

## Kinwald Edition

# OWNER'S MANUAL



- ① 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 *Triple-X Kinwald Edition* racing car before beginning the construction process will ensure a smooth assembly.
- ① Take your time and pay close attention to detail. Keep this manual for future reference.





When all else fails, read the instructions.

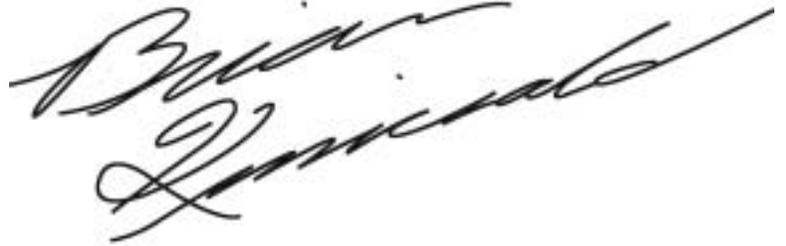
**CompetitionX**  
A WEB SITE FOR THE SERIOUS RAGER

For the latest setup tips and information on your new *Triple-X Kinwald Edition*, visit Team Losi on the Internet at: [www.TeamLosi.com](http://www.TeamLosi.com)

# Welcome Team Losi Triple-X Owner!

Thank you for choosing the Team Losi *Triple-X* Kinwald Edition. I have been fortunate to work and race for Team Losi through the years. I owe a great deal of my success to their cutting edge designs and attention to detail. This Kinwald Edition kit includes a large selection of more important specialty parts I used to win the recent ROAR Modified 2 Wheel Drive National Championship. Before you start building your new *Triple-X*, I suggest you read through the instructions first. Be sure to check out the performance tips as you build and the tuning tips at the back of this manual as well. I hope you enjoy your *Triple-X* as much as I do mine.

Good luck, and thank you for choosing Team Losi.



## 1. INTRODUCTION

### TRIPLE-X KINWALD EDITION COMPLETED KIT DIMENSIONS

Length: 14.875"	Front Width: 9.82"	Rear Width: 9.84"	Height: 5.125"
Wheelbase: 10.6"	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!

 This wrench designates a performance tip. These tips are not necessary, but can improve the performance of your *Triple-X* car.

 In illustrations where it is important to note which direction parts are facing, 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 kit is composed of different bags marked A through G. Each bag contains all of the parts necessary to complete a particular section of the kit. Some of these bags have subassembly bags within them. It is essential that you open only one bag at a time and follow the correct assembly sequence, otherwise you may face dif-

iculties in finding the correct part. It is helpful to read through the instructions for an entire bag prior to beginning assembly. Key numbers (in parenthesis) 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 kit 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 ensure that parts are not lost during construction, it is recommended that you work over a towel or mat to prevent parts from rolling away.

### IMPORTANT SAFETY NOTES

1. Select an area for assembly that is away from the reach of small children. *Some parts in this kit are small and can be swallowed by children, causing choking and possible internal injury.*

2. The shock fluid and greases supplied should be kept out of childrens' reach. *They are not intended for human consumption!*

3. Exercise care when using any hand tools, sharp instruments, or power tools during construction.

4. Carefully read all manufacturers' warnings and cautions for any glues, chemicals, or paints that may be used for assembly and operating purposes.

## TOOLS REQUIRED

Team Losi has supplied all necessary Allen wrenches and a special wrench that is needed for assembly and adjustments. The following common tools will also be required: Needle-nose pliers, regular pliers, hobby knife, scissors or other body cutting/trimming tools, and a soldering iron may be necessary for radio installation. 3/16", 1/4", 11/32", 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 specific questions pertaining to radio/electrical equipment.

## 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). The second number or fraction designates the length of the screw. For cap-head and button-head screws, this number refers to the length of the threaded portion of the screw. For flat-head screws, this number refers to the overall length of the screw. Bearings and bushings are referenced by the inside diameter x outside diameter. Shafts and pins are referred to by 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 attach to.

## MOTORS AND GEARING

The *Triple-X* includes an 78-tooth, 48-pitch spur gear. The overall internal drive ratio of the transmission is 2.43:1. The pinion gear that is used will determine the final drive ratio. To calculate the final drive ratio, first divide the spur gear size by the pinion gear size. For example, if you are using a 20-tooth pinion gear, you would divide 78 (spur gear size) by 20 (pinion gear size).  $78/20=3.9$ . This tells you that 3.9 is the external drive ratio. Next, multiply the internal drive ratio (2.43) by the external drive ratio (in this case 3.9).  $2.43 \times 3.9 = 9.477$ . This means that by using a 20-tooth pinion gear with the standard 78-tooth spur gear, the final drive ratio is 9.477.

Consult your high-performance shop for recommendations to suit your racing style and class. The chart below lists some of the more common motor types and a recommended initial gearing for that motor. Ratios can be adjusted depending on various track layouts, tire sizes, and battery types.

### RECOMMENDED INITIAL GEARING FOR COMMON MOTORS

TYPE OF MOTOR	PINION	SPUR
24° Stock	23	78
11-Turn Modified	19	78
12-Turn Modified	20	78
13-Turn Modified	21	78
14-Turn Modified	22	78
15-Turn Modified	23	78
16-Turn Modified	24	78
17-Turn Modified	25	78

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*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.  $360^\circ \times 2$ ). 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.

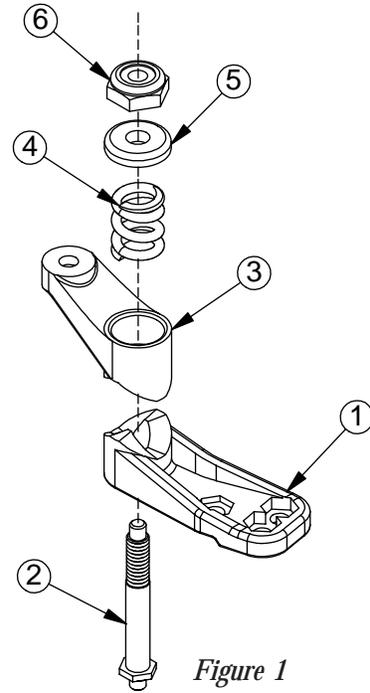


Figure 1

Figure 2



⑦

⑪

❑ 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.

🔑 Once assembly of your new Triple-X 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.

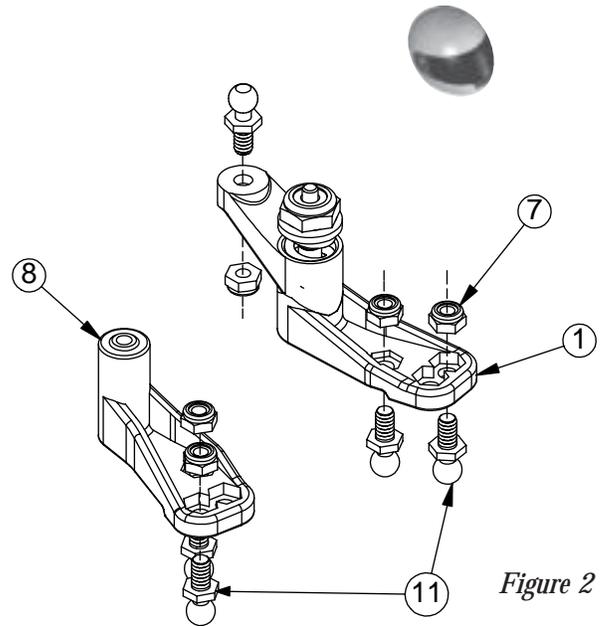


Figure 2

Figure 3

❑ 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!*

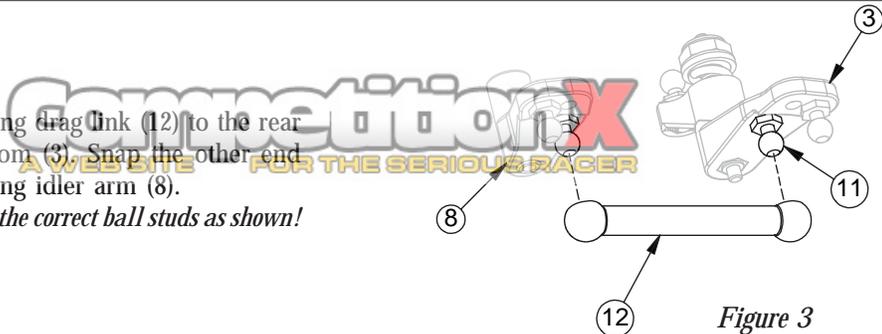
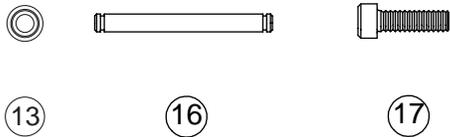


Figure 3

# BAG A (Continued)

Figure 4



❑ Step 8. Insert a 3/32" x 3/16" ball bearing (13) into the two large, angled holes in the bottom of the front kickplate (14). Insert the other two bearings (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 bearings (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 bearings (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).

⚙️ 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.

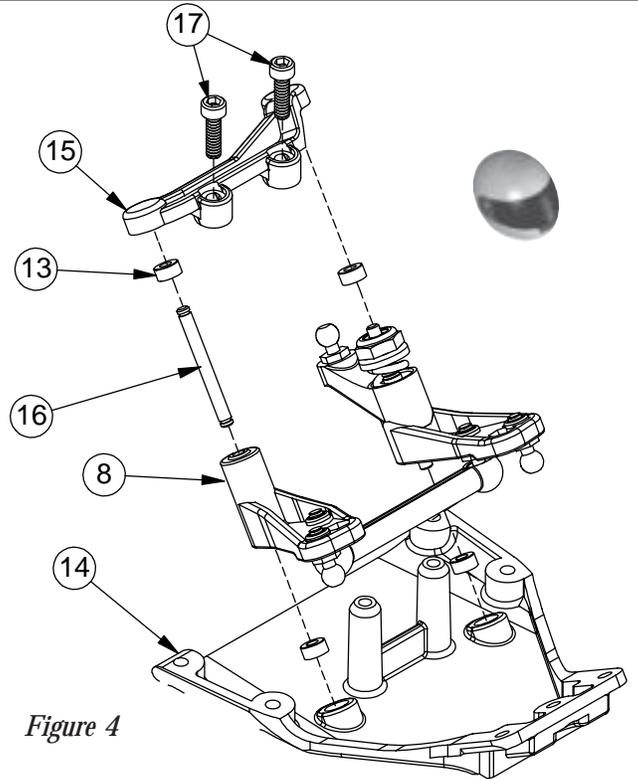
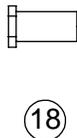


Figure 4

Figure 5



❑ Step 12. Install a threaded insert (18) into the top of each of the two forward holes in the main chassis (19). 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 chassis (19), lining up the hex on the inserts (18) with the hex in the holes.

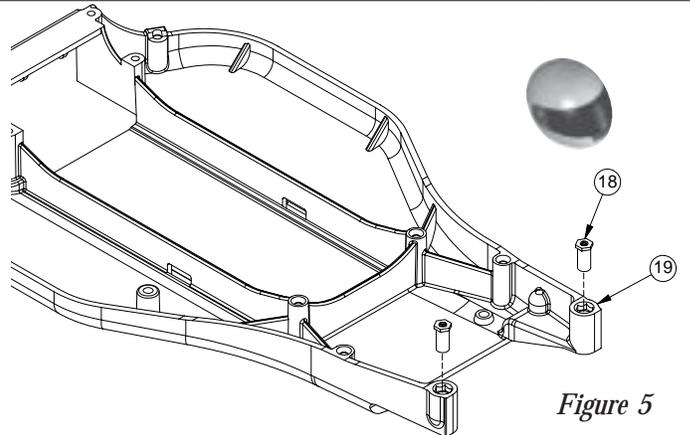
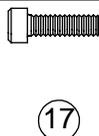


Figure 5

Figure 6



❑ 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 3/8" cap-head screws (17) through the forward holes and into the threaded inserts (18). Thread two more 4-40 x 3/8" cap-head screws through the two rear holes of the kickplate (14) and into the chassis (19).

⚠️ **IMPORTANT NOTE:** Ensure that the hex of the threaded insert remains seated in the hex area on top of the chassis.

⚙️ 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 main chassis. Pre-tapping these holes makes it easier to install the screws during assembly.

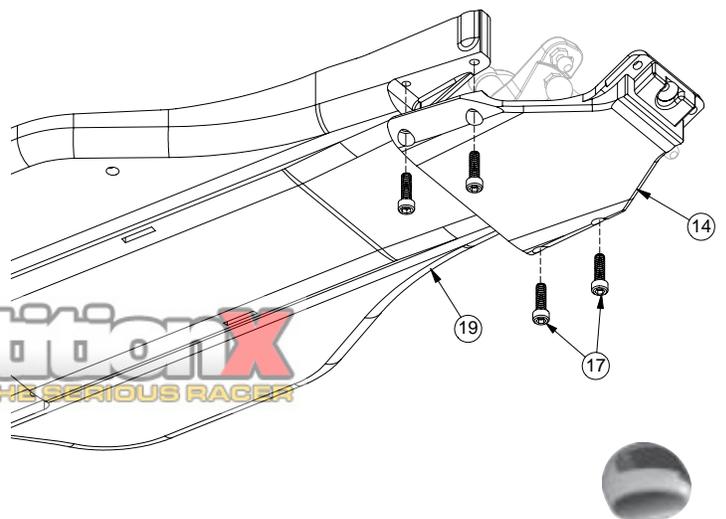
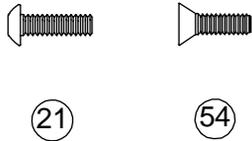


Figure 6

# BAG B

Figure 7



□ Step 1. Position the front bulkhead (20) on top of the front kickplate (14) and main chassis (19) as shown in Figure 7. Secure the front bulkhead (20) to the chassis (19) by threading two 4-40 x 3/8" button-head screws (21) through the hole in the top of the bulkhead (20) and into the chassis (19).

□ Step 2. Secure the front kickplate (14) to the front bulkhead (20) by threading a 4-40 x 3/8" flat-head screw (54) through the center hole in the front of the kickplate (14) and into the bulkhead (20).

⚠ There is a short thread-cutting screw included in the wrench bag. This screw can be used to tap threads into the hole in the front bulkhead. Pre-tapping this hole makes it easier to install the screw during assembly.

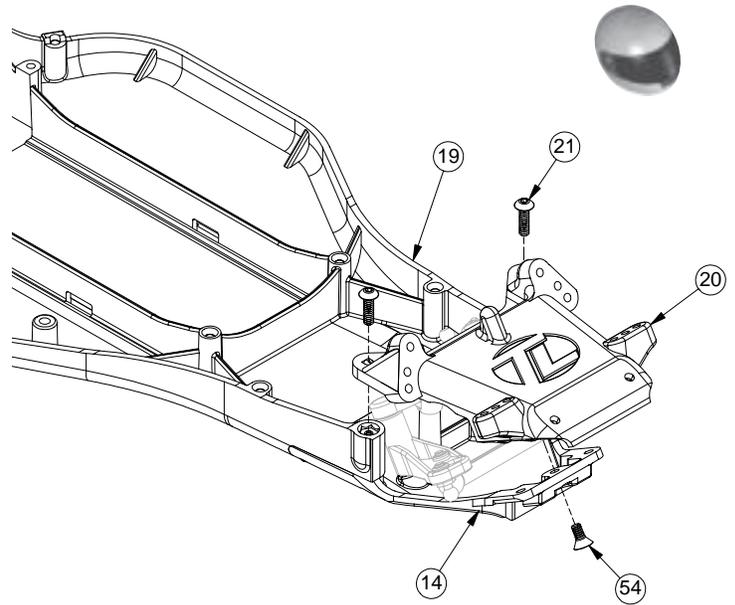
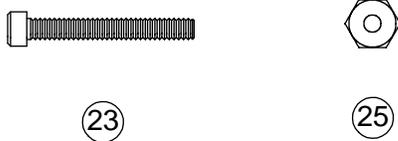


Figure 7

Figure 8



□ Step 3. Insert two 4-40 x 7/8" cap-head screws (23) – one on each side – through center holes in the top of the front shock tower (24). Secure the screws (23) to the shock tower (24) by threading a 4-40 nut (25) over each screw (23) and tightening.

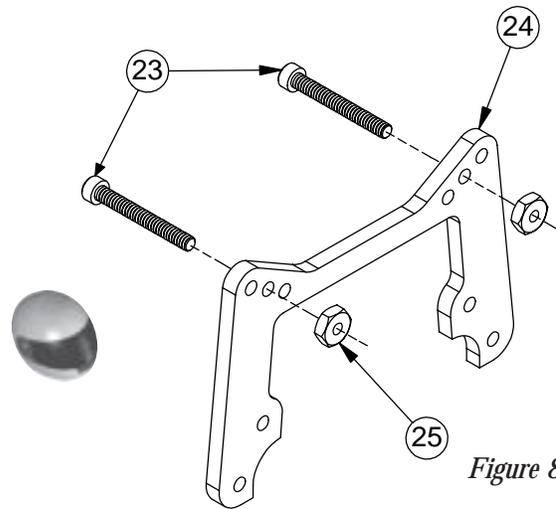
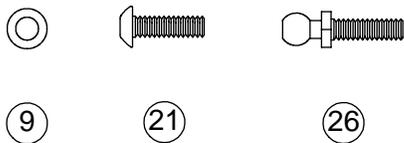


Figure 8

Figure 9



□ Step 4. Attach the front shock tower (24) to the front bulkhead (20) with four 4-40 x 3/8" button-head screws (21). The screws (21) thread into the top-most and bottom-most holes in the bulkhead (20). 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 9.

□ Step 5. Place one ball stud washers (9) over each of the two 3/8" ball studs (26). Thread a 3/8" ball stud (26) into the outside hole on each side of the front bulkhead (20).

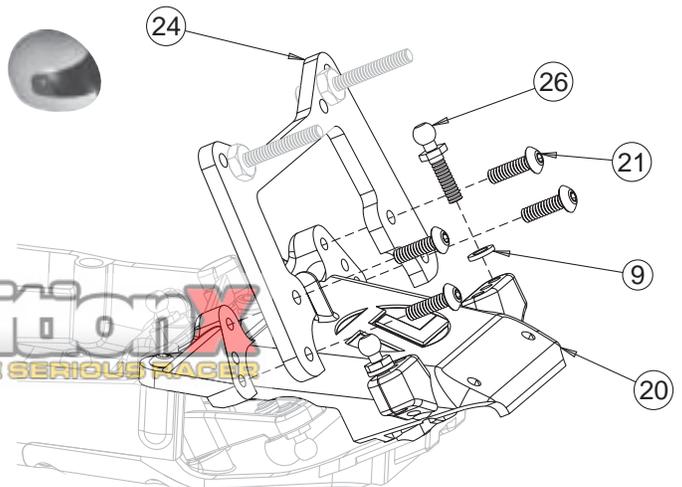
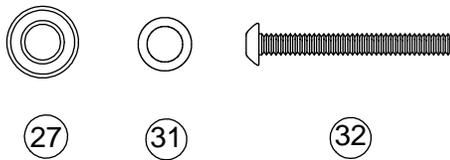


Figure 9

# BAG B (Continued)

Figure 10



- ❑ Step 6. Insert a 3/16" x 3/8" sealed bearing (27) into each side of both front spindles [left (28), right (29)].
- ❑ Step 7. Insert a front stub axle (30) from the outside of both spindles (28), (29) as shown in Figure 10.
- ❑ Step 8. Place a front axle spacer (31) over each of the two front stub axles (30) as shown in Figure 10. Thread a 4-40 x 1" button-head screw (32) into each of the stub axles (30) from the back side. The front axle spacer (31) should be positioned on the stub axle (30) between the head of the screw (32) and the inner bearing (27). Tighten the screws (32) while holding the stub axle (30) with a 3/8" socket wrench or pliers.

*\*NOTE: If the 3/16" x 3/8" bearing only has one Teflon™ seal (colored, woven-looking) in it, position the seal to the outside of the hub.*

⚠ Be sure that the front axle screws are **TIGHT!** The thread-lock compound that is on the screws takes 24 hours to cure.

