RC8 B4e

1:8 Scale 4WD Electric Off Road Competition Buggy Kit

30 TIME ASSOCIATED

SCALE 1:8 VEHICLE | KIT | 4 WHEEL DRIVE | ELEC. POWERED | OFF ROAD | NOT INCLUDED | CLEAR BODY

#80946 RC8B4e TEAM KIT

1:8 Scale 4WD Electric Off Road Competition Buggy Manual

WeAreAE CHAMPIONS by DESIGN AssociatedElectrics.com

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 RC8B4e Kit:

- New chassis layout featuring two shorty-style only battery configurations. Both configurations include a centrally mounted center differential and in-line center driveshafts for superior drivetrain efficiency and equalized chassis balance.
- New two-piece clamping motor mounts make for secure mounting and allows for mounting of a 30mm motor fan.
- New battery trays with battery stops built in for easy battery position adjustments.
- New ESC tray with protective shield has two chassis positions 2x2s and 1x4s battery setups for ideal weight bias positioning.
- New receiver box with built in servo mounts has integrated cable routing and increased volume for taller antenna-less receivers.
- Innovative front-end geometry with new 8° inclined kingpin steering blocks are paired with a new wider upper suspension arm pivot for improved steering balance and predictable handling in all conditions
- New gearboxes are specific to front and rear
- All new front lower, front upper, and rear suspension arm designs
- New rear wing mount has adjustable wing angle shims, significant strength improvements, an aerodynamic shape, and extra clearance for shock position adjustment
- New rear wing has more vertical fins for increased straight line stability, a taller rear lip height for increased downforce, increased strength in various areas to reduce bending fatigue, and dimples on the backside as a template for cutout holes
- New rear chassis brace has several design features and flex options
- New rear hub features a symmetrical left and right common design with axle height inserts for adjustable roll center tuning. The standard bearing size used is an 8x16x5mm flanged but the hub will still accept 15x21x4mm bearing for tuning options.
- New steering bellcranks with top-mounted steering rack for extra clearance around gearbox assembly
- New aluminum steering rack designed around the updated front end geometry is lightweight and durable
- New steering bellcrank nuts are longer to reduce drag from the steering rack under flex
- Updated steering servo linkage features a new heavy duty threaded ball and steel screw joint
- New A and B blue aluminum suspension arm mounts are shaped to interlock with the RC8B4 chassis
- New RC8B4e specific 7075 aluminum hard anodized chassis features updates to strengthen the front and rear droop tab areas and an increased width along kick up area, and accommodations for the electric specific layout.
- New upper suspension arm link mount is significantly wider than RC8B3 series, providing the required geometry for the new 8° steering blocks
- New front shock tower has strength improvements and allows for the upper suspension arm insert to be mounted from front side via a recessed pocket, without disassembly of the tower from the gearbox
- New RC8B4e specific front top plate has been updated to fit the new steering geometry and an offset front chassis brace.
- New front body post is recessed into the front top plate and the reversible design is easy to mount
- New spring cups and shock rod end design has a locking screw to keep the cups in place during a crash
- New front shock bushings are 1.5mm longer, and rear shock bushings are 4mm than RC8B3 shock mounts
- New two-piece rear body post features a rubber grommet to allow some flex to extend the life of the body
- New side guards have integrated wire routing clips and are over 1 inch narrower than RC8B3.2e

:: Additional

Your new RC8B4e Kit comes as a kit. There are items you will need to complete your kit (refer to the website for suggestions):

- 2 or 3 channel radio/transmitter (2.4GHz recommended)
- Two 2s or One 4s LiPo Battery Pack
- Polycarbonate-specific paint
- 1:8 scale buggy tires and wheels
- Reamer / hole punch
- Transmitter batteries
- 1/8th scale sized motor
- Thread-locking compound
- CA (cyanoacrylic) glue
- Ride height gauge
- Steering servo
- 1/8th scale sized ESC
- Needle-nose pliers
- Hobby knife

:: Other Helpful Items

- Silicone Shock/Diff Fluids (Refer to the website for complete listings):
- Shock Pliers
- Reamer / Hole Punch - (#1499)
- Ride Height Gauge
- FT Hex Wrenches - (#1506, 1518)
- Wire Cutters
- Turnbuckle Wrench - (#1114)
- Body Scissors (AE #1737)
- FT Hex Wrenches / Nut Drivers - (#1519)
- Calipers or a Precision Ruler
- Wheel Nut Wrench 17mm - (#1571)

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21062 Bake Parkway
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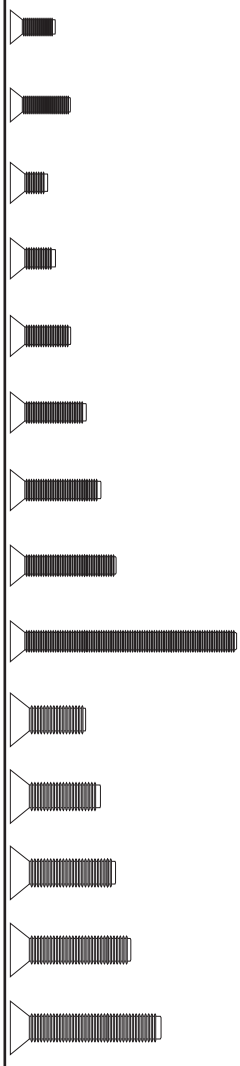
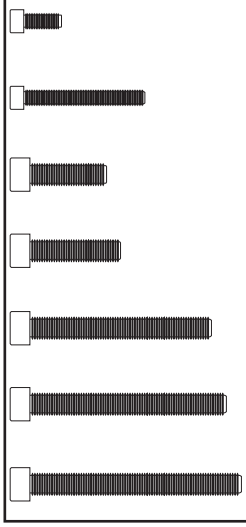
:: Hardware - 1:1 Scale View

Flat Head (fhcs)



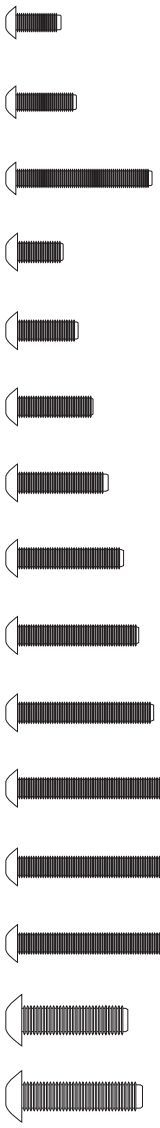
2.5x6mm (4675)
2.5x8mm (31448)
3x5mm (31540)
3x6mm (31541)
3x8mm (25201)
3x10mm (25202)
3x12mm (25203)
3x14mm (89208)
3x30mm (89212)
4x10mm (81262)
4x12mm (89214)
4x14mm (89217)
4x16mm (81263)
4x20mm (81264)

Socket Head (shcs)



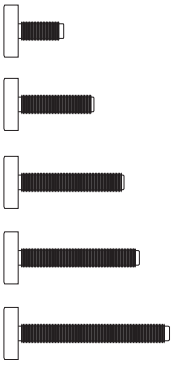
2x5mm (31511)
2x16mm (7184)
3x10mm (25620)
3x12mm (89454)
3x24mm (89225)
3x26mm (89226)
3x28mm (89227)

Button Head (bhcs)



2.5x6mm (31520)
2.5x8mm (31521)
2.5x18mm (81259)
3x6mm (31531)
3x8mm (31532)
3x10mm (25211)
3x12mm (89202)
3x14mm (25187)
3x16mm (89203)
3x18mm (2308)
3x20mm (25188)
3x22mm (25189)
3x24mm (89204)
4x14mm (81260)
4x16mm (81261)

LP Socket Head (lp shcs)

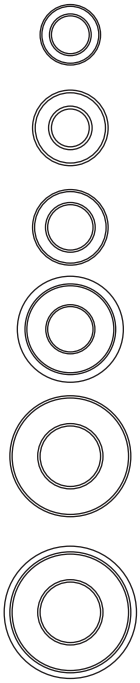


3x6mm (41089)
3x10mm (41090)
3x14mm (41094)
3x16mm (41093)
3x20mm (41091)

Set Screws

3x3mm (25225)
3x6mm (81257)
3x10mm (4671)
3x12mm (81258)
4x4mm (7732)
5x4mm (89221)

Ball Bearings



5x8x2.5mm (8680)
5x10x4mm (91560)
6x10mm (31404)
6x13x5mm flanged (91559)
8x16x5mm (91564)
8x16x5mm flanged (91565)

Nuts (lock/plain)

M3 Nut (91477)
M3 Alum. Locknut, Blue (31550)
M3 Locknut, Black (25215)

M3 Locknut w/Flange (25612)
FT 3mm Locknuts, Blue(25392)

FT M4 Locknut, Blue (31551)
M4 Locknut, Serrated (91738)

:: Table of Contents

:: Notes

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

This symbol indicates a specific build order 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 hardare 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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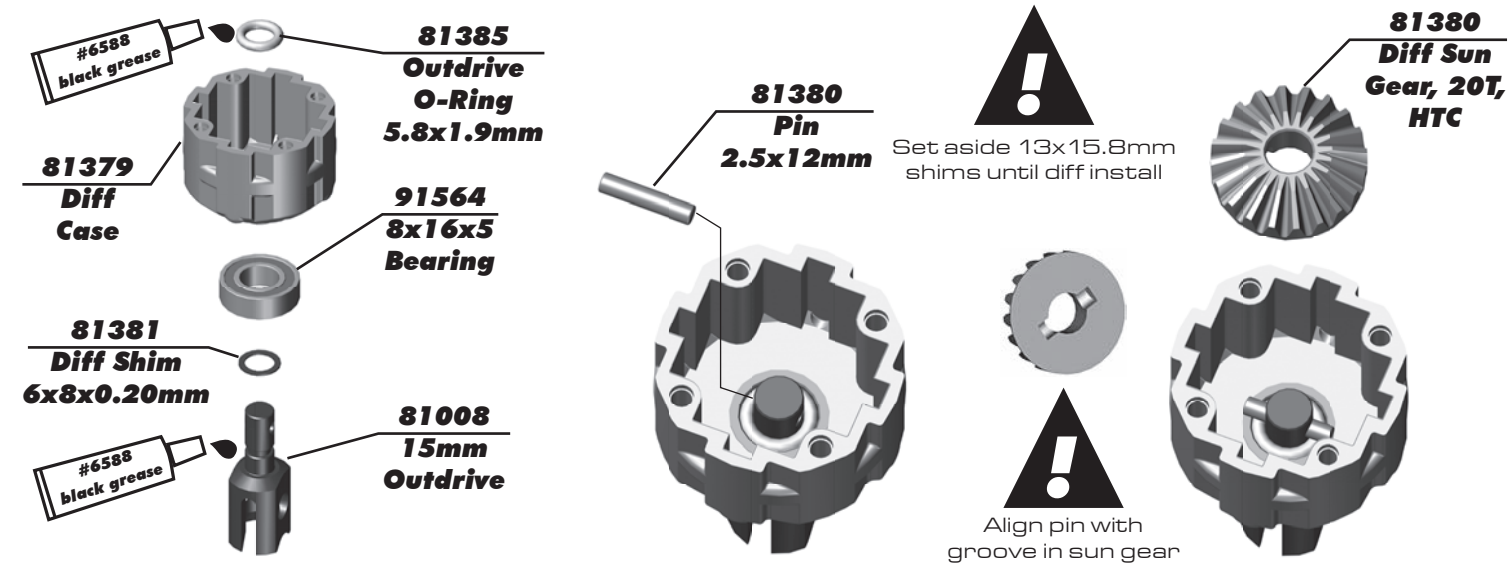
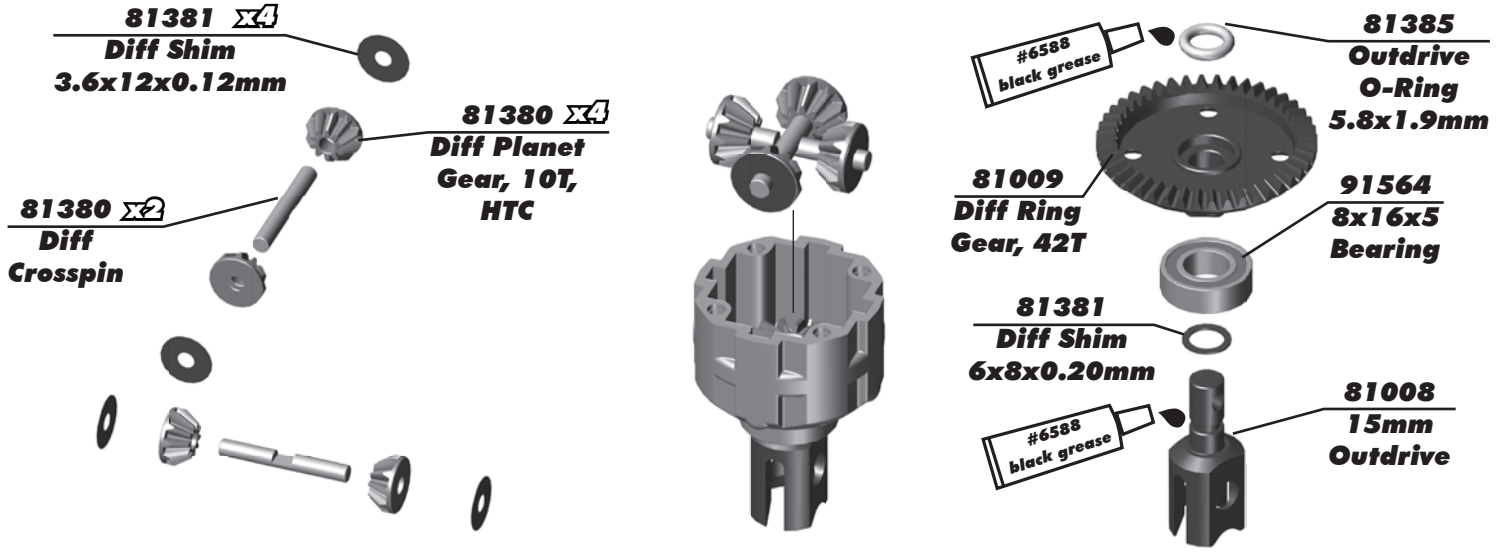
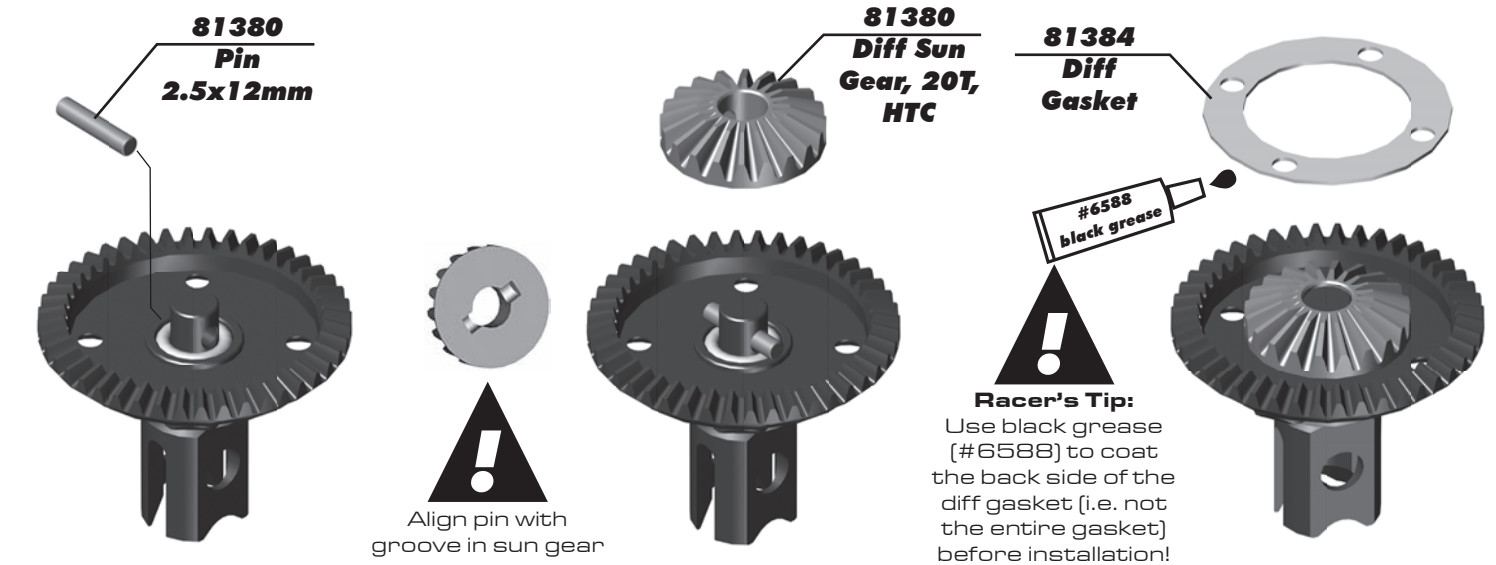
:: Differential Build (Front and Rear) - Bag 1.1, 1.2 - Step 1



:: Differential Build (Front and Rear) - Bag 1.1, 1.2 - Step 2

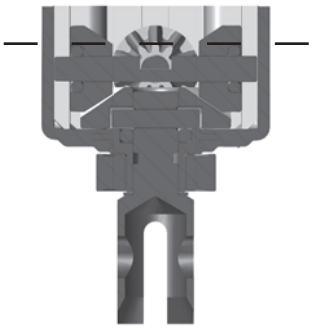


:: Differential Build (Front and Rear) - Bag 1.1, 1.2 - Step 3

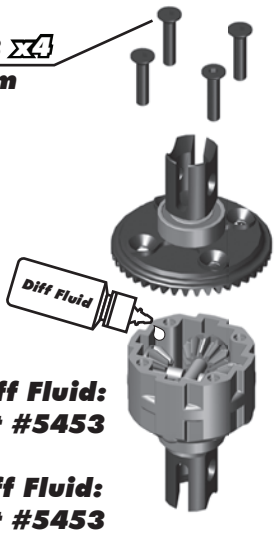


:: Differential Build (Front and Rear) - Bag 1.1, 1.2 - Step 4

Racer's Tip:
Fill diff above the cross pins, below the planet gears as shown.



