

IJKP-16 / Installation Instructions

Air Locker Conversion Kit for IJKP-1 (4-Tire Air System Jeep JKU)

Made in USA

Kit Contents:

- 2 Female Quick Couplings with Preinstalled Tube Bulkheads
- 2 M6x20mm Button Head Bolts and Nuts
- 4 M6x16mm Button Head Bolts / Nuts
- 1 12-inch section of Black Nylon Tubing (Passenger Side Connection to Compressor)
- 1 48-inch section of Black Nylon Tubing (Compressor to Union Tee)
- 1 7-foot section of Black Nylon Tubing (Union Tee to Air Locker Manifold)
- 1 12-inch section of Black Nylon Tubing (Union Tee to Driver Seat Connection)
- 1 Union Tee Fitting
- 1 Brass Bushing
- 1 Air Locker Manifold (and 1 M5x40mm Socket Head Bolt / Nut, 2 Plugs, 1 90 Elbow Fitting)
- 2 Y-Connectors (with Male Quick Couplings)

Tools Required:

- Teflon Tape
- Drill
- 1/4" Drill Bit
- Ratchet
- 10mm Wrench
- 4mm Allen Wrench

STEP 1 – Air Locker Manifold Preparation

- 1-A) Assembly of the Air Locker Manifold. It is important that all the pieces are assembled as shown in **Figure 1**. The ARB air locker valves will be oriented facing up from what will be the top of the manifold assembly when bolted in place. Assemble your air locker valves (**A**) in series then attach one end to the brass bushing and thread into the manifold. Alternate tightening the brass bushing (**B**) and silver fitting on the ARB air locker valve (**A**) to achieve the correct orientation while ensuring both are tight. Install the 1/4" plug (**C**), 3/8" plug (**D**), and 90 elbow fitting (**E**) and tighten each. Only apply Teflon tape to the items indicated below.

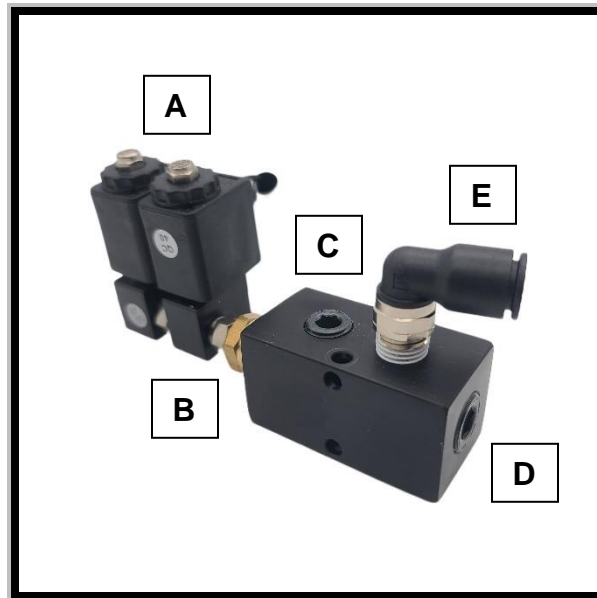


Figure 1

- A – ARB Air Locker Valves** (Apply Teflon tape to exposed threads of silver fittings)
- B – Brass Bushing** (Apply Teflon tape)
- C – 1/4" Plug** (Apply Teflon tape)
- D – 3/8" Plug** (Apply Teflon tape)
- E – 90 Elbow Fitting**

- 1-B) Set aside for installation under the hood later.

STEP 2 – Quick Coupling Installation

The new Quick Couplings will replace the existing bulkheads in the seat brackets. The seat brackets can be left on the outer seat frame rail or moved to the inner seat frame rail (recommended). The inner seat frame rail option results in a cleaner looking installation since the quick coupler will be tucked in but does require a little more work. This inner rail option will also allow you to maintain the ability to partially close the doors with airlines connected on those cold / rainy days.

Outer Seat Frame Rail Option

2-A) This option does not require removing the seat brackets, nor any of the other air system components. Remove the existing bulkheads on each side of Jeep and replace with the new Quick Couplings. Proceed to Step 2-E.

Inner Seat Frame Rail Option (recommended)

2-B) This option will require removal of the compressor (just unbolting from bracket) and unbolting seats so they can be tilted back. The example below shows the driver's side. You will repeat the same on the passenger side. Unbolt the seat and tilt back. Remove the existing seat bracket. Use a ¼" drill to drill out the two existing holes on the inner seat frame (**Figure 2**) or use the two holes in one of the seat brackets as a guide to mark and drill the two holes. **Note:** Some Jeeps have an additional bracket under the driver's seat holding a wire harness in place. In this instance you can remove the existing bolts and use them to bolt the seat bracket in place (i.e. no drilling).



