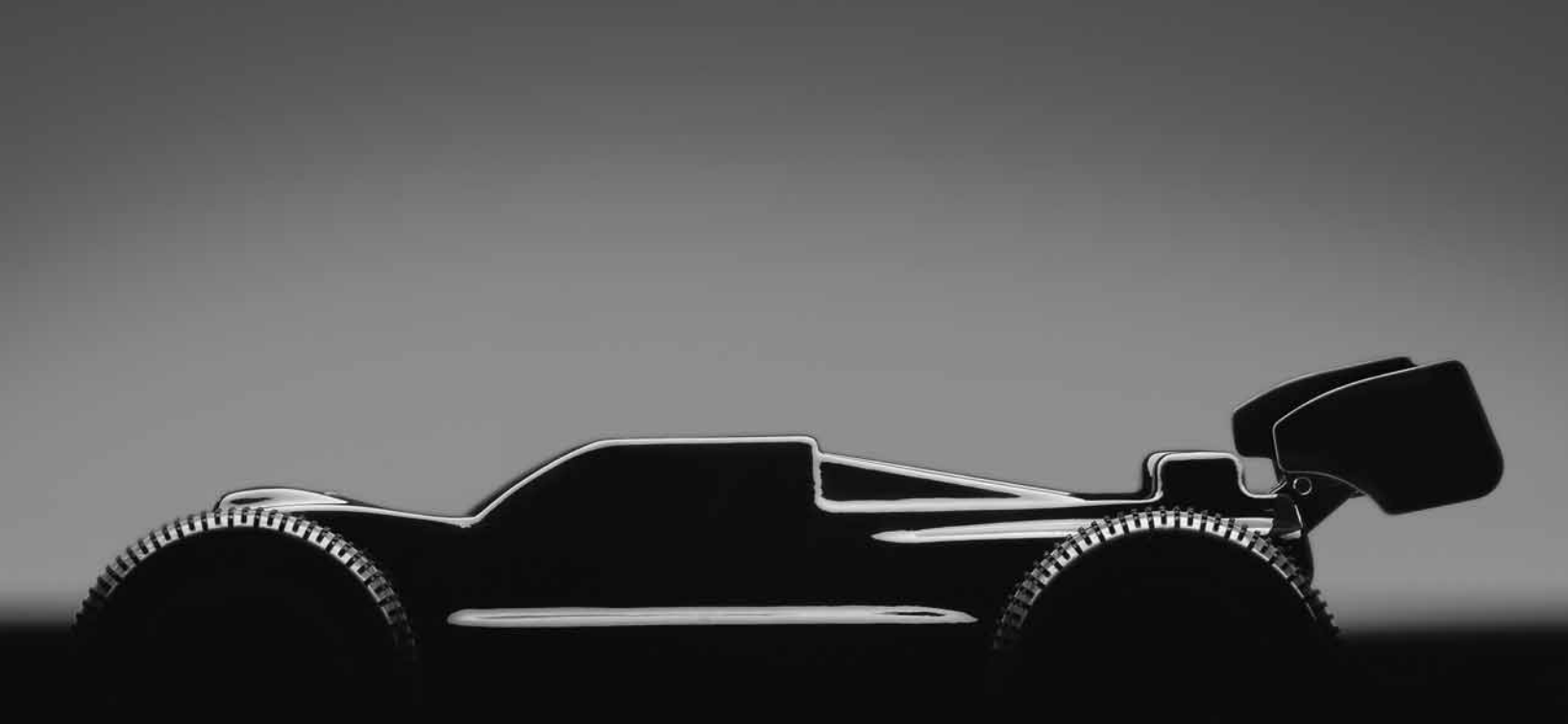


ZO1T™

ASSEMBLY INSTRUCTIONS

O'DONNELL® RACING

i O'DONNELL HISTORY

Every dream has a beginning and an end. This one just happened to start out in the O'Donnell family garage back in 1980. Young Steve O'Donnell wasn't satisfied with the mediocre products that the RC industry had to offer, so he set out to build the best engineered and manufactured products available. Lucky for us, his dream is far from over…

O'Donnell took his vast knowledge of nitro engine tuning and soon designed products that would complement his talents. First came his custom designed and machined aluminum cooling heads for the on-road racing scene. Finding another void in the industry, he also began producing custom tuned pipes to better utilize all of the power these nitro burning monsters could produce.

The efforts of O'Donnell did not go overlooked. Some of the major R/C manufacturers went to O'Donnell Manufacturing to have their trick aluminum parts machined. O'Donnell's meticulous standards and overwhelming knowledge of the products made it a natural fit. Over the past 24 years, O'Donnell Manufacturing has produced parts for such notable companies as Team Associated and Team Losi.

O'Donnell Manufacturing took another major step forward in 1988 when they introduced O'Donnell Racing Fuel…the name that made them famous with racers around the world. Once again, O'Donnell saw a need — for a high-quality fuel specifically blended for the demands of nitro burning car engines. From that point on, O'Donnell Racing Fuel became synonymous with winning. To this day, no other fuel has won as many national championships as O'Donnell Racing Fuel.

To complement the racing fuel, O'Donnell set out in 2000 to design a glow plug that would out-perform and out-last all the competitors. The result? Two U.S. patents and a World Championship. Not bad for someone who started out in his parents' garage. Today, O'Donnell glow plugs are the choice of champions worldwide.

O'Donnell's dreams moved to the next level when he embarked on the ultimate journey…the design and creation of a new 1/8 off-road nitro racing buggy. The plan was simple: Don't try to "re-invent the wheel", ***just refine it…all of it****.*

Now all of the development, refinement and on-track performance of the O'Donnell Z01-B Buggy can be found in the Z01-T Truggy.

ii WARRANTY

- *O'Donnell® guarantees this kit to be free from defects in both material and workmanship at the date of purchase. O'Donnell will warranty this kit for 90 days after the purchase date. O'Donnell will repair or replace, at no charge, the incorrectly made part.*
- *Make sure you save the receipt or invoice you were given when you bought your model! It is your proof of purchase and we must see it before we can honor the warranty. Further, O'Donnell reserves the right to change or modify this warranty without notice.*
- *In that O'Donnell has no control over the final user assembly or material used for final user assembly, no liability shall be assumed nor accepted for any damage resulting from the use by the user of the final user-assembled product. By the act of using the user-assembled product, the user accepts all resulting liability.*

To return your Z01T for repairs covered under warranty you should send your truggy to:

Hobby Services
3002 N. Apollo Drive Suite 1
Champaign, Illinois 61822
Attn: Service Department
Phone: (217) 398-0007 9:00 am-5:00 pm Central Time M-F
E-mail: hobbyservices@hobbico.com
www.hobbyservices.com

If the buyer is not prepared to accept the liability associated with the use of this product, the buyer is advised to return this kit immediately in new and unused condition to the place of purchase.

iii SAFETY PRECAUTIONS

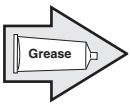
Use care and good sense at all times when operating this radio controlled truggy. Failure to use this vehicle in a safe, sensible manner can result in injury or damage to property. You and you alone must insure that the instructions are carefully followed and all safety precautions are obeyed.

- *Do not operate the Z01T near people. Spectators should be behind the driver or at a safe distance away from the vehicle.*
- *Water can cause the electronics to short out and can cause permanent damage.*
- *Always turn on the transmitter before turning on the receiver.*
- *Fully extend the transmitter antenna before operating your vehicle.*
- *Before turning on your radio system, check to make sure that no one else is running on the same frequency.*
- *The engine and exhaust produce quite a bit of noise. Do not run this vehicle when or where it can disturb others.*
- *The engine and exhaust can become very hot. Avoid touching any of these parts during use and until they have cooled down.*
- *Model engine fuel is poisonous. Make sure you read and follow all of the precautions on the fuel container. Keep fuel out of the reach of children.*
- *Model engine fuel is flammable and when ignited has a flame that is difficult to see. Avoid sparks, flames, smoking, or any other ignition source when fuel is near.*
- *The engine emits harmful fumes just like real vehicles. Do not operate this model indoors.*
- *Avoid running the truggy in cold weather. The plastic and metal parts can become brittle at low temperatures. In addition, grease and oil become thick, causing premature wear and poor performance.*

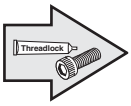
iv GENERAL BUILDING TIPS

- *Read the instructions carefully before starting assembly.*
- *We recommend building the kit on a towel to help prevent small parts and screws from rolling off your work surface.*
- *Before turning on your radio system, check to make sure that no one else is running on the same frequency.*
- *Do not use an electric screwdriver/drill for assembling the kit. This could cause parts to strip out from overtightening.*
- *Use a quality threadlock where specified in the manual.*

- *Parts for step included in this parts bag.*

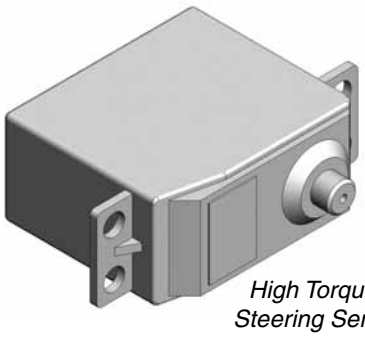


- *Apply grease to part(s) indicated.* ***Note:*** *Always use black moly grease on areas indicated.*

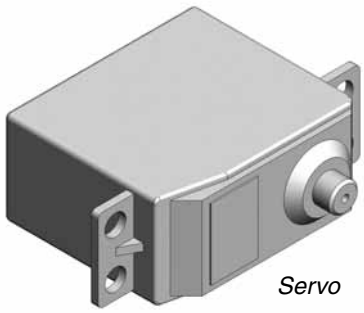


- *Apply threadlock to screw(s) indicated.* ***IMPORTANT: Clean oil or film from screws before applying threadlock.***

Transmitter



High Torque
Steering Servo



Servo

Receiver

5-Cell Receiver
Hump Pack

Engine

Glow Plug
(and spares)

Tires

Header & Pipe

Tire Inserts

Threadlock

CA Tire Glue

Diff, Shock & Air Filter Oils

Fuel Bottle

3.0mm Hex Wrench

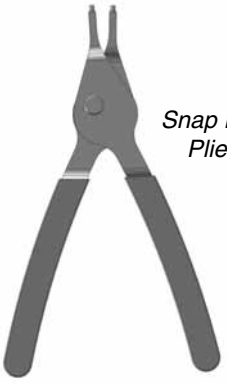
2.5mm Hex Wrench

2.0mm Hex Wrench

1.5mm Hex Wrench

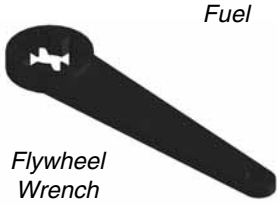
Hobby Knife

Clutch Tool



Snap Ring Pliers

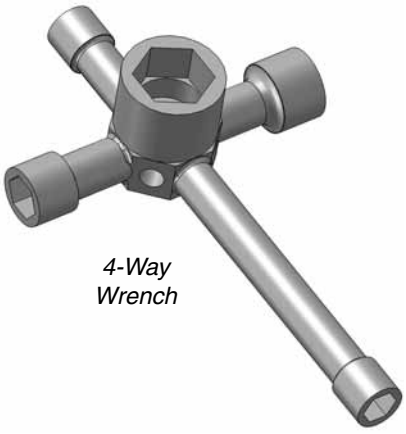
Fuel



Flywheel Wrench

Body Scissors

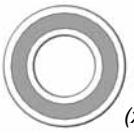
Glow Plug Ignitor



4-Way Wrench

1 DIFF HOUSING

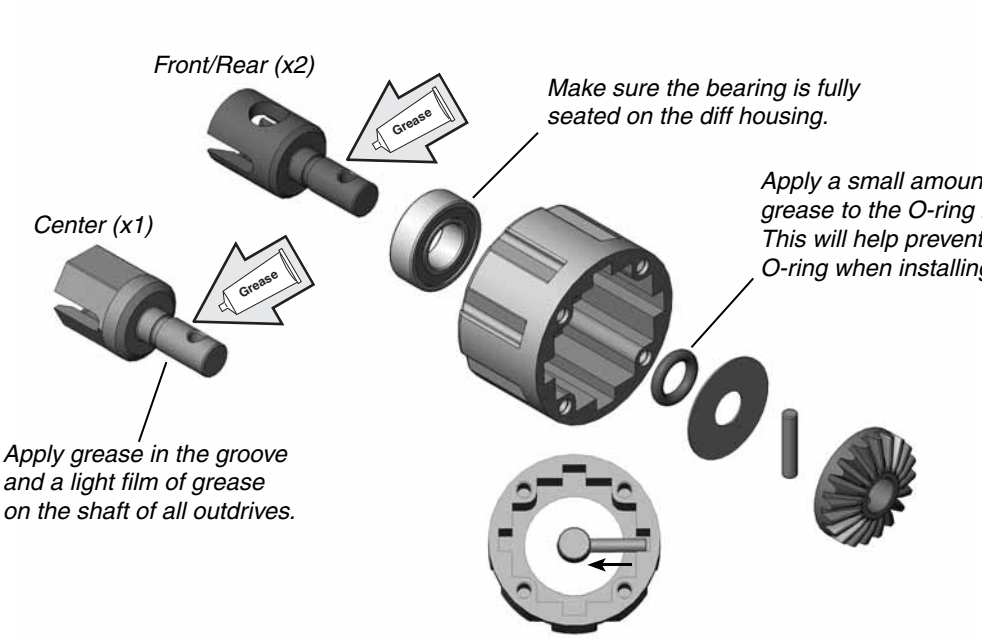
HARDWARE



(x3)
8x16mm Bearing

(x3)
Diff Outdrive O-Ring

(x3)
Sun Backing Washer

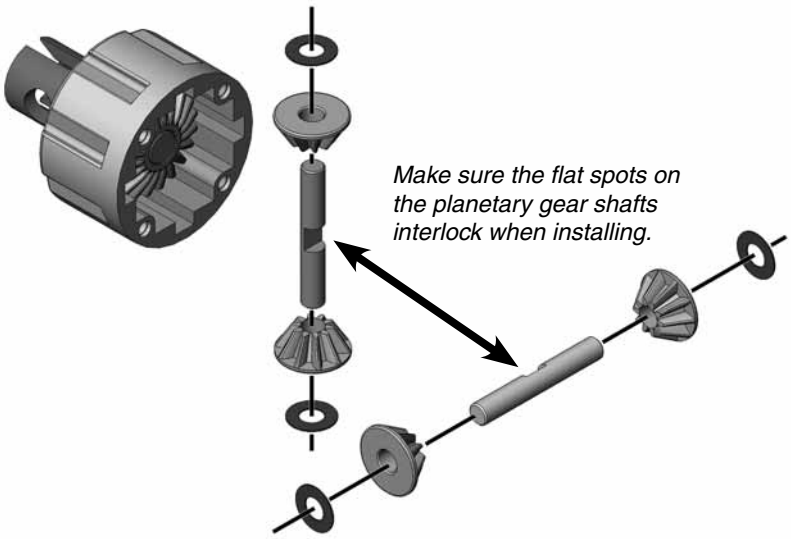


1

2 DIFF PLANETARY GEARS

HARDWARE

(x12)
Satellite Backing Washer



1

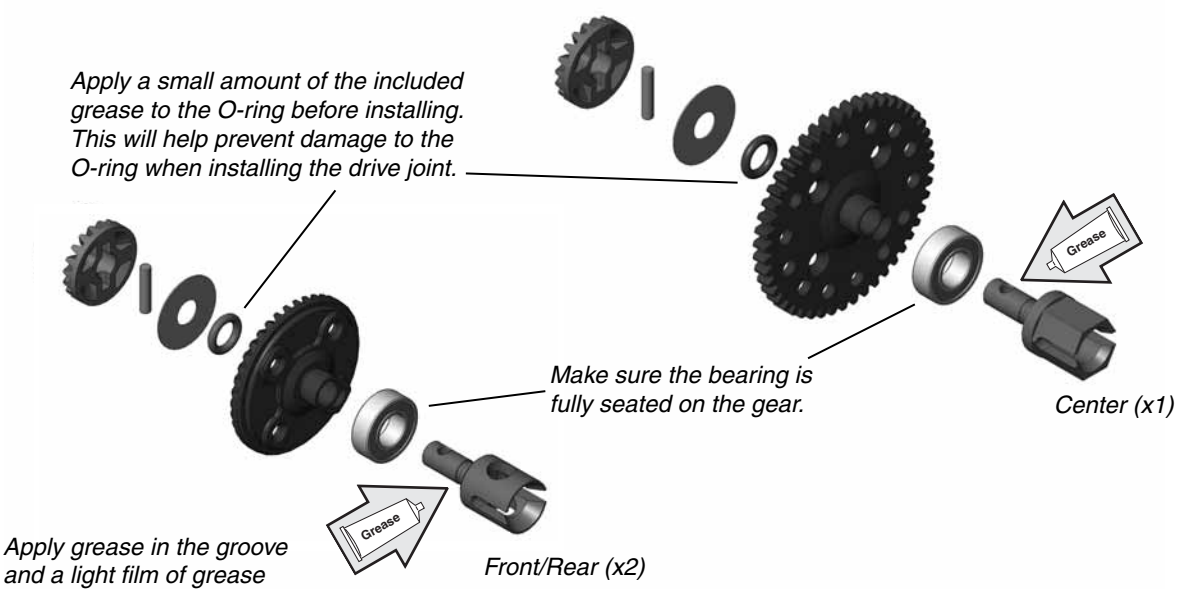
3 SPUR/DIFF GEARS

HARDWARE

(x3)
8x16mm Bearing

(x3)
Diff Outdrive O-Ring

(x3)
Sun Backing Washer



1

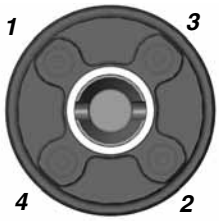
4 DIFF OIL

HARDWARE

(x12)
3x12mm FH Screw

*Fill the diff until the planetary gear shafts are completely covered with diff oil. When using heavy oils, you need to allow the oil to settle and add oil if necessary. Do not overfill! (**Note:** See set-up sheet for recommended diff oils.)*

Build the front, rear and center diffs.



Finish tightening the diff gear screws in order. This will help make sure the gear is mounted flat on the diff housing and the housing is properly sealed.

1

5 CENTER DIFF MOUNTS

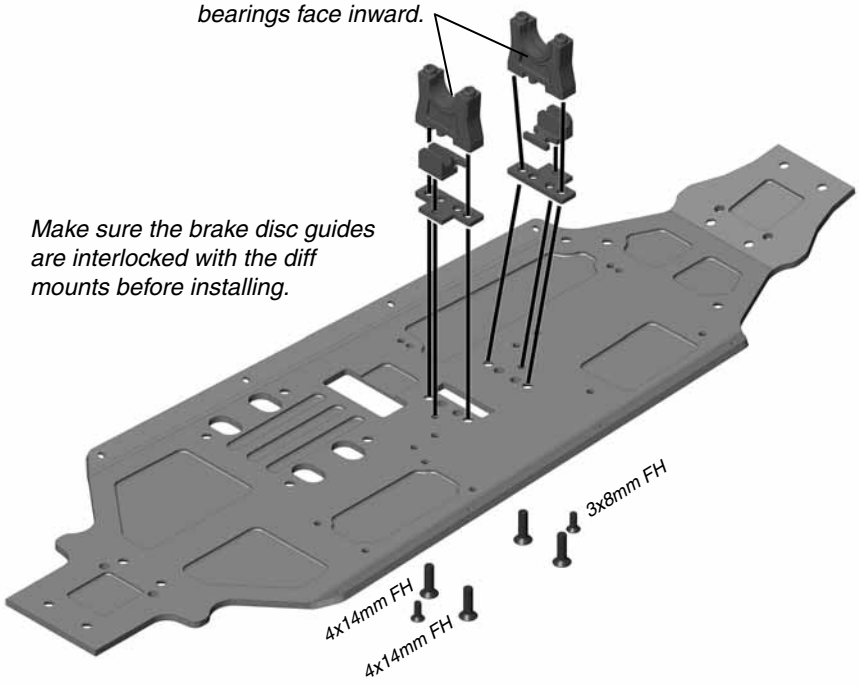
HARDWARE

(x2)
3x8mm FH Screw

(x4)
4x14mm FH Screw

IMPORTANT!
The grooves for the diff bearings face inward.