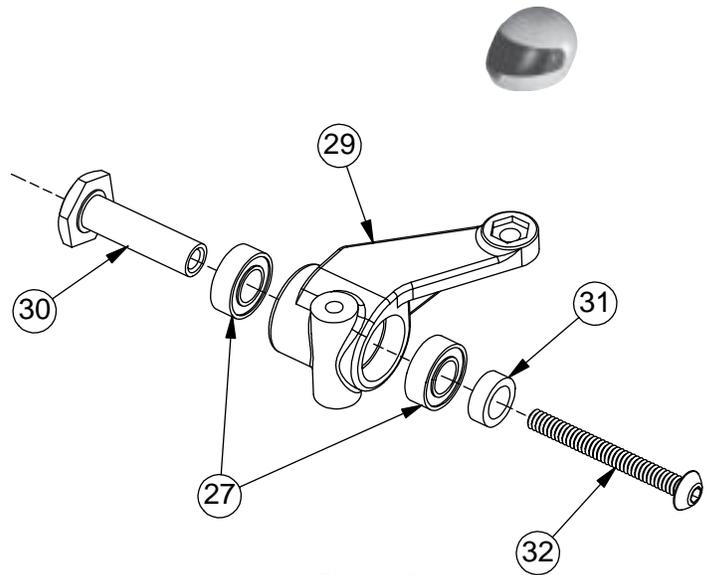
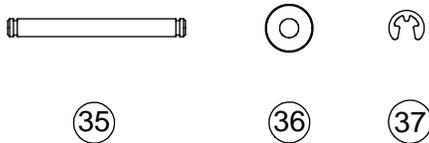


Figure 10

Figure 10A



- ❑ Step 9. Attach the right spindle (29) to the right spindle carrier (34) by aligning the holes in each part and inserting a 3/32" x 1.050" hinge pin (35) from the bottom. Do not insert the pin (35) all the way through both parts yet.
- ❑ Step 10. Insert a front spindle spacer (36) between the top of the spindle (29) and the spindle carrier (34) as shown in Figure 11. Once the spacer (36) is in place, insert the hinge pin (35) through the spacer (36) and the top of the spindle carrier (34). Center the hinge pin (35) in the spindle carrier (34).
- ❑ Step 11. Secure the hinge pin (35) with two 3/32" E-clips (37) – one on each end.

⚠ **IMPORTANT NOTE:** There are two different sizes of E-clips in this assembly bag. Be sure to use the smallest E-clips on the 3/32" hinge pins. Refer to Figure 10A and make sure that the spindles are installed correctly.

- ❑ Step 12. Repeat Steps 9-11 for the left spindle (28) and left spindle carrier (33).

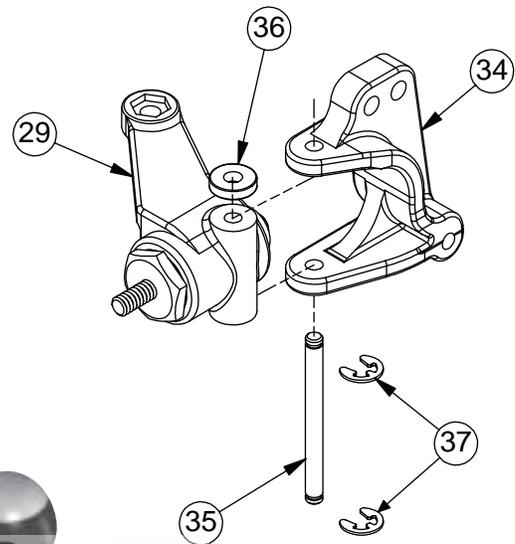
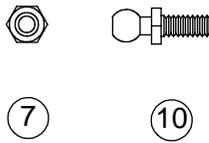


Figure 10A

# BAG B (Continued)

Figure 11



□ Step 13. Insert a 4-40 mini locknut (7) into the hex area in each spindle carrier (33), (34) as shown in Figure 11. Insert a 1/4" ball stud (10) into the outside hole (closest to the installed hinge pin) and tighten.

□ Step 14. Insert a 4-40 mini locknut (7) into the hex area in each spindle (28), (29). Thread a 1/4" ball stud (10) into the nut from the bottom of the spindle (28), (29) and tighten.

⚠ IMPORTANT NOTE: Do not overtighten the ball studs!

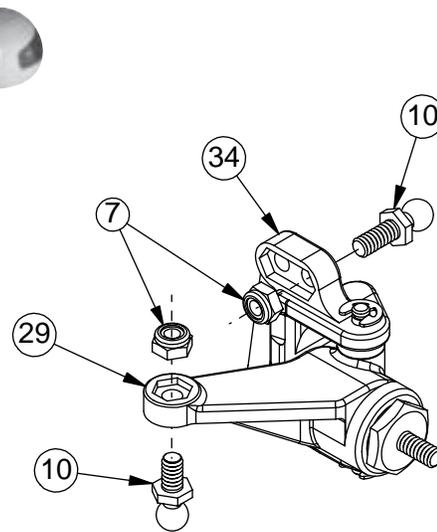
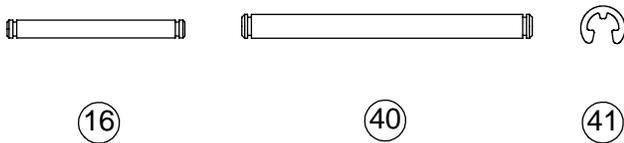


Figure 11

Figure 12



□ Step 15. Attach the right spindle and carrier assembly to a front suspension arm (38) as shown in Figure 12. Note that the spindle arm faces the side of the suspension arm (38) with the shock mount holes (rear) and the ball stud (10) pointing forward. Line up the holes in the spindle carrier (34) with the holes in the front arm (38), insert a 3/32" x .930" hinge pin (16) and attach a 3/32" E-clip (37) to both sides of the hinge pin (16).

⚠ IMPORTANT NOTE: There are two sizes of E-clips in this assembly bag. Be sure to use the small E-clips on the 3/32" pins.

□ Step 16. Attach the arm (38) to the right side of the front pivot block (39) by inserting a 1/8" x 1.42" hinge pin (40), from the front, through the arm (38) and pivot block (39) as shown in Figure 12.

□ Step 17. Insert a 1/8" E-clip (41) in the groove in the rear of the hinge pin (40) only.

□ Step 18. Repeat Steps 14-16 for the left spindle and carrier assembly and remaining front suspension arm (38).

□ Step 19. Slide the front hinge pin brace (42) over the front of both inner hinge pins (40). The E-clip grooves in both hinge pins (40) should be exposed in front of the brace (42). Secure the brace (42) by attaching a 1/8" E-clip (41) to the front of each hinge pin (40).

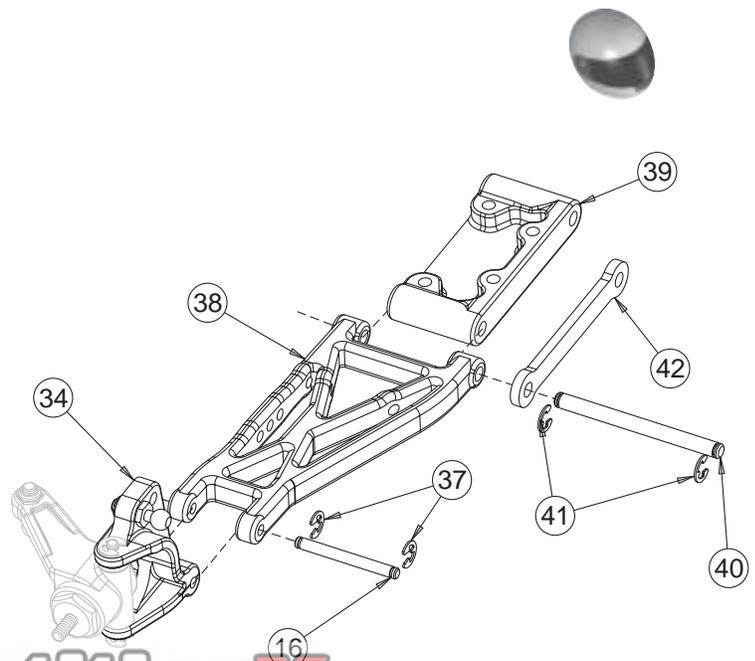


Figure 12

# BAG B (Continued)

Figure 13



(150)

❑ Step 20. Hold the chassis assembly upside down. Place the front pivot block (39) over the front edge of the front kick plate (14) as shown in Figure 13. The front edge of the front bulkhead (20) should be positioned between the front pivot block (39) and the hinge pin brace (42).

❑ Step 21. While holding the front suspension assembly in place, position the front bumper (43) on the bottom of the front pivot block (39) so that the four holes in the bumper (43) are aligned with the four holes in the pivot block (39). The bumper (43) should be attached as shown so that the edges curve towards the top of the chassis. Secure the bumper (43) and pivot block (39) to the front bulkhead (20) and kick plate (14) by threading four 4-40 x 5/8" flat-head screws (150) through the bumper and pivot block and tightening.

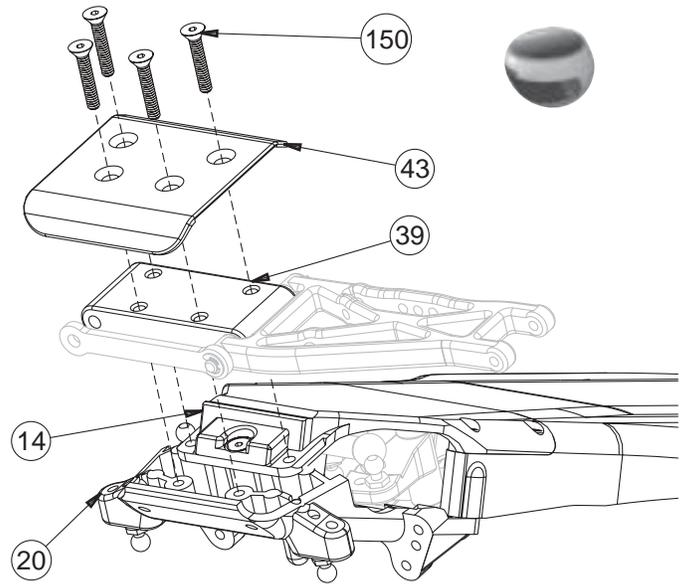
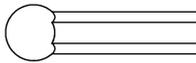
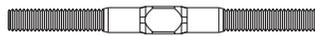


Figure 13

Figure 14



(45)



(46)

❑ Step 22. Thread a plastic rod end (45) onto each end of a 1-1/2" turnbuckle (46). Tighten both rod ends (45) equally until the rod is the same length as the rod in Figure 14A. Make two of these camber link assemblies.

*\*NOTE: Each end of the turnbuckle is threaded opposite. One end has left-hand threads, the other right-hand threads. This allows the length of the rods, once installed, to be adjusted without removing them.*

🔑 There is a small container/package of white grease in Bag B. It is recommended that this be applied to the threads of the turnbuckles before trying to thread the plastic rod ends on.

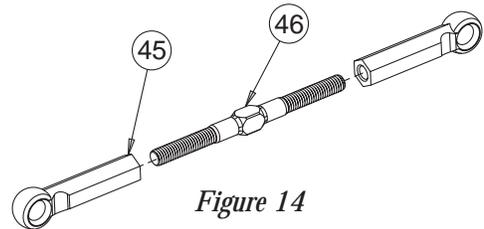


Figure 14

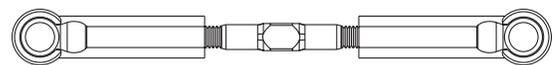


Figure 14A

Figure 15

❑ Step 23. Place a "foam thing" (47) over the ball studs (10) in each of the spindle carriers (33), (34) and the ball studs (10) in the front bulkhead (20). Next, attach one side of a camber link assembly to the ball stud (10) on the right side of the bulkhead (20). Attach the other side of the camber link assembly to the ball stud (10) in the spindle carrier (34).

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

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

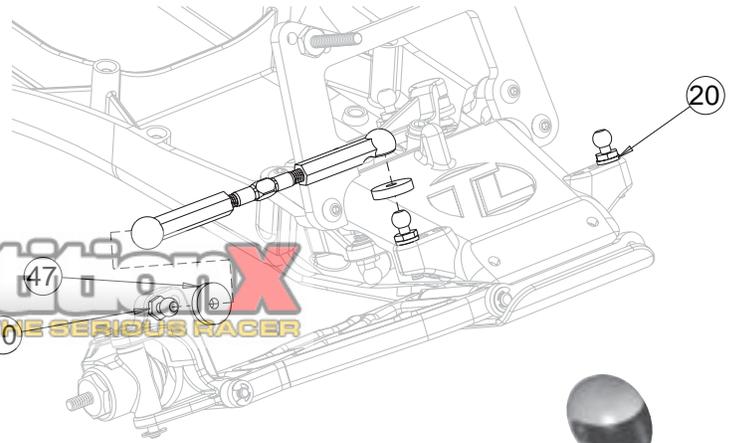
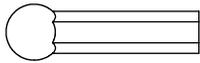


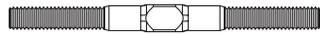
Figure 15

# BAG B (Continued)

Figure 16



45



46

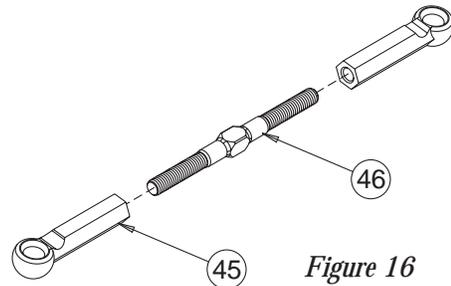


Figure 16

□ Step 25. Thread a plastic rod end (45) onto each end of a 1-1/2" turnbuckle (46). Tighten both rod ends (45) equally until the rod is the same length as the rod in Figure 16A. Make two of these tie-rod assemblies.

*\*NOTE: Each end of the turnbuckle is threaded opposite. One end has left-hand threads, the other right-hand threads. This allows the length of the rods, once installed, to be adjusted without removing them.*

🔑 There is a small container/package of white grease in Bag B. It is recommended that this be applied to the threads of the turnbuckles before trying to thread the plastic rod ends on.

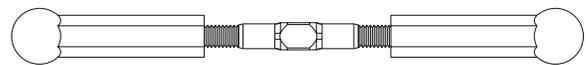


Figure 16A

Figure 17

□ 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 (11) in the right spindle (29). Attach the other tie rod assembly to the ball studs in the servo saver assembly and the left spindle (28).

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

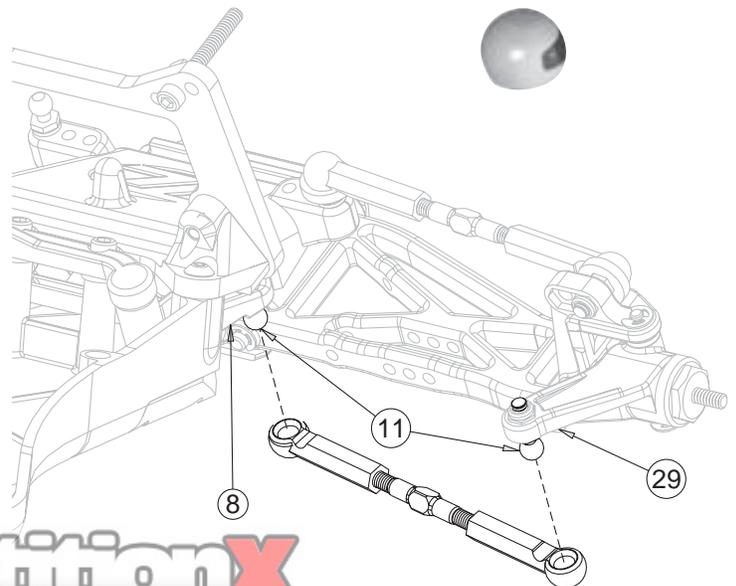
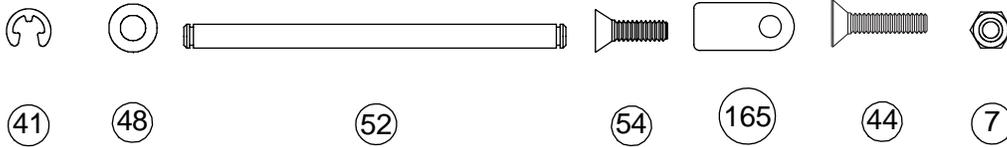


Figure 17

**CompetitionX**  
A WEB SITE FOR THE SERIOUS RAGER

# BAG C

Figure 18



- ❑ Step 1. Insert a 1/8" x 1/4" washer (48) into the recessed area on each side of the rear pivot block (49). Place the right rear suspension arm (50) – marked 'R' – over the right side of the rear pivot block (49). Line up the holes in the arm (50) with the holes in the pivot block (49) and assemble the parts by inserting an inner rear hinge pin (52) all the way through both parts. Install a 1/8" E-clip (41) to the rear end of the hinge pin (52).
- ❑ Step 2. Repeat Step 1 for the left rear suspension arm (51).
- ❑ Step 3. Slide the rear hinge pin brace (164) over the front of both inner hinge pins (52). Secure the brace (164) by attaching a 1/8" E-clip (41) to the front of each hinge pin (52).
- ❑ Step 4. Place the small anti-squat shims (165) to the side as they will not be used (read the "Anti-Squat" section in "Tips" for when to use these). Attach the rear pivot block (49) to the rear pivot plate (53) with four 4-40 x 1/2" flat-head screws (44). Thread 4-0 mini nuts (7) over the exposed threads of the 4-40 x 1/2" flat heads (44) and snug against the rear pivot block (49).

**⚠ IMPORTANT NOTE:** Ensure that the pivot block is installed with the wider end to the rear as shown in Figure 18.

- ❑ Step 5. Install the rear pivot plate (53) so that the pivot plate (53) is flush with the chassis (19). Make sure that the four holes in the chassis (19) line up with the holes in the pivot plate (53).

Secure the pivot plate (53) to the chassis (19) using four 4-40 x 3/8" flat-head screws (54).

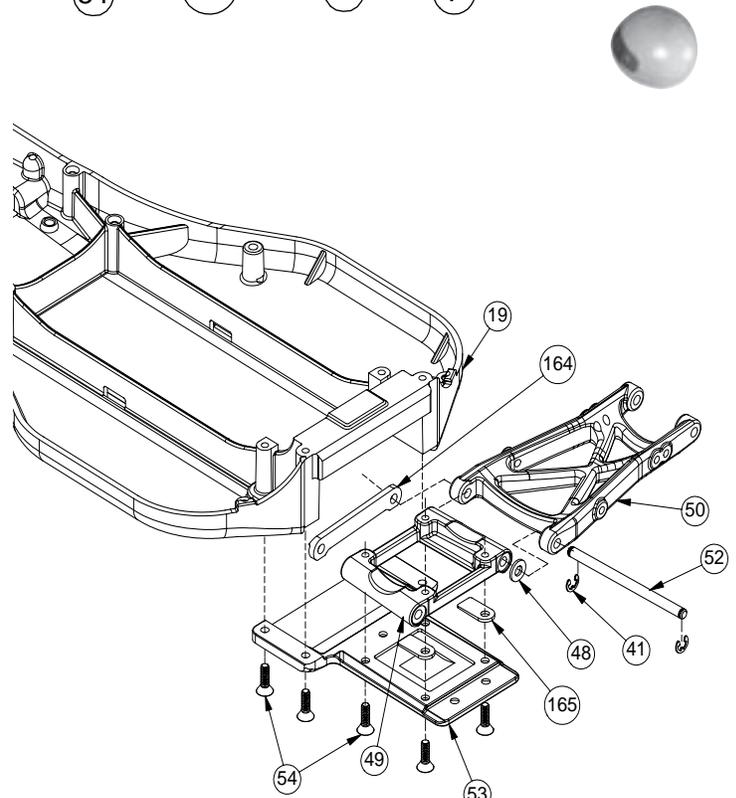
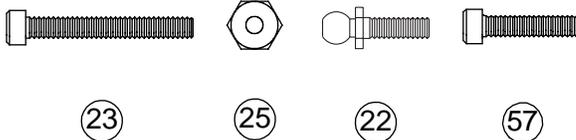


Figure 18

Figure 19



- ❑ Step 6. Insert two 4-40 x 7/8" cap-head screws (23) – one on each side – through the second hole out on the top of the rear shock tower (55) as shown in Figure 19. Secure the screws (23) to the shock tower (55) by threading a 4-40 nut (25) over each screw (23) and tightening.

**⚠ IMPORTANT NOTE:** The screws should extend from the same side of the shock tower as the two tabs near the center of the tower.

