

# INSTRUCTION MANUAL



## Specification:

- Length/510mm
- Width/310mm
- Height/220mm
- Ground Clearance/65mm
- Wheelbase/323-330mm
- Track/F:310mm, R:308mm
- Gear Ratio/C:46/13T, F/R:38/11T
- Weight/3450g

# CL-1 ADVANCED

## 1/8 Scale Radio Controlled Gas Powered Off Road 4WD Racing Buggy

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This radio controlled racing car is not a toy!  
This high-performance R/C model is recommended for ages 14 and older.

# Contents



Congratulations on your purchase of the new GS Racing 1/8 scale off-road buggy - Storm CL-1 Advanced.

Please read this manual thoroughly, before you attempt to start or drive your Storm CL-1 Advanced for short. This manual contains step-by-step instructions to help you complete, prepare for startup, and fine-tune your buggy. Updates, setups, and product news will be posted on our website, so check often.

As always, if you should ever have any questions or need help with your Storm CL-1 Advanced, please feel free to contact our official GS Racing dealers and distributors, as they will be glad to help you. You may also contact us at any time for the most up to date information and support.

Good luck and good racing!

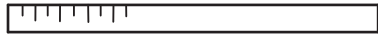
**- GS RACING -**



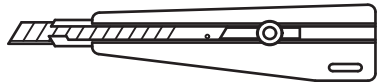
# Required Equipment for Operation

## 1. Tools Required for Building and Maintenance:

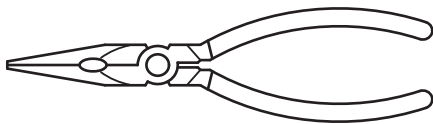
- Precision Ruler or Caliper



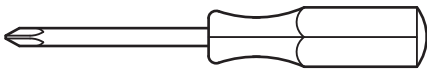
- Hobby Knife



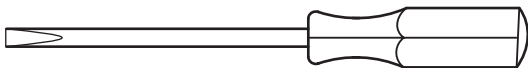
- Needle Nose Pliers



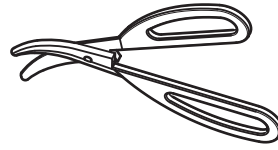
- Phillips Screwdriver (#0,#1,#2)



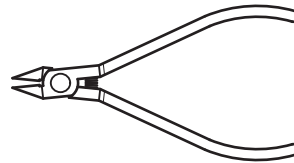
- Flathead Screwdriver



- Hobby Scissors



- Wire Cutters



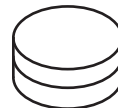
- Thread Locking Compound



- CA Glue and Rubber Cement

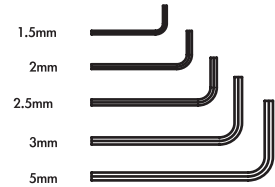


- Silicone Type of Grease

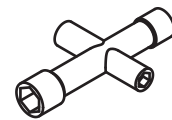
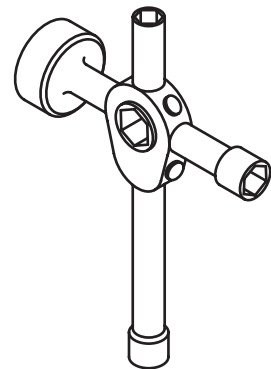


## Tools Included:

- Hex Wrench



- Cross Wrench



## WARNING!

- Do not use a power screwdriver to install screws into nylon or plastic materials.
- The fast rotation speed can heat up the screws being installed.
- They can then break the molded parts or strip the threads during installation.

## 2. Additional Items Needed for Operation :

- Radio System (FM recommended with high speed/torque servos)
- 8 AA size Batteries (For Transmitter)
- Ni-Cd Battery Pack (5-Cell Hump Type)
- Glow Fuel and Fuel Bottle
- Starter Box (GS Racing Turbo Starter Recommended.)
- 12-Volt Battery or Two 6-Cell 7.2-Volt Battery Packs for Starter Box
- .21 Glow Powered Rear Exhaust R/C Racing Engine and Exhaust (GS R21PBX and GS ProX Tuned Pipe recommended)

## Before You Start

1. If you find any problems regarding parts or packaging, please contact your local dealer or your GS Racing Distributor. If you ever have any questions, please feel free to contact your GS Racing distributor.

2. The following are symbols used throughout this instruction manual:



Apply CA glue



Attention



Soak air filter oil



Assemble front and rear



Assemble both left and right sides



Grease



Bag number



Pure Silicone Oil



Thread Locking Compound



Assemble in the specified order

3. The assembly is arranged so that you will finish each bag before you go to the next one. Sometimes you will have parts remaining at the end of a bag. These will become part of the next bag.

4. We are constantly updating parts to improve our products. These changes, if any, will be noted in supplementary sheets located in a parts bag or inside the box. Check the box before you start and each bag as it is opened. When a supplement is found, attach it to the appropriate section of the manual.

5. The circled numbers in the drawings are key numbers. These numbers are to be used to quickly find the part name and item (part) number in the back of the manual.

6. When we refer to left and right sides, we are referring to the driver's point of view from inside the buggy.

7. Experienced racers pay special attention to small details. Two such details are making sure all parts are bind-free and making sure all screws are clean of manufacturing oil. As you build the car you will be asked to make sure parts "rotate freely" or "move freely". This is very important and should not be overlooked. Nearly all the screws supplied with this and most other r/c cars have a very thin coat of oil on them. Often, this oil can cause a screw to come loose prematurely. Take time to wipe clean all screws. You may also use a lighter or other flame (use caution, minors use adult supervision) to burn off this oil.

## Introduction

Congratulations and thank you for choosing the GS Racing Storm CL-1 gas power off-road buggy. This manual contains all the basic instructions to finish assembly of, and break in, operation, and maintenance of your STORM CL-1. It is critical that you read all the instructions in this, and any/all accompanying guides, in order to operate your model correctly and avoid serious damage. Your hobby dealer cannot, under any circumstances, accept a model for return or exchange that has been run. We have taken the time to build your truck with our best setup, take the time to follow our instructions to ensure winning results with your STORM CL-1. If you should ever have any questions or need help with this or any GS product, please feel free to contact our official GS Racing dealers and distributors, as they will be happy to help you. Good luck and good racing!

## Safety Precautions

This is a high performance radio controlled model which needs to be operated with caution and common sense. Failure to operate your model in a safe and responsible manner could result in personal injury and/or property damage. It is your responsibility to read and follow all safety precautions. The STORM CL-1 is not intended for children under the age of 14 without adult supervision. GS Racing shall not be held liable for any loss or damages, whether direct, indirect, act of nature, arising from the abuse or misuse of this product or any other product required while operating this model.

- Fuel can be dangerous if improperly handled. Follow all of the manufacturer's suggestions.
- Always keep fuel in a cool area and never use near flame, sparks, or while smoking.
- Keep fuel and other flammables out of the reach of children.
- Always run your model in a well ventilated area outdoors. Never run your model indoors.
- All parts of the engine and exhaust can become extremely hot during, and after use. Be careful not to touch these parts especially when refueling, or making repairs.
- This model creates high levels of noise. Use ear protection if you find noise objectionable.
- This model is controlled by a radio frequency that is vulnerable to interference from many outside sources.

This interference can cause a loss of control so it is necessary to operate this model in an open area to avoid personal, or property damage. Always ensure no one is using your frequency before turning on your radio or model.

- Read, understand, and follow the instruction included with your radio gear.
- Never operate your model near people or property. The speed of this model has the potential for injury and or damage to people and or property.

Never use anything other than model car fuel.

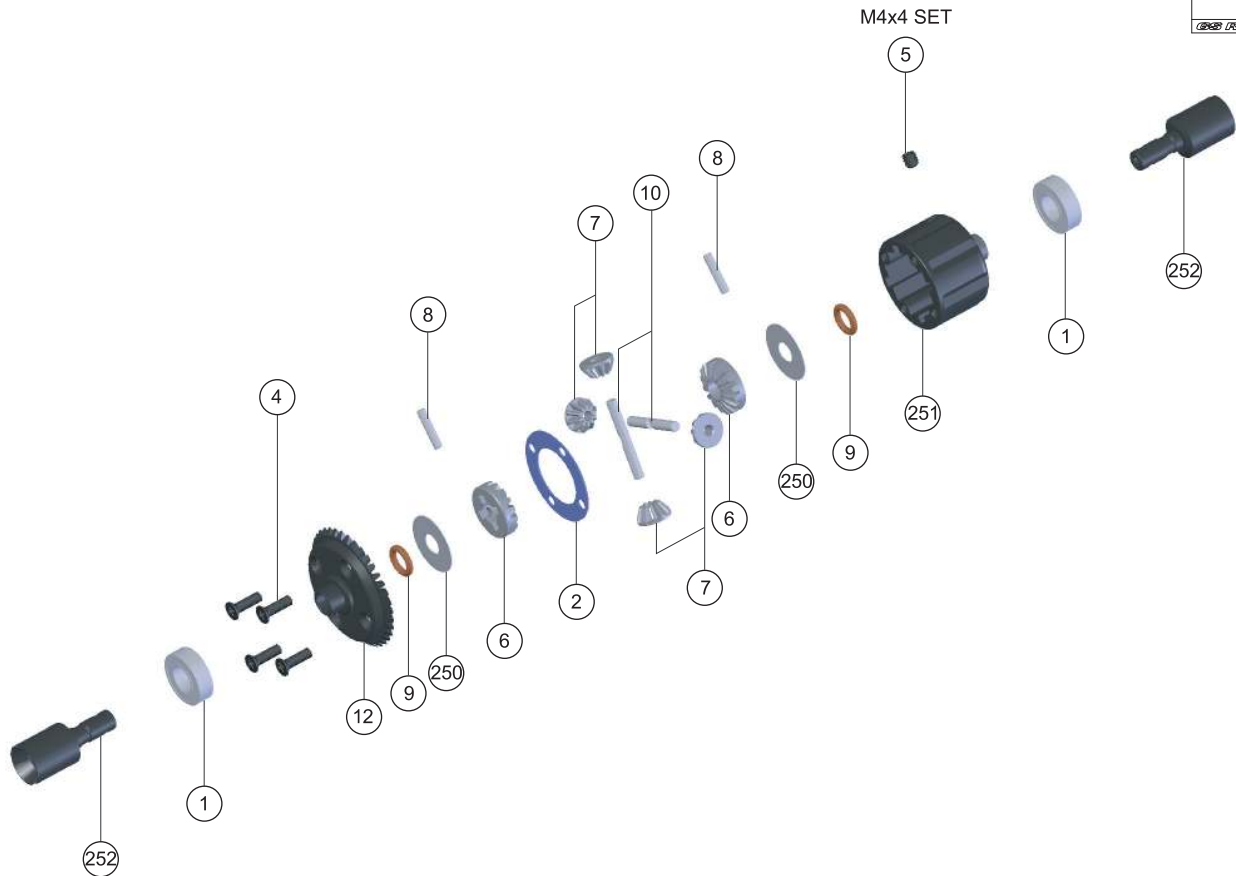
Never operate the model with a low battery. If the response becomes slow, stop immediately and replace batteries.

Never run the model without a clean and properly installed air cleaner.

Never run the model lean or allow the engine to overheat.

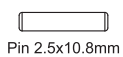
# 1. FRONT & REAR DIFFERENTIALS

## Exploded View with Key Numbers



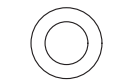
BB 8X16X5

1



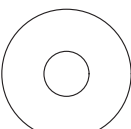
Pin 2.5x10.8mm

8



O-ring (1.75x9mm)

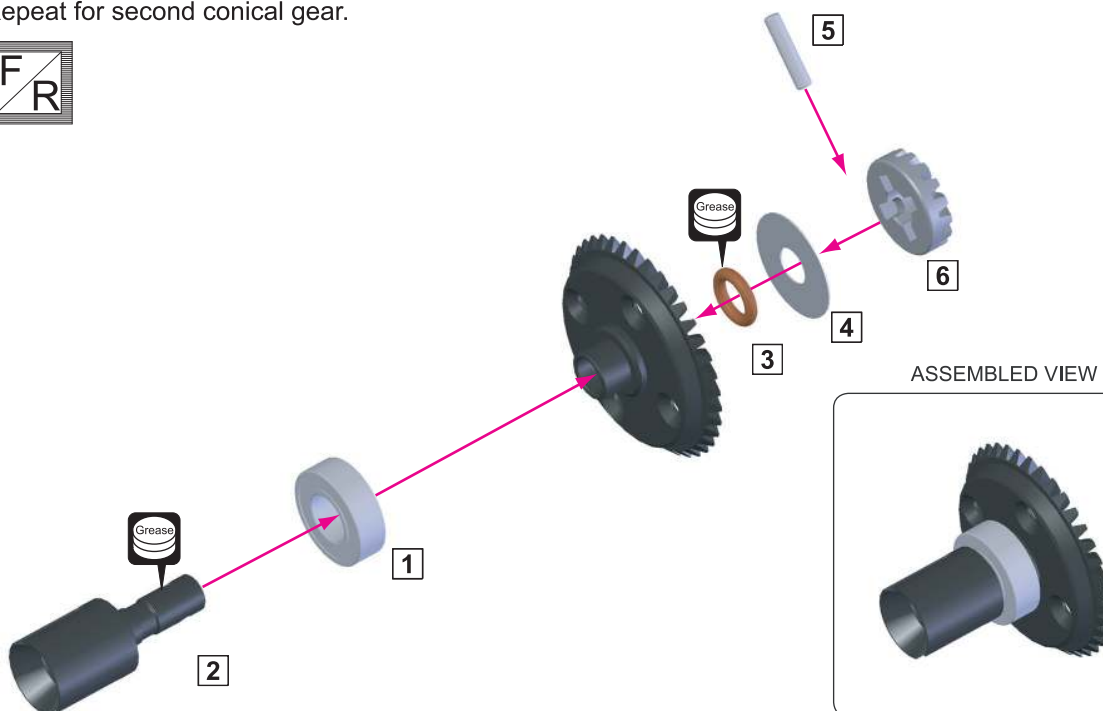
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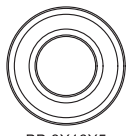
6.2x17.5xT0.2mm  
Washer

11

**Front/Rear Conical Gear:** Slide the bearing over the output shaft of the front/rear conical gear. Apply a light coat of grease to the male portion of the front/rear diff out drive and insert it through the spur gear. Apply a very light coat of grease to the o-ring, then slide it over the shaft of the out drive and seat it in the spur gear. Slide the shim on the shaft and over the o-ring. Insert the pin through the hole in the shaft of the out drive. Check to make sure the out drive rotates freely. If it does not, make sure the o-ring is properly seated and/or apply a bit more grease to the o-ring. Slide the large bevel gear over the pin. Repeat for second conical gear.



# FRONT & REAR DIFFERENTIALS



BB 8x16x5

1



4x4mm SET Screw

5



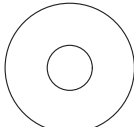
Pin 2.5x10.8mm

8



O-ring (1.75x9mm)

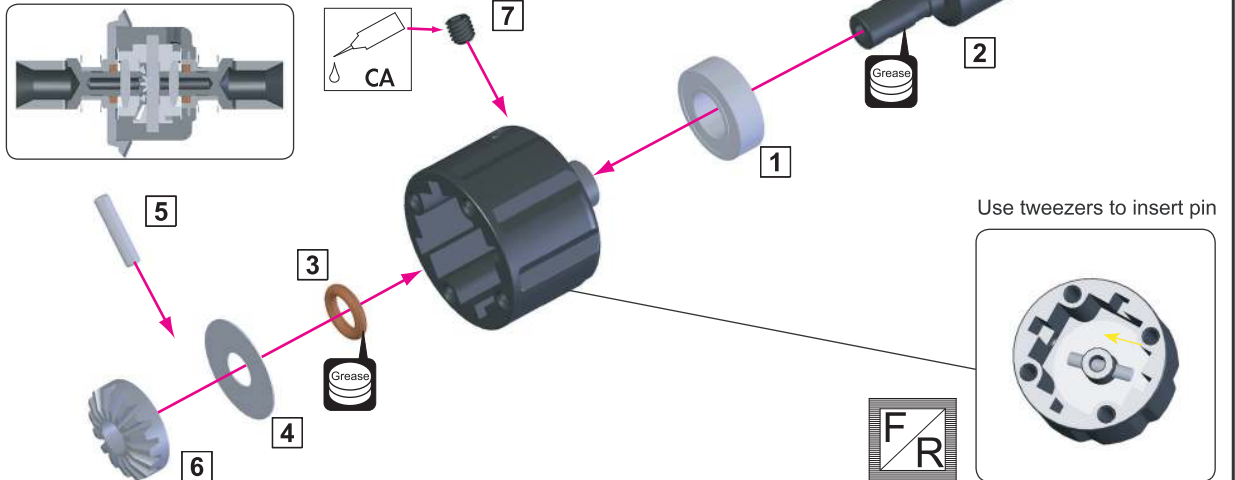
9



6.2x17.5xT0.2mm Washer

11

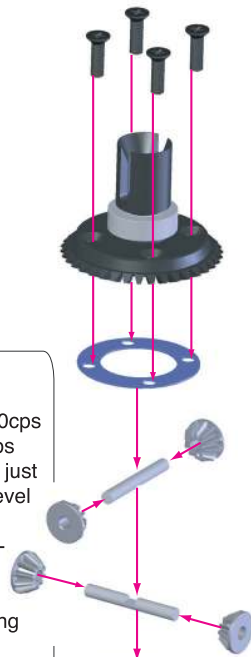
**Front/Rear Diff Assembly:** In this step you will assemble the diff cases for both the front and rear differentials. Slide the bearing onto the output shaft of the diff case. Apply a light coat of grease to the male portion of the front/rear diff out drive and insert it through the diff case. Apply a very light coat of grease to the o-ring, then slide it over the shaft of the out drive and seat it in the diff case. Slide the shim on the shaft and over the o-ring. Insert the pin through the hole in the diff case and through the hole in the shaft of the out drive. Check to make sure the out drive rotates freely. Install the set screw in the hole in the diff case and tighten until just under flush with the outside of the diff case. Slide the large bevel gear over the pin. Slide one of the small bevel gear assemblies into the grooves of the diff case and over the large bevel gear. You may need to rotate the out drive to allow the small bevel gear assembly to seat properly. Check to make sure all parts rotate smooth and are properly seated. Repeat for second diff case.



3x12mm FH HEX Screw

9

## FRONT DIFFERENTIAL



Front Diff: Use GS Pure Silicone Oil.  
Euro Setup: 10,000cps  
US Setup: 7,000cps  
Fill diff 80% full, or just above the small bevel gears. Allow oil to settle before installing conical gear. Ensure smooth operation by rotating both outdrives in opposite directions. Replace oil after heavy use. Replace gasket and o-ring regularly.



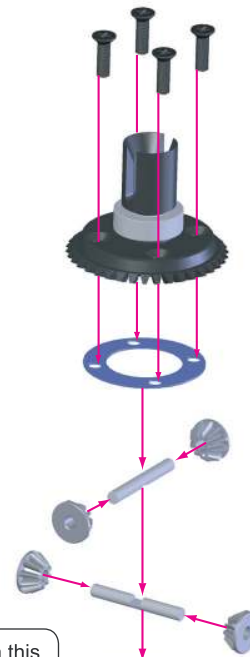
Tight the screws equally



Finish tightening in this order



## REAR DIFFERENTIAL

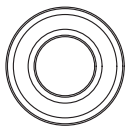
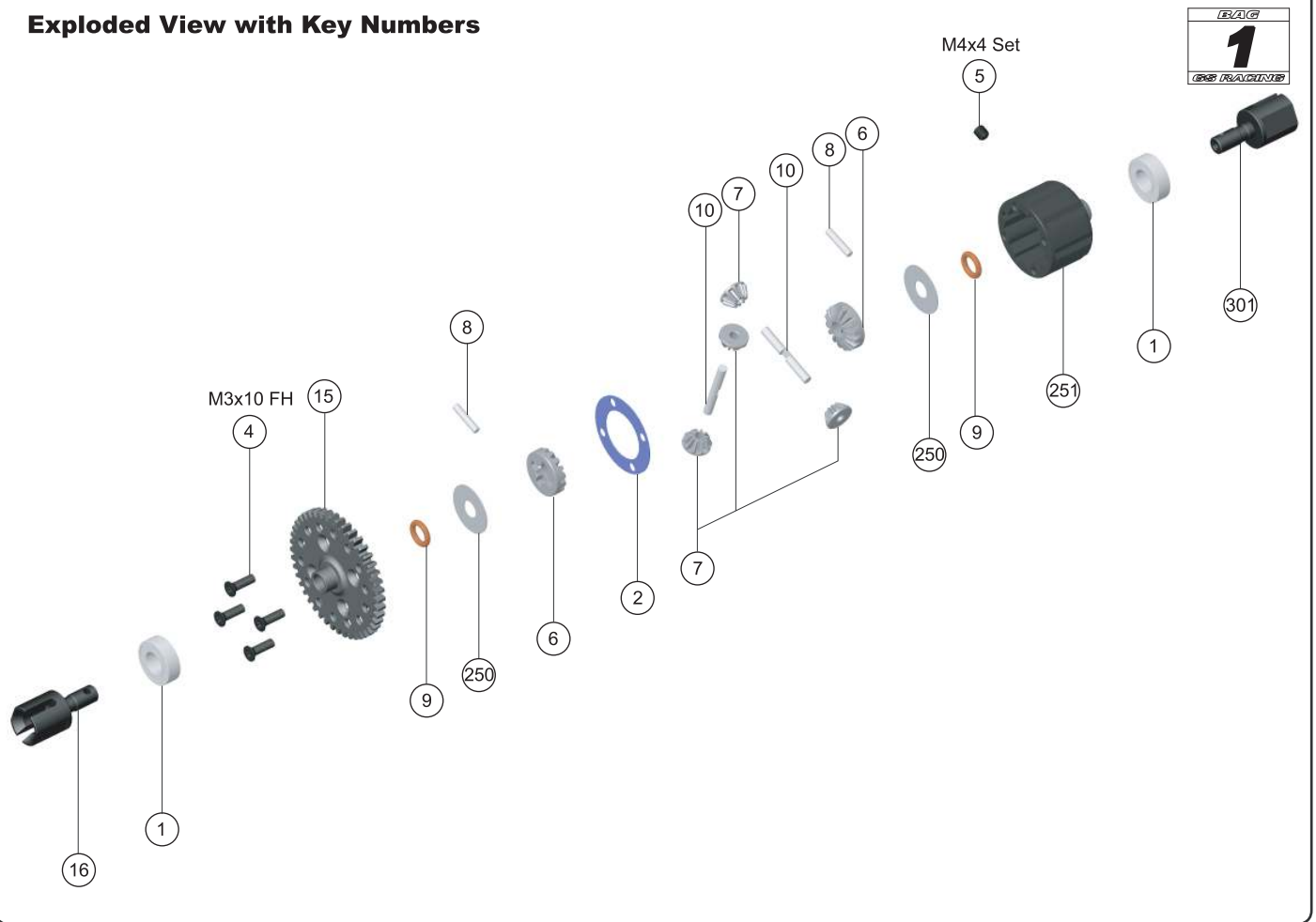


Rear Diff: Use GS Pure Silicone Oil.  
Euro Setup: 1,000cps  
US Setup: 500cps  
For loose track conditions, replace the oil with a heavy coat of the grease provided in your kit. Fill diff 80% full, or just above the small bevel gears.



