

# RC10 GRAPHITE

INSTRUCTION MANUAL



 TEAM ASSOCIATED 

## :: Introduction

Thank you for purchasing this Team Associated product. This assembly manual contains instructions and tips for building and maintaining your new Kit. Please take a moment to read through this manual to help familiarize yourself with these steps.

We are continually changing and improving our designs; therefore, actual parts may appear slightly different than in the illustrations. New parts will be noted on supplementary sheets located in the appropriate parts bags. Check each bag for these sheets before you start to build.

## :: KIT Features

Features in the RC10 Graphite Kit:

- Authentic replica of the RC10 Graphite Buggy Kit
- Graphite Carbon Fiber Molded Chassis
- Fully adjustable four-wheel independent suspension
- Updated longer front A-Arms
- Long travel, fluid-filled anodized aluminum coil-over shocks
- Sealed 6 gear transmission
- High-torque ball differential
- Exceptional ground clearance with low center of gravity
- Front and rear tires with one-piece racing wheels
- Clear Protech II body and wing
- Fiberglass shock towers
- Full metal ball bearings
- Fits 6-cell NiMH and 2S LiPo battery packs

## :: Additional

Your new RC10 Kit comes as a kit. There are some items you will need to complete your kit (refer to website for suggestions):

- R/C two channel surface frequency radio system
- Electronic Speed Control (ESC)
- Steering Servo
- 2S, 7.4V Lipo stick battery or 7.2V NiMH battery
- Peak detection battery charger
- Retaining Ring Pliers
- Polycarbonate specific paint
- Pinion gear, size to be determined by type and wind of motor you use
- R/C Electric Motor
- Servo Horn (AE #89007)
- Thread Lock (AE #1596)

Tools included:

- Allen wrenches (.035", .050", 1/16", 3/32")
- Shock building tool

## :: Other Helpful Items

- Silicone Shock Fluid (Refer to website for complete listings)
- Tire Adhesive (AE #1597)
- Shock Pliers (AE #1681)
- Wire Cutters / Hobby Knife
- Body Scissors (AE #1737)
- Green Slime shock lube (AE #1105)
- Needle Nose Pliers
- Reamer / Hole Punch (AE #1499)
- Calipers or a Precision Ruler
- Soldering Iron

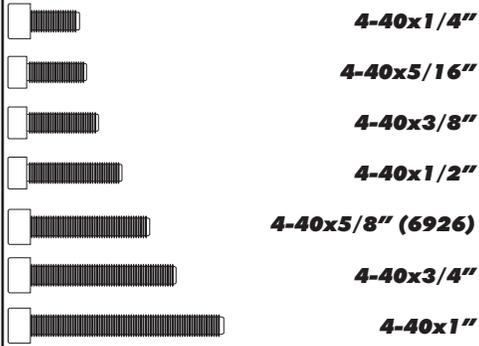
**Associated Electrics, Inc.**  
21062 Bake Parkway  
Lake Forest, CA 92630



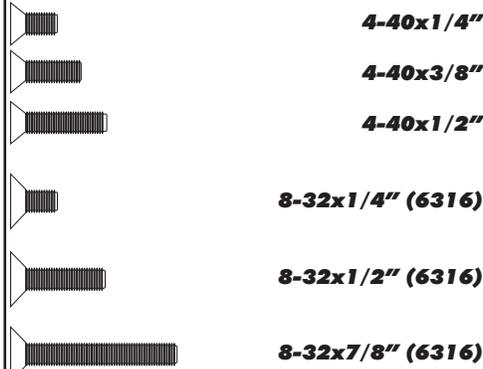
**Customer Service**  
Tel: 949.544.7500  
Fax: 949.544.7501

**:: Hardware - 1:1 Scale View**

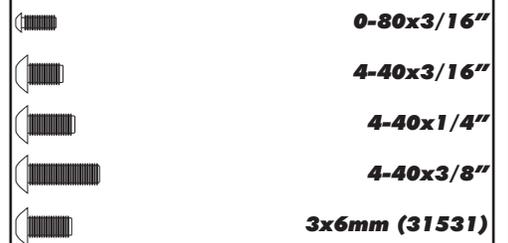
**Cap Head (shcs)**



**Flat Head (fhcs)**



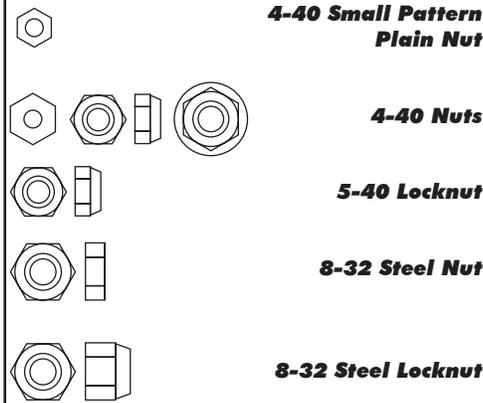
**Button Head (bhcs)**



**Shims and Washers**



**Nuts (lock/plain)**



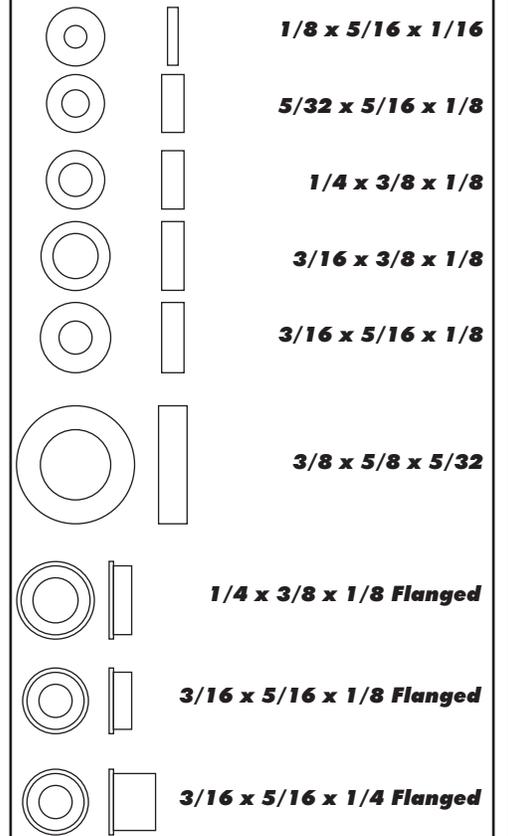
**Set Screws**



**Diff Balls**



**Bushings / Bearings**



**Notes:**

Blank area for notes.

**:: Table of Contents**

1..... Cover	12 - 13..... Turnbuckles Build (Bag F)
2..... Introduction	13 - 15..... Shocks Build (Bag G)
3..... 1:1 Hardware "Fold Out"	16..... Chassis Build (Bag H)
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5..... Chassis / Steering Build (Bag A)	18 - 21..... Wheels, Tires and Body Install (Bag J)
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11 - 12..... Rear Suspension Build (Bag E)	

**:: Notes**

This symbol indicates a special note or instruction in the manual.



**There is a 1:1 hardware foldout page in the front of the manual. To check the size of a part, line up your hardware with the correct drawing until you find the exact size.**

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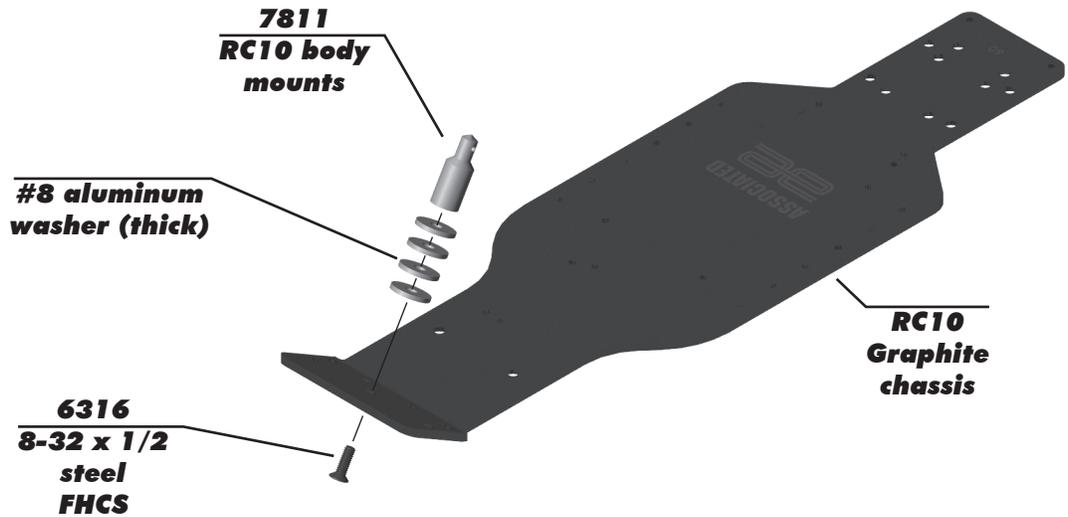


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**:: Chassis / Steering Build - Bag A - Step 1**



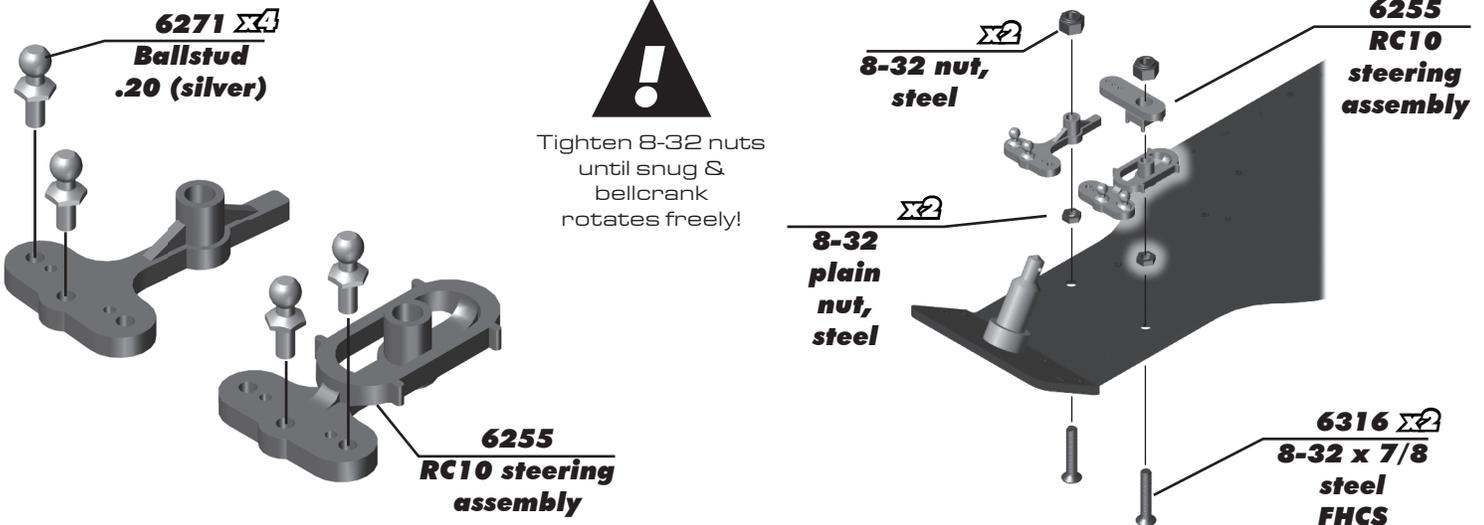
Washers are used to adjust to your preferred body height.



