

# ***GSE Performance***

## **POWER STEERING FOR ARCTIC CAT & YAMAHA**

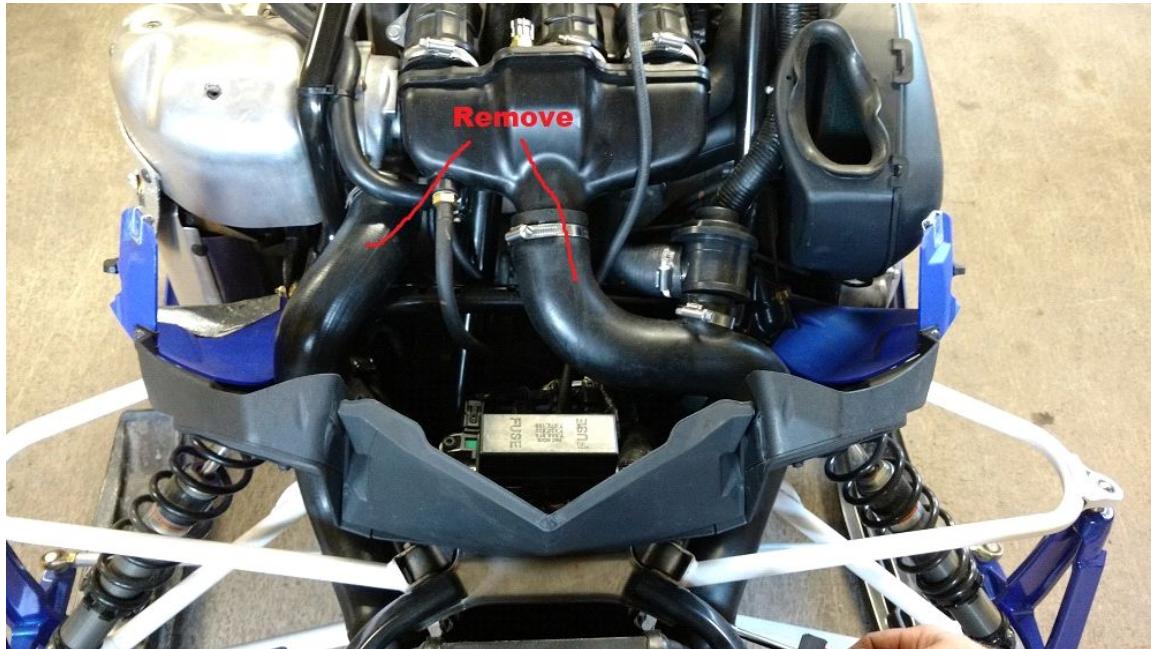
**Sidewinder / Thundercat instructions**

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**You will need several tools for this installation - it is recommended that a trained professional install this kit.**

When we refer to LH or RH it is understood that you will always be standing in front of the machine looking back at it.

