

# CALANDRA RACING CONCEPTS



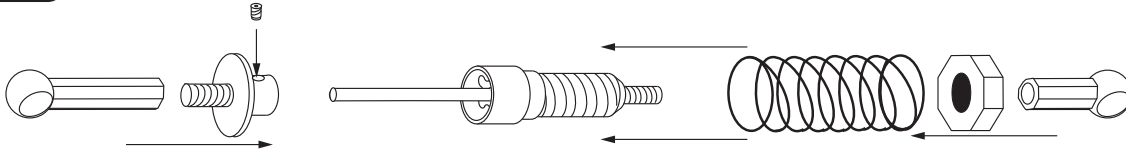
## Carpet Knife Version 3

# Assembly and Setup Manual

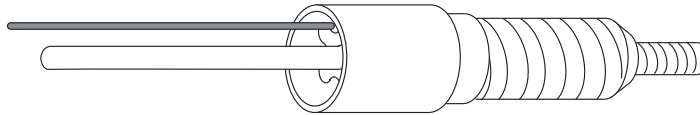
Congratulations! You now own the best 1/12th scale car on the market today, the Carpet Knife Version 3. This completely new car sets higher standards in pan car design, performance and convenience features. Calandra Racing is proud to have you as an owner of the new Carpet Knife! Build this car carefully and precisely. It will bring years of enjoyment and performance.

### Shock

1) Build the shock per the instructions included in Bag "S". Use FSR or Asc 30 weight silicone oil. After the shock is built, set it aside for mounting later.



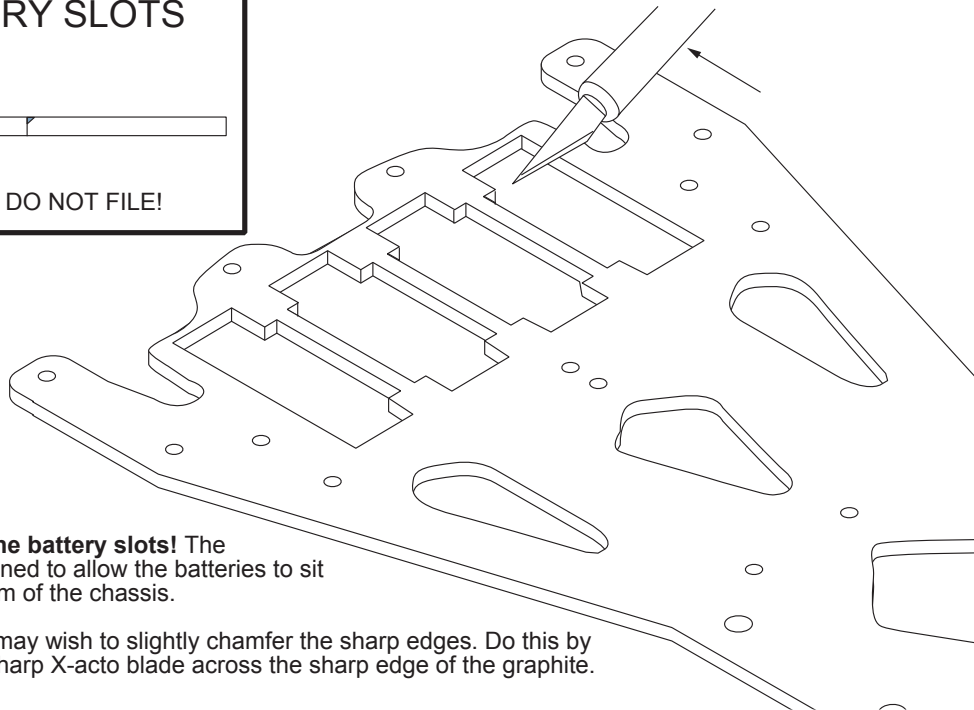
### DISASSEMBLY



### BEVEL BATTERY SLOTS



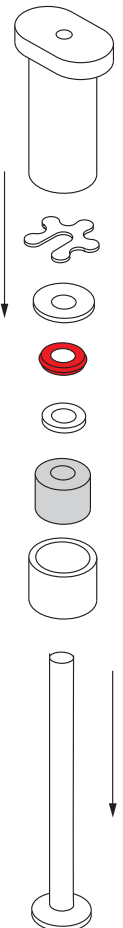
Remove sharp edge- DO NOT FILE!



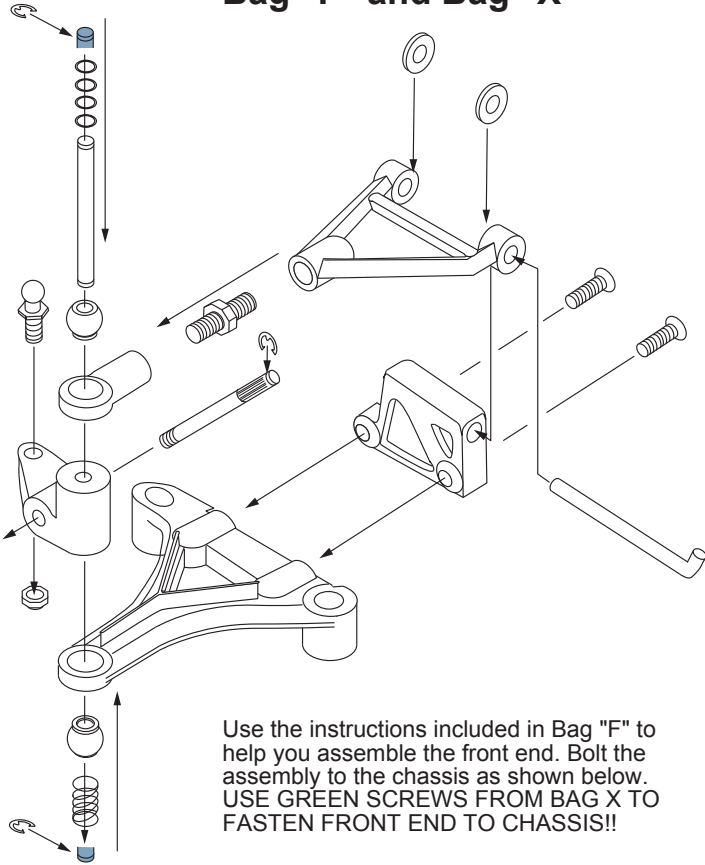
1. **DO NOT file the battery slots!** The slots are pre-machined to allow the batteries to sit flush with the bottom of the chassis.