- ❑ Step 7. Thread a bluish ball stud (22) into the center hole on each side of the rear shock tower (55). Place a "foam thing" (47) over each of the two ball studs (22).

- ❑ Step 8. Align a rear wing mount (56) with the lower holes in the left side of the rear shock tower (55). Secure the wing mount (56) with two 4-40 x 1/2" cap-head screws (57). Align and secure the other wing mount (56) to the right side of the tower (55) in the same manner.

**⚠ IMPORTANT NOTE:** The wing mounts should extend from the shock tower in the opposite direction of the screws in the top of the tower as shown in Figure 19.

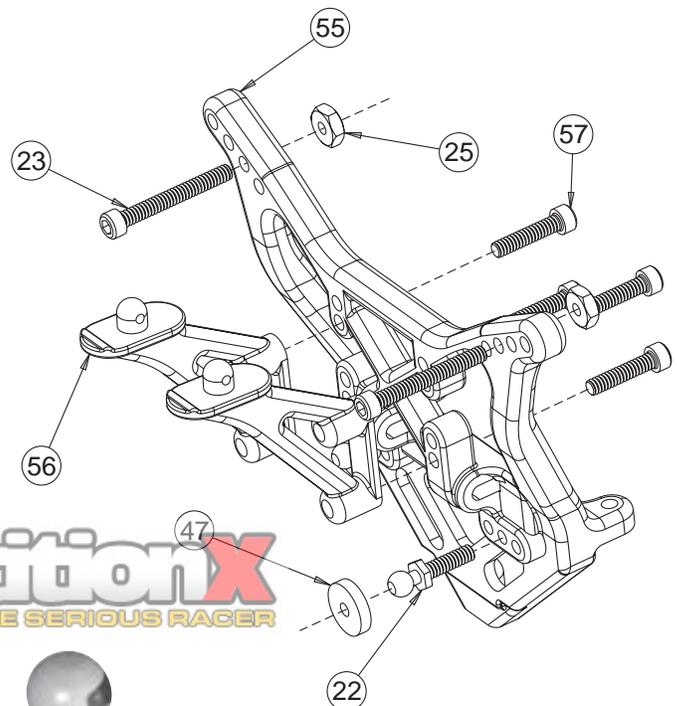
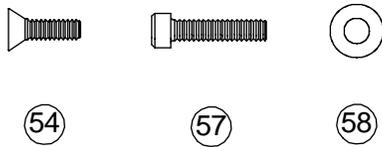


Figure 19

# BAG C (Continued)

Figure 20



❑ Step 9. Place the rear shock tower (55) between the rear of the chassis (19) and the rear pivot block (49). The shock tower (55) should sit flat against the rear pivot plate (53). Place a #4 washer (58) over two 4-40 x 1/2" cap-head screws (57). Secure the shock tower (55) to the chassis (19) by threading the two 4-40 x 1/2" cap-head screws (57), with washers (58) attached, through the tower (55) and into the chassis (19).

❑ Step 10. Secure the rear shock tower (55) to the rear pivot plate (53) by threading a 4-40 x 3/8" flat-head screw (54) through the pivot plate (53), from the bottom, and into the shock tower (55).

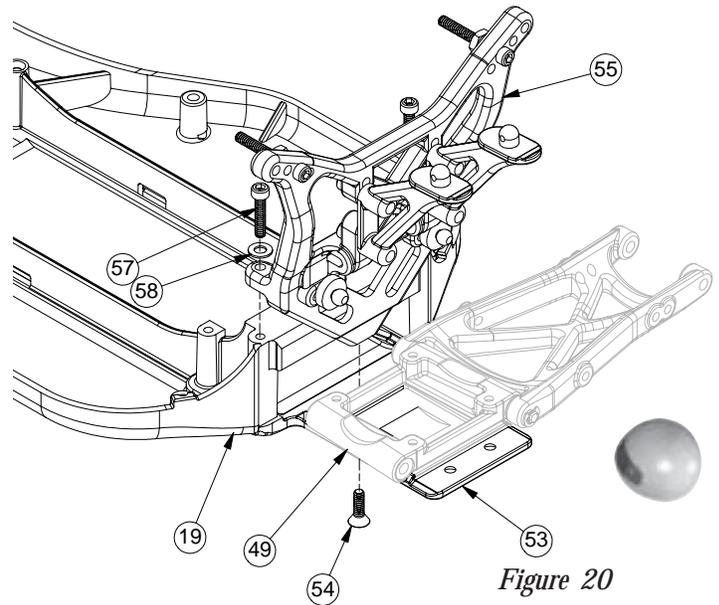


Figure 20

Figure 21

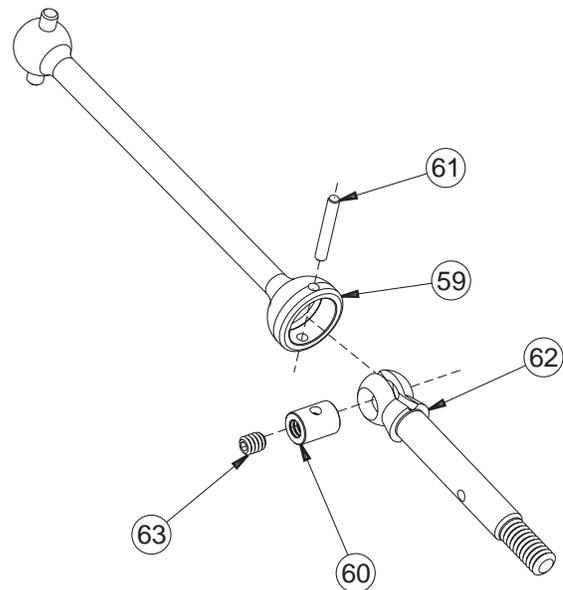


❑ Step 11. Apply a thin coat of white thrust bearing/assembly grease (87) to the outside of the CVD yoke (60). Insert the greased CVD yoke (60) into the large hole in the CVD rear axle (62) so that the hole in the CVD yoke (60) can be seen through the slots in the CVD rear axle (62).

❑ Step 12. Place the CVD dogbone (59) over the CVD rear axle (62). Align the holes in the CVD dogbone (59) with the hole in the CVD yoke (60). Secure all three parts by inserting a 1/16" x 7/16" (solid) pin (61) through the holes in the CVD dogbone (59), the slots in the CVD rear axle (62), and the hole in the CVD yoke (60).

❑ Step 13. Center the pin (61) in the CVD dogbone (59) and secure it by threading a 4-40 setscrew (63) into the end of the CVD yoke (60). Thread-lock compound should be applied to the setscrew (63) before installing it.

❑ Continue with Step 16/Fig. 22.



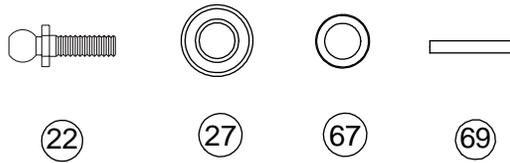
**!** IMPORTANT NOTE: Apply the enclosed thread-lock to the setscrew before threading it into the CVD yoke. If thread-lock is not used, the setscrew will loosen during operation. This will cause your car to stop running.



Figure 21

# BAG C (Continued)

Figure 22



❑ Step 16. Thread a bluish ball stud (22) into the outer hole in the right rear hub (65), from the front (the side without the recessed area) as shown in Figure 22.

**⚠ IMPORTANT NOTE:** Do not overtighten the ball studs.

❑ Step 17. Place a "foam thing" (47) over the ball stud (22).

❑ Step 18. Press a 3/16" x 3/8" sealed bearing (27) into the inside of the right rear hub (65). Slide a rear axle (62) through the bearing (27) in the rear hub (65).

*\*NOTE: If the 3/16" x 3/8" bearing only has one Teflon™ seal (colored, woven-looking) in it, position the seal to the outside of the hub.*

❑ Step 19. Slide an inner rear axle spacer (67) over the rear axle (62) – from the outside – against the inside of the bearing (27). Place a second 3/16" x 3/8" bearing (27) over the rear axle (62) and press the bearing (27) into the outside of the rear hub (65).

*\*NOTE: If the 3/16" x 3/8" bearing only has one Teflon™ seal (colored, woven-looking) in it, position the seal to the outside of the hub.*

❑ Step 20. Place an outer rear axle spacer (68) over the rear axle (62), against the outside bearing (27). The small side of the spacer (68) should be positioned next to the bearing (27).

❑ Step 21. Secure the rear axle (62) and the spacer (68) by inserting a 1/16" x 7/16" spirol pin (69) through the small hole in the rear axle (62). The pin (69) should be centered in the rear axle (62).

❑ Step 22. Repeat Steps 16-21 for the left rear hub (66).

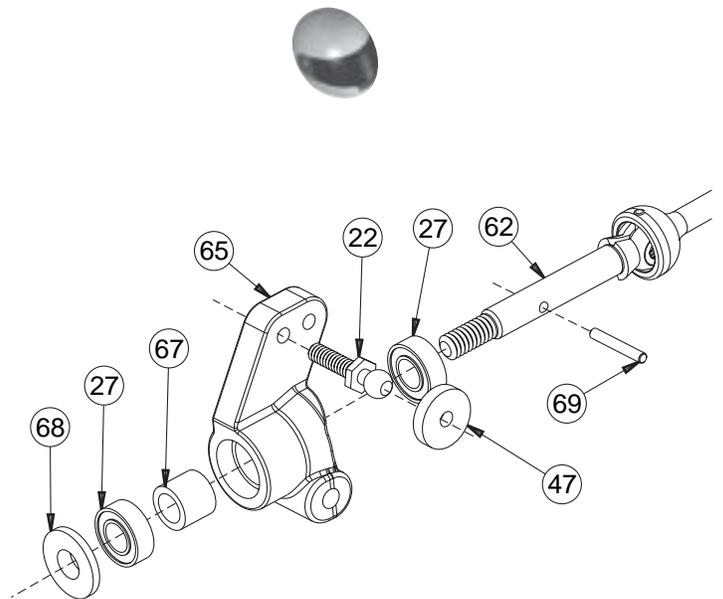
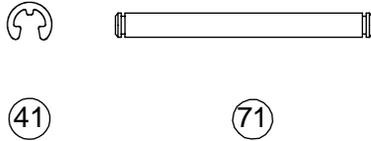


Figure 22

# BAG C (Continued)

Figure 23



❑ Step 23. Place the right rear hub (65) between the outer rails of the right rear suspension arm (50). Be sure that the ball stud (22) is towards the front. Position a rear hub spacer (70) between the hub (65) and the suspension arm (50) on each side of the hub (65).

❑ Step 24. Insert an outer rear hinge pin (71) into the suspension arm (50), through each of the two spacers (70) and rear hub (65). Secure the hinge pin (71) with two 1/8" E-clips (41).

❑ Step 25. Repeat Steps 23 and 24 for the left rear hub (66) and left rear suspension arm (51).

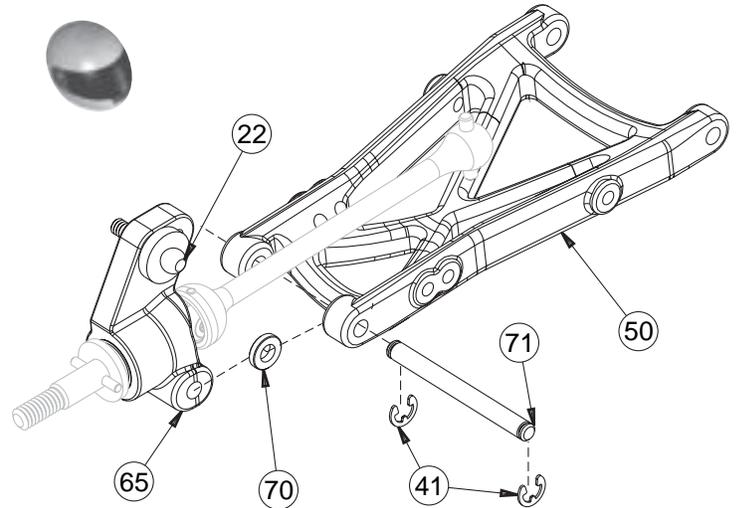
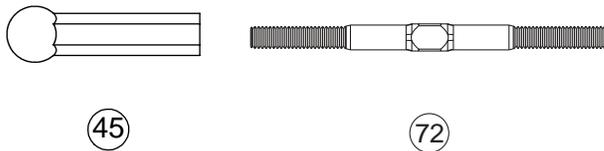


Figure 23

Figure 24



❑ Step 26. Thread a plastic rod end (45) onto each end of a 1-7/8" turnbuckle (72). Tighten both rod ends (45) until the rod is the same length as the one shown in Figure 24A. Make two of these rear camber link assemblies.

*\*NOTE: Each end of the turnbuckle is threaded opposite. One end has left-hand threads, the other right-hand threads. This allows the length of the rods, once installed, to be adjusted without removing them.*

🔑 There is a small container/package of white grease in Bag B. It is recommended that this be applied to the threads of the turnbuckles before trying to thread the plastic rod ends on.

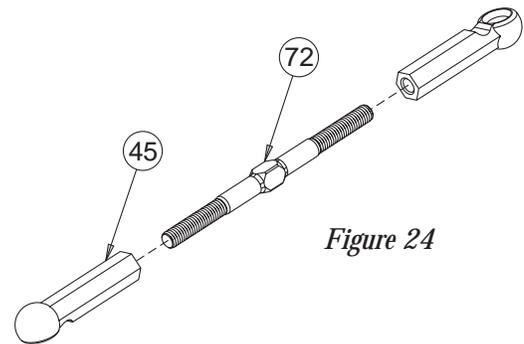


Figure 24

Figure 24A

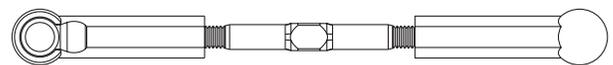


Figure 25

❑ Step 27. Attach one end of a rear camber link assembly from Step 26 to the ball stud (22) in the right rear hub (65) and the other end to the ball stud (22) in the rear shock tower (55).

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

❑ Step 28. Repeat Step 27 for the left side of the car.

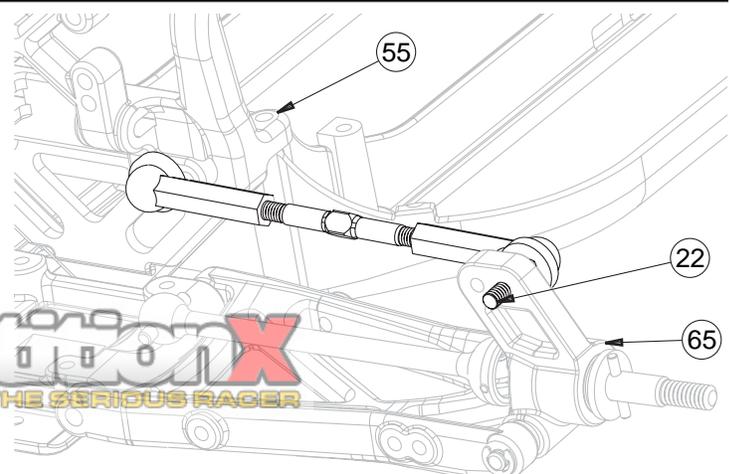


Figure 25

**COMPETITION X**  
A WEB SITE FOR THE SERIOUS RACER

# BAG D

Figure 26

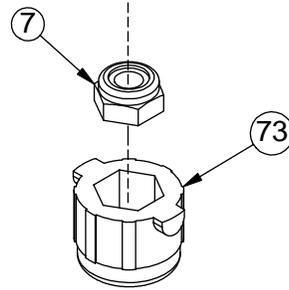


Figure 26

- ❑ Step 1. Insert a 4-40 mini locknut (7) into the hex area of the diff nut carrier (73). The thread-locking portion of the nut (7) should be to the outside.

Figure 27

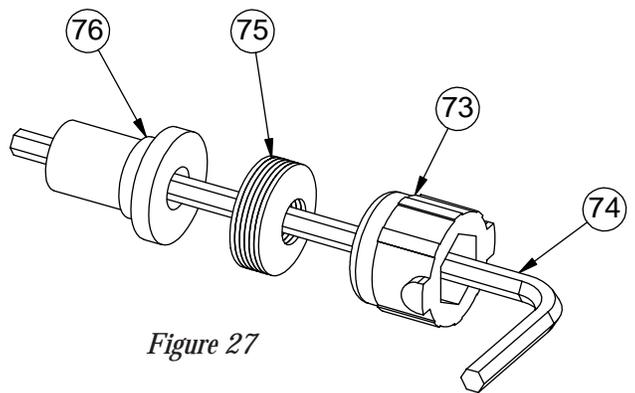


Figure 27

- ❑ Step 2. Locate the 5/64" Allen wrench (74) supplied with the kit. Place the diff nut carrier (73), nut side first, over the Allen wrench (74).
- ❑ Step 3. Stack the six beveled washers (75) over the wrench, next to the diff nut carrier (73). The washers (75) should all point the same direction and open away from the nut carrier (73) as shown in Figure 27.
- ❑ Step 4. Place the diff tube (76) over the wrench, large side first, so that it rests against the beveled washers (75).

Figure 28

- ❑ Step 5. Insert all of the parts that are stacked on the wrench into one of the outdrive/diff halves (77). Line up the tabs on the diff nut carrier (73) with the slots in the outdrive (77). Make certain that the diff tube (76) is pressed all the way into the outdrive/diff half (77), and that it is straight. There is a small shoulder on the diff tube (76) that should be flush with the outer surface of the outdrive (77).

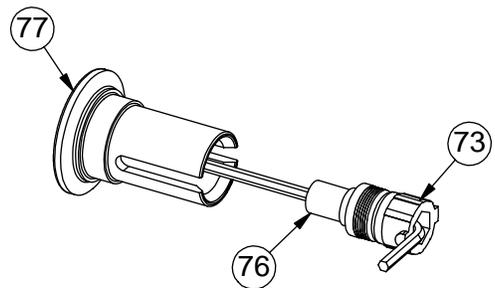


Figure 28

Figure 29

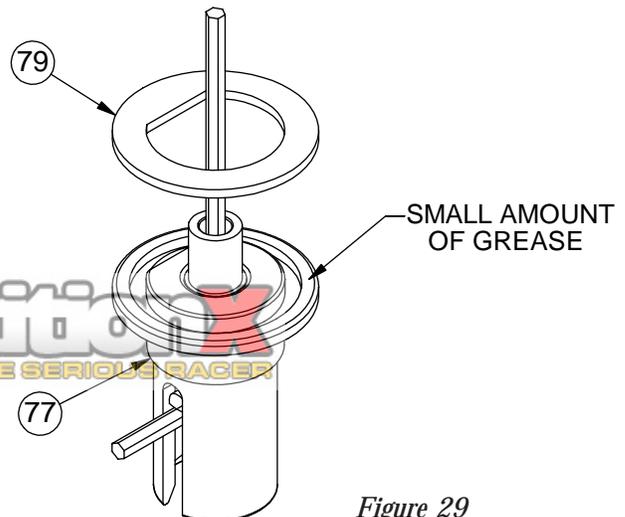
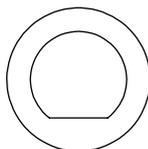


Figure 29

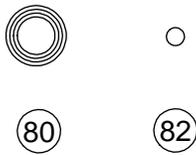
- ❑ Step 6. Apply a small amount of diff grease (clear) (78) to the outside ridge of the outdrive/diff half (77). Attach a diff washer (79) to the outdrive (77) by lining up the flat section of the washer (79) with the flat section of the outdrive (77).

*\*NOTE: Only a small amount of grease is needed. It is only there to hold the diff washer in place.*

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

# BAG D (Continued)

Figure 30



- Step 7. Insert a 5mm x 8mm bearing (80) into the center of the diff gear (81).
- Step 8. Press a 3/32" carbide diff ball (82) into each of the small holes in the diff gear (81).

**⚠ IMPORTANT NOTE:** There are two sets of balls in Bag D. Be certain to use the balls that are packaged alone (12 total) in Figure 33, Step 8. There is a second set of eight 5/64" balls packaged with washers in the bag. These balls will be used in Figure 33/Step 14.