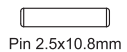
# CENTER DIFFERENTIAL

## Exploded View with Key Numbers



BB 8X16X5

(1)



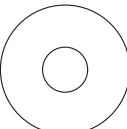
Pin 2.5x10.8mm

(8)



O-ring(1.75x9mm)

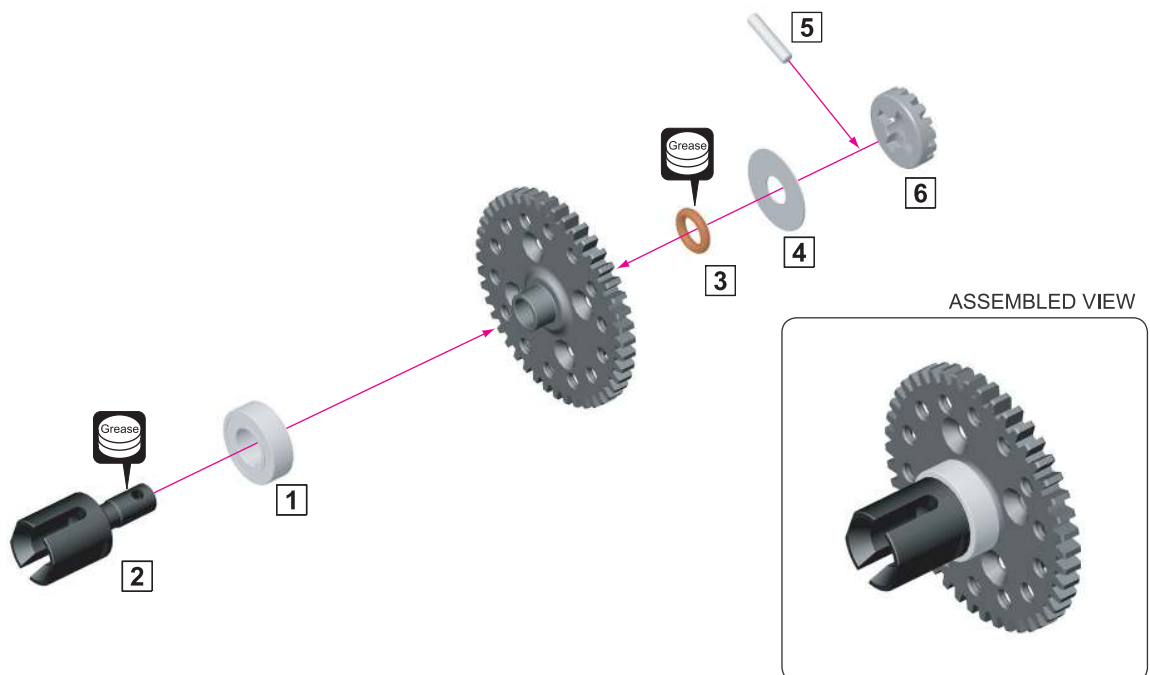
(9)



6.2x17.5xT0.2mm  
Washer

(11)

**Center Spur Gear:** Slide the bearing over the output shaft of the center spur gear. Apply a light coat of grease to the male portion of the long center diff out drive and insert it through the spur gear. Apply a very light coat of grease to the o-ring, then slide it over the shaft of the out drive and seat it in the spur gear. Slide the shim on the shaft and over the o-ring. Insert the pin through the hole in the shaft of the out drive. Check to make sure the out drive rotates freely. If it does not, make sure the o-ring is properly seated and/or apply more grease to the o-ring. Slide the large bevel gear over the pin.





# CENTER DIFFERENTIAL



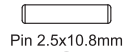
BB 8X16X5

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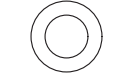
4x4mm SET Screw

5



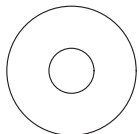
Pin 2.5x10.8mm

8



O-ring (1.75x9mm)

9



6.2x17.5xT0.2mm Washer

11

Center Diff Assembly: Slide the bearing onto the output shaft of the diff case. Apply a light coat of out drive and insert it through the diff case. Apply a light coat of grease to the o-ring, then slide it over the shaft and over the o-ring. Insert pin through the hole in the case and through the hole in the shaft of the out drive. Check to make sure the out drive rotates freely. Install the set screw in the hole on the diff case and tighten until just under flush with the outside of the diff case. Slide the large bevel gear over the pin. Slide one of the small bevel gear assemblies into the diff case and over the large bevel gear. You may need to rotate the out drive to allow the small bevel gear assembly to seat properly. Check to make sure all parts rotate smooth and are properly seated.

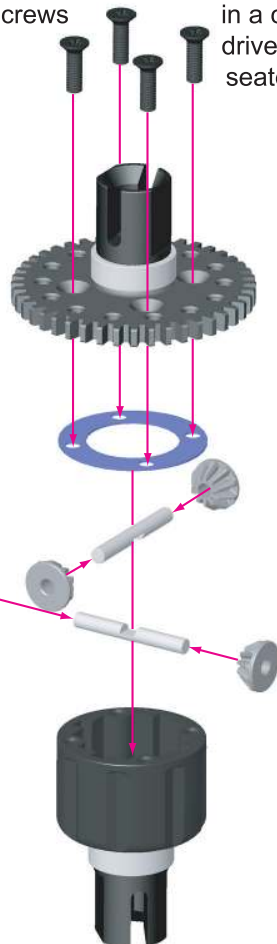
Use tweezers to insert pin



3x10mm FH HEX Screw

4

**Center Differential:** Fill the center diff to just above the small bevel gears with GS Racing Pure Silicone Diff Oil. Rotate the out drive to allow the oil to settle, then if needed, add more oil to bring oil level just above the small bevel gears. Place the gasket over the diff case, lining up the holes. Place the center spur gear assembly over the gasket, again lining up the holes. Attach the spur gear assembly using 3x10mm FH screws. Tighten the screws over tighten! Check to make sure the out drives rotate smoothly. If there is any binding, disassemble and check for improperly seated parts.



At the end of this step you may have extra screws, shims, and parts left over. Save these for later use or for spares. You may also have 2 pinion gears left over. These will be used in the next step.

Center Diff:  
Euro Setup: 10,000cps  
U.S. Setup: 10,000cps

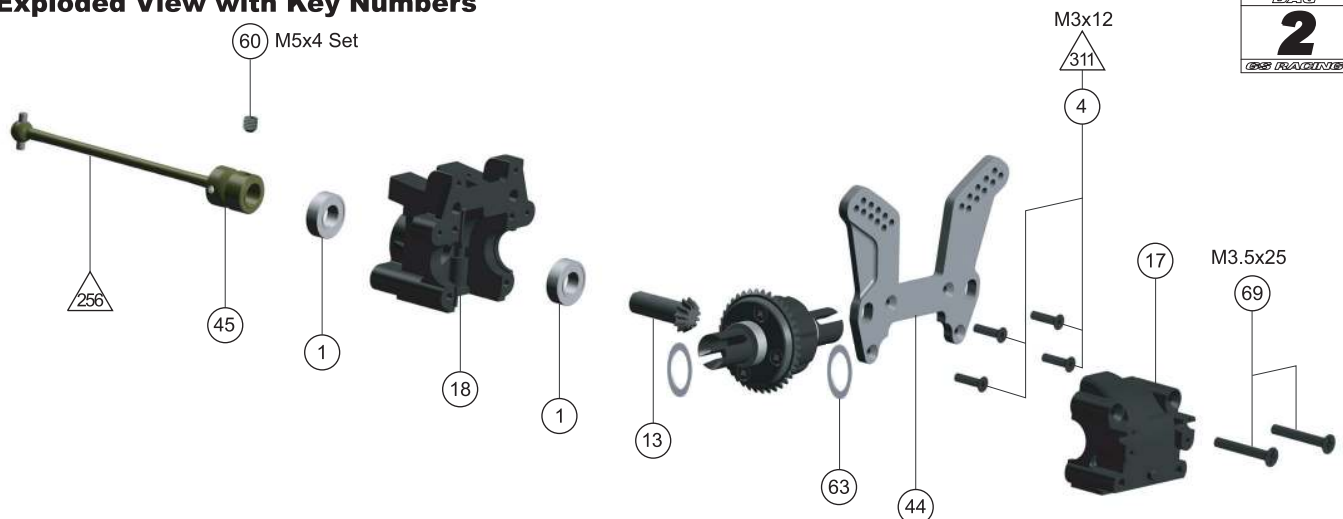


Finish tightening in this order



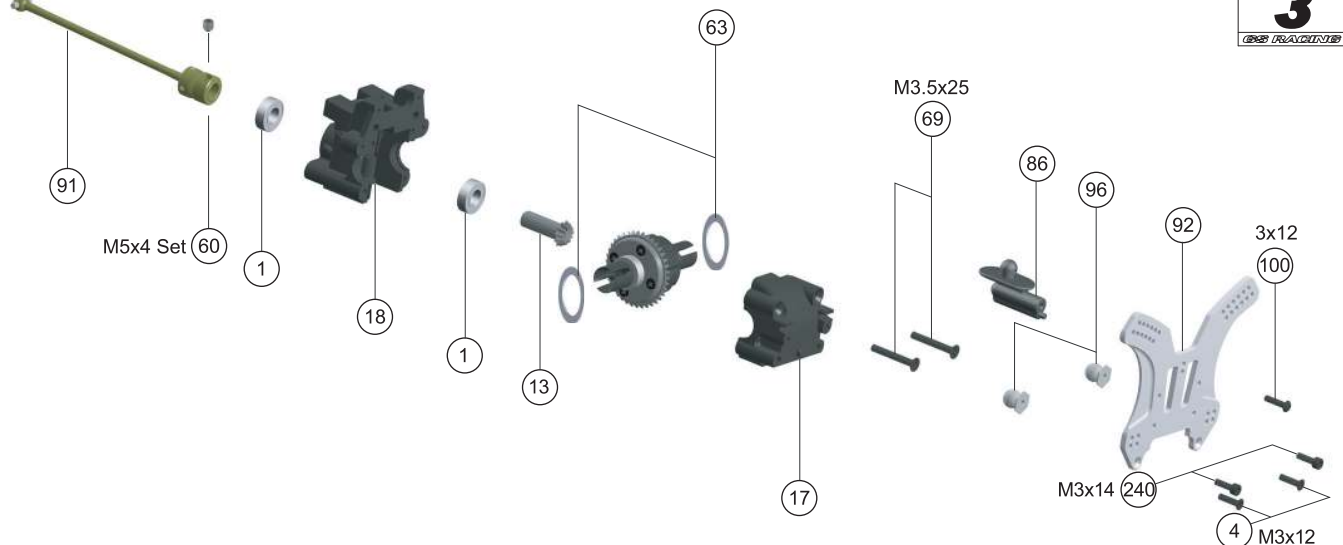
# FRONT/REAR TRANSMISSION

## Exploded View with Key Numbers



Slide 2 Shims (63) onto each diff out drive next to the bearing. Install 2 bearings (1) into Bulkhead-R (18), 1 inside and 1 outside. Slide the small pinion gear (13) into Bulkhead-R. Apply pressure to the pinion gear and fix the front center universal (45) using the 5x4mm Set Screw (60). Apply thread locking compound to the set screw. Apply a light coat of grease to the large Crown Gear on the diff, and install the diff into Bulkhead-R. Fit Bulkhead-F using 2pcs 3.5x2.5mm RH/ST. Make sure the thin shims seat properly and do not bend. Mark this gearbox as front. Attach the front shock tower using four 3x12mm screws. Shims: Due to tolerances, you may not need 4 shims. The gear mesh should be tight without binding. Test fitness of the diff with both shims on the gear-side of the diff and if the diff turns freely without binding continue to next step. If the diff binds and does not turn freely (it will make a grinding or crunching sound when spun), remove a shim from the gear side of the diff and reassemble. If the crown gear does not make enough contact with the pinion gear (it will make a clicking sound), add a shim to the gear side. Repeat until you are satisfied that you have the best gear mesh possible.

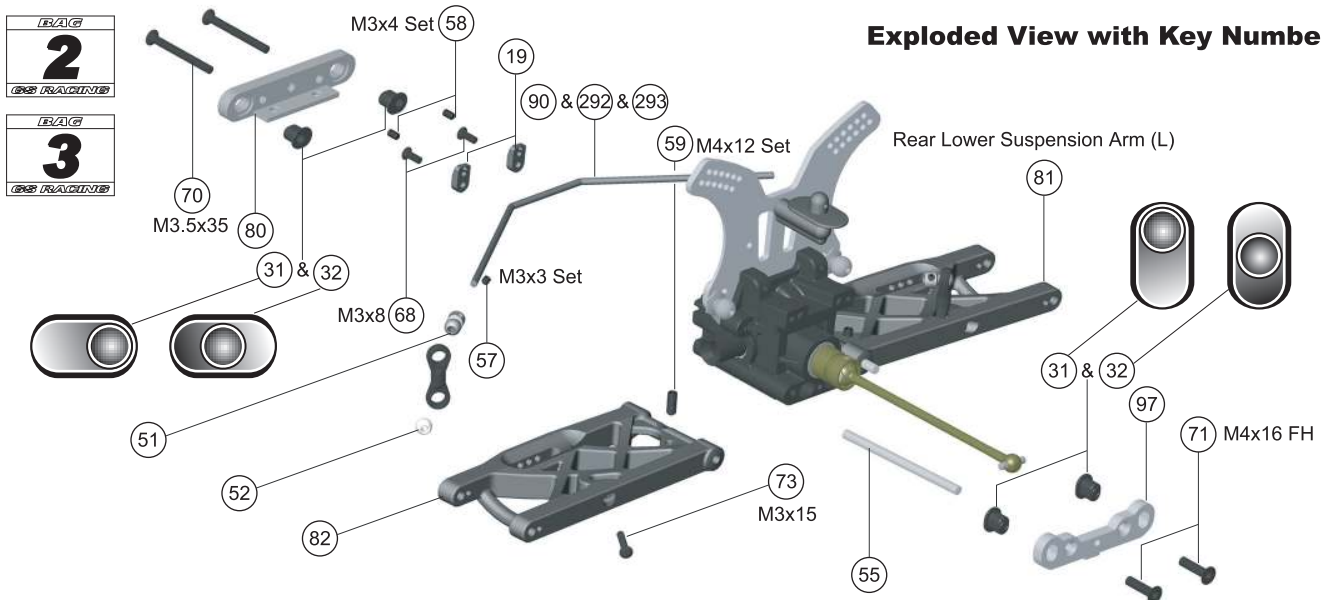
## Exploded View with Key Numbers



Slide 2 Shims (63) onto each diff out drive next to the bearing. Install 2 bearings (1) into Bulkhead-R (18), 1 inside and 1 outside. Slide the small pinion gear (13) into Bulkhead-R. Apply pressure to the pinion gear and fix the rear center universal (91) using the 5x4mm Set Screw (60). Apply thread locking compound to the set screw. Apply a light coat of grease to the large Crown Gear on the diff, and install the diff into Bulkhead-R. Fit Bulkhead-F using 2pcs 3.5x2.5mm RH/ST. Make sure the thin shims seat properly and do not bend. Mark this gearbox as rear. Attach the rear shock tower using two 3x12mm screws. Shims: Due to tolerances, you may not need 4 shims. The gear mesh should be tight without binding. Test fitness of the diff with both shims on the gear-side of the diff and if the diff turns freely without binding continue to next step. If the diff binds and does not turn freely (it will make a grinding or crunching sound when spun), remove a shim from the gear side of the diff and reassemble. If the crown gear does not make enough contact with the pinion gear (it will make a clicking sound), add a shim to the gear side. Repeat until you are satisfied that you have the best gear mesh possible. Attach body mount to tower using a 3x12 OH/ST screw. Attach ball studs to inside upper holes on tower using two 3x14 cap screws.

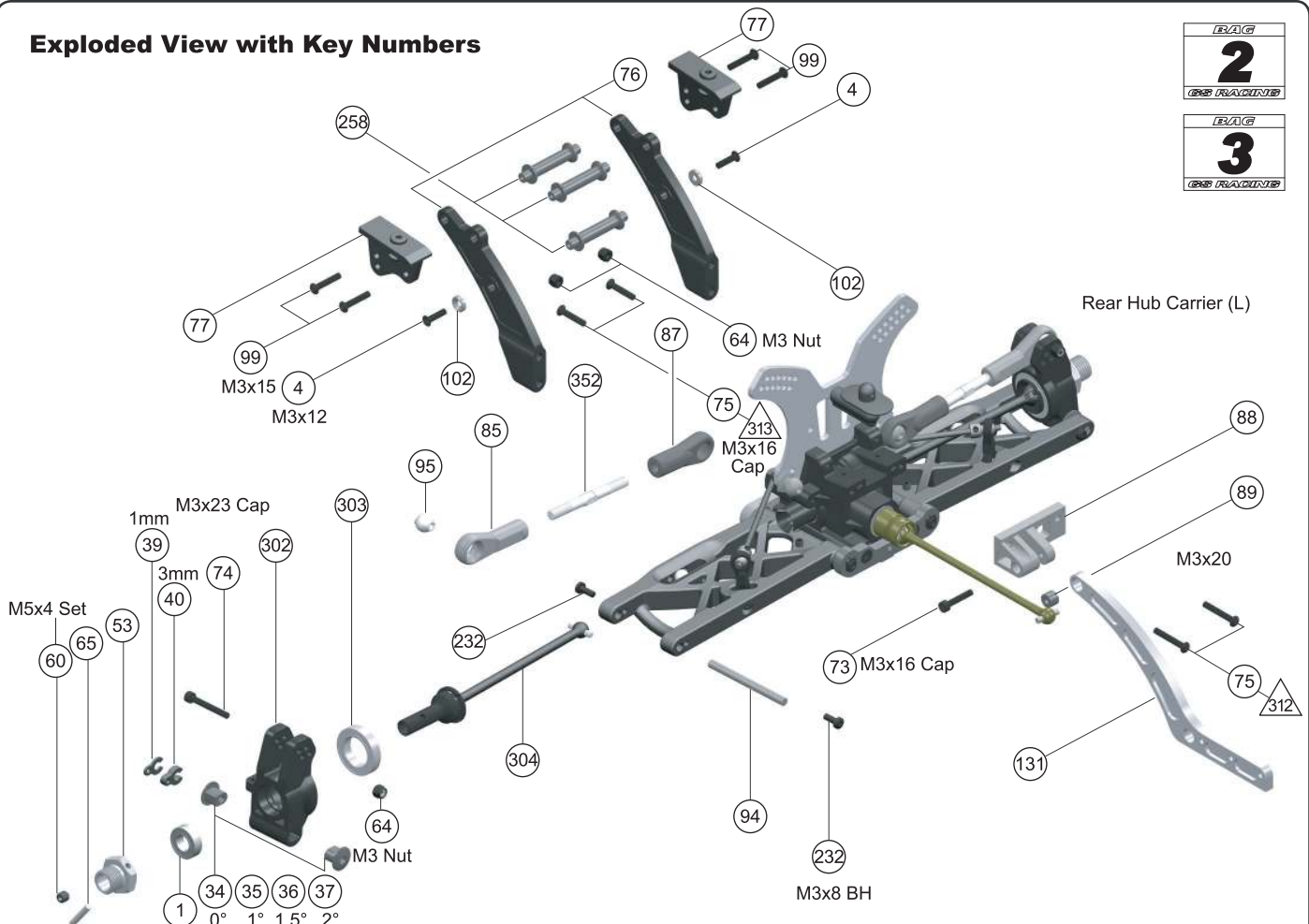
# REAR SUSPENSION

## Exploded View with Key Numbers



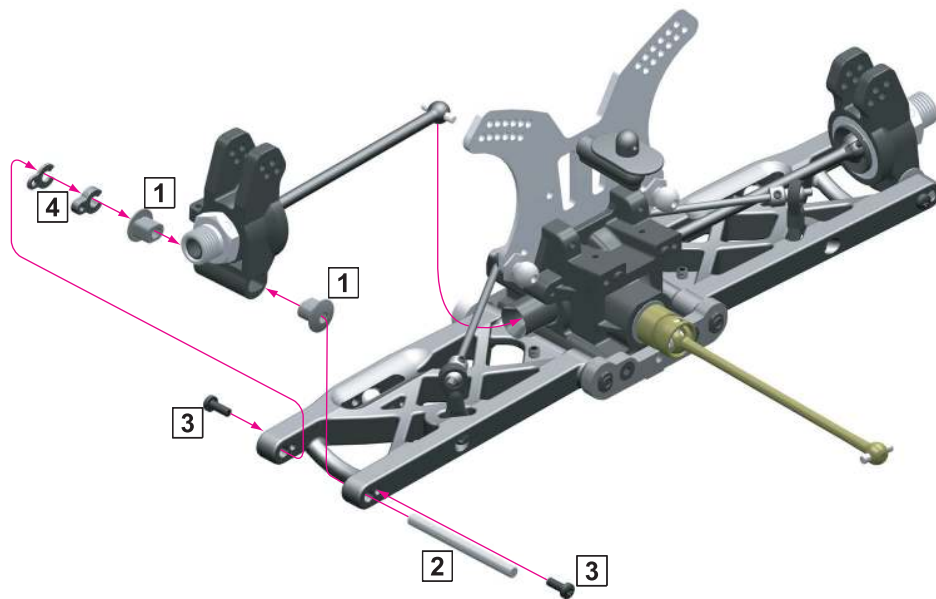
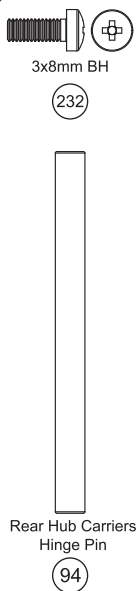
**Rear Suspension:** Install a #31 insert circle side up, into the anti squat mount. Attach the mount to the bulkhead. Slide pins into mount followed by arms. Install a #31 insert circle side out (US Setup) or a #32 insert (Euro Setup) into suspension mount. Slide mount over pins and attach to bulkhead. Make sure inserts are fully seated. Check fit and rotation of arms. Should there be binding in the movement of the arms, disassemble and remove a small amount of material from either side of the pin hole area of arm.

