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Revisions			
Rev.	Description	Date	Approved
A	Initial Release Per ECO 21-034	4/12/2021	KB



Extended Brake Line Kit

Installation Instructions

Applications:
 2019+ Jeep JL Wrangler
 2020+ Jeep JT Gladiator



TITLE:
**JL AND JT EXTENDED BRAKE LINE KIT
 INSTALLATION INSTRUCTIONS**

SIZE A	DWG NO: 8866-XX-INST	REV A
	SCALE: N/A	PAGE 1 OF 6



JL AND JT EXTENDED BRAKE LINE KIT INSTALLATION INSTRUCTIONS

Thank you for purchasing the best aftermarket products available for your vehicle. We strongly feel that the parts you are about to install should meet or exceed your expectations for performance. Proper assembly is critical to the performance of these components and the vehicle as a whole. Please take the time to carefully read these instructions and familiarize yourself with the installation procedure before working on your vehicle. If you have any questions PLEASE contact Synergy Manufacturing BEFORE beginning installation. Thanks again for supporting Synergy – enjoy the performance benefits of the best aftermarket products available for your vehicle!

Synergy Manufacturing

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Modifying or otherwise altering vehicle components may cause the vehicle to handle differently than originally designed. It is the driver’s responsibility to familiarize themselves with the performance and handling characteristics of the modified vehicle. Vehicles with larger diameter than stock tires must be driven carefully and cannot be expected to perform as stock or meet OEM performance with regard to handling, braking or crash performance. Ensure all replacement components are compatible with vehicle capacities so as not to overload components, especially tires. It is up to the individual to ensure that the vehicle and all components are compatible with the intended vehicle use, including load ratings, road conditions, and driver abilities. Thorough and frequent vehicle inspections are recommended to ensure a safe and reliable state of readiness, especially after off-highway use.

PARTS LIST

8866-03 JL AND JT FRONT EXTENDED BRAKE LINE KIT		
QTY	Part Number	Description
1	8866-03L	JL AND JT FRONT EXTENDED BRAKE LINE, LEFT
1	8866-03R	JL AND JT FRONT EXTENDED BRAKE LINE, RIGHT
4	N/A	COPPER WASHERS

PARTS LIST

8866-04 JL REAR EXTENDED BRAKE LINE KIT		
QTY	Part Number	Description
1	8866-04L	JL REAR EXTENDED BRAKE LINE, LEFT
1	8866-04R	JL REAR EXTENDED BRAKE LINE, RIGHT
4	N/A	COPPER WASHERS

PARTS LIST

8866-05 JT REAR EXTENDED BRAKE LINE KIT		
QTY	Part Number	Description
2	8866-05	JT REAR EXTENDED BRAKE LINE
4	N/A	COPPER WASHERS



GENERAL NOTES

- These instructions are also available on our website; www.synergymfg.com. Check the website before you begin for any updated instructions and additional photos for your reference.
- These instructions cover the installation of all three JL and JT brake line sets. As such not every set requires the same steps.
- After installation of the brake lines the vehicles brake system will need to be bleed and purged of any air in the lines before the vehicle can be driven. It is suggested to familiarize yourself with the brake bleeding process before beginning the installation of the Synergy brake lines. It is also wise to use a brake bleeding tool or have someone else help you.

TOOLS REQUIRED

- 12mm, 15mm, 16mm, 19mm Wrenches
- 10mm, 13mm Sockets and Ratchet
- Pliers, Flat Blade Screwdriver
- Brake Fluid

ESTIMATED INSTALLATION TIME

1/2 Hour

INSTALLATION

1. Installation can be done on the ground or in the air on a lift. Although it is easier to access the brake lines with the wheels off the vehicle, installation can be done with the wheels on the vehicle. Make sure the parking brake is set and that the vehicle is properly supported on jack stands if your pulling the wheels off.

