

1:10 Scale 2WD Electric Off Road Competition Short Course Kit





veareat

#### :: Introduction

Thank you for purchasing this Team Associated product. This assembly manual contains instructions and tips for building and maintaining your new vehicle. Please take a moment to read through the manual and familiarize yourself with the steps. We are continually changing and improving our designs; therefore, actual parts may appear slightly different than 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.

#### :: RC10SC6.4 KIT Features

- New 13mm big bore threaded aluminum shocks and springs with machined shock pistons for improved bump / jump handling
  13mm machined shock pistons, 2x1.6mm front and 2x1.8mm rear
- New front ballstud mount and top plate with angled steering system for improved steering consistency
- New 3.5mm heavy-duty ball cups and turnbuckles for maximum durability
- Updated rear suspension with wider C and D mounts from the RC10B6.4 series
- New longer 92.5mm CVA driveshafts for more rear grip
- 7.0mm blue aluminum rear clamping hexes with laser etching
- New chassis side rails with the RC10B6.4 fan mount system
- New short course truck length aluminum chassis with 22.5° kick-up to complement updated front-end geometry and with new shape to reduce chassis scrub with the track surface
- 20°, 22.5°, and 25° molded bulkheads included for a complete range of caster and kickup options
- B6.4 adjustable height steering bellcrank and rack system for optimized bumpsteer at all ride heights and caster angles
- B6.4 -1mm kingpin offset steering and caster block set for smoother and more predictable steering through the entire wheel throw
- Aluminum RC10B6.4 ESC mounting tray shifted forward in the chassis and with a wider footprint to fit electronics, resulting in a weight bias placed further forward
- Factory Team RC10B6.4 11g aluminum ESC tray

## :: Additional

Your new SC6.4 Team Kit comes unassembled and requires the following items for completion (Refer to www.rc10.com and www.Reedypower.com for complete listings):

- RC two channel surface frequency radio system
- AA-size batteries for transmitter (#302 alkaline)
- Electronic Speed Control, ESC
- Steering servo
- 540 size electric motor
- Pinion gear (48P), size determined by type/wind of motor
- Battery charger (a peak detection charger, or LiPo compatible charger)
- 2 cell LiPo battery pack
- Polycarbonate 1/10 Short course body
- Polycarbonate specific spray paint

## :: Other Helpful Items

- Silicone Shock Fluid (Refer to www.rc10.com for complete listings):
- Body Scissors (AE Part #1737)
- FT Body Reamer
- FT Hex/Nut Wrenches (AE Part #1519, 1650) FT Ballcup Wrench (#1579)
- Green Slime shock lube (AE Part #1105)
- Soldering Iron
- Needle Nose Pliers

FT Dual Turnbuckle Wrench (#1114)Hobby Knife

- Cyanoacrylate glue (CA)(#1597)
- Thread locking compound (#1596)
- Tires and Inserts, Fronts and Rears
- Wheels w/12mm Hex
   Black Method Wheels #71040

- Shock Pliers (#1681)
- FT Universal Tire Balancer (#1498)
- Calipers or a Precision Ruler
- Wire Cutters

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



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http://www.RC10.com • http://twitter.com/Team\_Associated • http://www.instagram.com/teamassociatedrc/ • http://www.facebook.com/TeamAssociated/

:: Hardware - 1:1 Scale View **Button Head (bhcs)** Flat Head (fhcs) **Ball Bearings** 2x4mm (31510) 2x3mm (91749) 4x7x2.5mm (31732) 2.5x6mm (31520) 2.5x8mm (31448) 5x8x2.5mm (8680) 2.5x8mm (31521) 3x8mm (25201) 2.5x10mm (31522) 3x10mm (25202) 5x10x4mm (91560) 3x4mm (91158) 3x12mm (25203) 3x5mm (31530) 3x14mm (89208) 5x12x4mm (91567) 3x6mm (31531) 3x16mm (25204) 3x8mm (31532) 3x18mm (89209) 10x15x4mm (91563) 3x10mm (25211) Set Screws 3x12mm (89202) 3x2.5mm (31500) **Ballstuds** 3x14mm (25187) 3x3mm (25225) Silver 5mm long (31283) 3x16mm (89203) 3x5mm (89219) 3x18mm (2308) Silver 8mm long (31284) 3x10mm (4671) 3x20mm (25188) 3x20mm (91737) HD 6mm (91047) 3x22mm (25189) Ti HD 6mm (91751) Socket Head (shcs) 3x24mm (89204) HD 8mm (91048) 1.6 x 5mm (91611) Ti HD 8mm (91752) 3x30mm (91478) 3 x 18mm (25191) HD 10mm (91049) 3 x 6mm (41089) Ti HD 10mm (91753) Nuts (lock/plain) 3 x 22mm (41095) M3 Plain Nut (91477) M3 Alum. Locknut, Blue (31550) **Diff Balls** Shims and Washers M3 Locknut, Black (25215 3/32 Carbide Diff Balls (6581) (kit) Ο (O) || 5.5x0.5mm (31381) M3 Locknut w/Flange (25612) FT 3mm Locknuts, Blue(25392) 3/32 Ceramic Diff Balls (6584)  $(\bigcirc)$ 5.5x1.0mm (31382) (FT Option) M4 Nuts: (O)5.5x2.0mm (31383) Serrated Steel (Silver)(91826) Thrust Washer (91990) FT Alum. Locknut (Blue) (25391) (0)2.6x6mm Washer (89278) Serrated Steel (Black) (91738) Caged Thrust Washer (91990) Serrated Steel LP (Black) (91150)  $\bigcirc$ 3x8mm Washer (89218)

Notes:

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#### **:: Notes**



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

This symbol indicates a Racers Tip.



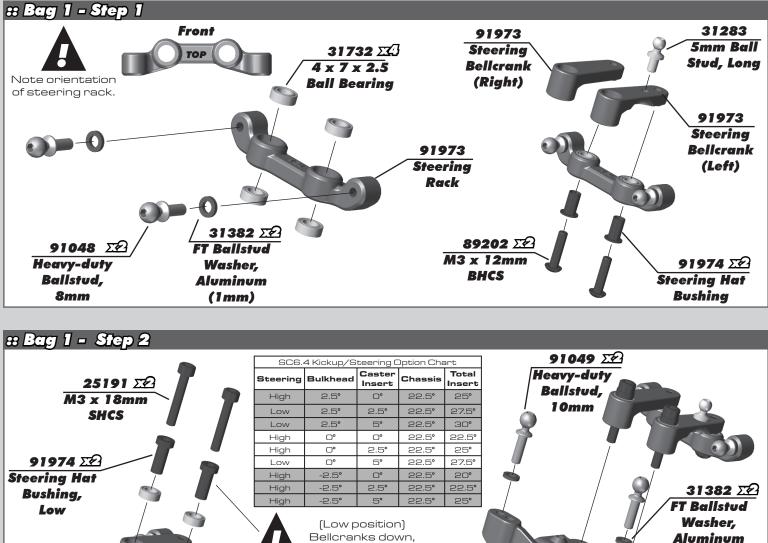
There is a 1:1 hardware foldout page in the front of the manual. To check the size of a part, line up your hardware with the correct drawing until you find the exact size. Each part in the foldout has a number assigned to it for ordering replacement parts.

