Installation Instructions

Manual Disc Brake Conversion Kit

Item # **FC1011-305**

Applications: 1959-64 Chevrolet Full Size Cars

Thank you for choosing Leed Brakes for your automotive product needs. Before you begin your installation please inspect all parts and review the installation instructions. If you have any missing or damaged parts or if you have any questions regarding the fitment of this kit on your specific vehicle please contact our customer service team at (716) 852-2139 before beginning your installation

Tools required for a safe and smooth installation:

Proper Jack & Jack Stands, Tube Wrenches, Standard Socket Set, Standard Wrench Set, Torque Wrench, Lug Wrench, Pliers, Mallet, Brake Fluid, Brake Cleaner, Wheel Bearing Grease.

Drum Brake Removal:

1. Safely raise the vehicle off the ground until the wheels are clear and spin freely. Support the vehicle using the appropriate Jack Stands and remove the front wheels.
2. Starting at the front wheel hub, remove the grease cap, cotter pin, lock nut and flat washer from the spindle as well as the outer bearing.
3. You should now be able to slide the hub/drum assembly off the spindle. If you have trouble removing this assembly you may need to retract the brake shoes by inserting a flathead screwdriver into the adjustment slot in the drum brake backing plate. Use the screwdriver to disengage the adjusting lever from the adjusting screw. You should now be able to turn the adjusting screw to retract the brake shoes.
4. Before you remove the drum brake backing plate you will want to remove all brake fluid from your brake system. ***Be very careful not spill any brake fluid on any painted surfaces as it will damage your paint.*** To remove the brake fluid from your system first remove the lid from your master cylinder. Next place one end of a clear hose on the bleeder of your wheel cylinder and the other into a suitable container. Finally open the bleeder screw until all fluid has been removed from your system
5. From under the dash disconnect the pushrod from the pedal assembly.
6. Disconnect the brake line(s) from your master cylinder. Remove the retaining hardware and remove the master cylinder and or power booster from the firewall. This assembly will also include the pushrod that was previously disconnected from the pedal.
7. Disconnect the hard brake line from your flexible hose at the frame rail. It is recommended you use a tube wrench as to not damage the brake line fittings. If your fittings look rusty spray them with penetrating oil and let them soak for easy removal.
8. Remove the horseshoe clip from the brake hose at the frame mount.
9. Remove the drum brake backing plate assembly by removing the 2 retaining bolts and nuts near the bottom of the backing plate and the large anchor bolt near the top. Again the use of penetrating oil is recommended on any rusty hardware for easy removal. **Photo 1**

Inspection:

Once you have removed all drum brake components from your spindles it is recommended that you clean your spindles bearing surfaces. Check for any debris or signs of damage to the spindle. Any light damage caused by rust can usually be cleaned up with an emery cloth.

Brake Kit Installation:

1. The calipers will be installed on the rear side of the spindle pointing back towards the firewall. The upper brackets will bolt to the outside face of the spindle using the 5/8" hole that held on the drum brake backing plate. The 7/16" hole in the base bracket should point back towards the firewall. Secure the assembly using the 5/8" bolt supplied making sure you place the 5/8" spacer supplied between the bracket and the spindle. Leave the bolt finger tight at this point. **Photo 2 & 3**
2. The lower brackets will be installed on the face of the spindle using the lower bolt holes. Slide the 7/16" x 2.5" and 7/16 x 3.5" bolts supplied through the brackets spindle and steering arms. Secure the assembly with the nylon lock nuts supplied again leaving them finger tight. **Photo 4**
3. Place the .75" spacer supplied between the upper and lower bracket. Slide the 7/16" x 2" bolt supplied through the lower bracket, spacer and upper bracket. Secure with the nylon lock nut supplied. **Photo 5**
4. Check the upper brackets to insure they are aligned properly and are not binding against the spindle anywhere along their edge or steering arm. If everything is clear all the bolts may now be torqued. Begin with lower bracket bolts followed by the bolt connecting the upper and lower brackets. Torque to 50-55 ft. lbs. Finally torque the 5/8" upper bolt to 80-85 ft. lbs. **Photo 6**
5. Next you will need to properly pack the inner and outer bearings with grease prior to installation.
6. Remove the protective coating from your rotors on both the braking surface and bearing race surfaces using a brake cleaner available at your local parts store.
7. Install the greased inner bearing into the inner race of the rotor. **Photo 7**
8. Lightly pack grease into the inner lip of the grease seal. Next install the grease seal into the inner portion of the rotor using a soft mallet or piece of wood. This will prevent any damage from occurring during installation. The lip of the seal should face the bearing when installed**. Photo 8**
9. Slide the rotor onto the spindle and install the greased outer bearing, slotted washer and adjusting nut. **Photo 10**
    a. Proper adjustment of the bearings is VERY IMPORTANT. Rotate the rotor while tightening the spindle nut to 18-24 ft lbs. Next back off the adjustment nut about 1/2 turn and retighten to 10-15 ft lbs while aligning the retaining slots with the cotter pin hole in the spindle.
    b. Install cotter pin, bend cotter pin so that each side is bent in the opposite direction of the other.
    c. Install the grease cap. **Photo 11**
    d. Spin the rotor to insure there is no interference with the grease cap and retaining assembly**.**
10. Calipers should arrive preloaded, if they are not you must install the brake pads so that the friction material is facing each other. The inner brake pad will require the pad retaining clip to be installed on the back of the brake pad then slid into the piston. **Photo 12**
11. The outer brake pad will need to fit snugly into the caliper. To do this you must bend the upper tabs down until a snug fit is accomplished.
12. Lubricate supplied caliper mounting pins with silicone grease.
13. Install the calipers with the bleeder screw facing up. Install the supplied slider bolts thru the inner caliper ears, then thru the bracket and finally into the outer caliper ear. Torque to 25-30 ft. lbs. Make sure that the slider bolt passes thru the underside of the inboard pad guide when installed. **Photo 13 & 14**

14. Once the calipers are installed spin the rotors to insure there is no interference between the caliper and the rotor.
15. Attach the flexible brake lines to the caliper using the banjo bolt and copper washers provided in the kit. Place one copper washer on the banjo bolt and then slide the banjo bolt into the flex hose. Install a second copper washer onto the end of the bolt and then install the bolt into the caliper. Tighten the banjo bolts to 25 Ft/Lbs. Additional torque may be required if any leaks are noted after bleeding the brakes. **Photo 15**
16. Install the other end of the flex hose to the frame bracket using the horseshoe clip provided. Reconnect the original hard line and tighten using a tube wrench.
17. Turn the wheels thru a complete left and right turn to insure there is no interference with the new brake system and any suspension or body components. Also check the rubber hoses during this operation to insure the hoses are not binding or twisting. If your rubber hoses bind during a turn you could experience loss of braking while driving. If it looks like they are binding remove the horseshoe clip and reposition the brake hose until it no longer binds.

Brake Line And Proportioning Valve Installation

1. Your kit has been supplied with a dual chamber master cylinder and an adjustable proportioning valve. This is not only an upgrade in performance, but also in safety. In order to utilize this system you will be required to run some new brake lines. The exact routing is up to you and will depend on any other modifications that may have been made to your vehicle.
2. The front port of the master cylinder will be connected to the front brakes. Using the line supplied connect a tee fitting and then run a line out to each front wheel.
3. The rear port of the master cylinder will be connected to the rear brakes. Using the supplied line connect the rear port to the In port of the adjustable proportioning valve. Then connect the Out port to the line running to the rear brakes.
4. It will be easiest to dry fit the master cylinder and proportioning valve and route your brake lines. Once all the connections are made you can remove just the master cylinder for bench bleeding. Once that's complete you will need to reconnect the lines running from the master cylinder to the valve and tee during final installation.

Master Cylinder Bench Bleeding

1. Before you install your master cylinder you must **bench bleed** it in a vice off of the vehicle using the **bench bleeder kit** provided.
2. To Bench Bleed
    a. Place your master cylinder in a **vice** by the mounting ears.
    b. Attach a clear plastic hose to the short end of each of the plastic nozzles provided.
    c. Clip the plastic bridge onto the partition wall of the master cylinder and insert each plastic tube into the holes insuring the end of the tube will be fully submerged in the brake fluid.
    d. Press the tapered end of the nozzles firmly into the master cylinder ports with a twisting motion.
    e. Fill the reservoir with new clean brake fluid (DOT 3 or DOT 4 Recommended).
    f. Using a large Phillips head screwdriver push the piston in, then release using full strokes. This MUST be done until ALL air has disappeared from the clear plastic hoses.

