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Read before Installation

This product is designed for use on RUVs for **extreme mud riding conditions**. Purchasers should be aware that use of this product **will** increase the frequency of required maintenance, part wear, **will** raise the center of gravity on your RUV, will increase stopping distance, will decrease turning radius and will increase risk of roll-over, injury and death on all types of terrain.

It is your responsibility to always inform other operators and passengers of this vehicle and about the added risks.

Adding or modifying any OEM or aftermarket part will usually void factory warranty. This product could interfere with other aftermarket accessories. If the user has aftermarket products on machine, contact High Lifter Products to verify that they will work together. It is up to the end user or installer to verify this product works in conjunction with all other accessories installed. Adding aftermarket suspension components and/or more aggressive tires can cause breakage of other OEM driveline components such as differentials, axles or drive shafts.

We recommend that wider tires and/or wheel spacers be used to achieve a wider stance and to improve stability of the RUV. Riders should be advised that the handling characteristics of a taller ATV or RUV are different and require extra care when riding, particularly on side hills, off-camber situations, turning and stopping. If you further raise the center of gravity by adding taller tires, heavy loads, or by any other means, the RUV must be operated with even more care, at slower speeds and on relatively flat ground. All turns should be done at a slow speed, even on level ground.

Operation of an RUV with or without modified suspension components, while or shortly after consuming alcohol or drugs, subjects the rider to the risk of serious bodily harm or possible death. This risk is compounded if the rider does not wear an approved helmet and other safety gear. High Lifter urges that all approved safety gear be worn when riding an RUV as a driver or passenger.

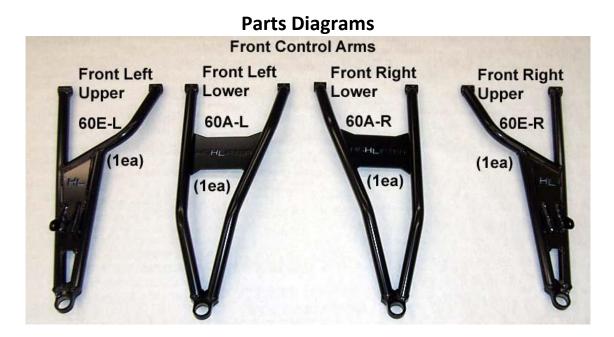
By purchasing and installing this product, user agrees that should damages occur, High Lifter Products will not be held responsible for loss of time, use, labor fees, replacement parts, or freight charges. High Lifter Products will not be held responsible for any direct, indirect, incidental, special, or consequential damages that result from any product purchased from High Lifter Products. The total liability of seller to user for all damages, losses, and causes of action, shall not exceed the total purchase price paid for the product that gives rise to the claim. Since this is an extreme product, the manufacturer specifically disclaims any liability for consequential damages or accidents injuries, or death, in connections with the use of this product.

If this product is not what you expected, or is not consistent with your intended use, you should return the product immediately to the seller, <u>before installation</u>, for a refund of the purchase price; less any fees. After installation, product is warranted to the original user and vehicle for the life of that vehicle for defects in workmanship and materials. Axles have a one year warranty for one break. Additional breaks will be charged a repair fee depending on the problem. High Lifter Products will warranty only parts provided by High Lifter Products. Any damage or problems with OEM housings, bearings, seals, or other manufacturer's products will not be covered by High Lifter Products. Parts and products will not be warranted if item was not installed properly, misused, or modified.

Dealers and other Installers

You are responsible for informing your customer and end user of the information contained above and the increased potential hazards of operating an RUV equipped with modified suspension components. If you install any suspension modifying components, it is your responsibility to also install the warning label prominently in view of the driver and passenger. They should also be instructed to notify anyone operating the vehicle, as well as any passengers, that said vehicle is modified.

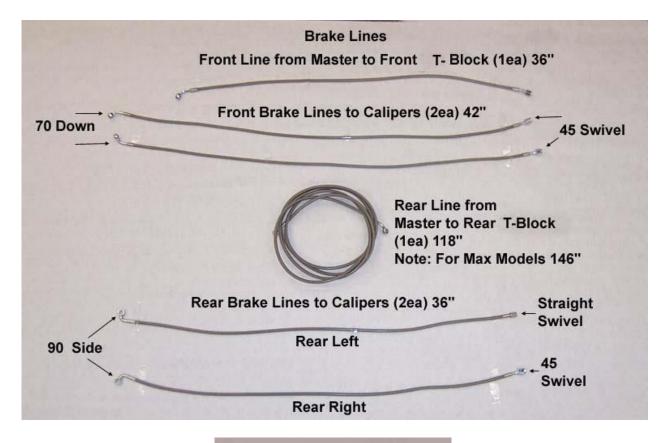
As discussed above, it is critically important that they be instructed in the need for slower speed operation, regardless of terrain, after this kit is installed.













