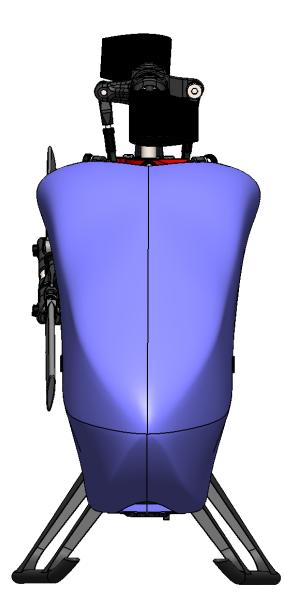


**190mm PL** Instruction Manual





# **VERY IMPORTANT NOTE:**

- Visit the Oxy Heli web site www.oxyheli.com to download the latest version of the manual.
- Inside Box 2 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.

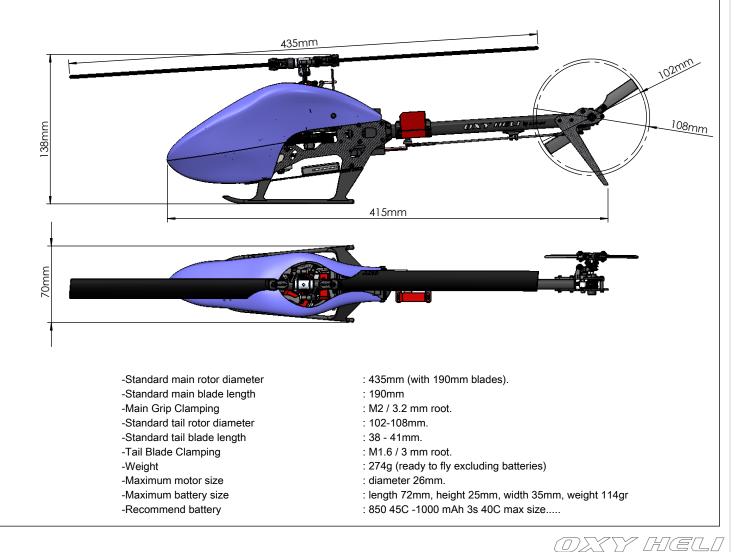
- Thank you for your purchase, and we wish you the best enjoyment with your new Oxy 2 Helicopter.

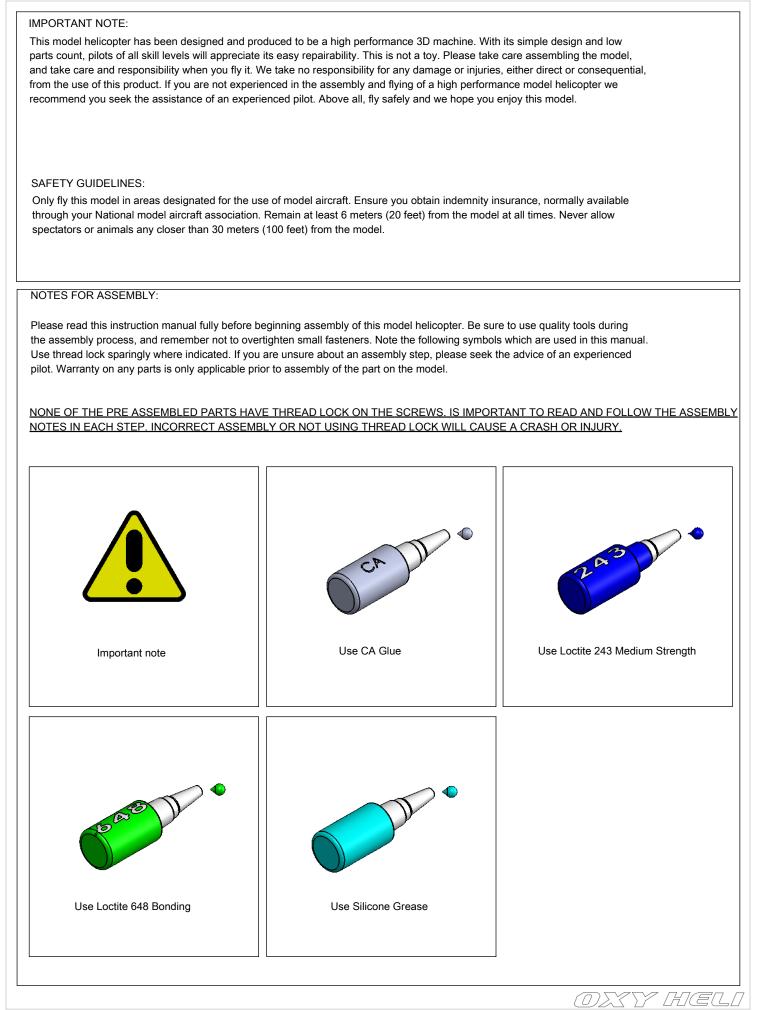
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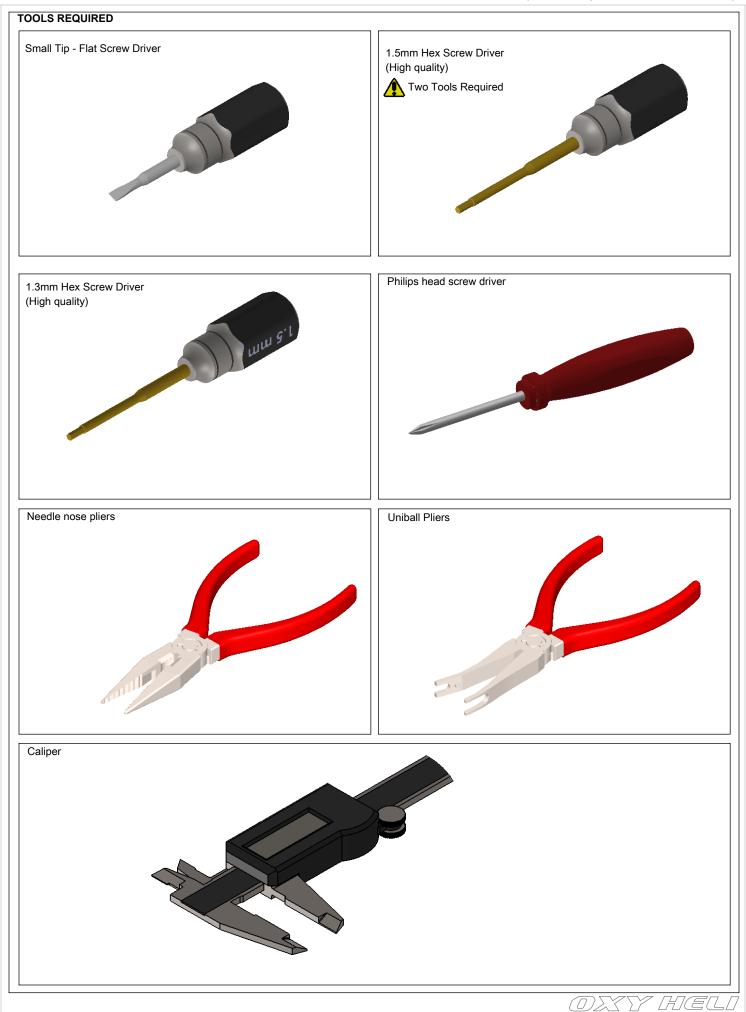
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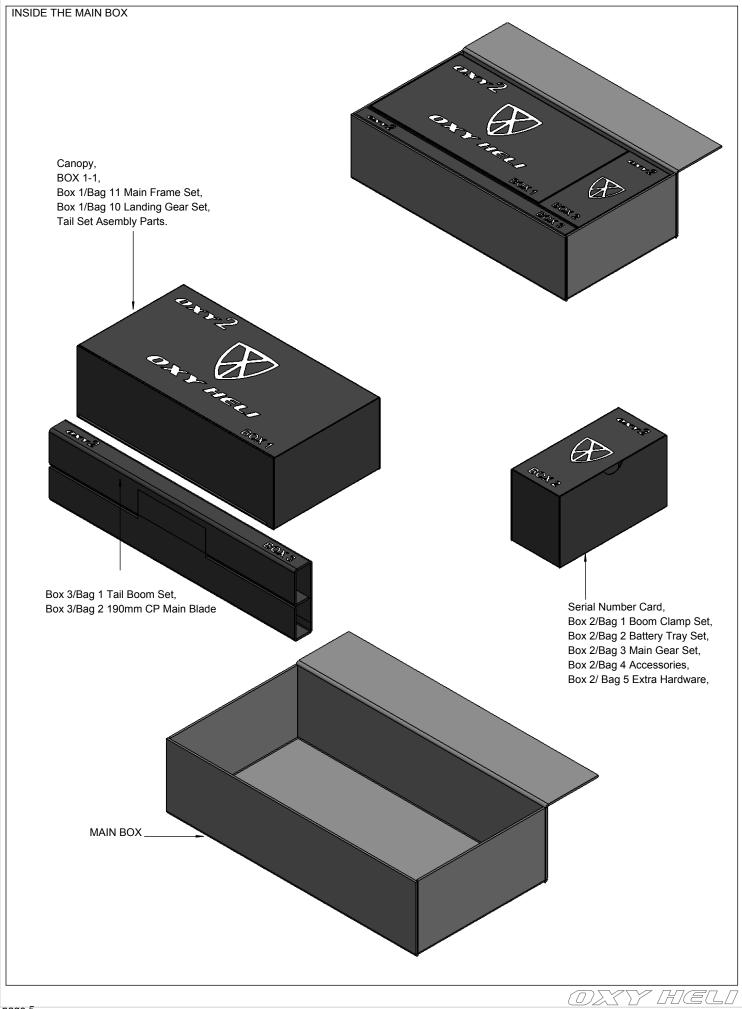
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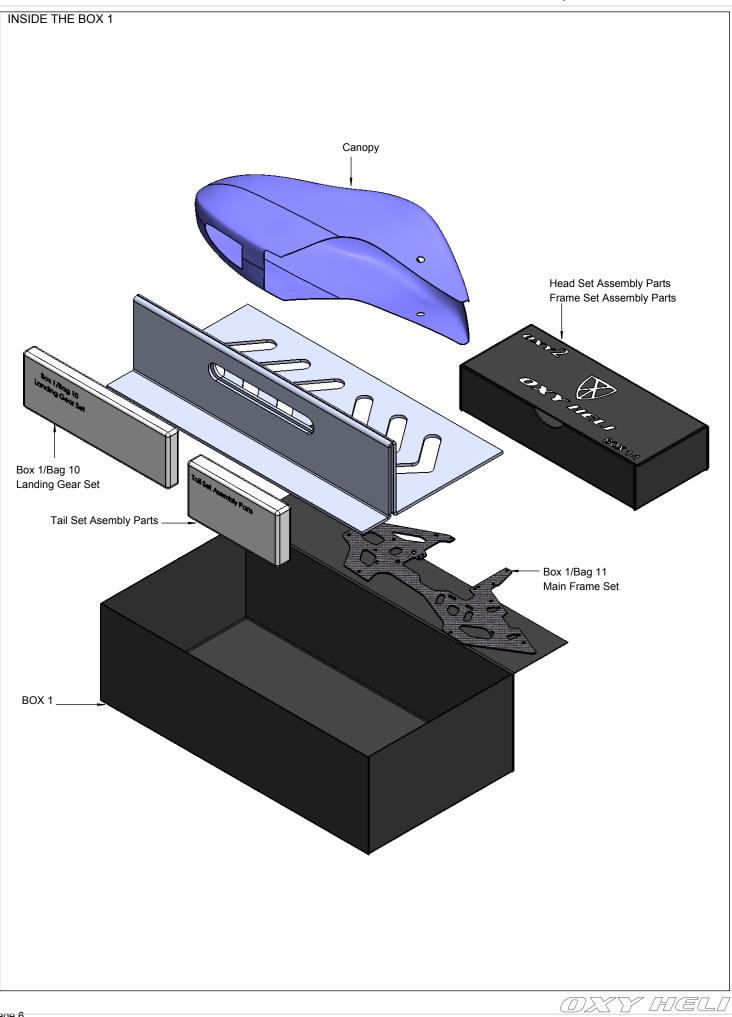












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#### **OXY 2 POWER SYSTEM AND HEAD SPEED SET-UP**

In order to choose the best setup for your Oxy 2, and optimize performance, it is important to know some basic information:

1- Motor  $\mathsf{Kv}-\mathsf{Min}$  3600 - Max 6000 - See your motor specification

2- Battery Pack – (3s or 4s)

3- Your target head speed

If you use a head speed calculator, use **110T** for the main gear and one of the available pinions 10T - 11T - 12T - 13T - 14T - 16T - 18T. The kit comes with one pinions (12T-2mm Shaft) which enables a wide head speed range with 3s batteries and 5500Kv Motor perfect for novice and expert pilots.

#### **Oxy 2 Gear Ratio Chart**

Pinions Teeth	Main Gear ratio
10	11.000
11	10.000
12	9.167
13	8.452
14	7.857
16	6.875
18	6.111

Oxy 2 Fly Style / Head Speed / Main Blade / Tail Blade / Max Pitch suggestion chart:

Model	Fly Style	Head S	speed	Main Blade	Pilch	Tail Blade	Tail Pulley
	Hover	3500	4000	190 CP	1.10/-3	41	16 T
0.000	Fly 2D	4000	4500	100 CP	10/-5	41	16 T
OXY2	Soft 3D	4500	5000	190 CP	1/-10	38	16 T
190mm	Hard 3D	5000	5500	100 CP	1/- 14	38	16 T
	Extreme 3D	5500	6000	190 CP	1/- 14	38	16 T

Model	Fly Style	Head S	peed	Main Blade	Pitch	Tail Blade	Tail Pulley
	Hover	3300	3750	210 CF	+10/3	41	15T
01010	Fly 2D	3750	4200	210 CE	+10/5	41	15T
0XY2	Soft 3D	4200	4650	210 CF	+/ 13	41	16 T
210mm	Hard 3D	4650	5100	210 CE	+/ 14	41	16 T
	Extreme SD	5100	5550	210 CF	+/ 14	41	16 T

Head Speed Note: Although Oxy 2 can handle very high Head Speed, we suggest not to exceed 5500 RPM to maintain a good compromise btw performances and efficiency.

#### Configuration examples

Since the Oxy2 is a high performance 3D RC helicopter, we suggest using high quality power components including motor, battery and ESC. Remember the Oxy 2 is a 200 class heli – use light components to maximize flight time and performance. Here are some suggestions:

- Motor: Suggested KV 3600KV to 6000KV, 16-11 to 19-12 caliber series (stator diameter - stator length).

- Battery: 3 or 4S with capacity from 800 to 1000mAh / 45C discharge rate. Maximum size: length 72mm, height 25mm, width 35mm, weight 114g.

- ESC: 25 to 30A - with BEC 5V or higher.

- Cyclic servos: Standard Sub MICRO size servo speed: =>0.06 sec/60 at 6V.

- Rudder servo: Standard MICRO size servo - speed =>0.06 sec/60 at 6V - a specific rudder servo is suggested for best tail authority.

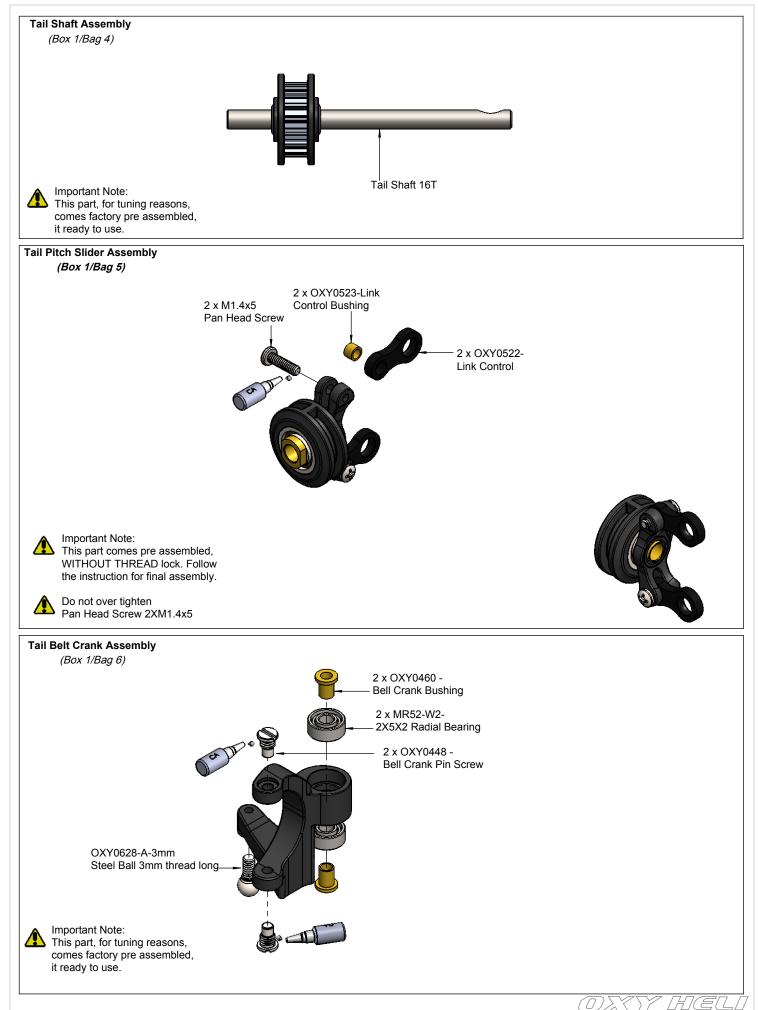
- FBL system: The Oxy 2 was designed around the U-lkon / U-Brain and Neo V-Bar Systems. But many other smaller size FBL systems can be used, depending on your personal choice. Max inner Frame dimension 26mm.

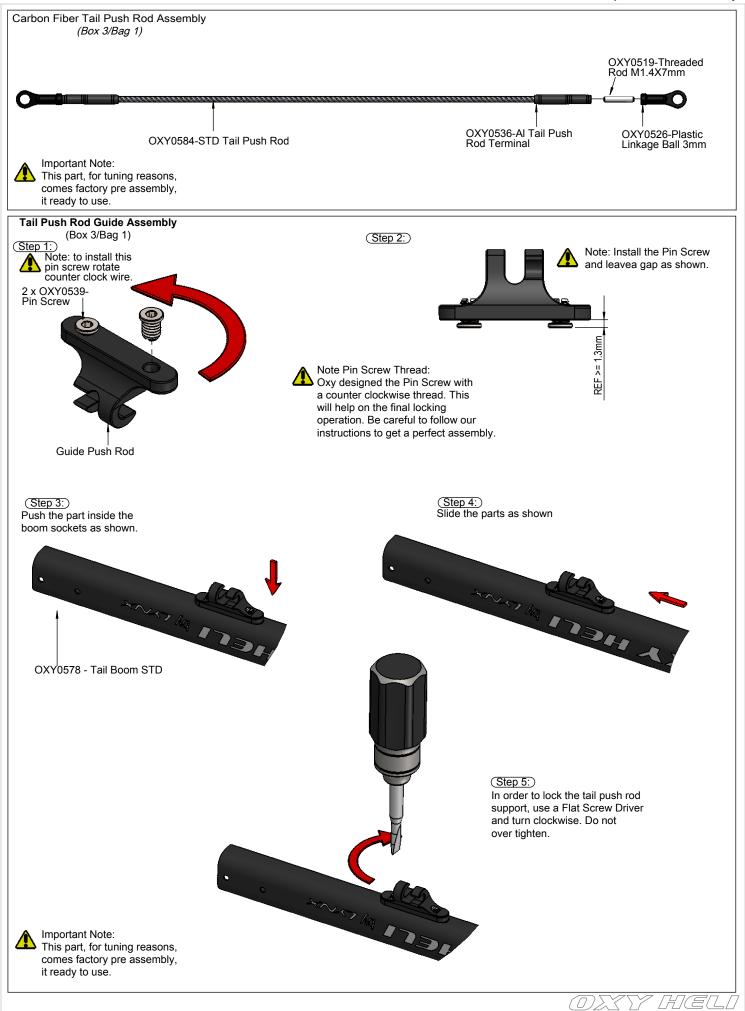
- Main blade: The Oxy 2 can fly with plastic or CF main blades from 190 to 210mm. Our testing was with Lynx 190mm Carbon Plastic main blades, and Zeal 210mm main blades. The Oxy 2 main grips use M2 clamp screw and have a 3.2 mm root.

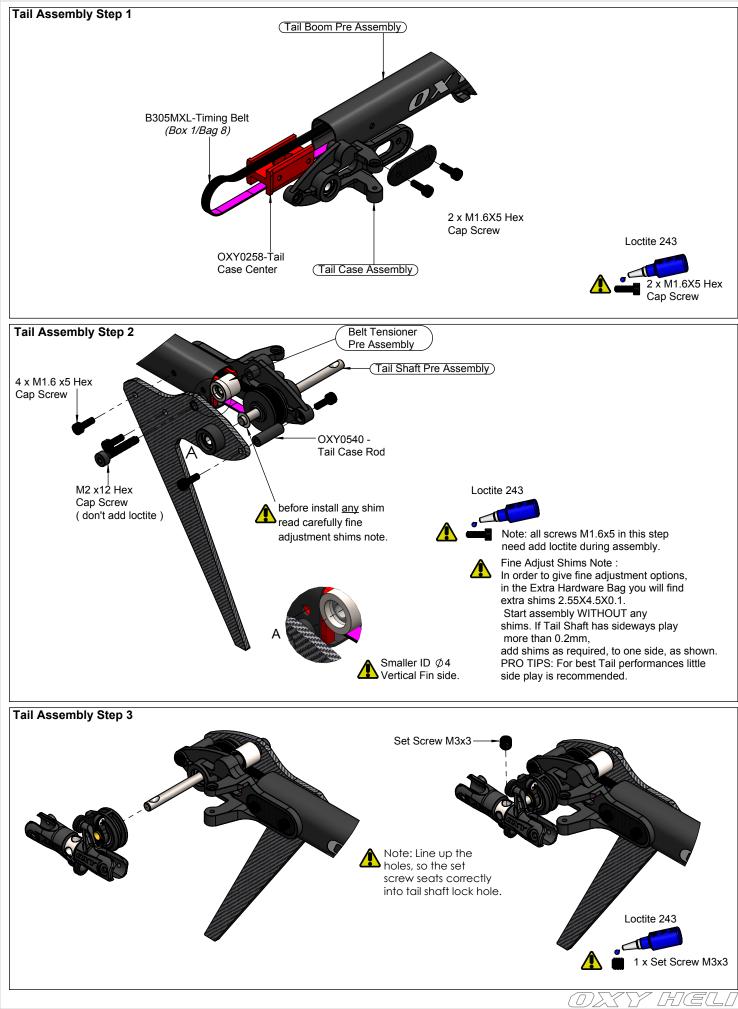
- Tail blades: The Oxy 2 uses our own OEM tail blades, either 38 or 41mm (included with the kit). They use a M1.6 clamp screw and 3 root.

We offer 38 and 41mm tail blades to suit different head speeds. Use 41mm tail blades when your head speed is lower than 4500rpm and 38mm with higher head speeds.

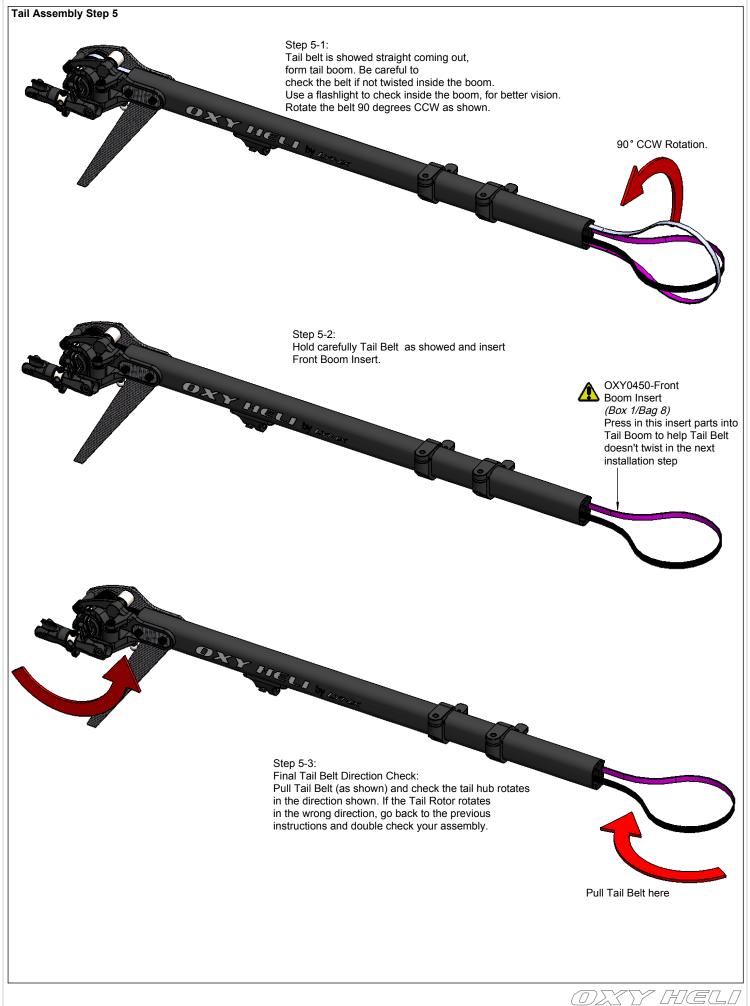


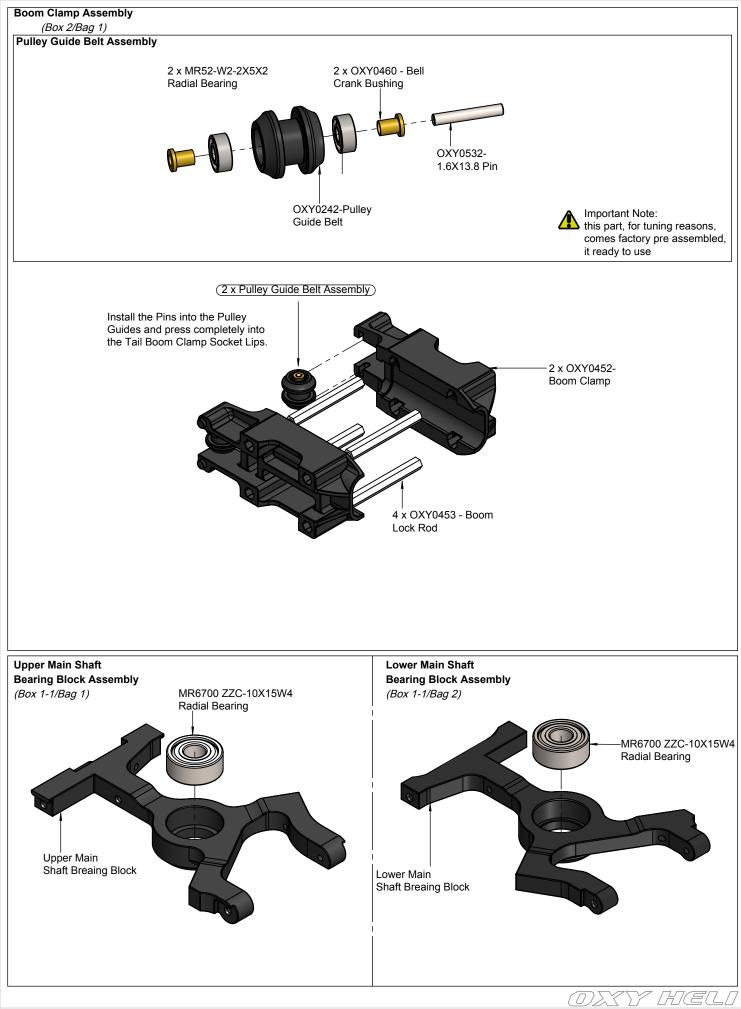


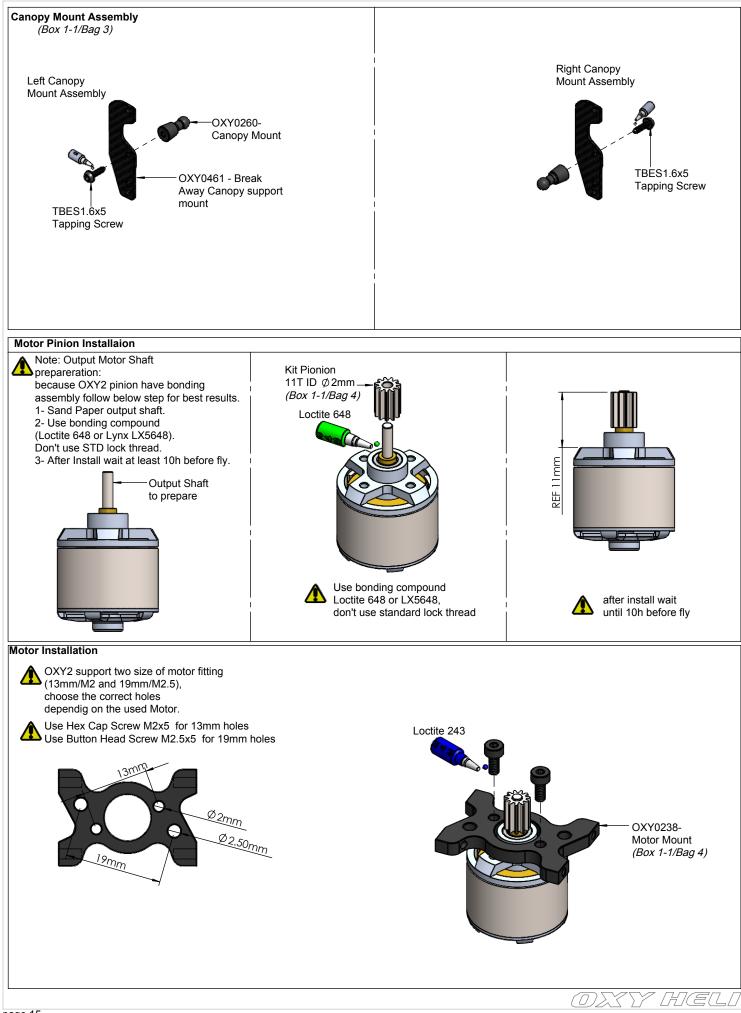




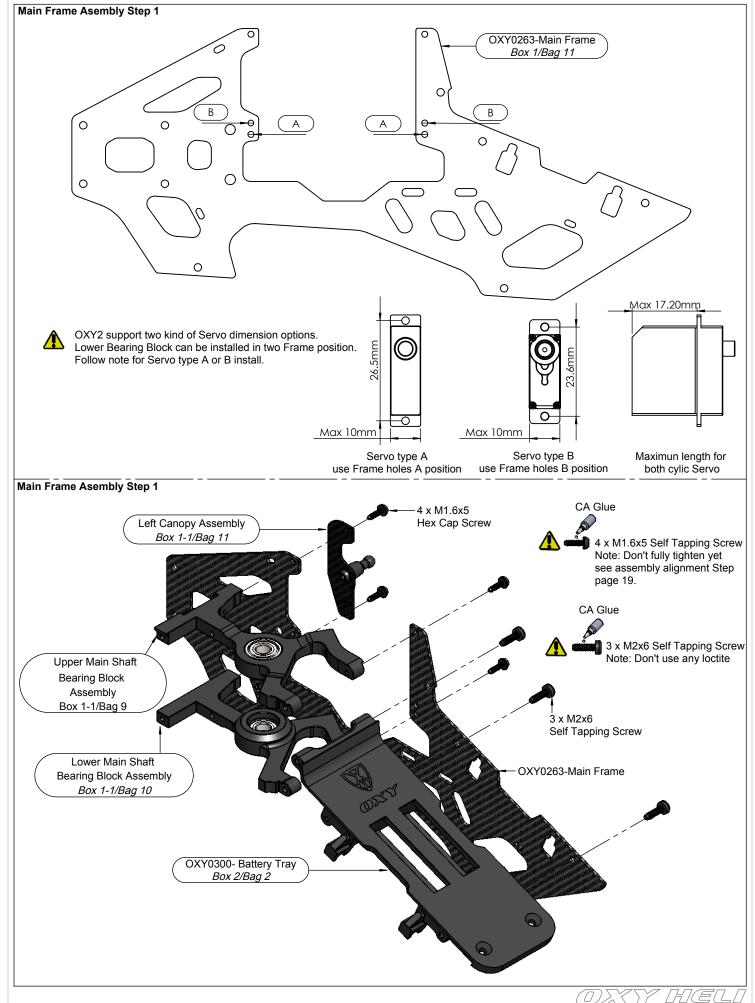


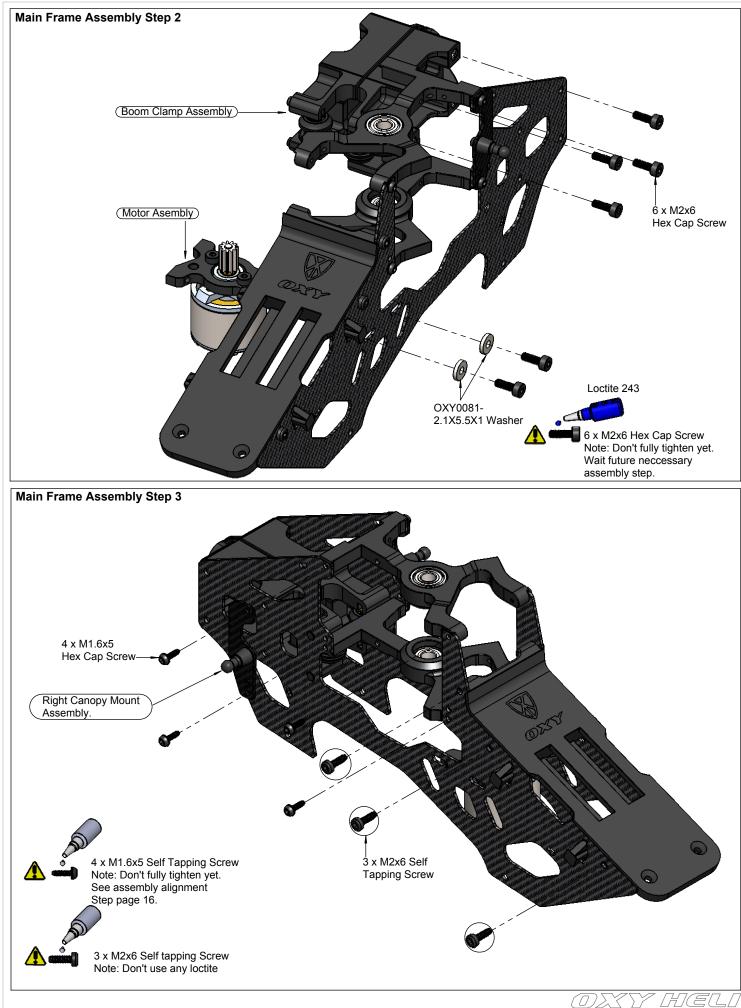


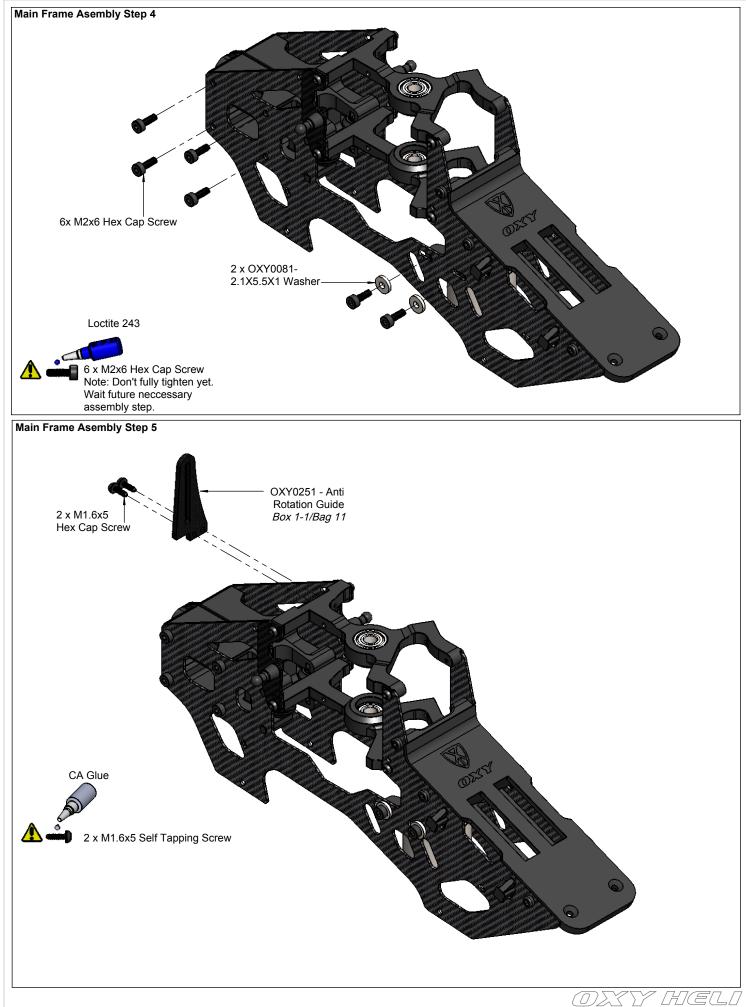


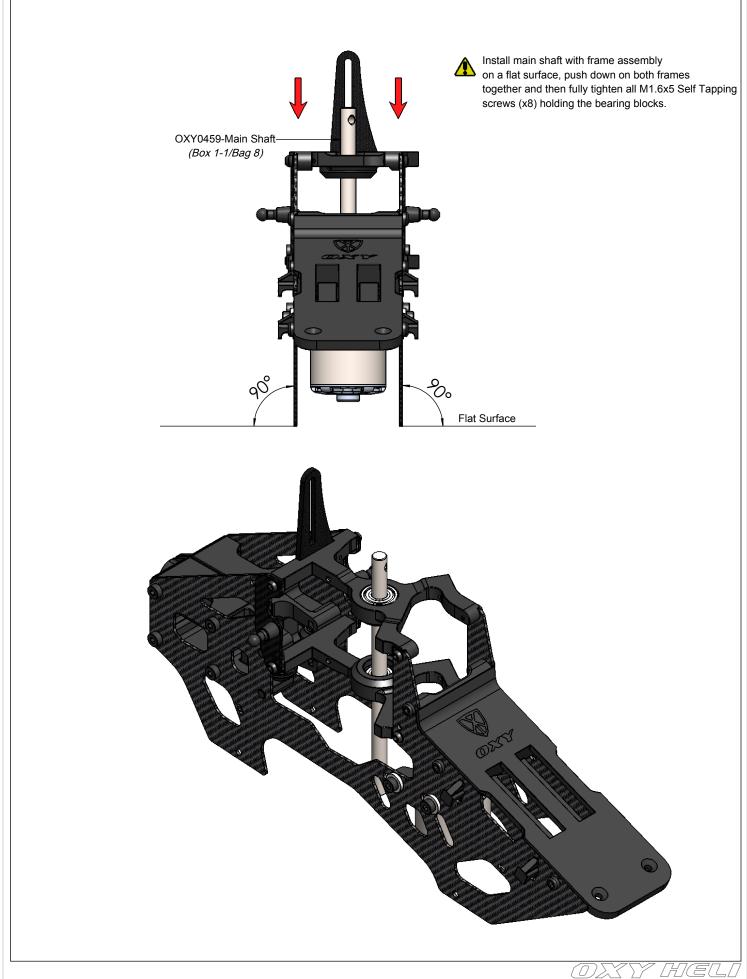


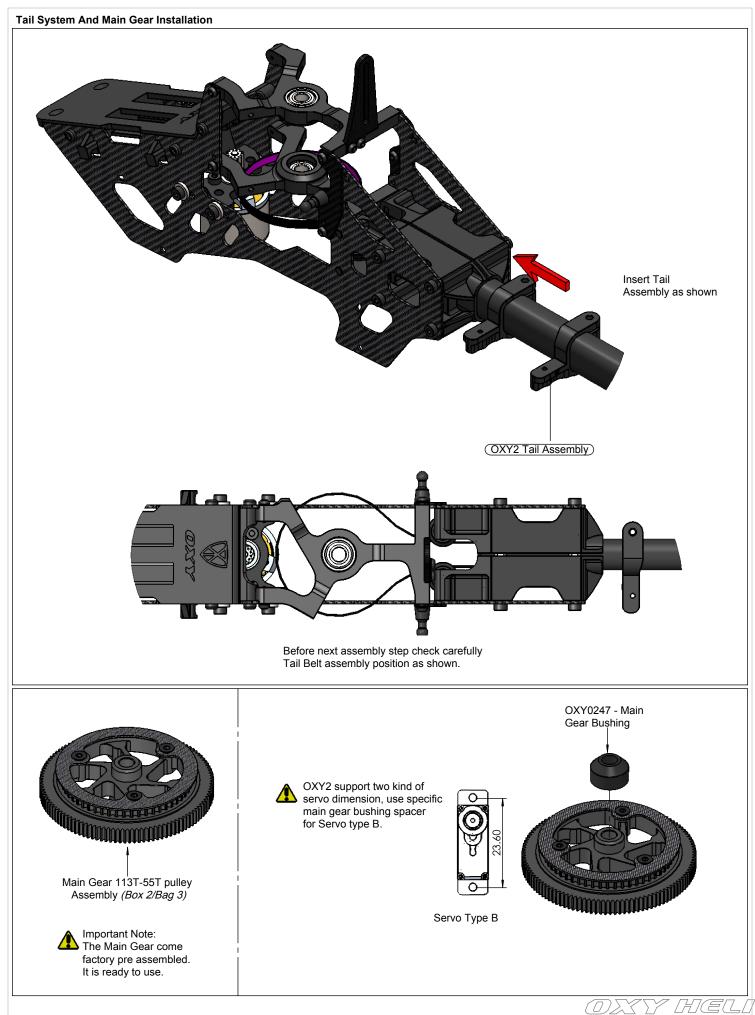
## Chapter 7: Main Frame Asembly

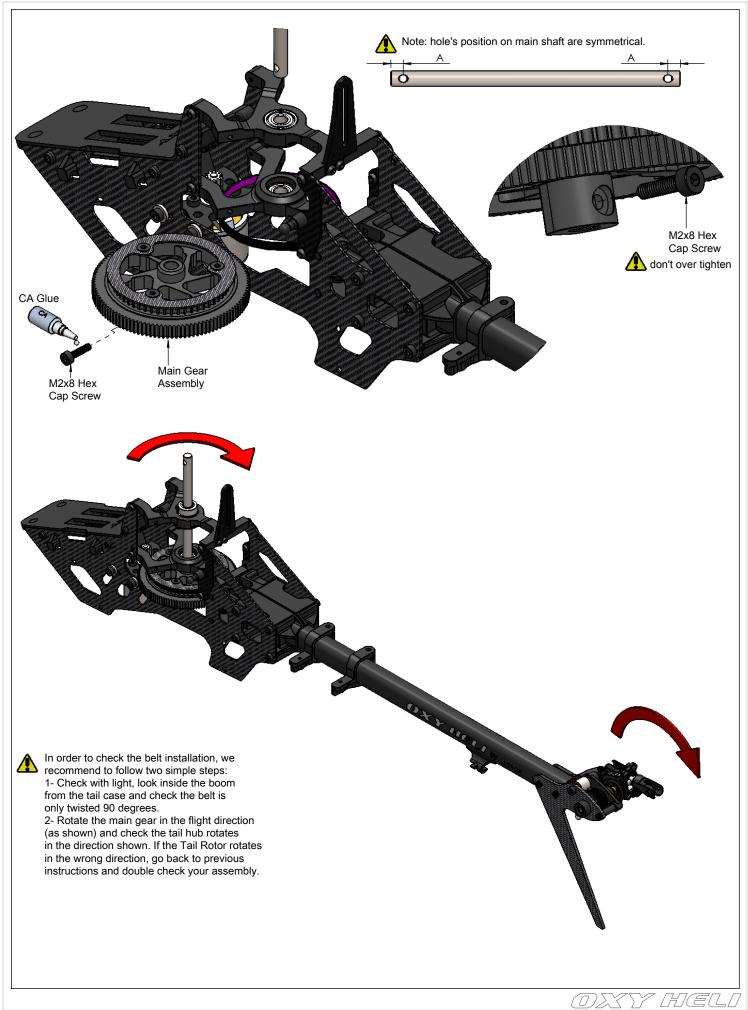






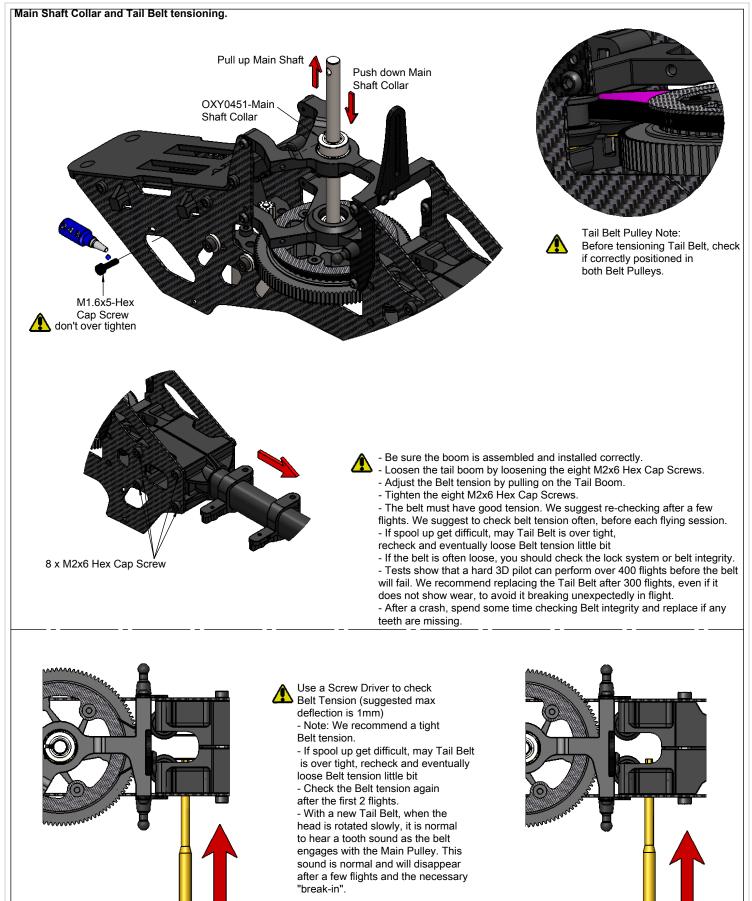




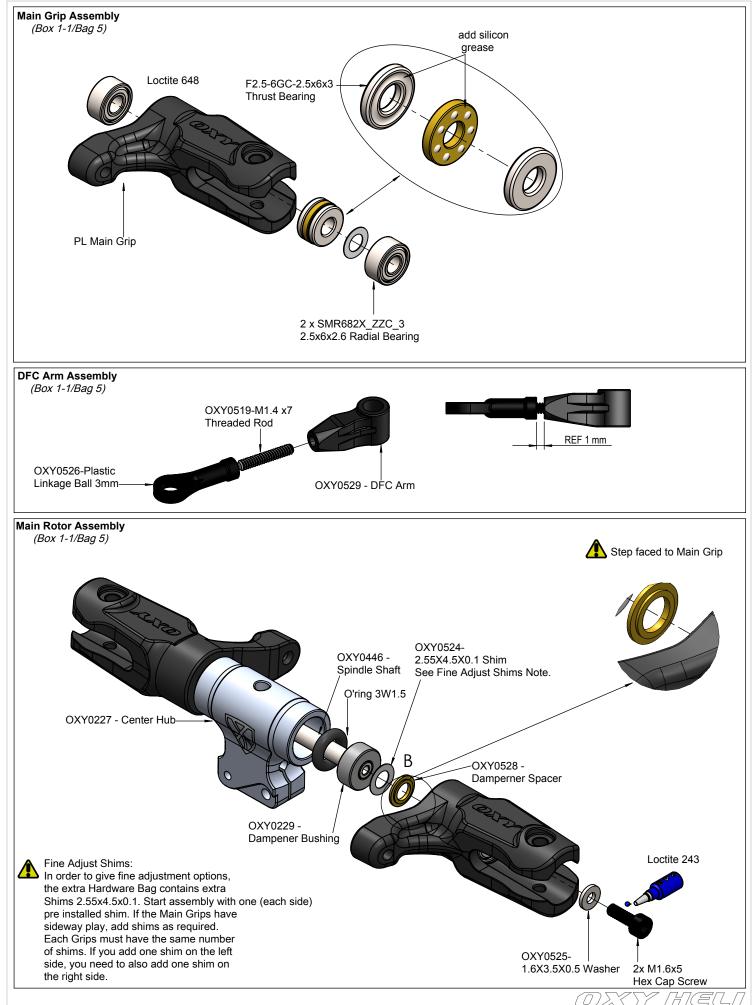


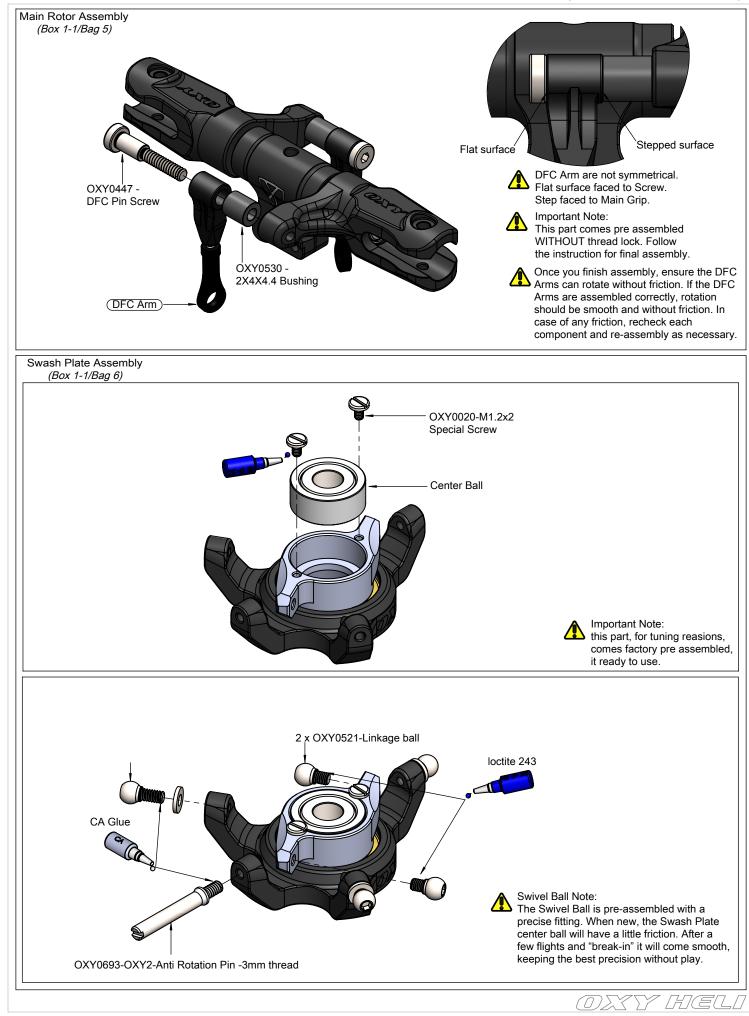
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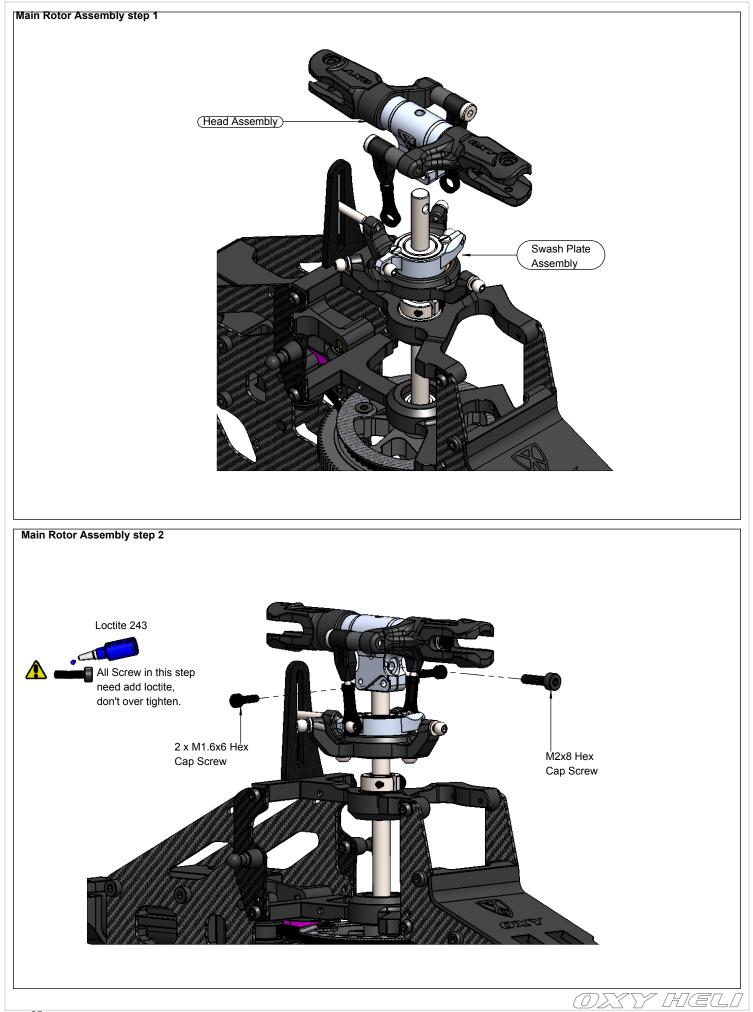
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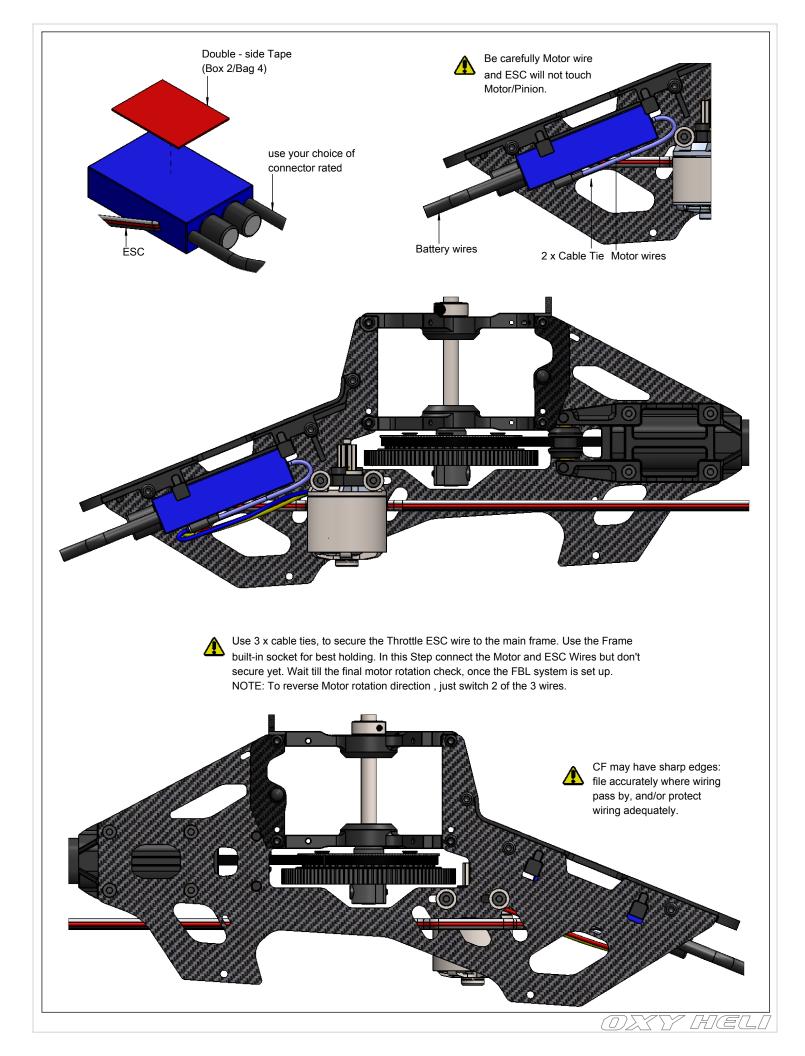


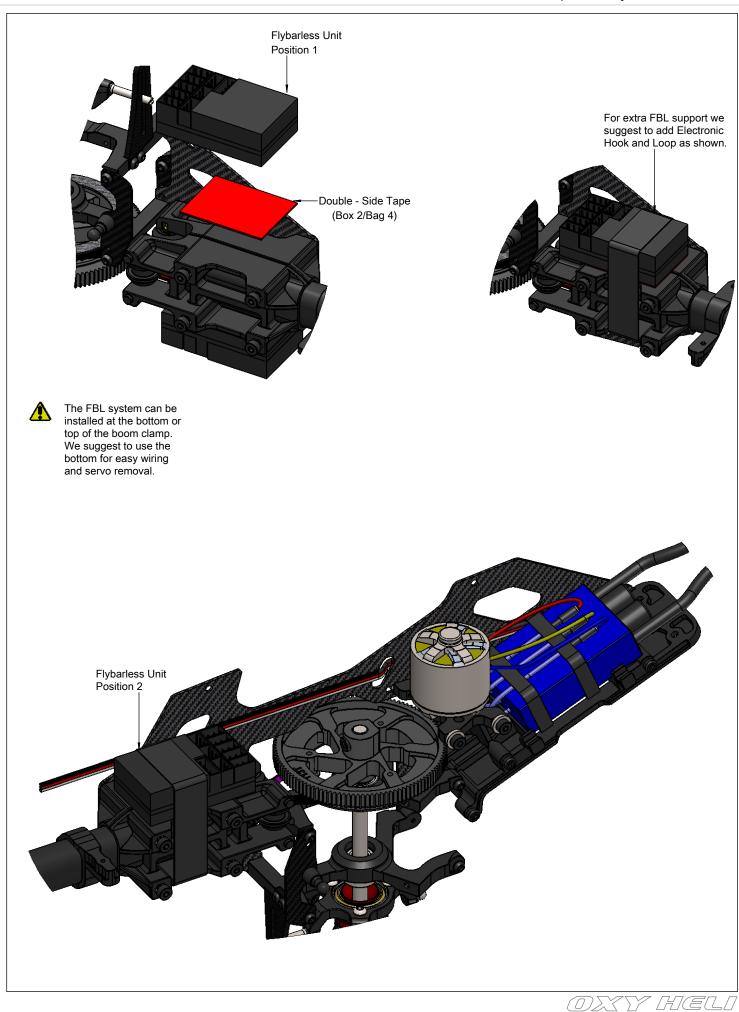
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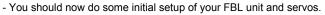








