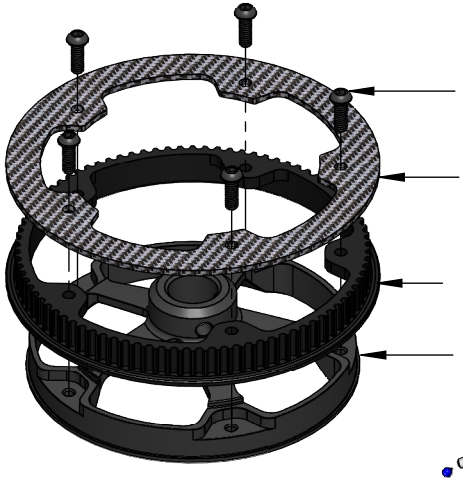
OXY0655 -
One Way Hub

⚠ Important Note:
This part, for tuning reasons, comes factory assembled, it is ready to use.



⚠ the Sleeve is free rotate as arrow Shown

⚠ Important note:
This part comes pre assembled WITHOUT thread lock. It MUST be re-assembled with thread lock as shown.

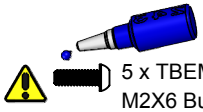


TBEM2X6 -
M2X6 Button Screw

OXY0658 -
Front Flange Pulley

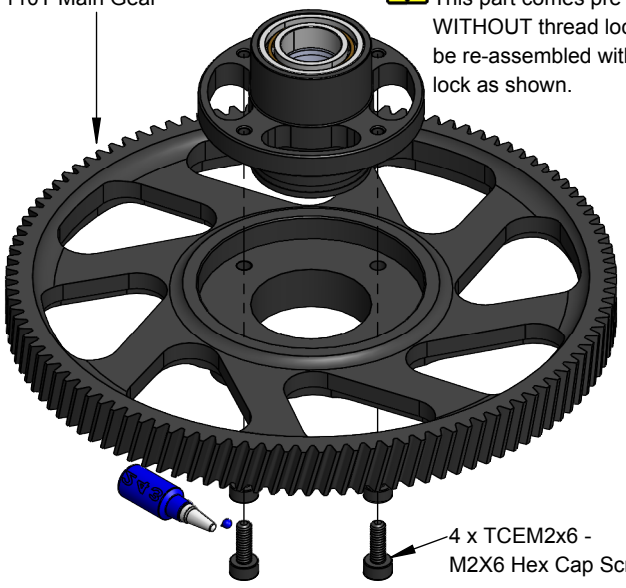
OXY0721-
88T Front Pulley

OXY0657 -
Front Pulley Hub



⚠ 5 x TBEM2X6 -
M2X6 Button Screw

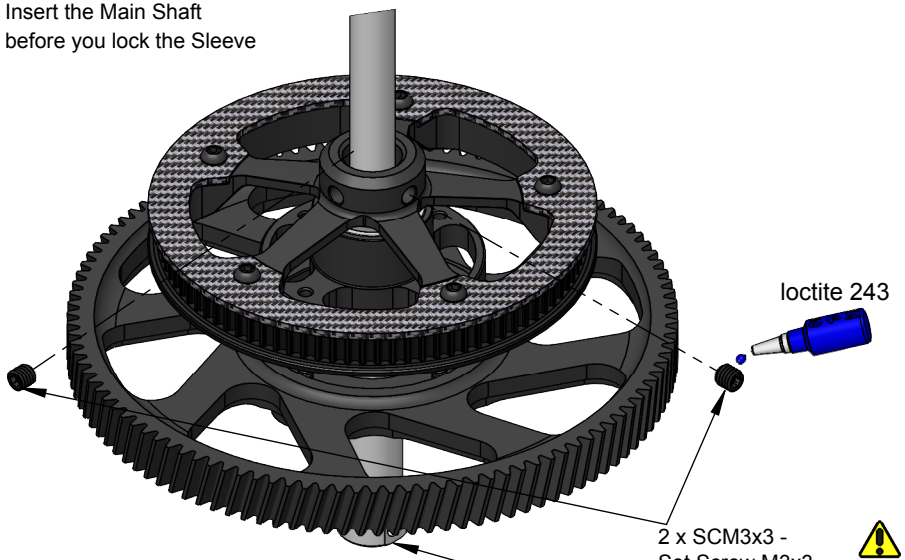
110T Main Gear



⚠ Important note:
This part comes pre assembled WITHOUT thread lock. It MUST be re-assembled with thread lock as shown.

4 x TCEM2x6 -
M2X6 Hex Cap Screw

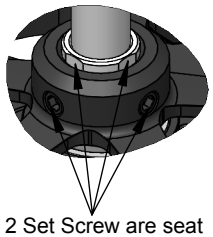
Insert the Main Shaft
before you lock the Sleeve



loctite 243

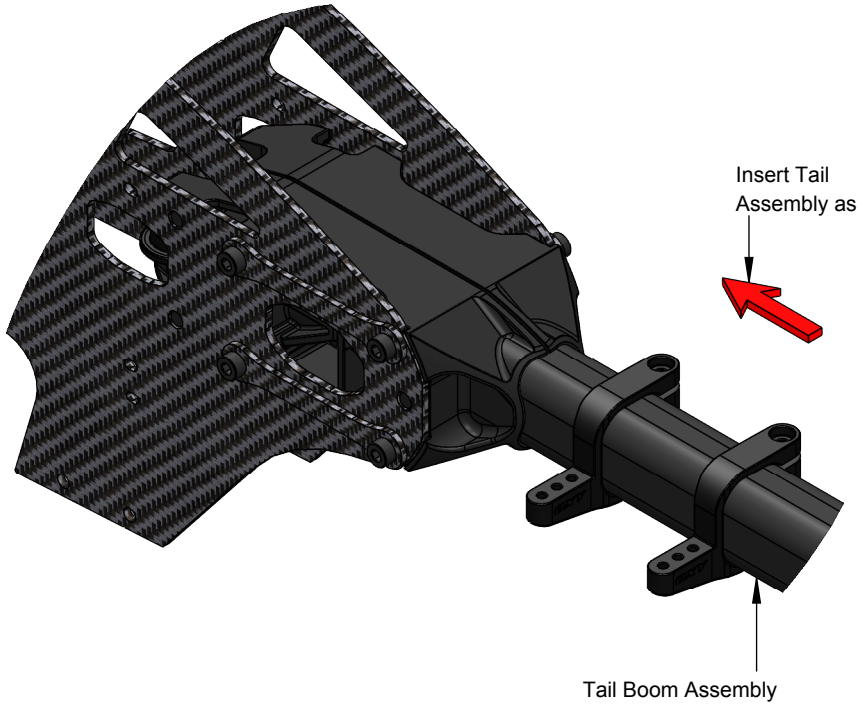
2 x SCM3x3 -
Set Screw M3x3

OXY0654 -
One Way Sleeve

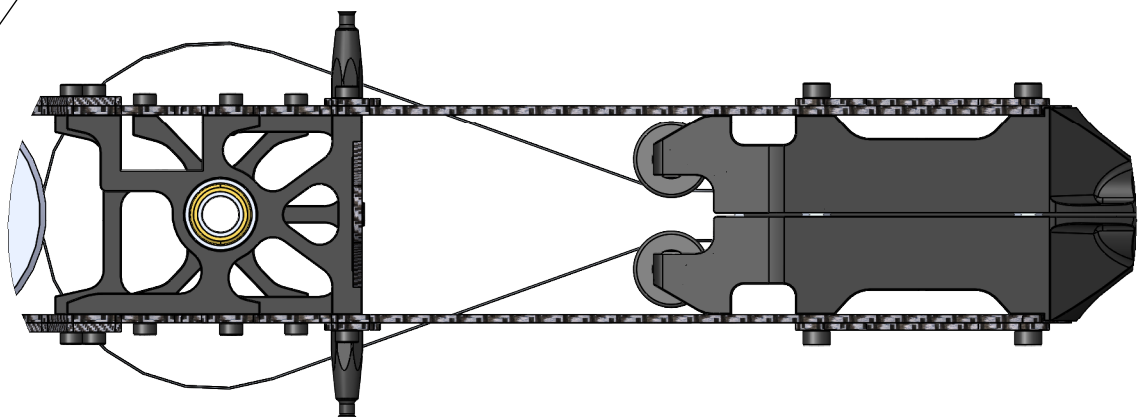


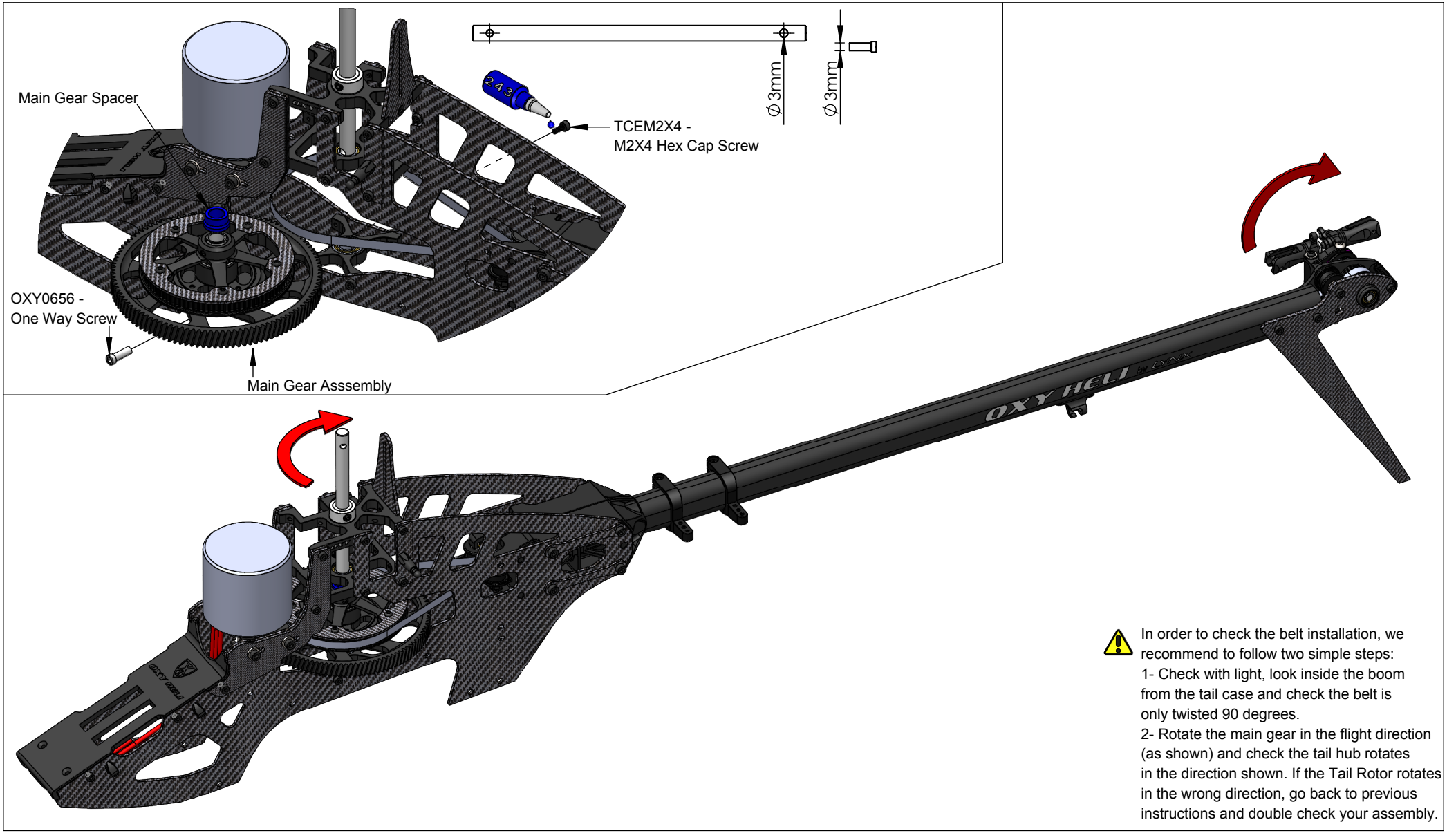
2 Set Screw are seat onto the flat surface of OXY0654 One Way Sleeve

⚠ Important note:
This part comes pre assembled WITHOUT thread lock. It MUST be re-assembled with thread lock as shown.



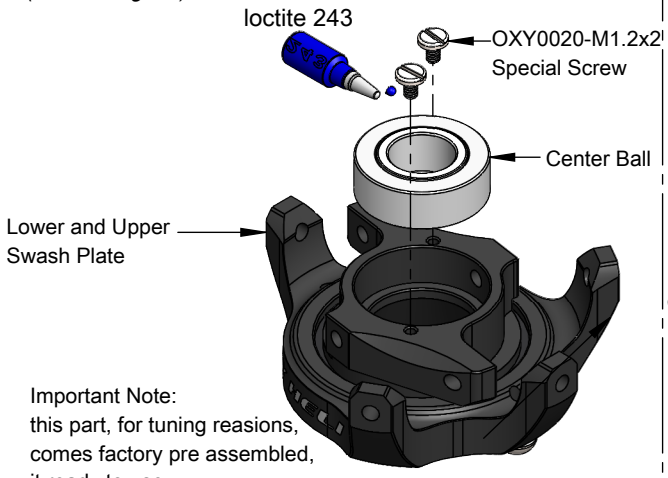
Before next assembly step check carefully
Tail Belt assembly position as shown.



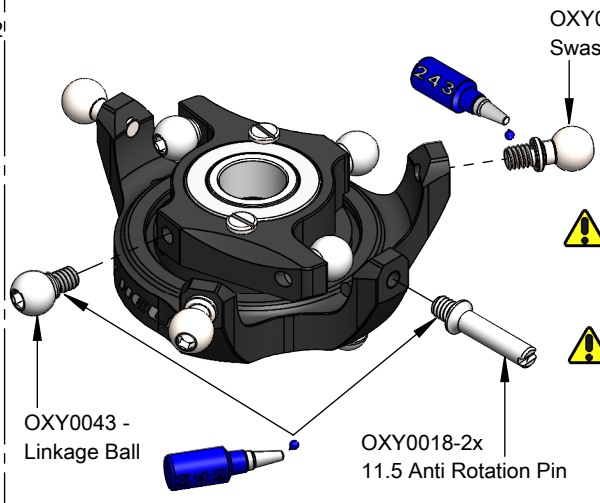


In order to check the belt installation, we recommend to follow two simple steps:
1- Check with light, look inside the boom from the tail case and check the belt is only twisted 90 degrees.
2- Rotate the main gear in the flight direction (as shown) and check the tail hub rotates in the direction shown. If the Tail Rotor rotates in the wrong direction, go back to previous instructions and double check your assembly.