## Exploded View with Key Numbers

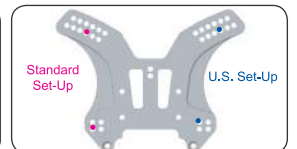
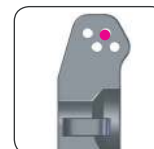
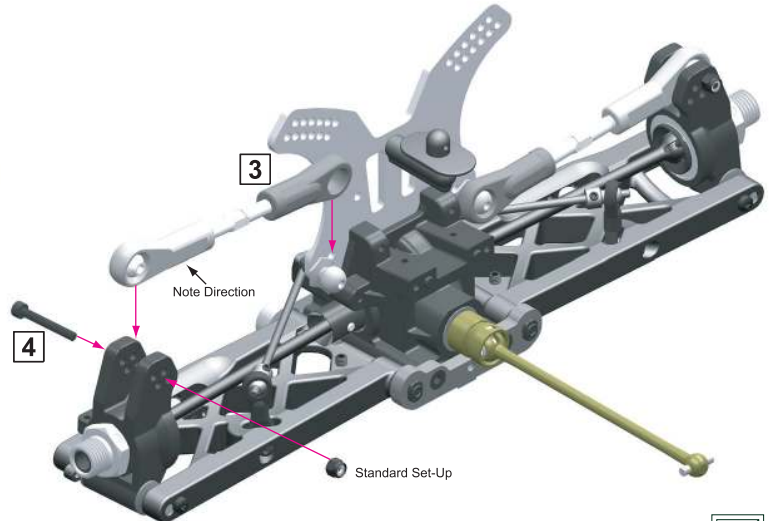
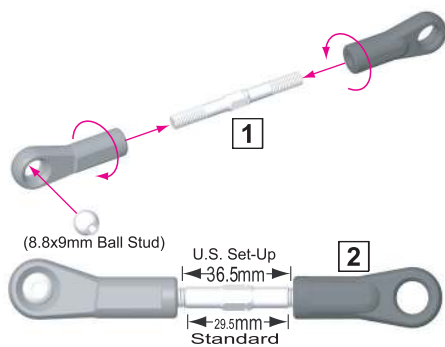


**Rear Hub Carrier Assembly:** The rear hubs on the CL-1 are not the same left and right. Push a 24x15x5 bearing into the inside of the hub and an 8x16x5 bearing into the outside of the hub. Slide a CVD through the bearings. Slide a wheel hub over the axle, lining up the holes in the axle and wheel hub. Push the 3mm pin through the hub and axle. Fasten the pin in place with a 5x5mm set screw. Repeat for other hub. Check to ensure wheel axle spins free. If the axle has an excessive amount of slop, disassemble and install an 8x16x0.5mm washer between the bearing and the wheel hub.

# REAR SUSPENSION

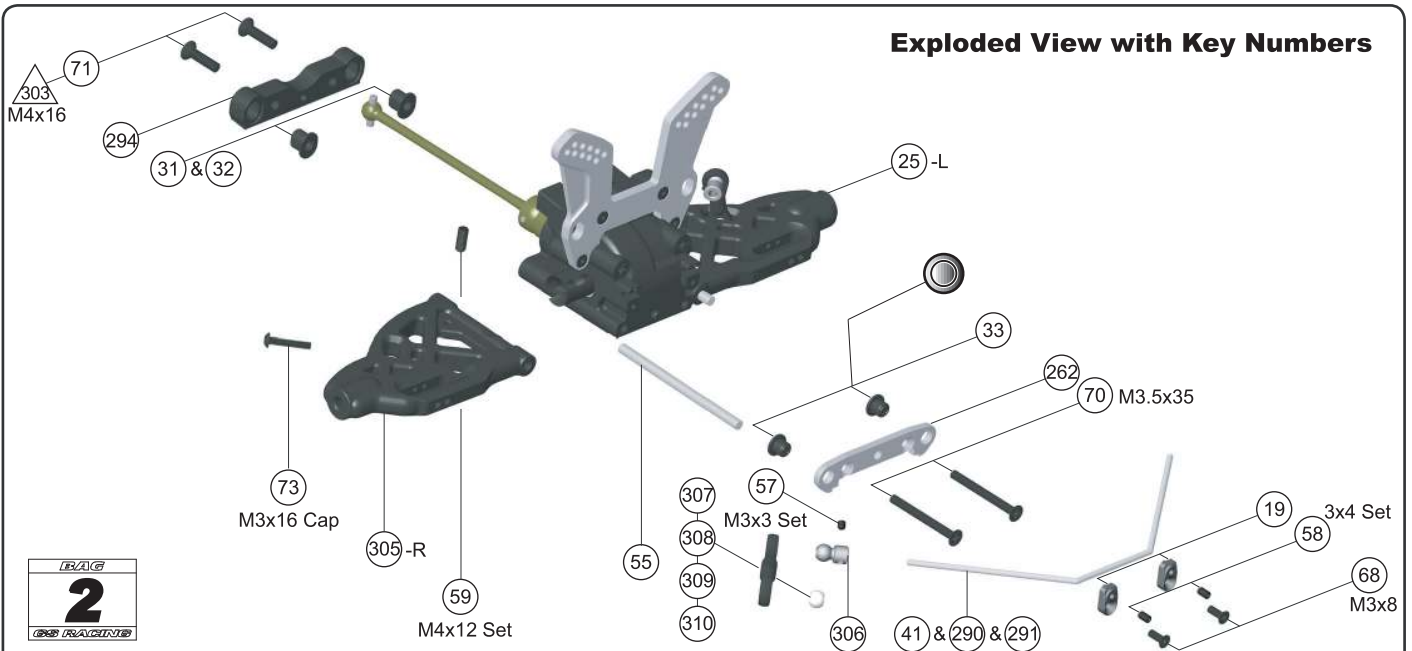


Insert #1 hub inserts into the hubs. This setting is used for both U.S. and Euro setups. Line up the hub assembly with the lower arm and slide the rear lower pin through, securing it with the 3x8mmBH screws on both sides. Install a 3mm clip in front of the hub and a 1mm clip behind the hub (U.S. Setup) or install both clips behind the hub (Euro Setup). Check for binding or slop. If there is any binding, disassemble and work out the bind. If there is any slop, insert thin shims to remove the slop, GS-VS1419 is an excellent bag of shims for this type of application. Repeat for other side. Your kit also includes 0, 1.5, and 2 degree toe inserts for the hubs. You can use these to increase or decrease rear toe/grip (more toe = more grip). Toe is also adjustable inboard on the rear suspension mount.



**Rear Upper Arm:** Thread two 8.8mm ball ends onto the 50mm turnbuckle. Note that the thread direction on the side of the turnbuckle with the groove is an opposite (left hand) tightening thread. All turnbuckles used in the Storm CL-1 are like this. Repeat for second upper arm. Note the outer turnbuckle is angled (see below). Snap the 8.8x9mm ball studs into the angled ball end. Attach the upper arms to the shock tower. Check to make sure the arms rotate freely. Slide the other end of the arms into the hub carriers and fasten them through the outside upper holes using 3x23mm Cap screws and 3mm locknuts.

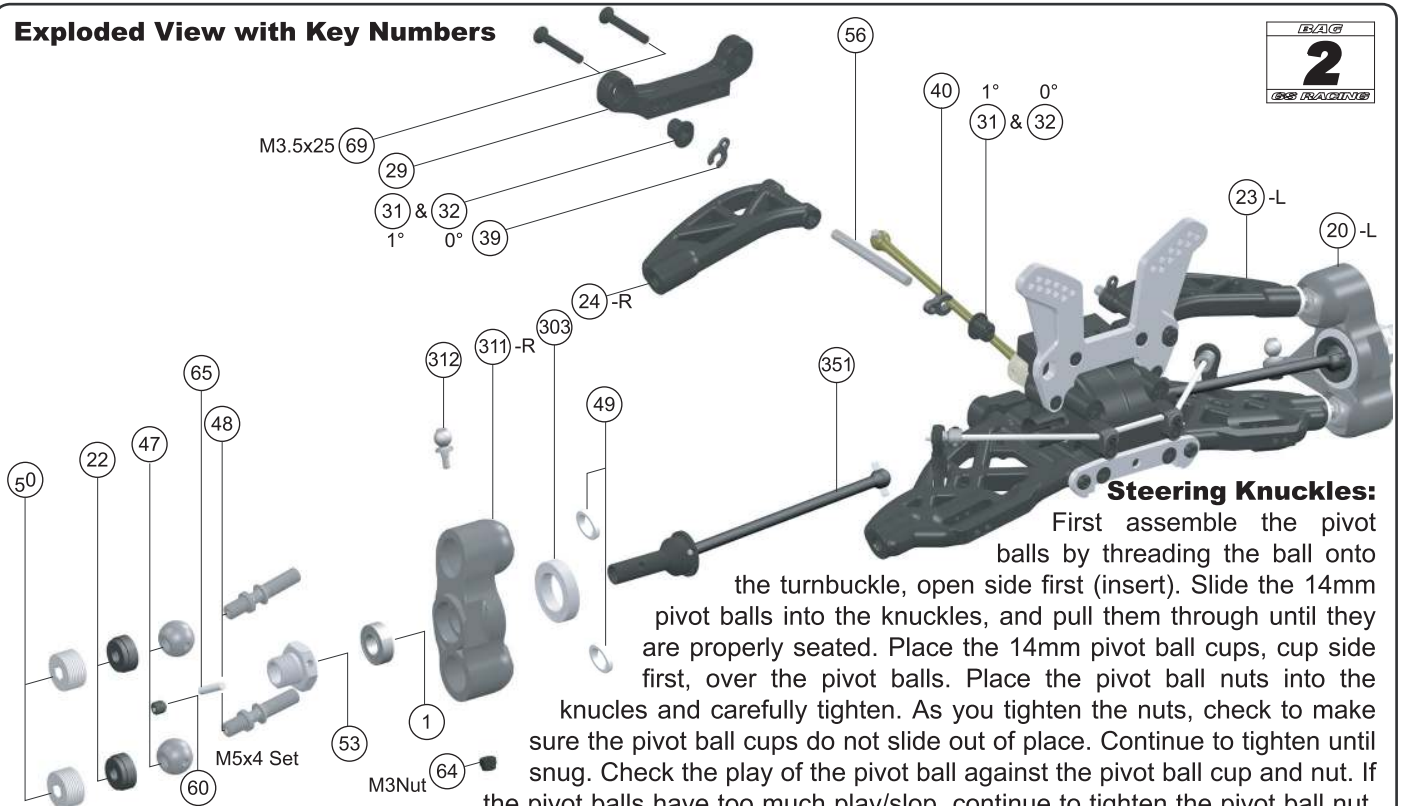
# FRONT SUSPENSION



**Exploded View with Key Numbers**

**Front Lower Arms:** The front lower arms are not identical left and right. If you kit contains an extra pair of arms, use them and either discard or keep as spares the arms in Bag 2. Thread a 4x12mm set screw (some kits may contain 4x6) through the hole on the tab of the inside of the arm until it sticks out 2.5mm below the arm. You will recheck this down-stop setting on page 29. Install a #31 insert circle side down (U.S. Setup) or #32 insert (Euro Setup) into the front suspension mount. Attach the mount to the bulkhead using 4x16 FH screws. Slide the pins, followed by the arms (note direction of left and right arms), round insert and front suspension plate into the mount. Make sure inserts are fully seated. Check fit and rotation of arms. Should there be binding in the movement of the arms, disassemble and remove a small amount of material from either side of the pin hole area of the arm.

**Exploded View with Key Numbers**



**Steering Knuckles:**

First assemble the pivot balls by threading the ball onto the turnbuckle, open side first (insert). Slide the 14mm pivot balls into the knuckles, and pull them through until they are properly seated. Place the 14mm pivot ball cups, cup side first, over the pivot balls. Place the pivot ball nuts into the knuckles and carefully tighten. As you tighten the nuts, check to make sure the pivot ball cups do not slide out of place. Continue to tighten until snug. Check the play of the pivot ball against the pivot ball cup and nut. If the pivot balls have too much play/slop, continue to tighten the pivot ball nut.

Repeat this until the pivot balls bind slightly then back off the nut about 1/8 turn. Slide the small and large bearings into the knuckles. Slide the front universal drive shafts through the bearings and attach wheel hubs with pin and set screw. If the drive shaft has an excessive amount of slop, disassemble and install an 8x16x0.5mm washer between the bearing and the wheel hub. Install 6.8mm ball studs in hole. Install ball stud into knuckle and fasten in place with 3mm locknut. The ball studs may be located in Bag 4. You can install them later on, after you have opened Bag 4. Slide the knuckle pivot ball washers over the threads of the pivot ball turnbuckles. Repeat for left side.

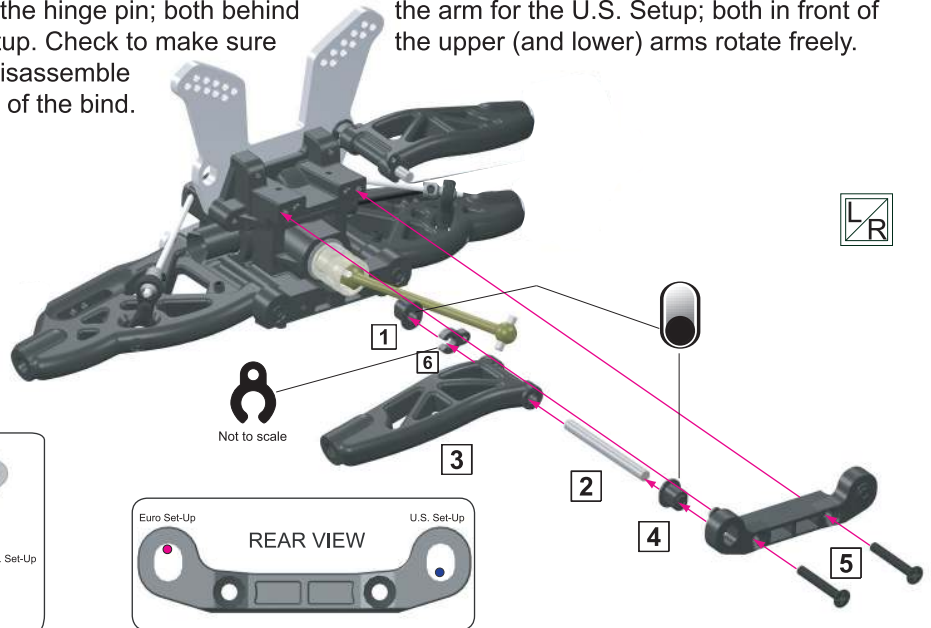
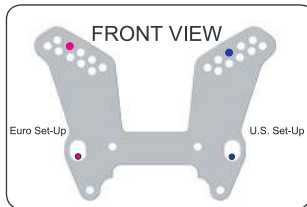
# FRONT SUSPENSION



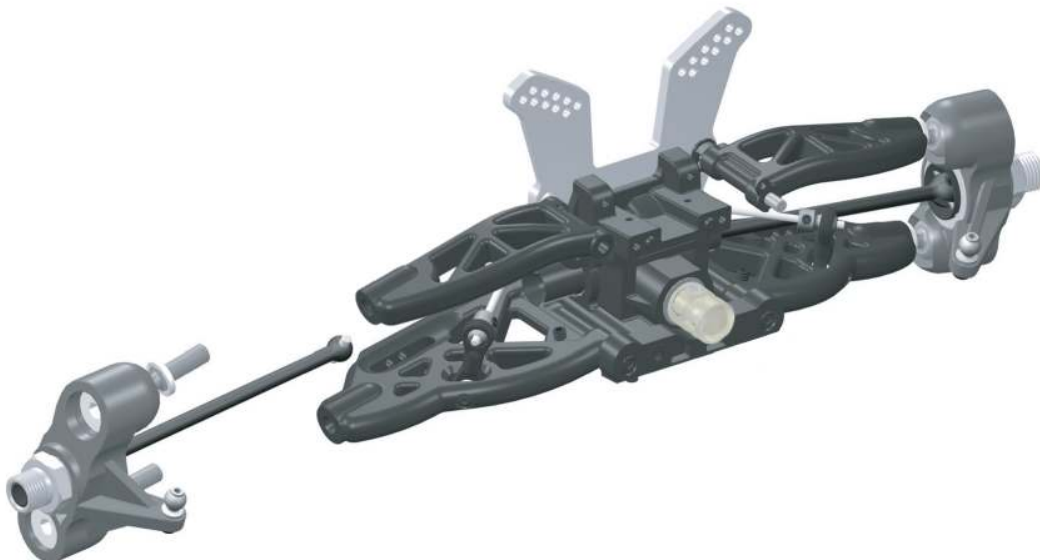
3.5x25mm FH/ST Screw

69

**Front Upper Arms:** Install #31 hinge pin inserts into the front shock tower, circle side down for both U.S. and Euro Setups. Slide the upper hinge pins into the inserts in the front shock tower followed by the upper arms. Note left and right arms. Install #31 inserts into the front upper arm holder, circle side down for U.S. Setup and circle side up for Euro Setups. The Euro setup provides for active caster, which causes caster angle change during suspension compression. Slide the holder with inserts fully seated, over the hinge pin and fasten to bulkhead with 3.5x25 screws. Install a 3mm and 1mm caster clip on the hinge pin; both behind the arm for the U.S. Setup; both in front of the upper (and lower) arms rotate freely. If there is any binding, disassemble and check for the cause of the bind.



Check to make sure the pivot ball washers, cone side first, are placed over the threaded portion of the pivot balls. Using a 2.5mm hex wrench, begin tightening the pivot balls into the upper and lower arms. Rotate between the upper and lower pivot balls about every 3 turns, and make sure the dog bone end of the front drive shafts enter the diff out drives. Tighten until the washers are snug against the arm. This setting will produce -1 degree of camber for the U.S. Setup.

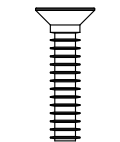
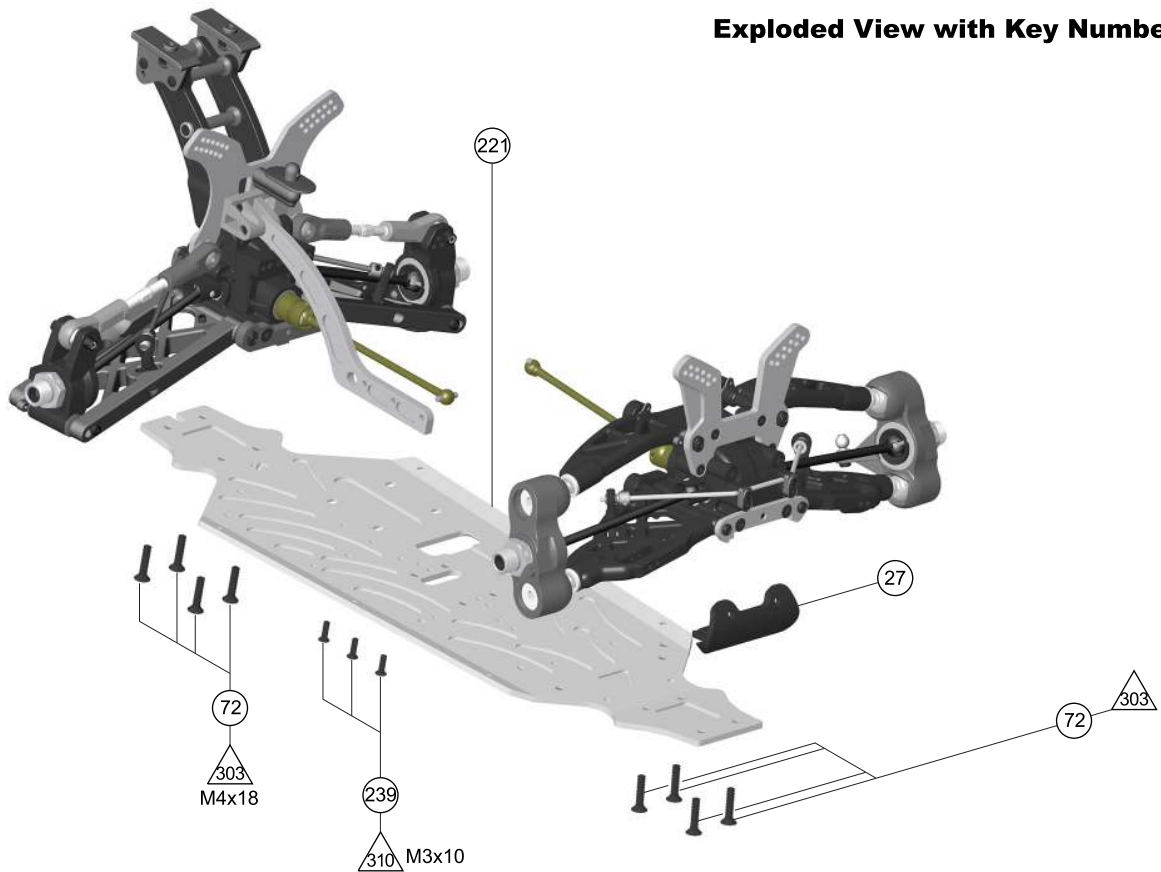


At the end of the next page, you will have several pieces of hardware and plastic inserts left over in Bags 2 and 3. Locate 4 each of the following items: Shock Cap Studs (used on page 29/30); 3x10mm Washers (also used on page 29/30), 3x23mm Cap Screws, 3mm Lock Nuts, 3x20mm Round Head (OH) Screws. These pieces are used to mount the shocks. You can wait for page 29 and 30 to install these pieces, or you can install them now (recommended): Slide the 3x23mm Cap Screws through the holes shown above (front tower) and the holes shown on page 14 (rear tower). Thread the Shock Cap Studs onto the cap screws (apply thread lock) and tighten firmly. Slide the washers on followed by the locknuts. Finger tighten the locknuts, as you will have to remove them along with the washers later on to install the shocks. Finger tighten the four 3x20mm Round Head (OH) Screws into the middle holes on the rear lower arms (Euro and US Setups), and the inside holes (US Setup) or the outside holes (Euro Setup) on the front lower arms. The remainder of the hardware and parts will be used later on or kept as spare/option parts.

