



VS30 Sprinter 28-Gallon Auxiliary Fuel Tank Installation Guide



Package Includes:

- 28-Gallon Aluminized Steel Auxiliary Fuel Tank
- Transfer Fuel Pump w/ Anti-Siphon Solenoid
- 30-ft Fuel Line (uncut)
- Factory Tank Pickup Tube, Vent & Bulkhead Fittings
- Auxiliary Tank Fuel Gauge, Power & Flow Switches
- Complete Wiring Kit
- Mounting Hardware

Before you start: We recommend running the fuel level down to 1/4 of a tank or less to make it easier to manage dropping & reinstalling the factory tank.



Completely power off the vehicle & disconnect the battery using the battery disconnect terminal located under the center console (if equipped). Otherwise disconnect the battery ground terminal.



Remove the fuel filler door and the filler neck shroud. There are a total of 6 T-30 torx bolts.



Remove the torx bolt attaching the filler neck to the body. Save all of your old hardware.



Support the fuel tank with a jack and remove the 3 metal straps mounting it to the vehicle.



Disconnect all fuel lines and electrical connectors and remove the factory fuel tank.



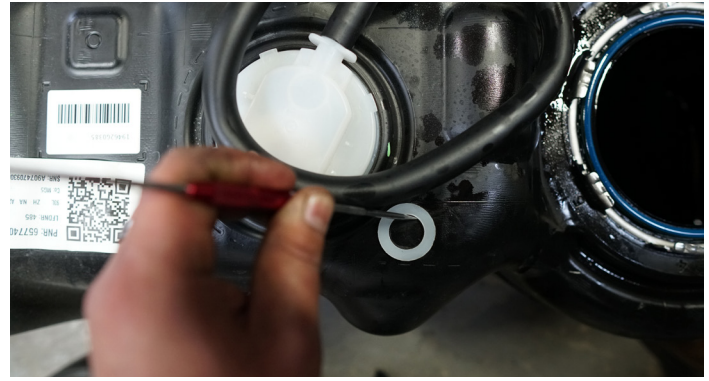
Use a hammer & punch to remove the lock-ring on the sending unit

Note the orientation of the sending unit.

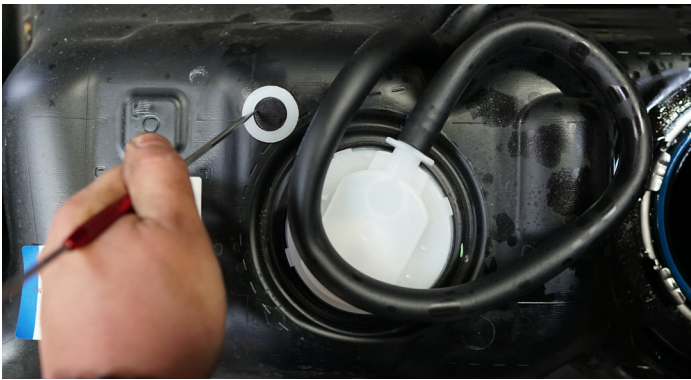




Remove the fuel sending unit.



Find the flat spot on the lower right side of the tank ventilator. Use an included nylon washer as a template to mark where you'll drill into the tank to install the RETURN line.



Do the same on the upper left. This will be for the FILL line.



Drill pilot holes into the center of your marks. Be careful not to get plastic shavings into tank.



Drill holes out to 3/4". Be careful not to get any debris into the fuel tank.



The holes should look like this when complete.





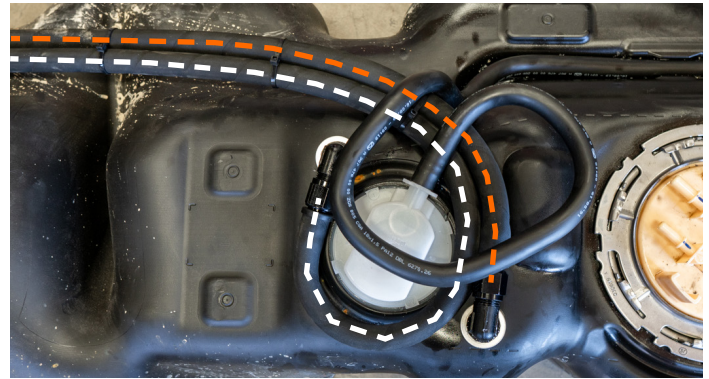
Install 2-90° bulkhead fittings on the tank. Use a nylon washer on both sides of the bulkhead. Use a 1" wrench on the nut and a crescent wrench to hold the fitting. Snug, but do not over-tighten.



