

WORLD'S XX4 EDITION

**ADDENDUM
MANUAL
READ FIRST!**



- Ⓢ** Carefully read through this Addendum Manual before you begin reading the original XX-4 instruction manual and assembling your *XX-4 Worlds Edition* kit. You should read through this Addendum Manual completely and mark each step in the Standard Manual that is found in this manual. When the marked step is reached in the Standard Manual, refer to this Addendum Manual for new assembly instructions pertaining to the *XX-4 Worlds Edition*.

TEAM LOSI

Always Racing Towards The Future.

Team Losi, Inc.
4710 East Guasti Rd., Ontario, CA 91761
www.TeamLosi.com • Feedback@TeamLosi.com
P/N 800-0145

XX-4 WORLDS EDITION

Thank you for choosing the new *XX-4 Worlds Edition* kit. The release of the *XX-4* revolutionized four-wheel-drive off-road racing. Its user-friendly, low-maintenance design is simply unmatched. This new *Worlds Edition* kit includes a complete selection of otherwise optional performance parts to build an ultimate racer like those used to dominate and win the recent IFMAR 1/10-Scale Electric World Championships. Like all other kits, it is most important that you read through the assembly instructions before starting the actual assembly. Take note of where the special performance parts are substituted as well as the tech tips that can be utilized at the time of assembly.

Although the tuning and setup instructions were developed by world and national champions, it is impossible to advise as to the perfect combination for every track. For this reason the "kit" setup should be used as the base from which you fine tune for your particular track conditions using the tuning tips. If in doubt, you can always return to the base "kit" setup and know that your setup will be fairly good.

Once again, thank you for choosing Team Losi.

HOW TO USE THIS ADDENDUM

In order to ensure proper assembly of your *XX-4 Worlds Edition*, it is important to know when it will be necessary to refer to this manual as you progress through the assembly process using the standard *XX-4 Owner's Manual*. It is recommended that you mark all of the steps listed below in the standard manual with a highlighter or other type of mark. When these steps are reached in the standard manual, you should refer to the instructions for that particular step in this addendum manual. For your convenience, all of the necessary steps are listed below and are separated by bag.

Mark the following steps in the standard *XX-4* Manual:

Bag A

Figure 5, prior to Step 23, Steps 23 and 24.
Figure 6, Steps 25 and 26.
Figure 7, Steps 27 and 28.

Bag B

Figure 10, Step 1 through Figure 19, Step 23.
Figure 21, Steps 26 through 28.
Figure 22, Steps 29 and 32.

Bag C

Figure 28, Step 3.
Figure 29, Steps 4 and 5.
Figure 40, Steps 23 and 26.
Figure 44, Steps 37 through 39.
Figure 45, Steps 40 through 42.
Figure 46, Steps 43 and 44.
Figure 47, Steps 45 through 48.

Bag D

Figure 51, Step 4.
Figure 53, Step 9.
Figure 54, Steps 10 and 11.

Bag D - continued

Figure 60, Steps 24 and 25.
Figure 63, Step 31.
Figure 65, Step 34.

Bag E

Figure 67, Steps 1 through 3.
Figure 68, Steps 4 and 5.
Figure 76, Steps 19 through 25.
Figure 77, Steps 26 through 28.
Figure 78, Step 29.

Bag F

Figure 82, Steps 6 through 8.
Figure 83, Steps 9 through 12.
Figure 85, Steps 18 through 21.
Figure 86, Steps 22 through 25.
Figure 87, Steps 27 through 31.

Bag H

Figure 96, Step 19 and 20.
Figure 99, Steps 29 through 32.
Figure 100, Steps 33 and 34.

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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 5

❑ Prior to performing Step 23 in the standard XX-4 Manual, the area indicated in Figure 5 to the right should be filed slightly to allow for better clearance of the high-performance belts used in the XX-4 Worlds Edition kit. This filing can be done with sand paper, a small file, or a Dremel tool.

❑ Step 23. Place a blue short 2mm drive belt (29) over the pulley (24) farthest away from the spur gear (12). Place a green short 2mm drive belt (179) over the pulley (14) next to the spur gear (12).

❑ Step 24. With the belts (29), (179) in place, install the slipper shaft assembly in the forward area of the chassis (30) with the spur gear (12) to the right side of the chassis (30). Refer to Figure 5 in the standard XX-4 Manual.

⚠ IMPORTANT NOTE: Ensure that the green belt is installed on the side of the chassis, not running to the front.

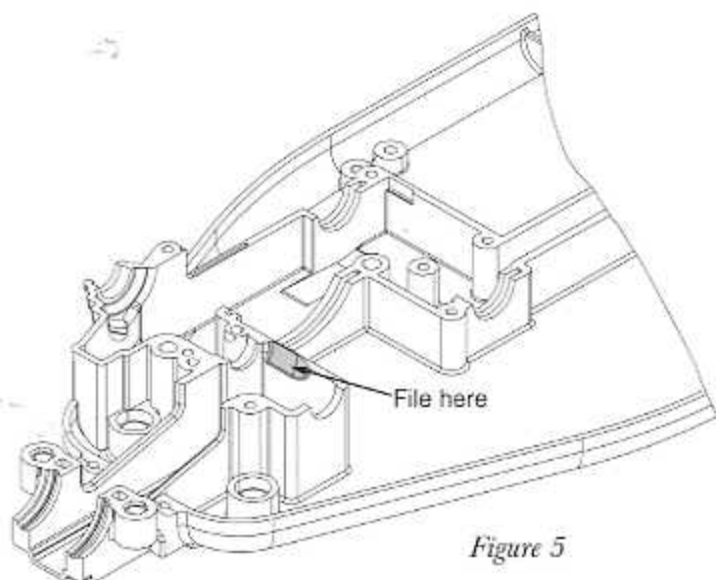


Figure 5

Figure 6

❑ Step 25. Ignore Steps 25 through 28 in the standard XX-4 Manual. No belt rollers are used in the *Worlds Edition* kit due to the inclusion of high-performance belts. Go to Figure 8, Step 29 in the standard manual and continue assembly.

Figure 7

❑ Step 27. As mentioned above, ignore Steps 25 through 28 in the standard XX-4 Manual. No belt rollers are used in the *Worlds Edition* kit due to the inclusion of high-performance belts. Go to Figure 8, Step 29 in the standard manual and continue assembly.

BAG B

Figure 10

❑ Step 1. The *XX-4 Worlds Edition* utilizes the plastic outdrives in both the front and rear of the car. To assemble the rear differential, jump to Bag C, Figure 33, Step 12 of the standard XX-4 Manual and assemble the rear differential following the instructions for assembling the front differential.

❑ Step 2. When you reach Step 17, replace the front diff pulley with the rear diff pulley. Once the rear differential is assembled, return to Bag B, Figure 20, Step 24 of the standard XX-4 Manual to continue assembly.

BAG B (Continued)

Figure 21

- ❑ Step 26. Looking at the marked sides of the bearing blocks, locate the one with the arrow pointing from left-to-right. This will be the left bearing block.
- ❑ Step 27. There are no belt rollers used in the *XX-4 Worlds Edition* kit. Move on to Figure 22 in the standard XX-4 Manual and continue.

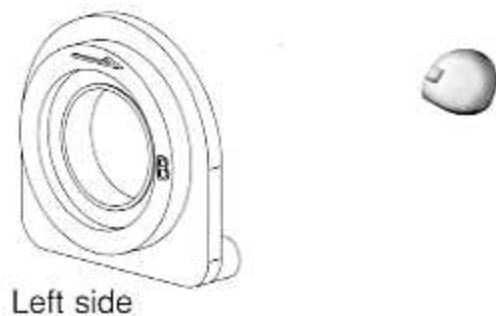


Figure 21

Figure 22

- ❑ Step 29. Position the rear differential in the center of the rear drive belt (36) so that the slot in the diff adjusting screw (46) faces to the left.
- ❑ Step 30. Pull the rear diff back so that the rear belt (36) wraps around the rear diff pulley (43). Ensure that the teeth on the belt (36) engage with the teeth on the pulley (43).
- ❑ Step 31. While holding the rear belt (36) around the rear diff pulley (43), carefully place the left rear bearing block assembly over the left side of the differential. The flat side of the rear bearing block (51) should be on the bottom (closest to the chassis).
- ❑ Step 32. Place the right bearing block (51) over the other side of the differential as shown. Align the flat sections of the two bearing blocks.

