

TEAM LOSI EIGHT

1/8th Scale Nitro Off Road Racing Truggy

Owner's Manual



ALWAYS RACING TOWARDS THE FUTURE.

Welcome Team Losi 8IGHT-T Owner!

Thank you for selecting the 8IGHT-T as your new racing truggy. The 8IGHT-T has already distinguished itself as a top caliber racing chassis and as you will see, we have made every effort to produce a chassis that is not only the most competitive but due to the race ready roller concept, also easy to use and maintain. Since building time has been greatly reduced you can get on the track sooner and concentrate on the finer points of the set-up covered in the tuning tips. Before you start to install the radio and engine in, read through the instructions to insure that your 8IGHT-T runs up to it's full potential from the first second it hits the track. The simple bag-by-bag assembly sequence and easily followed instructions and drawings combined with Team Losi's world famous quality fitting parts will make building the 8IGHT-T a most enjoyable project.

Before you open the first bag, or start assembly, please take a moment to read through the following instructions. This will familiarize you with the various parts, assembly tips, and descriptions as well as the tools needed. Taking an extra moment before starting can save a good deal of time and assure proper assembly.

Good luck and good racing,

Team Losi

8IGHT-T COMPLETED KIT SPECIFICATIONS

Overall Chassis Length: 18.2in (462mm)	Wheelbase: 12.64-12.80in (321-325mm)	*Front Track Width: 12.13in (308mm)
Overall Length w/Tires: 19-1/4in (489mm)	*Overall Height: 6-3/4in (171mm)	*Rear Track Width: 12.13in (308mm)

Note: Final kit weight will vary depending on accessories used.

**All measurements taken at ride height (36mm).*

Table 1: 8IGHT-T Completed Kit Specifications.

Kit/Manual Organization:

The kit is composed of different bags marked A through H. Each bag contains all of the parts necessary to complete a particular section of the kit. Some of these bags have sub-assembly bags within them. It is essential that you open only one bag at a time and follow the correct assembly sequence, otherwise you may face difficulties in finding the correct part. It is helpful to read through the instructions for an entire bag prior to beginning assembly. Next to each of the step numbers is a check box. At the completion of each step, place a check in this box so that if you must stop and come back to the assembly, you will be able to pick up where you left off.

For your convenience, an actual-size Hardware Identification Guide is included as a fold-out page at the back of this manual. Hardware that is not easily differentiable in each step is called out with an icon which contains a small picture of the part genre (referenced on the Hardware Identification Guide), the quantity of that part required for what is **shown** in the step, and the size or name of that part. To check a part, hold it against the silhouette until the correct part is identified. Associated with each of these parts, in the Hardware Identification Guide, is a LOSA-Number which is used when ordering replacement parts for your 8IGHT-T. In some cases, extra hardware has been supplied for parts that may be easy to lose.

Components used in each step are identified by their relative LOSA-Number and the component's name. With the exception of a few parts, these are not referenced in the Hardware Identification Guide.

The molded parts in Team Losi kits are manufactured to de-

manding tolerances. When screws are tightened to the point of being snug, the parts are held firmly in place. For this reason, **it is very important that screws not be overtightened in any of the plastic parts.**

In some steps there will be a filled black circle with a white number. These indicate the specific order by which assembly must occur. In cases where steps are repeated (front/rear or left/right) these numbers may be omitted. Please note that these numbers will not call out every sub-step required for the step's assembly procedures, they will only highlight the critical order required for assembly.

In each step, there are specific "Detail Icons" (shaped like a stop sign) that call out critical precautions or assembly tips for the process. There is a reference key that describes the meaning of each of the icons located on the fold-out Hardware Identification Guide at the back of this manual.

To ensure that parts are not lost during construction, it is recommended that you work over a towel or mat to prevent parts from rolling away.

IMPORTANT SAFETY NOTES:

1. Select an area for assembly that is away from the reach of small children. *Some parts in this kit are small and can be swallowed by children, causing choking and possible internal injury; PLEASE USE CAUTION!*
2. The shock fluid and greases supplied should be kept out of children's reach. *They are not intended for human consumption!*
3. Exercise care when using any hand tools, sharp instruments, or power tools during construction.
4. Carefully read all manufacturer's warnings and cautions for any chemicals, glues, or paints that may be used for assembly and operating purposes.

TOOLS REQUIRED FOR ASSEMBLY

Team Losi has supplied all necessary Allen wrenches and a special wrenchs that are needed for assembly and adjustments. The following common tools will also be required: Needle-nose pliers, regular pliers, hobby knife, scissors or other body cutting/trimming tools, and a soldering iron may be necessary for radio installation. 3/16", 1/4", 5/16", and 11/32" nut drivers are optional.

RADIO/ELECTRONICS

A suggested radio layout is provided in this manual. Your high performance R/C center should be consulted regarding specific questions pertaining to radio/electrical equipment.

HARDWARE IDENTIFICATION

When in question, use the Hardware Identification Guide at the back of this manual.

- For screws, the prefix number designates the thread size and number of threads per inch (i.e., 4-40 is a #4 size thread with 40 threads per inch). The second number, or fraction, designates the length of the screw. For cap head and button head screws, this number refers to the length of the threaded portion of the screw. For flat head and set screws, this number refers to the overall length of the screw.
- Bearings and bushings are referenced by the inside diameter (I.D.) x outside diameter (O.D.).
- Shafts and pins are designated by type (Roll, Solid) and referenced by diameter x length.
- Washers, Spacers and Shims are described by inside diameter or the screw size that will pass through the inside diameter x the thickness or by their designated application (i.e., Ball Stud washer is primarily used under a Ball Stud).
- Retaining Clips are sized by the shaft diameter that they attach to or by type (Body). The Hardware Icon associated with E/C-Clips only designates the part genre of clips, not the actual part.
- Nuts come in four types, Non-Flanged, Flanged (F), Plain, and Locking (L) (designated on the Hardware Icons). The prefix number designates the thread size and number of threads per inch. The second number, or fraction, designates the size of the hex. For example, L 4-40 x 1/4" designates a Lock nut that will thread onto a 4-40 screw using a 1/4" nut driver.
- Setscrews come in three types, Cup (C), Flat (F) and Oval (O) (designated on the hardware Icons). The prefix number designates the thread size and number of thread per inch. The second number, or fraction, designates the length of the threaded portion of the screw.

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TABLES

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Cap Head

- 2-56 x 1/4" (A6232)
- 2-56 x 1/2" (A6254)
- 4-40 x 3/8" (A6206)
- 4-40 x 1/2" (A6204)
- 4-40 x 5/8" (A6221)
- 5-40 x 1/2" (A6240)
- 5-40 x 7/8" w/ 5/8" Shoulder (A4414)



Flat Head 1

- 3 x 8mm (A9104)
- 3 x 12mm (A3500)
- 5-40 x 3/8" (A6270)
- 5-40 x 1/2" (A6271)
- 5-40 x 3/4" (A6272)
- 5-40 x 7/8" (A6273)



Flat Head 2

- 8-32 x 3/8" (A6264)
- 8-32 x 1/2" (A6262)
- 5-40 x 1-7/8" (A6273)



Button Head

- 2-56 x 1/4" (A6255)
- 4-40 x 1/4" (A6234)
- 4-40 x 1/2" (A6256)
- 5-40 x 3/8" (A6277)
- 5-40 x 1/2" (A6278)
- 5-40 x 3/4" (A6279)
- 5-40 x 1" (A6280)
- 8-32 x 3/4" (A6263)



Set

- F 5-40 x 1/8" (A6228)
- C 4-40 x 1/8" (A6227)
- C 5-40 x 3/16" (A6299)
- C 8-32 x 1/8" (A6298)
- F 5-40 x 1/8" (A6297)
- F 8-32 x 1/8" (A6296)
- O10-32 x 3/8" (A6295)
- 5-40 x 5/8" (A6043)



Ball Bearings 1

- 5x10x4mm (A6949)
- 6x10x3mm (A6946)
- 5x11x4mm (A6947)
- F 5x11x4mm (A6948)



Ball Bearings 2

- 5x13x4mm (A6949)
- 8x14x4mm (A6945)
- 1/2" x 3/4" (A6953)



Pins

- 2.5 x 14mm (A3525)
- 2.5 x 12.37mm (A3523)
- 3 x 17mm (A3531)
- 2.5 x 12.8mm (A3505)
- 4 x 66mm (A6500)



Washers

- Ball Stud (A6215)
- #4 x .030" (A6350)
- .250 x .094 x .020" (A9166)



Shims

- 5x7x.2mm (A9104)
- 6x8x.2mm (A6356)



Retaining Clips

- 5mm E-Clip (A6109)
- Body Clip (A8200)



Nuts (Lock/Plain)

- #4-40 (Mini) (A6306)
- #5-40 (A6302)
- #8-32 (A6311)

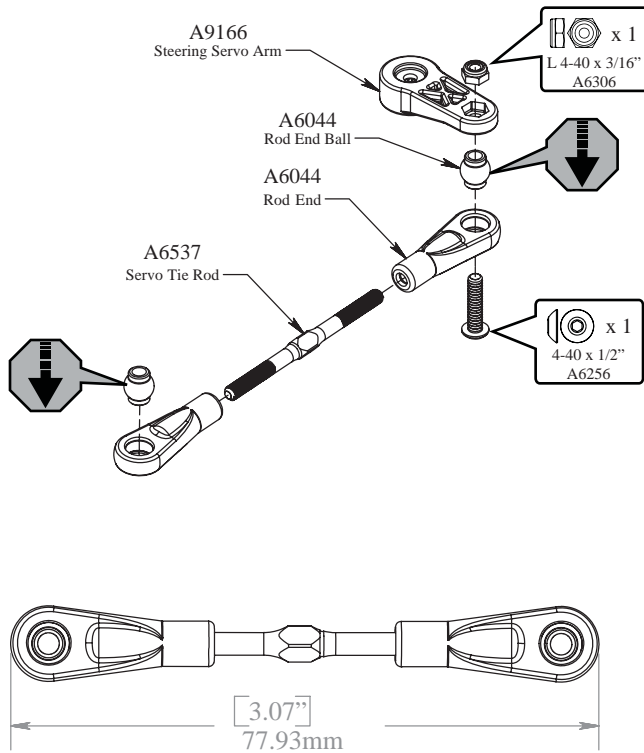
DETAIL ICON REFERENCE KEY

① These numbers are used to identify the critical order in which assembly must occur. *Note: They will not call out every stage of the assembly process.

- | | | | | | |
|-----------------------|------------------------------|-----------------------|---------------------------|---------------------------------|-----------|
| Apply Loctite® | Apply Clear Grease | Apply CA Glue | Degrease with Motor Spray | Fill With Silicone Oil | Pre-Tap |
| Pay Special Attention | Cut/Trim | Ensure Free Movement | Ensure Free Rotation | Ensure Proper Orientation | Push Firm |
| Side Shown | Assemble Other Side the Same | Repeat/Build Multiple | Screw Partially | DO NOT Over Tighten/ Snug Tight | Tighten |

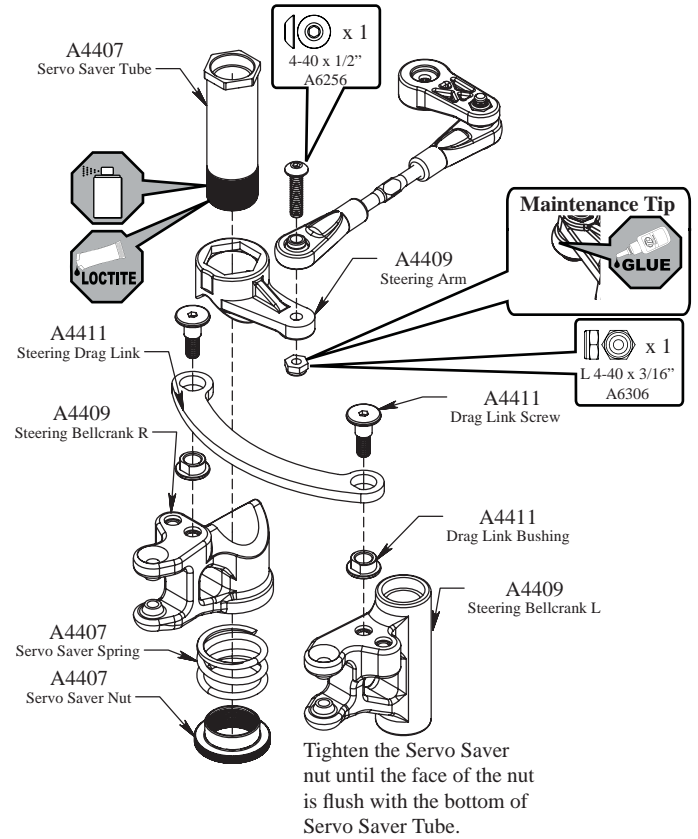
STEP A-01

Steering Link Assembly



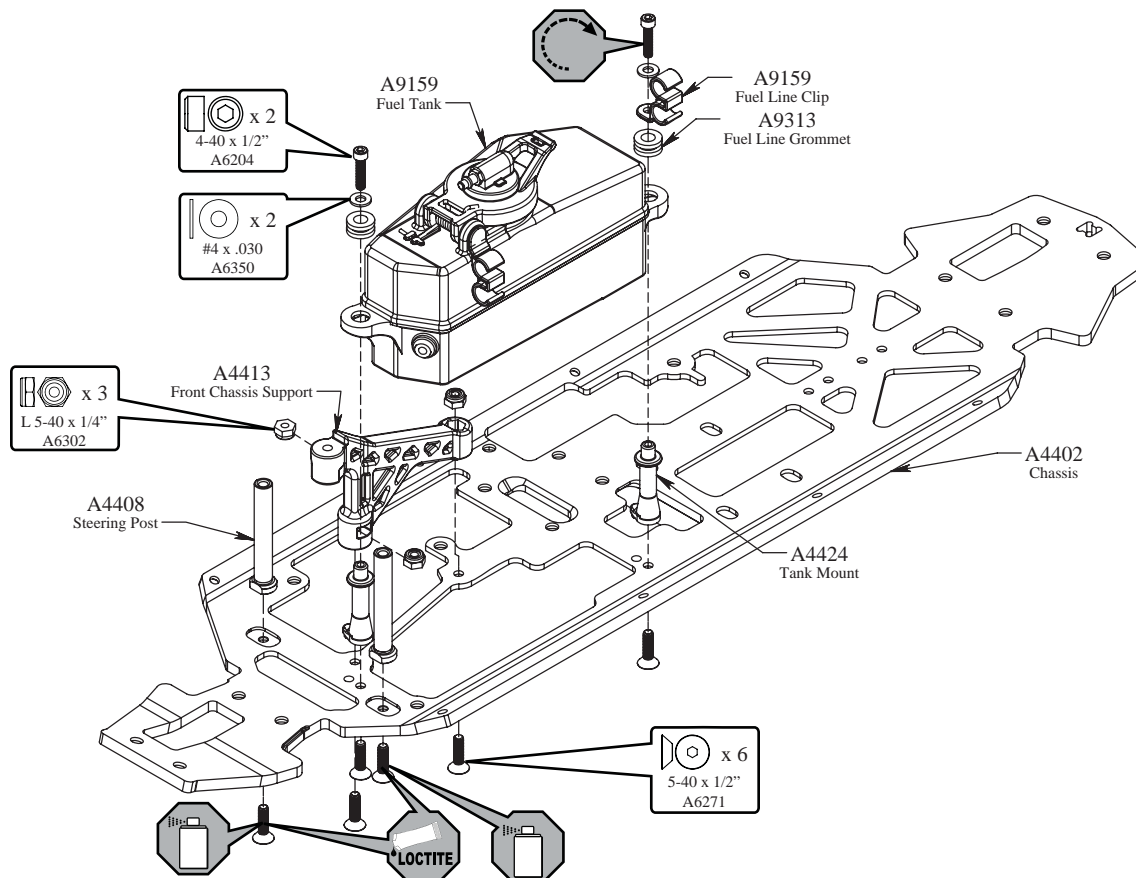
STEP A-02

Servo Saver Assembly



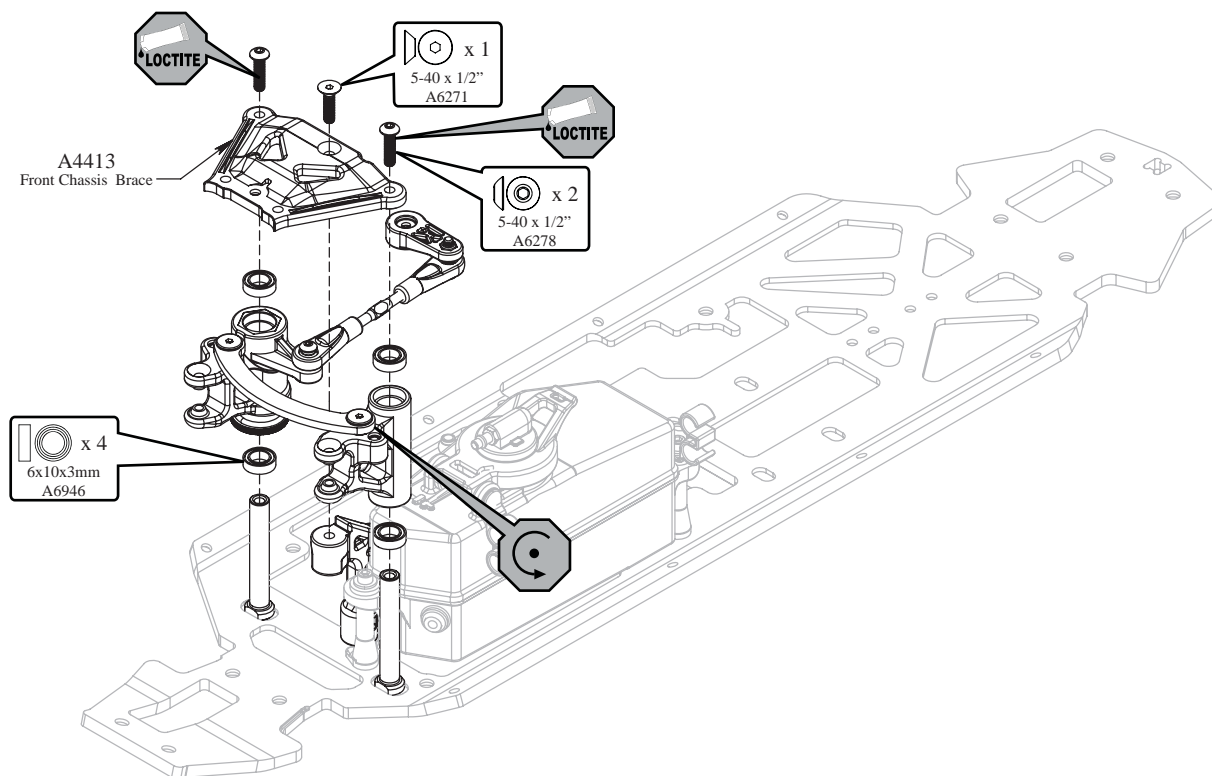
STEP A-03

Fuel Tank/Chassis Brace Assembly



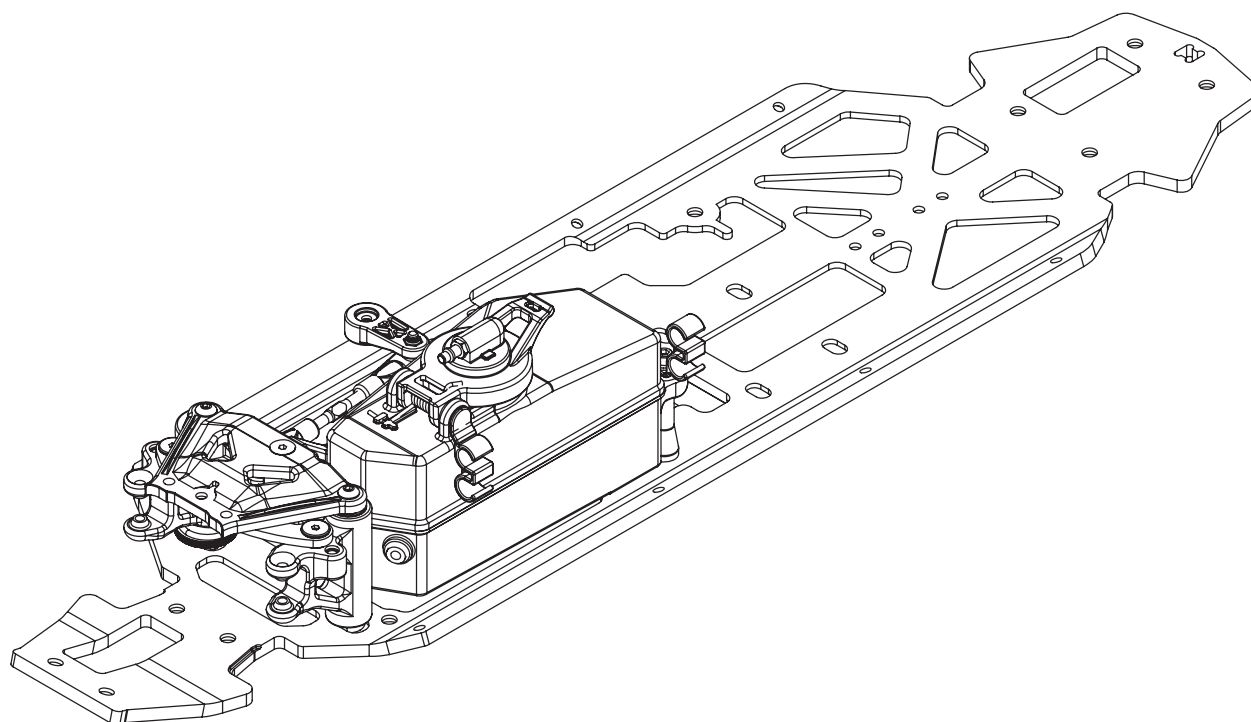
STEP A-04

Steering/Top Plate Assembly



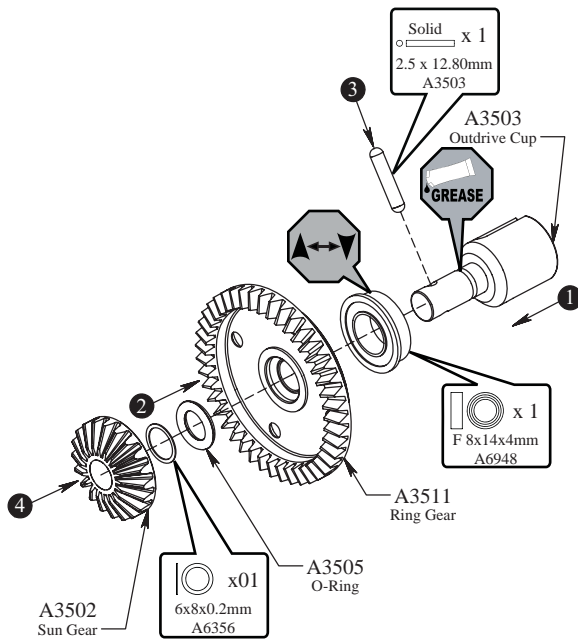
STEP A-05

Completed Steering Assembly



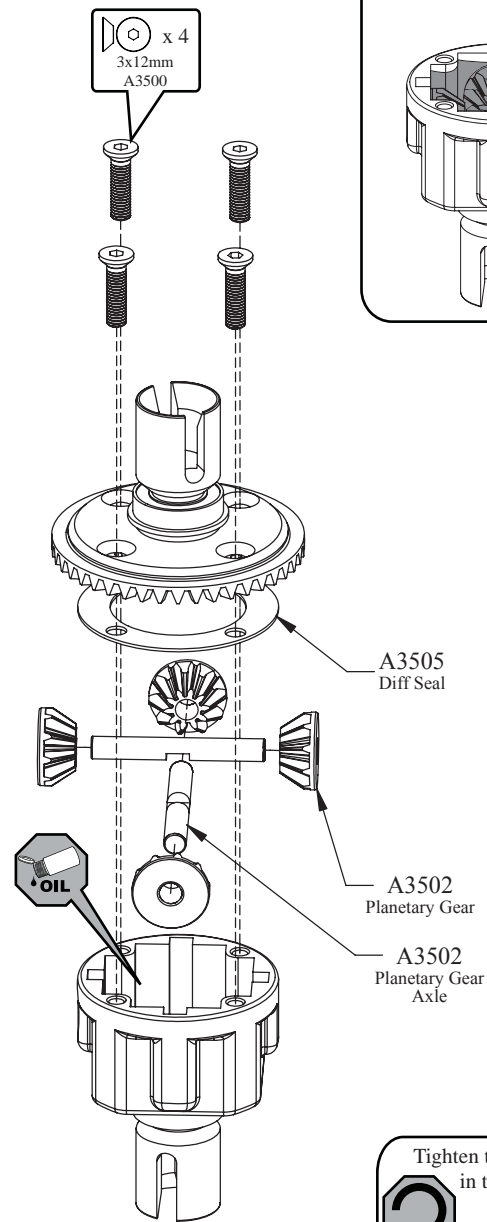
STEP B-01

Ring Gear Assembly

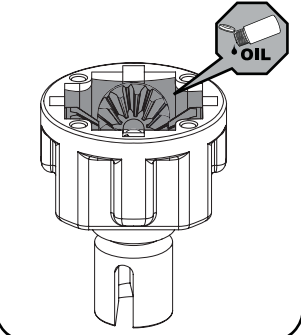


STEP B-03

Complete Diff Assembly

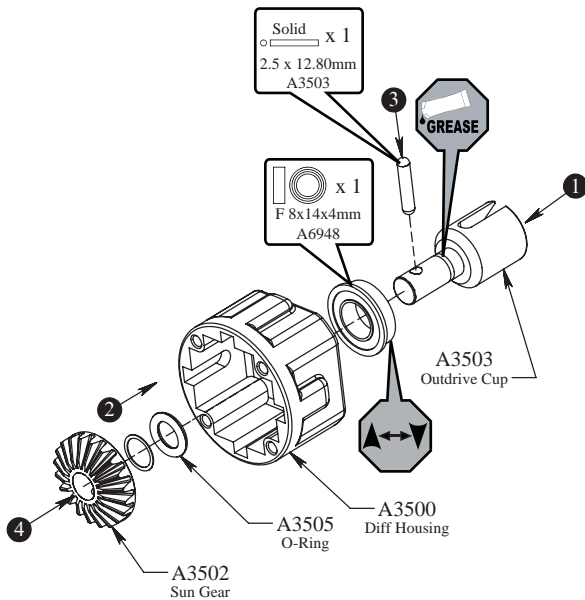


Fill with 7000wt. oil just above the planetary gear

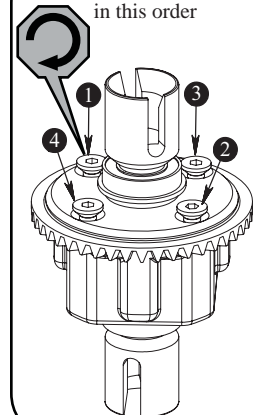


STEP B-02

Diff Case Assembly



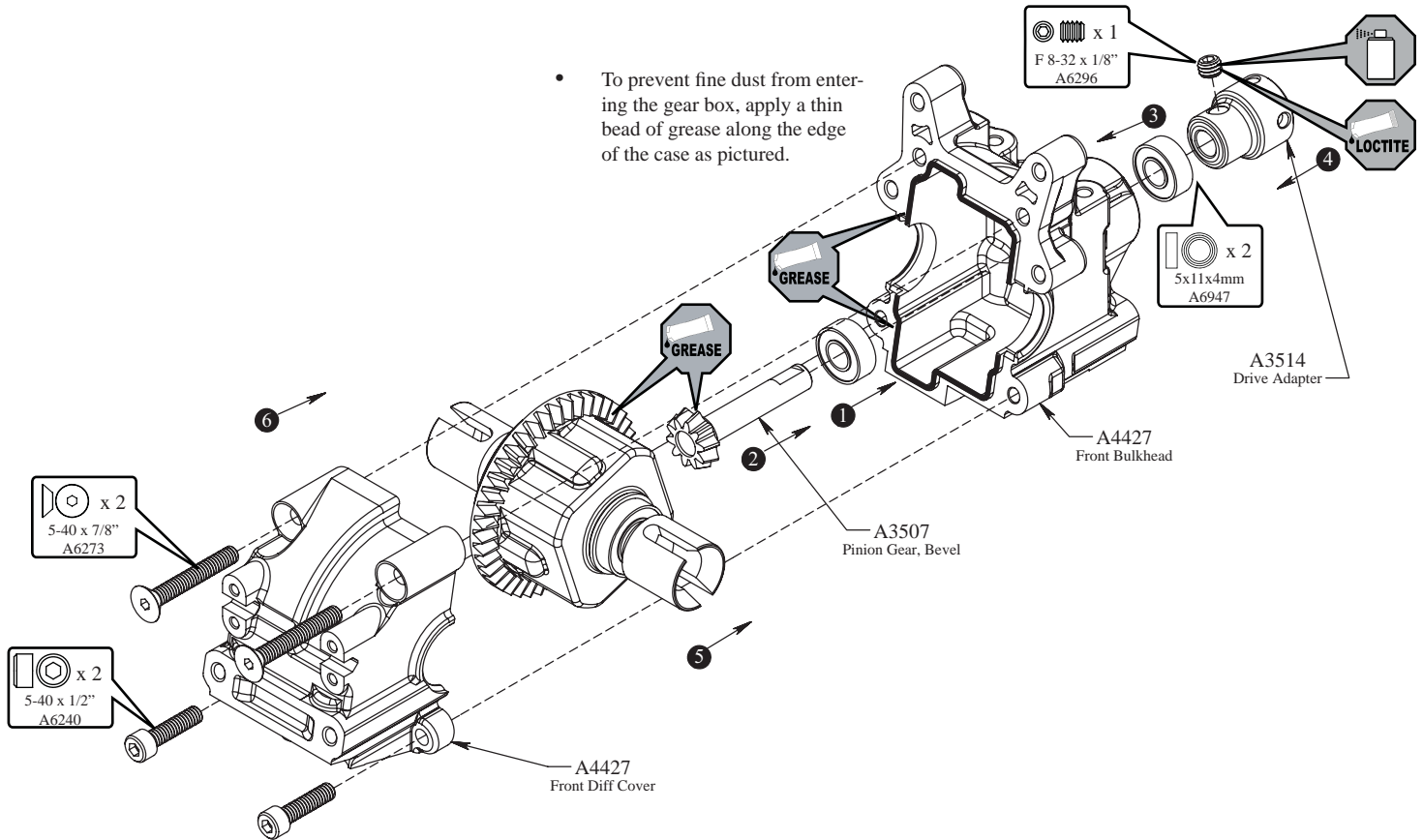
Tighten the diff screws in this order



STEP B-04

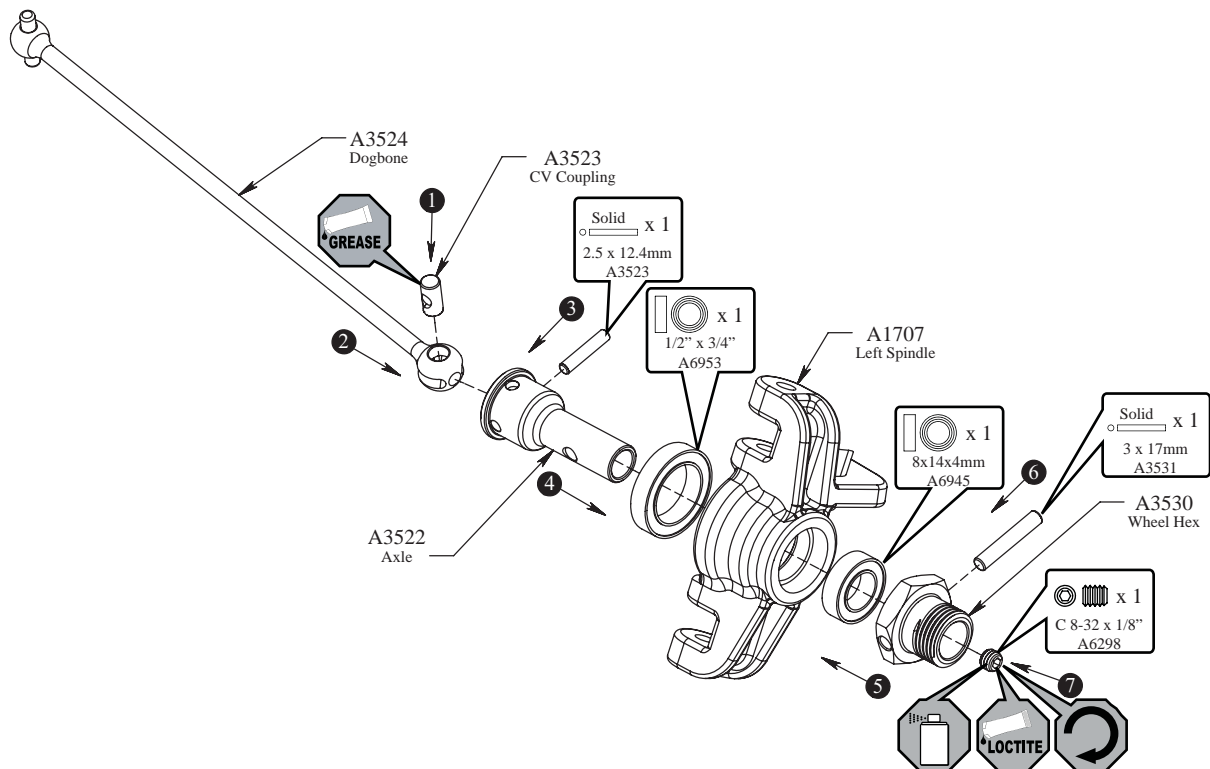
Front Diff Install

- To prevent fine dust from entering the gear box, apply a thin bead of grease along the edge of the case as pictured.



