OXY

215 Pro Instruction Manual





VERY IMPORTANT NOTE:

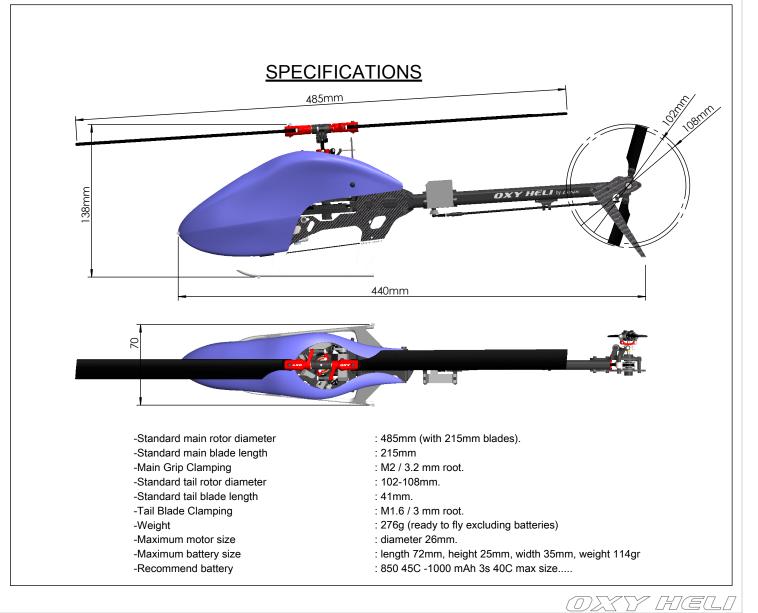
- Visit the Oxy Heli web site www.oxyheli.com to download the latest version of the manual.
- Inside Box 2 you will find your serial number card. Please take a moment to visit the Oxy Heli web site and follow the instructions to register your helicopter and serial number.

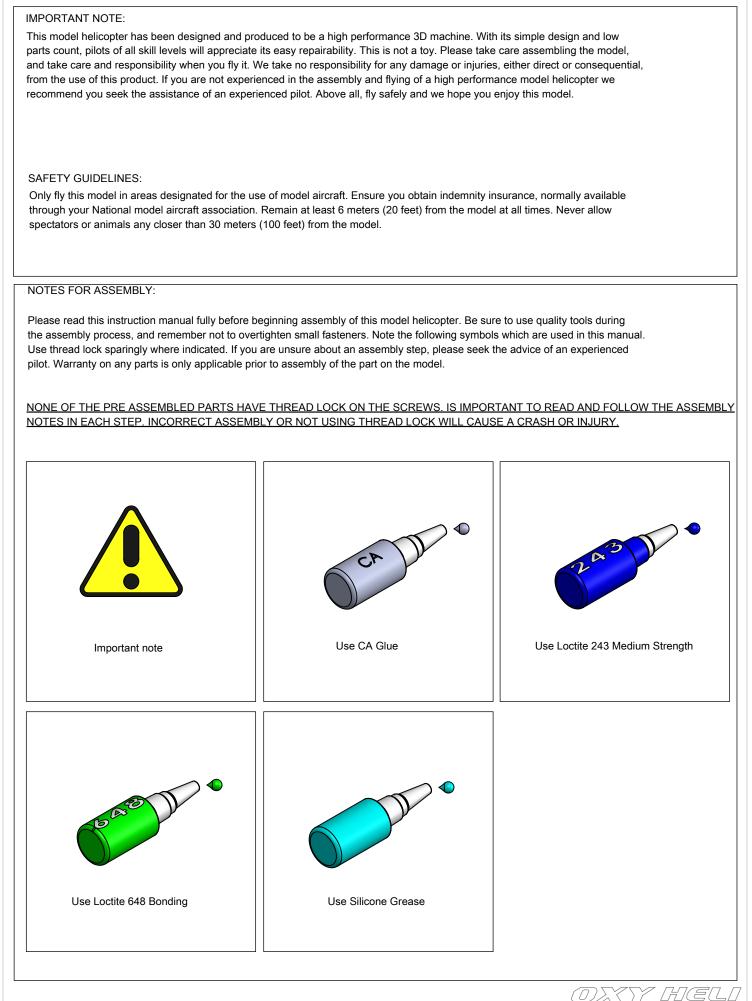
- It is important you take few minutes to register your helicopter and serial number with us. This is the only way to be in contact with us to receive news, promotional information and technical tips.

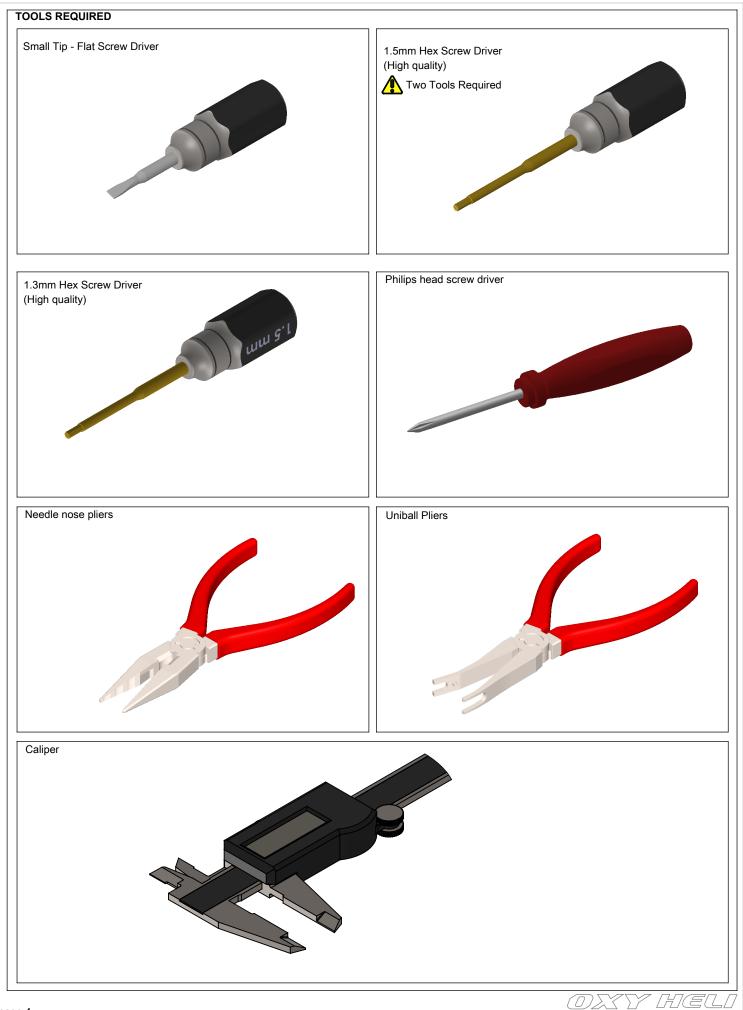
- We will also choose five serial numbers each year that will win a discount coupon worth 200USD each to spend at the Oxy Heli or Lynx Heli web sites.

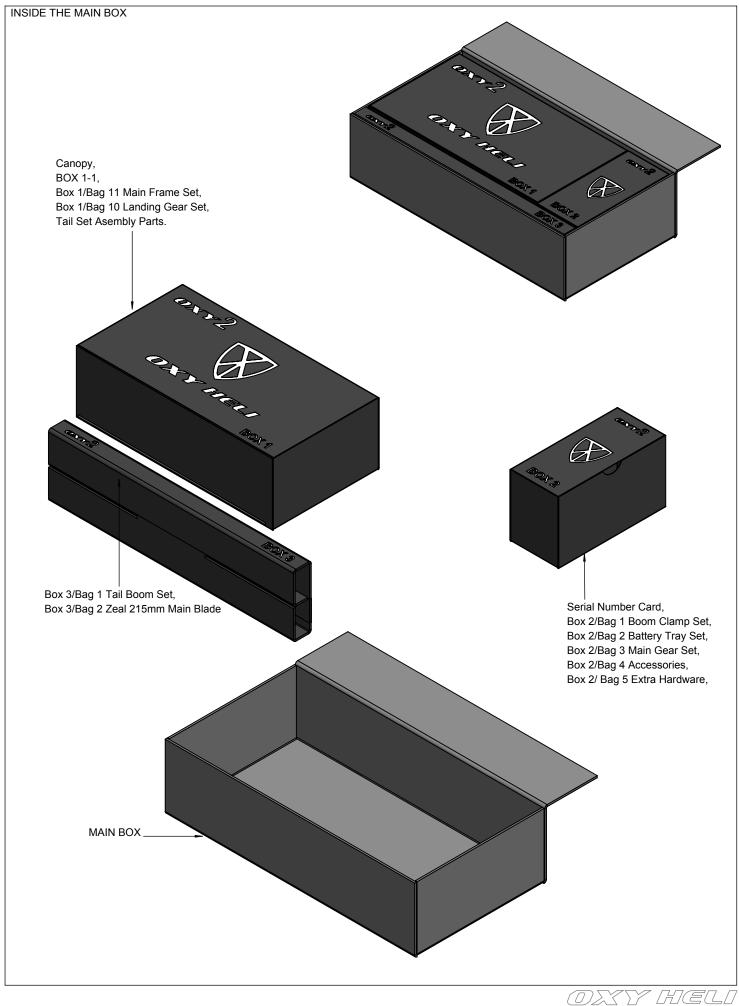
- Thank you for your purchase, and we wish you the best enjoyment with your new Oxy 2 Helicopter.

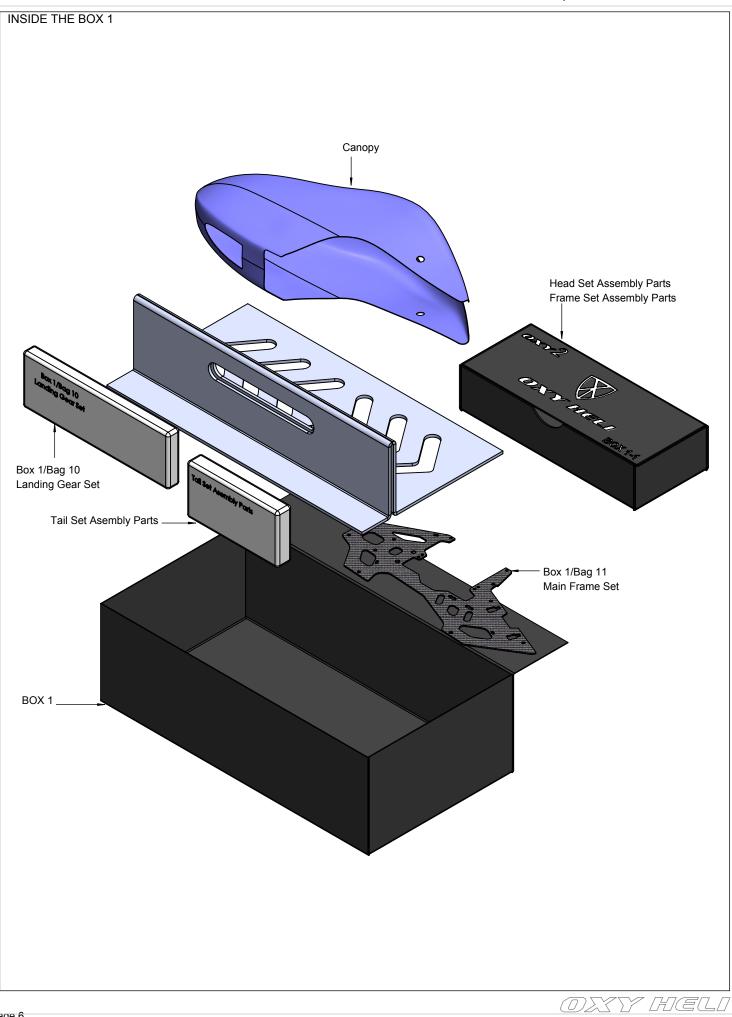
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OXY 2 POWER SYSTEM AND HEAD SPEED SET-UP

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

1- Motor Kv – 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 **113T** for the main gear and one of the available pinions 10T - 11T - 12T - 13T - 14T - 16T - 18T. The kit comes with one pinions (11T-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	Main Gear ratio	
(Teeth)		
10	11.000	
11	10.000	
12	9.167	
13	8.462	
14	7.857	
16	6.875	
18	6.111	

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

	Fly Style	Head S	Speed	Main Blade	Pitch	Tail Blade	Tail Pulley
	Hover	3500	4000	190 CP	+10/-3	41	16 T
07773	Fly 2D	4000	4500	190 CP	+10/-5	41	16 T
OXY2	Soft 3D	4500	5000	190 CP	+/-13	38	16 T
190mm	Hard 3D	5000	5500	190 CP	+/-14	38	16 T
	Extreme 3D	5500	6000	190 CP	+/-14	38	16 T

	Fly Style	Head	Speed	Main Blade	Pitch	Tail Blade	Tail Pulley
	Hover	3300	3750	210 CF	+10/-3	41	15T
OXY2	Fly 2D	3750	4200	210 CF	+10/-5	41	15T
	Soft 3D	4200	4650	210 CF	+/-13	41	16 T
215mm	Hard 3D	4650	5100	210 CF	+/-14	41	16 T
	Extreme 3D	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.

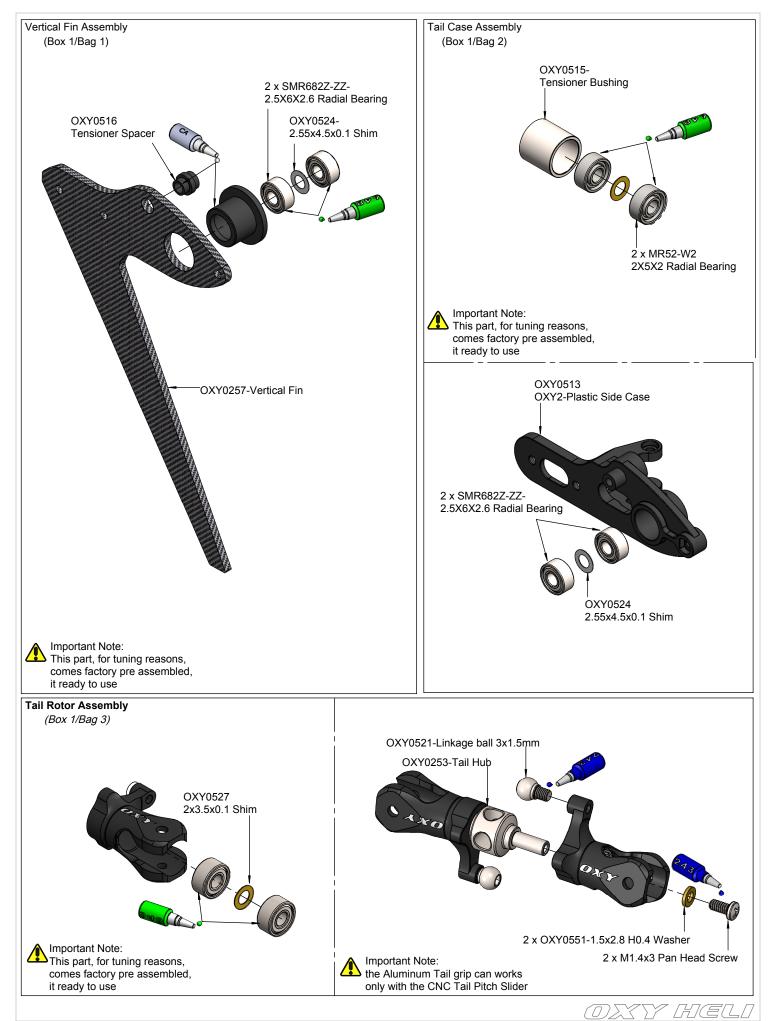
- Rudder servo: Standard MICRO size servo – speed =>0.06 sec/60 at 6V – a specific rudder servo is suggested for best tail authority.

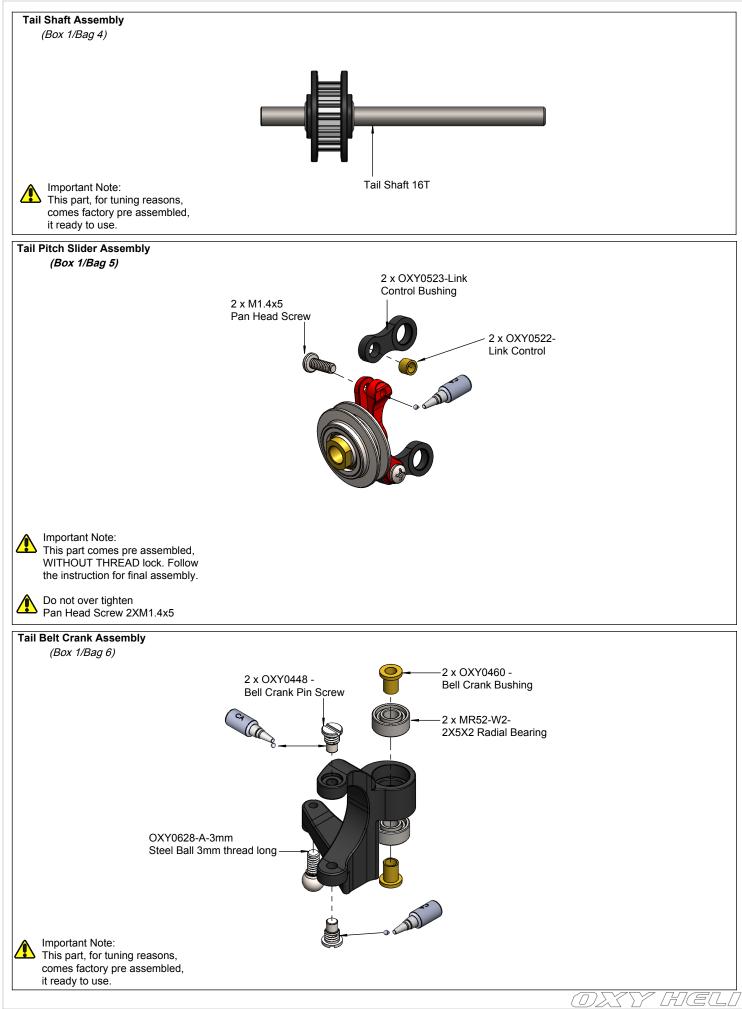
- FBL system: The Oxy 2 was designed around the U-lkon / U-Brain and Neo V-Bar Systems. But many other smaller size FBL systems can be used, depending on your personal choice. Max inner Frame dimension 26mm.

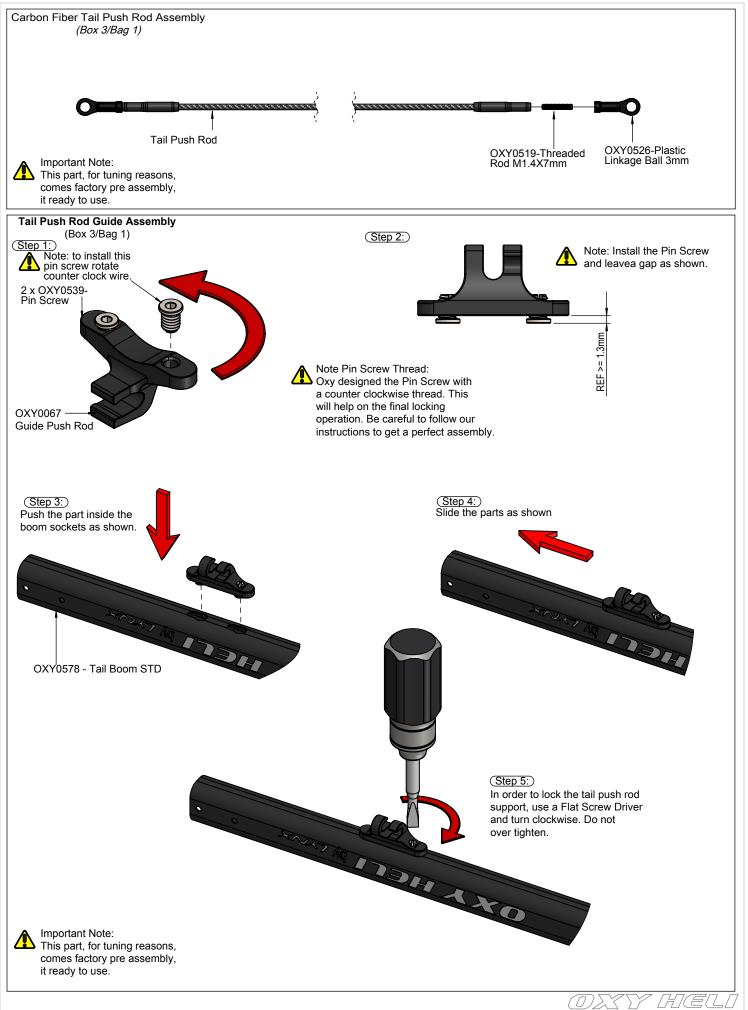
- Main blade: The Oxy 2 can fly with plastic or CF main blades from 190 to 210mm. Our testing was with Lynx 190mm Carbon Plastic main blades, and Zeal 210mm main blades. The Oxy 2 main grips use M2 clamp screw and have a 3.2 mm root.

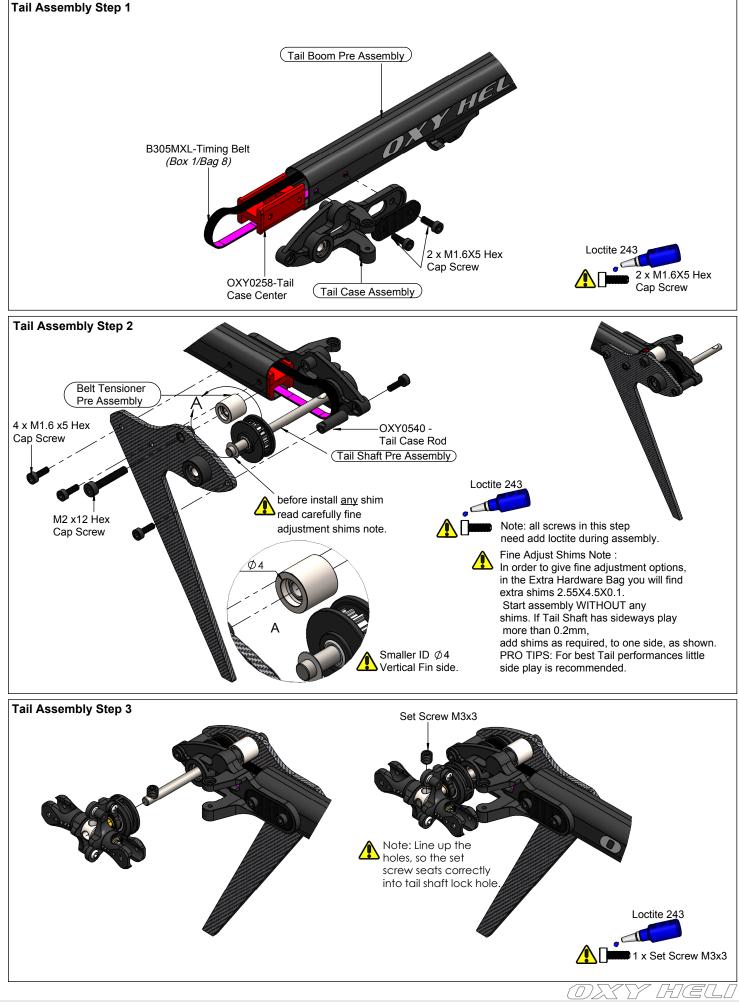
- Tail blades: The Oxy 2 uses our own OEM tail blades, either 38 or 41mm (included with the kit). They use a M1.6 clamp screw and 3 root.

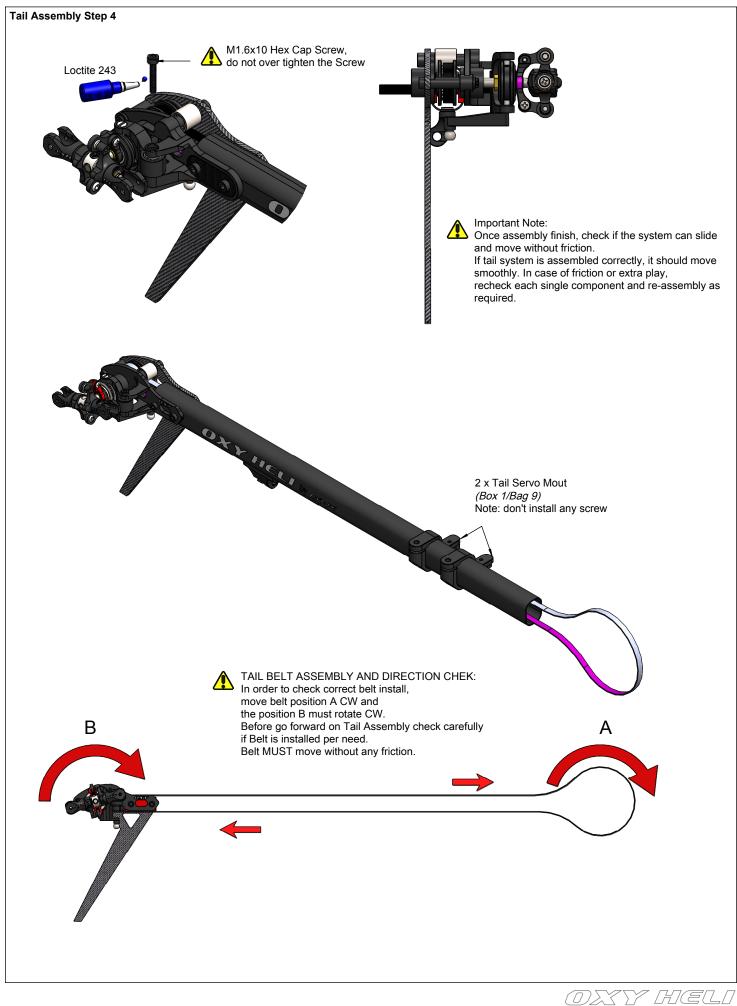
We offer 38 and 41mm tail blades to suit different head speeds. Use 41mm tail blades when your head speed is lower than 4500rpm and 38mm with higher head speeds.

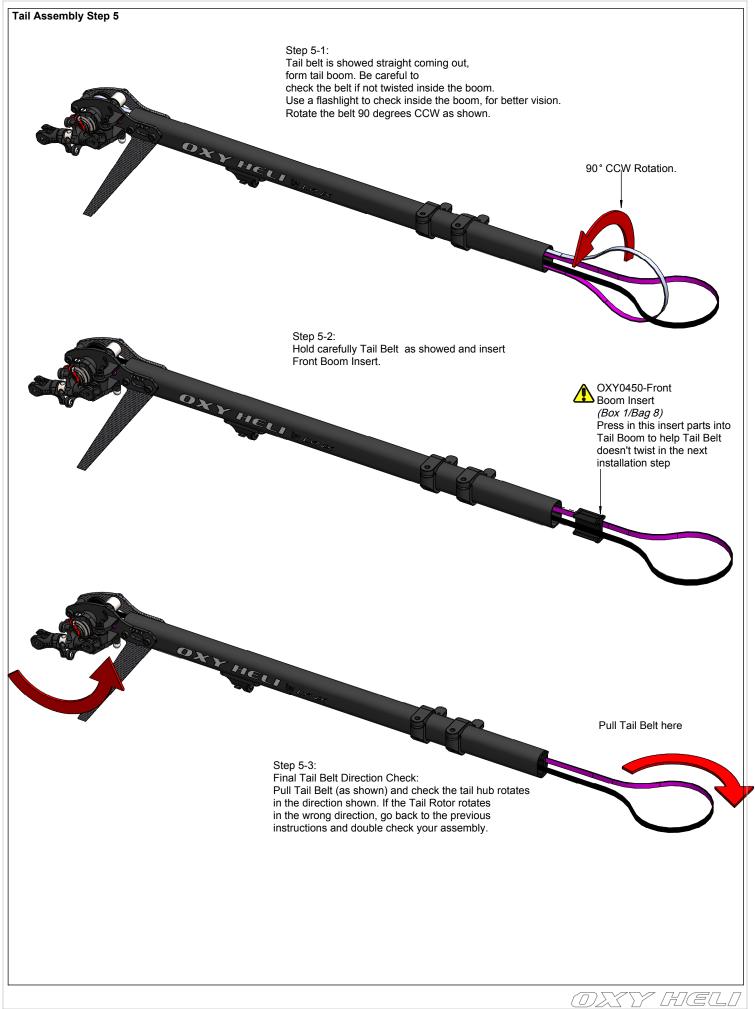


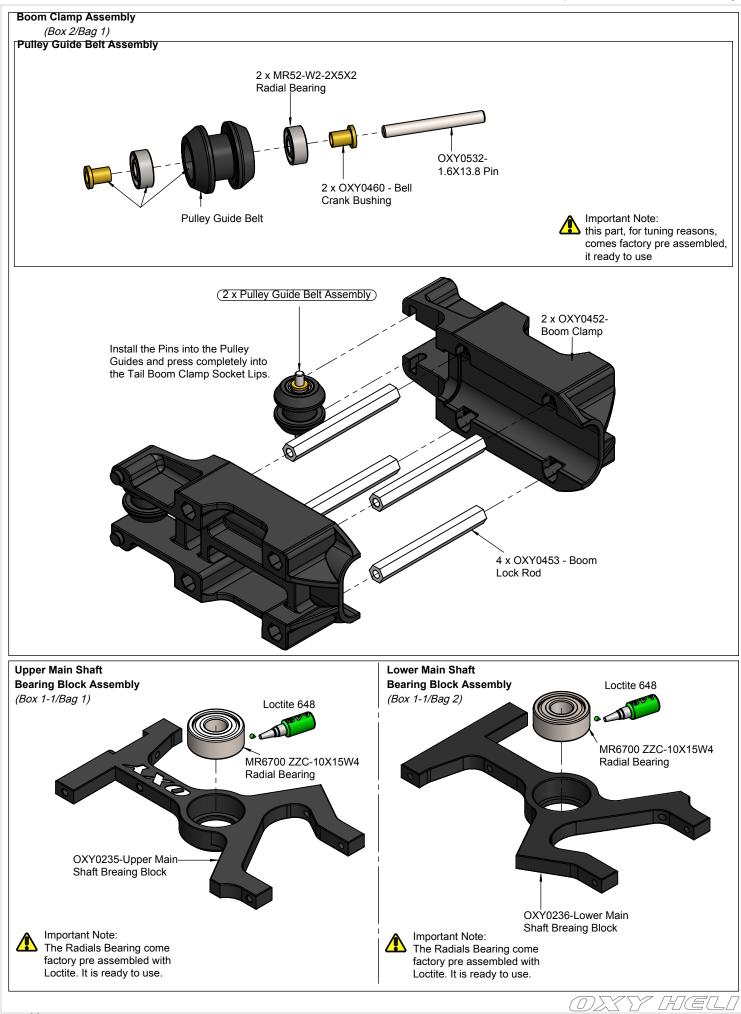


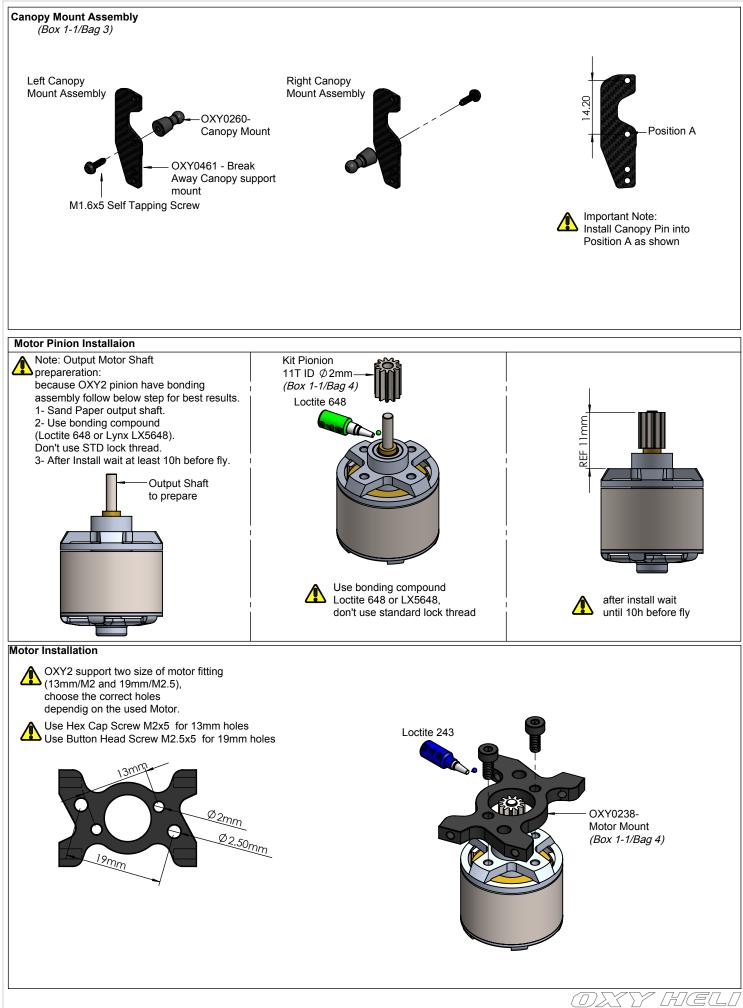




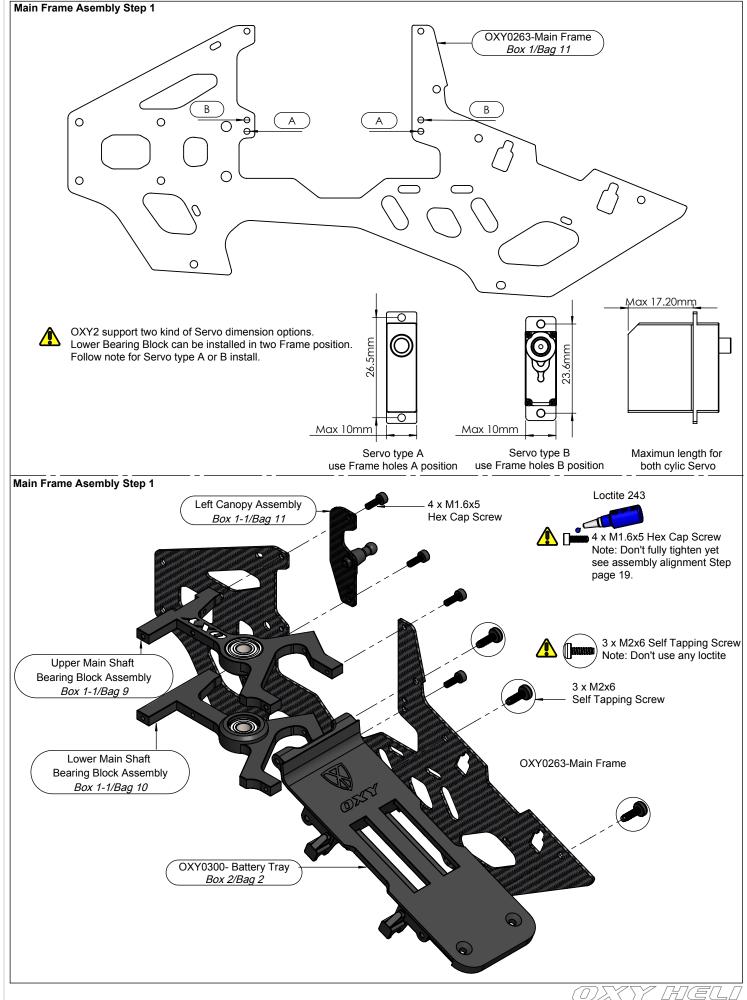


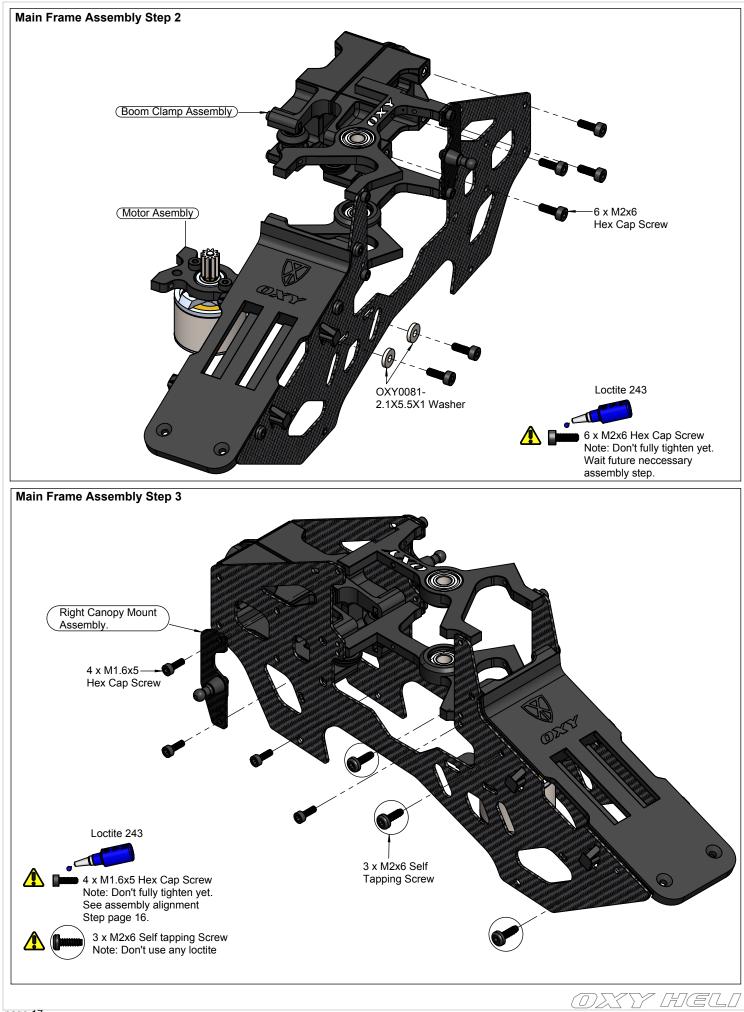


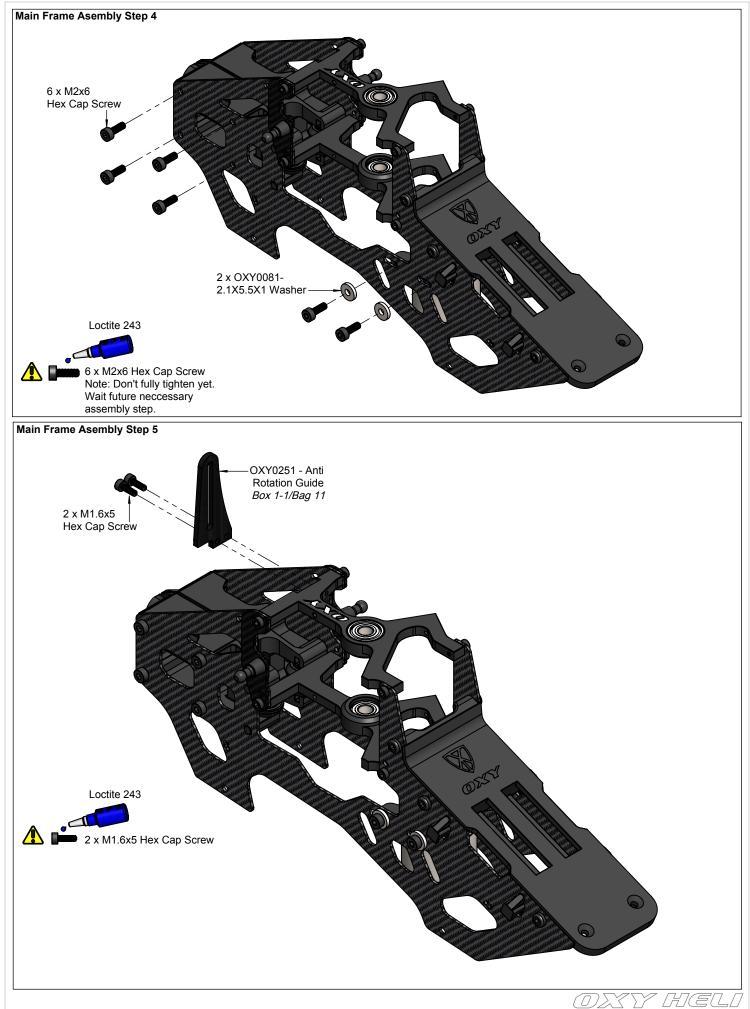


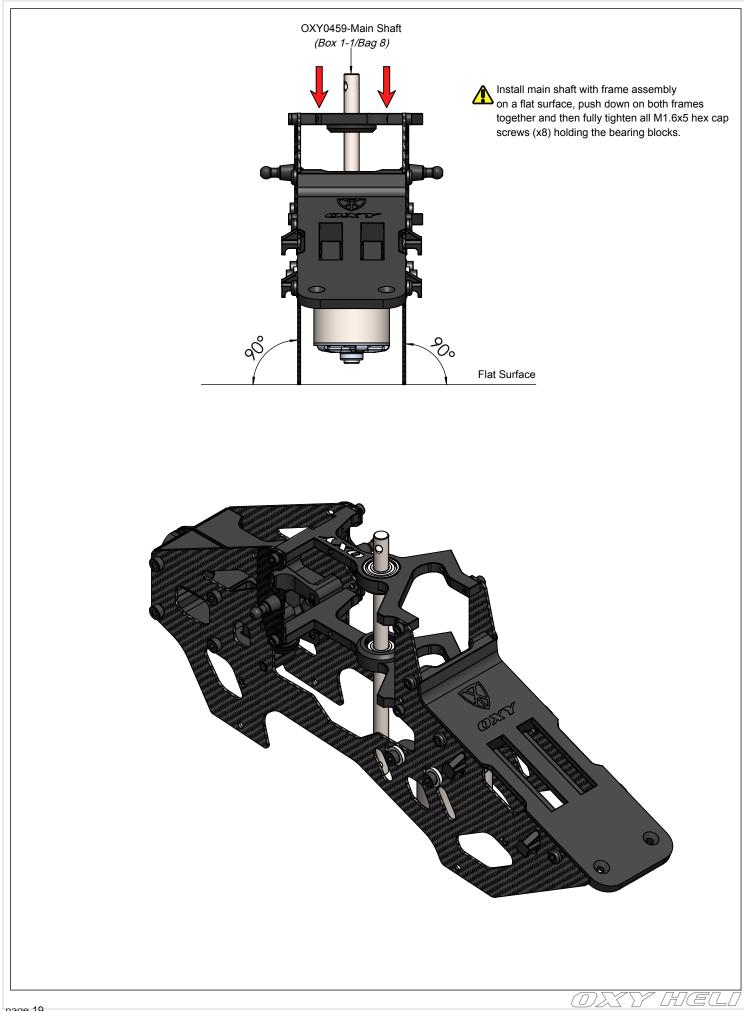


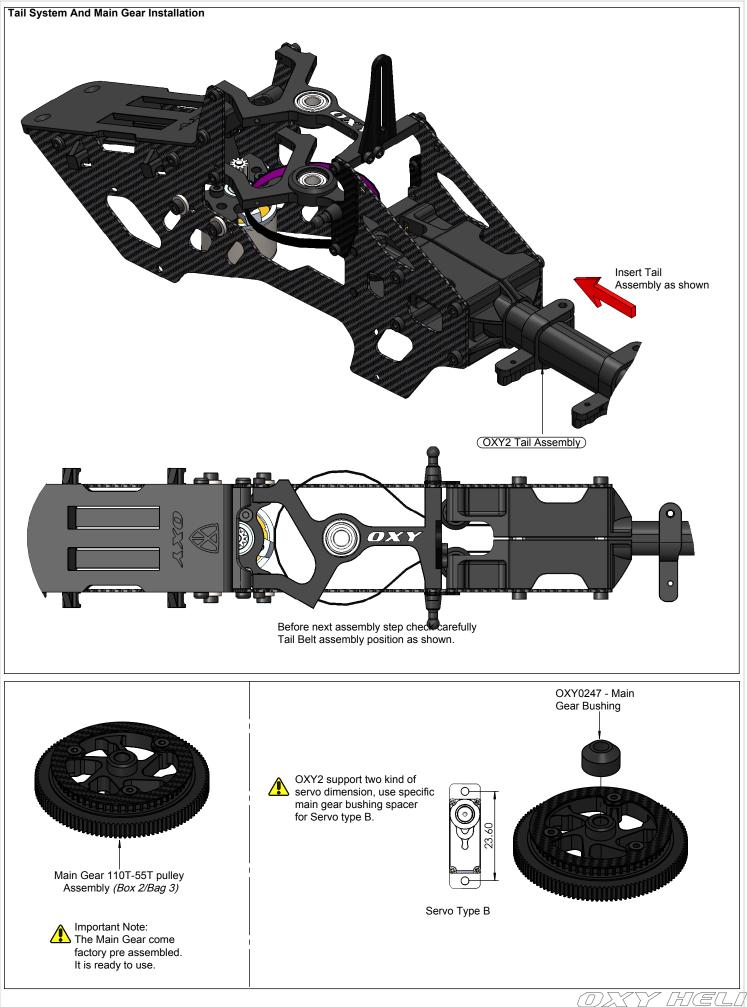
Chapter 7: Main Frame Asembly

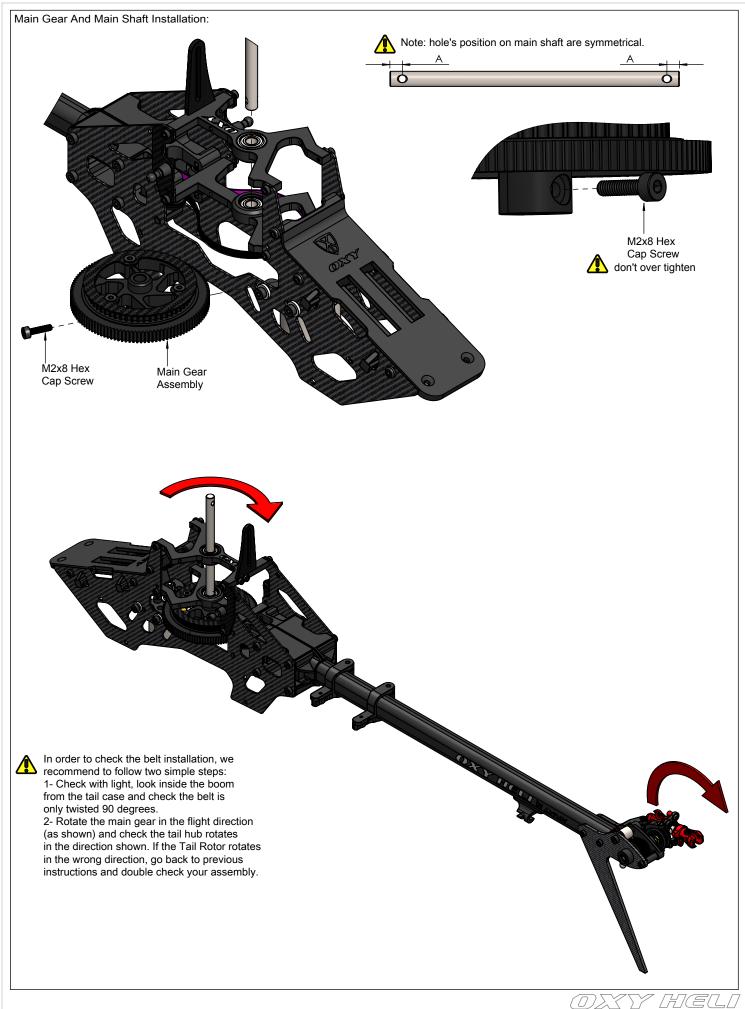


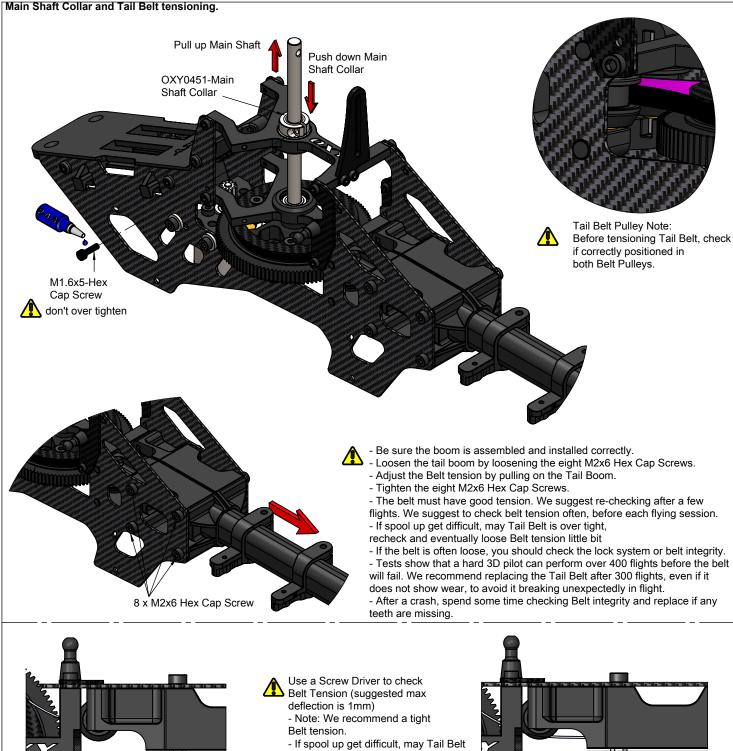


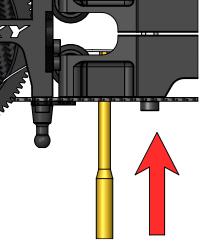








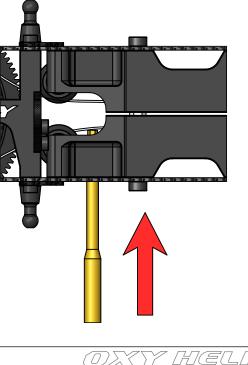


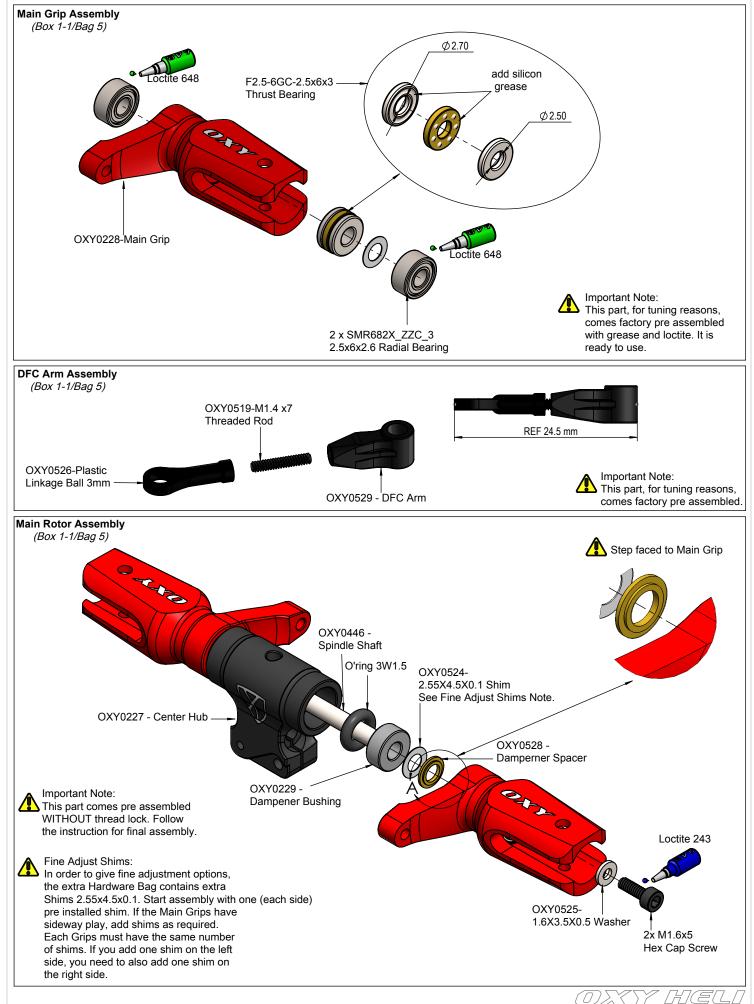


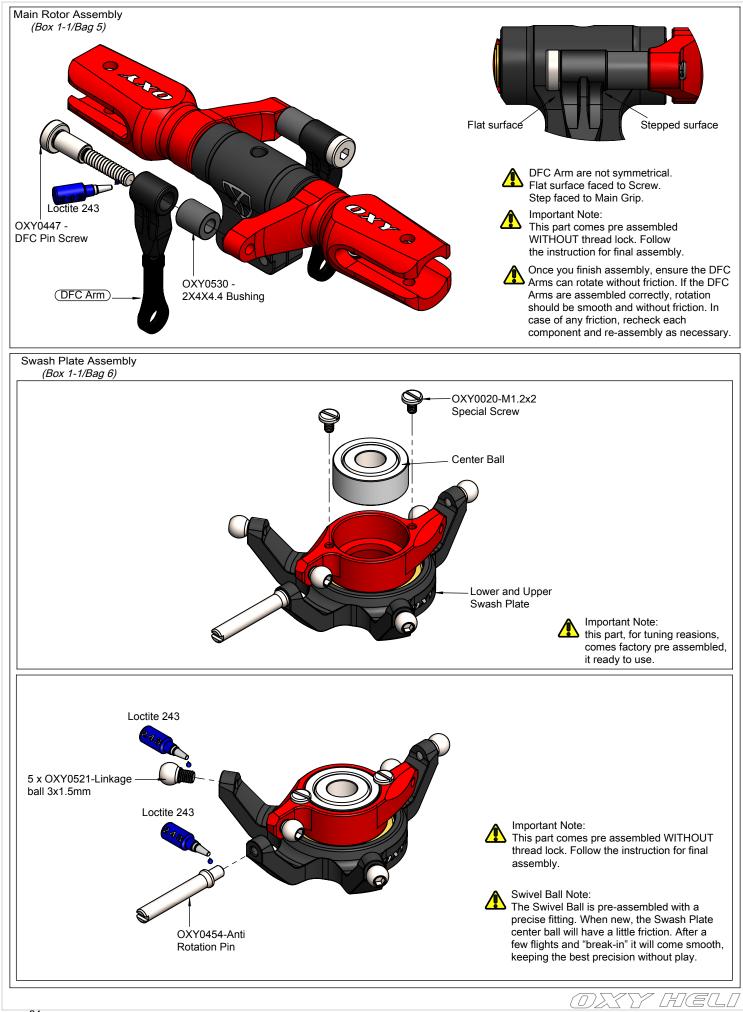
- If spool up get difficult, may Tail Belt is over tight, recheck and eventually loose Belt tension little bit

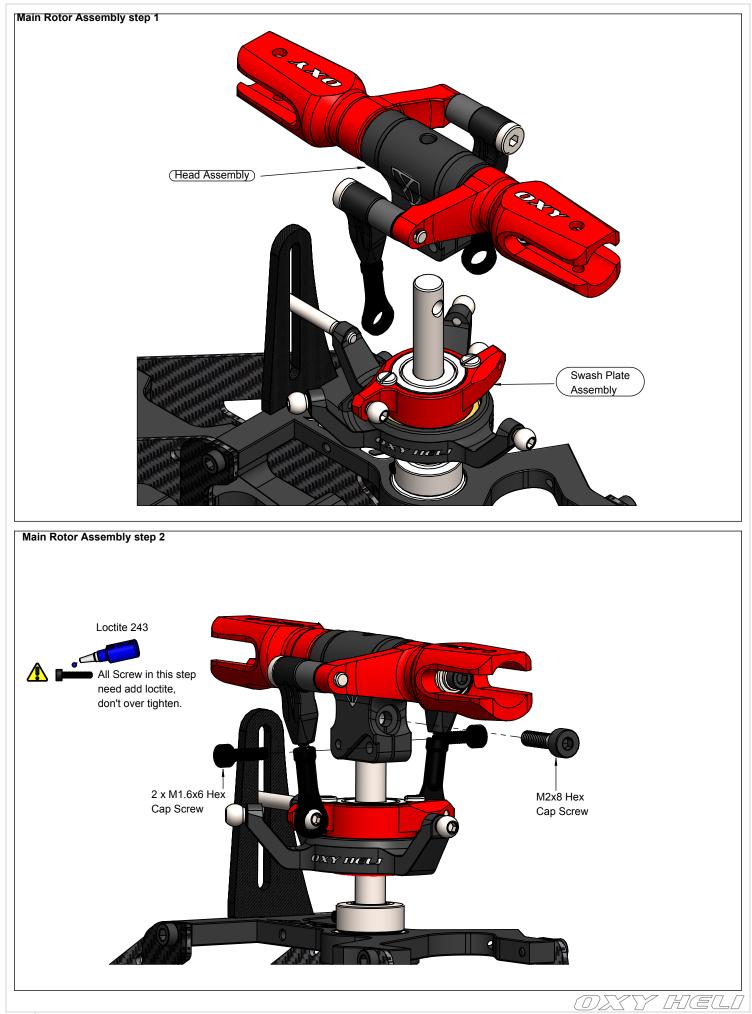
- Check the Belt tension again after the first 2 flights.

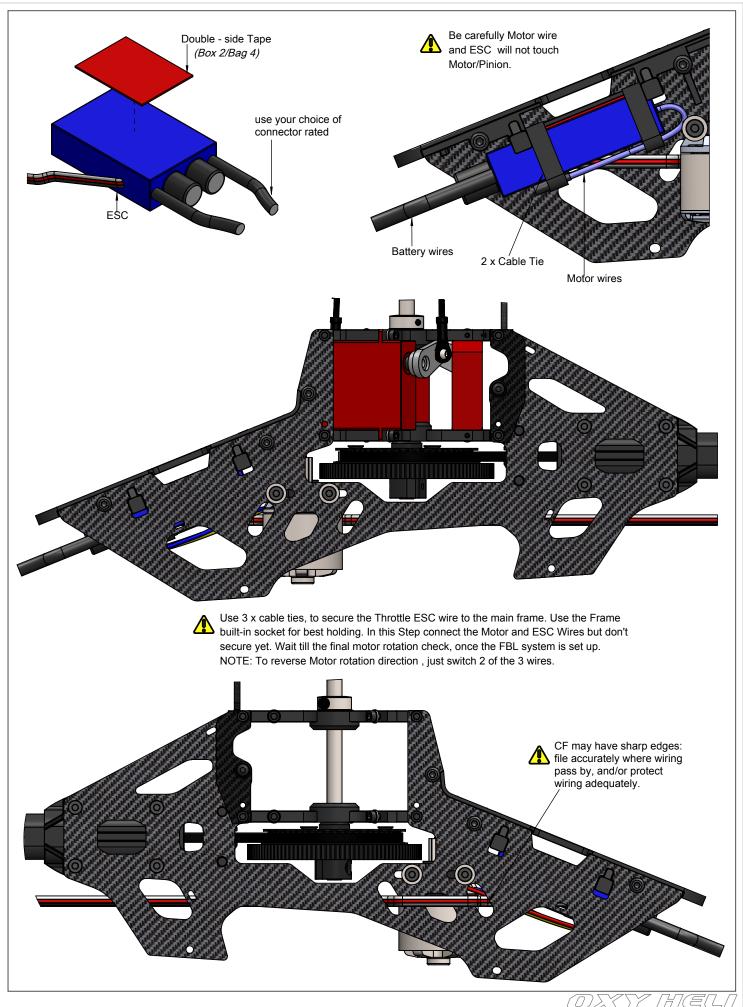
 With a new Tail Belt, when the head is rotated slowly, it is normal to hear a tooth sound as the belt engages with the Main Pulley. This sound is normal and will disappear after a few flights and the necessary "break-in".

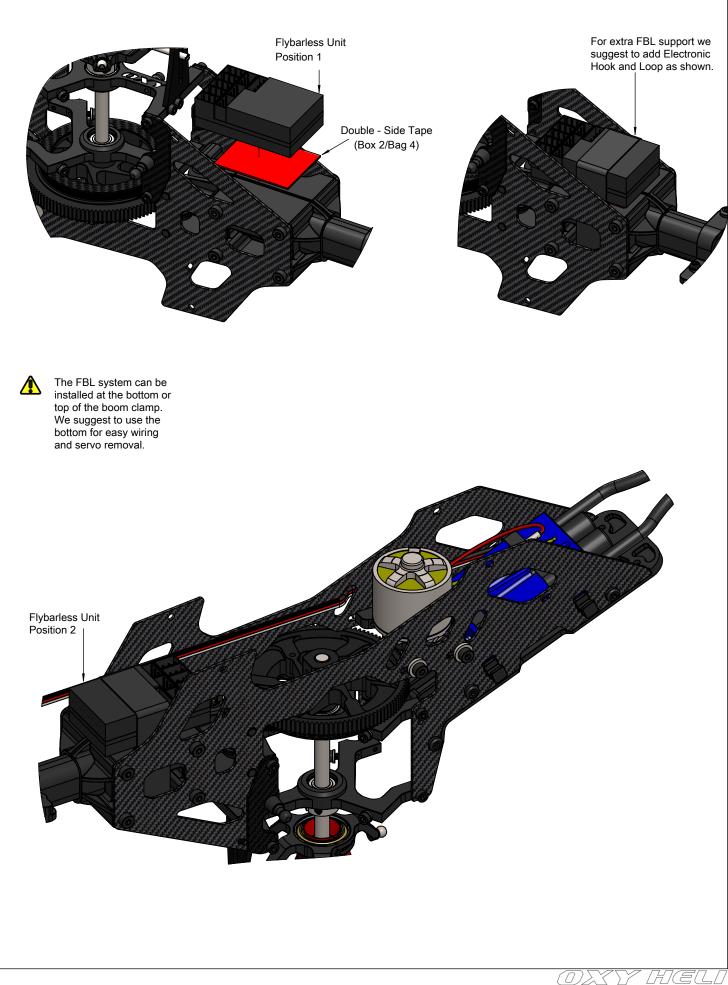




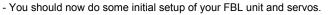








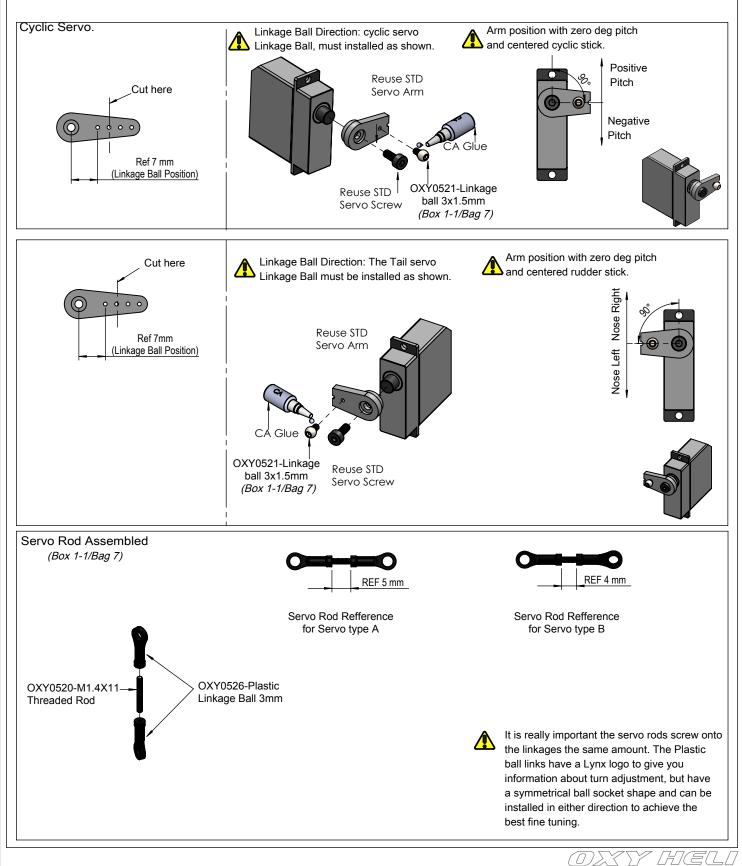
Chapter 14: Servo & Servo Rod Prepareration

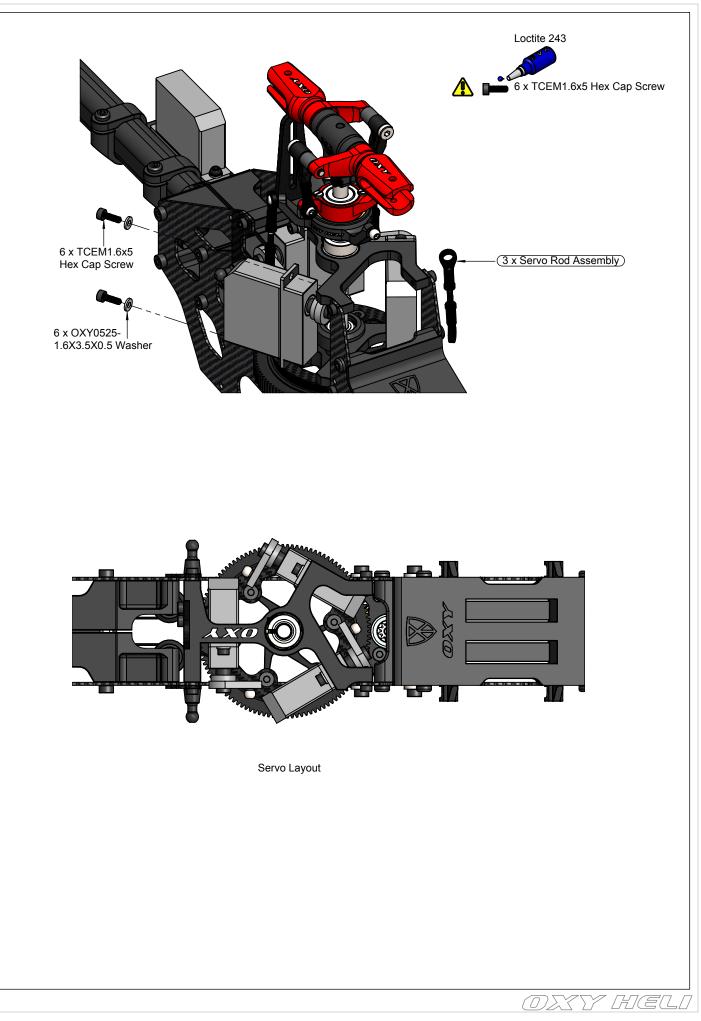


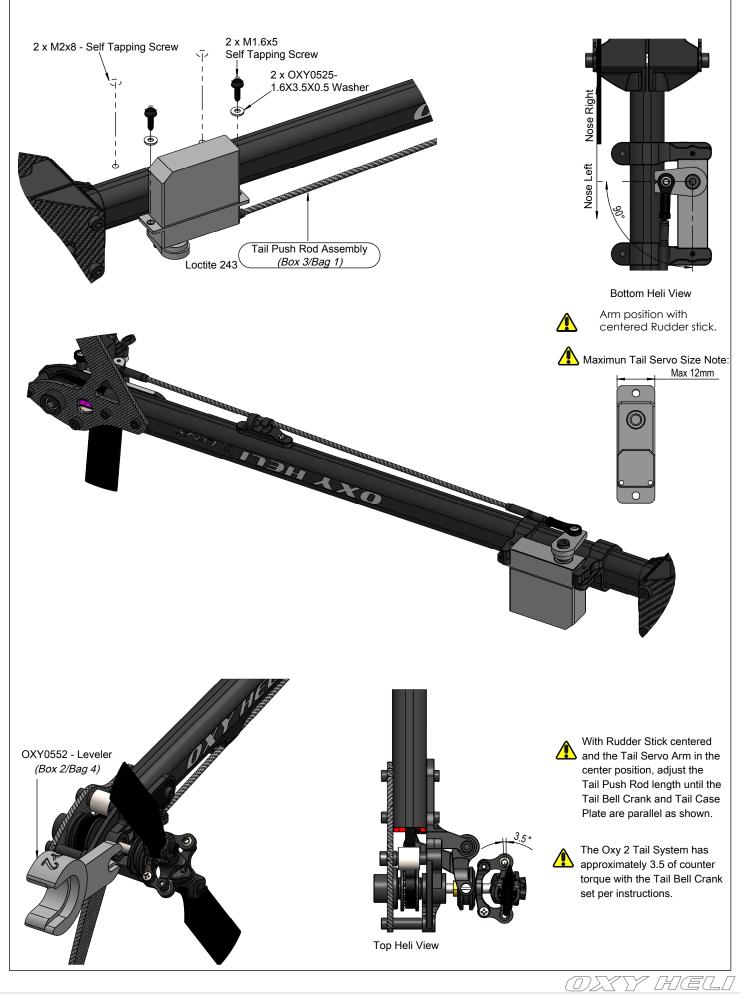
- We recommend you select a new model in your transmitter, and reset your FBL unit and start with a clean setup in it as well.
- After binding your transmitter to the receiver system used with the FBL unit, work your way through the FBL setup instructions to the point you plug in your servos.

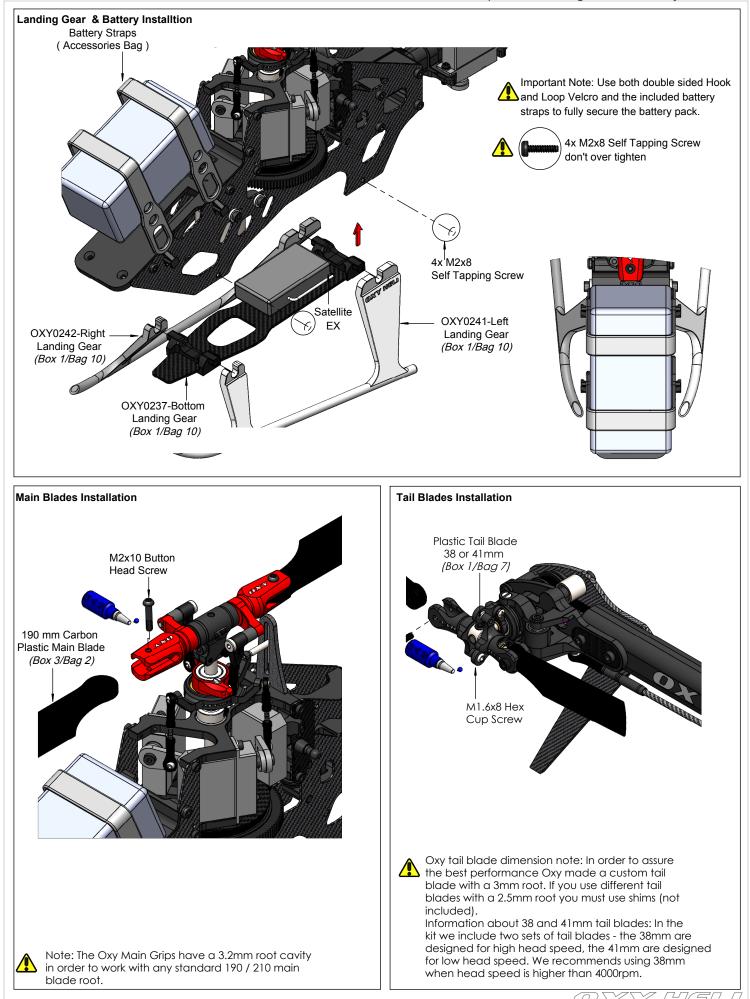
- Now set your collective stick in the middle position, and position the servo arms as close to the correct positions you can on each servo see the following pages for arm orientations on the various servos.

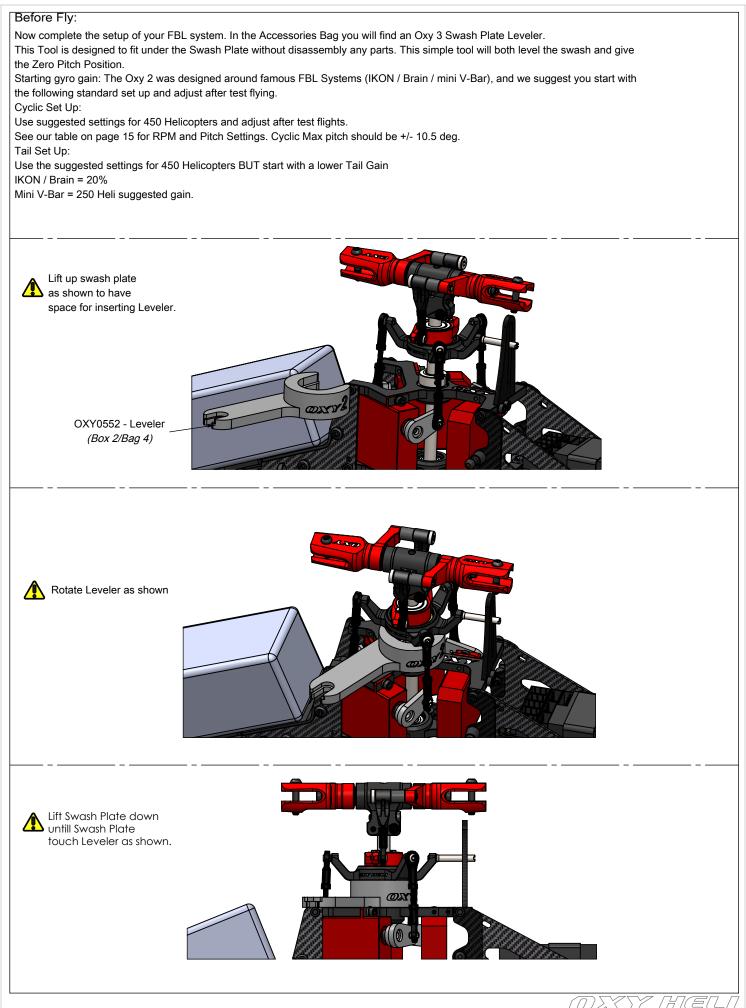
- Next confirm the servos work in the correct direction, then return the collective stick to the center position.
- Now use your FBL unit to trim the servos so the arms are exactly horizontal (see pictures below).
- This procedure varies between units. Carefully label the position of the servos, then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

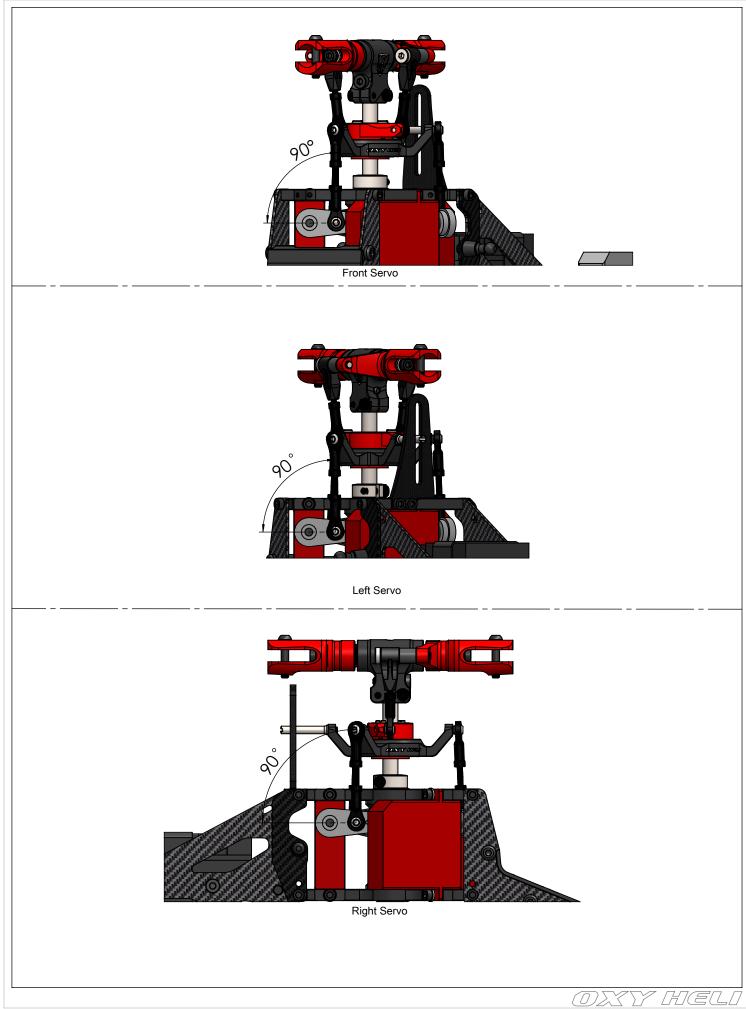


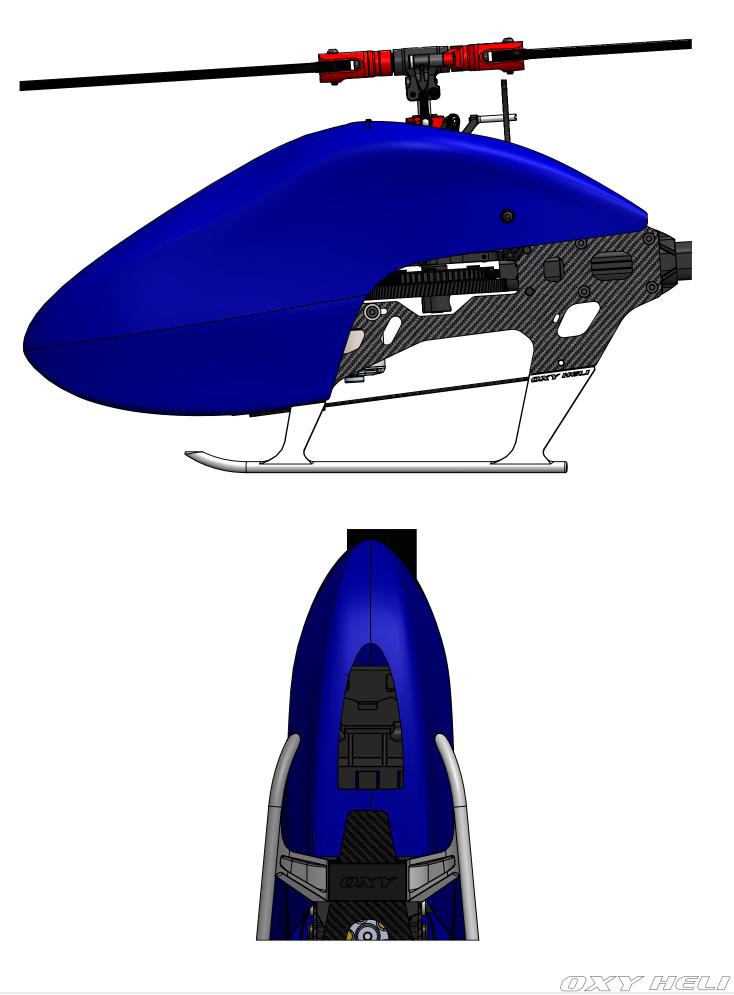


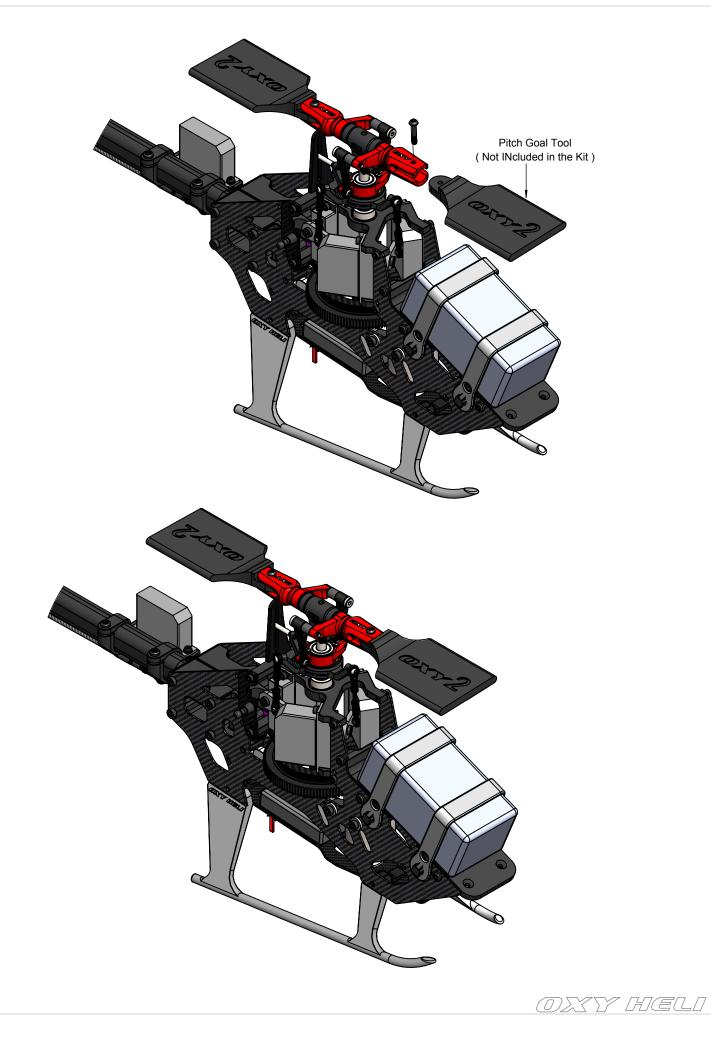


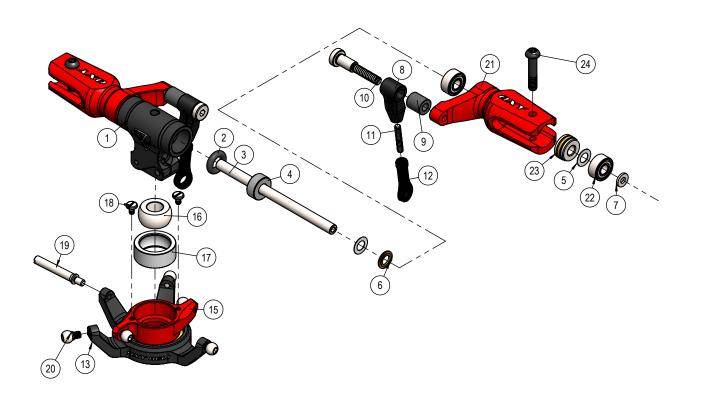






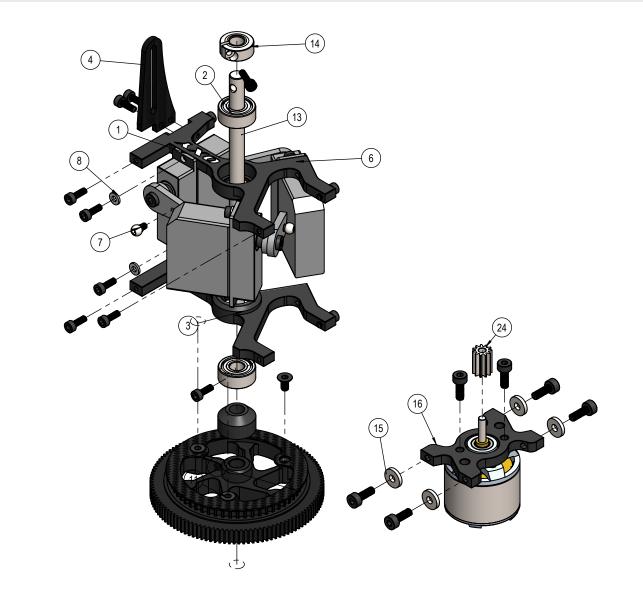






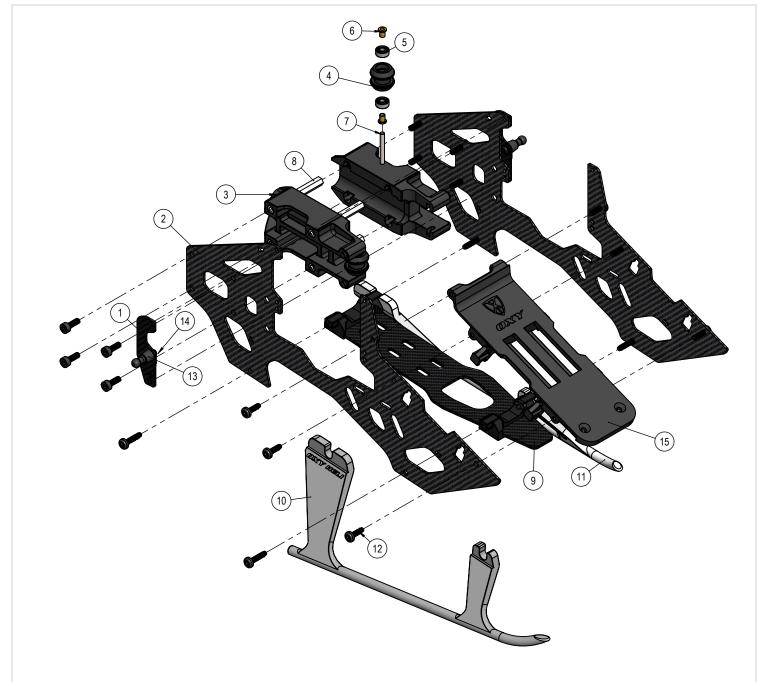
POS	Code	Name	QTY.
1	OXY0227	OXY2-CENTER HUB	1
2	OR3W1.5	Oring ID3x1.5	2
3	OXY0446	OXY2 Sindle Shaft	
4	OXY0229	OXY2-Dampener Bushing	2
5	OXY0524	2.55x4.5x0.1 Shim	4
6	OXY0528	OXY2-Damperner Spacer	2
7	OXY0525	1.6x3.5x0.5 Washer	2
8	OXY0529	OXY2-DFC Arm	2
9	OXY0530	OXY2-2x4X4.4 Bushing	2
10	OXY0447	OXY2-DFC Pin Screw	2
11	OXY0519	Threaded Rod M1.4X7mm	
12	OXY0526	Plastic Linkage Ball 3mm	
13	OXY0234	OXY2-Lower Swash Plate	
14	MR6700 ZZC	10X15W4 Radial Bearing	1
15	OXY0233	OXY2-Upper Swash Plate	1
16	OXY0017	Center Ball	1
17	OXY0016	Ball Holder	1
18	OXY0020	M1.2x2 SPECIAL SCREW	2
19	OXY0454	OXY2-Anti Rotation PIN	1
20	OXY0521	Linkage ball 3x1.5mm - DR1265	
21	OXY0228	OXY2- Main Grip	2
22	SMR682Z-ZZ	2.5X6X2.6 Radial Bearing	
23	F2.5-6GC	2.5x6x3 Thrust Bearing	
24	OXY0078	M2X10 Botton Screw	2





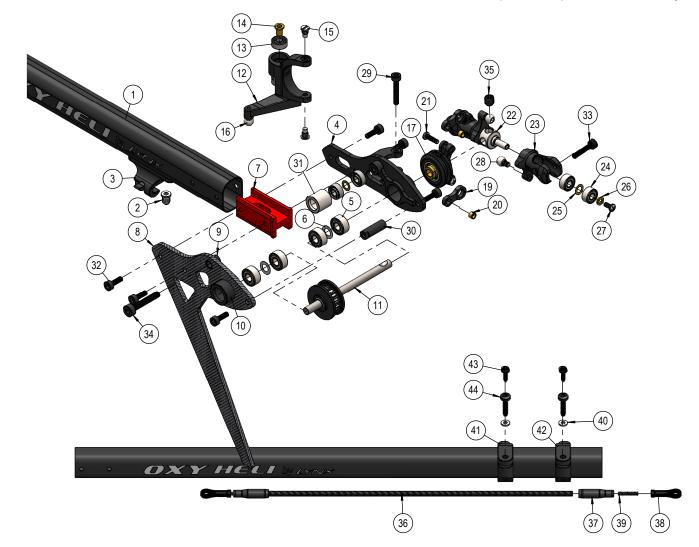
POS	Code	Name	QTY.
1	OXY0235	Upper Main Shaft Bearing Block	1
2	MR104_ZZC	4X10X4 RADIAL BEARING	2
3	OXY0236	Lower Main Shaft Bearing Block	1
4	OXY0251	OXY2-Anti Rotaion Guide	1
7	OXY0521	Linkage ball 3x1.5mm - DR1265	3
8	OXY0525	1.6x3.5x0.5 Washer	6
9	OXY0263	OXY2-Main Frame	1
10	OXY0538	CF Main Gear Cover	1
11	FHSM2X4	M2x4 Flat Head Screw	3
12	OXY0247	OXY2-Main Gear Bushing	1
13	OXY0459	OXY2-Main Shaft	1
14	OXY0451	OXY2-Main Shaft Collar	1
15	OXY0081	2.1X5.5X1 Washer	4
24	OXY0744	OXY2-11T 0.4M 2mm Shaft Straight Pinion	1
25	TCEM2X5	M2X5 Hex Cap Screw	3
26	TCEM1.6X5	M1.6X5 Hex Cap Screw	16
27	TCEM1.6X6	M1.6x6 Hex Cap Screw	
28	TCEM2X6	M2X6 Hex Cap Screw	
29	OXY0690	113T-55T Pulley Strait Main Gear	





			-
Pos.	Code	Name	QTY.
1	OXY0461	OXY2-Break Away Canopy	2
2	OXY0263	OXY2-Main Frame	2
3	OXY0452	OXY2-Boom Clamp	2
4	OXY0242	OXY2-Pulley Guide Belt	2
5	MR52-W2	2X5X2 RADIAL BEARING	4
6	OXY0460	OXY2 Bell Crank Bushing	4
7	OXY0532	1.6x13.8mm Pin	2
8	OXY0453	Boom Lock Rod	4
9	OXY0237	OXY2-Bottom Landing Gear	1
10	OXY0240	OXY2-Right Landing Gear	1
11	OXY241	OXY2-Left Landing Gear	1
12	TBES2X6	M2X6 Self Tapping Screw	6
13	OXY0260	Canopy Mount	2
14	TBESM1.6x5	M1.6x5 Self Tapping Screw	2
15	OXY0300	OXY2- Battery Tray	1
16	TBES2X8	M2X8 Self Tapping Screw	4
17	TCEM2X6	M2X6 Hex Cap Screw	8





Pos	Part Number	Description	Qty	Pos	Part Number	Description	Qty
1	OXY0436	OXY2 Tail Boom Stretch	1	23	OXY0537	OXY2-AL Tail Grip	2
2	OXY0539	M2.5 Pin Screw	2	24	SMR682-ZZ	2X5X2.3 Radial Bearing	4
3	OXY0622	OXY2-TE Guide Push Rod	1	25	OXY0527	2x3.5x0.1 Shim	3
4	OXY0543	OXY2-Tail Case	1	26	OXY0551	1.5x2.8H0.4 Washer	2
5	SMR682Z-ZZ	2.5X6X2.6 Radial Bearing	4	27	PanM1.4x3	M1.4x3 Pan Head Screw	2
6	OXY0524	2.55x4.5x0.1 Shim	2	28	OXY0521	Linkage ball 3x1.5mm - DR1265	2
7	OXY0258	OXY2-Tail Case Center	1	29	TCEM1.6X10	M1.6X10 Hex Cap Screw	1
8	OXY0257	OXY2-Vertical Fin	1	30	OXY0540	OXY2-Tail Case Rod	1
9	OXY0516	2x3.5x2.2 Bushing	1	31	OXY0515	OXY2-Tensioner Bushing	1
10	OXY0279	OXY2-Vertical Fin Bushing	1	32	TCEM1.6X5	M1.6X5 Hex Cap Screw	6
11	OXY0256	OXY2-TAIL SHAFT	1	33	TCEM1.6x8	M1.6x8 Hex Cap Screw	2
12	OXY0604	OXY2-Tail Bell Crank	1	34	TCEM2X12	M2X12 Hex Cap Screw	1
13	MR52-W2	2X5X2 Radial Bearing	4	35	SCM3x3	Flat-Tip Set Screw M3x3	1
14	OXY0460	OXY2 Bell Crank Bushing	2	36	OXY0584	std tail push Carbon Rod	1
15	OXY0448	OXY2-Bell Crank Pin Screw	2	37	OXY0536	OXY2-Tail Push Rod Terminal	2
16	OXY0628	3mm Steel Ball 3mm thread long	1	38	OXY0526	Plastic Linkage Ball 3mm	2
17	OXY0607	OXY2-Tail Pitch Slider Ring	1	39	OXY0519	Threaded Rod M1.4X7mm	2
18	OXY0457	OXY2-Tail Pitch Slider Bushing	1	40	OXY0525	1.6x3.5x0.5 Washer	2
19	OXY0522	OXY2-Link Control	2	41	OXY0605	OXY2-Tail Servo Support	1
20	OXY0523	OXY2-Link Control Buhing	2	42	OXY0606	OXY2-Tail Servo Support	1
21	PanM1.4x5	M1.4x5 Pan Head Screw	2	43	TBESM1.6x5	M1.6x5 Self Tapping Screw	2
22	OXY0253	OXY2-Tail Hub	1	44	TBES2X8	M2X8 Self Tapping Screw	2

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SP-OXY2-010 - OXY2 - Swash Plate, Service Bag	SP-OXY2-011 - OXY2 - Swash Plate, Set	SP-OXY2-013 - OXY2 - Main Grip Service Bag
	Char Hell	
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	
	P P P P P P P P P P P	

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		Chapter 21: Spare Part
SP-OXY2-020 - OXY2 - Break Away Canopy , 2PCS	SP-OXY2-021 - OXY2 - Canopy Mount	SP-OXY2-022 - OXY2 - Bottom Plate
		2
2 x OXY2-Break Away Canopy	2 x Canopy Mount 2 x M1.6X4 Hex Cap Screw	1 x OXY2-Bottom Landing Gear 4 x M2X8 Self Tapping Screw
SP-OXY2-023 - OXY2 - Plastic Landing Gear Skid, Left / Right	SP-OXY2-069 OXY2 - Battery Tray , Set	SP-OXY2-070 OXY2 - Tail Boom Clamp Mount, set
<u> </u>		
<		
	1.	2 x OXY2-Boom Clamp
1 x OXY2-Right Landing Gear, black 1 x OXY2-Left Landing Gear, black	1 x OXY2- Battery Tray 6 x M2X6 Self Tapping Screw	4 x Boom Lock Rod 8 x M2X6 Hex Cap Screw
SP-OXY2-026 - OXY2 - CNC Aluminum Belt Pulley Guide, Set	SP-OXY2-027 - OXY2 - Boom Mount Lock Rod, Set	SP-OXY2-057 - OXY2 - Main Gear Spacer
2 x OXY2-Pulley Guide Belt		
4 x 2X5X2 Radial Bearing 4 x OXY2 Bell Crank Bushing 2 x 1.6x13.8mm Pin	4 x Boom Lock Rod 8 x M2X6 Hex Cap Screw	1 x OXY2-Main Gear Bushing





		Chapter 21. Spare Part
SP-OXY2-012 - OXY2 - Blade Holder	SP-OXY2-028-OXY2 - Battery Oring , 4PC	SP-OXY2-045 - OXY2 - 190mm Carbon Plastic Main Blade
AB officia		
l x OXY2 Blader Holder SP-OXY2-046 - OXY2 - 38mm Tail Blade, Black	4 x Oring 55W2.5 SP-OXY2-047 - OXY2 - 41mm Tail Blade, Black	2pcs 190mm Carbon Plastic Main Blade SP-OXY2-048 - OXY2 - Pinion 10T - 2mm Motor Shaft
2pcs 38mm Tail Blade, Black SP-OXY2-049 - OXY2 -	2pcs 41mm Tail Blade, Black SP-OXY2-050 - OXY2 -	1 x Pinion 10T- M0.4 - 2mm Motor Shaft SP-OXY2-051 - OXY2 -
Pinion 11T - 2mm Motor Shaft	Pinion 12T - 2mm Motor Shaft	Pinion 13T - 2mm Motor Shaft
1 x Pinion 11T- M0.4 - 2mm Motor Shaft	1 x Pinion 12T- M0.4 - 2mm Motor Shaft	1 x Pinion 13T- M0.4 - 2mm Motor Shaft
SP-OXY2-052 - OXY2 - Pinion 14T - 2mm Motor Shaft	SP-OXY2-053 - OXY2 - Pinion 14T - 2.5mm Motor Shaft	SP-OXY2-054 - OXY2 - Pinion 16T - 2.5mm Motor Shaft
1 x Pinion 14T- M0.4 - 2mm Motor Shaft	1 x Pinion 14T- M0.4 - 2.5mm Motor Shaft	1 x Pinion 16T- M0.4 - 2.5mm Motor Shaft

		Chapter 21: Spare Parts
SP-OXY2-055 - OXY2 -	SP-OXY2-059 - OXY2 -	SP-OXY2-060 - OXY2 -
Pinion 18T - 2.5mm Motor Shaft	Vertical Fin Sticker Yellow	Vertical Fin Sticker Orange
1 x Pinion 18T- M0.4 - 2.5mm Motor Shaft	1 x Vertical Fin Sticker yellow	1 x Vertical Fin Sticker Orange
SP-OXY2-061 - OXY2 - Vertical Fin Sticker White	SP-OXY2-062 - OXY2 - Vertical Fin Sticker Green	SP-OXY2-063 - OXY2 - Fiber Glass Canopy Schema # 1
		and and a second
1 x Vertical Fin Sticker White	1 x Vertical Fin Sticker Green	1 x Orange Canopy
SP-OXY2-064 - OXY2 - 3D Leveler Tool		