**\*\*Optional\*\*** - You may wish to slightly chamfer the sharp edges. Do this by lightly dragging a sharp X-acto blade across the sharp edge of the graphite.

### Center Shock Assembly

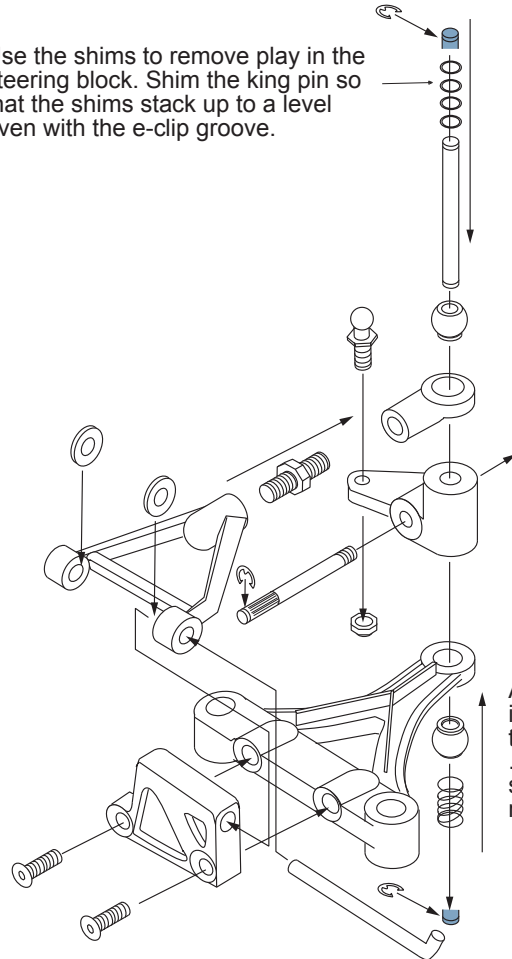


## Bag "F" and Bag "X"

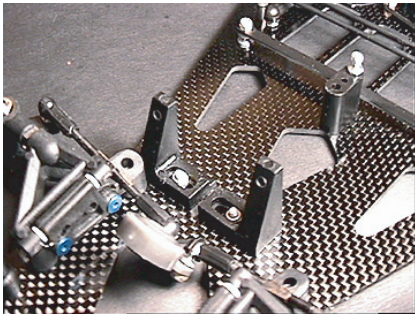


Use the instructions included in Bag "F" to help you assemble the front end. Bolt the assembly to the chassis as shown below. **USE GREEN SCREWS FROM BAG X TO FASTEN FRONT END TO CHASSIS!!**

Use the shims to remove play in the steering block. Shim the king pin so that the shims stack up to a level even with the e-clip groove.

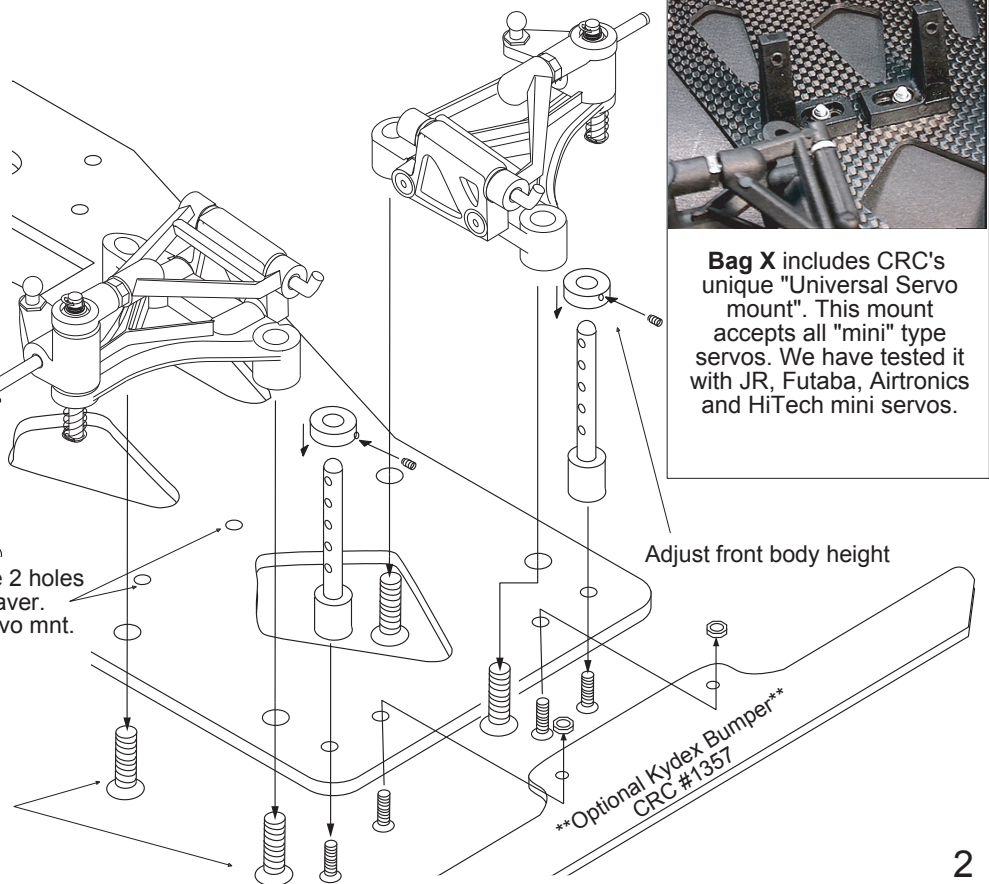


A .20" spring is included in the kit. Try .18" for more steering response.



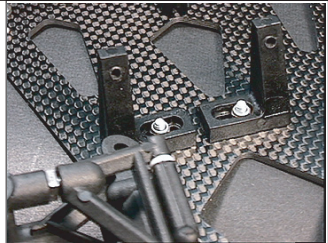
Bolt the universal servo mounts in these 2 holes. Adjust the mounts to center the servo saver. Use the screws from Bag "F" for the servo mnt.

**\*\*\*\* USE THE GREEN ALUMINUM SCREWS FROM BAG "X/F" \*\*\*\***  
Both Left + Right sides.



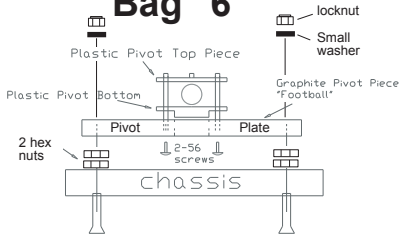
Adjust front body height

**\*\*Optional Kydex Bumper\*\***  
CRC #1357



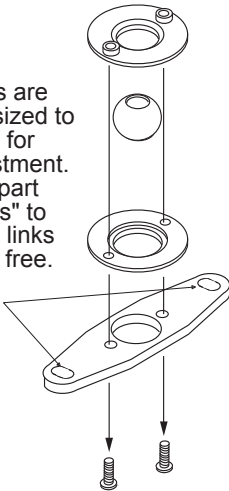
**Bag X** includes CRC's unique "Universal Servo mount". This mount accepts all "mini" type servos. We have tested it with JR, Futaba, Airtronics and HiTech mini servos.

### Bag "6"



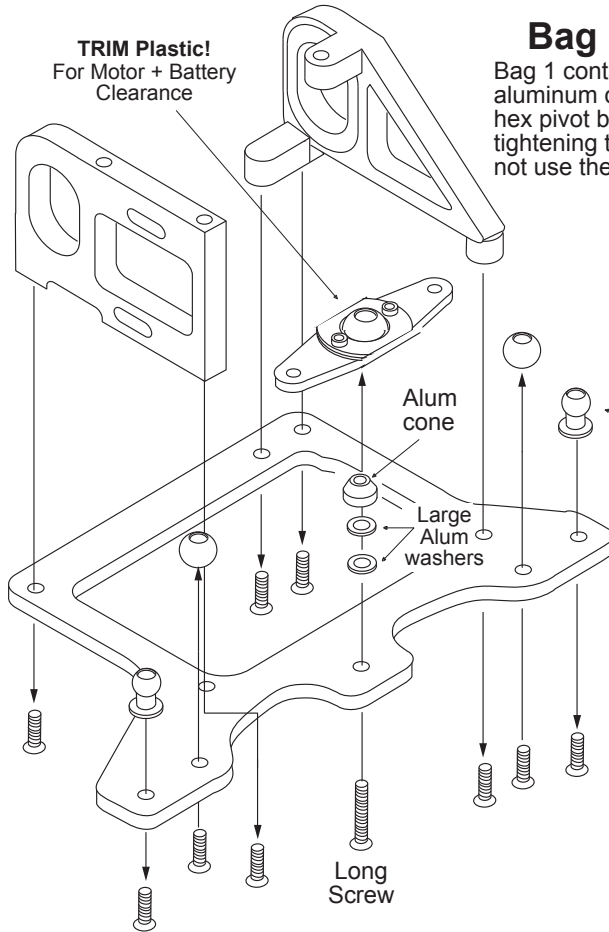
Side View

Holes are oversized to allow for adjustment. This part "floats" to allow links to be free.



Install the 2 small 2-56 button head screws - Do not over tighten. Pivot ball must move freely.

