BAG E

Figure 67

❑ Step 1. Insert a 1/8" stainless washer (75) into the recessed area at the rear of the right rear suspension pivot (108).

❑ Step 2. Place the right rear suspension arm (109) – **marked 'L'** – over the right rear suspension pivot (108). Line up the holes in the arm (109) with the holes in the suspension pivot (108) and attach the two parts by inserting an inner rear hinge pin (107) all the way through both parts.

⚠ **IMPORTANT NOTE:** Check that the suspension pivot is installed correctly. The washer should be to the rear (opposite tside of the arm that the letter is on), and the side of the pivot with the raised area around the screws should be on top.

❑ Step 3. Repeat steps 1 and 2 for the left suspension pivot (105) and left suspension arm (106) – **marked 'R'**.

⚠ **IMPORTANT NOTE:** The letters on the rear suspension arms are marked backwards. This was not a mistake! The arms are used in the other configuration on other cars . In order to optimize the overall layout of the XX-4, the suspension arms were reversed. Be sure that the arm marked 'L' is on the right side, and the arm marked 'R' is on the left side.

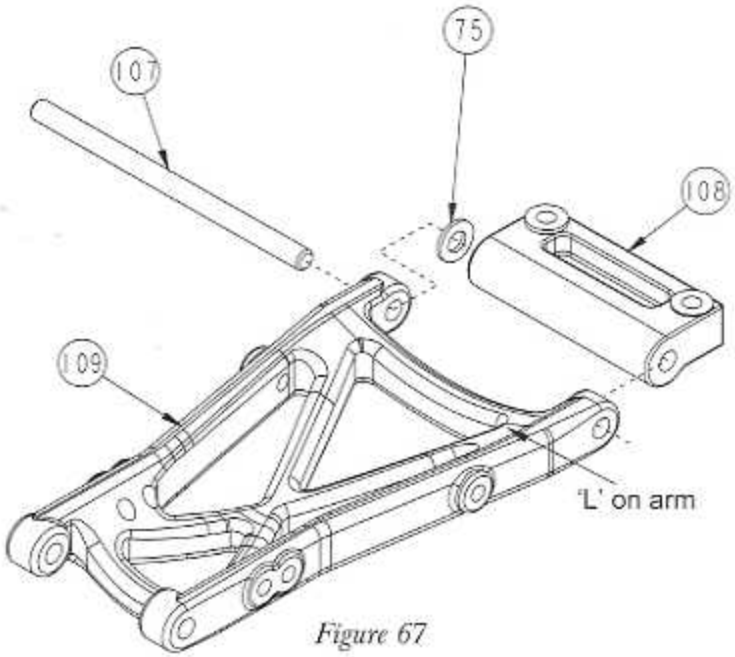
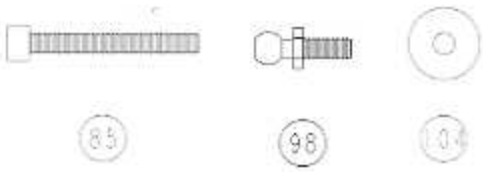


Figure 67

Figure 68



❑ Step 4. Thread a 1/4" ball stud (98) into each of the #2 holes on the bottom of the rear shock tower (110). Mount the ball studs (98) from the rear as shown. Place a foam thing (104) over the two ball studs (98).

❑ Step 5. Insert a 4-40 x 7/8" cap-head screw (85), from the front, through the third hole in, on the top of the shock tower (110) on each side. Thread a top shock mount bushing (86) onto each of the two screws (85), and tighten.

⚠ **IMPORTANT NOTE:** The shock mount bushings and ball studs should be on the same side of the shock tower as shown in the illustration. Do not overtighten the shock mount bushings.

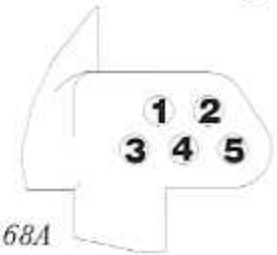


Figure 68A

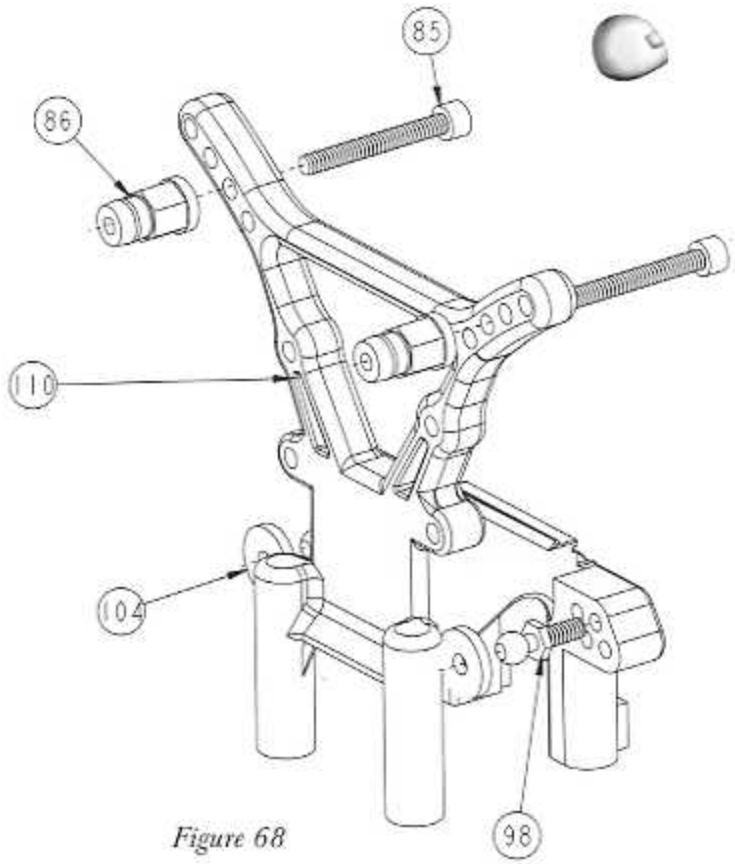
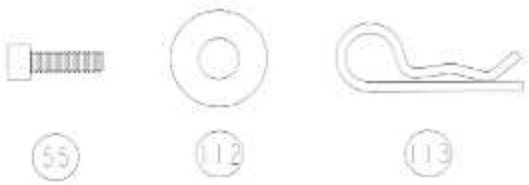


Figure 68

BAG E (Continued)

Figure 69



❑ Step 6. Position the wing mount (111), with the posts pointing up, at the rear of the shock tower (110). Align the holes in the wing mount (111) with the holes in the tower (110) and secure the mount (111) to the tower (110) with two 4-40 x 3/8" cap-head screws (55). Attach both wing mounts (111) to the rear tower (110).

❑ Step 7. Place a wing mount washer (112) over the post on each of the wing mounts (111). Secure the washers (112) with a body clip (113).

**NOTE: The wing will be attached later, in Bag H.*

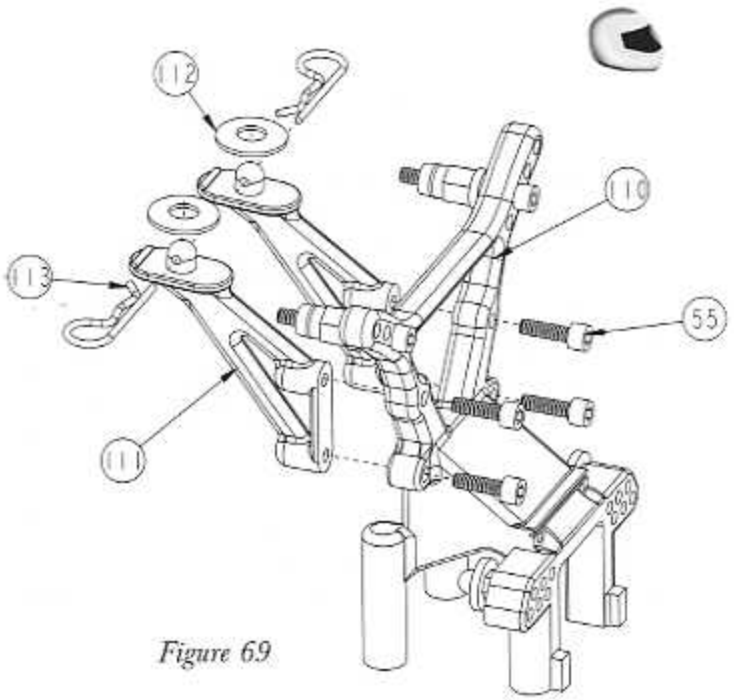
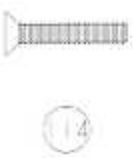


Figure 69

Figure 70



❑ Step 8. Position the right suspension pivot (with the arm marked 'L' attached) between the chassis (30) and the differential outdrive (39). Line up the holes in the pivot (108) with the holes in the chassis (30). Secure the pivot (108) to the chassis (30) with two 4-40 x 5/8" flat-head screws (114). Thread the two screws (114) into the pivot (108) until the end of each screw (114) is flush with the top of the suspension pivot (108).

❑ Step 9. Repeat step 8 for the left suspension pivot (105).

There are two small wedges included in your kit. These pieces fit under the rear suspension pivots to adjust the anti-squat. Put these wedges in your spare parts box for now. Anti-squat adjustment and installation of the wedges will be discussed in the tip section.

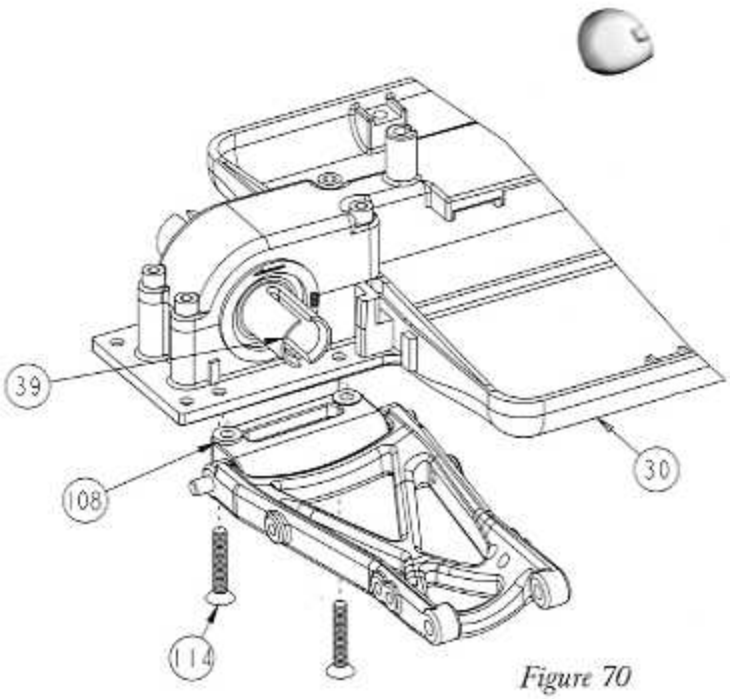


Figure 70

BAG E (Continued)

Figure 71

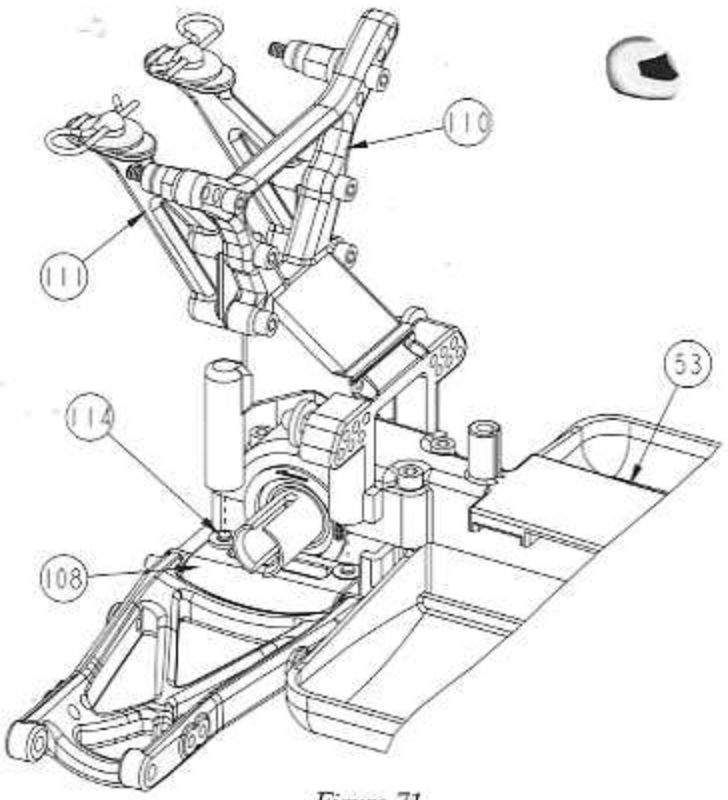


Figure 71

Before proceeding to step 10, locate the 4-40 thread-forming screw used prior to step 34 in Bag B and thread the four holes in the bottom of the rear shock tower. Apply a small amount of white assembly grease to the screws before threading them into the holes.

❑ Step 10. Place the rear shock tower (110) over the back of the main chassis cover (53), on top of the rear suspension pivots (105), (108) with the wing mounts (111) pointing back. Insert the tab on the front of the shock tower (110) into the indexed area on the chassis (30) and line up the four holes in the bottom of the shock tower (110) with the four screws (114) already installed in the suspension pivots (105), (108). Thread the four 4-40 x 5/8" flat-head screws (114) into the holes in the shock tower (110) evenly until all four screws (114) are tight.

