

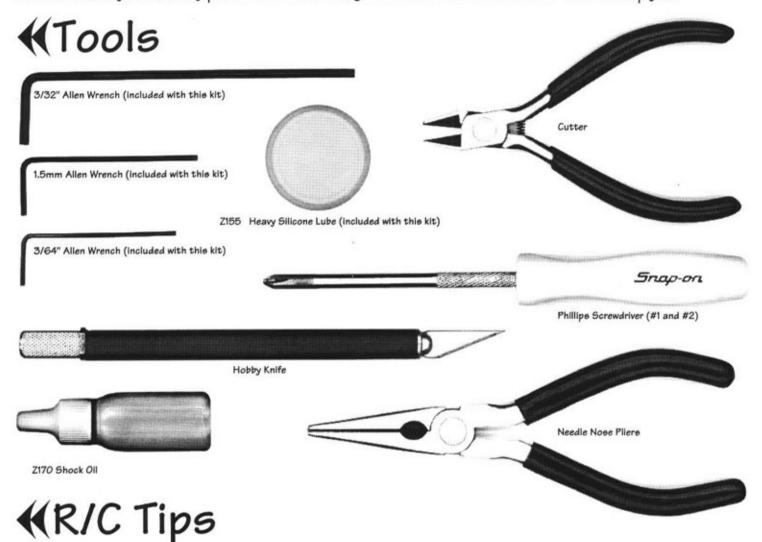
Instruction Manual



HPI JAPAN • 3-25-36 TAKAOKANISHI • HAMAMATSU-SHI, SHIZUOKA-KEN • 053-439-0833 • 053-439-0844 FAX HPI USA • 15321 BARRANCA PARKWAY • IRVINE, CALIFORNIA 92618 • (714) 753-1099 • (714) 753-1098 FAX



Thank you for selecting this HPI racing car! This kit is designed to be easy to build and uses top quality parts for durability and performance. The staff at HPI Racing tries hard to make everything easy to build and trouble-free. If you have any problem with this kit, give us a call and we will do our best to help you.



R/C cars are fun to drive, but be aware that driving them in the wrong places can cause serious damage. Never drive near real cars, animals, or people that are unaware that an R/C car is being driven.

When learning to drive, go to an area that has no obstacles that can damage your car if you have a crash. Stay away from curbs, parked cars, poles, etc. Always wear shoes when driving!

Important basics...

- · Build this kit in an area out of reach from children. Tools, parts, and liquids can be dangerous!
- Follow the operating instructions for the radio equipment at all times.
- Always turn on the transmitter before you turn on the car.
- Keep the wheels of the car off of the ground when checking the operation of the radio equipment.
- Always turn off the radio system and unplug the battery pack when not using the car.
- Follow the operating instructions for the Ni-Cd batteries and Ni-Cd battery charger at all times.
- Insulate any exposed electrical wiring with heat shrink tubing to prevent dangerous short-circuits.



KLET'S START!

OPEN BAG A, B, F, G



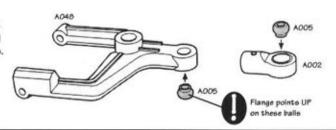
x 4

x 2



A005 Pivot Ball

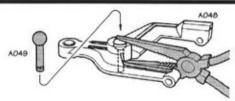
Use needle-nose pliers to press balls into both lower arms and both socket arms. The surface of the pliers should be flat to prevent damage to the balls. The flange of all of the balls should point toward the front axle.





A049 Joint Pin (B)

Use needle-nose pliers to press the joint pine into both lower arms.



AO47 Lower Arm Mount (R) A047 Lower Arm Mount (L) A048 Caster Block (L) A048 Caster Block (R) AO48 Rising Caster Block (L) x 1

A048 Rising Caster Block (R) x 1

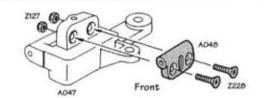
37.5mm x 2 A006 Pin 1/8" Shaft Z200 E Clip x 4 4-40 Z127 Lock Nut x 4 4-40 x 1/2" x 4 Z228 Flat Head Screw

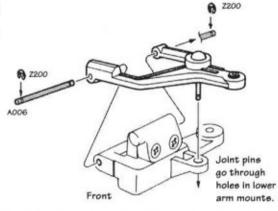
Front

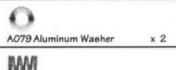


This kit is supplied with rising-rate and standard caster blocks. We recommend the standard block as a starting point. The rising-rate block is designed to provide more steering under hard cornering. Bolt the caster blocks to the lower arm mounts as shown.

