

RC8Be FACTORY Team



#80904 RC8Be Factory Team Kit

1:8 Scale Electric 4WD Off Road Race Buggy Manual & Catalog 4/10

TEAM ASSOCIATED



Designed in California, USA

:: Introduction:

Thank you for purchasing this Team Associated product. This manual contains instructions and tips for building and maintaining your new RC8Be Factory Team, 1/8 scale racing buggy. Please take a moment to read through it and familiarize yourself with these steps as they will help you to understand each component's function and show you some tips for getting the most out of your RC8Be Factory Team build experience.

:: RC8Be FT Features:

- 16mm Big Bore Threaded Shocks
 - Hard anodized, threaded, bladder cap shocks
 - Heavy duty 4 mm TiN coated stainless steel shafts
- 5 mm 7075 Blue Aluminum Shock Towers
 - RC8B towers allow the driver to stand the shock angle up for a more aggressive suspension.
 - New Front tower camber link bushings allow for easy setup adjustments and vehicle maintenance
 - New camber link positions for more tuning options
- 7075 blue CNC aluminum suspension mounts front and rear
 - Molded bushings allow for easy adjustment of rear toe-in, rear anti-squat, and front kick-up.
- Updated steering geometry for reduced bump-steer
- Updated wing mount with additional clearance for 16mm shocks
- Molded composite Front and Rear chassis braces
- Heavy duty shock bushings for improved durability
- Includes full set of white Factory Team 83mm "big" wheels
- Blue Aluminum 1-Piece top plate
- Race proven/winning setup
- Light-weight 3mm Hard Anodized chassis
- New pin style shock mounting on arms for improved durability
- Improved Steering knuckles for durability
- Updated suspension rod ends and upper arms for improved durability
- Now uses RC8T style droop screws easily adjustable from top or botto
- Blue Aluminum hexes and nylock locking wheel nuts

:: Optional Components

Optional components and accessories to help you get the most out of your RC8Be FT kit.

- Silicone shock fluid for tuning
- Silicone diff fluid for tuning
- Ride height gauge (#1449 recommended)
- FT Hex Driver Set (AE Part #1541)
- FT Nut Driver Set (AE Part #1561)
- FT Body Scissors (AE Part#1737)

:: Additional:

Your RC8Be FT kit comes with the latest components used by our factory race team to win races. However there are some things that are necessary to complete the build.

- 2 channel radio/transmitter set with switch – FM/PCM/2.4GHz recommended
- Transmitter batteries
- 1/8 Scale Specific Speed Control and Motor. • Plug Extension (depending on ESC)
- High Torque Steering Servo (AE Part # 29167)
- FT Tire Glue (AE Part #1597) • Thread Lock Compound (AE Part#1596)
- Polycarbonate specific spray paint or paint and airbrush
- Wire Cutters • Needle nose pliers • Hobby knife • Reamer/hole punch

:: RC8Be Platform Features:

- 4.30:1 ratio gearboxes
 - 43T diff ring and 10T pinion for increased punch and durability over conventional buggy ratio gearboxes
- 2 piece Center diff housing split vertically for easy diff removal and maintenance
- Caster blocks adjust 14, 16, or 18 degrees with molded inserts
- 3.5mm light CVA drivetrain
 - Front and rear hubs use large 15 mm x 24 mm bearing on the inside
 - 14 other 8mm x 16 mm rubber sealed bearings
 - Rear molded CVA boots to keep dirt and mud out of rear joints
- Alloy steel turnbuckles.
- 10mm thick arms.
- Molded suspension pivot bushings for adjustable pivot height. • RC8e body with air scoops (#89523).
- Rigid one-piece motor mount utilizes standard motor screw mounting pattern.
- Large speed control mounting area raised off of chassis to allow for easy screw mounting of common speed controllers.
- Speed control mounting area includes convenient switch-mounting boss.
- Utilizes 3 hook-and-loop straps to secure LiPo batteries into battery tray.
- Molded battery tray supports 7.4-14.8V battery packs with room for foam pads.
- Accepts two ROAR-approved 1:10 scale size 7.4V LiPo battery packs: (#703 Reedy LiPo 5000 mAh 7.4V 20C (2), #704 Reedy LiPo 5000 mAh 7.4V 20C w/connector (2), #709 Reedy LiPo 5000 mAh 7.4V 35C w/connector (2)).
- New sealed receiver box for proper electronics placement.
- Receiver, servo, and battery tray remove from vehicle in one piece for easy maintenance and cleaning.
- Convenient wire routing keeps critical electronic wires out of drivetrain components and simplifies disassembly.
- Includes pinion gear (15T) and molded spur gear (46T).
- Motor, ESC, transmitter, and batteries are not included.



* These symbols indicate a special note or instructions.

Alert! The Differentials and Shocks are pre-assembled. They need to be filled with fluid before use!

There is a 1:1 fold out in the back of the manual. Fold it out while building your kit for easy part sizing!

Associated Electrics, Inc.
26021 Commercentre Dr.
Lake Forest, CA 92630

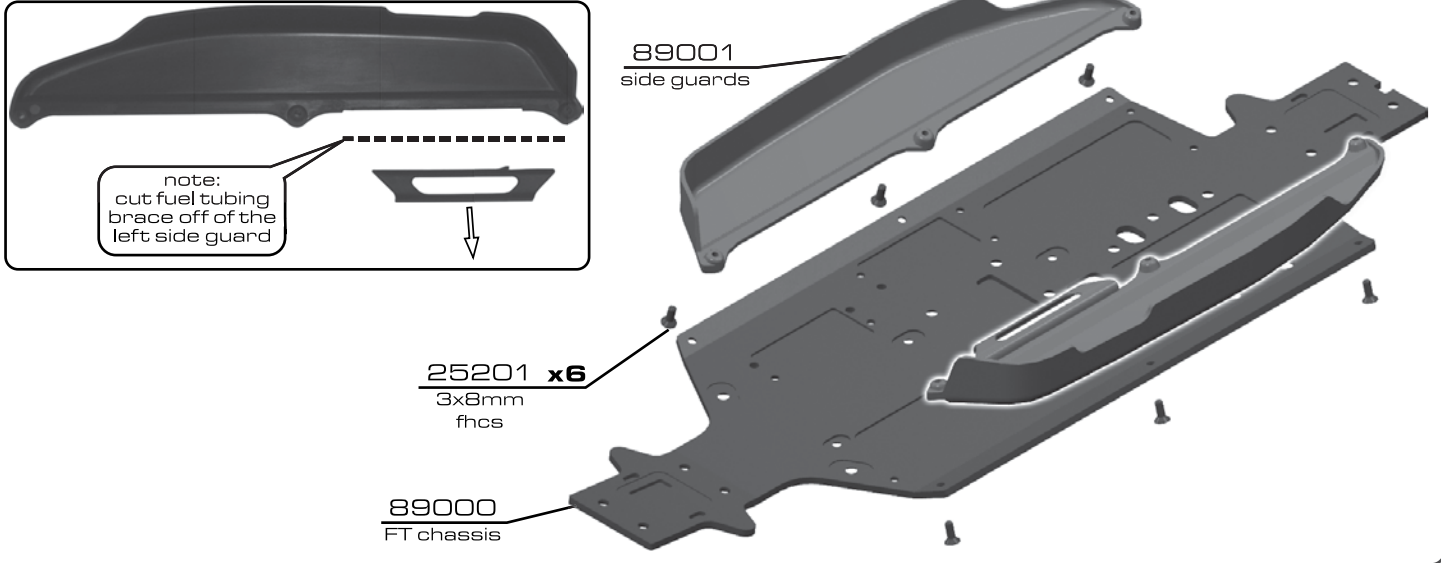


Customer Service
Tel: 949.544.7500
Fax: 949.544.7501

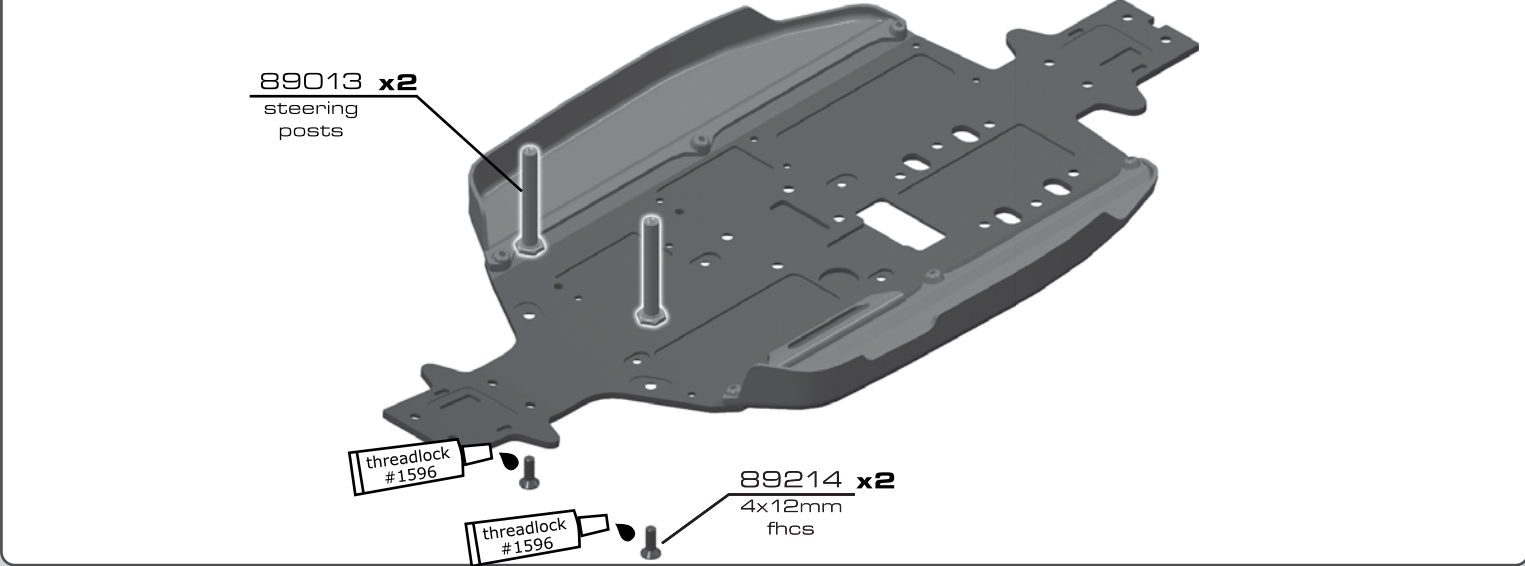
<http://www.TeamAssociated.com> • <http://www.RC10.com> • http://twitter.com/Team_Associated • <http://bit.ly/AEonFacebook>

:: Chassis Build

BAG A

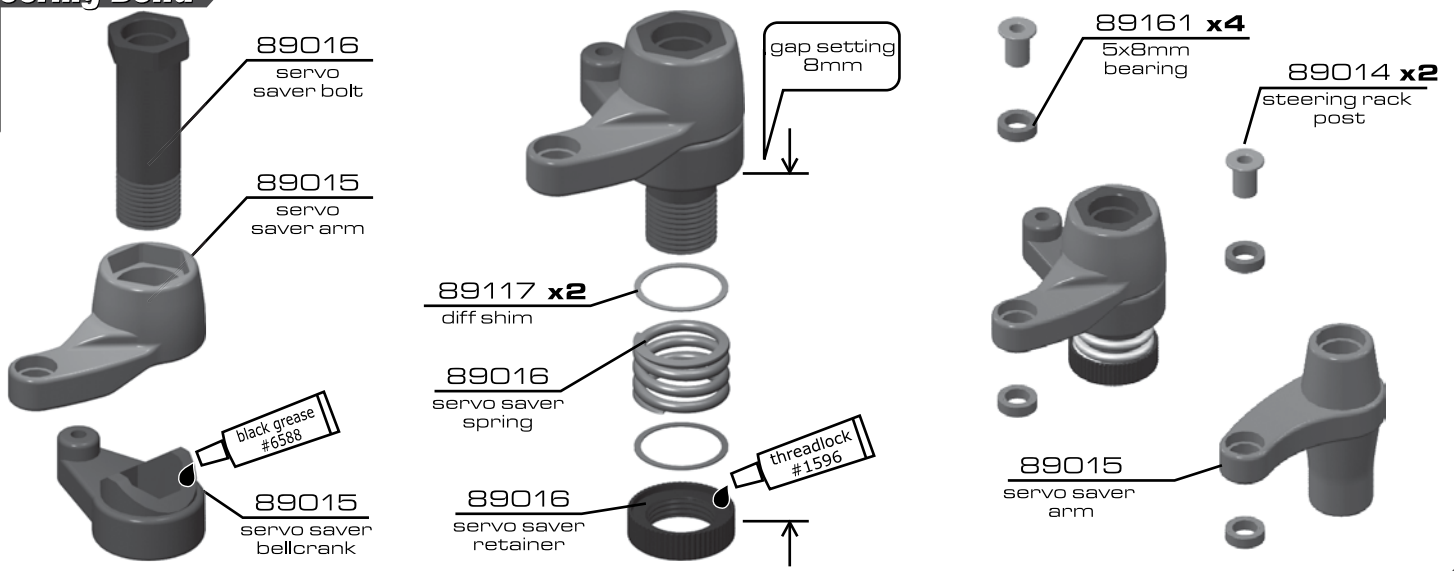


:: Chassis Build (cont.)

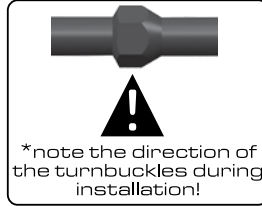
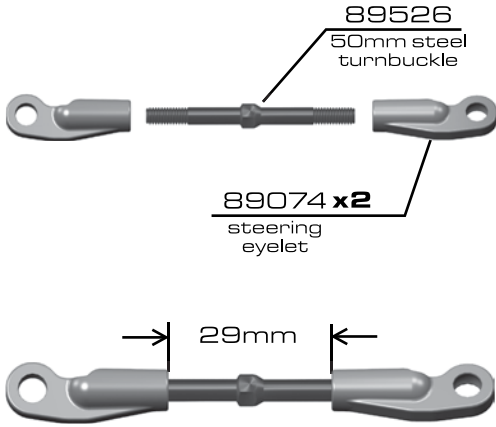


:: Steering Build

BAG B



:: Steering Build (cont.)



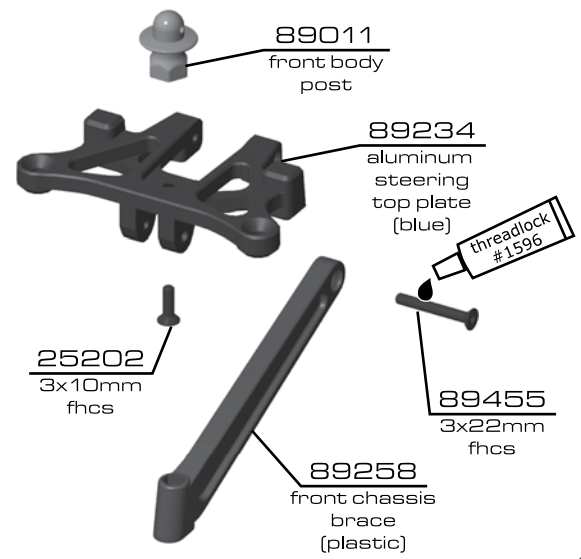
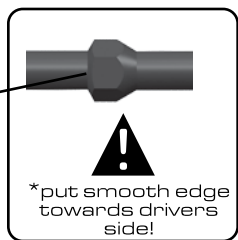
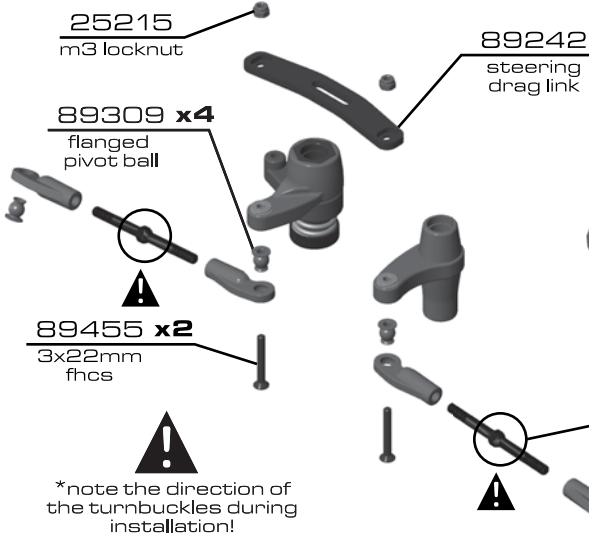
▲ Passengers side



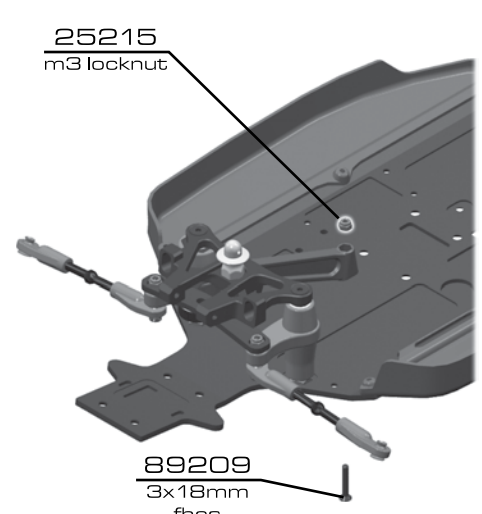
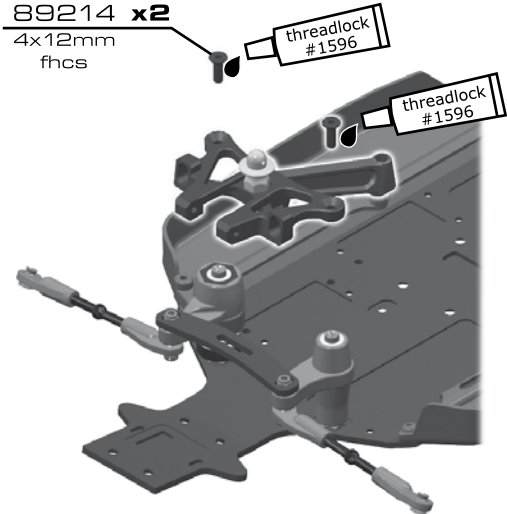
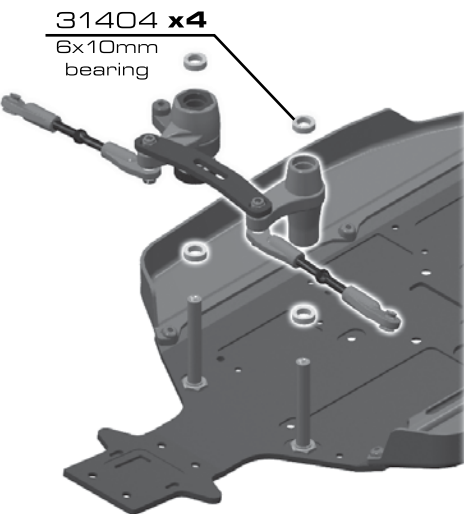
▲ Drivers side



:: Steering Build (cont.)

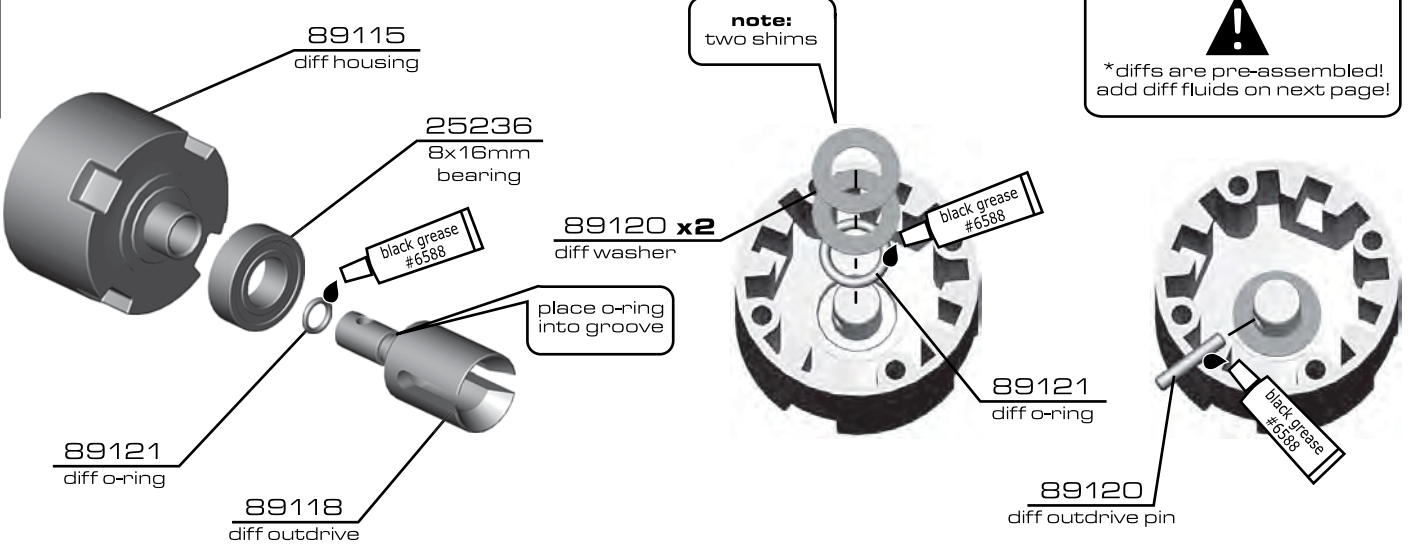


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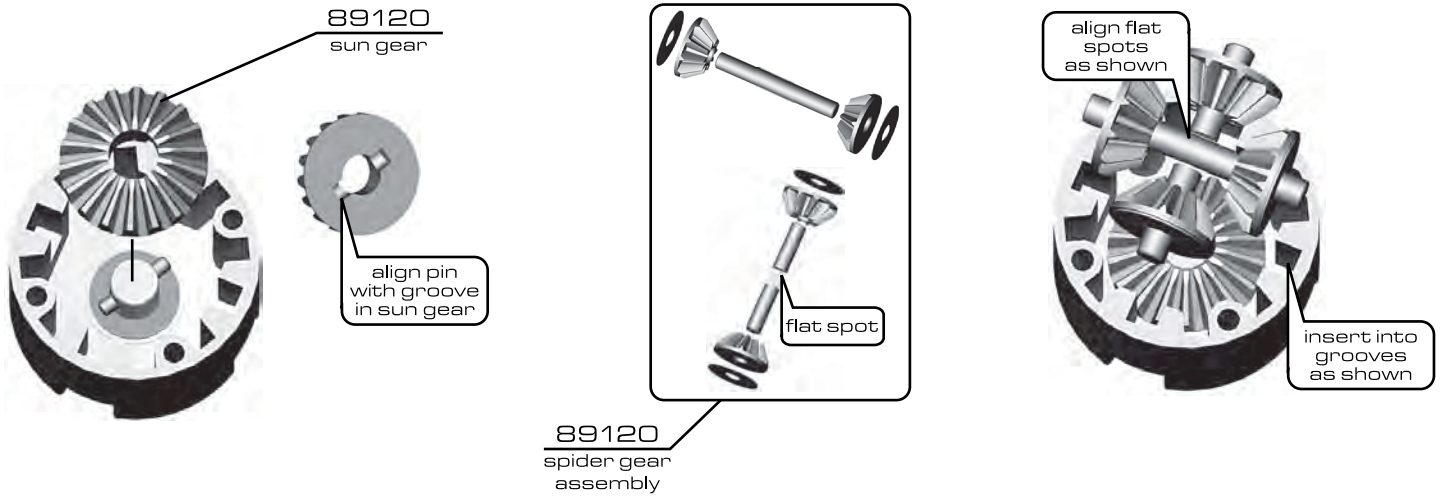


