



1965-68 Disc Brake Kit Installation Instructions

Shafer's Classic Reproductions, Inc.

The best way to convert your Chevy to single piston disc brakes. Shafer's Classic Reproductions offers a machined caliper bracket designed to eliminate the binding caused with other kits, bolting right onto your stock spindles. The conversion kit also includes a new master cylinder, 11" vented rotors, loaded mid-size GM calipers, and an adjustable proportioning valve for fine tuning your brakes. Brake lines are available in stainless steel for an improved appearance and durability. The 9" booster, in power conversion kits, is designed to meet the braking requirements of heavier cars. Shafer's Classic Reproductions offers only the highest quality parts for your restoration needs. **Caution:** You must use either 15" rims or 14" off-set rims to clear the brake caliper with this conversion. **Caution:** Converting your vehicle to disc brakes requires you to have the front end of the car realigned after the conversion.

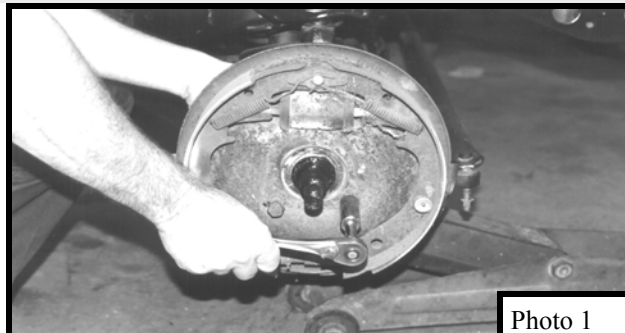
Installation Tools Required:

- Hydraulic Floor Jack
- Pliers
- Crescent Wrench
- 5/8" Socket
- 7/16" Socket
- 15/16" Deep-Well Socket
- 11/16" Wrench
- 5/8" Wrench
- 3/4" Wrench
- 1/2" Wrench
- 7/16" Wrench
- 7/16" Socket
- 9/16" Wrench
- 3/8" Wrench
- Flat Head Screw-driver
- Brake Cleaner
- Soft Mallet
- Chisel
- Bearing Grease
- Disc Brake Fluid (Page 6)
- Torque Wrench - ft/lbs
- Torque Wrench - in/lbs.

Disc Brake Bracket Attachment

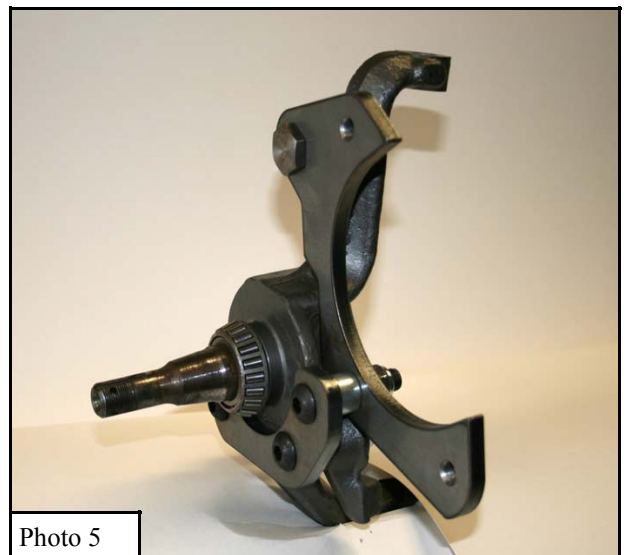
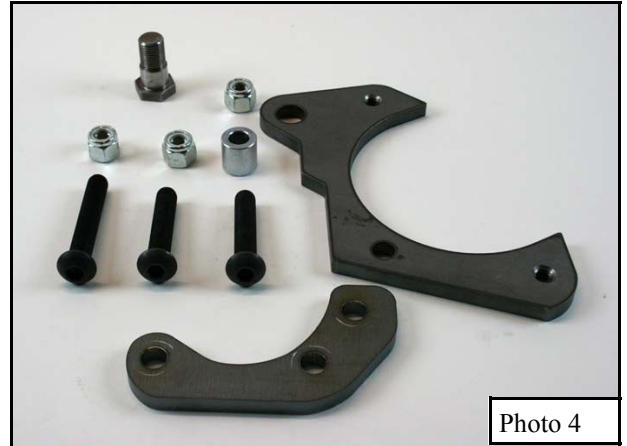
The following instructions are designed to direct you in the installation of the disc brake caliper bracket kit. The photos and instructions were written for the passenger side of the car (right front). Differences in installation have been detailed for different model years.