Swash Plate Assembly
(Box 3/ Bag 18)



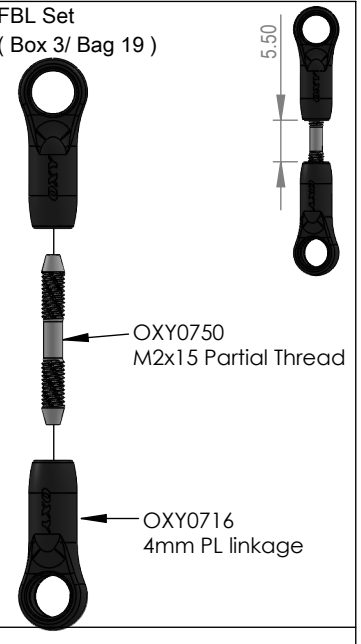
Important Note:
this part, for tuning reasions,
comes factory pre assembled,
it ready to use.



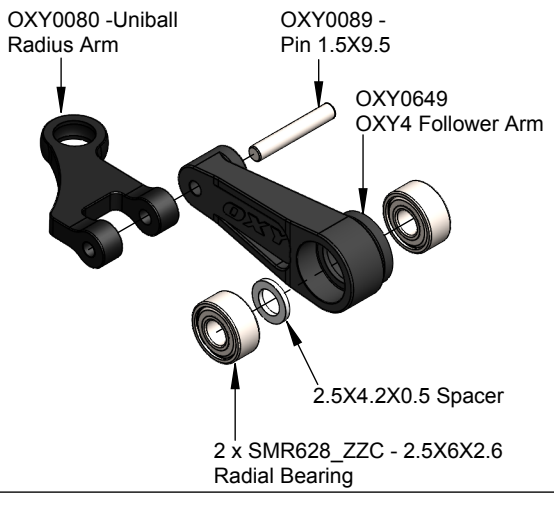
Important Note:
This part comes pre assembled WITHOUT thread lock. Follow the instruction for final assembly.

Swivel Ball Note:
The Swivel Ball is pre-assembled with a precise fitting. When new, the Swash Plate center ball will have a little friction. After a few flights and “break-in” it will come smooth, keeping the best precision without play.

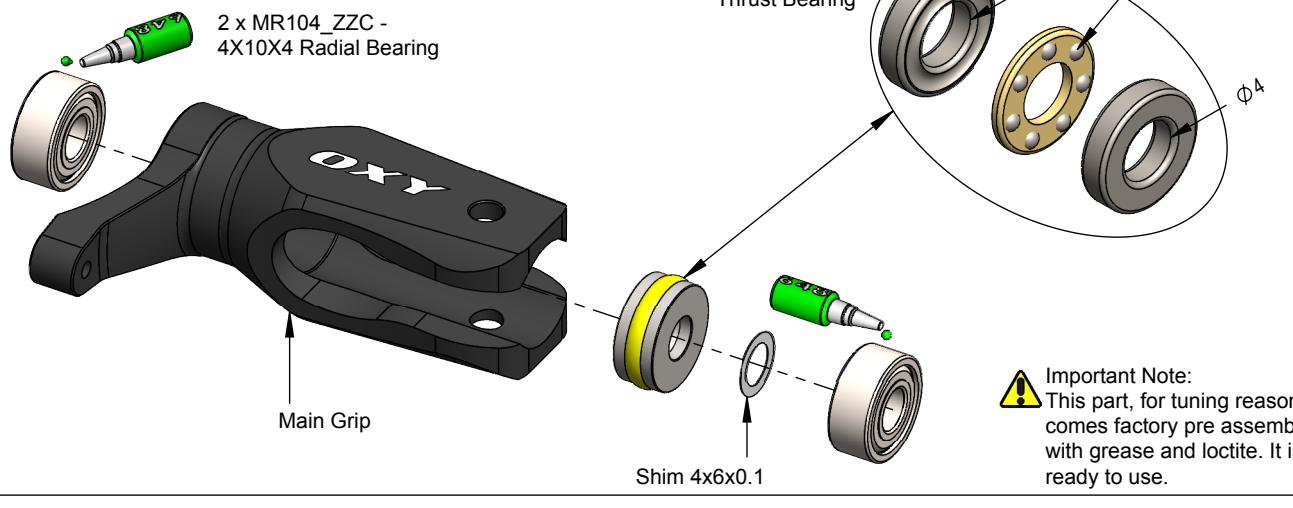
FBL Set
(Box 3/ Bag 19)



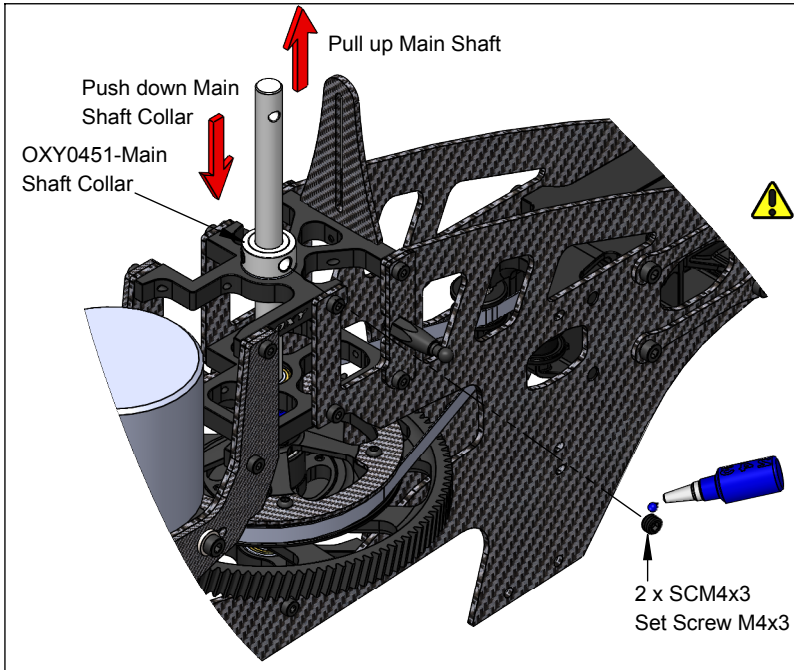
FBL Set
(Box 3/ Bag 19)



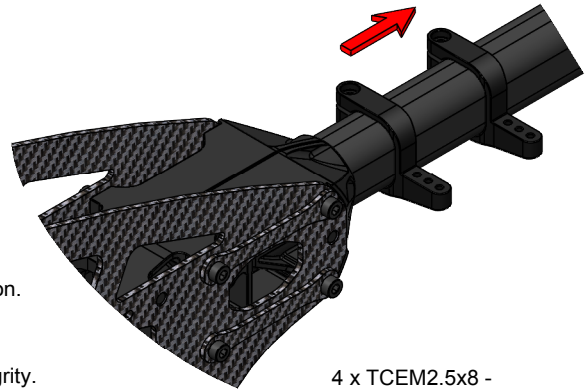
Main Rotor Assembly
(Box 3/ Bag 17)



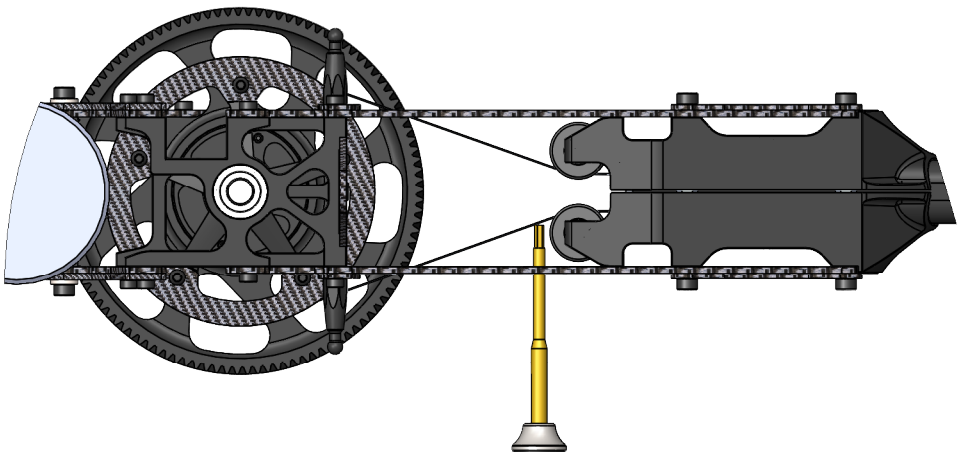
Important Note:
This part, for tuning reasons, comes factory pre assembled with grease and loctite. It is ready to use.



- Be sure the boom is assembled and installed correctly.
- Loosen the tail boom by loosening the eight M2.5x8 Hex Cap Screws.
- Adjust the Belt tension by pulling on the Tail Boom.
- Tighten the eight M2.5x8 Hex Cap Screws.
- The belt must have good tension. We suggest re-checking after a few flights. We suggest to check belt tension often, before each flying session.
- If spool up get difficult, may Tail Belt is over tight, recheck and eventually loose Belt tension little bit
- If the belt is often loose, you should check the lock system or belt integrity.
- Tests show that a hard 3D pilot can perform over 400 flights before the belt will fail. We recommend replacing the Tail Belt after 300 flights, even if it does not show wear, to avoid it breaking unexpectedly in flight.
- After a crash, spend some time checking Belt integrity and replace if any teeth are missing.



4 x TCEM2.5x8 - M2.5x8 Hex Cap Screw

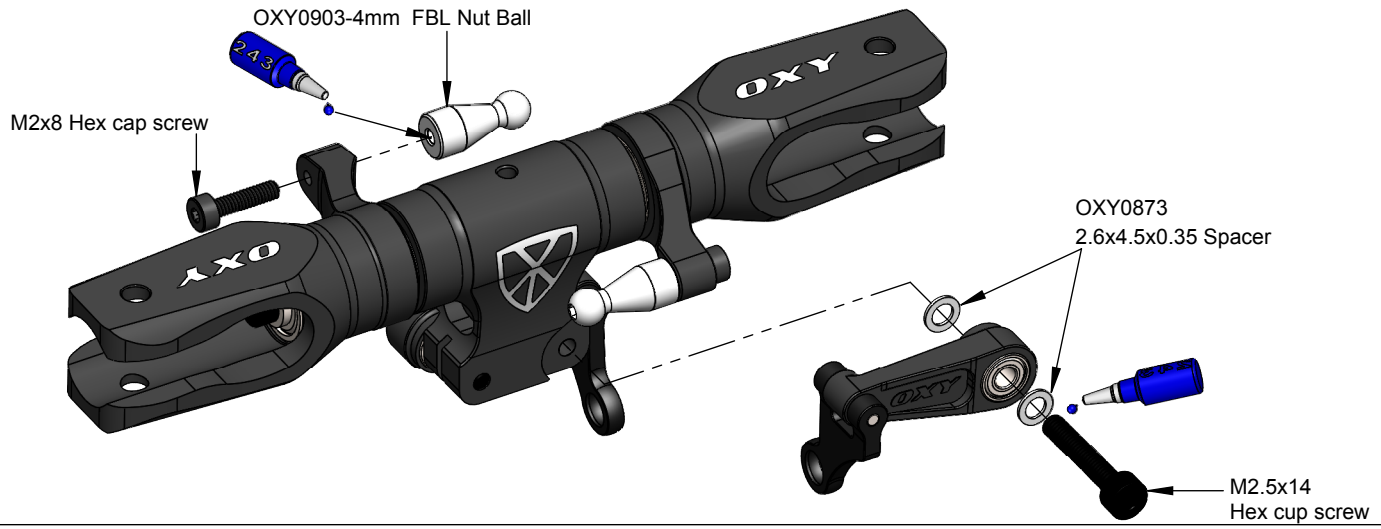


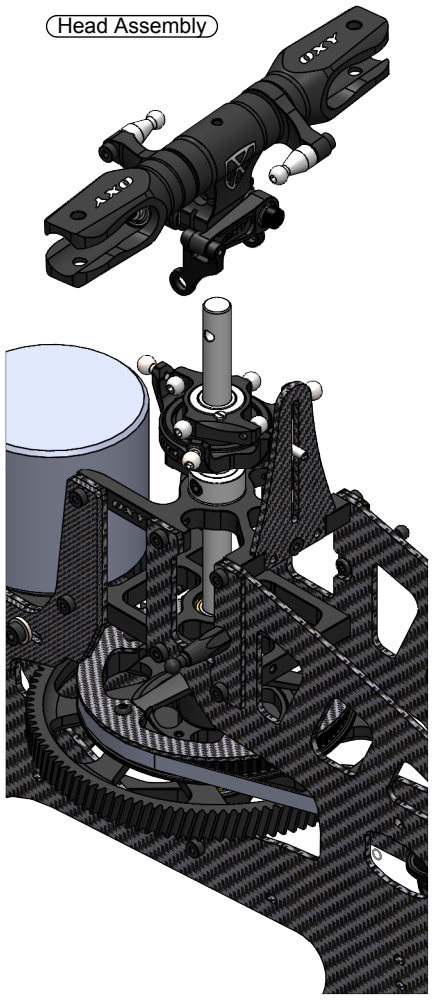
Use a Screw Driver to check Belt Tension (suggested max deflection is 1mm)
- Note: We recommend a tight Belt tension.
- If spool up get difficult, may Tail Belt is over tight, recheck and eventually loose Belt tension little bit
- Check the Belt tension again after the first 2 flights.
- With a new Tail Belt, when the head is rotated slowly, it is normal to hear a tooth sound as the belt engages with the Main Pulley. This sound is normal and will disappear after a few flights and the necessary "break-in".

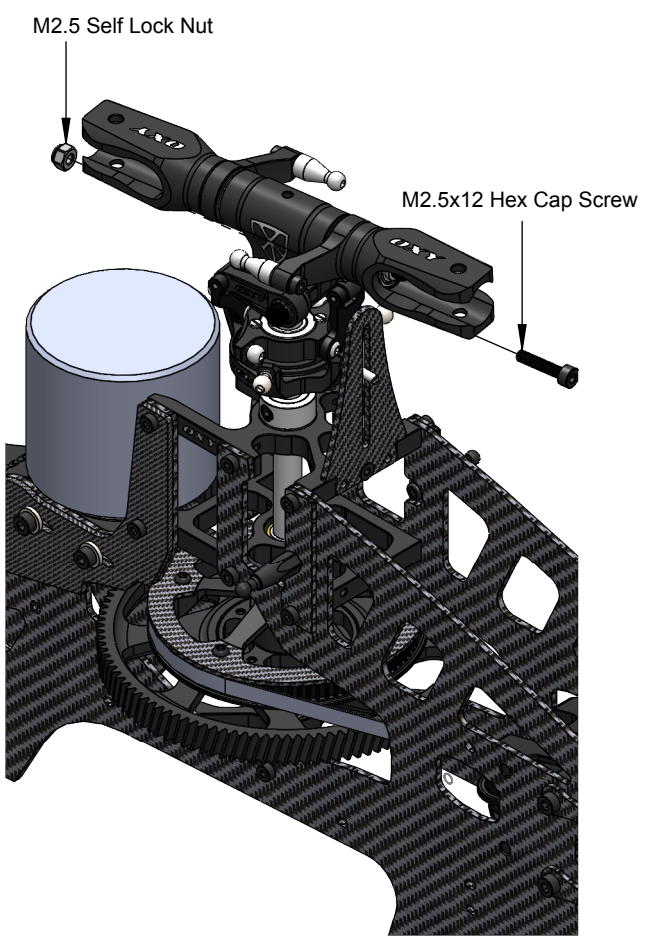
Important Note:
This part comes pre assembled WITHOUT thread lock. Follow the instruction for final assembly.

