

IJKP-15 / Installation Instructions

4-Tire Air System Add-on Kit for Under Seat Mounted ARB Twin Compressor (CKMTA12)

Jeep JK Unlimited (2007 - 2018) / Jeep JK (2007 - 2010)

Made in USA

Kit Contents:

- 2 Brackets with Quick Connect Bulkheads
- 6 M6x16mm Button Head Bolts / Nuts
- 1 Quick Connect T-Fitting
- 1 2 ft section of Black Nylon Tubing
- 1 5 ft section of Black Nylon Tubing
- 2 Double air lines (10ft) with 2 Y-Connectors and 4 Air Chucks
- 1 Quick Connect Plug
- 2 5/16" Ring Terminals for ARB Harness to Battery (Red)
- 2 22-18 Gauge (Red) Quick Splices (1 Scotchlok / 1 T-Tap Set)

Tools Required:

- Small Flat Blade Screwdriver or Metal Paper Clip
- Metal Rod and Electrical Tape (to help fish ARB wire harness through firewall)
- Drill
- 1/4" Drill Bit
- 12" Extension with 3/4" Step Drill (greatly eases ARB harness installation)
- 10mm Socket
- 10mm Wrench
- 4mm Allen Wrench
- T-30 Torx
- Crimping Tool
- Pliers

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 Preparation

- 1-A) Depending on the seat mount you are using, determine if the outlet needs to be rotated to ensure t-fitting clearance. If required, follow the instructions provided with the ARB compressor to rotate the outlet as far down towards compressor body as possible while maintaining the ability to tighten the provided t-fitting. This ensures clearance when installed under the seat. Ensure the t-fitting and bolt for outlet are tightened to prevent leaks.

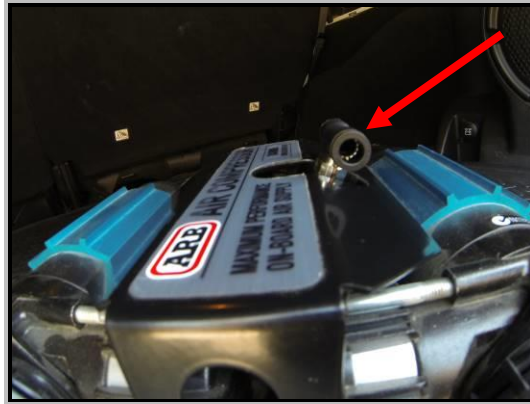


Figure 1

- 1-B) Install the ARB provided filters on the back of the compressor.

DISCONNECT THE BATTERY BEFORE PROCEEDING

STEP 2 – Quick Connect Brackets and Air Line Installation

- 2-A) For 2013+ Jeeps, simply use a ¼" drill to drill out the two existing holes on the outer side seat frame rail of passenger seat as shown in Figure 2. Drill out the same two holes on the driver's seat. Skip to Step 2-C.



Figure 2

2-B) For 2007 – 2012 Jeeps, you will first need to mark the outer side seat frame rail holes for drilling (Jeep was not kind enough to provide these on older models). Using the holes in one of the quick connect brackets; mark the holes on the outer side seat frame rail. Align bottom edge of bracket with bottom edge of seat frame rail. Mark the holes and drill the three ¼” holes in the outer side seat frame rail. Repeat on other seat.

2-C) Use the two holes you have just drilled as guide and align the quick connect bracket with the two holes and then mark the hole where it will mount to the leg of the seat as shown in Figure 3. Drill a ¼” hole at your mark. Repeat on other seat.



Figure 3

2-D) Bolt the bracket and quick connect bracket to the inside (towards center of vehicle) of the outer side seat frame rail as shown in Figure 4.

