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Read before Installation

This product is designed for use on ATVs and/or 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 ATV and/or 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 ATV or 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 ATV or 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 ATV and/or 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 ATV or 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.

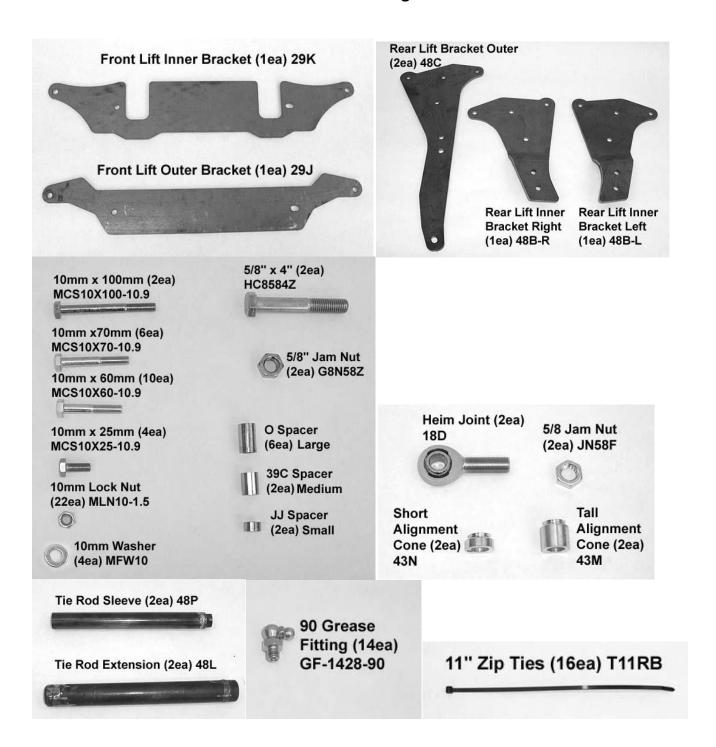
If this product is not what you expected, or is not consistent with your intended use, you should return the product immediately to the seller, <u>before installation</u>, for a refund of the purchase price; less any fees. After installation, product is warranted for one year for defects in workmanship 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.

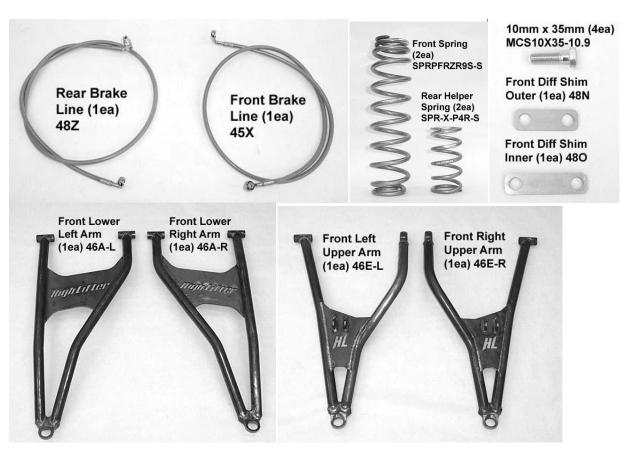
Dealers and other Installers

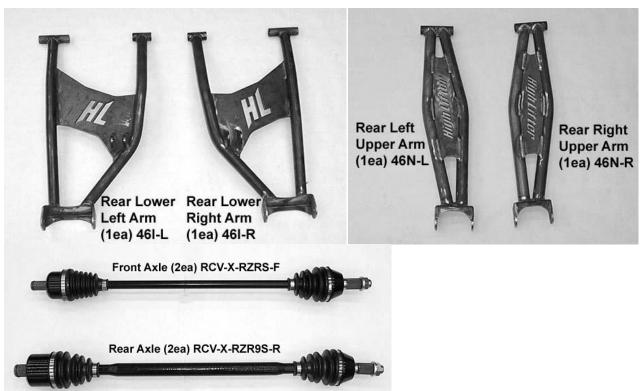
You are responsible for informing your customer and end user of the information contained above and the increased potential hazards of operating an ATV or RUV equipped with modified suspension components. If you install any suspension modifying components, it is your responsibility to also install the warning label prominently in view of the driver and in prominent view of the driver and passenger on RUVs and multi-passenger ATVs. 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.

