

**PRO** 1  
*Racing*



**SP1 2006, THE ULTIMATE 1/4 SCALE SPRINT CAR**



## Dear Customer

Enclosed you will find several data sheets and illustrations for the 2006 SP1 Sprint Car. All this data is based on what our factory engineers and drivers have developed in design and testing.

The SP1 ¼scale Sprint Car is a precision built machine. For it to operate properly the following must be adhered to:

- Keep the car clean
- Rebuild shocks every 3 to 4 races
- Always check the suspension for free movement, replace damaged components.
- Make sure servos and servo savers are functioning properly. Never bottom out servos at end points.
- Tire maintenance is very important, all ways check for proper wear and loose Bands.
- Use a quality fuel such as VP16 and keep the air filter clean.
- Do not over tighten the drive belt, make sure it has about ¼" deflection at the center of the belt.
- Have a check list that you can go by every time you put your SP1 on the track

Sincerely

Pro1 Racing  
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**SPRING COLOR CODE**  
**AND RATES**

<b><u>COLOR</u></b>	<b><u>RATE (in /lb)</u></b>
ORANGE	7
YELLOW	10
WHITE	14
SILVER	18
GREEN	20
BLUE	22
RED	31
BLACK	38



## **BASIC SETUP**

Front Tow: 1/8" tow out

Front Caster, left: 2 to 3 degrees positive

Front Caster, right: 3 to 5 degrees positive

Front Camber, left: negative 1 ½ degrees

Front Camber, right: positive 1 ½ degrees

### **Shocks**

Front left – red spring, 25w silicone shock oil

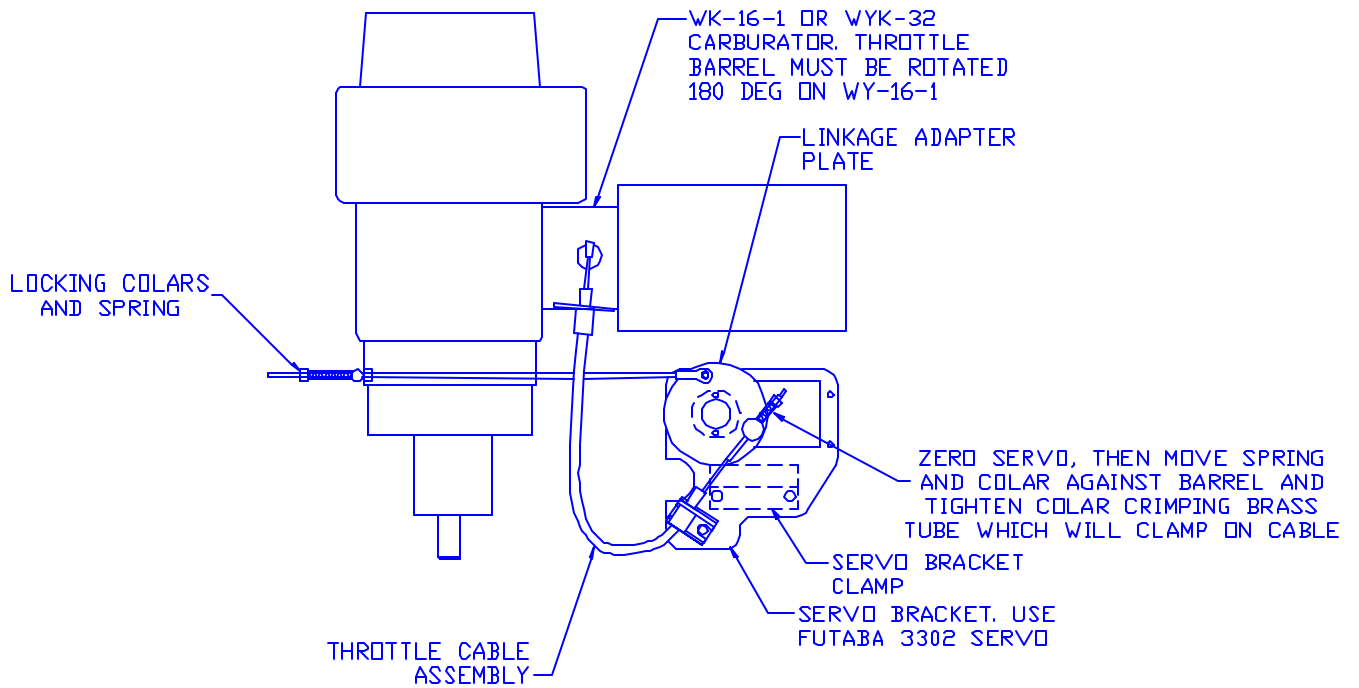
Front right – blue spring, 25w silicone shock oil