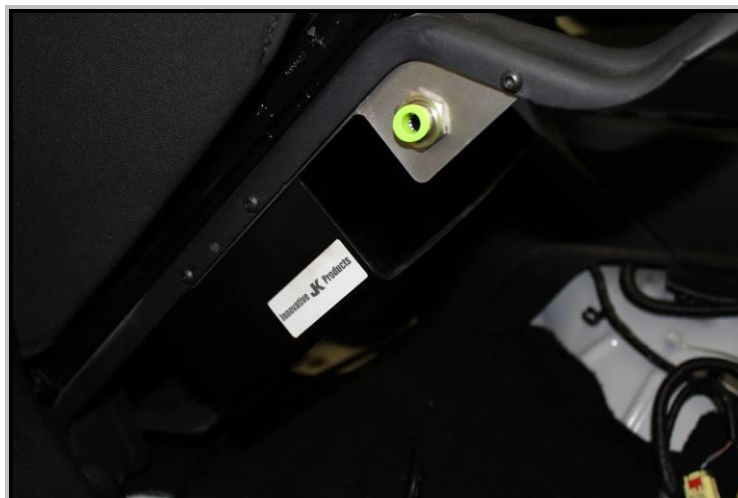


Figure 4

2-E) Remove the rear two screws from the center console as shown below. Now fish the 5ft section of black tubing up and over the hump in the center of the Jeep underneath the console from the driver side to the passenger side. Use the pictures below as a guide as to where the tubing will end up going in and out. Placing something under the rear part of the console will help hold it up while fishing the tubing up and over. Reinstall the two rear screws in the console when complete.



Driver Side

Passenger Side

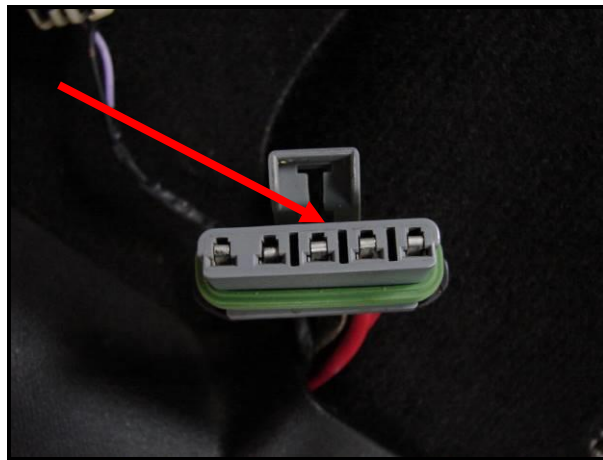
2-F) Connect the two sections of black nylon tubing to the quick connect bulkheads on each side of the vehicle and then to the quick connect t-fitting on the compressor. Press the tubing in firmly until it bottoms out at each connection. In general, the connections will be as follows, however, the tubing may need to be routed / trimmed differently depending on the compressor mount you have installed to ensure the tubing is not kinked:

- 2ft section – from t-fitting (towards front of Jeep) to Passenger seat bulkhead connection.
- 5ft section – from t-fitting (towards back of Jeep) to Driver seat bulkhead connection.

STEP 3 on the following pages provides instructions for the ARB wiring harness installation which we have found works with the Innovative AT Products bracket installation (IJKP-9). It may have to be modified depending on the manufacturer of the bracket you have installed. The connections will not change, but the lengths and locations of connectors may have to be modified.

STEP 3 – Wiring Harness Installation

- 3-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.



- 3-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.

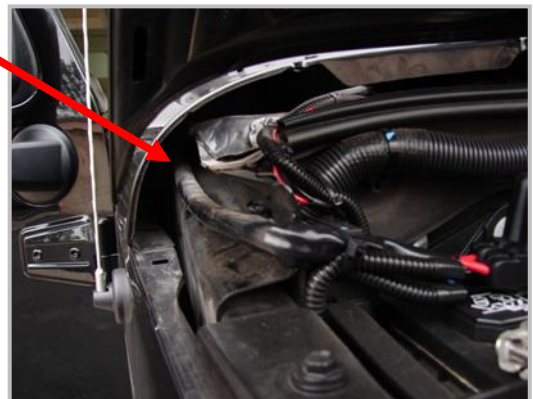


3-C) There are two ways to do this step.