- Unclip any ABS wiring from the stock brakelines. For the JL/JT front brake lines pull out the plastic ABS wiring mounts on the brake line coil bucket bracket on the front axle. The JL rears will require the ABS wiring mounts to be pulled out from the rear upper control arm brake line bracket. See **Figure 1. and 2.**



Figure 1. Front ABS Wire Mount Removal **Figure 2. Rear ABS Wire Mount Removal**

- Unbolt any brackets holding the brake lines to the axles or control arms. The JL/JT front brake lines will need the coil bucket mount unbolted with a 10mm socket and ratchet and the control arm mount unbolted with a 15mm wrench. The JL rear brake lines will need to have the upper control arm mounting bracket unbolted with a 10mm socket and ratchet. See **Figure 3. and 4.**

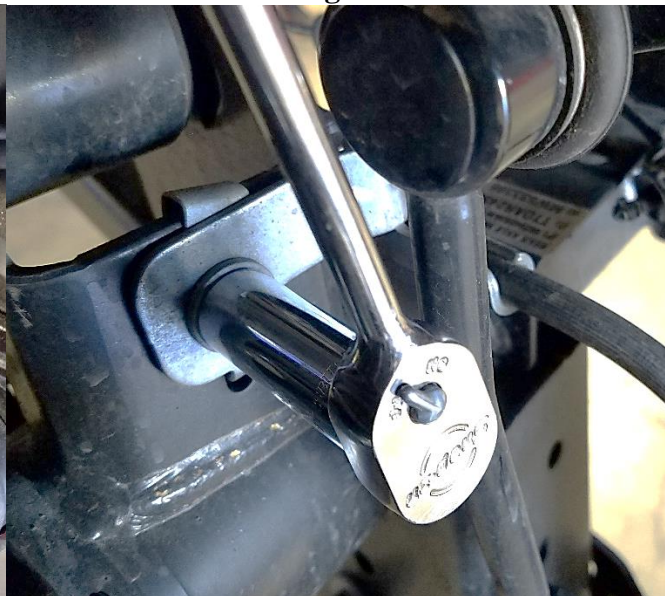


Figure 3. Front Line Bracket Removal

Figure 4. Rear Line Bracket Removal

- For each line use a 15mm socket or wrench and loosen and remove the banjo bolt at the caliper. Then use a 12mm and 16mm wrench to loosen and disconnect the frame end of the brake line. Remove the spring clip on the frame end with pliers or screwdriver. See **Figure 5. and 6.**

