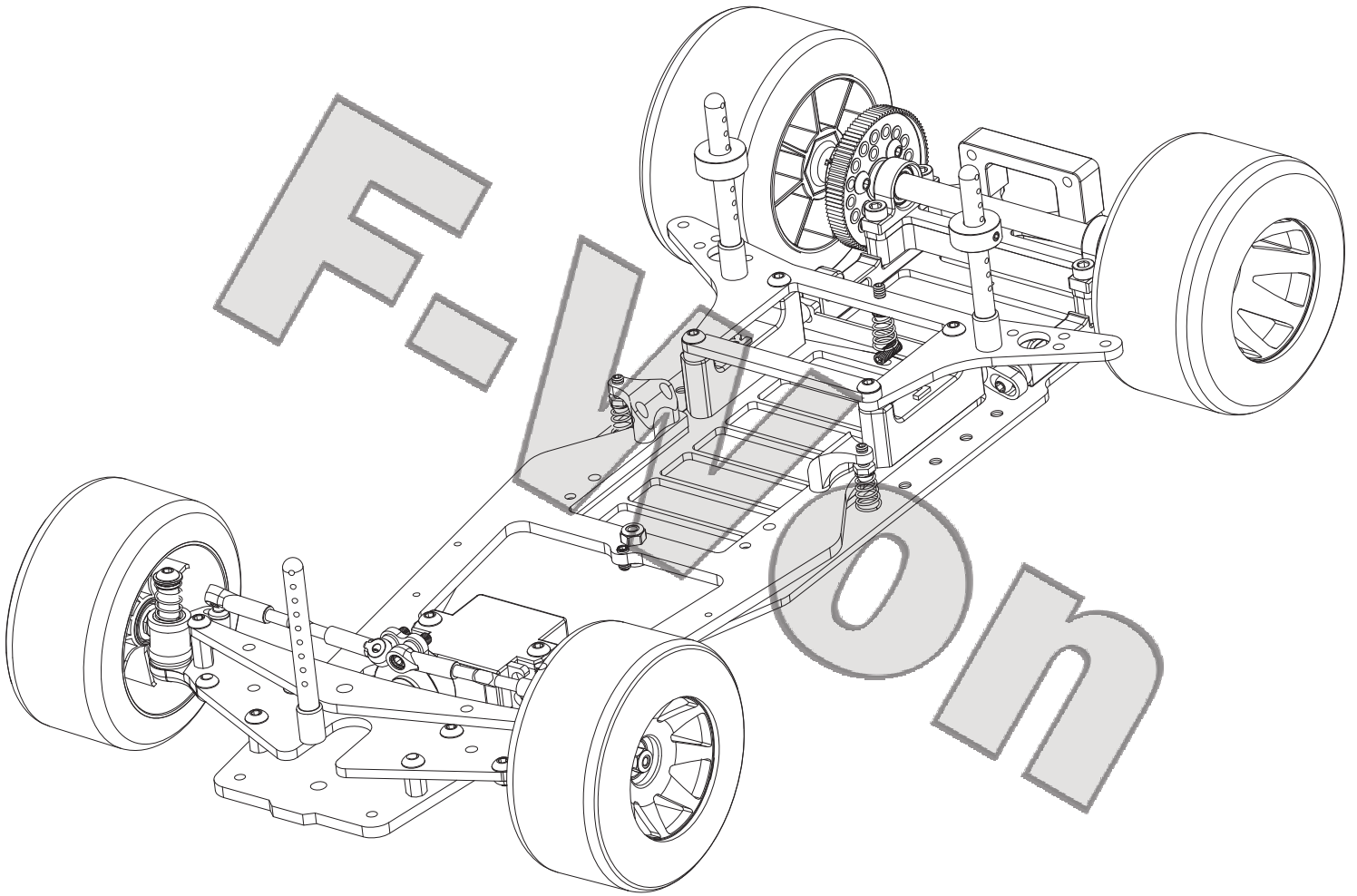


Assembly Manual



1/10th scale Formula 1 race car kit



6785 Martin Street ~ Rome, NY 13440
Tel + Fax 315-338-0867 ~ www.teamcrc.com



Thank you for choosing another fine road racing machine from the World Champions at Calandra Racing Concepts. The new F-Won 1/10th Formula-1 car is the result testing and racing throughout the world. The new chassis is already proven with a WIN at the 2024 US Indoor Champs.

Looking back...we have built the company by going to races, large and small. Meeting racers all over the world, getting our hands dirty in the pits, rubbing elbows with hobbyists, racers and our customers, all while enjoying the same hobby. When CRC started, the internet didn't exist. Setups and product information was passed along by magazines and word of mouth at R/C race events across the country. CRC was there back then and is there now, supporting our customers and enjoying the hobby, all while trying to win every race we attend by engineering products that are the best. And what company can say the following; "At CRC; we make the cars, we make the tires, we make the batteries, we make the racing surface (Fastrak carpet) and we make the barriers (Clik Trak)". We have experience in every facet of the hobby/sport. And we have been doing it for over 30 years, since 1993.

This assembly manual supplies all the information and guidance you need to build your new F-Won with World Championship winning heritage from Calandra Racing Concepts. Please read through the manual to get familiar with the steps needed to build your next winning machine.