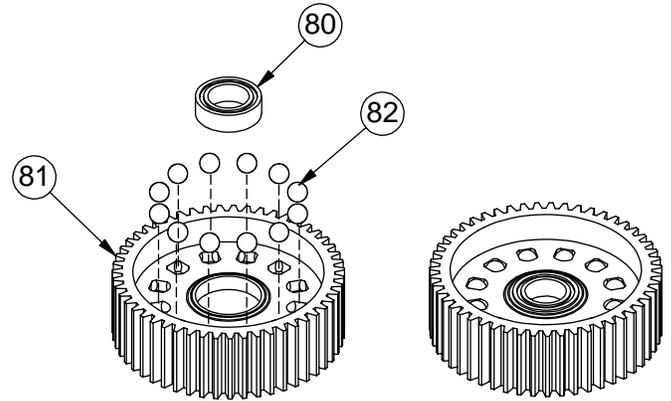


Figure 30

Figure 31

- Step 9. Apply a fairly heavy coat of clear diff grease (78) to the exposed side of the diff washer (79). Carefully place the diff gear (81) over the diff tube (76) so that the diff balls (82) and diff gear (81) rest against the diff washer (79).

**⚠ IMPORTANT NOTE:** It is a good idea to hold the diff nut carrier in place so the diff tube is not pushed into the outdrive/diff half when the gear is pushed over it.

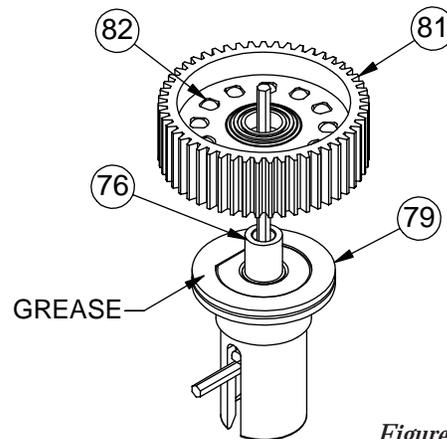
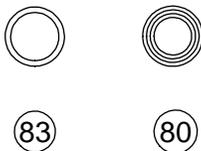


Figure 31

Figure 32



- Step 10. Insert a 5mm x 8mm bearing (80) into the second outdrive/diff half (77). Make sure that the bearing (80) is pushed all the way into the outdrive (77). A pencil or the handle of a hobby knife can be used to push the bearing (80) into place.
- Step 11. Apply a slight amount of clear diff grease (78) to the 1/4" x 5/16" shim (83). Insert the shim (83) into the outdrive/diff half (77) next to the 5mm x 8mm bearing (80). Make sure that the shim (83) is flat against the bearing (80). *Be extra careful not to bend this shim!*

*\*NOTE: Only a small amount of grease is needed. It is only needed to hold the shim in place next to the bearing.*

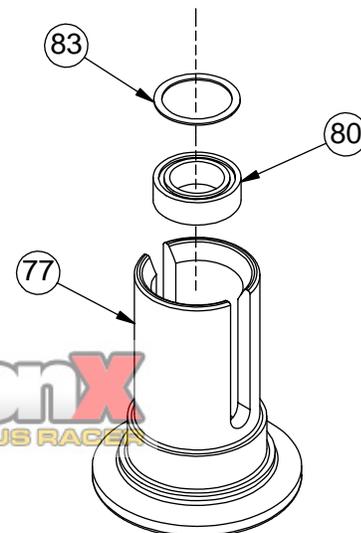
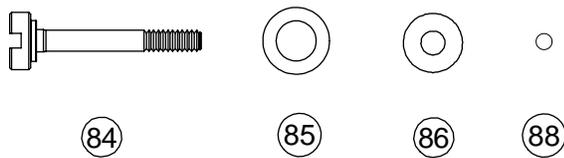


Figure 32

# BAG D (Continued)

Figure 33



❑ Step 12. Locate the diff adjusting screw (84) and place the foam thrust bearing seal (85) over the shoulder of the screw (84) next to the head.

❑ Step 13. Place one of the 3mm x 8mm thrust bearing washers (86) over the diff screw (84).

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

❑ Step 14. Grease the thrust washer (86) well with white thrust bearing/assembly grease (87) and place the eight 5/64" thrust bearing balls (88) on top of the washer (86), around the diff screw (84). Apply more white thrust bearing/assembly grease (87) to the tops of the thrust bearing balls (88). Place the second thrust washer (86) over the screw (84) and against the thrust bearing balls (88).

❑ Step 15. Very carefully insert the diff screw (84), with the thrust bearing assembly installed, into the outdrive (77). Be very careful not to bend or pinch the shim (83) while inserting the diff screw (84). Pull the threaded end of the diff screw (84) until the thrust bearing assembly rests against the shim (83) and bearing (80) inside of the outdrive (77).

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

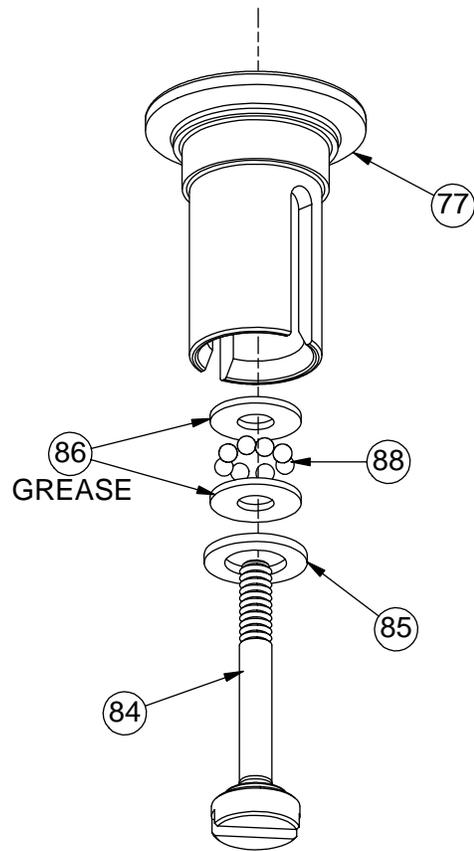
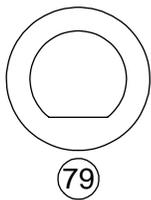


Figure 33

Figure 34



❑ Step 16. Locate the smallest of the Allen wrenches (74) and place it through the slot in the outdrive/diff half (77) containing the diff screw (84). Slide the wrench all the way against the screw (84). By handling the outdrive/diff half (77) with the wrench inserted, the diff screw (84) will be held in place while finishing assembly of the differential.

❑ Step 17. Apply a small amount of clear diff grease (78) to the outer ridge of the outdrive (77). Install the remaining diff washer (79), again lining up the flat sections of the outdrive/diff half (77) with the flat sections in the washer (79). Apply a fairly heavy coat of grease (78) to the exposed side of the diff washer (79).

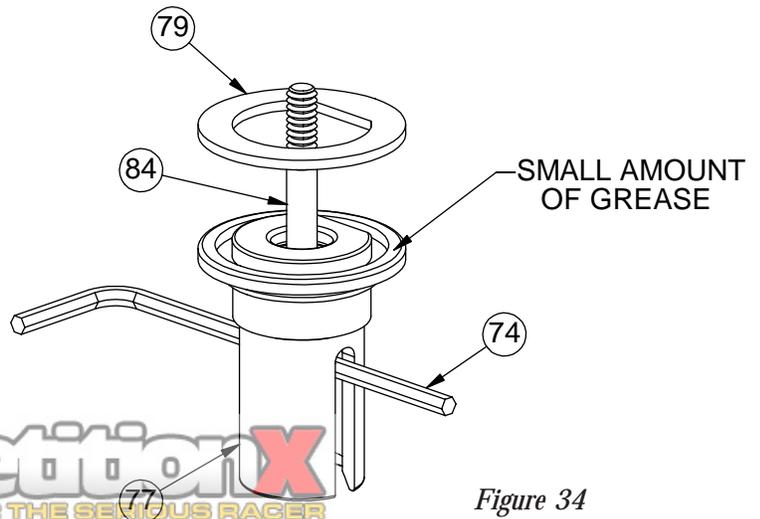


Figure 34

# BAG D (Continued)

Figure 35

- ❑ Step 18. Make sure that the slot in the diff screw (84) is lined up with the slot in the outdrive/diff half (77) and that the Allen wrench is inserted in the slot in the diff screw (84).
- ❑ Step 19. While holding the outdrive/diff half (77) with the Allen wrench inserted, carefully place the two outdrive/diff halves (77) together.
- ❑ Step 20. Hold the diff so that the outdrive/diff half (77) with the diff nut carrier (73) is pointing up. Slowly turn the top diff half clockwise to thread the diff screw (84) into the 4-40 mini locknut (7) in the diff nut carrier (73). 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 nut carrier is pushed all the way into the outdrive/diff half.*

🔑 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 21. Tighten the diff until the gear (81) cannot be turned while both of the outrives (77) are being held. Final diff adjustment should be made after completion of the car.

- ❑ Continue with Step 26/Fig. 36.

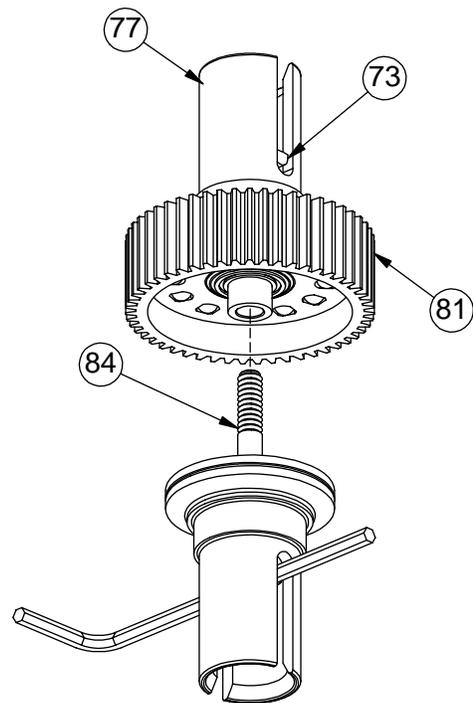
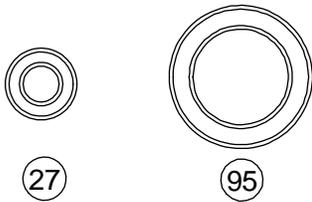


Figure 35

**CompetitionX**  
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# BAG D (Continued)

Figure 36



❑ Step 26. Insert a 3/16" x 3/8" sealed bearing (27) into the top bearing seat of the left gearbox half (94).

❑ Step 27. Insert a 1/2" x 3/4" bearing (95) into the lower bearing seat of the left gearbox half (94).

*\*NOTE: If the 1/2" x 3/4" bearing only has one Teflon™ seal (colored, woven looking) in it, position the seal to the outside of the gearbox half.*

**⚠ IMPORTANT NOTE:** Never allow the gearbox halves to come into direct contact with any type of motor spray. The material used on these parts was selected with performance in mind, and some motor sprays may damage the parts.

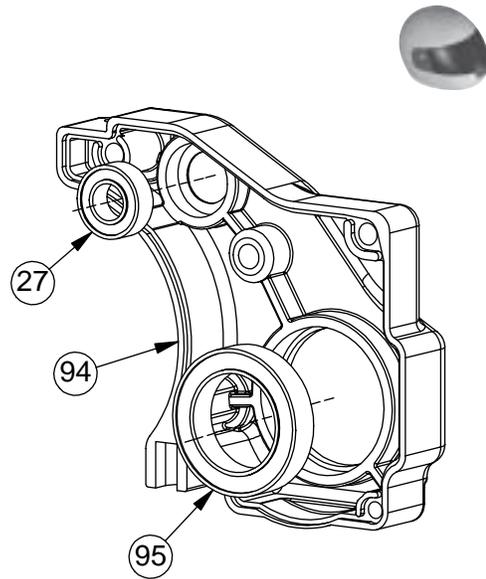
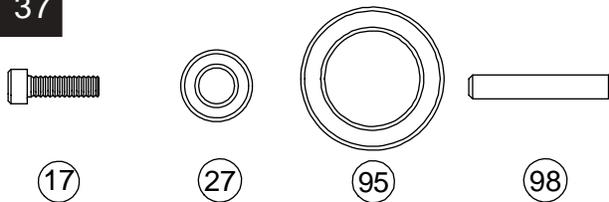


Figure 36

Figure 37



❑ Step 28. Place the motor plate (96) against the outside of the right gearbox half (97) by aligning the hole in the motor plate (96) with the top shaft bearing housing in the right gearbox half (97) as shown in Figure 37.

❑ Step 29. Rotate the motor plate (96) so that the screw holes in the motor plate (96) line up with the screw holes in the gearbox half (97). Secure the motor plate (96) to the gearbox half (97) by threading a 4-40 x 3/8" cap-head screw (17) through the hole near the center of the gearbox half (97) – from the inside – into the hole in the motor plate (96) and tightening.

❑ Step 30. Insert a 3/16" x 3/8" sealed bearing (27) into the top bearing seat of the right gearbox half (97). Carefully push the bearing (27) all the way into the bearing seat using a pencil or the handle of a hobby knife. Care should be taken not to damage the seals on the bearing (27).

*\*NOTE: If the 3/16" x 3/8" bearing only has 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 (95) into the lower bearing seat of the right gearbox half (97).

❑ Step 32. Press, and lightly tap, the idler gear shaft (98), into the hole in the center of the right gearbox half (97).

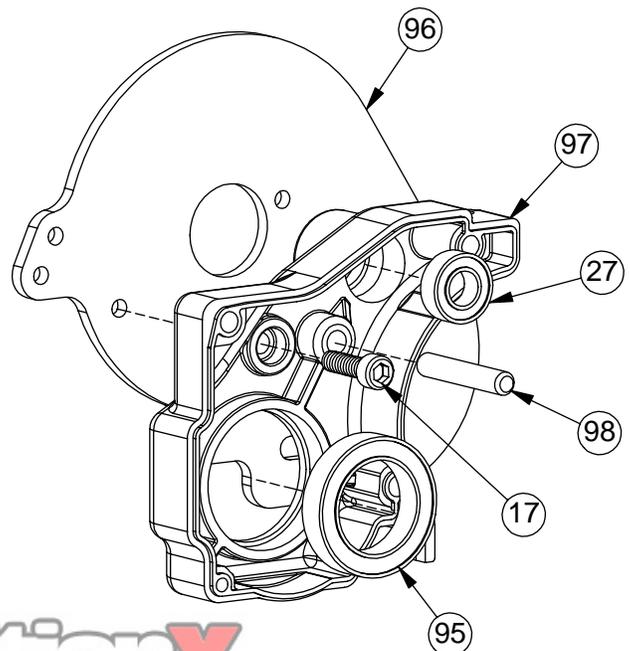
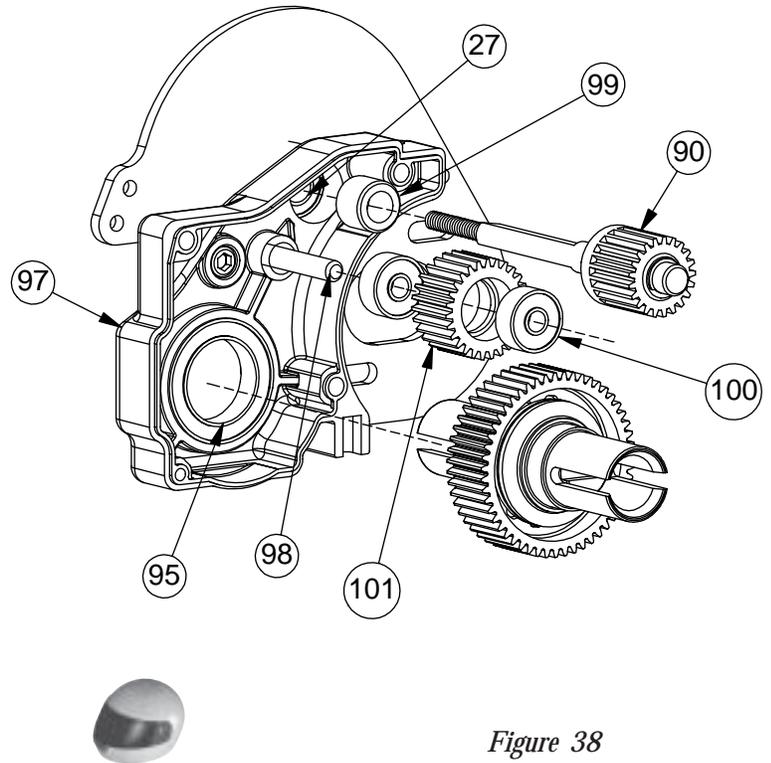
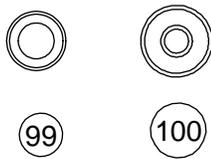


Figure 37

# BAG D (Continued)

Figure 38

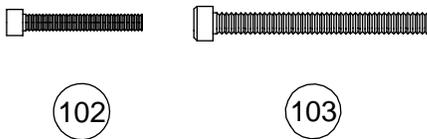


- ❑ Step 33. Slide the smaller of the two top shaft spacers (99) over the slipper shaft (90), from the side with the setscrew, and against the top gear.
- ❑ Step 34. Insert the slipper shaft (90), threaded side first, through the bearing (27) in the right gearbox half (97).
- ❑ Step 35. Insert a 1/8" x 3/8" bearing (100) into each side of the idler gear (101). Place the idler gear (101) over the idler gear shaft (98).
- ❑ Step 36. Insert the differential assembly into the 1/2" x 3/4" bearing (95) in the right gearbox half (97) with the differential diff nut carrier (73) side first.

*\*NOTE: Align the teeth on all gears when installing the differential.*

Figure 38

Figure 39



- ❑ Step 37. Apply a thin coat of white assembly grease (87) along the inside edge of the right gearbox half (97). This will help seal the gearbox once it is assembled.
- ❑ Step 38. Carefully place the left gearbox half (94) over the assembled right gearbox half (97).
- ❑ Step 39. Thread the 2-56 x 5/8" cap-head screw (102) into the lower, forward hole in the transmission housing from the left side.
- ❑ Step 40. Insert a 4-40 x 1-1/8" cap-head screw (103) into each of the two rear holes in the left gearbox half (94) and thread them into the motor plate (96) as shown in Figure 39.

**⚠ IMPORTANT NOTE:** The top, forward hole in the gearbox halves remains open at this point. This hole will be used to attach the gearbox to the rear shock tower.

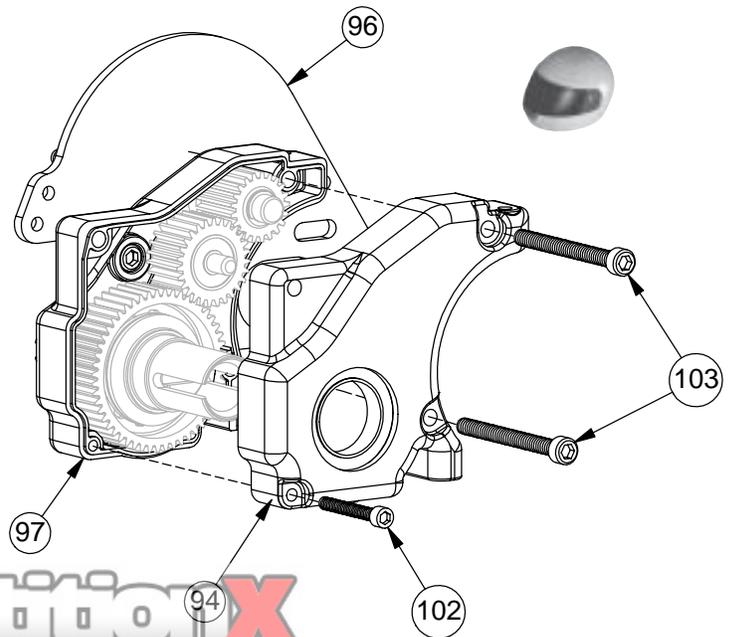
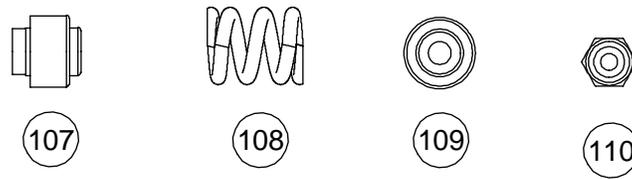


Figure 39

# BAG D (Continued)

Figure 40



- ❑ Step 41. Slide the slipper back plate (104) over the slipper shaft (90), aligning the flat sections on the slipper shaft (90) with the flat sections of the back plate (104).
- ❑ Step 42. Place the slipper pad (105) on one side of the spur gear (106) and align the notches on the spur gear (106) with the notches on the slipper pad (105).
- ❑ Step 43. Place the spur gear (106), pad side first, over the slipper shaft (90). The slipper pad (105) should rest against the slipper back plate (104).  
*\*NOTE: Ensure that the slipper pad remains indexed in the spur gear.*
- ❑ Step 44. Install the second slipper pad (105) to the exposed side of the spur gear (106). Again, align the notches on the spur gear (106) with the notches on the slipper pad (105).
- ❑ Step 45. Place the second slipper back plate (104) over the slipper shaft (90) so that the large, flat surface of the back plate (104) rests against the slipper pad (105).
- ❑ Step 46. Slide the slipper spacer (107), long side first, onto the shaft (90) and against the outer slipper back plate (104).
- ❑ Step 47. Place the silver slipper spring (108) over the shaft (90), followed by the spring retaining washer (109) and secure with the 4-40 locknut (110).