NOT Shown are 4 axles Front Left RCV-X-C1D-FL (1ea), Front Right RCV-X-C1D-FR (1ea) Rear Left and Right RCV-X-C1D (2ea)

Installation Instructions When referring to left and right positions during the installation process, it is from the seated position!

Front Lift Installation

- 1. You will need jack stands to do this installation. Front and rear control arms will need to be removed at the start of the installation process. These instructions will be written as if the UTV is on jack stands.
- 2. Place a jack under the center of the UTV front end and lift until the front wheels clear the ground. Remove the tires and lower the UTV onto jack stands.
- 3. Place a jack under the center of the UTV rear end and lift until the rear wheels clear the ground. Remove the tires and lower the UTV onto jack stands.



4. Disconnect the front calipers from the knuckles. Disconnect the brake lines from the calipers. Save all the stock hardware to reinstall the calipers. Zip ties are provided to reattach the brake lines to the new a-arms.



5. Remove the lower control arms first. Disconnect from the frame, shock, and hub assembly.



6. Next you will need to remove upper arm, but the brake line is riveted to the upper arm. Disconnect it from the frame and hub, then turn it over to expose the rivets that secure the brake lines.



7. Use a small drill bit that fits into the head of the rivet and drill out the rivets.



- 8. Remove the cotter pin and castle nut that secure the brake rotor and axle to the hub assembly.
- 9. Remove the brake rotor.
- 10. Pull the stock axles out of the differential.
- 11. Disconnect the front shocks from the UTV.
- 12. Disconnect the tie rods from the rack and pinion. Make sure to leave the factory jam nut in place on the rack and pinion ends.



- 13. At this point you need to make sure both sides of the UTV are completely disassembled. When both sides are complete move to the rear of the UTV.
- 14. Before proceeding to the rear for disassembly you need to insert the new steering stops into the rack and pinion. Do it now before any of the new components get in the way.
- 15. The boots on the rack and pinion are held on by zip ties. You will need to cut the zip tie that secures the boots to the inside of the rack and pinion. Next pull the boot back to expose the inner tie rod joint.

NOTE: To make the installation easier turn the steering wheel all the way in the direction that you are working.



16. Place the steering stop clips (2ea) between the inner tie rod joint and the rack and pinion. It is a tight fit, so you may have to force it on this is to ensure that the spacer stays in place.

NOTE: We used two per side because one large steering stop was too difficult to install!



17. Pull boot back over the ball joint and steering stop and refasten with 11" zip tie. Be sure to verify the zip tie is tight so prevent material from getting into the boot.



- 18. Repeat the steps for the opposite site.
- 19. Rear disassembly.
- 20. Remove the nuts that secure the sway bar to the sway bar rod. You will completely remove the sway bar, sway bar connecting brackets, and rods from the UTV. They are not used in conjunction with the big lift kit.



- 21. Disconnect the brake caliper from the hub assembly and the brake lines from the caliper. Using a small drill bit, drill out the rivet that secures the brake lines to the rear upper control arms.
- 22. Disconnect and remove the factory cotter pin and castle on the rear axles.
- 23. Remove the brake rotor assembly.
- 24. Remove the rear shocks.



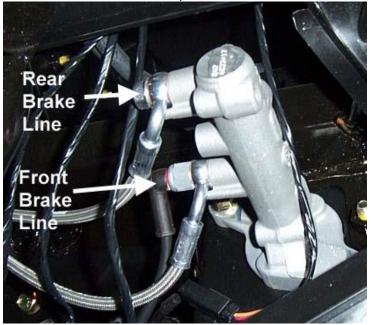
- 25. Disconnect the upper and lower control arms from the hub assembly and remove the hub assembly.
- 26. Pull the axles out of the differential.
- 27. Remove the upper and lower rear control arms from the UTV. You will reuse the factory hardware to reconnect the new control arms to the frame