### TRIM Plastic! For Motor + Battery Clearance

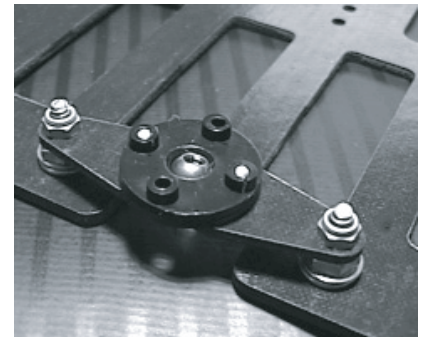
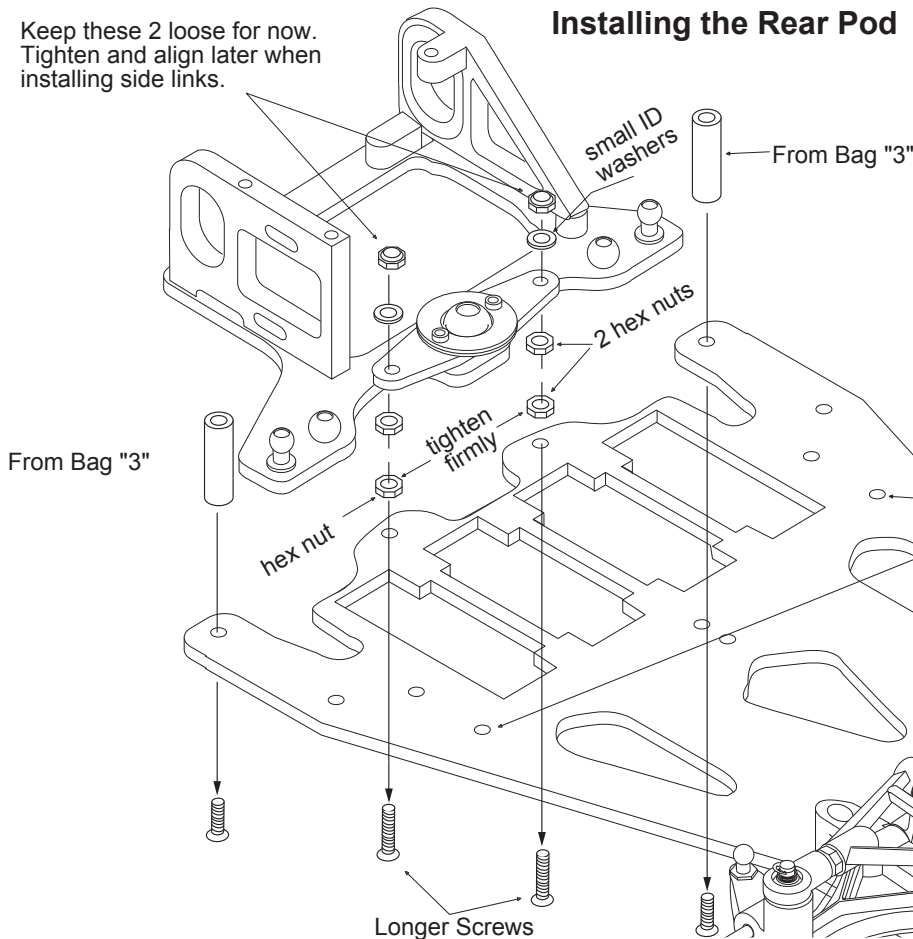


### Bag "R" and Bag "1"

Bag 1 contains the graphite bottom plate, aluminum cone, and hardware. Mount the hex pivot balls (from Bag 2) securely by tightening them with a 3/16" nut driver. Do not use the screw head to tighten the hex balls.

### Installing the Rear Pod

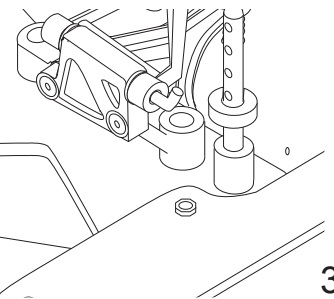
Keep these 2 loose for now. Tighten and align later when installing side links.



Mounted Pivot Assembly (football shaped). Shown here with the rear lower pod removed. Don't forget to trim the plastic pivot ball cups as shown above.

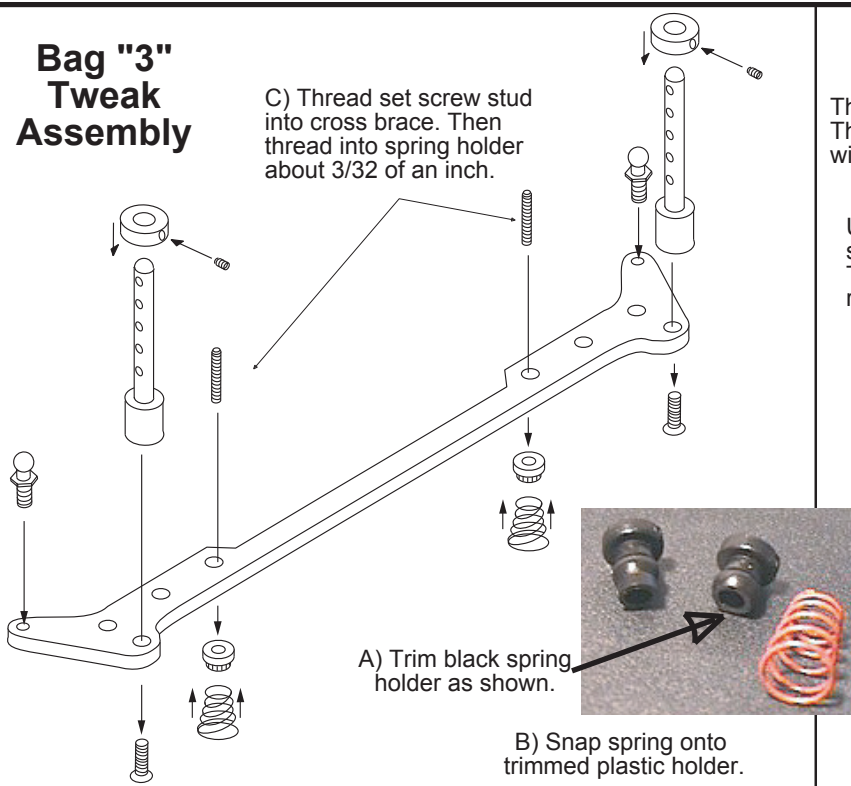
### Bag 8

Mount the Battery brace using these 2 holes. Stack the cones to form an "hour-glass" shape. Then place the brace above the cones and lock with a nut.



