



INSTALLATION INSTRUCTIONS

Gas Tank Skid Plate Kit

For: Jeep TJ, including Rubicon

Kit 67820

Your safety, and the safety of others, is very important. To help you make informed decisions about safety, we have provided installation and operating instructions and other information on labels and in this guide. This information alerts you to potential hazards that could hurt you or others. It is not possible to warn you about all potential hazards associated with this product, you must use your own good judgment.

CARELESS INSTALLATION AND OPERATION CAN RESULT IN SERIOUS INJURY OR EQUIPMENT DAMAGE. READ AND UNDERSTAND ALL SAFETY PRECAUTIONS AND OPERATING INSTRUCTIONS BEFORE INSTALLING AND OPERATING THIS PRODUCT.

This guide identifies potential hazards and has important safety messages that help you and others avoid personal injury or death. **WARNING** and **CAUTION** are signal words that identify the level of hazard. These signal words mean:

▲WARNING signals a hazard that *could* cause serious injury or death, if you do not follow recommendations.

▲CAUTION signals a hazard that *may* cause minor to moderate injury, if you do not follow recommendations.

This guide uses **NOTICE** to call attention to important mechanical information, and **Note**: to emphasize general information worthy of special attention

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Introduction

Dear Customer:

Congratulations on your purchase of a new WARN Gas Tank Skid Plate!

We are delighted to have you as a customer and want to make sure that your experience with Warn is a positive one.

The information in this manual helps insure that your Warn product is installed properly and operated safely. Although we believe the manual is complete and understandable, it is not a definitive guide to every possible situation or circumstance.

If, after reading this manual, you have any questions - please call us. At Warn, we pride ourselves on customer service and product support.

For future reference, please record the following information:

Model/Part Number: _____ **Date of Purchase:** _____

Sincerely,

Your WARN Industries Customer Service Team

United States:

Phone: 503.722.1200 or (800) 543-9276 (US only)

Fax: 503.722-3000

International:

Phone: 503.722.3008

Fax: 503.722.3005

Parts

<u>PART NO.</u>	<u>QUANTITY</u>	<u>DESCRIPTION</u>
67818	1	Gas Tank Skid Plate
35427	2	Zip Tie

Tools

Phillips & flat head screwdriver	Wire cutters	Floor Jack
½ ratchet and socket set	Needle nose pliers	Rags
¼" & 5/16" Nut drivers OR	¼" Ratchet and socket set	Pick

Safety Precautions



WARNING

Injury Hazard

Failure to observe these instructions could lead to severe injury or death.

- ❑ **ALWAYS WEAR SAFETY GLASSES WHEN INSTALLING THIS KIT. FALLING DIRT CAN CAUSE EYE INJURY. SPLASHED FUEL CAN CAUSE EYE INJURY.**
- ❑ **ALWAYS DISCONNECT ALL WIRES AT BATTERY TERMINALS. DISCONNECT THE NEGATIVE TERMINAL FIRST. BE CAREFUL TO AVOID CONTACTING POSITIVE BATTERY TERMINAL WITH TOOL BEING USED TO DISCONNECT NEGATIVE BATTERY TERMINAL.**
- ❑ **NEVER SMOKE, CARRY LIGHTED TOBACCO OR OPEN FLAME OF ANY TYPE OR HAVE ANY TYPE OF HEAT OR SPARK GENERATING DEVICE IN THE VICINITY WHEN WORKING ON OR NEAR ANY FUEL-RELATED COMPONENT. HIGHLY FLAMMABLE MIXTURES ARE ALWAYS PRESENT AND CAN BE IGNITED, RESULTING IN POSSIBLE PERSONAL INJURY OR DEATH.**
- ❑ **ALWAYS RELIEVE FUEL SYSTEM PRESSURE BEFORE BEGINNING WORK. FUEL IN THE FUEL SYSTEM REMAINS UNDER HIGH PRESSURE EVEN WHEN THE ENGINE IS NOT RUNNING. BEFORE DISCONNECTING ANY OF THE FUEL LINES OR FUEL SYSTEM COMPONENTS, THE FUEL SYSTEM PRESSURE MUST BE RELIEVED.**
- ❑ **ALWAYS RELIEVE PRESSURE IN FUEL TANK BY REMOVING GAS CAP, BEFORE BEGINNING WORK ON FUEL TANK COMPONENTS.**
- ❑ **ALWAYS DRAIN FUEL FROM OPEN LINES, TAKING CARE NOT TO ALLOW ANY FUEL TO SPLASH ON ANY BODY PART OF ANYONE.**
- ❑ **NEVER INHALE FUEL VAPORS. WHEN DISCONNECTING FUEL LINES, ALWAYS WORK IN A WELL-VENTILATED AREA TO AVOID POSSIBLE INJURY.**

Installation

Note: Always keep an appropriate fire extinguisher on hand, when working with fuel related components.

