RC8 B4.1e

#80950 RC8B4.1e 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 RC8B4.1e Kit:

- New RC8B4.1e RWB/FWB adjustable weight bias chassis design to tune rear grip vs. steering
- New low CG and lightweight aluminum front and rear shock towers
- New shorter 16mm front and rear shock bodies for lower CG and lighter weight
- New 6 -hole 1.4mm front and 1.5mm taper rear machined shock pistons included with emulsion shock cap seals
- New 3-hole rear suspension arms with updated rear anti-roll bar geometry for both smooth and bumpy tracks
- New durable rear hub design with wide footprint base, and tuneable 3mm carbon fiber hub towers
- New blue aluminum front upper arm mount for added durability
- New molded RC8B4.1 front bumper with optimized profile for bumpy transitions
- 13-44 Ring and Pinion Bevel Gear Set
- 92mm universal driveshafts with 17mm outdrives
- Updated Soft Blend suspension arms for maximum durability in cold weather
- New +1 aluminum steering block arms for sharper steering on low grip
- RC8B4e centralized drivetrain and chassis configuration optimized for shorty-style batteries only
- Two battery trays included with adjustable stops for battery position adjustment
- RC8B4e 25mm wide hook and loop strap per battery tray for easy battery hold-down
- RC8B4e ESC tray with protective shield has unique position for 2x2s and 1x4s battery setups for ideal weight bias positioning
- RC8B4e receiver box with built-in servo mounts has integrated cable routing and increased volume for fitting taller antenna-less receivers
- Wire routing clips included for clean wiring of batteries and motor with sensor wire
- Two-piece clamping motor mount which can shift to the forward or rearward location to support FWB or RWB.

:: 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):

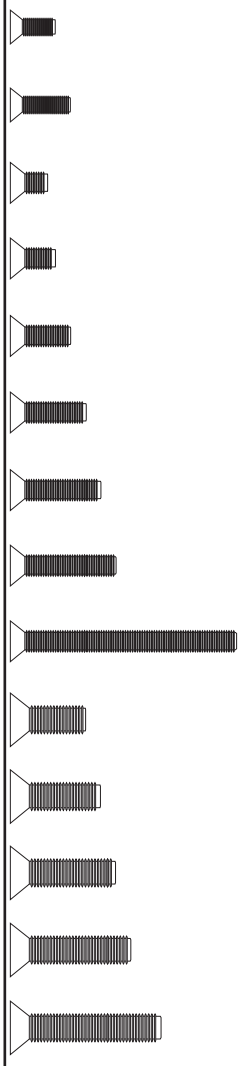
- 2 or 3 channel radio/transmitter (2.4GHz recommended)
- Two 2s or One 4s LiPo Battery Pack
- Polycarbonate-specific paint
- 1:8 scale buggy tires and wheels
- Reamer / hole punch
- Transmitter batteries
- 1/8th scale sized motor
- Thread-locking compound
- CA (cyanoacrylic) glue
- Ride height gauge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

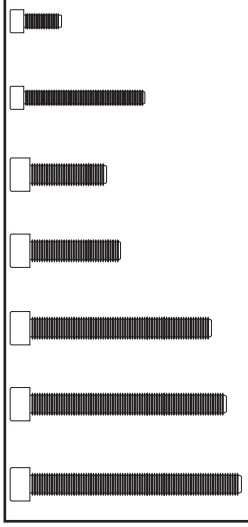
:: Hardware - 1:1 Scale View

Flat Head (fhcs)



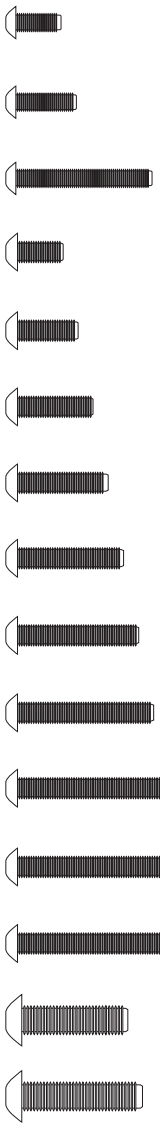
2.5x6mm (4675)
2.5x8mm (31448)
3x5mm (31540)
3x6mm (31541)
3x8mm (25201)
3x10mm (25202)
3x12mm (25203)
3x14mm (89208)
3x30mm (89212)
4x10mm (81262)
4x12mm (89214)
4x14mm (89217)
4x16mm (81263)
4x20mm (81264)

Socket Head (shcs)



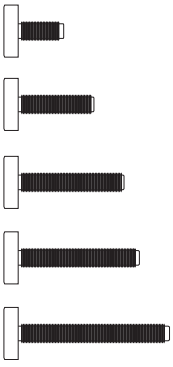
2x5mm (31511)
2x16mm (7184)
3x10mm (25620)
3x12mm (89454)
3x24mm (89225)
3x26mm (89226)
3x28mm (89227)

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)

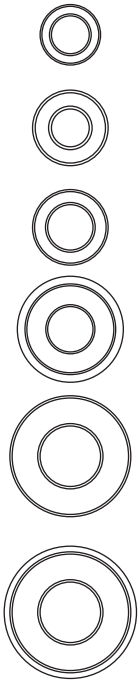


3x6mm (41089)
3x10mm (41090)
3x14mm (41094)
3x16mm (41093)
3x20mm (41091)

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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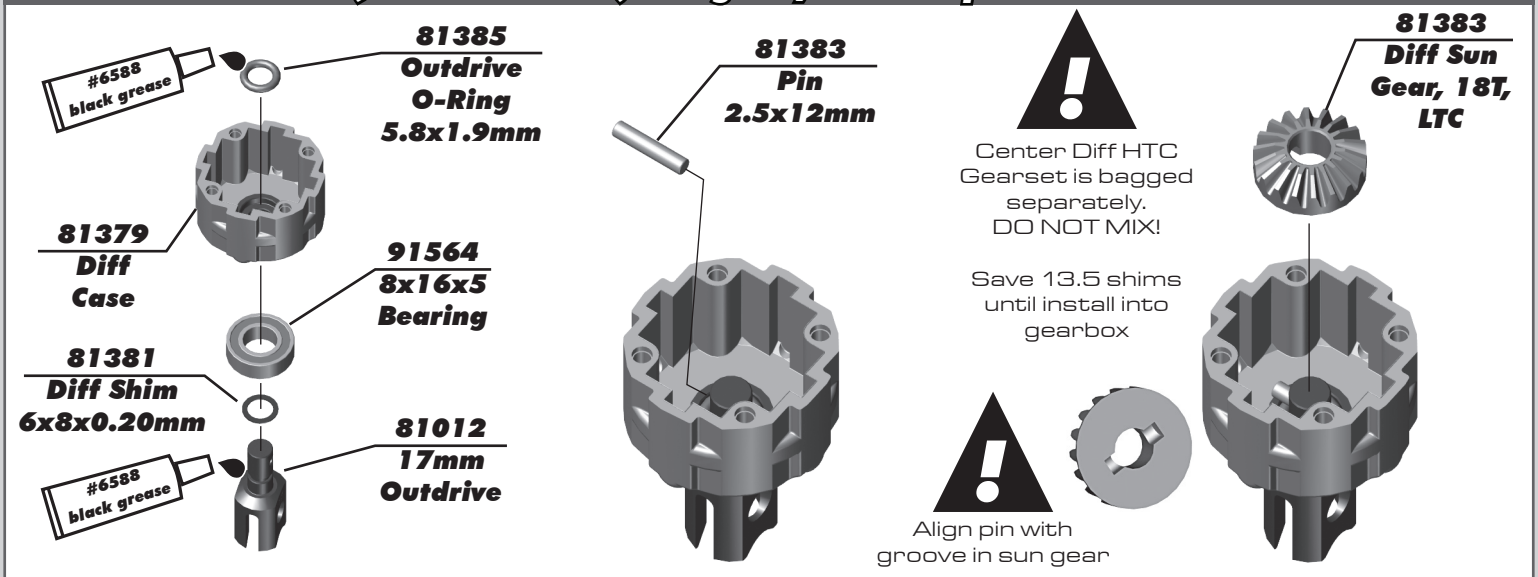
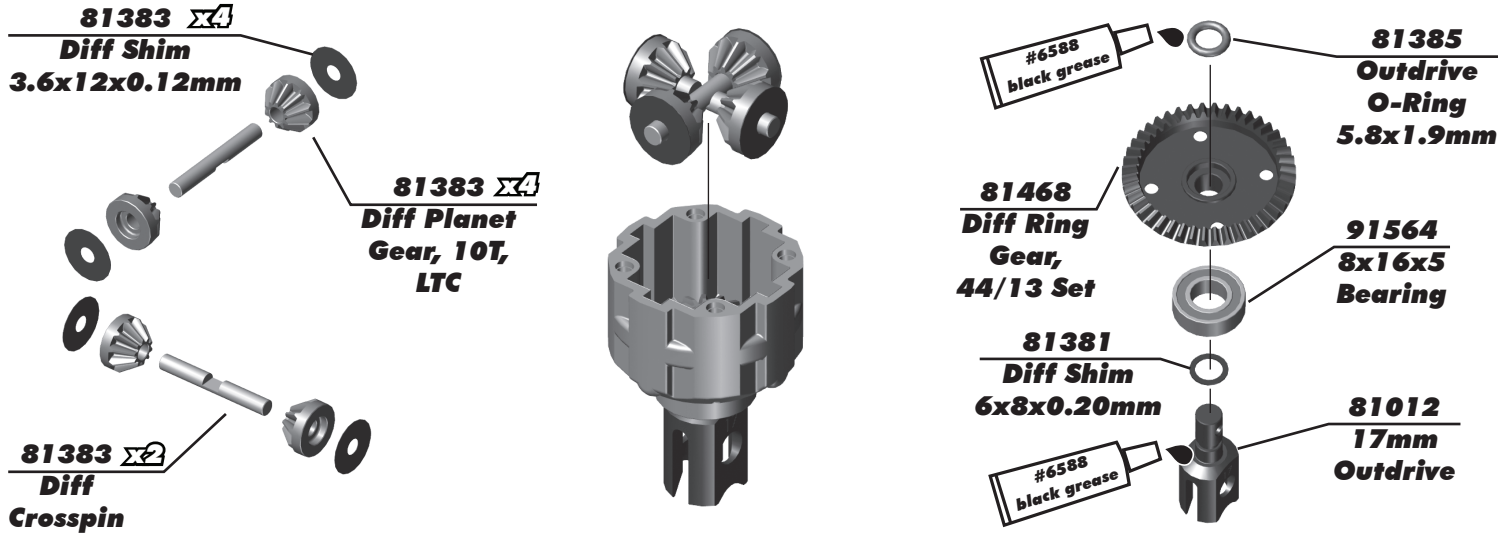
http://www.RC10.com • http://twitter.com/Team_Associated • http://www.instagram.com/teamassociatedrc/ • http://www.facebook.com/TeamAssociated/

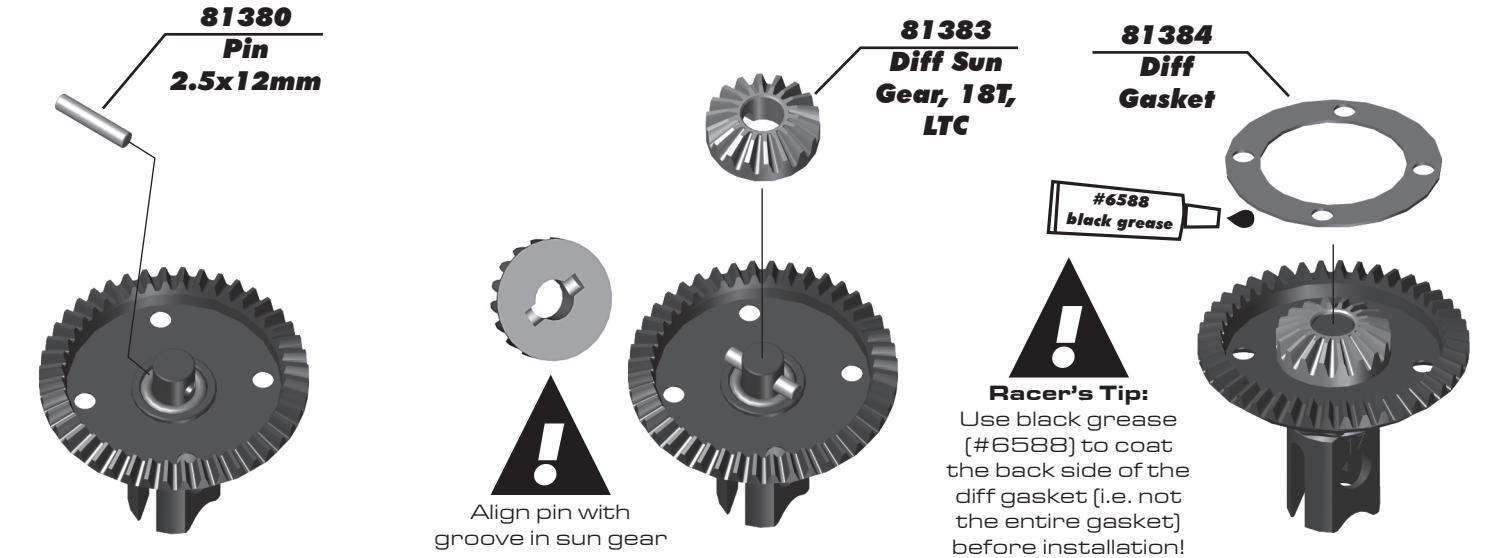
:: Differential Build (Front and Rear) - Bag 1.1, 1.2 - Step 1



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

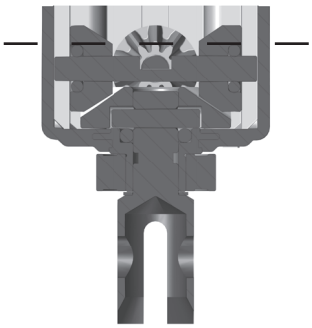


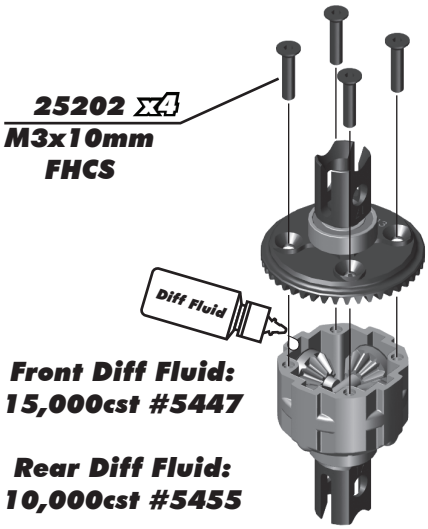
:: Differential Build (Front and Rear) - Bag 1.1, 1.2 - Step 3



:: 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.

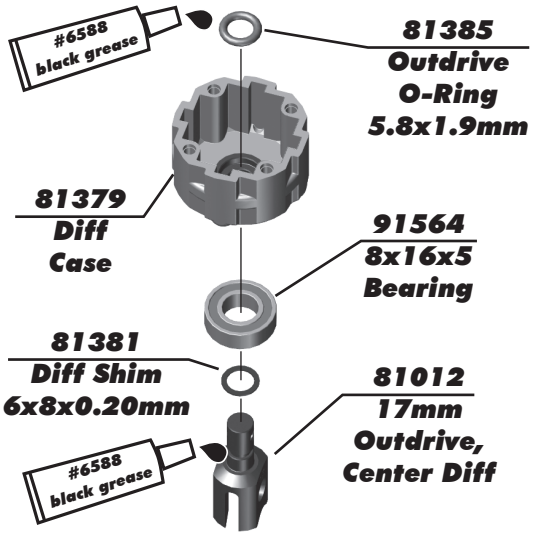


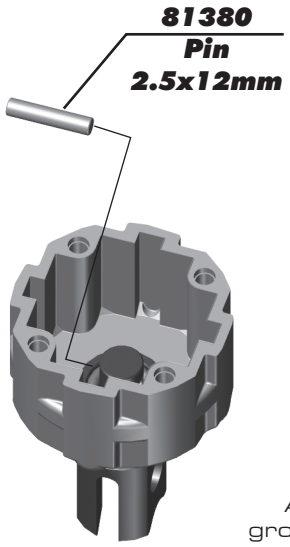


Front Diff Fluid:
15,000cst #5447

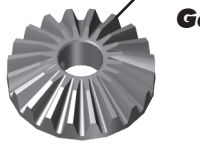
Rear Diff Fluid:
10,000cst #5455

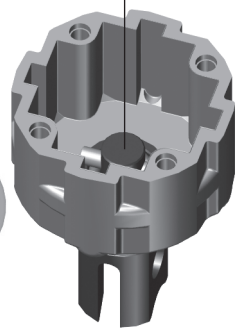
:: Differential Build (Center) - Bag 1.1, 1.2 - Step 5





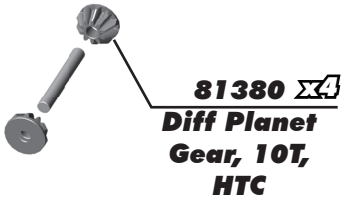
Use HTC Gearset for center differential!

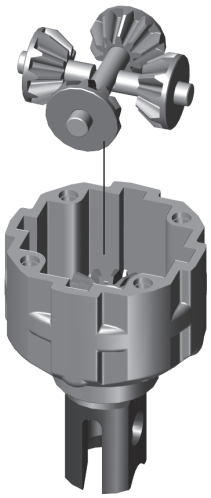


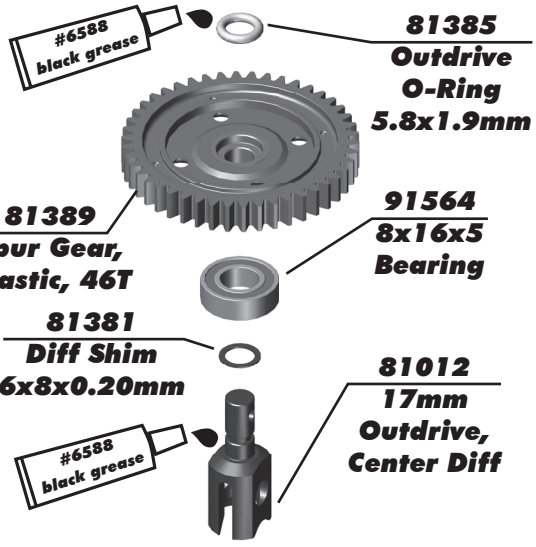


Align pin with groove in sun gear

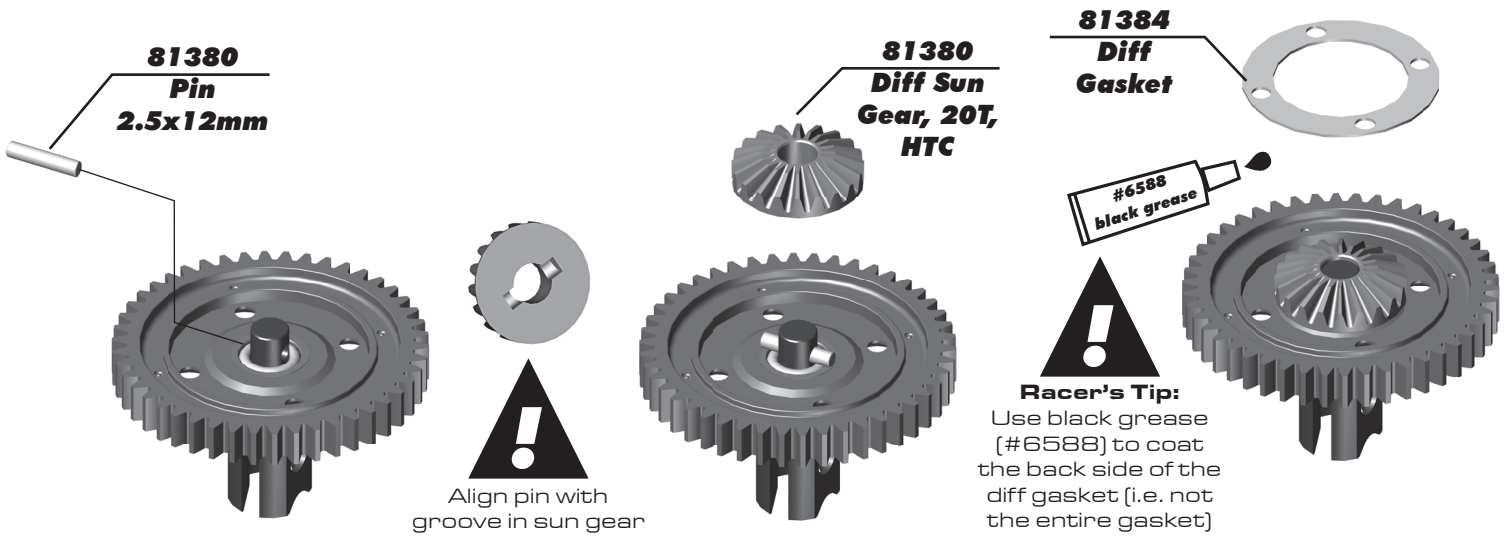
:: Differential Build (Center) - Bag 1.1, 1.2 - Step 6



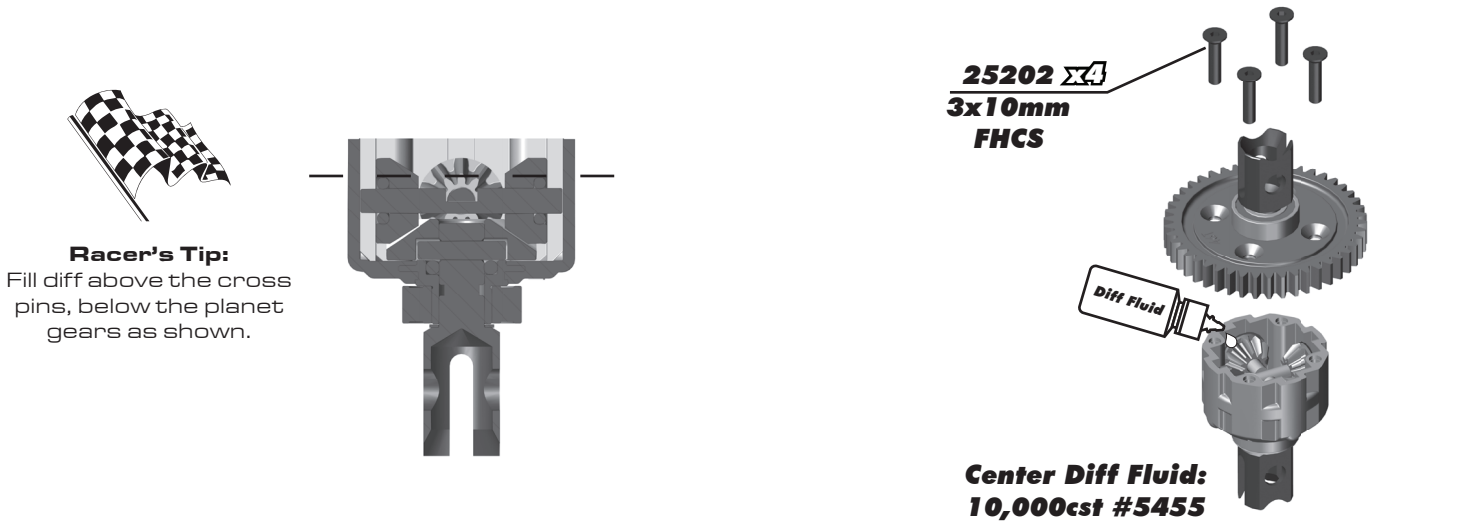




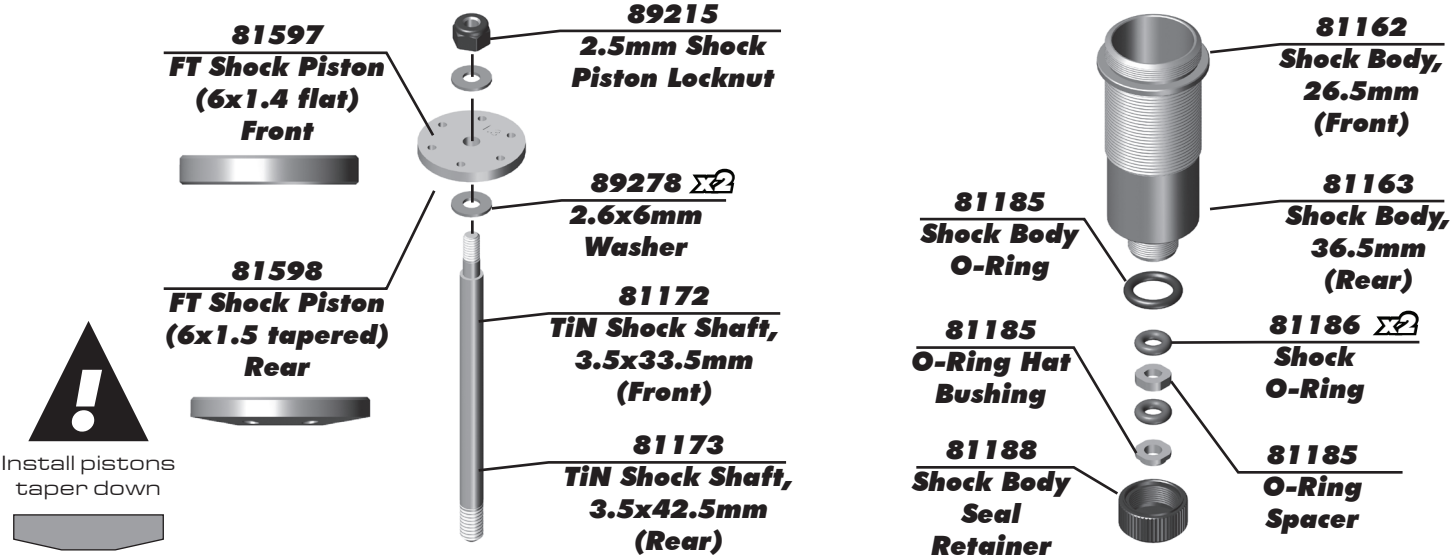
:: Differential Build (Center) - Bag 1.1, 1.2 - Step 7



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



:: Shocks Build - Bag 2.1 - Step 1



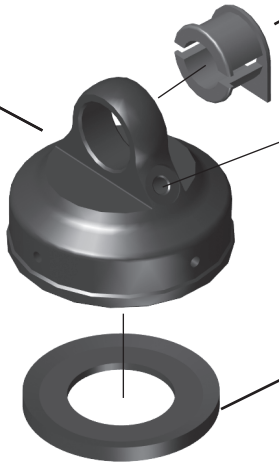
:: Shocks Build - Bag 2.1 - Step 2

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

81190
Shock Boots

81562
Rod End Ball

81621
Shock Rod End
Front: 0
Rear: +4



81512
Shock Cap Insert

81452
RC8B3.2
Shock Cap

91492
2x4mm BHCS

91492
Gasket

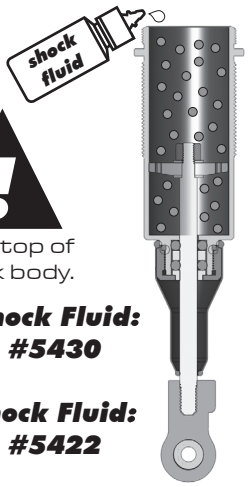
2

81184
Emulsion Seal

1

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

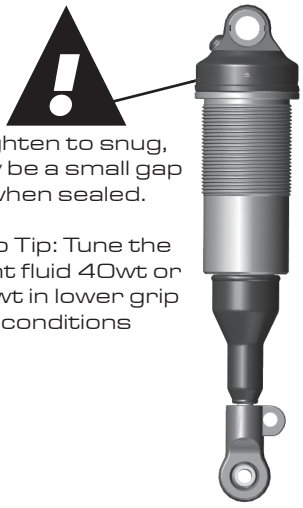
:: Shocks Build - Bag 2.1 - Step 3



Fill to top of shock body.

Front Shock Fluid:
45wt #5430

Rear Shock Fluid:
30wt #5422



Tighten to snug, may be a small gap when sealed.

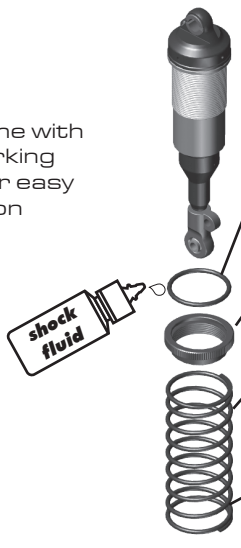
Pro Tip: Tune the front fluid 40wt or 35wt in lower grip conditions

Bleed Procedure:
Remove bleeder screw
Tilt shock so bleed hole is the highest point and slowly compress the shaft.

Stop about 3mm from full compressed, install the screw, and check that the shock is not pressurized.
If so, bleed out a small amount more.

:: Shocks Build - Bag 2.1 - Step 4

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

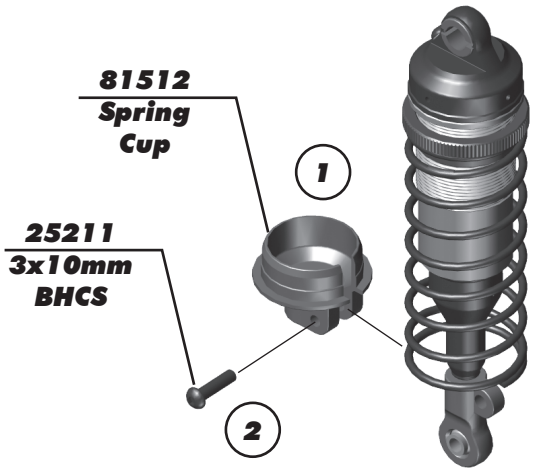


81221
Spring Collar O-Ring, 20mm

81221
Spring Collar, 20mm

81223
V2 Front Spring, White (5.10lb/in)
L70, 9.25T, 1.6D

81233
V2 Rear Spring, Pink (3.70lb/in)
L86, 12.00T, 1.6D



81512
Spring Cup

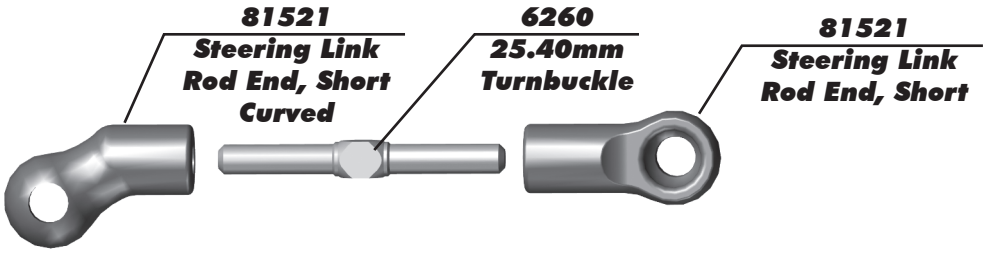
1

25211
3x10mm BHCS

2

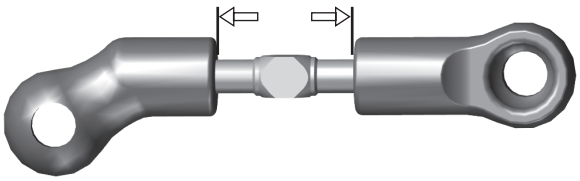
:: Turnbuckles Build - Bag 3.1- Step 1

Steering Servo Turnbuckle



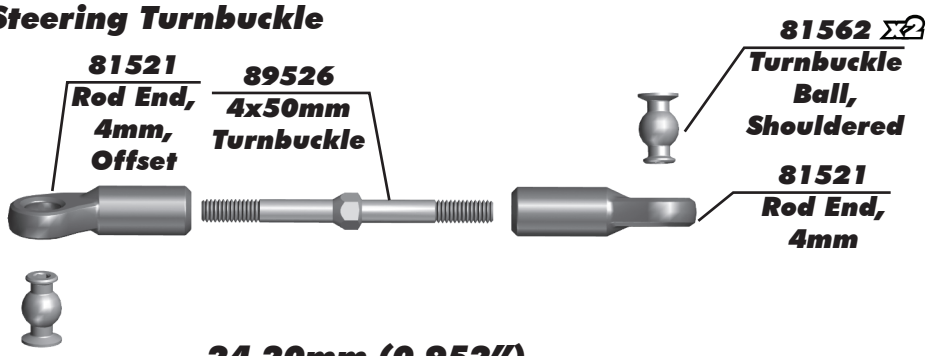
Set aside until page 22

11.50mm (0.45")



:: Turnbuckles Build - Bag 3.1 - Step 2

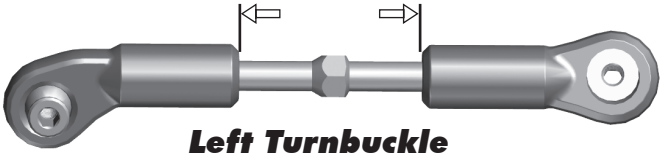
Steering Turnbuckle



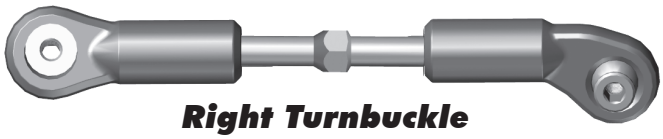
Note the direction of turnbuckle ball

Set aside until page 15

24.20mm (0.952")



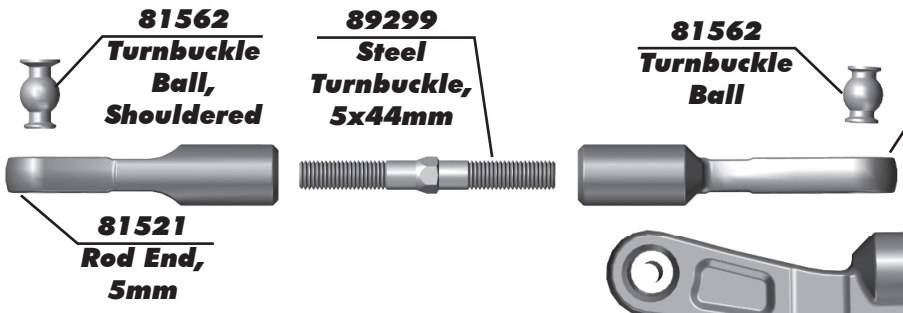
Left Turnbuckle



Right Turnbuckle

:: Turnbuckles Build - Bag 3.1 - Step 3

Rear Hub Turnbuckle



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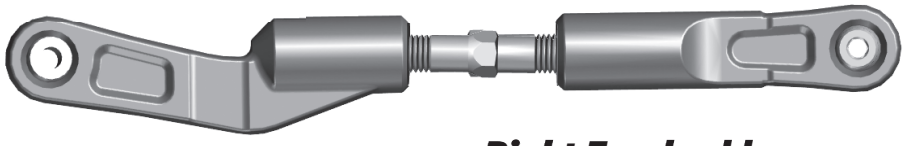
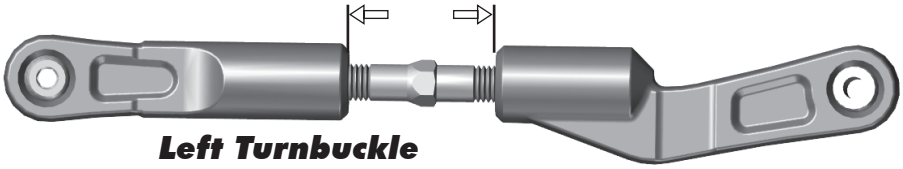


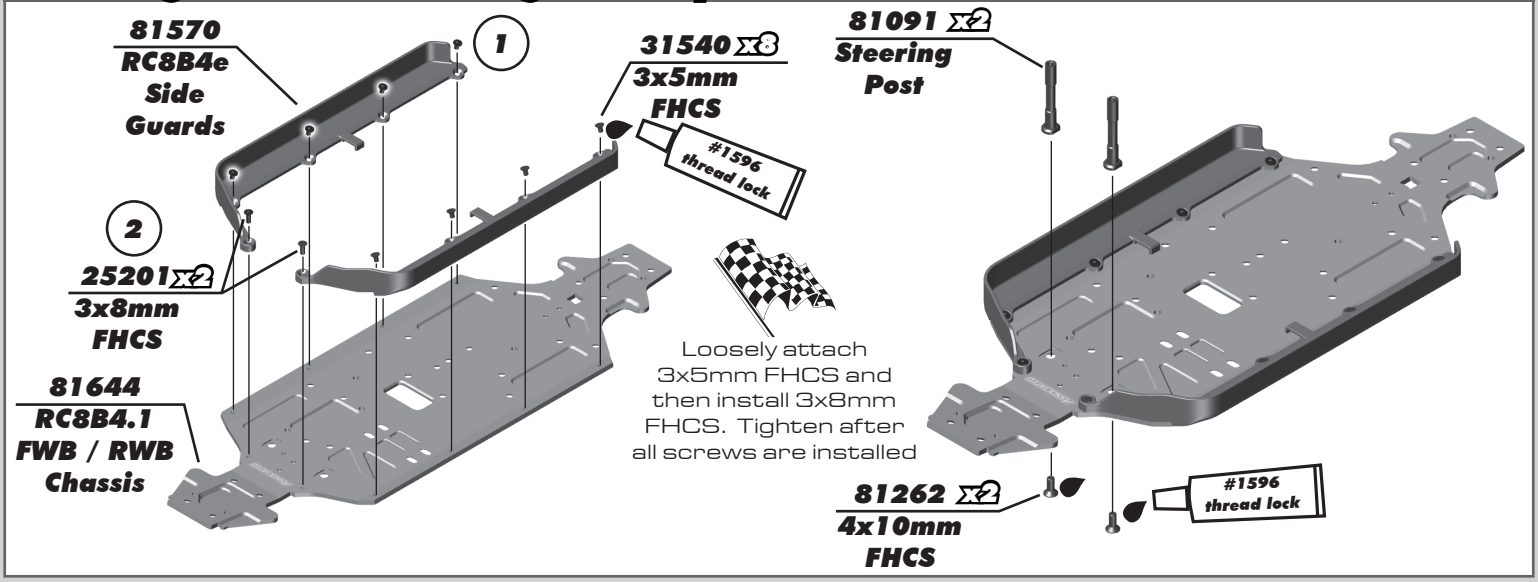
Right Turnbuckle

19.70mm (0.775")