Simplest - Using a 12" extension and $\frac{3}{4}$ " 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 $\frac{3}{4}$ " 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 $\frac{3}{4}$ " 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.



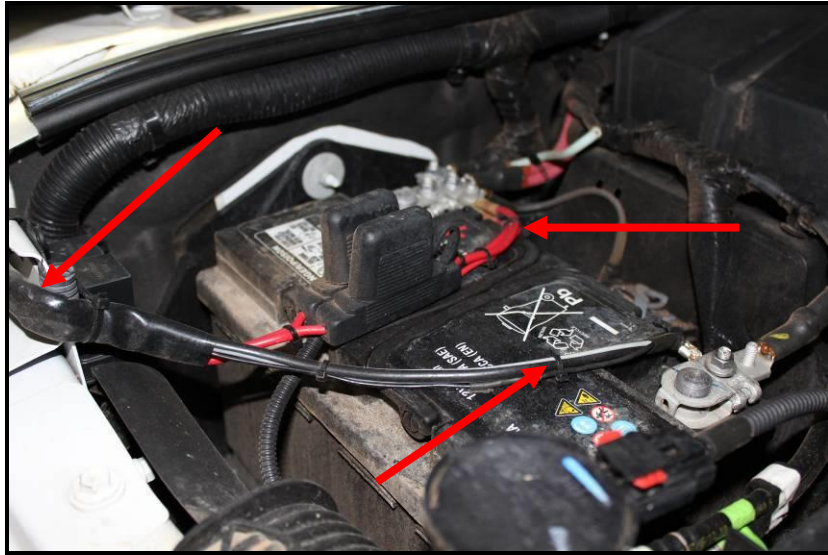
3-D) Run the ARB wiring harness down along the dash and along the rocker as shown below. Run the harness directly behind the door strap hook (i.e. between hook and body). Reinstall the metal connectors into the 5-pin plug in the correct order you noted in Step 3-A. If you forgot, you can always match 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 4. Leave the remaining long ARB wiring harness in the footwell for now.

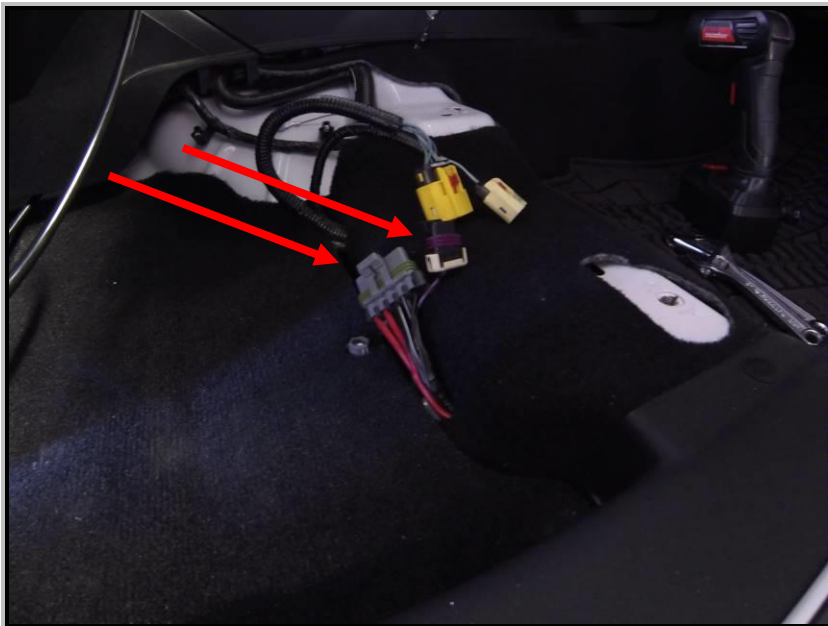
Run the remaining harness up behind the glove box (remove glove box for access) and leave there for now.



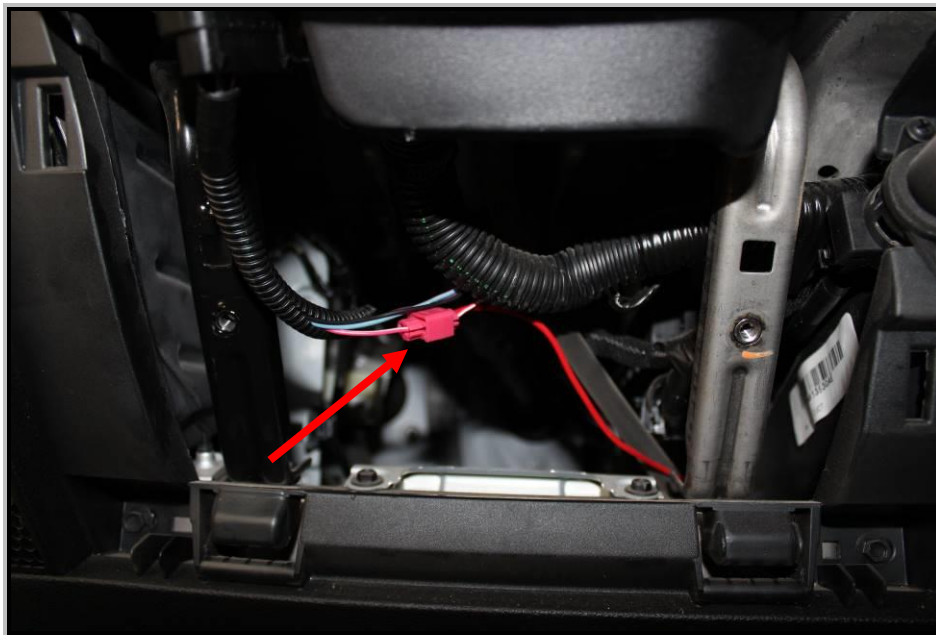
- 3-E) Go back to the engine compartment and attach the ARB harness to the battery. Both positive wires (**red**) should be placed in one of the provided connectors. Crimp and use a heat source to seal. Attach to positive terminal of battery. Use the second connector to connect both negative wires (**black**) to the negative terminal of battery. Make sure the wires are secure and run in a fashion not to interfere with anything.



- 3-F) Reinstall the side panel and rocker panel. The two harnesses can be run under the carpet with the plugs positioned as shown below.



- 3-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.
- 3-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.
- 3-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.



- 3-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.



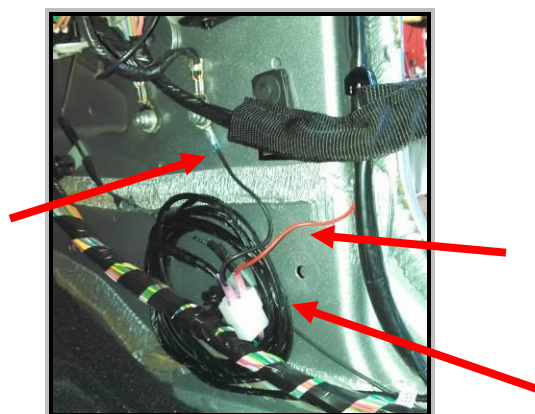
STEP 4 – for sPOD Connection Only

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.