Install the pick-up tube inside the tank on the FILL bulkhead fitting.



Cut a 6-1/2 foot section from the supplied 30' fuel line. Press a supplied barb fitting into one end. Press a barb fitting into one end of the remaining 23-1/2' line.



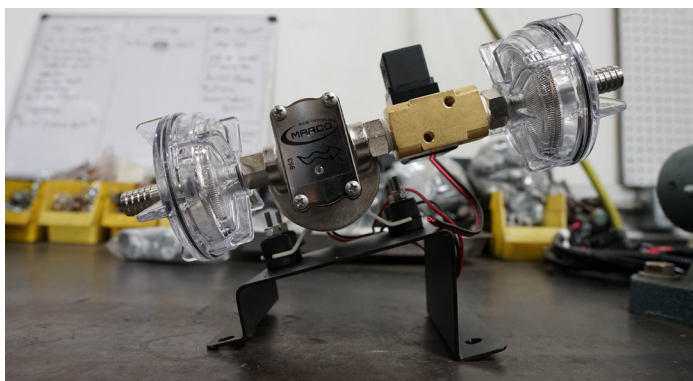
Install the 6-1/2 ft line on the FILL bulkhead. Install the 23-1/2 ft section on the RETURN bulkhead. Route the fuel lines as shown and secure together with zip-ties.



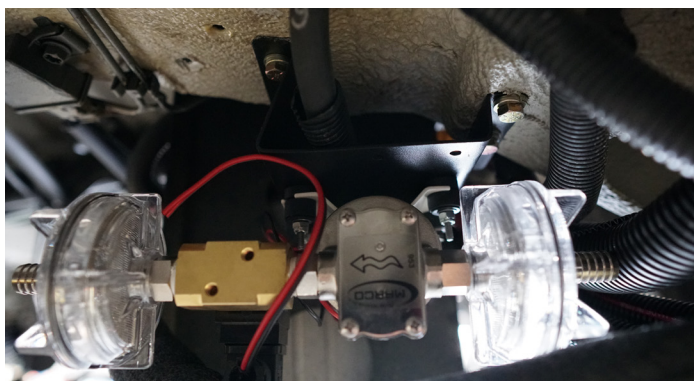
Reinstall the sending unit into the tank in the same orientation it was removed.



Make sure the ridges of the lock-ring are centered on the catches of the sending unit.



Assemble the fuel pump on the bracket as shown. Orientation of the pump on the bracket may change based on equipment already mounted underneath the vehicle.



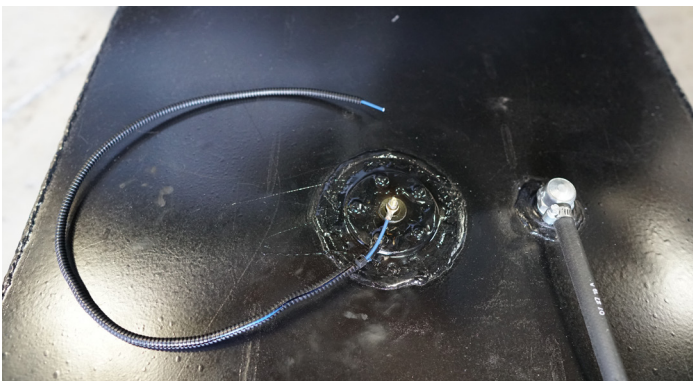
Mount the transfer pump assembly behind the factory tank near the frame rail. Enlarge existing holes and secure the pump using the provided riv-nuts.



Completely remove the spare tire basket from the vehicle. Mounting holes may need to be enlarged to mount the tank.



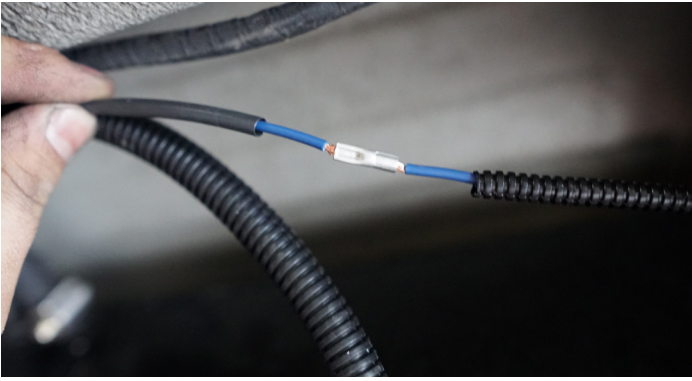
Support the tank with a jack and install front facing hardware.