Make sure the brake disc guides are interlocked with the diff mounts before installing.



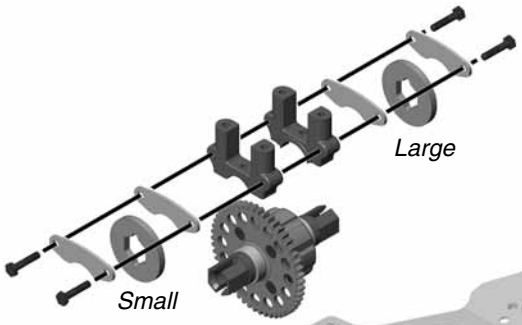
2

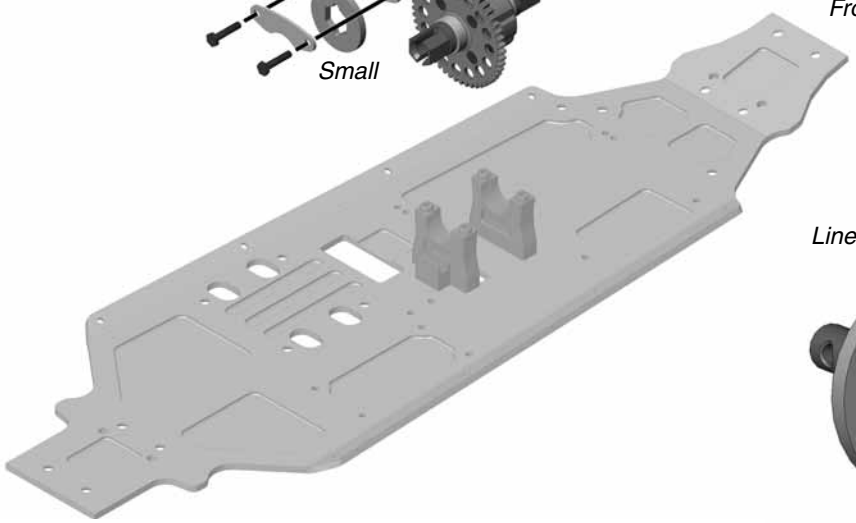
6 MOUNT THE CENTER DIFF

HARDWARE

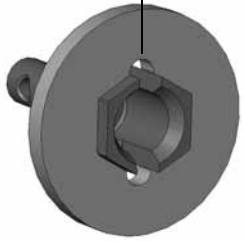
(x4)
Brake Pad Bolt

IMPORTANT!
Brake pad bolt adjustment must be correct and equal front and rear.





Line up brake disc notch.



2

7 BRAKE ACTUATOR & FUEL FILTER MOUNT

HARDWARE

(x4)
3x35mm BH Screw

(x2)
5x8mm Flanged Bearing

(x2)
3x4mm Set Screw

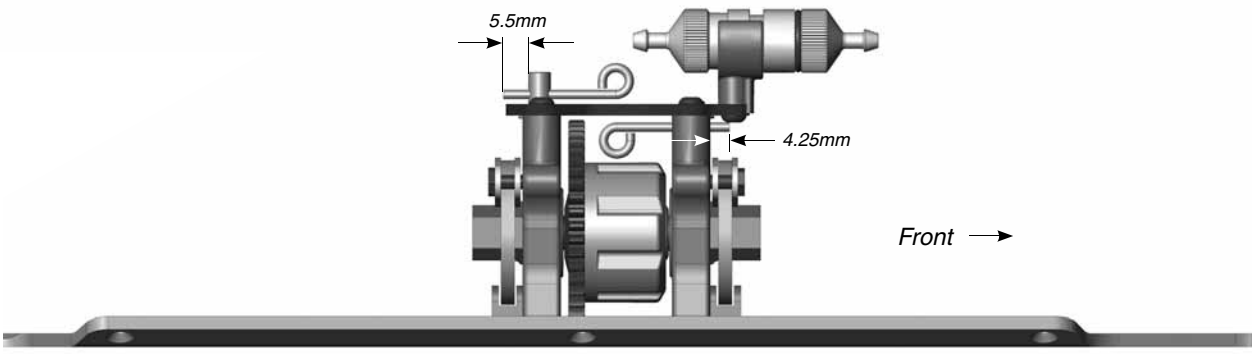
(x2)
3x8mm BH Screw

IMPORTANT!

Mount the fuel filter mount to the center upper brace before installing the center upper brace to the center diff mounts.

IMPORTANT!

Make sure the brake actuators move freely in the mounts.



2

8

REAR DIFF JOINT

HARDWARE

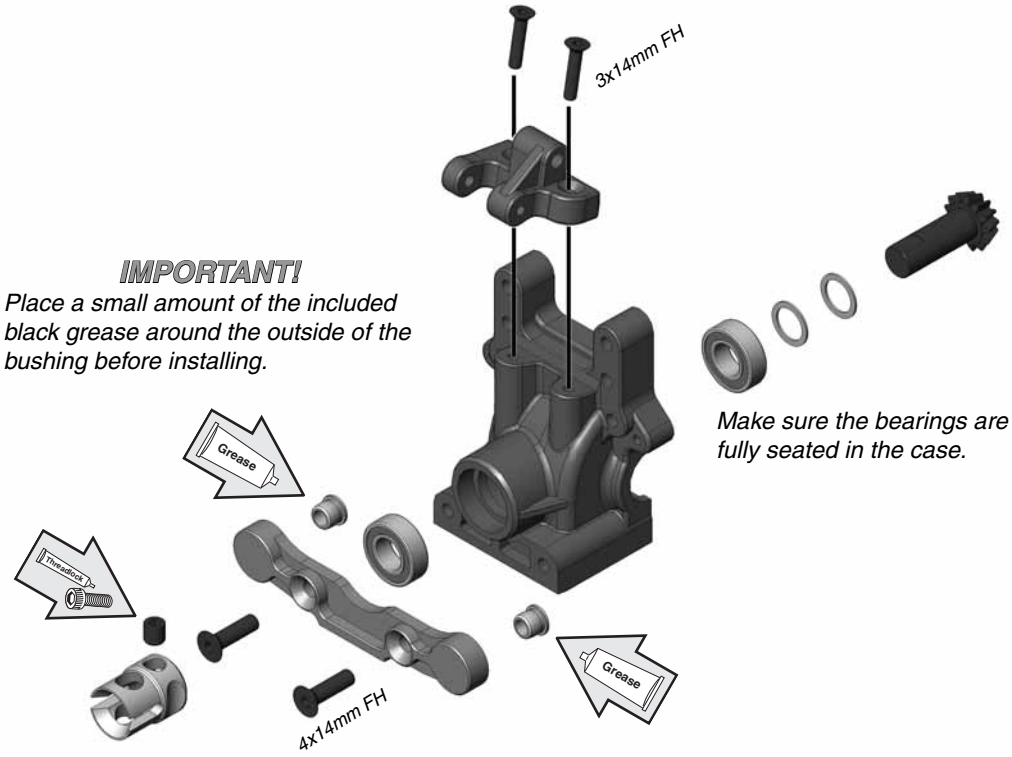
(x2)
4x14mm FH Screw

(x2)
8x16mm Bearing

(x1)
5x5mm Set Screw

(x2)
Pinion Shaft Shim

(x2)
3x14mm FH Screw



IMPORTANT!

Place a small amount of the included black grease around the outside of the bushing before installing.

Make sure the bearings are fully seated in the case.

3

9

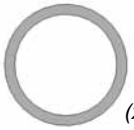
REAR DIFF HOUSING

HARDWARE

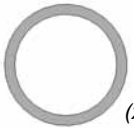
(x2)
4x40mm FH Screw

(x2)
4x8mm Set Screw

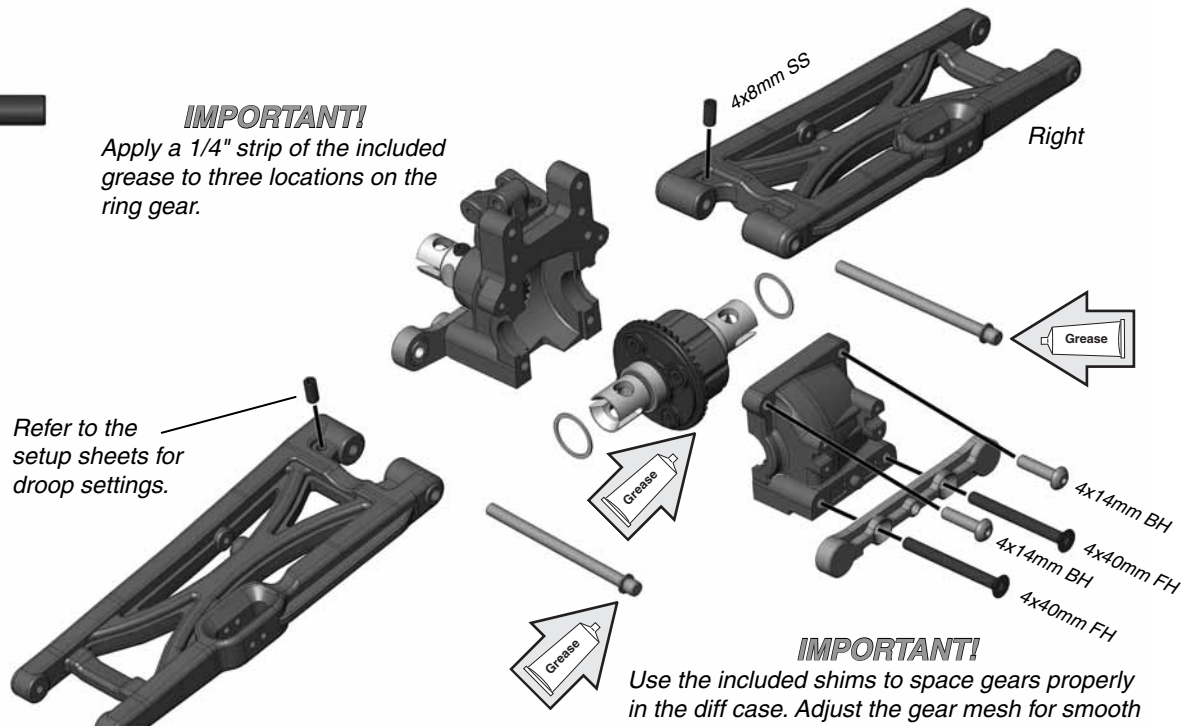
(x2)
4x16mm BH Screw



(x2)
Silver (Thick) Diff Shim



(x2)
Gold (Thin) Diff Shim



IMPORTANT!

Apply a 1/4" strip of the included grease to three locations on the ring gear.

IMPORTANT!

Use the included shims to space gears properly in the diff case. Adjust the gear mesh for smooth rotation without excessive play. The number of shims needed, and the side on which they must be placed, may vary.