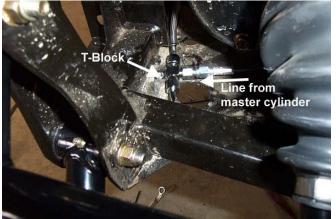
- 28. Once you have disconnected control arms, shocks, axles, and sway-bar from the UTV move to the brake lines.
- 29. Brake line installation is difficult and removal of the factory brake lines is very difficult. The brake lines are all connected as one front assembly and one rear assembly. They cannot be separated into pieces. You can take the time and remove all the plastic and rivets that secure the lines to the frame and attempt to pull the lines out as single units, but we went with a simpler route. We cut all the brake lines and removed them in pieces. We are not going to illustrate this process, but you need to remove the factory brake lines, they are not used in conjunction with this kit. **FACTORY BRAKE LINES ARE NOT REUSED!!!!**
- 30. Once you have remove the factory brake lines, you need to install the new longer brake lines. The new brake lines will follow the same route as the factory lines.
- 31. Start with the longest line that runs from the front to the rear of the UTV.
- 32. You will need to remove the floorboard panel that covers the radiator lines if you have not done so already. The panel is located on the floorboard on the passenger side of the UTV.
- 33. Take the longest brake line and insert it in from the front of the UTV, following along the same lines as the factory line. It will run under the floor board near the radiator hoses and lines. Run it all the way to the back of the UTV.



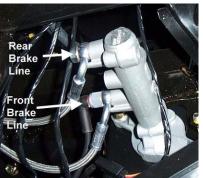
34. You will connect one end to the brake master cylinder under the driver's side fender. See illustration of where to connect lines on the master cylinder.



35. In the rear of the UTV connect a T-block to the brake line. Then connect the two rear brake lines that run out to the calipers. The right side line is 36" with a 45 swivel fitting. The left side is 36" with a straight swivel.



- 36. Next connect the front brake lines to the UTV.
- 37. Connect to the UTV the front booster line (36") to the master cylinder. Run the line to where the factory T-block was located.



- 38. Next, connect the T-block to the line and connect the two front brake lines (42") to the block. Secure the T-block with the zip ties provided.
- 39. From this point, you will prepare the new control arms and shocks for installation.
 NOTE: A press or a vise is suggested for removing and replacing the ball joints. Verify that the clip snaps into place after installing the ball joints into the new A-arm
- 40. Once you have the arms disconnected from the UTV, remove the factory bushings, sleeves, and ball joints from the stock control arms. You will need to reuse these in the new kit.





NOTE: You will need a press to remove the ball joints!!



41. Now reinstall the bushings, sleeves, ball joints and new grease fittings into the new arms. If you place some grease on them it makes the installation easier.





NOTE: A press or a vise is suggested for removing and replacing the ball joints. If you press in the ball joint crooked, <u>DO NOT TRY TO FORCE IT IN!</u> If you try to force it straight you can "egg" the opening. Press the ball joint out and reinsert it into the opening, pressing it in with a vise. Verify that the clip snaps into place after

installing the ball joints into the new Control Arm. You should always double check the ball joint snap ring for proper fit. Even if you use snap ring pliers, it may not seat. You can use a flathead screwdriver and a hammer to tap the snap ring to ensure that it is seated into the grove.





- 42. You will need a **spring compressor** to install the new springs and spring stiffeners onto the factory shocks. Follow these steps for the front and rear.
- 43. There are two size spring stiffeners, small is for the front and large is for the rear!
- 44. Place the shock in the compressor and attach the compressor so that you can compress the spring and remove the retaining clip that holds the springs in place.
- 45. Remove the clip.



46. Remove the factory spring and small aligning ring.



47. You need to install the new bump stop onto the shock in the front if you are working on the front shocks. NOTE: Bump stops do not go onto the rear shocks!



48. Install the bump stop between the shock eye and factor bump stop. NOTE: Use a vise to snap the bump stop into place. If you use a hammer you can crack the part.





49. Slide the spring lift bracket onto the shock.



50. Reinstall the aligning ring onto the shock. On the front the retaining ring plastic and it will slide over the new bump stop with minimal pressure.



51. Place the new lift spring onto the shock. There are front and rear springs in the kit, make sure that you read the part numbers on the boxes to ensure you are placing the spring in the correct location.



