IJKP-10 / Installation Instructions

4-Tire Air System for ARB Twin Compressor (CKMTA12)
Jeep JK 2-Door (2011 - 2018)

Made in USA

Kit Contents:

- 1 Flat Bracket
- 1 Formed Bracket
- 2 Plastic Push Pins
- 2 Bolts / Nuts
- 1 Branch Tee Fitting
- 2 Brackets with Bulkhead Fittings
- 1 60 in section of Black Nylon Tubing
- 1 94 in section of Black Nylon Tubing
- 2 Double air lines (8 ft) with 2 Y-Connectors and 4 Air Chucks
- 1 Black Plug (for closing one side)
- 3 5/16" Ring Terminals for ARB Harness to Battery (Red)
- 2 22-18 Gauge (Red) Quick Splices (1 Scotchlok / 1 T-Tap Set)
- 1 Air Down / Up Tool (IJKP-18)

Tools Required:

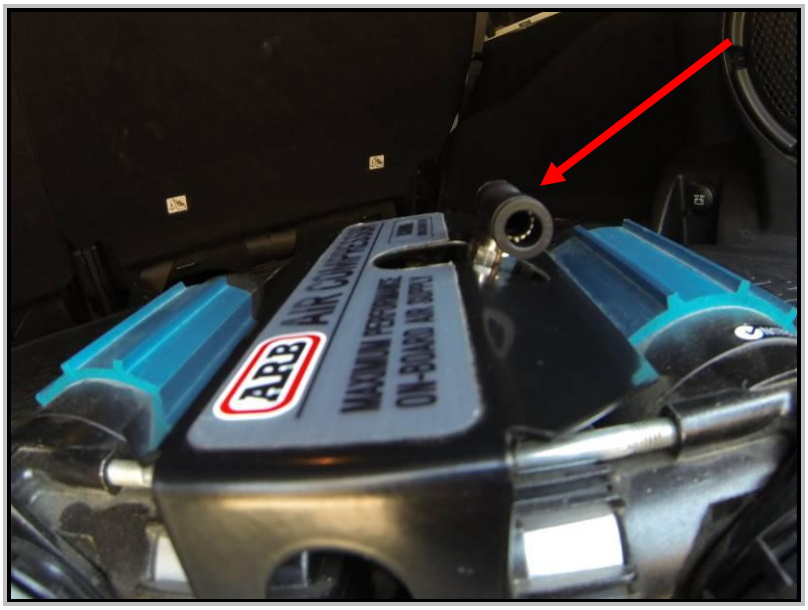
- Small Flat Blade Screwdriver or Metal Paper Clip
- Metal Rod and Electrical Tape (to help fish ARB wire harness through firewall)
- Drill
- ¼" Drill Bit, ¾" Step Drill
- 12" Extension with ¾" Step Drill (greatly eases ARB harness installation)
- Ratchet
- Extension
- 18mm Socket
- Breaker Bar
- Impact (optional)
- 10mm Socket
- 10mm Wrench
- Crimping Tool
- Pliers
- Dremel Tool (optional)
- Knife or Razor (for trimming plastic)
- T-30 Torx

Other items required (not Supplied):

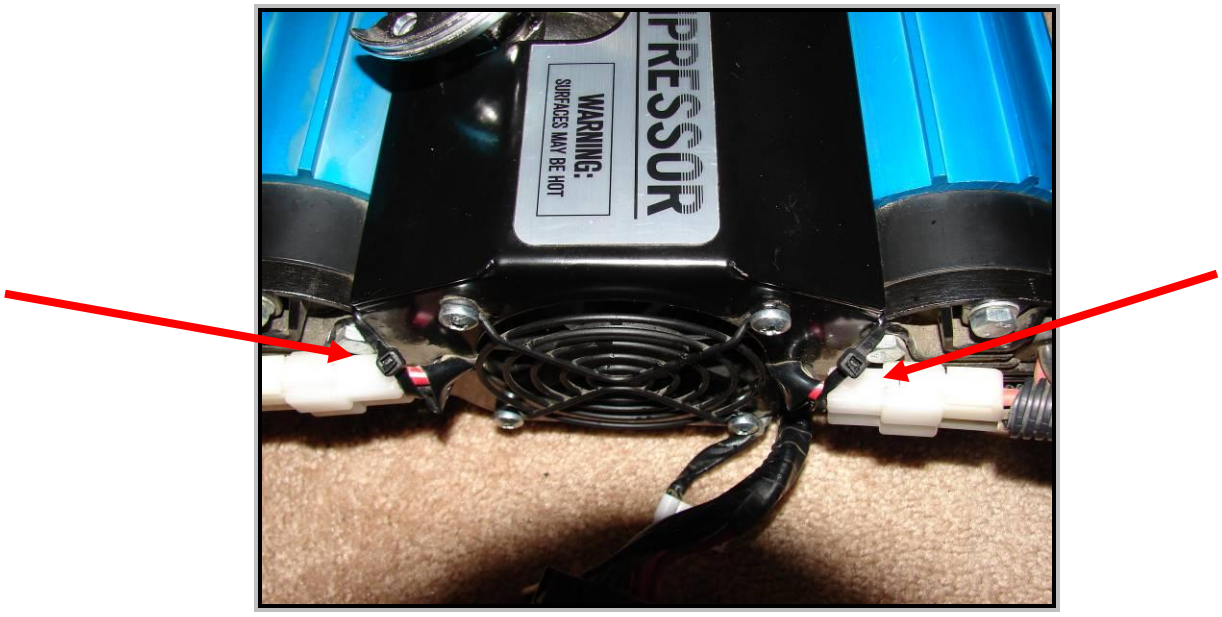
- Mounting location for the supplied ARB Compressor Switch. Options:
  - Daystar makes a Lower Dash Switch Panel or A-Pillar Mounted Pod
  - Cut an opening in dash or console for switch
  - Direct wire to an sPOD Switch Panel (instructions included in Step 5)
- 22-18 Gauge Wire (Red and Blue) may be required to extend leads on ARB harness for Power and Switch Light.

STEP 1 – Compressor / Wiring Preparation

1-A) Install the provided branch tee fitting into the compressor. Ensure the fitting is tightened to ensure a very good seal. Then insert a 10mm open end wrench into the slot on the top of the compressor where you just installed the fitting. You will see a 10mm hex head bolt on the end of the manifold. Loosen it, rotate the cylinder as far over as possible, then tighten the bolt. This ensures proper seat clearance for fitting and lines.