Figure 72

(116)

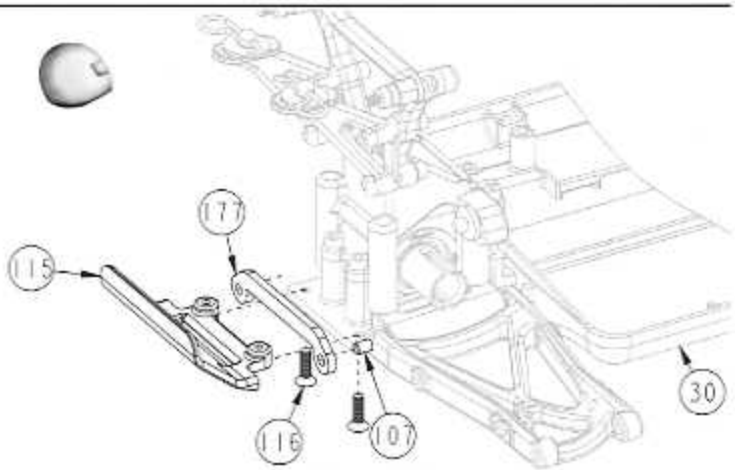
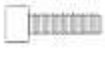


Figure 72

❑ Step 11. Position the rear hinge pin brace (177) over the end of each inner rear hinge pin (107) as shown.

❑ Step 12. Attach the rear bumper (115) to the back of the chassis (30) by threading two 4-40 x 3/8" flat-head screws (116) through the chassis (30) and into the holes in the bumper (115).

Figure 73



(55)

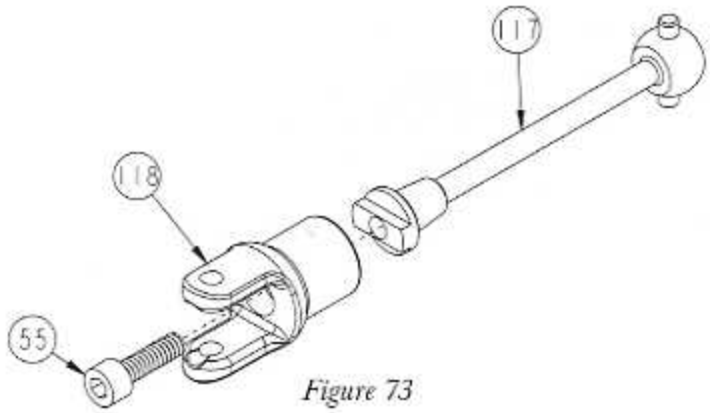


Figure 73

❑ Step 13. Attach the rear dogbone (117) to the rear universal yoke (118) by lining up the slot on the dogbone (117) with the groove in the universal yoke (118). Secure the two pieces with a 4-40 x 3/8" cap-head screw (55). Make two rear dogbone assemblies.

A small amount of liquid thread-lock on the threads of the screw will hold the screw securely in place, keeping the yoke from coming loose.

BAG E (Continued)

Figure 74

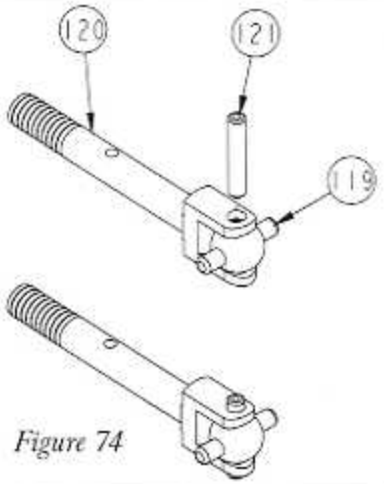


Figure 74

❑ Step 14. Position the rear universal pivot (119) in the rear axle (120) so that the holes in both parts are aligned.

❑ Step 15. Using pliers, carefully push a 3/32" x 1/2" spirol pin (121) through the rear axle (120) and universal pivot (119) until the pin (121) extends evenly out both sides of the rear axle (120).

When inserting the pin, be careful not to "mushroom" the ends of the pin. This can cause the universal pivot to bind.

❑ Step 16. Make two rear axle assemblies.

Figure 75

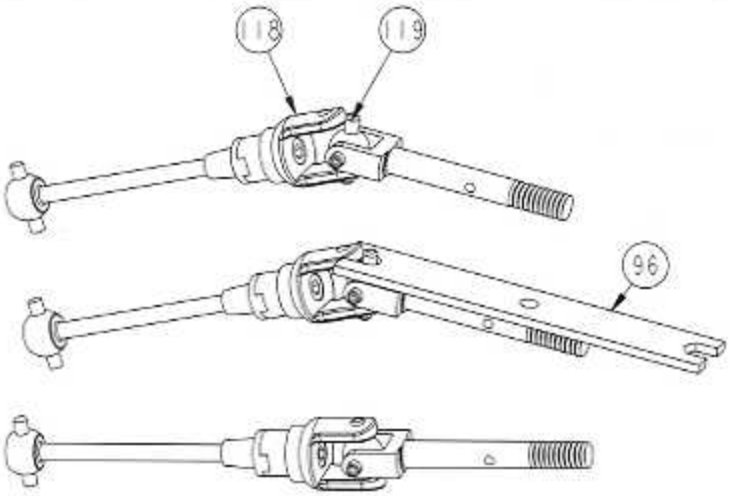
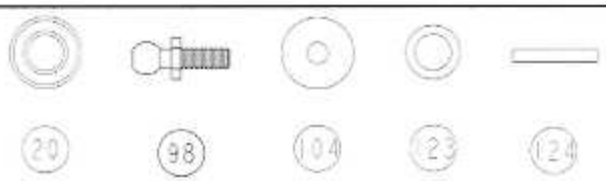


Figure 75

❑ Step 17. Using the small end of the Team Losi assembly wrench (96), spread the rear universal yoke (118) over the pins on the universal pivot (119).

❑ Step 18. Attach both dogbone assemblies to both axle assemblies.

Figure 76



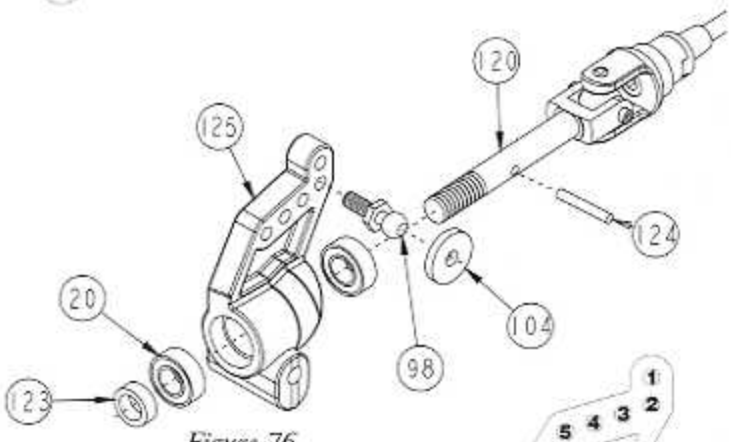


Figure 76

Figure 76A

❑ Step 19. Press a 3/16" x 3/8" bearing (20) into each side of the right rear hub (125).

NOTE: If the bearings only have one Teflon™ seal (tan, woven looking) in them, position the Teflon™ seal to the outside.

❑ Step 20. Thread a 1/4" ball stud (98) into the #2 hole in the rear hub (125). The ball stud (98) should be threaded into the side of the hub (125) with the recessed area and the letter 'R'.

❑ Step 21. Place a foam thing (104) over the ball stud (98).

❑ Step 22. Slide the rear axle (120) through the bearings (20) from the inside of the hub (125).

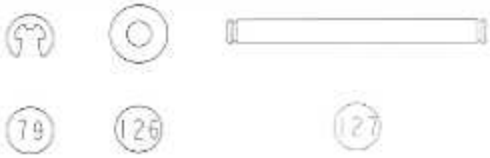
❑ Step 23. Place a rear axle spacer (123) over the rear axle (120), against the outside bearing (20).

❑ Step 24. Secure the rear axle (120) and spacer (123) by inserting a 1/16" x 7/16" spirol pin (124) through the small hole in the rear axle (120). The pin (124) should be centered in the rear axle (120).

❑ Step 25. Repeat steps 19 through 25 for the left rear hub (122).

BAG E (Continued)

Figure 77



❑ Step 26. Place the right rear hub (125) between the outer rails of the right rear suspension arm (marked 'L')(109). Be sure that the ball stud (98) is towards the front of the car. Position a rear hub spacer (126) between the hub (125) and suspension arm (109) on both the front and rear side of the hub (125).

**NOTE: If there is a reinforcement brace attached to the outside of the arm, remove it before installing the rear hub.*

❑ Step 27. Insert an outer rear hinge pin (127) into the suspension arm (109), through each of the two spacers (126), and the rear hub (125). Secure the hinge pin (127) with two 1/8" E-clips (79).

❑ Step 28. Repeat steps 26 and 27 for the right rear suspension arm (marked 'R') (106).

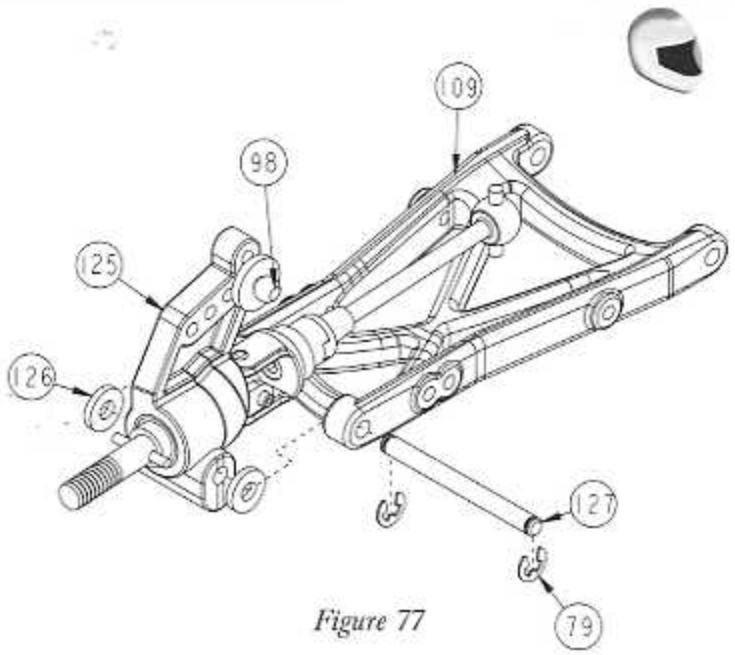


Figure 77

Figure 78

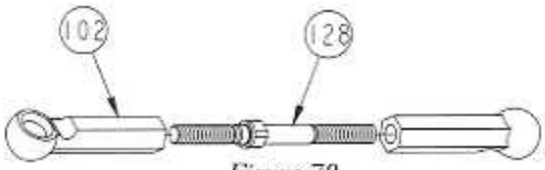


Figure 78

❑ Step 29. Thread a plastic rod end (102) onto each end of a 1-3/8" turnbuckle (128). Tighten both rod ends (102) equally until the rod is the same length as the rod in Figure 78A. Make two of these camber link assemblies.

Figure 78A

Figure 79

❑ Step 30. Attach one end of a camber link assembly to the ball stud (98) on the rear shock tower (110). Rotate the rear hub (122), (125) inward and insert the dogbone (117) into the rear diff, lining up the pins on the dogbone (117) with the slots in the rear diff. With the dogbone (117) in place, attach the other end of the camber link to the ball stud (98) on the rear hub (122), (125). Attach a camber link to both the left and right side of the car.

Try to mount all of the camber links so that the threads adjust in the same direction (e.g. forward makes the rod shorter). This will help to make adjustments easier once the car is assembled.

**NOTE: Try to leave your car sitting on a flat surface until the shocks are assembled. This will keep the dogbones correctly inserted in the differentials until the shocks can be installed.*

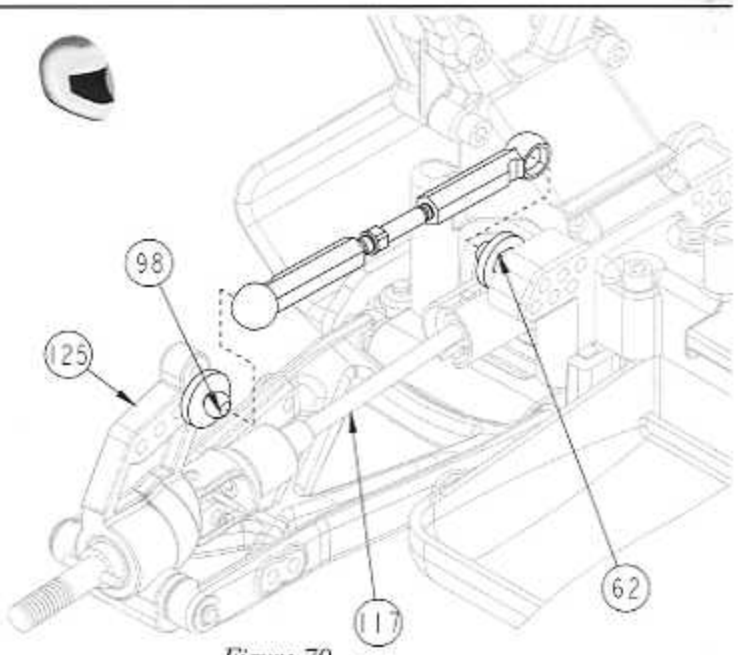


Figure 79

BAG F

Figure 80

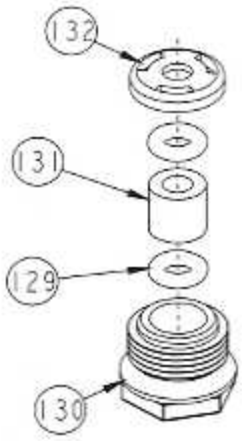


Figure 80

❑ Step 1. Place one shock O-ring (129) into the shock cartridge body (130), making sure that the O-ring (129) sits flat on the bottom of the cartridge body (130).

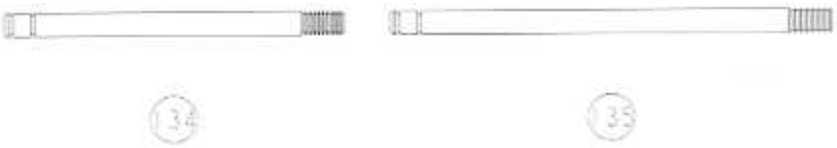
❑ Step 2. Insert the shock cartridge spacer (131) into the cartridge body (130), followed by a second O-ring (129).