1. Try to run the vehicle so there is a very small amount of fuel left in the tank, preferably where the low fuel light is on. Do not attempt this installation with more than 1/4 of a tank of fuel.
2. Disconnect all wires attached to the battery terminals. Disconnect negative terminal first. Be careful to avoid contacting positive battery terminal with tool being used to disconnect negative battery terminal.
3. Cut the zip ties holding the axle vent tubes to the filler hose. To obtain access to this area there may be a plastic fascia that needs to be opened. There is a Christmas tree fastener holding it in place that will need to be removed. Be careful not to damage it. It will need to be reinstalled later.
4. On some models of the TJ there may be a grounding strap attached to the driver's side shock mount. Use a flat head screwdriver to remove it. Disconnect the electrical connector at the left front corner of the tank. Slide the red locking clip to the side then unhook the connector. **See Figure 1.**
5. Disconnect the evap. hose from the steel tubing. Do not bend or damage the steel tubing. **See Figure 1.**

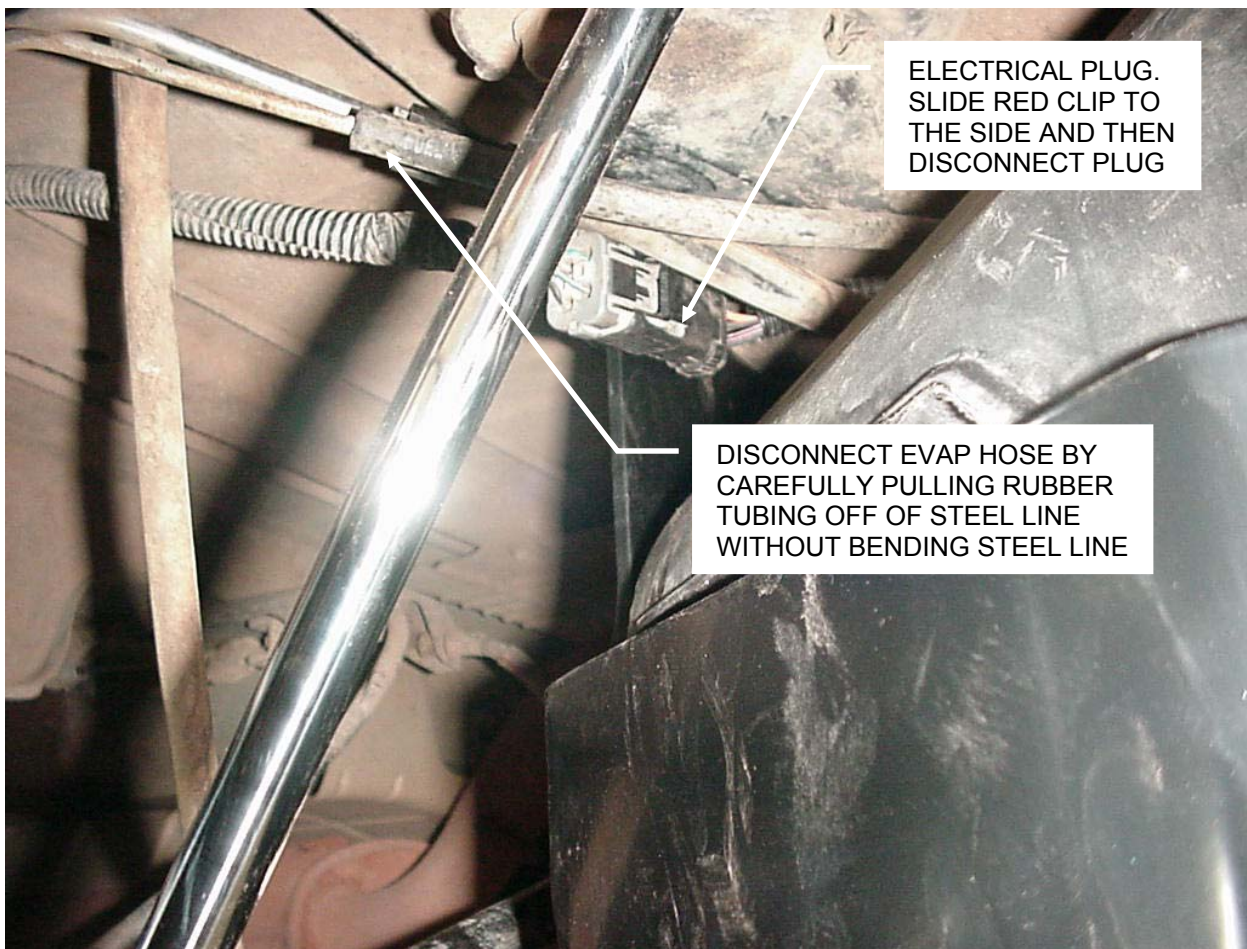


Figure 1: Evap Hose, Electrical Plug

6. Loosen the gas cap. **NOTE: THIS IS IMPORTANT BECAUSE IT RELEASES THE PRESSURE IN THE TANK.** You can either remove the 8 screws holding the filler neck in place to remove it with the tank or loosen the hose clamps at the tank to and pull the fuel filler and overflow hoses off of the tank. See **Figure 2**.



Figure 2: Fuel Filler and Overflow Hoses unhooked at tank.

7. The next step is to disconnect the high-pressure line. See **Figures 3 and 4**.

NOTE: Fuel will come out of fuel lines when they are disconnected. Make sure to catch fuel in container and/or have rags ready to absorb the fuel. Do not stand or lay directly beneath the fuel lines when you disconnect them, otherwise you may spill fuel on yourself or your assistant.

There are two styles of connectors. The older ones are easier, just pinch the plastic tabs together and pull them apart. No tools are required. The newer style connector is shown in **Figure 3** and will require a pair of needle nose pliers to disconnect it.

Only late model jeeps will have additional fuel lines attached to the top of the tank. The brackets attached to the tank will need to be removed. Refer to **Figure 4** for removal procedure. Step 8 will have to be started before you can gain access to properly disconnect the fuel line rail from the top of the tank.



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Figure 3:
Unhook High
Pressure Line