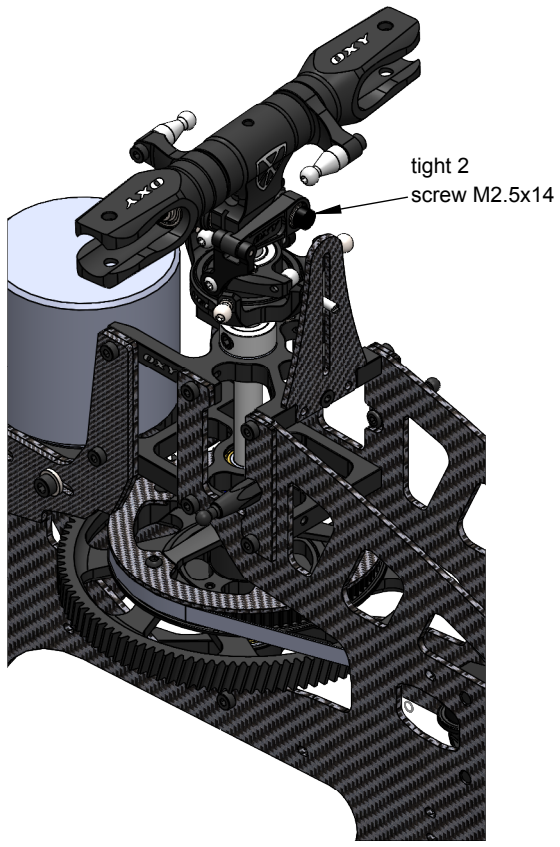
Step Faced to Main Grip

Fine Adjust Shims:
In order to give fine adjustment options, the extra Hardware Bag contains extra Shims 4x6x0.1. Start assembly with one (each side)pre installed shim. If the Main Grips have sideway play, add shims as required. Each Grips must have the same number of shims. If you add one shim on the left side, you need to also add one shim on the right side



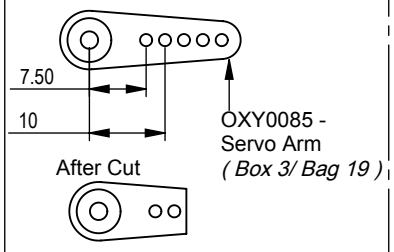

Head Assembly

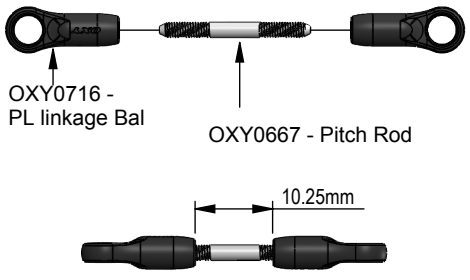

M2.5 Self Lock Nut
M2.5x12 Hex Cap Screw


tight 2
screw M2.5x14

- You should now do some initial setup of your FBL unit and servos.
- We recommend you select a new model in your transmitter, and reset your FBL unit and start with a clean setup in it as well.
- After binding your transmitter to the receiver system used with the FBL unit, work your way through the FBL setup instructions to the point you plug in your servos.
- Now set your collective stick in the middle position, and position the servo arms as close to the correct positions you can on each servo see the following pages for arm orientations on the various servos.
- Next confirm the servos work in the correct direction, then return the collective stick to the center position.
- Now use your FBL unit to trim the servos so the arms are exactly horizontal (see pictures below).
- This procedure varies between units. Carefully label the position of the servos, then proceed with the installation of the servos as shown.

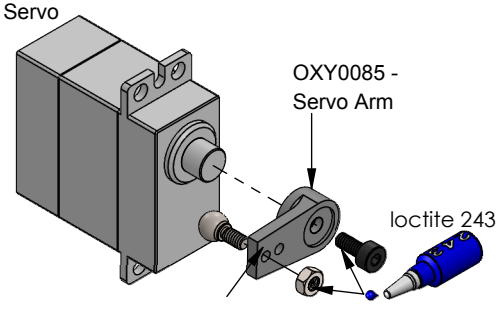
Linkage Ball Position



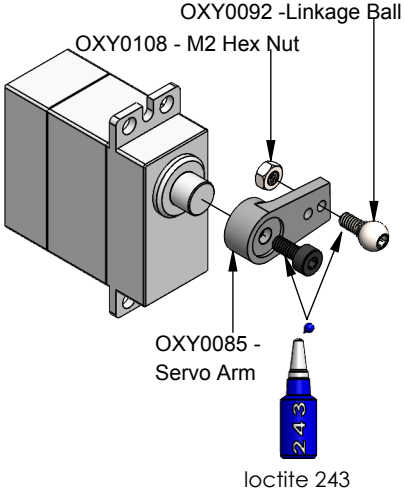


It is really important the servo rods screw onto the linkages the same amount. The Plastic ball links have a Lynx logo to give you information about turn adjustment, but have a symmetrical ball socket shape and can be installed in either direction to achieve the best fine tuning.

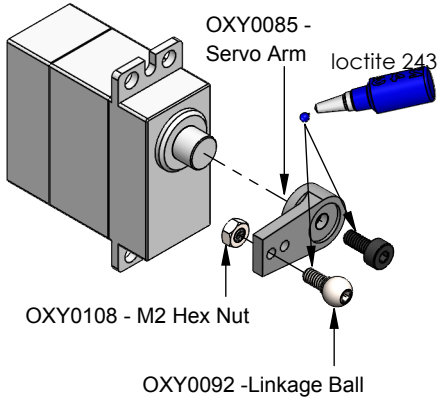
Front Cyclic Servo



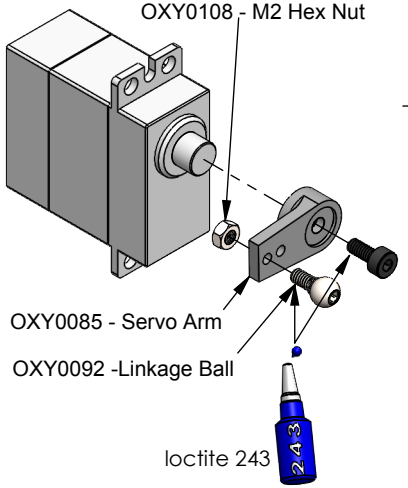
Left Cyclic Servo



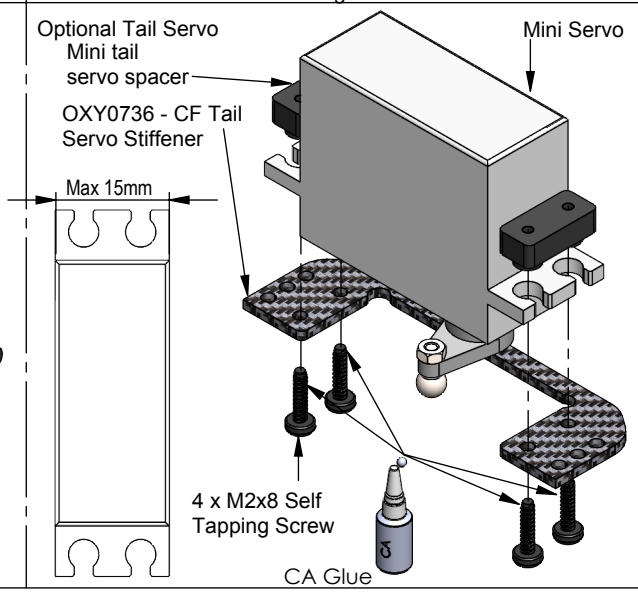
Right Cyclic Servo

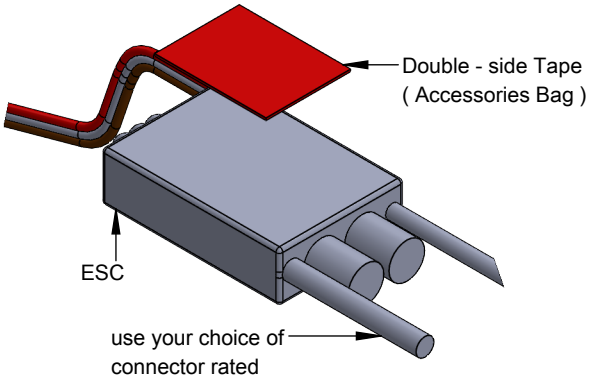


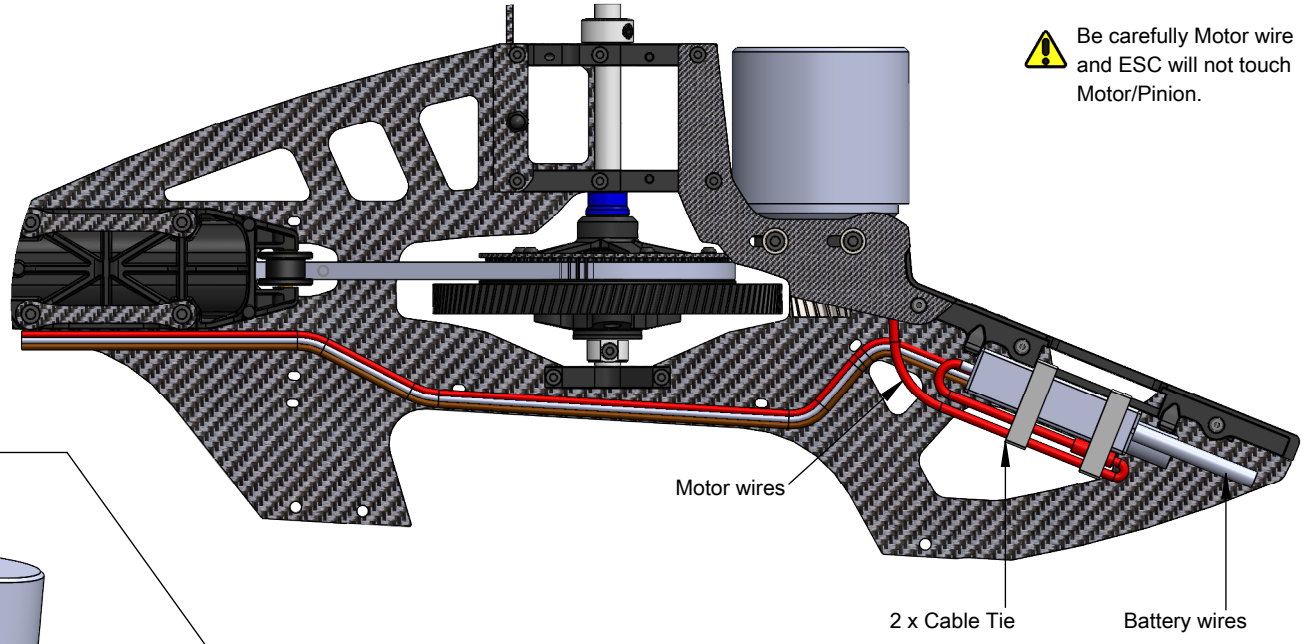
Tail Servo



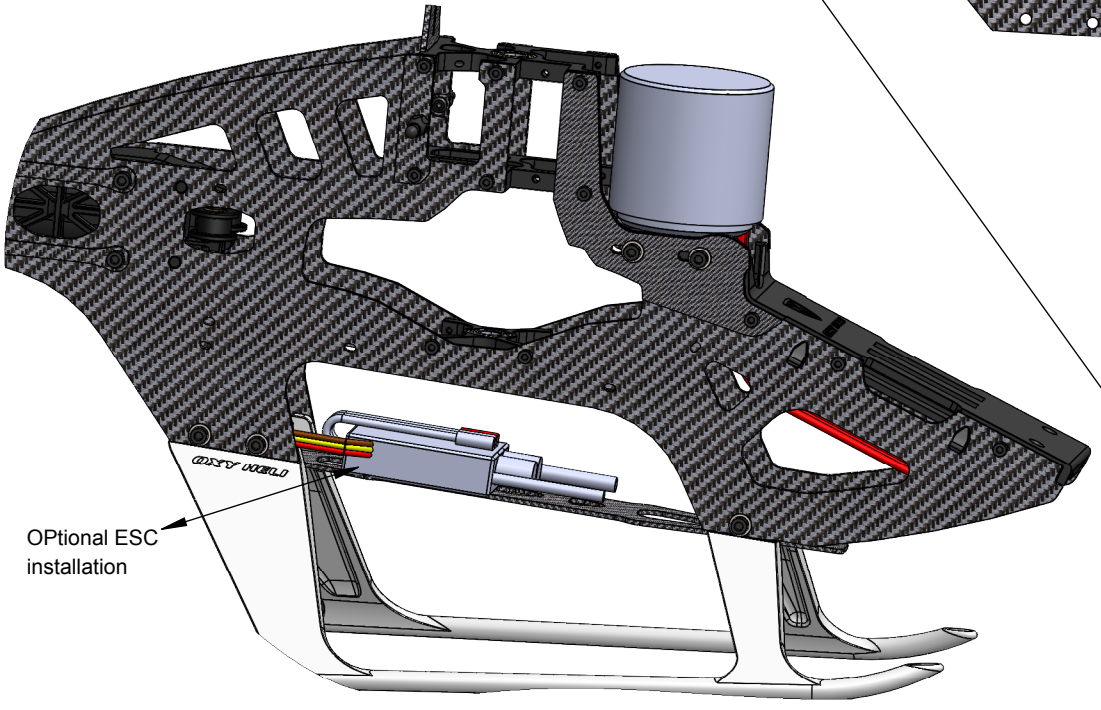
Optional Tail Servo



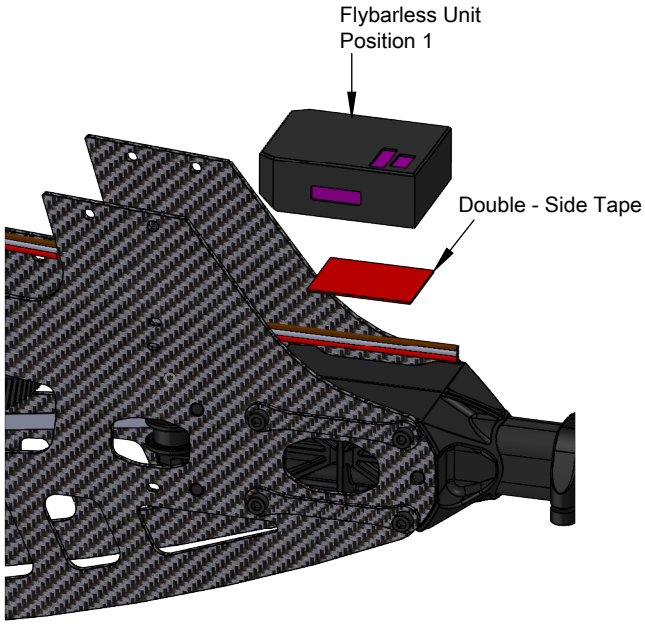




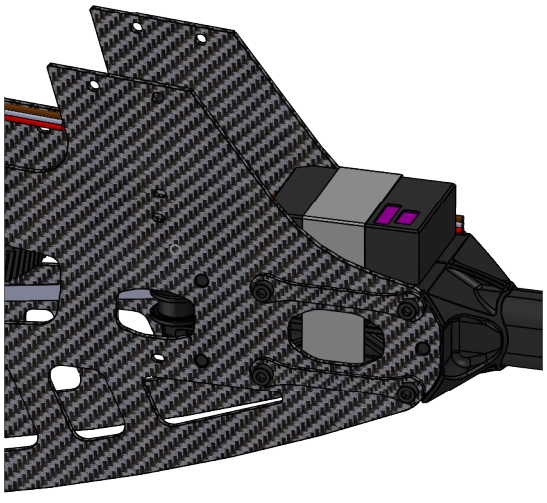
Be carefully Motor wire and ESC will not touch Motor/Pinion.



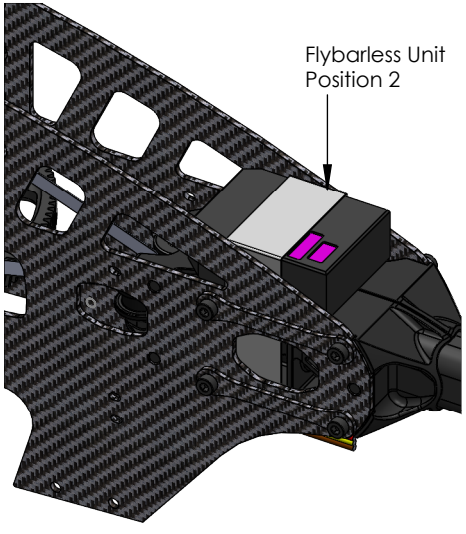
Use 3 x cable ties, to secure the Throttle ESC wire to the main frame. Use the Frame built-in socket for best holding. In this Step connect the Motor and ESC Wires but don't secure yet. Wait till the final motor rotation check, once the FBL system is set up.
NOTE: To reverse Motor rotation direction , just switch 2 of the 3 wires.

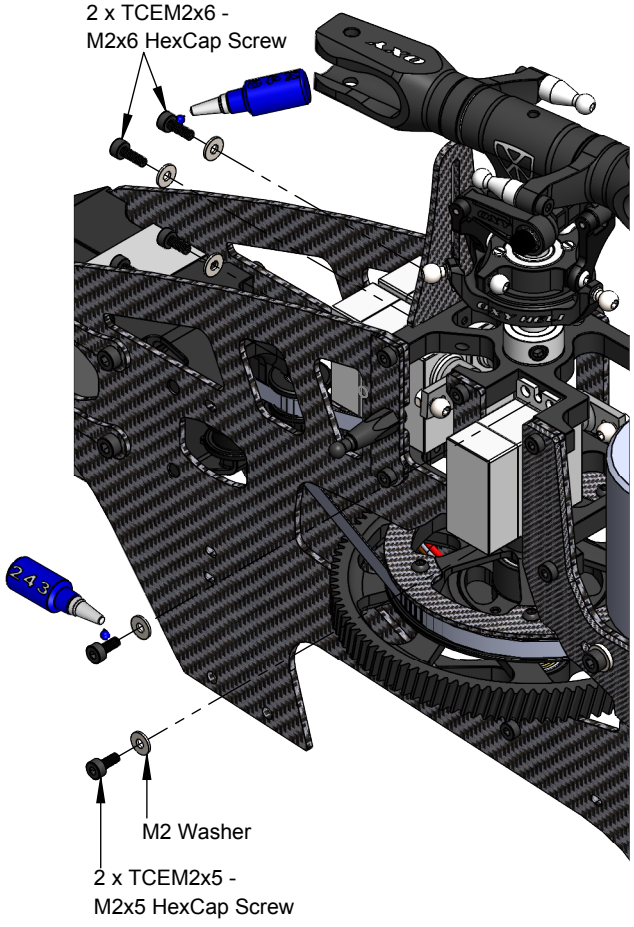


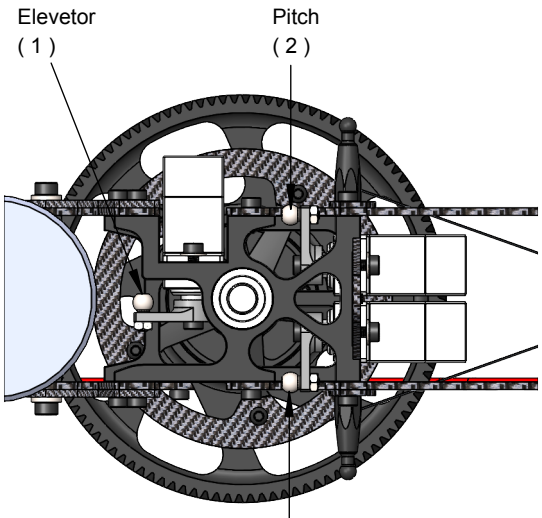
For extra FBL support we suggest to add Electronic Hook and Loop as shown.



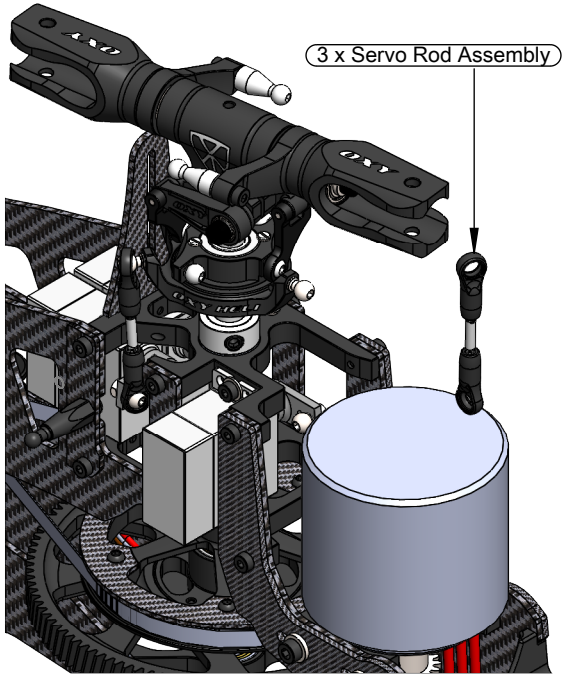
The FBL system can be installed at the bottom or top of the boom clamp. We suggest to use the bottom for easy wiring and servo removal.

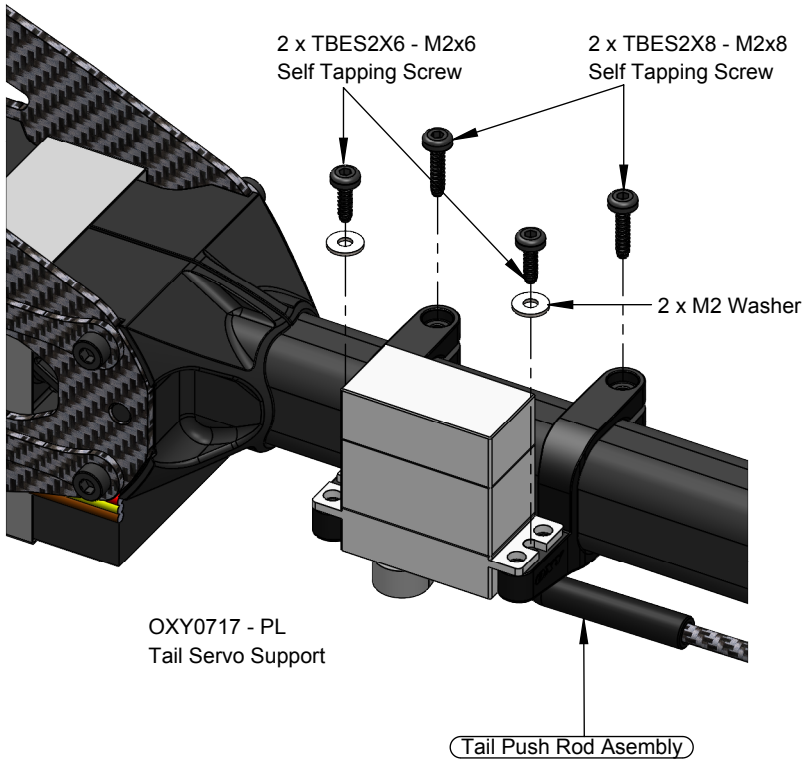




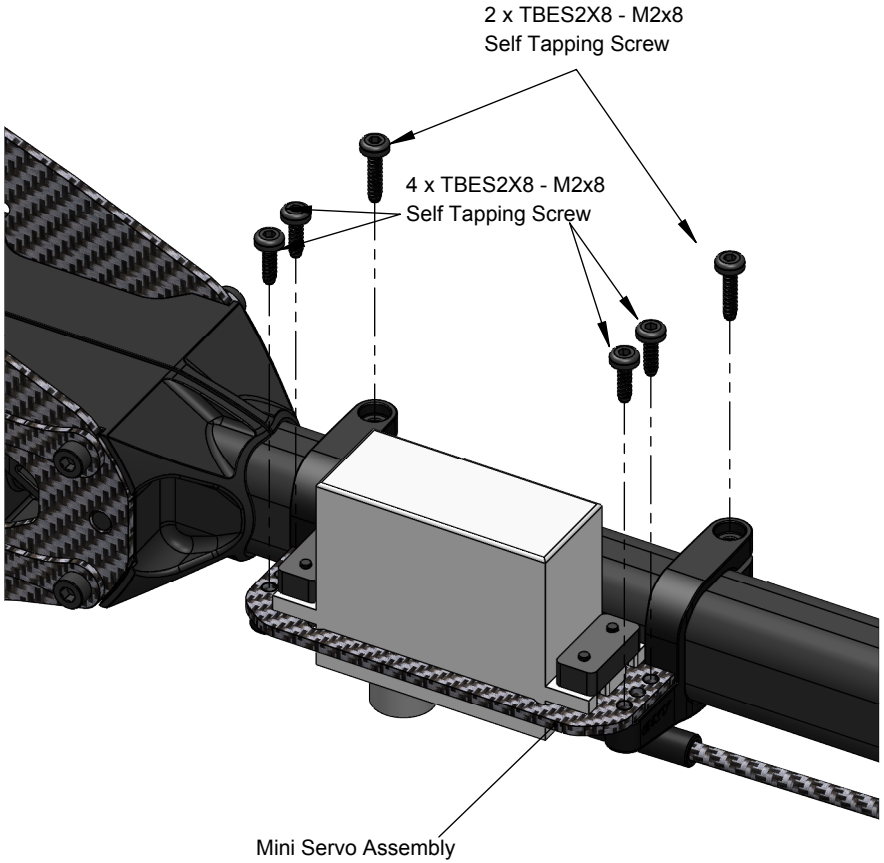


Servo Layout

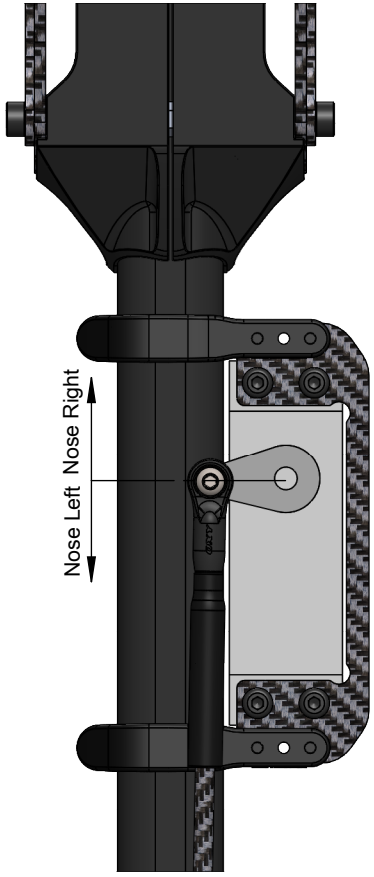




Optional Tail Servo Installation

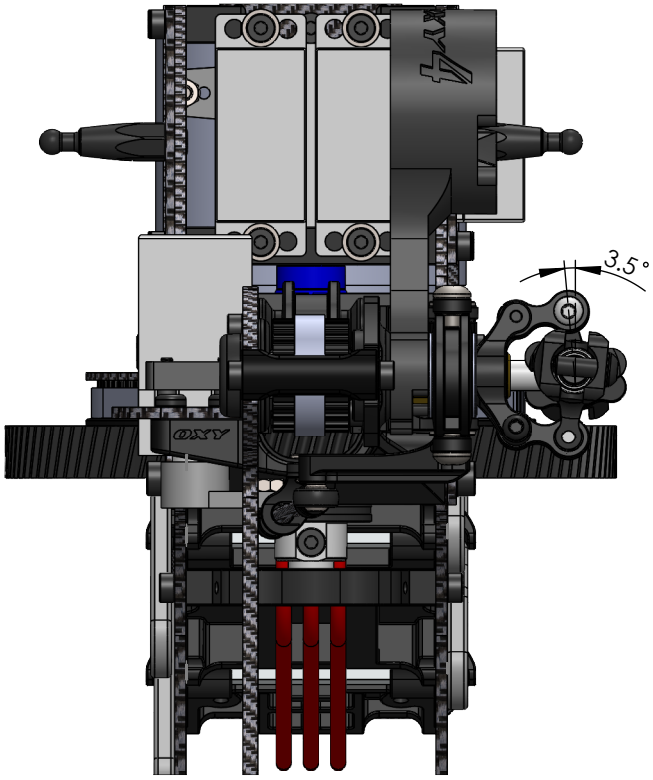


Arm position with centered Rudder stick.



