### **INSTALLATION MANUAL:**



REAR BRAKE LINES 2018+ JL





# What is Included?

1309102 Jeep Rear Brake Lines (2018+, JL)			
QTY	Part Number	Description	Class/Grade
2	1309102	Left/Right Brake Line Hose Assembly	N/A
1	1309102A	JL Rear Brake Line Axle Mount (Left)	Stainless Steel
1	1309102B	JL Rear Brake Line Axle Mount (Right)	Stainless Steel
4	BQ 1016	Banjo Fitting Copper Crush Washers (10mm hole)	N/A
2	BQ 3052	Brake Hose Retaining Clip	N/A

#### **Product Notes and Features:**

The Jeep Rear Brake Line Kit (2018+, JL) includes all necessary hardware to replace the rear OEM braking system with extended, anti-expansion hosing. Included brackets provide safe rerouting options to keep the brake line and ABS cable routed away from numerous pinch points on the vehicle's suspension.

- Included axle brackets are laser cut using 1/8" thick stainless steel and formed using the latest CAD software and manufacturing techniques
- OEM-style hydraulic brake fittings ensure a precise, no-leak fit
- Approximately 27" overall length (~24" hose length) allows for use in many different vehicle suspension setups





#### **TOOLS REQUIRED FOR INSTALLATION**

- Basic hand tools
- Metric ratchet wrench set,
- Vice grips
- Brake fluid and rags

(12mm, 13mm, 15mm, 16mm, 17mm)

\*\*\*Take this product to a licensed professional if you are hesitant about the installation process!\*\*\* \*\*\*Remove the rear tires and jack the vehicle on stands for easy wheel-well access\*\*\*

Remove all ABS cable clips/zip ties holding the line to the brake hose. This includes the zip ties at the bottom of the upper control arm, the c-clips retaining the ABS line next to the brake hose, and the frame mount. See figures below. Take care when cutting the zip ties so you don't accidentally cut the ABS cable.



Old ABS clip to be disconnected



Old ABS zip ties to be removed



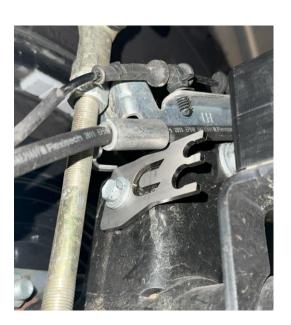
Old ABS clips to be disconnected

The ABS cable should be completely free from the OEM brake line hose. At this point, it should only be connected at the sensor, and past the frame mount.

Remove the brackets holding the old brake line to the axle. The retaining bolt can be removed using a 13mm ratchet or wrench and is located next to the upper control arm, as seen in the figures below. You can replace this bracket with the included JL Front Brake Line Axle Mount (1309101A or 1309101B) depending on which side you are doing.







#### NOTE:

Reuse the stock bolt and retaining clip from the original brake line bracket.

Orient the brackets with the "C" logo in the proper orientation. Both the left and right brackets will read as "C" and the larger cutout will be located on the bottom if installed correctly.

Once the rear brackets (left and right) are in place, you may replace the rear brake lines. You may find it easier to remove the banjo bolt at the caliper first, hang the loose end to avoid a mess, then remove the frame end fitting of the old brake line.



Brake caliper banjo bolt (15mm)

### TIP:

Use rags when removing any brake line fittings to absorb as much brake fluid as possible.



Frame end fitting (16mm and 12mm)

Remove the metal retaining clip on the frame-end fitting using pliers. Both the left and right rear frame-end brackets will have one. You can discard these clips, as you are given new clips to use in the kit.



The rear brake lines **ARE** side specific. Make sure that you match each fitting to its proper side. Reference the photos below. The new banjo fittings included in the kit have a slight bend to them. Ensure this curve/bend of the fitting is pointed in and up towards the axle on both sides. Torque the banjo bolt (15mm) to 26 lbs-ft.



New banjo fitting installed (rear driver's side)

#### NOTE:

When reinstalling the banjo bolt, use the **new** copper crush washers that are included in this kit. Put one washer on either side of the fitting.



(2) Copper Crush Washers



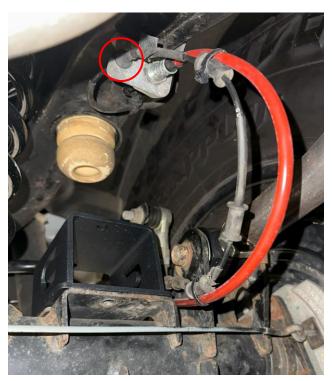
New banjo fitting installed (rear passenger's side)

With the caliper end of the new brake line installed, route the hose over the axle and on the inside of the sway bar, as shown below. You can choose to install the rubber grommet into the rear axle bracket now, or later. The new brackets also provide a new routing point for your ABS cable. If you zip-tie the ABS cable to the brake line, use caution: make sure there is enough slack in the ABS cable from the axle mount to the frame mount at full flex. You may need to refrain from using zip-ties if you do not have enough slack at full flex.



#### TIP:

If you want to zip-tie the ABS cable to the brake line but do not have enough slack at full flex, you can remove the ABS cable from the frame mount. This may provide enough slack to prevent any cable damage.



Route the new fitting through the frame mount bracket. Without cross-threading the fitting, thread the male hardline fitting at the frame into the new female fitting. The male fitting should spin freely on the hardline, like a coupler. Tighten this connection point to 15 lbs-ft using a 12mm and 17mm wrench. Install the new spring retaining clip as shown in the figure below.



#### **WARNING:**

If the male coupler fitting is seized on the hardline, you may need to disconnect the caliper banjo fitting and spin the entire new line onto it. Use caution when doing this to avoid cross-threading the fittings.

#### NOTE:

If the threads on your vehicle's male coupler fittings are stripped, Jeep over-torqued your brake line fittings at the factory. If the coupler does not thread properly into the new female fitting, Clean and/or retap the male coupler fitting to M10x1.00.

8. If you only installing new rear brake lines, you may now bleed the brakes. If you are installing new front brake lines, top off the brake fluid reservoir. It is best to keep brake fluid flowing during a brake line swap to keep air out of the lines. If air is introduced from the reservoir at any point, you will have to do a full brake bleed. It is easiest to do a brake bleed with another person, with the use of a brake bleed tool.

Check all connections for leaks. Wipe down surfaces coated in brake fluid with simple green or your favorite surface cleaner. Brake fluid will eat away paint, so wipe clean as soon as your connections are tight.

#### **WARNING:**

Do not drive the vehicle until you are sure that there is no air remaining in the brake lines. Driving the vehicle with air in the brake lines will result in poor braking power, putting you and others at risk.

#### **POST-INSTALLATION CHECKLIST:**

- ☐ Caliper Banjo Bolts torqued to <u>26 lbs-ft</u>
- Copper Crush Washers installed on both sides of the banjo fitting
- ☐ Frame mount brake line fitting torqued to <u>15 lbs-ft</u>
- ☐ Brake line is evenly spaced between the axle mount and frame mount
- ☐ ABS cable has enough slack at full flex (see step 6)
- ☐ No air is present in the brake lines
- ☐ Brake pedal is firm after brake bleed
- ☐ Lug nuts are torqued to 125 lbs-ft