❑ Step 3. Once the second O-ring (129) is inserted, and is flush with the top of the cartridge body (130), snap the shock cartridge cap (132) onto the cartridge body (130).

❑ Step 4. Make four cartridge assemblies.

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

Figure 81



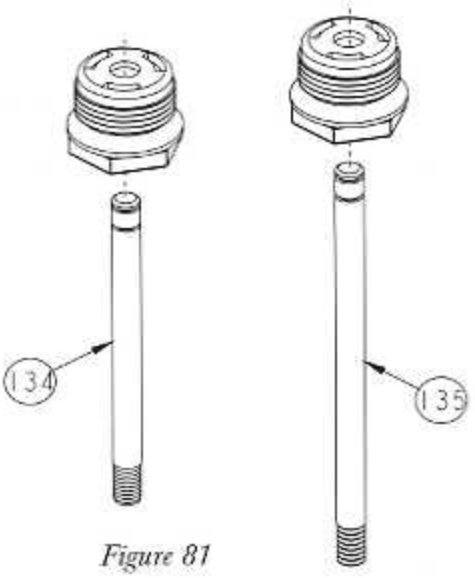


Figure 81

❑ Step 5. Place a drop of shock fluid (133) on the grooved end of each shock shaft [front (134), rear (135)] and slide a cartridge, hex end first, down the shock shaft (134), (135) toward the threads.

Figure 82

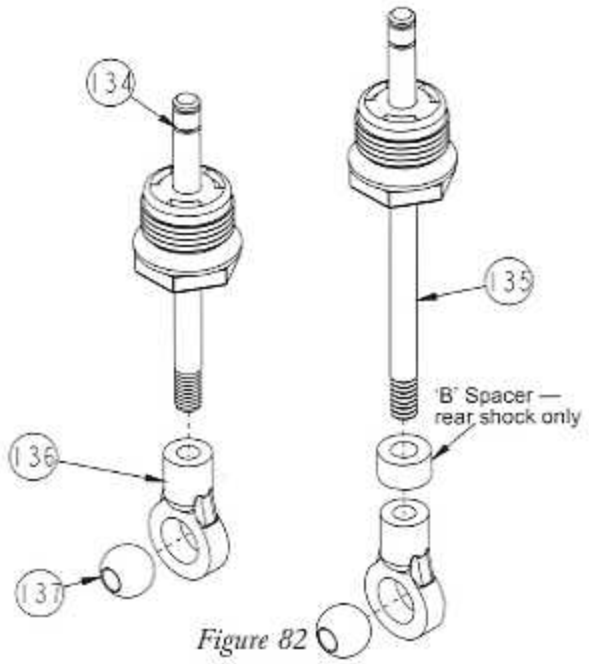


Figure 82

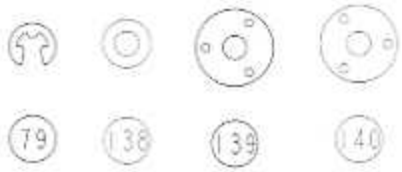
❑ Step 6. Using needle-nose pliers or small vise grips, grasp the front shock shaft (134) between the grooves, and thread a shock end (136) all the way onto the shaft (134). Attach a shock end (136) to both front shock shafts (134).

❑ Step 7. Before threading the shock ends (136) onto the rear shock shafts (135), slide a 'B' shock spacer (138) *(the larger of the two spacers, marked 'B')* over the shaft (135) and next to the cartridge. Once the spacers are in place, thread the shock ends (136) onto the shock shafts (135).

❑ Step 8. Carefully snap a 1/4" swivel ball (137) into each of the shock ends (136) on the four shock shafts (134), (135).

BAG F (Continued)

Figure 83



❑ Step 9. Snap a 1/8" E-clip (79) into the groove closest to the cartridge on both front shock shafts (134).

❑ Step 10. Before attaching the E-clip to the rear shock shafts (135), slide an 'A' shock spacer (138) *(the smaller of the two spacers, marked 'A')* over the shaft (134) and next to the cartridge. Once the spacers are in place, snap a 1/8" E-clip (79) into the groove closest to the cartridge on both front shock shafts (134).

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

❑ Step 11. Slide a black, #57 shock piston (139) onto each of the two front shock shafts (134) until the piston rests against the E-clip (79). Secure the pistons (139) to the shafts (134) with a second E-clip (79).

**NOTE: Be sure to attach the black, #57 pistons to the short shock shafts. The long shock shafts are for the rear.*

❑ Step 12. Slide a red, #56 shock piston (140) onto each of the two rear shock shafts (135) until the piston rests against the E-clip (79). Secure the pistons (140) to the shafts (135) with a second E-clip (79).

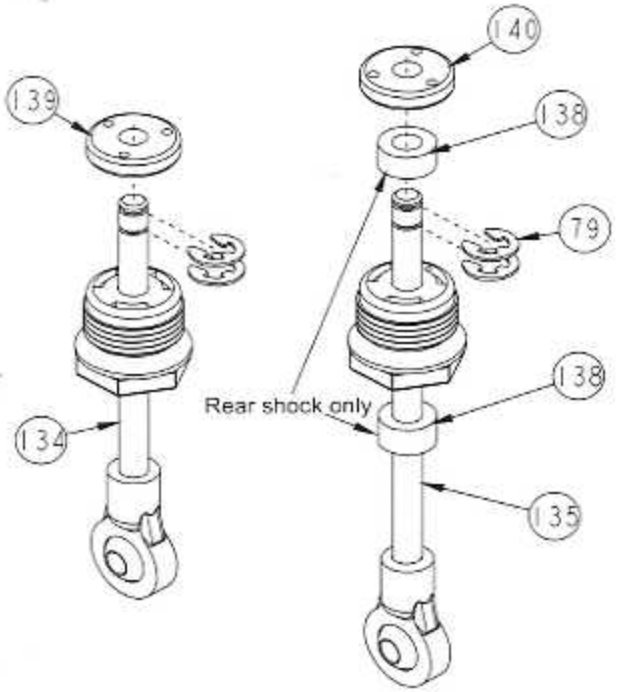


Figure 83

Figure 84

❑ Step 13. Match the short, front shock bodies (141) to the short, front shafts (134); and the long, rear shock bodies (142) to the long, rear shafts (135).

❑ Step 14. Fill the shock body (141), (142) with shock fluid (133) up to the bottom of the threads.

❑ Step 15. Insert the shaft assembly into the shock body (141), (142) with the cartridge against the shock piston (139), (140). Slowly tighten the cartridge approximately two full turns. With the cartridge still slightly loose, slowly push the shock shaft (134), (135) into the shock body (141), (142). This will bleed the excess fluid out of the shock. Once the shaft (134), (135) is all the way in, tighten the shock cartridge the rest of the way by hand.

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

❑ Step 16. With the shaft (134), (135) 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 (134), (135) 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.

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

❑ Step 17. Repeat steps 14 through 16 for all four shocks.

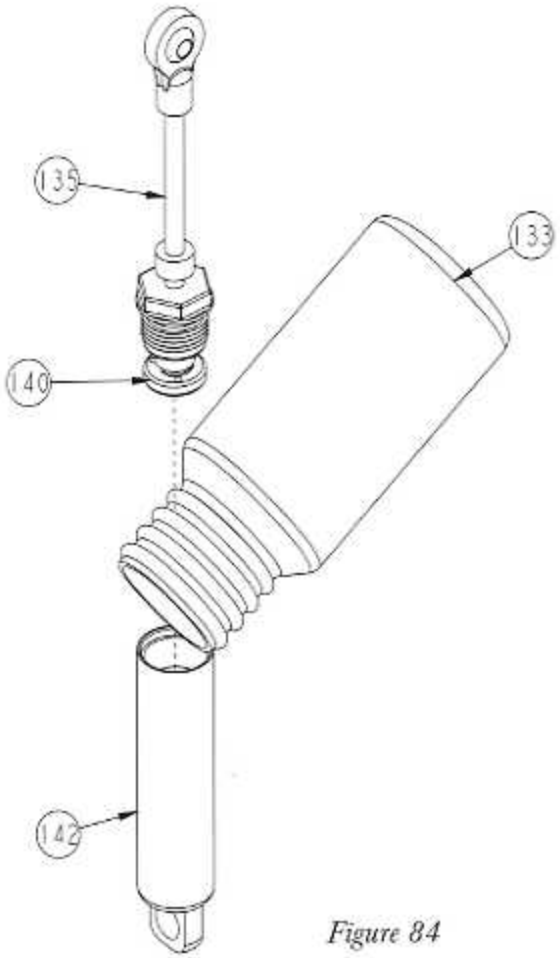
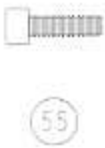


Figure 84

BAG F (Continued)

Figure 85



(55)

❑ Step 18. Snap a bottom shock spring cup (143) onto each of the four shafts (134), (135) and around the shock end (136).

❑ Step 19. Slide a front shock spring (144) over each of the two front shocks so that the spring rests on the spring cup (143). Slide a rear shock spring (145) over each of the two rear shocks so that the spring rests on the spring cup (143).

❑ Step 20. Insert a 4-40 x 3/8" cap-head screw (55) into the larger hole of each of the four shock spring collars (146) and thread the screw into the smaller hole.

❑ Step 21. With the screw (55) still loose in the collar (146), slide the collar (146) over the top of each shock body (141), (142) and against the spring (144), (145). Tighten the screw (55) in the collar (146) to hold it in place. *Do not over tighten!*

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

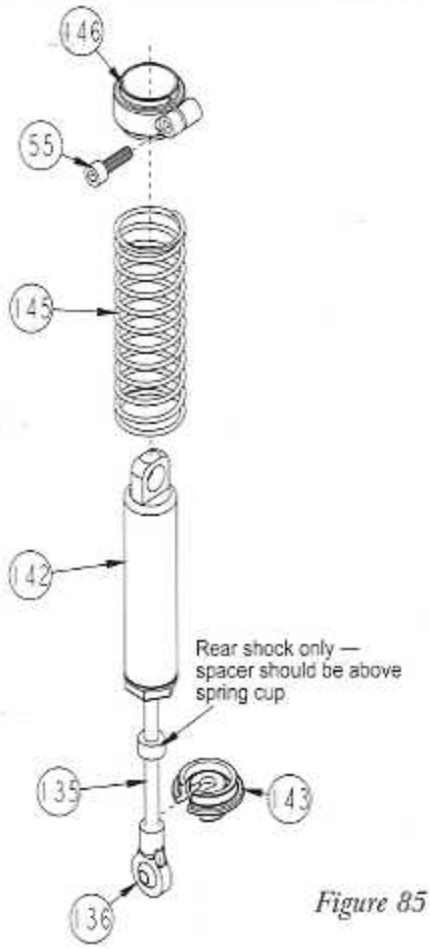
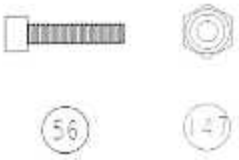


Figure 85

Figure 86



(56) (147)

❑ Step 22. Make sure that the rear dogbones (117) are still in place in the rear differential before continuing.

❑ Step 23. Insert a 4-40 x 1/2" cap-head screw (56) in the hole in the swivel ball (137) in the rear shock.

❑ Step 24. Attach the bottom of the shock to the rear arm (106), (109) by threading the 4-40 x 1/2" cap-head screw (56) into the inside shock mounting hole on the arm (106), (109).

❑ Step 25. Place the top of the shock body (142) over the shock mount bushing (86) on the rear shock tower (110) and secure it with a 4-40 locknut (147).

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

❑ Step 26. Repeat steps 23 through 25 for the second rear shock.

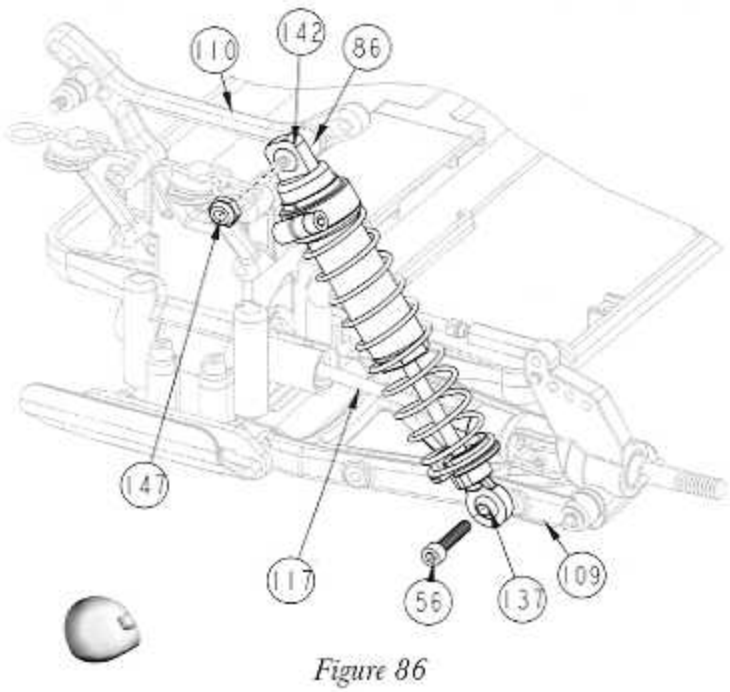
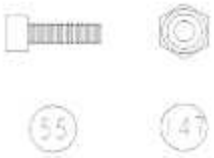


Figure 86

BAG F (Continued)

Figure 87



❑ Step 27. Make sure that the front dogbones (94) are still in place in the front differential before continuing.

❑ Step 28. Insert a 4-40 x 3/8" cap-head screw (55) in the hole in the swivel ball (137) in the front shock.

❑ Step 29. Attach the bottom of the shock to the front arm (77) by threading the 4-40 x 3/8" cap-head screw (55) into the middle shock mounting hole on the arm (77).

❑ Step 30. Place the top of the shock body (141) over the shock mount bushing (86) on the front shock tower (84) and secure it with a 4-40 locknut (147).

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

❑ Step 31. Repeat steps 28 through 30 for the second front shock.

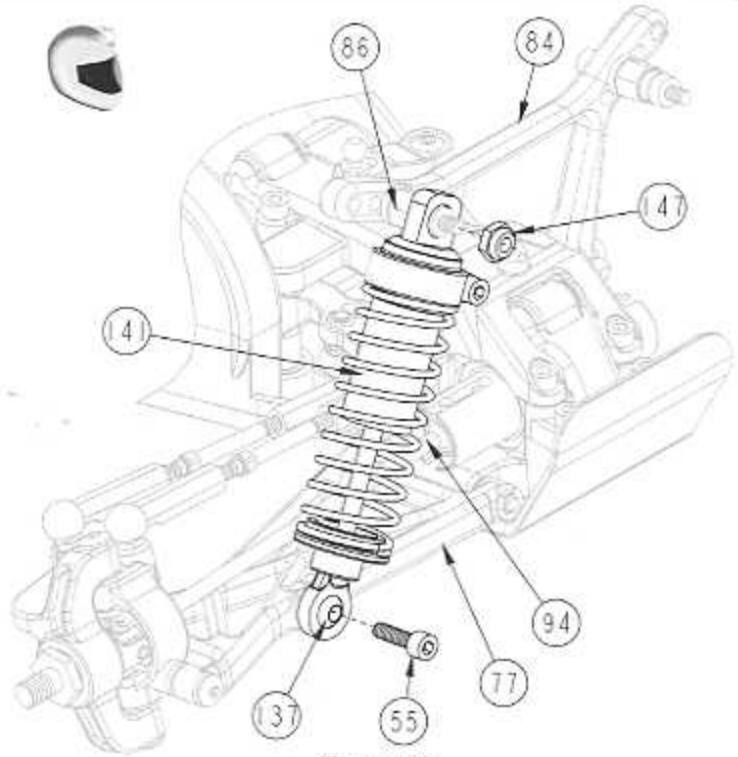


Figure 87

Understanding shock adjustments

There are endless combinations in which the shocks can be adjusted. You have the ability to change the springs, oil, and pistons. They can be changed independently, or all at once.

The springs are the simplest to understand. This is especially true since all Team Losi springs are labeled with a pound rating so that you know exactly how soft or firm a particular spring is. Basically, the higher the number, the stiffer the spring. One thing to keep in mind when working with springs is that the spring collars should only be used to adjust ride height. Moving the spring collar down, resulting in more pre-load on the spring, is not the correct way to stiffen the spring. If a stiffer spring is desired, then a stiffer spring should be installed.

The oil is also easy to understand since the different viscosities (weights) are labeled on the bottles. Team Losi also produces different sizes of shock pistons. The piston sizes are not quite as easy to understand. Although Team Losi pistons are labeled as to what size they are, what exactly does this mean? This is not one of the easiest things to explain, but I'll do my best to help you understand what happens to the damping of the shock when the piston size is changed.

Let me start by giving you a couple of examples. I'm sure you've experienced the "bubble" test before. This is where you turn a bottle or jar upside down to see how fast or slow the air bubble will travel to the other end. The thicker the fluid, the slower the bubble travels. This is an example of how viscosity works. The thicker fluid has a higher viscosity, which makes the bubble move through it slower. Just the same as a higher viscosity shock fluid makes the piston travel through the shock body slower.

Piston size is a little trickier to explain. I'll give it a shot though. Picture a bathtub full of water. If you were to take a one-foot square sheet of plastic and move it quickly from one end of the tub to the other it wouldn't be easy. This is because the surface of the sheet of plastic would be pushing all of the water around it. If you were to take that same sheet of plastic and drill several large holes in it, the surface area would be greatly reduced. The sheet of plastic could then be moved from one end of the tub to the other much quicker, and with less effort. This is because the water can now pass through the holes as well as around the edges of the sheet. This is an example of something called "pack". Pack is a term used to describe how much resistance there is when a shock sees a quick, sharp movement – such as landing off a jump or hitting a large rut.

Pistons with smaller holes* in them have more pack, while pistons with larger holes have less pack. Another term you should be familiar with is "static damping". Static damping is the amount of resistance when the shock is moved slowly up and down. Static damping generally affects the handling of the vehicle when entering and exiting corners and in the small "footprint" type holes in a track's surface. Static damping can be adjusted by changing the oil in the shock – regardless of the piston size. Changing to heavier oil will not only increase the static damping, but also increases the pack in the shock. Achieving the right combination of pack and static damping can be tricky. The main advantage of being able to change the size of the piston is the ability to achieve the correct balance of pack and static damping.

**Team Losi pistons are packaged as 55, 56, etc. This number designates the drill-bit size of the holes in the piston. Keep in mind that a larger number designates a smaller hole, and a smaller number designates a larger hole.*

BAG G

Figure 88

❑ Step 1. Inspect the inside of the tires [front (148), rear (149)] for any excess material. If present, trim excess rubber to ensure proper seating of the tire on the wheel [front (150), rear (151)]. During tire assembly, make sure that all lettering faces to the outside of the wheel.

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

❑ Step 2. Insert the front foam tire liners (152) into the front tires (148). Pull the front tire (148) over the front wheel (150) and squeeze the tire (148) to properly seat it in the grooves of the wheel (150).

**NOTE: The front foam tire liners are narrower than the rear tire liners.*

➤ For best results, trim 3/16" off of the inside edge of the foam on both sides at a 45° angle.

❑ Step 3. Insert the rear foam tire liners (153) into the rear tires (149). Pull the rear tire (149) over the rear wheel (151) and squeeze the tire (149) to properly seat it in the grooves of the wheel (151). Make certain that the foam liners (153) are not pinched between the tires (149) and the wheels (151).

➤ For best results, trim 3/16" off of the inside edge of the foam on both sides at a 45° angle.

❑ Step 4. The tires (148), (149) should now be glued to the wheels (150), (151). This can be done by using a fast curing superglue or cyanoacrylate glue available at your local hobby shop. Allow the glue to dry thoroughly before continuing.

⚠ **IMPORTANT NOTE:** Read and follow the manufacturers safety warnings regarding the use of any adhesives.

❑ Step 5. Attach the front wheel (150) to the front stub axle (90) by lining up the hex in the wheel (150) with the hex on the axle (90).

❑ Step 6. Apply a small amount of white thrust bearing/assembly grease (49) to the exposed portion of the front axle. Secure the front wheel (150) by threading a 10-32 locknut (154) onto the front stub axle (90), and tightening.

❑ Step 7. Attach the rear wheel (151) to the rear axle (120) by lining up the pin (121) in the rear axle (120) with the groove in the rear wheel (151) and pushing the wheel (151) all the way onto the axle (120).

❑ Step 8. Secure the rear wheel (151) by threading a 10-32 locknut (154) onto the rear axle (120), and tightening.

➤ Don't overtighten the rear wheels. Doing so may result in a slight bind in the rear axle. Team Losi offers a bearing spacer/wheel washer set (A-9941) that, when installed, allows the rear wheel nuts to be fully tightened.

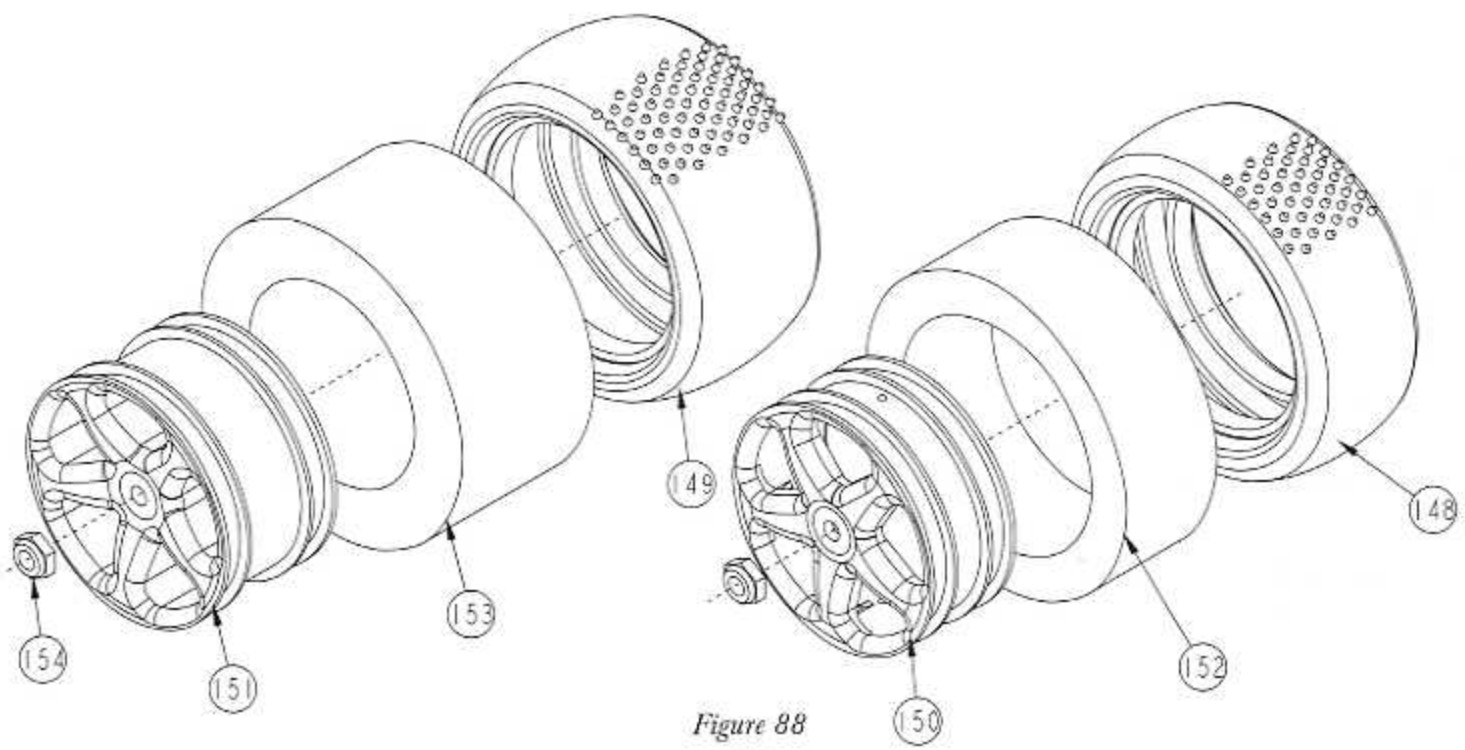
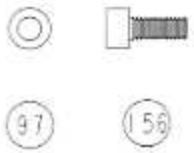


Figure 88

BAG H

Figure 89



❑ Step 1. Place the motor mount (155) against the motor *(not included)* so that the shaft on the motor is centered in the large hole in the motor mount (155) and the flat surface of the motor mount rests against the motor as shown. Align the holes in the motor mount (155) with the holes in the motor.

❑ Step 2. Place a ball stud washer (97) over each of the two 3mm x 8mm motor screws (156) and secure the motor mount (155) to the motor by threading the screws (156) through the two holes in the motor mount (155), and tightening.

If there are two sets of mounting holes in the motor, thread the screws into the set of holes that will allow the motor to be rotated clockwise the farthest (when looking at the motor from the same side as the motor mount). This will allow more room for the motor wires once the motor is installed.

❑ Step 3. Attach the pinion gear *(not included)* to the motor shaft with the tooth section of the gear away from the motor as shown.

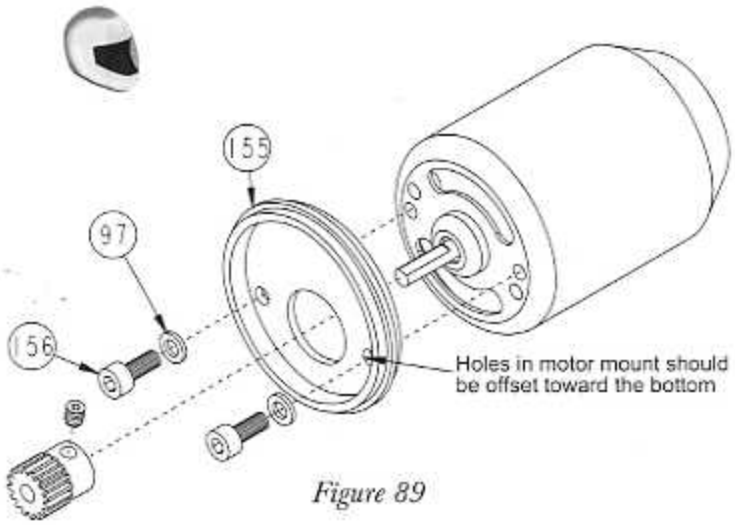


Figure 89

Figure 90

❑ Step 4. Install the motor mount (155), with the motor attached, in the groove in the chassis (30). Check alignment of the pinion gear with the spur gear (12). If the two gears don't align properly, remove the motor and adjust the position of the pinion gear. Check again for proper alignment.

❑ Step 5. Once the pinion gear is properly aligned with the spur gear (12), place the motor mount clamp (157) over the motor mount as shown. Thread a 4-40 x 3/8" button-head screw (163) through the forward hole in the clamp (157), into the threaded insert (54) in the chassis (30), and tighten.

❑ Step 6. Thread a 4-40 x 3/8" button-head screw (163) through the rear hole in the clamp (157) into the threaded insert (54), but **don't tighten** the screw (163) yet. Check the gear mesh through the opening in the side of the cover (53). To adjust the gear mesh, rotate the motor – forward to loosen the gear mesh; and backward to tighten the gear mesh. Once the gear mesh has been adjusted, tighten the rear screw (163).

