TEAM LOSI XXT CR GRAPHITE PLUS

OWNER'S MANUAL

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

TEAM LOSI Racing CompetitionX
A WEB SITE FOR THE SERIOUS RACER

Team Losi, Inc., 13848 Magnolia Ave., Chino, CA 91710
phone: (909)465-9400 • fax: (909)590-1496
http://www.TeamLosi.com • feedback@TeamLosi.com

MADE IN THE UNITED STATES OF AMERICA P/N 800-0105

Welcome Double-XT 'CR' *Graphite Plus* Owner!

Thank you for choosing Team Losi and the value-packed Double-XT 'CR' *Graphite Plus* kit. As you probably know, Team Losi has been the pioneer in offering feature-packed, race-ready, race-winning R/C car and truck kits. The Double-XT 'CR' *Graphite Plus* is perhaps the best example of this. Titanium; carbon fiber/graphite; precision-machined, lightweight aluminum; and space-age coated parts create a truly state-of-the-art race truck. Now you can build a truck like the ones used by Team Losi drivers to dominate racing throughout the country – winning every Modified National Championship for the past two years!

As always, please take a moment to read through the instructions before starting the actual assembly. Also check out the tech tips for tuning ideas.

Good luck, and thank you for choosing Team Losi.

1. INTRODUCTION

DOUBLE-XT 'CR' *GRAPHITE PLUS* COMPLETED KIT DIMENSIONS

Length: 15.5"	Front Width: 12.5"	Rear Width: 12.6"	Height: 5.5"
Wheelbase: 11.4"	All dimensions at ride height.	Weight will vary depending on accessories.	

NOTES & SYMBOLS USED

Figure 1

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

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

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

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

This wrench designates a performance tip. These tips are not necessary, but can improve the performance of your *Graphite Plus* 'CR' truck.

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

KIT/MANUAL ORGANIZATION

The 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 *Graphite Plus* 'CR'. 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 difficulties 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 *Graphite Plus* 'CR' are manufactured to demanding tolerances. When screws are tightened to the point of being snug, the parts are held firmly in place. For this reason it is very important that screws not be overtightened in any of the plastic parts.

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

IMPORTANT SAFETY NOTES

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

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

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

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

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TOOLS REQUIRED

Team Losi has supplied all necessary Allen wrenches and a special wrenches that are needed for assembly and adjustments. The following common tools will also be required: Needle-nose pliers, regular pliers, hobby knife, scissors or other body cutting/trimming tools, and a soldering iron may be necessary for radio installation. 3/16", 1/4", and 3/8" nut drivers are optional.

RADIO/ELECTRICAL

A suggested radio layout is provided in this manual. Your high-performance R/C center should be consulted regarding specifics on radio/electrical equipment.

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 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 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 Double-XT 'CR' *Graphite Plus* includes an 88-tooth, 48-pitch spur gear. The overall internal drive ratio of the *Graphite Plus* 'CR' is 2.61:1. 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 88 (spur gear size) by 20 (pinion gear size). ***88/20 =4.4***. This tells you that *4.4* is the external drive ratio. Next, multiply the internal drive ratio (2.61) by the external drive ratio (in this case 4.4). ***2.61 x 4.4 = 11.484***. This means that by using a 20-tooth pinion gear with the standard 88-tooth spur gear, the final drive ratio is 11.484:1.

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	22	88
36° Stock	21	88
11-Turn Modified	16	88
12-Turn Modified	17	88
13-Turn Modified	18	88
14-Turn Modified	19	88
15-Turn Modified	20	88
16-Turn Modified	21	88
17-Turn Modified	22	88

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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

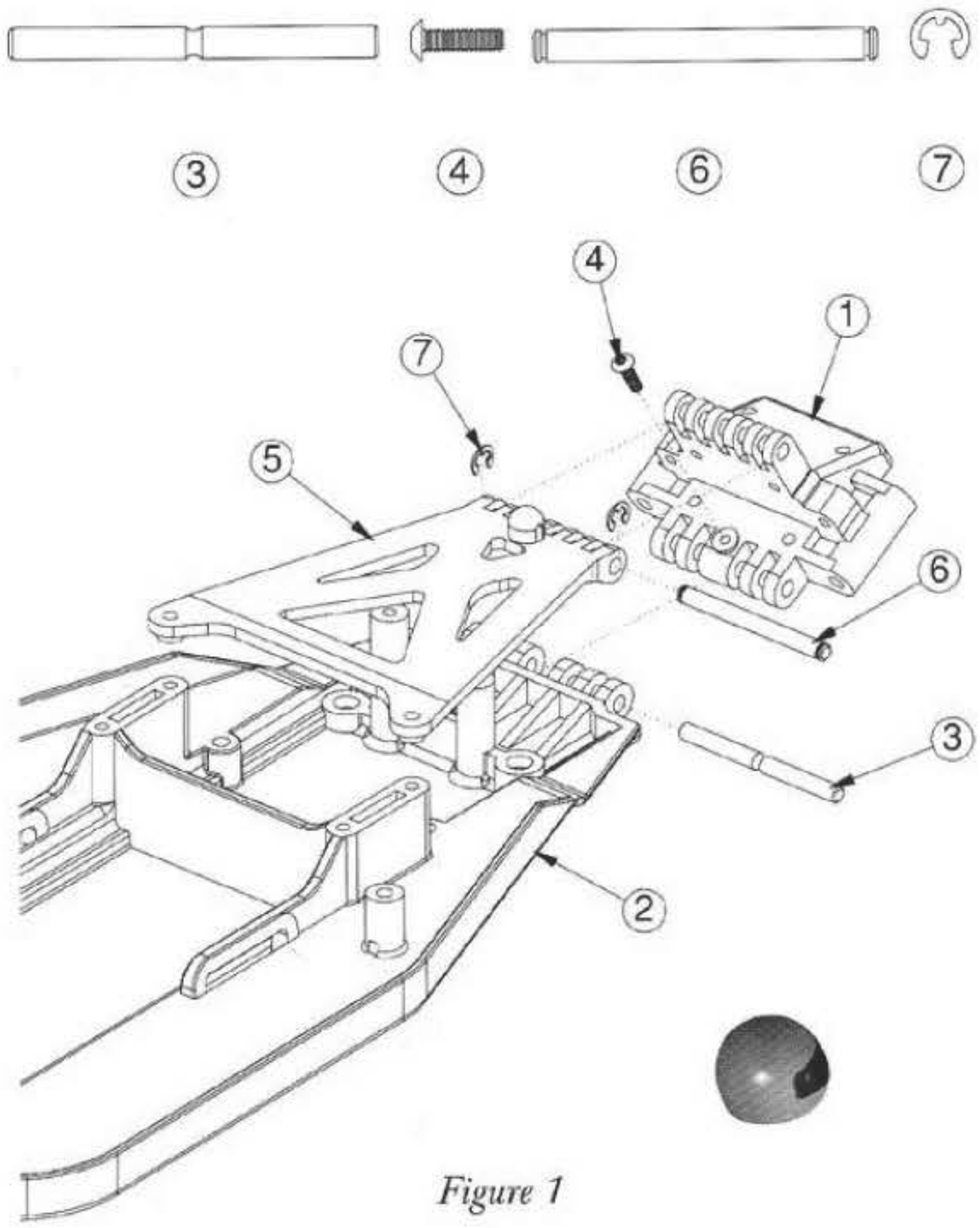


Figure 1

❑ Step 1. Attach the front bulkhead (1) to the main chassis (2) by aligning the bottom hinge holes on the bulkhead (1) and the main chassis (2). Once the holes are aligned, carefully tap the 1/8" lower bulkhead hinge pin (3) through the bulkhead (1) and the chassis (2) until the hinge pin (3) is centered in the chassis (2).

**NOTE: Use the 1/8" hinge pin with the large groove in the center. The lower hinge pin fit is VERY TIGHT! Be sure that the holes are aligned before tapping the pin through the parts.*

❑ Step 2. Secure the pin (3) by threading a 2-56 x 5/16" button-head screw (4) into the small hole (located at the rear) in the top of the front bulkhead (1). Thread the screw (4) all the way in.

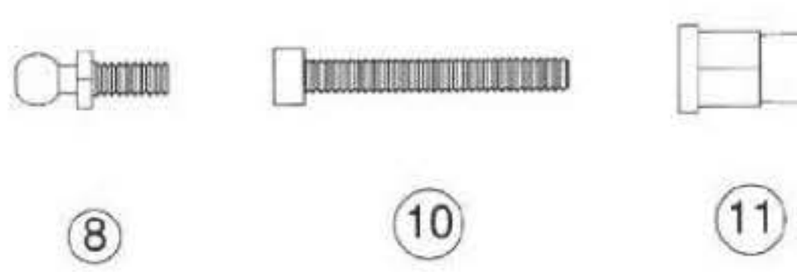
❑ Step 3. Attach the front chassis stiffener (5) to the front bulkhead (1) by aligning the holes in the stiffener (5) with the holes in the top hinge of the bulkhead (1). Secure the two parts by inserting the 1/8" upper bulkhead hinge pin (6) through both the bulkhead (1) and stiffener (5).

**NOTE: Use the shortest 1/8" hinge pin without a groove in the center. The hinge pin fit is tight! Lightly tap the hinge pin through both parts until it is centered.*

❑ Step 4. Center the hinge pin (6) and attach an 1/8" E-clip (7) to each end of the hinge pin (6).

When removing the front bulkhead for any reason, the 2-56 x 5/16" button-head screw must be completely removed before removing the lower hinge pin.

Figure 2



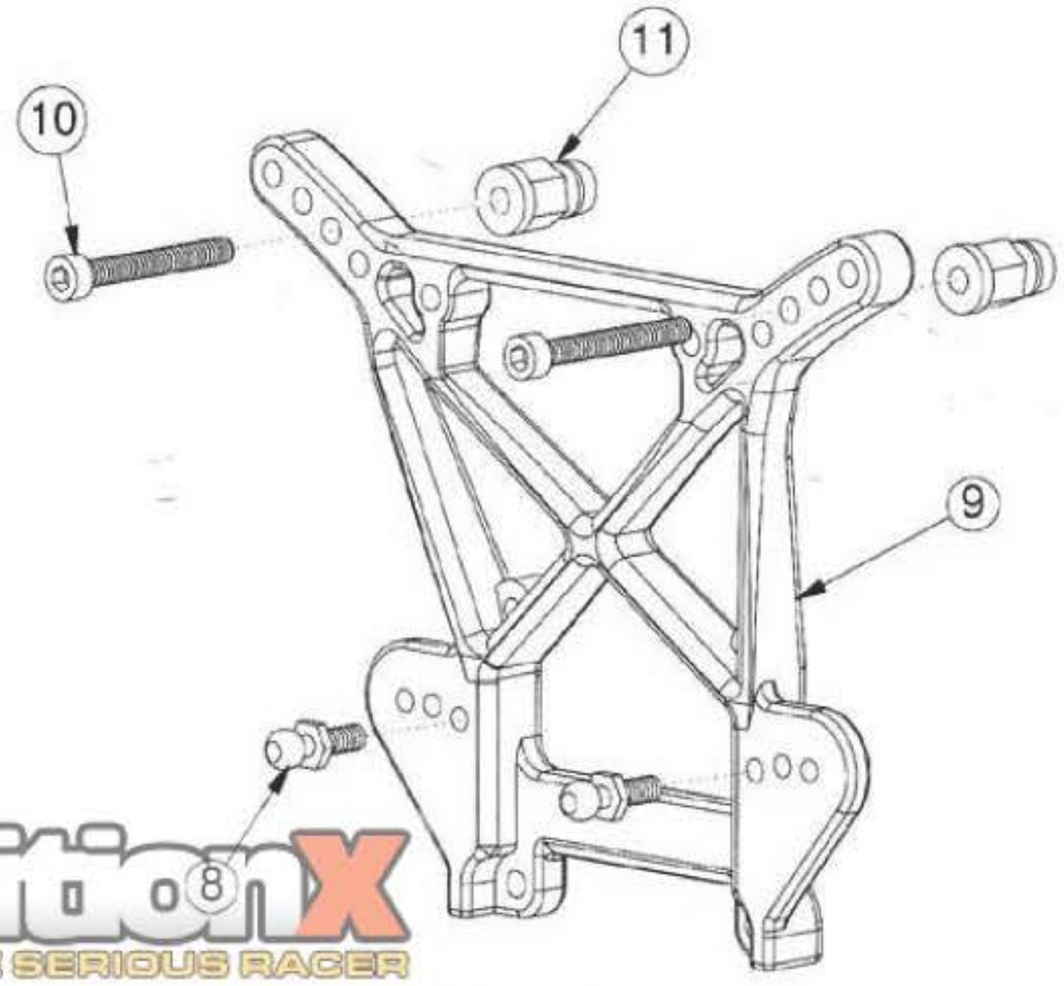


Figure 2

❑ Step 5. Insert a 1/4" ball stud (8) into each of the inside holes on the bottom of the shock tower (9). Mount the ball studs (8) from the rear as shown.

❑ Step 6. Insert a 4-40 x 7/8" cap-head screw (10) from the rear, through the inside hole in on the top of the shock tower (9) on each side. Thread a top shock mount bushing (11) onto each of the two screws (10) and tighten.

⚠ **IMPORTANT NOTE:** Remove all flashing from the bottom of the front shock tower. This will ensure proper fit of the front shock tower to the front bulkhead.

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BAG A (Continued)

Figure 3

(12)

❑ Step 7. Attach the front shock tower (9) to the front side of the front bulkhead (1) with four 4-40 x 3/8" cap-head screws (12).

❑ Step 8. Attach the front body mount (13) to the front side of the front shock tower (9) with two 4-40 x 3/8" cap-head screws (12) as shown.

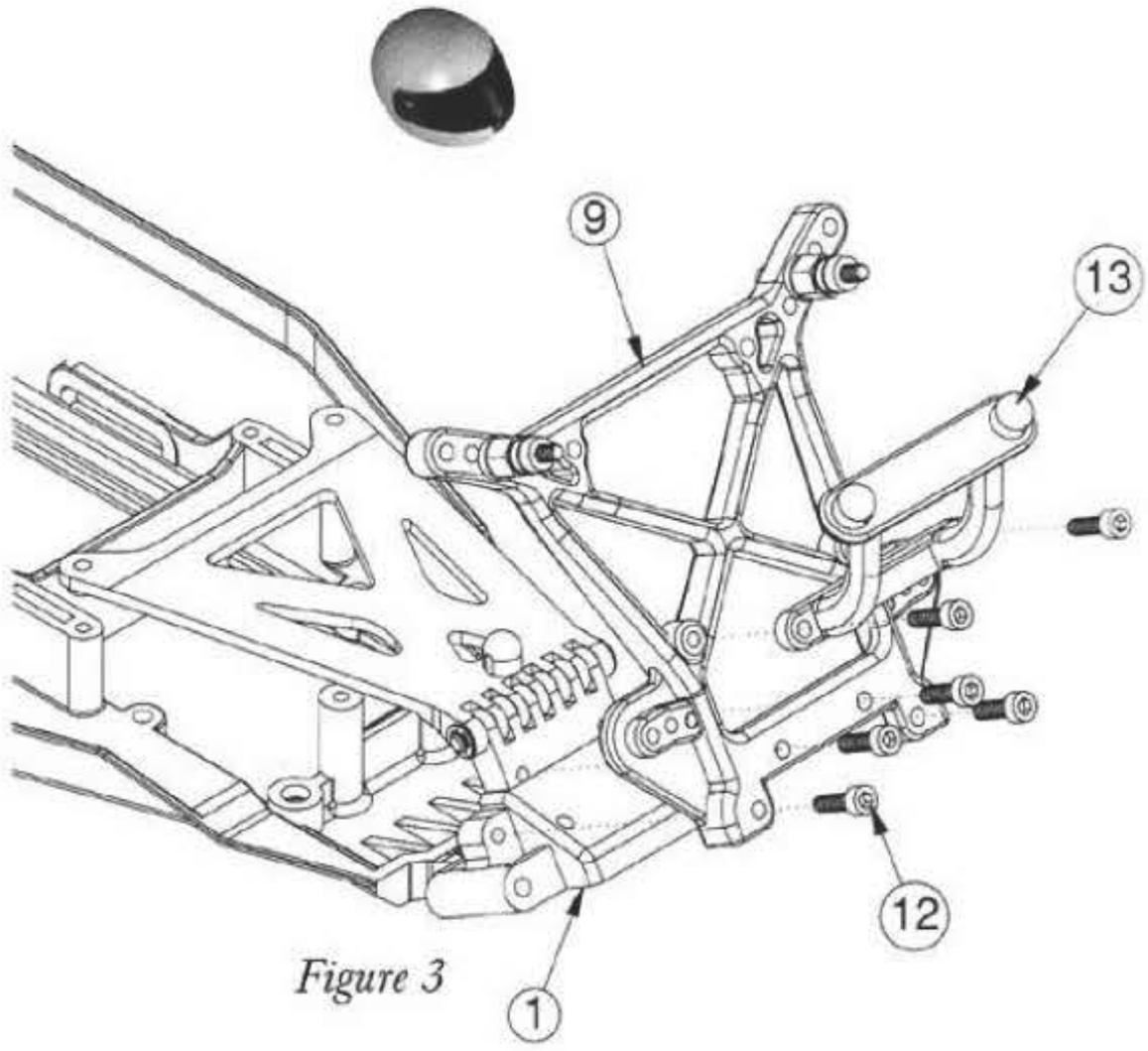

Figure 3

Figure 4

(18) (20) (21)

❑ Step 9. Insert a front axle (14) into each of the front spindles [left (15), right (16)] as shown. The hole in the axle (14) should line up with the hole in the spindle (15), (16).

❑ Step 10. Place four ball stud washers (18) over the end of a kingpin/ball stud (19). Slide the washers (18) all the way against the base of the ball stud on the kingpin/ball stud (19).

❑ Step 11. Attach the right spindle (16) to one of the spindle carriers (17) by aligning the holes in each and inserting a the kingpin/ball stud (19), with washers attached, through the spindle carrier (17), spindle (16), and axle (14). Secure the kingpin/ball stud (19) with a 3/32" E-clip (20) at the bottom of the shaft.

⚠ **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 12. Check to see that the spindle (16) rotates easily in the spindle carrier (17). If the spindle doesn't rotate easily, move the kingpin/ball stud up slightly so that there is a *small* space between the washers (18) and the spindle carrier (17). Once the spindle (16) rotates easily, thread a 5-40 setscrew (21) into the back side of the axle (14) and tighen.

❑ Step 13. Repeat Steps 10-12 for the left spindle (15) and the second spindle carrier (17).

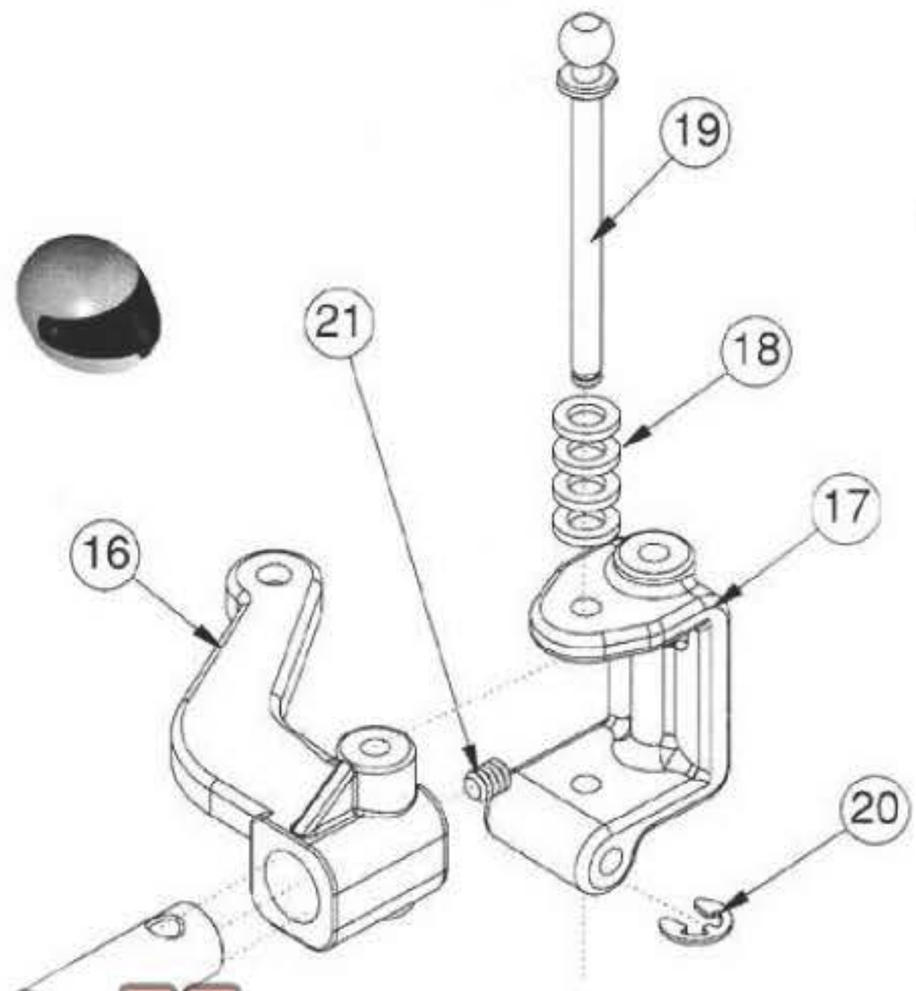

Figure 4

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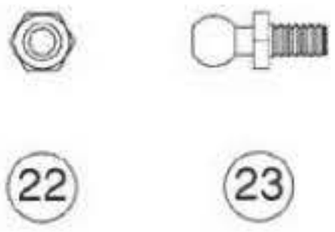
BAG A (Continued)

Figure 5



❑ Step 14. Insert a 4-40 mini locknut (22) into the hex area in the bottom of each spindle (15), (16). Thread a 3/16" ball stud (23) in from the top and tighten.

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

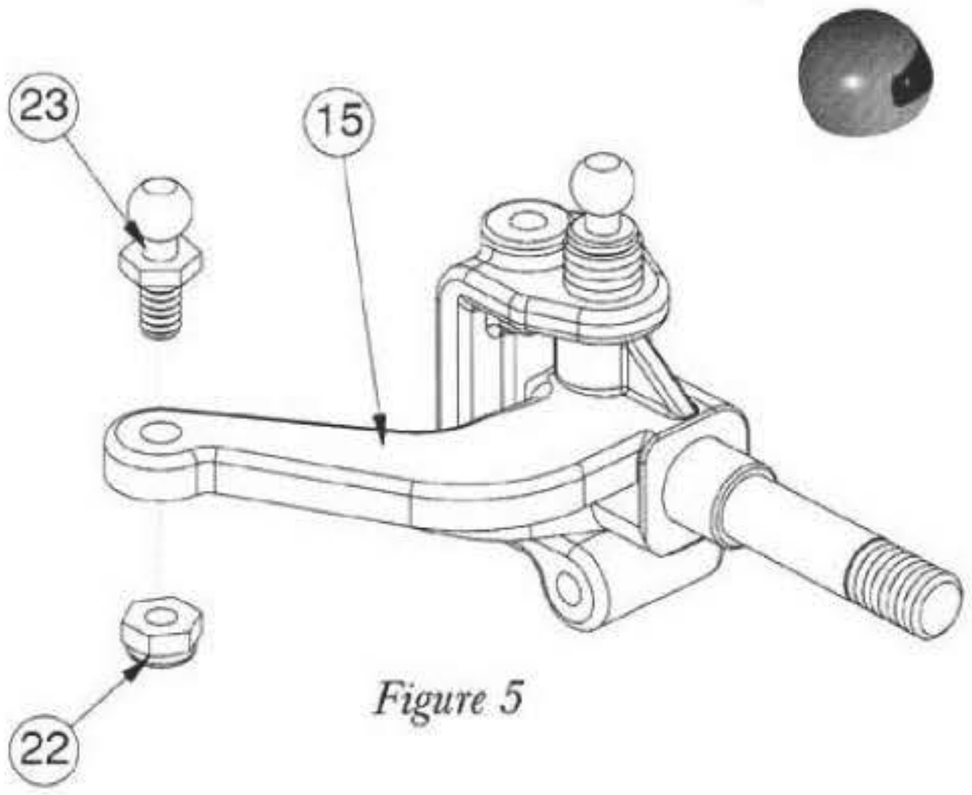
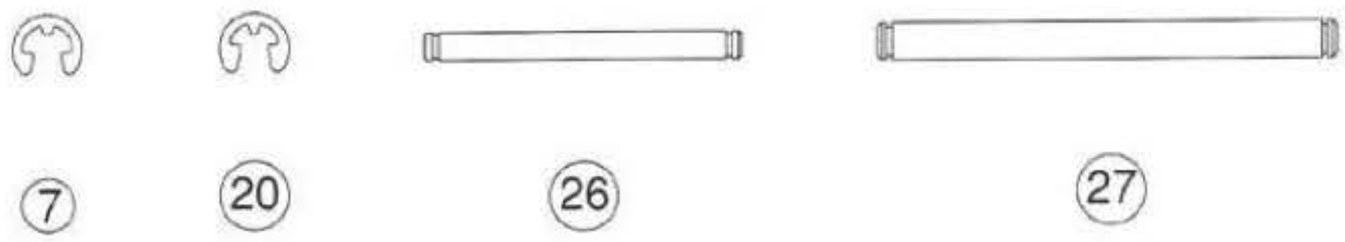


Figure 5

Figure 6



❑ Step 15. Attach the right spindle and carrier assembly to the right front suspension arm (25) as shown. Line up the holes in the spindle carrier (17) with the holes in the front arm (25), insert a 3/32" x 1.050" hinge pin (26) and attach a 3/32" E-clip (20) to both sides of the hinge pin (26).

⚠ **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 (25) to the right side of the front bulkhead (1) by inserting the 1/8" inner front hinge pin (27), from the front, through the arm (25) and bulkhead (1).

❑ Step 17. Insert a 1/8" E-clip (7) in the rear groove of the hinge pin (27).

❑ Step 18. Repeat Steps 15-17 for the left spindle and carrier assembly and left suspension arm (24).

❑ Step 19. Slide the front hinge pin brace (28) over the front of both hinge pins (27). Be sure that the brace (28) is installed correctly so that the E-clip grooves in both hinge pins (27) are exposed. Secure the brace by attaching a 1/8" E-clip (7) to the front of each hinge pin (27).

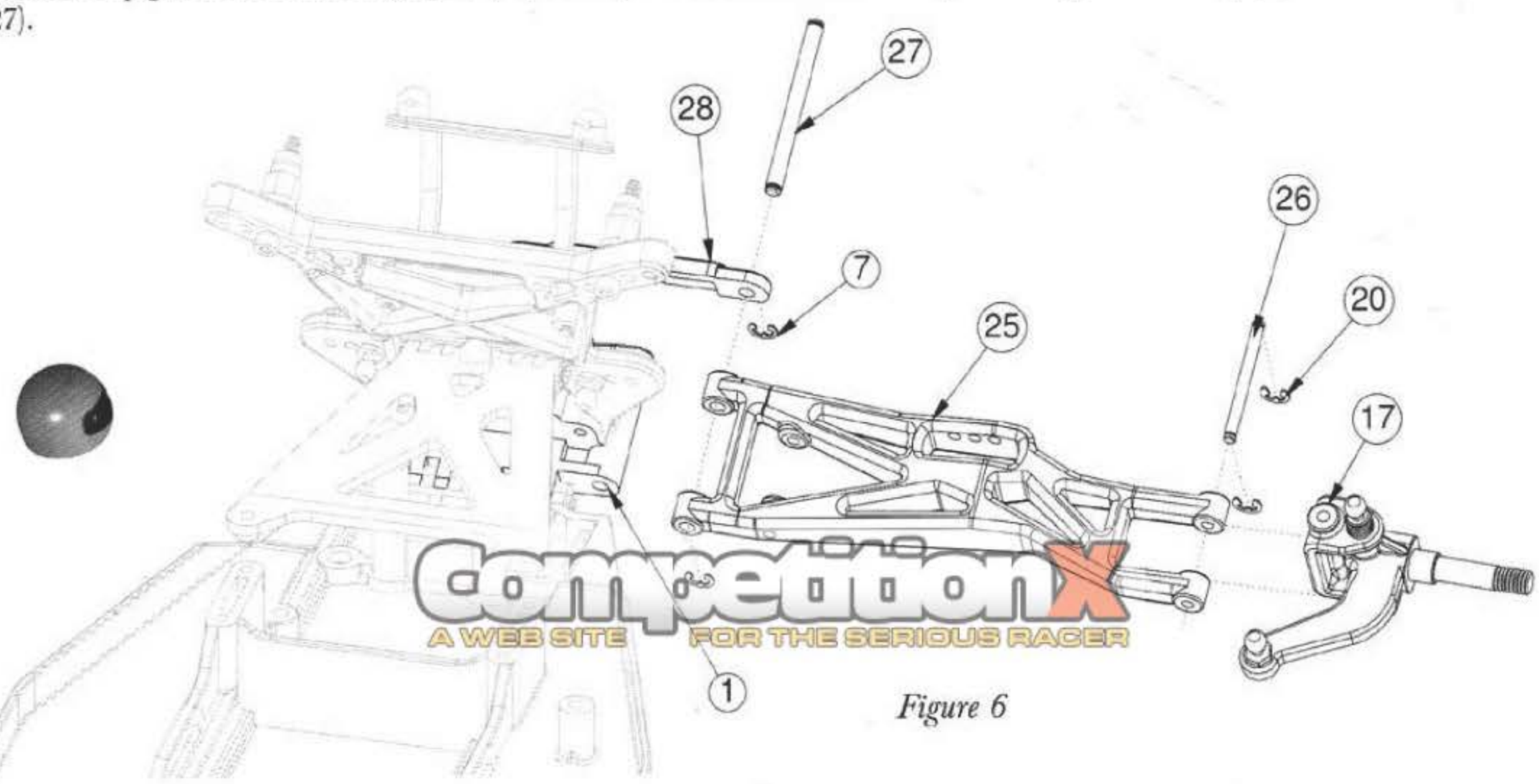


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Figure 6

BAG A (Continued)

Figure 7

(30)

❑ Step 20. Thread a plastic rod end (29) onto each end of a 2-3/4" turnbuckle (30). Tighten both rod ends (29) equally until the rod is the same length as the rod in Figure 7A. Make two of these camber link assemblies.

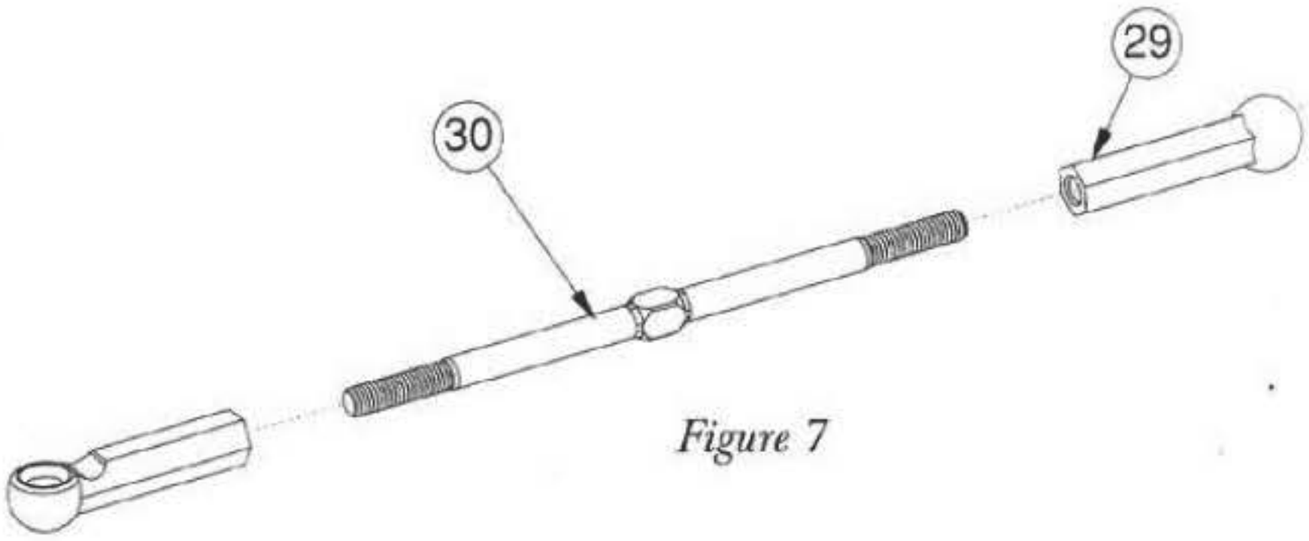

Figure 7

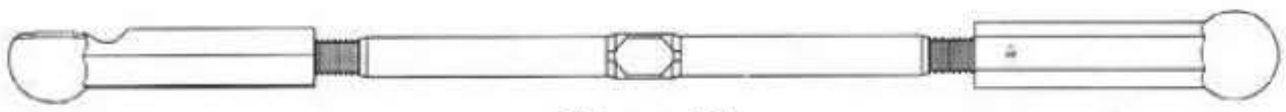

Figure 7A

Figure 8

❑ Step 21. Place a "foam thing" (31) over the ball on each of the kingpin/ball studs (19) in the spindle carriers (17) and the ball studs (8) in the shock tower (9). Next, attach one side of a camber link assembly to the ball stud (8) on the right side of the shock tower (9). Attach the other side of the camber link assembly to the kingpin/ball stud in the spindle carrier (17).

