TERAFLEX

PRODUCT INSTALLATION GUIDE

2012 JK Vacuum Pump Relocator

Part #4403100



Important Notes:

Prior to beginning this or any installation read these instructions to familiarize yourself with the required steps and evaluate if you are experienced and capable to personally perform these modifications.

Refer to the parts list to ensure that all necessary components and hardware has been included. If any parts are missing please contact your local retailer for assistance.

Kit Contents		
Item ID	**Item Name**	**Quantity**
403100	2012 JK Vacuum Pump Relocation Bracket	1
172	¼" Lock Washer	2
195	Zip Tie	3
381	Partially Threaded M6 Hex Head Bolt	2
382	M6 Nut	2
383	Butt Connector	4
384	Green 14 Guage Wire	1
385	Black 14 Guage Wire	1
458	¼" Flat Washer	2
600193	Instructions	1
600255	Black ¼" Split Wire Loom	1

Tools needed:

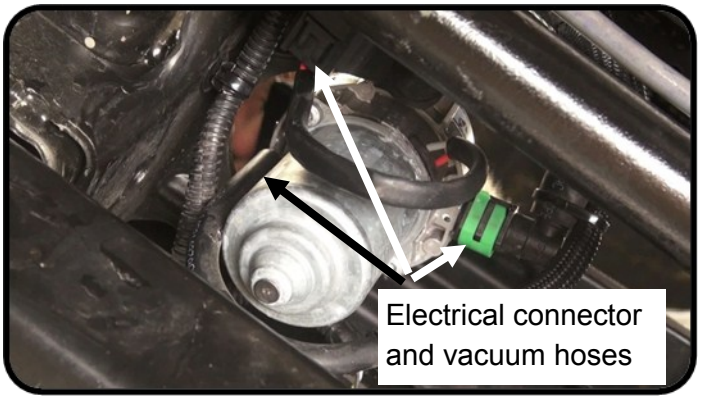
- 10mm socket
- Wire strippers/crimpers
- 10mm box wrench
- Ratchet
- 13mm deep socket
- Heat gun for heat shrink connectors
- 3/16 drill bit and drill
- Razor knife
- Diagonal cutters

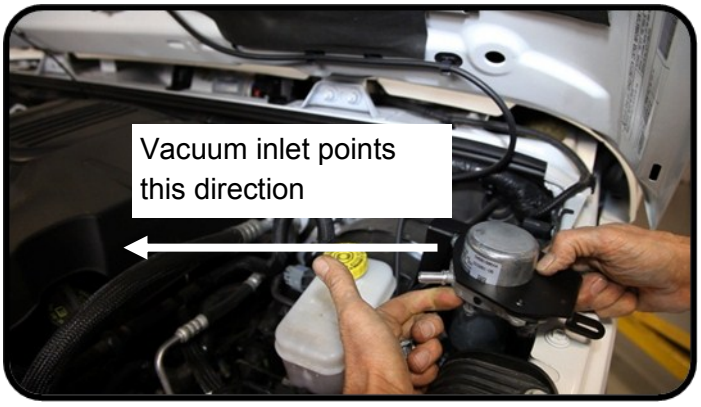
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Installation:

1. Disconnect the electrical connector, vacuum connector, and small intake hose from the auxiliary vacuum pump. Remove the two nuts that fasten the pump to the frame bracket, and remove the pump.





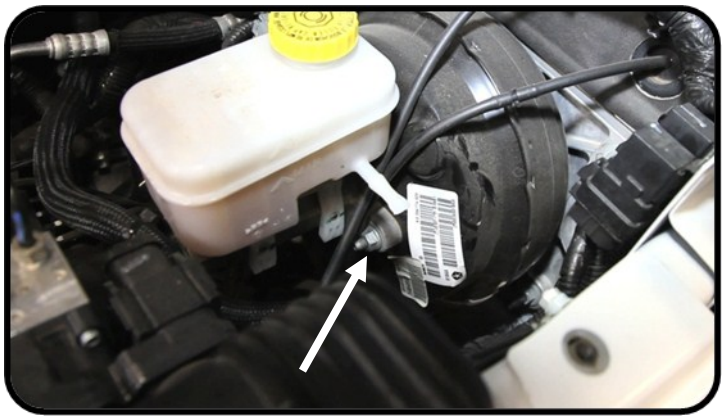
2. *Before* installing the bracket to the vehicle, fit the Teraflex pump relocation bracket to the pump by passing the top to the pump upward through the bracket and aligning the bolt holes so that the nipple of the pump points roughly toward the vehicle coolant reservoir cap when the bracket is in its installed position.

3. Install the 6mm bolts, washer, lock washer, and nuts onto the bracket and pump assembly and tighten.

4. Remove the fender bolt shown using a 10mm socket.



5. Loosen the 13mm nut on the driver's side brake booster stud far enough to enable the slotted section of the bracket to be slid behind the nut.



6. Position the pump/bracket assembly such that the hole in the bracket lines up with the threaded fender hole as shown, and slide the slotted portion of the bracket behind the previously loosened nut and over the stud.



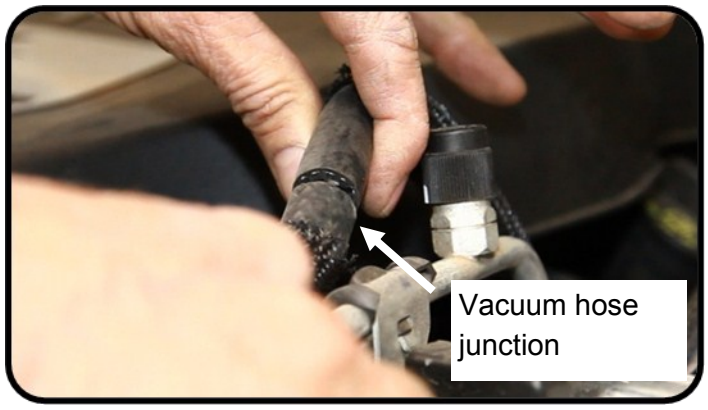
7. Re-install the bolt through the bracket into the fender.

8. Tighten the brake booster stud nut.

Vacuum Hose Routing:

9. Cut the plastic ties that hold the pump hose in place, and pull the hose upward past the radiator and into the engine compartment.

10. Note the point (next page) where the two sections of the vacuum hose join together near the front of the driver's cylinder head. Separate the hoses at this point. It is ok to use a razor knife to cut the tip of the hose for easier removal.



11. Remove the 90 degree plastic vacuum connector, short section of hose, and check valve from the hose to which they are connected. A razor knife may be helpful for cutting the tip of the hose to get the check valve out.



12. Install the 90 degree vacuum connector/hose/check valve into the end of the hose that remains connected to the intake manifold.

13. Route the new hose assembly beneath the brake master cylinder and connect the vacuum connector to the pump.

14. Re-install the smaller intake hose to the pump, route it across the firewall alongside the existing wire loom, and secure it in place using the supplied zip ties.



Electrical Wiring:

15. Cut the factory electrical connector from the main chassis harness, leaving enough wire on both the connector and factory harness for butt connectors to be installed. The wires to be cut are green and black. Do not cut the red and white wires of the pump harness.

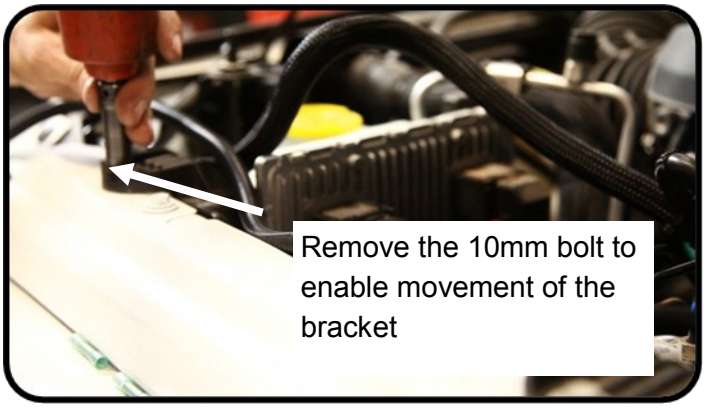


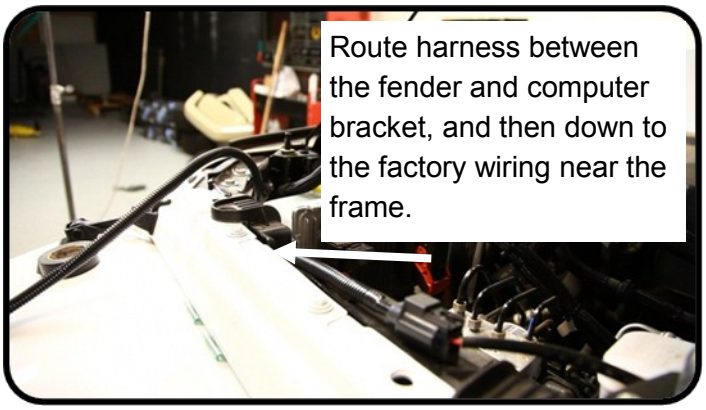
16. Strip 3/8” of the insulation from the two wires protruding from the factory connector and attach the supplied green and black wires to the factory connector using the supplied heat-shrink butt connectors.



17. Plug the factory connector into the pump harness plug.

18. Slide the supplied wire loom over the lengths of wires, and route the wires as shown (next page). It may be necessary to remove the fender bolt from the plastic bracket as shown to allow for movement of the bracket, so that the new harness can pass between it and the fender.

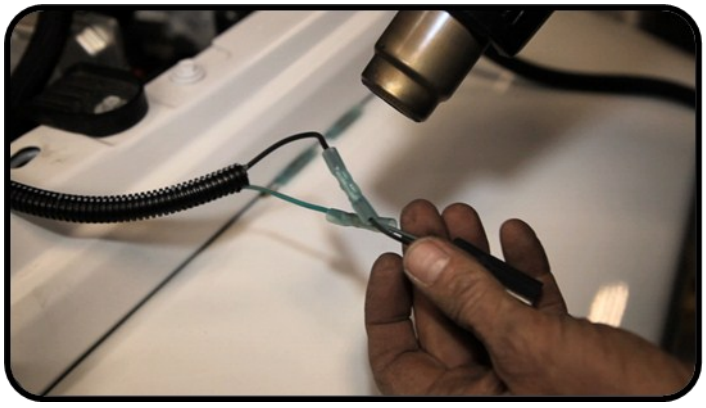




19. Strip 3/8” of insulation from the green and black wires protruding from the main harness, and crimp a supplied butt connector on each stripped wire.

20. Attach the supplied kit wires to the other ends of the butt connectors, making sure to match wire colors.

21. Using a heat gun or equivalent, apply heat to the butt connectors to shrink and seal them.



22. Drill a 3/16” hole next to the existing hole as shown, and attach the connector to the 2 holes as shown.





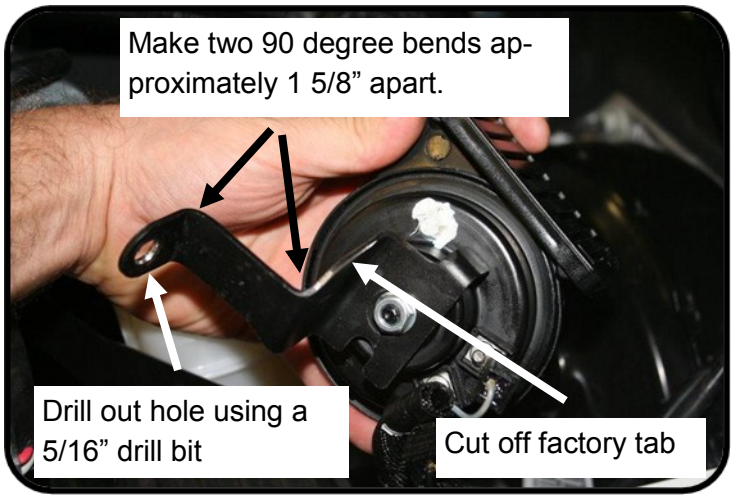
The installation is complete.

Relocating the Secondary Horn on 2013 Models:

1. Remove the horn and bracket from the fender of the vehicle.

2. Separate the horn from the bracket and disconnect the electrical connectors.

3. Modify the bracket as shown (next page). The horn is shown attached to the bracket for reference.

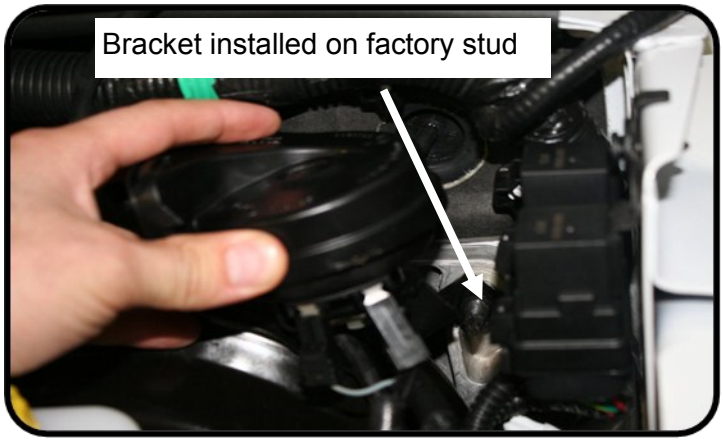


4. Re-attach the horn to the bracket using the factory nut in the orientation shown in the above photo.

5. Remove the nut from the component carrier mount stud shown.



6. Install the horn with bracket onto the stud as shown, re-install the factory nut, and attach the electrical connectors.



