GM C1500/K1500 Rear Disc Brake Conversions – (5/6 lug, 11” Drum Axles)
Fitment

5-Lug Axles
- 92-00 Chevrolet C1500 Suburban
- 92-00 GMC C1500 Suburban
- 95-00 Chevrolet Tahoe
- 95-00 GMC Yukon, Denali, XL 1500
- 97-99 Chevrolet Cargo Van
- 96-04 Chevrolet/GMC Express 1500

6-Lug Axles
- 92-00 Chevrolet Blazer, Tahoe, Suburban
- 92-00 GMC Yukon, Denali, XL 1500
- 88-98 Chevrolet C2500
- 88-98 GMC C2500
- 96-02 Chevrolet Express 2500
- 96-02 GMC Savana 2500
- 99-00 Cadillac Escalade

Even if your model is listed above, if it does not have the flange shown here or does not have the 11” factory drum size, then the kit will not fit.

Note: The flange can be measured easily from the back side of the drum, without removing anything.

Dimensions
**Warning**

- Disc brakes should only be installed by someone experienced and competent in the installation and maintenance of disc brakes.

- If you are not sure of how to safely use this brake component or kit, you should not install or use it.

- Do not assume anything. Improperly installed or maintained brakes are dangerous. If you are not sure, get help or return the product.

**Notes**

- As with most suspension and tire modifications (from OEM specifications), changing the brakes may alter the front to rear brake bias. Your specific needs will depend on other modifications to the system.

- This kit can be operated using the stock OEM master cylinder. However, to retain a more firm brake pedal feel many users swap to larger bore master cylinders such as the GM CK1500 MASTER CYLINDER UPGRADE This can be a bolt-in swap using the supplied 9/16-18 x ½-20 adapter on one of the ports.

- For added user control, the factory proportioning valve can be swapped to an adjustable proportioning valve such as Wilwood 260-10922. Otherwise, it is advised to modify the factory proportioning valve as described below in Additional Information and Recommendations.

- The brackets in this kit are designed to be installed without removing the differential cover. This can be done by use of a cut-off wheel or reciprocating saw to split the drum backing plate into two pieces for removal. If you wish to retain your drum backing plates, the axles can be removed from the housing by draining the fluid, then removing the differential cover and C-clip retainers.

- This kit fits most 15 inch diameter wheels and larger. If the caliper contacts the inside of a 15” wheel, in most cases it will be in limited “hot spots.” It is acceptable to sand the caliper casting to create clearance in these spots so long as no more than 1/8 inch of material is removed. At the time of installation, prior to any modification, get an estimate of clearance to the wheel. If it cannot be made to work, the kit can be returned to LSMFG so long as it is in completely resalable condition. Shipping costs will not be included in the refund.

- The included rotors measure .220 thickness (for 5-lugs) or .315 thickness (for 6-lugs) whereas the factory drum measures .125 thick. Technically, the difference moves the wheel outboard by .095 (for 5-lugs) or .190 (for 6-lugs), although that amount is typically insignificant to wheel/tire fitment.

- **On axles with the higher offset (5.1")** The OD of the axle flange can sometimes be too large to fit inside of the rotor. If this is the case, the excess material can be removed with a grinder by spinning the axle slowly while holding a grinder on the outside edge.
• **Replacement Parts**: any component in the kit is normally in stock and ready to ship from LSMFG. Refer to the [Disc Brake Parts](#) category to see most of these. If you’d like OEM fitment info on sourcing calipers, hoses, or pads from a parts store then that is available by emailing [orders@littleshopmfg.com](mailto:orders@littleshopmfg.com) The rotors begin as an off-the-shelf part prior to being machined and zinc plated by LSMFG. This work could be copied by a competent machine shop, although it would not likely be as inexpensive as buying them as part of the kit.

• It is the responsibility of the buyer and installer of this kit to verify suitability/fitment of all components and ensure all fasteners and hardware achieve complete and proper engagement. Improper or inadequate engagement can lead to component failure.

• For any questions or suggestions, email [orders@littleshopmfg.com](mailto:orders@littleshopmfg.com)
This installation refers to both 5 lug and 6 lug axles, and to the passenger side. All steps are to be repeated on the driver side in kind. Start by removing the factory drum. It may be necessary use a lubricant around the axle register to do this. Once the drum is removed, remove the brake shoe retaining springs (2 places) as shown.

Disconnect the parking brake cable from the brake shoe, then remove and discard the brake shoes and hardware. The cable can then be removed from the backing plate by depressing its perimeter springs.
Remove the brake line from the wheel cylinder using a line wrench if possible. The 4 bolts retaining the drum backing plate to the axle can now be removed and discarded.

The brackets in this kit are designed to be installed without removing the differential cover. This can be done by use of a cut-off wheel or reciprocating saw to split the drum backing plate into two pieces for removal. If you wish to retain your drum backing plates, the axles can be removed from the housing by draining the fluid, then removing the differential cover and C-clip retainers. Before installing the brackets, locate the notch as indicated. This will be mounted **UP** when the bracket is installed on the axle, and mounted towards the **REAR** of the truck.
For standard, low-offset kits: The bracket and hardware will sandwich the .25” spacer as shown. For high-offset kits: use the machined aluminum spacers in place of the .25” spacer. It will need to be installed with the counterbore facing the flange. In order to do this the axle will need to be removed from the housing. The caliper brackets should be mounted to the back of the axle. The longer two bolts should be positioned on top, with the shorter bolts securing the bottom. All four will use a washer. After those four bolts are tightened, install the hose bracket using two more washers, and the two ½-20 half nuts to secure it.

The rotor can now be installed using 2 lug nuts to temporarily secure it. In the case of drilled/slotted rotors, the direction of rotation shown is for the passenger side. 5-lug kits with non-parking brake calipers should be checked to confirm the machined pad spacers are present (6-lug kits and parking brake calipers do not use these). Make sure the notch lines up with the corresponding boss on the brake pad.
The calipers can be installed using medium strength threadlocker (such as Loctite 243) on the two 7/16-20 caliper bolts. **Kits with parking brake calipers should refer below to Parking Brake Caliper Setup prior to going further.** Parking brake calipers come packaged with the pistons in a neutral position which may prevent the pads from sliding over the rotor. If this is the case, the caliper piston can be rotated clockwise (for passenger side) to retract the piston and provide more clearance. This can be done using a brake rewind tool or Channellock-type pliers on the outside of the piston face.

When installing the pads, make sure the notch lines up with the corresponding boss on the brake pad and the clip is installed correctly to hold the pad in place.
With the caliper bolted into place, check the corners of the pads against the rotor. If there is contact in this spot you can wedge a flat head screwdriver under the corner and use a hammer to lightly tap the ear of the pad and hold tension away from the rotor. If the pad still contacts the rotor, it may be necessary to lightly sand the corner of the pad until there is clearance.

Install the banjo bolt and crush washers into the hose as shown, with the offset side of the fitting away from the caliper. Then install the hose into the caliper as shown.
Install the retaining clip by lightly tapping with a hammer, being careful not to bend the hose bracket. The factory brake line can then be tightened into the rubber hose. It is best to use a wrench to support the rubber hose from spinning in the key of the hose bracket. **For kits without parking brake calipers, skip to Additional Information and Recommendations.**

Depending on factory cable lengths, the existing cables can sometimes be used without any modification. If they are too long, then cut off the cable stop as shown using cable cutters or a cut-off wheel. The spring can be removed and the cable installed into the parking brake caliper as shown.
The supplied cable stops can be slid over the end of the cable and against the parking brake lever. It is suggested that you tighten the set screws and adjust the system for proper function at this time. There are typically points of adjustment on the factory cables along the chassis (depending on the model and cab configuration). The cable stop itself can be moved forward or back depending on the needs of the system as well. Once it is working correctly, the excess cable can be trimmed closer to the stop.
**Parking Brake Caliper Setup**

- **This is an important part of installation that many people overlook.** Our parking brake calipers are self-adjusting. Every time you use the parking brake they adjust themselves for pad wear by clicking to the next stop on an internal ratchet. If you do not use your parking brake during normal operation of the vehicle, over time the pads will wear and there will be insufficient contact between the pads and the rotor. When this happens, the parking brake will never engage. To adjust the parking brake while installing or servicing the calipers, use the following directions. Failure to adjust the parking brake can result in no parking brake, brakes dragging, overheating, premature brake wear, or ineffective rear brakes causing excessive front wear and overheating.

- **If possible, adjust the parking brake after the caliper has been mounted but before the system has been bled.**

- With the caliper in place on the rotor, remove the parking brake spring. Compress the lever by hand until it bottoms out against the lever stop. You will notice the pads being pushed out towards the rotor. Each time the lever is returned the pads do not retract as far. This is due to the internal ratchet mechanism engaging its next notch. Do this until the pads bottom out on the rotor and are no longer able to achieve the next notch in the ratchet.

**Note:** If the pads cannot be made to contact the rotor in this fashion, sometimes it may be necessary to remove the nut from the lever arm and use a wrench to turn the shaft and engage the pads against the rotor. You will turn the shaft in the same direction as the lever would, and it should move the pad towards the rotor. Carefully watch the shaft as you rotate it: if the shaft sucks down into the caliper body, you are turning the wrong way. Once the pads have bottomed out on the rotor, reinstall the seals, lever, and nut exactly as they were removed. The lever should be installed in the next closest position allowed by the orientation of the shaft. There should not be pressure from the pads to the rotor when the lever is in the open position.

- Replace the return spring and parking brake cable. It is wise to make sure this system is working properly prior to filling the system with fluid.
Parking Brake Caliper Setup (continued)

• When bleeding the parking brake calipers, ensure that the bleeder screw is parallel to the ground. If it is not, then it will be necessary to reposition the vehicle, the axle, or the caliper. **If the bleeder screw is not parallel to the ground then you can bleed gallons of fluid through it without eliminating all of the air.**

Additional Information and Recommendations

• As with most suspension and tire modifications (from OEM specifications), changing the brakes may alter the front to rear brake bias. Rear brakes should not lock up before the front. Brake system evaluation and tests should be performed by persons experienced in the installation and proper operation of brake systems. Evaluation and tests should be performed under controlled conditions. Start by making several stops from low speeds then gradually work up to higher speeds. Always utilize safety restraint systems while operating the vehicle.

• **Modifying the factory proportioning valve:** If an adjustable proportioning valve is not to be used, some installers choose to modify the factory proportioning valve to increase rear brake pressure. This is done so as follows: 1.) Follow the steel brake line that runs out of the smaller reservoir of the master cylinder. This is the line that feeds the rear brakes. Prior to going into the large ABS unit on the fenderwell, the line will run into a distribution block. This will be a 5-port steel or brass block. On the end of the block that the line feeds into, there will be a large end nut with a rubber plug in the center. 2.) Using a box-end wrench, loosen and remove the end nut from the distribution block. (Use caution as it is spring-loaded. As you remove the end nut, a spring should also pop out of the block. The spring can be set aside. 3.) Remove the small aluminum piston from inside the distribution block. It may be necessary to use a pair of needle-nose pliers to pull the piston out. With the piston out, remove the rubber seal from the piston itself. If the seal did not come out on the piston, use a pick or a small screwdriver to remove the seal from inside the block. The inside face of the end nut has a plastic insert with a hole in the center. The end of the piston will push into this plastic insert. Make sure the piston is seated all the way into the end nut. 4.) Screw the end nut with the piston back into the distribution block and re-tighten. The spring and the seal should not have been re-installed. **Note:** the stock distribution block cannot be modified in certain application due to factory variances. If this is the case, save and reassemble all components.
To properly bleed the brake system, begin with the caliper farthest from the master cylinder. Repeat the procedure until all calipers in the system are bled, ending with the caliper closest to the master cylinder. **Note:** When using a new master cylinder, it is important to bench bleed the master cylinder first.

Test the brake pedal. It should be firm, not spongy, and stop at least 1 inch from the floor under heavy load. If the brake pedal is spongy, bleed the system again. If the brake pedal is initially firm, but then sinks to the floor, check the system for leaks. Correct the leaks (if applicable) and then bleed the system again. If the brake pedal goes to the floor and continued bleeding of the system does not correct the problem, either air may be trapped in the system, or a master cylinder with increased capacity (larger bore diameter) may be required. It is common to swap to 2002 GM Silverado/Sierra 1500 master cylinders which bolt into place on CK1500 trucks. A 9/16-18 x ½-20 adapter fitting will need to be used.

**Brake Testing**

- Make sure pedal is firm: Hold firm pressure on pedal for several minutes, it should remain in position without sinking. If pedal sinks toward floor, check system for fluid leaks. **DO NOT** drive the vehicle if pedal does not stay firm or can be pushed to the floor with normal pressure.
- At very low speed (2-5 mph) apply brakes hard several times while turning steering from full left to full right, repeat several times. Remove the wheels and check that components are not touching, rubbing, or leaking.
- Carefully examine all brake components, brake lines, and fittings for leaks and interference. Make sure there is no interference with wheels or suspension components.
- Drive vehicle at low speed (15-20 mph) making moderate and hard stops. Brakes should feel normal and positive. Again check for leaks and interference.
- Always test vehicle in a safe place where there is no danger to (or from) other people or vehicles.
- Always wear seat belts and make use of all safety equipment.

**Pad and Rotor Bedding**

- Once the brake system has been tested and determined safe to operate the vehicle, follow these steps for the bedding of the pads and rotors. These procedures should only be performed on a race track, or other safe location where you can safely and legally obtains speeds up to 65 MPH, while also being able to rapidly decelerate.
- Begin with a series of light decelerations to gradually build some heat in the brakes. Use an on-and-off the pedal technique by applying the brakes for 3-5 seconds, and then allow them to fully release for a period roughly twice as long as the deceleration cycle. If you use a 5 count during the deceleration interval, use a 10 count during the release to allow the heat to sink into the pads and rotors.
Pad and Rotor Bedding (continued)

• After several cycles of light stops to begin warming the brakes, proceed with a series of medium to firm deceleration stops to continue raising the temperature level in the brakes.

• Finish the bedding cycle with a series of 8-10 hard decelerations from 55-65 MPH down to 25 MPH while allowing a proportionate release and heat-sinking interval between each stop. The pads should now be providing positive and consistent response.

• If any amount of brake fade is observed during the bed-in cycle, immediately begin the cool down cycle. • Drive at a moderate cruising speed, with the least amount of brake contact possible, until most of the heat has dissipated from the brakes. Avoid sitting stopped with the brake pedal depressed to hold the car in place during this time. Park the vehicle and allow the brakes to cool to ambient air temperature.

POST-BEDDING INSPECTION • After the bedding cycle, the rotors should exhibit a uniformly burnished finish across the entire contact face. Any surface irregularities that appear as smearing or splotching on the rotor faces can be an indication that the brakes were brought up to temperature too quickly during the bedding cycle. If the smear doesn’t blend away after the next run-in cycle, or if chatter under braking results, sanding or resurfacing the rotors will be required to restore a uniform surface for pad contact.

For any questions or suggestions, email orders@littleshopmfg.com