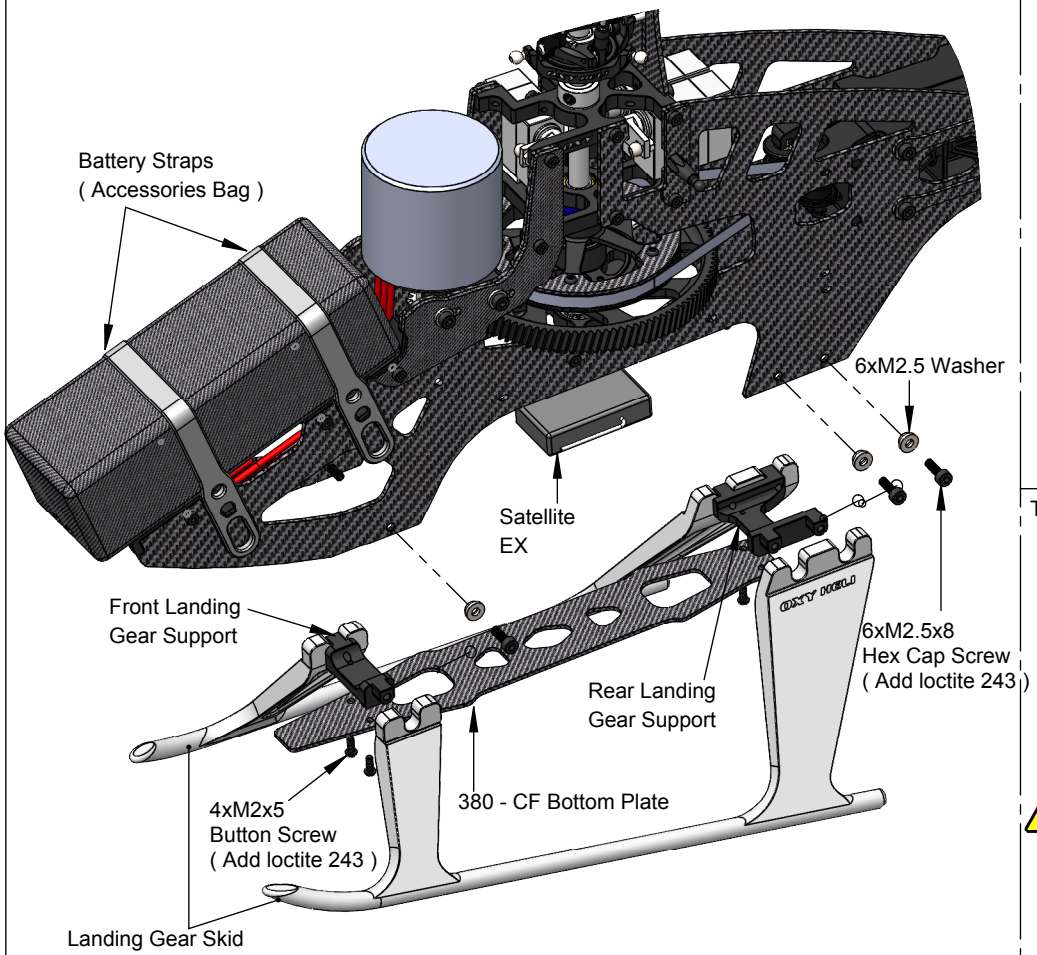
Leveler
(Accessories Bag)

With Rudder Stick centered and the Tail Servo Arm in the center position, adjust the Tail Push Rod length until the Tail Bell Crank and Tail Case Plate are parallel as shown.

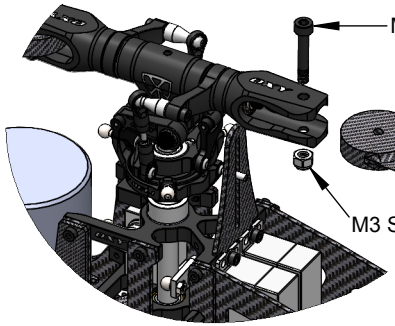


The Oxy 4 Tail System has approximately 3.5 of counter torque with the Tail Bell Crank set per instructions.

Landing Gear & Battery Installtion



Main Blades Installation

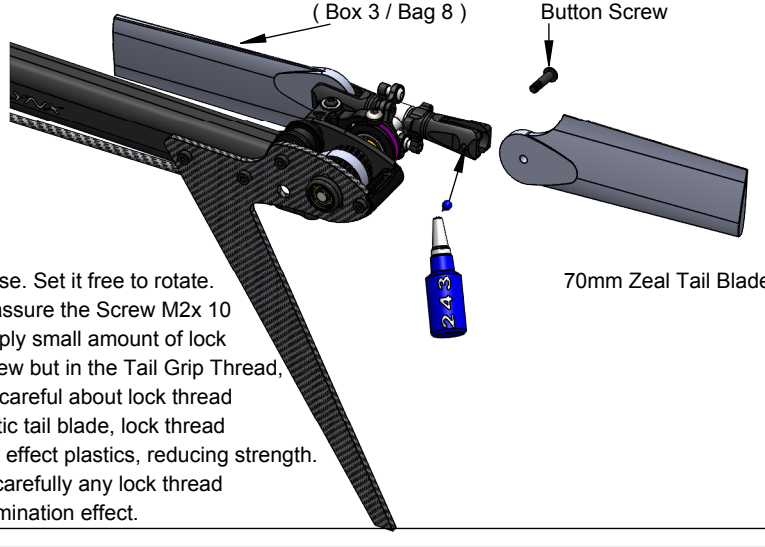


Main Blade Lock Note:
In small Heli or in aggressive head design like oxy 2, 3 and 4 if you fly on hard terrain MUST set loose.This suggestion will avoid annoying wobbling on ramp up or landing.

Please look at Accessories for the shims you need to adjust Main & Tail Blades thickness, in the kit have included:

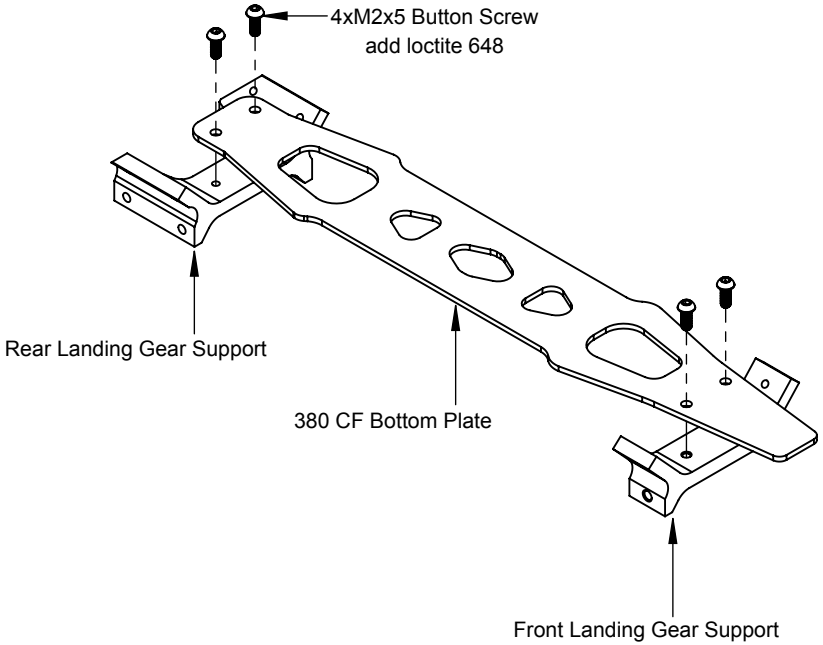
1 Set x OXY4 - Main Blade Shim Silver = 0.5mm thickness
1 Set x OXY4 - Main Blade Shim Black = 0.6mm thickness
1 Set x OXY4 - Main Blade Shim Red = 0.75mm thickness

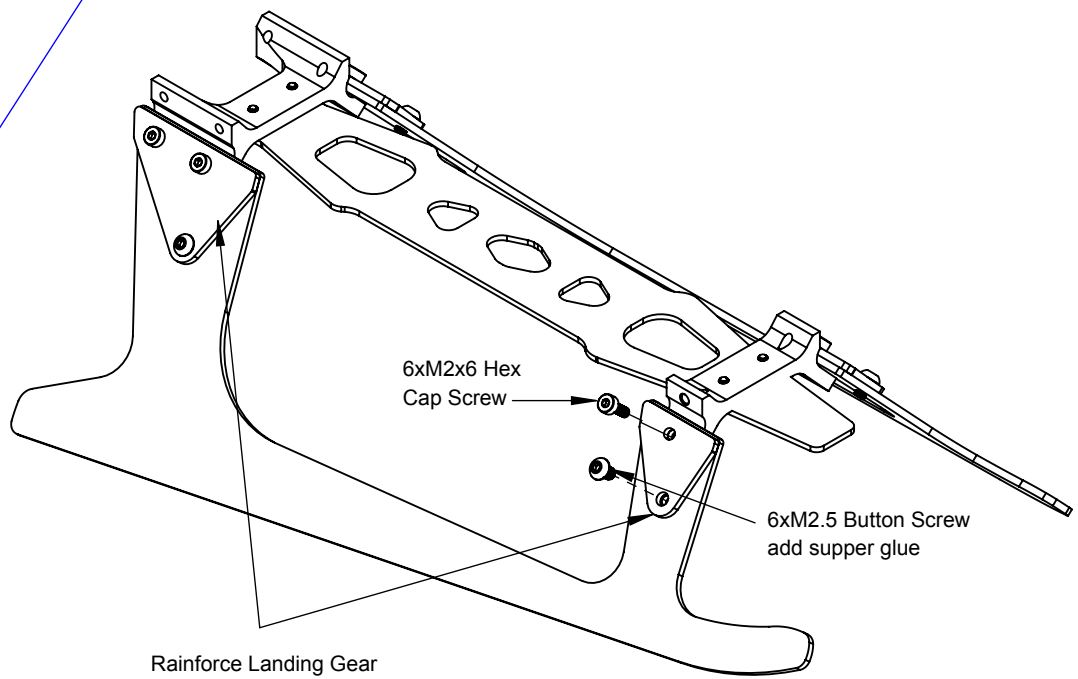
Tail Blades Installation



Tail blade need be loose. Set it free to rotate. About lock thread, to assure the Screw M2x 10 use it but carefully. Apply small amount of lock thread NOT in the Screw but in the Tail Grip Thread, using a tooth pick. Be careful about lock thread contamination on plastic tail blade, lock thread contains chemical that effect plastics, reducing strength. After assembly clean carefully any lock thread excess to avoid contamination effect.

OSP-1193-OXY4-380 Landing Gear for manual





Before Fly:

Now complete the setup of your FBL system. In the Accessories Bag you will find an Oxy 4 Swash Plate Leveler.

This Tool is designed to fit under the Swash Plate without disassembly any parts. This simple tool will both level the swash and give the Zero Pitch Position.

Starting gyro gain: The Oxy 4 was designed around famous FBL Systems (IKON / Brain / mini V-Bar), and we suggest you start with the following standard set up and adjust after test flying.

Cyclic Set Up:

Use suggested settings for 450 Helicopters and adjust after test flights.

See our table on page 6 for RPM and Pitch Settings. Cyclic Max pitch should be +/- 10.5 deg.

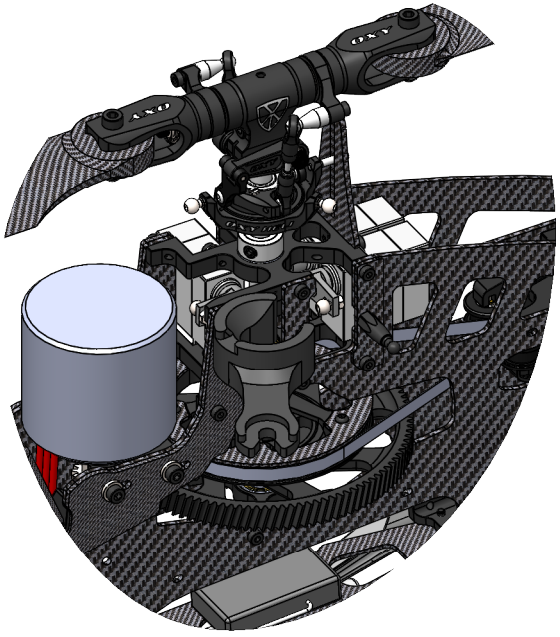
Tail Set Up:

Use the suggested settings for 450 Helicopters BUT start with a LOWER Tail Gain (Increase after test per need)

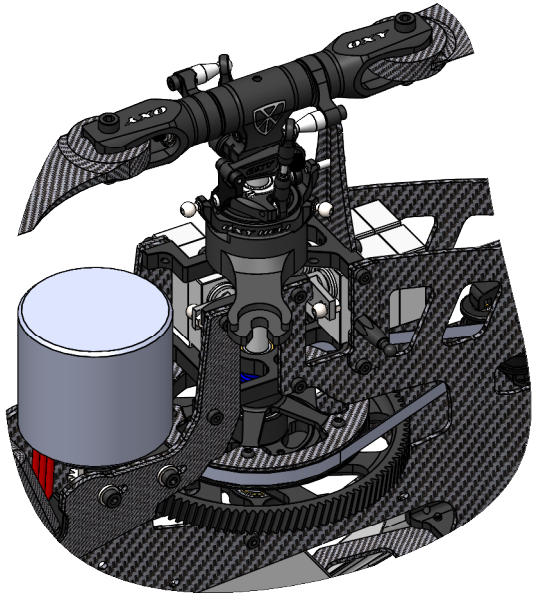
IKON / Brain = 20%

Mini V-Bar = 250 Heli suggested gain.

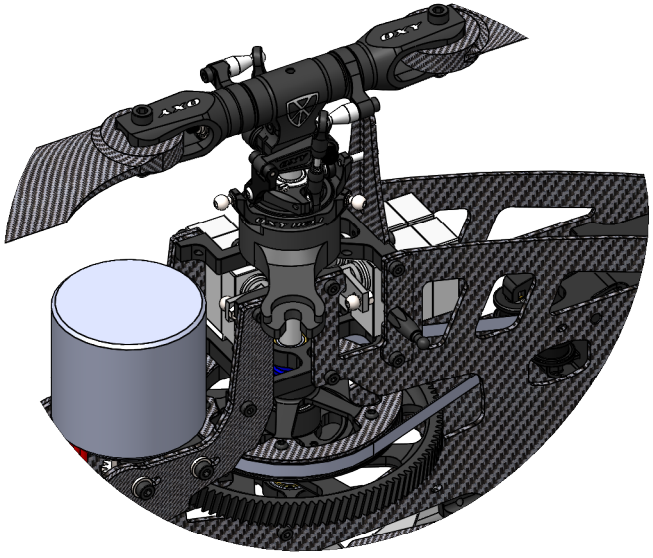
⚠ Lift up swash plate as shown to have space for inserting Leveler.