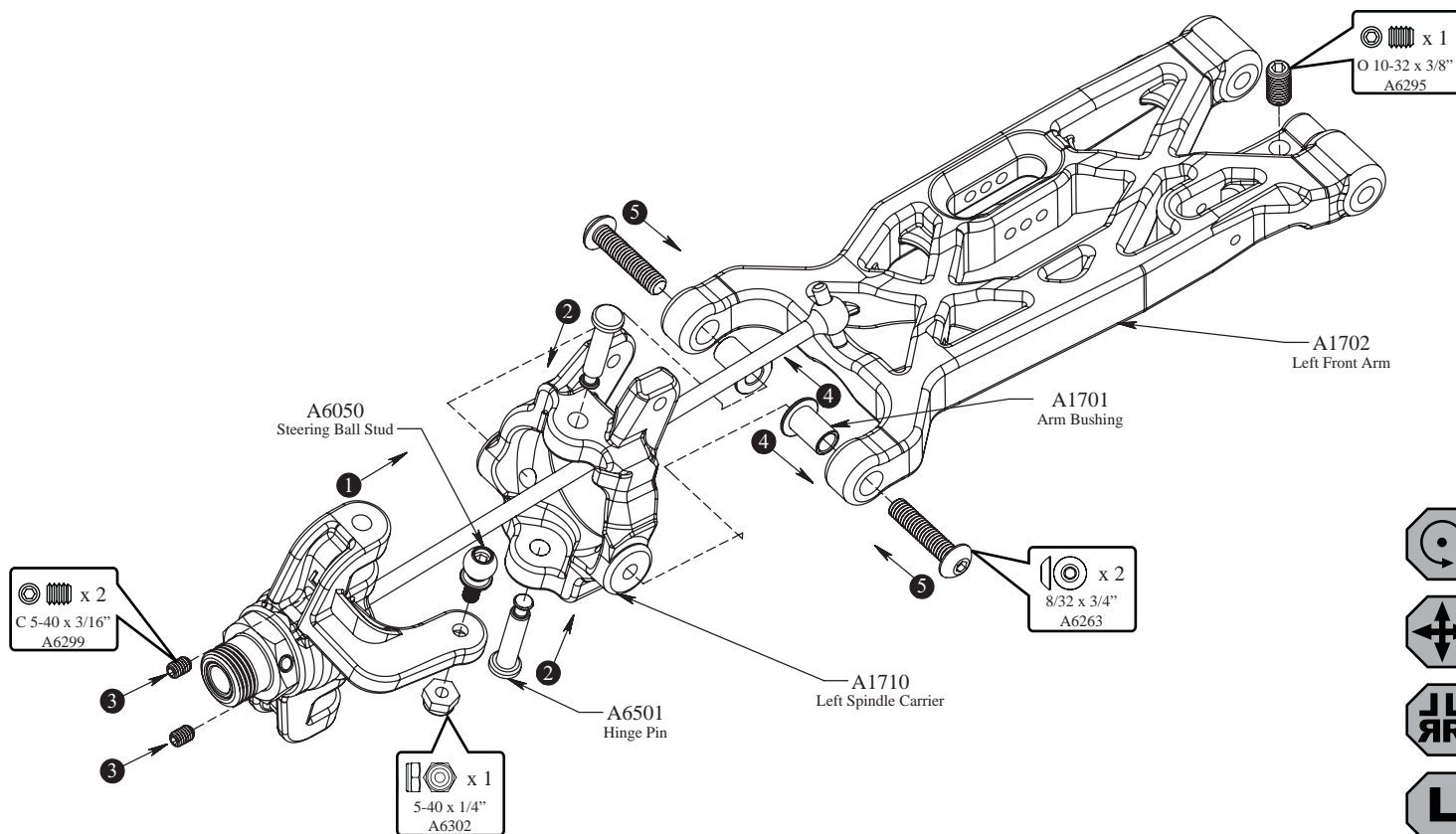
STEP B-05

Front Spindle & CV Assembly



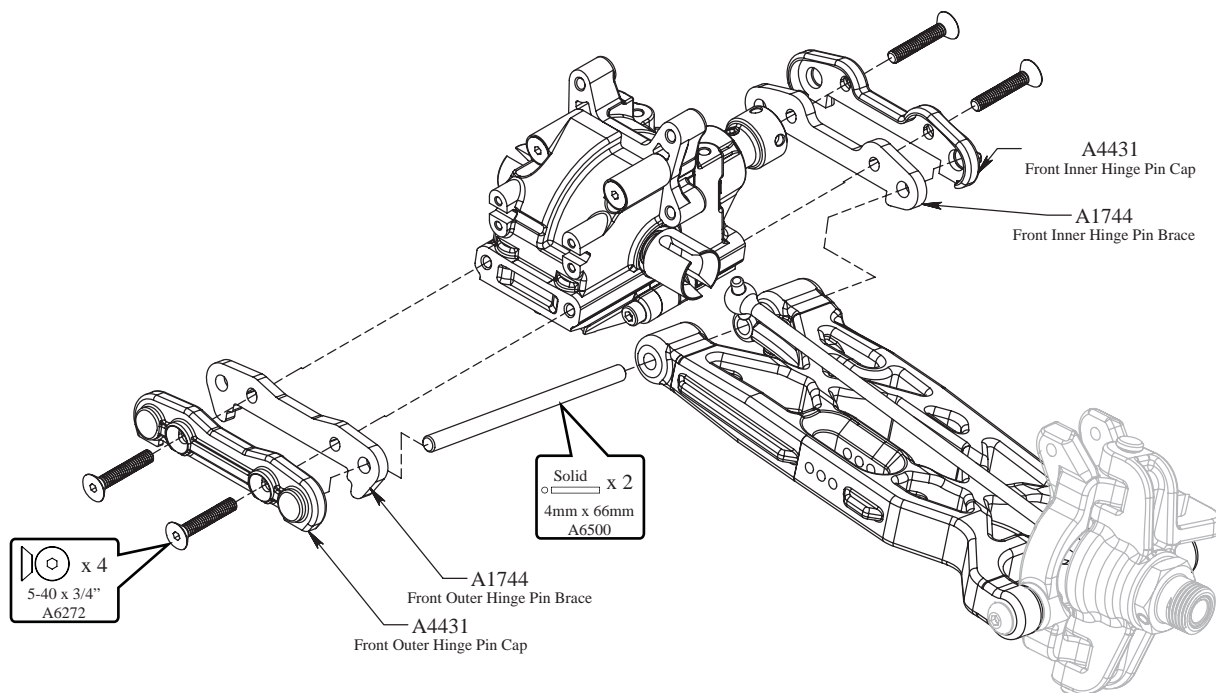
STEP B-06

Spindle/Carrier Assembly



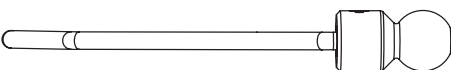
STEP B-07

Front Suspension Arms Assembly

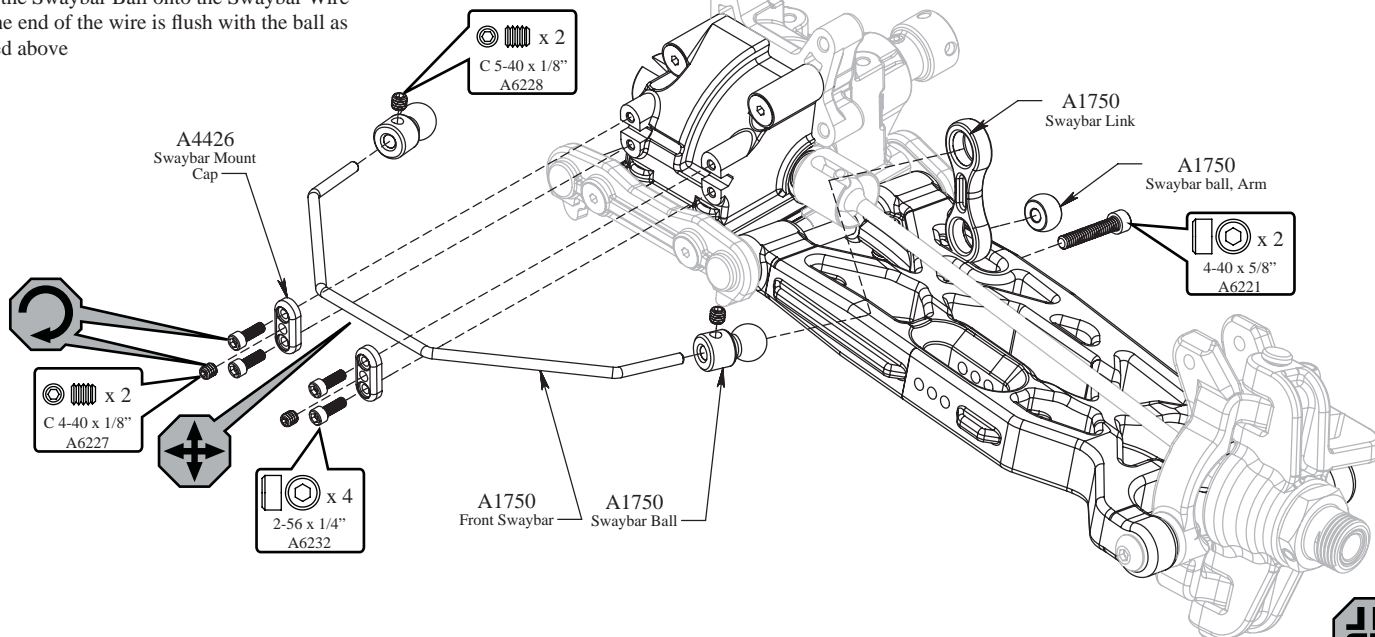


STEP B-08

Swaybar Assembly

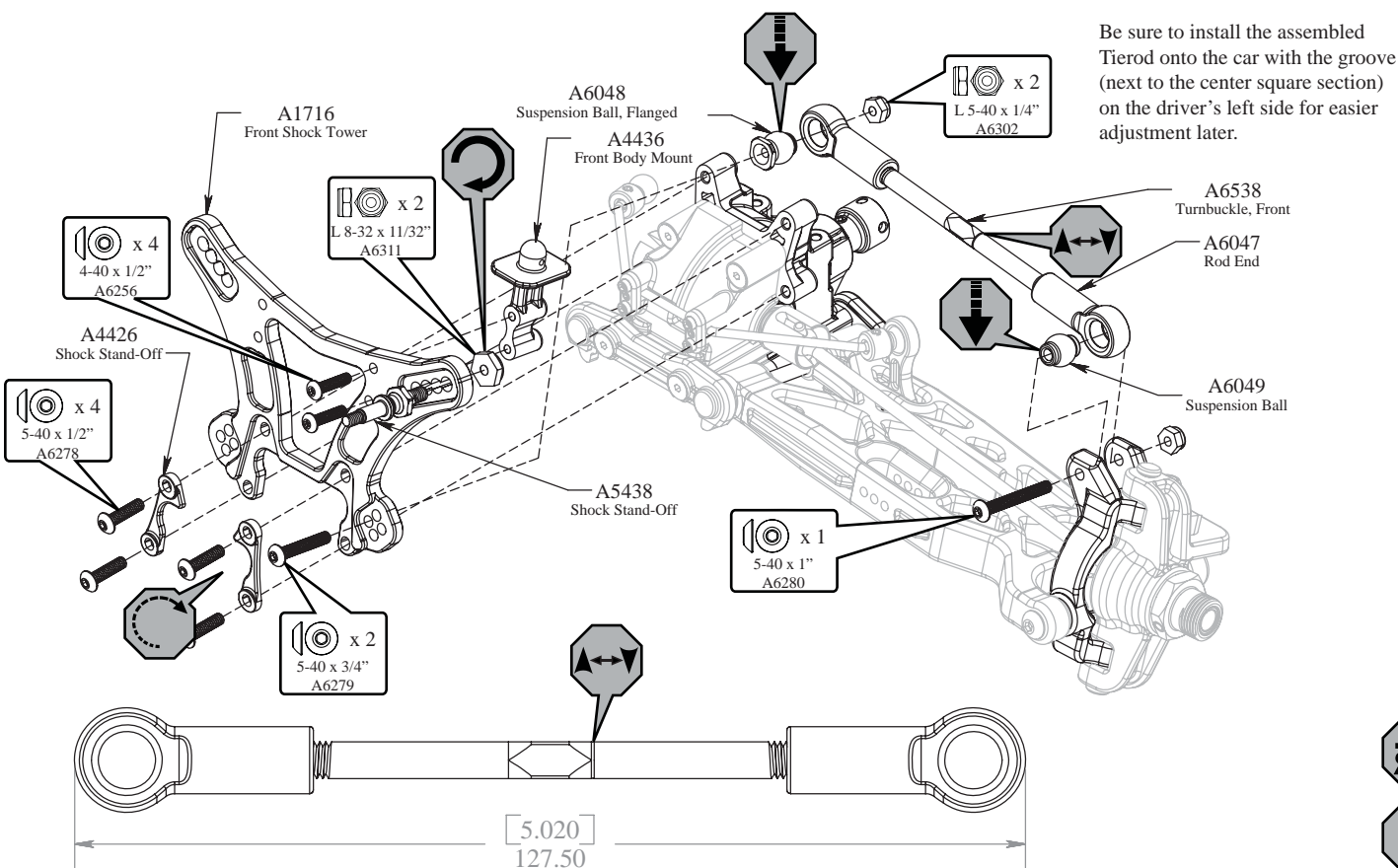


Install the Swaybar Ball onto the Swaybar Wire until the end of the wire is flush with the ball as pictured above



STEP B-09

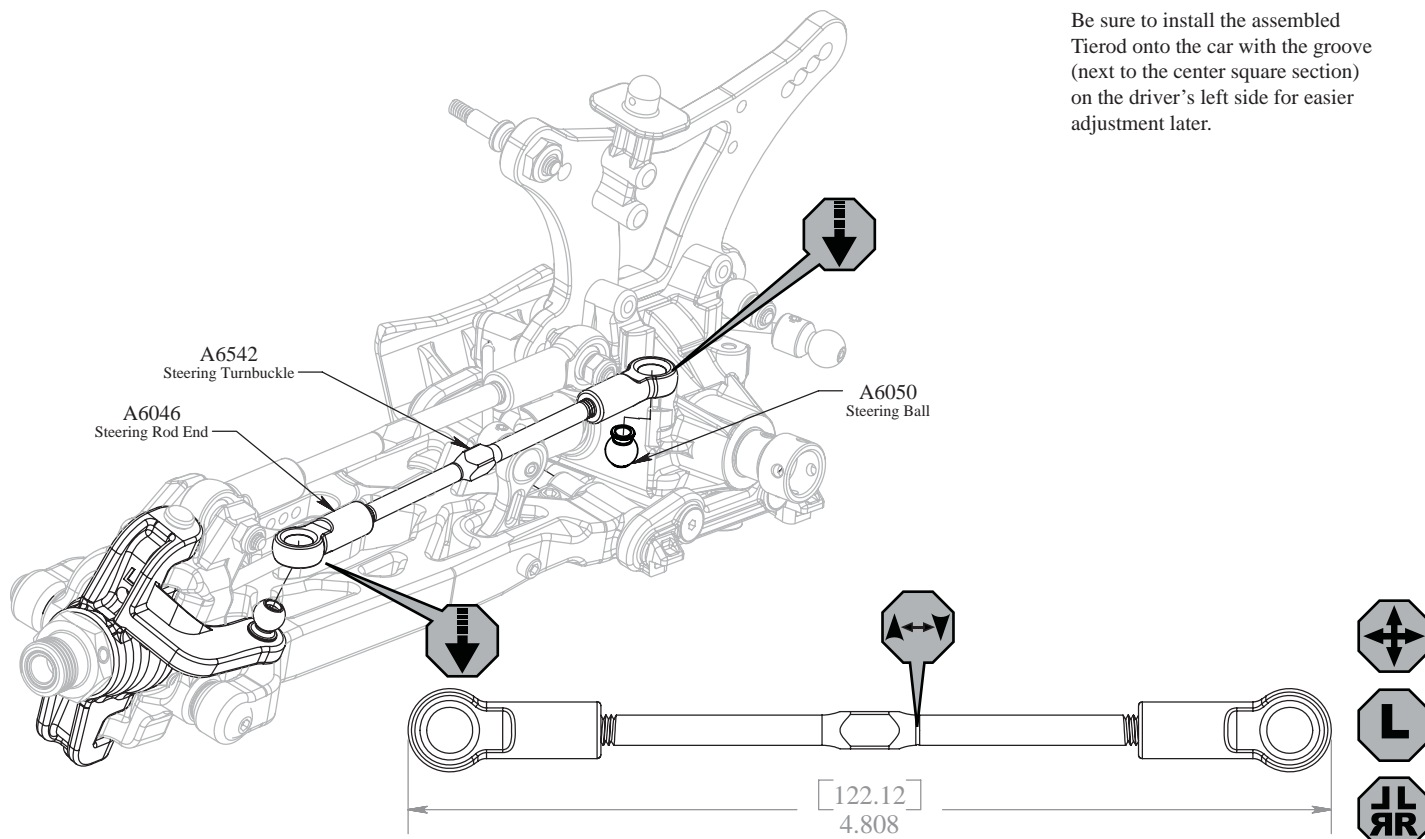
Tie Rod/Shock Tower Assembly



STEP B-10

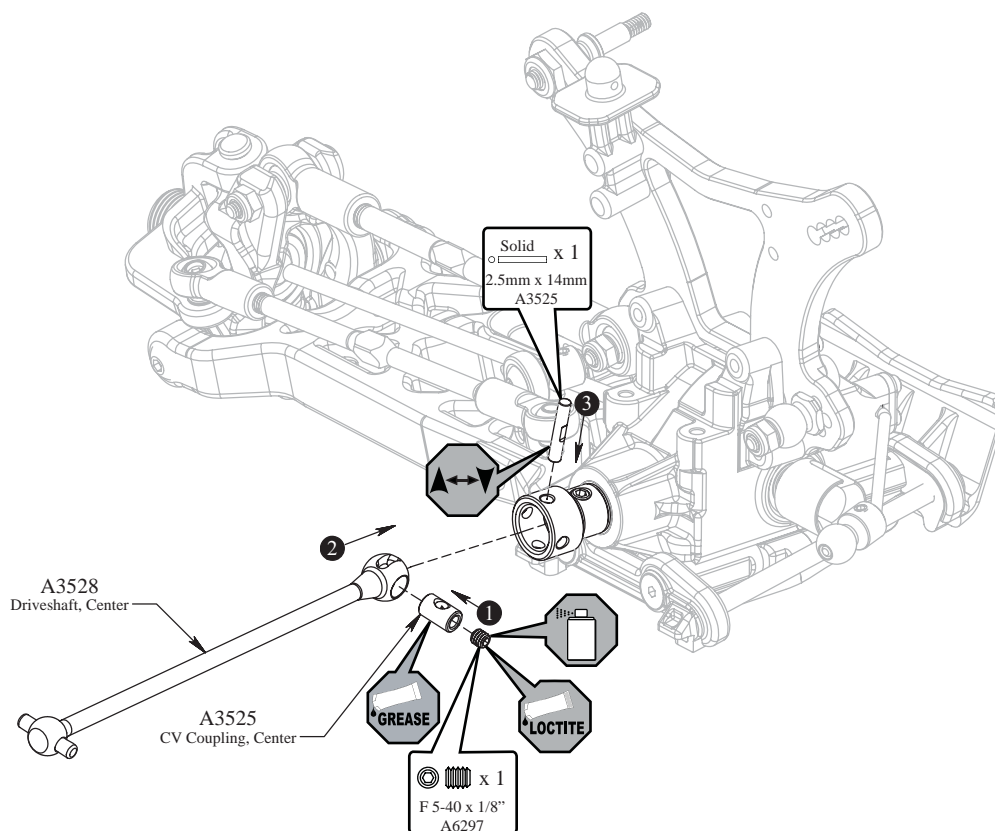
Front Steering Link Assembly

Be sure to install the assembled Tierod onto the car with the groove (next to the center square section) on the driver's left side for easier adjustment later.