Rear left – white spring, 15w silicone shock oil

Rear right – red spring, 20w silicone shock oil



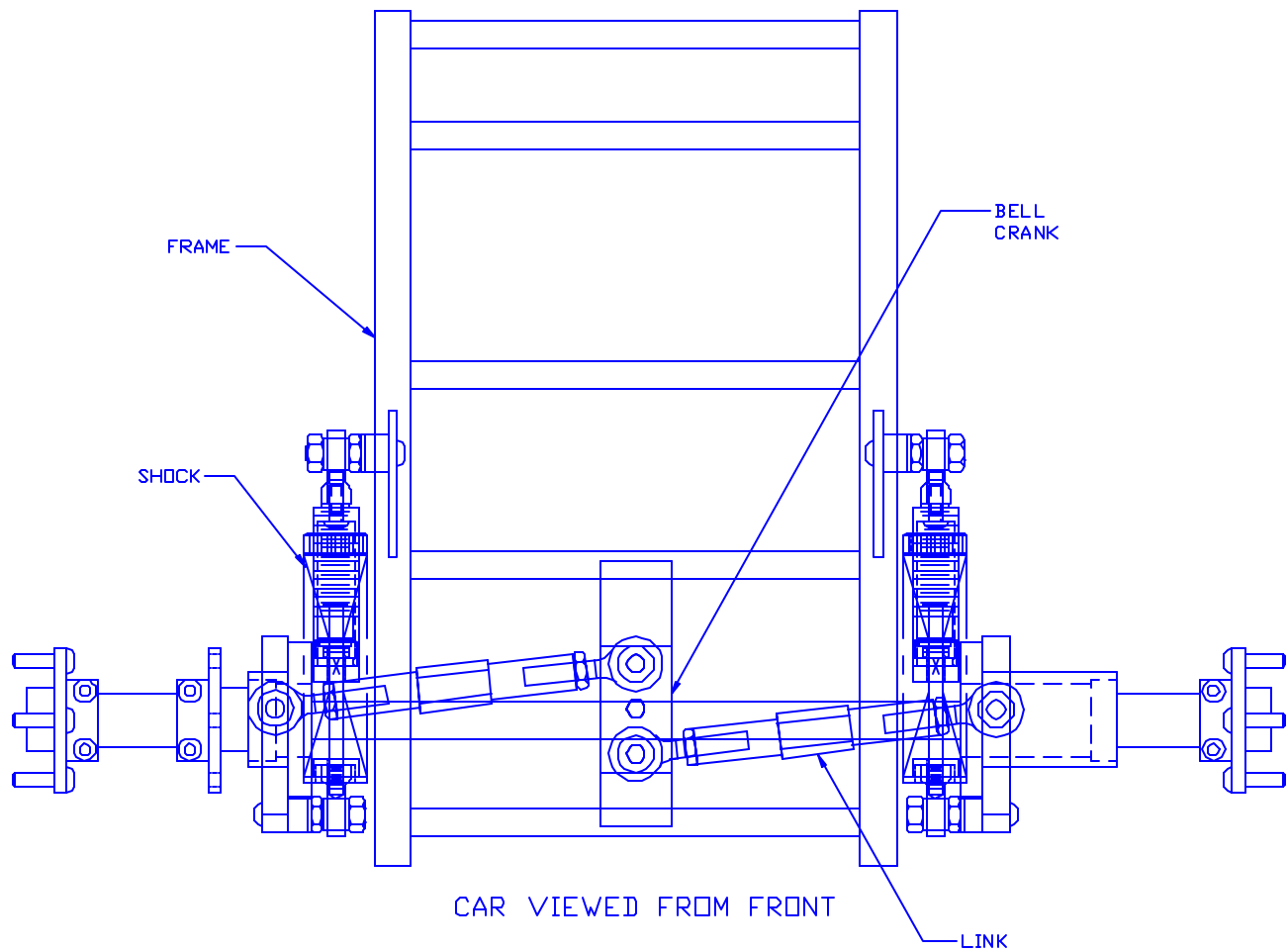
## THROTTLE LINKAGE AND CLUTCH HOUSING DIAGRAM