- ⚠ 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 48. Tighten the 4-40 locknut (110) all the way down, and then back it off four full turns (e.g., 360° x 4). This is a good starting point for adjustment. Final adjustment can be made later.

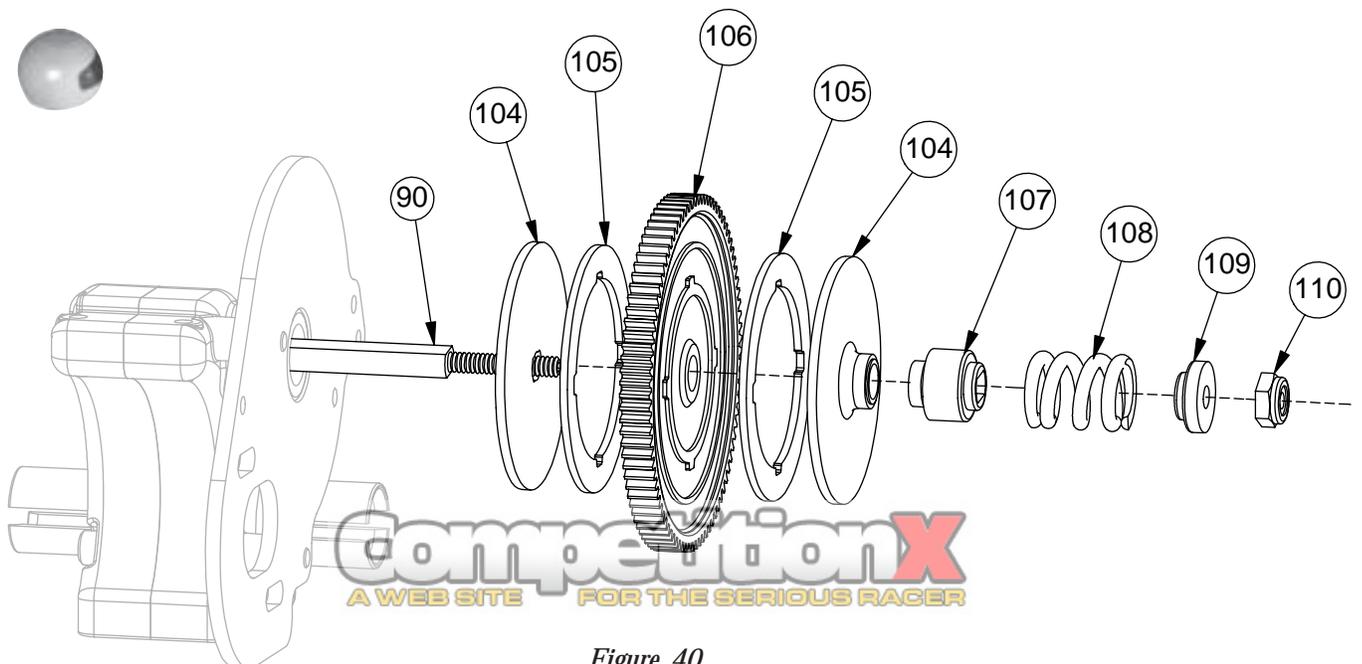


Figure 40

# BAG D (Continued)

Figure 41



□ Step 49. Place the motor guard (111) over the rear of the assembled transmission as shown in Figure 41.

□ Step 50. Secure the top of the motor guard (111) to the top of the transmission by threading a 4-40 x 3/8" button-head screw (21) through each of the two holes in the motor guard (111) and into the gearbox halves (94), (97).

⚙️ 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 transmission case. Pre-tapping these holes makes it easier to install the screws during assembly.

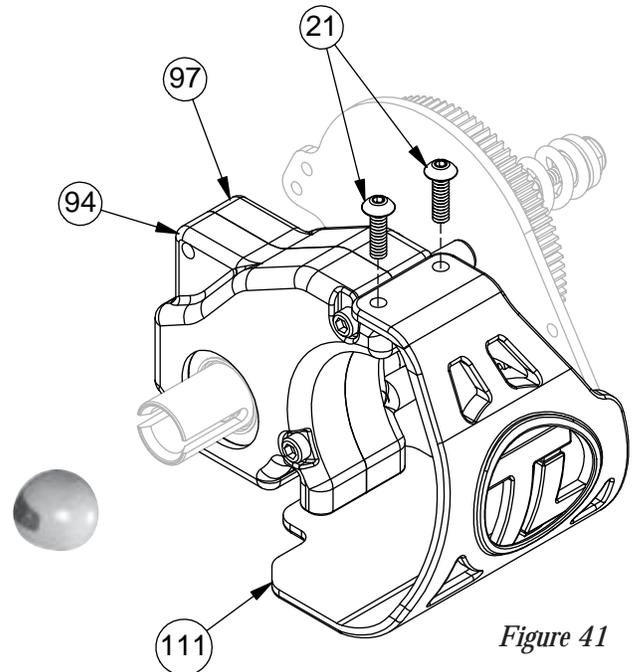
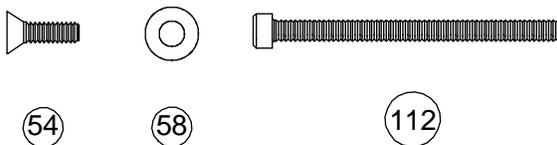


Figure 41

Figure 42



□ Step 51. Place the assembled chassis on a flat table so that the rear suspension arms (50), (51) are flat and the chassis (19) is flat on the table. This will make installing the transmission a little easier.

□ Step 52. Insert the CVD's (59) into each of the outdrive/diff halves (77) and place the transmission into the rear pivot block (49). Push the transmission forward so that the top, center portion of the transmission fits between the tabs on the rear shock tower (55).

□ Step 53. Hold the rear arms (50), (51) up so that the CVD's (59) stay in place, and turn the car over – holding the transmission in place while doing so. Align the two holes in the bottom, rear of the transmission housing with the two holes in the rear of the pivot plate (53).

□ Step 54. Apply a small amount of white assembly grease (87) to each of the two 4-40 x 3/8" flat-head screws (54). Thread the screws (54) through the two holes in the back of the rear pivot plate (53), through the motor guard (111), and into the gearbox halves (94), (97).

□ Step 55. Place a #4 washer (58) over the 4-40 x 1-1/2" cap-head screw (112). Thread the screw (112) through the hole in the left side of the rear shock tower (55), through both gearbox halves (94), (97), and into the motor plate (96).

*\*NOTE: In order to properly align all parts, it may be necessary to pull the transmission forward while inserting the screw.*

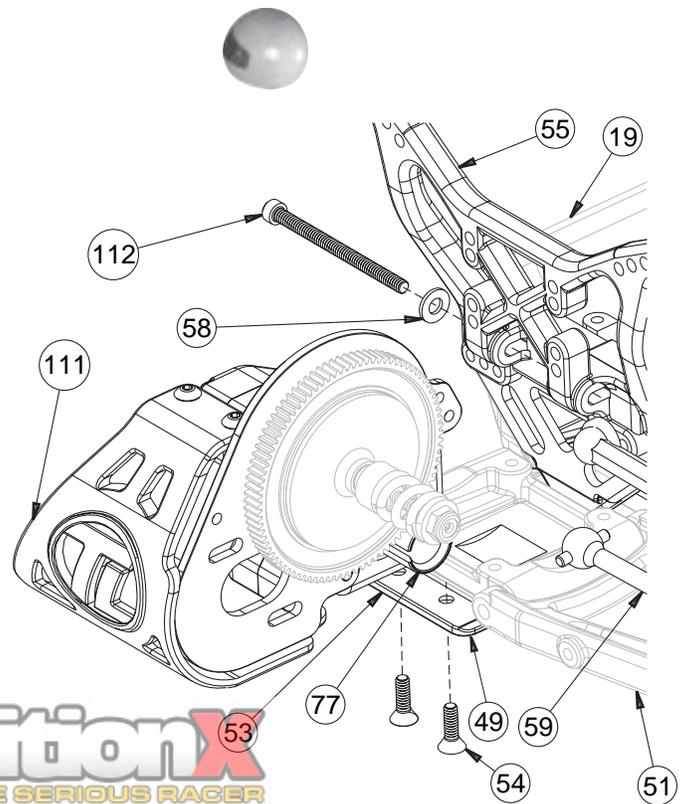
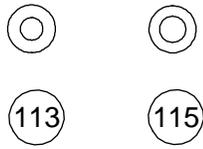


Figure 42

**⚠️ IMPORTANT NOTE:** Ensure that the screw is threaded into the motor plate.

# BAG E

Figure 43



- ❑ Step 1. Place one shock O-ring (113) into the cartridge body (114), making sure that the O-ring (113) sits flat in the bottom of the cartridge body (114).
- ❑ Step 2. Insert the cartridge spacer (115) into the cartridge body (114) followed by a second O-ring (113).
- ❑ Step 3. Once the second O-ring (113) is inserted, and is flush with the top of the cartridge body (114), press the cartridge cap (116) onto the cartridge body (114).
- ❑ Step 4. Make four cartridge assemblies.

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

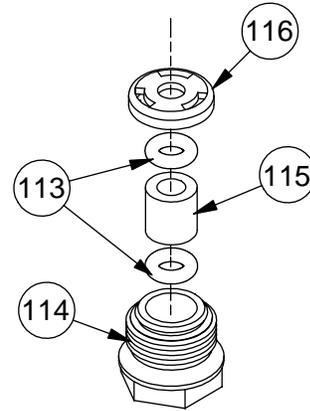
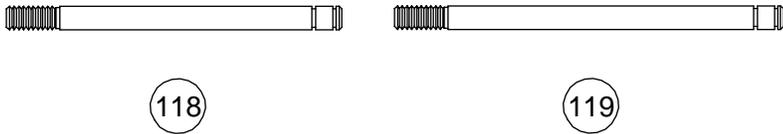
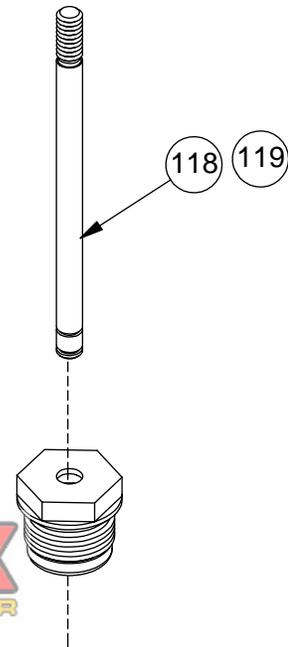


Figure 43

Figure 44



- ❑ Step 5. Place a drop of shock fluid (117) on the grooved end of each shock shaft [front (118), rear (119)] and slide a cartridge, hex end first, down the shock shaft (118), (119) toward the threads as shown in Figure 44.



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Figure 44

# BAG E (Continued)

Figure 45



❑ Step 6. Using needle-nose pliers, or small vise grips, grasp the front shock shaft (118) between the grooves and thread a shock end (120) onto the shaft (118). Thread the shock end (120) all the way onto the shaft (118) until the threads stop.

❑ Step 7. Repeat Step 6 for the second front shaft (118) and two rear shock shafts (119).

❑ Step 8. Carefully snap a 1/4" shock mount ball (122) into each of the shock ends (120) on each of the shock shafts (118), (119).

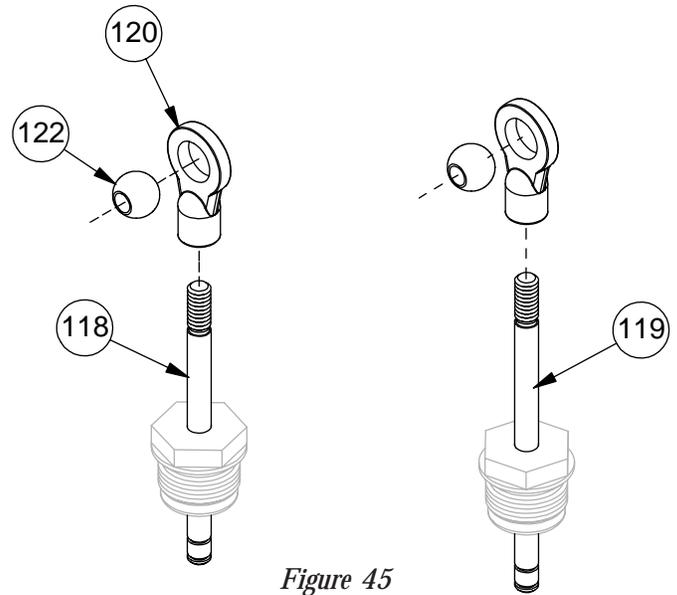


Figure 45

Figure 46



❑ Step 9. Place a .050" plastic washer (36) over the end of each shock shaft (118 & 119).

❑ Step 10. Snap a 1/8" E-clip (41) into the groove closest to the cartridge on all four shafts.

❑ Step 11. Slide a #56 (Red) shock piston (123) over the end of each shaft until it rests against the E-clip (41). Secure the pistons (123) to the shaft with another 1/8" E-clip (41).

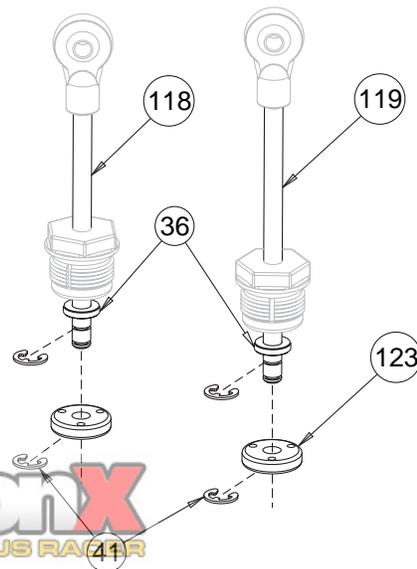


Figure 46

# BAG E (Continued)

Figure 47

❑ Step 12. Match the short, front shock bodies (125) to the short, front shafts (118), and the long, rear shock bodies (126) to the long, rear shafts (119).

❑ Step 13. Fill the shock body (125), (126) with shock fluid (127) up to the bottom of the threads inside the shock body (125), (126).

❑ Step 14. Insert the shaft assembly with the cartridge against the shock piston (123), (124). Slowly tighten the cartridge about two full turns only. With the cartridge still slightly loose, slowly push the shock shaft (118), (119) into the shock body (125), (126). This will bleed the excess fluid out of the shock. Once the shaft (118), (119) is all the way in, tighten the shock cartridge the rest of the way.

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

❑ Step 15. Now, with the shaft (118), (119) still all the way in, secure the cartridge by tightening it with pliers or a wrench approximately an additional 1/8 turn. There should be no air in the shock as you push the shaft (118), (119) in and out. If there is, the shock needs more fluid. If the shock does not compress all the way, the shock has too much fluid in it.

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

❑ Step 16. Repeat Steps 13-15 for all four shocks.

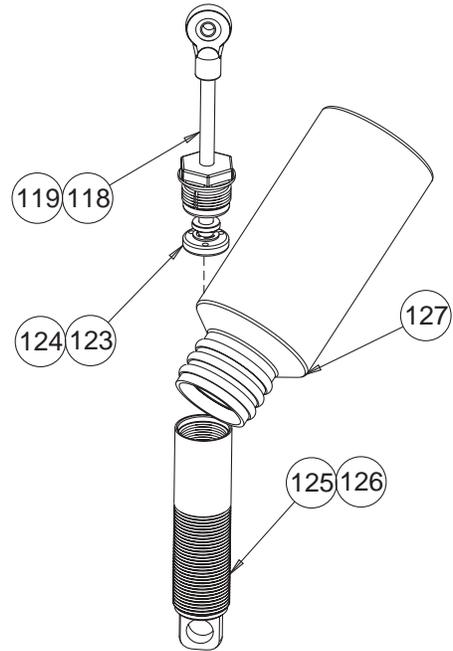


Figure 47

Figure 48

❑ Step 17. Snap a bottom shock spring cup (128) onto each of the four shafts (118), (119) and around the shock end (120).

❑ Step 18. Slide a front (short) shock spring (129) over each of the two front shocks so that the spring rests on the spring cup (128). Slide a rear (long) shock spring (131) over each of the two rear shocks so that the spring rests on the spring cup (128).

❑ Step 19. Thread a shock spring adjustment nut (130) on to the top of all four shock bodies (125), (126). Thread the spring adjustment nuts (130) on to the shocks until the nut (130) just touches the spring (129), (131).

❑ Continue with Step 22/Fig.49.

*\*NOTE: Final adjustment should be made once the car is fully built and all radio gear and electrics are installed. Refer to the setup sheet provided in the back of this manual for final ride height adjustment.*

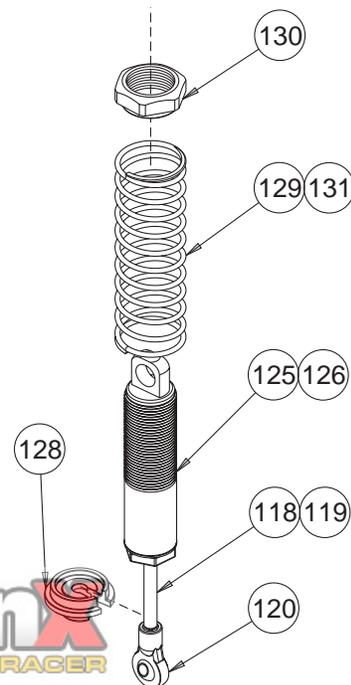
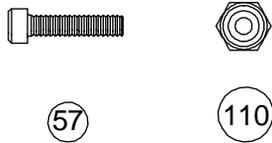


Figure 48

# BAG E (Continued)

Figure 49



- ❑ Step 22. Pick up your car, making sure that the CVD's (59) stay in the outrives (77).
  - ❑ Step 23. Position the bottom of an assembled rear shock in front of the shock mounting area on the right rear suspension arm (50). Align the hole in the shock mount ball (122) with the inside hole in the arm (50).
  - ❑ Step 24. Attach the shock to the rear arm (50) by threading a 4-40 x 1/2" cap-head screw (57) through the shock mount ball (122) and all the way into the inside hole of the suspension arm (50).
  - ❑ Step 25. Slide a short shock mount bushing (132), large side first, over the screw (23) on the right side of the rear shock tower (55).
  - ❑ Step 26. Place the top of the shock body (126) over the shock mount bushing (132). Secure the shock to the tower (55) by threading a 4-40 locknut (110) onto the shock mount screw (23).
- \*NOTE: Before attaching the top of the shock, make sure that the CVD is in place in the outrive.*
- ❑ Step 27. Repeat Steps 23 through 26 for the left rear shock.

