

CAL-F-RNG1

POLARIS RANGER 1000 – FRONT CONTROL ARM LINK KIT



Parts Available For These Popular Brands and Others

POLARIS

can-am



Kawasaki



HIGHLIFTER



sales@highlifter.com



800-699-0947 | 8:00am - 6:00pm CST



780 Professional Drive North, Shreveport, LA 71105



www.highlifter.com

Read before Installation

This product is designed for use on RUVs with increased ground clearance and fender clearance. Purchasers should be aware that use of this product may increase the frequency of required maintenance, part wear, and with the raised center of gravity on your RUV, this will increase the 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 about the added risks.

High Lifter Products, products are designed to best fit user's RUV under stock conditions. Adding, modifying, or fabricating any OEM or aftermarket parts will void warranty. High Lifter Products, products 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. 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 RUV's are different and require extra care when riding, particularly on side hills or off-camber situations. If you further raise the center of gravity by adding taller tires, heavy loads to racks or seats, 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 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 and/or RUV as a driver or passenger.

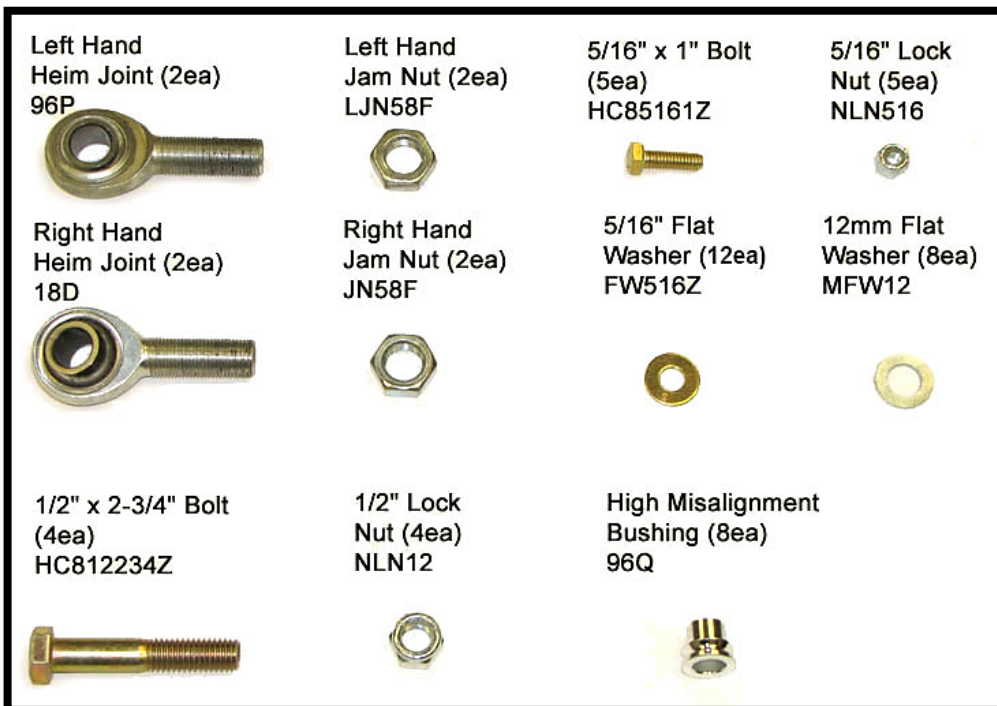
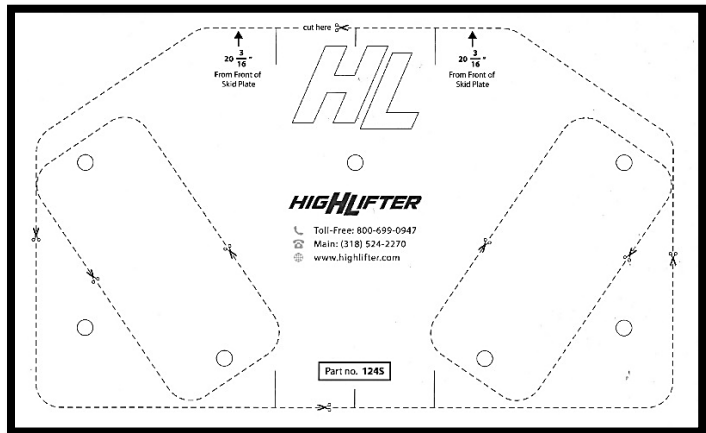
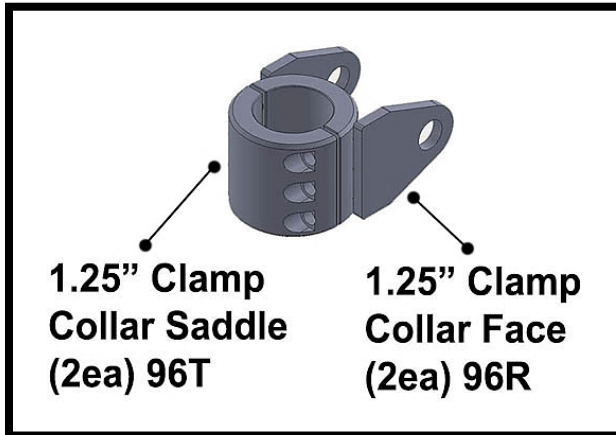
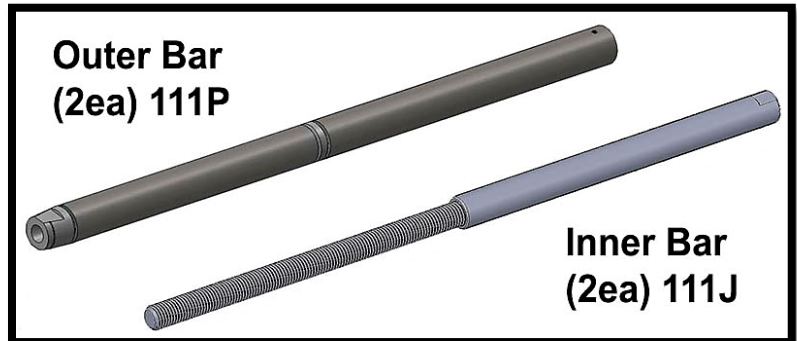
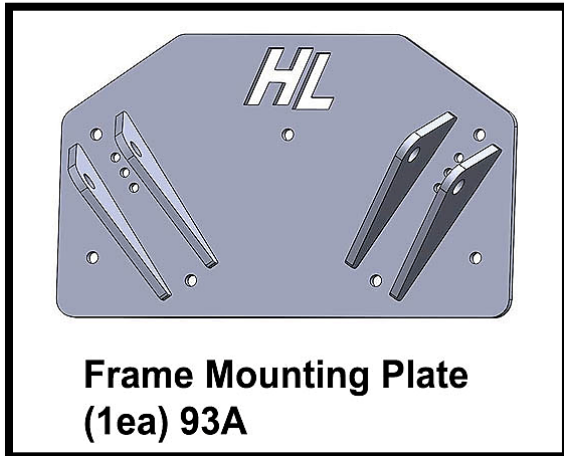
By purchasing and installing High Lifter Products, products, user agrees that should damages occur, High Lifter Products will not be held responsible for loss of time, use, labor fees, replacement parts, or freight charges. High Lifter Products will not be held responsible for any direct, indirect, incidental, 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.

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 and/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 lift kit is installed.

PARTS DIAGRAM



READ THE REQUIREMENTS FOR INSTALLATION BEFORE YOU INSTALL

1. This kit requires 1-1/4" DOM tubing to be used at the front control arm.
2. All Polaris Ranger High Lifter Editions and Ranger Back Country models require 3" or greater lift kit and steering stops.
3. All standard Polaris Rangers with factory control arms that are not arched will require a 3" or greater lift and forward arched arms that also include a steering stop.
4. This kit will work with all Big Lift Kits that are 3" or greater.
5. Steering stops are a requirement, no matter what lift kit, big lift kit, or forward arms are installed on the SXS.

Installation Steps:

1. If there is not enough ground clearance to work under the SXS, you will need to jack up the front of the SXS so that you can perform the steps for installation. If you jack up the SXS make sure that it is secured so that it does not interfere with the removal of the skid plate and the installation of the control arm links.

2. Remove the factory skid plate.

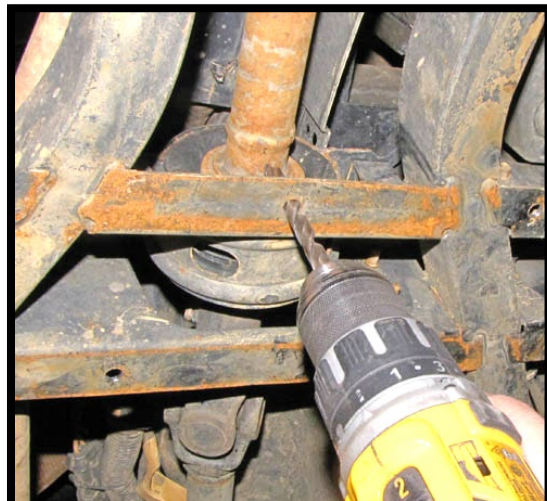
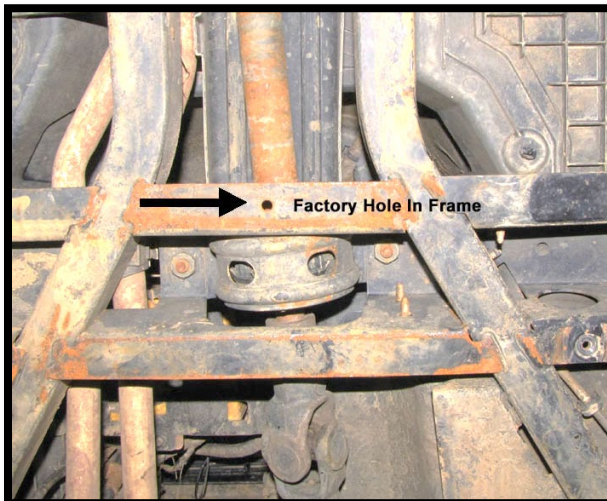
NOTE: You have three options for the factory skid plate

- a) Remove the factory plate and not reinstall. Many mud riders do this.
- b) Use the template and only cut holes in the plastic skid plate for the control arm link plate heim joint tabs.
- c) Use the template and cut out the entire opening for the control arm link plate.

3. Once the factory skid plate has been removed, the next step will be to install the frame plate to the frame.



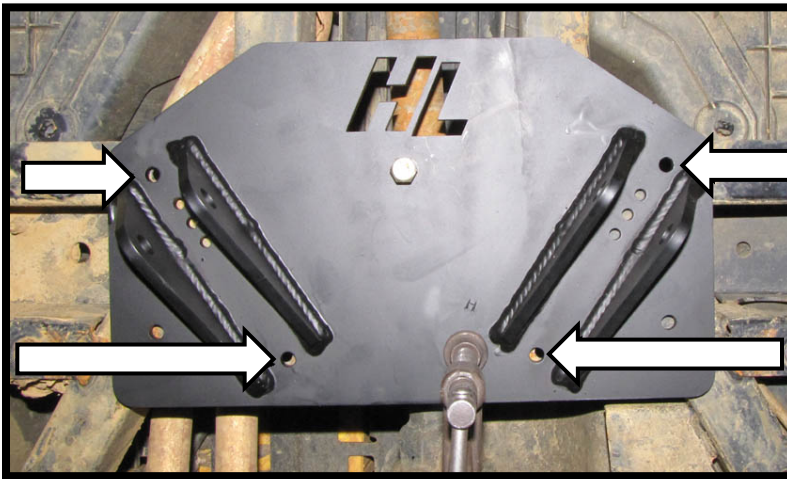
4. Using one of the factory holes where the skid plate was connected to the undercarriage as a guide, drill a larger bolt hole in the frame with a 5/16 drill bit.



5. Slide a **5/16" flat washer** onto a **5/16" x 1" bolt**. Then connect the **frame plate 93A** to the frame and loosely secure it with the **5/16" washer** and **5/16" lock nut**.



6. This plate is used on multiple kits, so use the bolt holes that are designed for this SXS. See illustration of which holes are used.



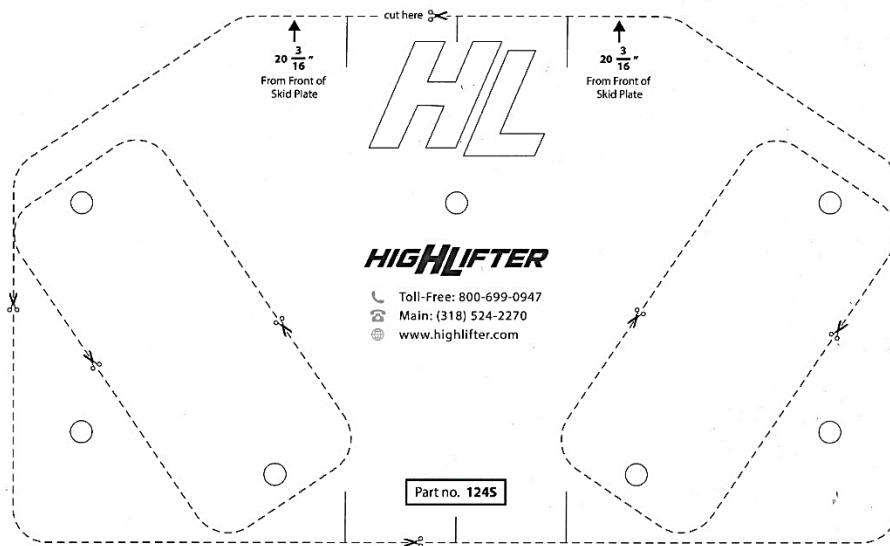
7. Next, make sure that the plate is tightly secured to the frame and positioned so that the holes in the plate align with the frame rails. Using the plate as a guide, drill the additional four bolt holes required to secure the plate to the frame. **NOTE: We used a C-clamp in our image to secure the plate while we drilled the additional holes.**
8. Using the plate as a template, drill holes in the frame with a 5/16 drill bit.



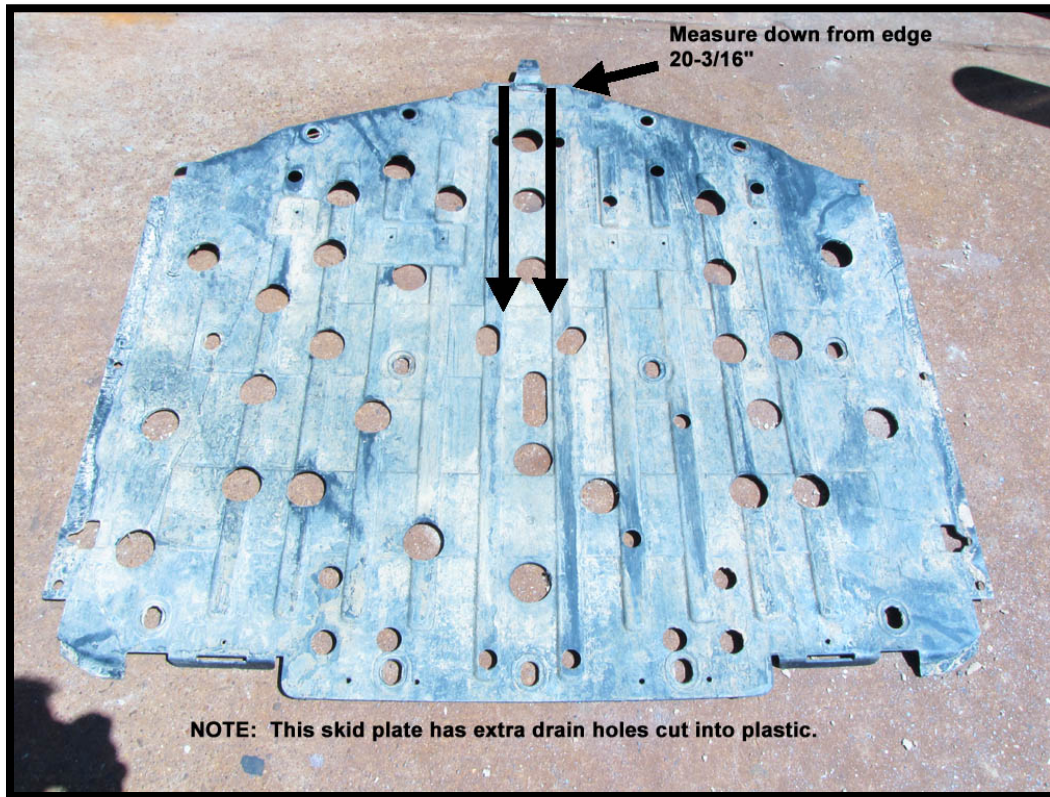
9. Slide a **5/16" flat washer** onto (4) **5/16" x 1" bolts** to connect the plate to the frame. Loosely secure them with **5/16" flat washers** and **5/16" lock nuts**. Torque bolts to 25lb-ft.



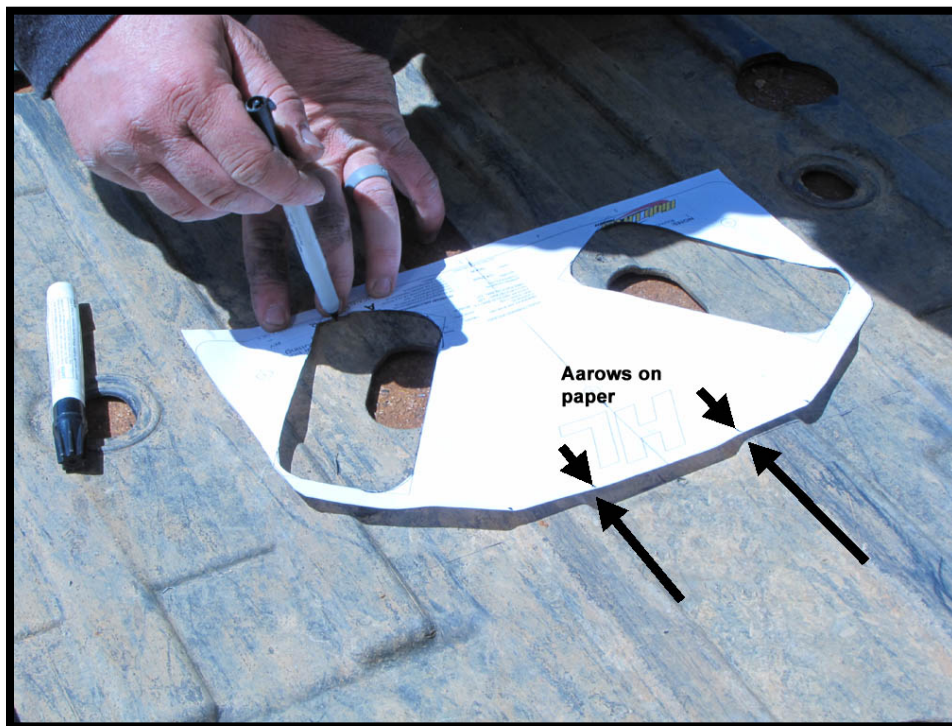
10. For the next steps we will be using the template provided to cut access holes in the plastic skid plate.
NOTE: The skid plate in our images was modified with multiple holes to allow for easy drainage and washing out mud from between the skid plate and undercarriage.
11. Locate the **template 124S** that came in the kit. You will need to cut the template out and prepare it for use in marking the skid plate for cutting.



12. With the skid plate lying flat with the frame side down, use a tape measure and measure 20-3/16" down from the front edge of the skid plate. See the illustration in image of where to start your measurement.



13. Located on the top and bottom edges of the template are three lines. Two long and one short. Use these lines to center the template on the ribs of the skid plate. The two longer lines go to the inside edges of the two center ribs and the one single line is the center between the two ribs. Once you have aligned the upper and lower lines on the template mark the hole to be cut in the skid plate.



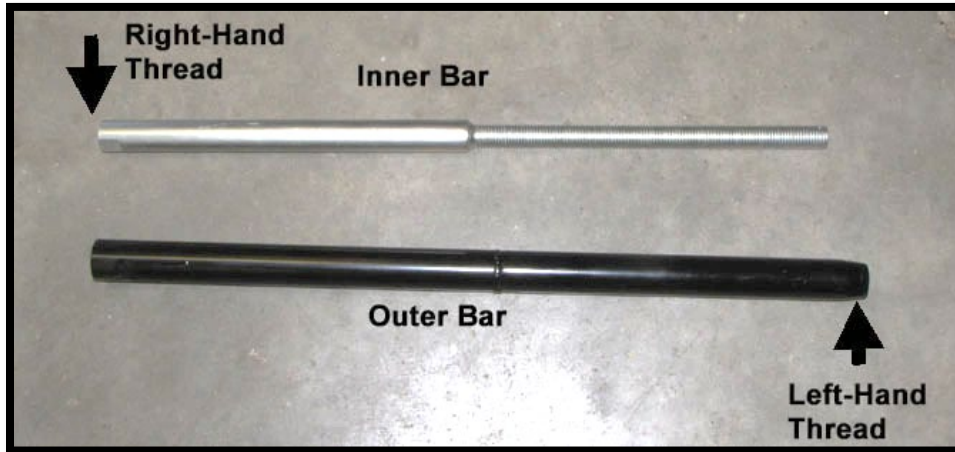
14. Cut the marked sections in the skid plate using an oscillating/cutting tool.



15. Reattach the skid plate over the control arm link plate. Secure the skid plate using the factory hardware.



16. Next you need to connect the control arm link bars to the frame plate tabs. The bars are made up of two separate parts that are threaded together. An Outer (hollow) bar that is painted black and an inner (threaded) bar that is zinc plated. **NOTE: All bars are shipped with marine grade grease or lubricant on the threads.**



17. Lubrication of the threaded portions are key to the proper function of the bars. Make sure to use a quality marine-grade grease to lubricate the threads on the bars to prevent them from seizing up. The bars should be serviced during regular oil changes or when the unit is being serviced. Regular checks and services will keep the bars functioning properly.
18. The larger outer (hollow) bar will connect to the frame plate. If not already assembled, insert the **LEFT-HAND heim joint 96P** and **LEFT-HAND jam nut LJN58F** to the bar. Leave about $\frac{1}{4}$ " of thread exposed for final adjustments.



19. Now insert the two **alignment cones 96Q** into the eyelet of the heim joint and connect it to the plate.



20. Connect the heim joints to the plate using the $\frac{1}{2}$ " x 2-3/4" bolt, 12mm washer 2ea, and $\frac{1}{2}$ " lock nut. Torque the nut to 110lb-ft.



21. Now it's time to connect the clamp collars to the lower control arms. When clamping the collars to the lower control arms you want to be as far down on the arm as you can, but you don't want to interfere with the turning of the wheels and also with movement of the control arm bars. Meaning when the wheel is at full turn you don't want to hit the bar and when the shock is at full compression you don't want the bar to hit the frame. **Later in the installation there will be a series of steps that you will need to do to check clearance.**

22. When fastening the socket head bolt on the collars use a zigzag or cross pattern with the bolts. This will ensure an even clamp distance on both sides of the clamp.

Tighten bolts with a cross or zig-zag pattern

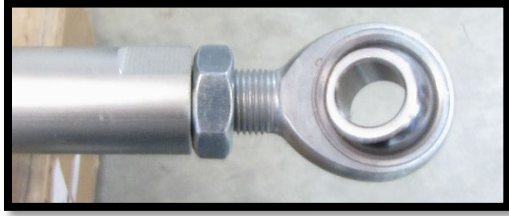


23. Loosely connect the **clamp collars 96R & 96T** onto the lower control arm. Connect it at the lowest point possible on the arm using the $\frac{1}{4}$ -20 x $\frac{3}{4}$ " **socket head bolts**. Keep in mind you will need to adjust it later, so fasten snug, not all the way tight.



24. Repeat to the other side.

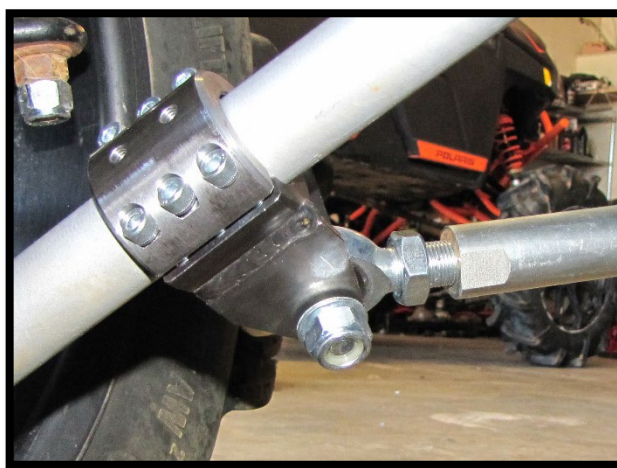
25. If not already assembled, connect the **RIGHT-HAND heim joint 18D** and **RIGHT-HAND jam nut JN58F** to the end of the threaded bar, leaving $\frac{1}{4}$ " of thread for final adjustments.



26. Adjust the inner bar so that the heim will reach the clamp collar tabs. Then insert (2) **alignment cones 96Q** into the eyelet of the heim joint.



27. Connect the heim joint to the collars on the control arms. Place alignment cones on either side of the heim joint. Connect to the collar using the $\frac{1}{2}$ " x 2-3/4" bolt, 12mm washer 2ea, and $\frac{1}{2}$ " lock nut. Torque the nut to 110lb-ft. Repeat to the other side.



28. Next, you must complete a **CLEARANCE CHECK**. Follow the steps and check for clearance before riding. If you check before riding you can adjust before you damage the bars, clamps, or other parts.

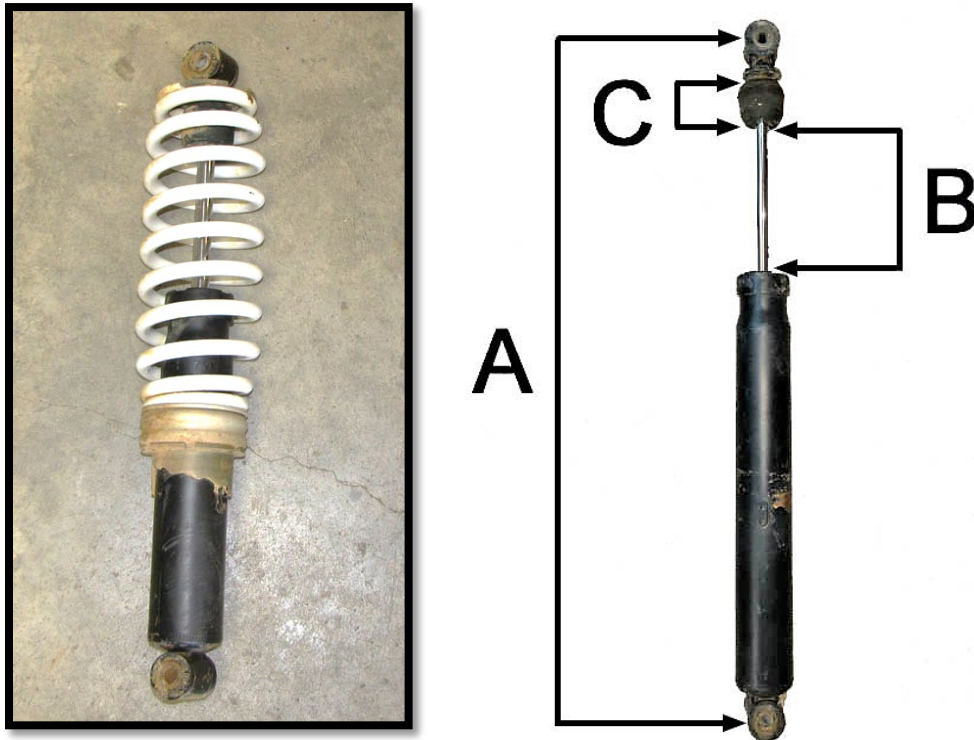
Performing Clearance Check:

29. Remove shock from the SXS.

30. Use the chart to record the following measurements. This important!!!

31. Measure the shock from eye to eye. Record this measurement in the A block

NOTE: You do not need to remove the spring, we did it to illustrate areas to measure.



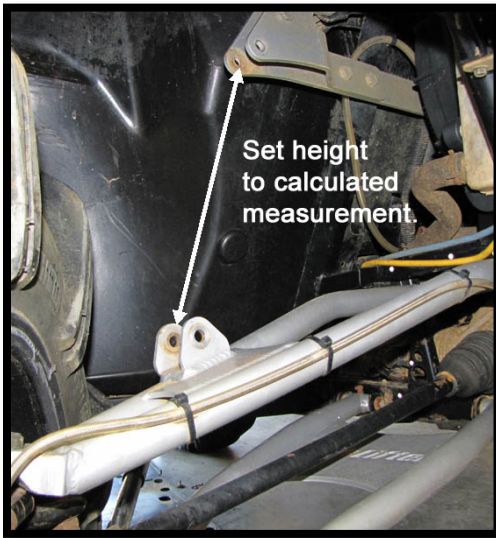
32. Measure the length of the exposed shock shaft (between bump stop and shock body) and record the measurement in block B.

33. Measure the height of the bump stop, divide it by 2 and record the measurement in the C block.

34. Take the A and subtract B & C. This will equal what the shock will be at full compression.

Position	Part to Measure	Length
A	Shock Length	
B	Exposed Shock Shaft	-
C	Bump Stop / 2	-
	Total Compressed Length	=
Formula	A-B-C= Compressed Length	

35. Using a tape measure while the shock is off the bike, lift the control arms until the measurement from the shock frame mount to the shock control arm mount is the length calculated above.



36. Use a jack stand or a friend to hold it in place while you situate the link bar to be close but not touching the frame. You can adjust the bars, slide the clamp up and down on the control arms, and rotate the collar to achieve proper clearance.



37. When the control arms are set to the fully compressed length, check to make sure that the adjustable link bar clears the frame and clears the tire when the tire is turned to full lock.
38. Make any adjustments to clear the tire and frame. You can adjust the bars, slide the clamp up and down on the control arms, and rotate the collar to achieve proper clearance.



39. Repeat steps on opposite side.
40. Reattached the shock to the SXS.

41. When you have completed the clearance check, torque the ¼-20 x ¾" socket head bolts to 12lb-ft.



42. Located on each (hollow) bar is a single ¼-28 x 3/16" set screw. Make sure that the set screw is tight so that the bars will not rotate during use. Do not over torque.



43. Located on each clamp collar are two ¼-20 x 3/8" set screws. Make sure that the set screws are tighten so that the collars cannot move during use.



44. Once the installation is complete make sure to tighten any factory hardware that was removed to factory specifications. Lower jacks and remove all jack-stands. **MAKE SURE THAT THE CLEANACE CHECK WAS PERFORMED BEFORE RIDING!**



Thank You
For Choosing
HIGHLIFTER

High Lifter Control Arm Link Kit Warranty Program

LIMITED LIFETIME WARRANTY:

HIGH LIFTER PRODUCTS, INC. warrants its Control Arm Link Kits to be free from structural defects* while under ownership of the ORIGINAL purchaser.

*Structural defects do not include heim joints, hardware, bushings, clamp collars with stripped, broken, or cross-threaded bolts

HIGH LIFTER reserves the right to inspect the Control Arm Link Kit for determining if there were any defects in the installation and to determine the validity of any warranty claim. The warranty process may require the ORIGINAL purchaser to provide proof of purchase and photographs of the UTV with the Control Arm Link Kit installed. **HIGH LIFTER** is not liable for any incidental or consequential damages to anything other than the Control Arm Link Kit covered by this warranty. **HIGH LIFTER** is not liable for any incurred expenses, labor costs to install/remove/reinstall of the kit or any OEM or aftermarket components, loss of use of machine, damage to housings or damage to any aftermarket accessory or OEM components. Any parts used to repair a Control Arm Link Kit must be purchased from **HIGH LIFTER** or warranty will be voided. For safety reasons it is important that the proper fastener grade, thread engagement, and torque specification be followed to prevent parts from failing. See instructions for torque data/specifications. This warranty is non-transferable.

What is NOT covered under this warranty:

1. Damage because of improper installation. (Kit must be installed per the installation instructions provided by High Lifter Products, Inc by a mechanically competent Individual or recognized powersport service center.)
2. Damage because of modification(s), chemicals, misuse, or neglect/lack of maintenance.
3. Cosmetic damage because of chemicals, UV rays, impacts such as, but not limited to rock chips and trees or marring from tools and jacks are not covered.
4. Collateral damage or vehicle collision because of other failed components.
5. Adjustable bars that are not greased or serviced will not be warrantied. (Lubrication of the threaded portions are key to the proper function of the bars. Make sure to use a quality marine-grade grease to lubricate the threads on the bars to prevent them from seizing up. The bars should be serviced during regular oil changes or when the unit is being serviced. Regular checks and services will keep the bars functioning properly.)
6. Bars that are bent and show damaged from impact, will not be covered under warranty.

REFUSED SHIPMENTS/ORDER CANCELLATION:

Refused shipments are subject to a 20% restocking fee plus all associated freight costs. It is our goal to ship all orders in a timely manner. 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 20% 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 Approval (RMA) number issued, the kit 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 that a replacement or refund will be issued on any product, but only that we will inspect the kit for warranty claims. For orders outside the United States, any freight or fees associated with customs and duties are the responsibility of the purchaser and 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 kit submitted for warranty repair or replacement. The purchaser is responsible for any freight charges on all warranty claims, including incoming freight to High Lifter and return freight to the purchaser.



High Lifter Products Warranty Claim

Name: _____

Address: _____

Phone Number: _____

E-Mail Address: _____

Portal Gear Kit Product Number: _____

Place of Purchase: _____

Date of Purchase: _____

Reason for Return: _____

Return Merchandise Authorization (RMA) Number: _____

High Lifter Products
780 Professional Drive North • Shreveport, Louisiana • 71105
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www.HighLifter.com