**NOTE: The gears need a small amount of backlash in order to function properly.*

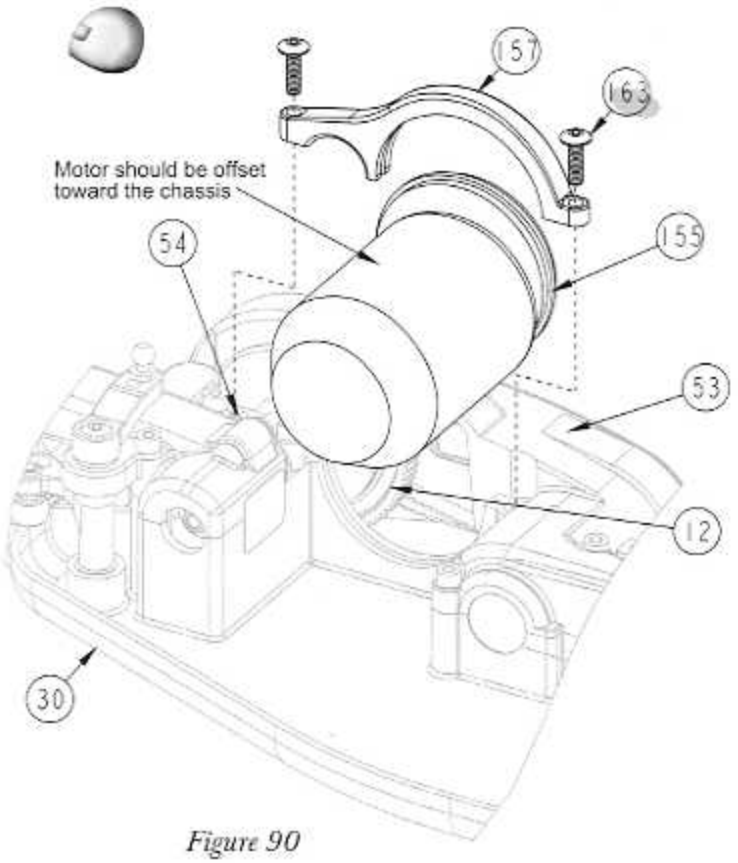


Figure 90

BAG H (Continued)

Figure 91

❑ Step 7. There are two small holes in the top of the main chassis cover (53): One above the slipper shaft (7) and the other above the layshaft (2). There are also holes in the slipper shaft (7) and layshaft (2) that line up with the holes in the cover (53). By lining up the holes in the cover (53) and shafts (2), (7) and inserting the 1/16" Allen wrench (9) into the holes in the shafts and the cover, adjustments of the front and rear diff, and the slipper can be checked. These adjustments will be discussed in the tip section.

❑ Step 8. Thread a 4-40 x 1/8" button-head screw (158) into each of the two holes in the main chassis cover (53). These two screws act as plugs to help seal the drive train.

❑ Step 9. Insert the round, one-way/clicker adjustment plug (159), bevelled side first, in the hole just in front of the motor. Removing this plug allows adjustments to be made to the one-way/clicker. These adjustments are discussed in the tip section of the manual.

❑ Step 10. Insert the rectangular, gear mesh access plug (160), bevelled side first, in the opening behind the slipper adjustment nut.

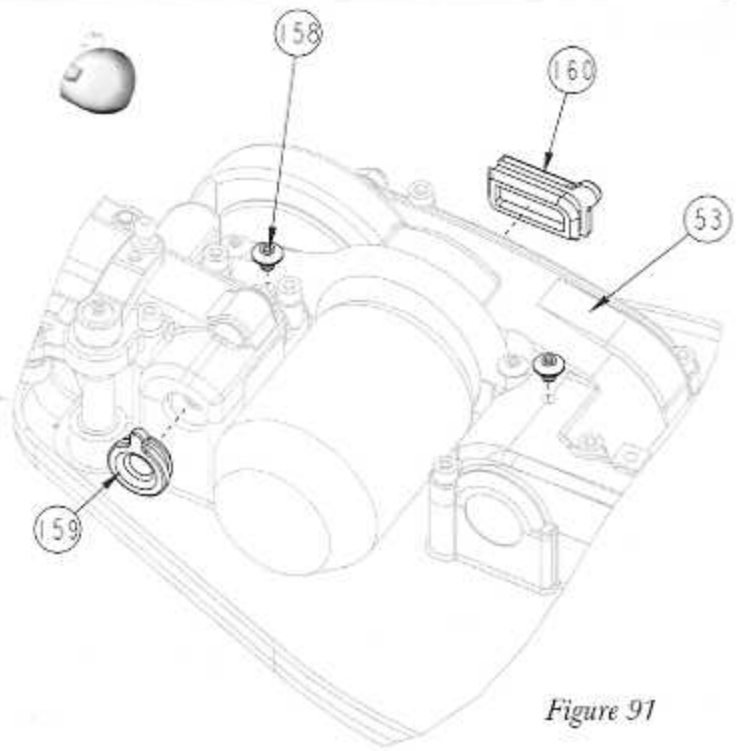


Figure 91

Figure 92

❑ Step 11. Refer to Table 92 and locate the type of steering servo you will be using. In the column marked "mount position", note the listing for your particular servo. Refer to Figure 92A to see how the steering servo mount (161) should be attached to the chassis (30).

❑ Step 12. Remove the servo mount (161) from the steering parts tree and attach the servo mount (161) (as required by your servo) to the chassis (30) with two 4-40 x 3/8" cap-head screws (55).

❑ Step 13. Position the servo *(not included)*, with the output shaft toward the center of the chassis (30), between the servo mount (161) and the chassis cover (53). Place a #4 washer (162) over the four 4-40 x 3/8" button-head screws (163). Secure the servo with the four screws (163) – two in the servo mount (161); and two in the chassis cover (53).

SERVO TYPE	OFFSET	SERVO ARM
Airtronics 94102, 94103, 94141, 94145, 94151, 94152, 94155, 94156, 94322, 94732, 94735, 94737, 94738, 94741	Narrow	23
Futaba S131S, S131SH, S3001, S5101, S9101, S9201, S9301, S9303, S9304, S9401, S9402, S9403	Wide	25
Futaba S132H	Narrow	25
JR NES-507, NES-513, NES-517, NES-901, NES-4000, NES-4131, NES-4721, NES-4735, NES-9021	Wide	23
KO PS-702, PS-703, PS-1001, PS-1003	Wide	23
KO PS-901BH, PS-902	Narrow	23

Table 92

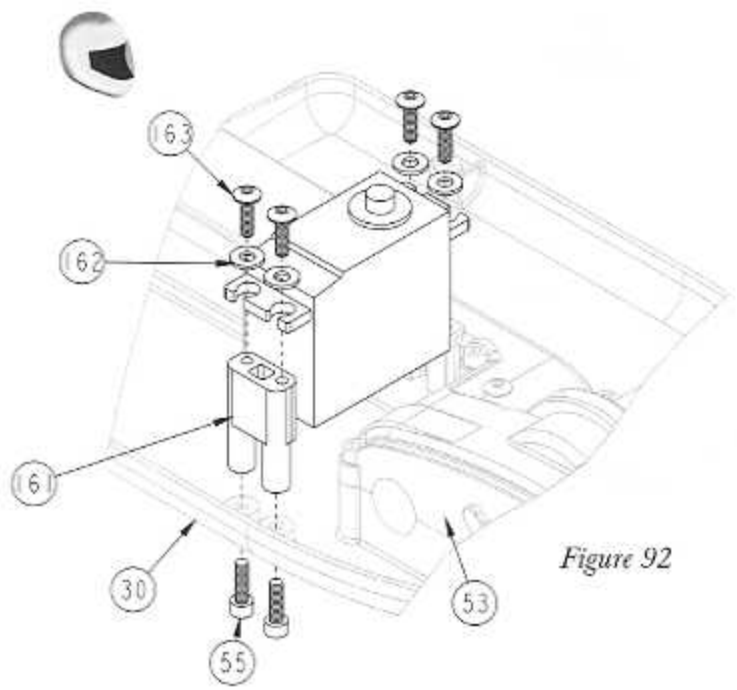


Figure 92

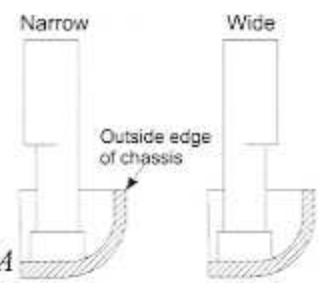
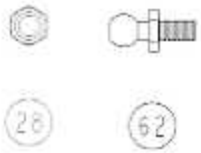


Figure 92A

BAG H (Continued)

Figure 93



❑ Step 14. Refer back to Table 92 to find out which servo arm (164) should be used with your particular servo.

❑ Step 15. Remove the servo arm (164), required for your servo, from the steering parts tree. Insert a 3/16" ball stud (62) through the outside hole in the arm (164) and position the hex on the ball stud (62) in the hex area of the arm (164). Thread a 4-40 mini locknut (28) onto the ball stud (62), and tighten.

❑ Step 16. Plug the servo into your radio system's receiver. Switch the transmitter on, followed by the receiver. Check to see that the steering trim setting on the transmitter is set to the middle position. With the radio system still turned on, attach the servo arm (164) to the servo so that the arm (164) points straight to the left side of the chassis (30) – away from the servo mount (161). Secure the servo arm (164) to the servo with the servo arm screw supplied with your servo.

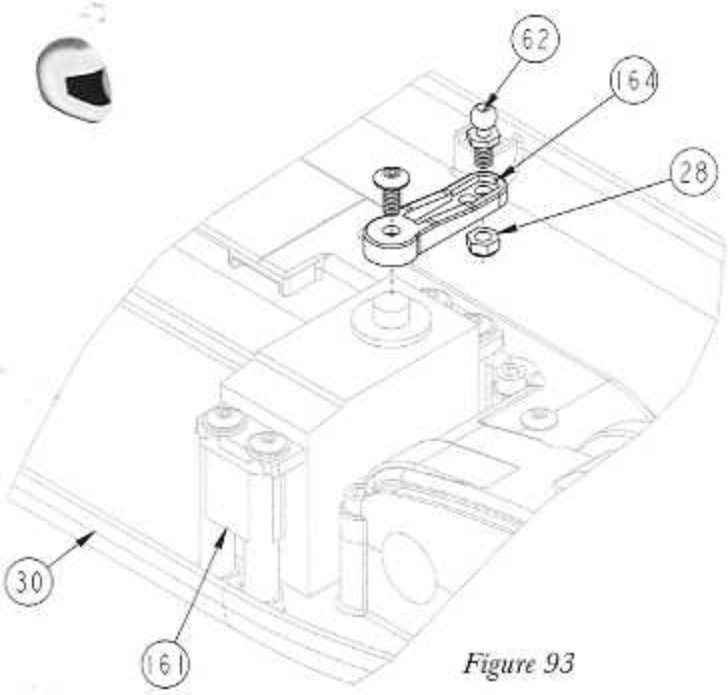


Figure 93

Figure 94

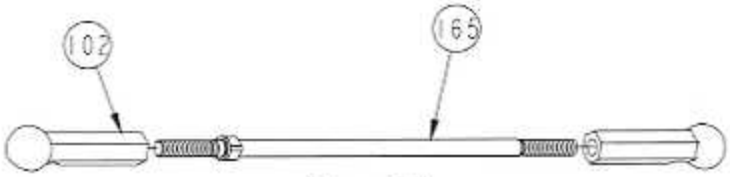


Figure 94

❑ Step 17. Thread a plastic rod end (102) onto each end of the steering rod (165). Tighten both rod ends (102) equally until the rod is the same length as the rod in Figure 94A.

Figure 94A

Figure 95

❑ Step 18. Attach the rod end (102) at one end of the steering rod (165) to the ball stud (62) in the servo arm (164). Attach the other rod end (102) to the ball stud (62) in the steering bellcrank arm (72).

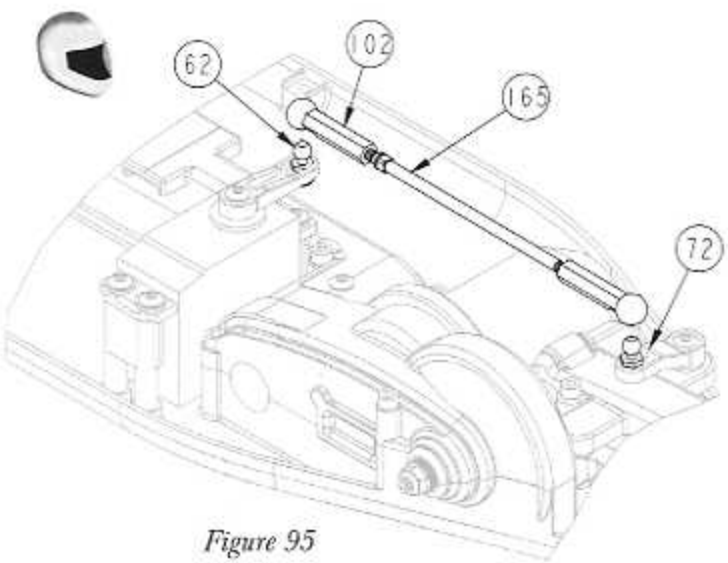
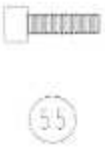


Figure 95

BAG H (Continued)

Figure 96



❑ Step 19. Attach the two battery strap/body mount posts (166) to the chassis (30), as shown, by placing the square base of the post (166) in the area between the ribs at the side of the chassis (30). Thread a 4-40 x 3/8" cap-head screw (55) through the bottom of the chassis (30), into each of the posts (166), and tighten.

⚠ **IMPORTANT NOTE:** The flat section – on the round platform at the top of the post – should be positioned to the inside of the chassis. Positioning the flat section to the inside makes installing and removing the batteries easier.

❑ Step 20. Peel the backing off of a foam battery pad (167) and stick the pad (167) to the top of the chassis (30), in the area shown in Figure 95. Attach a foam pad (167) to both sides of the chassis (30).

For best results, clean the area on the chassis where the pads are to be installed with a mild rubbing alcohol. Rubbing alcohol does a very good job of cleaning the area without leaving any lubricants behind. This will ensure a good, strong bond between the pad and the chassis. Allow the surface to fully dry before installing the pad.