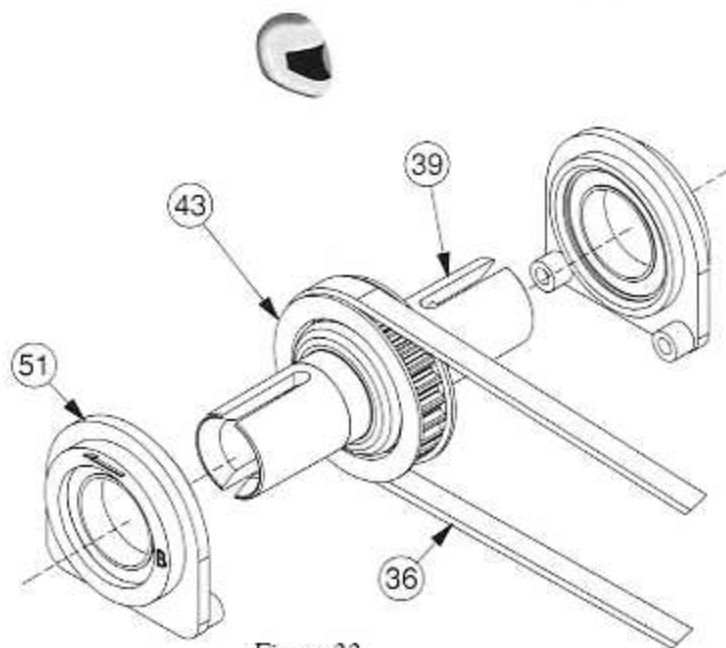


Figure 22

BAG C

Figure 28



- Step 3. Press a 3/16" x 5/16" bearing (60) into each of the two recessed areas at the front of the chassis (30).

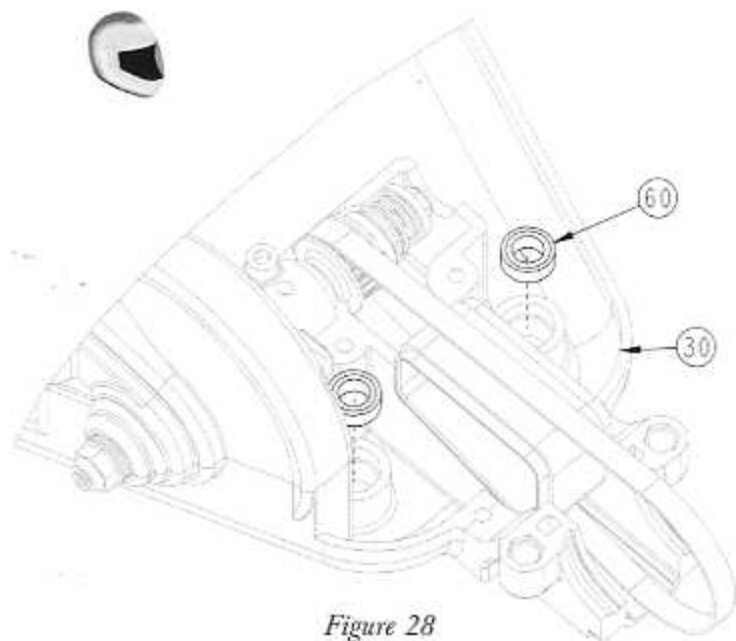
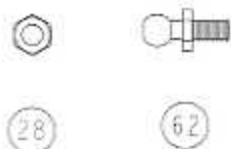


Figure 28

Figure 29



- Step 4. Insert a 4-40 mini locknut (28) into the hex areas in the steering idler arm (61) as shown. Thread a 3/16" ball stud (62) into each nut (28), from the opposite side of the idler arm (61), and tighten.

**NOTE: The idler arm has no splines on the end of the shaft. The splines are on the steering bellcrank used in Step 5.*

- Step 5. Insert a 4-40 mini locknut (28) into the hex areas in the steering bellcrank (63) as shown. Thread a 3/16" ball stud (62) into each nut (28), from the opposite side of the bellcrank (63), and tighten.

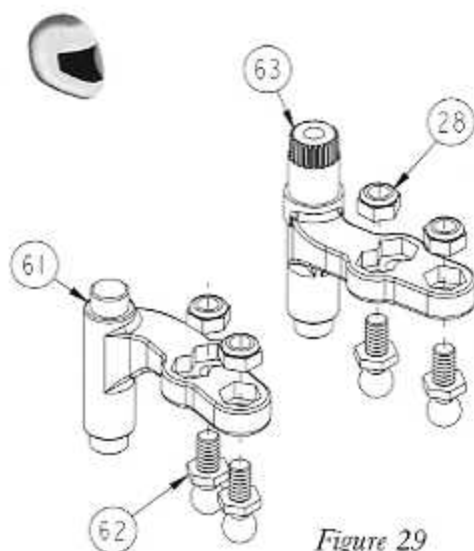
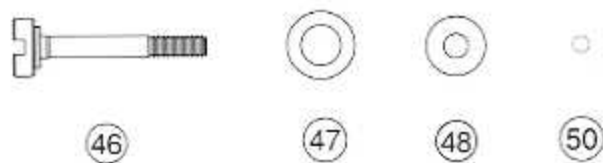


Figure 29

BAG C (Continued)

Figure 40



❑ Step 23. Locate the diff adjusting screw (46) and place the foam thrust bearing seal (47) over the shoulder of the screw (46).

❑ Step 24. Place one of the 3mm x 8mm thrust bearing washers (48) over the diff screw (46).

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

❑ Step 25. Grease the thrust washer (48) well with white thrust bearing/assembly grease (49) and place the seven 5/64" thrust bearing balls (50) on top of the washer (48), around the diff screw (46). Apply more white thrust bearing/assembly grease (49) to the tops of the thrust bearing balls (50). Place the second thrust washer (48) over the screw (46) and against the thrust bearing balls (50).

❑ Step 26. Very carefully insert the diff screw (46), with the thrust bearing assembly installed, into the left plastic outdrive/diff half (68). Pull the threaded end of the diff screw (46) until the thrust bearing assembly rests against the inside of the outdrive (68).

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

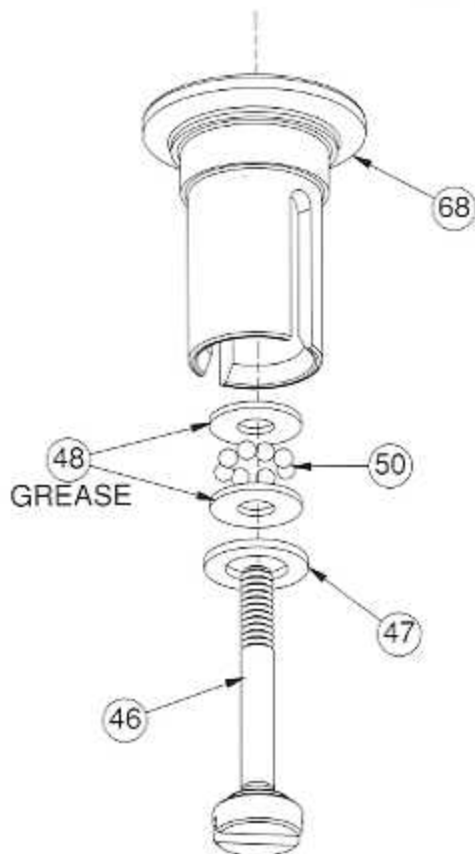


Figure 40

Figure 44

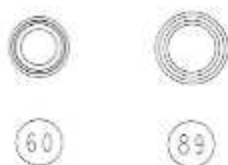
❑ Step 37. Ignore Steps 37 through 39 in the standard XX-4 Manual. No belt rollers are used in the *Worlds Edition* kit due to the inclusion of high-performance belts. Go to Figure 46, Step 43 in the standard manual and continue assembly.

Figure 45

❑ Step 40. As mentioned above, ignore Steps 37 through 39 in the standard XX-4 Manual. No belt rollers are used in the *Worlds Edition* kit due to the inclusion of high-performance belts. Go to Figure 46, Step 43 in the standard manual and continue assembly.

BAG C (Continued)

Figure 46



- ❑ Step 43. Press the 3/16" x 5/16" bearing (60) into the recessed area in the front belt cover (70). This bearing goes in the area that does not have a hole all the way through the cover (70).
- ❑ Step 44. Press the 1/4" x 3/8" bearing (89) into the recessed area around the hole that passes all the way through the cover (70).

