TEAM ASSOCIATED®

WORLD CHAMPION R/C CARS

RC10B6 Builder's Support Kit 2

KIT ASSEMBLY REQUIRED

#90053 RC10B6 Builder's Support Kit 2

1:10 Scale 2WD Electric Off Road Builder's Support Kit Manual

WeAreAE CHAMPIONS by DESIGN AssociatedElectrics.com

ASSOCIATED ELECTRICS

:: Introduction

Thank you for purchasing this Team Associated product. This assembly manual contains instructions and tips for building and maintaining your new vehicle. Please take a moment to read through the manual and familiarize yourself with the steps. We are continually changing and improving our designs; therefore, actual parts may appear slightly different than the illustrations. New parts will be noted on supplementary sheets located in the appropriate parts bags.
Check each bag for these sheets before you start to build.
Check www.AssociatedElectrics.com for the latest versions of our instruction manuals.

:: RC10B6 Builders Support Kit 2 Features

The RC10B6 Builders Support Kit 2 brings Team Associated race-winning technology to builders assembling dirt oval sprint cars, late models, and custom drag cars. The applications are endless. The Builders Support Kit has the major sub-assemblies builders need in a value-packed kit, without having to pay for excess 2WD off-road buggy parts. "Not everything depicted in this manual comes in this kit. Illustrations are for understanding fundamental designs and helping aid in the assembly of your custom build."

Scan the QR code to get to the TeamAssociated.com product page where you can download a detailed PDF manual showing each assembly included. Also look for a downloadable PDF of 3rd party conversion vendors who supply parts to complete your dirt oval, drag, or custom creation.

RC10 B6 BUILDER'S SUPPORT KIT 2

SCAN ME

Digital manual

:: Additional

Your new RC10B6 Builders Support Kit 2 comes unassembled and requires the following items for completion (refer to www.AssociatedElectrics.com and www.Reedypower.com for suggestions):

- R/C two channel surface frequency radio system
- AA-size batteries for transmitter
- Electronic Speed Control ("ESC")
- Steering servo
- R/C electric motor (540 size)
- Pinion gear (48P), size determined by type/turn or kV of motor
- Battery charger (a peak detection charger, or LiPo compatible charger)
- 2 cell LiPo battery pack
- Polycarbonate body
- Polycarbonate specific spray paint
- Cyanoacrylate glue ("CA") (#1697)
- Thread locking compound (#1596)
- Tires and Inserts, Fronts and Rears
- Wheels w/12mm Hex
  Front Wheels #9690 (white), #9691 (yellow)
  Rear Wheels #9695 (white), #9696 (yellow)
- Slim Front Wheels w/12mm Hex (carpet/astro turf)
  #91757 (white) #91758 (yelllow)

:: Other Helpful Items

- Silicone Shock Fluid (Refer to AssociatedElectrics.com for complete listings)
- Green Slime shock lube (#1105)
- FT Turnbuckle Wrench, 4mm (#1112)
- FT Body Reamer (#1499)
- Shock Pliers (#1681)
- Wire Cutters
- FT Hex/Nut Wrenches (#1519)
- FT Ballcup Wrench (#1579)
- Hobby Knife
- Needle Nose Pliers
- FT Universal Tire Balancer (#1498)
- Calipers or a Precision Ruler
- FT Body Scissors (#1737)
- Soldering Iron

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

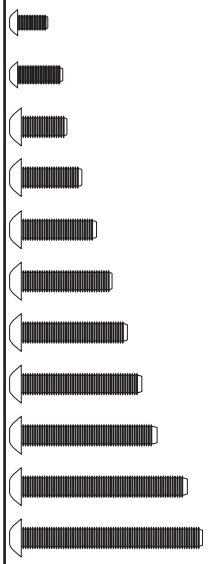
ASSOCIATED ELECTRICS Since 1984

Customer Service
Tel: 949.544.7500
Fax: 949.544.7501

http://www.AssociatedElectrics.com • http://www.instagram.com/teamassociatedrc/ • http://www.facebook.com/TeamAssociated/

:: Hardware - 1:1 Scale View

Button Head (bhcs)

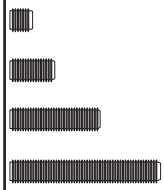


2x4mm (31510)
2.5x6mm (31520)
3x6mm (31531)
3x8mm (31532)
3x10mm (25211)
3x12mm (89202)
3x14mm (25187)
3x16mm (89203)
3x18mm (2308)
3x22mm (25189)
3x24mm (89204)

Shims and Washers

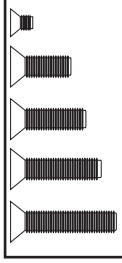
5.5x0.5mm (31381)
5.5x1.0mm (31382)
5.5x2.0mm (31383)
3x8mm Washer (89218)

Set Screws



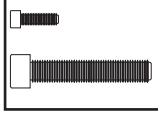
3x3mm (25225)
3x6mm (81257)
3x12mm (81258)
3x20mm (91737)

Flat Head (fhcs)



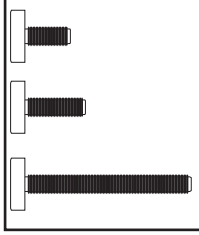
2x3mm (91749)
3x8mm (25201)
3x10mm (25202)
3x12mm (25203)
3x14mm (89208)

Cap Head (shcs)



1.6x5mm (91611)
3x16mm (89224)

LP Socket Head (lp shcs)



3x6mm (41089)
3x8mm (41096)
3x22mm (41095)

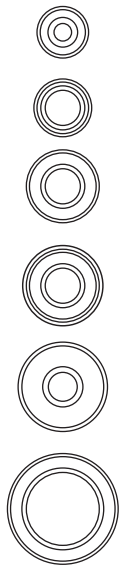
Nuts (lock/plain)

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

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

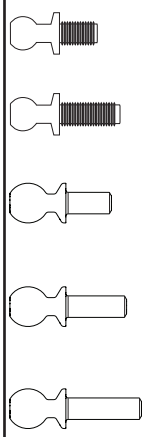
M4 Locknuts:
Serrated Steel LP (91150)
Serrated Steel (Silver) (91826)
Serrated Aluminum (Black) (91738)

Ball Bearings



4x7x2.5mm (31732)
5x8x2.5mm (31400)
5x10x4mm (91560)
5x10x4mm flanged (92324)
5x12x4 (91567)
10x15x4 (91563)

Ballstuds



Silver 5mm long (31283)
Silver 8mm long (31284)
HD 6mm (91047)
Ti HD 6mm (91751)
HD 8mm (91048)
Ti HD 8mm (91752)
HD 10mm (91049)
Ti HD 10mm (91753)

Notes:

:: Table of Contents

1..... Cover

2..... Introduction

3.....1:1 Hardware “Fold Out”

4..... Table of Contents

5.....Steering Build
Bag 1

5.....Front Suspension Build
Bag 2

8.....Caster / Steering Blocks Build
Bag 3

9.....Rear Suspension Build
Bag 4

10.....Gear Differential Build
Bag 5

11.....Gearbox Build
Bag 6

14.....Rear Hubs Build
Bag 7

15.....Turnbuckles Build
Bag 8

16.....Shocks Build
Bag 9

19.....Electronics Build
Bag 10

22.....Tuning Tips

24..... Setup Sheet “Kit Setup”

25..... Setup Sheet “Blank”

26..... Back Cover

:: Notes

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

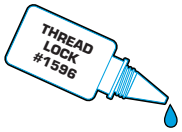
x2 This symbol indicates the number of the same part that is required.

2 This symbol indicates the order within a step to assemble parts.

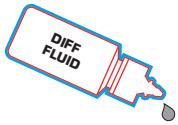
FACTORY TEAM This symbol indicates there are optional FT parts available

This symbol indicates a Racers Tip.

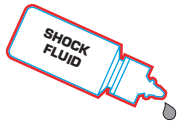
There is a 1:1 hardware foldout page in the front of the manual. To check the size of a part, line up your hardware with the correct drawing until you find the exact size. Each part in the foldout has a number assigned to it for ordering replacement parts.



This symbol indicates where Thread Lock Adhesive should be applied. *not included

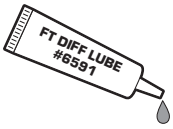


This symbol indicates where Diff Fluid should be applied.



This symbol indicates where Shock Fluid should be applied.

This symbol indicates where FT Silicone Grease should be applied. *not included

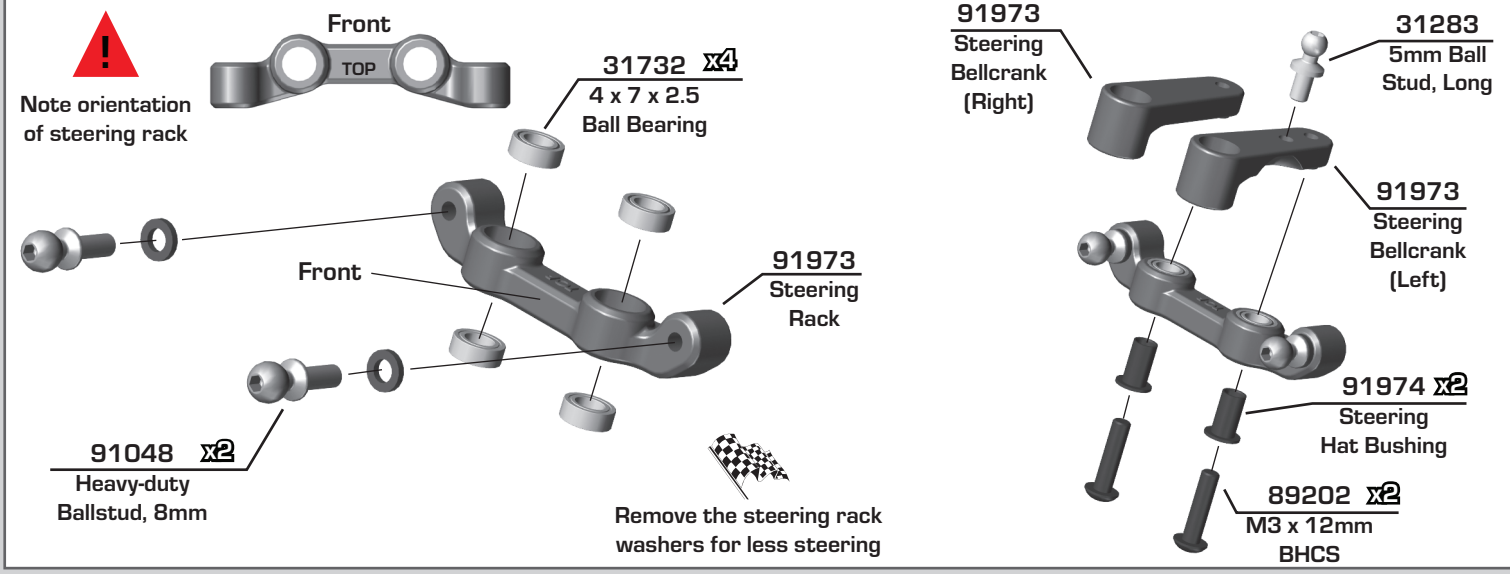


This symbol indicates where FT Diff Lube should be applied. *not included

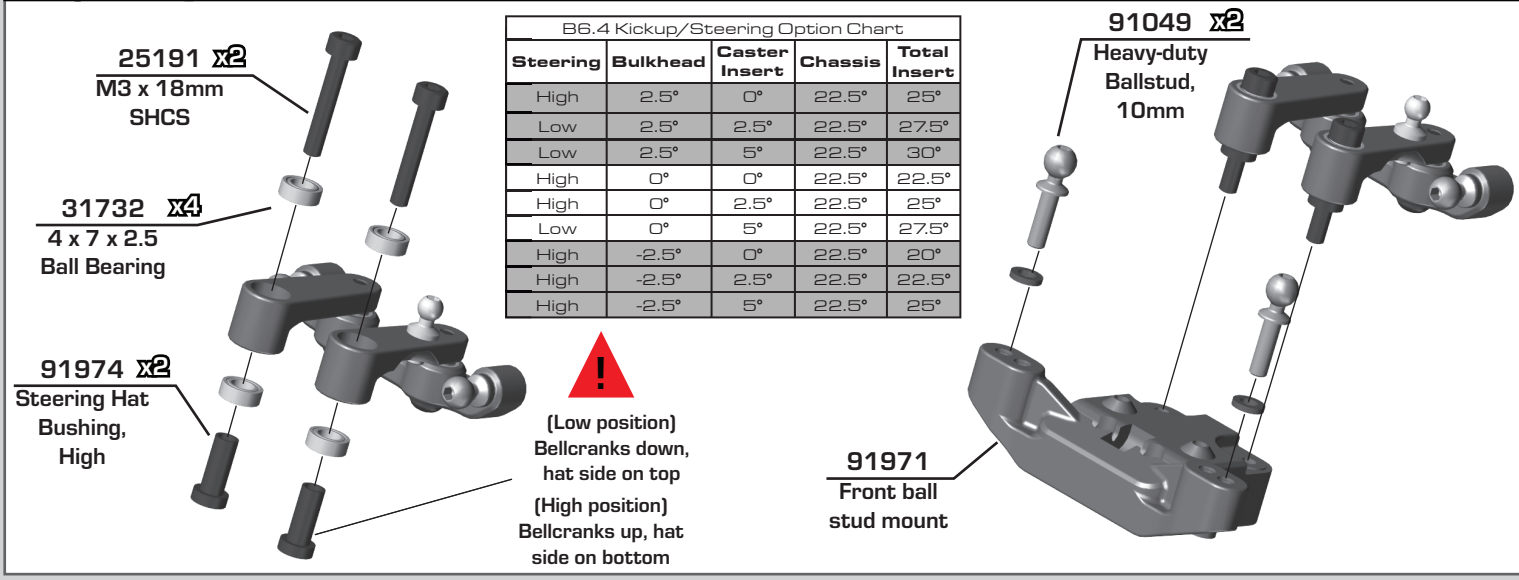
This symbol indicates where Black Grease should be applied.