1-B) Use two wires ties to secure the main power plugs up against the compressor body and trim ends of wire ties. This is important for clearance as these wires will be close to the seat frame once the compressor is installed.

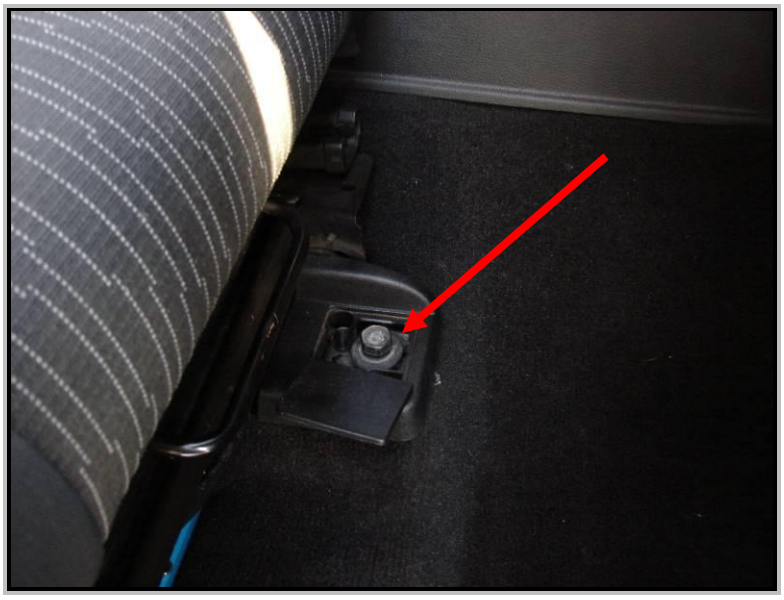


DISCONNECT YOUR BATTERY BEFORE PROCEEDING

STEP 2 – Seat Removal and Preparation

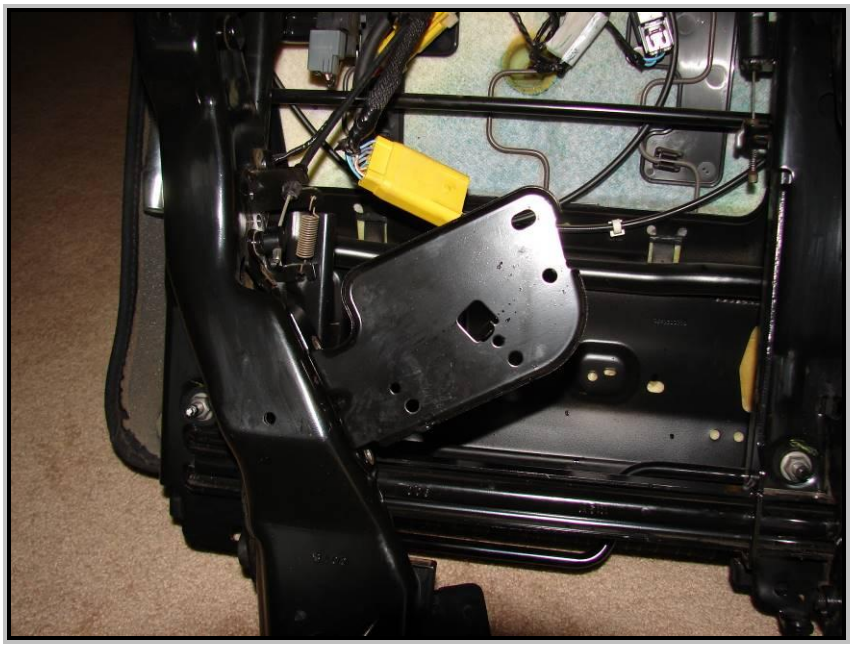
2-A) Slide and fold the passenger seat completely forward. Disconnect the yellow connector(s) under the seat. Also remove the one half of the yellow plug(s) attached to the metal plate under the seat. This is required to remove the seat from the vehicle.

2-B) Use a 18mm socket to remove the 4 bolts that secure the seat in the Jeep. You may need a breaker bar (or impact) to get these loose.