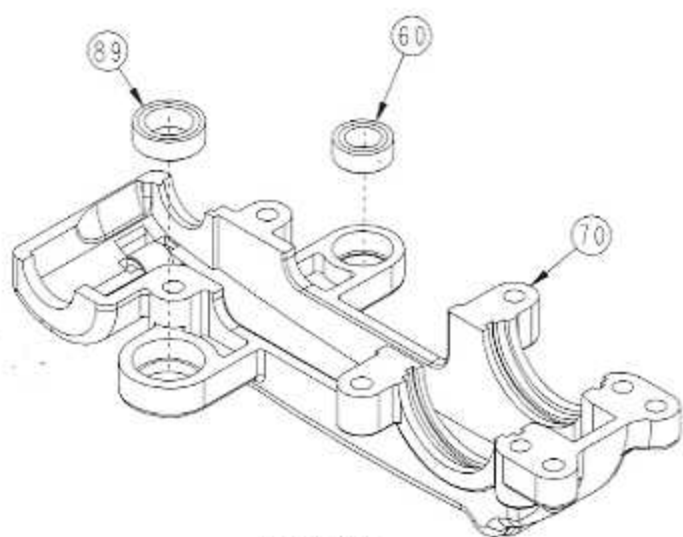
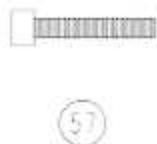


Figure 46

Figure 47



- ❑ Step 45. Ensure that the hexes of the two threaded inserts (65) are still in the hex areas at the front of the chassis (30).
- ❑ Step 46. Attach the front belt cover (70) – with the steering bearings installed – to the front of the chassis (30). Carefully align the tops of the steering bellcrank (63) and steering idler arm (61) so that they fit into the bearings (60), (71).
- ❑ Step 47. Press the cover (70) all the way down, into position. Check to be sure that the outdrive bearing O-rings (69) are in the center groove of the cover (70), and not pinched between the chassis (30) and the cover (70).
- ❑ Step 48. Secure the cover (70) to the chassis (30) with two 4-40 x 5/8" cap-head screws (57). Thread the screws (57) through the two rear holes in the cover (70), into the chassis (30), and tighten.

**NOTE: Apply a small amount of the white assembly grease to the threads of the screws.*

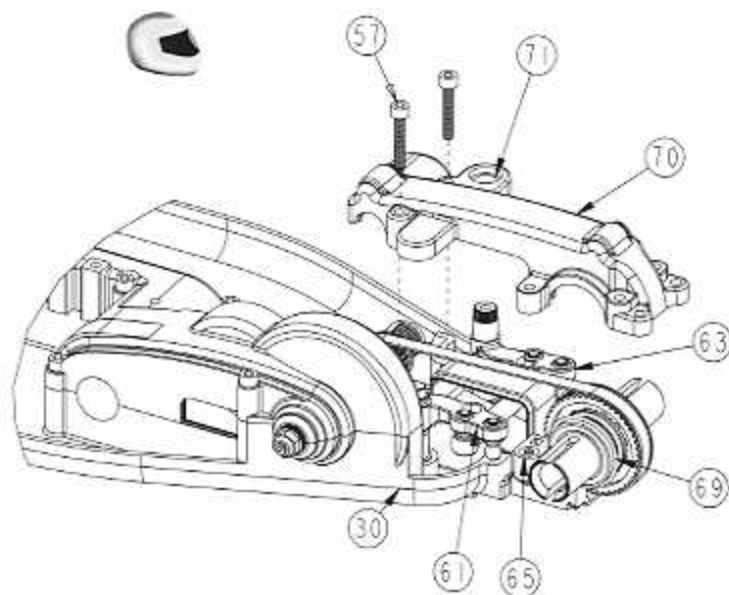


Figure 47

BAG D

Figure 51

❑ Step 4. Ignore this step. The 5-40 setscrew is not used in the Worlds Edition kit. The absence of the setscrew adds to the durability of the front bulkhead.

Figure 53



56

❑ Step 9. Thread a 4-40 x 1/2" cap-head screw (56) through each of the two holes at the very front of the front belt cover (70), into the front bumper (81), and tighten.

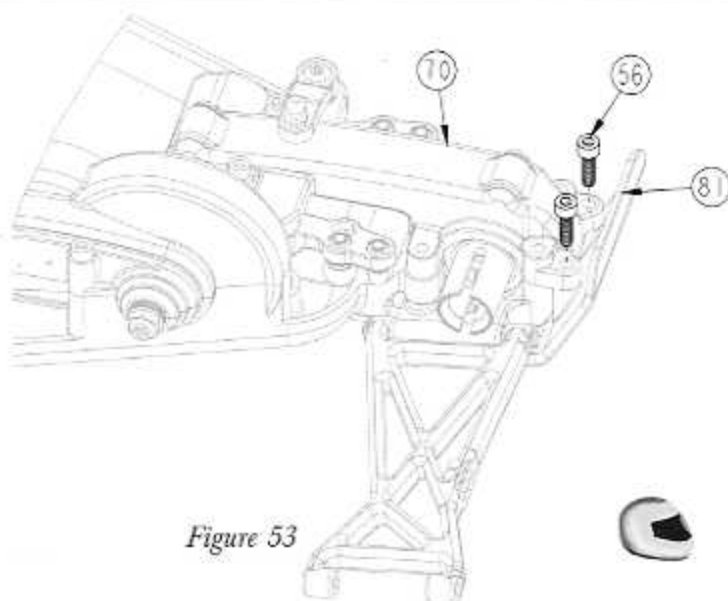


Figure 53

Figure 54



85



97



98



178

❑ Step 10. Place a ball stud washer (97) over each of the two 1/4" ball studs (98) and thread a ball stud (98) into each of the inside holes on the bottom of the front shock tower (84). Mount the ball studs (98) from the front as shown.

❑ Step 11. Insert a 4-40 x 7/8" cap-head screw (85), from the rear, through the third hole in on the top of the shock tower (84) on each side. Thread a 4-40 nut (178) onto each of the two screws (85), and tighten.

! IMPORTANT NOTE: The shock mount screw and ball studs should extend from the same side of the shock tower as shown in the illustration.

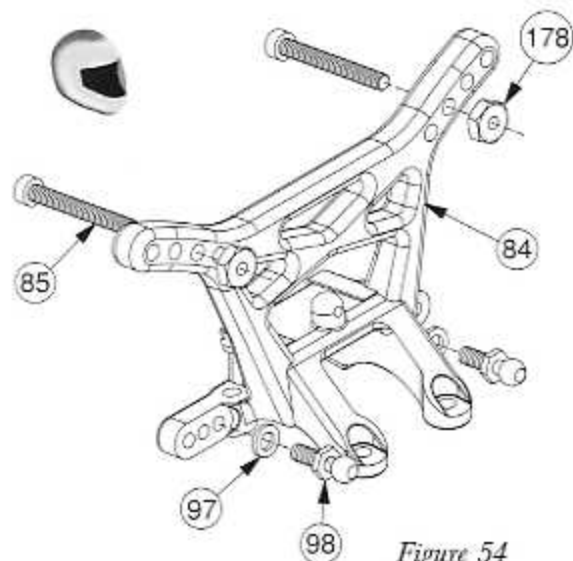


Figure 54

Figure 60



98

❑ Step 24. Thread a 1/4" ball stud (98) into the top of the right spindle carrier (100) as shown.

**NOTE: Be sure that the ball stud is threaded into the correct hole. The ball stud should be threaded into the hole with the raised area around it as shown in the illustration.*

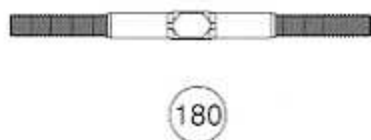
❑ Step 25. Repeat step 24 for the left spindle carrier (99).



Figure 60

BAG D (Continued)

Figure 63



- Step 31. Thread a plastic rod end (102) onto each end of a 1-7/8" titanium turnbuckle (180). Tighten both rod ends (102) equally until the rod is the same length as the rod in Figure 63A. Make two of these camber links.

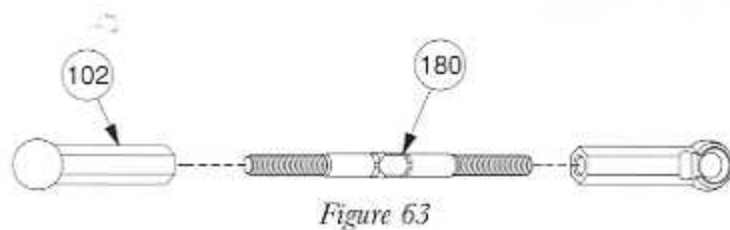


Figure 63

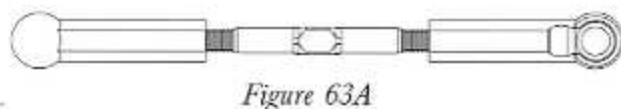
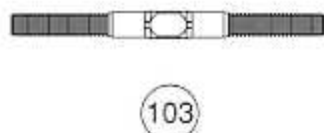


Figure 63A

Figure 65



- Step 34. Thread a plastic rod end (102) onto each end of a 1-5/8" titanium turnbuckle (103). Tighten both rod ends (102) equally until the rod is the same length as the rod in Figure 65A. Make two of these tie rods.

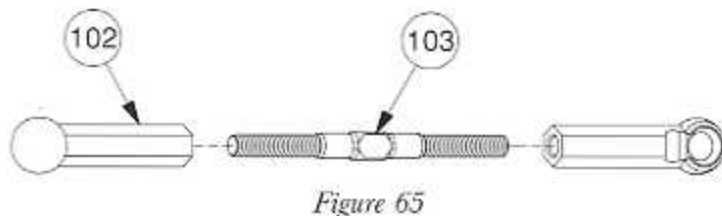


Figure 65



Figure 65A

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 'R' – 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 (same side of the arm that the letter is on), and the side of the pivot with the raised area around the screw holes should be on top.

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

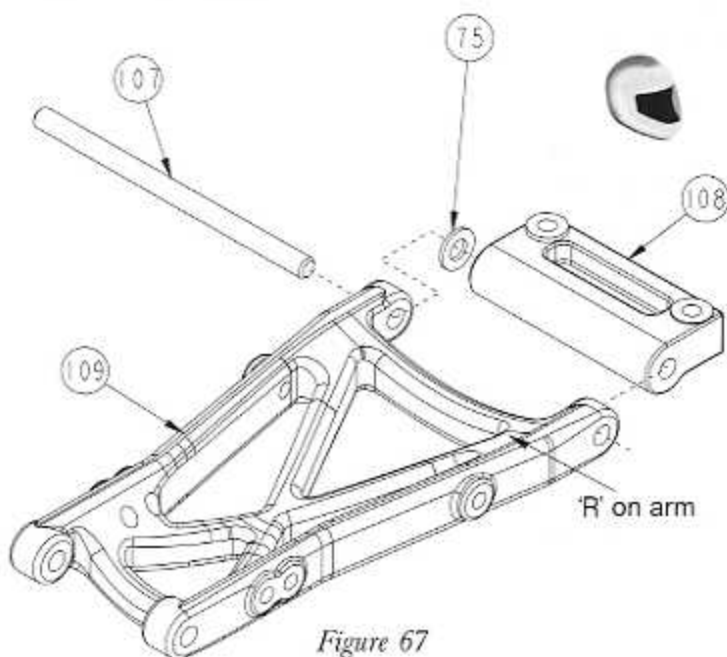
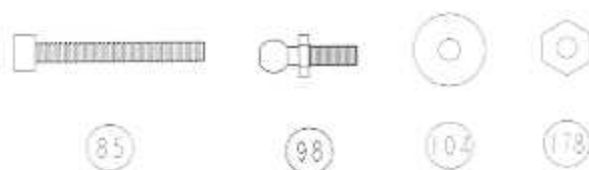


Figure 67

BAG E (Continued)

Figure 68



❑ Step 4. Thread a 1/4" ball stud (98) into each of the #4 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 outside hole on the top of the shock tower (110) on each side. Thread a 4-40 nut (178) onto each of the two screws (85), and tighten.

⚠ IMPORTANT NOTE: The shock mount screws and ball studs should extend out the same side of the shock tower as shown in the illustration.

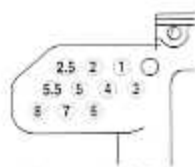


Figure 68A

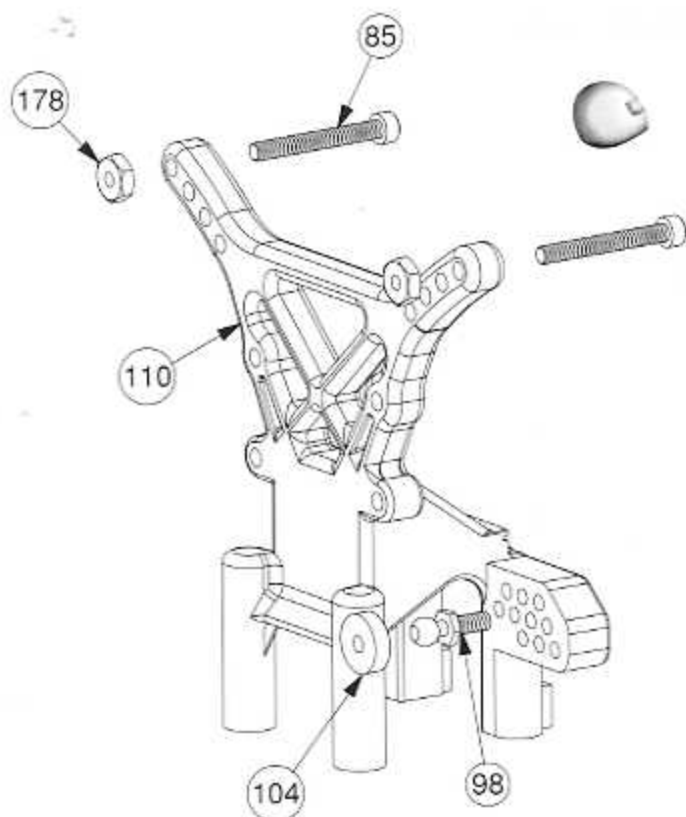


Figure 68

Figure 76

❑ Step 19. Thread a 1/4" ball stud (98) into the 'C' hole in the rear hub (125). The ball stud (98) should be threaded into the flat side of the hub (125).

❑ Step 20. Place a foam thing (104) over the ball stud (98).

❑ Step 21. Press a 3/16" x 3/8" bearing (20) into the inside of the right rear hub (125). Slide the rear axle (120) through the bearing (20) from the inside of the hub (125).

** NOTE: If the bearing only has one Teflon™ seal (tan, woven looking) in it, position the Teflon™ seal to the outside.*

❑ Step 22. Slide an inner rear axle spacer (181) over the rear axle (120) – from the outside – against the inside of the bearing (20). Place a second 3/16" x 3/8" bearing (20) into the outside of the rear hub (125).

** NOTE: If the bearing only has one Teflon™ seal (tan, woven looking) in it, position the Teflon™ seal to the outside.*

❑ Step 23. Place an outer rear axle spacer (123) over the rear axle (120), against the outside bearing (20). The small side of the spacer (123) should be positioned next to the bearing (20).

❑ Step 24. Secure the rear axle (120) and spacer (123) by inserting a 1/16" x 7/16" spiro 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).