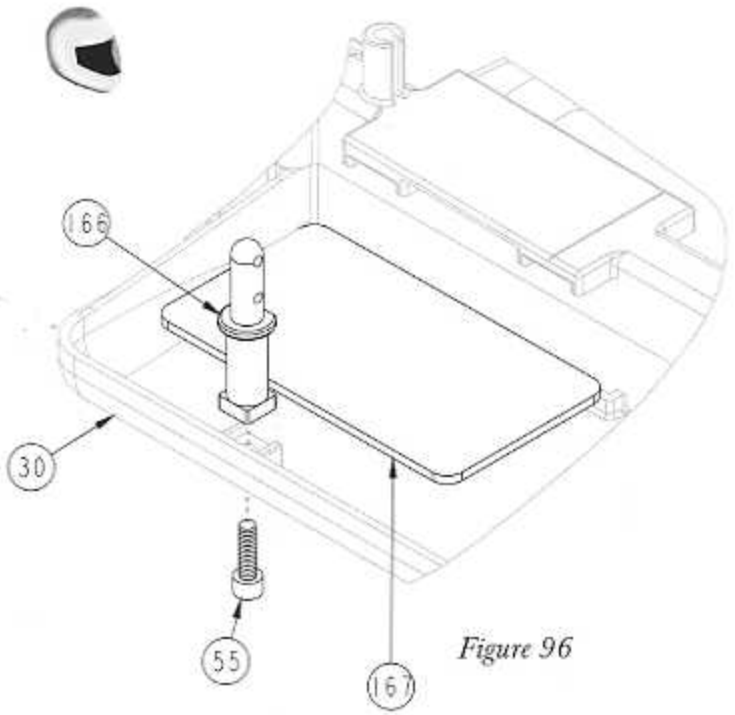
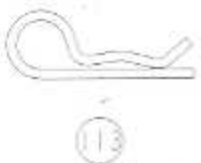


Figure 96

Figure 97



❑ Step 21. Install the battery pack *(not included)* in the chassis (30) as shown. The jumper wire between the two blocks of cells should run over the chassis cover (53), in front of the wide, flat surfeace as shown.

**NOTE: Running the jumper wire to the rear, behind the antenna post will surround the receiver with battery wires which may cause radio interference.*

❑ Step 22. Place the two tabs on the battery hold-down strap (168) under the wide area on top of the chassis cover (53). With the tabs in place, pull the outside of the strap (168) down so the post (166) is inserted through the hole in the strap (168). Secure the strap to the post by installing a body clip (113) in the lower hole in the post (166).

**NOTE: See Figures 97A and 97B for a diagram showing battery pack assembly and jumper wire length.*

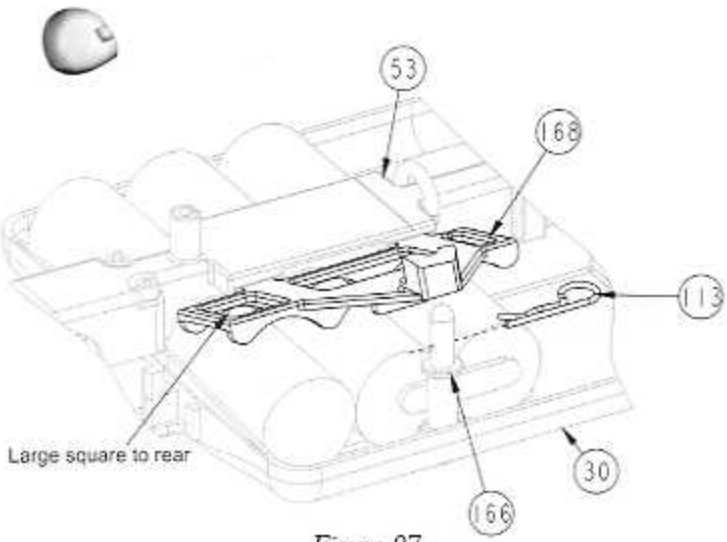


Figure 97

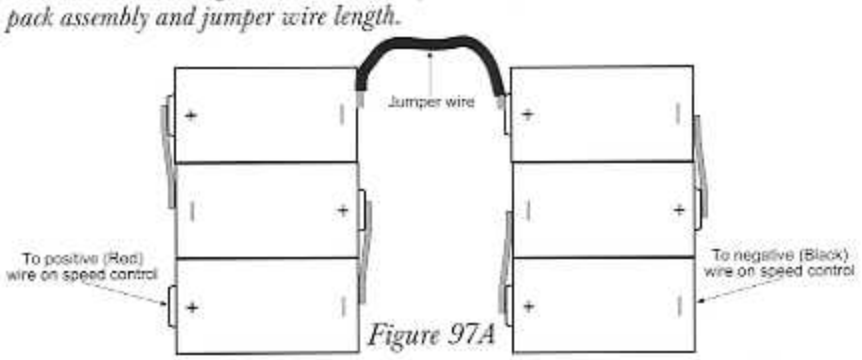


Figure 97A

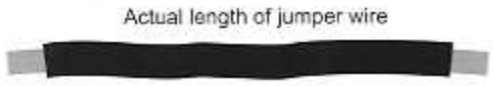


Figure 97B

BAG H (Continued)

Figure 98

❑ Step 23. Cut a piece of thick two-sided tape (169) to the same size as the bottom of the receiver *(not included)*. Remove the backing from one side of the tape (169) and attach the tape (169) to the bottom of the receiver.

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

❑ Step 24. Remove the backing from the other side of the two-sided tape (169) and attach the receiver to the top of the chassis cover (53) on the wide, flat area between the batteries.

❑ Step 25. Slide the antenna wire, extending from the receiver, through the antenna tube (170) so that the wire comes out the opposite end of the tube (170).

**NOTE: A small drop of oil placed in the tube will make the wire slide through the tube easily.*

❑ Step 26. While pulling the wire through the antenna tube (170), press the tube (170) down into the center of the post on top of the chassis cover (53). The wire should be positioned in the slot at the front of the post.

❑ Step 27. Fold the excess wire at the top of the tube (170) down over the tube (170), and place the antenna cap (171) over the tube (170) and wire.

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

❑ Step 28. Using thin two-sided tape (176), attach the speed control *(not included)* to the left side of the chassis (30), between the motor and the battery pack.

**NOTE: The drive system of the XX-4 has been optimized for operation in the forward direction. It is recommended that speed controls with reverse not be used.*

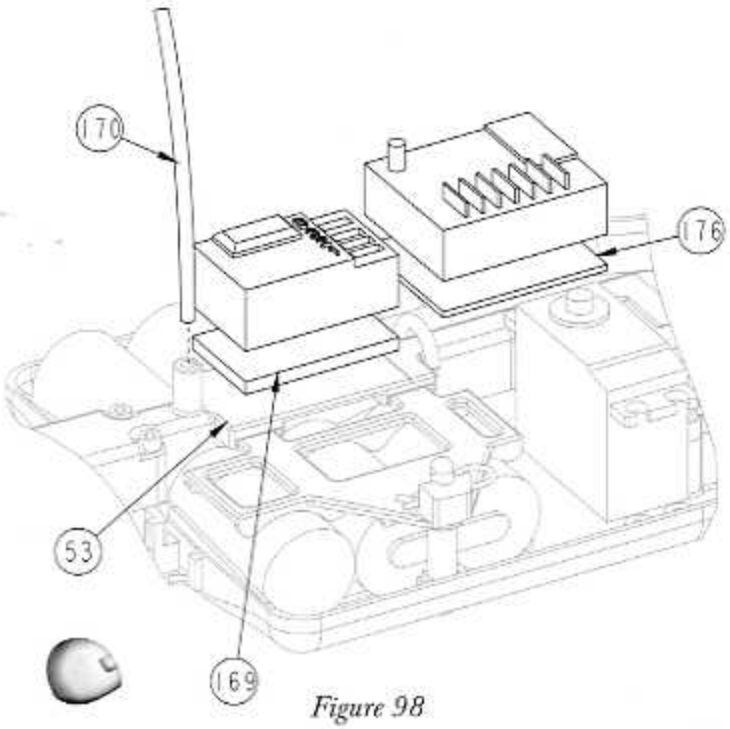


Figure 98

Figure 99

❑ Step 29. Trim the body (172) and wing (173) along the trim lines as shown.

❑ Step 30. Make four 3/16"-diameter holes in the areas on the hood, sides, and roof of the body (172) that are marked with dimples or small circles.

**NOTE: If the holes are a little tight when installing the body, enlarge them slightly with a hobby knife or round file.*

❑ Step 31. Make two 3/16"-diameter holes in the areas on the wing (173) that are marked with dimples or small circles.

**NOTE: If the holes are a little tight when installing the wing, enlarge them slightly with a hobby knife.*

❑ Step 32. Attach the body (172) to the rolling chassis and secure the body with three body clips (113): One through the post on the front shock tower (84); and one through each post (166) at the sides of the chassis (30).

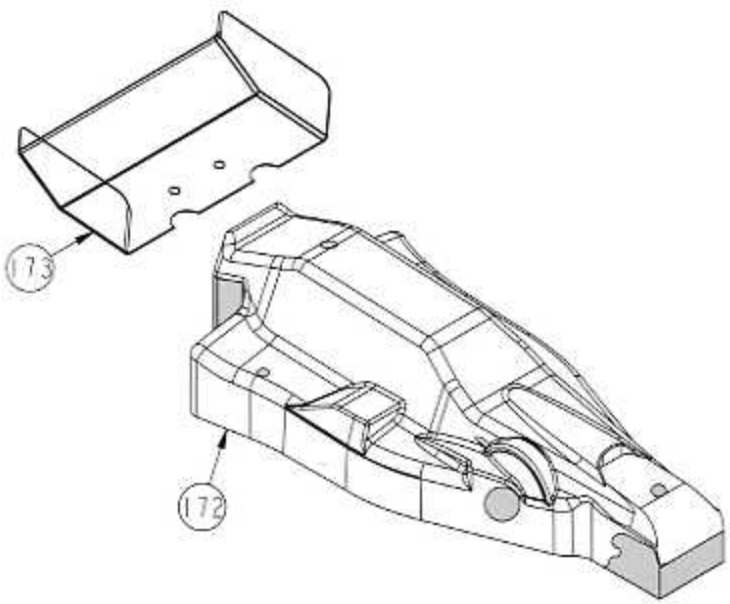
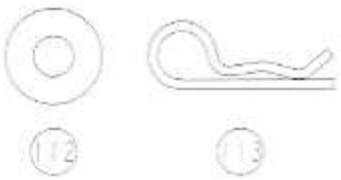


Figure 99

BAG H (Continued)

Figure 100



❑ Step 33. Remove the body clips (113) and wing mount washers (112) from the wing mount (111). Attach the wing (173) to the wing mount (111) by lining up the holes in the wing (173) with the posts in the wing mount (111).

❑ Step 34. Place a wing mount washer (112) down over each of the posts on the wing mount (111) and against the wing (173). Secure the wing (173) and washers (112) with the two body clips (113).

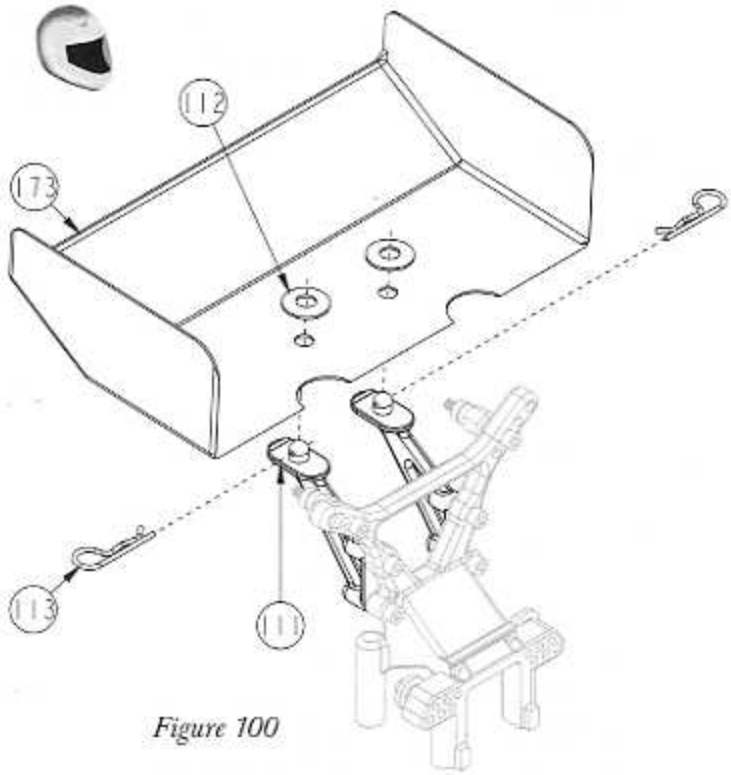


Figure 100

Body and Wing Painting

Prepare the body shell for painting by washing it thoroughly with warm water and a small amount of liquid detergent. Dry the body with a clean, soft cloth. Use the window masks (174), supplied with the kit, to cover the window areas *from the inside.* A high-grade masking tape should be used on the inside of the body to mask off any stripes, panels, or designs that you wish to paint on the body or wing. Use acrylic lacquer, acrylic enamel, or any other Lexan (Polycarbonate) recommended paints. Apply paint to the inside of the body. Remove the tape for the area that you wish to apply the next color to and continue with the next color. Try to use the darker colors first. If you use a light color before a dark color, apply a thin coat of white over the lighter color before continuing with the darker color.

Stickers

Cut the stickers from the sticker sheet (74) that you wish to use. Before removing the protective backing, find the desired location for the sticker. Remove the backing completely and reattach an edge of the sticker to the shiny side of the backing paper. Using the rest of the backing as a handle, position the sticker over the desired location and press it firmly into place to complete its application.