1. Remove front wheel from vehicle.
2. Remove dust cup from the hub. Remove the cotter pin, nut, and flat washer from the spindle. Remove the outer bearing and the drum.
3. Draining system should be performed as follows:
 - a.) Remove M/C cover. Use a syringe to remove as much fluid as possible from the reservoir.
 - b.) Attach hoses to the front bleeder screws, and place the other end in a container. Open bleeder screw.
 - c.) When fluid stops draining, remove rubber hoses from the steel wheel lines and from the backing plate.**NOTE:** Brake fluid can damage paint. Be careful when draining system.
4. Remove backing plate from spindle. Remove the bottom bolts that hold the backing plate to the steering arm using a 5/8" socket on the bolt and an 11/16" wrench on the nut (**Photo 1**).
5. Remove brake shoes from backing plate.
6. Use chisel to bend and remove french lock washer on wheel cylinder bolt (**Photo 2**).
7. Remove wheel cylinder bolt using 15/16" deep-well socket. After removing wheel cylinder bolt, remove backing plate from spindle (**Photo 3**). Clean spindle in area where new parts will be attached.



Disc Brake Bracket Attachment (cont.)

8. Select small caliper bracket from kit (**Photo 4**). Bolt to outside of spindle using the two 3" long pan head bolts. These bolts go through the two lower bolts in the spindle with the third hole in the bracket towards the rear of car (**Photo 5**). Make sure pan head is on the outside.
9. Select larger caliper bracket from kit (**Photo 4**). The long leg points to the back of the car. Attach bracket to the spindle where the wheel cylinder was mounted using supplied 15/16" x 1" shoulder bolt and french lock washer. Do not tighten at this time.
10. Using 2-1/2" long pan head bolt and 3/4" spacer attach lower part of big bracket to small bracket (**Photo 5**). Spacer goes between brackets.
11. Install lock washer and nuts to back side of bolts. Using 3/4" wrench on the nuts and allen wrench on the bolts.
12. Tighten bolt at the top of the bracket using a 15/16" socket. Tighten to 65 ft./lbs.
13. Hammer french lock washer forward over the front of the caliper bracket and down over the top of the bolt.
14. **This completes the attachment of the disc brake bracket. Repeat steps 1-9 for the drivers side of the vehicle.**



Disc Brake Wheel Area

The following instructions are designed to direct you in the installation of the wheel area of the disc brake conversion. The photos and instructions were written for the passenger side of the car. (right side) Differences in installation have been detailed for different model years.

1. Remove protective coating from new rotor using brake cleaner (available at most parts stores).
2. Pack bearings with grease. Install inner bearing in rotor. Install grease seal using a soft mallet or flat plate so as not to distort the seal.
3. Put a small amount of grease on seal.
4. Pack outer bearing and install rotor using supplied spindle washer, nut and cotter pin. Tighten spindle nut as follows: Rotate the rotor while torqueing spindle nut to 17-25 ft/lbs. Back off the adjusting nut 1/2 turn and re-tighten to 10-15 in/lbs. Rotor should not be rotated during this operation. Lock adjusting nut and retainer with cotter pin.
5. Install dust cup using enclosed mounting tube. *Be sure to keep this tube as it also functions to install other dust cups as well (**Photo 6**).
6. Install calipers using instruction sheets and hardware provided with the calipers (**Photo 7**).
7. Install brake hose to caliper. Use the gaskets that comes with the caliper. Tighten bolt using a 7/16" socket.
8. Install new steel brake wheel line on junction block using 3/8" tubing wrench (drivers side only) . Attach hose to steel line and then install brake hose clip to secure. Tighten with 3/8" tubing wrench and an 11/16" wrench on hose (**Photo 8**).
9. This completes the installation of the wheel area. Repeat steps 1-8 for the drivers side of the vehicle.

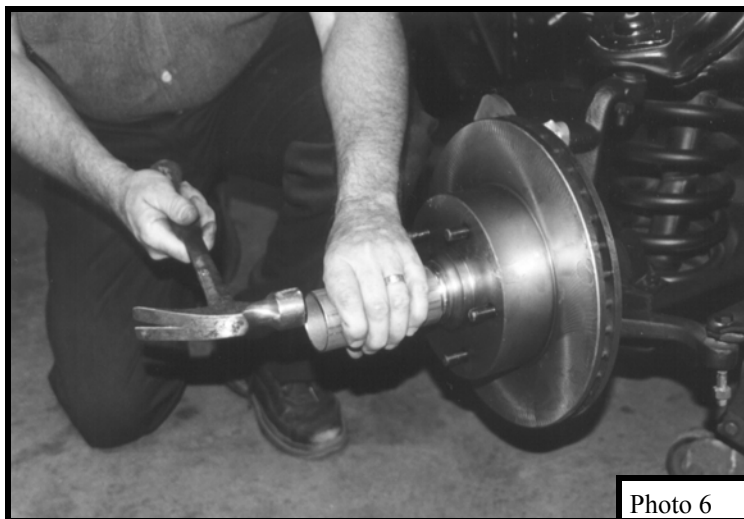


Photo 6

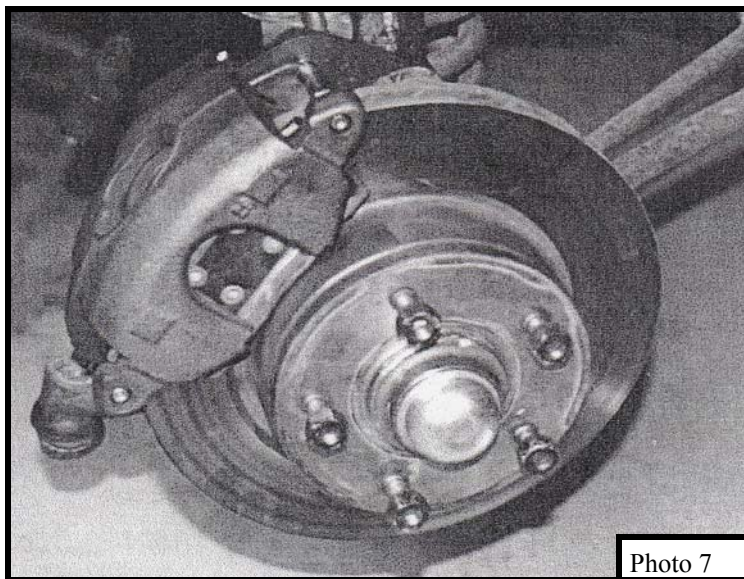
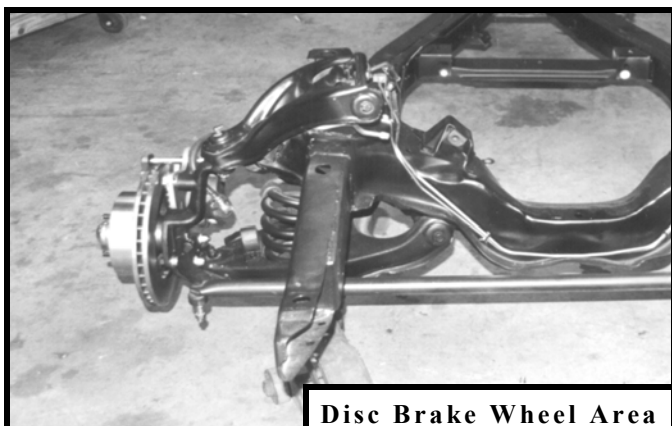


Photo 7



Disc Brake Wheel Area

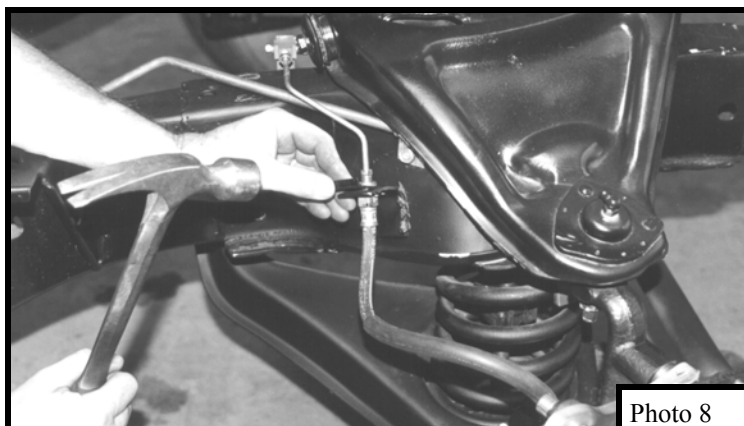


Photo 8

Upper Disc Brake Area

The following instructions are designed to direct you in the installation of the upper area of the disc brake conversion, including the booster, master cylinder, proportioning valve, and brake lines. Differences in installation have been detailed for different model years.