52. Compress the spring and place retaining clip back on the shock.



- 53. Repeat steps for all springs. Remember that there are two size spring stiffeners, small is for the front and large is for the rear
- 54. To install the new parts, start from the top and work your way down to the control arms.
- 55. There are two front upper lift brackets, left and right. We started with the left side in the images.



56. Connect the left lift bracket to the frame. Place a 12mm washer on the 12mm x 25mm bolt.



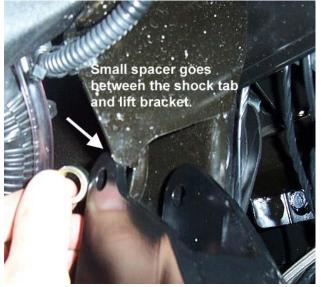
57. Insert the bolt through the hole in the lower portion of the lift bracket and connect the bracket to the UTV using the factory hole in the frame. When connecting the bracket to the frame, one of the lift bracket tabs will go between the factory shock mounts tabs. See the illustration.



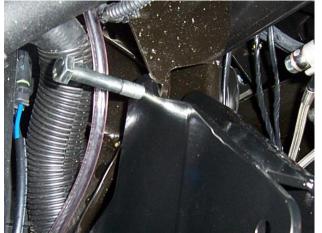
58. Once you have the bracket in place secure the lower bolt to the frame using a 12mm washer and 12mm lock nut.



59. Next, connect the upper portion of the bracket to the factory shock mount tabs. Place the small AA spacer to the outside the shock mount tab between the tab and bracket.



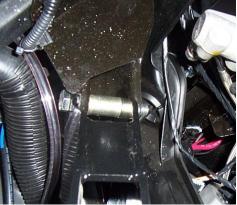
60. Insert the 10mm x 70mm bolt through the lift bracket and small spacer.



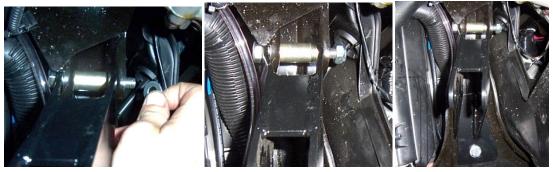
61. Insert the lager SS spacer between the shock mount tab and lift bracket.



62. Push the 10mm x 70mm bolt through the spacer, lift bracket, and factory shock tab.



63. Place a 10mm washer on the end of the bolt and secure it with a 10mm lock nut.



- 64. Repeat these steps for the opposite side.
- 65. Now move down to installing the front control arms.
- 66. Connect the lower control arm to the frame using the factory hardware.



67. Connect the lower control arm to the hub assembly using the factory hardware.



- 68. Next place some axle grease on both ends of the axle. NOTE: There are front left and front right axles. Make sure that you install the axles in the correct locations.
- 69. Insert the axle into the front differential.



70. Next insert the axle into the hub assembly.



71. Connect the upper control arm to the frame using the factory hardware.



72. Now connect the upper control arm to the hub assembly. NOTE: The ball joint is almost a press fit into the hub assembly. We stacked 4 washers into the ball joint end and used the factory nut to tighten down on the ball joint. It will pull the ball joint into place. MAKE SURE THAT THE BALL JOINT IS ALL THE WAY SEATED!!! Remove washers when done.



73. Once you have seated the upper ball joint secure it with the factory washer, castle nut, and cotter pin.



74. Next connect the tie rod to the rack and pinion. Make sure to run the factory jam nut all the way down the splines on the rack and pinion stub. Screw the tie rod onto the stub.



75. Connect the new jam nut and heim joint to the tie rod.



76. For the next step, you will need to drill a ½" hole in to hub assembly so you can connect the tie rod and heim joint.
77. Using a ½" drill bit, open up the factory hole in the hub assembly.



- 78. Connect the heim joint to the hub assembly.
- 79. Place the alignment cones on either side the eyelet on the heim joint. Insert the heim joint and cones into the hub assembly.



80. Secure the heim joint to the hub assembly with the $\frac{1}{2}$ " x 3" bolt and $\frac{1}{2}$ " lock nut.



81. Included in the kit are new axle washers and a new crimp nut. You need to use two washers per axle. USE THE LOCKTITE ON THE AXLE END!! Fasten the axle to the hub assembly with the new crimp nut, using a punch to lock the axle nut in place.

