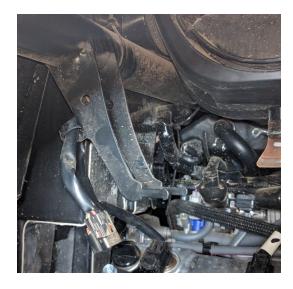
## **Preparing UTV**

- 1. From the bed area remove the top plastic covers.
- 2. Remove the rear intake bracket from the chassis (2x) 10mm head bolts. Loosen the 8mm head bolt on the clamp holding the coolant pipe. Slide the bracket down to get it out of the way. Follow that coolant tube down and remove the 8mm head bolt that secures the coolant tube to the chassis. Now you can pull slightly out and remove the coolant drain plug and drain coolant into a clean container.

  Do not refill coolant until kit is completely installed
- 3. Remove the bolts from upper radiator brackets. Unhook the clear tubes from the radiator fans and disconnect both of the fan connectors from underneath the bed. Remove both coolant hoses from the radiator. Then remove the radiator by sliding it forward and upwards. Set aside for reinstallation
- 4. Remove (6x) 12mm head nuts and (1x) 10mm head bolt from exhaust header, pull off and set aside (you will not need this anymore)
- 5. Remove emissions plates and tubes from the valve cover with 4mm allen. Unplug the solenoid and remove from chassis bracket
- 6. Install the black DLP block off plates but keep the bolts loose on the large plate (a bracket will be installed later using those bolts)
- 7. Cut off the bracket pictured below from the chassis. (\*\*TAKE CAUTION not to damage the wiring directly behind it)



8. Remove the (2x) 10mm head bolts that hold the factory plastic intake box on. The front intake bolt, directly behind the passenger seat, will require a long extension to remove

- 9. Remove the rubber line that goes from the top of the plastic oil tank breather to the factory air box and install the supplied mini air filter in its place
- 10. Loosen the intake clamps on the throttle bodies and unplug the intake air temp sensor. Then remove the intake box. (Recommend that the open throttle body ports get covered to avoid getting debris in the engine)
- 11. Remove the factory rearmost map sensor, next to the fuel rail
- 12. Remove the two small rubber caps from the throttle body. (pictured below) One is next to the rear injector and one is next to the middle injector

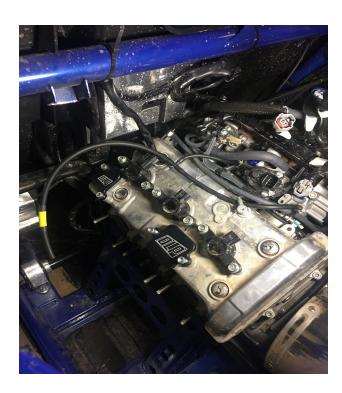




13. Install the supplied Blow Off Valve vacuum line into their places. It will be labeled BOV, this end will run along the valve cover towards the front of UTV. (as pictured) (it will get hooked up to the Blow Off Valve after the turbo is installed)



\*Recommended that you zip tie all your vacuum lines to prevent any boost leaks\*



- 14. Install the new supplied map sensor into the same place of the factory one (pictured in step 12). Use the supplied vacuum line and make sure this is not kinked
- 15. Remove the factory air temp sensor from the intake box and install into the intercooler with the supplied bolt
- 16. Install the intercooler fan shroud to the intercooler using (2x) M6 x 12mm bolts on the throttle body side and the (2x) M6 x 16mm bolts on the turbo side (leave the driver side fan shroud bolts loose for later install of bracket)
- 17. Install the fan to the shroud using the short M6 x 12mm bolts. \*\* Recommend using blue loctite on all bolts\*\*

# Installation of main components

1. Install the turbo manifold onto the engine. Make sure copper ring gaskets are in all holes





- 2. Thread the short side of the (4x) supplied studs, two onto the manifold, and two onto the turbo
- 3. Install turbo on to the manifold with the supplied gasket. (make sure the gasket is the correct way, it has an offset center hole) Torque to 50 ft lbs



- 4. Remove the oil pressure sensor with a 24mm socket. (located below the exhaust manifold next to the oil filter) Place an oil bucket or rags underneath
- 5. Remove the zip tie holding the wiring for ground from the chassis and remove the 10MM head bolt. (This bolt will not be reused)
- 6. Use thread sealant and install the sensor back into the (M) position of the supplied billet oil block
- 7. Install the supplied -3an to ½ npt adapter into the (S) position of the oil block using thread sealant Then the ½ npt plug into the side (S) position (unless an oil light or gauge is being used)
- 8. Install the oil block with supplied M6 bolts and o'ring into the factory oil pressure sensor location (recommend using blue loctite) (Do not forget to re-install ground wire to the top bolt)
- 9. Install the rubber grommet into the 2nd hole up on the chassis below the turbo (Pictured below)
- 10. Install the straight end of the black -3AN oil feed line through grommet and install it to the oil block fitting (Pictured below)





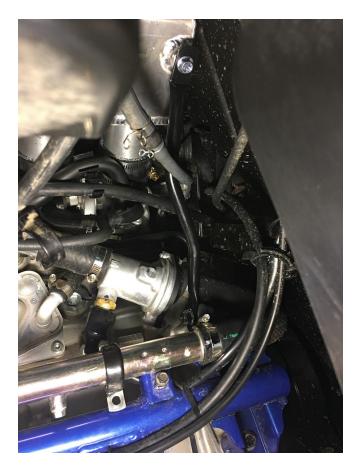
- 11. Install the 90 degree end of black -3AN oil feed line to the top turbo fitting and route the line toward the firewall. (Orientation pictured on the previous page)
- 12. Now you can hook up the BOV labeled vacuum line up to the blow off valve nipple on the turbo
- 13. Place the short silicone couplers onto the throttle bodies and slide clamps over the couplers. Position the lower clamps to keep full throttle actuation
- 14. Position the intercooler assembly (take care not to damage the fins on the intercooler) Then from the passenger side, position the tubes into the throttle body couplers. Wait to tighten clamps to make the rest of the install easier

- 15. Reach your hand in between intercooler and engine and plug the air temp sensor in
- 16. Position the drivers side of the intercooler into the coupler on the turbo
- 17. Verify the throttle body couplers are straight and tighten the intercooler to throttle body clamps. They do not have stops like the factory to keep them level. **NOTE: make sure to position the clamps so they do not restrict the throttle body from actuating.**

#### \*IMPORTANT (If the boots are not positioned correctly, a boost leak may occur)

- 18. Using the supplied hose clamp, reattach your idle air valve hose to the black nipple on the intercooler
- 19. On the passenger side, install the tubular intercooler brackets using the short 10mm head bolt to the intercooler and the 12mm head nut and bolt to the ears on the engine block. (Pictured below)
- 20. On the driver side install the sheet metal bracket into the large block off plate bolts and the fan shroud bolts. Previously left loose (Pictured on the next page)
- 21. The turbo to intercooler coupler clamps can now be tightened







### Odds and ends

- 1. Remove the OEM U-shaped coolant line on the factory oil cooler (pictured below)
- 2. Install the adapter fittings into both sides of the turbo with the included sealing washers. Take care not to overtighten the fittings as they will break if overtightened
- 3. Install the coolant line with the 120 degree fitting to the adapter fitting on the outside of the turbo and the coolant line with the 45 degree fitting to the inside
- 4. Route both coolant lines above the exhaust just below the bed
- 5. Install the 4 inch rubber hoses to the barbed end of both lines with the clamps supplied. Install both lines in place of the "C" shaped hose that was previously removed and secure with clamps
- 6. Secure both coolant lines to the frame above the exhaust (verify rubber lines are not kinked or rubbing on anything sharp)



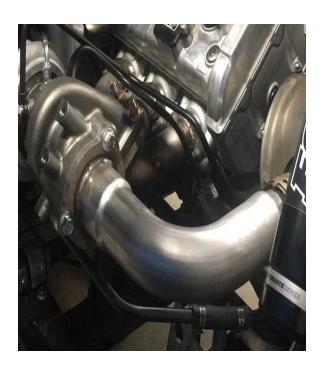


- 7. Install the supplied flanged oil hard line to the bottom of the turbo with the supplied gasket and bolts using M6 x 16mm long bolts supplied
- 8. Remove the plastic stator cover plug with a 10MM allen. Install supplied billet plug with supplied O-ring. Then install the -8AN 90 degree fitting into cover (as pictured below)





- 9. Install the oil soft line with the 45 degree line to the 90 degree fitting previously installed. This fitting should be angled about 45 degrees up. Install the other end of the soft line onto the oil drain hard line with the supplied clamp. \*\*Secure this line out of the way of the rear parking brake rotor\*\*
- 10. Install the muffler of your choice (OEM muffler may be used with or without spark arrestor) There will be a noticeable HP loss with spark arrestor still installed
- 11. Install the 3 bolt flange exhaust tube from turbo to muffler using the gasket and 3 supplied bolts, use the factory clamp for the muffler. (As pictured on the next page)



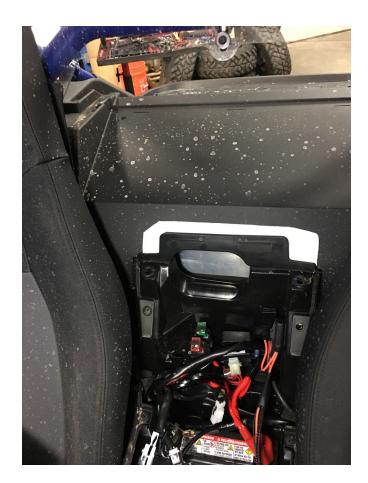


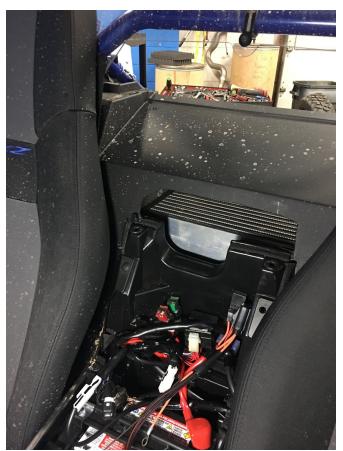
- 12. Install the turbo mounting bracket to the chassis and the turbo. (as pictured above) The roll cage bracket will need to be installed INSIDE the vertical brace. Then using the short (2x) 14mm head bolt to install the mounting bracket to the turbo and then the 10mm head nut and bolt install the turbo mounting bracket to the roll cage bracket. \*Take caution not to pinch the clear hose running along the roll cage\*
- 13. Cut the vacuum line from the throttle body to the charcoal canister right below the oil tank on the passenger side. Install the check valve into that line with the flat side facing towards the charcoal canister (as pictured)



- 14. Remove the center console cover
- 15. Cut out the intercooler template at the end of these instructions, place the template over the factory induction hole (as pictured on the next page)

16. Mark the outline of the template onto the plastics then cut out the outlined area (as pictured)





- 17. Install the Intercooler scoop onto the intercooler using (4x) M6 by 12mm bolts with blue loctite
- 18. Now the radiator can be reinstalled

## **Intake Installation**

If using the factory rear cargo bed, use the template at the end of these instructions to cut holes for the intake pipe and the intercooler inlet

#### \*\*IMPORTANT\*\* UNI Pod filter must be oiled prior to install\*\*

- 1. Install 90 degree silicone coupler on to turbo inlet
- 2. Feed the top of the intake tube through the bed, then secure the bottom to the 90 degree coupler previously installed
- 3. <u>Standard pod filter</u>: Install Outerwears onto the oiled filter and install filter to the intake tube angled away from the roll bar

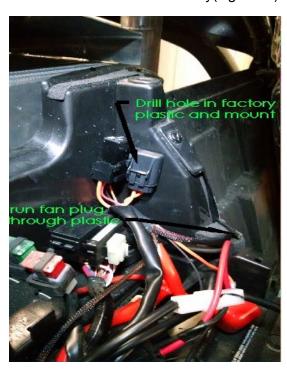
<u>Donaldson intake upgrade</u>: Install the mounting bracket on the factory roll cage. Mount the donaldson filter assembly. (filter housing may need to be clocked before install) Install coupler onto the intake pipe and run the other end to the donaldson outlet





### Install fan wiring harness

- 1. Hook up the positive and negative wire to the battery. (orange is positive)
- 2. Drill a 1/4" hole in side of factory plastic to mount the relay (SEE PICTURE)
- 3. Run the intercooler fan plug (short part of harness) through the factory plastic and plug the fan in
- 4. The longer part of the harness will run along the passenger side console area to the front of the car. You will need to remove the center shifter plastic and few of the clips for the side panel. You can tuck the harness into the factory rubber sound deadening material or zip tie to the factory harness
- 5. Remove the hood ((2x) allen head bolts) to get access to the front side of the firewall, Unplug the white connector for accessory(cigarette) outlet and plug in the wiring harness in-line



#### 2019 DUAL FAN RELAY TAP INSTALLATION



(Arrow points towards the front of the car)

Due to the limitations of the 2019 YXZ ECU, the two cooling fans need to be tied together for full fan control

- 1. Find the yellow wire under each of the fan relays circled.
- 2. Using the T-taps, tap into each yellow wire
- 3. Connect the two T-taps with the jumper wire supplied

### Final assembly

- 1. Fill and bleed coolant system
- 2. Reinstall rear covers and center console
- 3. Install the 91 octane sticker next to the fuel fill cap and the intercooler sticker over the inlet hole
- 4. AFTER FIRST HEAT CYCLE, RETIGHTEN ALL OF THE EXHAUST HARDWARE

  \*\*Periodically check the tightness of all exhaust hardware after turbo install is complete\*\*

