



Wilwood / LSMFG – GM 88-00 C1500 14" Front Big Brake Kit



## Fitment

- 1988-1999 Chevrolet C1500 Pickup\*
- 1995-2000 Chevrolet C1500 Suburban
- 1995-1999 GMC C1500 Suburban
- 1999-2000 Cadillac Escalade
- 1988-1998 GMC C1500 Pickup Sierra\*
- 1995-2000 Chevrolet Tahoe
- 1995-2000 GMC Yukon, Denali, XL 1500

- The 14" C1500 kit utilizing Wilwood 6-piston FNSL calipers, aluminum hubs, hats, and machined 6061 AL brackets which bolt directly to the factory spindles or drop spindles without drilling. Designed to fit 88-00 full size 2wd GM trucks and SUVs.
- \*Note: Fits spindles with factory 1.25" rotor width. Non-heavy duty spindles on 88-91 Standard Cabs with a 1" rotor width must be swapped to spindles from an 88-91 Ext Cab, 88-91 454SS, or any spindle from 92-00. The same applies to drop spindles for those year ranges.
- It is the buyer's responsibility to check proper clearance and function of all brake parts to their existing suspension components and wheels/tires before driving the vehicle.

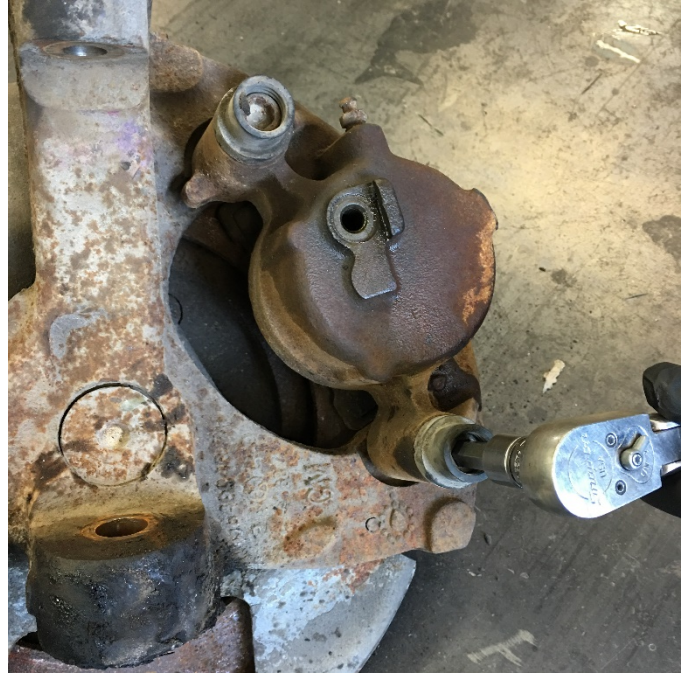
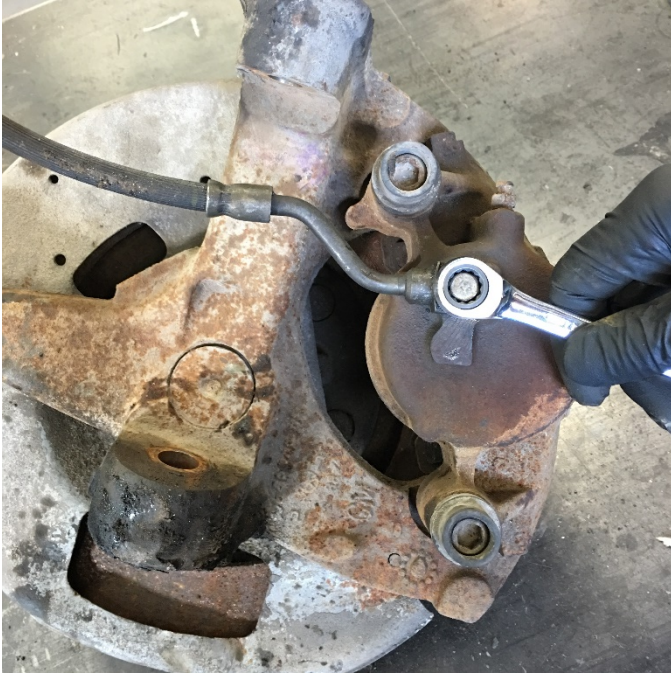
## Warning

- 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 1/2-20 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**
- Stainless steel braided hoses are necessary for the installation of this kit. They are available to fit the factory chassis fittings here: [Braided Stainless Hoses - 88-00 GM CK1500 for 14/16 inch Front Kits](#)
- This kit fits most 18 inch diameter wheels and larger.
- The wheel mounting surface moves the wheel outboard .20 from its stock position.
- 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)

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This installation refers to the passenger side spindle. All steps are to be repeated on the driver side in kind. For instruction purposes, the spindle has been removed. It is not necessary to remove spindle to install new brakes. Start by removing the factory brake line and factory brake caliper. These items will no longer be used

3 & 4



Remove the factory dust cover, then the cotter pin, castle nut, and washer. The castle nut and washer should be saved.