# FRONT & REAR ASSEMBLY

BAG  
**2**  
CONTAINS

## Exploded View with Key Numbers



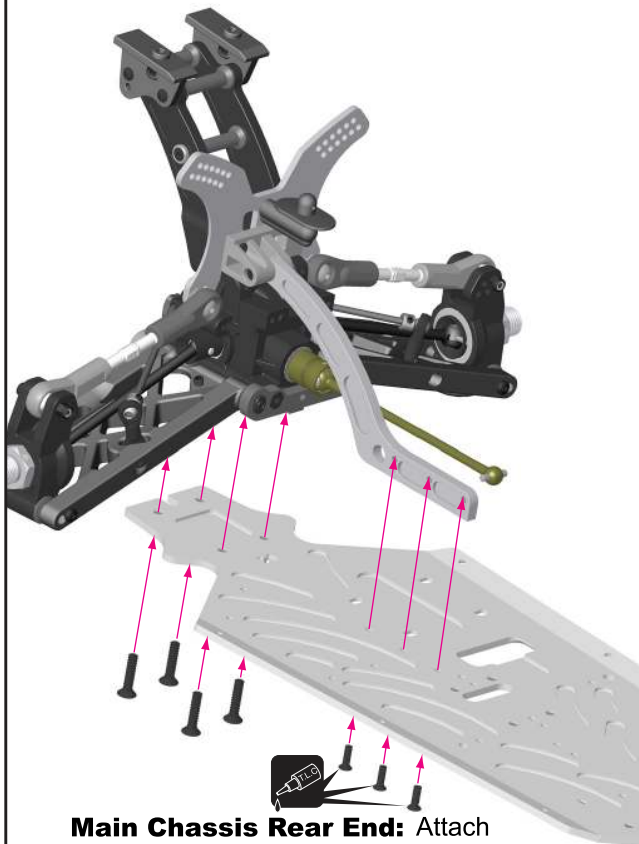
4x18mm FH/ST  
HEX Screw

72



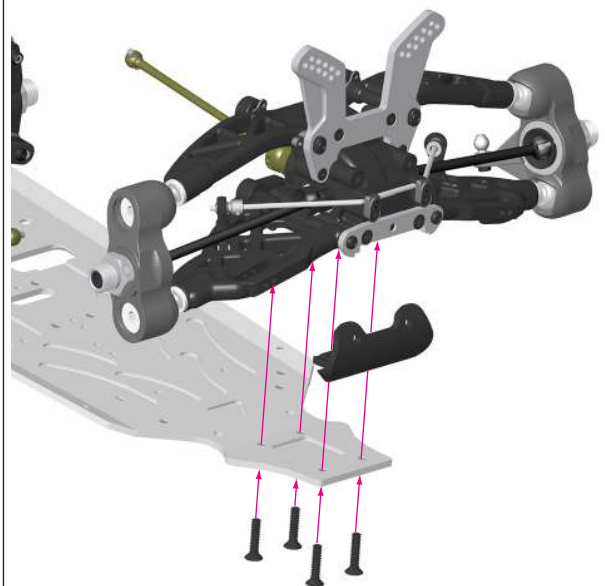
M3x10mm FH  
HEX SCREW

239



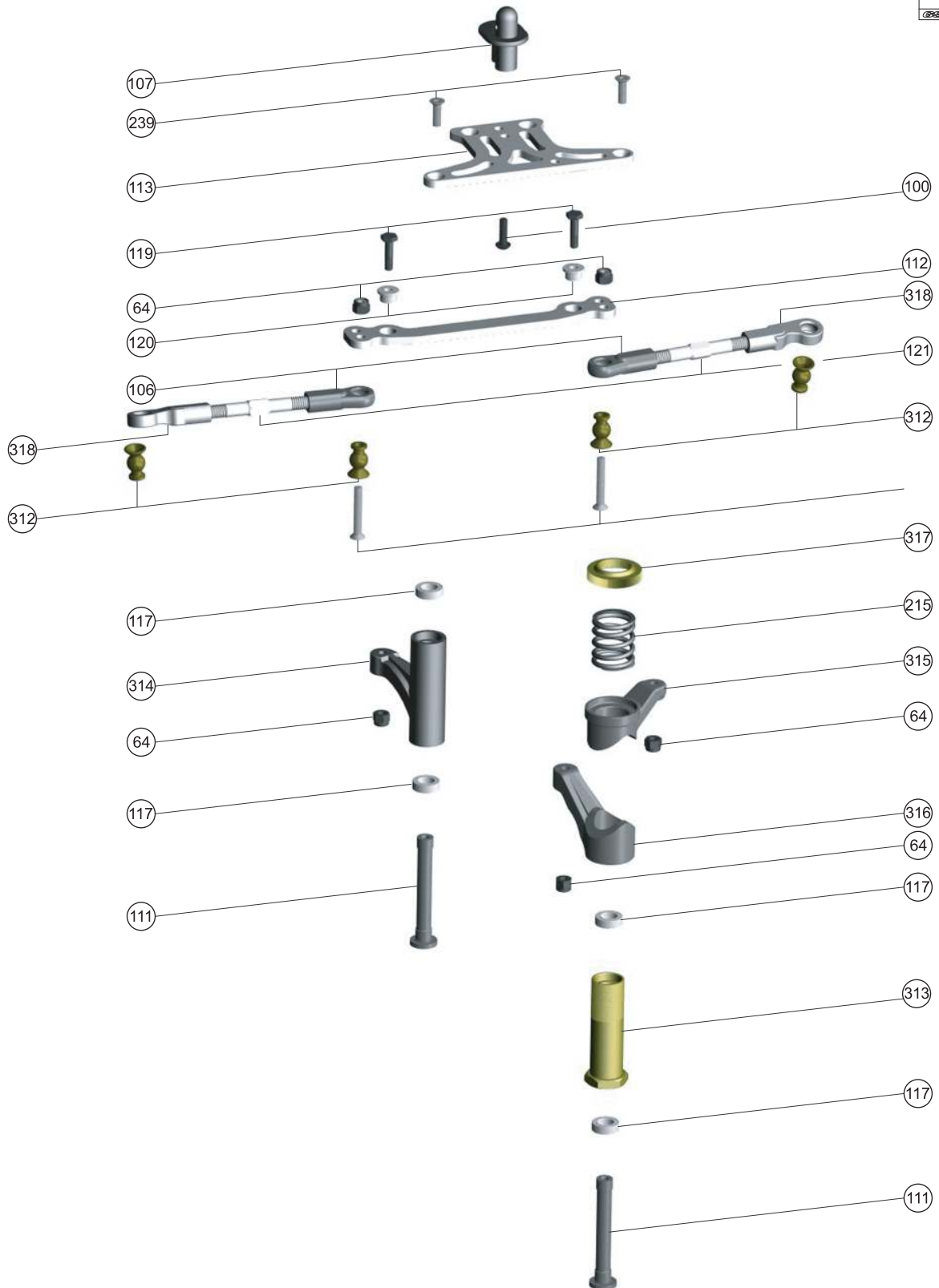
**Main Chassis Rear End:** Attach the rear end assembly using four 4x18 FH/ST screws. Attach chassis brace using three 3x10 FH machine thread screws. The 3x10 screws may be located in Bag 5. You can attach the brace later, after opening Bag 5.

**Main Chassis Front End:** Attach the front assembly using four 4x18mm FH screws.



# 7. STEERING

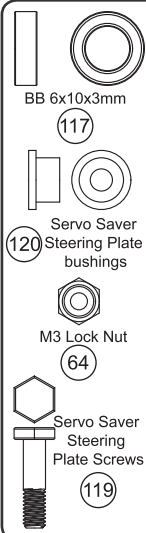
## Exploded View with Key Numbers



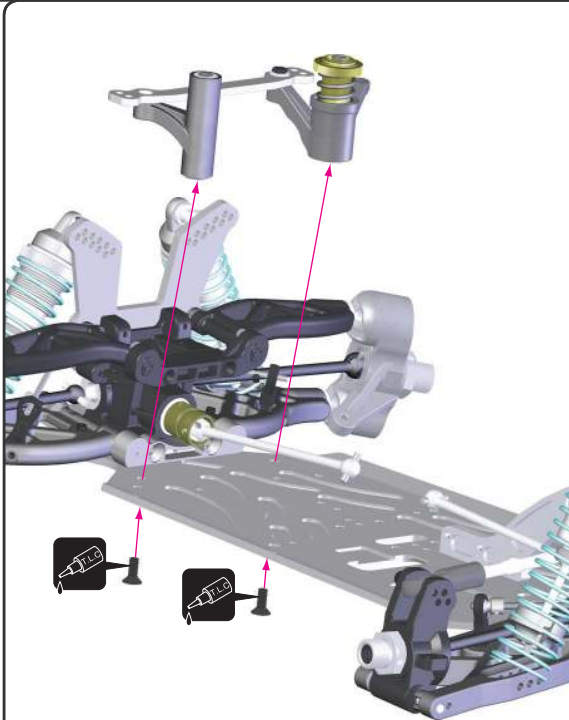
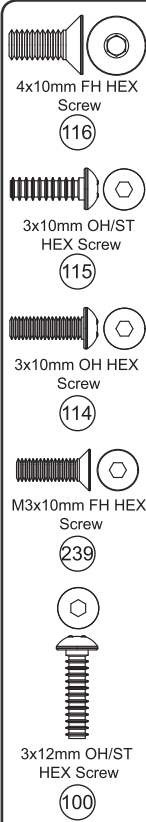
**Servo Saver:** Slide the Servo Saver Pipe through Bellcrank-A, aligning the hex portion of both pieces. Slide Bellcrank-B over servo saver mount (note direction) and onto Bellcrank-A. Slide the servo saver spring over the mount. Thread the servo saver mount nut onto the mount and tighten until 1.5mm of the mount protrudes past the nut. If you tighten the nut more, responsive, but you will risk premature servo failure. You may fine tune this setting after initial break in.



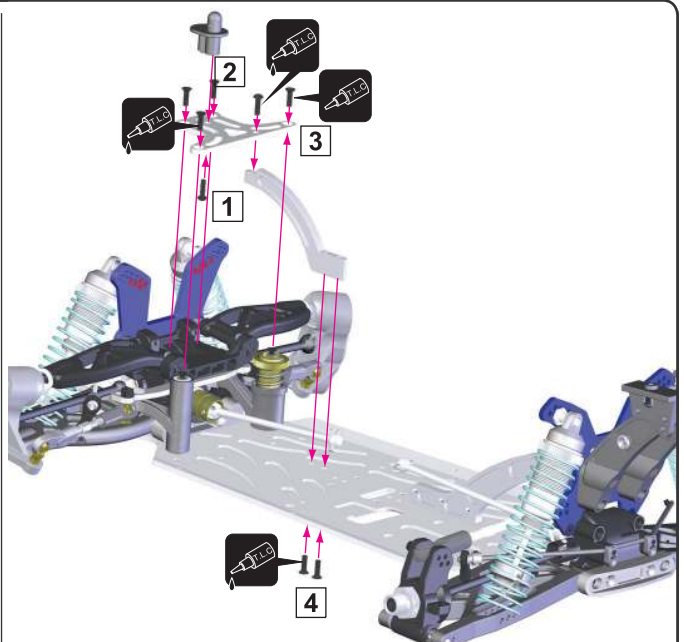
# STEERING



**Servo Saver Assembly:** Attach the steering plate as shown to the bellcranks using 3mm lock nuts, bushings, and plate screws. Next, insert the bearings into the bellcranks and slide the shafts in the direction shown.



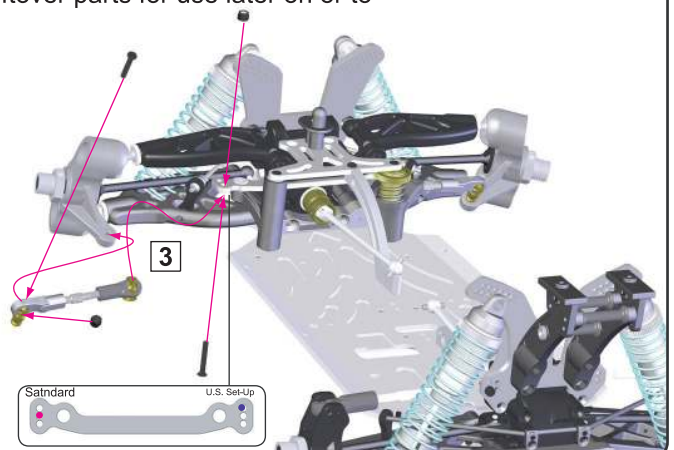
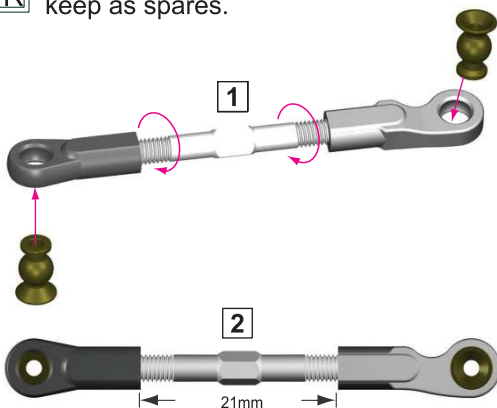
Install the steering assembly to the chassis using 4x10 FH screws.



Attach the front body mount to the support plate using the 3x10 OH/ST screw. Note direction of the support plate. Next, attach the front chassis brace to the plate using the 3x10 OH machine thread screw. Attach the plate to the front bulkhead using four 3x10 FH screws. Attach chassis brace to the chassis using two 3x10 FH screws. The 3x10 FH screws may be located in Bag 5.



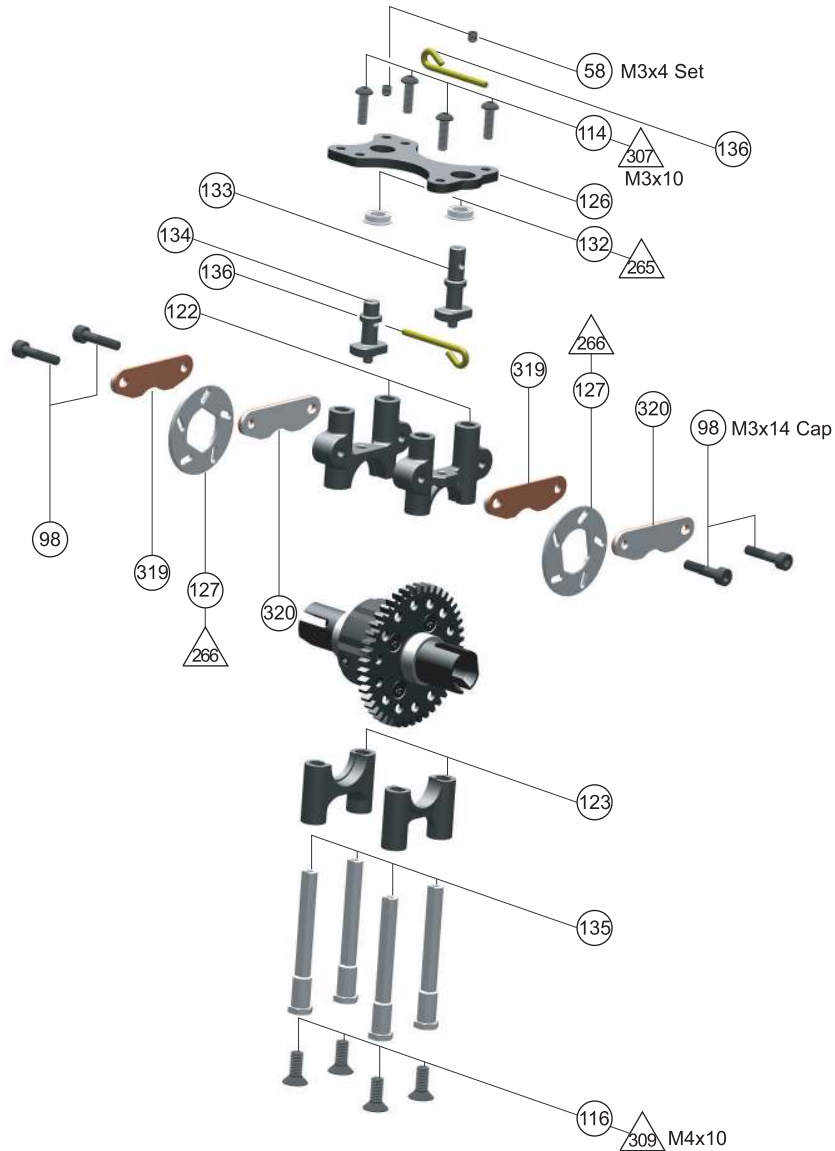
**LR** After completing this page, set aside any leftover parts for use later on or to keep as spares.



# 8. CENTER DIFF & BRAKE



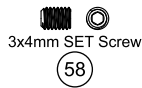
## Exploded View with Key Numbers



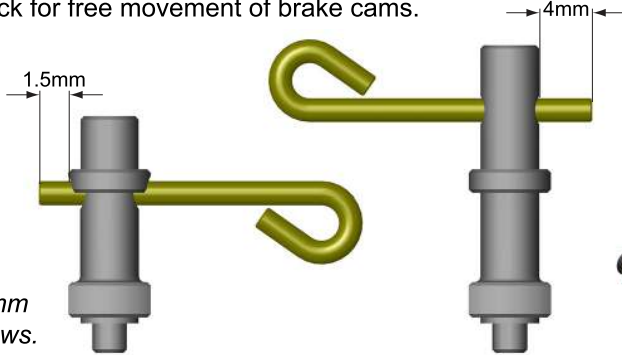
**Brake Pads:** Place both Center Diff Mount-A pieces flat on a table, smooth side down. Locate and inspect the brake pad/ caliper assemblies. The brake pads and calipers included in your kit may come pre-glued. You will notice that one of the holes in each assembly is elongated. Make 2 pairs of brake pad/ caliper assemblies (as shown in diagram) so that the elongated holes line up. Place the assemblies over the mounts, lining up the holes in the mounts and the brake assemblies. Thread two 3x14 cap screws through the brake assemblies and tighten until there is approximately a 2.5mm gap between the pads. Later, you may readjust this setting if the brakes are too tight or too loose.



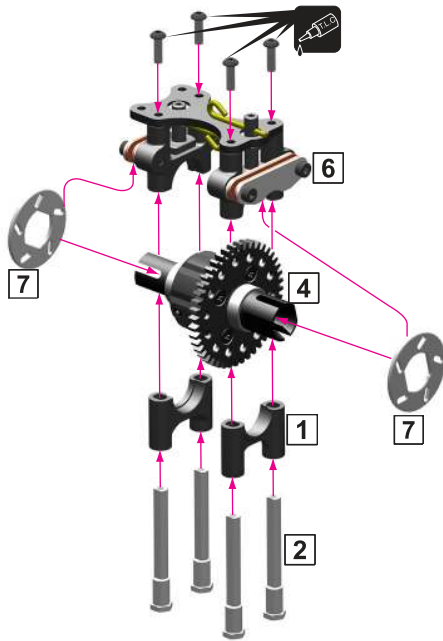
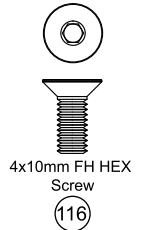
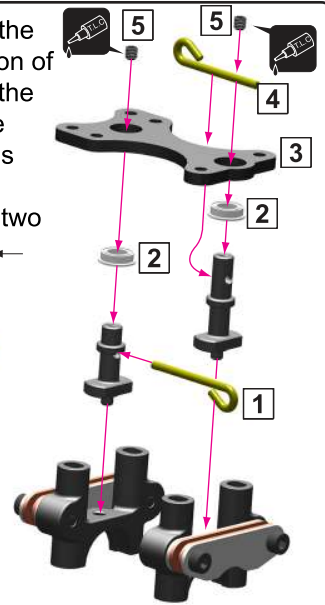
# CENTER DIFF & BRAKE



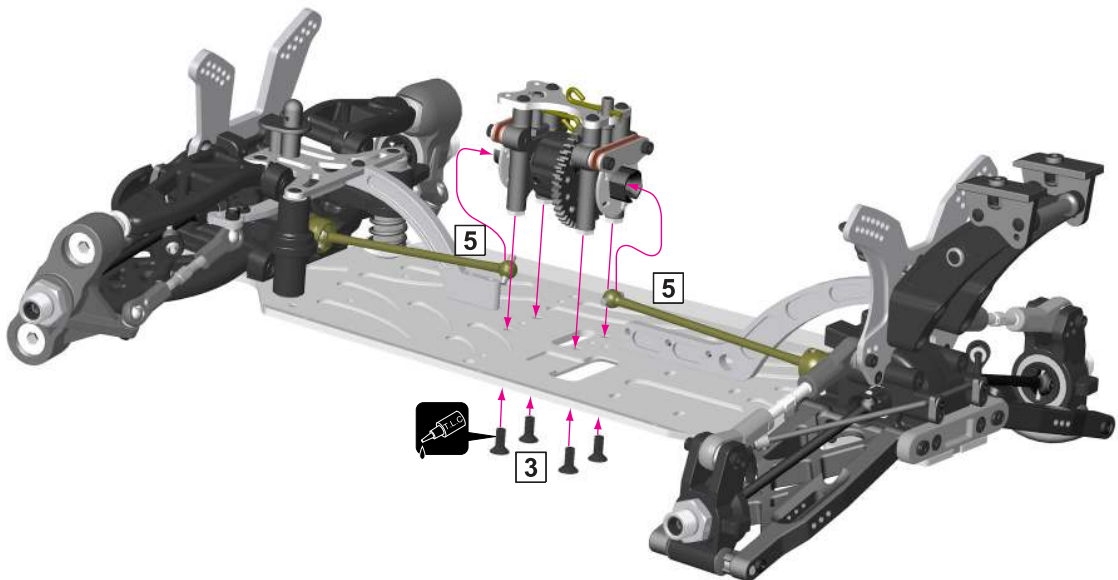
**Brake Assembly:** Slide a brake lever through the short brake cam. Slide the flanged brake cam bearings over the short and long brake cams, note direction of flange. Place brake cams in holes in the center diff mounts, note direction of the brake cams. Slide the center diff support plate over the brake cams. Slide the other brake lever through the hole of the long brake cam. Position brake cams as shown in the diagram, so that the ears are directly above each other, approximately in the center line of the support plate, and fasten in place with two 3x4mm set screws. Check for free movement of brake cams.



Your kit may include 3x3mm instead of 3x4mm set screws.

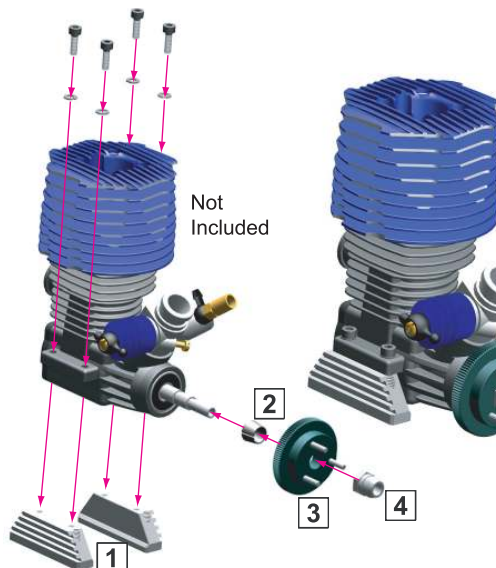
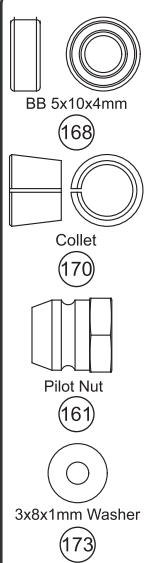
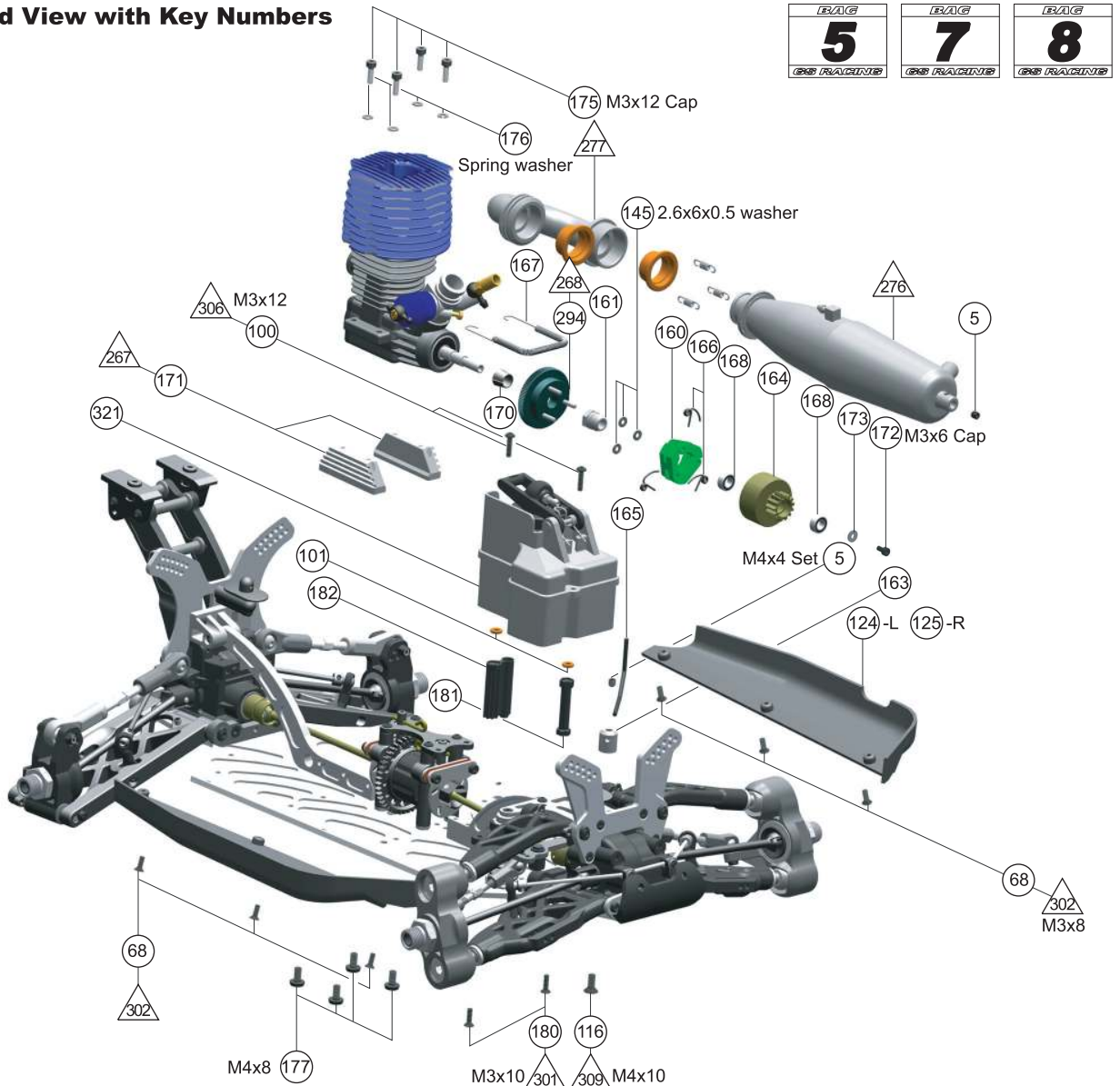


**Center Diff and Brakes:** The assembly method shown in the diagrams can be difficult to follow. To facilitate the assembly: Slide the diff mount 'B' pieces over the diff mount posts, as shown on the left (1 & 2). Attach the mount/post assemblies to the chassis as shown below using 4x10 FH screws (3). Place the center diff onto the mounts on the chassis, making sure the diff is properly seated in the grooves of the diff mount (4) and the dogbones seat into the outrives (5). Slide the upper diff mounts **without** the brake cams and levers onto the diff posts (6). Line up the brake discs between the brake pads and push the upper mounts down until snug (7). Place the short and long brake cams with bearings into the diff assembly, noting location and direction for each (see diagram at the top of the page). Slide the upper plate over the brake cams and fasten with 3x10 OH Screws (8). Slide the brake lever into the long brake cam, and after centering both brake levers, fasten with set screw (see diagram at the top of the page). Check to make sure all parts spin free. Check brake tolerances.