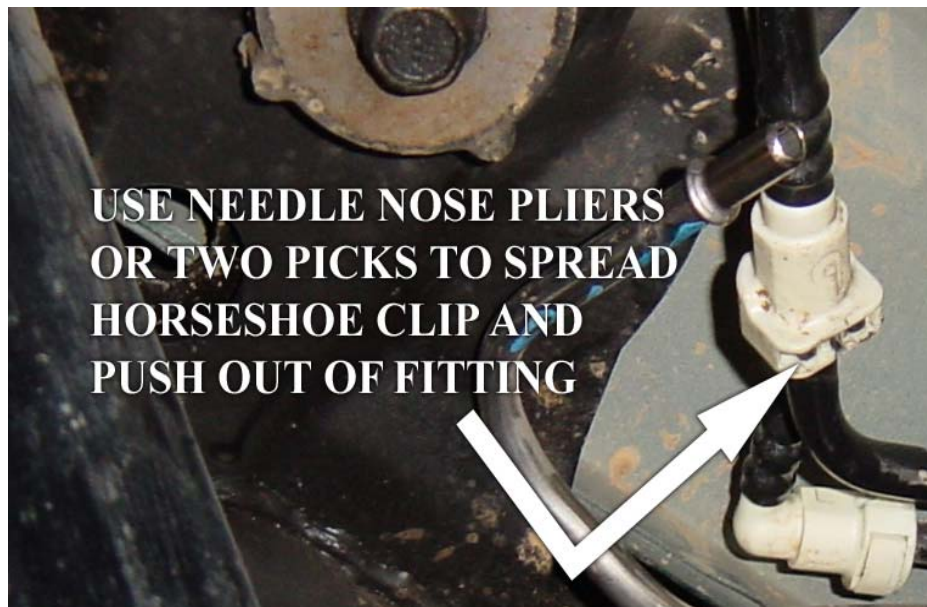
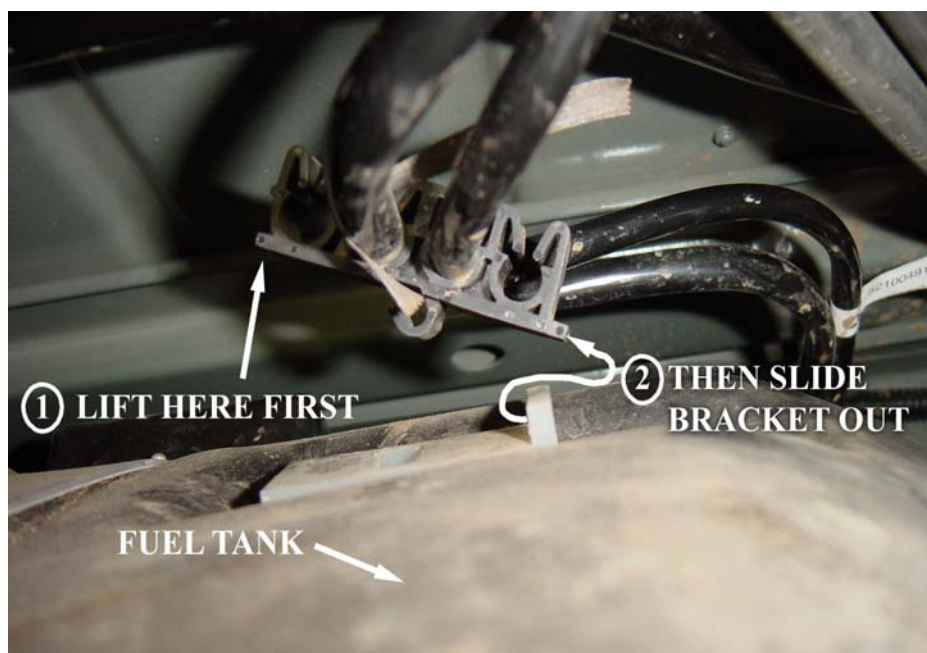


Figure 4:
Disconnect fuel
rail from top of
tank on Late
Model Jeeps as
the tank is
lowered.



8. Position a floor jack under the center of the factory skid plate to hold it in place while removing the nuts. Remove the 7 nuts, four along the back mounting flange and three along the front mounting flange, holding the skid plate and tank in place. Do not remove the nuts holding the metal straps to the tank until it is removed from the vehicle. See **Figure 5**.