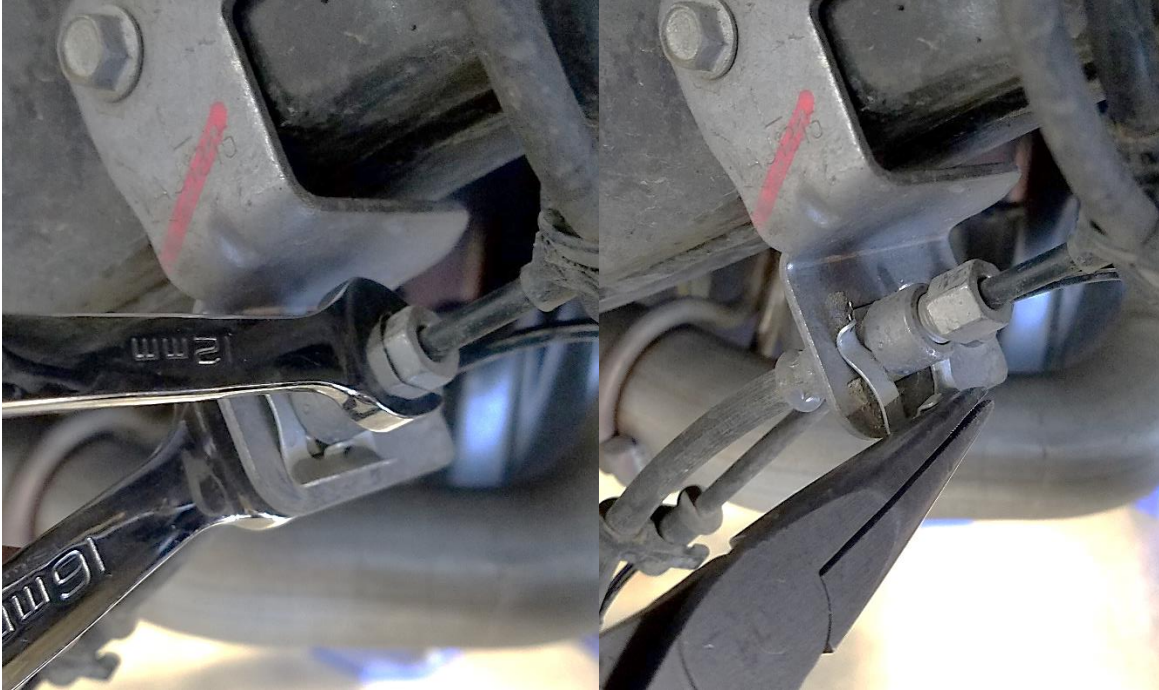


Figure 5. Loosening the brake line

Figure 6. Removing the Spring Clip

- JL/JT fronts and JL rears are right and left side specific so match up the line you took off to one in the kit. Install the banjo bolt end first. The JL/JT fronts have 2 thick copper washers, and two thin copper washers. Install the thick copper washer up against the caliper body and the thin washer in between the banjo bolt head and banjo. Tighten the banjo bolt to 26lbs-ft. See **Figure 7. and 8.**



Figure 7. Front Caliper Banjo Bolt

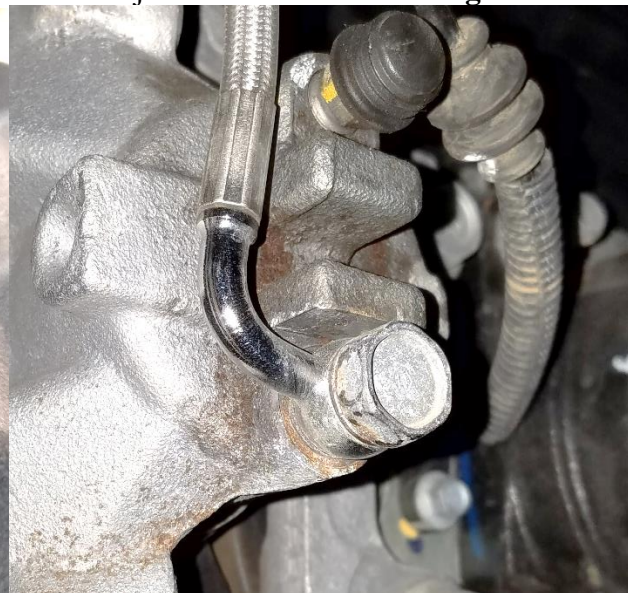


Figure 8. JT Rear Banjo Bolt

6. Route the new Synergy brake line around the suspension components up to the frame end and reinstall the brake line spring retaining clips. Carefully thread the male brake hard line nut into the new female fitting on the Synergy brake lines taking care to not cross thread the nut. Use a 12mm and 19mm wrenches to tighten the nut to 15lbs-ft.

7. The JL/JT front brake lines will need to have the new coil bucket mounting bracket on the front axle installed and the ABS wiring mounts pushed back in to the bracket. See **Figure 9**. The JL new rear brake line upper control arm mount will also need to be installed and the ABS wiring push in mounts pushed back in.



Figure 9. Reinstalling ABS Wiring Mounts.

8. Bleed the brakes. Either have someone help you bleed the brakes or use a brake bleeding tool. Do not drive until you have made sure that all the air is out of the brake line system and you have a firm brake pedal. Check the brake line connections for leaks and tighten as necessary! Water in a spray bottle works very well for cleaning up residual brake fluid when done with the install.

Installation is Complete

Table 1. Vehicle Bolt Torques

Bolted Joint Location	Wrench Size	Torque
Lug Nuts	21mm (OEM)	125lb-ft
Caliper Banjo Bolt	15mm	26lb-ft
Brake Hardline Nut at the Frame	12mm (Nut) 19mm (Synergy Line)	15lb-ft