THE WYK-32 CAN BE USED WITH THIS DESIGN. USE A FUTABA 3302 SERVO.



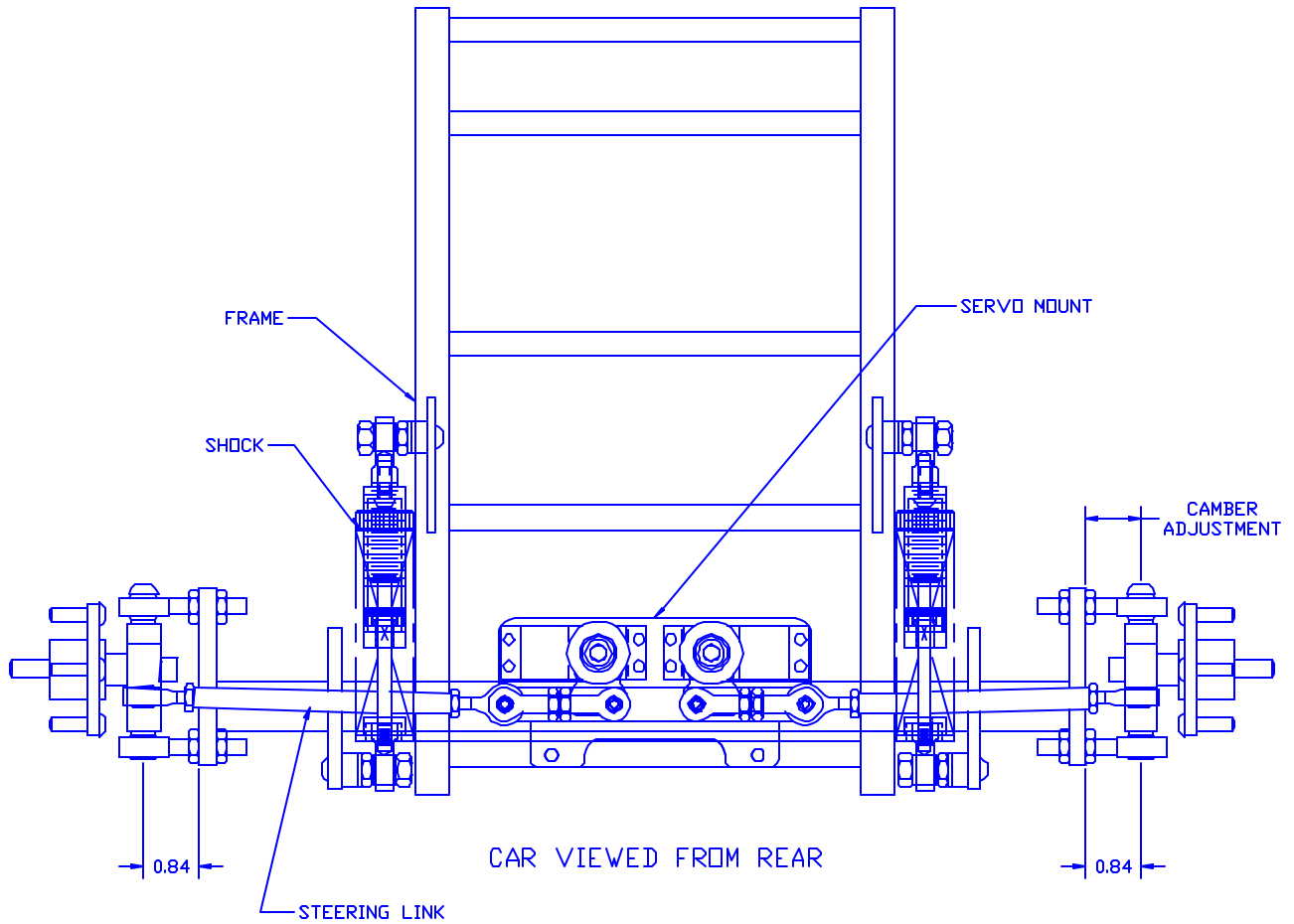
## REAR SUSPENSION REFERENCE



WATTS LINKAGE REAR GEOMETRY. THE LINKAGE PIVOT POINTS ARE ON THE BELL CRANK AND TRAILING LINKS. TO ADJUST THE LINKAGE SYSTEM LOOSEN THE JAM NUTS ON THE LINKS AND TURN UNTIL THE BELL CRANK IS STRAIGHT UP AND DOWN.