Install lower arms to lower arm mounts with pine and secure with E clips.





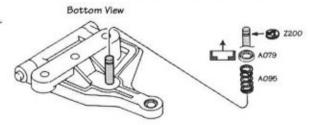


A095 Front Spring (0.65mm) x 2

Z200 E Clip x 2 Install washer, spring, and secure with E clip. Compress spring with needle nose pliers if E clip does not slide on easily.

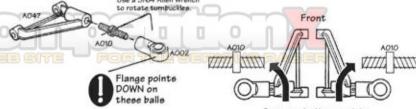
Optional springs available:

A096 0.70mm A097 0.75mm A050 0.80mm (kit)

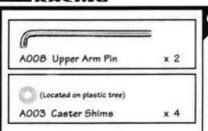


x 2 A047 Upper Arm

A010 Turnbuckle (A) x 2 Screw turnbuckles into both upper arms. The turnbuckles are not symmetrical, so install them as shown. Use a 3/64 Allen Wrench



Rotate turnbuckles toward the front of car for more camber.

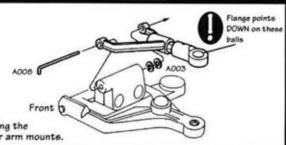


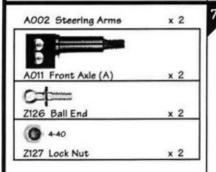
Connect upper arms to upper arm mount using upper arm pins.

Caster settings:

- 6° All shims toward rear of car
- 4" One shim on each side of Caster block
- 2° All shims toward front of car

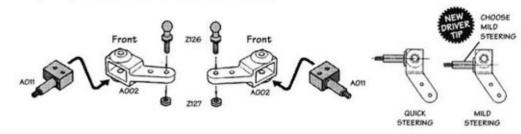
Additional caster positions can be obtained by using the included 2* front suspension shims under the lower arm mounts.

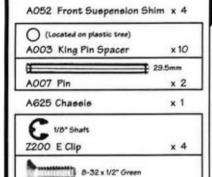




Press front axies into steering arms. Install ball ends and lock nuts as shown, balls must point up. A 3/16" socket or a Tamiya wrench will make installation easier.

Front



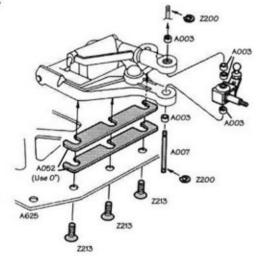


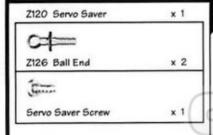
Z213 Flat Head Screw

x 6

Connect suspension to chassis. Suspension shims can be used to adjust ride height. We recommend two O° shims on each side.

Install king pins and steering arms as shown. Ball ends must point up and toward the back of the car. The king pin spacers can be rearranged to adjust ride height.



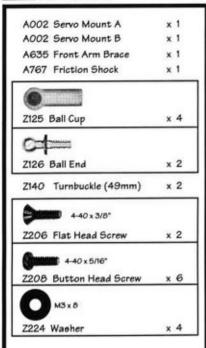


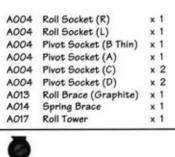
Choose the adaptor that fits your servo.