This symbol indicates where Green Slime can be applied. *not included

Bag 1 - Step 1



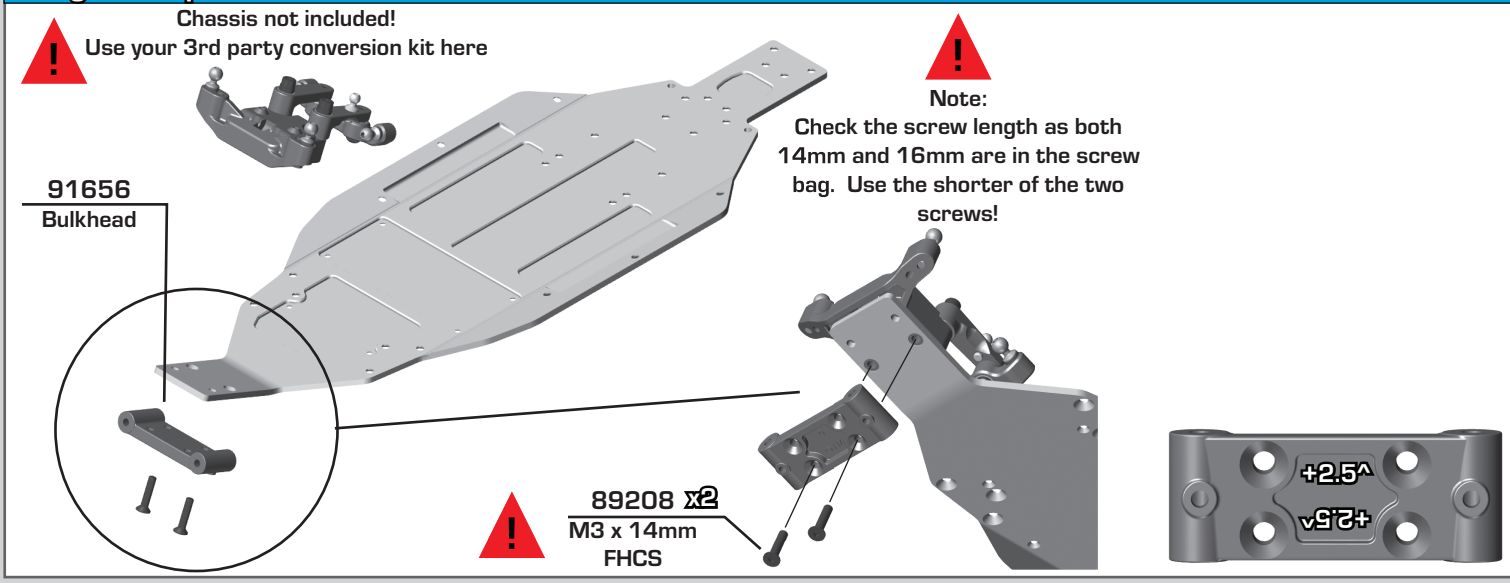
Bag 1 - Step 2



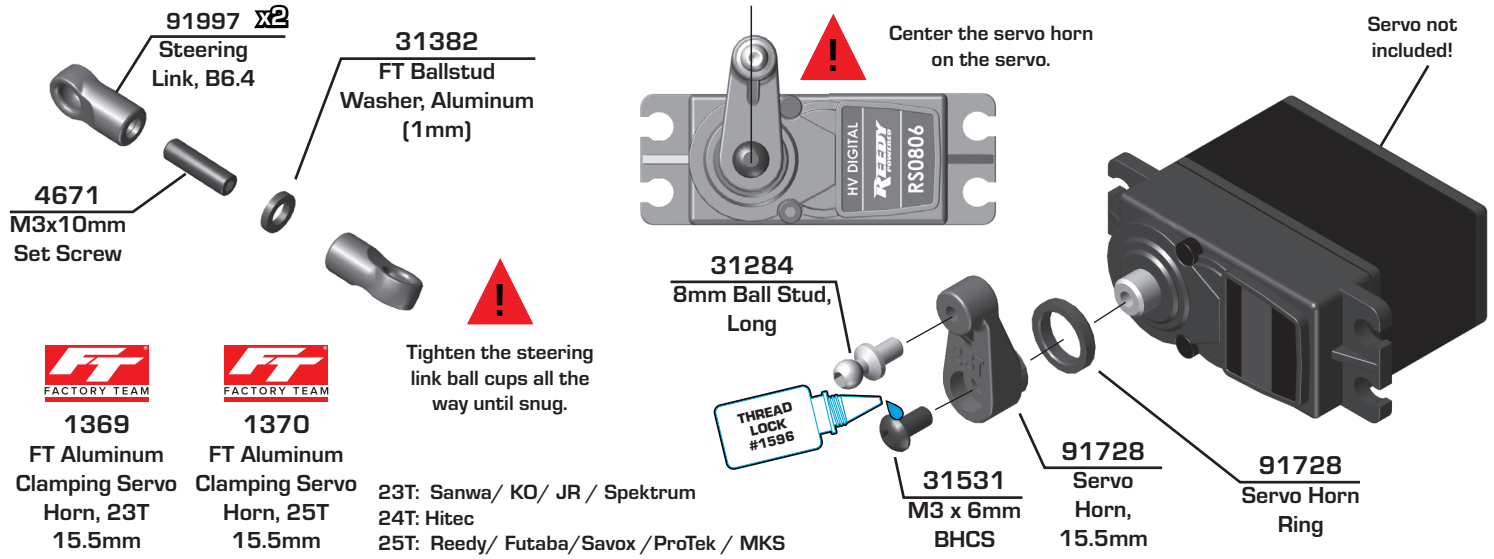
B6.4 Kickup/Steering Option Chart

Steering	Bulkhead	Caster Insert	Chassis	Total Insert
High	2.5°	0°	22.5°	25°
Low	2.5°	2.5°	22.5°	27.5°
Low	2.5°	5°	22.5°	30°
High	0°	0°	22.5°	22.5°
High	0°	2.5°	22.5°	25°
Low	0°	5°	22.5°	27.5°
High	-2.5°	0°	22.5°	20°
High	-2.5°	2.5°	22.5°	22.5°
High	-2.5°	5°	22.5°	25°

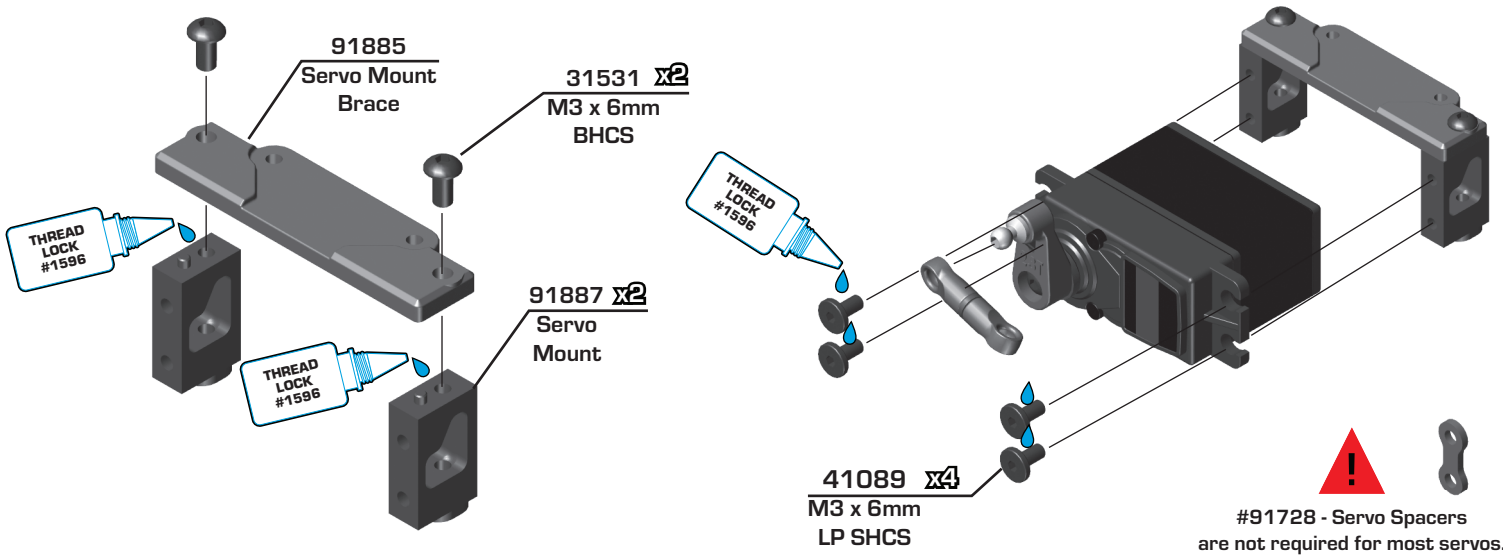
Bag 2 - Step 1



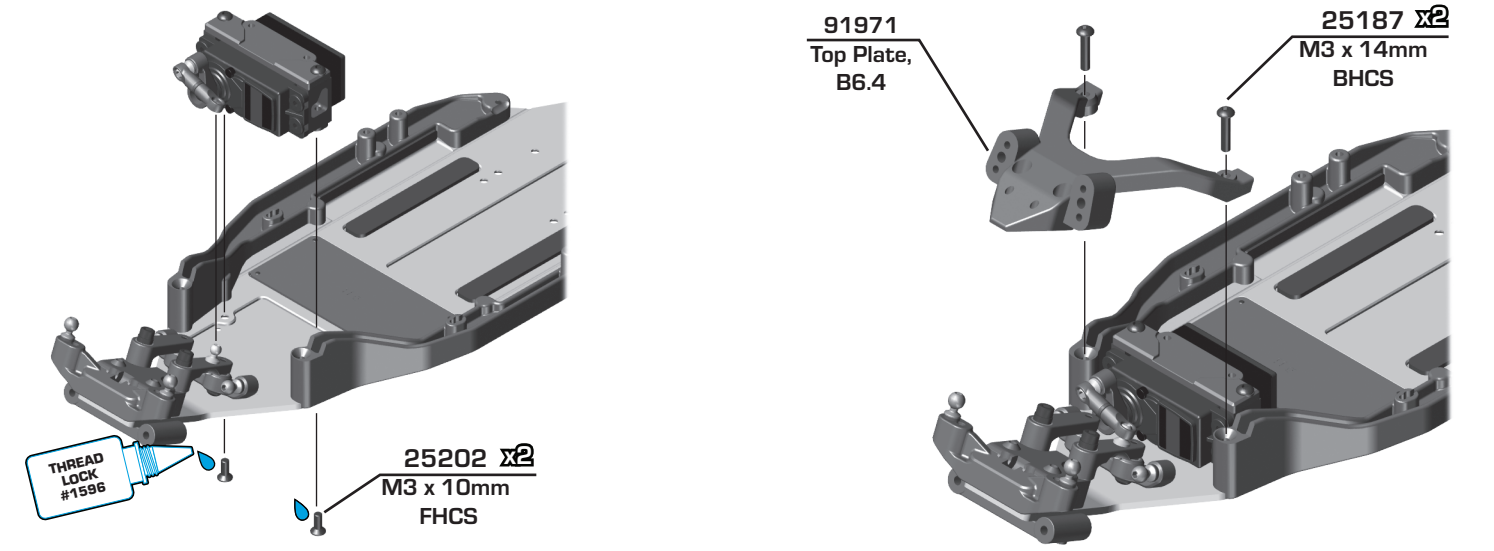
Bag 2 - Step 2



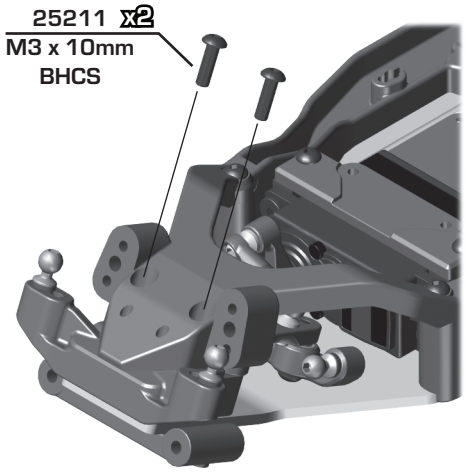
Bag 2 - Step 3



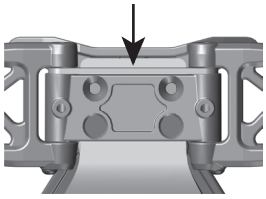
Bag 2 - Step 4

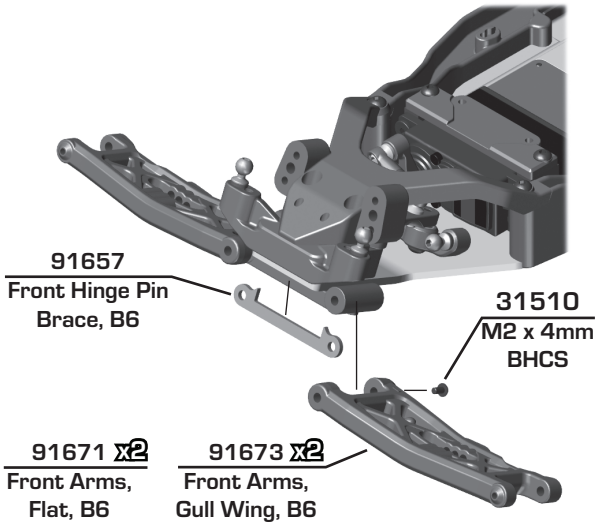


Bag 2 - Step 5



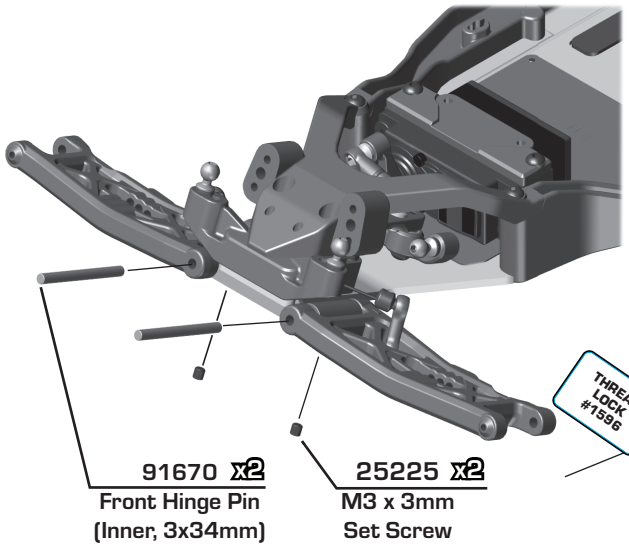
The front hinge pin brace has a sharp edged side, and a rounded edge side. Mount the sharp edge side towards the bulkhead.

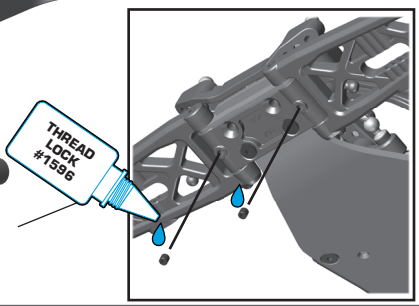


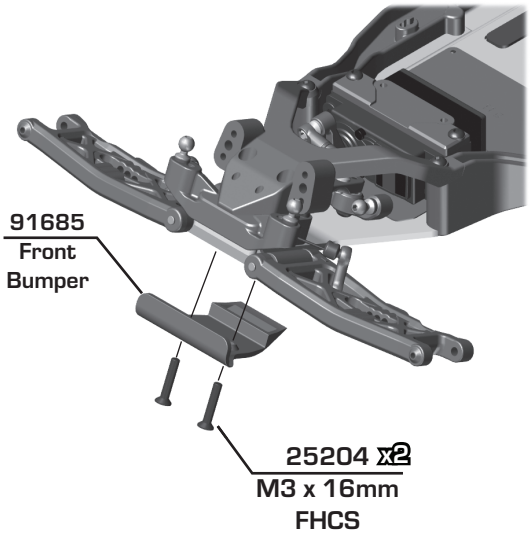


Build 2 (1 left, 1 right)

Bag 2 - Step 6

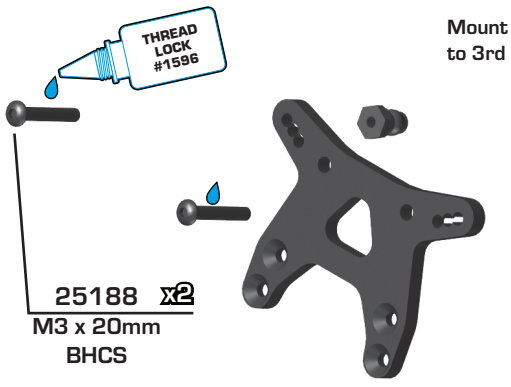


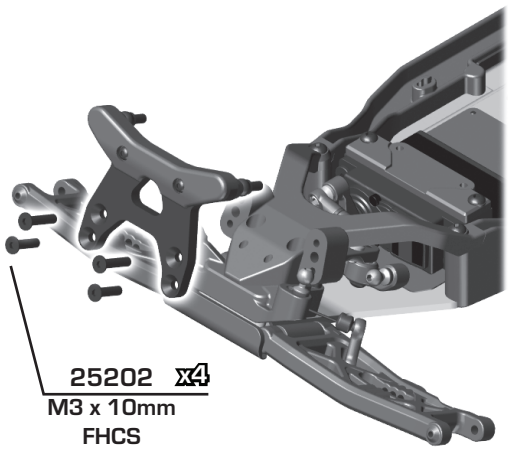




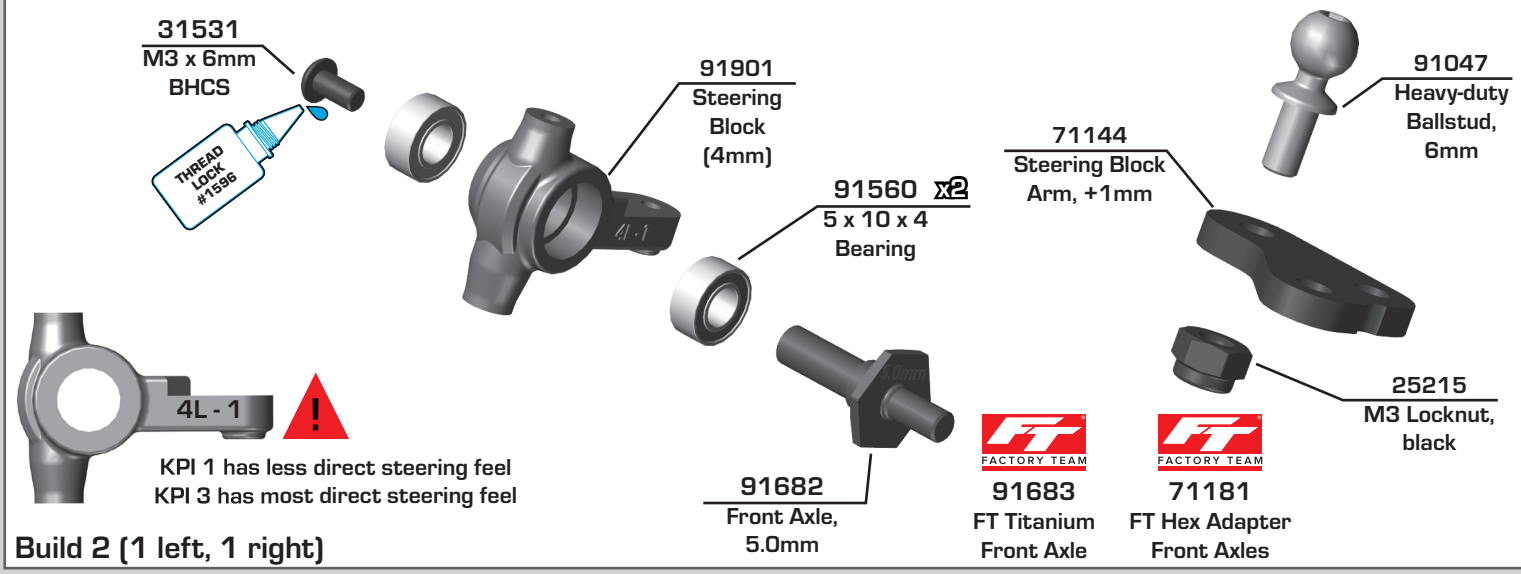
Bag 2 - Step 7

Mount screw and shock bushings to 3rd party conversion kit tower and chassis.



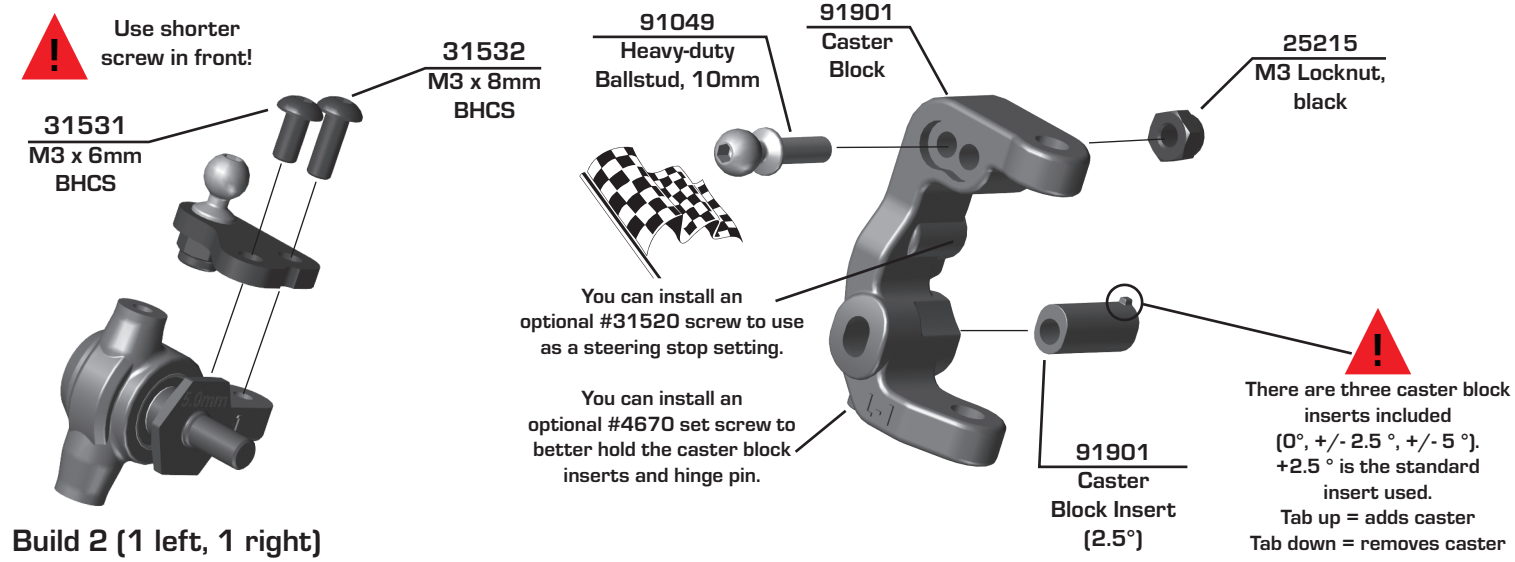


Bag 3 - Step 1



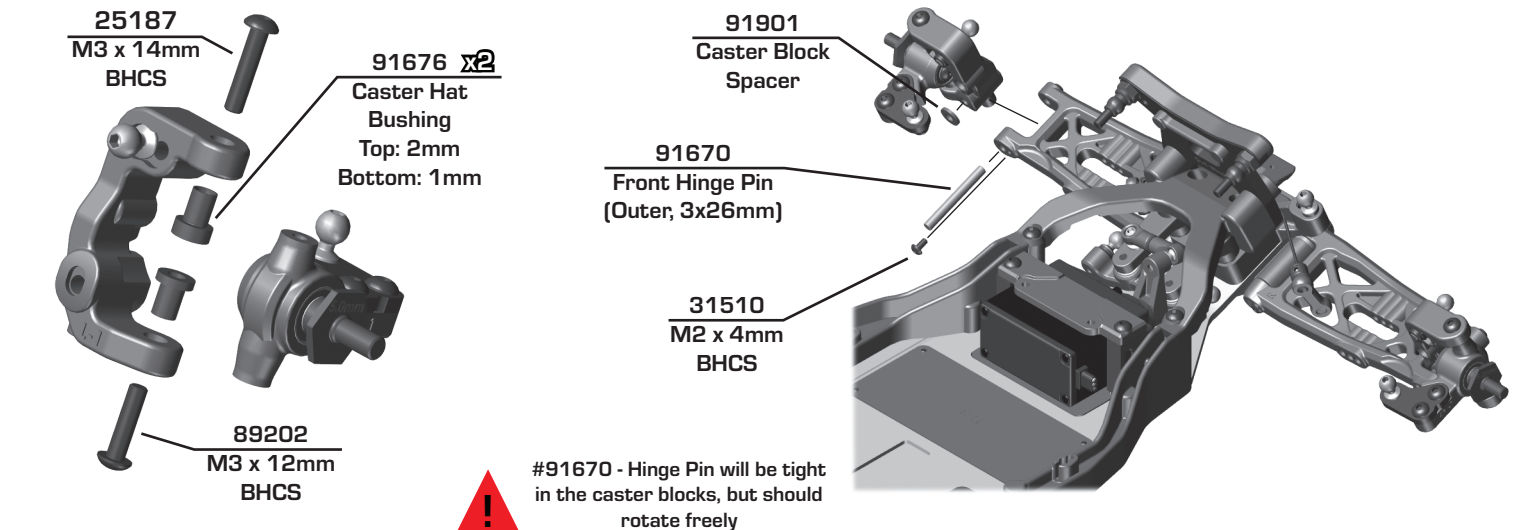
Build 2 (1 left, 1 right)

Bag 3 - Step 2



Build 2 (1 left, 1 right)

Bag 3 - Step 3

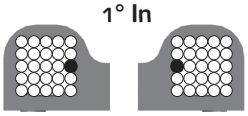


Build 2 (1 left, 1 right)

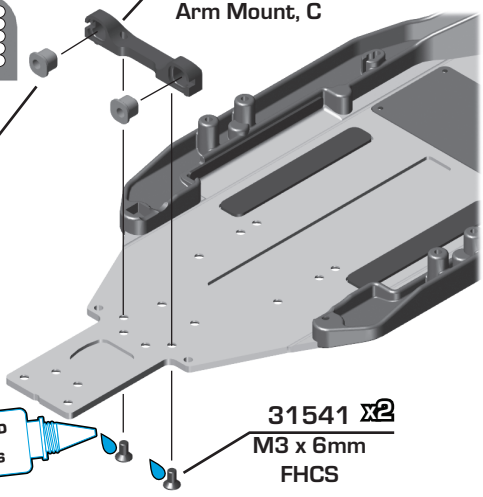
Build 2 (1 left, 1 right)

Bag 4 - Step 1

Arm Mount C:
1° In



91882
Aluminum
Arm Mount, C



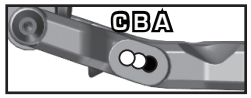
92014 x2
Arm Mount
Inserts
(1°)

See next step
for pill chart
tips

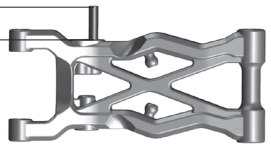
THREAD LOCK #1596

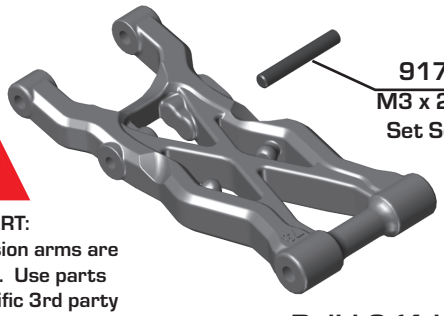
31541 x2
M3 x 6mm
FHCS

You can use a dot of CA glue to better secure the lower shock mounting set screw



11mm





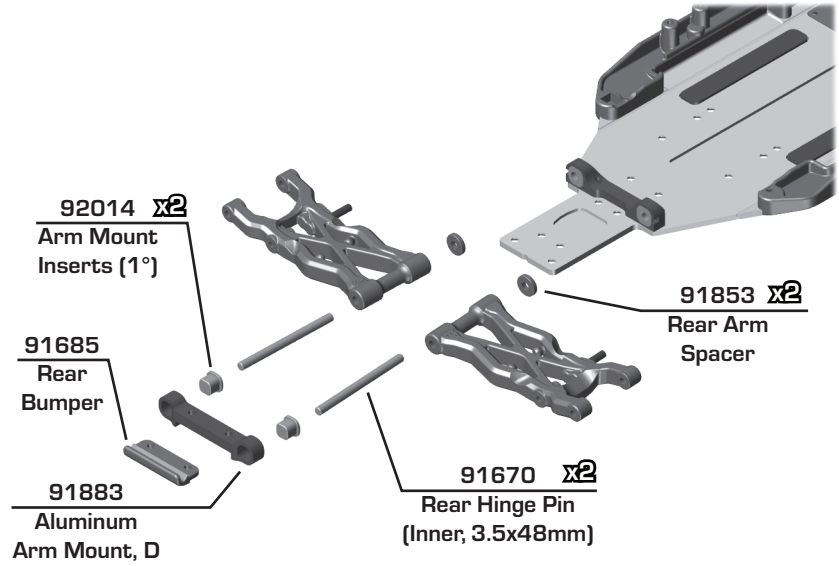
91737 x2
M3 x 20mm
Set Screw

ALERT:
Rear suspension arms are not included. Use parts for your specific 3rd party conversion application.

Build 2 (1 left, 1 right)

Bag 4 - Step 2

Arm Mount D:
Center



92014 x2
Arm Mount
Inserts (1°)

91685
Rear
Bumper

91883
Aluminum
Arm Mount, D

91853 x2
Rear Arm
Spacer

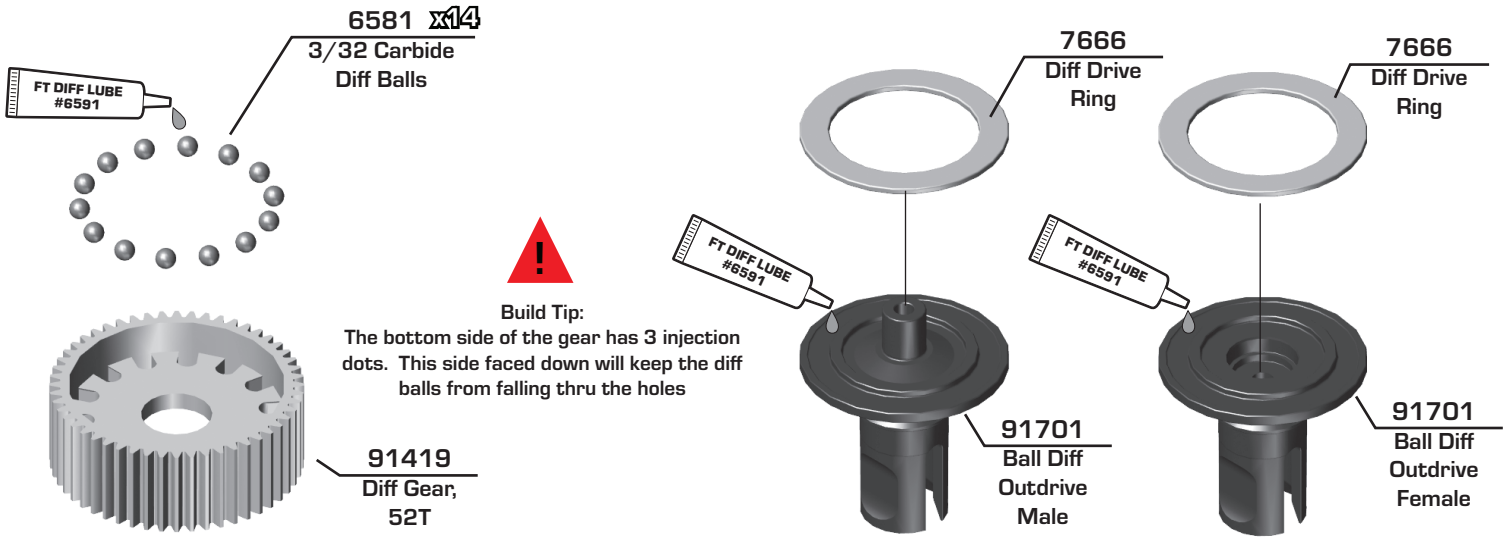
91670 x2
Rear Hinge Pin
(Inner, 3.5x48mm)

The (#91882) C and (#91883) D aluminum arm mounts allow for a large amount of setup combinations when using the (#92014) 0.5° and 1° arm mount inserts.

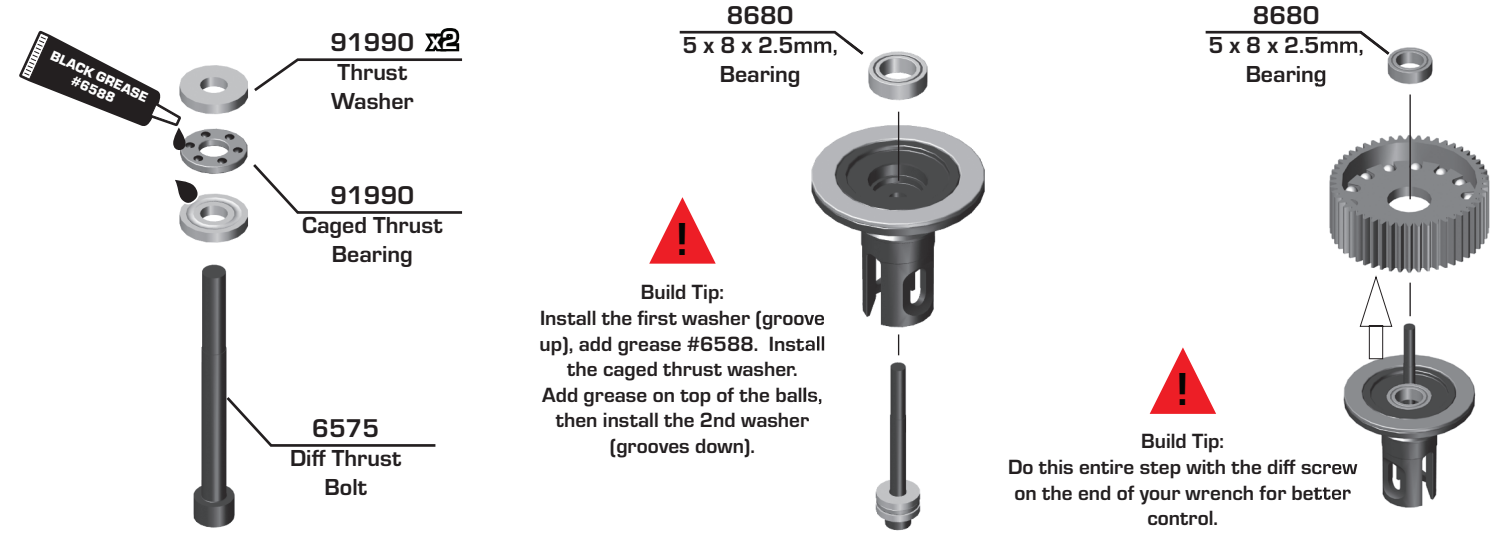
For a complete list of pill setup combinations, please visit our website by using the link below.
http://bit.ly/B6PillChart

Arm Mount C: 1 deg In / Arm Mount D: Center	Toe-In	Anti-Squat
	4 degree Kit Setup	1 degree Kit Setup

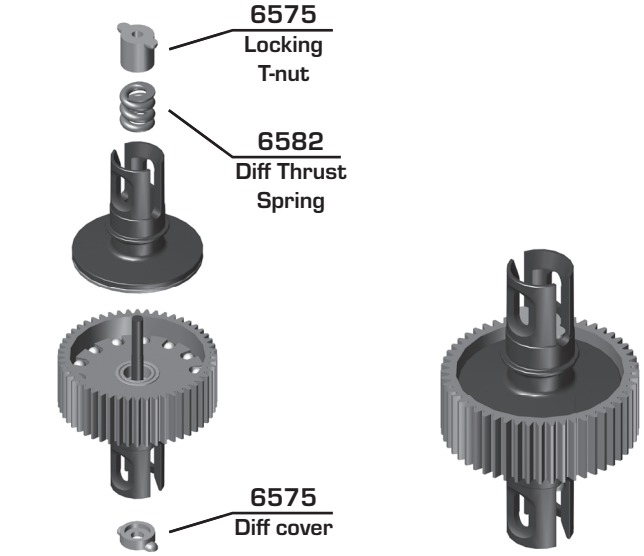
Bag 5 - Step 1



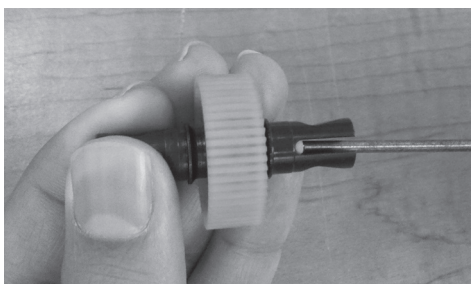
Bag 5 - Step 2



Bag 5 - Step 3



As you tighten the diff bolt, you will notice the T-nut ears moving closer to the bottom of the outdrive slot. This compresses the spring behind the T-nut. The spring should be completely compressed at the time the T-nut reaches the end of the slot. Caution! Pay close attention to the feeling when the spring is completely compressed. Do not overtighten the bolt. When you feel the spring completely compressed, loosen the diff bolt 1/8 of a turn. Your diff should now operate smoothly but with resistance as the outdrives move in opposite directions.
After you have driven the car once, re-check the diff setting.

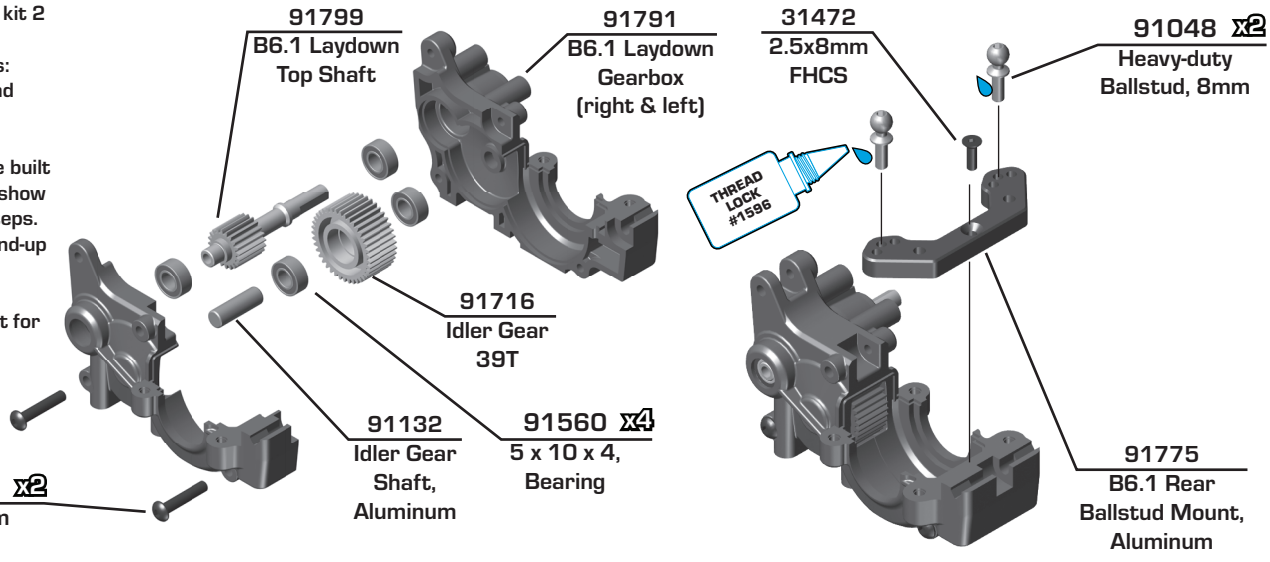


Bag 6 - Step 1

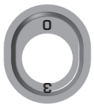
The B6 builders support kit 2 comes with three transmission options: Laydown, Layback, and Stand-up.

Laydown and Layback are built very similarly, so we will show only the layback build steps. Following this, is the Stand-up build steps.

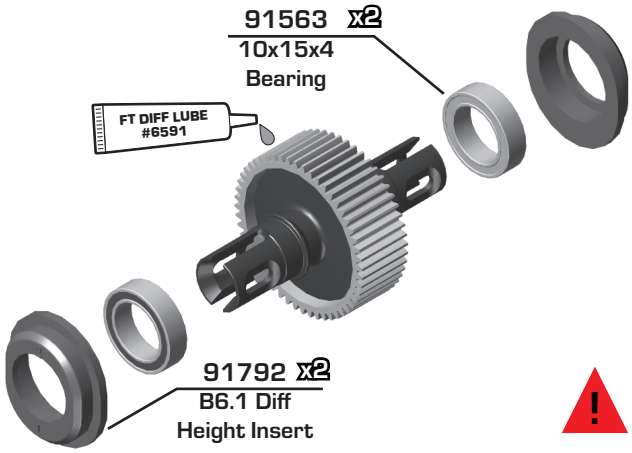
Choose what one is right for you and your setup.



Bag 6 - Step 2

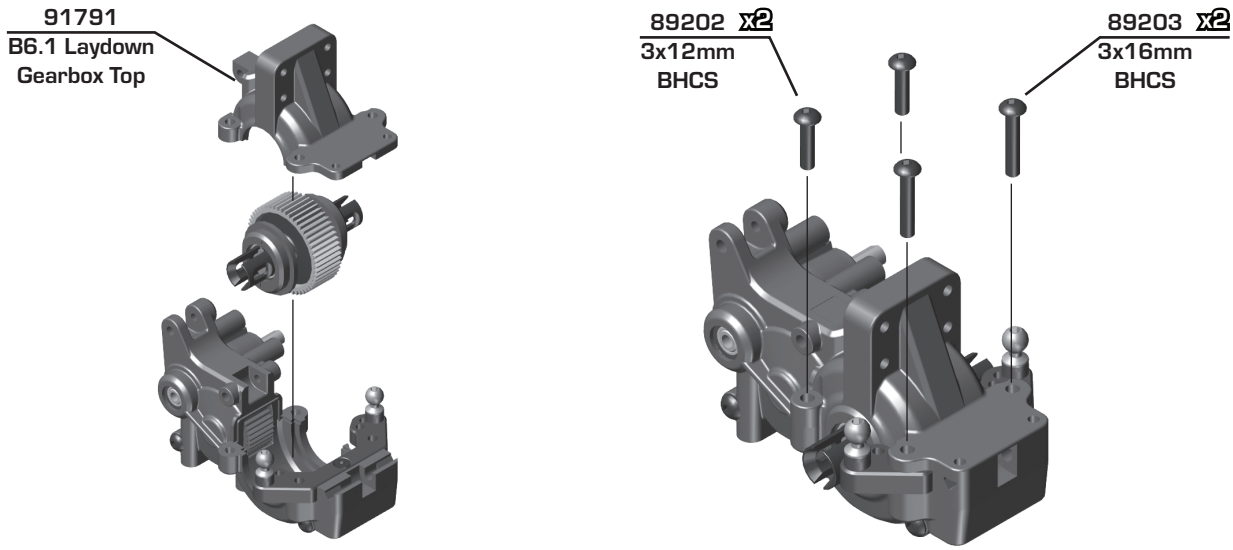
Diff Height	
	3
	2
	1 Kit Setup
	0

Add a drop of Diff Lube (#6591 - not included) to the teeth of the diff gear, idler gear, and top shaft.