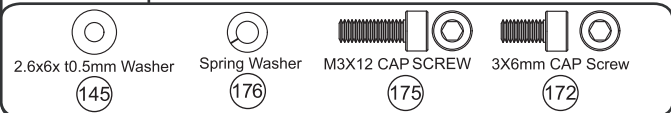


# 9. FUEL TANK & ENGINE

## Exploded View with Key Numbers

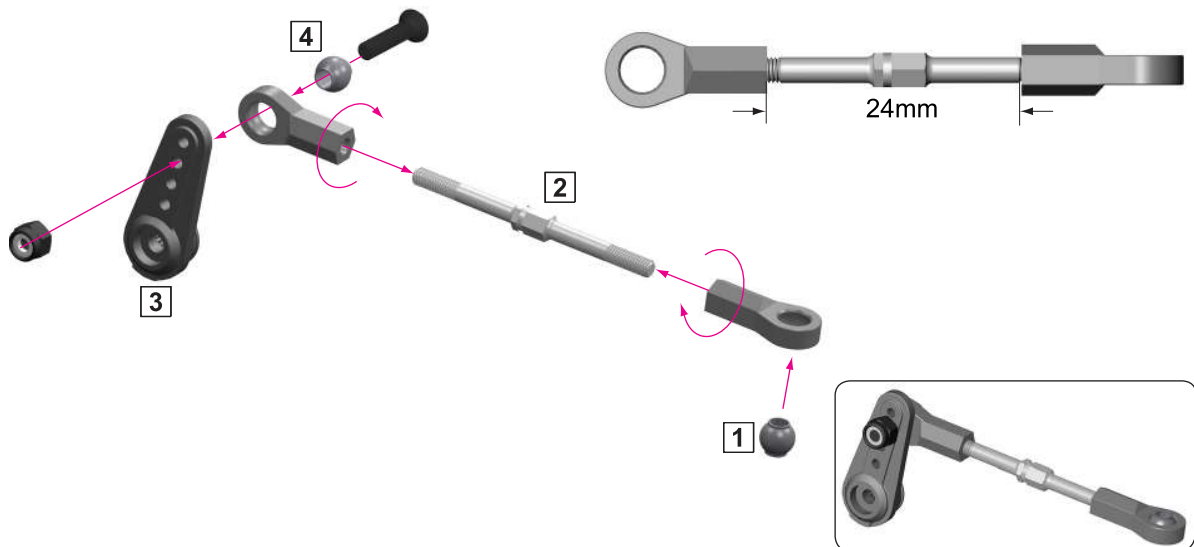
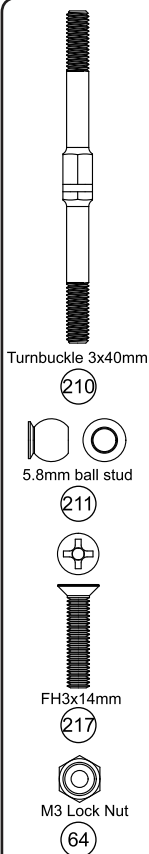
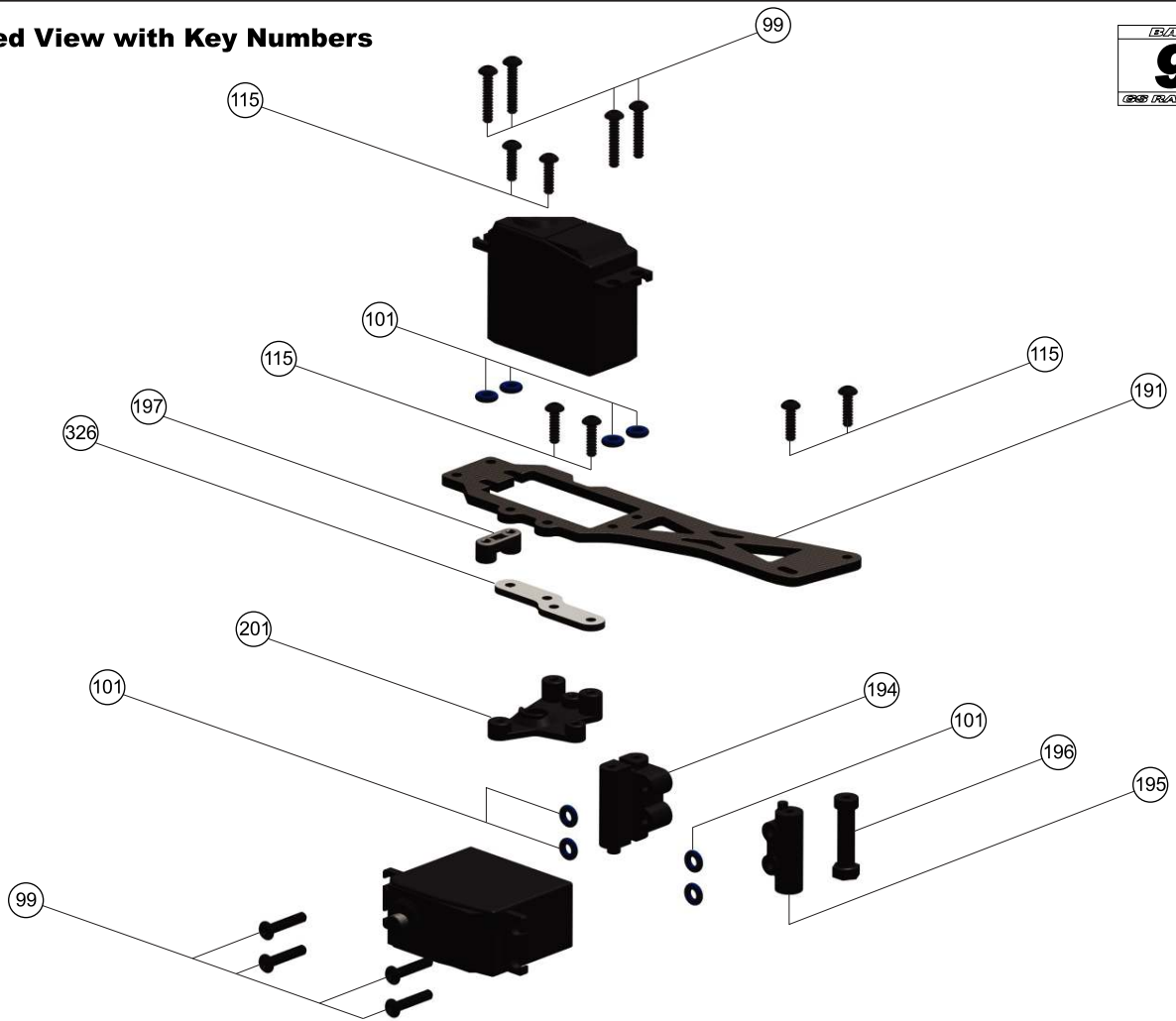


**Clutch:** Rotate carb, ball link, and fuel nipple to direction shown. Install engine mounts using 3x12 Cap screws and spring washers. Slide kit collet and flywheel over crankshaft and secure with pilot nut. Slide three 2.6mm washers onto flywheel posts. Place springs into the grooves of the clutch shoes. Align and slide shoe and spring assembly onto a post. Use caution and push down on the shoe and snap the tip of the spring into the groove on the nut. The shoe should be flush with the washer. Work in a counter clockwise direction until all 3 shoes are installed. Next, slide a bearing, clutchbell, bearing over the crankshaft and secure with a 3x8 washer and 3x6 Cap screw. Your kit includes 5x7x0.2mm washers. Use these washers to reduce the play of the bell. If the bell has too much play, remove the bell and bearings, and place shims over the shaft. Reinstall the bell and check for play. You can also place shims [8] [9] [10] between the outer bearing and shim. The bell should have 1mm of play. The bell should be flush with the inside edge of the shoes.



# 10. RADIO TRAY

## Exploded View with Key Numbers



**Steering Arm:** The ball ends and turnbuckles may vary slightly from those included in your kit. Press a ball stud into each ball end. Tighten the ball ends onto the turnbuckle. The gap between the ball ends should be 24mm. After you install the radio tray, re-adjust the setting as needed so that the servo horn is vertical with the front tires pointing straight ahead. Cut/shape a servo horn included in the kit or with your radio equipment like the one shown below. Install the linkage to the horn as shown.

# RADIO TRAY

**Servos:** Install the rubber grommets included with your servos. Attach post C to the radio tray, hex side down. Attach throttle servo to tray with servo mount (shown on left). Attach post A to tray and servo (note direction). Attach steering servo (shown on right) to posts A and B. Do not overtighten any of the screws. Route steering servo wire around the outside, away from the center of the car. Attach transponder mount and linkage. If you have a personal transponder, install it now.

3x15mm OH/ST HEX Screw (99)

3x10mm OH/ST HEX Screw (115)

Not included

**Radio Box:** Mount the on/off switch into radio box A with the "on" side facing toward the inside of the buggy. You may install the silicone switch cover included in your kit over the switch before installation. Install radio box A and radio box B together using two 2x33mm BH screws. Place the receiver and battery (flat or hump pack can be used) inside the radio box. Route the antenna wire through the small groove in the rear of the radio box. Route the wire through the antenna tube and secure the antenna tube in the mount in the radio box. Before securing the lid with the body pins, route the servo leads into the radio box. Refer to your radio instruction manual for proper wiring. Secure lid with 4mm body pin. *The opening in the lid may need to be made larger to accept some brands of on/off switches.*

M2X33 BH (220)

Body Pin (218)

Attach the radio tray to the radio box with two 3x10 OH/ST screws. Attach radio tray assembly to the chassis using seven 3x10 FH/ST screws. Attach the steering link to the bellcrank using a 3mm locknut and 3x4 FH screw. Make sure the linkage is attached under the bellcrank (see page 29). Check alignment of steering servo horn against the front knuckles. Set aside any left over parts from Bag 9 for use later on or to keep as spares.

M3x10mm FH/ST HEX Screw (216)

FH3x14mm (217)

3x10mm OH/ST HEX Screw (115)

M3 Lock Nut (64)

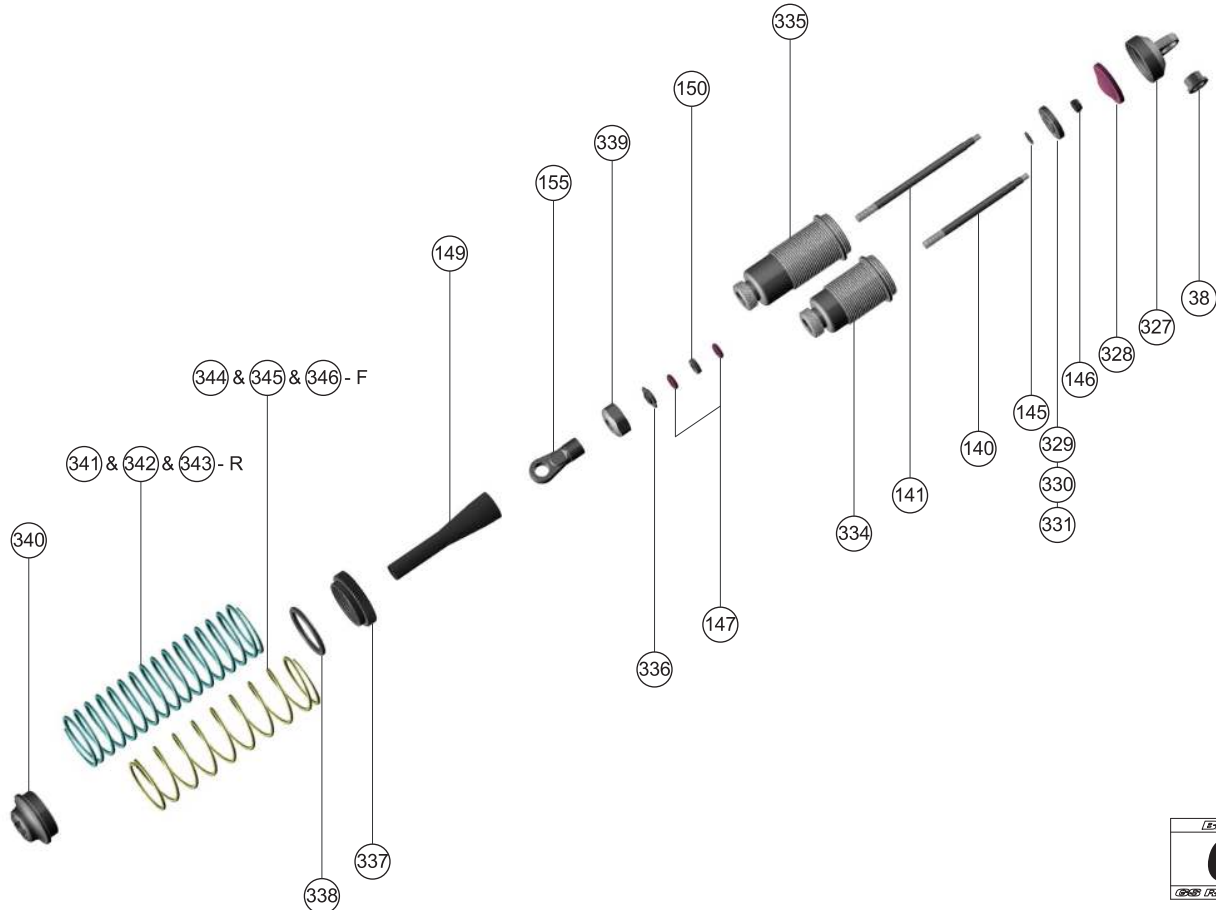
3mm Nut

For Steering Linkage



# 11. SHOCK ABSORBERS

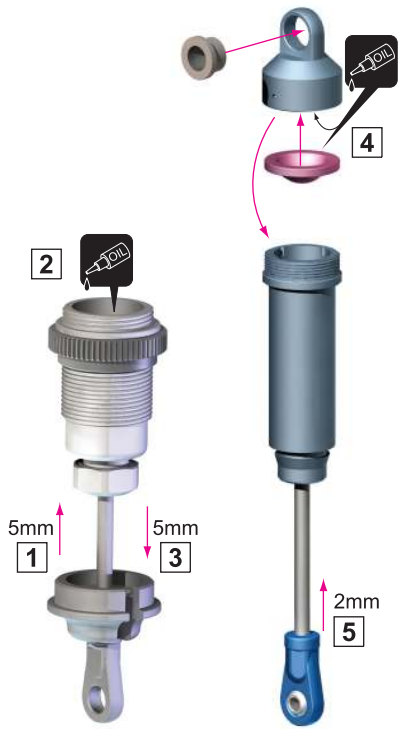
## Exploded View with Key Numbers



**Shock Body/Piston:** You will build 2 front (short) and 2 rear (long) shocks. Slide a 2.6mm washer over the stepped end of a shock shaft. Place a piston over the shaft and secure with 2.5mm locknut. You may hold the shaft with pliers, holding the pliers just above the threads at the opposite end of the shaft. Apply a drop of shock oil to the o-rings. Place an o-ring, followed by a 2mm plastic washer, a second o-ring, and 1mm plastic washer into the bottom of the shock body. Gently press the 1mm washer to seat the parts and expose the small groove in the body. Carefully place the G-ring in the shock body and snap into the groove. Apply a drop of oil to the threads of the shock shaft and carefully insert through the shock body. Tighten ball ends onto shafts until the threads of the shafts are covered. Install ball studs in ball ends, making sure they rotate freely. Keep any extra hardware as spares.

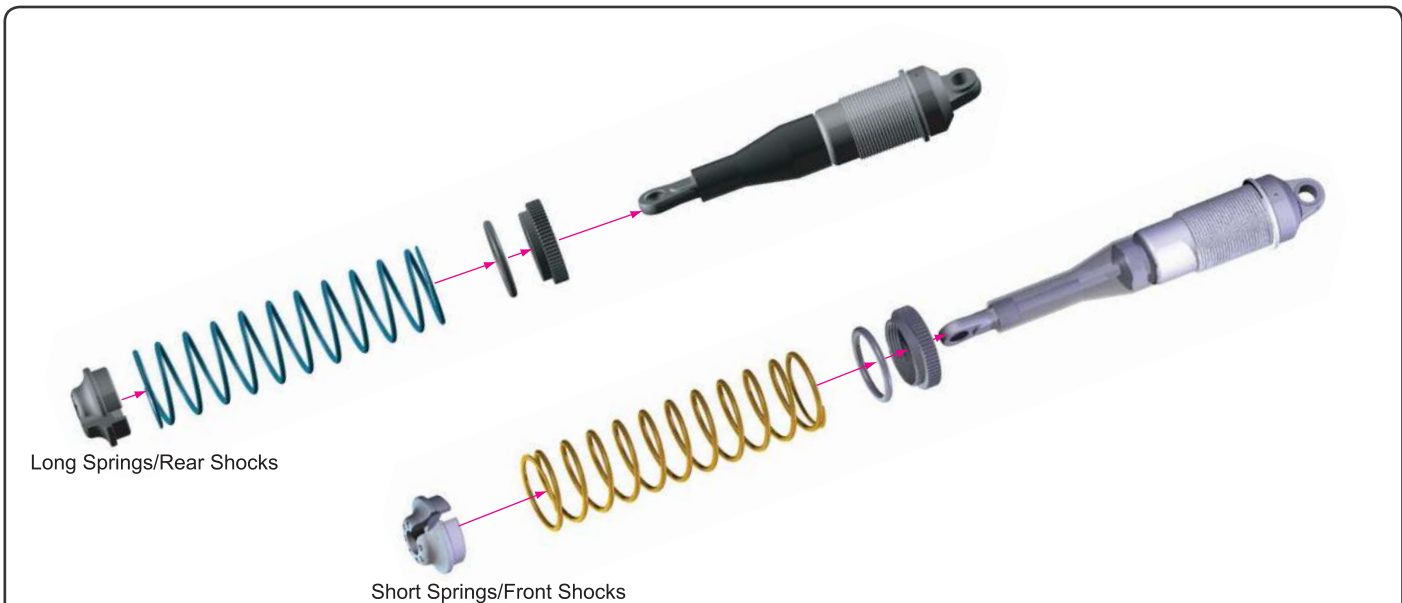


# SHOCK ABSORBERS



**Shock Oil:** Push the shock shaft in/up about 5mm. Fill the shock with shock oil about half way, see below for suggested oils. Pull the shock shaft down/out and continue to fill until oil level is just below the top of the body. Set aside and allow air bubbles to escape. Apply a few drops of oil to the threads inside the shock cap. Carefully seat the bladder inside the cap until evenly seated. Push the shaft up/in again about 2mm. Carefully thread the shock cap onto the shock body until tight and fully seated. Wipe off any excess oil, which may have leaked, out at this time. Check shock action. The shock shaft should be able to fully compress into the body without resistance, but rebound 5-10mm. If the shaft cannot compress completely, there is too much oil in the shock. If there is no rebound, there is too little oil in the shock. Make sure all the shocks have the same amount of rebound. You may notice minor oil leakage after initial assembly. If oil leakage persists, disassemble, check to make sure the bladder is properly seated in the shock cap and repeat the process. Install the shock cap bushing (these may be left over from Bag 2.)

U.S. Set-Up: 50wt. GS oil in front shocks, 35wt. GS oil in rear shocks  
 Euro Set-Up: 350cps GS oil in all shocks.  
 Use lighter oil in very cold weather, heavier oil in very hot weather.  
 Use only genuine GS Pure Silicone Oils.