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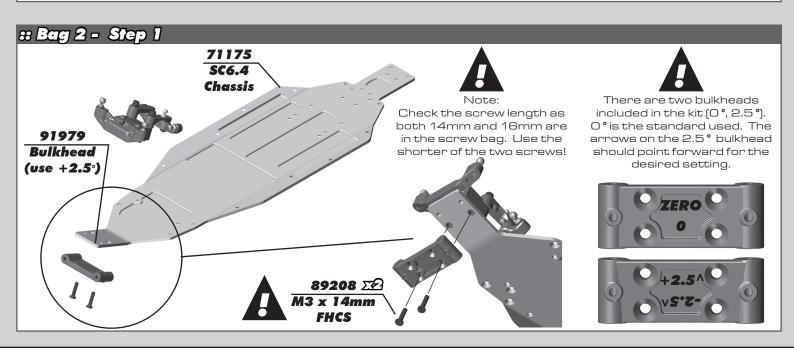


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31732 X 4 x 7 x 2.5 Ball Bearing
(Low position) Bellcranks down, hat side on top
(High position) Bellcranks up, hat side on bottom



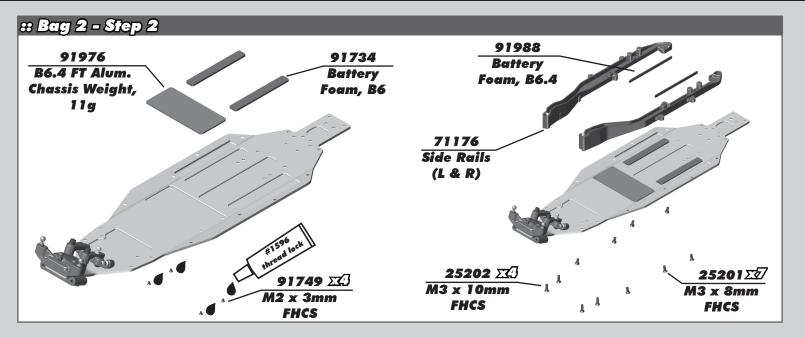
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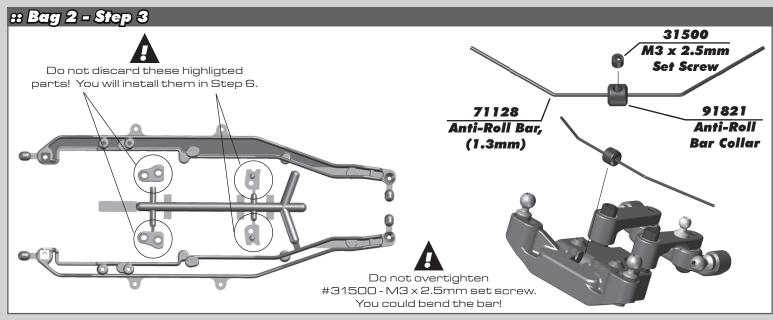
(1*mm*)

71182

Front Ball Stud Mount



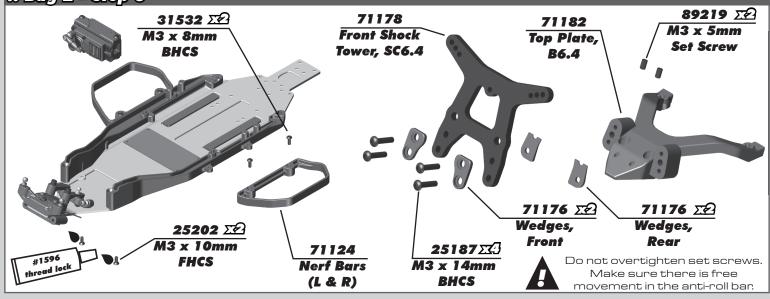


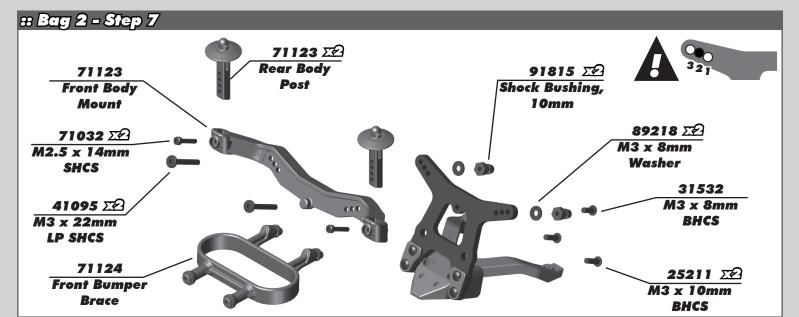


:: Bag 2 - Step 4 Align the servo horn 90 degrees. 91997 22 31382 Use sub trim after build to FT Ballstud Steering Servo not center steering. Washer, Aluminum included! link, B6.4 (1*mm*) 4671 M3x10mm **Set Screw** 31284 8mm Ball Stud, Long 31531 M3 x 6mm BHCS Tighten the 91728 91728 steering link ball 23T: Sanwa/ KO/ JR/ Spektrum Servo Servo Horn cups all the way 24T: Hitec Ring Horn until snug. 25T: Reedy/Futaba/Savox/ProTek/MKS

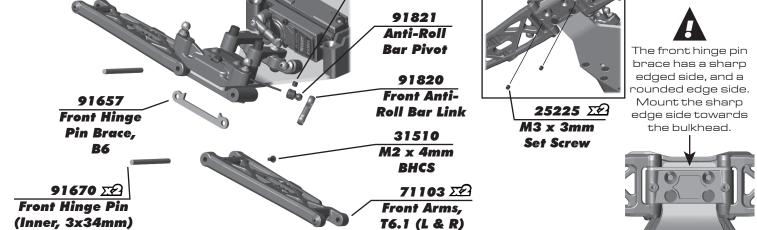
#### :: Bag 2 - Step 5 91885 Servo Mount 31531 🖽 МЗ х 6тт Brace BHCS #1596 thread lock 91887 22 Servo Mount 41089 22 M3 x 6mm #91728 - Servo Spacers LP SHCS are not required for most servos.

:: Bag 2 - Step 6

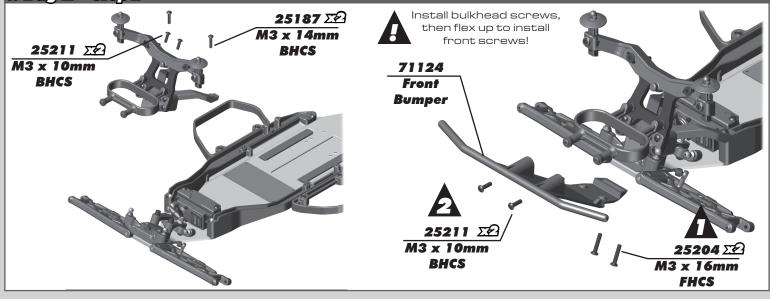


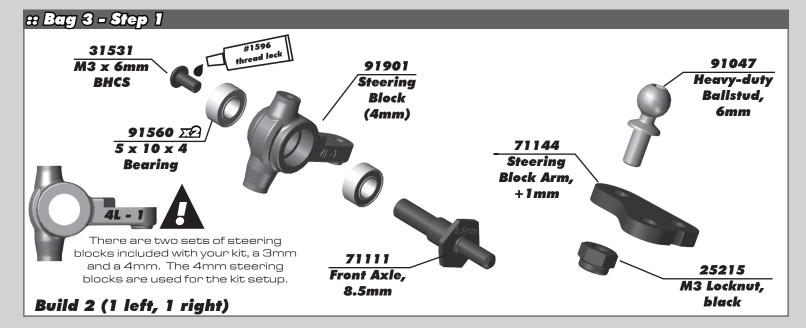


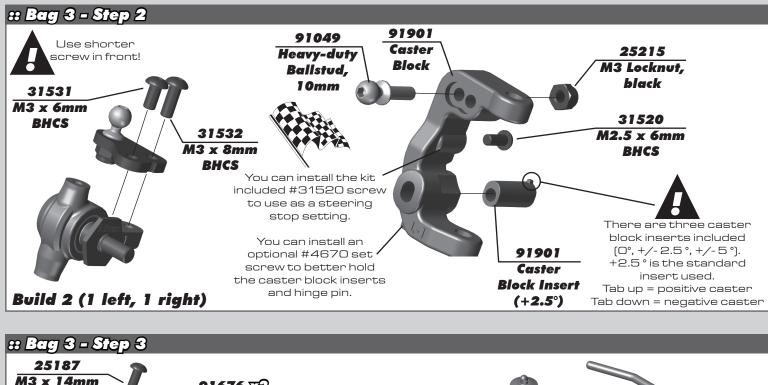


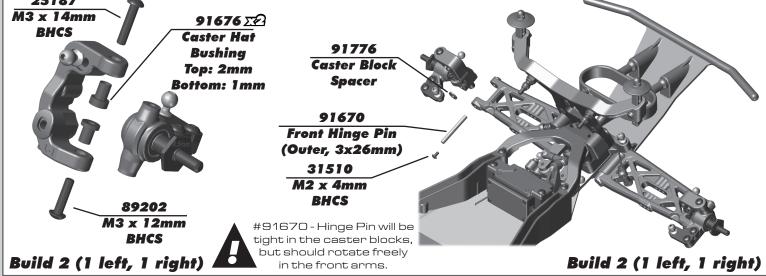


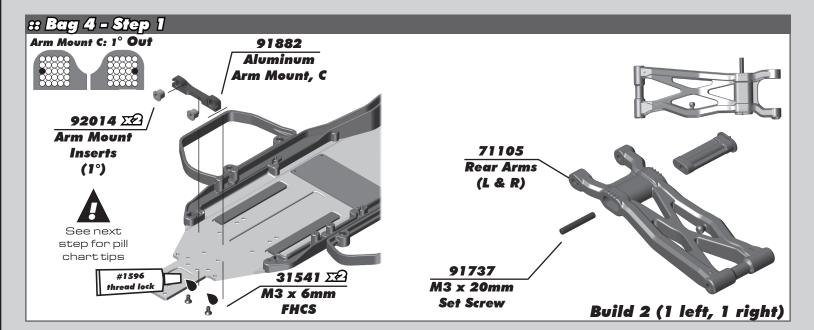
:: Bag 2 - Step 9

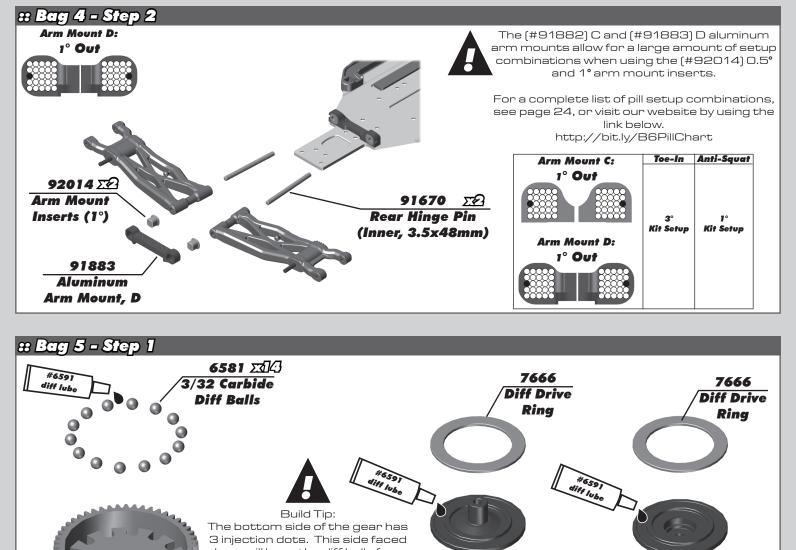










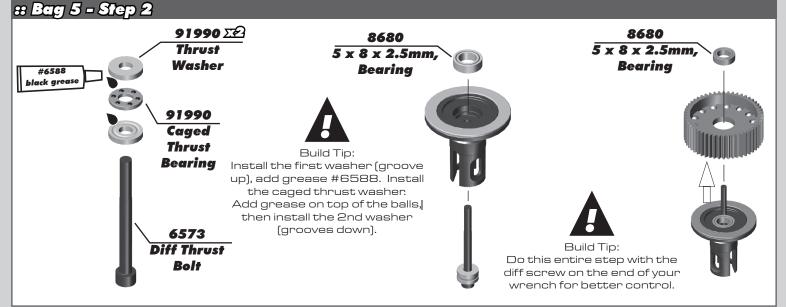


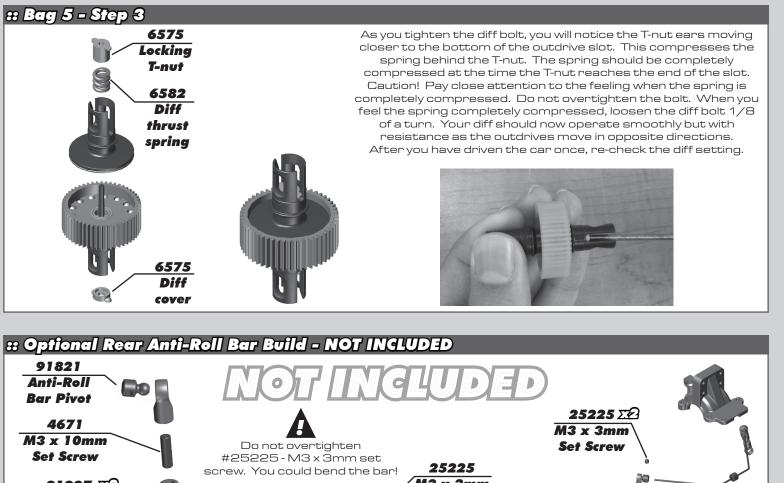
# down will keep the diff balls from falling thru the holes 91419 Diff Gear, 527