**:: Chassis / Steering Build - Bag A - Step 2**

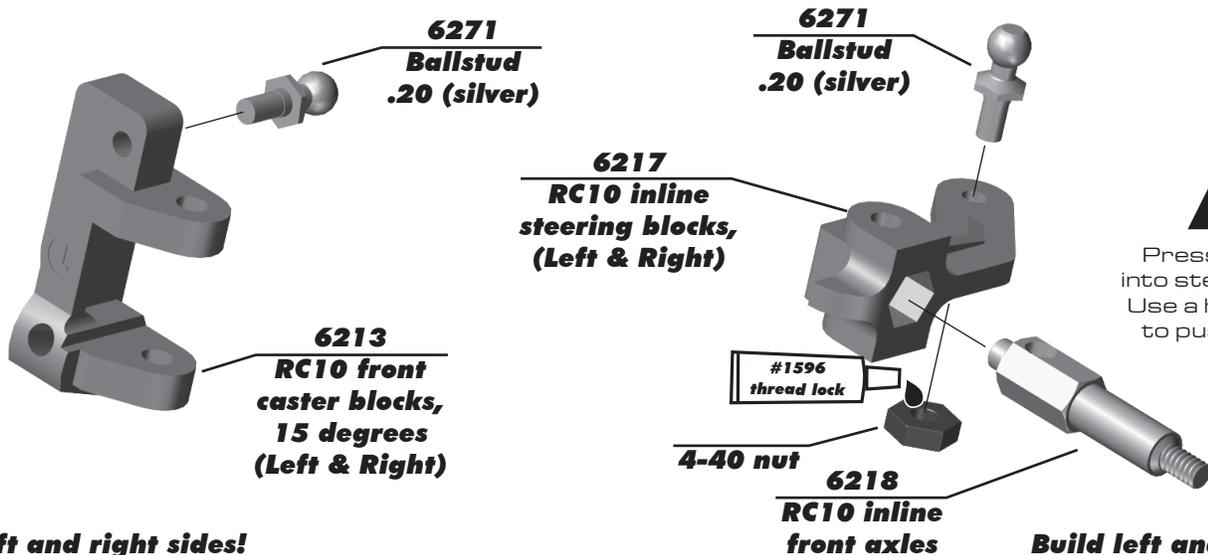


Tighten 8-32 nuts until snug & bellcrank rotates freely!



**:: Front Suspension Build - Bag B - Step 1**

**LEFT**

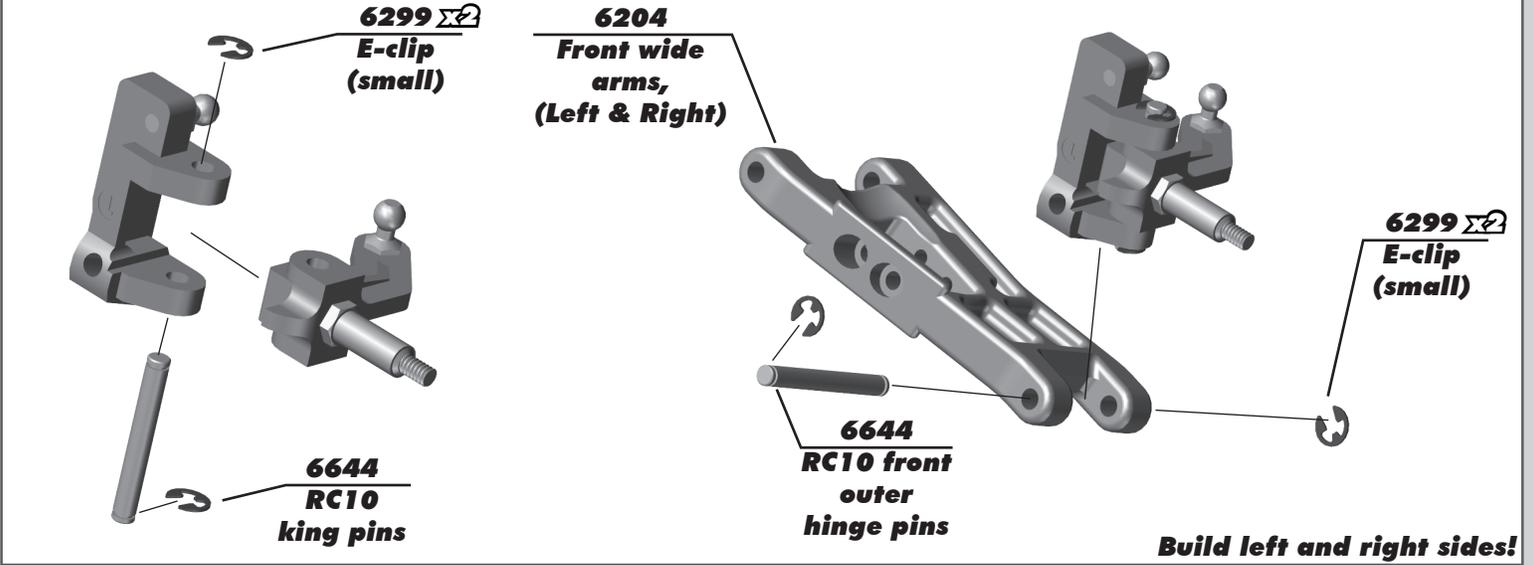


Press stub axles into steering blocks. Use a hard surface to push down on!

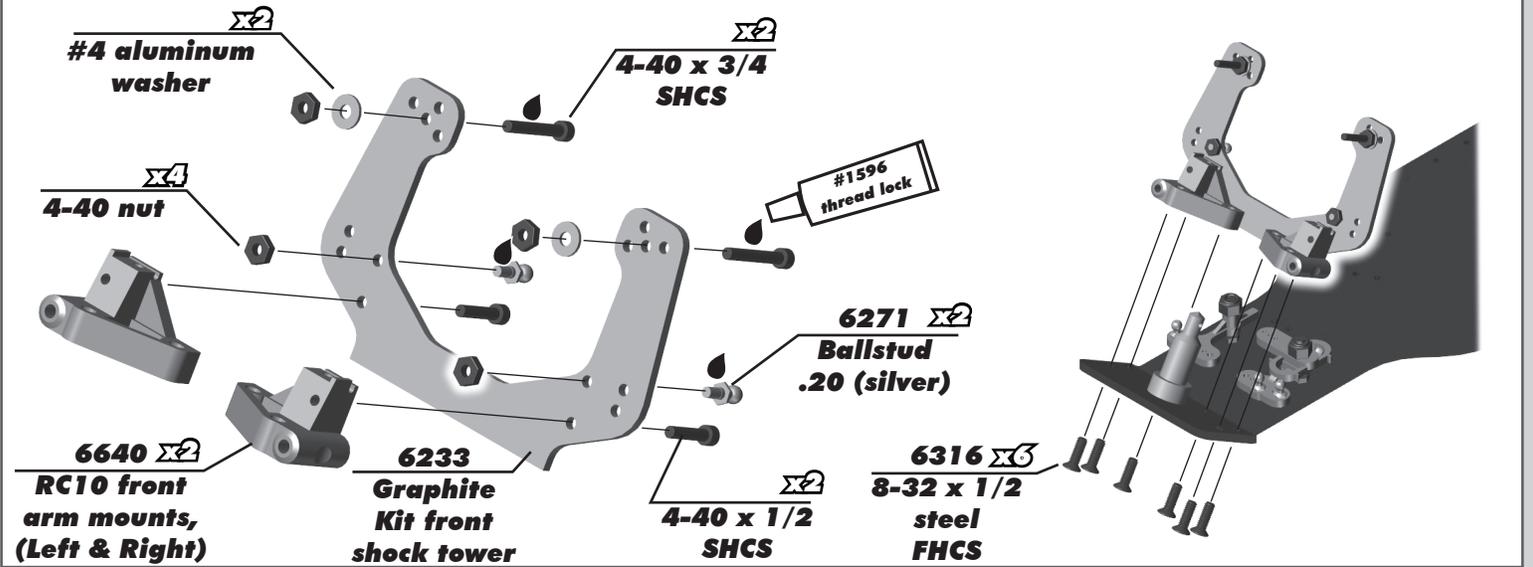
**Build left and right sides!**

**Build left and right sides!**

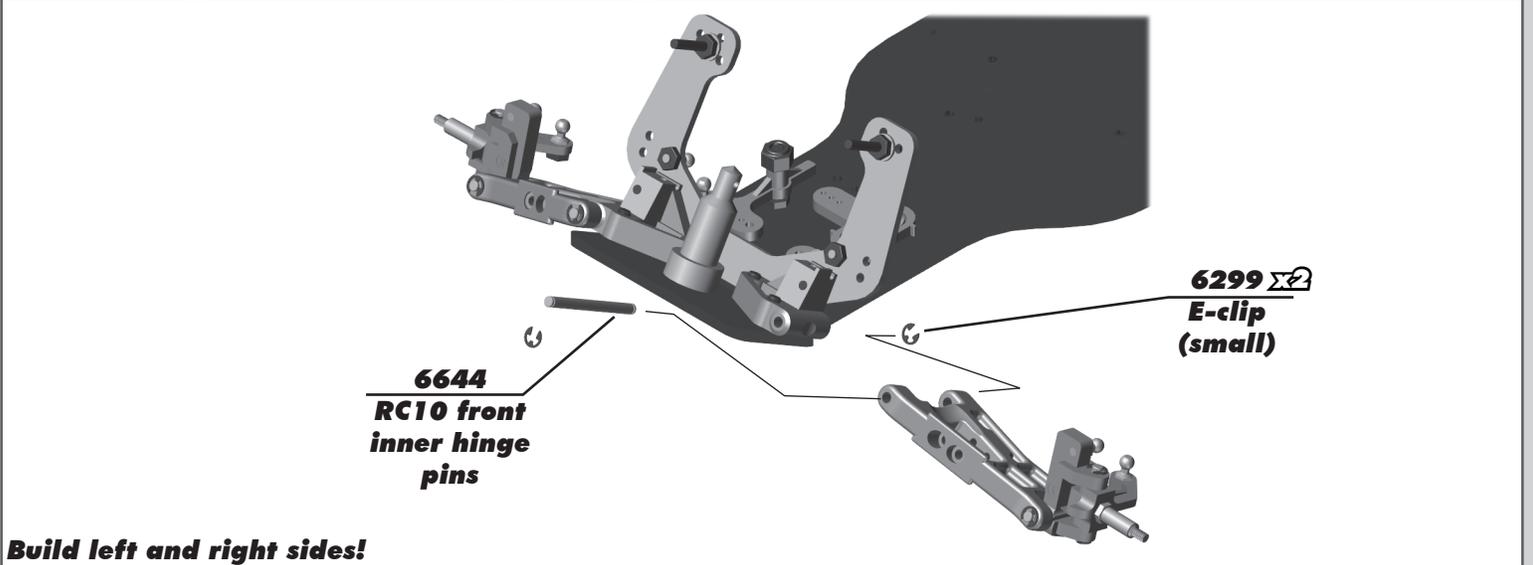
**:: Front Suspension Build - Bag B - Step 2**



**:: Front Suspension Build - Bag B - Step 3**



**:: Front Suspension Build - Bag B - Step 4**



**:: Transmission Build - Bag C - Step 1**

**Drive gear pivot pin**



Remove any burrs if necessary with hobby knife!



Key drive gear pin into slot on spine plate!

**RC10 spine plate**

**Drive gear pivot nut**



**:: Transmission Build - Bag C - Step 2**

**RC10 idler gear pivot**

**NOTE:** Install washer [1] before bowed e-clip [2]

**Bowed e-clip**



Curved side of bowed E-Clip should point outwards!

**Washer 5mm x 0.17mm**

**Racer's Tip:** Use a small amount of CA glue on idle pivot hole.

**:: Transmission Build - Bag C - Step 3**

**Bearing 3/16x5/16x1/4**

**Flanged Bearing 3/16x5/16x1/4**

! Snap internal retaining clip into groove with internal snap ring pliers!

