



OWNER'S MANUAL



- Ⓛ Carefully read through all instructions to familiarize yourself with the parts, construction techniques, and tuning tips outlined in this manual. Being able to grasp the overall design of your new XXX-NT Sport racing truck before beginning the construction process will ensure a smooth assembly.
- Ⓛ Take your time and pay close attention to detail. Keep this manual for future reference.



Always Racing Towards The Future.

Team Losi, a division of Horizon Hobby, Inc.

4710 E. Guasti Road Ontario, CA 91761

phone: (909)390-9595 • fax: (909)390-5356

www.TeamLosi.com • feedback@TeamLosi.com

P/N 800-0182

WELCOME XXX-NT SPORT OWNER!

Thank you for choosing the Team Losi XXX-NT Sport as your vehicle to enjoy the exciting world of nitro powered all-terrain racing. The XXX-NT Sport is the result of hundreds of hours of computer-aided design and on-track testing by our world champion development team. The XXX-NT Sport represents the latest in technology and meets the unique demands of nitro powered off-road racing.

Since fuel powered models tend to require greater mechanical tuning ability, it is important that you read through this manual completely before beginning assembly. A little extra time now will save building time and help get your new truck running sooner. You will find that our unique bag-by-bag assembly is both quick and easy to follow. You will also notice that we have included a separate tip section along with helpful hints throughout this manual to help you tune your XXX-NT Sport and maximize your enjoyment of this model.

Once again, thank you for making a wise choice... the XXX-NT Sport.

Team Losi

1. INTRODUCTION

XXX-NT SPORT COMPLETED DIMENSIONS

Length: 16-1/2"

Front Width: 12-3/4"

Rear Width: 12-3/4"

Height: 5-1/4"

Wheel base: 11-1/4"

All dimensions at ride height.

Weight will vary depending on accessories.

NOTES & SYMBOLS USED

Figure 1

This is a common figure number found at the beginning of each new illustration throughout the manual.

Step 1. - Each step throughout the entire manual has a check box to the left of it. As you complete each step, mark the box with a check. If you need to take a break and return to building at a later time you will be able to locate the exact step where you left off.

**NOTE: This is a common note. It is used to call attention to specific details of a certain step in the assembly.*



IMPORTANT NOTE: Even if you are familiar with Team Losi kits, be sure and pay attention to these notes. They point out very important details during the assembly process. Do not ignore these notes!

Tip: This designates a performance tip. These tips are not necessary, but can improve the performance of your XXX-NT Sport truck.



In illustrations where it is important to note which direction parts are pointing, a helmet like this one will be included in the illustration. The helmet will always face the front of the car. Any reference to the right or left side will relate to the direction of the helmet.

KIT/MANUAL ORGANIZATION

The XXX-NT Sport is composed of different bags marked A through F. Each bag contains all of the parts necessary to complete a particular section of the truck. 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 sequence, otherwise you may face difficulties in finding the right part. It is helpful to read through the instructions for an entire bag prior to starting assembly. Key numbers (in parentheses) have been assigned to each part and remain the same throughout the manual. In some illustrations, parts which have already been installed are not shown so that the current steps can be illustrated more clearly.

For your convenience, an actual size hardware identification guide is included with each step. To check a part, hold it against the silhouette until the correct part is identified. In some cases extra hardware has been supplied for parts that may be easy to lose.

The molded parts in the XXX-NT Sport are manufactured to demanding 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.

To insure 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. *The parts in the kit are small and can be swallowed by children, causing choking and possible internal injury.*
2. The shock fluid and greases supplied should be kept out of children's reach. *They were 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 glues, fuel, or paints that may be used for assembly and operating purposes.
5. Gas powered vehicles should not be operated indoors.
6. Be careful when handling your truck after it has been run for any period of time. The engine and many parts can get extremely hot during operation.

TOOLS REQUIRED

Team Losi has supplied all Allen wrenches and a special wrench that is needed for assembly and adjustments. The following common tools will also be required: Small flatblade screwdriver, Phillips screwdriver, needle nose pliers, regular pliers, scissors, or other body cutting/trimming tools. 3/16", 1/4", 5/16", and 3/8" nut drivers are optional.

RADIO/ELECTRICAL

A suggested radio layout is provided in this manual. Your high performance R/C center should be consulted regarding specifics on radio/electrical equipment. However, we recommend using a steering servo with a minimum of 50 oz-in of torque.

HARDWARE IDENTIFICATION

When in question, use the hardware identification guide in each step. For screws, the prefix number designates the screw size and number of threads per inch (i.e., 4-40 is #4 screw with 40 threads per inch of length). The fraction following designates the length of the threads for cap head screws, and the overall length for flathead screws. Bearings and bushings are referenced by the inside diameter x outside diameter. Shafts and pins are diameter x length. Washers are described by inside diameter or the screw size that will pass through the inside diameter. E-clips are sized by the shaft diameter that they are attached to.

FUEL

The fuel used to power the XXX-NT Sport truck is a special blend of methanol, oils, and nitromethane. This fuel is highly flammable and should be treated with extreme caution. Be sure to read any warnings and cautions that appear on the packaging of the fuel. Because exhaust fumes are produced from running fuel powered models, this model should not be operated indoors. Be careful when handling your truck while the motor is running. Avoid pointing the exhaust outlet towards your face. The exhaust fumes can cause irritation and burning of the eyes.

There are a number of different brands of model fuels available. We have found that fuels specially blended for R/C car use like Blue Thunder, Trinity, and Orion perform better than common model airplane or helicopter fuels. Model airplane fuels usually do not have the proper type or amount of oil needed for the extreme demands of R/C car racing.

FUEL BOTTLE

You will need some sort of a fuel bottle in order to fill the tank in your XXX-NT Sport with fuel. Your local hobby shop should have fuel bottles available.

STARTERS

If you will be installing an engine that is not equipped with a pull-start, you will need to have some sort of an electric starter in order to start the engine. There are several hand-held electric starters available on the market. There are also a few manufacturers that produce starter boxes. A starter box is easier to use, but is usually more expensive. When attempting to start the engine in your truck with an electric starter, make certain that the engine is being turned the correct direction (counter-clockwise). Turning the engine over the wrong direction will cause the engine to not start or possibly run backwards.

GLOWIGNITER

You will also need a glow plug igniter in order to start the engine in your XXX-NT Sport. There is a wide variety of glow plug igniters available. Check with your local hobby shop.

TABLE OF CONTENTS

1. INTRODUCTION	i	2. BAG A	1-6
Completed Kit Dimensions	i	3. BAG B	7-11
Notes & Symbols	i	4. BAG C	12-21
Kit Manual Organization	i	5. BAG D	22-26
Important Safety Notes	i	6. BAG E	27-30
Tools Required	i	7. BAG F	31
Radio/Electrical	ii	8. Engine Installation	32-39
Hardware Identification	ii	9. Radio Installation	40-51
Fuel	ii	10. Final Assembly	52
Fuel Bottle	ii	11. Final Checklist	53
Starters	ii	12. Tips from the Team	53-55
Glow Igniter	ii	13. Spare parts	56-59

Team Losi is continually changing and improving designs; therefore, the actual part may appear slightly different than the illustrated part. Illustrations of parts and assemblies may be slightly distorted to enhance pertinent details.

BAG A

Figure 1



⑥

Step 1. Place the servo saver bottom (1) over the servo saver post (2) and slide the servo saver bottom all the way against the hex at the opposite end. Be sure that the hex on the servo saver post (2) is inserted into the hex in the servo saver bottom (1).

Step 2. Slide the servo saver top (3) down over the servo saver post (2) so that the 'V' area of the servo saver top (3) rests in the 'V' area of the servo saver bottom (1). The arm on the servo saver top (3) and the arm on the servo saver bottom (1) should point in opposite directions as shown in Figure 1.

Step 3. Slide the servo saver spring (4) over the servo saver post (2) and push it into the recessed area of the servo saver top (3). Install the servo saver spring cap (5) and thread the 6-40 locknut (6) onto the end of the servo saver post (2).

Step 4. Tighten the 6-40 locknut (6) all the way down and then loosen it two full turns (e.g. 360° x 2). This is a good starting point for the adjustment. Once assembly is complete, if you wish, the servo saver can be adjusted tighter or looser.

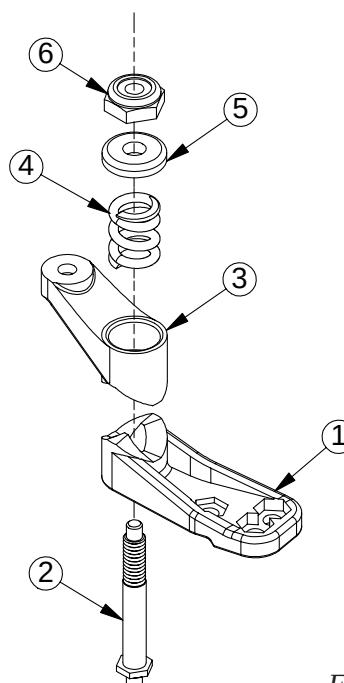


Figure 1

Figure 2



⑦

Step 5. Insert a 4-40 mini locknut (7) into the outer hex area in the servo saver bottom (1) and steering idler arm (8) as shown in Figure 2. Thread a 3/16" ball stud (11) through the outside hole in each arm, into the nuts (7), and tighten. Insert a 4-40 mini locknut (7) into the hex area in the servo saver top (3). Thread a 3/16" ball stud (11) through the hole in the arm, into the nut (7), and tighten.

Step 6. Insert a 4-40 mini locknut (7) into the hex areas in the rear of the servo saver bottom (1) and the steering idler arm (8) as shown in Figure 2. Thread a 3/16" ball stud (11) through the arms, into each nut (7), and tighten.

Tip: Once assembly of your new XXX-NT is complete, you may notice that the tires toe in slightly as the suspension compresses. We have found this setting to yield the best performance. Should you prefer to change this so that the tires do not toe in, you can add one ball stud washer under the ball studs on the outside of the servo saver assembly and steering idler arm. To accomplish this, you will want to replace the 3/16" ball studs with 1/4" ball studs.

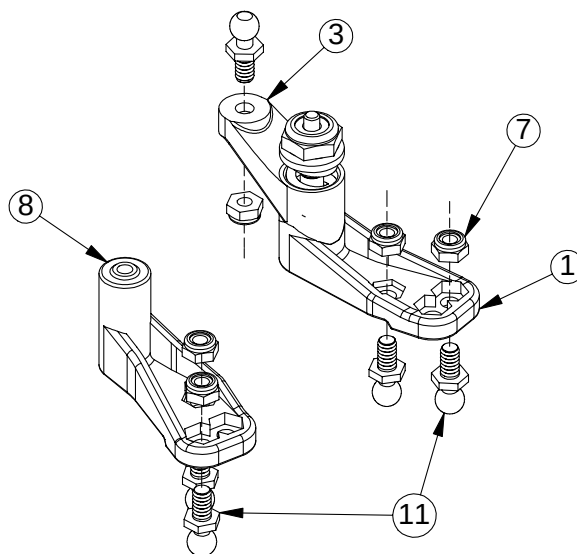


Figure 2

Figure 3



⑪

Step 7. Snap one end of the steering drag link (12) to the rear ball stud (11) on the servo saver bottom (3). Snap the other end to the rear ball stud (11) on the steering idler arm (8).

***NOTE:** Be sure to snap the rod onto the correct ball studs as shown!

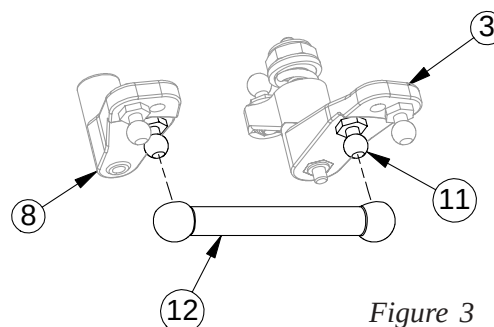
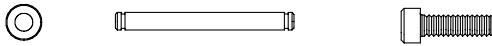


Figure 3

BAG A (Continued)

Figure 4



(13)

(16)

(17)

Step 8. Insert a 3/32" x 3/16" plastic bushing (13) into the two large, angled holes in the bottom of the front kickplate (14). Insert the other two bushings (13) into the two outer holes in the steering brace (15).

Step 9. Insert a 3/32" x .930" hinge pin (16) through the hole in the steering idler arm (8) and center the pin (16) in the idler arm (8). Place the servo saver assembly and the steering idler arm (8) into the bushings (13) in the kickplate (14) so that the installed drag link is to the front as shown in Figure 4.

Step 10. Place the steering brace (15) on top of the servo saver assembly and steering idler arm (8) ensuring that the bushings (13) slide over the pins.

Step 11. Secure the steering brace (15) to the kickplate (14) using two 4-40 x 3/8" cap-head screws (17).

Tip: There is a short thread-cutting screw included in the wrench bag. This screw can be used to tap threads in the holes in the kickplate. Pre-tapping these holes makes it easier to install the screws during assembly.

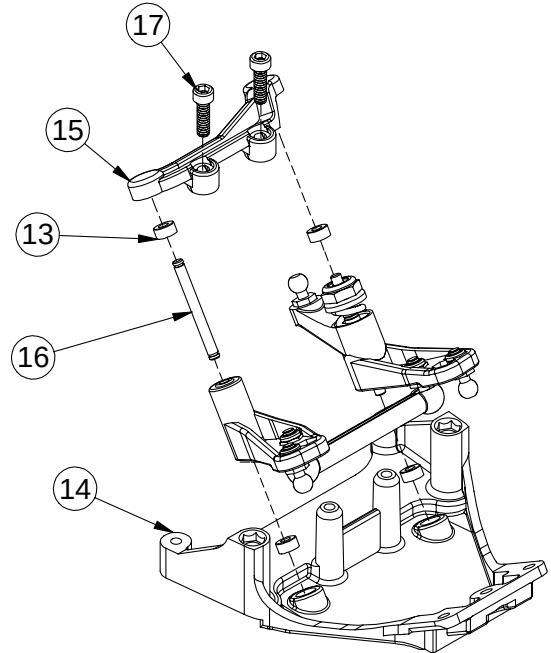


Figure 4

Figure 5



(18)

Step 12. Install a threaded insert (18) into the top of each of the two forward holes in the kickplate (14). The inserts should be installed with the hex-side up as shown in Figure 5. Press the threaded inserts (18) all the way into the holes in the kickplate (14), lining up the hex on the inserts (18) with the hex in the holes.

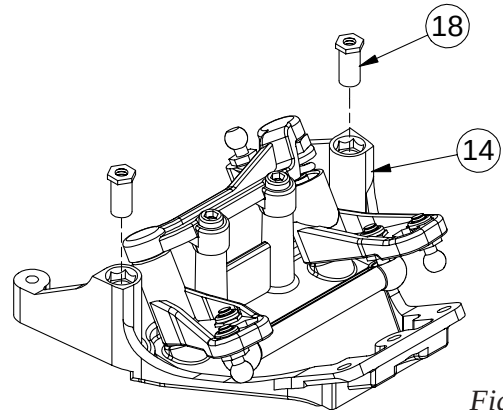


Figure 5

Figure 6



(20)

(21)

Step 13. Attach the front kickplate (14) to the bottom of the main chassis (19). Align the four holes in the kickplate (14) with the four holes in the main chassis (19). Secure the kickplate (14) to the chassis (19) by threading two 4-40 x 5/8" flat-head screws (21) through the forward holes and into the threaded inserts (18). Thread two more 4-40 x 3/8" (20) flat-head screws through the two rear holes of the chassis (19) and into the kickplate (14).

! IMPORTANT NOTE: Ensure that the hex of the threaded insert remains seated in the hex area on top of the kickplate.

Tip: There is a short thread-cutting screw included in the wrench bag. This screw can be used to tap threads in the holes in the kickplate. Pre-tapping these holes makes it easier to install the screws during assembly.

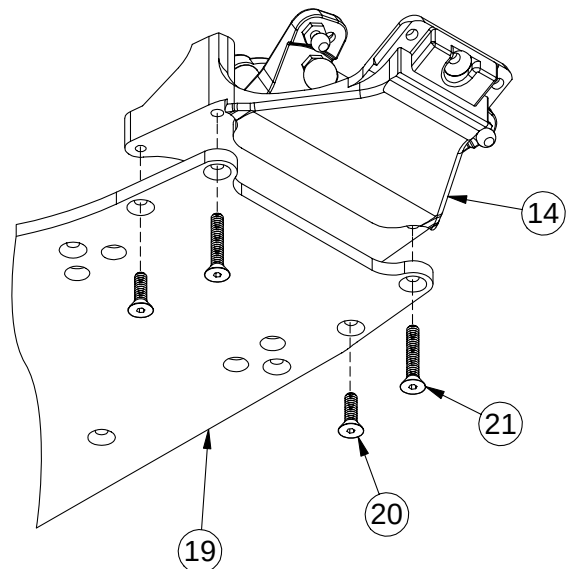


Figure 6

BAG A (Continued)

Figure 7

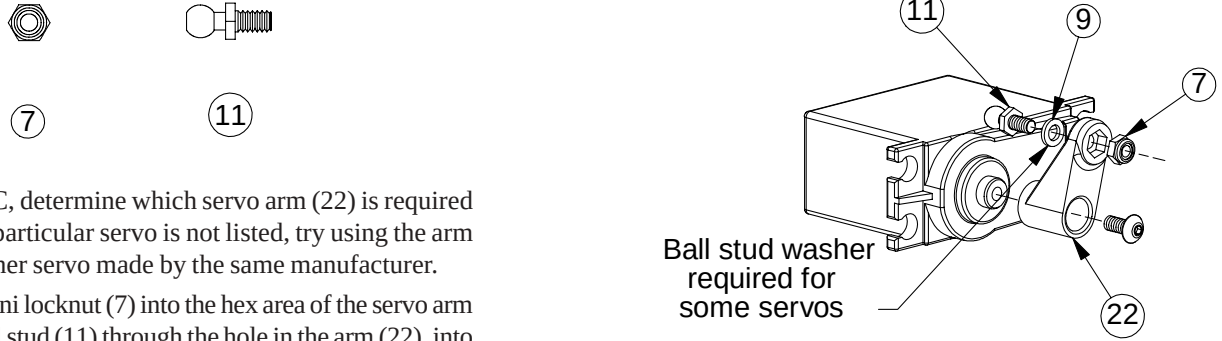


Figure 7

Step 14. Using Table 7C, determine which servo arm (22) is required for your servo. If your particular servo is not listed, try using the arm recommended for another servo made by the same manufacturer.

Step 15. Insert a 4-40 mini locknut (7) into the hex area of the servo arm (22). Thread a 3/16" ball stud (11) through the hole in the arm (22), into the locknut (7), and tighten.

Step 16. Plug the servo into the radio system's receiver (*not included*). Make sure that there is power to the receiver, and turn the transmitter on followed by the receiver. Be sure that the trim settings for the steering on your transmitter are set to the center. With the radio system still turned on, attach the servo arm (22) to the output shaft so that the arm is one spline off center in the direction shown in Figure 7A. Secure the arm (22) with the servo arm screw supplied with the servo.

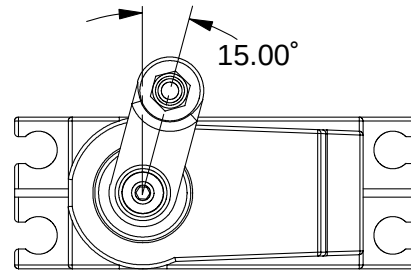


Figure 7A

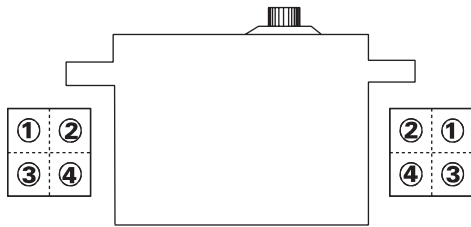


Figure 7B

**Note: Posts are not to scale.*

Position of pin on servo mount post	
1	Forward away from servo
2	Forward next to servo
3	To rear away from servo
4	To rear next to servo

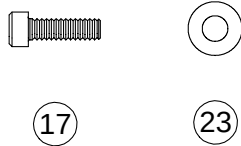
SERVO TYPE	MOUNTING POST PIN LOCATION	REQUIRED SERVO ARM	STEERING LINK LENGTH	THROTTLE SERVO POSTS
Airtronics All	3	23	10A	NARROW
Futaba S131, S131SH, S148, S3001, S3003, S5101, S9101, S9201, S9301, S9304, S9401, S9403	2	25	10A	WIDE
Futaba S3401, S9402, S9404, S9450	3	25	10A	NARROW
Futaba S9303	4**	25	10A	WIDE
HiTech HS-605, HS-615, HS-925, HS-945	3**	24	10B	NARROW
HiTech All others	1	24	10B	NARROW
JR NES-507, NES-513, NES-517, NES901, NES-4000, NES-4131, NES-4721, NES-4735, NES-9021, DS-8231	1	23	10A	NARROW
KO PS-702, PS-703, PS-1001, PS-1003	2	23	10A	WIDE
KO PS-901BH, PS-902	1	23	10A	NARROW
Multiplex All	3	23	10A	NARROW

***Use 1 ball stud washer on the ball stud when attaching it to the servo arm*

Figure 7C

BAG A (Continued)

Figure 8



Step 17. Use the tables in Figure 7B and 7C (on the previous page) to determine how the servo mounting posts (24) should be attached to the servo (*not included*).

Tip: Trim any flashing from the pins on the mounting posts so that they will seat all the way into the holes in the chassis brace and chassis.

Step 18. Place a #4 washer (23) over each of the four 4-40 x 3/8" cap-head screws (17) and attach the servo posts (24) to the servo by threading a screw (17) through the upper and lower holes in each post (24). Do not tighten the screws (17) yet! Just snug them up so that the posts are held in place, but can still be moved from side to side with a little resistance. The screws (17) will be tightened after the servo is installed so that the posts (24) have the correct spacing.

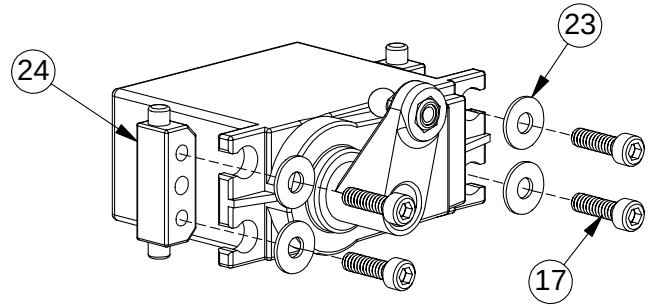


Figure 8

Figure 9

Step 19. Install the steering post bushings (25) into the forward holes in the chassis (19) as shown in Figure 9. Insert the pin on the left servo post (24) into the hole in the servo post bushing (25). Move the servo and posts (24) slightly until both the left and right posts (24) are inserted in the holes in the servo post bushings (25). Make sure both servo mounting posts (24) are perpendicular to the chassis, and tighten down all four servo mounting screws (17).

Tip: There are two sets of servo mounting holes in the chassis. Mounting the servo in the forward set of holes will give the best overall performance. However, the servo may be mounted in the rear set of holes to increase rear traction and improve handling on very slippery tracks. If the servo is mounted in the rear holes, you must reverse the ball stud in the servo arm so that the ball points forward.

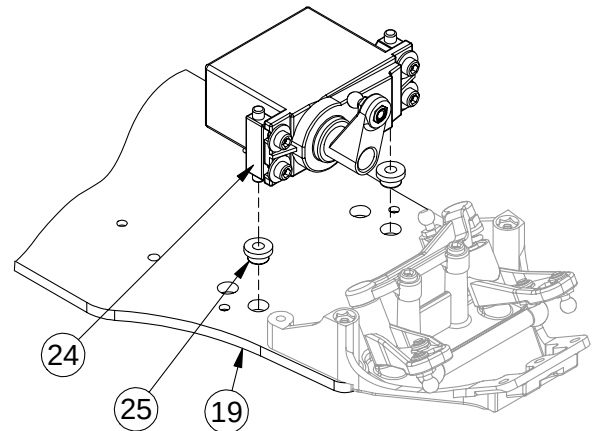
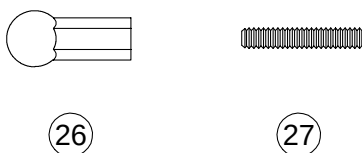


Figure 9

Figure 10



Step 20. Thread a short plastic rod end (26) onto each end of the 4-40 x 5/8" threaded rod (27).

Step 21. Refer to table in Figure 7C (on the previous page) to determine the appropriate rod length for the servo that is installed. Tighten both sides equally until the rod is the same length as the one shown in Figure 10A or 10B.

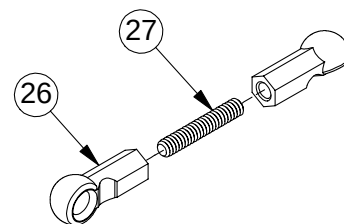


Figure 10

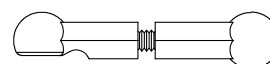


Figure 10A

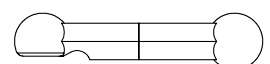


Figure 10B

BAG A (Continued)

Figure 11

Step 22. Attach one end of the rod to the ball stud (11) in the servo arm (22) and the other to the ball stud (11) in the servo saver top (3) as shown in Figure 11.

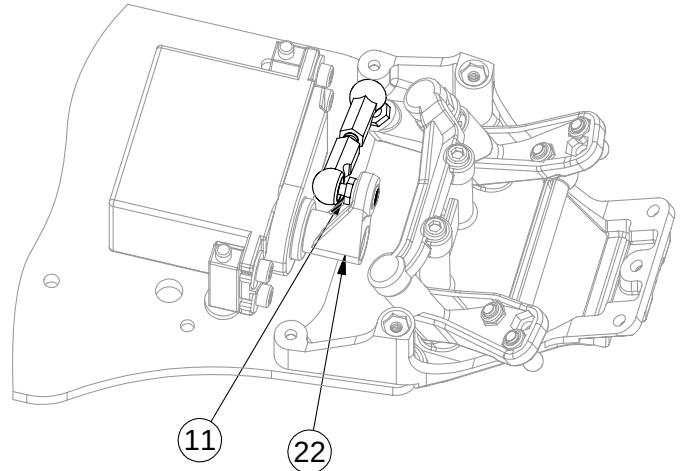
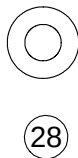


Figure 11

Figure 12



Step 23. Press a rubber tank-mounting grommet (28) into each of the three large holes in the top of the chassis brace (29) as shown. The grommets (28) should be centered, top-to-bottom, in the holes of the chassis brace.

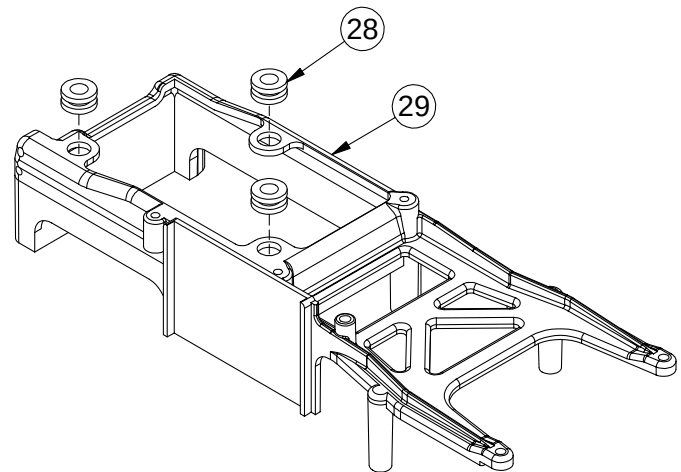
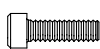


Figure 12

Figure 13



Step 24. Line up the three posts on the fuel tank (30) with the three holes with grommets in the chassis brace (29). Install the fuel tank (30) on the chassis brace (29) from the bottom by pressing the three posts on the tank (30) through the three rubber grommets (28).

Step 25. Place a #4 washer (23) over each of the three 4-40 x 3/8 inch cap-head screws (17). Thread a screw (14) through each of the grommets (28) and into the posts in the fuel tank (28). Hold the tank (30) all the way up against the chassis brace (29). Tighten each of the three screws (14) until the washer (23) just touches the grommet (28).

**NOTE: The screws should not be tightened so that grommet smashes. By tightening the screws until the washers just touch the grommets, the tank will be "shock mounted". This helps the fuel from foaming while running the truck.*

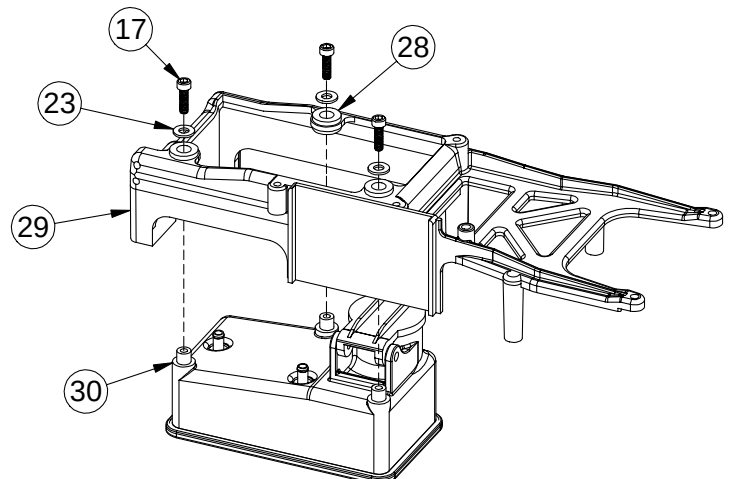


Figure 13

BAG A (Continued)

Figure 14



(20)

Step 26. Place the chassis brace (29) on top of the chassis (19). Pay particular attention to the servo posts (24). The pins in the top of the servo posts (24) should fit into the two holes in the chassis brace (29). Once the chassis brace (29) is lined up and in place, secure it to the chassis (19) with six 4-40 x 3/8" flat-head screws (20) as shown.

**NOTE: Make sure that the pins on the top and bottom of the servo posts stay located in the holes in the servo post bushings and chassis brace, and that the servo is as close to centered between the two servo posts as possible.*

Tip: There is a short thread-cutting screw included in the wrench bag. This screw can be used to tap threads in the holes in the top chassis brace. Pre-tapping these holes makes it easier to install the screws during assembly.