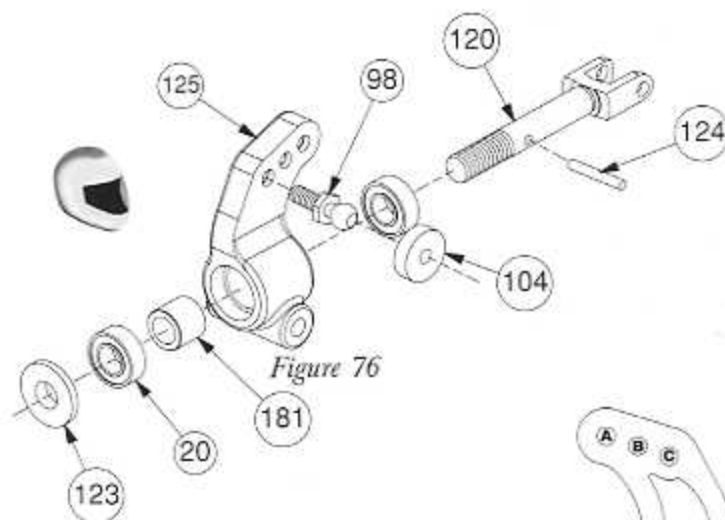
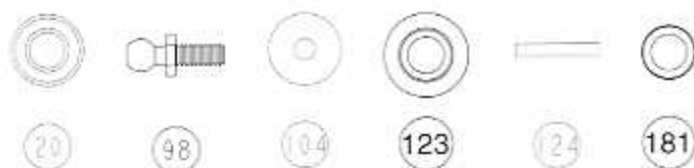
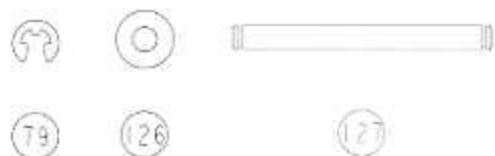


Figure 76

Figure 76A

BAG E (Continued)

Figure 77



- Step 26. Place the right rear hub (125) between the outer rails of the right rear suspension arm (marked 'R')(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 left rear suspension arm (marked 'L') (106).

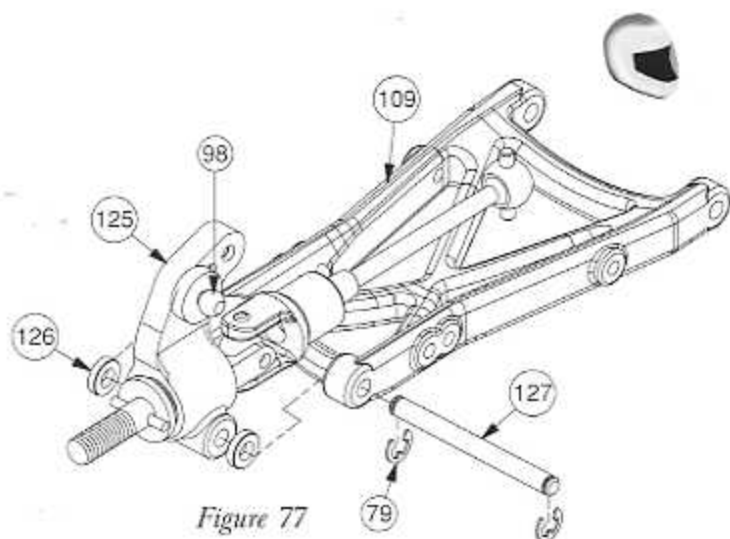
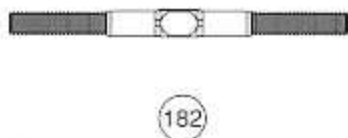


Figure 77

Figure 78



- Step 29. Thread a plastic rod end (102) onto each end of a 1-3/4" titanium turnbuckle (182). 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.

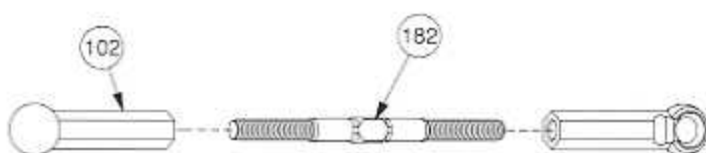


Figure 78

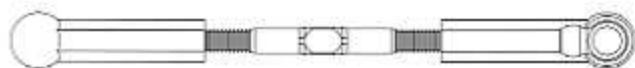
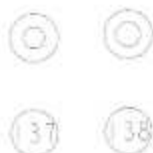


Figure 78A

BAG F

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 two 'B' shock spacers (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).

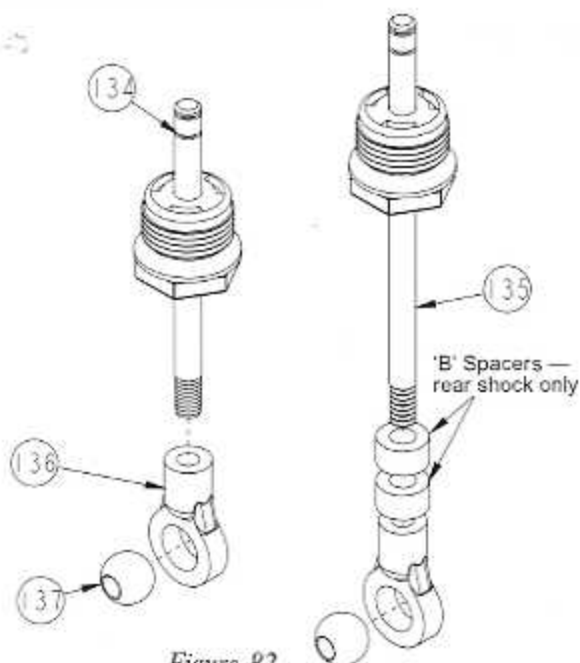


Figure 82

Figure 83



□ Step 9. Slide an inner shock spring (183) over each of the front shock shafts (134) so that the small spring (183) rests against the top of the shock cartridge. Snap a 1/8" E-clip (79) into the groove closest to the cartridge on both front shock shafts (134).

* NOTE: Inner shock springs are only used on the front shock shafts.

□ Step 10. Slide an 'A' shock spacer (138) (the smaller of the two spacers, marked 'A') over each of the rear shock shafts (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 rear shock shafts (134).

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

□ 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 blue, #54 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).

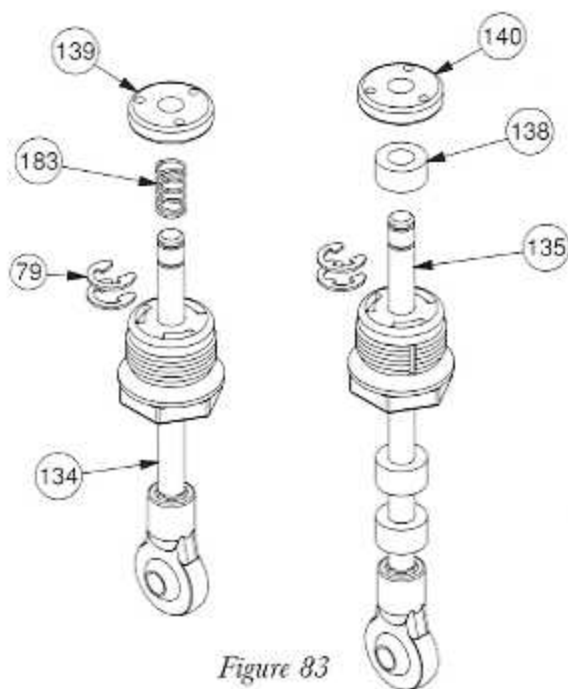


Figure 83

BAG F (Continued)

Figure 85

- ❑ 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. Thread a shock spring adjustment nut (146) on to the top of all four shock bodies (141), (142). Thread the spring adjustment nuts (146) on to the shocks until the nut (146) just touches the spring (144), (145).

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

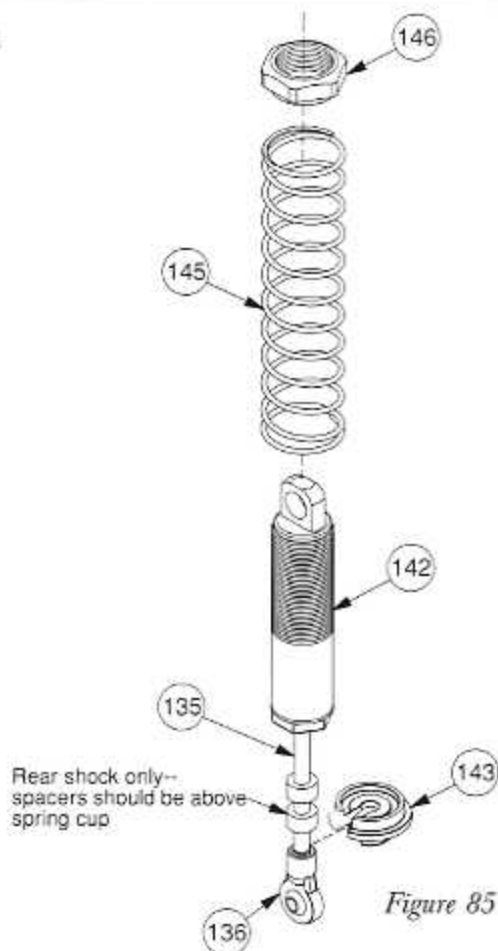
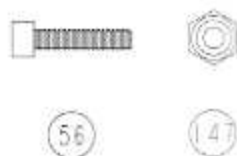


Figure 85

Figure 86



- ❑ 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 outside shock mounting hole on the arm (106), (109).
- ❑ Step 25. Slide a shock mount bushing (86), large side first, over the screw (85) on the right side of the rear shock tower (110). Place the top of the shock body (142) over the shock mount bushing (86) 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.

