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Part# 101011

Front Brake Lines

2011-23 Chevy/GM 2500/3500 HD 4wd

READ AND UNDERSTAND ALL INSTRUCTIONS AND WARNINGS PRIOR TO INSTALLATION OF SYSTEM AND OPERATION OF VEHICLE.

SAFETY WARNING BDS Suspension Co. recommends this system be installed by a professional technician. In addition to these instructions, professional knowledge of disassembly/ reassembly procedures and post installation checks must be known.

PRODUCT SAFETY WARNING Certain BDS Suspension products are intended to improve off-road performance. Modifying your vehicle for off-road use may result in the vehicle handling differently than a factory equipped vehicle. Extreme care must be used to prevent loss of control or vehicle rollover. Failure to drive your modified vehicle safely may result in serious injury or death. BDS Suspension Co. does not recommend the combined use of suspension lifts, body lifts, or other lifting devices.

You should never operate your modified vehicle under the influence of alcohol or drugs. Always drive your modified vehicle at reduced speeds to ensure your ability to control your vehicle under all driving conditions. Always wear your seat belt.

PRE-INSTALLATION NOTES

1. Special literature required: OE Service Manual for model/year of vehicle. Refer to manual for proper disassembly/reassembly procedures of OE and related components.
2. Adhere to recommendations when replacement fasteners, retainers and keepers are called out in the OE manual.
3. Larger rim and tire combinations may increase leverage on suspension, steering, and related components. When selecting combinations larger than OE, consider the additional stress you could be inducing on the OE and related components.
4. Post suspension system vehicles may experience drive line vibrations. Angles may require tuning, slider on shaft may require replacement, shafts may need to be lengthened or trued, and U-joints may need to be replaced.
5. Secure and properly block vehicle prior to installation of BDS Suspension components. Always wear safety glasses when using power tools.
6. If installation is to be performed without a hoist, BDS Suspension Co. recommends rear alterations first.
7. Due to payload options and initial ride height variances, the amount of lift is a base figure. Final ride height dimensions may vary in accordance to original vehicle attitude. Always measure the attitude prior to beginning installation.

POST-INSTALLATION WARNINGS

1. Check all fasteners for proper torque. Check to ensure for adequate clearance between all rotating, mobile, fixed, and heated members. Verify clearance between exhaust and brake lines, fuel lines, fuel tank, floor boards and wiring harness. Check steering gear for clearance. Test and inspect brake system.
2. Perform steering sweep to ensure front brake hoses have adequate slack and do not contact any rotating, mobile or heated members. Failure to perform hose check/ replacement may result in component failure.
3. Re-torque all fasteners after 500 miles. Always inspect fasteners and components during routine servicing.

PARTS LIST

Part #	Qty	Description
22533D	1	Front Brake Line - DRV
22533P	1	Front Brake Line - PASS
05568	1	Front Brake Line Routing Bracket - DRV
05569	1	Front Brake Line Routing Bracket - PASS
5188	2	Brake Line Clip
CCW-03-05	4	Crush Washer

590	1	Bolt Pack
	6	Wire Clamp
	6	1/4"-20 x 5/8" Bolt, Grade 5, Zinc
	4	1/4" Lock Washer, Zinc
	6	6mm Washer (12mm OD), Zinc
	2	1/4"-20 Serrated Flange Nuts

INSTALLATION INSTRUCTIONS

1. Park the vehicle on a flat, clean surface and block the rear wheels for safety.
2. Raise the front of the vehicle and support with jack stands under the frame rails.
3. Remove the wheels.
4. Disconnect ABS wire from the brake line bracket on the steering knuckle and disconnect the bracket from the knuckle. (Fig 1).