The Blue wire shown goes to the fuel gauge terminal marked "S". This is the fuel level sending unit. Ground the black wire to the chassis using a provided self tapping screw.



Secure the rear facing portion of the tank using the factory spare tire basket hooks.



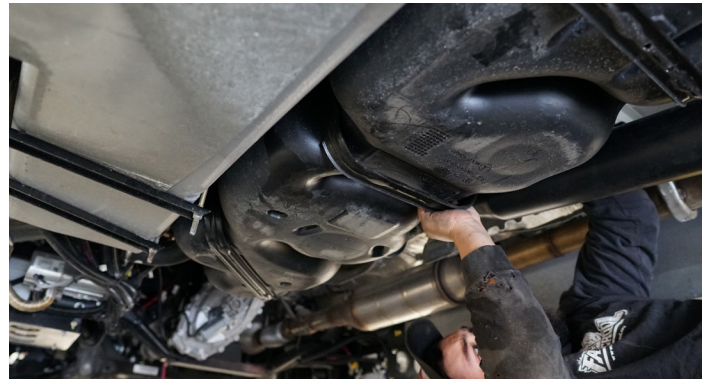
Connect the blue wire on the tank to the blue wire using an included connector. Seal connections with heat shrink.



Connect the included black & red wires to the pump. Connect the included wire to the red on the anti-siphon solenoid. Ground the black wire on the solenoid to the chassis. Seal all connections with heat shrink.



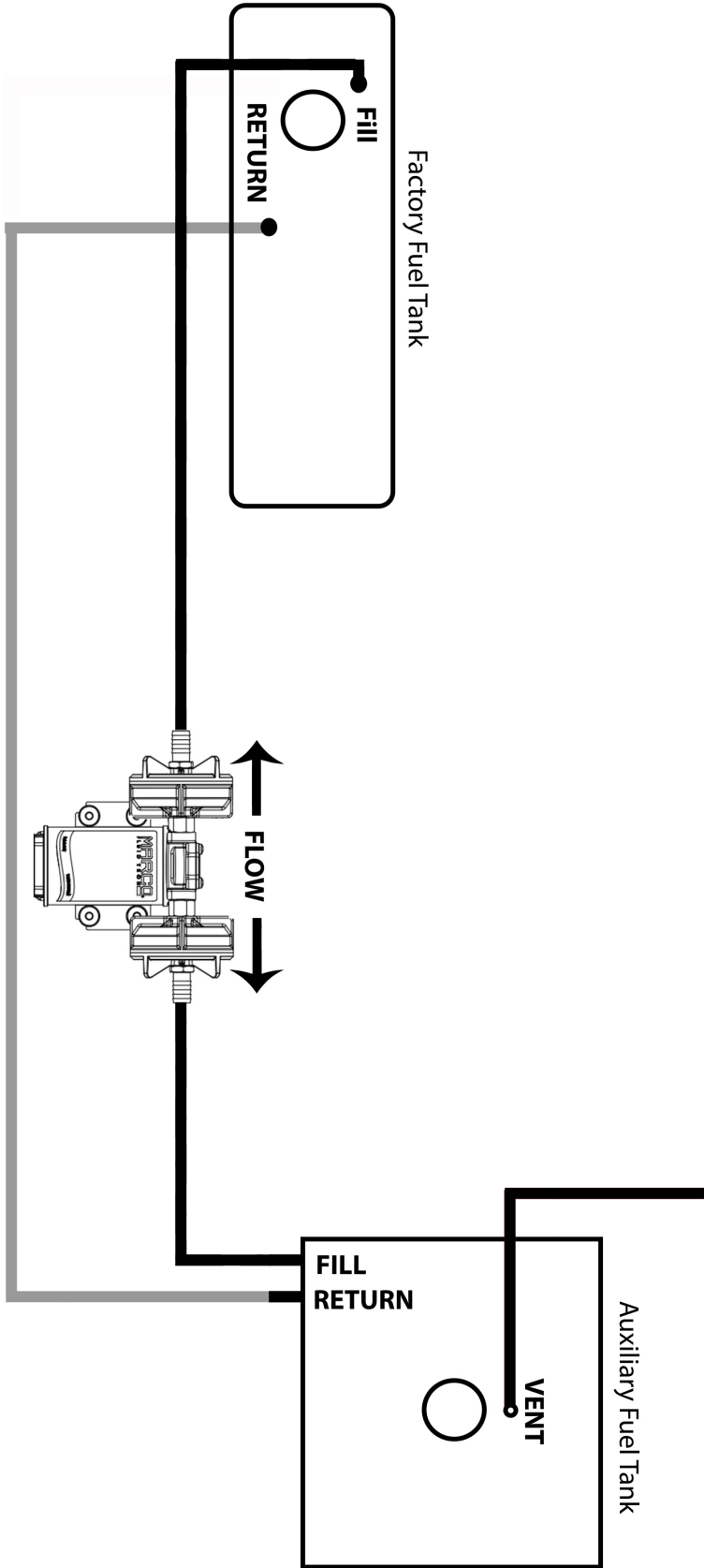
Run all wiring through the provided loom and route towards pass-through boot located underneath the drivers seat. Secure wires along brake hard-lines with zip-ties.



Reinstall the factory tank. Be careful not to pinch the auxiliary fuel lines between cross-member and the tank.

The next step in the installation is to finish hooking up the fuel lines. Before you begin please review the fuel line schematic on the next page.

VS30 28-Gallon Auxiliary Fuel Tank: Fuel Line Schematic





Press the 6-1/2 ft hose from the FILL line from the factory fuel tank onto the barbed fitting of the fuel pump.



Run the remaining 23-1/2 ft hose from the RETURN line on the factory fuel tank to the auxiliary tank. The line goes on the rear-most port (which has a 'V' welded on the exterior beneath it). Trim & save the excess hose - you will need it for the next step. Use the supplied hose clamp to secure it on the tank.



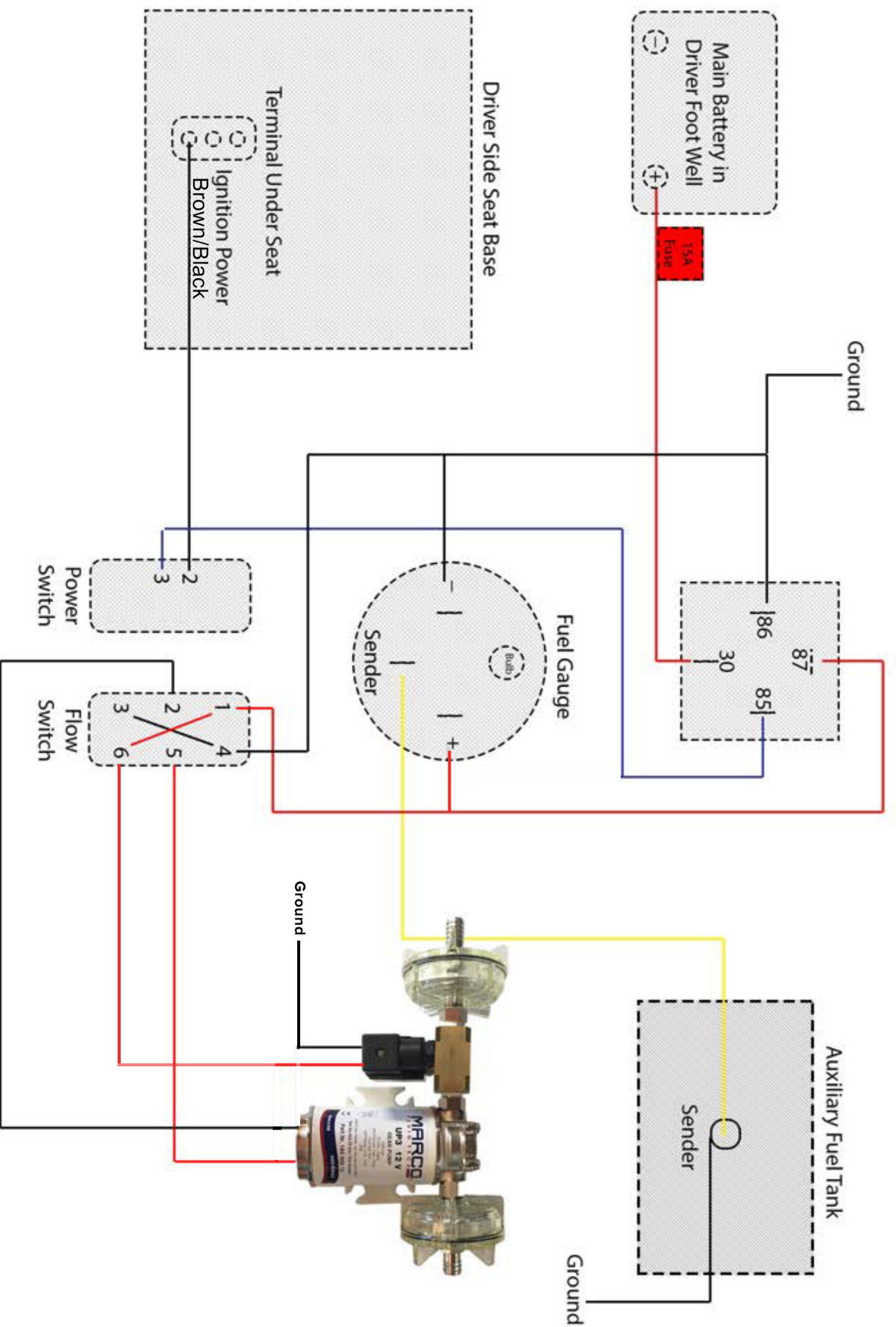
Attach the remaining fuel line onto the FILL port of the auxiliary tank and secure the connection with a hose clamp. Press the other end onto the open barbed fitting of the fuel pump.