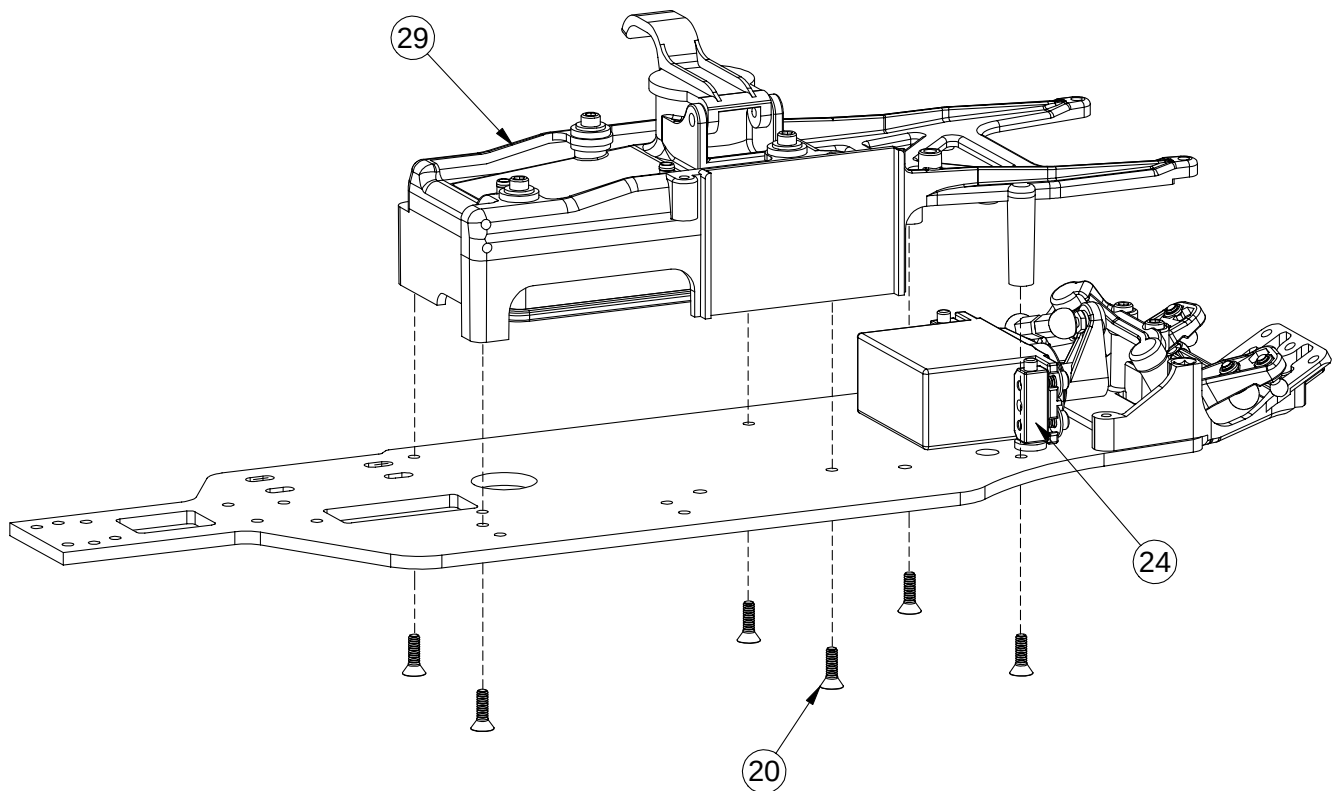


Figure 14

BAG B

Figure 15

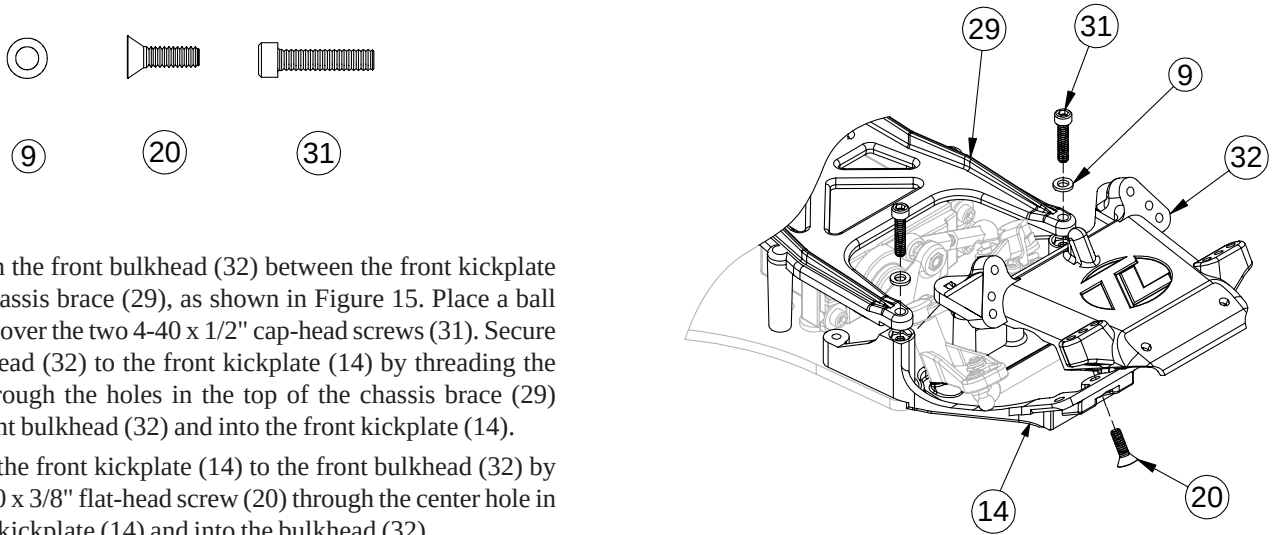


Figure 15

Figure 16

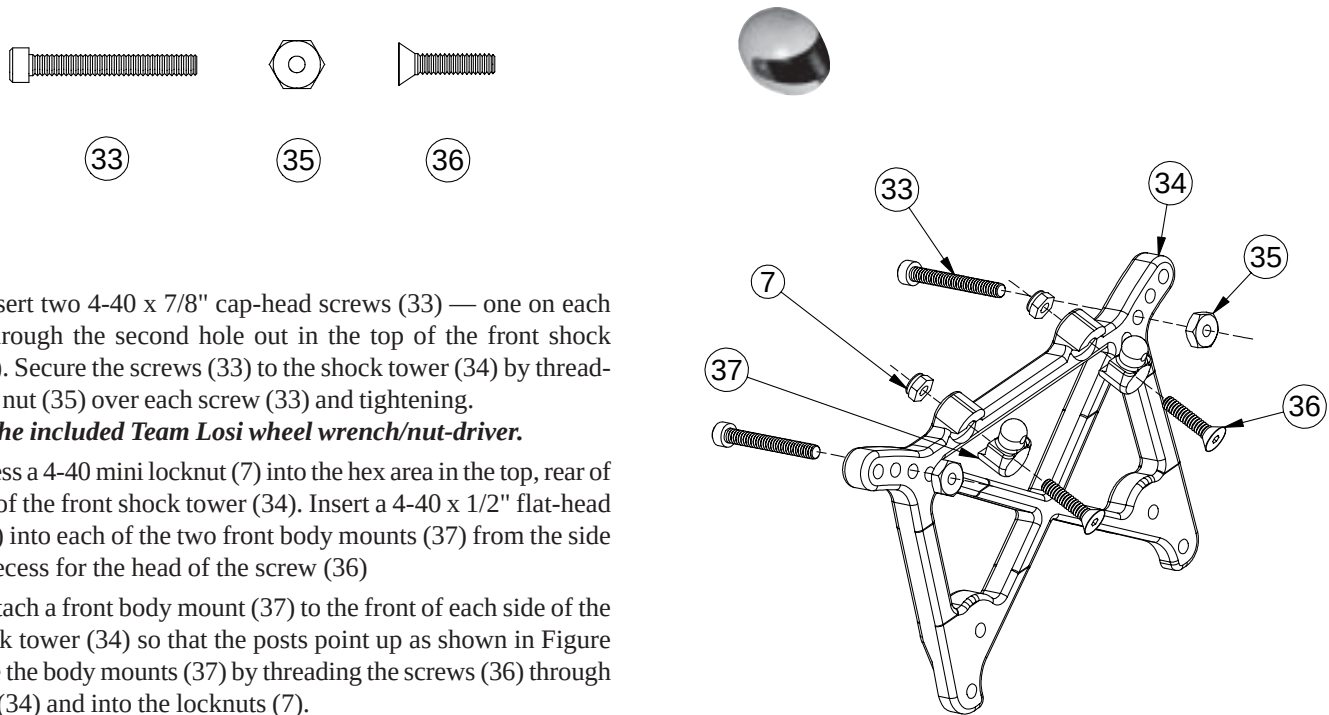
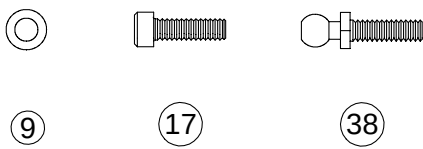


Figure 16

BAG B (Continued)

Figure 17



Step 6. Attach the front shock tower (34) to the front bulkhead (32) with four 4-40 x 3/8" cap-head screws (17). The screws (17) thread into the top-most and bottom-most holes in the bulkhead (32). The center holes are not used.

! IMPORTANT NOTE: The screws in the top of the shock tower must be pointing forward as shown in Figure 17.

Step 7. Place a ball stud washer (9) over each of the two 3/8" ball studs (38). Thread a 3/8" ball stud (38) into the center hole on each side of the front bulkhead (32).

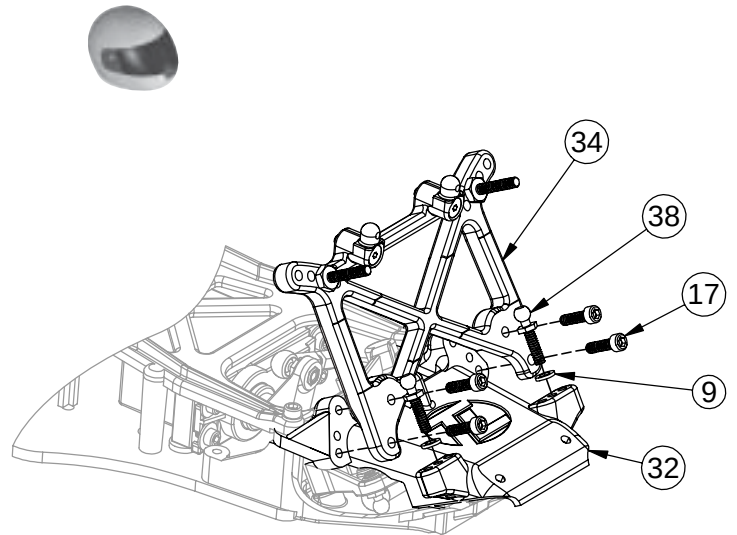
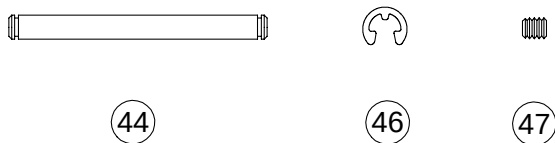


Figure 17

Figure 18



Step 8. Insert a front axle (39) into each of the front spindles [right (40), left (41)] as shown. The hole in the axle (39) should line up with the hole in the spindle (40), (41).

Step 9. Attach the right spindle (40) to the right spindle carrier (42) by aligning the holes in each part and inserting a 1/8" x 1.250" king pin (44) from the bottom. Do not insert the pin all the way through both parts yet.

Step 10. Insert a front spindle spacer (45) between the top of the spindle (40) and the spindle carrier (42) as shown in Figure 18. Once the spacer (45) is in place, insert the king pin (44) through the spacer (45) and the top of the spindle carrier (42).

Step 11. Center the king pin (44) and secure it with two 1/8" E-clips (46). With the king pin (44) still centered, thread a 5-40 setscrew (47) into the back side of the axle (39) and tighten.

Step 12. Repeat Steps 8-11 for the left spindle (41) and left spindle carrier (43).

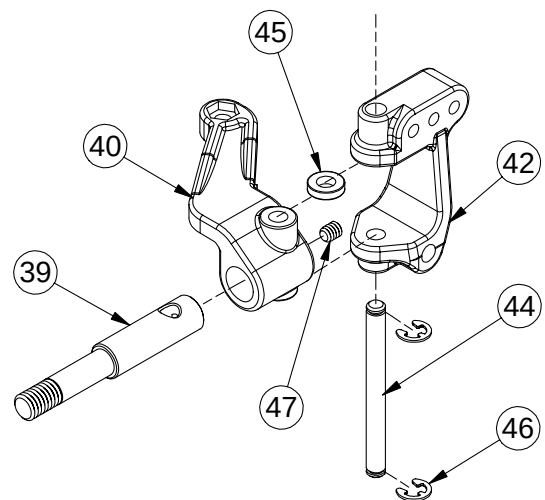
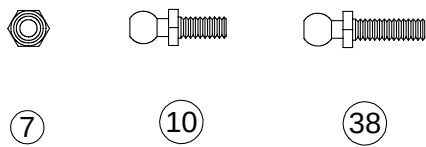


Figure 18

BAG B (Continued)

Figure 19



Step 13. Insert a 3/8" ball stud (38) into the middle hole on top of each spindle carrier (42), (43) from the front as shown, and tighten.

⚠ IMPORTANT NOTE: Do not overtighten the ball studs!

Step 14. Insert a 4-40 mini locknut (7) into the hex area in the top of each spindle (40), (41). Thread a 1/4" ball stud (10) into the nut from the bottom of the spindle (40), (41) and tighten.

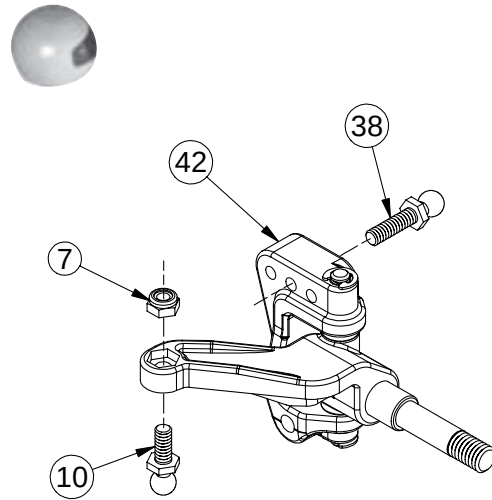
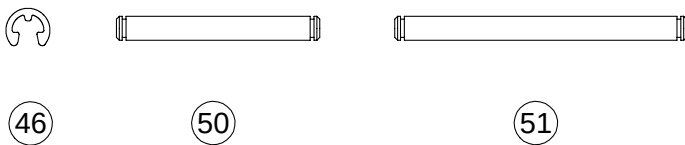


Figure 19

Figure 20



Step 15. Attach the right spindle and carrier assembly to a front suspension arm (48) as shown in Figure 20. Note that the spindle arm faces the side of the suspension arm (48) with the shock mount holes (rear) and the ball stud pointing forward. Line up the holes in the spindle carrier (42) with the holes in the front arm (48), insert a 1/8" x .960" hinge pin (50) and attach a 1/8" E-clip (46) to both sides of the hinge pin (50).

Step 16. Attach the arm (48) to the right side of the front pivot block (49) by inserting a 1/8" x 1.42" hinge pin (51), from the front, through the arm (48) and pivot block (49) as shown in Figure 20.

Step 17. Insert a 1/8" E-clip (46) in the groove in the rear of the hinge pin (51) only.

Step 18. Repeat Steps 15-17 for the left spindle and carrier assembly and remaining front suspension arm (48).

Step 19. Slide the front hinge pin brace (52) over the front of both inner hinge pins (51). The E-clip grooves in both hinge pins (51) should be exposed in front of the brace (52). Secure the brace (52) by attaching a 1/8" E-clip (46) to the front of each hinge pin (51).

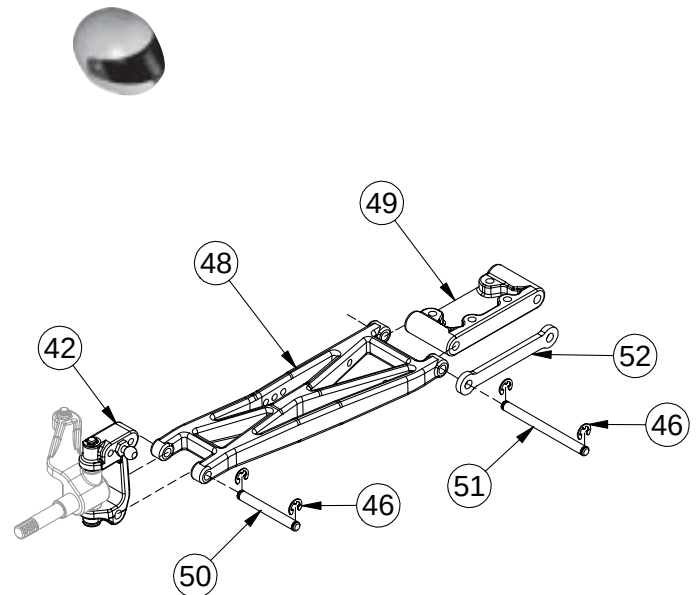


Figure 20

BAG B (Continued)

Figure 21



(21)

Step 20. Hold the chassis assembly upside down. Place the front pivot block (49) over the front edge of the front kick plate (14) as shown in Figure 21. The front lip of the front bulkhead (32) should be positioned in the space between the front pivot block (49) and the aluminum hinge pin brace (52).

Step 21. While holding the front suspension assembly in place, position the front bumper (53) on the bottom of the front pivot block (49) so that the four holes in the bumper (53) are aligned with the four holes in the pivot block (49). The bumper (53) should be attached as shown so that the edges curve towards the top of the chassis. Secure the bumper (53) and pivot block (49) to the front bulkhead (32) and kick plate (14) by threading four 4-40 x 5/8" flat-head screws (21) through the bumper and pivot block and tightening.

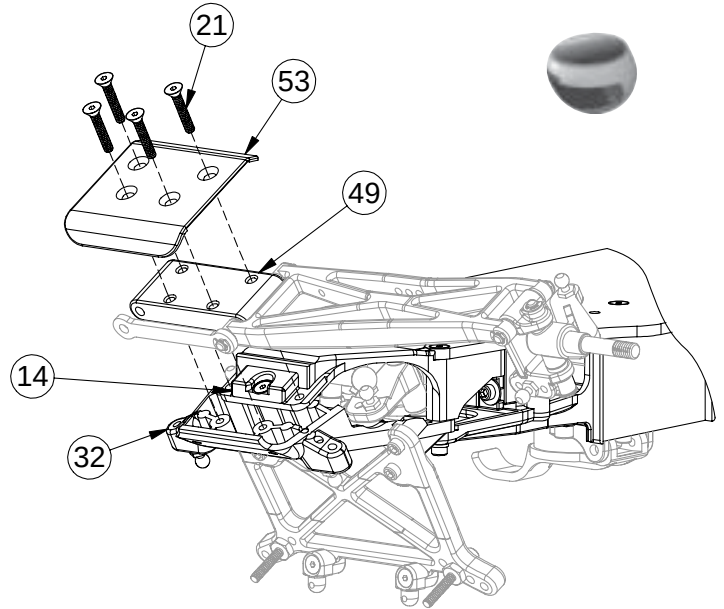


Figure 21

Figure 22



(54)



(55)

Step 22. Thread a long plastic rod end (54) onto each end of a 2-1/4" turnbuckle (55). Tighten both rod ends (54) equally until the rod is the same length as the rod in Figure 22A. Make two of these camber link assemblies.

**NOTE: The turnbuckles have right and left hand threads at opposite ends. This allows the length of the rods to be adjusted without removing them. Install all turnbuckles with the machined groove to the left side so all adjustments will be made in the same direction.*

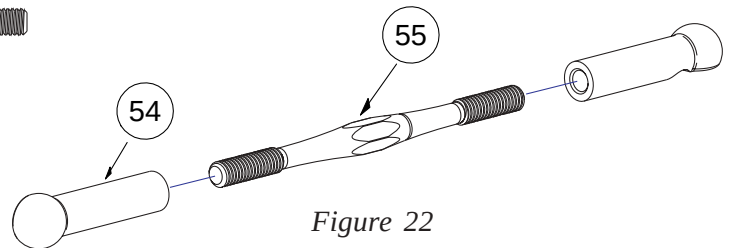


Figure 22

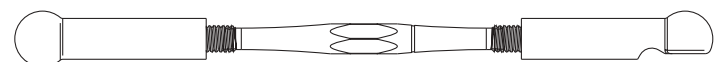


Figure 22A

Figure 23

Step 23. Place a "foam thing" (56) over the ball studs (38) in each of the spindle carriers (42), (43) and the ball studs (10) in the front bulkhead (32). Next, attach one side of a camber link assembly to the ball stud (10) on the right side of the bulkhead (32). Attach the other side of the camber link assembly to the ball stud (38) in the spindle carrier (42).

Step 24. Attach the second camber link assembly to the left side of the truck.

Tip: Try to mount all of the camber links so that the threads adjust in the same direction. This allows for much easier adjustments later.

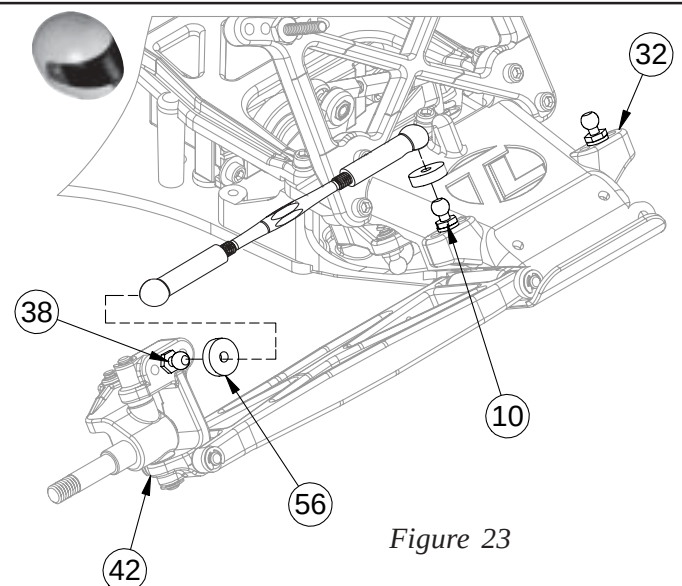
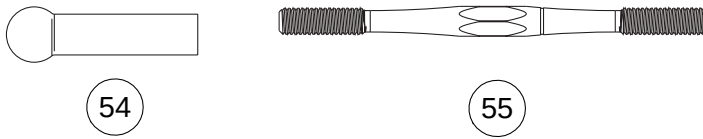


Figure 23

BAG B (Continued)

Figure 24



Step 25. Thread a long plastic rod end (54) onto each end of a 2-1/4" turnbuckle (55). Tighten both rod ends (54) equally until the rod is the same length as the rod in Figure 24A. Make two of these tie-rod assemblies.

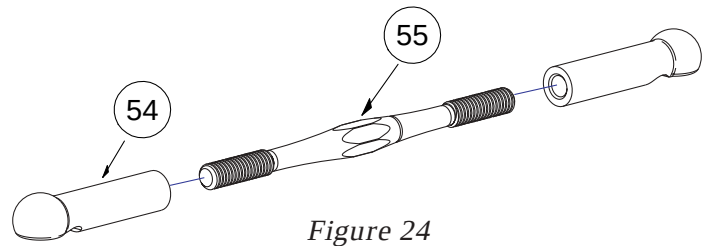


Figure 24

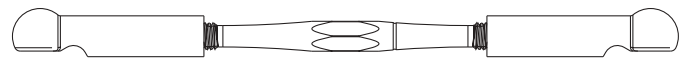


Figure 24A

Figure 25

Step 26. Snap one end of a completed tie rod assembly to the ball stud (11) in the steering idler arm (8). Snap the other end to the ball stud (10) in the right spindle (40). Attach the other tie rod assembly to the ball stud in the bottom of the servo saver assembly (8) and the left spindle (41).

Tip: Once again, assure that all turnbuckles are mounted with the threads in the same direction for easier adjustment later.

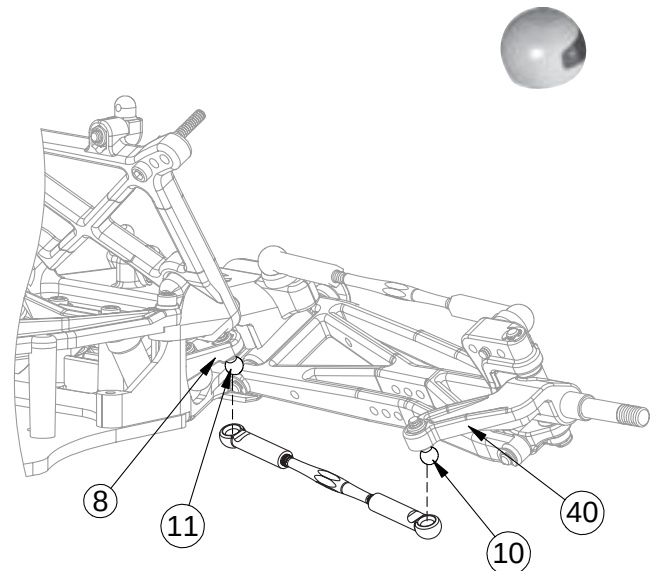


Figure 25

BAG C

Figure 26



(7)

Step 1. Insert a 4-40 mini locknut (7) into the hex area of the diff nut carrier (57). The thread-locking portion of the nut (7) should be to the outside.

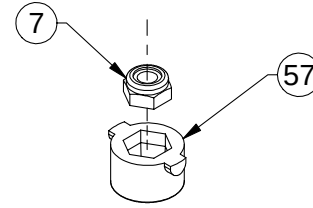


Figure 26

Figure 27



(23)

Step 2. Locate the 5/64" Allen wrench (59) supplied with the kit. Place the diff nut carrier (57), nut side first, over the Allen wrench (59).

Step 3. Slide the #4 washer (23) over the wrench up against the diff nut carrier (57).

Step 4. Slide the differential coil spring (58) over the wrench so that it is up against the #4 washer as shown in Figure 27.

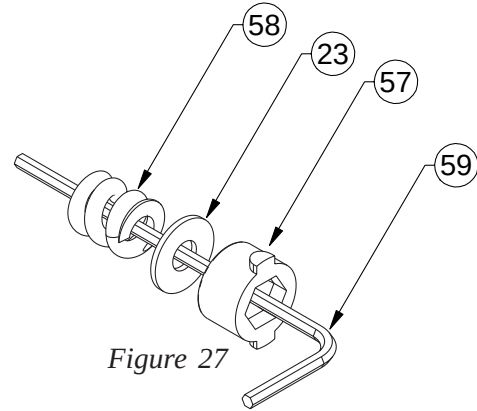


Figure 27

Figure 28

Step 5. Insert all of the parts that are stacked on the wrench into the male outdrive/diff half (60). Line up the tabs on the diff nut carrier (57) with the slots in the outdrive (60). Press the parts all the way into the outdrive/diff half (60).

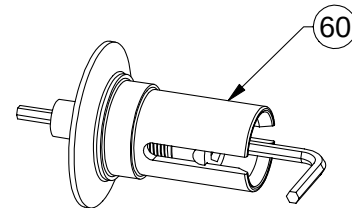
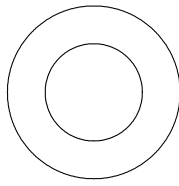


Figure 28

Figure 29



(61)

Step 6. Apply a small amount of diff grease (clear) (62) all the way around the face of the outside ridge of the outdrive/diff half (60). Attach a diff washer (61) to the outdrive (60) by centering the hole in the washer (61) over the raised center of the outdrive (60).

**NOTE: Only a small amount of grease is needed, but be sure to cover the entire face of the ridge on the outdrive.*

! IMPORTANT NOTE: Do not glue the diff washers to the outdrive/diff halves. Doing so may not allow the washers to mount flat.

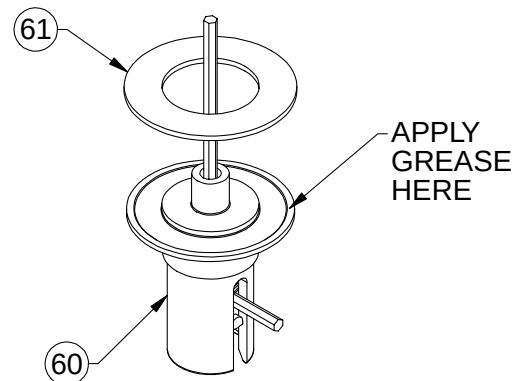


Figure 29

BAG C (Continued)

Figure 30

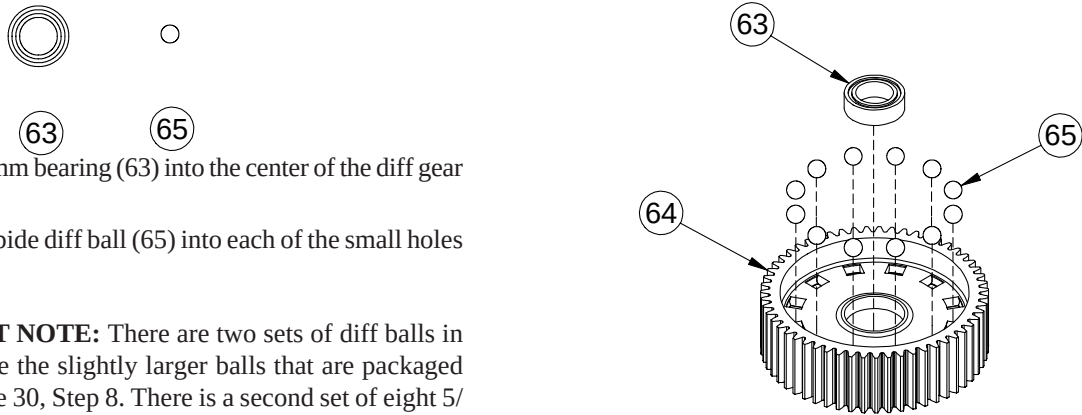


Figure 30

Figure 31

Step 9. Apply a fairly heavy coat of clear diff grease (62) to the exposed side of the diff washer (61). Carefully place the diff gear (64) over the male outdrive (60) so that the diff balls (65) and diff gear (64) rest against the diff washer (61).

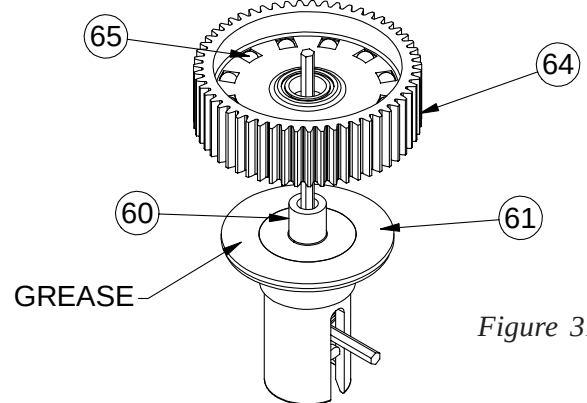
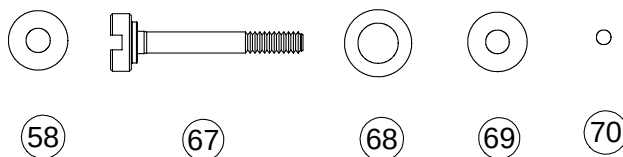


Figure 31

Figure 32



Step 10. Locate the diff adjusting screw (67) and place the foam thrust bearing seal (68) over the shoulder of the screw (67).

Step 11. Place one beveled washer (58) over the diff screw (67) with the concave surface facing away from the head of the diff screw (67).

Step 12. Place one of the 3mm x 8mm thrust bearing washers (69) over the diff screw (67).

**NOTE: The thrust bearing washers are packaged in a small bag along with the eight 5/64 inch thrust bearing balls.*

Step 13. Grease the thrust washer (69) well with white thrust bearing/assembly grease (71) and place the eight 5/64 inch thrust bearing balls (70) on top of the washer (69), around the diff screw (67). Apply more white thrust bearing/assembly grease (71) to the tops of the thrust bearing balls (70). Place the second thrust washer (69) over the screw (67) and against the thrust bearing balls (70).

Step 14. Very carefully insert the diff screw (67), with the thrust bearing assembly installed, into the female outdrive (66). Pull the threaded end of the diff screw (67) until the thrust bearing assembly rests against the inside of the outdrive (66).

IMPORTANT NOTE: Ensure that all eight thrust bearing balls remain in place between the two washers, around the diff screw.

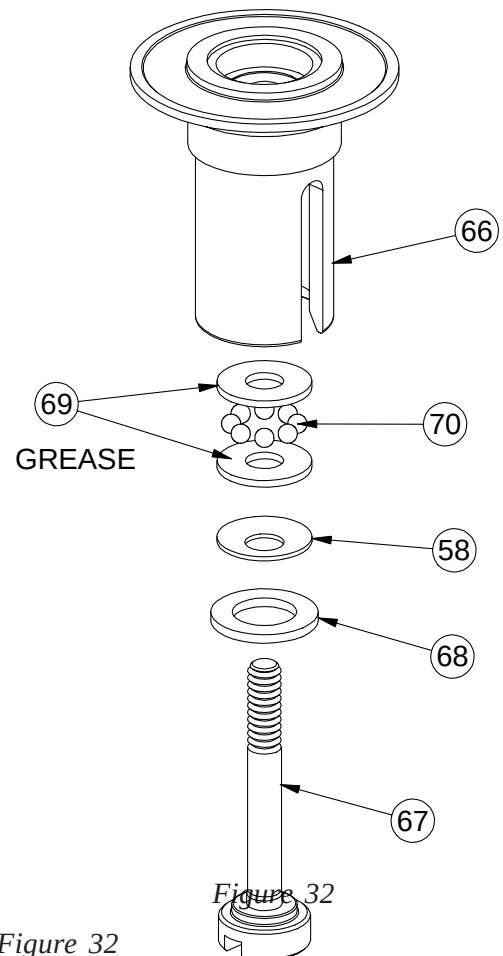
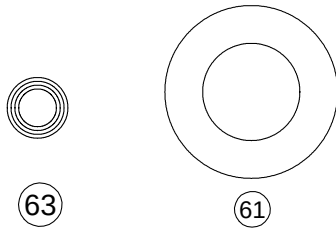


Figure 32

Figure 32

BAG C (Continued)

Figure 33



Step 15. Locate the smallest of the Allen wrenches (59) and place it through the slot in the outdrive/diff half (66) containing the diff screw (67). Slide the wrench all the way against the screw (67). By handling the outdrive/diff half (66) with the wrench inserted, the diff screw (67) will be held in place while finishing assembly of the differential.

Step 16. Insert a 5mm x 8mm bearing (63) into the female outdrive/diff half (66). Make sure that the bearing (63) is pushed all the way into the outdrive (66).

Step 17. Apply a small amount of diff grease (clear) (62) all the way around the face of the outside ridge of the outdrive/diff half (66). Attach a diff washer (61) to the outdrive (66) by centering the hole in the washer (61) over the raised center of the outdrive (66).

**NOTE: Only a small amount of grease is needed, but be sure to cover the entire face of the ridge on the outdrive.*

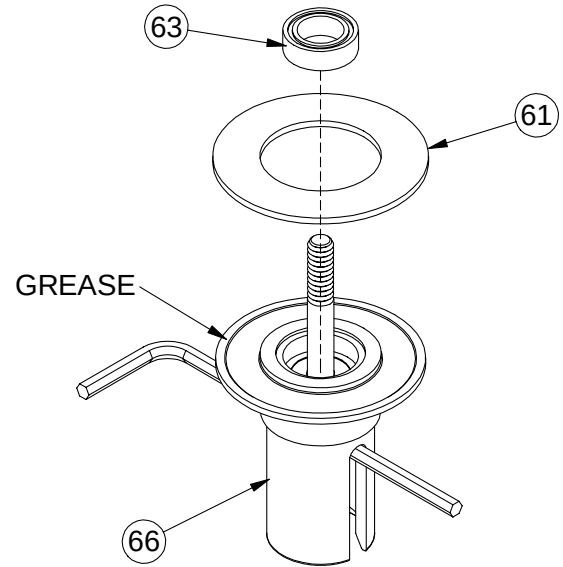


Figure 33

Figure 34

Step 18. Apply a fairly heavy coat of clear diff grease (62) to the exposed side of the diff washer (61).

Step 19. While holding the outdrive/diff half (66) with the Allen wrench inserted, carefully place the two outdrive/diff halves (60)(66) together.

Step 20. Make sure that the slot in the diff screw (67) is lined up with the slot in the outdrive/diff half (66) and that the Allen wrench is inserted in the slot in the diff screw (67).

Step 21. Hold the diff so that the outdrive/diff half (60) with the diff nut carrier (57) is pointing up. Slowly turn the top diff half clockwise to thread the diff screw (67) into the 4-40 mini locknut (7) in the diff nut carrier (57). Thread the two halves together until the screw just starts to snug up.

**NOTE: If the screw will not thread into the nut, make sure that the diff nut carrier is pushed all the way into the outdrive/diff half.*

Tip: When tightening the diff, tighten the screw a little and then “work” the diff a little. Then tighten the diff a little more and “work” the diff again. Continue this until the diff is tight. This will ensure proper seating of all the parts in the diff assembly.

Step 22. Tighten the diff until the gear (64) cannot be turned while both of the outdrives (60)(66) are being held. Final diff adjustment should be made after completion of the car.