Booster and Master Cylinder

1. (For power disc brake applications) Before installing the booster/master cylinder assembly, screw sleeve 3/8" to 1/2" on to the booster. Lock down sleeve with locking nut. Thread rod into sleeve 3/8" to 1/2" and lock down with second locking nut. Tighten using 1/2" wrench on the sleeve and a 9/16" wrench on the nut **(Photo 9)**. Slide boot over back of booster.
2. Remove old master cylinder from firewall. Remove clevis pin from brake pedal under dash. Remove brake pedal assembly from under dash.
3. Install booster/master cylinder assembly to the firewall using original nuts and washers. Do not tighten nuts at this time **(Photo 10)**.
4. (For power disc brake applications) Connect the 3/8" hose from the intake manifold or carburetor to the check valve of the booster using the provided hose clamps.
5. Under the dash, connect the yoke and clevis pin to the brake pedal assembly using cotter pin. Pull the brake pedal all the way up and adjust the yoke so that the clevis pin will slip easily in the hole. Tighten sleeve and lock nuts at this time using a 1/2" wrench on the sleeve and a 9/16" wrench on the nuts. **NOTE:** In some power disc brake conversions you may have to remove the brake pedal and drill a 3/8" hole 1" lower than the original hole. The above steps may require assistance.

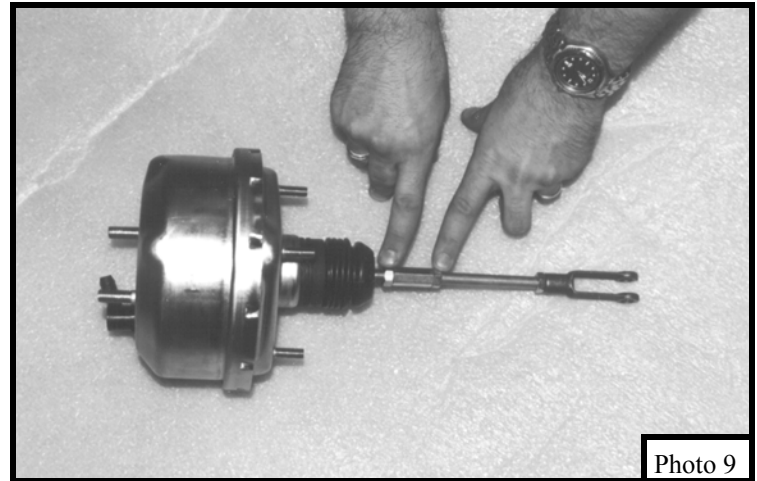


Photo 9

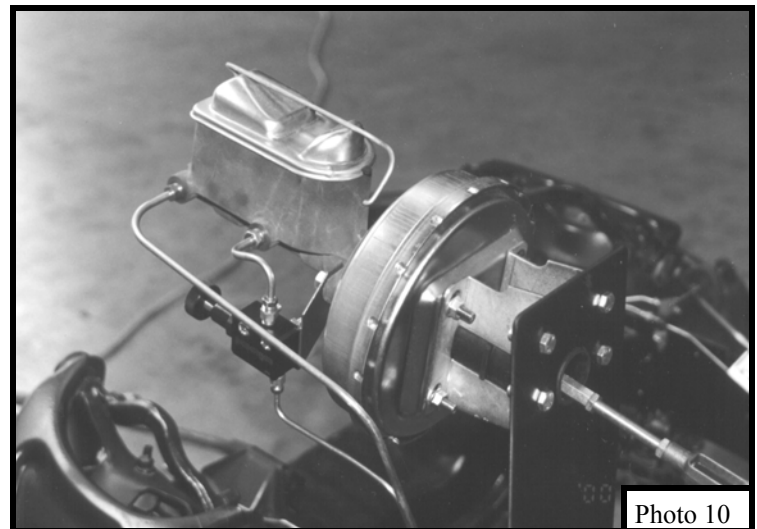


Photo 10

Brake Line Installation

Layout pattern of line will vary by year. Instructions are specific to each application, however pictures are for general installation use only.

6. Attach 1/4" brake line to the front hole in master cylinder. Line goes from M/C to original location in the top of the junction block on the frame. Tighten top nut with 1/2" wrench **(Photo 10)**, tighten lower nut with 7/16" wrench. Remove rear brake line from back of junction block and install supplied plug in rear of junction block using 7/16" wrench.
7. Install the original replacement front brake line. Line runs from front of drivers side junction block to hose on passenger side. Tighten with 3/8" wrench.

8. Install 1/4" line in bottom ("out") of proportioning valve **(Photo 10)**. Do not tighten at this time. This line attaches to the rear brake line with the supplied couplings. For 1965 applications: select 2 piece coupling that reduces from 1/4" to 3/16". For 1966-68 applications: select 1 piece coupling. Tighten nuts using 7/16" wrench on the nuts and a crescent wrench on the coupling. Tighten fitting at the proportioning valve with 3/8" wrench.

9. **This completes the installation of the upper portion of your disc brake conversion. Be sure to check for leaks after filling system with brake fluid.**



Disc Brake System Filling and Bleeding

The following instructions are designed to direct you in the filling and bleeding of your disc brake system.

NOTE: BRAKE FLUID CAN RUIN PAINT. BE CAREFUL WHEN FILLING AND BLEEDING SYSTEM.

1. It is advisable to replace the brake fluid if the color is muddy or brown. This condition is due to water that has been absorbed by the fluid which eventually will corrode the brake lines and master cylinder, as well as create the potential for a vapor lock under extreme braking conditions. Flush system with clean brake fluid and replace with a good grade of disc brake fluid (DOT 3 or 4 Glycol base) or with Silicon Brake Fluid (DOT 5), available at any parts store. Silicon Brake Fluid does not damage paint, does not absorb water, and maintains its viscosity over a large temperature range.
2. Bleeding of the hydraulic system may be accomplished by any one of the four methods: pressure, pedal, gravity, or vacuum.
3. When pressure bleeding is employed the correct pressure setting is 10-15 psi. (max), for the bleeder tank.
4. If power brakes are fitted, the engine should not be running and the vacuum reserve should be reduced to zero.
5. The rear of the car must always be higher than the front of the car so that any air trapped in the front of the master cylinder can exit by way of the compensating ports (depress pedal half way, once or twice and watch for two bubbles in the reservoir.)
6. Tapping the caliper with a rawhide mallet as fluid is flowing out may assist in obtaining a better bleed job.
Note: The master cylinder may be individually bench bled before being installed. When bench bleeding, always hold master cylinder by the ears, not by the body. Bleeding is best accomplished by filling the reservoir and lettering the master cylinder bleed itself.
7. Brake bleeding can be simplified and assure that there is no line restriction by using the gravity bleed approach as follows:
 - a) Leave bleeder screws open when installing calipers and open bleeder screws on rear wheel cylinders.
 - b) Fill master cylinder reservoir, do not pressurize master cylinder or pump brake pedal; instead observe bleeder ports until brake fluid flows out; then shut off valves.
 - c) No further procedure is required if brake pedal is hard after shutting off all bleeder valves. Make sure that master cylinder is "topped-off."
8. With bleeders closed and system bled, a hard pedal should be experienced so that at full application the toe of your left foot can still be placed between the bottom of the pedal and the floor.
9. In addition there should be brake pedal end-play of 1/16" to 1/4", (from full release until initial braking action takes place.)
10. Power brake cars will experience a "drop off" of the pedal when the engine is started. This is a normal condition, and signifies that the booster is working correctly.
11. Pedal height can be adjusted by lengthening or shortening the pushrod between the pedal and the master cylinder.

NOTE: Do not pump the pedal fast when bleeding systems utilizing silicon brake fluid

NOTE: Be sure to check for leaks after filling system with brake fluid.

NOTE: Do not drive on public highways until brakes stop the car without a spongy brake pedal feel; initial braking tests should be done in a safe open area.

NOTE: You must use either 15" rims or 14" off-set rims to clear the brake caliper with this conversion.

NOTE: Converting your vehicle to disc brakes requires you to have the front end of the car re-aligned after the conversion.

Quality parts insure a quality restoration.
Shafer's Classic Reproductions
For exact reproduction parts every time.