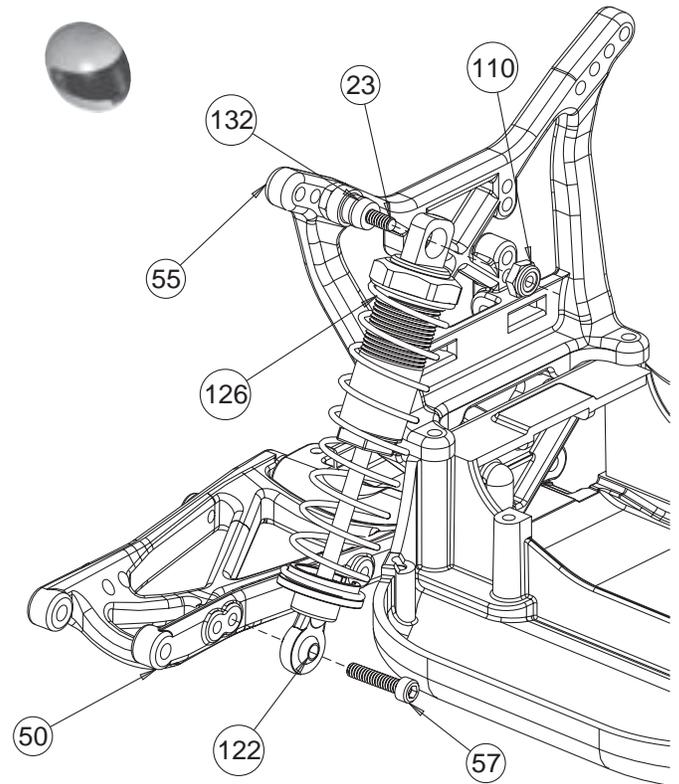


Figure 49

Figure 50



- ❑ Step 28. Insert the shock end (120) of a front shock into the shock mounting area of the right front suspension arm (38) and line up the hole in the shock mount ball (122) with the middle hole in the arm (38).
  - ❑ Step 29. Secure the shock to the front arm (38) by threading a 4-40 x 1/2" cap-head screw (57) all the way into the arm (38) from the rear.
  - ❑ Step 30. Slide a long shock mount bushing (133), large side first, over the screw (23) on the right side of the front shock tower (24).
  - ❑ Step 31. Place the top of the shock body (125) over the shock mount bushing (133) on the front shock tower (24). Secure the shock to the tower (24) by threading a 4-40 locknut (110) onto the shock mount screw (23).
- ❑ Step 32. Repeat Steps 28-31 for the left front shock.

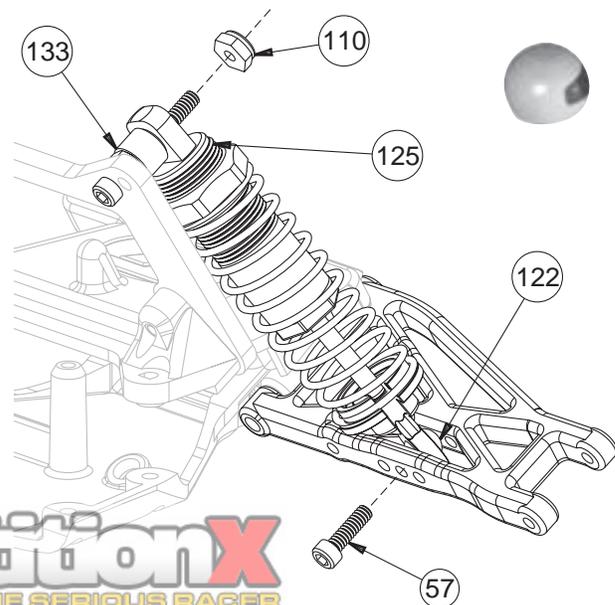
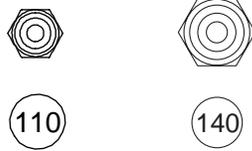


Figure 50

# BAG F

Figure 51



❑ Step 1. Inspect the inside of the tires [front (134), rear (135)] for any excess material. If present, trim excess rubber to ensure proper seating of the tire on the wheel [front (136), rear (137)]. During tire assembly, make sure that all lettering faces to the outside of the wheel.

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

❑ Step 2. Insert the front foam tire liners (138) into the front tires (134). Pull the front tires (134) over the front wheels (136) and squeeze the tires (134) to properly seat them into the grooves in the wheels (136). Make certain that the foam liners (138) are not pinched between the tires (134) and the wheels (136).

❑ Step 3. Insert the rear foam tire liners (139) into the rear tires (135). Pull the rear tires (135) over the rear wheels (137) and squeeze the tires (135) to properly seat them into the grooves in the wheels (137). Make certain that the foam liners (139) are not pinched between the tires (135) and the wheels (137).

❑ Step 4. The tires (134), (135) must be glued to the wheels (136), (137). This can be done by using a fast-curing superglue or cyanoacrylate glue available at your hobby shop. Be sure to follow the manufacturers' warnings on the bottle.

🔑 Team Losi Tread Lock (A-7880) is the best glue available for gluing R/C car tires. This glue was produced specifically for this purpose.

⚠️ **IMPORTANT NOTE:** Allow the glue to dry thoroughly before continuing. Read and follow adhesive manufacturers' safety warnings regarding use.

❑ Step 5. Install the front wheels (136) to the front stub axles (30) by lining up the hex on the axle (30) with the hex area in the front wheel (136).

❑ Step 6. Secure the front wheels (136) by threading a 4-40 locknut (110) onto each of the front axles (30) and tightening.

❑ Step 7. Mount the rear wheels (137) to the rear axles (62) by lining up the pin (69) in the rear axle (62) with the groove in the rear wheel (137) and pushing the wheel (137) all the way onto the axle (62).

❑ Step 8. Secure the rear wheels (137) by attaching 8-32 locknuts (140) to the rear axles (62) and tightening.

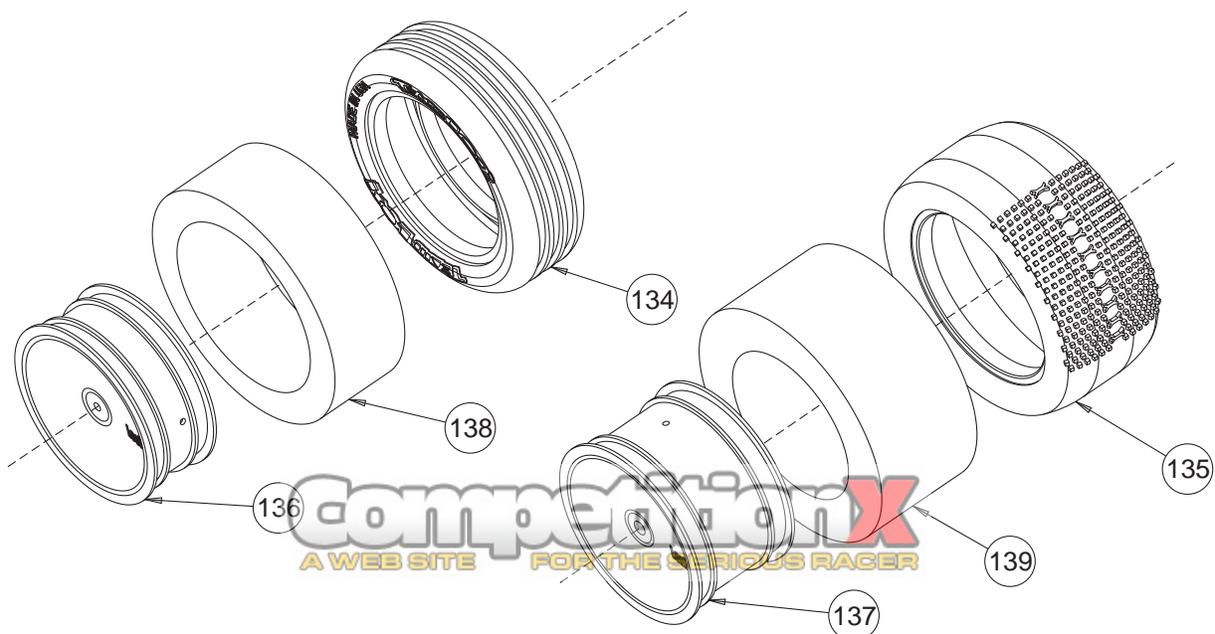
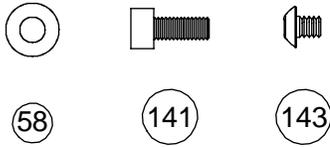


Figure 51

# BAG G

Figure 52



□ Step 1. Attach the motor (*not included*) to the motor plate (96) using two 3mm x 8mm cap-head screws (141) and #4 washers (58). Do not tighten the screws yet.

□ Step 2. Attach the pinion gear (*not included*) to the motor shaft, adjust gear mesh and tighten the motor screws (141).

*\*NOTE: The gears need some backlash in order to function properly.*

□ Step 3. Locate the gear cover (142) and cut the back side of it along the trim line as shown. If not already present, drill two 1/8" mounting holes in the gear cover (142) at the two locations marked with dimples.

□ Step 4. Place the trimmed gear cover (142) over the motor plate (96) and secure it with two 4-40 x 1/8" button-head screws (143) through the two open holes in the motor plate (96).

□ Step 5. Insert gear cover plug (144) into the large hole in the gear cover (142).

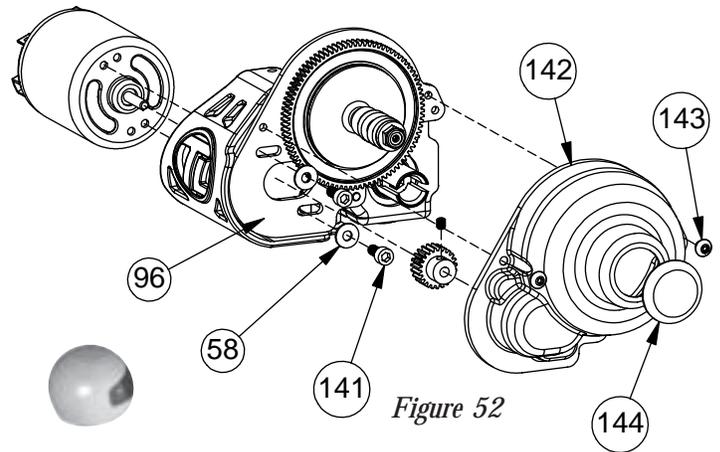
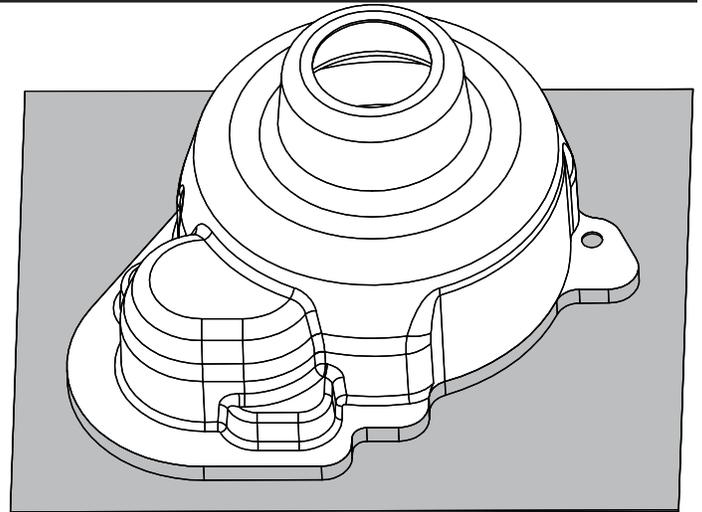
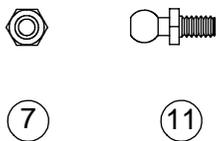


Figure 52

Figure 53



□ Step 6. Using Table 53B (on the following page), determine which servo arm (145) 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 7. Insert a 4-40 mini locknut (7) into the hex area of the servo arm (145). Thread a 3/16" ball stud (11) through the hole in the arm (145), into the locknut (7), and tighten.

□ Step 8. 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 (145) to the output shaft so that the arm is one spline off center in the direction shown in Figure 53A. Secure the arm (145) with the servo arm screw supplied with the servo.

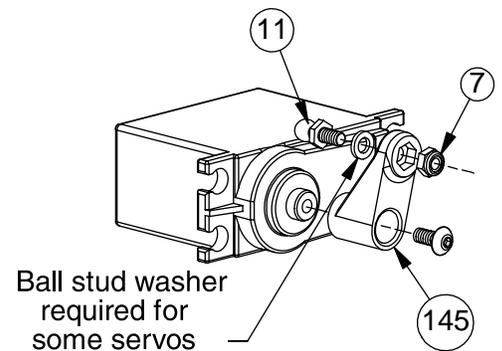


Figure 53

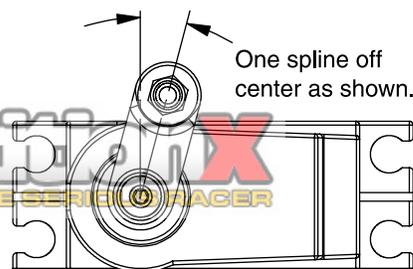
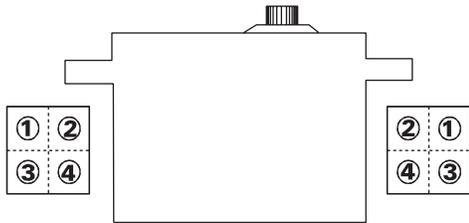


Figure 53A

# BAG G (Continued)



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

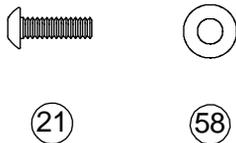
Table 53A

SERVO TYPE	MOUNTING POST PIN LOCATION	REQUIRED SERVO ARM	STEERING LINK LENGTH
<b>Airtronics</b> All	4	23	61A
<b>Futaba</b> S131, S131SH, S148, S3001, S3003, S5101, S9101, S9201, S9301, S9304, S9401, S9403	2	25	61A
<b>Futaba</b> S3401, S9402, S9404, S9450	3	25	61A
<b>Futaba</b> S9303	4**	25	61A
<b>HiTech</b> HS-605, HS-615, HS-925, HS-945	3**	24	61B
<b>HiTech</b> All others	1	24	61B
<b>JR</b> NES-507, NES-513, NES-517, NES901, NES-4000, NES-4131, NES-4721, NES-4735, NES-9021, DS-8231	1	23	61A
<b>KO</b> PS-702, PS-703, PS-1001, PS-1003	2	23	61A
<b>KO</b> PS-901BH, PS-902	1	23	61A
<b>Multiplex</b> All	3	23	61A

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

Table 53B

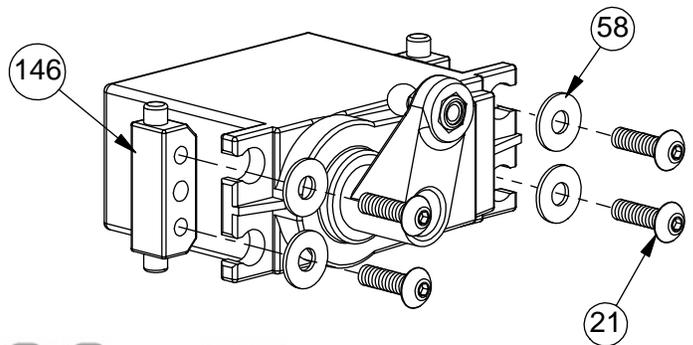
Figure 54



□ Step 9. Use Tables 53A and 53B to determine how the servo mounting posts (146) should be attached to the servo (*not included*).

✂ 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 10. Place a #4 washer (58) over each of the four 4-40 x 3/8" button-head screws (21) and attach the servo posts (146) to the servo by threading a screw (21) through the upper and lower holes in each post (146). Do not tighten the screws (21) 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 (21) will be tightened after the servo is installed so that the posts (146) have the correct spacing.



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# BAG G (Continued)

Figure 55



17

□ Step 11. Install the servo into the chassis (19) as shown in Figure 55. Insert the pin on the left servo post (146) into the hole in the chassis (19). Move the servo and posts (146) slightly until both the left and right posts (146) are inserted in the holes in the chassis (19).

□ Step 12. Place the chassis brace (147) on top of the servo. The pins from both servo mounting posts (146) should fit into the holes on the bottom of the chassis brace (147). If they do not, move the posts (146) slightly until the pins fit into the holes.

□ Step 13. Remove both the servo and the chassis brace (147) from the car. While holding the brace (147) in place, tighten the top two screws (21), followed by the bottom two screws (21). Holding the brace (147) in place will help keep the posts (146) from moving while tightening the screws (21).

*\*NOTE: The servo should be as close to centered between the two posts as possible*

□ Step 14. Reinstall the servo and brace (147) to the chassis (19). Ensure that the pins on both sides of the servo posts are in their respective holes and secure the brace (147) to the chassis (19) with four 4-40 x 3/8" cap-head screws (17).

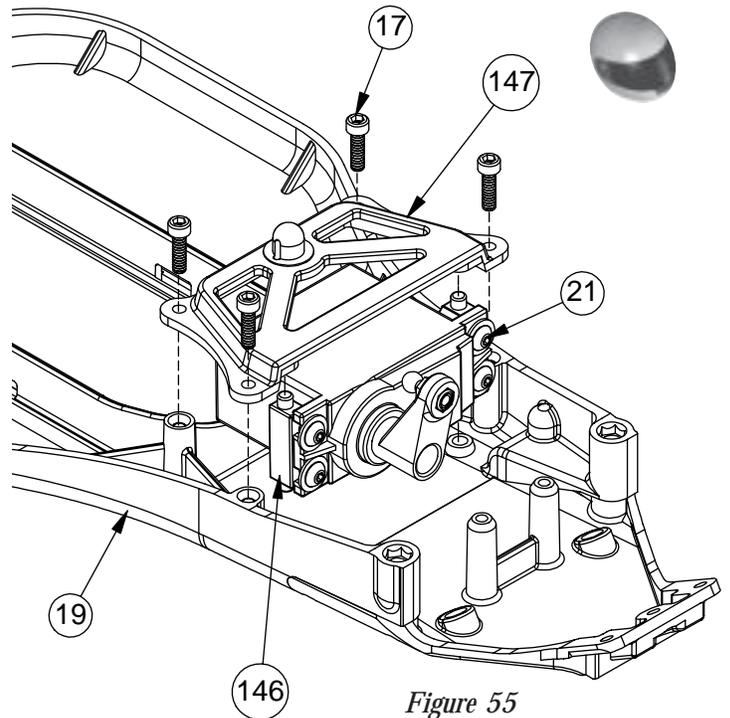
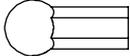


Figure 55

Figure 56



148



149

□ Step 15. Thread a short plastic rod end (148) onto each end of the 4-40 x 5/8" threaded rod (149).

□ Step 16. Refer to Table 53B 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 56A or 56B.

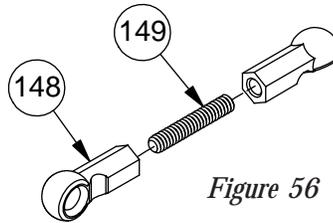


Figure 56

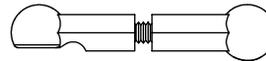


Figure 56A

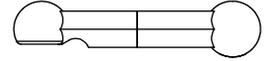


Figure 56B

Figure 57

□ Step 17. Attach one end of the rod to the ball stud (11) in the servo arm (145) and the other to the ball stud (11) in the servo saver as shown in Figure 57.

**COMPETITION**  
A WEB SITE FOR THE SERIOUS RACER

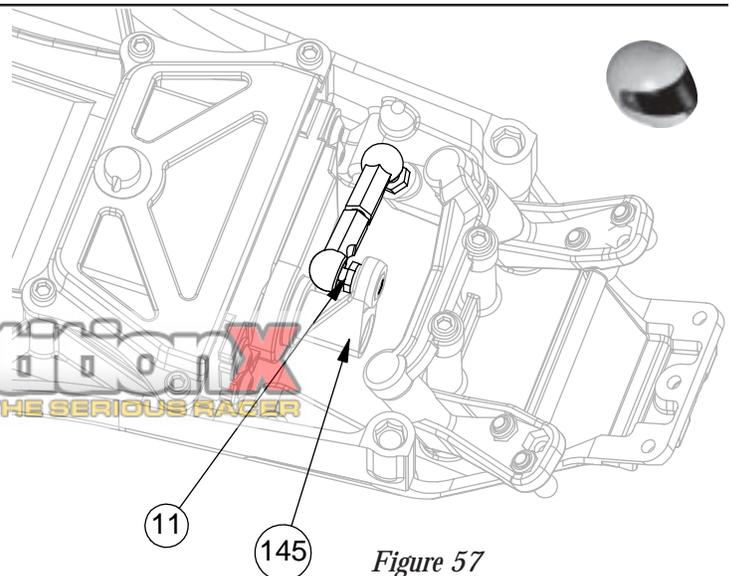


Figure 57

# BAG G (Continued)

Figure 58



(54)

❑ Step 18. Insert a 4-40 x 3/8" flat-head screw (54) into each of the two rear body mounts (151) from the side with the recess for the head of the screw (54).