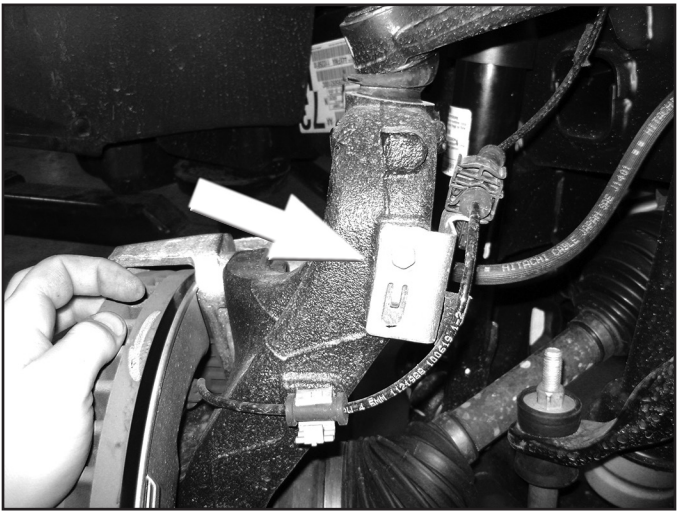


FIGURE 1

5. Locate the new stainless steel lines. The lines are driver and passenger side specific. The caliper end has a offset jog. When installed the hardline at the caliper will offset towards the inside of the vehicle. Identify the appropriate lines. (Fig 2 - Pass Side Shown)



FIGURE 2

6. Locate the factory brake line junction at the frame where the hardline and rubber line meet. (Fig 3) Using a 13mm line wrench disconnect the hardline from the rubber line. Remove the retaining clip and pull the line from the frame bracket. Place a bucket, etc under the hardline to catch any brake fluid drips.



FIGURE 3

7. Remove the factory brake line from the caliper and remove from the vehicle. Be sure to remove the factory crush washers as well. Place a new provided crush washer on each face of the new brake line and install on the caliper with the factory banjo bolt. Torque the bolt to 20 ft-lbs.
8. Run the new brake line up to the factory frame mount bracket. Feed the end of the line through the bracket and fasten to the factory hardline. Using a 13mm line wrench on the hard line fitting and 11/16" wrench on the new line, tighten the fitting securely. Secure the line to the factory bracket with the original brake line clip or the provided new one (5188). (Fig 4)



FIGURE 4

9. Locate and remove the two upper hub assembly bolts (Fig 5). The bolts are accessed from the back side of the steering knuckle. Save hardware.

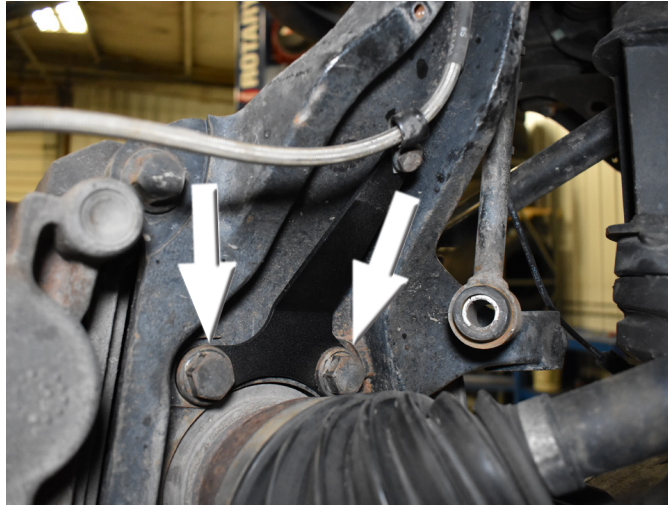


FIGURE 5

10. Install the brake line routing bracket per the respective side (05568 = DRV, 05569 = PASS. 05568 DRV shown above) and fasten to the knuckle with the two bolts removed in the previous step. Apply Thread Locker and torque the hub assembly bolts to 125 ft-lbs.
11. Run the ABS line around the front of the steering knuckle and up to the wire connector on the frame. Reconnect the wire and reattach it to the original place on the frame.
12. There are two threaded holes near the top of the steering knuckle neck, inboard side. Using a provided wire clamp, 1/4" x 5/8" bolt and 1/4" lock washer (BP 590), loosely attach the ABS line to the upper threaded hole on the back side of the steering knuckle (Fig 6). Fasten the brake line to the brake line bracket on the back side of the steering knuckle using 1/4" x 5/8" bolt, 6mm washer, and 1/4"-20 serrated flange nut (Fig 7). The hardware will be tightened once the line slack is set.