❑ Step 22. Attach the second camber link assembly to the left side of the truck.

➽ Try to mount all of the camber links so that the threads adjust the same direction. This makes it much easier to make adjustments later.

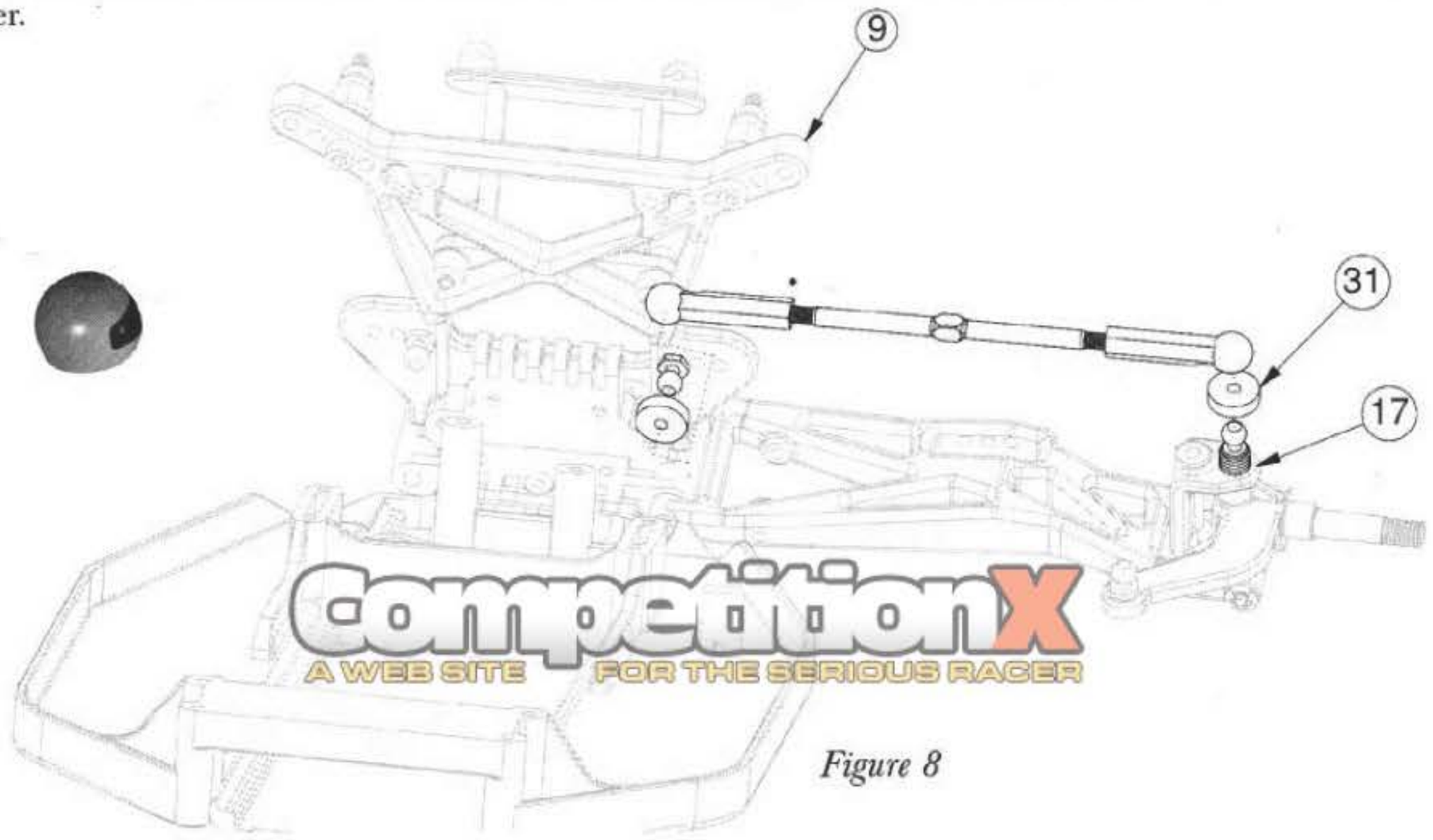

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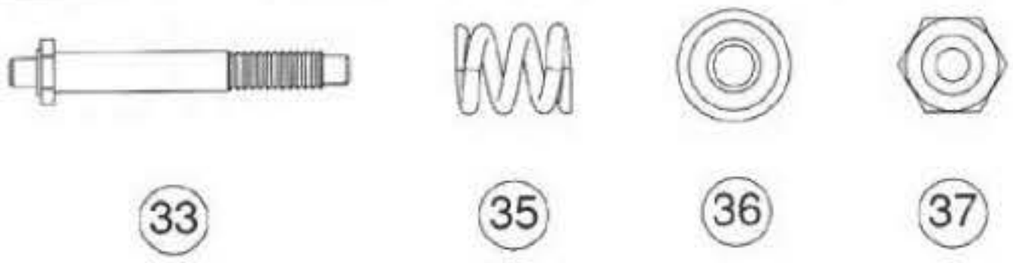
Figure 8

BAG B

Figure 9



❑ Step 1. Place the servo saver bottom (32) over the servo saver post (33) and slide the servo saver bottom all the way down. Be sure that the hex in the servo saver post (33) is inserted into the hex in the servo saver bottom (32).

❑ Step 2. Slide the servo saver top (34) down over the servo saver post (33) so that it rests against the servo saver bottom (32). The arm on the servo saver top (34) and the arm on the servo saver bottom (32) should point in opposite directions.

❑ Step 3. Slide the servo saver spring (35) over the servo saver post (33) and push it into the recessed area of the servo saver top (34). Install the servo saver spring cap (36) and thread the 6-40 locknut (37) onto the threads of the servo saver post (33).

❑ Step 4. Tighten the 6-40 locknut (37) all the way down and then loosen it two full turns (e.g. 360° x 2). This is a good starting point for the adjustment. Once assembly is complete, if you wish, the servo saver can be adjusted tighter or looser.

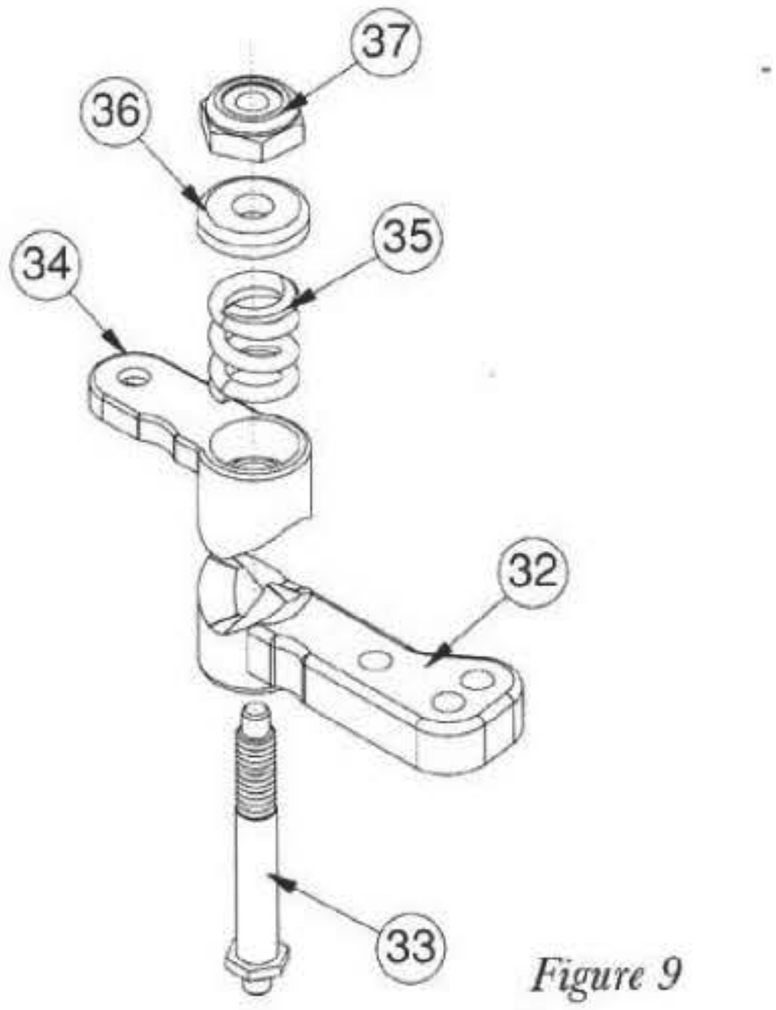
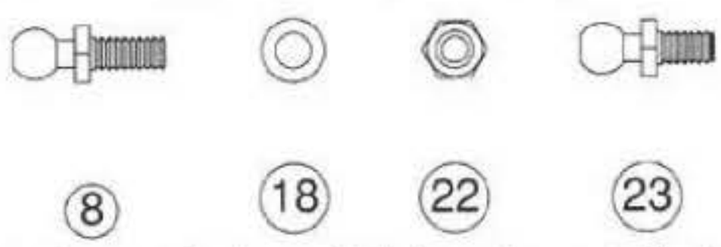


Figure 9

Figure 10



❑ Step 5. Insert a 4-40 mini locknut (22) into the outside hex area in the servo saver bottom (32) and steering idler arm (38) as shown. Place two ball stud washers (18) over each of the two 1/4" ball studs (8). Thread a 1/4" ball stud (8) through the outside hole in each arm, into the nuts (22), and tighten. Insert a 4-40 mini locknut (22) into the hex area in the servo saver top (34). Thread a 3/16" ball stud (23) through the hole in the arm, into the nut (22), and tighten.

❑ Step 6. Insert a 4-40 mini locknut (22) into the hex areas in the rear of the servo saver bottom (32) and the steering idler arm (38) as shown. Thread a 3/16" ball stud (23) through the arms, into each nut (22), and tighten.

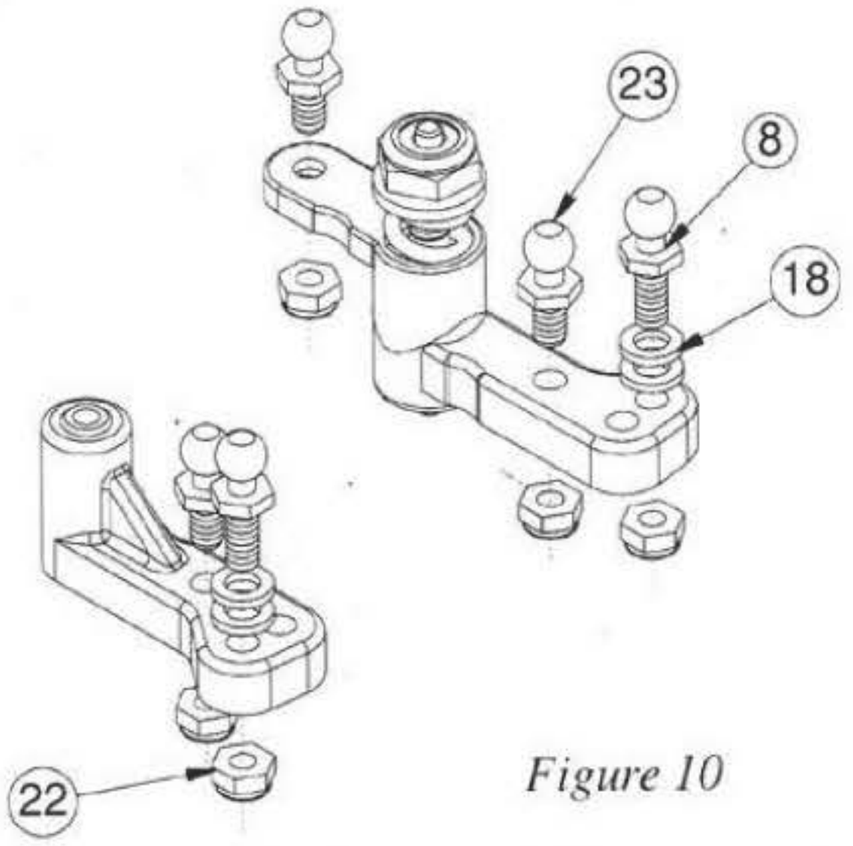
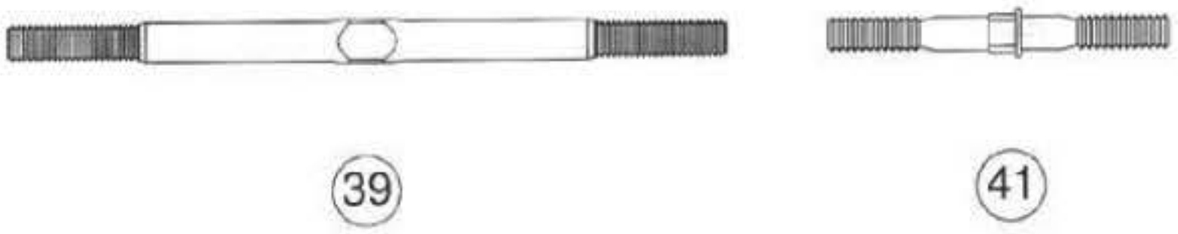


Figure 10

Figure 11



❑ Step 7. Thread a plastic rod end (29) onto each end of a 2-3/8" turnbuckle (39). Tighten both rod ends (29) equally until the completed tie rod assembly is the same length as the one in Figure 11A. Make two of these tie rod assemblies.

❑ Step 8. Thread a short plastic rod end (40) onto each end of the 1-1/8" turnbuckle (41). Tighten both rod ends (40) equally until the completed drag link is the same length as the one in Figure 11A.

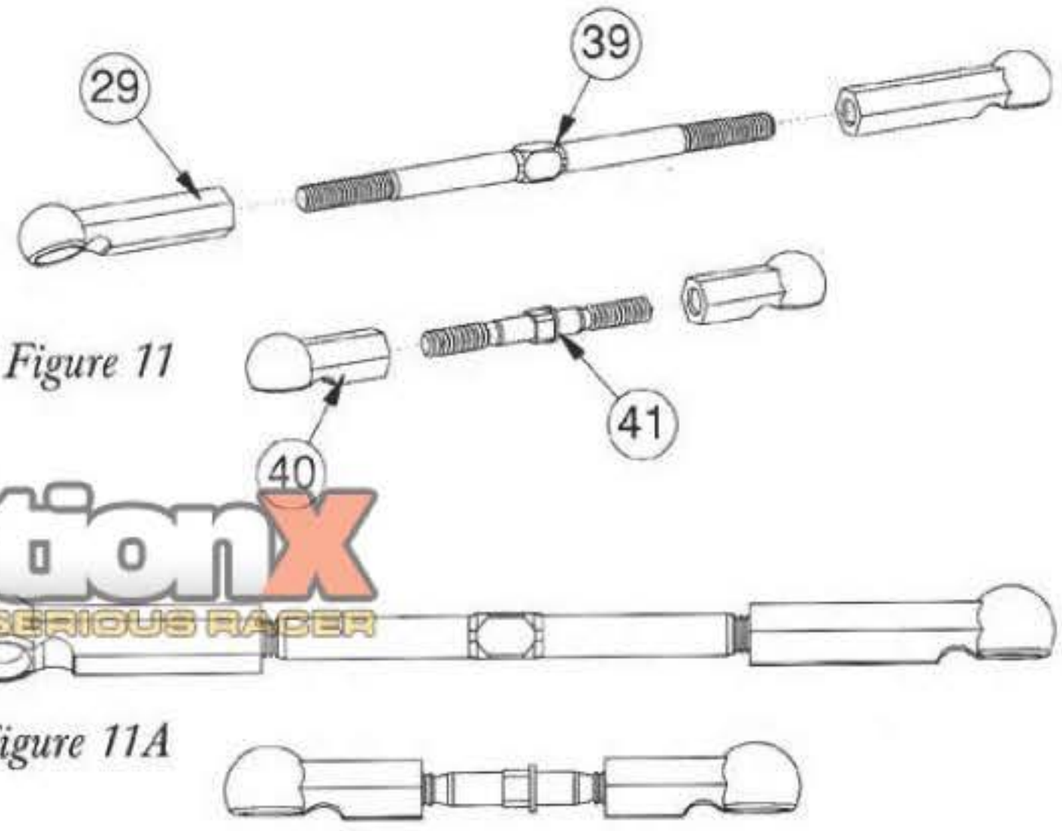


Figure 11

Figure 11A

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BAG B (Continued)

Figure 12

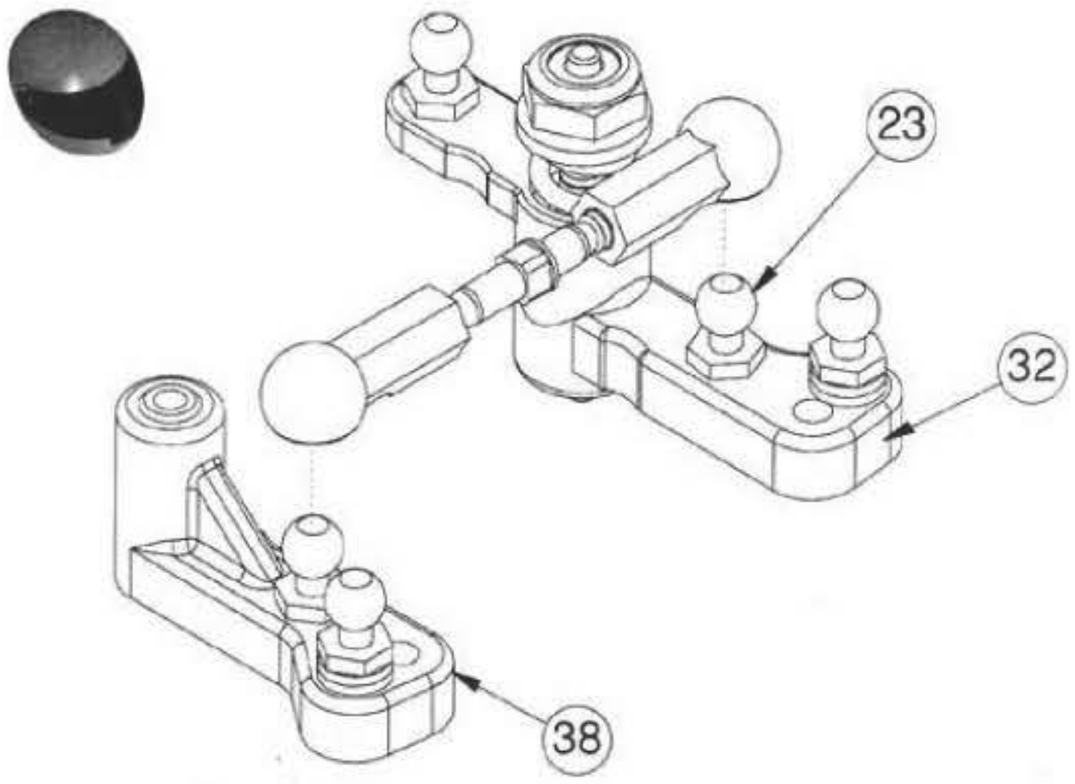
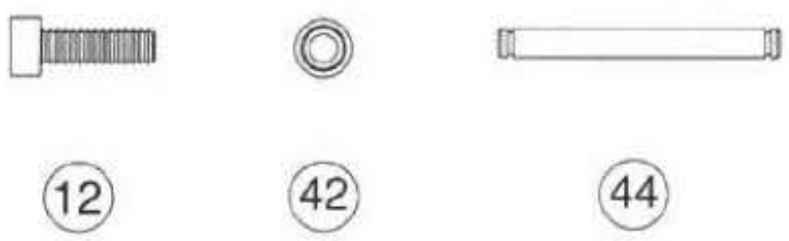


Figure 12

❑ Step 9. Snap one end of the short drag link to the rear ball stud (23) on the servo saver bottom (32). Snap the other end to the rear ball stud (23) on the steering idler arm (38).

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

Figure 13



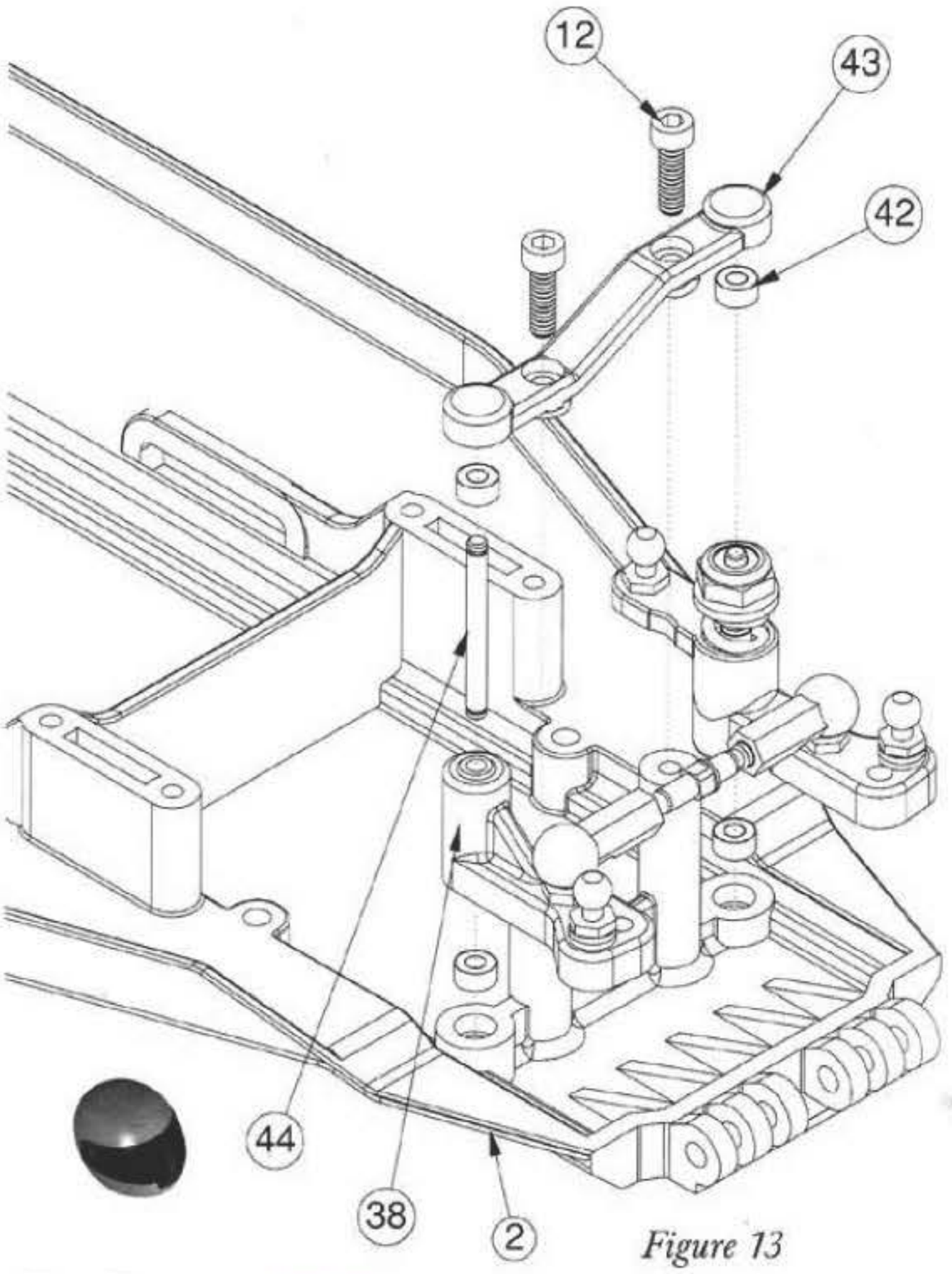


Figure 13

❑ Step 10. Insert a 3/32" x 3/16" bearing (42) into the two large holes in the bottom of the steering brace (43). Insert the other two bearings (42) into the two holes in the main chassis (2).

❑ Step 11. Insert a 3/32" x .930" hinge pin (44) through the hole in the steering idler arm (38) and position it as shown in Figure 13A. Place the servo saver assembly and the steering idler arm (38) into the bearings (42) in the chassis (2) so that the installed drag link is in the front.

❑ Step 12. Place the steering brace (43) on top of the servo saver assembly and steering idler arm (38) being sure that the bearings (42) slide over the pins.

❑ Step 13. Attach the steering brace to the chassis (2) using two 4-40 x 3/8" cap-head screws (12).

⚠ **IMPORTANT NOTE:** Tighten the two 4-40 screws all the way and then back them off 1/8 of a turn. This will keep the posts on the chassis from "taking a set" if they should twist at all.

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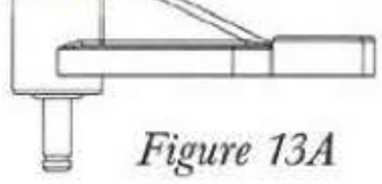


Figure 13A

BAG B (Continued)

Figure 14

❑ Step 14. Snap one end of a completed tie rod assembly to the ball stud (8) in the idler arm (38). Snap the other end to the ball stud (23) in the right spindle (16). Attach the other tie rod assembly to the ball studs in the servo saver assembly and the left spindle (15).

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

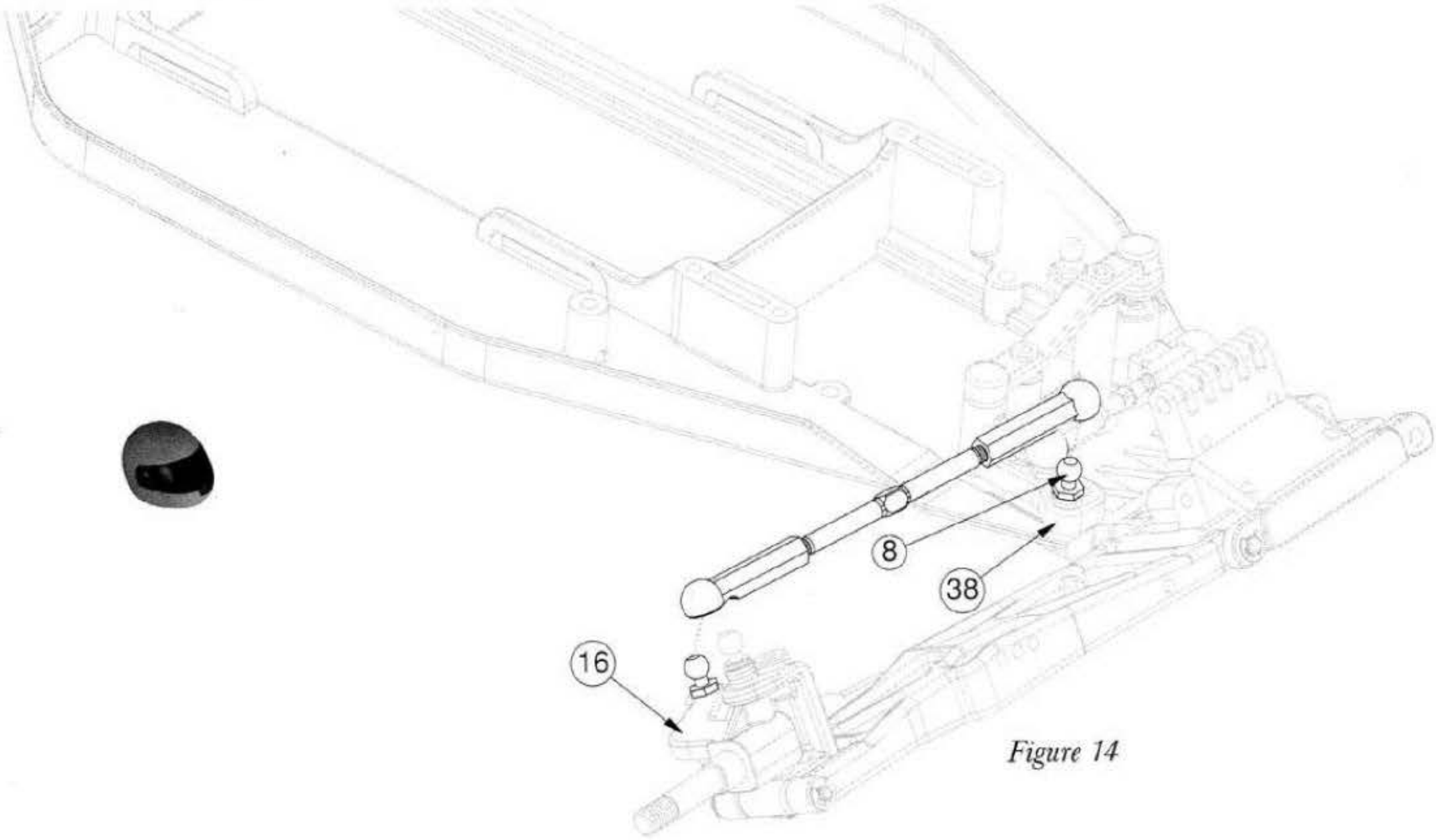


Figure 14

Figure 15

***NOTE:** *If you do not have your servo at this time, skip to Bag C and continue assembly. It is recommended that the servo be installed at this time since much of the front end of the truck is built around the servo and minor disassembly will be required to install it later.*

⚠ **IMPORTANT NOTE:** If the servo mounting instructions are not followed carefully, your servo may be damaged!

❑ Step 15. Using a file or a Dremel tool, trim the two lower ears off of your servo *(not included)* as shown in Figure 15. Be very careful to trim the correct ears! If the wrong ears are trimmed, your servo will not be able to be mounted unless the servo case is replaced.

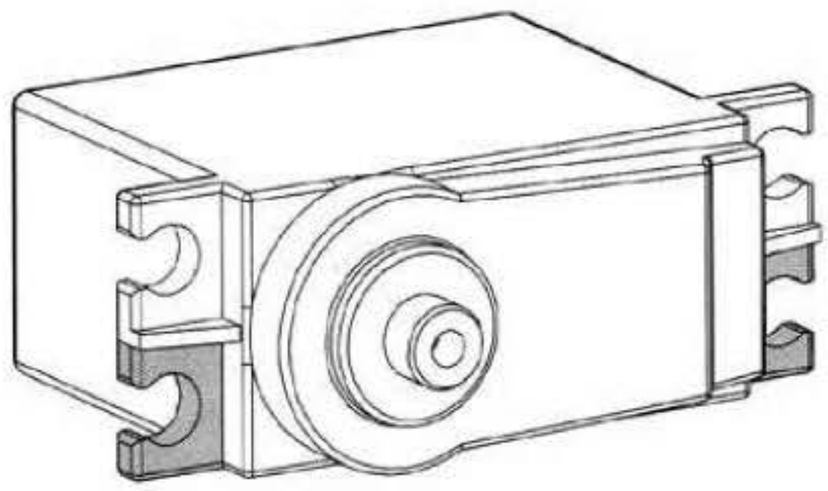


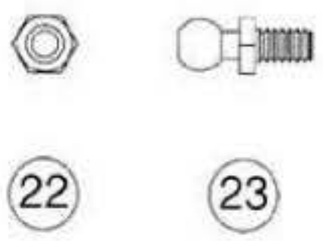
Figure 15

⚠ **IMPORTANT NOTE:** It is not recommended that you use cutters or a hobby knife to remove the servo ears. Some cases are made of very brittle material and damage to your servo case may result.

