SNORK-RNG1-3

Polaris Ranger XP 1000 Snorkel Kit

Parts Available For These Popular Brands and Others

POLARIS can-am HONDA Kawasaki YAMAHA Revs Your Heart

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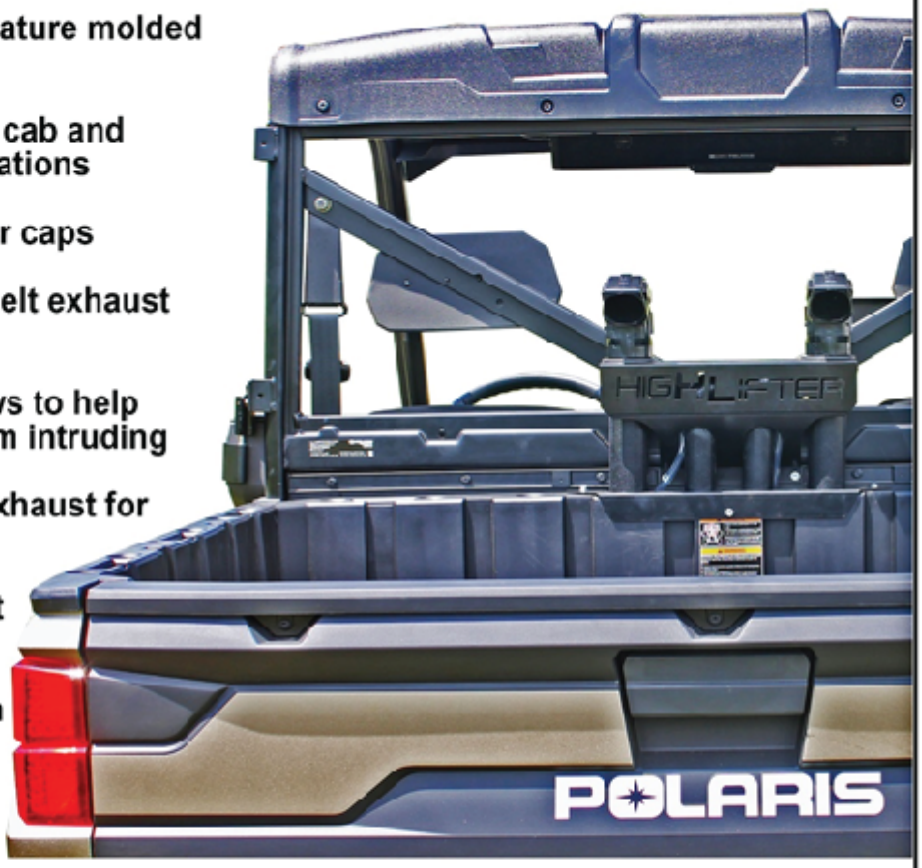
NEW HIGH LIFTER SNORKEL DESIGN

- Uses high temperature molded silicon hoses
- Allows use of the cab and back glass applications
- High Lifter 2" riser caps
- Custom molded belt exhaust port duct
- Differential bellows to help prevent water from intruding
- Utilizes the belt exhaust for heat dissipation
- Does not obstruct rear view
- Easier installation than typical snorkel kits



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Please read instructions and view illustrations before installing

Need Help? Contact Us

Mon-Fri 8am - 5pm CST ➤ 800-699-0947

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READ BEFORE INSTALLATION

This snorkel kit is intended to provide clean, dry air to the engine, belt housing if equipped, and other parts needing venting on ATVs/UTVs, but does not necessarily mean the ATV/UTV can exceed the OE manufacturer's stated maximum rated water line depth. The snorkel kit is intended only as an additional margin of protection in the event that the ATV/UTV is inadvertently driven into water deeper than the OE manufacturer's air intakes will tolerate. There are many considerations to make when increasing water line depth and a snorkel is just one component

This snorkel kit is NOT intended for riding in water deeper than what the OE manufacturer of your ATV/UTV recommends. Riding in water deeper than stated by the OE manufacturer is dangerous possibly causing the driver of the ATV/UTV to ride unexpectedly into deeper water subjecting the driver and/or passengers to serious injury or death. Riding in water deeper than stated by the OE manufacturer can also cause complete failure of the ATV/UTVs engine. OE manufacturers will almost certainly void any warranty on the ATV/UTV if a snorkel is, or has been installed at the time warranty service is sought.

It is the installer's responsibility to verify all components and particularly that any templates are correct before starting any part of the snorkel installation. The snorkel should be installed by a professional mechanic or one who is by experience fully competent with snorkel installation. Please note this is a custom installation and you may want/need to modify for your particular installation and additional items may be needed to install. Any snorkel, even those properly installed can and possibly leak under certain conditions causing catastrophic engine failure. The ATV/UTV owner should frequently check components for wear and tear and look for any signs of leaking at the joints. **THERE IS NO WARRANTY OR RETURN OF THIS SNORKEL, NOR IS THERE ANY WARRANTY ON DAMAGE DONE TO AN ATV/UTV AS A RESULT OF THE INSTALLED SNORKEL REGARDLESS OF WHOM PURCHASED OR INSTALLED THE SNORKEL.** If you are the dealer or installer it is your responsibility to inform the user of this warranty and dangers of riding in water deeper than the OE recommends.

When using this product, your vehicle will be modified to increase performance. Whenever a modification is done to an ATV/UTV, you change the performance of the vehicle including fuel system, handling, braking, and steering. You should always drive safely and avoid any maneuvers that would cause harm, serious injury or death to the driver or passengers. This product is manufactured only for off-road use.

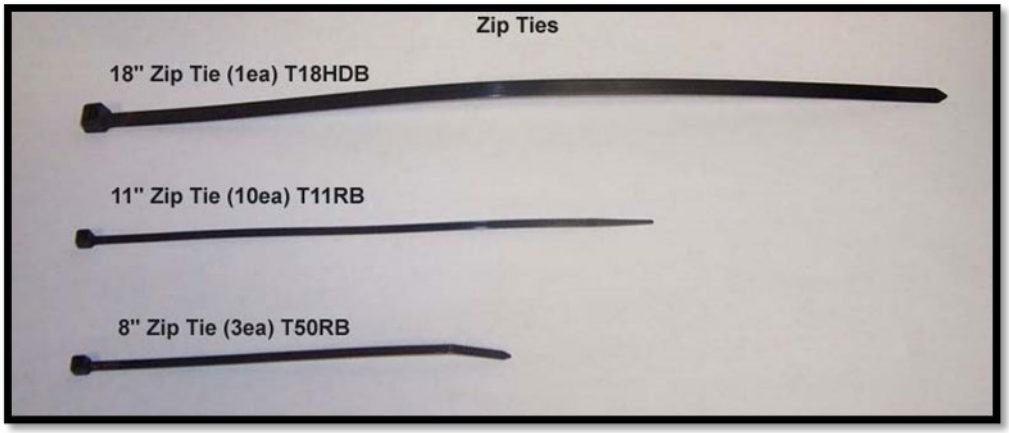
When installing the snorkel kit, you are altering the airflow to the carburetor/throttle body and a jet kit or EFI programmer may or may not be required once the kit is installed.

ALL SALES OF SNORKEL KITS ARE FINAL – NO RETURNS, NO EXCEPTIONS.

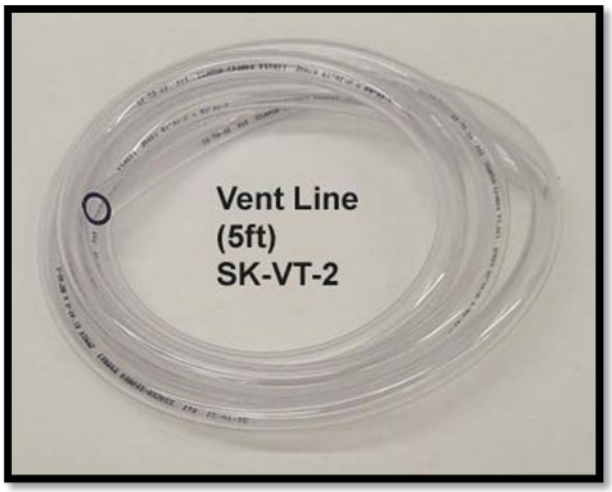
NOTE: Make sure that you seal your air box with silicone. This is very important in preventing water from getting into the air intake system.

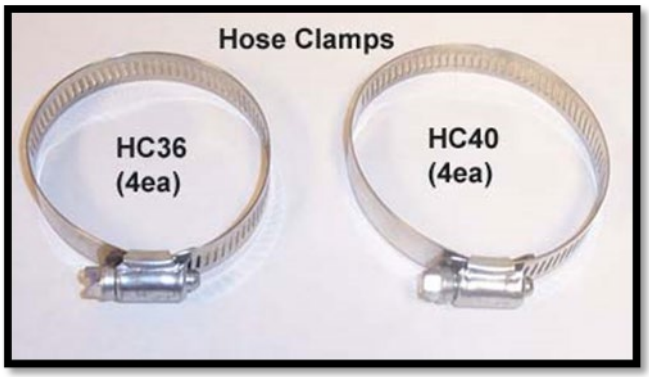
NOTE: You may use grease to seal your air box, but you will need to check the seal regularly or before each ride.

PARTS DIAGRAM




3" x 2" Flush Mount Bushing
(1ea) SK-BSH-301


Vent Line
(5ft)
SK-VT-2


Hose Clamps
HC36
(4ea)
HC40
(4ea)


2" x 13-1/2" Pipe (2ea)
SK-P-223
2" x 2-3/4" Pipe
(1ea) SK-P-224


1-1/2" x 10" Pipe (2ea)
SK-P-1527
1-1/2" x 3-1/2" Pipe
(1ea) SK-P-1506


2" Riser Cap (2ea) 43R


SK-EL-1501


SK-EL-1502


Riser Bracket (1ea) 75G
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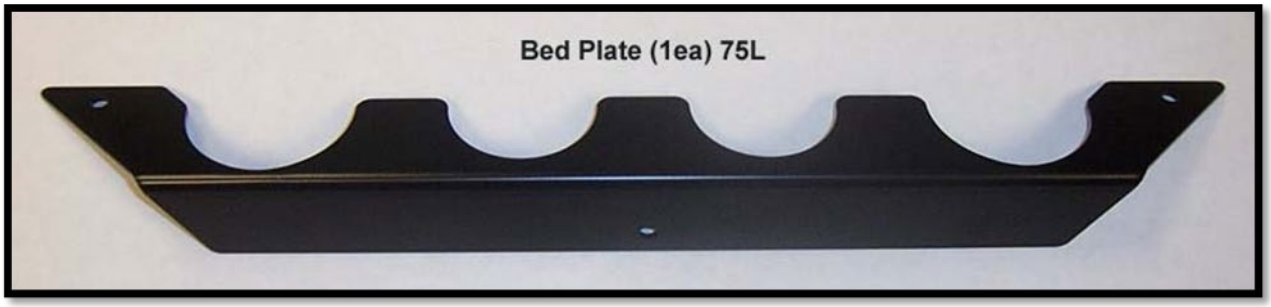
Bed Plate (1ea) 75L


Clutch Exhaust
(1ea) 75C
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Clutch Exhaust
Duct #2
(1ea) 75D
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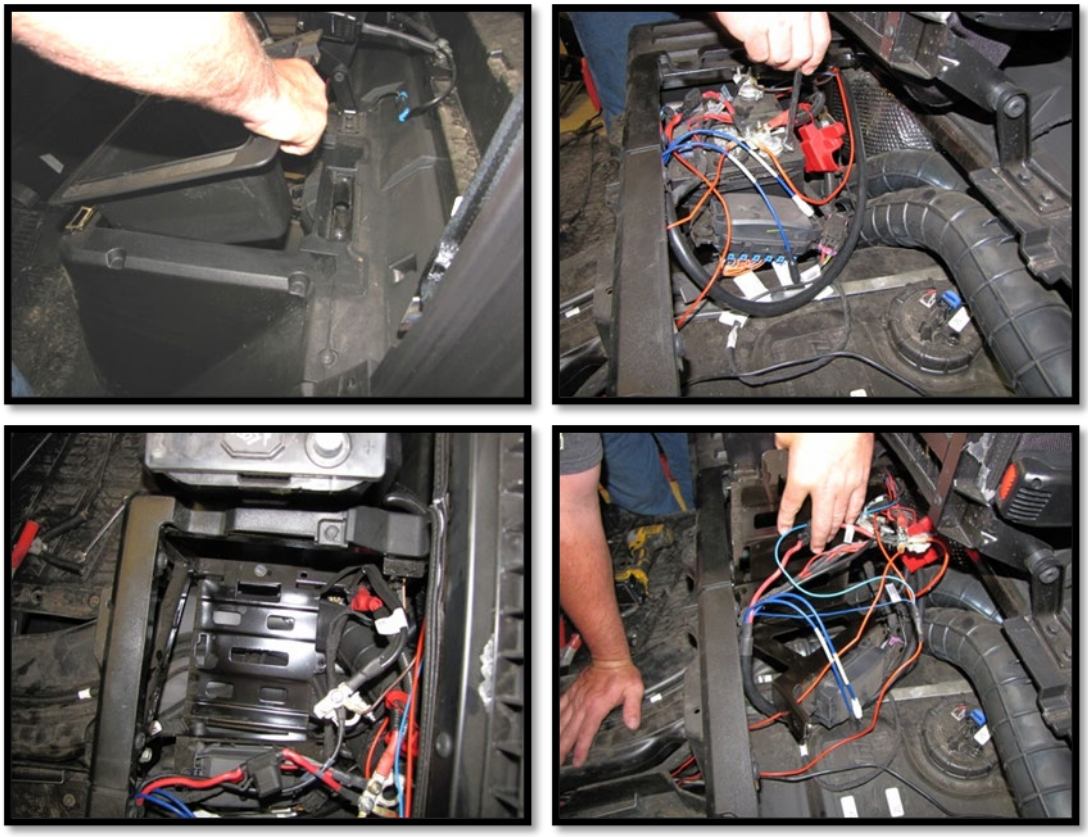
1. Lift the bed and disconnect the lift support strut. Then disconnect and remove the bed.

2. Remove the factory clutch outlet duct along with the metal mount bracket. You will reuse the metal mount bracket later with the new exhaust duct provided.

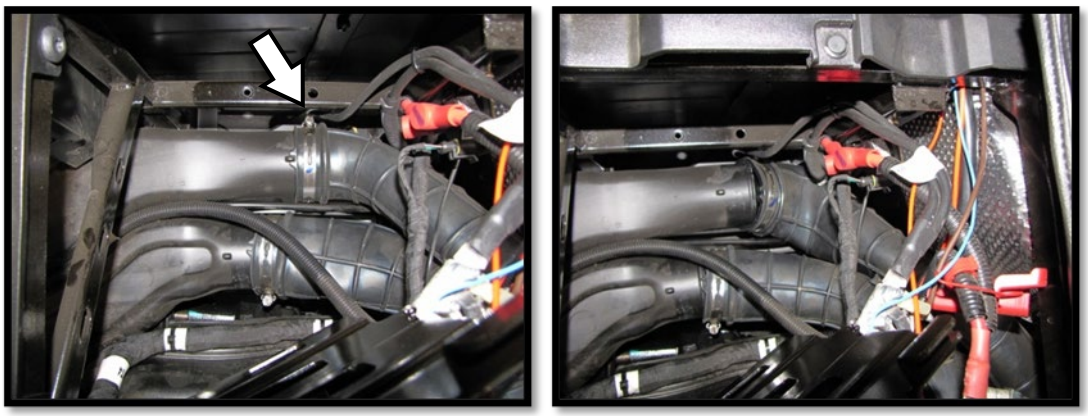



3. Next, disconnect and remove the driver's seat.


4. Under the passenger seat, lift and remove the storage box. Remove the battery and the battery support bracket. This will give you access to the factory intake hoses.



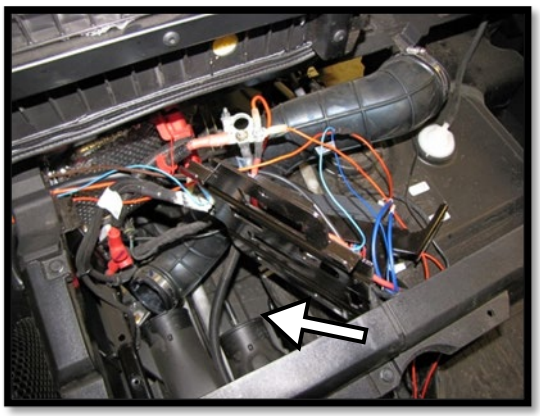
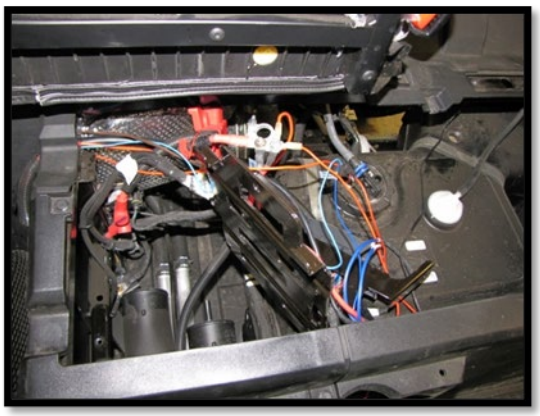
5. Loosen the factory air intake hose clamp.



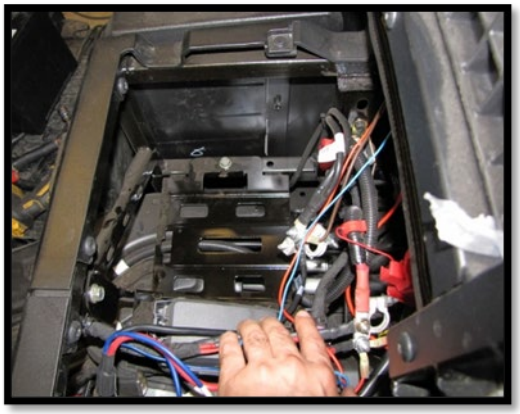
6. Now loosen the clamp from the air box inlet, and remove the factory air intake hose.



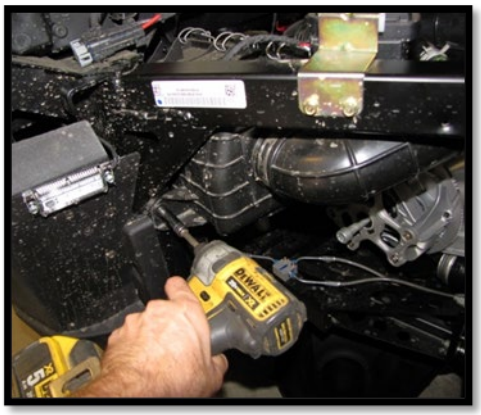
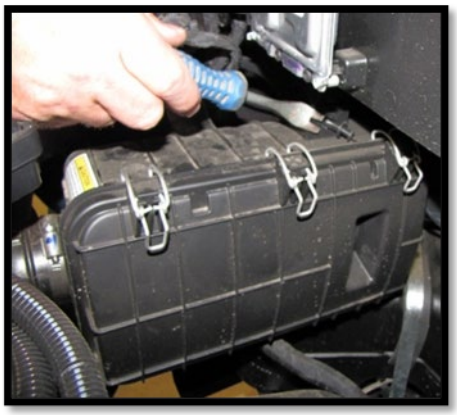
7. Next, loosen and remove the factory clutch intake hose. Also remove the adapter from the mouth of the clutch intake port fitting.

8. Reinstall the battery support bracket and the battery back under the passenger seat.

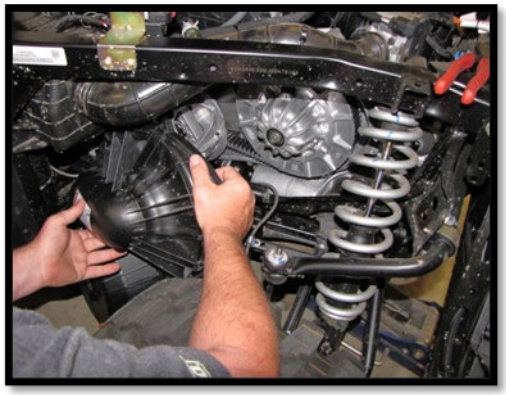




9. Remove the air box.


10. Seal the air box.
    a. Remove the lid and the duckbill drain valve.
    b. Slide a **22Y rubber washer** onto the **1/2 x 1" Hex Bolt.** Then apply silicone to the washer.
    c. Insert the bolt through the hole.
    d. Slide another **22Y rubber washer** onto the bolt followed by a **1/2" lock Nut**. Then tighten.
    e. Next, apply a generous amount of silicone to the outer edge of the box where the lid makes contact. You can use grease, but you will need to check it regularly or before each ride.
    f. Re-attach the lid and shut tight.
    g. Set the air box aside and let dry. It will be reinstalled later.

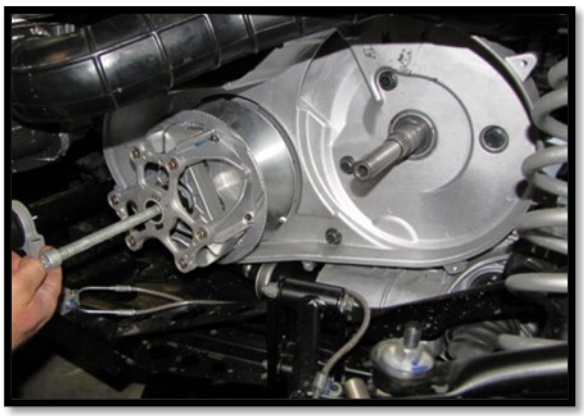

11. Remove the clutch housing cover. You will need to jack up the rear of the ranger to gain more clearance from the control arms.

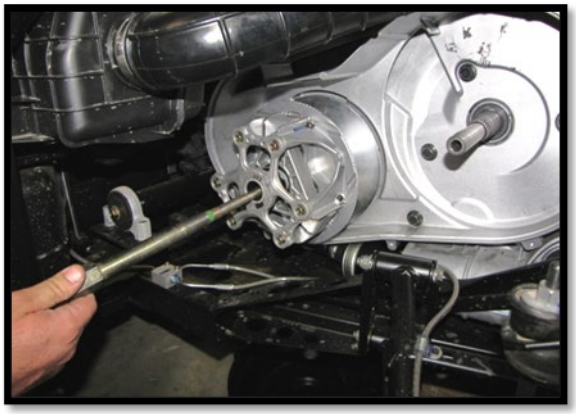
12. Remove the secondary clutch and the belt.



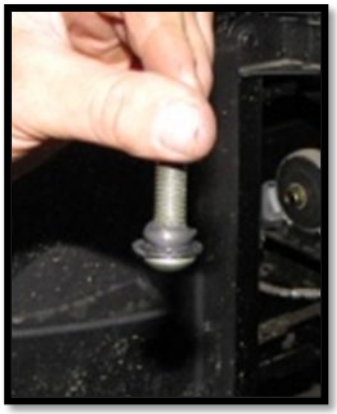
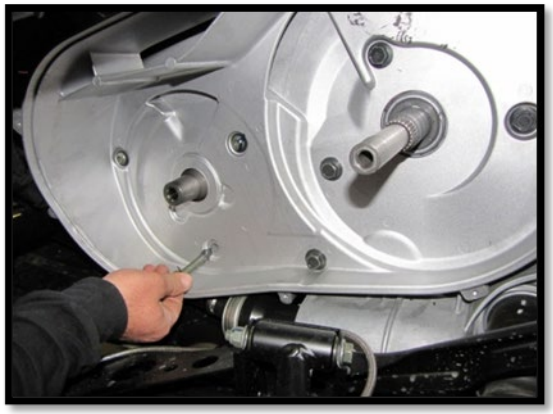

13. Remove the bolt and corresponding hardware from the primary clutch.




14. Use a clutch puller to remove the primary clutch.

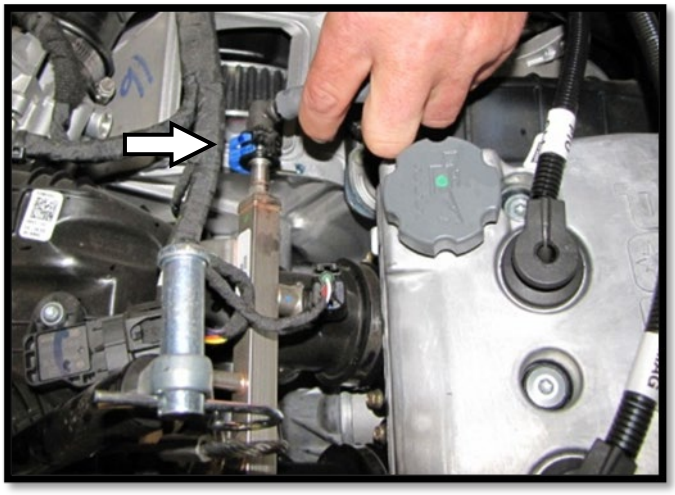


15. Remove the three bolts from the left side of the clutch housing. Apply silicone under the head of each bolt and then screw them back in.

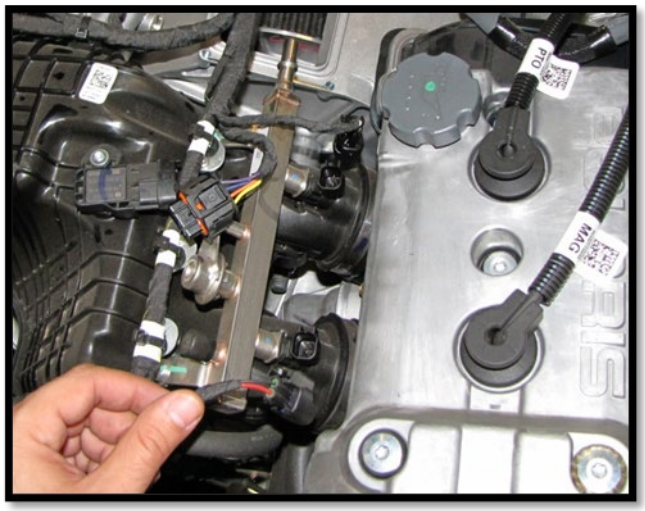




16. Before you can remove the four bolts from the right side of the clutch housing, you will need to remove the fuel rail and intake manifold first to be able to gain access to the nuts on the other side of the engine block. Process to the next step.
    NOTE: These bolts are longer and run through the clutch housing and out the other side of the engine block.
    NOTE: Also by removing the fuel rail, it will give you the clearance you need to install the new clutch housing outlet duct in later steps.

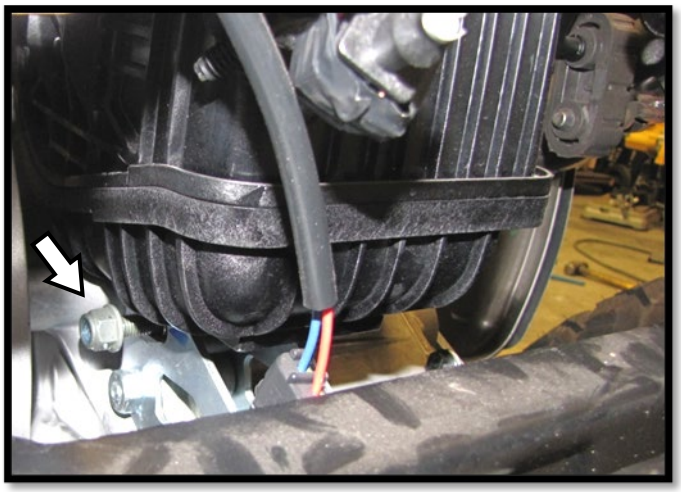
17. Remove the fuel rail and intake manifold.
    a. Disconnect the fuel line from the fuel rail.

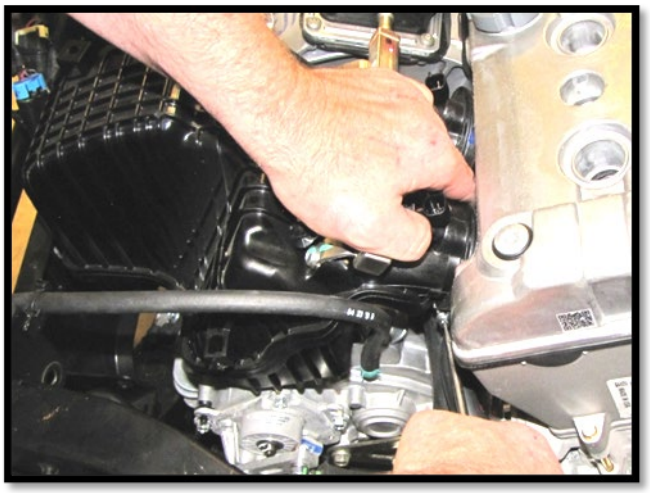


    b. Snip off the three zip ties securing the wire harness to the fuel rail. Then disconnect the wire harness.

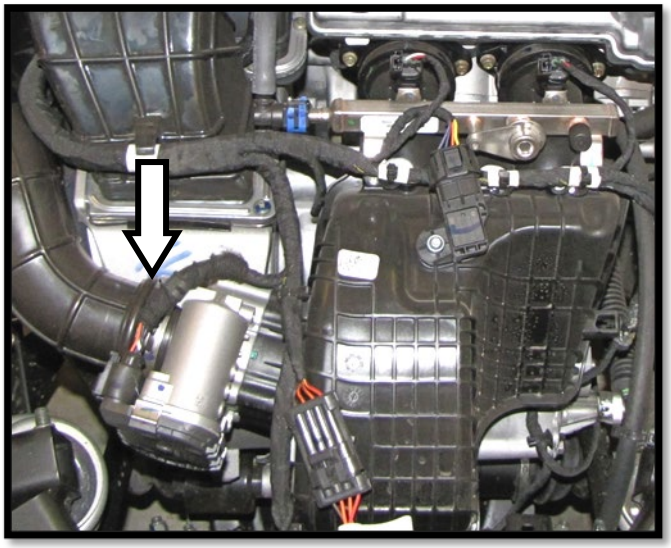


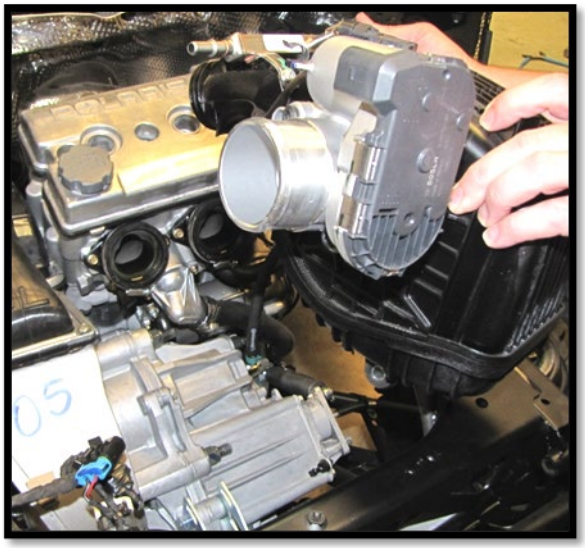
    c. Remove the 8mm bolt and nut at the bottom back side of the intake manifold. Followed by loosening the two clamps around the throttle body adapter.



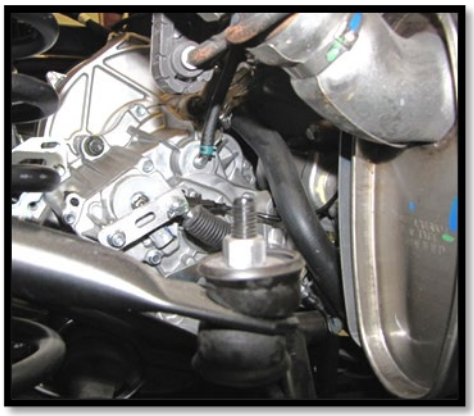
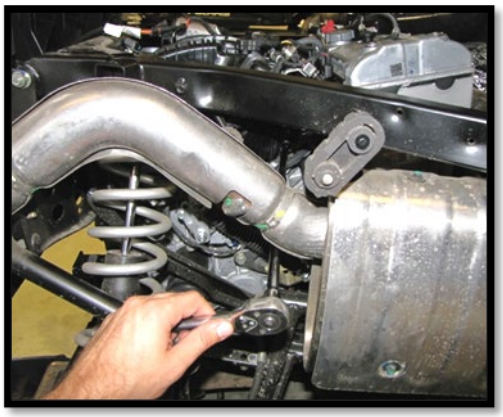


d. Loosen the hose clamp at the throttle inlet and pull the hose off. Then pull the intake manifold and fuel rail out and set aside for now.





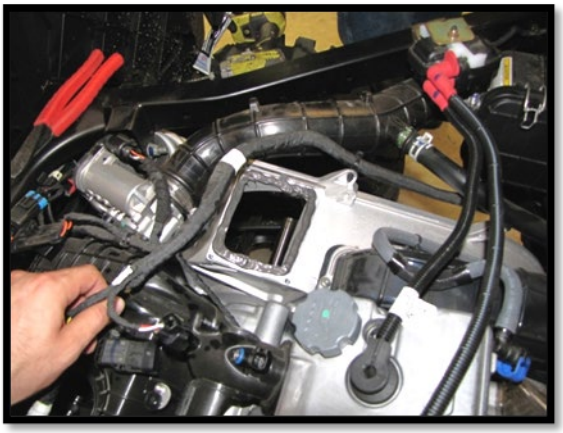
18. Now you can remove the four bolts on the right side of the clutch housing. Find the four corresponding **GOLD** lock nuts on the other side and remove them.

19. Once you have removed the bolts, apply silicone under the head of each one and then screw them back in.


20. In the following steps, you will install the new clutch housing outlet duct.

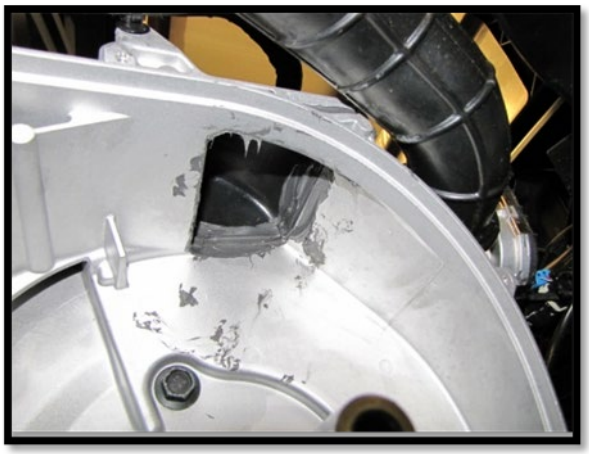
21. Apply a generous amount of silicone to the top of the clutch housing exhaust port where the duct makes contact.

22. Slide the factory metal mount bracket onto the new **75N** clutch outlet duct. While installing, be careful not to pull the sides of the duct in. **This is necessary to prevent it from having an improper seal.** Once fastened, you will need to reach into the housing with your fingers and check for leaks or pulling of the edges.

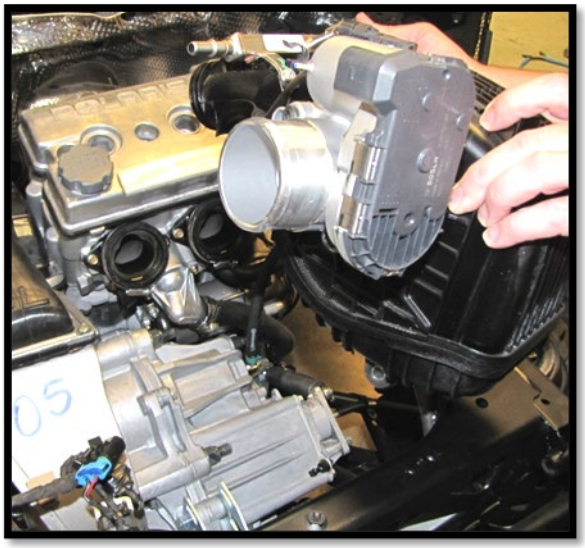


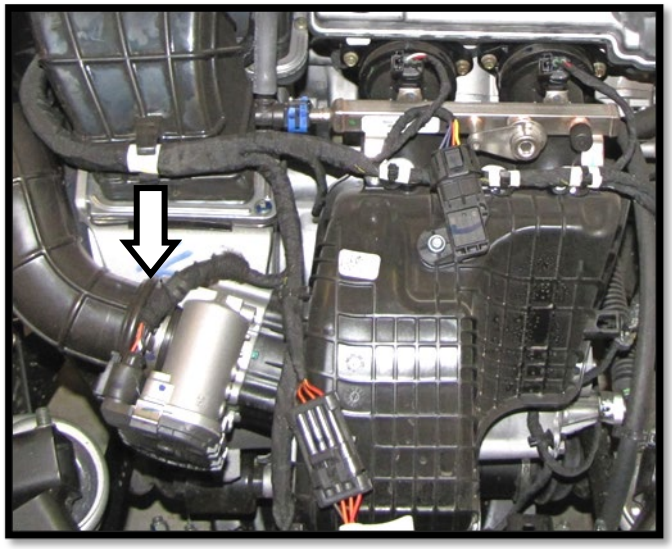
23. Also apply a generous amount of silicone under and around the edges of the port inside the clutch housing. This will help ensure no water will leak in.



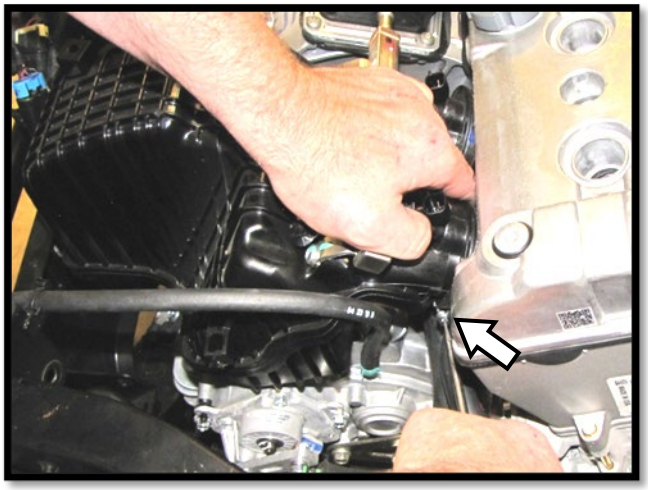
24. Reinstall the fuel rail and intake manifold.

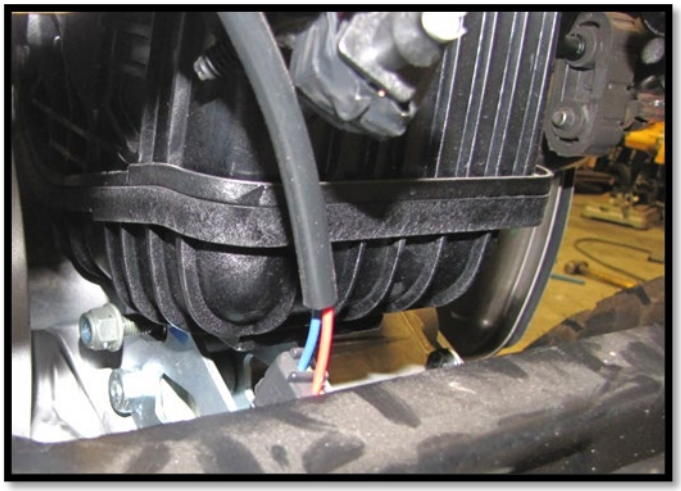
a. Insert the intake manifold and fuel rail back into their correct location. Slide the hose back onto the throttle inlet and tighten the hose clamp.



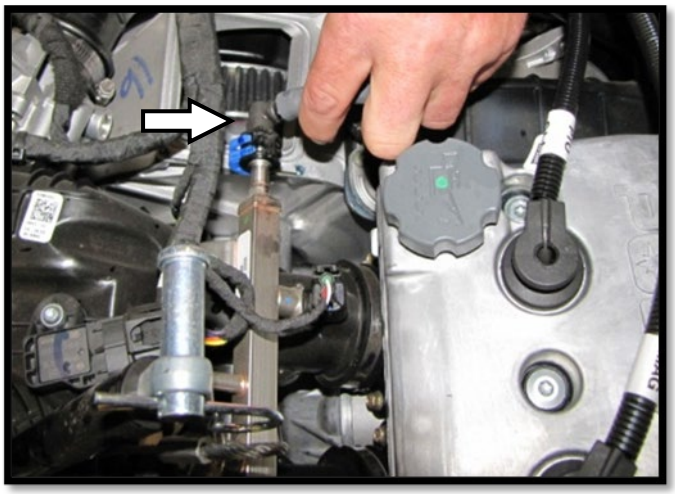


b. Tighten the two clamps around the throttle body adapter. Then insert and tighten the 8mm bolt and nut at the bottom back side of the intake manifold.

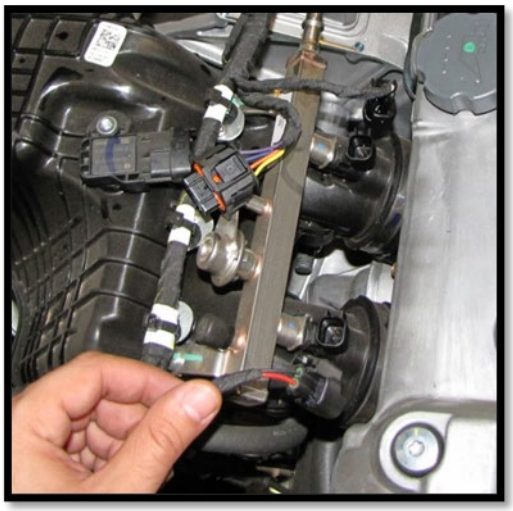


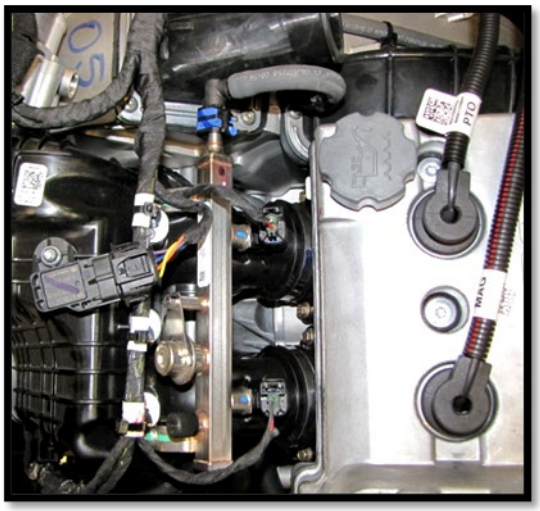


c. Reconnect the fuel line into the fuel rail.



d. Reconnect the wire harness. Then re-secure the harness to the fuel rail with **three 8" zip ties**.



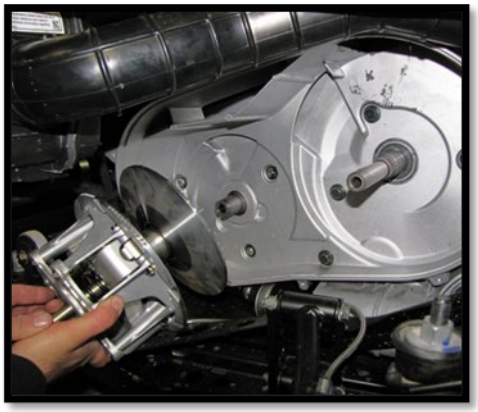


25. Remove the factory clutch housing inlet duct.

26. Apply a generous amount of silicone around the edge of the intake port where the duct makes contact.

27. Before reinstalling the factory clutch inlet duct, you must insert all the factory screws back into the metal mount bracket and through the inlet duct. This will keep the duct in place when tightening the screws and reinstalling it. While installing, be careful not to pull the sides of the duct in. **This is necessary to prevent it from having an improper seal.** Once fastened, you will need to reach into the housing with your fingers and check for leaks or pulling of the edges.

28. Next, use a clutch puller to reinstall the primary clutch.

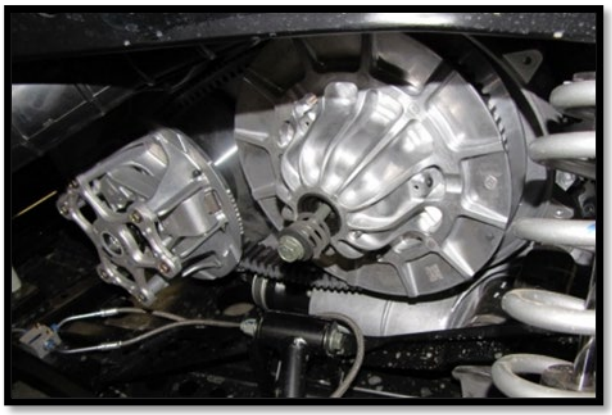


29. Use the factory bolt and corresponding hardware to complete the primary clutch installation.



30. Reinstall the belt and secondary clutch



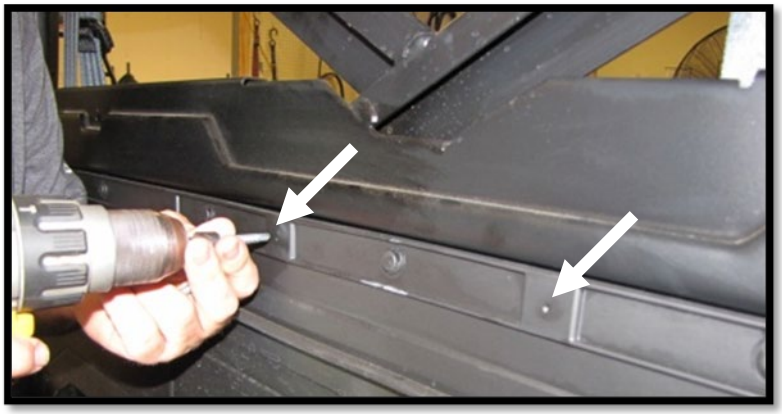




31. Before reinstalling the clutch housing cover, it needs to be sealed. Apply a generous amount of silicone to the clutch housing cover where it makes contact and seals to the housing.

32. Reinstall the clutch housing cover and make sure it's properly sealed.


33. Insert two **27A** rubber grommets into the top holes of riser plate **75G**.
NOTE: If you have a cab or rear window, the grommets will also prevent it from being scratched or damaged.


34. Next, you will install the riser plate using two **1 ½" self tapping screws** to the back of the cab. There are two indentions in the plastic you can use as guides to drill the screws into and keep the riser plate centered.



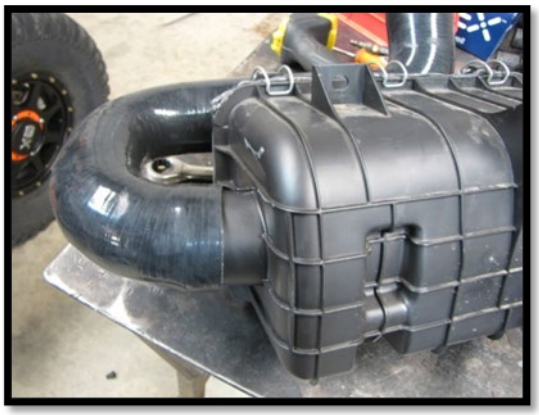

35. In the following steps you will install the new clutch intake hose.
36. Insert and glue **SK-P-224** (2 ¾" pipe) into **SK-BSH-301** bushing adapter.


37. Insert the bushing adapter into the factory clutch intake hose and tighten the factory hose clamp.


38. Insert the new clutch intake hose **75B** onto the pipe. Align the hose to the back of the cab and riser plate in the proper position. The high lifter logo should be at the top of the hose and facing away from the cab. Attach and tighten it with hose clamp **HC40**. You may need to bend the exhaust heat shield down at the edge to provide more clearance for the hose.


39. Next, slide the new air intake hose **75A** onto the air box inlet. Position it so that the high lifter logo is at the top of the hose and facing away from the cab when you reinstall the air box in the next step. Doing this before installing the air box will make the installation much easier and prevent having to adjust it. Attach and tighten down with hose clamp **HC40**.

NOTE: You may need to apply lubrication to inlet to slide the hose on due to a tighter fit.



40. Reinstall the factory air box with the new air intake hose. The high lifter logo should be at the top of the hose and facing away from the cab.

41. In the following steps you will install the new clutch exhaust hose to the clutch outlet duct.

42. Place the clutch exhaust hose **75C** to the back of the cab with 90 degree bend in the upward position. The high lifter logo should be at the top of the hose and facing away from the cab. You will need to position it so that it lines up correctly with the riser plate and clutch outlet duct.

43. Once in the correct position, you may need to trim the excess hose that exceeds past the mouth of the clutch outlet duct.
    NOTE: Always trim the end that's opposite of the high lifter logo.


44. Next, slide the **SK-P-1506** (3" pipe) into the clutch outlet duct. Center it and slide the clutch exhaust hose on. Attach and tighten with two **HC36** hose clamps.



45. Connect and glue the 90 degree elbows **SK-EL-1501** and **SK-EL-1502** together. Then secure the elbows underneath the top of the riser plate with a heavy duty **18" zip tie** so that they are snug. This will keep them in place while you line up the risers in the next steps.

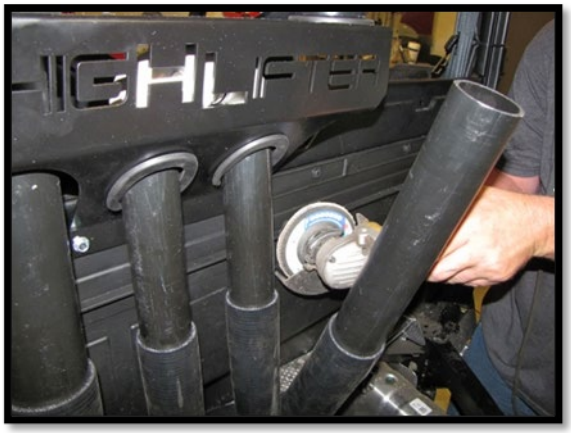
46. Slide two **SK-P-1527** (1 ½" x 10 ½" pipes) into the elbows. Then loosely slide the RIGHT riser into the corresponding clutch exhaust hose. Do not glue these into the elbows yet.

47. Loosely slide the small clutch exhaust hose **75D** onto the LEFT riser**. It is very important that it be positioned (as in the picture below) so that it can blow the excess engine heat out of the engine bay.** The high lifter logo should be at the top of the hose and facing away from the cab.



48. Loosely insert two **SK-P-223** (2 x 13 ½" pipes) into the riser plate. You need to align them up so you can determine where to trim the plastic lip on the back of the cab in the next step.

49. Once the 2" risers are lined up and you know where to trim, slide them out of the riser plate and pull them back. Use a grinder to trim the plastic lip so that each 2" riser can sit flush to the back of the cab.
NOTE: This is not needed for the 1 ½" risers since they already allow enough clearance to the lip.

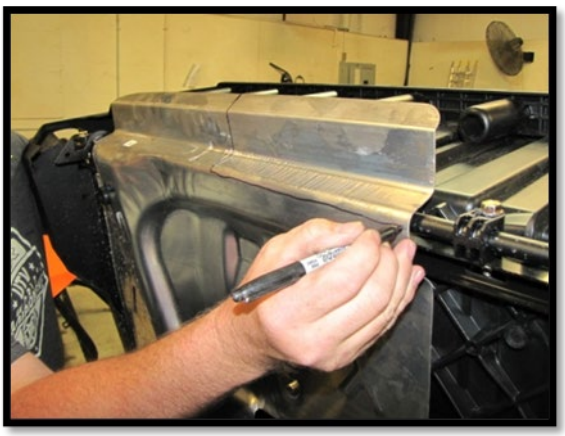



50. Slide the risers back into the riser plate. Then loosely attach the two **43R** riser caps to the top of the risers so that they sit flush to the riser plate. Do not fasten the hoses yet with clamps, you may need to make more adjustments in the following steps.
    NOTE: It is recommended not to glue riser caps.



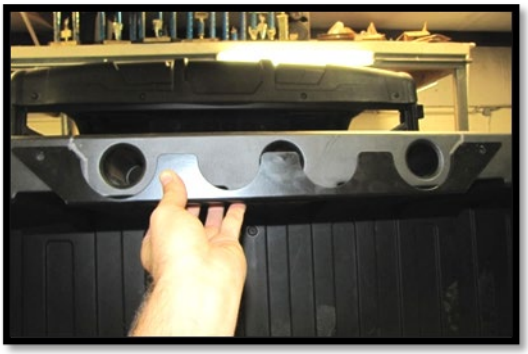
51. Reinstall the bed, but do not re-attach the lift strut yet.

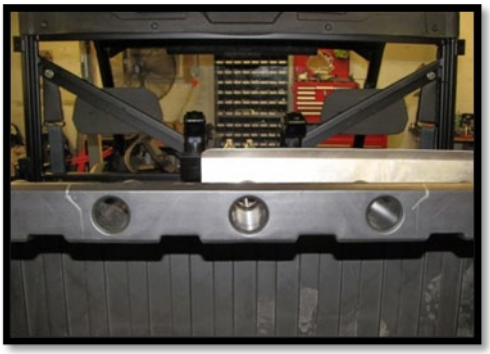
52. Gently pull the bed down just enough to make contact with the risers. Make a mark where the heat shield needs trimming so that it will clear the risers when the bed is down.

53. Trim the heat shield with a grinder where you marked it. Once finished, make sure it has proper clearance and trim extra if needed.


54. Find the bed plate **75L**. Center it on the bed using the large holes and where it meets the snorkels. Then trace the inside with a marker.





55. Using a reciprocating saw and a grinder, carefully trim the line you marked.




56. Gently fold the bed down to the snorkels to check clearance. Make adjustments, mark, and trim any extra plastic that's needed.

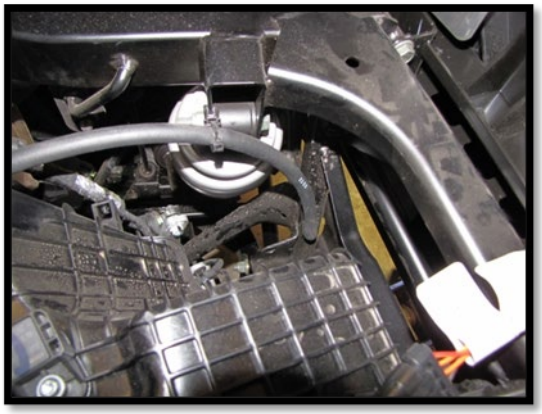

57. Once you have made sure the plate fits correctly with the snorkels, go ahead and attach the plate with three **T141** screws.

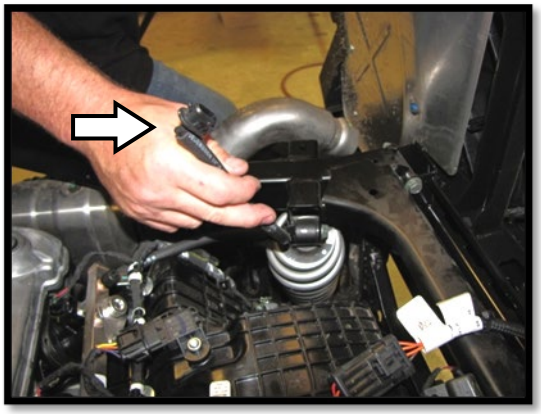


58. Go ahead and glue the 1 ½” risers into the elbows.

59. Once all final adjustments have been made. You need to attach and tighten the remaining hose clamps to the risers. Use a **HC40** for each 2” riser and a **HC36** for each 1 ½” riser.

60. Find the rear differential vent hose and remove the 90 degree vent line fitting on the end.





61. Insert a barbed fitting **BHF-14-ST** into the vent hose, followed by a bellow **VB01**. Use **11" zip ties** to secure the hose and bellow to the frame in a place it won't get damaged.




62. Find the front differential vent hose running up the frame on the front passenger side and disconnect it from frame. You will need the extra slack to reroute it up to the front storage compartment.



63. Find any precut holes or opening to route the vent line through to the front storage compartment. Once through, insert a barbed fitting **BHF-14-ST** into the vent hose, followed by a bellow **VB01**. Use **11" zip ties** to secure the hose and bellow in a place it won't get damaged.

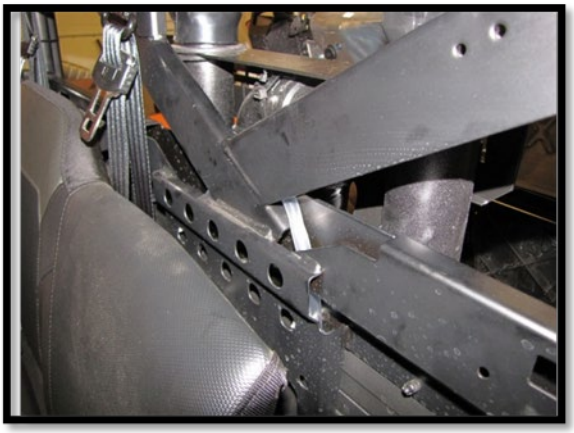
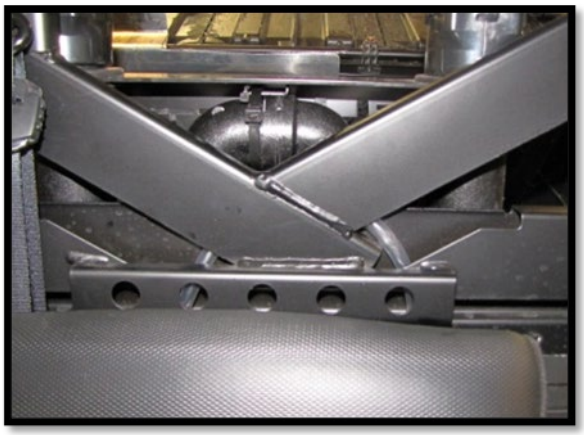
64. In the following steps you will need to reroute the gas tank vent line.

65. Under the driver seat, find and disconnect the factory gas tank vent line.

66. Insert the 5’ vinyl hose **SK-VT-2** into the barbed fitting on the gas tank. You will need to route it up the cab. Drilling a routing hole in the plastic is optional. It just needs to be clear from being pinched or damaged.




67. You can route the line through the cab frame behind the seats. If gas was to over flow from the vent line, it is necessary that it does not come in contact with the engine or exhaust. Use zip ties to secure it if needed.

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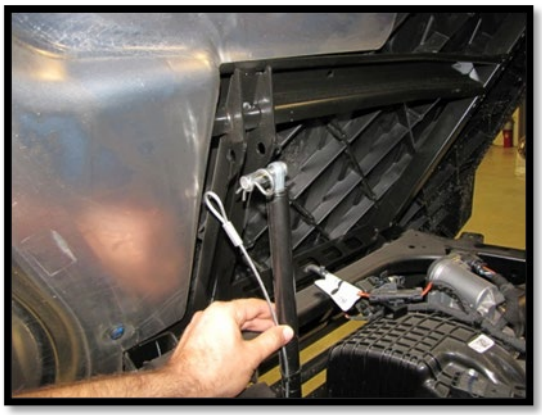
68. Reinstall the driver's seat.

69. Check and make sure everything is sealed and tightened properly.


70. Reattach the lift support strut to the bed and close the bed. Check fitment, clearance, and make any necessary adjustments.




Water Testing Clutch/Belt Housing Snorkel

DO NOT USE WATER FOR TESTING THE AIR BOX OR AIR INTAKE TO THE ENGINE!

Here are some steps for water testing your clutch/belt housing snorkel to ensure you have a water tight seal and there are no leaks in your system.

If you used silicone to seal your housing cover and backing plates, make sure you have followed the curing time instructions listed on the silicone that you used. Some silicones require that you wait up to 48 hours for proper cure time. Just make sure you are following the manufacturer's directions before you use or test.

Steps for testing your Clutch/Belt Housing

1. Verify the engine is off
2. Locate the drain plug in the Clutch/Belt housing and ensure that it is tightly secured.
3. Insert a water hose into the intake port on the clutch/belt housing snorkel. Make sure you are filling the correct inlet as severe damage could occur if you fill the engine air intake inlet.
4. Turn on the clean water supply and allow it to fill the housing up to the point when it is just about to come out the opening of the snorkel. Fill slowly as leaks are easier to find if you splash water during the fill process
5. Turn off the water and allow the water to settle in the housing.
6. Look for leaks or wicking of water from bolt holes, sealed areas, backing plates and all hose connections.
7. If single or multiple leaks are present, then you will need to reseal the system and start the testing again. Don't assume there is just one leak if you find one.
8. If there are no leaks, then open the drain plug and allow the water to drain from the housing.
9. There will be some water left in the housing even after you drain. AFTER the water has completely drained out, start the engine and allow it to run for a short period. Rap the throttle a couple of times to race the engine to expel the last traces of water and to dry the system. When no water is present and after a short period kill the engine.
10. Reinstall the drain plug and ensure a tight fit.
11. There could still be some water in the housing, when driving for the first time after this test, feel for belt slip. If there is belt slip redo the drying process. If there isn't any belt slip drive slower for a short time as that will dry the remaining water from the system.
12. Always inspect your snorkel system before and after rides for damage or leaks. Parts can vibrate or become damaged from riding.
13. **DO NOT USE WATER FOR TESTING THE AIR BOX OR AIR INTAKE TO THE ENGINE!**