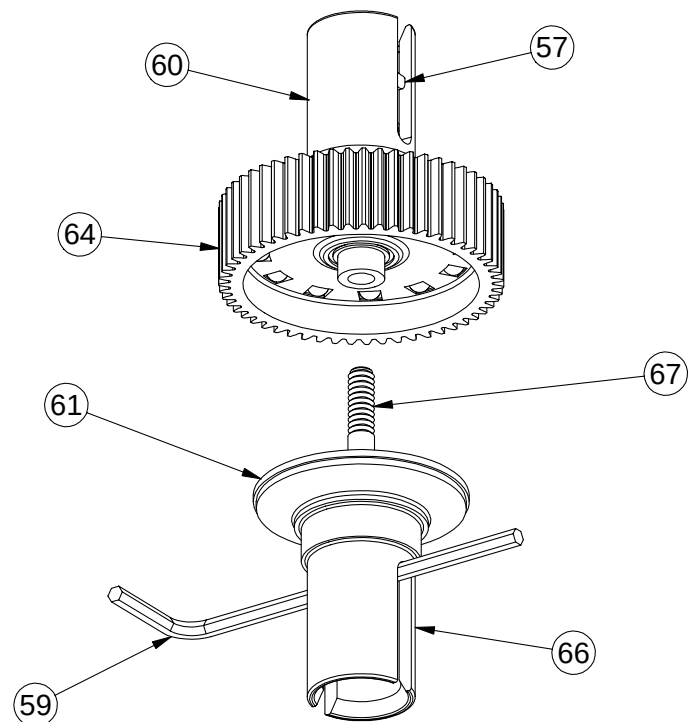


Figure 34

BAG C (Continued)

Figure 35



(72)

Step 23. Locate the slipper shaft (73) and thread the 4-40 x 1" setscrew (72) all the way into the threaded side of the slipper shaft (73). Make sure that the setscrew (72) is **TIGHT!**

**NOTE: Some top gear/slipper shaft assemblies may be pre-assembled from the factory.*

Tip: A small amount of liquid thread-lock should be used to help to hold the setscrew securely in place. If your slipper shaft was pre-assembled at the factory, thread-lock compound has already been applied.

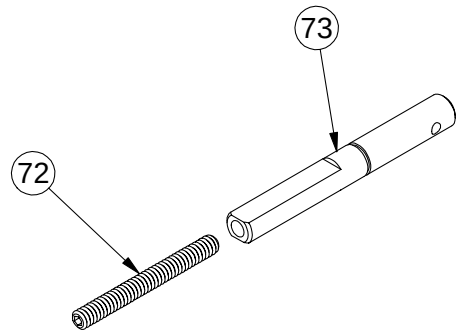


Figure 35

Figure 36



(74)

(76)

Step 24. Press the 1/16" x 5/16" pin (74) into the small hole in the slipper shaft (73) so that it extends evenly from both sides of the shaft (73).

Step 25. Slide the top gear (75) over the setscrew (72) onto the slipper shaft (73). Align the groove in the gear (75) with the pin (74) and slide the gear (75) over the pin (74).

Step 26. Secure the top gear (75) to the shaft (73) by inserting a 3/16" C-clip (76) into the groove in the slipper shaft (73).

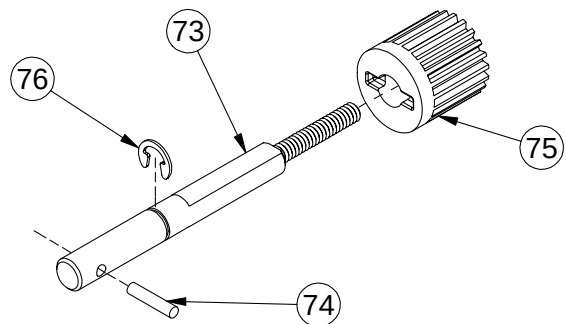


Figure 36

Figure 37



(76)

(78)

Step 27. Locate the brake shaft (77) and press the .078" x 3/8" spirol pin (78) into the small hole away from the grooved end of the brake shaft (77) so that it extends evenly from both sides of the shaft (77).

Step 28. Press the compound gear bushing (181) all the way into the end of the compound gear (79). Slide the compound gear (79), with the bushing (181) in place, over the brake shaft (77). Align the groove in the gear (79) with the pin (78) and slide the gear (79) over the pin (78).

Step 29. Secure the compound gear (79) and bushing (181) to the shaft (77) by inserting a 3/16" C-clip (76) into the groove in middle of the brake shaft (77).

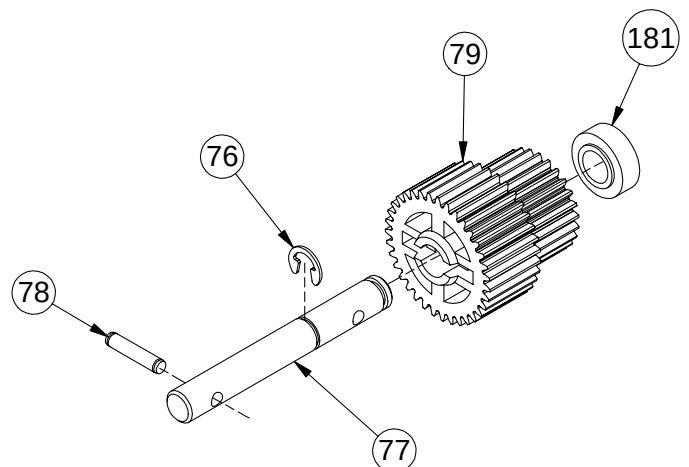
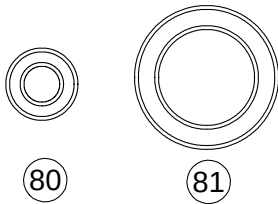


Figure 37

BAG C (Continued)

Figure 38



Step 30. Insert two 3/16" x 3/8" sealed bearing (80) into the two top bearing seats of the right gearbox half (82).

**NOTE: If any of the supplied gearbox bearings only have one Teflon™ seal (colored, woven looking) in it, position the seal to the outside of the gearbox half.*

Step 31. Insert a 1/2" x 3/4" bearing (81) into the lower bearing seat of the right gearbox half (82).

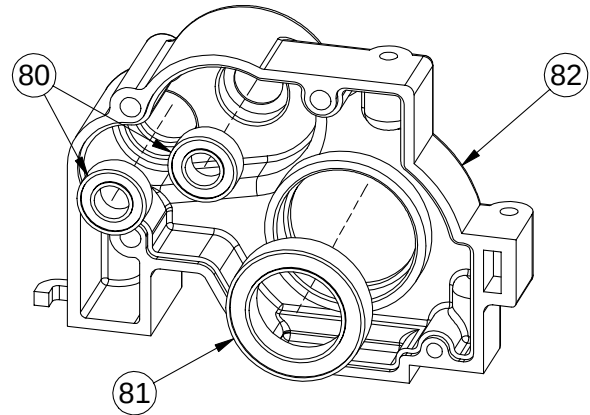
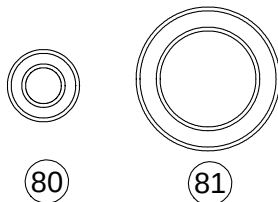


Figure 38

Figure 39



Step 32. Use the short, 4-40 thread-cutting screw included in the wrench bag to pre-tap the three holes noted in Figure 39. Thread the screw all the way into and out of each hole.

Step 33. Insert two 3/16" x 3/8" sealed bearing (80) into the two top bearing seats of the left gearbox half (83).

Step 34. Insert a 1/2" x 3/4" bearing (81) into the lower bearing seat of the left gearbox half (83).

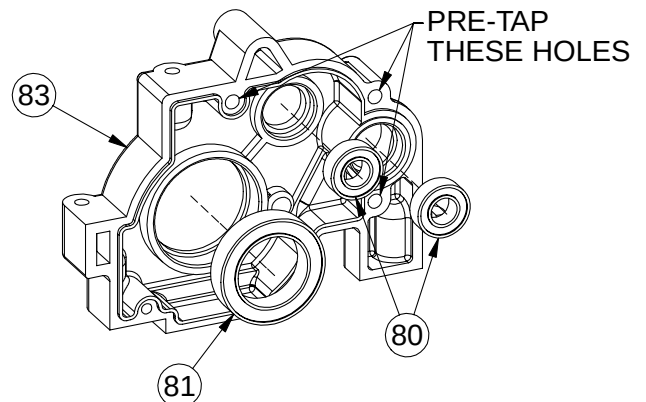


Figure 39

Figure 40



Step 35. Slip the 3/16" x .015 shim (84) over the slipper shaft (73) up against the top gear (75).

Step 36. Insert the slipper shaft (73) into the forward-most bearing (80) in the left gearbox half (83).

Step 37. Insert the differential assembly into the 1/2" x 3/4" bearing (81) in the right gearbox half (82). Insert the differential diff nut carrier (57) side first.

**NOTE: be sure the head of the diff adjusting screw faces the right side of the gearbox. This will allow easy adjustment while running your truck.*

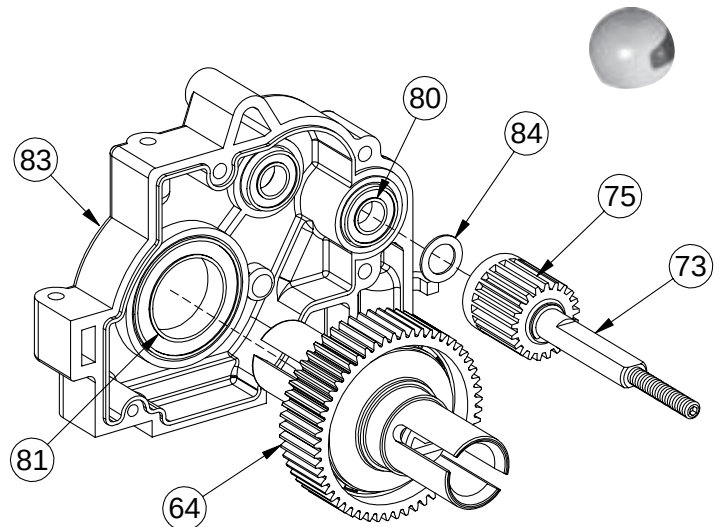


Figure 40

BAG C (Continued)

Figure 41

Step 38. Insert the brake shaft (77) through the 3/16" x 3/8" bearing (80) in the left gearbox half (83), aligning the teeth of the compound gear (79) with the diff gear (64) and top gear (75) as you do.

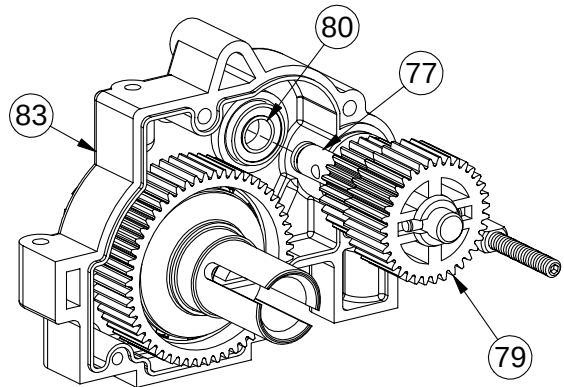
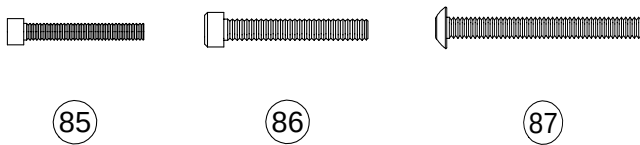


Figure 41

Figure 42



Step 39. Apply a thin coat of white assembly grease (71) along the inside edge of the left gearbox half (83). This will help seal the gearbox once it is assembled.

Step 40. Carefully place the right gearbox half (82) over the assembled left gearbox half (83). Be sure to align each shaft into the bearings in the right gearbox half (82).

Step 41. Thread the 2-56 x 5/8" cap-head screw (85) into the lower, rearward hole in the gearbox housing from the right side.

Tip: Be sure you have completed Step 32, and have pre-tapped the top three holes in the left gearbox before installing the 4-40 x 1-1/8" buttonhead screws in Step 42.

Step 42. Position the aluminum gearbox brace (88) on the right gearbox half (82) as shown in Figure 42. Thread two 4-40 x 1" button-head screws (87) through the gearbox brace (88) and into the two holes in the gearbox housing.

Step 43. Thread the 4-40 x 3/4" cap-head screw (86) into the upper, middle hole in the gearbox housing from the right side.

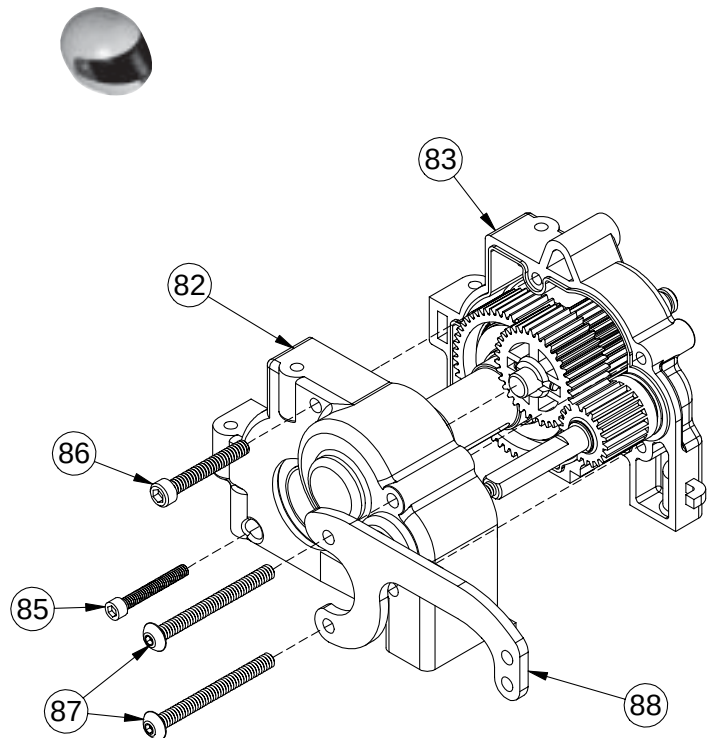
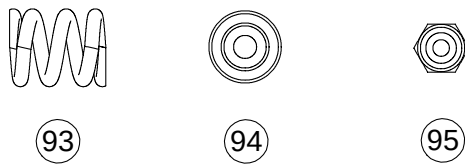


Figure 42

BAG C (Continued)

Figure 43



Step 44. Slide the slipper backing plate (89) over the slipper shaft (73), aligning the flat sections on the slipper shaft (73) with the flat sections of the backing plate (89).

Step 45. Place the slipper pad (90) on one side of the spur gear (91) and align the notches on the spur gear (91) with the notches on the slipper pad (90).

Step 46. Place the spur gear (91), pad side first, over the slipper shaft (73). The slipper pad (90) should rest against the slipper back plate (89).

**NOTE: Ensure that the notches in the slipper pad remain indexed in the spur gear.*

Step 47. Install the second slipper pad (90) to the exposed side of the spur gear (91). Again, align the notches on the spur gear (91) with the notches on the slipper pad (90).

Step 48. Place the second slipper backing plate (89) over the slipper shaft (73) so that the large, flat surface of the backing plate (89) rests against the slipper pad (90).

Step 49. Slide the slipper spring adaptor (92), large side first, onto the shaft (73) and against the outer slipper backing plate (89).

Step 50. Place the silver slipper spring (93) over the shaft (73), followed by the spring retaining washer (94), small side first, and secure with the 4-40 steel locknut (95).

⚠ IMPORTANT NOTE: Before tightening the nut, check to see that the slipper pads are properly aligned with the spur gear on both sides. If not, align them before proceeding.

Step 51. Tighten the 4-40 locknut (95) all the way down, and then back it off three full turns (e.g., $360^\circ \times 3$). This is a good starting point for adjustment. Final adjustment can be made later.

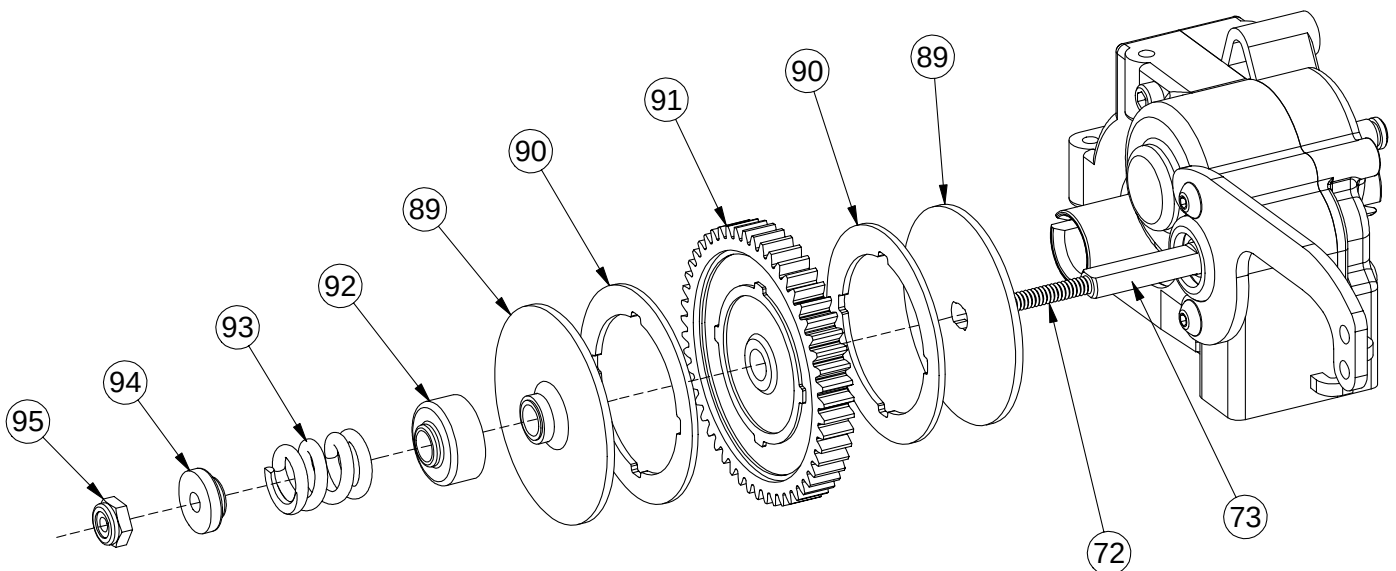
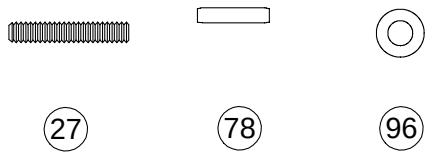


Figure 43

BAG C (Continued)

Figure 44



Step 52. Press the .078" x 3/8" spirol pin (78) into the hole in the end of the brake shaft (77) so that it extends evenly from both sides of the shaft (77).

Step 53. Slide the brake hub (98) over the brake shaft (77). Align the groove in the brake hub (98) with the pin (78) and slide the hub (98) over the pin (78).

Step 54. Thread the two 4-40 x 5/8" set screws (27) all the way into each of the two brake caliper mounting holes in the left gearbox half (83).

Step 55. Slip a 1/4" x .020 washer (96) and a brake sleeve (97) over each of the two 4-40 x 5/8" set screws (27).

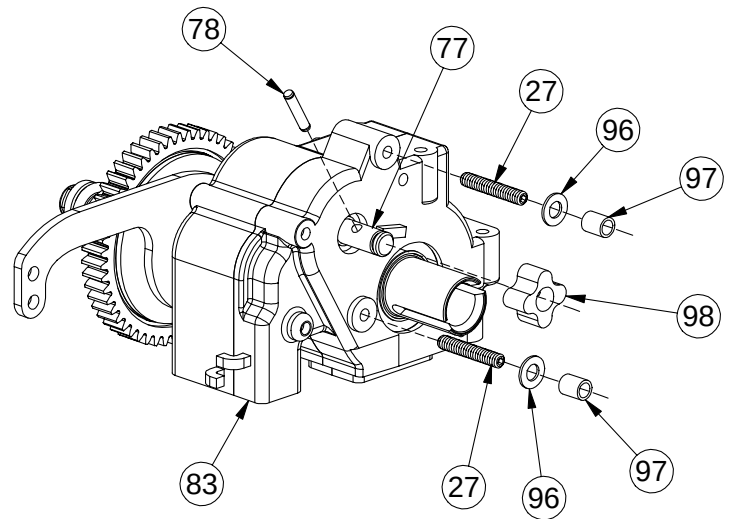


Figure 44

Figure 45

Step 56. Place one of the brake caliper plates (99) over the two brake sleeves (97).

Step 57. Slide the brake rotor (100) onto the brake hub (98).

Step 58. Place the other brake caliper plate (99) over the brake sleeves (97).

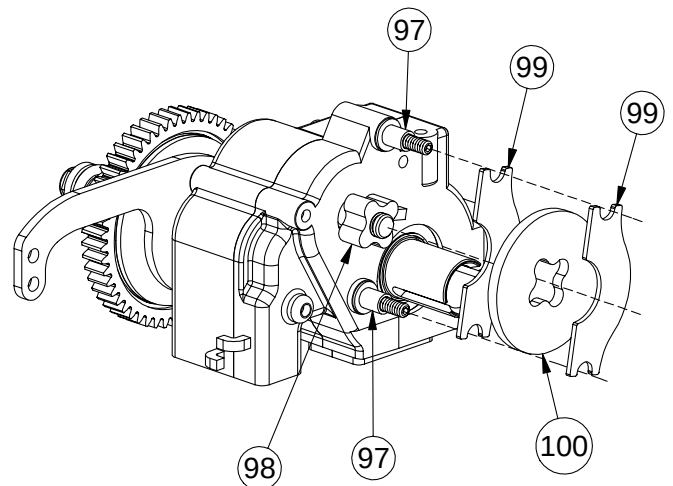


Figure 45

BAG C (Continued)

Figure 46

Step 59. Slide a brake lever clip (101) over the brake lever (102) flange side first. Slide the clip (101) all the way up the brake lever (102) to the sharp bend.

Step 60. Slide the other brake lever clip (101) over the end of the brake lever (102) with the flange side facing away from the first brake lever clip (101).

! IMPORTANT NOTE: Ensure brake lever clips are oriented in opposing directions with the flanged sides facing apart as shown.

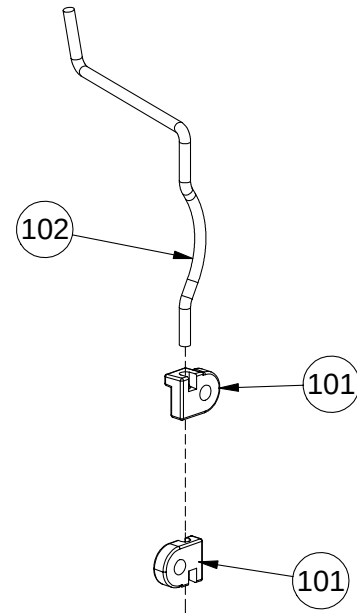
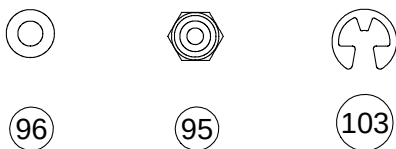


Figure 46

Figure 47



Step 61. Place a 1/4" x .020 washer (96) over each of the two 4-40 x 5/8" set screws (27).

Step 62. While holding the brake lever clips (101) in position on the brake lever (102), slide brake lever clips (101) over the 4-40 x 5/8" set screws (27). Be sure the top brake lever clip (101) points toward the rear of the gearbox and the lower brake lever clip (101) points toward the front.

Step 63. Secure the brake lever clips (101) with two 4-40 steel locknuts (95). Tighten the nuts (95) until they are just snug, then back them off about 1/4 turn, so the brake lever clips (101) can still be moved slightly.

Step 64. Insert a 3/16" E-clip (103) into the groove in the end of the brake shaft (77) to retain the brake hub (98).

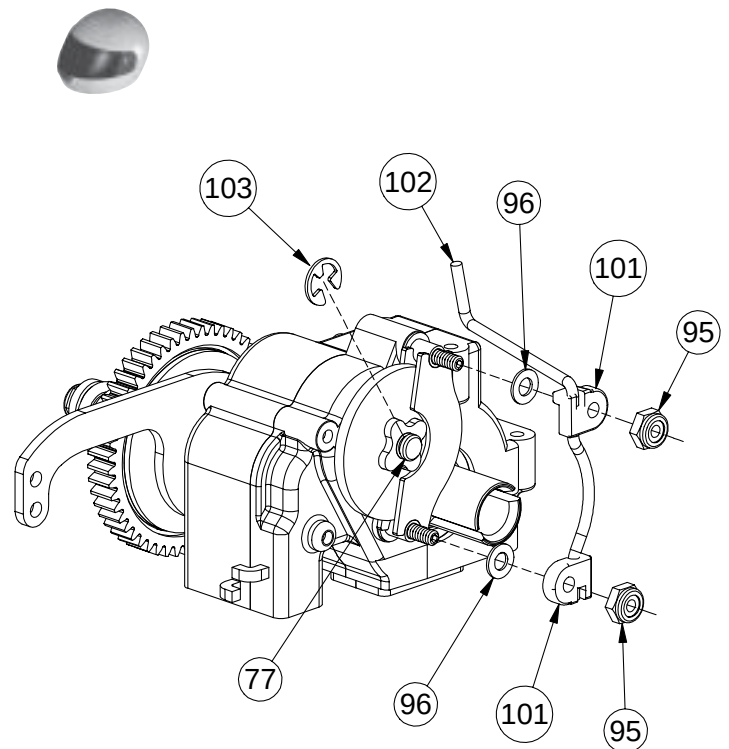


Figure 47

BAG C (Continued)

Figure 48

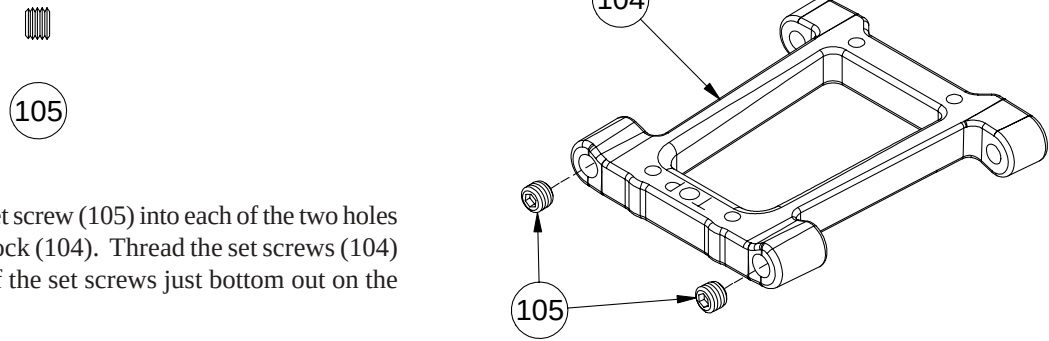


Figure 48

Figure 49

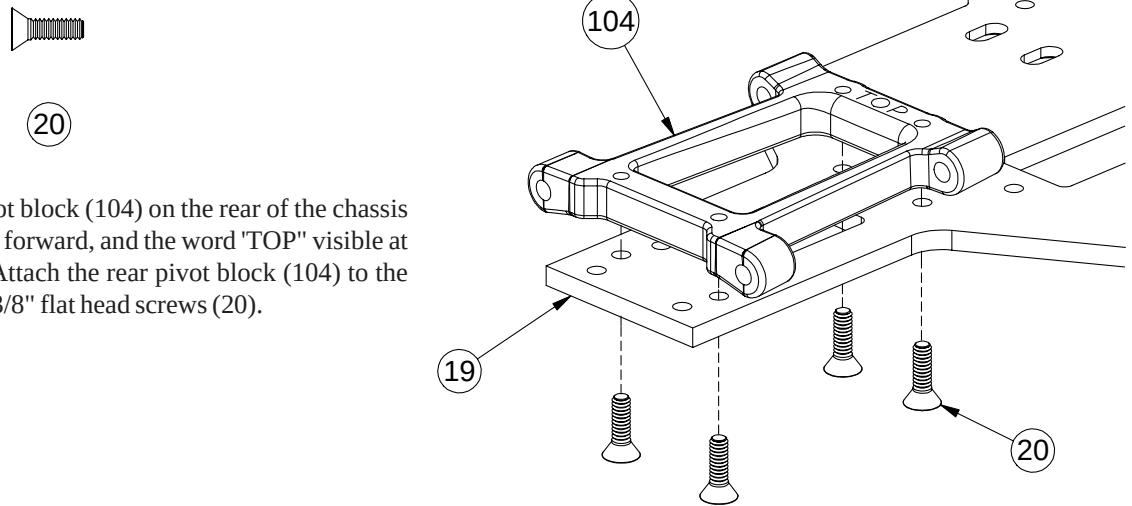
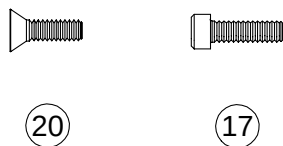


Figure 49

Figure 50



Step 67. Place the gearbox assembly onto the rear of the chassis, aligning the bottom of the gearbox halves (82)(83) with the rectangular hole in the chassis (19). Attach the gearbox assembly to the rear of the chassis (19) with four 4-40 x 3/8" flat head screws (20).

Step 68. Secure the gearbox brace (88) to the top chassis brace (29) with two 4-40 x 3/8" cap head screws (17).

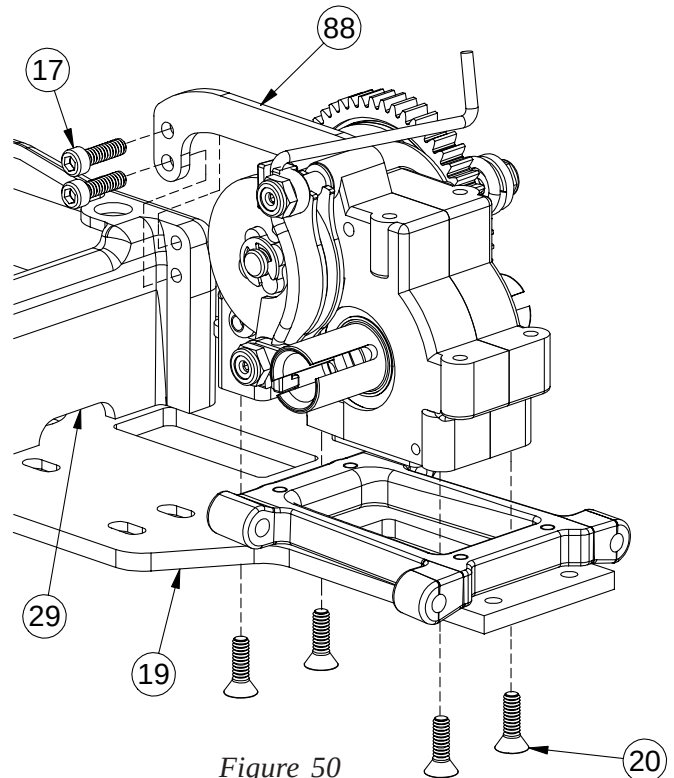
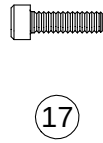


Figure 50

BAG D

Figure 51

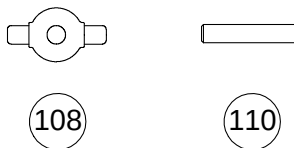


Attach the dogbones (107) to the plastic universal yokes (106) by lining up the slot on the dogbone (107) with the groove in the universal yoke (106). Secure the two pieces with a 4-40 x 3/8" cap-head screw (17).

Tip: A small amount of thread-lock compound should be used on the threads of the 4-40 x 3/8" screws to help keep them tight.

Figure 51

Figure 52



Step 2. Position the universal pivot (108) in the rear axle (109) so that the holes in both are aligned.

Step 3. Using pliers, carefully push a 3/32" x 1/2" spirol pin (110) through the rear axle (109) and universal pivot (108) until the pin (110) extends evenly from both sides of the rear axle (109).

Tip: The pin can be made to press in tighter. This will ensure that it stays firmly in place. To do so, **SLIGHTLY** crimp the center of the pin with heavy duty wire cutters. When inserting the pin, be careful not to smash the ends of the pin, or the universal may not operate freely.

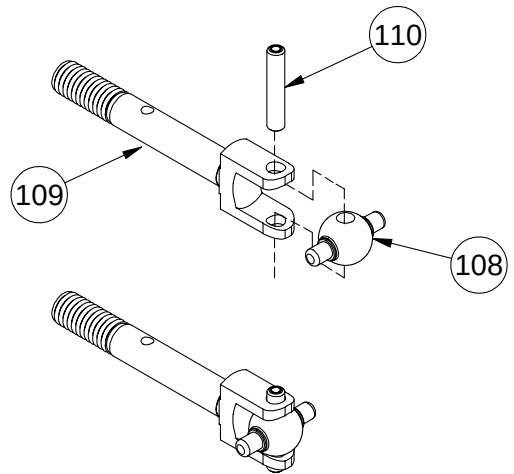


Figure 52

Figure 53

Step 4. Using the small end of the assembly wrench (111) supplied with your kit, pry the pins on the universal pivot (108) into the holes in the plastic universal yoke (106).

Tip: The dogbones should rotate freely. If they do not, the ears of the universal yoke can be squeezed slightly with a pair of pliers. Squeezing the ears will press the outside of the hole in the ears against the pin in the universal pivot. This will cause the hole to enlarge slightly, helping the dogbone to rotate freely.