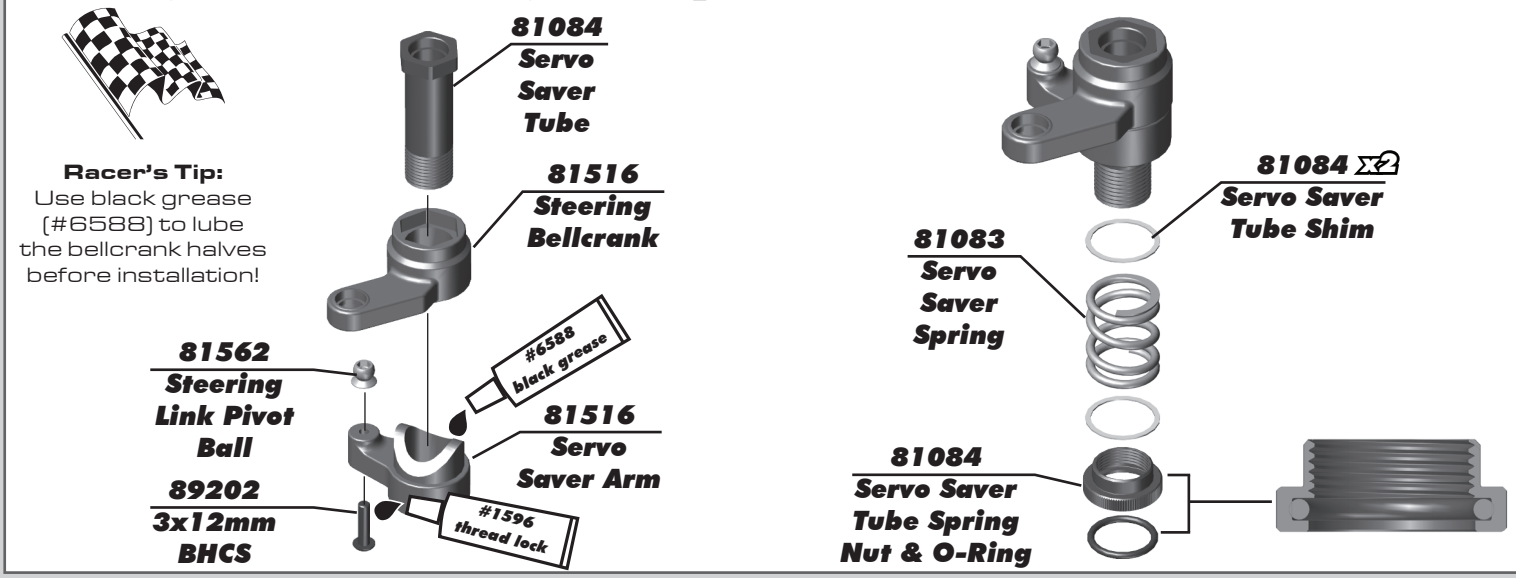


Left Turnbuckle

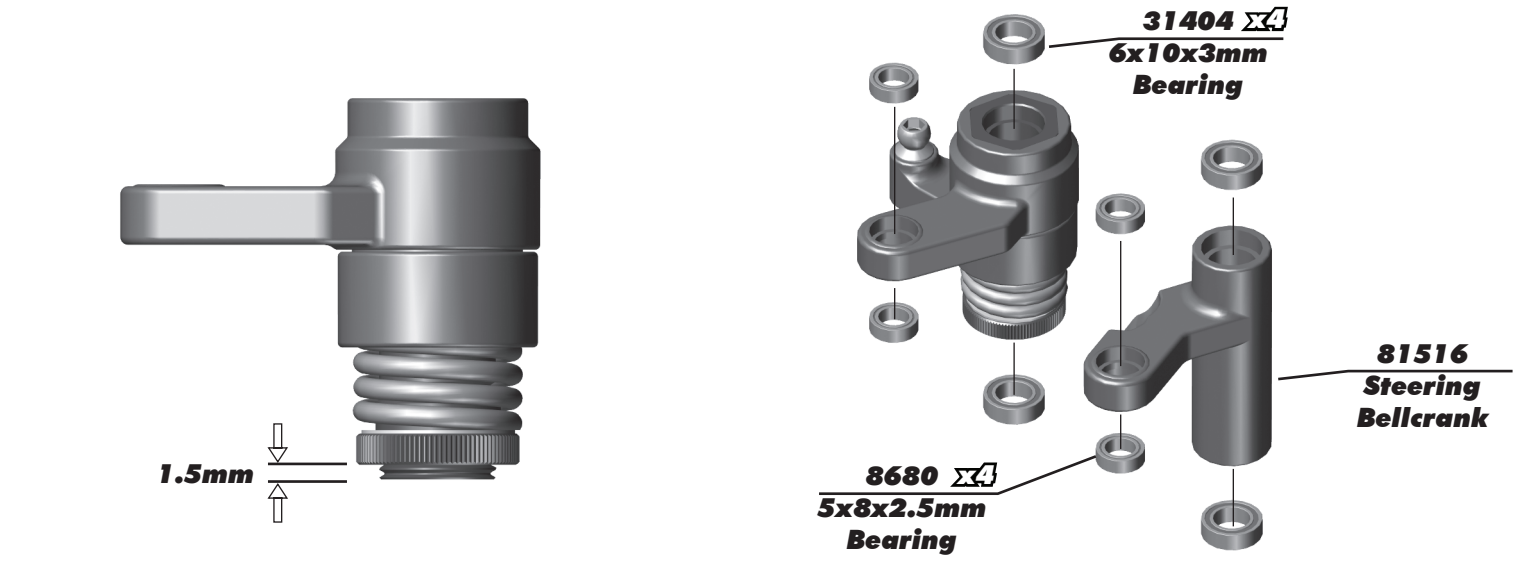
:: Steering / Chassis Build - Bag 4.1 - Step 1



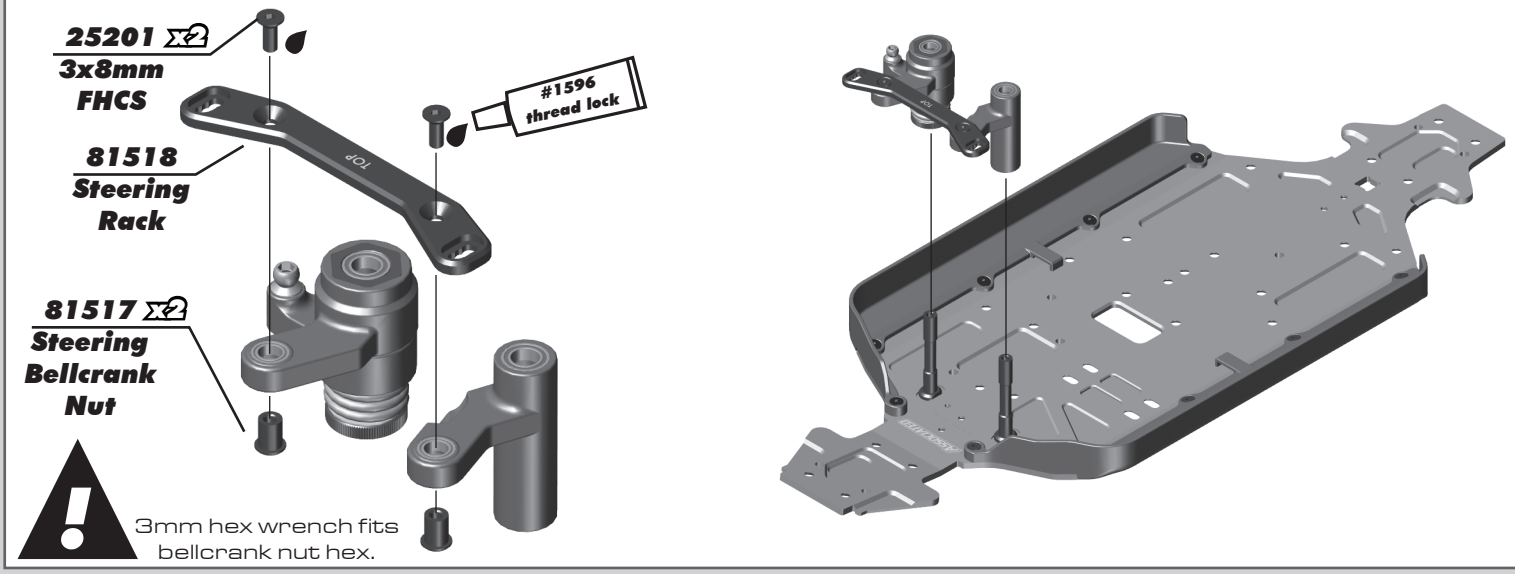
:: Steering / Chassis Build - Bag 4.1 - Step 2



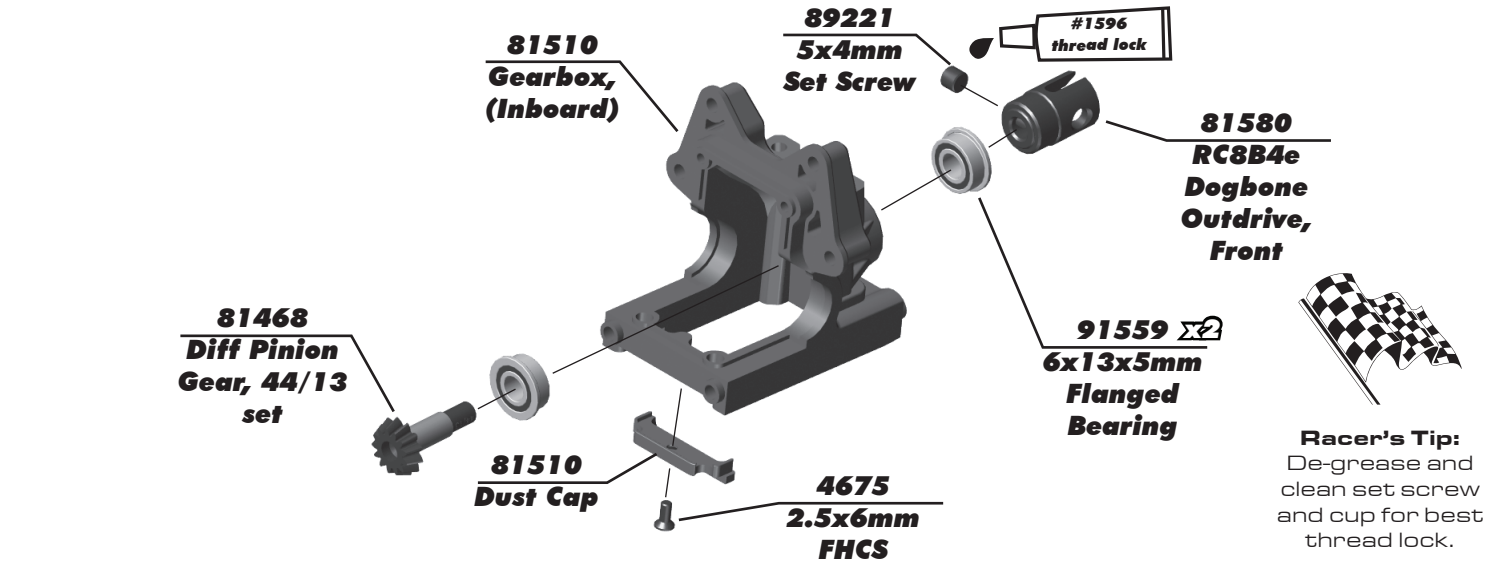
:: Steering / Chassis Build - Bag 4.1 - Step 3



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

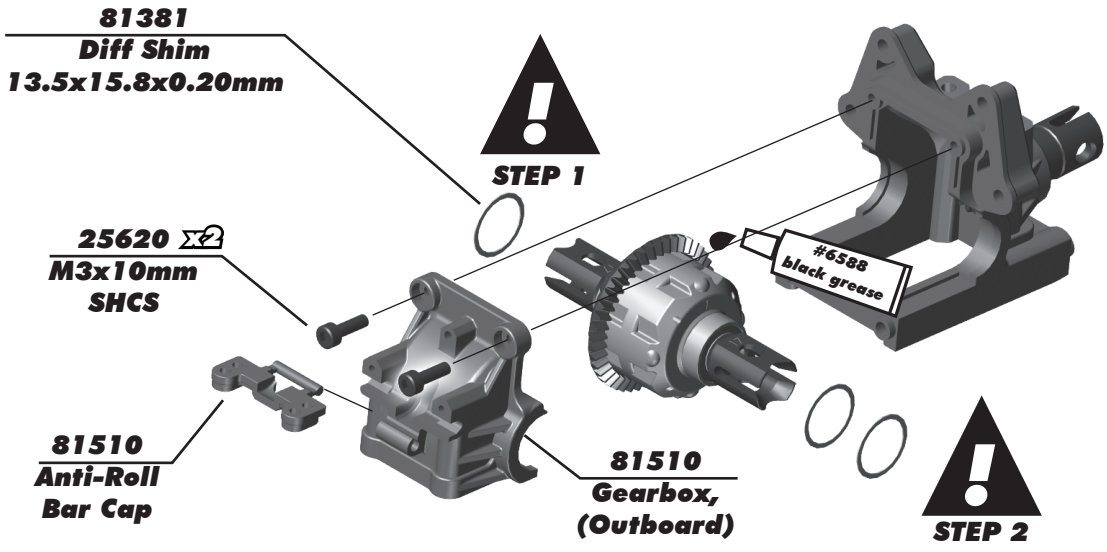


:: Front Gearbox Build - Bag 5.1, 5.2, 5.3 - Step 1



Racer's Tip:
De-grease and clean set screw and cup for best thread lock.

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

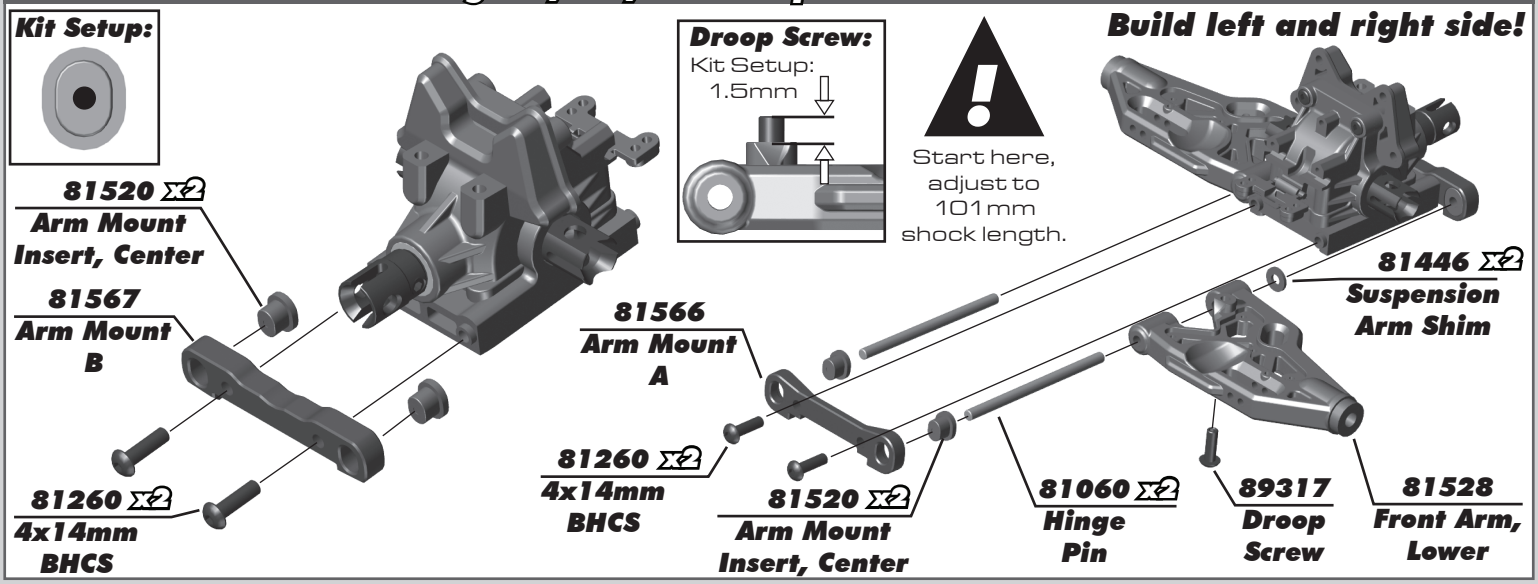


Step 1:
Add shims on the ring gear side to TIGHTEN gear mesh. Subtract shims on this side to LOOSEN gear mesh.
NOTE:
Start 1 x Thick 0.2mm

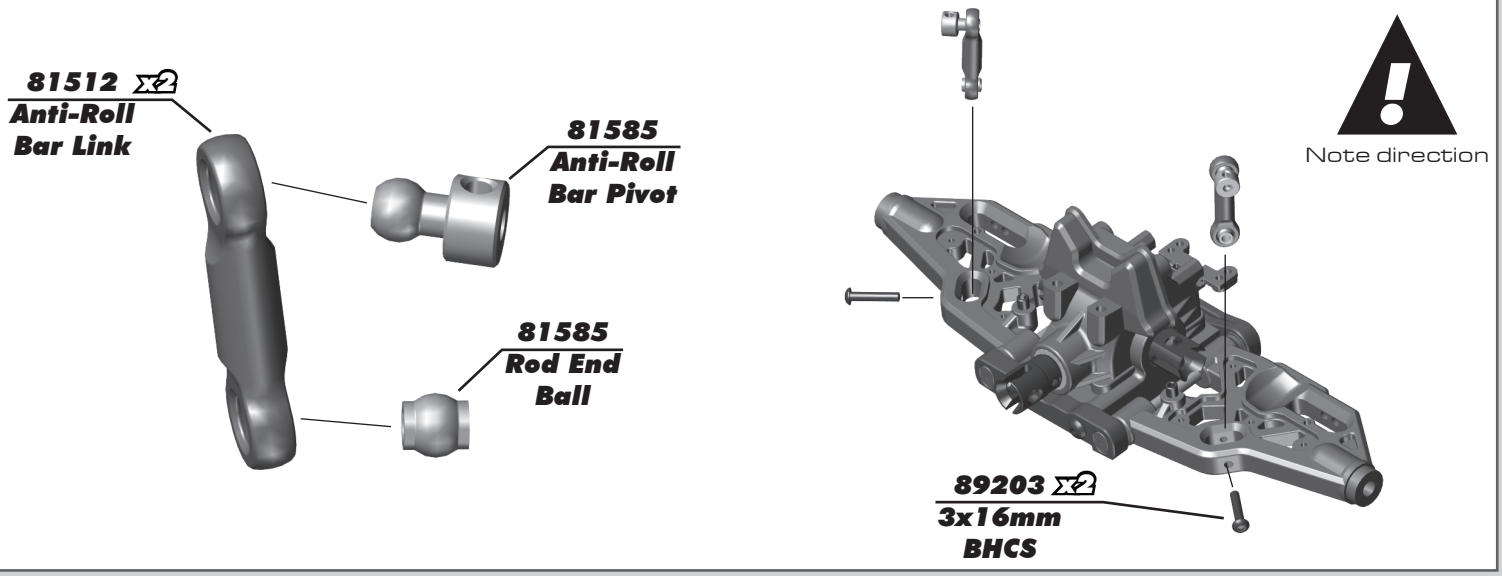
Step 2:
Add or subtract shims here to finalize diff side to side play once gear mesh is set from Step 1. Recommended diff "side-to-side" clearance (gearbox assembly) 0.10 - 0.25mm. Start with 1 x 0.1 mm.