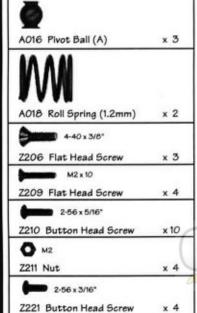


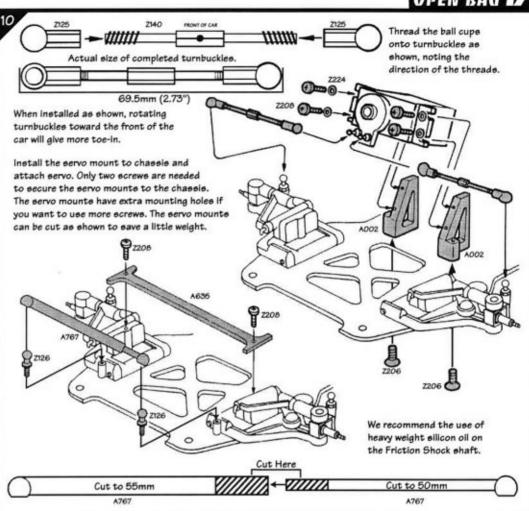


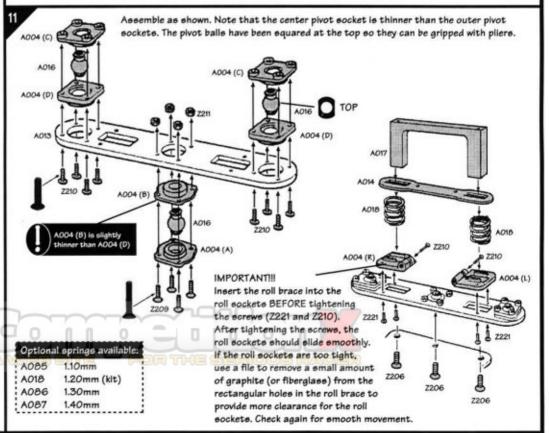
OPEN BAG D



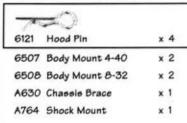


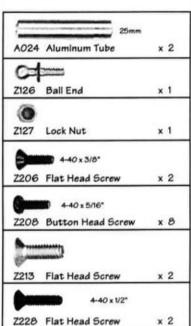












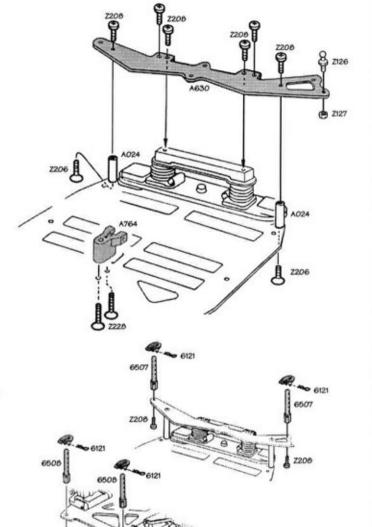
Assemble chassis brace as shown.

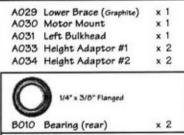
We have provided extra holes to position stick packs in two locations. We recommend starting with the pack in the back position. Moving the pack forward will provide more steering on high grip tracks.

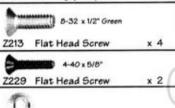
When using saddle pack batteries, remove the battery mount (A053). Use a file to round the sharp edges of the chassis slots to prevent damage to the batteries.

Road Star kite have an optional chaesie brace that can be used when saddle pack batteries are being used.

Attach body poets. There are extra holes to mount the body poets in different locations to fit a variety of bodies.







A035 Spacer (C) Aluminum Cone x 2

Assemble rear pod as shown. The ride height of the car can be adjusted using Height Adaptors #1 or #2.

When using the tires provided in this kit, Height Adaptor #1 should be used in the position shown.

Top

Attach rear pod to chassis as shown. A small drop of thread-lock will prevent the screws from vibrating loose.