3

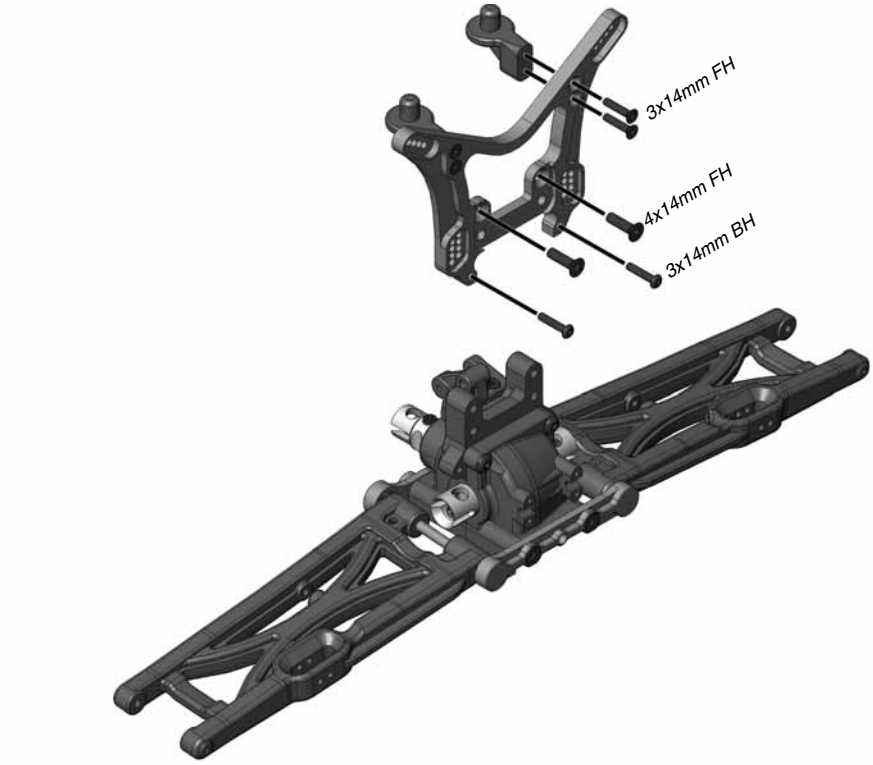
10 REAR SHOCK TOWER

HARDWARE

(x2)
4x14mm FH Screw

(x4)
3x14mm FH Screw

(x2)
3x14mm BH Screw



3

11 REAR OUTDRIVES

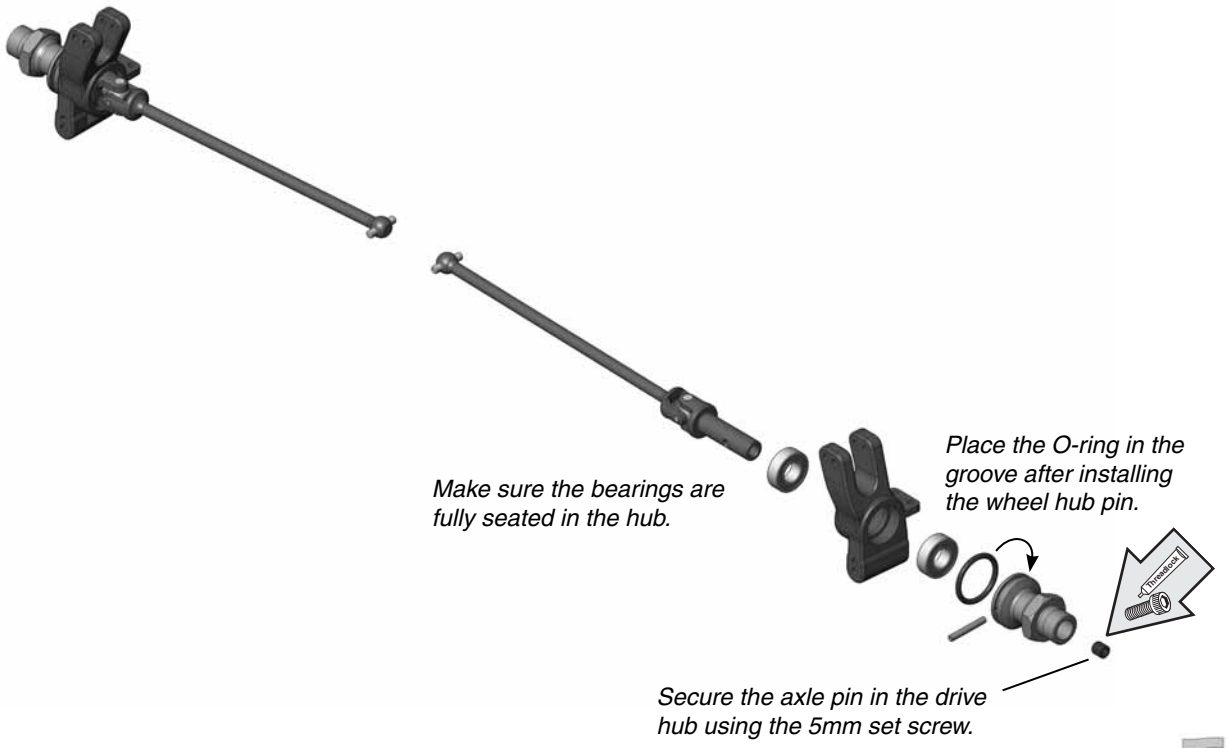
HARDWARE

(x2)
Wheel Hub Pin

(x4)
8x16mm Bearing

(x2)
5x5mm Set Screw

(x2)
O-Ring



3

12

REAR UPPER LINK

HARDWARE

(x2)
3x25mm BH Screw

(x2)
3x6mm BH Screw

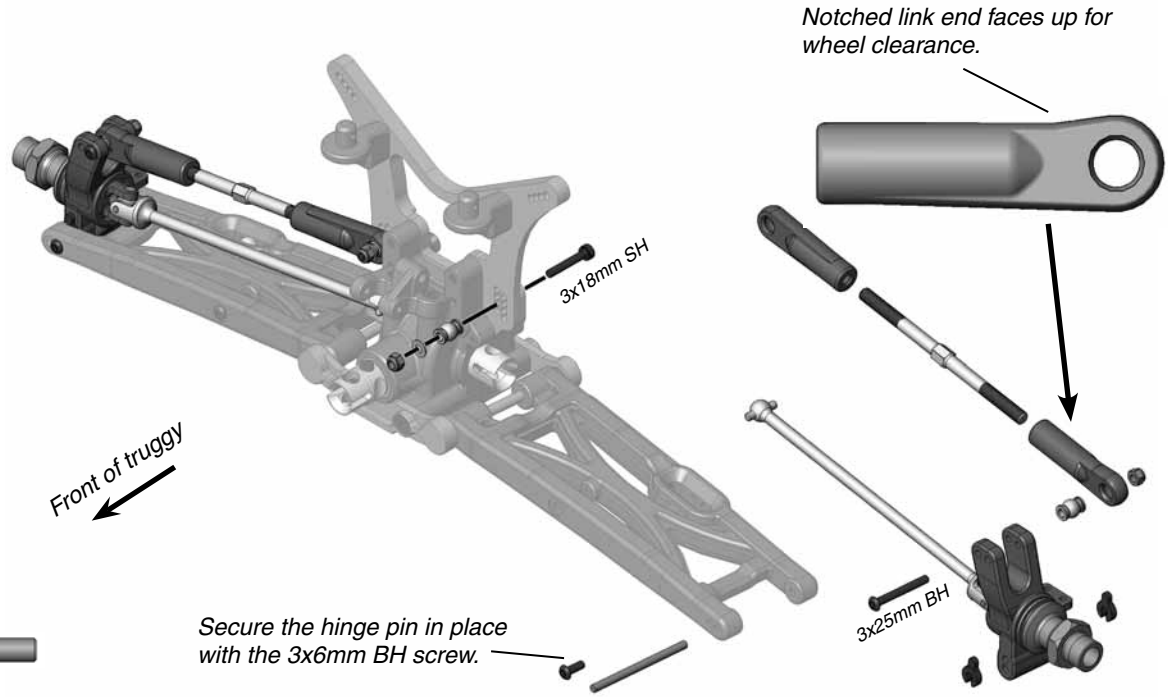
(x4)
Standard Rod End Ball

(x2)
3mm Washer

(x2)
3x18mm SH Screw

(x4)
3mm Lock Nut

(x2)
Outer Lower Rear Hinge Pin



3

13

WING MOUNT

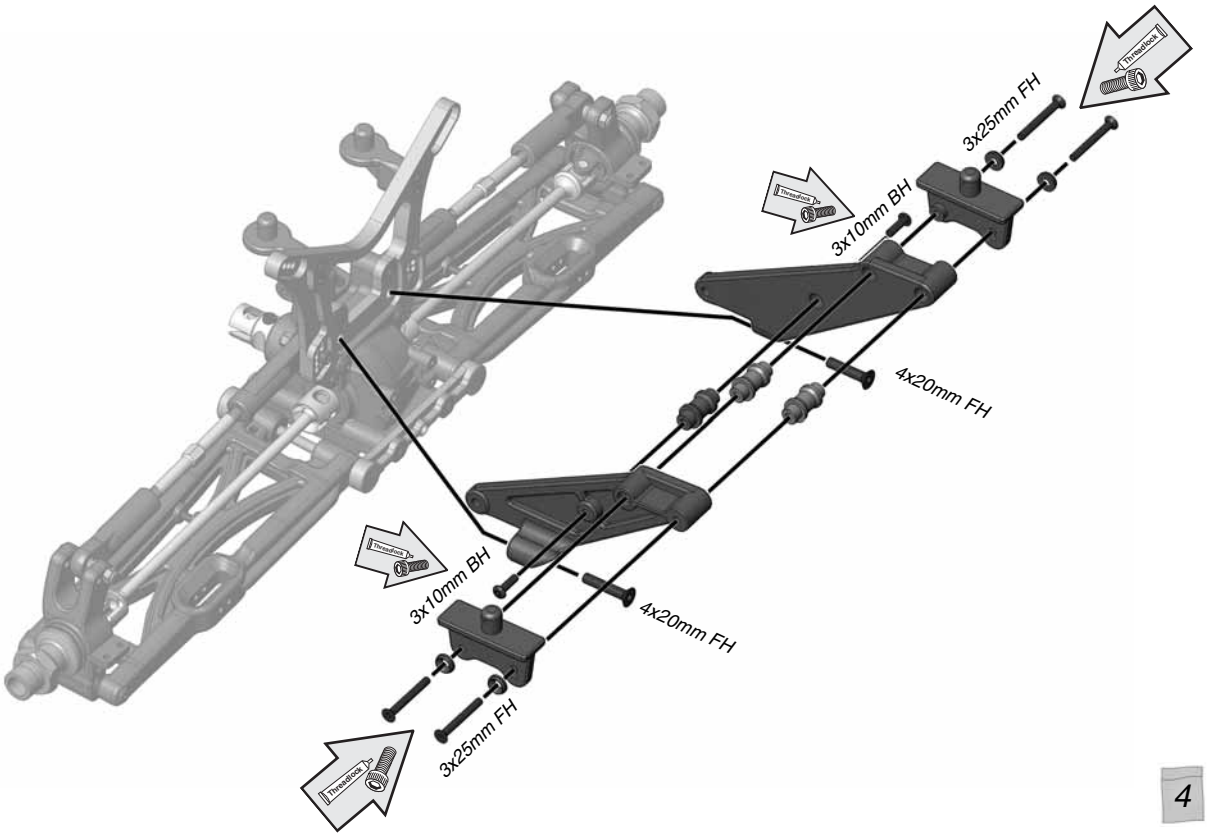
HARDWARE

(x2)
3x10mm BH Screw

(x4)
3x25mm FH Screw

(x4)
3mm Countersunk Washer

(x2)
4x20mm FH Screw



4

14 REAR SWAYBAR

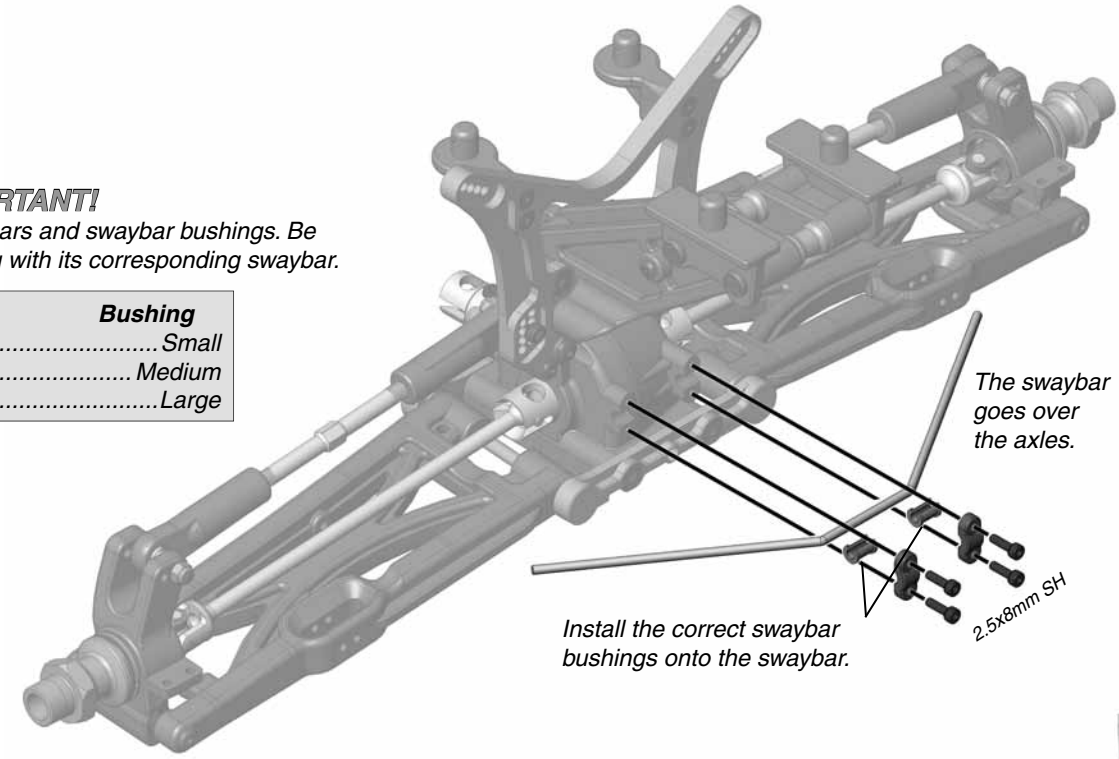
HARDWARE

(x4)
2.5x8mm SH Screw

IMPORTANT!

There are three sizes of swaybars and swaybar bushings. Be sure to use the correct bushing with its corresponding swaybar.

Rear Swaybar	***Bushing***
Soft .093" OD	*Small*
Medium .100" OD	*Medium*
Firm .105" OD	*Large*



3

15 REAR SWAYBAR LINKS

HARDWARE

(x2)
4x10mm Set Screw

(x2)
3x3mm Set Screw

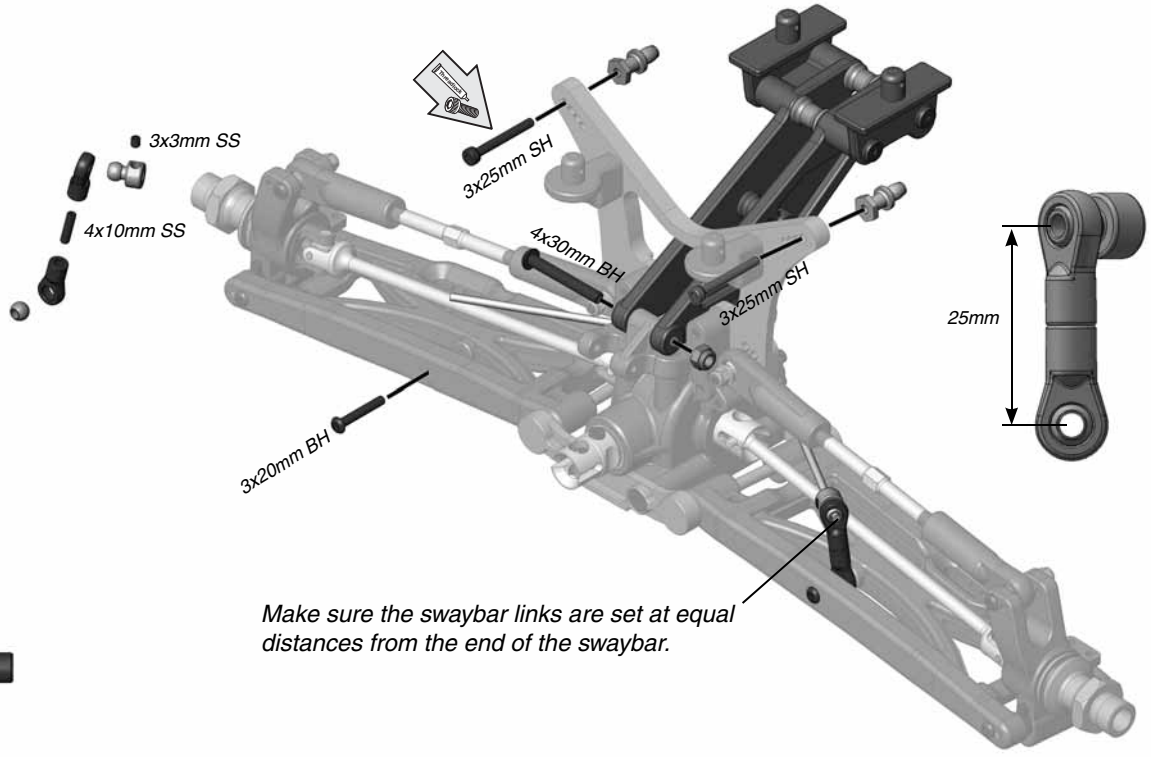
(x2)
End Ball

(x2)
3x20mm BH Screw

(x1)
4mm Lock Nut

(x2)
3x25mm SH Screw

(x1)
4x30mm BH Screw

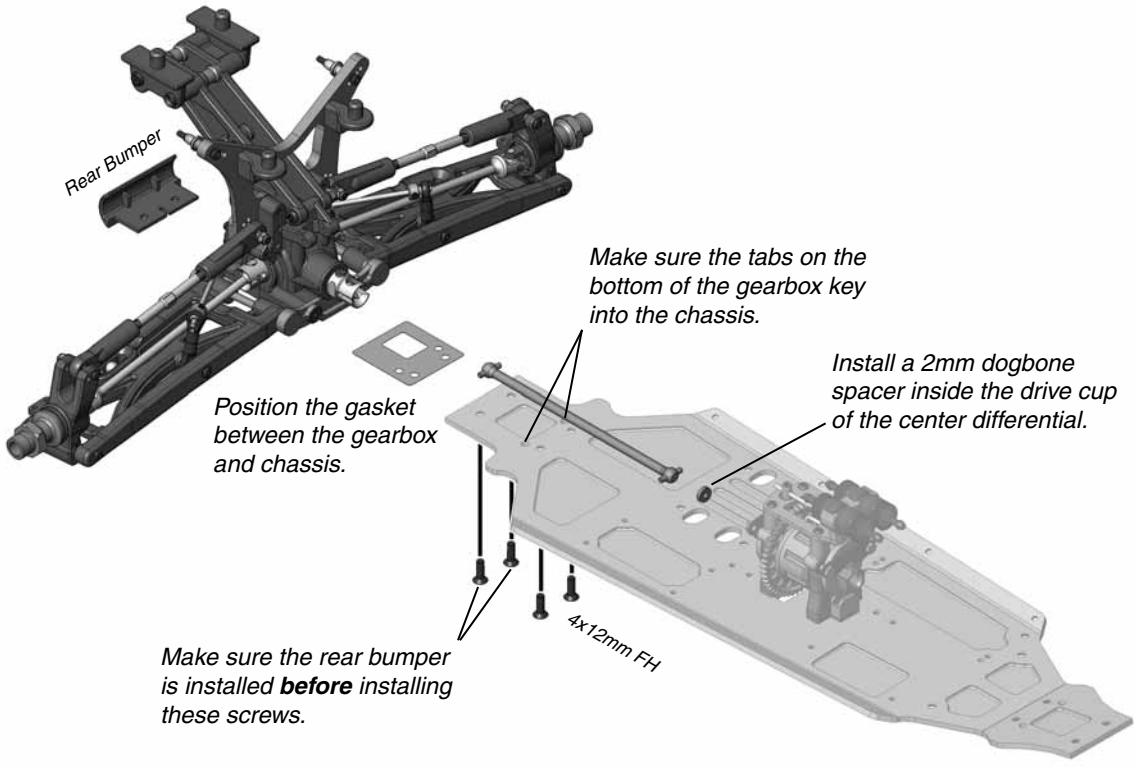


3

16 REAR SUSPENSION

HARDWARE

(x4)
4x12mm FH Screw



3

17 REAR CHASSIS BRACE

HARDWARE

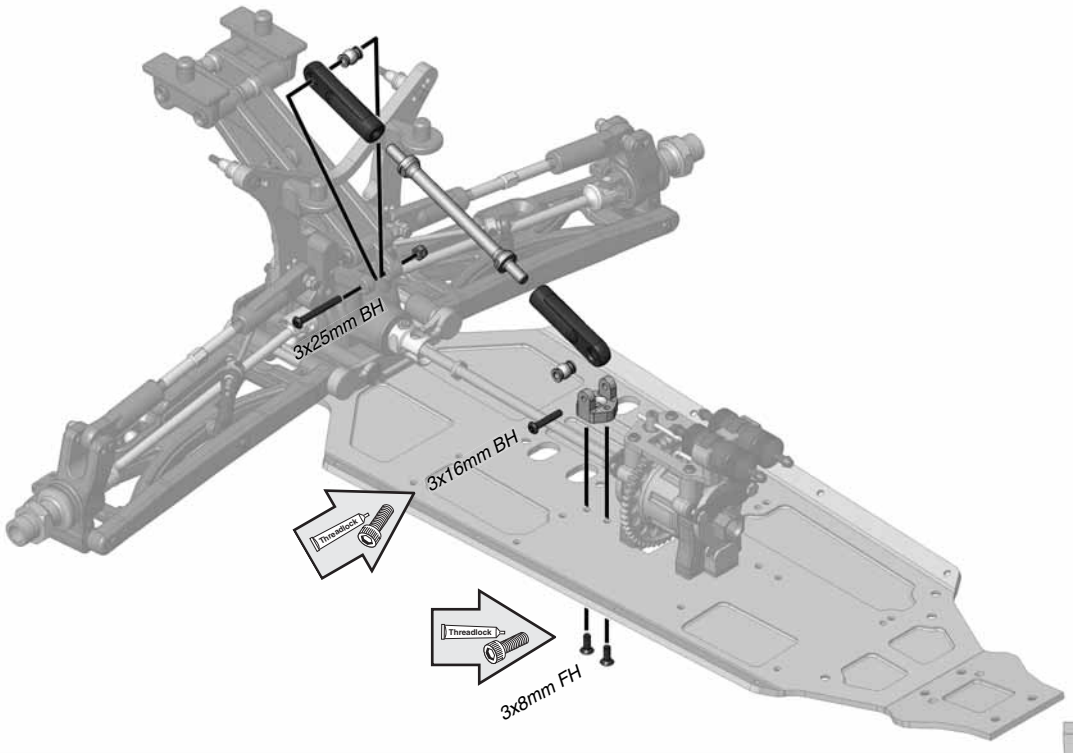
(x1)
3x25mm BH Screw

(x2)
3x8mm FH Screw

(x1)
3x16mm BH Screw

(x1)
3mm Lock Nut

(x2)
Standard Rod End Ball



3

18 FRONT DIFF HOUSING

HARDWARE

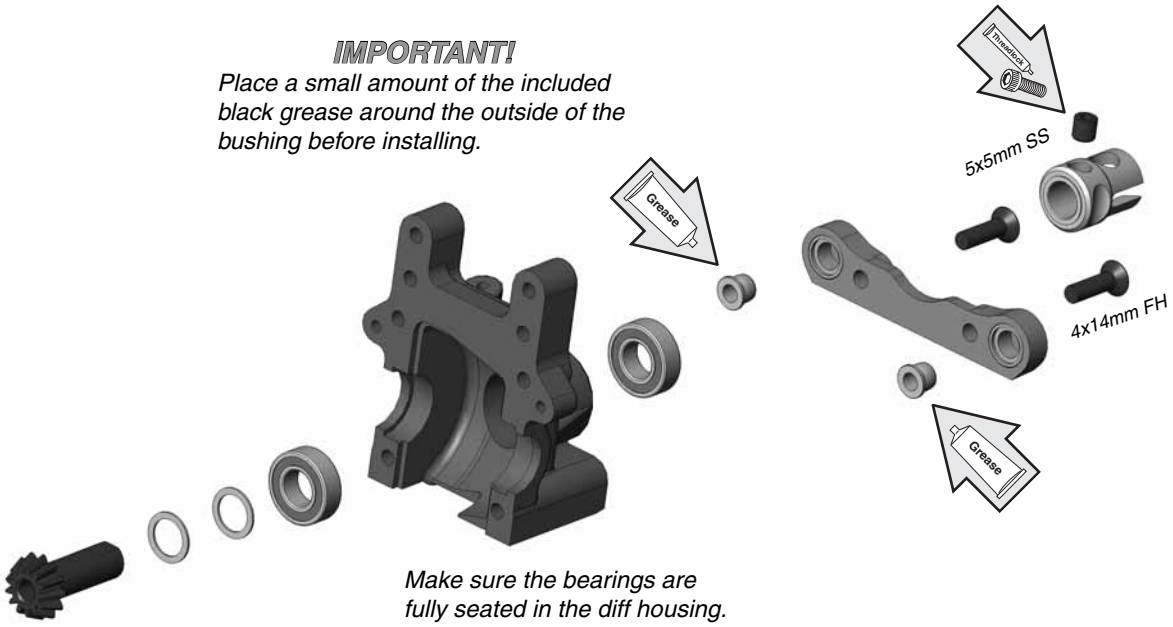
(x1)
5x5mm Set Screw

(x2)
Pinion Shaft Shim

(x2)
8x16mm Bearing

(x2)
4x14mm FH Screw

IMPORTANT!
Place a small amount of the included black grease around the outside of the bushing before installing.



Make sure the bearings are fully seated in the diff housing.