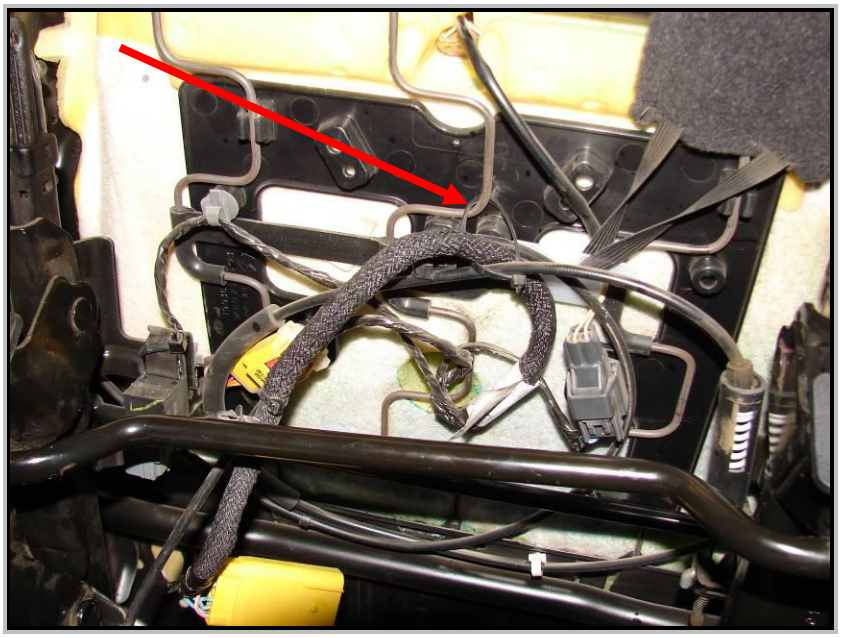


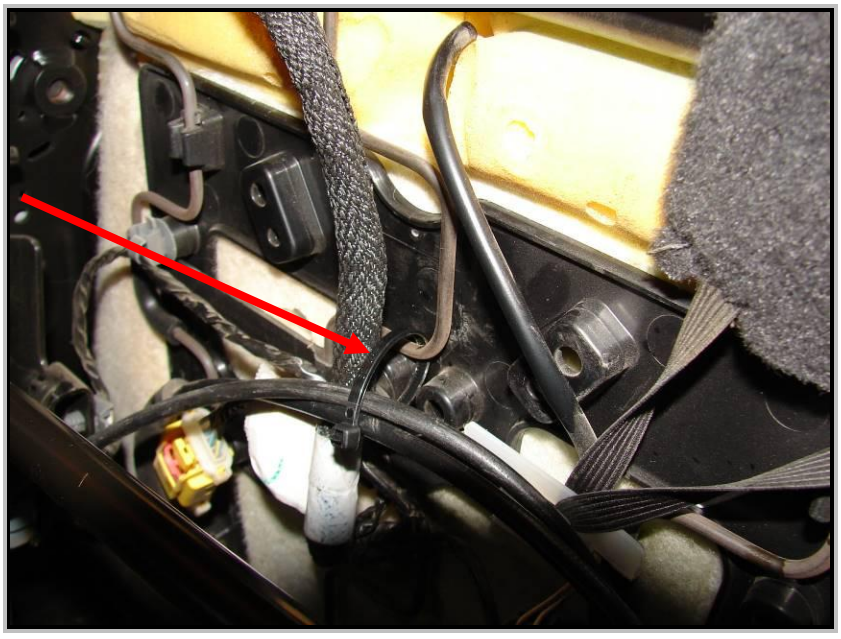
2-C) Find a work space to place the seat without damaging the fabric or leather and orient as shown below.

2-D) Use a drill to drill out the two rivets holding the metal plate on the bottom of the seat (on some models these may be screws, check first). You do not need to drill completely through. Just enough for the rivet heads to come off. Remove and discard, the plate is no longer needed.



2-E) Use one of the provided wire ties to secure the two black cables as shown below. Be sure to leave the wire tie loose as shown. The cables need to be free to move as the seat is adjusted. The wire harness to the yellow plug should be between the two cables and the bottom of the seat as shown in second picture.