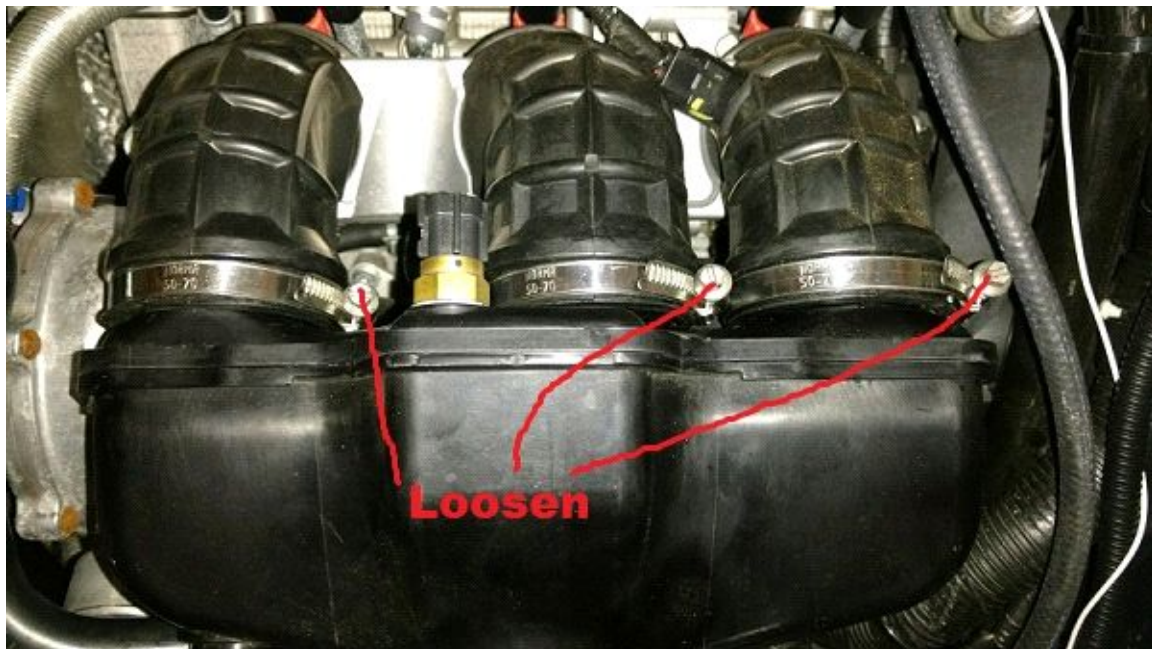
First thing to do is take both side panels and the hood off. next you can remove both turbo hoses as shown in the following picture.



next remove the small hose from the upper side of the airbox shown below.



next loosen the three hose clamps on the airbox shown below.



next unplug the sensor on the top left side of the airbox shown at the beginning of the next page.

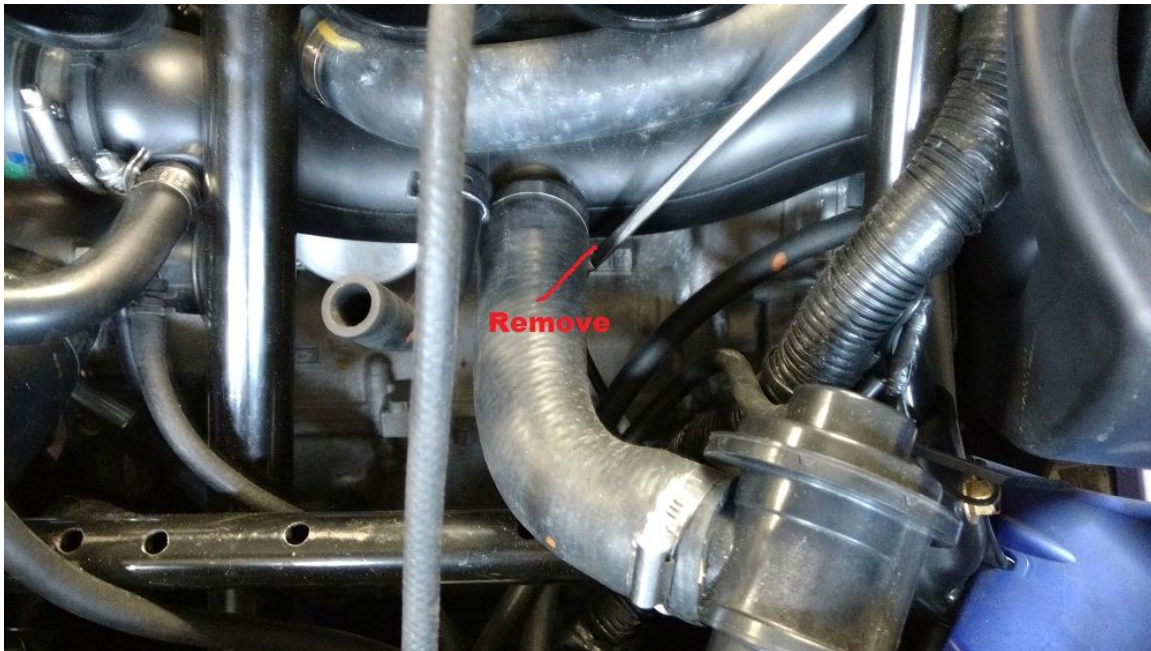




next remove the hose from the lower RH side of the airbox shown below then remove the airbox.



next you can loosen the clamp on the blow off valve shown in the picture below and then pull the hose off and swing it off to the RH side.

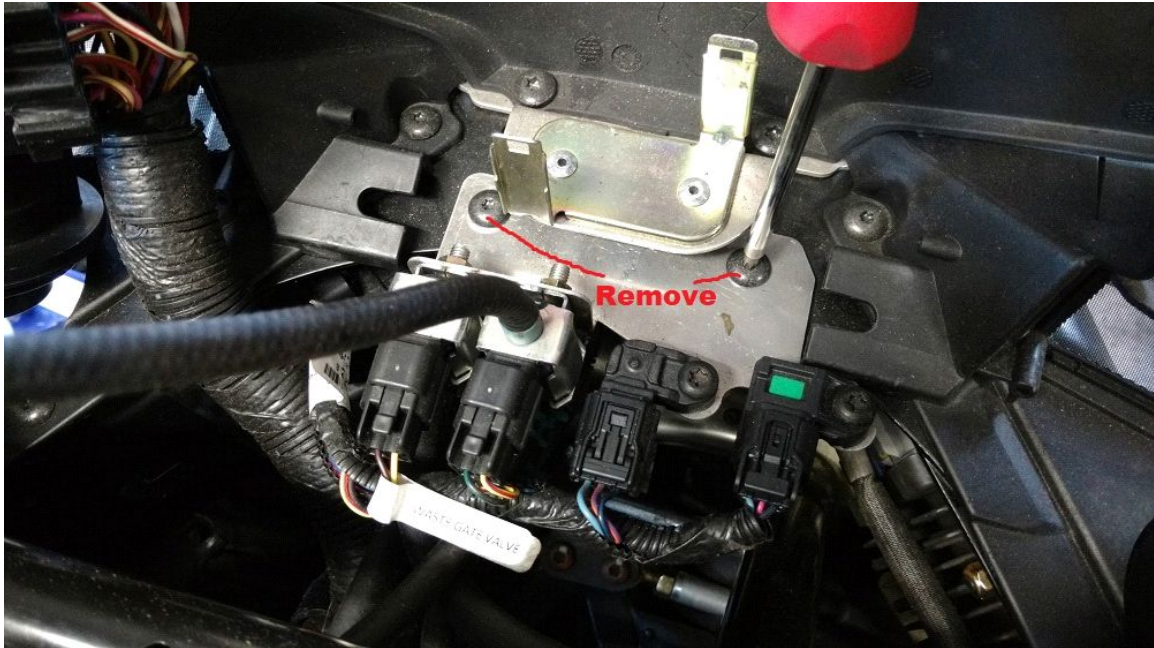


next remove the fuse box by prying the holding tabs out and lifting up on the fuse box. see picture below - pull fuse box off to RH side out of the way.