NOTE: There are two tubes of Loctite in the kit. Use one tube for the front and the second for the rear!!!



82. Attach the top of the shock to the upper lift bracket. Use the 10mm x 55mm bolt, 10mm washer, and 10mm lock nut.



83. Next connect the bottom of the shock to the control arm. Use the 10mm x 55mm bolt, 10mm washer, and 10mm lock nut.



84. Route the brake line along the control arm so that it does not contact with any moving parts and so that it will not be in a bind when you turn fully in either direction.



- 85. Connect the new brake line to the caliper using the factory hardware.
- 86. Connect the caliper to the hub assembly using the factory hardware.
- 87. Secure all the brake lines using the zip ties provided.



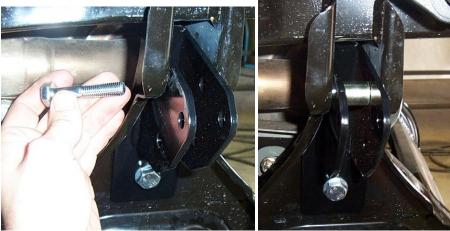
- 88. Repeat the steps for the opposite side.
- 89. Once both sides are in place, fasten all hardware tight.
- 90. When you have finished the front, move to the rear and start with the upper lift brackets.
- 91. Connect the rear upper lift bracket to the frame using 12mm x 25mm bolt, 12mm washers, and 12mm lock nut. NOTE: Unlike the front, the rear brackets will work on either side.
- 92. Insert 12mm x 25mm bolt and 12mm washer into the lower hole in the lift bracket.



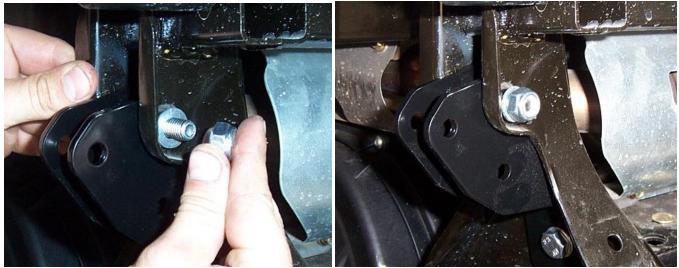
93. Connect the bracket the frame. Insert bracket between the shock mount tabs. Secure the bolt the frame with a 12mm washer and 12mm lock nut.



94. Next you will secure the bracket to the shock mount tabs. Insert a 10mm x 55mm bolt through the shock tab and lift bracket. Insert the G spacer into the center of the lift bracket and push the bolt all the way through.



95. Secure the bolt with a 10mm washer and 10mm lock nut.



96. Loosely connect the rear lift plates to the outside of the lift bracket.

97. Insert a 10mm x 55mm bolt through the lift plate and bracket. Insert between the two plates a G spacer.



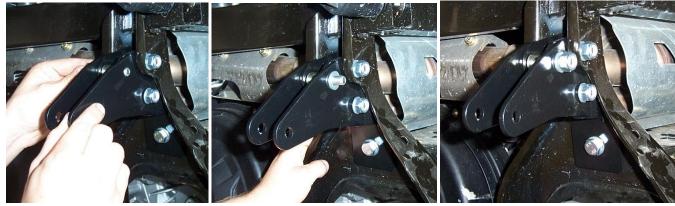
98. Place the second lift plate on the outside of the lift bracket. Secure them loosely with a 10mm washer and 10mm lock nut.



99. Rotate the bracket up and insert a 10mm x 55mm bolt through the lift plate and lift bracket. Insert between the two plates a G spacer.



100. Secure the plates loosely using a 10mm washer and 10mm lock nut.



101. Connect the lower control arm to the frame using the factory hardware.



102. Next you will connect the lower arm to the hub assembly. Grease the hub assembly before you connect it to the control arm. **NOTE: It will be difficult to grease the hubs once the lift is installed.**



103. Connect it to the lower control arm using factory hardware.



104. Next connect the upper control arm to the frame using the factory hardware.



105. Place some grease on the axle ends and insert the axle in to the rear differential.



106. Insert the axle into the hub assembly.



107. Connect the upper control arm to the hub assembly using the 10mm x 110mm bolt provided. The factory bolt is to short and it cannot be used with the new upper control arm. Secure tight with 10mm washer and 10mm lock nut.