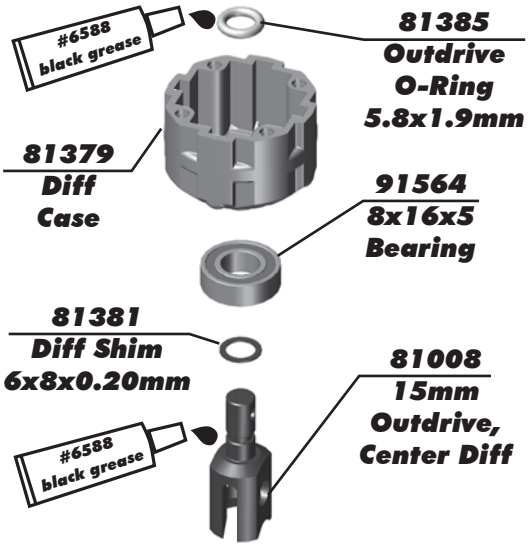
89208 x4
3x14mm
FHCS

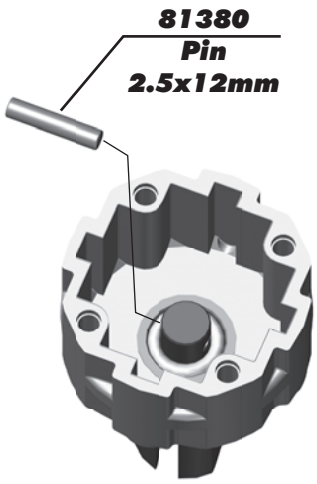


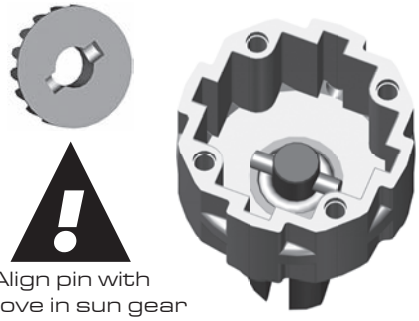
Front Diff Fluid:
5,000cst #5453

Rear Diff Fluid:
5,000cst #5453

:: Differential Build (Center) - Bag 1.1, 1.2 - Step 5

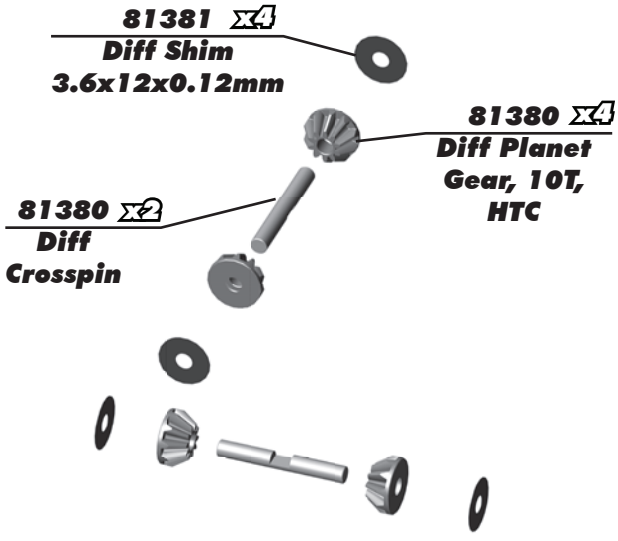


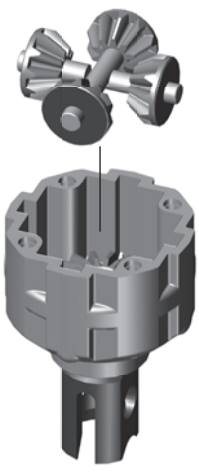


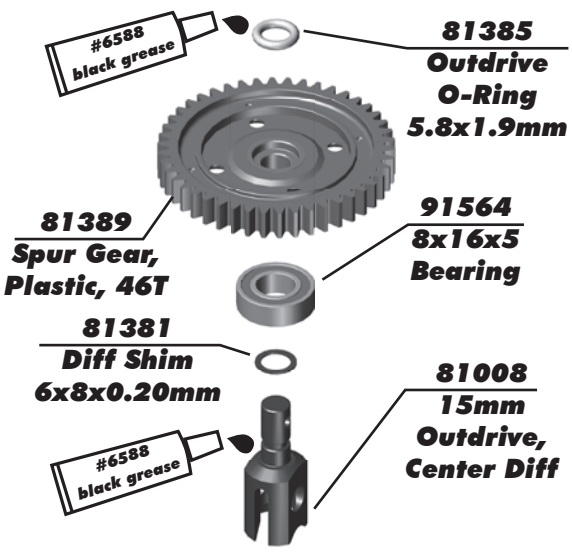


Align pin with groove in sun gear

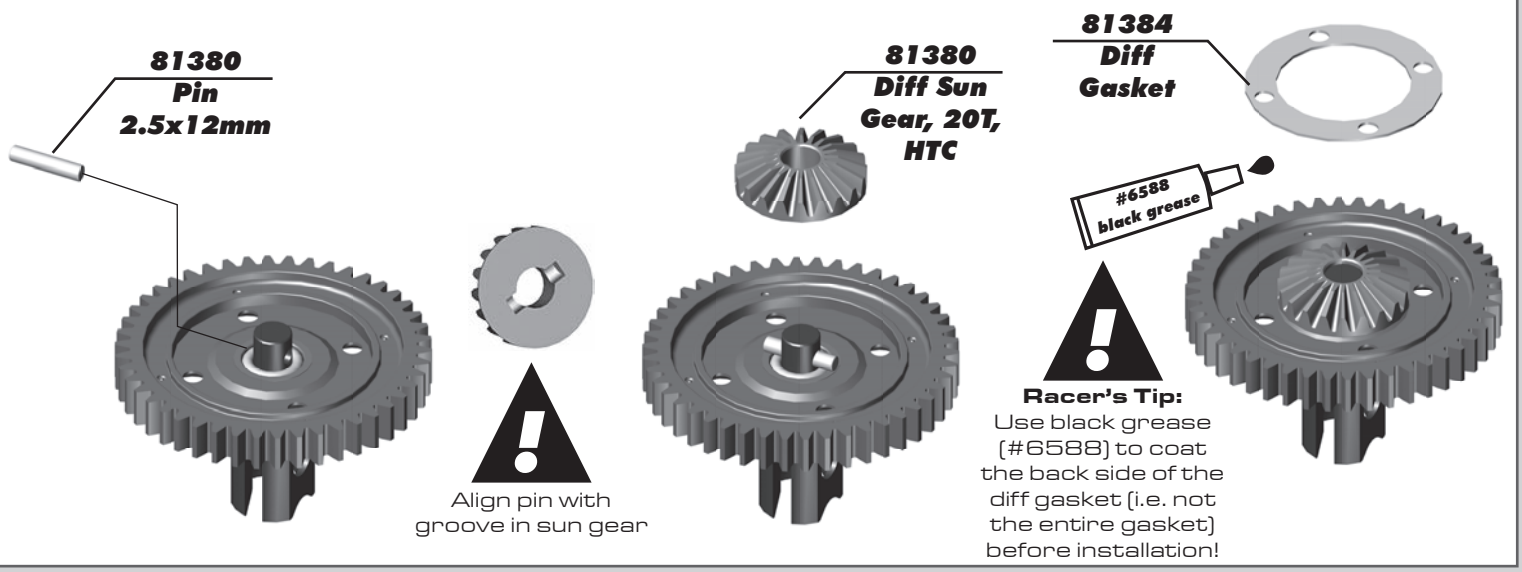
:: Differential Build (Center) - Bag 1.1, 1.2 - Step 6



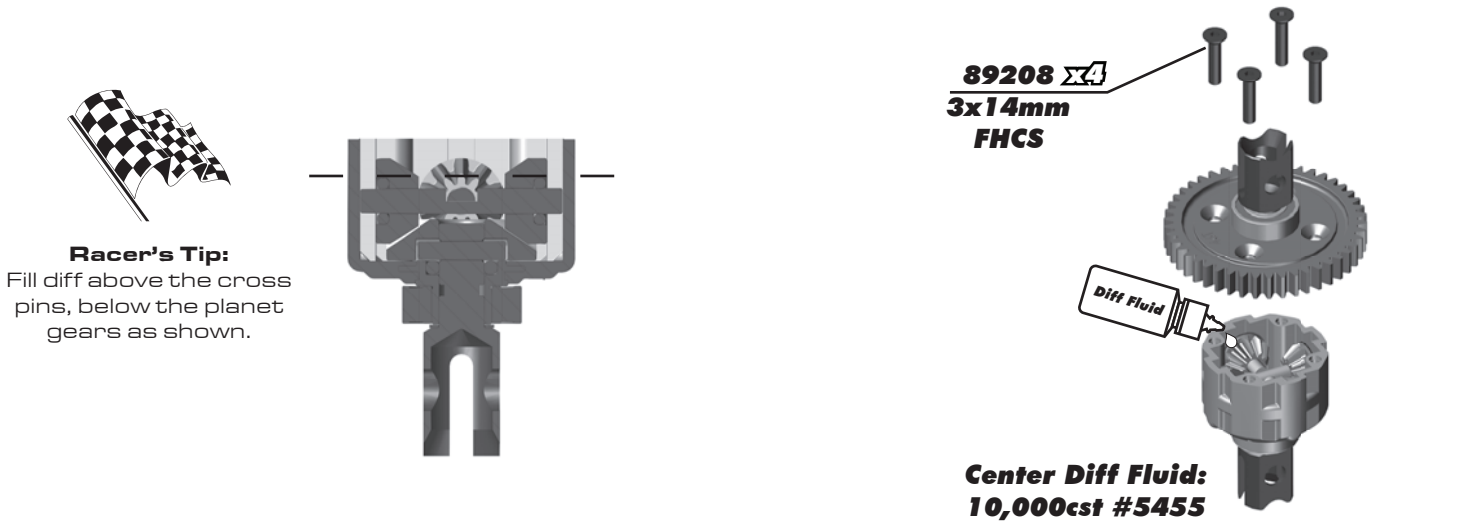




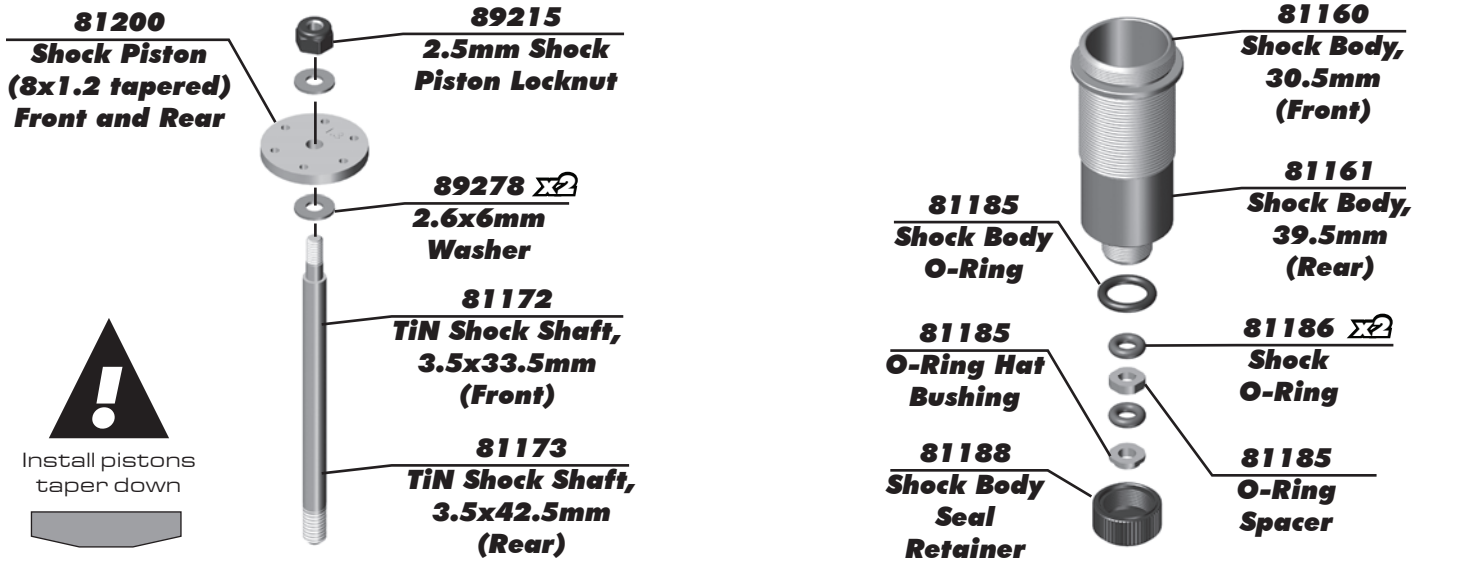
:: Differential Build (Center) - Bag 1.1, 1.2 - Step 7



:: Differential Build (Center) - Bag 1.1, 1.2 - Step 8



:: Shocks Build - Bag 2.1 - Step 1



:: Shocks Build - Bag 2.1 - Step 2

Racer's Tip:
Use green slime (#1105) to lube the o-rings before installation!

81190
Shock Boots

81562
Rod End Ball

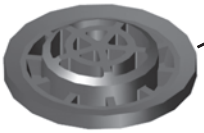
81512
Shock Rod End

81452
RC8B3.2
Shock Cap

81512
Shock Cap Insert

91492
2x4mm BHCS

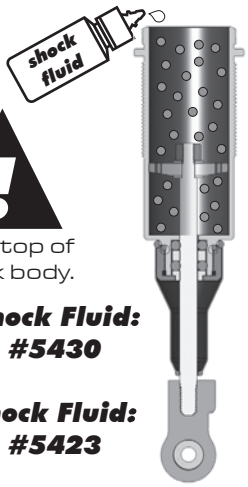
91492
Gasket
2



81453
Bladder, Stiff
1

When installing the shock bladder, make sure it is correctly seated within the shock cap as shown.

:: Shocks Build - Bag 2.1 - Step 3



Fill to top of shock body.

Front Shock Fluid: 45wt #5430

Rear Shock Fluid: 40wt #5423

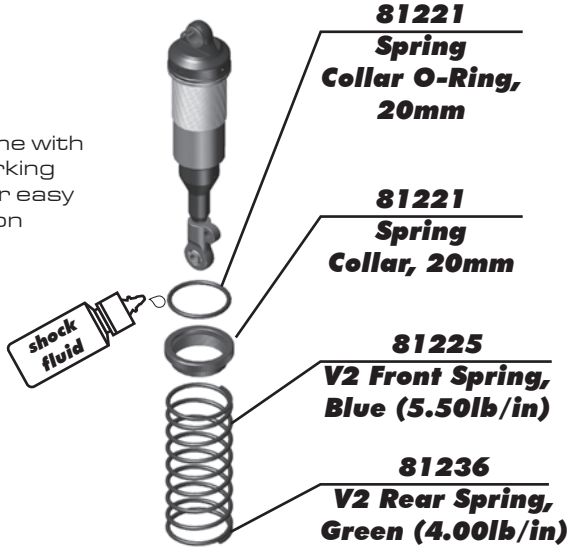
Leave a gap when installing the shock cap.

Compress shock shaft fully. Let shock fluid bleed from cap, then tighten cap.

For more rebound, do not compress shock shaft as far before tightening the shock cap.

:: Shocks Build - Bag 2.1 - Step 4

The springs come with a colored marking pre-installed for easy identification



81221
Spring Collar O-Ring, 20mm

81221
Spring Collar, 20mm

81225
V2 Front Spring, Blue (5.50lb/in)

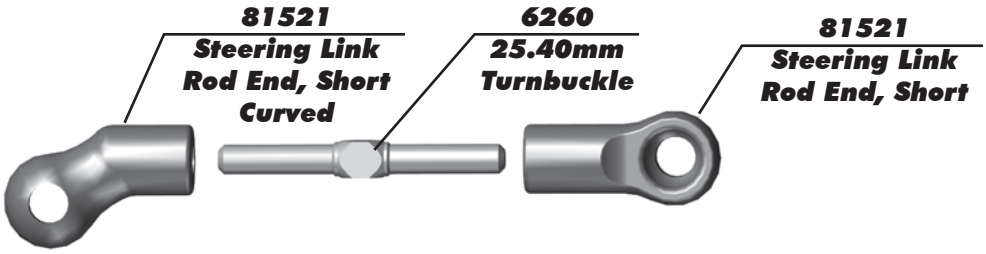
81236
V2 Rear Spring, Green (4.00lb/in)

81512
Spring Cup
1

25211
3x10mm BHCS
2

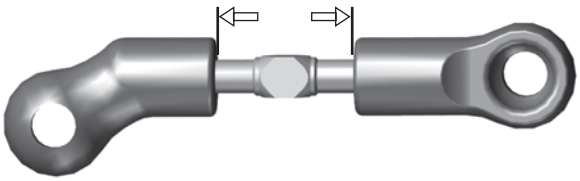
:: Turnbuckles Build - Bag 3.1- Step 1

Steering Servo Turnbuckle



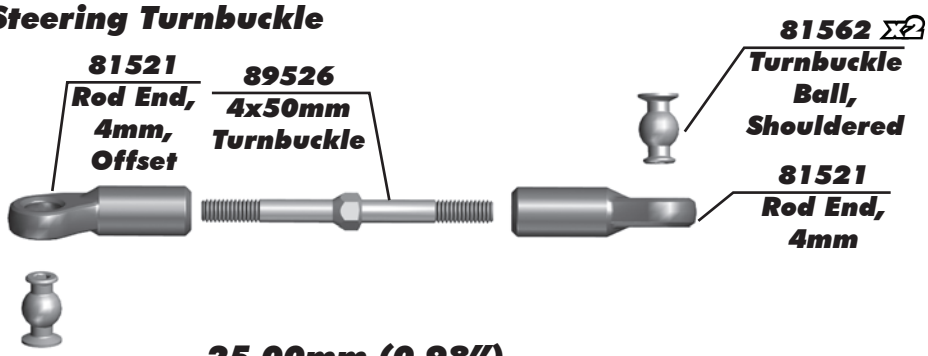
Set aside until page 22

11.50mm (0.45")



:: Turnbuckles Build - Bag 3.1 - Step 2

Steering Turnbuckle



Note the direction of turnbuckle ball

Set aside until page 15

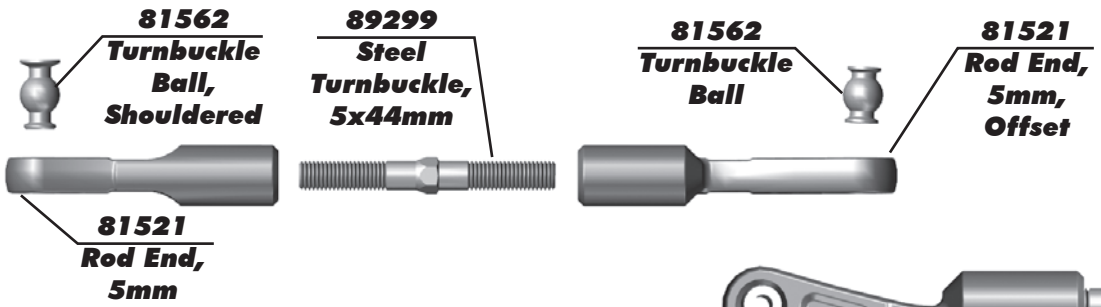
25.00mm (0.98")

Left Turnbuckle

Right Turnbuckle

:: Turnbuckles Build - Bag 3.1 - Step 3

Rear Hub Turnbuckle



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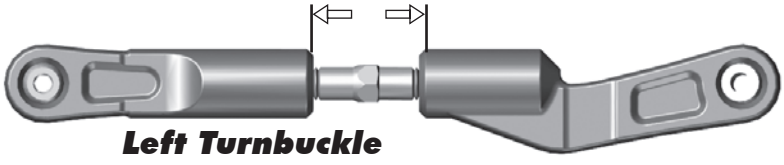
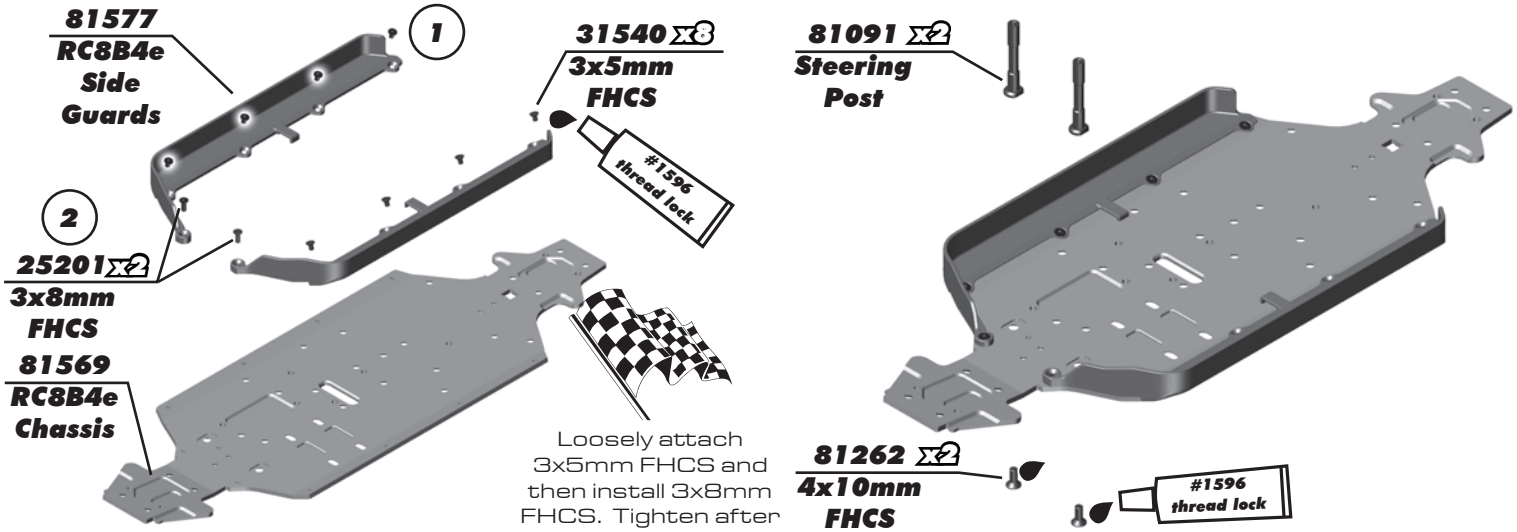
Right Turnbuckle