## Bag "3" Tweak Assembly

C) Thread set screw stud into cross brace. Then thread into spring holder about 3/32 of an inch.



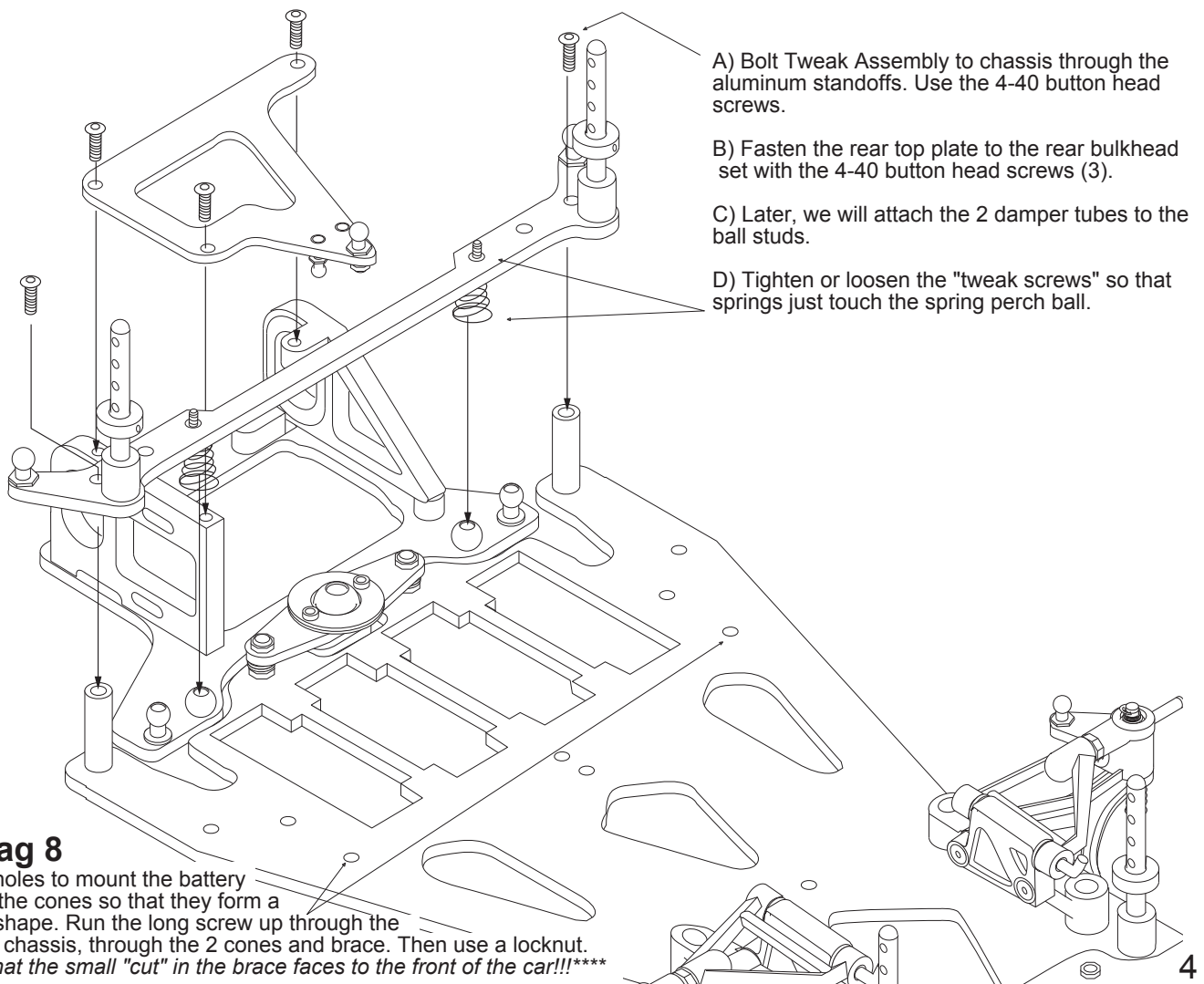
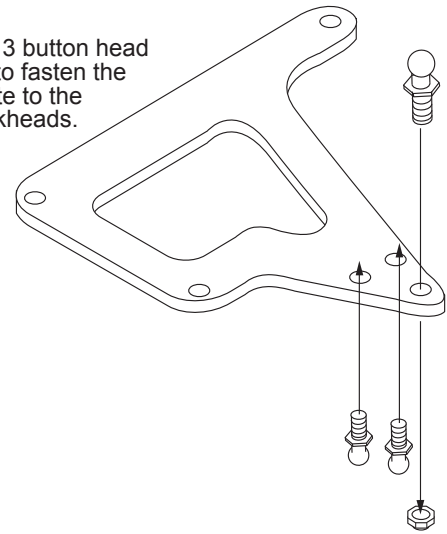
A) Trim black spring holder as shown.

B) Snap spring onto trimmed plastic holder.

## Bag "5" Rear top plate

Thread the 2-56 balls into the graphite from the bottom. Then, mount the larger 4-40 ball from the top and secure with a locknut.

Use the 3 button head screws to fasten the Top Plate to the rear bulkheads.



A) Bolt Tweak Assembly to chassis through the aluminum standoffs. Use the 4-40 button head screws.

B) Fasten the rear top plate to the rear bulkhead set with the 4-40 button head screws (3).