FIGURE 6

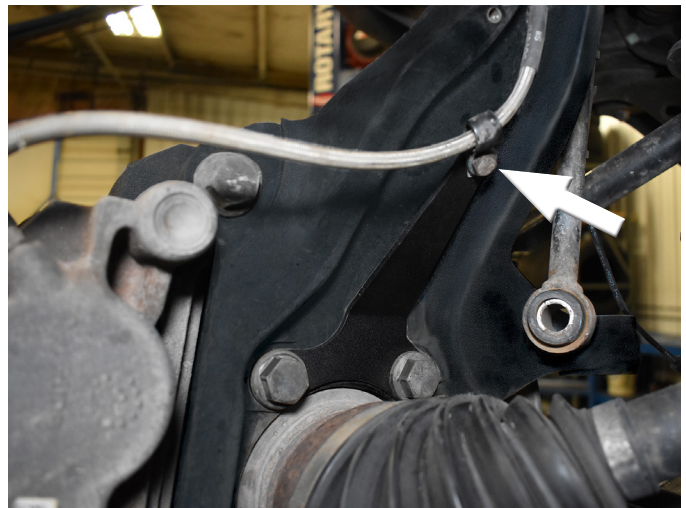


FIGURE 7

13. On the front side of the steering knuckle there is a small threaded hole. Using a third wire clamp, fasten the ABS wire to the front face of the knuckle with a 1/4" x 5/8" bolt and 1/4" lock washer (BP 590). Tighten securely (Fig 8). Pull the slack out of the line between the clamp and the caliper to provide as much loose line as possible above the clamp and then tighten to lock it in place. Adjust the slack in the two other lines, rotating the steering knuckle back and forth as a check, and tighten the upper clamp to 10 ft-lbs.

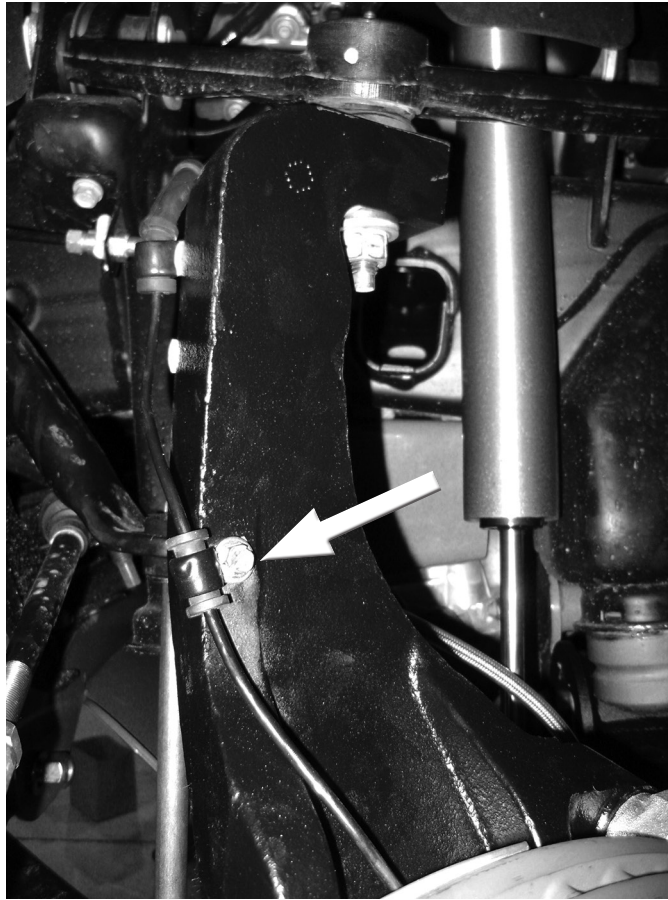


FIGURE 8

14. Repeat installation on the other side of the vehicle.
15. Properly bleed the brake system of air and top off the brake fluid reservoir with the proper type of fluid (see owners manual).
16. Reinstall wheels and lower the vehicle to the ground. Torque lug nuts to 140 ft-lbs.
17. Cycle the steering and suspension to ensure the new brake lines have adequate clearance from the tires and suspension components. Re-route if necessary.

NOTICE TO DEALER/INSTALLER

These instructions, the warning card, and included decals must be given to the owner of this BDS Suspension product.

For questions, technical support and warranty issues relating to this BDS Suspension product, please contact your distributor/installer before contacting BDS Suspension directly.

Sold/Installed by: