



# VIBER 12 SG FBL

JR CCPM 140° ← CHOICE → JR CCPM 120°

ASSEMBLY MANUAL



The photo depicts an assembled model

## Specifications

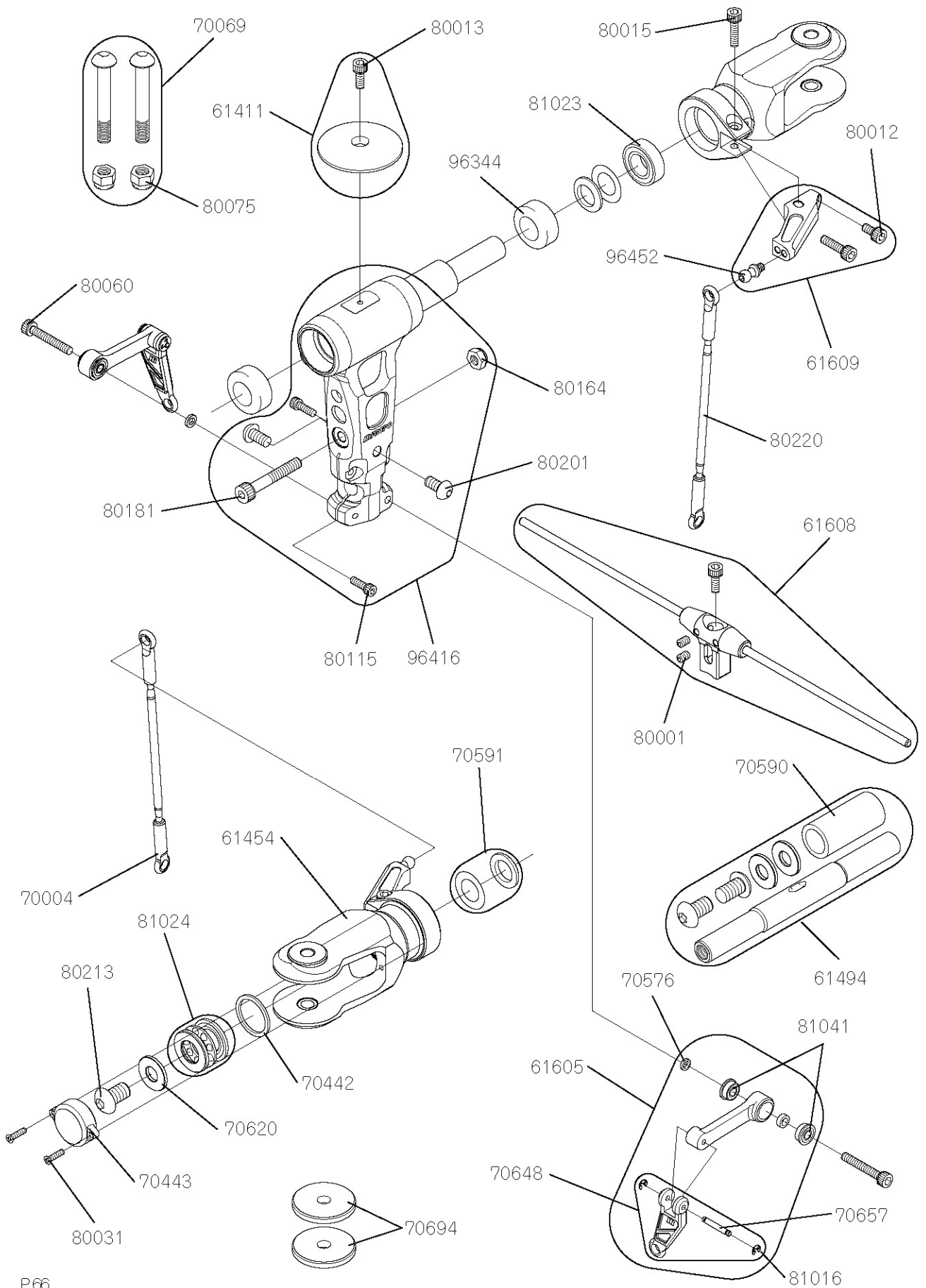
Length	1,359mm	Height	425mm	Width	182mm
Main Rotor Dia. *1	1,605mm	Tail Rotor Dia.	288mm	Gross Weight *2	3,600g ~
Gear Ratio	T9	10.3 : 1 : 4.65	T10	9.3 : 1 : 4.65	T11 8.45 : 1 : 4.65
Control System	120° /140° CCPM choice		Tail Drive System : Shaft Drive		

\*1 With 720mm Main Blades

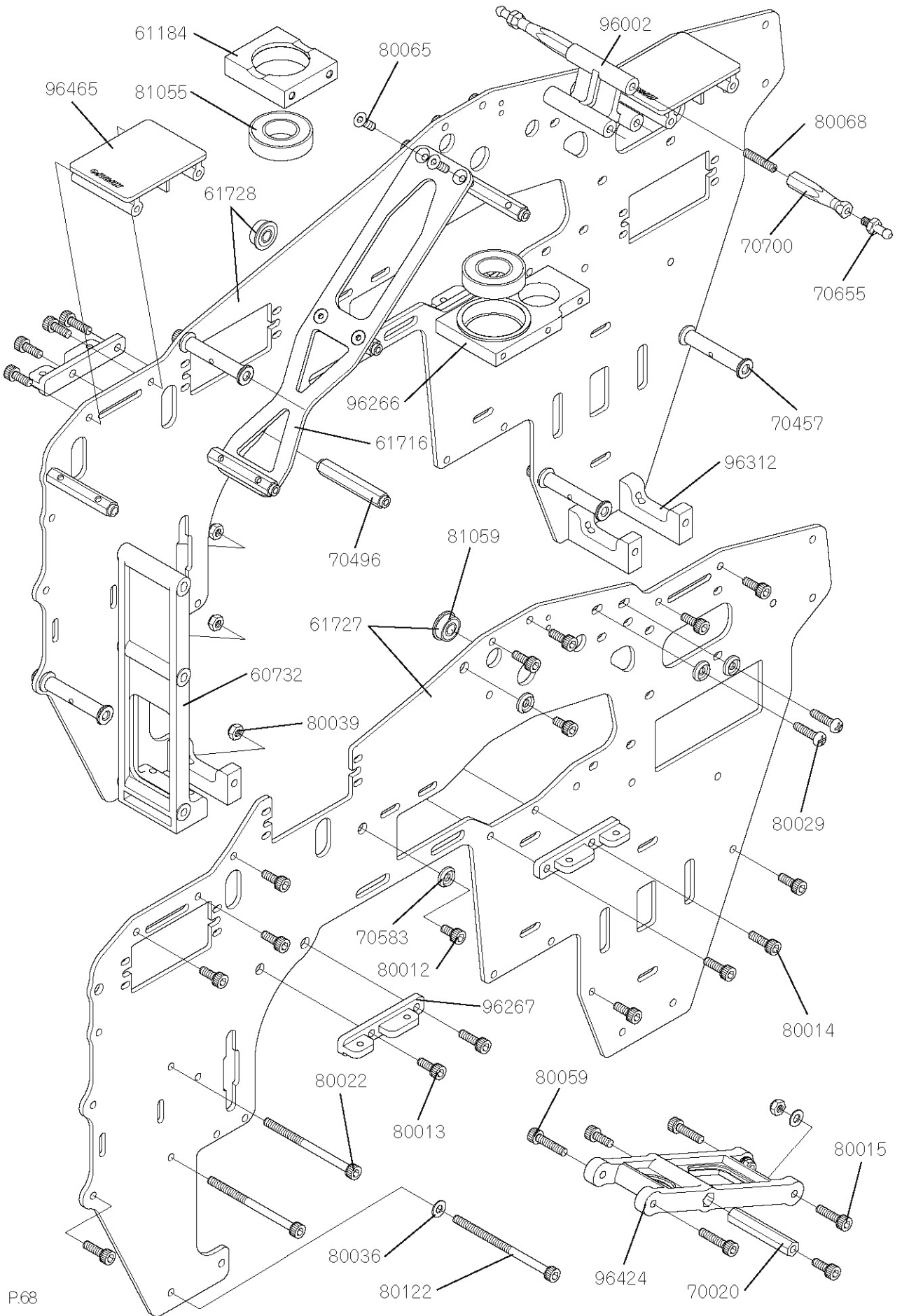
\*2 not including main blades or battery

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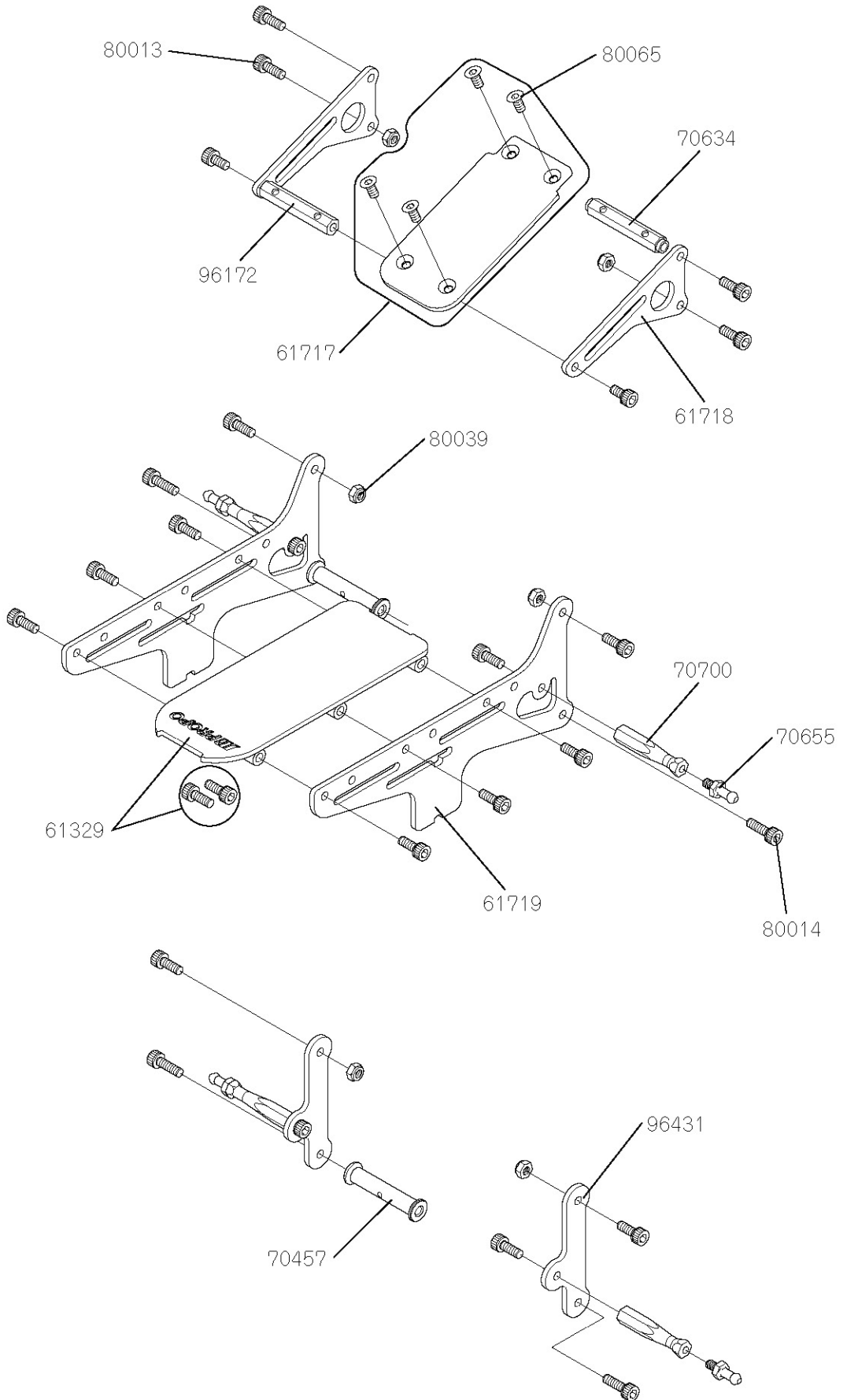
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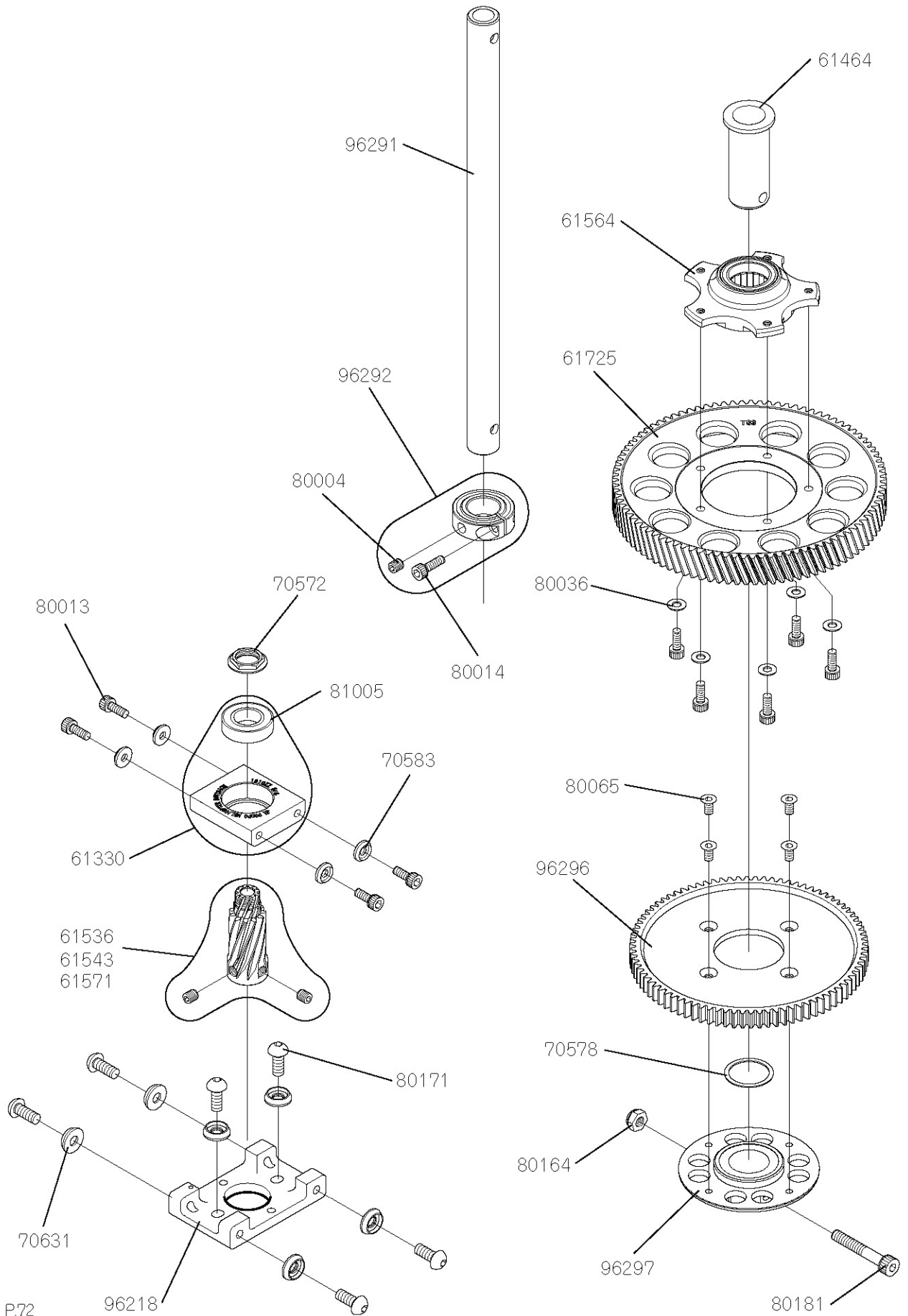
Item No.	Description	Qty	Note
61411	Head button	× 1	w/Socket head bolt M3 × 8
61454	Main blade holder assembly	× 1	L-1790ZZ already assembled
61494	Spindle shaft $\phi$ 10	× 1	w/Spindle shaft tube, Bolt, Washer
61605	FBL Washout arm assembly	× 2	Red L-730ZZ already assembled
61608	FBL Pitch jig set	× 1	One set
61609	FBL Pitch arm (90)	× 1	w/Socket head bolt M3 × 6, M3 × 12
70004	Universal link	× 10	
70069	Main blade bolt M5	× 2	M5 × 30 w/Nylon lock nut
70442	Thrust washer	× 2	
70443	Thrust bearing cap	× 2	
70576	Washer 3 × 4.5 × 1	× 2	
70590	Spindle shaft tube	× 1	
70591	Grip spacer set	× 2	w/Spindle shim washer
70620	Spindle shaft washer M6	× 2	
70648	Washout link C	× 2	w/Pin
70657	Washout link pin	× 2	
70694	Aluminum rotor spacer t3	× 4	
80001	Setscrew M3 × 4	× 10	
80012	Socket head bolt M3 × 6	× 10	
80013	Socket head bolt M3 × 8	× 10	
80015	Socket head bolt M3 × 12	× 10	
80031	Flat head screw M2 × 8	× 10	
80060	Socket head bolt M3 × 20	× 10	
80075	Nylon lock nut M5	× 10	
80115	Socket head bolt M2.6 × 8	× 10	
80164	Nylon lock nut M4 (t3.8)	× 10	
80181	Special socket head bolt M4 × 26	× 2	
80201	Button head bolt M4 × 8	× 10	
80213	Button head bolt M6 × 10	× 10	
80220	Threaded rod M2.3 × 85 ( $\phi$ 2.5)	× 2	
81016	E Stopper ring M1.5	× 10	
81023	Shielded bearing 9 × 17 × 5	× 2	L-1790ZZ
81024	Thrust bearing 9 × 17 × 5	× 1	SST-1790DSG
81041	Flanged bearing F 3 × 7 × 3	× 2	LF-730ZZ
96344	Damper rubber 90 (10 $\phi$ )	× 2	
96416	Flybarless center hub (90)	× 1	Bolts set
96452	Control ball L5.5	× 1	



Item No.	Description	Qty	Note
60732	Cross member B	× 1	
61184	Bearing block w/bearing	× 1	6901ZZ already assembled
61716	Carbon frame support plate	× 1	w/Bolt
61727	Carbon main frame L	× 1	w/LF-1040ZZ
61728	Carbon main frame R	× 1	w/LF-1040ZZ
70020	Cross member L32	× 2	HEX
70457	Cross member L32	× 2	
70496	Cross member w/step L32	× 2	
70583	Special washer M3	× 10	
70655	Body catch head L2	× 2	
70700	Body catch L30	× 2	
80012	Socket head bolt M3 × 6	× 10	
80013	Socket head bolt M3 × 8	× 10	
80014	Socket head bolt M3 × 10	× 10	
80015	Socket head bolt M3 × 12	× 10	
80022	Socket head bolt M3 × 40	× 10	
80029	Self tapping screw M3 × 12	× 10	
80036	Flat washer M3	× 10	
80039	Nylon lock nut M3 (t2.8)	× 10	
80059	Socket head bolt M3 × 14	× 10	
80065	Flat head bolt M3 × 6	× 10	
80068	Setscrew M3 × 15	× 10	
80122	Socket head bolt M3 × 50	× 10	
81055	Shielded bearing 12 × 24 × 6	× 1	6901ZZ
81059	Flanged bearing F4 × 10 × 4	× 2	LF-1040ZZ
96002	Cooling fan cover stay bracket	× 2	
96266	Bearing block MS lower w/bearing	× 1	
96267	Frame brace mount	× 2	
96312	Frame lower bracket	× 1	
96424	Frame support (E12)	× 1	
96465	Gyro mount	× 1	

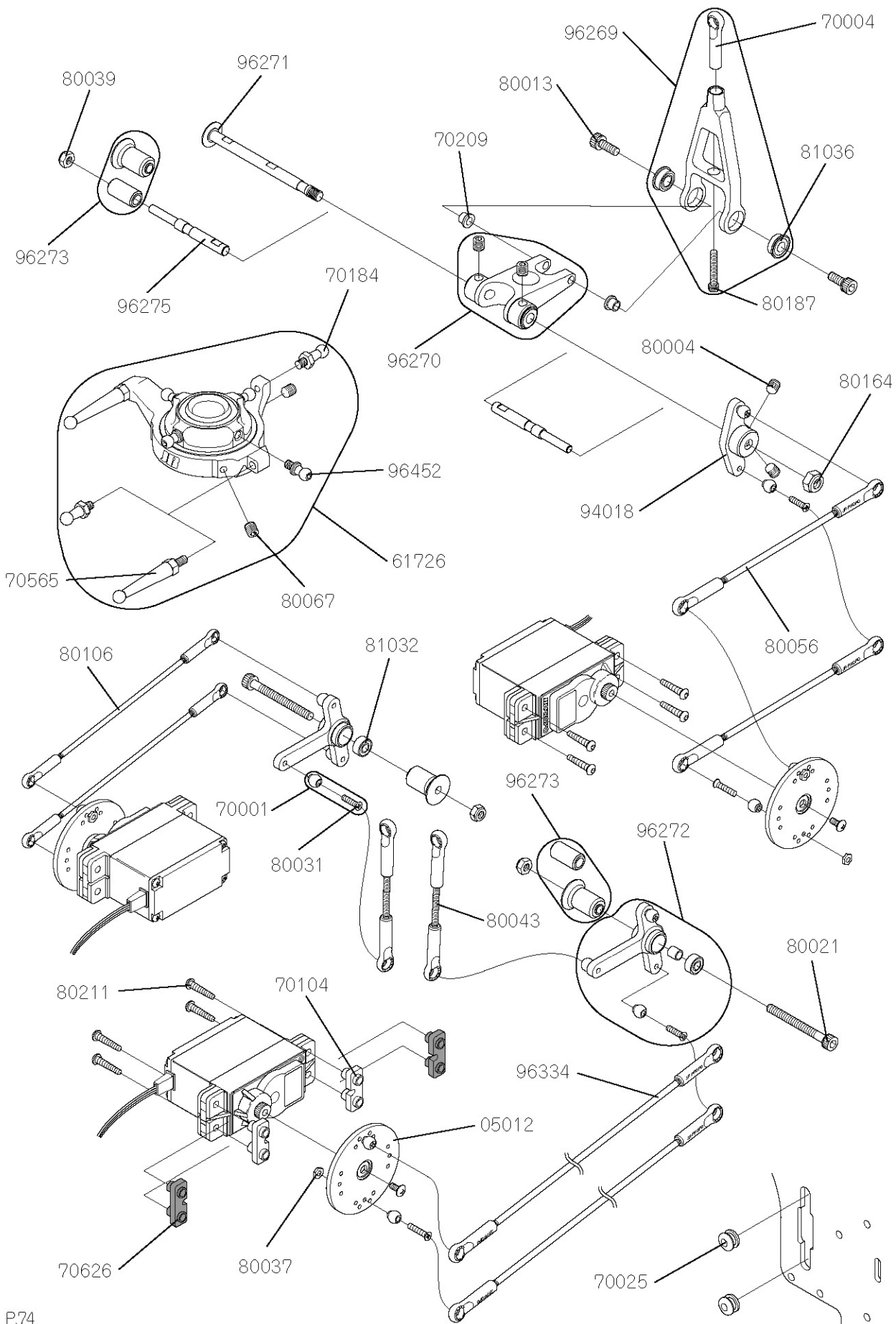


Item No.	Description	Qty	Note
61329	Front tray	× 1	w/Socket head bolt M3 × 8
61717	Carbon top tray	× 1	w/Flat head bolt M3 × 6
61718	Carbon top tray mount	× 2	
61719	Carbon front tray frame	× 2	
70457	Cross member L32	× 2	
70634	Cross member w/step L32P20	× 2	
70655	Body catch head L2	× 2	
70700	Body catch L30	× 2	
80013	Socket head bolt M3 × 8	× 10	
80014	Socket head bolt M3 × 10	× 10	
80039	Nylon lock nut M3 (t2.8)	× 10	
80065	Flat head bolt M3 × 6	× 10	
96172	Front bed mount	× 3	Cross member L36P20
96431	Body mount plate	× 2	

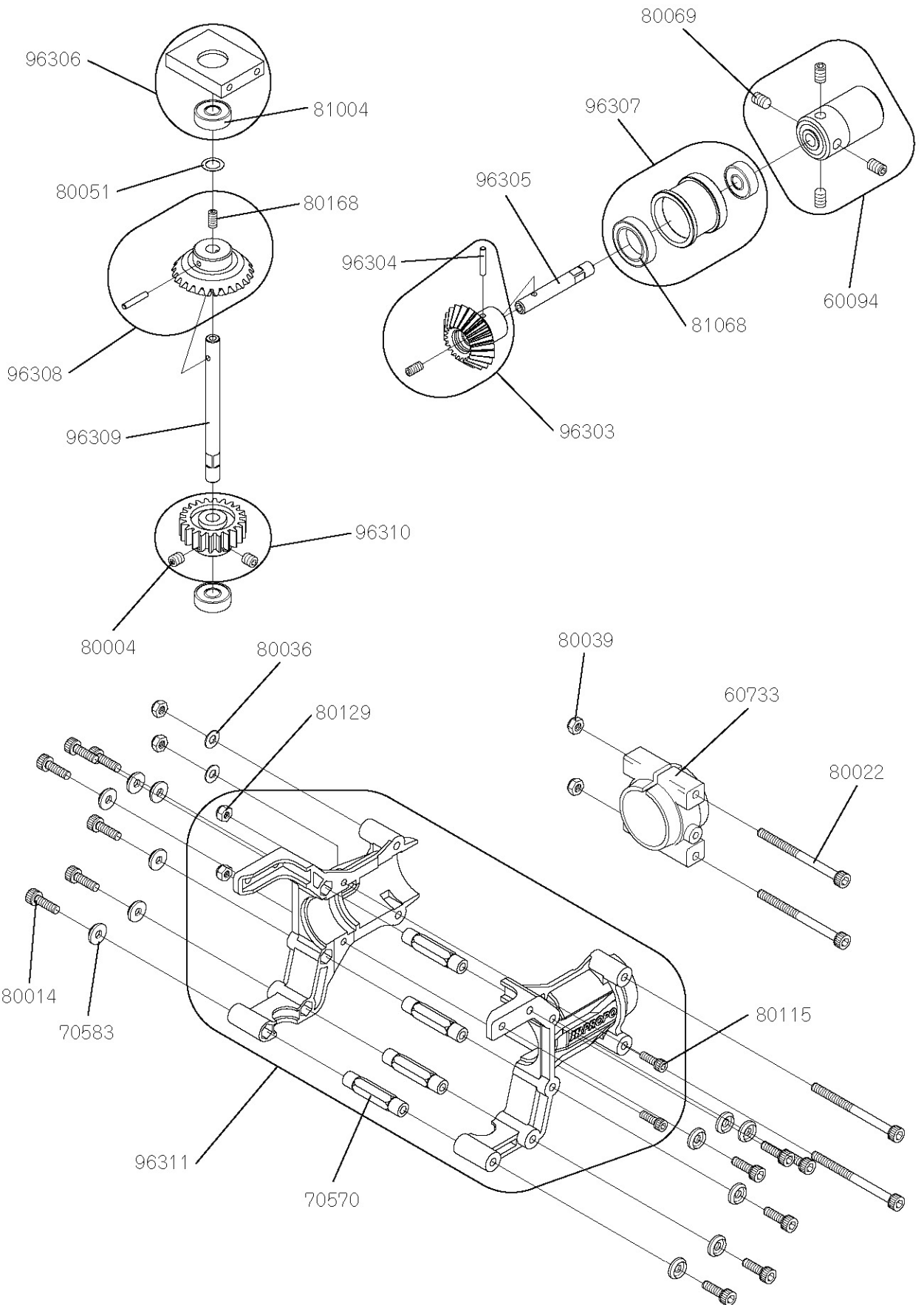




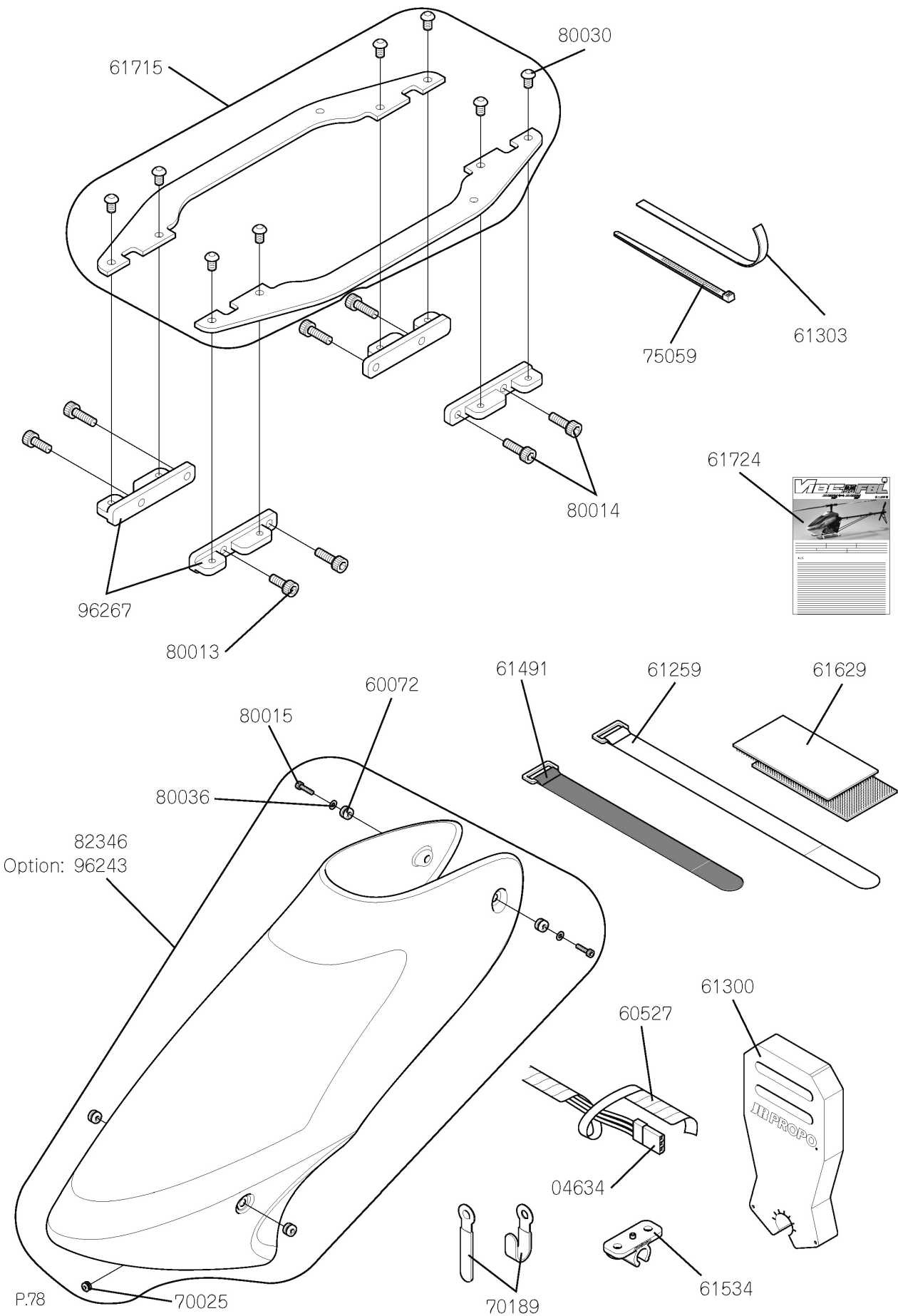
Item No.	Description	Qty	Note
61330	Bearing block w/bearing	× 1	L-1910ZZ already assembled
61464	Autorotation sleeve	× 1	
61536	Helical pinion gear T10	× 1	w/Setscrew M4 × 4
61543	Helical pinion gear T9	× 1	w/Setscrew M4 × 4
61564	Autorotation unit	× 1	Bearing already assembled w/Button head bolt
61571	Helical pinion gear T11	× 1	w/Setscrew M4 × 4
61725	Helical main gear T93	× 1	
70572	Pinion nut M9	× 1	
70583	Special washer M3	× 10	
70578	Washer 15 × 18 × 0.5	× 2	
70631	Special washer M4	× 10	
80004	Setscrew M4 × 4	× 10	
80013	Socket head bolt M3 × 8	× 10	
80014	Socket head bolt M3 × 10	× 10	
80036	Flat washer M3	× 10	
80065	Flat head bolt M3 × 6	× 10	
80171	Button head bolt M4 × 10	× 10	
80164	Nylon lock nut M4 (t3.8)	× 10	
80181	Special socket head bolt M4 × 26	× 2	
81005	Shielded bearing 10 × 19 × 7	× 2	L-1910ZZ
96218	Motor mount	× 1	
96291	Main shaft	× 1	
96292	Main shaft collar	× 1	w/Socket head bolt, Setscrew
96296	Tail drive gear T86	× 1	w/Flat head bolt
96297	Tail drive gear hub	× 1	



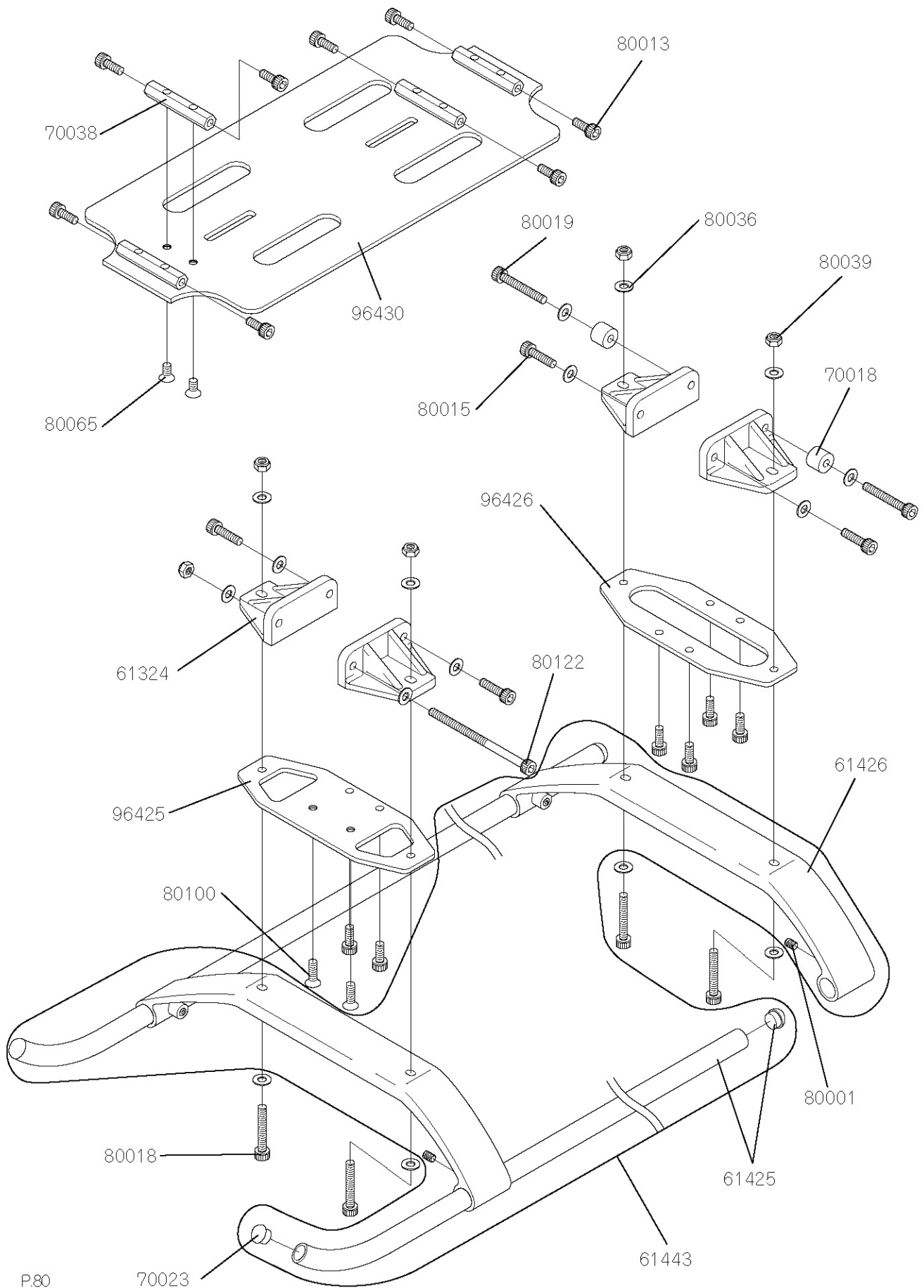
Item No.	Description	Qty	Note
05012	Big horn set	× 1	Please purchase to JR radio division
61726	SWASH PLATE 90 (V2)	× 1	One set
70001	Joint ball A	× 10	w/Flat head screw M2 × 8
70004	Universal link	× 10	
70025	Switch damper rubber	× 4	
70104	Servo mount plate B	× 10	
70184	Ball arm L9	× 1	
70209	Swash control arm brg collar	× 2	
70565	Ball arm L28.25	× 1	
70626	Servo mount plate C	× 10	
80004	Setscrew M4 × 4	× 10	
80013	Socket head bolt M3 × 8	× 10	
80021	Socket head bolt M3 × 30	× 10	
80031	Flat head screw M2 × 8	× 10	
80037	Nut M2	× 10	
80039	Nylon lock nut M3 (t2.8)	× 10	
80043	Threaded rod M2.3 × 35	× 2	
80056	Threaded rod M2.3 × 85	× 2	
80067	Setscrew M3 × 3	× 10	
80106	Threaded rod M2.3 × 100	× 2	
80211	HEX Tapping screw M2.6 × 12	× 10	silver
80164	Nylon lock nut M4 (t3.8)	× 10	
80187	Socket head bolt M2.3 × 15	× 5	
81032	Shielded bearing 3 × 7 × 3	× 2	L-730ZZ
81036	Flanged bearing F4 × 8 × 3	× 2	LF-840ZZ
94018	Elevator control arm	× 1	
96269	Swash control arm	× 1	
96270	Swash control base	× 1	w/Setscrew M4 × 4
96271	Base spindle shaft	× 1	
96272	T-Arm lever	× 1	
96273	CCPM Lever spacer set	× 1	
96275	120 CCPM Pivot pin	× 2	
96334	Elevator control rod M2.5 × 165	× 2	w/Universal link
96452	Control ball L5.5	× 1	



Item No.	Description	Qty	Note
60094	Tail drive joint F	× 1	w/Setscrew M4 × 6
60733	Tail boom holder	× 2	
70570	Cross member L28	× 2	
70583	Special washer M3	× 10	
80004	Setscrew M4 × 4	× 10	
80014	Socket head bolt M3 × 10	× 10	
80022	Socket head bolt M3 × 40	× 10	
80036	Flat washer M3	× 10	
80039	Nylon lock nut M3 (t2.8)	× 10	
80051	Poly slider 0.13	× 10	
80069	Setscrew M4 × 6	× 10	
80115	Socket head bolt M2.6 × 8	× 10	
80129	Nylon lock nut M2.6	× 10	
80168	Setscrew M3 × 6	× 10	
81004	Shielded bearing 5 × 13 × 4	× 2	R-1350ZZ
81068	Shielded bearing 12 × 18 × 4	× 1	6701ZZ
96303	Bevel gear T21	× 1	w/Setscrew M3 × 6, Pin
96304	Bevel gear pin	× 2	
96305	Bevel gear shaft	× 1	
96306	Tail pinion unit bearing block A	× 1	Bearing already assembled
96307	Tail pinion unit bearing block B	× 1	Bearing already assembled
96308	Bevel gear T25	× 1	w/Setscrew M3 × 6, Pin
96309	Tail pinion shaft	× 1	
96310	Tail pinion gear T22	× 1	w/Setscrew M4 × 4
96311	Tail pinion unit set	× 1	One set

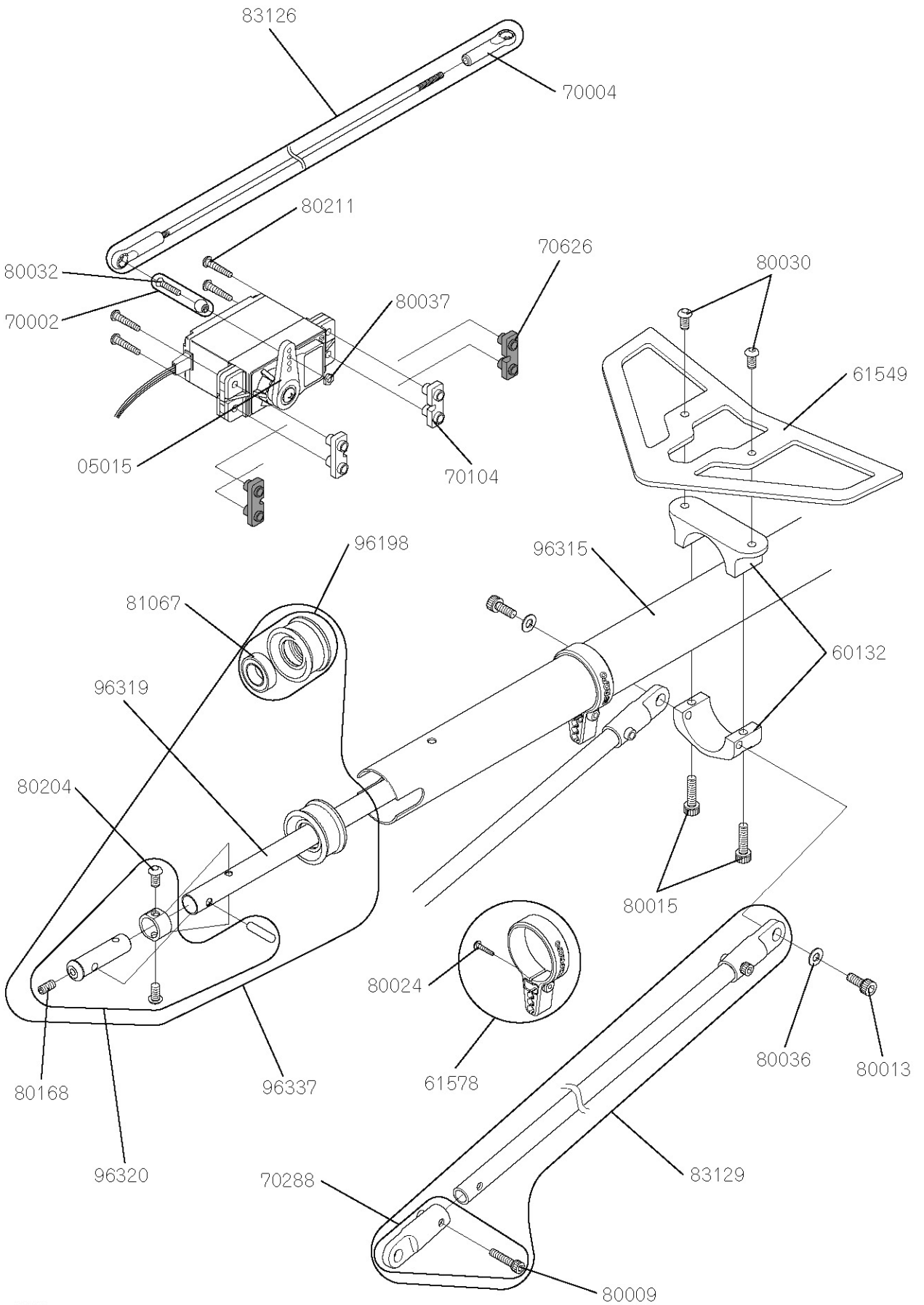


Item No.	Description	Qty	Note
04634	Lead harness 150LG	× 1	Please purchase to JR radio division
60072	Rubber grommet	× 4	
60527	Spiral tube (1m)	× 1	
61259	Hook and loop strap L	× 2	Red Length 270mm
61300	Blade holder	× 1	
61303	Hook and loop strap S	× 2	Red Length 200mm
61491	Hook and loop strap	× 2	Black Length 200mm
61534	Battery clamp	× 4	w/Flat head bolt, Nylon lock nut
61629	Hook and loop fastener L60	× 2	
61715	Carbon frame brace plate	× 2	w/Button head bolt M3 × 5
61724	Assembly manual	× 1	
70025	Switch damper rubber	× 4	
70189	Cord holder	× 10	w/Flat washer M3
75059	Nylon strap S	× 10	
80013	Socket head bolt M3 × 8	× 10	
80014	Socket head bolt M3 × 10	× 10	
80015	Socket head bolt M3 × 12	× 10	
80030	Button head bolt M3 × 5	× 10	
80036	Flat washer M3	× 10	
82346	FRP Body	× 1	Painted
96243	FRP Body	× 1	White (not included in this kit)
96267	Frame brace mount	× 2	

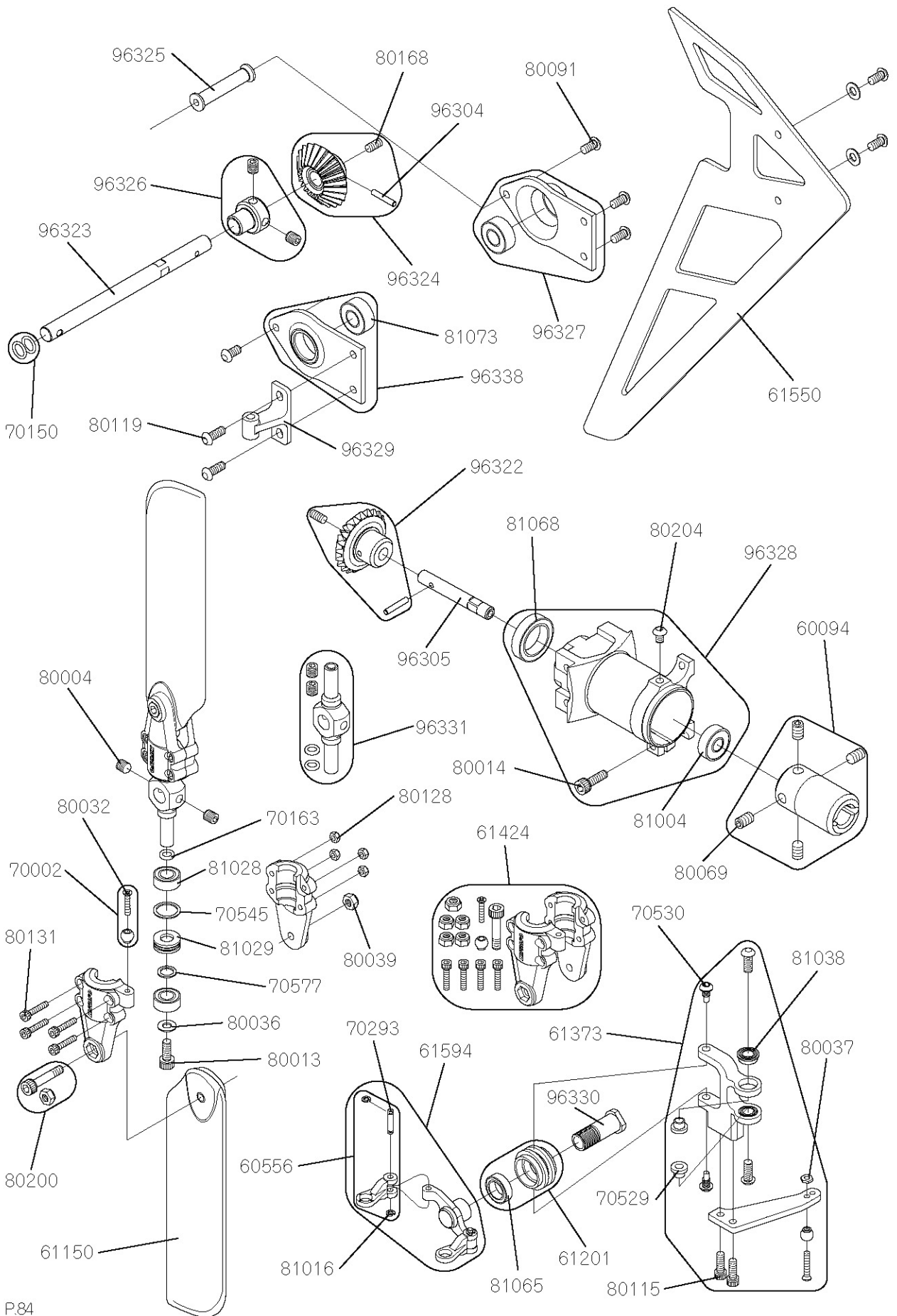




Item No.	Description	Qty	Note
61324	Landing strut adapter	× 4	
61425	Landing skid	× 2	Black w/skid cap
61426	Low profile landing strut Ver.2	× 2	w/Setscrew M4 × 4
61443	Low profile landing gear set Ver.2	× 1	
70018	Spacer B 3 × 8 × 6.5	× 2	
70023	Landing skid cap	× 4	
70038	Cross member L32-P14	× 2	
80001	Setscrew M3 × 4	× 10	
80013	Socket head bolt M3 × 8	× 10	
80015	Socket head bolt M3 × 12	× 10	
80018	Socket head bolt M3 × 18	× 10	
80019	Socket head bolt M3 × 22	× 10	
80036	Flat washer M3	× 10	
80039	Nylon lock nut M3 (t2.8)	× 10	
80065	Flat head bolt M3 × 6	× 10	
80100	Flat head bolt M3 × 10	× 5	
80122	Socket head bolt M3 × 50	× 10	
96425	Brace adapter plate F	× 1	
96426	Brace adapter plate R	× 1	
96430	Battery mount plate	× 1	



Item No.	Description	Qty	Note
05015	Super horn set	× 1	Please purchase to JR radio division
60132	Tail boom brace clamp	× 1	U, L
61549	Carbon hirizontal fin B	× 1	
61578	Tail rod guide D set	× 4	w/Self tapping screw M2 × 8
70002	Joint ball B	× 10	w/Flat head screw M2 × 10
70004	Universal link	× 10	
70104	Servo mount plate B	× 10	
70288	Tail boom brace end 60	× 4	w/Socket head bolt M2.6 × 12
70626	Servo mount plate C	× 10	
80009	Socket head bolt M2.6 × 12	× 10	
80013	Socket head bolt M3 × 8	× 10	
80015	Socket head bolt M3 × 12	× 10	
80024	Self tapping screw M2 × 8	× 10	
80030	Button head bolt M3 × 5	× 10	
80032	Flat head screw M2 × 10	× 10	
80036	Flat washer M3	× 10	
80037	Nut M2	× 10	
80168	Setscrew M3 × 6	× 10	
80204	Button head bolt M3 × 4	× 10	
80211	HEX Tapping screw M2.6 × 12	× 10	Silver
81067	Shielded bearing 8 × 14 × 4	× 2	L-1480ZZ
83126	Tail control rod L785	× 1	w/Universal link
83129	Carbon tail brace set L590	× 1	For 1 kit, w/Tail boom brace end
96198	Shaft drive guide	× 1	w/L-1480ZZ
96315	Tail boom L808	× 1	
96319	Tail drive shaft	× 1	
96320	Drive shaft insert set	× 2	w/Drive shaft collar
96337	Tail drive shaft set	× 1	



Item No.	Description	Qty	Note
60094	Tail drive joint F	× 1	w/Setscrew M4 × 6
60556	Tail PC link B	× 2	w/Link pin, E Stopper ring M1.5
61150	Carbon tail rotor blades L105	× 2	
61201	Tail slide ring	× 1	w/L-1170ZZ
61373	ASGTail pitch control lever set	× 1	One set
61424	Tail blade holder	× 1	For 1 kit
61550	Carbon vertical fin B	× 1	
61594	ASG Tail PC plate	× 1	w/PC Link
70002	Joint ball B	× 10	w/Flat head screw M2 × 10
70150	O Ring 5 × 7 × 1	× 2	
70163	O Ring 3.5 × 5.5 × 1	× 2	
70293	HG Tail PC link pin	× 2	
70529	Tail PC bearing collar	× 2	
70530	Tail PC slide bolt	× 2	
70545	Washer 8 × 10 × 0.5	× 2	
70577	Washer 5 × 7 × 0.5	× 2	
80004	Setscrew M4 × 4	× 10	
80013	Socket head bolt M3 × 8	× 10	
80014	Socket head bolt M3 × 10	× 10	
80032	Flat head screw M2 × 10	× 10	
80036	Flat washer M3	× 10	
80037	Nut M2	× 10	
80039	Nylon lock nut M3 (t2.8)	× 10	
80069	Setscrew M4 × 6	× 10	
80091	Button head bolt M3 × 6	× 10	
80115	Socket head bolt M2.6 × 8	× 10	
80119	Button head bolt M3 × 8	× 10	
80128	Nylon lock nut M2	× 10	
80131	Socket head bolt M2 × 10	× 10	
80168	Setscrew M3 × 6	× 10	
80200	Tail blade bolt set	× 2	w/M3 × 15, Nylon lock nut
80204	Button head bolt M3 × 4	× 10	
81004	Shielded bearing 5 × 13 × 4	× 2	R-1350ZZ
81016	E Stopper ring M1.5	× 10	
81028	Shielded bearing 5 × 10 × 4	× 2	L-1050ZZ
81029	Thrust bearing 5 × 10 × 4	× 2	T5-10
81038	Flanged bearing F 4 × 7 × 2.5	× 2	LF-740ZZ
81065	Shielded bearing 7 × 11 × 3	× 2	L-1170ZZ
81068	Shielded bearing 12 × 18 × 4	× 1	6701ZZ
81073	Shielded bearing 6 × 13 × 5	× 2	L-1360ZZ
96304	Bevel gear pin	× 2	
96305	Bevel gear shaft	× 1	
96323	Tail output shaft	× 1	
96324	Bevel gear T22(Output)	× 1	w/Setscrew M3 × 6, Pin
96325	Tail gear case cross member	× 1	
96326	Tail output shaft stopper	× 1	w/Setscrew M4 × 4
96327	Tail gear case plate L	× 1	686ZZ already assembled
96328	Tail gear case assembly	× 1	Bearing already assembled
96329	Tail gear lever bracket	× 1	
96322	Bevel gear T22(Input)	× 1	w/Setscrew M3 × 6, Pin
96330	Tail slide ring sleeve	× 1	
96331	Tail center hub	× 1	w/O Ring, Setscrew M4 × 4
96338	Tail gear case plate R	× 1	686ZZ Bearing already assembled

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The product and the contents of these instructions are subject to change without notice due to improvement.