**RC10 internal retaining clip**

**RC10 axle drive gear**

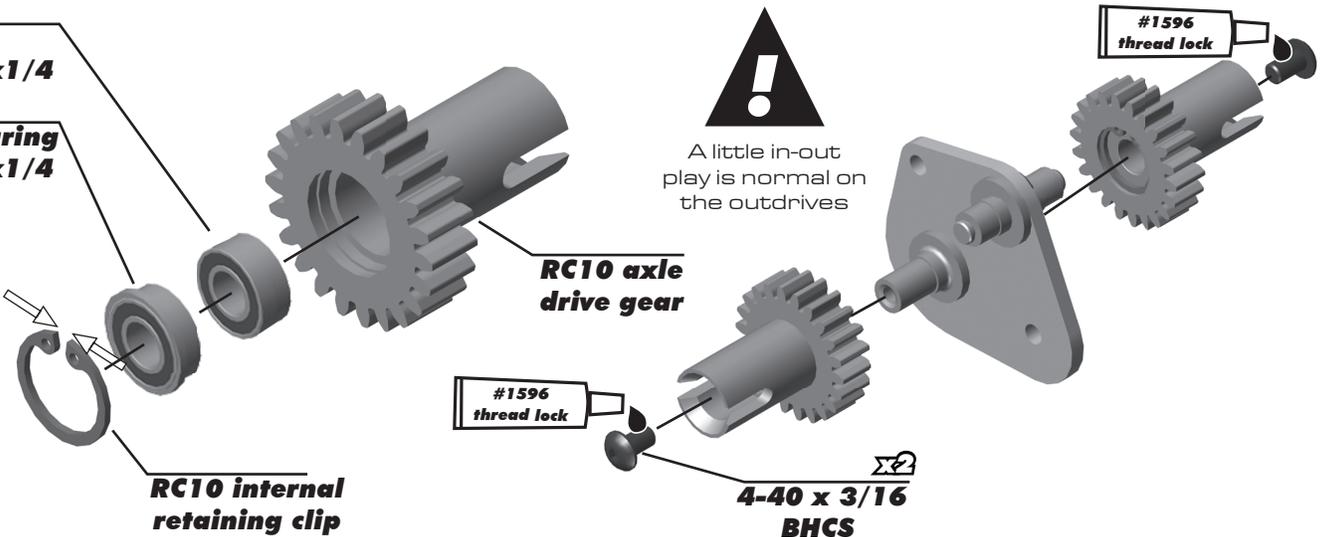
! A little in-out play is normal on the outdrives

**#1596 thread lock**

**4-40 x 3/16 BHCS**

**#1596 thread lock**

**Build 2**



**:: Transmission Build - Bag C - Step 4**

**Flanged Bearing**  
3/16x5/16x1/8

**6613 RC10 idler gear**

**6299 E-clip (small)**

**0-80 x 3/16 BHCS** x4

**Build 2**

Carefully tighten screws in x-pattern!

**:: Transmission Build - Bag C - Step 5**

**RC10 diff shaft and pinion**

**RC10 diff thrust bearing**

**RC10 diff bushing** x2

**RC10 diff thrust washers (small & large)**

**RC10 diff pinion**

**RC10 bearing adapter**

**Flanged Bearing**  
1/4 x 3/8 x 1/8

**RC10 diff tube w/hub**

**Bushing**

**#6588 black grease**

**#6636 silicone lube**

Use just enough black grease to cover the balls on the thrust bearing!

Use #6636 silicone lube on the inside of diff pinion

Press bushing in, make sure it is flush with diff hub!

Slip the gear onto the tube and tap the assembly together using the handle of a hammer or a plastic handle of a screwdriver. Do not use a vise!

**:: Transmission Build - Bag C - Step 6**

**Spur gear**  
81T, 48P

**#6636 silicone lube**

**1/8 diff balls** x3

Apply silicone grease into each hole of the spur gear before inserting diff balls. Insert diff balls opposite of stamped number on spur gear. Make sure they are evenly covered in lube!

**Diff drive rings**

**Caution:**  
Do not get any grease on the back side of the diff drive rings or the diff hub.

Make sure diff rings sit flat on hub!

**:: Transmission Build - Bag C - Step 7**

**Caution:**  
Do not get any grease on the back side of the diff drive rings or the outer hub.

**RC10 diff outer hub**

**Diff drive rings**

**RC10 diff spring**

**5-40 locknut**

**Caution:**  
Make sure diff rings sit flat on hub!

**Caution:**  
Tighten locknut until spring is fully compressed, then back out until lock nut is flush with shaft end. Adjust as necessary.

**:: Transmission Build - Bag C - Step 8**

**6637 RC10 motor plate, Gold**

**6642 RC10 transmission case, (right)**

**6642 RC10 transmission case, (left)**

**RC10 bearing adapter**

**6299 E-clip (small)**

**Flanged Bearing 3/16 x 5/16 x 1/8**

**Caution:**  
Cutting a slot in the bearing adapter will make e-clip installation easier!

**:: Transmission Build - Bag C - Step 9**

**RC10 felt**

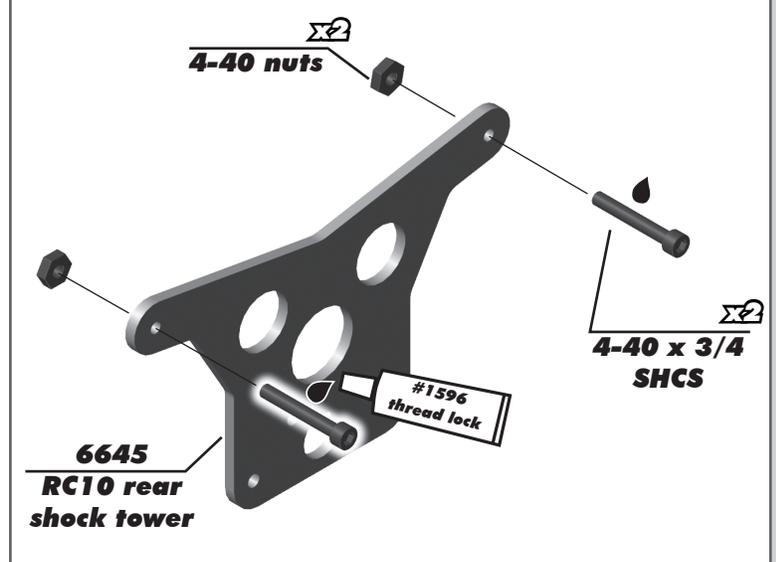
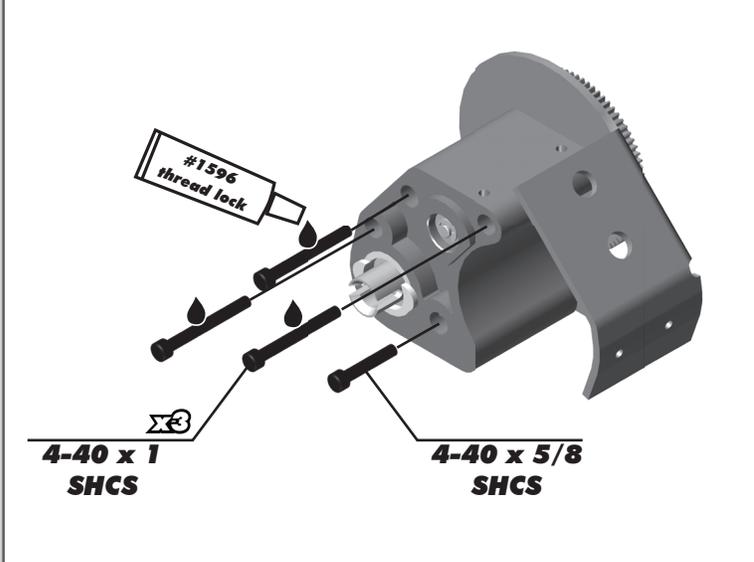
**RC10 felt seal**

**4-40 plain nut (small)**

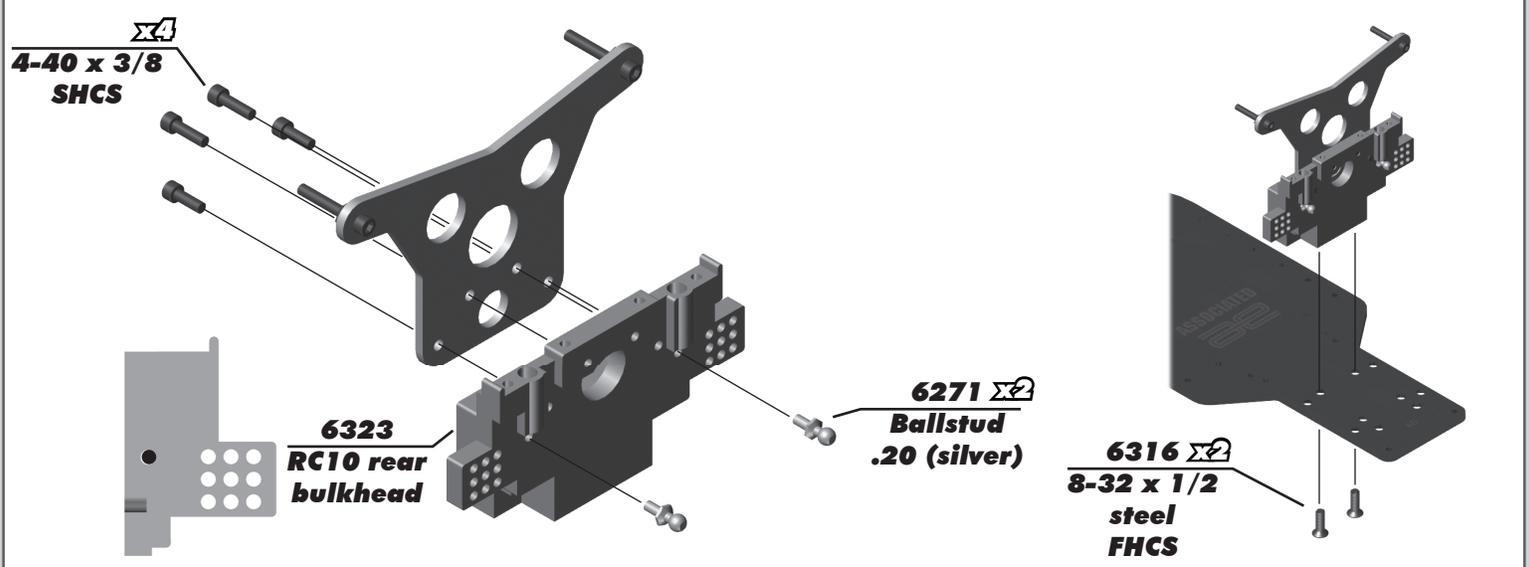
**Caution:**  
Press nut all the way inside the transmission case.