5

19 FRONT SUSPENSION ARMS

HARDWARE

(x2)
4x16mm BH Screw

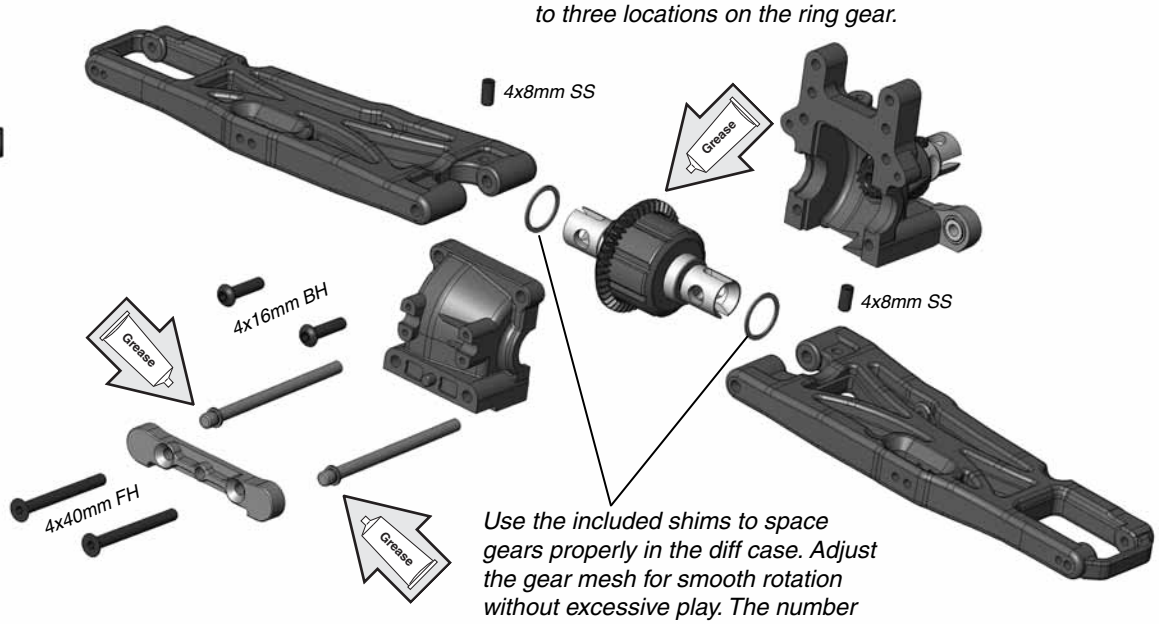
(x2)
4x40mm FH Screw

(x2)
4x8mm Set Screw

(x2)
Silver (Thick)
Diff Shim

(x2)
Gold (Thin)
Diff Shim

IMPORTANT!
Apply a 1/4" strip of the included grease to three locations on the ring gear.



Use the included shims to space gears properly in the diff case. Adjust the gear mesh for smooth rotation without excessive play. The number of shims needed, and the side on which they must be placed, may vary.