Parts Diagrams







Installation Instructions

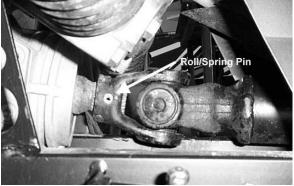
When referring to left and right positions during the installation process, it is from the seated position!

- 1. Place the jack under the center of the RZR front end and lift until the front wheels clear the ground. Be careful to support the RZR properly so that it is secure, but so that the A-arms and shocks can droop to full extension.

 NOTE: Make sure that the jack is tall enough to raise the ATV high enough to reinstall the tires after the lift is put on.
- 2. Remove the front wheels and shocks.
- 3. Disconnect the calipers from the knuckles and the brake lines from the A-arms. Push the calipers aside so that they do not interfere with removing the remaining factory components.
- 4. Next you will need to disconnect the tie rod from the knuckle assembly.
- 5. Remove the cotter pin and castle nut that secures the axles to the knuckle assembly.
- 6. Now disconnect the knuckle assembly from the upper and lower control arms. It should slide away from the axle.
- 7. Now pull the axle out of the differential. You may need to tug hard on the axle to pop it out of the differential.



- 8. Once you have removed the axle, disconnect the upper and lower control arms from the frame. Do this on both sides.
- 9. Once you have removed the factory upper and lower arms and axles you need to remove the front differential and add the shims. You will also need to clearance the differential to be reinstalled into the frame.
- 10. Because the kit comes with replacement axles that have very large axle bars, these bars will hit the frame when installed. You will need to shim up the differential to gain the clearance needed to install the new bars.
- 11. There is a roll/spring pin that connects the differential to the drive shaft. You need to push out the roll/spring pin so that you can disconnect the differential from the drive shaft.



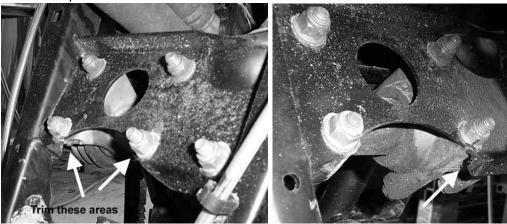
12. Disconnect the wires and vent line from the differential.



- 13. Remove the 4 bolts that secure the differential to the frame.
- 14. Remove the front differential.



- 15. Once you have removed the differential, you will need to clearance the frame and some of the rack and pinion so when you reinstall the differential it will not hit on the frame.
- 16. Review the photos to see the areas that will need to be trimmed.



NOTE: You will need to test the differential in place to see if you have removed enough material. So don't secure the driveshaft to the differential until you have installed the shims and check for clearance.

17. When you have achieved the proper clearances you need to secure the differential to the frame.



18. Install the differential in place by first making sure that the roll/spring pin holes line up in the drive shaft yolk and shaft on differential. Once they are aligned insert pin.



19. Insert the two differential shims in place under the differential. The longer shim goes to the rear of the differential and the shorter goes to the front of the differential.

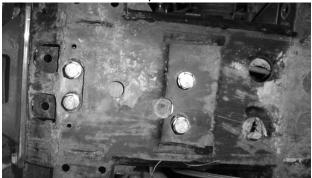




20. Once you have them under the differential, use a small punch or screwdriver to align the holes in the shims with the holes in the differential. **This is difficult!**



21. Secure the differential in place with four 10mm x 35mm bolts and 10mm washers.



22. Reconnect wires and vent lines to the differential.

23. Before you proceed with the installation of the lift kit and new control arms, you will need to disconnect the brake lines from the master cylinder. You are going to take the factory brake line on the right side of the RZR and install it on the left side. The new 45X brake line will be attached on the right side of the RZR.