**:: Transmission Build - Bag C - Step 10**

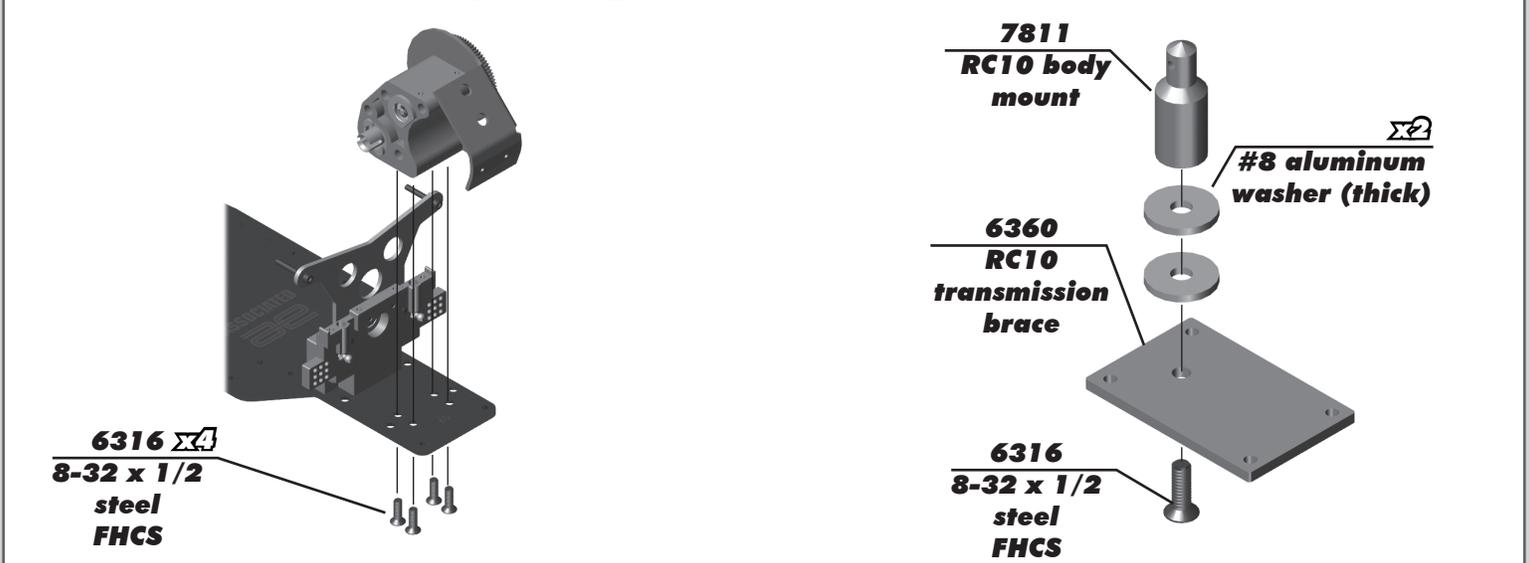
**:: Rear Bulkhead Build - Bag D - Step 1**



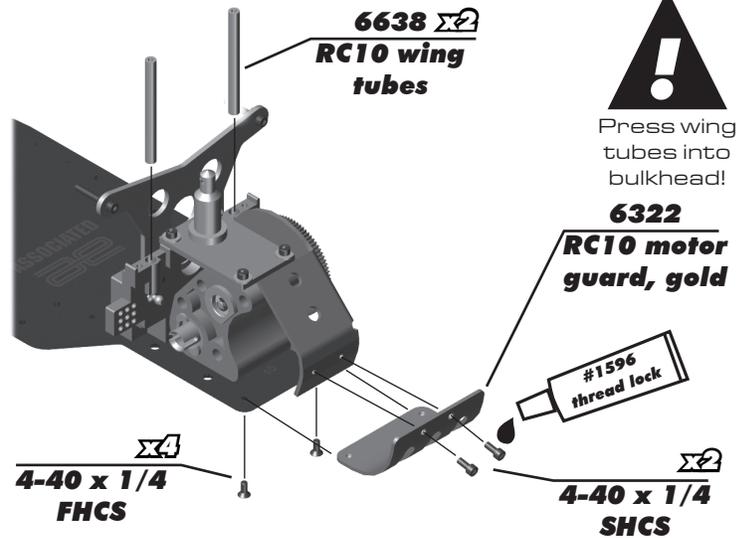
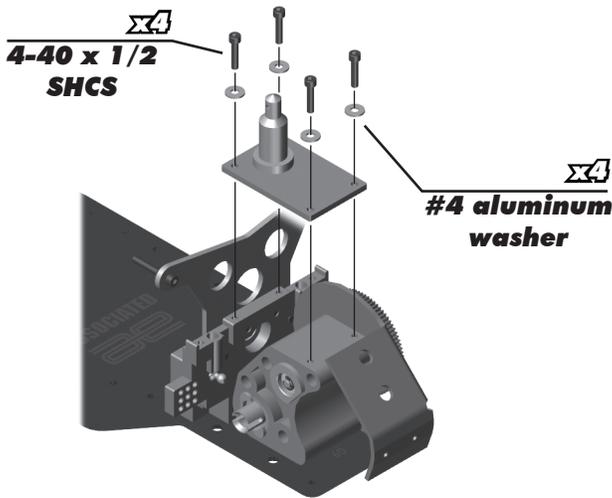
**:: Rear Bulkhead Build - Bag D - Step 2**



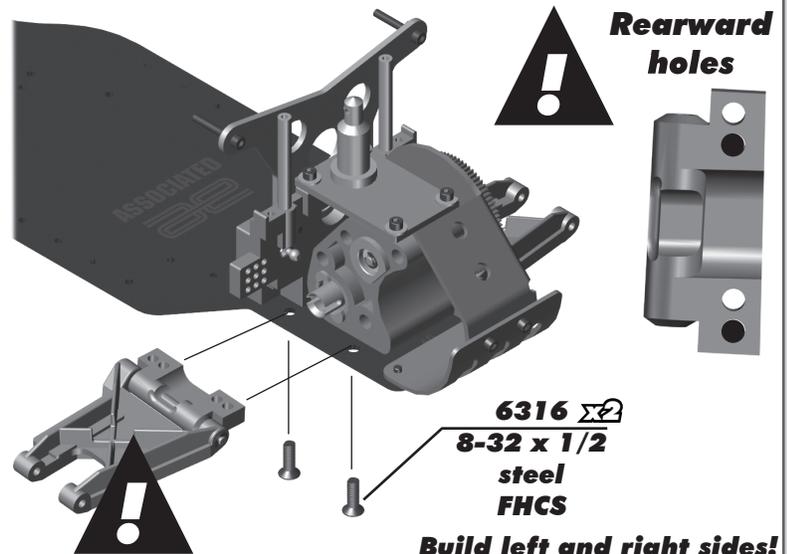
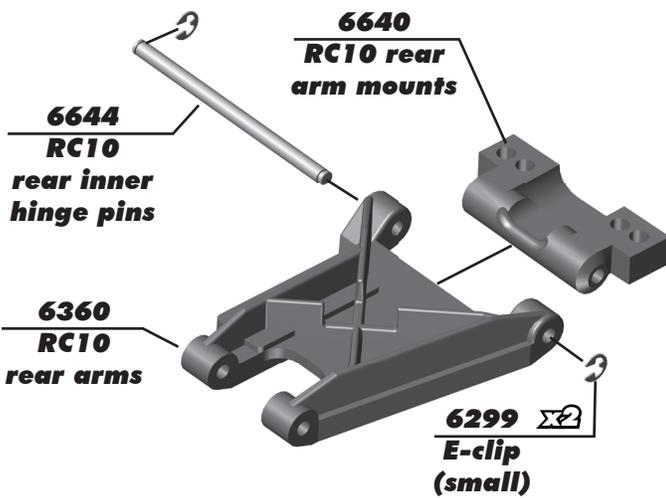
**:: Rear Bulkhead Build - Bag D - Step 3**



**:: Rear Bulkhead Build - Bag D - Step 4**



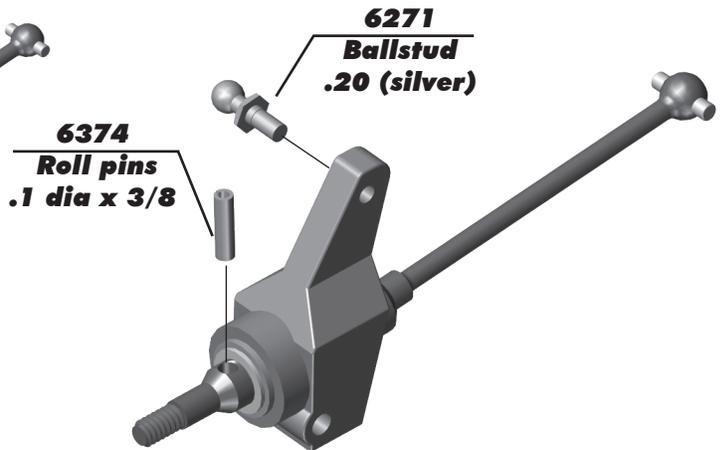
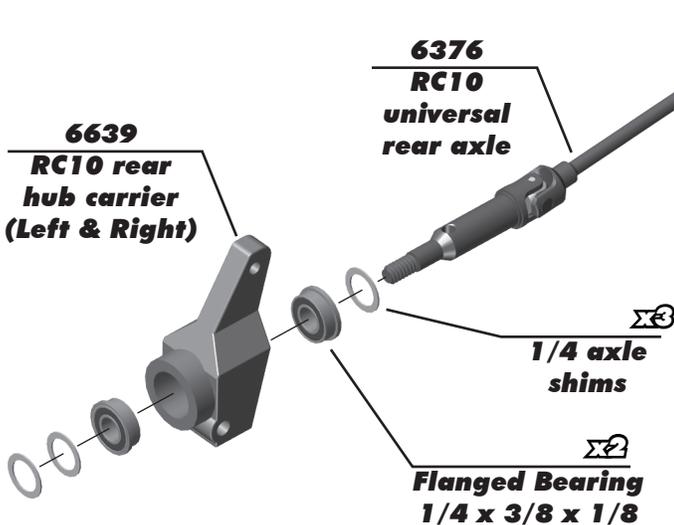
**:: Rear Suspension Build - Bag E - Step 1**



**Build left and right sides!**

**Build left and right sides!**

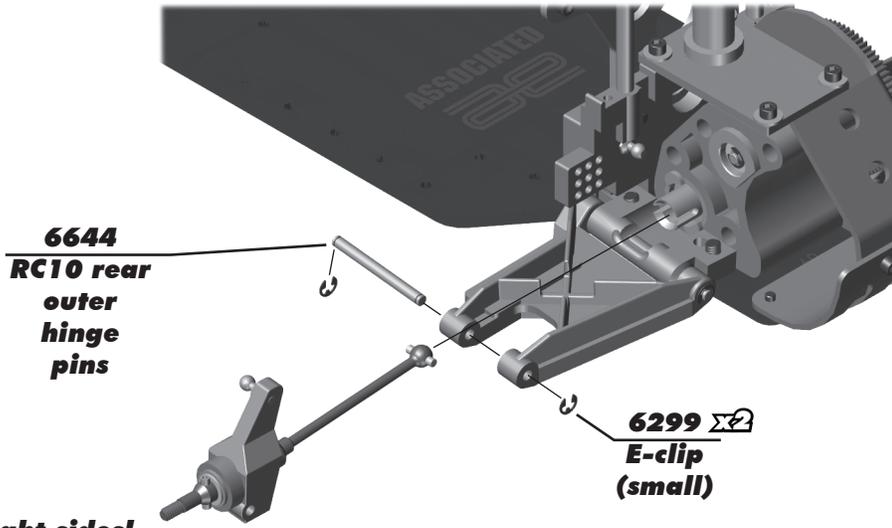
**:: Rear Suspension Build - Bag E - Step 2**



**Build left and right sides!**

**Build left and right sides!**

**:: Rear Suspension Build - Bag E - Step 3**



**Build left and right sides!**

**:: Turnbuckles Build - Bag F - Step 1**



Orient the notch to the left throughout the car. It indicates which end has the left hand threads!



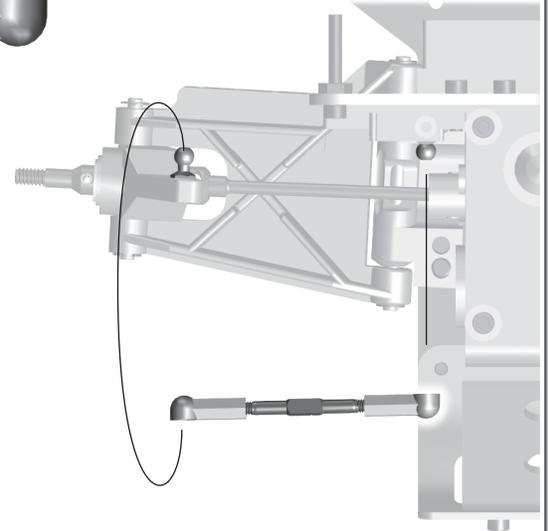
**6279**  $\Sigma 2$   
**Ball cups**  
**(white)**

**6267**  
**Steel turnbuckle,**  
**black (2.06")**

**Rear Camber Turnbuckle**  
**1.00" (25.50mm)**



Recommended turnbuckle lengths are approximate. Final recommended settings = 0 degree Front Toe in and -2 Degree Camber Front and Rear.