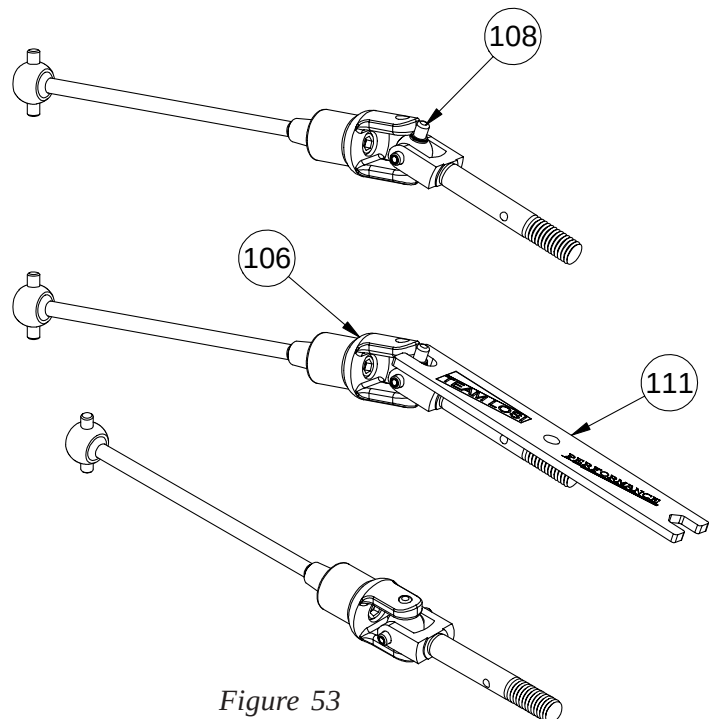
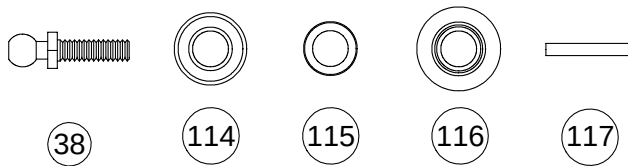


Figure 53

BAG D (Continued)

Figure 54



Step 5. Thread a 3/8" ball stud (38) into the outer hole in the right rear hub (112) from the side opposite the letter ('L' and 'R') designating left and right. Place a "foam thing" (56) over the ball stud (38).

Step 6. Press a 3/16" x 3/8" bearing (114) into the inside of the rear hub (112). Slide the rear axle (109), from the inside, through the bearing (114).

Step 7. Slide the center bearing spacer (115) over the axle and against the bearing (114). Slide the second bearing (114) over the axle and press it into the outside of the rear hub (112).

Step 8. Place a rear axle spacer (116) over the rear axle, against the outside bearing (114). The small side of the spacer (116) should be positioned against the outside bearing (114).

Step 9. Secure the rear axle (109) and spacer (116) by pressing a 1/16" x 7/16" pin (117) through the small hole in the rear axle (109). The pin (117) should be centered in the rear axle (109).

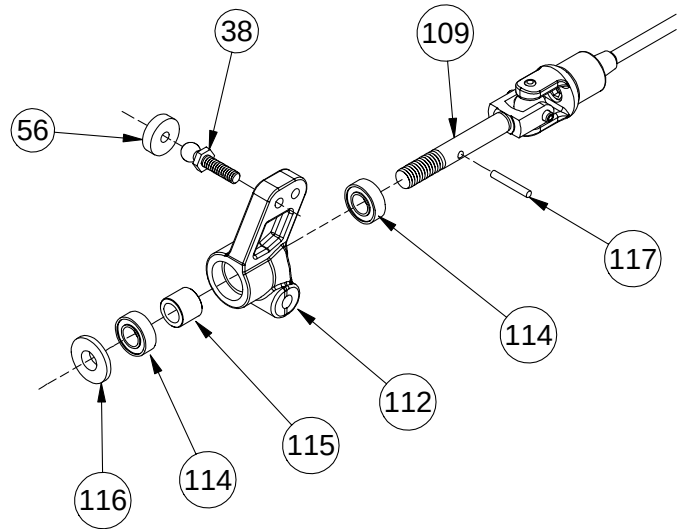
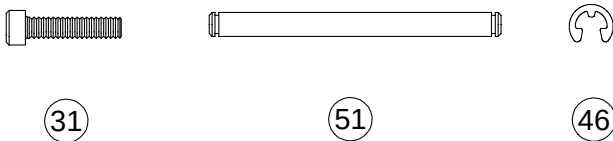


Figure 54

Figure 55



Step 10. Slide a suspension ball (121) over a 4-40 x 1/2" cap head screw (31) and thread it into the middle shock mount hole on the right rear suspension arm (118) from the back side.

Step 11. Slide an outer rear hinge pin (51) partially through the outside of the right rear suspension arm (118) from the rear. Slide a plastic rear hub spacer (120) over the pin (51) and against the rear portion of the suspension arm (118).

Step 12. Place the right rear hub (112), marked 'R', (ball stud facing rearward) between the outer rails of the suspension arm (118), against the spacer (120). Slide the hinge pin (51) partially through the hub (112).

Step 13. Insert another rear hub spacer (120) (not shown in Figure 55) between the rear hub (112) and the forward rail of the suspension arm (118). Slide the hinge pin (51) through both sides of the suspension arm (118), the rear hub (112), and both spacers (120). Secure the hinge pin with two 1/8" E-clips (46).

Step 14. Repeat Steps 1-13 for the left suspension arm (119) and left hub (113).

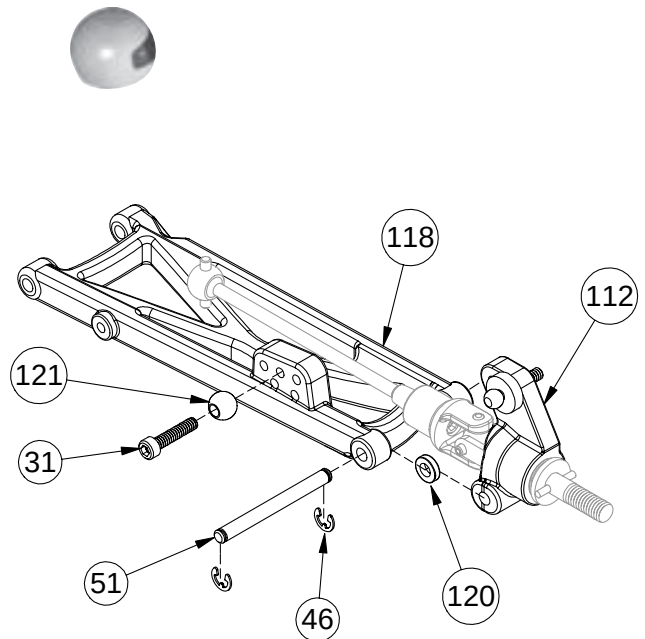
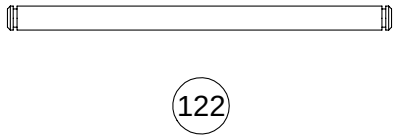


Figure 55

BAG D (Continued)

Figure 56



Step 15. Position the right rear arm (118) inside the rear pivot block (104) and line up the holes in the arm with the holes in the pivot. Slide a rear inner hinge pin (122) through the pivot block (104) and rear arm (118) all the way in until the pin (122) rests against the set screw in the front of the pivot block (104).

Step 16. Repeat step 15 for the left rear arm (119).

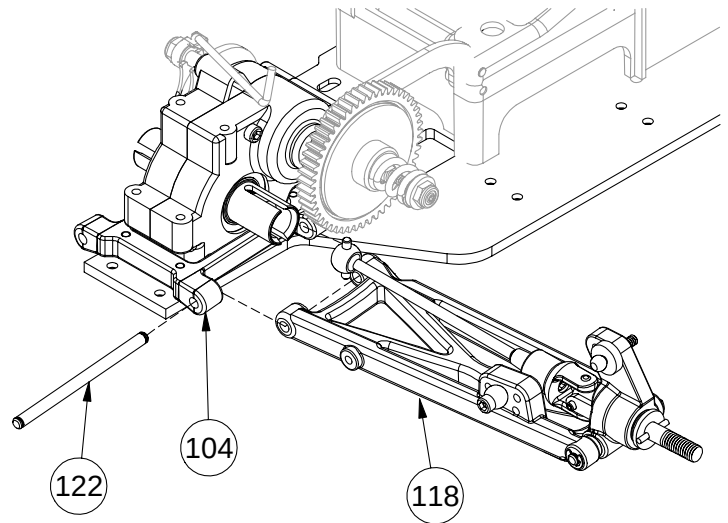
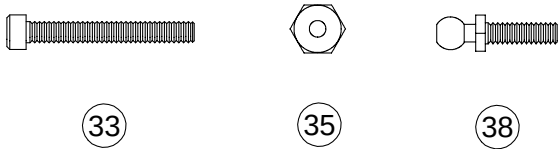


Figure 56

Figure 57



Step 17. Insert two 4-40 x 7/8" cap-head screws (33), one on each side, through the outer holes in the top of the rear shock tower (123) from the front side. Secure the screws (33) to the rear shock tower (123) by threading a 4-40 nut (35) over each screw (33) and tightening..

Tip: Use the included Team Losi wheel wrench/nut-driver to secure the 4-40 nuts.

Step 18. Thread a 3/8" ball stud (38) into the center hole on each side of the shock tower (123).

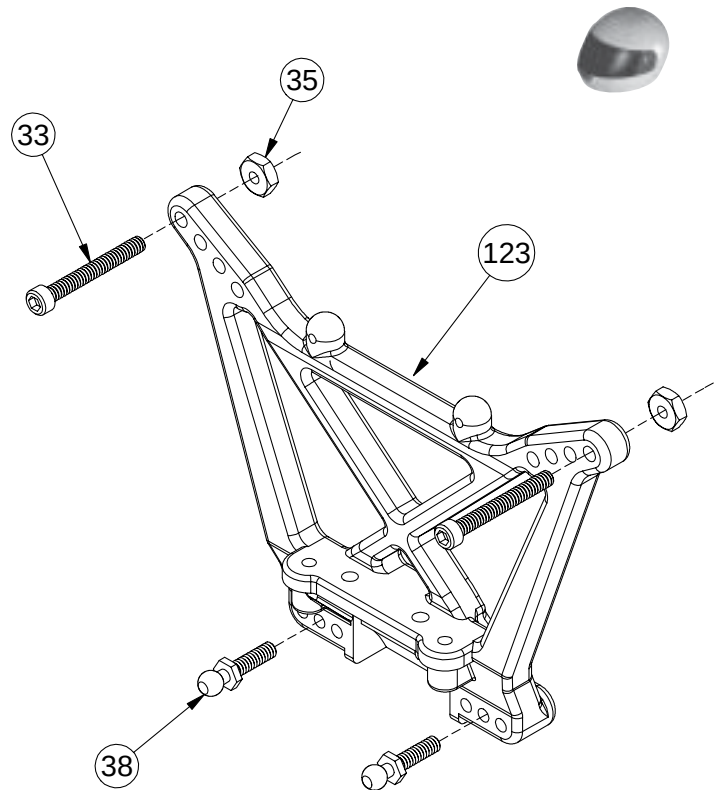
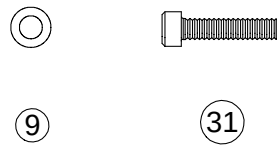


Figure 57

BAG D (Continued)

Figure 58



Step 19. Place the rear shock tower (123) over the rear of the gearbox assembly (82)(83) so that the top holes line up. Place a gold ball stud washer (9) over each of the 4-40 x 1/2 inch cap-head screws (31). Secure the rear shock tower (123) to the gearbox (82)(83) by threading the 4-40 x 1/2 inch screws (31), with washers (9) attached, through the tower (123) and into the gearbox (82)(83).

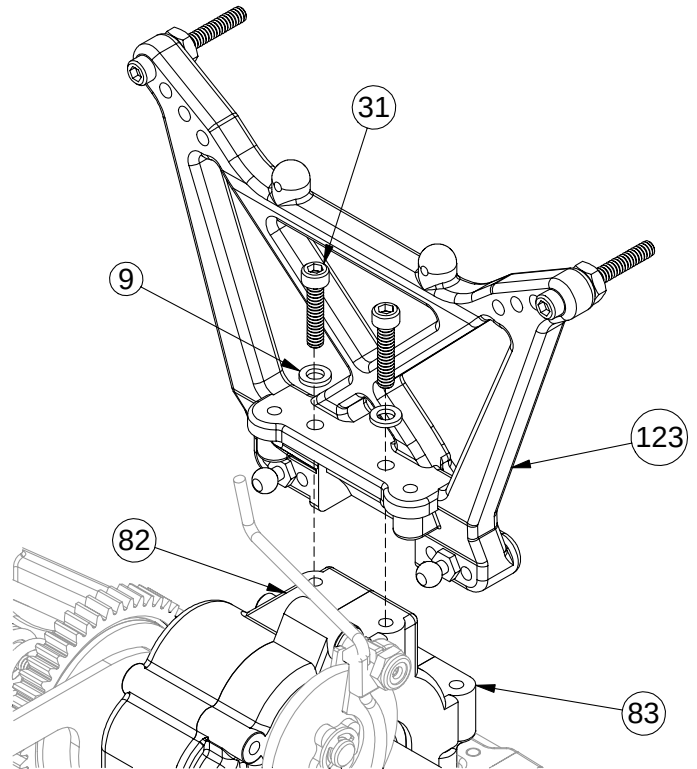
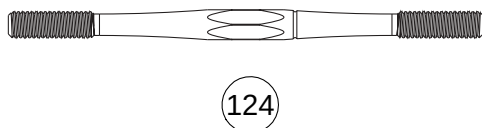


Figure 58

Figure 59



Step 20. Thread a long plastic rod end (54) onto each end of a 2-1/2 inch turnbuckle (124). Tighten both rod ends (54) equally until the rod is the same length as the one shown in Figure 59A. Make two of these rear camber link assemblies.

**NOTE: The turnbuckles have right and left hand threads at opposite ends. This allows the length of the rods to be adjusted without removing them. Install all turnbuckles with the machined groove to the left side so all adjustments will be made in the same direction.*

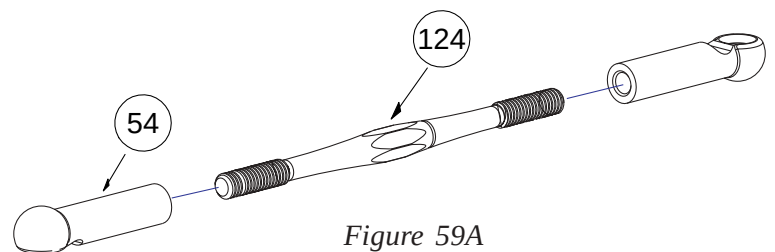


Figure 59A

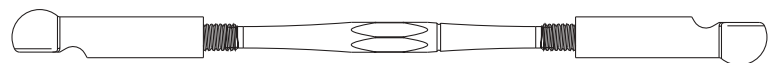


Figure 59

BAG D (Continued)

Figure 60

Step 21. Attach one end of the rear camber link assembly from Step 19 to the ball stud (38) in the right rear hub (112) and the other end to the ball stud (38) in the rear shock tower (123).

Tip: Remember to attach the turnbuckles so that the threads are in the same direction on all your linkages.

Step 22. Repeat Step 20 for the left side of the truck.

**NOTE: It's a good idea to leave your truck sitting on a flat surface until the shocks are assembled and installed. This will keep the dogbones in place.*

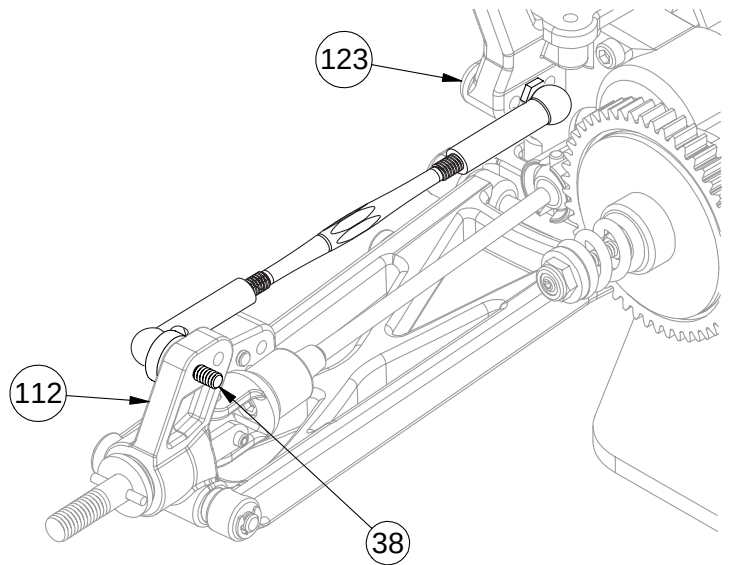
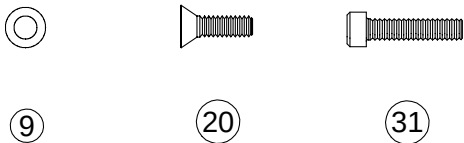


Figure 60

Figure 61



Step 23. Slide the battery box (125) into place on the back of the chassis (19). The top flange of the battery box (125) should fit between the shock tower (123) and the gearbox. The back of the chassis (19) should fit snugly into the recess in the bottom of the battery box (125). Be sure that all the holes line up.

Step 24. Place a gold ball stud washer (9) over each of the 4-40 x 1/2" cap-head screws (31). Secure the rear shock tower (123) and battery box (125) to the gearbox by threading the 4-40 x 1/2" screws (31), with washers (9) attached, through the tower (123) and battery box (125) and into the gearbox.

Step 25. Secure the bottom of the battery box (125) to the chassis (19) with two 4-40 x 3/8" flat head screws (20).

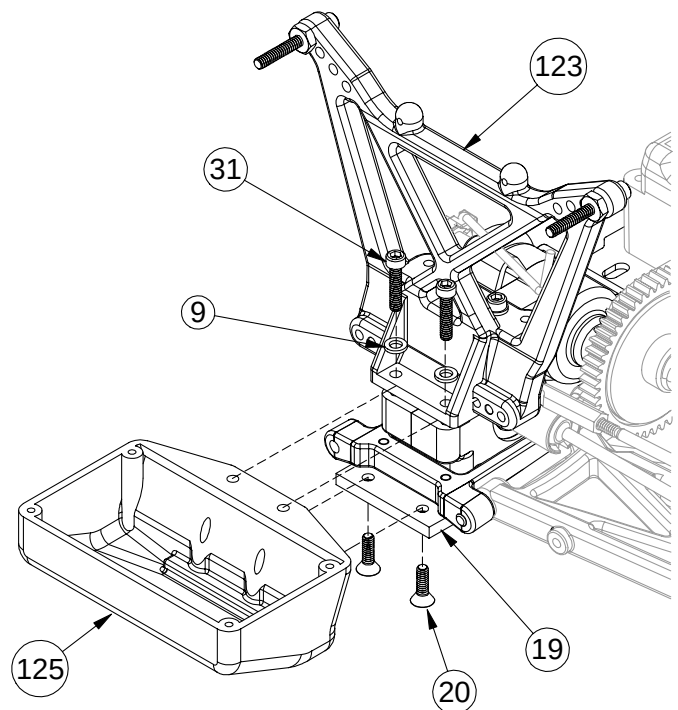
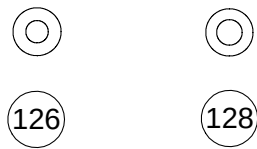


Figure 61

BAG E

Figure 62



Step 1. Place one shock O-ring (126) into the cartridge body (127), making sure that the O-ring (126) sits flat on the bottom of the cartridge body (127).

Step 2. Insert the cartridge spacer (128) into the cartridge body (127) followed by a second O-ring (126).

Step 3. Once the second O-ring (126) is inserted, and is flush with the top of the cartridge body (127), “snap” the cartridge cap (129) onto the cartridge body (127).

Step 4. Make four cartridge assemblies.

**NOTE: Cartridges in some kits may be pre-assembled at the factory.*

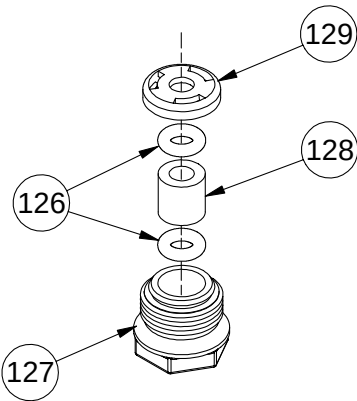
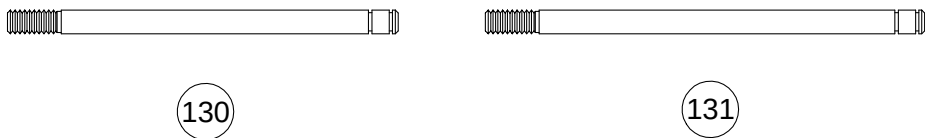


Figure 62

Figure 63



Step 5. Place a drop of shock fluid (132) on the grooved end of each shock shaft [front (130), rear (131)] and slide a cartridge, hex end first, down the shock shaft (130), (131) toward the threads.

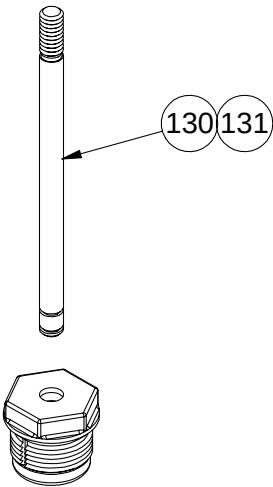


Figure 63

BAG E (Continued)

Figure 64



Step 6. Using needle nose pliers, or small vise grips, grasp the front shock shaft (130) between the grooves and thread a shock end (133) onto the shaft (130). Thread the shock end (133) all the way onto the shaft (130).

Step 7. Repeat Step 6 for the second front shaft (130) and both rear shafts (131).

Step 8. Carefully snap a 1/4" swivel ball (134) into the two shock ends (133) on the shorter, front shock shafts (130) only.

! IMPORTANT NOTE: Do not insert 1/4" balls into the rear shock ends (attached to the longer shock shafts). These balls are already attached to the rear suspension arms.

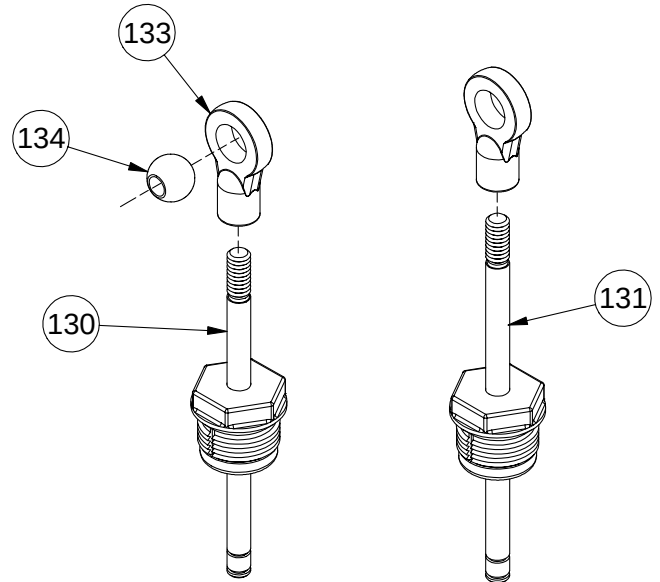


Figure 64

Figure 65



Step 9. Snap a 1/8" E-clip (46) into the groove closest to the cartridge on both rear (long) shock shafts (131).

Step 10. Before installing the E-clip to the front shock shafts (130) - the shorter of the two lengths - slide a plastic spacer (120) over the front shaft (130) next to the cartridge. Once the spacers are in place, snap a 1/8" E-clip (46) into the groove closest to the cartridge on both front shock shafts (130).

**NOTE: Shock spacers are only used on the front shock shafts in this step.*

Step 11. Slide a #55 (orange) shock piston (135) onto each of the front shafts (130) until it rests against the E-clip (46). Secure the pistons (135) to the front shafts (130) with a second E-clip (46).

**NOTE: The orange #55 shock pistons are used on the front (short) shock shafts. The red #56 shock pistons are used on the rear (long) shock shafts.*

Step 12. Slide a #56 (red) shock piston (136) onto each of the rear shafts (131) until it rests against the E-clip (46). Secure the pistons (136) to the rear shafts (131) with a second E-clip (46).

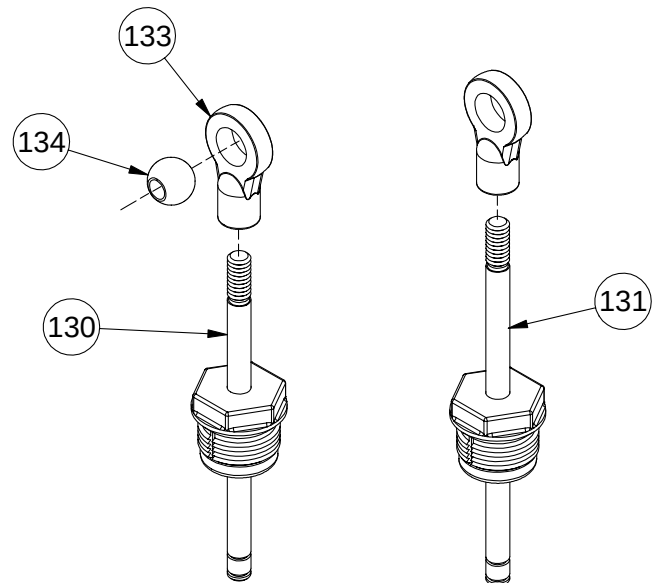


Figure 65

BAG E (Continued)

Figure 66

Step 13. Match the short, front shock bodies (137) to the short, front shafts (130), and the long, rear shock bodies (138) to the long, rear shafts (131).

Step 14. Fill the shock body (137), (138) with shock fluid (132) up to the bottom of the threads.

Step 15. Insert the shaft assembly into the shock body (137), (138) with the shock piston (135)(136) pulled up against the cartridge. Slowly tighten the cartridge approximately two full turns. With the cartridge still slightly loose, slowly push the shock shaft (130), (131) into the shock body (137), (138). This will bleed the excess fluid out of the shock. With the shaft (130), (131) all the way in, hand tighten the shock cartridge the rest of the way.

**Note: Be sure to match the front shock shafts with the front shock bodies.*

Step 16. With the shaft (130), (131) still all the way in, secure the cartridge by tightening it with pliers approximately an additional 1/8-turn. There should be no air in the shock as you push the shaft (130), (131) in and out. If there is, the shock needs more oil. If the shock does not compress all the way, the shock has too much oil.

**NOTE: If leaking persists around the outside, tighten the cartridge more.*

Step 17. Repeat Steps 14-16 for all four shocks.

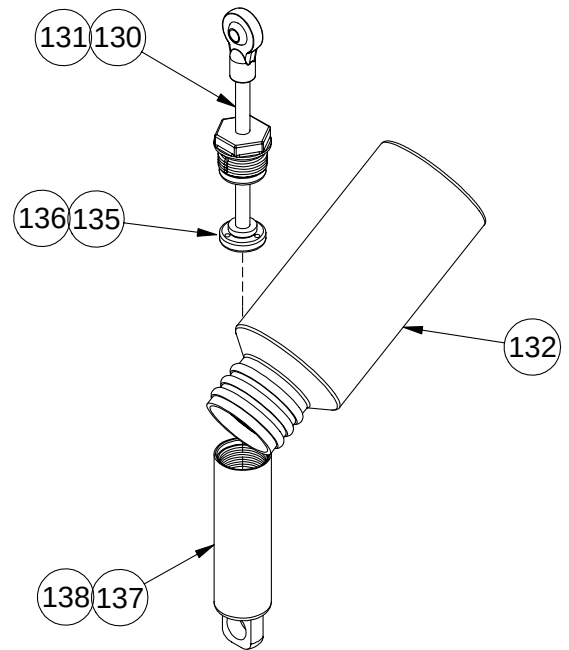


Figure 66

Figure 67



17

Step 18. Snap a shock spring cup (140) onto each of the four shafts (130), (131) and around the shock end (133).

Step 19. Slide a red shock spring (141) over each of the shocks so that the springs rest on the spring cup (140).

Step 20. Insert a 4-40 x 3/8" cap-head screw (17) into the larger hole of each of the four shock collars (139) and thread it into the smaller hole.

Step 21. With the collar (139) loose, slide it over the top of each shock body (137), (138) and against the spring (141). Tighten the collar (139) to hold it in place. *Do not overtighten!*

**NOTE: Final adjustment will be made later in the ride height section in the tips portion of the manual.*

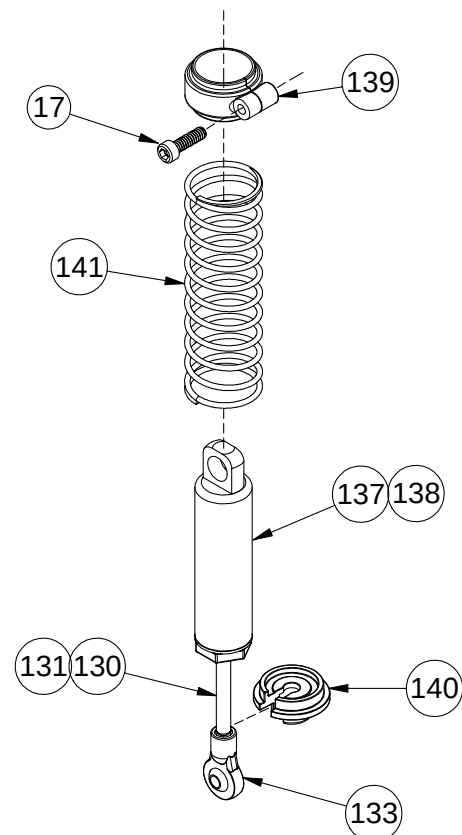
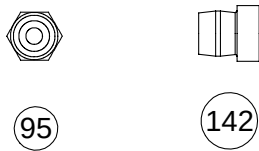


Figure 67

BAG E (Continued)

Figure 68



Step 22. Make sure that the dogbones are in the outdrives (47) before continuing.

Step 23. Attach the bottom of a rear shock (the longer of the two shocks) to the right rear arm (118) by snapping the shock end (133) over the the shock mount swivel ball (134) that is already attached to the right rear arm (118).

Step 24. Slide a short shock mount bushing (142), large side first, over the screw (33) on the right side of the rear shock tower.

Step 25. Place the top of the shock body (138) over the shock mount bushing (142) on the rear shock tower (123) and secure it with a 4-40 locknut (95).

**NOTE: Before attaching the top of the shock, make sure that the dogbone is in place in the outdrive.*

Step 26. Repeat Steps 23-25 for the left rear shock.

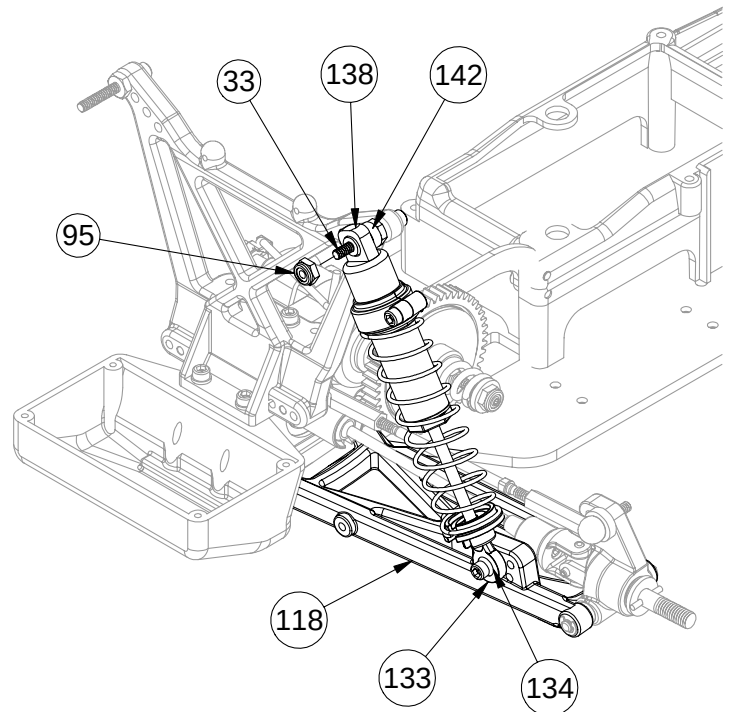
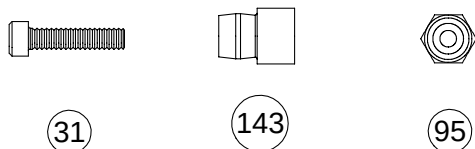


Figure 68

Figure 69



Step 27. Insert the shock end (134) of a front shock between the shock mounting rails of the front suspension arm (48) and line up the hole in the shock mount swivel ball (133) with the middle hole in the arm (48).

Step 28. Attach the shock end (134) to the front arm (48) by threading a 4-40 x 1/2" cap-head screw (31) all the way into the arm (48).

Step 29. Slide a long shock mount bushing (143), large side first, over the screw (33) on the right side of the shock tower (34).

Step 30. Place the top of the shock body (137) over the shock mount bushing (143) on the front shock tower (34) and secure it with a 4-40 locknut (95).

Step 31. Repeat Steps 27-30 for the left front shock.

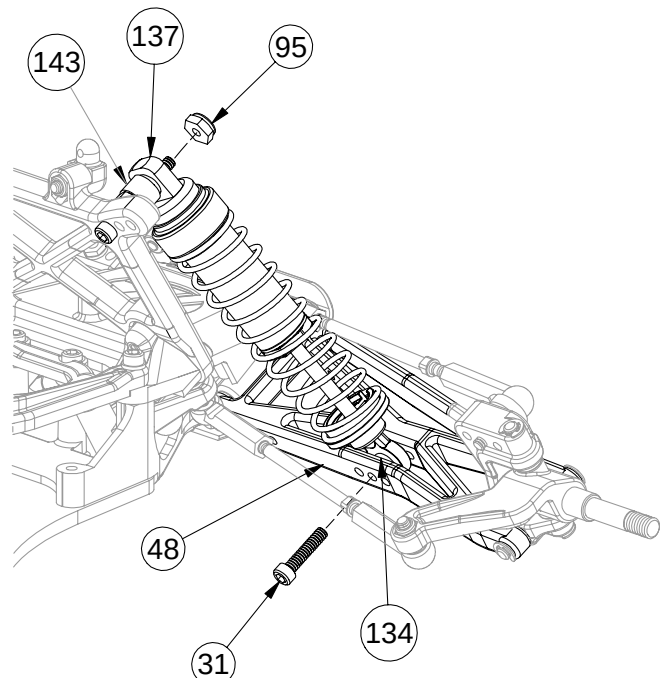
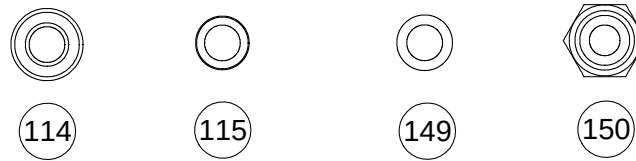


Figure 69

BAG F

Figure 70



Step 1. Inspect the inside of the tires [front (144), rear (145)] for any excess material. If present, trim excess rubber to ensure proper seating of the tires on the wheels [front (147), rear (148)].

**NOTE: Do not set tires on furniture as they may leave permanent stains.*

Step 2. Insert foam tire liners (146) into the front tires (144). Pull the front tires (144) over the front wheels (147) so that the angled ribs are on the solid side of the wheel (outside). Squeeze the tires (144) to properly seat it in the grooves of the wheels (147).

Step 3. Insert foam tire liners (146) into the rear tires (145). Pull the rear tires (145) over the rear wheel (148) and squeeze the tire (145) to properly seat it in the grooves of the wheels (148). Make certain that the foam liners (146) are not pinched between the tires (145) and the wheels (148).

Step 4. The tires (144), (145) should now be glued to the wheels (147), (148). This can be done by using a fast-curing superglue or cyanoacrylate glue available at your hobby shop. Be sure to follow the manufacturer's warnings on the bottle.

Tip: Team Losi Tread Lock (A-7880) is the best glue available for gluing R/C car tires. This glue was formulated and produced especially for this purpose.

! IMPORTANT NOTE: Allow the glue to dry thoroughly before continuing.

Step 5. Press a 3/16" x 3/8" bearing (114) into the inside of both front wheels (147). Slide the front wheels (147) over the front axles (39) so the solid side of the wheel faces the outside. Slide an axle bearing spacer (115) over the front axle (39) next to the inside bearing, (114) so that the spacer is positioned in the center of the wheel (147). Press the remaining 3/16" x 3/8" bearings (114) into the outside of both front wheels (147).

**NOTE: If the 3/16" x 3/8" bearings only have one Teflon™ seal (colored, woven looking) in them, position the seal to the outside of the wheel.*

Step 6. Place a 3/16" x .015 shim (149) over each of the front axles (39), next to the outer bearing (114). Secure the front wheels (147) by threading a 10-32 locknut (150) onto the front axles (39) and tightening with the included Team Losi wheel wrench.

! IMPORTANT NOTE: Do not overtighten the front wheel nuts. The front tires should rotate freely.

Step 7. Mount the rear wheels (148) to the rear axles (109) by lining up the pins (117) in the rear axles with the grooves in the rear wheels (148) and pushing the wheels (148) all the way onto the axles (109).

Step 10. Secure the rear wheels (148) by attaching 10-32 locknuts (150) to the rear axles (109) and tightening.

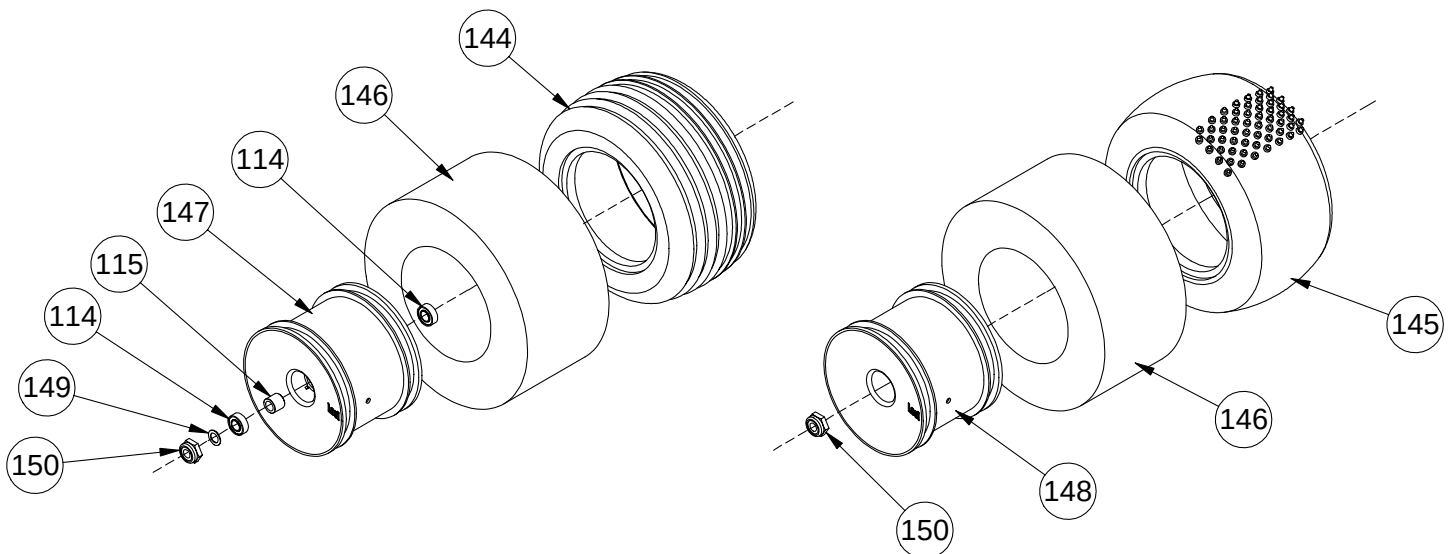
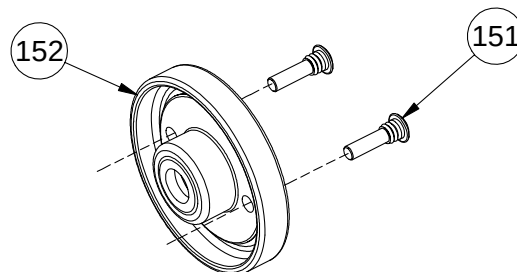
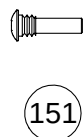


Figure 58

ENGINE INSTALLATION

Figure 71



Step 1. Thread a clutch pin/screw (151) into each of the small holes in the flywheel (152) and tighten with a .050" Allen wrench. The screws should be inserted from the rear as shown.

Tip: A small amount of thread-lock compound should be used on the threads of the clutch pins.

Figure 71

Figure 72

Step 2. Remove any hardware that came installed on the crankshaft of your engine. This includes all nuts, washers, and prop hubs.

***NOTE:** If your engine did not come with a glow plug you will need to purchase one. Use a glow plug wrench, or a 5/16" nut driver to install the glow plug into the head of the engine. Most glow plugs come with a brass washer. Make sure that this washer is placed on the glow plug before it is installed.

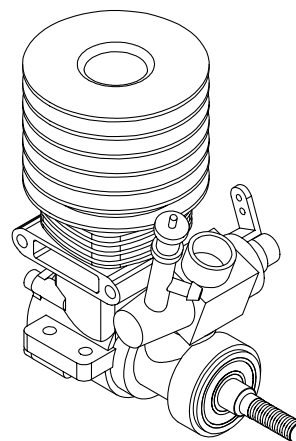
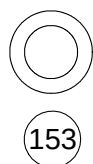


Figure 72

Figure 73



Step 3. Slide a flywheel shim (153) over the crankshaft, and against the front bearing on the engine. Slide the flywheel collet (154), large side first, over the crankshaft and next to the shim (153).

Tip: There are two shims included in the kit. If the flywheel interferes with the case of the engine, add a second shim. If after the engine is installed, the gears don't line up properly, a second shim can be added to help correct the alignment.

Step 4. Slide the flywheel (152), pins out, over the crankshaft. The flywheel (152) should be seated over the collet (154). Thread the clutch nut (155) onto the crankshaft and tighten it using a 3/32" Allen wrench.

! IMPORTANT NOTE: The clutch nut should be very tight. Hold the flywheel with a rag in order to get a good grip while tightening the clutch nut. There are special tools available for inserting in the head of the engine to keep it from turning over while tightening the clutch nut. Other than these special tools, *nothing should ever be inserted in the head of the engine to keep it from turning over!*

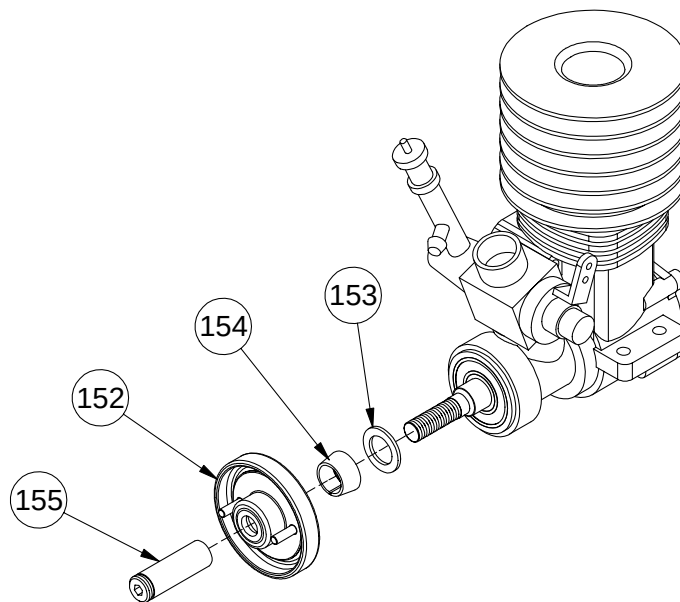


Figure 73

ENGINE INSTALLATION (Continued)

Figure 74

Step 5. Hook the two ends of the clutch spring (156) together to form a loop as shown. Stretch the looped spring (156) over the two clutch shoes (157) so that the clutch shoes (157) form a circle. Make sure that the holes in the clutch shoes are on opposite sides of the circle as shown

! IMPORTANT NOTE: Th clutch shoes may come in a single piece, and must be completely separated to operate properly. Bend the shoes along the cut and pull the two halves apart.

Tip: *LIGHTLY sanding the surface of the clutch shoes can improve their performance. Sand the shoes using a 400 grit, or finer sandpaper. Sand the shoe surface lengthwise, not across the shoe sideways. DO NOT use a sanding block, or lay the sandpaper on a flat surface. Too much sanding may cause flat spots to develop on the shoes.*

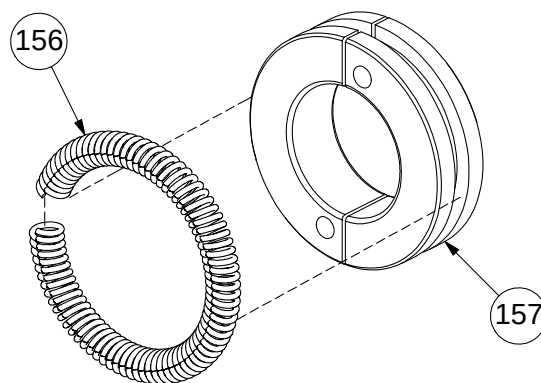


Figure 74

Figure 75

Step 6. Slide the clutch shoe assembly over the clutch nut (155). Place each shoe (157) over a clutch pin (151) and slide the shoes (157) all the way against the flywheel (152). In order for the shoes (157) to slide over the clutch nut (155), they will have to be pulled apart slightly, stretching the springs (156).

! IMPORTANT NOTE: Make sure that the clutch shoes are facing the correct direction as illustrated. Position the clutch so that the shoes are separated one on top, one on bottom. The top clutch shoe should be attached to the pin at the left side of the flywheel, as shown in Figure 75, when looking at the engine from the front.

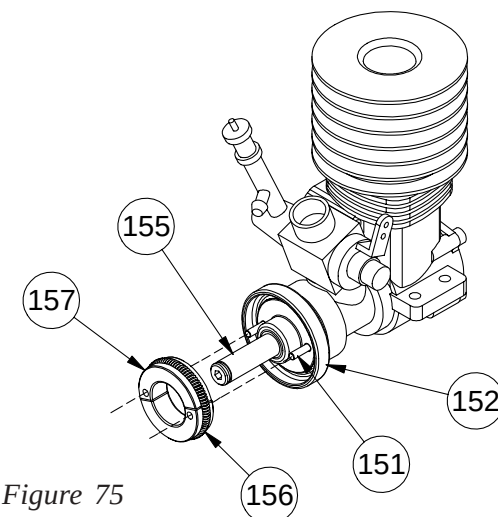
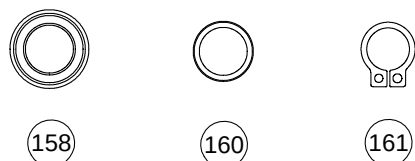


Figure 75

Figure 76



Step 7. Insert a 1/4" x 3/8" clutch bearing (158) into each side of the clutch bell (159).

Step 8. Slide the clutch bell (159) over the clutch nut (151) so that the gear faces out. Push the clutch bell (159) all the way against the clutch assembly.

Step 9. Place the clutch spacer (160) over the clutch nut (151) and against the clutch bell (159). Secure the assembly by pushing the 1/4" clutch nut clip (161) over the end of the clutch nut (151) and into the groove in the clutch nut (151).

! IMPORTANT NOTE: The bearings used in the clutch contain a special grease that does not migrate. It is important that these bearings only be replaced with Team Losi's replacement clutch bearings. It is also important not to oil the bearings in the clutch. Any oil that is put on the bearings can find its way into the clutch assembly and cause the clutch to slip.

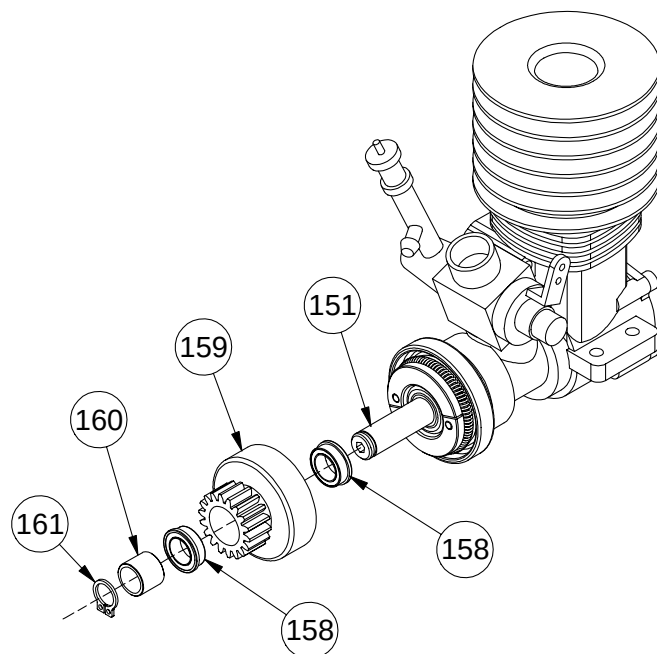
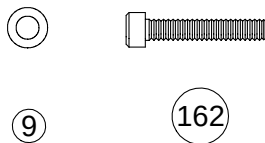


Figure 76

ENGINE INSTALLATION (Continued)

Figure 77/78



Step 12. Place a ball stud washer (9) over the four 4-40 x 1/2" cap-head screws (31). Insert a 4-40 x 1/2" cap-head screw (31) through the four holes in the engine as illustrated.

Step 13. Attach the engine to the engine mounts (164) by threading the four screws (31) into the four holes shown.

*NOTE: The two engine mounts should be positioned with the narrow end up as shown in Figure 78.

Tip: It's a good idea to use a thread-lock compound on the threads of the screws in the engine mounts.

! IMPORTANT NOTE: Make sure that the engine mounts are installed correctly as indicated in Figure 78. The larger, partially threaded holes should be positioned toward the front of the motor, and the four screws should be installed into the smaller, fully threaded holes.

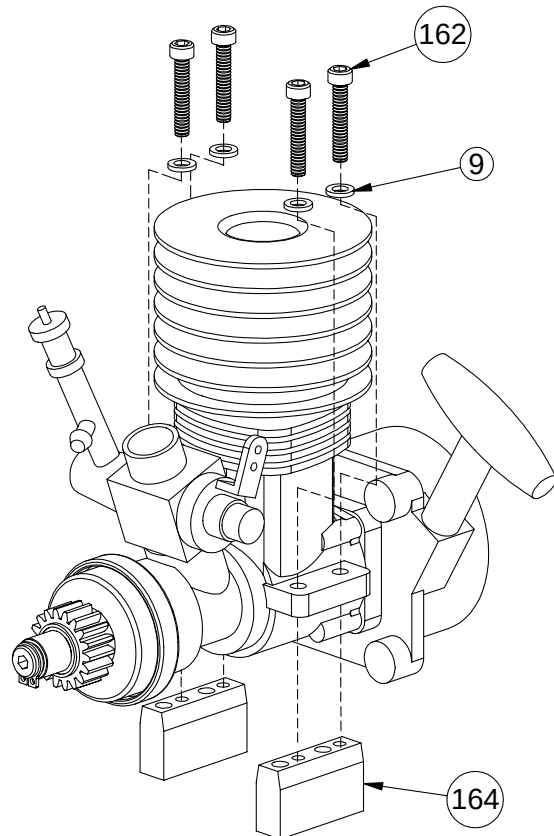


Figure 77/78

ENGINE INSTALLATION (Continued)

Figure 79

Step 14. Install the carburetor to the engine as per the instructions supplied with the engine. The carburetor throttle arm should be on the left side of the engine as shown. Check that the arm has equal throw from center. If the arm rotates more in one direction, loosen the nut securing the arm and re-position the arm.

**NOTE: If your engine comes equipped with a slide valve carburetor, the slide ball should be positioned to the left side of the motor pointing up and forward.*

Step 15. Tighten the carburetor locking screws or other mechanism per the instructions included with your engine.

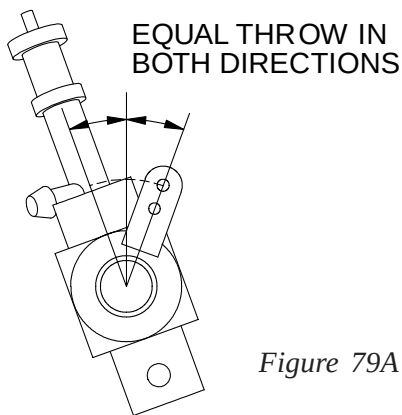


Figure 79A

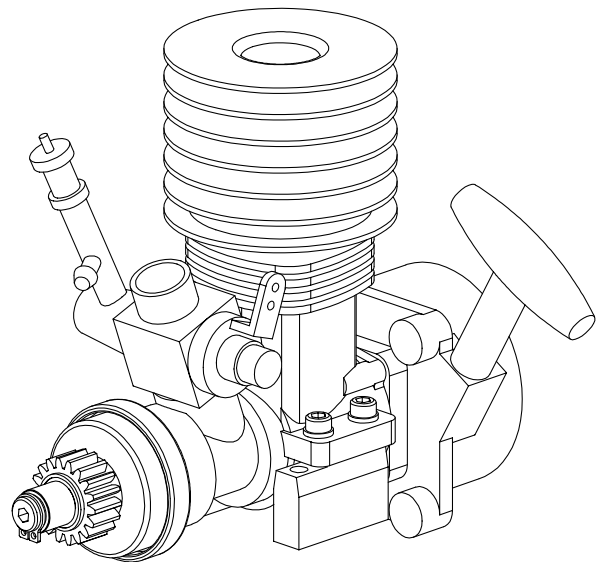


Figure 79

ENGINE INSTALLATION (Continued)

Figure 80/81



169

Step 19. Insert a 4-40 x 1" cap-head screw (169), from the left, through each of the two holes in the middle of the engine.

Step 20. Wet your finger with water and *lightly* moisten the exhaust port gasket (170) and slide it in place over the exhaust port of the engine.

Step 21. Position the aluminum exhaust header over the exhaust port on the motor and align the holes in the header flange (171) with the screws (169). Secure the header (171) to the engine by tightening the two screws (169).

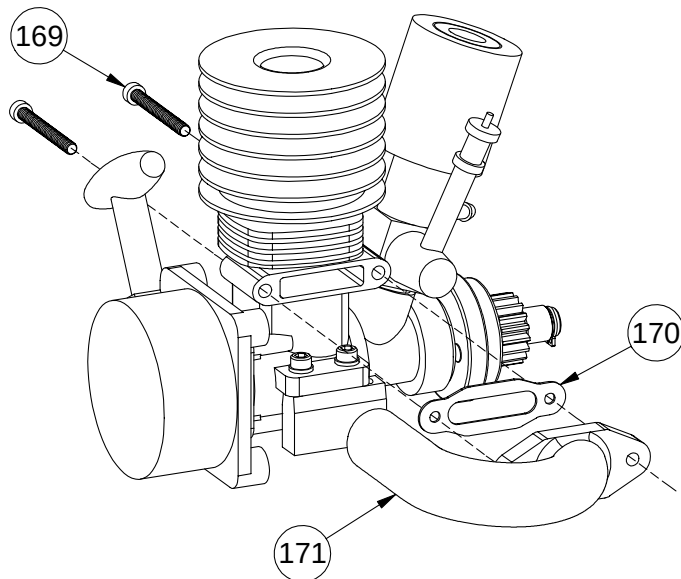


Figure 80/81

Figure 82



172



173

Step 22. Place a countersunk washer (172) over each of the 5-40 x 1/2" flat-head screws.

Step 23. Position the engine in the chassis (19) and line up the holes in the engine mounts (164) with the slots in the chassis (19).

Step 24. Thread the 5-40 x 1/2" flat-head screw (173), with the washers (172) in place, all the way into each of the four holes in the engine mounts (164). Be sure all the countersunk washers (172) fit down inside the slots in the chassis (19). Do not fully tighten the screws yet.

Tip: It's a good idea to use a thread-lock compound on the threads of the screws in the engine mounts.

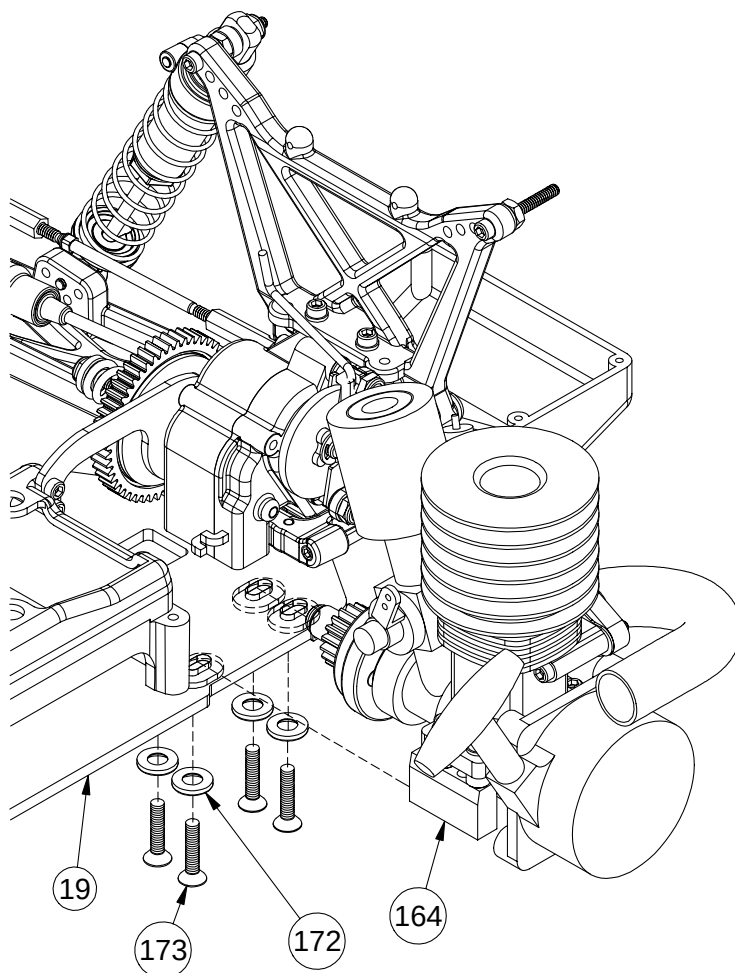


Figure 82

ENGINE INSTALLATION (Continued)

Figure 83

Step 25. Adjust the gear mesh between the clutch bell gear (159) and the spur gear (91) by sliding the engine mounts (164) in the slots of the chassis (19). 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). 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 (91).

Step 26. Once the engine alignment and gear mesh are correct, tighten all of the screws (173). Re-check the gear mesh after all the screws are tight to ensure the motor mounts did not move.

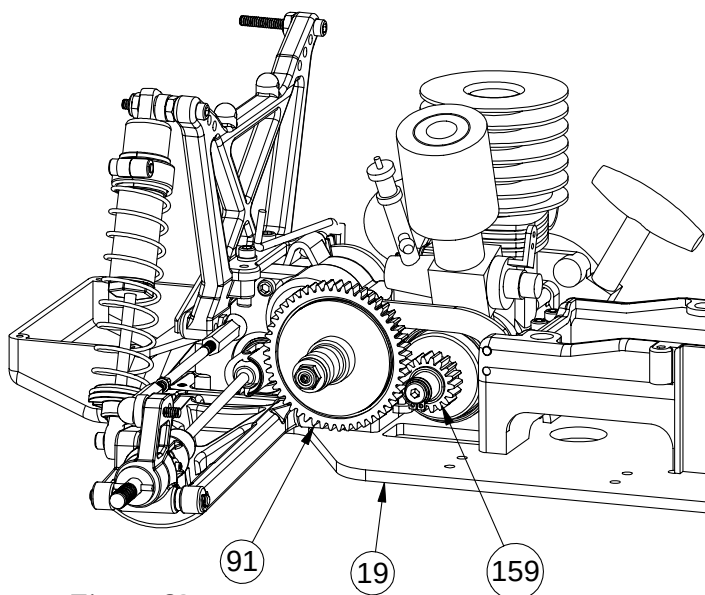


Figure 83

Figure 84

Step 27. Slide the silicone coupler (174) over the end of the exhaust header (171) as shown.

Step 28. Insert the tuned pipe (175) into the opposite end of the exhaust coupler (174) so that the small hole in the side of the pipe points towards the truck.

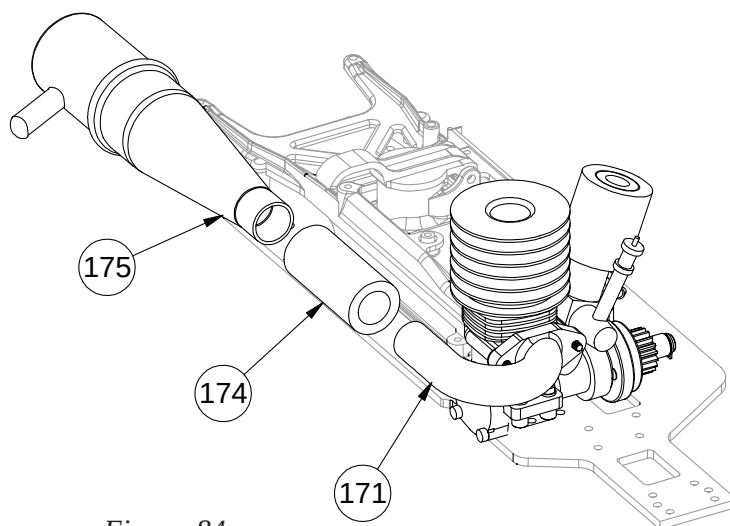


Figure 84

Figure 85



Step 29. Cut a 3" (75mm) length from the fuel tubing (176) supplied with the kit. Slide the fuel tubing (176) over the end of the pipe mounting bracket (177) as shown. Slide the pipe mounting bracket (177) over the tuned pipe (175) as shown.

**NOTE: Some kits may come with two types of fuel tubing. For this step use the opaque (non-transparent) fuel tubing.*

Step 30. Place a #4 washer (23) over a 4-40 x 3/8" cap-head screw (17). Thread the screw (17) through the pipe mounting bracket (177), into the hole in the top of the center chassis brace (29), and tighten.

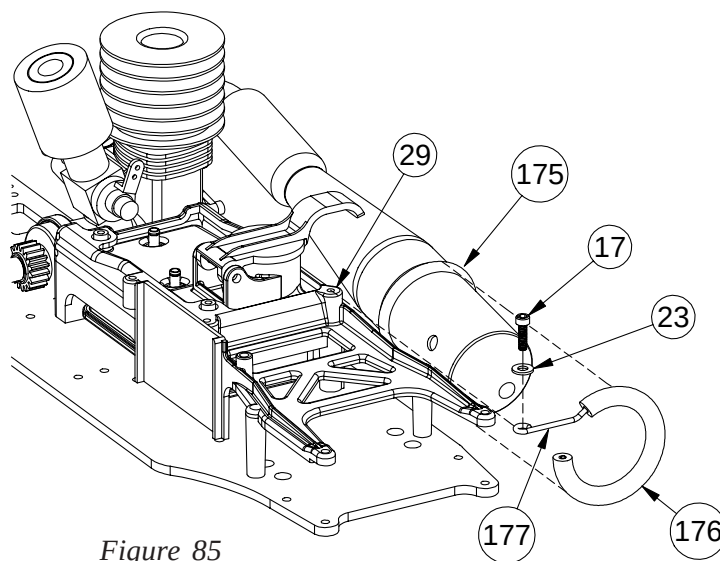


Figure 85

ENGINE INSTALLATION (Continued)

Figure 86/87

Step 34. Rotate the tuned pipe (175) so that the stinger points down slightly. Secure the tuned pipe (175) to the coupler (174) by wrapping an 8" tie strap (180) around the coupler (174), and the pipe (175), and tightening.

Step 35. Secure the coupler (174) to the header (171) by wrapping an 8" tie strap (180) around the coupler (174) and header (171) and tightening. Cut off the extra length from both tie straps (180).

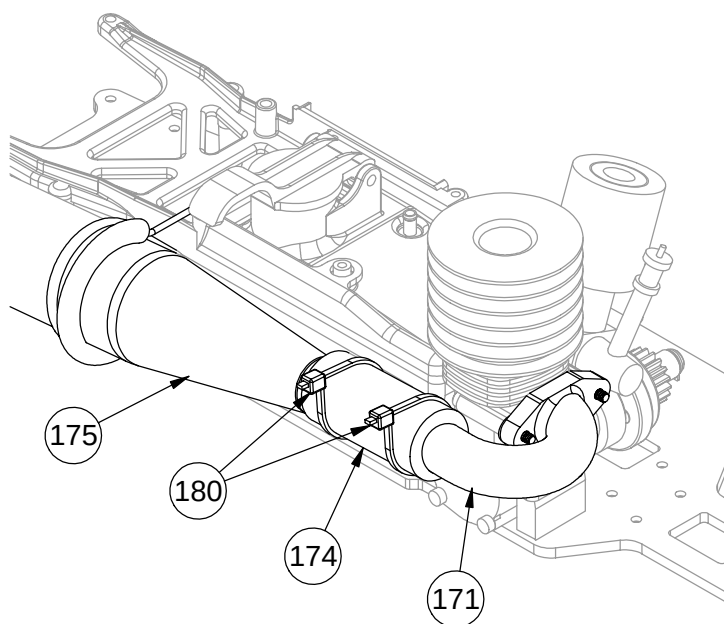


Figure 86/87

ENGINE INSTALLATION (Continued)

Figure 88

Step 36. Cut an 11" (280mm) length of fuel tubing (176) from the piece supplied.

Step 37. Cut one end of the 11" piece of tubing at a 45° angle as shown in Figure 88A. Install the uncut side of the tubing to the forward fitting on the top of the fuel tank (30).

Step 38. Wind the tubing into two small loops and insert them into the rectangular slot in the chassis brace (29) as shown. Insert the cut end of the tubing into the inside (small) hole in the tuned pipe (175). This fuel line will serve as the fuel tank pressure line.

! IMPORTANT NOTE: Make sure that the cut section of fuel tubing is inserted all the way into the tuned pipe.

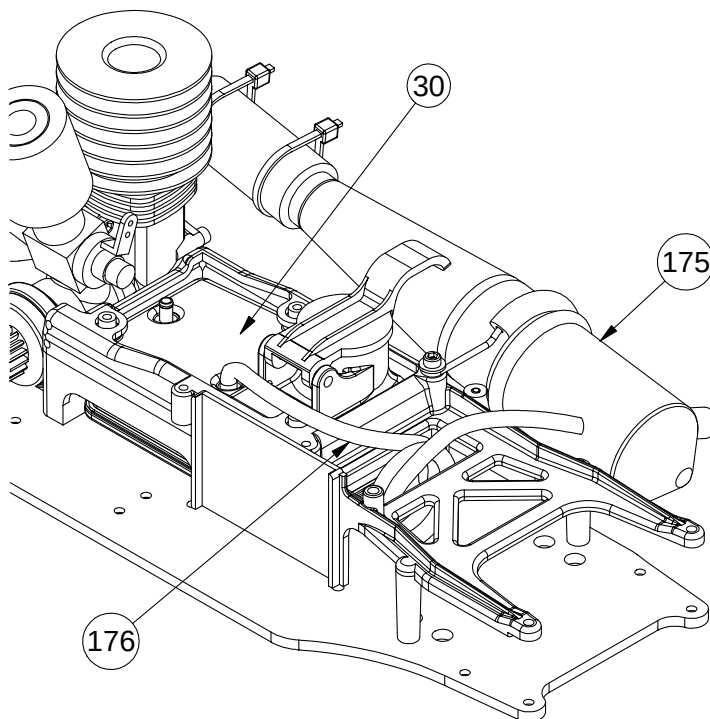


Figure 88

Figure 88A

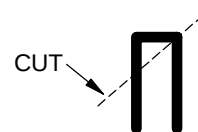


Figure 89

Step 41. Attach one end of the fuel tubing (176) to the rear fitting on the top of the fuel tank (30), and attach the other end to the fitting on the carburetor. This will be your fuel line.