C) Later, we will attach the 2 damper tubes to the ball studs.

D) Tighten or loosen the "tweak screws" so that springs just touch the spring perch ball.

## Bag 8

Use these 2 holes to mount the battery brace. Stack the cones so that they form a "hour-glass" shape. Run the long screw up through the bottom of the chassis, through the 2 cones and brace. Then use a locknut.  
\*\*\*\*Be sure that the small "cut" in the brace faces to the front of the car!!\*\*\*\*

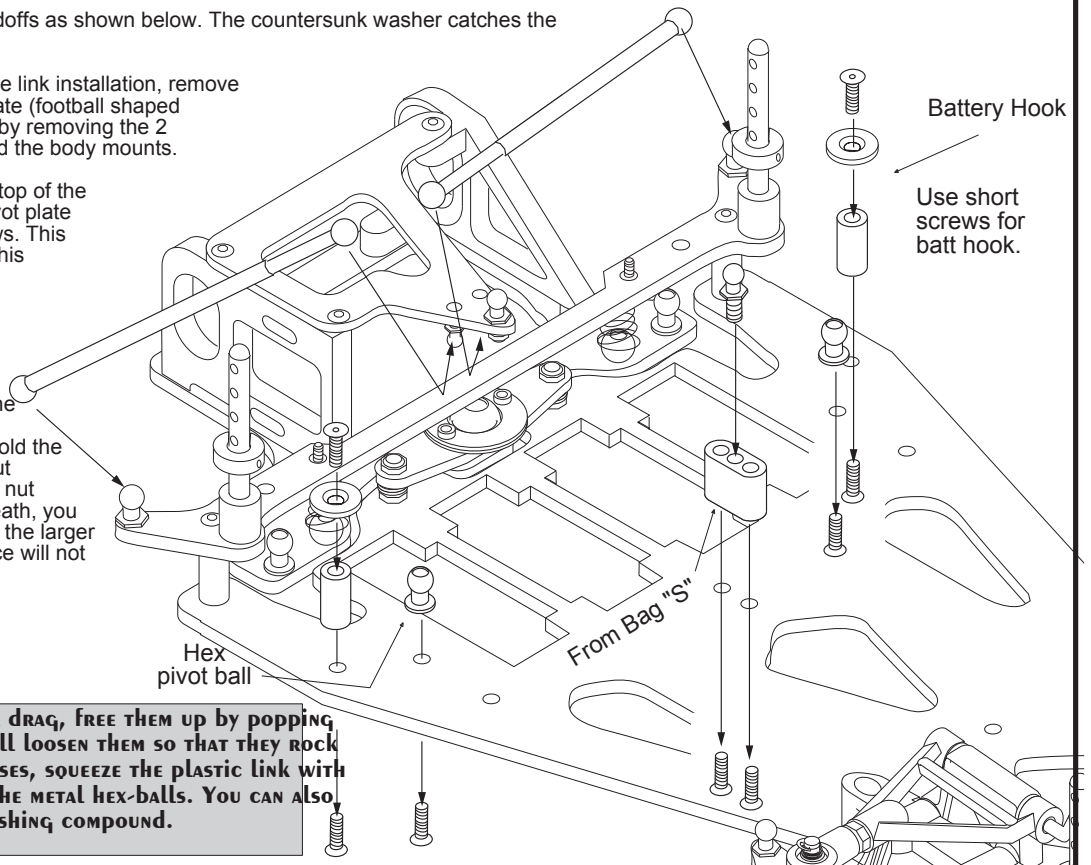
## Bag "2", Bag "4" and Bag "7"

- 1) Find the Damper tubes in Bag #4. Clean the aluminum tubes with a cotton swab to ensure there is no aluminum filings in the tube.
- 2) Assembly by threading the 2-56 studs into the black plastic ball cups. Thread in fairly deep with only about 1/8" of the thread protruding. Now, thread one ballcup into the aluminum tube and the other into the black delrin plunger. Using Losi Hydra fluid, cover the plunger with fluid, filling the slots with fluid. Be sure the vent hole is clear. Insert the plunger in the tube and wipe the excess fluid. The tubes are now ready to install.
- 3) At this time, do not install the damper tubes. We will do that later. The tubes are shown here for illustration purposes only. They snap on the balls.
- 4) Bag #7. Install the battery hook standoffs as shown below. The countersunk washer catches the O-ring retainer that secures the battery.

5) For the next step, which is the 1-piece link installation, remove the top tweak brace so that the pivot plate (football shaped piece) is exposed from the top. Do this by removing the 2 button head screws that are right behind the body mounts.

6) Be sure the 2 aluminum locknuts on top of the pivot plate are loose. Notice that the pivot plate "floats" or moves slightly on the 2 screws. This "floating" allows the links to "free up". This ensures that the rear pod plate pivots freely on the links and center pivot ball. This is a crucial step when setting up the Carpet Knife.