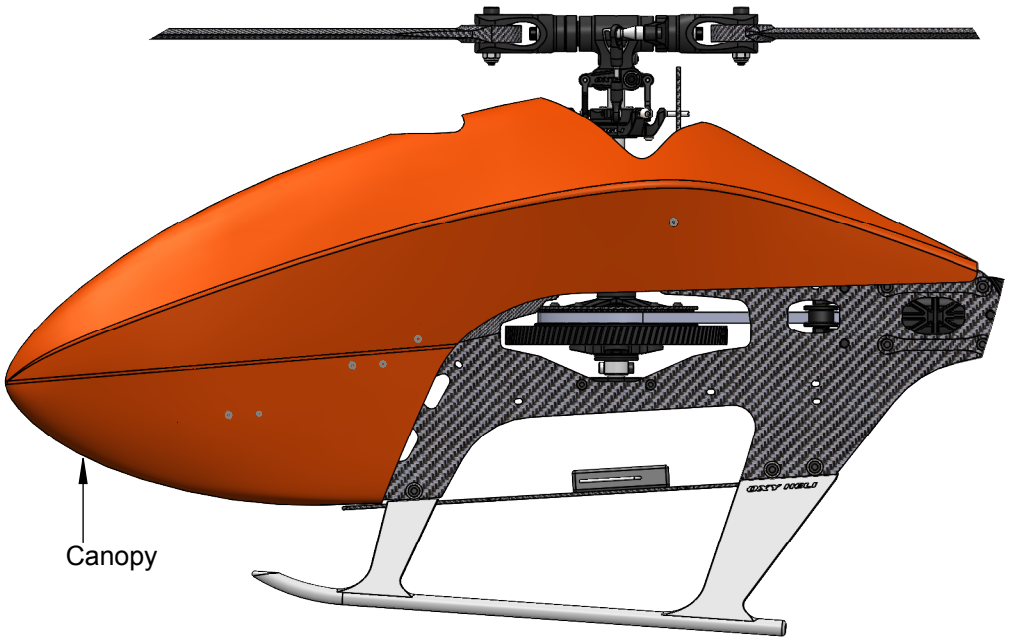


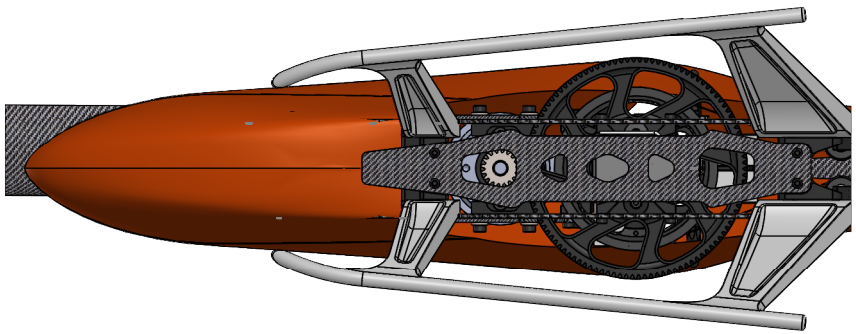
⚠ Rotate Leveler as shown

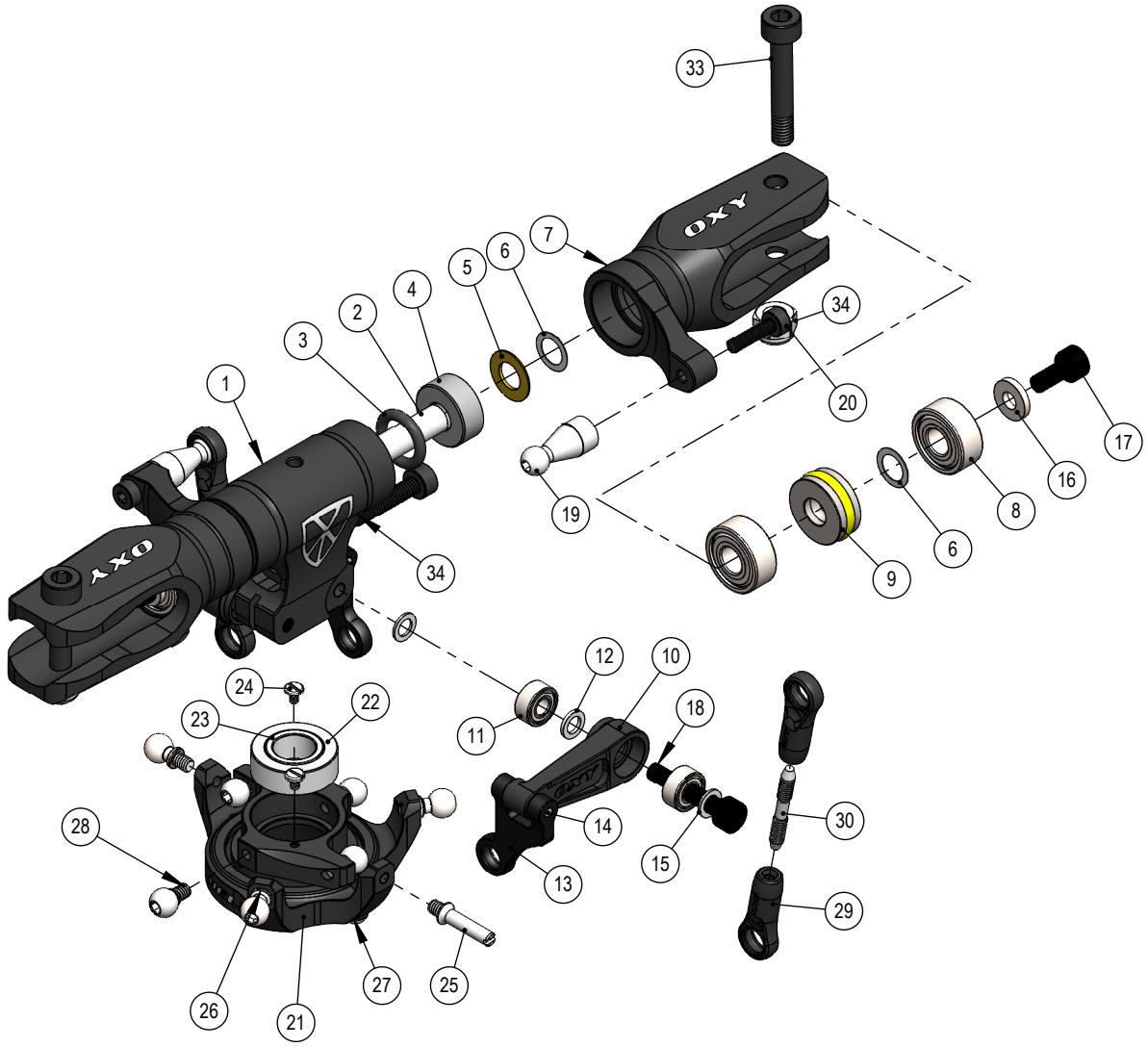


⚠ Lower Swash Plate down untill Swash Plate touch Leveler as shown.