:: Front and Rear Differentials

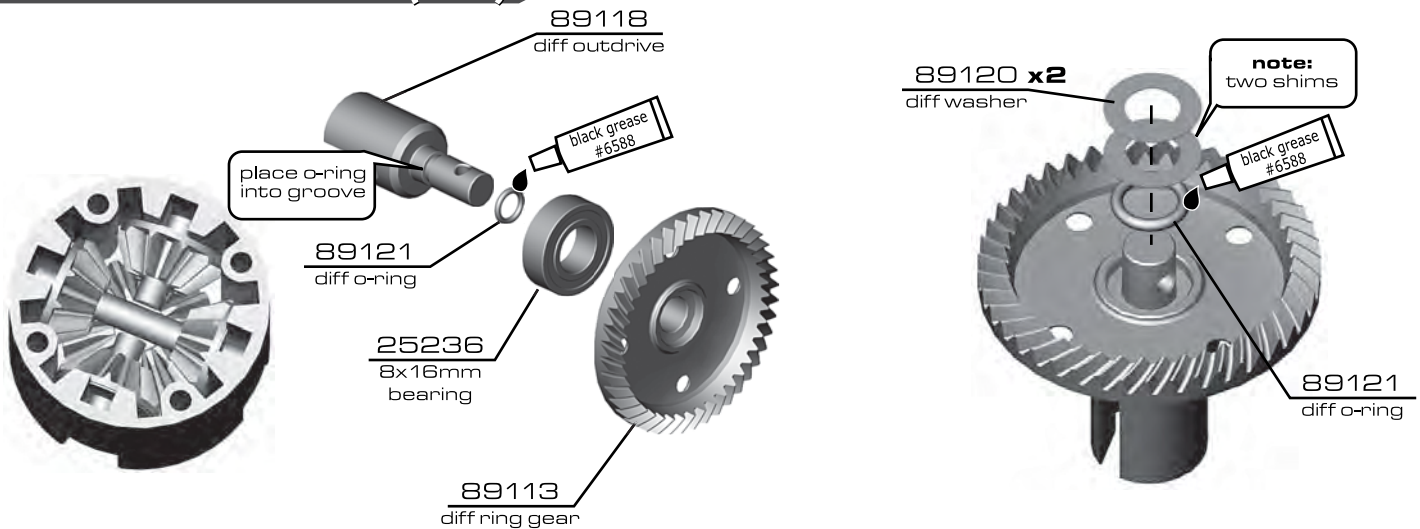
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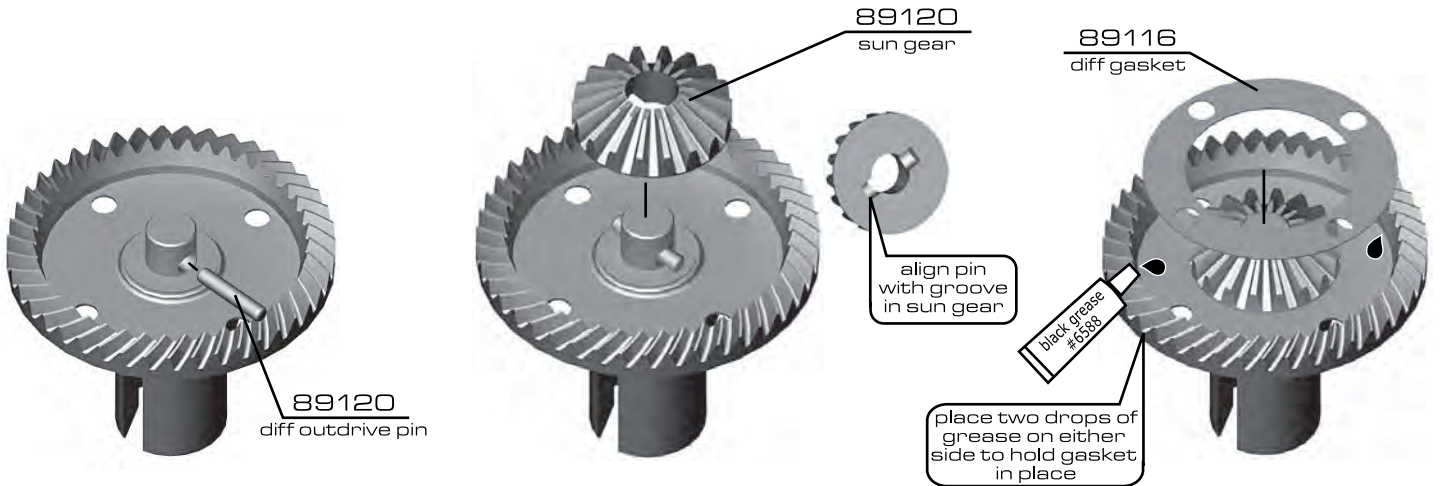
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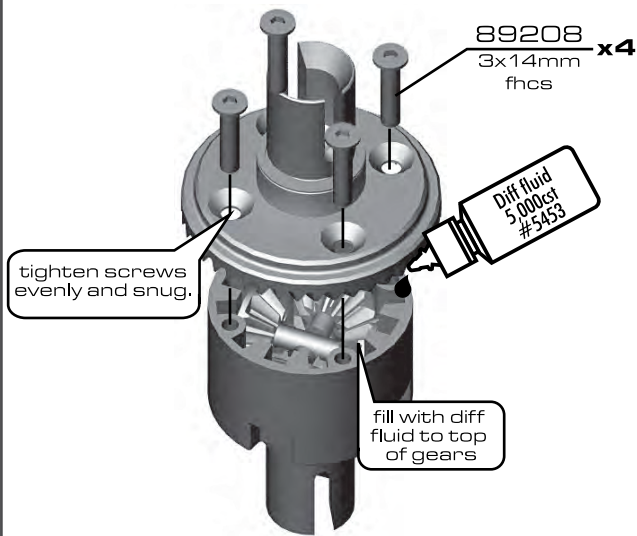
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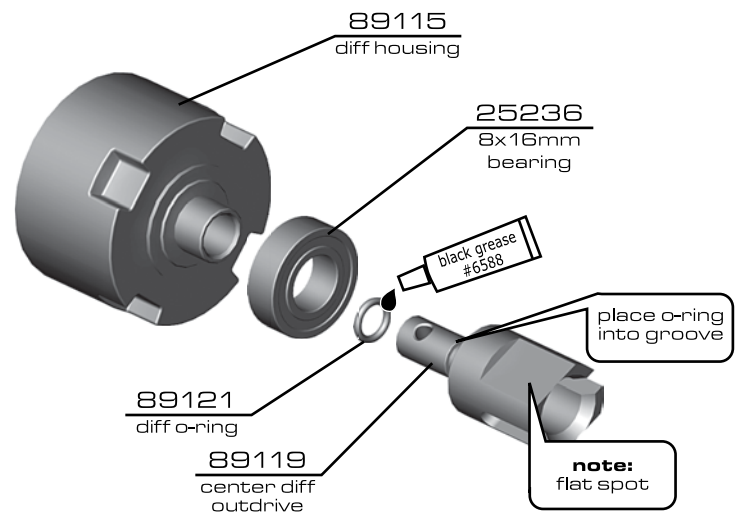
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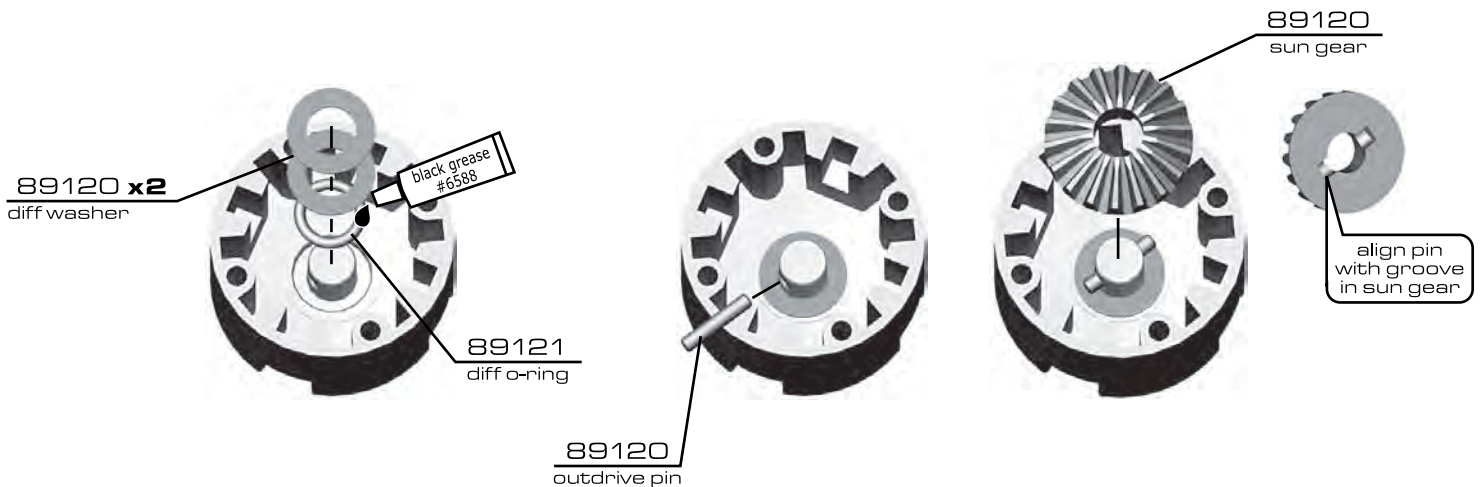
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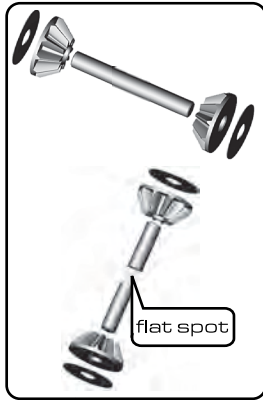
:: Center Differential



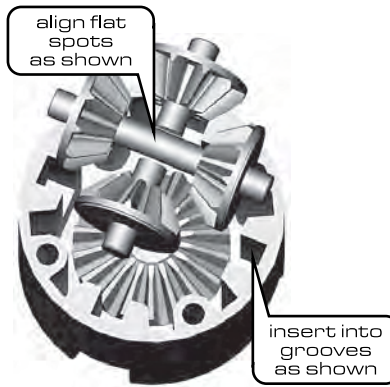
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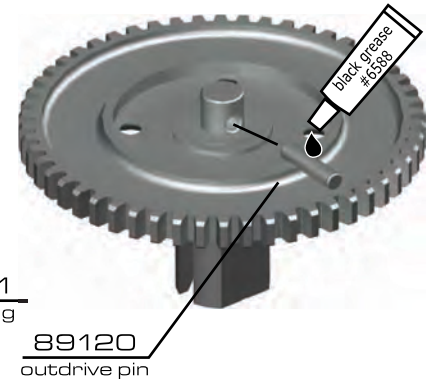
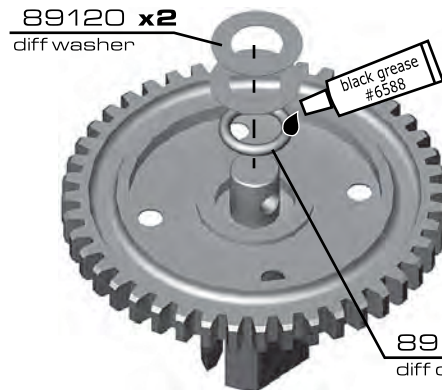
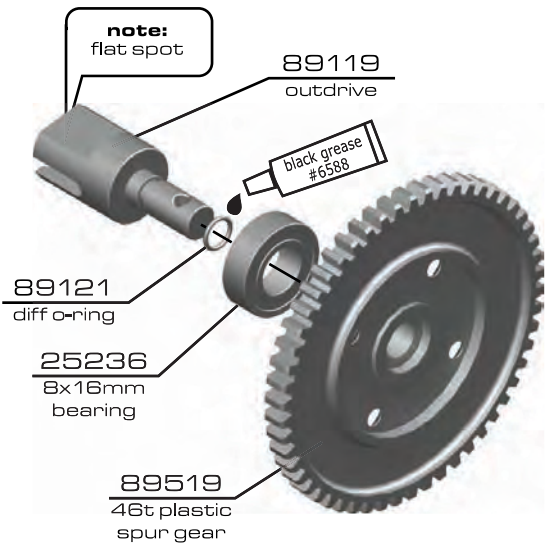
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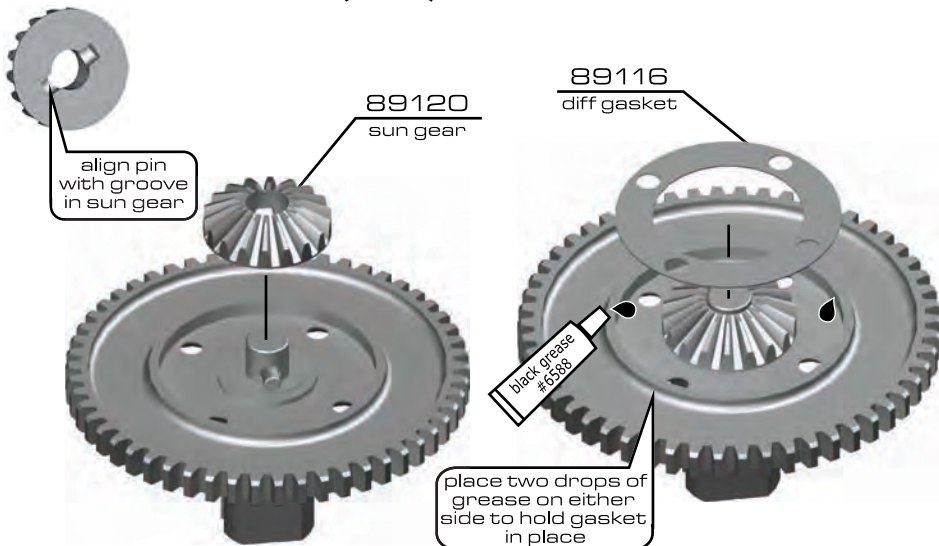
89120
spider gear assembly



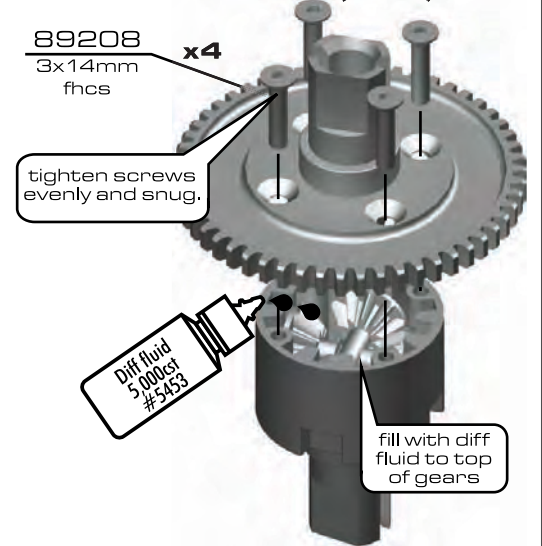
:: Center Differential (cont.)



:: Center Differential (cont.)

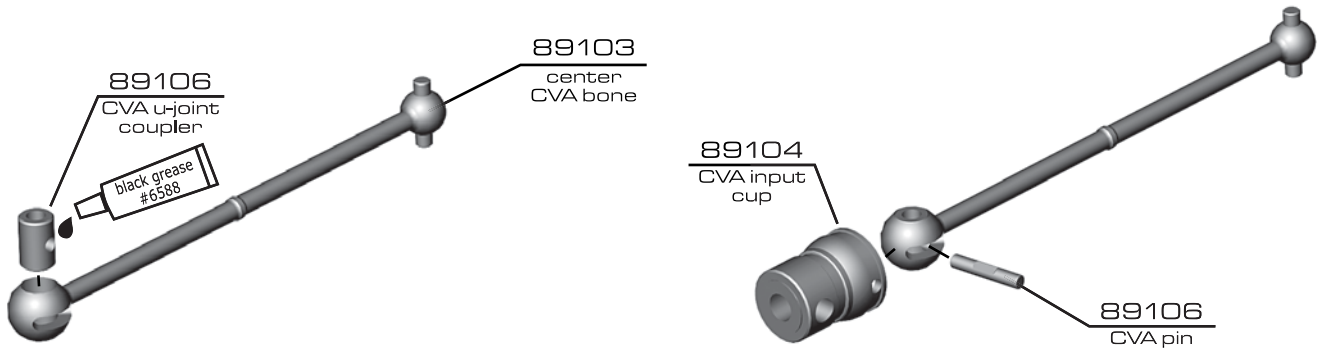


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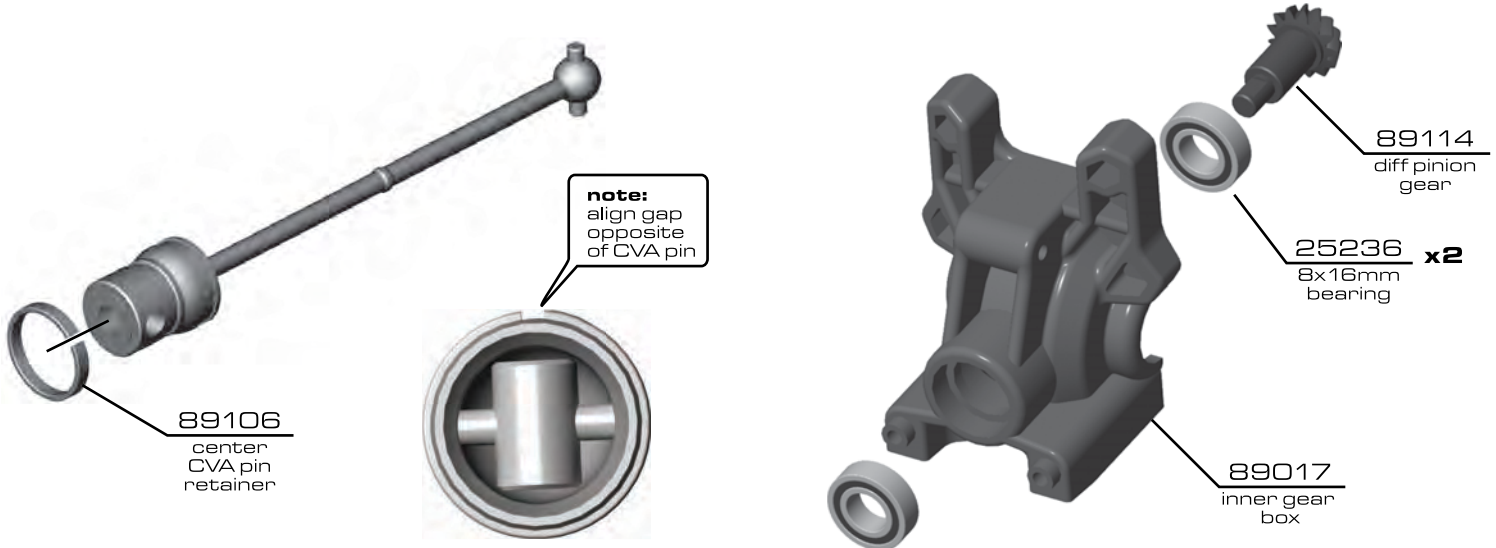


:: Front Bulkhead Build

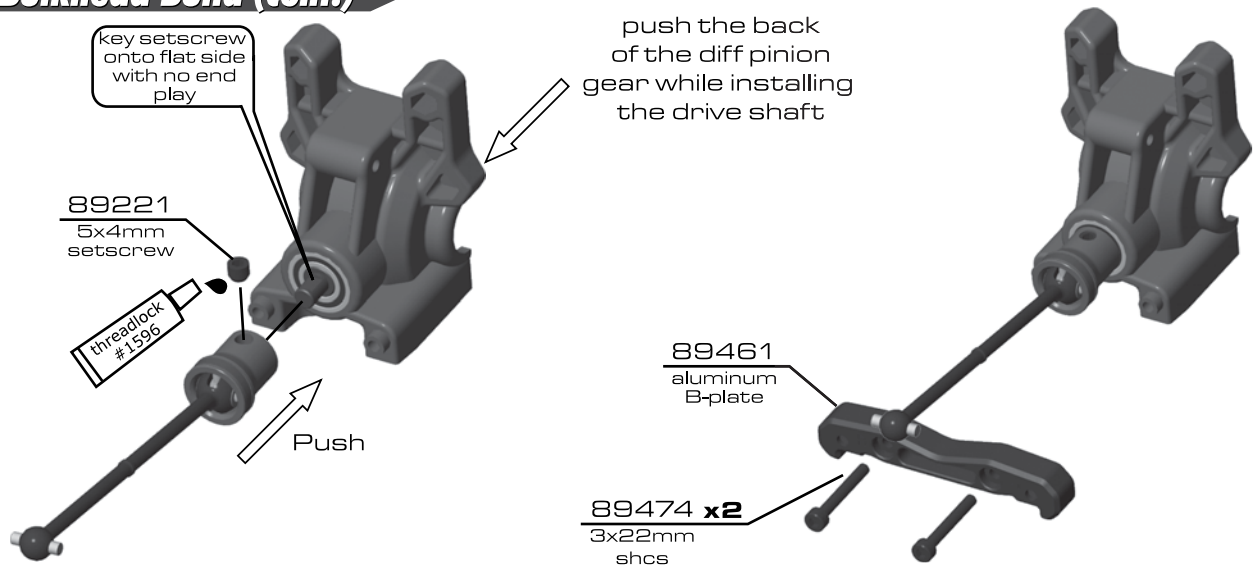
BAG D



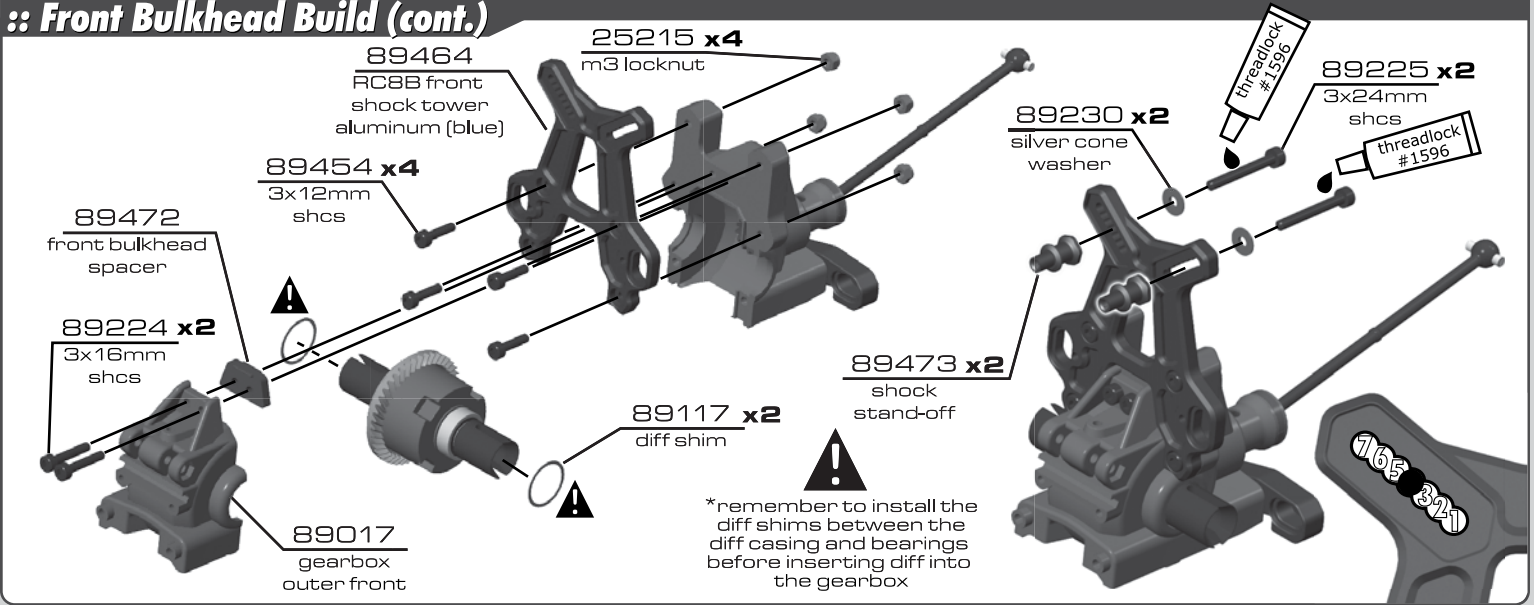
:: Front Bulkhead Build (cont.)