## FRONT SUSPENSION REFERENCE

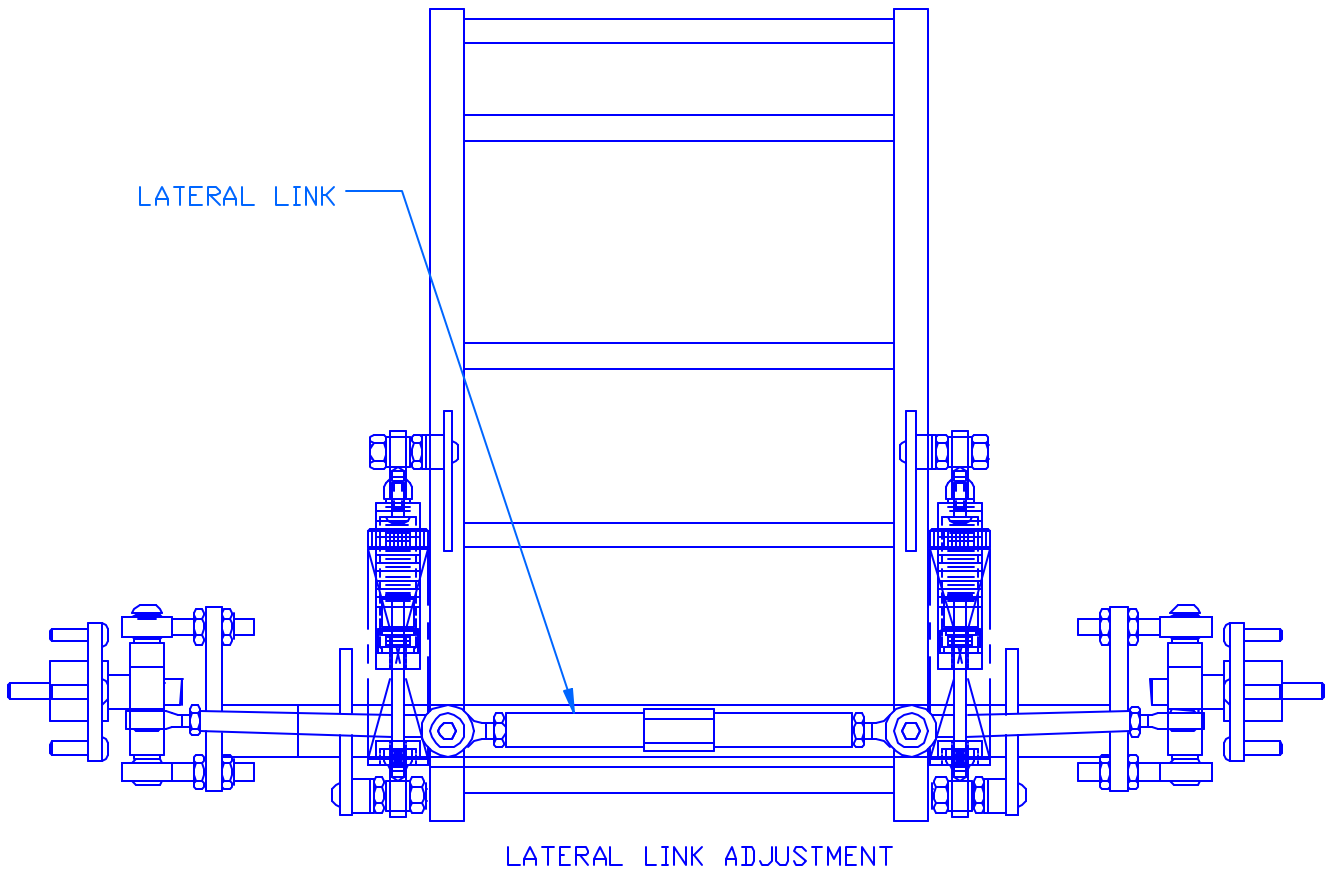


THE .84 DIMENSIONS IS FIXED AND SHOULD NOT BE CHANGED. THE UPPER ROD ENDS ARE FOR CAMBER AND CASTOR ADJUSTMENTS.