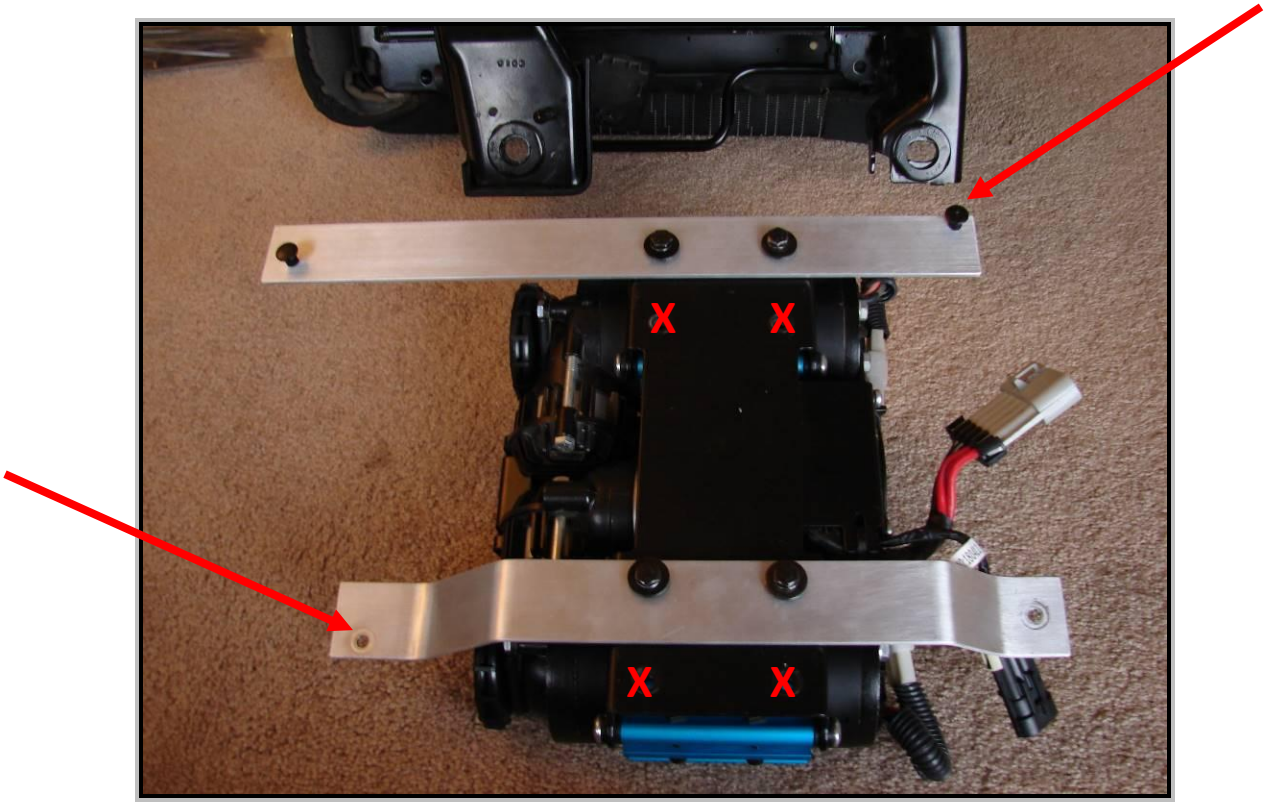


STEP 3 – Compressor Installation

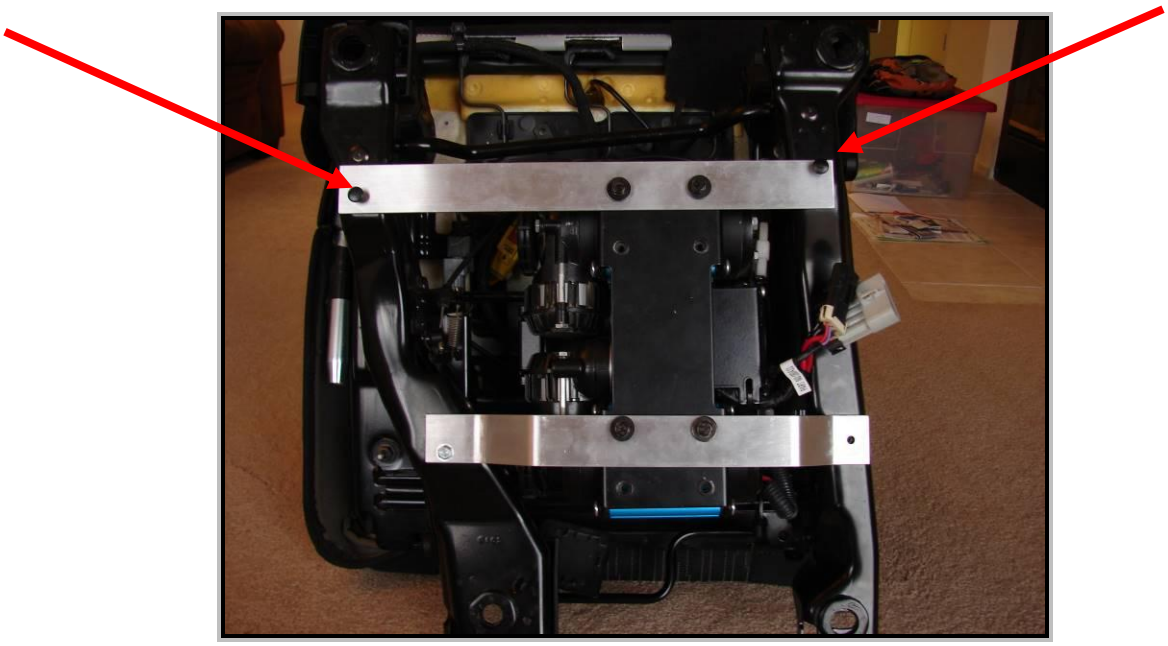
3-A) Orient the compressor upside down with the electrical plugs to the right as shown below. Place the two supplied plastic push pins partially into the flat bracket and then place the flat bracket on the compressor (using the two upper most holes) and finger tighten in place with the bolts supplied with the ARB compressor. Ensure the flat bracket is oriented correctly (plastic push pin on the right should be in the upper right corner and the longer side of the flat bracket should be on the left).

Place the bent bracket on the compressor and finger tighten in place with the bolts supplied with the ARB compressor. Ensure the bent bracket is oriented correctly (bends go down towards work surface and hole on left should be in lower left corner).

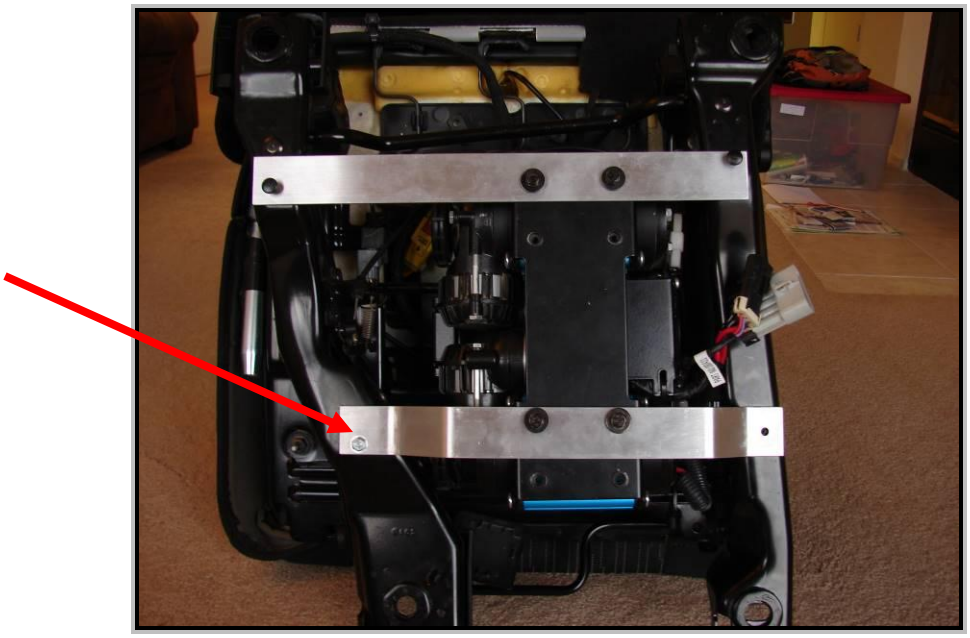
Note: Holes on compressor marked with an **X** are not used.



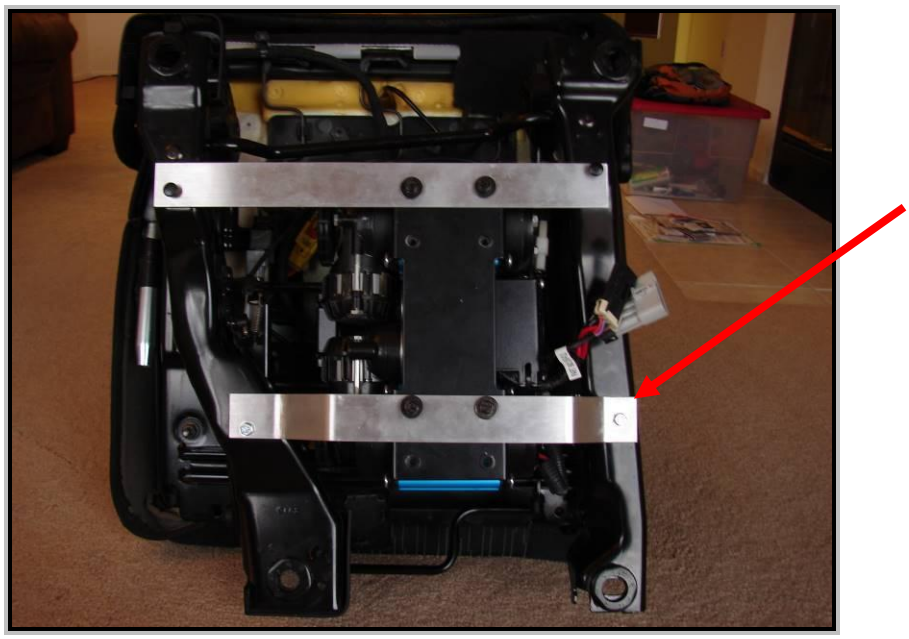
3-B) Use the flat bracket as a guide to locate the plastic push pins into the factory holes in the seat frame. Use a hammer to tap the plastic push pins firmly into the flat bracket and into the seat frame.