Figure 2

- 2-C) Install a M6x20mm button head bolt / nut at the tip of the seat bracket and install one of the provided couplers. Mount the seat bracket as shown in **Figure 3** using two of the provided M6x16mm bolts / nuts. The bolt/nut you installed does not need to be bolted to the frame rail nor require any drilling. Due to the shape of the seat frame rail, it is there to angle the coupler for easier access. Typically, the coupler will still be pointed down slightly and now is a good time to pull up on the coupler to slightly bend the seat bracket, so the coupler is directed straight out (makes it easier to connect y-connector when airing tires). Repeat on driver's side.

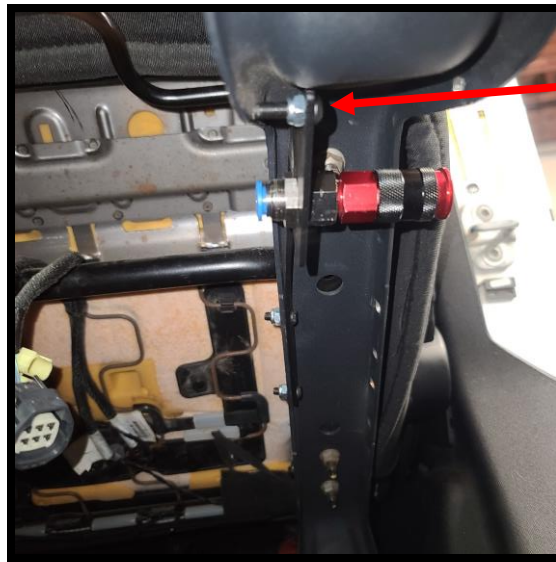


Figure 3

- 2-D) Bolt compressor back in place and bolt the seats back in place. Connect one of the 12-inch sections of **black** tubing from the front side of branch tee fitting (compressor) to the passenger seat air connection. Once complete, the installation of the seat brackets should look like **Figures 4** and **5**.



Figure 4



Figure 5

2-E) While the passenger seat is tilted up out of the way, remove the existing tubing and run the new 48-inch section of **black** tubing under the center console (**blue** tubing shown in photo is just for demonstration) as shown in **Figure 6** (technically you can use the existing tubing in place, but we recommend replacing depending on the age of your system). Fish the black tubing into the corner shown and twist clockwise while pushing and it will go over and come out on the driver's side. You may have to go around and reach under the driver seat and feel for it along the edge of the center console to pull it through. Leave a little bit on each side for now.

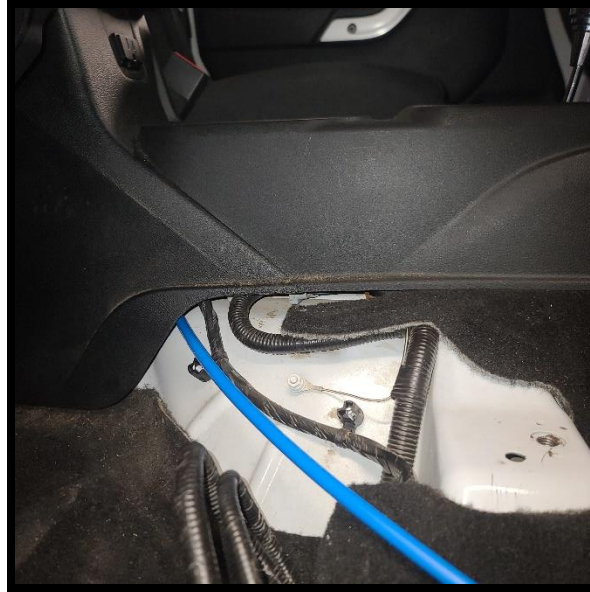


Figure 6

STEP 3 – Air Locker Manifold and Final Plumbing

3-A) Under the hood, remove the three (3) bolts indicated below in **Figures 8 and 9**. The lower bolt also requires the removal of the nut on the back side from the inner fender (**Figure 10**). Place some sort of spacer under the plastic tab as shown in **Figure 11**. This will allow access to the underside for installation of the air locker manifold assembly.

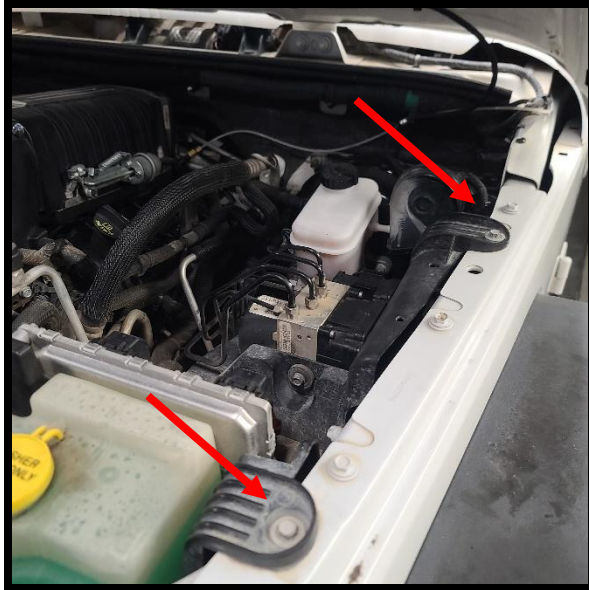


Figure 8

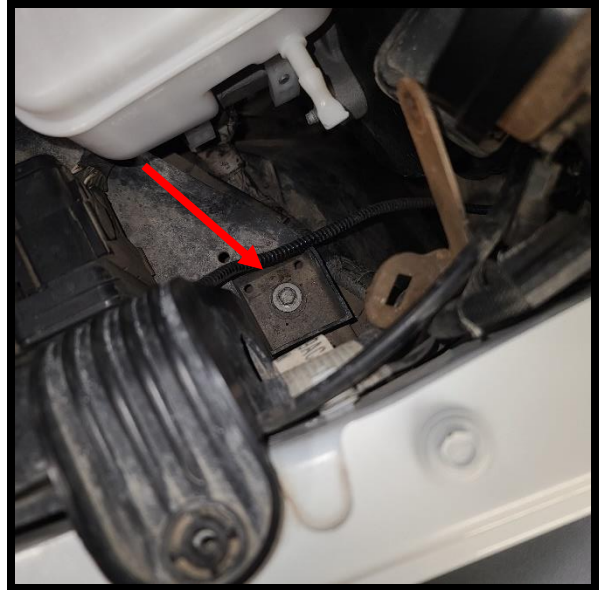


Figure 9



Figure 10

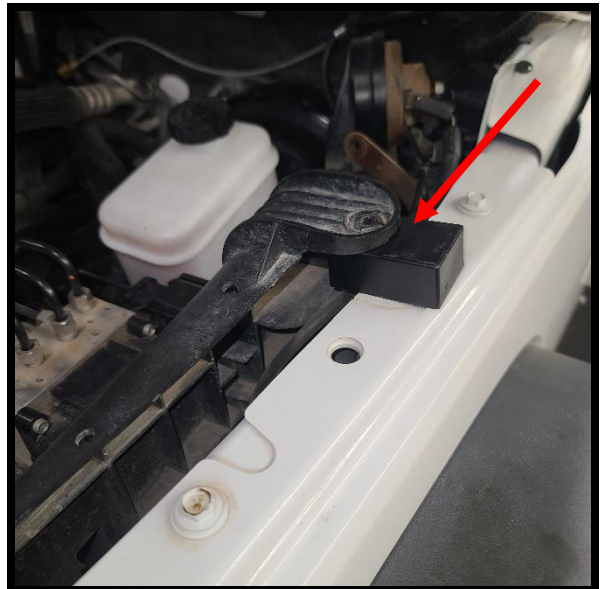


Figure 11

3-B) Install the air locker manifold assembly (from **Step 1-C**) as shown in **Figure 12**. Install in the factory hole using the provided M5x40mm socket head bolt / nut and tighten in place. Reinstall all three (3) bolts / nut removed in **Step 3-A** and tighten.

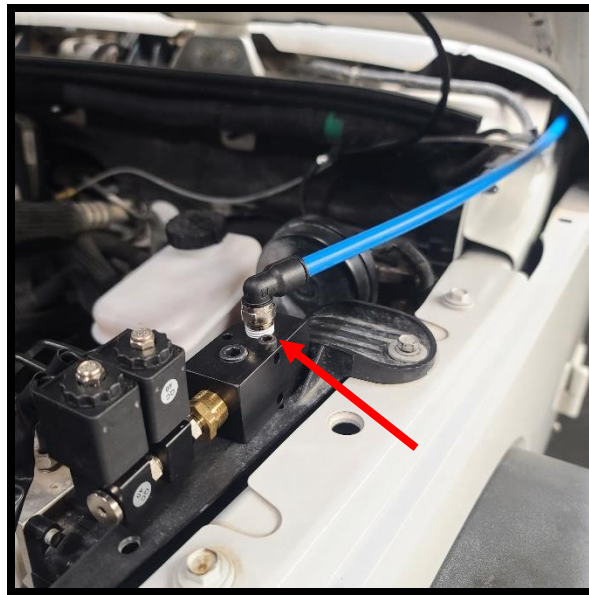


Figure 12

3-C) Remove the rocker panel and dash panel on the driver's side. Run the 7-foot section of the **black** nylon tubing as shown in **Figures 13, 14, and 15** (**blue** tubing shown in photos is just for demonstration). Connect tubing to air locker manifold fitting by pushing in firmly. Reinstall the rocker panel / dash panel and **black** nylon tubing should be run as shown in **Figure 16**. Leave any excess **black** nylon tubing under the driver's seat for now.