16.00mm (0.62")

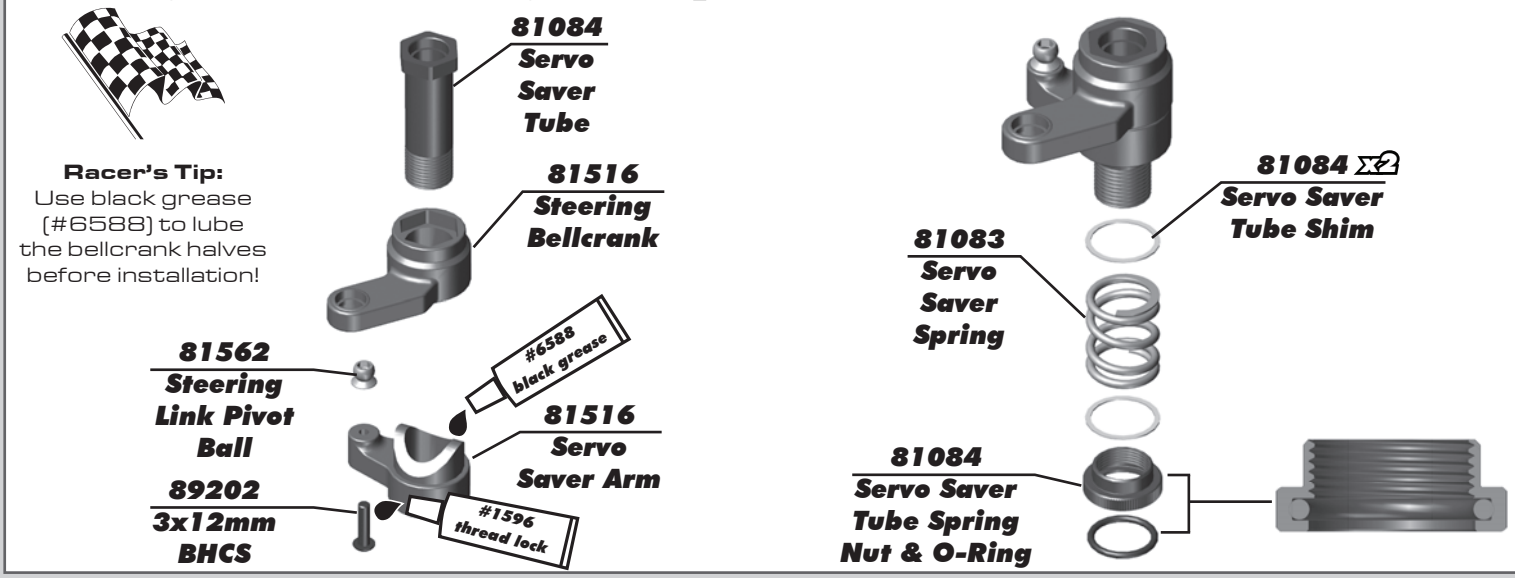


Left Turnbuckle

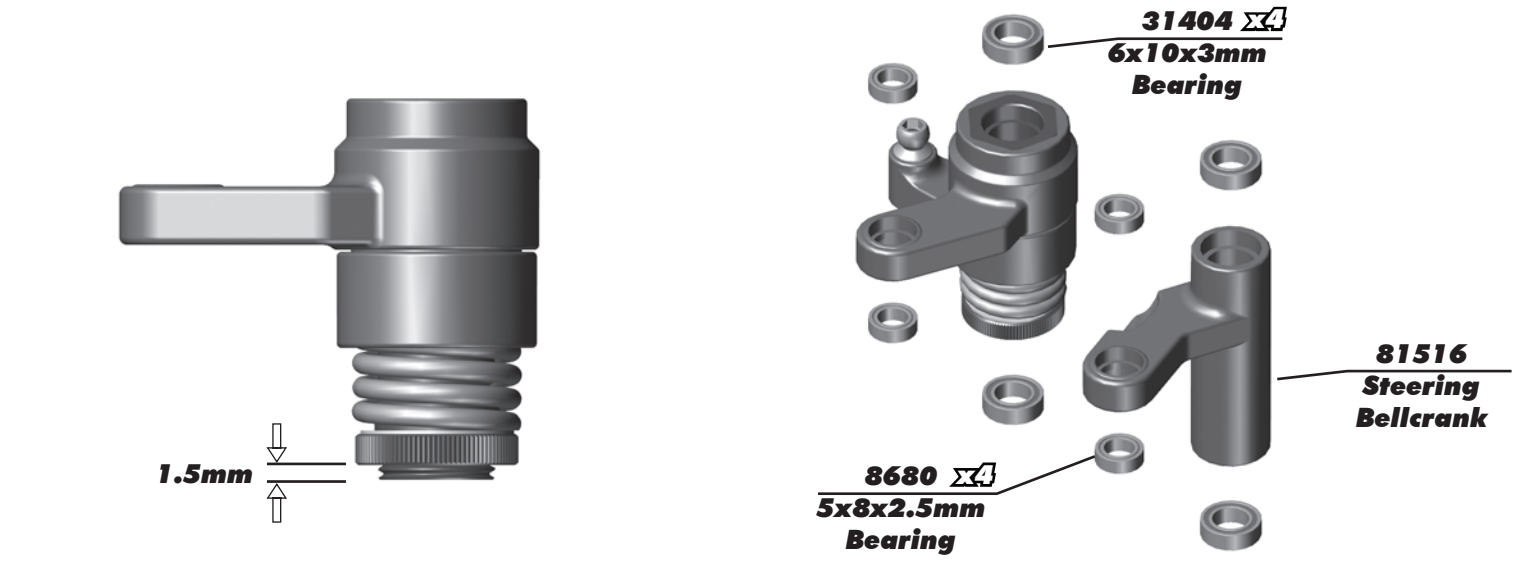
:: Steering / Chassis Build - Bag 4.1 - Step 1



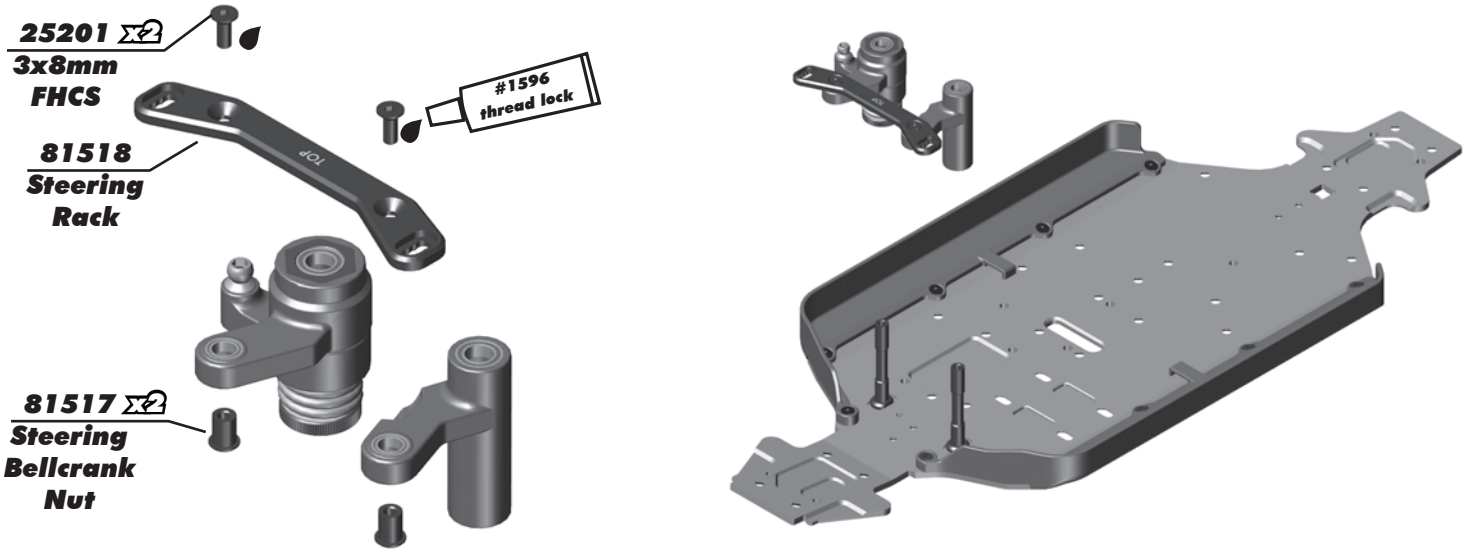
:: Steering / Chassis Build - Bag 4.1 - Step 2



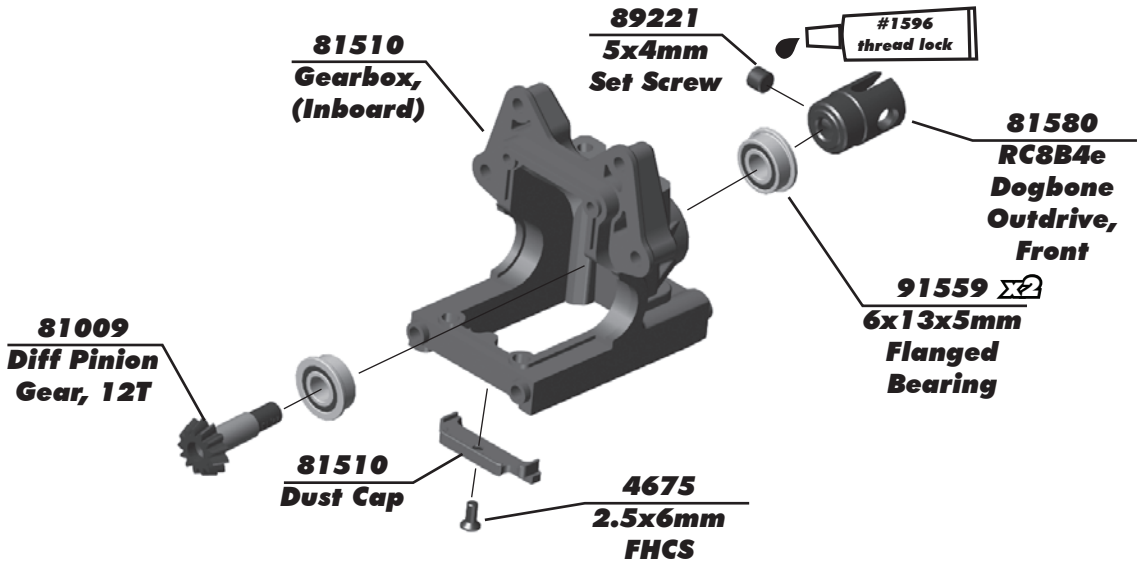
:: Steering / Chassis Build - Bag 4.1 - Step 3



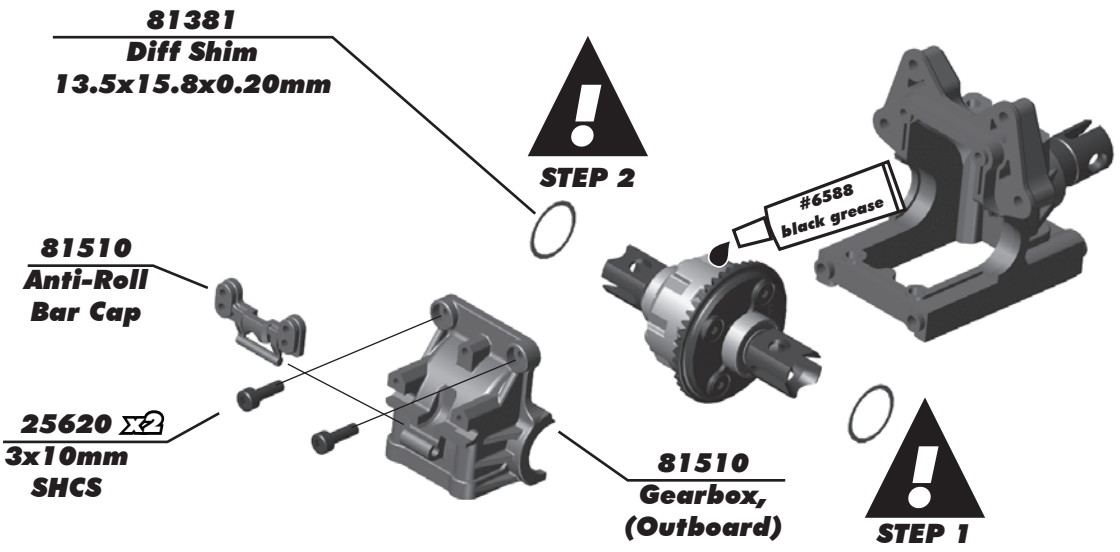
:: Steering / Chassis Build - Bag 4.1 - Step 4



:: Front Gearbox Build - Bag 5.1, 5.2, 5.3 - Step 1



:: Front Gearbox Build - Bag 5.1, 5.2, 5.3 - Step 2

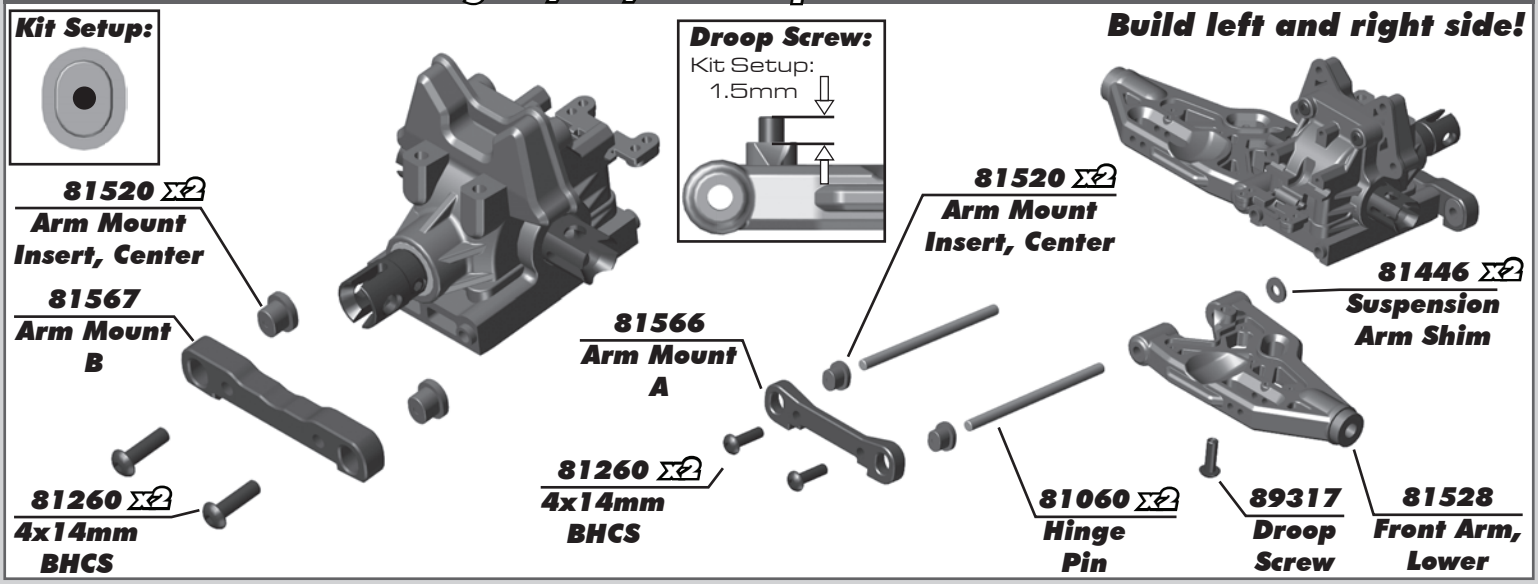


Step 1:
Add shims on the ring gear side to TIGHTEN gear mesh. Subtract shims on this side to LOOSEN gear mesh.
NOTE:
Start 1 x Thick 0.2mm

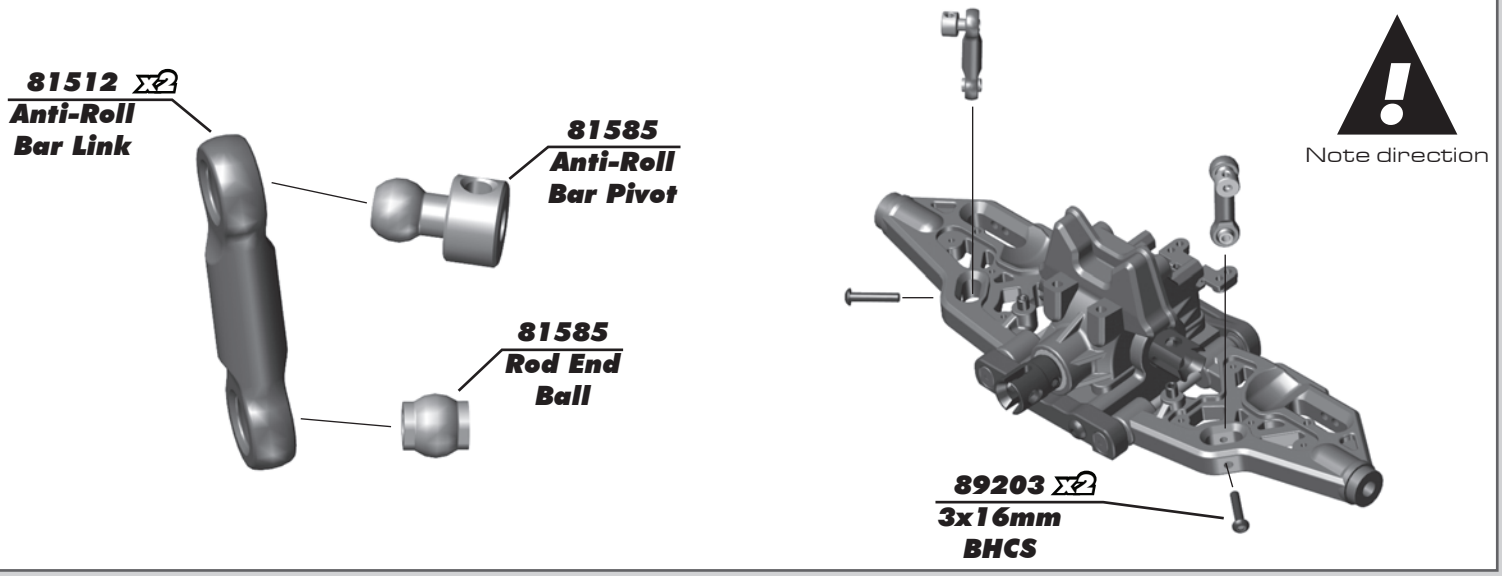
Step 2:
Add or subtract shims here to finalize diff side to side play once gear mesh is set from Step 1.
Recommended diff "side-to-side" clearance (gearbox assembly) 0.10 - 0.25mm.
Start with 1 x 0.1 mm.