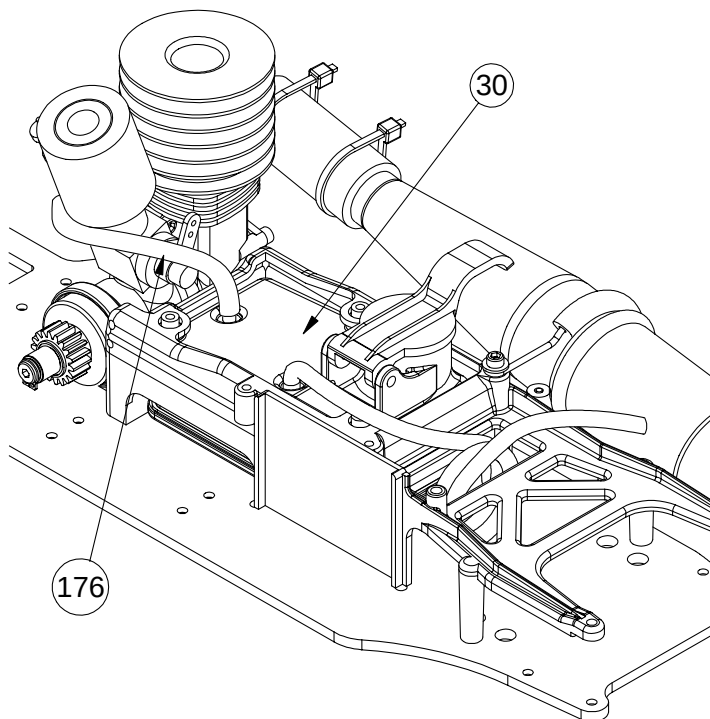


Figure 89

RADIO INSTALLATION

Figure 90

Step 1. Cut a piece of two-sided tape (182) to the same size as the bottom of the receiver. Remove the backing from one side of the tape (182) and attach the tape (182) to the bottom of the receiver.

Tip: For best results clean the surfaces that the two-sided tape will be attached to with a mild rubbing alcohol. This will ensure a good, strong bond. Allow the surface to fully dry before attaching the tape.

Step 2. Remove the backing from the remaining side of the two-sided tape (182) and attach the receiver to the side of the center chassis brace (29), between the two receiver box guide rails as shown. The receiver should be mounted so that it is at least 1/8" above the chassis (19) and the antenna is to the front of the truck.

Step 3. Plug the steering servo into the slot marked "Channel 1" or "Function 1" on the receiver.

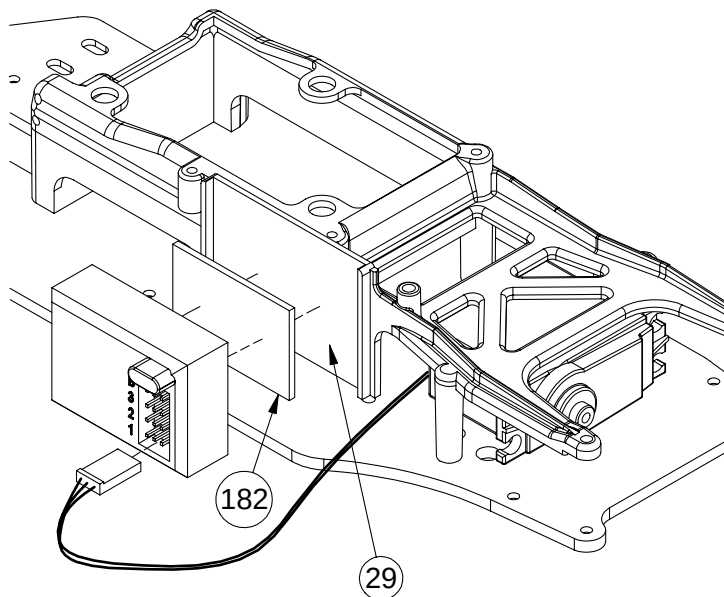


Figure 90

Figure 91

Step 4. Route the antenna wire up, through the antenna mounting post in the center chassis brace (29).

Step 5. Slide the antenna wire through the antenna tube (183) (a small drop of oil in the tube will make this easier).

Step 6. While pulling the wire through the antenna tube (183), slide the antenna tube (183) down and push it firmly into the antenna mounting post on the center chassis stiffener (29).

Step 7. Fold the wire over the antenna tube (183) and place the antenna cap (184) over the tube (183) and extra wire.

***NOTE:** If the antenna wire is shorter than the tube, remove the tube and cut enough off of the tube so that the wire will extend about 3/4" past the end of the tube.

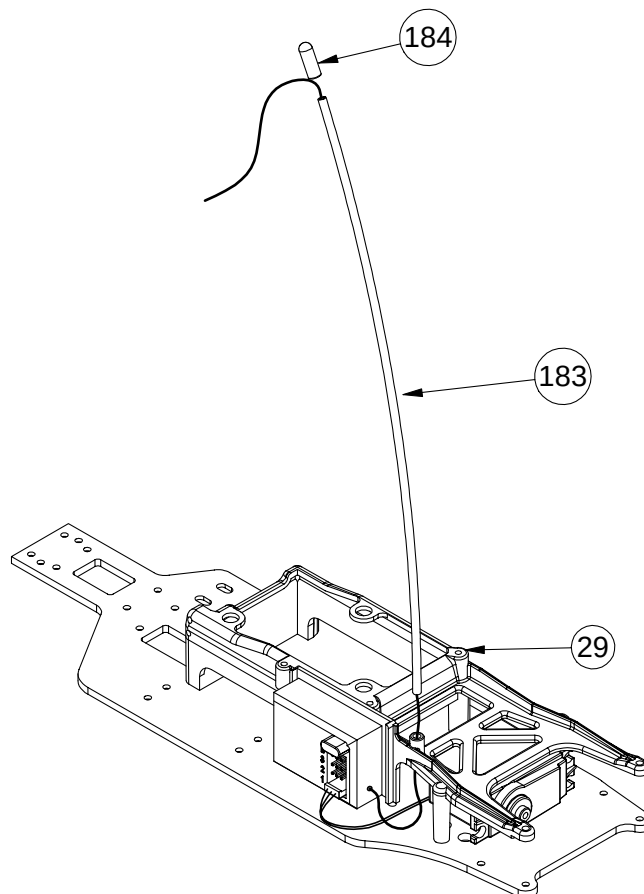


Figure 91

RADIO INSTALLATION (Continued)

Figure 92



187

Step 8. Place the battery pack into the battery box (125), so that the power lead is to the right side of the chassis. Cut two small pieces of the battery spacer foam (185) to fit inside the battery box (125) on each side of your battery pack. The foam (185) should fit tightly between the battery pack and the sides of the battery box (125) to prevent the battery pack from moving around inside the box while running your truck.

Step 9. Attach the battery box lid (186) to the battery box (125) with four 2-56 x 1/2" button-head screws (187). Be careful not to pinch the power lead in between the battery box (125) and the lid (186).

**NOTE: If your battery pack is smaller and fits loosely under the lid, cut a piece of battery spacer foam to fit tightly between the lid and the battery pack. This will keep the battery pack from moving up and down in the battery box.*

Step 10. Route the power lead forward through the shock tower and over the gearbox.

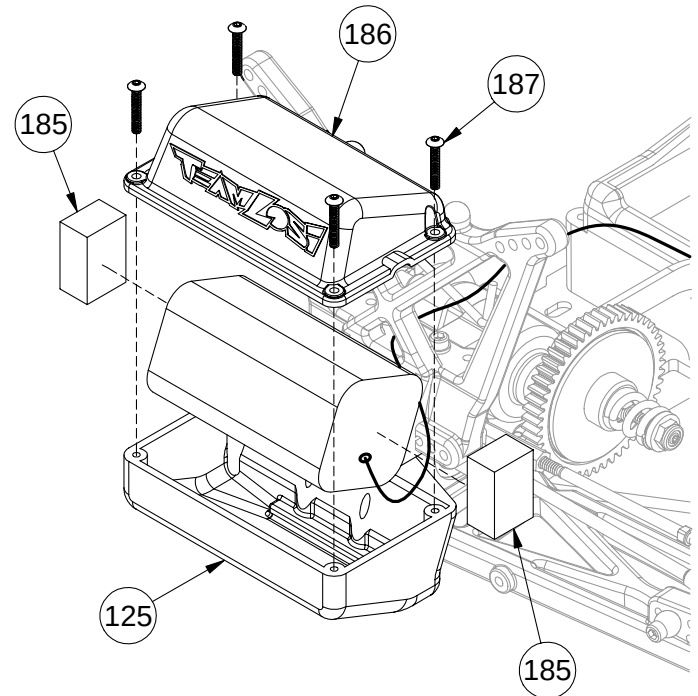


Figure 92

Figure 93



20

Step 11. The top holes in the throttle servo mounts (188) are offset slightly to accommodate different width servos. Look up your throttle servo in the table on page 3, Figure 7C to determine what configuration to assemble the throttle servo mounts (188). The "WIDE" configuration is shown in Figures 93A and the "NARROW" configuration is shown in Figure 93B.

Step 12. Attach the throttle servo mounts (188) to the chassis (19) with two 4-40 x 3/8" flat-head screws (20), so that the mounts are oriented correctly, as shown in Figure 93A or 93B.

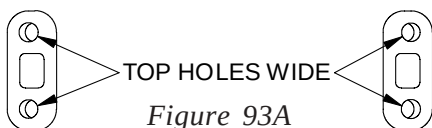


Figure 93A

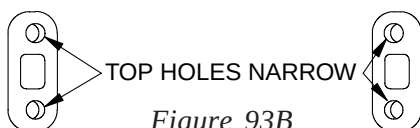


Figure 93B

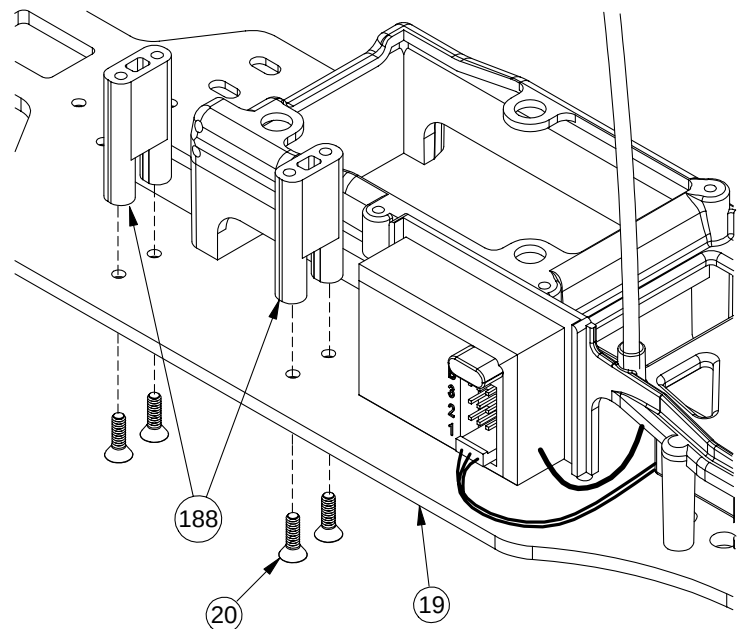
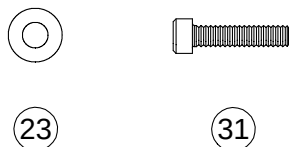


Figure 93

RADIO INSTALLATION (Continued)

Figure 94

Rotary Valve Carburetors



Step 13. Attach the grommets (supplied with your radio system) to the throttle servo per the radio system instructions.

Step 14. Route the servo lead and plug through the slot in the bottom of the **forward** servo mount (188) and plug it into the slot marked "Channel 2" or "Function 2" in the receiver.

Step 15. Position the throttle servo and switch mount (189) over the throttle servo mounts (188) so that the servo output shaft is to the **rear** and the switch mount (189) is to the right, as shown in Figure 94.

Step 16. Place a #4 washer (23) over each of four 4-40 x 1/2" cap-head screws (31). Thread a screw (31) through each of the four grommets in the servo, through the slots in the switch mount (189), and into the four holes in the top of the servo mounting posts (188).

! IMPORTANT NOTE: Do not overtighten the screws! The purpose of having the grommets is to absorb the shock and vibration from the gas engine. Overtightening the screws will prohibit the grommets from working properly.

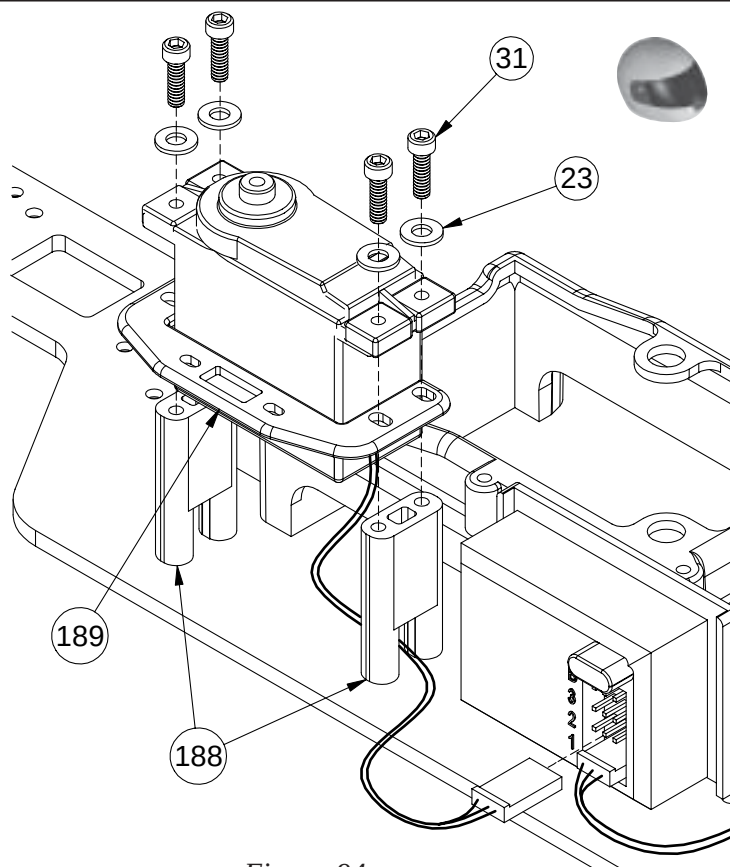
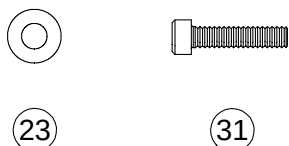


Figure 94

Figure 95

Slide Valve Carburetors



Step 13. Attach the grommets (supplied with your radio system) to the throttle servo per the radio system instructions.

Step 14. Route the servo lead and plug through the slot in the bottom of the **rear** servo mount (188) and plug it into the slot marked "Channel 2" or "Function 2" in the receiver.

Step 15. Position the throttle servo and switch mount (189) over the throttle servo mounts (188) so that the servo output shaft is to the **front** and the switch mount (189) is to the right, as shown in Figure 95.

Step 16. Place a #4 washer (23) over each of four 4-40 x 1/2" cap-head screws (31). Thread a screw (31) through each of the four grommets in the servo, through the slots in the switch mount (189), and into the four holes in the top of the servo mounting posts (188).

! IMPORTANT NOTE: Do not overtighten the screws! The purpose of having the grommets is to absorb the shock and vibration from the gas engine. Overtightening the screws will prohibit the grommets from working properly.

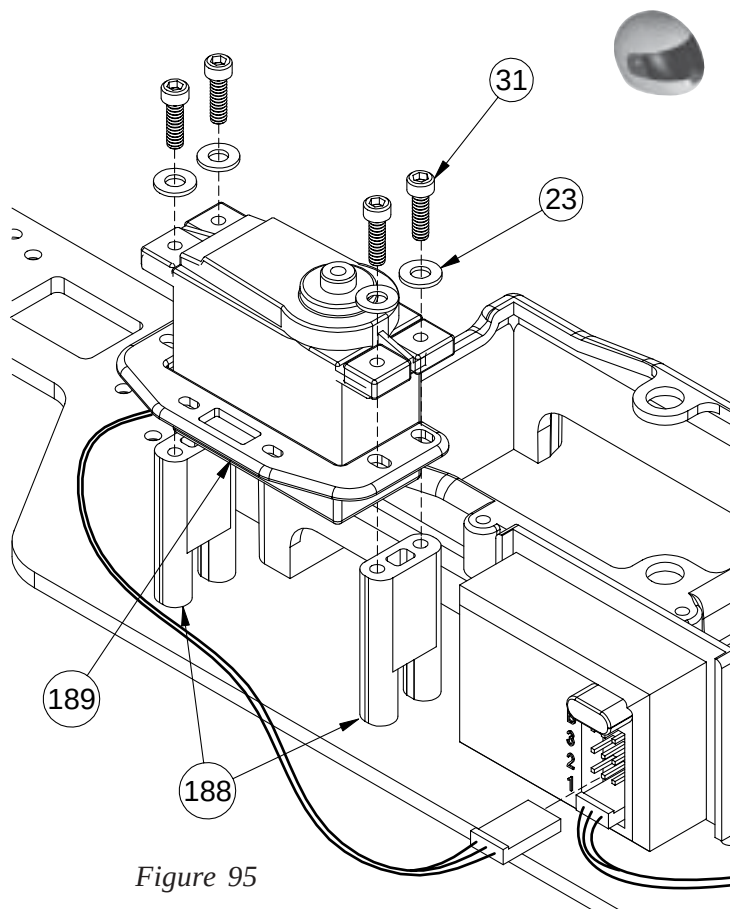


Figure 95

RADIO INSTALLATION (Continued)

Figure 96

Step 17. Remove the two small screws from the switch (supplied with radio system). Place the switch, from the bottom, into the switch mount (189).

Step 18. Place the switch top plate (if applicable) over the switch, on top of the switch mount (189). Line up the holes in the switch with the holes in the top plate and secure the switch to the switch mount (189) with the two screws from the switch.

Step 19. Plug the switch lead into the slot marked "Battery" in the receiver.

Tip: Some racers prefer to eliminate the switch and replace it with a servo extension wire. If you wish to replace the switch with an extension wire, plug one end of the wire into the slot marked "Battery" in the receiver.

Step 20. Plug the battery lead into the free end of the switch and make sure that the switch is in the "off" position. Use a couple of small tie-straps to secure the battery lead to the gearbox brace. This will keep the wires away from any moving parts such as the gears, throttle and brake linkages, etc.

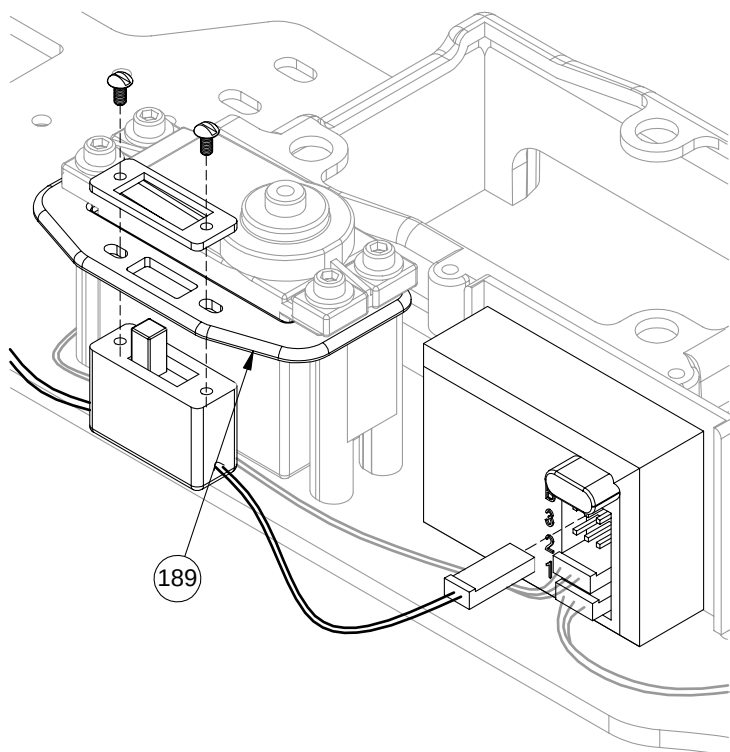


Figure 96

Figure 97



(17)

Step 21. Slide the receiver cover (198) into place over the rails on the top chassis brace (29), so that the top lip of the chassis brace (29) fits up inside the receiver cover (198), and the notches at the bottom of the receiver cover (198) fit into the holes in the chassis (19). Be carefull to arrange the radio wires so that they fit through the mouse-holes in the bottom of the receiver cover (198) and are not pinched under the cover (198).

Step 22. Slightly bend the throttle return spring eyelet (199). Place the throttle return spring eyelet (199) over one of the 4-40 x 3/8" cap-head screws (17), and thread the screw (17) through the forward hole in the receiver cover (198) and into the top chassis brace (29).

Step 23. Thread the other 4-40 x 3/8" cap-head screws (17) through the rear hole in the receiver cover (198) and into the top chassis brace (29).

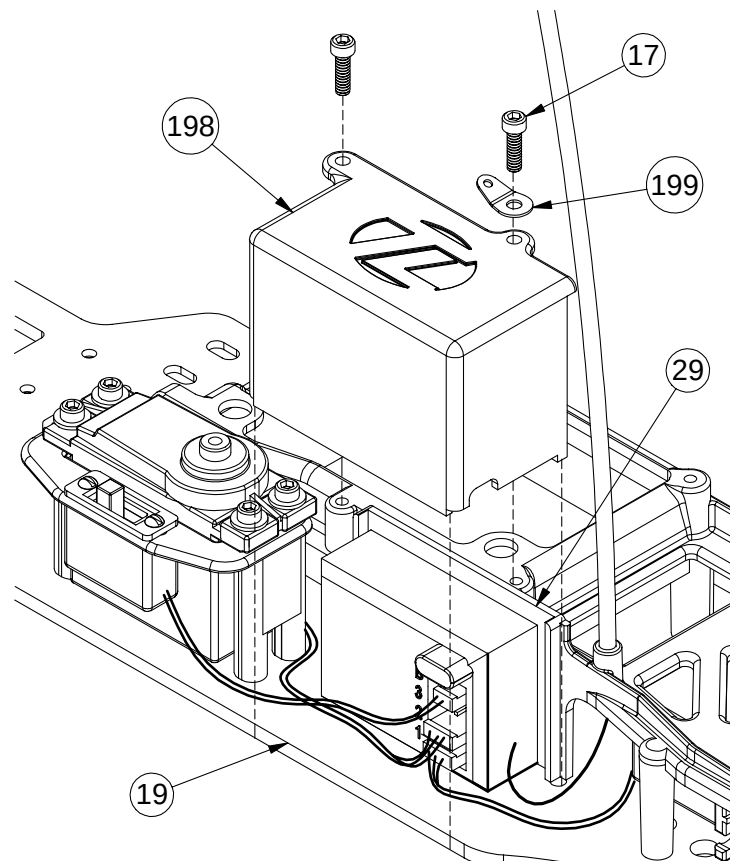


Figure 97

RADIO INSTALLATION (Continued)

Rotary Valve Carburetors

If your engine comes equipped with a rotary valve carburetor, complete the steps in Figure 98 through Figure 104. If your engine comes equipped with a slide valve carburetor, skip ahead to page 47 and complete the steps in Figure 105 through Figure 111.

Figure 98



193

Step 24. Slide a linkage collar (192) over the end of the throttle Z-bend wire (191) (the shorter of the two), and position it approximately 1/4" (6mm) from the Z-bend. Secure the collar (192) with a 4-40 x 1/8" set screw (193).

Step 25. Place the throttle over-ride spring (194) (longer of the two springs) over the wire (191) and against the collar (192). Slide a plastic over-ride slider (195) onto the wire (191), so that the long end is towards the Z-bend.

Step 26. Place a brake over-ride spring (196) (black, shorter of the two springs) over the wire (191) and against the over-ride slider (195). Place a linkage collar (192) over the end of the wire (191), so that the springs are somewhat compressed, and secure it with a 4-40 x 1/8" setscrew (193). The collar (192) should be positioned at the end of the wire (191). Final adjustments will be made later.

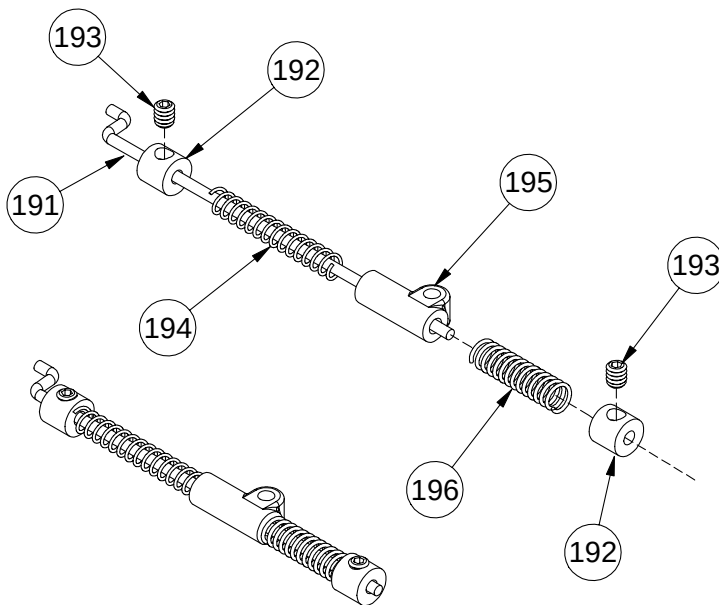


Figure 98

Figure 99



193

Step 27. Slide a linkage collar (192) over the end of the long, brake Z-bend wire (197), and position it approximately 2 1/4" (60mm) from the Z-bend. Secure the collar (192) in place with a 4-40 x 1/8" set screw (193).

Step 28. Slide a plastic over-ride slider (195) onto the wire (191), so that the long end is towards the Z-bend. Place a brake override spring (196) (black, shorter of the two springs) over the wire (191) and against the slider (195).

Step 29. Slide a linkage collar (192) over the end of the wire (191) until it just touches the spring (196). Secure it with a 4-40 x 1/8" setscrew (193). Once again, final adjustments will be made later.

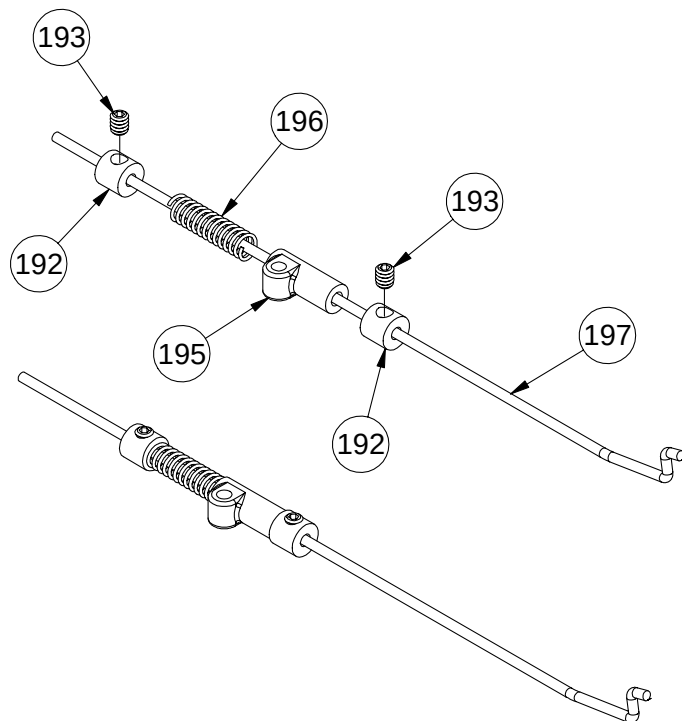


Figure 99

RADIO INSTALLATION (Continued)

Rotary Valve Carburetors

Figure 100

Step 30. For rotary valve carburetors, you will need to remove the straight, shorter arm of the throttle servo horn (190), as shown in Figure 100. Cut off the arm with heavy duty clippers or a Dremel™ hobby tool.

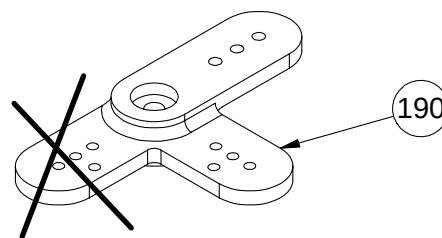


Figure 100

Figure 101

Step 31. Determine which throttle servo spline insert (200) will fit your throttle servo by referring to the table on page 3, Figure 7C.

Step 32. Press the correct throttle servo spline insert (200) into the hexagonal hole in the bottom of the throttle servo horn (190).

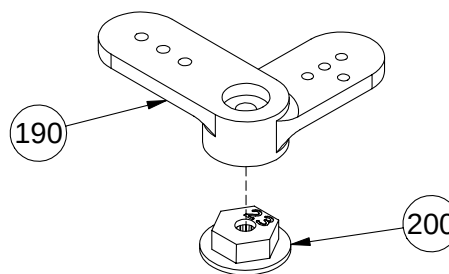
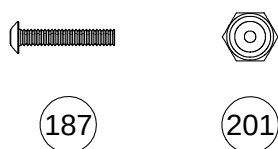


Figure 101

Figure 102



Step 33. Attach the throttle linkage to the throttle servo horn by inserting a 2-56 x 1/2" button-head screw (187) through the over-ride slider (195) and into the inner hole in the longer arm of the throttle servo horn (190). Once the screw (187) is snug up against the over-ride slider (195), unscrew it one full turn to allow some movement between the arm (190) and the slider (195). Secure the screw (187) with a 2-56 locking nut (201).

Step 34. Insert the brake linkage Z-bend (197) from the bottom, through the middle hole in the shorter arm of the throttle servo horn (190).

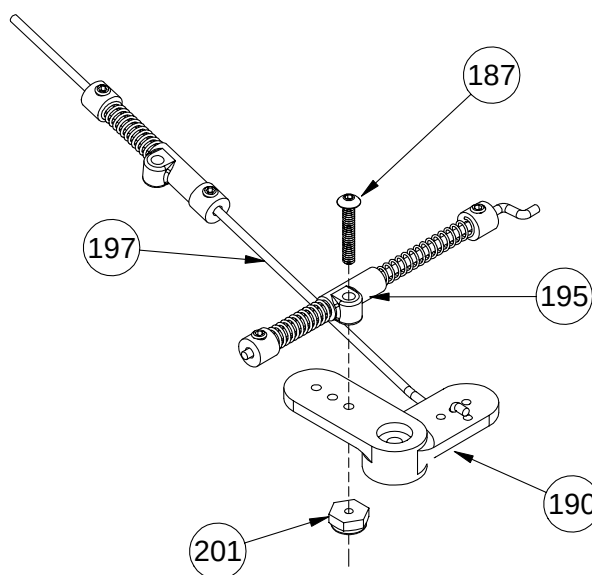


Figure 102

RADIO INSTALLATION (Continued)

Rotary Valve Carburetors

Figure 103



Step 35. Install the throttle linkage Z-bend wire (191) in the top hole of the throttle arm so that the wire is positioned on the side of the arm toward the engine.

Step 36. Press the throttle servo horn (190) and throttle servo spline insert (200) onto the output shaft of the servo, and secure it with the screw included with your servo. Be sure the servo output shaft is centered and the servo horn is aligned properly, as shown.

Step 37. Insert the end of the brake lever (102) through the hole in the over-ride slider (195) on the brake linkage.

Step 38. Place a linkage collar (192) over the end of the brake lever (102) and secure it with a 4-40 x 1/8" set screw (193).

**NOTE: The slider should fit loosely under the linkage collar to prevent binding.*

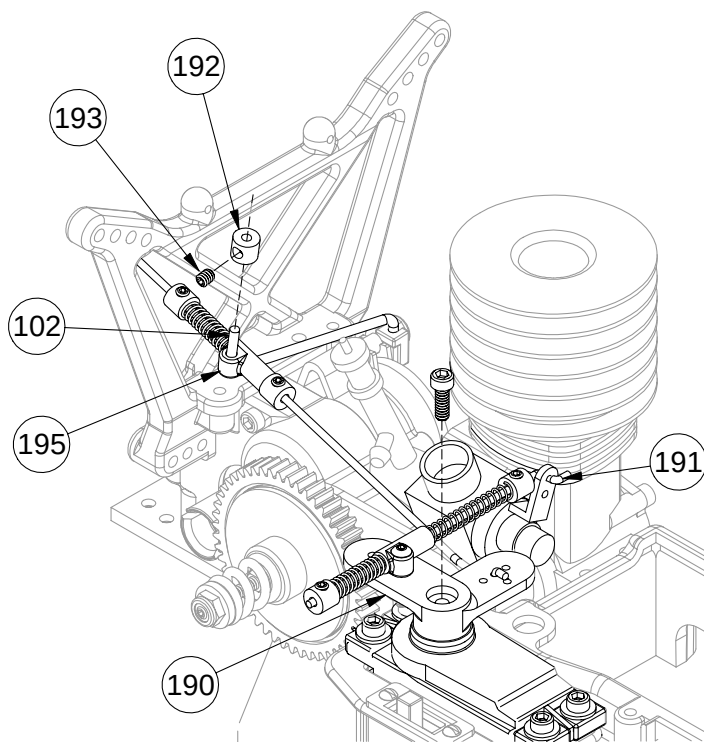


Figure 103

Figure 104

Step 39. Attach one end of the throttle return spring (202) to the hole in the eyelet (199). Attach the other end of the spring (190) to the hole toward the edge of the servo arm as shown.

Step 40. Remove the air filter (165) from the air filter boot (166). Check to see that the throttle return spring is holding the carburetor closed, and that the linkage is not pulling the carburetor open.

Step 41. Looking through the air filter boot (166) into the carburetor, check the opening of the small, half-moon area near the side. This opening should be approximately 1/32" (1mm) in the fully closed position. If it is not, refer to your engine instructions and adjust the idle adjustment screw until the opening is 1/32" (1mm) with the throttle closed.

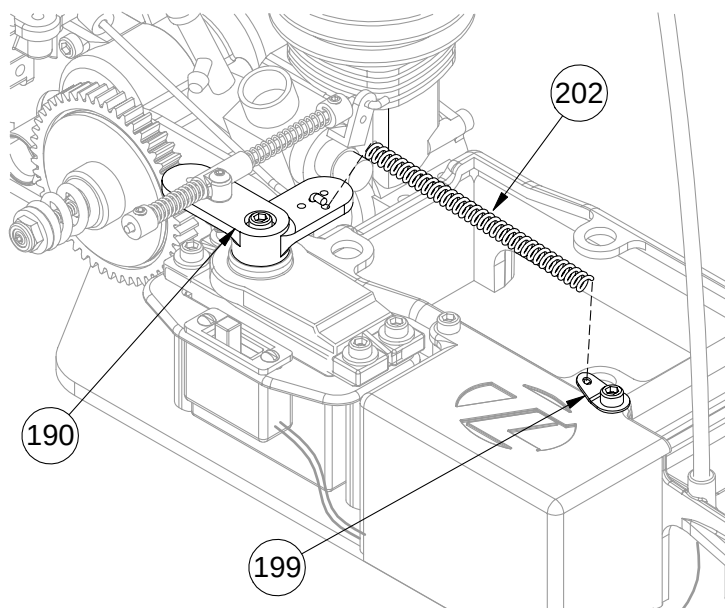


Figure 104

Once you have completed the radio installation for a rotary valve carburetor, skip ahead to page 50 and begin at Figure 112.

RADIO INSTALLATION (Continued)

Slide Valve Carburetors

If your engine comes equipped with a slide valve carburetor, complete the steps in Figure 105 through Figure 111.

Figure 105



193

Step 24. Thread the 4mm ball cup (204) all the way onto the end of the threaded throttle rod (203). Slide a linkage collar (192) over the other end of the throttle rod (203), and up against the ball cup (204). Secure the collar (192) with a 4-40 x 1/8" set screw (193).

Step 25. Place the throttle over-ride spring (194) (longer of the two springs) over the rod (203) and against the collar (192). Slide a plastic over-ride slider (195) onto the rod (203), so that the long end is away from the ball cup (204).

Step 26. Place a brake over-ride spring (196) (black, shorter of the two springs) over the rod (203) and against the over-ride slider (195). Place a linkage collar (192) over the end of the rod (203), so the springs are somewhat compressed, and secure it with a 4-40 x 1/8" setscrew (193). The collar (192) should be positioned at the end of the rod (203). Final adjustments will be made later.

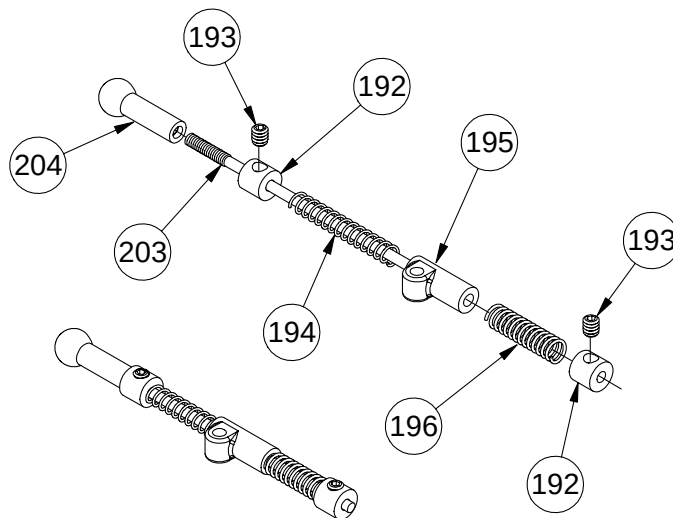


Figure 105

Figure 106



193

Step 27. Slide a linkage collar (192) over the end of the long, brake Z-bend wire (197), and position it approximately 3" (75mm) from the Z-bend. Secure the collar (192) in place with a 4-40 x 1/8" set screw (193).

Step 28. Slide a plastic over-ride slider (195) onto the wire (197), so that the long end is towards the Z-bend. Place a brake over-ride spring (196) (black, shorter of the two springs) over the wire (197) and against the slider (195).

Step 29. Slide a linkage collar (192) over the end of the wire (197) until it just touches the spring (196). Secure it with a 4-40 x 1/8" setscrew (193). Once again, final adjustments will be made later.

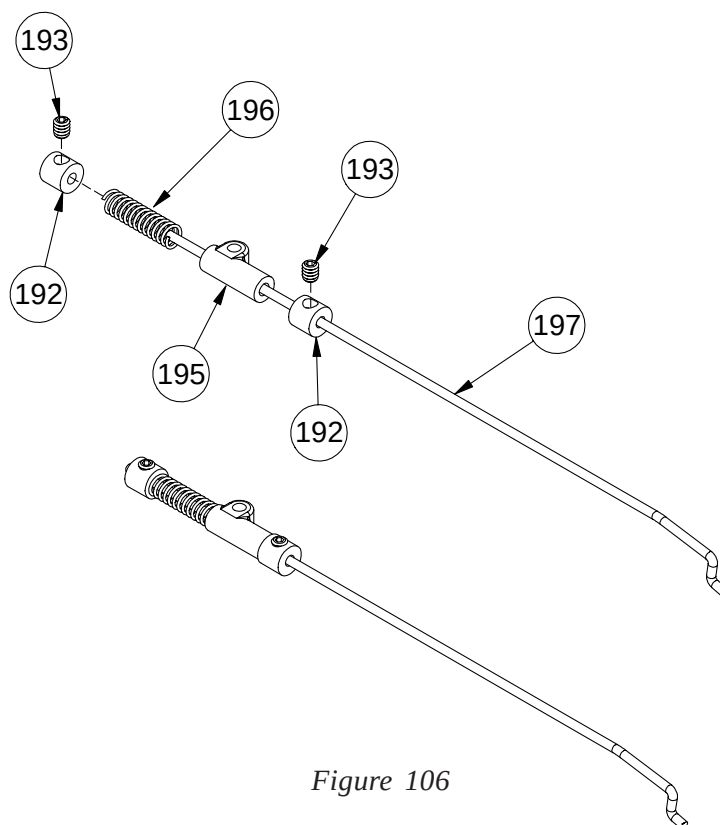


Figure 106

RADIO INSTALLATION (Continued)

Slide Valve Carburetors

Figure 107

Step 30. For slide valve carburetors, you will need to remove the shorter, perpendicular arm of the throttle servo horn (190), as shown in Figure 107. Cut off the arm with heavy duty clippers or a Dremel™ hobby tool.

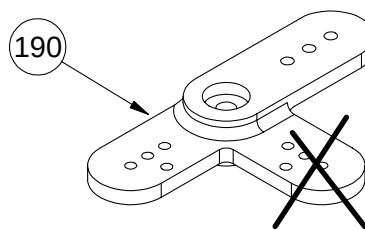


Figure 107

Figure 108

Step 31. Determine which throttle servo spline insert (200) will fit your throttle servo by referring to the table on page 3, Figure 7C.

Step 32. Press the correct throttle servo spline insert (200) into the hexagonal hole in the bottom of the throttle servo horn (190).

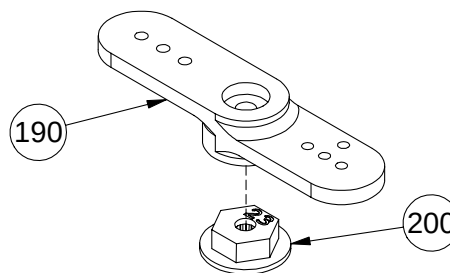
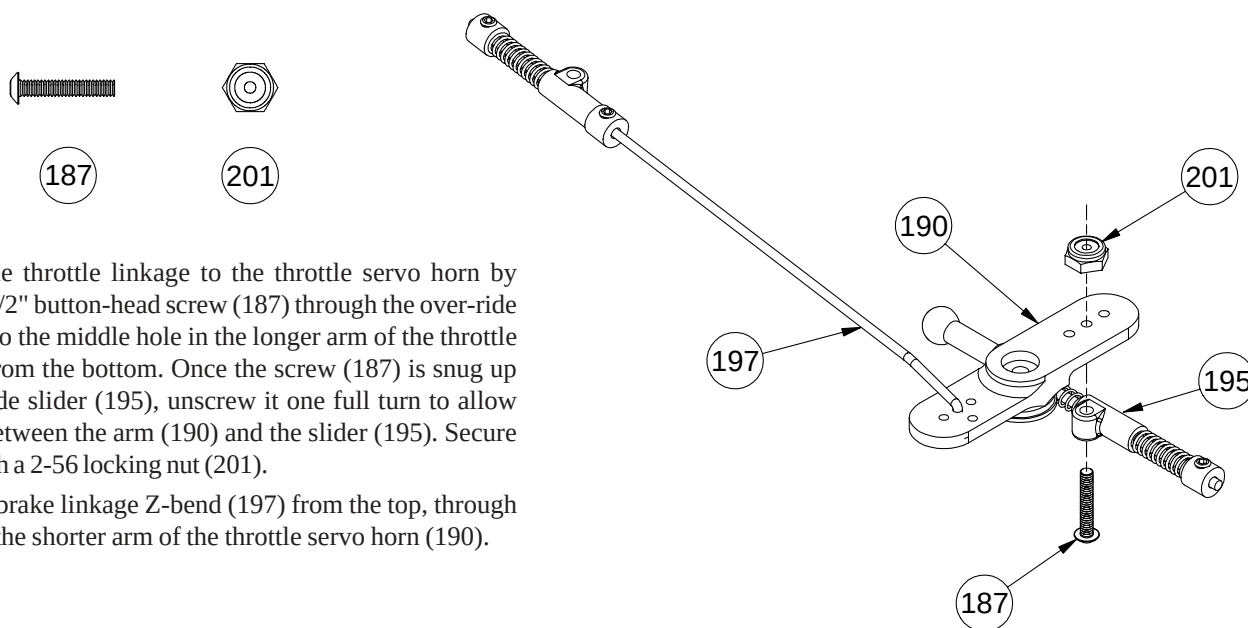


Figure 108

Figure 109



Step 33. Attach the throttle linkage to the throttle servo horn by inserting a 2-56 x 1/2" button-head screw (187) through the over-ride slider (195) and into the middle hole in the longer arm of the throttle servo horn (190) from the bottom. Once the screw (187) is snug up against the over-ride slider (195), unscrew it one full turn to allow some movement between the arm (190) and the slider (195). Secure the screw (187) with a 2-56 locking nut (201).

Step 34. Insert the brake linkage Z-bend (197) from the top, through the middle hole in the shorter arm of the throttle servo horn (190).

Figure 109

RADIO INSTALLATION (Continued)

Slide Valve Carburetors

Figure 110



Step 35. Snap the 4mm ball cup (204) onto the ball on the carburetor. Make sure the ball is pointing toward the right side of the truck and slightly upward.

Step 36. Press the throttle servo horn (190) and throttle servo spline insert (200) onto the output shaft of the servo, and secure it with the screw included with your servo. Be sure the servo output shaft is centered and the servo horn is aligned properly, as shown.

Step 37. Insert the end of the brake lever (102) through the hole in the over-ride slider (195) on the brake linkage.

Step 38. Place a linkage collar (192) over the end of the brake lever (102) and secure it with w 4-40 x 1/8" set screw (193).

**NOTE: The slider should fit loosely under the linkage collar to prevent binding.*

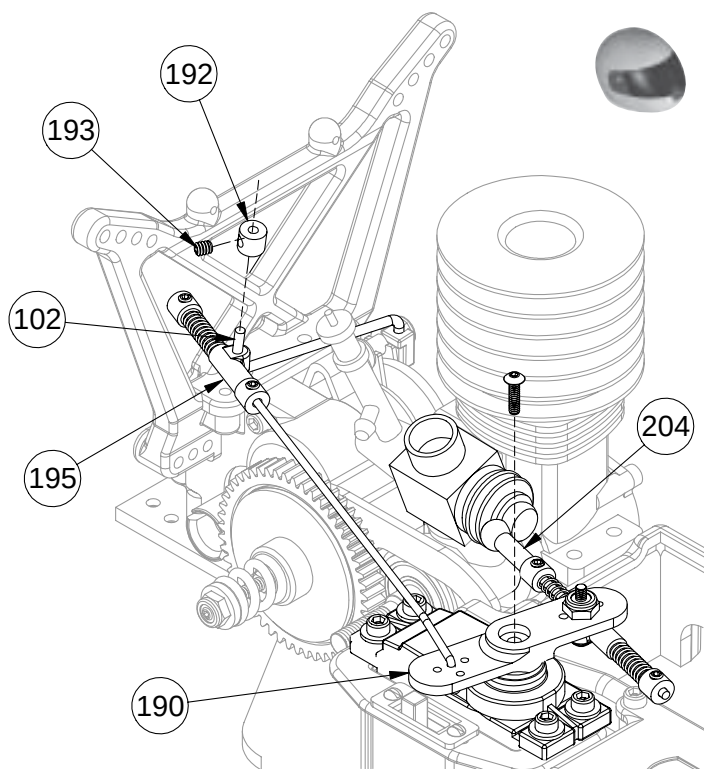


Figure 110

Figure 111

Step 39. Attach one end of the throttle return spring (202) to the hole in the eyelet (199). Attach the other end of the spring (190) to the hole toward the edge of the servo arm as shown.

Step 40. Remove the air filter (165) from the air filter boot (166). Check to see that the throttle return spring is holding the carburetor closed, and that the linkage is not pulling the carburetor open.

Step 41. Looking through the air filter boot (166) into the carburetor, check the opening of the small, half-moon area near the side. This opening should be approximately 1/32" (1mm) in the fully closed position. If it is not, refer to your engine instructions and adjust the idle adjustment screw until the opening is 1/32" (1mm) with the throttle closed.

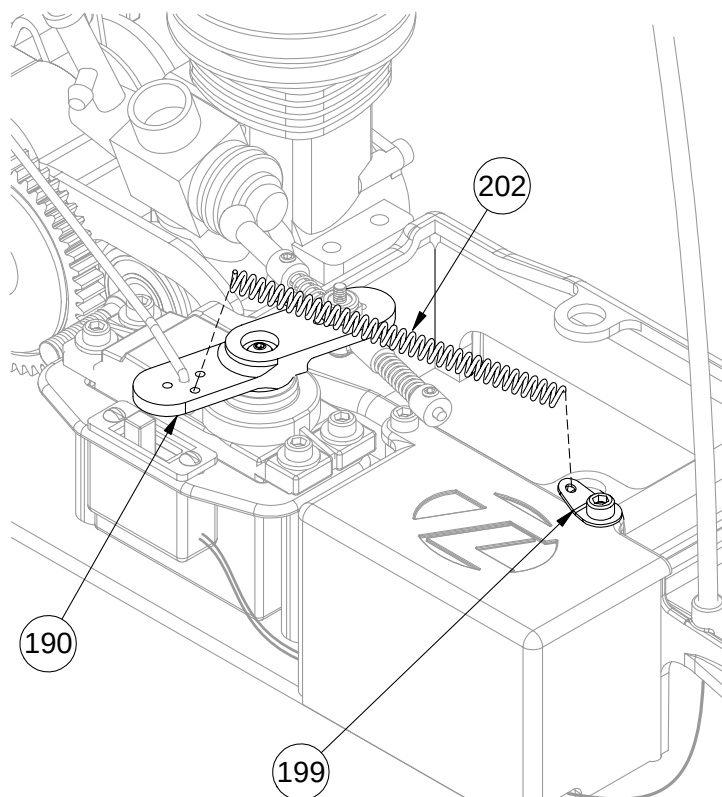


Figure 111

RADIO INSTALLATION (Continued)

Figure 112/113

Step 42. Turn your transmitter switch on followed by the receiver switch (or plug in the extension wire if not using a switch).

Step 43. Move the transmitter throttle control to full throttle. The throttle servo should open the carburetor and push backward on the brake lever. If the servo rotates the wrong direction, refer to your radio manufacturer's instructions for reversing the servos.

Step 44. With the throttle control on the transmitter in the neutral position and the trim centered, check that the carburetor opening is in the fully closed position, and that the springs (194)(196) on the throttle wire (191)(203) are compressed the same amount. If the carburetor is not fully closed, or one spring (194)(196) is compressed much more than the other, adjust the position of the over-ride slider (195) by moving the collars (192) along the wire (191)(203), one at a time, until the slider (195) is centered between the springs (194)(196), and the carburetor is in the closed position. This will be the correct idle position.

Step 45. With the throttle still in the neutral position and the carburetor fully closed, check to see that the collar (192) at the front of the brake over-ride slider (195) is not touching the slider (195). If it is, loosen the setscrew (193) and move the collar forward so that it does not touch the over-ride slider (195) while the brake lever (102) rests in the forward position against the brake caliper. Loosen the setscrew (193) in the collar (192) at the rear of the brake linkage wire (197) and move the collar (192) until the linkage spring (196) has a slight amount of pre-load on it. Tighten the setscrew (193) in this collar (192).

**NOTE: This collar can be adjusted later to change the amount of "panic", or full brake that the truck has.*

Step 46. Loosen the setscrew (193) in the collar (192) at the front side of the brake over-ride slider (195) and move the collar (192) until it just touches the slider (195). Tighten the setscrew (193) in the collar (192). This will be the final location of this collar (192).

Step 47. Move the throttle control on the transmitter to full throttle. Refer to the radio manufacturer's instructions and adjust the end point adjustment so the throttle servo will rotate just far enough to open the carburetor all the way. Now move the throttle control on the transmitter to full brake. Adjust the end point on the transmitter so that the servo doesn't over-rotate when applying full brake. The servo should only have to move 3/8" in the brake direction.

**NOTE: If your radio system does not have end point adjustments, you may need to move the throttle pivot and brake linkage wire to a different hole in the servo horn. The closer the wires are mounted to center on the horn, the less the wires will move. If the wires are moved to a different hole in the servo horn, start the throttle linkage adjustment again at Step 43.*

ROTARY VALVE INSTALATION

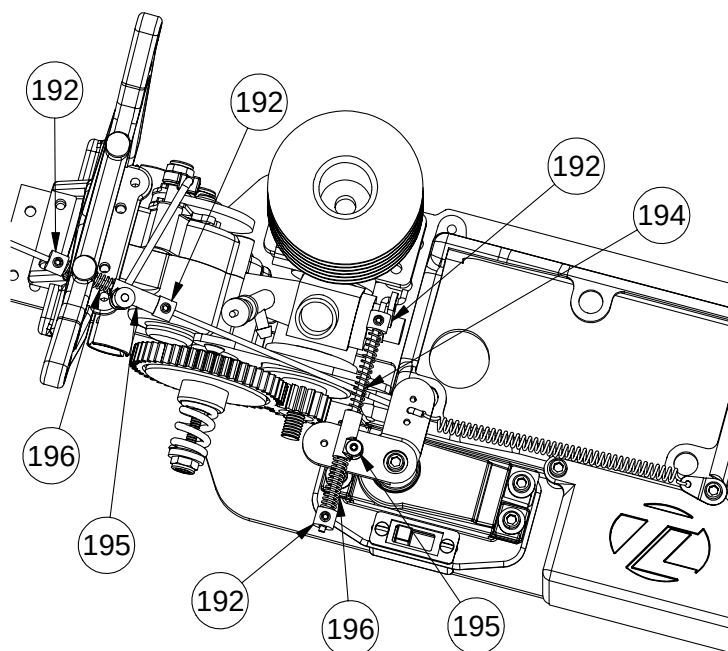


Figure 112

SLIDE VALVE INSTALATION

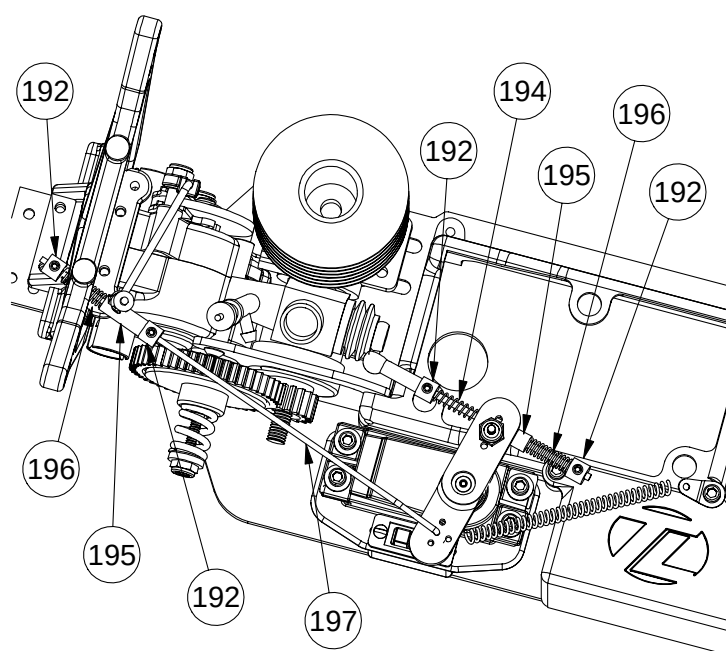


Figure 113

RADIO INSTALLATION (Continued)

Step 48. Move the steering control on the transmitter to the right. The tires on the truck should turn to the right. If not, refer to your radio manufacturer's instructions for reversing the servos and correct the steering servo.

Step 49. Without touching the transmitter the front tires should be pointing straight. Slight adjustments can be made with the trim adjustments on the transmitter. If the tires are turned without touching the transmitter, refer to Figure 7A to ensure that the servo horn is installed properly.

Step 50. Move the steering control on the transmitter all the way to the left. The tires should turn all the way to the left. If the tires do not turn all the way, check the end point adjustments on the transmitter. Check the steering throw to the right as well.

Step 51. Turn the radio switch off (or unplug the extension wire from the receiver), and then turn the transmitter off. Make it a habit to always turn the transmitter on first and off last.

Step 52. Once the throttle and brake linkages are adjusted, replace the air filter.

FINAL ASSEMBLY

Figure 114

Step 1. Trim the body (205) along the trim lines as shown. Cut out the areas indicated on the front and side windows to allow easy access to the fuel tank. Cut out the area behind the cab to allow for cooling and access to the engine.

Step 2. Make three 5/16" (8mm) diameter holes in the areas on the windshield and hood of the body (205) that are marked with dimples or small circles.

Step 3. Make two 5/16" (8mm) diameter holes in the rear of the body at the locations marked with a small hole or dimple.

Step 4. Cut the spoiler out of the back panel and attach it to the body with double sided tape.

qStep 5. Attach the body (182) to the truck and secure it by placing a body clip (184) through each of the two holes in the front body mount (12), and the two holes in the rear shock tower (96).

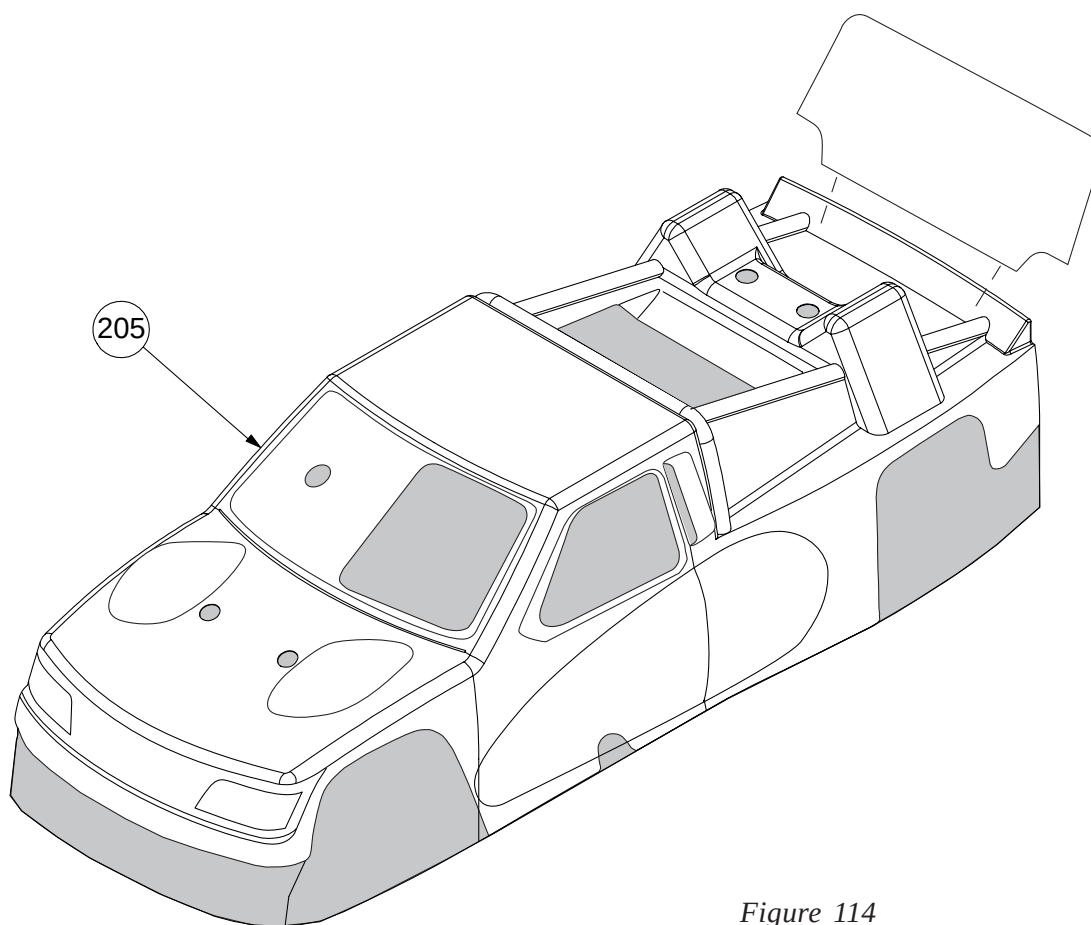


Figure 114

Body Painting

Prepare the body shell for painting by washing it thoroughly with warm water and a small amount of liquid detergent. Dry the body with a clean, soft cloth. Use the window masks (185), supplied with the kit, to cover the window areas *from the inside*. A high-grade 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. Use acrylic lacquer, acrylic enamel, or any other Lexan (Polycarbonate) recommended paints. Apply paint to the inside of the body. Remove the tape for the area that you wish to apply the next color to and continue with the next color. Try to use the darker colors first. If you use a dark color after a light color, apply a thin coat of white over the lighter color before continuing with the darker color.

Stickers

Cut the stickers from the sticker sheet (186) that you wish to use. Before removing the protective backing, find the desired location for the sticker. Remove the backing completely and reattach an edge of the sticker to the shiny side of the backing paper. Using the rest of the backing as a handle, position the sticker above the desired location and press it firmly into place to complete its application.

FINAL CHECKLIST

BEFORE RUNNING YOUR XXX-NT SPORT for the first time, you should run down the following checklist — in order — and complete the listed tasks. This simple checklist will help to make the first run much more enjoyable.

1. Adjust the rear differential

See *Adjusting The Differential* in the tips section.

2. Check for proper radio linkage adjustments

Refer to the Radio Installation section one last time and ensure that all linkages and collars are properly adjusted.

3. Check for free suspension movement

All suspension arms should be very free. Any binds will cause the truck to handle poorly. The steering should also operate very freely.

4. Set the rear ride height

The rear ride height should be set so that the dogbones are level with the surface. See the *Rear Ride Height* section of the tips.

5. Set the front ride height

The front ride height should be set so that the front suspension arms are level with the surface.

6. Adjust the camber

The front camber should be set to 1-1/2 degrees of negative camber (top of tire points in) at ride height. Adjust the front camber with the tires straight. The rear camber should be set to 1-2 degrees of negative camber at ride height.

7. Adjust toe-in/toe-out

The front tie rods should be adjusted evenly until the front tires have 1-degree of toe-in.

8. Set transmitter trims

The steering trim tab on the transmitter should be adjusted so that the truck rolls straight when you are not touching the steering wheel/stick. The throttle trim tab should be adjusted as per the Radio Installation section of the manual.

9. Check fuel lines

Ensure that all fuel lines are properly connected.

TIPS FROM THE TEAM

TUNING THE ENGINE should be done following the manufactures instructions. If you do not have instructions, start by closing both the high speed and low speed (idle) needle valves by turning them clockwise until you feel increased resistance – **do not over tighten them**. Typically, the high speed needle will need to be adjusted 2 - 3 full turns open, and the low speed needle about 2 full turns open.

By turning the needle valve clockwise, the fuel mixture will become leaner – meaning that the engine 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 full throttle while the low speed needle only affects the fuel mixture at idle and the low end of the throttle band.

THE AIR FILTER should be changed when it becomes covered with dust or dirt. The cleaner the filter remains, the better the engine can breathe and run. If the air filter is allowed to become too dirty some of the dust or dirt can find its way into the engine and cause problems. If the air cleaner should ever come off while operating your truck, **stop immediately. Reattach the air filter before continuing!** Never run without an air filter.

OILING THE FOAM PRE-FILTER can help keep dust from entering the paper air filter element and potentially finding its way into the motor. Good filter oil can be found in most automotive sections or motorcycle shops. These specialty oils are very sticky and will attract and hold the dust on the foam. When using this type of oil, be careful not to over oil the foam. Squeeze out any excess oil before installing the foam pre-filter over the paper element. **Never** oil the paper element. When the foam needs cleaning wash it out using one of the specialty foam filter cleaners or a light detergent like Simple Green. Be sure to rinse away any residual cleaner and let the foam dry before oiling and reinstalling it.

TO SHUT THE ENGINE OFF, simply squeeze the rubber stinger extending from the tuned pipe. Once the stinger is squeezed, and the exhaust can no longer exit the pipe, the engine will stop running.

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 truck to have a mind of its own. The result can be a runaway truck or a poor responding radio system. If using alkaline batteries, a fresh set should operate the radio system for at least 1-2 hours of running without a problem. 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 replaced.

If you will be using a Nicad receiver pack, it is recommended that a minimum battery size of 600 mAh and minimum voltage of 4.8 volts be used. A Nicad battery will not operate the radio system as long as an alkaline battery. The Nicad battery should be charged before every day's outing with your truck, 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.

ATTACHING THE RECEIVER to the center brace with self adhesive hook and pile material (like Velcro brand) can help absorb the shock and vibration that is transmitted through the chassis by the engine. This type of material can be found at most hobby shops and yardage stores. This can also help prevent glitching and increase the life of your receiver. Simply attach the hook material to the center brace with the self-adhesive backing on the back on the material. Attach the pile (fuzzy) material to the back of the receiver in the same way. When you position the receiver on the hook portion, it grabs on to the fuzzy side and holds the receiver in place. This is the method most of the team racers prefer.

The receiver cover on the XXX-NT Sport offers a great deal of protection from the elements. If you plan on running in very wet conditions you may want to seal your receiver. Placing the receiver in a plastic bag or balloon works well. The object is to completely cover all openings and crystal socket to keep water or fuel out. Any liquid that enters the receiver can cause radio failure.

THE CLUTCH BEARINGS included in the kit contain a special lubricant. If the clutch bearings need to be replaced it is important to only replace them with the Team Losi clutch bearings #A-6906. If a different bearing is used, or if you oil the standard clutch bearings, the lubricant can migrate into the clutch. If lubricant comes into contact with the clutch it will slip and not function properly. If necessary, you may clean the bearings with model fuel, and lubricate with one drop of Mobile1™.

If you clean your truck with a silicone product like Armour-All, be careful to keep it out of the clutch and the fuel tank. This will cause the clutch to slip and/or the motor to run poorly.

THE BRAKE ROTOR on your XXX-NT should be inspected after every 2-3 hours of running. When the rotor wears to half the original thickness, the rotor should be replaced. Attach the new rotor in accordance with the instructions.

THE GEAR BOX, or transmission, is the heart of every race car. The XXX-NT transmission is no exception. Although the XXX-NT transmission is very efficient, there are certain adjustments that are necessary for top performance. The differential is the most important. Several greases were tested for use in the differential and the one that we found to work the best is included in the kit. This grease protects the moving parts extremely well, while at the same time allowing the diff to operate smoothly. Since this differential is designed to be "self aligning", it is extremely important to take your time while assembling it to make sure that all of the parts are properly seated into the correct locations.

ADJUSTING THE DIFFERENTIAL. This may be a little complicated at first. If you do this as you read this tip, the procedure should be fairly simple. Tighten the slipper nut all the way down. Now, with the wheels installed, and the tires glued in place, hold the right rear tire in your right hand. While holding the tire, place your index finger and thumb over the spur gear. Now try to turn the left rear tire while holding the right rear tire and the spur gear. It should be **VERY** difficult to turn the left rear tire. If it turns easily, the diff is too loose. Tighten it by lining up the slot in the diff screw with the slot in the outdrive and placing the small Allen wrench through both slots. Now **slowly** turn the left rear tire clockwise about 1/8 turn. As long as the diff screw was held in place with the Allen wrench, you have just tightened your diff. Pretty easy, huh? Check the adjustment and continue tightening the diff, a little at a time, until the left rear tire can't be turned easily while holding the spur gear and the right rear tire. Be careful not to tighten the diff too much! Once the diff is adjusted, it should still operate freely and feel smooth. If the diff screw starts to get tight before the diff is close to being adjusted properly, the diff should be disassembled and checked for proper assembly.

Once your diff has been adjusted by hand, start your truck and place it on an asphalt area. Give the truck full throttle from a stop. The diff should not slip. If it does, tighten the diff slightly until it no longer slips. After the differential has been adjusted, adjust the slipper as noted below.

Remember! The diff was not designed to operate as a slipper. The truck should never be run while the diff is slipping. Doing so can damage the diff balls and drive rings. Always make sure that the slipper will slip before the differential!

If your diff becomes "gritty" feeling, it should be rebuilt. Disassembling, cleaning and re-lubricating the parts in accordance with the instructions will usually be sufficient. The carbide diff balls that come in the kit should rarely need replacing. If, after cleaning, the diff still feels "gritty" the following parts should be replaced in the order listed: Differential washers #A-2903, thrust bearing assembly #A-3071, carbide diff balls #A-6951. When rebuilding your diff it's a good idea to always replace the lock nut. This will help keep the diff from loosening as you continue to drive your XXX-NT.