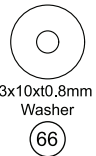
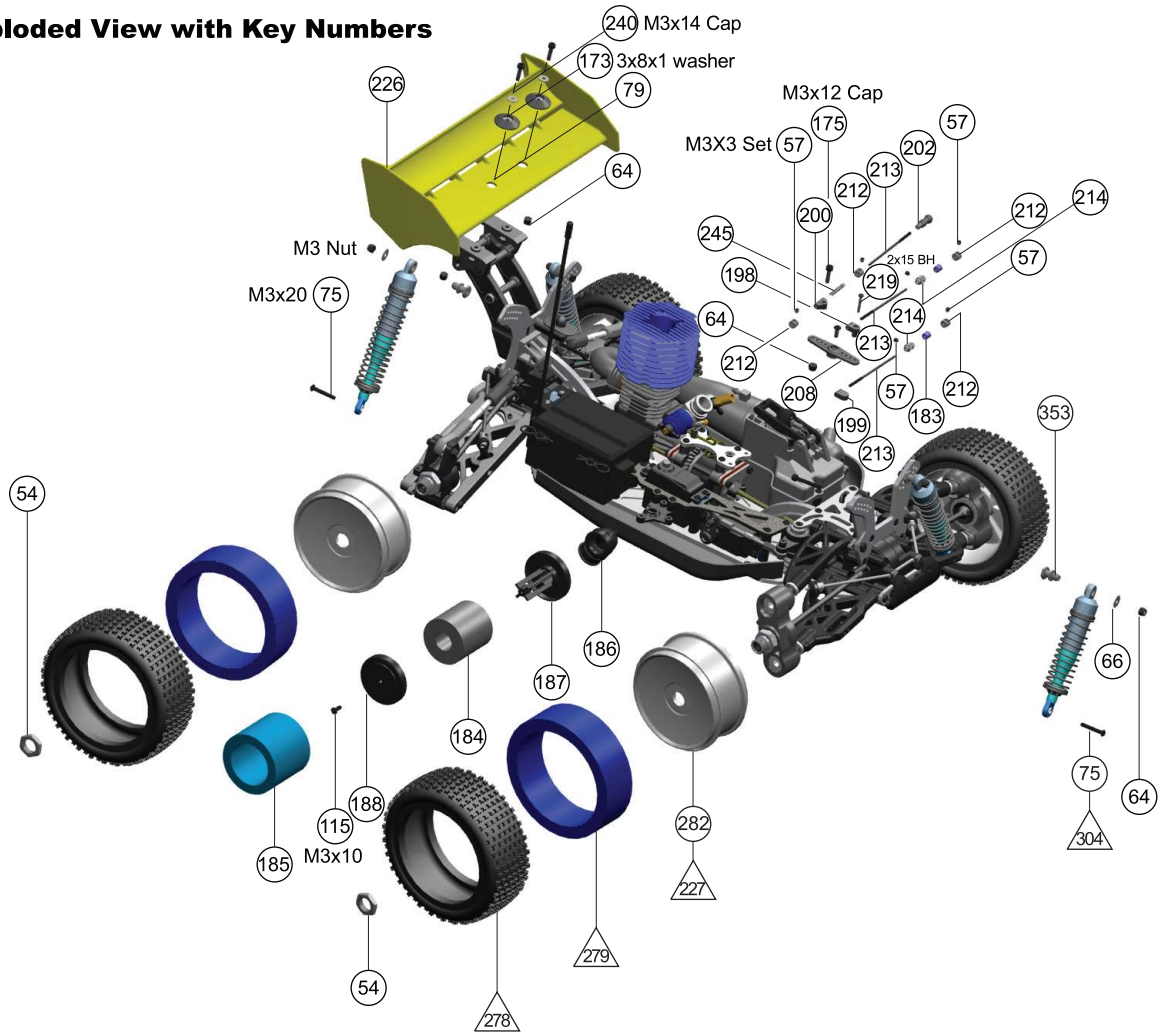


Install springs as shown. Locate the tree of plastic spring spacers. Install these spacers, after installing the shocks and wheels to the car, according to the respective set up sheets in the back of this manual to set proper ride height. After driving the car for a few tanks, or after rebuilding, the shocks may 'settle' and you may need to add more spacers. Use equal size/number of spacers left and right.

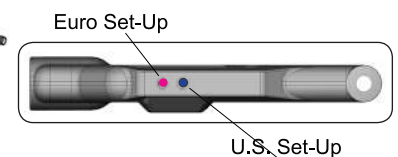
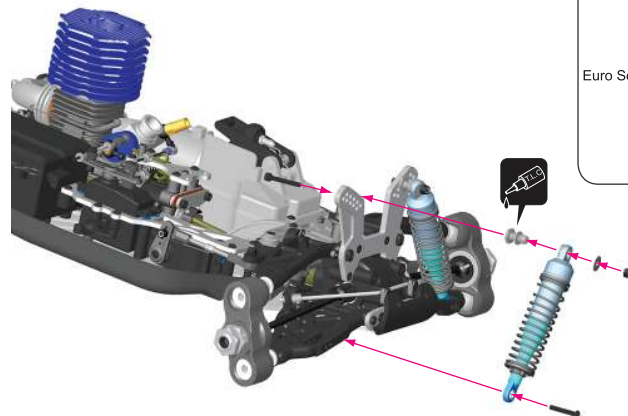
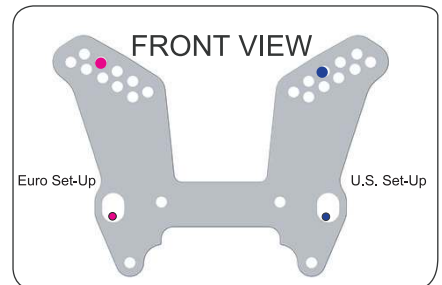


# 12. FINAL ASSEMBLY

## Exploded View with Key Numbers

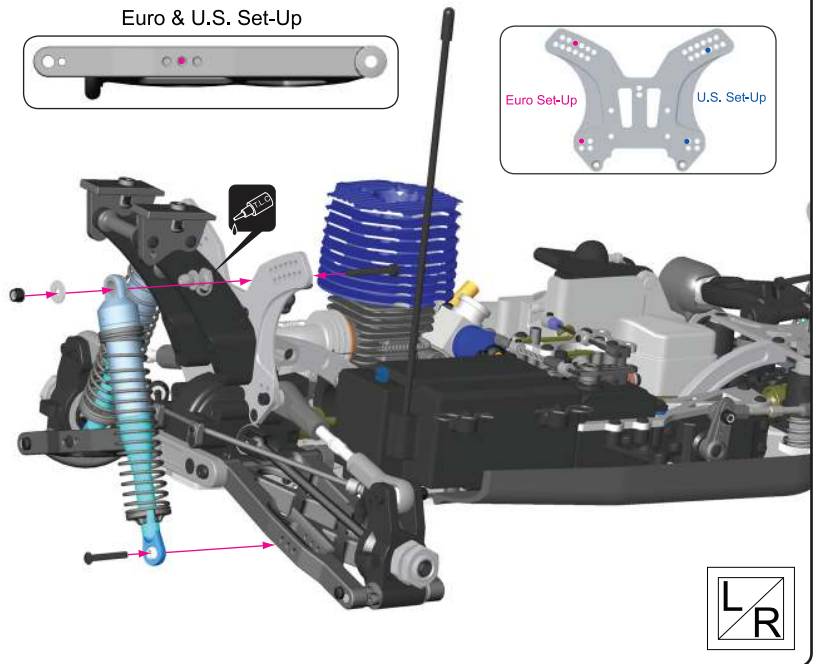


**Front Shocks:** At the end of page 17, you should have pre-installed the shock mounting hardware. If not, locate 4 each of the following from Bags 2 and 3: Shock Cap Studs, 3x10mm Washers, 3x23mm Cap Screws, 3mm Lock Nuts, 3x20mm Round Head (OH) Screws. These pieces are used to mount the front shocks (this step) and rear shock (next step). Slide two 3x23mm Cap Screws through the holes in the shock tower at the positions shown below. Thread the Shock Cap Studs onto the cap screws (apply thread lock) and tighten firmly. Slide the shocks as shown, followed by washers, and secure with locknuts. Slide the shock bottoms into the openings of the arms. Attach the shocks to the arms using 3x20mm Round Head (OH) Screws at the positions shown below. Check to make sure the front suspension rotates freely.

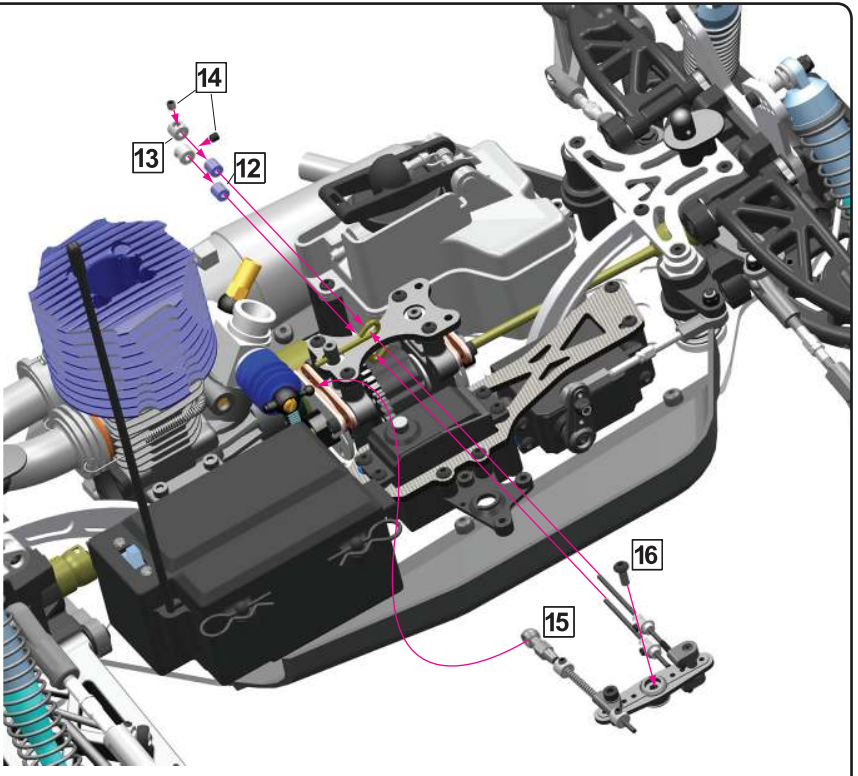


# FINAL ASSEMBLY

**Rear Shocks:** Using the same hardware as you did to attach the front shocks, continue with the rear shocks. Slide two 3x23mm Cap Screws through the holes in the shock tower at the positions shown on the right. Thread the Shock Cap Studs onto the cap screws (apply thread lock) and tighten firmly. Slide the shocks as shown, followed by washers, and secure with locknuts. Slide the shock bottoms into the openings of the arms. Attach the shocks to the arms using 3x20mm Round Head (OH) Screws at the positions shown on the right. Check to make sure the rear suspension rotates freely. After installing the wheels (next page), be sure to install spring spacers to set proper ride height.



**Throttle/Brake Linkage:** Thread the ball cup onto a throttle rod until tight. Slide a 2mm stopper over the rod followed by the linkage spring, throttle rod support, and stopper. Tighten the last stopper to keep parts in place for now. Install this assembly to the 3rd or 4th hole of the servo horn. You may need to enlarge the hole slightly. Do not overtighten, make sure the linkage rotates freely. Slide the adjuster knobs onto the middle of the remaining 2 rods and tighten in place. Thread one rod onto the upper brake rod support and one rod into the lower rod support until flush. Mount both support onto the 2nd or 3rd hole of the servo horn (opposite the throttle side) using a 2x15 RH screw. Make sure the linkage rotates freely.

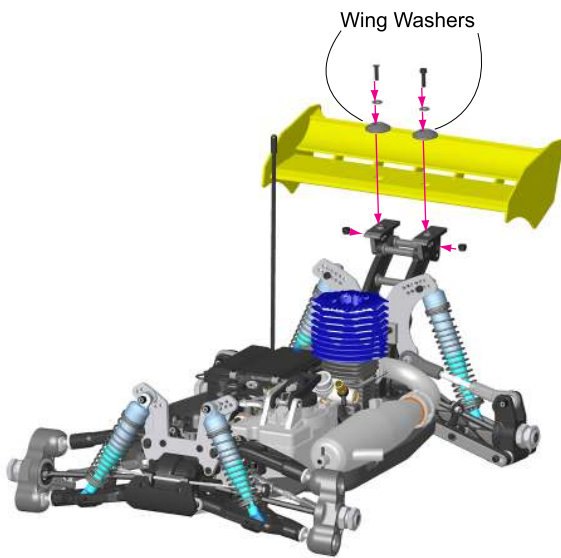


Slide the brake rods through the upper and lower brake levers until they extend about 15mm past the levers. The upper lever activates the rear brakes, the lower lever activates the front brakes. Slide a 5mm piece of fuel line over the ends of the rods followed by the stoppers. Tighten the stoppers about 10mm from the end of the rods. Snap the ball cup onto the carburetor ball link. Slide the servo horn onto the servo and fasten in place. Refer to page 33 for throttle and brake linkage settings. Make sure to tighten the set screw in the stopper next to the ball cup. This stopper is used to adjust the spring tension required to close the carburetor when the throttle servo is at neutral. By rotating the adjuster knobs on the brake linkages, you can independently fine tune front and rear brakes. Use the stoppers at the end of each brake linkage to adjust the overall brake settings.

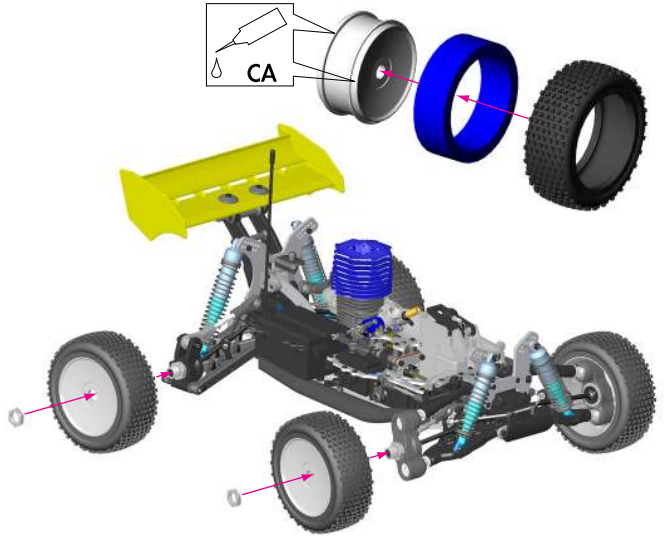


# FINAL ASSEMBLY

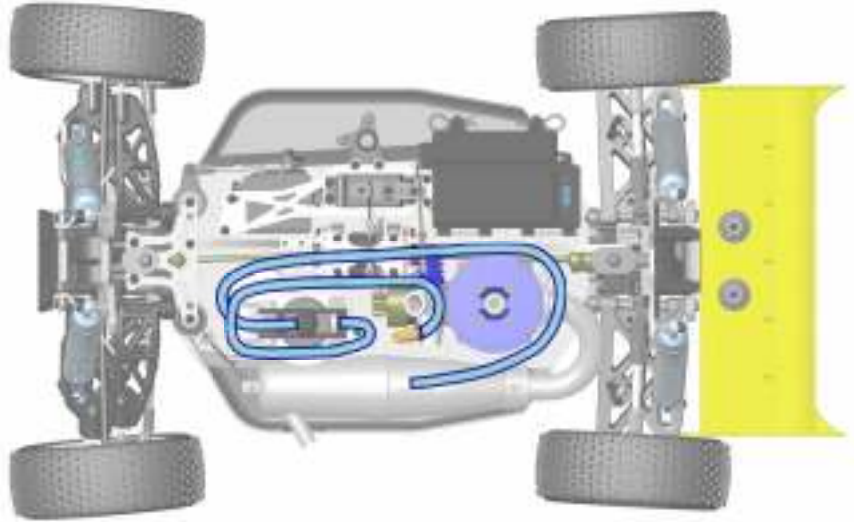
-  3x8x1mm Washer
-  173
-  M3x14mm CAP Screw
-  240
-  M3 Lock Nut
-  64



Clean contact area of the wheels and tires with rubbing alcohol or window cleaner before gluing!

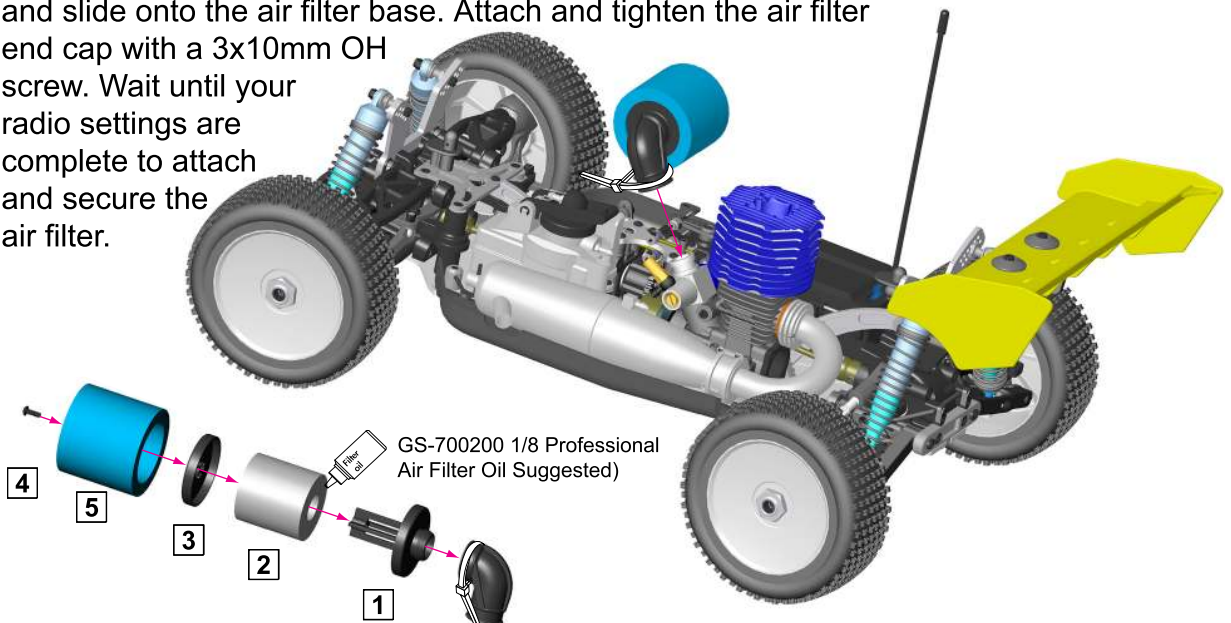


**Fuel Line:** Prepare 2 pieces of fuel tubing as shown. Attach the fuel line from the lower pressure fitting of the fuel tank to the engine. Attach the pressure line from the upper pressure fitting of the fuel tank cap to the exhaust pipe. Keep both lines away from rotating parts.

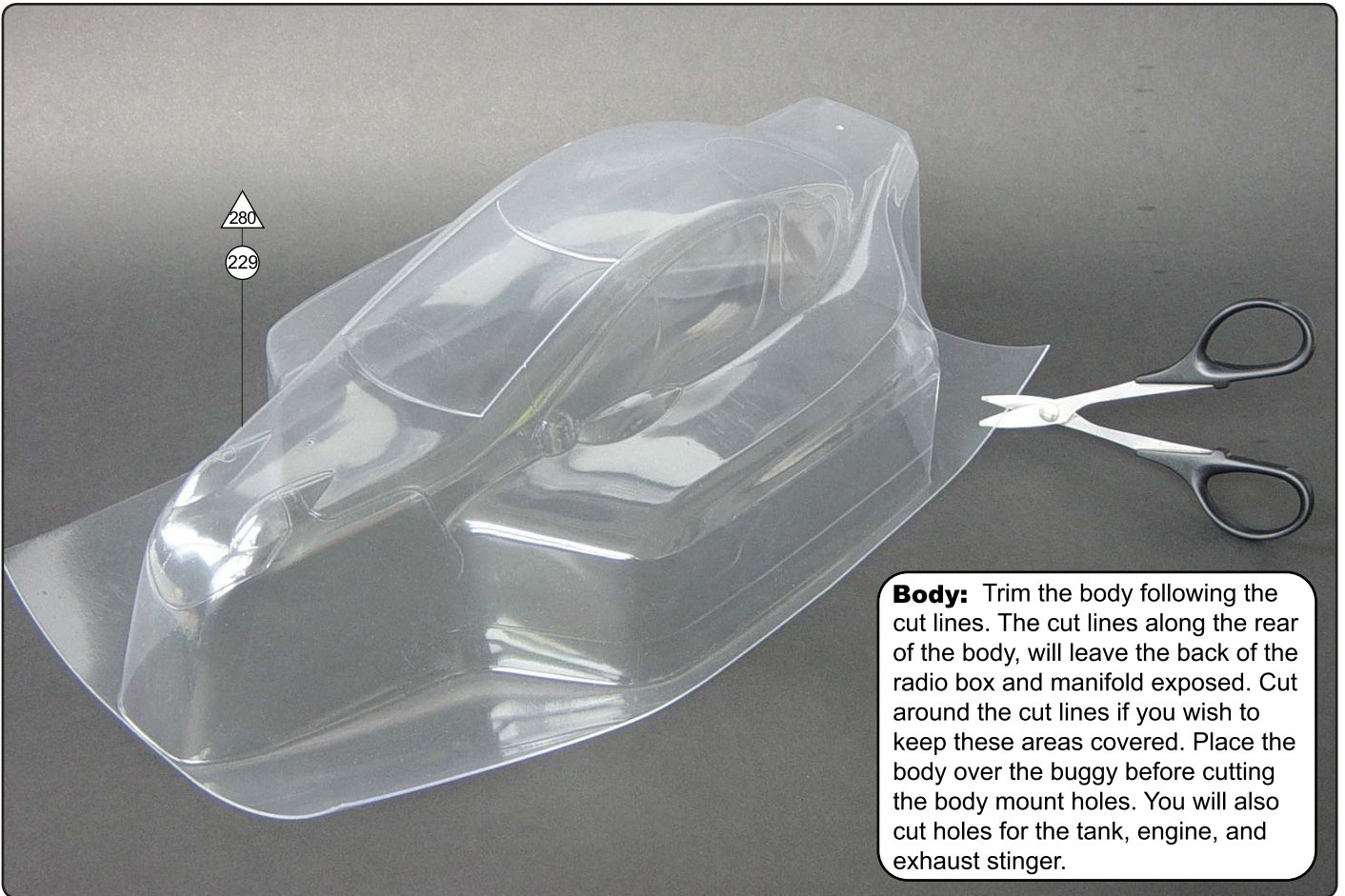


-  3x10mm OH/ST HEX Screw
-  115

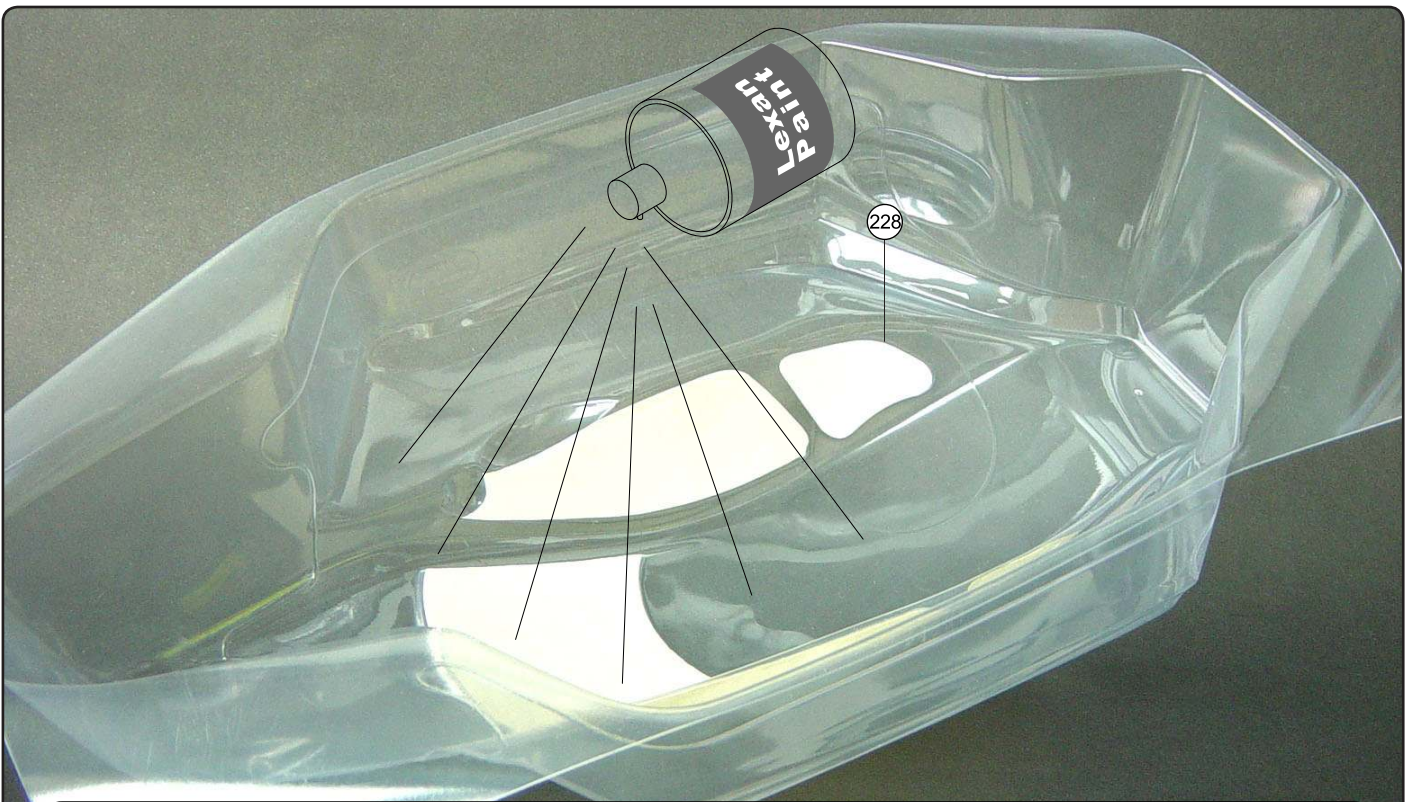
**Air Filter:** Push the air filter base onto the air filter adapter and secure with a small tie wrap. Apply a liberal amount of air filter oil (not included) to the air filter foam element and slide onto the air filter base. Attach and tighten the air filter end cap with a 3x10mm OH screw. Wait until your radio settings are complete to attach and secure the air filter.