91701

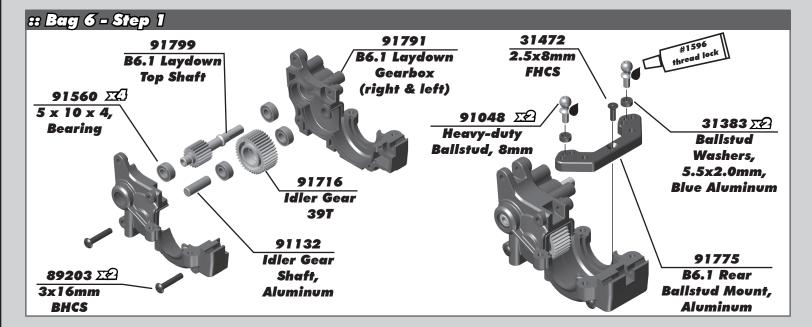
**Ball Diff** 

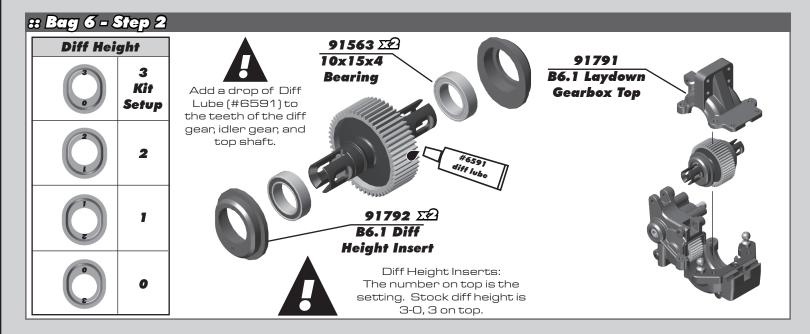
**Outdrive** 



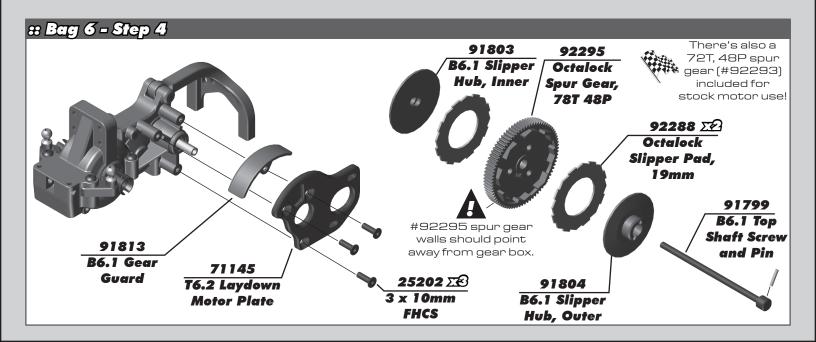


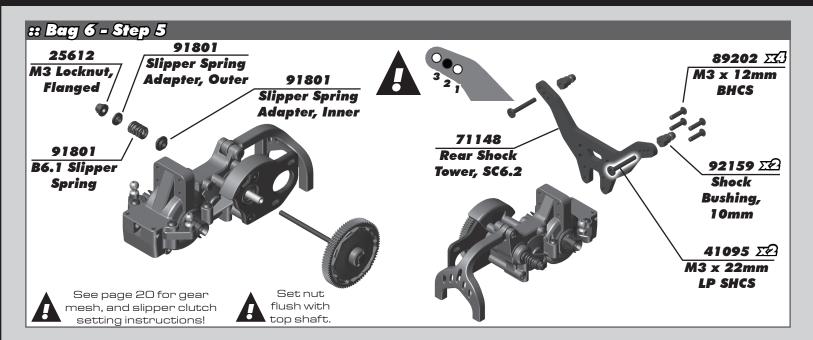




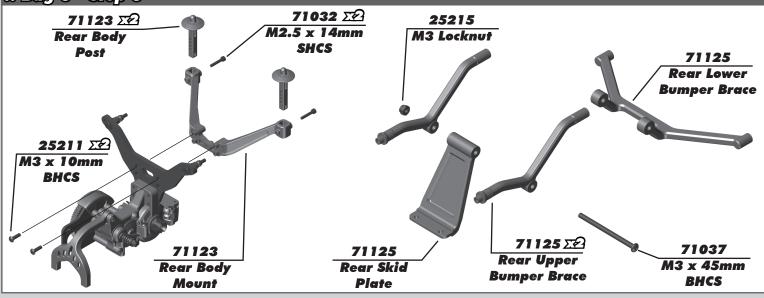


:: Bag 6 - Step 3 89202 X 91709 89203 22 3 x 12mm Laydown BHCS 3 x 16mm Chassis BHCS Brace 91819 **B6.1 Shock Pivot Ball** 89203 25188 3 x 16mm 3 x 20mm BHCS BHCS