**Build left and right sides!**

**:: Turnbuckles Build - Bag F - Step 2**



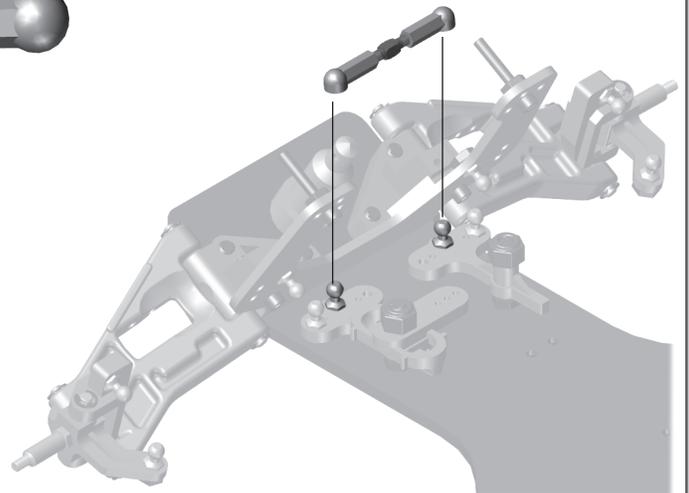
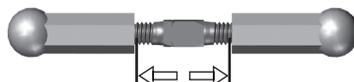
Orient the notch to the left throughout the car. It indicates which end has the left hand threads!



**6279**  $\Sigma 2$   
**Ball cups**  
**(white)**

**6267**  
**Steel turnbuckle,**  
**black (1.06")**

**Steering Rack Turnbuckle**  
**0.50" (12.5mm)**



**:: Turnbuckles Build - Bag F - Step 3**



Orient the notch to the left throughout the car. It indicates which end has the left hand threads!



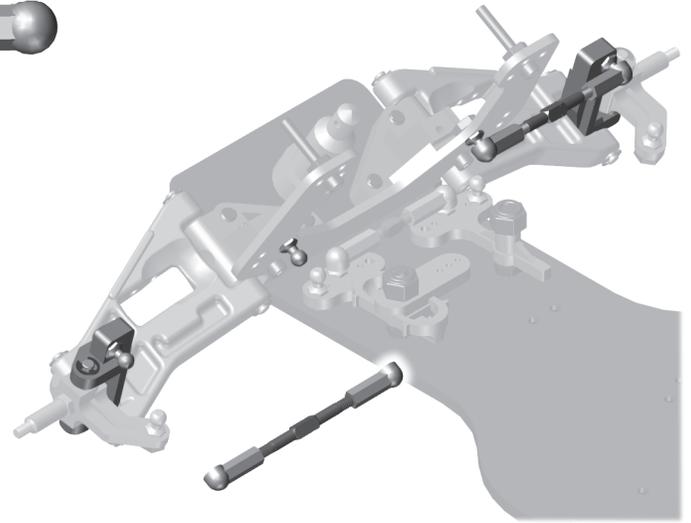
**6279**  $\Sigma 2$   
**Ball cups**  
**(white)**

**6267**  
**Steel turnbuckle,**  
**black (1.65'')**

**Front Camber Turnbuckle**  
**1.14'' (29.00mm)**



Recommended turnbuckle lengths are approximate. Final recommended settings = 0 degree Front Toe in and -2 Degree Camber Front and Rear.



**Build left and right sides!**

**:: Turnbuckles Build - Bag F - Step 4**



Orient the notch to the left throughout the car. It indicates which end has the left hand threads!



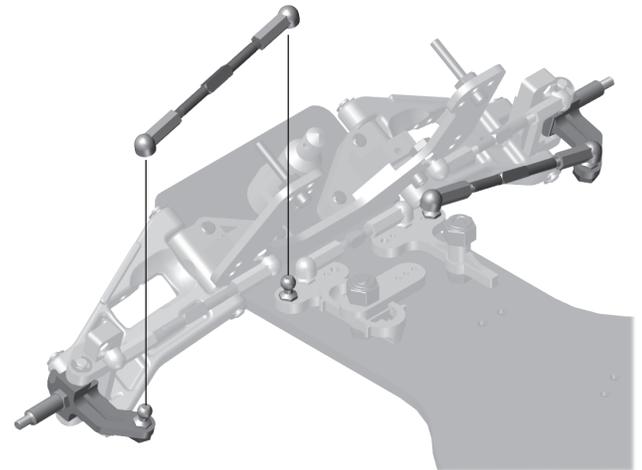
**6279**  $\Sigma 2$   
**Ball cups**  
**(white)**

**6267**  
**Steel turnbuckle,**  
**black (1.65'')**

**Steering Turnbuckle**  
**1.37'' (35.00mm)**



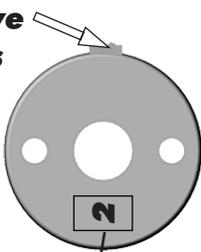
Recommended turnbuckle lengths are approximate. Final recommended settings = 0 degree Front Toe in and -2 Degree Camber Front and Rear.



**Build left and right sides!**

**:: Turnbuckles Build - Bag F - Step 5**

**Remove spurs**



**Piston**

**Piston number here**  
**Use #2 = front shocks**  
**Use #2 = rear shocks**



**TIP:** Use marker to mark the piston numbers for easy identification!

**6299**  
**E-clip**  
**(small)**

**6462**  
**Shock shaft,**  
**front (0.56)**

**6420**  
**Shock shaft,**  
**rear (1.32)**

**6420/6462**  
**Shock pistons**  
**(1, 2, 3)**

**6299**  
**E-clip**  
**(small)**



**Build two front and two rear!**

**:: Shocks Build - Bag G - Step 2**

**5407**  $\Sigma$ 2  
**Red o-ring**

**Remove spurs**

**Shock assembly tool**

**6437**  
**FT Hard Anodized shock body, front (0.71)**

**6435**  
**FT Hard Anodized shock body, rear (1.32)**

**6420/6462**  $\Sigma$ 2  
**Off-road shock rebuild kit**

**Shock fluid 30wt #5422**

**SNAP!**

**Front Shock**

**Rear Shock**

Place on table and push down hard until clamp snaps into place

**:: Shocks Build - Bag G - Step 3**

**Front Shock**

**Rear Shock**

**6420/6462**  $\Sigma$ 2  
**Shock downstops**

**6420/6462**  
**Shock cap o-ring**

**6420/6462**  
**Shock pivot ball**

**6420/6462**  
**Shock rod end**

**Build two front and two rear!**

**:: Shocks Build - Bag G - Step 4**

**Shock fluid 30wt #5422**

**6420/6462**  
**RC10 shock cap Gold**

**Step 1-3**

**Step 3-4**

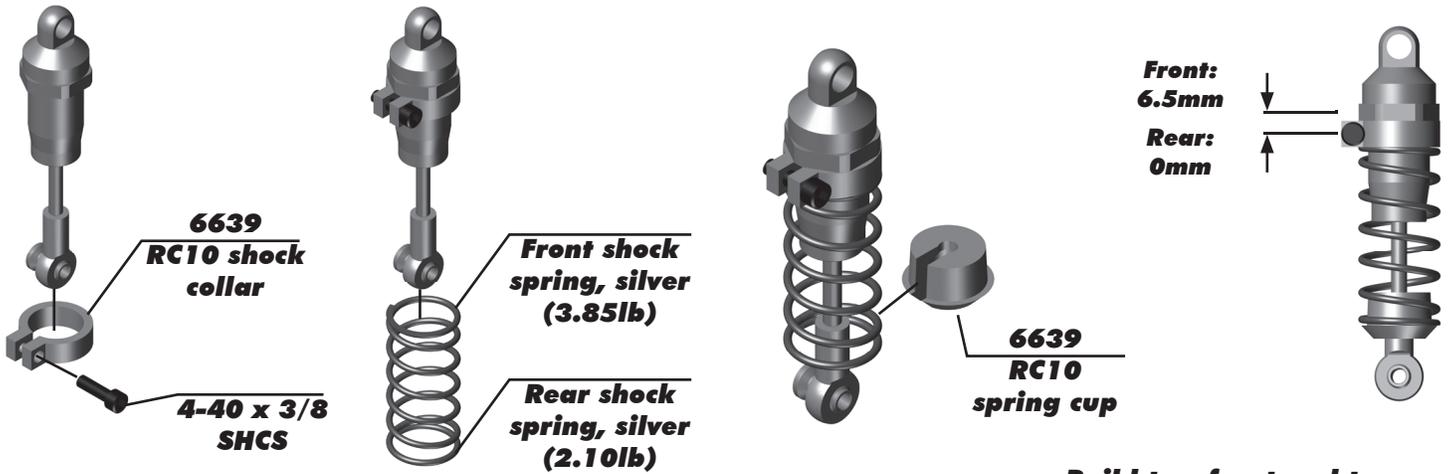
**Step 5-6**

**Step 7**

**\* Shock Bleeding Steps:**

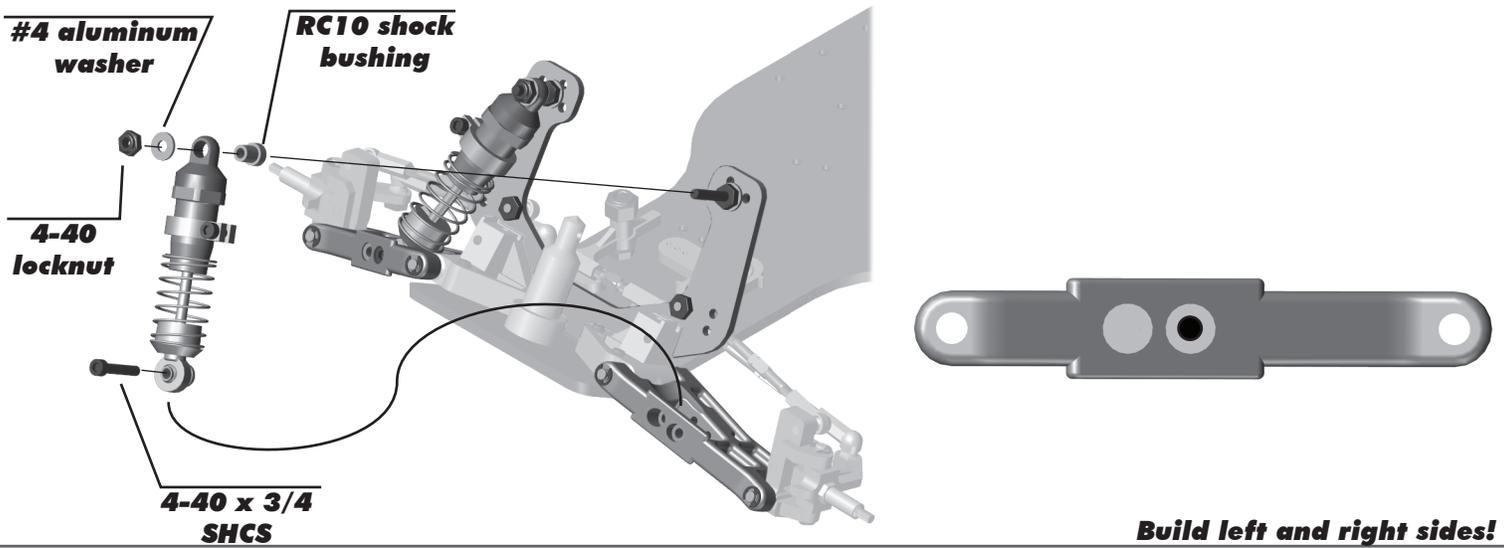
1. Pull shock shaft down.
2. Fill shock body 3/4 full with silicone fluid.
3. Slowly move the shock shaft up and down to remove air from under piston.
4. Wait for bubbles to come to surface.
5. Fill shock body to top with silicone fluid.
6. Place several drops of oil in the cap and on cap threads.
7. Install cap and tighten completely.
8. Slowly compress shaft all the way to the top. If there is pressure at the top of the stroke, there is too much oil. You must bleed it out.
9. Slowly pull shaft down.
10. Unscrew the cap 3/4 turn and tilt the shock at a slight angle.
11. Slowly compress the shaft to push out excess oil and air. You should see bubbles coming out from under the cap.
12. With the shaft compressed, tighten the cap and re-check for pressure at the top of the stroke. If there is still pressure, repeat steps 9 thru 11.

**:: Shocks Build - Bag G - Step 5**

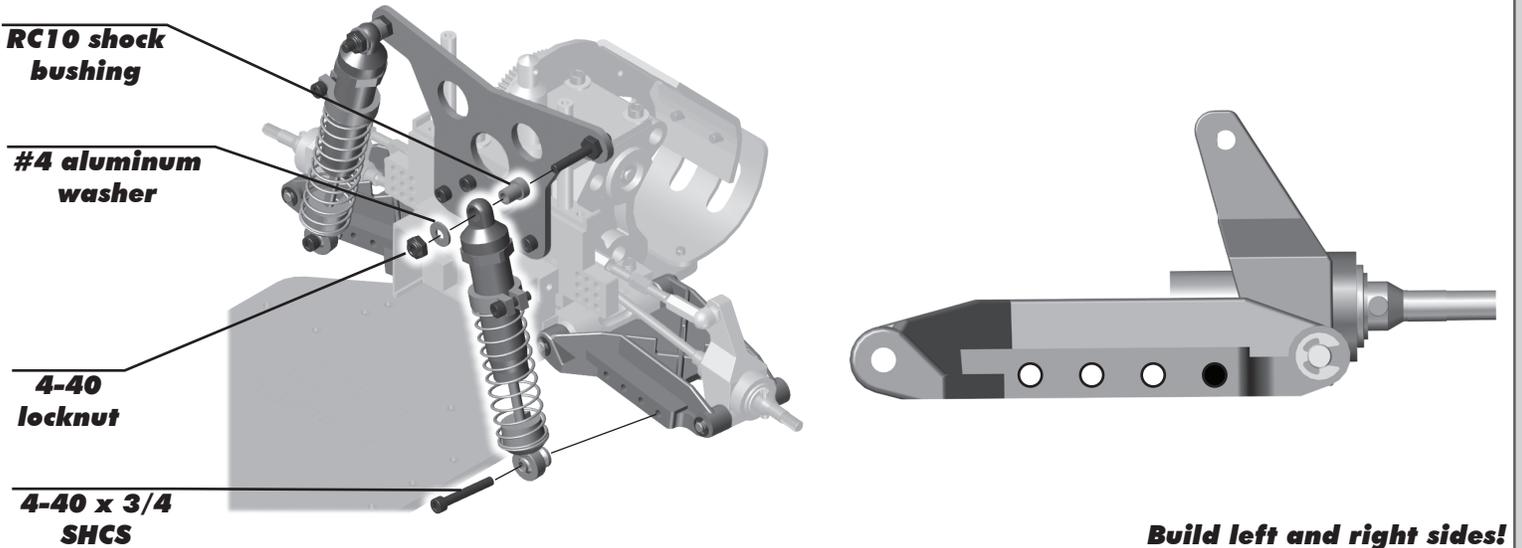


**Build two front and two rear!**

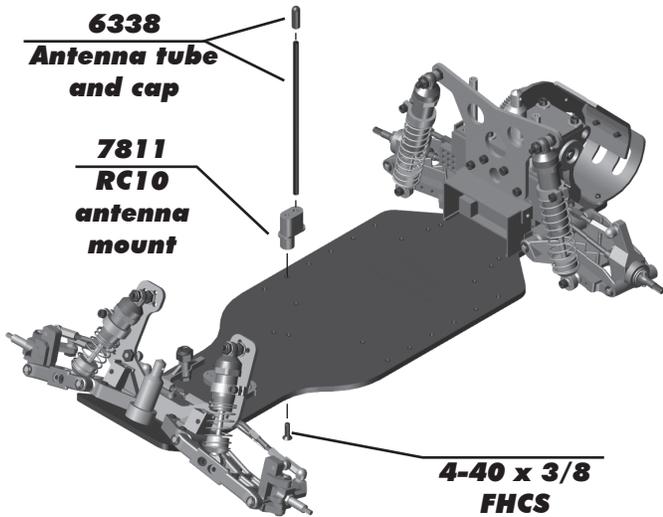
**:: Shocks Build - Bag G - Step 6**



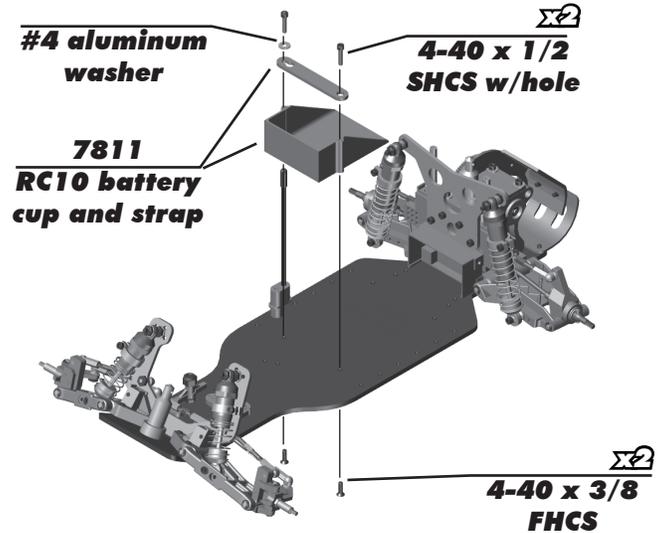
**:: Shocks Build - Bag G - Step 7**



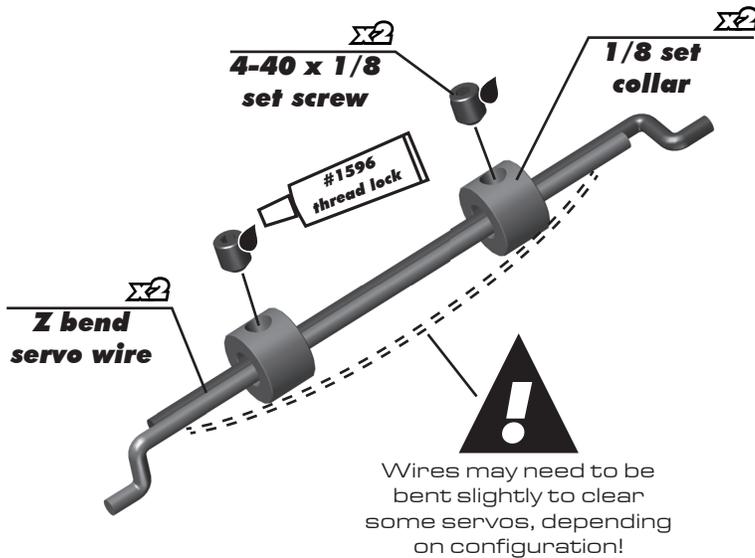
**:: Chassis Build - Bag H - Step 1**



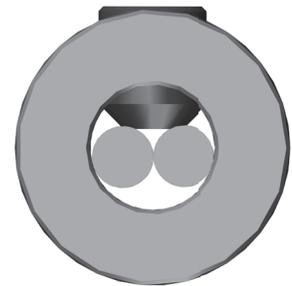
**Build left and right sides!**



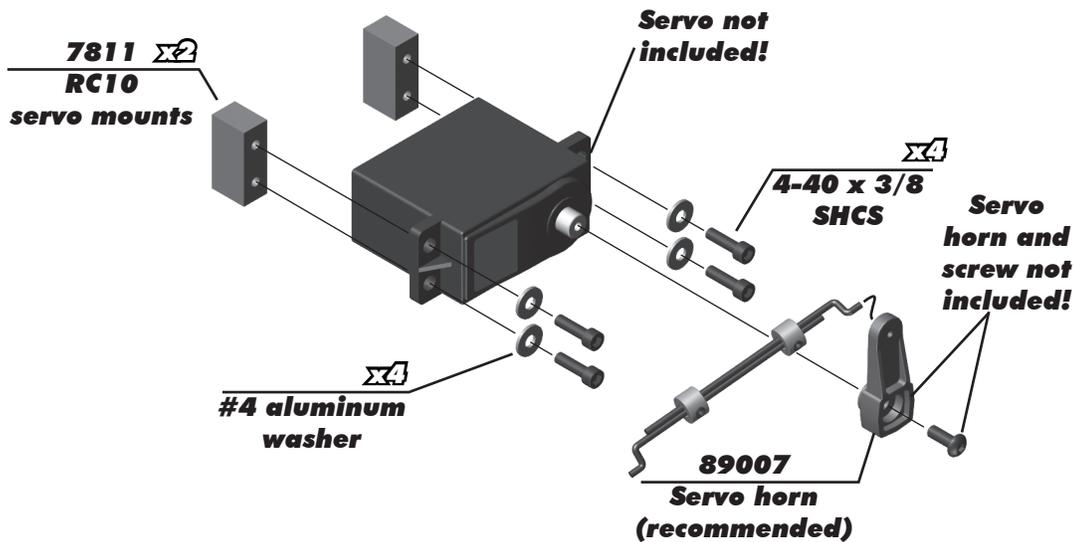
**:: Electronics Build - Bag I - Step 1**



Align Z-bend wires so that the set screw tightens down on both wires at once!



**:: Electronics Build - Bag I - Step 2**

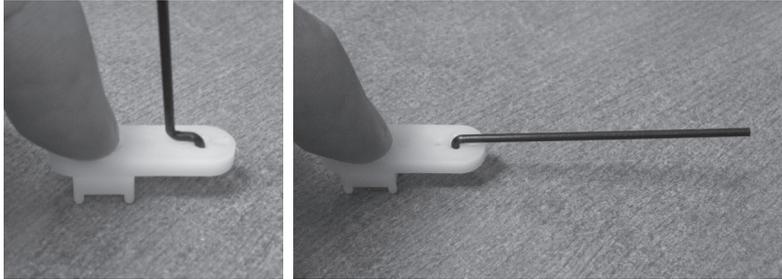


**:: Electronics Build - Bag 1 - Step 3**

Follow steps below to properly install Z bend wire into servo horn and steering link.

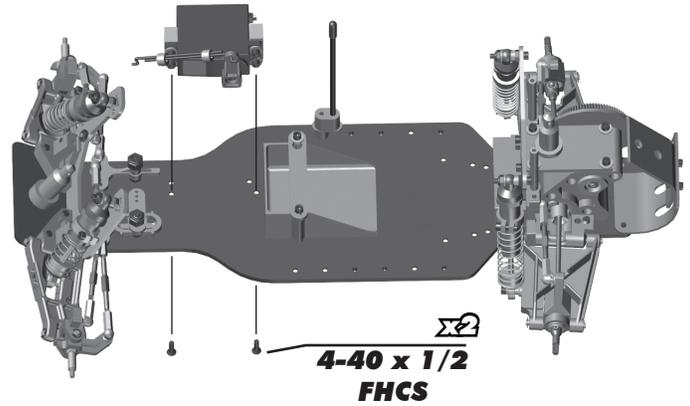


**NOTE:** Hole choice may vary depending on servo and servo horn used.

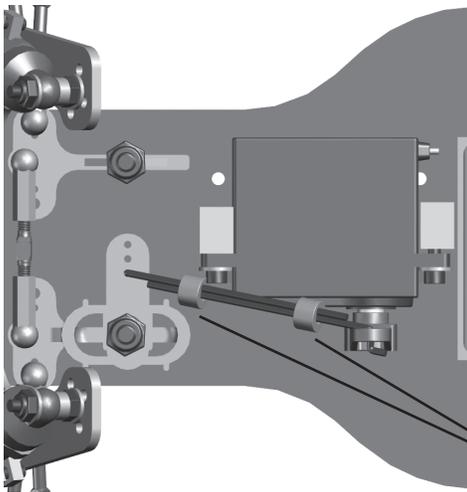


- 1) Press down on the Z bend wire....
- 2) Rotate the wire so the Z bend wire is fully installed into steering link as shown.

**TIP:** Chamfering the top of the hole slightly will help to press in Z bend wire.



**:: Electronics Build - Bag 1 - Step 4**



Install Z bend servo wire into steering bellcrank as shown. Ensure that full steering throw can be achieved with your servo horn setup!

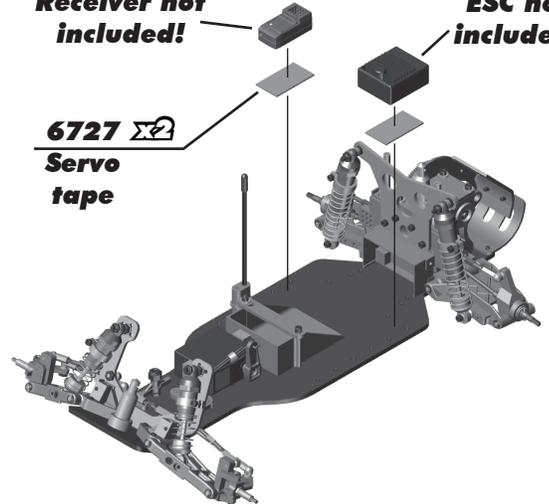


Space collars as wide as possible while still clamping both wires.

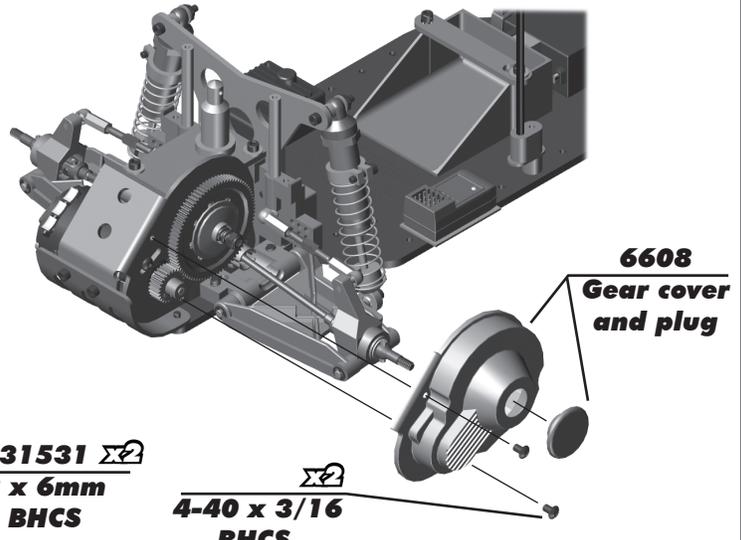
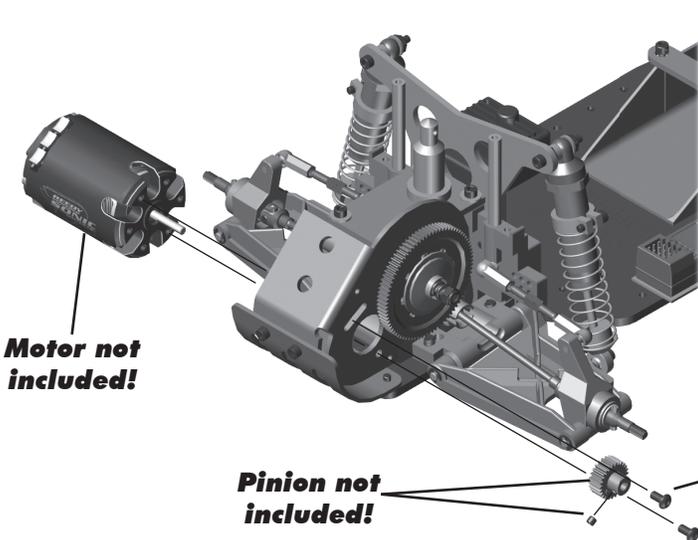
**Receiver not included!**

**ESC not included!**

**6727**  $\Sigma$   
**Servo tape**



**:: Electronics Build - Bag 1 - Step 5**

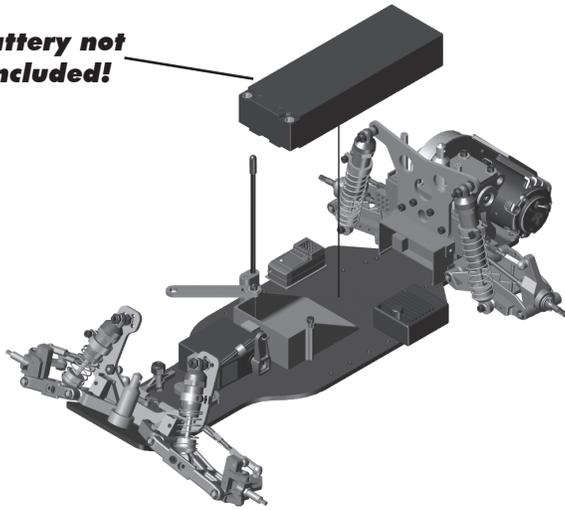


**31531**  $\Sigma$   
**3 x 6mm BHCS**

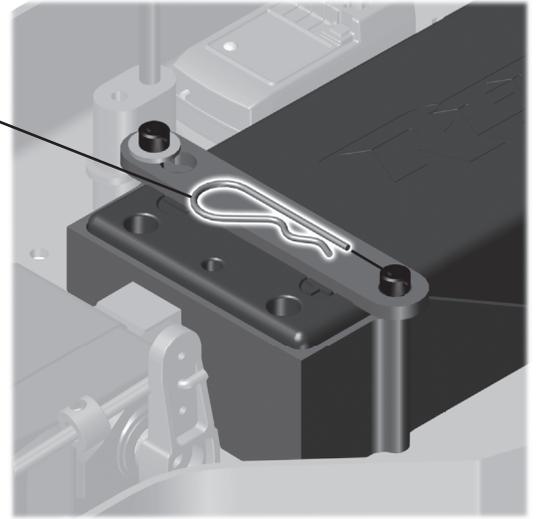
$\Sigma$   
**4-40 x 3/16 BHCS**

**:: Electronics Build - Bag I - Step 6**

**Battery not included!**



**6332  
Body clip**



**:: Wheels / Tires and Body - Bag J - Step 1**

**6872  
Front Tire,  
Ribbed**



**Pro Tip!**

Front tires may fit tight on the front wheels. Use a drop of water to lubricate the tire bead during installation.

**Build 2**

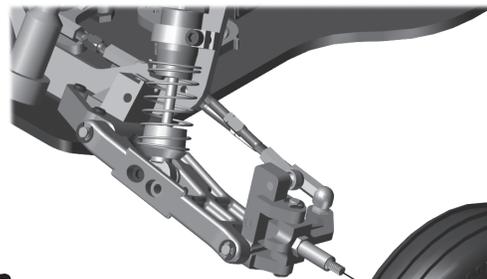
**6852  
Front wheels,  
1 Piece**



**Flanged Bearing  
3/16 x 3/8 x 1/8**



**x2**



**4-40  
locknut**

**:: Wheels / Tires and Body - Bag J - Step 2**

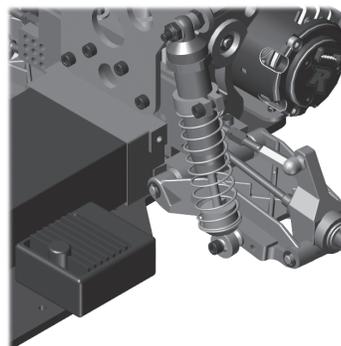
**6822  
RC10  
rear tire  
2.0"**



**6806  
RC10 rear  
wheel  
2.0"**

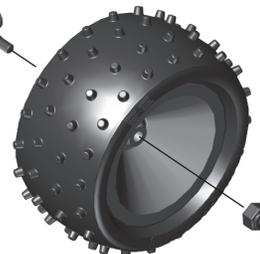


**Build 2**



**8-32 steel  
locknut**

**x2**



## :: Wheels / Tires and Body - Bag J - Step 3

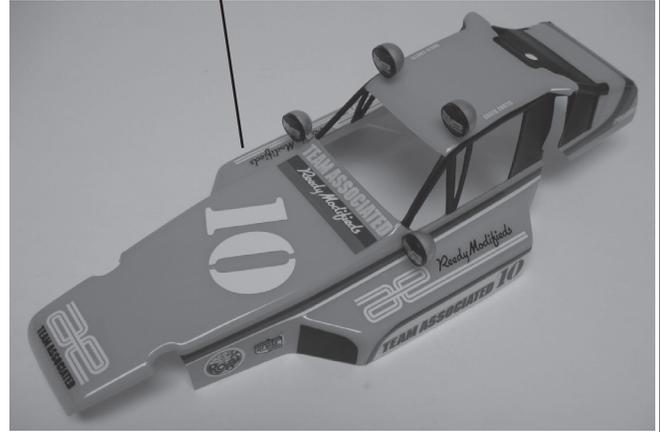
### Painting Tips:

Your RC 10 Kit comes with a clear polycarbonate body and wing. You will need to prep the body and wing before you can paint them. Wash the inside thoroughly with warm water and liquid detergent. Dry the body and wing using a clean, soft, lint-free cloth. Use high quality masking tape to make masks for the windows and install them on the inside of the body (RC cars get painted from the inside). Using high quality masking tape, apply tape to the inside of the body to create a design. Spray (either rattle can or airbrush R/C specific paint) the paint to the inside of the body (preferably dark colors first, lighter colors last).

NOTE: use ONLY paint that is recommended for use with (polycarbonate) plastics. If you do not, you can destroy the plastic body and wing!!!!). It is recommended to wear a mask while painting.

After the paint has dried, cut the body and wing along the trim lines. Make sure to drill or use a body reamer to make the holes for the body mounts, wing mounts, and antenna!

**6173  
RC10  
Protech II body,  
unpainted**



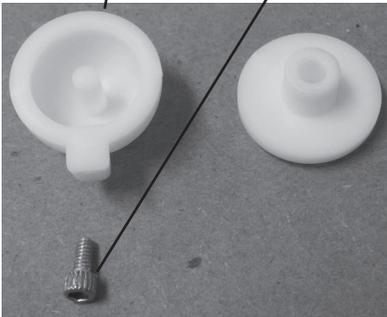
## :: Wheels / Tires and Body - Bag J - Step 4

### Light Buckets:

Press the light bucket halves together. Install light buckets with 2-56 x 3/16 SHCS in areas shown.

**6639  
Light  
buckets**

**x4  
2-56 x 3/16  
SHCS**



Mount the light buckets in any location of your choosing, or not at all.