24. Disconnect and remove the right side brake line from the master cylinder and replace it with the new line provided. Now install the right side factory brake line on the left. When you have installed the front arms you will need to route brake lines to the front of the new a-arms. This will ensure that you have no binding or pinching of the brake lines.





- 25. When you have completed the brake line installation, reconnect the lines to the calipers. Use the factory hardware to reconnect all lines.
- 26. The next few steps will be to prepare for the front upper and lower control arm installation.
- 27. Remove the bushings, sleeves, and ball joints from the stock control arms. You will need to reuse these in the new kit.





28. Now reinstall the bushings, sleeves, and ball joints into the new arms. If you place some grease on them it makes the installations 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.











29. Install the grease fitting into the new arms before installation. DO NOT OVER TORQUE THE FITTINGS.

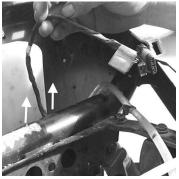


- 30. Set all control arms aside at this time. You need to install the lift kit to the upper portion of the frame.
- 31. Open the hood and you will need to reroute the headlight wires. Currently they run up from below the cross member on frame and connect to the lights.





32. Run the wires behind the cross member on the frame and reconnect to the lights.



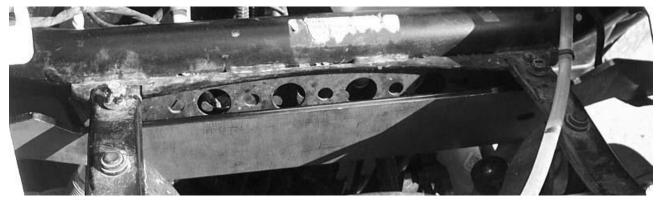
33. Disconnect the top of the front shocks.



- 34. Remove the shocks from both sides at this time.
- 35. Next insert the long front lift plate in front of the front cross member. Insert it through the hood opening.







36. Insert the 10 x 70mm bolt through the bracket, placing a 10mm washer between the bracket and the shock mount.



37. Next insert a large spacer in the stock shock mount position and push the 10x70mm bolt through. Repeat steps for the opposite side at this time.





38. Insert the front slotted bracket on the backside of the front cross member.



39. Connect the bracket to the frame by placing it on the bolts and fasten it using the 10mm lock nuts provided.



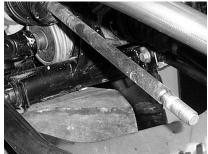


40. You will need to connect the tie rod assembly.

41. If you have not done so already remove the factory tie rod end. Slide the new tie rod over the factory tie,

screwing into place.









42. Next connect the tie rod extension to the end of factory rod.



43. Get the 5/8" heim joint provided in the kit and place a 5/8" jam nut on the heim joint end. Run the jam nut all the way down to the bottom of the thread.



44. Screw the heim joint into the tie rod end. Repeat these steps for the opposite side.



45. At this point you will need to attach the upper and lower control arms.

46. Use the factory nuts and bolts to connect the new control arms to the RUV frame. You will have left and right

upper and lower control arms.



47. Install the new axles provided in the kit. Place some grease on the ends of the axles to make installation easier.



48. Reconnect the knuckle assemble, make sure to insert the new axle end into the knuckle assembly.

NOTE: Insert <u>ALL</u> ball joint connecting bolts from rear to front! If this is not done the control arm will rub on the bolt at full steering lock.







49. Included in the kit are new axle washers and a new crimp nut. You need to use two washers per axle. Fasten the axle to the hub assembly with the new crimp nut, using a punch to lock the axle nut in place.









- 50. Finish connecting the tie rod to the knuckle assemble by using the $5/8" \times 4"$ bolt, long and short high misalignment cones, and two 5/8" nuts.
- 51. Where the original tie rod connected to the knuckle assembly you will need to drill out a 5/8" hole.