108. Secure the rotor to the hub using the new axle nut. Included in the kit are new axle washers and a new crimp nut. You need to use two washers per axle. USE THE LOCKTITE ON THE AXLE END!! Fasten the axle to the hub assembly with the new crimp nut, using a punch to lock the axle nut in place.

NOTE: There are two tubes of Loctite in the kit. Use one tube for the front and the second for the rear!!!



109. Connect the shock to the lower control arm using the 10mm x 55mm bolt, 10mm washer, and 10mm lock nut. NOTE: You will need to place the nut next to where the bolt will run through the hole before you insert the bolt all the way through. There is limited space, so you will need to thread the bolt into the nut as you are inserting it.



110. Connect the top of the shock to the lift bracket using the 10mm x 55mm bolt, 10mm washer, and 10mm lock nut.



- 111. Route the new brake line along the control arm so that it does not contact with any moving parts and so that it will not be in a bind when the arm is fully articulated up or down.
- 112. Connect the new brake line to the caliper using the factory hardware.



113. Connect the caliper to the hub assembly using the factory hardware.



114. Secure all the brake lines using the zip ties provided.



115. Repeat the steps for the opposite side.

- 116. Make sure all bolts are tightened.
- 117. Follow the steps listed below for wheel alignment and bleeding the brake lines before you reattach all the wheels.
- 118. Once you have followed the steps for aligning the steering and bleeding the brakes, place the wheel back on the UTV and torque all lugs to factory specifications.

Brake Line Bleeding

Attach the 1 man bleeder bottle, or slip a small hose/tube over the end of the bleed screw and place the other end in a bottle/jar with a little brake fluid in it. That way as air bubbles out it can't return air back up the hose. The only thing being sucked up the hose will be brake fluid.

Make sure that all brake fluid reservoirs are filled to full level that is indicated on the reservoir container.

With the hose in place, open the bleeder screws on all calipers and let the system gravity bleed for about 30 minutes. After the 30 minutes close each bleeder screw then start the second bleeding process.

Refill reservoir to the full mark. Being careful not to splash brake fluid everywhere, or to let the master cylinder go dry (therefore letting air back into the top of the system) depress the brake lever to force clean brake fluid into the brake line from the master cylinder. Do this 5-6 times for each caliper and refill the master cylinder reservoir(s) as needed. You will find that you have to refill the master cylinder often as these are long brake lines and small master cylinders.

NOTE: Make sure that the cover to the master cylinder is on before you start pumping the brakes!!! When you are confident that all the old fluid and air is purged from the line, close the bleed screw and move on.

After all calipers are bled, recap the master cylinders. You should now have good stiff brake levers at the hand and the foot. It will probably take a whole pint sized bottle to do all 4 wheel cylinders. Don't try to save the extra fluid and dispose of used fluid properly.

Aligning the front wheels

 Take a tape measure and measure the front and back side of the brake rotors. They must both be the same distance. If they do not then you will need to adjust the rods in or out. This is setting the toe to zero.

NOTE: A slight toe out makes the steering less sensitive and the ATV more stable. After setting the toe to zero, you can adjust to your preference. When adjusting the toe, be sure to take the time to adjust both ends half the required distance.

2. Once you have done these steps, place the tires back on the ATV and torque lugs to factory specifications.

This product has a dual warranty. The suspension components have a life time warranty and the axles have a limited replacement. Please see information on the following pages.



High Lifter Lifetime Warranty

From the beginning, High Lifter has engineered and manufactured some of the toughest, most durable products on the market. That's why this product comes with a Lifetime Warranty. It's our promise that High Lifter will never let you down.

- The **Lifetime Warranty** covers products sold to the original purchaser only and is not transferable. The term of the warranty is for the lifetime of the vehicle in question.
- Normal wear and tear items and finishes, such as, but not limited to: Heim joints, tie rod ends, ball joints, bearings, seals, bushings, bushing sleeves, zinc plating, powder coating, or chipping and discoloration of any finish is not covered.
- High Lifter will ship the replacement product after the returned product has been inspected by High Lifter staff.
- The warranty shall not include claims for damages, installation time or labor charges, economic losses, inconvenience, transportation, towing, down time, direct or indirect or consequential damages or delay resulting from any defect.
- The warranty does not apply to products that have been improperly applied or improperly installed.