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

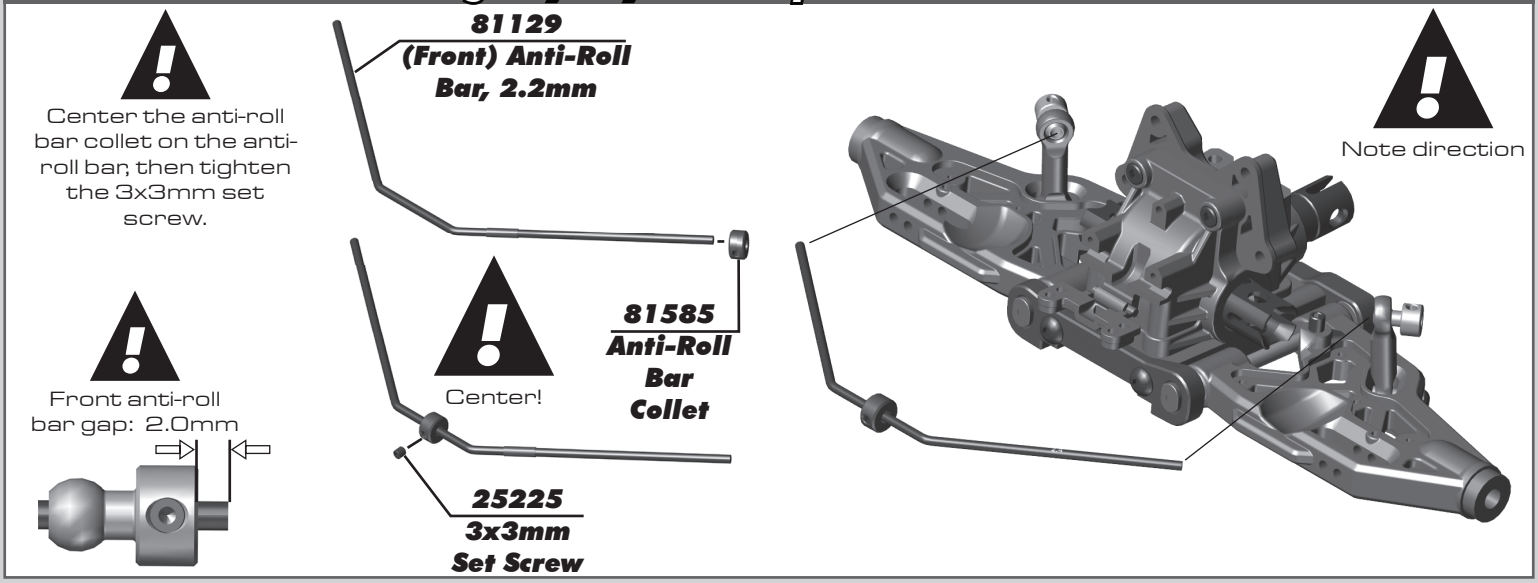
:: Front Gearbox Build - Bag 5.1, 5.2, 5.3 - Step 3



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

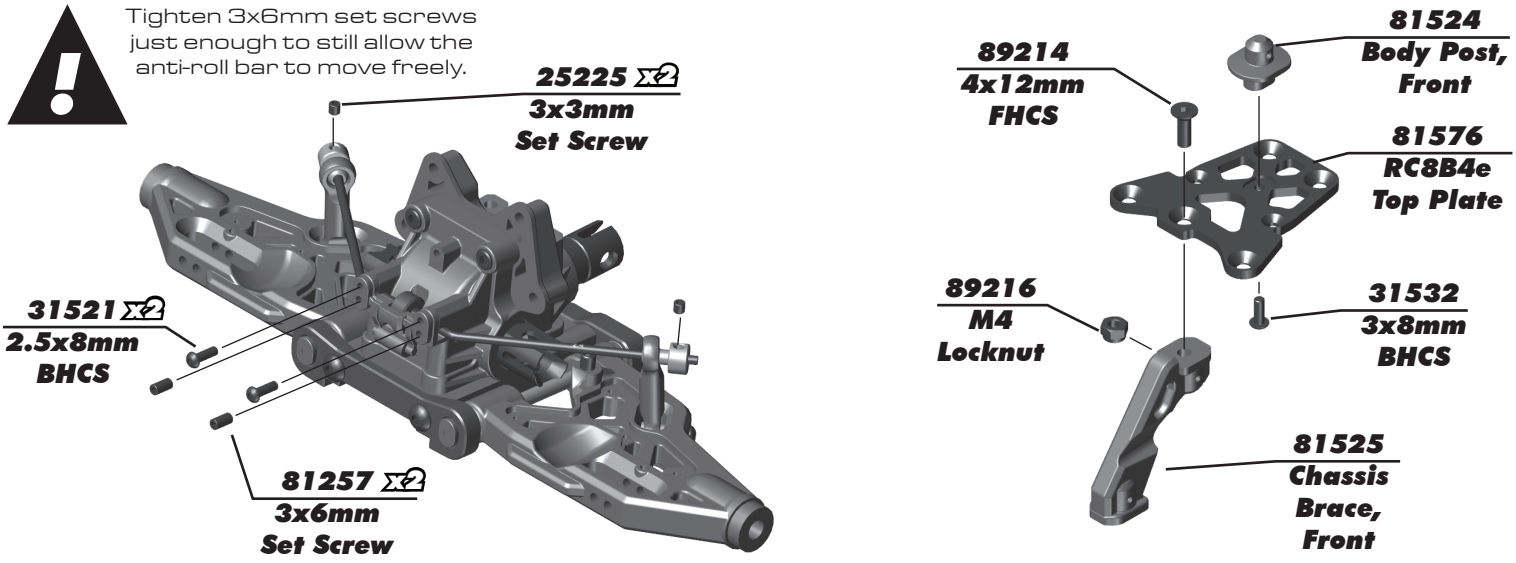


:: Front Gearbox Build - Bag 5.1, 5.2, 5.3 - Step 5

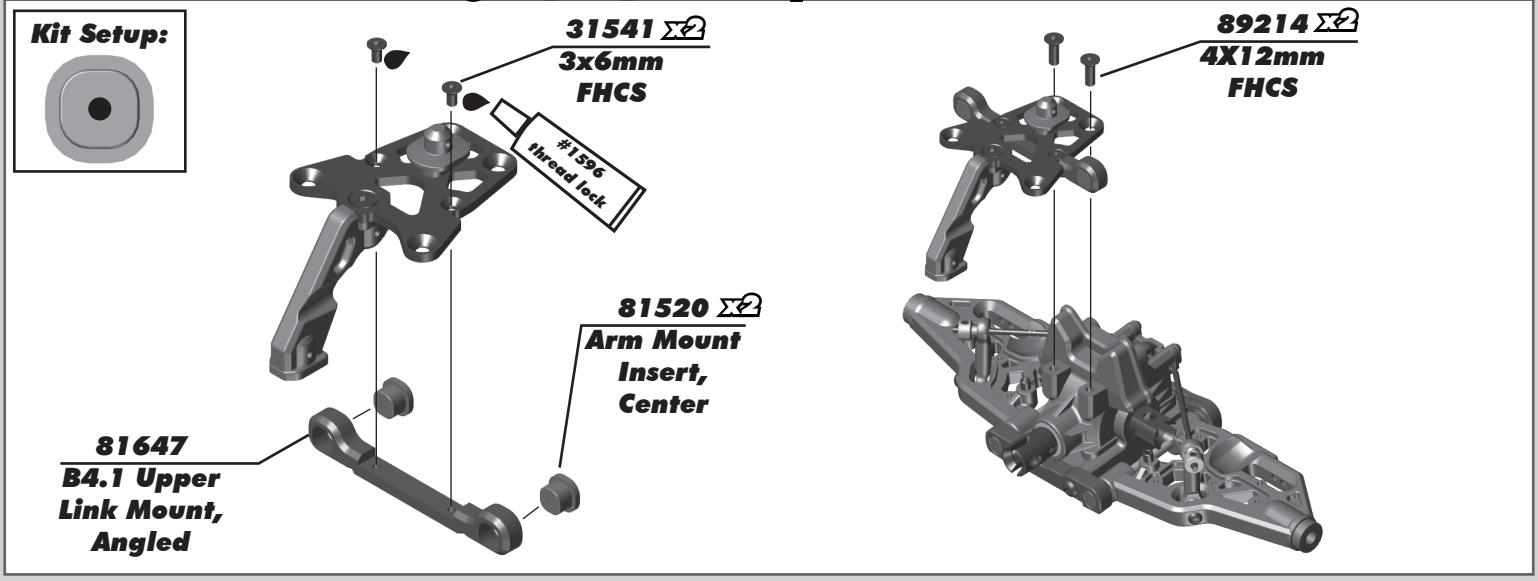


:: Front Gearbox Build - Bag 5.1, 5.2, 5.3 - Step 6

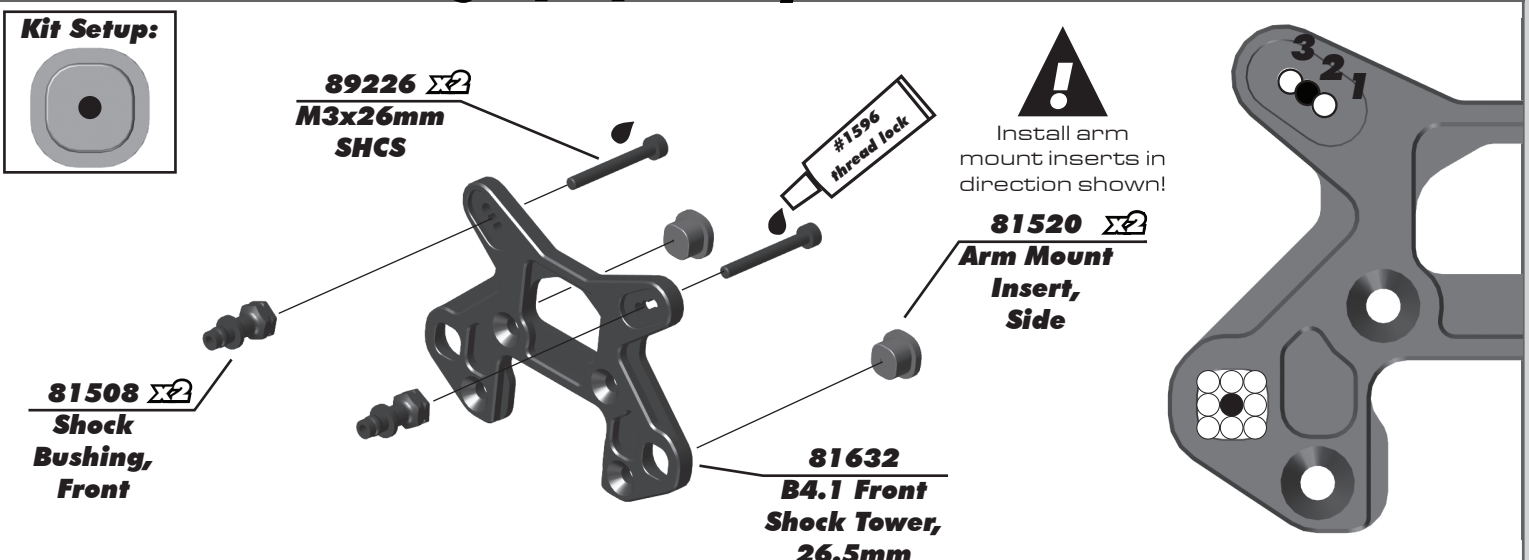
Tighten 3x6mm set screws just enough to still allow the anti-roll bar to move freely.



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

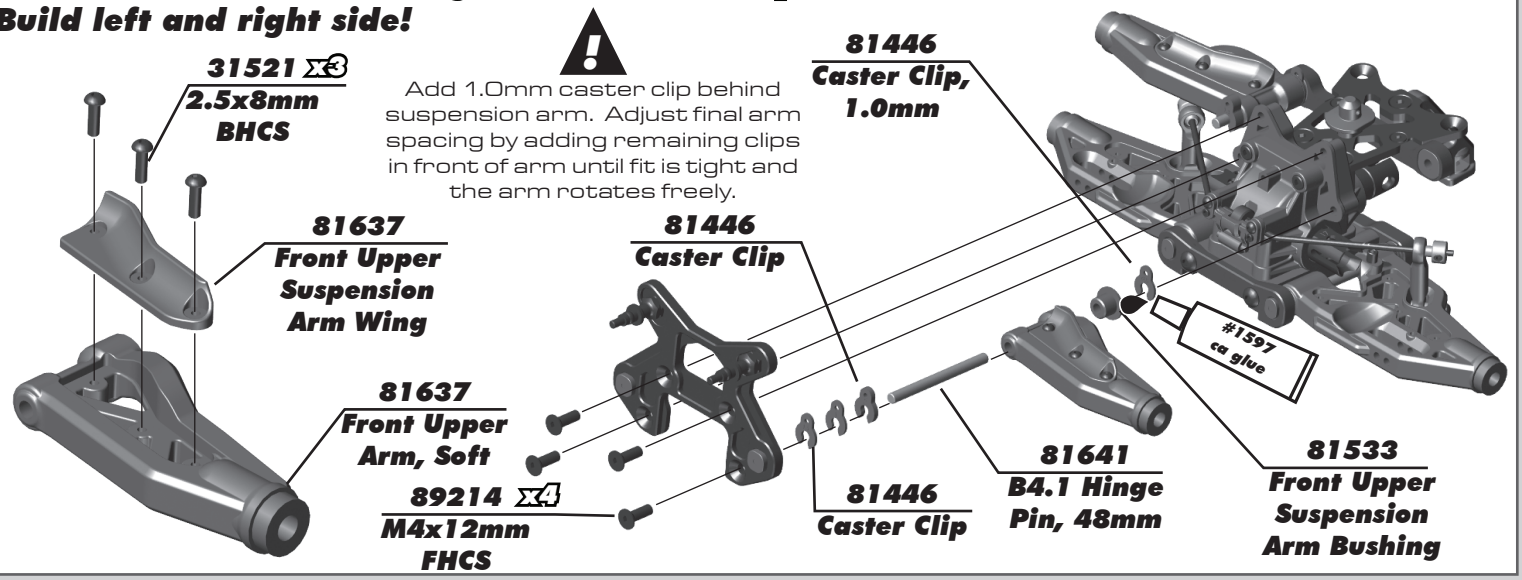


:: Front Gearbox Build - Bag 5.1, 5.2, 5.3 - Step 8



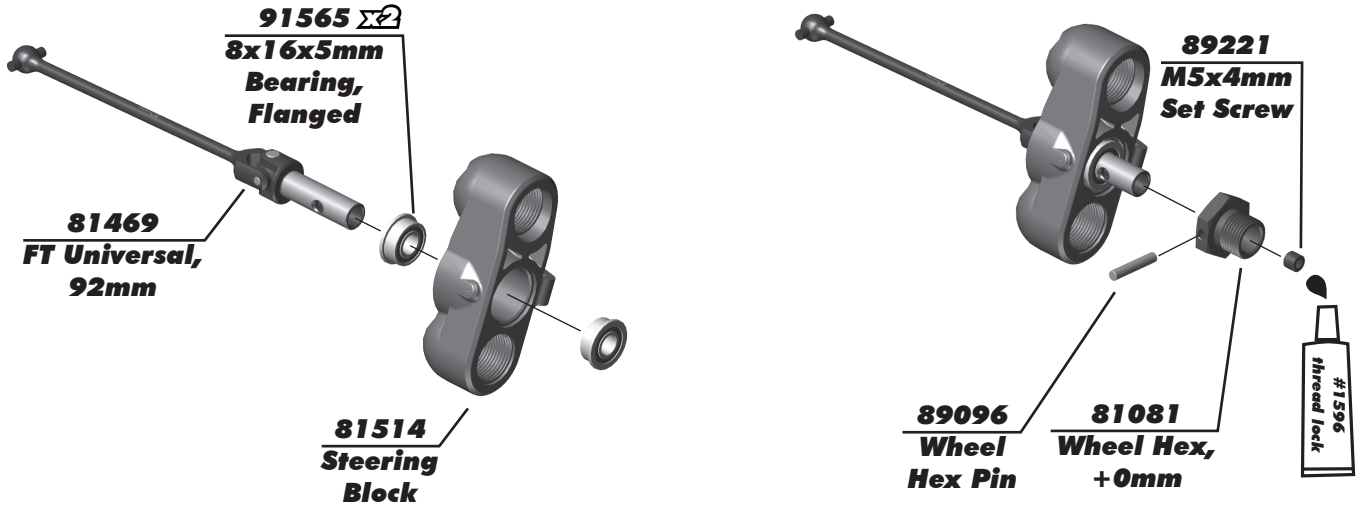
:: Front Gearbox Build - Bag 5.1, 5.2, 5.3 - Step 9

Build left and right side!



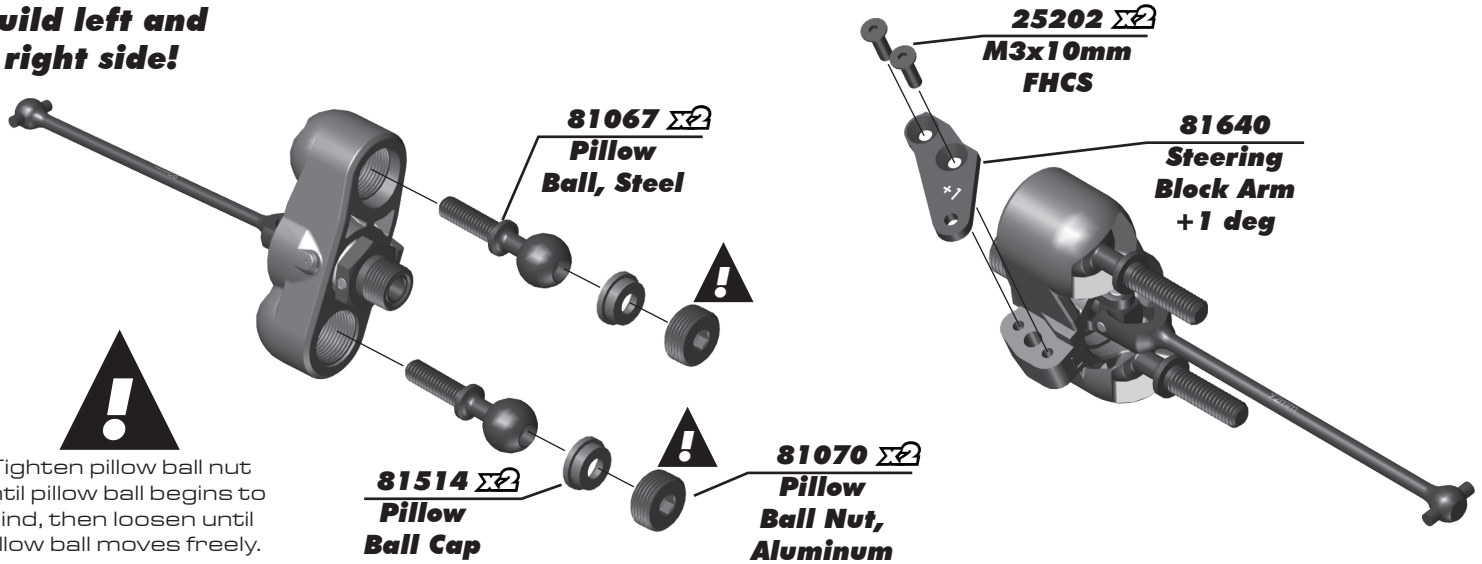
:: Steering Blocks Build - Bag 6.1 - Step 1

Build left and right side!