:: Front Bulkhead Build (cont.)

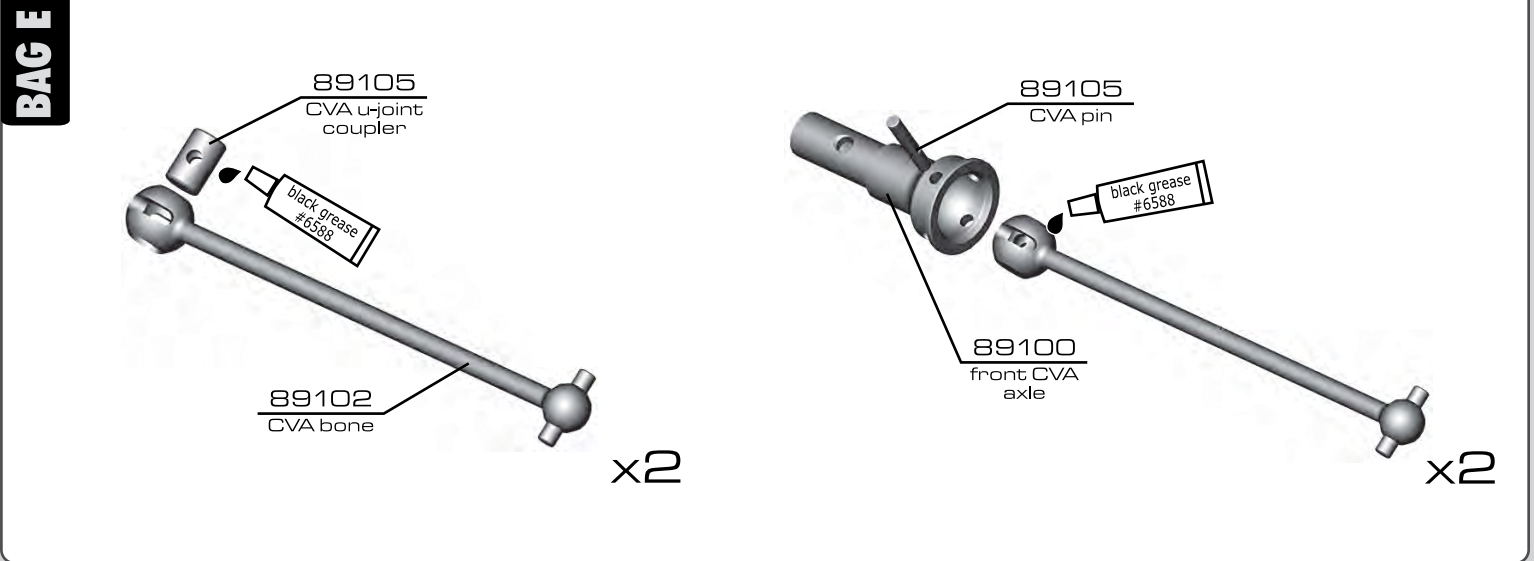


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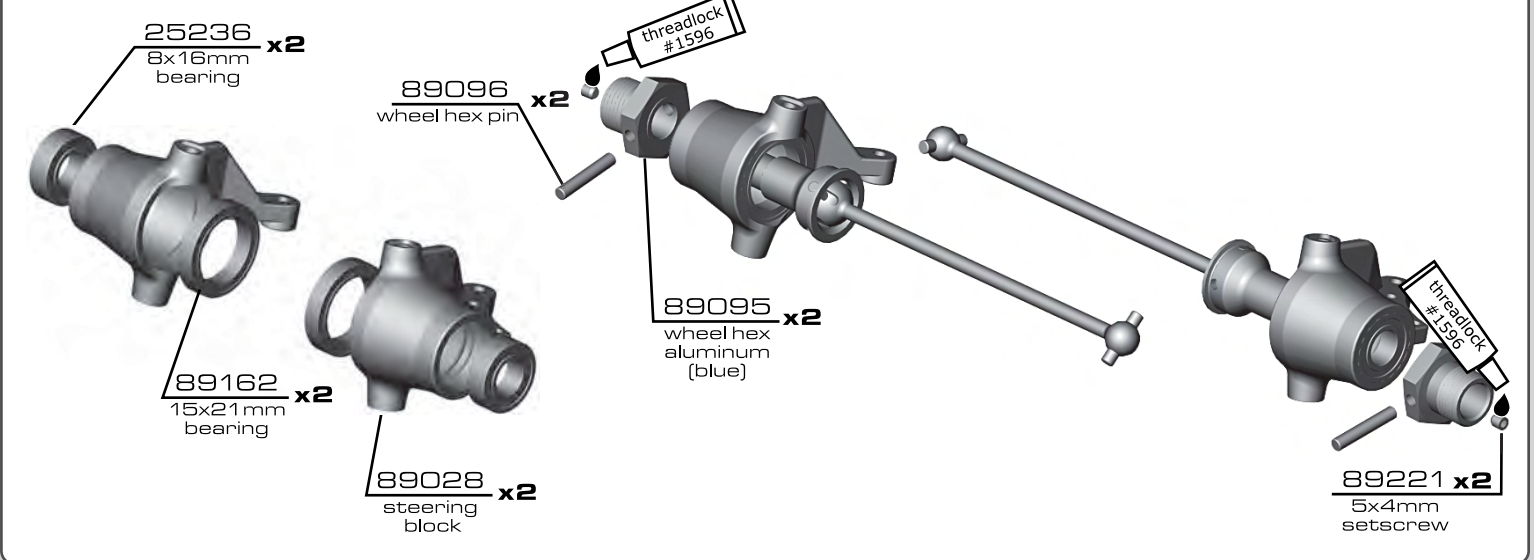


:: Front Suspension

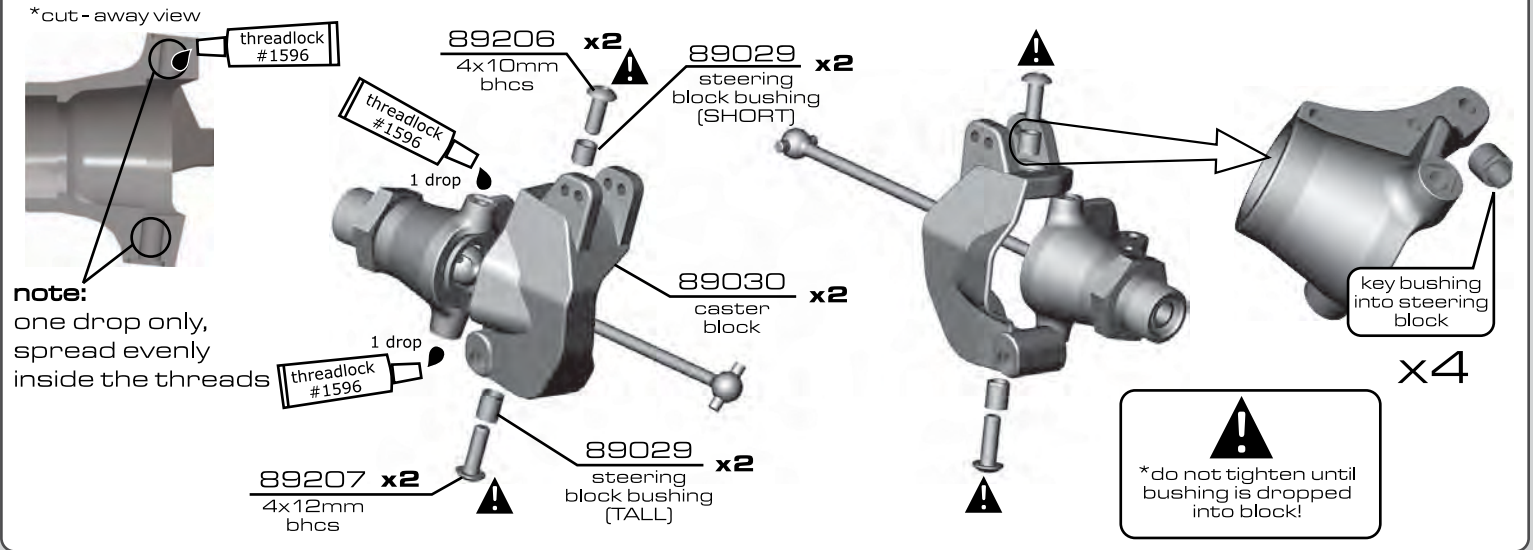
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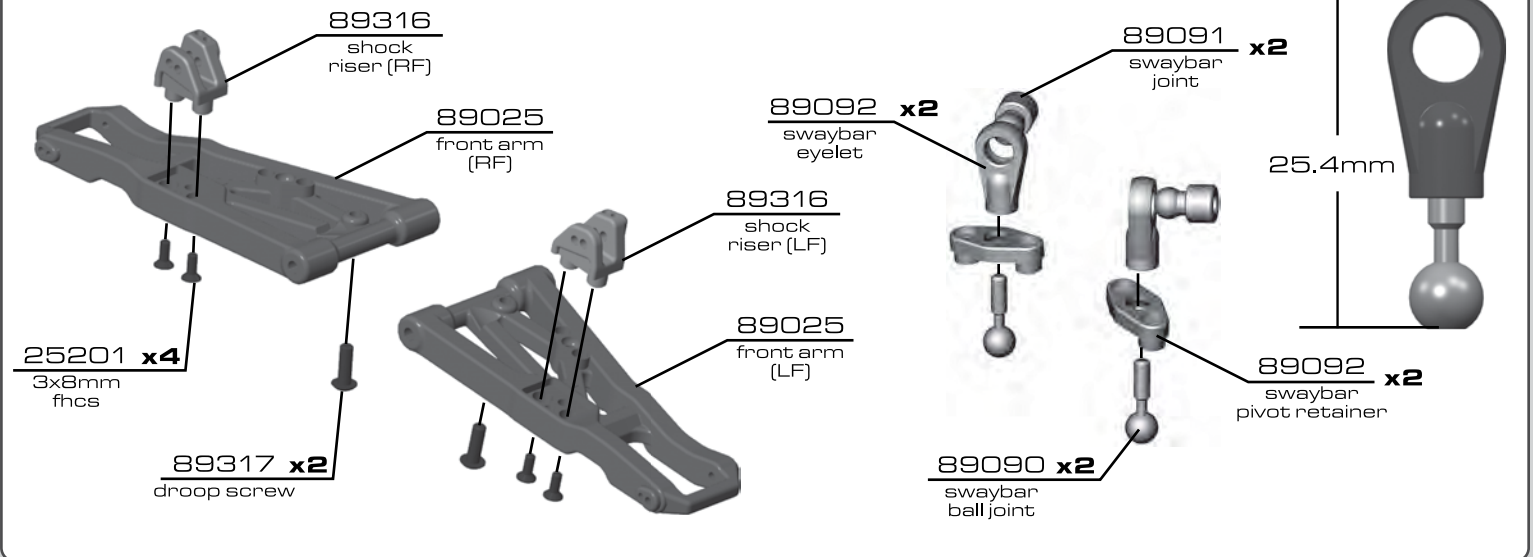
:: Front Suspension (cont.)



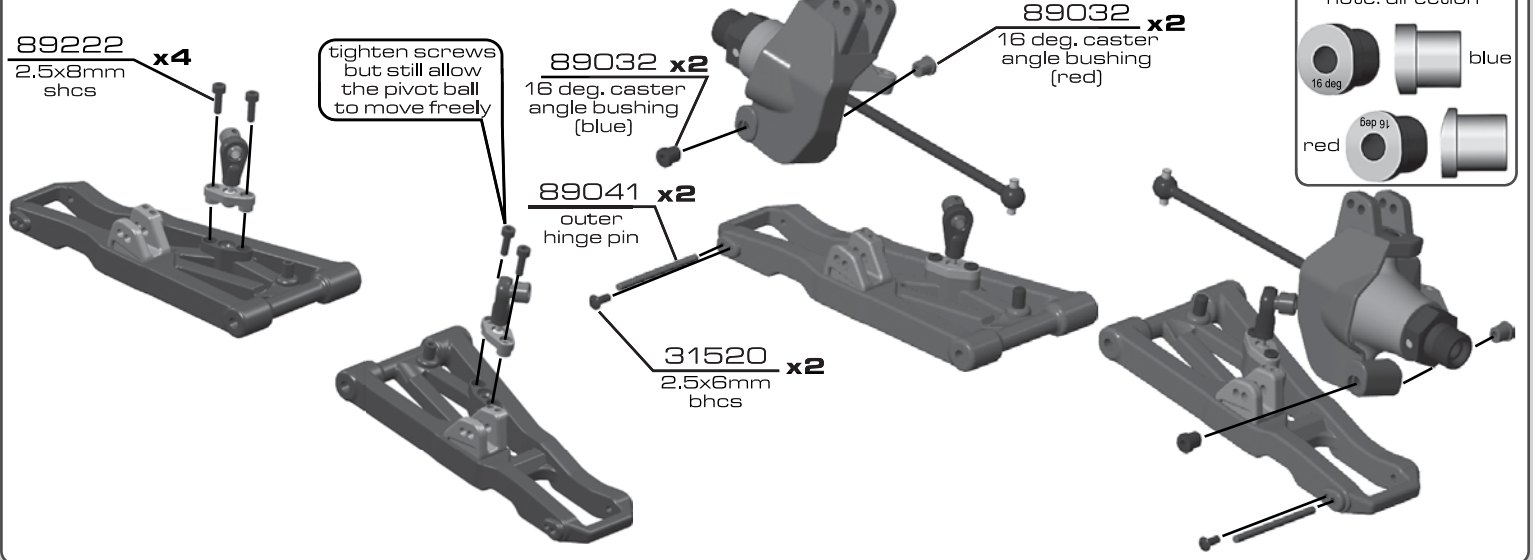
:: Front Suspension (cont.)



:: Front Suspension (cont.)



:: Front Suspension (cont.)



:: Front Suspension (cont.)

89076 x2
ball joint

25215 x2
m3 locknut

89225 x2
3x24mm shcs

89230 x4
silver cone washer

89076
suspension eyelet

89025
upper arm (R)

89025
upper arm (L)

89269 x2
38mm turnbuckle

*note the direction of the turnbuckles during installation!

*put smooth edge towards drivers side!

6mm

side view

:: Front Suspension (cont.)

hinge pin bushings
2 dot up

89460
aluminum A plate

89230 x2
silver cone washer

89279 x2
3x45mm shcs

89466 x2
inner hinge pin

89039 x2
hinge pin bushing (two dot)

89039 x2
hinge pin bushing (one dot)

hinge pin bushings
1 dot

:: Front Suspension (cont.)

89219 x2
3x5mm setscrew

31531 x2
3x6mm bhcs

89017
swaybar mount

89088
swaybar (silver)

25225 x2
3x3mm setscrew

89226
3x26mm shcs

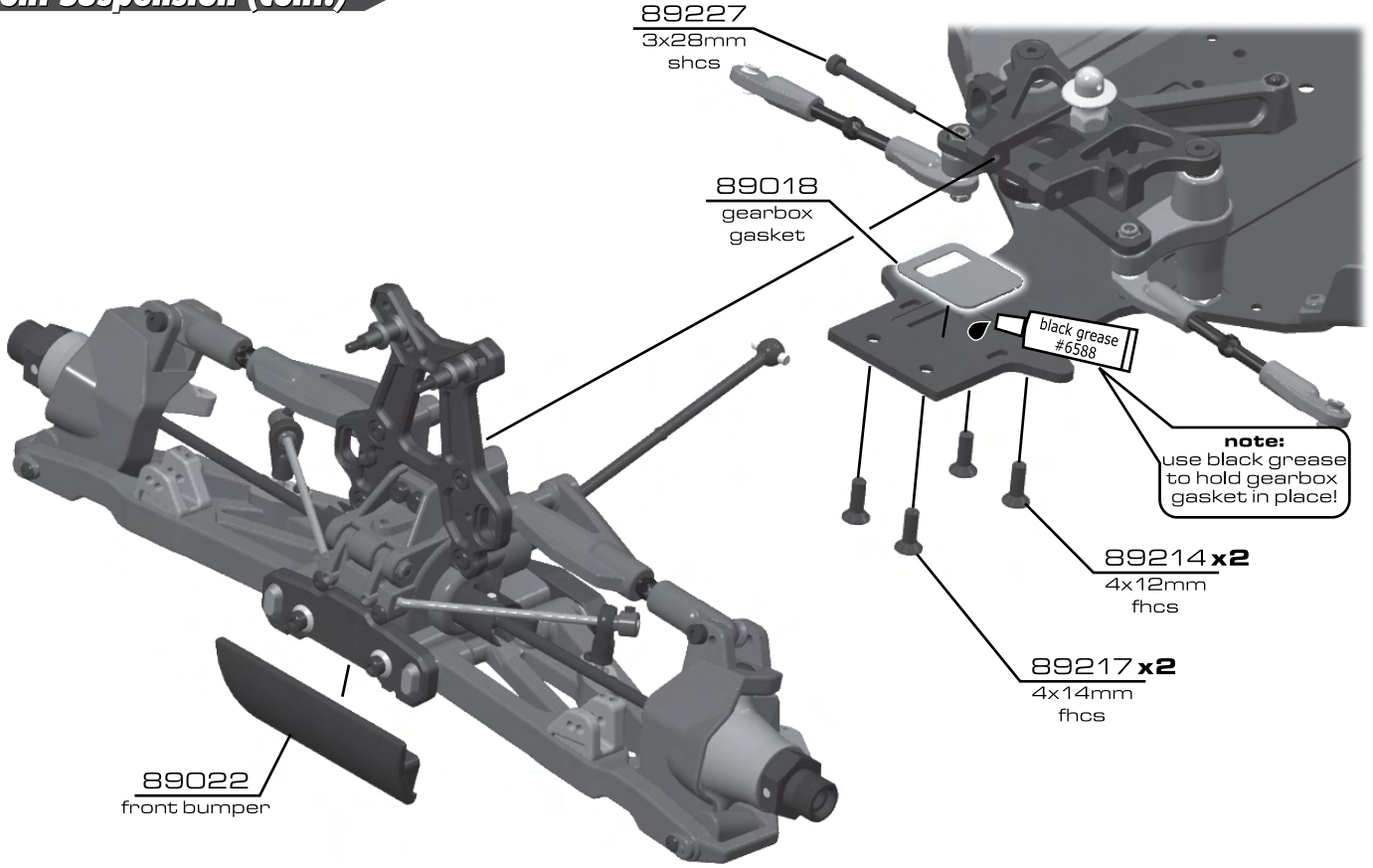
25215
m3 locknut

threadlock #1596

threadlock #1596

*tighten setscrews to remove slop, but allow free movement of bar!

:: Front Suspension (cont.)



:: Front Suspension (cont.)

hinge pin bushings



1
dot

89040 x2
upper inner
hinge pin

89039 x2
hinge pin
bushing
(one dot)

89218 x2
3x8mm
washer

threadlock
#1596

31531 x2
3x6mm
bhcs

threadlock
#1596

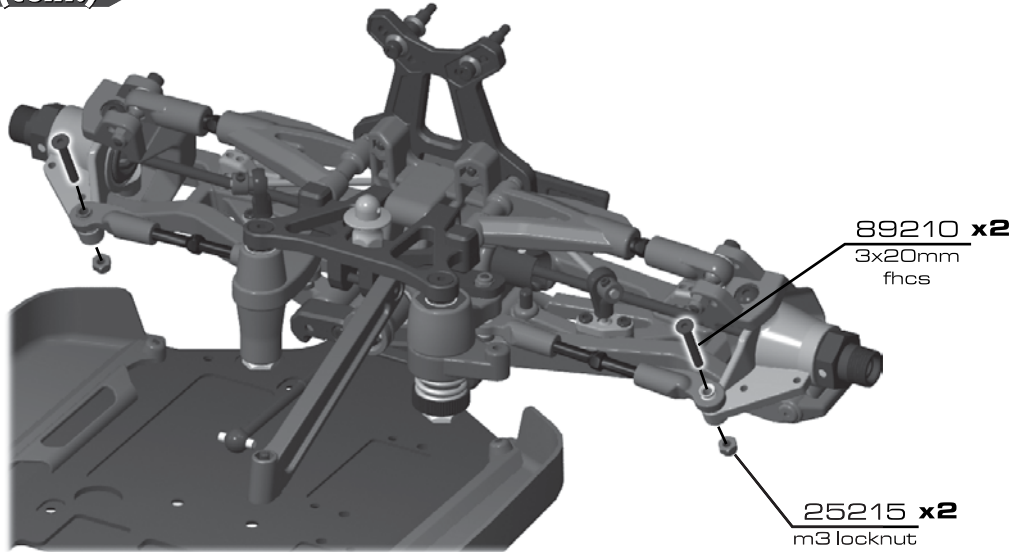
89470 x2
shock tower
hinge pin
bushings
(two dot up)

shock tower hinge
pin bushings



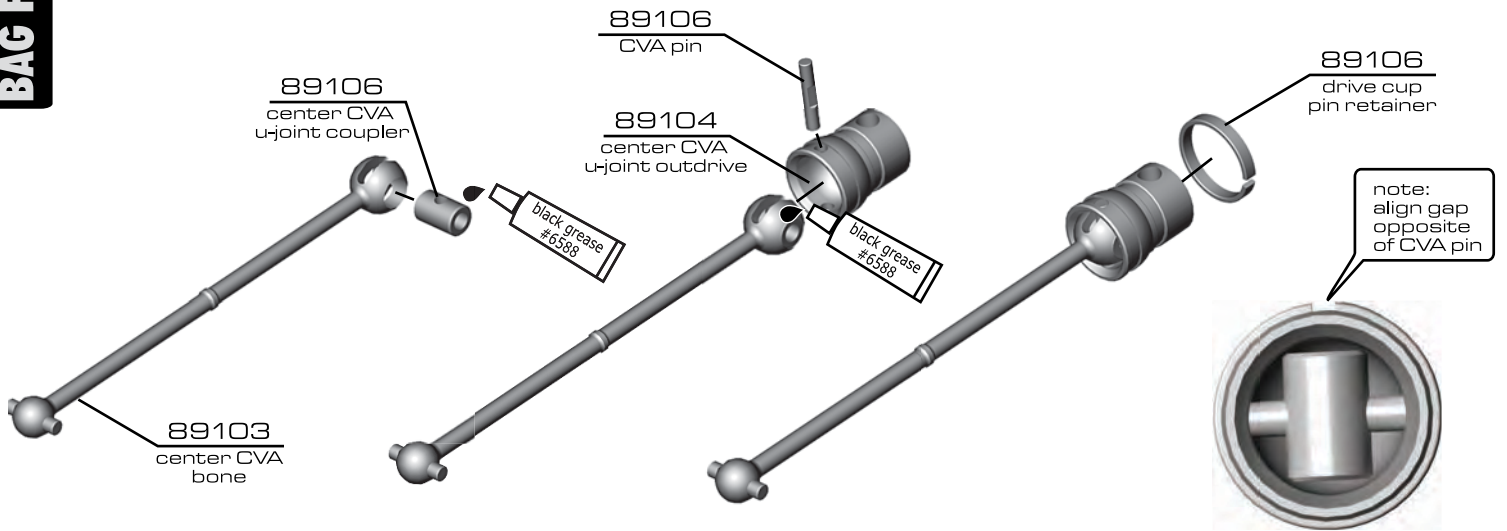
2
dot up

:: Front Suspension (cont.)