Making a warranty claim

- 1. All claims must be accompanied by the part and the original sales receipt or other acceptable proof of purchase from the original owner.
- 2. All warranties must be accompanied with a Return Merchandise Authorization (RMA) number. (Contact High Lifter at 318-524-2270 or 800-699-0947 for an RMA number)
- 3. When shipping the damaged product:
 - a. Write the RMA number on the outside of the box.
 - b. Also include the RMA number, proof of purchase and any notes inside the box.
 - c. Please keep your tracking number and shipment information.
- 4. The customer is responsible for shipping the product to High Lifter--return shipping within the lower 48 states will be paid by High Lifter products. With all warranty claims, only standard shipping services apply.
- 5. High Lifter will process your order within 24 business hours of receiving the returned item.
- 6. Ship to: High Lifter Products, 780 Professional Drive North, Shreveport, Louisiana 71105

For axle warranty see additional information sheet!

High Lifter Outlaw RCV Big Lift Axle Warranty Program

Thank you for purchasing a High Lifter Products Big Lift equipped with a set of Outlaw RCV Big Lift Axles. Our axles have been engineered to provide superior performance for use on your ATV/UTV.

LIMITED WARRANTY:

HIGH LIFTER PRODUCTS, INC. warrants to the ORIGINAL purchaser of any High Lifter Big Lift

equipped with 4-Outlaw RCV Big Lift Axles for a total of one (1) axle warranty claim or breakage <u>per set of 4 axles (not (1) warranty claim or breakage for each individual axle</u>) for a period of one (1) year from the original date of purchase. This warranty covers defects in materials or workmanship or failures in normal services.

Repair services will be available after the warranty has expired for an additional cost (repair costs will be determined by the actual components that need to be replaced). If you need repair service for your Outlaw RCV axle please contact your High Lifter representative at 1.800.699.0947 for an estimate.

The limited warranty is subject to the following conditions:

a) The product is properly installed.

b) **HIGH LIFTER** is not liable for any incidental or consequential damages to anything other than the axle covered by this warranty, including labor costs to remove/reinstall, loss of use of machine, damage to housings, or damage to OEM supplied parts.

c) If the axle has been disassembled or modified by a third party, or has OEM parts installed on the axle, the warranty is null and void.

d) Any axle damaged in a collision is excluded from this warranty. However, they may be refurbished for standard costs pending authorization by the owner.

e) Warranty is non-transferable from the ORIGINAL purchaser.

f) **HIGH LIFTER** reserves the right to inspect the axle and determine any defects in installation to determine the validity of a warranty's claim. This may include the ORIGINAL purchaser providing photographs of the ATV/UTV and its installed lift kit.

g) Boots damaged by CV joint failures are covered under this warranty. Boots damaged by punctures or tears from trail obstructions are not covered under this warranty. Boot inspection should be a part of regular ATV/UTV maintenance.

REFUSED SHIPMENTS/ORDER CANCELLATION:

Refused shipments are subject to a 25% restocking fee plus return freight. If a customer wishes to cancel an order (provided it is not a special order product), it is the responsibility of the customer to cancel the order prior to the product being shipped. If a customer cancels an order after product has been shipped, the refused shipment, cancellation, or return will be subject to a 25% restocking fee and any freight charges incurred. For orders outside the United States, any fees associated with customs or duties are non-refundable.

DAMAGED SHIPMENTS:

All claims for damaged shipments must be made within 72 hours of delivery to the point of destination. Any damage to package should be noted with carrier at the time of delivery if possible. We will not be responsible for damage claims made over 72 hours after delivery to the point of destination.

OBTAINING A WARRANTY CLAIM:

All returns for warranty must be pre-approved by calling 1.800.699.0947. After warranty approval has been granted and a Return Merchandise Authorization (RMA) number issued, the axle must be received by HIGH LIFTER PRODUCTS within 15 calendar days. The RMA number must be clearly displayed on the return box or the return will be refused. An RMA number does not imply a replacement or refund on any product, but only that we will inspect the axle for warranty claims. For orders outside the United States, any fees associated with customs or duties are non-refundable. All claims must be accompanied by the sales receipt detailing date and place of purchase, a written explanation of the problem, a

phone number, and e-mail address. A copy of this receipt must be included with the axle submitted for warranty repair or replacement. The purchaser is responsible for any freight charges on a warranty claim or repair service after the warranty expires, including incoming freight to High Lifter and return freight to the purchaser.