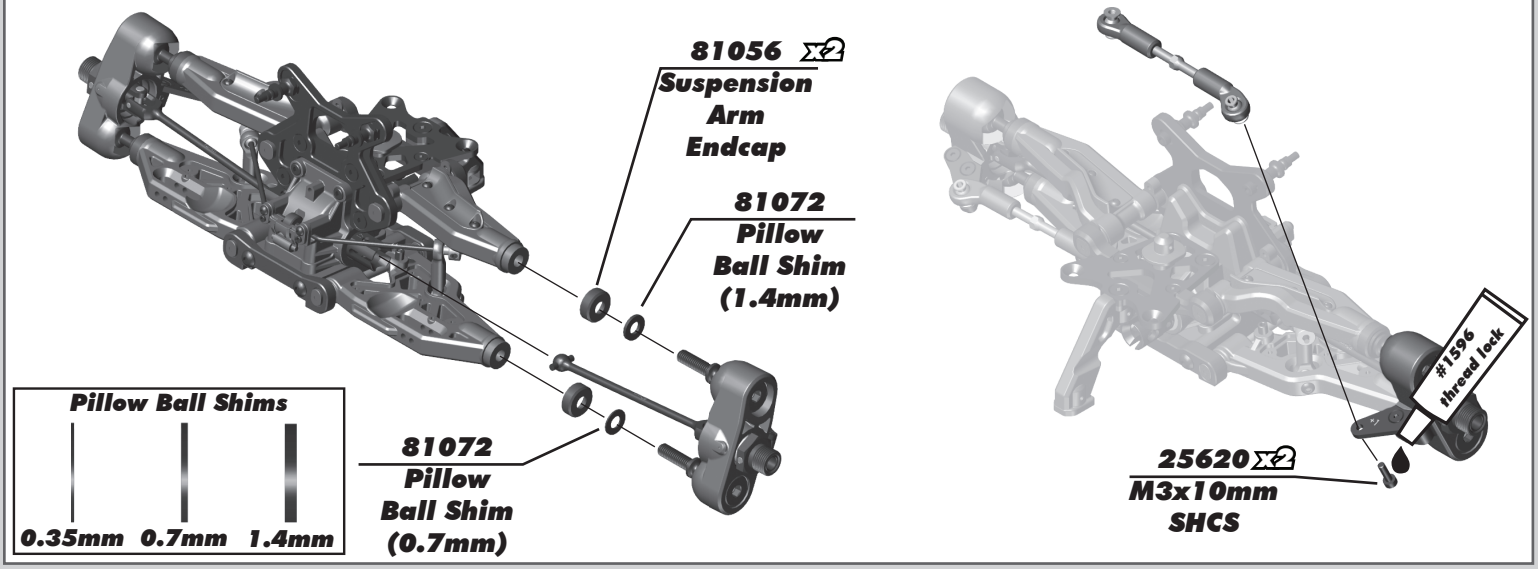


:: Steering Blocks Build - Bag 6.1 - Step 2

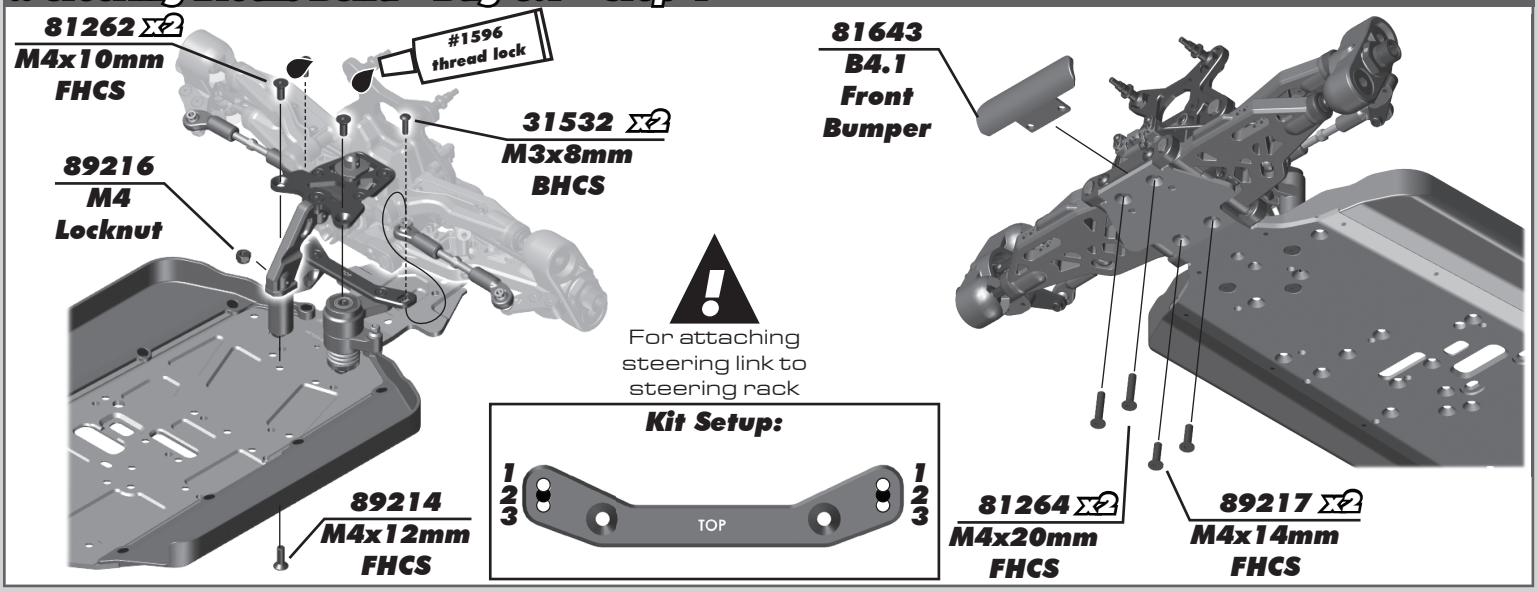
Build left and right side!



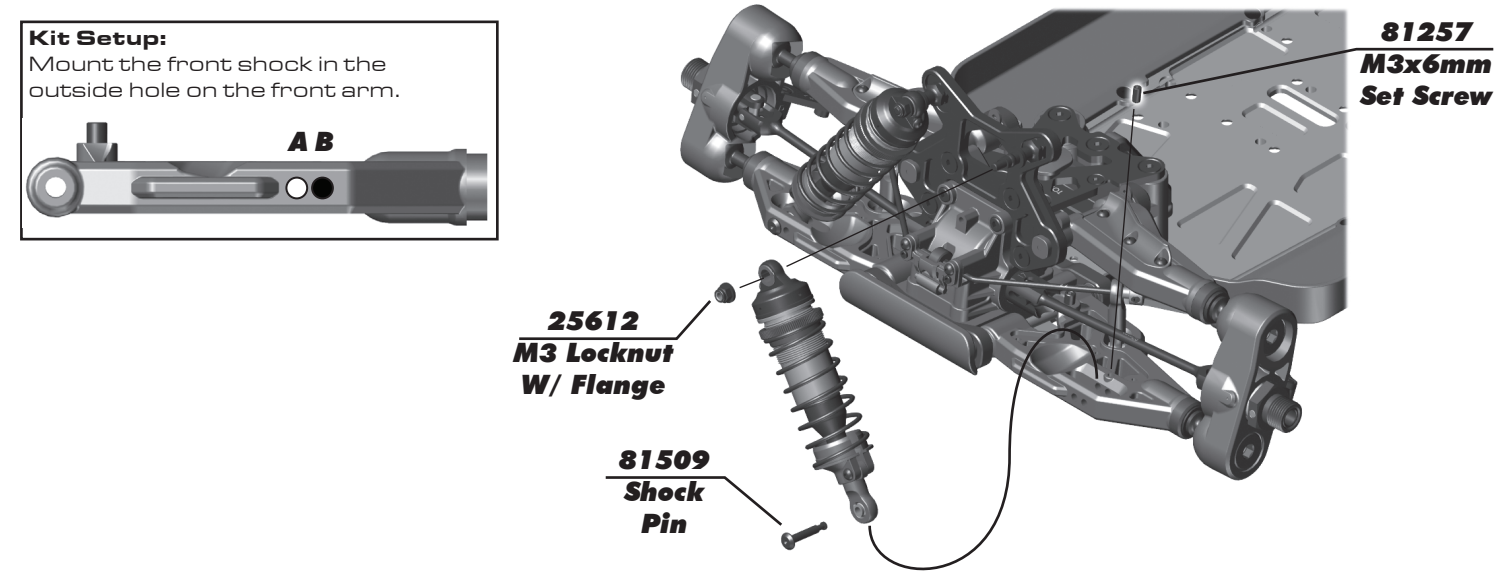
:: Steering Blocks Build - Bag 6.1 - Step 3



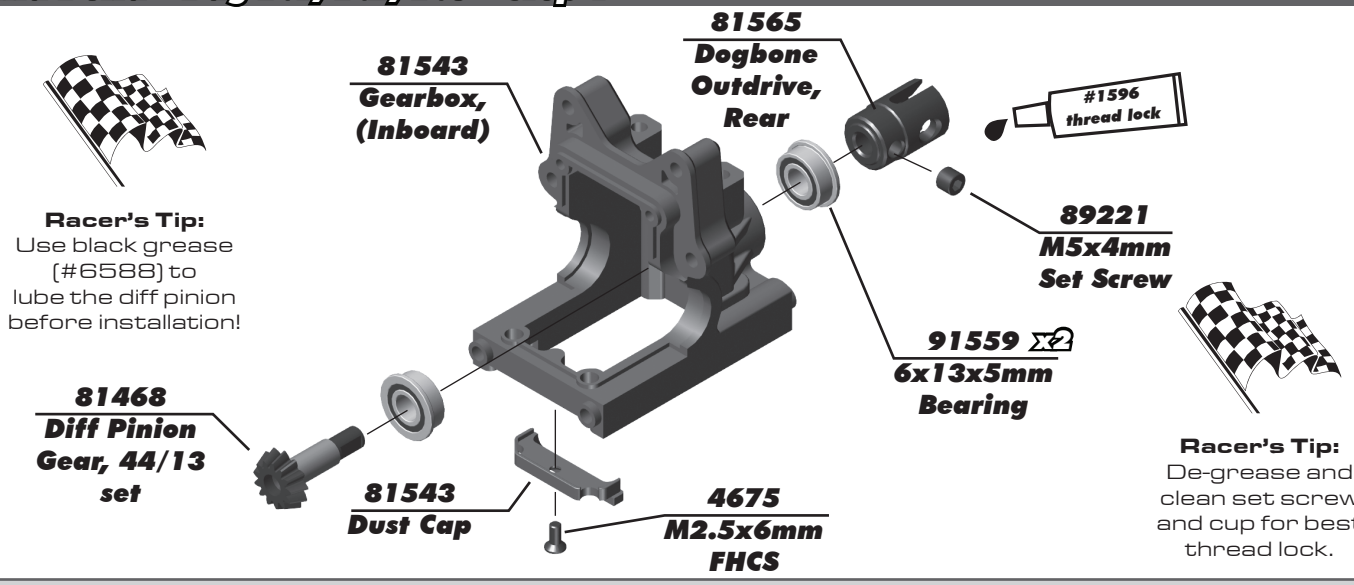
:: Steering Blocks Build - Bag 6.1 - Step 4



:: Steering Blocks Build - Bag 6.1 - Step 5



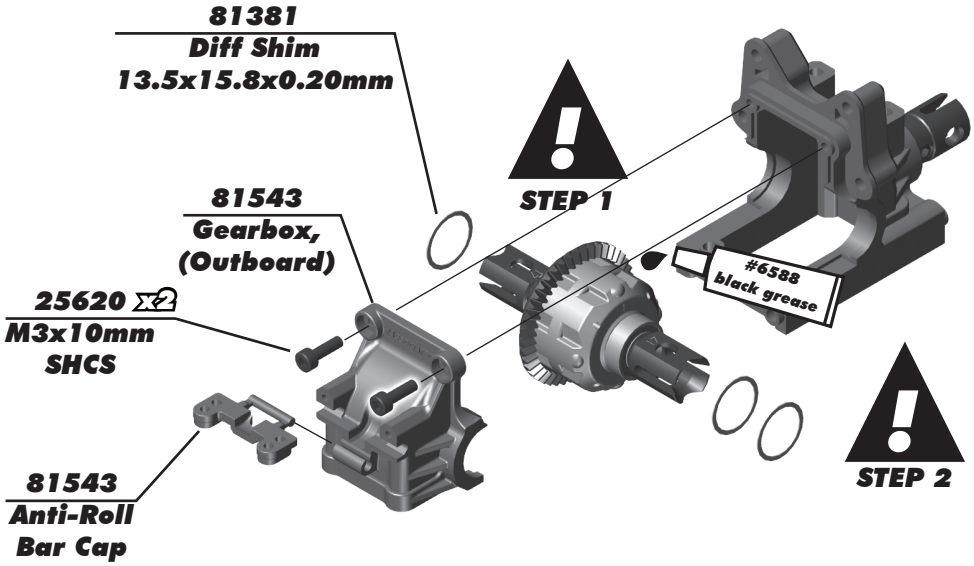
:: Rear End Build - Bag 7.1, 7.2, 7.3 - Step 1



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

Racer's Tip:
De-grease and clean set screw and cup for best thread lock.

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



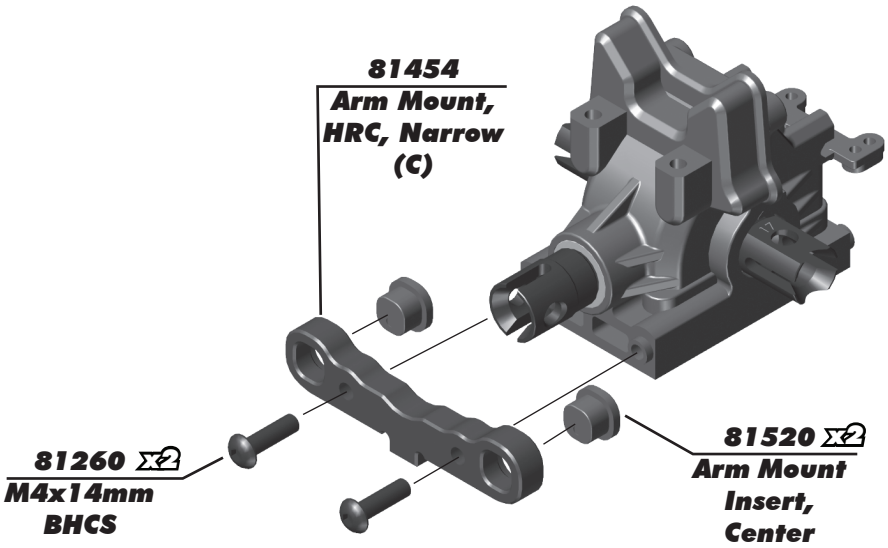
Step 1:
Add shims on the ring gear side to TIGHTEN gear mesh. Subtract shims on this side to LOOSEN gear mesh.
NOTE:
Start 1 x Thick 0.2mm

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.