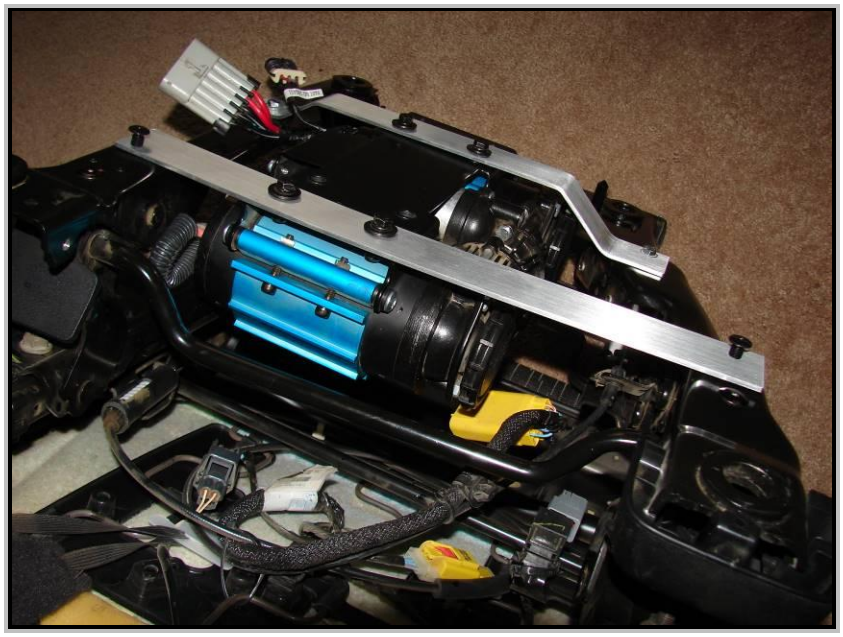
3-C) Use one of the supplied bolts and nuts to secure the left side of the bent bracket to the seat frame using the factory hole. The nut should be on the top side of the seat frame.



3-D) Use the hole in the right side of the bent bracket as a guide to drill a 1/4” hole into the seat frame. Use the remaining bolt and nut to secure the right side of the bent bracket to the seat frame. And finally, tighten the 4 bolts to secure the compressor.

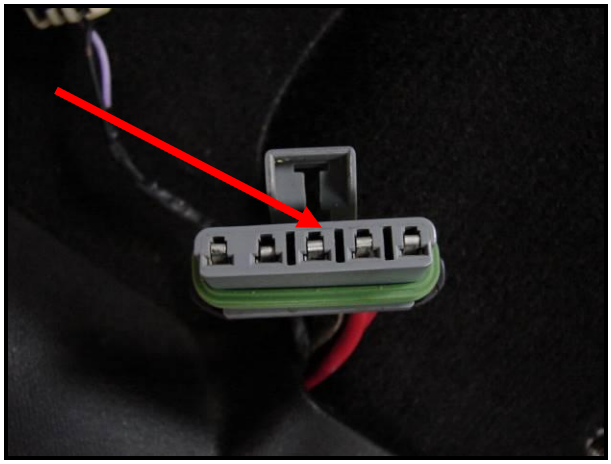


3-E) Once installed it should look like this as viewed from the top:



STEP 4 – Wiring Harness Installation

4-A) Locate the 5-pin plug on the large ARB wiring harness (NOT the 5-pin plug on the compressor). Remove the plastic retainer from the back of the plug. This will allow the wires to be removed from the plug. Using a small flat blade screwdriver, or a paperclip, insert it into the smaller side of each metal connector and pull out the wire from the back of the plug at the same time (there is a metal tab that locks each connector in place and the screwdriver will temporarily unlock the connector so it can be removed). Make sure you note the order! Removing the wires from the plug allows the wires to be passed through the firewall later.

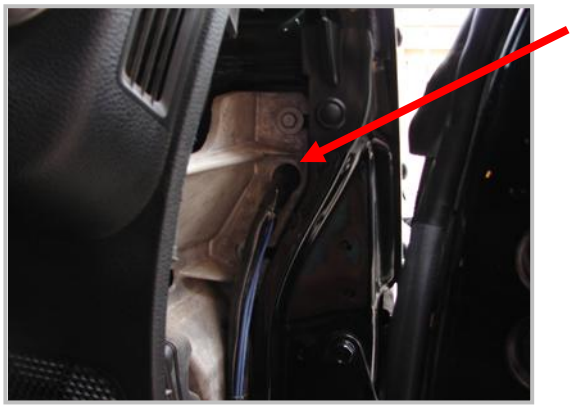


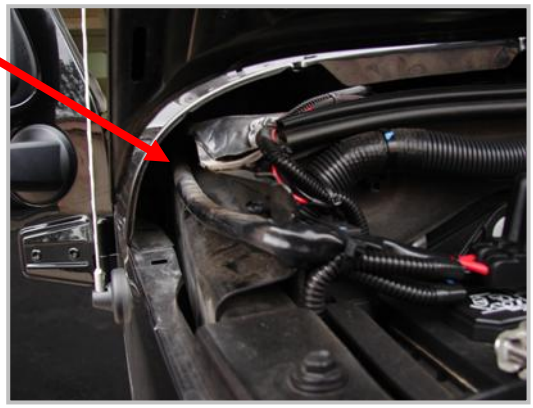
4-B) Remove the rocker panel on the passenger side. Pulling up on the panel near the push pins (2) will help release the pins (2) and then the panel. Up in the footwell, the panel must be pulled towards center of vehicle to release it. Then remove the side panel from the dash on the passenger side. A small flat head screwdriver will help get it started. It can then be pulled off.

4-C) There are two ways to do this step.

Simplest - Using a 12” extension and ¾” step drill to open the hole in the firewall that runs into the engine compartment that is filled with expanding foam (see first picture at bottom of page). The ¾” drill will go through the foam quickly and then ease into the firewall portion since the hole is not round. Once the hole is opened up to ¾” you can pass the entire ARB harness through in one shot by attaching a metal rod and pulling through.

Harder (if tool not available) - This method will take patience. Use a metal rod to punch through the foam and sealing tape on back side of the hole through firewall. Pull the black sheathing back on the ARB wiring harness to expose about 3 feet of the harness near the end with the metal connectors you removed in Step 4-A. Starting with the three (3) **black** wires, use tape to attach the ends to the metal rod and pull them through the firewall. Repeat the process for the two (2) **red** wires. DO NOT try and do all five (5) at once. Now pull the sheathing up the harness so you have about 1 foot that is smooth (not bunched up). Secure the sheathing to the wires with tape (electrical tape is preferred) wrapping tightly. Use a set of pliers to squeeze the bundle into a flatter shape (a large round bundle will not fit through the flat shaped hole under the cowl). With a little finesse you can get the wire harness / sheathing through the firewall by working it back and forth. Once through, pull the sheathing up the harness again to cover the wires and then the whole harness should move easily through the firewall to adjust as needed.



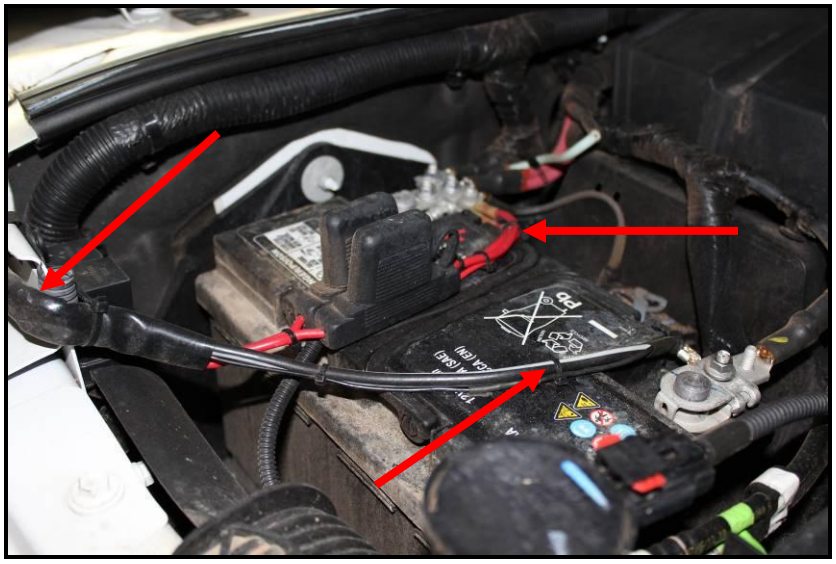


4-D) Run the ARB wiring harness down along the dash and along the rocker as shown below. Run the harness directly behind the door strap hook (i.e. between hook and body). Reinstall the metal connectors into the 5-pin plug in the correct order you noted in Step 4-A. If you forgot, you can always match up against the connector on the compressor. **This must be done before attaching harness to the battery in the next step!** Now run the long ARB wiring harness (the one with a plug on one end and 4 wires on the other end) in reverse along the large ARB harness. Leave a little extra length of the long ARB harness near the 5-pin plug. You will see 2 white connectors (for airlockers) which are not used. Just tuck these away.

NOTE: If you are running a sPOD proceed directly to Step 5. Leave the remaining long ARB wiring harness in the footwell for now.

Run the remaining harness up behind the glove box (remove glove box for access) and leave there for now.

4-E) Go back to the engine compartment and attach the ARB harness to the battery. Crimp and use a heat source to attach and seal one of the provided ring connectors to each positive wire (**red**). Attach both to the positive (+) terminal of battery. Repeat with the remaining ring connector to connect both negative wires (**black**) to the negative (-) terminal of battery. Make sure the wires are secure and run in a fashion not to interfere with anything.

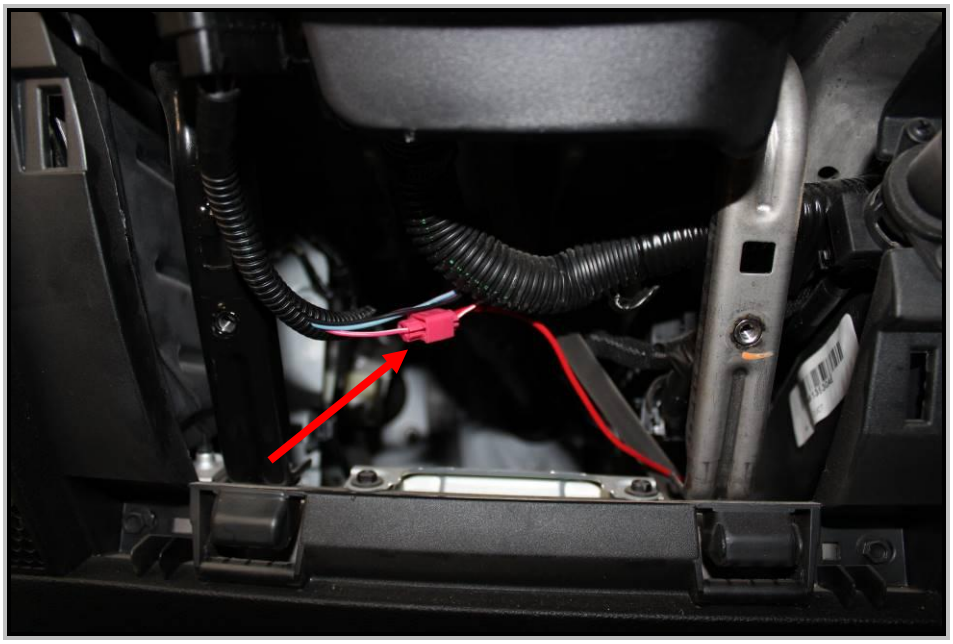


4-F) The two harness plugs should be positioned as shown below once the rocker panel is installed. **DO NOT** install the rocker panel at this time. It will be installed later after running airlines in **Step 6**.

4-G) Now go back to the harness behind glove box. Follow the ARB instructions to connect the ARB switch harness (the one with all connectors) to the long ARB harness. ARB provides a 4-pin white connector to join the two sections. The other end of this harness will have a lot of terminal connectors (you will only be working with the connectors for the isolation switch (i.e the on/off switch), a ***red*** *wire w/ yellow stripe*, and a ***blue*** *wire w/ white stripe*. The other two sets of terminal connectors are for front and rear air locker solenoids which are not applicable to this installation.

4-H) Run the end of the harness with all the connections described above to your switch location. Install the provide ARB switch and connect the terminals as indicated in the ARB wiring diagram.

4-I) Connect the ***red*** *wire w/ yellow stripe* to the ***pink*** *wire w/ white stripe* using the provided red Scotchlok as shown below. It is located under the steering wheel behind the dash panel. That panel is removed by grapping the top and pulling away. A metal plate will then need to be removed using a 10mm socket. This is an ignition on power source, so your compressor will only work if the ignition is on or the engine is running.

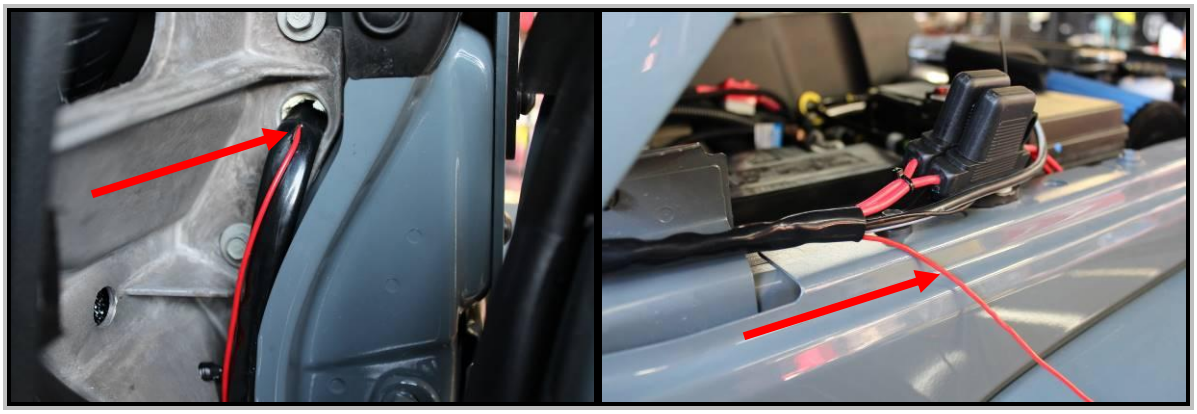


4-J) If you want your ARB switch to light up when your parking/headlights are on for visibility at night, connect the ***blue*** *wire w/ white stripe* to the ***orange*** *wire w/gray stripe* using the provided red T-Tap Set as shown below. The wire is located in the harness that goes to the window control module.

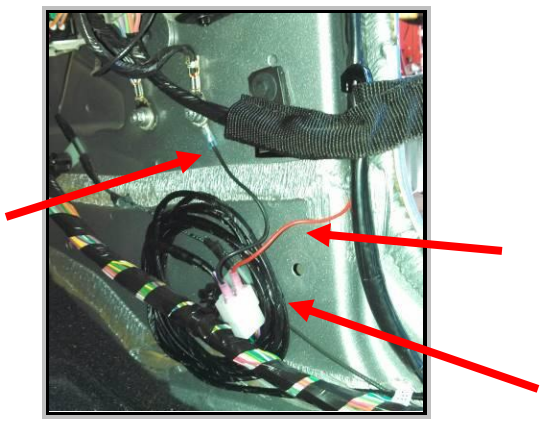
STEP 5 – for sPOD Connection Only (all others skip to Step 6)

Note: Two female spade connectors, one terminal spade connector, one ring terminal, ~20 feet of 22-18 gauge ***red*** wire, and 6" of 22-18 gauge ***black*** wire are suggested (not provided in kit). Note, the ARB switch harness is not used for this method.

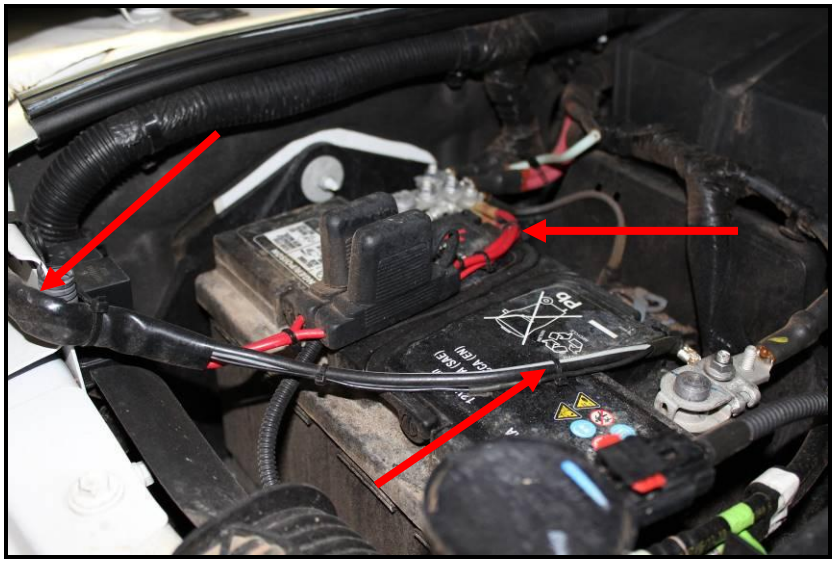
5-A) Install the white connector onto the long ARB harness. The connector is usually attached to the harness in a little plastic bag (refer to the ARB instruction manual). Once complete, use a female spade connector to connect a ***red*** *wire* to the male spade connector of the ***purple*** *wire* in the ARB white 4-pin connector. Now run the ***red*** *wire* to the switch connection of your choice on the sPOD under the hood. This is best accomplished by making a small slit in the main ARB harness sheathing that you just ran through the firewall and then fish the ***red*** *wire* through the sheathing until it comes out the other end in the engine compartment (see pictures below). You can then run the ***red*** *wire* to the switch connection of your choice on the sPOD and connect using a terminal spade connector. You will not need to connect the corresponding ground at the sPOD. Finally, use a female spade connector to connect a ***black*** *wire* to the male spade connector of the ***black*** *wire* in the ARB white 4-pin connector and run the other end to the ground stud in the footwell with a ring terminal.



5-B) Coil up the remaining long ARB wiring harness you just connected the ***red*** and ***black*** *wires* to and position behind rocker panel in footwell.



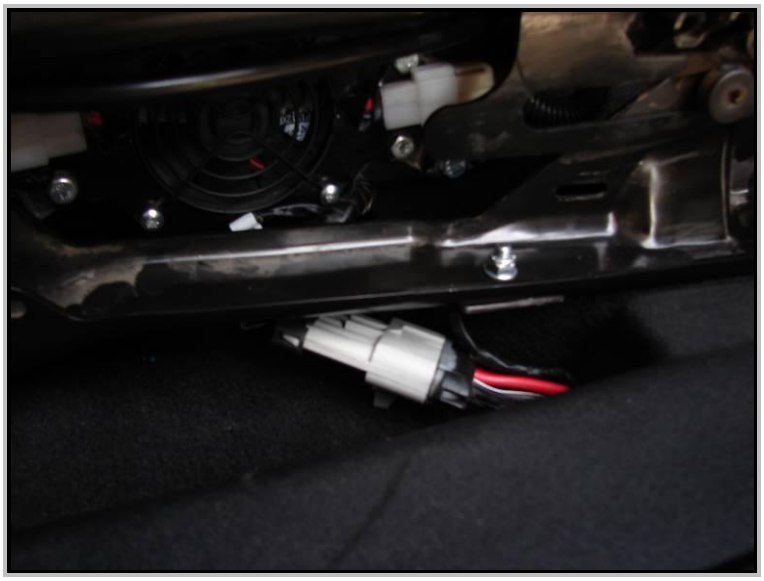
5-C) Go back to the engine compartment and attach the ARB harness to the battery. Crimp and use a heat source to attach and seal one of the provided ring connectors to each positive wire (**red**). Attach both to the positive (+) terminal of battery. Repeat with the remaining ring connector to connect both negative wires (**black**) to the negative (-) terminal of battery. Make sure the wires are secure and run in a fashion not to interfere with anything.



5-D) The two harness plugs should be positioned as shown below once the rocker panel is installed. **DO NOT** install the rocker panel at this time. It will be installed later after running airlines in **Step 6**.

STEP 6 – Seat Installation and Final Plumbing

6-A) Reinstall the seat and tighten the 4 bolts. Attach harness to compressor. *Side panels are removed from the seat frame in picture below just for demonstration purposes.*

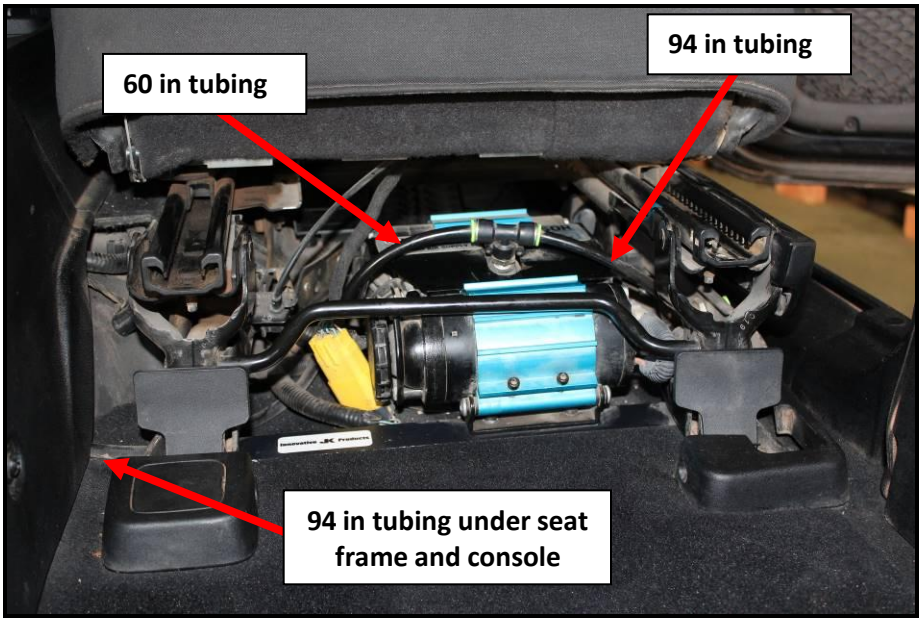


6-B) Reconnect yellow plug under seat. While looking under seat, check for clearance of wires, cables, plugs, and compressor as the seat is moved forward and back and folded and tumbled.

6-C) Install the brackets with bulkhead fittings in each footwell (driver and passenger). They mount to the bolts holding the bracket for the door strap. Passenger side shown below.

6-D) Remove the rocker panel on the driver side the same way you did in Step 4-B for the passenger side.

6-E) Install the black nylon tubing as shown below. Be sure to firmly push the tubing into the connectors to ensure it locks in place. The 60 in section exits the fitting on the Driver side and wraps under the compressor to the bulkhead bracket on the Passenger side. The 94 in section exits the fitting on the Passenger side and wraps under the compressor, goes under the seat frame, under the center console (remove the two T-30 Torx screws at the back of the console to lift it up slightly so you can feed the tubing up and over), and to the bulkhead bracket on the Driver side.



6-F) Each length of tubing will exit underneath the seat frame on each side, then along the rocker on each side, and up to the connections you installed up in the footwells. Before connecting each tubing end to the fittings in the footwells, reinstall the rocker panels on each side while routing the tubing appropriately underneath the panel. Once installed you can then connect each length of tubing to the fittings in the footwells.

STEP 7 – System Check

7-A) Plug each airline set-up into each side of Jeep (if you have the Air Down / Air Up Tool, remove it from the system for now). Turn on compressor. It should run for a few seconds then shut off (when it reaches the pressure safety switch built into the compressor). The system should be able to sit for a few minutes without the compressor cycling. If after a few seconds or even a minute the compressor cycles you will need to check for leaks. The first thing to check is the t-fitting in the compressor to ensure it is tight. Once everything is ok, TURN OFF the compressor. Then push any one of the air chucks onto a valve stem to relieve pressure in the system, then the airlines can be removed from each side of Jeep or proceed to set-up the Air Down / Air Up Tool (see IJKP-18 instructions).

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STEP 8 – System Tips

8-A) The last part in your parts bag should be a black plastic plug. Keep this somewhere safe in your Jeep. It is used to close off one seat connection if you happen to only be using one side (i.e. to fix a flat or air up another vehicle). DO NOT store it in one of the seat connections. It will get broken off! See Quick User Guide for additional details.

8-B) The system is designed to be flexible in that you can air 1, 2, 3, or 4 tires at once since all the air chucks are self-sealing. Also, any of the four (4) airlines can also be used on their own. The same way you connect / disconnect the airlines from the seat connections, each airline can be removed from the splitter and plugged directly into either seat connection. This way you can use a single airline to fix a flat, air up a mattress, fill a bike tire, etc. No need to carry a fifth single line since you have four to choose from.

Please contact info@innovativeATproducts.com if you have any questions or feedback.

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