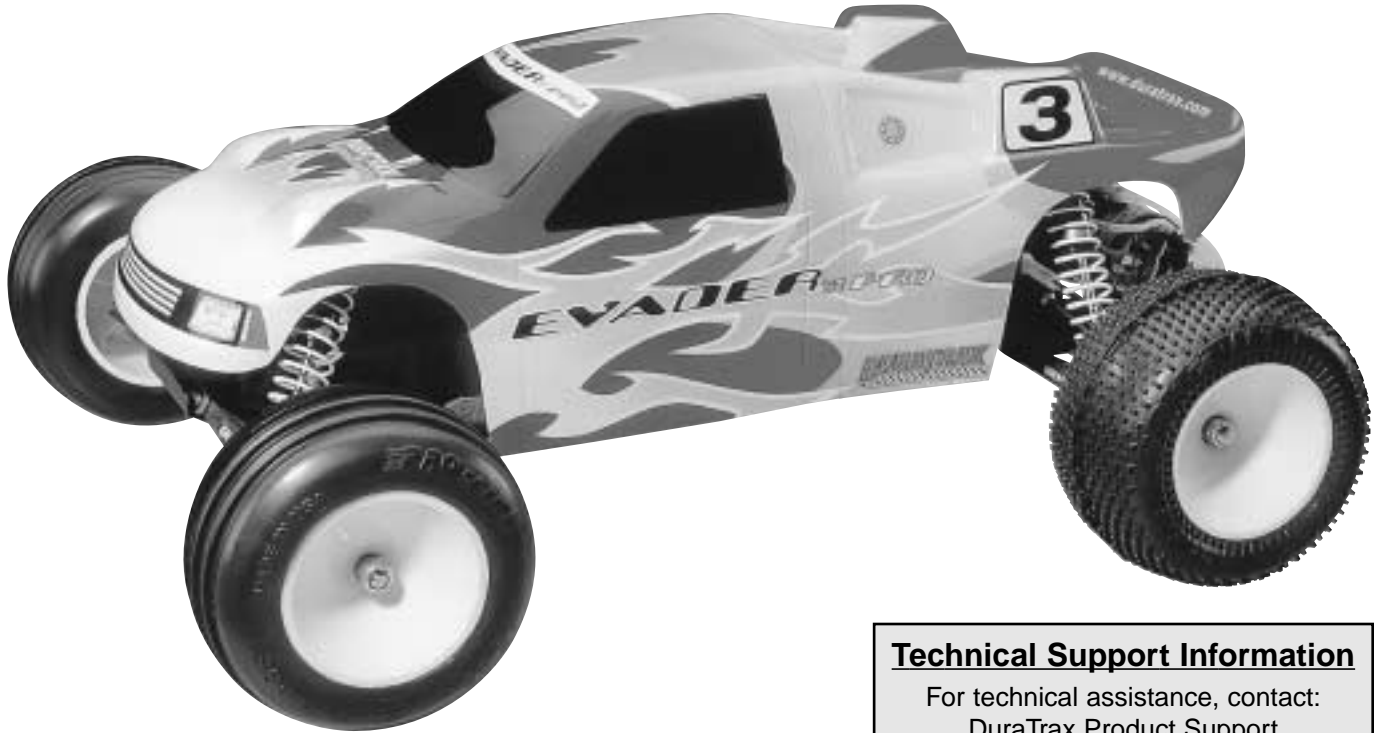




EVADERST PROTM

PREBUILT



Length: 15.2" [385mm]
Width: 13" [330mm]
Height: 5.8" [147mm]
Weight: 3.3 lb [1500g]
Wheelbase: 11.6" [295mm]

Technical Support Information

For technical assistance, contact:
DuraTrax Product Support
3002 N. Apollo Drive, Suite 1
Champaign, IL 61822
(217) 398-8970, Ext. 5
carsupport@duratrax.com

ASSEMBLY AND OPERATION MANUAL

Warranty

- **DuraTrax**® will warranty this kit for 90 days after the purchase date from defects in materials or workmanship. DuraTrax will either repair or replace, at no charge, the incorrectly made part. Exception: Specific parts covered under the Graphite Parts and Stress Tech™ Guarantee, see page 3.
- Make sure you **save the receipt or invoice** you were given when you bought your model! It is your proof of purchase and we must see it before we can honor the warranty.
- To return your Evader ST Pro for repairs covered under warranty you should send your truck to:

Hobby Services
3002 N. Apollo Drive Suite 1
Champaign, Illinois 61822
Attn: Service Department
Phone: (217) 398-0007 9:00 am-5:00 pm Central Time M-F
E-mail: hobbyservices@hobbico.com

If the buyer is not prepared to accept the liability associated with the use of this product, the buyer is advised to return this kit immediately in new and unused condition to the place of purchase.

READ THROUGH THIS MANUAL BEFORE STARTING. IT CONTAINS IMPORTANT INSTRUCTIONS AND WARNINGS CONCERNING THE ASSEMBLY AND USE OF THIS MODEL.

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INTRODUCTION

Thank you for purchasing the DuraTrax Evader ST Pro. This manual contains the instructions you need to build, operate and maintain your new electric R/C vehicle. Read over this manual thoroughly before building or operating the Evader ST Pro.

SAFETY PRECAUTIONS

When the safety precautions are followed, the Evader ST Pro will provide years of enjoyment. Use care and good sense at all times when operating this radio controlled truck. Failure to use this vehicle in a safe, sensible manner can result in injury or damage to property. You and you alone must insure that the instructions are carefully followed and all safety precautions are obeyed.

- Do not operate the Evader ST Pro near people. Spectators should be behind the driver or at a safe distance away from the vehicle.
- Make sure to read the instructions with the battery and charger before charging.
- Do not leave the charger unattended during charging. If the battery or charger become hot at any time, disconnect the battery from the charger immediately! Failure to do so may cause permanent damage to the charger and battery and may cause bodily harm.
- Do not cover the air intake holes on the charger during charging. This may cause the charger to overheat.
- Do not allow the electronic speed control (ESC) or radio equipment to come into contact with moisture. Water can cause the electronics to short out and can cause permanent damage.
- Always turn on the transmitter before turning on the electronic speed control.
- Before turning on your radio, check to make sure that no one else is running on the same frequency as your Evader ST Pro.

HELPFUL HINTS

- Avoid working over a deep pile carpet. If you drop a small part or screw, it will be difficult to find.
- Place a mat or towel over your work surface. This will prevent parts from rolling off and will protect the work surface.
- Avoid running the truck in cold weather. The plastic and metal parts can become brittle at low temperatures. In addition, grease and oil become thick, causing premature wear and poor performance.
- Test fit all parts before attaching them permanently.

GRAPHITE AND STRESS-TECH™ PARTS GUARANTEE

We have engineered the Evader ST Pro to take the rough and tumble abuse that makes R/C fun. We are so confident of the quality and durability of the Graphite and Stress-Tech parts that we will replace any Graphite or Stress-Tech part you break during the first 12 months you own the vehicle. Just send in the part to us and we will send you a FREE replacement. Please see the Evader ST Pro parts list for the items covered under the Graphite and Stress-Tech guarantee.

To receive your free replacement part, please send the following to the Hobby Services address listed on the cover of this manual.

- 1. The broken part must be included.
- 2. The part number and description of the broken part.
- 3. Dated copy of your invoice or purchase receipt.
- 4. Your name, phone number and shipping address.

REPAIR SERVICE

Repair service is available anytime.

After the 90 day warranty, you can still have your Evader ST Pro repaired for a small charge by the experts at DuraTrax's authorized repair facility, Hobby Services, at the address listed on the front page of this manual.

To speed up the repair process, please follow the instructions listed below.

- 1. Under most circumstances return the ENTIRE system: vehicle and radio. The exception would be sending in a Stress-Tech or Graphite part. See the instructions under Graphite and Stress-Tech Parts Guarantee above.
- 2. Make sure the transmitter is turned off and all of the batteries are removed.
- 3. Send written instructions which include: a list of all items returned, a THOROUGH explanation of the problem, the service needed and your phone number during the day. If you expect the repair to be covered under warranty, be sure to include a proof of date of purchase (your store receipt or purchase invoice).
- 4. Also be sure to include your full return address.

SPECIFICATION & DESCRIPTION CHANGES

All pictures, descriptions and specifications found in this instruction manual are subject to change without notice. DuraTrax maintains no responsibility for inadvertent errors in this manual.

ADDITIONAL ITEMS REQUIRED



**To operate the Evader ST Pro,
the following items are required:**

- DuraTrax 6 cell battery pack (DTXC2081)
- DuraTrax 6-7 cell charger (DTXP4100)
- Electronic speed control
- Motor
- 2-Channel radio with one servo

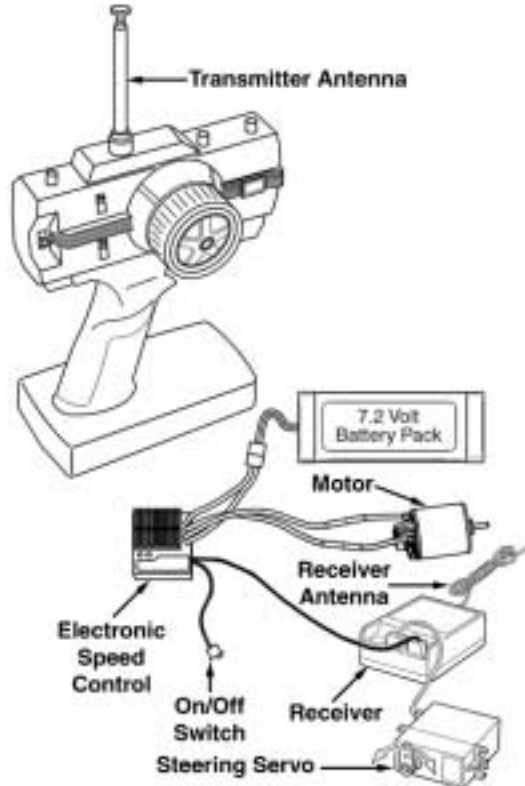
Tools Needed for Completion

- Hobby knife (HCAR0105)
- #11 Blades (HCAR0211)
- #2 Phillips head screwdriver (DTXR0124)
- Needle nose pliers (DTXR0300)

Tools Included for Maintenance & Cleaning

- 3/32", 1.5mm & 2.5mm hex Wrenches
- Turnbuckle wrench
- Nut driver (4-way)

PREPARING THE RADIO SYSTEM



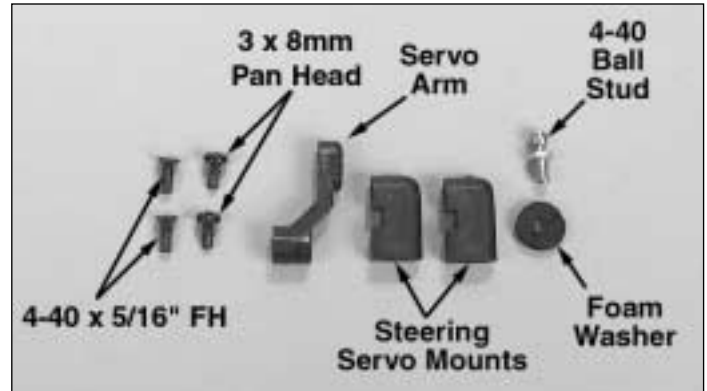
- 1. Install the "AA" batteries in the transmitter.
- 2. Install and extend the transmitter antenna.
- 3. Connect the steering servo and electronic speed control to the receiver. See your radio instructions to see which channel is steering (servo) and which is throttle (ESC).
- 4. Uncoil and extend the receiver antenna.
- 5. Hook up the charged 6 or 7 cell battery to the electronic speed control.
- 6. Adjust the servo trims of the transmitter to the neutral position (centered).
- 7. Switch on the transmitter.
- 8. Switch on the electronic speed control.
- 9. Set up speed control (see your ESC instructions for the correct set-up procedure).
- 10. Operate the steering and throttle control. Make sure the steering servo arm and motor move in proportion to the movement of the steering wheel and throttle trigger.
- 11. Switch off the receiver, then the transmitter.
- 12. See your radio instructions for set-up and operating the radio system.

CHARGE YOUR BATTERY

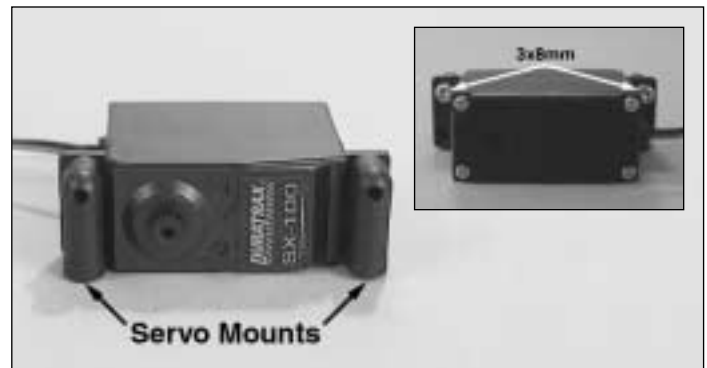
- 1. Charge the 6- or 7-cell battery (not included) on your charger (not included). **See Safety Precautions before charging.** See your charger's instructions for proper charging procedure and charge times.



STEERING SERVO INSTALLATION



- 1. Locate and remove from the parts bag two (2) steering servo mounts, one (1) servo arm (determine which servo arm is required for your radio system), one (1) 4-40 ball stud, one (1) foam washer, two (2) 3x8mm pan head screws and two (2) 4-40 x 5/16" flat head machined screws. To ensure that you are using the right size screw, match the screw to the picture on the hardware chart, which is on the separate exploded view/parts list.



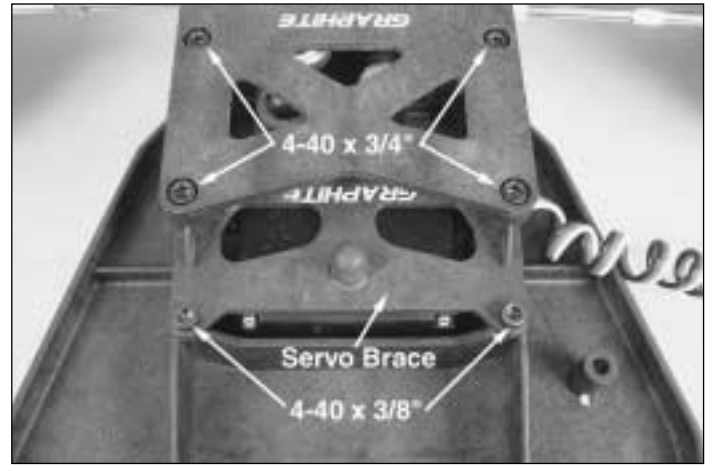
- 2. Attach the servo mounts to the servo using the two (2) 3x8mm screws as shown.



- 3. Install the 4-40 ball stud into the flat side of the steering servo arm in the upper hole. With the steering servo centered as described in "Preparing the Radio System", install the correct steering servo arm onto the servo splines as shown above. (Note: If the steering servo is not properly centered, the steering could be off). Re-install the servo horn screw, securing the horn onto the servo.



□ 4. Remove the two (2) 4-40 x 3/4" socket head machined screws from the upper plate and rotate the front of the truck forward. (Note: Be careful that you do not loosen any of the steering assembly parts during this process).

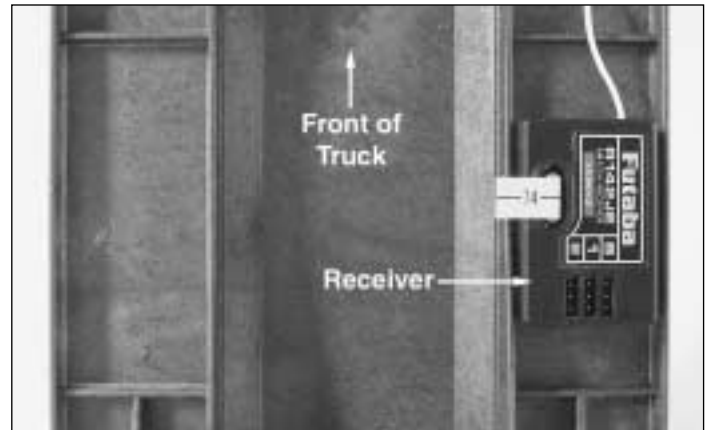


□ 6. Install the servo brace onto the chassis using the two (2) 4-40 x 3/8" socket head machined screws and two (2) 4-40 x 3/4" socket head cap screws. Re-install the two (2) 4-40 x 3/4" socket head cap screws into the upper plate.

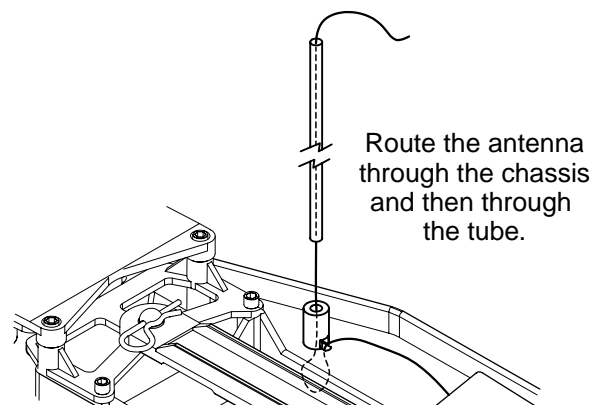


□ 5. Install the steering servo into the mounting slot. Line up the holes in the servo mounts with the two holes in the chassis. (Note: there are two different mounting holes in the servo mounts. Use the appropriate holes for your servo). Install the two (2) 4-40 x 5/16" flat head machined screws through the bottom of the chassis into the servo mounts. Attach the steering link ball cup onto the 4-40 ball stud on the servo.

RECEIVER INSTALLATION



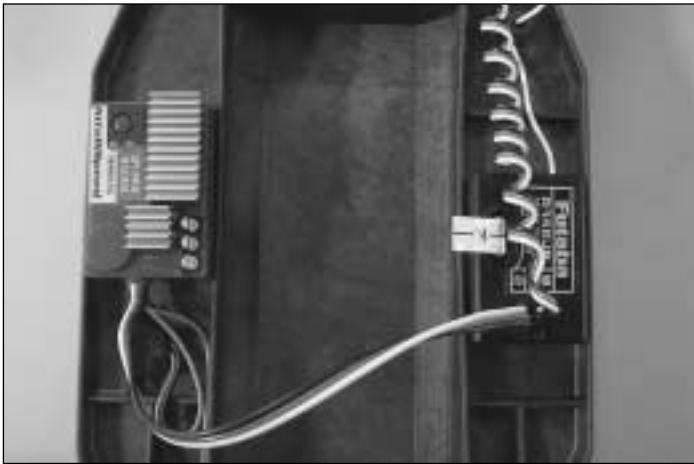
□ 1. Install the receiver onto the chassis as shown. Remove the protective backing from one side of the included 1/4" thick piece of foam tape and install it onto the chassis. Then remove the other piece of protective backing and install the receiver onto the foam rubber.



□ 2. Route the receiver antenna through the holes in the chassis as shown above. Locate the antenna tube, and thread the receiver antenna through the antenna tube. The antenna will be longer than the antenna tube. **DO NOT CUT**

OR COIL THE ANTENNA WIRE. Press fit the antenna tube into the hole in the chassis. **Tip: Run the antenna wire through your fingers to straighten out the kinks before running through the antenna tube. Also, applying a small amount of soap and water to the antenna wire will help lubricate the wire for threading into the antenna tube.**

ELECTRONIC SPEED CONTROL (ESC) INSTALLATION



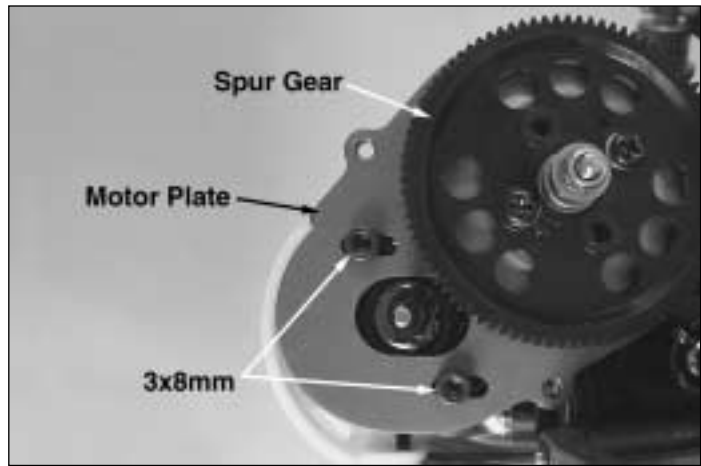
❑ 1. Mount your ESC to the chassis using the included double sided tape. If the speed control is too large to mount to the chassis it can be mounted to the front of the rear shock tower. When mounting the ESC make sure there is sufficient air flow across the ESC to keep it cool.

❑ 2. Plug the ESC receiver lead into channel #2 of the receiver.

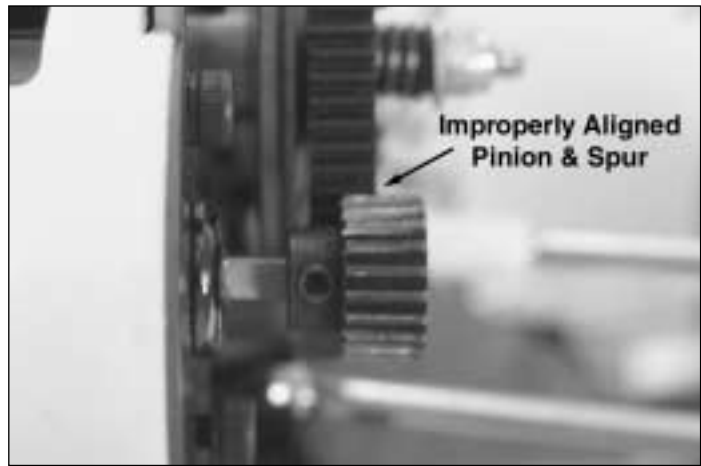
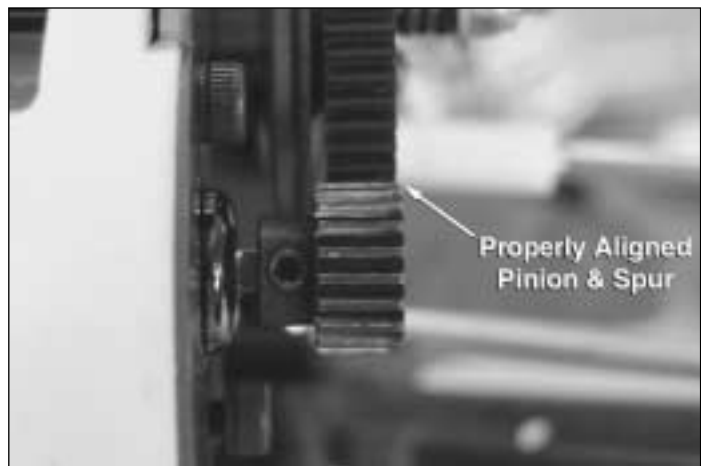
MOTOR INSTALLATION



❑ 1. Remove the rear wheel that is on the same side as the spur gear, this will make installing the motor, pinion and gear cover easier.



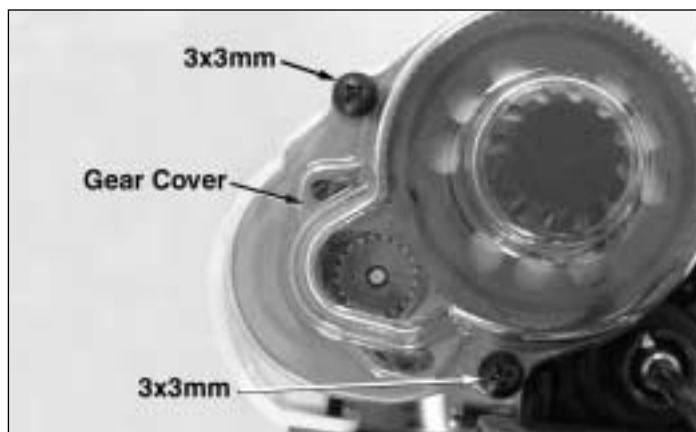
❑ 2. Using the two included 3x8mm screws, secure the motor to the motor plate. **Note:** Do not tighten the motor screws down yet.



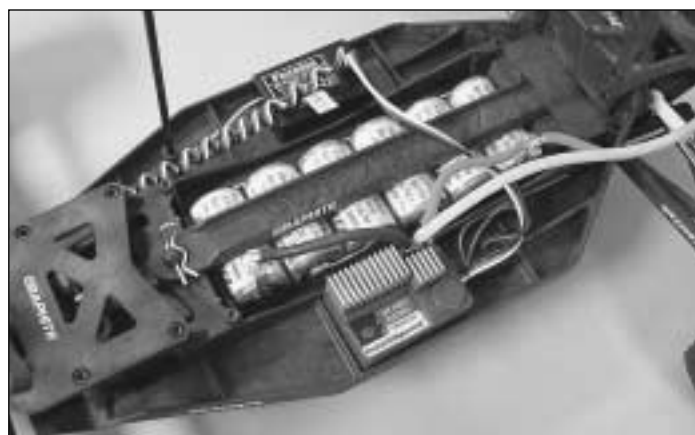
❑ 3. Install the included pinion onto the motor shaft. Make sure the set screw is placed over the flat spot on the motors shaft. Line the pinion up with the spur gear so that it is properly lined up with the spur gear. **Note:** See the pictures above to help determine if the spur and pinion are properly lined up.

❑ 4. Set the gear mesh between the spur and pinion. The mesh is set by sliding the motor forward and back. When setting the gear mesh you want to make sure it is not set too tight or too loose (either will cause the spur gear to strip easily).

To set the gear mesh properly, slide the pinion until it fully meshes up against the spur then back it up slightly. Run a piece of paper between the two gears. If the paper is ripped, the mesh is too tight. If the paper is not tightly creased the gear mesh is too loose. Once the gear mesh is set, tighten the motor screws.

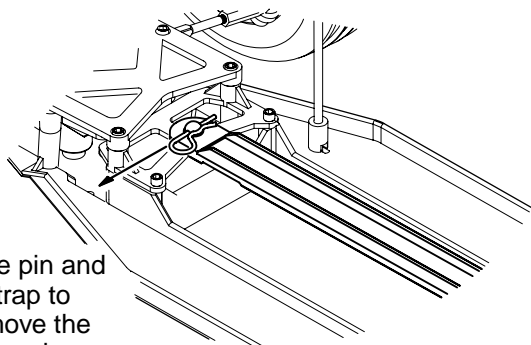


- ❑ 5. Install the gear cover onto the motor plate and secure it in place with the included 3x3mm screws.
- ❑ 6. Re-install the rear wheel back onto the truck.
- ❑ 7. Connect the motor to your ESC according to the ESC's instruction manual.

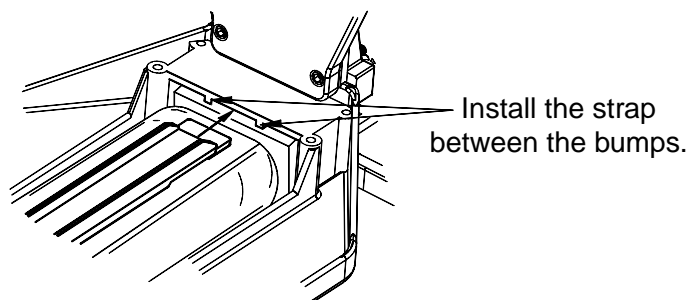


- ❑ 2. Install the charged 6 or 7 cell battery into the battery slot. Re-install the battery strap onto the Evader ST. **Note that there is a channel in the rear of the chassis for the battery strap to rest in.** Re-install the body clip into the battery strap post.

BATTERY INSTALLATION



Remove the pin and lift the strap to install/remove the battery pack.



Install the strap between the bumps.

- ❑ 1. Remove the body pin from the battery strap post, and remove the battery strap from the Evader ST.

PAINT THE BODY

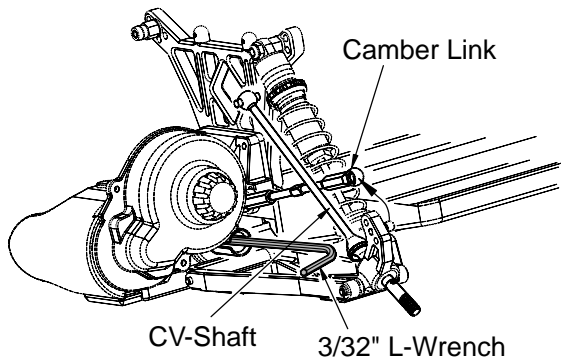
- ❑ 1. Clean the body thoroughly using a small amount of dish soap and water. Make sure that all of the soap is rinsed out of the body. Let the body completely air dry.
- ❑ 2. Apply the included window masks to the inside of the body. Try to get as much air as possible out from under the mask during application.
- ❑ 3. Use Hobbico Master Mask liquid masking film or a quality masking tape to mask the inside of the body to your desired paint scheme.
- ❑ 4. Spray a light coat of lexan compatible paint onto the inside of the body and let it completely dry before applying the next coat. Continue applying light coats until the desired area of the body is adequately covered.
- ❑ 5. Once the body is painted as desired, remove the window masks and apply the desired decals.
- ❑ 6. Secure the body to the chassis using the included body clips.

BALL DIFFERENTIAL BREAK-IN

The ball differential has been adjusted at the factory for proper "break-in". Do not tighten the differential before the truck has been properly broken-in or you can damage the differential.

After running the truck for 2 or 3 battery packs, the ball differential will require readjustment. This is the "normal" break-in period for the ball differential. You will hear a "squealing" sound when accelerating from a stop and the truck will accelerate slower. This indicates that the differential is properly broken-in and now requires adjustment. Do not run the truck again until the differential is properly readjusted as follows.

Adjusting the differential is quick and easy. Access the adjusting screw by disconnecting the rear camber link (using pliers) at the right rear wheel. Rotate the wheel and CV shaft out of the way.



While holding the left rear tire, tighten the adjusting screw by inserting the included 3/32" L-wrench into the cap screw on the right side of the ball differential. The screw should be tightened until it is "just snug." **Caution: Do not over tighten the adjusting screw or you will damage the differential.** Next, loosen the screw 1/8 of a turn.

Reinstall the CV shaft back into the differential and reattach the camber link. The ball differential may need occasional adjustment to maintain performance.

MAINTENANCE TIPS

BEFORE EACH RUN

- 1. Check to make sure that all screws are tight and there are not any screws missing.
- 2. Check to make sure that the transmitter batteries are not low.
- 3. Check to make sure that all of the moving parts of the Evader move freely and do not bind.

- 4. Check for broken or damaged parts. Replace any broken or damaged parts before running the Evader ST Pro. Running of the Evader ST Pro with broken or damaged parts could result in damage to other parts.

- 5. Check to make sure that the receiver and speed control are still properly secured to the chassis.

- 6. Check to make sure that all wires are properly connected.

AFTER EACH RUN

- 1. Clean any large globs of dirt or debris from the chassis and moving parts.

- 2. Disconnect and remove the battery from the Evader.

- 3. Check for any broken or damaged parts. This way parts may be replaced before the next run.

AFTER EVERY 10 RUNS

- 1. Check the servo saver for proper operation. During normal maintenance, check the operation of the servo saver by grasping the servo arm and linkage and turning one of the front tires left and right. If the wheels turn without moving the linkages and servo arm, then the unit is operating properly. If the linkage and servo arm move, loosen the knurled adjustment nut on the left side servo saver shaft. If the servo saver becomes clogged with dirt, it may not work properly which could cause servo or linkage damage. The servo saver needs to be disassembled, cleaned and readjusted. To safely adjust the servo saver, loosen the knurled aluminum collar on the left side steering post completely. Then reinstall 1-1/2 turns onto the post. Retest the servo saver as described above. Adjust the servo saver tighter or looser if needed.

- 2. Check to make sure that the bearings are free of dirt and debris and roll smoothly.

- 3. Check the shocks for oil leakage. If the shocks have leaked any shock fluid out, you should properly refill the shocks for best performance. Inspect the shock shafts for deep scratches.

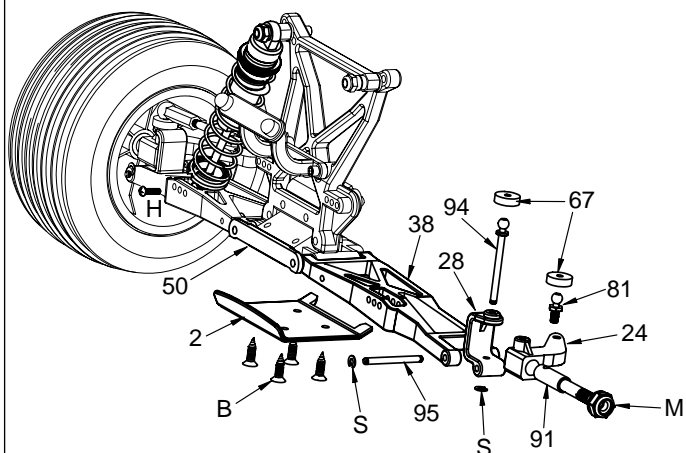
- 4. Check the motor brushes for wear. If the motor brushes are severely worn or discolored they should be replaced.

- 5. Check for buildup and wear on the bearings of the motor. If the bearings are dirty, use DuraTrax Power Shot™ to clean them, then relubricate the bearings.

- 6. Check for proper gear mesh between the spur and pinion gear.

ASSEMBLY GUIDE

The following information has been provided to help maintain and tune the Evader ST Pro.

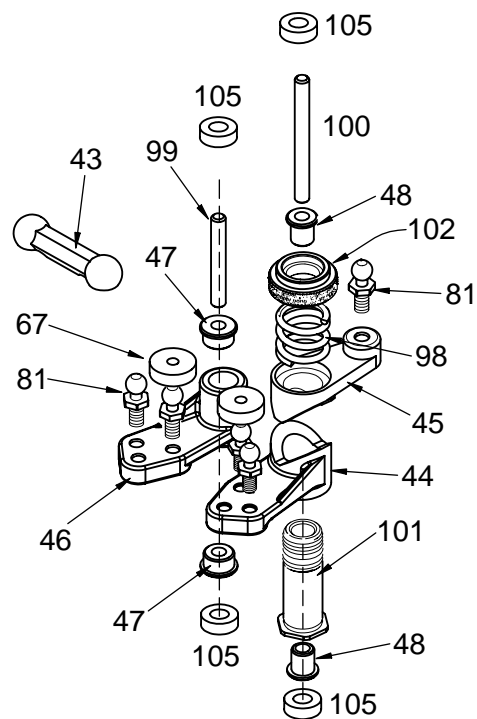


Front Knuckle Arm, Hub Carrier, Axle

1. Attach the front hub carriers (28) to the front suspension arms (38) using the (95) front outer hinge pins.
2. Install the front axles (91) into the knuckle arms (24L or 25R).
3. Install two spacers onto each kingpin.
4. Insert the knuckle arms (24L or 25R) into the front hub carriers (28) and then secure them in place with the kingpins (94). **Note: The spacers go on the top of the hub carriers (28).**
5. Secure the kingpins (94) in place using 2.5mm e-clips (S).
6. Install 3mm set screws into the axles (91) to secure them to the kingpins (94).
7. Attach the front bumper (2) to the front bulkhead using four 4-40x5/16" (B) flat head machine screws.

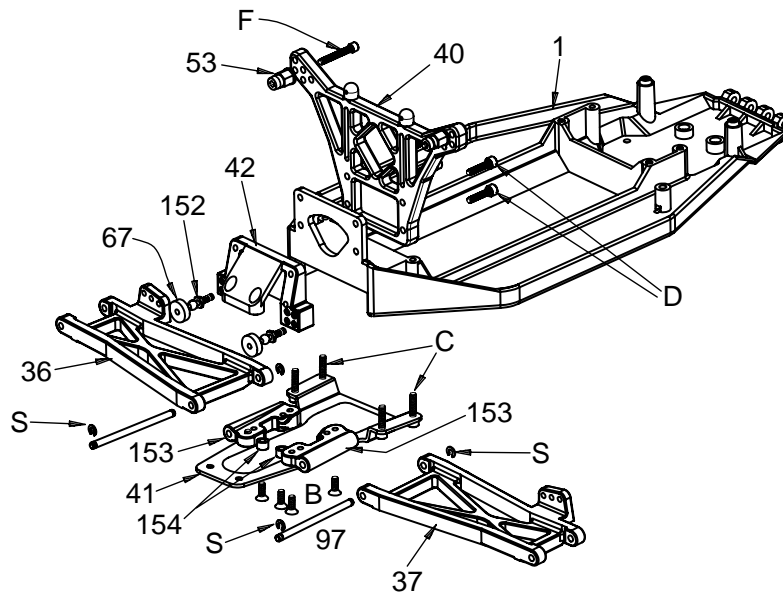
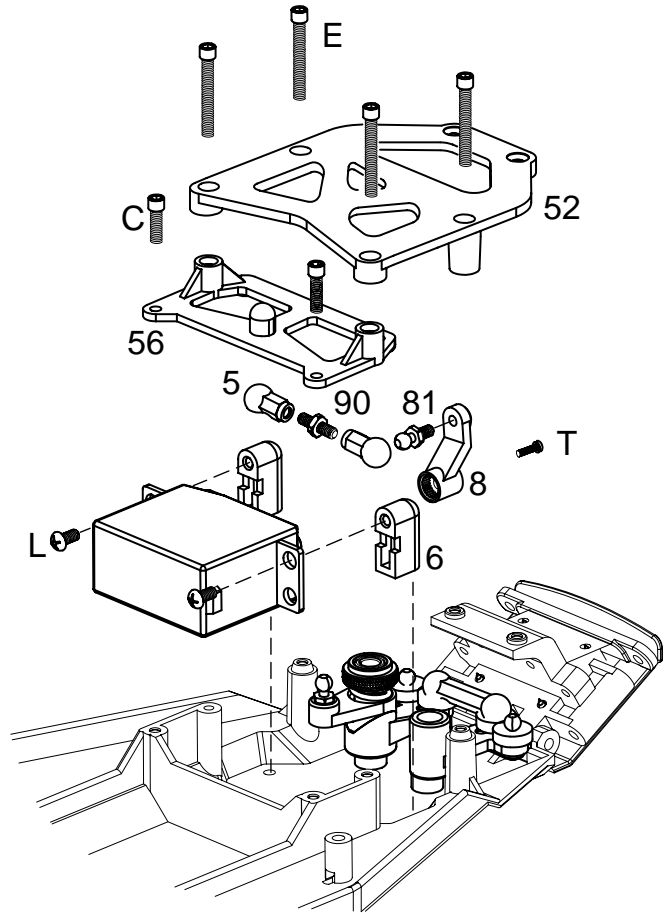
Steering Bellcrank Assembly

1. Insert two of the brass bushings (105) into the chassis. **Note: The brass bushings may need to be slightly tapped into place. The bushings must be fully seated in the chassis.**
2. Insert the short aluminum bellcrank post (99) into the right brass bushing in the chassis.
3. Install ball studs (81) into the right bellcrank (46) in the holes shown.
4. Insert a plastic bushing (47) into each end of the right steering bellcrank. Again, make sure the bushings are fully seated.
5. Slide the assembled right bellcrank onto the short aluminum bellcrank post (99).
6. Install ball studs (81) into the lower left bellcrank (44) in the holes shown.
7. Insert the threaded aluminum servo saver hub (101) into the bottom of the lower left steering bellcrank (44). **Note: The aluminum servo saver hub is designed to key into the bottom of the lower left steering bellcrank. Make sure that the hex in the hub fully seats in the bellcrank.**
8. Install a ball stud (81) into the upper left steering bellcrank (45).
9. Slide the upper left steering bellcrank (45) onto the servo saver hub (101). The upper and lower left steering bellcranks are designed to key together.
10. Place the servo saver spring (98) on top of the two left steering bellcranks.
11. Secure the left bellcrank assembly together with the aluminum servo saver spring adjuster (102). **Note: The servo saver spring adjuster is machined on one side for the servo saver spring to fit into. Make sure this side goes down against the servo saver spring. The servo saver spring will need to be properly adjusted once the entire steering bellcrank assembly has been installed on to the Evader ST Pro.**
12. Insert a plastic bushing (48) into each end of the left steering bellcrank assembly. Again, make sure the bushings are fully seated.
13. Install the long aluminum bellcrank post (100) into the left brass bushing in the chassis.
14. Slide the assembled left bellcrank assembly onto the bellcrank post.
15. Attach the left and right bellcranks together with the one piece molded link (43).



Servo, Servo Plate, Upper Plate

1. Attach the servo mounting lugs (6) to the front of the servo mounts on the servo using two 3x8 self tapping screws (L).
2. Install a ball stud (81) into the steering servo horn (8). Install the ball stud into the hole furthest from the center.
3. Install the steering servo horn onto the servo. **Note: Make sure the transmitter, steering servo and servo horn are properly centered before securing the servo horn to the servo.**
4. Secure the servo to the chassis with two 4-40x5/16" (B) flat head screws.
5. Attach the servo brace (56) to the chassis by installing two 4-40x3/8" (C) socket head screws into the two rear holes.
6. Connect the servo to the steering bellcrank assembly using the adjustable steering servo link (5 & 90).
7. Install two brass bushings (105) into the underside of the upper plate (52). **Note: The brass bushings may need to be slightly tapped into place. The bushings must be fully seated into the upper plate.**
8. Install the upper plate (52) onto the servo plate (56) and steering bellcrank assembly. Make sure the steering bellcrank posts insert into the bushings in the upper plate. Secure the upper plate with four 4-40x3/4" (E) socket head screws and two 4-40x5/16" (B) flat head screws (bulkhead).

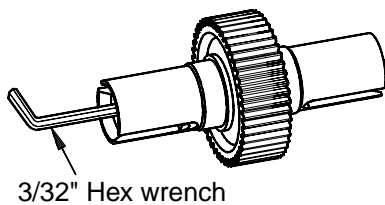
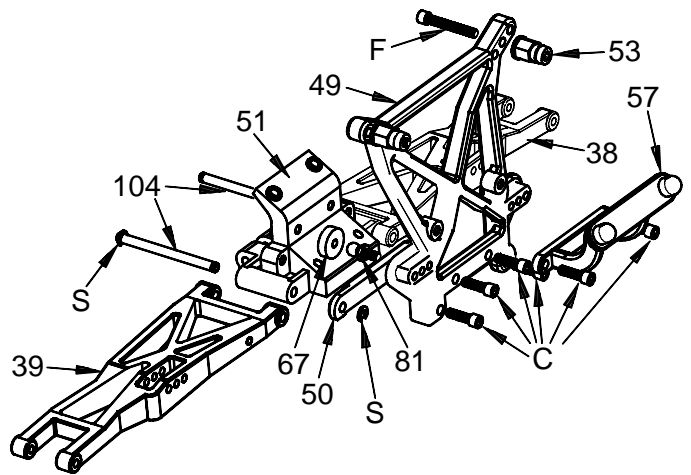


Rear Shock Tower, Rear Transmission Plate, Rear Bulkhead, Rear Suspension Arm.

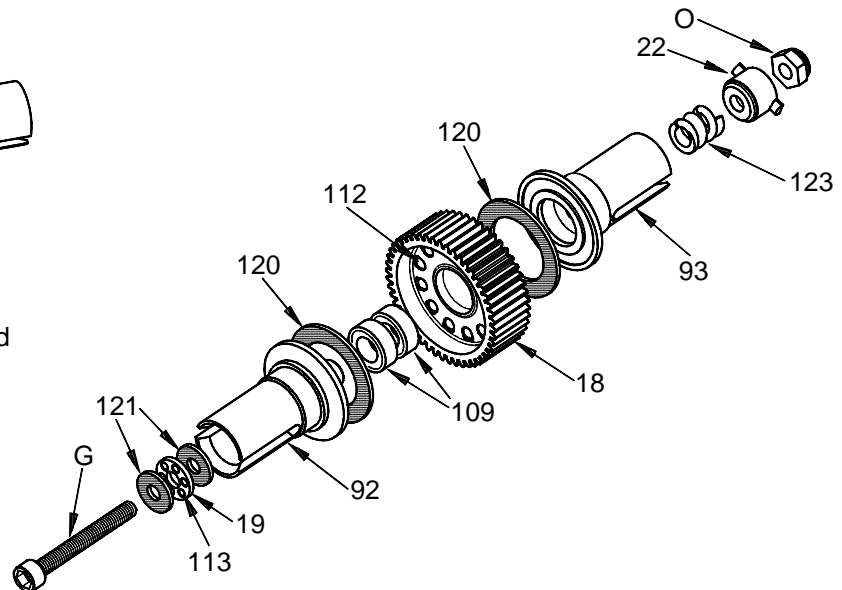
1. Attach the rear chassis plate (41) to the chassis using four 4-40x3/8" (C) socket head screws.
2. Attach the rear suspension arm mounts (153) to the rear chassis plate (41) using four 4-40x5/16" (B) flat head screws.
3. Attach the rear suspension arms (36 or 37) to the suspension arm mounts (153) using the inner rear hinge pins (97).
4. Secure the inner rear hinge pins (97) in place using four 2.5mm e-clips (S).
5. Install the rear shock tower (40) and rear bulkhead (42) onto the chassis using four 4-40x1/2" (D) screws. **Note: Make sure the screws pass through the shock tower, chassis and into the rear bulkhead.**
6. Install two ball studs (152) into the appropriate holes in the rear bulkhead. **Note: The stock setting is the lower inner holes. Make sure that the ball studs are in the same hole location on both sides.**

Bulkhead, Bulkhead Brace, Front Suspension Arm, Front Shock Tower, Front Bumper

1. Attach the front bulkhead (51) to the chassis using the hinge pin (103).
2. Secure the hinge pin in place using a 2mm set screw.
3. Attach and secure the front suspension arms (38 and 39) to the front bulkhead (51) using the (104) front inner hinge pins.
4. Secure the rear of the front inner hinge pin with a 2.5mm (S) e-clip.
5. Install the front bulkhead brace (50) onto the two front inner hinge pins.
6. Secure the front bulkhead brace using 2.5mm (S) e-clips.
7. Attach the front shock tower (49) to the front bulkhead using four 4-40x3/8" (C) socket head screws.
8. Secure the front body mount (57) to the shock tower using two 4-40x3/8" (C) socket head screws.
9. Attach the top of the front bulkhead to the upper plate (52) with two 4-40x5/16" (B) flat head machine screws.

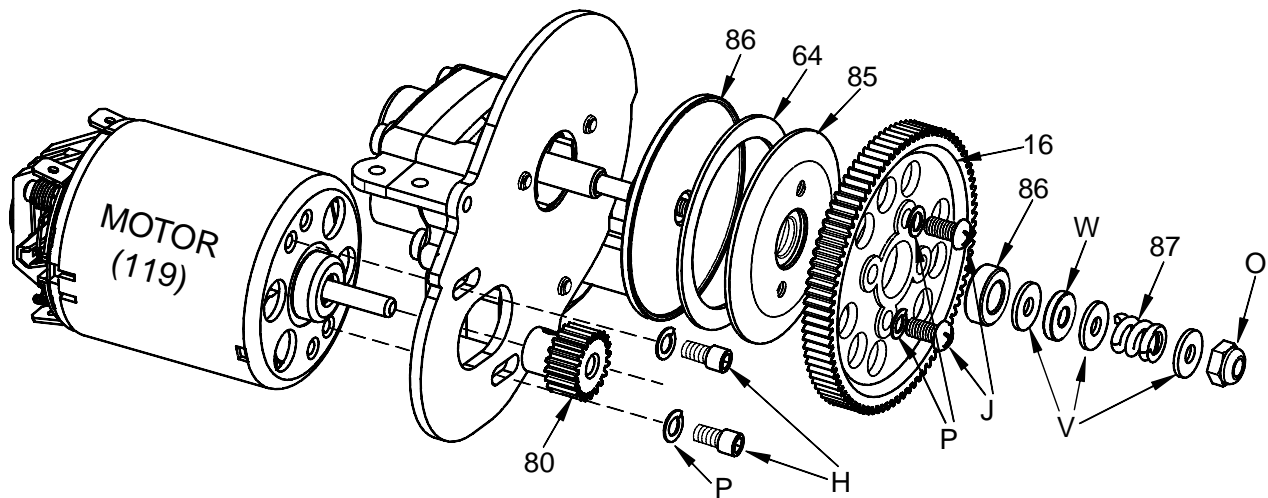


The diff can be properly adjusted by tightening the diff bolt until snug and then back off 1/8 turn.



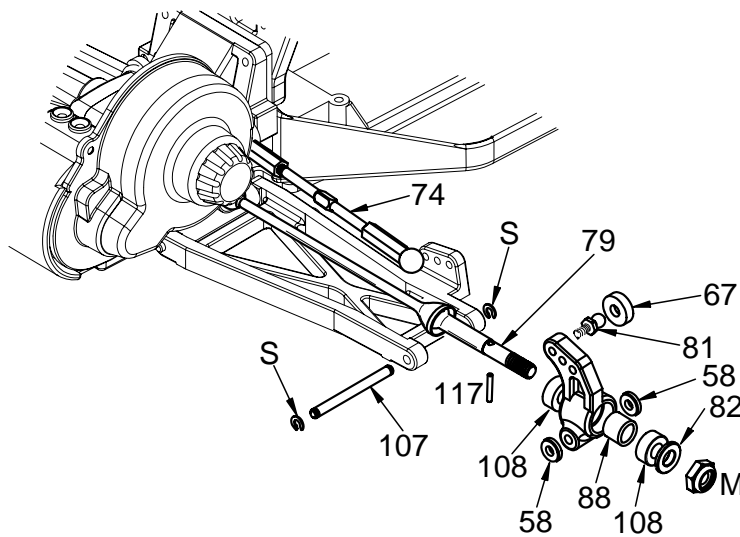
Ball Differential

1. Place one of the differential thrust washers (121) onto the 3x25mm cap screw (G).
2. Lubricate the differential thrust washer using silicone grease. Then install the plastic thrust ball holder (19) and 1/16" thrust balls (113).
3. Lubricate the other differential thrust washer (121) and install it on top of the 1/16" thrust balls (113) and holder (19).
4. Insert the screw and thrust ball assembly into the right outdrive (92).
5. Apply a small amount of silicone grease to one of the differential rings (120) and place it onto the right outdrive. The grease should hold the differential ring in place.
6. Install a 5x9mm bearing onto the right outdrive.
7. Install the 3/32" differential balls (112) into the differential gear (18).
8. Install a 5x9mm bearing into the center of the differential gear and install the gear onto the left outdrive.
9. Install the other differential ring (120) onto the left differential outdrive (93).
10. Insert the differential spring (123), lock nut holder (22) and the 3mm lock nut (M) into the end of the left differential outdrive (93).
11. Join the left and right differential outdrives together and tighten the 3x25mm cap screw (G) until the differential gear cannot be turned while both differential outdrives are being held. The differential will require fine tuning once it has been installed into the car.



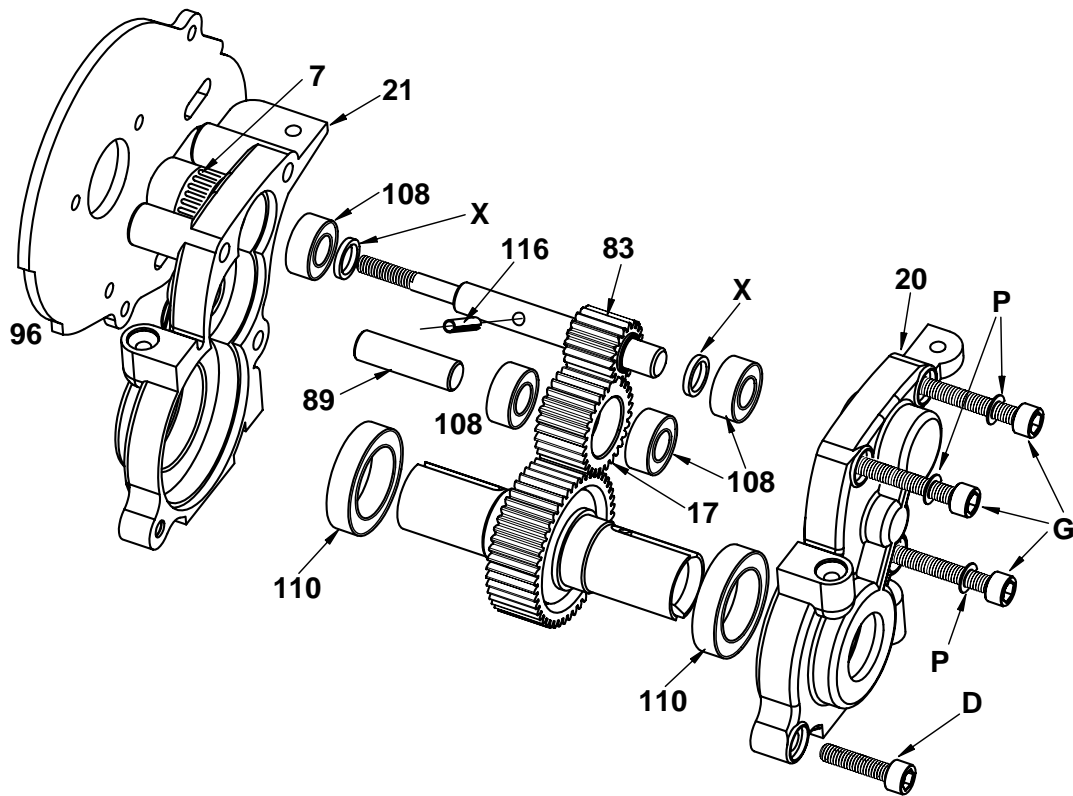
Slipper Clutch

1. Install the inner slipper plate (86) onto the top shaft (83). Make sure the notch in the inner slipper plate keys onto the 2x10 spring pin in the top shaft.
2. Place the slipper pad (64) and outer slipper plate (85) onto the top shaft (83). Make sure the slipper pad (64) is properly centered between the two plates (85 & 86).
3. Install a slipper bushing (86) into the spur gear (16).
4. Slide the spur gear (16) onto the top shaft (83) and secure it to the outer slipper plate (85) using (2) 3x6mm screws (J) and (2) 3mm lock washers (P).
5. Slide a 3mm flat washer (V), 3mm brass washer (W), and then another 3mm washer (V) onto the top shaft.
6. Install the slipper spring (87), 3mm washer (V), and then the 3mm lock nut (O). Refer to page 16 for adjusting the slipper.



Rear Hub, Rear Axles

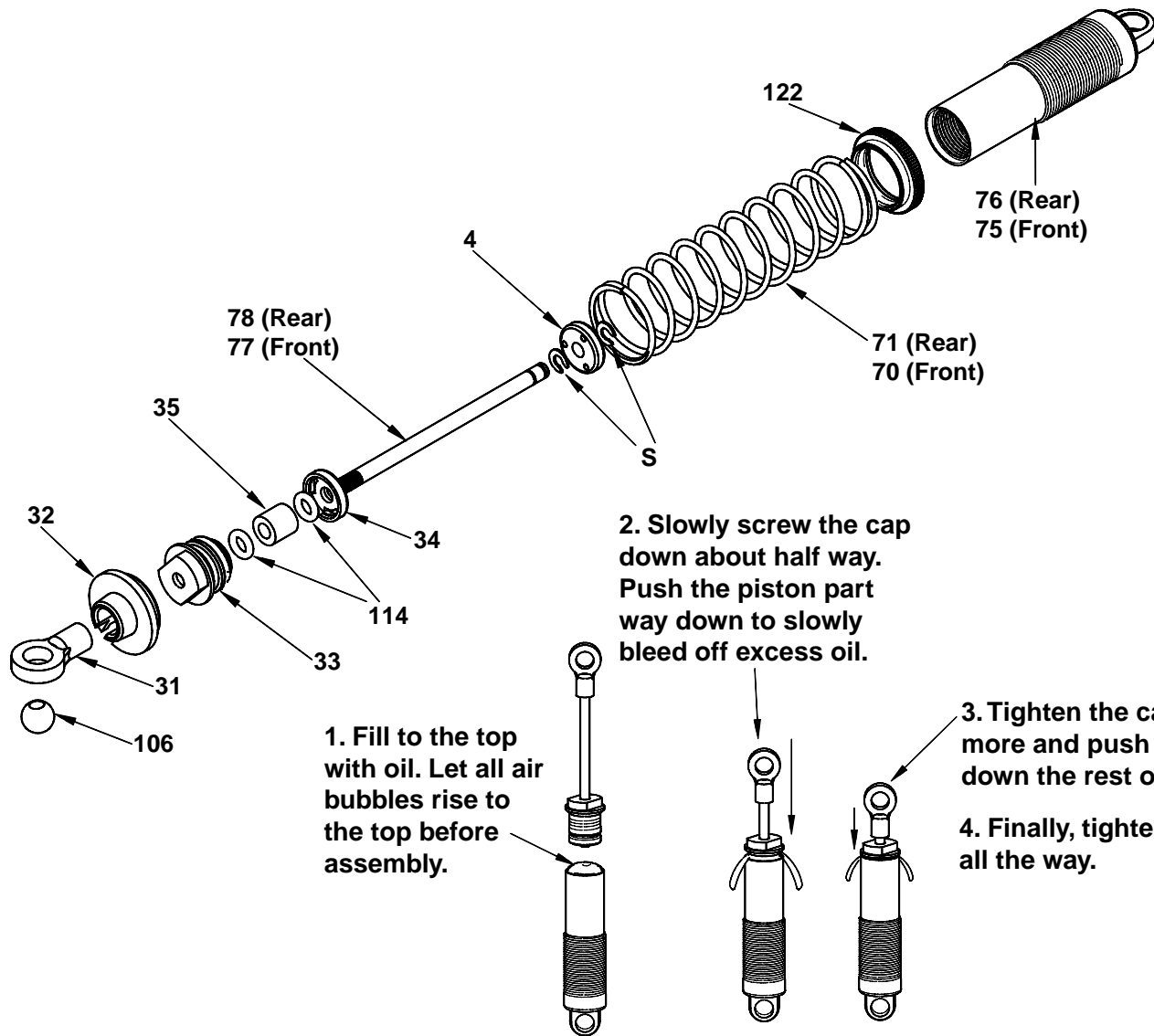
1. Install the bearing spacer (88) and two 5x10mm bearings (108) in both of the rear hubs (26L or 27R).
2. Install a ball stud (81) into the center hole of the rear hubs.
3. Place a 3mm plastic spacer (58) on each side of the rear hubs. Secure the rear hubs (26L or 27R) to the rear suspension arms (36L or 37R) with the 3mm outer rear hinge pins (107).
4. Secure the outer rear hinge pins (107) with 2.5mm e-clips (S).
5. Install the rear axles (79) through the bearings in the hubs.
6. Slide a rear axle washer (82) onto the axle and then install a 2.5x12mm spring pin (117) into the rear axle.



Gearbox

Note: When installing the bearings, make sure they are fully seated. If the bearings are not fully seated the gearbox halves may not properly fit together or may cause binding.

1. Install a 5mm washer (X) onto each end of the top shaft (83)
2. Install a 5x10mm bearing (108) into the upper hole of the right gearbox half (21).
3. Install the top shaft (83) into the 5x10mm bearing that was just installed into the right gearbox half.
4. Install the 2x10mm spring pin (116) into the top shaft
5. Attach the roll pin cover (7) to the right gearbox half.
6. Install a 5x10mm bearing (108) into each side of the idler gear (17).
7. Install the idler gear shaft (89) into the idler gear bearings.
8. Install the idler gear into the right gearbox half (21).
9. Install a 12x18mm bearing (110) into the lower hole in the right gear box half (21).
10. Install the ball differential into the 12x18mm bearing that was just installed into the right gear box half (21).
11. Insert a 12x18mm (110) and 5x10mm bearing (108) into the left gearbox half (20).
12. Install the two gearbox halves together. Make sure the two gearbox halves seat together properly.
13. Secure the two halves together with the 4-40x1/2" socket head screw (D).
14. Install the aluminum motor plate (96) on the side of the gearbox and attach it with the (3) 3x25mm socket head screws (G).



With a properly filled shock, the piston can be pushed in completely and will then rebound about 3/8". Exercise the shock a few times and listen for air bubbles. If you hear any squishing, rebuild the shock.

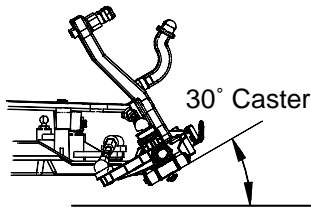
Shocks

1. Install a 2.5mm e-clip (S) onto the lower groove on the shock shaft (77 or 78). Install the e-clip into the groove closest to the center of the shaft.
2. Place the shock piston (4) on top of the 2.5mm e-clip.
3. Secure the shock piston (4) in place with a 2.5mm e-clip (S) in the groove towards the end of the shaft.
4. Install a shock o-ring (114), then the plastic spacer (35), and then another shock o-ring (114) into the shock seal holder (33). Secure all of the parts in the shock seal holder using the shock seal cap (34).
5. Install the shock shaft assembly into the shock seal assembly.
6. Fill the shock with fluid. Then install the shock seal assembly into the shock.
7. While tightening the shock seal assembly down, work the shock shaft and piston up and down to help remove any air and excess oil that may be trapped in the shock.
8. Thread the shock shaft end (31) onto the end of the shock shaft (77 or 78). **Note:** To hold the shock shaft, use needle nose pliers with a piece of cloth (to protect the shaft).
9. Install the shock ball (106) in the shock end (31).
10. Install the shock spring (70 or 71) onto the shock body (75 or 76).
11. Secure the shock spring in place with the shock retainer (32).