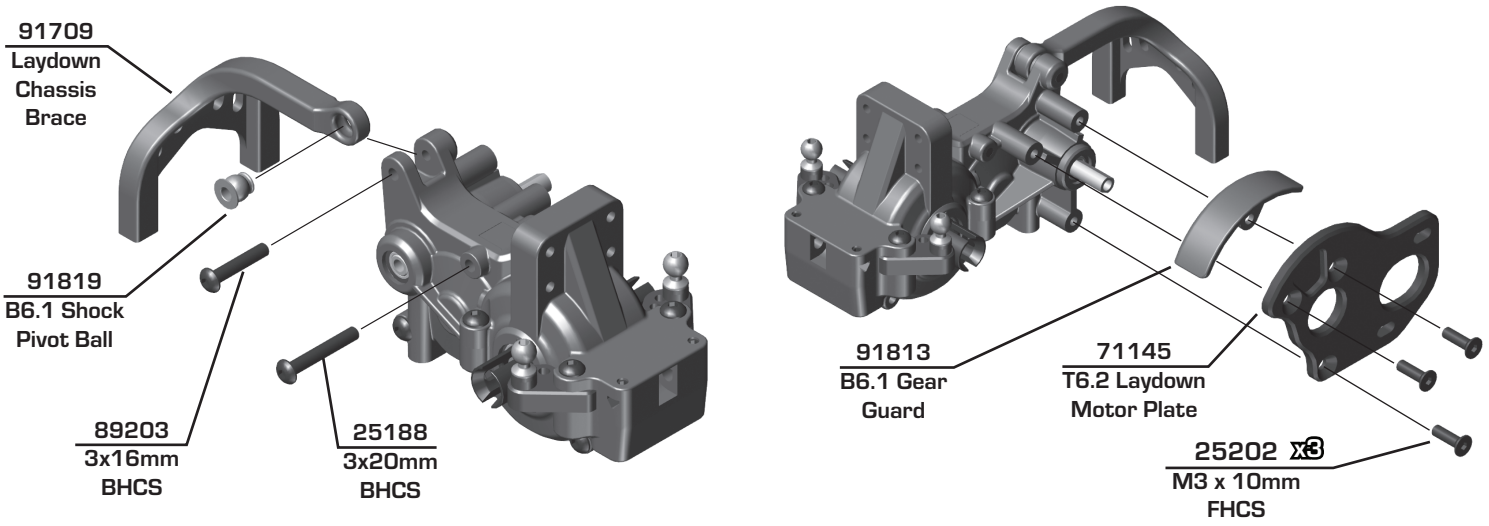


Diff Height Inserts: The number on top is the setting. Stock diff height is 1.

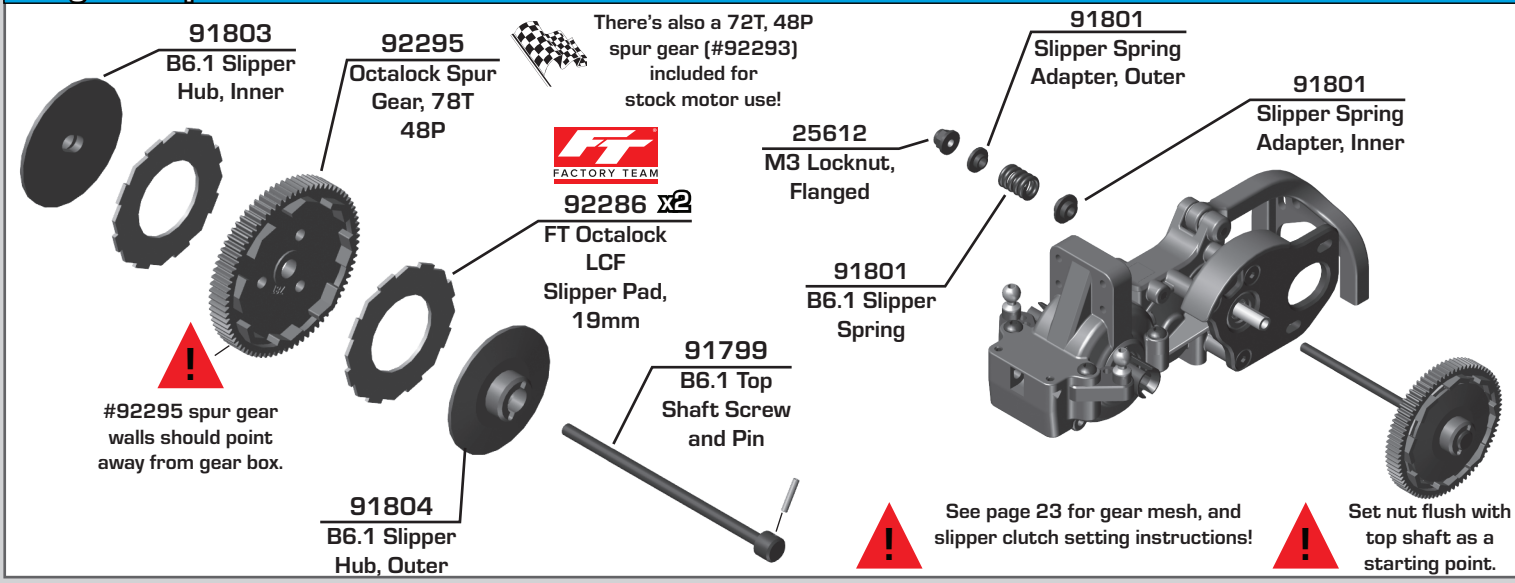
Bag 6 - Step 3



Bag 6 - Step 4



Bag 6 - Step 5

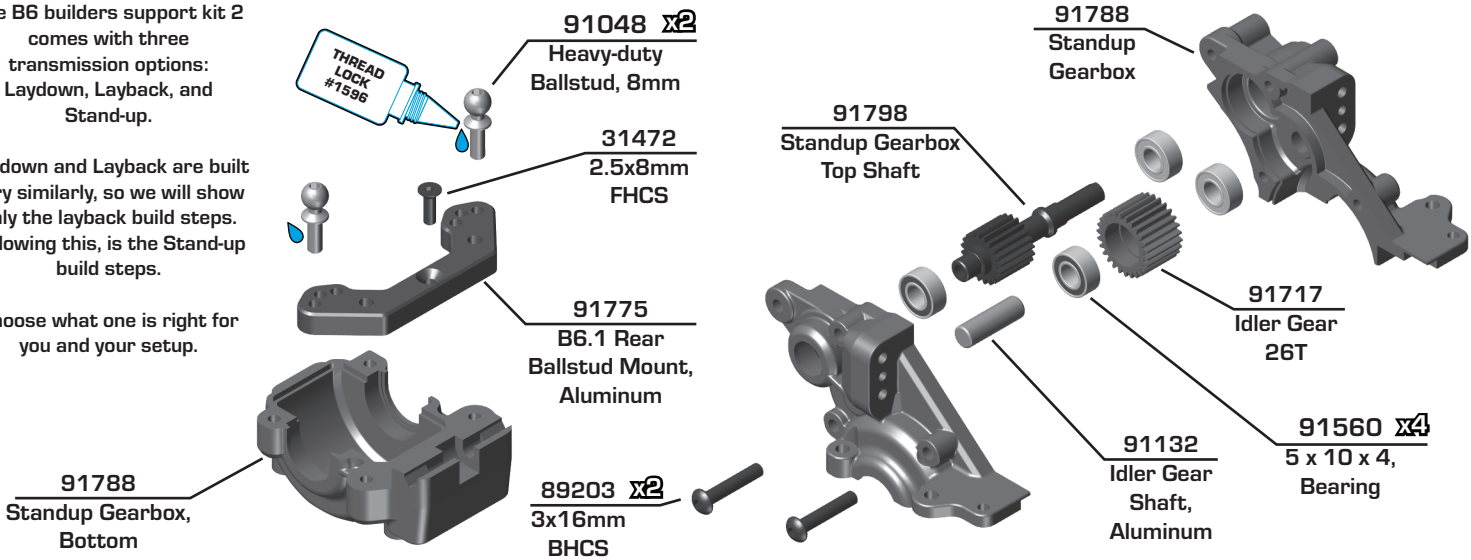


Bag 6 - Step 6

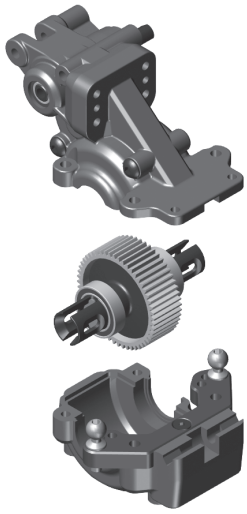
The B6 builders support kit 2 comes with three transmission options: Laydown, Layback, and Stand-up.

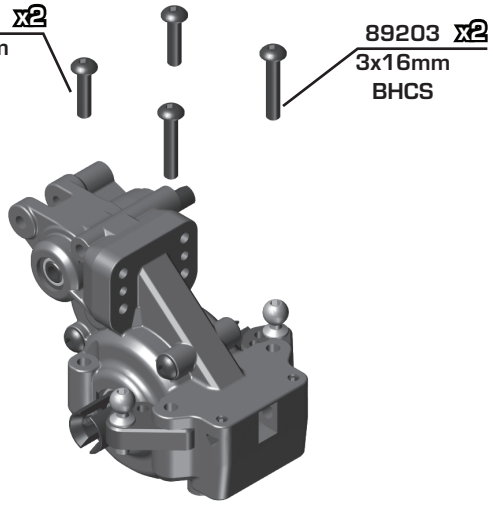
Laydown and Layback are built very similarly, so we will show only the layback build steps. Following this, is the Stand-up build steps.

Choose what one is right for you and your setup.