Bag 1

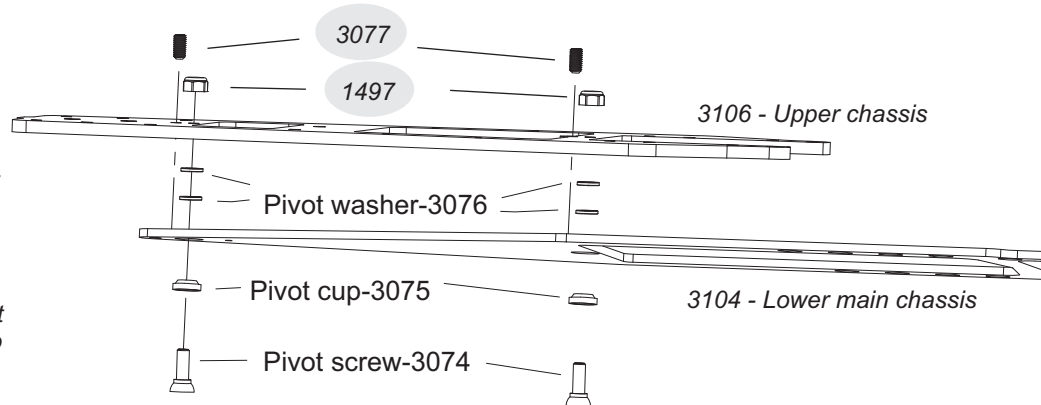
1. The F-Won is a pure racing machine made to win at the highest level on high grip national events. Follow these instructions to carefully build your new race winning machine.

To the 3074 pivot screw, add a 3075 pivot cup over the threaded end. Then on top of the 3104 chassis, add two of the 3076 pivot washers. Thread the pivot screws into the 3106 carbon upper plate. Be sure to thread these straight and 90 degrees to the plate. Snug these firmly, but don't over tighten, these will be secured with a lock nut.

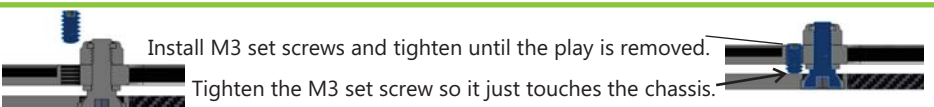
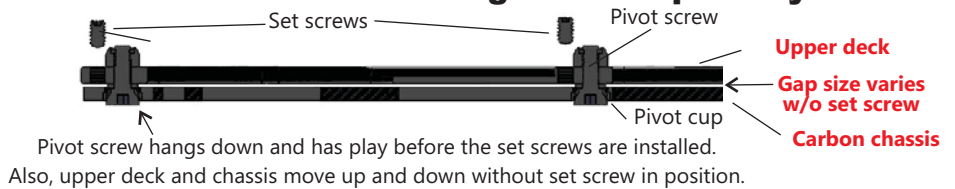
After the pivot screws thread into the upper deck they are secured with 2 lock nuts (1497). You will notice that, at this point, the upper deck and lower chassis move up and down and will touch each other. This will be corrected by correctly setting the 3077 M3 set screws.

2. The 3077 M3 set screws thread in from the top of the upper deck and will be threaded in and adjusted to remove this play and movement. The only purpose of the M3 set screws is to remove the up/down play from the pivot assembly and act as a pivot point. Do not over tighten. Just bring the set screw down to slightly touch the chassis and remove the up and down play.

Please refer to the illustrations below on how to set the position and tightness of the two M3 set screws that adjust pivot play. The upper deck should pivot side-to-side freely with no "up and down" play. If the set screw is set too tight, the side-to-side pivot action will be bound.



A closer look into installing the CRC pivot system

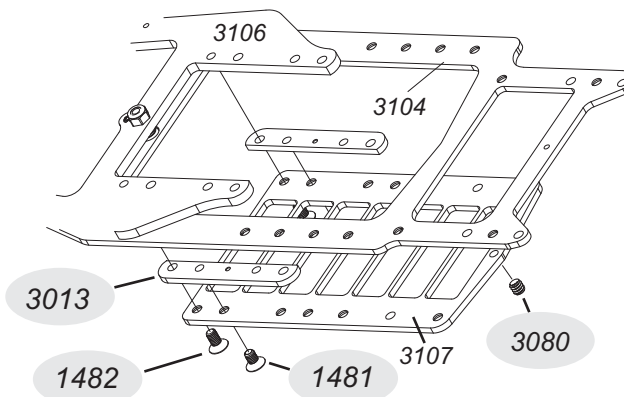
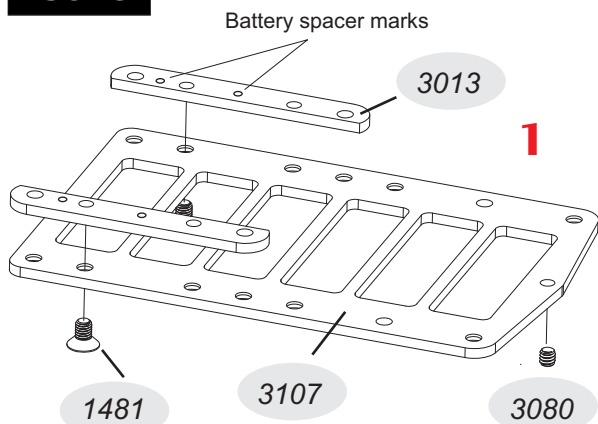


The upper deck should pivot freely, smoothly and without bind. There should be little to NO up/down play between the upper deck and chassis. If the upper plate does not pivot smoothly, one or both of the set screws are too tight. You are better off slightly loose rather than too tight. But be sure there is no bind and it rolls smoothly.

Bag 1 cont

Battery plate to upper deck

- Use the #1482 M3 x 8 flat head screws to secure the battery plate and spacer to the upper deck.



# of 3076 used under upper plate	Battery spacer used
1	Single mark
2	2 marks (dots)
3	3 marks (dots)

- Notice the chart on the left. Match the shims used to the number of marks or "dots" on the battery spacer plate. If you used two #3076 washers, use the spacer with 2 marks. This will properly space the battery plate. For the F-Won, typically, choose between 2 or 3 spacers.

Attach the correct plastic battery spacers (3013) to the carbon fiber battery plate (3107) with the #1481 M3 x 5 flat head screws. These screws self-thread into the plastic, so use very little force, no need to crank them. The plastic is there only as a spacer, so they only need to be lightly secured. Thread the 3080 M3 x 3 set screw into the battery plate. Later, this set screw will adjust and limit your "up-travel". Be sure the screw does not protrude toward the bottom. It must be flush or sunk in.

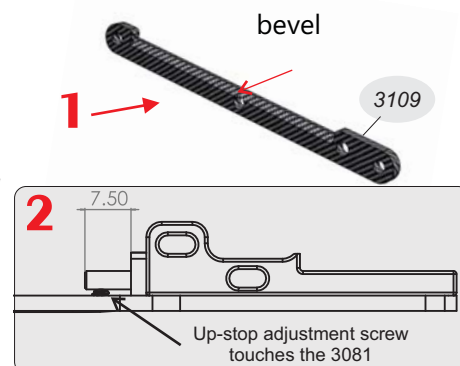
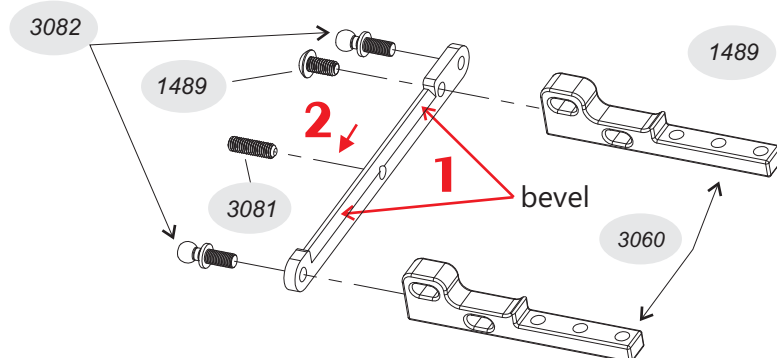
Bag 2

- To increase the pinion/spur gear range, you may want to bevel the edge of the 3109 damper strut with a file or Dremel. This will increase available space to move the motor forward. Just file a 45 degree bevel into the strut as shown to the right. This is NOT mandatory, just a convenience. **Be careful to bevel the correct side!**

- Carefully install the 3081 center suspension post set screw into the damper strut. Thread into the damper strut so that the screw is flush with the back side of the damper strut. Be sure to thread the set screw straight and perpendicular into the carbon fiber. Put a little oil or grease on the screw first.

Please note the direction and orientation of the damper strut that attaches to the 2 bulkheads. Use M3 x 6mm button head (#1489) screws to mount the strut to the 2 bulkheads. Leave these slightly loose until this assembly is bolted to the chassis.

One of the male ballstuds (3082) self taps to the damper strut, be sure to thread straight. Then the strut mounts to the motor plates using a 1489 M3 x 6 button head and the second 3082 on the other side.

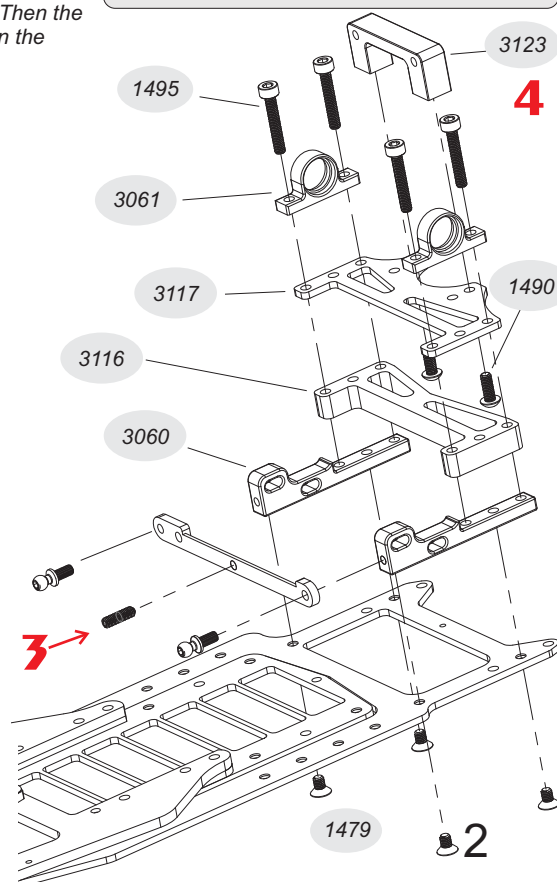


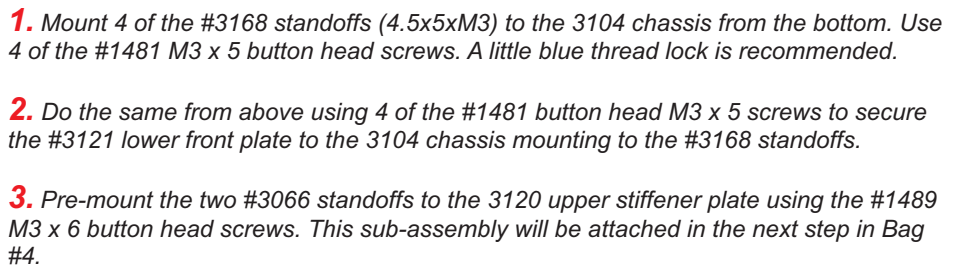
- The two 3061 axle carriers attach to the motor pods with the 1495 M3 x 16 screws. These 3061 carriers are symmetrical can be installed either side, either way. These bolt "through" the 3116 and 3117 carrier spacers. For further ride adjustment, different sizes and carbon fiber spacers are available. The entire assembly attaches to the chassis with 4 of the M3 x 5 mm flatheads (1479). Be sure to use **ONLY** the M3 x 5 screws here, nothing longer. A dab of thread lock is advised.

With the entire pod bolted flat to the chassis, don't forget to tighten the 1489 button head and 3082 ballstud that we left slightly loose from the earlier step.

- The wing of your choice will mount to the 3123. You can run the 3123 on top of the 3116 or underneath depending on how high you want the rear wing mounted. We suggest the CRC 3125 or 1580 rear wing.

We have a number of different thickness rear ride spacers options. The #3183 is a rear ride height adjustment set.





Bag 4

***Welcome to the FINEST front end in pan car racing;
The CRC Ultra-tune Front End.***

1. To ensure quality, some of the CRC kits come with the steering blocks “pre-assembled”. While these are assembled, final adjustments need to be made before installation. Be sure the 3021 bushing is seated straight and proper. Also, be sure the 3022 steering block collar is securely “finger” tight and snugged.

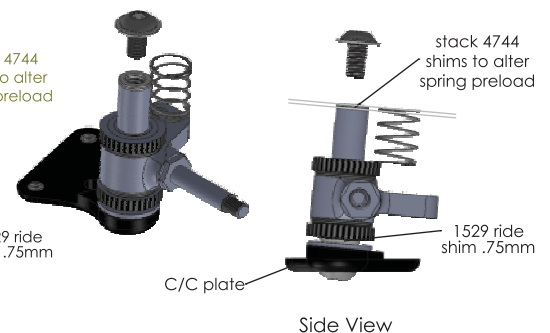
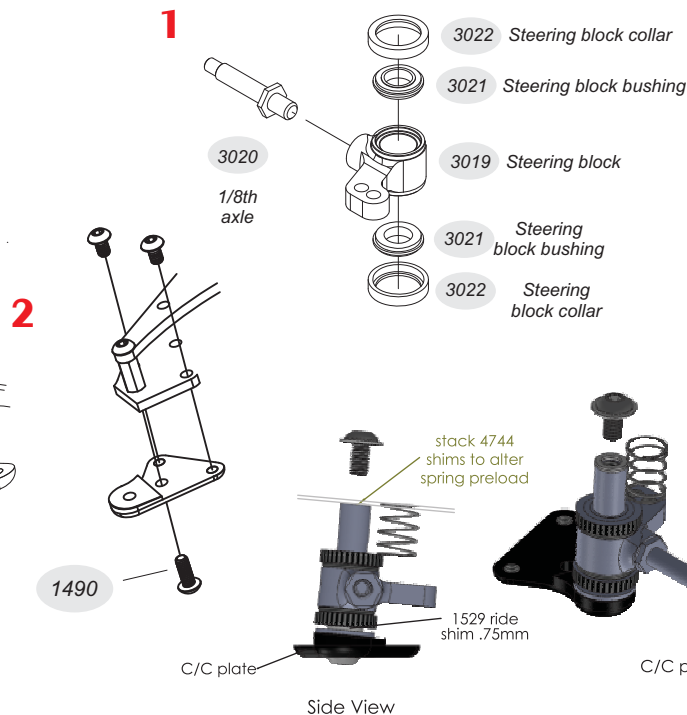
*For the 3020 axle, add a drop of thread locker to the front axle and tighten **FIRMLY** into the 3019 steering block. Drop the steering block over the kingpin to help hold the steering block while tightening. Use a deep 5.5mm nut driver to tighten the axle.*

2. C/C plate mount - The foundation of the Ultra-tune is the Caster/Camber plate. The front end builds from this plate. Use two M3 x 5mm button heads to mount the 4/-1 CC plate to the upper deck.

3. Push a small body clip through the vent hole in the king pin. This is a safe way to hold the king pin while securing it to the C/C plate (caster/camber plate). Tighten the king pin to the C/C plate with the M3 x 8 BH (1490) while holding the body clip, using the clip as a wrench or lever. Drop a 1529 ride shim over the king pin. You can use this thick (.75mm) shim or a thinner to adjust ride height. Just remember, changes here will affect the spring preload. Refer to our videos - <https://youtu.be/Y2Aj-jORXI0t?t=501>

Now, add the fully assemble steering block to the kingpin. The CRC team prefers damping grease (not silicone fluid) to damp and smooth the front suspension. Place ONLY the lower bushing/steering block over the kingpin and add Kyosho 15k Diff grease to the gap between the bushings. Put a good amount in the gap between bushings. Before installing the top of the steering block fully over kingpin, place your finger over the bushing hole to keep the grease trapped in the block. Work the block up and down, working the grease around.

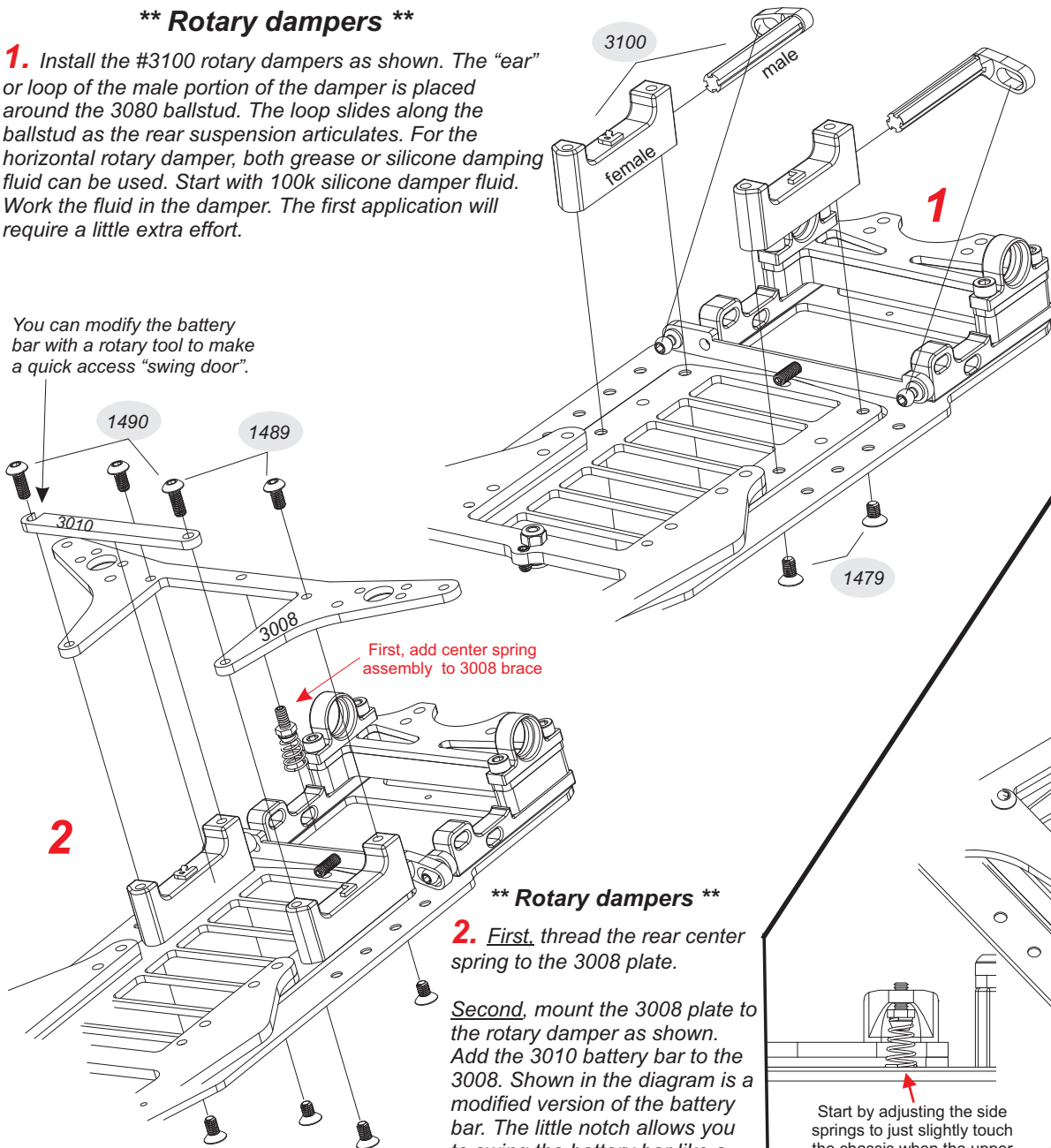
4. Put the front spring over the kingpin. At this point in the assembly, at initial setup, we recommend just slight preload. Set the kingpin height level or just slightly lower than the spring height. Top off with the washer and M3 x 6 button head.



** Rotary dampers **

1. Install the #3100 rotary dampers as shown. The "ear" or loop of the male portion of the damper is placed around the 3080 ballstud. The loop slides along the ballstud as the rear suspension articulates. For the horizontal rotary damper, both grease or silicone damping fluid can be used. Start with 100k silicone damper fluid. Work the fluid in the damper. The first application will require a little extra effort.

You can modify the battery bar with a rotary tool to make a quick access "swing door".



Bag 5

Tweak Spring assembly

Thread the set screw in until flush with the bottom of the holder.

Make sure spring coil is seated into groove on spring holder.