### Chapter 14: Servo & Servo Rod Prepareration

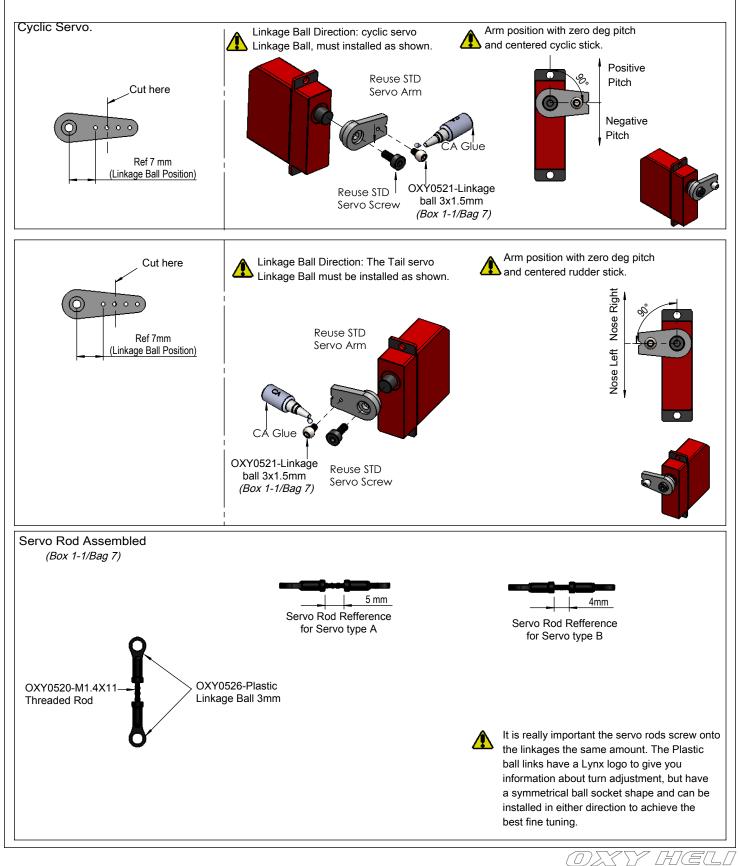


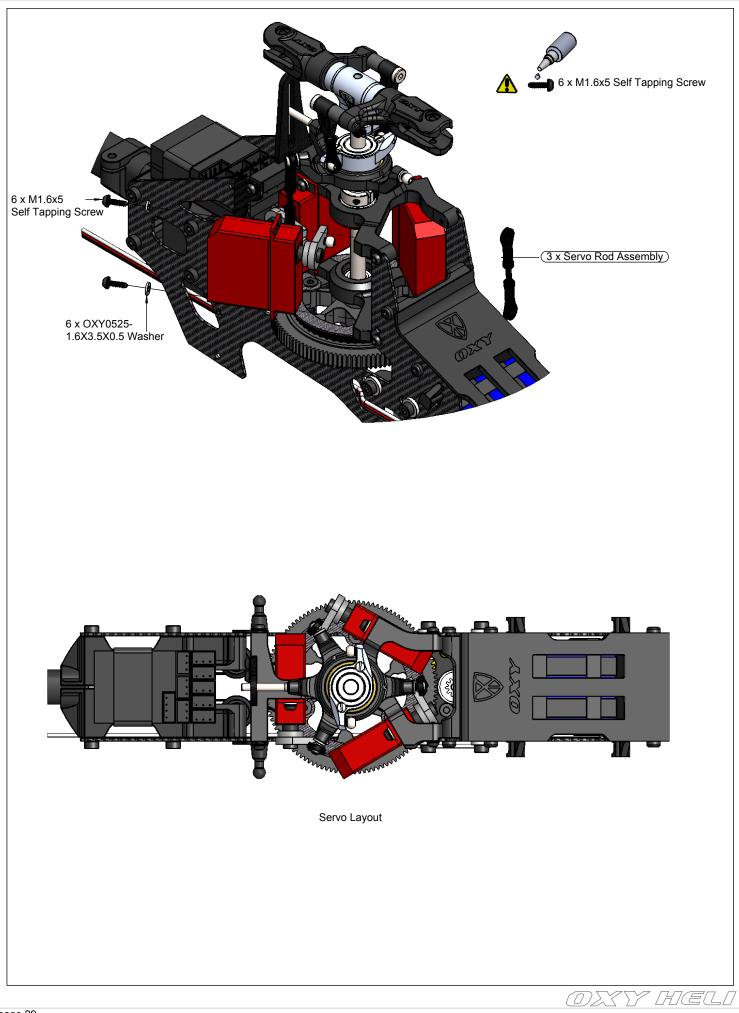
- We recommend you select a new model in your transmitter, and reset your FBL unit and start with a clean setup in it as well.

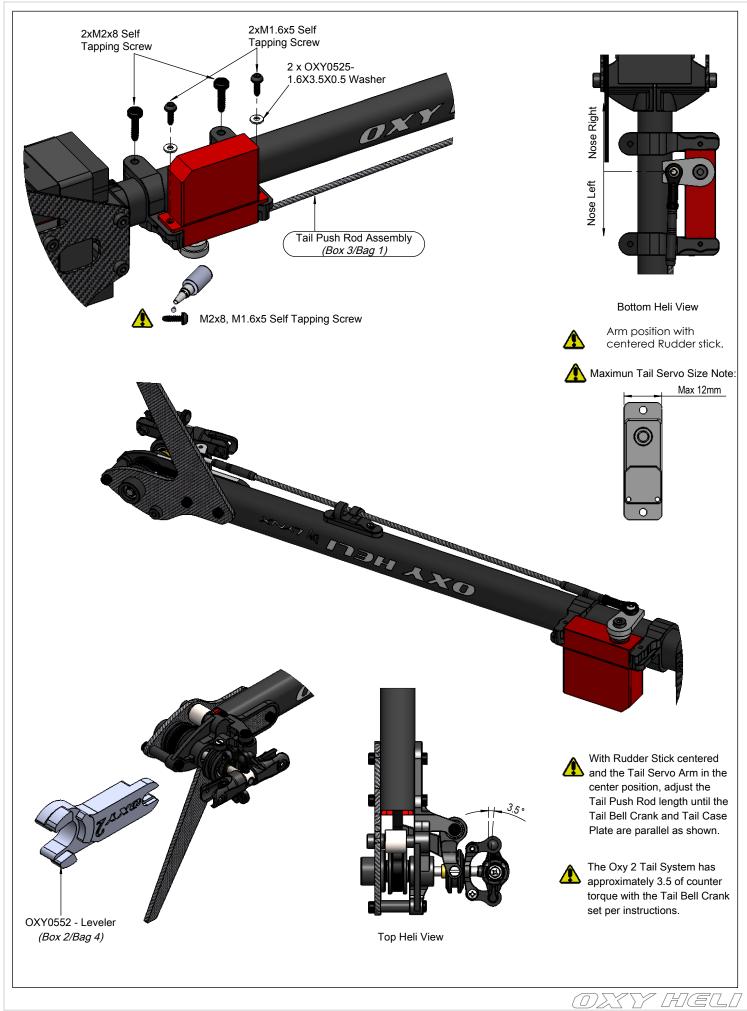
- After binding your transmitter to the receiver system used with the FBL unit, work your way through the FBL setup instructions to the point you plug in your servos.

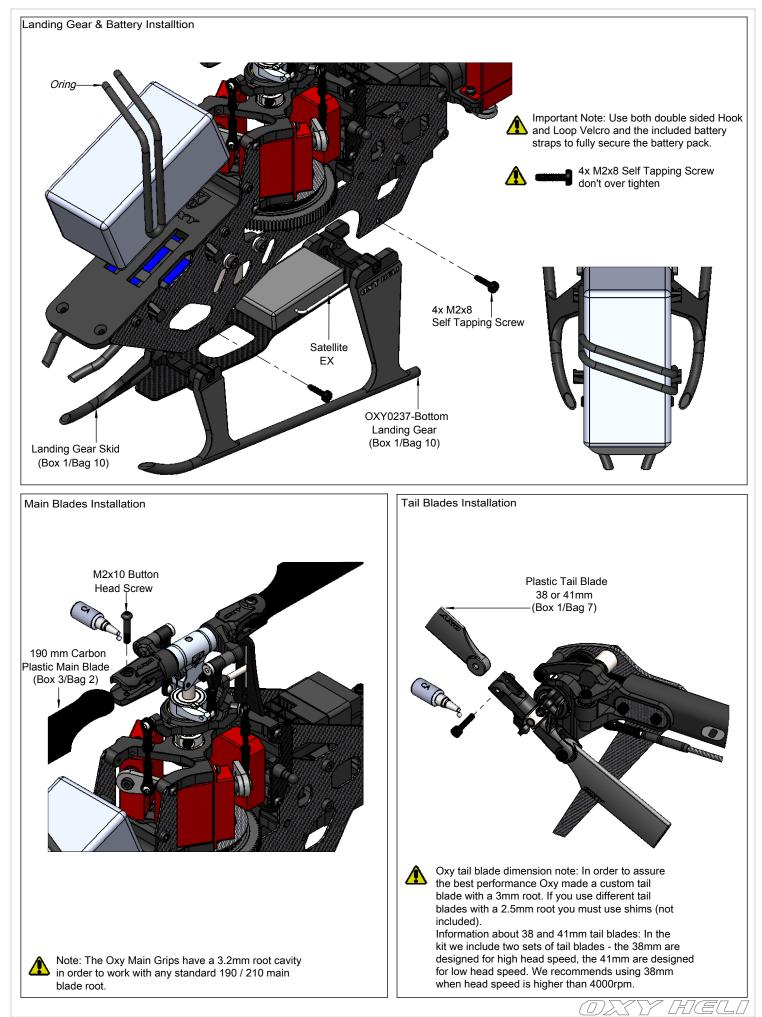
- Now set your collective stick in the middle position, and position the servo arms as close to the correct positions you can on each servo see the following pages for arm orientations on the various servos.

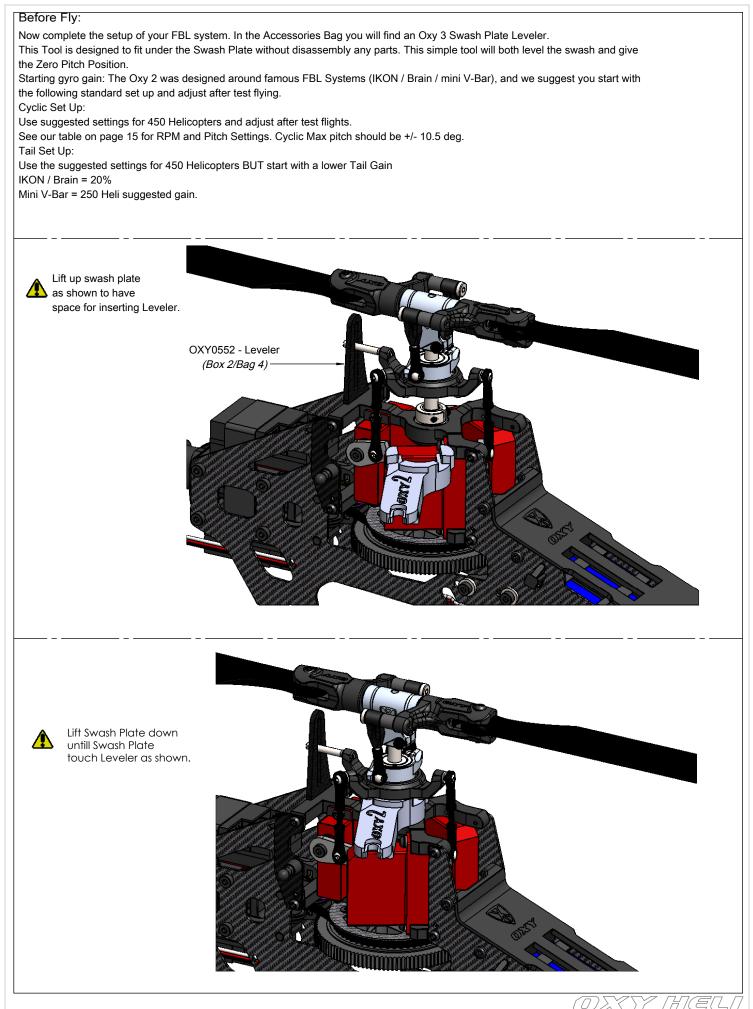
- Next confirm the servos work in the correct direction, then return the collective stick to the center position.
- Now use your FBL unit to trim the servos so the arms are exactly horizontal (see pictures below).
- This procedure varies between units. Carefully label the position of the servos, then proceed with the installation of the servos as shown.