Figure 13

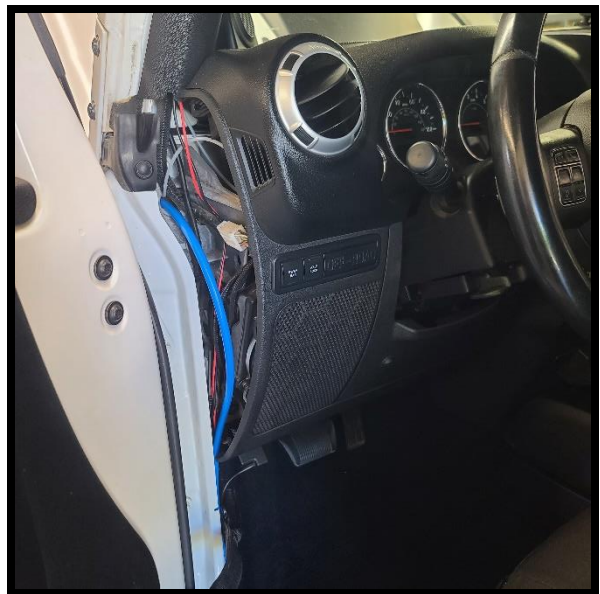


Figure 14



Figure 15



Figure 16

3-D) Attach the remaining 12-inch section of **black** tubing to the driver's side seat connection (**blue** tubing shown in photos is just for demonstration). Using **Figure 17** as a guide, attach the other end of the 12-inch section of **black** tubing to the center of the provided union tee fitting. You will then trim the 7-foot section (coming in from air locker manifold) and the 48-inch section (coming from the passenger side) to connect to the union tee fitting such that it is positioned similar as shown in **Figure 17**. Press in firmly to seat the tubing at all connections. **Note: Double check everything before making any cuts! Use a sharp knife or tubing cutter to make clean, square cuts of the tubing.**

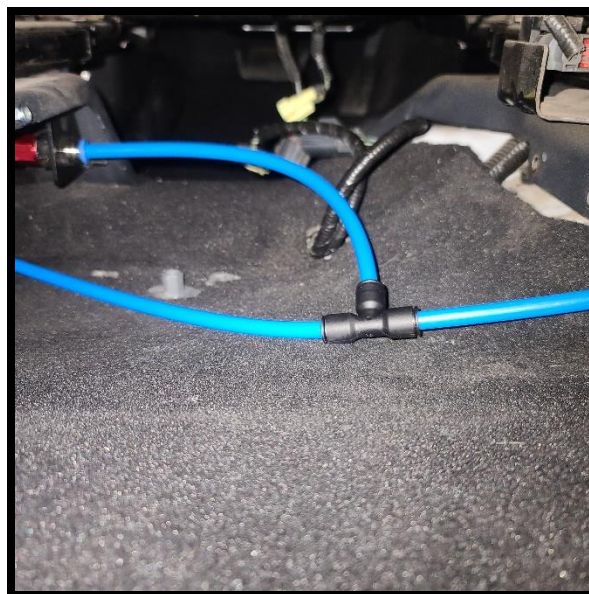


Figure 17

STEP 4 – Final Wiring / Plumbing Guide

4-A) Follow your switch controller manufacturer instructions for wiring of the compressor and air locker solenoids using the following as a reference:

ARB Switch Wiring Harness

- ARB **Black** wire to ground
- ARB **Purple** wire to switch control # of choice (this turns on/off the ARB compressor)
- ARB **Yellow** (not used since REAR locker will be wired directly to your switch control system)
- ARB **Green** (not used since FRONT locker will be wired directly to your switch control system)

Note: The ARB pigtail harness (the one with all the connectors) provided with the ARB compressor is not used and can be discarded.

ARB Air Locker Solenoids (Front and/or Rear)

- One connection to switch control # of choice (this turns “on/off” the air locker)
- One connection to ground
- Note: Either wire can be used for power or ground. Repeat for each solenoid.

4-B) Install the airline fittings onto each air locker solenoid as per the ARB air locker instructions. Run your air locker airlines to your respective front and/or rear air lockers. Be sure to keep airlines away from any hot surfaces or pinch points. Avoid sharp bends. And be sure to leave slack as needed for suspension articulation.

4-C) System check. Turn on the 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 are the air locker solenoids to ensure there are no leaks where they connect to manifold or from the output fittings that go to your air lockers. Also check the fitting installed on top of compressor. Once everything is ok, TURN OFF the compressor. If you do find a leak, make sure you bleed pressure from the system first! This can be done by cycling one of your air locker solenoids a few times with the compressor off.

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

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