** Rotary dampers **

2. First, thread the rear center spring to the 3008 plate.

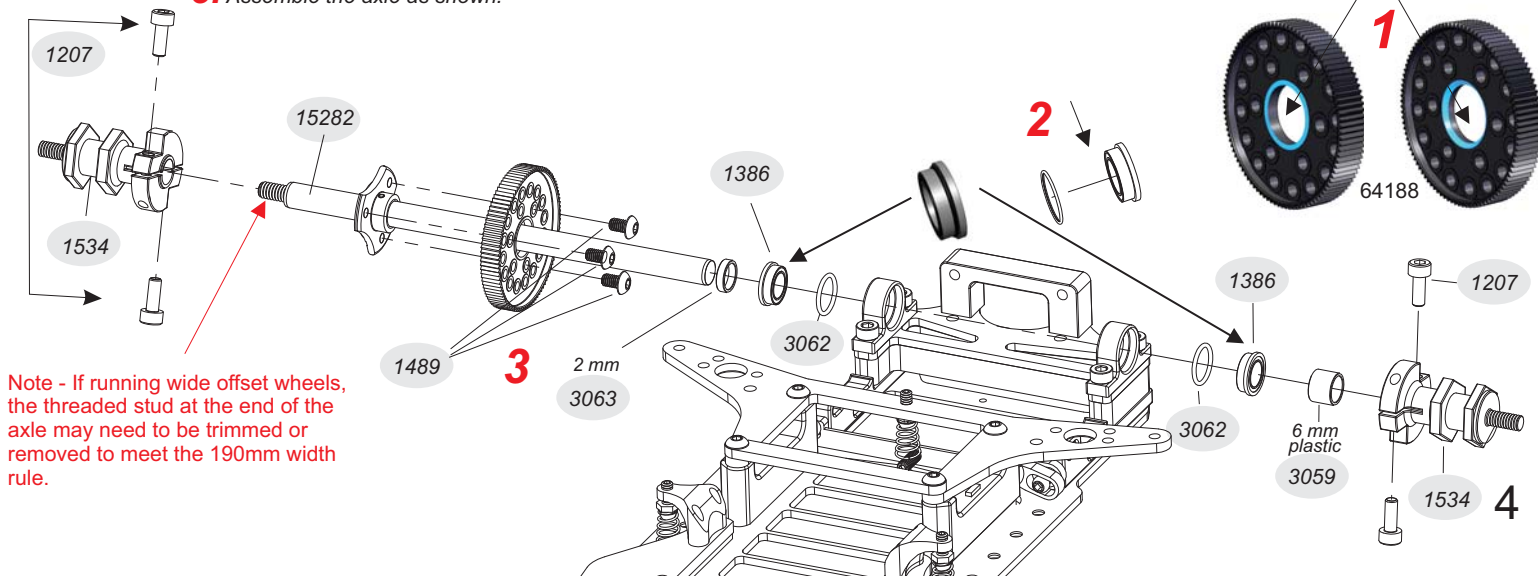
Second, mount the 3008 plate to the rotary damper as shown. Add the 3010 battery bar to the 3008. Shown in the diagram is a modified version of the battery bar. The little notch allows you to swing the battery bar like a door.

Start by adjusting the side springs to just slightly touch the chassis when the upper plate is flat and parallel to

Rear Axle

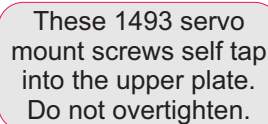
Bag 6

1. The inner collar on the CRC spur gear needs to be removed when using the gear in a solid axle application. Take a hobby knife and trim off the "flange" of plastic that faces the back side of the axle flange.
2. Slip/stretch the 3062 O-ring over both rear axle flanged bearings before installing.
3. Assemble the axle as shown.



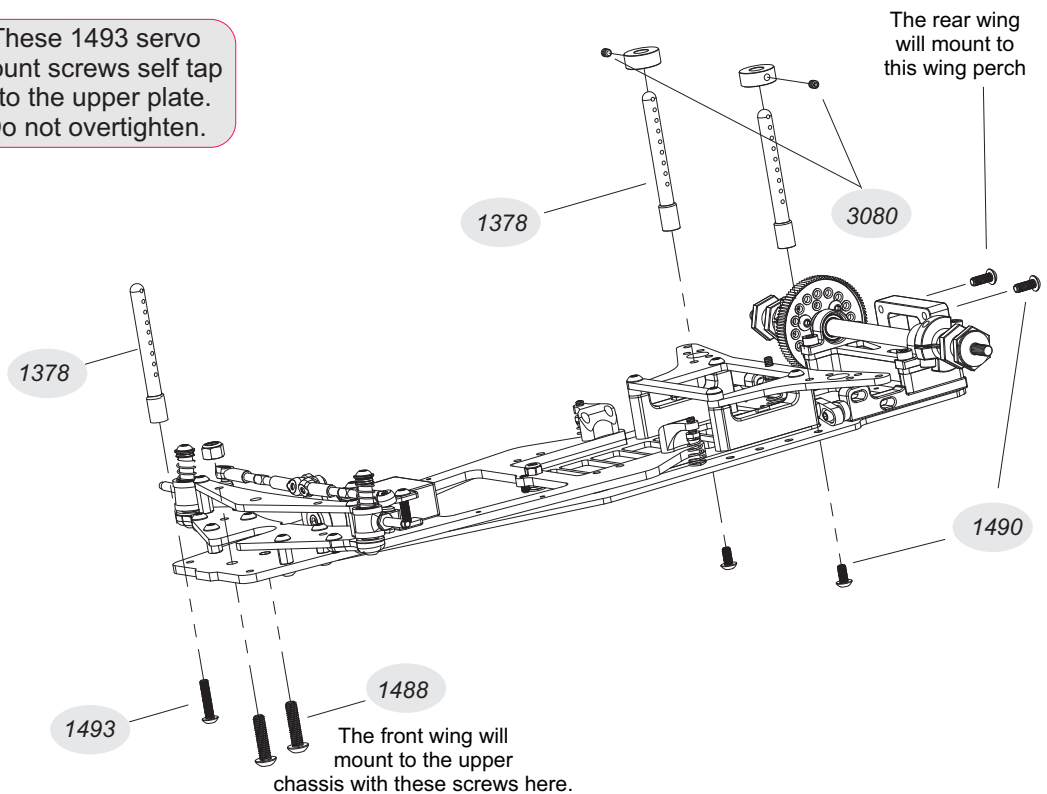
Note - If running wide offset wheels, the threaded stud at the end of the axle may need to be trimmed or removed to meet the 190mm width rule.