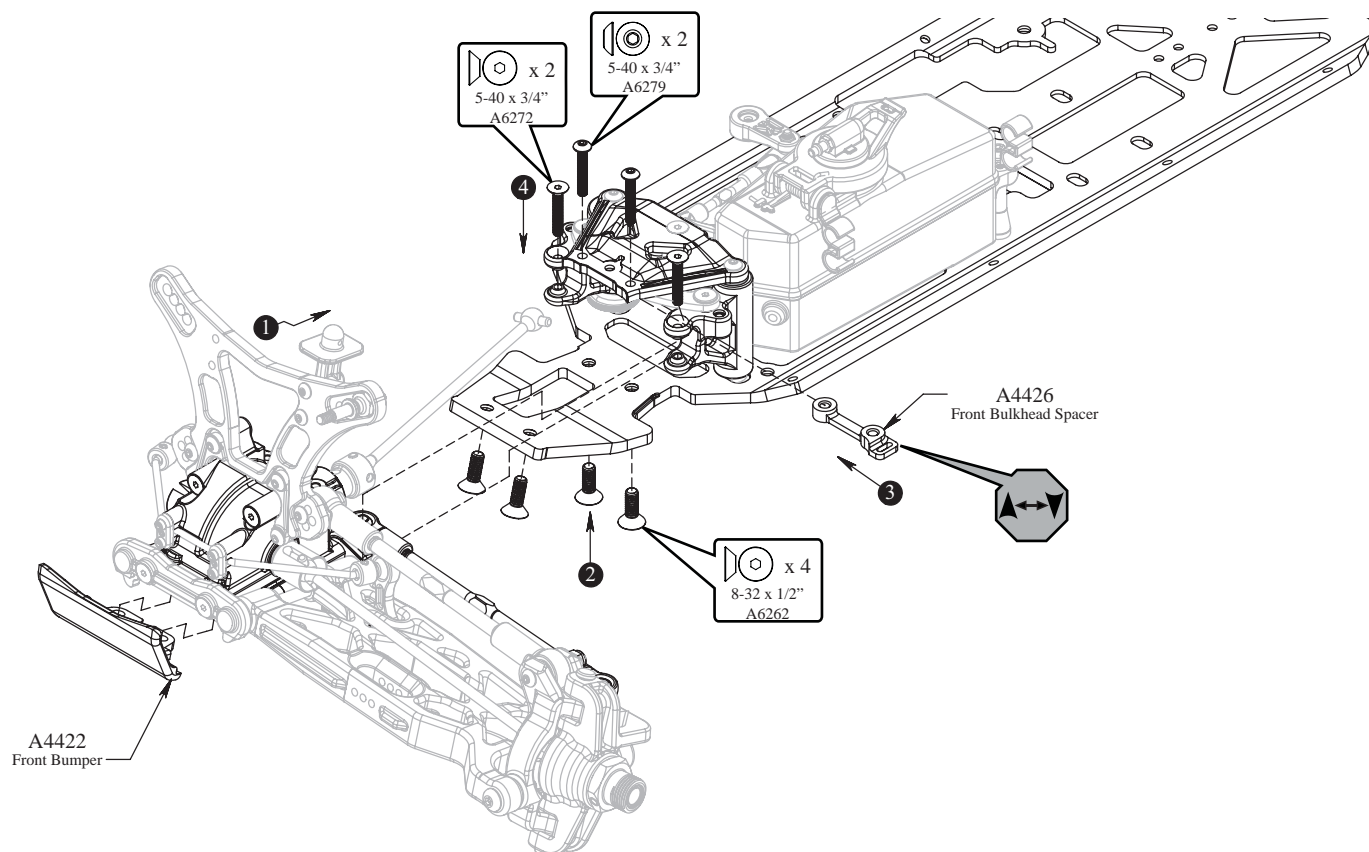
STEP B-11

Center CV Assembly



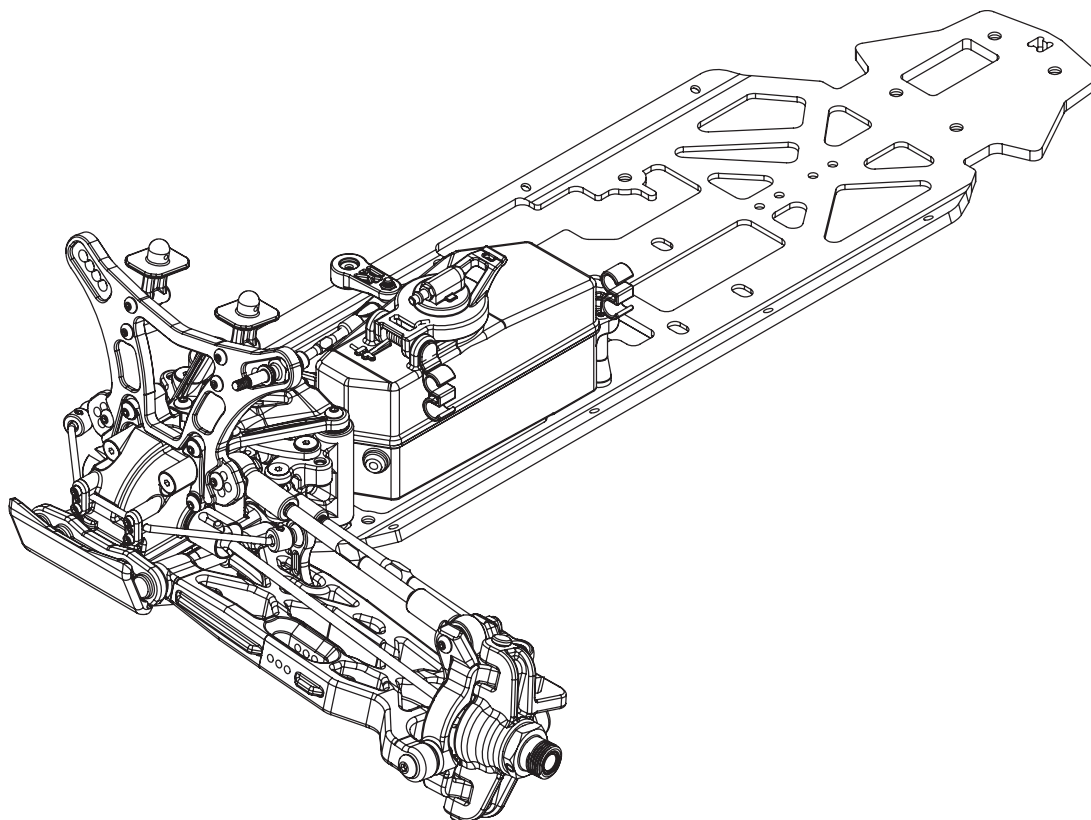
STEP B-12

Front Clip Assembly



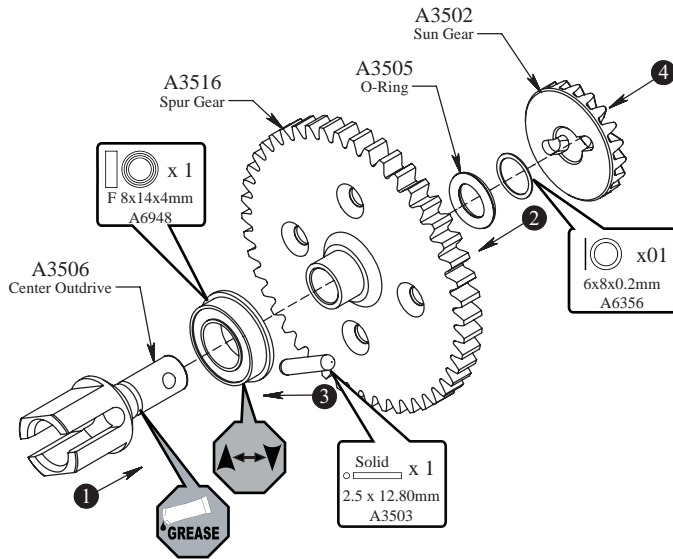
STEP B-13

Completed Front Assembly



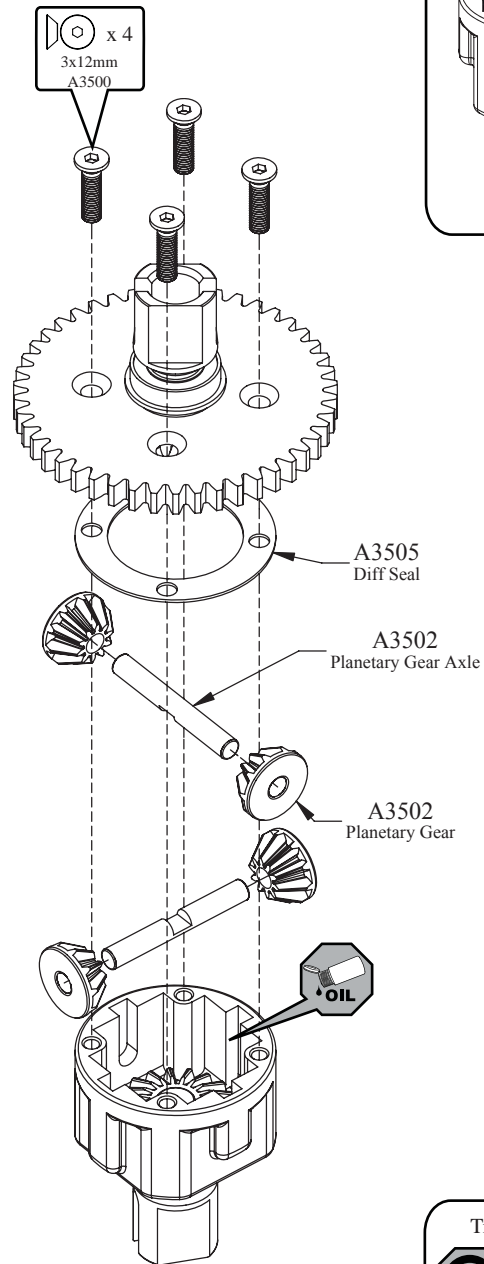
STEP C-01

Spur Gear Assembly



STEP C-03

Complete Diff Assembly

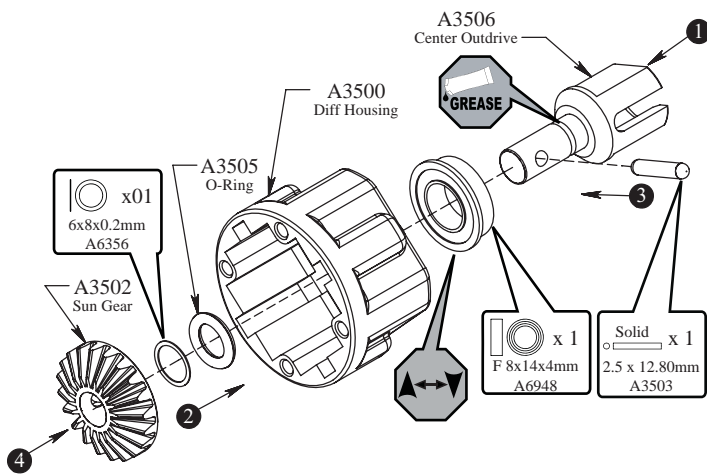


Fill with 10000wt. oil just above the planetary gear

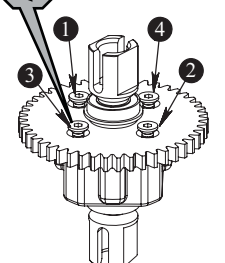


STEP C-02

Diff Case Assembly

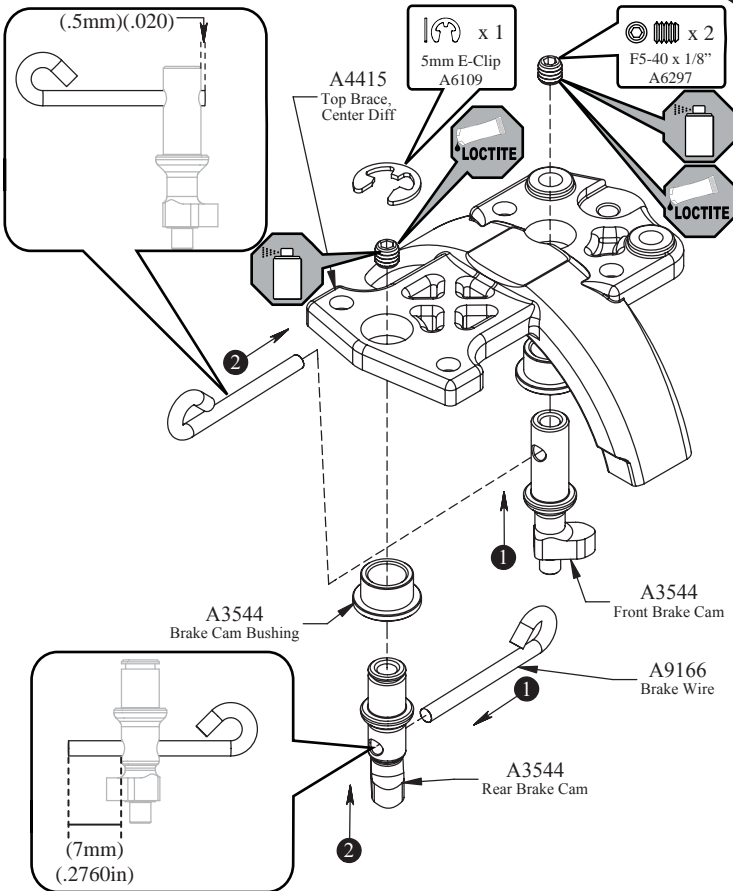


Tighten the diff screws in this order



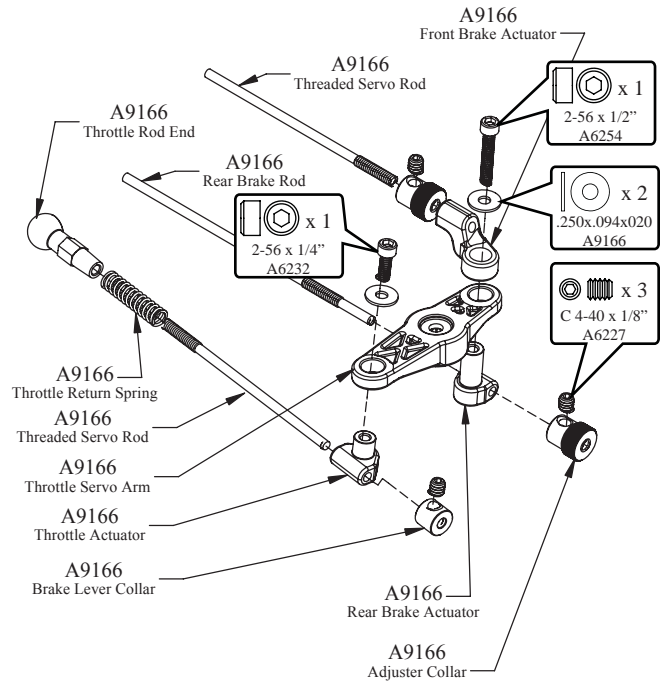
STEP C-04

Center Top Brace Assembly



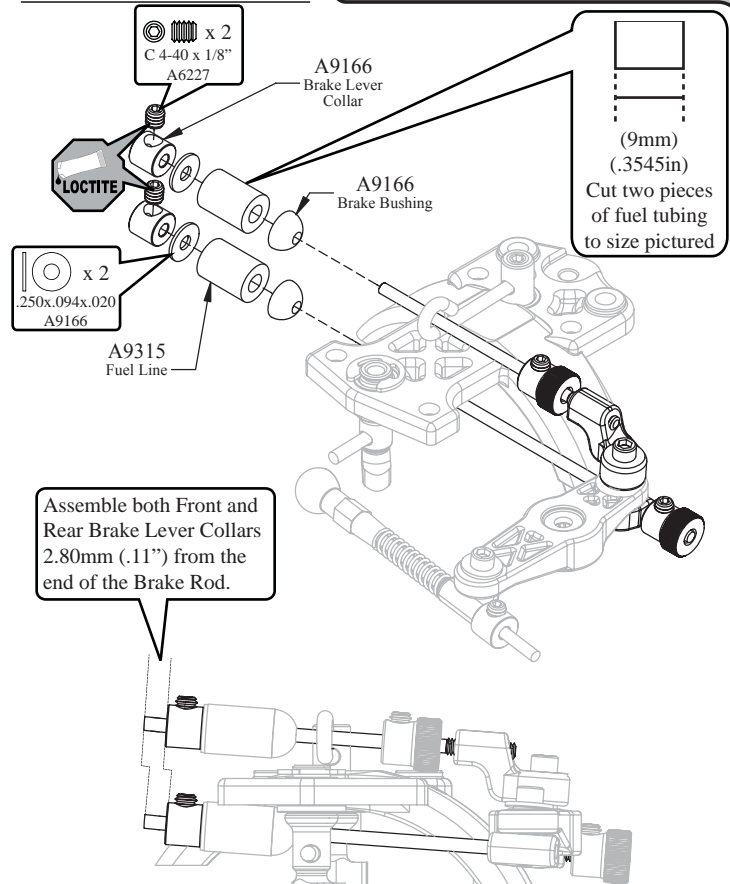
STEP C-05

Linkage Assembly



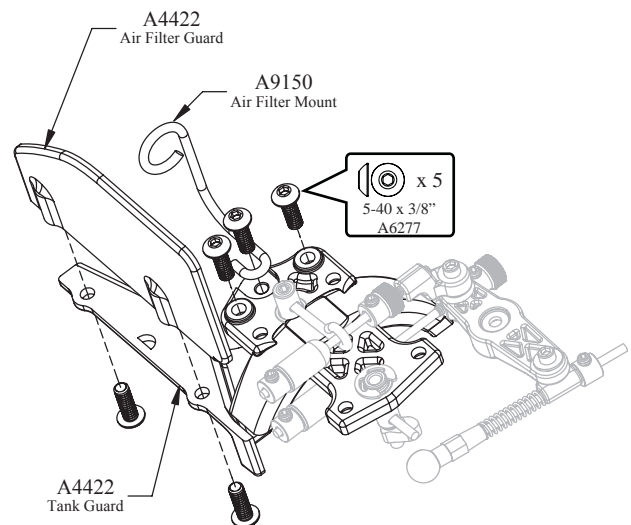
STEP C-06

Linkage Assembly



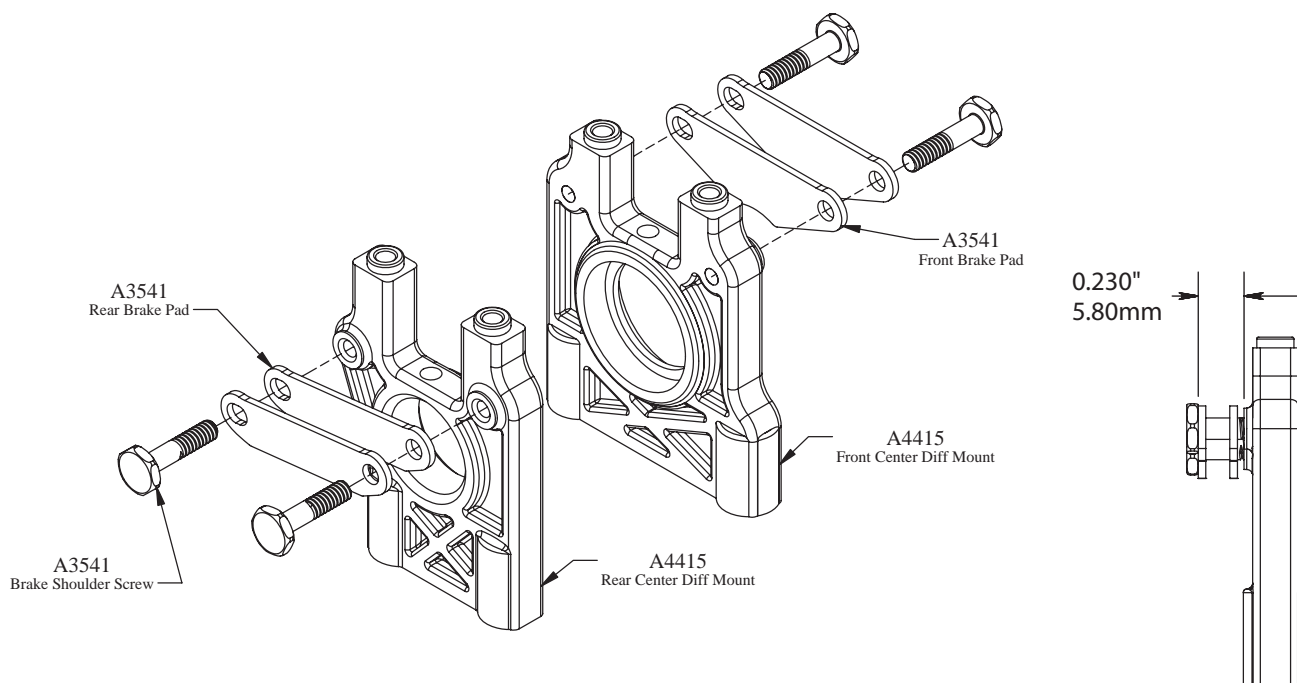
STEP C-07

Air Filter Mount & Guard



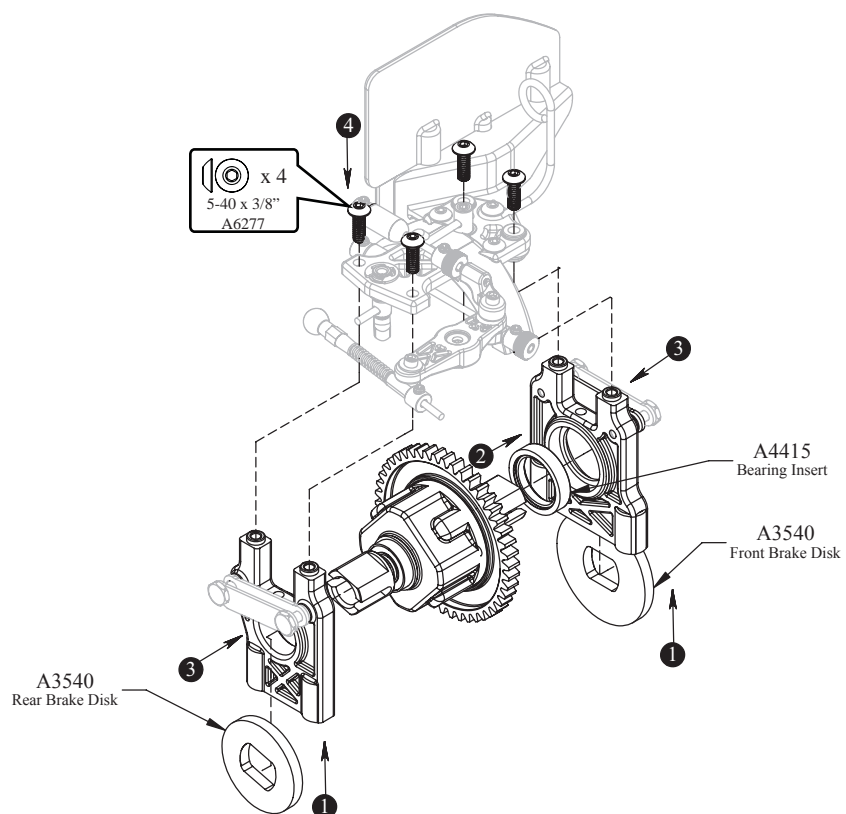
STEP C-08

Brake Caliper Assembly



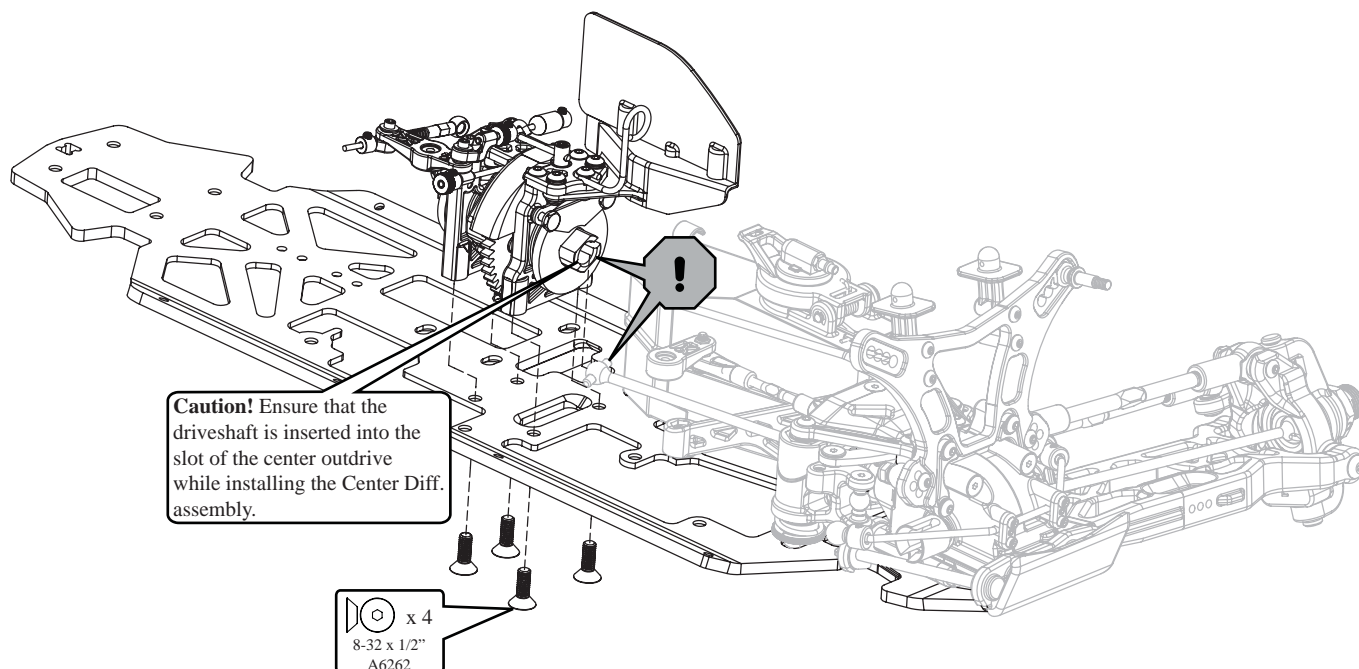
STEP C-09

Center Diff/Brake Rotor Assembly



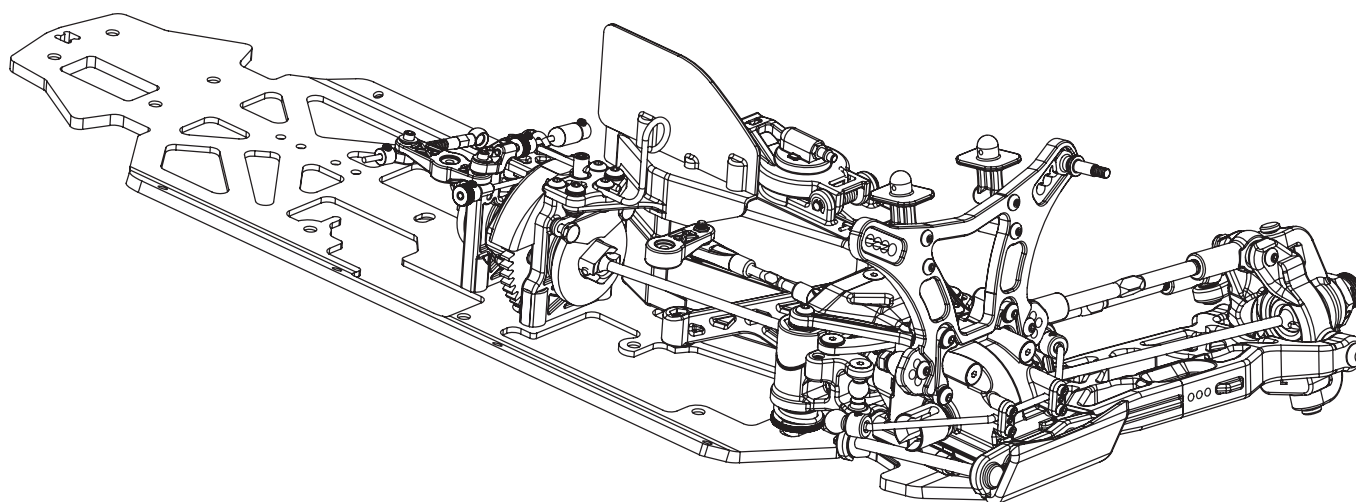
STEP C-10

Center Diff Installation



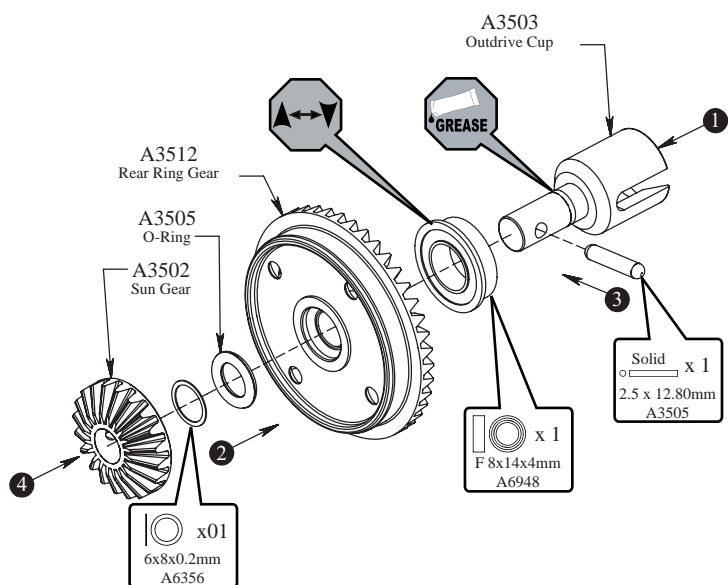
STEP C-11

Completed Center Diff Assembly



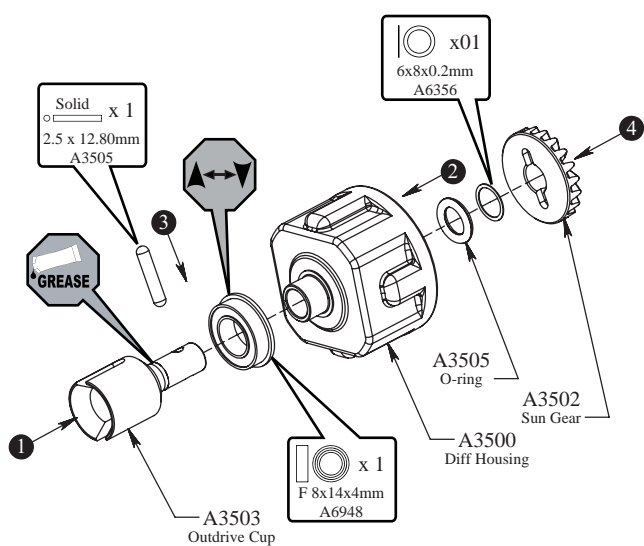
STEP D-01

Ring Gear Assembly



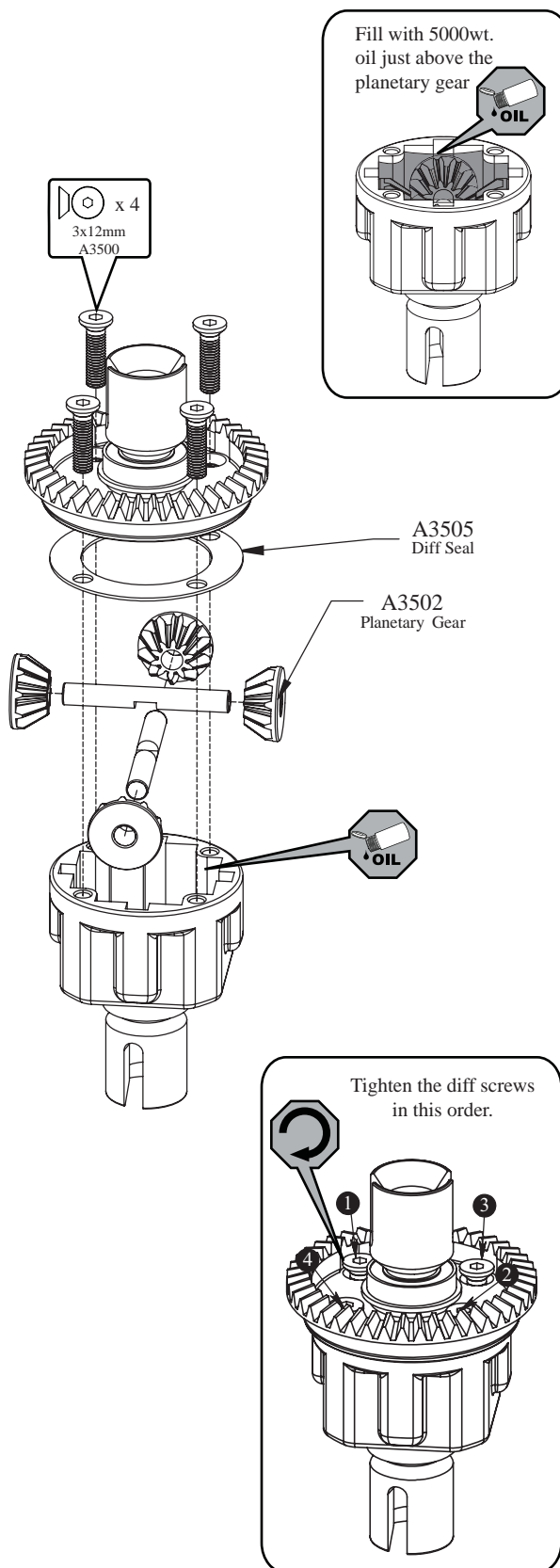
STEP D-02

Diff Case Assembly



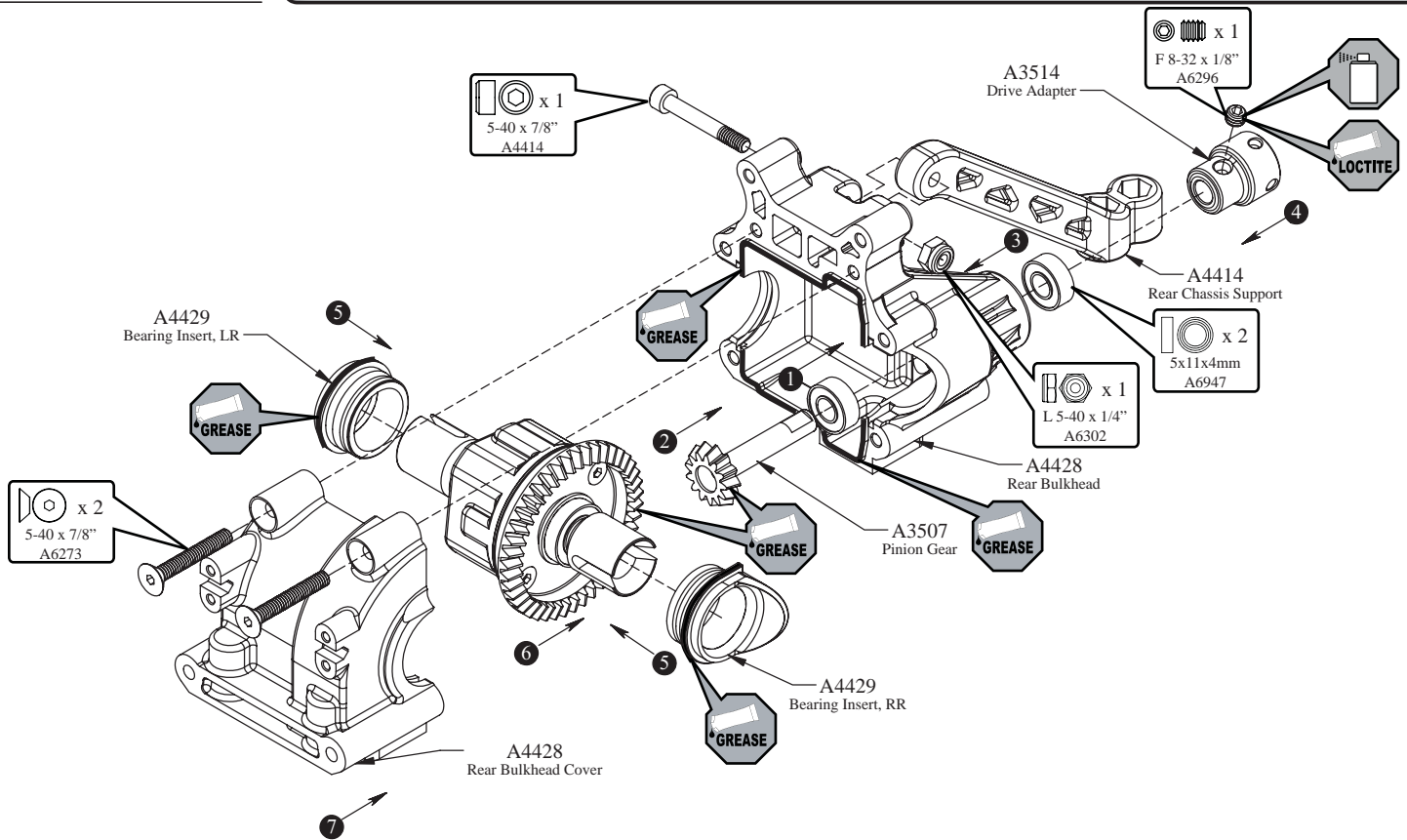
STEP D-03

Complete Diff Assembly



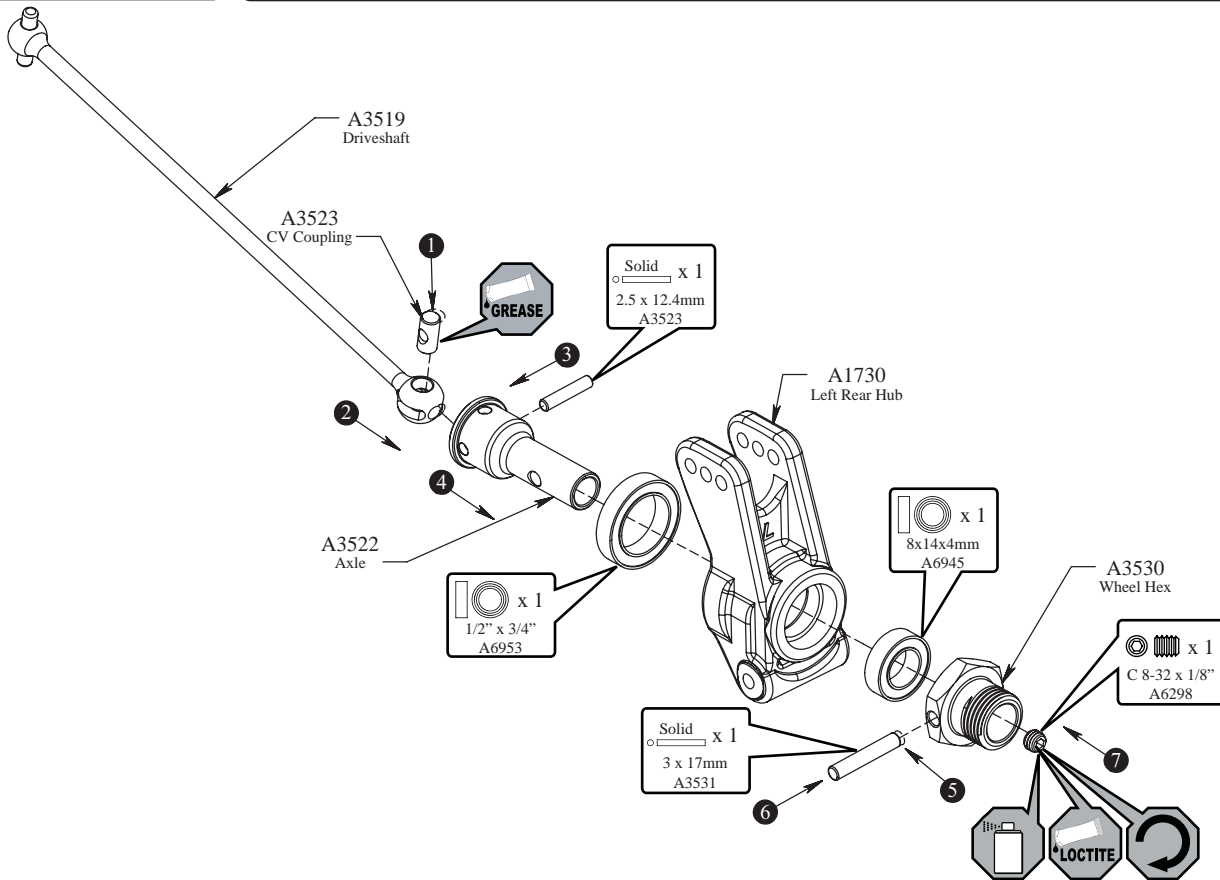
STEP D-04

Rear Diff Installation



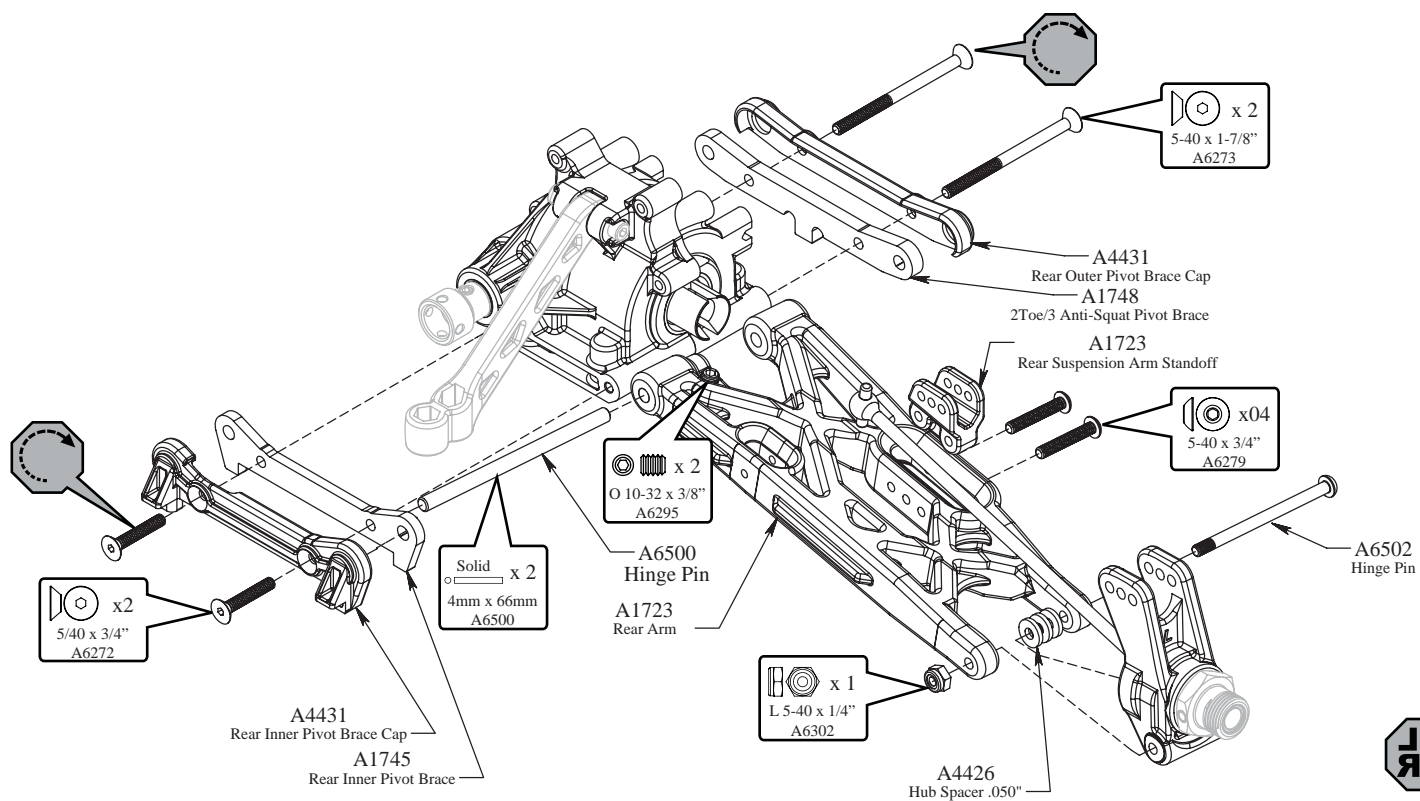
STEP D-05

Rear Hub & CV Assembly



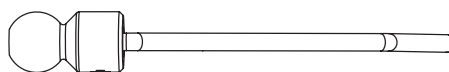
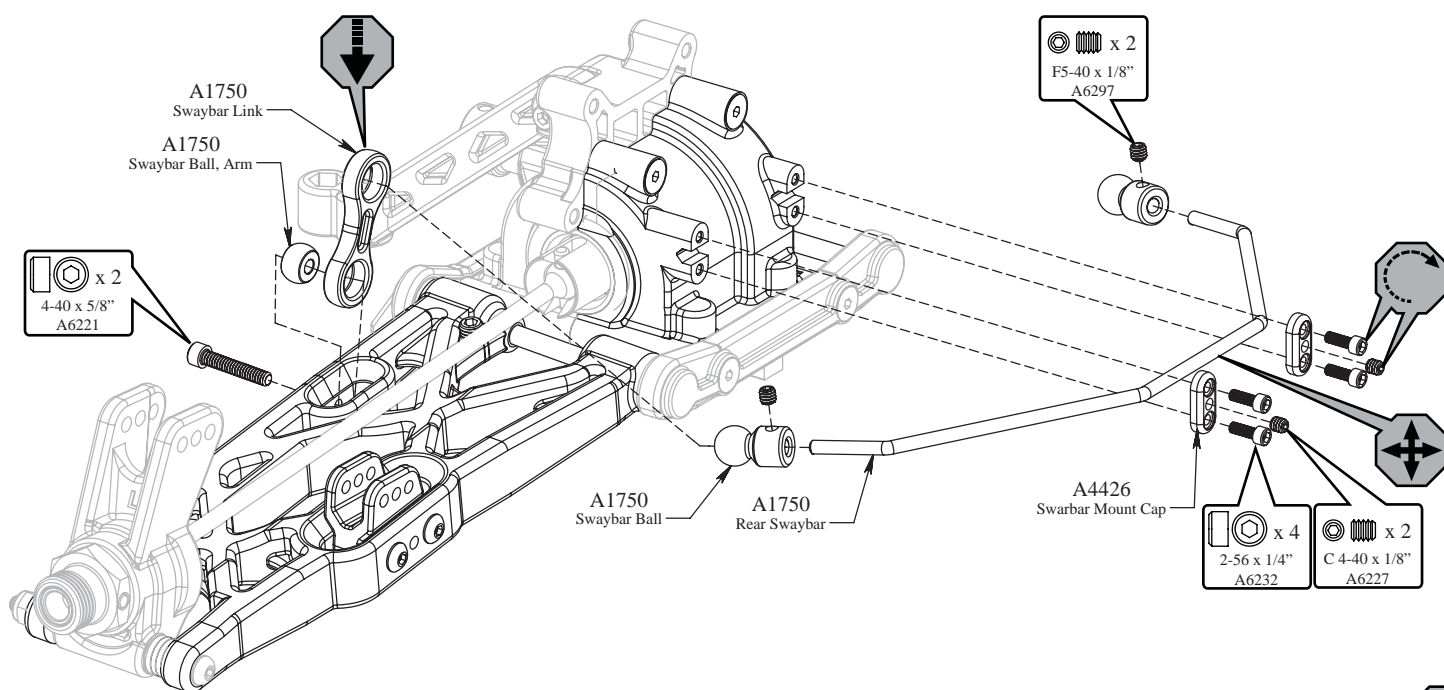
STEP D-06

Rear Suspension Arm Assembly



STEP D-07

Swaybar Assembly

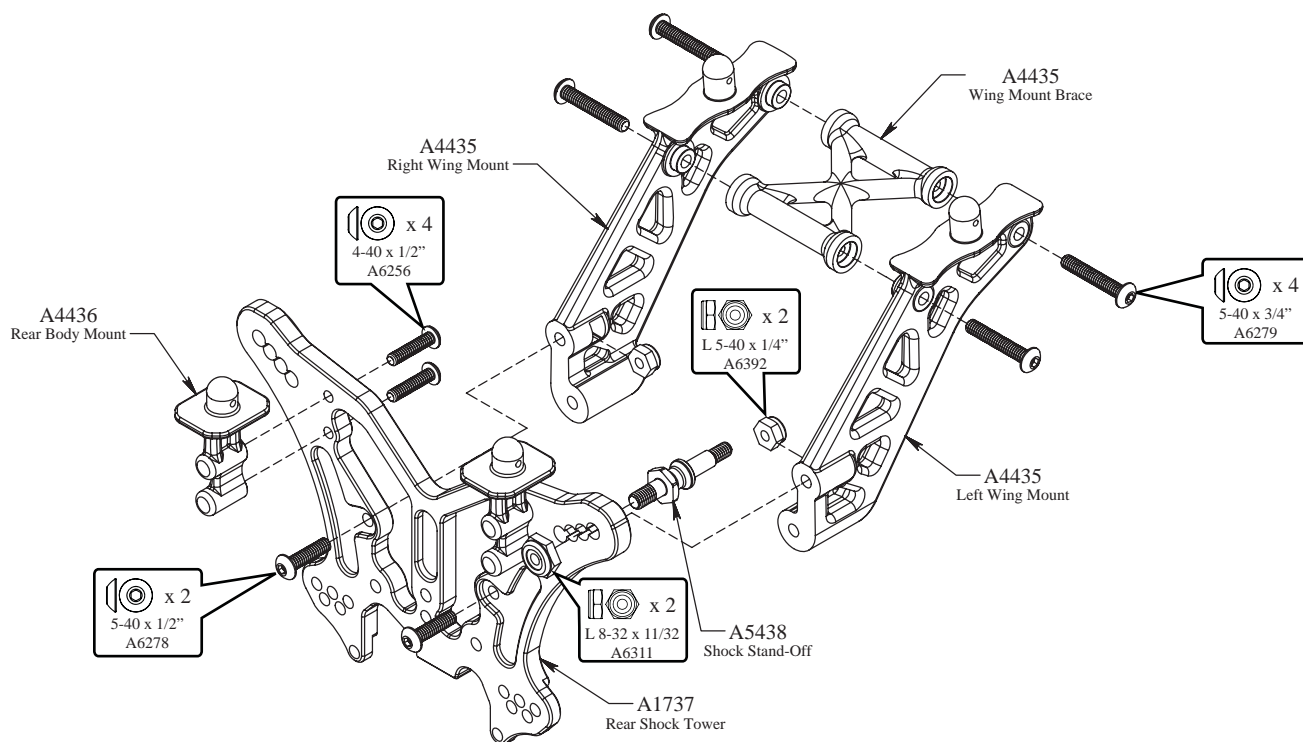


Install the Swaybar Ball onto the Swaybar Wire until the end of the wire is flush with the ball as pictured above



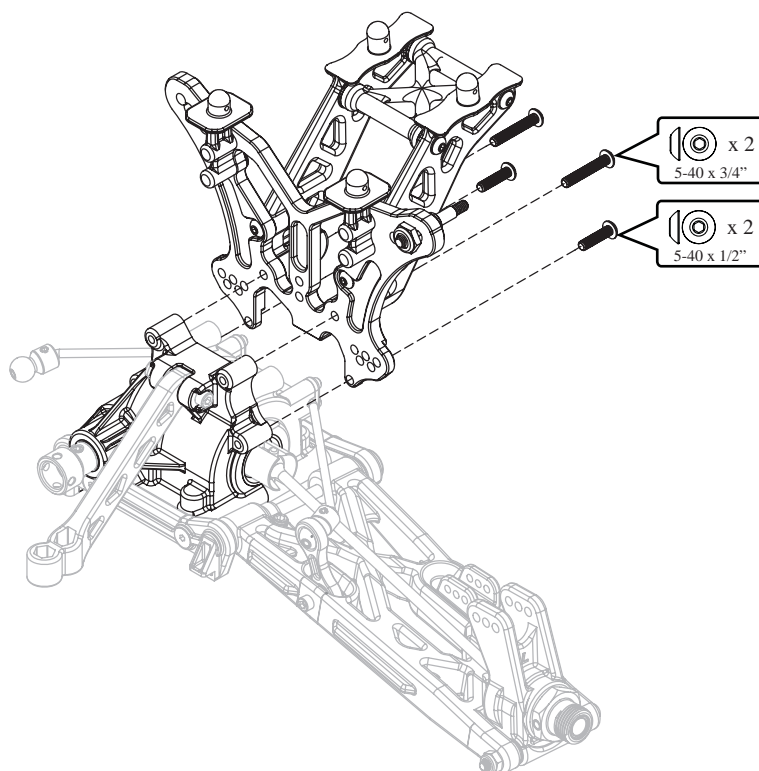
STEP D-08

Wing Mount Assembly



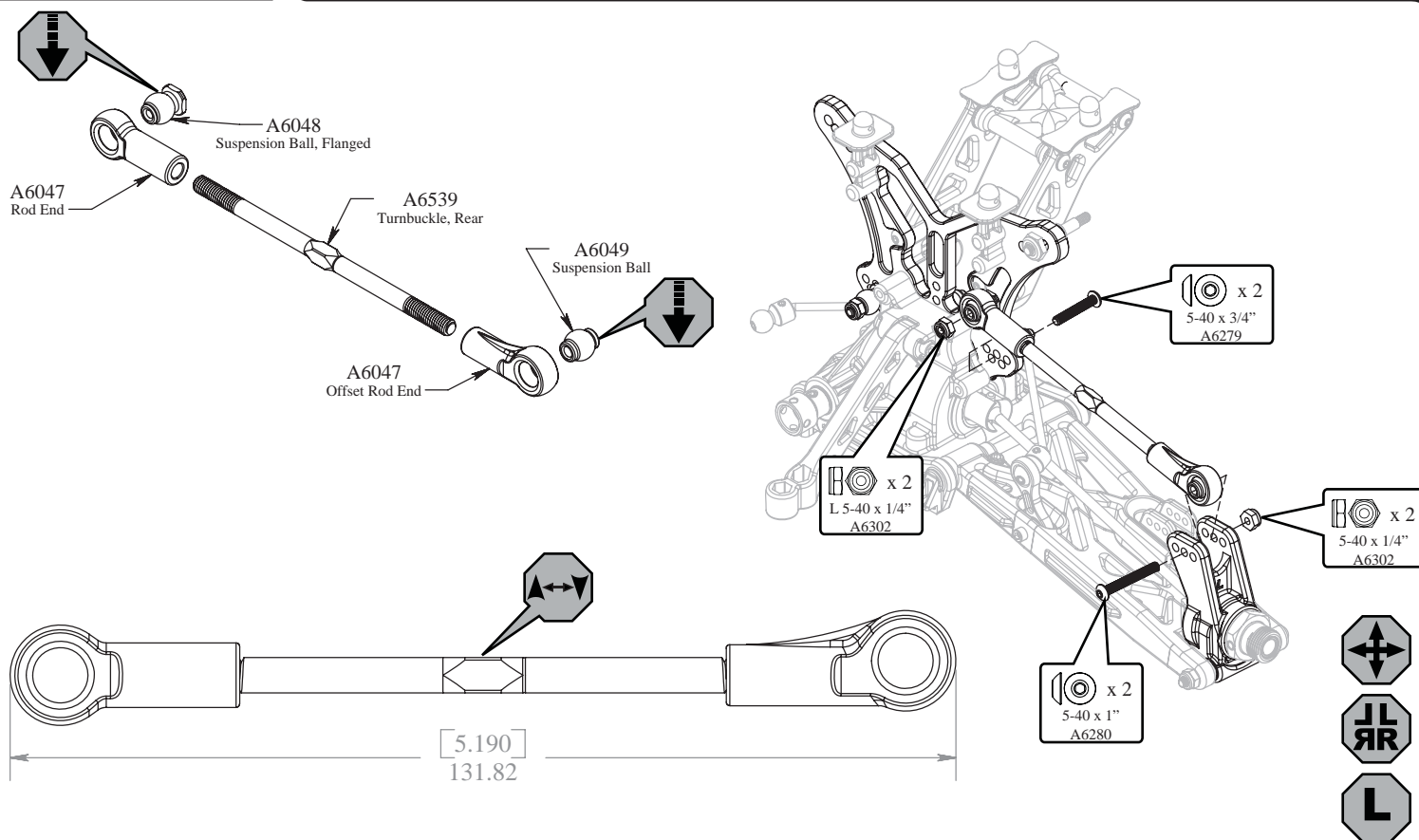
STEP D-09

Rear Shock Tower Installation



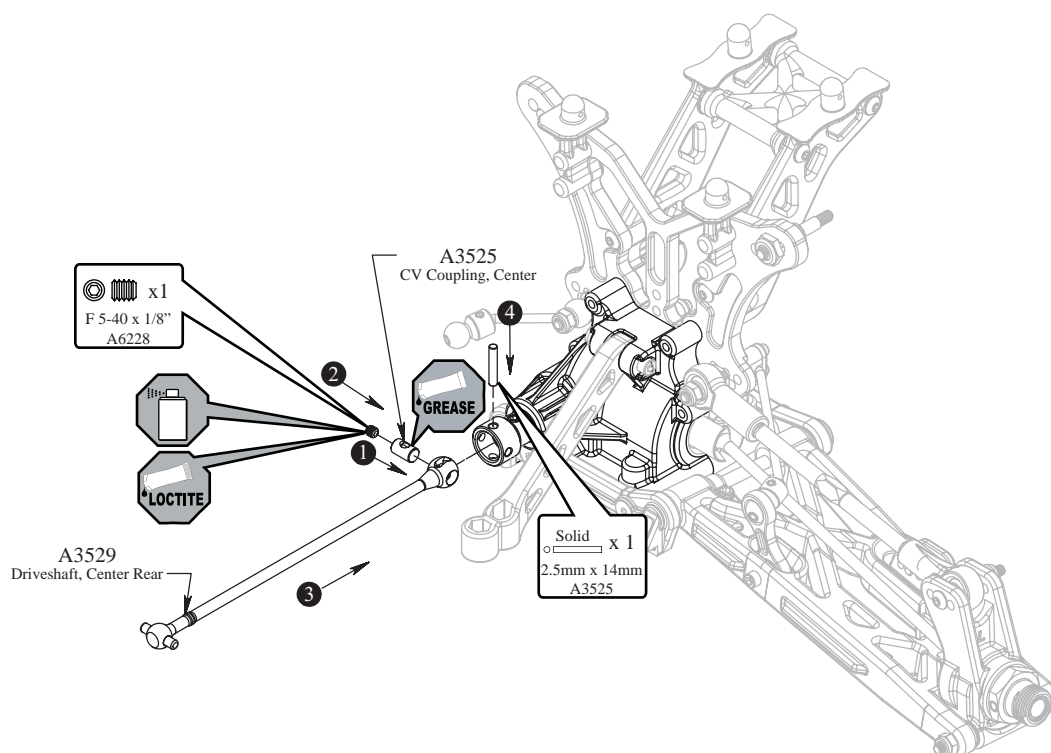
STEP D-10

Tie Rod Installation



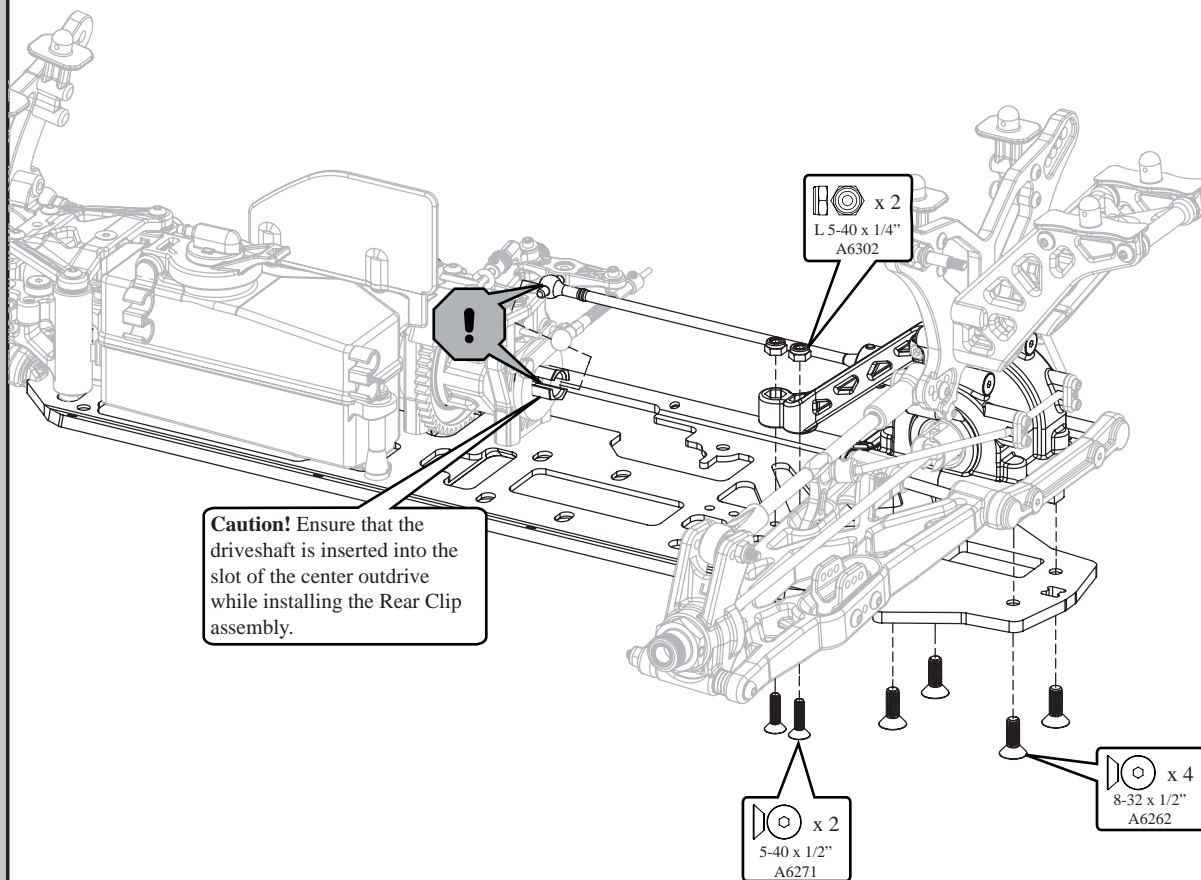
STEP D-11

Center CV Assembly



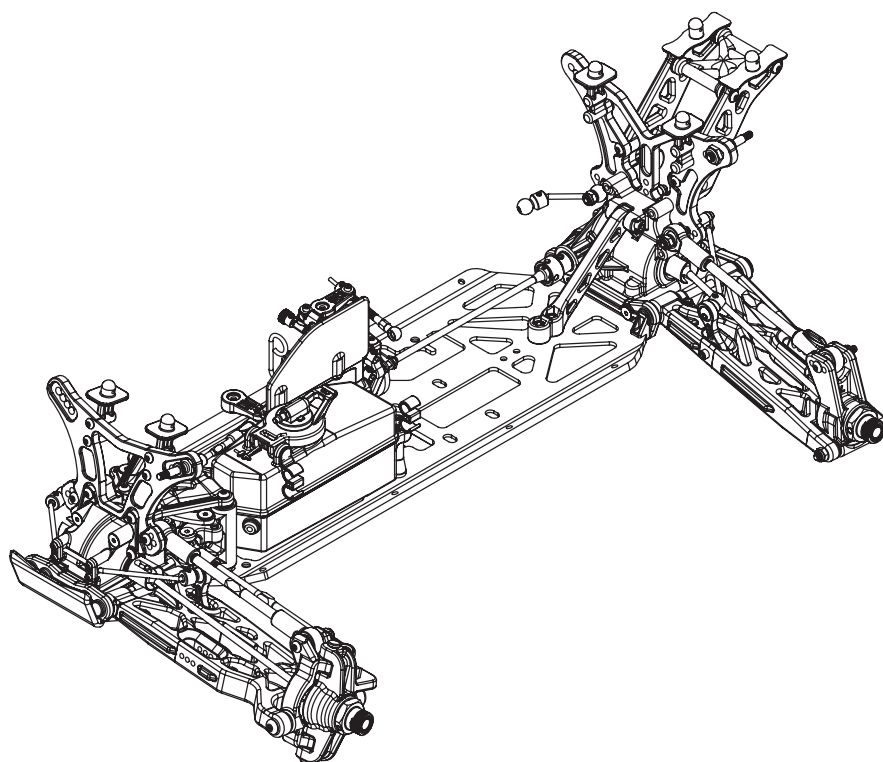
STEP D-12

Rear Clip Assembly



STEP D-13

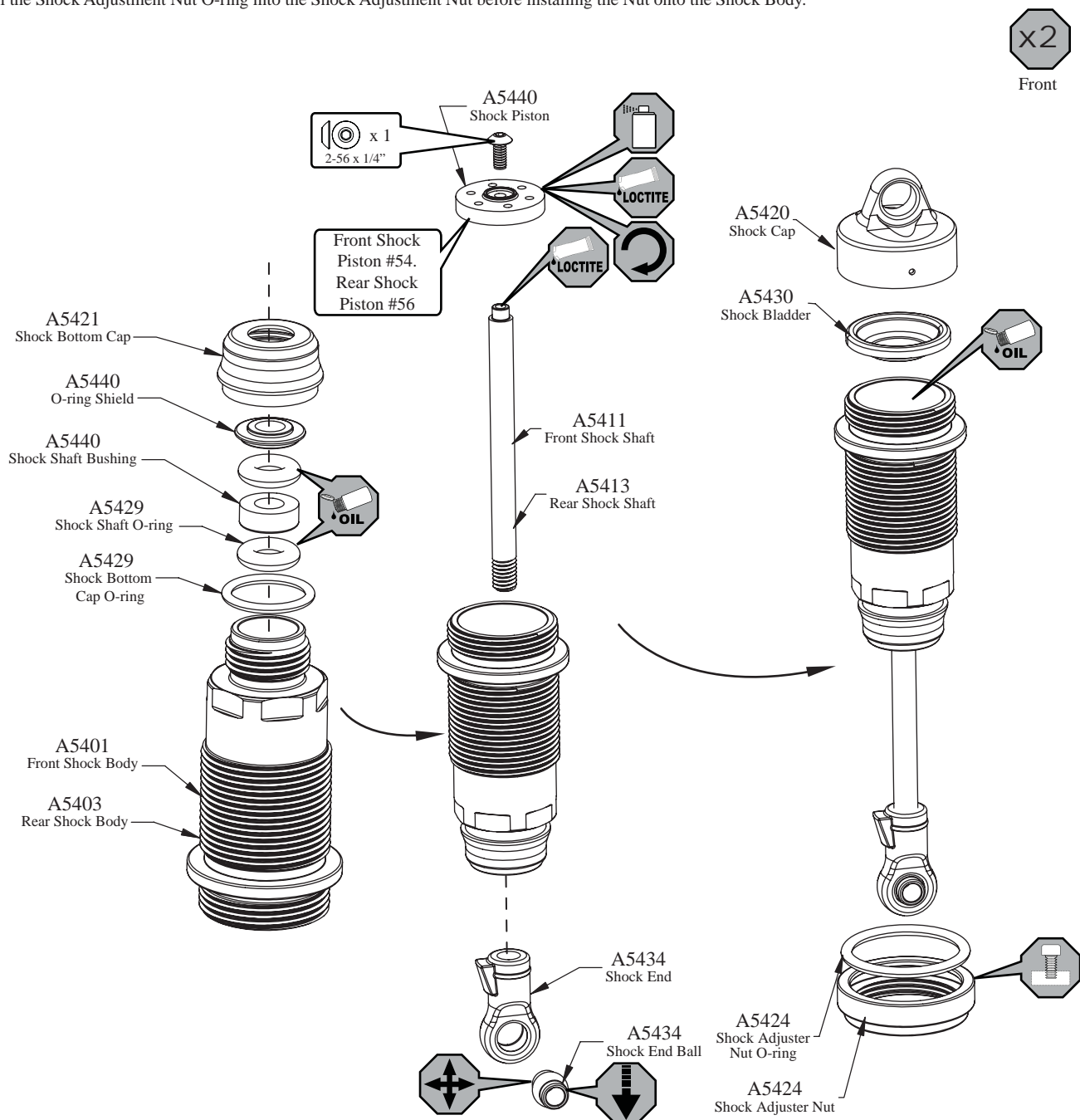
Completed Rear Assembly