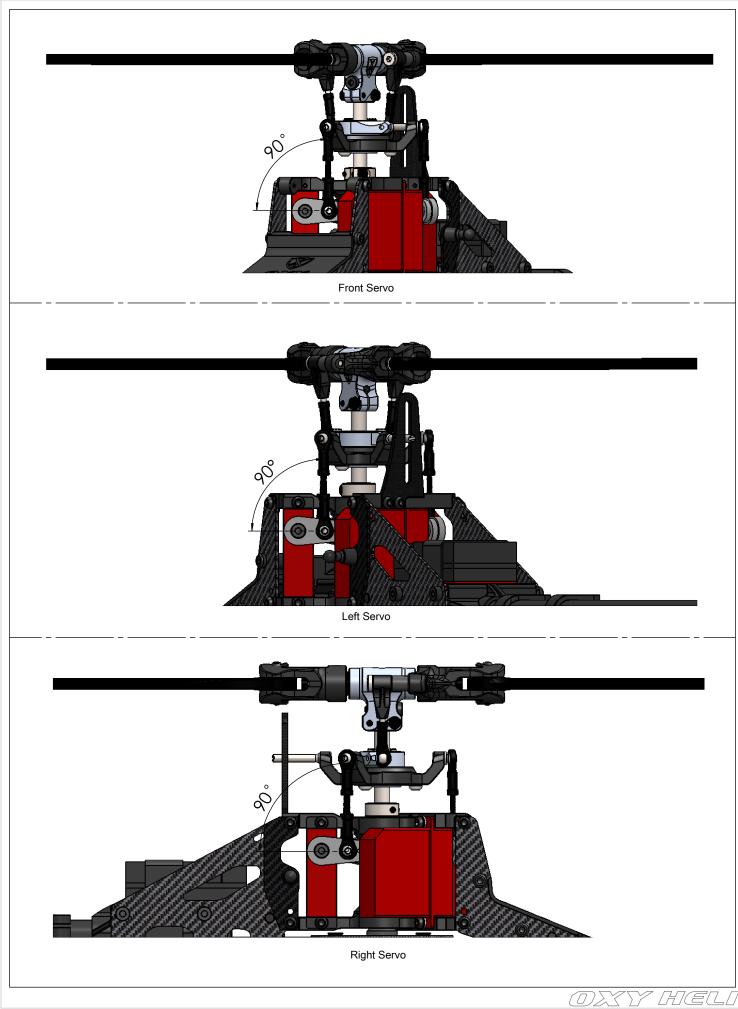






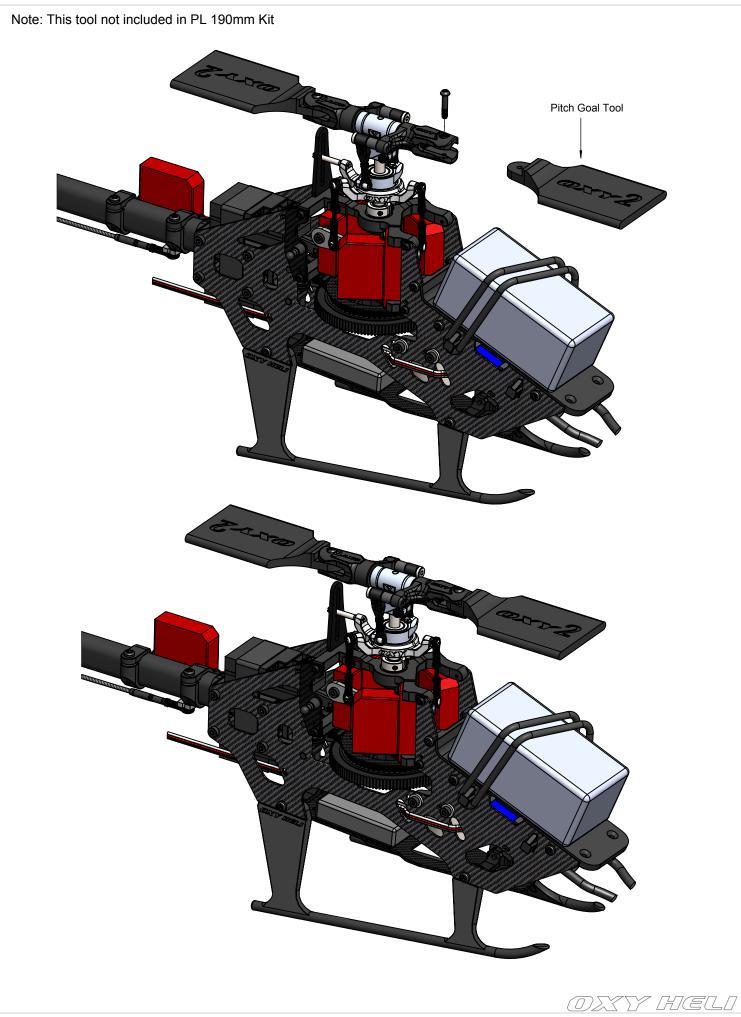


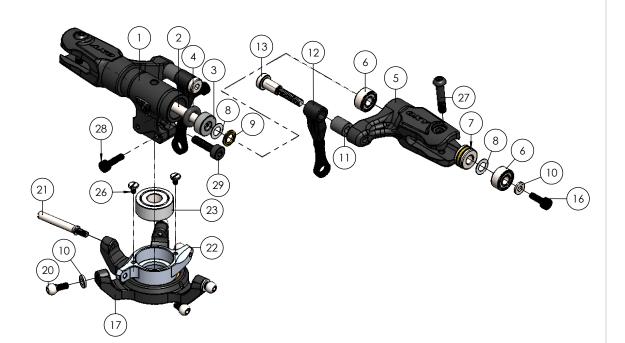






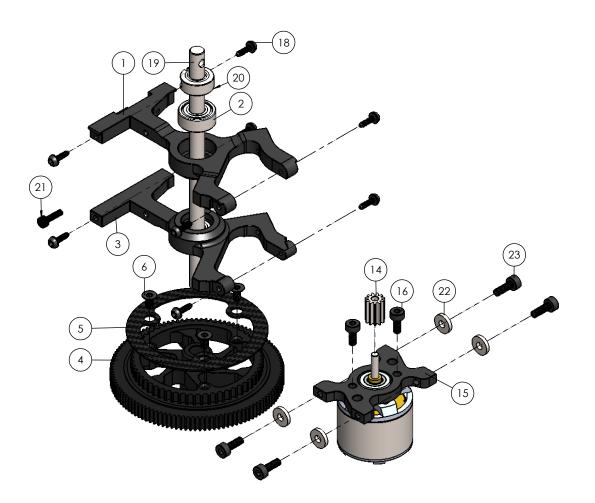




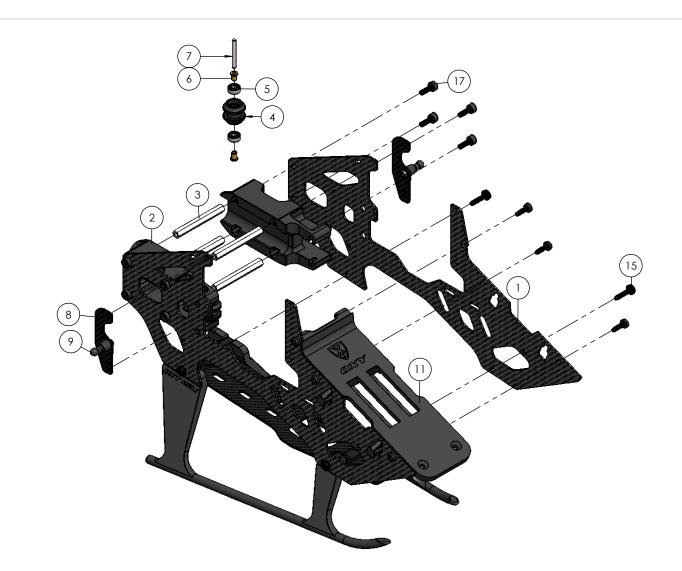


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POS	PartNo	DESCRIPTION	QTY.
1	OXY0227	OXY2-CENTER HUB	1
2	OXY0446	OXY2 Sindle Shaft	1
3	OXY0229	OXY2-Dampener Bushing	2
4	OR3W1.5	Oring ID3x1.5	2
5	OXY0619	OXY2-PL Main Grip	2
6	SMR682Z-ZZ	2.5X6X2.6 Radial Bearing	4
7	F2.5-6GC	2.5x6x3 Thrust Bearing	2
8	OXY0524	2.55x4.5x0.1 Shim	4
9	OXY0528	OXY2-Damperner Spacer	2
10	OXY0525	1.6x3.5x0.5 Washer	5
11	OXY0530	OXY2-2x4X4.4 Bushing	2
12	OXY0529	OXY2-DFC Arm	2
13	OXY0447	OXY2-DFC Pin Screw	2
14	OXY0519	Threaded Rod M1.4X7mm	2
15	OXY0526	Plastic Linkage Ball 3mm	2
16	TCEM1.6X5	M1.6X5 Hex Cap Screw	2
17	OXY0598	OXY2-PL Lower Swash Plate	1
18	MR6700 ZZC	10X15W4 Radial Bearing	1
19	OXY0111	M1.6X3 BUTTOM SCREW	3
20	OXY0628	3mm Steel Ball 3mm thread long	3
21	OXY0693	OXY2-Anti Rotation PIN	1
22	OXY0233	OXY2-Upper Swash Plate	1
23	OXY0016	Ball Holder	1
24	OXY0017	Center Ball	1
25	OXY0521	Linkage ball 3x1.5mm - DR1265	2
26	OXY0020	M1.2x2 Special Screw	2
27	OXY0078	M2X10 BUTTOM SCREW	2
28	TCEM1.6X6	M1.6x6 Hex Cap Screw 2	
29	TCEM2X8	M2X8 Hex Cap Screw	1
2000 26		1	1



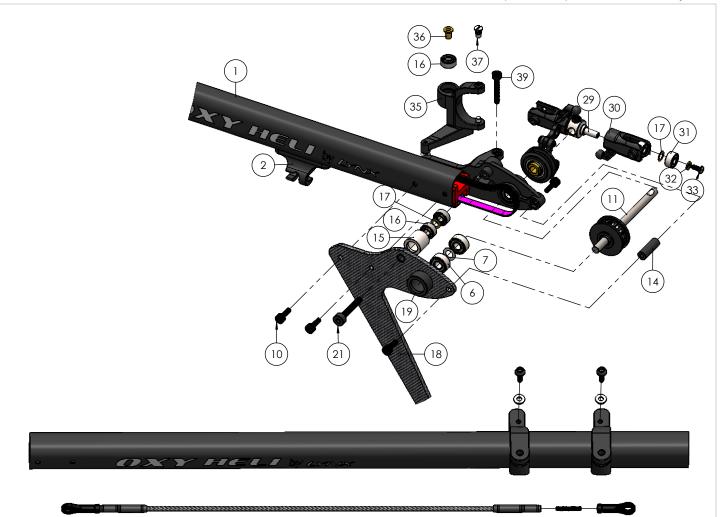


POS	PartNo	DESCRIPTION	QTY.
1	OXY0602	Upper Main Shaft Bearing Block	1
2	MR104_ZZC	4X10X4 RADIAL BEARING	2
3	OXY0603	Lower Main Shaft Bearing Block	1
4	OXY0690	113T-55T Pulley Strait Main Gear	1
5	OXY0538	CF Main Gear Cover	1
6	FHSM2X4	M2x4 Flat Head Screw	3
14	OXY0744	OXY2-11T 0.4M 2mm Shaft Straight Pinion	1
15	OXY0238	OXY2-MOTOR MOUNT	1
16	TCEM2X5	M2X5 HEX CAP SCREW	2
17	OXY0263	OXY2-Main Frame	1
18	TBESM1.6x5	M1.6x5 Self Tapping Screw	8
19	OXY0459	OXY2-Main Shaft	1
20	OXY0451	OXY2-Main Shaft Collar	1
21	TCEM1.6X6	M1.6x6 Hex Cap Screw	1
22	OXY0081	2.1X5.5X1 WASHER	4
23	TCEM2X6	M2X6 Hex Cap Screw	4