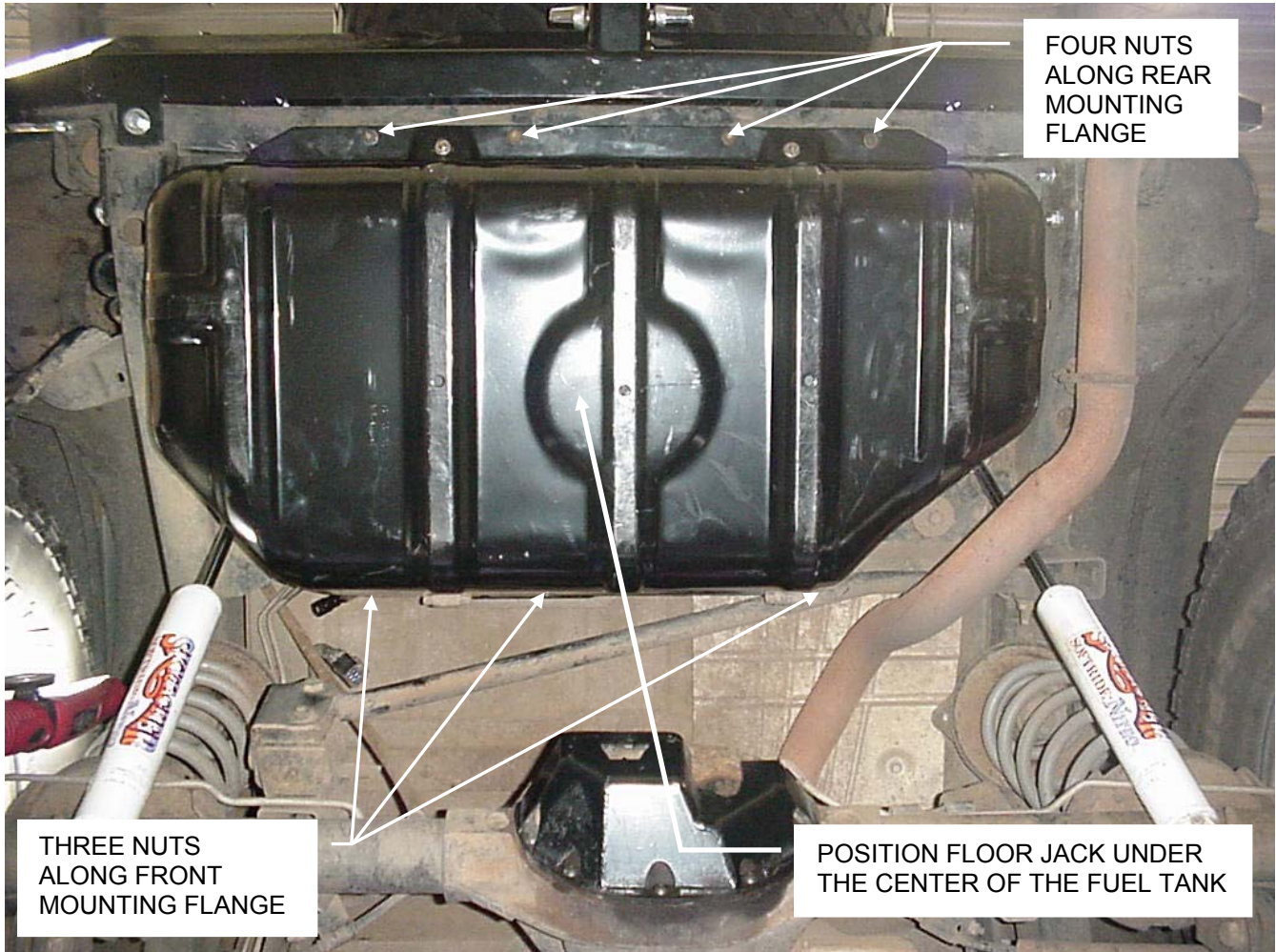


Figure 5: Location of seven mounting nuts

9. Slowly lower the tank and factory skid plate from the vehicle approximately 3-4 inches to allow for final disconnecting of fuel rail on top of tank, refer to **Figure 4** for proper disconnection. Once the fuel rail assembly is disconnected from the top of the tank continue to remove the tank from the vehicle. It will have to be rotated in order to get the filler neck out of the frame and through the hole. This step is much easier with the help of a second person. See **Figure 6** for additional information on location of fuel rail on the top of the tank.