TUNING GUIDE

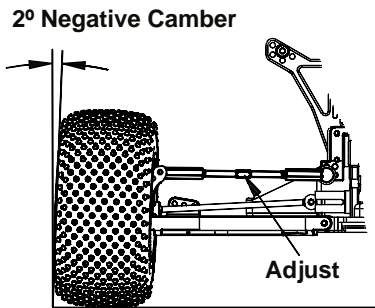
When tuning the Evader ST Pro make sure that you have equal length shocks on both sides (left and right), camber rods and steering rods. Also, make sure to have the shock pre-load adjusters at the same setting from left to right. They do not have to be the same front to rear.

CASTER



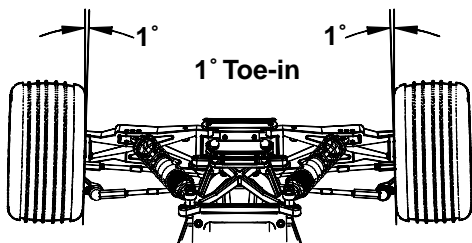
Caster refers to the angle which the kingpin is at in relation to the surface when viewed from the side. 0 degrees of caster means that the kingpin is straight up and down. The Evader comes stock with 30 degrees of caster and is not adjustable.

CAMBER



Camber refers to the angle at which the tire and wheel ride in relation to the ground when viewed from the front or rear. Negative camber is when the tire and wheel lean inward and positive camber is when the tire and wheel lean outward. Typically you want 0 to 2 degrees of negative camber. Never put in positive camber. Make sure that both sides have equal amounts of camber by keeping the camber turnbuckles equal in length.

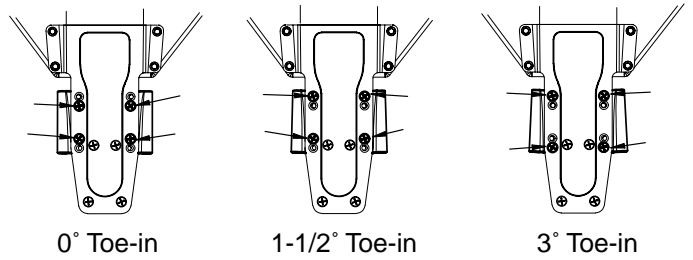
FRONT/REAR TOE-IN AND TOE-OUT



Front wheels pointed towards each other

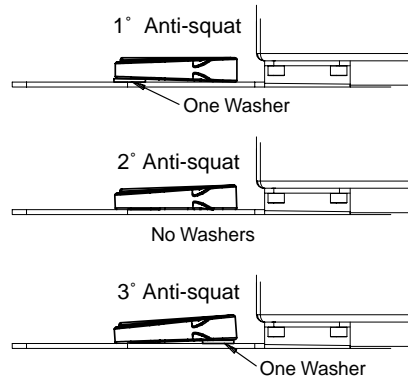
Toe-in and toe-out refer to the angle which the tire is at when viewed from above. Toe-in increases stability under

acceleration. However, toe-in also decreases steering when entering a corner. Toe-out will increase steering into corners, but will decrease the overall stability during acceleration. The front typically is set-up with 0 to -2 degrees of toe-in.



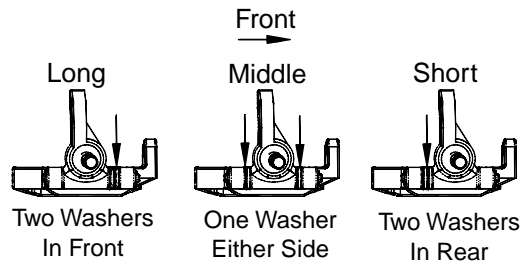
Rear toe-in affects the traction of both the front and rear of the truck. Rear toe-in increases the amount of traction in the rear, but decreases steering. Decreasing rear toe-in will increase steering, but will give less rear traction. Notice that placing the rear suspension arm mount screws in different locations on the aluminum rear plate changes the rear toe-in.

REAR ANTI-SQUAT



Increasing rear anti-squat will increase traction and give you more on-power stability. However, the truck will have less grip when decelerating into a corner. This could cause the truck to spin out entering the corner. More anti-squat allows the truck to accelerate better through the rough parts of the track.

WHEEL BASE



Wheel base is the distance from the center of the front wheel to the center of the rear wheel. Lengthening the wheel base of the Evader increases steering, but decreases rear traction as a result of increased weight distribution to the front wheels. Decreasing the wheel base of the Evader will increase rear traction, but decrease steering.

BATTERY PLACEMENT

The battery placement of the Evader can be adjusted with the foam spacers which will affect the truck's rear traction. Spacing the battery in the forward position will create less rear traction. Spacing the battery in the rear position will create more rear traction.

RIDE HEIGHT

The ride height of the Evader ST Pro affects how it jumps and handles. The ride height of the Evader ST Pro is adjustable through the threaded pre-load adjusters on the shock bodies. To measure the ride height of the Evader, set the truck up as if you are ready to run. Push the front of the truck down all of the way and release it. When the truck returns the front arms should be parallel with the surface. The rear ride height is set up the same except that the drive shafts are parallel with the surface. Lowering the front ride height will increase steering response due to more weight on the front wheels. Lowering the rear ride height will increase rear traction and reduce steering response due to more weight on the rear wheels.

CAMBER LINK PLACEMENT

The camber link placement affects the traction and handling on rough tracks. Using a long mounting position will increase traction but decrease stability. Shortening the link will increase stability, but decrease traction.

SLIPPER ADJUSTMENT

The slipper clutch is designed to help prevent gear breakage during jumping and controls traction. The slipper should not be overtightened. This could cause damage to the differential gears. The slipper should be set so that it slips for 1-2 feet from a stop with a fully charged battery.

FRONT SHOCK ADJUSTMENT

Moving the tops of the shocks out will increase steering and produce quicker suspension reaction. Moving the tops of the shocks in will result in slower steering reaction, but greater smoothness over bumps. Mounting the bottoms of the shocks in the inside hole will give more slow speed steering but will take away some high speed steering.

REAR SHOCK ADJUSTMENT

Moving the tops of the shocks in will result in more traction in the corners and greater smoothness over the bumps. Moving the tops of the shocks out will give the truck more steering and enable it to handle large jumps better. Moving the bottom of the shock in will give the car a smoother feel through bumps, but will reduce stability. Moving the bottom of the shock out will cause the car to exit corners more stable but not be as smooth through rough sections of the track.

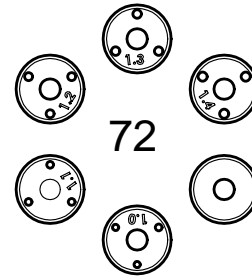
SHOCK OILS AND SHOCK SPRINGS

Many different combinations can be used between the shock oils and shock springs. Some basic guidelines when setting up the Evader are that if the rear end is stiff, the truck will have more steering and less rear traction. Hardening the front will

result in less steering and more rear traction. (Changing the position of the threaded shock pre-load adjusters results in ride-height change. It does not change the spring tension.)

Thinner shock oil will make the shocks react faster, but makes the truck less stable and may cause the truck to bottom out over large jumps. Thicker shock oil makes the truck smoother over large jumps and in straights, but less reactive over rough sections. We have filled the shocks with 20 weight shock oil, which is a good choice for most driving conditions.

SHOCK PISTONS



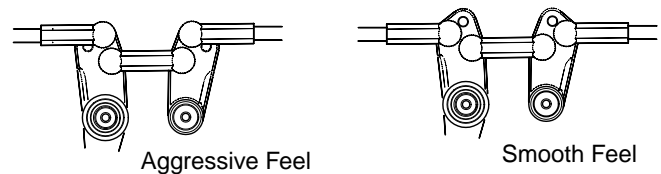
"1x3" Shock Piston: **1** = The diameter of each piston hole.
 3 = How many holes the piston has.

The Evader ST Pro comes with optional shock pistons to help you tune your kit to the different track conditions. You will find a 1x3, 1.10x3, 1.20x3 (stock), 1.30x3 and a 1.40x3. You can obtain the same static feel by going with a larger hole in the piston and thicker oil or a smaller hole in the piston and a thinner oil. However, the handling of the car will be different. Typically you would use a large hole piston with thicker oil for bumpy or rutted tracks. This helps keep the oil from "packing" up. You would use small hole with thinner oil for tracks with large jumps. This helps keep the chassis from "slapping" the ground.

ADJUSTABLE STEERING RATE

Adjust the D/R to increase or decrease the steering travel. When first learning to drive, adjust the dual rate for less steering travel. As you get to be a better driver, adjust the dual rate for more steering travel.

STEERING ADJUSTMENT (ACKERMAN)



Choose the best steering link location for your driving style. Use the outer location (most common) for a smoother, more predictable feel. Use the inner location for a more aggressive, responsive feel.