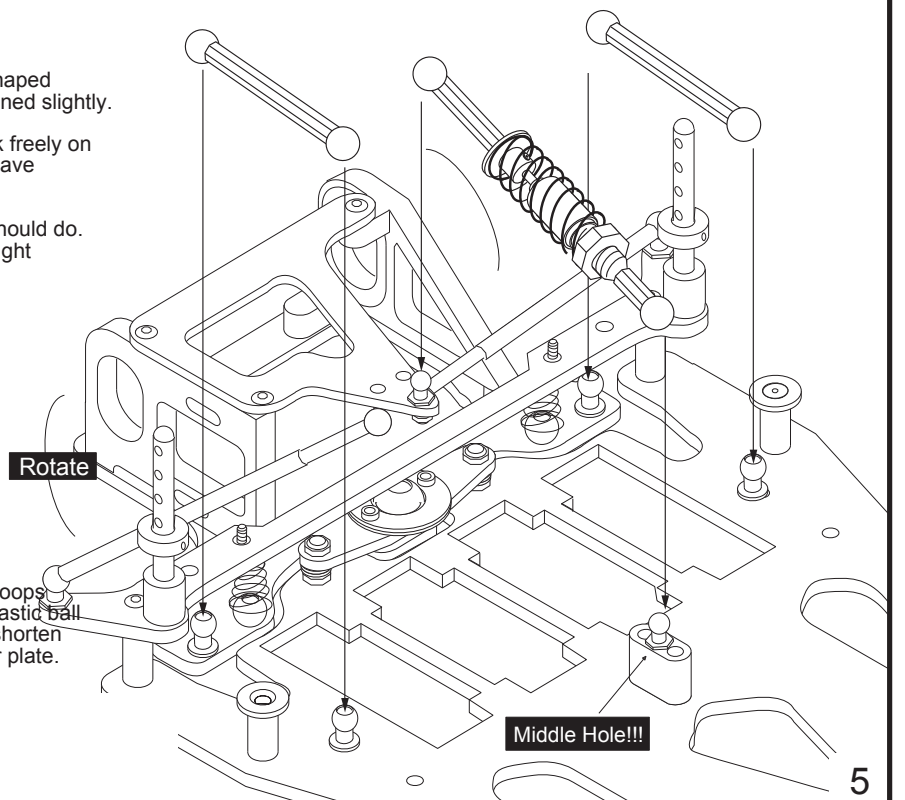
7) To begin the link installation, secure the hex-pivot balls to the chassis with the screws provided in Bag "2". Tighten the pivots firmly using a 3/16" nut driver. Hold the screws from underneath the chassis, but TIGHTEN the balls from above with the nut driver. If you try to tighten from underneath, you will strip out the head of the screw. Use the larger nut driver to tighten as this larger surface will not strip as easy.



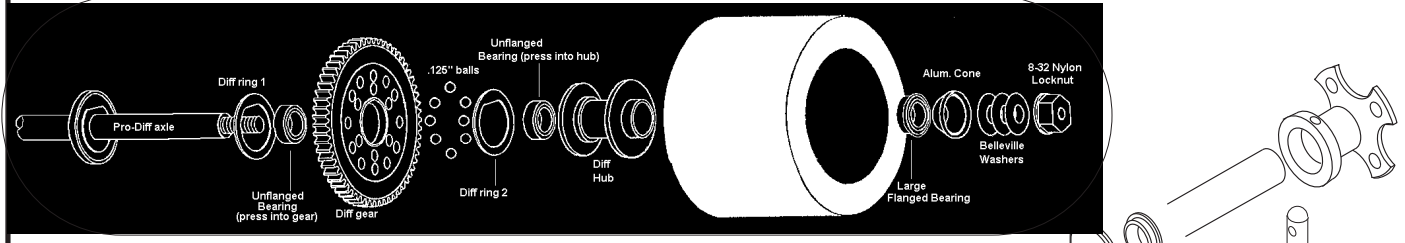
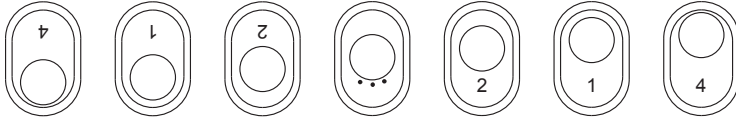
**IMPORTANT!** - If the links bind or drag, free them up by popping them on and off a few times. This will loosen them so that they rock freely when popped on. In severe cases, squeeze the plastic link with pliers while they are popped onto the metal hex-balls. You can also polish the balls slightly with a polishing compound.

## Bag "2" One-piece links

- 1) With the top Tweak brack removed, locate the football shaped graphite part. Be sure the 2 exposed top locknuts are loosened slightly.
- 2) Snap the 2 links on the balls as shown. They should rock freely on the pivot balls. Do NOT install the center shock yet, if you have already, remove the center shock.
- 3) Place the car on a flat surface. A smooth table or desk should do. Be sure that the rear bottom plate and chassis are in a straight line, flat against the table. Keep the car flat on the table for step 4.
- 4) Now, slowly tighten the 2 locknuts that secure the pivot plate (football shaped part). Snug them down firmly.
- 5) Pick up the car and check the pivoting action of rear lower plate. Rotate the rear plate from side-to-side. It should move free without binding or "clicking". If it does not, repeat steps 1-4. The handling of the Carpet Knife hinges (pun intended!) on the free movement of this rear plate. Be sure that the rear links and rear plate are free and not binding.
- 6) Snap the center shock on the 2 balls as shown. With the car suspended in the air, see that the rear pod is level or droops slightly (viewed from the side). Extend (loosen) the black plastic ball cups to lengthen the shock. Cut the ballcup or tighten it to shorten the length of the shock. This will effect the droop of the rear plate.



## Bag "D" Differential axle assembly

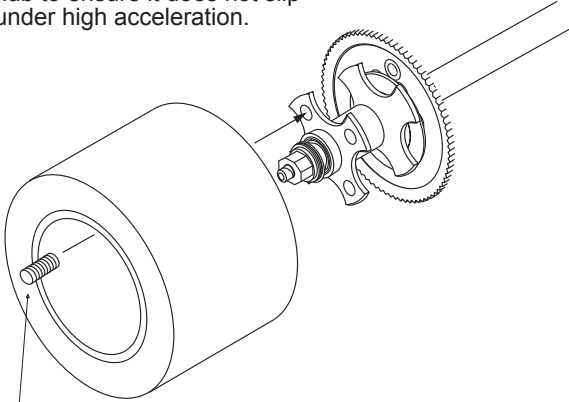


1) Use the above ride-height adjusters to set the rear height of the car. The adjuster you use depends on the rear tire size.