52. Once you have drilled the hole, align the heim joint over the hole and place the small alignment cone on top of the heim joint.



53. Insert the 5/8" x 4" bolt through the small alignment cone and heim joint.





54. Under the heim joint place the large alignment cone and then attach it to the knuckle assembly.







55. Secure the rod assembly using two 5/8" nuts.



- 56. For the next steps you will need a spanner wrench or a way to decompress the factory spring.
- 57. You will need to adjust the tension on the shock to the lowest setting or to where the spring has the least amount of tension on it. You do this by adjusting both spanner nuts all the way down towards the shock eyelet.

 NOTE VERY IMPORTANT: In order to keep from damaging the shock threads and spring adjuster you need to make sure that the threads are clean from dirt. The threads on the shock are easily damaged!!!



58. Compress the spring and remove the retaining collar from the shock.



59. Now remove the spring.





- 60. There are two different springs for this kit. A long spring (Front) and a short spring (Rear)
- 61. Place the new long front spring onto the shock.



62. Compress the spring and reattach the spring retaining collar.

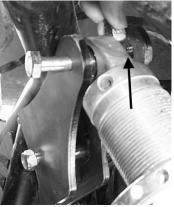


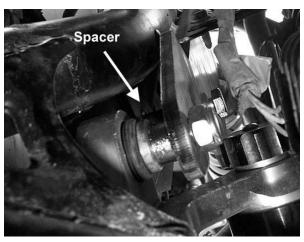
63. Adjust the spanner nuts to the desired riding height. You may need to adjust after you ride a few times to dial in your desired setting.



64. Connect the top of the shock to the lift plates. Insert the 10 x 70mm hex bolt through from the backside forward. Place a small front shock spacer between the shock eyelet and the lift plate. Fasten it tight using a 10mm lock nut provided.









- 65. Repeat steps for opposite side and tighten all nuts and bolts.
- 66. Now connect the bottom of the shock to the new control arms by using the 10mm x 60mm bolts and 10mm lock nuts provided in the kit. Repeat the steps for opposite side.
- 67. Attach the brake lines to the upper arms using the zip ties provided.



68. Once you have completed the installation you will need to bleed the brake lines. Follow the steps listed below once you have finished the rear installation.

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

1. Place the jack under the center of the RZR rear end and lift until the rear wheels clear the ground. Be careful to support the RZR properly so that it is secure, but so that the trailing arms and shocks can droop to full extension.

NOTE: Before you jack up the UTV make sure to disconnect the rear sway bar from the arms.



2. You will need to completely remove the rear control arms and rear shocks,



3. Disconnect and remove the rear sway bar and sway bar brackets. NOTE: The sway bar is no longer used once it is removed.

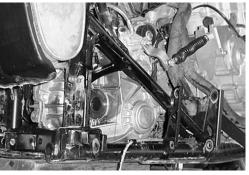




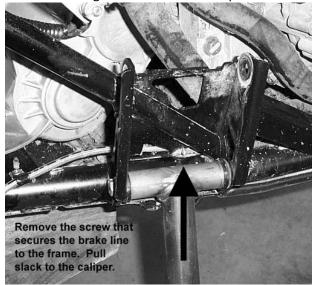


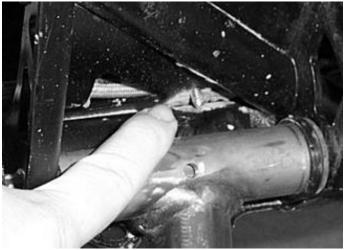
4. Remove the axles.