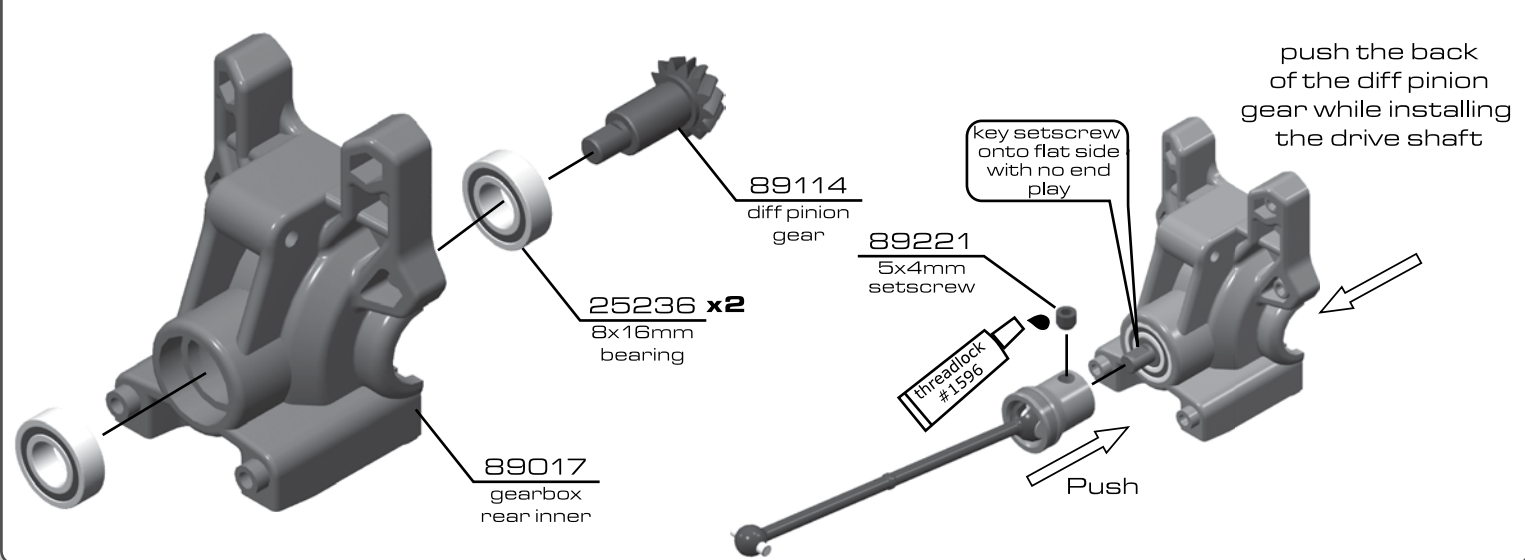


:: Rear Bulkhead Build

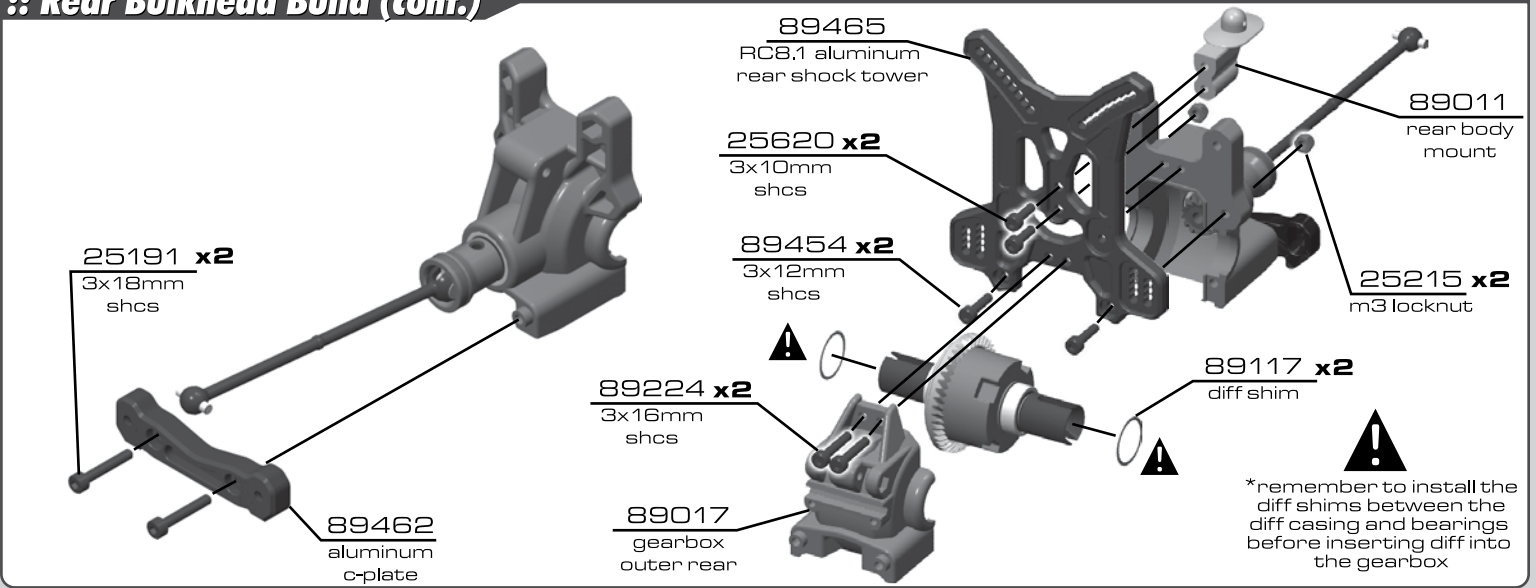
BAG F



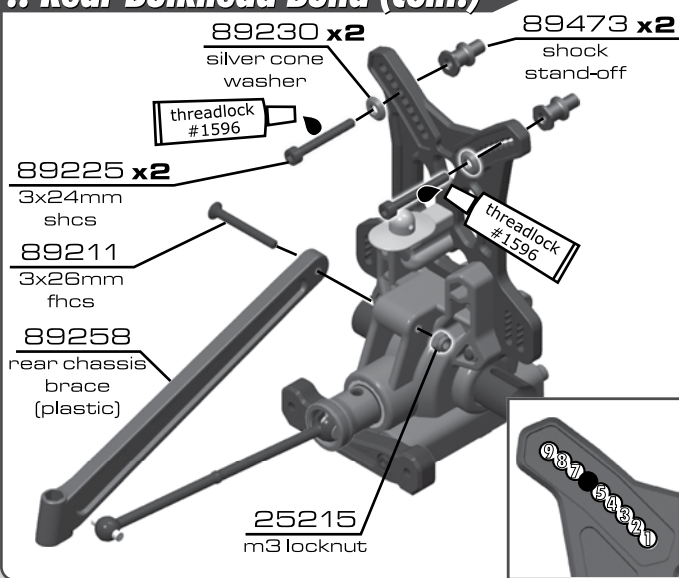
:: Rear Bulkhead Build (cont.)



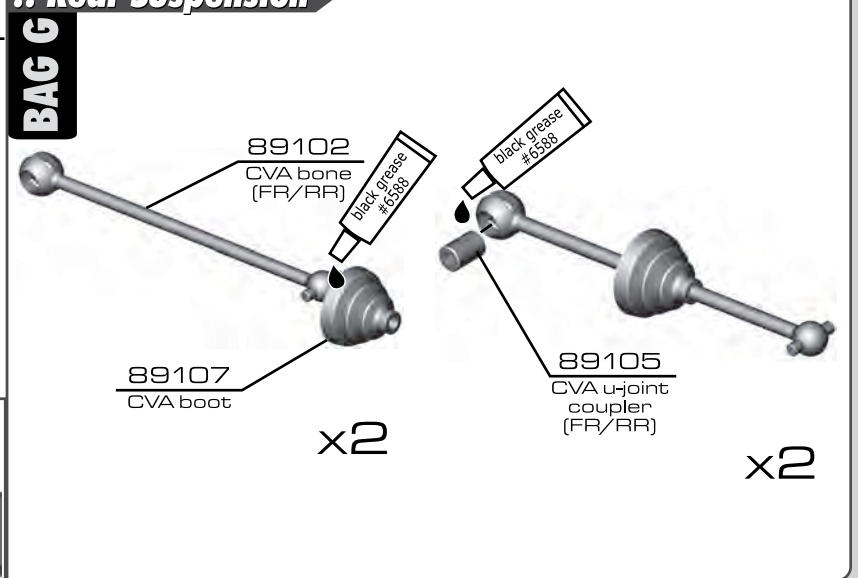
:: Rear Bulkhead Build (cont.)



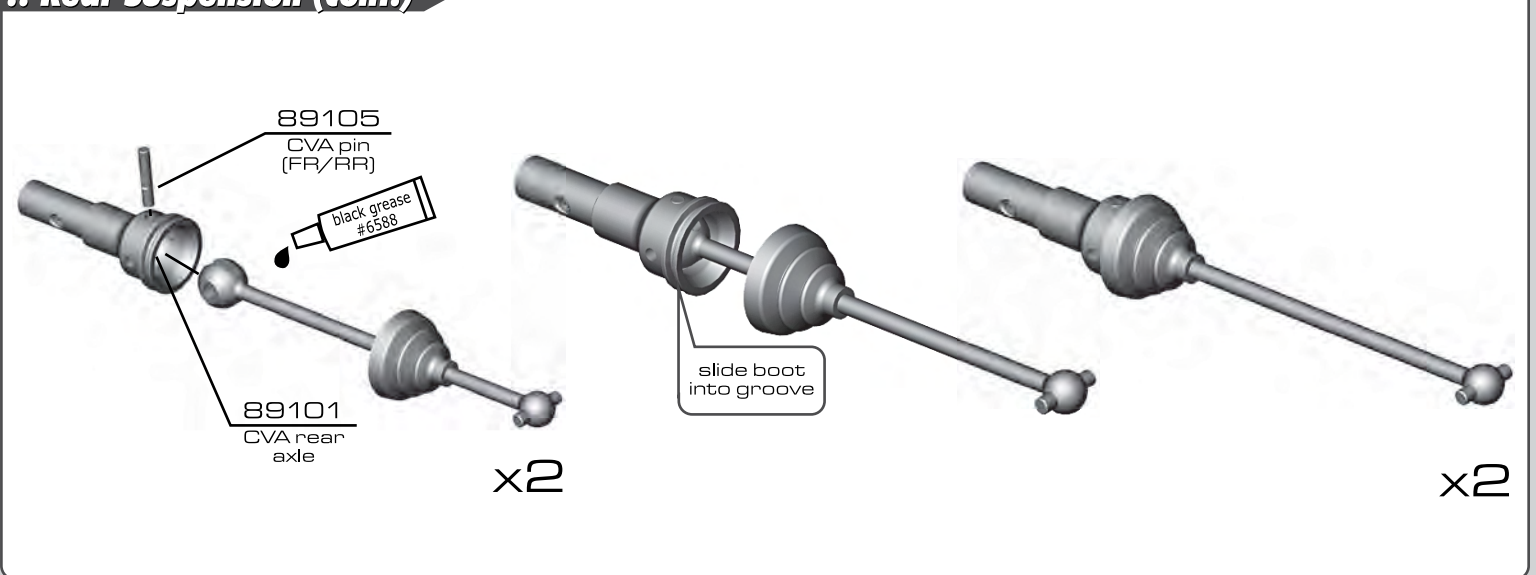
:: Rear Bulkhead Build (cont.)



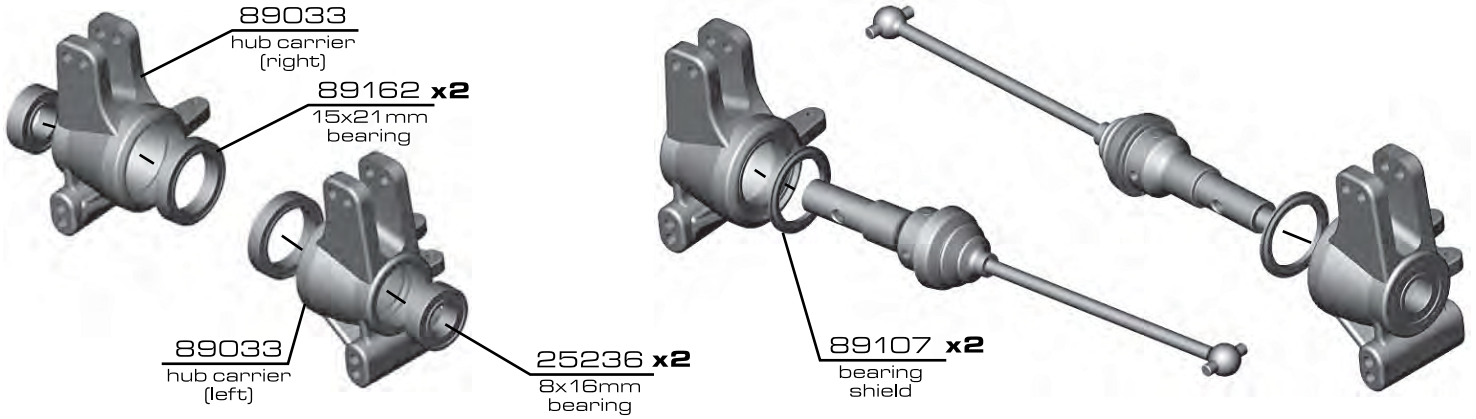
:: Rear Suspension



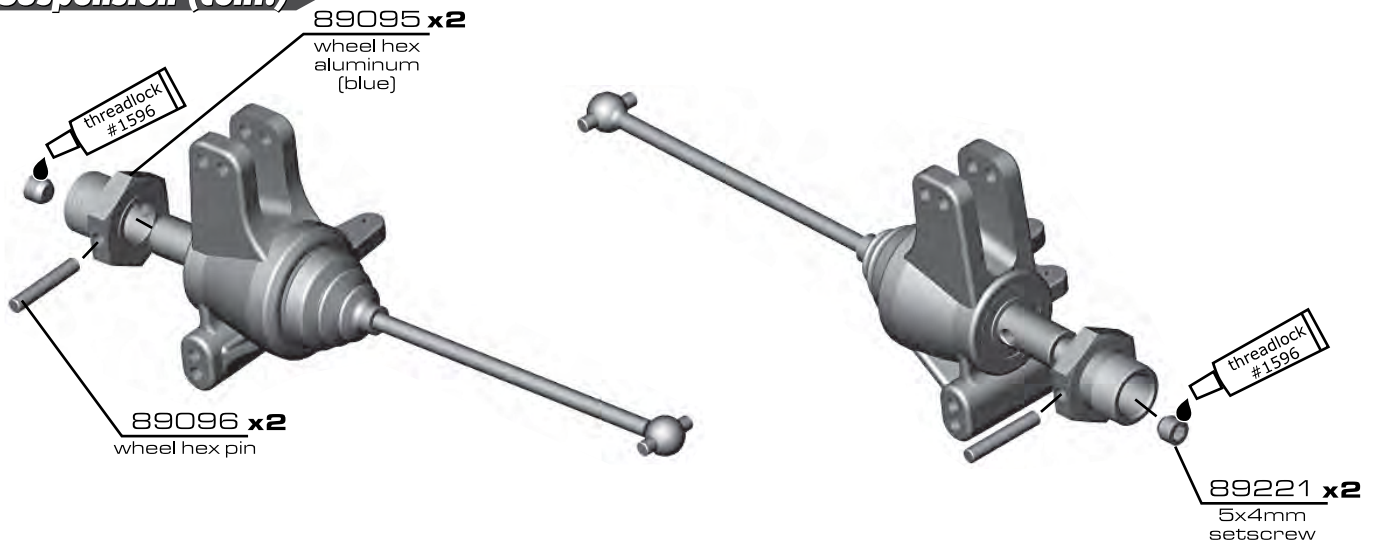
:: Rear Suspension (cont.)



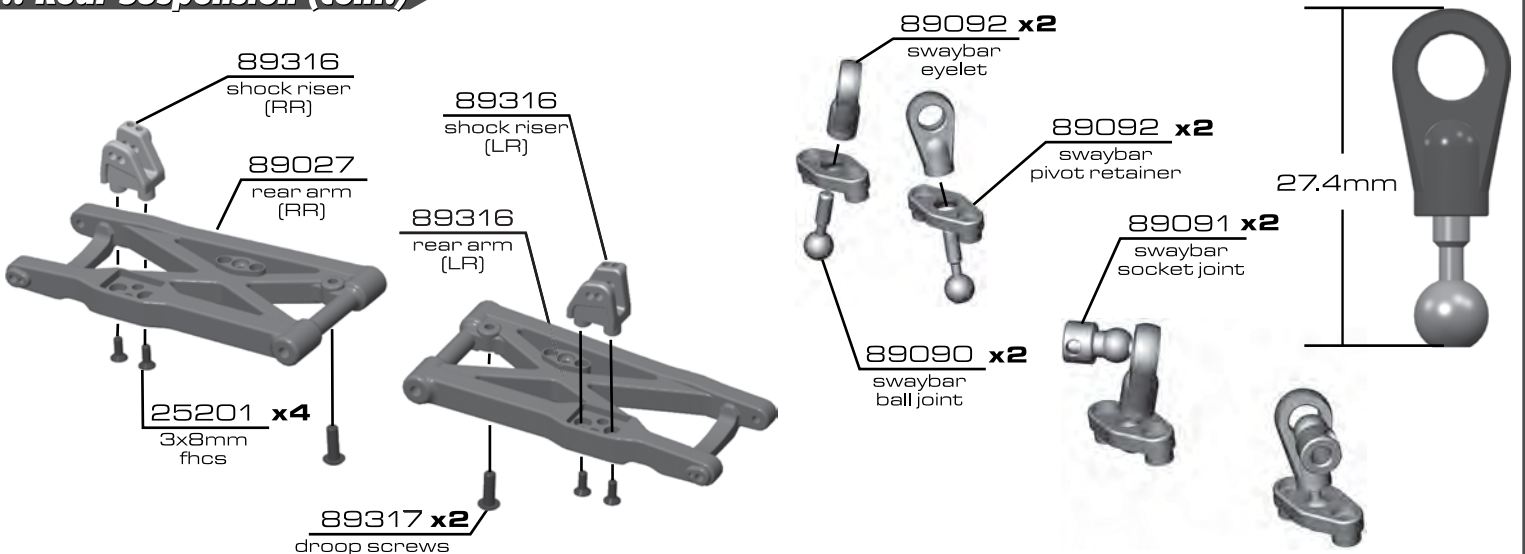
:: Rear Suspension (cont.)



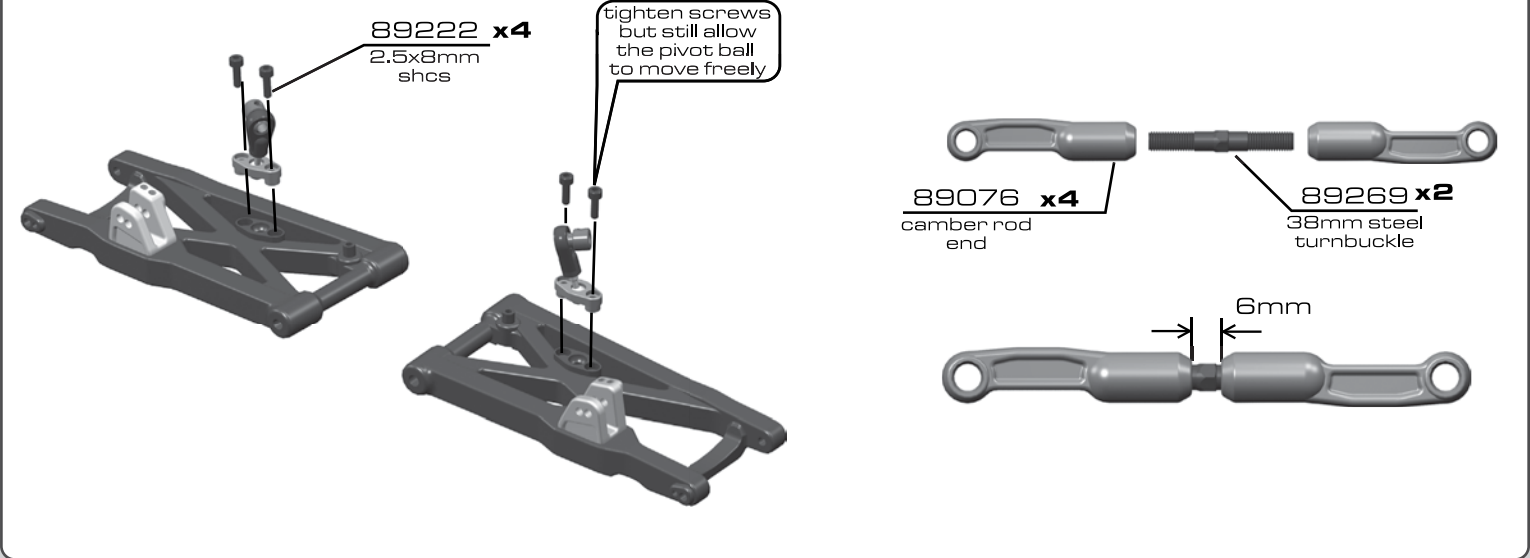
:: Rear Suspension (cont.)



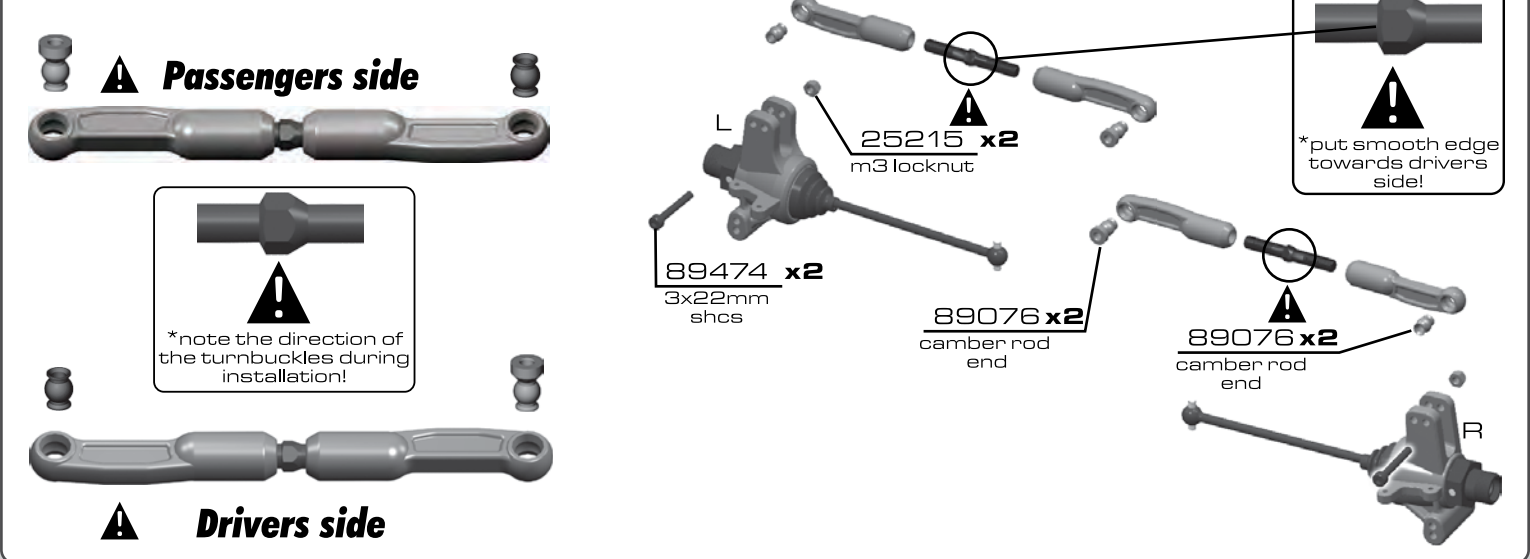
:: Rear Suspension (cont.)



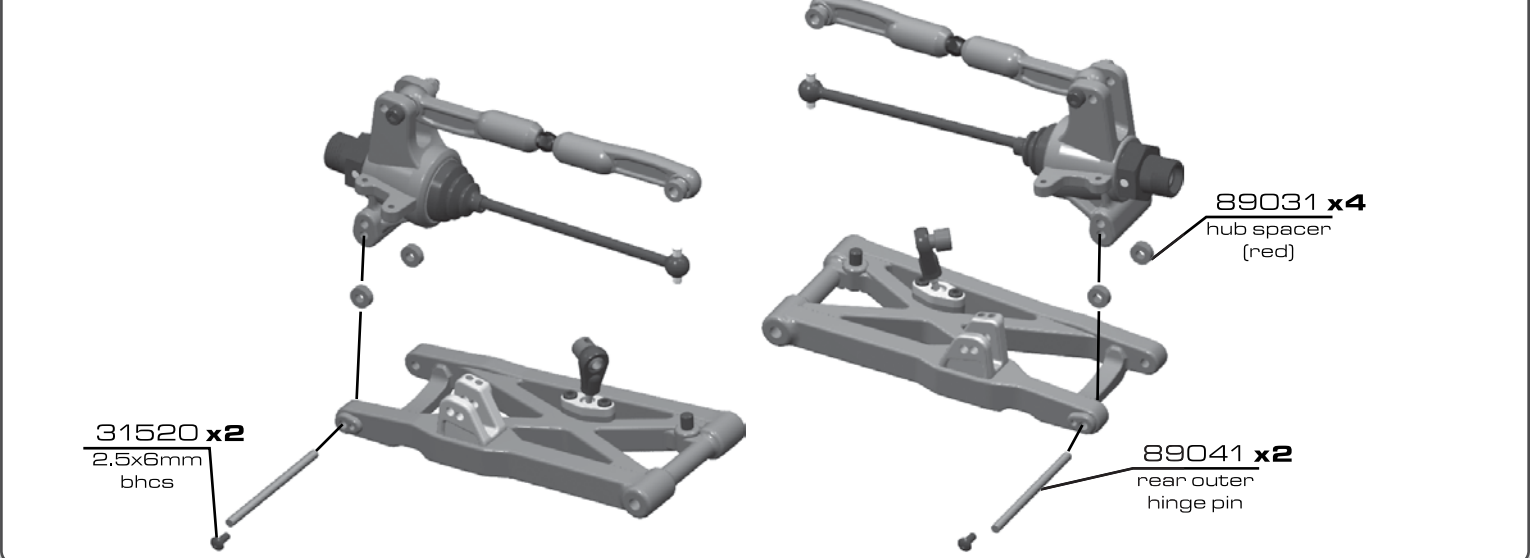
:: Rear Suspension (cont.)



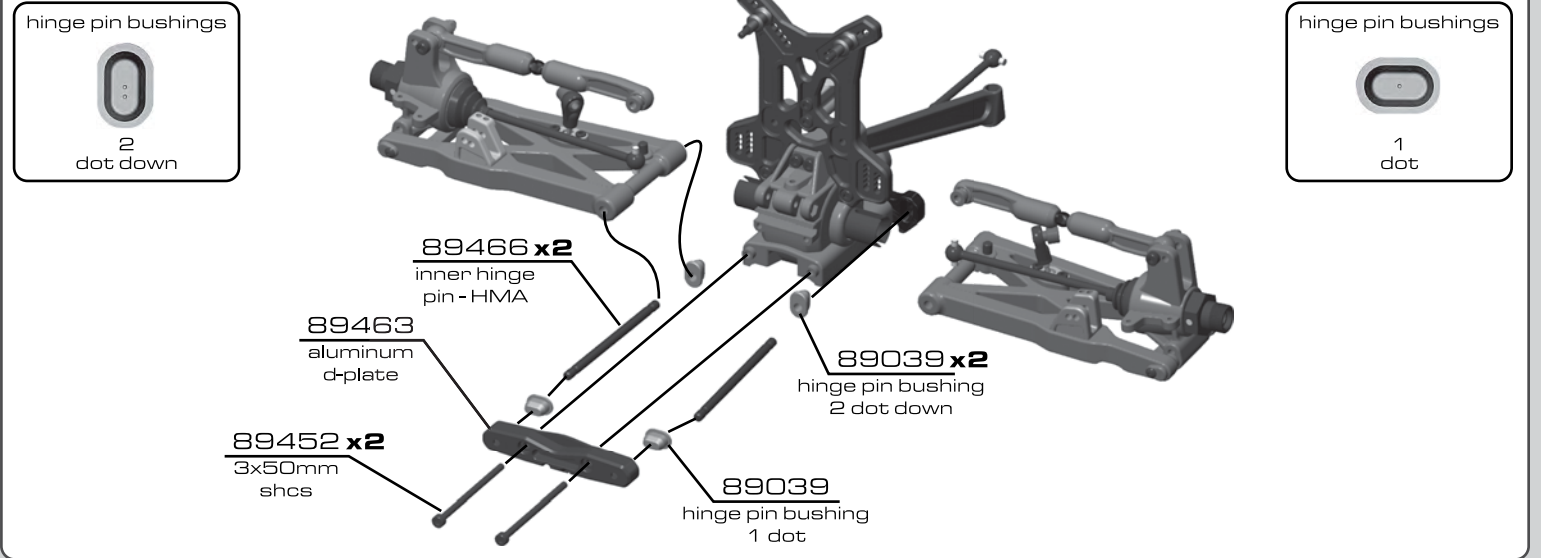
:: Rear Suspension (cont.)



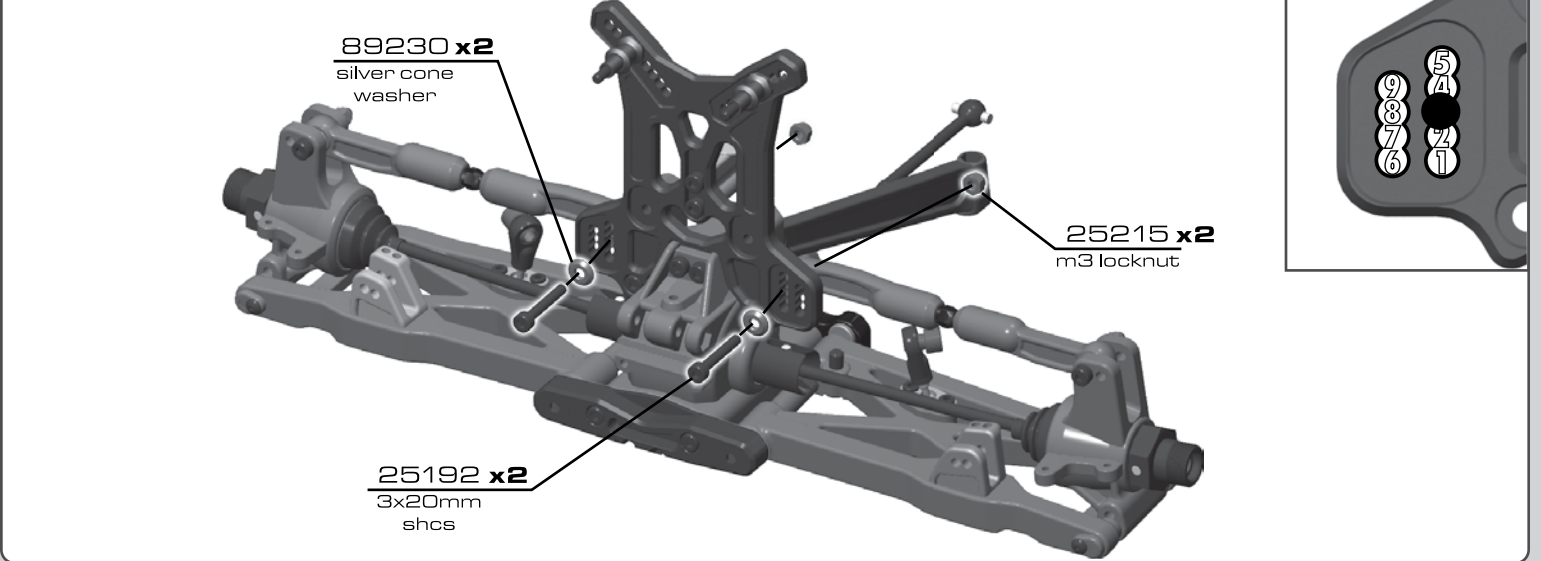
:: Rear Suspension (cont.)



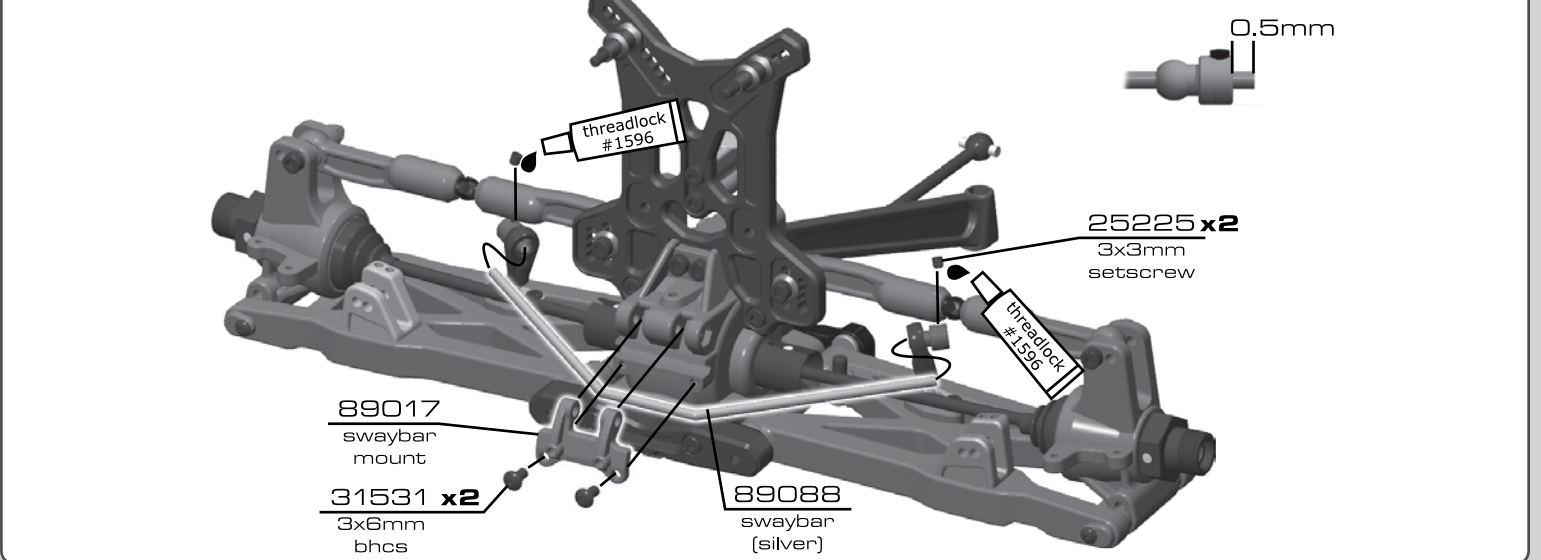
:: Rear Suspension (cont.)



:: Rear Suspension (cont.)

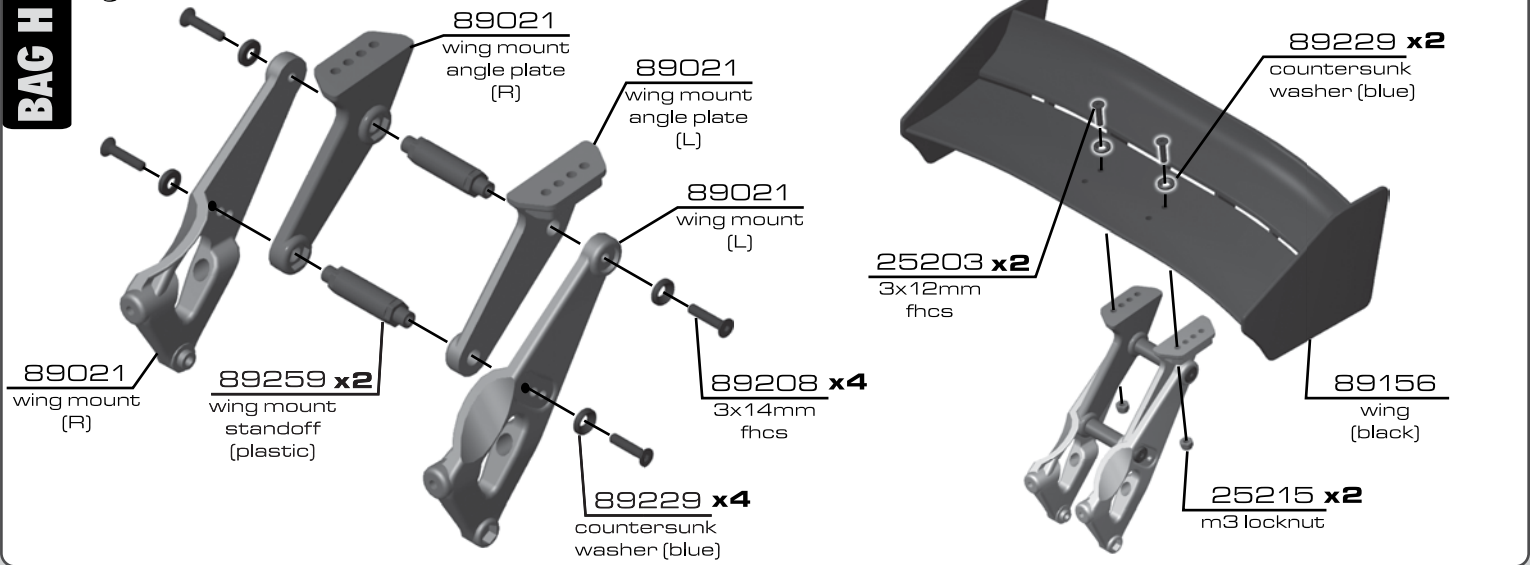


:: Rear Suspension (cont.)

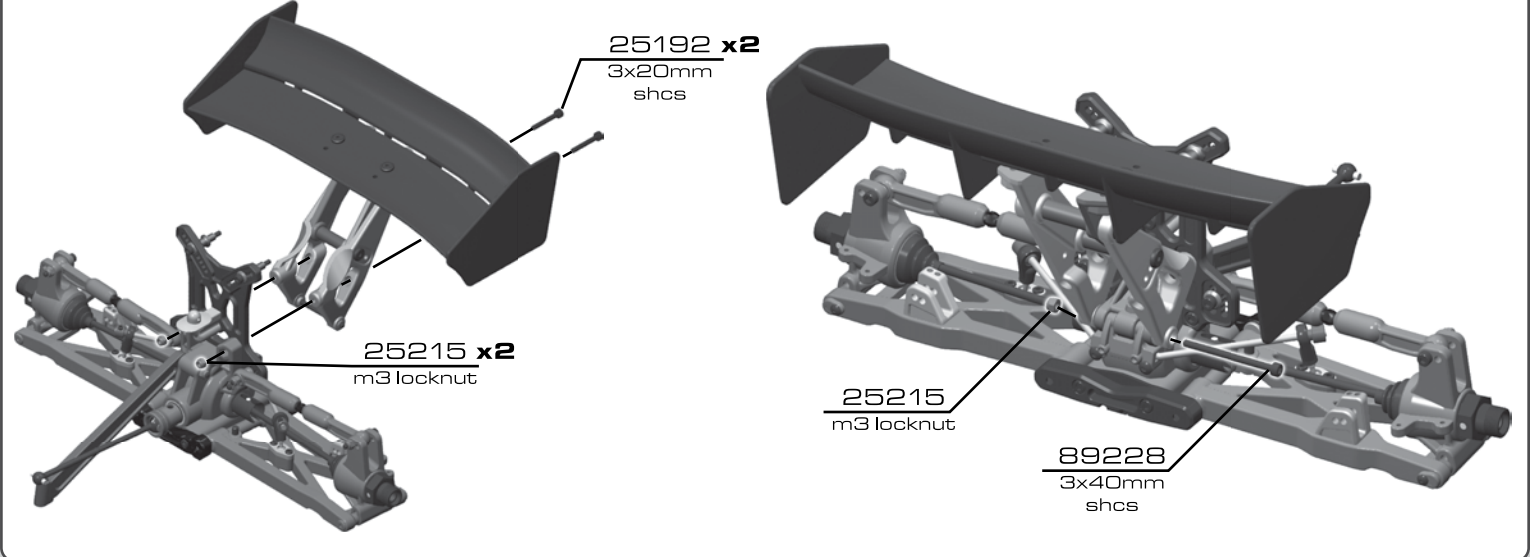


:: Wing Build

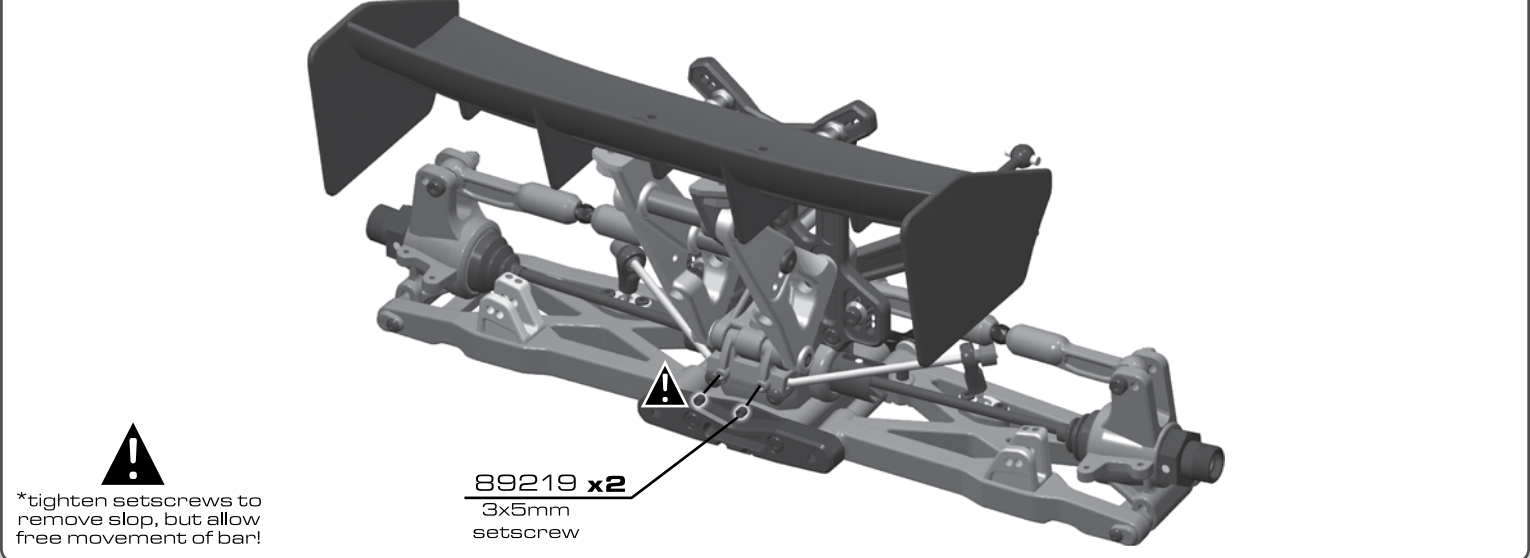
BAG H



:: Wing Build (cont.)

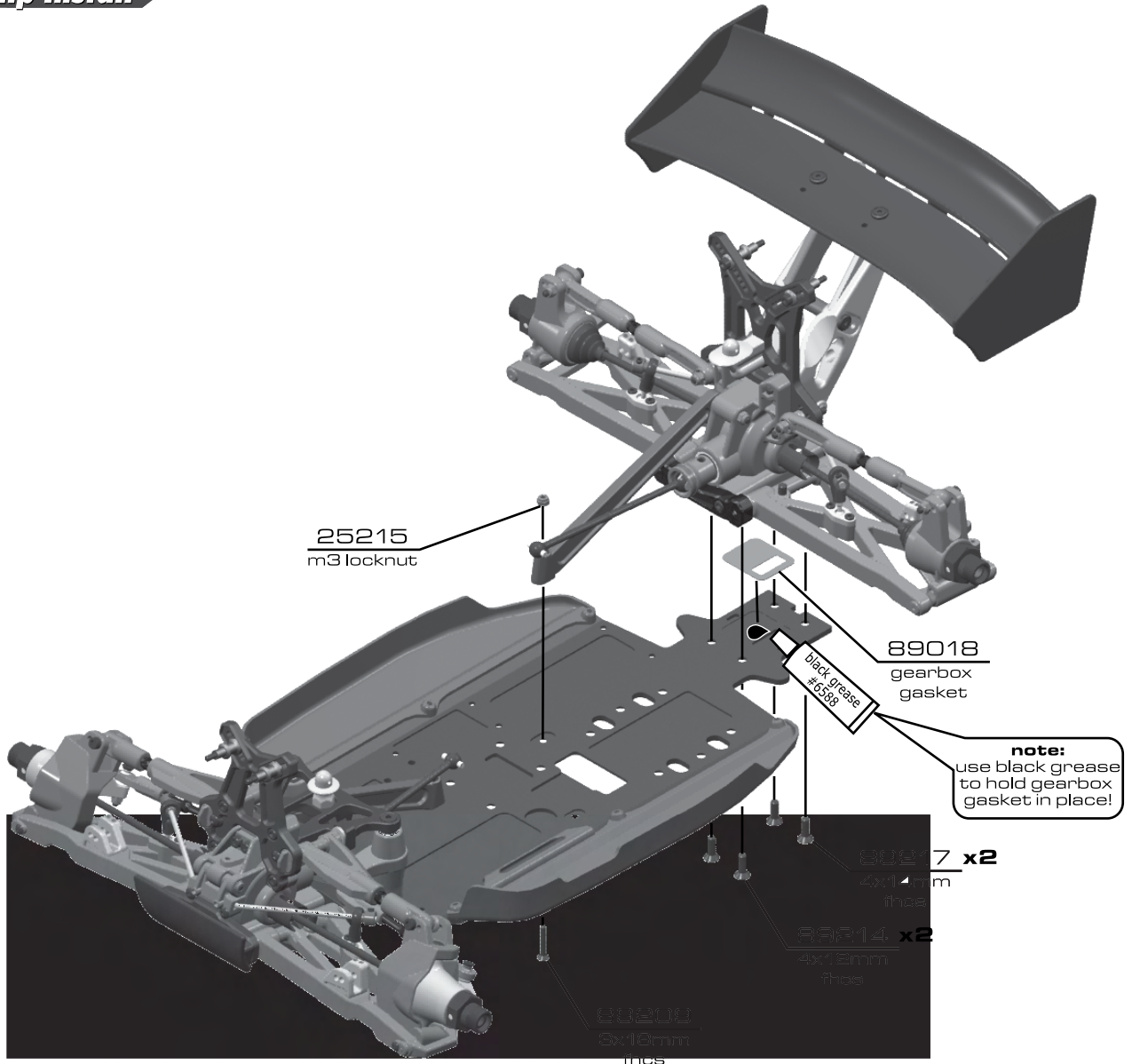


:: Wing Build (cont.)



