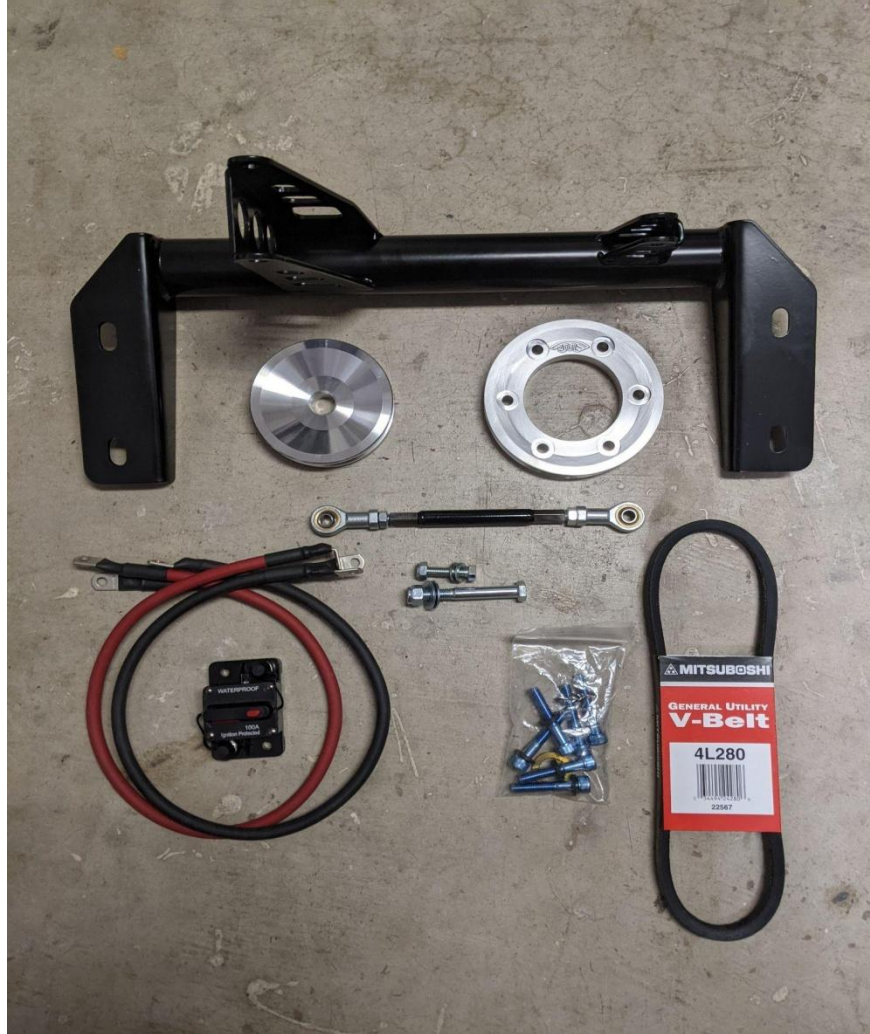


Installing your new JTE alternator kit.

This kit requires you to purchase your own GM CS121 style alternator.



The alternator used in this instruction manual is a Powermaster 8062

Tools needed for the install

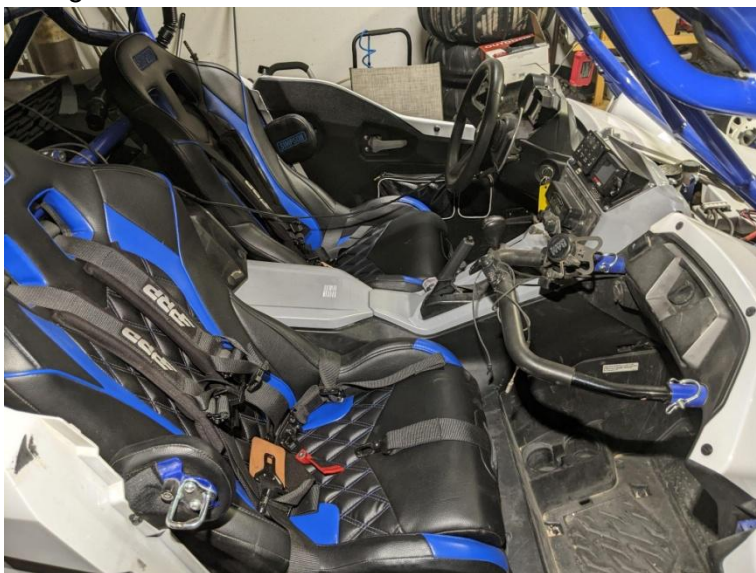
- 7mm socket
- 10mm Socket
- 12mm Socket
- 14mm socket
- Torque wrench (5-70ft/lbs)
- 10mm wrench
- 12mm wrench
- 13mm wrench
- 2- 9/16 wrench or socket
- 15/16 wrench and Crows foot

- 8mm allen wrench
- 6mm allen socket
- Blue thread locker
- Flat Blade screwdriver
- Ratchet
- Channel Locks
- Ratchet extensions

1. Remove the skid plate fasteners using the 10mm socket and Place skid plate aside, now you are able to access the area from underneath your YXZ



2. Remove passenger side items form within the YXZ



2.1 Remove passenger side seat/mounting bracket using the 12mm socket



2.2 Remove center console cover



2.3 Remove the passenger side plastic cover. Remove the plastic fastener holding the center trim.



2.4 Gently move the trim up to expose fasteners holding the side cover on.





2.5 Use a Flat blade screwdriver and 10mm socket to remove the fasteners holding the cover in place.

5 plastic fasteners marked in red
3 10mm bolts marked in green

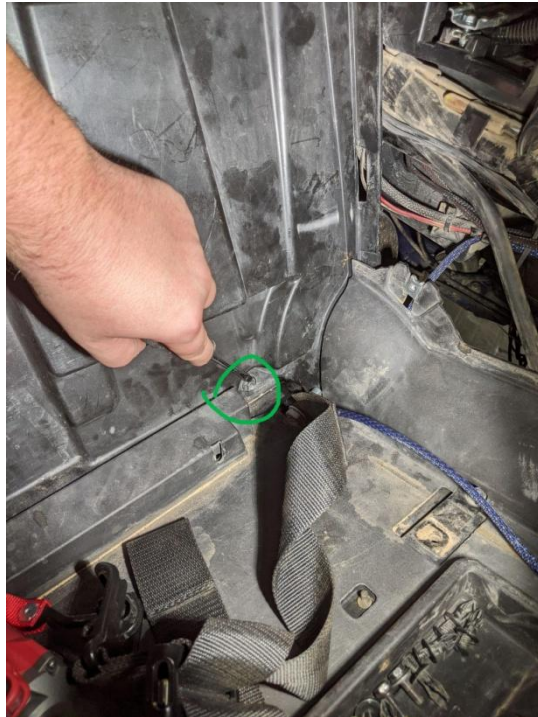
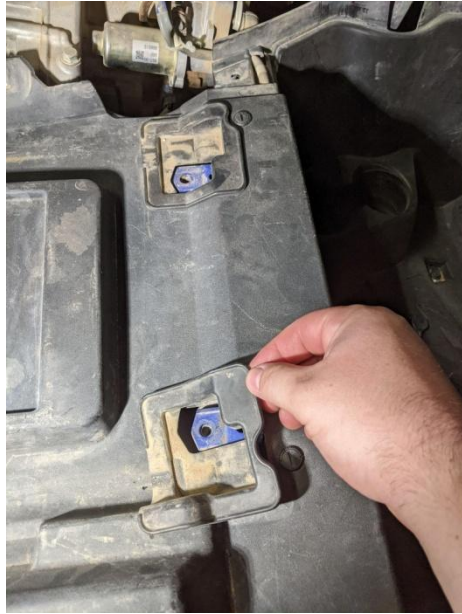


2.6 Now remove the side cover starting from the front of the YXZ and place it to the side



2.7 Now remove the gas tank cover fasteners

- 3 plastic fasteners marked in red
- 1 10mm bolt marked in green
- 2 rubber seals

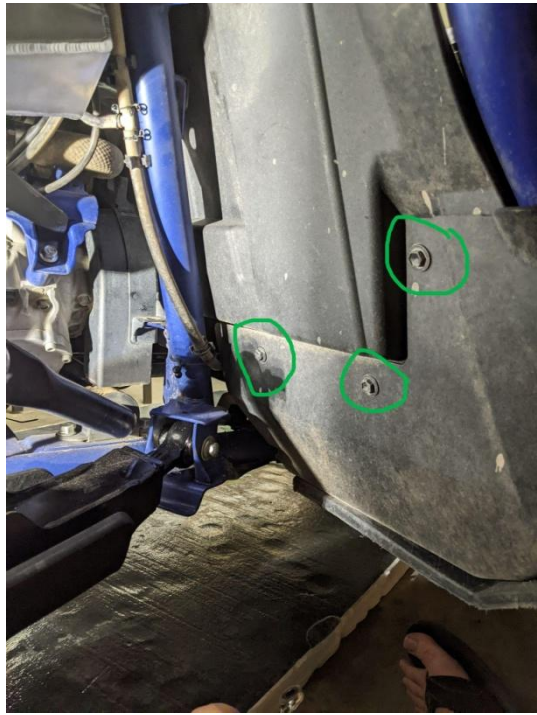
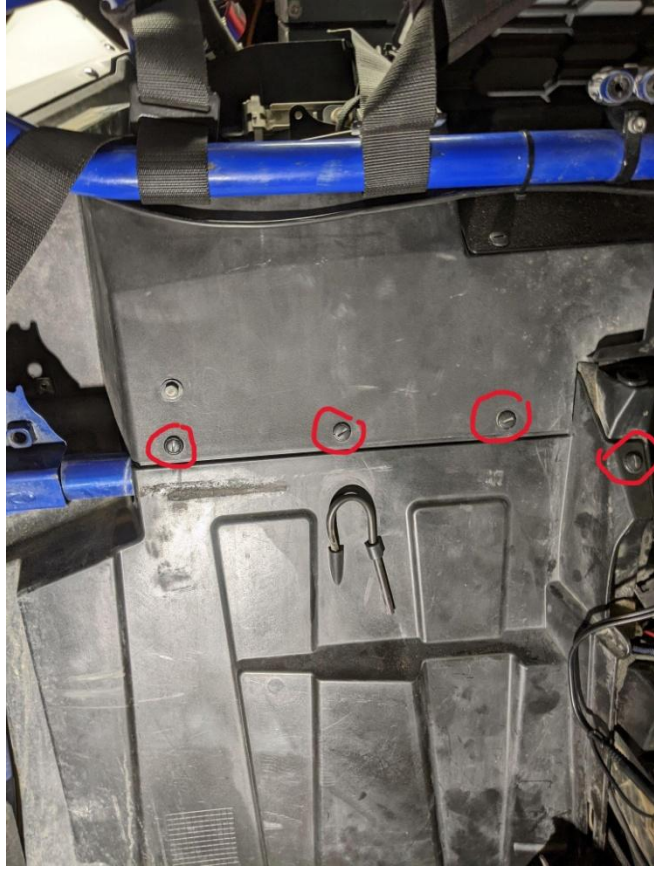


