

# Ford F-150 2017-2020 ARB Installation Instructions



## 1) Remove OEM Bottle Jack:

Fold down the rear seat and remove the factory scissor jack using a T-40 torx bit. Remove the bolt as shown in the 3<sup>rd</sup> photo using a 18mm deep socket.



## 2) Compressor & Bottle Jack Installation:

Install the (4) 3M adhesive pads as shown below. Using the provided (4) bolts, (4) washers and (4) lock washers that came with your ARB, attach the compressor as shown below using a 10mm wrench.

Install the provided ¼" thick rubber pad to the bottom of the jack mounting plate as shown below in the 2<sup>nd</sup> picture.



Attach the jack to the mounting plate using the provided (4) Velcro straps. (1) 8" strap around the jack handle pump, to reduce rattles, (2) 12" Velcro straps attaching the jack to the mounting plate, and (1) 12" Velcro strap attaching the handle to the jack.

We recommend using a Harbor Freight Pittsburg 4 ton bottle jack, any 2 or 4 ton bottle jack should work, as our design is fairly universal. The Pittsburg jack has the widest base we could find which will work well when operating the jack on loose soil conditions.





Install the compressor using the provided (2) bolts and (2) washers using a 13mm wrench. When installing this bracket push it as far back as possible to prevent the compressor from coming in contact with the seat when in the folded up position. Attach the push to connect "T" air line fitting into the compressor using a 14mm wrench. Screw on the two ARB air filter screens as shown in the 2<sup>nd</sup> picture below.



### 3) Side Air Fitting Installation:

Remove the plastic cover covering the passenger side seat belt ratcheting mechanism. There are two torx bolts circled in red located under the rear seat next to the power inverter. You will first need to remove the inverter cover to gain clearance, then remove these two bolts using a T-25 torx bit.





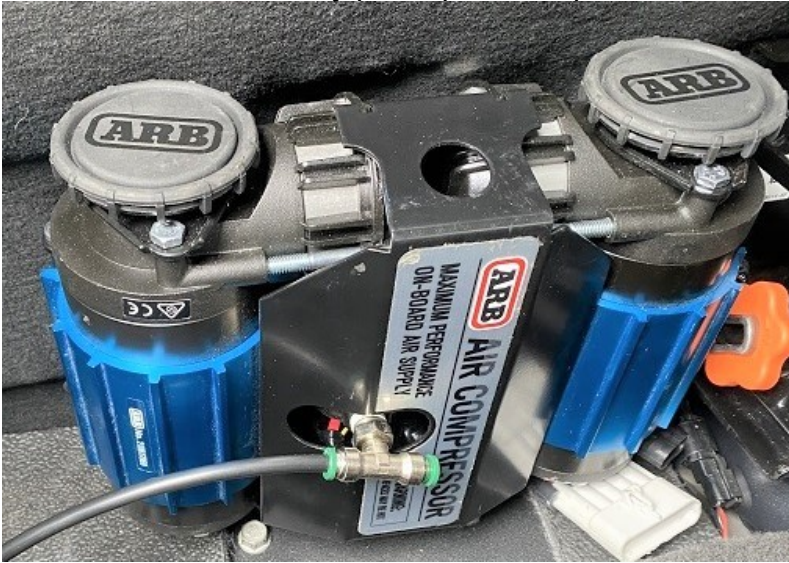
Remove the passenger side seatbelt ratcheting mechanism using a T-45 torx bit, then remove the seat belt bolt retaining clip. This clip will not be reused, we recommend cutting it off with a pair of side cutters. Attach the provided mounting bracket as shown below, note the red arrow in the 3<sup>rd</sup> picture. This notch in the bracket should rest against the ratcheting mechanism. Attach the push to connect airline fitting to the brass coupler using a 13/16" and 9/16" wrench. There are a few degrees of adjustment in this part, get the mounting bracket close then set the plastic cover into position, adjust the rotation of the coupler as necessary. Once you are satisfied with the angle of the coupler tighten the bolt and reinstall the plastic cover. Repeat this same procedure on the driver side.





#### 4) Air Line Installation:

Connect the ¼" diameter, 21" long airline to the push to connect fitting on the passenger side, the opposite end will connect to the "T" push to connect airline fitting on the ARB compressor. Route the airline so it is free of any pinch points or potential rattles.



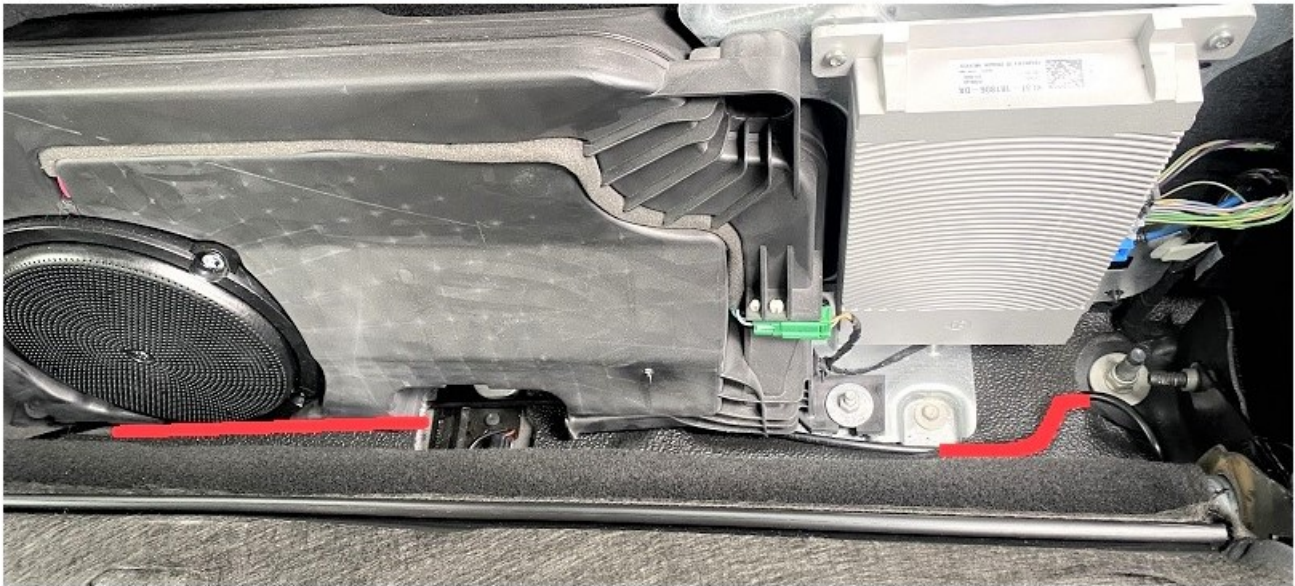
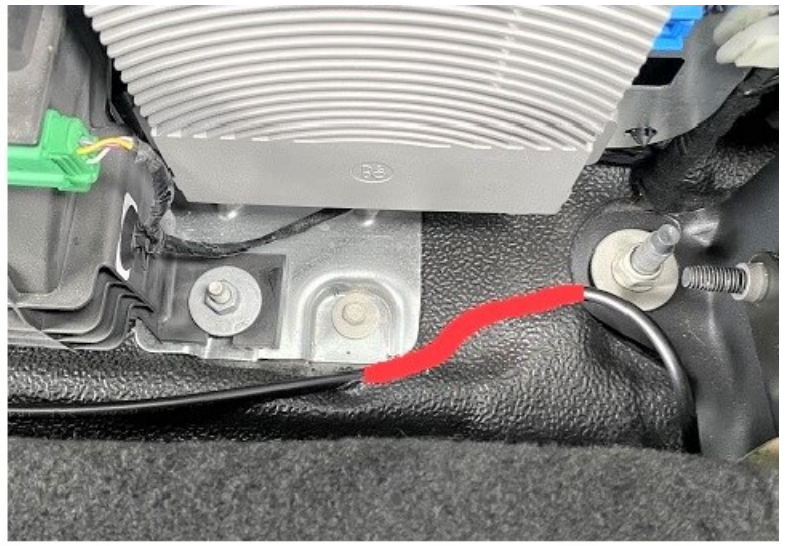
#### Laying Down The Driver Side Rear Seat:

Lift up the bottom portion of the seat until it is in its fully locked position. Using the photos below as a reference to its location on the driver side of the vehicle, lift up on the steel pin as indicated by the red arrow until it is locked in the open position. There is an audible sound made when it is disengaged. When it is in the open position you can then fold down the bottom portion of the seat and lower the top.



Connect the ¼" diameter, 60" long airline to the push to connect fitting on the driver side, the opposite end will connect to the "T" push to connect airline fitting on the ARB compressor. Carefully route the air line under the carpet where possible as outlined in red to reduce any potential rattling or damage.







# Ford F-150 2017-2020 ARB Wiring Installation Instructions

## Tools required

- \*8MM, 10MM & 13MM sockets
- \*Wiring crimpers
- \*Wire cutter
- \*Large hammer
- \*Zip tie cutters
- \*Drill with .75" drill bit or uni-bit, stepper bit.
- \*Flat screwdriver
- \*Small pick or awl
- \*Lighter



## 5) Wiring Access:

You will need to gain access behind the large panel shown in the first picture to route the wiring. To remove the following panel you will first need to remove the snap in panel shown in the 2<sup>nd</sup> picture on the passenger side of the vehicle. No tools are required to remove these panels, as they simple snap into place. Once this panel is removed pull back the rubber door steal then snap out the large panel. **Note**, the large panel has a plastic barbed clip, circled in red, that must be removed and is only accessible once partially pulled out.

Once the large panel has been unclipped set it to the side.

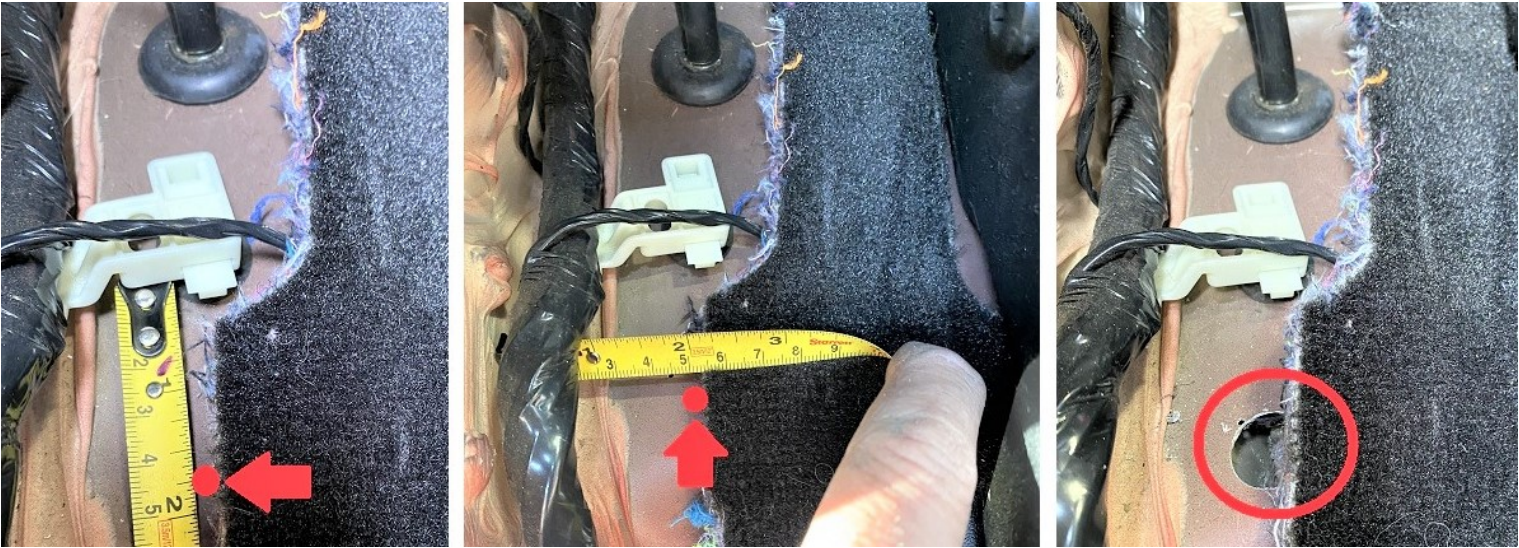




**6) Drill .75" Hole:**

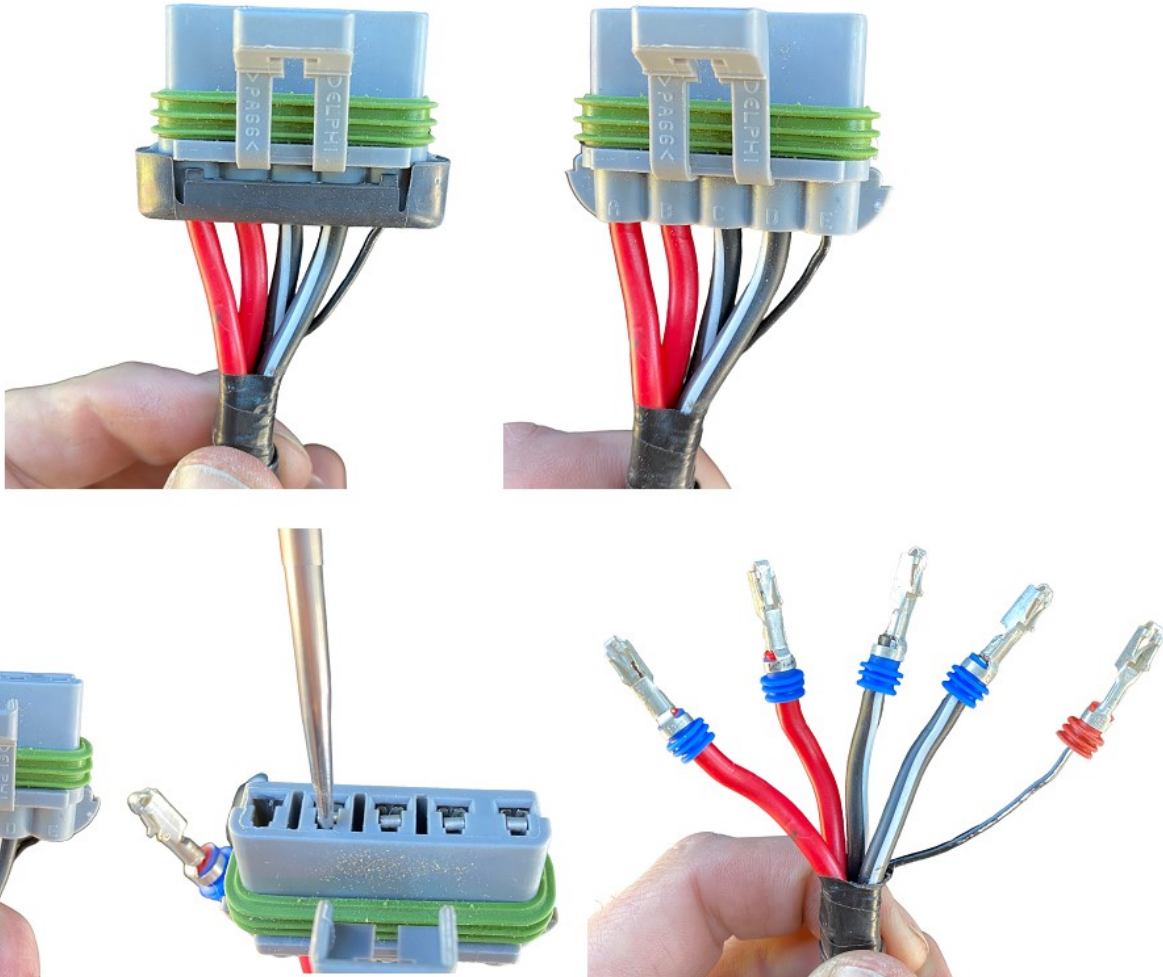
The pictures below show the area that is now visible since the large plastic panel has been removed. Using the pictures below as a reference for location, drill a .75" dia hole through the floor board of the truck.

The hole will be ~1.75" down from the white plastic clip, and ~2.0" over from the side of the body.



**7) Large Wire ARB Wiring Harness:**

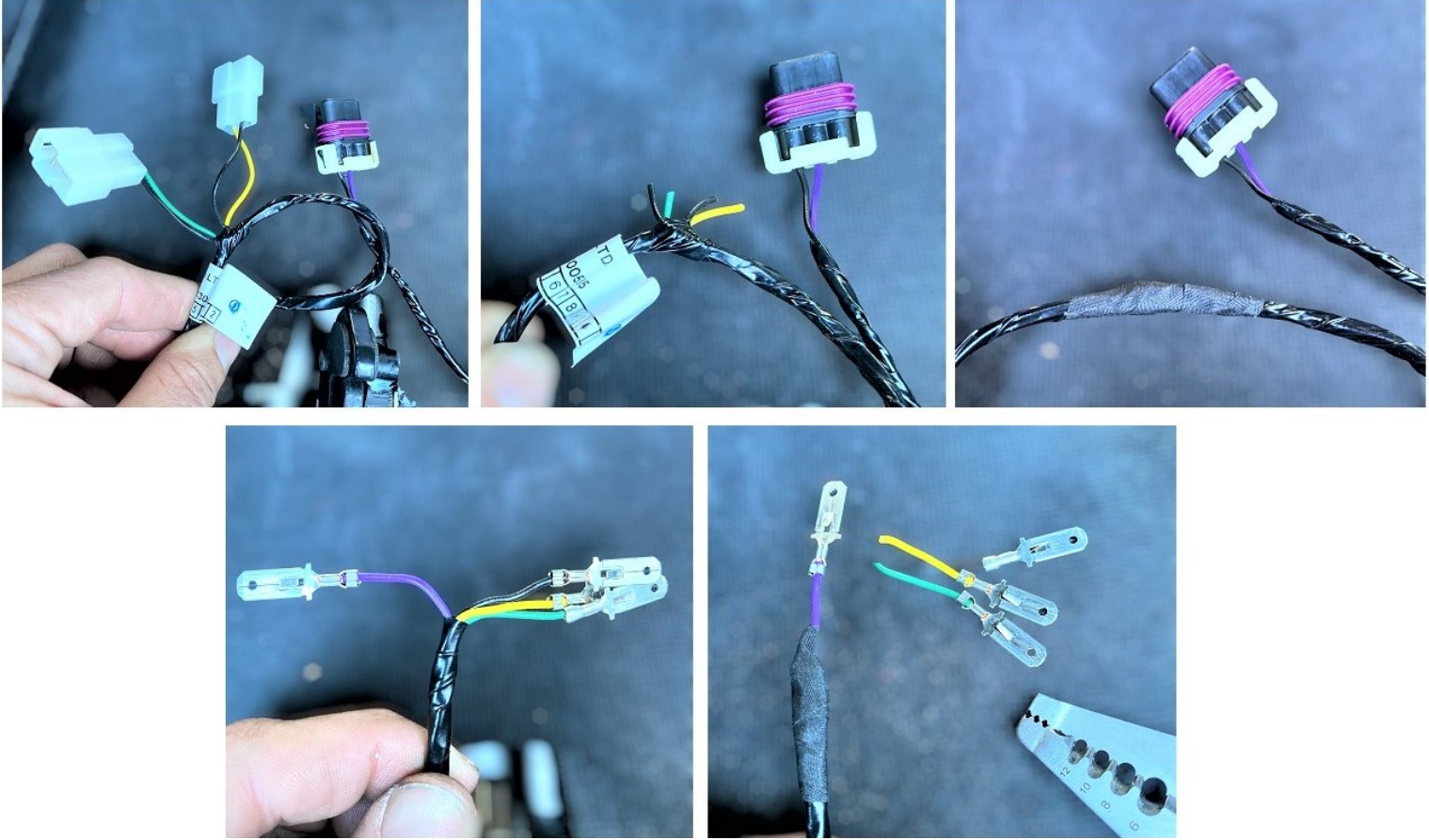
Remove the black plastic wire clip on the large ARB compressor wiring harness. Use a small pick and insert it into the wiring harness as shown below to remove wires from the plug. The smaller the pick the better.





**8) Small Wire ARB Wiring Harness:**

Uncoil the small wire ARB wiring harness. You will only be using the purple for this installation. All the other wires and connectors will be cut off and taped up using the supplied Tessa heat tape. Using the pictures below as a guide cut off all other plugs.



**9) Feeding Wires Through The Floor:**

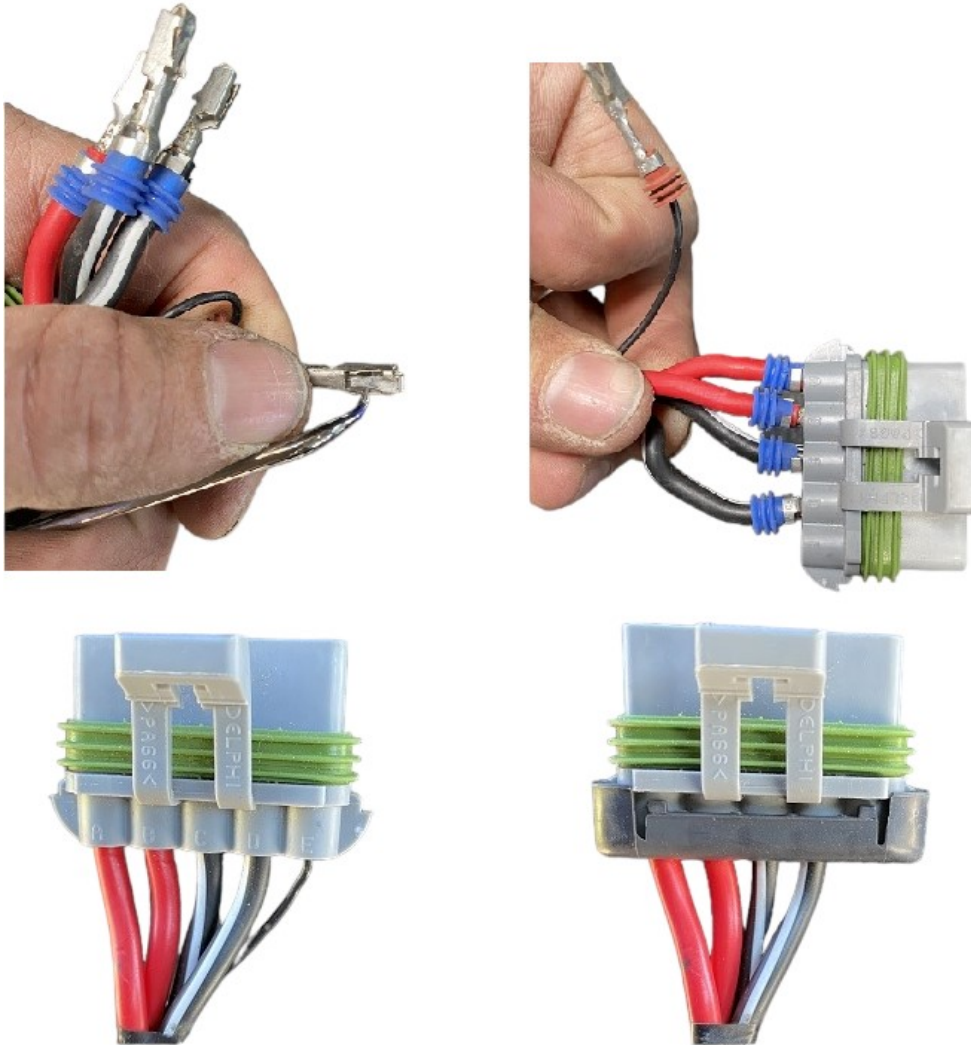
Insert the small purple wiring harness through the provided rubber grommet, then install the larger wire loom into the grommet. Pass the wires through the hole previously drilled into the floor then install rubber grommet, leaving ~20" of wiring exposed into the cab of the truck.





## 10) Reassemble Plug:

Using the photos below reassemble the main ARB harness. **Note:** You will more than likely need to use a small pick to pull back the small metal tabs that hold the wire to the plastic connector. Install the wire in one at a time in the same order as shown below, then install the black plastic wire clip. Plug both wiring harnesses back into the ARB compressor.

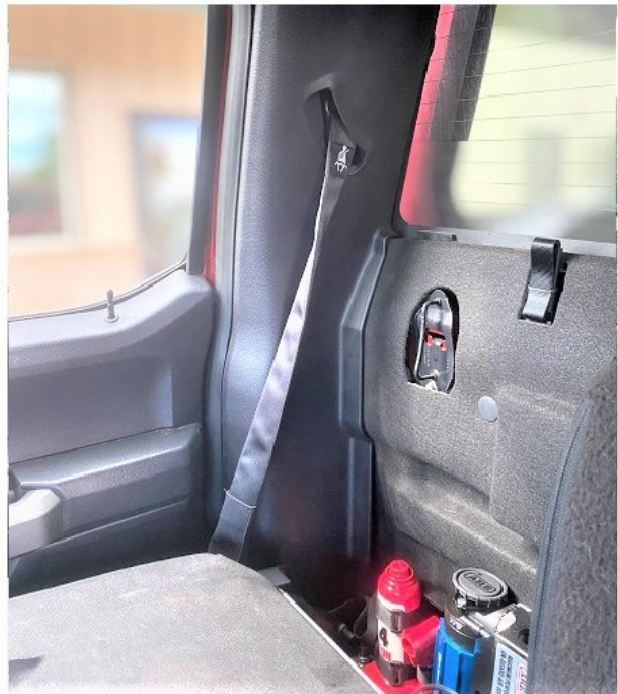


## 11) Interior Reassembly:

Tuck the wiring harness that goes behind bottle jack mounting plate behind the carpet and out of harms way. You are now able to bolt down the bottle jack mounting plate using a deep 18mm socket. Making sure that the wiring harness is not pinched or being pulled too tight. Reinstall the plastic interior panels.





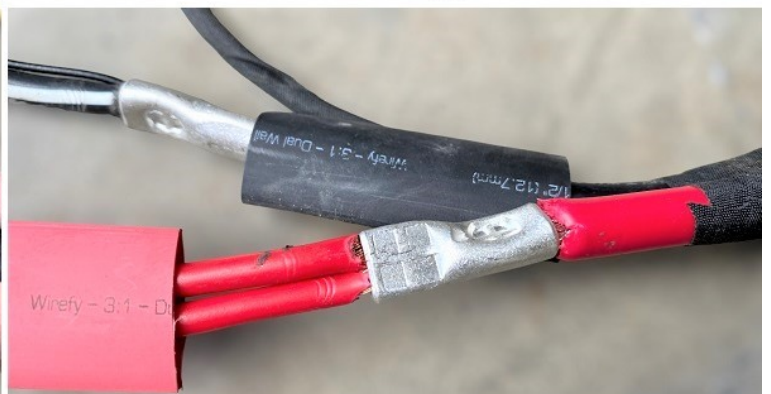
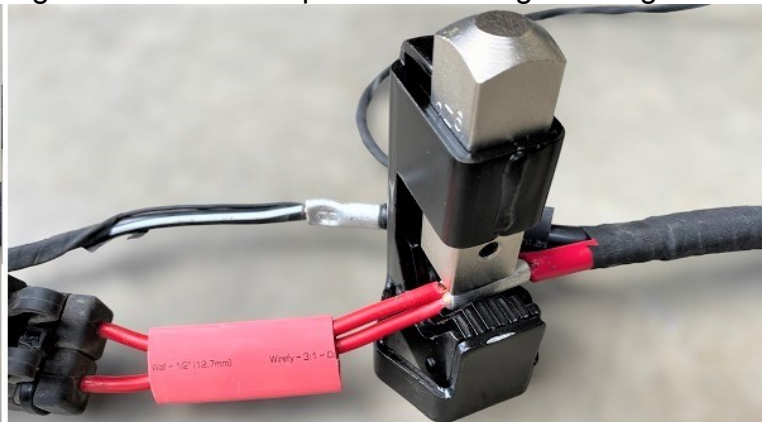
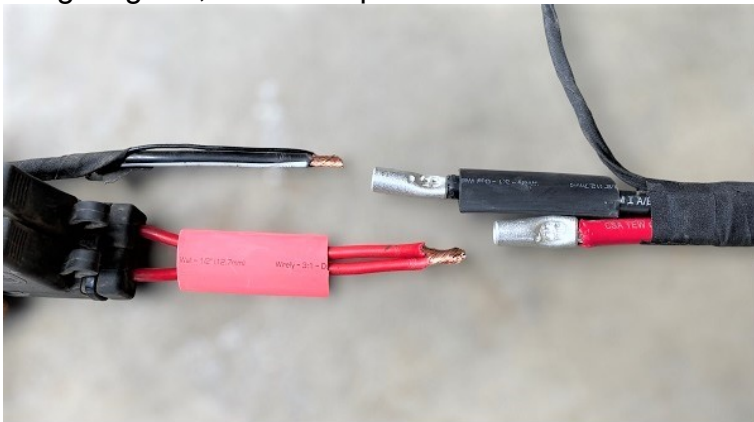


## 12) Large Wire ARB Wiring Harness:

The provided wiring harness has both the positive and negative wires staggered. This is to reduce the possibility of the wires coming in contact with each other and shorting out the vehicle. Using the provided harness as a template, cut down the ARB harness to match the offset and strip off the 3/8" of insulation off the black wires. Then twist the two red wires together, and the two black wire together. **Note: Be sure to install the provide 1/2" heat shrink tubing prior to crimping the terminal ends.**

Using the provided lug crimper, place it on a solid surface, Insert the wires inside the butt connector. Hit the top of the crimping tool with a large hammer forcefully.

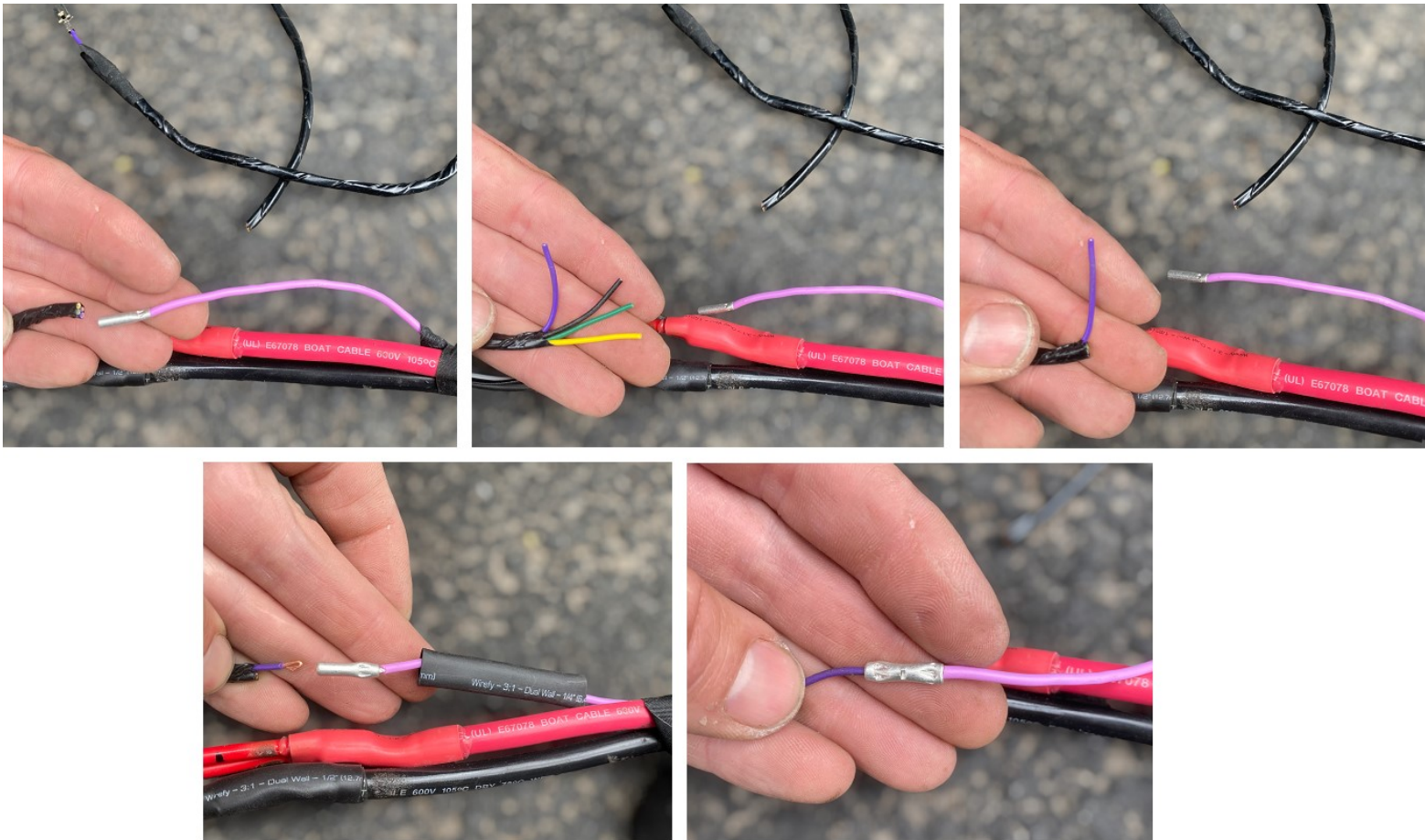
Using a lighter, install the provided 1/2" heat shrink tubing over the wires to prevent it from grounding out.





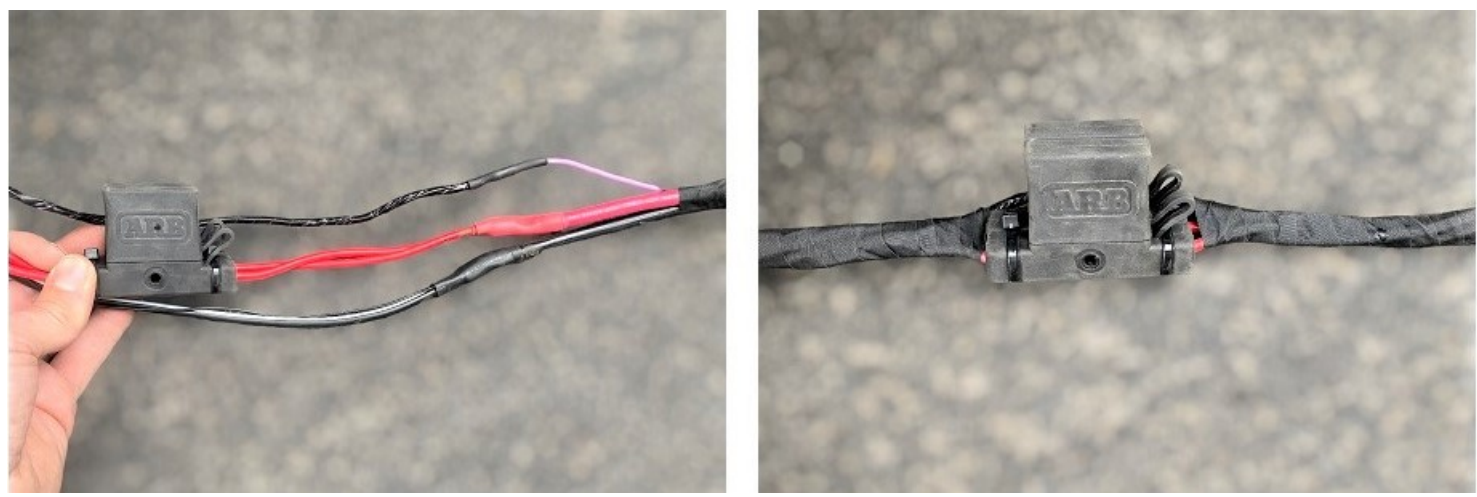
**13) Purple Signal Wire:**

The purple signal wire coming off the main ARB wiring harness will now be cut down ~54" to match up to the purple wire coming off the supplied wiring harness with this kit. Follow the pictures below Using a lighter, install the provided 1/4" heat shrink tubing over the wires to prevent it from grounding out.



**16) Taping The Wiring Harness:**

Using the provided heat roll tape, wrap up the wires, this includes the small purple wire as shown below





### 17) Wiring Routing Up To The Battery:

Route the wiring harness behind the body mounts, then route with wiring between the inner fender well and the fire wall of the truck up towards the battery on the passenger side of the vehicle. It's a bit tricky to show in the photos, however route the wiring harness away from sharp edges and potential pinch points.

Using the provide zip ties secure the wiring done thus far to the side of the frame rail.

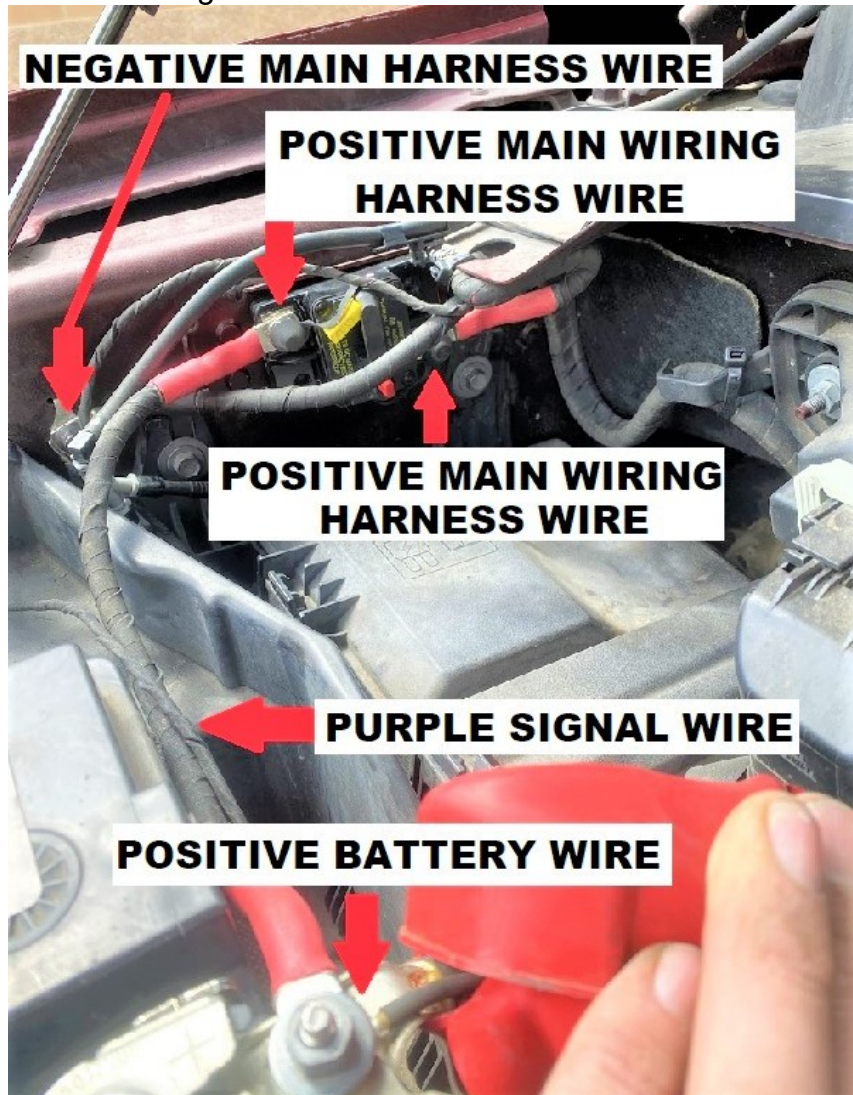
### 18) Mount The 80 Amp Fuse:

Using the supplied 3M adhesive pads, place two of them on the underside of the 80 amp fuse block. Clean all the excess dirt/oil off the side of the mounting location shown below.



### 19) Attach Wiring Harness and Battery Jumper Wire:

Attach the wires as shown below using a 10mm and 8 mm socket.





## 20) Connecting To Switch Panel Wires:

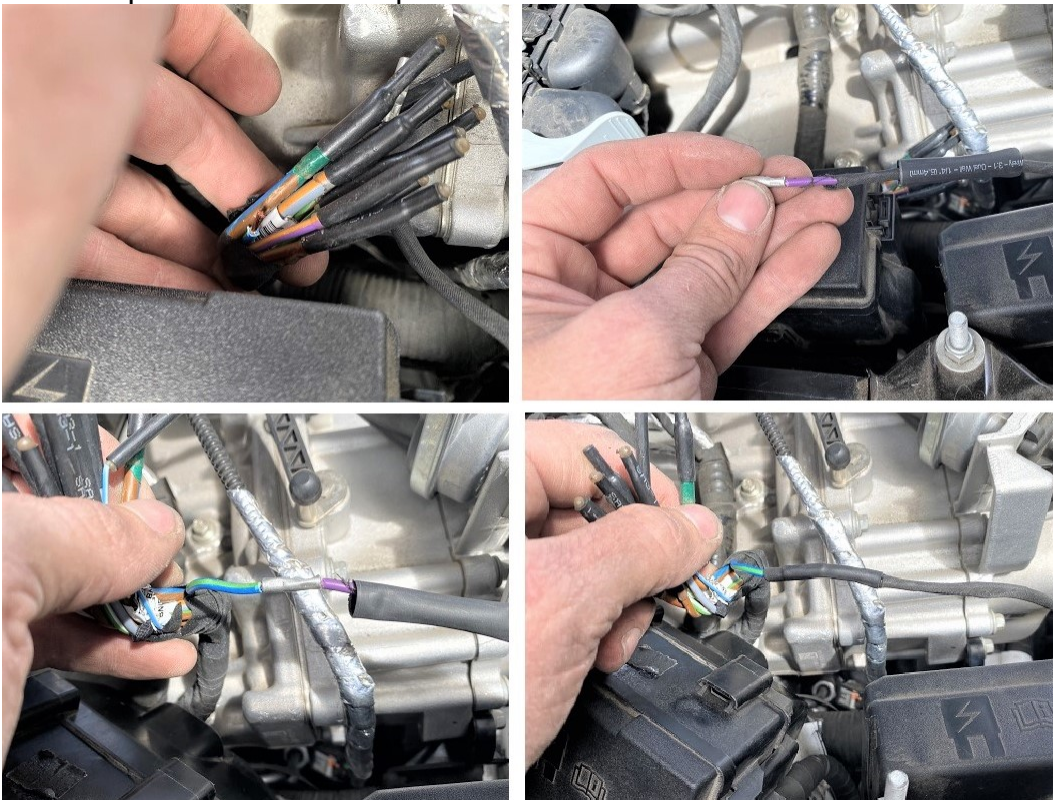
Determine which one of the wires you want to tap into to power on your compressor. The purple (signal) wire that you previously installed uses 3 Amps. We recommend saving switch 1,2,3,4 for items that will require higher amperage. Unclip the plastic box if applicable by pushing in on the two tabs as shown below. This will free up a bit more room to gain access to the switched wires.

Switch	Amp Draw	2017 Colors	2018-2019 Colors	2020 Colors
1	15	Green/Blue Stripe	Green/White Stripe	Yellow
2	15	Grey/Yellow Stripe	Brown/Blue Stripe	Green/Brown Stripe
3	10	Purple/Orange Stripe	Grey/Yellow Stripe	Purple/Green Stripe
4	10	Brown/Blue Stripe	Green/Yellow Stripe	Brown
5	5	Grey/Orange Stripe	Brown/White Stripe	Blue/Orange Stripe
6	5	Yellow/Purple Stripe	Green/Orange Stripe	Yellow/Orange Stripe



## 21) Attaching Upfitter Switched Wires:

Cut off the tape connecting the switched wires together. Select the wire you want to tap into for power, cut off the tip of the wire just past factory installed heat shrink tubing. Route the purple signal wire up to the switched wire, strip the end, attach the 1/4" heat shrink tubing and crimp both the purple signal wire and the switched wire. Once completed reinstall the plastic fuse block.





## 27) Wrapping Up:

Turn the truck ignition on. Turn on the proper upfitter switch for activation. Once the compressor cycles on it should quit pumping and automatically turn off at ~95psi. If the compressor continues to cycle on and off, there is an air leak in the system. Using soapy water check for air leaks and double check your connections for both the brass air chucks as well as the push lock air lines.

Once all the air leaks are fixed, go through the entire wiring harness and securely attach the harness using the supplied zip ties. Keep the wiring away from any pinch points or hot engine parts.

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Questions during the assembly of this kit or, have design feedback please reach out to us at [sales@dirtychurchindustries.com](mailto:sales@dirtychurchindustries.com)



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