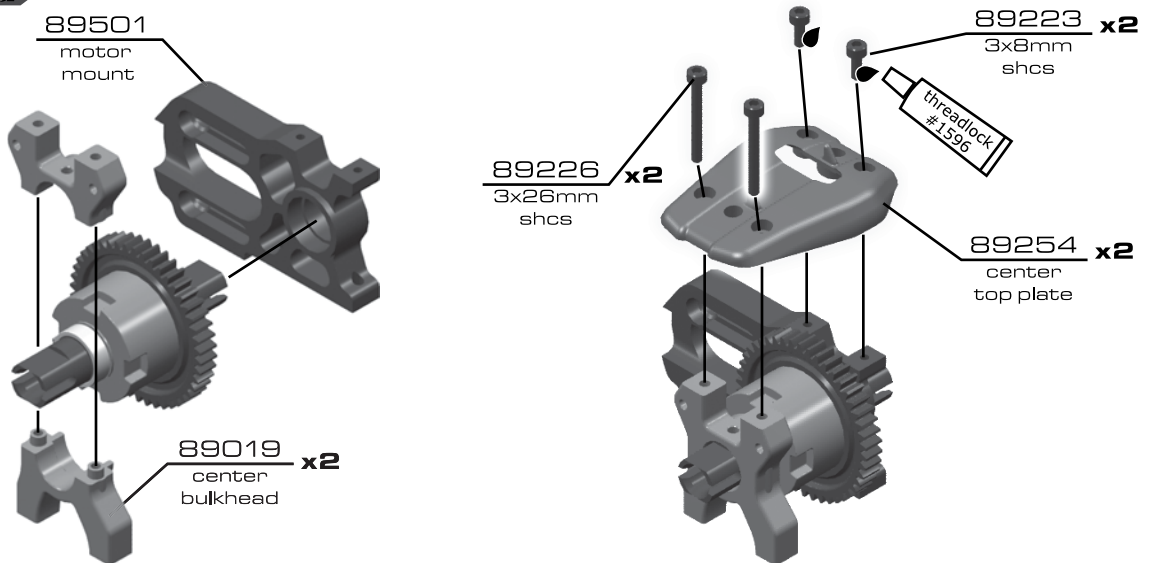
!
*tighten setscrews to remove slop, but allow free movement of bar!

:: Rear Clip Install

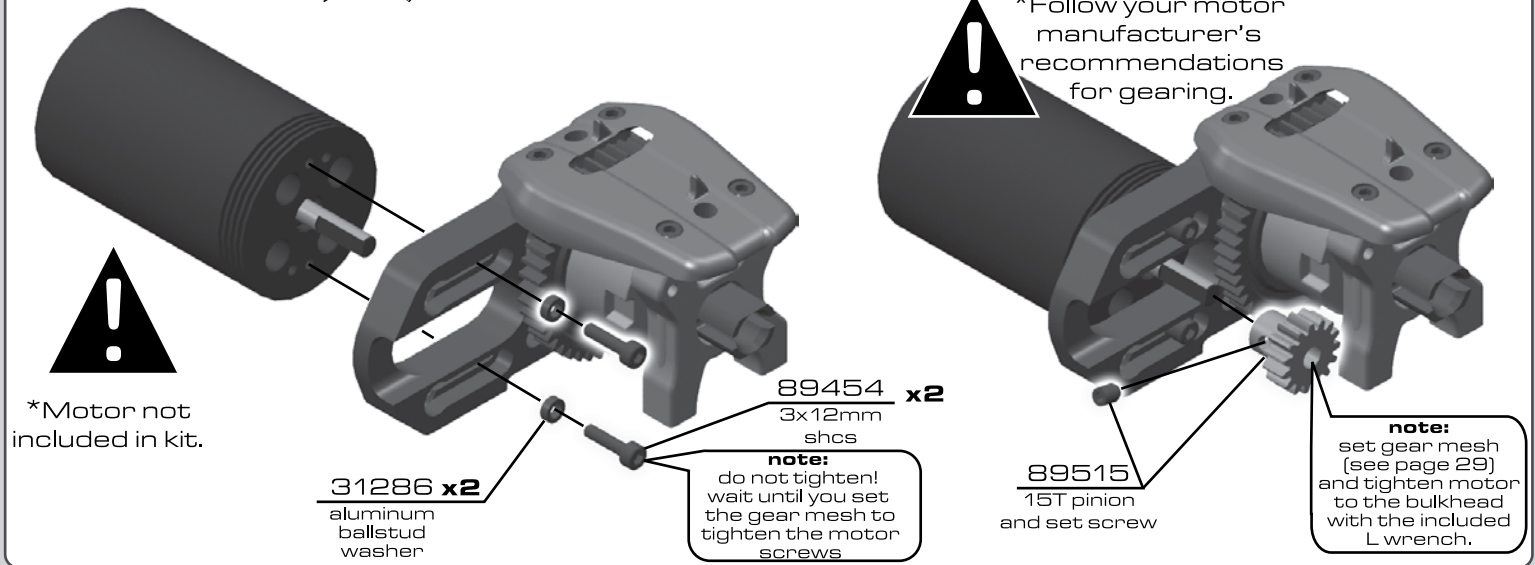


:: Center Bulkhead

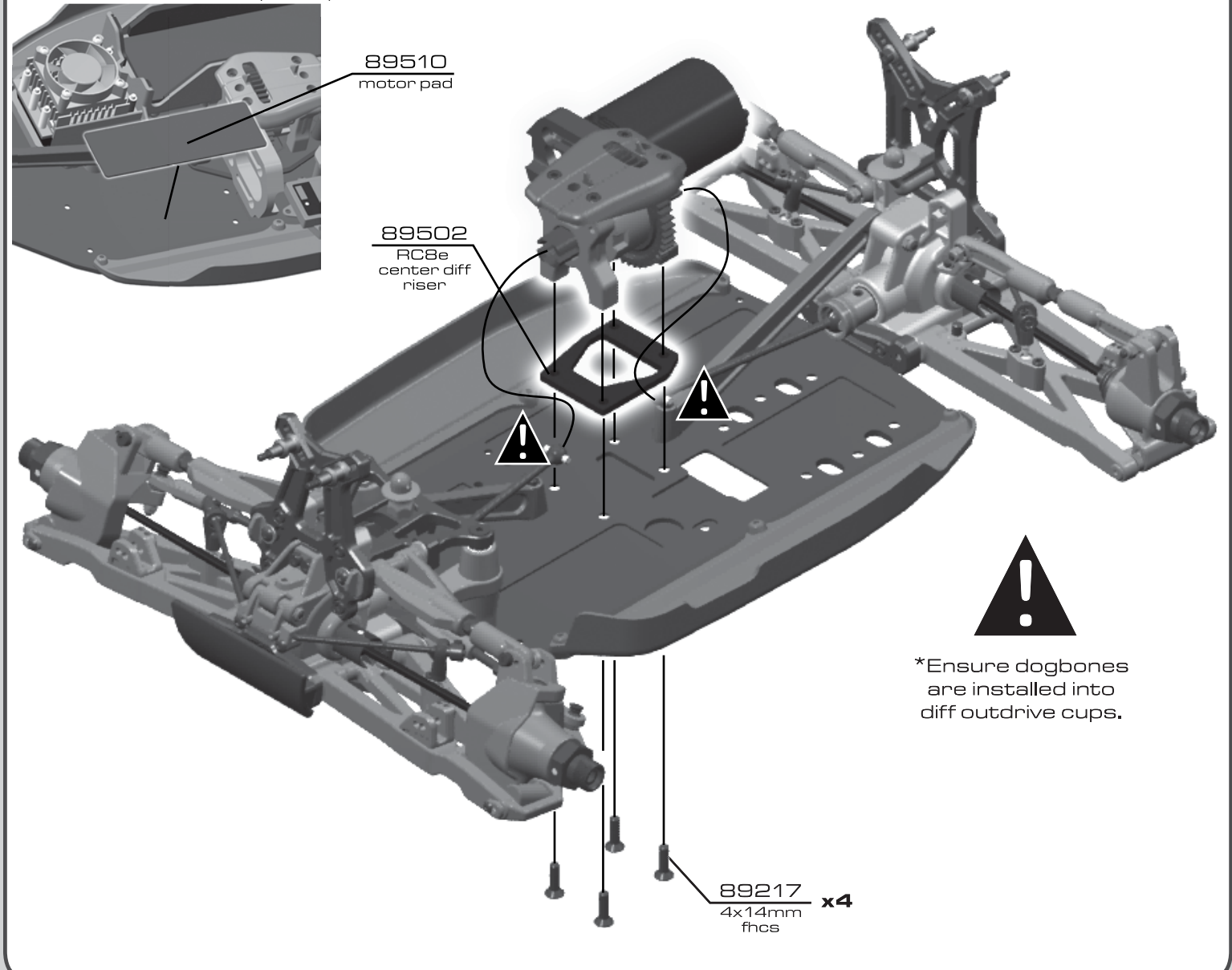
BAG I



:: Center Bulkhead (cont.)



:: Center Bulkhead (cont.)



:: Shocks

BAG J



89291 x2
16x29mm FT shock body front

89344 x2
16x38mm FT shock body rear

shock fluid

89352 x4
spacer

89066 x2
shock o-rings

89352 x4
o-ring

89352 x4
bottom nut

89278 x8
2.5mm piston washer

89353
shock piston set (1,3, blank)

89215 x4
piston locknut

1,3mm piston

89467 x2
HD shock shaft 29mm (front)

89468 x2
HD shock shaft 38mm (rear)

! *use the lower shock tools locknut holder to thread the piston locknut onto the shock shafts

:: Shocks (cont.)

shock fluid

1 drop on threads

fit boot into groove

fill to top with shock oil
front: 25wt #5428
rear: 25wt #5428

tighten eyelet to line on shaft

89356 x2
shock boot front

89357 x2
shock boot rear

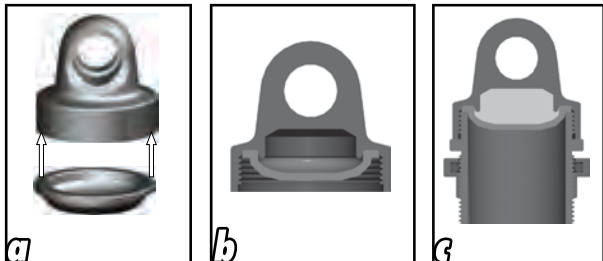
89352 x4
shock boot washer

89469 x4
HD shock ends

89469 x4
shock rod end ball

:: Shocks (cont.)

Bladder installation



As you install the cap with bladder, it will force out any extra oil. If you install the cap with the shaft fully extended, you are running FULL REBOUND.

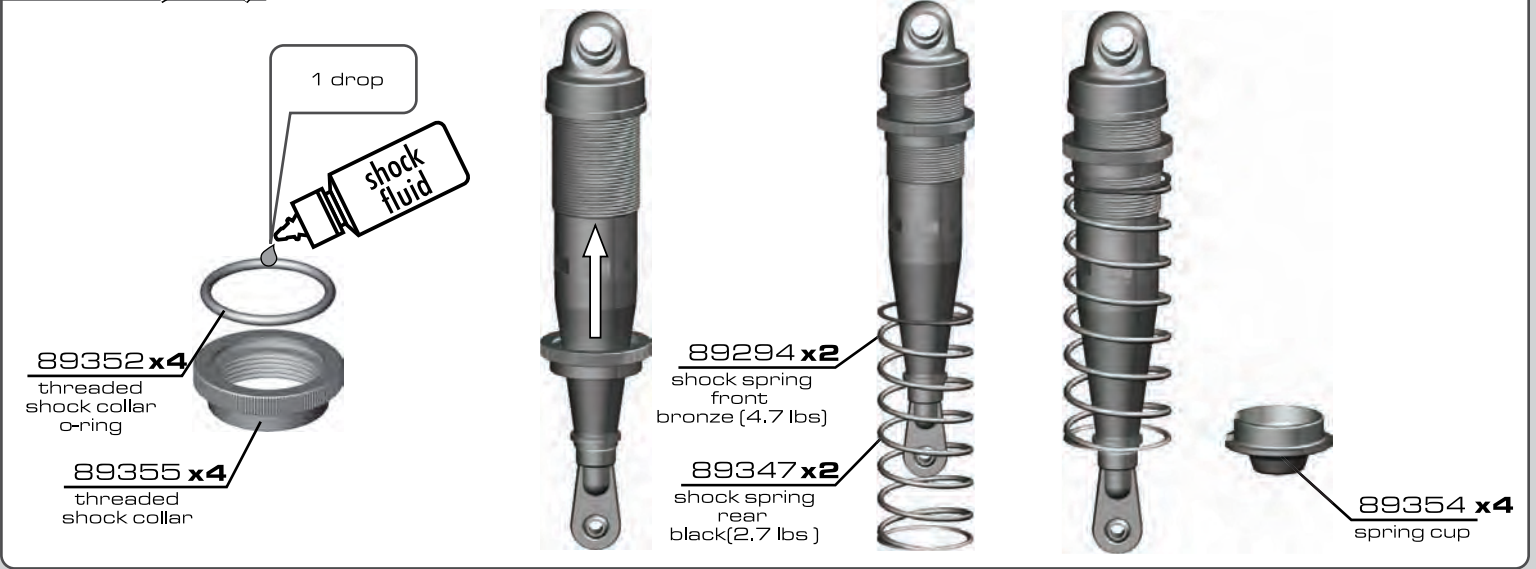
To run less rebound, unthread the cap 1-2 turns and compress the shaft to the desired position and re-tighten the cap.

89335 x4
shock cap

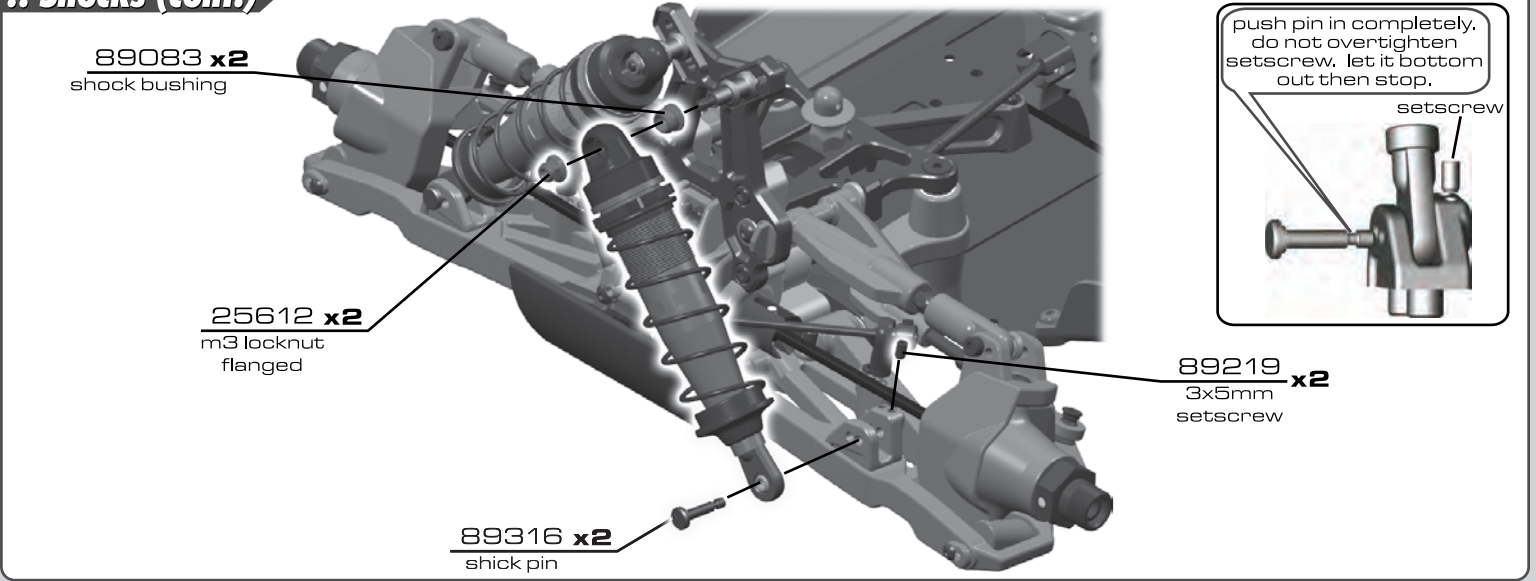
89351 x4
shock bladder

*some residual oil may appear for your first few runs around the shock cap as a result of bleeding.

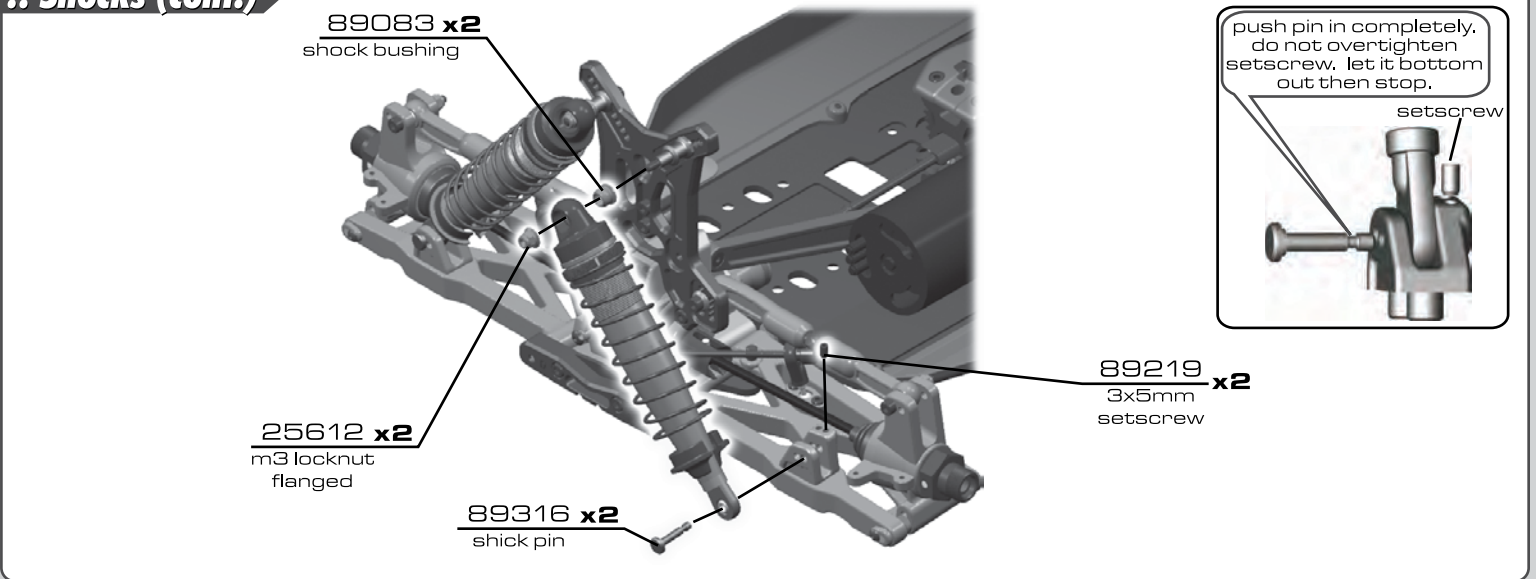
:: Shocks (cont.)



:: Shocks (cont.)



:: Shocks (cont.)



:: Battery / Radio Tray Build

BAG K

89504
radio tray
(bottom)

89208 **x4**
3x14mm
fhcs

89229 **x4**
blue
countersunk
washer

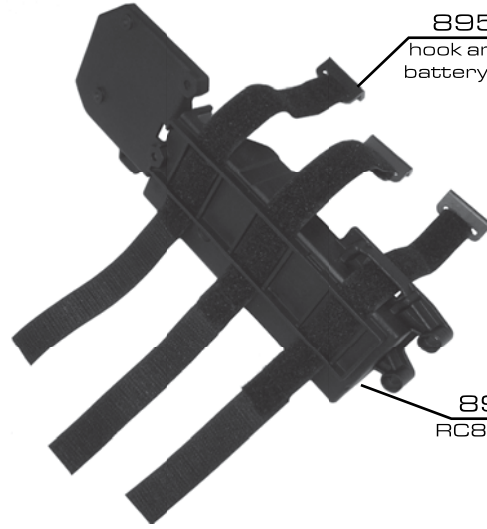
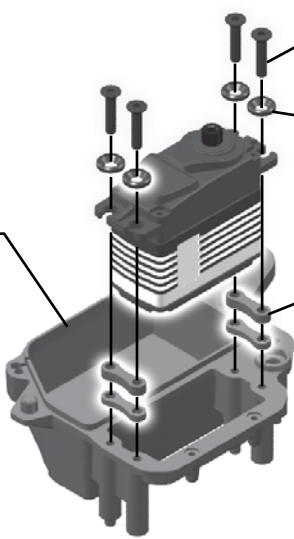
89006 **x2**
servo spacers
(1 thin, 1 thick)

89506 **x3**
hook and loop
battery straps

89505
RC8e battery
tray

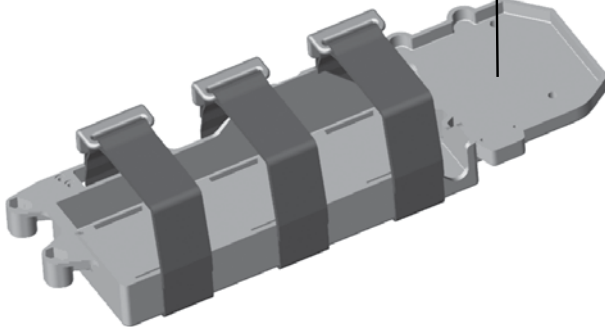
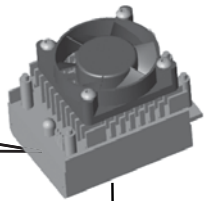


*Servo not included in kit.

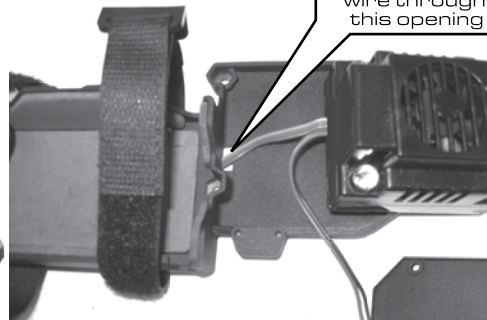


:: Battery / Radio Tray Build (cont.)

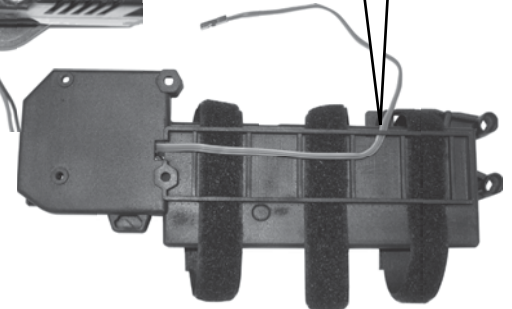
note:
speed control
not included.
attach with
servo tape
pt #6727.



note:
route the speed
control receiver
wire through
this opening

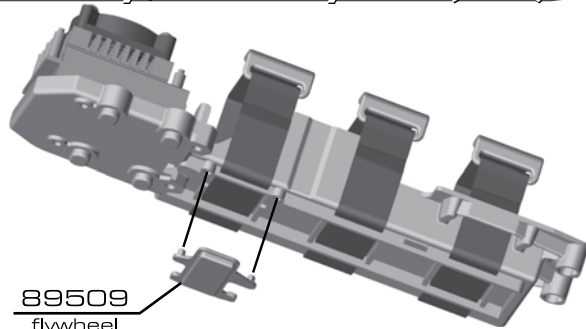


note:
route the speed
control receiver
wire through
this opening

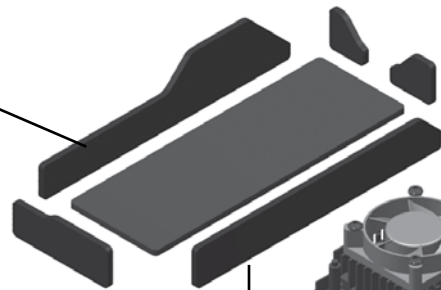


:: Battery / Radio Tray Build (cont.)

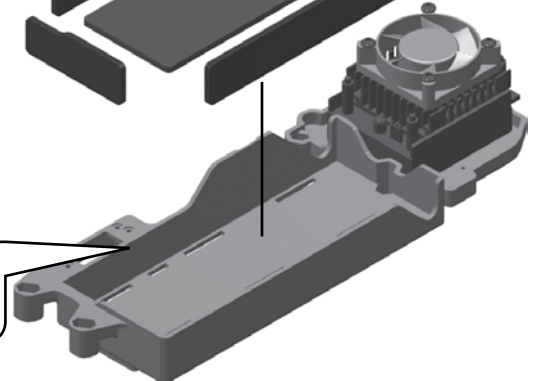
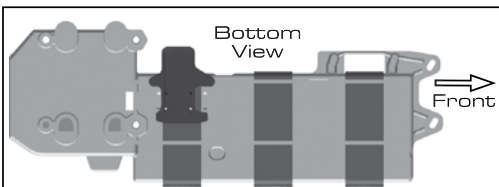
89509
flywheel
opening cover



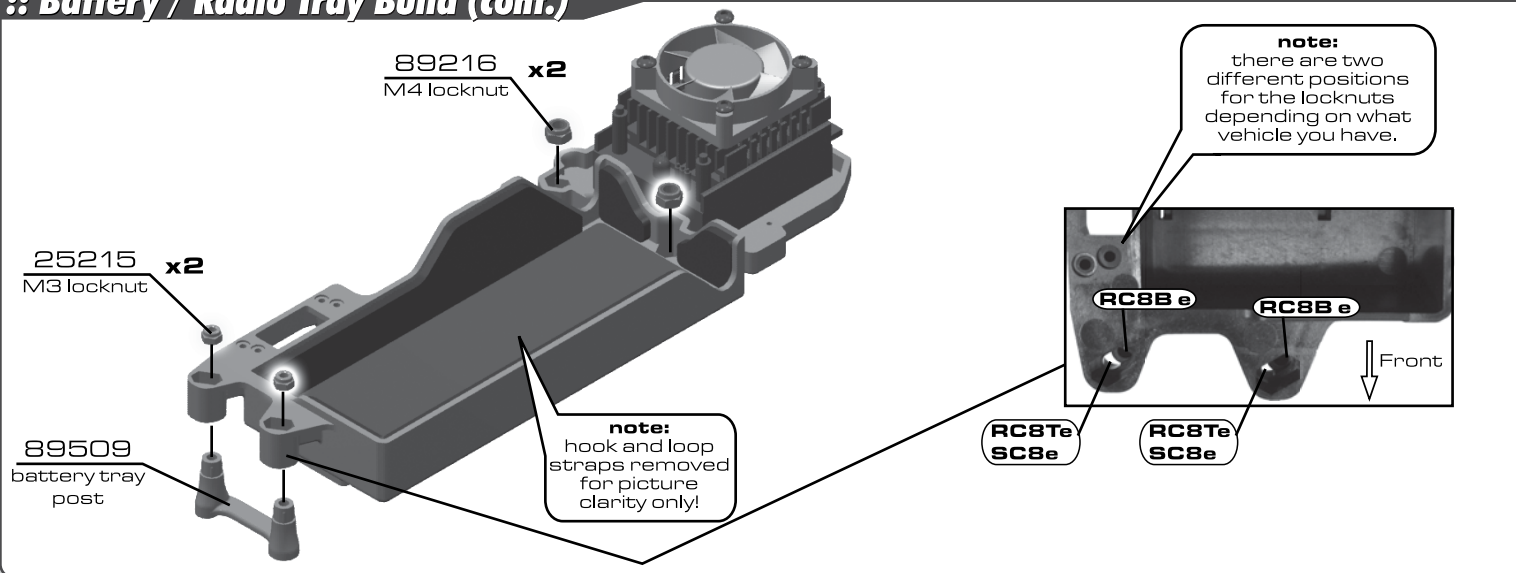
89507
battery tray
pads



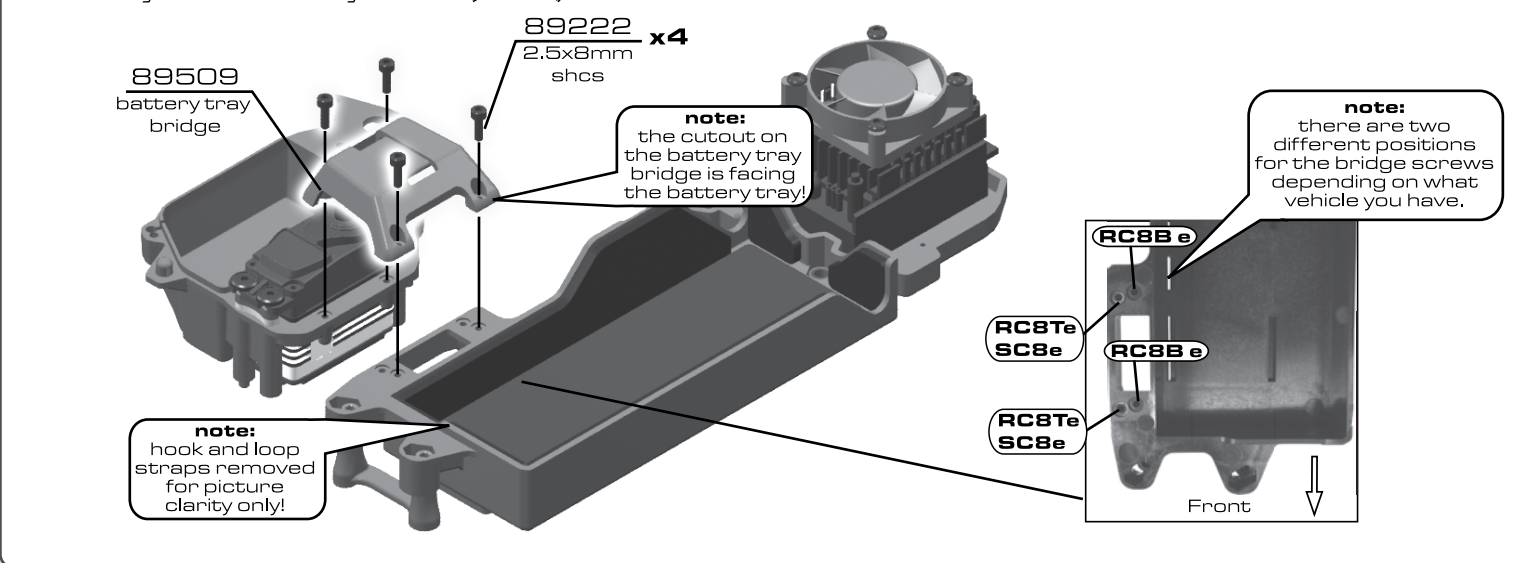
note:
hook and loop
straps removed
for picture
clarity only!



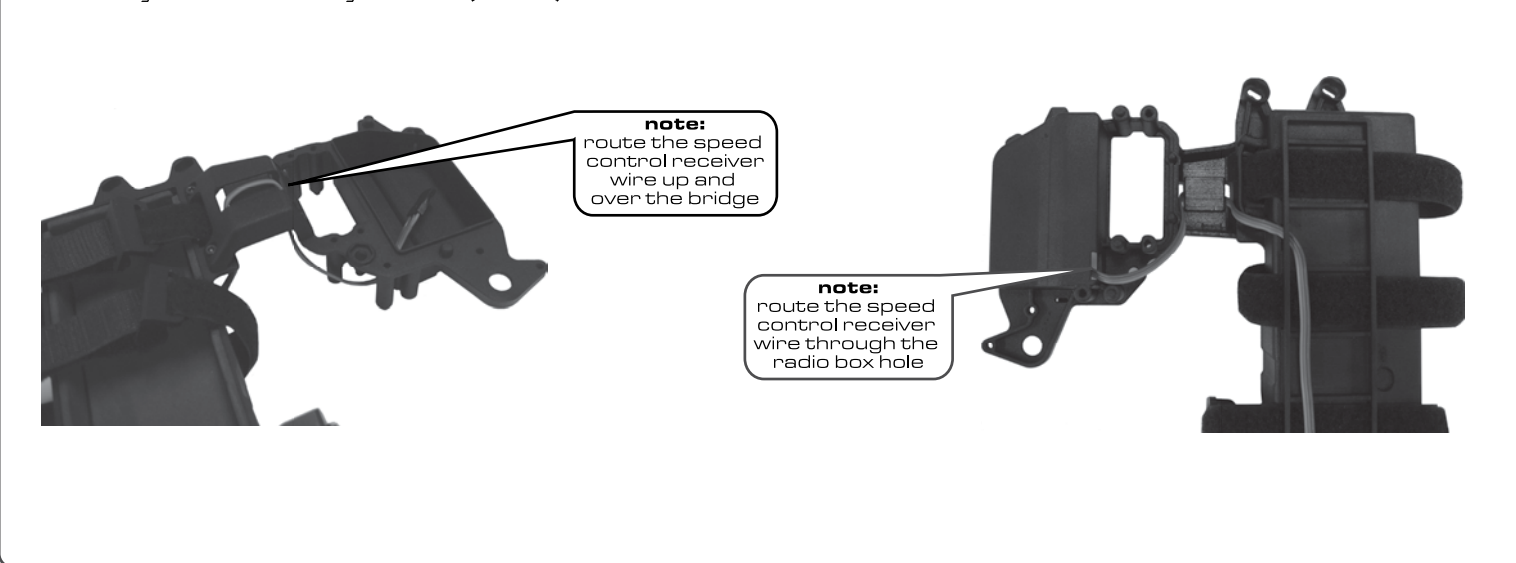
:: Battery / Radio Tray Build (cont.)



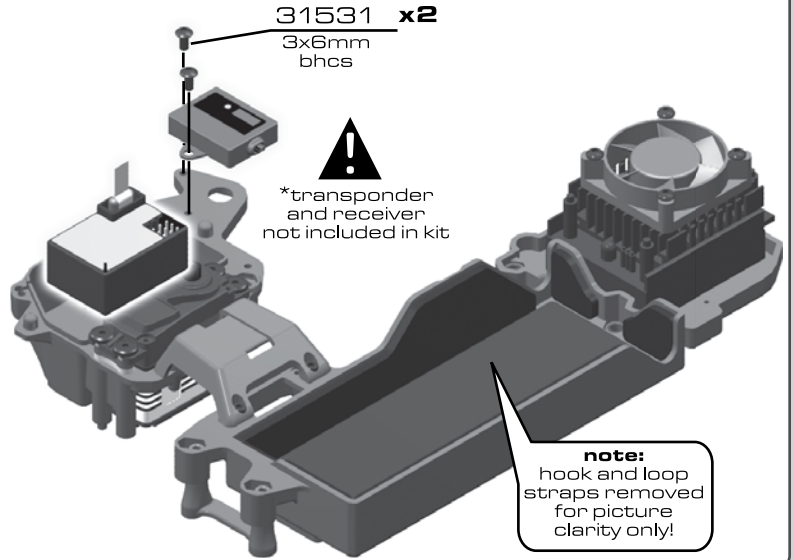
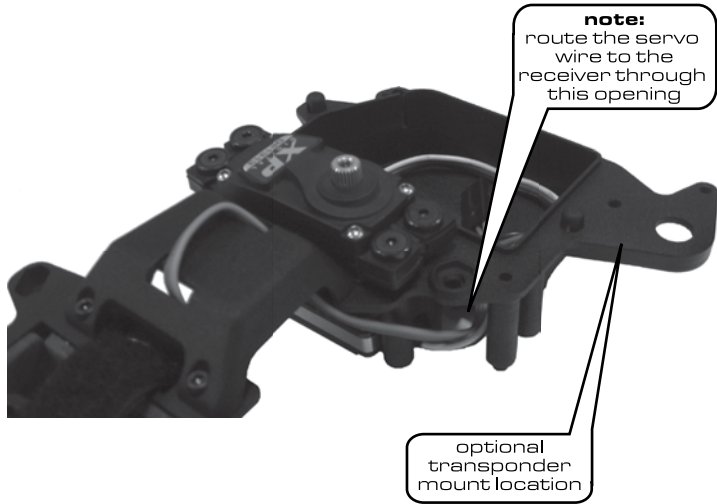
:: Battery / Radio Tray Build (cont.)



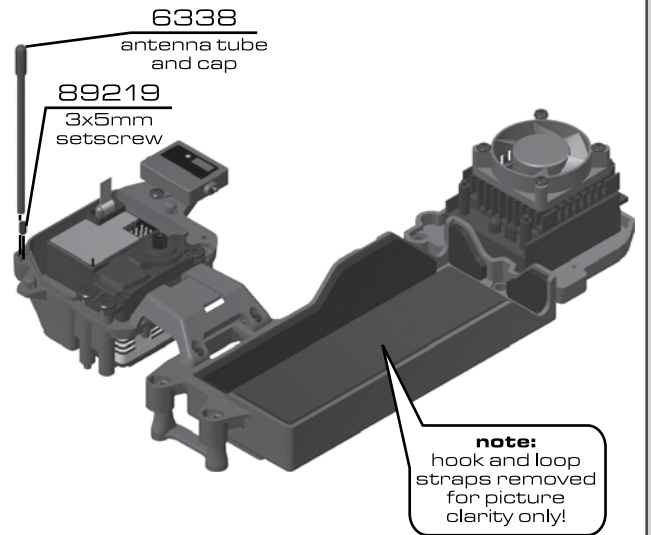
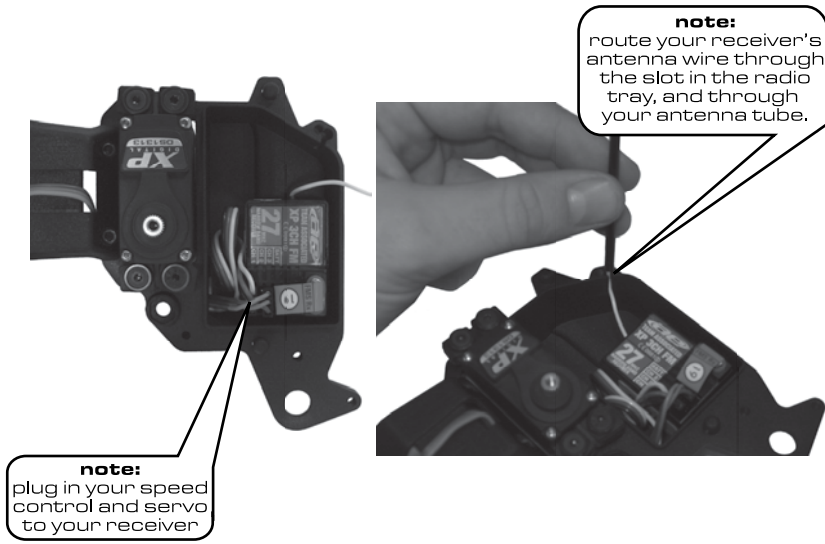
:: Battery / Radio Tray Build (cont.)



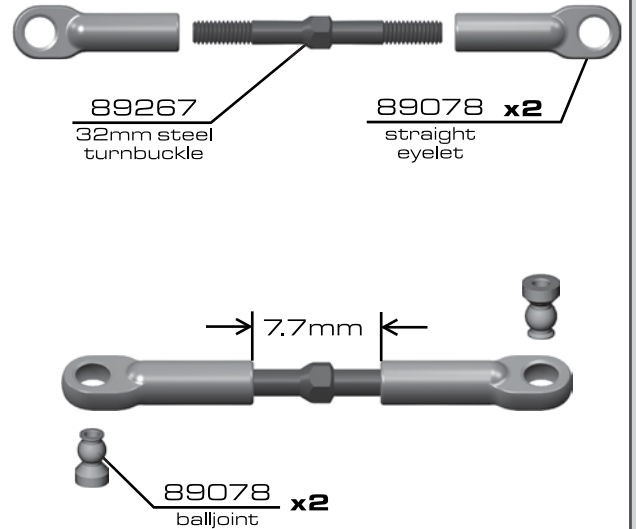
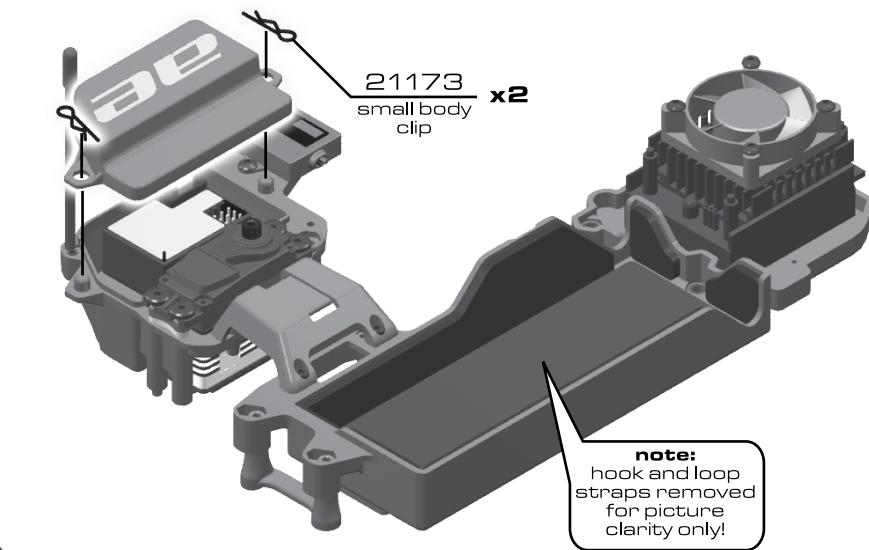
:: Battery / Radio Tray Build (cont.)



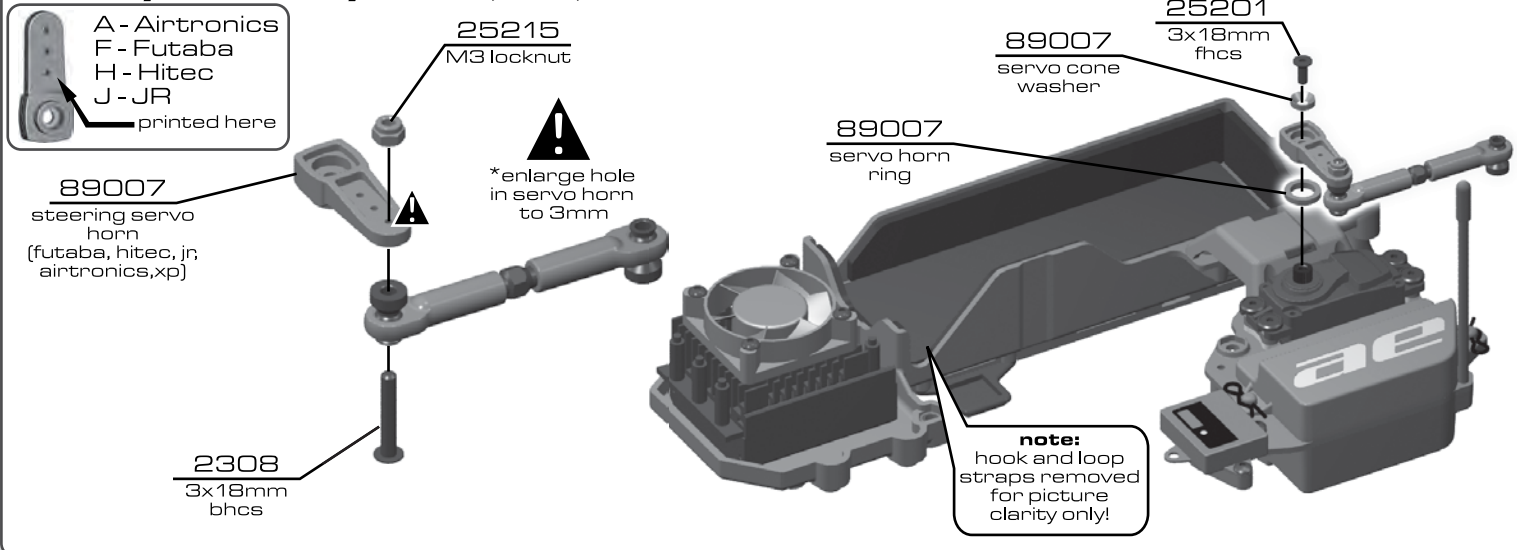
:: Battery / Radio Tray Build (cont.)



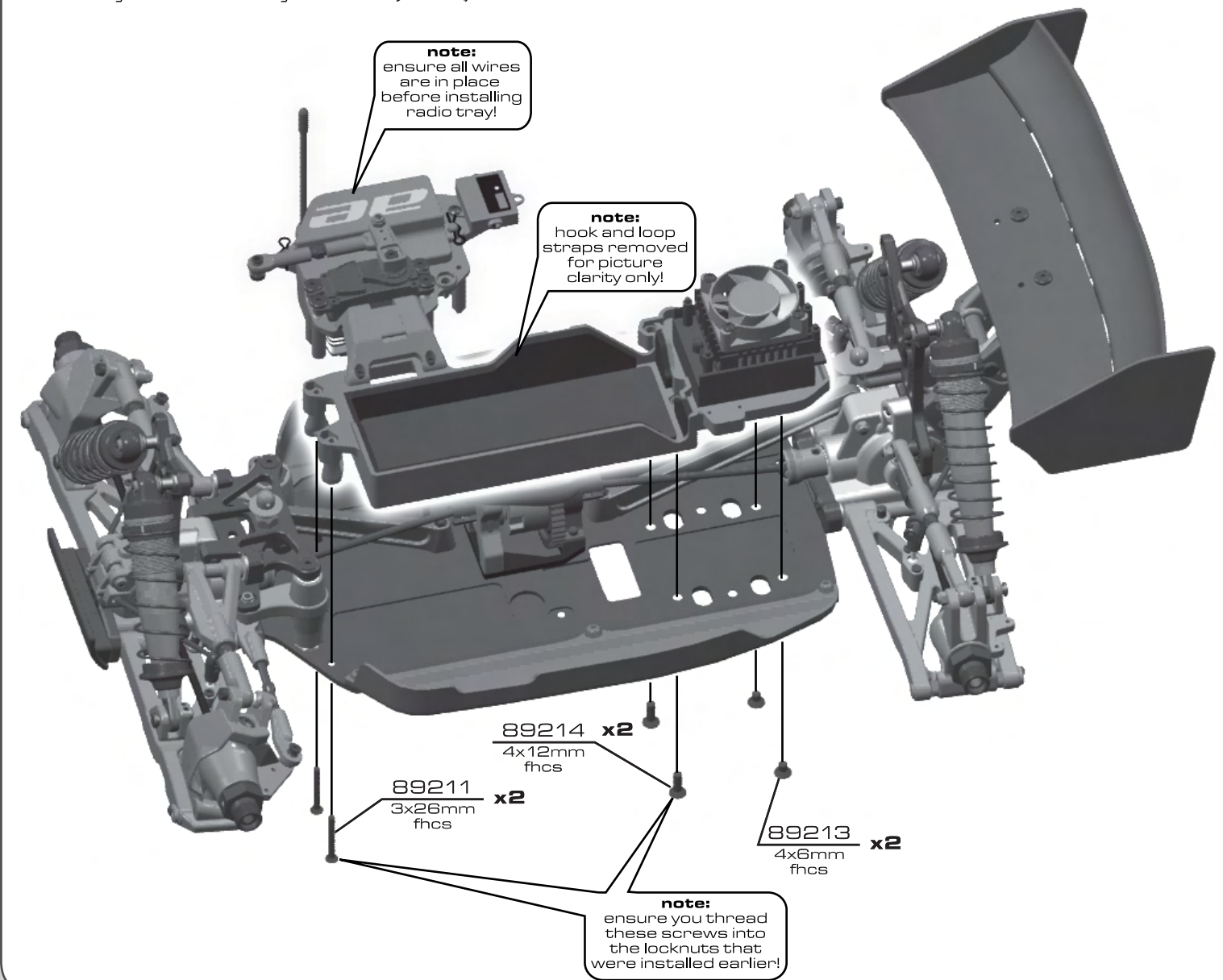
:: Battery / Radio Tray Build (cont.)