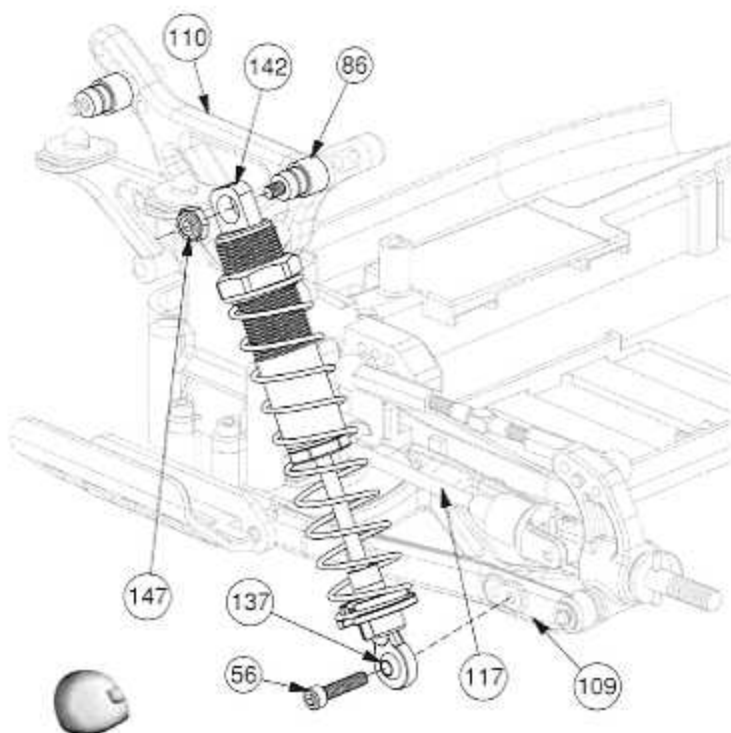
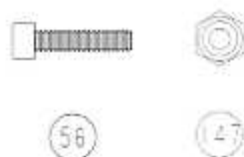


Figure 86

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 1/2" cap-head screw (56) 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 1/2" cap-head screw (56) into the inside shock mounting hole on the arm (77).
- ❑ Step 30. Slide a shock mount bushing (86), large side first, over the screw (85) on the right side of the rear shock tower (110). Place the top of the shock body (141) over the shock mount bushing (86) 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.

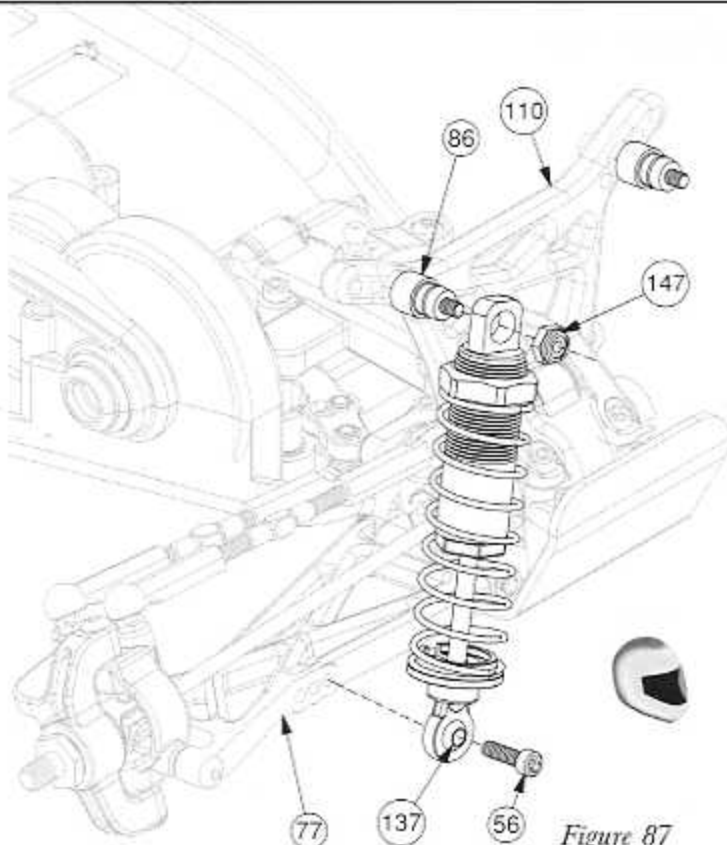


Figure 87

BAG H

Figure 96



- ❑ Step 19. Attach the two battery strap posts (166) to the chassis (30), as shown. The square at the bottom of the posts (166) should sit in the recessed areas of the chassis (30), and the holes in the top of the posts should point front to rear. 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.

- ❑ Step 20. Glue two of the four small plastic pieces to each of the battery straps (168) as shown in Figure 96A. Make certain that the plastic pieces are glued securely to the top of the battery straps (168). This will lower the battery strap in order to hold the cells firmly in place in the slotted chassis.

➤ Team Losi **Tread Lock** glue (A-7880) works very well for holding the small plastic spacers in place. Additionally, **Tread Lock** is by far the best glue available for gluing tires.

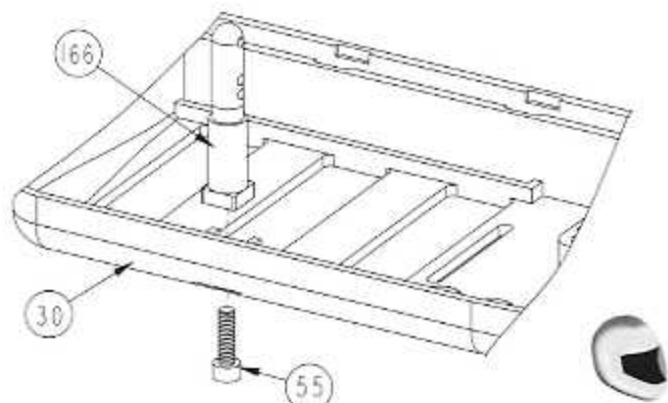


Figure 96

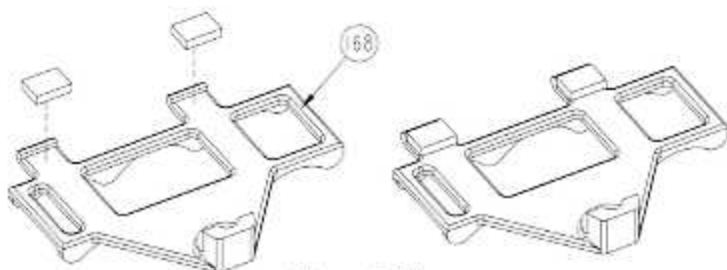


Figure 96A

BAG H (Continued)

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).

⚠ IMPORTANT NOTE: Once the body has been painted, place an oval-shaped foam ring on the inside of the body around each of the two body mounting holes near the outside of the body. The rings will hold the body up off of the battery posts and ensure that the body is mounted at the correct height.

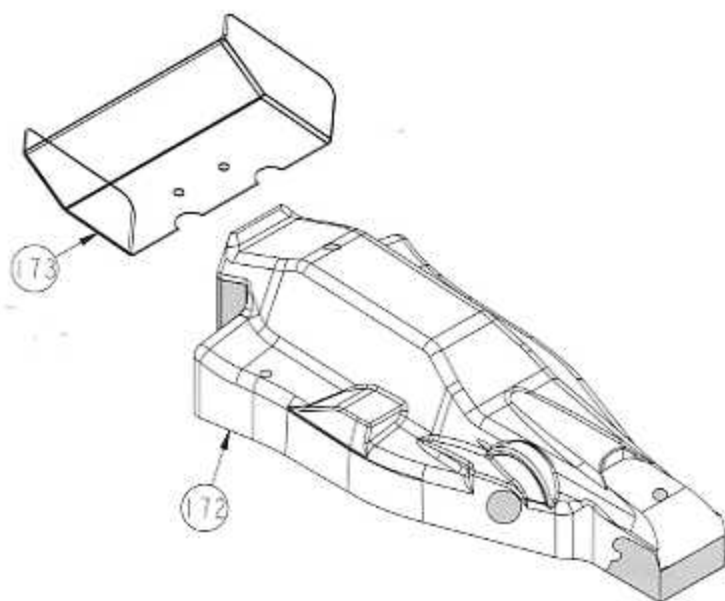


Figure 99

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).