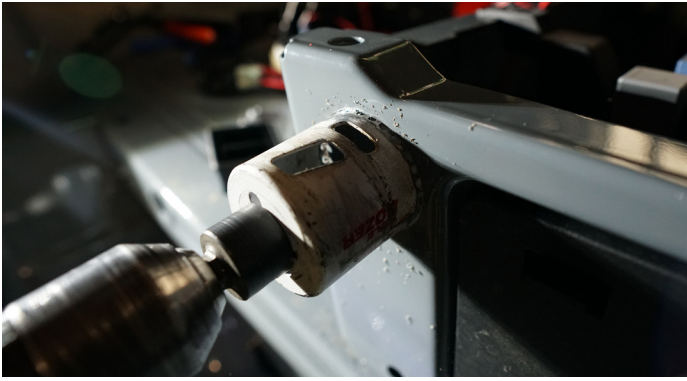
The next step in the installation is to mount the auxiliary fuel gauge, control switches & finish wiring the system. Before you begin make sure the battery is disconnected.





VS30 28-Gallon Auxiliary Fuel Tank: Wiring Schematic



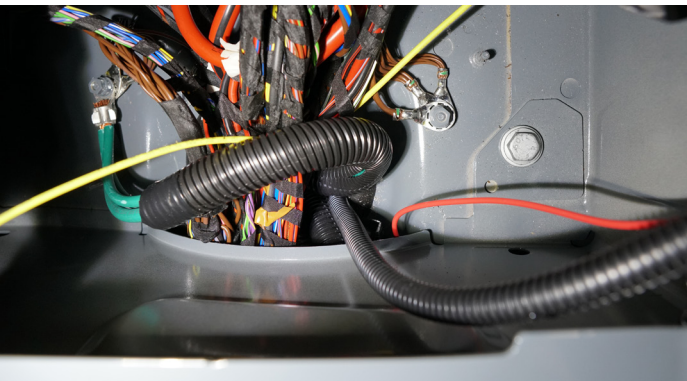


Remove the driver seat from the vehicle. Use a hole-saw to cut a 2-1/16" hole in the base for the auxiliary fuel gauge. Finish off with a barrel sander.



Use the switch bezel as a template and cut a hole for the switch panel. Then install the gauge & switch housing. Do not install the switches yet.

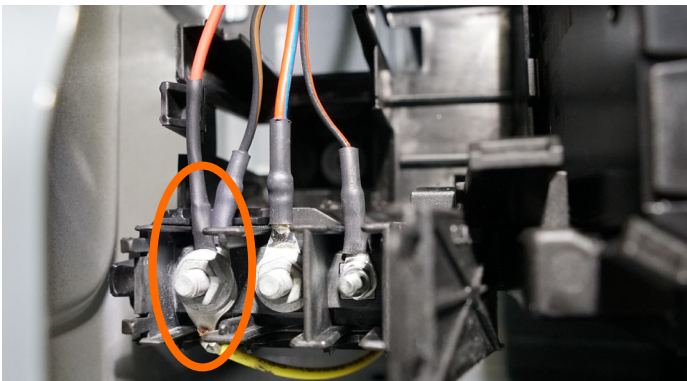
At this point please refer to the wiring schematic on the previous page. The following steps will wrap up the electrical portion of the installation.



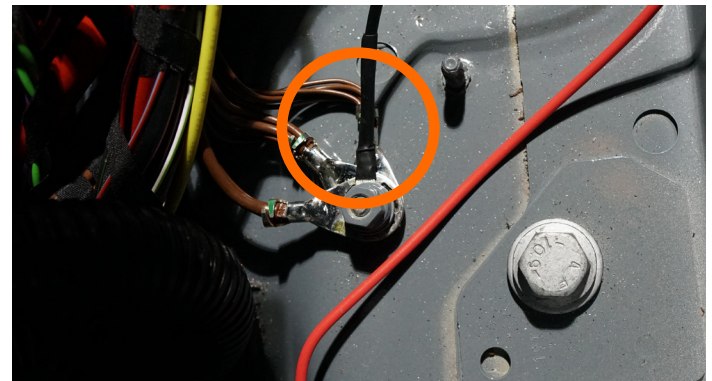
Locate the wiring pass-through boot located underneath the driver seat. Cut the zip-tie. Run the blue wire (aux. sending unit), red and black wires (fuel pump) through it. Re zip-tie the boot.



Attach the red & black wires (fuel pump) to the open center terminals of the flow switch (2 & 5). Connect the wire (solenoid) to the wire on terminal 6 using a spade connector. Install the power switch on the open left slot of the bezel. Do not install the flow switch.



Attach the auxiliary tank power switch (red) wire to the key-hot power source post. Look for the black/brown wire.

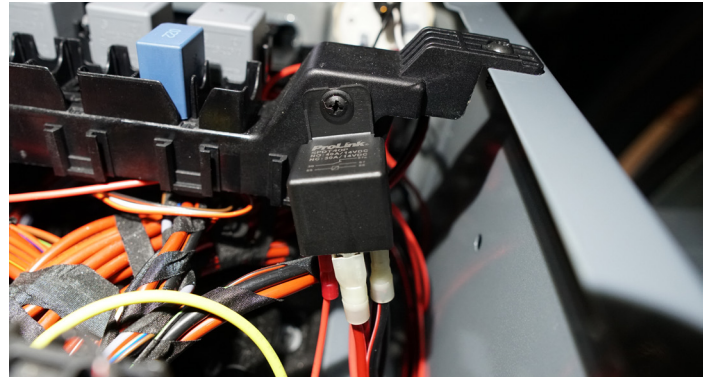


Attach the ground (black) wire from the relay to the factory ground stud.

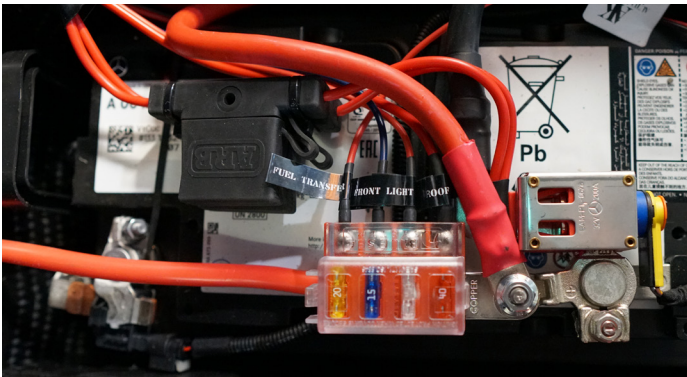




Install the illumination bulb on the fuel gauge. Attach the blue wire (aux. tank sending unit) to the bottom terminal marked "S".



Install the relay using a provided self-tapping screw.



Install main power wiring from the relay to the positive battery terminal using an included in-line fuse or fuse-block (shown) if powering multiple accessories.



Completely reassemble your interior (with the exception of the flow switch). **The driver seat electronics must be hooked up before the battery is connected.**

Test the fuel system for operation. Make sure the direction of the fuel transferring between the factory & auxiliary tanks matches the flow switch indication. If the direction is reversed, rotate the switch 180° and install it in the bezel.

Congratulations your installation is complete!