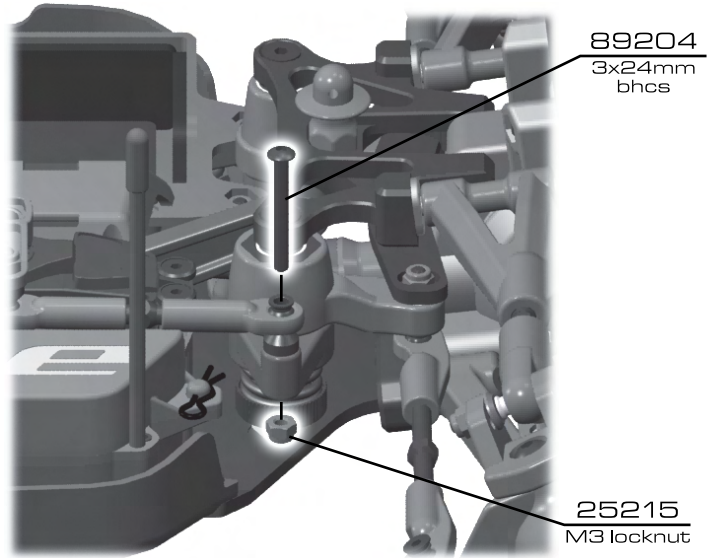
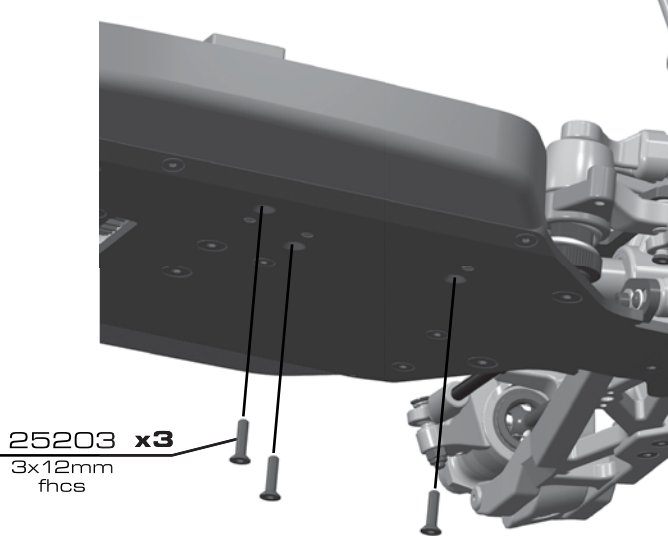
:: Battery / Radio Tray Install (cont.)



:: Battery / Radio Tray Install (cont.)



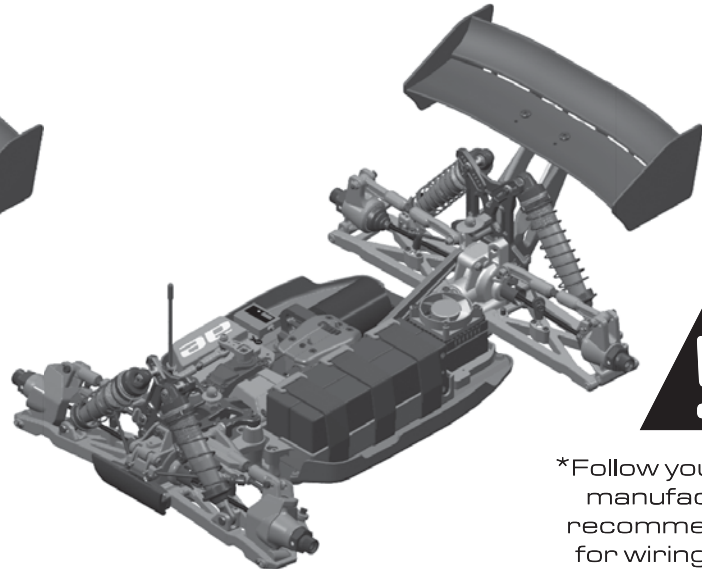
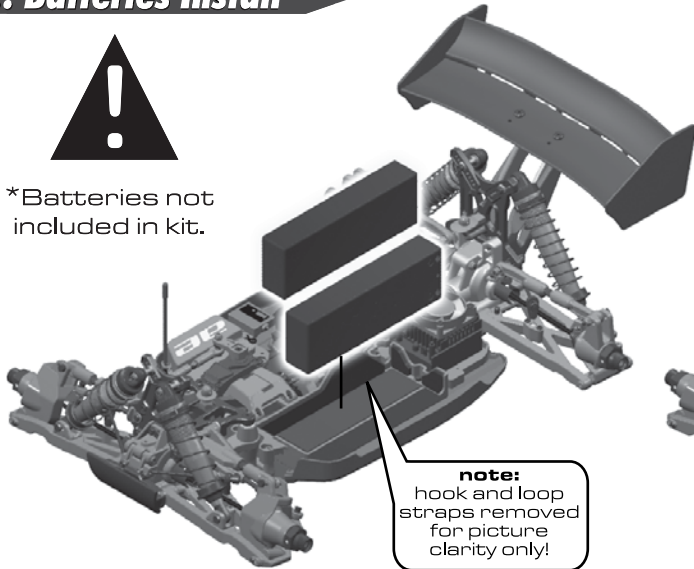
:: Battery / Radio Tray Install (cont.)



:: Batteries Install



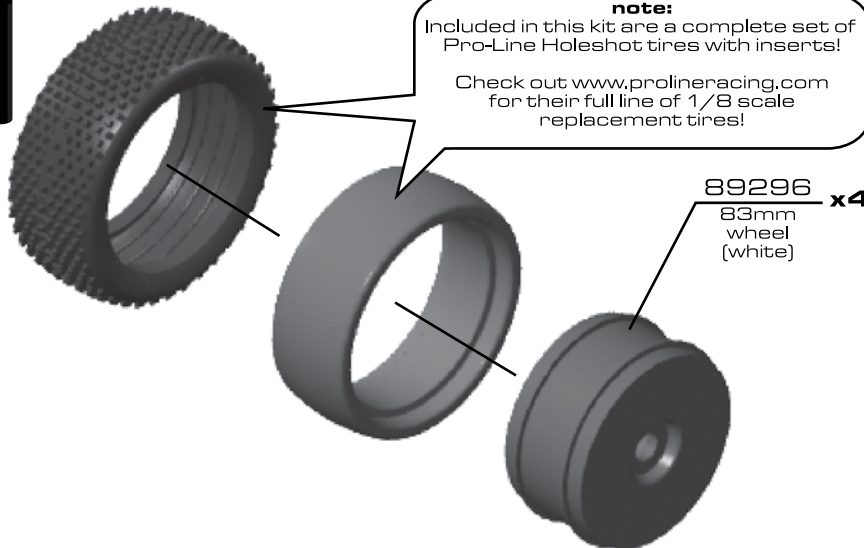
*Batteries not included in kit.



*Follow your battery manufacturer's recommendations for wiring setups.

:: Wheel and Tire Build

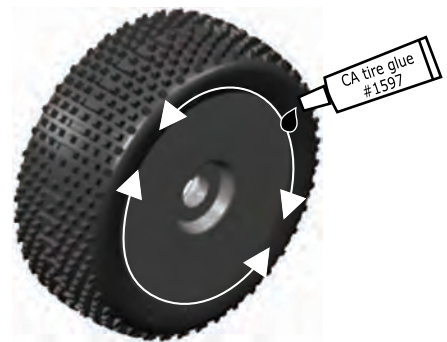
BAG L



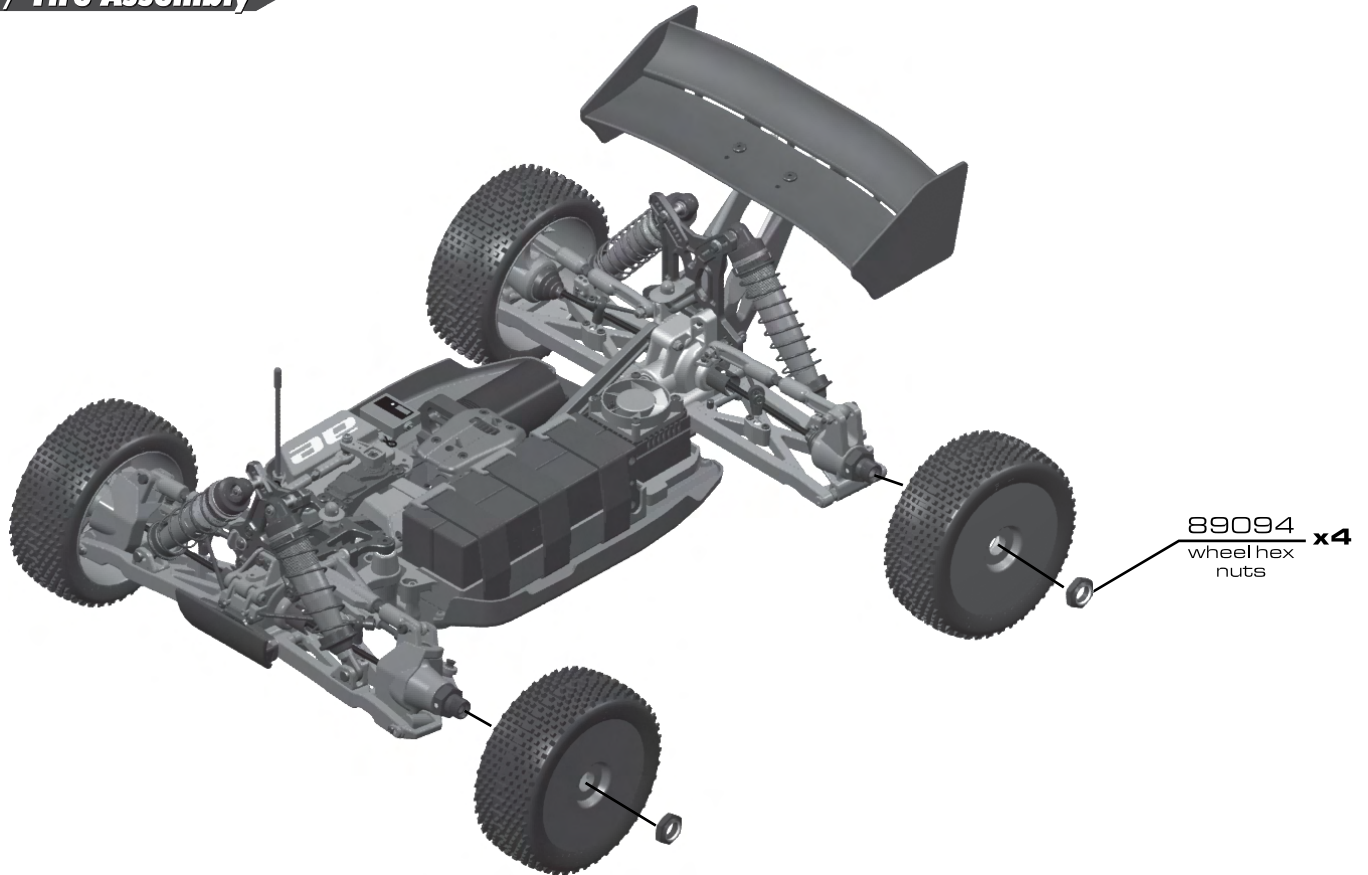
:: Building Tips

Tires:

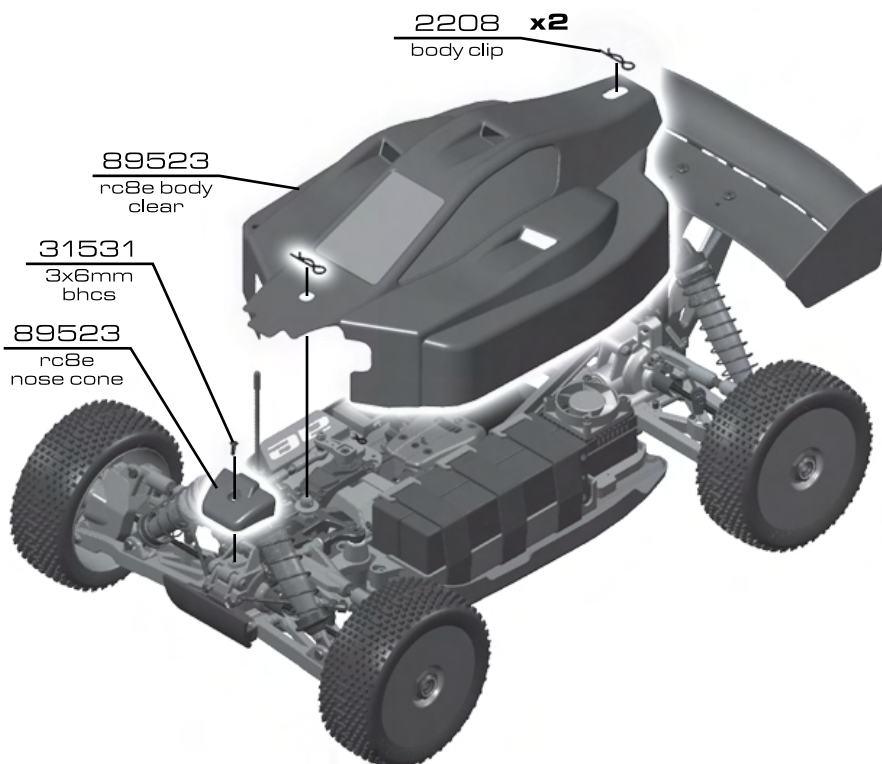
Your tires need to be glued to the wheels using a fast-curing Tire glue [CA] (AE Pt# 1597). This is available at your local hobby shop. Make sure to clean the mounting surface of the tire with alcohol for best adhesion.



:: Wheel / Tire Assembly



:: Body Install



:: Building Tips

Clear Body:

Your RC8B e comes with a clear lexan body. You will need to prep the body before you can paint it. Wash the inside thoroughly with warm water and liquid detergent. 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 from the inside]. Using high quality tape, apply to the inside of the body to create a design. Spray (either with spray paint or airbrush) the paint on the inside of the body (**NOTE: use ONLY paint that is recommended for use with lexan (polycarbonate) plastics. If you don't, you may destroy the plastic body!!!!**). After painting, cut the body along the trim lines. Make sure to cut holes for the body mounts and antenna. Remove the clear protective sheet before applying decals.

:: Chassis

Gearing:

Recommended Gearing: 15-46. This is a good starting point for most tracks. Follow your motor manufacturer's recommendations for gearing options.

Gear Mesh:

To correctly set your gear mesh, follow the steps below:

1. Loosen the motor mount screws so you can slide your motor from side to side freely.
2. Slide the motor until the pinion gear comes in contact with the spur gear. Tighten the motor mount screws. Now "rock" the spur gear. There should be a little "free play" between the gears.
3. If you have a small amount of 'free-play', continue building your RCBB e. If not, go back to Step 1. Be sure to check for "free-play" through a full rotation of the spur gear.

Differential Fluid:

Team Associated includes a complete bottle of 5,000cst diff oil. You can also provide your own oil and try one of the optional setups.

Standard differential fluid setup: Front = 5,000cst; Center = 5,000cst; Rear = 5,000cst.

Optional diff setup 1 (high grip track): Front = 5,000cst; Center = 10,000cst; Rear = 5,000cst.

Center Differential:

Use the standard setup for most cases. Some racers will try thicker oil (7,000-10,000cst) when greater acceleration is needed. This is typically done on very smooth tracks since thicker fluid can reduce handling in bumpy conditions.

:: Front End:

Front Differential:

Use the standard setup for most cases. Try 7,000cst to 10,000cst to get less low speed steering and better acceleration out of turns.

Kickup Bushing:

Generally more kick-up will provide better handling in the bumps and have better straight line acceleration. Less kick-up will provide more all around steering and have a more aggressive feel.

Caster:

The standard caster block insert setup is for 16 degrees. The standard inboard kick-up is 9 degrees (2-dot up insert in A-plate). You can reduce the caster using 14 degree inserts (also move both upper cone washers in front of the ball joint) for smoother steering. Changing to 18 degree inserts (also move both upper cone washers behind the ball joint) will typically provide more steering on power but reduce handling in bumpy conditions.

Front Upper Pivot Insert:

The standard setup is to use 2-dot up in the tower and 1-dot in the top plate. It is recommended to maintain a 1 dot gap (1 mm per dot) front to rear when using 2-dot up in the A-Plate. Reducing the A-Plate insert to 1-dot allows the use of same dot number insert in both tower and top plate. Going up to 3-dot up in the tower will give more turn in, but less steering on power/exit. Going down (1-dot, 2-dot down) will reduce turn in, but give more steering on exit.

Front Camber Link-Outer:

The standard short location will work the best for most tracks. going to the long front link will give you more steering, but can make the car less predictable in bumps and exiting turns.

Front Camber Angle:

A good starting camber setting is -2 degrees. Positive camber, where the top of the tire is leaning out, is typically not recommended.

Front Toe-In:

Zero degree toe-in (tires pointing straight forward) is a good starting setting. You can increase turn in by adding 1-2 degrees of toe-out (front of tires point slightly out). Front toe - in is not a typical tuning adjustment used by the Team.

:: Front End (cont.):**Front Ride Height:**

The front ride height setting you should use most often is with 29mm of gap between the chassis bottom and the ground. Check the ride height with the FT Ride Height Gauge (# 1449) by lifting up the entire vehicle about 8-12 inches off the bench and drop it. After the suspension "settles" into place, then raise or lower the adjustment collars as necessary and recheck.

Front Arm Shock Location:

Inside on the arm will give a more responsive front end. Outside on the arm will be less responsive steering, but will be more predictable through bumps.

:: Rear End:

Rear Differential: Start with the standard setup. For expert drivers, the most popular setting for buggy is 3,000 cst. the thicker 5,000cst kit oil will rotate less in the turns and accelerate straight on power. The thinner oil (2,000 or 3,000cst) will give more low speed traction.

Anti-squat:

Anti-squat denotes the angle of the rear inner hinge pin relative to the ground. This setting is adjusted by changing the insert bushing in the C-Plate. The kit setting is 2 degrees (2-dot down) but you change to 1 degree (3-dot down). Typically less anti-squat lets the suspension work more over the bumps, but it will sacrifice the ability to square up on power.

Rear Camber Link Length & Vertical Adjustment:

You can change the length of the camber link on the hub or tower as well as adjust the vertical location on the tower. A longer link will give the feeling of the most grip, but it will not be as responsive to square up on throttle, and might get loose if driven hard. This can easily be corrected by running the shorter link on the hub, but it will sacrifice some forward grip.

Changing to a higher location on the tower will be a smaller adjustment than changing the length of the upper link. Going up on the tower location has a similar effect as a longer camber link, but not as drastic. For example, if you change to the short rear link on the hub and you need to gain more forward grip, try raising the link up on the tower. New additional lower holes should be used when running the optional hinge pin hole in the rear hub carrier.

Rear Hub Hinge Pin Height:

The upper hole gives more rear grip on turn in, and good forward traction, but it might have difficulty squaring up out of turns. The lower hinge pin hole in the hub will be more responsive on throttle, and give more side grip in the turns.

Rear Hub Spacing:

You have 3 options for rear hub spacing, FWD, MIDDLE, & BACK. The kit setting provides a good balance of rear traction and steering, and will be used most often. Moving the hubs FWD will give more rear traction for low grip tracks. You can use the hubs BACK on high grip tracks for more on-power steering. Also, you can replace the included shims to get intermediate settings.

Rear Camber:

A good starting camber setting is -2 degrees. Use the included # 1719 camber gauge to set your camber. 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.

Rear Ride Height:

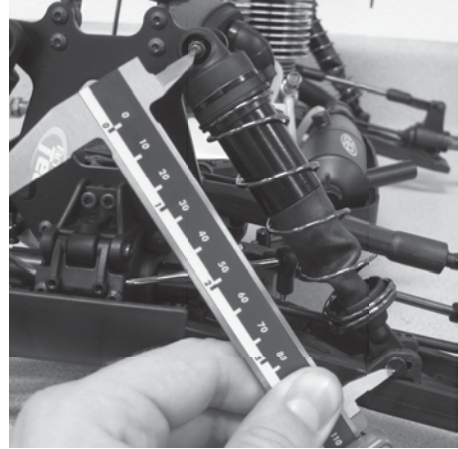
The rear ride height setting you should use most often is 29mm of gap between the chassis bottom and ground. Check the ride height with the FT Ride Height Gauge (# 1449) by lifting up the entire vehicle about 8-12 inches off the bench and drop it. After the suspension "settles" into place, then raise or lower the adjustment collars as necessary and recheck.

Rear Arm Shock Location:

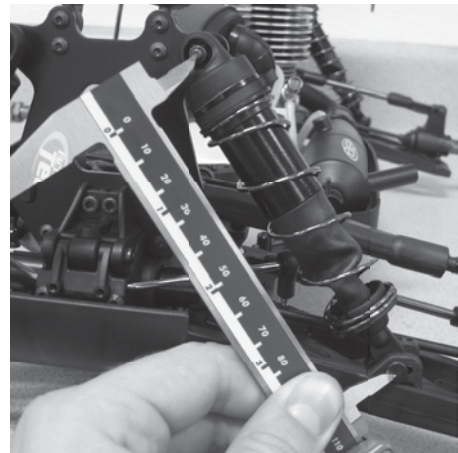
Inside on the arm will give less entry steering, accelerates better straightline through bumps, but may lack side bite. Outside on the arm will be less grip, more steering, but will be more predictable when it breaks traction.

:: Droop Settings:

Droop Settings: (Truggy shown but applicable for all vehicles)



Step 1: With only the bottom of the shocks attached, the droop screws raised all the way, and the chassis above your working surface so the arms are at full extension, you should be able to easily slide the top of your shock over the standoff screw, while leaving the shock at full extension. If the mounting hole of the shock cap is above or below the standoff screw, adjust the droop screw accordingly. Repeat for all corners of your vehicle. Measure from the center of the standoff screw to the center of the shock riser button to get your FULL DROOP setting. The front shocks should be 109mm, while the rear shocks should be 127.5mm.



Step 2: Finish installing the shock to the standoff. Set your vehicle to your desired droop setting. To increase your droop turn the droop screw (from the top) counter-clockwise (loosen), turn the droop screw (from the top) clockwise (tighten) to decrease your droop. Remember, never back the screw out beyond full droop or you could risk damage to your vehicle.

Step 3: Measure from the center of the shock standoff screw to the center of the shock riser button to get your final droop setting. The front shocks should both be set at the same length, as should the rear shocks. * The normal droop setting is between 0-5mm from the FULL DROOP measurement.

Front Droop: Increasing front droop (loosen droop screws) will increase off-throttle steering. It also allows the front end to lift more, giving more rear grip and less front grip on-power. Remember to never loosen the screws beyond the FULL DROOP setting. Decreasing front droop (tighten droop screws) yields more on-power steering and quicker response at the expense of some stability in bumpy sections. It will also give less off-throttle steering.

Rear Droop: Increasing rear droop (loosen droop screws) will increase traction in bumpy sections, but will reduce high-speed stability. Remember to never loosen the screws beyond the FULL DROOP setting. Decreasing rear droop (tighten droop screws) will increase stability in high speed sections, but will reduce stability in bumpy sections.

Setup Sheets:

Most often the best way to get your car handling right is to go to our website www.rc10.com and click on the "racing" link, then the "Setups" link, then search for your vehicle. Our team of professional drivers help develop these setups at National events. Also, most drivers have a "base" setup that they use as a starting point for every event. Try running some of our base setups OR look for track conditions and tires that are similar to your local track and mimic that setup. Remember, each adjustment has a purpose, so copy everything from the setup sheet and then make adjustments based on the recommendations in here at <http://www.rc10.com/rc/tuning>.