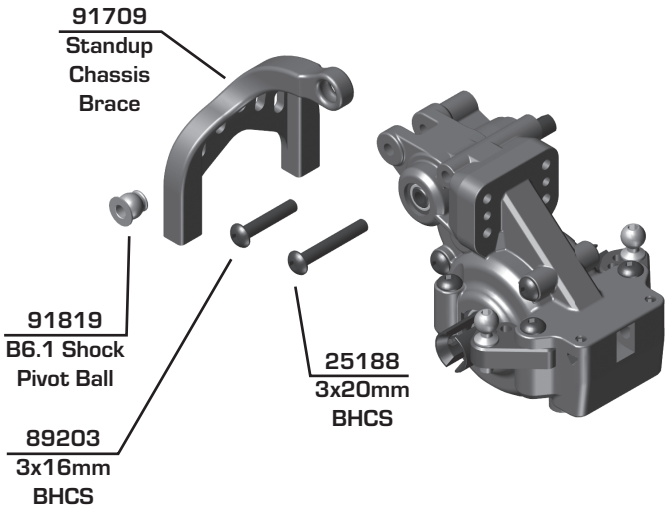


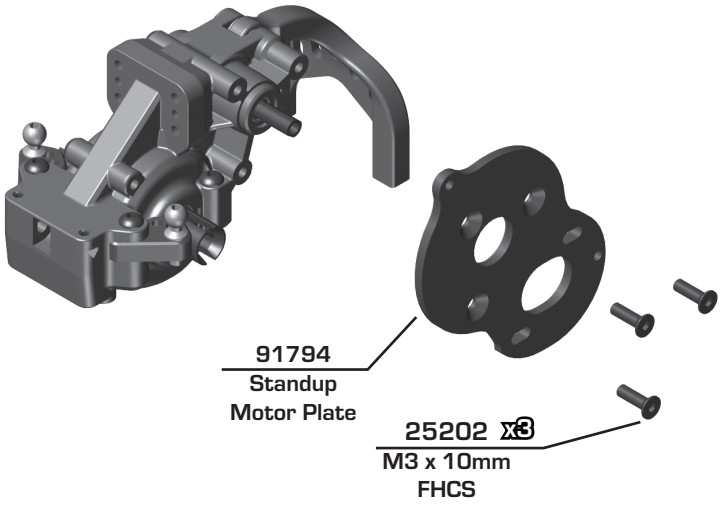
Bag 6 - Step 7



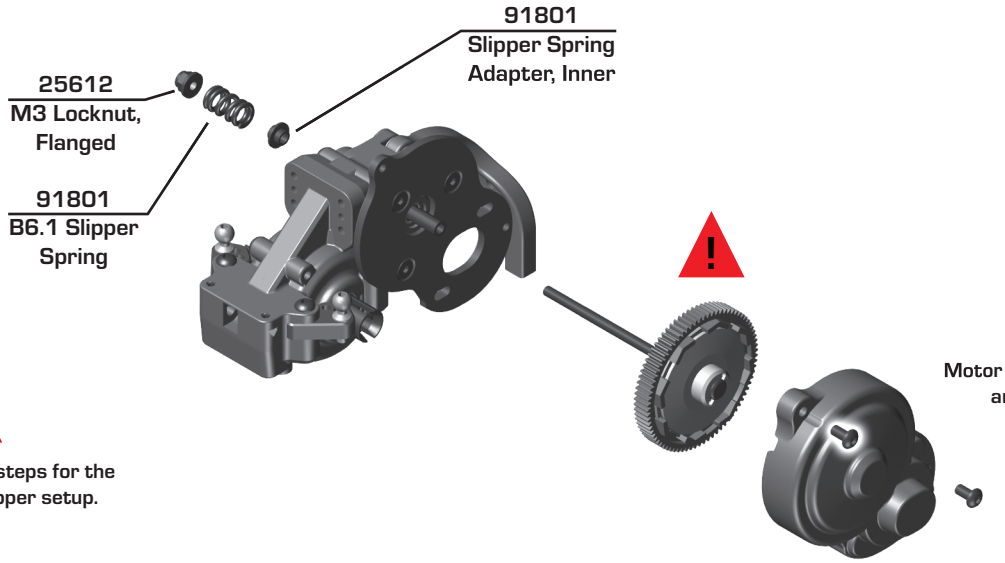


Bag 6 - Step 8





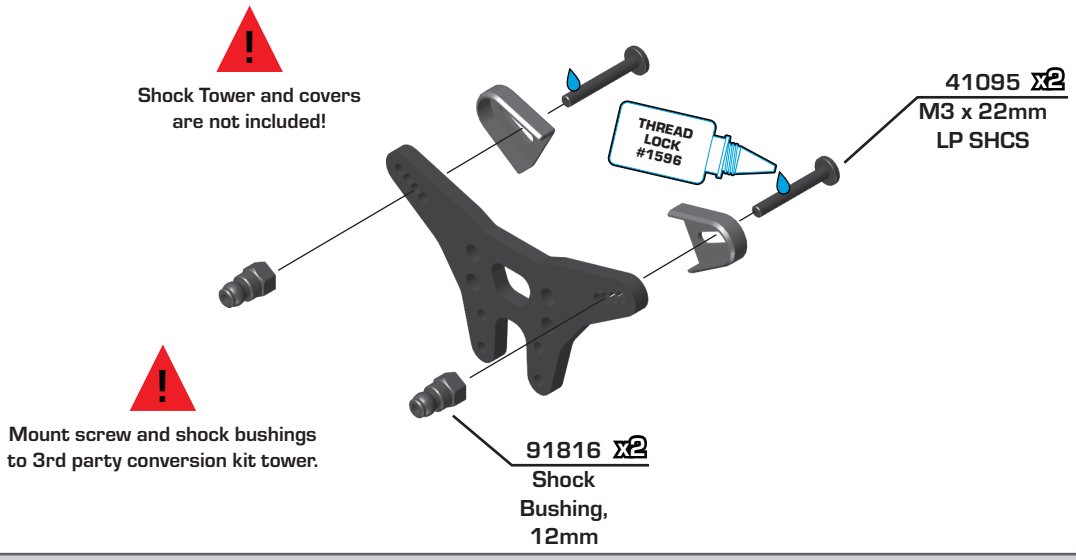
Bag 6 - Step 9



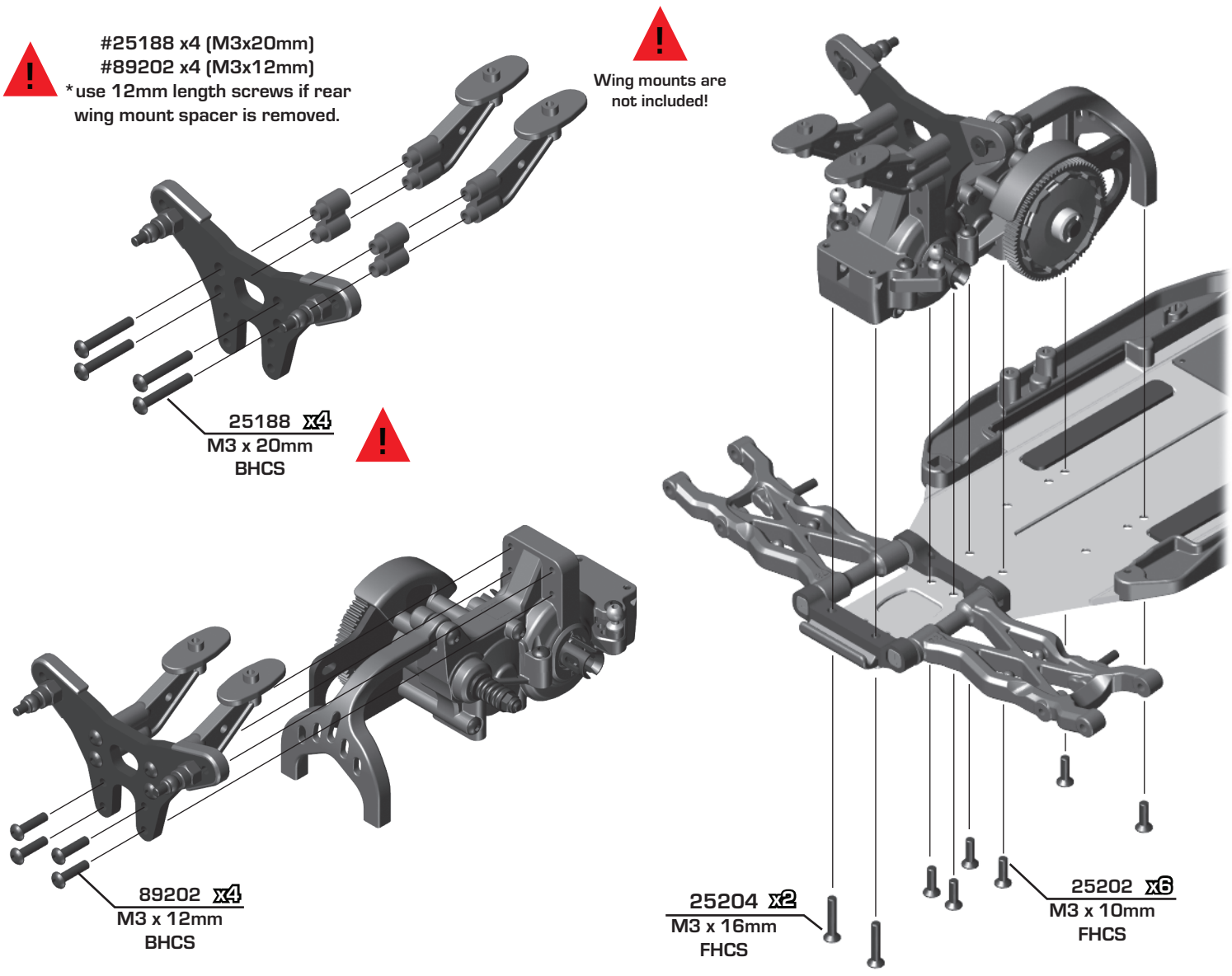
See previous build steps for the spur gear and slipper setup.

Motor cover and hardware are not included!

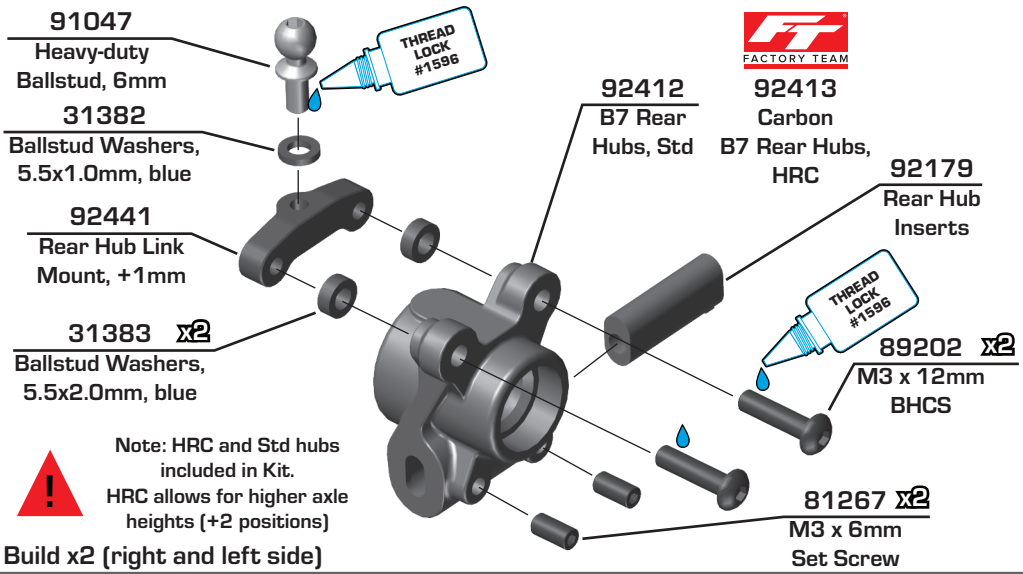
Bag 6 - Step 10



Bag 6 - Step 11



Bag 7 - Step 1

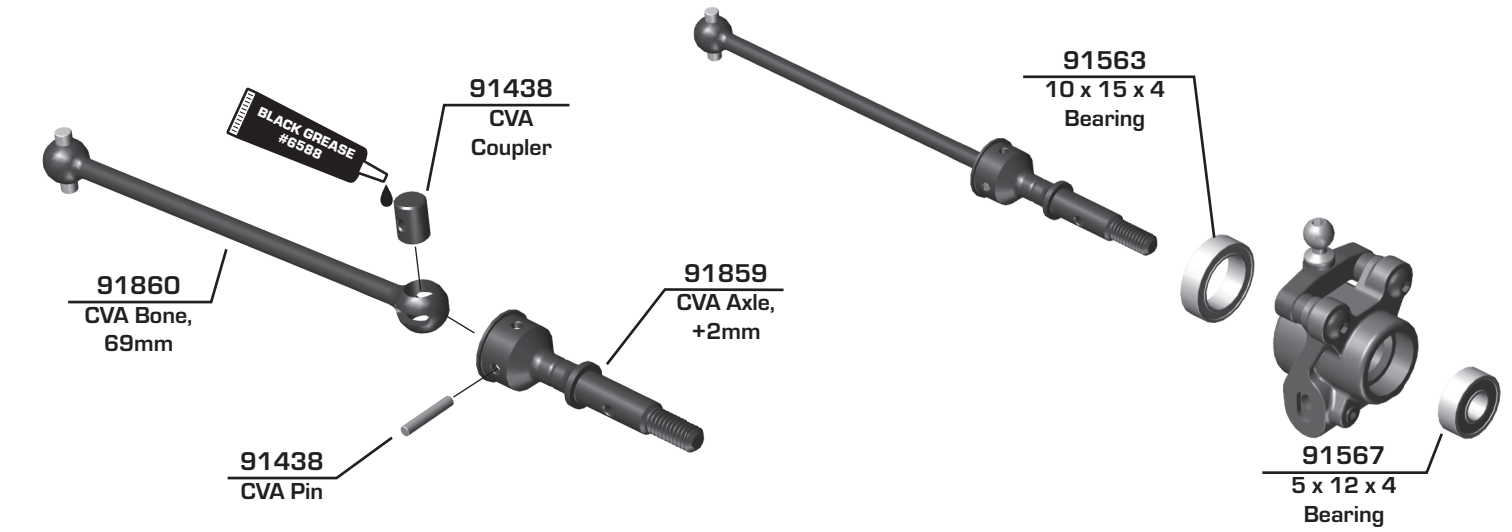


Note: HRC and Std hubs included in Kit.
HRC allows for higher axle heights (+2 positions)

Build x2 (right and left side)

Rear Axle Height		
3 ↑ 0 ↓	3 ↑	+3mm
2 ↑ 1 ↓	2 ↑	+2mm
2 ↓ 1 ↑	1 ↑	+1mm Kit Setup
3 ↓ 0 ↑	0 ↑	+0mm

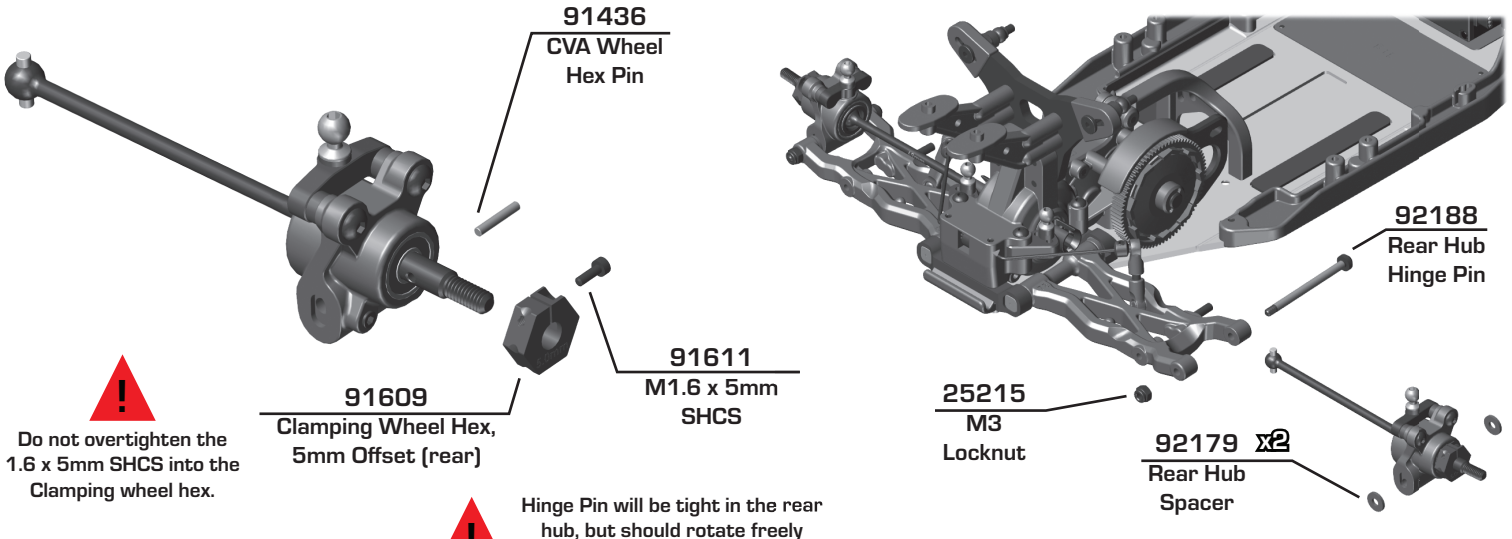
Bag 7 - Step 2



Build x2

Build x2 (right and left side)

Bag 7 - Step 3



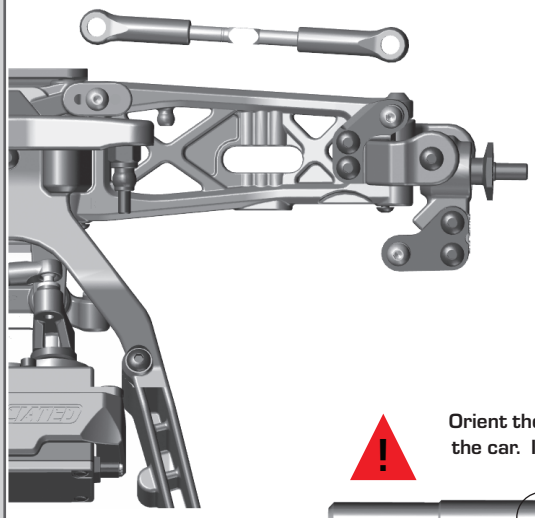
Do not overtighten the 1.6 x 5mm SHCS into the Clamping wheel hex.

Hinge Pin will be tight in the rear hub, but should rotate freely in the rear arms.

Build x2 (right and left side)

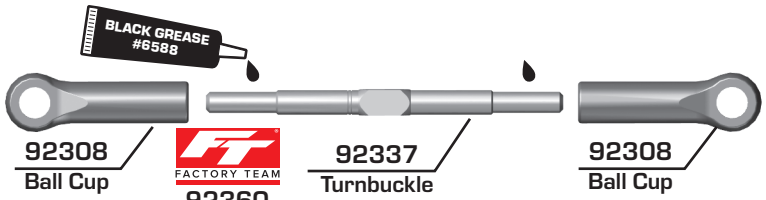
Build x2 (right and left side)

Bag 8 - Step 1



Racers Tip:

Use black grease (#6588) on the threads of the turnbuckles for easier ball cup installation!

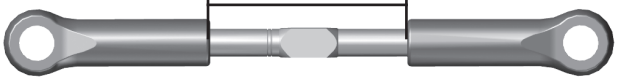


Measurements given are approximation. Camber should be set with a gauge at ride height.

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

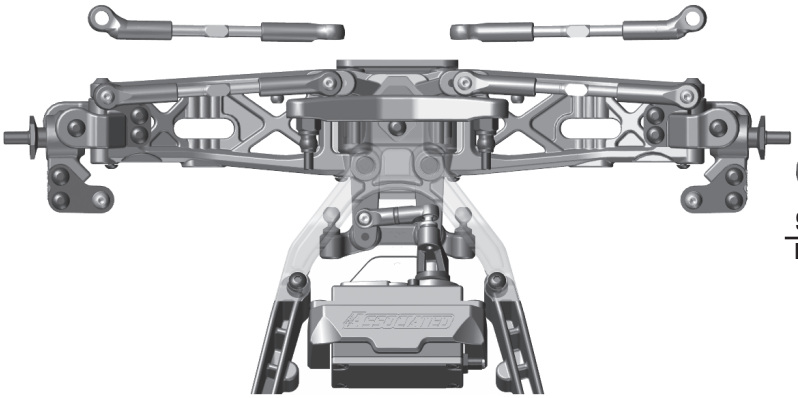
Front Camber Turnbuckle

26.50mm

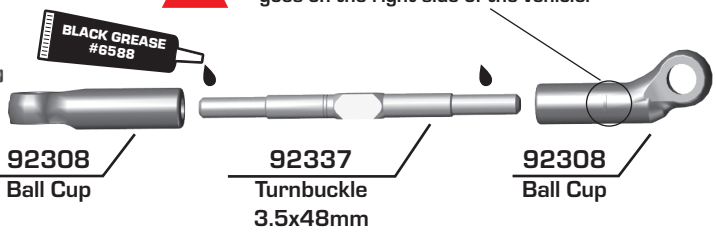


Build x2 (right and left side)

Bag 8 - Step 2



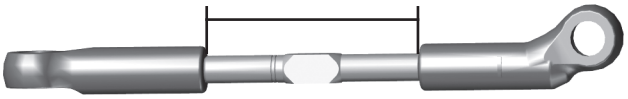
There are two offset ballcups labeled "1" and "2". The ballcup labeled "1" goes on the right side of the vehicle.



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

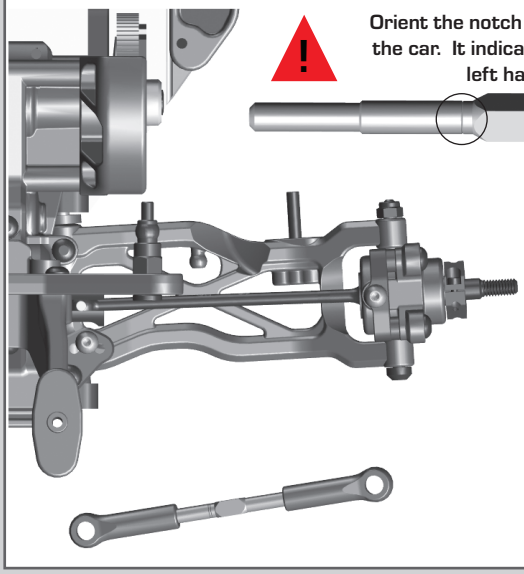
Steering Turnbuckle

28.30mm

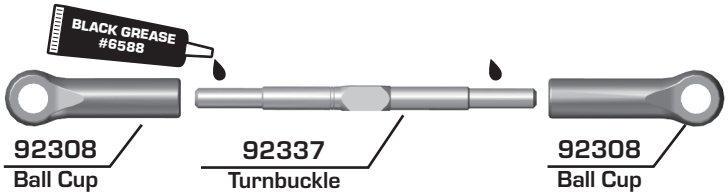


Build x2 (right and left side)

Bag 8 - Step 3



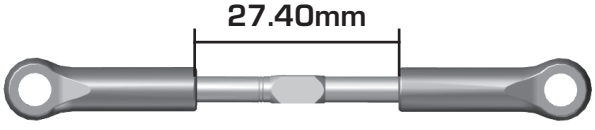
Orient the notch to the left throughout the car. It indicates which end has the left hand threads!



Measurements given are approximation. Camber should be set with a gauge at ride height.

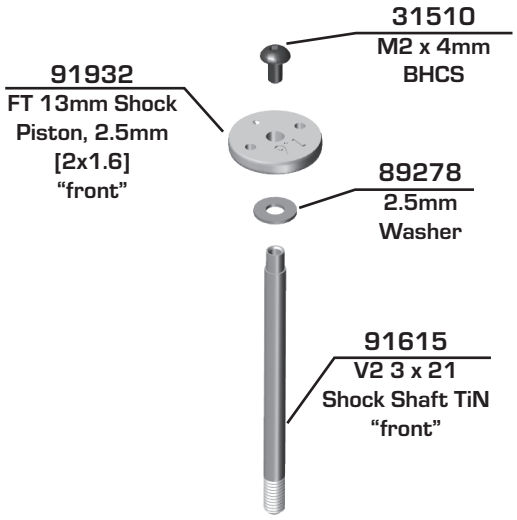
Rear Camber Turnbuckle

27.40mm



Build x2 (right and left side)

Bag 9 - Step 1

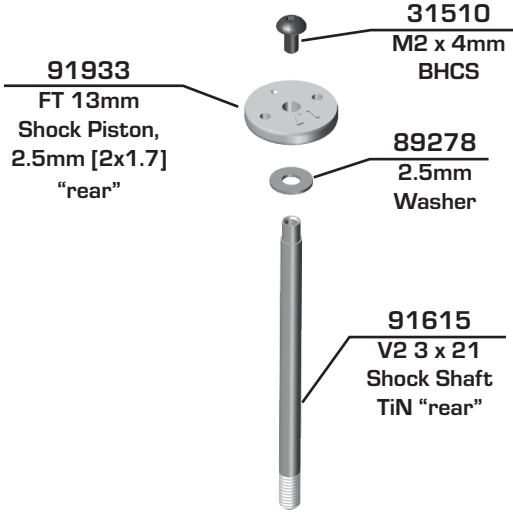


Build x2 front shocks

Mount the shock pistons with the number facing up!

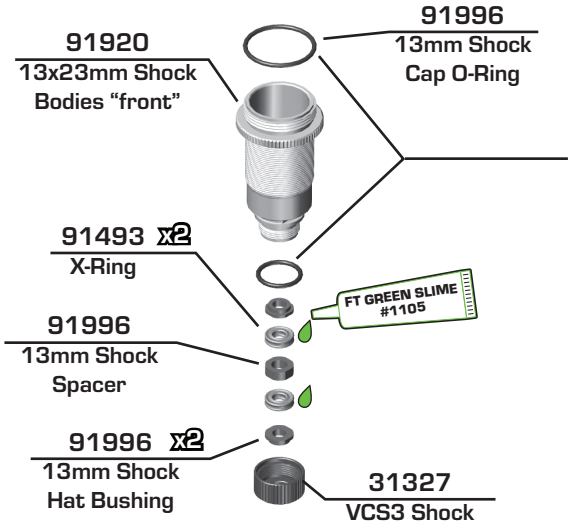
Racers Tip:

Use a marker over the numbers on the pistons to make them easily visible!



Build x2 rear shocks

Bag 9 - Step 2

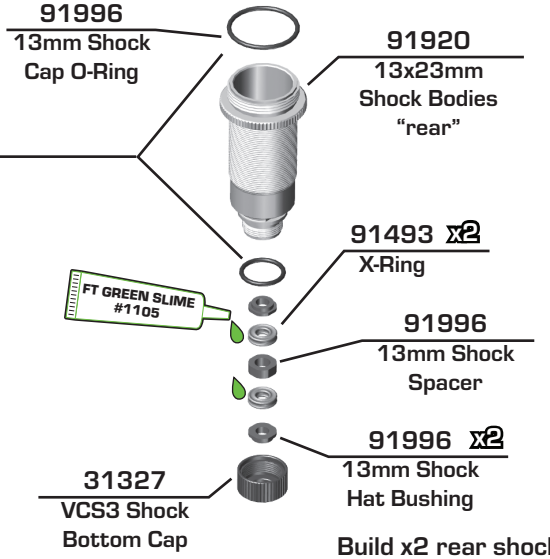


Build x2 front shocks

Lightly rub shock oil on the O-ring before installation!

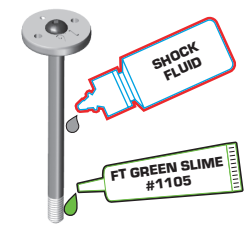
Racers Tip:

Coating the O-rings with green slime (#1105) helps seal & reduce O-ring swell! Green slime not included in kit!



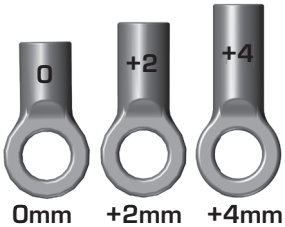
Build x2 rear shocks

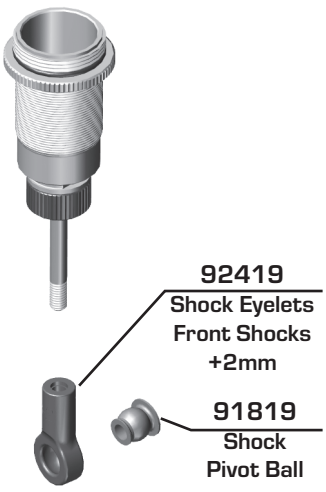
Bag 9 - Step 3



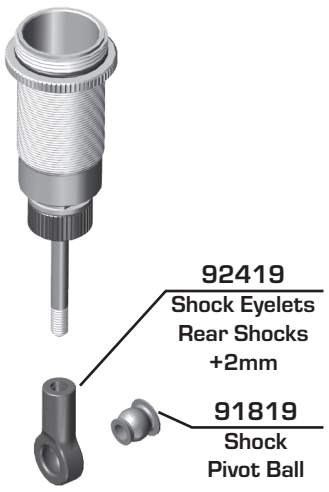
Lightly rub shock fluid or green slime on threads

There are 3 lengths of shock eyelet in the kit. Pay attention to length when building as these affect your droop and uptravel.



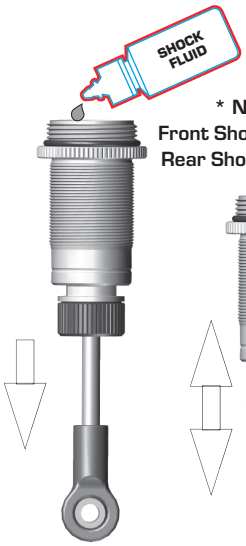


Build x2 front shocks



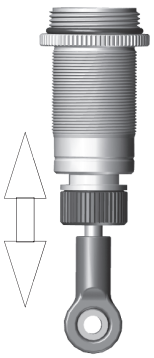
Build x2 rear shocks

Bag 9 - Step 4



* Not included
Front Shock: 30wt #5422
Rear Shock: 30wt #5422

Steps 2-3



Steps 4-5

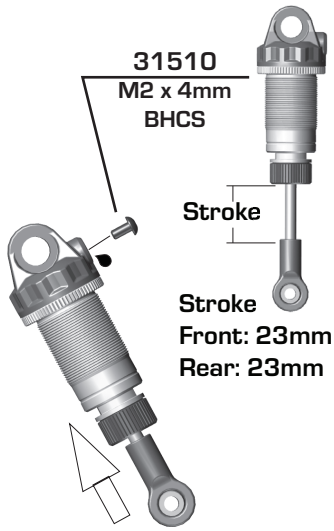
Steps 6-7

91926
13mm Shock Cap

Step 8

Shock Bleeding Steps:

1. Before assembly, get each bleed screw and thread it 1-2 turns into the shock cap, then remove the screw. This will make it easier when you are bleeding your shocks.
2. Pull shock shaft down.
3. Fill shock body 3/4 full with silicone shock fluid.
4. Slowly move the shock shaft up and down to remove air from under the piston.
5. Wait for bubbles to come to surface.
6. Fill shock body to top with silicone shock fluid.
7. Place a drop of oil in the cap and on cap threads.
8. Install cap (without bleed screw) and tighten completely.
9. Slowly compress shaft all the way to bleed excess silicone shock fluid out the hole in the cap (use rag around shock to catch excess fluid).
10. Install M2x4mm button head screw until snug while shaft is fully compressed.



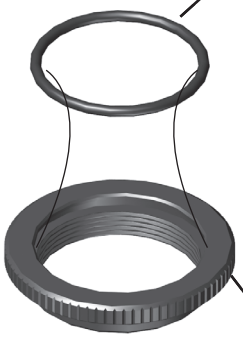
31510
M2 x 4mm BHCS

Stroke

Stroke
Front: 23mm
Rear: 23mm

Steps 9-10

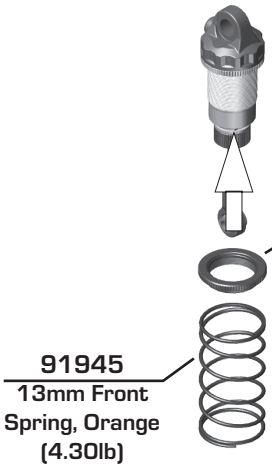
Bag 9 - Step 5



91996 x4
13mm Threaded Collar O-ring

91928 x4
13mm Threaded Collar

Build x4

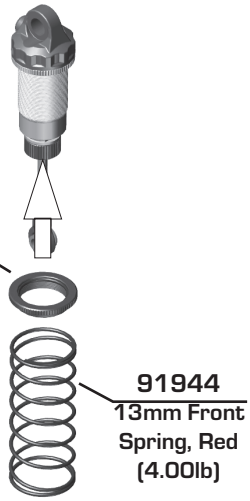


91945
13mm Front Spring, Orange (4.30lb)

Racers Tip:

Use your finger to rub shock fluid on the O-ring for smoother adjustment!