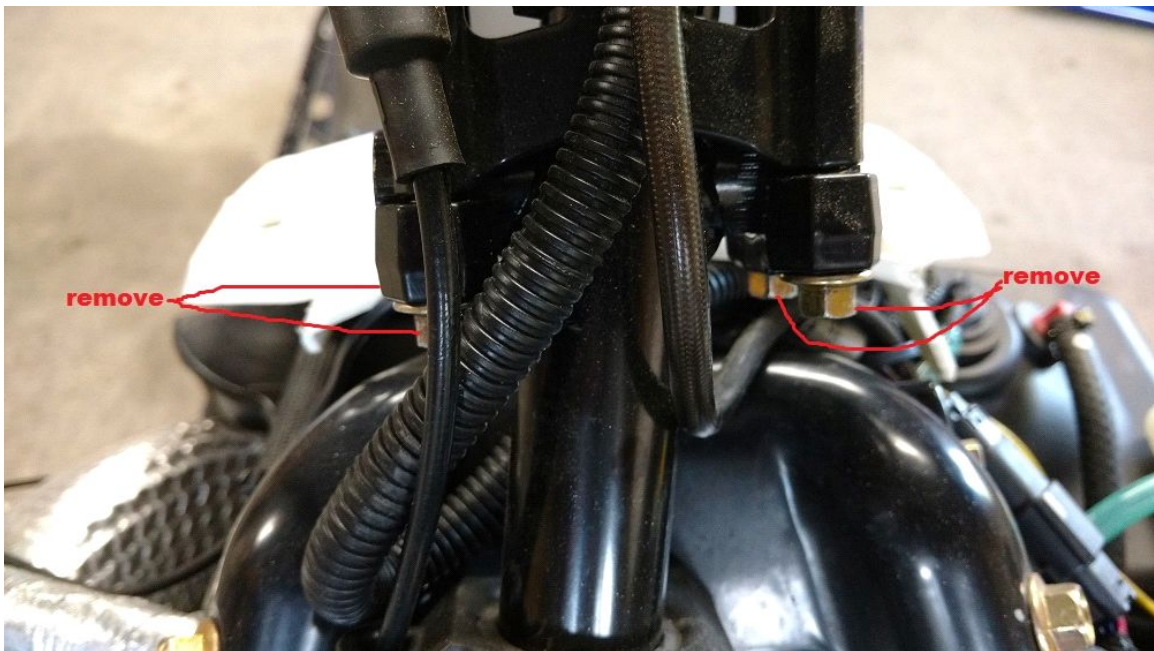


next remove the screws from the sensor/relay mounting plate pictured next using a T25 torx driver. also swing this plate to the RH side out of the way.



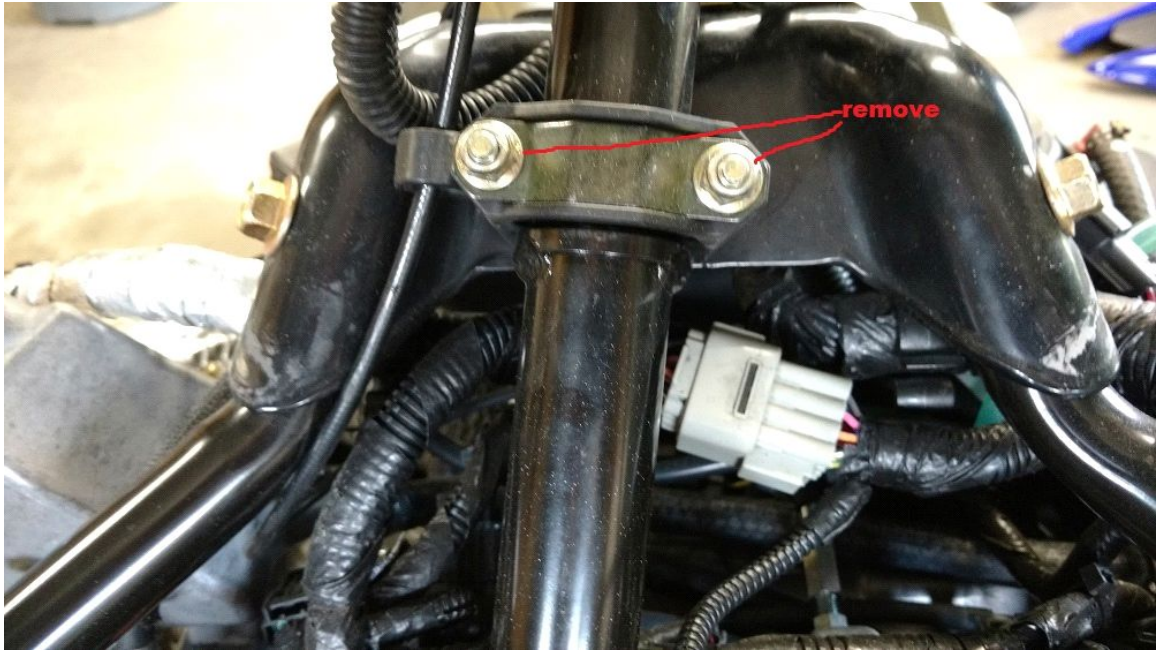


next remove the bolts from the lower side of the handle bar riser. see picture below.



once you have removed all four bolts you can lay the bars back onto the gas tank.

Next step is to remove the nuts from the upper steering post bushing using a 10mm socket. once the nuts are removed you can take the top half of the bushing off.



next you will want to remove the nut from the steering link rod in the front of the bulk head seen in the following picture.



next look down at the rubber boot covering the A-arm and tierod - remove the six push darts shown in the picture on the next page.





next step is to remove the nut from the bottom of the steering post using a 17mm deep socket and ratchet. see below picture



after removing the steering post nut you can pull the post up and out.

You can now install the lower portion of the steering post - Take note of the flat side of the stud making sure to put it against the flat side of the bracket in the bulkhead. see the picture below.

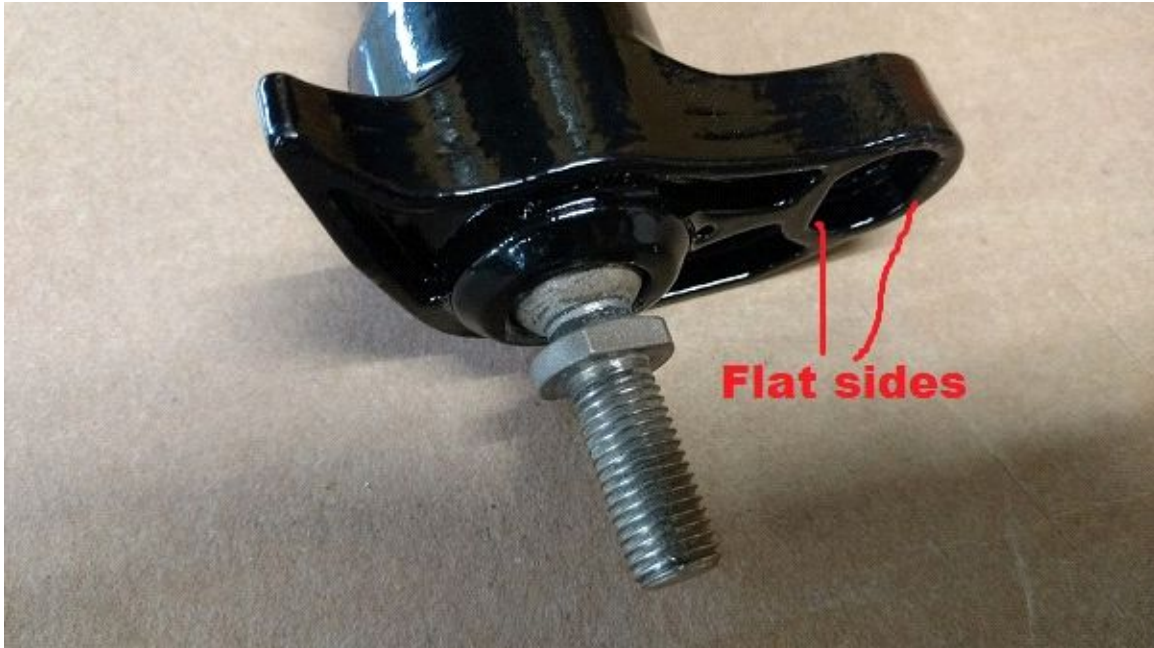


once in position you will have to hold down with some force to keep the stud from rotating while tightening the nut.

Next you can install the rubber boot and the push darts and then move on to the steering link rod.

when installing the tierod end into the steering post be sure the flat sides are lined up properly and goes all the way inside the post. see the flat sides in the picture on the next page.





next step is to remove the motor mount nuts, first remove clutch side using a 15mm socket and long extension on the bolt.



use a 18mm socket with a half drive ratchet on the nut.



once the nut is off you can slide the bolt part way out - leave it flush with the bracket. now you can remove the other side motor mount nut using a 15mm open end wrench and the same 18mm socket. see picture below for wrench location - kind of tricky !



once the Exhaust side nut is off you can slide the bolt out part way so that it is just even with the bracket.

If you have not pulled the wires to the RH side yet you will want to do so now so you have room to install the power steering motor and mounting plate.

Now you can put the steering motor in place, slide it in the splines of the lower portion of the steering post making sure the three bolt holes are on the upper side.





**Important:** when installing the set screw in the lower end of the steering post you will first want to look in the hole and make sure it is lined up with the groove in the steering motor shaft. once you have it lined up you can put the set screw in and tighten it up with a 5/32 allen wrench. next be sure to tighten the jam nut using a 1/2 inch wrench.

next you can put the mounting plate down in and work everything into place. it has to be slid over the top of the steering motor and then slide into place on the engine mounts. this can be a little tricky but once everything is in the proper position it slides right in. see picture on the next page.



once the mount plate is slid over the upper shaft you can slide the mount plate into position on the engine mounts. see below picture



once in place you can push both engine mount bolts back in all the way and put the nuts on but dont tighten them yet. next you can install and tighten the three bolts in the steering motor shown in the picture on the next page.





now you can go back and tighten the two engine mount bolts.

next you will be able to install the steering post. make sure your skis are pointing straight forward and the T at the top of the post is straight across and in the proper location. once you are sure everything is lined up where it needs to be you can slide the splined yoke onto the steering motor splines. once again make sure the groove is in line with the set screw hole and then you can install the set screw and tighten it, also tighten the jam nut.

Next you can install the upper bushing and nuts.

**( IT IS VERY IMPORTANT NOT TOO OVER TIGHTEN THE NUTS )**

make sure the steering post still turns freely when you snug the nuts on the bushing.



next step is to install the power steering control module. see picture on next page.



snug the two bolts using a 10mm socket.

next you can plug the motor wires in to the module. see below picture



put a ziptie around the steering motor harness and the voltage regulator wires to hold it in place. see picture on next page

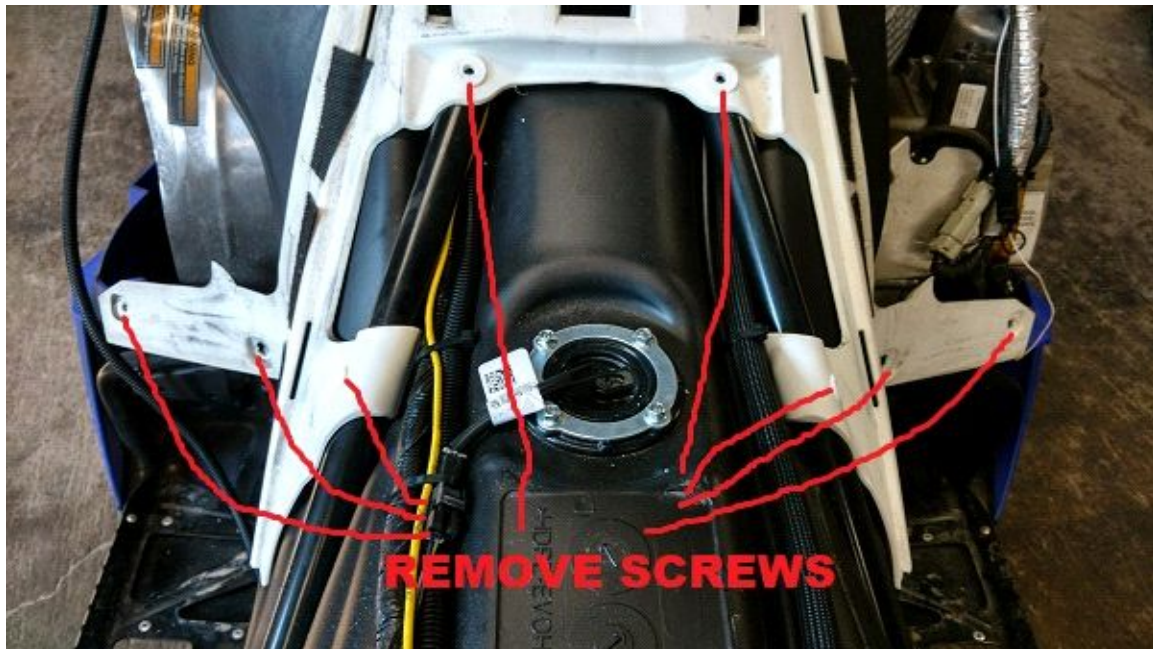




now you can plug the power source harness into the module and route it and the single white wire up along the mail harness of the snowmobile . see picture below



when you get to the upper steering post brace stop and then take the gas tank cover off. see picture on next page

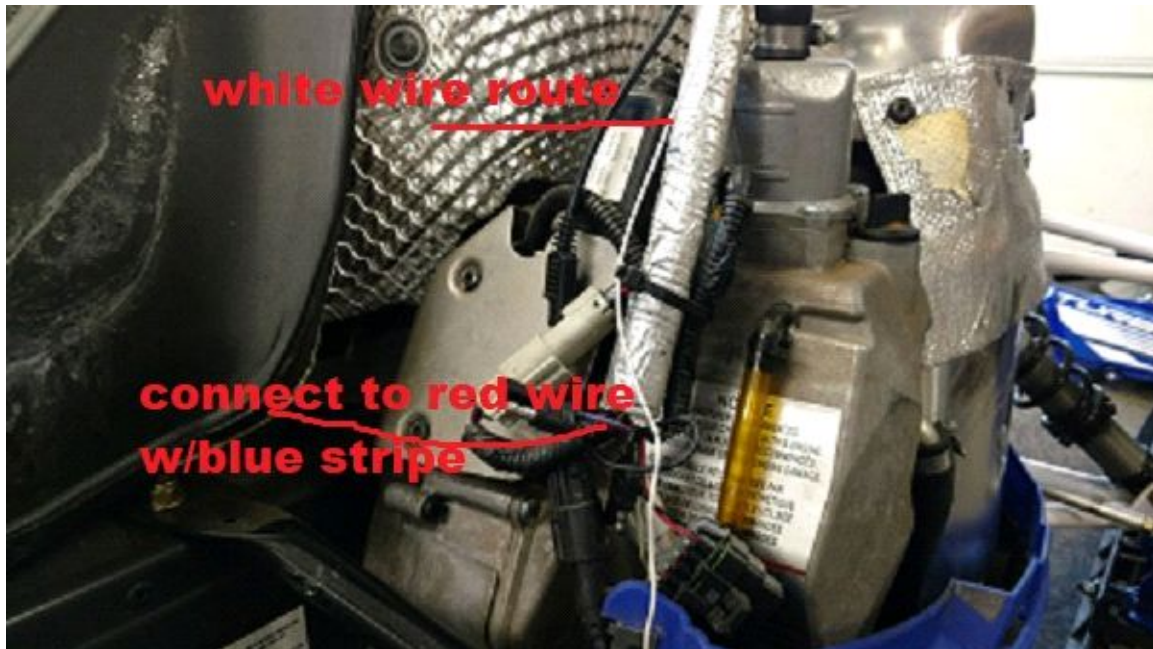


next you can route the positive and negative wires as shown below.



connect white wire using the supplied red connector to the red W/ blue stripped wire from the accessory plug. see picture on next page





now you may reinstall the sensor/relay plate and then the fuse box.

refer back to previous pictures for placement of each item.

next reinstall the turbo hoses and the blow off valve. be sure to tighten all clamps so there is no boost pressure leaks.

next you can reinstall the handle bars to your desired position.

now the hood and side panels can go back on.

be sure to check the alignment of the handle bars VS the skis, you may have to make a slight adjustment if the are not in line.

This kit is manufactured by **RRF** and sold  
exclusively by **GSE Performance**

***Be sure to check out our performance mufflers  
and high flow air filters***

If you have any questions about any of the steps  
you can call us at

**315-783-3705**

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**www.gseperformance.com**

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