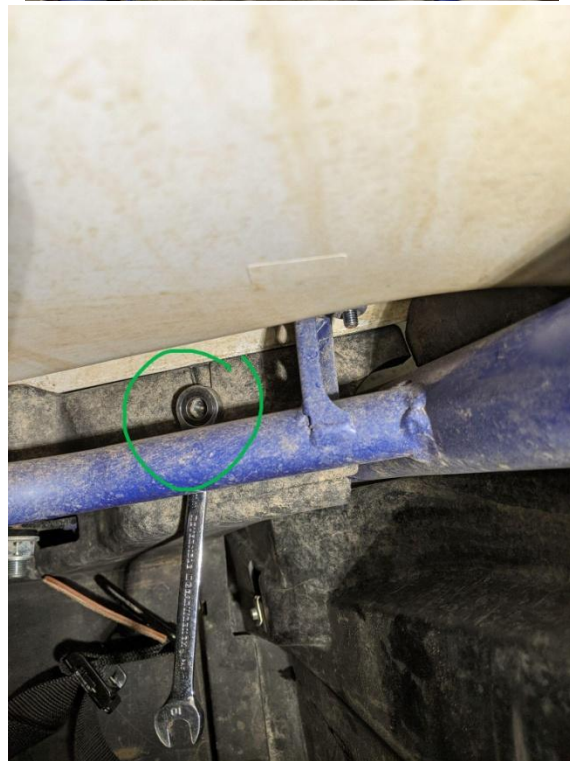


2.8 Now work on removing the back firewall. I decided it was best to leave the top plastic attached to the car. You are more than welcome to remove all plastic from the back, reassembly will be easier.