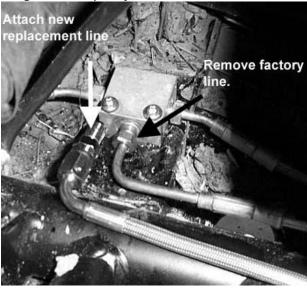


5. On the rear right side of the RZR there is a screw that secures the brake line to the frame. You need to disconnect the brake line from this point. Once you disconnect it pull the slack out of the line. This will give you the needed length to reattach the caliper to the hub once the new control arms are installed.





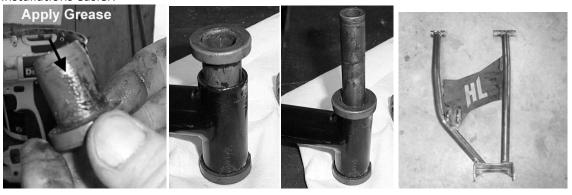
- 6. Next on the left side of the RZR you will need to completely remove the brake line and attach the 48Z line provided in the kit.
- 7. Disconnect the brake line at the junction fitting on the left rear side of the RZR. Attach the line to the caliper using the factory banjo bolt and washers.



8. Remove the bushing and sleeves from the stock control arms. You will need to reuse these in the new kit.



9. Now reinstall the bushings and sleeves into the new arms. If you place some grease on them it makes the installations easier.



10. Attach the grease fittings. Install the grease fitting into the new arms before installation. DO NOT OVER TORQUE THE FITTINGS.



- 11. Use the same steps as you did for the front.
- 12. Before you compress the spring on the shock you will need to adjust the tension on the shock to the lowest setting or to where the spring has the least amount of tension on it. You do this by adjusting the collar all the way down towards the shock eyelet.

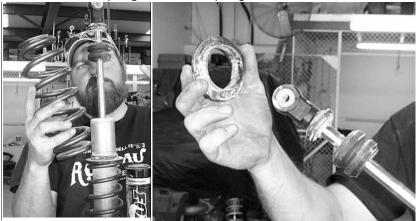
NOTE VERY IMPORTANT: In order to keep from damaging the shock threads and spring adjuster you need to make sure that the threads are clean from dirt. The threads on the shock are easily damaged!!!



13. Compress the spring and remove the retaining collar from the shock.



14. Now remove the spring and center spring collar.



15. Remove the factory helper spring and install the spring onto the shock.





16. Reinstall the center spring collar and spring. Compress the spring and reattach the spring retaining collar.



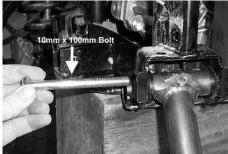




17. Set the shock aside for now.

18. Next install the lower control arm to the frame. You will replace one of the factory bolts with a 10mm x 100mm bolt. Replace the bolt that secures the arm to the rear connection point. Do not place the lock nuts on the lower arms at this time. You will need to attach a bracket to the lower arm bolt.







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



20. Insert the new axle into the differential.



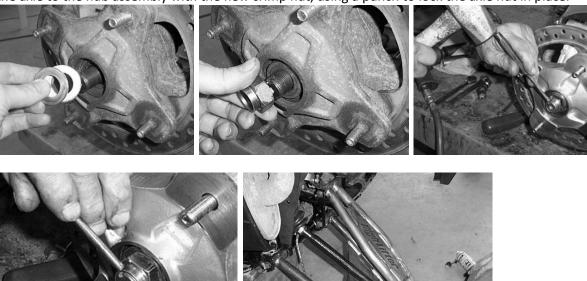
21. Place the hub assembly onto the axle end and then connect the upper and lower arms to the hub assembly. NOTE: There is a change in the lower factory arm in 2016. They went from a smaller 10mm bolt to a larger 12mm bolt. If you have a newer model with the changes you will need to drill out the High Lifter Lower control arm so that you can attach it to the knuckle assembly. Us a ½" drill bit for the 12mm bolt opening.







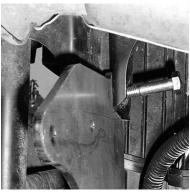
22. Included in the kit are new axle washers and a new crimp nut. You need to use two washers per axle. Fasten the axle to the hub assembly with the new crimp nut, using a punch to lock the axle nut in place.