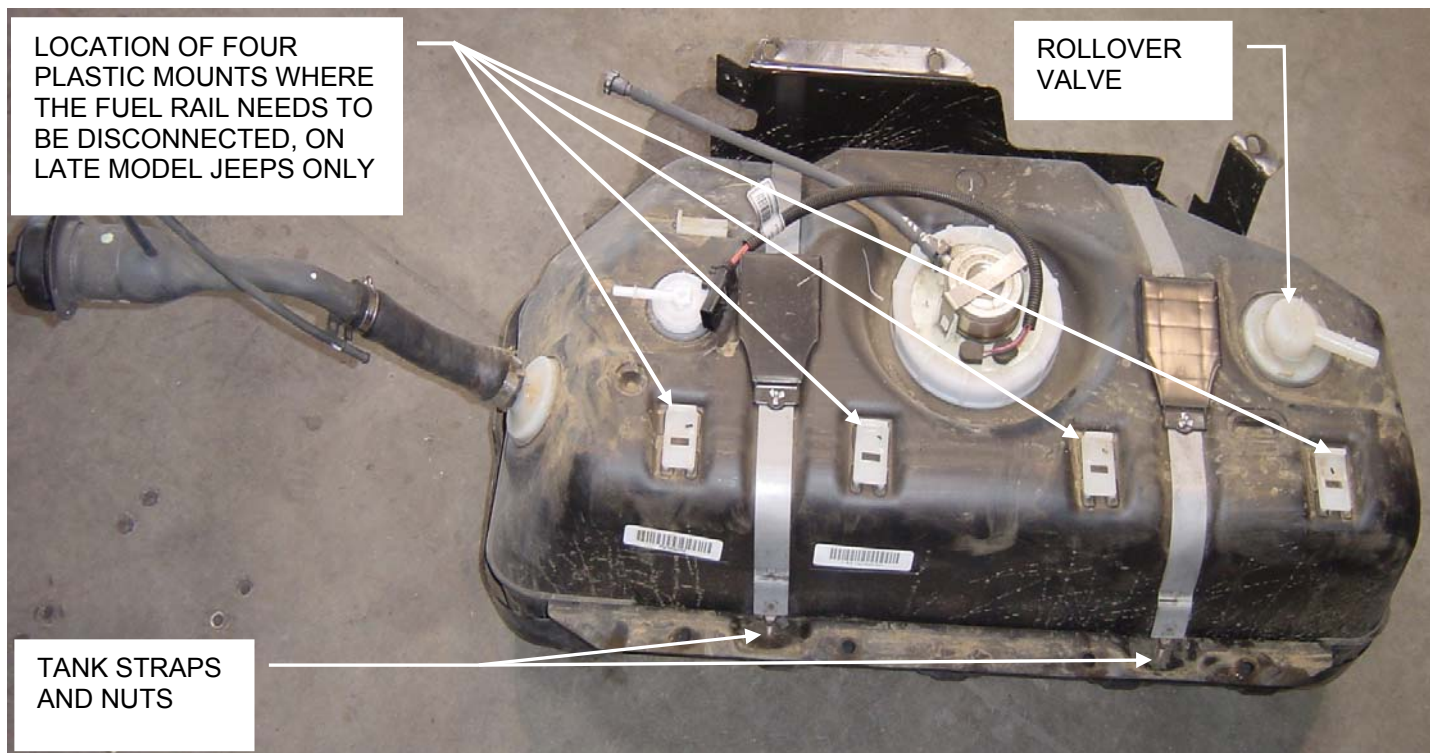


Figure 6: Location of mounts for fuel rail on top of tank

10. Remove the nuts holding the straps to the OEM skid pan and remove the tank. Refer to **Figure 6**. It will be necessary to unhook one of the vent hoses connected to the rollover valves to remove the tank straps.
11. Before placing the tank into the Warn Skid Plate check the fit of the Warn Skid Plate on the vehicle. The forward right-hand single mounting point of the skid plate may need to be bent slightly if it is not lining up properly to the frame stud. Once this has been done remove the skid plate from the vehicle. Attach the OE straps to the Warn Skid Plate, place the tank into the skid plate and loosely install the nuts on the straps to secure the tank to the skid plate. Due to manufacturing variances, the nuts may not need to be tightened as far as they were with the factory skid plate. The straps are only meant to keep the tank from sliding around. Slowly and evenly tighten the straps while checking to see if the tank is secure. The torque spec for the straps is 120 inch pounds (10 ft/lbs). **DO NOT OVER TIGHTEN THE TANK STRAPS.**
12. Attach the vent hose to the rollover valve that was disconnected in step 10.
13. Using the jack lift the Warn Skid Plate and gas tank back up into place. Guide the fuel filler hoses between the frame and body if they were removed with the fuel tank. When the skid plate and tank are nearing the frame, it may be necessary to tilt the skid plate and tank back to clear the rear track bar.

If you are installing this skid plate on a late model vehicle, it will be necessary to reconnect the fuel rail to the top of the tank. **Refer to Figure 4 if the vehicle is so equipped.**

Once the skid plate and tank are clear of the rear track bar, finish jacking them up slowly and line the factory studs up to the slotted holes on the skid plate. Loosely install the skid plate using the seven factory nuts. See **Figure 7**.

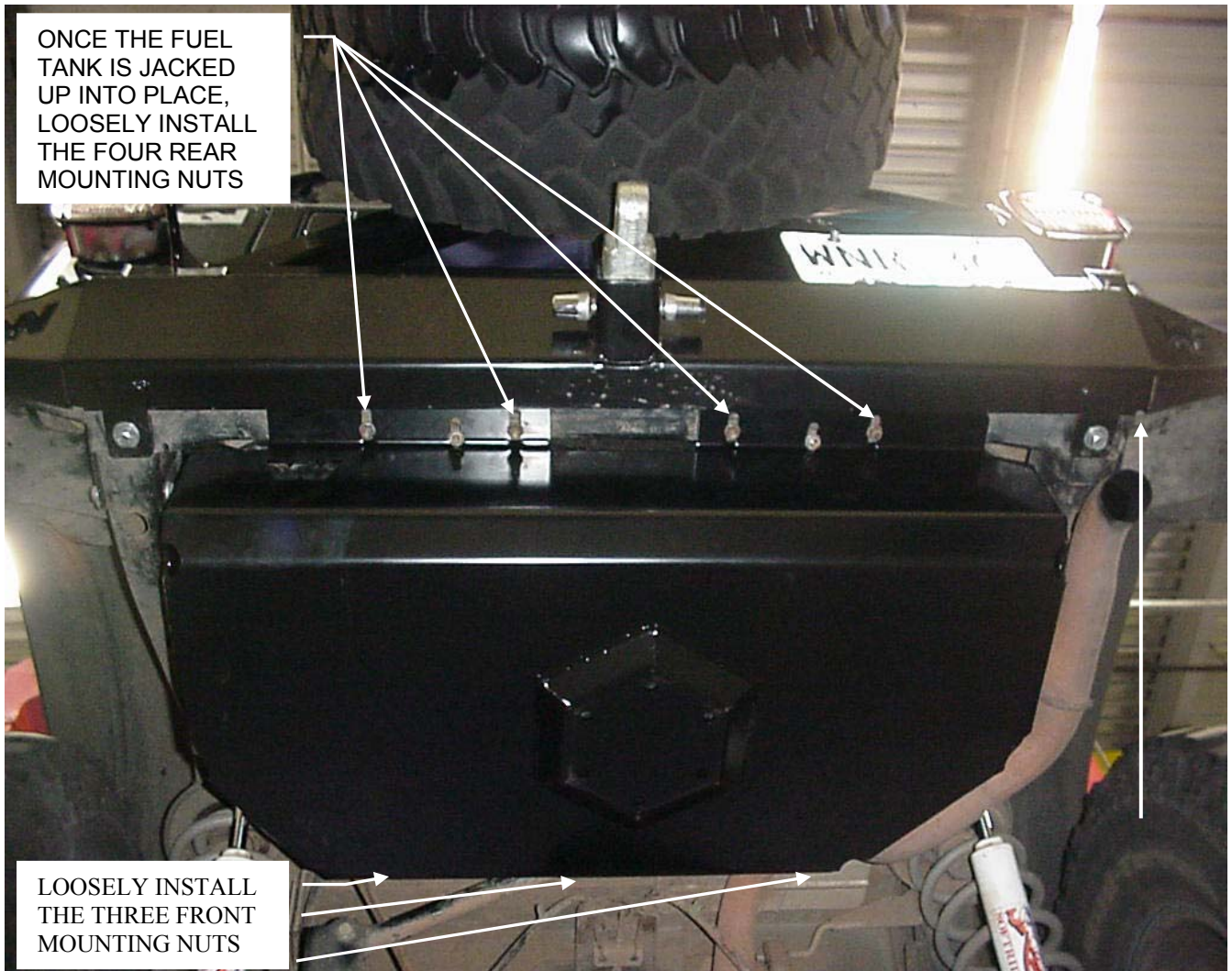


Figure 7: WARN skid plate loosely installed.

14. Once the seven nuts are loosely installed, you can slide the skid plate toward the back of the vehicle to gain more clearance for the rear track bar and the rear axle differential cover. Once the skid plate is in the desired position, tighten the seven nuts to 204 inch pounds (17 ft/lbs).

15. Reattach the high-pressure fuel line (they snap together), electrical connector and evap. hose. Be sure to slide the red locking clip on the electrical connector.