5 & 6

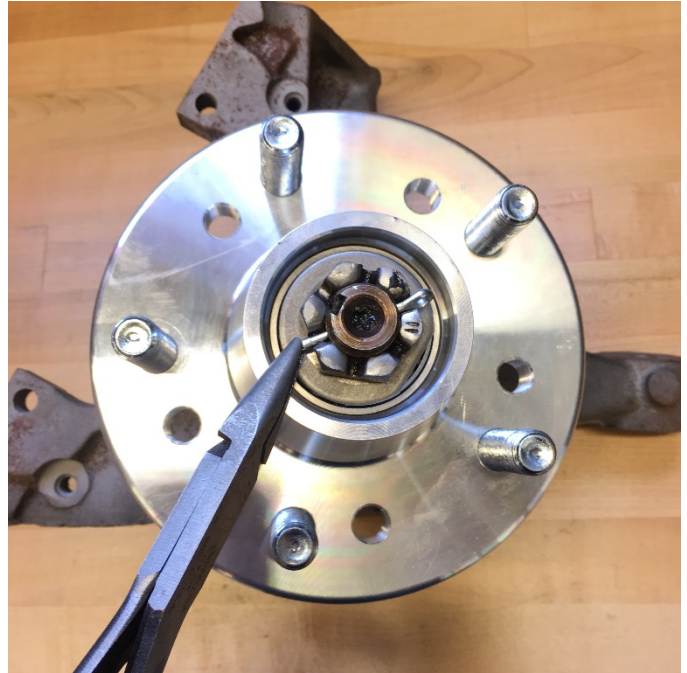


Remove the rotor to access the 3 dust cover bolts underneath. Remove the dust cover, which will not be reused.

7 & 8



Trim the spindle ears as shown. A reciprocating saw, bandsaw, or cut-off wheel can be used. The sharp tips left over can be sanded flat as shown in Step 8 to avoid contact with the new caliper.



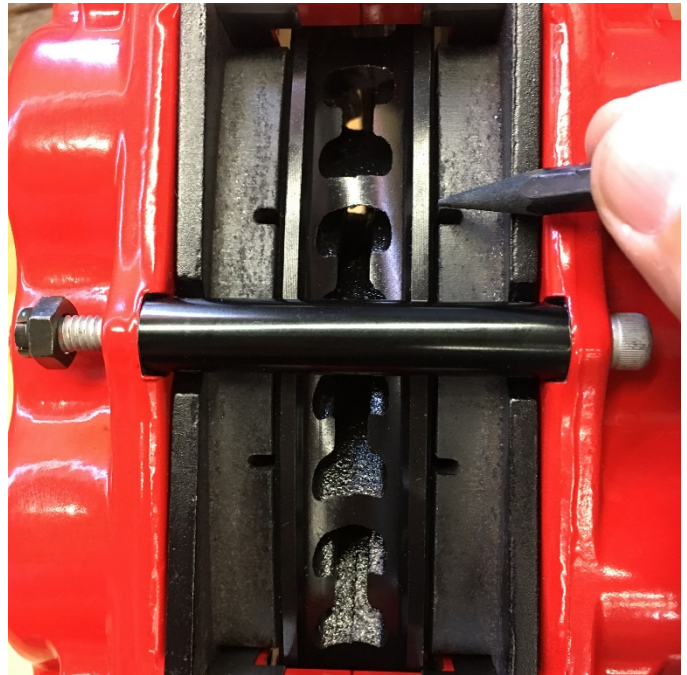
Pack the large inner bearing cone (A5) with high temperature disc brake bearing grease (available from your local auto parts store) and install into the back side of the hub. The inner seal can then be pressed in or lightly tapped in with a hammer by circling the perimeter. Install the hub onto the spindle, then pack the outer bearing (A3) with grease and install under the factory washer, castle nut, and supplied cotter pin.



Install the dust cap by tapping lightly around the perimeter. The radial brackets can temporarily be installed at this time using the supplied flange bolts and two .750x.438x.035 shim washers between the bracket and the spindle. Any corners or burrs on the spindle should be removed so that the brackets sit flat against the machined surface. It is not necessary to torque them at this time.



Arrange the rotor and hat in the position shown ensuring the arrow noting rotation direction is correct for its position on the vehicle. Start the first few threads of all 12 of the  $\frac{1}{4}$ -20 12-point bolts. Using an alternating sequence, apply red **Loctite® 271** to the threads, and torque to 155 in-lbs. (Safety-wiring is not used for these bolts. If safety-wiring is desired/required for your application, then **Wilwood PN 230-4572** can be used as an added measure of security.) The rotor can be installed on the hat at this time using three M14x1.5 lug nuts to hold the hat flat against the hub.



This kit contains distinct right and left-hand calipers that must be mounted in the correct direction. They should be positioned so that the largest pistons are at the rotor exit end of the caliper. There is an arrow on the face of the caliper noting rotation direction. Lubricate the caliper mounting studs with lightweight oil. Initially place one .875x.375x.035 shim on each stud of the bracket. Mount the caliper using lock nuts and washers and ensure that it seats on the bracket and does not contact the spindle.

Remove the bridge bolt, nut, and spacer tube and install the pads at this time. Temporarily tighten the lock nuts and view the rotor through the top opening of the caliper. The caliper will need to be centered on the rotor by adding or subtracting the .750x.438x.035 shims between the bracket and the spindle. Always use the same amount of shims on each of the two mounting bolts.

Once the caliper alignment is correct side to side, check that the top of the brake pads are flush with the outside diameter of the rotor. If not, adjust by adding or subtracting .875x.375x.035 shims between the caliper and the bracket.

After the caliper pad height is set, check that there is no pre-applied pressure when spinning the rotor. If so, make adjustments as necessary. Then remove the bracket mounting bolts one at a time, apply red Loctite® 271 to the threads, and torque to 60 ft-lbs. Torque the caliper lock nuts to 30 ft-lb. Then secure the brake pads in place with the center bridge pad retainer tube, bolt, and locknut. The locknut should be snug without play in the bolt or tube. However, be cautious not to over tighten.

Temporarily install the wheel and tighten the lug nuts. Ensure that the wheel rotates freely without any interference or contact to the caliper.





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OEM rubber brake hoses generally cannot be adapted to Wilwood calipers. LSMFG provides the [Stainless Steel Braided Flex Lines - For 88-00 GM C1500 14 inch Front Kit](#) to go between the caliper and the factory hard line fittings at the chassis.

**Note:** It is the installer's responsibility to confirm that all fittings and hoses are the correct size and length, and also to ensure proper sealing and that they will not be subject to crimping, strain and abrasion from vibration or interference with suspension components, the brake rotor, or wheel. In absence of specific instructions for brake line routing, the installer must use his best professional judgment on correct routing and retention of lines to ensure safe operation. Test vehicle brake system per the 'minimum test' procedure stated within this document before driving. After road testing, inspect for leaks and interference. Initially after install and testing, perform frequent checks of the vehicle brake system and lines before driving to confirm that there is no undue wear or interference not apparent from the initial test. Afterwards, perform periodic inspections for function, leaks and wear in an interval relative to the usage of vehicle.

## Additional Information and Recommendations

- This C1500 front kit can be operated using the stock OEM master cylinder. However, 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 vehicle.
- For optimum performance, fill and bleed the new system with Wilwood Hi-Temp<sup>o</sup> 570 grade fluid or EXP 600 Plus. For severe braking or sustained high heat operation, use Wilwood EXP 600 Plus Racing Brake Fluid. Used fluid must be completely flushed from the system to prevent contamination. **Note:** Silicone DOT 5 brake fluid is **NOT** recommended for racing or performance driving.
- **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 fender well, 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. Bleed the outboard bleed screw first, then the inboard. Repeat the procedure until all calipers in the system are bled, ending with the caliper closest to the master cylinder. If the caliper is fitted with bleed screws on four corners, make sure the bottom bleed screws are tight. Only bleed from the top bleed screws. **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 1/2-20 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 obtain 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.
- 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.

**COMPETITION VEHICLES** • If your race car is equipped with brake cooling ducts, blocking them will allow the pads and rotors to warm up quicker and speed up the bedding process. Temperature indicating paint on the rotor and pad edges can provide valuable data regarding observed temperatures during the bedding process and subsequent on-track sessions. This information can be highly beneficial when evaluating pad compounds and cooling efficiencies.

**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.

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