SLIPPER ADJUSTMENTS should be made after the diff is properly adjusted. The slipper setting that the manual had you assemble your truck with should be reasonably close to correct. If you have just adjusted your diff, and the slipper nut is tightened all the way, adjust your slipper back to its original adjustment by loosening the lock nut three full turns (360° x 3).

CHANGING THE GEARS on your XXX-NT is a very simple process. There are several different clutch bell gears available for the XXX-NT. When changing to a different size gear, you will need to re-set the gear mesh. To adjust the gear mesh, loosen the four screws securing the engine mounts to the chassis and reposition the engine. When the desired gear mesh is achieved, tighten all four screws. In conditions where more torque (bottom end) is desired, the 18-tooth clutch bell can be replaced with the 17-tooth clutch bell. The gear mesh will need to be readjusted by loosening the four screws that hold the engine in place as mentioned above.

FUEL for the gas engines is available at any full service hobby shop. It is highly recommended that you use a fuel specially blended for R/C cars like O'Donnell, Blue Thunder or Trinity. Avoid using model airplane/helicopter fuel as the quantity and type of lubricant may not meet the extreme needs of R/C cars. We have found that no more than 20% nitro content is needed for optimum performance.

CAMBER in the front end of the truck is not really adjusted much. We suggest one to two degrees of negative camber at the front measured at ride height. A general rule of thumb is that more negative camber will help the truck go through bumps in turns a little more consistently. Less

negative camber can make the truck respond quicker on some tracks with hard packed surfaces.

The rear camber is used to help the truck drive through bumps in corners a little better. Generally, run between one and two degrees of negative camber at ride height. More negative camber will make the truck drive through bumps better, but you will usually lose a little straight line rear traction.

FRONT TOE-IN and TOE-OUT is fully adjustable by changing the length of the tie rods. When adjusting toe-in, be sure to adjust both tie rods equally so that the steering balance from left to right will remain the same. Toe-out will make the truck turn into the corner faster, but can cause oversteer. It can also make the truck feel “wandery” exiting corners and cause the truck to hook.

Toe-in makes the truck a little easier to drive, and will make the truck more neutral feeling and more stable exiting corners. We almost always run about one degree of toe-in on the XXX-NT.

FRONT RIDE HEIGHT is an adjustment that can change the way a truck jumps, turns and goes through the bumps. This is an adjustment that can vary from track to track. You should try raising and lowering the front ride height to get a feel for what it does to the handling of the truck. The front ride height should initially be set so that the arms are level at ride height. To set the ride height, drop the front of the truck from about 2-3 inches above the table. Lightly “work” the front suspension up and down. This will “settle” the front suspension at its natural ride height. Working the suspension becomes important as the parts start to get dirty and worn.

Once the suspension has settled, the arms should be level. If the front end is either too high, or too low, adjust the spring collars accordingly and check the ride height again as described above. Continue this procedure until the front ride height is adjusted to the desired location.

REAR RIDE HEIGHT can change the way a truck turns, the amount of traction a truck has and the way a truck goes through the bumps. Again, it is a good idea to play with this adjustment and get a feel for it. For most conditions, the rear ride height should be set so that the dog bones are level with the ground. Adjust the rear ride height in the same way as described in the front ride height section.

CAMBER LOCATIONS on the XXX-NT are very adjustable. Although there are many holes to choose from, it is suggested that the locations in the manual be used. We have done extensive testing with all of these locations both on the track, and on special computer programs, and have found the locations in the manual to be *very consistent* from track to track. These locations should produce the best all around setup and work under most conditions.

REMOVING THE ENGINE can seem slightly difficult when you look at all of the fuel lines and linkages connected to the engine. This is really a simple thing to do though. The easiest procedure that we have found is the following — remember to leave the engine mounts attached to the engine: First, remove the fuel line from the fuel tank. You want to remove the line that runs to the carburetor. Remove the screw that holds the pipe-mounting wire in place. Remove the four screws that hold the engine mounts in place. Slide the engine out of the left side of the chassis while positioning the engine so that the short throttle linkage can be removed from the throttle arm on the carburetor.

To reinstall the engine, simply reverse the steps above.

WORKING ON THE CLUTCH is easier than it may seem. If you only need to work on the clutch, and don't need to remove the engine, follow this procedure: remove the slipper adjustment nut and all of the slipper parts from the top shaft. Remove the spur gear, gear plate, and slipper pad. Remove the clip from the clutch nut. Remove the clutch nut spacer and the outside bearing (or bushing) from the clutch bell. With the outside bearing (bushing) removed you should be able to rotate the clutch bell slightly so that it can slide off, past the throttle servo. When you are finished working on the clutch, install the clutch bell without the outside bearing (bushing). Once the clutch bell is in place, install the outside bearing (bushing), followed by the clutch nut spacer. Attach the clutch nut clip. Assemble the slipper assembly according to the manual.

The suggestions in this section are only general guidelines. There are so many variables in a racing truck that they can't possibly be listed in a simple tip section. Go to the track, try various combinations of setups, and get a feel for what each one does to the handling. Look for setup updates as well as the latest hot tips in “Tech-Talk” each month in *R/C Car* magazine. Also check out our website, WWW.TEAMLOSI.COM for the latest updates and additional tuning tips.

Good luck with your new XXX-NT. We're sure you will be pleased with its superb performance.

SPARE PARTS LIST

KEY #	KIT/PART DESCRIPTION	PART NO.	SPARE PARTS DESCRIPTION
1	Servo saver bottom	A-1620	XXX Steering/Servo Mount Assembly (Molded)
2	Servo saver post	A-1610	Steering Hardware Set
3	Servo saver top	A-1620	XXX Steering/Servo Mount Assembly (Molded)
4	Servo saver spring	A-1610	Steering Hardware Set
5	Servo saver spring cap	A-1620	XXX Steering/Servo Mount Assembly (Molded)
6	6-40 locknut	A-1610	Steering Hardware Set
7	4-40 mini locknut	A-6306	4-40 Aluminum Mini Nuts (10)
8	Steering idler arm	A-1620	XXX Steering/Servo Mount Assembly (Molded)
9	Ball stud washer	A-6215	#4 Narrow Washers (10)
10	1/4" ball stud	A-6006	Ball Studs w/Rod Ends 4-40 x 1/4" (4)
11	3/16" ball stud	A-6001	Ball Studs w/Rod Ends 4-40 x 3/16" (4)
12	Steering drag link	A-1620	XXX Steering/Servo Mount Assembly (Molded)
13	3/32" x 3/16" plastic bushing	A-1620	XXX Steering/Servo Mount Assembly (Molded)
14	Front kickplate	A-4160	XXX-NT Front Kickplate, Bulkhead, and Steering Brace
15	Steering brace	A-4160	XXX-NT Front Kickplate, Bulkhead, and Steering Brace
16	3/32" x .930" hinge pin	A-1146	Front Outer & Kingpins 3/32" (XX, 'CR', XXX)
17	4-40 x 3/8" cap-head screws	A-6206	4-40 x 3/8" Cap-Head screws (10)
18	Threaded insert	A-4224	Threaded Chassis Inserts - Short and Long
19	Chassis	A-4019	XXX-NT Chassis
20	4-40 x 3/8" cap-head screw	A-6206	4-40 x 3/8" Cap-Head Screws
21	4-40 x 5/8" flat-head screw	A-6233	4-40 x 5/8" Flat-Head Screw (10)
22	Servo Arm	A-1620	XXX Steering/Servo Mount Assembly (Molded)
23	#4 washer	A-6350	#4 and 1/8" Hardened Washers
24	Servo mounting post	A-1620	XXX Steering/Servo Mount Assembly (Molded)
25	Steering servo mount bushings	A-9415	XXX-NT Servo Mounts, Arms, and Switch Mount
26	Short plastic rod end	A-1615	Short Ball Cups and Threaded Rod
27	4-40 x 5/8" threaded rod	A-1615	Short Ball Cups and Threaded Rod
28	Rubber tank mounting grommet	A-9313	Fuel Tank Mounting Set
29	Chassis brace	A-4021	XXX-NT Top Chassis Brace
30	Fuel tank	A-9310	Fuel Tank (75 cc)
31	4-40 x 1/2" cap head screw	A-6204	4-40 x 1/2" Cap Head Screws
32	Front bulkhead	A-4160	XXX-NT Front Kickplate, Bulkhead, and Steering Brace
33	4-40 x 7/8" cap-head screw	A-6216	4-40 x 7/8" Cap-Head Screws
34	Front shock tower	A-1109	Front Shock Tower (XXX-T)
35	4-40 zinc nut	A-6300	4-40 Hex Nuts (10)
36	4-40 x 1/2" flat-head screw	A-6220	4-40 x 1/2" Flat-Head Screw (10)
37	Front Body Mounts	A-4118	Front Bumper, and Body Mounts
38	3/8" ball stud	A-6305	4-40 Locking Nuts Low Profile
39	Front axle	A-1022	Front Axles for XX-T Wheels
40	Right front spindle	A-4125	Front Spindles & Carriers, Rear Hubs (XXX-T)
41	Right spindle carrier	A-4125	Front Spindles & Carriers, Rear Hubs (XXX-T)
42	Left front spindle	A-4125	Front Spindles & Carriers, Rear Hubs (XXX-T)
43	Left spindle carrier	A-4125	Front Spindles & Carriers, Rear Hubs (XXX-T)
44	1/8" x 1.250" hinge pin	A-2164	1/8" Upper Bulkhead/ Inner Hinge Pins
45	Spindle spacer	A-5050	Shock Spacer Set
46	1/8" E-clip	A-6100	E-Clips 1/8"
47	5-40 setscrew	A-6228	5-40 Hardened Setscrews
48	Front suspension arm	A-1116	Front Suspension Arms (XXX-T)
49	Front pivot	A-4126	Front and Rear Pivot Block Set (all XXX)
50	1/8" x .960" hinge pin	A-1150	Front Outer Hinge Pin (XXX-T)
51	1/8" x 1.420" hinge pin	A-2007	Front Inner Hinge Pin (all XXX)
52	Front hinge pin brace	A-4137	Aluminum Front Inner Hinge Pin Brace (all XXX)
53	Front bumper	A-4118	Front Bumper, and Body Mounts
54	Plastic rod end (long)	A-6012	H.D. Plastic Rod Ends (Sport)
55	2 1/4" turnbuckle	A-6068	Threaded L/R Set w/ Rod Ends (2.25")(Sport)
56	Foam thing	A-6003	Foam Things (Linkage Rings)
57	Diff nut carrier	A-2910	"Monster Diff" Diff Screw and Hardware (Sport)

SPARE PARTS LIST

KEY #	KIT/PART DESCRIPTION	PART NO.	SPARE PARTS DESCRIPTION
58	Diff coil spring	A-2910	"Monster Diff" Diff Screw and Hardware (Sport)
59	Allen wrenches	N/A	N/A
60	Male outdrive	A-2905	"Monster Diff" Male Outdrive
61	Drive Ring	A-2903	"Monster Diff" Drive Rings
62	Clear diff grease	A-3065	Silicone Differential Compound
63	5mm x 8mm bearing	A-6907	5mm x 8mm Ball Bearings
64	55 tooth diff gear	A-2925	'XXX-NT' Diff Gear Only (4.11:1)
65	3/32" diff balls	A-3009	3/32" Diff Balls
66	Female outdrive	A-2906	"Monster Diff" Female Outdrive
67	Diff screw	A-2910	"Monster Diff" Diff Screw and Hardware (Sport)
68	Foam Diff Seal	A-2910	"Monster Diff" Diff Screw and Hardware (Sport)
69	Thrust washer	A-3099	Full Complement Thrust Bearing Set
70	5/64" thrust bearing balls	A-3099	Full Complement Thrust Bearing Set
71	White thrust bearing grease	A-3066	Teflon™ Thrust Bearing/Assembly Grease
72	4-40 x 1" setscrew	A-2922	'XXX-NT' Slipper Shaft, Gear & Hardware
73	Slipper shaft	A-2922	'XXX-NT' Slipper Shaft, Gear & Hardware
74	5/16" x .065 pin, solid	A-6406	1/16" Pin Assortment (5/16", 3/8", 7/16")
75	Top shaft gear	A-2922	'XXX-NT' Slipper Shaft, Gear & Hardware
76	3/16" C-clip	A-6102	C-clips, .1875" (3/16") - Large
77	Brake shaft	A-2923	XXX-NT Center Brake Shaft and Hardware
78	3/8" x .078 spirol pin	A-6406	1/16" Pin Assortment (5/16", 3/8", 7/16")
79	Compound gear	A-2927	XXX-NT Compound Gear and Brake Hub
80	3/16" x 3/8" bearing	A-6903	3/16" x 3/8" Ball Bearing
81	1/2" x 3/4" bearing	A-6908	1/2" x 3/4" Bearings w/Teflon Seal (XX Trans)
82	Right gearbox half	A-2920	XXX-NT Transmission Case Set and Brake Clips
83	Left gearbox half	A-2920	XXX-NT Transmission Case Set and Brake Clips
84	3/16" x .015" shim	A-6230	Shim Assortment (3/16", 1/4", 1/2")
85	2-56 x 5/8" cap-head screw	A-2921	XXX-NT Trans Screw Set
86	4-40 x 3/48" cap-head screw	A-2921	XXX-NT Trans Screw Set
87	4-40 x 1-1/8" button-head screw	A-2921	XXX-NT Trans Screw Set
88	Transmission brace	A-4027	XXX-NT Gearbox Brace
89	Slipper backing plate	A-3132	Slipper Backing Plate
90	Slipper pad	A-3123	Slipper Friction Pad
91	51 tooth spur gear	A-3912	Spur Gear, 51T, 32P (XXX-NT)
92	Slipper spring adaptor	A-3135	Slipper Spring, Cup, Retainer, and Nut
93	Slipper Spring	A-3135	Slipper Spring, Cup, Retainer, and Nut
94	Spring retaining washer	A-3135	Slipper Spring, Cup, Retainer, and Nut
95	4-40 steel nylock halfnut	A-3135	Slipper Spring, Cup, Retainer, and Nut
96	Washer, 1/4" x .020	A-9411	Disk Brake Rebuild Kit
97	Brake sleeve	A-9411	Disk Brake Rebuild Kit
98	Brake rotor hub	A-2927	XXX-NT Compound Gear and Brake Hub
99	Brake caliper	A-9411	Disk Brake Rebuild Kit
100	Brake rotor	A-9413	Disk Brake Rotor (XXX-NT)
101	Brake lever clip	A-2920	XXX-NT Transmission Case Set and Brake Clips
102	Brake lever	A-9411	Disk Brake Rebuild Kit
103	3/16" E-clip	A-6101	E-Clips, 3/16"
104	Rear pivot block	A-2114	Rear Pivot Block (XXX-NT)
105	8-32 x 1/8" set screw	A-6237	8-32 x 1/8" Hardened Set Screws
106	Universal yoke	A-3083	Yoke & Screw for Dog Bone/Drive Shaft
107	Dogbones	A-3090	Dogbone Driveshaft W/Yoke (XXT, NXT, XXX-NT)
108	Universal pivot	A-3014	Universal Pivots
109	Rear axle	A-3015	Rear Axle, Spacer & Pin
110	3/32" x 1/2" spirol pin	A-6400	Pins, U-Joint
111	Assembly wrench	A-2012	Assembly Wrench
112	Right rear hub	A-4125	Front Spindles & Carriers, Rear Hubs (XXX-T)
113	Left rear hub	A-4125	Front Spindles & Carriers, Rear Hubs (XXX-T)
114	3/8" x 3/16" bearing	A-6903	3/16" x 3/8" Sealed Bearings (2)

SPARE PARTS LIST

KEY #	KIT/PART DESCRIPTION	PART NO.	SPARE PARTS DESCRIPTION
115	Inner axle spacer	A-9941	Bearing Spacer/ Wheel Washer
116	Outer axle spacer	A-9941	Bearing Spacer/ Wheel Washer
117	1/16" x 7/16" pin	A-6400	Pins, U-Joint (8)
118	Rear arm right	A-2142	Rear Suspension Arms (XXX-NT)
119	Rear arm left	A-2142	Rear Suspension Arms (XXX-NT)
120	Rear hub spacer	A-5050	Shock Spacer Set
121	Suspension swivel ball	A-2006	Swivel Suspension Balls .250"
122	Rear inner hinge pin	A-2166	Inner Rear Hinge Pins (XXX-T)
123	Rear shock tower	A-2104	Rear Shock Tower (XXX-NT)
124	2.500" turnbuckle	A-6070	Threaded L/R Set w/Ends (2.50") (Sport)
125	Battery box	A-4030	Battery Box and Rx Cover Set (XXX-NT)
126	Shock O-ring	A-5015	Double O-Ring Shock Cartridge (Front/Rear)
127	Shock cartridge body	A-5015	Double O-Ring Shock Cartridge (Front/Rear)
128	Shock cartridge spacer	A-5015	Double O-Ring Shock Cartridge (Front/Rear)
129	Shock cartridge cap	A-5015	Double O-Ring Shock Cartridge (Front/Rear)
130	Front shock shaft	A-5005	Shock Shaft 1.0"
131	Rear shock shaft	A-5022	Shock Shaft 1.2"
132	Shock fluid	A-5224	SILATECH Competition Shock Fluid 30wt
133	Shock end	A-5023	Spring Clamp & Cups
134	Suspension swivel ball	A-2006	Swivel Suspension Balls .250"
135	Shock piston #55	A-5047	Teflon™ Shock Pistons #55, Orange
136	Shock piston #56	A-5046	Teflon™ Shock Pistons #56, Red
137	Front shock body	A-5030	.9" Shock Body Hard Anodized
138	Rear shock body	A-5031	1.2" Shock Body Hard Anodized
139	Spring cup	A-5023	Spring Clamp & Cups
140	Shock collar	A-5023	Spring Clamp & Cups
141	Red shock spring	A-5152	2.5" Spring 2.6 Rate (Red)
142	Top shock mount bushing, short	A-5013	Upper Shock Mount Bushings (all XXX)
143	Top shock mount bushing, long	A-5013	Upper Shock Mount Bushings (all XXX)
144	Front tire	A-7505R	Front DIRECTIONAL Tires (Red) w/Foam Liners
145	Rear tire	A-7636R	Rear STEP-PIN Tires (Red) w/Foam Liners
146	Foam tire liners	A-7698	Truck Foam Liners - Firm
147	Front wheel	A-7055	Front Solid-face Truck Wheels (Yellow)
148	Rear wheel	A-7155	Rear Solid-face Truck Wheels (Yellow)
149	3/16" x .015" shim	A-6230	Shim Assortment (3/16", 1/4", 1/2")
150	10-32 locknut	A-6303	10-32 Locking Nuts (4ea Nylon & Steel)
151	Clutch pin/screw	A-9375	Flywheel Pins/Screws
152	Flywheel	A-9372	Flywheel w/Pins (2 Pin, Steel)
153	Flywheel shim	A-9376	Flywheel Collet w/shims
154	Flywheel collet	A-9376	Flywheel Collet w/shims
155	Clutch nut	A-9369	Clutch Nut
156	Clutch spring	A-9363	Clutch Springs for Machined Clutch Shoes
157	Clutch shoe	A-9362	Machined Teflon™ Clutch Shoesw/Spring
158	1/4" x 3/8" clutch bearing	A-6906	1/4" x 3/8" Flanged Ball Bearing
159	Clutch bell 18-tooth	A-9381	18-Tooth Clutch Bell
160	Clutch nut spacer	A-9369	Clutch Nut
161	1/4" clutch nut clip	A-9370	Clutch Nut Clips
162	4-40 x 5/8" cap-head screw	A-6221	4-40 x 5/8" Cap-Head Screw
164	Engine mounts	A-9336	XXX-NT Engine Mount Set w/Hardware
165	Paper air filter element	A-9302	Paper Air Filter Element
166	Air filter boot	A-9304	Air Filter Boot (Rubber)
167	Foam pre-filter	A-9303	Foam Pre-Filter
168	4" tie-strap	A-9304	Air Filter Boot (Rubber)
169	4-40 x 1" cap-head screw	A-6223	4-40 x 1" Cap-Head Screw
170	Exhaust gasket	A-9317	Exhaust Manifold Gaskets (4)
171	Exhaust header	A-9321	Raised Exhaust Header and Coupler
172	Counter-sunk washers	A-9336	XXX-NT Engine Mount Set w/Hardware

SPARE PARTS LIST

KEY #	KIT/PART DESCRIPTION	PART NO.	SPARE PARTS DESCRIPTION
173	5-40 x 1/2" flat-head screws	A-9336	XXX-NT Engine Mount Set w/Hardware
174	Silicone exhaust coupler tubing	A-9325	Silicone Exhaust Coupler Tubing
175	Tuned pipe	A-9329	Tuned Exhaust Pipe (Sport)
176	Fuel tubing	A-9315	Fuel Tubing (24")
177	Pipe mounting bracket	A-9330	Pipe Mounting Bracket w/Hardware
178	3/8" Silicone tubing	A-9327	Exhaust Stinger & Stinger Sleeve
179	Aluminum stinger sleeve	A-9327	Exhaust Stinger & Stinger Sleeve
180	8" tie-strap	A-9325	Silicone Exhaust Coupler Tubing
181	Compound gear bushing	A-2927	XXX-NT Compound Gear and Brake Hub
182	Two-sided tape (thick)	A-4004	Servo Tape
183	Antenna tube	A-4002	Antenna Kit
184	Antenna cap	A-4003	Antenna Caps
185	Battery spacer foam	A-4116	XXX Battery Strap, Pad, and Foam Spacer
186	Battery box lid	A-4030	Battery Box and Rx Cover Set (XXX-NT)
187	2-56 x 1/2" button head screw	A-6236	2-56 x 1/2" Button Head Screws
188	Throttle servo mount	A-9415	XXX-NT Servo Mounts, Arms, and Switch Mount
189	Switch mount	A-9415	XXX-NT Servo Mounts, Arms, and Switch Mount
190	Throttle servo horn	A-9415	XXX-NT Servo Mounts, Arms, and Switch Mount
191	Throttle Z-bend wire	A-9410	Brake/Throttle Linkage Set (XXX-NT)
192	Linkage collar	A-9410	Brake/Throttle Linkage Set (XXX-NT)
193	4-40 x 1/8" set screw	A-6227	4-40 x 1/8" Hardened Set Screws
194	Throttle over-ride spring	A-9410	Brake/Throttle Linkage Set (XXX-NT)
195	Over-ride slider	A-9410	Brake/Throttle Linkage Set (XXX-NT)
196	Brake over-ride spring	A-9410	Brake/Throttle Linkage Set (XXX-NT)
197	Brake Z-bend wire	A-9410	Brake/Throttle Linkage Set (XXX-NT)
198	Receiver cover	A-4030	Battery Box and Rx Cover Set (XXX-NT)
199	Throttle return spring eyelet	A-9409	Throttle Return Spring & Eyelet
200	Throttle servo splined insert	A-9415	XXX-NT Servo Mounts, Arms, and Switch Mount
201	2-56 locking nut	A-9410	Brake/Throttle Linkage Set (XXX-NT)
202	Throttle return spring	A-9405	Brake/Throttle Linkage Set
203	Throttle threaded rod	A-9410	Brake/Throttle Linkage Set (XXX-NT)
204	4mm ball cup	A-9410	Brake/Throttle Linkage Set (XXX-NT)
205	Body	A-8405	XXX-NT Sport Truck Body - Aqua
		A-8406	XXX-NT Sport Truck Body - Grape
		A-8407	XXX-NT Sport Truck Body - Graphite
207	Stickers	A-8346	Sticker Sheet XXX-NT
208	Body clips	A-8200	Body Clips



Setup Sheet

Track: _____

☐ Indoor	☐ Smooth	☐ Slippery	☐ Hard Packed
☐ Outdoor	☐ Rough	☐ High-Bite	☐ Loose/Loamy
☐ Tight	☐ Wet	☐ Blue-Groove	
☐ Open	☐ Dry		

Weather: _____

Driver: _____

Date: _____

FRONT SUSPENSION (Circle or Check the Appropriate Settings)

Toe ☐ In _____°
☐ Out _____°

Ride Height _____

Camber ☐ - _____°
☐ + _____°

Caster ☐ Stock _____°
☐ Other _____°

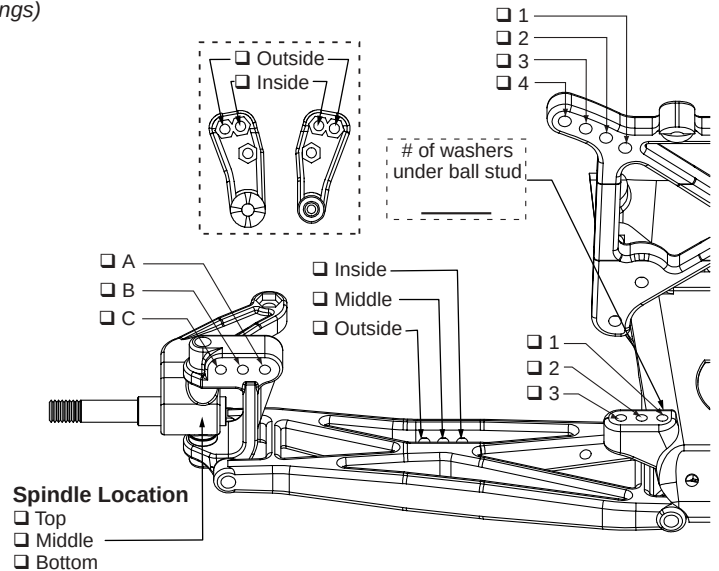
Sway Bar ☐ No
☐ Yes size _____

of washers under steering / tie-rod ball studs
Spindle ball stud: _____
Bellcrank ball stud: _____

Servo Position: Front ☐
Back ☐

Front Shocks

Oil: _____
Piston: _____ ☐ Standard / ☐ Drilled
Spring: _____
Limiters: ☐ Inside- _____ ☐ Outside- _____



REAR SUSPENSION

Toe-In ☐ Inside _____°
☐ Outside _____°

Pivot Support _____
☐ No Shim
☐ Shim Under Front
☐ Shim Under Rear > # of shims: _____

Ride Height _____

Camber ☐ - _____°
☐ + _____°

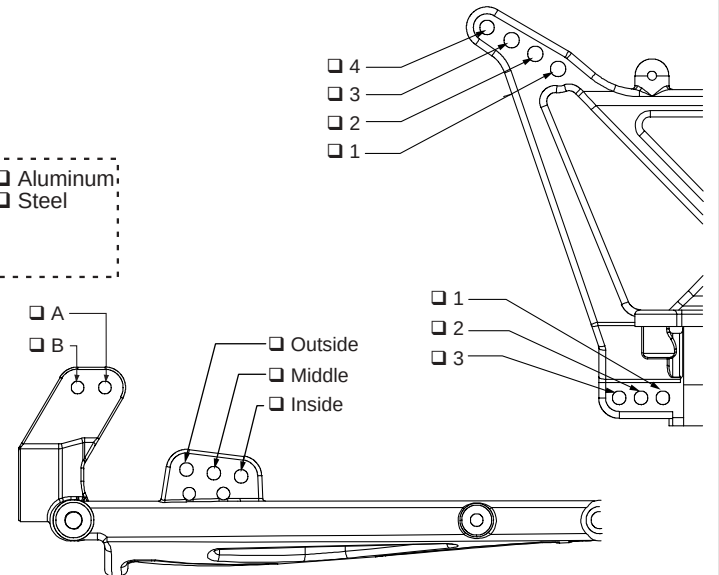
Rear Hub Spacing ☐ Forward
☐ Center
☐ Rear

Sway Bar ☐ No
☐ Yes size _____

Drive Shafts ☐ Dogbones ☐ Aluminum
☐ CVDs ☐ Steel
Outdrives ☐ Steel
☐ Plastic

Rear Shocks

Oil: _____
Piston: _____ ☐ Standard / ☐ Drilled
Spring: _____
Limiters: ☐ Inside- _____ ☐ Outside- _____



Tires

Front: _____ Compound _____ Foam _____
Rear: _____ Compound _____ Foam _____

Body _____
Spoiler ☐ yes ☐ no ☐ Size _____

Engine: _____

Carburetor Type: ☐ Slide valve / ☐ Rotary

Glow Plug Type: _____

Engine Temp: _____

Head Clearance: _____

Fuel Type: _____ Nitro%: _____

Carb Restrictor: ☐ .170 ☐ .180 ☐ .190 ☐ None

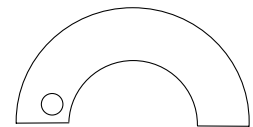
Muffler Type: _____

Manifold: _____

Spur/Clutch Bell: _____ / _____

Clutch: ☐ Stock ☐ Other _____

☐ Sprung ☐ Unsprung ☐ Leading ☐ Trailing



Shade where clutch was cut or lightened.

Notes:



Setup Sheet

Track: _____

Driver: _____

Date: _____

☐ Indoor
☐ Outdoor

☐ Smooth
☐ Rough

☐ Slippery
☐ High-Bite
☐ Blue-Groove

☐ Hard Packed
☐ Loose/Loamy

☐ Tight
☐ Open

☐ Wet
☐ Dry

Weather: _____

FRONT SUSPENSION (Circle or Check the Appropriate Settings)

Toe ☐ In _____°
☐ Out _____°

Ride Height _____

Camber ☐ - _____°
☐ + _____°

Caster ☐ Stock _____°
☐ Other _____°

Sway Bar ☐ No
☐ Yes size _____

of washers under steering / tie-rod ball studs
Spindle ball stud: _____
Bellcrank ball stud: _____

Servo Position: Front ☐
Back ☐

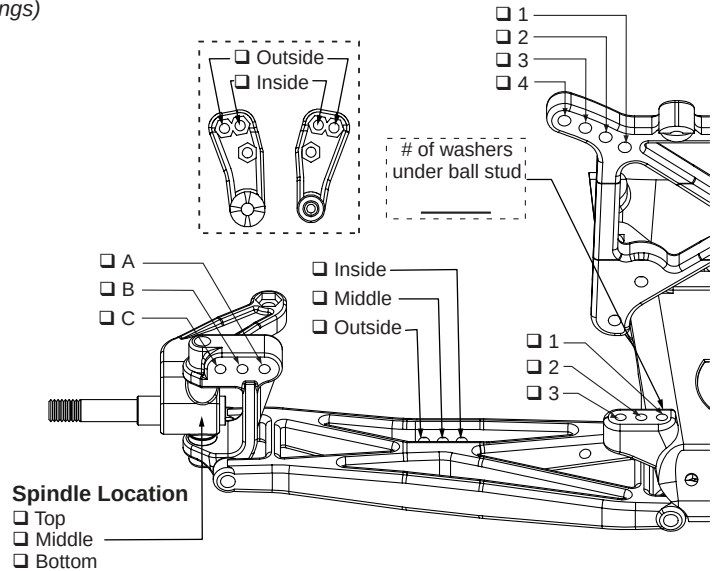
Front Shocks

Oil: _____

Piston: _____ ☐ Standard / ☐ Drilled

Spring: _____

Limiters: ☐ Inside- _____ ☐ Outside- _____



REAR SUSPENSION

Toe-In ☐ Inside _____°
☐ Outside _____°

Pivot Support _____
☐ No Shim
☐ Shim Under Front
☐ Shim Under Rear > # of shims: _____

Ride Height _____

Camber ☐ - _____°
☐ + _____°

Rear Hub Spacing ☐ Forward
☐ Center
☐ Rear

Sway Bar ☐ No
☐ Yes size _____

Drive Shafts ☐ Dogbones ☐ Aluminum
☐ CVDs ☐ Steel
Outdrives ☐ Steel
☐ Plastic

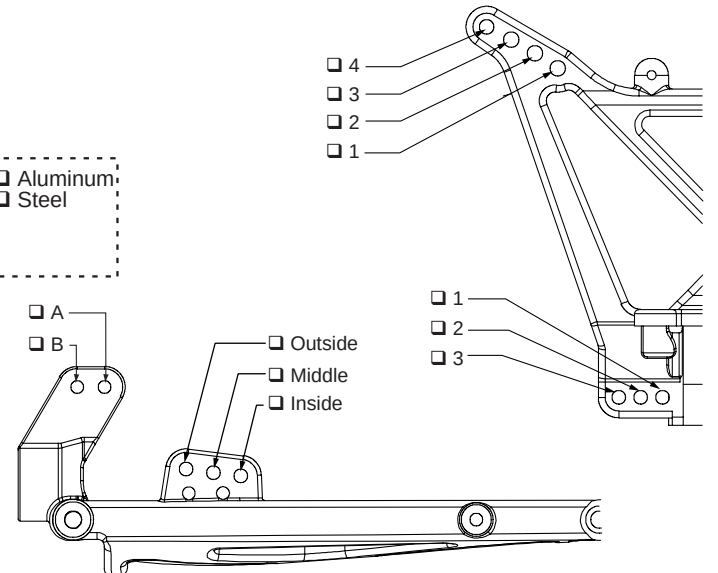
Rear Shocks

Oil: _____

Piston: _____ ☐ Standard / ☐ Drilled

Spring: _____

Limiters: ☐ Inside- _____ ☐ Outside- _____



Tires

Front: _____ Compound _____ Foam _____

Rear: _____ Compound _____ Foam _____

Body _____

Spoiler ☐ yes ☐ no ☐ Size _____

Engine: _____

Carburetor Type: ☐ Slide valve / ☐ Rotary

Glow Plug Type: _____

Engine Temp: _____

Head Clearance: _____

Fuel Type: _____ Nitro%: _____

Carb Restrictor: ☐ .170 ☐ .180 ☐ .190 ☐ None

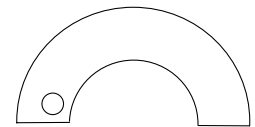
Muffler Type: _____

Manifold: _____

Spur/Clutch Bell: _____ / _____

Clutch: ☐ Stock ☐ Other _____

☐ Sprung ☐ Unsprung ☐ Leading ☐ Trailing



Shade where clutch was cut or lightened.

Notes:

