



SDHQ Motorsports
190 S McQueen Rd
Ste 109 Gilbert, AZ 85233
www.SDHQoffroad.com

Product Packing List

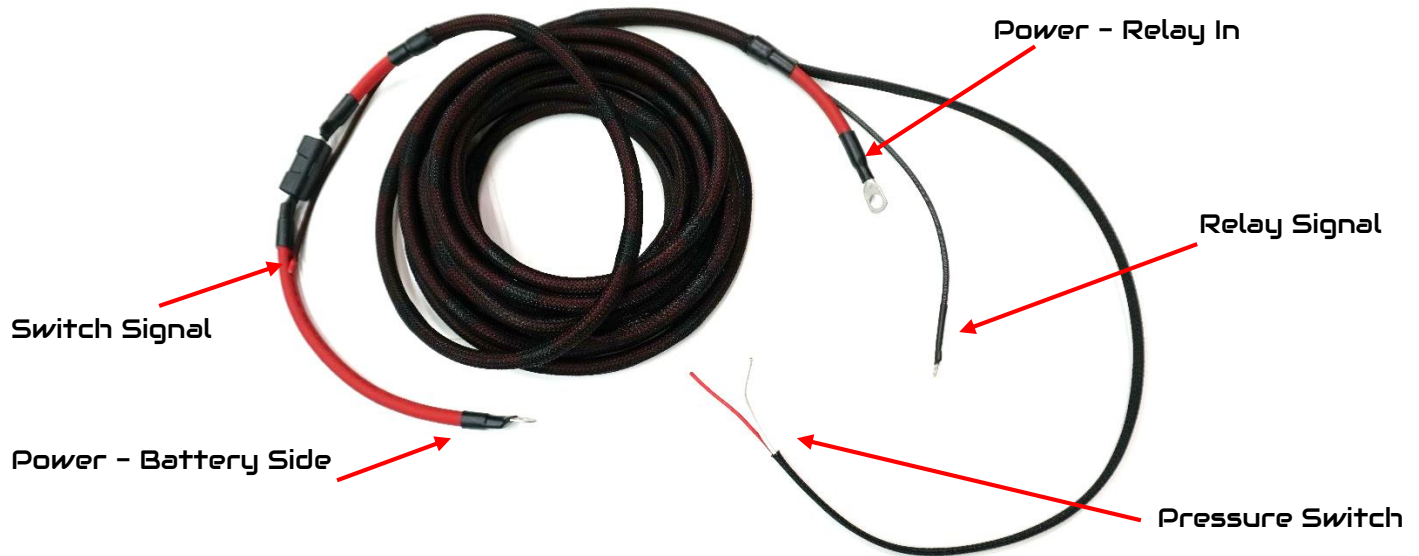
Product: SDHQ-11-1113-G5-ST

Description: SDHQ Built 2017-Current Ford F250/350
Under Bed Air System Mounting Kit with Spare Tire

_____ (2) Compressor Mount A	SDHQ-11-1113-G5-ST-A
_____ (2) Compressor Mount B	SDHQ-11-1113-G5-ST-B
_____ (1) Passenger Tank Mount	SDHQ-11-1113-G5-ST-C
_____ (1) Driver Tank Mount	SDHQ-11-1113-G5-ST-D
_____ (1) Capture Plate	SDHQ-11-1113-G5-ST-E
_____ (1) Relay Mount	SDHQ-11-1113-G5-ST-F
_____ (1) Viair Tank Template	SDHQ-11-1113-G5-ST-G
_____ (1) Firestone Tank Template	SDHQ-11-1113-G5-ST-H
_____ (1) Hardware Package	SDHQ-11-1113-G5-ST-HP
_____ (3) 3/8" - 16 Rivet Nuts	
_____ (10) 3/8" - 16 1" Hex Head Bolts	
_____ (6) 3/8" - 16 Hex Nuts	
_____ (12) 3/8" Lock Washers	
_____ (16) 3/8" Washers	
_____ (4) M5 x .8 20mm S.S. Socket Head Bolts	
_____ (4) M5 x .8 S.S. Nylock Nuts	
_____ (2) 90 Degree 1/4" NPT Elbow	
_____ (4) 1/4" - 20 1" Hex Head Bolts	
_____ (8) 1/4" Washers	
_____ (4) 1/4" Lock Washers	
_____ (4) 1/4" - 20 Hex Nuts	

Inspected and Packaged By: _____ Date: _____

For questions or help with the installation, please email help@sdhqoffroad.com
Store front hours: Mon. - Fri. 8:00am - 5:30pm and Sat. 9:00am - 2:00pm Arizona Time.

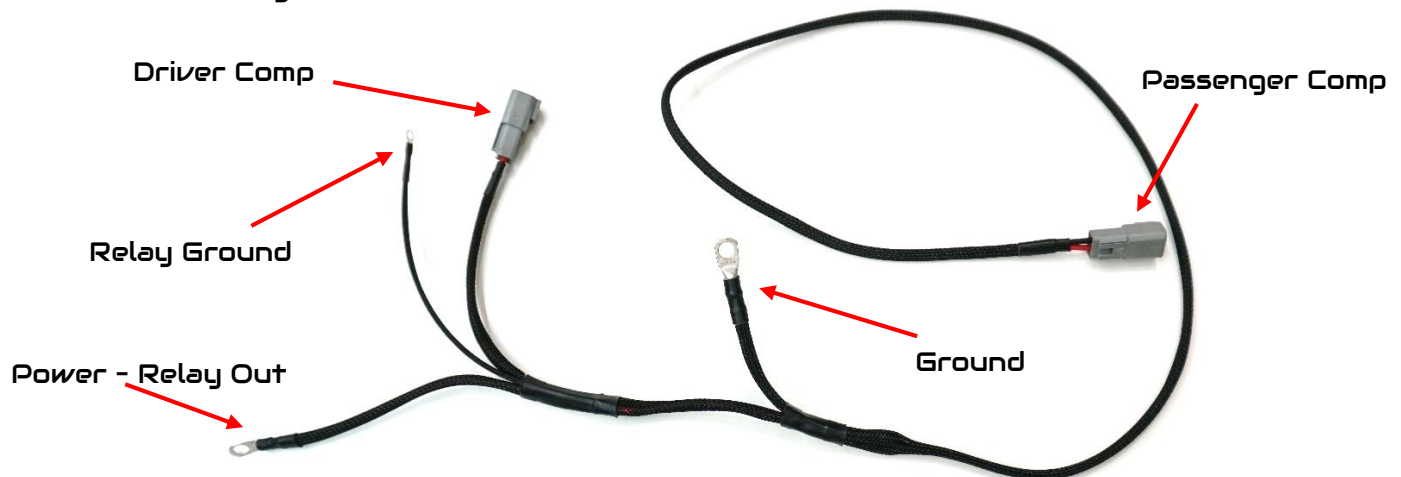


Included in **SDHQ-11-1113-G5-VPH**: Viair Primary Harness

- (1) Super Duty Viair Primary Harness
- (1) Hardware Pack

SDHQ-11-1113-G5-VPH
SDHQ-11-1113-G5-VPH-HP

- (1) 8-4 GA Red Terminal Boot
- (1) DTP 2 Male Connector
- (1) DTP 2 Male Wedge
- (2) 14-12 GA Solid Barrel Female Pins
- (1) DTP 2 Female Connector
- (1) DTP 2 Female Wedge
- (2) 14-12 GA Solid Barrel Male Pins
- (1) 1.5" Length ½" Heat Shrink



Included in **SDHQ-11-1113-G5-VSH**: Viair Secondary Harness

- (1) Super Duty Viair Secondary Harness
- (1) Hardware Pack

SDHQ-11-1113-G5-VSH
SDHQ-11-1113-G5-VSH-HP

- (1) 8-4 GA Red Terminal Boot
- (2) DTP 2 Male Connector
- (2) DTP 2 Male Wedge
- (4) 14-12 GA Solid Barrel Female Pins

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INSTALLATION INSTRUCTIONS

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Description: SDHQ Built 2017-Current Ford F250/350 Under Bed Air System Mounting Kit with Spare Tire



<u>Parts List</u>	<u>Hardware List</u>	<u>Required Tools</u>
(2) Compressor Mount A SDHQ-11-1113-G5-ST-A (2) Compressor Mount B SDHQ-11-1113-G5-ST-B (1) Passenger Tank Mount SDHQ-11-1113-G5-ST-C (1) Driver Tank Mount SDHQ-11-1113-G5-ST-D (1) Capture Plate SDHQ-11-1113-G5-ST-E (1) Relay Mount SDHQ-11-1113-G5-ST-F (1) Viair Tank Template SDHQ-11-1113-G5-ST-G (1) Firestone Tank Template SDHQ-11-1113-G5-ST-H	(3) 3/8" – 16 Rivet Nuts (10) 3/8" – 16 1" Hex Head Bolts (4) 3/8" – 16 Hex Nuts (14) 3/8" Washers (4) M5 x .8 20mm S.S. Socket Head Bolts (4) M5 x .8 S.S. Nylock Nuts (2) 1/4" – 20 1" Hex Head Bolts (2) 1/4" – 20 Hex Nuts (2) 1/4" Lock Washers (4) 1/4" Washers	1/8", 3/8" & 17/32" Drill Bits 9/16" Socket & Wrench Drill Rivet Nut Tool 7/16" Socket and Wrench Ratchet Sharpie Crimping Tool Torch

Tech Notes

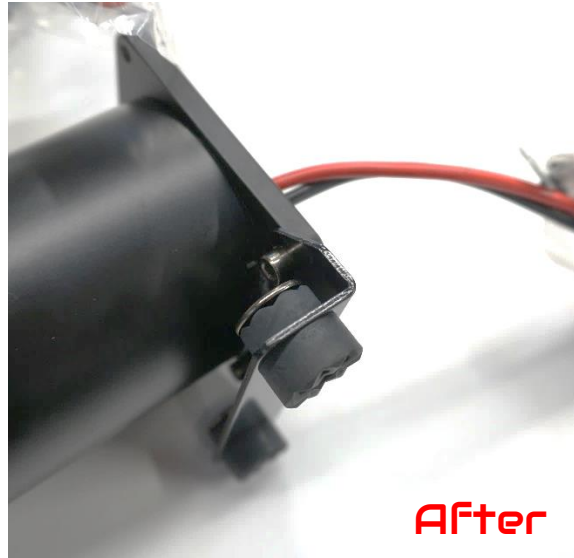
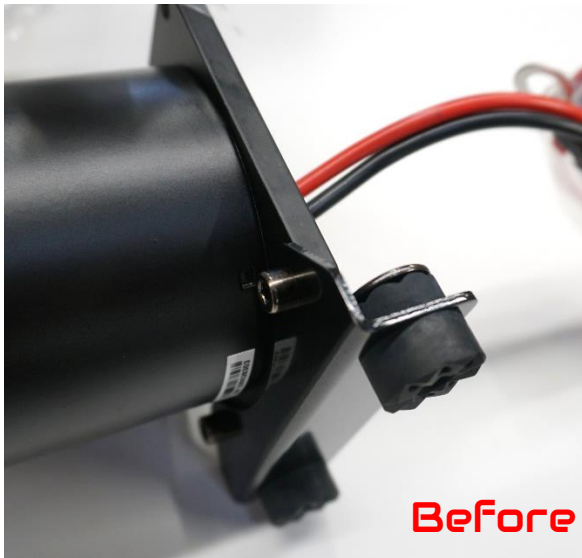
Approx. Install Time: 1 Hour Not Including Wiring
 Kit does require drilling for installation

READ ALL INSTRUCTIONS THOROUGHLY FROM START TO FINISH BEFORE BEGINNING INSTALLATION!

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Installation Instructions:

1. Unbox your F250/F350 air system mounting kit and lay all parts and hardware out on a clean surface. Verify that all parts and hardware are present and read through the instructions before starting the install.
2. Unbox your Viair air system kit and locate the (2) compressors. The compressor mounting brackets will need to be flipped inward to provide extra room when installing the compressors. Start with the rear bracket on either compressor unscrewing the (2) M5 socket head bolts. Flip the bracket as shown and replace the bolts. Repeat for the other compressor.



3. To flip the front mounting bracket, you will need to replace the factory hardware with the supplied (2) M5 20mm socket head bolts. Remove both M5 socket head bolts and set aside as they will not be reused. Install the supplied M5 socket head bolts without the mounting bracket and tighten. Now place the mounting bracket on the inside of the compressor and secure using the supplied M5 Nylock nuts.





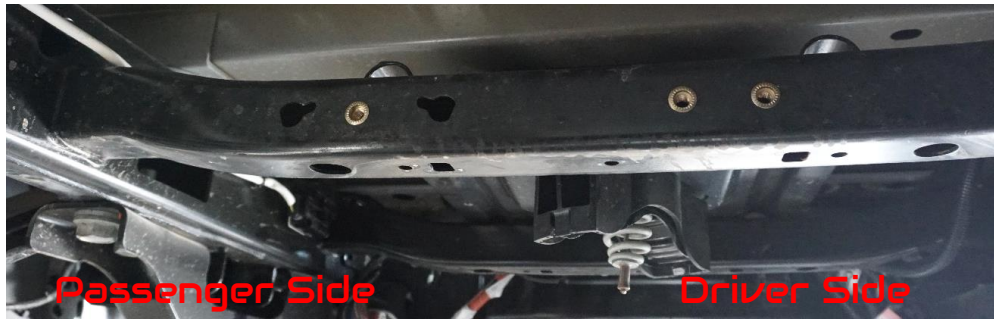
- Next locate the supplied compressor mounts. Set the compressors on their sides such that they are opposites, shown below. Use the Viar supplied hardware to secure the mounts to the compressor and tighten.



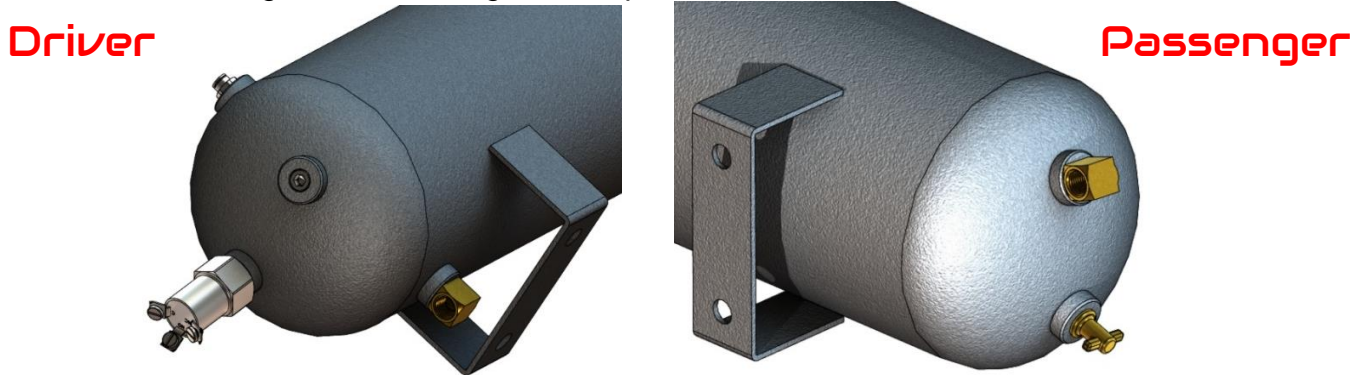
- After dropping the spare tire, grab your Tank Plate Drilling Template and align it on the cross member in front of the rear differential facing the front of the vehicle. Line up the $\frac{3}{4}$ " hole with the most passenger hole on the cross member and then center mark the other (3) holes for drilling. Drill out the holes to $\frac{17}{32}$ " and then install the (3) $\frac{3}{8}$ "-16 rivnuts using a rivnut tool.
Either template will mount in the same location on the passenger side of the cross member



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6. Attach all fittings to the air tank while its off the vehicle. This includes pressure switch, brass 90° fittings, tank drain and plugs. Below is the set up recommended for this install but can be configured many different ways as long as fitment allows. *Swapping the pressure sensor and plug on the driver side is recommended if running "Piggy Back" shocks while the set up shown is for reservoir shocks* **Preassemble tank without sealant and mount it to check desired fitment of fittings before locking them in place**

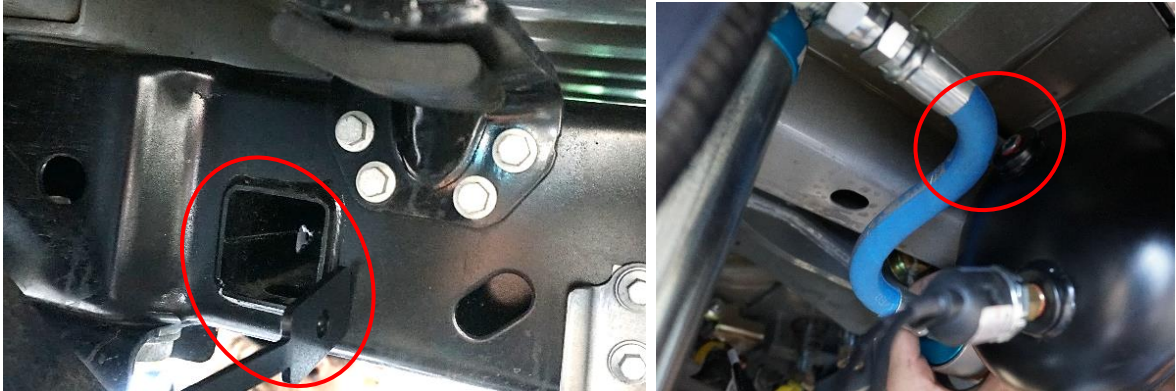


7. Attach the tank mounts on the tank using only the top weld nut locations. Lift the tank up to the cross member and align the mounts with the previously installed rivnuts. Install the supplied 3/8" hardware into the tank mounts as shown and secure the tank to the cross member.



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8. Now install the capture plate through the cross member in the passenger rear wheel well. With the capture plate in the cross member you can use the hole on the bottom of the cross member to help locate and install the final 3/8" bolt. **If running a shock with a reservoir, the hose fitting may need to be clocked to prevent rubbing on the tank**



9. On the passenger side frame rail near the rear of the vehicle there is an electrical box that might need to be unclipped from the frame for compressor clearance when marking drill holes. Once holes are marked the box can be reinstalled.

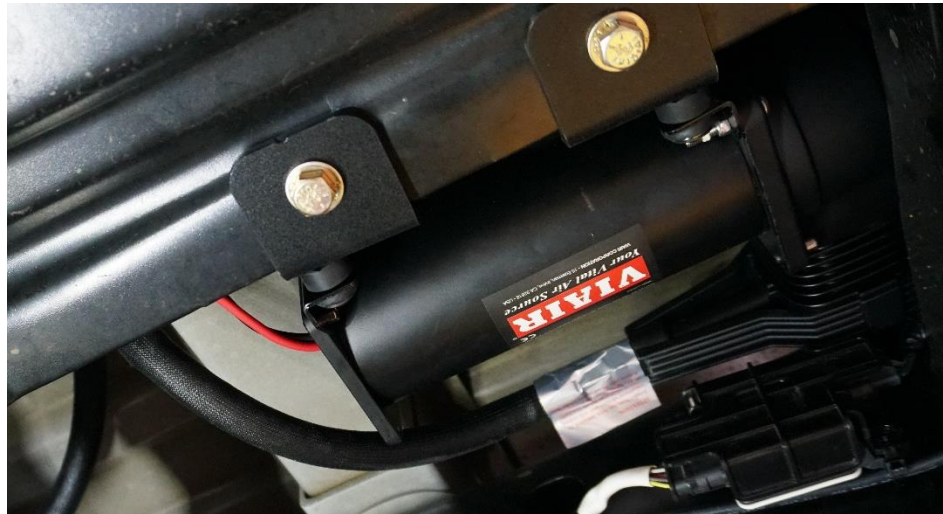


10. Now take the passenger side compressor and hold in position on the center tire support. Place the compressor as far towards the front of the front of the truck without contacting the bed cross member. When in the desired location mark the (2) mounting hole positions. Repeat for the driver side compressor and then drill holes for the supplied 3/8" mounting hardware.



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11. Bolt up either compressor using the supplied 3/8" bolts, washers, and nuts. Having an extra hand to support the compressor will help with getting the first bolt started. Once both compressors are mounted torque down the 3/8" hardware.

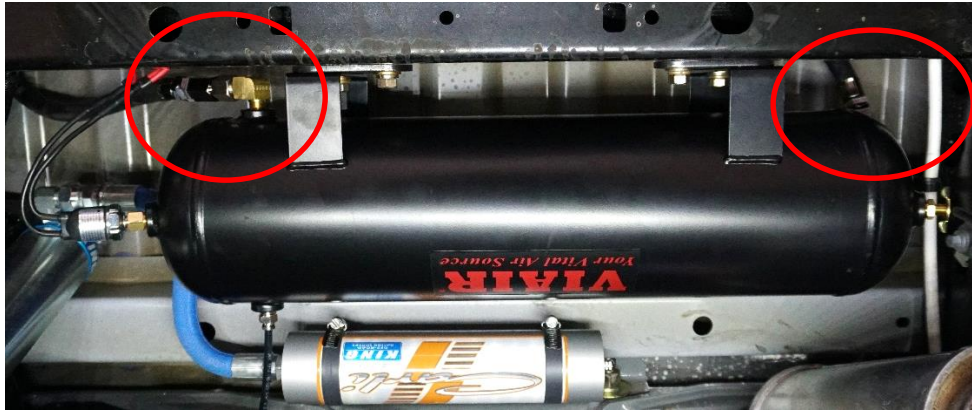


12. Locate the Viair supplied relay and SDHQ supplied stainless relay mount. Using 1/4" hardware, attach the relay to the relay mount as shown. On the driver side frame under the truck locate the 13mm ground bolt and remove it. Place the Relay Mount over the factory ground and replace the 13mm bolt. **This ground bolt will be used to ground out the compressor harness**



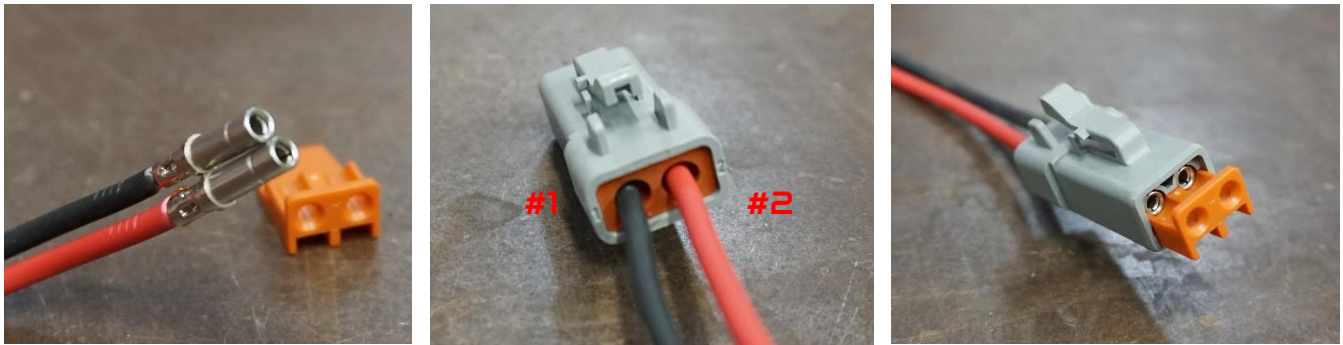
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13. Attach the compressors hoses to the 90° fittings on the tanks. You have now completed the compressor and tank mounting portion of this kit.

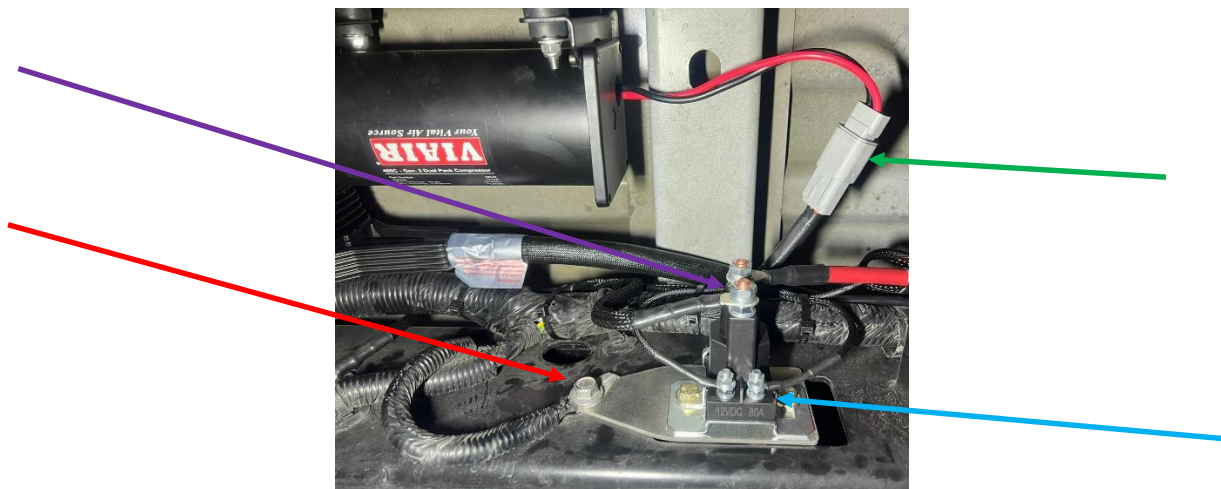


14. Now to wire the system together. Start by pinning the ends of each compressor harness with the supplied Male DTP barrel sockets. Once pinned, insert the wires into the back of the male connector until they lock in place **Negative wire will go in the (#1) pin location marked on the DTP connector**. Insert the DTP wedges from the front of the connector to support the pins.

Shown Below is a Male DTP 2 Connector

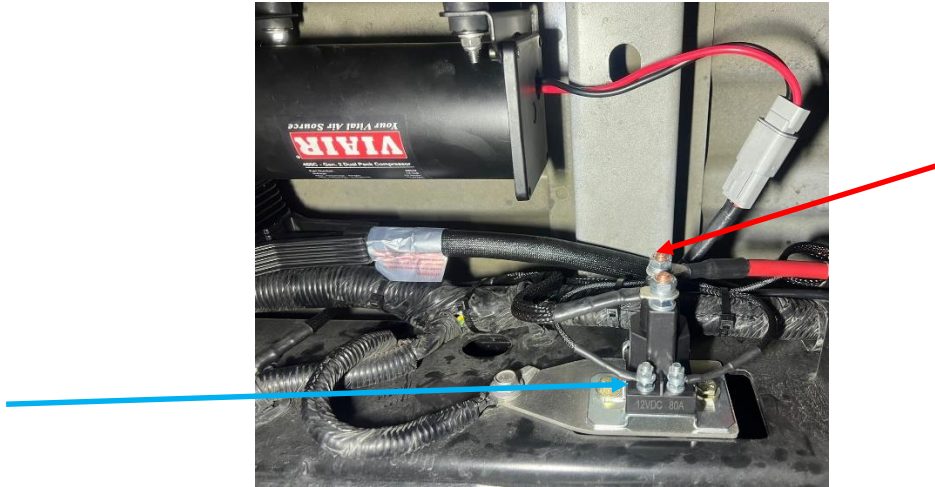


15. Install SDHQ-11-1113-G5-VSH (Viאר Secondary Harness) by connecting both compressors to the harness. The longer DTP connector on the harness will power the passenger side compressor and route over the top of the spare tire holder. Connect the 3/8" negative lug to the body ground and the 5/16" power lug to relay previously mounted on the driver frame. Use one of the supplied red boots to cover the power wire to compressors. Connect the small negative wire to the ground side of the relay signal.



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16. Locate SDHQ-11-1113-G5-VPH (Viair Primary Harness). Begin installing by connecting the loomed side of the **power wire** to the input of the Viair relay. Install the other red boot over this connection. Connect the **small white wire** to the signal side of the relay. Secure the wire along the factory harness letting the breakaway hang loose.



17. Next locate the supplied female and male DTP 2 connectors, pins and sockets. Now install the male connector to the pressure switch on the tank. The switch is not directional so the wires can be placed in either pin position.

Shown Below is a Female DTP 2 Connector

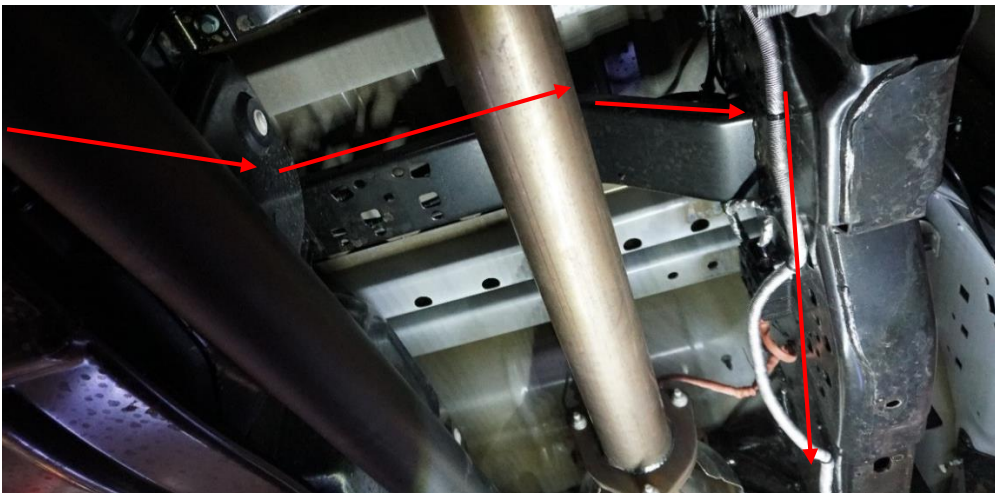
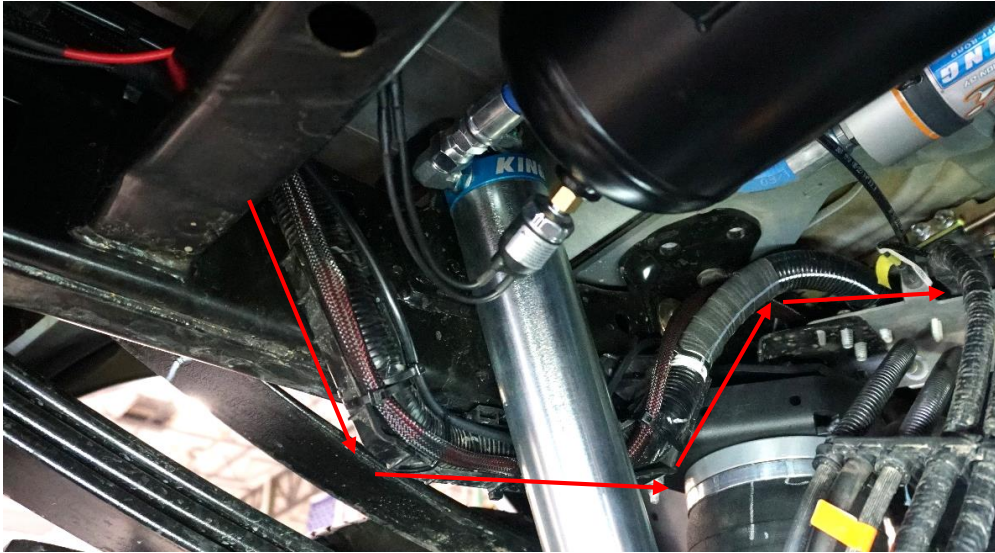


18. Locate the harness breakaway with the red and white wires. Check fitment to pressure switch location and trim to length if needed/desired. Once fitment is confirmed heat shrink the loom in place and install the female DTP 2 connector. The red power wire goes in pin (#2) and white wire in pin (#1). Connect to the pressure switch and secure.



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19. Continue routing the harness along the factory wiring on the driver side frame. Cross over the frame at the center mounted cross member above the drive shaft and exhaust.



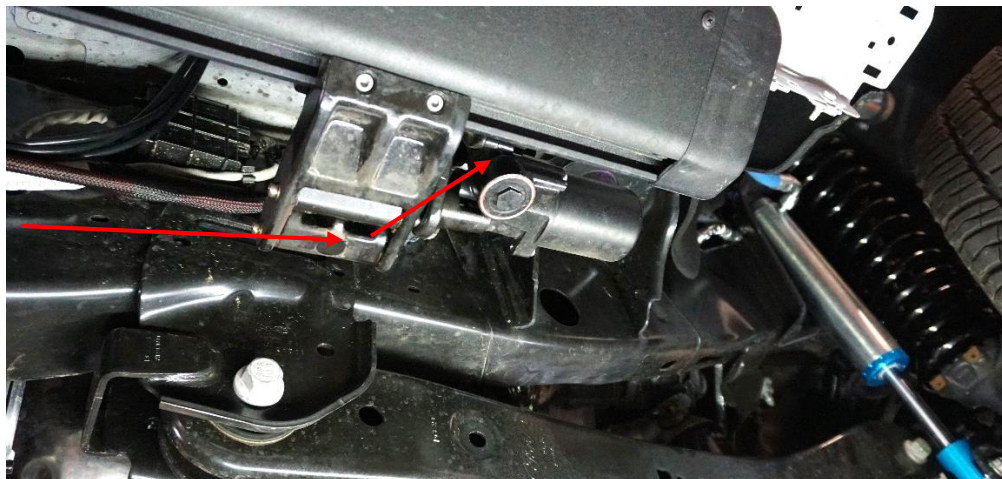
20. Once over the cross member to the passenger side of the frame follow the factory wiring towards the front of the truck.

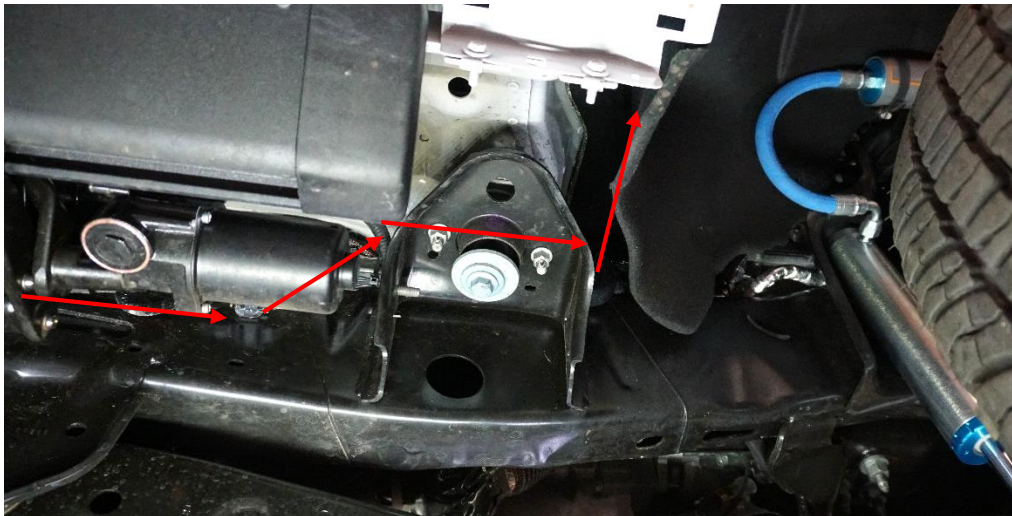


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21. When the harness is routed to the front wheel well pass over the top of the frame in front of the fire wall into the engine bay. Secure wiring such that it will not get damaged in the wheel well and it stays away from exhaust heat. Once in the engine bay connect the power wire to the battery and the switch signal wire to the desired switch style.

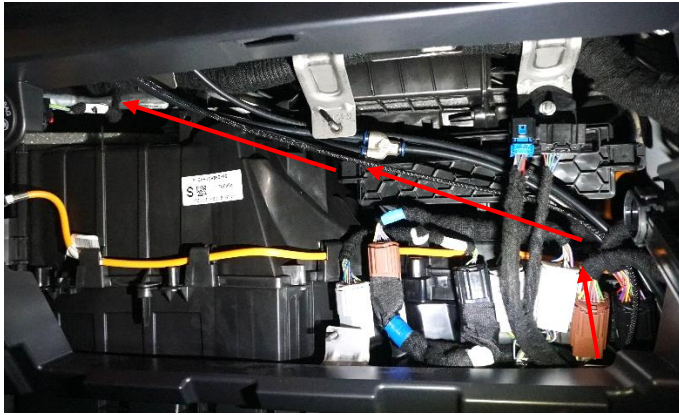




22. Now run air lines and mount air chuck as desired. If running an in the cab air controller its recommended to pass through the grommet on the passenger front floor as shown. The routing of airlines can follow the same as the harness previously ran.



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Example Chuck and Manifold Mounting



Female DTP 2

vs

Male DTP 2



23. Enjoy your SDHQ Built Super Duty under bed air system with spare tire capability!

*****Double check all hardware is installed correctly and tight*****

*****Re-torque ALL bolts after 100 miles*****



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