BOIO

A033

A036

BOIO

A035

A036

A036

A036

A037

A038

A038

A038

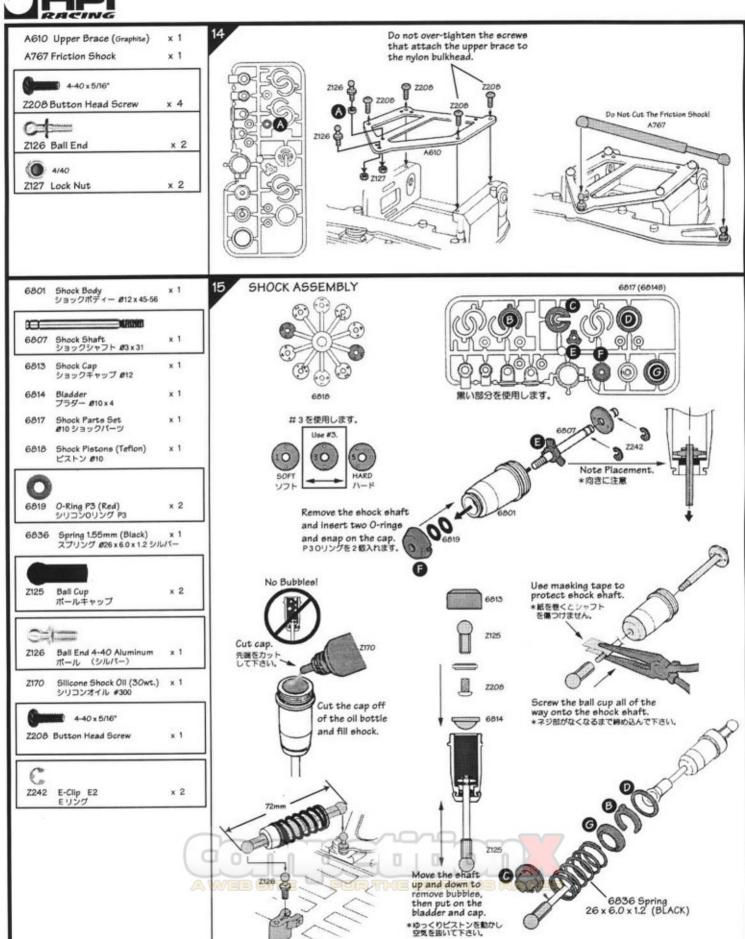
A039

A03

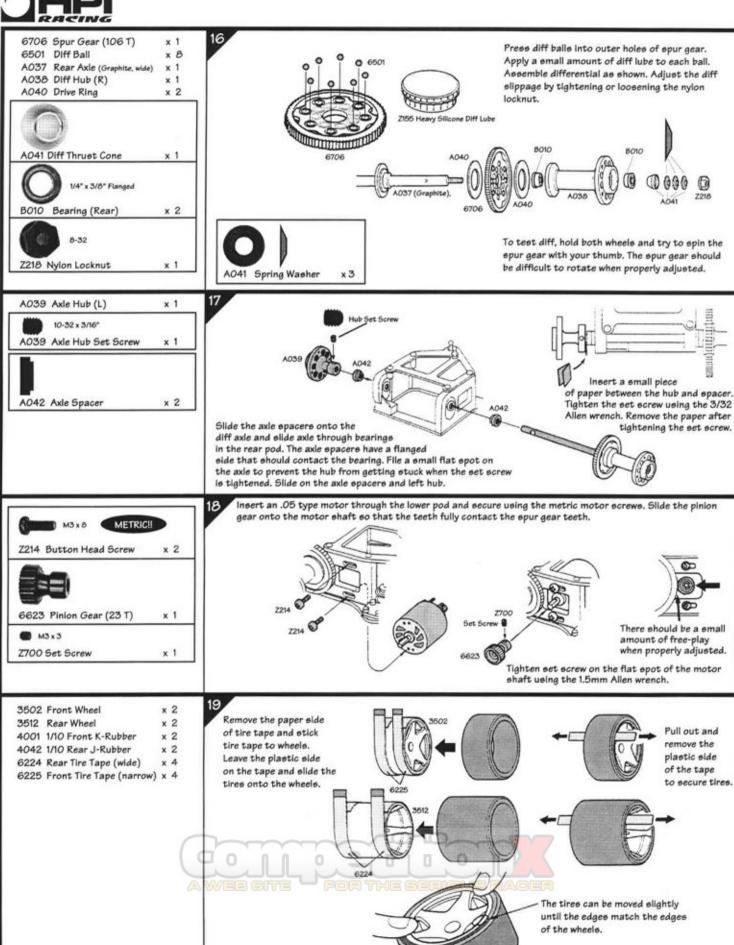
A Z213

B Z213













3/16" x 5/16" Flanged

B005 Bearing (Front)

x 4

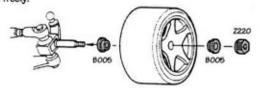


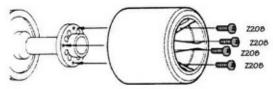
Z220 Nylon Locknut x 2

4-40 x 5/16*

Z208 Button Head Screw x 8

Press the bearings into the front wheels. Slide front wheels onto steering axles and tighten nut. The wheel should spin freely.





Press the rear wheels onto the rear hubs. Secure with wheel screws.

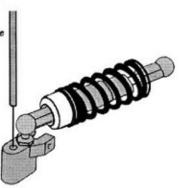
Z150 Antenna Tube

x 1

Z150 Antenna Tube Cap

21

Press antenna tube into the antenna mount. Slide receiver antenna through tube and secure with antenna tub cap.

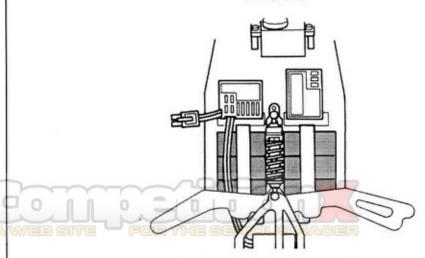




22

Install batteries as shown.





Don't forget to file the sharp edges of the chassis to prevent damage to the batteries.

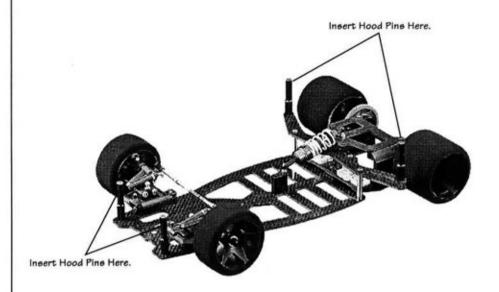




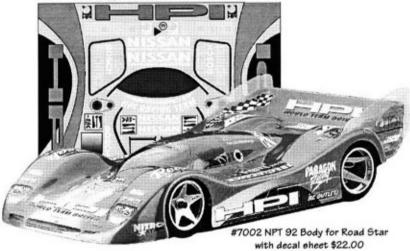
6122 Hood Pin

x 4

Use the adjustable body mount to adjust the height of the body. Body not included. We recommend our HPI #7002 NPT '92 body that is designed to fit perfectly on this chassis.



All Bodies include a FREE decal sheet.







RACING TIPS

This HPI car has several ways to adjust the handling of the car for maximum performance. The following information will help you tune the car to the track conditions. The best way to learn how to adjust the car is to practice and test as much as possible!

SLIPPERY TRACK CONDITIONS

- Adjust front suspension to 6° castor position, see diagram below and page 4.
- . Set the front axle to "Mild Steering" position, see page 4.
- . Use a mild motor, large pinion gear, and an ESC with a current limiter set for smooth throttle response.
- · Check turning radius in both directions, adjust steering radius to smallest amount that allows you to steer around sharpest corner.
- . Try a harder front tire compound. Use tire traction sauce on rear tires. Make sure rear tires are in good condition.
- · Make oure car is "tweeked" flat, see diagram below.

BUMPY TRACK CONDITIONS (Use the same settings as for slippery conditions, plus the following settings)

- · Adjust ride height for more ground clearance to prevent chassis from "bottoming out" over bumps, see page 4 and 6.
- · Use very light silicone lube on the dampener washers, see page 7.

VERY HIGH GRIP TRACK CONDITIONS

- Adjust front suspension to 2° castor position, see diagram below and page 4.
- . Set the front axle to "Quick Steering" position, see page 4.
- · Use extra amount of silicone lube or heavier silicone lube on dampener washers, see page 7.
- · Lower the chassis by using small tires front and rear, or adjusting the front kingpin spacers and rear height adaptors.

TUNING THE FRONT SUSPENSION

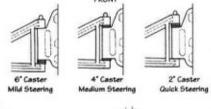
This HPI car has a unique double-wishbone front suspension that allows you to make adjustments that will help the car perform better.

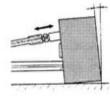
CASTER

The caster of the suspension can be adjusted using the supplied caster shims. The goal of adjusting the caster is to make the car easy to drive. When built with both shims toward the rear of the car, the steering will be mild and the car will return to a very stable straight line. When built with both shims toward the front of the car, the steering will be more sensitive to small steering movements.

CAMBER

The camber of the suspension can be adjusted by rotating the turnbuckles. The goal of adjusting ethe camber is to adjust the suspension to provide even wear across the entire front tire. The Mild turnbuckles have asymmetrical threads that allow you to make easy changes to the settings without removing any components. When built as described in Step 5, rotating the turnbuckles toward the front of the car will give more camber. Since foam tires have a small amount of deflection during hard cornering, we recommend a small amount of negative camber for proper tire wear. If more negative camber is needed to make the tires wear flat, rotate the turnbuckles a small amount toward the front of the car.





A small amount of negative camber is recommended to allow for tire deflection during heavy cornering.

TUNING THE REAR SUSPENSION

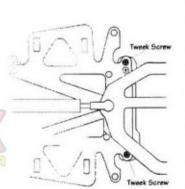
This HPI car features a Triple-Pivot rear suspension that allows you to make adjustments that will help the car perform better.

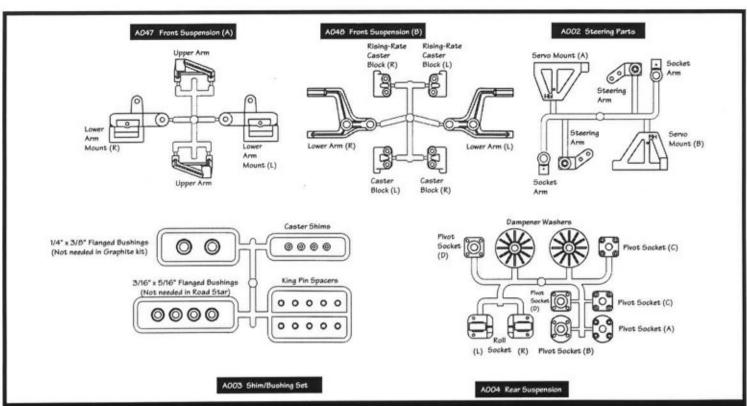
TWEEKING THE CAR FLAT

The "tweek" of the car can be adjusted. The goal of adjusting the tweek is to provide equal weight on the rear tires so that the car corners equally when turned to the left and right. To test the tweek of the rear tires, place the car on a flat surface and use a small screwdriver to lift the center of the lower brace. When the tires lift off the ground, they should both lift at the same time. If one tire lifts later than the other, then that tire has more weight being applied to it, making the car unbalanced. Use the tweek screws to adjust the pressure applied to the spring brace until both rear tires lift at the same time. Rotating the tweek screw in the clockwise direction makes that tire heavier.

ADJUSTING THE RIDE HEIGHT OF THE CHASSIS

The shock can be used to adjust the ride height of the chassis. The goal of adjusting the ride height is to make the chassis flat from the front of the car to the rear of the car. To check the ride height, place the car (with battery, radio, and motor installed) on a flat surface. Shim the shock using the spacers from Part #6817.





HPI RACING PARTS

Part #	ary	Name	Retail Price	Part #	QTY	Name Re	tall Price
3502	2	1/10 STAR ON ROAD RIMS BLACK (F)	\$6.00	A041	1	DIFF, CONE SET	\$2.00
3512	2	1/10 STAR ON ROAD RIMS BLACK (R)	6.00	A042	4	AXLE SPACER	5.00
5103	2	GREEN TRUED DONUT (F)	8.50	A046	4	O-RING P3 BLACK	1.00
5113	2	GREEN TRUED DONUT (R)	9.00	A047	1	FRONT SUSPENSION (A)	5.00
6075	6	WASHER (COUNTERSUNK ALUMINUM)	4.00	A048	1	FRONT SUSPENSION (B)	5.00
6122	10	BODY PIN (M)	2.00	A049	2	JOINT PIN (B)	4.50
6151	1	SILICONE OIL #500	4.00	A050	2	FRONT SPRING O.80mm	3.00
6160	6	REAR AXLE SPACER SET (ALUMINUM)	7.50	A052	4	FRONT SUSPENSION SHIM (0°,2°)	1.50
6163	1	SERVO TAPE	4.00	A054	2	ALUMINUM TUBE 12.5mm	3.00
6224	8	TIRE TAPE WIDE	6.25	A055	1	SHOCK MOUNT W/SPACER	1.50
6225	8	TIRE TAPE NARROW	4.50	A067	4	AXLE SPACER 5mm	6.00
6501	8	DIFF. BALLS 1/8"	2.00	A071	2	TURNBUCKLE 61mm	7.00
6507	2	BODY MOUNT 4-40	3.50	A073	2	ALUMINUM TUBE 8mm	2.00
6508	2	BODY MOUNT 8-32	3.50	A085	2	ROLL SPRING 1.1mm	2.00
6625	1	PINION GEAR 25 TOOTH (64 PITCH)	5.99	A086	2	ROLL SPRING 1.3mm	2.00
6694	1	SPUR GEAR 94 TOOTH (64 PITCH) (W/BALLS)	4.99	A087	2	ROLL SPRING 1.4mm	2.00
6805	1	SHOCK BODY 12 x 45-56mm	9.80	A095	2	FRONT SPRING 0.65mm (Pink)	2.00
6807	1	SHOCK SHAFT 3 x 31mm	3.00	A096	2	FRONT SPRING 0.70mm (Green)	2.00
	1	SHOCK CAP 12mm (GREY ANODIZED)	3.50	A097	2	FRONT SPRING 0.75mm (Blue)	2.00
6813	2	BLADDER 10 x 4mm	2.00	A111	2	SUPER SHOCK SET 45-56	32.00
6814	1	10mm SHOCK PARTS SET	4.50	A610	1	RS10G & 10GW REAR UPPER BRACE (Woven Graphite)	15.00
6817	1	10mm PISTONS TEFLON SET	4.00	A625	1	RS10GW MAIN CHASSIS (Woven Graphite)	60.00
6818	5	SILICONE O-RING P-3 (RED)	1.50	A630	1	RS10GW CHASSIS BRACE (Woven Graphite)	12.00
6819	1	NPT' 92 Body for R510GW	22.00	A635	1	RS10GW FRONT ARM BRACE (Woven Graphite)	9.00
7002	1	STEERING PARTS SET	6.00	A767	1	FRICTION SHOCK SET	5.00
A002	1	SHIM/BUSHING PARTS SET	6.50	8005	2	BEARING 3/16" x 5/16" FLANGED	13.00
A003		REAR SUSPENSION PARTS SET	6.50	B010	2	BEARING 1/4" x 3/8" FLANGED	14.00
A004	1	PIVOT BALL SET	6.00	Z120	1	SERVO SAVER SET (WITH SCREW)	5.50
A005	5		5.00	Z125	14	BALL CUP	5.00
A006	2	PIN 37.5mm	5.00	Z126	4	4-40 BALL END	5.00
A007	2	KING PIN 29.5mm	3.50	Z127	4	4-40 LOCK NUT	2.50
A008	2	PIN 2 x 31mm	5.00	Z140	2	TURNBUCKLE (B)	7.00
A010	2	TURNBUCKLE (A) 16mm	24.00	Z150	1	ANTENNA PIPE SET	1.00
A011	2	FRONT AXLE (A)	12.00	Z155	1	DIFF, LUBE	2.00
A013	1	ROLL BRACE (GRAPHITE)	4.00	Z200	10	E-CLIP 1/8"	1.00
A014	1	SPRING BRACE	1.50	Z206	4	4-40 x 3/8" FLAT HEAD SCREW	1.00
A015	1	ALUMINUM TUBE 18.5mm	5.00	Z207	6	4-40 x 5/16" BUTTON HEAD SCREW	2.00
A016	3	PIVOT BALL (A)		Z208	4	4-40 x 5/16" BUTTON HEAD SCREW	1.00
AO17	1	ROLL TOWER	18.00	Z209	8	M2 x 10 FLAT HEAD SCREW	2.00
A018	2	ROLL SPRING (A)(1.20mm)	5.00	Z210	10	2-56 x 5/16" BUTTON HEAD SCREW	2.00
A024	3	ALUMINUM TUBE 25mm	19.00	Z210 Z211	- 8	M2 NUT	2.00
A029	1	LOWER POD BRACE (GRAPHITE)	25.00	Z213	0 8	8-32 x 1/2" FLAT HEAD SCREW (GREEN)	1.50
A030	1	MOTOR MOUNT (RIGHT)		Z213	4	M3 x 8 BUTTON HEAD SCREW	1.00
A031	1	BULKHEAD (LEFT)	2.50	Z214 Z218	4	8-32 NYLON NUT	1.50
A033	2	HEIGHT ADAPTOR #1 (A)	the second by the	Z210 Z220	6	5-40 NYLON NUT	1.50
A034	2	HEIGHT ADAPTOR #2	1.00		10	2-56 x 3/16" BUTTON HEAD SCREW	2.00
A035	2	SPACER (C) ALUMINUM CONE	2.50	Z221	100		2.00
A037	1	REAR AXLE (GRAPHITE)	22.50	Z224	6	WASHER M3 x 8 4-40 x 1/2" FLAT HEAD SCREW	2.00
A038	1	DIFF. HUB (RIGHT)	15.00	Z228	6		2.00
A039	1	HUB (LEFT) (WITH SCREW)	15.00	Z230	6	4-40 x 3/4" FLAT HEAD SCREW	1.50
A040	2	DRIVE RING	1.50	Z900	1	ALLEN WRENCH SET (3/64", 1.5mm, 3/32")	1.50