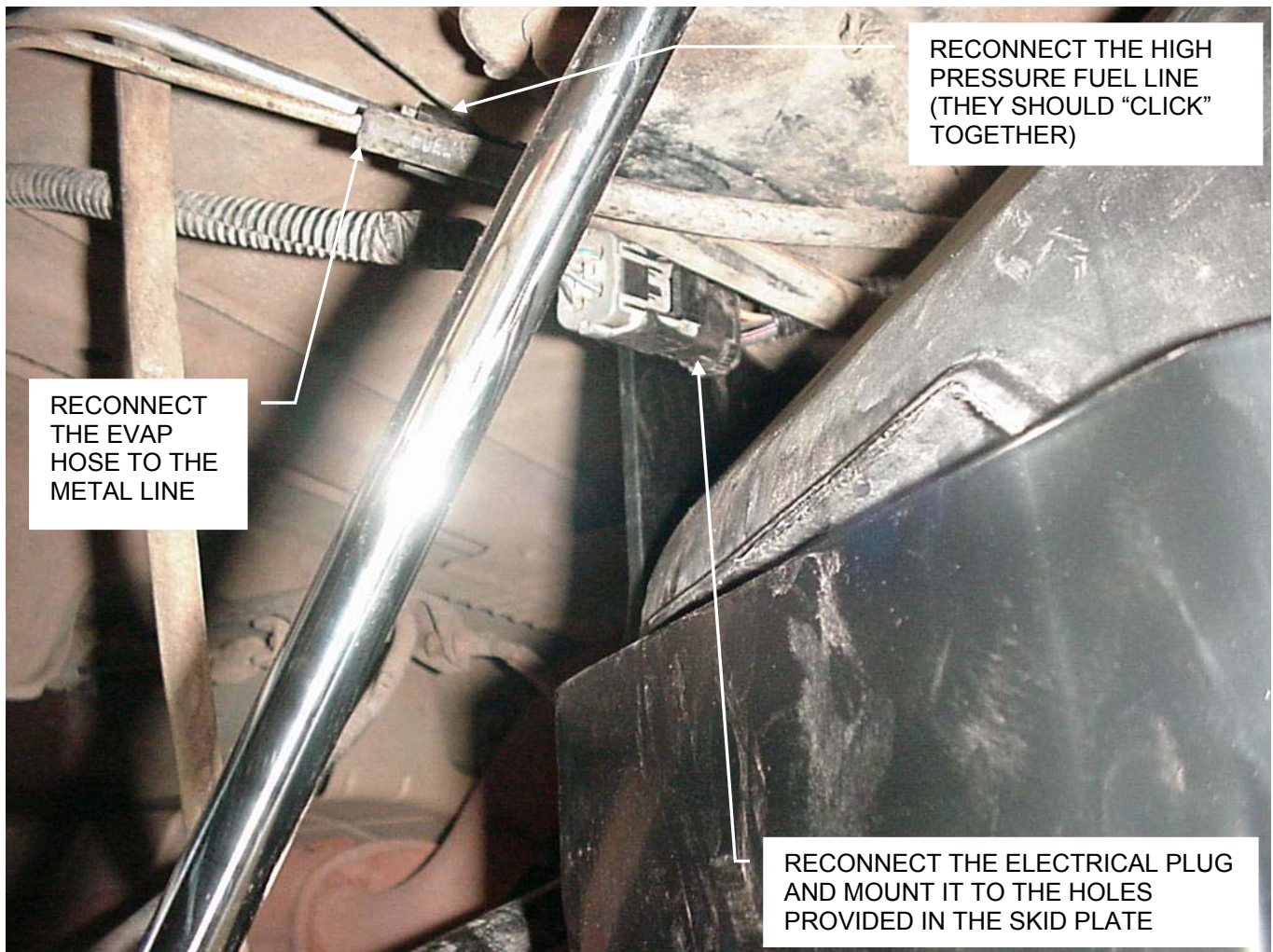


Figure 8: reconnection of Evap hose, Electrical connector and High-pressure fuel line

16. Zip tie the axle vent hose to the filler neck if you remove the fuel filler neck with the tank and reconnect the grounding strap if the vehicle has one.
17. Reinstall the 8 screws holding the filler neck in place if it was removed with the tank and tighten all the rest of the fasteners. Reattach all the vehicle wires to the battery terminals. Attach negative terminal of the battery last. If you disconnected the fuel filler and overflow hoses from the tank, instead of removing the fuel filler neck, reinstall the fuel filler and overflow hoses to the tank using the factory hose clamps.
18. Start the vehicle engine and check for fuel leaks.