STEP E-01

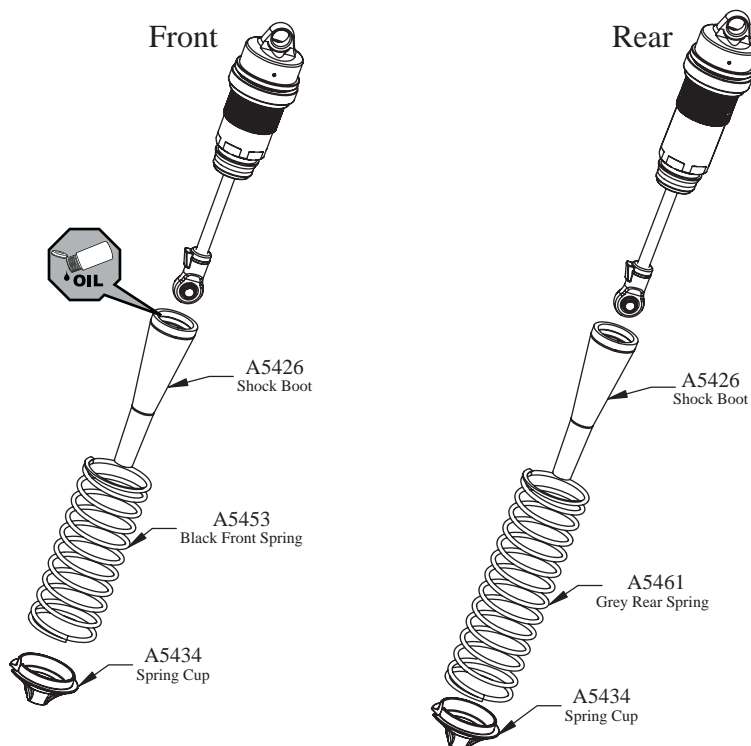
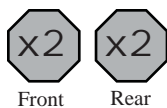
Shock Assembly

- Clean the 2-56 x 1/4" Button Head Screw and apply loctite to the threads.
- Install the #54 Shock Pistons using the 2-56 x 1/4" Button Screw into the front Shock Shafts with a .050" Allen Wrench. Install the #56 Shock Pistons using the 2-56 x 1/4" Button Screw into the longer rear Shock Shafts with a .050" Allen Wrench.
- Place a drop of Shock Oil into the bottom of the Shock Body to lubricate the Shock Seals.
- Thread the Shock Shaft into the Shock end using pliers. Used caution when threading the Shock Shaft Ends onto the Shafts. Avoid gouging or scratching the Shock Shaft while gripping the Shock Shaft with pliers by placing the edge of a towel over the shaft, then gripping the portion of the Shaft covered by the towel. This method will work very well to protect the Shock Shafts from damage.
- Ensure the Shaft is fully extended when filling the shock.
- Fill the Shock Body with Shock Oil (Front 45wt/Rear 30wt) until the Oil is to the top of the Body.
- "Work" the Shock Shaft up and down a times. This will release the air bubbles trapped beneath the Piston. Place the filled Shock, in the upright position, off to the side for a few minutes until the air bubbles escape from the Oil.
- Once all the air bubbles are out of the Oil, gently place the Shock Bladder onto the Shock as shown. Some Oil should "bleed" from the Shock.
- Screw the Shock Cap onto the Body until some resistance is felt.
- Slowly push the Shock Shaft up. This will bleed excess Oil from the Shock.
- Tighten the cap all the way down using the shock tools included in your kit.
- Move the Shock Shaft up and down. The Shaft should be easy to push up into the Body of the Shock. If increased pressure is felt towards the top, there is too much oil in the Shock. Loosen the Shock Cap and "bleed" the Shock as done previously.
- Make sure each pair (front/rear) Shocks have the same rebound and compression. This is checked by holding one Shock in each hand horizontally and pushing them together by the Shock End. Watch carefully to ensure that both compress evenly. Now release both Shocks and again watch carefully as they should rebound the same.
- Install the Shock Adjustment Nut O-ring into the Shock Adjustment Nut before installing the Nut onto the Shock Body.



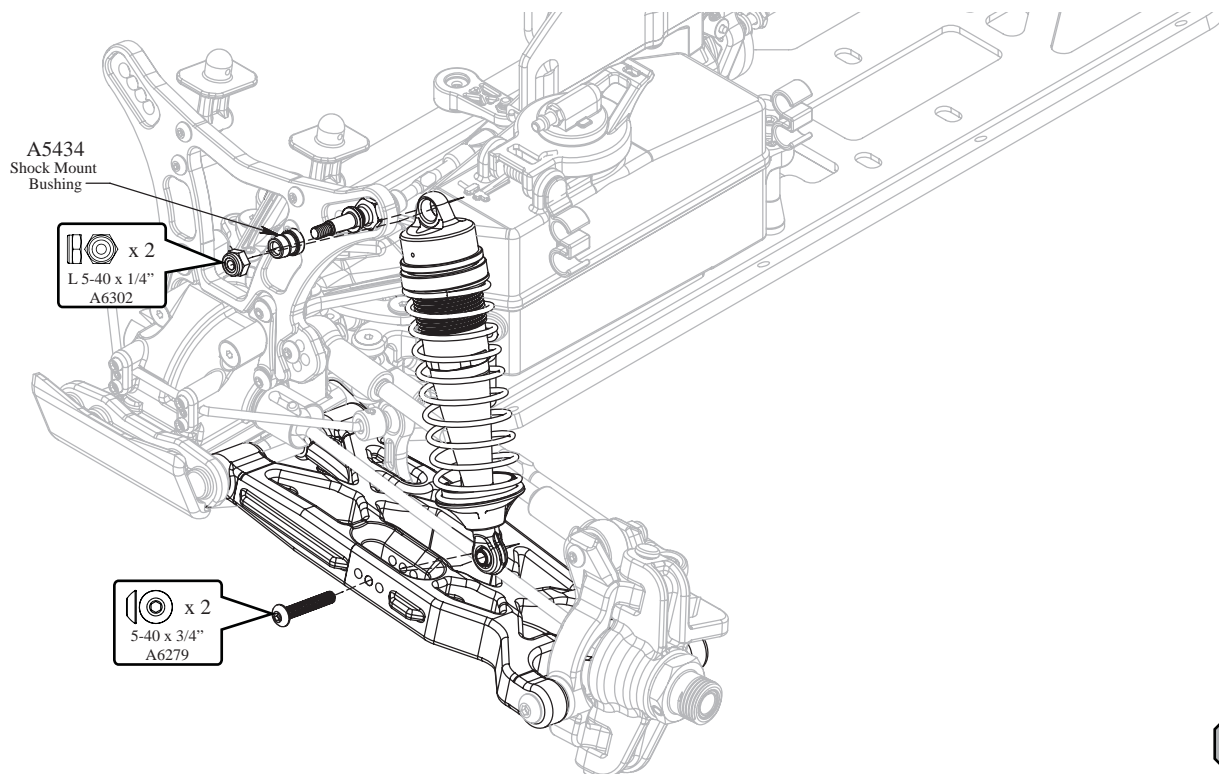
STEP E-02

Shock Boot & Spring Assembly



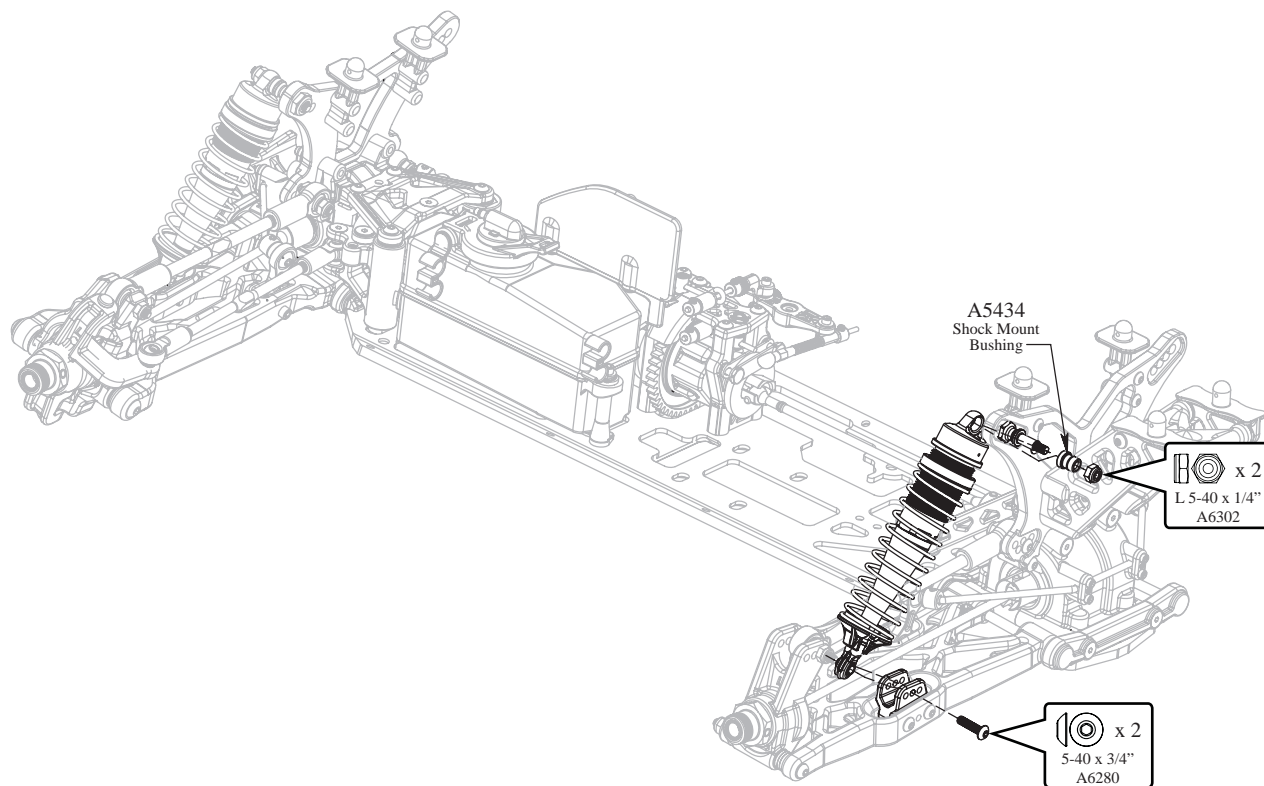
STEP E-03

Front Shock Installation



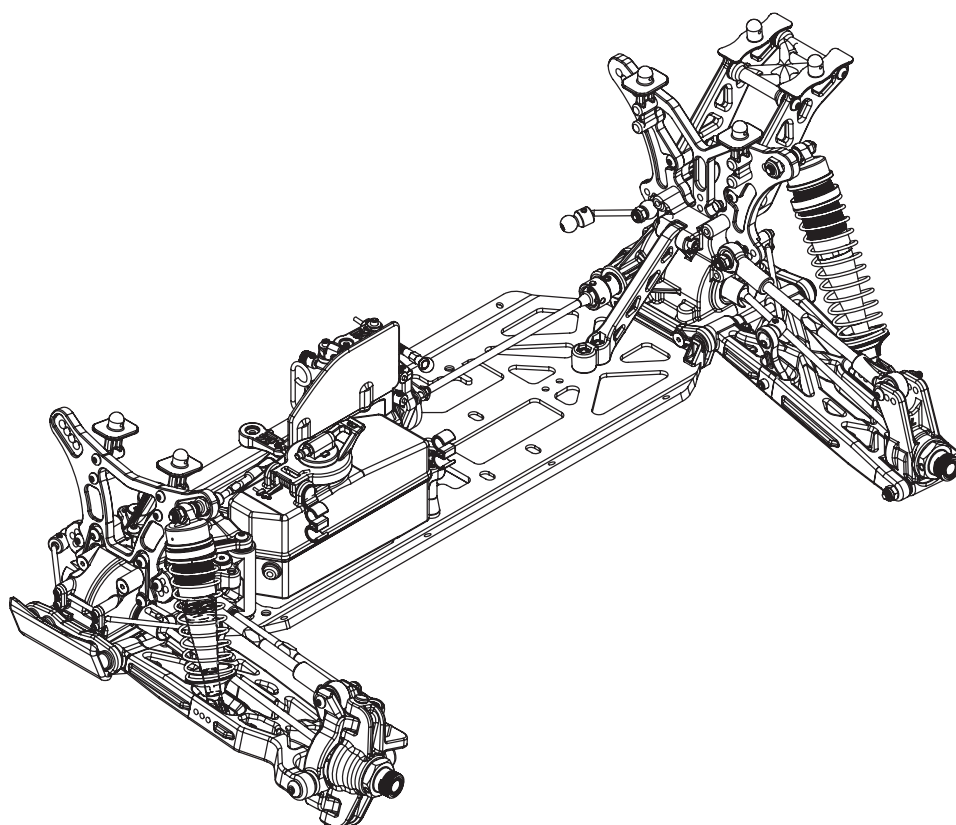
STEP E-04

Rear Shock Installation



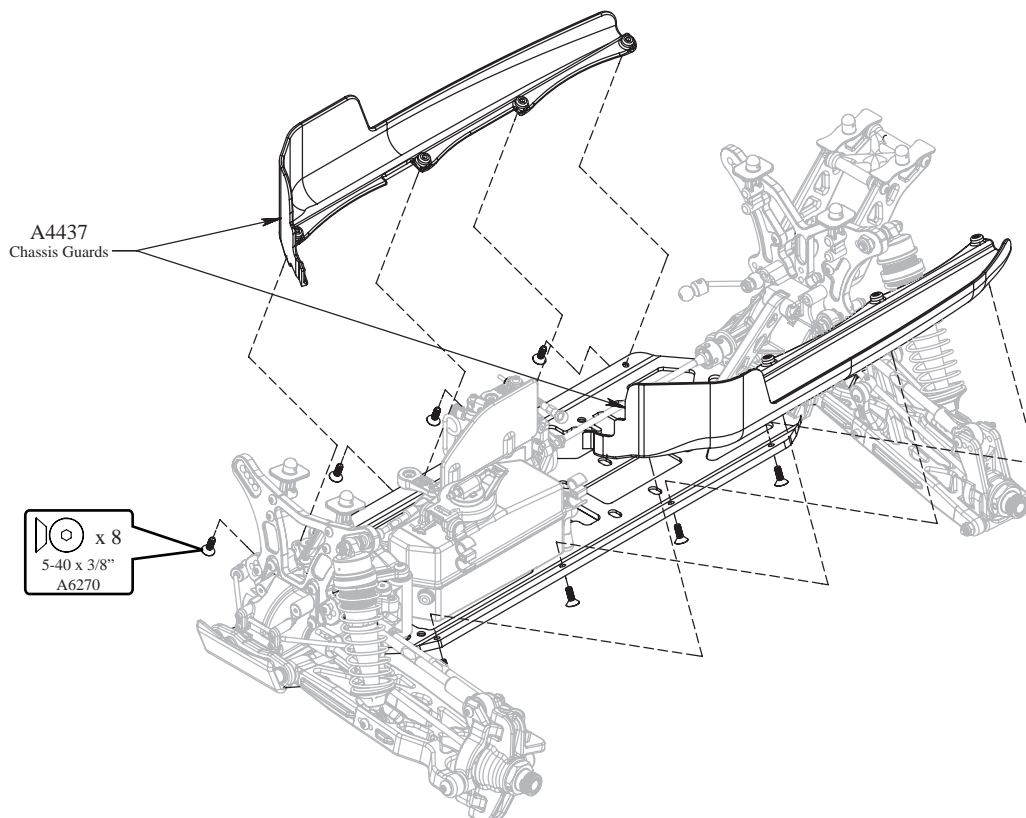
STEP E-05

Completed Shock Assembly



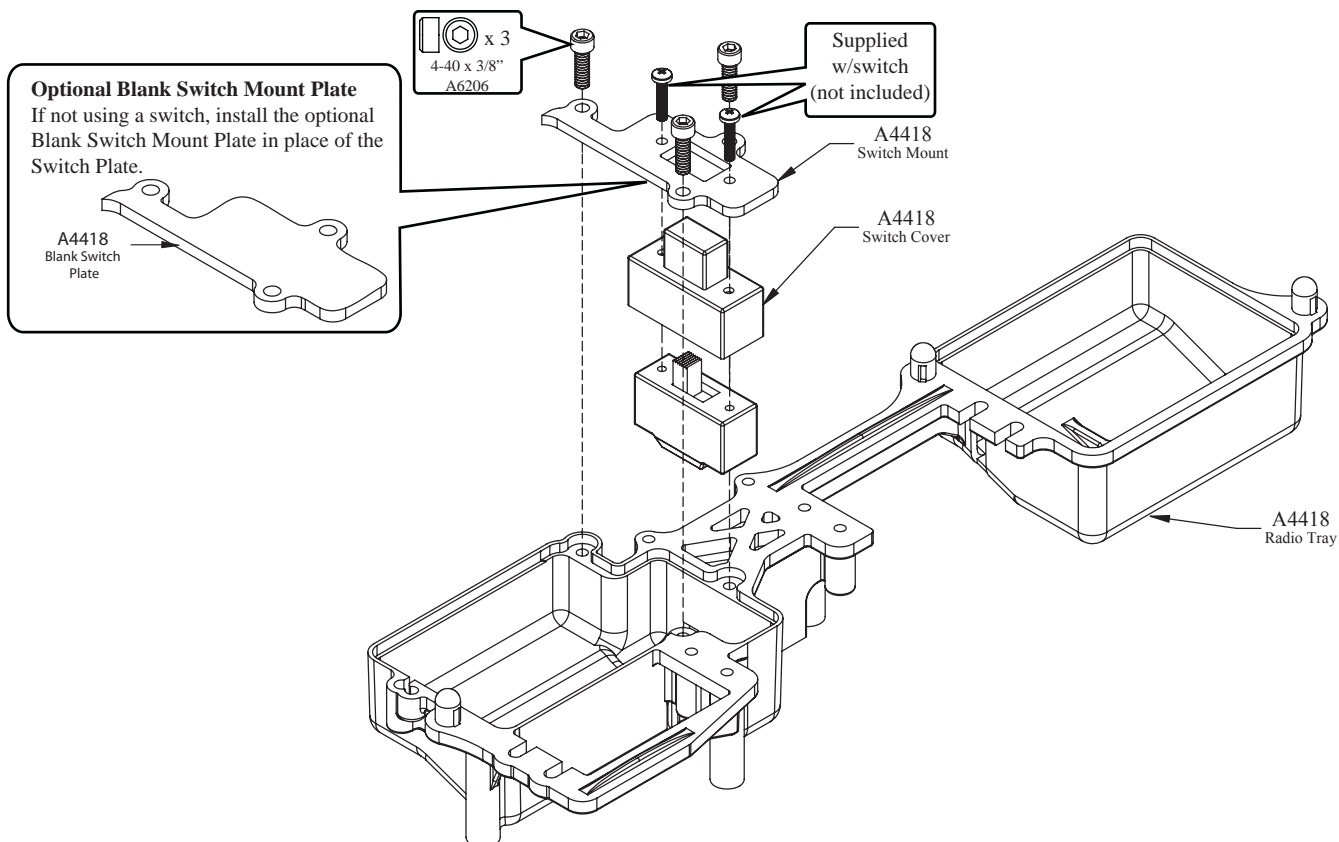
STEP F-01

Chassis Guard Installation



STEP F-02

Switch Installation

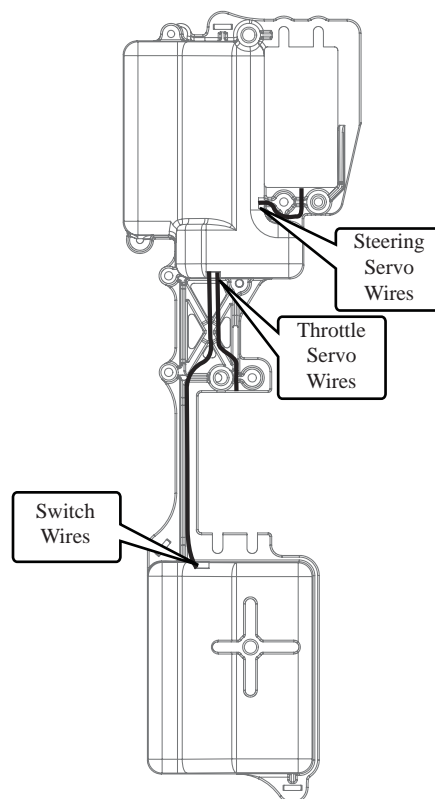


STEP F-03

Servo Chart/Wiring Diagram

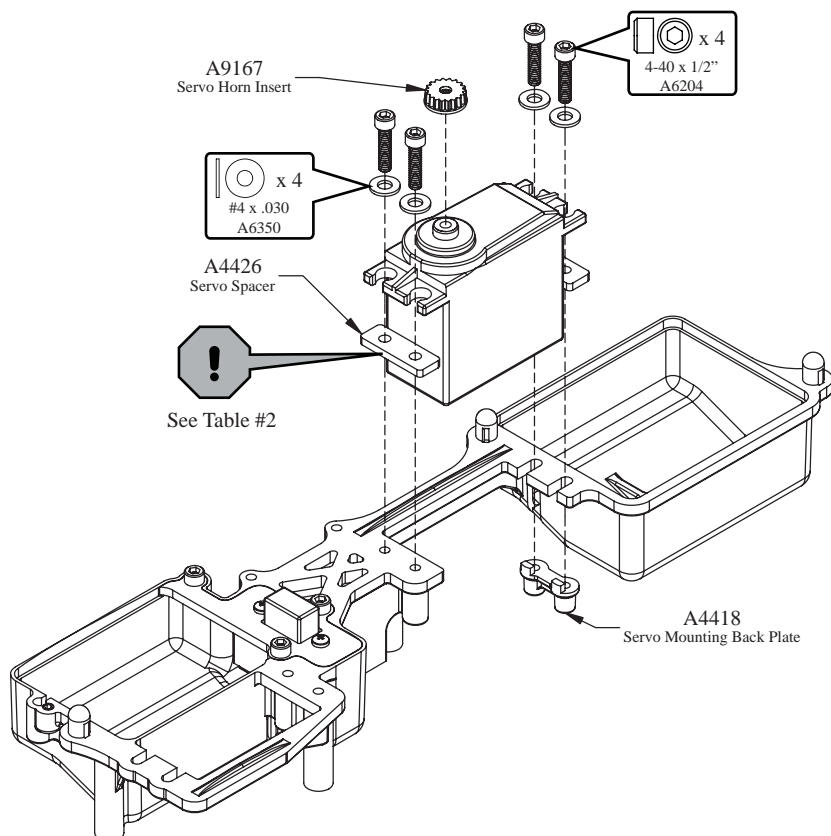
Servo Manufacturer, Make/Model		Servo Spacer	Servo Horn
JR	All (DZ9000T/S Needs Spacer)	No	23T
Airtronics Savwa	94357Z, 94358Z, 94649Z, 94360Z, 94452Z, 94758Z, 94737Z, 94738Z	Yes	23T
	94102Z, 94112Z, 94361Z, 94362Z	Yes	
Hitec	All	No	24T
Futaba	All (S9102 DOES NOT FIT)	No	25T
KO	PDS-2123, 2344, 2363, 2365, 2366	No	23T
		No	

Table2: Servo assembly and installation



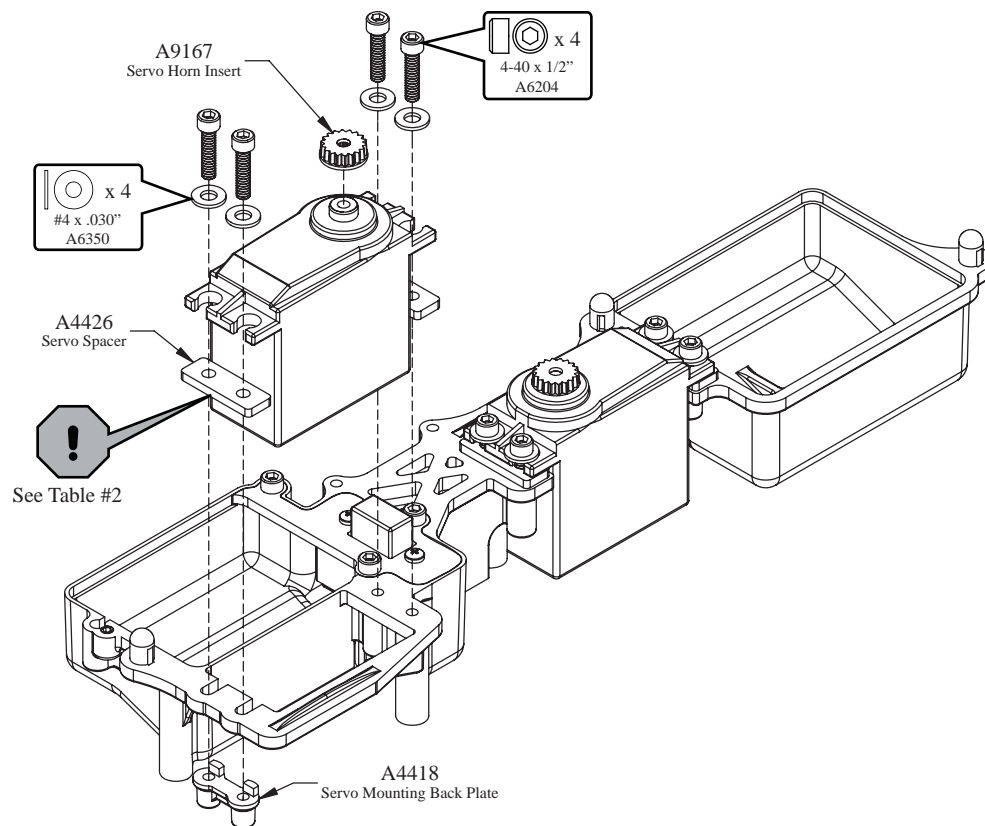
STEP F-04

Throttle Servo Installation



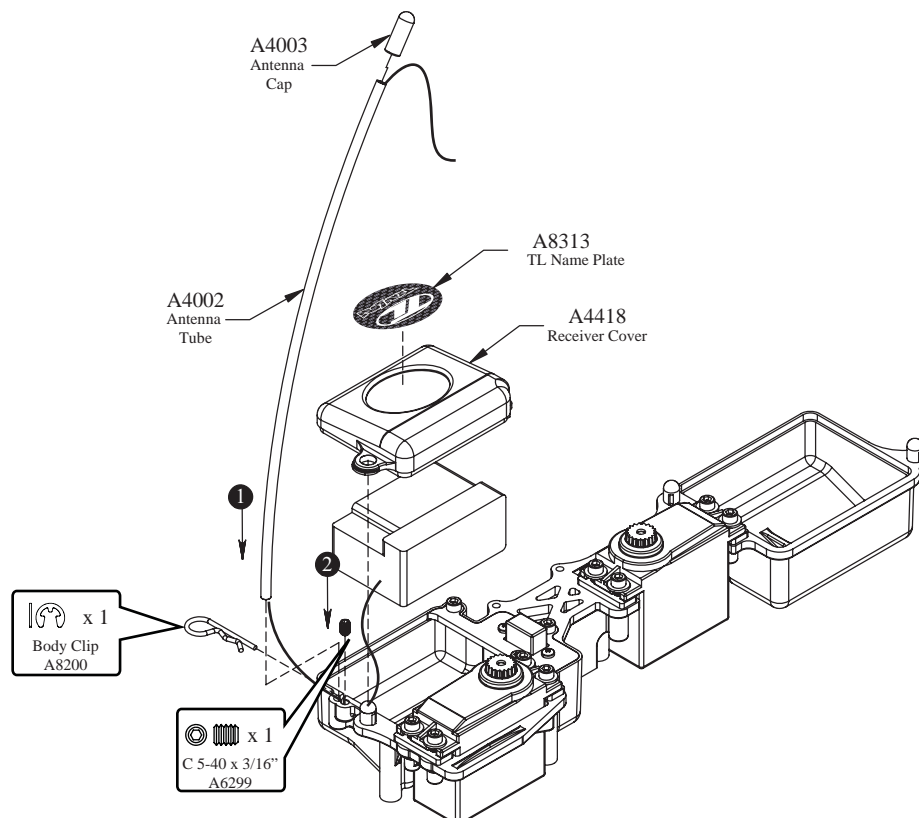
STEP F-05

Steering Servo Installation



STEP F-06

Receiver/Antenna Tube Assembly

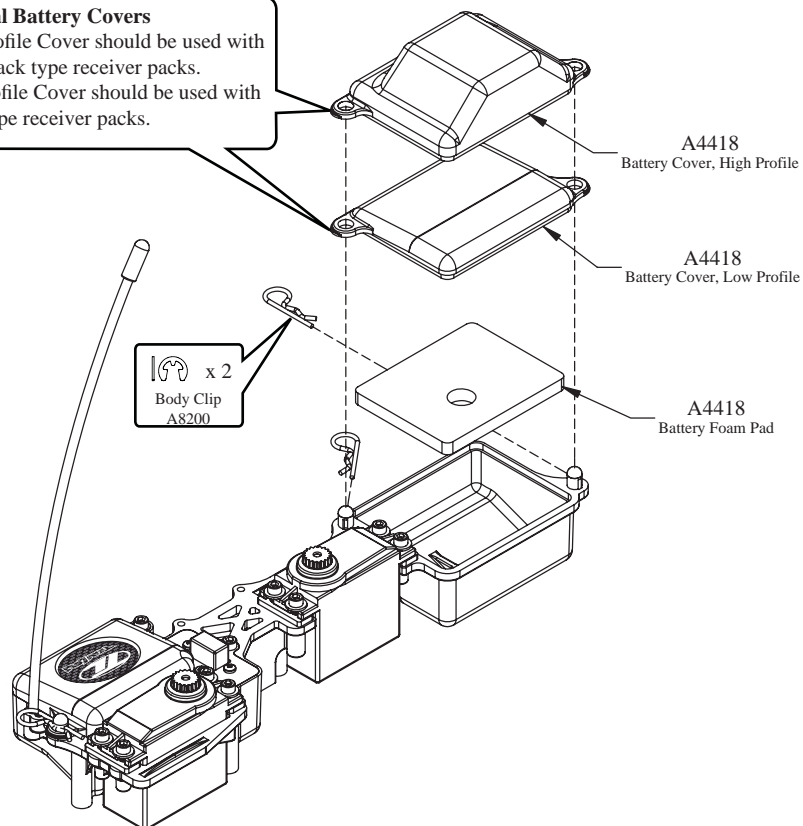


STEP F-07

Receiver Battery Door

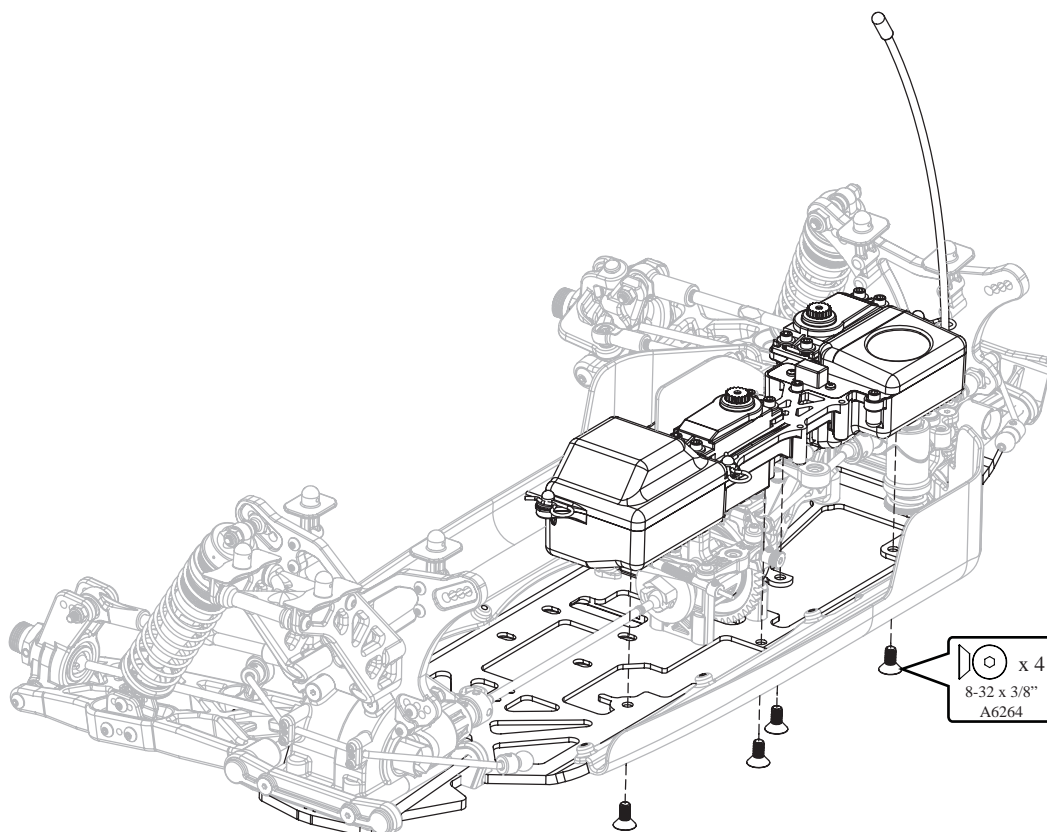
Optional Battery Covers

High Profile Cover should be used with Hump pack type receiver packs.
Low Profile Cover should be used with Li-Po type receiver packs.



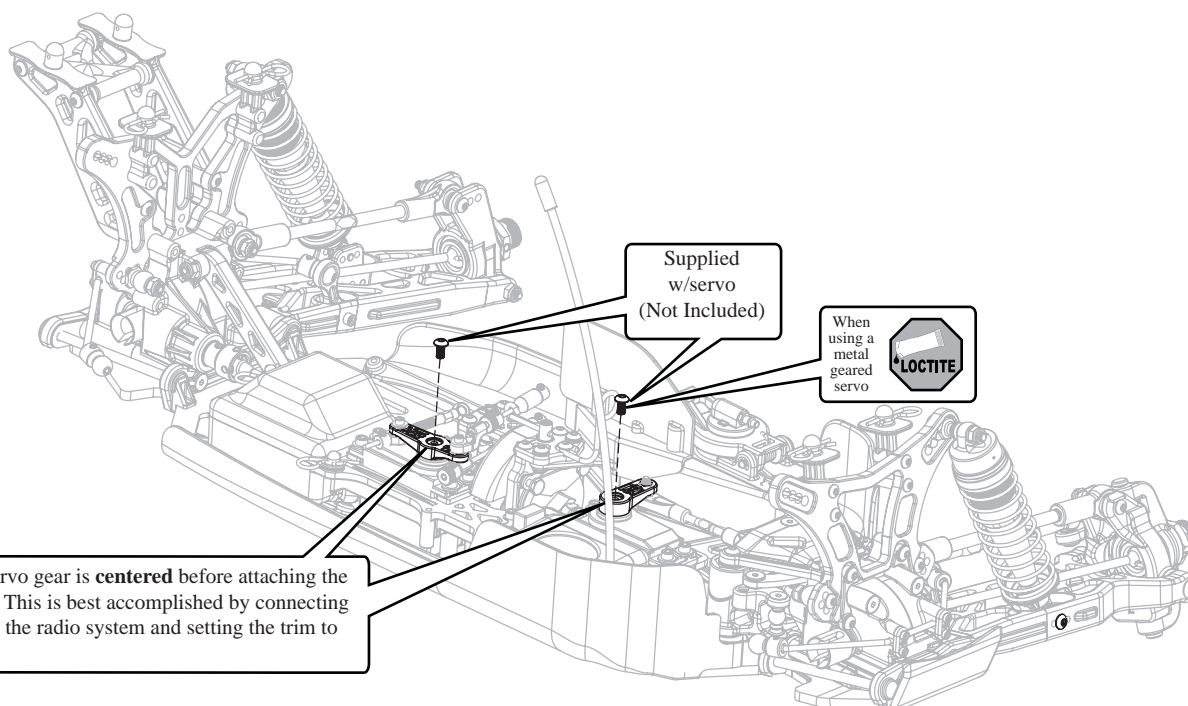
STEP F-08

Radio Tray Installation



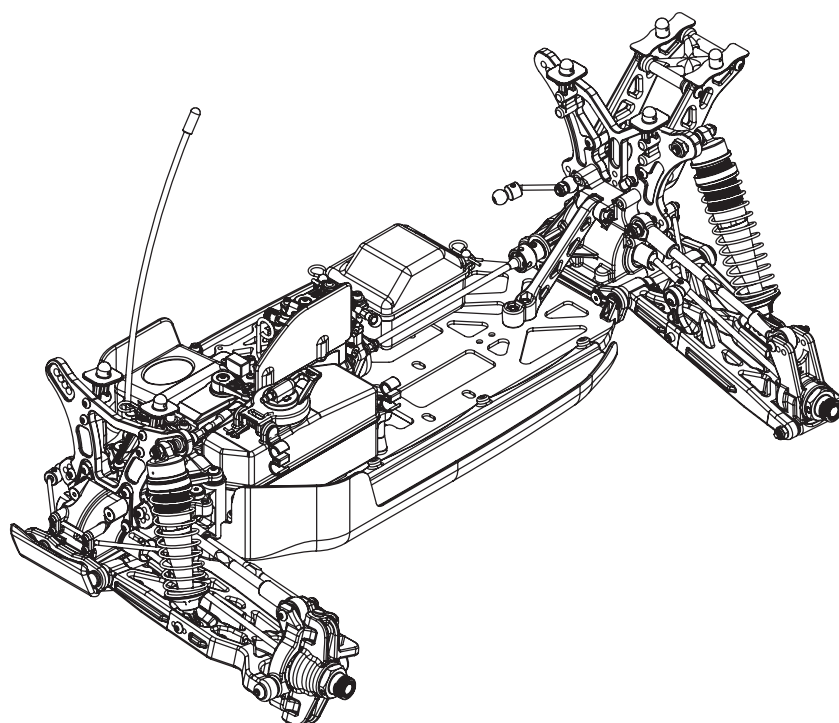
□ STEP F-09

Servo Horn Installation



□ STEP F-10

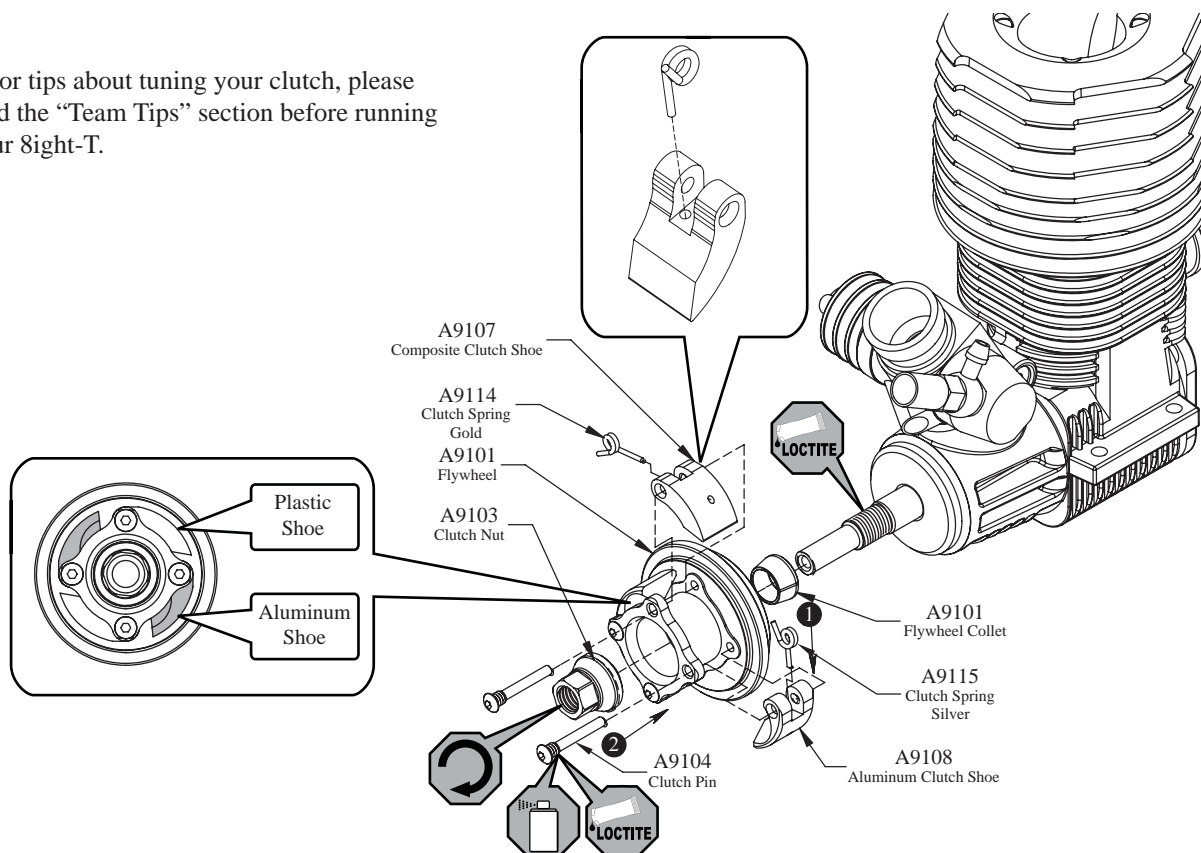
Completed Radio Tray Installation



STEP G-01

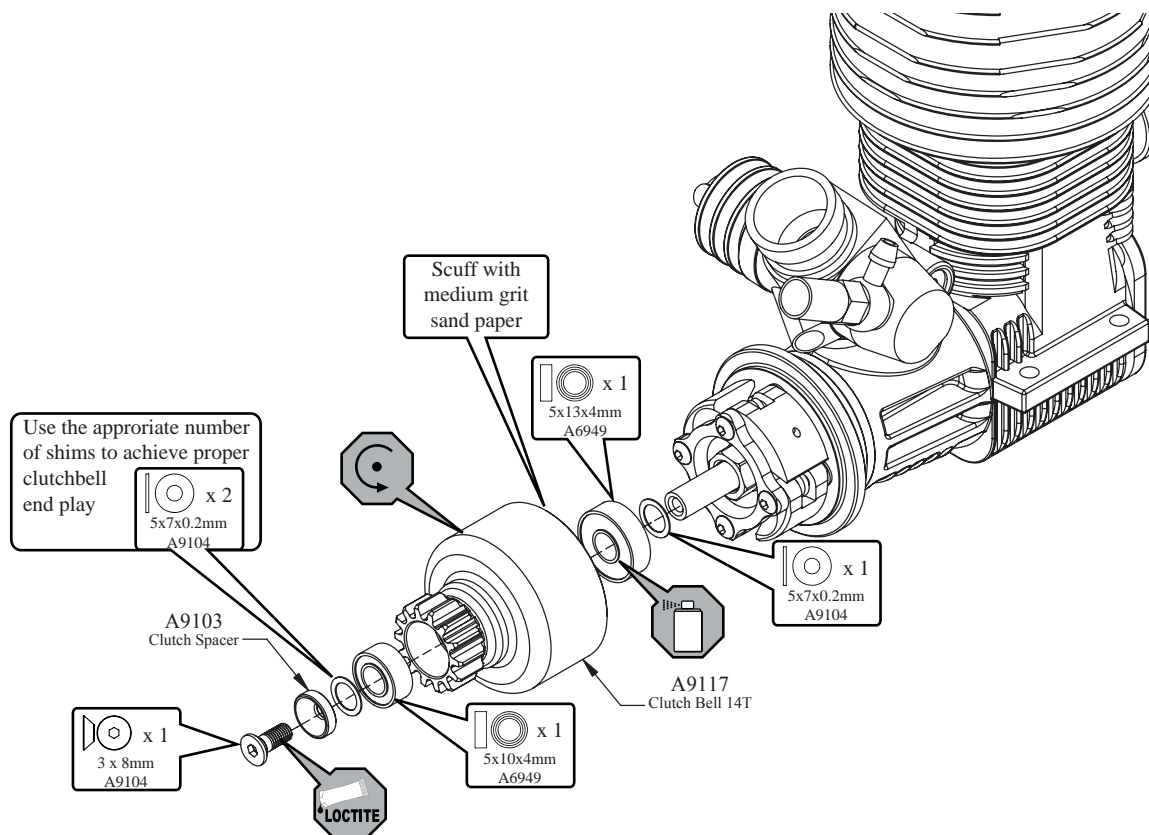
Clutch Assembly

* For tips about tuning your clutch, please read the "Team Tips" section before running your 8ight-T.



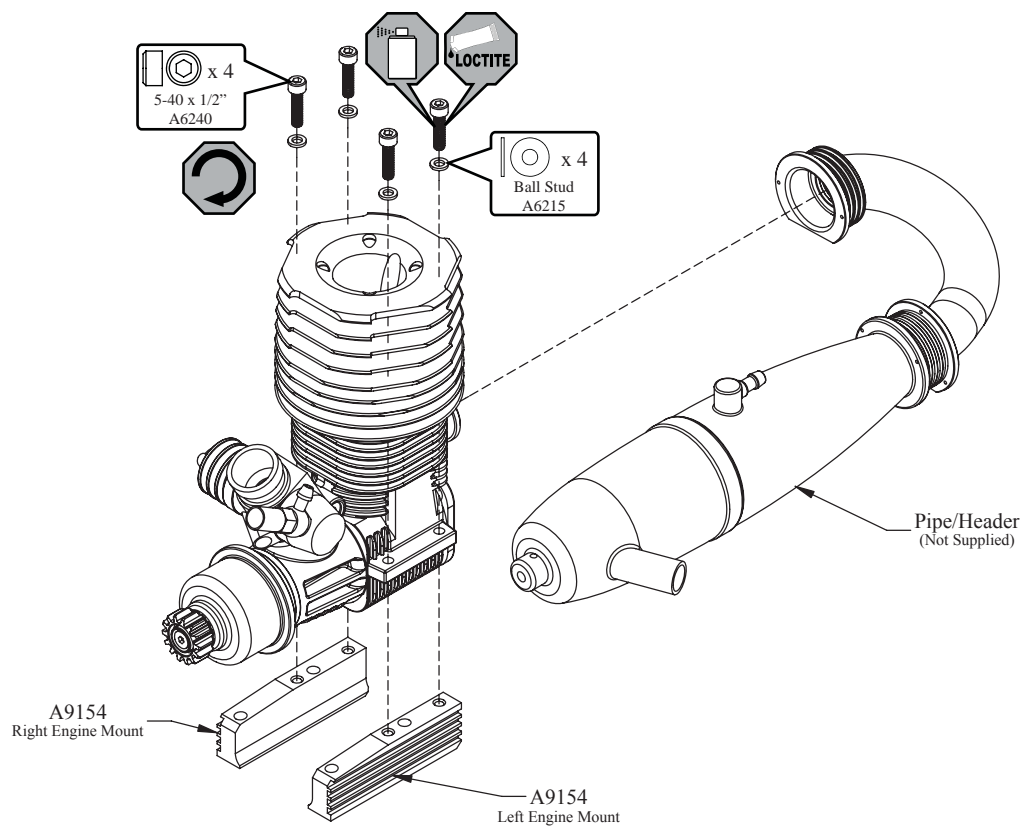
STEP G-02

Clutch Bell Assembly



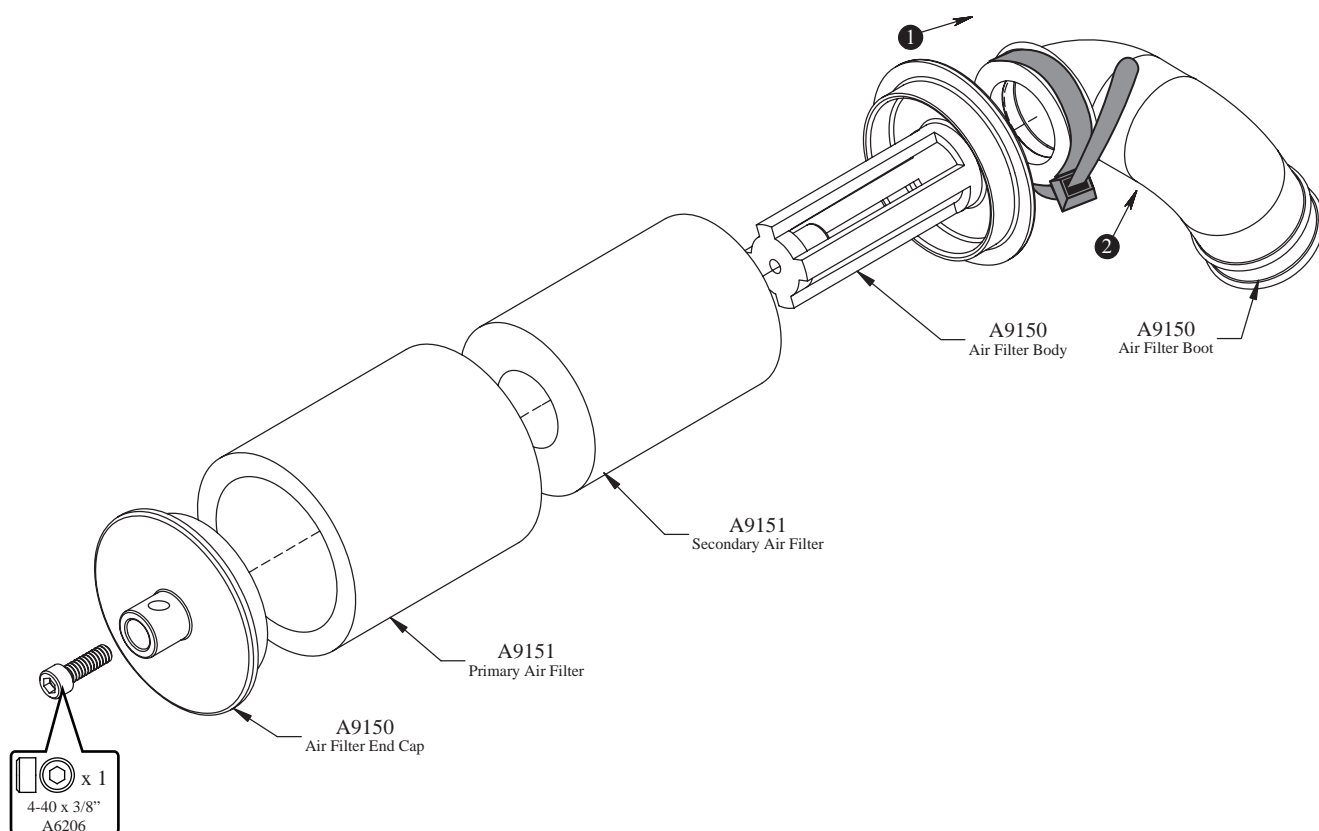
STEP G-03

Engine Mount Assembly



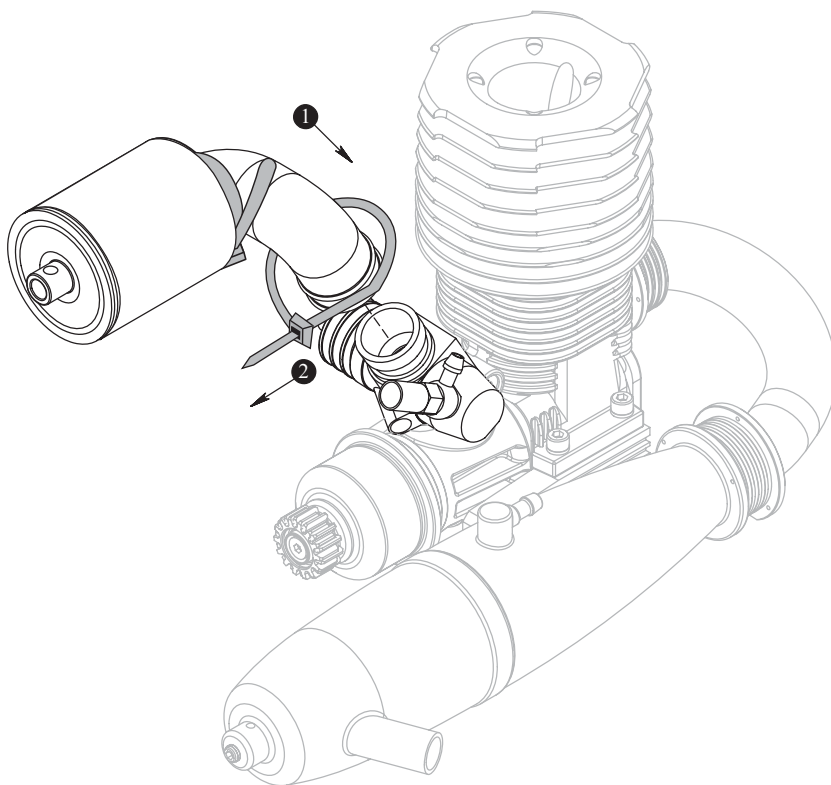
STEP G-04

Air Filter Assembly



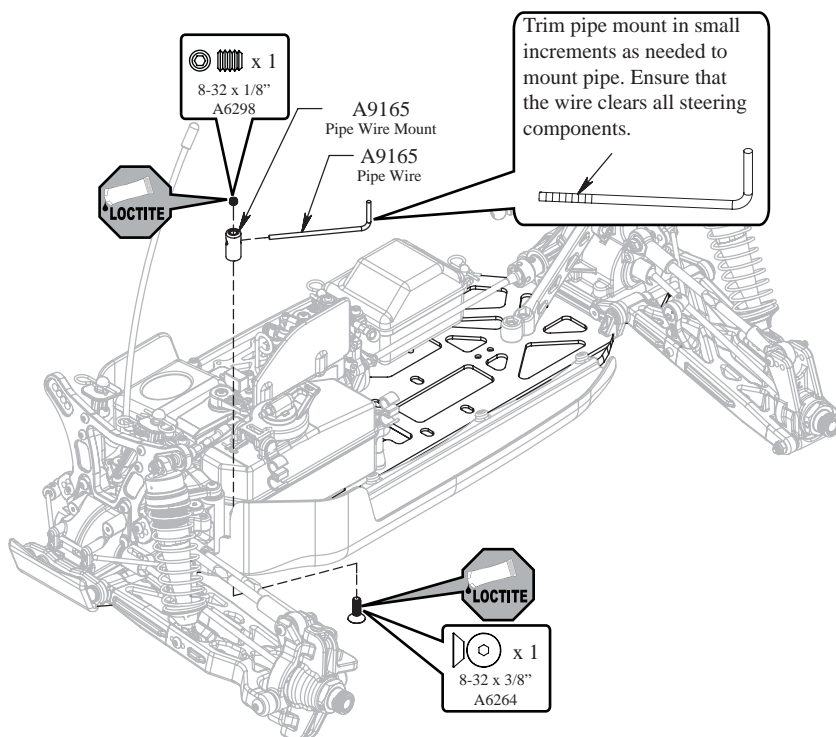
STEP G-05

Air Filter Installation



STEP G-06

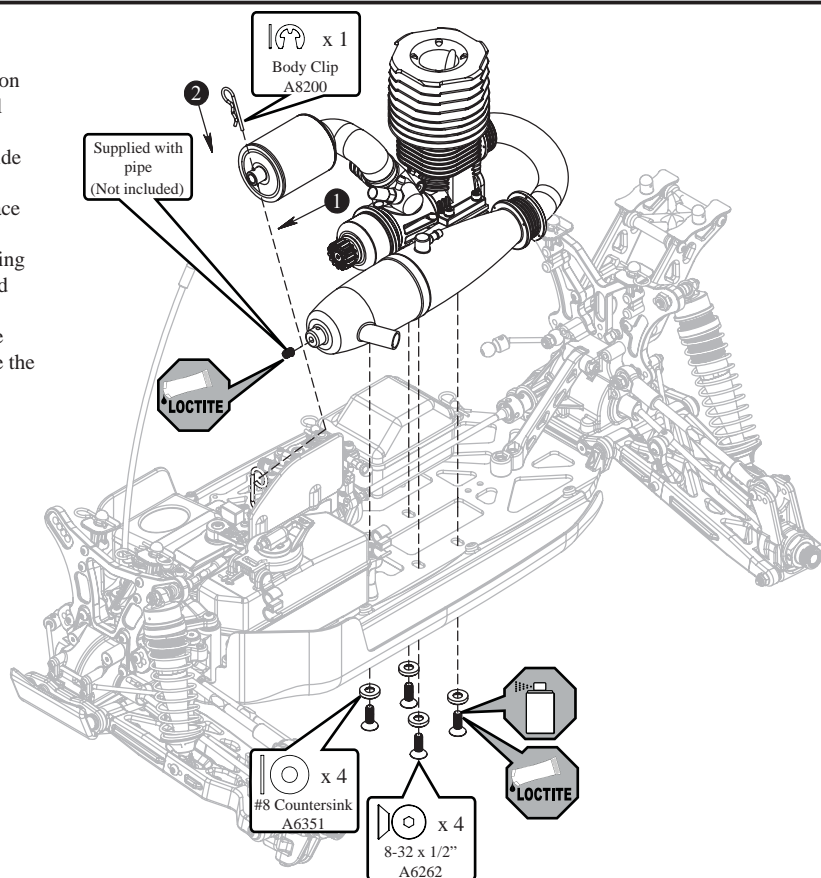
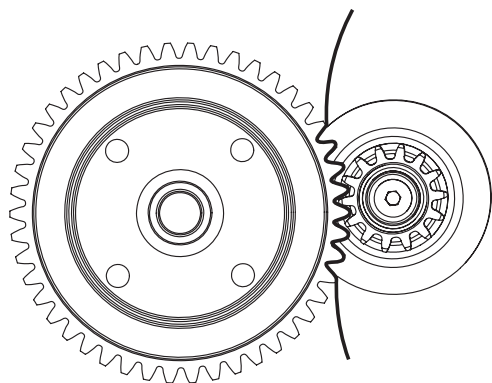
Pipe Mount Assembly



□ STEP G-07

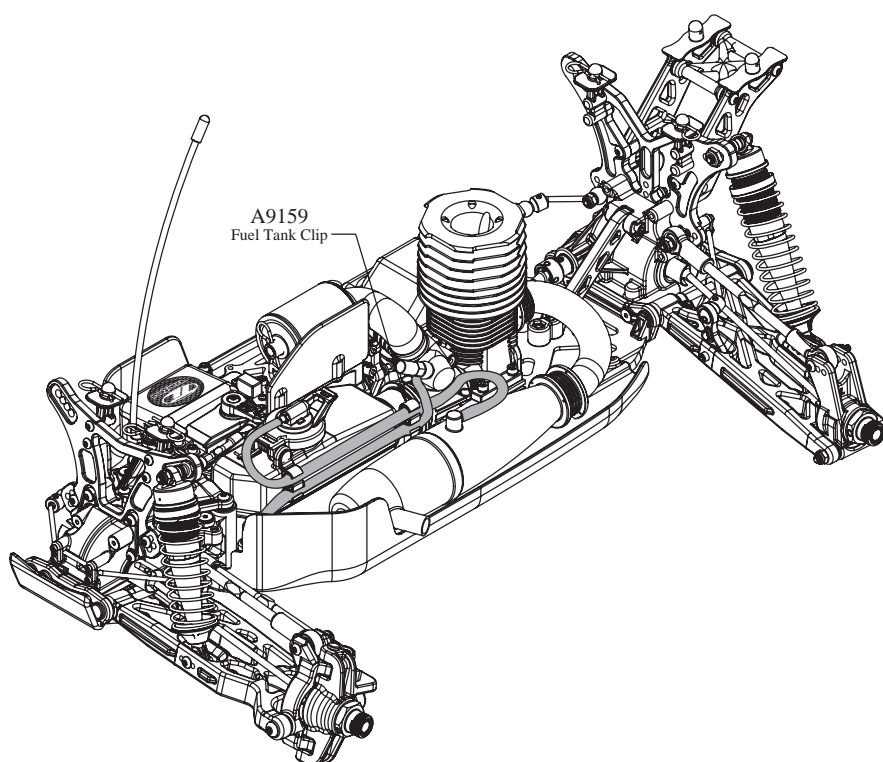
Engine Installation

- Adjust the Gear mesh between the Clutch Bell and the Spur Gear by sliding the Engine Mounts in the slots of the Chassis. In order to function properly, the Gears should be as close as possible, but still have a small amount of backlash (space between the Gear teeth).
- Place a piece of paper between the Clutch Bell Gear and Spur Gear, Slide the engine sideways until the paper is pinched between the Gears and Tighten the engine mount Screws. This will give a small amount of space between the gears.
- You should be able to rock one Gear back and forth *slightly* while holding the other one steady. Be sure to check the Gear mesh all the way around the Spur gear.
- Once the engine alignment and Gear mesh are correct, tighten all of the Screws. Re-check the Gear mesh after all the Screws are tight to ensure the Engine Mounts did not move.



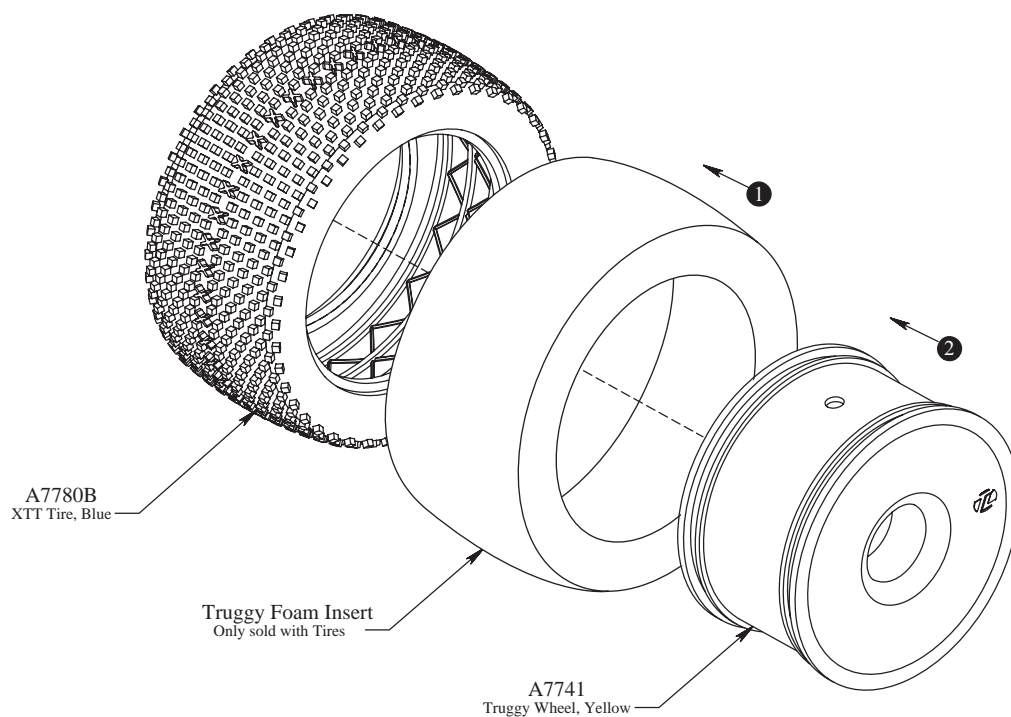
□ STEP G-08

Fuel Tube/Completed Engine Assy.