5

20 FRONT SHOCK TOWER

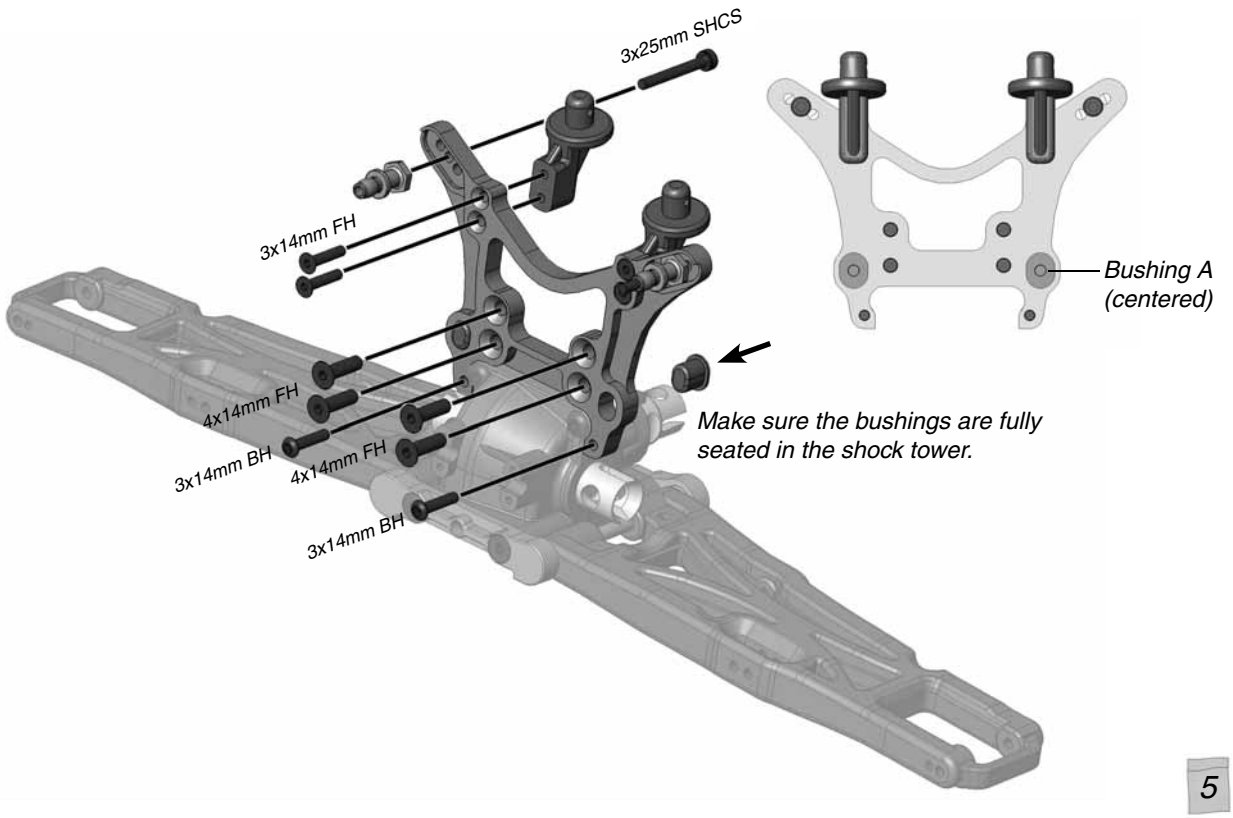
HARDWARE

(x4)
4x14mm FH Screw

(x2)
3x14mm BH Screw

(x4)
3x14mm FH Screw

(x2)
3x25mm SHCS



5

21 LEFT & RIGHT FRONT STEERING BLOCKS

HARDWARE

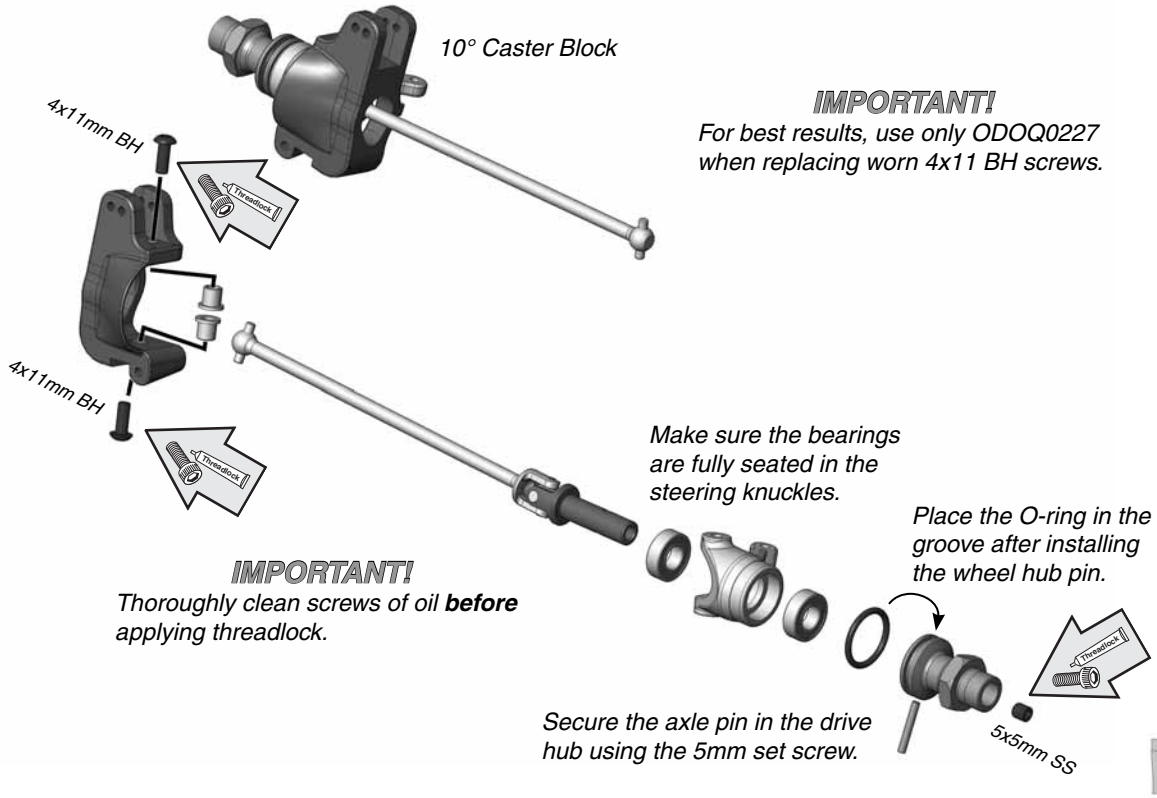
(x4)
8x16mm Bearing

(x4)
4x11mm BH Screw

(x2)
Wheel Hub Pin

(x2)
5x5mm Set Screw

(x2)
O-Ring



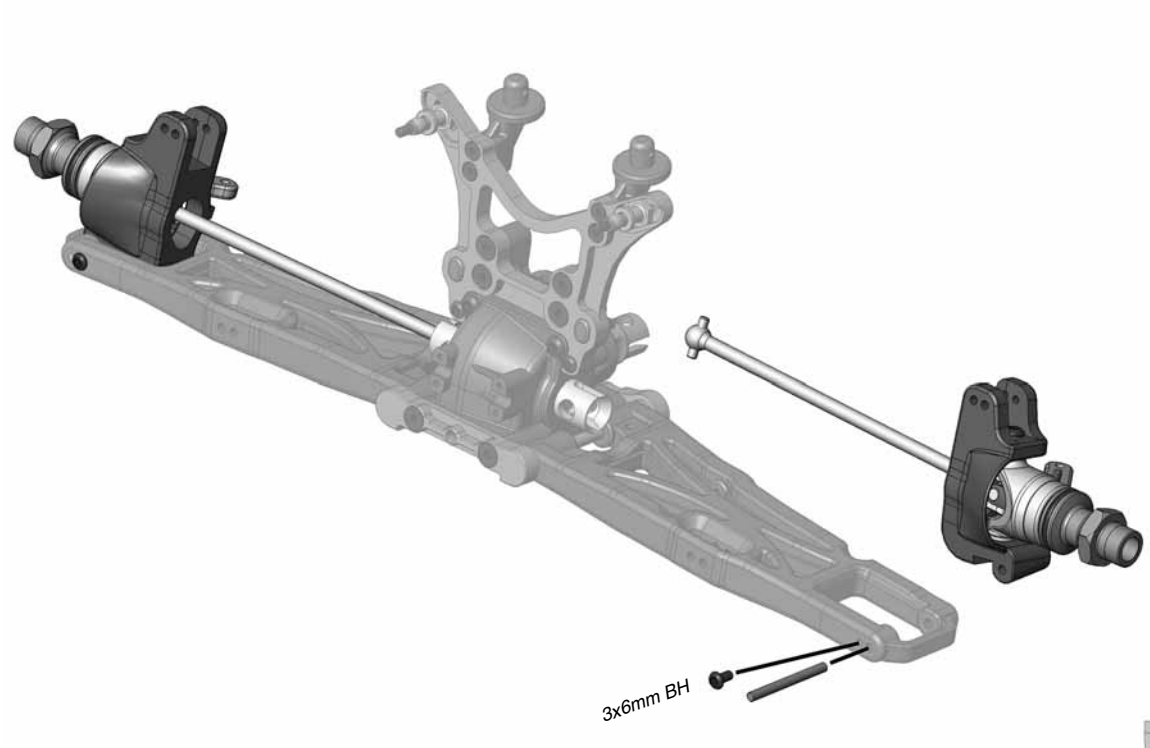
5

22 FRONT SUSPENSION

HARDWARE

(x2)
3x6mm BH Screw

(x2)
Outer Lower Front Hinge Pin



5

23 FRONT UPPER LINKS

HARDWARE

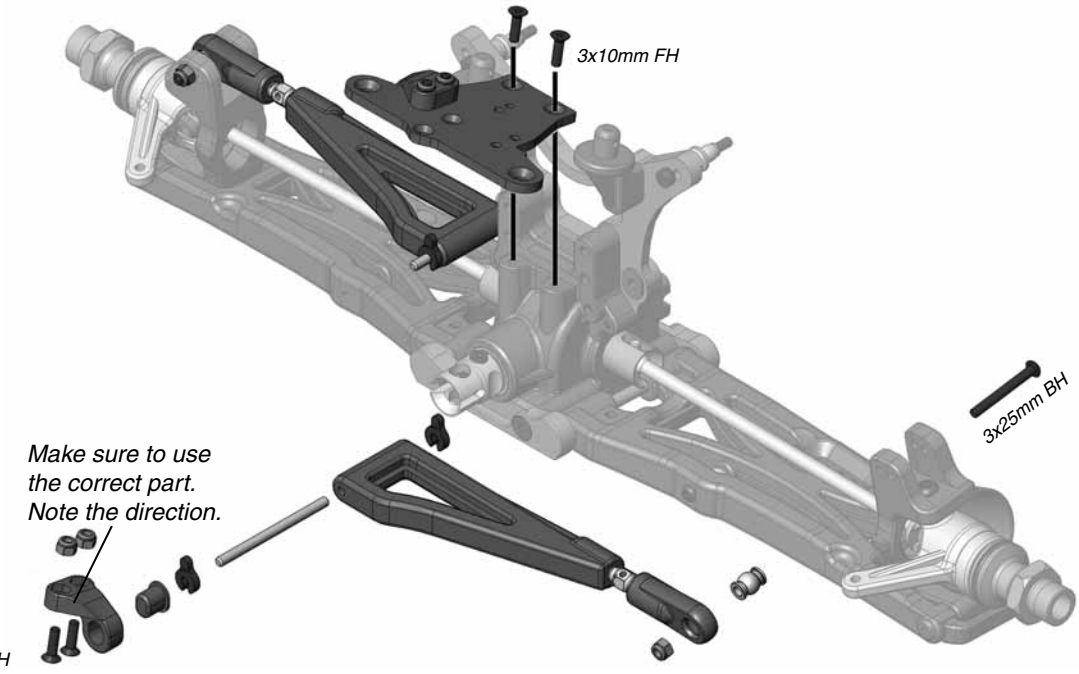
(x2)
3x25mm BH Screw

(x6)
3x10mm FH Screw

(x2)
Standard Rod End Ball

(x6)
3mm Lock Nut

Actual Size



5

HARDWARE

(x3) 3mm Lock Nut

(x1) 3x16mm FH Screw

(x4) 6x10mm Bearing

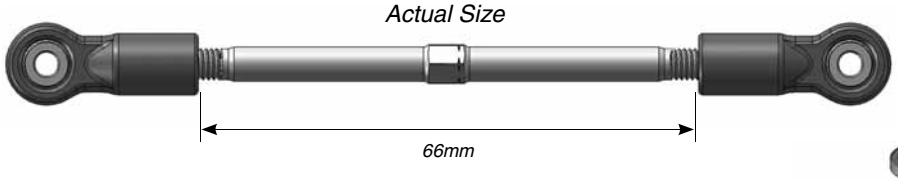
(x2) 3x14mm FH Screw

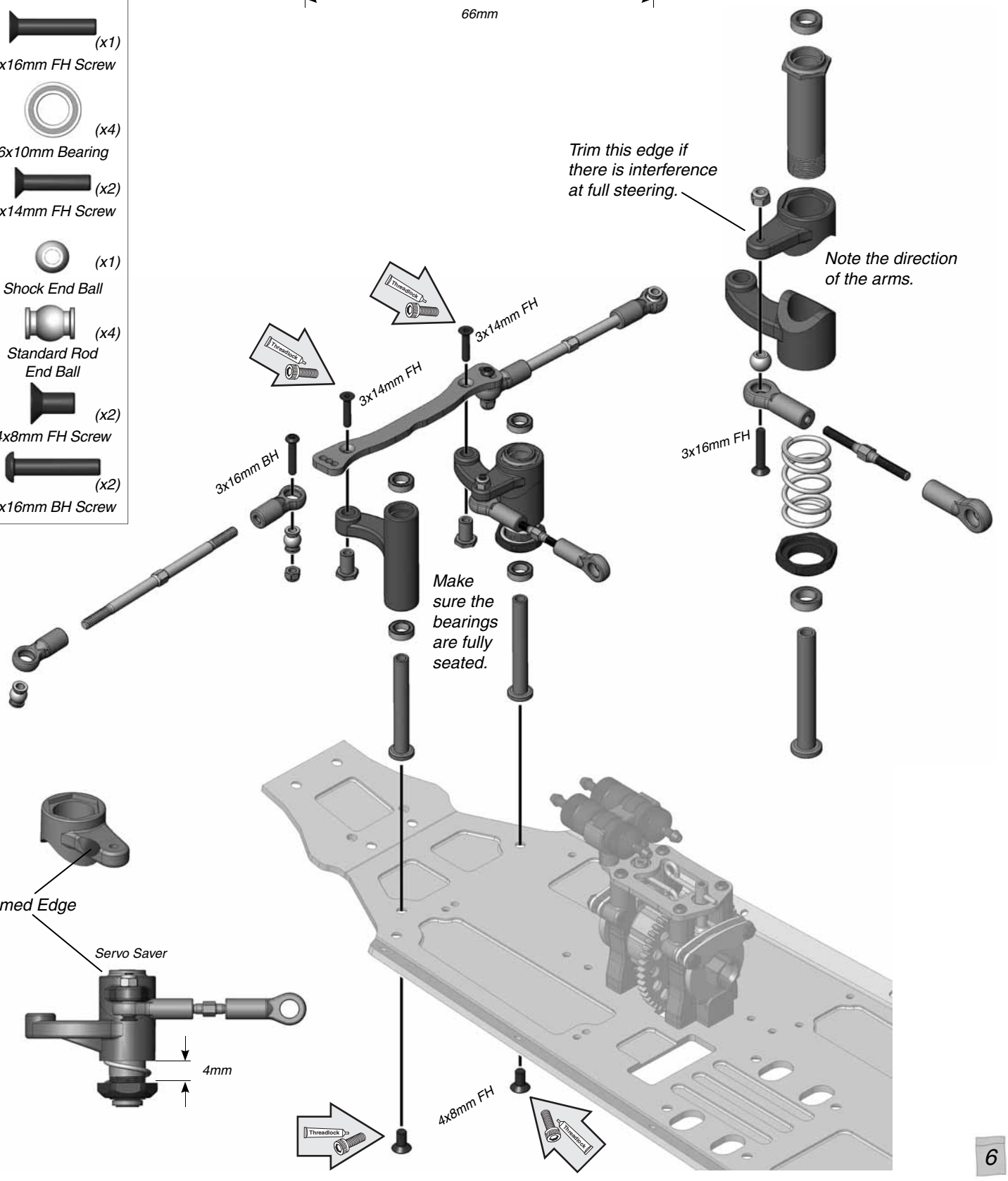
(x1) Shock End Ball

(x4) Standard Rod End Ball

(x2) 4x8mm FH Screw

(x2) 3x16mm BH Screw





6

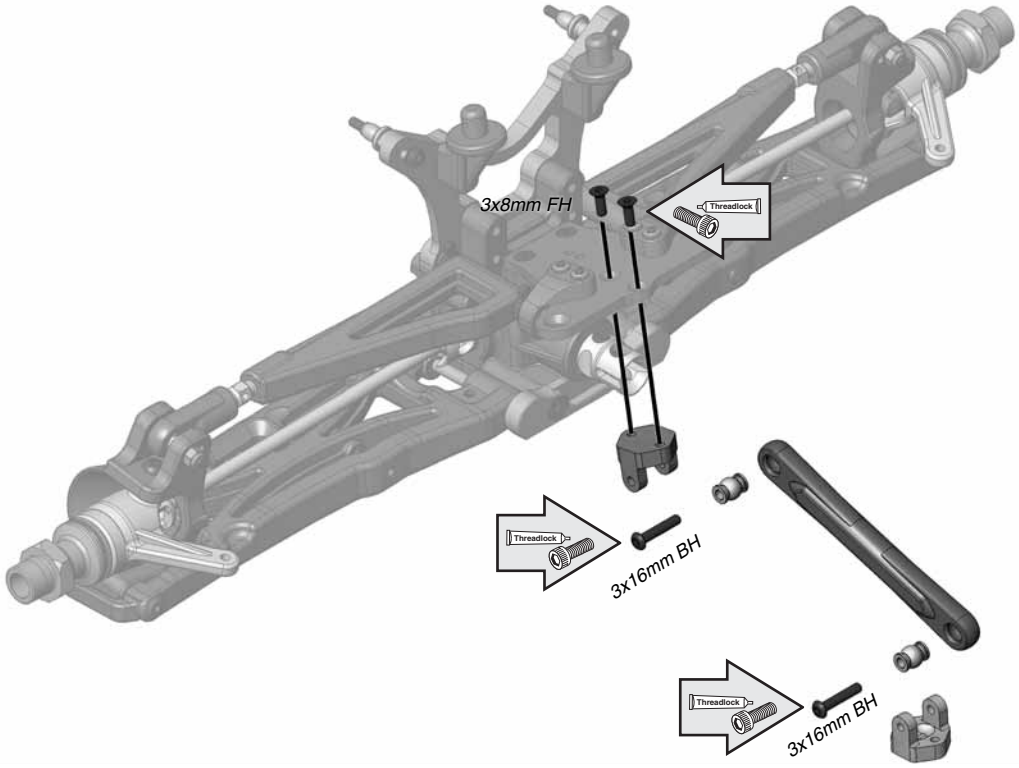
25 FRONT CHASSIS BRACE

HARDWARE

(x2)
3x8mm FH Screw

(x2)
3x16mm BH Screw

(x2)
Standard Rod End Ball

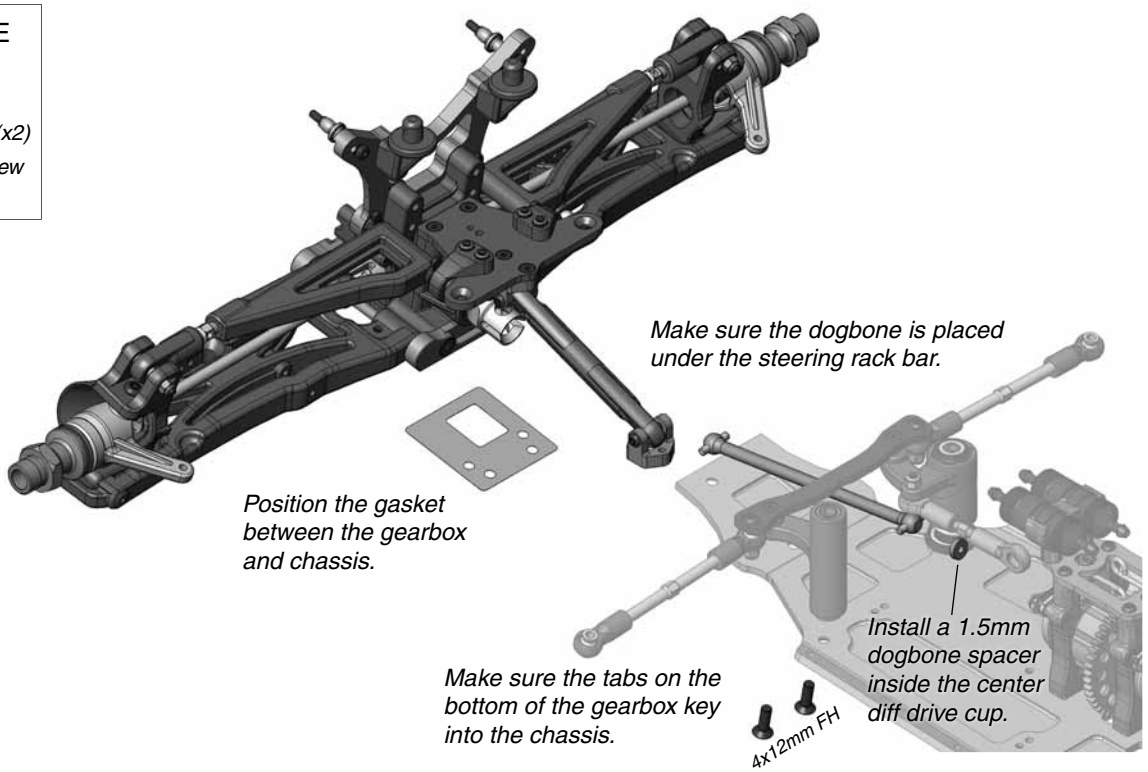


7

26 FRONT END

HARDWARE

(x2)
4x12mm FH Screw

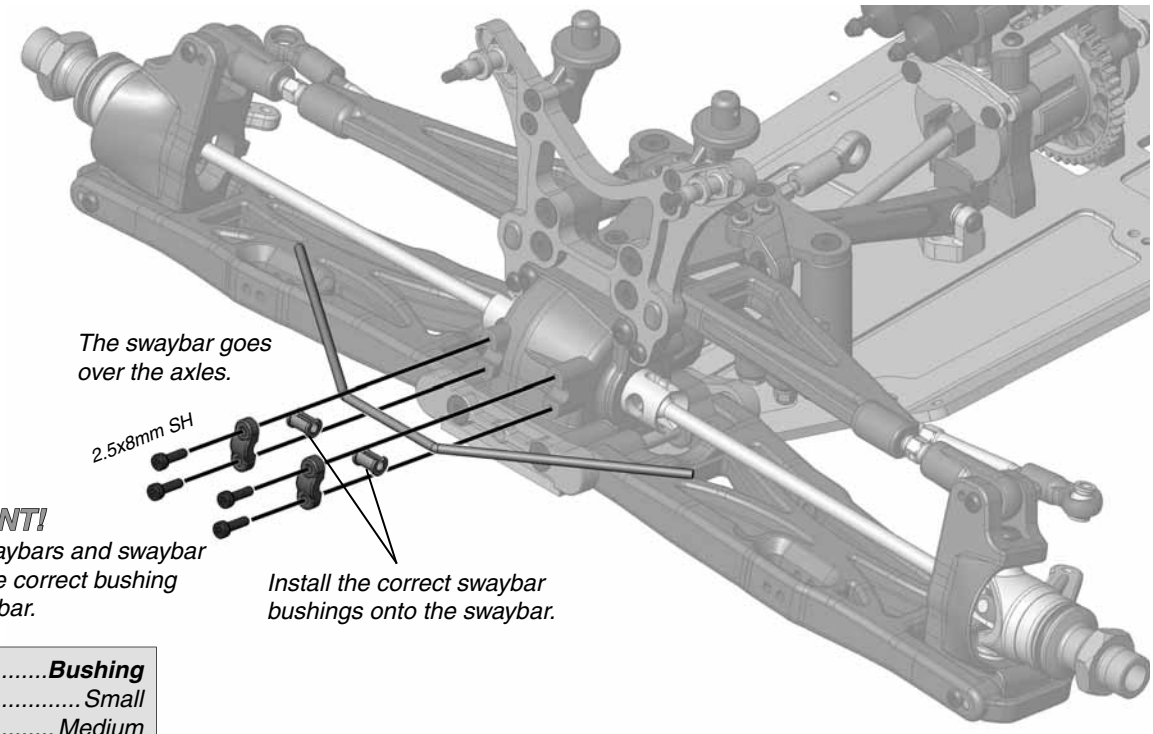


7

27 FRONT SWAYBAR

HARDWARE

(x4)
2.5x8mm SH Screw



IMPORTANT!

There are three sizes of swaybars and swaybar bushings. Be sure to use the correct bushing with its corresponding swaybar.

Front Swaybar	***Bushing***
Soft .093" OD	*Small*
Medium .100" OD	*Medium*
Firm .105" OD	*Large*

5

28 FRONT SWAYBAR LINKS

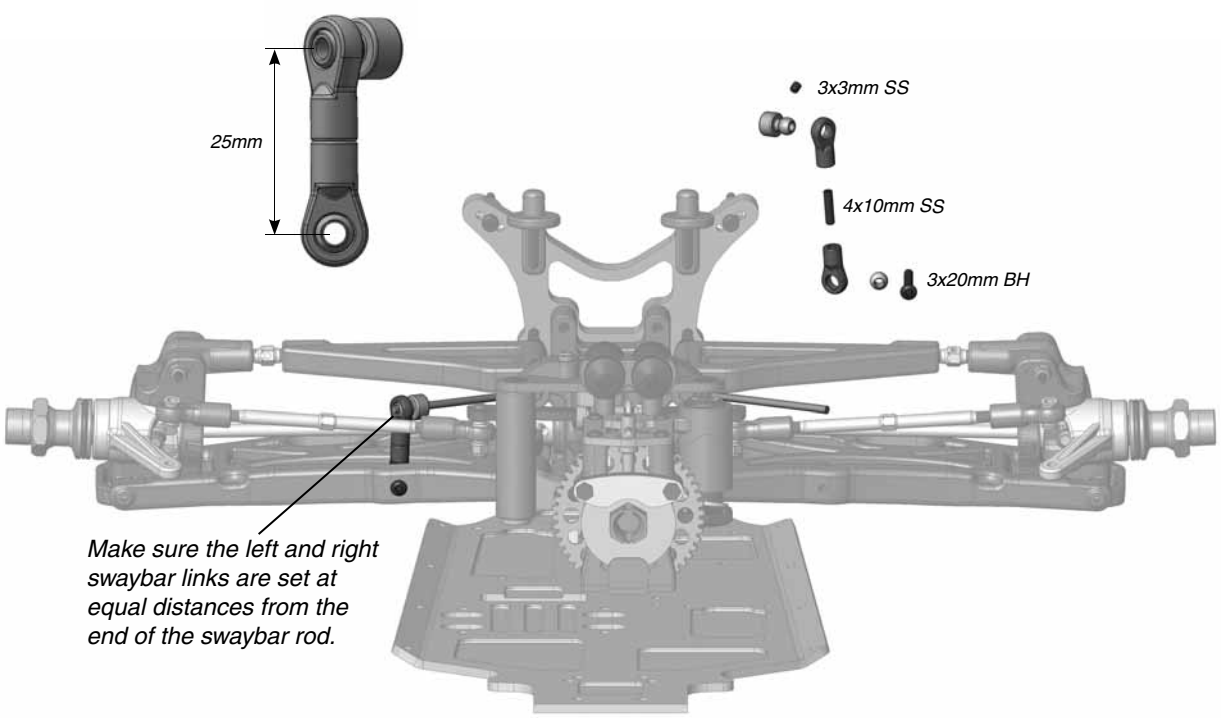
HARDWARE

(x2)
4x10mm Set Screw

(x2)
3x3mm Set Screw

(x2)
End Ball

(x2)
3x20mm BH Screw



5

29 FRONT BUMPER

HARDWARE


(x2)
3x18mm BH Screw


(x2)
3mm Lock Nut


(x2)
4x8mm FH Screw

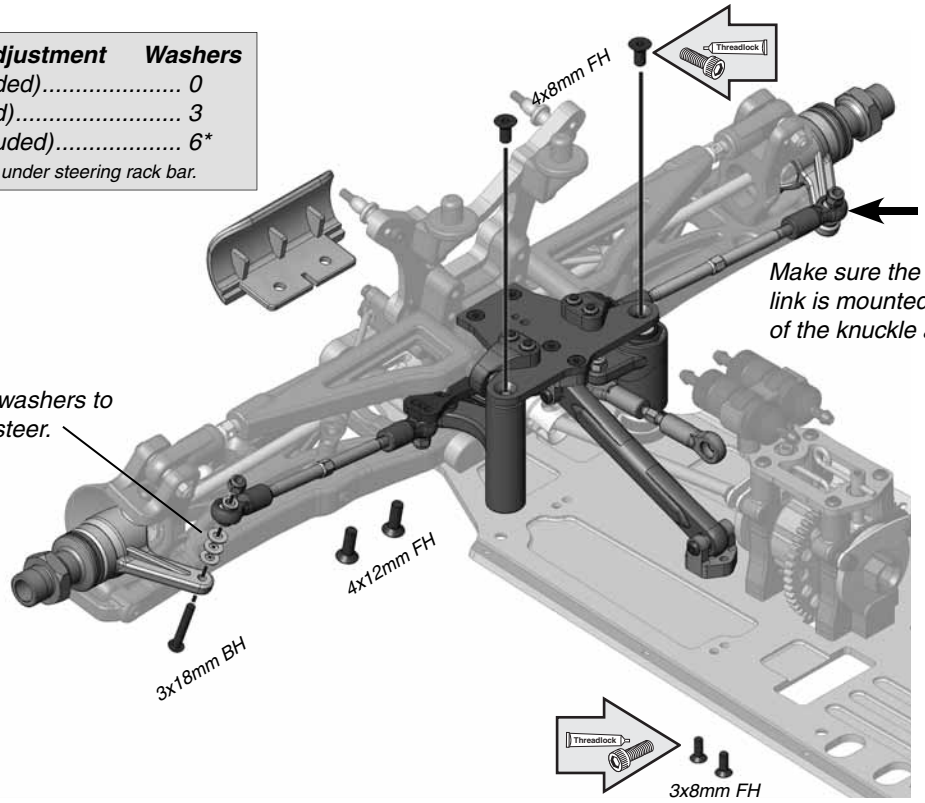

(x6)
3mm Washer


(x2)
3x8mm FH Screw


(x2)
4x12mm FH Screw

Steering Link Adjustment	Washers
5° Hub (not included)	0
10° Hub (included)	3
15° Hub (not included)	6*

* 4 at knuckle, 2 under steering rack bar.



7

30 STEERING SERVO

HARDWARE

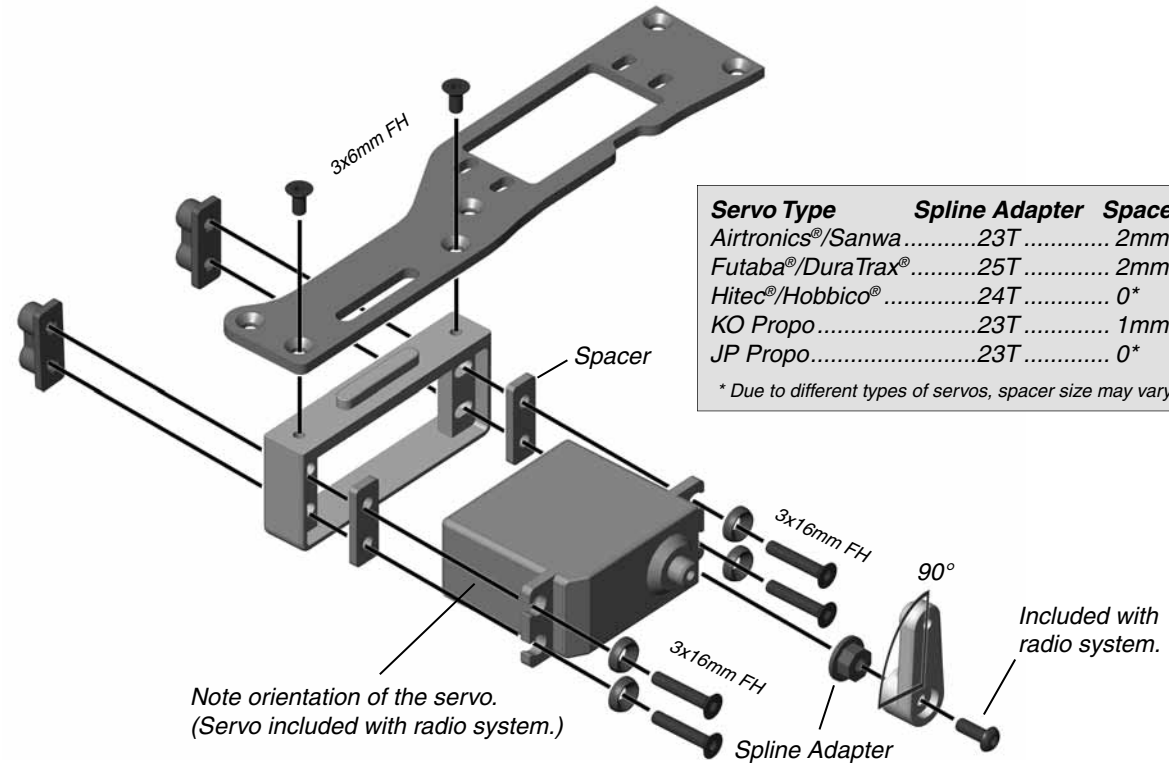

(x2)
3x6mm FH Screw


(x4)
3x16mm FH Screw


(x4)
3mm Countersunk Washer

Servo Type	Spline Adapter	Spacer
Airtronics®/Sanwa	23T	2mm*
Futaba®/DuraTrax®	25T	2mm*
Hitec®/Hobbico®	24T	0*
KO Propo	23T	1mm*
JP Propo	23T	0*

* Due to different types of servos, spacer size may vary.



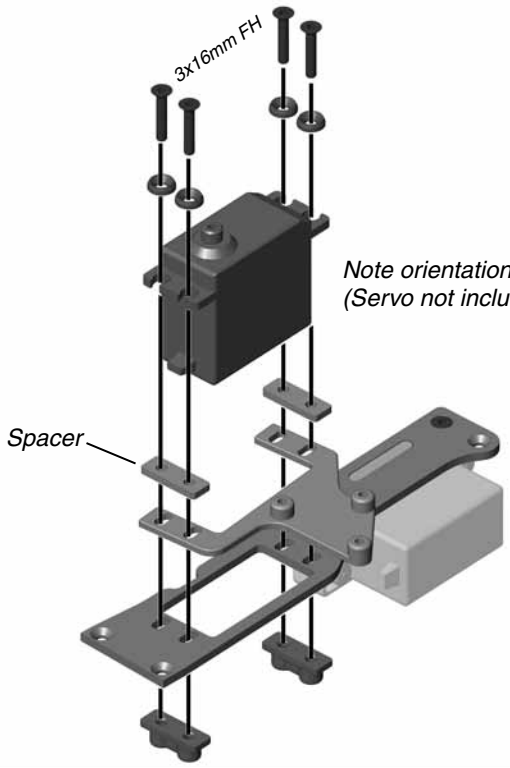
8

31 THROTTLE SERVO

HARDWARE

(x4)
3x16mm FH Screw

(x4)
3mm Countersunk Washer



Note orientation of the servo. (Servo not included.)