❑ Step 19. Attach a rear body mount (151) to the rear of each side of the chassis (19) so that the posts point, at an angle, towards the rear of the car as shown in Figure 58. Secure the body mounts (151) by tightening the screws (54). Apply the self adhesive battery insulation tape (121) to both inner edges of the battery compartment as seen in Fig. 58A.

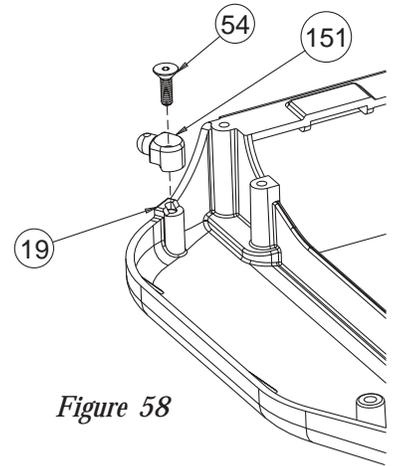


Figure 58

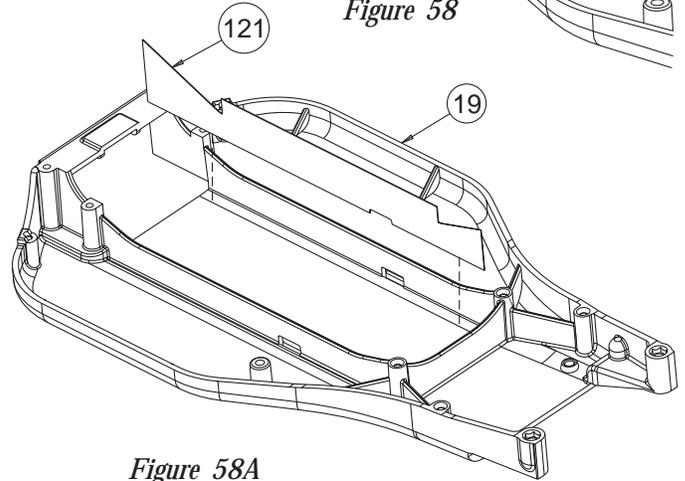
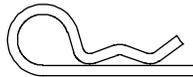


Figure 58A

Figure 59



(155)

❑ Step 20. Place the battery spacing foam (152) into the recessed area in the rear of the chassis (19). The foam (152) should be positioned against the rear shock tower (55).

❑ Step 21. Remove the backing tape from the battery strap foam strip (153) and attach it to the bottom side of the battery hold-down strap (154).

**⚠ IMPORTANT NOTE:** The battery strap can be mounted in one of two ways. The different offset will accommodate different styles of batteries. If you will be running matched-type cells, or individual cells laid out side-by-side, the foam strip should be attached on the side with ribs. The foam should be positioned between these ribs. If, however, you are using a pre-assembled stick pack, the foam strip should be attached to the side of the strap opposite the ribs.

❑ Step 22. Once the battery pack (not included) is installed, the plastic battery strap (154) will hold the batteries in place. The battery strap (154) fits under the rear "bridge" of the chassis (19), between the two ribs on the bottom, and fits over the post on the front chassis brace (147). The strap (154) is secured to the post with a body clip (155).

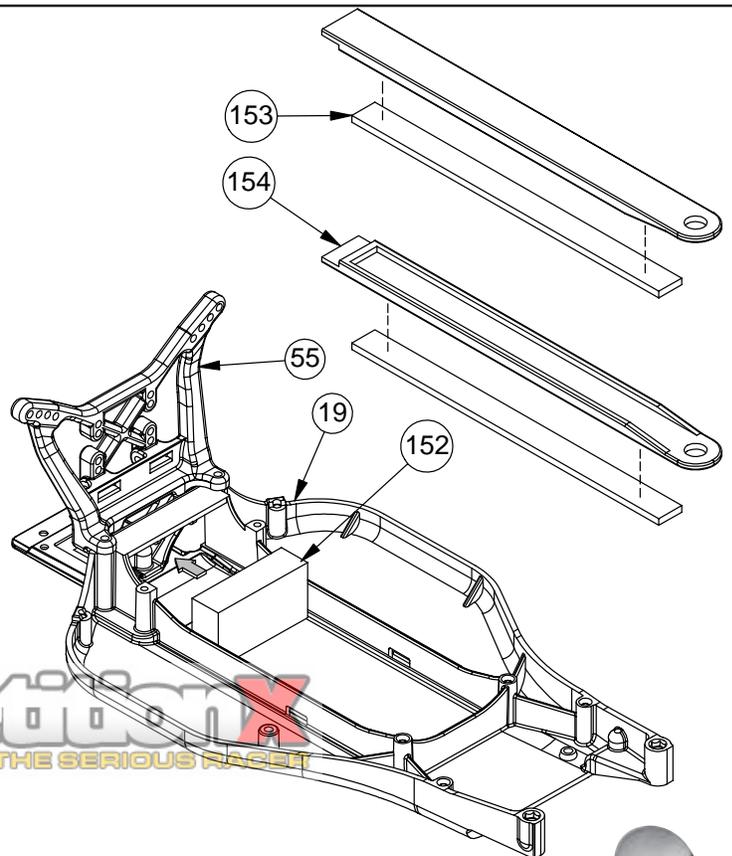


Figure 59

# BAG G (Continued)

Figure 60

❑ Step 23. Cut a piece of two-sided tape (156) to the same size as the bottom of the receiver (*not included*). Peel one side of the backing off and stick the tape (156) to the bottom of the receiver.

❑ Step 24. Make sure that the area on the right side of the chassis (19) is clean. Wipe this area off with a clean cloth or rag.

*\*NOTE: Rubbing alcohol can be used to clean any oily residue that may be present on the chassis or receiver. Allow the alcohol to dry before applying the two-sided tape.*

❑ Step 25. Peel the backing off of the two-sided tape (156) and install the receiver to the right side of the chassis (19) with the antenna wire exiting the receiver towards the front of the car as shown in Figure 60.

❑ Step 26. Run the antenna wire forward to the antenna post on the chassis (19). Run the wire into the small hole in the bottom of the post, and up through the top of the post.

❑ Step 27. Slide the antenna wire through the antenna tube (157) (*a small drop of oil in the tube will make this easier*) so that the wire comes out the other end of the tube (157).

❑ Step 28. While pulling the wire through the antenna tube (157), slide the antenna tube (157) down and push it firmly into the antenna mounting post on the main chassis (19).

❑ Step 29. Fold the wire down over the antenna tube (157) and place the antenna cap (158) over the tube (157) and excess wire.

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

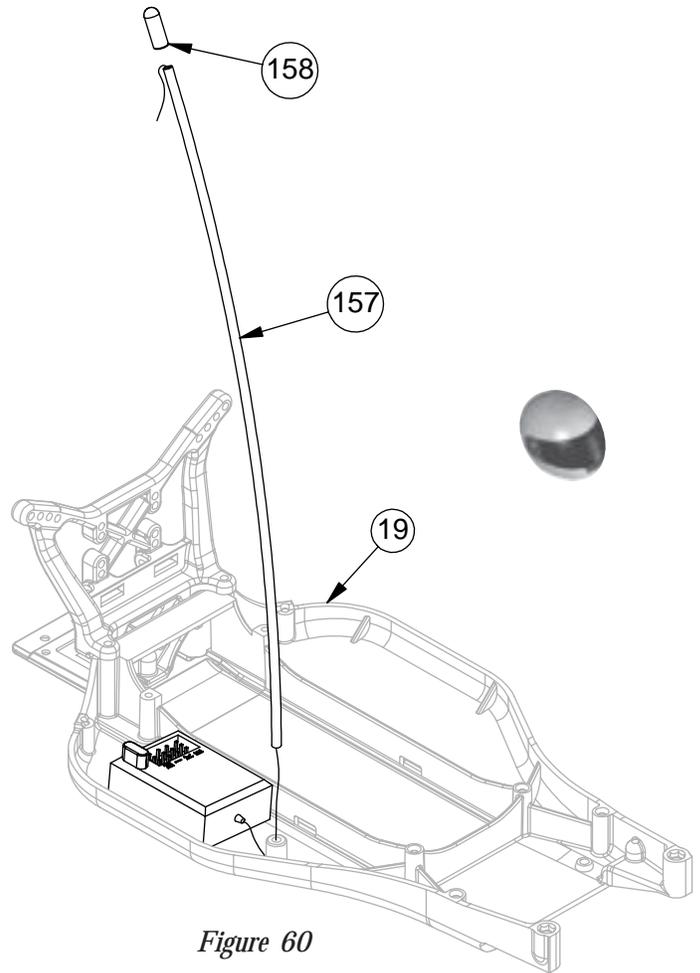


Figure 60

Figure 61

❑ Step 30. Cut a piece of two-sided tape (156) to the same size as the bottom of the speed control (*not included*). Peel one side of the backing off and stick the tape (156) to the bottom of the speed control.

❑ Step 31. Make sure that the area on the left side of the chassis (19) is clean. Wipe this area off with a clean cloth or rag.

*\*NOTE: Rubbing alcohol can be used to clean any oily residue that may be present on the chassis or receiver. Allow the alcohol to dry before applying the two-sided tape.*

❑ Step 32. Peel the backing off of the two-sided tape (156) and install the speed control to the left side of the chassis (19) as shown in Figure 61.

❑ Step 33. Run the wire from the speed control through the slot in the left rail on the chassis (19), across the center of the chassis (19), and through the slot in the right rail of the chassis (19).

❑ Step 34. Plug the speed control wire into the channel 2 slot in the receiver. Plug the wire from the servo into the channel 1 slot in the receiver.

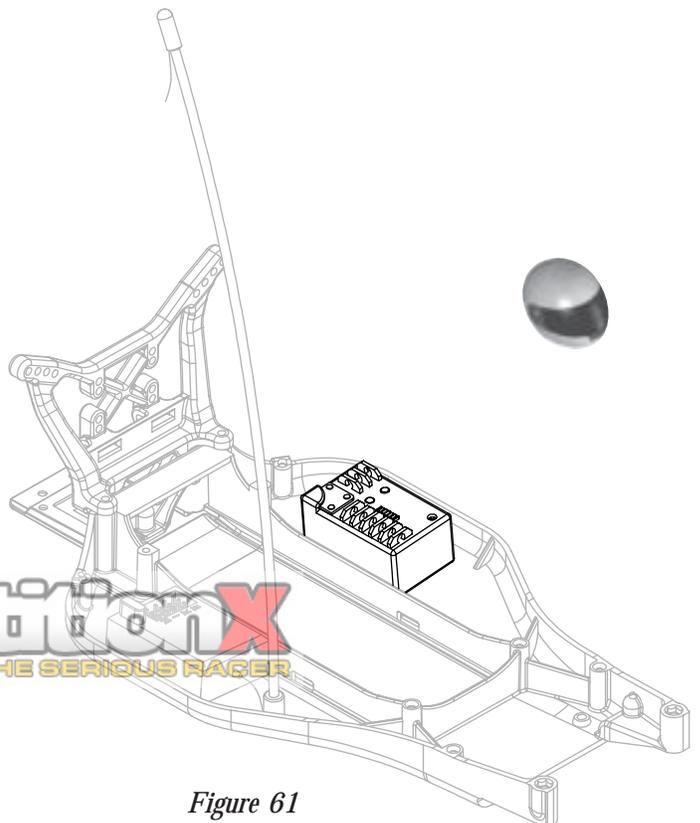
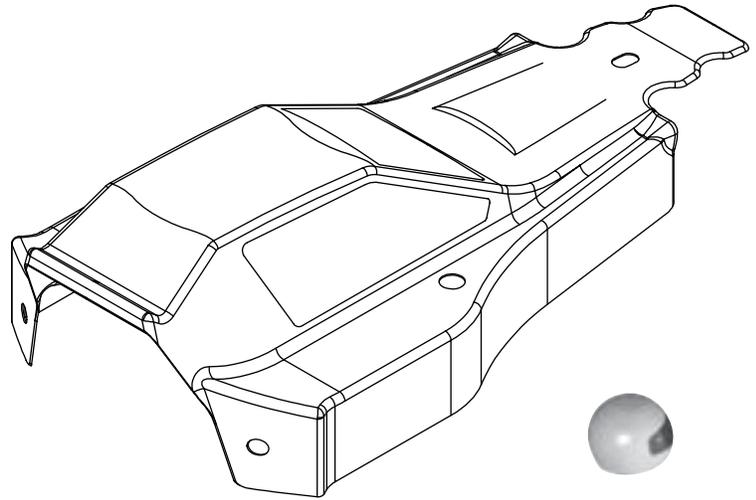
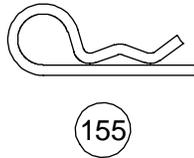


Figure 61

# BAG G (Continued)

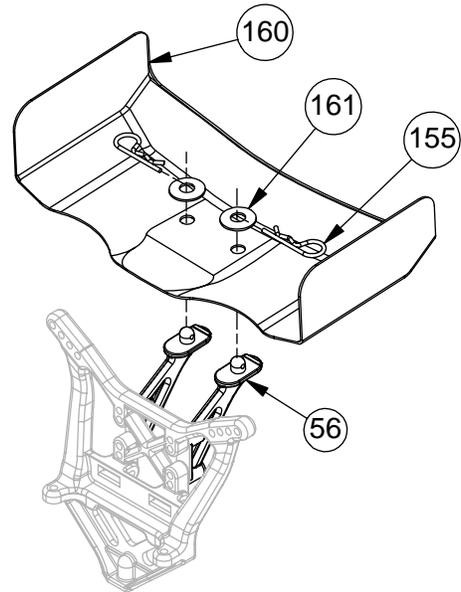
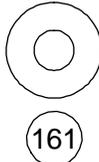
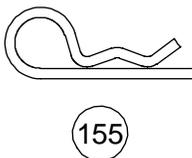
Figure 62



- ❑ Step 35. Trim the body (159) along the trim lines as shown in Figure 62.
- ❑ Step 36. Make four 1/4"-diameter holes at the locations marked with dimples at the front, right side pod, and rear of the left and right side pods of the body (159). These will be the body mounting and antenna tube holes.
- ❑ Step 37. Install the body (159) onto the rolling chassis and secure it with body clips (155) through the post on the chassis brace (147), and through the rear body mounts (151).

Figure 62

Figure 63



- ❑ Step 38. Trim the rear wing (160) along the trim lines as shown in Figure 63.
- ❑ Step 39. Make two 5/32"-diameter holes in the wing (160) at the locations marked with dimples.
- ❑ Step 40. Place the rear wing (160) onto the rear wing mounts (56) as shown in Figure 63. Place a wing mount washer (161) over the post on each rear wing mount (56).
- ❑ Step 41. Secure the rear wing (160) and wing mount washers (161) to the rear wing mounts (56) by inserting a body clip (155) through the hole in the post on each rear wing mount (56).

Figure 63

## Finishing the Body and Wing

### BODY AND WING PAINTING

Prepare the Lexan body shell and wing for painting by washing them thoroughly with warm water and liquid detergent. Dry both the body and wing with a clean, soft cloth. Use the window masks (162) supplied to cover the windows *from the inside*. A high-quality masking tape should be used on the inside of the body to mask off any stripes, panels, or designs that you wish to paint on the body or wing. Use acrylic lacquer, acrylic enamel, or any other paints recommended for Lexan (polycarbonate). Apply paint to the inside of the body and the bottom side of the wing. Remove the tape for the next color and continue. Try to use darker colors first. If you use a dark color after a light color, apply a coat of white over the lighter color before applying the darker color. This will help prevent the darker color from bleeding through the lighter color.

### STICKERS

Cut the stickers from the sticker sheet (163) that you wish to apply to the body or wing. Before removing the protective backing, find the desired location. Remove the backing completely and reattach an edge of the sticker to the shiny side of the backing material. Using the rest of the backing material as a handle, position the sticker and press firmly into place to complete its application.

# FINAL CHECKLIST

BEFORE RUNNING YOUR NEW TRIPLE-X for the first time, you should run down the following checklist – in order – and complete the listed tasks. I'm sure you're anxious to get out and run your new *Triple-X* now that it's built, but following this simple checklist will help to make your first run with your new car much more enjoyable.

1. Adjust the differential  
See *About The Differential* in the tips section.
2. Adjust the slipper  
See *Adjusting The Slipper* in the tips section.
3. Check for free suspension movement  
All suspension arms should move freely. Any binds will cause the car 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. See the *Front Ride Height* section of the tips.
6. Adjust the camber  
The front camber should be set to about 1/2 degree of negative camber (top of tire points in) at ride height. Adjust the front camber with the tires turned straight ahead. The rear camber should also be set to have about 1/2 degree of negative camber at ride height. See the *Camber* section of the tips.
7. Set the front toe-in  
Adjust the front tie rods so that, when the steering is straight on the transmitter, the front tires are both pointing straight. It is recommended that you start with the front toe-in set to zero (no toe-in or toe-out).
8. Charge a battery pack  
Charge a battery pack as per battery manufacturer's and/or charger manufacturer's instructions so that radio adjustments can be made.
9. Adjust the speed control  
Following the manufacturer's instructions, adjust your speed control, and set the throttle trim on your transmitter so the the car does not creep forward when not applying throttle. Make sure that there is not too much brake being applied when the trigger/stick is in the neutral position.
10. Set transmitter steering trim  
The steering trim tab on the transmitter should be adjusted so that the car rolls straight when you are not touching the steering wheel/stick. If the servo was installed correctly, as per Tables 53A and 53B, the wheels should turn equally to the left and right. If this is not the case, refer to Table 53A &B and ensure that the steering servo and rod were properly installed.

## TIPS AND HINTS FROM THE TEAM

About The Differential Never allow the diff to slip; that's what the slipper is for. Before trying to adjust your diff, you need to tighten the slipper until the spring is fully compressed. Next, hold the spur gear and right rear tire, then try turning the left rear tire forward. It should be very difficult to turn the left rear tire. If the tire turns easily, the diff is too loose. To tighten the diff, line up the slot in the diff screw with the groove in the left outdrive. Place the 1/16" Allen wrench through both of these slots. This will lock the diff screw and the outdrive together. While holding the Allen wrench in place, turn the right rear tire forward about 1/8 of a turn. Check the differential adjustment again and repeat the tightening process as necessary until the differential is no longer slipping. The final differential adjustment check should be made by placing the car on carpet, grass, or asphalt and punching the throttle. The differential should not slip. If it does, tighten the diff in 1/8-turn increments as described above until the slippage stops.

Once the diff has been 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 inspected; you may have a problem with the differential assembly. Refer to the assembly instructions to ensure that the diff is properly assembled and that all parts are properly seated in the assembly. **FOR THE SERIOUS RAGER**

There are a few things you should know about differentials. First, when rebuilding your diff, you should always replace the small, 4-40 locknut. Second, after the diff has been run a time or two, it is not uncommon for the balls to seat into the rings and create a slightly loose adjustment. So, after your first and second runs, check the adjustment to avoid slippage. Third, remember: Never let the diff slip. Doing so can damage the diff balls, rings, and gear. Always make sure

that the slipper will slip before the diff.

Adjusting the Slippers should be done after the diff is properly adjusted. If you have just finished adjusting the differential, loosen the slipper adjustment nut four full turns (e.g., 360 degrees x 4) to return the adjustment to the setting originally described in the assembly instructions. To make the final adjustments, place your car on the racing surface and give the car full throttle. The slipper should slip for one or two feet at the most. If the slipper slips for more than two feet, you'll need to tighten the adjustment nut. If the slipper doesn't slip for at least one foot, back off the adjustment nut 1/8 of a turn and retry. If you can't hear the slipper when you punch the throttle, hold the front of the car with the rear wheels still on the track and give the car full throttle. The car should push against your hand with reasonable force and the slipper only slipping slightly. Don't expect the slipper to make up for poor driving or set-up. You still have to use the throttle and maintain the shocks and chassis. The slipper will help you drive more comfortably and help accelerate of corners and land jumps.

When the track is really rough, rutty, or has a lot of killer jumps, you may want to consider installing a Hydra-Drive unit. When using the Hydra-Drive, the slipper adjustment should be set a bit looser so that the spur gear is easier to rotate while holding the right rear tire. Use the same method of checking adjustment on the Hydra-Drive as you would on the standard friction slipper. Do not run the Hydra-Drive too loose; it will build up heat and eventually damage the seals. The standard fluid should be used most of the time in the Hydra-Drive. This kit has a different type of slipper that cannot be used with the Hydra-Drive as it is currently assembled. However, a Hydra-Drive unit can be fit to the shaft by replacing the gear and outside aluminum slipper back plate with the Hydra-Drive spur gear, gear plate, Hydra-Drive unit, spring, etc. A Hydra-Drive conversion kit is also available (part #A3112).