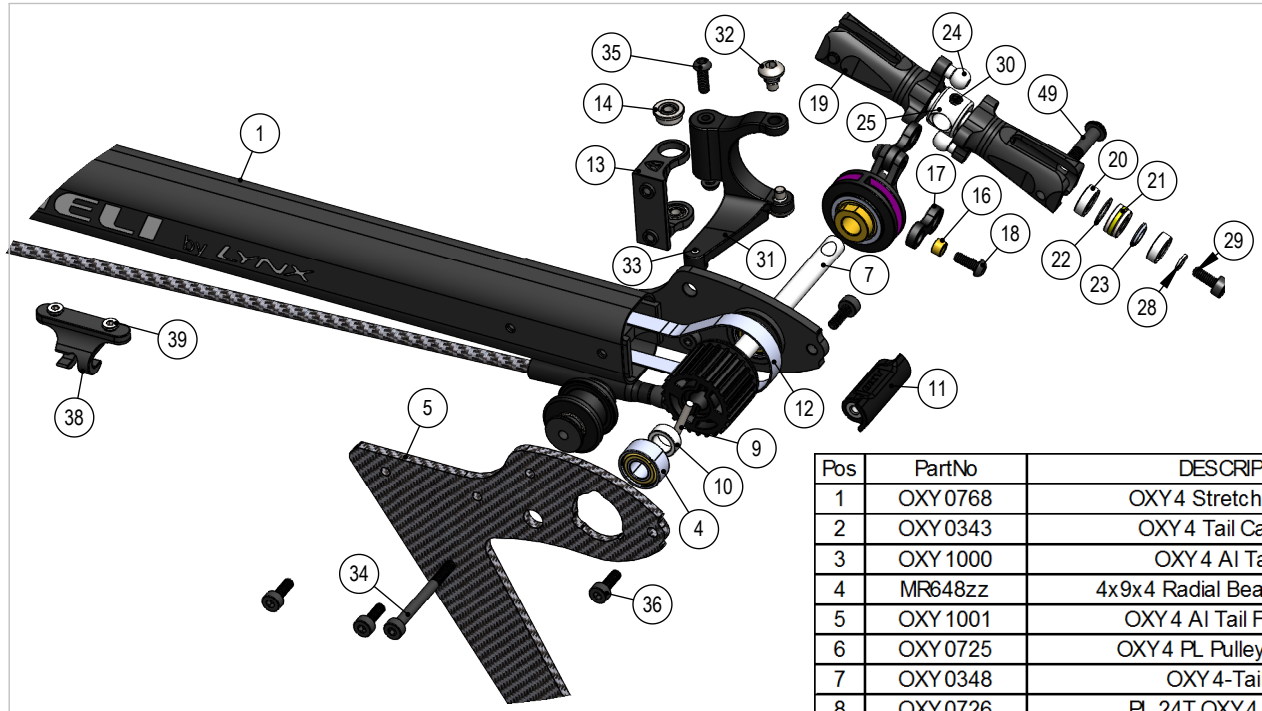



Canopy

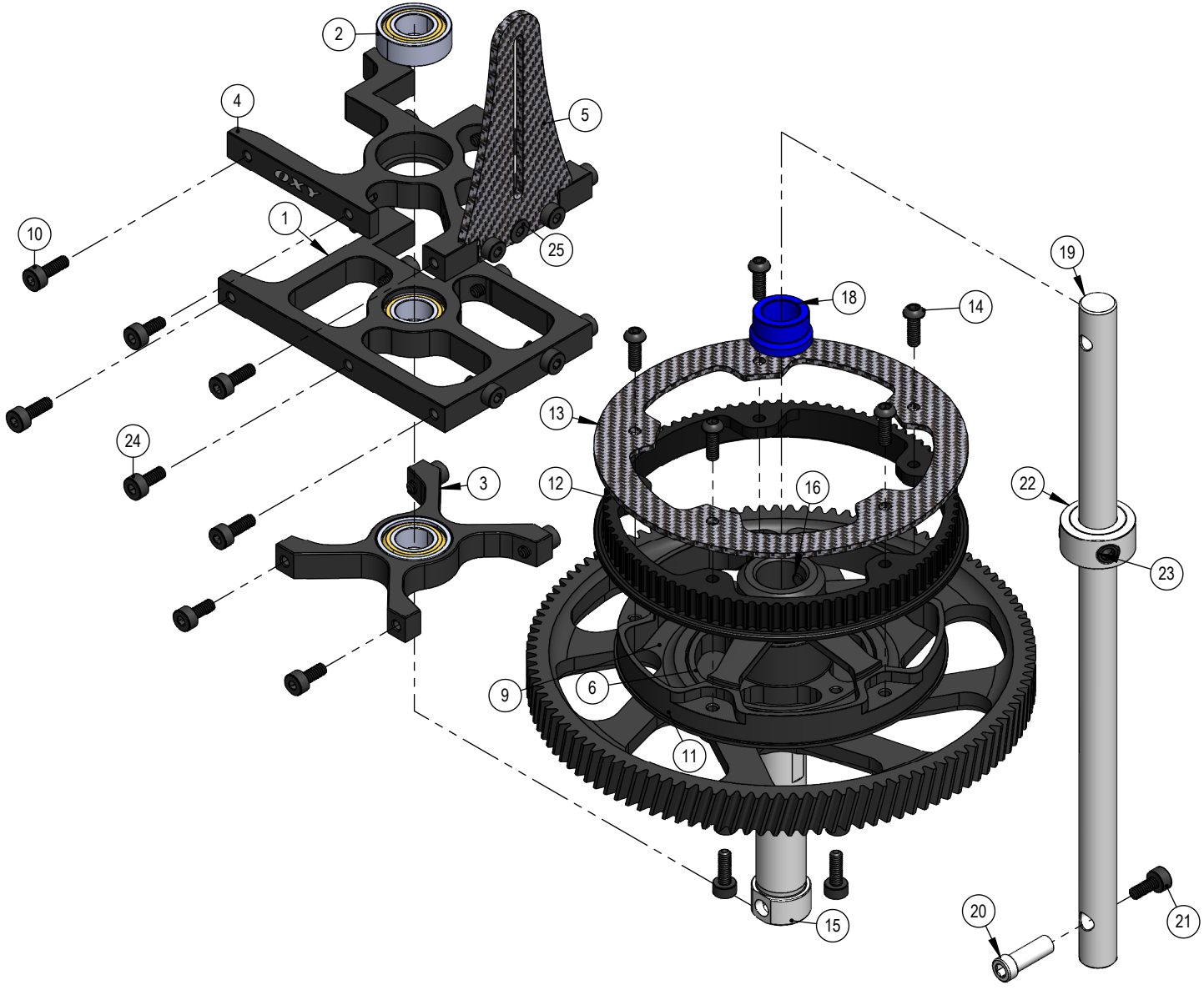




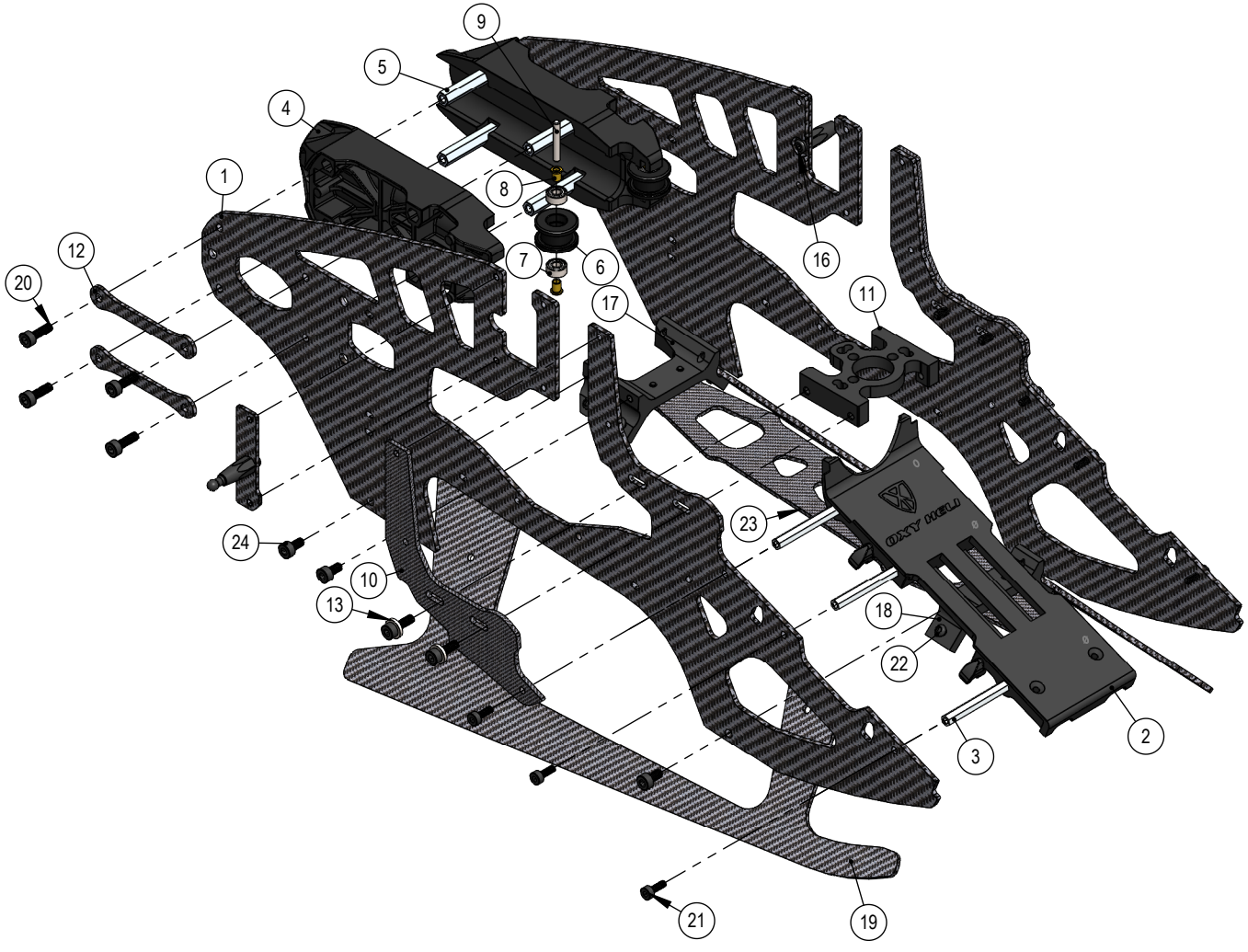
Pos	PartNo	DESCRIPTION	QTY.
1	OXY0324	Center Hub	1
2	OXY0339	OXY4-Spindle Shaft	1
3	OR6x1.5	Oring ID6x1.5 Shore 80-90	2
4	OXY0325	OXY4-Damperner Bushing	2
5	OXY0680	OXY4-Damperner Spacer	2
6	OXY0361	Shim 4x6x0.1	4
7	OXY0333	OXY4-Main Grip	2
8	MR104_ZZC	4X10X4 RADIAL BEARING	4
9	F4-10G	4X10X4 Thrust Bearing	2
10	OXY0649	OXY4 Follower Arm	2
11	SMR682Z-ZZ	2.5X6X2.6 Radial Bearing	4
12	OXY0870	2.5X4X0.5 Washer	2
13	OXY0080	UNIBALL RADIUS ARM	2
14	OXY0089	1.5x9.5 Alloy Steel Dowel Pin	2
15	OXY0873	2.6x4.5x0.35 Spacer	4
16	OXY0332	M2.5 Washer	2
17	TCEM2.5X6	M2.5X6 Hex Cap Screw	2
18	TCEM2.5X14	M2.5x14 Hex Cap Screw	2
19	OXY0903	4mm FBL Nut Ball	2
20	TCEM2X8	M2X8 Hex Cap Screw	2
21	OXY0696	OXY4 Lower Swash Plate	1
22	OXY0694	OXY4 Ball Holder	1
23	OXY0695	OXY4 Center Ball	1
24	OXY0020	M1.2x2 Special Screw	2
25	OXY0018	2x11.5 ANTIROTATION PIN	1
26	OXY0019	M2 WASH PLATE BALL	3
27	OXY0111	M1.6X3 Button Screw	2
28	OXY0043	4X2 LINKAGE BALL	4
29	OXY0716	4mm PL linkage Ball M2 thread	4
30	OXY0750	M2x15 Partial Thread	2
31	SLNM2.5	M2.5 Self Lock Nut	1
32	TCEM2.5x12	M2.5X12 Hex Cap Screw	1
33	TCEM3X18	M3X18 Hex Cap Screw Shouldered	2
34	SLNM3	M3 Self Lock Nut	2



Pos	PartNo	DESCRIPTION	QTY.	Pos	PartNo	DESCRIPTION	QTY.
1	OXY0768	OXY4 Stretch Tail Boom	1	26	OR-ID2_W1	O-RING ID2 W1	2
2	OXY0343	OXY4 Tail Case Insert	1	27	OXY0054	3X4X0.1 Shim	2
3	OXY1000	OXY4 Al Tail Case	1	28	OXY0055	2X3.5X0.5 Washer	2
4	MR648zz	4x9x4 Radial Bearing (Japan)	2	29	TCEM2X5	M2X5 Hex Cap Screw	3
5	OXY1001	OXY4 Al Tail Fin Adapter	1	30	SCM3x3	Flat-Tip Set Screw M3x3	1
6	OXY0725	OXY4 PL Pulley Guide Belt	1	31	OXY0724	OXY4-Tail Bell Crank	1
7	OXY0348	OXY4-Tail Shaft	1	32	OXY0057	Tail Pin Screw	2
8	OXY0726	PL 24T OXY4 Tail Pulley	1	33	OXY0092	4X2X4.2 M2 Linkage Ball	1
9	OXY0733	1.5x10 Alloy Steel Dowel Pin	1	34	TCEM2X22	M2X22 Shouldered Hex Cap Screw	1
10	OXY0743	4x6x2.5 Bushing	1	35	TBEM2X6	M2X6 Button Screw	2
11	OXY0648	OXY4- Tail Case Rod	1	36	TCEM2X6	M2X6 Hex Cap Screw	6
12	B583MXL	Timing Belt	1	37	OXY1009	OXY4-380 - Vertical Fin Plate	1
13	OXY0673	OXY4- Bell Crank Support	1	38	OXY0620	OXY3-OXY4-TE Guide Push Rod	1
14	MF682ZZ	2X5X2.3 FLANGE BEARING	2	39	OXY0539	M2.5 Pin Screw	2
15	OXY0714	OXY4-Tail Pitch Slider	1	40	OXY0758	OXY4- Stretch Tail Push Rod	1
16	OXY0062	2X3X2 BUSHING	2	41	OXY0735	OXY4 - Tail Push Rod terminal	2
17	OXY0064	LINK CONTROL	2	42	OXY0666	OXY4 SST Threaded Rod M2X10	2
18	TBEM2X5	M2X5 Button Screw	2	43	OXY0716	4mm PL linkage Ball M2 thread	2
19	OXY0956	OXY4 380 Tail Grip	2	44	OXY0717	OXY4 PL Tail Servo Support	2
20	MR63-X	3X6X2 Radial Bearing	4	45	OXY0736	OXY4 - CF Tail Servo Stiffener	1
21	F3-6M	3x6x2.8 Thrust Bearing	2	46	OXY0770	Mini Tail Servo Spacer	2
22	OXY0053	4.2X6X0.2 Shim	2	47	TBES2X8	M2X8 Self Tapping Screw	6
23	OXY0723	OXY3.4 Tail Grip Spacer	2	48	TBES2X6	M2X6 Self Tapping Screw	4
24	OXY0050	4X3XM2BALL	2	49	OXY1006	M2.5x10 Button Shoulder Screw	2
25	OXY0344	OXY4-Tail Hub	1				



Pos	PartNo	DESCRIPTION	QTY.
1	OXY0335	Middle Bearing Block	1
2	RM126-ZZ	6x12x4 Radial Bearing	3
3	OXY0331	LOWER BEARING BLOCK	1
4	OXY0352	Upper Bearing Block	1
5	OXY0711	OXY4- Anti rotation Guide	1
6	OXY0655	OXY4-One Way Hub	1
7	HF0812	One Way 8x12x12	1
8	MR148ZZ	8x14x3.5 Radial Bearing	2
9	OXY0993	Oxy 380 Main Gear	1
10	TCEM2X6	M2X6 Hex Cap Screw	14
11	OXY0657	OXY4- Front Pulley Hub	1
12	OXY0721	OXY4 88T Front Pulley	1
13	OXY0658	OXY4- Front Flange Pulley	1
14	TBEM2X6	M2X6 Button Screw	5
15	OXY0654	OXY4 One Way Sleeve	1
16	SCM3x3	Flat-Tip Set Screw M3x3	2
18	OXY1011	Main Gear Bushing Adapter	1
19	OXY0927	OXY4 380 Main Shaft	1
20	OXY0656	OXY4 One Way Screw	1
21	TCEM2X4	M2X4 HEX CAP SCREW	1
22	OXY0334	OXY4 Main Shaft Lock Ring	1
23	SCM4X3	M4x3 Flat-Tip Set Screw	2
24	TCEM2X5	M2X5 Hex Cap Screw	12
25	FHSM2X4	M2x4 Flat Head Screw	1



Pos	PartNo	DESCRIPTION	QTY.
1	OXY0954	OXY4 380 Main Frame	2
2	OXY0722	OXY4 PL Battery Tray	1
3	OXY0665	OX4 H3x32 M2	3
4	OXY0683	OXY4- Boom Clamp	2
5	OXY0660	OXY4 H4x32mm M2.5	4
6	OXY0725	OXY4 PL Pulley Guide Belt	2
7	SMR682Z-ZZ	2.5X6X2.6 Radial Bearing	4
8	OXY0668	OXY4 Bell Crank Bushing	4
9	OXY0023	2X13.5 PIN	2
10	OXY1017	OXY4-380 CF Motor Mount Stiffener	2
11	OXY0951	OXY4 380 Motor Mount	1
12	OXY0663	OXY4 Boom Clamp Stiffener CF	4
13	OXY0332	M2.5 Washer	4
14	OXY0425	OXY4 - Break Aw ay Canopy	2
15	OXY0082	Canopy Mount	2
16	TBES2X6	M2X6 Self Tapping Screw	2
17	OXY0901	OXY4-AL Back Landing Gear Support	1
18	OXY0900	OXY4-AL Front Landing Gear Support	1
19	OXY1010	OXY4-380 - Landing Gear Skid	2
20	TCEM2.5x8	M2.5X8 Hex Cap Screw	12
21	TCEM2X6	M2X6 Hex Cap Screw	6
22	TBEM2X5	M2X5 Button Screw	10
23	OXY0955	OXY4 380 Bottom Plate	1
24	TCEM2.5X5	M2.5X5 Hex Cap Screw	6

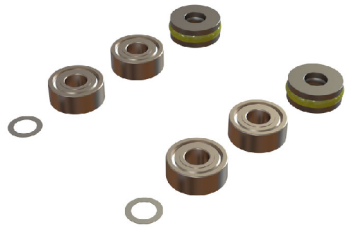
OSP - 1002
OXY4 - Center Hub

1 x Center Hub
1 x M2.5x12 Hex Cap Screw
2 x M2X6 Hex Cap Screw
1 x M2.5 Self Lock Nu

OSP-1202
OXY4 CNC Main Grip, Black - 1 Pcs

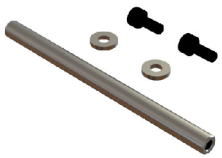
2 x Main Grip Assembly
2 x M3X18 Shouldered Hex Cap Screw
2 x M3 Self Lock Nut

OSP - 1004
OXY4 - Main Grip Service Bag



2 x 4X10X4 Thrust Bearing
4 x 4X10X4 RadialL Bearing
2 x Shim 4x6x0.1

OSP - 1010
OXY4 - Carbon Steel Spindle Shaft



1 x OXY4-Spindle Shaft
2 x M2.5 Washer
2 x M2.5X6 Hex Cap Screw

OSP - 1011
OXY4 - Dampeners, 2 Set

4 x OXY4-Damperner Bushing
4 x Oring ID6x1.5
4 x OXY4-Damperner Spacer
4 x Shim 4x6x0.1

SP-0059-OXY4
FBL-Head-System

SP-0076-OXY4
FBL-Antirotation-Arm, Service-Bag

OSP - 1057
OXY4 - DFC Arm -Spacer Set, 4Pcs

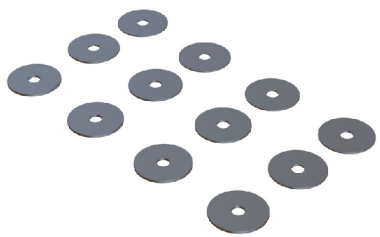
4 x M2X18 Hex Cap Screw
4 x 2X3.5X0.5 Washer
4 x OXY4 - Main Grip Bushing - Black

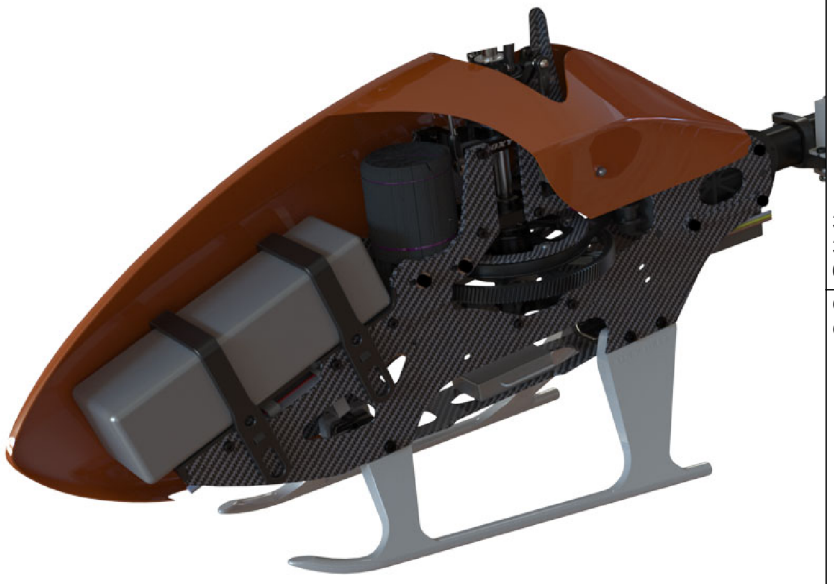
OSP - 1005
OXY4 - Swashplate, Set

1 x Swash Plate, Set

OSP - 1006
OXY4 - Swashplate - Service Bag

1 x OXY4 Ball Holder
1 x OXY4 Center Ball
2 x M1.2x2 Special Screw
1 x 2x11.5 Anti Rotation Pin
3 x M2 Wash Plate Ball
4x Linkage Ball