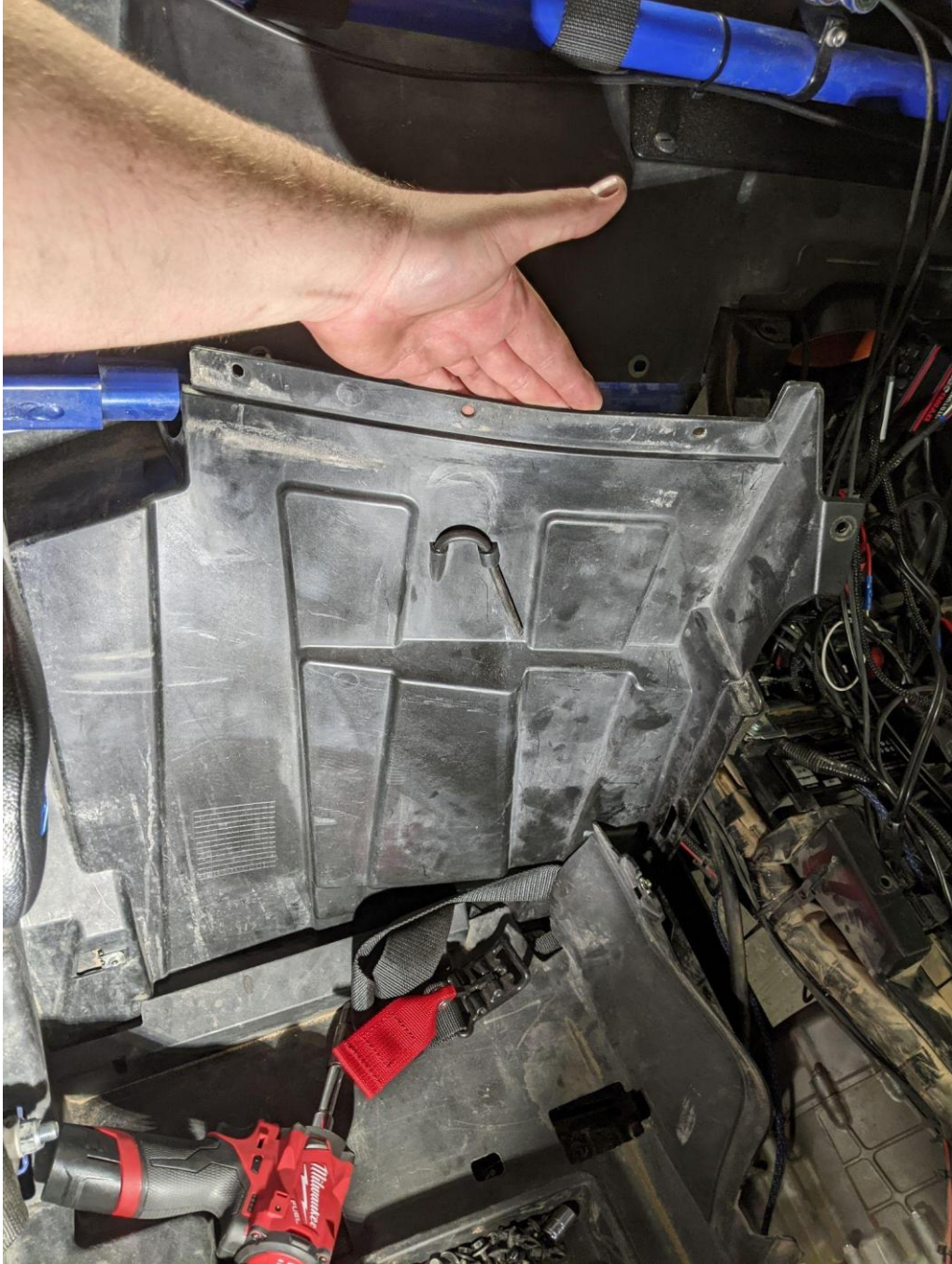
4 plastic fasteners marked in red

5 10 mm bolts marked in green

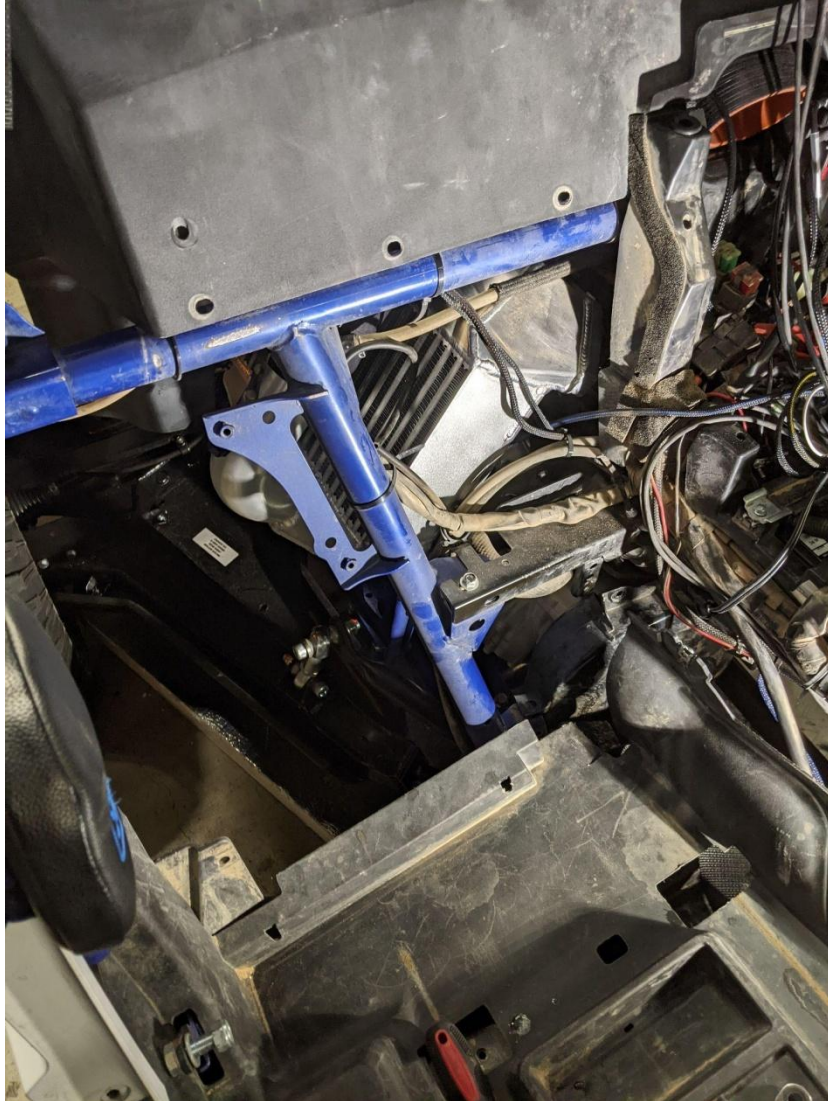




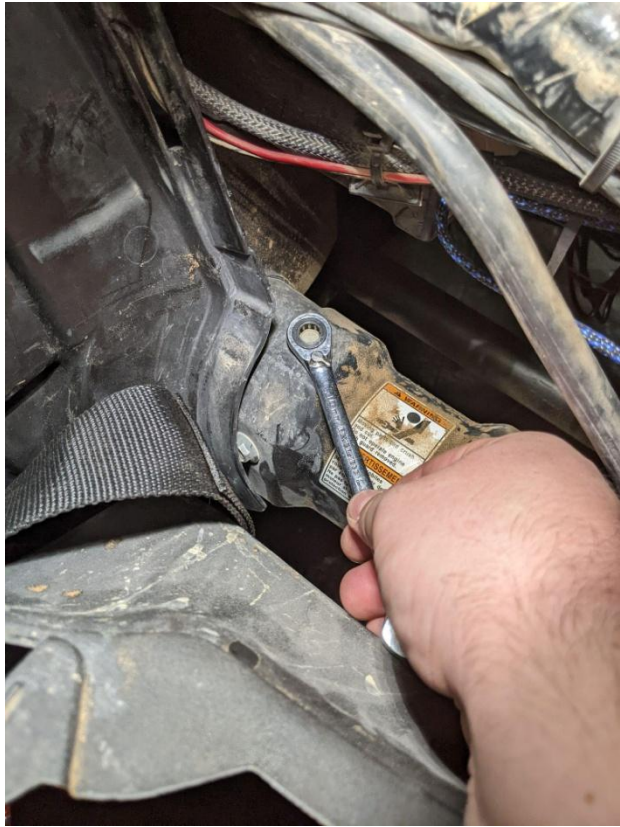
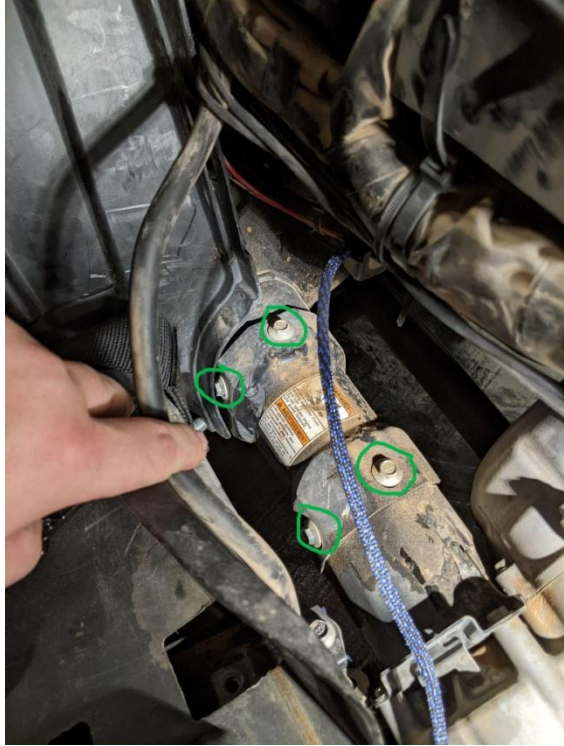
2.9 Once all fasteners have been removed, I found it best to pull on the top right corner and slowly work the firewall out. Be sure to remove the vent line before removing the fire wall.



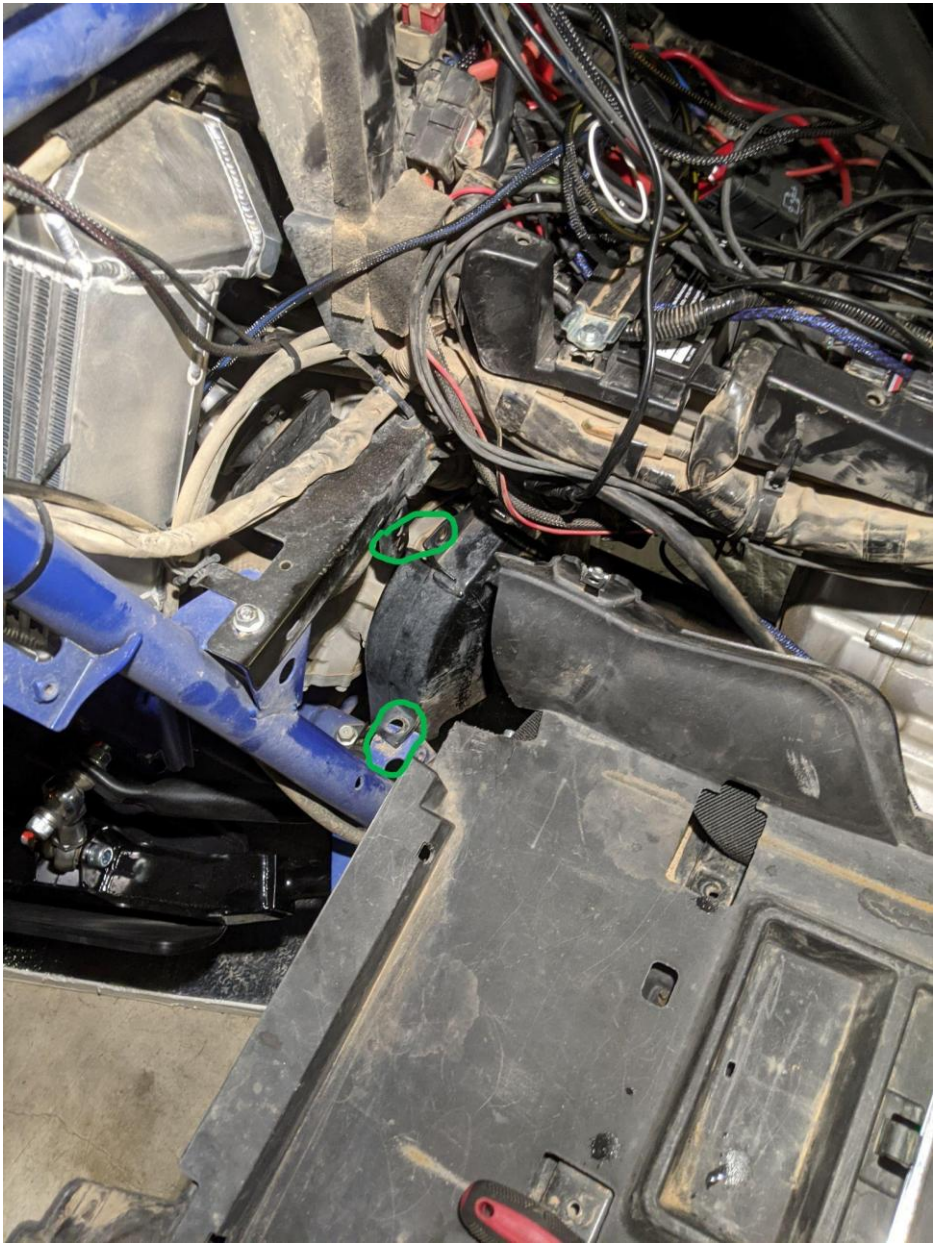
2.10 Once the passenger side firewall has been removed you can start to remove the driveline shield off.



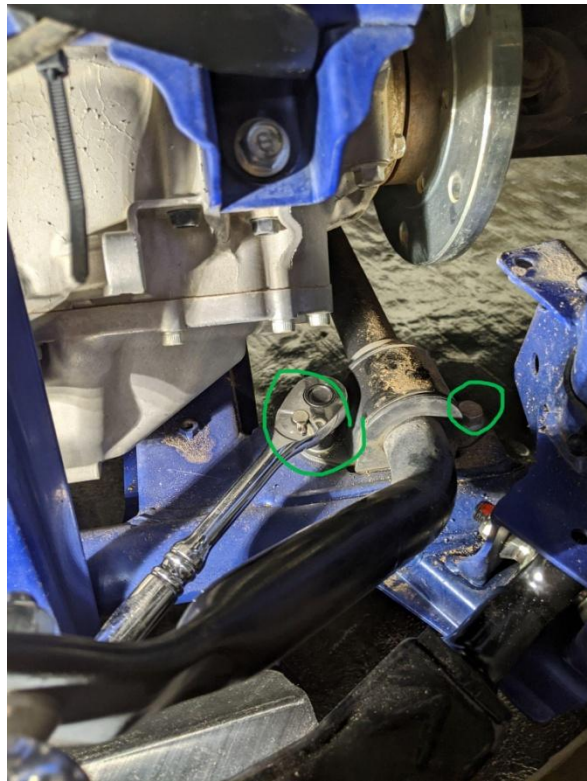
3.1 Remove the 4 10mm bolts holding the plastic shroud.



3.2 Now remove the 2 10mm bolts holding the metal drive line shroud on.



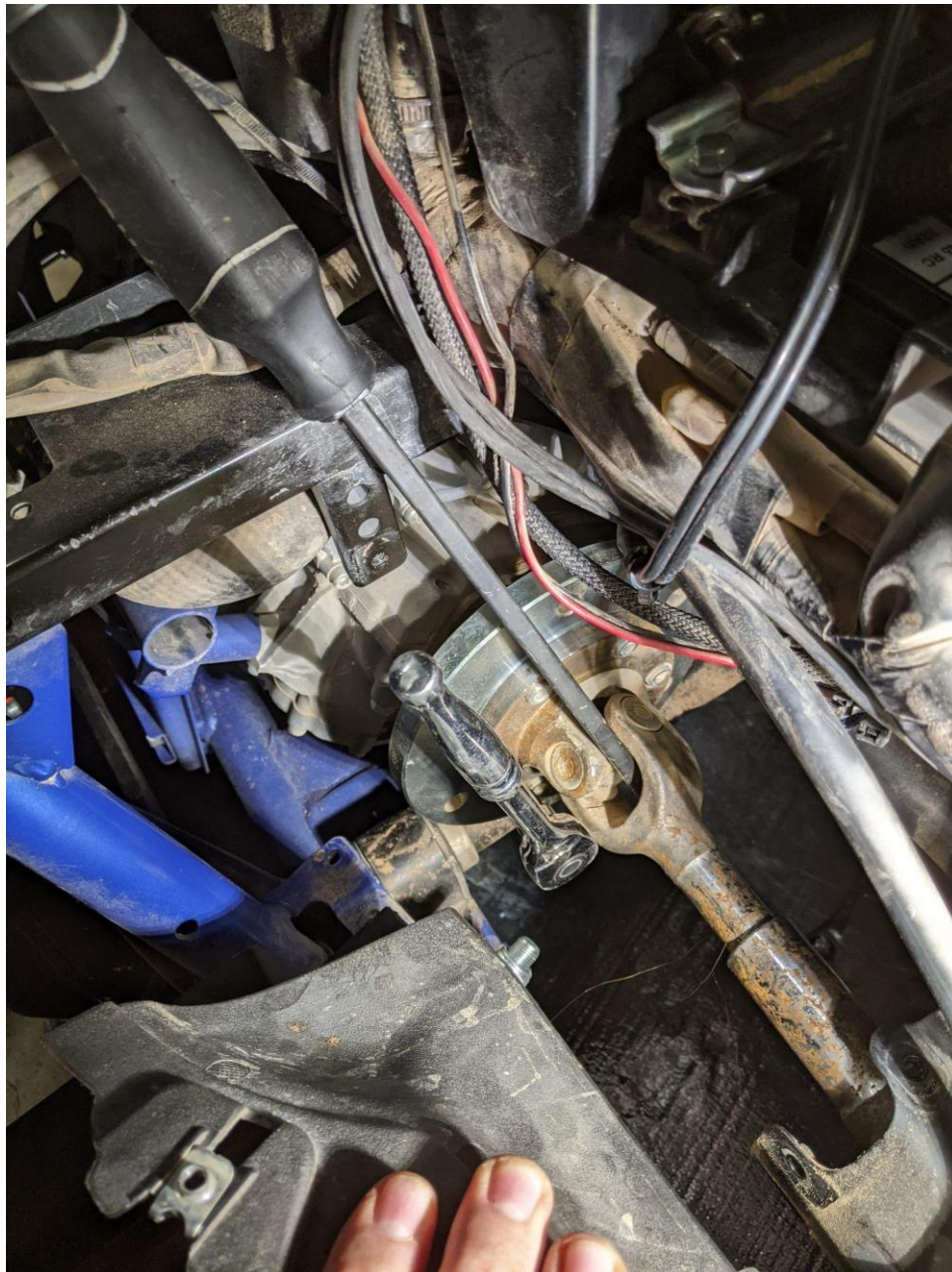
4. Once the shroud is removed start removing the sway bar bolts. 4 14mm bolts 2 will be on the passenger side and 2 will be located on the drivers side.





Try to avoid spinning the flywheel clockwise as there is a possibility of the timing chain jumping teeth causing your car to lose its timing.

5. Now it's time to remove the drive shaft. You will need to prevent the motor from turning over. I used a pry bar in between the yolk as shown below to achieve this. There are 6 6mm allen bolts that need to be removed. You can discard all but one bolt; it will be used for the ground bolt on the alternator. New bolts are provided for the drive shaft.



5.1 Once the 6 bolts are removed pull the drive shaft back and move it to the side.



5.2 Before pulling the drive shaft apart, mark the drive shaft with a marker to align it back up as it once was.



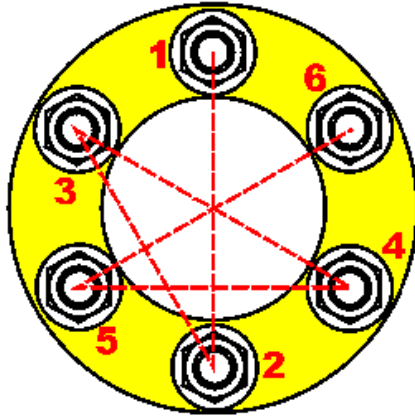
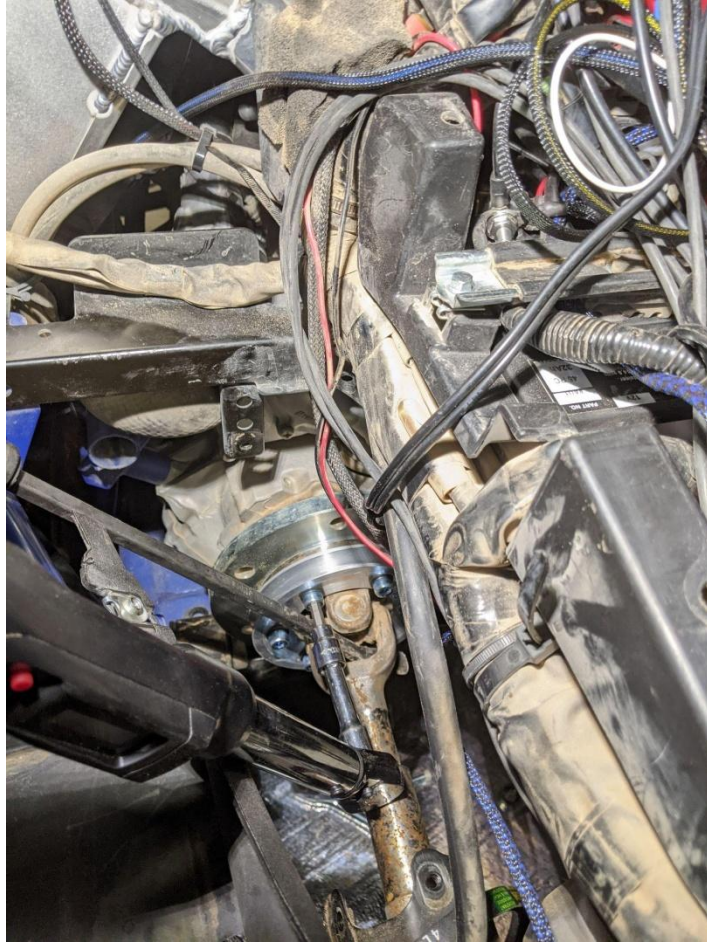
5.3 Now remove the drive shaft by pulling it apart. Now install the pulley with the JTE logo facing the transmission and put the driveshaft back together aligning the marks you put on earlier. **Be sure to install the belt at this point.** Now is a good time to put a small amount of grease in the slip joint although it's not necessary.



—Before you install the drive shaft make sure you put the belt on—

5.4 Now you are ready to reinstall the drive shaft. Rotate the new pulley till the holes align up with the flange and put a couple bolts in for guides, Then get the flange to align to the flywheel and hand tighten the two bolts you only need a couple threads of engagement. Now it's time to install the rest of the bolts with blue thread locker. When installing the bolts make sure you are using the washer provided. The bolts will be torqued to 37ft/lbs one again you will be using your pry bar to keep the engine from turning over. Torque in a star pattern.

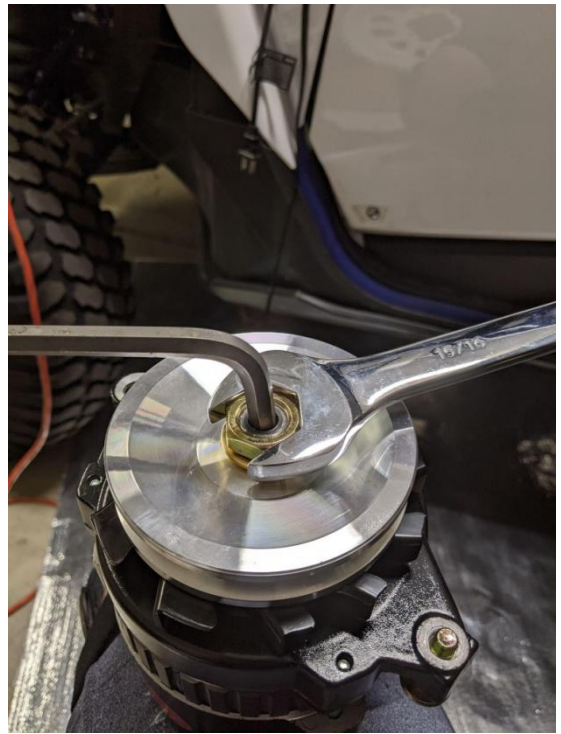


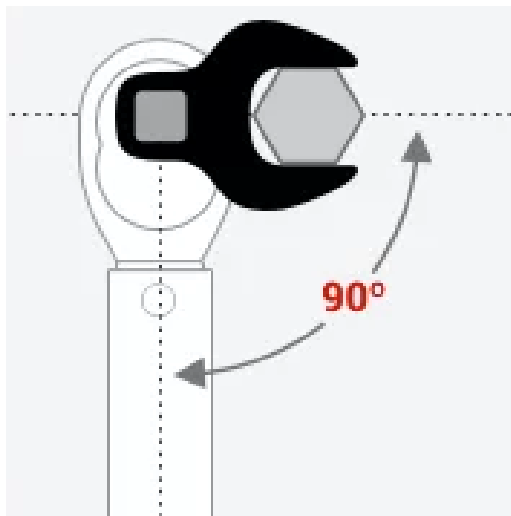


**Criss-Cross Tightening
Sequence for
Circular Bolt
Patterns**

6. Once the drive shaft is reinstalled it is time to install the pulley on your alternator. Remove the hardware that is installed on the alternator. Retain the hardware as it will be used. Remove the locking washer and replace it with the one provided in the kit. Install the pulley with the step facing the alternator. Using a 8mm allen wrench hold the shaft in place and use the 15/16 wrench/crowsfoot to tighten the nut to 70ft/lbs. Be sure to have the crows foot at 90 degrees to the torque wrench to ensure the correct torque value. diagram below. I used bolt mark but it is not necessary.



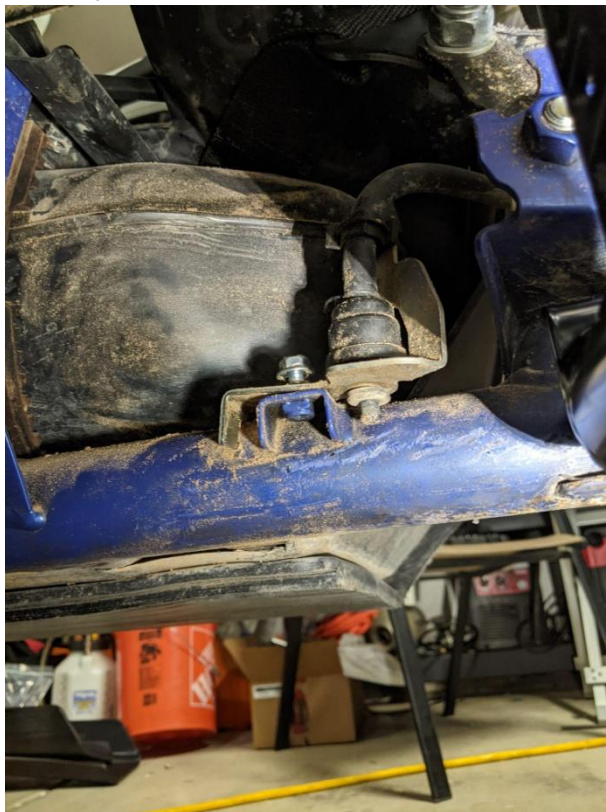




7. Now that you put the pulley on, go under the YXZ and place the alternator up on the driveshaft out of the way.

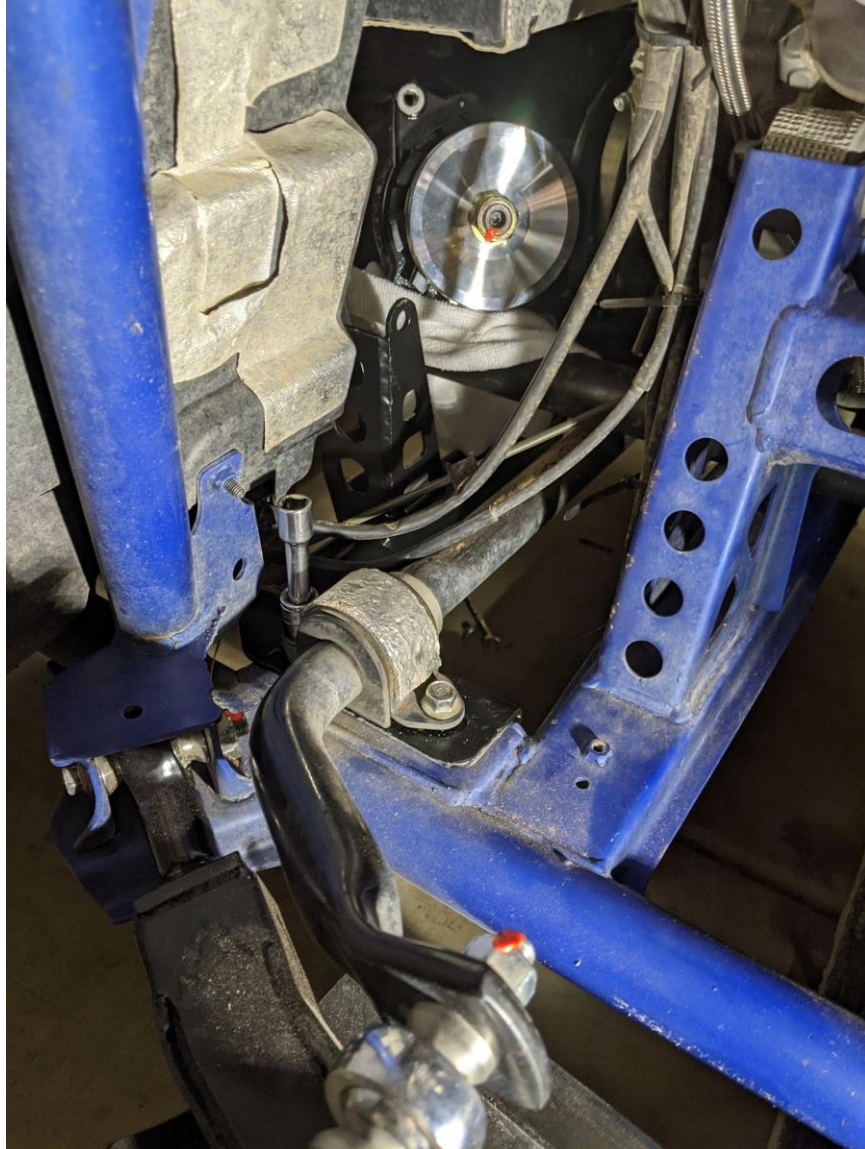


8. Remove the breather and bracket. It is held on with 1 10mm bolt, once removed tuck it out of the way as it's in the way when you install the alternator bracket.



9. Now grab the alternator bracket and install it. Lift the sway bar mounts out of the way to make room for the bracket. Installing the bracket should be nice and easy. When installing the bracket angle the front of the bracket down (Front meaning the part of the bracket furthest to the front of

the YXZ) to clear the breather mount. Make sure both mounting tabs are in between the frame and sway bar mount. Once the bracket is installed grab the 14mm bolts you removed and reinstall them through the sway bar mount and alternator mount, hand tighten them as you will need to align the alternator pulley with the drive pulley by moving the bracket. If you are having a hard time aligning the bracket you can use a clamp/pry bar to help you align the holes.

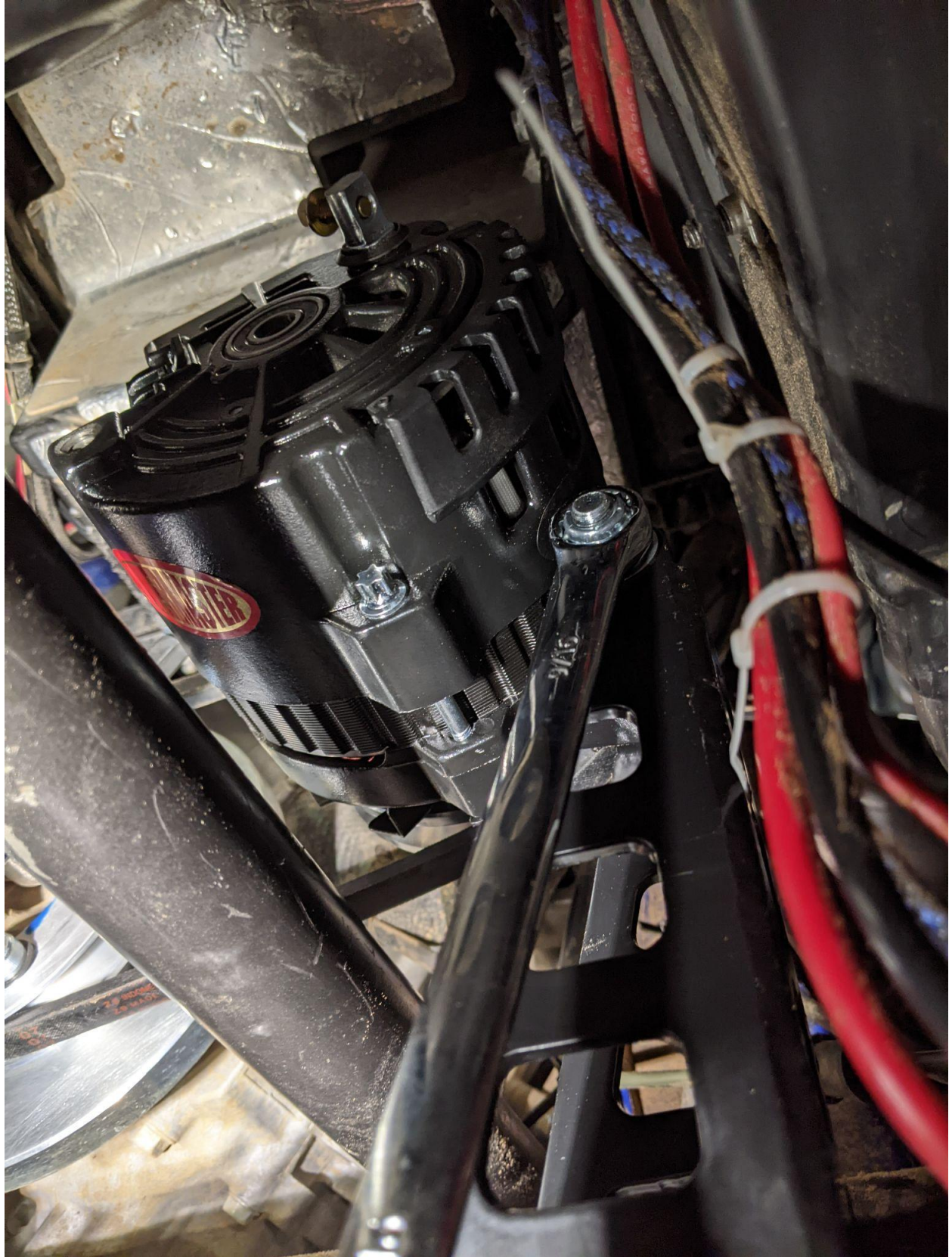




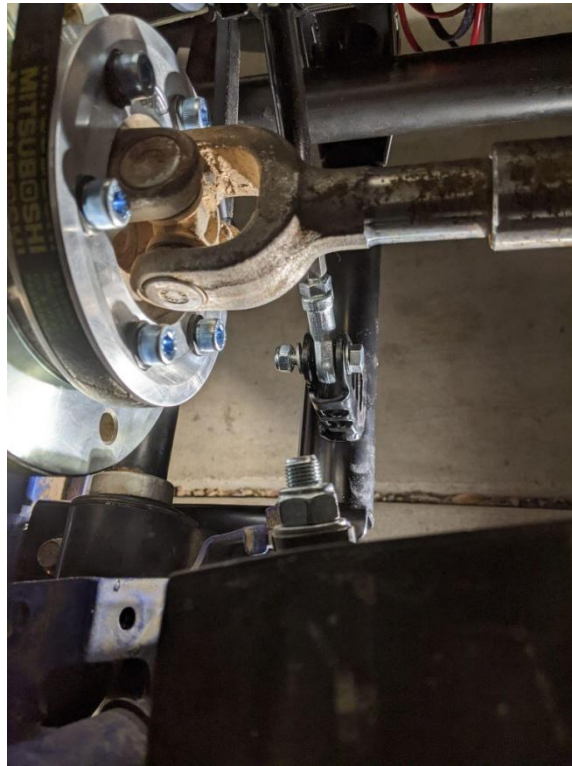
10. Now it's time to mount the alternator to the bracket. Start by using the 3/8-16 3 inch long bolt provided rotate the alternator so that the pulley is facing the engine and slide the wide mount into the bracket. Slide the bolt with a washer through the bracket and alternator. Now place another washer on the other side and screw on the nut. Now snug the bolt up using 2 9/16 wrenches, make sure it is tight but loose enough the alternator is able to rotate.