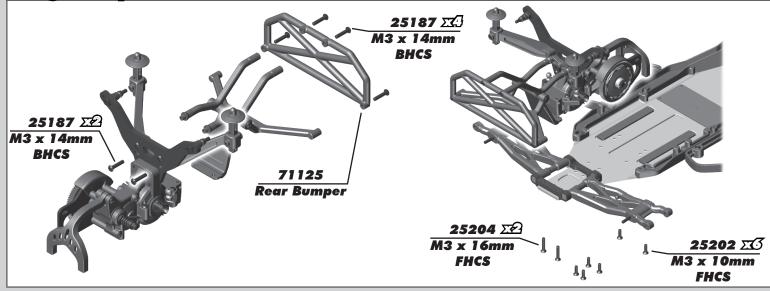


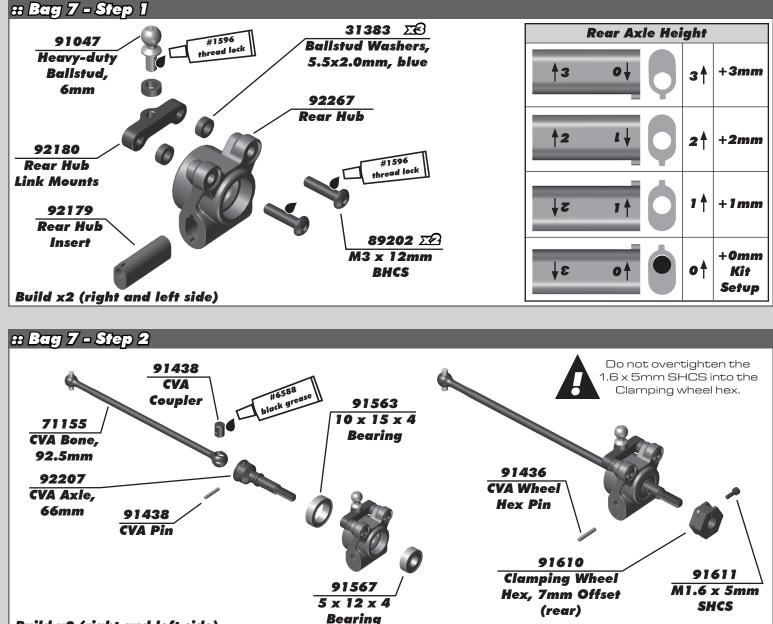


#### :: Bag 6 - Step 6



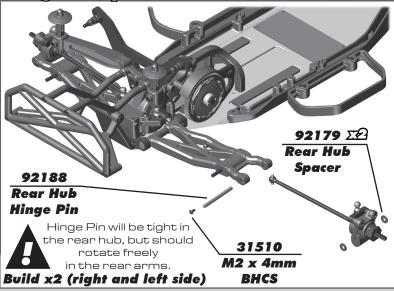
:: Bag 6 - Step 7





Build x2 (right and left side)

#### :: Bag 7 - Step 3



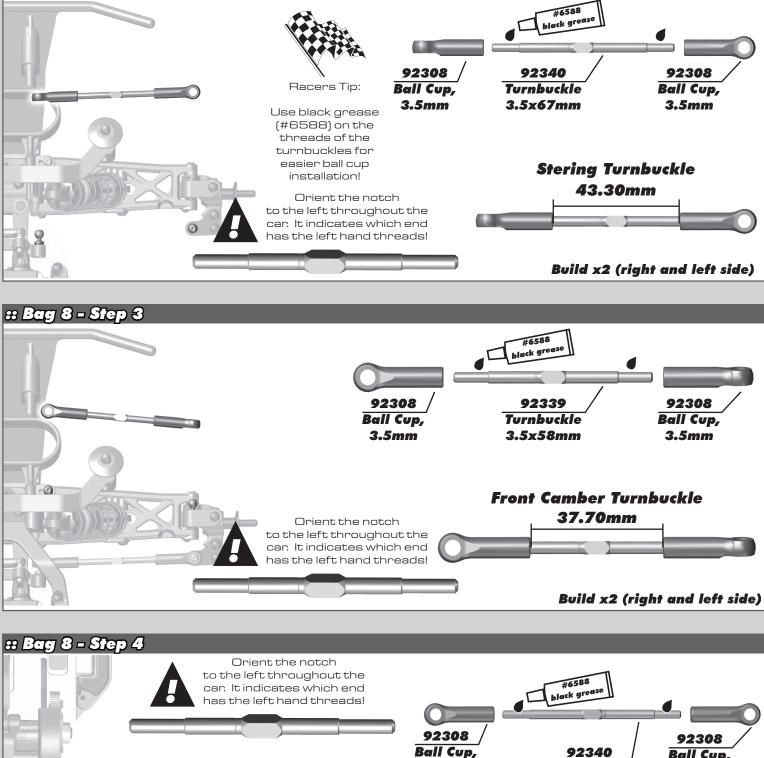
#### :: Bag 8 - Step 1

It is important that the turnbuckle eyelets move freely once snapped on to the ballstud. If the fit is too tight, the car handling will be inconsistent. To check, grab turnbuckle eyelet with fingers and rotate the cup. If there is resistance, lightly squeeze ball cup with needle nose pliers as shown and test again. It is important that the ball cup be snapped onto the ballstud before squeezing with needle nose pliers. Be sure to check and adjust the fit for each ball cup that is installed.