Servo Type	Spline Adapter	Spacer
Airtronics/Sanwa	23T	3mm*
Futaba/DuraTrax	25T	3mm*
Hitec/Hobbico	24T	1mm*
KO Propo	23T	2mm*
JP Propo	23T	2mm*

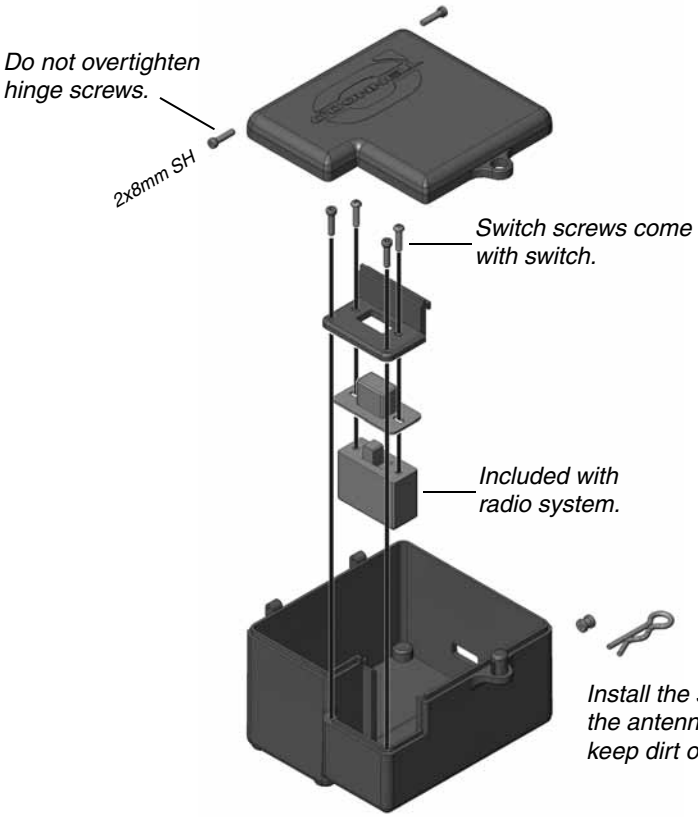
** Due to different types of servos, spacer size may vary.*

8

32 ON/OFF SWITCH

HARDWARE

(x4)
2x8mm SH Screw



Install the small grommet in the antenna wire hole to help keep dirt out of the radio box.

8

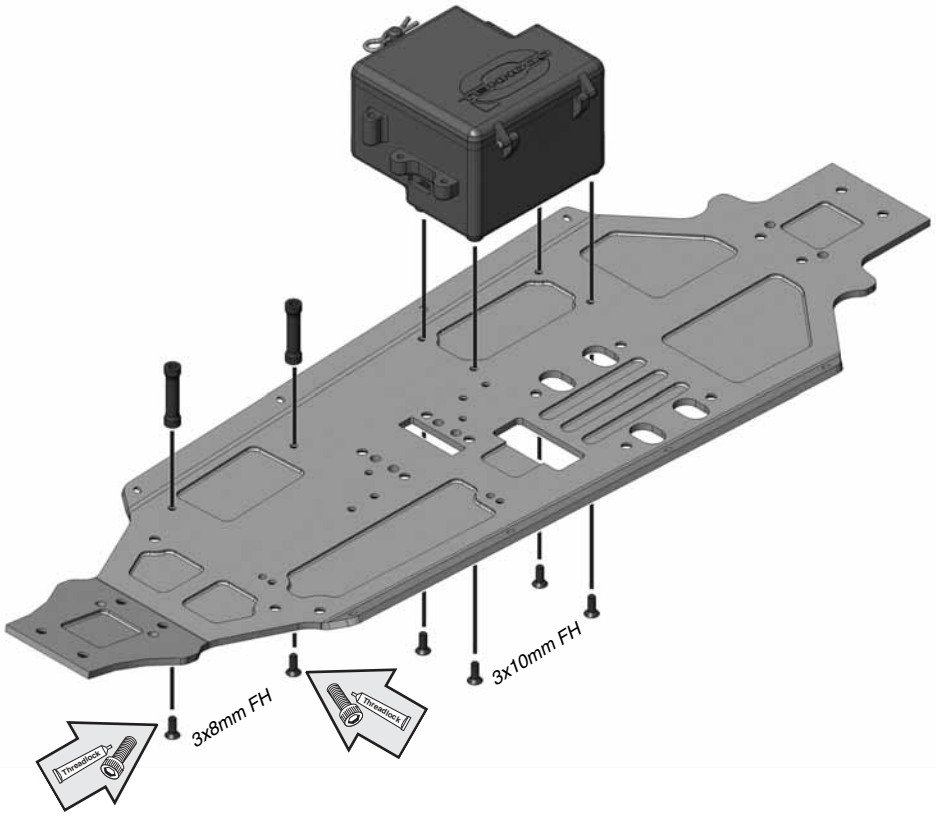
33

SERVO TRAY POSTS

HARDWARE

(x2)
3x8mm FH Screw

(x4)
3x10mm FH Screw



8

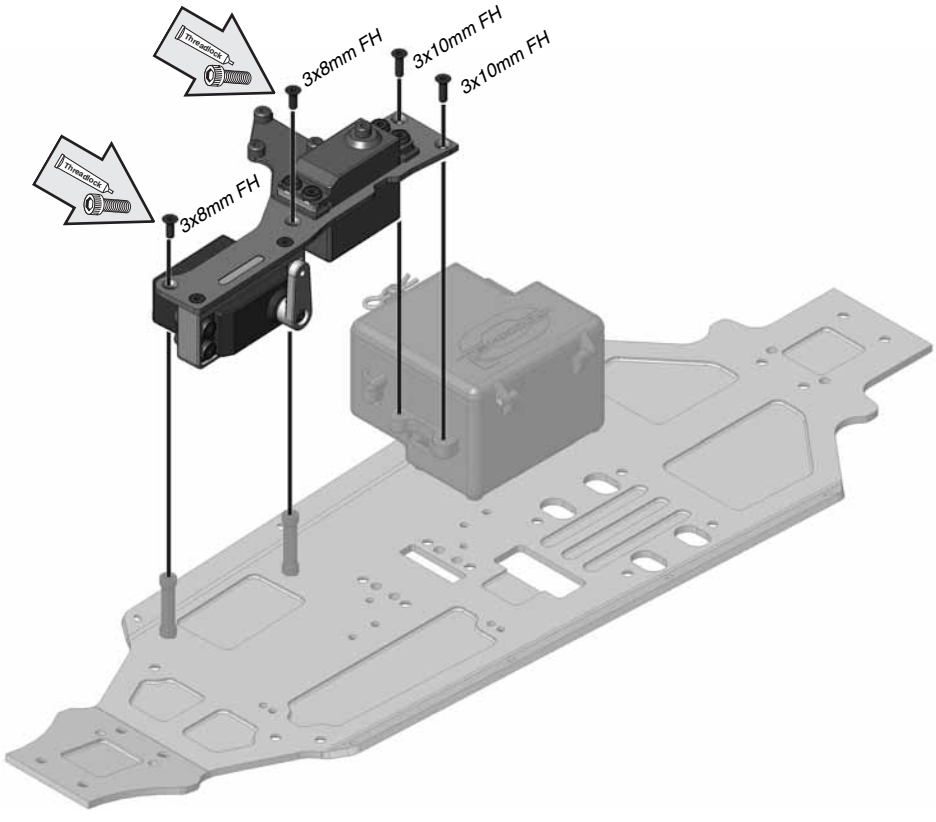
34

SERVO TRAY

HARDWARE

(x2)
3x8mm FH Screw

(x2)
3x10mm FH Screw



8

35 SERVO LINKAGES

HARDWARE

(x1) 3x14mm BH Screw

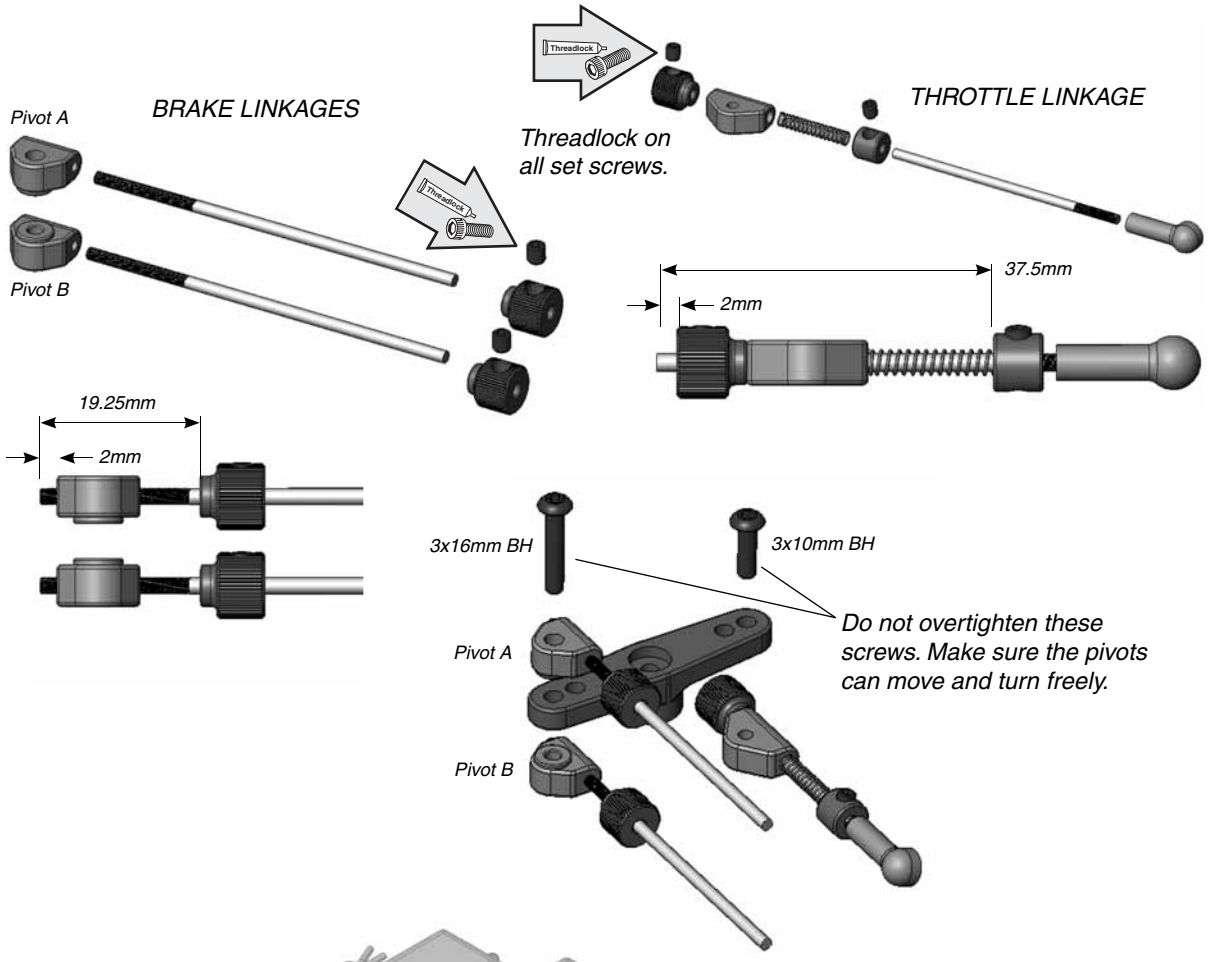
(x1) Ball End

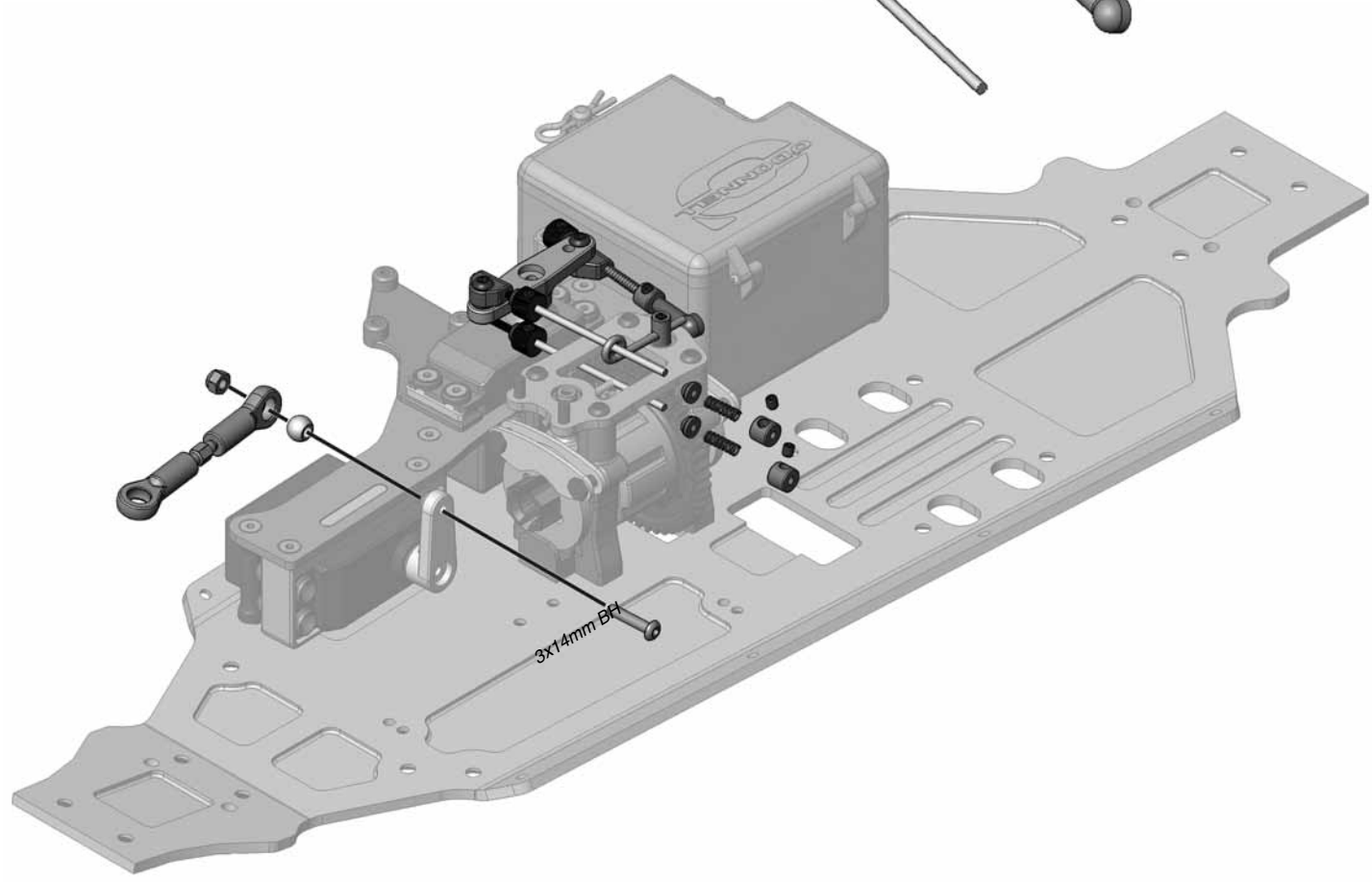
(x1) 3mm Lock Nut

(x1) 3x16mm BH Screw

(x1) 3x10mm BH Screw

(x6) 3x3mm Set Screw



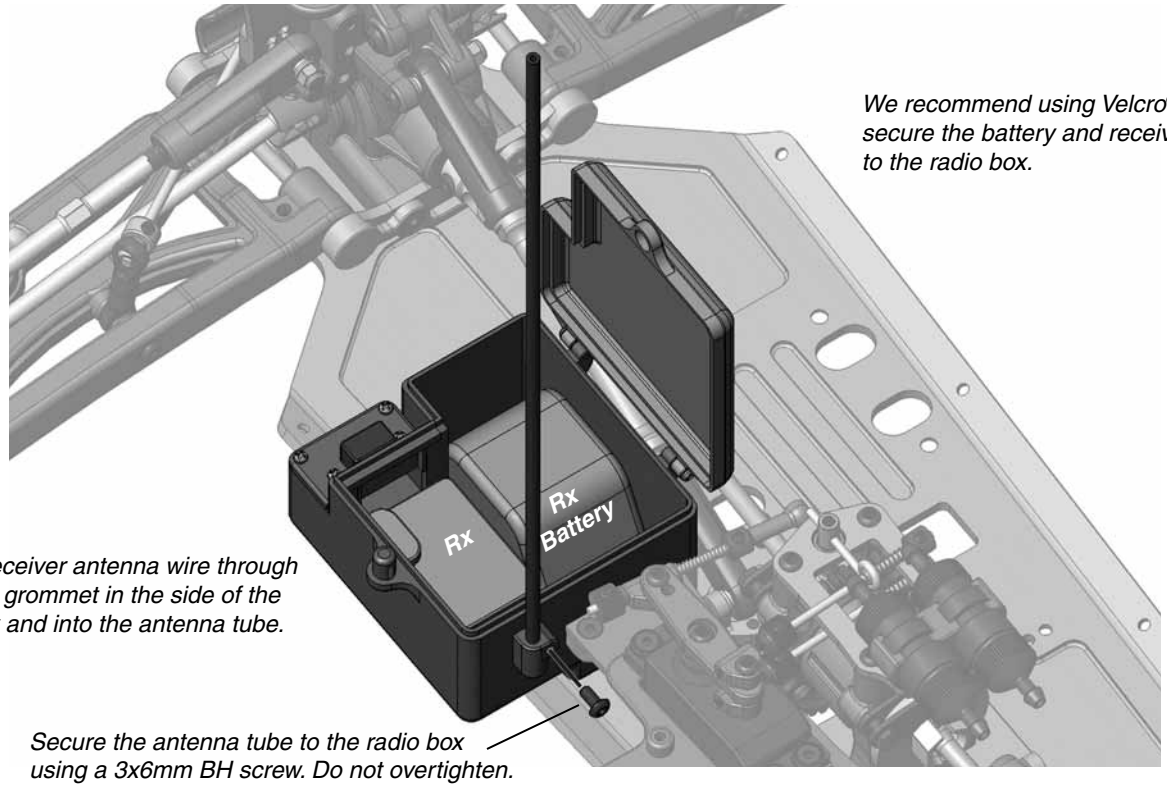


8

36 RECEIVER

HARDWARE

(x1)
3x6mm BH Screw



We recommend using Velcro® to secure the battery and receiver to the radio box.

Route the receiver antenna wire through the antenna grommet in the side of the receiver box and into the antenna tube.

Secure the antenna tube to the radio box using a 3x6mm BH screw. Do not overtighten.

8

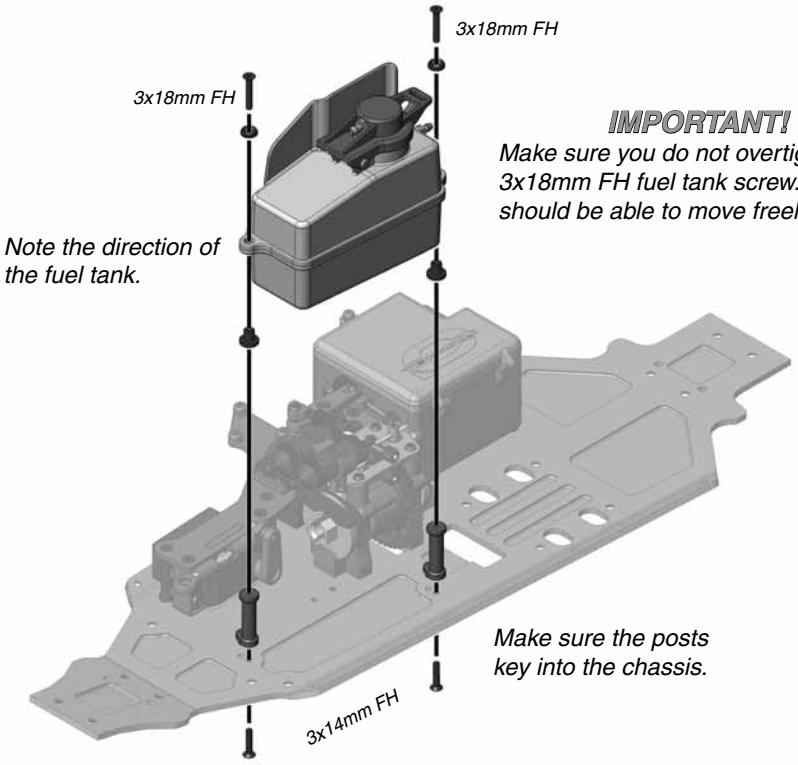
37 FUEL TANK

HARDWARE

(x2)
3mm Countersunk Washer

(x2)
3x18mm FH Screw

(x2)
3x14mm FH Screw



Note the direction of the fuel tank.

IMPORTANT!
Make sure you do not overtighten the 3x18mm FH fuel tank screw. The tank should be able to move freely.

Make sure the posts key into the chassis.

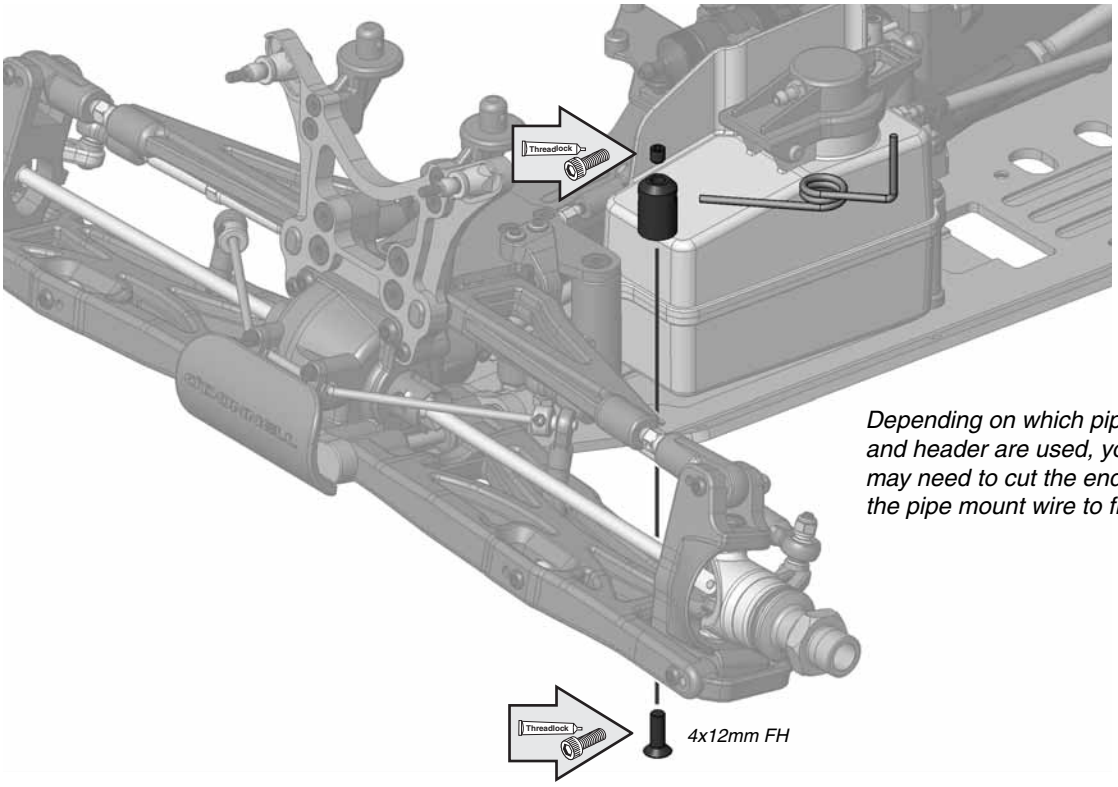
9

38 TUNED PIPE MOUNT

HARDWARE

(x1)
4x4mm Set Screw

(x1)
4x12mm FH Screw



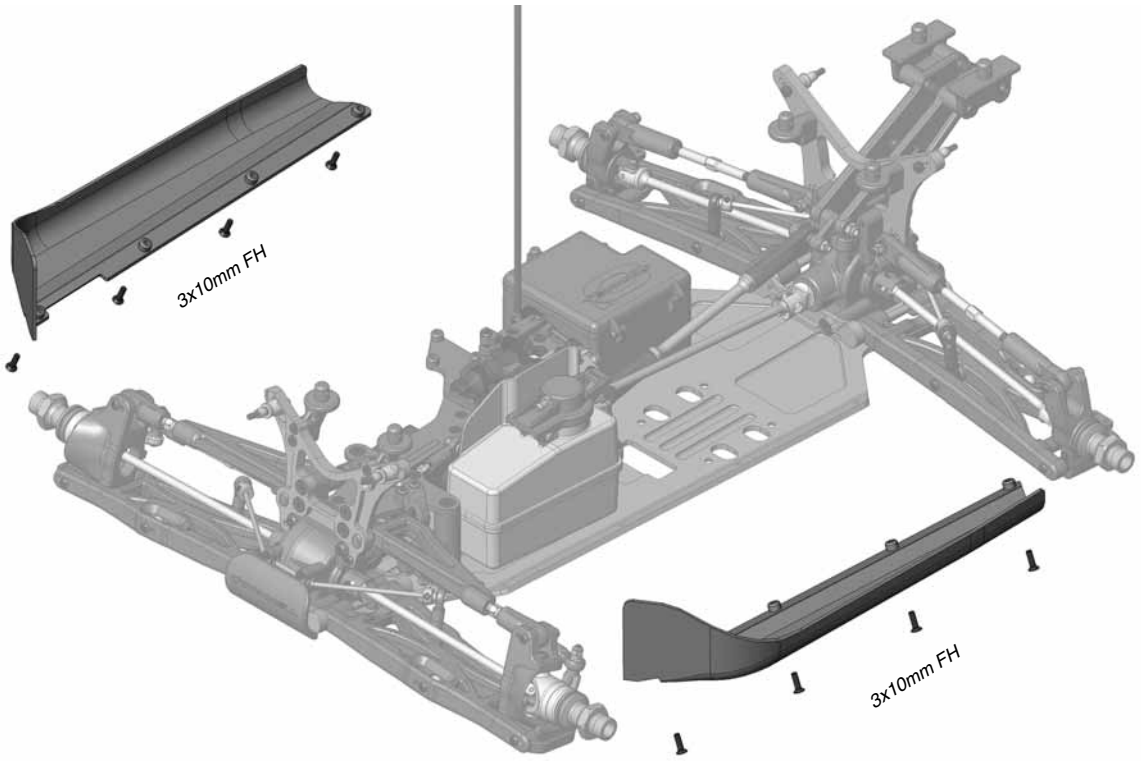
Depending on which pipe and header are used, you may need to cut the end of the pipe mount wire to fit.

9

39 SIDE GUARDS

HARDWARE

(x8)
3x10mm FH Screw



9

40

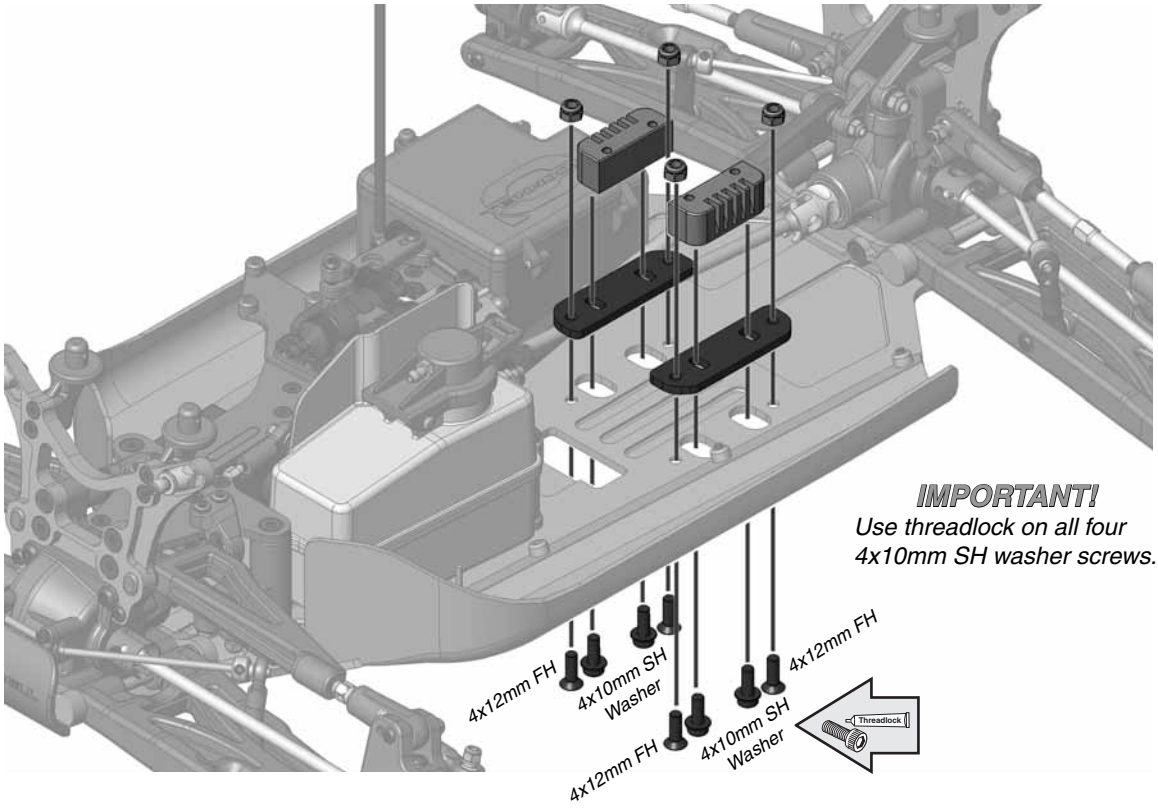
ENGINE MOUNT

HARDWARE

(x4)
4x12mm FH Screw

(x4)
4x10mm SH Washer Screw

(x4)
4mm Lock Nut



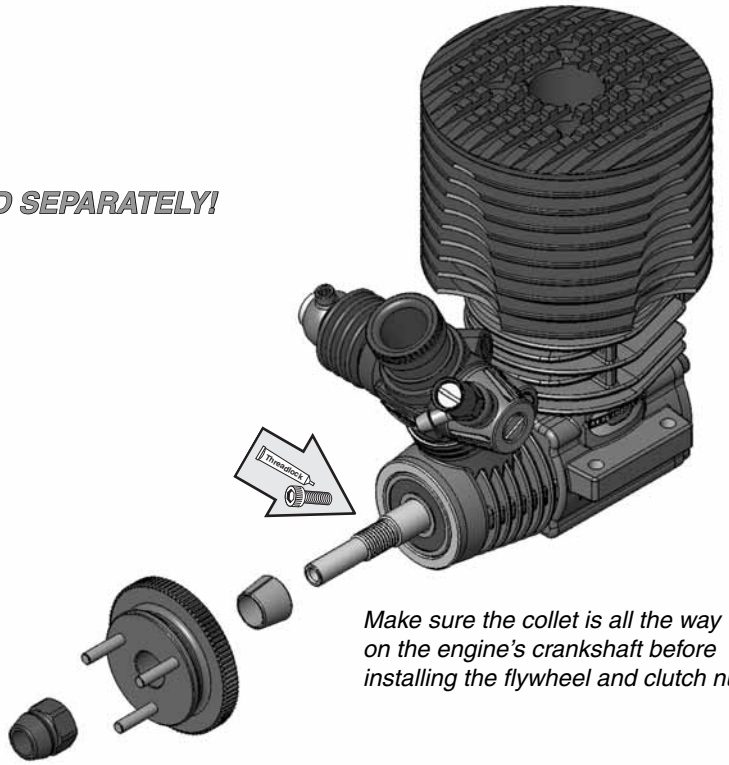
IMPORTANT!
Use threadlock on all four 4x10mm SH washer screws.

9

41

FLYWHEEL

ENGINE SOLD SEPARATELY!



Make sure the collet is all the way on the engine's crankshaft before installing the flywheel and clutch nut.

10

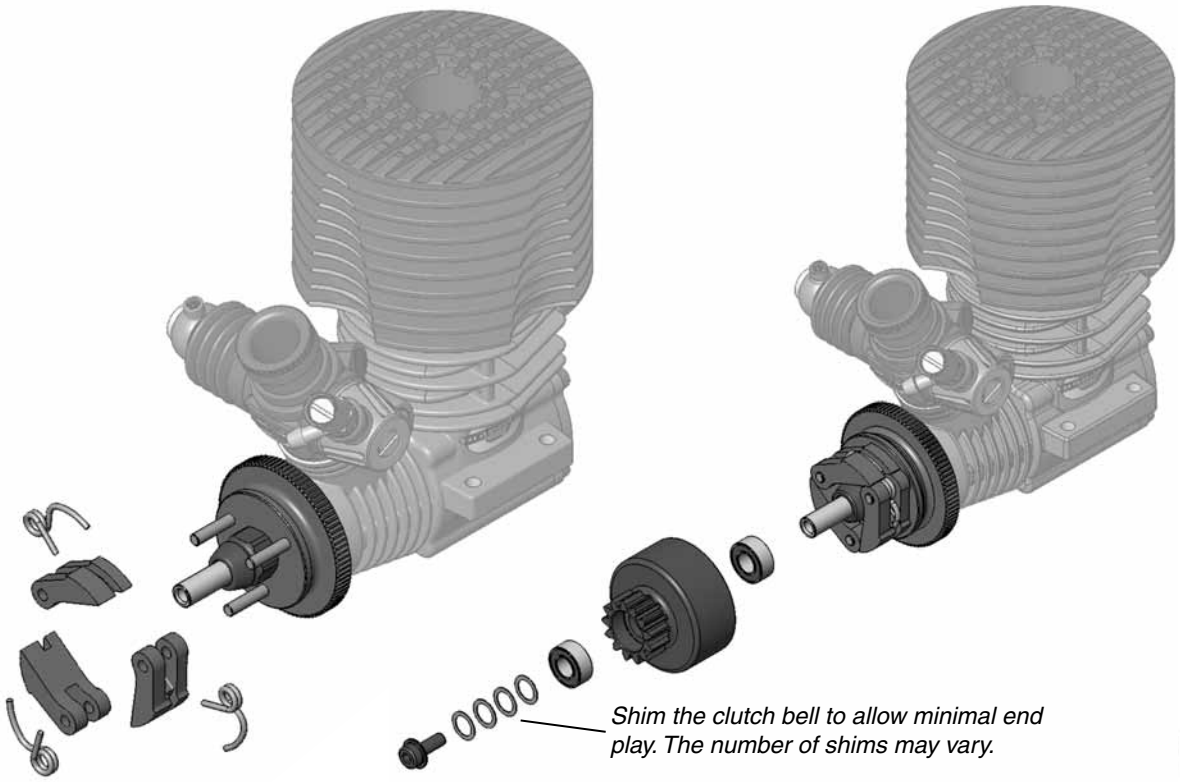
42 CLUTCH

HARDWARE

(x2)
5x10mm Bearing

(x4)
Clutch Shim

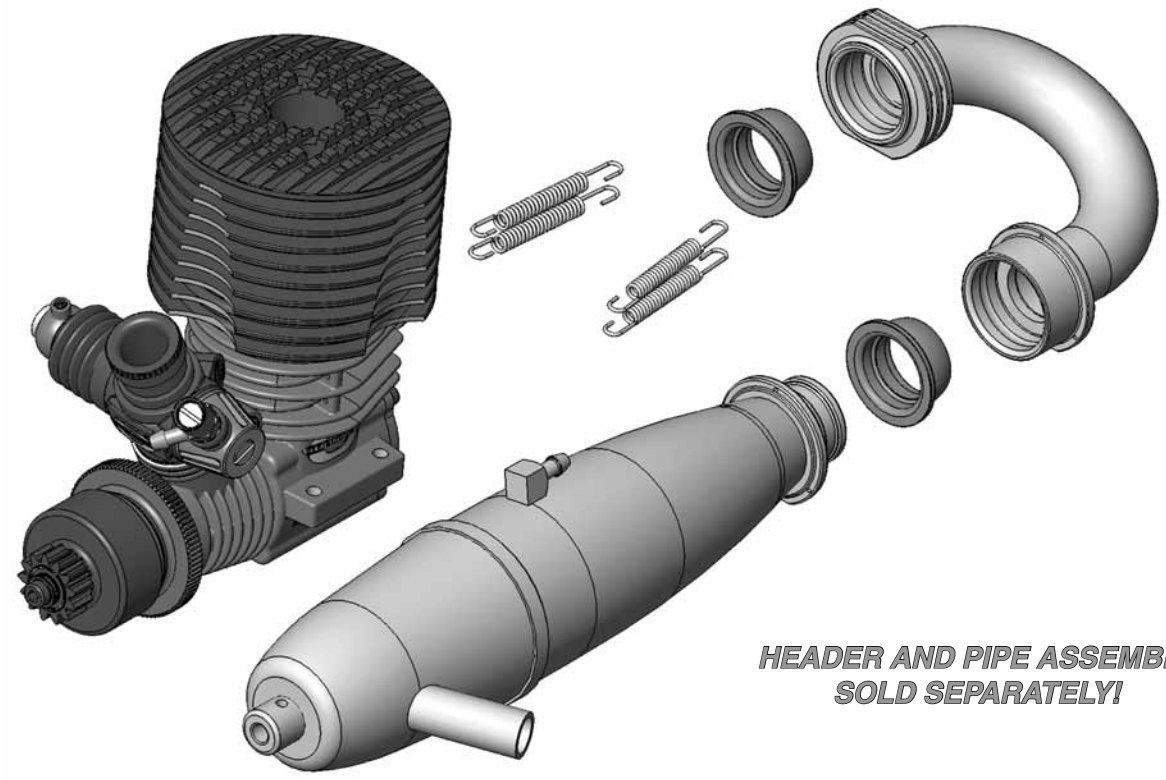
(x1)
3mm SH Screw with Washer



Shim the clutch bell to allow minimal end play. The number of shims may vary.

10

43 HEADER & PIPE

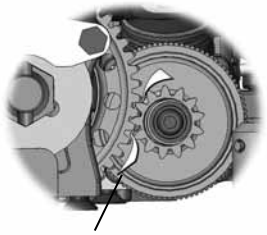


HEADER AND PIPE ASSEMBLY SOLD SEPARATELY!

44 ENGINE INSTALLATION

HARDWARE

(x4)
3x14mm SH Screw

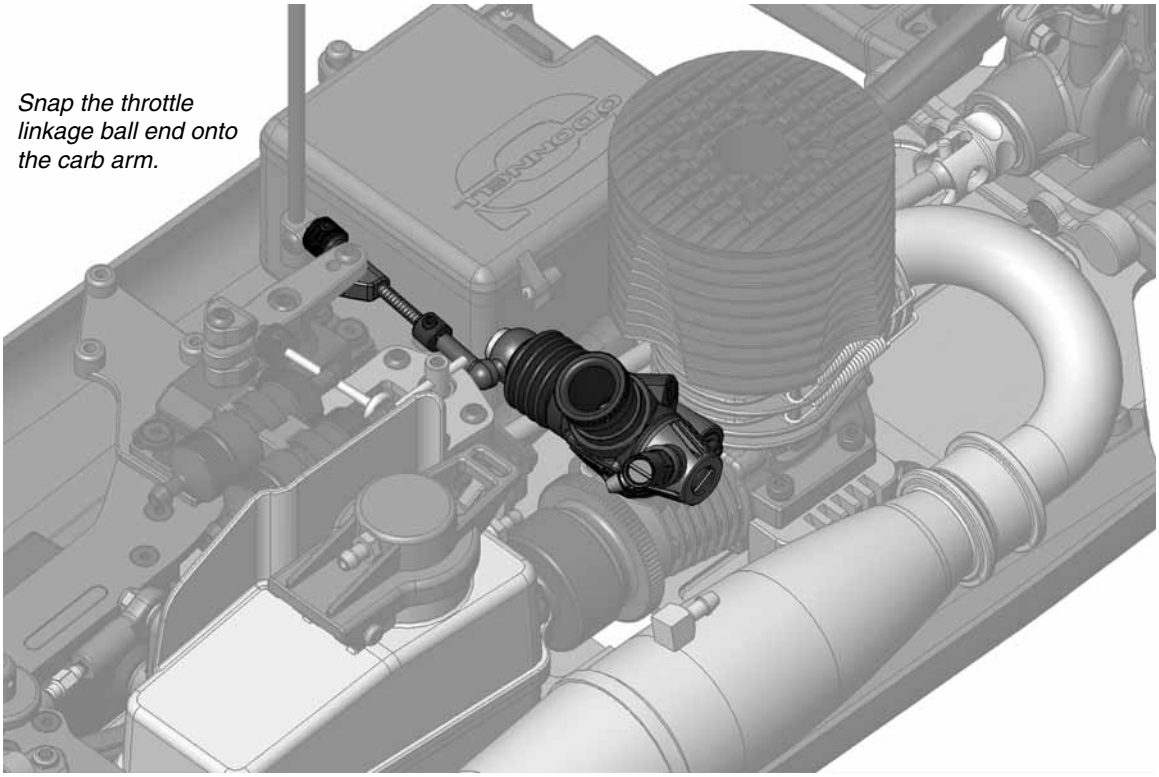


Place a strip of paper between the spur and clutch bell to help properly set the gear mesh. Once the gear mesh is set, remove the paper.

10

45 THROTTLE LINKAGE

Snap the throttle linkage ball end onto the carb arm.



46 SHOCK SHAFT

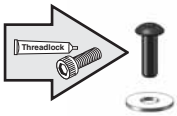
HARDWARE

(x4)
2-56x1/4" Button Head Screw

(x4)
2.5mm Washer

(x4)
3mm Washer (Silver)

IMPORTANT!
*Thoroughly clean screws of oil **before** applying threadlock.*



2.5mm Washer

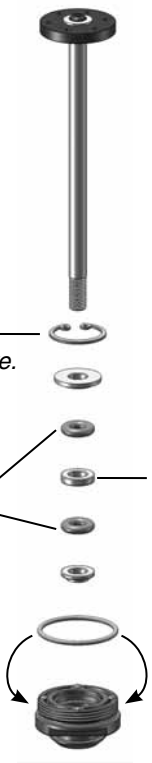
3mm Washer

Rear (Long) x 2
Front (Short) x 2

***Note:** The notch in the 3mm silver washer does not affect shock performance and can be positioned in any direction.*

IMPORTANT!
Make sure the snap ring is securely seated in the groove.

To help prevent damage to the O-rings, apply a small amount of shock oil to the O-rings and shaft threads before installing the shock shaft.

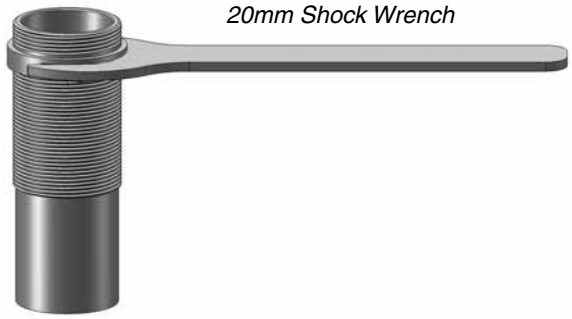


***Note:** Make sure the spacer fits freely with no resistance in the shock cartridge. If necessary, sand or trim spacer to fit.*

11

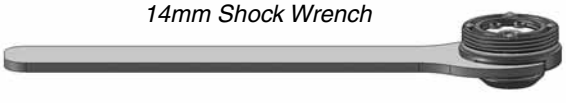
47 SHOCK BODY ASSEMBLY

20mm Shock Wrench



Rear (Long) x 2
Front (Short) x 2

14mm Shock Wrench



IMPORTANT!
When installing the shock cartridge into the shock body, be sure to not cross-thread the cartridge in the shock body. Press the shock cartridge into the bottom of the shock body and rotate the cartridge backwards until you feel the threads engage. Then thread the cartridge into the shock body until it bottoms out. GENTLY snug the cartridge (DO NOT overtighten!)

***Note:** Be sure to install the long shaft into the long body and the short shaft in the short body.*

11

48 SHOCK OIL

HARDWARE

(x4)
Shock End Ball

Be careful not to damage the shock shaft when installing the shock ends.

Fill the shock body with shock oil (with shock shaft fully extended, oil level should be just below the top of the shock body). Gently work the shaft up and down in the shock body to allow the air bubbles to work out of the oil.

11

49 SHOCK CAP

Make sure the bladder is fully seated in the shock cap groove before installing it on the shock body.

IMPORTANT!
To avoid damage, DO NOT overtighten or use the hole in the cap when installing the cap on the shock body.

Slide the shock shaft up until the piston is to the top of the shock oil. Do not push the shock piston all the way out of the shock oil. Slowly thread the shock cap onto the shock body, allowing the excess oil to come out of the bleed hole in the shock cap. Using the included shock wrench, firmly tighten the shock cap.

11

50 SHOCK BOOT AND SPRING

Install the shock boot over the shock end and secure it in place on the shock body. Gently work the shock end out the bottom of the shock boot. The bottom of the shock boot should be firmly in place around the top of the shock end.

Be careful not to tear the shock boots during installation.

x 4

Thread the adjustable collar onto the shock body.

Make sure the spring retainer keys onto the tab on the shock end.

Rear (Long) x 2
Front (Short) x 2

11

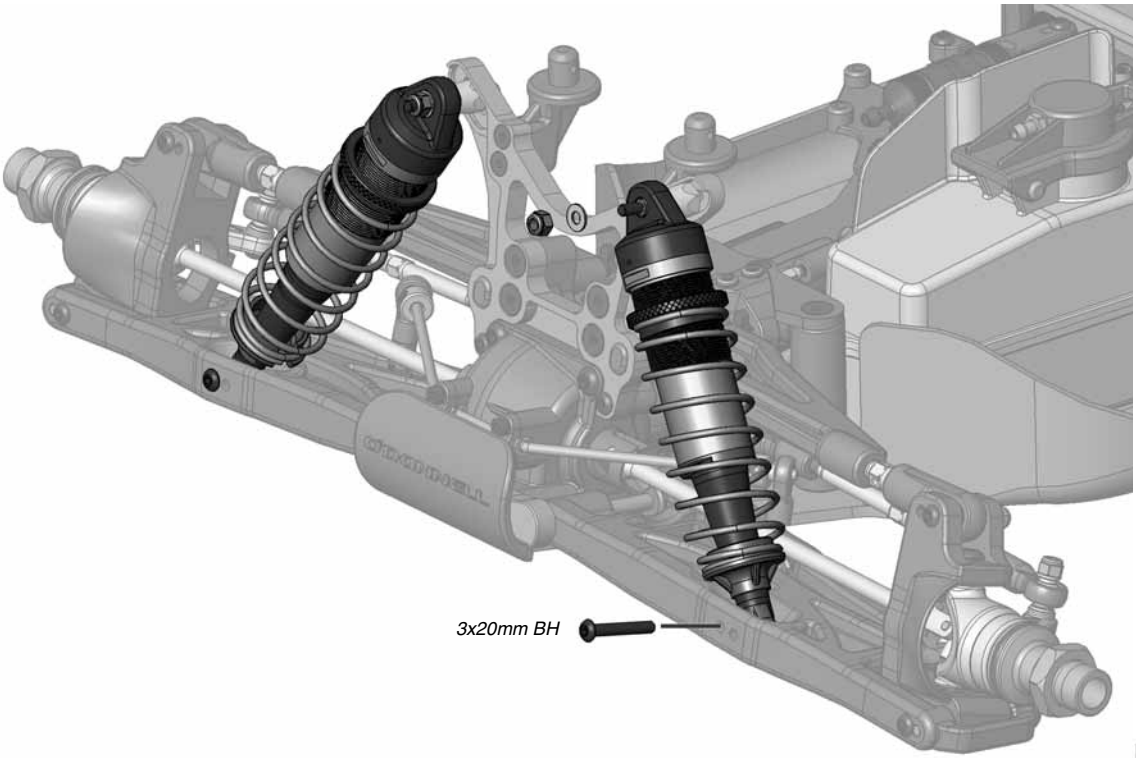
51 FRONT SHOCK INSTALLATION

HARDWARE

(x2)
3x20mm BH Screw

(x2)
3mm Lock Nut

(x2)
3mm Washer



3x20mm BH

11

52

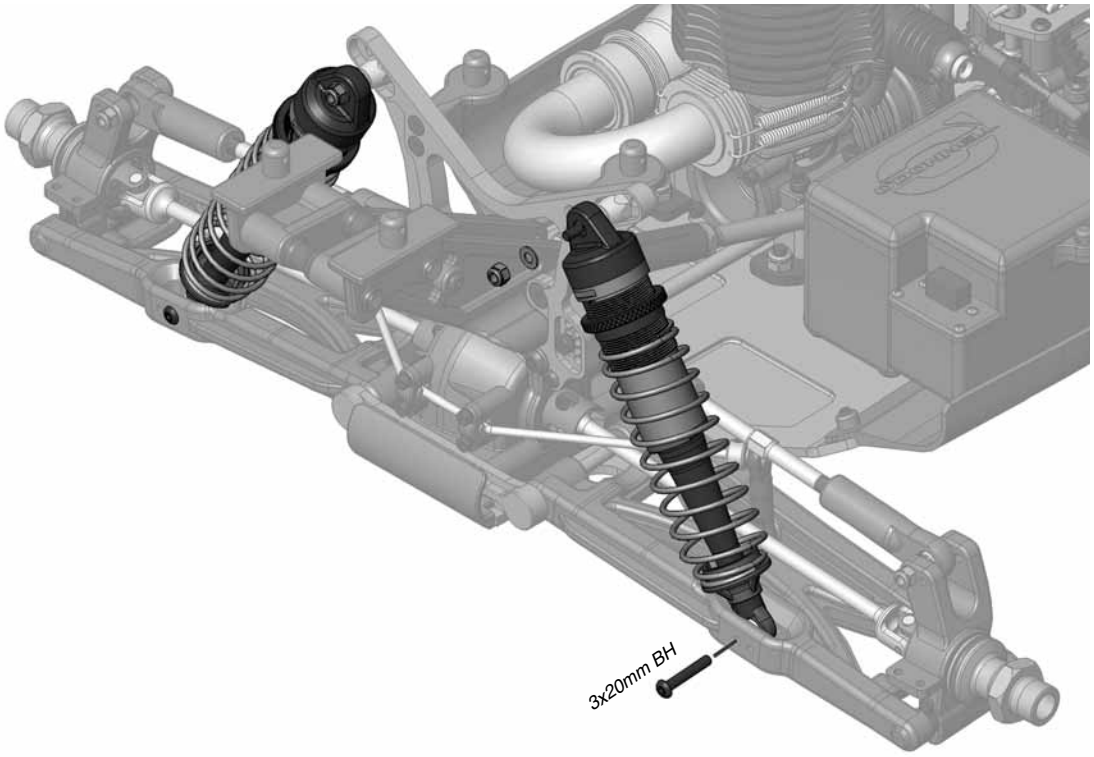
REAR SHOCK INSTALLATION

HARDWARE

(x2)
3x20mm BH Screw

(x2)
3mm Lock Nut

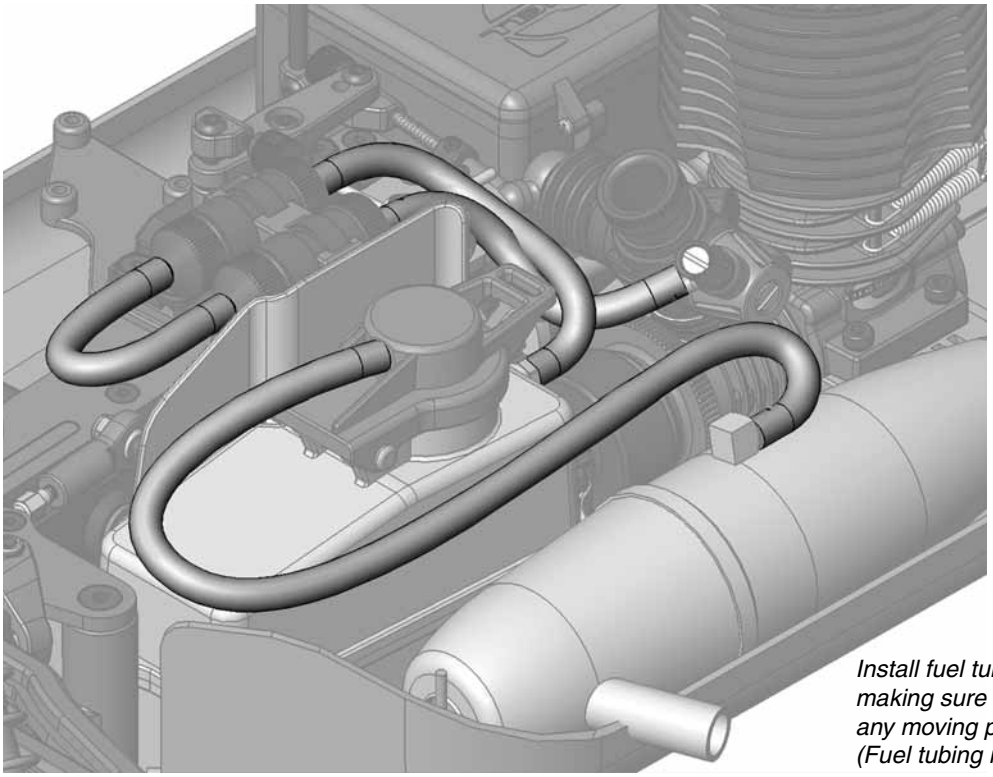
(x2)
3mm Lock Nut



11

53

FUEL TUBING



Install fuel tubing as shown, making sure it is not close to any moving parts or kinked. (Fuel tubing not included.)

54 AIR FILTER

HARDWARE

(x1)
3x8mm BH Screw

Secure the air filter assembly to the air filter boot with one of the included tie straps.

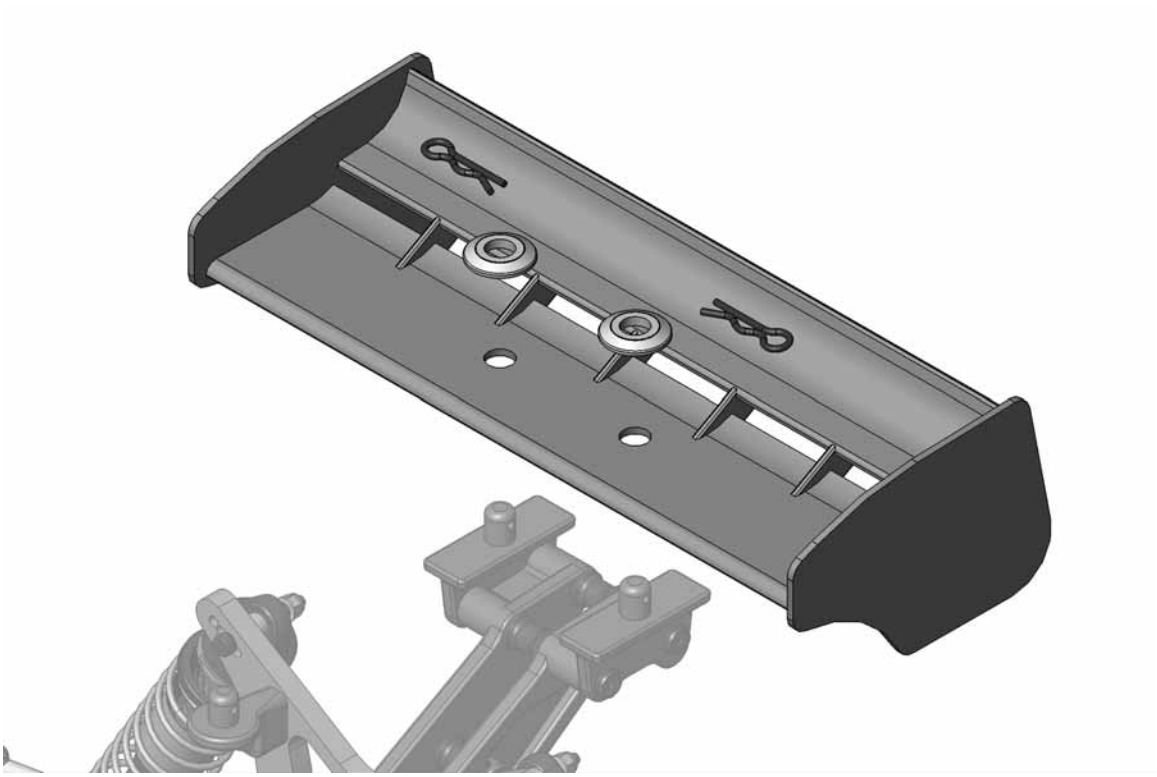
IMPORTANT!

Place the inner element into a small plastic bag and soak with air filter oil (not included). Work the oil into the element until it is completely saturated. Remove the element from the bag and remove the excess oil from the filter using a clean rag or paper towel.

Secure the air filter to the carb with one of the included tie straps.

12

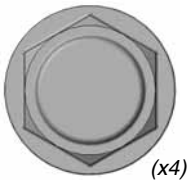
55 WING INSTALLATION



13

56 TIRE AND WHEEL INSTALLATION

HARDWARE



(x4)
Wheel Nut

Tires and inserts sold separately.

14

57 BODY

Trim body as shown.