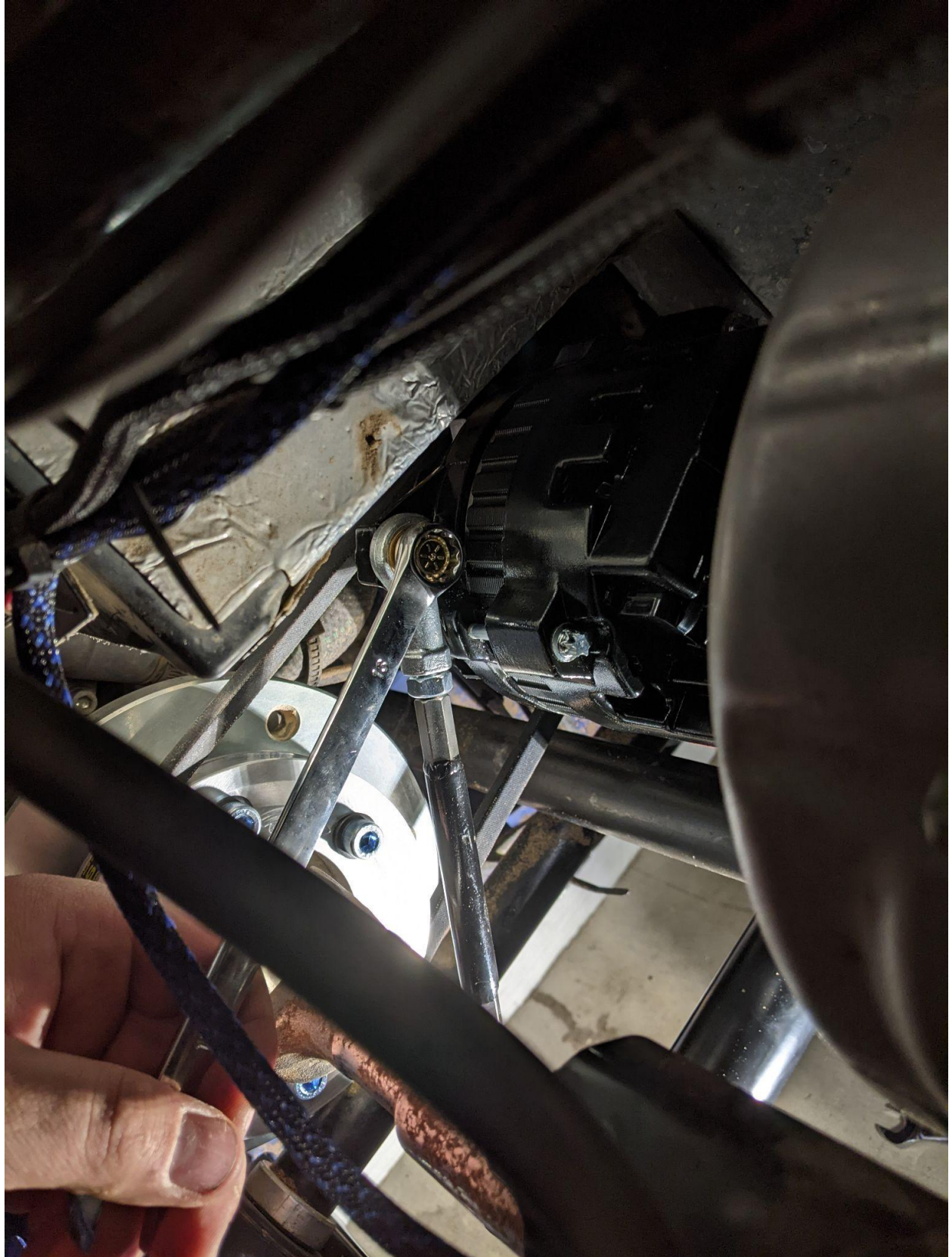




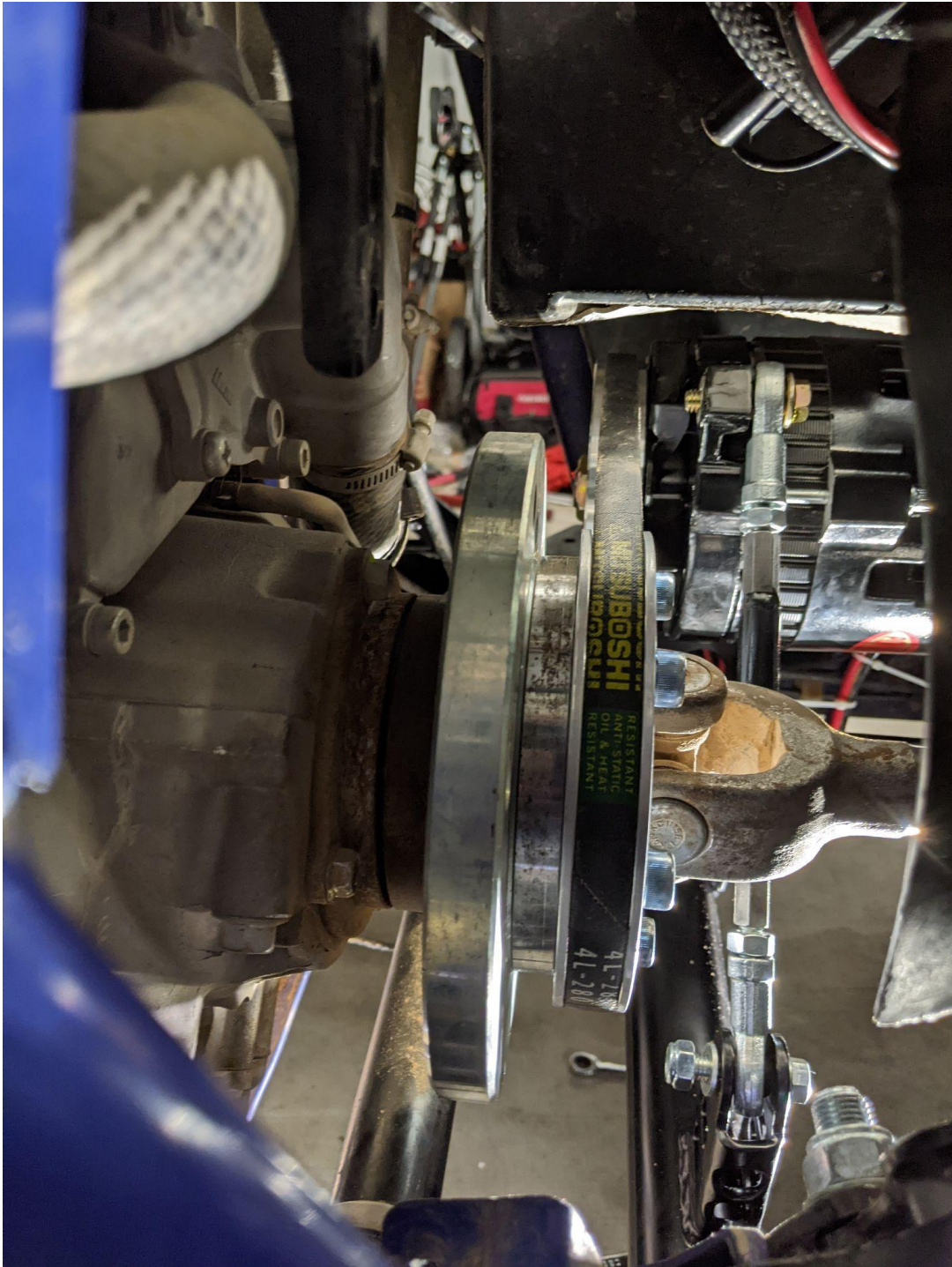


11. If you haven't already put the belt on both pulleys. Grab the turnbuckle and screw it together so it's at its shortest. Install the turnbuckle using the m8 bolt provided on the lower mount. Make sure to include a washer on the bolt and nut side. Now mount the turnbuckle to the alternator with the hardware provided with your alternator. I found it best to be under the car so you can push up on the alternator and feed the bolt through. Now tighten both the bolts 18ft/lbs.

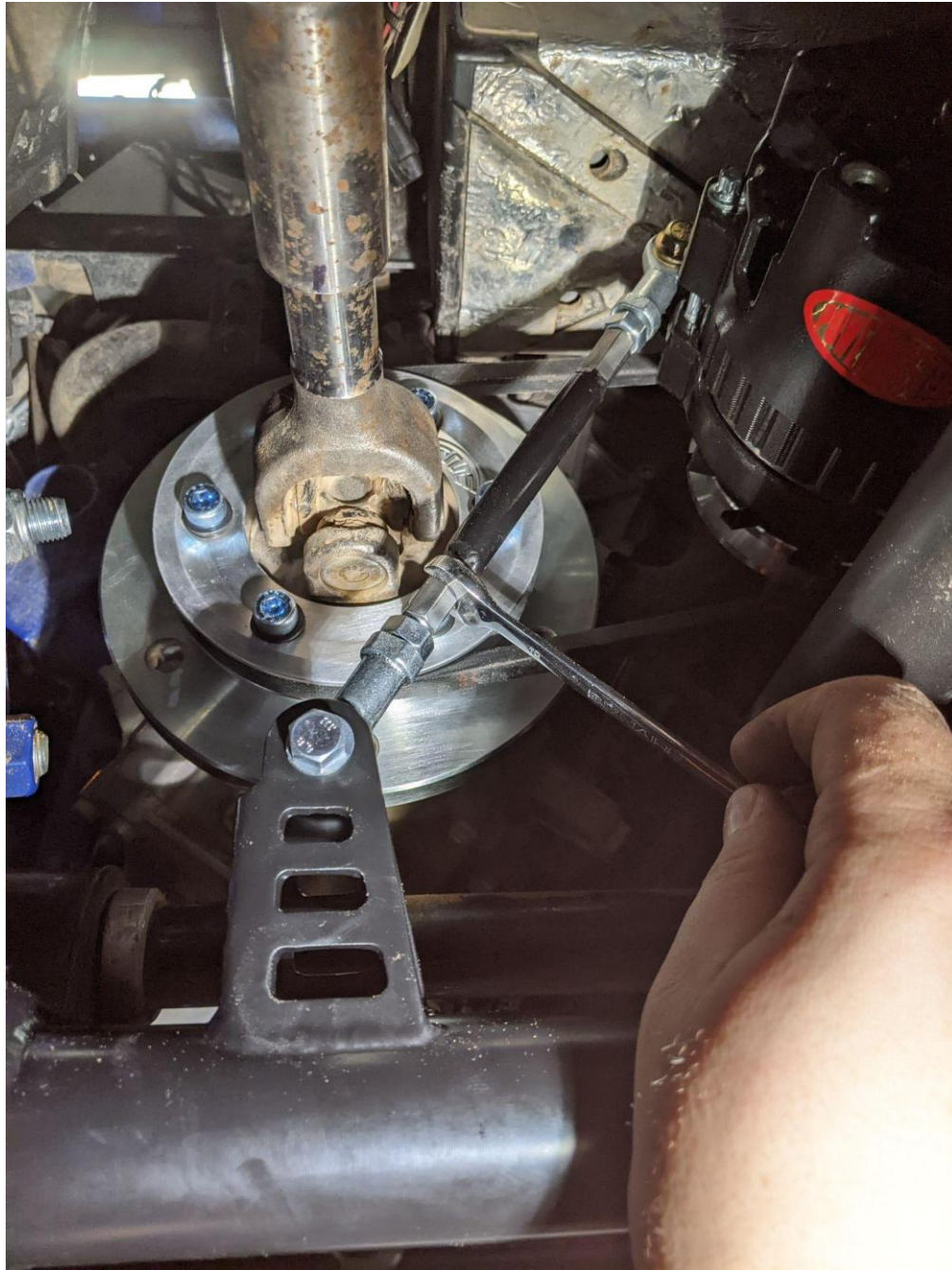




12. Now align the alternator with the drive pulley. Easiest to have a friend help. Slide the bracket forwards/backwards to align the drive pulley to the alternator pulley. Once the pulleys are aligned lock the bracket into place by tightening the sway bar/ alternator bolts down to 55 ft/lbs. After doing this verify that the pulleys are inline still if they are not loosen the bolts back up and realign the pulleys again.



13. Now adjust the belt tension by turning the turnbuckle using a 10mm wrench. I used about 1/2 inches of play in the belt. Do not over tighten the belt as this can cause damage to your alternator and damage the belt.







14. Once the desired tension is set, lock the turnbuckle into place using the 13mm jam nut on the top and bottom.

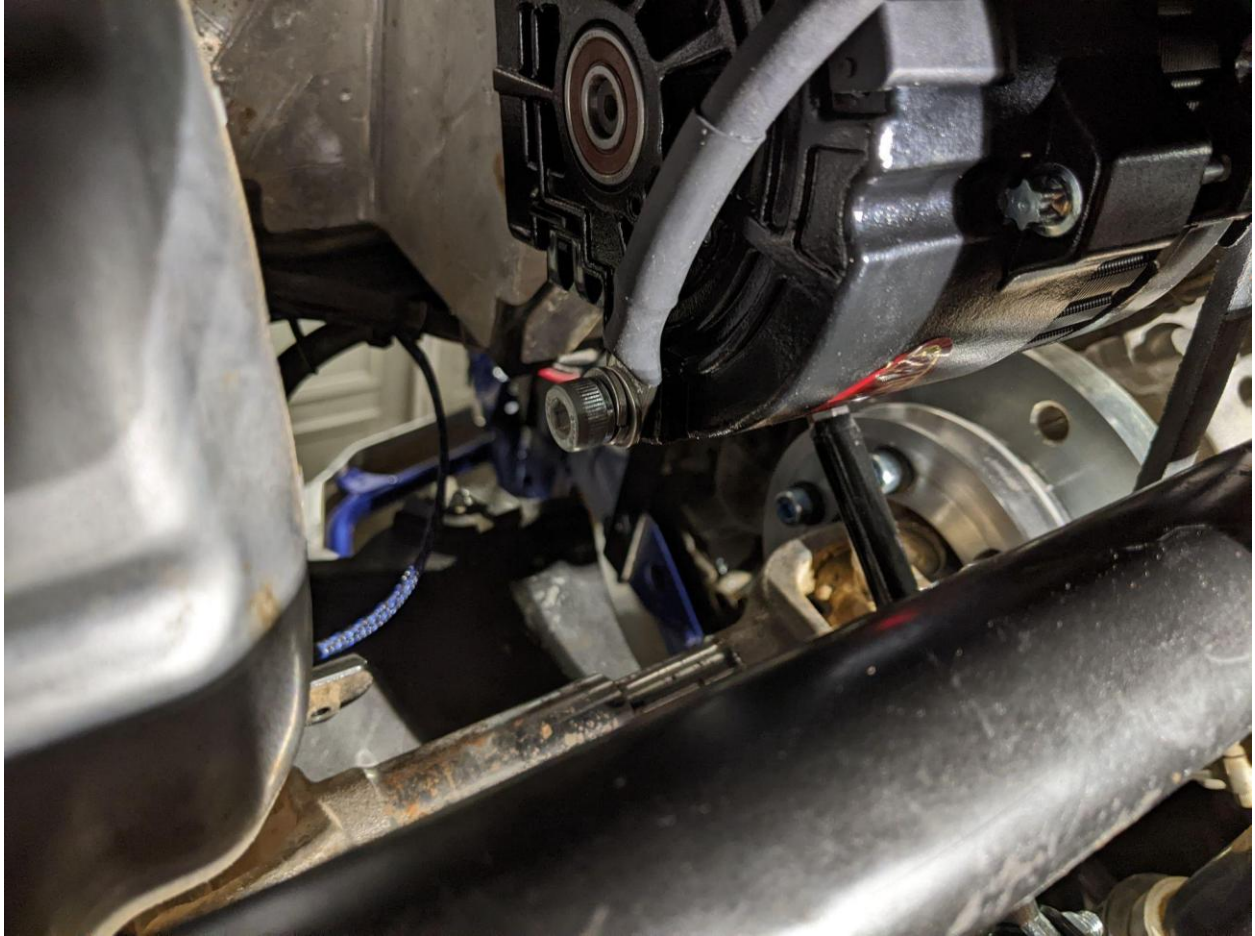


15. Now it is time to install the wiring. Start with the ground, the ends have 2 different sizes: the larger opening is going to the alternator side and the other one goes to the ground on your engine. Reuse 1 bolt (M8x1.25) from the driveshaft flange and install a lock washer and washer on it. This side will be installed on the backside of the alternator wire leading towards the driver side around the alternator bracket, hand tighten the wire for now. Run the other side towards the

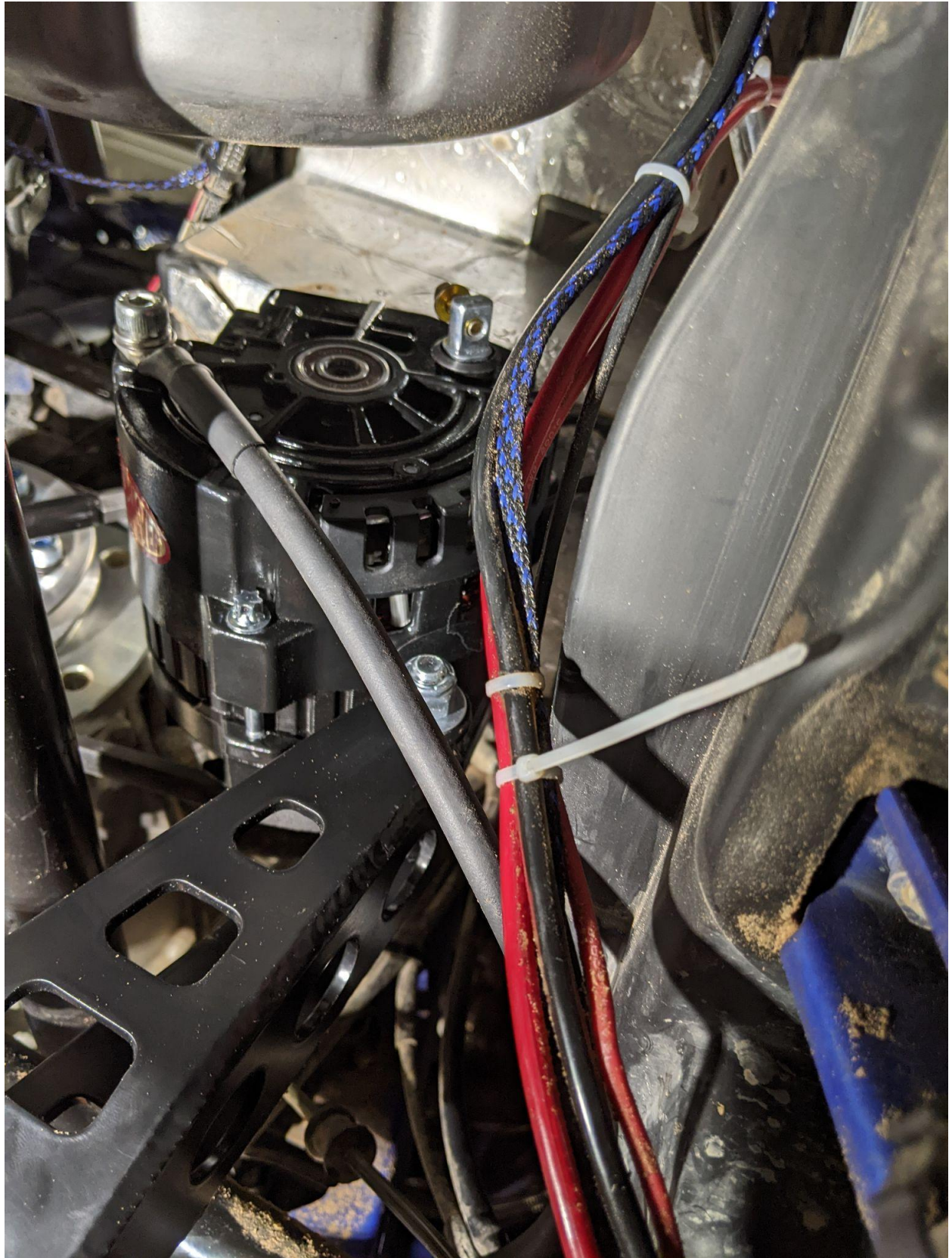
engine oil filter there is a factory ground near the location. Follow the OEM wiring harness as it keeps the wire out of the way best. Loosen that bolt with the factory ground and place the alternator ground there. Retighten that Bolt to 5.2ft/lbs stock fastener is a 10mm bolt head. Zip tie the ground wire to the harness as shown below. Now go back and adjust the ground wire on the back of the alternator as you see fit avoiding rotating parts and torque down the bolt to 12ft/lbs.