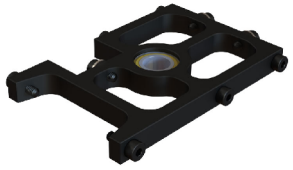
OSP-1008 OXY4 - PL Linkage Ball, 10pcs  10 x Plastic Linkage Ball	OSP-1012 Threaded Rod M2x10  10 x M2x10 Threaded Rod	OSP - 1048 Threaded Rod M2x20  10 x Threaded Rod M2X20	SP-OXY3-036 OXY3 - Servo Arm Set, 4 PC  4 x Servo Arm 4 x linkage Ball 4 x Hex Nut	OSP-1103 FBL-Linkage-Ball-Screw 
OSP-1124 OXY3-OXY4-DFC-Set 	SP-0007 OXY4-DFC-Arm,Service-Bag 	OSP - 1013 OXY4 - Blade Holder  1 x OXY4 Blade Holder	ZHM-NRG325C  1 x ZEAL Energy Carbon Fiber Main Blades 325mm (Neon Orange)	M2x6CS-10 - Hex Cap Screw M2x6, 10 PCS  10 x Hex Cap Screw M2x6
M2.5x6CS-10 - Hex Cap Screw M2x6, 10 PCS  10 x Hex Cap Screw M2.5x6	M2.5x12CS-10 - Hex Cap Screw M2.5x12, 10 PCS  10 x Hex Cap Screw M2.5x12	M2.5-SLN-10 Self Lock Nut M2.5  10 x 10 Self Lock Nut M2.5	M3-SLN-10 Self Lock Nut M3  10 x 10 Self Lock Nut M3	SP-0072 OXY4 - Main Blade Shim Set  4 x 3x15x0.5 Shim 4 x 3x15x0.6 Shim 4 x 3x15x0.7 Shim



OSP - 1019
OXY4 - Upper Main Shaft Bearing Block

1 x Upper Bearing Block
1 x 6x12x4 Radial Bearing
1 x M2x4 Flat Head Screw
3 x Washer M2
3 x M2X5 Hex Cap Screw
6 x M2X6 Hex Cap Screw

OSP - 1020
OXY4 - Middle Main Shaft Bearing Block



1 x Lower Bearing Block
1 x 6x12x4 Radial Bearing
3 x Washer M2
5 x M2X5 Hex Cap Screw
4 x M2X6 Hex Cap Screw

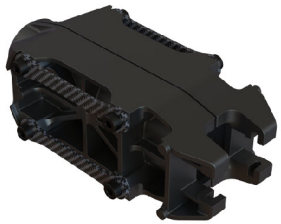
OSP - 1021
OXY4 - Lower Main Shaft Bearing Block

1 x Lower Bearing Block
1 x 6x12x4 Radial Bearing
4 x M2X5 Hex Cap Screw

OSP - 1022
OXY4 - Motor Mount

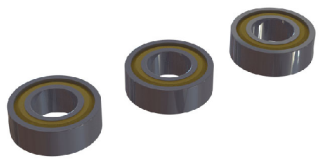
1 x OXY4-Motor Mount
4 x M2.5 Washer
8 x M2.5X8 Hex Cap Screw

OSP - 1017
OXY4 - Tail Boom Clamp Mount, Set



2 x OXY4 Boom Clamp
4 x OXY4 H4x32mm M2.5
4 x OXY4 Boom Clamp Stiffener
8 x M2.5X8 Hex Cap Screw

OSP - 1023
OXY4 - Main Shaft Bearing Block
- Service Bag



3 x 6x12x4 Radial Bearing

OSP - 1018
OXY4 - Boom Mount Lock Rod

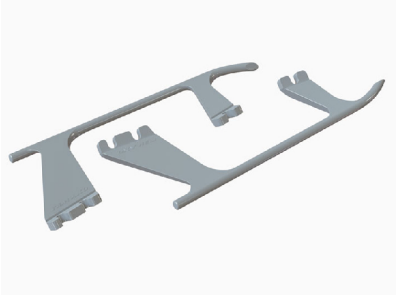
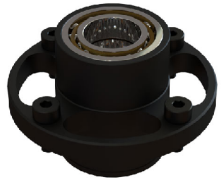
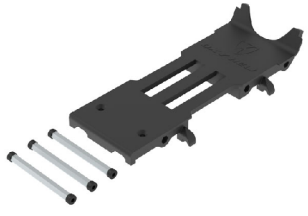
4 x OXY4 H4x32mm M2.5
8 x M2.5X8 Hex Cap Screw

OSP - 1024
OXY4 - Break Away Canopy Plate

2 x Break Away Canopy Plate

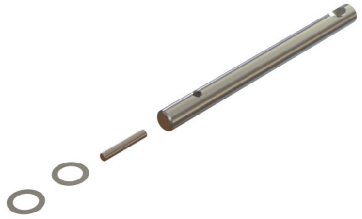
OSP - 1026
OXY4 - Carbon Anti Rotation Guide

1 x OXY4 - Anti rotation Guide

OSP-1224-OXY4 380-AL-landing-Gear-Support,-Black-Set 	OSP-1223 OXY4-380 Landing Gear Skid, White  1 Set landing Gear Skid	OSP - 1027 OXY4 - Belt Pulley Guide, Set  2 x Pulley Guide Belt Assembly	OSP-1187 OXY4-380-CNC-Main-Gear  1 x CNC Main Gear	OSP - 1029 OXY4 - One Way Hub Assembly  1 x Main Gear Hub Set
OSP - 1030 OXY4 - Front Pulley Assembly  1 x OXY4 - Front Pulley Hub 2 x Set Screw M3x3	OSP - 1031 OXY4 - Front Pulley Spare  1 x OXY4 88T Front Pulley 1 x OXY4- Front Flange Pulley 5 x M2X6 Button Screw	OSP - 1032 OXY4-One Way Sleeve  1 x OXY4 One Way Sleeve 1 x OXY4 One Way Screw 1 x M2X4 Hex Cap Screw	OSP - 1034 OXY4- Battery Tray  1 x OXY4 PL Battery Tray 3 x OX4 H3x32 M2 M2X6 Hex Cap Screw	SP-OXY3-015 - OXY3 - Battery Oring , 4PC  4 x Battery Strap
OSP-1077 OXY3-OXY4 - Canopy Mount  4 x Canopy Mount 4 x Self Tapping Screw	OSP-1073 OXY4 - Sleeve Locking Screw  2 x Sleeve Locking Screw 2 x M2x4 Hex Cap Screw	OSP - 1052 OXY4 - Boom Clamp Stiffener, 4Pcs  4 x OXY4 Boom Clamp Stiffener CF	M2.5x8CS-10 - Hex Cap Screw M2.5x8, 10 PCS  10 x Hex Cap Screw M2.5x8, 10 PCS	M3x8CS-10 - Hex Cap Screw M3x8, 10 PCS  10 x Hex Cap Screw M3x8, 10 PCS

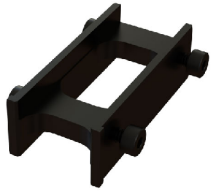
M2x6CS-10 - Hex Cap Screw M2x6, 10 PCS  10 x Hex Cap Screw M2x6, 10 PCS	M2x5CS-10 - Hex Cap Screw M2x5, 10 PCS  10 x Hex Cap Screw M2x5, 10 PCS	M2x4CS-10 - Hex Cap Screw M2x4, 10 PCS  Hex Cap Screw M2x4, 10 PCS	M3x3SC-10 - Set Screw M3x3, 10 PCS  Set Screw M3x3, 10 PCS	M2x6BH-10 - Button Hex Cap Screw M2x6, 10 PCS  Button Screw M2x6, 10 PCS
M2.5x8SBH-10 Self-TappingScrew M2.5x8, 10 PCS  10 x Self Tapping M2.5x8				

OSP-1235
OXY4 - 380 Tail Shaft



1 x OXY4-Tail Shaft
1 x 1.5x9.5 Alloy Steel Dowel Pin
2 x Shim 4x6x0.1

OSP - 1036
OXY4 - Tail Case Hub



1 x OXY4 Tail Case Insert
4 x M2X6 Hex Cap Screw

OSP - 1037
OXY4 - Tail Case Cover

OXY4- Tail Case Rod
M2X6 Hex Cap Screw

OSP-1178
OXY4-AL-Right-Tail-Case

OSP-1234
OXY4 - 380 Tail Pitch Slider

1 x Pitch Slider, Set

OSP - 1040
OXY4 - Tail Bell Crank

1 x Tail Bell Crank, Set

OSP - 1041
OXY4 - Bell Crank Support

OXY4 - Tail Bell Crank Support, Set

OSP - 1042
OXY4 - Tensioner Tail Belt

OXY4 - Tail Belt Tensioner, Set

OSP-1195
OXY4-380-Tail-Grip

1 x Tail Grip Assembly

OSP - 1044
OXY4 - Tail Rotor Hub, Spare

1 x OXY4-Tail Hub
1 x Set Screw M3x3
2 x M2X4 Hex Cap Screw
2 x 2X3.5X0.5 Washer

OSP-1154
OXY4 25T Tail Pulley

1 x 25T Tail Pulley
1 x Bushing
1 x Shim 4x6x0.1
1 x 1.5mm Pin

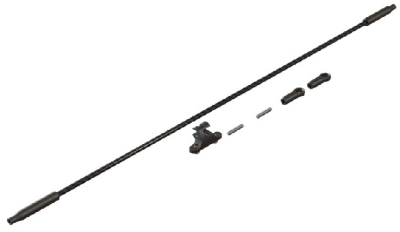
OSP-1068
OXY4 - Stretch Kit 360 Combo

2 x Tail STD Boom

OSP-1069
OXY4 - 360 Tail Boom

1 x 360mm Tail Boom

OSP-1070
OXY4 - 360 - Tail Push Rod

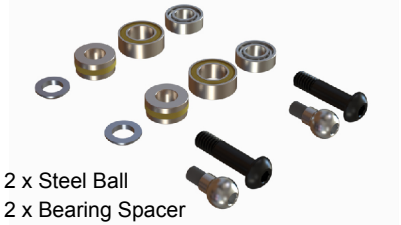


OSP-1071
OXY4 360mm Timing Belt Spare , 1Pcs

1 xTiming Belt B557MXL
1 x Front Boom Insert

ZHT-070C
ZEAL Carbon Fiber Tail Blades 70mm

SP-OXY3-025
OXY3 - Tail Rotor - Service Bag



2 x Steel Ball
2 x Bearing Spacer
2 x Thrust Bearing 3x6x2.8
2 x Radial Bearing 3x6x2
2 x Radial Bearing 4x7x2.5
2 x Button Screw M2.5x10

OSP - 1053
OXY4 - 23T Tail Pulley

1 x 23T Tail Pulley
1 x Bushing
1 x Shim 4x6x0.1
1 x 1.5mm Pin

OSP - 1054
OXY4 - 24T Tail Pulley

1 x 24T Tail Pulley
1 x Bushing
1 x Shim 4x6x0.1
1 x 1.5mm Pin

OSP-1231
OXY4 Vertical Fin rev 2

OSP-1051
OXY4 - Tail Blade 68mm - Black, 2Pcs

SP-OXY3-028 - OXY3
Tail Pitch Slider - Service Bag

2 x Bushing
2 x Link Control
2 x M2x5 Button Screw

OSP-1049
OXY4 - Tail Servo Mount, Set

2 x Washer M2
2 x Self Tapping Screw M2x6
2 x Self Tapping Screw M2x8
2 x Tail Servo Mount

OSP-1074
OXY4 - Mini Servo Adapter

1 x Mini Tail Servo Adapter
2 x Spacer
2 x M2x6 Self Tapping Screw
2 x M2x8 Self Tapping Screw

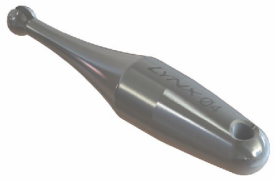
OSP-1050
OXY4 - Tail Blade 62mm - Black, 2Pcs

2 x Tail Blade 62mm

2 x Tail Blade 68mm

M3x3SC-10 Set Screw M3x3, 10 PCS  10 x Set Screw M3x3	M2x8SBH-10 Self-Tapping Button Hex Screw M2x8, 10 PCS  10 x Self-Tapping Button Hex Screw M2x8	M2x6SBH-10 Self-Tapping Button Hex Screw M2x6, 10 PCS  10 x Self-Tapping Button Hex Screw M2x6	M2x5CS-10 Hex Cap Screw M2x5, 10 PCS  10 x Hex Cap Screw M2x5	M2x6BH-10 Button Hex Cap Screw M2x6, 10 PCS  10 x Button Screw M2x6
M2x5BH-10 Button Hex Cap Screw M2x5, 10 PCS  10 x Button Screw M2x5				

OSP-1055 **OXY4 - Leveler Tool**  1 x Leveler Tool	**OSP-1056** **OXY4 - Vertical Fin Sticker** 	**SP-OXY3-054** **OXY3 - Battery Hook & Loop, 2 Set**  2 x OXY3 - Battery Hook & Loop, 2 Set	**SP-OXY3-055 - OXY3** **Double Side Adhesive Tape, 2PC**  2 x Double Side Adhesive Tape	**SP-OXY3-057** **OXY3 - Cable Ties Set** 
M3x18CS-10 **Hex Cap Screw M3x18, 10 PCS**  10 x Hex Cap Screw M3x18	M3x3SC-10 Set Screw M3x3, 10 PCS  10 x Set Screw M3x3	M2.5-SLN-10 Self Lock Nut M2.5  10 x Self Lock Nut M2.5	M2x8SBH-10 Self-Tapping Button Hex Screw M2x8, 10 PCS  10 x Self-Tapping Button Hex Screw M2x8	M2x6SBH-10 Self-Tapping Button Hex Screw M2x6, 10 PCS  10 x Self-Tapping Button Hex Screw M2x6
M3-SLN-10 Self Lock Nut M3  10 x Self Lock Nut M3	M2x18CS-10 Hex Cap Screw M2x18, 10 PCS  10 x Hex Cap Screw M2x18	M2x6CS-10 Hex Cap Screw M2x6, 10 PCS  10 x Hex Cap Screw M2x6	M2x5CS-10 Hex Cap Screw M2x5, 10 PCS  10 x Hex Cap Screw M2x5	M2.5x12CS-10 Hex Cap Screw M2.5x12, 10 PCS  10 x Hex Cap Screw M2.5x12

M2x6BH-10 Button Hex Cap Screw M2x6, 10 PCS  10 x Button Screw M2x6	M2x5BH-10 Button Hex Cap Screw M2x5, 10 PCS  10 x Button Screw M2x5	LX0362 3-4 mm Spindle Shaft Wrench  1 x 3 - 4 mm Spindle Shaft Wrench	LX1568 4mm Plastic Linkage Ball Reamer Too  1 x 4mm Plastic Linkage Ball Reamer Tool	M2x22SCS-10 Shoulder Hex Cap Screw M2x22, 10 PCS  10 x Shoulder Hex Cap Screw M2x22, 10 PCS
M4x3SC-10 - Set Screw M4x3, 10 PCS  10 x Set Screw M4x3, 10 PCS				