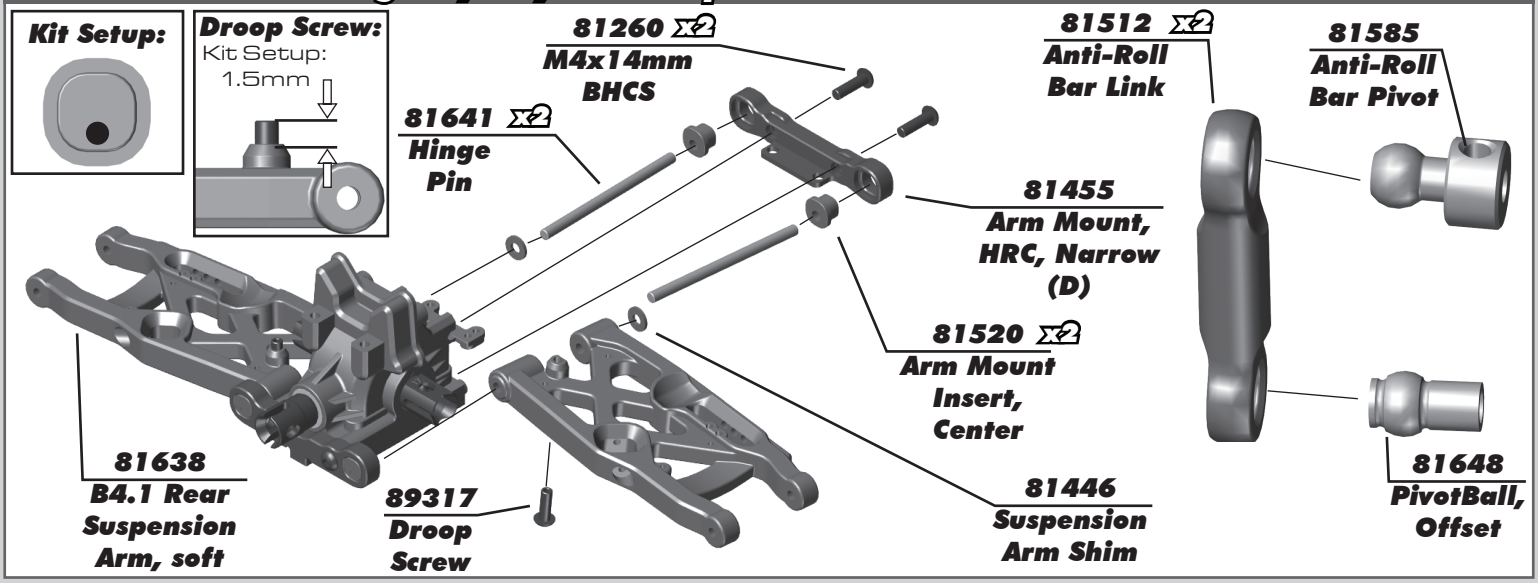
Note:
0.1 mm shim can be used for fine tuning of gear mesh

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

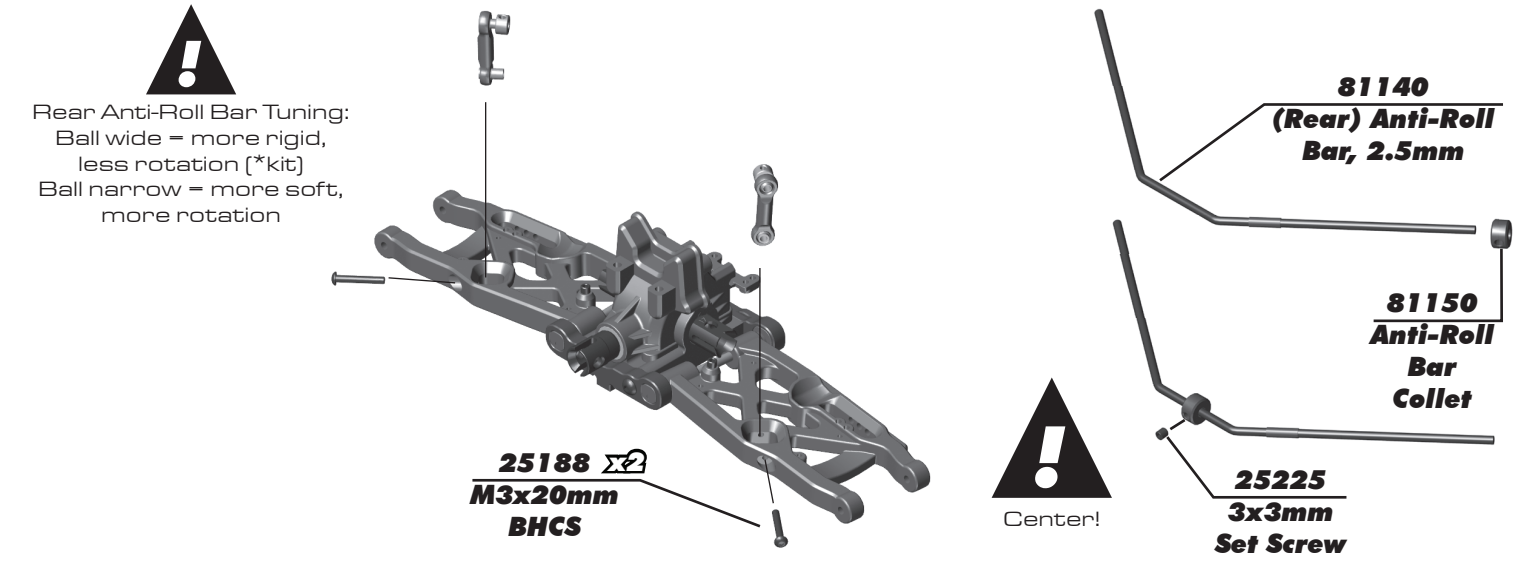
Kit Setup:



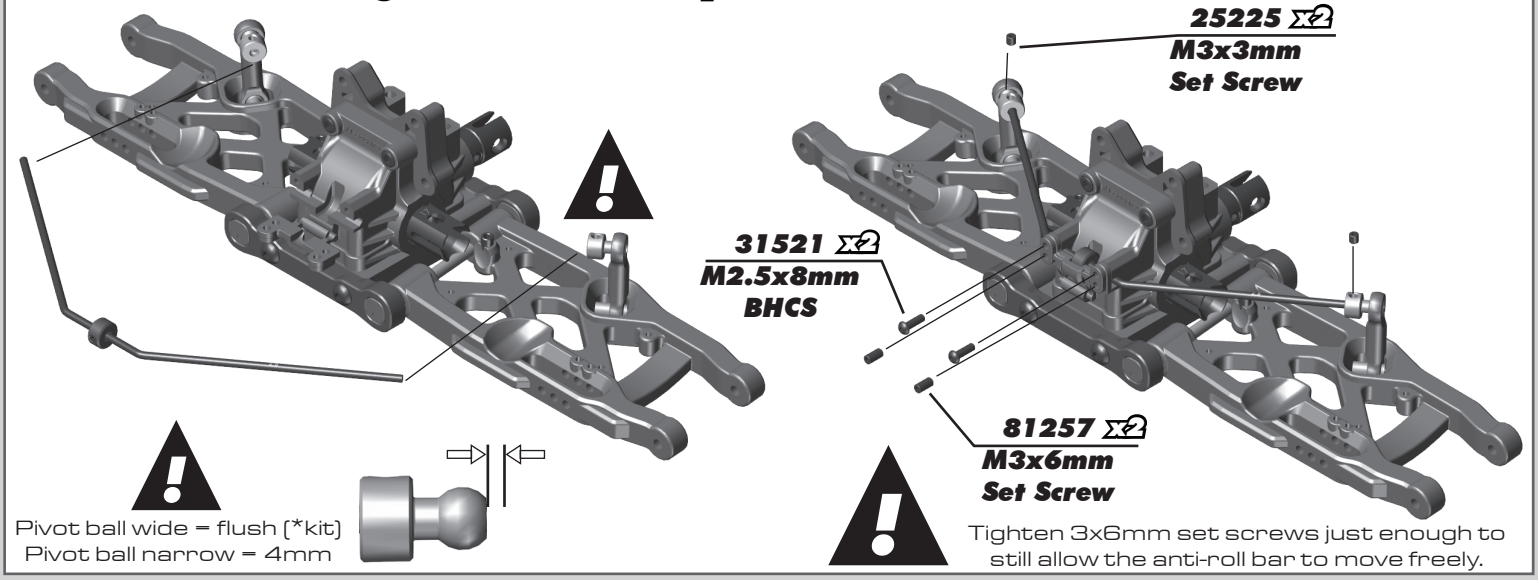
:: Rear End Build - Bag 7.1, 7.2, 7.3 - Step 4



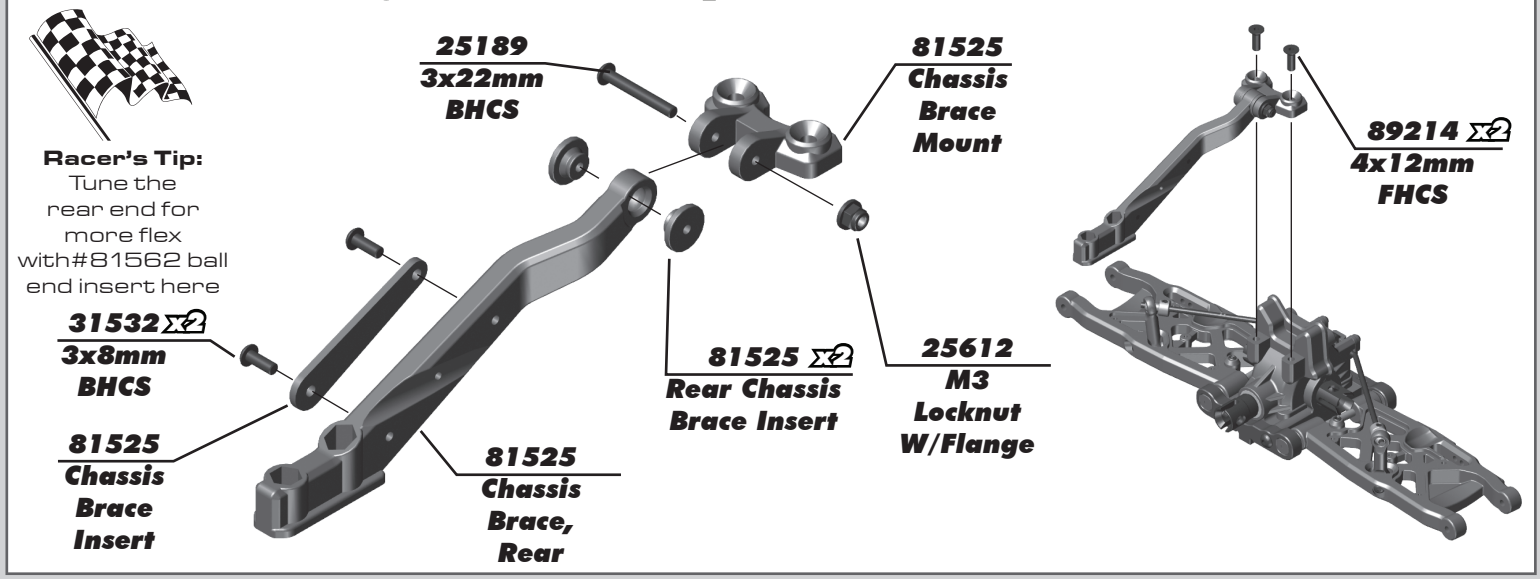
:: Rear End Build - Bag 7.1, 7.2, 7.3 - Step 5



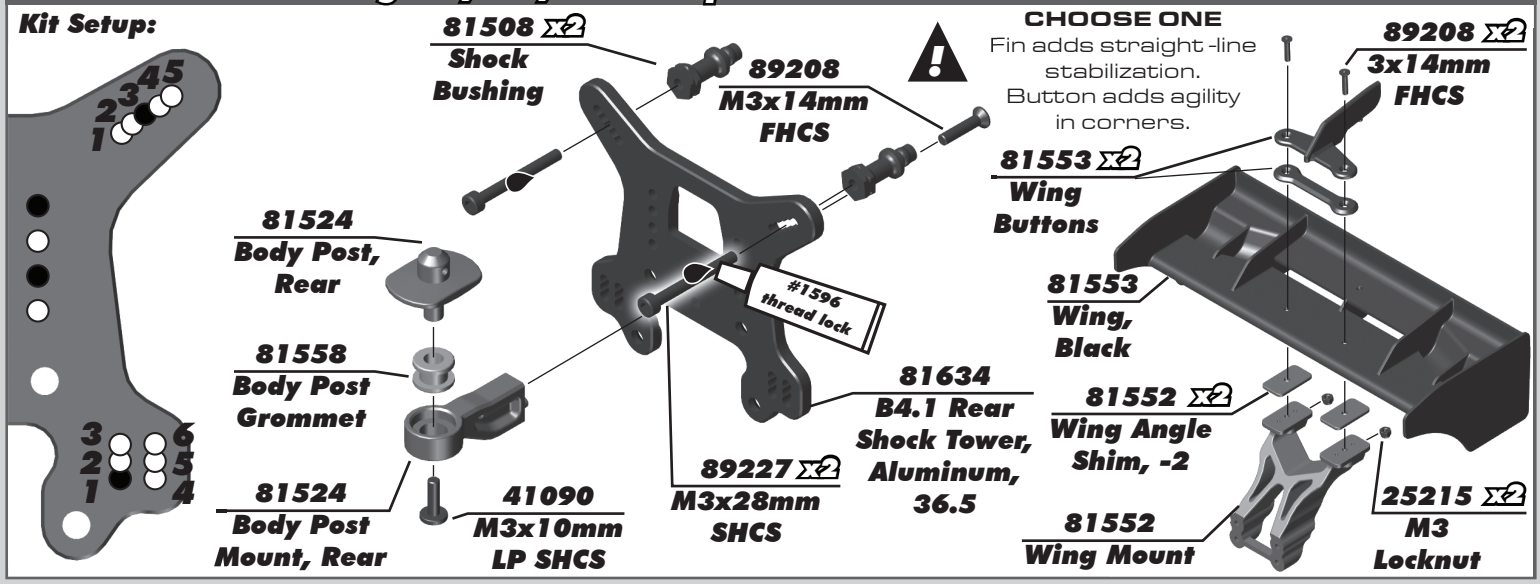
:: Rear End Build - Bag 7.1, 7.2, 7.3 - Step 6



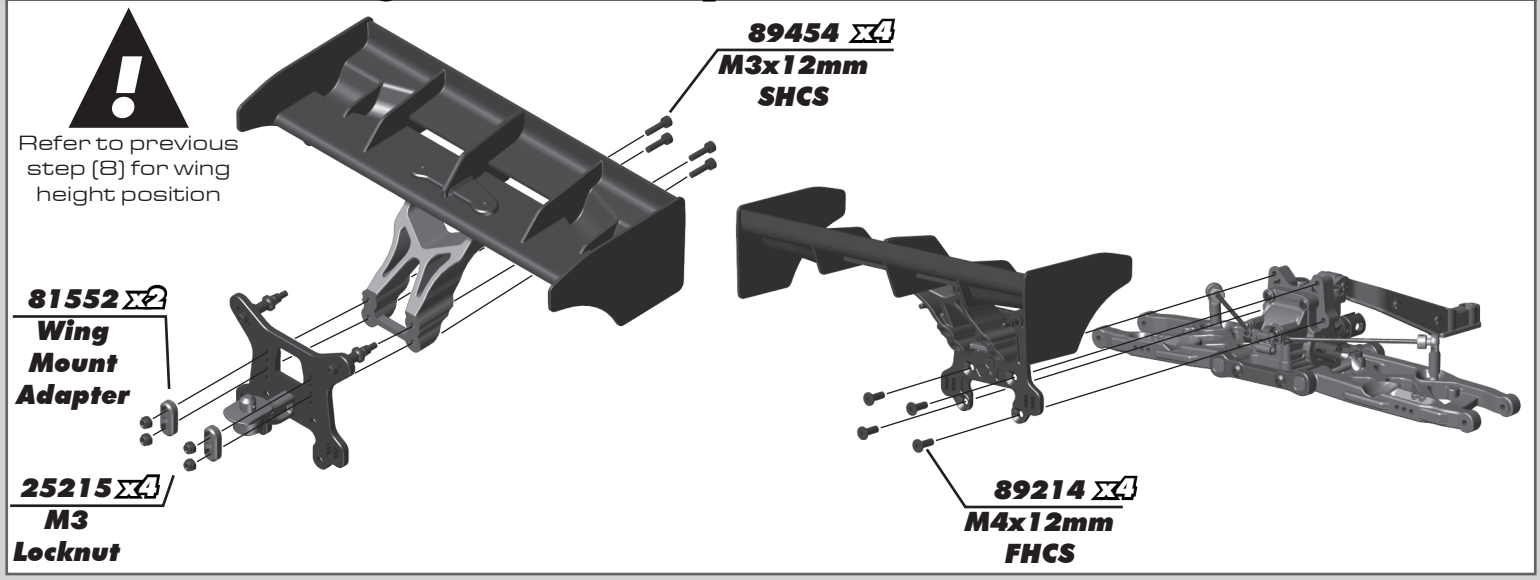
:: Rear End Build - Bag 7.1, 7.2, 7.3 - Step 7



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

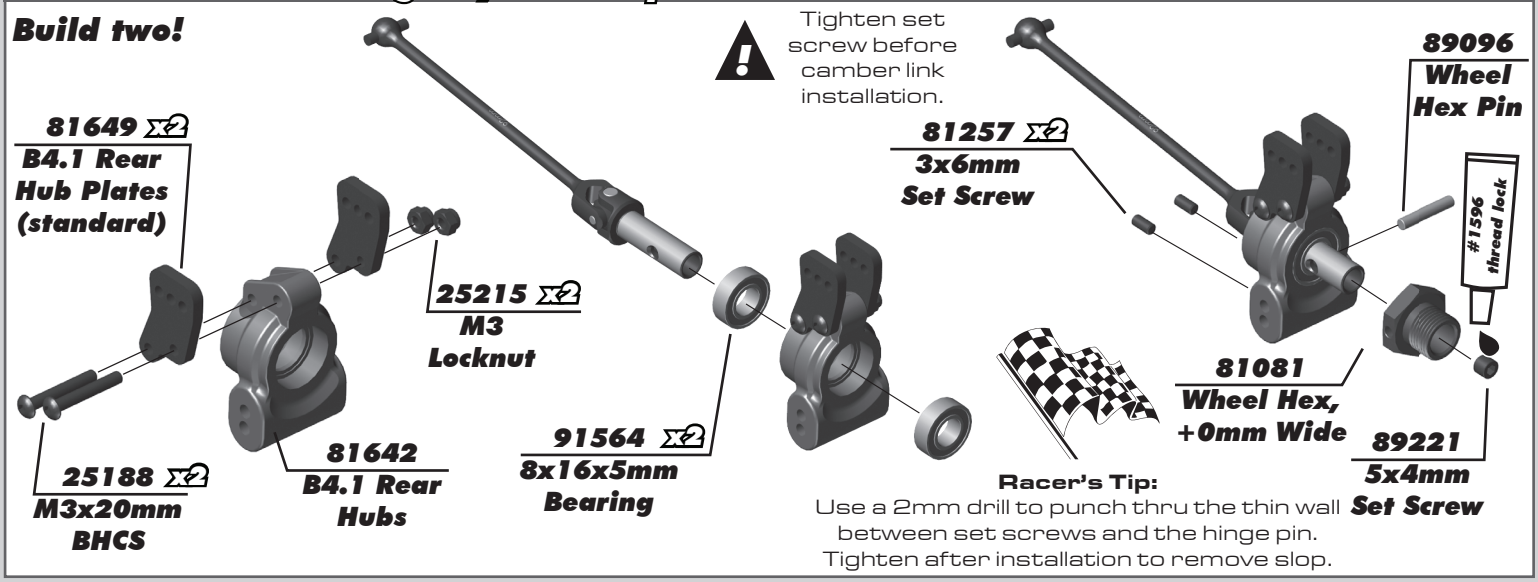


:: Rear End Build - Bag 7.1, 7.2, 7.3 - Step 9



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

Build two!

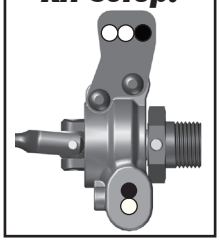


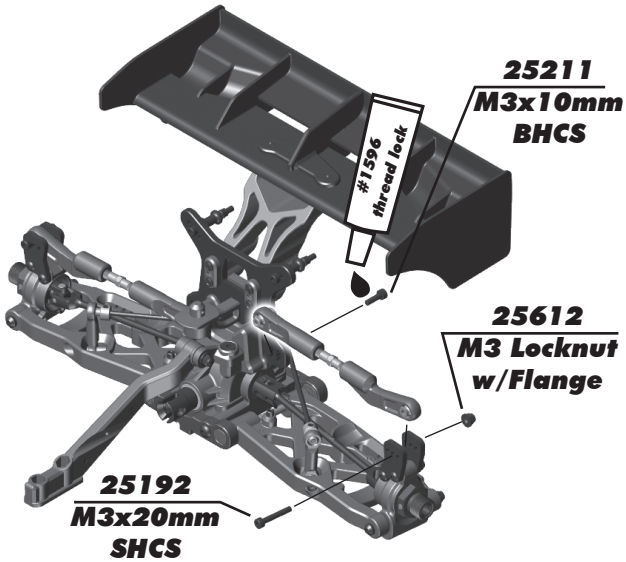
Racer's Tip:
Use a 2mm drill to punch thru the thin wall between set screws and the hinge pin. Tighten after installation to remove slop.

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

Install left and right side!

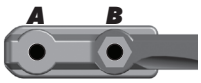
Kit Setup:





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

Tuning Tip:
Remove screw A for "soft/short" flex configuration.



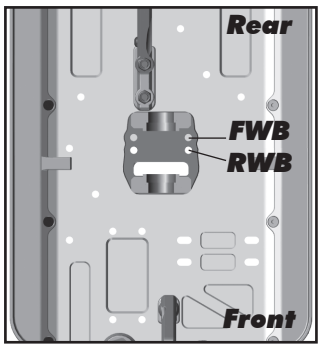
Kit Setup:
Mount the rear shock in the outside hole on the rear arm.

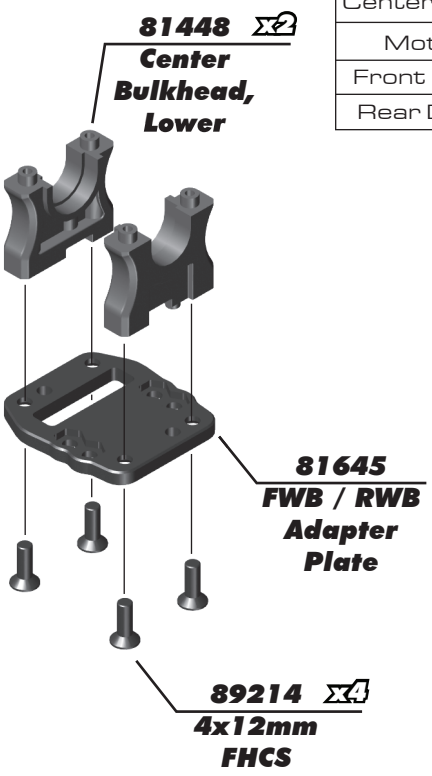
:: Center Bulkhead - Bag 9.1 - Step 1

Note: Do not use brake rotor guides on center bulkheads

Motor Direction on ESC to Reverse

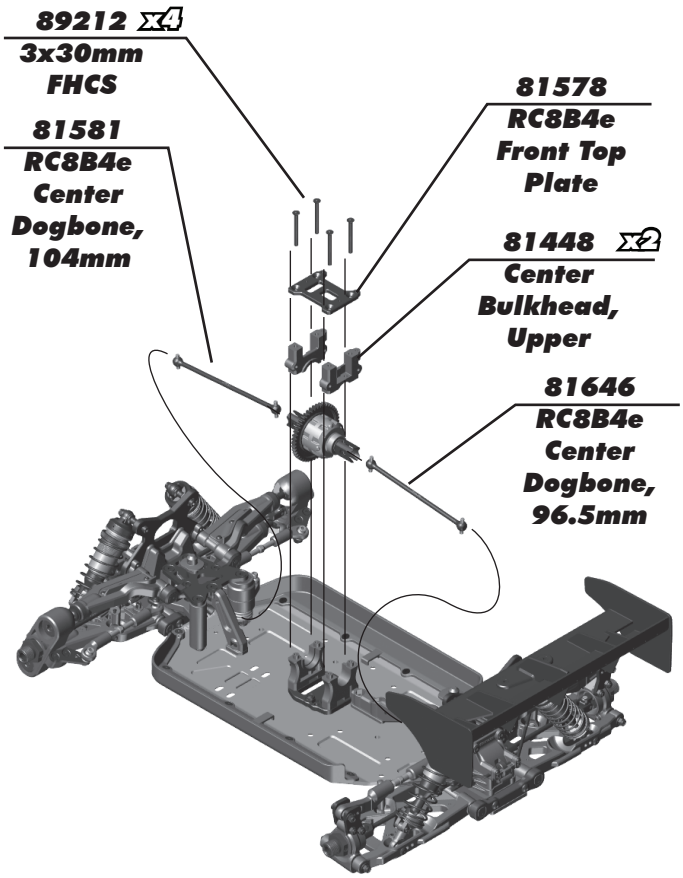
Weight Bias Setting	FWB	RWB
Center Diff Adapter Position	FWD	RWD
Motor Clamp Position	FWD	RWD
Front Dogbone Shaft (mm)	96.5	104
Rear Dogbone Shaft (mm)	104	96.5

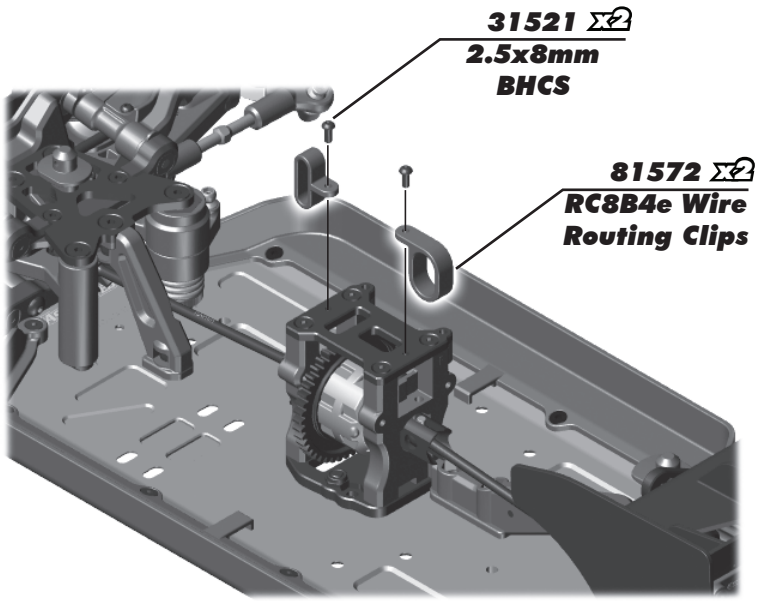




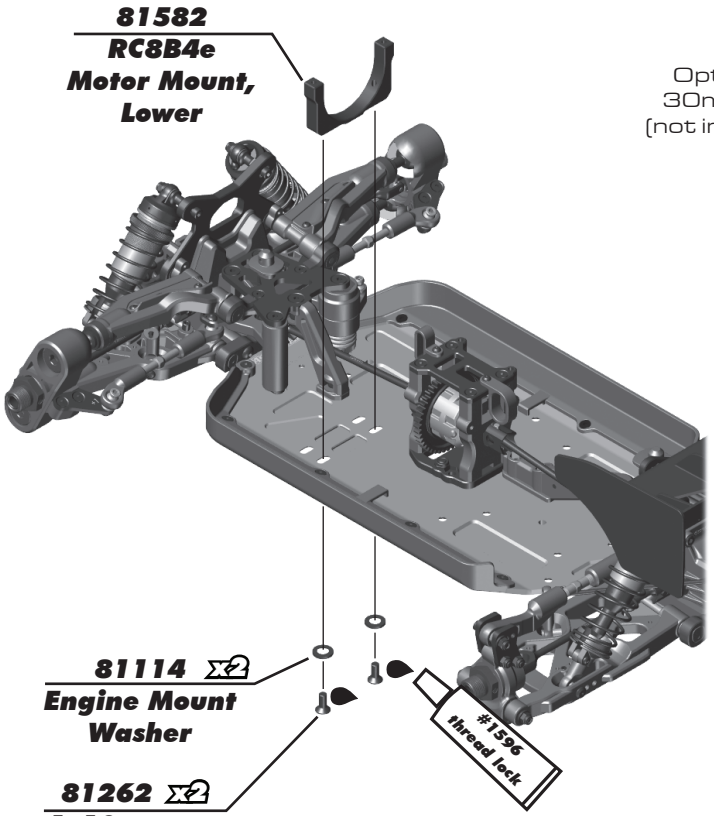
Note: The upper center bulkheads have "F" for front and "R" for rear.

:: Center Bulkhead - Bag 9.1 - Step 2

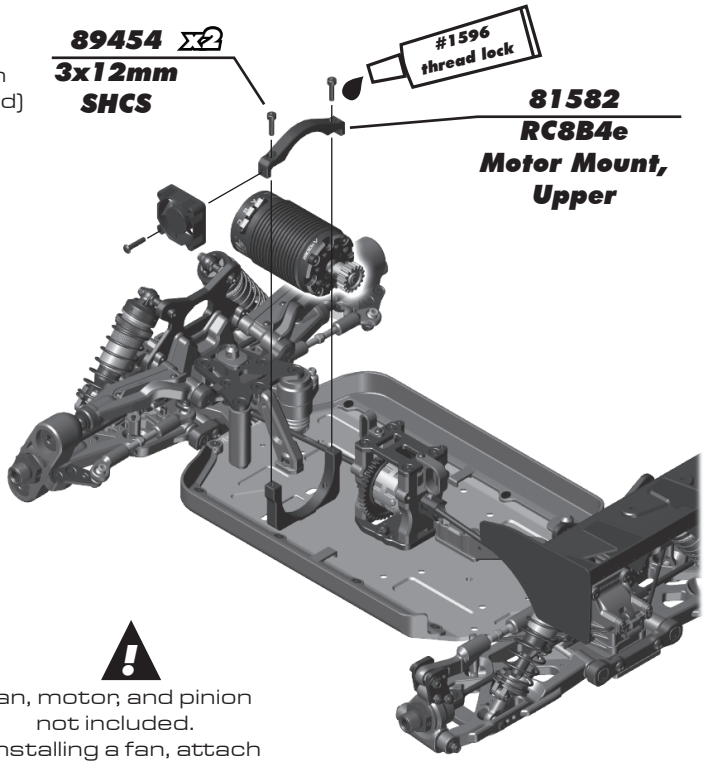




:: Center Bulkhead - Bag 9.1 - Step 3



Optional!
30mm fan
(not included)

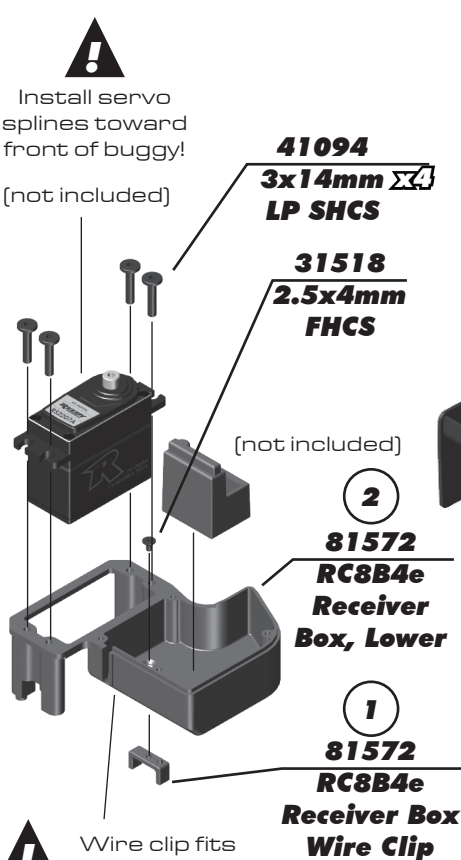


Fan, motor, and pinion not included.
If installing a fan, attach before installing motor mounts.
Hardware not included.
Maximum screw depth 4mm.

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

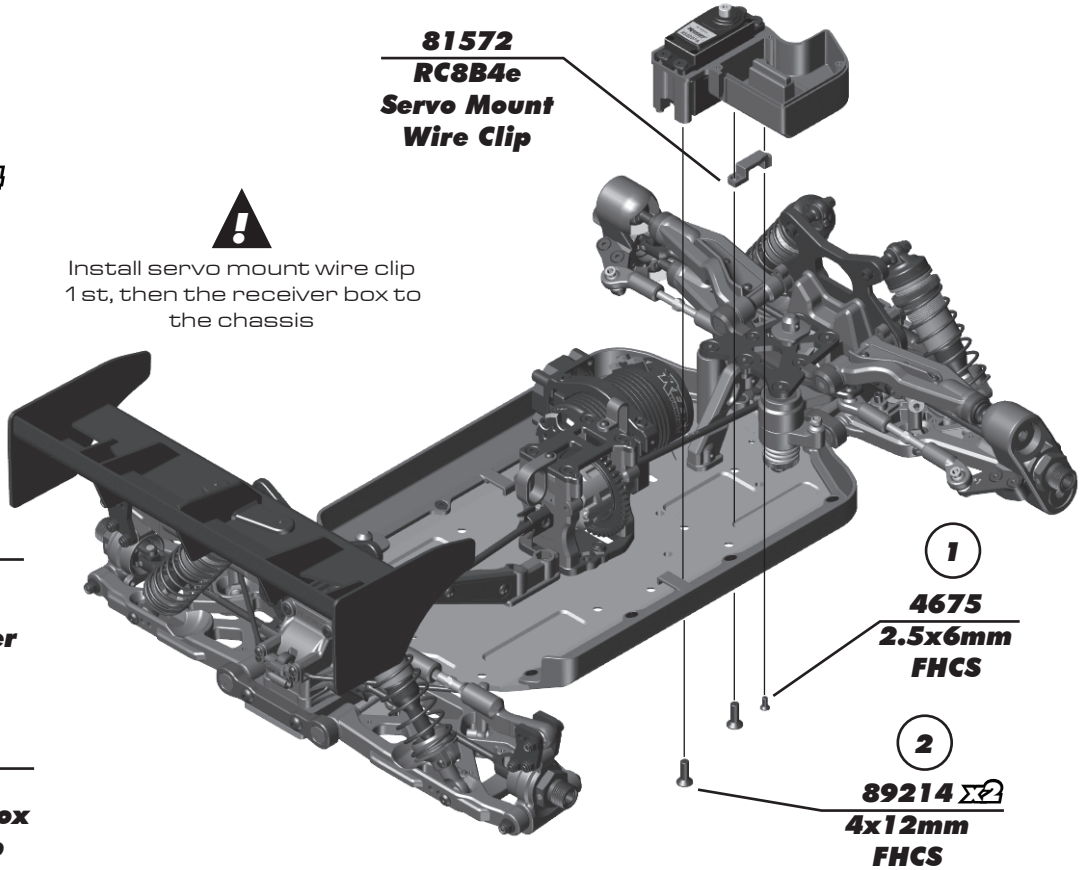
Install servo splines toward front of buggy!

(not included)

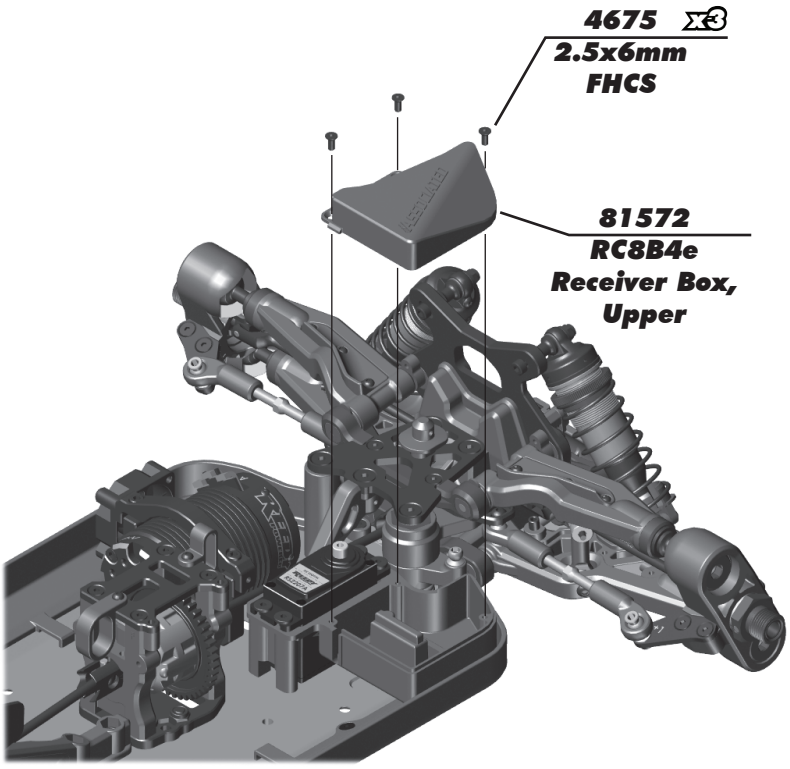


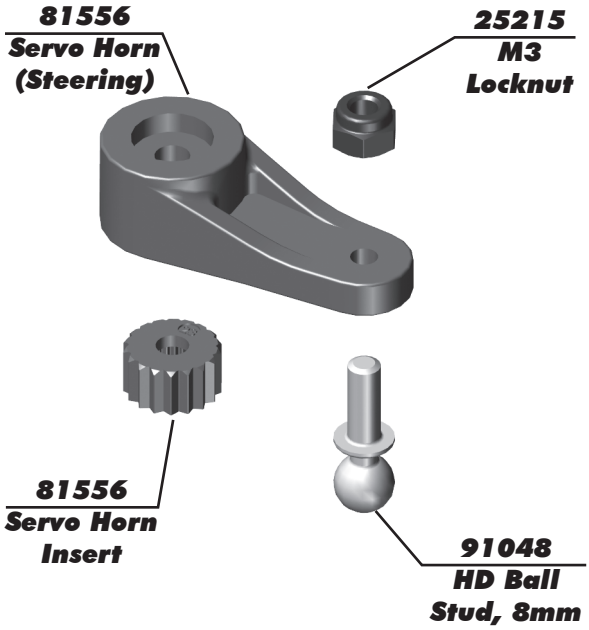
Wire clip fits under this foot!