CompetitionX
A WEB SITE FOR THE SERIOUS RACER

BAG B (Continued)

Figure 16



❑ Step 16. Using Table 17B, determine which servo arm (45) is required for your servo. If your servo is not listed, try using the arm recommended for another servo made by the same manufacturer, or use one supplied with your servo that is the same length as either the 23L or the 25L arm.

❑ Step 17. Insert a 4-40 mini locknut (22) into the hex area of the servo arm (45). Thread a 3/16" ball stud (23) through the hole in the arm (45), into the locknut (22), and tighten.

❑ Step 18. 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 (45) so that it points straight up, away from the ears that were trimmed off of the servo case. Secure the arm (45) with the servo arm screw supplied with the servo.

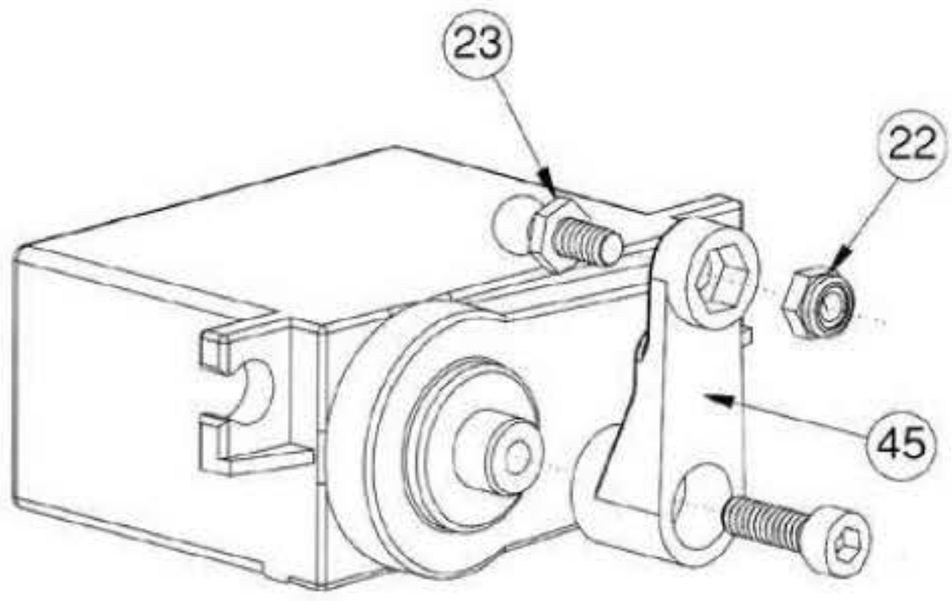
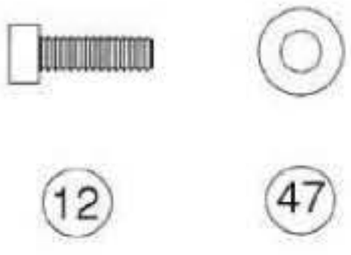


Figure 16

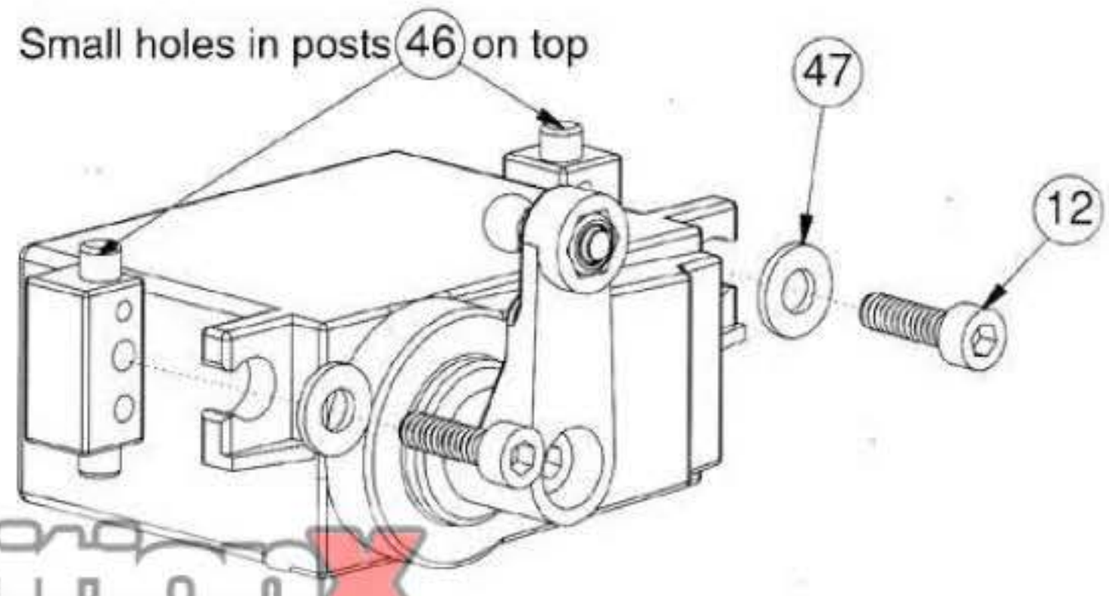
Figure 17



❑ Step 19. Use Tables 17A and 17B to determine how the servo mounting posts (46) should be attached.

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.

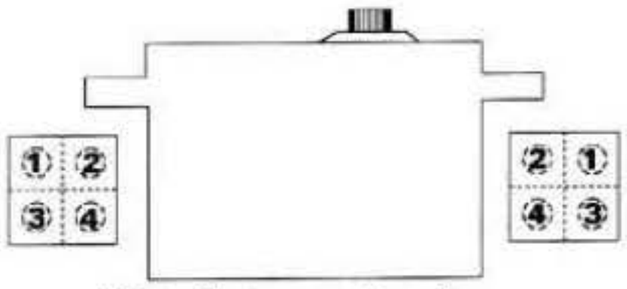
❑ Step 20. Place a #4 washer (47) over each of the two 4-40 x 3/8" cap-head screws (12) and attach the servo posts (46) to the servo by threading a screw (12) through the center hole in each post (46). Do not tighten the screws (12) all of the way yet! Just snug them up. The screws (12) will be tightened after the servo is installed so that the posts (46) have the correct spacing.



CompetitionX
A WEB SITE FOR THE SERIOUS RACER

Figure 17

BAG B (Continued)



**Note: Posts are not to scale.*

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

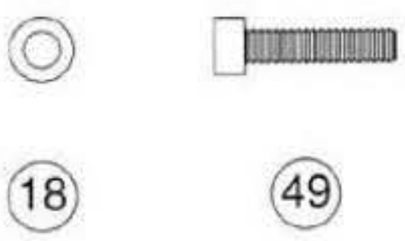
Table 17A

⚠ **IMPORTANT NOTE:** Small, lightening hole in the servo mounting post should always be mounted to the top (the side opposite to where the mounting ears were removed from).

SERVO TYPE	MOUNTING POST PIN LOCATION	REQUIRED SERVO ARM
Airtronics 94141, 94145, 94151, 94152, 94155, 94156, 94157, 94158, 94732, 94734, 94735, 94737, 94738, 94739, 94741, 94742, 94743	**3**	**23L**
Airtronics 94102, 94103, 94322	**1**	**23S**
Futaba S131S, S131SH, S148, S3001, S3003, S5101, S9101, S9201, S9203, S9301, S9303, S9304, S9401, S9402, S9403, S9404	**2**	**25L**
Futaba S132H	**1**	**25L**
JR NES-507, NES-513, NES-517, NES-531, NES-901, NES-911, NES-2700G, NES-4000, NES-4131, NES-4721, NES-4735, NES-9011, NES-9021	**2**	**23S**
KO PS-702, PS-703, PS-1001, PS-1003	**2**	**23S**
KO PS-901BH, PS-902	**1**	**23S**

Table 17B

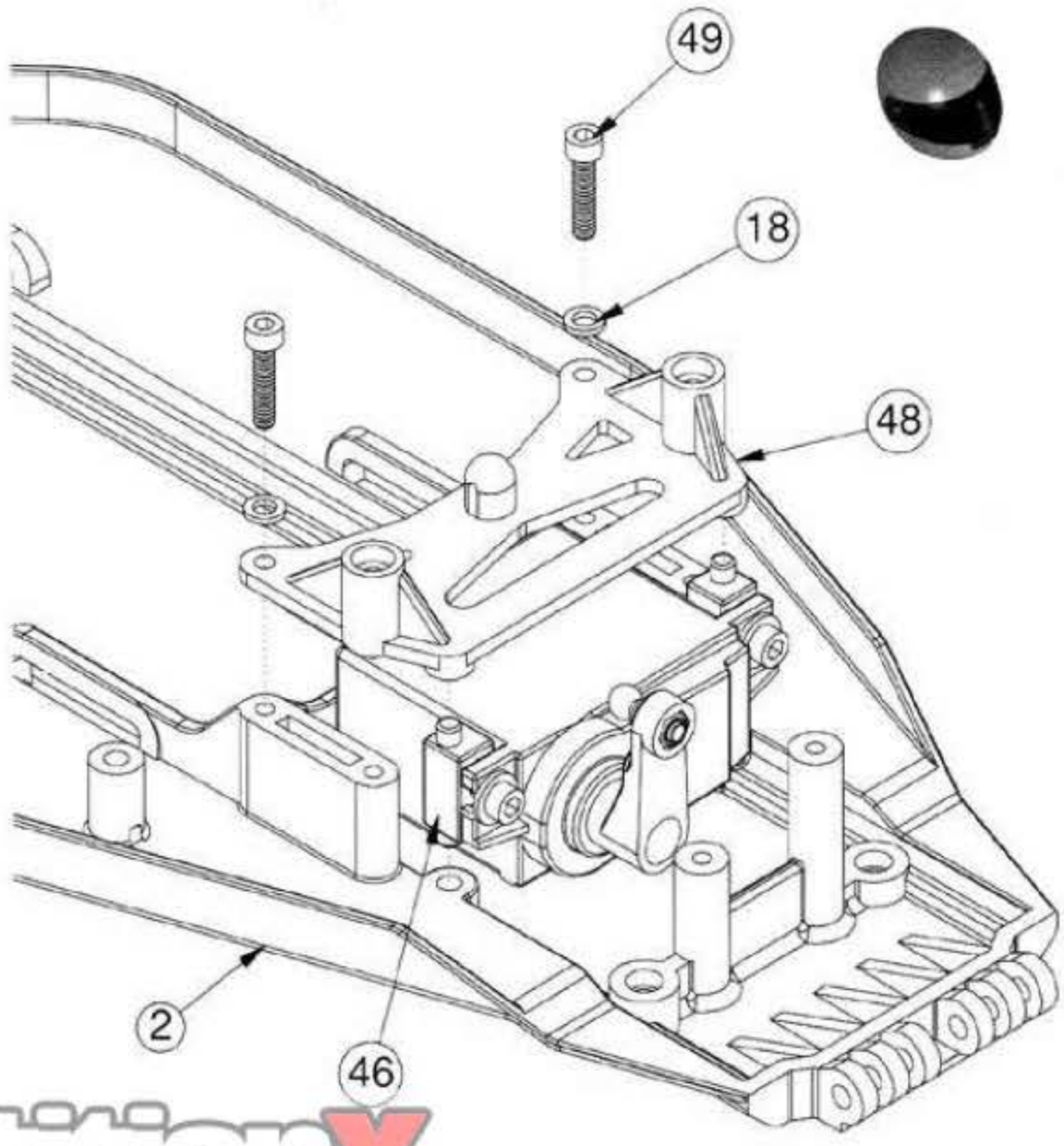
Figure 18



❑ Step 21. Place the servo, with servo mounting posts (46) attached, into the chassis (2). Align the pins in the mounting posts (46) with the holes in the chassis (2). Mount the chassis brace (48) on top of the servo. The slots in the chassis brace (48) should align with the grooves in the chassis (2). Make sure that the pins in the mounting posts (46) are inserted into the chassis brace (48) and the chassis (2). Using two 4-40 x 1/2" cap head screws (49) and two ball stud washers (18), attach the chassis brace (48) as shown.

❑ Step 22. Tighten the screws (12) in the servo mounting posts (46)

⚠ **IMPORTANT NOTE:** Don't overtighten the screws in the servo mounting posts! The mounting ears on the servo can be damaged if these screws are overtightened.



CompetitionX
A WEB SITE FOR THE SERIOUS RACER

Figure 18

BAG B (Continued)

Figure 19

(50)

❑ Step 23. Thread a short plastic rod end (40) onto each end of the 4-40 x 5/8" threaded rod (50). Tighten both sides equally until the rod is the same length as the one shown in Figure 19B. Attach one end of the rod to the ball stud (23) in the servo arm (45) and the other to the ball stud (23) in the servo saver as shown in Figure 19.

Figure 19A

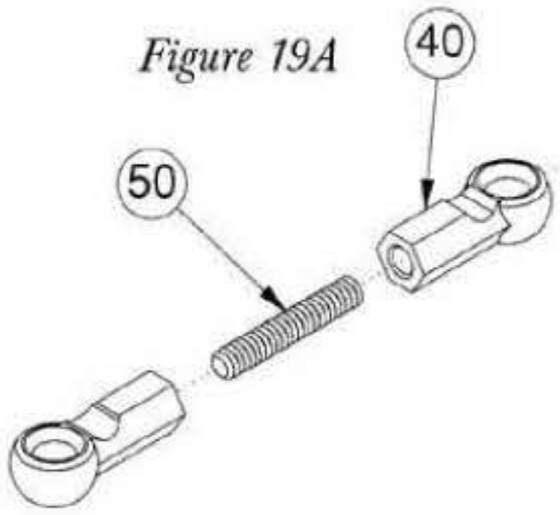
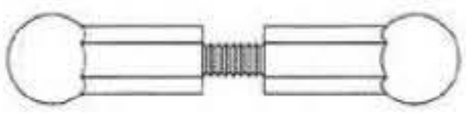


Figure 19B



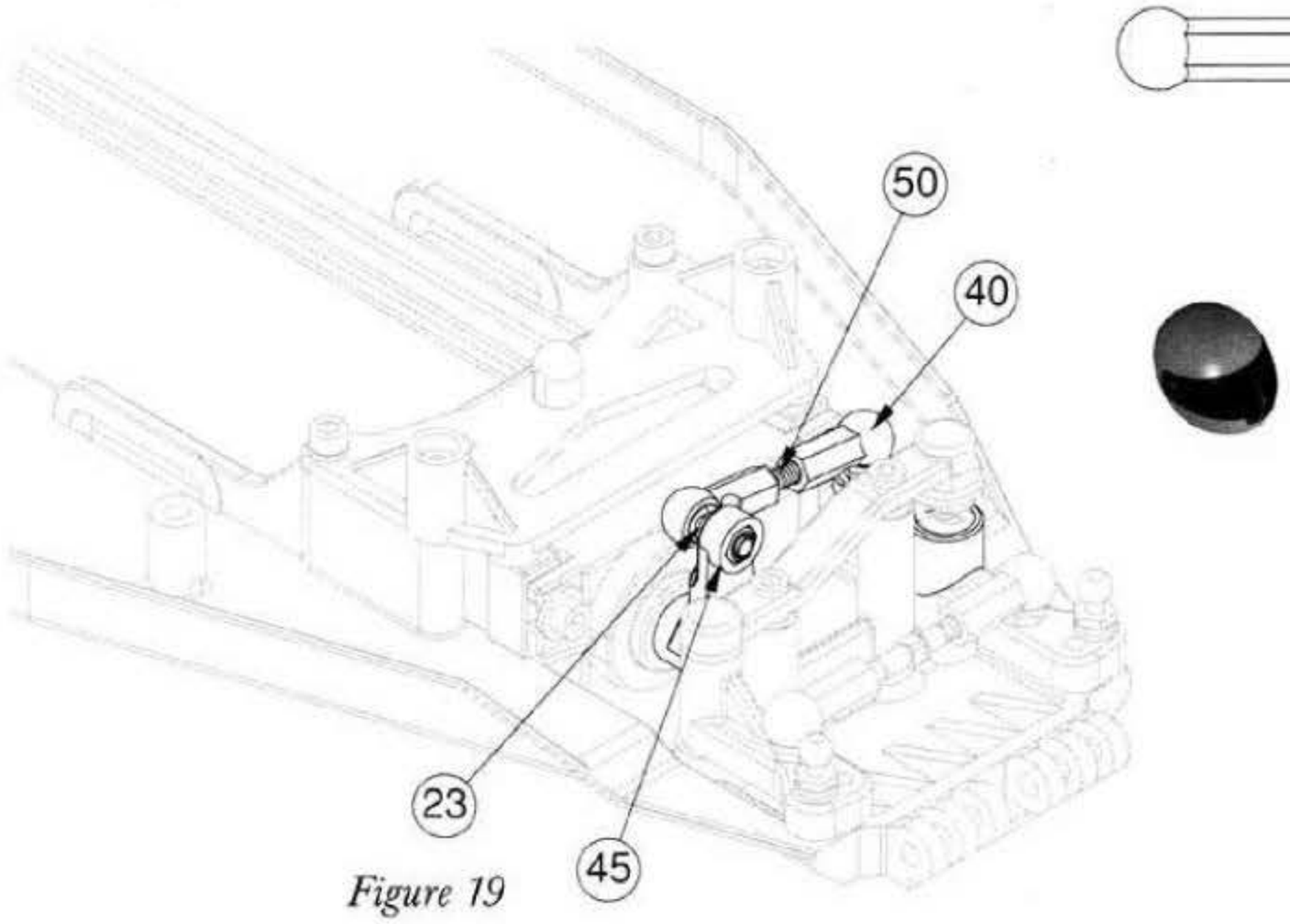
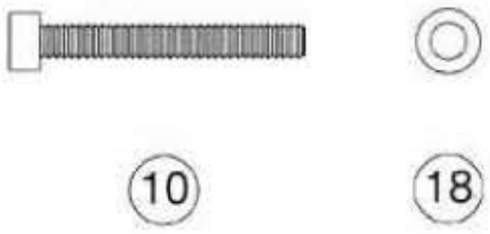


Figure 19

Figure 20



❑ Step 24. Rotate the front bulkhead (1) back until the front chassis stiffener (5) can be indexed into the chassis brace (48). Place a ball stud washer (18) over each of the two 4-40 x 7/8" cap-head screws (10). Insert a screw (10) through each of the two holes in the front chassis stiffener (5) and tighten.

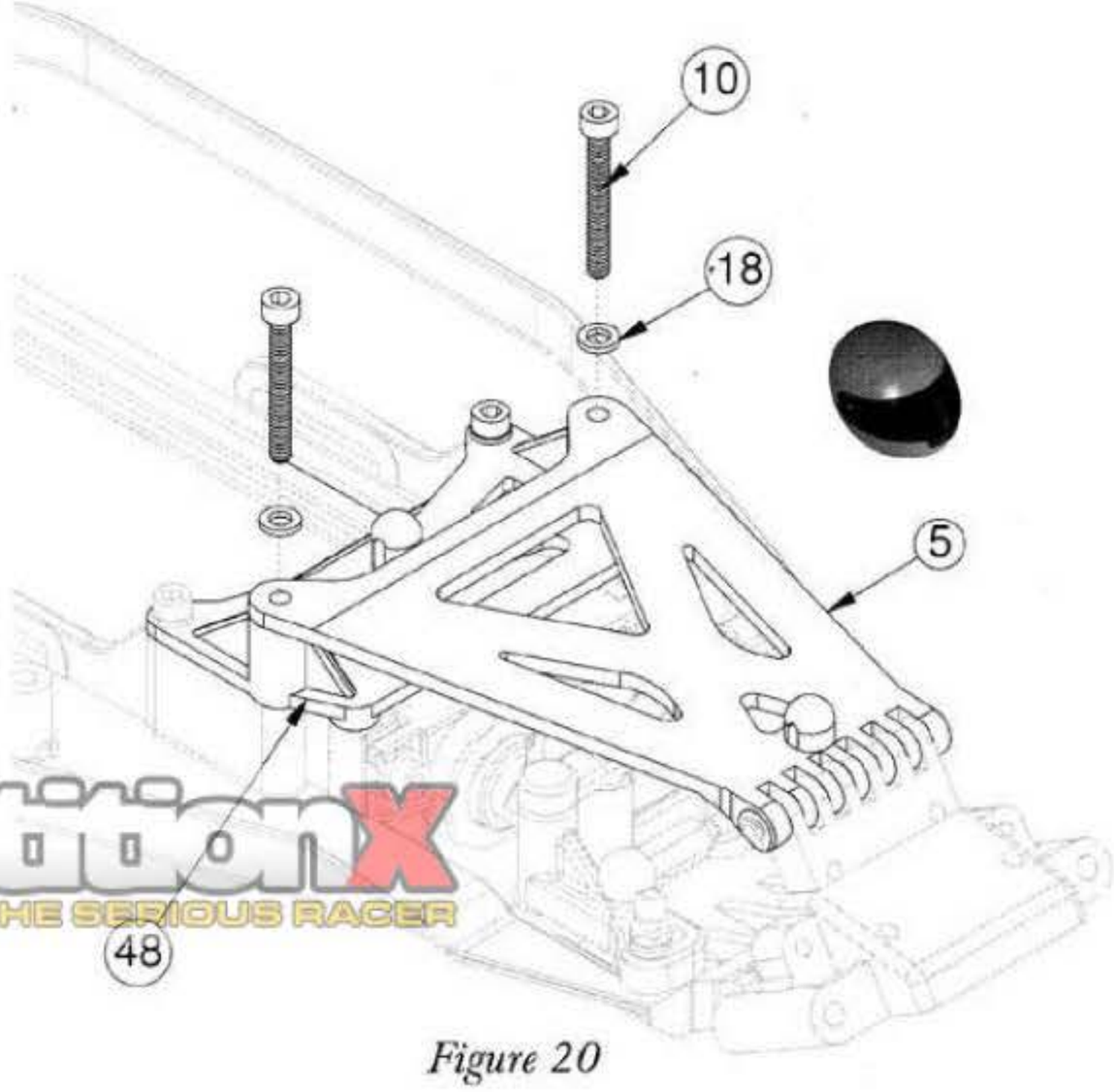
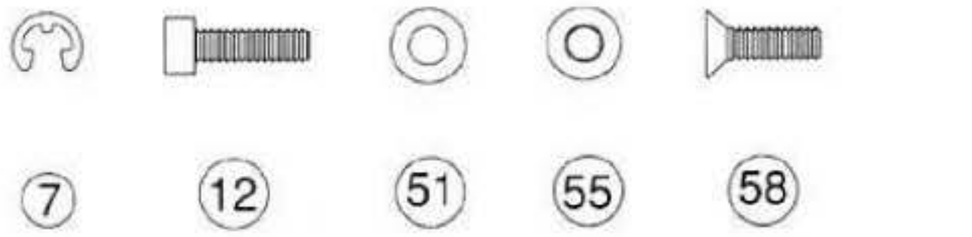


Figure 20

CompetitionX
A WEB SITE FOR THE SERIOUS RACER

BAG C

Figure 21



❑ Step 1. Insert a 1/8" x 1/4" washer (51) into the recessed area on each side of the rear pivot block (52).

❑ Step 2. Place the right rear suspension arm (53) over the right side of the rear pivot block (52). Line up the holes in the arm (53) with the holes in the pivot block (52) and attach them by inserting an inner rear hinge pin (54), E-clip groove forward, all the way through both parts. Install a 1/8" E-clip (7) to the front end of the hinge pin (54).

⚠ **IMPORTANT NOTE:** The lettering on the rear pivot block should face up.

❑ Step 3. Attach a 1/4" shock mount ball (55) to the middle hole of the shock mount bracket (56) with a 4-40 x 3/8" cap-head screw (12) as shown. Secure the shock mount bracket (56) to the front side of the rear suspension arm (53) with two 4-40 x 3/8" cap-head screws (12) as shown.

⚠ **IMPORTANT NOTE:** Ensure that the shock mount bracket is attached correctly. The outside holes should be higher than the inside holes. The shock mount ball should be to the rear side of the bracket.

❑ Step 4. Repeat Steps 1-3 for the left rear suspension arm (53).

❑ Step 5. Attach the rear pivot block (52) to the rear pivot plate (57) with four 4-40 x 3/8" flat-head screws (58).

⚠ **IMPORTANT NOTE:** Ensure that the pivot block is installed with the wider end to the rear.

❑ Step 6. Holding the chassis (2) upside down, install the rear pivot plate (57) so that the pivot plate (57) is flush with the chassis (2). Make sure that the four holes in the chassis (2) line up with the holes in the pivot plate (57). Secure the pivot plate (57) to the chassis (2) using four 4-40 x 1/2" cap-head screws (49).

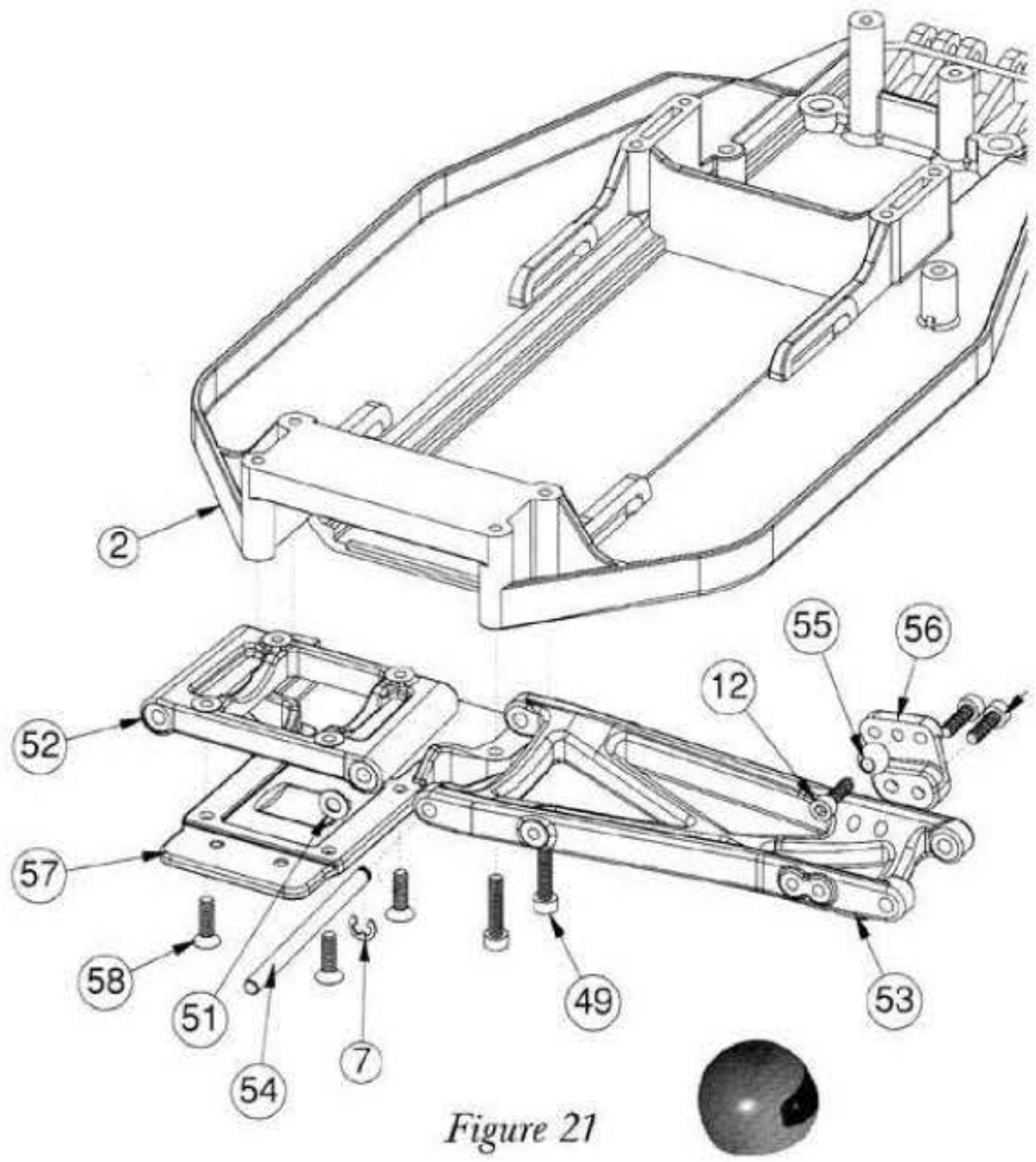
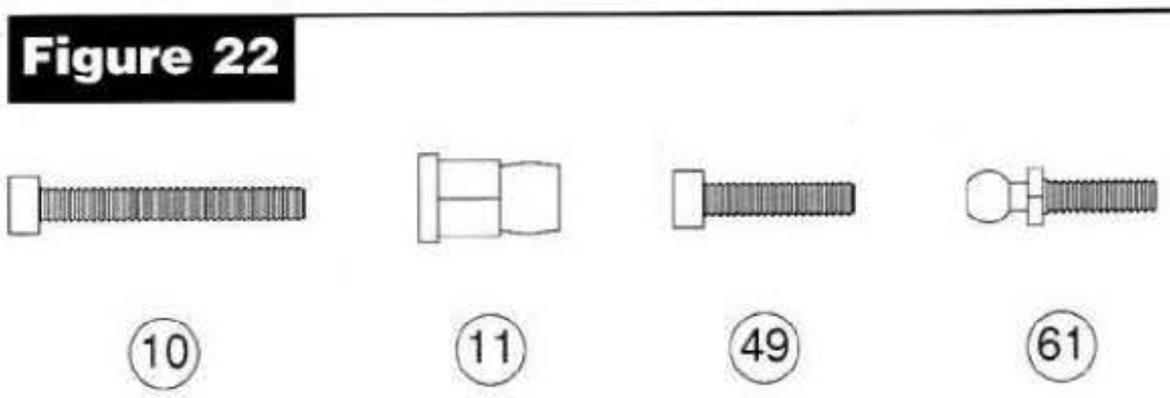


Figure 21

Figure 22



❑ Step 7. Insert two 4-40 x 7/8" cap-head screws (10) through the third hole in on each side of the rear shock tower (59) as shown. Thread the top shock mount bushings (11) onto the two screws (10) and tighten. The shock mount bushings (11) should be on the side of the shock tower (59) opposite the flat surface.

❑ Step 8. Attach the rear shock tower (59) to the rear bulkhead (60) by threading four 4-40 x 1/2" cap-head screws (49) through the upper holes in the tower (59) as shown. This will mount the tower (59) in the lowest position.

❑ Step 9. Thread a 3/8" ball stud (61) into the #5 hole on each side of the rear bulkhead (60) *See Figure 22A*. Place a "foam thing" (31) over each of the two ball studs (61).