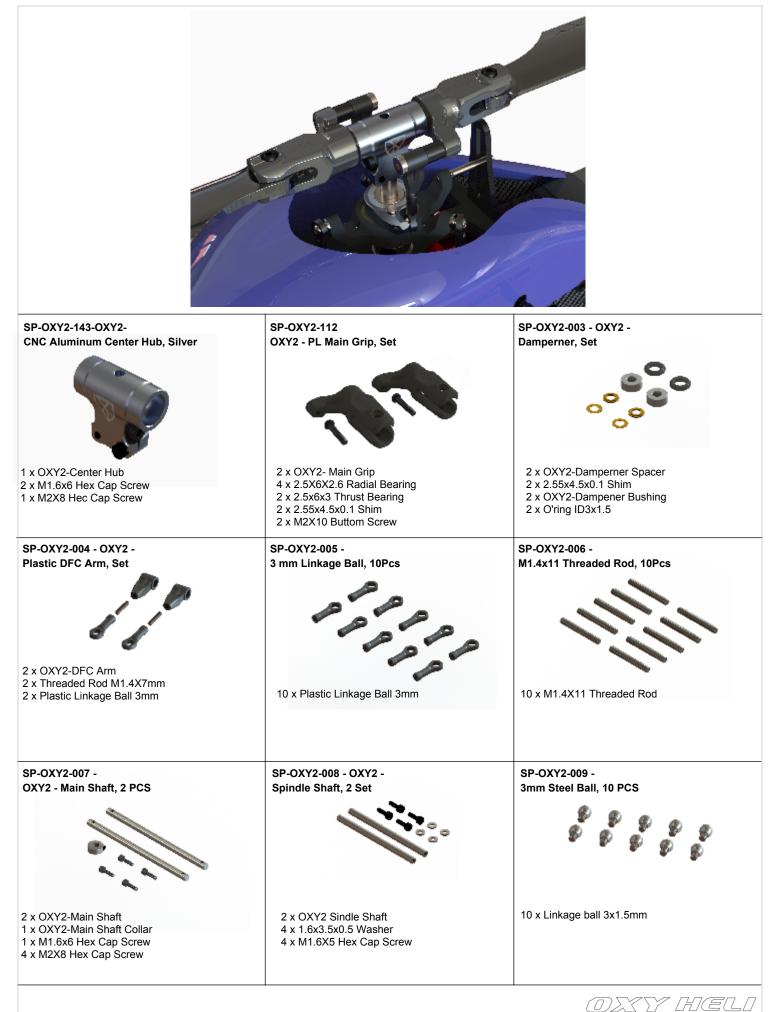
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POS	PartNo	DESCRIPTION	QTY.
1	OXY0263	OXY2-Main Frame	2
2	OXY0452	OXY2-Boom Clamp	2
3	OXY0453	Boom Lock Rod	4
4	OXY0623	OXY2-Pulley Guide Belt	2
5	MR52-W2	2X5X2 Radial Bearing	4
6	OXY0460	OXY2 Bell Crank Bushing	4
7	OXY0089	PIN 1.5X9.6	2
8	OXY0461	OXY2-Break Away Canopy	2
9	OXY0601	Canopy Mount	2
10	TBESM1.6x5	M1.6x5 Self Tapping Screw	2
11	OXY0300	OXY2- Battery Tray	1
12	OXY0237	OXY2-Bottom Landing Gear	1
13	OXY0240	OXY2-Right Landing Gear	1
14	OXY241	OXY2-Left Landing Gear	1
15	TBES2X8	M2X8 Self Tapping Screw	4
16	TBES2X6	M2X6 Self Tapping Screw	6
17	TCEM2X6	M2X6 Hex Cap Screw	8

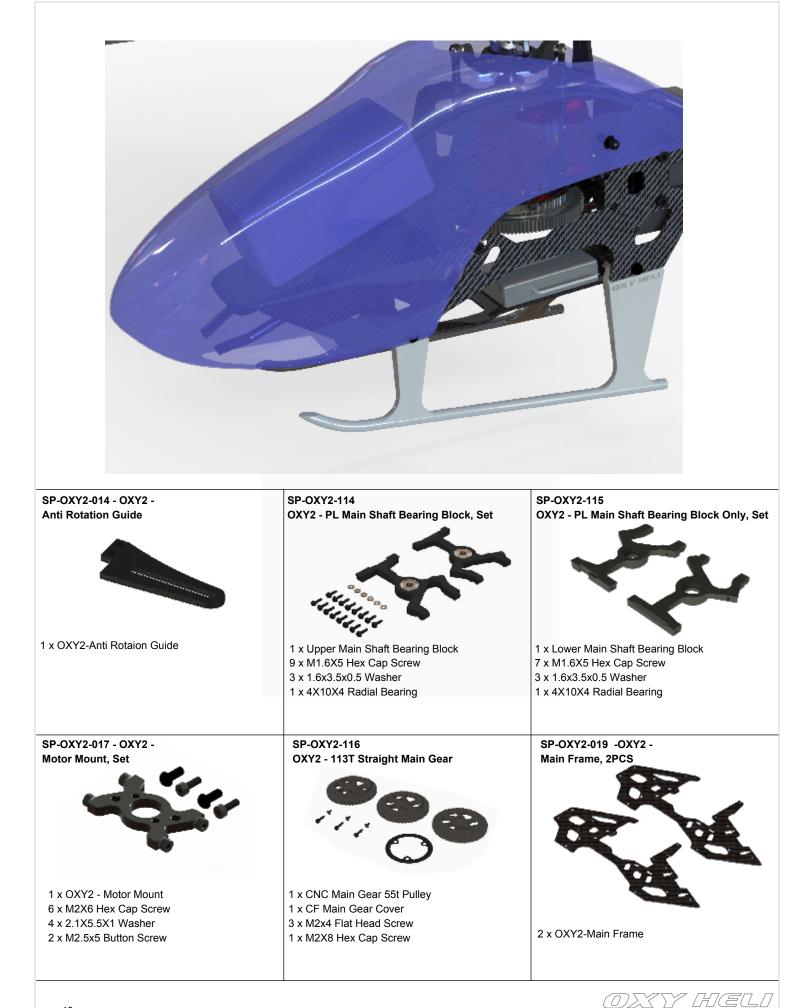


POS	PartNo	DESCRIPTION	QTY.	POS	PartNo	DESCRIPTION	QTY.
1	OXY 0578	OXY 2 Tail Boom STD ( Black )	1	22	OXY 0607	OXY 2-Tail Pitch Slider Ring	1
2	OXY 0622	OXY 2-TE Guide Push Rod	1	23	MR683	3x7x2 Radial Bearing	2
3	OXY 0539	M2.5 Pin Screw	2	24	OXY 0457	OXY 2-Tail Pitch Slider Bushing	1
4	OXY 0258	OXY 2-Tail Case Center	1	25	OXY 0608	Tail Pitch Slider Halffmoon	1
5	OXY 0513	OXY 2-Plastic Side Case	1	26	OXY 0522	OXY 2-Link Control	2
6	SMR682Z-ZZ	2.5X6X2.6 Radial Bearing	4	27	OXY 0523	OXY 2-Link Control Buhing	2
7	OXY 0524	2.55x4.5x0.1 Shim	3	28	PanM1.4x5	M1.4x5 Pan Head Screw	2
8	OXY 0514	OXY 2-Tail Case Stiffener	1	29	OXY 0253	OXY 2-Tail Hub	1
9	B305MXL	305T W2.5 Timing Belt	1	30	OXY 0624	OXY 2-PL Tail grip	2
10	TCEM1.6X5	M1.6X5 Hex Cap Screw	6	31	SMR682-ZZ	2X5X2.3 Radial Bearing	4
11	OXY 0256	OXY 2-TAIL SHAFT	1	32	OXY 0551	1.5x2.8H0.4 Washer	2
12	OXY 0458	OXY 2-16T MXL TAIL PULLEY	1	33	PanM1.4x3	M1.4x3 Pan Head Screw	2
13	OXY 0456	OXY 2-Tail Flange Pulley	2	34	SCM3x3	Flat-Tip Set Screw M3x3	1
14	OXY 0540	OXY 2-Tail Case Rod	1	35	OXY 0604	OXY 2-Tail Bell Crank	1
15	OXY 0515	OXY2-Tensioner Bushing	1	36	OXY 0460	OXY 2 Bell Crank Bushing	2
16	MR52-W2	2X5X2 RADIAL BEARING	4	37	OXY 0448	OXY 2-Bell Crank Pin Screw	2
17	OXY 0527	2x3.5x0.1 Shim	3	38	OXY 0628	3mm Steel Ball 3mm thread long	1
18	OXY 0745	OXY2 Vertical Fin PL Tail Case Version	1	39	TCEM1.6X10	M1.6X10 Hex Cap Screw	1
19	OXY 0279	OXY 2-Vertical Fin Bushing	1	40	OXY 0605	OXY 2-Tail Servo Support	1
20	OXY 0516	2x3.5x2.2 Bushing	1	41	OXY 0606	OXY 2-Tail Servo Support	1
21	TCEM2X12	M2X12 Hex Cap Screw	1	42	OXY 0450	OXY 2-Front_Boom Insert	

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SP-OXY2-010 - OXY2 - Swash Plate, Service Bag	SP-OXY2-113 OXY2 - PL Swash Plate, Set	SP-OXY2-013 - OXY2 - Main Grip Service Bag
1 x Ball Holder 1 x Center Ball 2 x M1.2x2 Special Screw	1 x OXY2-Lower Swash Plate 1 x OXY2-Upper Swash Plate 1 x 10X15W4 Radial Bearing 1 x Center Ball 1 x Ball Holder 2 x M1.2x2 Special Screw 1 x OXY2-Anti Rotation Pin 1 x Linkage ball 3x1.5mm	4 x 2.5X6X2.6 Radial Bearing 2 x 2.5x6x3 Thrust Bearing 2 x 2.55x4.5x0.1 Shim 2 x M2X10 Button Screw
SP-OXY2-058 - OXY2 - DFC Pin Screw, Set	SP-OXY2-099 Linkage Ball ø 3x6mm, 10Pc	SP-OXY2-125 OXY2 - PL Main Grip Spare, 4Pcs
	P P P P P P P P P P	e e e e e
2 x OXY2-DFC Pin Screw 2 x OXY2-2x4X4.4 Bushing	10 x ø 3x6mm	4 x PL Main Grip
SP-OXY2-129 OXY2 - DFC Spare, 4Pcs	SP-OXY2-130 Threaded Rod M1.4x7 , 10Pcs	
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		Chapter 21: Spare Par
SP-OXY2-062 - OXY2 -	SP-OXY2-059 - OXY2 -	SP-OXY2-060 - OXY2 -
/ertical Fin Sticker Green	Vertical Fin Sticker Yellow	Vertical Fin Sticker Orange
	1 x Vertical Fin Sticker yellow	1 x Vertical Fin Sticker Orange
x Vertical Fin Sticker Green		