# :: Bag 8 - Step 2

0



3.5mm

**Build x2 (right and left side)** 

Turnbuckle

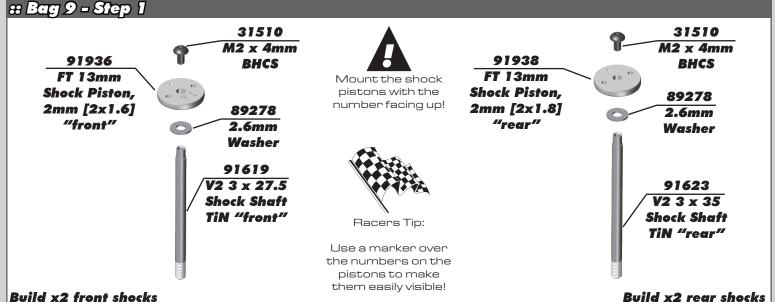
3.5x67mm

**Rear Camber Turnbuckle** 

50.70mm

Ball Cup,

3.5mm

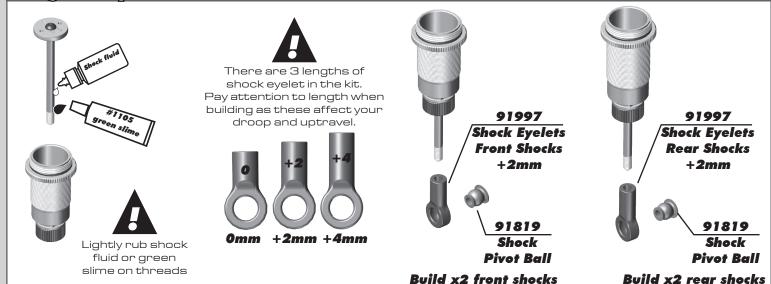


#### Build X2 front snocks

#### :: Bag 9 - Step 2

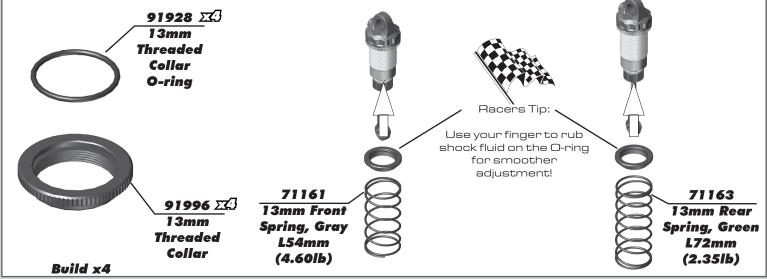


#### :: Bag 9 - Step 3

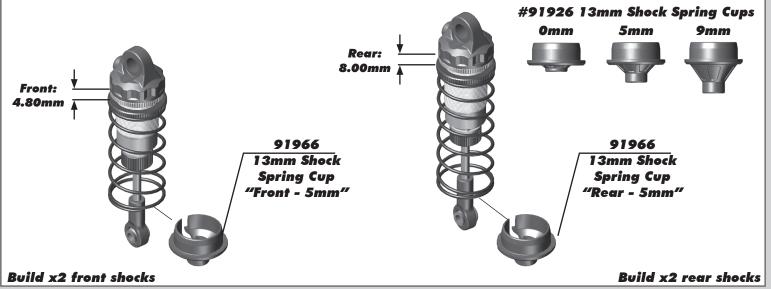


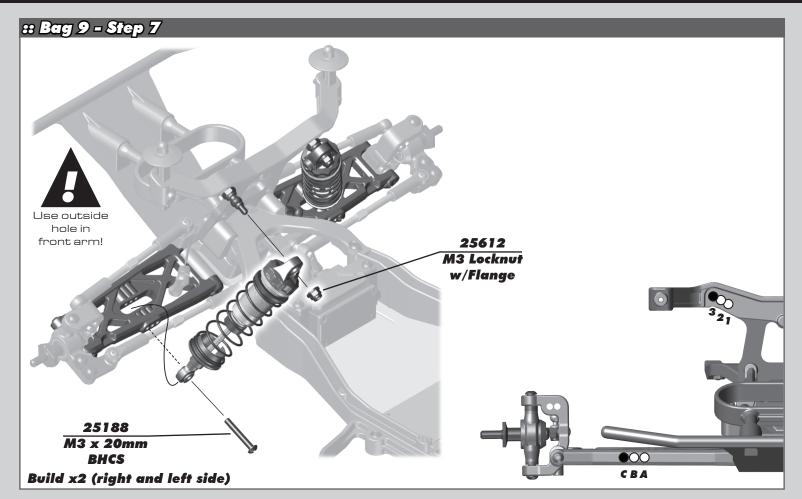
#### :: Bag 9 - Step 4 91926 13mm 31510 Shock Cap M2 x 4mm Front Shock: 30wt #5422 BHCS **Shock Bleeding Steps: Rear Shock: 30wt** #5422 1. Before assembly, get each bleed screw and thread it 1-2 turns into the shock cap, then Stroke remove the screw. This will make it easier when you are bleeding your shocks. 2. Pull shock shaft down Fill shock body 3/4 full with silicone shock fluid. З. Slowly move the shock shaft up and down to 4. Stroke remove air from under the piston. 5 Wait for bubbles to come to surface. Front: 28.5mm Fill shock body to top with silicone shock fluid. 6. Place a drop of oil in the cap and on cap Rear: 34.5mm threads. 8. Install cap (without bleed screw) and tighten completely. 9. Slowly compress shaft all the way to bleed excess silicone shock fluid out the hole in the cap (use rag around shock to catch excess fluid). 10. Install M2x4mm button head screw until snug while shaft is fully compressed. Steps 6-7 Steps 9-10 Steps 2-3 Steps 4-5 Step 8 :: Bag 9 - Step 5

17

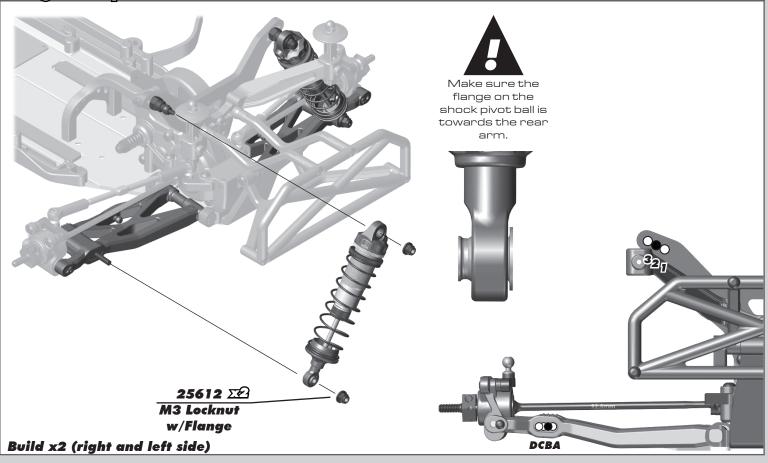


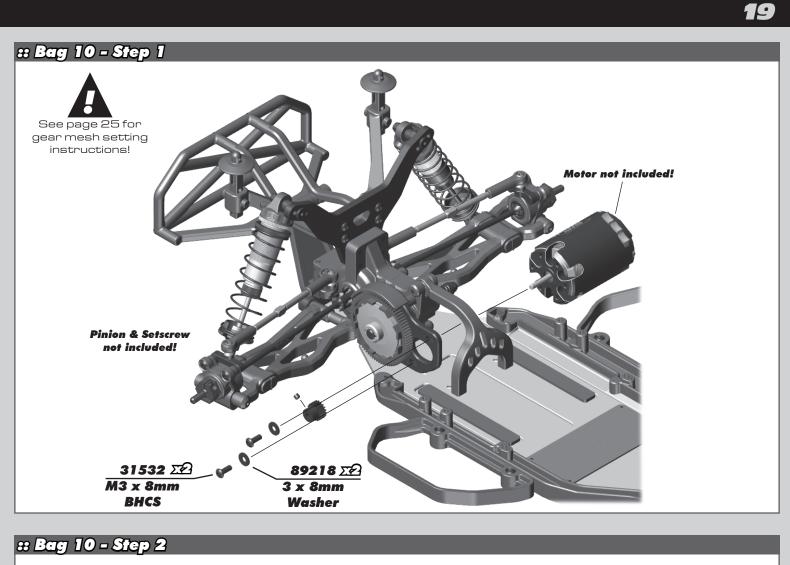
# :: Bag 9 - Step 6

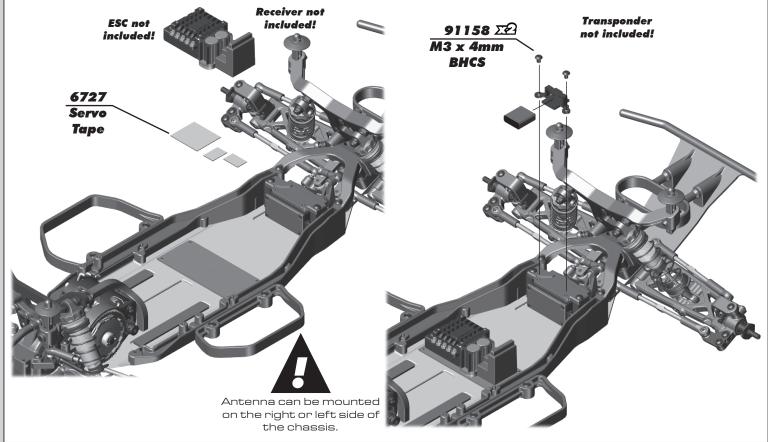




## :: Bag 9 - Step 8

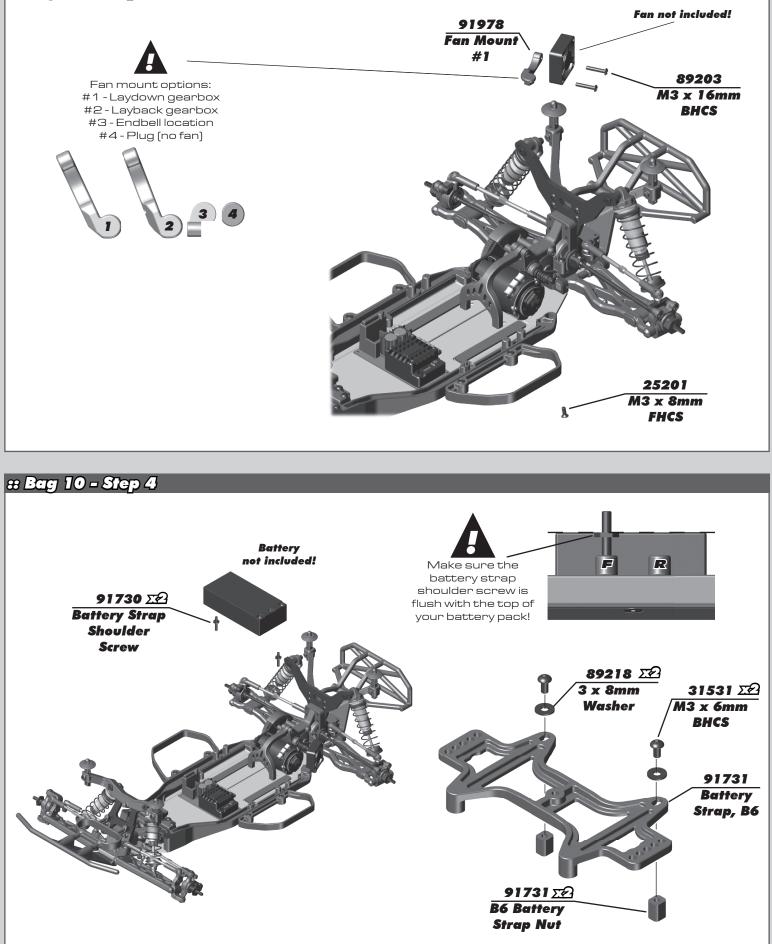


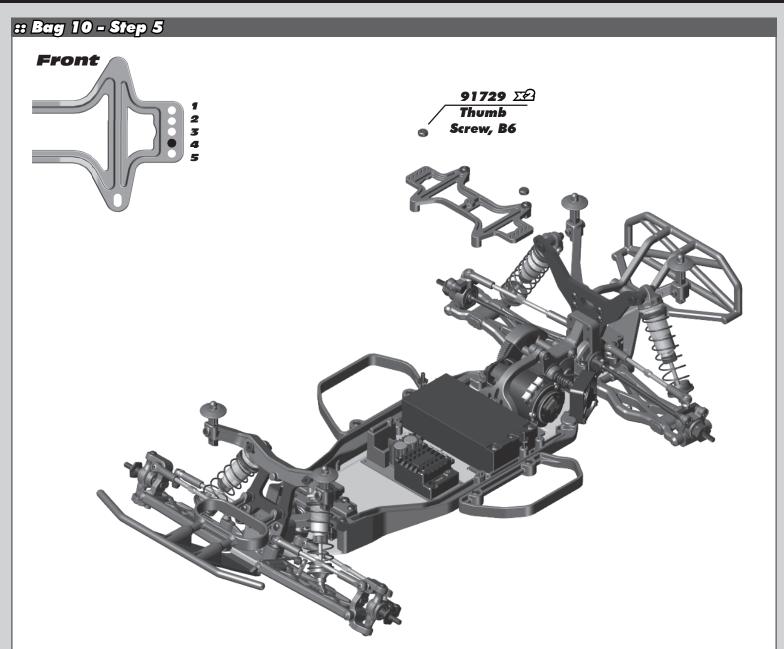


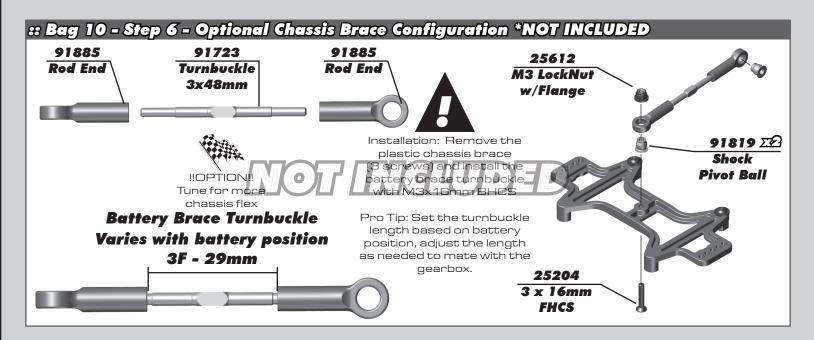




# :: Bag 10 - Step 3









# :: Bag 10 - Step 7





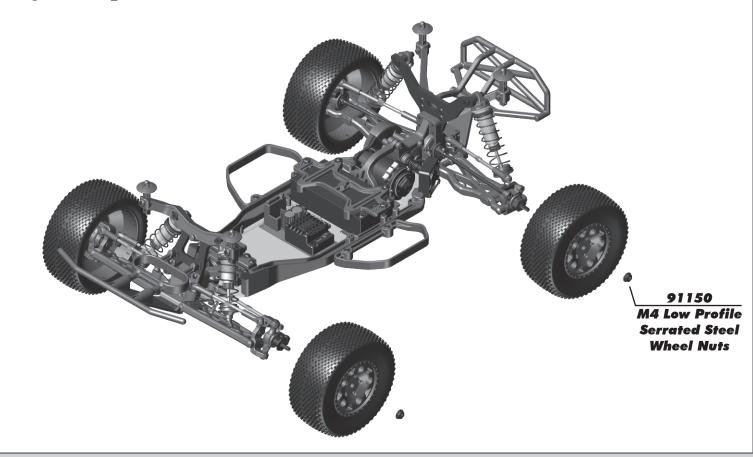
# Carefully apply CA glue

(tire adhesive) to the tire bead on the side. Do one side at a time, allowing it to dry before gluing the other side!

CA glue not included!

# Build 4

# :: Bag 10 - Step 8



# :: Notes

## :: Tuning Tips

#### **Painting:**

Your Kit requires a clear polycarbonate body and polycarbonate specific paint. You will need to prep the body before you can paint it. Wash the INSIDE thoroughly with warm water and liquid detergent (do not use any detergents with scents or added hand lotion ingredients!). Dry the body using a clean, soft, lint-free cloth. Use the supplied window masks to cover the windows from the INSIDE of the body (RC cars get painted on the inside). Using high quality masking tape, apply tape to the inside of the body to create a design. Spray (use either rattle can or airbrush) the paint on the inside of the body (preferably dark colors first, lighter colors last). NOTE: ONLY use paint that is recommended for polycarbonate plastics. If you do not, you can destroy the body! After the paint has completely dried (usually after 24 hours), cut the body along the trim lines. Make sure to drill or use a body reamer to make the holes for the antenna if needed! Use hook and loop tape to secure the body to the side rails of the vehicle.

## **Tips for Beginners:**

Before making any changes to the standard setup, make sure you can get around the track without crashing. Changes to your vehicle will not be beneficial if you can't stay on the track. Your goal is consistent laps. Once you can get around the track consistently, start tuning your vehicle. Make only ONE adjustment at a time, testing it before making another change. If the result of your adjustment is a faster lap, mark the change on the included setup sheet (make adddtional copies of the sheet before writing on it). If your adjustment results in a slower lap, revert back to the previous setup and try another change. When you are satisfied with your vehicle, fill in the setup sheet thoroughly and file it away. Use this as a guide for future track days or conditions. Periodically check all moving suspension parts. Suspension components must be kept clean and move freely without binding to prevent poor and/or inconsistent handling.

#### Rear Arm Mount Pill Insert Setup:

The aluminum rear arm mounts utilize eccentric pill inserts to make fine adjustments to anti-squat, toe, pin heights, and pin width. Adjustments can be made using the supplied inserts (#92014)

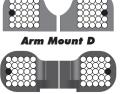
Standard Position Use this position as a reference when changing pill locations.

> Toe: 3° Anti-squat: 1° Roll Center: +0 Pivot Width: +0

Possible Insert Locations

5

G



**Pin Width** 

More distance = wider pivot

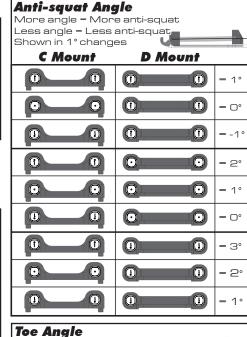
Arm Mount C

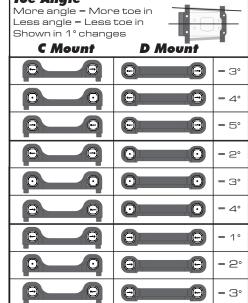


Number indicates degree of change: 0.5°, 1.0°, 0° (center dot)

> Hole 0.5° or 0.35mm from center

Hole 1.0° or 0.7mm from center

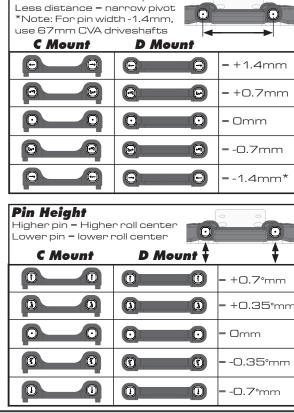




For additional setup tips, please visit our website by using the link or QR code below.

http://bit.ly/B6PillChart





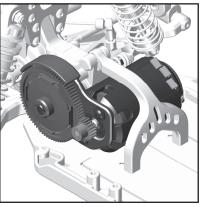
# :: Tuning Tips (cont.)

#### **Motor Gearing:**

Proper motor gearing will result in maximum performance and run time while reducing the chance of overheating and premature motor failure. The gear ratio chart lists recommended **starting gear ratios** for the most widely used motor types. Gear ratios will vary depending upon motor brand, wind, and electronic speed control. Consult your motor and electronic speed control manufacturers for more information.

Team Associated is not responsible for motor damage due to improper gearing.

		J		
SC6 Gear Ratio Chart (Internal Gear Ratio 2.60:1)				
Motor	Pinion	Spur	<b>Final Drive Ratio</b>	
21.5 Reedy S-Plus Brushless	32	81	6.58:1	
17.5 Reedy S-Plus Brushless	27	81	7.80:1	
13.5 Reedy S-Plus Brushless	25	81	8.42:1	
10.5 Reedy 540-M4 Brushless	24	81	8.78:1	
9.5 Reedy 540-M4 Brushless	23	81	9.16:1	
8.5 Reedy 540-M4 Brushless	22	81	9.57:1	
7.5 Reedy 540-M4 Brushless	21	81	10.03:1	
6.5 Reedy 540-M4 Brushless	20	81	10.53:1	



#### Set The Gear Mesh:

You should be able to rock the spur gear back and forth in the teeth of the pinion gear without making the pinion gear move. If the spur gear mesh is tight, then loosen the #31532 screws (p. 19) and move the motor away, then try again. A gear mesh that is too tight or too loose will reduce power and damage the gear teeth.

#### **Diff Height Adjustment:**

Diff height adjustment (p.12) .

On high grip surface when using low ride heights, a higher diff height would be a good option. On low grip surface when using high ride heights, a lower diff height would be better.

#### **Gear Box Type:**

Selecting the correct gear box is dependent on the type of track it will be used on. The optional 4-gear standup gear box is for the lowest grip conditions. This gear box moves the weight towards the rear of the car and also uses the rotation of the motor to transfer weight to the rear while on-power. The 3-gear standup gear box also moves the weight towards the rear of the car, but in this configuration, the motor's rotation helps with on-power steering. The laydown gear box is used on high grip conditions when on-power steering and stability are most important. This gear box will change directions the quickest and generate the most steering. Layback is used for most indoor clay track conditions.

# **Slipper Clutch:**

The assembly instructions give you a base setting for your clutch. Turn the nut on the shaft so that the end of the top shaft is even with the outside of the nut. At the track, tighten or loosen the nut in 1/8 turn increments until you hear a faint slipping sound for 1-2 feet on takeoffs. Another popular way to set the clutch is to hold both rear tires firmly in place and apply short bursts of throttle. If the clutch is properly set, the front tires should lift slightly up off the surface.

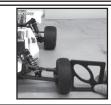
#### **Caster:**

Caster describes the angle of the caster block as it leans toward the rear of the vehicle. Positive caster means the kingpin leans rearward at the top. The kit includes three inserts to adjust caster angle at the caster block,  $0^{\circ}$ , 2.5°, and +5°. The total caster angle is the sum of the kick-up angle and the caster block angle. Standard total caster angle for the B6 is  $30^{\circ}$ , with 25° kick-up and +5° caster block angle.

For less entry steering and more exit steering, try O° caster block angle.

## Front Camber:

Camber describes the angle at which the tire and wheel rides when looked at from the front. Negative camber means that the tire leans inward at the top. A good starting camber setting is -1°. Positive camber, where the top of the tire is leaning out, is not recommended. A camber gauge can be used to more accurately set camber.



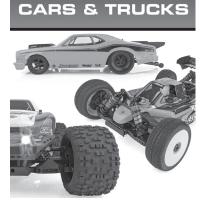


Testing camber with camber gauge

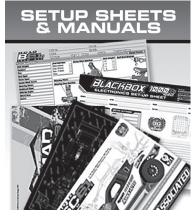
## **Rear Camber:**

Camber describes the angle at which the tire and wheel rides when looked at from the back. Negative camber means that the tire leans inward at the top. A good starting camber setting is -1°. Adding a small amount of positive camber, where the top of the tire is leaning out, will tend to improve straight-line acceleration on loose tracks. A camber gauge can be used to more accurately set camber.

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