Bag 7

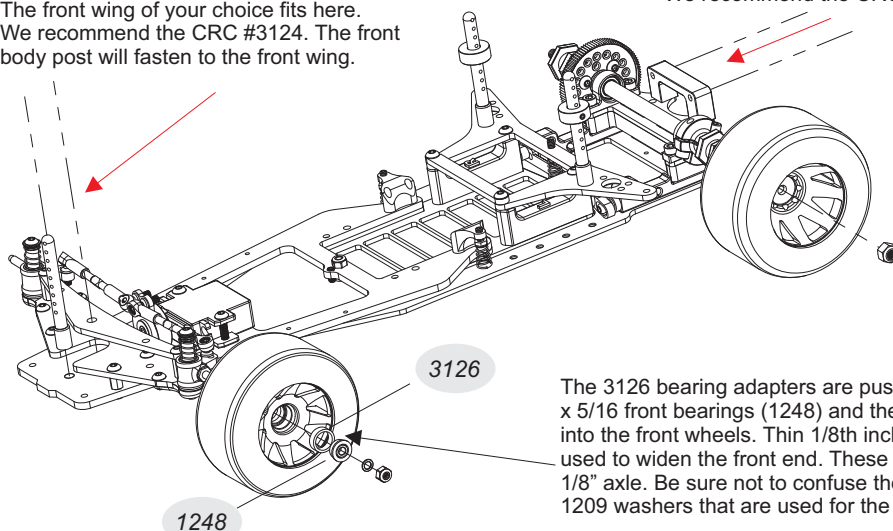


- WINGS NOT INCLUDED**

The rear wing will mount to wing perch mounted earlier in the assembly

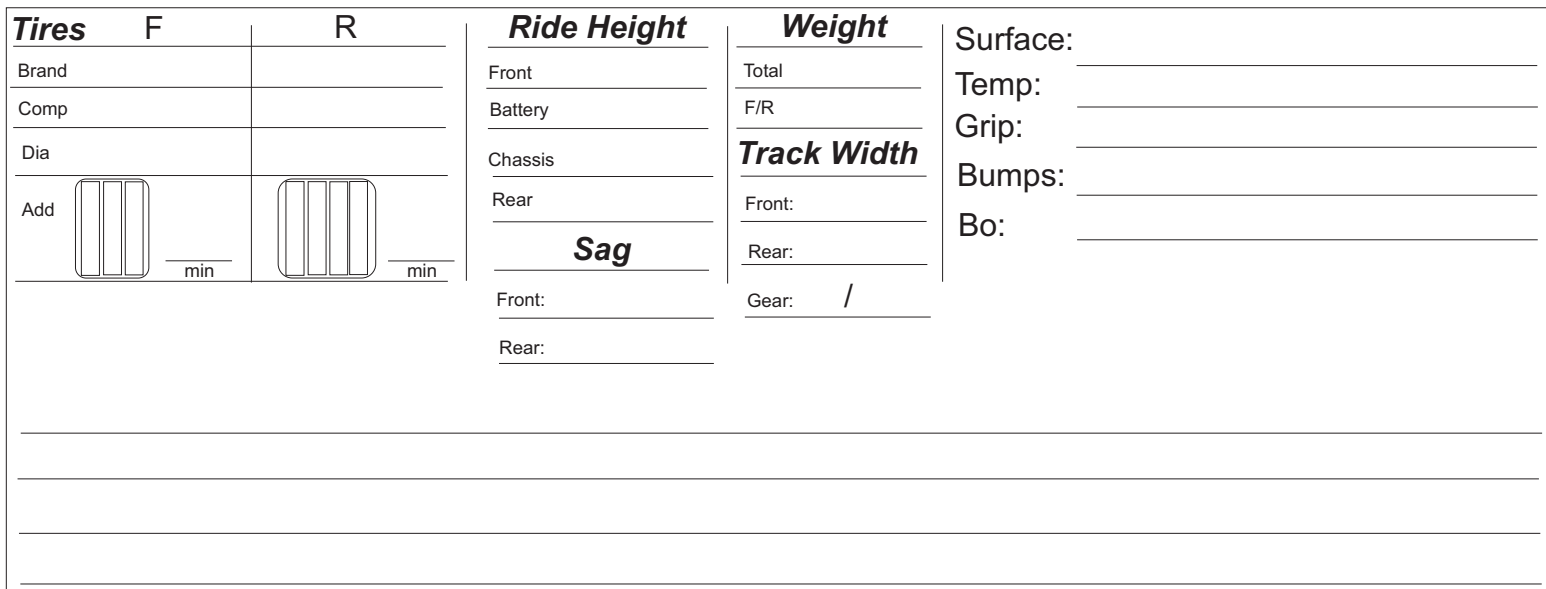
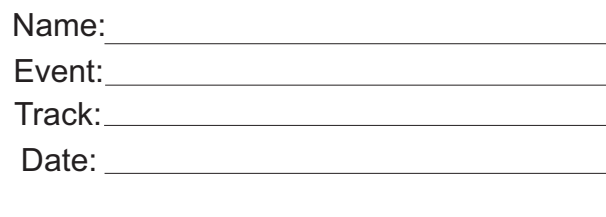


The front wing of your choice fits here.
We recommend the CRC #3124. The front
body post will fasten to the front wing.