CAUTION- MASTER CYLINDER WILL NOT BLEED PROPERLY IF HOSES ARE NOT FULLY SUBMERGED IN BRAKE FLUID UNTIL THE BLEEDING PROCESS IS COMPLETE

Master Cylinder Install:

1. Remove the master cylinder from the vice and install on the firewall, secure with factory hardware. ***Be very careful not spill any brake fluid on any painted surfaces as it will damage your paint.***
2. Carefully remove the bleeder kit nozzles and install the brake lines in the appropriate ports.
3. Secure all brake lines and check for leaks.
4. Remove the factory pushrod from your original master cylinder and install it into the new master cylinder with the original dust boot. Be sure to connect the pushrod to the upper hole in the pedal. The lower hole is only used for power brake applications.

Bleeding the vehicles braking system:

We recommend that the brake system is bled using a gravity bleed method. While there are many ways to bleed a system this way is less likely to introduce air in the system causing a spongy pedal. Whenever bleeding your system you must keep an eye on your fluid level. If your master runs dry you will have to bench bleed the master again.

1. Remove the cap from the master cylinder.
2. Starting at the right rear wheel cylinder or caliper attach a clear hose to the bleeder with the other end in a clear container.
3. Open the bleeder and observe the fluid flow. It may take a couple of minutes for the fluid to flow with a new system. Once the fluid begins to flow let it drip until you do not see any air.
4. Move to the left rear wheel, repeat step 3.
5. Move to the right front wheel, repeat step 3.
6. Move to the left front wheel, repeat step 3.
7. Repeat steps 2 thru 6 once more.
8. Install the lid on the master cylinder.
9. Pump the brake pedal until you achieve a firm pedal.
10. Remove lid on master cylinder & check fluid level
11. Repeat steps 2 thru 6 to insure all air has been removed.

Adjustable Proportioning Valve Adjustment

1. The adjustable proportioning valve is meant to control rear brake lockup by limiting the pressure to the rear brakes. If the rear brakes lockup prematurely the car can be difficult to control during a hard stop.

2. The valve provides a maximum of a 55% reduction in rear brake pressure. Meaning that even when adjusted to the full decrease position it will not shut off the rear brakes. Count the turns from the full decrease position to the full increase position. Turn the knob back in the full decrease direction half that number of turns. This will give you a good starting point for most vehicles.

Once you feel you have successfully removed all air from your brake system check all fittings and lines for leaks and verify all fasteners are tight. Install your wheels, and spin them to insure they still spin freely making sure the caliper doesn't interfere with the wheel and your brakes are not dragging or locked up.

Install your wheels and spin them to insure they still spin freely making sure the caliper doesn't interfere with the wheel and your brake components are not dragging or locked up.

That completes the installation of your brake kit at the spindles. If you purchased a kit containing power or manual actuation, please refer to the separate instructions provided with those components.

If you have any questions please call our tech line at (716) 852-2139

Thank you for purchasing from Leed Brakes we hope you have had an enjoyable experience.

In from master cylinder *front* brake port
1/2-20 fitting used
Out to front brake caliper (either LH or RH side)
3/8-24 fitting used
To brake warning light
In from master cylinder *rear* brake port
7/16-24 fitting used
Out to front brake caliper (either LH or RH side)
3/8-24 fitting used
Out to rear brakes
9/16-18 fitting used
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Installation Photos