Note:
0.1 mm shim can be used for fine tuning of gear mesh

:: Front Gearbox Build - Bag 5.1, 5.2, 5.3 - Step 3



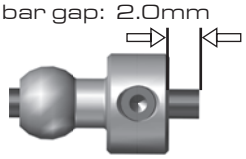
:: Front Gearbox Build - Bag 5.1, 5.2, 5.3 - Step 4

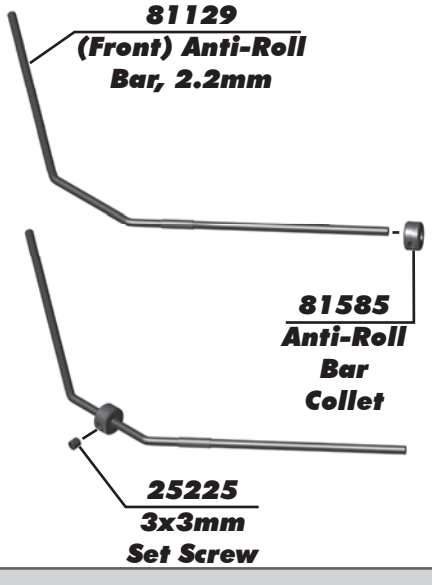


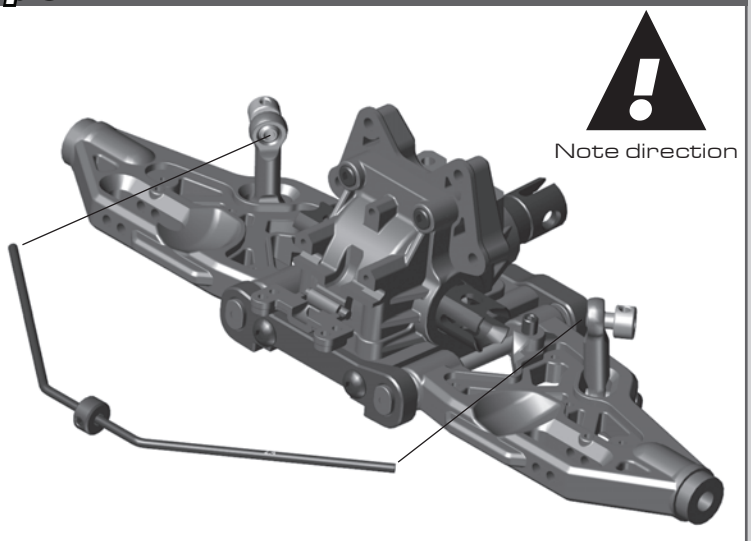
:: Front Gearbox Build - Bag 5.1, 5.2, 5.3 - Step 5

Center the anti-roll bar collet on the anti-roll bar, then tighten the 3x3mm set screw.

Front anti-roll bar gap: 2.0mm

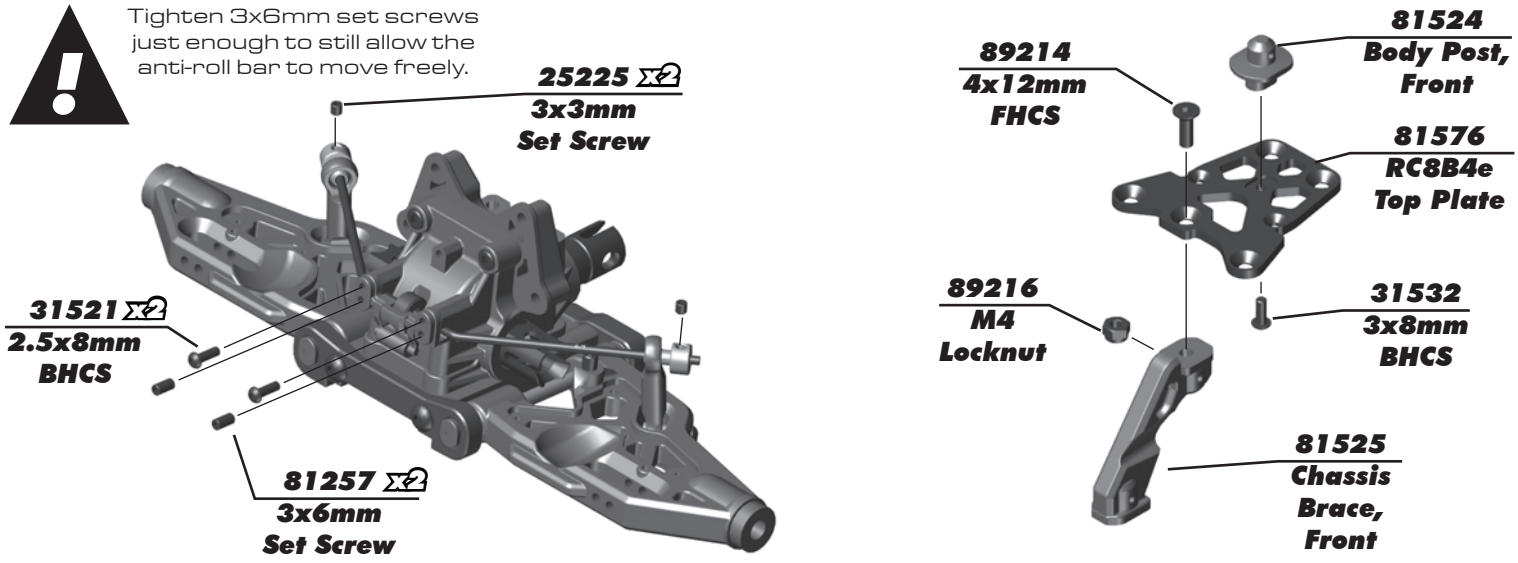






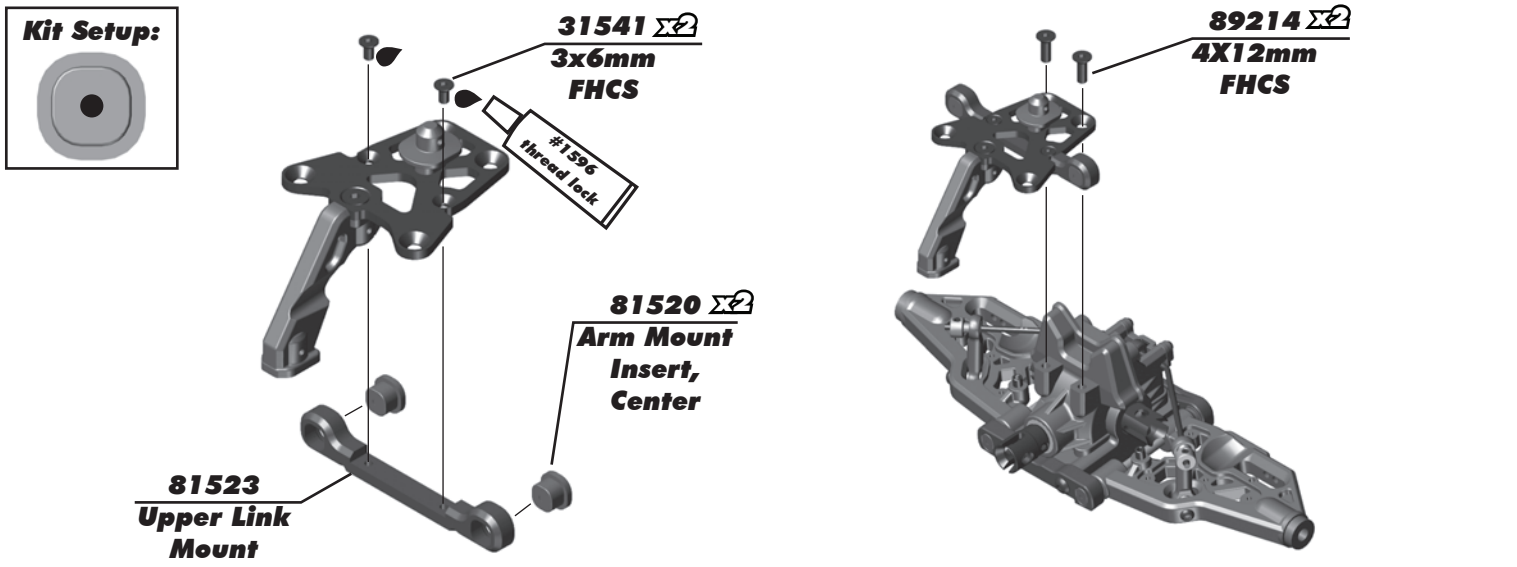
:: Front Gearbox Build - Bag 5.1, 5.2, 5.3 - Step 6

Tighten 3x6mm set screws just enough to still allow the anti-roll bar to move freely.



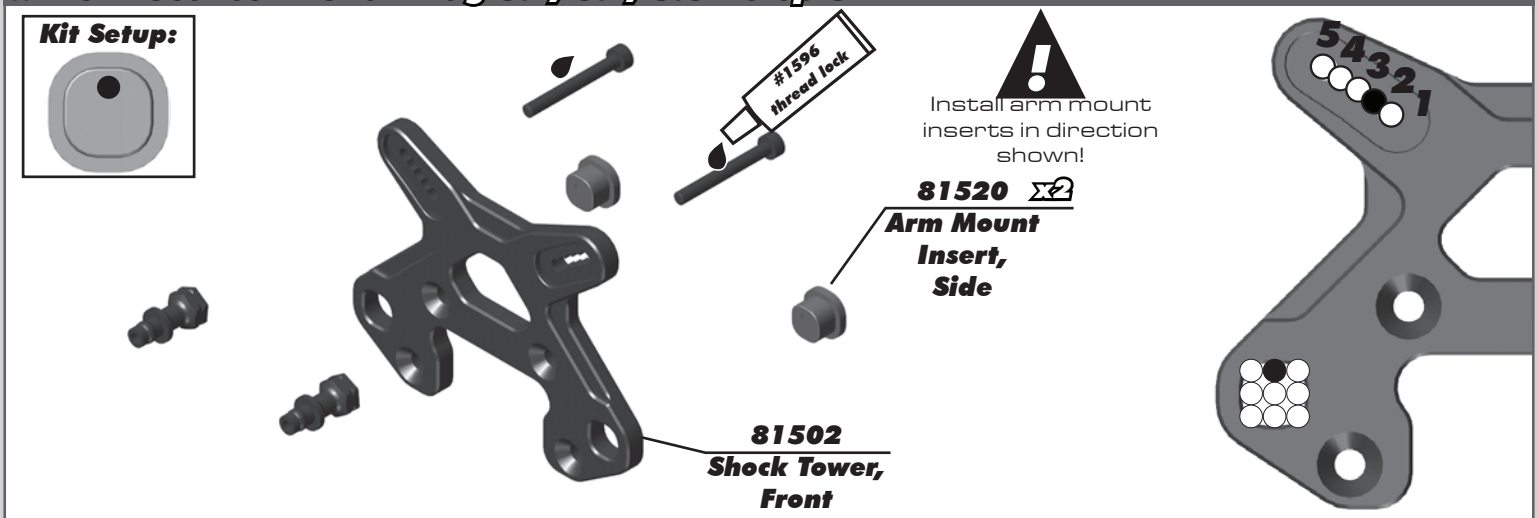
:: Front Gearbox Build - Bag 5.1, 5.2, 5.3 - Step 7

Kit Setup:



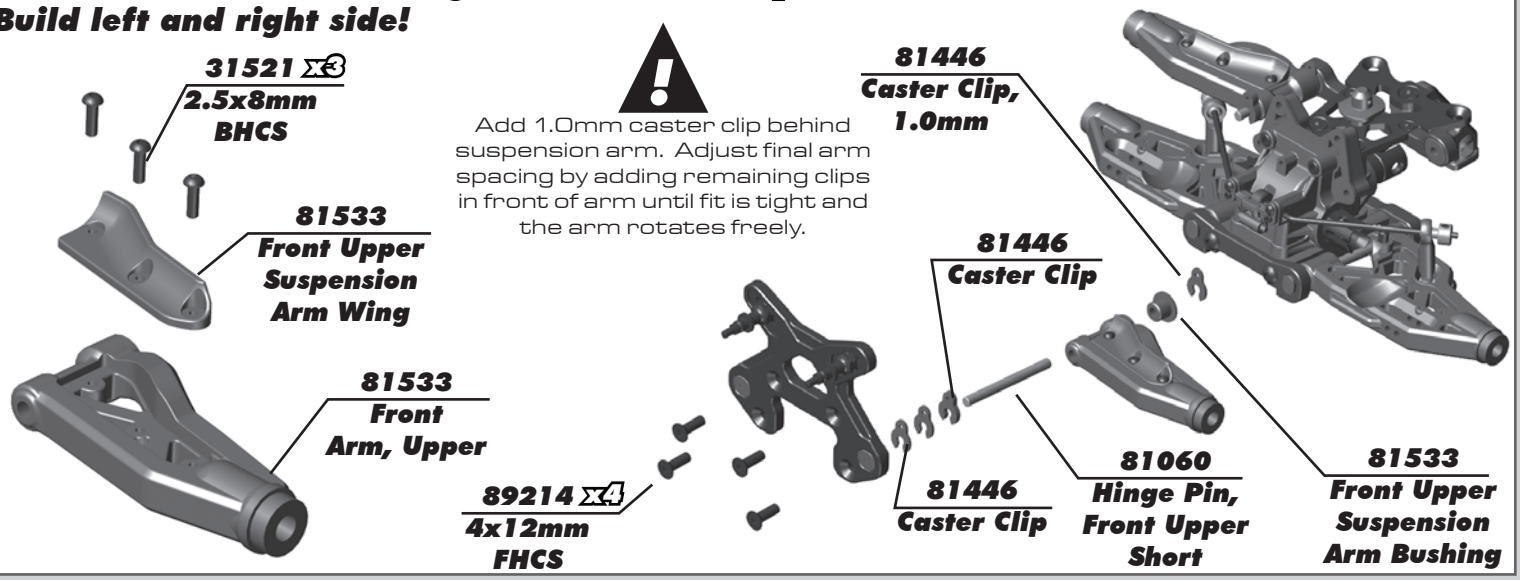
:: Front Gearbox Build - Bag 5.1, 5.2, 5.3 - Step 8

Kit Setup:



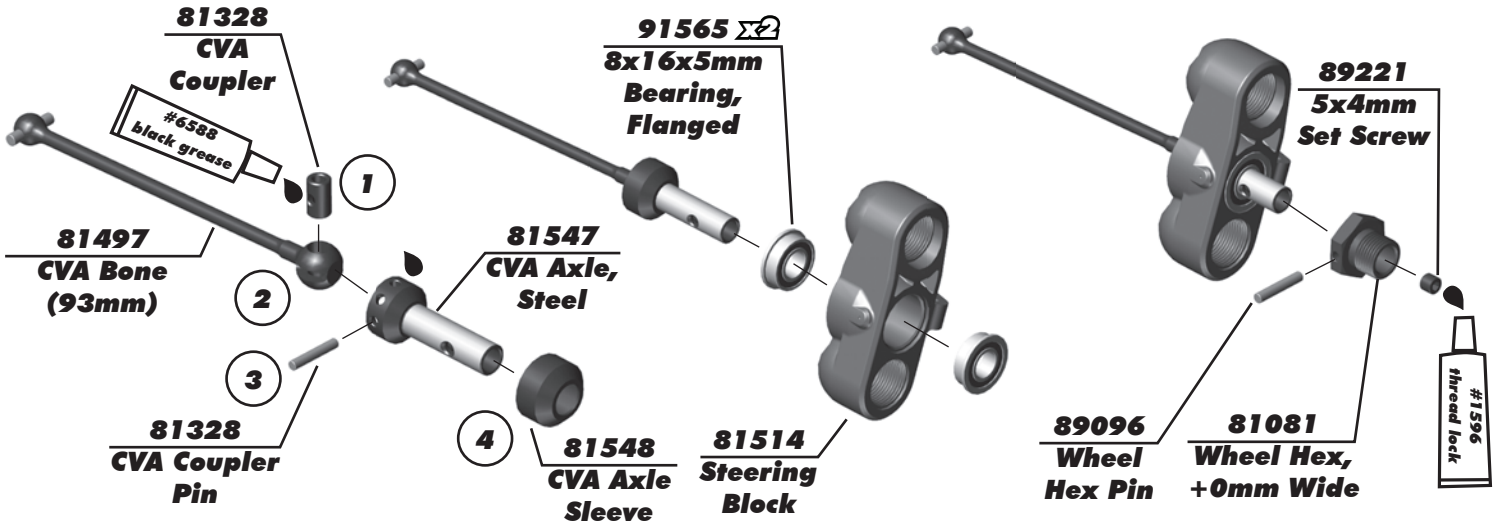
:: Front Gearbox Build - Bag 5.1, 5.2, 5.3 - Step 9

Build left and right side!



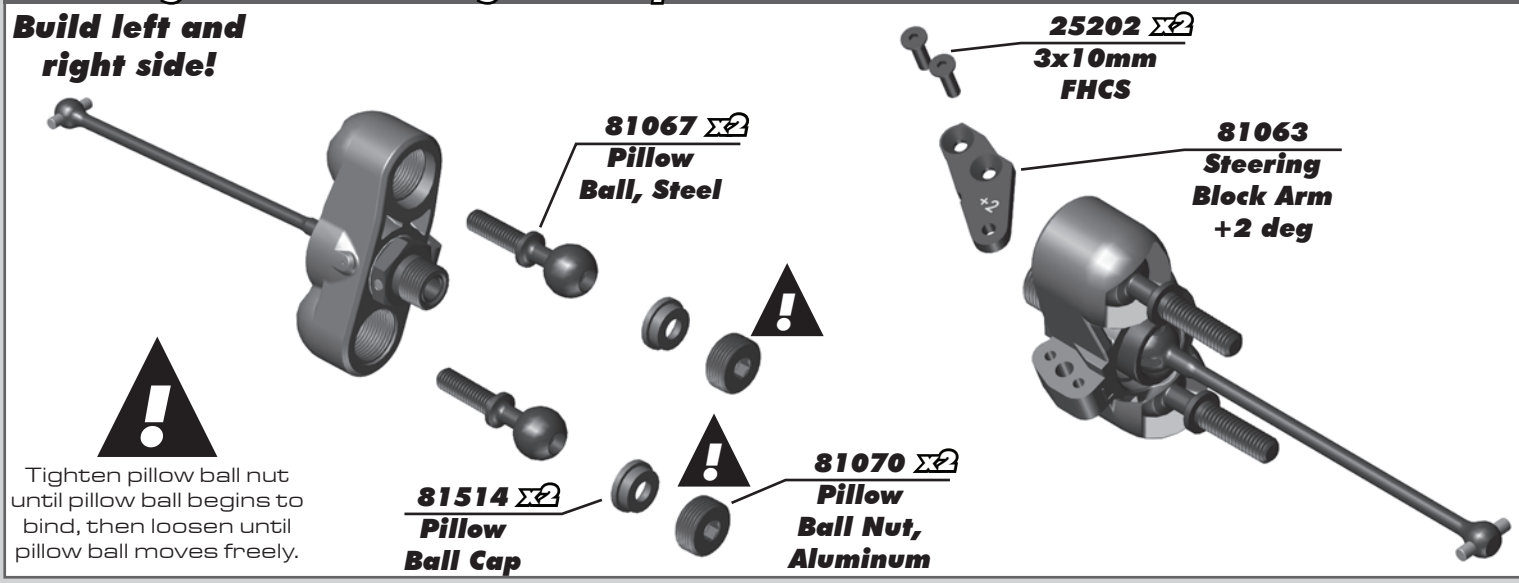
:: Steering Blocks Build - Bag 6.1 - Step 1

Build left and right side!

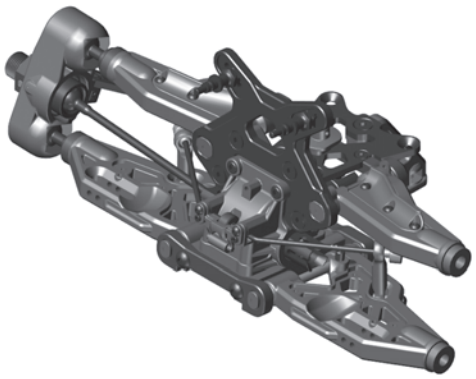


:: Steering Blocks Build - Bag 6.1 - Step 2

Build left and right side!

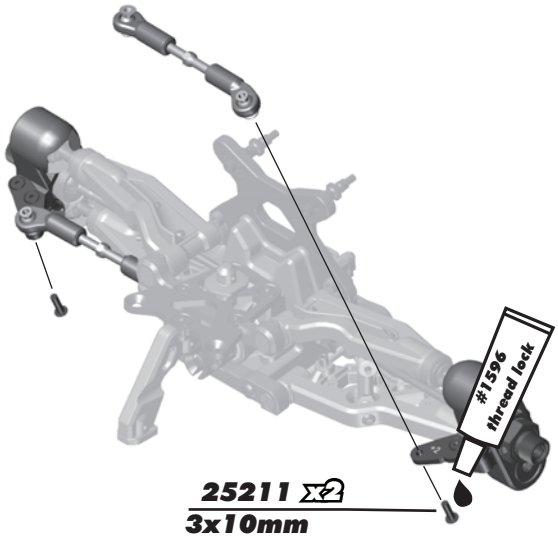


:: Steering Blocks Build - Bag 6.1 - Step 3

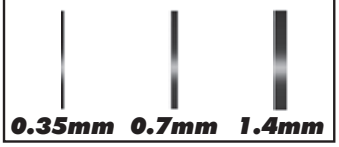


81056 x2
Suspension Arm Endcap

81072
Pillow Ball Shim (1.4mm)



Pillow Ball Shims



81072
Pillow Ball Shim (0.35mm)

25211 x2
3x10mm BHCS

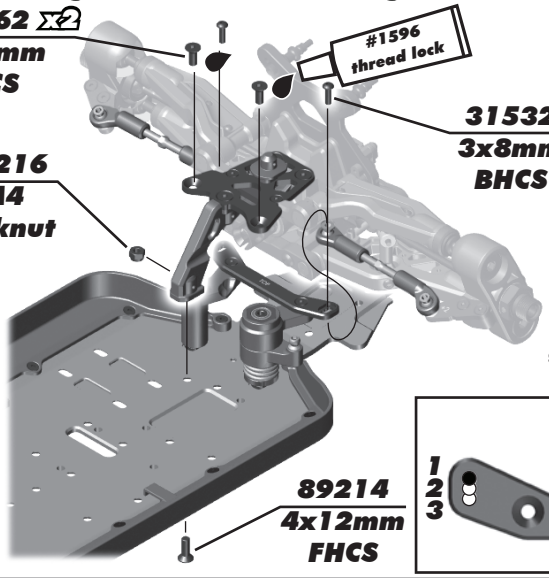
:: Steering Blocks Build - Bag 6.1 - Step 4

81262 x2
4x10mm FHCS

#1596 thread lock

31532 x2
3x8mm BHCS

89216
M4 Locknut

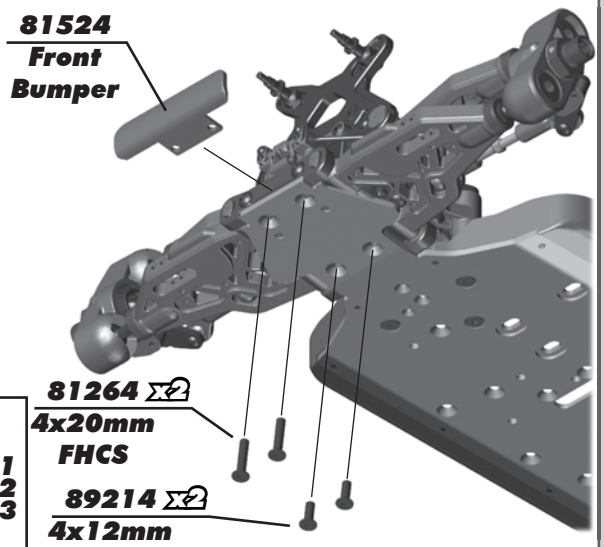


89214
4x12mm FHCS

For attaching steering link to steering rack

Kit Setup:

81524
Front Bumper

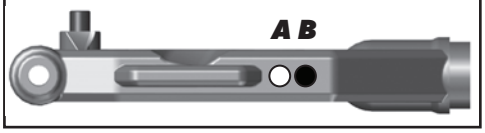


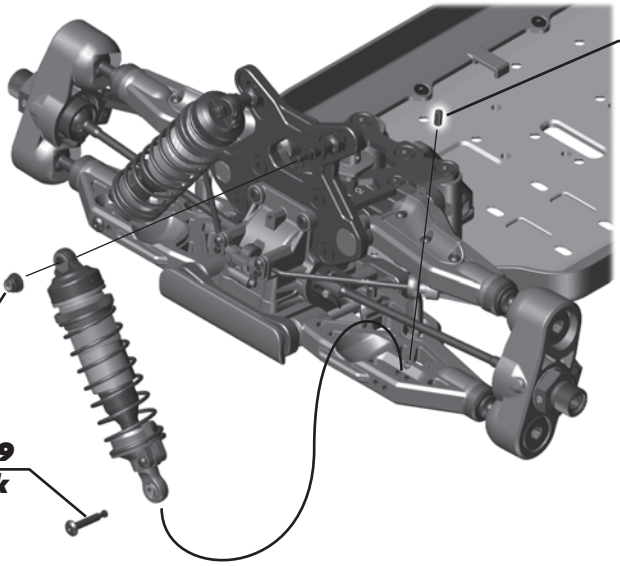
81264 x2
4x20mm FHCS

89214 x2
4x12mm FHCS

:: Steering Blocks Build - Bag 6.1 - Step 5

Kit Setup:
Mount the front shock in the outside hole on the front arm.



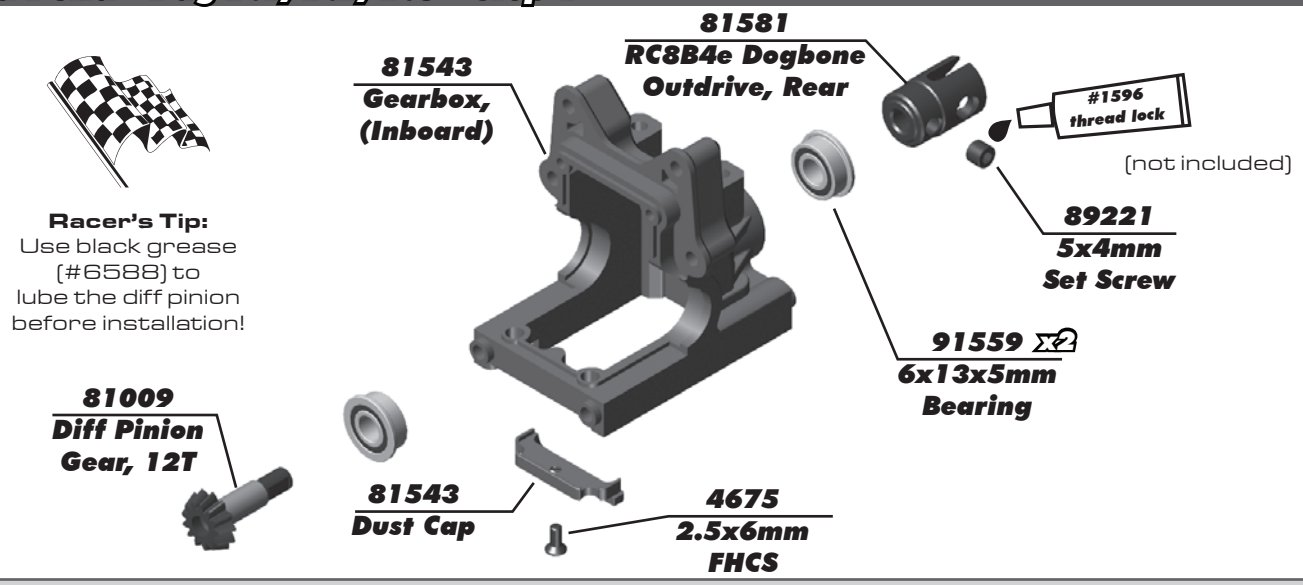


81257
3x6mm Set Screw

25612
M3 Locknut W/ Flange

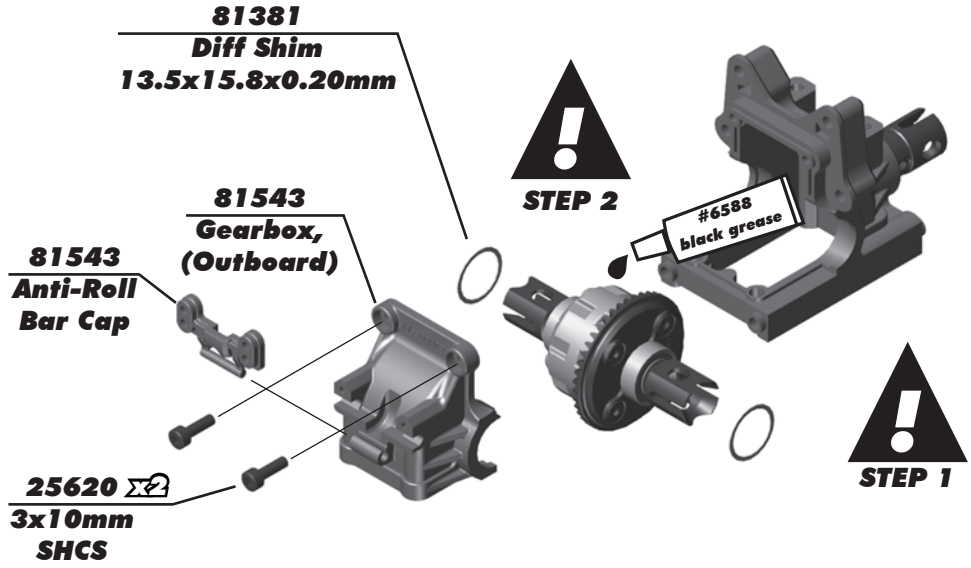
81509
Shock Pin

:: Rear End Build - Bag 7.1, 7.2, 7.3 - Step 1



Racer's Tip:
Use black grease (#6588) to lube the diff pinion before installation!

:: Rear End Build - Bag 7.1, 7.2, 7.3 - Step 2



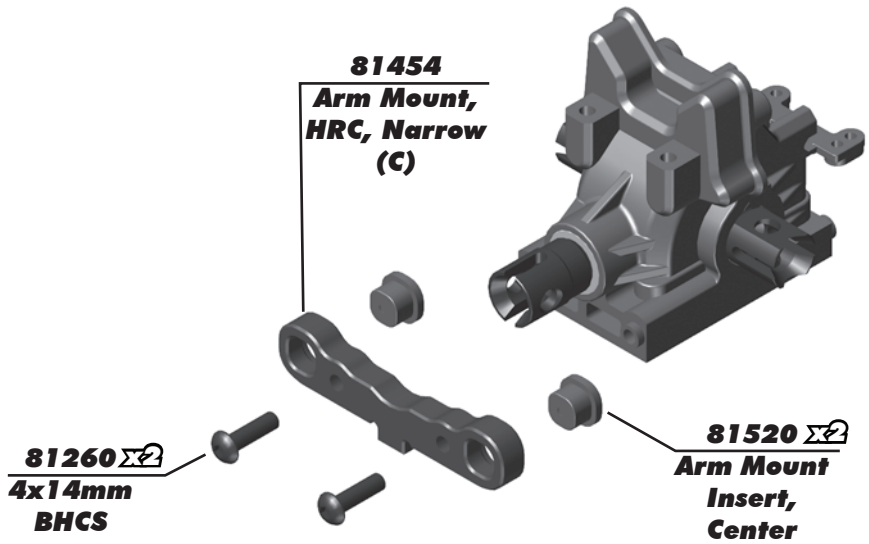
Step 1:
Add shims on the ring gear side to TIGHTEN gear mesh. Subtract shims on this side to LOOSEN gear mesh.
NOTE:
Start 1 x Thick 0.2mm

Step 2:
Add or subtract shims here to finalize diff side to side play once gear mesh is set from Step 1. Recommended diff "side-to-side" clearance (gearbox assembly) 0.10 - 0.25mm. Start with 1 x 0.1 mm.

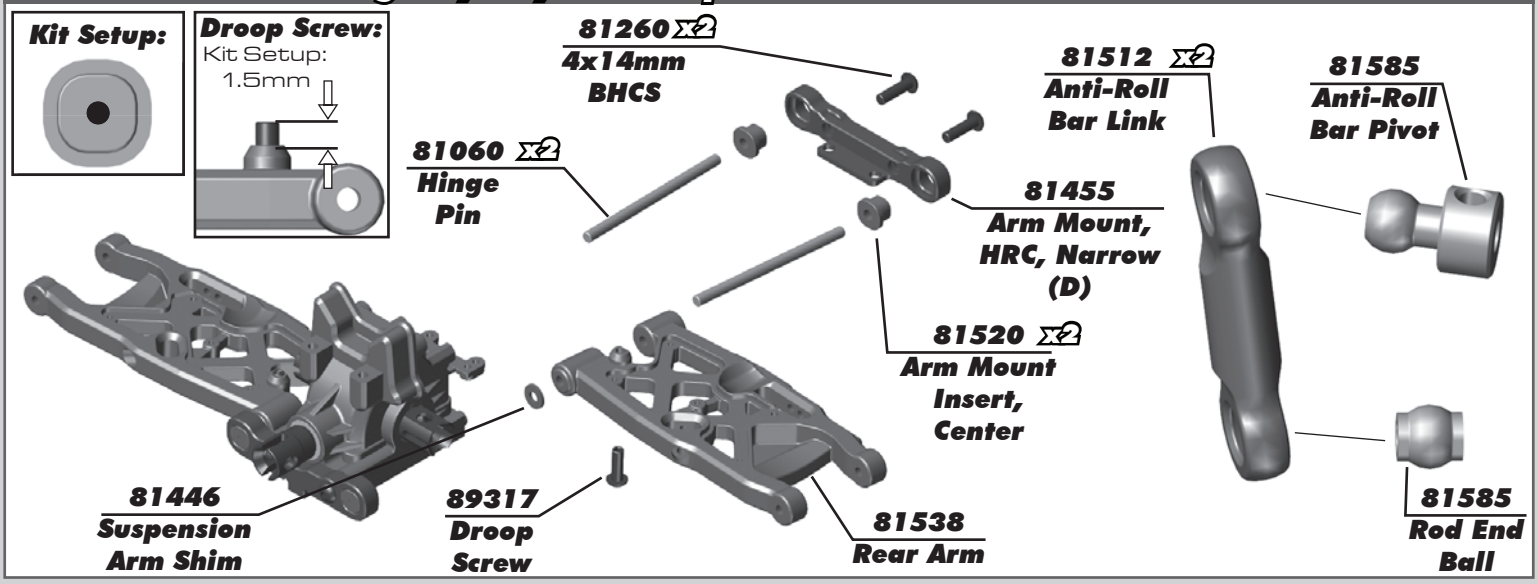
Note:
0.1 mm shim can be used for fine tuning of gear mesh

:: Rear End Build - Bag 7.1, 7.2, 7.3 - Step 3

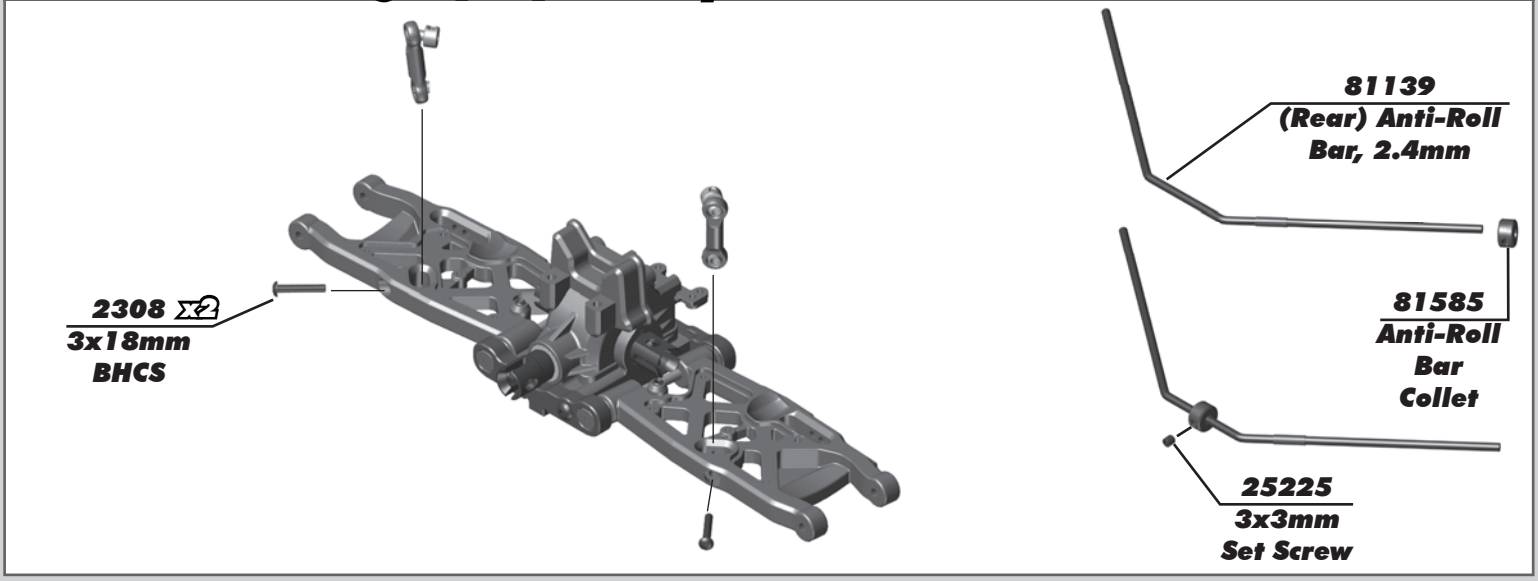
Kit Setup:



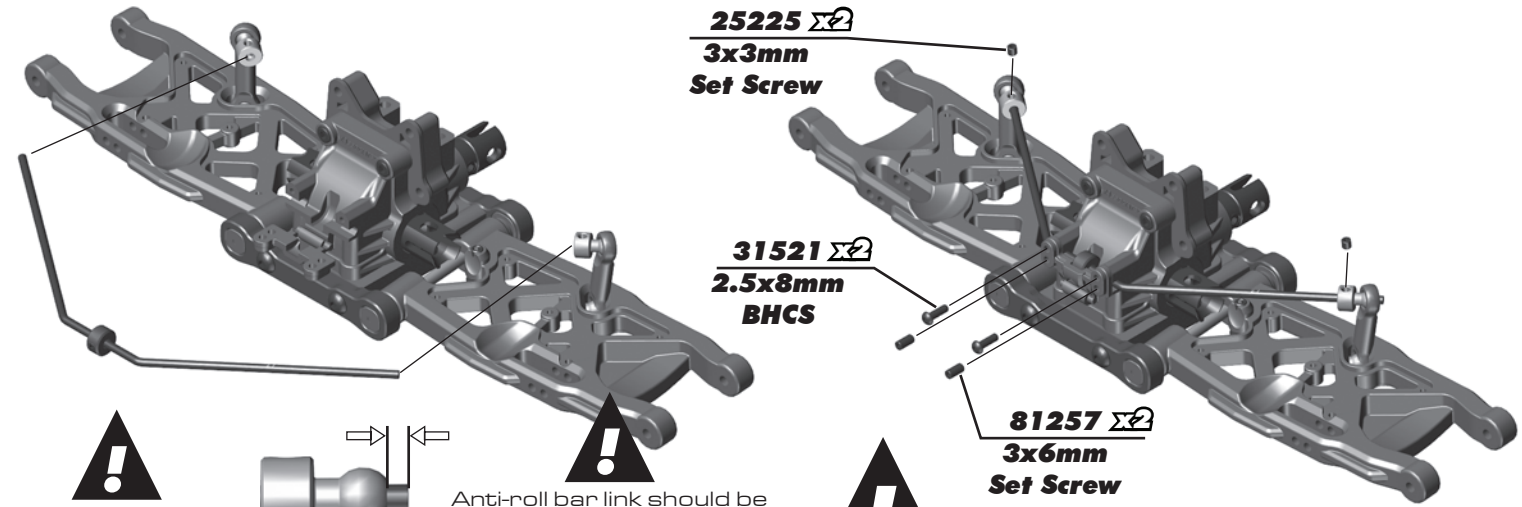
:: Rear End Build - Bag 7.1, 7.2, 7.3 - Step 4



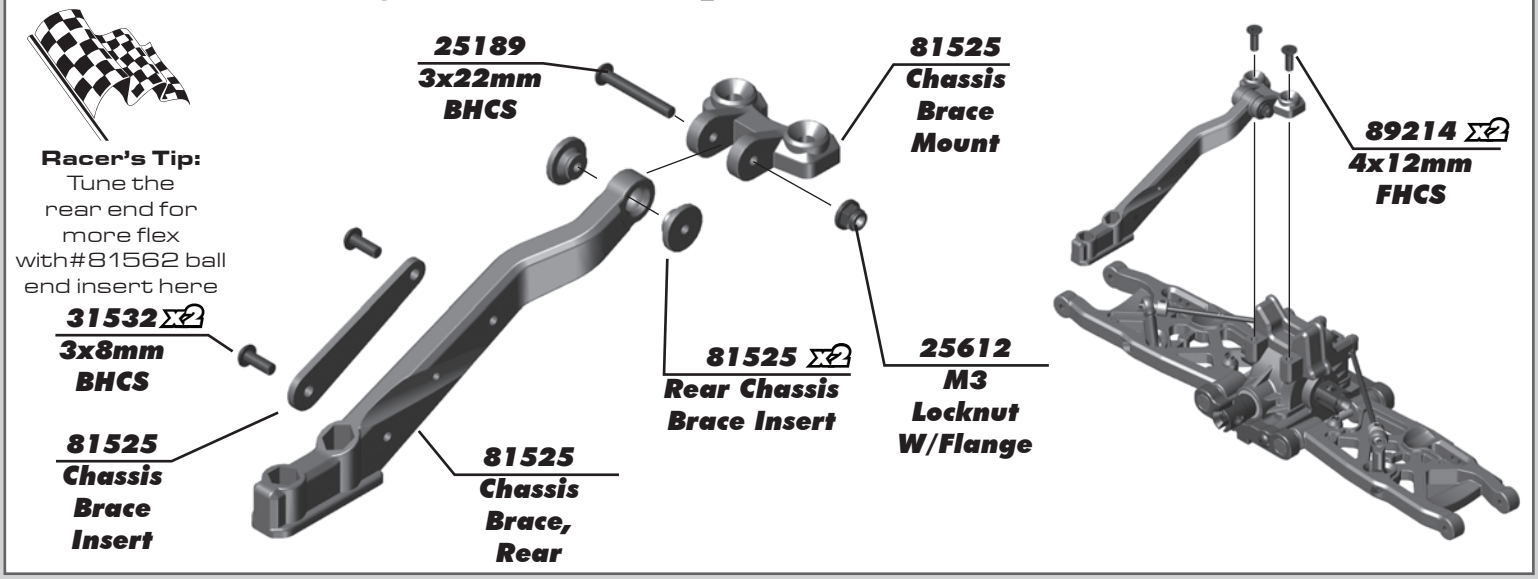
:: Rear End Build - Bag 7.1, 7.2, 7.3 - Step 5



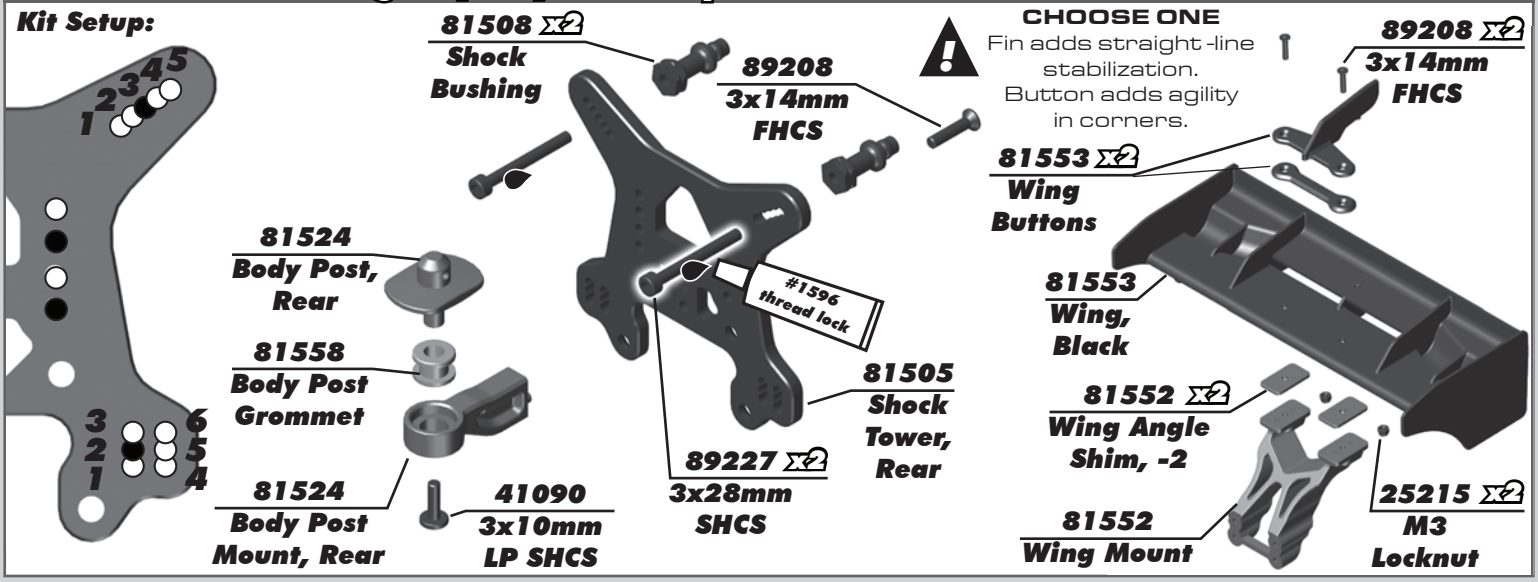
:: Rear End Build - Bag 7.1, 7.2, 7.3 - Step 6



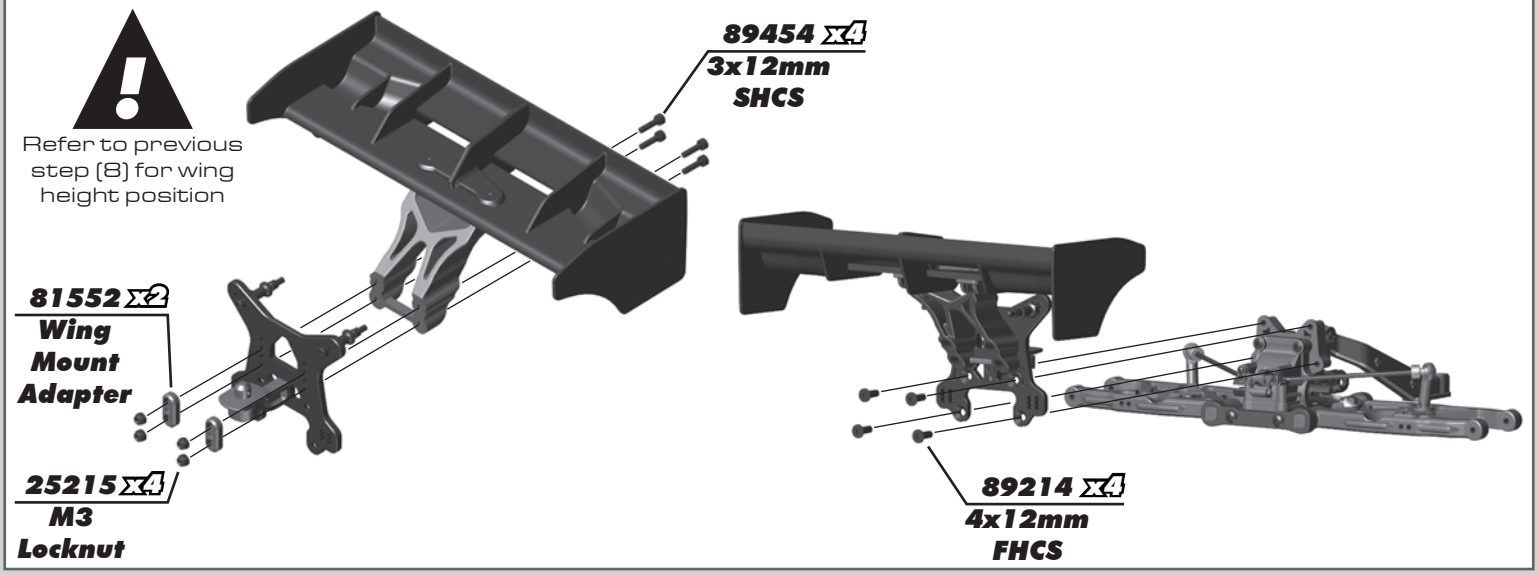
:: Rear End Build - Bag 7.1, 7.2, 7.3 - Step 7



:: Rear End Build - Bag 7.1, 7.2, 7.3 - Step 8

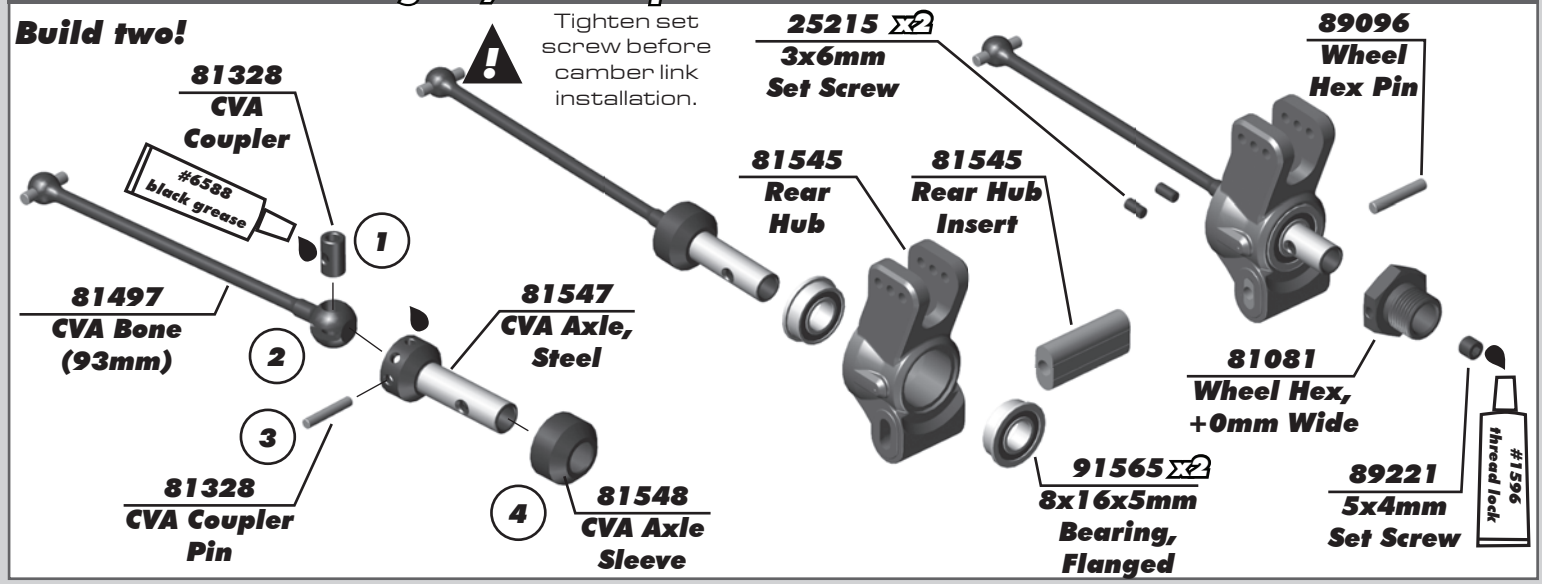


:: Rear End Build - Bag 7.1, 7.2, 7.3 - Step 9



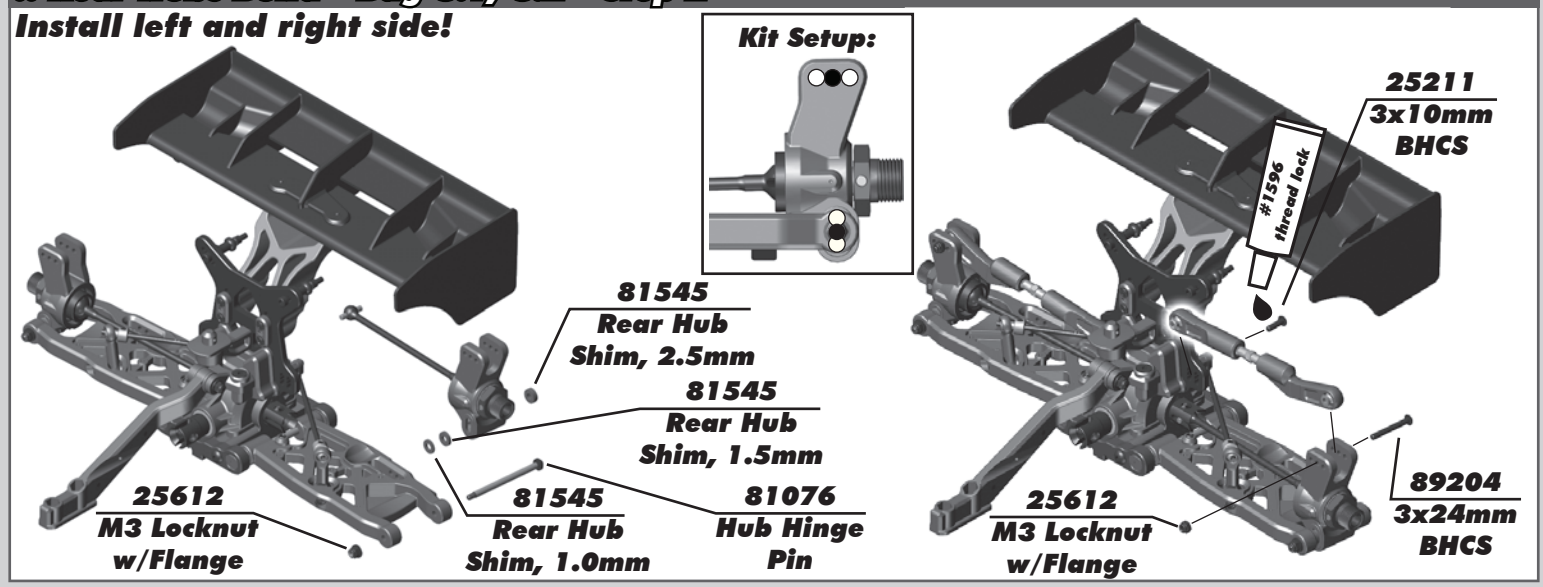
:: Rear Hubs Build - Bag 8.1, 8.2 - Step 1

Build two!



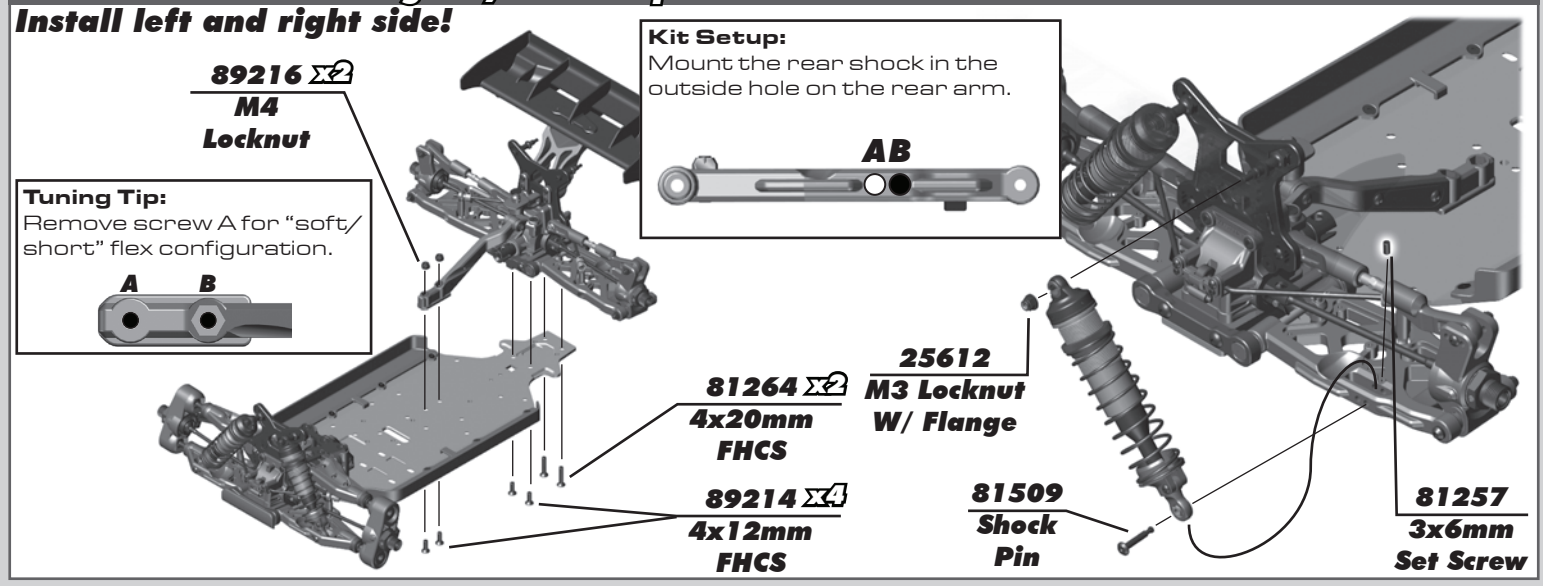
:: Rear Hubs Build - Bag 8.1, 8.2 - Step 2

Install left and right side!

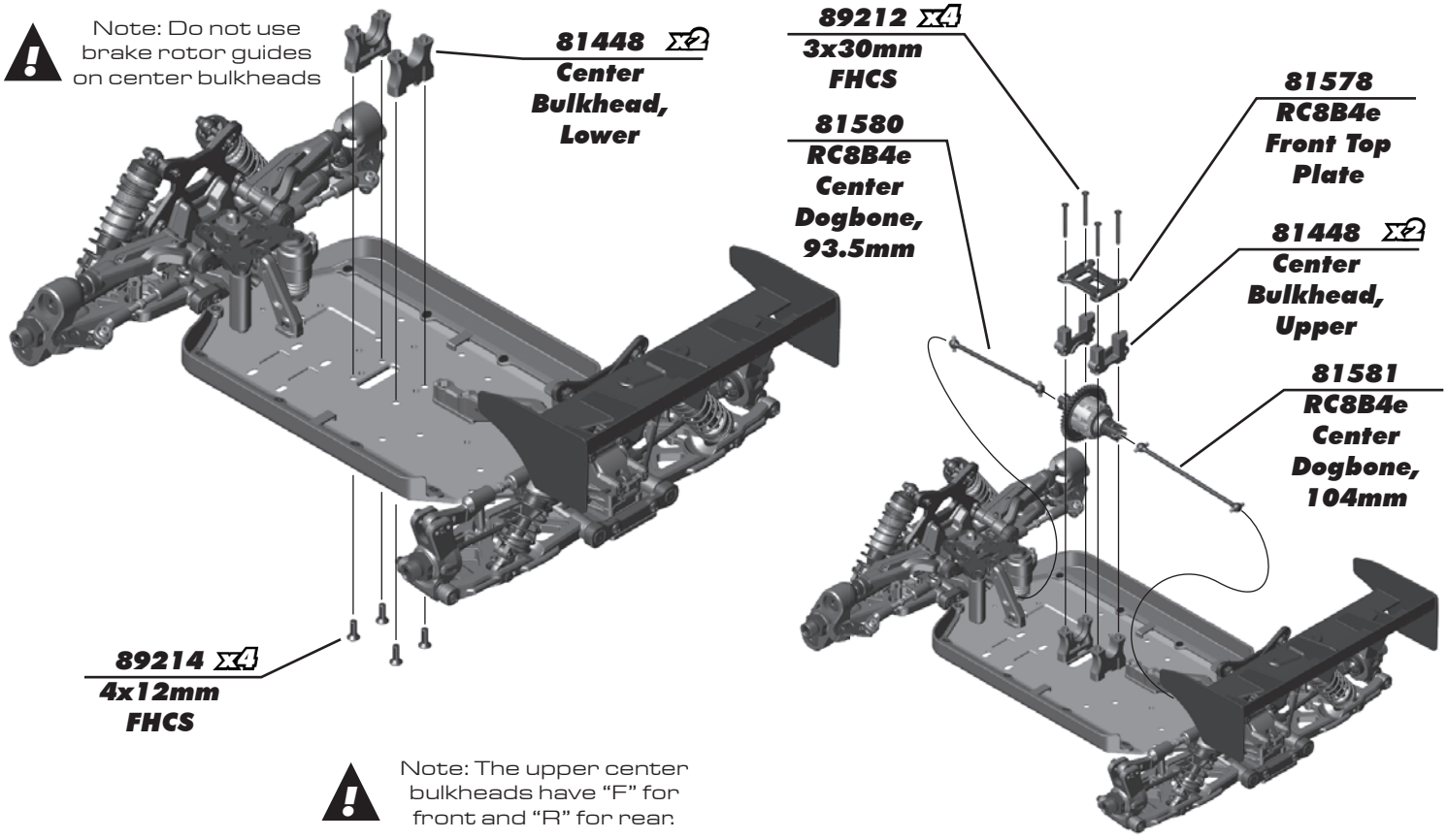


:: Rear Hubs Build - Bag 8.1, 8.2 - Step 3

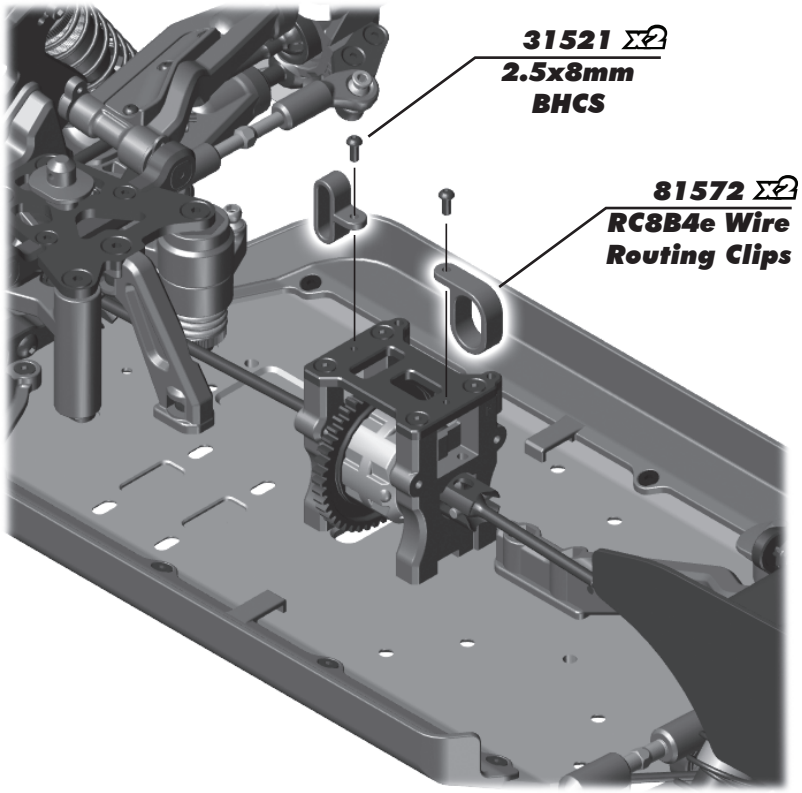
Install left and right side!