⚠ IMPORTANT NOTE: The wing will need to be trimmed more in order to clear the shocks when mounted in the outside hole of the tower. Trim the front indent of the wing a little at a time until the wing clears the rear shocks.

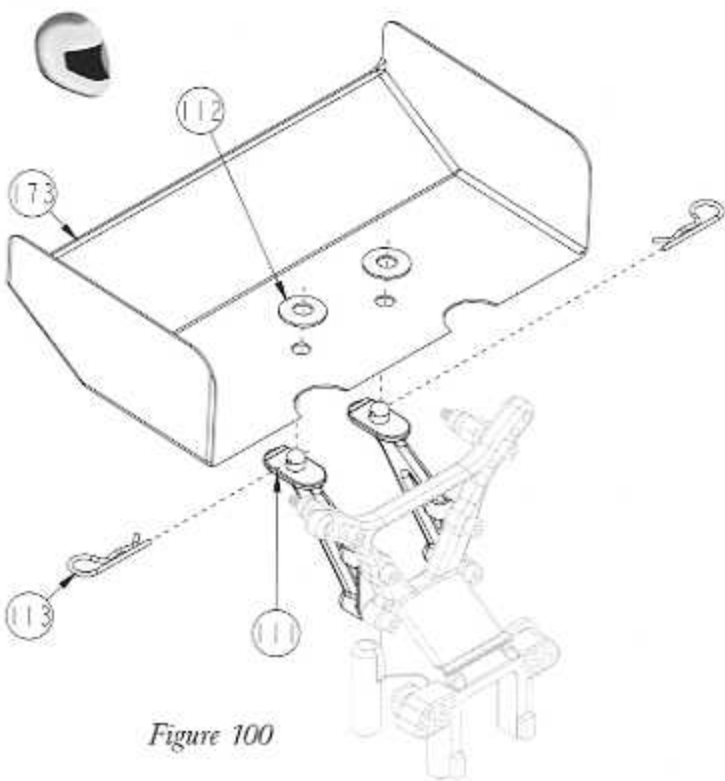


Figure 100

SETUP TIPS

It is recommended that you start with the setup shown on the included setup sheet. From this point, you will be able to refer to the following setup tips to help dial in your *XX-4 Worlds Edition* to virtually any condition. Aside from these tips, you can always access the latest XX-4 setups from top factory racers around the world at: www.TeamLosi.com/setups.

Front Suspension

Camber:

- Add more negative camber on high-bite surfaces.
- Remove negative camber for slippery surfaces.

Toe-Out:

- Increase toe-out for slippery surfaces.

Damping:

It is important to note that the shocks on a 4WD car will typically feel lighter than on a 2WD car when damping is correct. Many drivers will automatically judge the damping by feel on the bench and inappropriately increase the damping. You should only make damping adjustments based on how the car feels on the track.

- You hardly ever need to alter from the standard setup with 25wt oil. If the front end feels too stiff, lighten the oil in the front shocks by 2-5wt.

Shock Position:

- Moving the top of the shock in (shock laid down more) will make the car react slower and smoother. Moving the top of the shock out (shock stood up more) will make the car react quicker.

Springs:

- Stiffer front springs will make the car have more steering and react quicker, but the car will be more difficult to control when it is sliding.
- Softer front springs will make the car react slower and have less steering.

Internal Shock Springs:

- Internal shock springs allow for a higher front ride height while maintaining good all-around steering and driveability.

Ride Height:

- Front ride height should always be adjusted lower than the rear ride height.
- Raising the front will typically increase on-power steering, but can make the car over-react and hard to control while sliding.
- Lowering the front ride height will increase off-power steering while making the car more stable on-power and easier to control while sliding.

Camber Link:

- A longer link will increase corner speed.
- A shorter link will make the car react slightly quicker, but will have less corner speed and make the car less stable.
- Adding spacers under the ball stud in the front caster block increases on-power steering, but makes the car slightly unpredictable.

Rear Suspension

Camber:

- Add more negative camber on high-bite surfaces.
- Remove negative camber for slippery surfaces.

Toe-In:

- Inboard toe-in (toe-in in suspension mounts) will increase steering by making the front end more responsive as well as improving handling over jumps.
- Outboard toe-in (toe-in in rear hubs) is best suited for very bumpy and/or very high-bite surfaces (e.g., fresh grass). Outboard toe-in will make the car handle smoother on such surfaces when in-board toe-in tends to make the car difficult to drive.

Rear Hub Spacing:

- Space the rear hubs forward for slippery surfaces.
- Space the rear hubs back for high-bite surfaces.

Sway Bar:

- Adding a rear sway bar helps to make the steering more aggressive on smoother surfaces.

Rear Suspension - continued

Damping:

It is important to note that the shocks on a 4WD car will typically feel lighter than on a 2WD car when damping is correct. Many drivers will automatically judge the damping by feel on the bench and inappropriately increase the damping. You should only make damping adjustments based on how the car feels on the track.

- Drilling one of the holes in the #54 piston out to a #51 (1.7mm) and changing to 35wt oil will reduce the "pack" in the rear shocks. This will make the rear end kick up less over bumpy sections of the track. Remember to use the outside hole of the shock tower as well as the outside hole in the arm with this shock setup.

Springs:

- The softer the rear spring is the less the car will turn in to a corner, but the car will have more on-power and high-speed steering.
- Stiffer rear springs will have the opposite effect.

Ride Height:

- Lowering the ride height results in more rear grip. If the rear ride height is set too low (especially if it's lower than the front ride height) the car may start the turn with understeer, then instantly change to oversteer.

Camber Link:

The rear camber link is the most effective adjustment in tuning your XX-4. There are three recommended mounting positions for the XX-4. They are listed, as follows, in order from the smoothest, easiest to drive to the most aggressive:

- #4 hole in bulkhead - 'C' hole in rear hub: Easiest to drive. Car has nice balance and jumps well.
- #5.5 hole in bulkhead - 'B' hole in rear hub with a rear sway bar: Improved steering with very good balance.
- #4 hole in bulkhead - 'A' hole in rear hub with a rear sway bar: More slow-speed steering. This setup could yield the fastest lap times on many tracks.

Anti-Squat:

- Increasing anti-squat (by using the small anti-squat shims) will make the rear end of the car feel more free. The car will rotate better in corners.
- Decreasing anti-squat (by removing the small shims or placing a shim under the rear of the blocks) will make the rear end kick up less over bumps while on power.

Differentials

The differential adjustment is a very good way to tune your XX-4.

Front Diff (most critical):

- The front diff should always be tighter than the rear diff.
- Adjusting the front diff tighter will increase the drive out of turns. The steering will feel sharper, but the car will have less off-power steering.

Rear Diff:

- Loosening the rear diff will make the car easier to drive and improve high-speed handling. Be careful not to adjust the rear diff so loose that it will slip!

Slipper Adjustment

- The slipper, when properly adjusted, should not be set so that you can feel it while driving. The slipper's main purpose is to help protect the differentials and drive train from jolts when landing on jumps and driving through washboard sections.

One-Way/Clicker Adjustment

- The one-way/clicker is typically adjusted very loose and works best this way in most conditions.

Battery Position

- Batteries forward (on the left side of the chassis) generally make the car more stable.
- Batteries back (on the left side of the chassis) generally make the car initiate turns harder.

Rear Wing

- Due to the weight distribution of 4WD cars, rear wings are generally more critical on a 4WD than on a 2WD car. The overall size, as well as the kick-up area of the rear wing can dramatically impact the high-speed corner speed as well as the jumping characteristics of the car.

Transmitter Adjustment

- If your transmitter has a steering exponential adjustment, use it to adjust the responsiveness of your car's steering. This really makes a big difference! Use the exponential adjustment to fine tune your current car/tire setup.