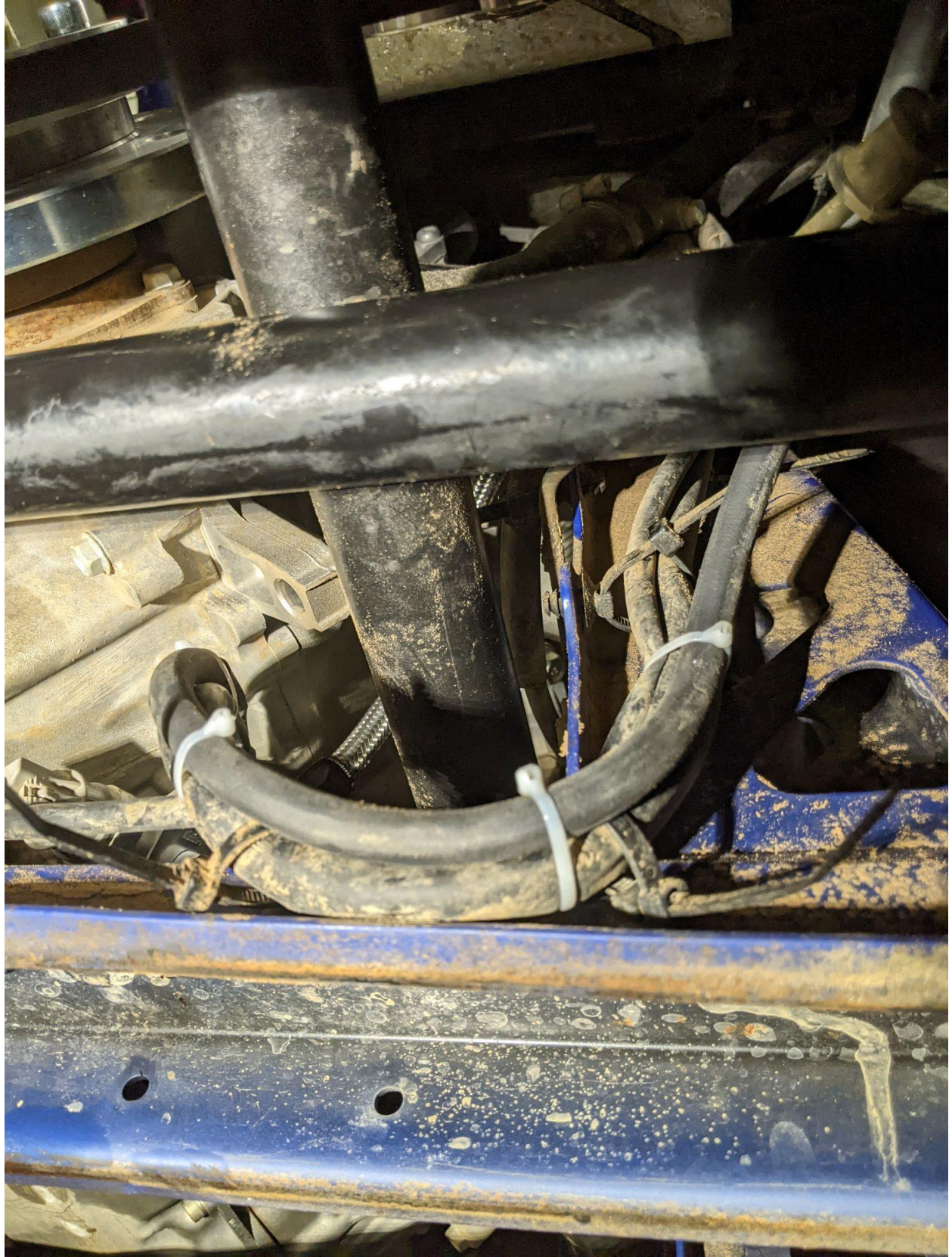












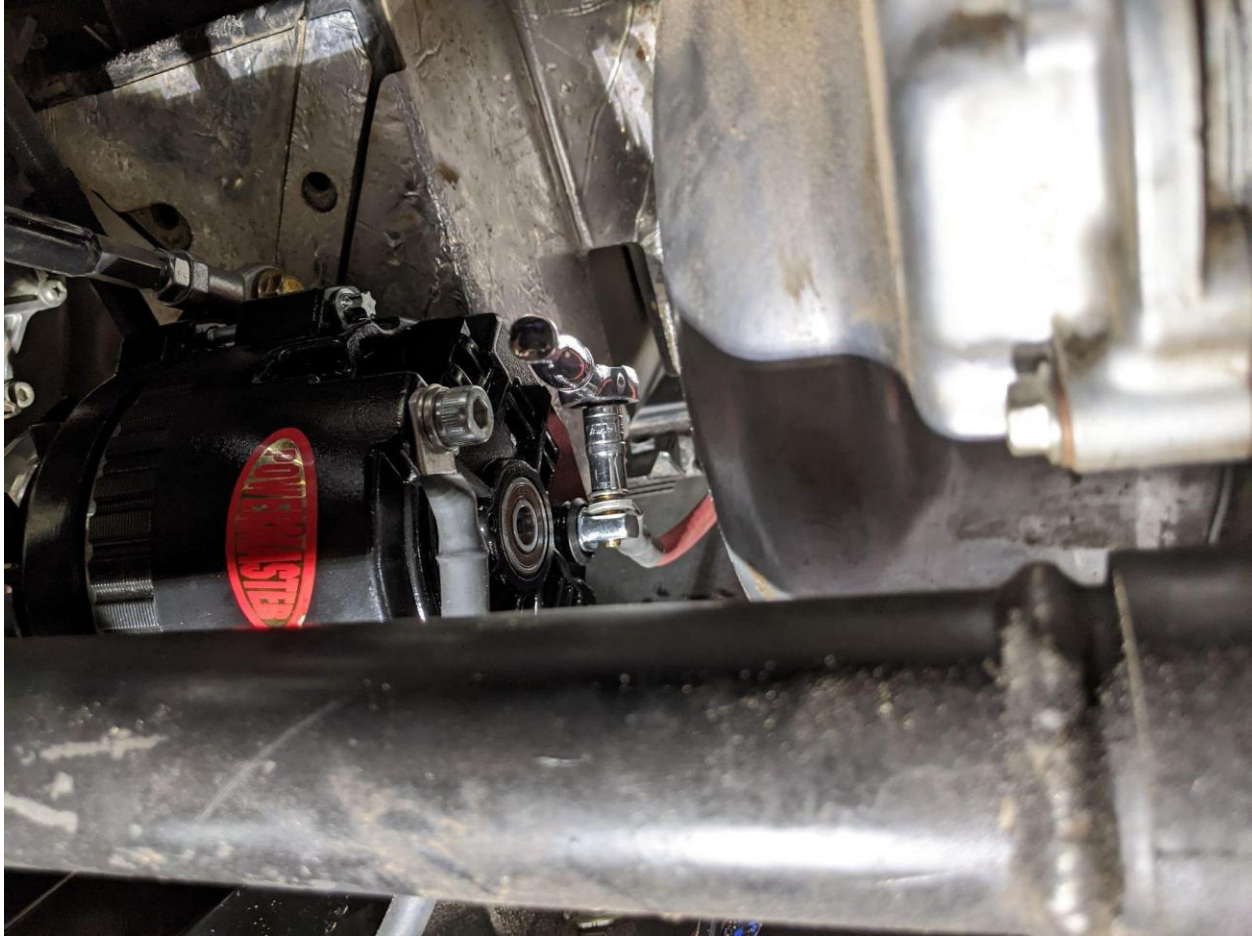
16. It's time for the positive lead. There are 2 wires. Grab the longer cable first, Note the wire has a 90 degree connector and one straight connector. Start by taking the straight connector and feed it where the wiring harness is for the ecu. You should be able to see the wire from the passenger side, grab the wire and lay it on top of the transmission as shown in the image below. Go back under the YXZ and grab the wire and attach it the the positive lead on the alternator using the hardware provided with your alternator this with the Powermaster 8062 it will be a 7mm hex drive bolt torque the bolt to 6ft/lbs.







Once cable is routed and connected, Tie it up using cable ties so that it does not rub against transmission, (not shown)



17. Time to install the circuit breaker. You can decide if you want to install it using screws or velcro the choice is yours. Grab the circuit breaker and it will be installed with the waterproof label facing the front of the YXZ on the driver's side of the tunnel. the 90 degree will be installed on the waterproof terminal, the short lead will be installed on the other terminal. I suggest you install the cables on the circuit breaker before you mount it. I used a pair of channel locks to hold the connector while I used a 10mm socket to tighten the terminals down to 5ft/lbs. Once you install the leads, install the circuit breaker as shown below. Finally connect the short lead to the positive side of the battery.







once circuit breaker is in place mark and drill upper bolt through factory side plastic panel, use supplied hardware to secure the breaker

18. I would recommend starting your car and verifying everything is working correctly. With the Powermaster 8062 alternator you should be seeing around 14.00 volts at idle (may have to rev engine up a few hundred RPM higher than idle with 1:1 drive version of kit) . Once you confirm this you are now ready to assemble your YXZ. refer to step 2 and work backward till your car is assembled. Below are pictures to help with assembly as well please take a look at them before assembling your YXZ.



Take the plastic drive shaft shield and reinstall it to the transmission side metal cover.
Using the 2 10mm bolts

For the rear fire wall panel I found it is easiest to put the top corner (marked with a red circle) in first at an angle and slide it into place represented with the green arrow. Do not worry about trying to get the top under the top plastic all at once there is enough play to at the end to get the panel under the top plastic. Do not forget to reinstall the vent line marked in blue.