TIPS FROM THE TEAM

ADJUSTING THE DIFFERENTIALS The differentials should be adjusted before trying to adjust the slipper. To adjust the front differential, remove the forward access screw (installed in step 8, bag H) and insert a 1/16" Allen wrench in the hole. Slowly rotate the front wheels backwards until the hole in the slipper shaft aligns with the Allen wrench. Once the shaft is aligned, insert the Allen wrench all the way through the shaft and into the support in the chassis. With the wrench in place the slipper shaft cannot be turned. Hold both front tires and try to rotate them backwards. If the tires can be rotated easily, the diff is too loose.

To tighten the diff, insert the second 1/16" Allen wrench in the left outdrive. Slowly rotate the right front tire until the slot in the diff screw is aligned with the slot in the outdrive. Position the Allen wrench so that it is inserted in the slot in both the outdrive and the diff screw. Slowly rotate the right tire clockwise about 1/8 turn. Rotating the right tire clockwise with the diff screw held in place by the Allen wrench will tighten the diff.

Check the diff adjustment again as described above. When the diff is properly adjusted, the tires should be VERY difficult to turn. You may actually hear the front belt skip. **Don't** repeatedly skip the front belt with the slipper shaft locked in place. Doing so may cause the teeth on the pulleys and/or belt to become rounded, reducing belt life. Once the front diff is properly adjusted, remove the Allen wrench from the slipper shaft and replace the access screw.

The rear differential is adjusted in a similar fashion. Remove the rear access screw (installed in step 8, bag H) and insert the Allen wrench into the hole, through the hole in the idler shaft, and into the support in the chassis. Turn the rear tires slowly backwards. When checking the rear diff, the tires must be turned backwards or the rear belt will skip while trying to check adjustment. Adjustments to the rear diff are made exactly the same way as the front diff. Continue to tighten the rear diff until the rear tires are very difficult to turn with the Allen wrench inserted in the idler shaft. Once the rear diff is properly adjusted, remove the Allen wrench from the idler shaft and replace the access screw.

SLIPPER ADJUSTMENTS should be made only after both the front and rear diffs are properly adjusted. The slipper adjustment that this manual recommended during assembly should be fairly close. The slipper is designed with a separate pad for the front and rear wheels. The slipper adjustment can be checked in a similar way to checking the diff adjustment. When the Allen wrench is inserted in the slipper shaft (forward hole), the rear slipper can be checked. Again, only rotate the rear tire backwards when the Allen wrench is inserted in the slipper shaft. There should be resistance, but you should be able to rotate the rear tires. The resistance you feel is the slipper. The tighter the slipper adjustment, the more resistance.

The front slipper adjustment can be checked by inserting an Allen wrench in the idler shaft (rear shaft) and rotating the front tires. Again, the resistance you feel is the slipper. You should always be able to rotate the tires when checking the slipper adjustment. The slipper needs to be able to absorb the jolts that the drive train encounters due to bumps and jumps on the track.

As a final check of the slipper adjustment, place your car, with a fully-charged battery, on a carpeted area. Give the car full throttle from a stopped position. The slipper should slip slightly (about 1-2 feet). If the slipper does not slip, loosen the slipper nut 1/8 turn and check again. It is important that the slipper not be adjusted too tight! If the slipper does not slip when the car encounters bumps and ruts, extra wear-and-tear to the drive train will result.

The slipper pads will seat and break in after 3-4 runs. This usually results in the slipper adjustment becoming tighter. At this point the slipper adjustment should be checked again. Loosen the slipper as necessary so that it will slip slightly.

THE ONE-WAY/CLICKER allows the front wheels to free-wheel when off power. This increases steering and smooths the car's handling under braking. The clicker can be adjusted through the access plug on the left side of the car. Tightening the nut will reduce the amount of free-wheeling. A tighter adjustment will result in an increase in braking force, but usually a slight loss in steering. The one-way/clicker adjustment can be very useful as the amount of traction changes on a track.

THE BELTS on the XX-4 are a result of extensive research and testing. They are made from the best materials to optimize both efficiency and life-expectancy. It is very important that you do not allow motor spray to come into contact with the belts on the XX-4. If the belts are exposed to motor spray, the materials will break down – resulting in damage to the belt.

TIRES, as always, play an important part in the way the car handles. Naturally, the more traction a tire has, the easier the car is to drive. Be careful! It is possible to have too much front traction with a 4WD car. If the front tire has too much traction, the car will become very "darty" and hard to drive. In extreme cases the car may even traction-roll.

With 2WD cars, front and rear tires can be used in any combination. With 4WD cars this isn't always true. You should always try to use a similar tires on both the front and rear. More importantly, the front and rear tires should be the same diameter. If the front and rear tires are different diameters, the front and rear drive ratios will differ. Having different drive ratios in the front and rear can make the car handle unpredictably. To further explain, if the front tires are larger than the rear tires, the front-wheel-drive will have less acceleration and more top-end speed than the rear-wheel-drive. If the front tires are smaller than the rear tires, the front-wheel-drive will have more acceleration and less top-end speed than the rear-wheel-drive.

THE BATTERY PACK in the XX-4 can be mounted in two locations. The standard mounting location (referred to in the manual) is to the rear of the chassis. By simply rotating the battery straps, the battery can be mounted farther forward in the chassis. Mounting the battery farther forward can increase steering at the cost of a slight reduction in rear traction. This can be a useful adjustment on certain track surfaces.

THE CHASSIS of the XX-4 is made of Team Losi's exclusive Stiffezel material. This material is very stiff and relatively lightweight. The high fiber content of the chassis makes it slightly conductive to electricity. It is very important that the heat-shrink on the battery cells be checked periodically. If an exposed portion of the cell makes contact with the chassis, the battery pack may short out or radio interference may result. The battery pads on the chassis should also be replaced from time-to-time to reduce the risk of the battery pack shorting out on the chassis. It's also a good idea to apply a piece of electrical tape to the sides of the chassis and chassis cover in the area where the jumper wire and battery bars may touch.

Due to the very low motor placement in the XX-4, care should also be taken not to allow any capacitors or motor tabs to touch the chassis. Radio interference may again be the result of contact here. A piece of electrical tape under the area where the motor mounts is a good insurance policy.

REAR ANTI-SQUAT on the XX-4 is adjustable. Anti-squat adjustments can be made by installing the small wedges (referred to in figure 70) under the rear suspension mounts. Installing the wedge under the front portion of the suspension mount will increase anti-squat. Installing the wedge under the rear portion of the suspension mount will decrease anti-squat. The rear suspension mounts have two degrees of anti-squat built into them. Installing a wedge under the front portion of the mount will increase the anti-squat to four degrees and installing the wedge under the rear portion will result in zero degrees of anti-squat.

Typically, a higher degree of anti-squat will result in quicker acceleration and a loss of on-power steering. A lower degree of anti-squat will have more on-power steering, but will accelerate slightly slower. More anti-squat will help the car go through bumps better when already at full speed. Less anti-squat will accelerate through bumps better.

CAMBER in the front end of the car is not really adjusted much. In the front, run between one and two degrees of negative camber at ride height. A general rule of thumb is that more negative camber will help the car go through bumps in turns a little more consistently. Less negative camber can make the car respond quicker on some tracks with hard-packed surfaces.

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

FRONT TOE-IN and TOE-OUT are fully adjustable by changing the length of the tie rods. When adjusting toe-in, be sure to adjust both tie rods equally so that the steering balance from left to right will remain the same. Toe-in makes the car a little easier to drive, and will make the car more neutral feeling. Too much toe-in can make the car feel "wandery" when exiting corners. Toe-out will make the car turn into the corner faster, but can cause oversteer. It is recommended that you run the front toe-in/toe-out as close to straight as possible.

FRONT RIDE HEIGHT is an adjustment that can change the way a car jumps, turns, and goes through bumps. This is an adjustment that can vary from track to track. You should try raising and lowering the front ride height to get a feel for what it does to the handling of the car. The front ride height should initially be set so that the dogbones are level at ride height. To set the ride height, drop the front of the car onto a table from about 2-3 inches above the table. Lightly "work" the front suspension up and down. This will "settle" the front suspension at its natural ride height. Working the suspension becomes important as the parts start to get dirty and worn from running. Once the suspension has settled, the dogbones should be level. If the front end is either too high, or too low, adjust the spring collars accordingly and check the ride height again as described above. Continue this procedure until the front ride height is adjusted to the desired location.

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

CAMBER LOCATIONS on the XX-4 are very adjustable. Although there are many holes to choose from, it is suggested that the locations in the manual be used. We have done extensive testing with all of these locations both on the track, and on special computer programs, and have found the locations in the manual to be *very consistent* from track to track. These locations should produce the best all-around setup and work under most conditions.

THE WING is marked with scribe lines that will allow it to clear the rear shocks in their standard mounting position. If you move the rear shocks to a different location, make sure that the wing is trimmed so that the rear shocks will clear it.

MAINTENANCE on the XX-4 is quite simple. We have found certain sequences that make accessing different parts of the XX-4 very easy. If the front differential needs to be removed, start by removing the front bumper. Take the two screws out of the bottom and the two screws out of the top. Disconnect the bottoms of the shocks from the front arms. Disconnect the outside of the tie rods and camber links. Remove the front two screws from the front shock tower that go down into the front bulkhead. Turn the car over and remove the two screws holding the front bulkhead in place. Remove the front bulkhead with the suspension arms attached. The front diff should now be accessible.

To get to the rear diff, rear belt, spur gear, or idler shaft, first remove the rear bumper. Remove the four screws from the bottom of the rear suspension. With the screws removed, the rear suspension can be removed – shock tower, arms, and all. Remove the motor from the car. Turn the chassis over and remove the two screws at the front and rear of the motor mount area. Remove the two screws in the bottom of the servo mount. Turn the chassis right-side-up and remove all the screws from the main chassis cover (nine total). Unplug the speed control from the receiver and remove the gear mesh plug. Remove the chassis cover with the receiver and servo still attached.

To access the front belt or slipper shaft, follow the same sequence just mentioned and continue by removing the front shock tower. Once the front shock tower is removed, take out the clicker access plug and remove the front belt cover. To remove the front belt, the steering tunnel must also be removed.

When reassembling the car **don't forget** to put the screws back into the threaded inserts from the bottom of the chassis. If these screws are not installed, the motor may move while running the car, resulting in a damaged spur gear. Also, don't forget about the rubber access plugs and allow them to fall in the enclosed part of the chassis. If one of these plugs gets into the belts while running – well, do I even need to tell you what will happen?

Good luck with your new XX-4. We're sure you will be pleased with its superb performance.

SPARE PARTS LIST

KEY #	KIT/PART DESCRIPTION	PART NO.	SPARE PARTS DESCRIPTION
1	.078" x 3/8" spirol pin	A-3225	Layshaft with Hardware (4WD)
2	Layshaft	A-3225	Layshaft with Hardware (4WD)
3	Large (42T) 2mm belt pulley	A-3210	Drive and Differential Pulley Set (4WD)
4	3/16" C-clip	A-6102	C-Clips 3/16"
5	Small (17T) 3mm belt pulley	A-3210	Drive and Differential Pulley Set (4WD)
6	.078" x 5/16" spirol pin	A-6403	.078" x 5/16" Pins - Slipper Shaft (XX-4)
7	Slipper shaft	A-3221	Slipper Shaft Assembly with Hardware (XX-4)
8	5-40 x 5/8" set screw	A-3221	Slipper Shaft Assembly with Hardware (XX-4)
9	Allen wrenches	N/A	N/A
10	Front slipper back plate	A-3222	Slipper Back Plate - Front (XX-4)
11	Front slipper pad (yellow)	A-3123	Slipper Pad
12	Spur gear	A-3930	84-Tooth, 48-Pitch Spur Gear (XX-4)
13	Rear slipper pad (dark-colored)	A-3224	Slipper Pad Rear (XX-4)
14	29-tooth 2mm belt pulley	A-3210	Drive and Differential Pulley Set (4WD)
15	Rear slipper back plate	A-3223	Slipper Back Plate - Rear (XX-4)
16	Pulley flange	A-3210	Drive and Differential Pulley Set (4WD)
17	Slipper thrust washer	A-3125	1/4" x 9/16" Thrust Bearing Assembly
18	Slipper thrust bearing	A-3125	1/4" x 9/16" Thrust Bearing Assembly
19	Thrust bearing spacer	A-3217	Bearing Inserts and O-Rings (4WD)
20	3/16" x 3/8" bearing	A-6903	3/16" x 3/8" Bearings
21	Small plastic bearing washer	A-2127	'CR' Rear Hub Spacers .060"
22	1/8" Belleville washers	A-3242	Slipper Belleville Spring Washer Set (XX-4)
23	5-40 locknut	A-6302	5-40 Steel Locking Nuts
24	One-way/clicker pulley	A-3214	One-Way/Clicker, Spring, & Belt Roller Set (4WD)
25	One-way/clicker plate	A-3214	One-Way/Clicker, Spring, & Belt Roller Set (4WD)
26	One-way adjustment spring	A-3214	One-Way/Clicker, Spring, & Belt Roller Set (4WD)
27	Adjustment spring washer	A-3214	One-Way/Clicker, Spring, & Belt Roller Set (4WD)
28	4-40 mini locknut	A-6306	4-40 Aluminum Mini Nuts
29	Short 2mm drive belt	A-3206	Front/Side Drive Belt 196mm (4WD)
30	Chassis	A-4201	Main Chassis - Stiffezel (XX-4)
31	Belt roller	A-3214	One-Way/Clicker, Spring, & Belt Roller Set (4WD)
32	Belt roller shaft	A-3240	Belt Roller Shafts and Shims (4WD)
33	3/32" shim	A-3240	Belt Roller Shafts and Shims (4WD)
34	Right layshaft bearing insert	A-3217	Bearing Inserts and O-Rings (4WD)
35	Left layshaft bearing insert	A-3217	Bearing Inserts and O-Rings (4WD)
36	Rear drive belt	A-3201	Rear Drive Belt 366mm (XX-4)
37	Diff nut carrier	A-3078	Differential Screw, Hardware, and Seal
38	Diff tube	A-3072	Differential Tube
39	Steel outdrive/diff half	A-3073	Outdrive Cup
40	Diff grease (clear)	A-3065	Silicone Differential Compound
41	Diff drive ring	A-3070	Differential Drive Rings
42	5mm x 8mm bearing	A-6907	5mm x 8mm Bearings
43	Rear diff pulley	A-3210	Drive and Differential Pulley Set (4WD)
44	3/32" diff ball	A-6951	3/32" Carbide Balls
45	1/4" x 5/16" shim	A-6230	Shim Assortment - 3/32", 3/16", 1/4", 1/2"
46	Diff adjusting screw	A-3078	Differential Screw, Hardware, and Seal
47	Foam thrust bearing seal	A-3078	Differential Screw, Hardware, and Seal
48	3mm x 8mm raced thrust bearing washers	A-3071	Differential Thrust Bearing Assembly
49	White thrust bearing/assembly grease	A-3066	Teflon™ Assembly Grease
50	3mm x 8mm thrust bearing	A-3071	Differential Thrust Bearing Assembly
51	Rear bearing blocks	A-3217	Bearing Inserts and O-Rings (4WD)
52	1/2" x 3/4" bearing	A-6908	1/2" x 3/4" Bearings w/Teflon™ Seal
53	Main chassis cover	A-4208	Chassis Cover Set (XX-4)
54	Long threaded inserts	A-4224	Threaded Chassis Inserts - Short & Long (4WD)
55	4-40 x 3/8" cap-head screw	A-6206	4-40 x 3/8" Cap-Head Screws
56	4-40 x 1/2" cap-head screw	A-6204	4-40 x 1/2" Cap-Head Screws

SPARE PARTS LIST

KEY #	KIT/PART DESCRIPTION	PART NO.	SPARE PARTS DESCRIPTION
57	4-40 x 5/8" cap-head screw	A-6221	4-40 x 5/8" Cap-Head Screws
58	4-40 x 3/4" cap-head screw	A-6211	4-40 x 3/4" Cap-Head Screws
59	Steering tunnel	A-4208	Chassis Cover Set (XX-4)
60	3/16" x 5/16" plastic steering bushing	A-1550	Steering Linkage/Bellcrank Set (4WD)
61	Steering idler arm	A-1550	Steering Linkage/Bellcrank Set (4WD)
62	3/16" ball stud	A-6001	Studded Balls w/Rod Ends 4-40 x 3/16"
63	Steering bellcrank	A-1550	Steering Linkage/Bellcrank Set (4WD)
64	Steering drag link	A-1550	Steering Linkage/Bellcrank Set (4WD)
65	Short threaded inserts	A-4224	Threaded Chassis Inserts - Short & Long (4WD)
66	Right plastic outdrive/diff half	A-3097	Molded Front Outdrive Set (Dogbone) (4WD)
67	Front diff pulley	A-3210	Drive and Differential Pulley Set (4WD)
68	Left plastic outdrive/diff half	A-3097	Molded Front Outdrive Set (Dogbone) (4WD)
69	Outdrive bearing O-ring	A-3218	O-rings for Outdrive Bearing (4WD)
70	Front belt cover	A-4208	Chassis Cover Set (XX-4)
71	1/4" x 3/8" plastic steering bushing	A-1550	Steering Linkage/Bellcrank Set (4WD)
72	Steering bellcrank arm	A-1550	Steering Linkage/Bellcrank Set (4WD)
73	4-40 x 1/4" button-head screw	A-6234	4-40 x 1/4" Button-Head Screws
74	XX-4 sticker sheet	A-8319	XX-4 Sticker Sheet
75	1/8" stainless washer	A-6350	Washer Assortment (Pivot Ball, #4, 1/8")
76	Front bulkhead	A-1201	Front Bulkhead (4WD)
77	Front suspension arm	A-1210	Front Suspension Arms (XX-4)
78	Inner front hinge pin	A-2007	Hinge Pin 1.42"
79	1/8" E-clip	A-6100	E-Clips 1/8"
80	5-40 x 1/8" set screw	A-6228	5-40 x 1/8" Hardened Set Screws
81	Front bumper	A-4217	Front and Rear Bumper Set (XX-4)
82	4-40 x 1/2" flat-head screw	A-6220	4-40 x 1/2" Flat-Head Screws
83	4-40 x 1/4" flat-head screw	A-6213	4-40 x 1/4" Flat-Head Screws
84	Front shock tower	A-1204	Front Shock Tower (XX-4)
85	4-40 x 7/8" cap-head screw	A-6216	4-40 x 7/8" Cap-Head Screws
86	Top shock mount bushing	A-5008	Upper Shock Mount Bushing
87	Left spindle	A-1216	Front Spindles and Carriers (4WD)
88	Right spindle	A-1216	Front Spindles and Carriers (4WD)
89	1/4" x 3/8" bearing	A-6913	1/4" x 3/8" Ball Bearing w/Teflon™ Seals
90	Front stub axle	A-1219	Front Stub Axle and Hardware (4WD)
91	Front universal yoke	A-3236	Front Drive Yokes and Screws (4WD)
92	2-56 x 1/4" cap-head screw	A-6232	2-56 x 1/4" Cap-Head Screws
93	Front universal pivot	A-1221	Front Universal Pivots (4WD)
94	Front dogbone	A-3230	Front Dogbone/Driveshaft (XX-4)
95	1/16" x 3/8" spirol pin	A-6402	1/16" x 3/8" Pins - Front U-Joint (4WD)
96	Team Losi assembly wrench	A-6030	Assembly Wrench (version 2)
97	Ball stud washer	A-6350	Washer Assortment (Ball Stud, #4, 1/8")
98	1/4" ball stud	A-6006	Studded Ball w/Ends 4-40 x 1/4"
99	Left spindle carrier	A-1216	Front Spindles and Carriers (4WD)
100	Right spindle carrier	A-1216	Front Spindles and Carriers (4WD)
101	Kingpin/hinge pin screw	A-6235	Kingpin/Hinge Pin Screws (4WD)
102	Plastic rod end	A-6005	H.D. 30° Plastic Rod Ends
103	1-5/8" turnbuckle	A-6035	Adjustable Threaded L/R Rod Set w/ends 1.625"
104	Foam thing	A-6003	Foam Things (Linkage Ring)
105	Left rear suspension pivot	A-2210	Rear Pivot Blocks and Anti-Squat Shims
106	Left rear suspension arm (marked 'R')	A-2131	'CR' Rear Suspension Arms
107	Inner rear hinge pin	A-2161	Inner Rear Hinge Pins
108	Right rear suspension pivot	A-2210	Rear Pivot Blocks and Anti-Squat Shims
109	Right rear suspension arm (marked 'L')	A-2131	'CR' Rear Suspension Arms
110	Rear shock tower	A-2204	Rear Shock Tower (XX-4)
111	Wing mount	A-4222	Wing Mount Set (XX-4)
112	Wing mount washer	A-4222	Wing Mount Set (XX-4)

SPARE PARTS LIST

KEY #	KIT/PART DESCRIPTION	PART NO.	SPARE PARTS DESCRIPTION
113	Body clip	A-8200	Body Clips
114	4-40 x 5/8" flat-head screw	A-6233	4-40 x 5/8" Flat-Head Screws
115	Rear bumper	A-4217	Front and Rear Bumper Set (XX-4)
116	4-40 x 3/8" flat-head screw	A-6210	4-40 x 3/8" Flat-Head Screws
117	Rear dogbone	A-3081	Buggy Dogbone/Drive Shaft w/Yoke
118	Rear universal yoke	A-3083	Yoke and Screw for Dogbone/Drive Shaft
119	Rear universal pivot	A-3014	Universal Pivots
120	Rear axle	A-3015	Rear Axle, Spacer, and Pin
121	3/32" x 1/2" spirol pin	A-6400	3/32" Pins for U-Joint
122	Left rear hub	A-2125	Rear Hub Set
123	Rear axle spacer	A-3016	Rear Axle Spacers
124	1/16" x 7/16" spirol pin	A-6401	1/16" Pins for Wheels and Gear
125	Right rear hub	A-2125	Rear Hub Set
126	Rear hub spacer	A-2216	Rear Hub Spacers .050" (4WD)
127	Outer rear hinge pin	A-2164	Outer Rear Hinge Pins
128	1-3/8" turnbuckle	A-6034	Adjustable Threaded L/R Rod Set w/Ends 1.375"
129	Shock O-ring	A-5015	Double O-ring Shock Cartridge
130	Shock cartridge body	A-5015	Double O-ring Shock Cartridge
131	Shock cartridge spacer	A-5015	Double O-ring Shock Cartridge
132	Shock cartridge cap	A-5015	Double O-ring Shock Cartridge
133	Shock fluid	A-5224	SILATECH Competition Shock Fluid 350/30wt
134	Front shock shaft	A-5004	Shock Shaft .6"
135	Rear shock shaft	A-5022	Shock Shaft 1.2"
136	Shock end	A-5023	Spring Clamps and Cups
137	1/4" swivel ball	A-2006	Swivel Suspension Balls .250"
138	Shock spacer	A-5015	Double O-ring Shock Cartridge
139	Black, #57 shock piston	A-5045	Teflon™ Shock Pistons #57 (Black)
140	Red, #56 shock piston	A-5046	Teflon™ Shock Pistons #56 (Red)
141	Short, front shock body	A-5029	.6" Shock Body Hard Anodized
142	Long, rear shock body	A-5031	1.2" Shock Body Hard Anodized
143	Bottom shock spring cup	A-5023	Spring Clamps and Cups
144	Front shock spring	A-5132	2" Spring 3.5 Rate (Green)
145	Rear shock spring	A-5150	2.5" Spring 2.3 Rate (Pink)
146	Shock spring collar	A-5023	Spring Clamps and Cups
147	4-40 locknut	A-6305	4-40 Locking Nuts - Low Profile
148	Front tire	A-7281S	4WD Front IFMAR PIN (Silver) w/Foam Liners
149	Rear tire	A-7367S	2.2" Rear IFMAR PIN (Silver) w/Foam Liners
150	Front wheel	A-7045	XX-4 Front 5-Spoke Wheels (Yellow)
151	Rear wheel	A-7141	5-Spoke Rear Wheel (Yellow)
152	Front foam tire liners	A-7299	Buggy Front CLOUDS Foam Liners
153	Rear foam tire liners	A-7399	Buggy Rear CLOUDS Foam Liners
154	10-32 locknut	A-6303	10-32 Nylon Locking Nuts (4ea. Nylon & Steel)
155	Motor mount	A-3219	Motor Mount and Screws (4WD)
156	3mm x 8mm motor screw	A-6201	3mm x 8mm Cap-Head Screws w/Washers (Motor)
157	Motor mount clamp	A-4215	Motor Mount Clamp (4WD)
158	4-40 x 1/8" button-head screw	A-6212	4-40 x 1/8" Button-Head Screws
159	Round, one-way/clicker adjustment plug	A-3244	Access Plugs (4WD)
160	Rectangular, gear mesh access plug	A-3244	Access Plugs (4WD)
161	Steering servo mount	A-1550	Steering Linkage/Bellcrank Set (4WD)
162	#4 washer	A-6350	Washer Assortment (Ball Stud, #4, 1/8")
163	4-40 x 3/8" button-head screw	A-6229	4-40 x 3/8" Button-Head Screws
164	Servo arm	A-1550	Steering Linkage/Bellcrank Set (4WD)
165	Steering rod	A-6042	Steering Rod and Ball Cups - 3.25" (4WD)
166	Battery strap/body mount post	A-4220	Battery Post/Hold-Down Straps (4WD)
167	Foam battery pad	A-4226	Foam Battery Pads (4WD)
168	Battery hold-down strap	A-4220	Battery Post/Hold-Down Straps (4WD)

SPARE PARTS LIST

KEY #	KIT/PART DESCRIPTION	PART NO.	SPARE PARTS DESCRIPTION
169	Thick two-sided tape	A-4004	Servo Tape
170	Antenna tube	A-4002	Antenna Kit
171	Antenna cap	A-4003	Antenna Caps
172	Body	A-8044	XX-4 Body w/Window masks
173	Wing	A-8108	XX-4 Maxi-Wing
174	Window mask	A-8044	XX-4 Body w/Window masks
175	One-way/clicker pulley flange	A-3214	One-Way/Clicker, Spring, & Belt Roller Set (4WD)
176	Thin two-sided tape	A-4004	Servo Tape
177	Rear Hinge Pine Brace	A-????	????

GLOSSARY of R/C TERMS

Ackerman — The degree of difference in the steering angle between the inside and outside wheel when the car is turning.

Anti-squat — The angle, from horizontal, of the inner rear hinge pin in relationship to the chassis. Anti-quat helps to keep the rear suspension from squatting under acceleration.

C.G. (center of gravity) — The point on the chassis at which the car balances with all components installed.

Camber — The angle, from vertical, of the wheels. Negative camber is when the top of the tire is closer to the center of the car than the bottom of the tire. Negative camber is commonly used to add stability in bumps. Positive camber is when the bottom of the tire is closer to the center of the car than the top of the tire. Positive camber is not commonly used.

Camber link — The rod assembly used to connect the rear hub to the rear bulkhead and the front spindle carrier to the front shock tower.

Caster — The angle, from vertical, of the king pin in relationship to the ground.

Glitch — The most dreaded term ever to be heard around radio controlled vehicles. This is a term used to describe when the car does something different than what you tell it to do because of radio interference. This can happen for several reasons. The most common are: 1) someone turning on a radio that is on a frequency too close to your own, and 2) Electric components may be touching the chassis without insulation.

Kick-up — The angle of the entire front suspension, from horizontal, in relationship to the rest of the chassis.

Oversteer — A situation in which the front tires have more traction than the rear tires. This causes the rear tires to lose traction in corners.

Ride height — The point at which the car naturally rides.

Tie rod — The rod assembly used to connect the steering bellcrank and the steering idler arm to the spindle arms.

Toe-in — The front edge of both tires are closer together than the rear edge of both tires.

Toe-out — The front edge of both tires are farther apart than the rear edge of both tires.

Understeer — A situation in which the rear tires have more traction than the front tires. This causes the car to have inadequate steering.

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