The rear wing of your choice fits here.
We recommend the CRC #3125

If you have any questions or concerns about any CRC product, feel free to call or e-mail the staff at CRC for assistance. All of our in-house staff at CRC are experts in building, setup, driving and racing R/C model cars. Your new F-Won was handled by experienced racers from the moment of design right through the completion of the kit. We utilize our top driving professionals around the world as well as feedback from local racers at the CRC test track to build you the most complete and competitive product possible. Our team travels to major events around the world, please stop in at a race if you need any help or just to say "Hi!". Have fun, RUN CRC, practice often and good luck!





**CRC - IFMAR
World Champions**

**U.S. Indoor
National Champion**

Kit Parts

1248 Front bearing 1/8 x 5/16
1378 2" Body post w/ collars
1386 Rear axle bearing - 1/4 x 3/8
1534 F-Won Clamping Hub - Black
1795 Roll Spring .55mm (2) Rear F-Won
3008 Tweak plate - 2.5
3010 Battery lock bar - 2.5
3013 Battery spacer plates 2, 2.75, 3.5mm (2)
3018 2.25 rear ride plate
3019 Steering block, trailing-for 1/8 axle
3020 1/8" Axle for steering block
3021 Steering bushing
3022 Steering block collars
3023 Vented kingpin-5mm
3030 Front Springs .50 (2)
3040 C/C plate 4-1 Left
3041 C/C plate 4-1 Right
3059 4 + 6mm plastic axle spacer (3)
3060 Motor plate
3061 Bearing carrier
3062 Bearing o-rings (10)
3063 Axle spacer (2mm)
3066 4.5 x 9 x M3 Standoff (4)
3067 4.5 x 16 x M3 Standoff (4)
3074 Pivot Screw (2)
3075 Pivot cup - Standard roll center cup
3076 Pivot washer (4)
3104 Carbon chassis
3106 Carbon upper deck-3mm
3107 Battery lower Plate Carbon - 2mm
3109 Damper strut - 2.5
3114 Carbon bumper
3115 3d printed soft bumper
3116 Thick rear ride spacer 7mm
3117 2.5mm wing/rear spacer
3120 F-Won FE Upper-Stiffner
3121 F-Won FE Plate Lower
3168 4.5 x 5 x M3 Standoff (4)
3387 Molded Spring Retainers
15282 Diff/solid rear axle - carbon

Kit Hardware

1207 M3 x 8 Cap head
1208 Washer
1479 M3 x 5 Flat Head
1480 M3 x 6 Flat Head
1481 M3 x 5 Button Head
1482 M3 x 8 Flat Head
1483 M3 x 10 Flat Head
1484 M3 x 12 Flat Head
1486 M3 x 8 Cap head Aluminum
1488 M4 x 18mm Button Head
1489 M3 x 6 Button Head
1490 M3 x 8 Button Head
1491 M3 x 10 Button Head
1492 M3 x 12 Button Head
1493 M3 x 14 Button Head
1495 M3 x 18 Cap Head
1497 M3 Aluminum Mini Locknut
1499 M4 Steel Locknut
1529 Front ride washer 5 x .75mm
1790 Roll Spring .40mm (2)
1791 Roll Spring .45mm (2)
1793 Roll Spring .50mm (2)
1796 Roll Spring .60mm (2)
3028 Front Springs .40 (2)
3029 Front Springs .45 (2)
3030 Front Springs .50 (2)
3032 Front Springs .60 (2)
3033 Front Springs .65 (2)
3077 M3 x 6 set screw (4)
3078 M3 x 12 set screw (4)
3080 M3 x 3 set screw (4)
3081 M3 x 10 set screw (4)
3082 M3 4.3mm x 6 ballstud (4)
3332 M2.5 x 6 clamp screw (6)
4732 1/4" rear axle shim (20)
4744 1/8 front axle shim (20) AND
4744 "AKA" - Kingpin extension shim

Option Parts

1494 Metal Roll Spring Holders - M3
1580 Black Adj Dual Element Rear Wing
3016 2mm rear ride plt - carbon
3017 2.5mm rear ride plate - carbon
3024 3mm rear ride height plate - carbon
3025 Low profile king pin screw
3034 Camber/Caster plate 4-.25 Left
3035 C/C plate 4-.25 Right
3036 C/C plate 4-.5 Left
3037 C/C plate 4-.5 Right
3038 C/C plate 4-.75 Left
3039 C/C plate 4-.75 Right
3042 C/C plate 4-1.5 Left
3043 C/C plate 4-1.5 Right
3044 C/C plate 4-2 Left
3045 C/C plate 4-2 Right
3047 C/C plate 5-.25 Left
3048 C/C plate 5-.25 Right
3049 C/C plate 5-.5 Left
3050 C/C plate 5-.5 Right
3053 C/C plate 5-1 Left
3054 C/C plate 5-1 Right
3055 C/C plate 5-1.5 Left
3056 C/C plate 5-1.5 Right
3057 C/C plate 5-2 Left
3058 C/C plate 5-2 Right
3087 C/C plate 7-.5 Left
3088 C/C plate 7-.5 Right
3089 C/C plate 7-1 Left
3090 C/C plate 7-1 Right
3091 C/C plate 7-1.5 Left
3092 C/C plate 7-1.5 Right
3093 C/C plate 7-2 Left
3094 C/C plate 7-2 Right
3079 Pivot cup, +1 roll center (1mm)
3083 2, 2.5, 3, 3.5mm ride spacer
3124 Black F1 Front Wing
3125 Black F1 Rear Wing
33575 Tungsten carbide ballast