TERAFLEX PRODUCT INFORMATION

MAINTENANCE INFORMATION:
It is the buyer's responsibility to have all suspension, drivetrain, steering, and other components checked for proper tightness and torque after the first 100 miles and every 3000 miles after that.

NOTICE TO INSTALLER:
The enclosed "Warning to Driver" sticker must be installed in the vehicle in driver's view. This sticker is to act as a constant safety reminder when operating the vehicle. It is your responsibility as the equipment installer to install the provided sticker and to forward the product instructions to the vehicle's owner for review. If a "Warning to Driver" sticker or product installation guide were not included in the kit, FREE replacement stickers and instructions are available by request. It is the installer's duty to ensure a safe and controllable vehicle after the modifications have been performed.

WARNING:
Neither the seller nor the manufacturer will be liable for any loss, damage, or injury directly or indirectly arising from the use of or inability to determine the use of these products. Before using, the user shall determine the suitability of the products for its intended use, and the user shall assume all responsibility and risk in connection therewith.

WARNING TO DRIVER:
This vehicle has been modified to enhance off road performance and has unique handling characteristics. Use in harsh environments can cause extreme stress on the components. Vehicle should be inspected after being off road to make sure that all the components are in working order and safe to travel on the highway. All fasteners should be checked so that they are at the correct torque specifications as the vibration and stresses from off-roading may cause critical fasteners to work loose. Extra care should be taken to inspect the critical components, steering, and brake systems. During each oil change components such as arms, tie rod ends, etc. should be greased and checked for excessive wear. Any worn components should be replaced. When returning to the pavement always set or restore tire air pressure to the factory recommendation and connect or engage any disabled sway bar mechanisms. Because of the higher center of gravity and larger tires, this vehicle handles and reacts differently than many passenger cars, both on and off road. You must drive it safely! Extreme care should be taken to prevent vehicle rollover or loss of control, which can result in serious injury or death. Avoid sudden sharp turns or abrupt maneuvers. Generally, braking performance and capabilities are decreased when significantly larger/heavier tires are used, especially when used in combination with transfer case low-range reduction kits. Take this into consideration while driving. Do not add, alter or fabricate any factory or aftermarket parts to increase vehicle height over the intended height of the TeraFlex product purchased. Mixing component brand is not recommended. TeraFlex Inc. will not be responsible for any altered product or any improper installation or use of our products. We will be happy to answer any questions concerning the design, function, and correct use of our products. It is ultimately the buyer's responsibility to have all bolts/nuts checked for tightness after the first 100 miles and then every 3000 miles. Wheel alignment, steering system, suspension and drive line systems must be inspected by a qualified professional mechanic at least every 3000 miles.

TERAFLEX PRODUCT WARRANTY:
Tera Manufacturing warrants TeraFlex Suspension products to the original retail purchaser to be free of defects in material and workmanship for as long as the original purchaser owns the vehicle on which products were originally installed. Failure to complete regular maintenance (grease every 3000 miles) on TeraFlex FlexArms will void this warranty. All other conditions of the standard TeraFlex product warranty apply.

All TeraLow products are covered by TeraFlex's two (2) year warranty to be free of defects in material and workmanship for two years from date purchased.

Tera axles are covered by a 12-month warranty to be free of defects in materials and workmanship. This warranty does not cover or include product finish, improperly installed or applied products, improperly maintained products, products or components used for racing or competition or damage due to abuse or neglect, products that fail due to the use of larger tire and wheel combinations.

All returns must be accompanied by an original invoice. It is the customer's responsibility to remove the product from the vehicle. Shipping charges are the responsibility of the customer. Tera Manufacturing will pay the return freight if the product meets the terms of warranty.

This warranty is for the replacement or repair of defective TeraFlex products only and does not include freight charges, labor charges for removal of or installation of TeraFlex or related products or components, costs incurred due to down time of the vehicle, or lost profits due to vehicle down time.

A returned goods authorization number (RGA#) must accompany any returned products. For more information please contact a TeraFlex customer service representative.

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