The Most Sensitive Adjustments and the most used by the Team Losi race team, are the number of washers under the front camber link ball studs and the anti-squat. See these two sections and try to familiarize yourself with the way that these adjustments affect the handling of the *Triple-X*.

Ride Height is an adjustment that affects the way your car jumps, turns, and goes through bumps. To check the ride height, drop one end (front or rear) of the car from about a 5-6 inch height onto a flat surface. Once the car settles in to a position, check the height of that end of the car in relationship to the surface. To raise the ride height, lower the shock adjuster nuts on the shocks evenly on the end (front or rear) of the car you are working on. To lower the ride height, raise the shock adjuster nuts. Both left and right nuts should be adjusted evenly.

You should start with the front ride height set so that the front suspension arms are level with the surface. Occasionally, you may want to raise the front ride height to get a little quicker steering reaction, but be careful as this can also make the car flip over more easily. The rear ride height should be set so that the car comes to a rest at a height that is right in between having the arms level and the dogbones level with the surface. Every driver likes a little different feel so you should try small ride height adjustments to obtain the feel you like. We have found that ride height is really a minor adjustment. This should be one of the last adjustments after everything else has been dialed in. Do not use ride height adjustment as a substitute for a spring rate. If your car needs a softer or firmer spring, change the spring. Do not think that simply moving the shock nuts will change the stiffness of the spring; it won't!

Rear Hub Camber Location is best set according to the settings described in this manual. You should start with the outer hole in the hub. The outer hole will tend to make the car feel a bit stiffer. This results in the car accelerating straighter and also makes it a bit easier to line up for jumps. Moving to the inner hole will typically make the car go through bumps better. The inner hole may also give the feeling of more steering. This steering generally comes from the rear end though. What this means is that the rear end of the car may swing a bit more – at times even sliding more.

Rear Camber Link Length can be another useful adjustment. It is virtually impossible to make a blanket statement for exactly how the length of the camber link will affect the handling under all conditions. The following is our experience with how the length of the camber link will typically affect the handling of the *Triple-X*. A longer rear camber link will usually result in more rear traction. With a longer link, the car can start to drive more square, or point-to-point. This can make it difficult to carve corners at high speed. A shorter rear camber link will generally result in more steering from the rear of the car due to increased chassis roll. This can make it easier to change directions quicker, but can cause the rear of the car to roll around if the link is too short. A shorter rear link will usually go through bumps a bit better than a long link as well.

Front Carrier Camber Location is another adjustment that is almost always run in the standard (outer) location. This location keeps the car flatter with less roll. The outer location also helps the car stay tighter in turns with a more precise steering feel. Moving the link to the inner hole will make the steering react slightly slower. The advantage to the inner hole is that it can increase on-power steering and help the car get through bumps better.

Washers Under the Front Camber Link Ball Stud can be added or removed. This is one of the most important adjustments on the *Triple-X* car. You should get a feel for how the number of washers affects the handling. Adding washers will make the car more stable and keep the front end flatter. Removing washers will make the steering more aggressive. This can be good in some conditions, but can also make the car difficult to drive in others. The best all-around adjustment is with one washer – as per the assembly instructions.

Front Camber Link Length is another adjustment that is difficult to make a generic statement for as it can have slightly different results on various conditions. The following is a summary of how this adjustment will usually impact the handling of the *Triple-X*. A longer front camber link will usually make the car feel stiffer. This will help keep the car flatter with less roll, but can make the car handle worse in bumpy conditions. A shorter front camber link will result in more front end roll. This will increase high-speed steering and make the car better in bumps. Too short of a front link may make the car feel twitchy or "wandery" – meaning that it may be difficult to drive straight at high speed.

Front Shock Location can be adjusted easily by simply moving top of the shock to another hole in the shock tower. The standard location (center hole in the tower) works best on most tracks. Moving the top of the shock out one hole will result in an increase in steering and the car will react quicker. Moving the top of the shock to the inside hole in the tower will slow the steering response time and make the car smoother in bumps.

The bottom of the shock can also be moved in or out on the suspension arm. Moving the bottom of the shocks to the inside hole in the arm will result in more low-speed steering and less high-speed steering. Mounting the shocks in the inside hole will require limiters in the shocks to limit the travel, and the springs should be changed to stiffer ones. Moving the bottom of the shocks to the outside hole will reduce overall travel, increase high-speed steering, and reduce low-speed steering. This position may be good for oval tracks and high-traction surfaces.

Rear Shock Location can be changed just as easily as the front. Again, the standard location is the best place to start for most tracks. Moving the top of the shock in on the shock tower results in less side-bite (traction in corners) but makes the car smoother in bumps. Moving the top of the shocks to one of the two outside holes will give the car more forward traction and side bite as well as keeping the car from bottoming out on big jumps. A softer spring should be used if the shocks are mounted in one of the two outer holes in the tower.

Moving the bottom of the rear shocks to the outside hole in the arm will improve stability but may not handle bumps as well. You may also notice that the car is faster in the turns. The downside is that the car will not straighten out – or "square up" – as well.

Rear Anti-Squat is one of the most commonly used adjustments of the *Triple-X*. As per assembly instructions, there is 2 degrees of antisquat. Adding the shims under the front of the block will result in 4 degrees. This will result in less side-bite, which will cause the car to have more steering from the rear end. It will also give the car more forward traction and get more air off of large jumps. Adding the shims to the rear of the pivot block will result in 0 degrees of antisquat. This will have more side bite but will have less forward traction and get less air off of jumps.

Rear Hub Spacing can be adjusted by moving the spacers at the front and rear of the hub carrier. You will probably find that the middle (standard) location works best on just about every track. Spacing the hub back might help on large, high-speed, outdoor tracks. Spacing the hub forward might help on tight, indoor tracks.

Battery Location is sometimes overlooked, but can be a useful adjustment. Start by running the battery spaced forward. Moving the battery back can improve rear traction on slippery tracks. Moving the battery back too far can cause the rear end to swing through turns on some tracks. This is a result of having the weight too far back.



We are sure that you will find the *Triple-X* to be the most versatile and easiest car to drive fast with great consistency. We at Team Losi hope this information helps you to enjoy your *Triple-X* and racing as much as we do. For the latest in setup and accessory parts information, visit the Team Losi website at: [www.TeamLosi.com](http://www.TeamLosi.com)

# SPARE PARTS LIST

KEY#	KIT/PART DESCRIPTION	PART NO.	SPARE PARTS DESCRIPTION
1	Servo saver bottom	A-1620	Steering/Servo Mount Assembly (Molded)(XXX)
2	Servo saver post	A-1610	Steering Hardware Set
3	Servo saver top	A-1620	Steering/Servo Mount Assembly (Molded)(XXX)
4	Servo saver spring	A-1610	Steering Hardware Set
5	Servo saver spring cap	A-1620	Steering/Servo Mount Assembly (Molded)(XXX)
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	Steering/Servo Mount Assembly (Molded)(XXX)
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	Steering/Servo Mount Assembly (Molded)(XXX)
13	3/32" x 3/16" plastic bushing	A-6912	Steering/Servo Mount Assembly (Molded)(XXX)
14	Front kickplate - Graphite	A-9713	Front Kickplate, Bulkhead, and Steering - Graphite
15	Steering brace - Graphite	A-9713	Front Kickplate, Bulkhead, and Steering - Graphite
16	3/32" x .930" hinge pin	A-1146	Front Outer & King Pins 3/32" x .870"
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	XXX graphite chassis	A-9905	Main Chassis and Brace - Graphite (XXX)
20	Front bulkhead - Graphite	A-9713	Front Kickplate, Bulkhead, and Steering Brace (XXX)
21	4-40 x 3/8" button-head screw	A-6229	4-40 x 3/8" Button-Head Screws (10)
22	Short Neck Studded Ball - blue	A-6007	Studded Balls w/Ends (Short Neck)
23	4-40 x 7/8" cap-head screws	A-6216	4-40 x 7/8" Cap-Head Screws (10)
24	Front shock tower	A-1107	Front Shock Tower (XXX)
25	4-40 nut	A-6300	4-40 Hex Nuts (10)
26	3/8" ball stud	A-6000	Ball Studs w/Rod Ends 4-40 x 3/8" (4)
27	3/16" x 3/8" sealed bearing	A-6903	3/16" x 3/8" Teflon™-Sealed Bearings (2)
28	Left spindle	A-4124	Front Spindles/Carriers, and Rear Hubs (XXX)
29	Right spindle	A-4124	Front Spindles/Carriers, and Rear Hubs (XXX)
30	Front stub axle - blue	A-9952	Front Stub Axles and Screws (XXX)
31	Front axle spacer	A-3016	Axle Spacers
32	4-40 x 1" button-head screw	A-9952	Front Axles and Screws Alum. - Blue (XXX)
33	Left spindle carrier	A-4124	Front Spindles/Carriers, and Rear Hubs (XXX)
34	Right spindle carrier	A-4124	Front Spindles/Carriers, and Rear Hubs (XXX)
35	3/32" x 1.050" hinge pin	A-1149	Front Outer & King Pins 3/32" (XXT, XXX)
36	Front spindle spacer	A-2127	'CR' Rear Hub Spacers (.060")
37	3/32" E-clip	A-6103	E-Clips 3/32"
38	Front arm - Graphite	A-9702	Front Suspension Arms (XXX)
39	Front pivot block	A-4126	Front and Rear Pivot Block Set (XXX)
40	.125" x 1.42" hinge pin	A-2007	Hinge Pin 1.42" (XXT, XXX)
41	.125" E-clip	A-6100	1/8" E-Clips
42	Front hinge pin brace	A-9954BL	Alum. Front Hinge Pin Brace - Blue
43	Front bumper - blue	A-4120	Front Bumper, Motor Guard, and Body Mounts - Blue
44	4-40 x 1/2" flat-head screws	A-6220	4-40 x 1/2" Flat-Head Screws (10)
45	Long ball cup - blue	A-6013	H.D. 30° Plastic Rod Ends (16) - Brite Blue
46	1-1/2" Titanium turnbuckle	N/A	
47	Foam thing	A-6003	Foam Things (Linkage Rings) (24)
48	1/8" x 1/4" washer	A-6350	#4 and 1/8" Hardened Washers
49	Rear pivot block	A-4126	Front and Rear Pivot Block Set (XXX)
50	Right rear graphite arm	A-9802	Rear Suspension Arms (XX, XX4, XXX) - Graphite
51	Left rear graphite arm	A-9802	Rear Suspension Arms (XX, XX4, XXX) - Graphite
52	.125" x 1.900" hinge pin	A-2166	Inner Rear Hinge Pins (XXX)
53	Rear graphite pivot plate	A-9831	Rear Pivot Plate - Graphite (XXX)
54	4-40 x 3/8" flat-head screw	A-6210	4-40 x 3/8" Flat-Head Screws (10)
55	Graphite rear shock tower	A-9814	Rear Shock Tower - Graphite (XXX)
56	Wing mount	A-4222	Wing Mount Set (XX-4, XXX)

# SPARE PARTS LIST

KEY#	KIT/PART DESCRIPTION	PART NO.	SPARE PARTS DESCRIPTION
57	4-40 x 1/2" cap-head screw	A-6204	4-40 x 1/2" Cap-Head Screws (10)
58	#4 washer	A-6350	#4 and 1/8" Hardened Washers
59	CVD Bone	A-9923	MIP CVD Set for (XX, XXX, XX4) (1)
60	CVD Coupling	A-9923	MIP CVD Set for (XX, XXX, XX4) (1)
61	CVD Coupling pin	A-9923	MIP CVD Set for (XX, XXX, XX4) (1)
62	CVD axle	A-9923	MIP CVD Set for (XX, XXX, XX4) (1)
63	4.40 set screw	A-9923	MIP CVD Set for (XX, XXX, XX4) (1)
64	Team Losi wrench	A-6030	Assembly Wrench (version 2)
65	Right rear hub	A-4124	Front Spindles/Carriers, and Rear Hubs (XXX)
66	Left rear hub	A-4124	Front Spindles/Carriers, and Rear Hubs (XXX)
67	Inner rear axle spacer	A-9941	Bearing Spacer/Wheel Washer Set
68	Outer rear axle spacer	A-9941	Bearing Spacer/Wheel Washer Set
69	Rear axel drive pin	A-6401	Pins – Wheels and Gears
70	Rear hub spacer	A-2127	Rear Hub Spacers (.060")
71	Outer rear hinge pin	A-2164	1/8" Upper Bulkhead / Outer Rear Hinge Pin (2)
72	1.875" Titanium Turnbuckle	N/A	
73	Diff nut carrier	A-3078	Differential Screw, Hardware, and Seal
74	Allen wrenches	N/A	
75	Beveled washers	A-3078	Differential Screw, Hardware, and Seal
76	Diff tube	A-3072	Differential Tube
77	Outdrive/diff half	A-3073	Outdrive Cup/Diff Half
78	Diff grease (clear)	A-3065	Silicone Differential Compound
79	Diff washer	A-3070	Transmission Drive Rings (2)
80	5mm x 8mm bearing	A-6907	5mm x 8mm Bearings
81	Diff gear	A-3036	2.43:1 Diff Gear
82	3/32" carbide diff balls	A-6951	3/32" Carbide Diff Balls (12)
83	1/4" x 5/16" shim	A-6230	Shim Assortment - 3/16", 1/4", 1/2" (20)
84	Diff adjusting screw	A-3078	Differential Screw, Hardware, and Seal
85	Foam thrust bearing seal	A-3078	Diff Screw, Hardware, Seal Set
86	3mm x 8mm thrust bearing washer	A-3099	Full Compliment Thrust Bearing Set
87	White thrust bearing/assembly grease	A-3066	Teflon™ Assembly Grease
88	5/64" thrust bearing balls	A-3099	Full Compliment Thrust Bearing Set
90	Alum. slipper shaft/gear	A-9930	Alum. Gear /Slipper Shaft 2.19:1 Ratio
94	Left gearbox half	A-3033	Triple-X Transmission Case Set and Spacers
95	1/2" x 3/4" bearing	A-6908	1/2" x 3/4" Ball Bearings w/Teflon Seal (2)
96	Motor plate - blue	A-9980BL	Lightened Motor Plate - Blue
97	Right gearbox half	A-3033	Triple-X Transmission Case Set and Spacers
98	Idler gear shaft	A-3077	Transmission Upper Gear, Idler, Shaft
99	Top shaft spacer	A-3033	Triple-X Transmission Case Set and Spacers
100	1/8" x 3/8" bearing	A-6909	1/8" x 3/8" Ball Bearings ('XX' Trans) (2)
101	Idler gear	A-3079	Idler Gear (2.19:1 and 2.43:1)
102	2-56 x 5/8" cap-head screw	A-3047	Triple-X Transmission Screw Set
103	4-40 x 1-1/8" cap-head screw	A-3047	Triple-X Transmission Screw Set
104	Slipper back plate	A-3132	Slipper Backing Plate
105	Slipper pad	A-3123	Slipper Pad
106	Spur gear 78-tooth	A-3932	78T 48-Pitch Spur Gear
107	Slipper spacer	A-3124	Slipper Spring, Cup, Spacer, Bushing, and Washer
108	Silver slipper spring	A-3124	Slipper Spring, Cup, Spacer, Bushing, and Washer
109	Spring retaining washer	A-3124	Slipper Spring, Cup, Spacer, Bushing, and Washer
110	4-40 locknut	A-6305	4-40 Aluminum Locknuts, Low Profile (10)
111	Motor guard - blue	A-4120	Front Bumper, Motor Guard, & Body Mnts. - Blue(XXX)
112	4-40 x 1-1/2" cap-head screw	A-3047	Triple-X Transmission Screw Set
113	Shock O-ring	A-5015	Double O-Ring Shock Cartridge
114	Shock cartridge body	A-5015	Double O-Ring Shock Cartridge
115	Shock cartridge spacer	A-5015	Double O-Ring Shock Cartridge
116	Shock cartridge cap	A-5015	Double O-Ring Shock Cartridge

# SPARE PARTS LIST

KEY#	KIT/PART DESCRIPTION	PART NO.	SPARE PARTS DESCRIPTION
118	Front shock shaft - Titanium nitrided	A-5060	.6" Titanium Nitrided Shock Shaft
119	Rear shock shaft - Titanium nitrided	A-5064	1.0" Titanium Nitrided Shock Shaft
120	Shock end	A-5023	Spring Clamps & Cups (2)
121	Battery Insulating Tape	A-9606	Battery Box Insulation (Diecut)
122	1/4" shock mount ball	A-2006	Swivel Suspension Balls .250" (8)
123	#56 shock piston	A-5046	Teflon Shock Pistons #56 (Red)
125	Front shock body	A-5054	.6" Threaded Shock Body Set w/Nuts
126	Rear shock body	A-5055	.9" Threaded Shock Body Set w/Nuts
127	Shock fluid	A-5224	Team Losi Certified Shock Fluid 30wt
128	Shock spring cup	A-5023	Spring Clamps & Cups (2)
129	Front shock spring	A-5132	2" Spring 3.5 Rate (Green)
130	Adjuster Nut	A-5057	Threaded Shock Body Adjuster Nuts (2)
131	Rear shock spring	A-5150	2.5" Spring 2.3 Rate (Pink)
132	Short shock mount bushing	A-5013	Front and Rear Upper Shock Mount Bushings (XXX)
133	Long shock mount bushing	A-5013	Front and Rear Upper Shock Mount Bushings (XXX)
134	Front tire	A-7204S	Front Xtra-Wide Tires (Silver) w/Foam
135	Rear tire	A-7369R	2.2" Rear X-2000 Tires (Red) w/Foam
136	Front wheel	A-7006	Wide Front (Solid) Wheels -Blue (XXX)
137	Rear wheel	A-7106	Wide Rear (Solid) Wheels - Blue (All XX, XX4,XXX)
138	Front foam tire liners	A-7297	4wd Front Foam Liners - Firm
139	Rear foam tire liners	A-7398	Buggy Rear Foam Liners - Firm
140	8-32 locknut	A-6310	8-32 Alum. Locknuts (8)
141	3mm x 8mm cap-head screws	A-6201	3mm x 8mm Cap-Head w/Washers (10)
142	Gear cover	A-3048	Gear Cover with Access Plug (XXX)
143	4-40 x 1/8" button-head screw	A-6212	4-40 x 1/8" Button-Head Screws (4)
144	Gear cover plug	A-3045	Slipper Gear Cover Plug (4)
145	Servo Arm	A-1620	Steering/Servo Mount Assembly (Molded)(XXX)
146	Servo mounting post	A-1620	Steering/Servo Mount Assembly (Molded)(XXX)
147	Chassis brace	A-9905	Main Chassis and Brace - Graphite (XXX)
148	Short plastic rod end - blue	A-6013	30 Degree Rod Ends - Brite Blue
149	4-40 x 5/8" threaded rod	A-1615	Short Ball Cups and Threaded Rod
150	4-40 x 5/8" flat-head screw	A-6233	4-40 x 5/8" Flat-Head Screws (10)
151	Rear body mount - blue	A-4120	Front Bumper, Motor Guard, & Body Mnts. - Blue (XXX)
152	Battery spacing foam	A-9910	Battery Strap, Pad, and Foam Block - Graphite (XXX)
153	Battery strap foam strip	A-9910	Battery Strap, Pad, and Foam Block - Graphite (XXX)
154	Battery hold-down strap	A-9910	Battery Strap, Pad, and Foam Block - Graphite (XXX)
155	Body clip	A-8200	Body Clips (12)
156	Two-sided tape	A-4004	Servo Tape (6)
157	Antenna tube	A-4002	Antenna Kit
158	Antenna cap	A-4003	Antenna Caps (8)
159	Phobia Body	A-8041	Phobia Body w/Window Masks
160	Phobia rear wing	A-8113	Phobia rear V-Wing
161	Wing mount washers	A-4222	Wing Mount Set (XX-4, XXX)
162	Phobia window masks	A-8041	Phobia Body w/Window Masks
163	Sticker sheet	A-8349	Triple-X Kinwald Edition Sticker Sheet
164	Rear hinge pin brace	A-4138	Alum. Rear Hinge Pin Brace
165	Aniti-squat shim	A-4126	Front and Rear Pivot Block Set (XXX)