Setup Sheet

Driver: _____

Date: _____

Track: _____

- Indoor
- Outdoor

- Slick
- Loose-Dirt
- Blue-Groove

- Smooth
- Rough
- Extra-Rough

- Tight / Open

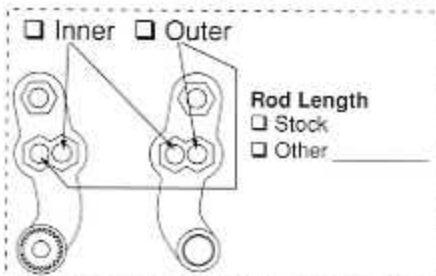
Front Suspension (Circle or Check the Appropriate Settings)

Toe In _____ °
 Out _____ °

Ride Height _____

Camber - _____ °
 + _____ °

Caster Stock _____ °
 Other _____ °



Plastic Dogbone Aluminum
 Steel CVD Steel

Front Shocks

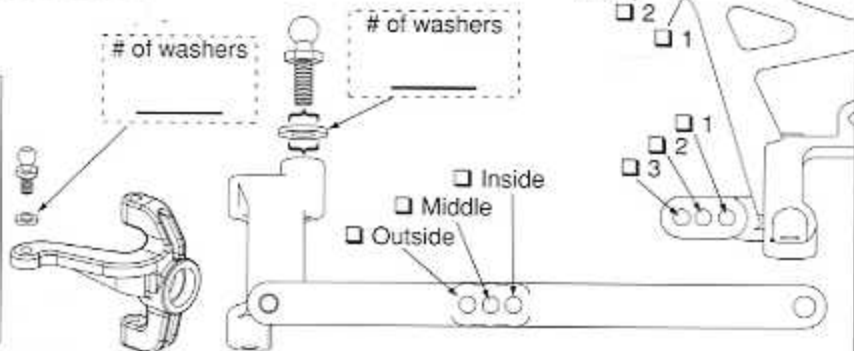
Oil: _____

Piston: _____ Standard / Drilled

Spring: _____

Internal Spring: _____

Limiters: Inside- _____ Outside- _____



Notes:

Rear Suspension

Toe-In Inside _____ °
 Outside _____ °

Ride Height _____

Camber - _____ °
 + _____ °

Pivot Support _____ No Shim
 Shim Under Front Shim Under Rear

Plastic Dogbone Aluminum
 Steel CVD Steel
 Sliders Plastic

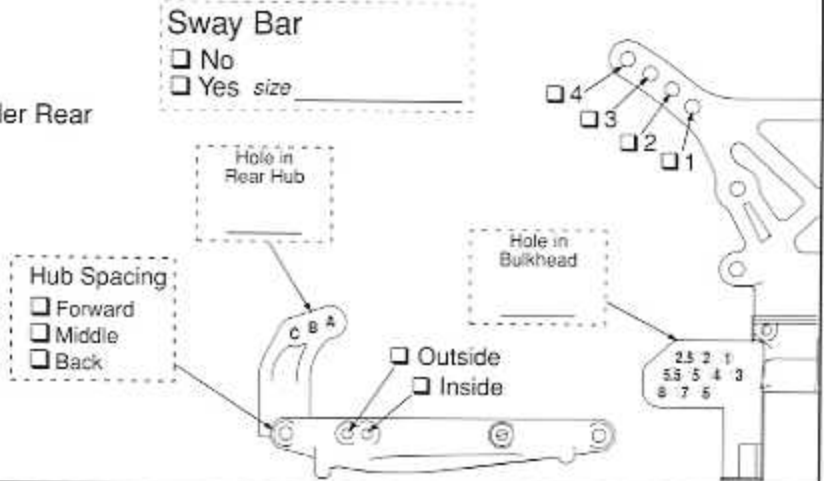
Rear Shocks

Oil: _____

Piston: _____ Standard / Drilled

Spring: _____

Limiters: Inside- _____ Outside- _____



Sway Bar
 No
 Yes size _____

Tires

Front: _____ Compound _____ Foam _____

Rear: _____ Compound _____ Foam _____

Motor: _____

Pinion: _____

Spur: _____

Wing Setup:

Clicker Adjustment: Locked One-Way: Soft Spring

Slipper: Yes No Stiff Spring _____

Battery Placement: Back Forward Other: _____

Notes:



Setup Sheet

Driver: **Jukka Steenari**

Date: _____

Track: _____

- | | | |
|--|--------------------------------------|--------------------------------------|
| <input type="checkbox"/> Indoor | <input type="checkbox"/> Slick | <input type="checkbox"/> Smooth |
| <input type="checkbox"/> Outdoor | <input type="checkbox"/> Loose-Dirt | <input type="checkbox"/> Rough |
| <input type="checkbox"/> Tight / <input type="checkbox"/> Open | <input type="checkbox"/> Blue-Groove | <input type="checkbox"/> Extra-Rough |

Front Suspension (Circle or Check the Appropriate Settings)

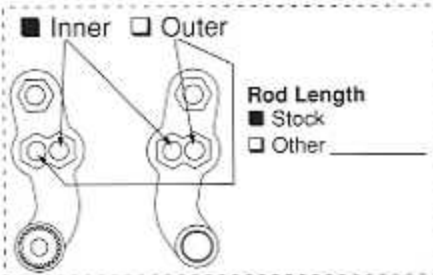
Toe In Out 0°

Ride Height Slightly lower than rear

Camber - + 1°

Caster Stock Other _____°

Diff Plastic Steel Drive Shafts Dogbone Aluminum CVD Steel



Notes:

Sway Bar

No Yes size _____

Front Shocks

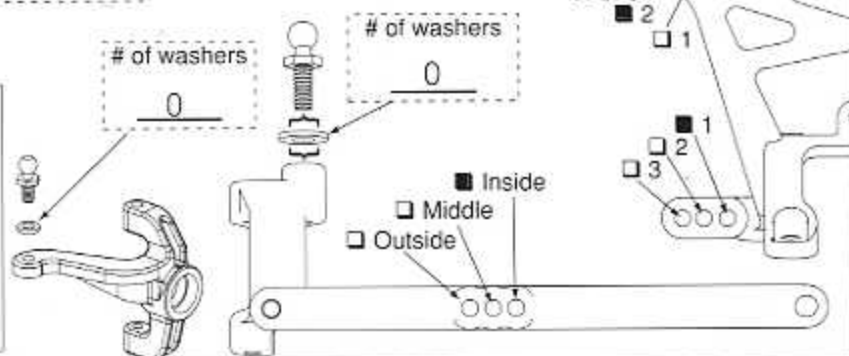
Oil: 25wt Losi

Piston: 57 Standard / Drilled

Spring: Orange

Internal Spring: Yes

Limiters: Inside- Spring Outside- _____



Rear Suspension

Toe-In Inside Outside 3°

Ride Height Dogbones slightly below level

Camber - + 2°

Pivot Support 2° No Shim Shim Under Front Shim Under Rear

Diff Plastic Steel Drive Shafts Dogbone Aluminum CVD Sliders Steel Plastic

Rear Shocks

Oil: 25wt Losi

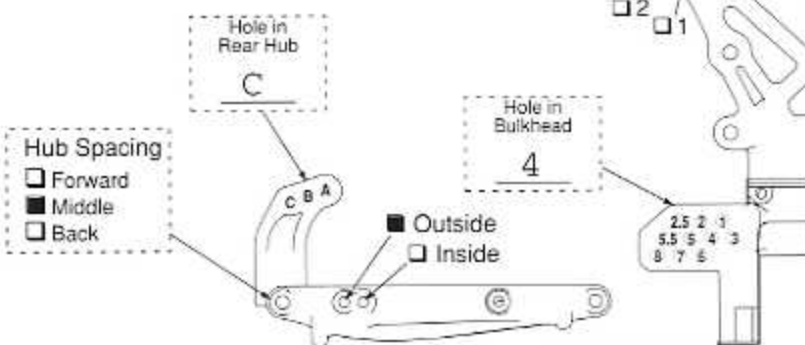
Piston: 54 Standard / Drilled

Spring: Yellow

Limiters: Inside- 'A' Spacer Outside- 2 'B' Spacers

Sway Bar

No Yes size _____



Tires

Front: Taper-Pin Compound Silver Foam Firm

Rear: Taper-Pin Compound Silver Foam Medium

Motor: _____

Pinion: _____

Spur: 84

Wing Setup: Full

Clicker Adjustment: Locked One-Way: Soft Spring

Slipper: Yes No Stiff Spring _____

Battery Placement: Back Forward Other: _____

Notes: _____