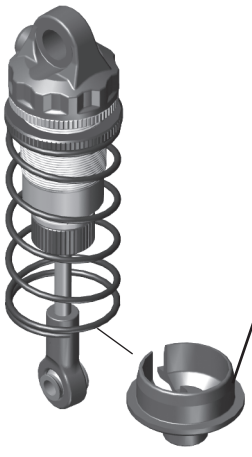
Build x2 Front Shocks



91944
13mm Front Spring, Red (4.00lb)

Build x2 Rear Shocks

Bag 9 - Step 6

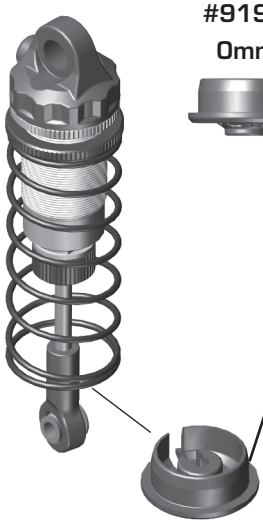


Screw collars to top. Use to adjust ride height.

91966
13mm Shock Spring Cup (Front - 5mm)

Build x2 front shocks

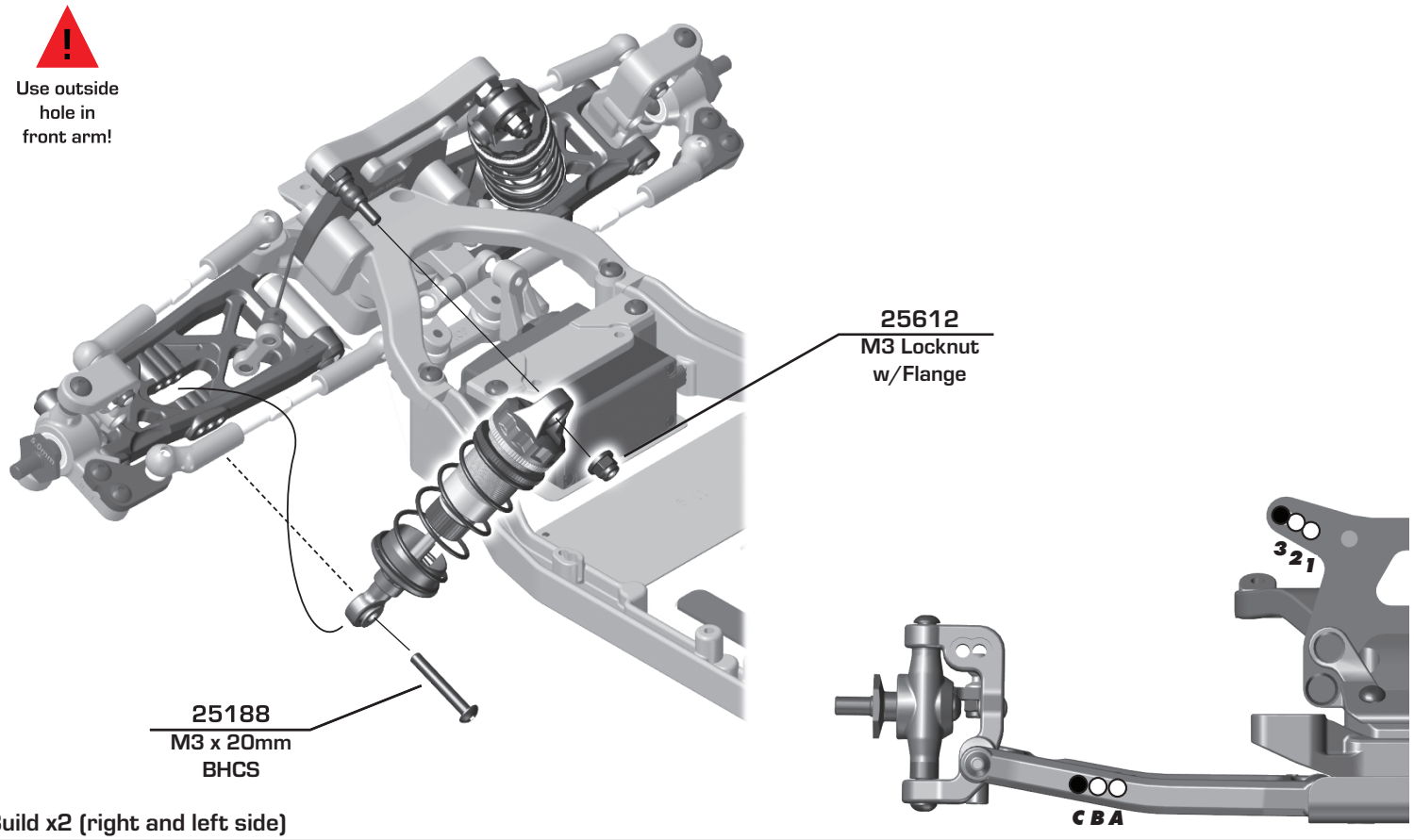
#91966 13mm Shock Spring Cups



91966
13mm Shock Spring Cup (Rear - 5mm)

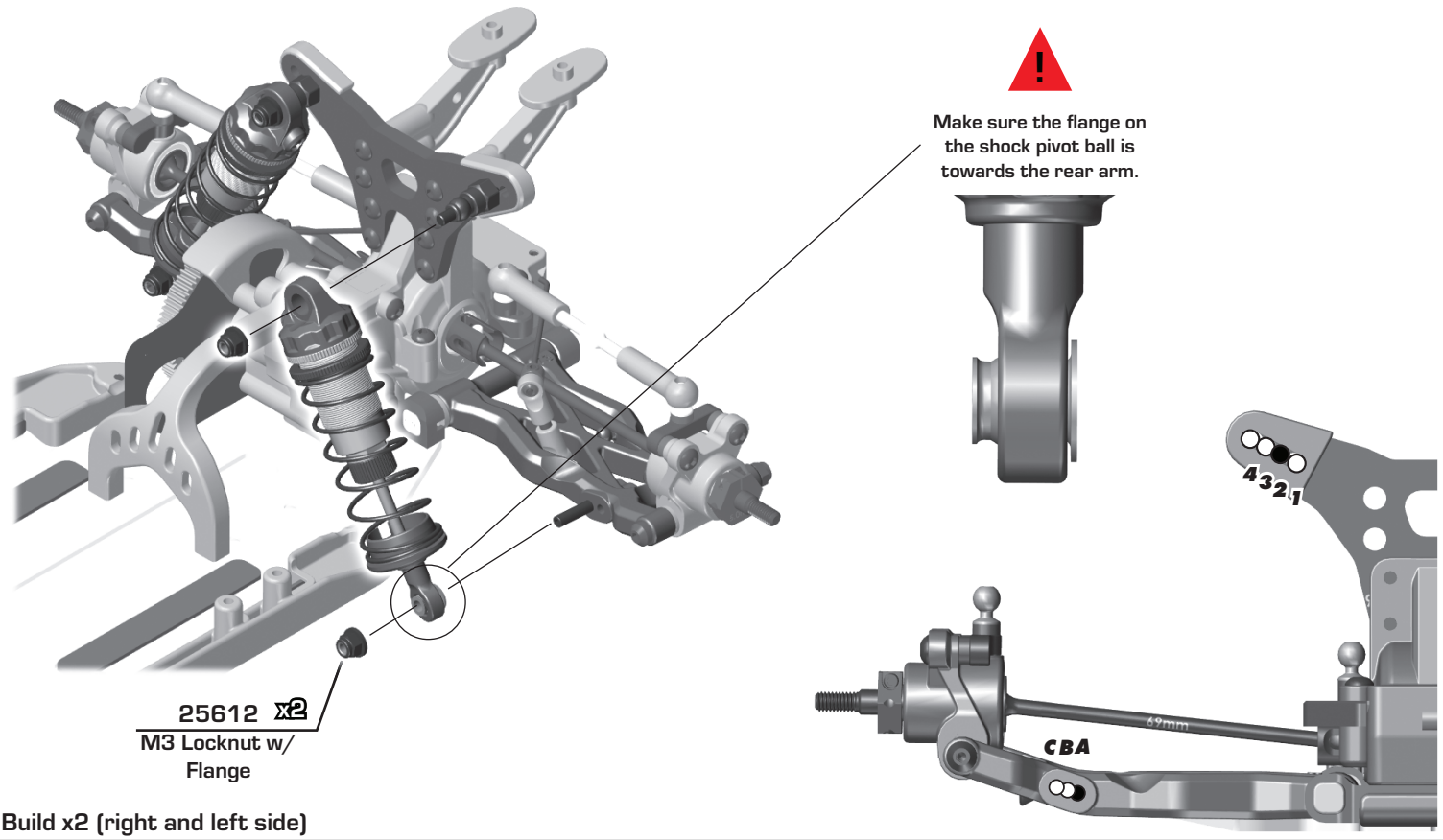
Build x2 rear shocks

Bag 9 - Step 7



Build x2 (right and left side)

Bag 9 - Step 8



Build x2 (right and left side)

:: Tuning Tips - Painting, Beginners

Painting:

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

Tips for Beginners:

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

Rear Arm Mount Pill Insert Setup:

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

Standard Position

Use this position as a reference when changing pill locations.

Toe: 3°
Anti-squat: 2°
Roll Center: +0
Pivot Width: +0

Arm Mount C

Arm Mount D

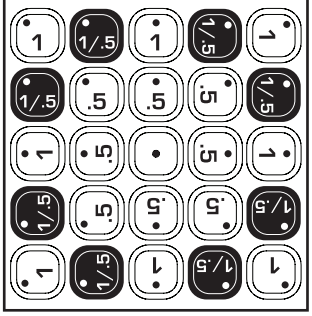
Insert Hole Locations

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

Hole 0.5° or 0.35mm from center

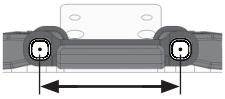
Hole 1.0° or 0.7mm from center

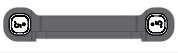
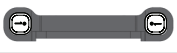
Possible Insert Locations



Pin Width

More distance = wider pivot
Less distance = narrow pivot
*Note: For pin width -1.4mm, use 67mm CVA driveshafts



C Mount	D Mount	
		= +1.4mm
		= +0.7mm
		= 0mm
		= -0.7mm
		= -1.4mm*

Pin Height

Higher pin = Higher roll center
Lower pin = lower roll center

C Mount	D Mount	
		= +0.7°mm
		= +0.35°mm
		= 0mm
		= -0.35°mm
		= -0.7°mm

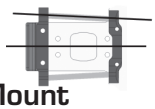
Anti-squat Angle

More angle = More anti-squat
Less angle = Less anti-squat
Shown in 1° changes

C Mount	D Mount	
		= 1°
		= 0°
		= -1°
		= 2°
		= 1°
		= 0°
		= 3°
		= 2°
		= 1°

Toe Angle

More angle = More toe in
Less angle = Less toe in
Shown in 1° changes



C Mount	D Mount	
		= 3°
		= 4°
		= 5°
		= 2°
		= 3°
		= 4°
		= 1°
		= 2°
		= 3°

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

http://bit.ly/B6PillChart

:: Tuning Tips (cont.)

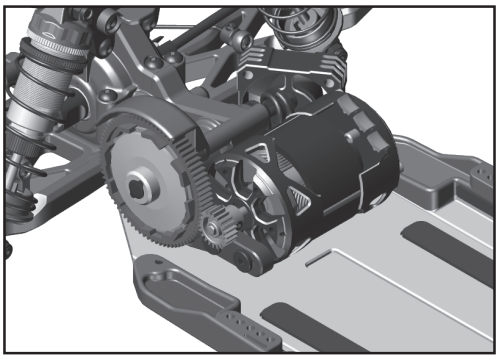
Motor Gearing:

Proper motor gearing will result in maximum performance and run time while reducing the chance of overheating and premature motor failure. The gear ratio chart lists recommended starting gear ratios for the most widely used motor types. Gear ratios will vary depending upon motor brand, wind, and electronic speed control. Consult your motor and electronic speed control manufacturers for more information. Team Associated is not responsible for motor damage due to improper gearing.

B7 Gear Ratio Chart (Internal Gear Ratio 2.60:1)

Motor	Pinion	Spur	Final Drive Ratio
21.5 Reedy S-Plus Brushless	33	72	5.67:1
17.5 Reedy S-Plus Brushless	29	72	6.45:1
13.5 Reedy S-Plus Brushless	27	*75	7.22:1
10.5 Reedy 540-M4 Brushless	24	78	8.45:1
9.5 Reedy 540-M4 Brushless	23	78	8.82:1
8.5 Reedy 540-M4 Brushless	22	78	9.22:1
7.5 Reedy 540-M4 Brushless	21	78	9.65:1
6.5 Reedy 540-M4 Brushless	20	78	10.14:1

*75T spur gear (#92294) not included



Set The Gear Mesh:

You should be able to rock the spur gear back and forth in the teeth of the pinion gear without making the pinion gear move. If the spur gear mesh is tight, then loosen the #41096 screws (p.19) and move the motor away, then try again.
A gear mesh that is too tight or too loose will reduce power and damage the gear teeth.

Diff Height Adjustment:

The diff height adjustment (p.12) is a good way to tune the car for grip level. On high grip with low ride heights, a higher diff height will be a good option. On lower grip with higher ride heights, a lower diff height will be better.

Slipper Clutch:

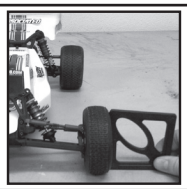
The assembly instructions give you a base setting for your clutch. Turn the nut on the shaft so that the end of the top shaft is even with the outside of the nut. At the track, tighten or loosen the nut in 1/8 turn increments until you hear a faint slipping sound for 1-2 feet on takeoffs. Another popular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

Caster:

Caster describes the angle of the caster block as it leans toward the rear of the vehicle. Positive caster means the kingpin leans rearward at the top. The kit includes three inserts to adjust caster angle at the caster block, 0°, 2.5°, and +5°. The total caster angle is the sum of the kick-up angle and the caster block angle. Standard total caster angle for the B6 is 30°, with 25° kick-up and +5° caster block angle. For less entry steering and more exit steering, try 0° caster block angle.

Front Camber:

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



Testing camber with camber gauge

Rear Camber:

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

ASSOCIATED ELECTRICS
Since 1964

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

call: (949) 544-7500 - fax: (949) 544-7501

Check out the following web sites for all of our kits, current products, new releases, setup help, tips, and racing info!

www.AssociatedElectrics.com

FOLLOW US ON SOCIAL MEDIA

TeamAssociated ReedyPower ElementRC FactoryTeam51	@TeamAssociatedRC @ReedyPower @Element_RC @FactoryTeam_RC	@Team_Associated @ReedyPower	@Associated_Electrics	TeamAssociatedRC ElementRC	TeamAssociated Reedy Element-rc