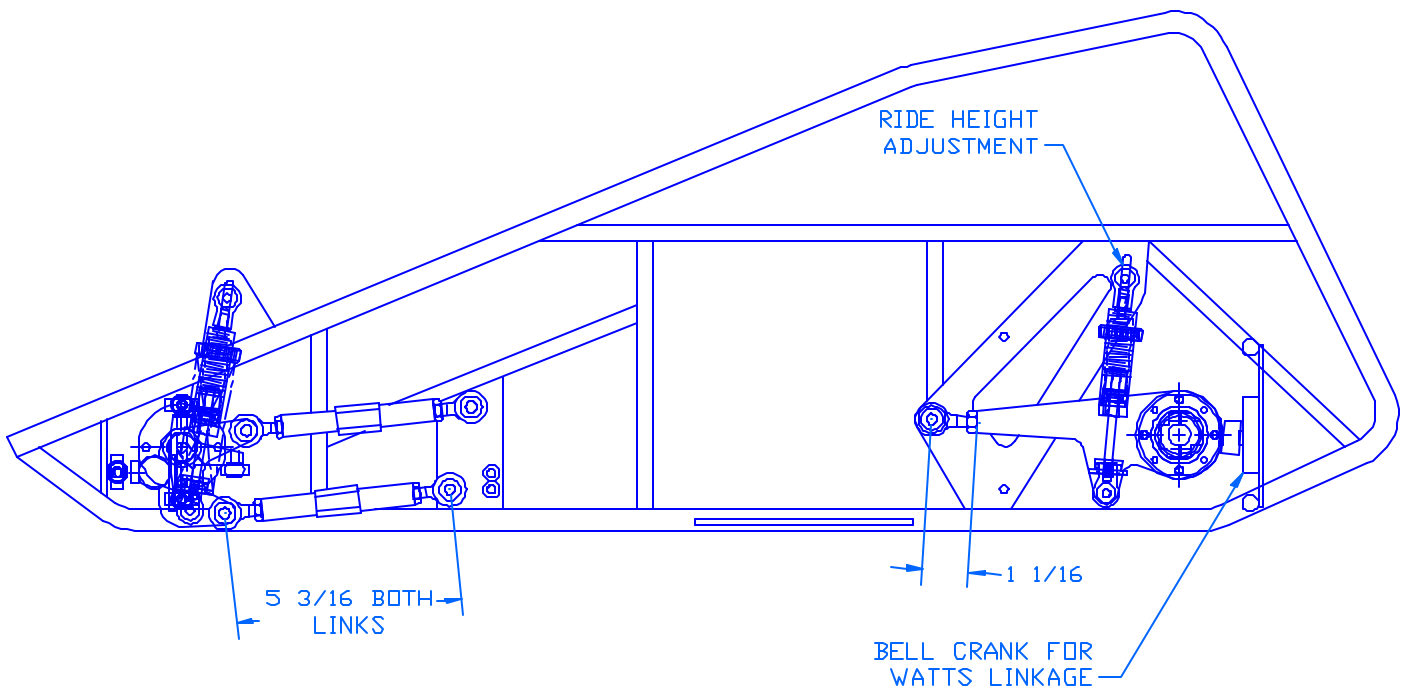
## LATERAL LINK ADJUSTMENT



ADJUST THE LATERAL LINK UNTIL THE AXEL IS CENTERED. TIGHTEN THE JAM NUTS.



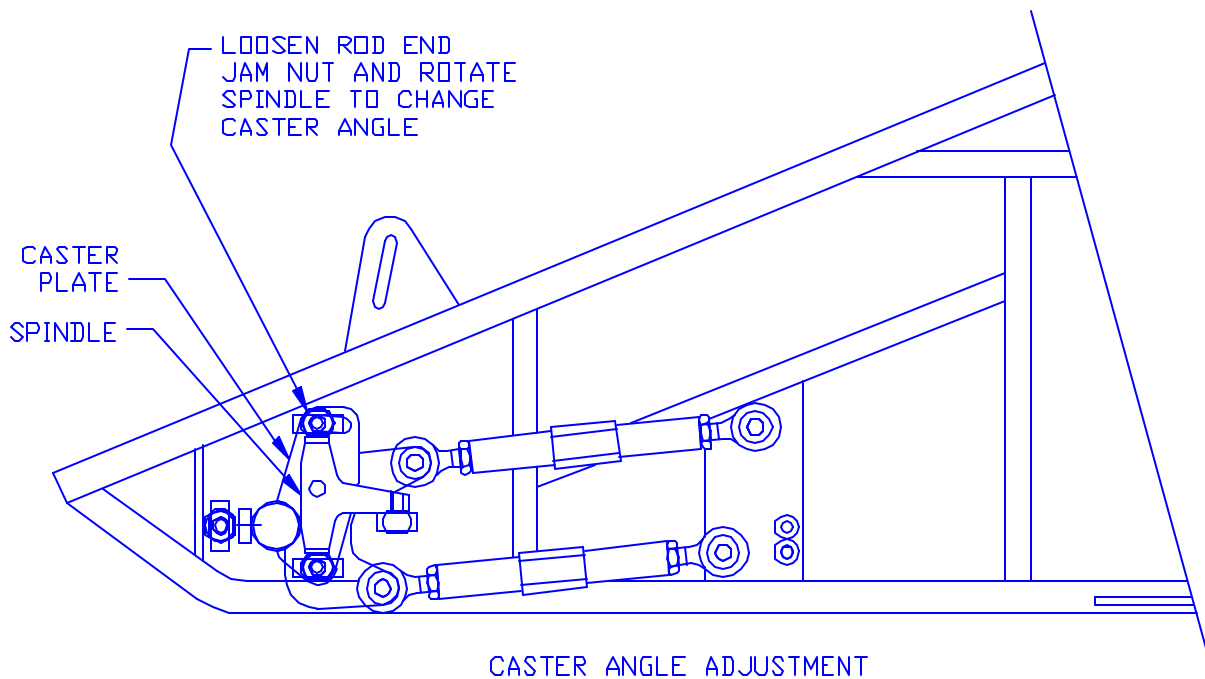
## FRONT LINK AND TRAILING LINK DIMENSIONS



THE SIDE LINKS SUPPORT THE FRONT AXEL. TO SET THEM UP, MAKE ALL OF THEM THE SAME LENGTH (5 3/16 CENTER TO CENTER). IF THEY BIND, ONE OF THE LINKS IS LONGER OR SHORTER, TURN THEM SLIGHTLY UNTIL BINDING IS GONE. THE REAR LINKS ARE SET BY THE LENGTH OF THE ROD END (1 1/16 INCH).



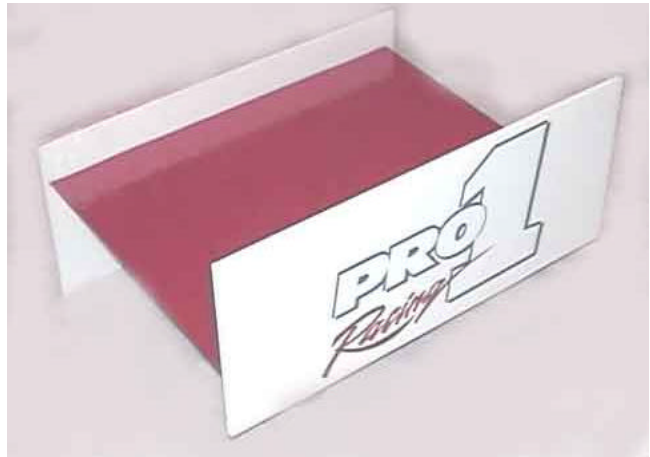
## CASTER ANGLE ADJUSTMENT



THE CASTER ANGLE CAN BE CHANGED BY LOOSENING THE UPPER ROD END THAT SUPPORTS THE SPINDLE AND ROTATING IT TO OBTAIN THE DESIRED ANGLE



## WING ASSEMBLY



THE WING CONSISTS OF 3 PARTS, (2) SIDE PANELS, (1) STYROFOAM WING SECTION.

You will need enough Vinyl Film to cover styrofoam wing.  
Silicone caulking to attach the side panels.  
2 plastic strips to attach to wing.  
Velcro

### ASSEMBLY STEPS:

1. APPLY THE VINYL FILM TO THE STYROFOAM WING.  
MAKE SURE YOU LEAVE ABOUT ¼ INCH TO IRON OVER THE EDGE.
2. USE SILICONE CAULKING TO ATTACH THE SIDE PANELS. CENTER THEM END TO END AND SPACE THEM ABOUT 2 INCHES FROM THE EDGE OF THE WING (UP AND DOWN)
3. USE SILICONE TO GLUE DOWN THE CURVE PLASTICS STRIPS. THEY SHOULD MEASURE 3 INCHES IN FROM SIDE TO SIDE AND 2 INCHES FROM THE REAR EDGE. REMOVE THE VINYL WHERE THE STRIPS WILL BE GLUED.



The PRO1 1/4 scale SP1 is a precision sprint race car. The frame is constructed of 4130 Chrome moly tubing, which is CNC formed and fixture welded. The front suspension is a hybrid watts link system and the rear is a traditional watts link design, both are supported by heavy duty track bars. The shocks, wheel hubs and gear assembly are interchangeable with the Pro1 grand national car. For clarity the polycarbonate body shell and rear tail are not shown. Precision components are CNC machined for accuracy, and structural Integrity



## **SP1** ¼ Scale Sprint Car

### FEATURES

#### - **Precision Racing Chassis**

1. Frame structure: 4130 chrome moly steel tubing.
2. Rigid design: Computer analysis's of chassis.
3. Finish: Powder coat finish

#### - **Front Suspension**

1. CNC machined components along with a 4130 front axel Tube are a combined weldment for rigidity.
2. Pro1 Ultra shock absorbers with a variety of machined pistons, o-ring sealing and heavy duty rod end connections.
3. Adjustable ride height.
4. Adjustable caster and camber.
5. New steering rack design.
6. Heavy duty spindles, axles and precision ball bearings.
7. BRP or Diamond Back Tires

#### - **Rear Suspension**

1. CNC machined trailing links.
4. Pro1 Ultra shock absorbers with a variety of machined pistons, o-ring sealing and heavy duty rod end connections.
4. Adjustable ride height.
5. Ridged pivot point connection for watts linkage assembly
6. Heavy duty rear hubs and axles with precision ball bearings.
7. 7075 aluminum axel.
8. BRP or Diamond Back Tires



- **Drive System**

1. 2 HP Zenoah engine, RC23, Inertia matched
2. Dual bearing clutch assembly with precision ball bearings.
3. Low rotating mass clutch spindle.
4. 8 oz fuel tank.
5. Aluminum drive gear and nylon driven gear a large range of gears are available.

- **Adjustable Features**

- Camber, front
- Caster, front
- Toe, front
- Ride height, front and rear
- Shock spring rate and oil viscosity

This racing machine has a solid design foundation, is fully adjustable and fun to race.

The SP1 is available fully assembled and ready to race. A full line of spare parts are also available. For spare parts just check out our online store at [http://www.pro1z.com/pro1\\_shopping.htm](http://www.pro1z.com/pro1_shopping.htm) for easy ordering.

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**Price: \$1,495.00 fully assembled, less electronics**



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