## :: Wheels / Tires and Body - Bag J - Step 5

### Painting Tips:

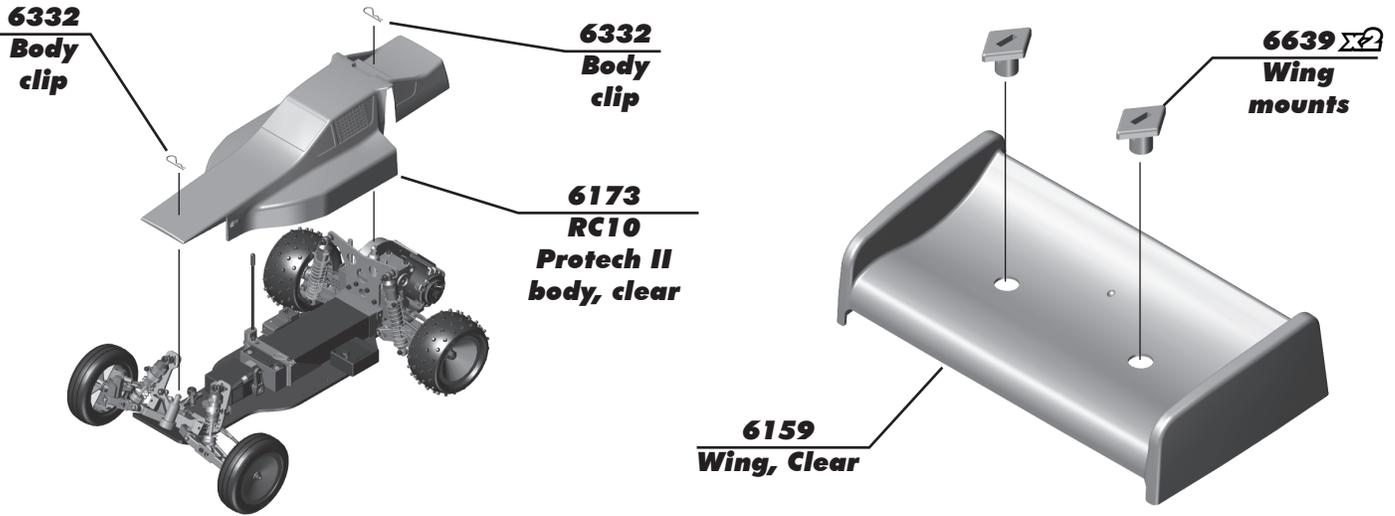
**Driver :**  
Your RC 10 Kit comes with a clear polycarbonate driver figure. You will need to prep the driver figure before you can paint it. Wash the inside and outside thoroughly with warm water and liquid detergent. Dry the driver figure using a clean, soft, lint-free cloth. The driver figure can be painted from the inside or the outside, depending on what type of finish you would like. If painted from the inside, the painted sections will appear glossy. If painted on the outside, the painted sections will appear flat or matte finished. Trim as shown and install inside the body using strapping tape. After painting, cut the body and wing along the trim lines.

NOTE: use ONLY paint that is recommended for use with (polycarbonate) plastics. If you don't, you can destroy the plastic body, driver figure, and wing!!!!.

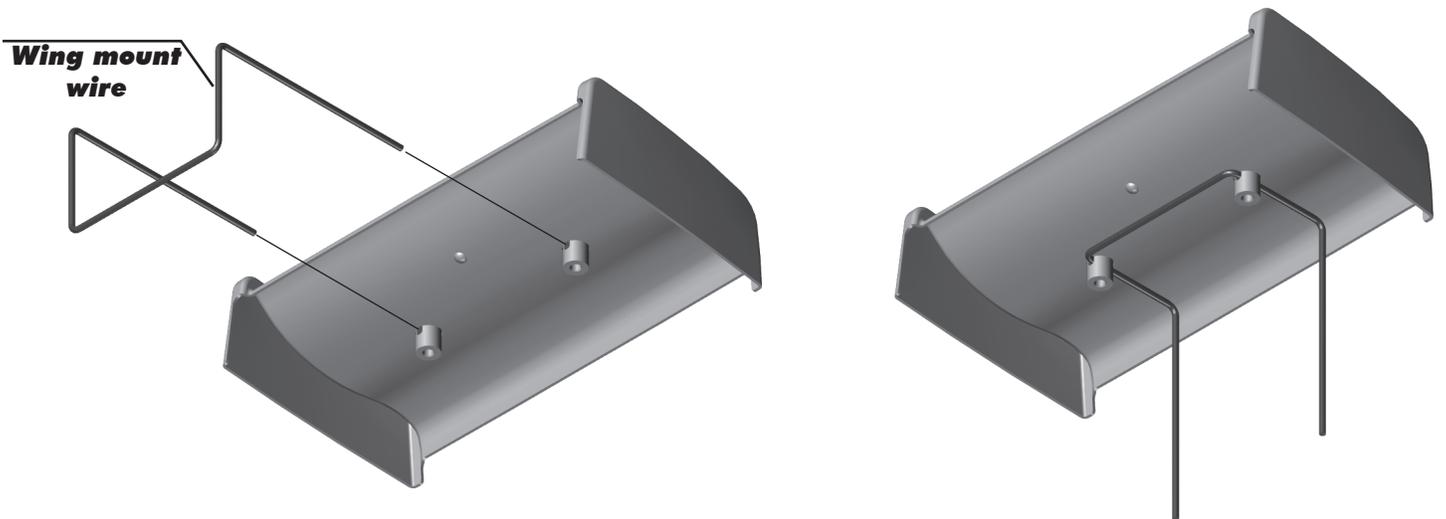
**RC10 driver  
figure, clear**



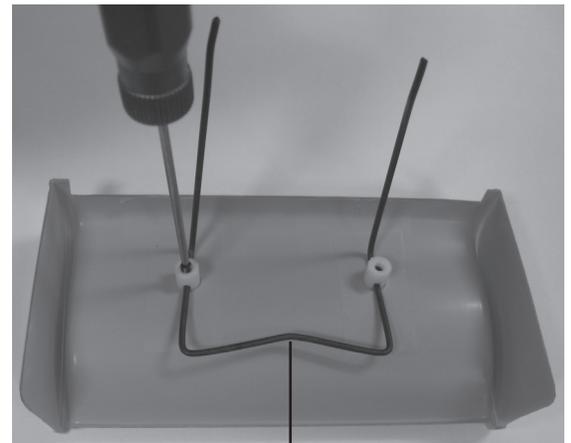
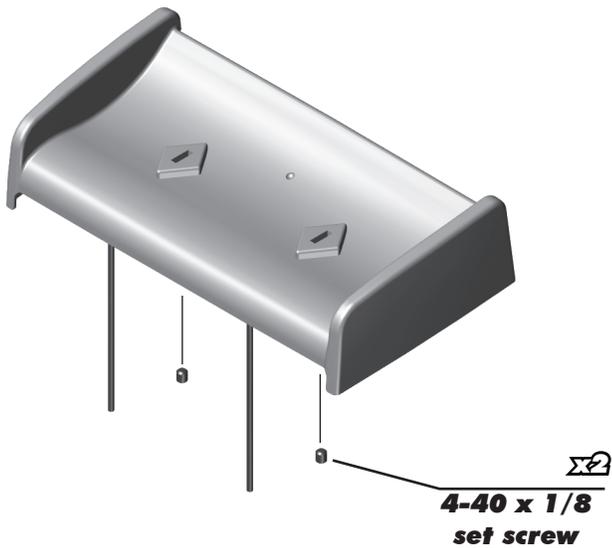
**:: Wheels / Tires and Body - Bag J - Step 6**



**:: Wheels / Tires and Body - Bag J - Step 7**



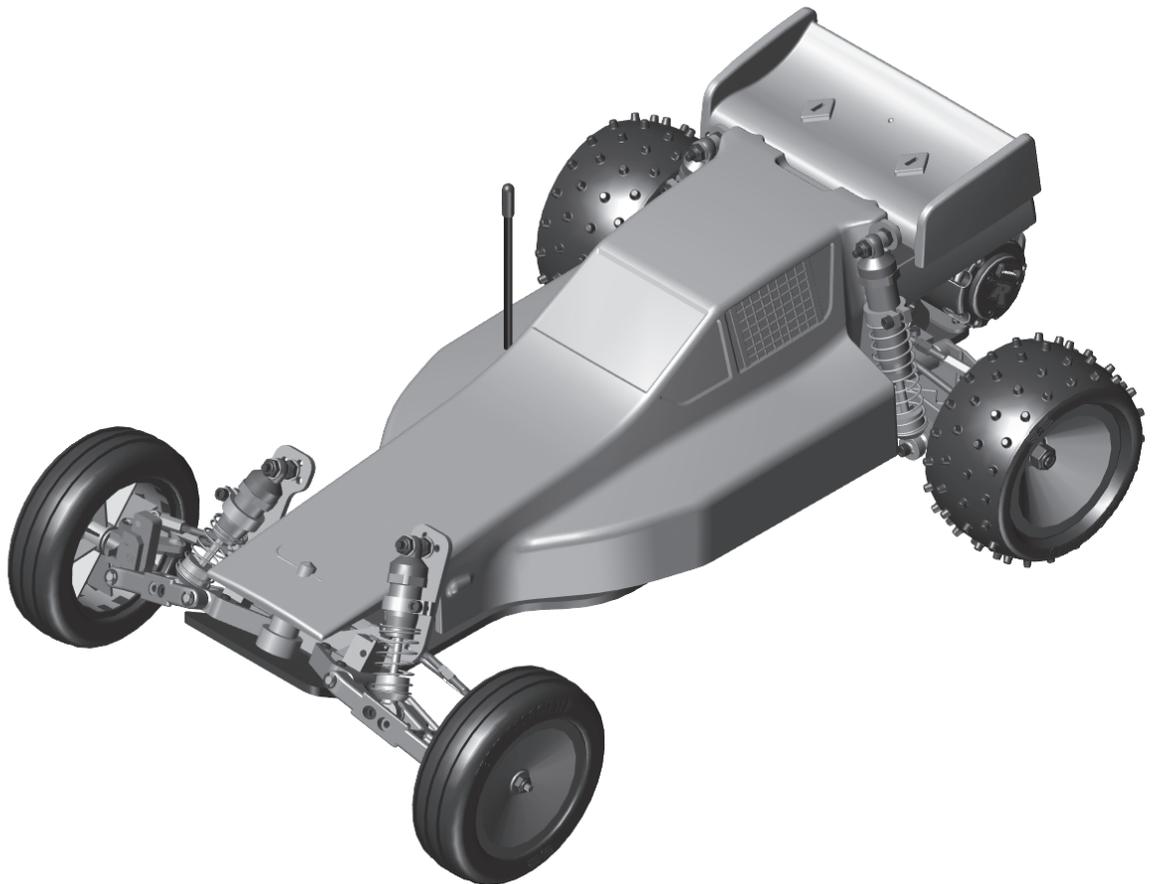
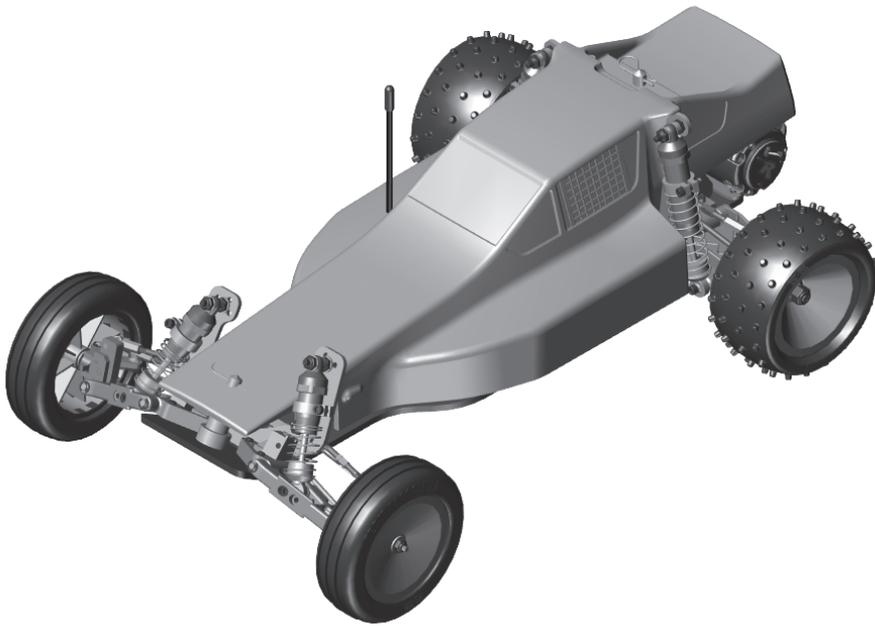
**:: Wheels / Tires and Body - Bag J - Step 8**



**TIP:** Bending the wire as shown can help ensure the wing buttons are parallel.

**:: Wheels / Tires and Body - Bag J - Step 9**

**TIP:** Bend wire to create tight fit inside wing tubes.



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