Install servo mount wire clip 1 st, then the receiver box to the chassis

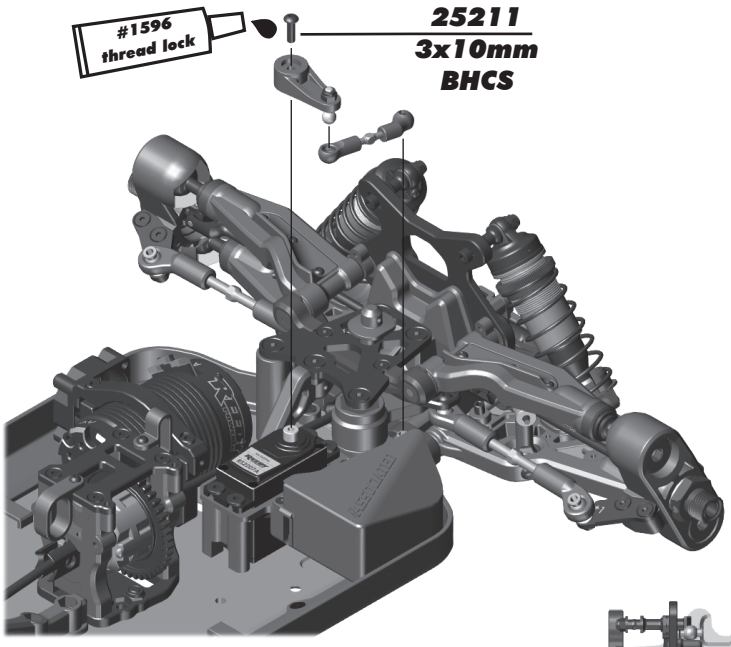


:: Radio Tray Build - Bag 11.1 - Step 2





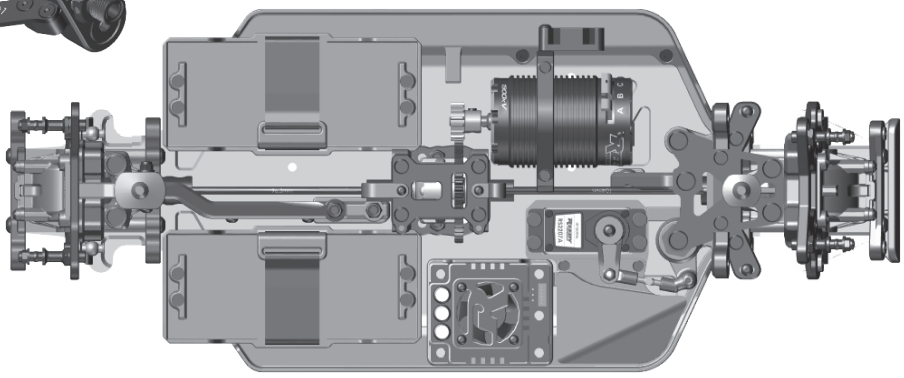
:: Radio Tray Build - Bag 11.1 - Step 3



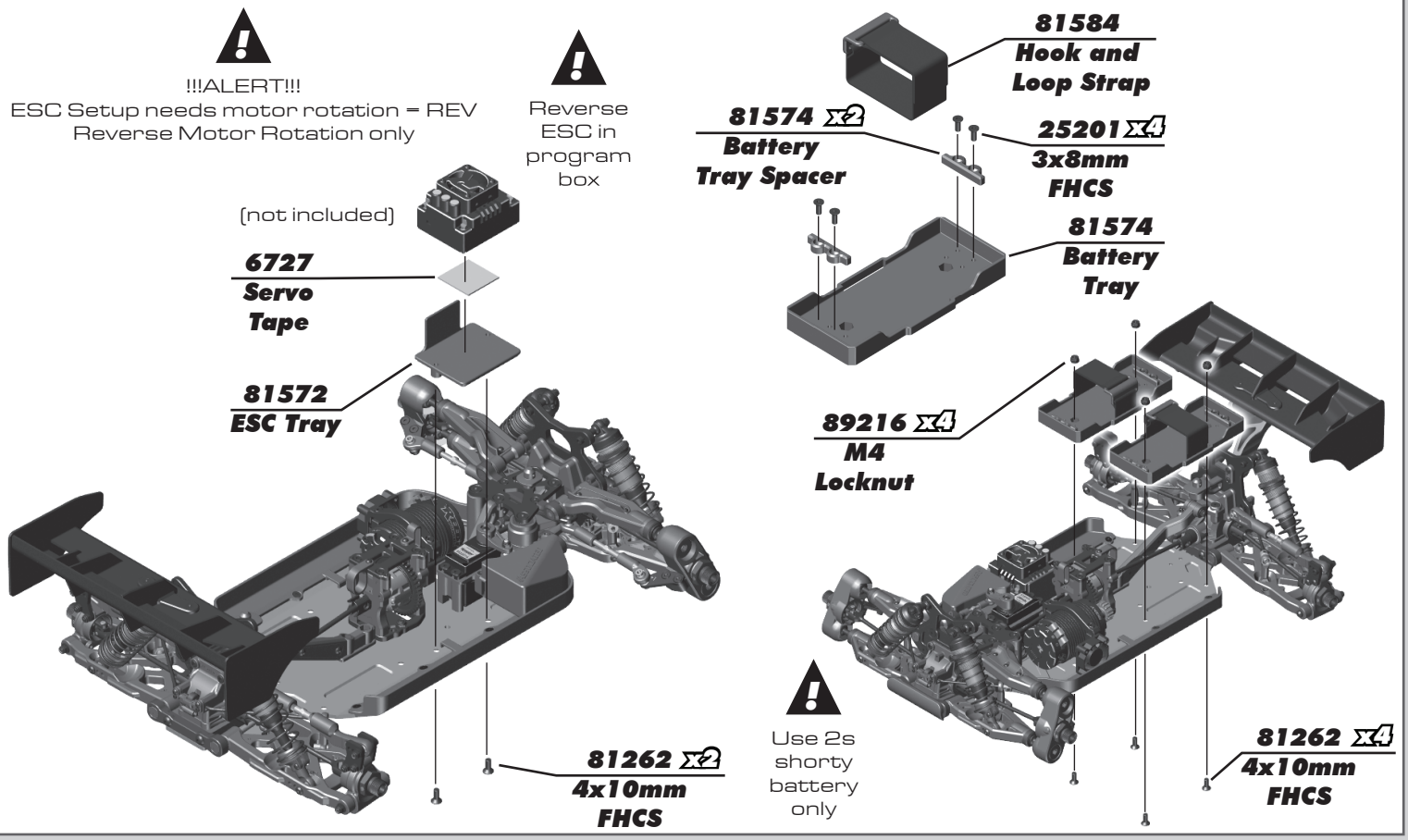
To build RC8B4.1 e for use with two 2s shorty battery packs in a "saddle" configuration, follow the steps below.

To build RC8B4.1 e for use with onme 4s shorty battery pack, continue to "Battery Tray Build - Bag 12.1 - Step 2"

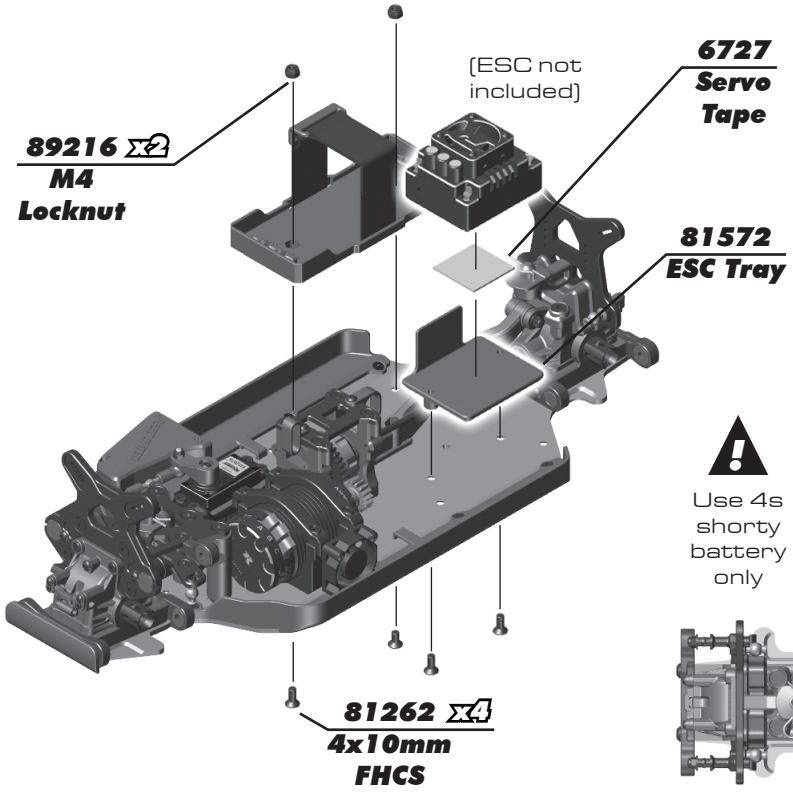
2s Shorty Pack Configuration



:: Battery Tray Build - Bag 12.1 - Step 1

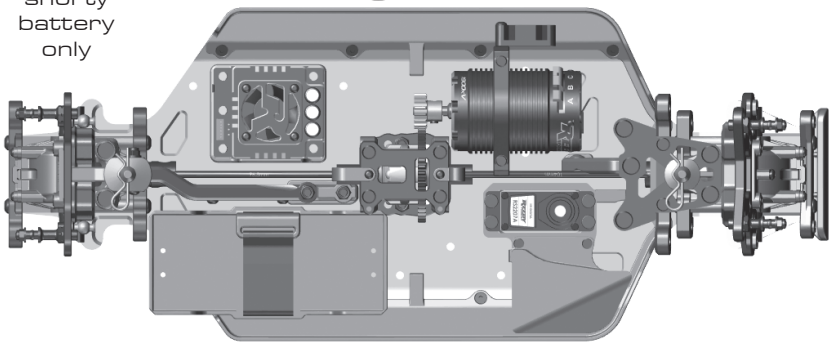


:: Battery Tray Build - Bag 12.1 - Step 2



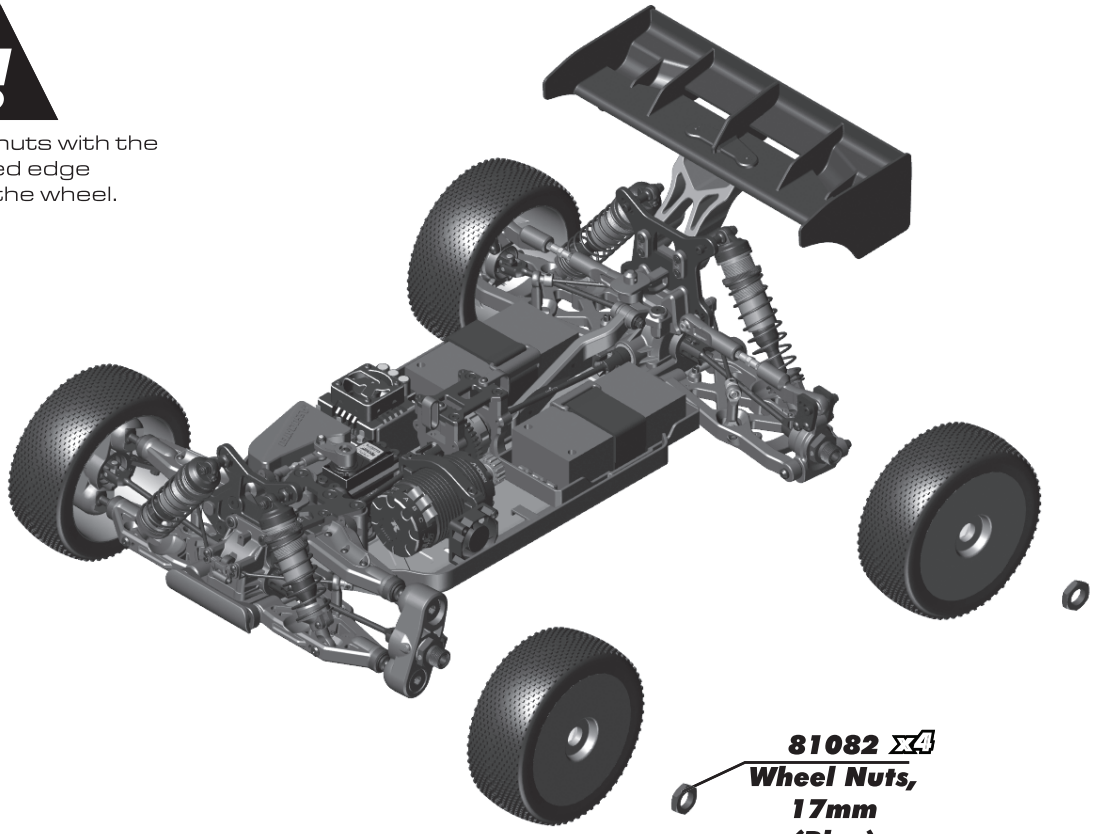
Use 4s shorty battery only

4s Shorty Pack Configuration



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

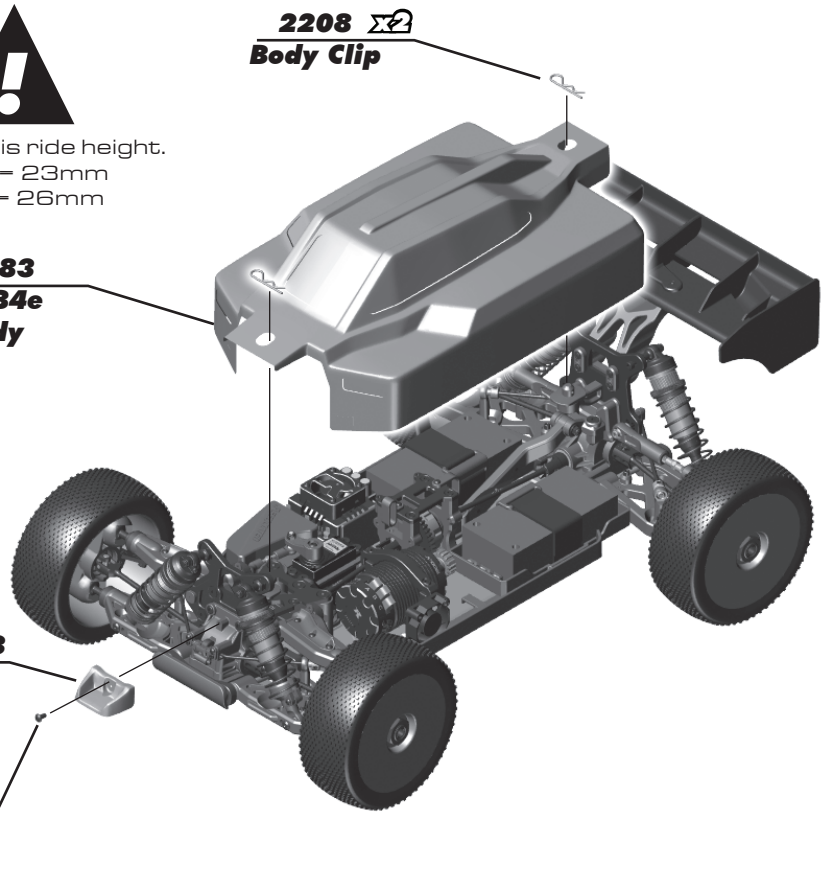
Install wheel nuts with the serrated edge towards the wheel.



81082 x4
Wheel Nuts, 17mm (Blue)

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

Final chassis ride height.
Front = 23mm
Rear = 26mm



2208 x2
Body Clip

81583
RC8B4e Body

81583
Nose Cone

31531
3x6mm BHCS

Painting Tips:

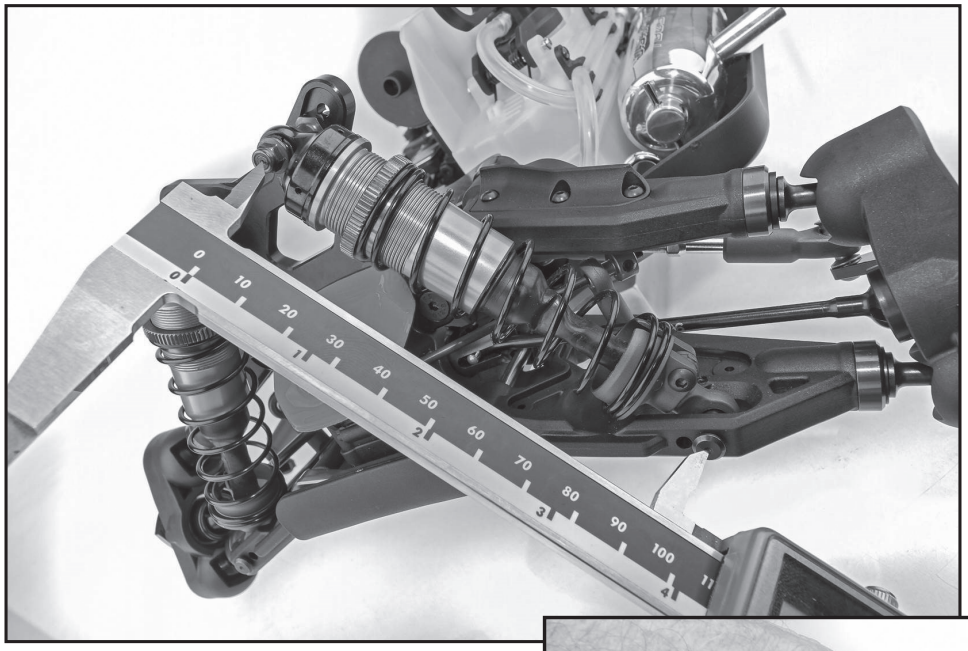
Your kit comes with a clear polycarbonate body. You will need to prep the body before you can paint it. Wash the inside thoroughly with warm water and liquid detergent. Dry the body using a clean, soft, lint-free cloth. Install the window masks on the inside of the body. (R/C cars get painted from the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

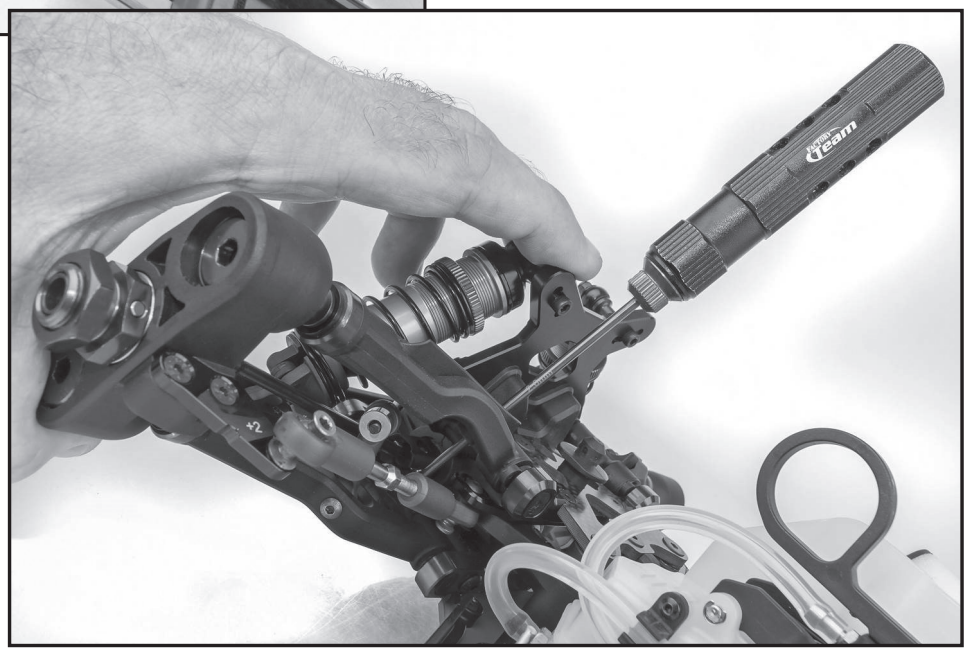
After painting, cut the body along the trim lines. Make sure to drill or use a body reamer to make the holes for the body mounts and antenna!

:: 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 101 mm shock length, and 126mm shock length for the rear using "C" hole.
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.



Racer's Tip:
Use 123mm for the middle "B" rear arm hole, and +2 or 0 eyelet.



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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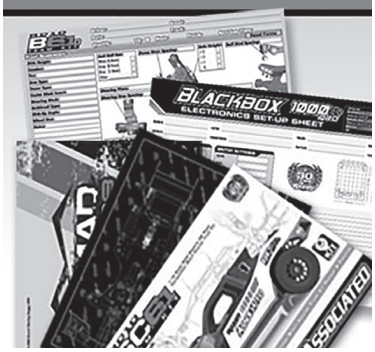

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@FactoryTeam_RC

@Team_Associated
@ReedyPower

@Associated_Electrics