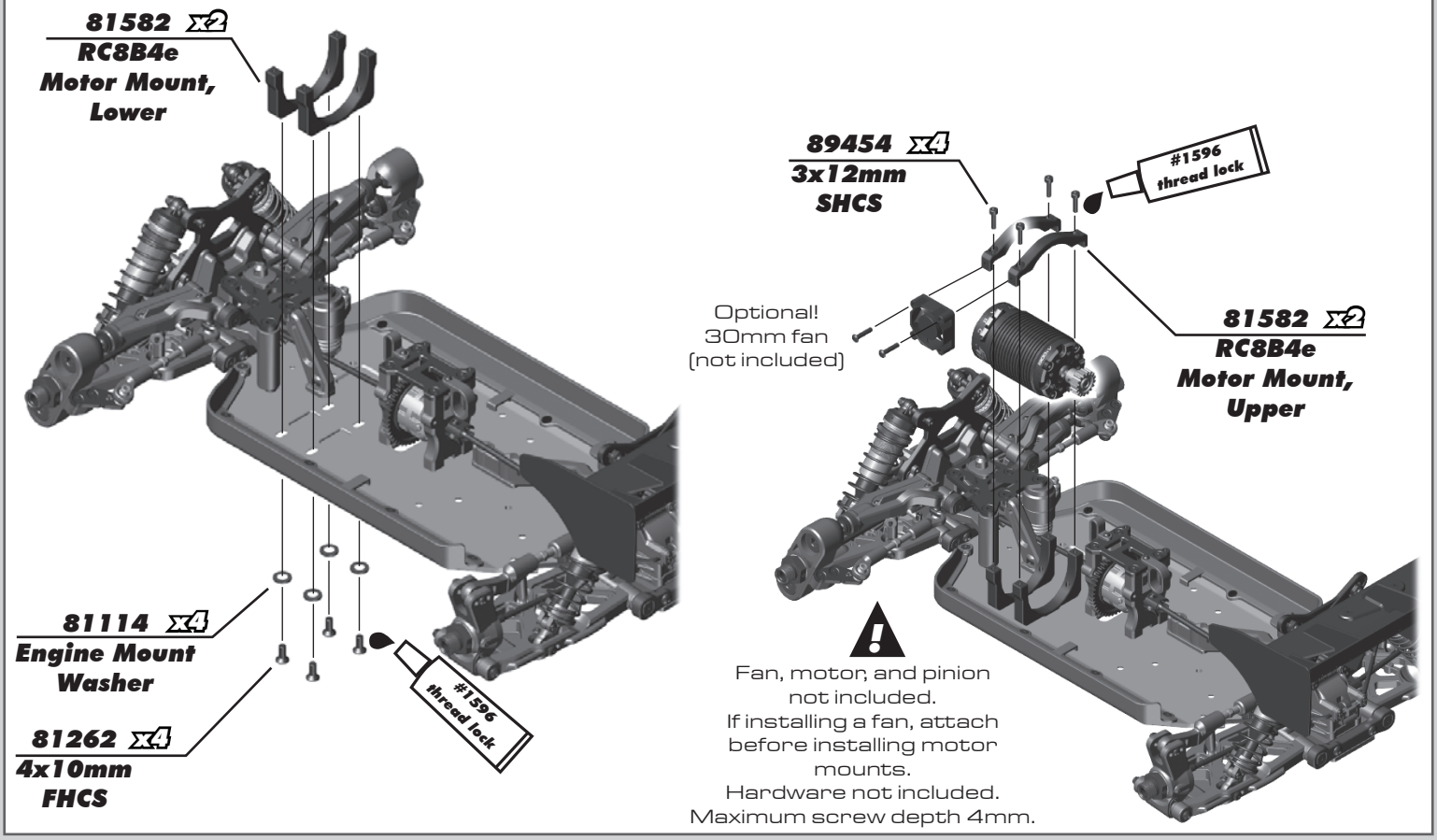
:: Center Bulkhead - Bag 9.1 - Step 1



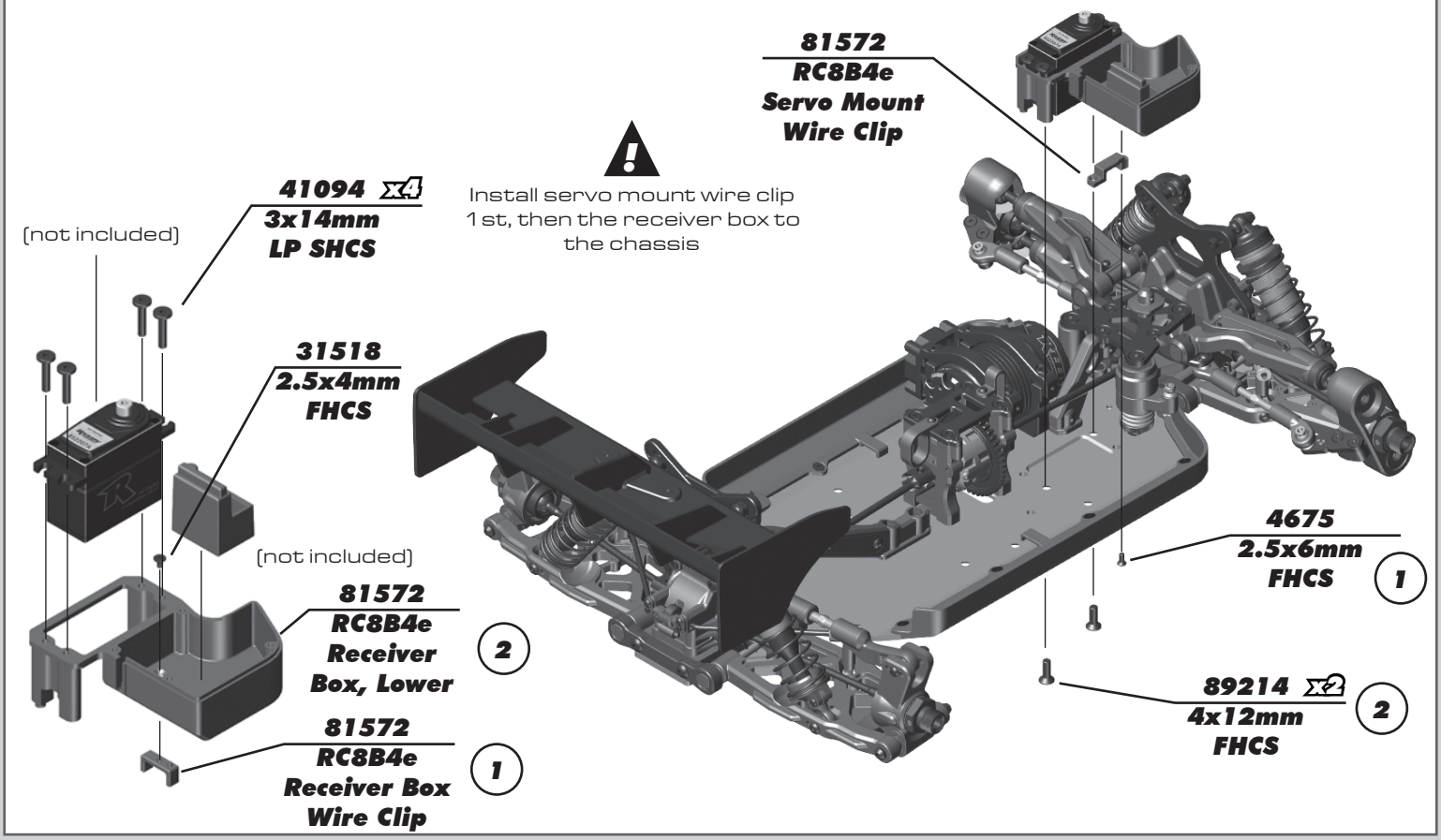
:: Center Bulkhead - Bag 9.1 - Step 2



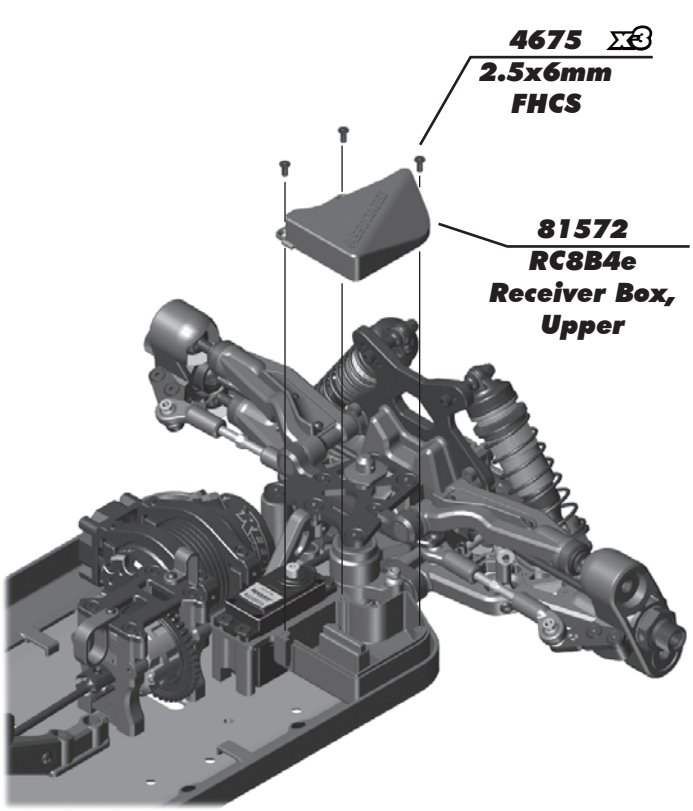
:: Center Bulkhead - Bag 9.1 - Step 3

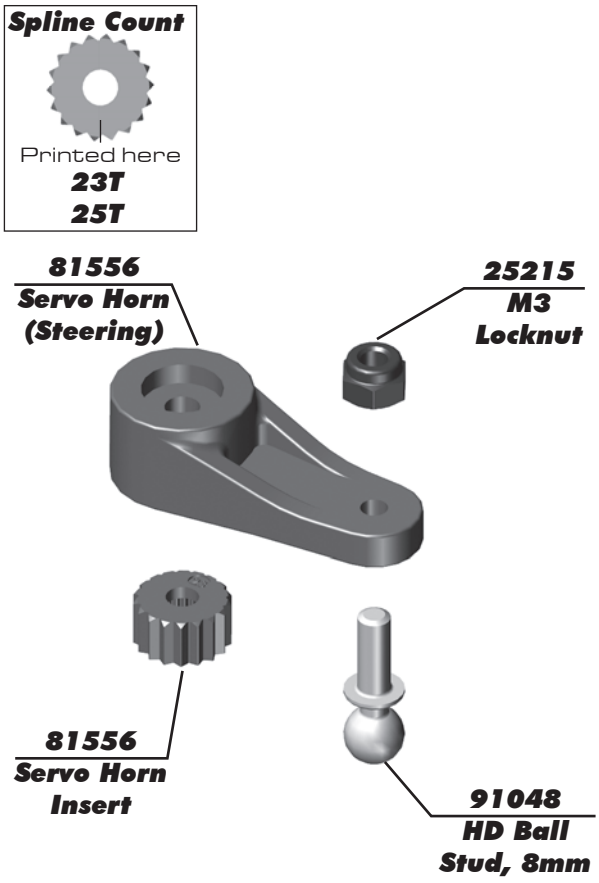


:: Radio Tray Build - Bag 10.1, 11.1 - Step 1

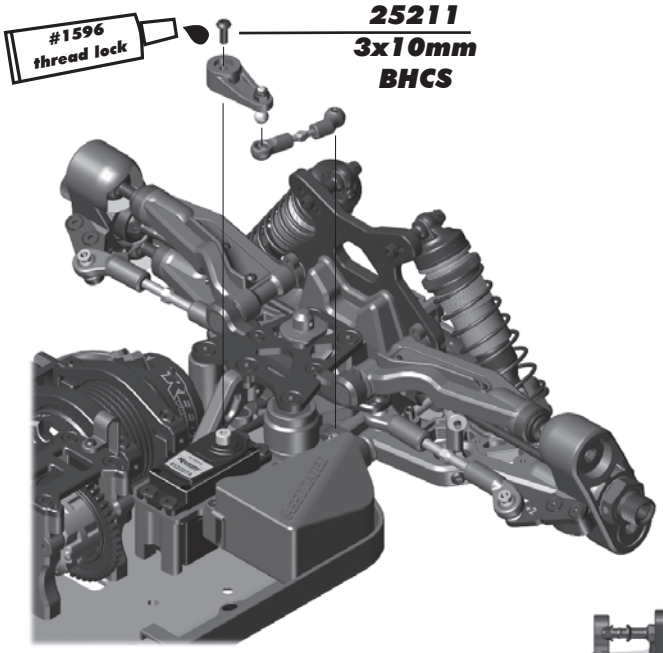


:: Radio Tray Build - Bag 11.1 - Step 2





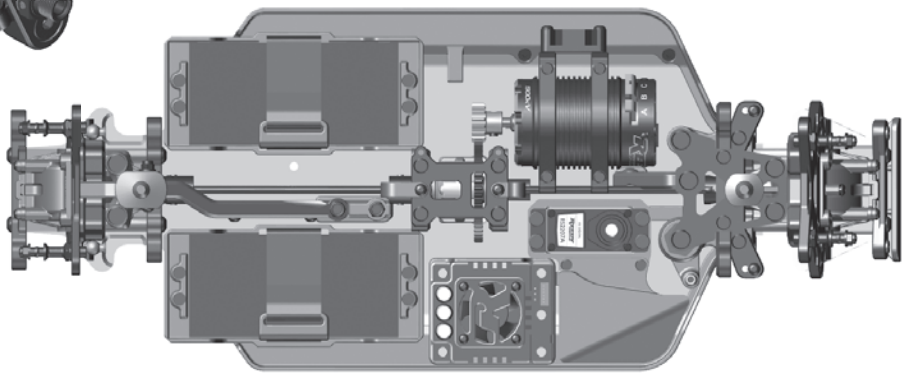
:: Radio Tray Build - Bag 11.1 - Step 3



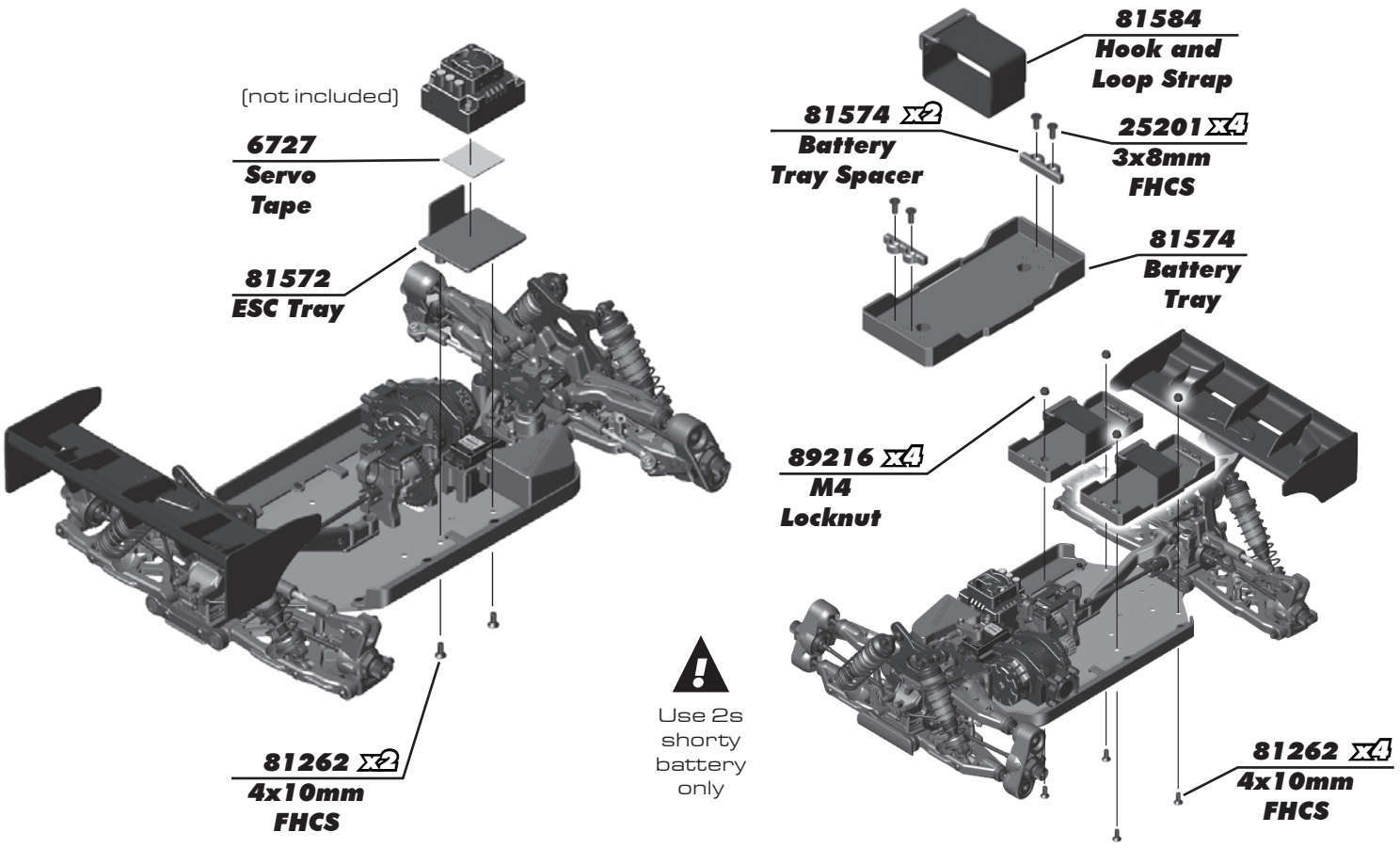
To build RC8B4e for use with two 2s shorty battery packs in a "saddle" configuration, follow the steps below.

To build RC8B4e for use with onme 4s shorty battery pack, continue to "Battery Tray Build - Bag 12.1 - Step 2"

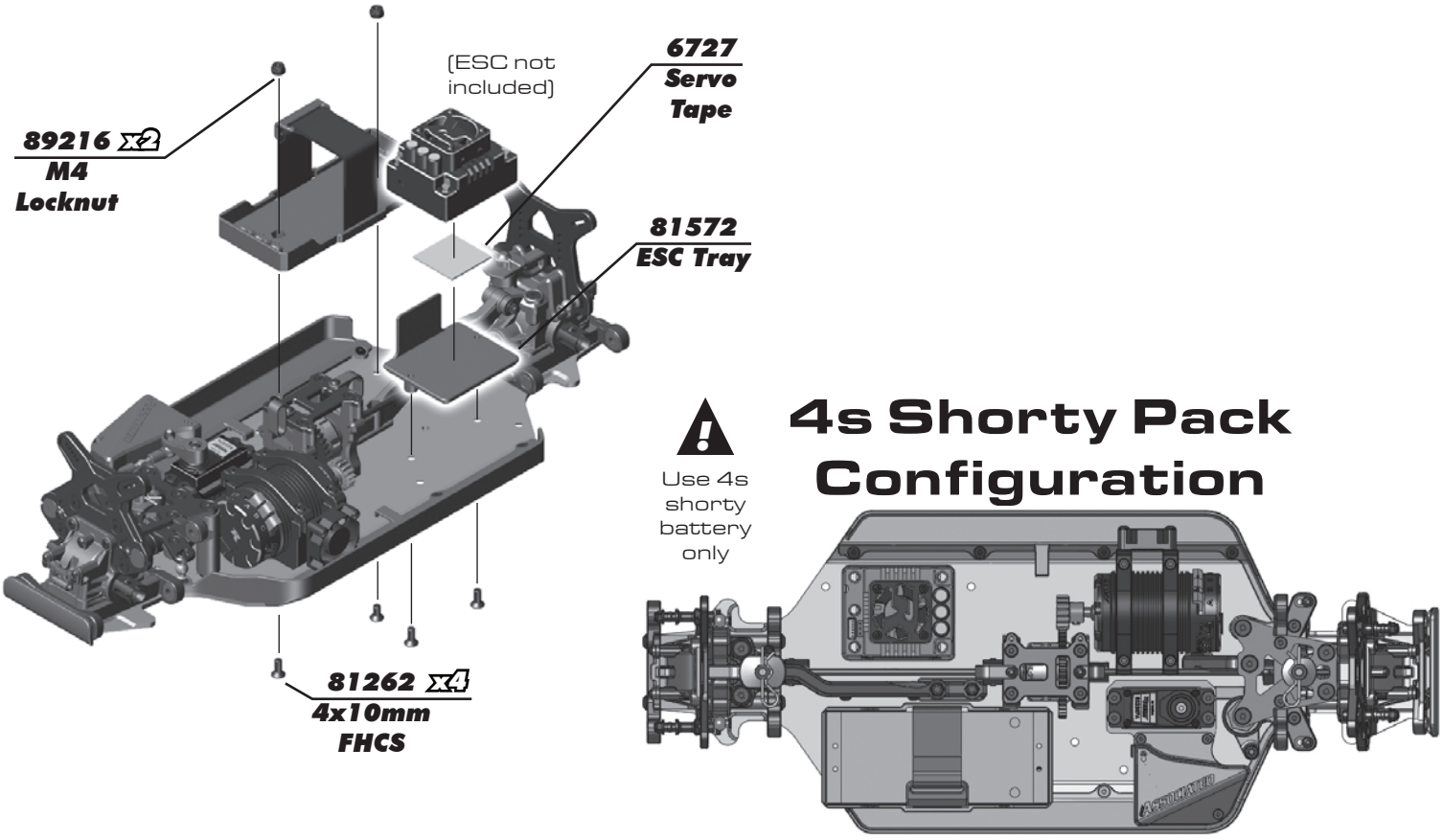
2s Shorty Pack Configuration



:: Battery Tray Build - Bag 12.1 - Step 1

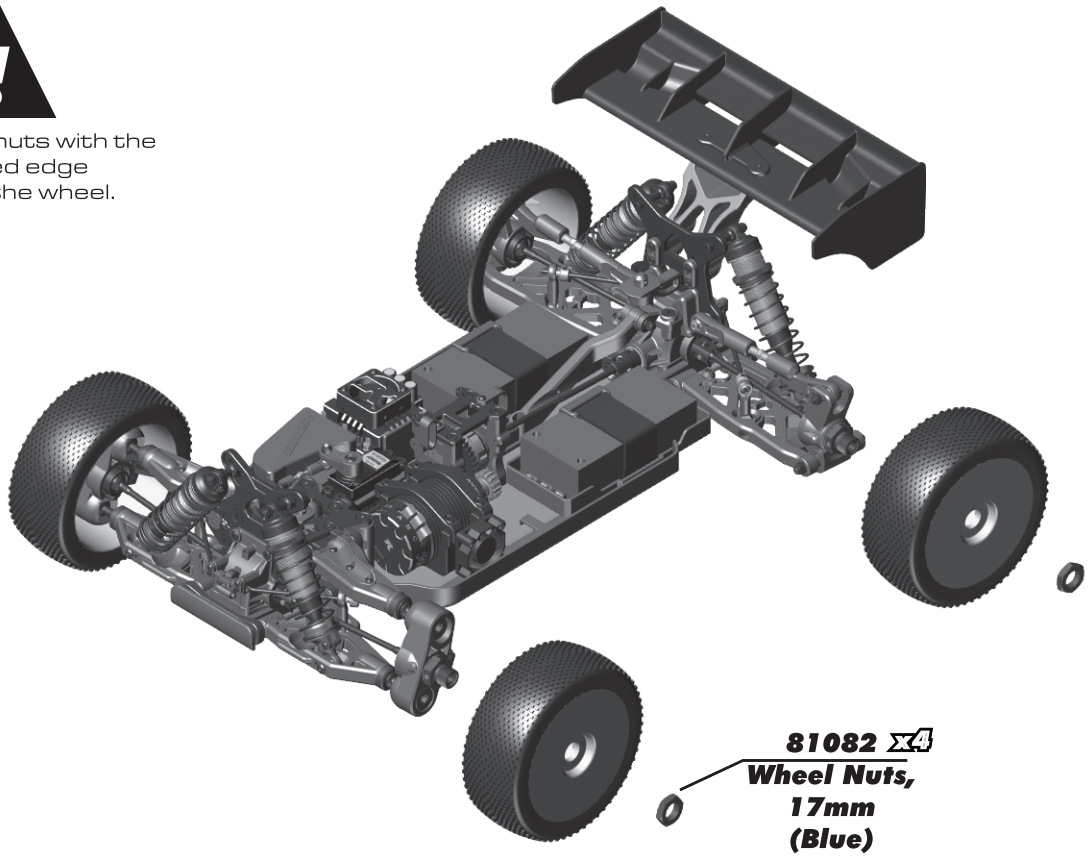


:: Battery Tray Build - Bag 12.1 - Step 2

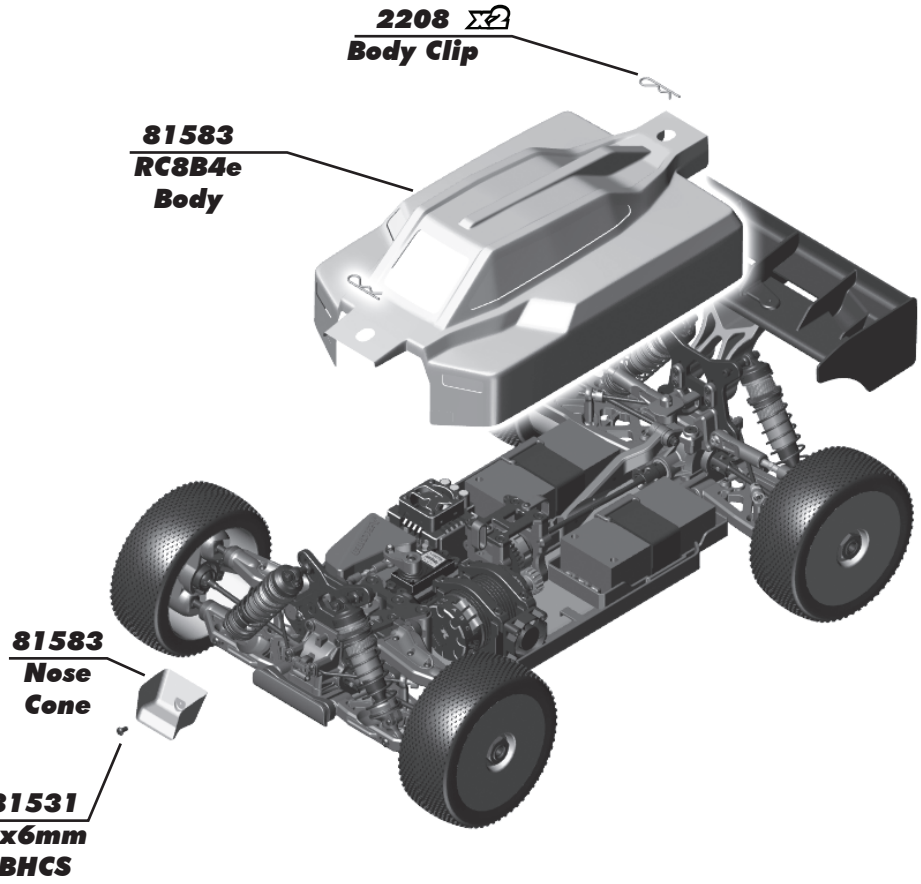


:: Wheels / Tires / Body - Misc. - Step 2

Install wheel nuts with the serrated edge towards the wheel.



:: Wheels / Tires / Body - Misc. - Step 3



Painting Tips:

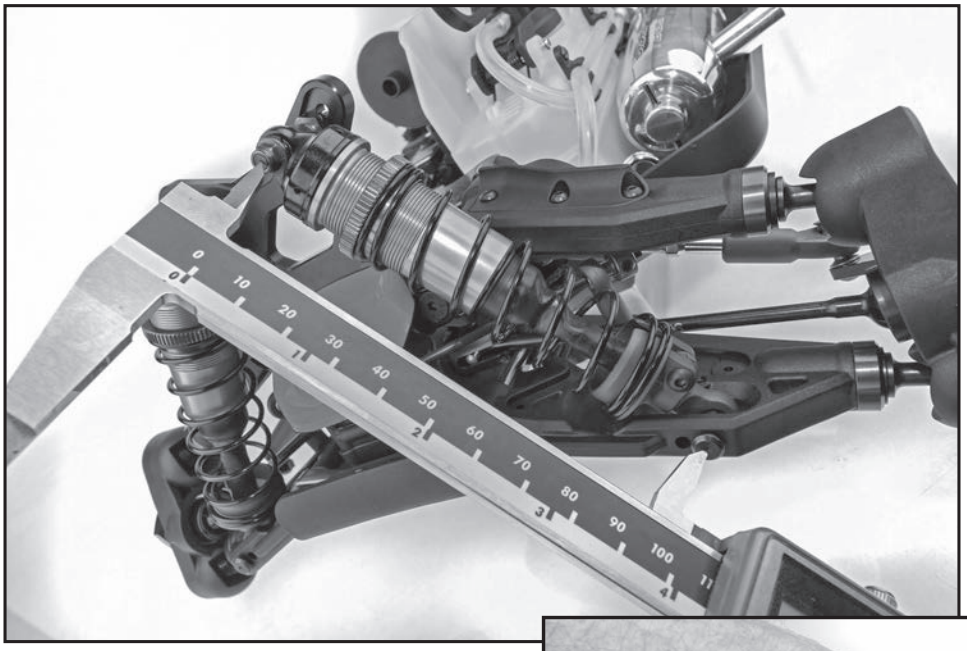
Your kit comes with a clear polycarbonate body. You will need to prep the body before you can paint it. Wash the inside thoroughly with warm water and liquid detergent. Dry the body using a clean, soft, lint-free cloth. Install the window masks on the inside of the body. (R/C cars get painted from the 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 (prefferably dark colors first, lighter colors last).

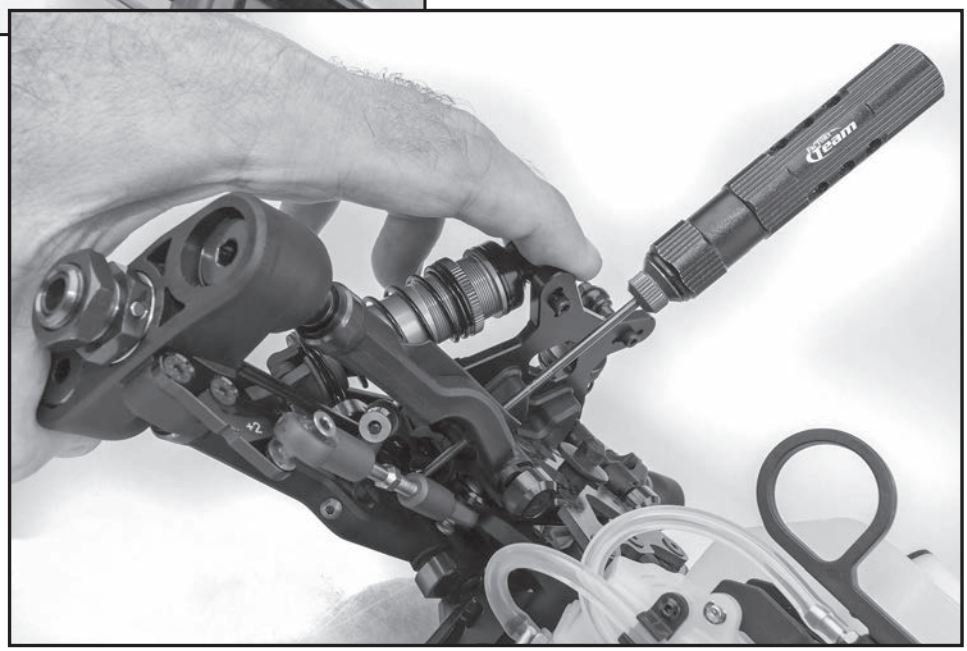
NOTE: use ONLY paint that is recommended for use with (polycarbonate) plastics. If you do not, you can destroy the polycarbonate body!!!

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

:: Droop Settings

Set droop by measuring overall length of shock (from standoff to shock pin) while the chassis is elevated above your working surface. The shocks should be fully extended.
Kit setup for front droop is 105mm shock length, and 126mm shock length for the rear.
If the shock length is too long, adjust by turning the droop screws clockwise.
If the shock length is too short, adjust by turning the droop screws counter-clockwise.





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:

To find different setups for your kit, visit our website, https://www.associatedelectrics.com/teamassociated/and click on the "Setup Sheets" link, and then the link to your model. Our team of professional drivers help develop these setups at races worldwide. Additionally, most drivers have a "base" setup that they use as a starting point for most races. Try running some of our base setups or look for track conditions and tires that are similar to your local track and replicate 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.

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