2) Push the flanged bearings from Bag "B" into the ride height adjusters. Press the plastic adjuster into the bulkhead as shown.

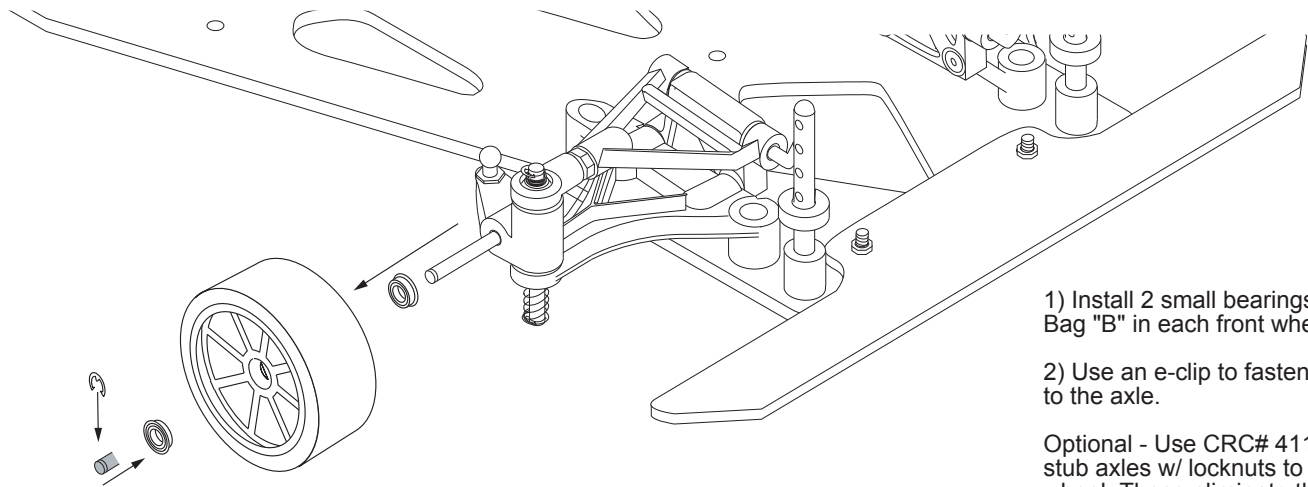
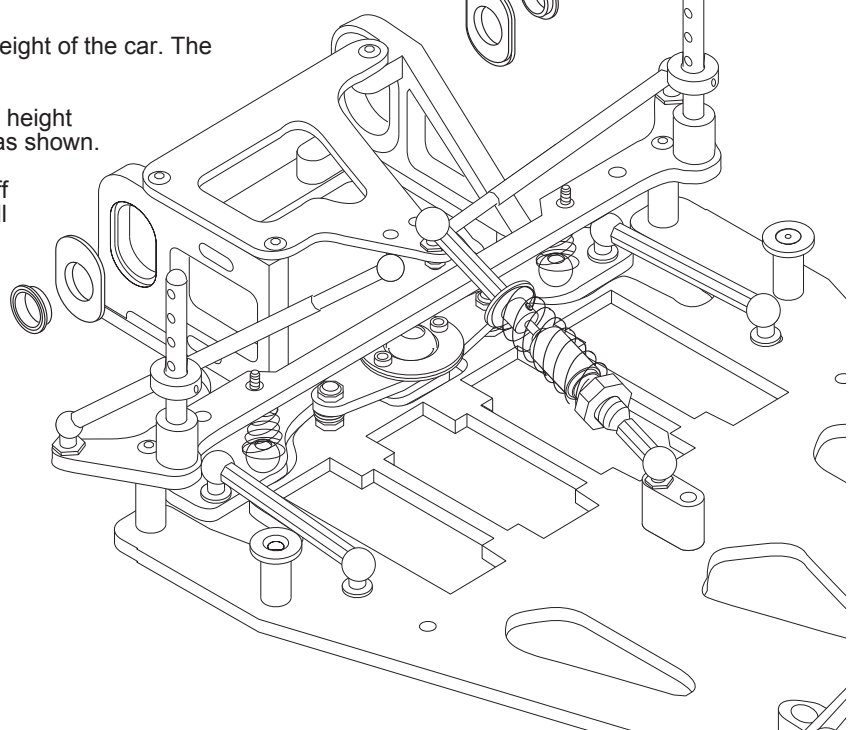
3) Assemble the diff as shown. Use FSR/CRC white diff grease on the balls. Tighten the nut so that the gear will not slip when both left + right wheels are held.

*Optional*-you can pin the right wheel to the diff hub to ensure it does not slip under high acceleration.



*Optional* - You may want to use a 4-40 set screw in the diff hub to prevent the wheel from spinning on the hub under hard acceleration. The hub is tapped 4-40.

Bolt the left wheel with the long screws provided.



1) Install 2 small bearings from Bag "B" in each front wheel.

2) Use an e-clip to fasten each wheel to the axle.

*Optional* - Use CRC# 4114 Titanium stub axles w/ locknuts to fasten each wheel. These eliminate the e-clips.

**SAME FOR THE OTHER SIDE**