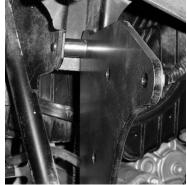


- 23. Connect the upper lift bracket to the frame at this point.
- 24. Connect the inner lift bracket to the inside of the shock mount tabs. Insert the 10mm x 60mm bolt through shock mount tab and bracket.



25. Now insert the 39C Medium Spacer between the shock mount tab and bracket and fully insert the 10mm x 60mm bolt.

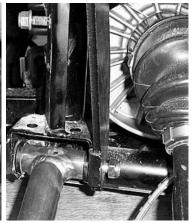




26. Connect the outer rear lift bracket the rear of the RZR on the outside of the shock mount tab. Place it onto the bolt you just inserted in to the upper shock mount tab. The lower portion of the bracket will attach the bolt on the lower control arm. Once the bracket is in place, loosely attach the 10mm lock nuts to hold it in place.



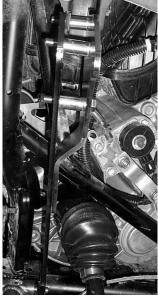




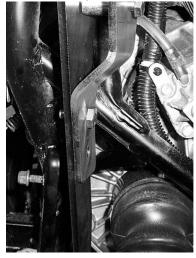
27. Next insert into to the two center holes a 10mm x 60mm bolt and O Large Spacer.







28. On the lower portion on the brackets insert two 10mm x 25mm bolt.







29. Place 10mm lock nuts on all bolt and fasten tight.



30. Now connect the top of the shock to the lift brackets by inserting another 10mm x 60mm bolt through the bracket.







31. Connect the lower portion of the shock to the control arm using the 10mm x 60mm bolt and 10mm lock nut.

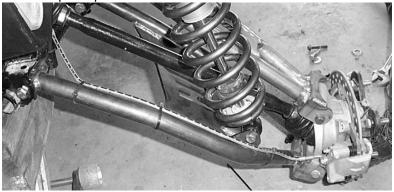






- 32. If you have not installed the opposite side, do so at this time.
- 33. Reconnect the calipers to the rear hubs. Route the lines so that you clear any parts that will bind, cut, or pinch the lines.

34. Use the zip ties provided to secure the lines to the arms.



- 35. Grease all fittings if you have not does so already.
- 36. Verify all nut and bolts are torque tight.
- 37. Follow the steps for bleeding the brake lines listed below.
- 38. Once you have finished bleeding the brake lines. Please the wheels back on the RZR and torque all lugs to factory specification

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.

With the hose in place, open the bleed screw.

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 and refill the master cylinder. 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 both front wheel calipers are bled, recap the master cylinder. You should now have good stiff brake pedal. It will probably take a whole pint sized bottle to do both front wheel calipers. Don't try to save the extra fluid and dispose of used fluid properly.

Master Cylinder/Brake Fluid

An over-full master cylinder may cause brake drag or brake lock-up, which could result in an accident. Maintain brake fluid at the recommended level. Do not overfill. Never store or use a partial bottle of brake fluid. Brake fluid is hygroscopic, meaning it rapidly absorbs moisture from the air. The moisture causes the boiling temperature of the brake fluid to drop, which can lead to early brake fade and the possibility of brake failure, which could result in an accident. After opening a bottle of brake fluid, always discard any unused portion.

Check the brake fluid in the master cylinder before each ride.

- 1. Position the unit on a level surface.
- 2. Position the handlebars so the master cylinder is level.
- 3. View the brake fluid level through the indicator window on the top of the master cylinder.
- 4. If the fluid level is low, remove the cover and add fluid to the fill line.

Do not overfill. Use DOT 4 brake fluid only.

5. Reinstall the cover.



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

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 per set of 4 axles (not (1) warranty claim or breakage for each individual axle) 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.