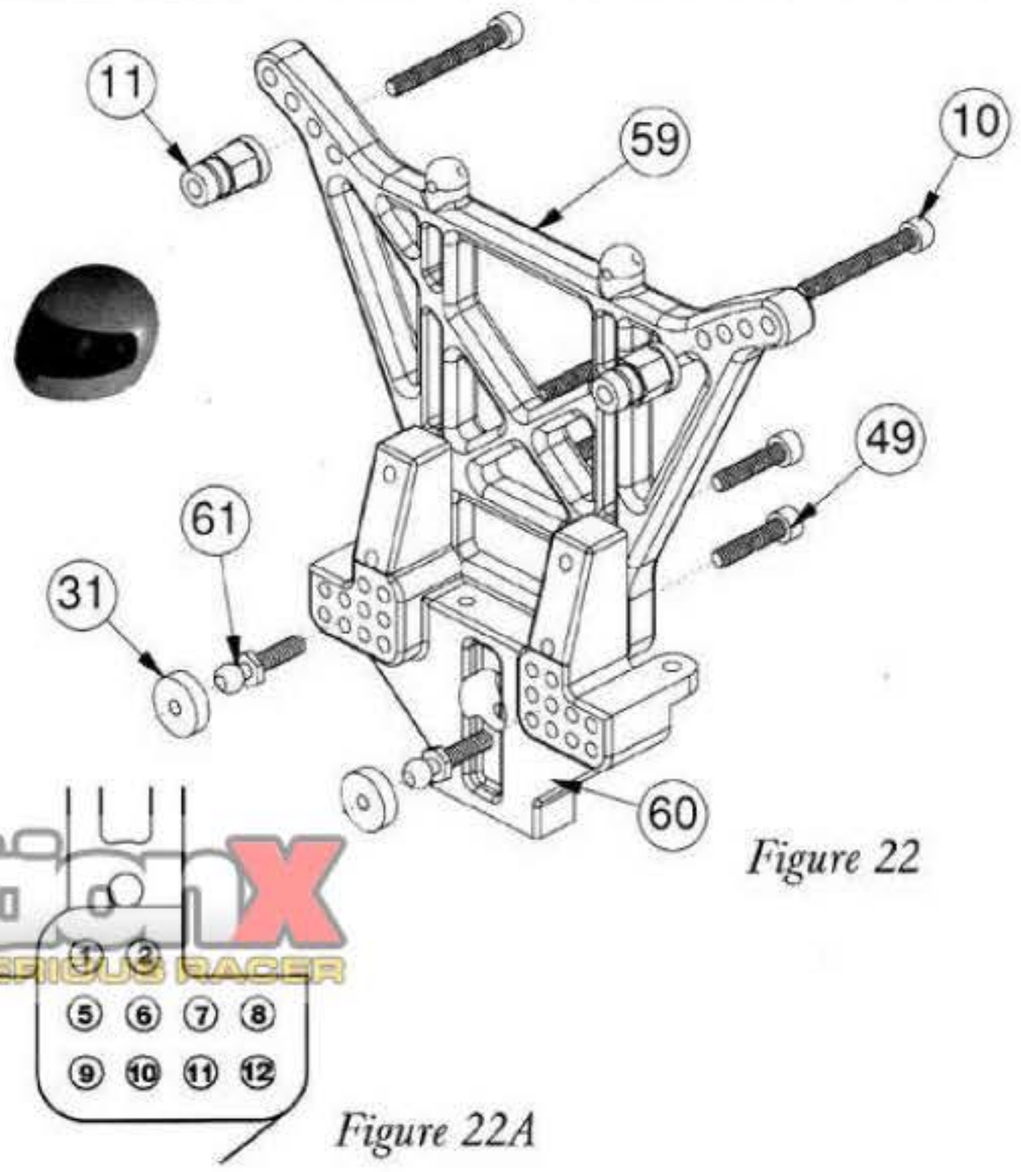


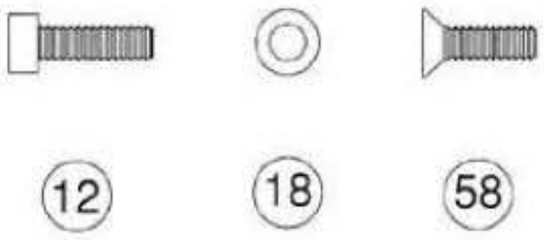
Figure 22

Figure 22A

CompetitionX
A WREN BRAND FOR THE SERIOUS RACER

BAG C (Continued)

Figure 23



❑ Step 10. Place the rear bulkhead (60) into the top, forward area of the rear pivot plate (57). Make sure that the bulkhead (60) is all the way down and that the mounting ears are flush with the chassis (2). Thread two 4-40 x 3/8" flat-head screws (58) through the pivot plate (57) and into the rear bulkhead (60). Do not tighten these screws yet.

❑ Step 11. Place a ball stud washer (18) over two 4-40 x 3/8" cap-head screws (12) and partially thread them through the two ears in the top of the bulkhead (60), into the chassis (2). Now tighten all four screws starting with the flat-head screws (58).

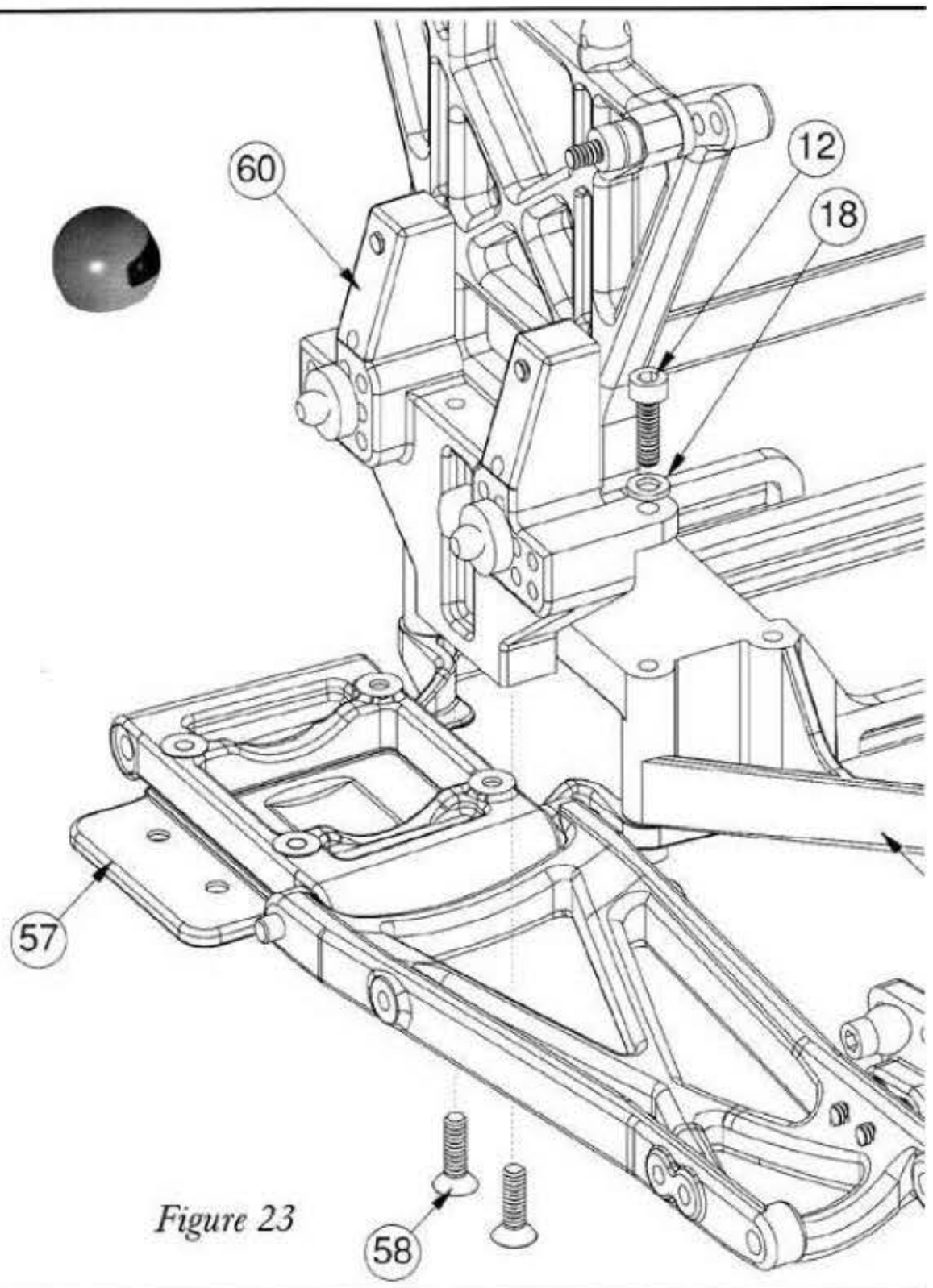


Figure 23

Figure 24

❑ Step 12. Apply a thin coat of white thrust bearing/assembly grease (62) to the outside of the CVD yoke (63). Insert the greased CVD yoke (63) into the large hole in the CVD rear axle (64) so that the hole in the CVD yoke (63) can be seen through the slots in the CVD rear axle (64).

❑ Step 13. Place the CVD dogbone (65) over the CVD rear axle (64). Align the holes in the CVD dogbone (65) with the hole in the CVD yoke (63). Secure all three parts by inserting a 1/16" x 7/16" (solid) pin (66) through the holes in the CVD dogbone (65), the slots in the CVD rear axle (64), and the hole in the CVD yoke (63).

❑ Step 14. Center the pin (66) in the CVD dogbone (65) and secure it by threading a 4-40 setscrew (67) into the end of the CVD yoke (63). Thread-lock compound (68) should be applied to the setscrew (67) before installing it.

❑ Step 15. Repeat Steps 12-14 for the second CVD assembly.

⚠ **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 truck to stop running.

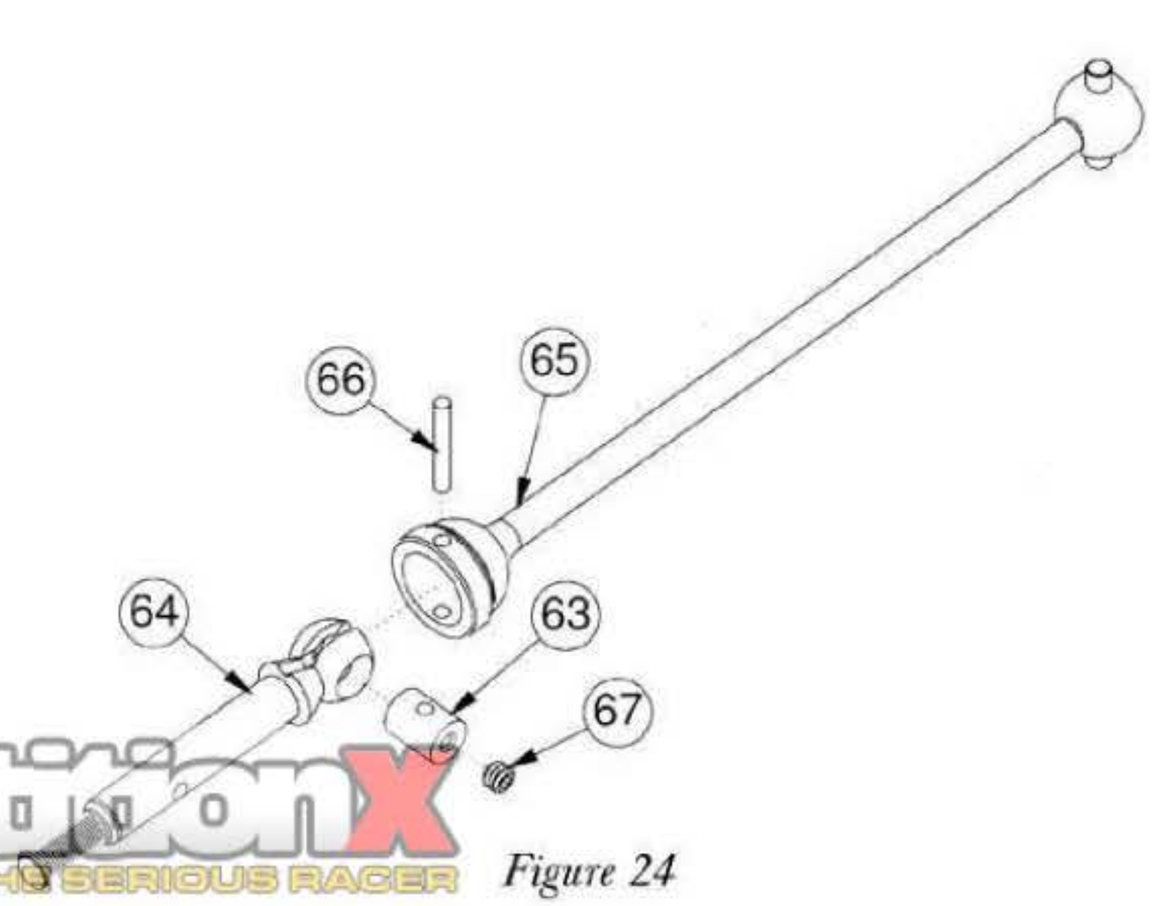
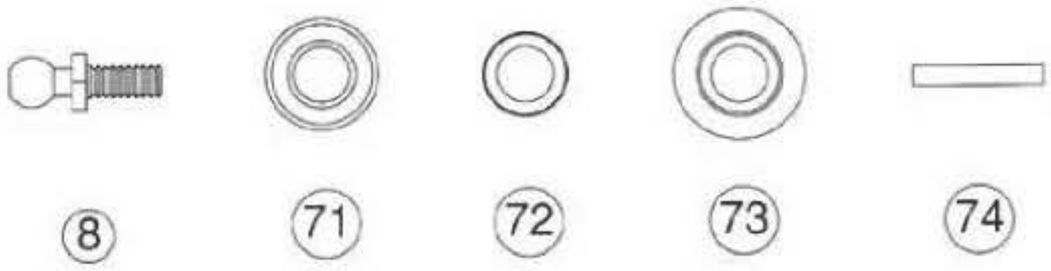


Figure 24

CompetitionX
A WEB SITE FOR THE SERIOUS RACER

BAG C (Continued)

Figure 25



❑ Step 16. Thread a 1/4" ball stud (8) into the 'B' hole in the right rear hub (70), from the front (the side with the letter).

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

❑ Step 17. Place a "foam thing" (31) over the ball stud (8).

❑ Step 18. Press a 3/16" x 3/8" bearing (71) into the inside of the right rear hub (70). Slide a CVD rear axle (64) through the bearing (71) in the rear hub (70).

**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 (72) over the CVD rear axle (64) – from the outside – against the inside of the bearing (71). Place a second 3/16" x 3/8" bearing (71) over the CVD rear axle (64) and press the bearing (71) into the outside of the rear hub (70).

**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 a outer rear axle spacer (73) over the CVD rear axle (64), against the outside bearing (71). The small side of the spacer (73) should be positioned next to the bearing (71).

❑ Step 21. Secure the CVD rear axle (64) and the spacer (73) by inserting a 1/16" x 7/16" (spirol) pin (74) through the small hole in each of the CVD rear axle (64). The pin (74) should be centered in the CVD rear axle (64).

❑ Step 22. Repeat Steps 16-21 for the left rear hub (69).

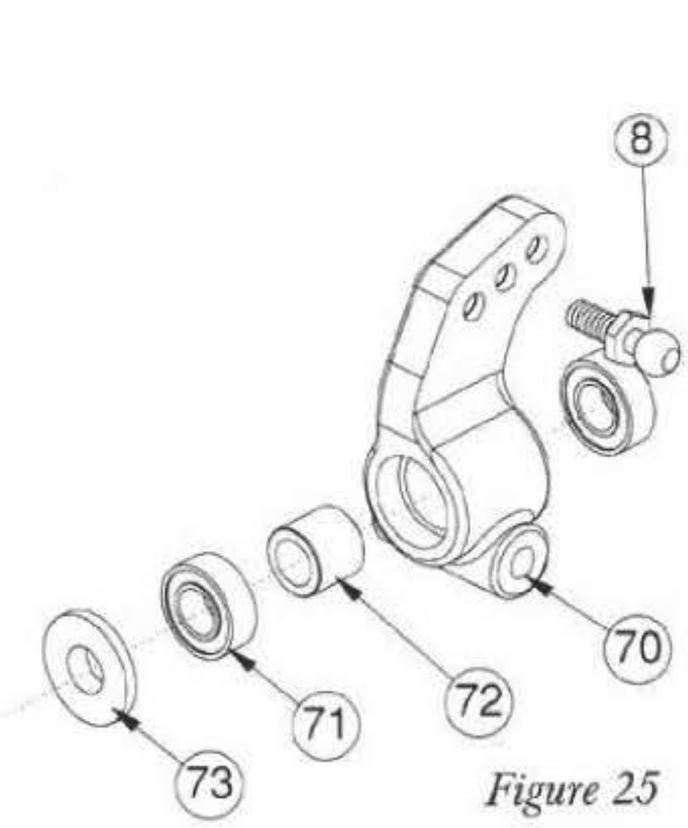


Figure 25

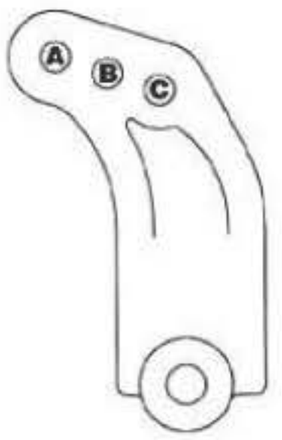


Figure 25A

Figure 26

6 7 75

❑ Step 23. Place the right rear hub (70) between the outer rails of the right rear suspension arm (53). Be sure that the ball stud (8) is towards the front. Position a rear hub spacer (75) between the hub (70) and the suspension arm (53) on each side of the hub (70).

❑ Step 24. Insert a 1/8" hinge pin (6) into the suspension arm (53), through each of the two spacers (75) and rear hub (70). Secure the hinge pin (6) with two 1/8" E-clips (7)

❑ Step 25. Repeat Steps 23 and 24 for the left hub (69) and left rear suspension arm (53).

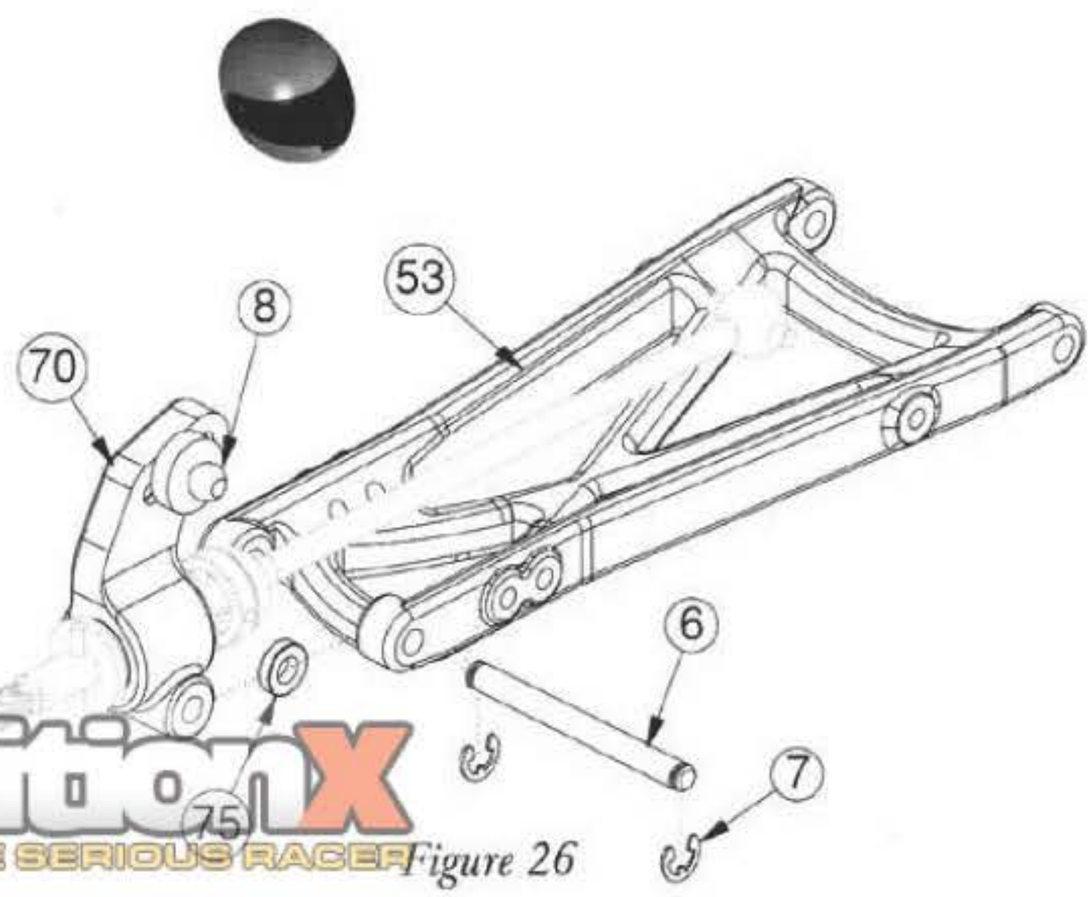


Figure 26

CompetitionX
A WEB SITE FOR THE SERIOUS RACER

BAG C (Continued)

Figure 27

76

❑ Step 26. Thread a plastic rod end (29) onto each end of a 2-5/8" titanium turnbuckle (76). Tighten both ends (29) equally until the rod is the same length as the one shown in Figure 27A. Make two of these rear camber link assemblies.

There is a small container/package of wax included with the titanium turnbuckles. It is recommended that this wax be applied to the threads of the turnbuckles before trying to thread the plastic rod ends onto the turnbuckles. The wax will help the rod ends to thread on much easier.

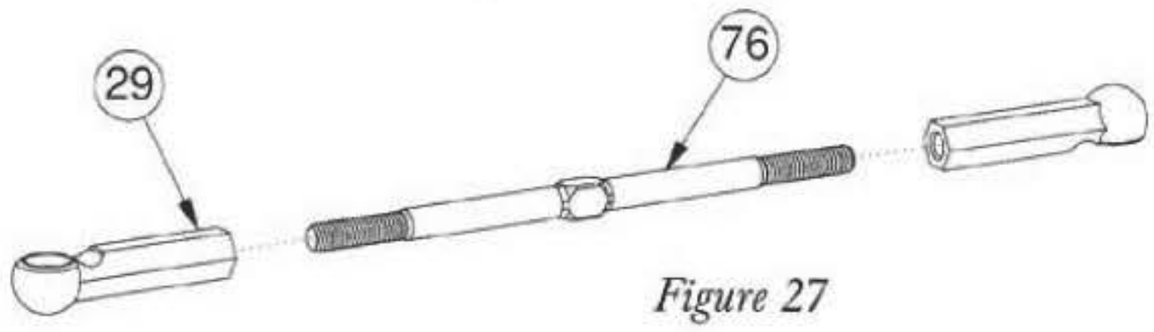


Figure 27

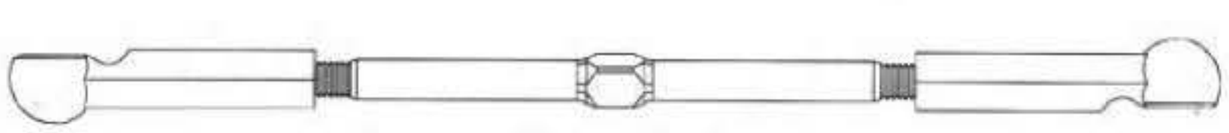


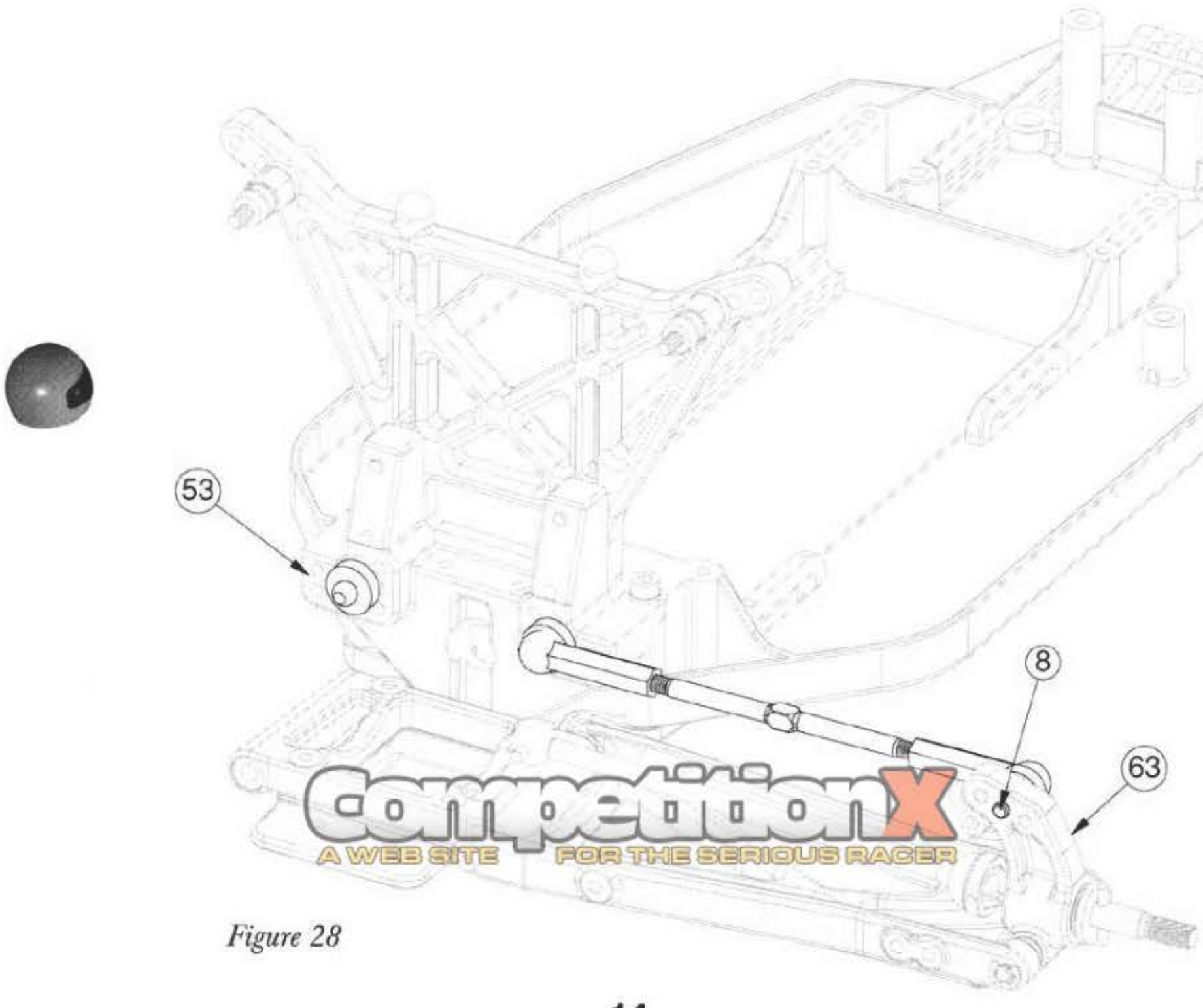
Figure 27A

Figure 28

❑ Step 27. Attach one end of a rear camber link assembly from Step 26 to the ball stud (8) in the right rear hub (70) and the other end to the ball stud (61) in the rear bulkhead (60).

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 truck.



CompetitionX
A WEB SITE FOR THE SERIOUS RACER

Figure 28

BAG D

STOP! Bag D requires that you pay close attention to the bearings involved in the assembly. Some bearings used during the assembly of this bag are very similar in size. It is important that you open the bags only as they are needed. The bearings that are of concern are packed in separate bags.

Figure 29

❑ Step 1. Insert a 4-40 mini locknut (22) into the hex area of the diff nut carrier (77). The thread-locking portion of the nut (22) should be to the outside.

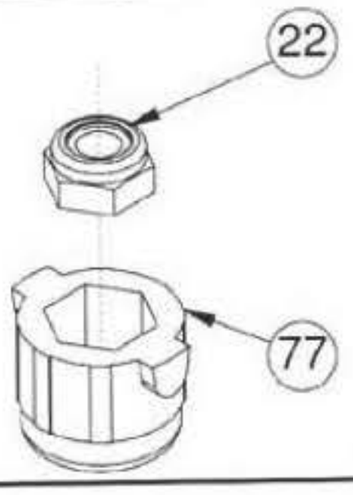
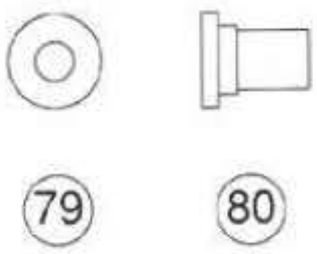


Figure 29

Figure 30



❑ Step 2. Locate the 5/64" Allen wrench (78) supplied with the kit. Place the diff nut carrier (77), nut side first, over the Allen wrench (78).

❑ Step 3. Stack the six beveled washers (79) over the wrench, next to the diff nut carrier (77). The washers (79) should all point the same direction and open away from the nut carrier (77).

❑ Step 4. Place the diff tube (80) over the wrench, big side first, so that it rests against the beveled washers (79).

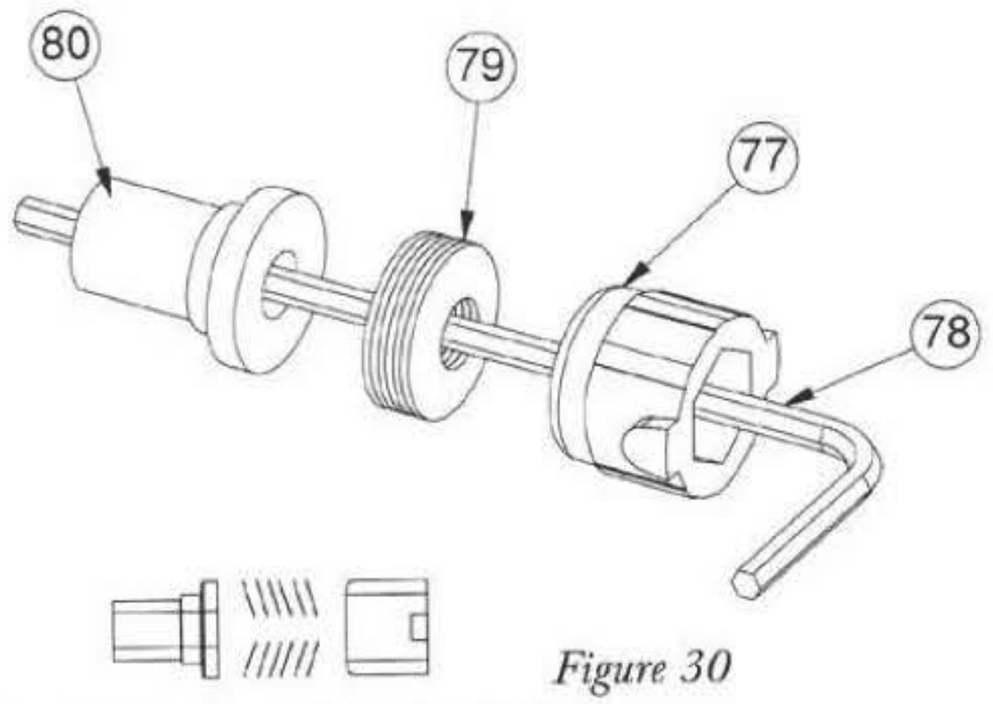


Figure 30

Figure 31

❑ Step 5. Insert all of the parts that are stacked on the wrench into one of the outdrive/diff halves (81). Line up the tabs on the diff nut carrier (77) with the slots in the outdrive (81). Make certain that the diff tube (80) is pressed all the way into the outdrive/diff half (81), and that it is straight. There is a small shoulder on the diff tube (80) that should be flush with the outer surface of the outdrive (81).

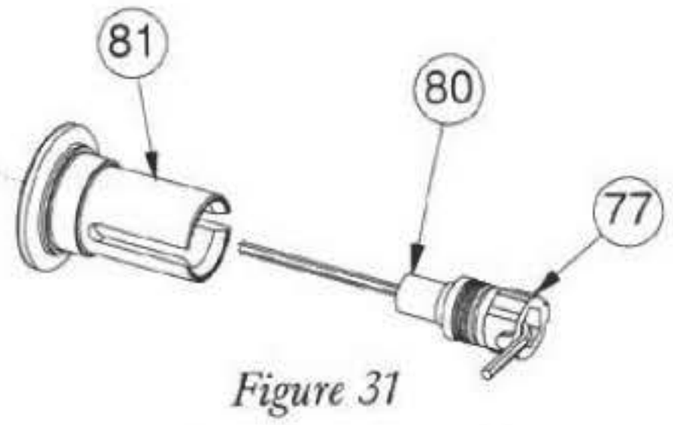
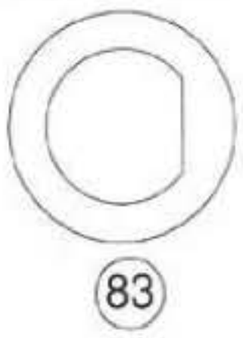


Figure 31

Figure 32



❑ Step 6. Apply a small amount of diff grease (clear) (82) to the outside ring of the outdrive/diff half (81). Attach a diff washer (83) to the outdrive (81) by lining up the flat section of the washer (83) with the flat section of the outdrive (81).

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

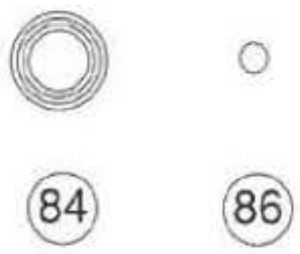
⚠ **IMPORTANT NOTE:** Do not glue the diff washers to the outdrive/diff halves. Doing so may not allow the washers to mount flat.