# BODY



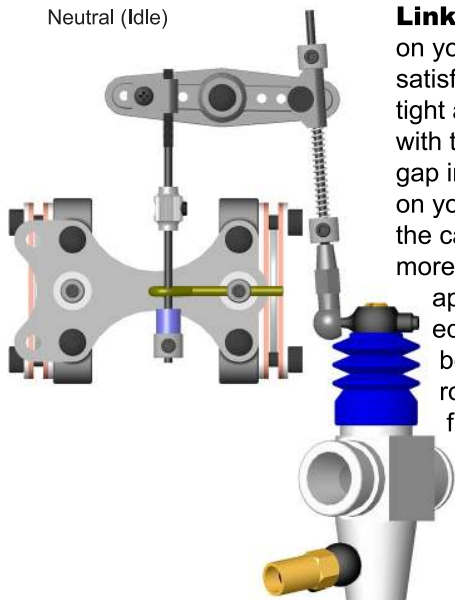
**Body:** Trim the body following the cut lines. The cut lines along the rear of the body, will leave the back of the radio box and manifold exposed. Cut around the cut lines if you wish to keep these areas covered. Place the body over the buggy before cutting the body mount holes. You will also cut holes for the tank, engine, and exhaust stinger.



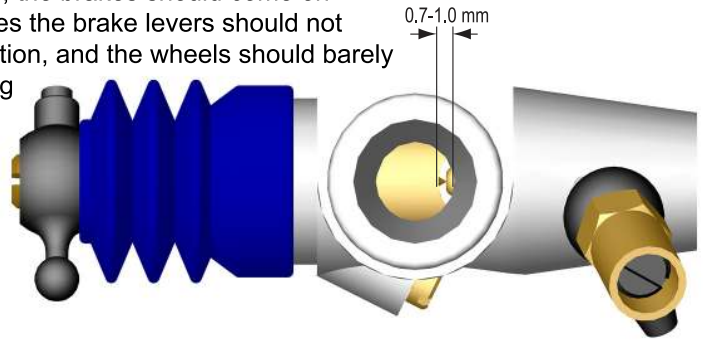
Wash the inside of the body with mild soap and water, then rinse out and dry thoroughly. Apply the window masks. Mask the inside of the body in any pattern or design you wish. Paint beginning with the darkest color first. If using spray cans, spray three light coats. Follow the paint manufacturer's guidelines for safe and proper use of paint. Allow for paint to dry, and remove window masks. Peel off protective outside film, apply decals, and attach body using body pins. Good luck racing!

# THROTTLE LINKAGE ADJUSTMENT

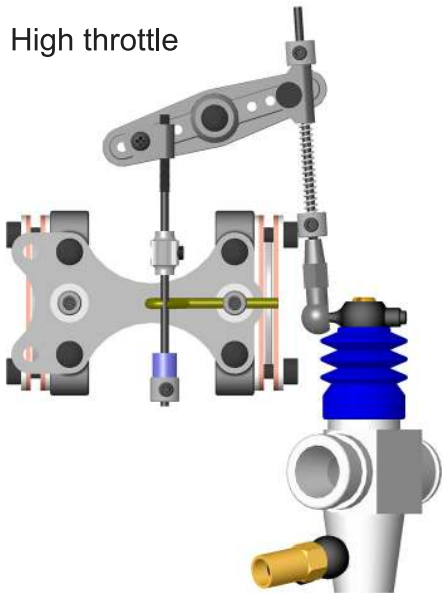
Neutral (Idle)



**Linkage Adjustment:** Study and understand the illustration first before you turn on your radio to check the linkage. Adjust linkage per illustration. When you are satisfied that the linkage is functioning correctly make sure all the 2mm Stoppers are tight and secure. When the throttle is in neutral, the servo horn should be parallel with the throttle servo, the throttle should be closed (there should be about a 0.7mm gap inside the carb), and the brakes should be disengaged. Adjust the Trim settings on your radio and/or adjust the linkages to achieve this setting. Upon applying throttle, the carb should begin to open. At full throttle, the carb should be fully open, and no more. Adjust the end point adjustment on your radio to achieve this setting. Upon applying the brakes, the brakes should come on equally. At full brakes the brake levers should not be in a locked position, and the wheels should barely rotate when rotating firmly by hand.

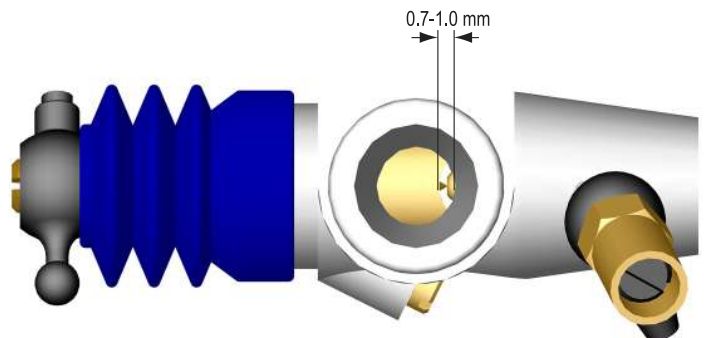
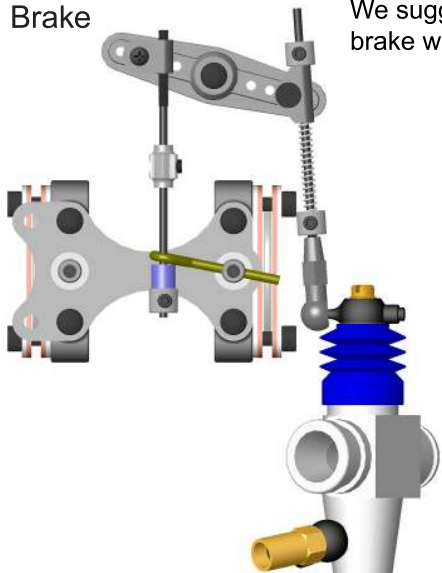


High throttle



Brake

We suggest adjusting the brakes to have slightly more rear bias. Too much front brake will make the car push entering corners under braking.



# TROUBLESHOOTING GUIDE

Problem	Things To Check	Solution
Engine won't start	<ol style="list-style-type: none"> <li>1. Fuel tank is empty.</li> <li>2. Bad glowplug or dead igniter battery.</li> <li>3. Fuel lines, fuel filter, air cleaner, or muffler is clogged.</li> <li>4. Engine is flooded due to over-priming.</li> <li>5. Carburetor is not adjusted properly.</li> </ol>	<ol style="list-style-type: none"> <li>1. Fill fuel tank with fuel.</li> <li>2. Replace glowplug or recharge/replace igniter battery.</li> <li>3. Clean or replace clogged parts.</li> <li>4. Remove glowplug, turn car over to discharge fuel from cylinder. Test glowplug and replace if defective.</li> <li>5. Set idle and full/slow needle adjusting screw to standard starting position.</li> </ol>
Engine won't turn over	<ol style="list-style-type: none"> <li>1. Fuel tank is empty.</li> <li>2. Fuel lines, fuel filter, air cleaner, or muffler is clogged.</li> <li>3. Carburetor is not adjusted properly.</li> <li>4. Engine has overheated.</li> </ol>	<ol style="list-style-type: none"> <li>1. Fill fuel tank with fuel.</li> <li>2. Clean or replace clogged parts.</li> <li>3. Re-adjust idle and full/slow needle adjusting screw.</li> <li>4. Allow engine to thoroughly cool down and open main needle adjusting screw turn richer (CCW).</li> </ol>
Bad reaction and response from engine	<ol style="list-style-type: none"> <li>1. Carburetor is not adjusted properly.</li> <li>2. Fuel lines, fuel filter, air cleaner, or muffler is clogged</li> <li>3. Low fuel pressure from muffler.</li> </ol>	<ol style="list-style-type: none"> <li>1. Re-adjust full/slow needle adjusting screw.</li> <li>2. Clean or replace clogged parts.</li> <li>3. Properly install pressure line between muffler and fuel tank.</li> </ol>
Car isn't easy to control	<ol style="list-style-type: none"> <li>1. Weak transmitter and /or receiver batteries.</li> <li>2. Low reception from radio antennas.</li> <li>3. Servo linkages not adjusted properly.</li> </ol>	<ol style="list-style-type: none"> <li>1. Recharge or replace batteries</li> <li>2. Fully extend transmitter and receiver antennas</li> <li>3. Move servo to neutral then re-adjust linkage(s).</li> </ol>

## Set-Up/Handling Tips

Car under steers in corner	<ol style="list-style-type: none"> <li>1. Reduce caster in front upper arms</li> <li>2. Reduce kickup in front lower arms</li> <li>3. Add front toe out</li> <li>4. Soften front sway bar</li> </ol>
Car is loose	<ol style="list-style-type: none"> <li>1. Add rear toe in</li> <li>2. Decrease rear anti-squat</li> <li>3. Lengthen rear camber link position</li> <li>4. Lighten rear diff oil</li> <li>5. Move rear hubs forward</li> </ol>
Car is unstable on bumpy tracks	<ol style="list-style-type: none"> <li>1. Raise ride height</li> <li>2. Soften sway bars</li> <li>3. Move rear hubs forward</li> <li>4. Increase down travel</li> </ol>
Car over steers on high grip surfaces	<ol style="list-style-type: none"> <li>1. Reduce down travel</li> <li>2. Stiffen sway bars</li> <li>3. Lower ride height</li> <li>4. Move shock positions to outer locations</li> <li>5. Stiffen shock oils and/or springs</li> </ol>



# SET-UP SHEET

## CL-I ADVANCED

Race time / Lap: \_\_\_\_\_

Best lap: \_\_\_\_\_

Name: \_\_\_\_\_  
 Date: \_\_\_\_\_  
 Track: \_\_\_\_\_

### Track Conditions

Size:  Open  Med.  Tight  
 Traction:  High  Med.  Low  
 Surface:  Smooth  Med.  Bumpy

### Diff. Oil

Front: # \_\_\_\_\_  
 Center: # \_\_\_\_\_  
 Rear: # \_\_\_\_\_

### Engine

Type: \_\_\_\_\_  
 Gasket: \_\_\_\_\_ mm Exhaust: \_\_\_\_\_  
 Plug: \_\_\_\_\_ Fuel: \_\_\_\_\_

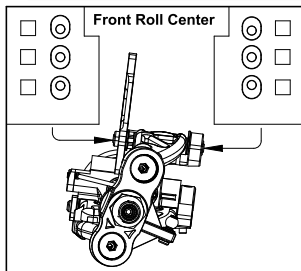
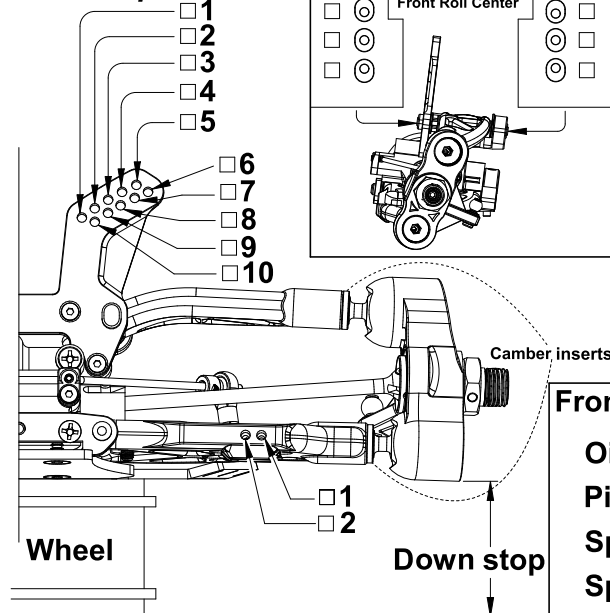
### Tire

Front Type: \_\_\_\_\_ Rear Type: \_\_\_\_\_  
 Front Foam: \_\_\_\_\_ Rear Foam: \_\_\_\_\_

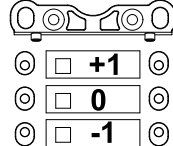
### Clutch

Clutch shoes: \_\_\_\_\_  
 Spring: \_\_\_\_\_ mm  
 Clutch bell / Spur gear: \_\_\_\_\_

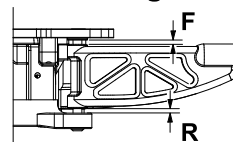
### Front Suspension



### Front Anti-squat



### Caster angle



Track width \_\_\_\_\_ mm

Camber insert Upper \_\_\_\_\_ mm

Camber angle \_\_\_\_\_ Lower \_\_\_\_\_ mm

Caster F \_\_\_\_\_ mm

R \_\_\_\_\_ mm

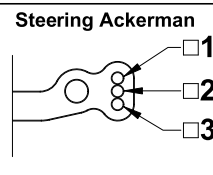
Toe angle \_\_\_\_\_

Down stop \_\_\_\_\_ mm

Sway bar  Use \_\_\_\_\_ mm  
 None

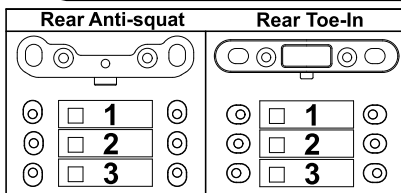
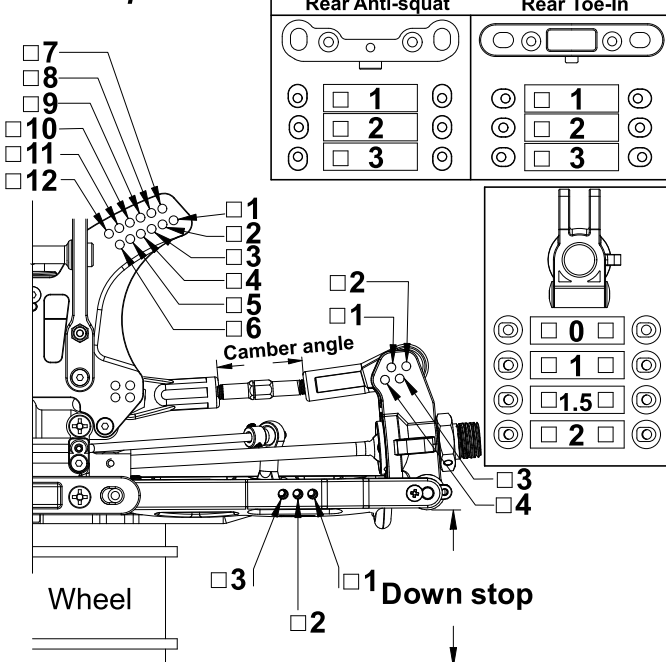
### Front Shocks

Oil: \_\_\_\_\_  
 Pistons: \_\_\_\_\_  
 Spring: \_\_\_\_\_  
 Spacer: \_\_\_\_\_ mm

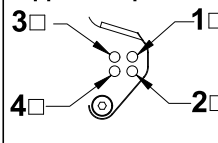


Notes: \_\_\_\_\_

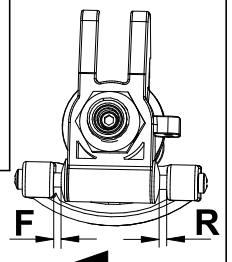
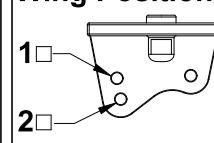
### Rear Suspension



### Upper arm position



### Wing Position



Camber angle \_\_\_\_\_ mm

Down stop \_\_\_\_\_ mm

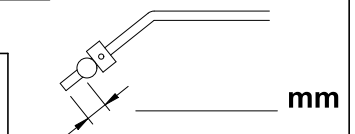
Wheelbase adjustment F \_\_\_\_\_ mm Front

R \_\_\_\_\_ mm

Sway bar  Use \_\_\_\_\_ mm None

### Rear Shocks

Oil: \_\_\_\_\_  
 Pistons: \_\_\_\_\_  
 Spring: \_\_\_\_\_  
 Spacer: \_\_\_\_\_ mm



Notes: \_\_\_\_\_

# STORM CL-1 Advanced Key No. List

Team Kit Key No.	Part Name	Q'ty in Use	Item No.
1	Ball Bearing 8X16X5	14	GSC-690003A
2	Diff. Gasket	3	GSC-AV006
4	3x12mm FH HEX Screw	20	GSC-620204
5	4x4mm SET Screw	5	GSC-610020
6	Diff. Large Bevel Gear	6	GSC-AV004
7	Diff. Small Bevel Gear	12	GSC-AV004
8	Pin 2.5x10.8mm	6	GSC-AV094
9	O-ring (1.75x9mm) AS009	6	GSC-ST067
10	Bevel Gear Shaft	6	GSC-AV095
12	Crown Gear 38T	2	GSC-CL002
13	Pinion Gear 11T	2	GSC-CL003
17	Differential Bulkhead Set (F)	2	GSC-CL005
18	Differential Bulkhead Set (R)	2	GSC-CL005
19	Sway Bar Plate	4	GSC-CL006
22	14mm Pivot Ball Cup	4	GSC-AV026
23	Front Upper Suspension Arms (L)	1	GSC-CL012
24	Front Upper Suspension Arms (R)	1	GSC-CL012
27	Front Bumper	1	GSC-CL007
29	Front Upper Arm Holder	1	GSC-CL014
31	CL-1 Caster Insert Set 1°	10	GSC-CL015
32	CL-1 Caster Insert Set 0°	10	GSC-CL015
33	CL-1 Camber, Caster Insert Set	4	GSC-CL015
34	CL-1 Camber Insert Set 0°	4	GSC-CL015
35	CL-1 Camber Insert Set 1°	4	GSC-CL015
36	CL-1 Camber Insert Set 1.5°	4	GSC-CL015
37	CL-1 Camber Insert Set 2°	4	GSC-CL015
38	CL-1 Shock Bushing	6	GSC-CL015
39	Caster Insert Set 1mm	4	GSC-CL028
40	Caster Insert Set 3mm	4	GSC-CL028
41	Front Sway Bar 2.3mm	1	GSC-CL018
44	7075 T6 Front Shock Tower	1	GSC-CLP004
45	Front Center CVD Drive Shaft	1	GSC-CLP009
46	Shock Cap Stud	2	GSC-CL045
47	14mm Knuckle Pivot Ball (Al hard coated)	4	GSC-CLP011
48	14mm Knuckle Pivot Ball Turnbuckles	4	GSC-CLP012
49	Knuckle Pivot Ball Washer	4	GSC-AV024
50	Knuckle Pivot Ball Nut	4	GSC-AV025
52	Ball 6.8x5.2	4	GSC-AV085
53	Wheel Hub	4	GSC-STP20
54	Wheel Hub Nut	4	GSC-STP042
55	Front/Rear Lower Arm Hinge Pin	4	GSC-CL016

Team Kit Key No.	Part Name	Q'ty in Use	Item No.
56	Front Upper Arm Hinge Pin	2	GSC-CL017
57	3x3mm SET Screw	10	GSC-610000
58	3x4mm SET Screw	6	GSC-610001
59	4x10mm SET Screw	4	GSC-610025
60	5x4 mm SET Screw	6	GSC-610039
61	3x8x0.5 mm Washer	4	GSC-AV099
62	12x8.2x t0.5 mm Washer	4	GSC-AV098
63	13.4x16xt0.2mm Washer	8	GSC-ST082
64	M3 Lock Nut	20	GSC-603007
65	Pin 3x16.8mm	4	GSC-602008
66	3x10xt0.8mm Washer	4	GSC-601023
68	3x8mm FH HEX Screw	10	GSC-620202
69	3.5x25mm FH/ST Screw	6	GSC-650065
70	3.5x35mm FH/ST Screw	4	GSC-650069
71	4x16mm FH HEX Screw	4	GSC-620224
72	4x18mm FH/ST HEX Screw	8	GSC-650211
73	3x16mm CAP Screw	5	GSC-611026
74	3x23mm CAP Screw	6	GSC-611030
75	3x20mm OH HEX Screw	8	GSC-613107
76	Wing support	2	GSC-CL020
77	Wing Mount	2	GSC-CL020
79	Washer	2	GSC-CL020
80	Rear Suspension Mount	1	GSC-CL021
81	Rear Lower Suspension Arms (L)	1	GSC-CL022A
82	Rear Lower Suspension Arms (R)	1	GSC-CL022A
85	Rear Upper Sus. Arm Ball End	1	GSC-CL024
86	Body Mount	1	GSC-CL025
87	Rear Upper Sus. Arm Ball Ends Set	2	GSC-CL024
88	Rear Chassis Brace Mount	1	GSC-CL026
89	Rear Chassis Brace Inserts	1	GSC-CL026
90	Rear Sway Bar 2.8mm	1	GSC-CL032
91	Rear Center CVD Drive Shaft	1	GSC-CLP010
92	7075 T6 Rear Shock Tower	1	GSC-CLP005
94	Rear Hub Carriers Hinge Pin	2	GSC-CL031
95	Rear Upper Sus. Arm Ball Stud (8.8xL9mm)	2	GSC-CL030
96	Rear Upper Sus. Arm Ball Stud (8.8xL10mm)	2	GSC-CL030
97	7075 T6 Rear Anti-Squat Mount	1	GSC-CLP008
98	M3x14 Cap Screw (Half tooth)	4	GSC-611024A
99	3x15mm OH/ST HEX Screw	12	GSC-613205
100	3x12mm OH/ST HEX Screw	4	GSC-613204
101	O-ring 2.8x6.6mm TBL	2	GSC-SH-8BL