STEP H-01

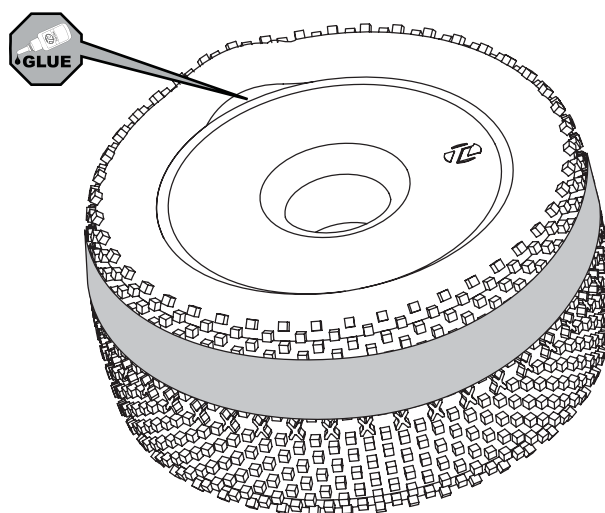
Tire Mounting



STEP H-02

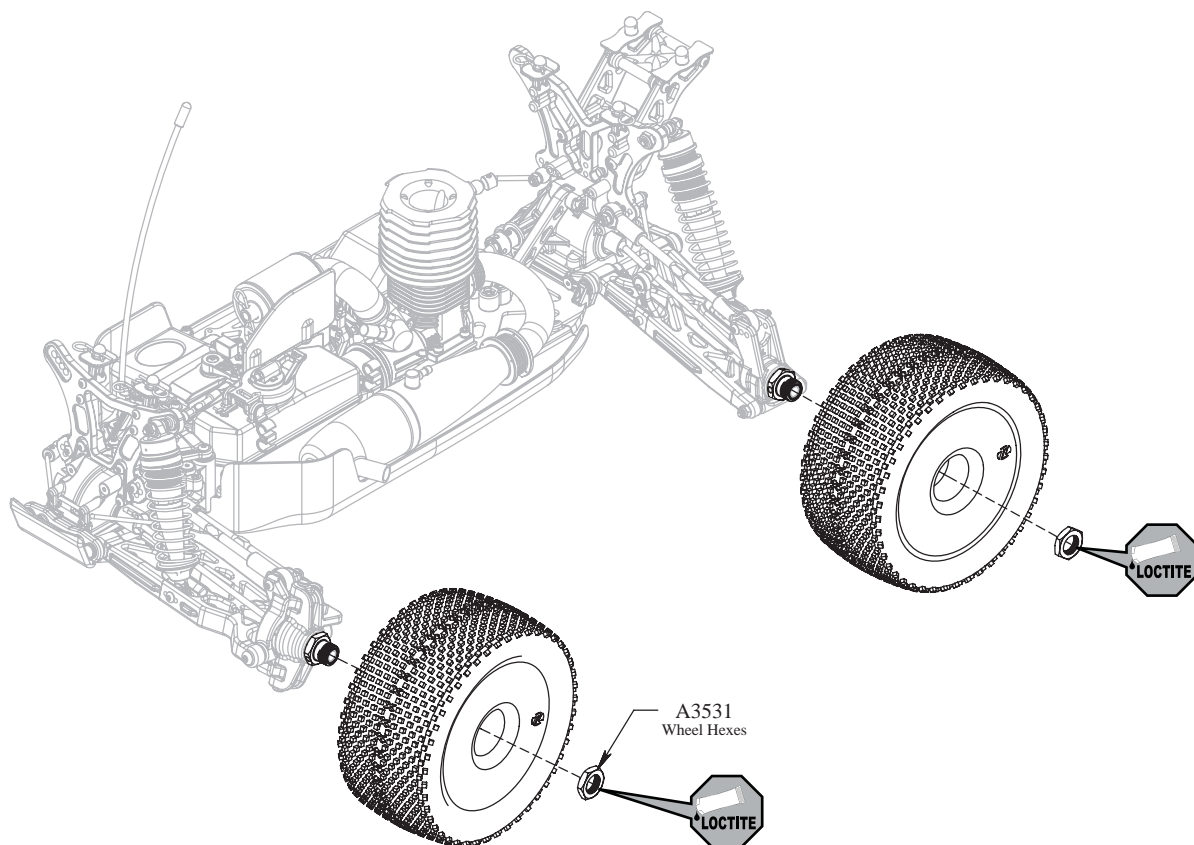
Tire Gluing

- The Tires need to be glued to the wheels. This can be done by using a fast-curing super glue or cyanoacrylate glue (LOSA7880, LOSA7881), available at your local hobby shop. Install a Tire gluing rubber band around the outside of the Tire, in line with the bead to hold it onto the Wheel.
- Now slightly pull back the tire bead from the wheel and apply a thin bead of glue between the Tire bead and the Wheel all the way around, wait for this side to dry and do the same to the other side until the Tire is firmly adhered to the Wheel. Allow the glue to dry thoroughly before continuing.



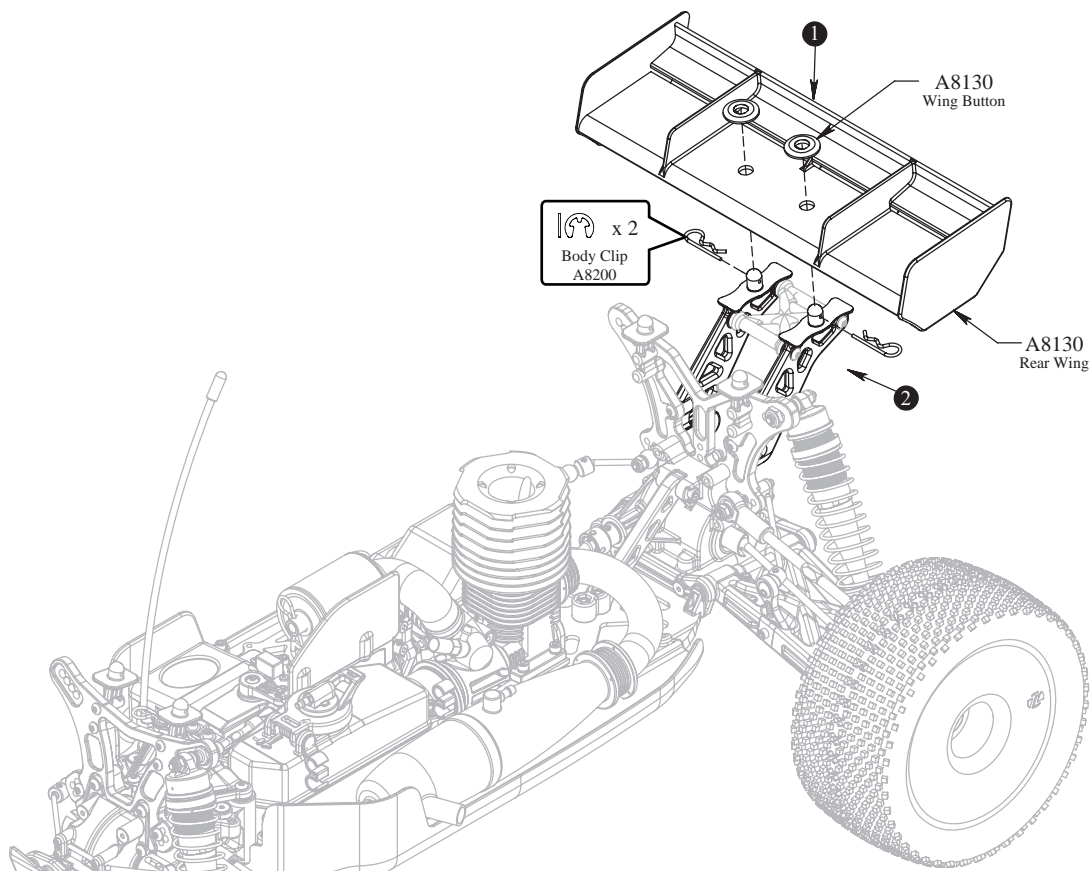
STEP H-03

Tire Installation



STEP H-04

Wing Installation



□ STEP H-05

Body Painting & Trimming

Painting:

Prepare the Lexan® Body and Wings for painting by washing them thoroughly (inside and out) with warm water and liquid detergent. Dry both the Body and Wings with a clean, soft cloth. Use the supplied Window Masks to cover the windows from the inside. A high-quality masking tape should be used on the inside of the Body to mask off any stripes, panels, or designs that you wish to paint on the Body or Wings. Use acrylic lacquer or other paints recommended for Lexan® (polycarbonate). **(NOTE: LEXAN® R/C CAR BODIES ARE MEANT TO BE PAINTED FROM THE INSIDE!)** Apply paint to the inside of the Body. Remove the masking tape for the next color and continue. Try to use darker colors first. If you use a dark color after a light color, apply a coat of white paint over the lighter color before applying the darker color, or if you are painting over white, coat it with silver. This will help prevent the darker color from bleeding through the lighter color.

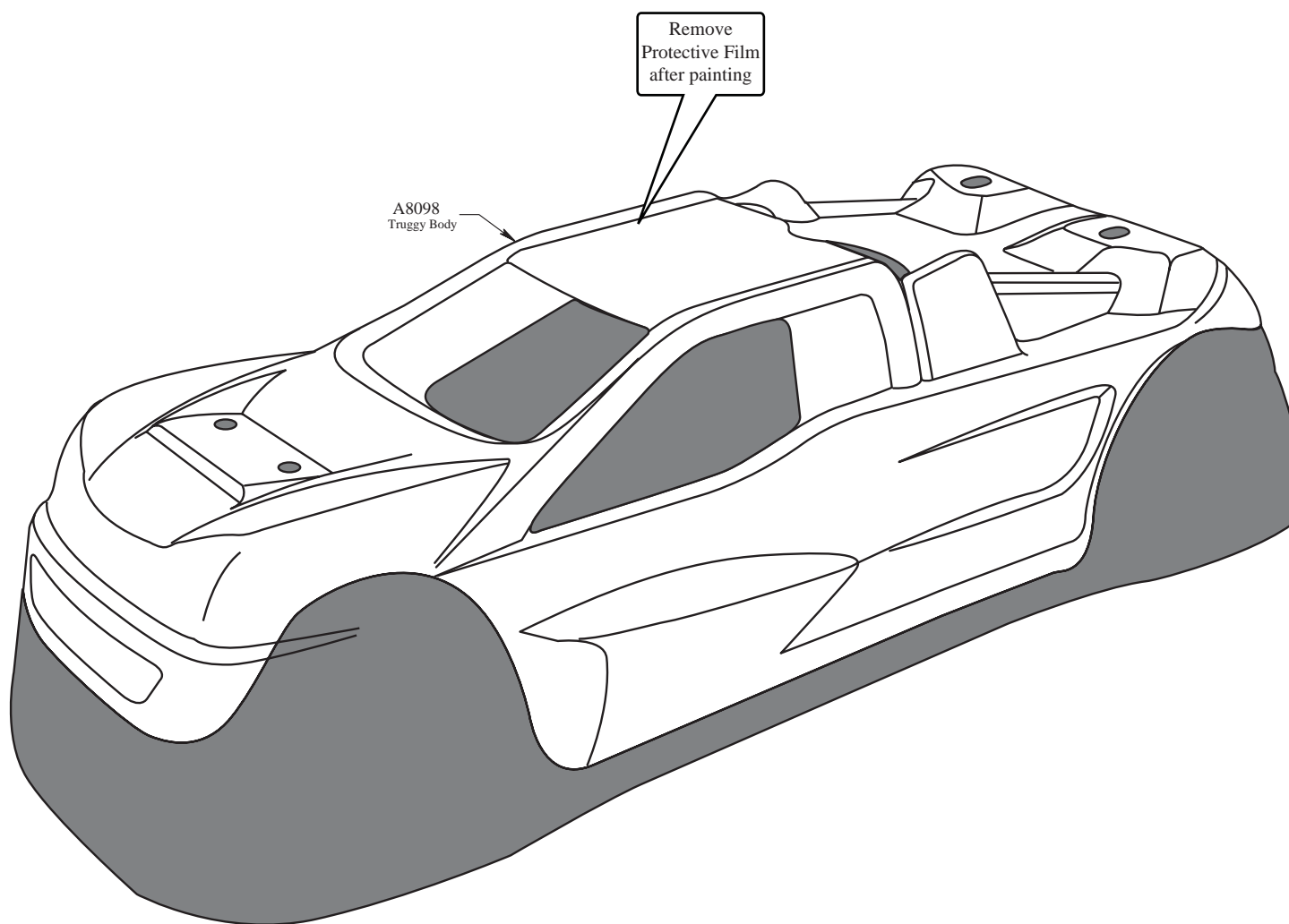
Mounting:

After painting, trim the Body along the trim lines as shown below, emphasized by the dark shading in the figure below. There is an indented trim line around the Body which can be used as a guide for trimming. Make four 7mm (.275")-diameter holes at the locations marked with dimples. There is one at the back of the Body and one on the right side of the Body. Also trim the round shaped hole on the front of the Body. These will be the Body mounting and Antenna holes.

Now cut out the large shaded areas on the body. These cut outs allow for fueling and to cool the engine.

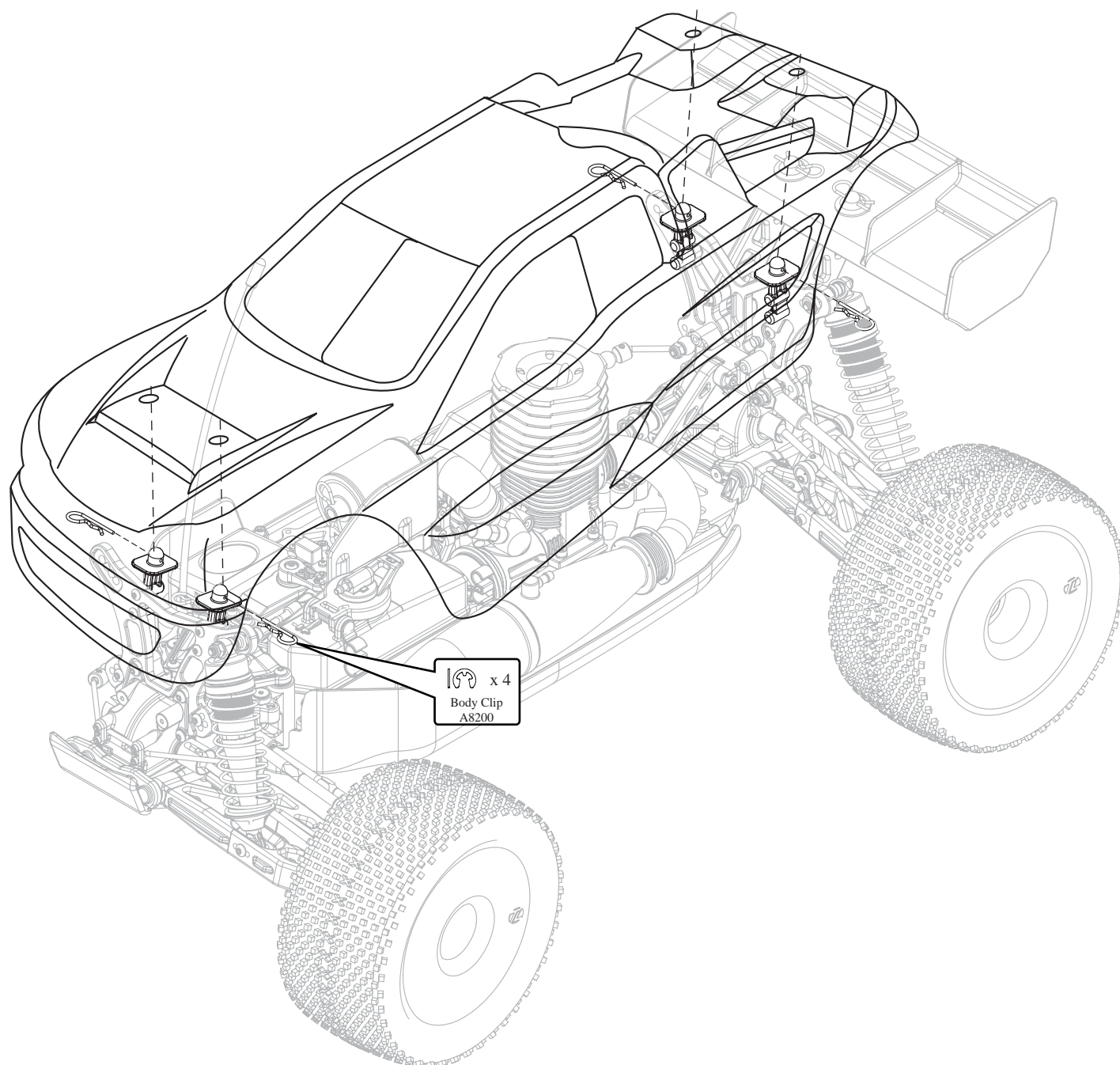
Stickers:

After the Wings and Body are mounted, **REMOVE THE PROTECTIVE FILM ON THE OUTER SURFACE**, now you can apply the stickers. Cut the stickers from the sticker sheet that you wish to apply to the Body or Wing. Before removing the protective backing, find the desired location. Remove the backing completely and reattach an edge of the sticker to the shiny side of the backing material. Using the rest of the backing material as a handle, position the sticker and press firmly into place to complete its application.



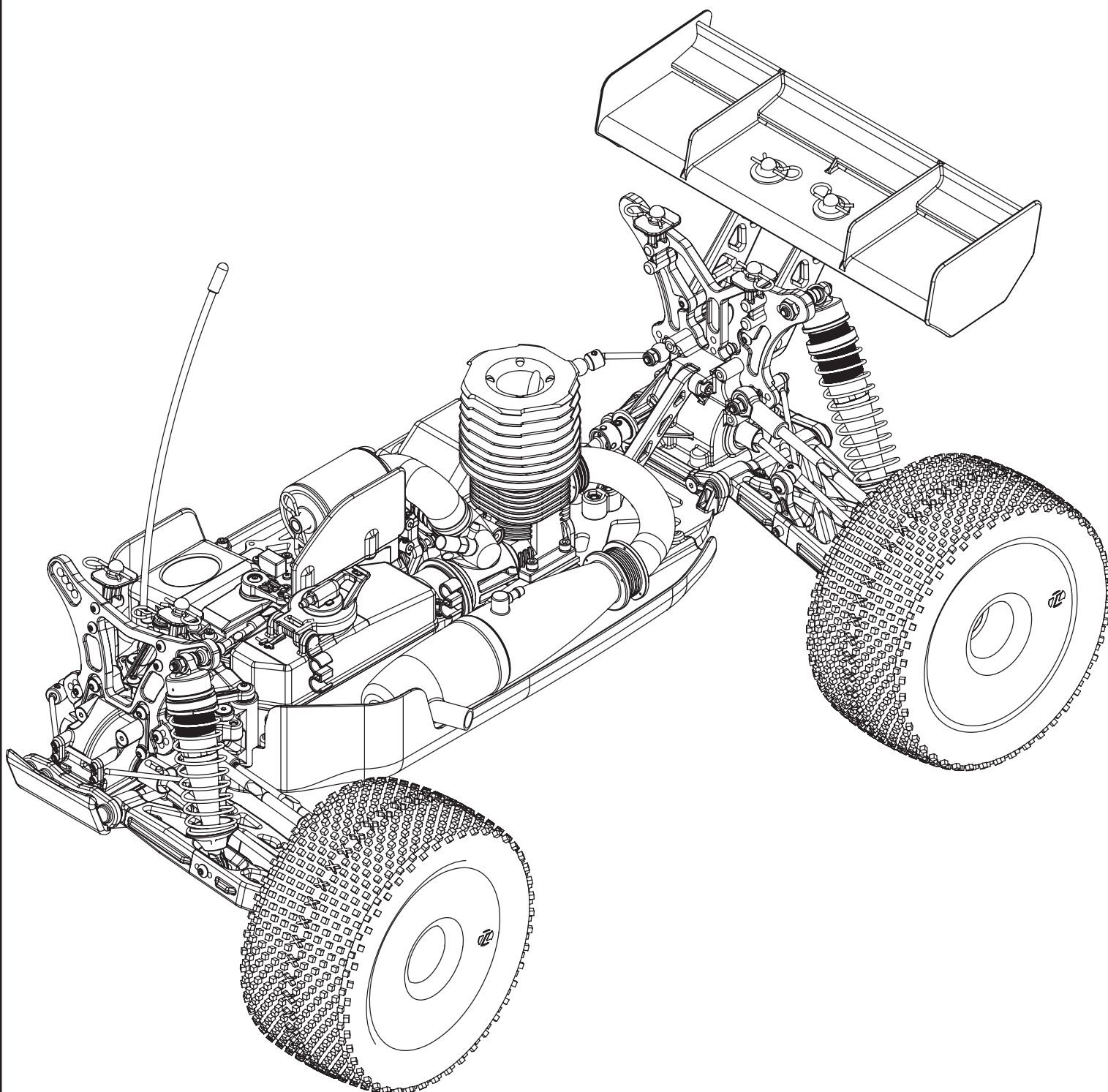
STEP H-06

Body Mounting



□ STEP H-07

Completed Chassis Assembly



BEFORE RUNNING YOUR NEW 8IGHT-T OFF-ROAD RACING TRUGGY for the first time, you should run down the following checklist in order and complete the listed tasks. We're sure you're anxious to get out and run your new 8IGHT-T now that it's built, but please note that fine tuning of the initial setup is an essential part of building a high performance racing buggy such as your new 8IGHT-T. Following this simple Checklist and the Team Tips will help to make the first run with your new car much more enjoyable.

1. **Breaking in the Differential:**

While holding the chassis with **only** the left side tires firmly on the ground, give the car about one eighth throttle, for 30 seconds. The right side tires should spin freely during this time. Repeat this with **only** the right side tires held firmly to the ground, allowing the left tires to spin. Repeat these steps at least two more times.

2. **Check for free suspension movement:**

All suspension arms and steering components should move freely. Any binds will cause the car to handle poorly.

3. **Set the ride height:**

Set the ride height on your buggy so that the bottom of the chassis is 36mm from the ground in front and 38mm in the rear by adjusting the shock adjustment nuts, effectively increasing or decreasing pre-load on the springs. See the Setup Guide for additional information on ride height adjustment.

4. **Set the camber:**

Adjusting the camber tierod length changes the amount of camber. Use the Team Losi wrench to adjust the tierods once installed. Rotating the tierods towards the front end of the vehicle will shorten the length, increasing negative camber. Rotating the tierods towards the back of the car will lengthen them, increasing negative camber. Set the front tires to have 1 degree of negative camber and ensure that they are adjusted equally, left to right. Set the rear tires to have 2 degrees of negative camber and ensure that they are adjusted equally, left to right.

5. **Set the front toe-in:**

Adjust the front steering tierods so that when the servo is centered on the transmitter, the front tires are both pointing slightly out with 1 degree of toe-out. Refer to the Setup Guide for more information on toe-in/out.

6. **Charge a receiver battery pack:**

Charge a battery pack as per the battery manufacturer's and/or charger manufacturer's instructions so that radio adjustments can be made.

7. **Set the transmitter steering trim:**

The steering trim tab on the transmitter should be adjusted so that the car rolls straight when you are not touching the steering wheel/stick. If the servo and steering link were installed correctly, the wheels should turn equally to the left and right. If this is not the case, refer to Table 2 and ensure that the steering servo and horn were properly installed. Also check the Steering Link Length as noted in Step F-03. Make sure the throttle trim is set so that the brakes are not "dragging" in the neutral position.

8. **Set the transmitter throttle and brake trim:**

The throttle trim tab on the transmitter should be adjusted so that the brakes are not dragging in the neutral position. The idle adjustment screw on the carburetor should be set at approximately 1mm open. When the throttle trigger is pulled back to the maximum, the carburetor is fully opened.

TIPS AND HINTS FROM THE TEAM

Before you start making changes on your *8IGHT-T* Off Road Racing Truggy, you need to make a few decisions. Tires, and how they are setup, have a tremendous impact on overall performance. Before you start making changes on the chassis setup, take a moment to observe a few of the fastest cars at the track and what type of tire and inner liner they are running. When making chassis changes, you should first decide where you feel the car needs to be different. This is commonly referred to as changing the “balance”. First decide if the front of the car needs to be adjusted or the back. You will want to work with the rear if the car enters the turn with the front end sticking, and tracking well, while the rear end either does not want to follow, or simply doesn’t know what it wants to do. The opposite is true if the rear end seems to want to push the front end through the corners or if the front drives into the corner uncontrollably. You will notice that several different adjustments have similar effects on the handling as well. You will find the best adjustment will become a personal decision based on the “feel” that each of these adjustments yield. This also reflects on the “balance” we referred to earlier. Never make more than one change at a time; if the change you made works adversely, or doesn’t address your need, return to the previous position and try something else. Team Losi’s development team has put hundreds of hours on the *8IGHT-T* to arrive at the setup we put in the instruction manual. If you find that you have lost the “handle” go back to the kit (stock) setup, as this setup has proven to be reliable, consistent, and easy to drive.

All of us at Team Losi are sure that you will find the *8IGHT-T* Off Road Racing Truggy to be the most versatile and easiest car to drive fast, with great consistency. We hope the information in the following guide helps you to enjoy your *8IGHT-T* Truggy, and racing it, as much as we do. For the latest in setup and accessory parts information, visit the Team Losi web site at: www.teamlosi.com regularly. For any technical questions go to the “Meet the Team” section of the site. We will try to answer your questions in the order received, to the best of our knowledge, by our own Team Losi R&D race team. Please check the Team Losi web site periodically to find out new setup information as we are always testing on all types of tracks and surfaces. Also note, that there are many ways to setup a car. The rules we follow can reverse sometimes with different driving styles or different setup styles, so test for yourself and you will find a setup that works right for you.

Tuning the Engine: Should be done following the manufactures instructions. Turning the needle valve clockwise, the fuel mixture will become leaner – meaning that it will draw less fuel. When the needle valve is turned counter-clockwise, the fuel mixture becomes richer – meaning that the engine will draw more fuel. The high speed needle affects the fuel mixture at fuel throttle while the low speed needle only affects the fuel mixture at idle and the low end of the throttle band.

To shut off the engine: Simply use the included pipe plug or simply bump the flywheel with a wrench or plastic handle tool.

The Receiver Battery: The Receiver Battery is an important, frequently overlooked part of gas-powered vehicles. It is important that the batteries always have a fair amount of charge remaining in them. A low receiver battery can cause the vehicle to have a mind of it’s own. The result can be runaway vehicle or a poor responding radio system. The length of time that a receiver battery pack’s charge lasts depends on the type of servos that are used. Some of the high performance servos draw more current than standard servos, and will drain the receiver pack faster. Just remember to check the receiver pack from time to time. When the servos start to operate a little slower, or radio response feels sluggish, the batteries probably need to be recharged. If you will be using a Nicad receiver pack, it is recommended that a minimum battery size of 1000mAh and minimum voltage of 5.4 volts be used. The Nicad battery should be charged before every day’s outing with your *8IGHT-T*, and after about every 45 minutes to 1 hour of operation. If you are planning on racing a long main event, be sure to charge the battery pack before the start of the main.

Droop: Adjust the front and rear droop by adjusting the front / rear down stop screws. Tighten the screws to increase the droop height (less travel). Loosen the screws to decrease the droop height. (more travel).

Less droop in the front has less on power steering and is better for small bumps. Less droop in the rear has less off-power steering.

More droop in the front has more on power steering and will be better on rough tracks. More travel in the rear increases rear traction and off power steering.

Front Camber Links: The lower camber link locations on the tower have more camber gain (total camber change through the suspension travel). Running the camber tie rod in the lower holes will increase off-power steering and make the vehicle more aggressive, however you may lose some consistency. More camber gain is good on small tight tracks. We have found that running less camber gain in the front suits the car the best for consistency and steering balance. A longer front camber link will make the vehicle feel stiffer. This will keep the buggy flatter with less roll and increase high speed steering. A short front camber link will roll more and make the vehicle more aggressive. Too short of a front link may make the vehicle feel twitchy.

Rear Camber Links: The lower camber link locations on the tower have more camber gain (total camber change through the suspension travel). Running the camber tie rod in the lower holes on the tower will increase corner speed and allow the buggy to sit on the rear more when on throttle. The lower camber position will not traction roll as easy. The upper camber link locations on the tower work better on high traction surfaces and improve stability. Using a longer rear camber link will have less roll and improve stability and traction. A shorter rear camber link will have more roll and increase steering and better in the bumps. Running “A” in the rear hub will generate more corner rotation entering the turn, but decrease steering on exit. Running “B” in the hub will be more stable entering the turn and increase steering on exit.

Pistons: Smaller hole pistons have stiffer damping, slower weight transfer, slower response, and will land large jumps better.

Larger hole pistons have softer damping, increased traction, quicker weight transfer / response, and bottom out easier off large jumps.

Shock Oil: Lighter shock oil has more overall traction and respond quicker. Thicker oil has less overall traction and react slower. On high

bite / smooth tracks, thick oil is easier to drive. Make sure you adjust oil when there is a drastic temperature change (20-25 degrees). If it gets cold outside you need to go to lighter shock oil. If it gets hotter outside you need to go to thicker weight shock oil.

Front Toe: More front toe-in (longer steering rods) decreases steering response entering and in the middle of the turn. More toe-in also increases on power steering. More front toe-out (shorter steering rods) increases steering response when entering the turn and increase straight-line stability. Toe out decrease on power steering.

Rear Toe-in: More rear toe-in increase forward traction and stability on power.

Less rear toe-in increase steering when on throttle and decrease stability on power.

Wheel Base: Shorter wheelbase (spacers behind the rear hubs) increases on-power traction, rear weight transfer, and has more off-power steering. Shorter wheelbase is better on tight or slick tracks. Longer wheelbase (spacers in front of the rear hubs) decreases off-power steering. Longer wheelbase is more stable, better in bumps, and has more on-power steering.

Sway Bars: Thinner front sway bar increases front traction off power, but has less on power steering.

Thicker front sway bar decrease front traction off-power making the steering smoother entering the turn, but has more on power steering.

Thinner rear sway bar increase rear traction and decreases on power steering.

Thicker rear sway bar increases stability in the middle of the turn and increases on power steering.

Thicker sway bars are more stable on high speed, high traction tracks.

Clutch: Softer springs engage at a lower RPM and have a smoother power band. If the engine doesn't have enough low-end power try running more preload (spring with more angle) or a stiffer spring.

Stiffer springs engage at a higher RPM and hit much harder. If the springs are too stiff it will cause the clutch to slip.

Plastic vs. Aluminum clutch shoes. We have found the two plastic and two aluminum clutch set-up to work best on most tracks, but if the track is very loose, rough and doesn't have jumps that are difficult to get over four plastic shoes will allow more slip and smoother acceleration. Running all four aluminum clutch shoes will have the most punch, but isn't as good on slick, rough tracks.

Differentials: Thinner front differential oil increases off power steering, but if the oil is too thin the steering will become grabby and inconsistent.

Thicker front differential oil increases off power stability and increases on power steering.

Thinner center differential has less forward drive, unload more under acceleration and is easier to drive on rough and slick tracks.

Thicker center differential has more acceleration, increases on-power steering, and less off-power steering. Thicker center differential is better on high bite / smooth tracks.

Thinner rear differential has more cornering traction and increases steering in the middle of the turn.

Thicker rear differential has less steering in the middle of the turn and more forward traction.

Shock mounting positions: More inclined (moving the shocks in on the tower) has softer initial damping and is more forgiving.

Less inclined (moving the shocks out on the tower) makes the car more responsive and is better for technical tracks.

Ackerman: Long Ackerman plate will have smooth steering and is more forgiving.

Short Ackerman plate responds quicker and has more steering in the middle of the turn. Short Ackerman plate is better suited for tight technical tracks.

Camber: More negative camber in the front has more steering and is more responsive.

Less negative camber in the front will have less steering and will be smoother.

More negative camber in the rear will have less rear traction, but will increase on power steering and will be less grabby in bumps.

Less negative camber in the rear will have more rear traction and make the rear off the buggy stay flatter, but if traction is lost it will be more violent.

Fuel tank insert: Your 8IGHT-T comes preinstalled with a fuel tank insert to meet ROAR and RC Pro Series 150cc fuel tank rule. If you are not racing your 8IGHT-T where these rules apply, you can remove the insert to allow for more fuel.

Gearing: The stock gearing for the 8ight-T is 14/48. If you are running on a small technical track or need more low-end power/acceleration, a 13 tooth clutch bell is recommended.

Brake setup: The standard brake bias for the 8IGHT-T is 60% rear - 40% front. If you need the truck to rotate more under braking, adjust the linkage for less front brake. If the truck is loose entering turns under braking, adjust the linkage for less rear brake or more front brake.

Outdrives and traction: When you 8IGHT-T is new it will have a lot of chassis roll and be a little loose on throttle due to lack of friction in the outdrives and crossbones. After about 45-60 minutes of running the 8IGHT-T will gain traction and stability. Once your 8IGHT-T is broken in, replacing the outdrives and crossbones with new parts will have more corner speed.

Bump steer: Running the bump steer ball down will have smoother steering in the middle of the turn. With the bump steer ball up will increase steering in the middle of the turn.

Rear Toe-in: Less rear toe-in will increase the wheel base of the truck and decrease forward traction, but will increase top speed and side traction in the middle of a turn. More toe-in will increase forward traction, have more off power steering and less side traction.

Rear Squat: The 8IGHT-T comes with three degrees of anti-squat. Running less anti-squat will have less off-power steering and roll (side to side) more on the rear. Less anti-squat will accelerate better in small bumps. More anti-squat will have more support (side to side) and be better on rough tracks with big jumps.

Ride Height: Measuring from a flat surface to the bottom face of the chassis, adjust the front of the chassis with 36mm of ride height and 38mm in the rear. We have found the the 8IGHT-T handles best when the front ride height is 1mm to 2mm lower or at least level than the rear of the truck.

Drop: Always measure the drop of the 8IGHT-T with the shocks on the the truck. Measure from the center of the top shock mount to the center of the bottom shock screw. More drop (travel) in the front will have more on-power steering and allow the truck to roll more on the rear when on throttle. More drop (travel) in the rear will increase off-power steering and allow the truck to roll on the front off throttle. More front and rear drop will accelerate better in bumps when going straight, but can cause the truck to traction roll in rough turns. Less front and rear drop will slide over bumps better in turns.

Clutch: Make sure to clean the inside of the clutch bell with Scotch Brite or really fine sand paper. The 8IGHT-T comes with 2 plastic and 2 aluminum (7075) clutch shoes. The kit set up with 2 gold and 2 silver springs is the most aggressive. If the clutch sounds like it is slipping, try running the optional black springs on the plastic shoes. The black springs on the plastic shoes will allow the shoes to engage earlier and allow the power to be delivered smoother. This set up works best on slick tracks.

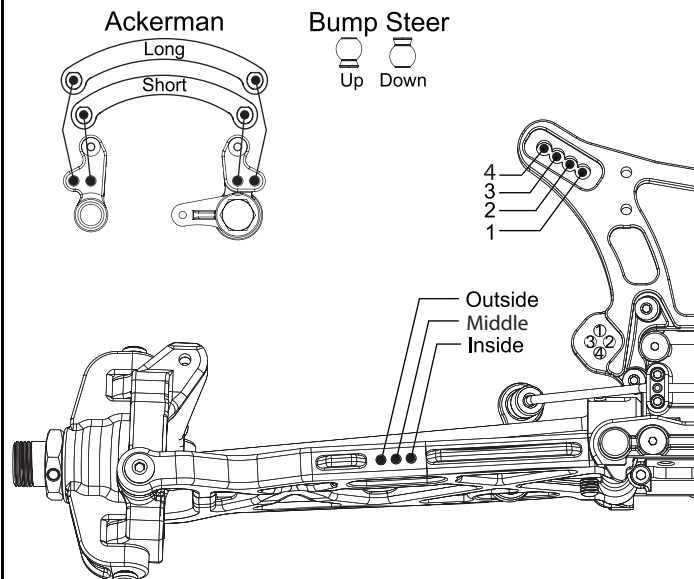
Setup Notes: _____

Name: _____		Date: _____ Event: _____	
City: _____ State: _____		Track: _____	
Track <input type="checkbox"/> Indoor <input type="checkbox"/> Tight <input type="checkbox"/> Smooth <input type="checkbox"/> Hard Packed <input type="checkbox"/> Blue Groove <input type="checkbox"/> Wet <input type="checkbox"/> Low Bite <input type="checkbox"/> High Bite Conditions <input type="checkbox"/> Outdoor <input type="checkbox"/> Open <input type="checkbox"/> Rough <input type="checkbox"/> Loose/Loamy <input type="checkbox"/> Dry <input type="checkbox"/> Dusty <input type="checkbox"/> Med Bite <input type="checkbox"/> Other _____			

Front Suspension

Toe: 2°
 Ride Height: 36mm
 Camber: -1°
 Caster: Stock
 Sway Bar: 2.3mm
 Piston/Oil: 54 / 45wt
 Spring: 5.0 Black
 Limiter/Droop: 95mm (Center to Center)
 Overall Shock Length: _____
 Steering Ackerman: Short
 Bump Steer: Down
 Camber Link: 2
 Shock Location: 3 / Middle
 Front Diff Fluid: 7000wt
 Receiver Battery Type: 1400mAh

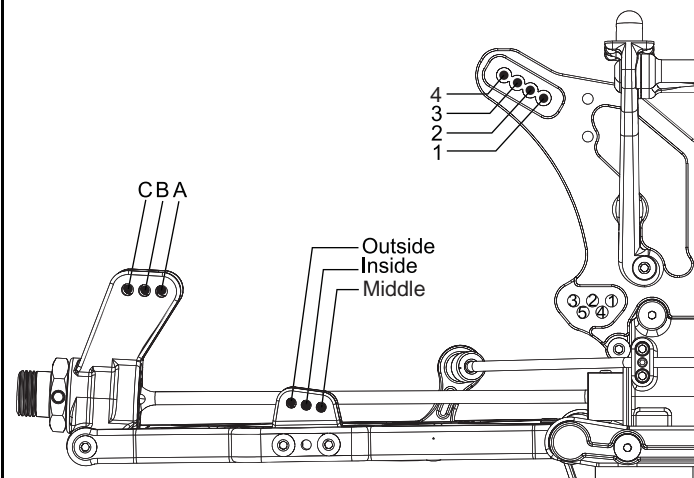
 Center Diff Fluid: 10000wt



Notes: _____

Rear Suspension

Toe: 2°
 Anti-Squat: 3°
 Ride Height: 38mm
 Camber: -2°
 Rear Hub Spacing: Forward
 Sway Bar: 2.7mm
 Piston/Oil: 56 / 30wt
 Spring: 4.0 Grey
 Limiter/Droop: 110mm (Center to Center)
 Overall Shock Length: _____
 Camber Link: 4 / A
 Shock Location: 3 / Middle
 Rear Diff Fluid: 5000wt

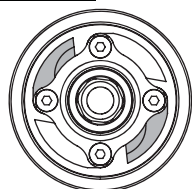


Notes: _____

Engine

Engine: _____ Fuel: _____
 Glow Plug: _____ Head Clearance: _____
 Pipe/Header: _____ Gearing: _____

Clutch



Clutch Shoes and Springs Info

2-Alum / .040 Silver 30° Spring
2 Plastic / .040 Gold 25° Spring

Tires

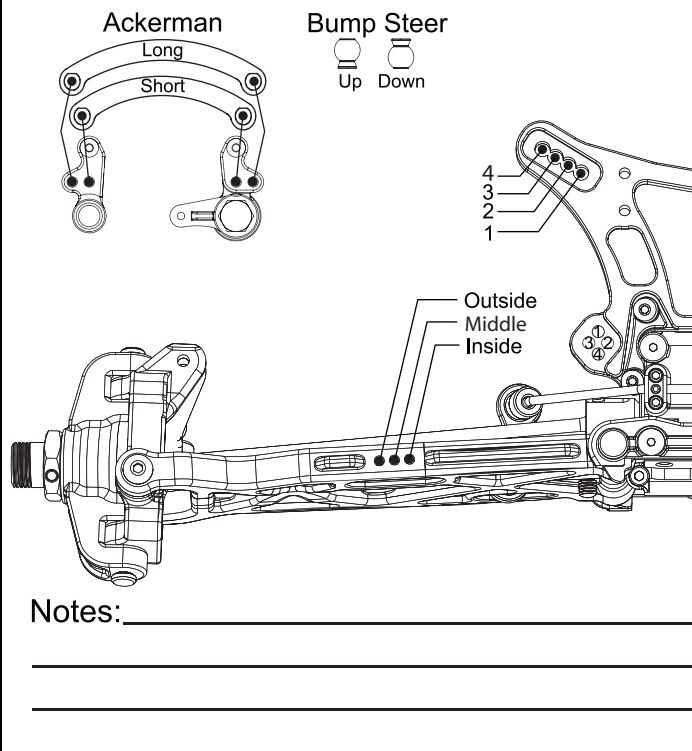
	Type	Compound	Insert
Front:	_____	_____	_____
Rear:	_____	_____	_____
Notes:	_____		

Name: _____		Date: _____ Event: _____	
City: _____ State: _____		Track: _____	
Track <input type="checkbox"/> Indoor <input type="checkbox"/> Tight <input type="checkbox"/> Smooth <input type="checkbox"/> Hard Packed <input type="checkbox"/> Blue Groove <input type="checkbox"/> Wet <input type="checkbox"/> Low Bite <input type="checkbox"/> High Bite Conditions <input type="checkbox"/> Outdoor <input type="checkbox"/> Open <input type="checkbox"/> Rough <input type="checkbox"/> Loose/Loamy <input type="checkbox"/> Dry <input type="checkbox"/> Dusty <input type="checkbox"/> Med Bite <input type="checkbox"/> Other _____			

Front Suspension

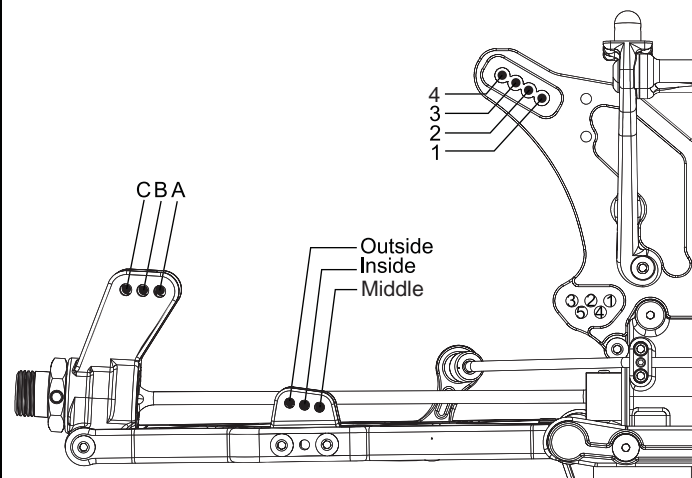
Toe: _____
 Ride Height: _____
 Camber: _____
 Caster: _____
 Sway Bar: _____
 Piston/Oil: _____
 Spring: _____
 Limiter/Droop: _____
 Overall Shock Length: _____
 Steering Ackerman: _____
 Bump Steer: _____
 Camber Link: _____
 Shock Location: _____
 Front Diff Fluid: _____
 Receiver Battery Type: _____

 Center Diff Fluid: _____



Rear Suspension

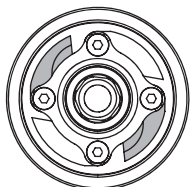
Toe: _____
 Anti-Squat: _____
 Ride Height: _____
 Camber: _____
 Rear Hub Spacing: _____
 Sway Bar: _____
 Piston/Oil: _____
 Spring: _____
 Limiter/Droop: _____
 Overall Shock Length: _____
 Camber Link: _____
 Shock Location: _____
 Rear Diff Fluid: _____



Engine

Engine: _____ Fuel: _____
 Glow Plug: _____ Head Clearance: _____
 Pipe/Header: _____ Gearing: _____

Clutch



Clutch Shoes and Springs Info

Tires

	Type	Compound	Insert
Front:	_____	_____	_____
Rear:	_____	_____	_____
Notes:	_____ _____ _____		



ALWAYS RACING TOWARDS THE FUTURE.

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Installing and Adjusting your 8IGHT Throttle/Brake Linkage

Before proceeding, become familiar with the operation of your radio system. Refer to your operation manual and become familiar with the End Point Adjustment (EPA) or Travel Adjustment for throttle, brake, and all trim adjustments.

Brake Disc and Pad Set-up

Proper brake pad to disc clearance is essential for optimal braking performance, use this method for initial set-up and maintenance and to check the presets from the factory. Due to normal brake wear, this setting should be checked after every 60-90 minutes of use.

1. With the radio tray powered off and the throttle servo arm removed, move the brake linkage wires towards the engine to the full throttle position.
2. Push the brake pads closed towards the center diff mount by hand. The brake cams and linkage should not engage, if they are engaged the pads will not compress all the way to the center diff mount.
3. Using a 4-40 washer as a gauge, adjust the brake screw to set the gap between the head of the screw and the brake pad to .020 - .030" (0.5 - 0.75mm). The washer should not snug into the gap. (Fig. 1)

NOTE: Removing the center diff assembly will make this adjustment easier.

4. Repeat on all four brake screws.

Installing the Throttle Linkage

1. Turn on your transmitter. Adjust the throttle trim on the transmitter to the neutral or centered position, this will allow for the adjustment later.

2. With the servos, receiver, switch and charged receiver battery installed and connected, turn on the radio tray. When throttle is applied, ensure the servo is rotating in the proper direction. (Fig. 2)

NOTE: To change the servo rotation, locate the servo reversing function on your transmitter and switch the direction of the servo.

3. Select a servo adapter that matches the number of splines on your servo (refer to your owners guide).

4. Place the servo arm adaptor onto the output shaft of the servo. Aligning the throttle servo arm parallel with the side of the servo case, place the arm onto the splines of the adaptor. If there is a slight angle, use the trim adjustment on your radio to position the arm as shown (Fig. 3). Secure the throttle servo arm with the screw supplied with the servo.

NOTE: If the arm cannot be positioned as shown using trim adjustment, the angle can be changed by removing the arm and adaptor and rotating the adaptor one spline in either direction until the arm is positioned as shown (Fig. 3).

5. Snap the throttle linkage ballcup onto the carburetor ball. The linkage should be level with the bottom of the chassis, and NOT hitting the servo case. Test for free movement. If necessary, rotate the ball/ring on the carburetor. (Fig. 4)

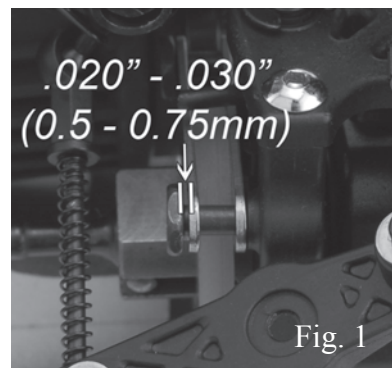


Fig. 1

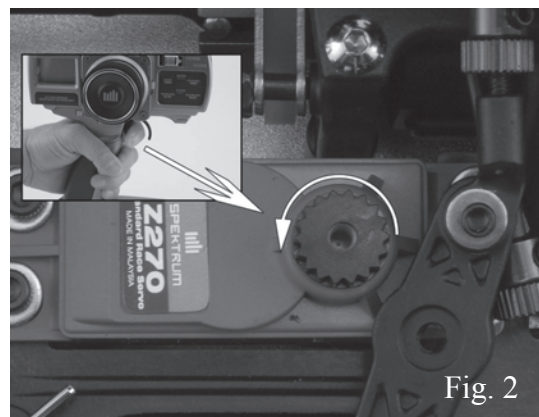


Fig. 2

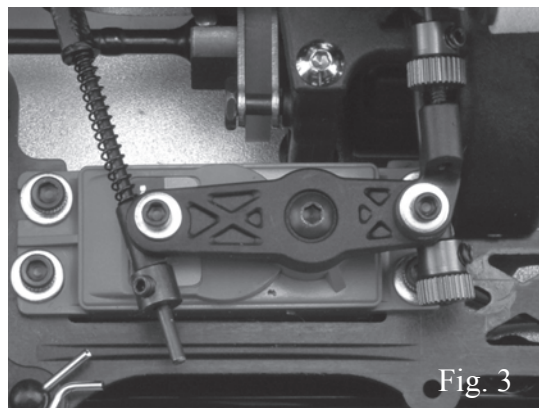


Fig. 3

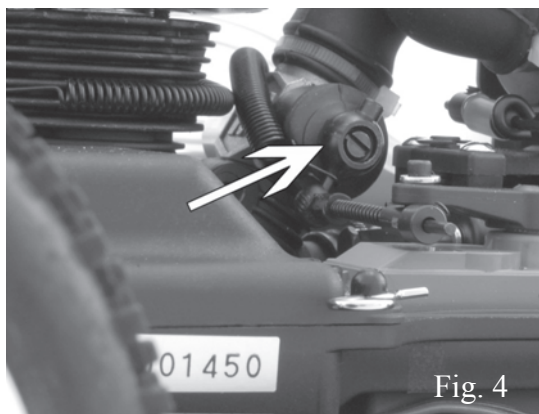
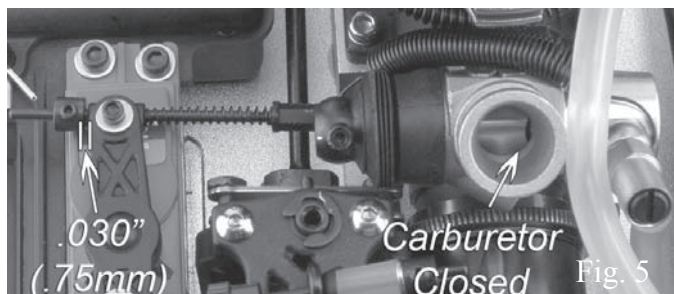


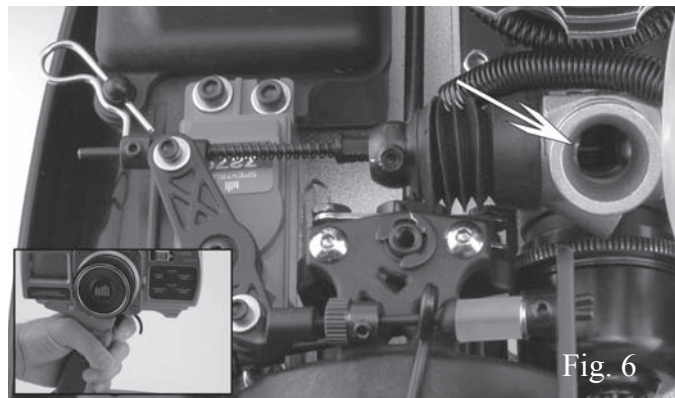
Fig. 4

6. With the air filter assembly removed from the carburetor, adjust the collar so that there is .030" (about the thickness of a #4 washer) space between the throttle actuator and adjustment collar (Fig. 5).

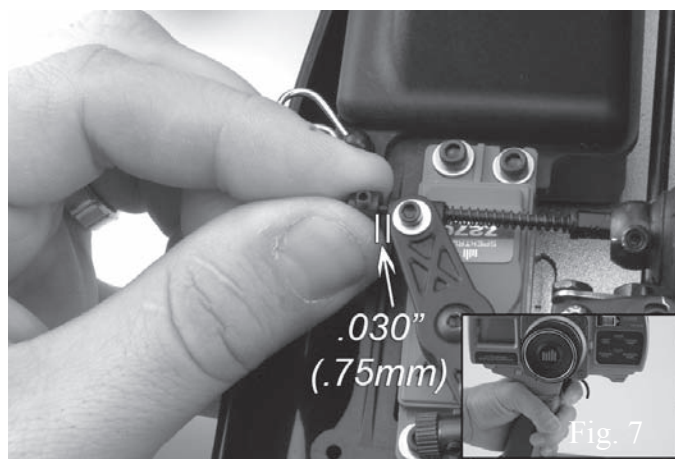


7. Watch the throttle linkage as the transmitter trigger is slowly moved to the full throttle position. Adjust the throttle EPA on the transmitter so that the carburetor only opens 90-95% of its total travel (Fig. 6).

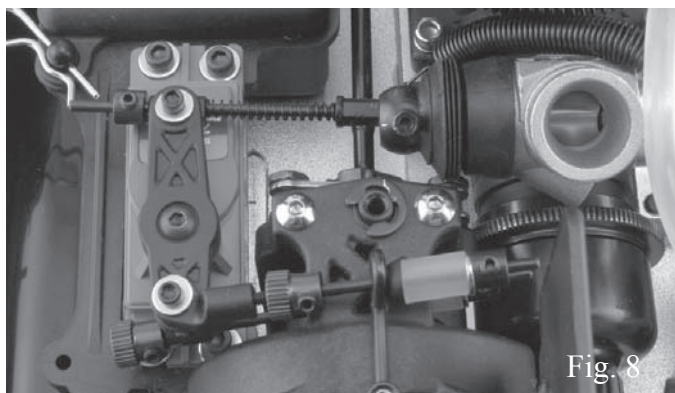
NOTE: Never set the carburetor to open 100% of its travel, some play must be left to allow for chassis flex. This adjustment will not affect the overall performance of the vehicle.



8. To ensure that the EPA or Travel Adjustment is set correctly, apply full throttle on the radio and gently pull on the throttle linkage rod. There should be at least 0.030" (0.75mm) of additional travel (Fig. 7).



9. Return the throttle to the neutral position and check the linkage. Repeat a couple times to make sure all linkage is free and not binding. If correctly adjusted, the linkage will return the same position every time. (Fig. 8)



The throttle portion of the linkage adjustment is now complete. Do NOT proceed if the above test does not work, repeat the procedure if necessary.

Adjusting the Brake Linkage

1. With the throttle in the neutral position, adjust the brake linkage rods as shown. Note the amount of thread showing on each brake rod.(Fig. 9)

2. Slide the collar (black) along the front brake rod (upper) towards the fuel tubing, until there is no play left in the linkage. The fuel tubing should NOT be compressed. Repeat this process for the rear brake rod (lower).

NOTE: The upper adjustment rod is for the front brake and the lower for the rear brake (Fig. 10).

3. At the end of this adjustment process, the brakes should NOT apply any resistance at the neutral throttle position.

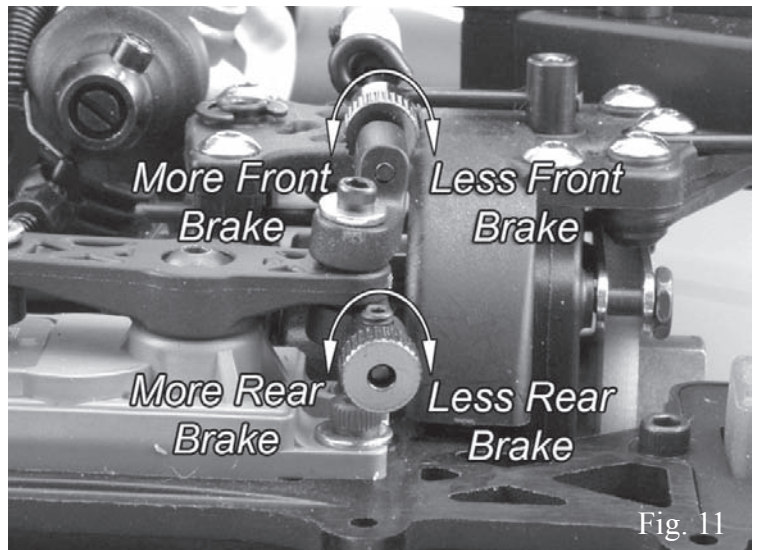
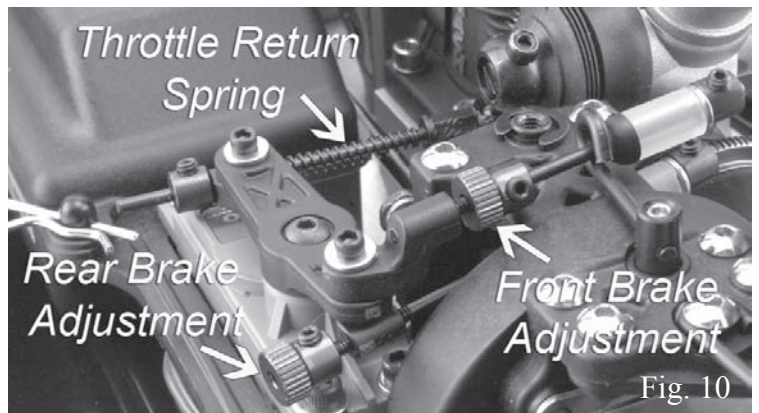
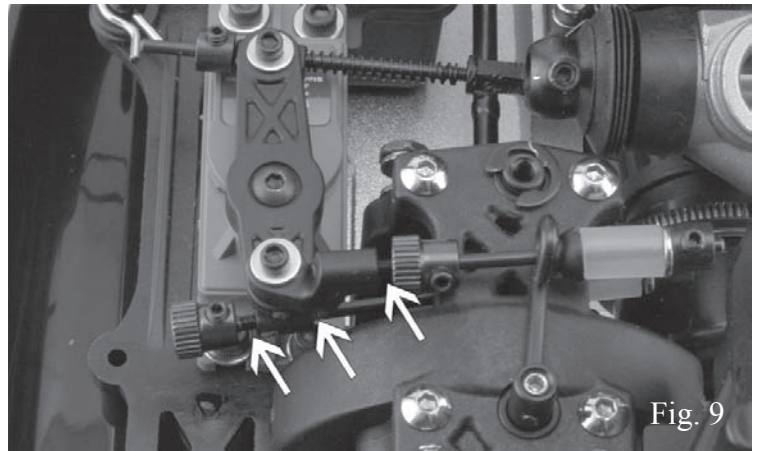
From adjustment in step 2, the brakes may be applying some resistance which can be felt by rotating the spur gear by hand through the bottom of the chassis. To ensure there is no resistance, rotate each of the adjustment knobs (blue) one turn in the clockwise direction (Fig. 11)

4. Check the adjustment, apply full throttle and return to neutral and check the brakes for resistance. Repeat a couple times and check for consistent operation.

5. Watch the brake linkage as the transmitter trigger is slowly moved to the full brake position. Adjust the brake EPA of the transmitter so that when full brake is applied the spur gear is difficult to turn by hand. The brake EPA can be adjusted later to get the desired amount of brake for various driving conditions.

8. Before proceeding, move the trigger to the full brake position and check the throttle return spring to ensure that it is not compressed completely.

NOTE: If the throttle return spring is fully compressed, the most probable cause is either the throttle servo arm is installed improperly or the EPA is set too high. Proper adjustment should allow for at least .250" (6.5mm) of additional movement in the full brake position.



The brake portion of the linkage adjustment is now complete. Do NOT proceed if the above test does not work, repeat the procedure if necessary.

Checking the Brake Bias

Brake bias is the difference between the amount of rear and front braking pressure.

1. To check the amount of rear brake bias, place the vehicle on a table, move the trigger to the full brake position and press down on both front and only one rear wheel to keep them from rotating.
2. Lift the remaining rear wheel off the table and rotate it in the forward direction. The resistance required to rotate the wheel, is the amount of rear brake being applied. This may vary from little resistance to full lock up.
3. Take note of how much resistance is required to turn the wheel.
4. Repeat for the front brake by holding both rear and only one front wheel. Again moving the trigger to the full brake position and rotating the other front wheel, noting the resistance required.
5. Do this several times for both the front and rear brakes to establish a "feel" for the applied braking resistance. Often the resistance will be different from front to rear.

Adjusting the Brake Bias

1. For most applications, begin by setting the braking bias to 40% front, 60% rear.
2. Brake bias is adjusted by adding or removing either front or rear brake. It is best to add to the under-powered brake to obtain the desired bias.

For example: if there is too much front brake bias, add rear brake by rotating the upper adjustment knob counter-clockwise. If there is too much rear brake, add front brake by rotating the upper brake knob counter-clockwise to obtain the desired bias.

3. Adjust only ONE brake rod at a time, a maximum of a $\frac{1}{4}$ turn, and re-check the bias with the method used above. Repeat until the desired brake bias is achieved.
4. Return the throttle to neutral and turn the spur gear by hand. No resistance should be felt while turning the spur gear at neutral throttle.
5. If the brakes are dragging, turn BOTH adjustment knobs clockwise the exact same amount ($\frac{1}{4}$ turn at a time) until the spur gear turns freely.
6. Always go back and check the bias after making any adjustment.
7. The brake system requires very little pressure to operate, and should engage quickly with only a small amount of servo arm movement (0.050")(1.3mm).
8. The brake bias has now been set, and linkage adjusted, final braking power will be set later for various driving conditions.

Linkage Adjustment Checklist

- ☐ 1. The linkage must be free for movement and not bind.
- ☐ 2. The linkage should not hit anything, servo, body etc.
- ☐ 3. The servo should not move more than 0.050" (1.3mm) before the brakes start to engage.
- ☐ 4. At least 0.250" (6.5mm) of travel should be allowed for the throttle return spring.
- ☐ 5. The brakes should not drag at neutral throttle.

If any of these conditions exist, the linkage has not been properly adjusted, repeat this procedure until the linkage has been properly adjusted