Figure 32

competitionX
A WEB SITE FOR THE SERIOUS RACER

BAG D (Continued)

Figure 33



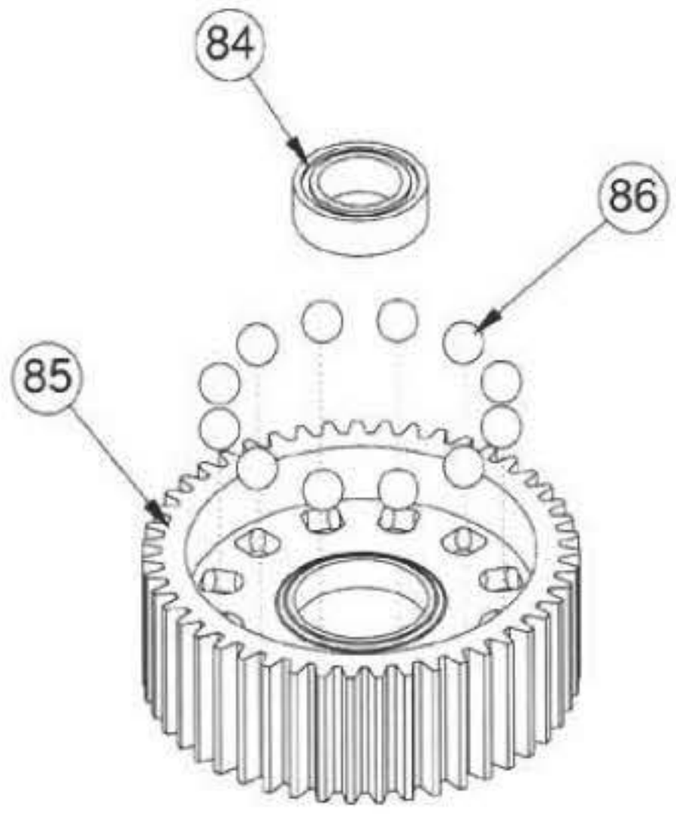


Figure 33

❑ Step 7. Insert a 5mm x 8mm bearing (84) into the center of the diff gear (85).

❑ Step 8. Press a 3/32" diff ball (86) into each of the small holes in the diff gear (85).

Figure 34

❑ Step 9. Apply a fairly heavy coat of clear diff grease (clear) (82) to the exposed side of the diff washer (83). Carefully place the diff gear (85) over the diff tube (80) so that the diff balls (86) and diff gear (85) rest against the diff washer (83).

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

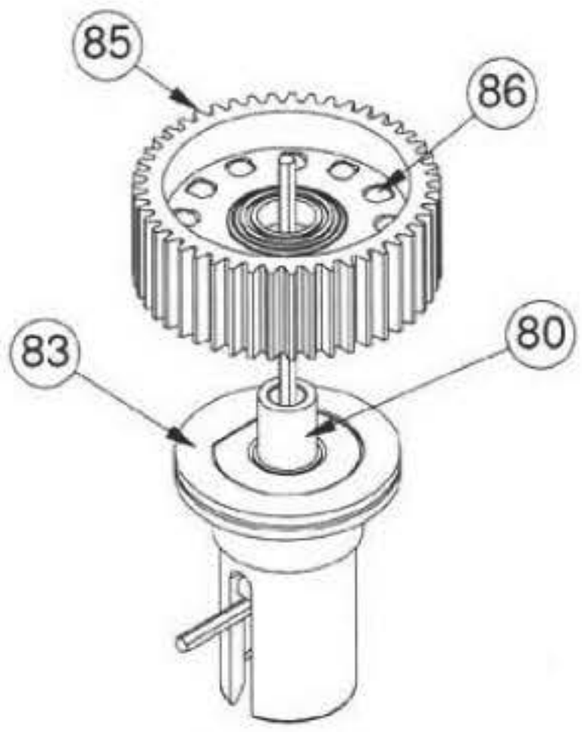
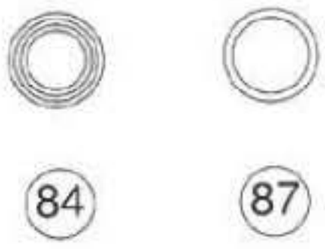
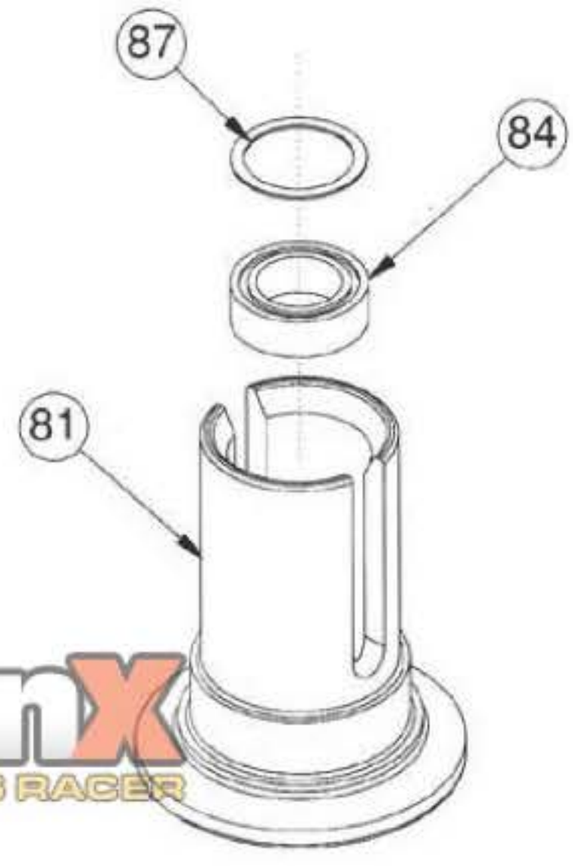


Figure 34

Figure 35





❑ Step 10. Insert a 5mm x 8mm bearing (84) into the second outdrive/diff half (81). Make sure that the bearing (84) is pushed all the way into the outdrive (81). The handle of a hobby knife or a pencil can be used to push the bearing (84) into place.

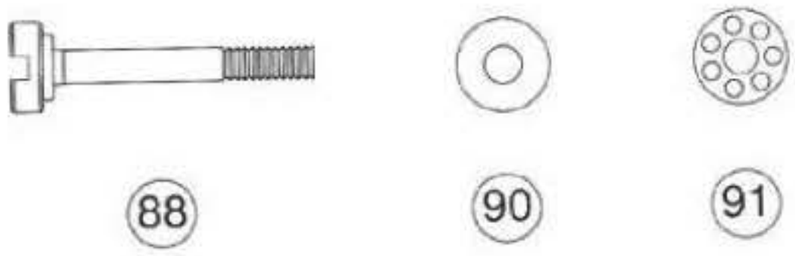
❑ Step 11. Drop the 1/4" x 5/16" shim (87) into the outdrive/diff half (81) on top of the 5mm x 8mm bearing (84). Make sure that the shim (87) is flat against the bearing (84). *Be extra careful not to bend this shim!*

competitionX
A WEB SITE FOR THE SERIOUS RACER

Figure 35

BAG D (Continued)

Figure 36



❑ Step 12. Locate the diff adjusting screw (88) and place the foam thrust bearing seal (89) over the shoulder of the screw (88).

❑ Step 13. Place one of the 3mm x 8mm thrust bearing washers (90) over the diff screw (88).

❑ Step 14. Grease the thrust washer (90) well with white thrust bearing/assembly grease (62) and place the 3mm x 8mm thrust bearing (91) over the screw (88) and next to the washer (90). Grease the exposed side of the thrust bearing (91) well with white thrust bearing/assembly grease (62) and place the second thrust washer (90) over the screw (88) and against the thrust bearing (91).

❑ Step 15. Very carefully insert the diff screw (88), with the thrust bearing assembly installed, into the outdrive (81). Be very careful not to bend or pinch the shim (87) while inserting the diff screw (88). Pull the threaded end of the diff screw (88) until the thrust bearing assembly rests against the shim (87) and bearing (84) inside of the outdrive (81).

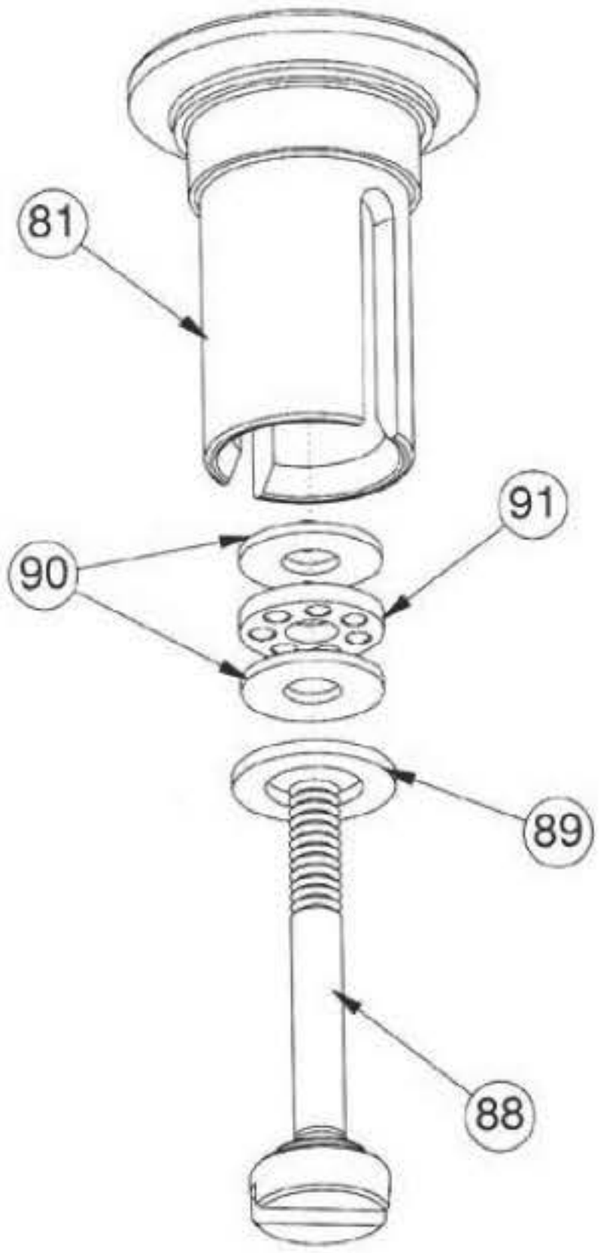
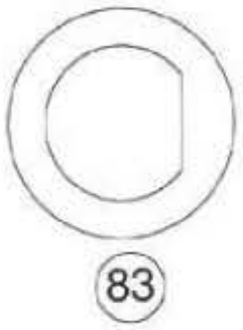


Figure 36

Figure 37



❑ Step 16. Locate the smallest of the Allen wrenches (78) and place it through the slot in the outdrive/diff half (81) containing the diff screw (88). Slide the wrench all the way against the screw (88). By handling the outdrive/diff half (81) with the wrench inserted, the diff screw (88) will be held in place while finishing assembly of the differential.

❑ Step 17. Apply a small amount of clear diff grease (82) to the outer ring of the outdrive (81). Install the second diff washer (83) again lining up the flat sections of the outdrive/diff half (81) with the flat sections in the washer (83). Apply a fairly heavy coat of grease (82) to the exposed side of the diff washer (83).

CompetitionX
YOUR WEBSITE FOR THE SERIOUS RACER

Figure 37

BAG D (Continued)

Figure 38

❑ Step 18. While holding the outdrive/diff half (81) with the Allen wrench inserted, carefully place the two outdrive/diff halves (81) together.

❑ Step 19. Make sure that the slot in the diff screw (88) is lined up with the slot in the outdrive/diff half (81) and that the Allen wrench is inserted in the slot in the diff screw (88).

❑ Step 20. Hold the diff so that the outdrive/diff half (81) with the diff nut carrier (77) is pointing up. Slowly turn the top diff half clockwise to thread the diff screw (88) into the 4-40 mini locknut (22) in the diff nut carrier (77). 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 insure proper seating of all the parts in the diff assembly.

❑ Step 21. Tighten the diff until the gear (85) cannot be turned while both of the outdrives (81) are being held. Final diff adjustment should be made after completion of the car.

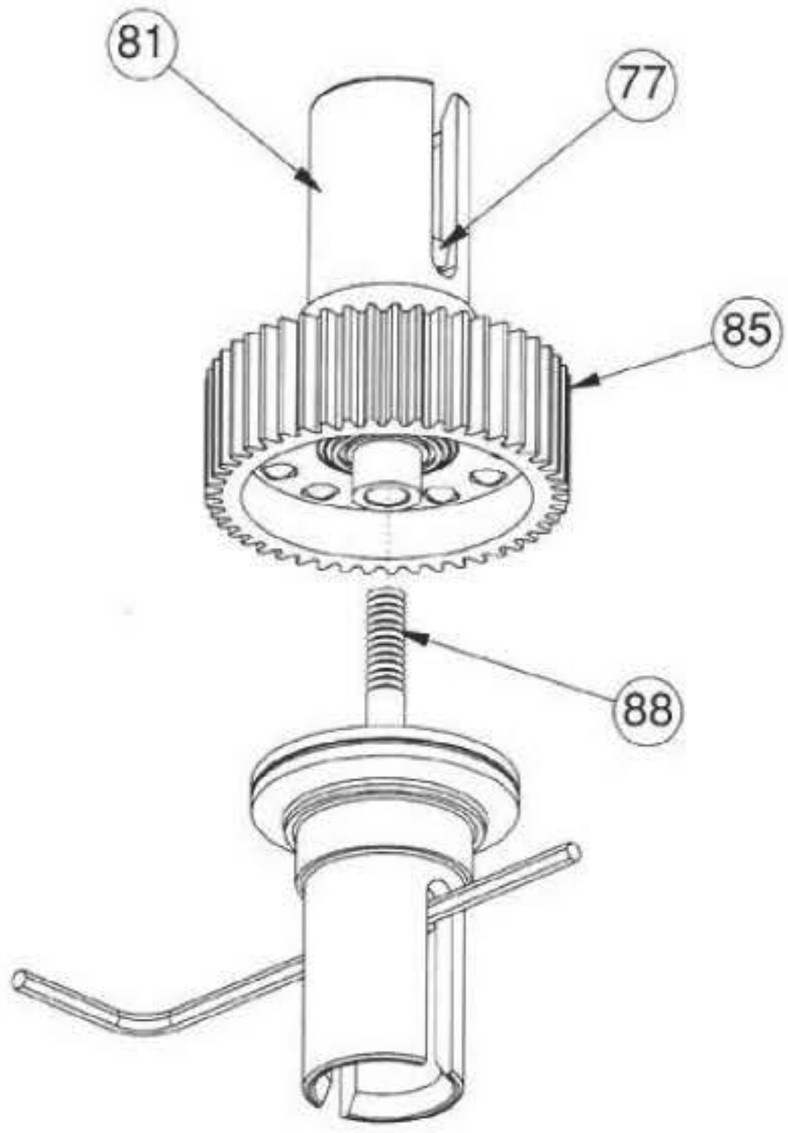


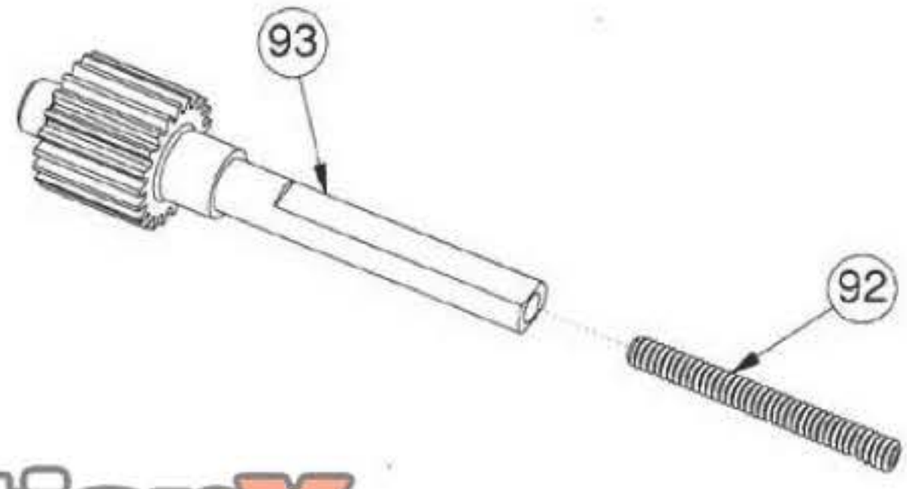
Figure 38

Figure 39

❑ Step 22. Thread the 4-40 x 1" setscrew (92) all the way into the threaded side of the aluminum top gear/slipper shaft (93). Make sure that the setscrew (92) is ***TIGHT!***

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

A small amount of liquid thread-lock will help to hold the setscrew securely in place.

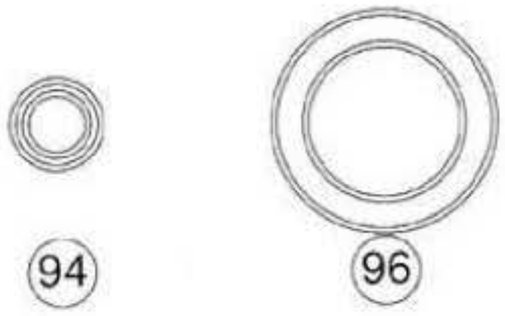


CompetitionX
A WEB SITE FOR THE SERIOUS RACER

Figure 39

BAG D (Continued)

Figure 40



❑ Step 23. Insert a 3/16" x 5/16" bearing (94) into the top bearing seat of the left gearbox half (95).

**NOTE: If the 3/16" x 5/16" bearing only has one Teflon™ seal (colored, woven looking) in it, position the seal to the outside of the gearbox half.*

❑ Step 24. Insert a 1/2" x 3/4" bearing (96) into the lower bearing seat of the left gearbox half (95).

**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 can damage the parts.

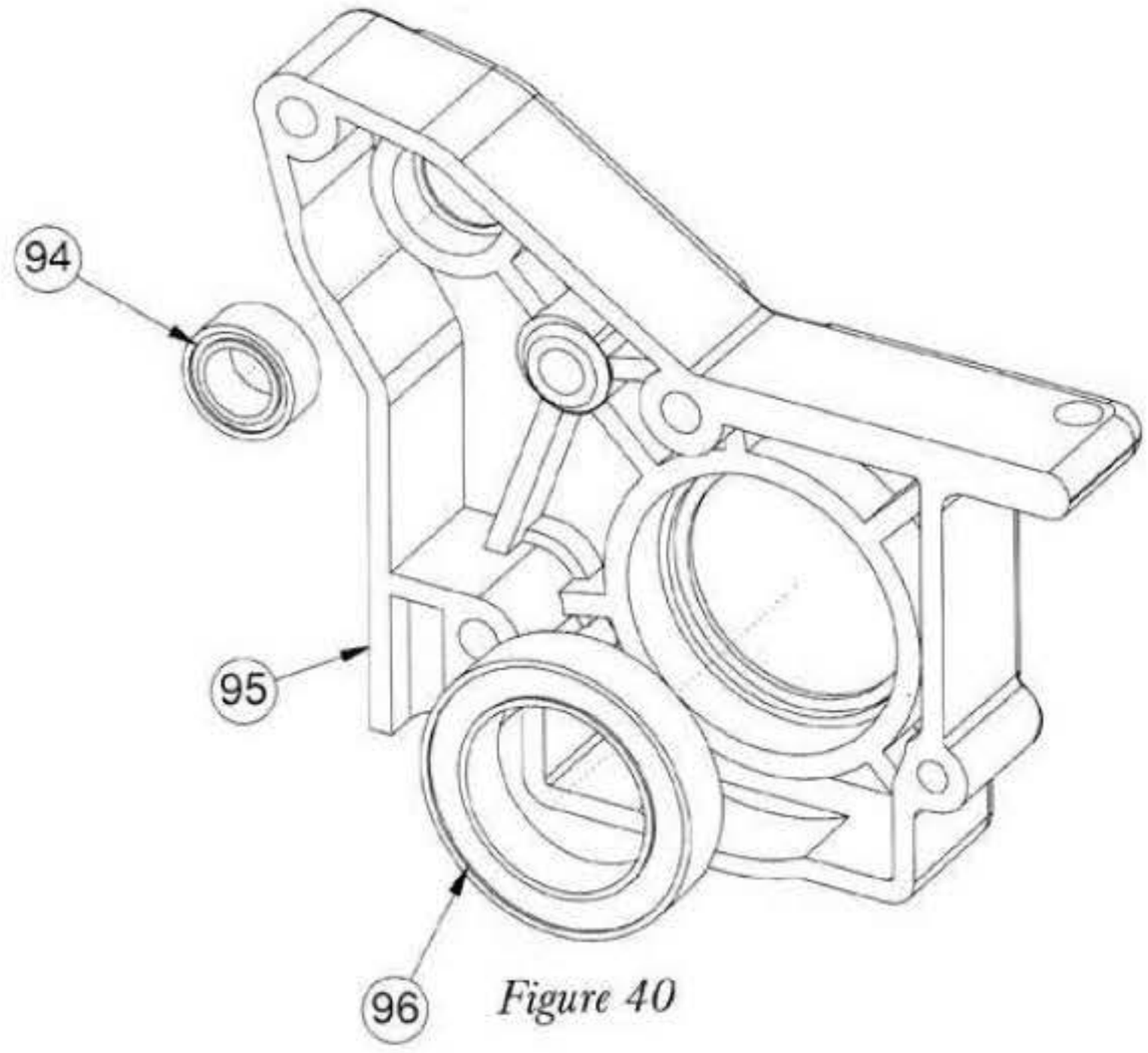
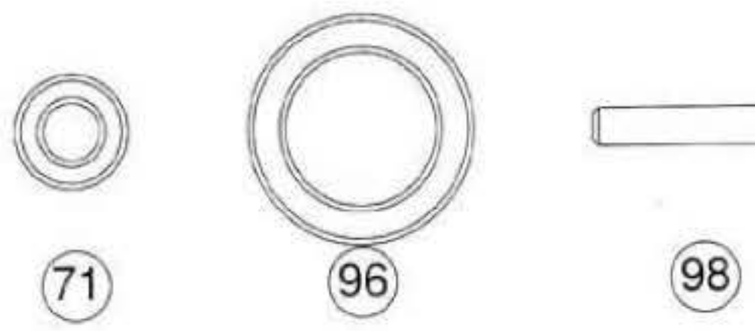


Figure 40

Figure 41



❑ Step 25. Insert a 3/16" x 3/8" bearing (71) into the top bearing seat of the right gearbox half (97). Carefully push the bearing (71) all the way into the bearing seat using a pen or the handle of a hobby knife. Care should be taken not to damage the seals on the bearing (71).

❑ Step 26. Insert a 1/2" x 3/4" bearing (96) into the lower bearing seat of the right gearbox half (97).

❑ Step 27. Press, and lightly tap, the idler gear shaft (98), into the hole in the center of the right gearbox half (97).

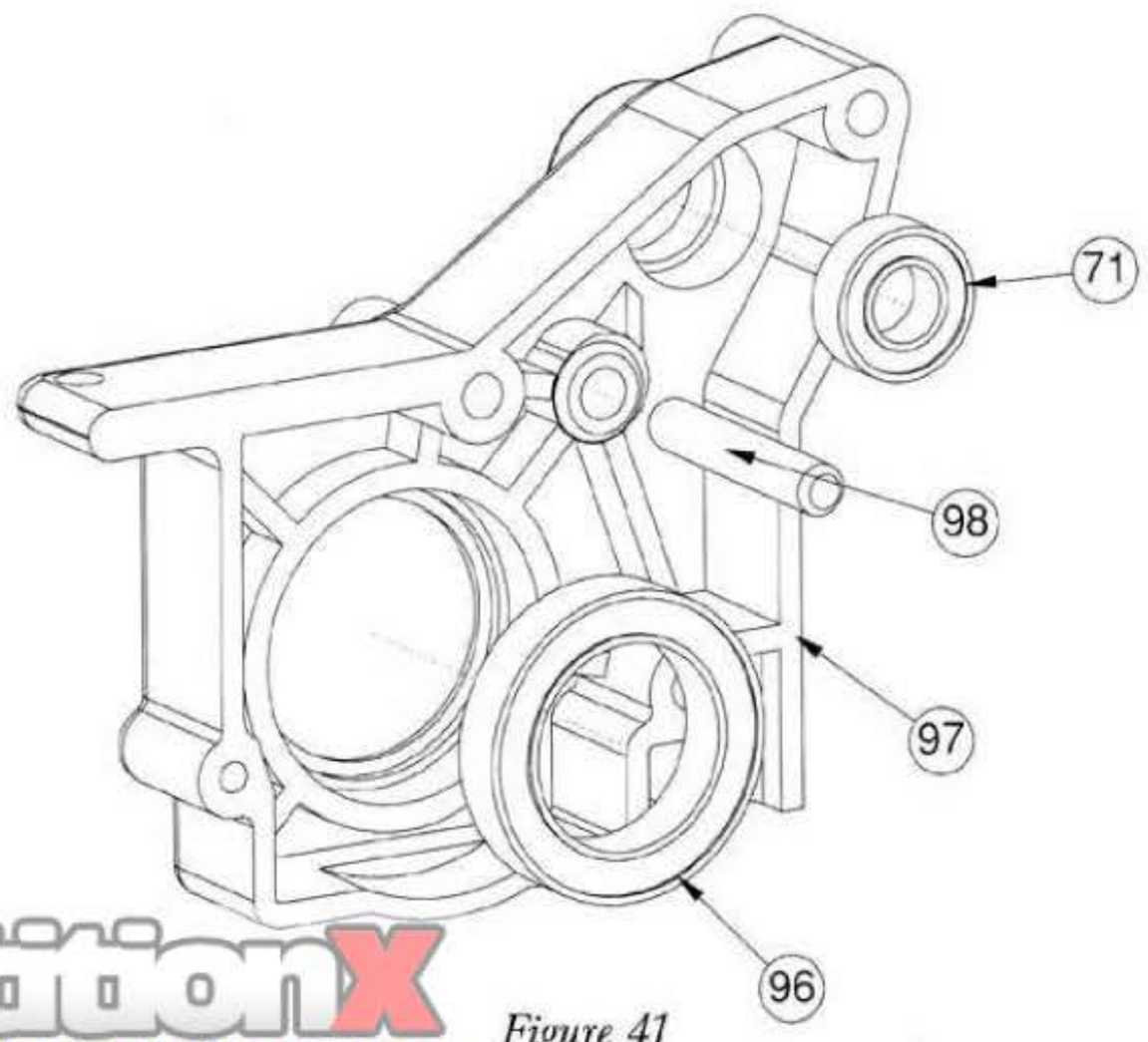


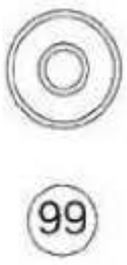
Figure 41

CompetitionX
A WEB SITE FOR THE SERIOUS RACER

scan courtesy of Vintagelosi.com

BAG D (Continued)

Figure 42



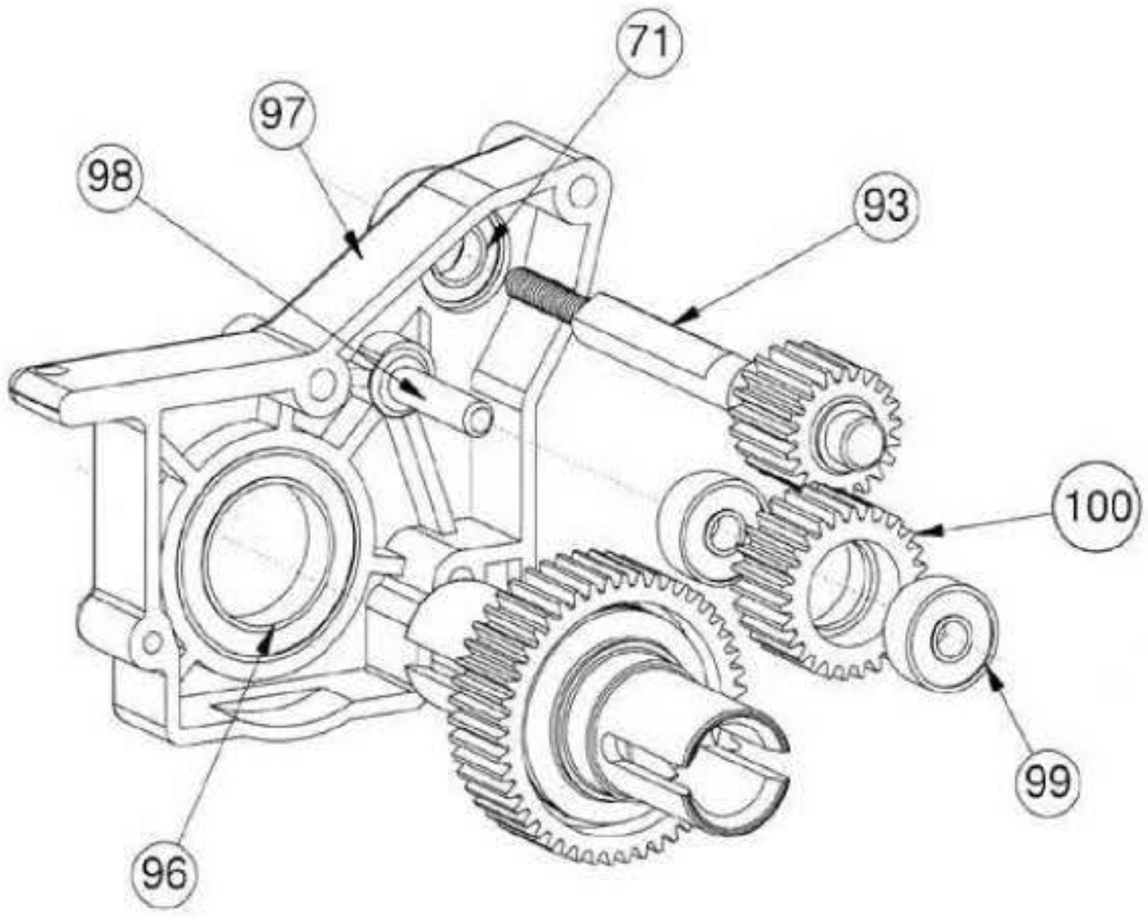
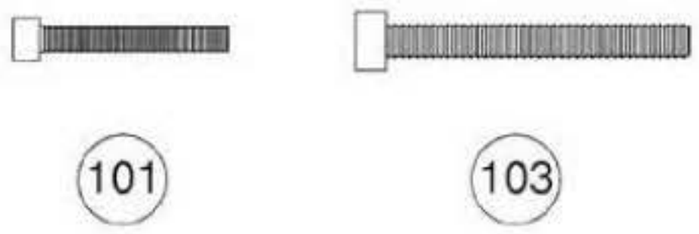


Figure 42

- ❑ Step 28. Insert the top gear/slipper shaft (93), threaded side first, through the bearing (71) in the right gearbox half (97).
- ❑ Step 29. Apply a thin coat of white assembly grease (62) to the teeth on the aluminum top gear/slipper shaft (93).
- ❑ Step 30. Insert a 1/8" x 3/8" bearing (99) into each side of the idler gear (100). Place the idler gear (100) over the idler gear shaft (98).
- ❑ Step 31. Insert the differential assembly into the 1/2" x 3/4" bearing (96) in the right gearbox half (97). Insert the differential diff nut carrier (77) side first.

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

Figure 43



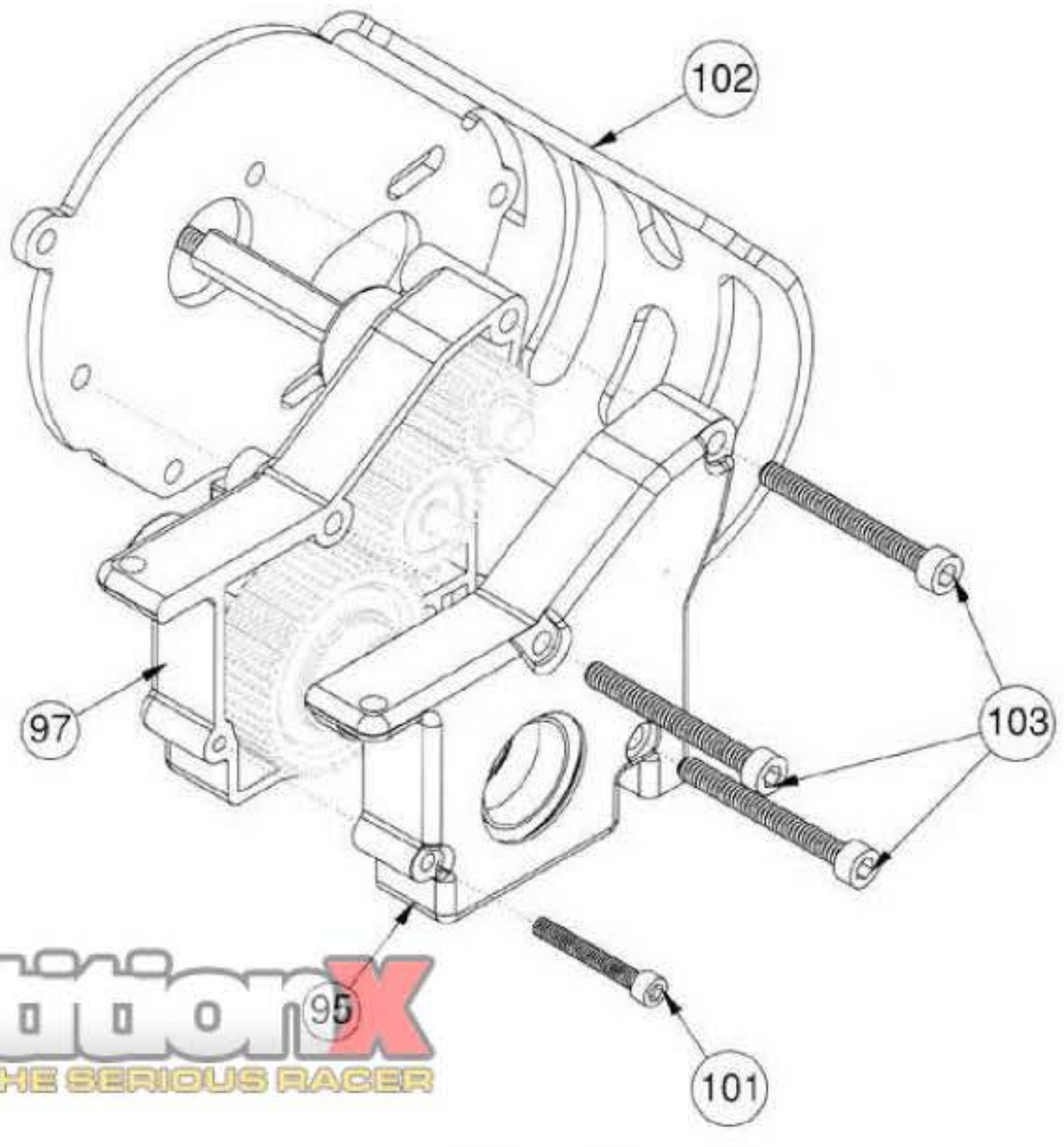


Figure 43

- ❑ Step 32. Apply a thin coat of white assembly grease (62) along the inside edge of the right gearbox half (97). This will help seal the gearbox once it is assembled.
- ❑ Step 33. Carefully place the left gearbox half (95) over the assembled right gearbox half (97).
- ❑ Step 34. Thread the 2-56 x 5/8" cap-head screw (101) into the lower, forward hole in the transmission housing from the left side.

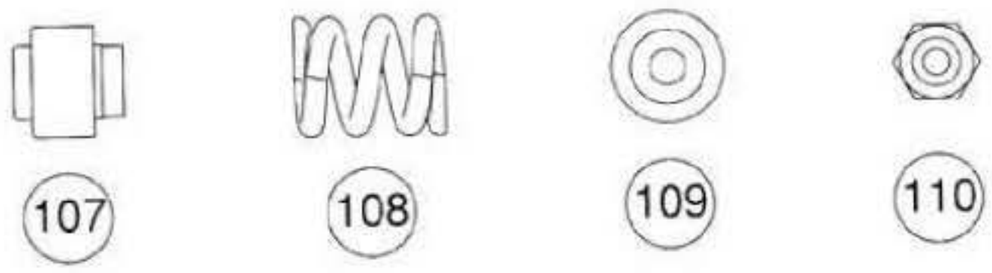
**NOTE: Do not tighten the screw yet. Just snug it up.*

- ❑ Step 35. Place the motor plate (102) against the right gearbox half (97) and line up the three holes in the transmission housing with the three holes in the motor plate (102).
- ❑ Step 36. Insert a 4-40 x 1" cap-head screw (103) into each of the three holes in the left gearbox half (95) and thread them into the motor plate (102). Tighten the three 4-40 x 1" screws (103), followed by the 2-56 x 5/8" cap-head screw (101).

ConnectionX
A WEB SITE FOR THE SERIOUS RACER

BAG D (Continued)

Figure 44



❑ Step 37. Slide the slipper back plate (104) over the slipper shaft (93), aligning the flat sections on the slipper shaft (93) with the flat sections of the back plate (104).

❑ Step 38. 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 39. Place the spur gear (106), pad side first, over the slipper shaft (93). 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 40. 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).

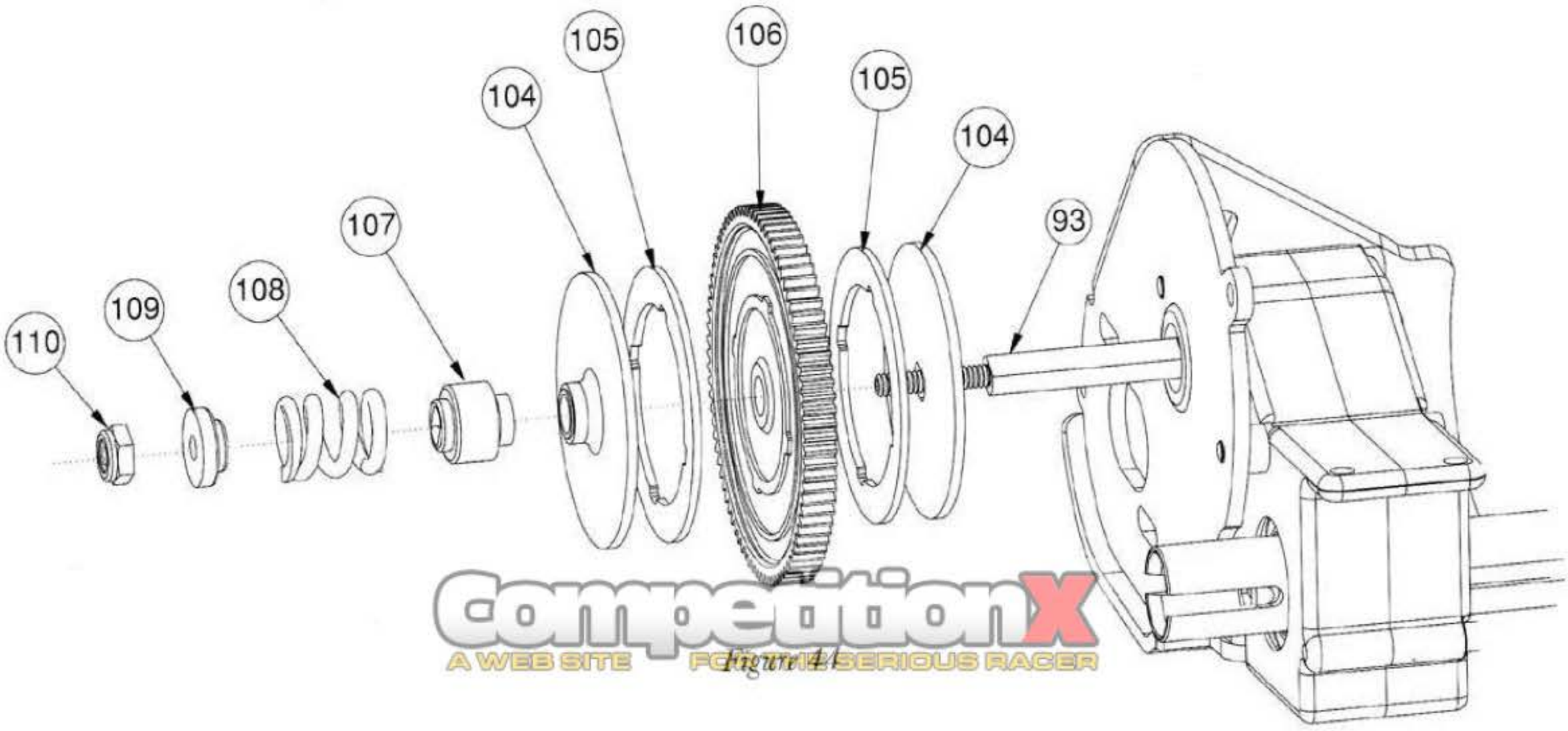
❑ Step 41. Place the second slipper back plate (104) over the slipper shaft (93) so that the large, flat surface of the back plate (104) rests against the slipper pad (105).

❑ Step 42. Slide the slipper spacer (107), long side first, onto the shaft (93) and against the outer slipper back plate (104).

❑ Step 43. Place the gold slipper spring (108) over the shaft (93), followed by the spring retaining washer (109) and secure with the 4-40 aluminum 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 44. 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.

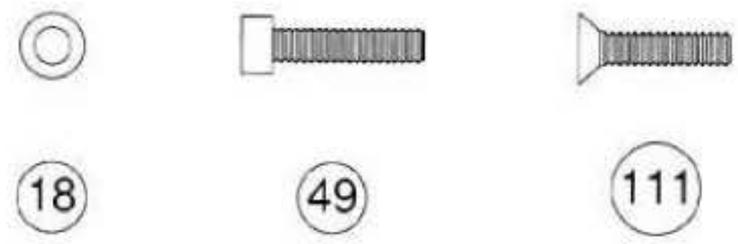


CompetitionX
A WEB SITE FOR THE SERIOUS RACER

Figure 44

BAG D (Continued)

Figure 45



❑ Step 45. Place the assembled chassis on a flat table so that the rear suspension arms (53) are flat and the chassis (2) is flat on the table. This will make installing the transmission a little easier.

❑ Step 46. Insert the CVD dogbones (65) into each of the outdrive/diff halves (81) and place the transmission into the rear pivot block (52).

❑ Step 47. Align the two forward holes in the transmission housing with the two holes in the rear bulkhead (60).

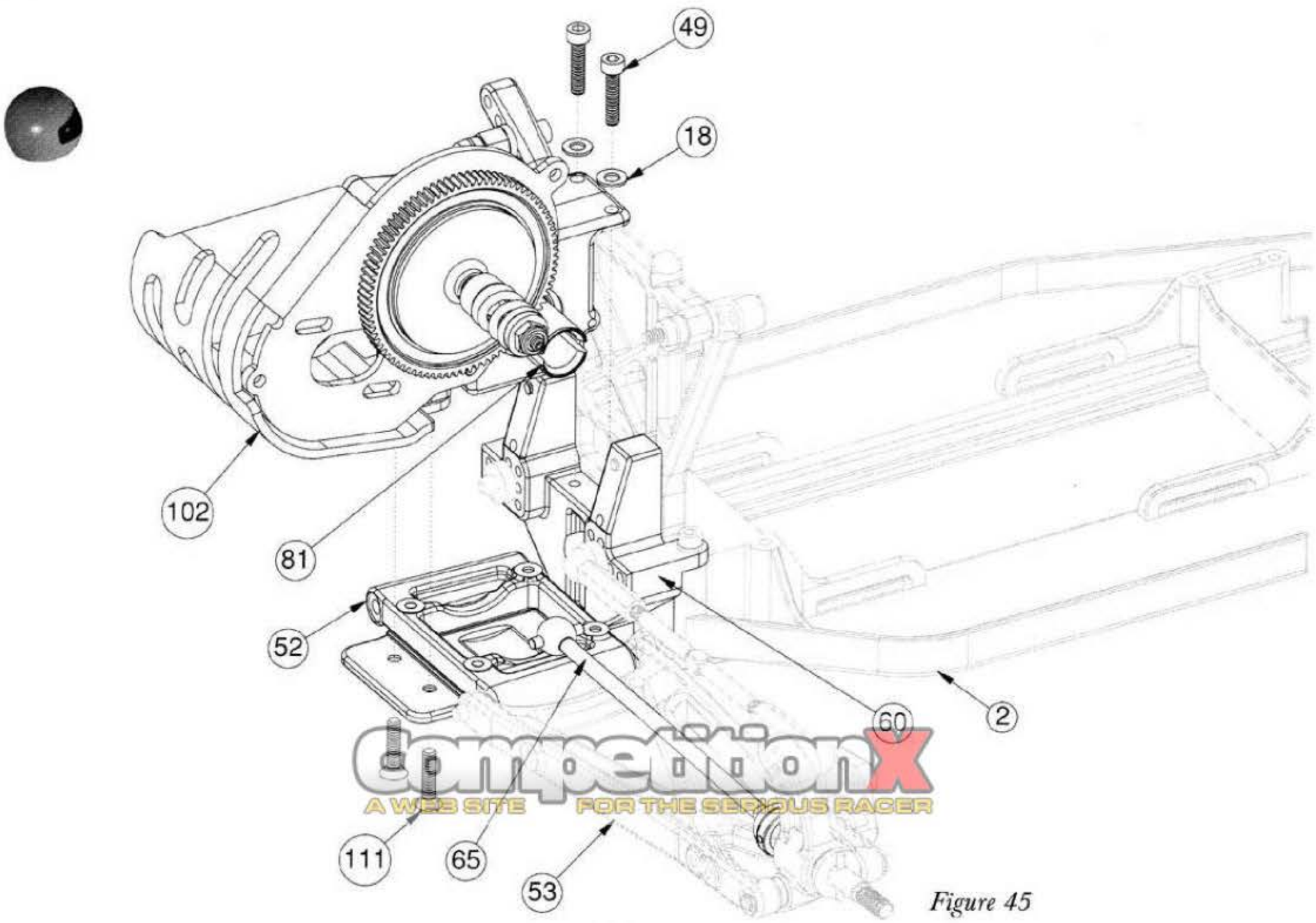
❑ Step 48. Place a ball stud washer (18) over each of the two 4-40 x 1/2" cap-head screws (49) and thread one through each of the two holes in the transmission housing and into the rear bulkhead (60).

**NOTE: Do not tighten the screws all the way yet! Leave the screw head about 1/16" above the transmission housing.*

❑ Step 49. Hold the rear arms (53) up so that the dogbones (65) stay in place, and turn the truck over. Apply a small amount of white assembly grease (62) to each of the two 4-40 x 1/2" flat-head screws (111). Thread the screws (111) through the two holes in the back of the rear pivot plate (57), through the motor plate (102), and into the transmission housing.

❑ Step 50. Tighten these two screws (111) all the way. Turn the truck back over, being careful to keep the dogbones in place, and tighten the other two screws (49).

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

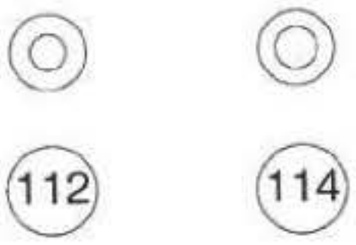


competitionX
A WEB SITE FOR THE SERIOUS RACER

Figure 45

BAG E

Figure 46



❑ Step 1. Place one shock O-ring (112) into the cartridge body (113), making sure that the O-ring (112) sits flat in the bottom of the cartridge body (113).

❑ Step 2. Insert the cartridge spacer (114) into the cartridge body (113) followed by a second O-ring (112).

❑ Step 3. Once the second O-ring (112) is inserted, and is flush with the top of the cartridge body (113), "snap" the cartridge cap (115) onto the cartridge body (113).

❑ Step 4. Make four cartridge assemblies.

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

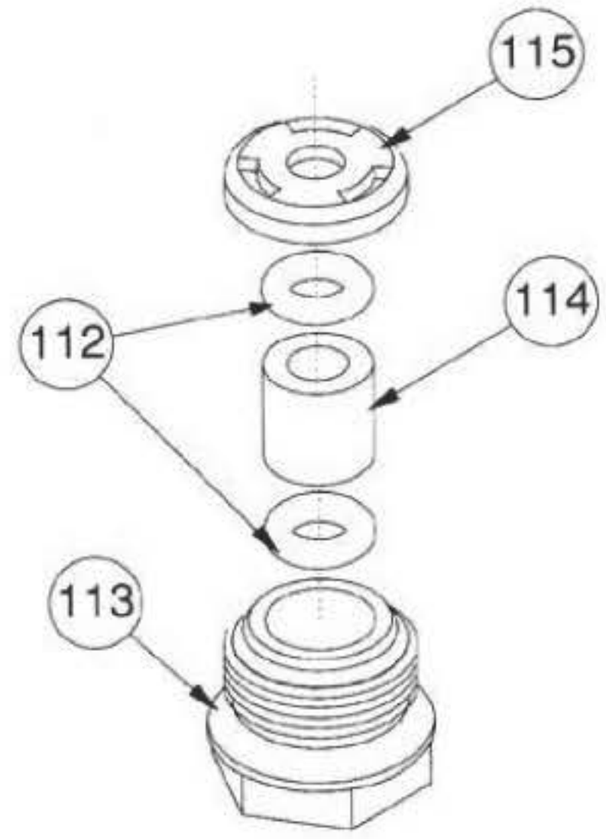
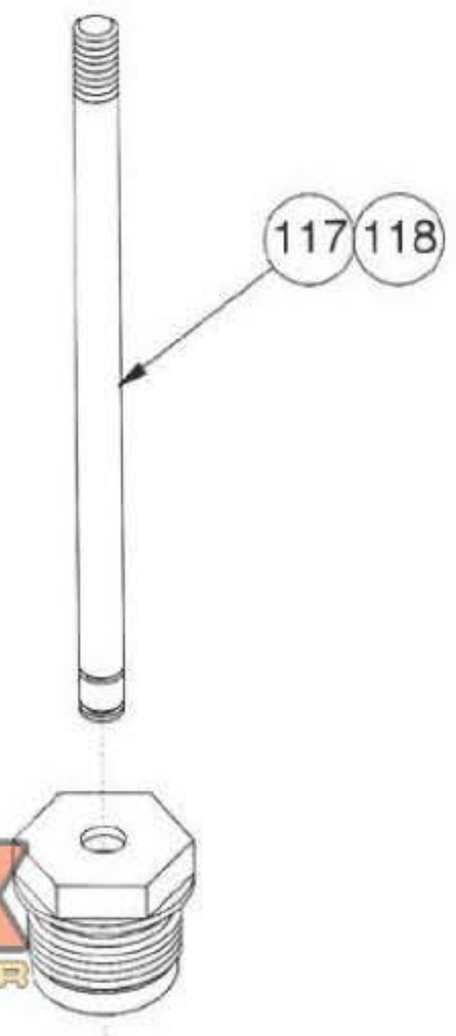


Figure 46

Figure 47

❑ Step 5. Place a drop of shock fluid (116) on the grooved end of each shock shaft [front (117), rear (118)] and slide a cartridge, hex end first, down the shock shaft (117), (118) toward the threads.

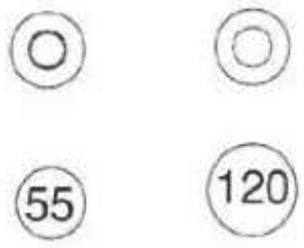


CompetitionX
A WEB SITE FOR THE SERIOUS RACER

Figure 47

BAG E (Continued)

Figure 48



❑ Step 6. Using needle-nose pliers, or small vise grips, grasp the front shock shaft (117) between the grooves and thread a shock end (119) onto the shaft (117). Thread the shock end (119) all the way onto the shaft (117) until the threads stop.

❑ Step 7. Repeat Step 6 for the second front shaft (117).

❑ Step 8. Before threading the shock ends (119) onto the rear shock shafts (118), place a 'B' shock spacer (120) *(larger of the two spacers, marked with a 'B')* over the shaft (118) and next to the cartridge.

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

❑ Step 9. Now, with the spacers in place, attach a shock end (119) to both rear shock shafts (118) as described in Step 6.

❑ Step 10. Carefully snap a 1/4" shock mount ball (55) into each of the shock ends (119) on the two front shock shafts (117).

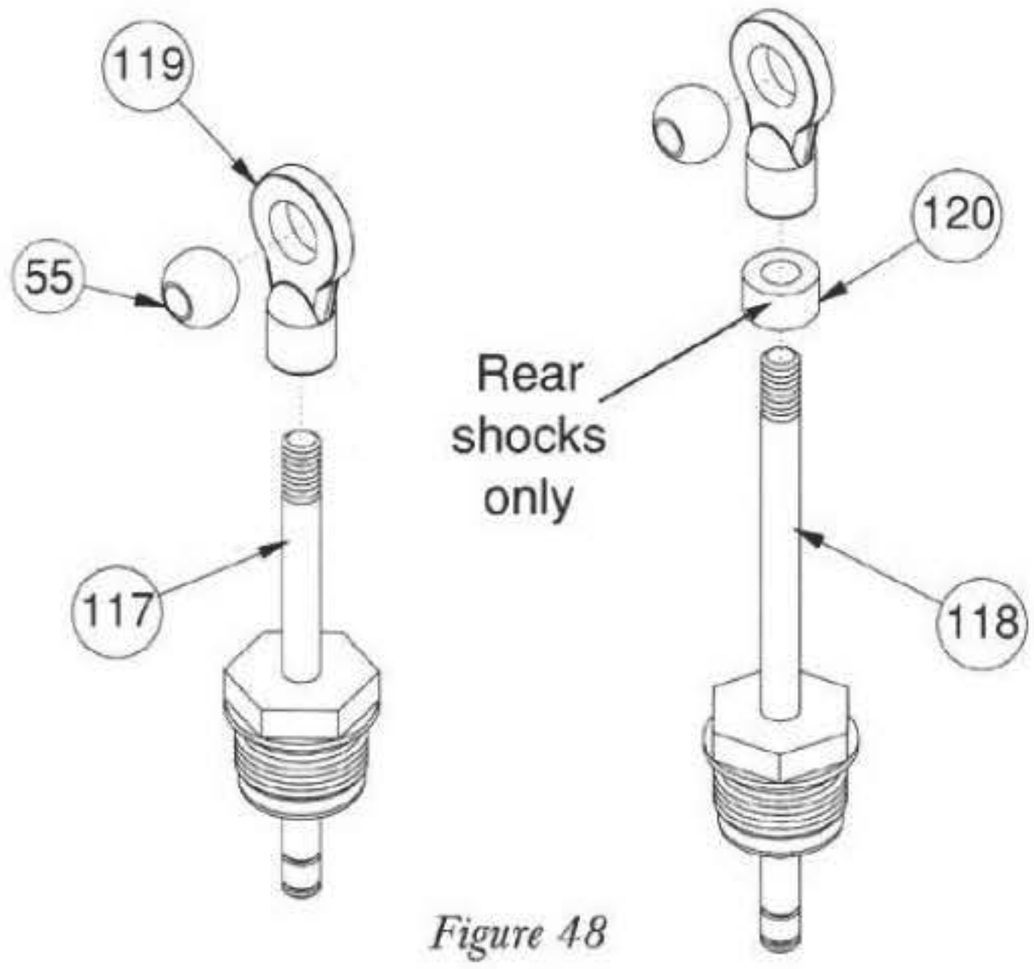
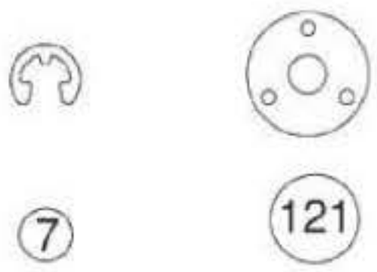


Figure 48

Figure 49

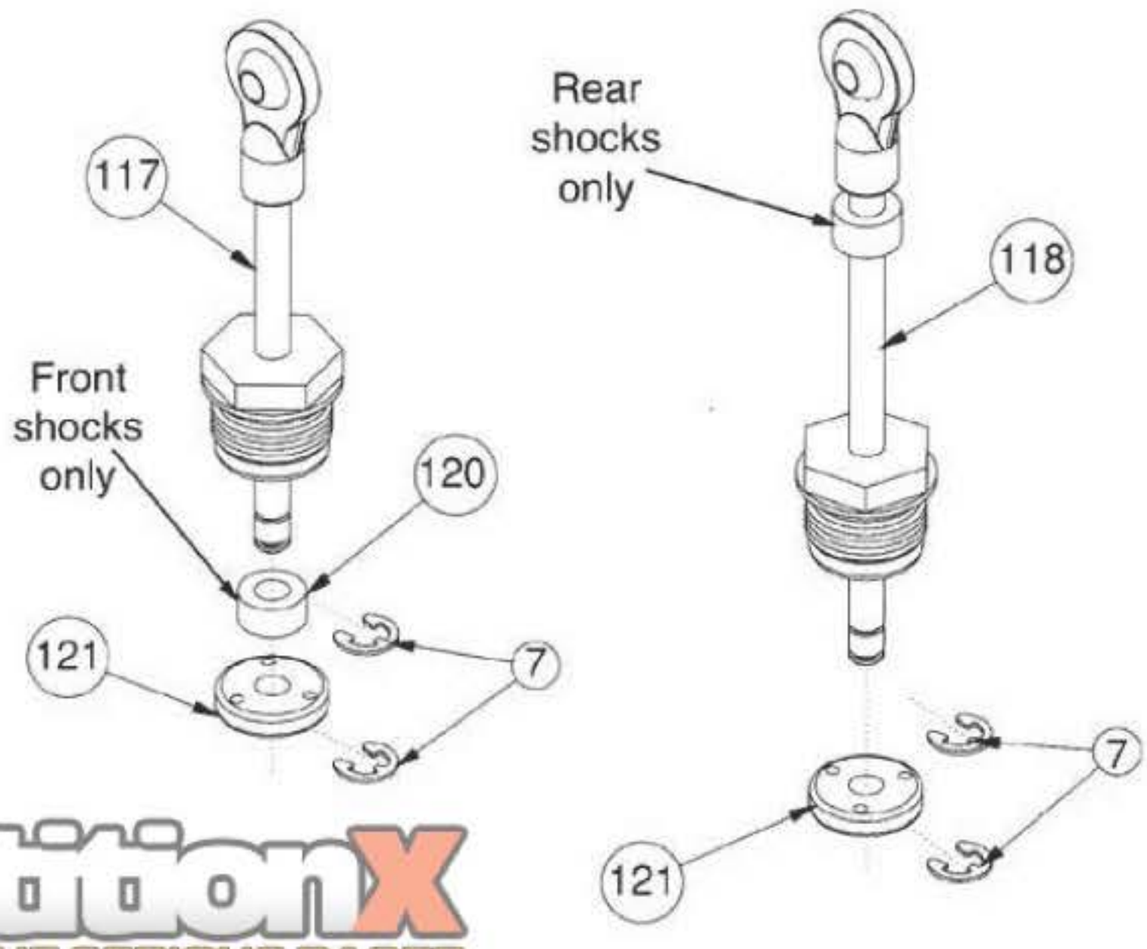


❑ Step 11. Snap a 1/8" E-clip (7) into the groove closest to the cartridge on both rear shock shafts (118).

❑ Step 12. Before installing the E-clip (7) to the front shock shafts (117), slide an 'A' shock spacer (120) *(the smaller of the two spacers, marked 'A')* over the shaft (117) next to the cartridge. Once the spacers are in place, snap a 1/8" E-clip (7) into the groove closest to the cartridge on both front shock shafts (117).

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

❑ Step 13. Slide a shock piston (121) onto each of the four shafts (117), (118) until it rests against the E-clip (7). Secure the pistons (121) to the four shafts (117), (118) with a second E-clip (7).



competitionX
A WEB SITE FOR THE SERIOUS RACER

Figure 49

BAG E (Continued)

Figure 50

❑ Step 14. Match the short, front shock bodies (122) to the short, front shafts (117), and the long, rear shock bodies (123) to the long, rear shafts (118).

❑ Step 15. Fill shock body (122), (123) with shock fluid (124) up to the bottom of the threads.

❑ Step 16. Insert the shaft assembly with the cartridge against the shock piston (121). Slowly tighten the cartridge about two full turns only. With the cartridge still slightly loose, slowly push the shock shaft (117), (118) into the shock body (122), (123). This will bleed the excess fluid out of the shock. Once the shaft (117), (118) 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 17. Now, with the shaft (117), (118) still all the way in, secure the cartridge by tightening it with pliers approximately an additional 1/8 turn. There should be no air in the shock as you push the shaft (117), (118) 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 18. Repeat Steps 15-17 for all four shocks.

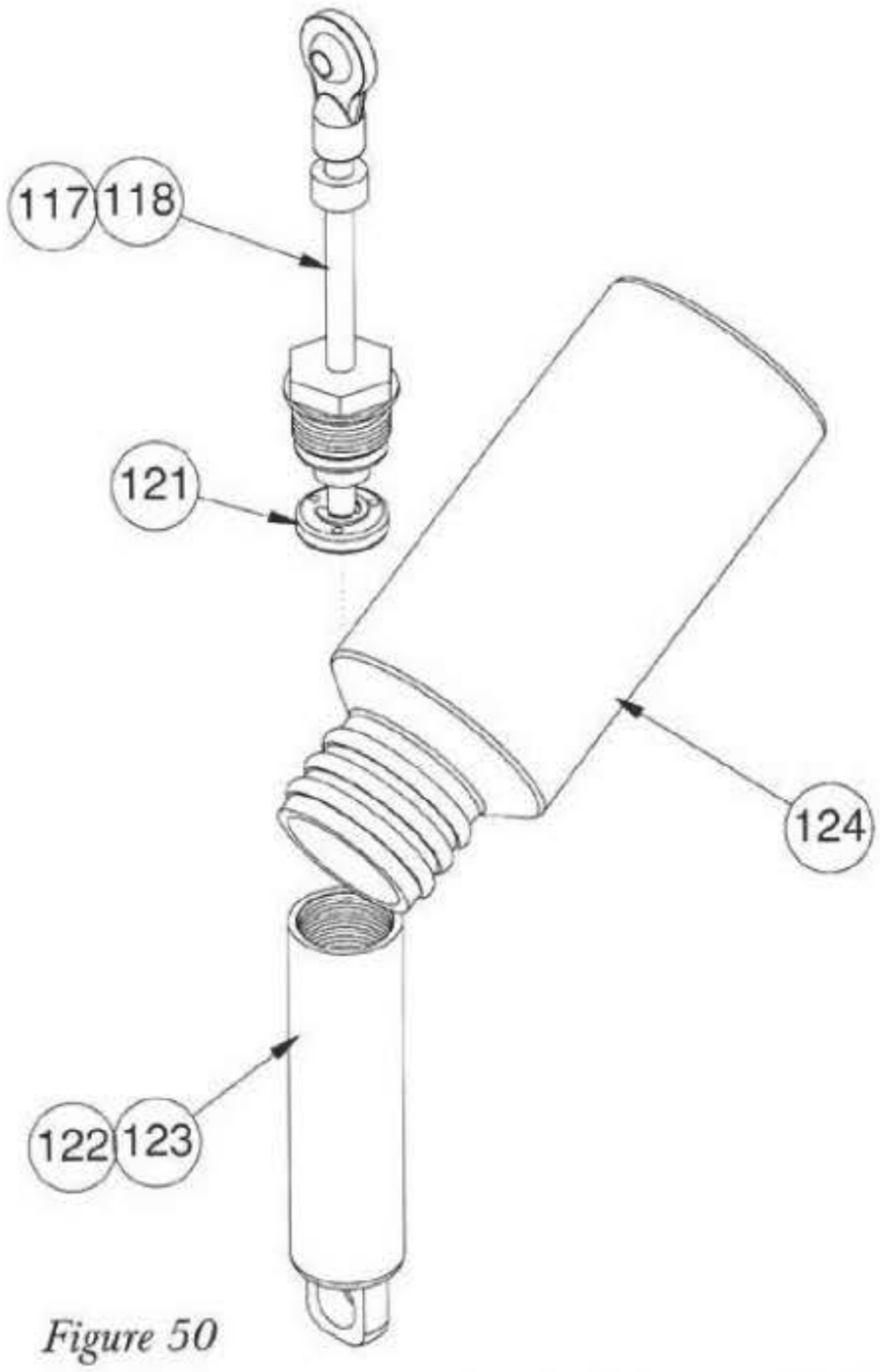


Figure 50

Figure 51

(12)

❑ Step 19. Snap a shock spring cup (125) onto each of the four shafts (117), (118) and down around the shock end (119).

**NOTE: On the rear shocks, the spring cup should be placed between the shock end and the shock spacer.*

❑ Step 20. Slide a front shock spring – *red* (126) down over each of the two front shocks so that it rests on the spring cup (125).

❑ Step 21. Insert a 4-40 x 3/8" cap-head screw (12) into the larger hole of each of two shock collars (127) and thread it into the smaller hole.

❑ Step 22. With the collar (127) loose, slide it down over the top of each shock body (122) and against the spring (126). Tighten the collar (127) to hold it in place.

**NOTE: Do not overtighten!*

❑ Step 23. Repeat Steps 19-22 for the rear shocks using the rear springs – *pink* (128).

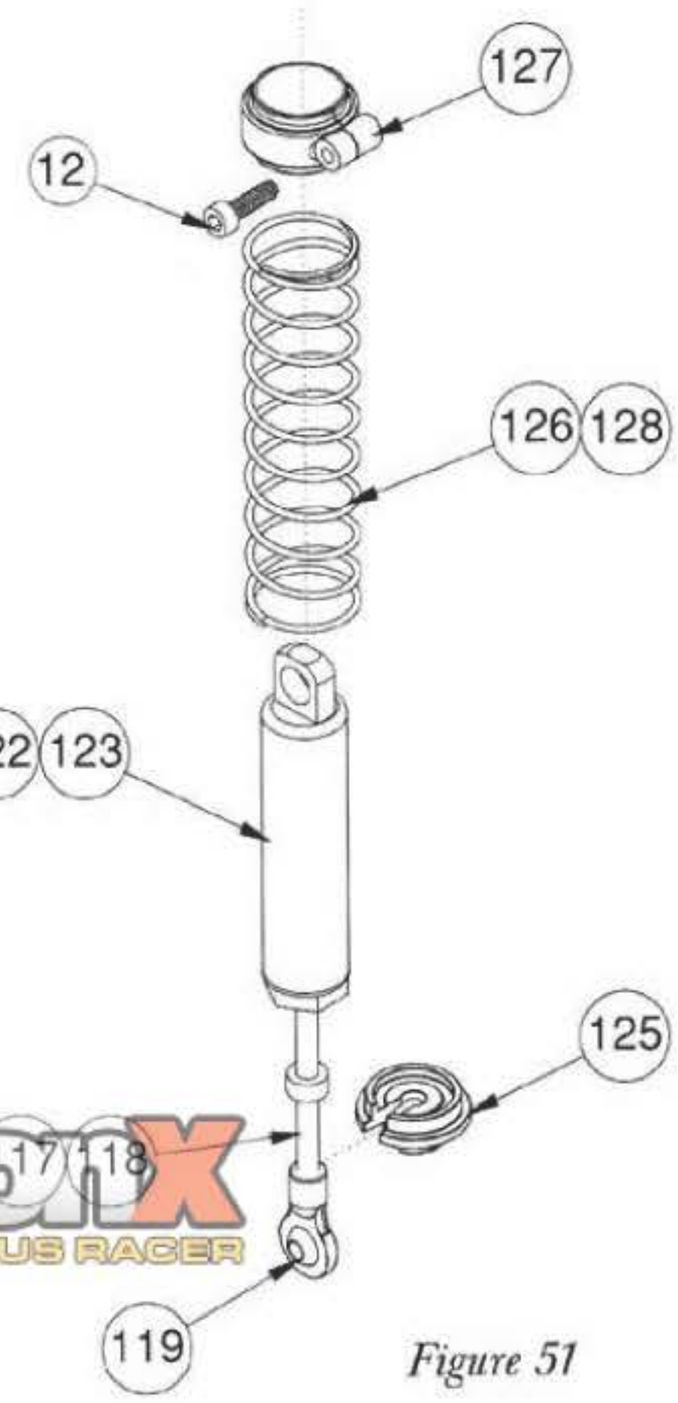


Figure 51

CompetitionX
A WEB SITE FOR THE SERIOUS RACER

BAG E (Continued)

Figure 52

110

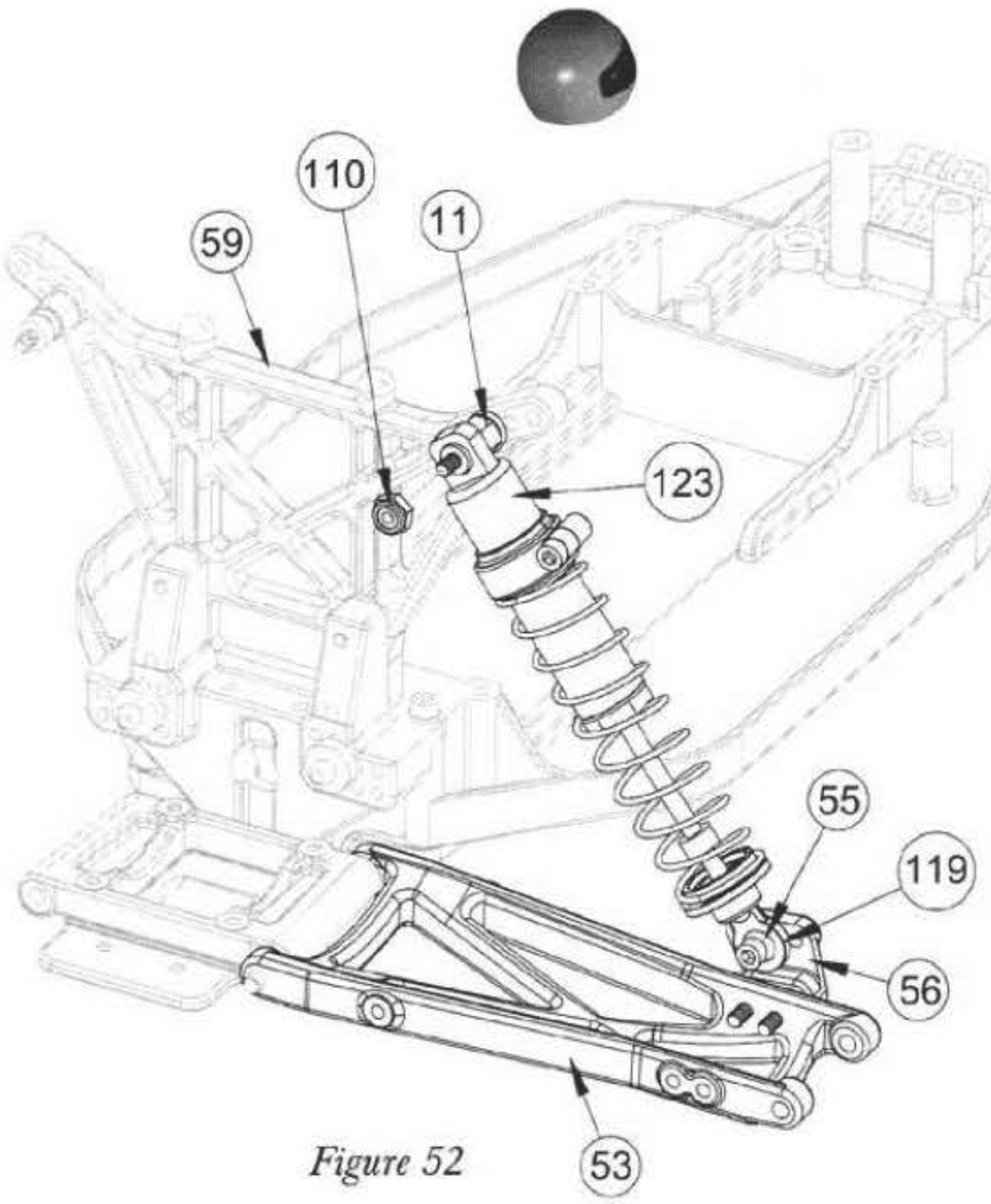


Figure 52

❑ Step 24. Pick up your truck, making sure that the CVDs stay in the outdrives (81).

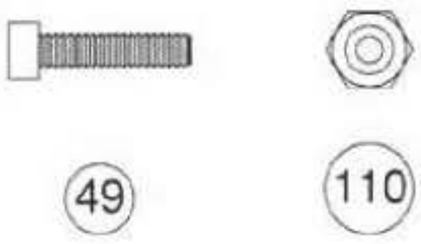
❑ Step 25. Attach the bottom of the shock to the rear arm (53) by snapping the shock bottom (119) onto the shock mount ball (55) attached to the shock mount bracket (56) on the rear arm (53).

❑ Step 26. Place the top of the shock body (123) over the shock mount bushing (11) on the rear shock tower (59) and secure it with a 4-40 aluminum locknut (110).

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

❑ Step 27. Repeat Steps 25 and 26 for the second rear shock.

Figure 53



49 110

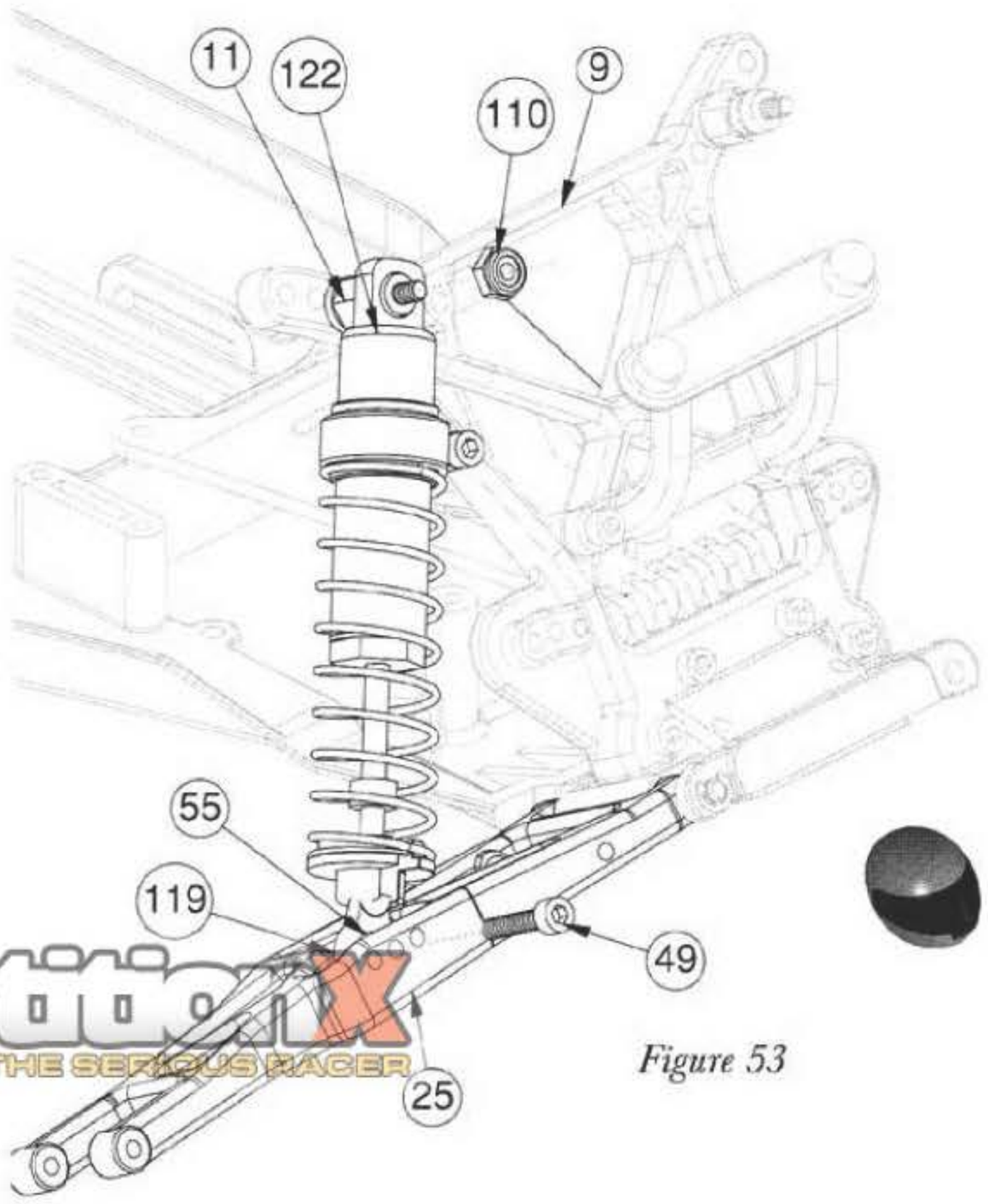


Figure 53

❑ Step 28. Insert the shock end (119) of a front shock into the shock mounting area of the front suspension arm (24), (25) and line up the hole in the shock mount ball (55) with the middle hole in the arm (24), (25).

❑ Step 29. Attach the shock end (119) to the front arm (24), (25) by threading a 4-40 x 1/2" cap-head screw (49) all the way into the arm (24), (25).

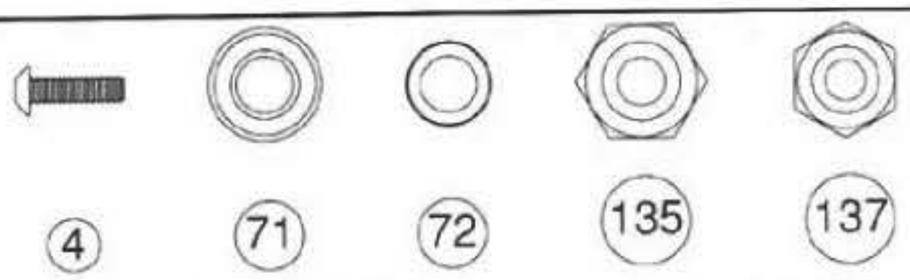
❑ Step 30. Place the top of the shock body (122) over the shock mount bushing (11) on the front shock tower (9) and secure it with a 4-40 aluminum locknut (110).

❑ Step 31. Repeat Steps 28-30 for the second front shock.

Competition RX
A WEB SITE FOR THE SERIOUS RACER

BAG F

Figure 54



❑ Step 1. Inspect the inside of the tires [front (129), rear (130)] for any excess material. If present, trim excess rubber to ensure proper seating of the tire on the wheel [front (131), rear (132)]. During tire assembly, make sure that all lettering faces to the outside of the wheel *(the side with the spokes).*

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

❑ Step 2. Insert the foam tire liners (133) into the front tires (129). Pull the front tires (129) over the front wheels (131) and squeeze the tires (129) to properly seat them into the grooves in the wheels (131). Make certain that the foam liners are not pinched between the tires (129) and the wheels (131).

The Directional front tires should be mounted with the straight ribs to the inside of the wheel.

❑ Step 3. Insert the foam tire liners (133) into the rear tires (130). Pull the rear tires (130) over the rear wheels (132) and squeeze the tires (130) to properly seat them into the grooves in the wheels (132). Make certain that the foam liners are not pinched between the tires (130) and the wheels (132).

❑ Step 4. The tires (129), (130) must be glued to the wheels (131), (132). 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.

⚠ **IMPORTANT NOTE:** Allow the glue to dry thoroughly before continuing. Read and follow adhesive manufacturers' safety warnings regarding use. *DO NOT spray glue accelerator on wheel disks!*

❑ Step 5. Attach the front wheel disks (134) to the outside of the front wheels (131), and line up the holes in the disk (134) with the holes in the wheel (131). Secure the front wheel disks with two 2-56 x 5/16"button-head screws (4).

❑ Step 6. Press a 3/16" x 3/8" bearing (71) into the inside of each front wheel (131). Place the wheel (131) over the front axle (14) so the wheel disks (134) face the outside. Slide an inner axle spacer (72) over the front axle (14), next to the inside bearing (71) so that the spacer (72) is positioned in the center of the wheel (131). Press the remaining 3/16" x 3/8" bearings (71) into the outside of the wheels (131).

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

❑ Step 7. Secure the front wheels by threading a 10-32 locknut (135) onto each front axle (14) and tightening.

There are also two thin shims packaged in Bag F. One of these shims can be placed over each front axle, between the outer bearing and the locknut. The addition of the shims will reduce the drag caused by the outer race of the bearing rubbing against the back of the locknut.

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

❑ Step 8. Insert the rear wheel disks (136) into the outside of the rear wheels (132).

❑ Step 9. Mount the rear wheels (132) to the rear axles (64) by lining up the pin (74) in the rear axle (64) with the groove in the rear wheel (132) and pushing the wheel (132) all the way onto the axle (64).

❑ Step 10. Secure the rear wheels (132) by attaching 8-32 locknuts (137) to the rear axles (64) and tightening.

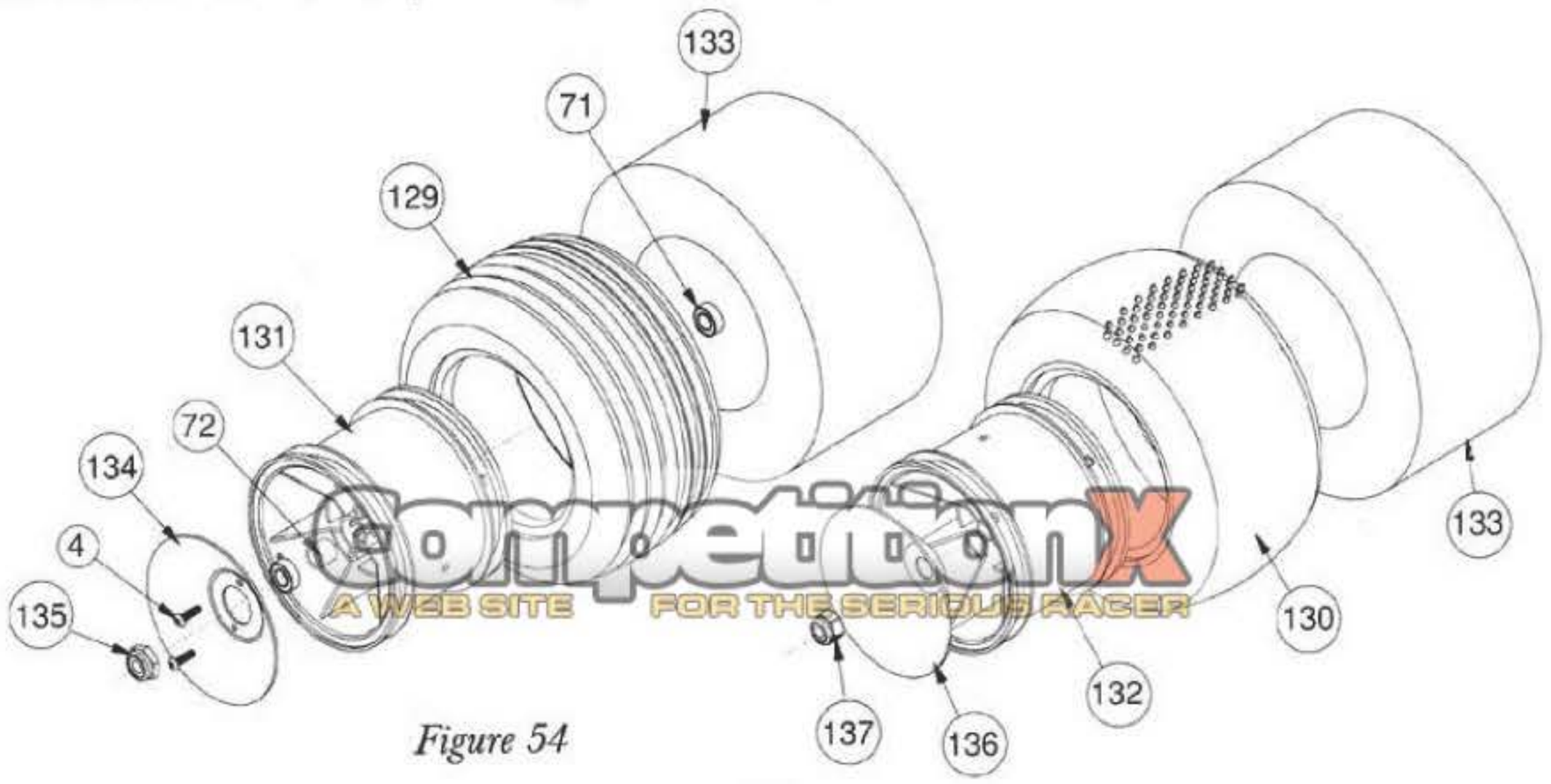
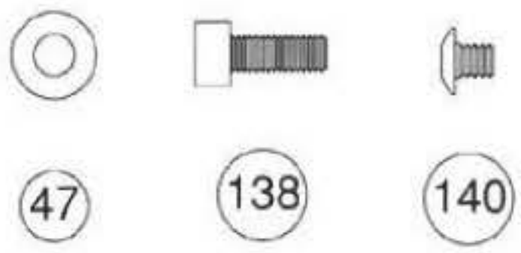


Figure 54

CompetitionX
A WEB SITE FOR THE SERIOUS RACER

BAG G

Figure 55



❑ Step 1. Attach motor *(not included)* to motor plate (102) using two 3mm x 8mm cap-head screws (138) and #4 washers (47).

❑ Step 2. Attach pinion gear *(not included)* to the motor shaft, adjust gear mesh and tighten the motor screws (138).

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

❑ Step 3. Locate gear cover (139) and cut the back side of it along the trim line as shown. Drill two 1/8" mounting holes in the gear cover (139) at the two locations marked with dimples.

❑ Step 4. Place the trimmed gear cover (139) over the motor plate (102) and secure it with two 4-40 x 1/8" button-head screws (140) through the two holes in the motor plate (102).

❑ Step 5. Insert gear cover plug (141) into the large hole in the gear cover (139).

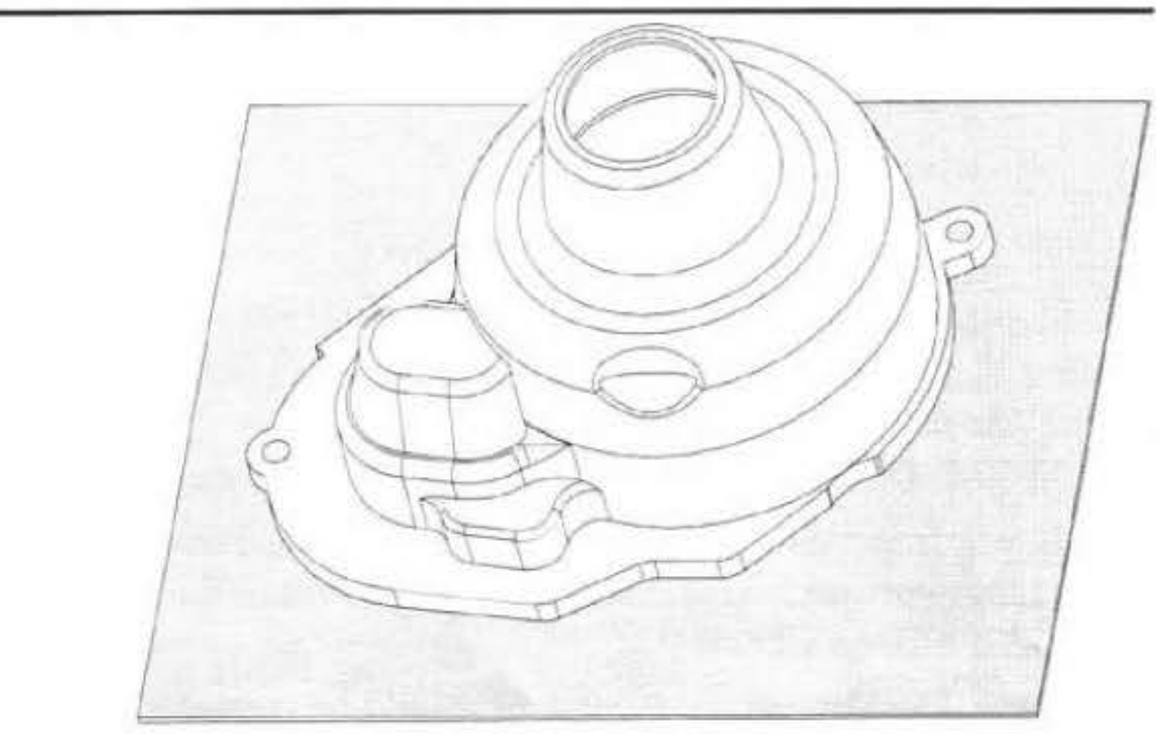


Figure 55

Figure 56

❑ Step 6. Place the first battery spacing foam (142) into the front of the recessed area in the chassis (2). Place the second battery spacing foam (142) into the rear of the reccessed area in the chassis (2), under the "bridge" in the chassis (2).

❑ Step 7. Attach the battery strap foam strip (143) to the bottom side of the battery hold-down strap (144).

❑ Step 8. Once the battery pack (not included) is installed, the plastic battery strap (144) will hold the batteries in place. The battery strap (144) fits under the rear "bridge" of the chassis (2), between the two ribs on the bottom, and is secured to the post on the front chassis brace (48) with a body clip (145).

**NOTE: If you plan to use a pre-assembled 6-cell pack in the stick configuration, chances are there is a plastic end cap on each end of the battery pack. In order for this type of battery to fit correctly, the end cap on the end of the battery that will be placed in the rear of the chassis needs to be removed. If the end cap is not removed, the battery will not fit under the "bridge" in the rear of the chassis.*

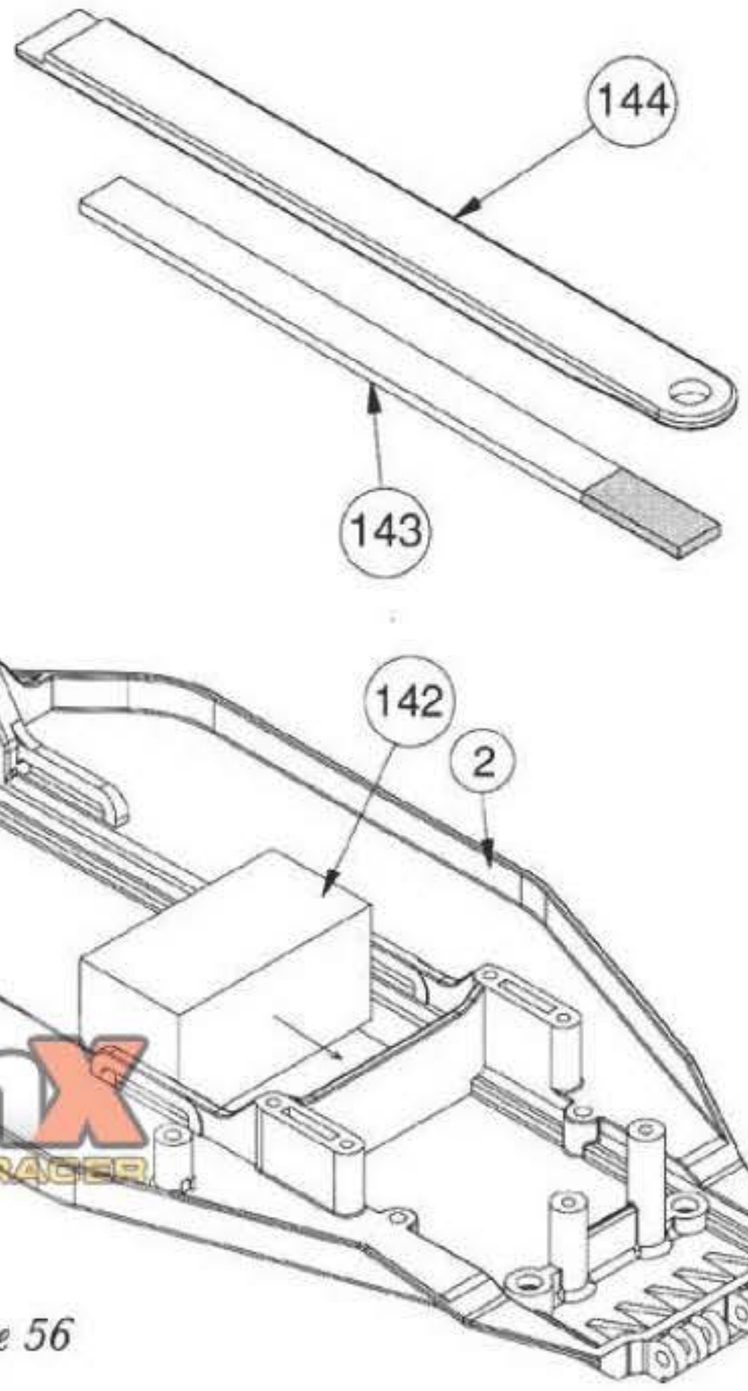


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Figure 56

BAG G (Continued)

Figure 57

❑ Step 9. Cut a piece of two-sided tape (146) to the same size as the bottom of the receiver *(not included)*. Peel one side of the backing off and stick it to the bottom of the receiver.

❑ Step 10. Make sure that the area on the right side of the chassis (2) just in front of the rear battery strap tab 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 11. Peel the backing off of the two-sided tape (146) and install the receiver to the right side of the chassis (2), just in front of the rear raised slot, and all the way against the outside of the chassis (2).

❑ Step 12. Run the antenna wire forward to the antenna post on the chassis (2). Run the wire into the small hole in the bottom of the post, and up through the top of the post.

❑ Step 13. Slide the antenna wire through the antenna tube (147) *(a small drop of oil in the tube will make this easier)* so that the wire comes out the other end of the tube (147).

❑ Step 14. While pulling the wire through the antenna tube (147), slide the antenna tube (147) down and push it firmly into the antenna mounting post on the main chassis (2).

❑ Step 15. Fold the wire down over the antenna tube (147) and place the antenna cap (148) over the tube (147) 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.*

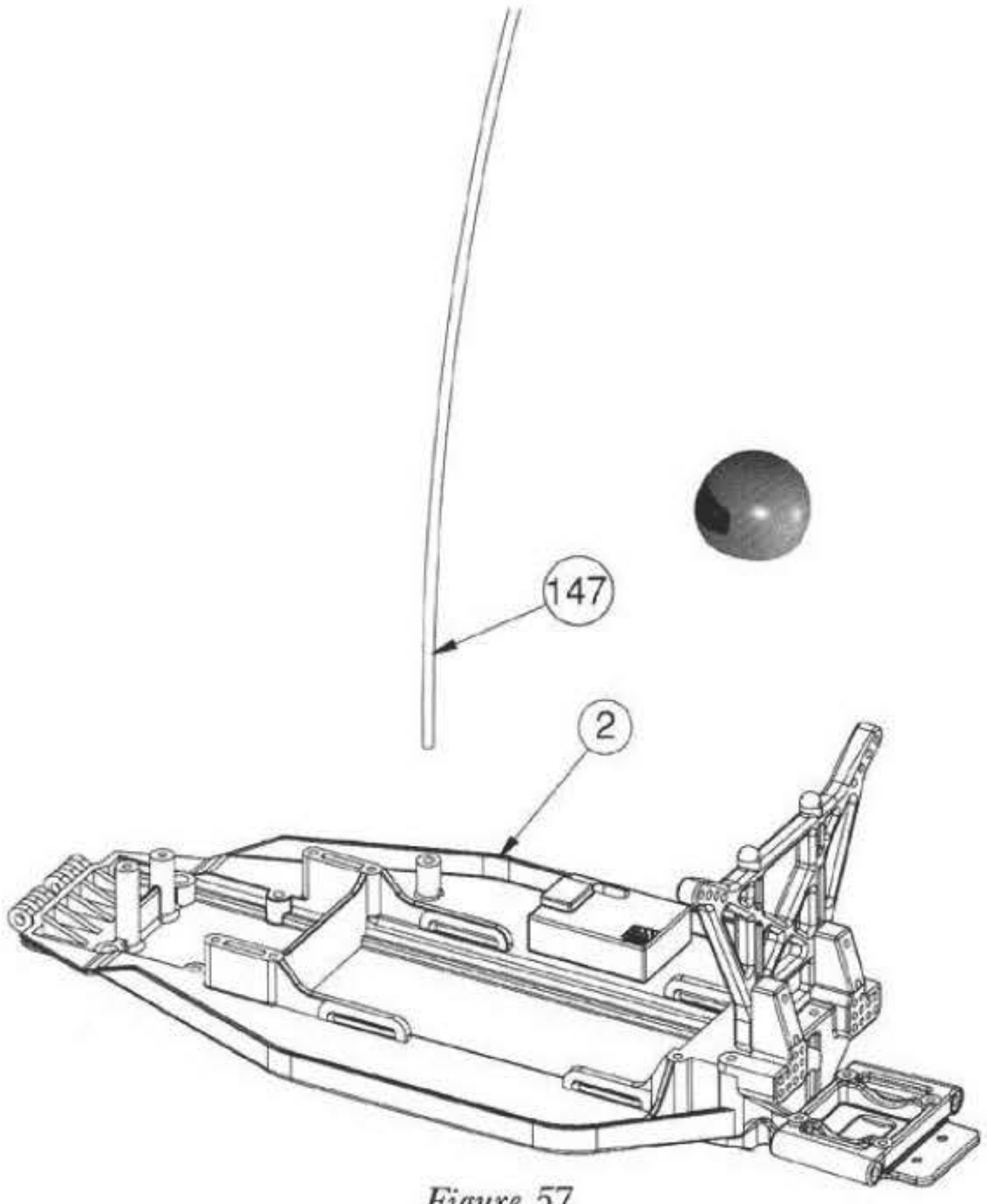
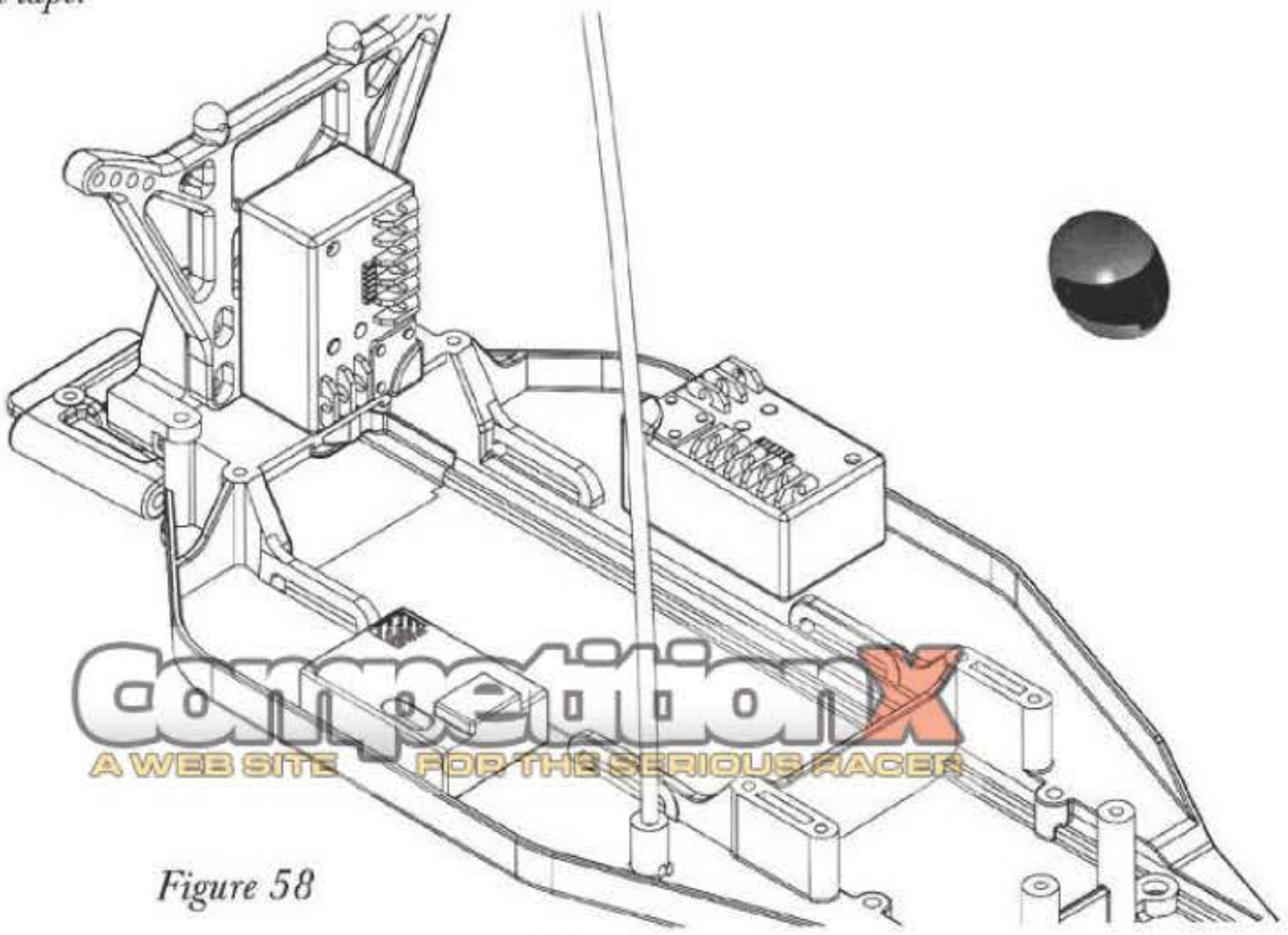


Figure 57

Figure 58

❑ Step 16. Using two-sided tape (146), mount the speed control *(not included)* in one of the two locations shown. If mounting the speed control to the chassis, be sure that there is sufficient room for the battery pack *(not included)* to fit in the center of the chassis.

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



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A WEB SITE FOR THE SERIOUS RACER

Figure 58

scan courtesy of Vintagelosi.com

BAG G (Continued)

Figure 59

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❑ Step 17. Turn on your radio system and check to make sure that the steering servo is centered and the front wheels are straight. If not, refer to the instructions for Bag B, Step 18 and correct the problem before continuing.

❑ Step 18. Place the front bumper (149) onto the bottom of the front bulkhead (1) and line up the four holes in the bumper (149) with the holes in the bulkhead (1).

❑ Step 19. Attach the bumper by threading four 4-40 x 1/4" flat-head screws (150) into each of the four holes. Tighten all four screws.

If you should need to work on your servo or move a ball stud for the front camber link, first remove the front bumper and then the two screws in the rear of the front chassis stiffener. Once these screws and the front bumper are removed, the front end will swing down and away allowing easy access to the front end components.

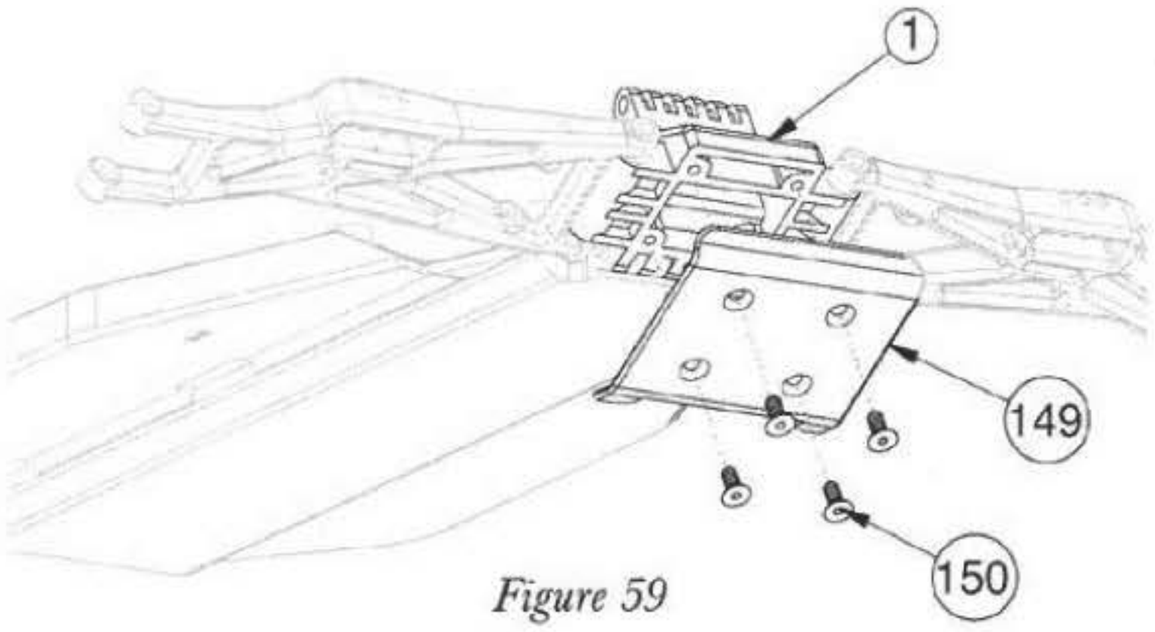


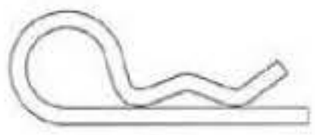
Figure 59

Figure 60

❑ Step 20. Trim the body (151) along the trim lines marked on it as shown.

❑ Step 21. Using the dimples on the front, rear, and roof of the body (151) as a guide, make five 5/16"-diameter holes at these locations. These will be the body mounting and antenna tube holes.

❑ Step 22. Install the body (151) onto the rolling chassis and secure it with body clips (145) through the posts on the rear shock tower (59), and through the posts on the front body mount (13).



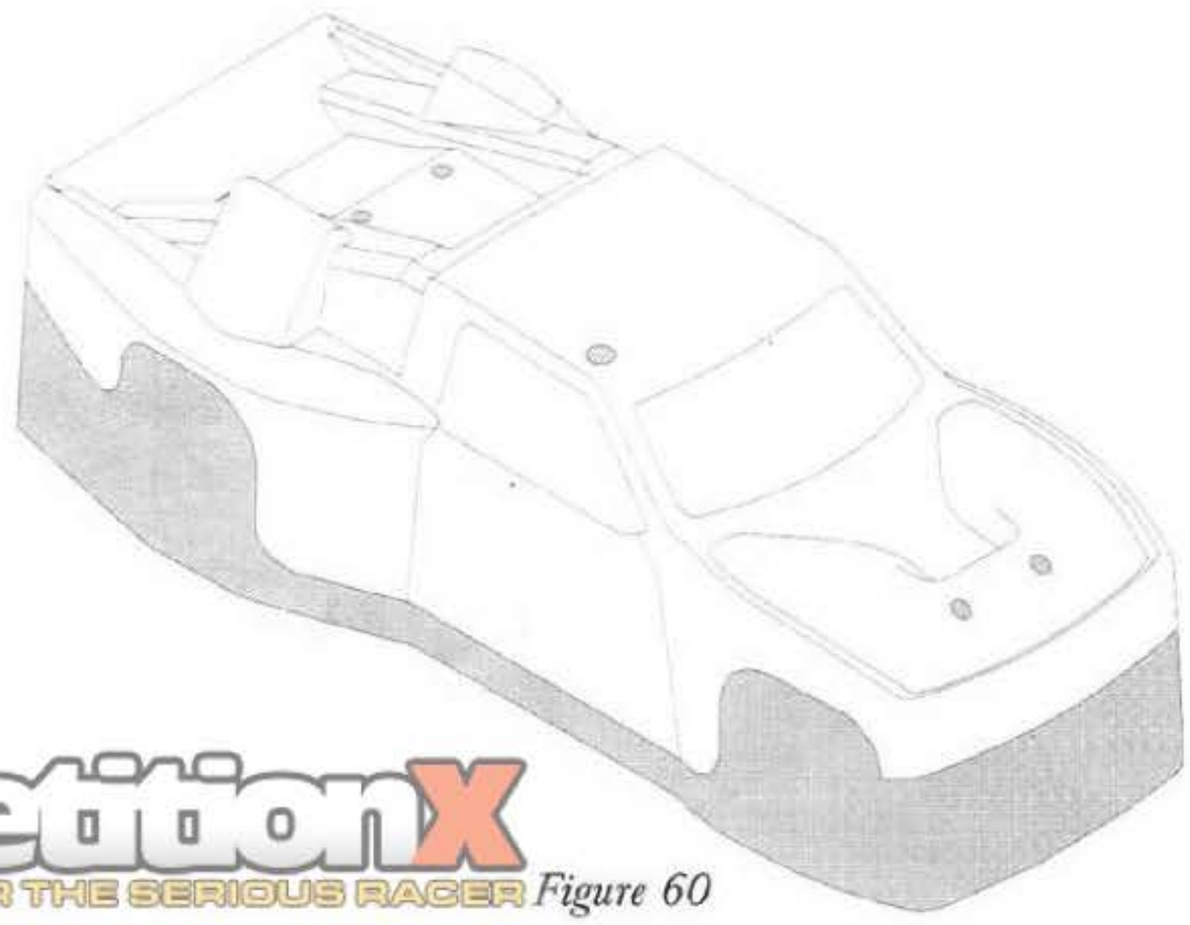
145

BODY, GEAR COVER, AND WHEEL DISK PAINTING

Prepare the Lexan body shell by washing thoroughly with warm water and liquid detergent. Dry with a clean soft cloth. Use the window masks (152) supplied to cover the windows *from the inside.* A high-quality masking tape should be used on the inside to mask off any stripes, panels, or designs that you wish to paint on the body, gear cover, or wheel disks. Use acrylic lacquer, acrylic enamel, or any other Lexan (polycarbonate) recommended paints. Apply paint to the inside of the parts. Remove the tape for the next color and continue. Try to use the darker colors first. If you use a dark color after a light color, apply a coat of white over the lighter color first.

STICKERS

Cut the stickers from the sticker sheet (153) that you wish to use. 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. Using the rest of the backing as a handle, position the sticker and press firmly into place to complete its application.



GarageEditionX
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Figure 60

FINAL CHECKLIST

BEFORE RUNNING YOUR DOUBLE-XT 'CR' *GRAPHITE PLUS* 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 Double-XT 'CR' *Graphite Plus* now that it's built, but following this simple checklist will help to make your first run with your new truck 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 be very free. Any binds will cause the truck to handle poorly. The steering should also operate very freely.

4. Set the rear ride height

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

6. Adjust the camber

The front camber should be set to 1-1/2 degrees of negative camber (top of tire points in) at ride height. Adjust the front camber with the tire turned straight ahead. The rear camber should be set to have about 2 degrees of negative camber at ride height. See the *Camber Adjustment* 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 inward just slightly *(toe-in)*. It is recommended that you start with about 1/2 degree of toe-in at each front tire.

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 throtlle trim on your transmitter so the the truck does not creep forward when no throttle is being applied. Also, 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 truck rolls straight when you are not touching the steering wheel/stick.

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 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 truck 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 the bearings in the diff installed in the wrong locations. Consult the assembly instructions for locations of various sizes of bearings in the differential.

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FOR THE SERIOUS RACER

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 built for a couple of hours, or 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 run, 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 Slipper 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 truck on the racing surface and give the truck 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 it doesn't slip for at least one foot, back off the adjustment nut 1/8 turn and retry. If you can't hear the slipper when you punch the throttle, hold the front of the truck with the rear wheels still on the track surface and give the truck full throttle. The truck should push against your hand with reasonable force and the slipper should slip slightly.

Don't expect the slipper to make up for poor driving. You still have to use your throttle carefully. The slipper will, however, give you a little help coming off corners and landing 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 sits. 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.

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

You should start with the front ride height set so that the front suspension arms are level. 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 truck flip over more easily. Run the rear ride height set so that the truck 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 and should try small ride height adjustments to get the feel he likes. We have found that ride height is really a minor adjustment. Play with it last after everything else has been dialed in. Do not use ride height adjustment as a substitute for a spring rate. If your truck needs a softer or firmer spring, change the spring. Do not think that simply moving the shock collar will change the stiffness of the spring; it won't!

Camber Location is best set according the settings described in this manual. Leave the rear inner location at #5 and start with the 'B' location in the rear hub. Move the ball stud to the 'C' location in the hub for a slightly stiffer feel. The 'C' location seems to have a bit more roll resistance than the 'B' location, but tends to give you slightly less steering out of the corners. Start with the front camber link in the inside hole in the front shock tower as this is a pretty good starting point for most tracks. Occasionally, you may want to move the camber link out one hole if there isn't enough steering when entering a turn. The shorter camber link tends to make the steering response a little more sensitive.

Kingpin Balls are adjustable and can affect the front camber location as well. By moving washers from the top of the spindle carrier to the bottom, the ball stud can be lowered. Lowering the ball stud will usually make the steering react a little faster, but can reduce the amount of low-speed steering the truck has.

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Some of the team drivers like to file the small raised area off of the top of the spindle carrier when using the kingpin/ball studs. This will broaden the range of adjustment that is available. In very slick conditions, you may want to try mounting the kingpin/ball stud all the way down flat against the top of the spindle carrier. Doing so can increase the

traction at the front of the truck which results in a gain of steering.

Front Shock Location can be adjusted easily by simply moving top of the shock to another hole in the shock tower. The standard location (inside hole on the tower) works best on most tracks. Moving the top of the shock out one hole can help to keep the nose of the truck a little higher on large, difficult jumps. The bottom of the shock is almost always mounted in the center hole in the arm.

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 out on the shock tower can help the truck land better on big jumps, but may also make the truck drive "square" with more forward traction and less cornering speed and side bite. The bottom of the shocks are almost always mounted to the center hole of the bottom shock mount. Try the inside hole if you're on a really rough track, but be aware that there is usually less cornering traction.

Rear Toe-In and Anti-Squat are two more things you should try and need to adjust based on what you feel is most comfortable to you. The standard kit setup is usually the best. The stock setup has two degrees of anti-squat. You can change this to zero degrees by changing the rear pivot block – another neat thing about the Double-XT 'CR' *Graphite Plus*. Less anti-squat will help the truck accelerate through the bumps, but may also decrease rear traction and steering through the corners. More importantly, less anti-squat is usually more predictable under braking or while de-accelerating, which on some tracks makes a big difference.

The rear toe-in is set stock at three degrees per side, or six degrees total. This helps the truck accelerate straighter, and this setting works well on nearly all tracks.

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. Start by running the battery spaced 1/2"-5/8" back from the front brace. Moving the battery back farther will increase rear-wheel traction, but can decrease steering. Moving the battery forward will increase steering, but can cause the rear of the truck to have too little traction.

The Secret to winning is realizing that there are no magic pieces or secret setups that are going to make you faster. There is no substitute for practice and experimenting with different things. The feel for the way the truck handles is different for every driver. The only way you will get the right feel for you and your truck is to make adjustments and note the effects that those adjustments have on your truck's handling. The more adjustments you try, the more you will learn about the truck and how it reacts. Make notes about the track conditions and which changes produced good or bad results. You may have to sacrifice a tenth of a second to end up with a truck that is comfortable to drive fast and consistent.

We are sure that you will find the Double-XT 'CR' *Graphite Plus* to be the most versatile and easiest truck to drive fast with great consistency. We at Team Losi hope this information helps you to enjoy your Double-XT 'CR' *Graphite Plus* and racing as much as we do.

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SPARE PARTS LIST

KEY #	KIT/PART DESCRIPTION	PART NO.	SPARE PARTS DESCRIPTION
1	Front bulkhead	A-1101	Front Bulkhead
2	Main chassis	A-9904	Graphite/Composite Extra-Long Chassis w/Braces
3	1/8" lower bulkhead hinge pin	A-1141	Pin Set for Front Bulkhead (upper & lower)
4	2-56 x 5/16" button-head screw	A-6225	2-56 x 5/16" Button-Head Screws (10)
5	Front chassis stiffener	A-9900	Graphite/Composite Chassis Brace Set
6	1/8" upper bulkhead/outer rear hinge pin	A-2164	Outer Rear Hinge Pins (2)
7	1/8" E-clip	A-6100	1/8" E-Clips
8	1/4" ball stud	A-6006	Ball Studs w/Rod Ends 4-40 x 1/4" (4)
9	Front shock tower	A-9721	Graphite/Composite Front Shock Tower (XX-T)
10	4-40 x 7/8" cap-head screw	A-6216	4-40 x 7/8" Cap-Head Screws (10)
11	Top shock mount bushings	A-5008	Upper Shock Mount Bushings (4)
12	4-40 x 3/8" cap-head screw	A-6206	4-40 x 3/8" Cap-Head screws (10)
13	Front body mount	A-4056	XX-T Front Body Mount
14	Front axle	A-1136	XX-T Front Axles w/Set Screws (2)
15	Left spindle	A-1125	XX-T Front Spindles & Carriers (2)
16	Right spindle	A-1125	XX-T Front Spindles & Carriers (2)
17	Spindle carriers, Left and Right	A-1125	XX-T Front Spindles & Carriers (2)
18	Ball stud washer	A-6215	#4 Narrow Washers (10)
19	Kingpin/ball stud	A-9708	Kingpin/Ball Stud (XX-T)
20	3/32" E-clip	A-6103	E-Clips 3/32"
21	5-40 setscrew	A-6228	5-40 Hardened Setscrews (10)
22	4-40 mini locknut	A-6306	4-40 Aluminum Mini Nuts (10)
23	3/16" ball stud	A-6001	Ball Studs w/Rod Ends 4-40 x 3/16" (4)
24	Left front suspension arm	A-9709	Graphite/Composite Front Suspension Arms (XX-T)
25	Right front suspension arm	A-9709	Graphite/Composite Front Suspension Arms (XX-T)
26	3/32" x 1.050" hinge pin	A-1149	XX-T Front Outer Pins & Kingpins (2)
27	1/8" inner front hinge pin	A-2007	Hinge Pin 1/8" x 1.42" (XX-T)
28	Front hinge pin brace	A-1102	Front Bulkhead Brace For Inner Hinge Pin
29	Plastic rod end	A-6005	H.D. 30° Plastic Rod Ends (16)
30	2-3/4" turnbuckle	N/A	Lunsford Racing Titanium Turnbuckle 2.75"
31	Foam thing	A-6003	Foam Things (Linkage Rings) (24)
32	Servo saver bottom	A-1602	Adjustable Steering & Servo Mount set
33	Servo saver post	A-1610	Steering Hardware Set
34	Servo saver top	A-1602	Adjustable Steering & Servo Mount set
35	Servo saver spring	A-1610	Steering Hardware Set
36	Servo saver spring cap	A-1602	Adjustable Steering & Servo Mount set
37	6-40 locknut	A-1610	Steering Hardware Set
38	Steering idler arm	A-1602	Adjustable Steering & Servo Mount set
39	2-3/8" turnbuckle	N/A	Lunsford Racing Titanium Turnbuckle 2.375"
40	Short plastic rod end	A-1615	Short Ball Cups & Threaded Rods
41	1-1/8" turnbuckle	A-2005	Adjustable L/R Threaded Rods w/Ends 1-1/8"
42	3/32" x 3/16" bearings	A-6912	3/32" x 3/16" Bearings (4)
43	Steering brace	A-9900	Graphite/Composite Chassis Brace Set
44	3/32" x .930" hinge pin	A-1610	Steering Hardware Set
45	Servo arms (23S, 23L and 25L)	A-1602	Adjustable Steering & Servo Mount set
46	Servo mounting posts	A-1602	Adjustable Steering & Servo Mount set
47	#4 washer	A-6201	3mm x 8mm Screws w/Washers (Motor) (10)
48	Chassis brace	A-9900	Graphite/Composite Chassis Brace Set
49	4-40 x 1/2" cap-head screw	A-6204	4-40 x 1/2" Cap-Head Screws (10)
50	4-40 x 5/8" threaded rod	A-1615	Short Ball Cups & Threaded Rods
51	1/8" x 1/4" washer	A-6350	#4 and 1/8" Hardened Washers
52	Rear pivot block	A-2113	'CR' Rear Pivot Block - 2°
53	Rear suspension arm	A-9810	Graphite/Composite Rear Suspension Arms (XX-T 'CR')
54	Inner rear hinge pin	A-2162	'CR' Inner Rear Hinge Pins (2)
55	1/4" shock mount ball	A-2006	Swivel Suspension Balls .250 (8)
56	Rear shock mount bracket	A-9810	Graphite/Composite Rear Suspension Arms (XX-T 'CR')

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SPARE PARTS LIST

KEY #	KIT/PART DESCRIPTION	PART NO.	SPARE PARTS DESCRIPTION
57	Rear pivot plate	A-2107	'CR' Rear Pivot Plate
58	4-40 x 3/8" flat-head screw	A-6210	4-40 x 3/8" Flat-Head Screws (10)
59	Rear shock tower	A-9821	Graphite/Composite Rear Shock Tower (XX-T)
60	Rear bulkhead	A-2101	Rear Bulkhead
61	3/8" ball stud	A-6000	Ball Studs w/Rod Ends 4-40 x 3/8" (4)
62	White thrust bearing/assembly grease	A-3066	Teflon™ Assembly Grease
63	CVD yoke	A-9922	MIP CVD Driveshafts (XX-T)
64	CVD rear axle	A-9922	MIP CVD Driveshafts (XX-T)
65	CVD dogbone	A-9922	MIP CVD Driveshafts (XX-T)
66	1/16" x 7/16" (solid) pin	A-9922	MIP CVD Driveshafts (XX-T)
67	4-40 setscrew	A-6227	4-40 x 1/8" Hardened Setscrews
68	Thread-lock compound	A-9922	MIP CVD Drive shafts (XX-T)
69	Left rear hub	A-2126	'CR' Rear Hub Carrier Set w/Spacers
70	Right rear hub	A-2126	'CR' Rear Hub Carrier Set w/Spacers
71	3/16" x 3/8" bearing	A-6903	3/16" x 3/8" Ball Bearing (2)
72	Inner rear axle spacer	A-9941	Bearing Spacer/Wheel Washer Set
73	Outer rear axle spacer	A-9941	Bearing Spacer/Wheel Washer Set
74	1/16" x 7/16" (spirol) pin	A-6401	Pins – Wheels and Gears
75	Rear hub spacer	A-2126	'CR' Rear Hub Carrier Set w/Spacers
76	2-5/8" turnbuckle	N/A	Lunsford Racing Titanium Turnbuckle 2.625"
77	Diff nut carrier	A-3078	Differential Screw, Hardware, and Seal
78	Allen wrenches	N/A	N/A
79	Beveled washers	A-3078	Differential Screw, Hardware, and Seal
80	Diff tube	A-3072	Differential Tube
81	Outdrive/diff half	A-3073	Outdrive Cup/Diff Half
82	Diff grease (clear)	A-3065	Silicone Differential Compound
83	Diff washer	A-3070	'XX' Trans Drive Rings (2)
84	5mm x 8mm bearing	A-6907	5mm x 8mm Bearings
85	Diff gear	A-3076	2.61:1 Diff Gear
86	3/32" diff balls	A-6951	3/32" Carbide Diff Balls (12)
87	1/4" x 5/16" shim	A-6230	Shim Assortment - 3/16", 1/4", 1/2" (20)
88	Diff adjusting screw	A-3078	Differential Screw, Hardware, and Seal
89	Foam thrust bearing seal	A-3078	'XX' Trans Diff Screw, Hardware, Seal Set
90	3mm x 8mm thrust bearing washer	A-3098	Differential Thrust Bearing w/Carbide Balls (Molded)
91	3mm x 8mm thrust bearing	A-3098	Differential Thrust Bearing w/Carbide Balls (Molded)
92	4-40 x 1" setscrew	A-9932	Aluminum Gear/Slipper Shaft 2.61:1
93	Aluminum top gear/slipper shaft	A-9932	Aluminum Gear/Slipper Shaft 2.61:1
94	3/16" x 5/16" bearing	A-6905	3/16" x 5/16" Ball Bearing (Slipper) (2)
95	Left gearbox half	A-3059	Transmission Case Set 2.61:1
96	1/2" x 3/4" bearing	A-6908	1/2" x 3/4" Ball Bearings w/Teflon Seal (2)
97	Right gearbox half	A-3059	Transmission Case Set 2.61:1
98	Idler gear shaft	A-3077	'XX' Trans Upper Gear, Idler, Shaft (2.61:1)
99	1/8" x 3/8" bearing	A-6909	1/8" x 3/8" Ball Bearings ('XX' Trans) (2)
100	Idler gear	A-3080	Idler Gear 2.61:1
101	2-56 x 5/8" cap-head screw	A-3061	Transmission Screw Set
102	Motor plate	A-3063	Motor Plate
103	4-40 x 1" cap-head screw	A-6223	4-40 x 1" Cap-Head Screws (6)
104	Slipper back plate	A-3132	Slipper Backing Plate (XX, XX-T)
105	Slipper pad	A-3123	Slipper Pad
106	Spur gear 88-tooth	A-3928	88T 48-Pitch Spur Gear (XX-4)
107	Slipper spacer	A-3124	Slipper Spring, Cup, Spacer, Bushing, and Washer
108	Gold 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 aluminum locknut	A-6305	4-40 Aluminum Locknuts, Low Profile (10)
111	4-40 x 1/2" flat-head screw	A-6220	4-40 x 1/2" Flat-Head Screws (6)
112	Shock O-ring	A-5015	Double O-Ring Shock Cartridge

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SPARE PARTS LIST

KEY #	KIT/PART DESCRIPTION	PART NO.	SPARE PARTS DESCRIPTION
113	Shock cartridge body	A-5015	Double O-Ring Shock Cartridge
114	Shock cartridge spacer	A-5015	Double O-Ring Shock Cartridge
115	Shock cartridge cap	A-5015	Double O-Ring Shock Cartridge
116	Shock fluid	A-5224	SILATECH Competition Shock Fluid 350/30 wt
117	Front shock shaft	A-5061	.9" Titanium Nitrided Shock Shaft
118	Rear shock shaft	A-5062	1.2" Titanium Nitrided Shock Shaft
119	Shock end	A-5023	Spring Clamps & Cups (2)
120	Shock spacers	A-5015	Double O-Ring Shock Cartridge
121	Shock piston	A-5046	Teflon™ Shock Pistons #56, Red (4)
122	Front shock body	A-5030	.9" Shock Body, Hard Anodized
123	Rear shock body	A-5031	1.2" Shock Body, Hard Anodized
124	Shock fluid	A-5224	Silatech Competition Shock Fluid 350/30wt
125	Shock spring cup	A-5023	Spring Clamps & Cups (2)
126	2.5" shock spring – red	A-5152	2.5" Spring 2.6 Rate (Red) (2)
127	Shock collar	A-5023	Spring Clamps & Cups (2)
128	2.5" shock spring – pink	A-5150	2.5" Spring 2.3 Rate (Pink) (2)
129	Front tire	A-7505S	Front Truck Tire DIRECTIONAL (Silver) (2)
130	Rear tire	A-7638S	Rear Truck Tire IFMAR PIN (Silver) (2)
131	Front wheel	A-7077	Front Disk Wheels w/Caps (Yellow) (XX-T) (2)
132	Rear wheel	A-7174	Rear Disk Wheels w/Caps (Yellow) (LX-T, XX-T) (2)
133	Foam tire liners	A-7699	Truck Foam Tire Liners (2)
134	Front wheel disk	A-7199	Disk Wheel Cap Set (XX-T) (4)
135	10-32 locknut	A-6303	10-32 Locknuts (4ea Nylon & Steel) (8)
136	Rear wheel disks	A-7199	Disk Wheel Cap Set (XX-T) (4)
137	8-32 locknut	A-9922	MIP CVD Driveshafts (XX-T)
138	3mm x 8mm cap-head screws	A-6201	3mm x 8mm Cap-Head w/Washers (10)
139	Gear cover	A-3064	'XX' Gear Cover & Plug
140	4-40 x 1/8" button-head screw	A-6212	4-40 x 1/8" Button-Head Screws (4)
141	Gear cover plug	A-3045	Slipper Gear Cover Plug (4)
142	Battery spacing foam	A-4015	Foam Battery Block Set XX/XX-T (2)
143	Battery strap foam strip	A-4115	Battery Hold-Down Strap X-Long
144	Battery hold-down strap	A-4115	Battery Hold-Down Strap X-Long
145	Body clips	A-8200	Body Clips (12)
146	Two-sided tape	A-4004	Servo Tape (6)
147	Antenna tube	A-4002	Antenna Kit
148	Antenna cap	A-4003	Antenna Caps (8)
149	Front bumper	A-4130	Front Bumper
150	4-40 x 1/4" flat-head screw	A-6213	4-40 x 1/4" Flat-Head Screw (6)
151	Double-XT body	A-8017	XX-T 'CR' Body w/Window Masks
152	Window masks	A-8017	XX-T 'CR' Body w/Window Masks
153	Sticker sheet	A-8342	XX-T 'CR' *Graphite Plus* Sticker Sheet

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