# STORM CL-1 Advanced Key No. List

Team Kit Key No.	Part Name	Q'ty in Use	Item No.
102	M3 Aluminum Countersunk Washer	2	GSC-W00110TA
106	6.8mm Steering Linkage Ball End	2	GSC-CL041
107	Body Mount	1	GSC-CL025
110	Servo Saver Spring	1	GSC-CL038
111	Servo Saver Shafts	2	GSC-CL037
112	Servo Saver Steering Plate	1	GSC-CL039
113	Carbon Fiber Front Support Plate	1	GSC-CLP003
114	3x10mm OH HEX Screw	5	GSC-610103
115	3x10mm OH/ST HEX Screw	7	GSC-613203
116	4x10mm FH HEX Screw	7	GSC-620222
117	Ball Bearing 6x10x3mm	4	GSC-690005
119	Servo Saver Steering Plate Screws	2	GSC-CL039A
120	Servo Saver Steering Plate bushings	2	GSC-CL039A
121	CL-1 Steering Linkage Turnbuckles	2	GSC-CL046
122	Center Diff . Mount Set A	2	GSC-AV008
123	Center Diff . Mount Set B	2	GSC-AV008
124	Side Guard ( L )	1	GSC-ST059
125	Side Guard ( R )	1	GSC-ST059
126	Carbon Fiber Center Diff Support Plate	1	GSC-AVP005
127	Vented Brake Disk	2	GSC-AVP030
130	Front Support Brace	1	GSC-CLP006
131	Rear Support Brace	1	GSC-CLP007
132	Flange Ball Bearing (5x8x2.5)	2	GSC-690004A
133	Brake Cam Long	1	GSC-CL034
134	Brake Cam Short	1	GSC-CL033
135	Center Diff. Mount Posts	4	GSC-AV009
136	Brake Lever	2	GSC-CL033
140	Shock Shaft-S	2	GSC-25081
141	Shock Shaft-L	2	GSC-25082
145	2.6x6x t0.5mm Washer	9	GSC-ST105
146	M2.5 Lock Nut	5	GSC-ST105
147	P3.5 O-Ring	8	GSC-SH-8-35
149	Shock Boot	4	GSC-34002
150	Shock Shaft Washer-2mm/POM	4	GSC-10065
155	Shock Shaft Ball End	4	GSC-100082
160	Aluminum Clutch Shoe	3	GSC-250404
161	Pilot Nut #117	1	GSC-ST032
162	Exhaust Gasket For .21 Engine	1	GSC-E21TBL
163	Manifold stay #144	1	GSC-ST071
164	Clutch Bell 13T (N1-CHB13B)	1	GSC-ST001
165	Muffler Stay Wire	1	GSC-ST071

Team Kit Key No.	Part Name	Q'ty in Use	Item No.
166	Clutch Spring(B11-001)	3	GSC-ST003
167	Manifold Holder Spring	2	GSC-ST078
168	Ball Bearing 5x10x4mm	2	GSC-581814
170	Cone Collar	1	GSC-ST002A
171	CL1 Engine Mount	2	GSC-CLP013
172	3X6mm CAP Screw	1	GSC-611020
173	3x8x1mm Washer	9	GSC-601008
174	5x7x0.2mm Washer	8	GSC-ST065
175	M3X12 CAP	5	GSC-611023
176	M3 Spring Washer	4	GSC-601005
177	4x8mm I-Head Screw	4	GSC-615001
180	3x10mm FH/ST HEX Screw	2	GSC-650024
181	Fuel Tank Posts-A (ST2-126)	1	GSC-AV092
182	Fuel Tank Posts-B (ST2-127)	1	GSC-AV092
183	Silicone Fuel Tubing 2.4x5.5mm/3ft (BL)	2	GSC-24553TBL
184	Air Filter Foam	1	GSC-701017-1
185	Air Filter Outer Foam	1	GSC-701017-2
186	Air Filter Adapter	1	GSC-701017
187	Air Filter base	1	GSC-701017
188	Air Filter End Cap	1	GSC-701017
189	Zip tie 5X120	2	GSC-701017
190	Air Cleaner Sticker	1	GSC-701017
191	Carbon Fibre Radio tray	1	GSC-CLP002
194	Radio Tray Post (A)	1	GSC-CL047
195	Radio Tray Post (B)	1	GSC-CL047
196	Radio Tray Post (C)	1	GSC-CL047
197	Servo Mount	1	GSC-AV072
198	Brake Rod Support-Up	1	GSC-AV072
199	Brake Rod Support-Lower	1	GSC-AV072
200	Throttle Rod Support	1	GSC-AV072
201	Transponder Mount	1	GSC-AV089
202	Throttle Ball End	1	GSC-AV072
203	Steering Servo Linkage Ball End	2	GSC-CL049
204	Servo Horn Adapter,Black (KO,Sanwa,Air)	2	GSC-900007BK
205	Servo Horn Adapter,Black (J)	2	GSC-900007BK
206	Servo Horn Adapter,Black (F)	2	GSC-900007BK
207	Servo Horn Adapter,Black (H)	2	GSC-900007BK
208	Servo Horn (BK)	2	GSC-900007BK
209	Silicone Switch Cover	1	GSC-COV001TBL
210	Turnbuckle 3x40mm	1	GSC-250147C
211	5.8mm ball stud	2	GSC-CL049

# STORM CL-1 Advanced Key No. List

Team Kit Key No.	Part Name	Q'ty in Use	Item No.
212	Stoper (CU2)	4	GSC-AV072
213	Linkage Rod 2x55mm	3	GSC-AV072
214	Adjuster Knob #137	2	GSC-AV072
215	Servo Saver Spring	1	GSC-CL038
216	M3x10mm FH/ST HEX Screw	7	GSC-650203
217	FH3x14mm	2	GSC-620028
219	M2X15 RH	2	GSC-AV072
220	M2X33 BH	1	GSC-AV069
221	7075 Hard Anodized chassis plate	1	GSC-CLP001
222	Antenna (BK)	1	GSC-AV091
223	Tube Cap	1	GSC-AV091
224	CL-1 Body	1	GSC-CL052
225	Body Pin (R8)	2	GSC-80006
226	CL-1 Wing (WH)	1	GSC-CL050WH
228	CL-1 window masks	1	GSC-CL052
229	CL-1 Body decals	1	GSC-CL053
230	CL1 manual	1	GSC-CL054
231	Cross Wrench-7/8/10/17mm	1	GSC-706051
232	BH3x8mm	4	GSC-640022
233	Cross Wrench-4/5/5.5/7mm	1	GSC-706006
234	HEX Wrench (5mm)	1	GSC-706009
235	5000 cps Silicone oil	1	GSC-70023
236	7000 cps Silicone oil	1	GSC-70025
237	1000 cps Silicone oil	1	GSC-70019
238	35wt Silicone oil	1	GSC-700111
239	M3x10mm FH HEX Screw	9	GSC-620203
240	M3x14mm CAP Screw	4	GSC-611024
242	CL-1 Rear Wing Sticker	1	GSC-CL050WH
243	Grease 5g	1	GSC-707019
245	Linkage spring	1	GSC-AV072
250	M6.1x17.5xT0.3mm Steel Shim for Diff	6	GSC-CLP033
251	High Performance Diff. Case	3	GSC-CLP032
252	Lightend Front/Rear Diff. Outdrive	4	GSC-CLP030
258	CL-1 Aluminum Wing joint	3	GSC-CLP024
262	7075 T6 Front Lower Suspension Plate (5mm)	1	GSC-CLP014
282	1/8 Off Road Competition Wheel (WH)	4	GSC-100340WH
283	1/8 Spacer For TH-Servo	2	GSC-CLR010
284	Break Holder	2	GSC-CLR010
289	GS Professional Fuel Filter	1	GSC-250483
290	Front Sway Bar 2.5mm	1	GSC-CLP025
291	Front Sway Bar 2.7mm	1	GSC-CLP025

Team Kit Key No.	Part Name	Q'ty in Use	Item No.
292	Rear Sway Bar 2.6mm	1	GSC-CLP026
293	Rear Sway Bar 3.0mm	1	GSC-CLP026
294	Aluminum CNC Front Lower Arm Holder	1	GSC-CLP015
295	GS High Performance Aluminum 35mm Fly Wheel	1	GSC-CLP021
301	Lightend Center Diff. Outdrive	2	GSC-CLP029
302	CL-1 Advanced New Rear Hub - R	1	GSC-CLA005
303	10x19x5mm Ball Bearing	4	GSC-690031
304	CL-1 Advanced New Lightened Rear CVD	2	GSC-CLA007
305	CL-1 Advanced Front Lower Arms - R	1	GSC-CLA004
306	Stabilizer Ball, 5.8x11mm	4	GSC-ST046
307	Ball, 5.8x4.6mm	4	GSC-ST046
308	Set Screw 3x12mm	4	GSC-ST046
309	5.8mm Ball End, Short	2	GSC-ST046
310	5.8mm Ball End, Medium	2	GSC-ST046
311	CL-1 Advanced/XUT Series Steering Knuckle (L/R)	2	GSC-CLA001
312	CL-1 Advanced/XUT Series Steering Ball Stud Set	4	GSC-CLA003-1
313	CL Series Reversed Servo Savor Holder	1	GSC-CLA002
314	CL AD Series New Steering Bell Cranks A	1	GSC-CLA002-1
315	CL AD Series New Steering Bell Cranks B	1	GSC-CLA002-1
316	CL AD Series New Steering Bell Cranks C	1	GSC-CLA002-1
317	Servo Saver Adjustment Nut	1	GSC-CLA002
318	CL AD Series New Steering Ball End (Curve)	2	GSC-CLA003
319	Pro Break Calipers-L (200002+200003A)	2	GSC-XTP021
320	Pro Break Calipers-R (200002+200003A)	2	GSC-XTP021
321	Fuel Tank 122cc	1	GSC-CLP036A
322	CL AD Series New Radio Box (Bottom)	1	GSC-CLA008
323	CL AD Series New Radio Box (Cover)	1	GSC-CLA008
324	CL AD Series New Radio Box Insert	1	GSC-CLA008
325	CL AD Series New Receiver Box Switch Cover	1	GSC-CLA008
326	CL Series Transponder Extend Mount (Carbon)	1	GSC-CLA008
327	CL Series 16mm Shock Cap	4	GSC-CLA011-4
328	CL AD Series 16mm Shock Bladder	4	GSC-CLA011-5
329	CL Series 16mm Shock Piston (1.2mmX6Holes)	4	GSC-CLA011-9
330	CL Series 16mm Shock Piston (1.3mmX6Holes)	4	GSC-CLA011-10
331	CL Series 16mm Shock Piston (1.4mmX6Holes)	4	GSC-CLA011-11
334	CL Series 16mm Shock Body (S)	2	GSC-CLA011-1
335	CL Series 16mm Shock Body (L)	2	GSC-CLA011-2
336	CL Series 16mm Shock Shaft Mount	4	GSC-CLA011-6
337	CL Series 16mm Shock Spring Mount w/Adjustment	4	GSC-CLA011FS
338	P20 O-ring	4	GSC-CLA011RS
339	CL Series 16mm Shock O-ring Mount	4	GSC-CLA011RS

# STORM CL-1 Advanced Key No. List

Team Kit Key No.	Part Name	Q'ty in Use	Item No.
340	CL AD Series 16mm Shock Spring Mount	4	GSC-CLA011-3
341	CL AD Series 16mm Front Shock Spring (1.5mm) (FY)	2	GSC-CLA011-7
342	CL AD Series 16mm Front Shock Spring (1.6mm) (BL)	2	GSC-CLA011-7
343	CL AD Series 16mm Front Shock Spring (1.7P10) (FO)	2	GSC-CLA011-7
344	CL AD Series 16mm Rear Shock Spring (1.5mm) (FY)	2	GSC-CLA011-8
345	CL AD Series 16mm Rear Shock Spring (1.6mm) (BL)	2	GSC-CLA011-8
346	CL AD Series 16mm Rear Shock Spring (1.7P10) (FO)	2	GSC-CLA011-8

Team Kit Key No.	Part Name	Q'ty in Use	Item No.
347	CL-1 Advanced New Rear Hub - L	1	GSC-CLA005
348	CL-1 Advanced Front Lower Arms - L	1	GSC-CLA004
349	XUT/CL Series Knuckle Pivot Ball Washer (3mm)	2	GSC-XTP014
350	CL-1 46T Spur Gear	1	GSC-CLP037
351	CL-1 Advanced New Lightened Front CVD	2	GSC-CLA006
352	CL-1 Series New Rear Upper Linkage (M5X65mm)	2	GSC-CLA009
353	CL-1 Advanced/XUT Series Front Shock Stud	2	GSC-CLA010

# STORM CL-1 Advanced Spare Part List

Item No.	Part Name
GSC-CL002	Crown Gear 38T
GSC-CL003	Pinion Gear 11T
GSC-CL005	Differential Bulkhead Set (F/R)
GSC-CL006	Sway Bar Plate (4)
GSC-CL007	Front Bumper
GSC-CL012	Front Upper Suspension Arms (L/R)
GSC-CL013	Front Lower Suspension Arms (L/R)
GSC-CL014	Front Upper/Lower Arm Holder
GSC-CL015	CL-1 Camber, Caster Insert Set (2 Set)
GSC-CL016	Front/Rear Lower Hinge Pin (4)
GSC-CL017	Front Upper Arm Hinge Pin (2)
GSC-CL018	Front Sway Bar 2.3mm
GSC-CL020	Wing Stay Set
GSC-CL021	Rear Suspension Mount
GSC-CL022	Rear Lower Suspension Arms (L/R)
GSC-CL023	Rear Hub Carriers (L/R)
GSC-CL024	Rear Upper Sus. Arm Ball Ends Set
GSC-CL025	Body Mount Set (F/R)
GSC-CL026	Rear Chassis Brace Mount
GSC-CL027	Sway Bar Linkage Set (4)
GSC-CL028	Caster Insert Set
GSC-CL030	Rear Upper Sus. Arm Ball Stud Set
GSC-CL031	Rear Hub Carriers Hinge Pin (2)
GSC-CL032	Rear Sway Bar 2.8mm
GSC-CL033	Brake Cam Short
GSC-CL034	Brake Cam Long
GSC-CL035	Brake Calipers
GSC-CL037	Servo Saver Shafts

Item No.	Part Name
GSC-CL038	Servo Saver Nut/Spring
GSC-CL039	Servo Saver Steering Plate (w/bushings)
GSC-CL039A	Servo Saver Steering Plate bushings
GSC-CL041	6.8mm Steering Linkage Ball End (5)
GSC-CL045	Shock Cap Stud (4)
GSC-CL046	CL-1 Steering Linkage Turnbuckles
GSC-CL047	Radio Tray Post Set (A/B/C)
GSC-CL049	CL-1 Steering Servo Linkage Set
GSC-CL050WH	CL-1 Eagle Wing Set (WH) (w/Sticker)
GSC-CL052	CL-1 Body (includes window masks + decals)
GSC-CL053	CL-1 Decal Sheet
GSC-CL054	CL-1 Instruction Manual
GSC-CLA001	CL-1 Advanced/XUT Series Steering Knuckle (L/R)
GSC-CLA002	CL-1 Advanced/XUT Series Servo Saver
GSC-CLA002-1	CL-1 Advanced/XUT Series Servo Saver Steering Bellcranks (A/B/C)
GSC-CLA003	CL-1 Advanced/XUT Series Steering Ball End Set
GSC-CLA003-1	CL-1 Advanced/XUT Series Steering Ball Stud Set
GSC-CLA004	CL-1 Advanced Front Lower Arms
GSC-CLA005	CL-1 Advanced New Rear Hub
GSC-CLA006	CL-1 Advanced New lightened Front CVD (2pc)
GSC-CLA007	CL-1 Advanced New lightened Rear CVD (2pc)
GSC-CLA008	CL-1 Advanced/XUT Series New Receiver Box
GSC-CLA009	CL-1 Series New Rear Upper Linkage (M5X65mm)
GSC-CLA010	CL-1 Advanced/XUT Series Front Shock Stud
GSC-CLA011-1	CL-1 Advanced/XUT Series 16mm Big Broad Shock Body (S)
GSC-CLA011-2	CL-1 Advanced/XUT Series 16mm Big Broad Shock Body (L)
GSC-CLA011-3	CL-1 Advanced/XUT Series 16mm Big Broad Shock Spring Holder
GSC-CLA011-4	CL-1 Advanced/XUT Series 16mm Big Broad Shock Caps

# STORM CL-1 Advanced Spare Part List

Item No.	Part Name
GSC-CLA011-5	CL-1 Advanced/XUT Series 16mm Big Broad Shock Bladder
GSC-CLA011-6	CL-1 Advanced/XUT Series 16mm Big Broad Shock Seal Kit
GSC-CLA011-7	CL-1 Advanced/XUT Series 16mm Big Broad Front Shock Spring Set
GSC-CLA011-8	CL-1 Advanced/XUT Series 16mm Big Broad Rear Shock Spring Set
GSC-CLA011-9	CL-1 Advanced/XUT Series 16mm Big Broad Shock Piston Set
GSC-CLA011-10	CL-1 Advanced/XUT Series 16mm Big Broad Shock Piston Set
GSC-CLA011-11	CL-1 Advanced/XUT Series 16mm Big Broad Shock Piston Set
GSC-CLA011FS	CL-1 Advanced/XUT Series 16mm Big Broad Front Shock System
GSC-CLA011RS	CL-1 Advanced/XUT Series 16mm Big Broad Rear Shock System
GSC-CLP001	CL-1 Main Chassis Pro (7075 T6 Hard Anodized)
GSC-CLP002	Carbon Fiber Radio Tray
GSC-CLP003	Carbon Fiber Front Support Plate
GSC-CLP004	7075 T6 Front Shock Tower
GSC-CLP005	7075 T6 Rear Shock Tower
GSC-CLP006	Aluminum Front Chassis Brace
GSC-CLP007	Aluminum Rear Chassis Brace
GSC-CLP008	Aluminum Rear Anti-Squat Mount
GSC-CLP009	Front Center CVD Drive Shaft (1)
GSC-CLP010	Rear Center CVD Drive Shaft (1)
GSC-CLP011	14mm Knuckle Pivot Ball (4) (Al hard coding)
GSC-CLP012	14mm Knuckle Pivot Ball Turnbuckles (4)
GSC-CLP013	7075 T6 Engine Mounts (fits all .21/.25 engines)
GSC-CLP014	7075 T6 Front Lower Suspension Plate (5mm)
GSC-CLP015	Aluminum CNC Front Lower Arm Holder
GSC-CLP021	GS High performance Aluminum 35mm Fly Wheel Set
GSC-CLP024	CL-1 Aluminum Wing joint Set
GSC-CLP025	Front Sway bar Set (2.3mm/2.5mm/2.7mm)
GSC-CLP026	Rear Sway bar Set (2.6mm/2.8mm/3.0mm)
GSC-CLP029	Lightend Center Diff. Outdrive
GSC-CLP030	Lightend Front/Rear Diff. Outdrive
GSC-CLP032	High Performance Diff. Case
GSC-CLP033	M6.1x17.5xT0.3mm Steel Shim for Diff
GSC-CLP034	13mm Pro Shock Spring Set (S-FY/H-FO) (8pcs)
GSC-CLP036A	New 1/8 Off Road Fuel Tank 122cc
GSC-CLP037	CL-1 46T Spur Gear
GSC-CLR010	1/8 Spacer for TH-Servo/Break Holder
GSC-AV004	Diff. Bevel Gear Set
GSC-AV006	Diff. Gasket (3)
GSC-AV008	Center Diff. Mount Set
GSC-AV009	Center Diff. Mount Shaft Set (4)
GSC-AV024	Knuckle Pivot Ball Washer (5)

Item No.	Part Name
GSC-AV025	Knuckle Pivot Ball Nut (5)
GSC-AV026	14mm Pivot Ball Cup (5)
GSC-AV069	Radio Box Set
GSC-AV072	Throttle Linkage Set
GSC-AV084	Sway Bar Collar 6.8x11.8mm (4)
GSC-AV085	Ball 6.8x5.2mm (4)
GSC-AV089	Transponder Mount
GSC-AV091	Pro Antenna (Black) (2)
GSC-AV092	Fuel Tank Post Set (A/B)
GSC-AV094	Pin 2.5x10.8mm
GSC-AV095	Bevel Gear Shaft
GSC-AV098	Washer 12x8.2x0.5mm
GSC-AV099	Washer 3x8x0.5mm
GSC-AV105	Shock spring Cup (Upper)
GSC-AVP005	Carbon Fiber Center Diff Support Plate
GSC-AVP030	Vented Pro Brake Disk (2)
GSC-ST001	Cluth Bell ,13T
GSC-ST002A	Cone Collar
GSC-ST003	Clutch Spring
GSC-ST032	Pilot Nut
GSC-ST046	Sway Bar Linkage Set
GSC-ST059	Side Guard Set (for STORM / CL-1)
GSC-ST065	Clutch Shim, 5x7x0.3mm (10)
GSC-ST067	O-Ring, AS009 (6)
GSC-ST071	Muffler Holder Set
GSC-ST078	Manifold Spring Holder Set
GSC-ST082	13.4x16x0.2mm Shim (10)
GSC-ST105	Storm/SUT 2.5mm Shock Locknut kit (10 pcs)
GSC-STP042	Hard Anodized Wheel Nut (4)
GSC-STP20	Hard Anodized Wheel Hub & Nut Set (2)
GSC-XTP014	XUT/CL Series Knuckle Pivot Ball Washer (3mm/4mm)
GSC-XTP021	1/8 Off Road High Performance Disk Break Pad Set
GSC-100082	Shock Shaft Ball End (5)
GSC-100340WH	1/8 Off Road Competition Wheel (WH)
GSC-10065	Pro Shock Seal Kit (for 3.5mm shock shaft)
GSC-10066	13mm Shock Piston - (2 hole x 1.5mm)
GSC-24553TBL	Silicone Fuel Tubing 2.4x5.5mm/3ft (BL)
GSC-250147C	Turnbuckle Rod - 3x40mm (2)
GSC-250404	1/8 Aluminum Clutch Shoes (1 Set)
GSC-250483	GS Professional Fuel Filter Set
GSC-25081	Front 3.5mm Shock Shaft (2)



# MEMO

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## Warranty

Your Storm CL-1 Advanced warranty covers workmanship and manufacturing defects of the original and unmodified parts. Warranty claims resulting from crashes, abuse, improper operation, improper mounting, improper adjustment or lack of maintenance will not be honored.

Contact your local hobby shop or GS distributor for all claims and questions. Claims must be well documented. All Claims are subject to expert examination approval by **GS RACING**

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