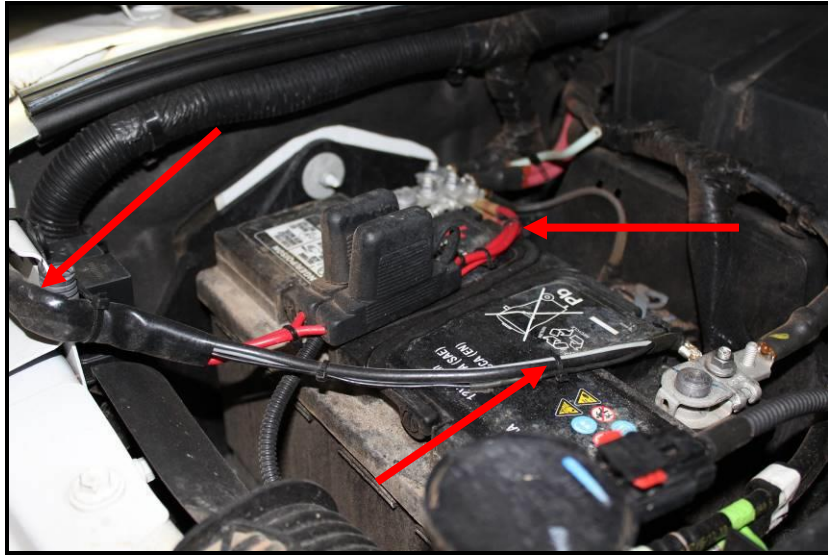
- 4-A) Install the white connector onto the long ARB harness. The connector is usually attached to the harness in a little plastic bag (refer to the ARB instruction manual). Once complete, use a female spade connector to connect a **red** wire to the male spade connector of the **purple** wire in the 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.



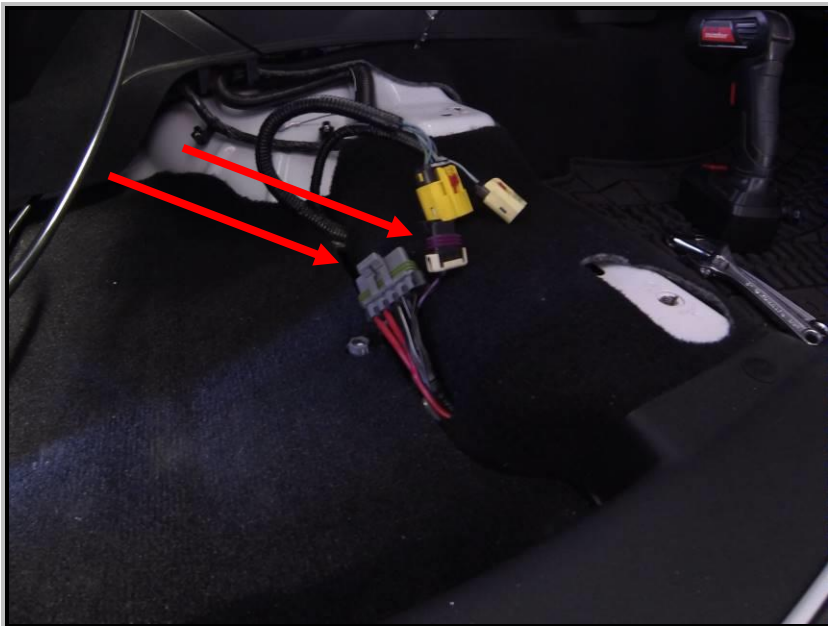
- 4-B) Coil up the remaining long ARB wiring harness you just connected the **red** and **black** wires to and position behind rocker panel in footwell.



- 4-C) Use the provided ring connectors to connect the two red wires (use the provided yellow ring terminals) to the positive terminal of the battery and the two black wires (use the provided red ring terminal) to the negative terminal of the battery. The ring terminals are designed to be crimped and then heated to shrink the insulation for a water tight seal. Make sure the wires are secure and run in a fashion not to interfere with anything.



- 4-D) Reinstall the side panel and rocker panel. The two harnesses can be run under the carpet with the plugs positioned as shown below.



STEP 5 – System Check

- 5-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 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).

STEP 6 – System Tips

- 6-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.
- 6-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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