Disc Brake Conversion Kit

Applications: 1959-64 Chevrolet Full Size Cars

← Front of Car

Photo 1

Photo 2

Photo 3

Photo 4

Photo 5

Photo 6

Photo 7

Photo 8

Photo 9

Photo 10

Photo 11

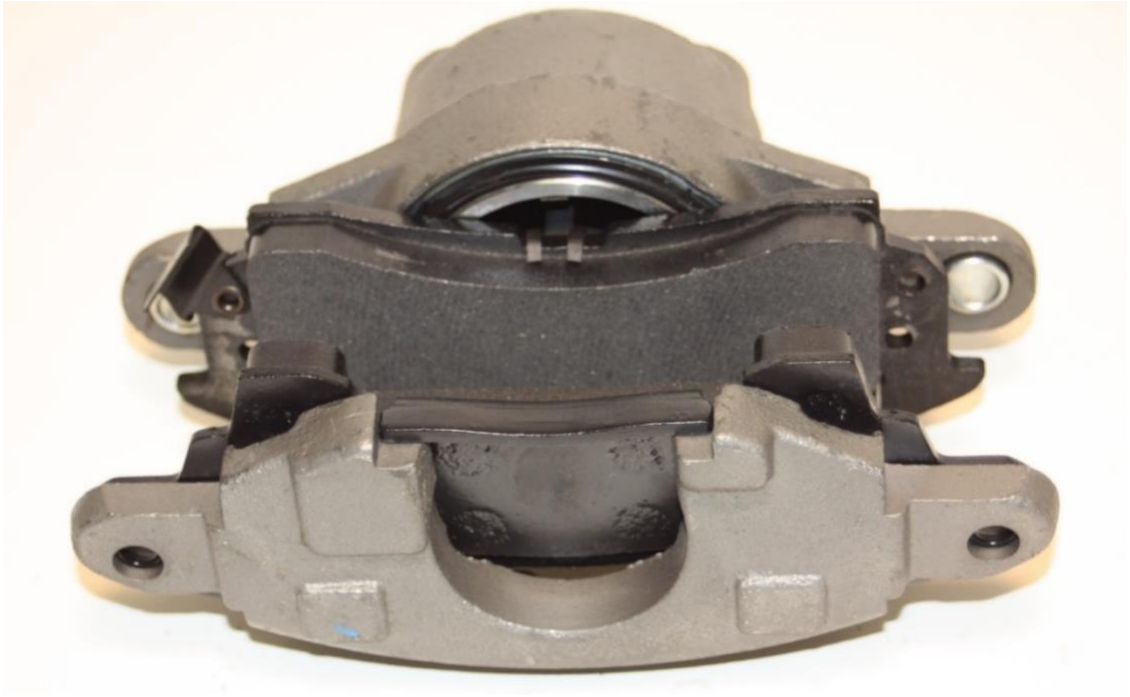

Photo 12

← Front of Car

Photo 13

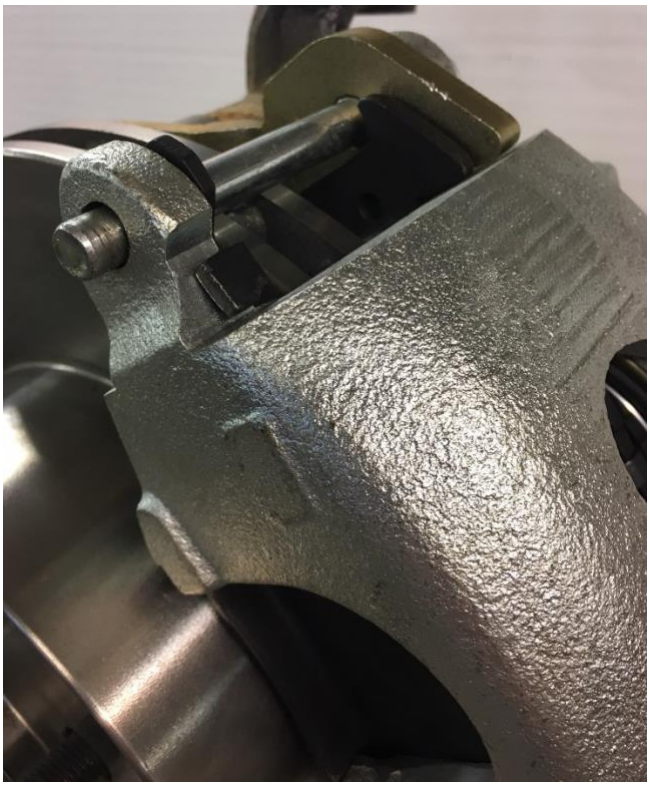

Photo 14

Photo 15