



1955-58 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 accommodate tall valve covers, as well as meeting 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. Later model Chevy 14" or 15" rally wheels may be used.

Caution: Anytime you do front end work it is recommended you realign the front suspension.

Installation Tools Required:

- Hydraulic Floor Jack
- Jack Stands
- Pliers
- Crescent Wrench
- 5/8 Socket
- 7/16 Socket
- 15/16 Deep-Well Socket
- 11/16 Wrench
- 5/8 Wrench
- 9/16 Wrench
- 1/2 Wrench
- 7/16 Wrench
- 3/8 Tubing Wrench
- Flat Head Screwdriver
- Brake Cleaner
- Soft Mallet
- Hammer
- Chisel Flat
- Bearing Grease
- Disc Brake Fluid (Page 6)
- Torque Wrench - ft/lbs
- Torque Wrench - in/lbs.
- 3/8 Hex Wrench
- (Wrench sizes may vary)

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 driver side of the car (left front). Differences in installation have been detailed for different model years. Wrench hex sizes noted may vary.

NOTE: Brake fluid can damage paint. Be careful when filling and bleeding system.

1. Remove front wheel from vehicle.
2. Drain the system.
 - a.) Remove M/C cover. Use a syringe or other means to remove as much fluid as possible from the reservoir.
 - b.) Attach one end of a hose to the front wheel cylinder bleeder screws and place the other end in a container. Open bleeder screw until fluid stops draining.
 - c.) Remove rubber hoses from the steel wheel lines and from the back of the wheel cylinder.
3. Remove dust cup from the hub. Remove the cotter pin, nut, and flat washer from the spindle. Remove the outer bearing and the drum (**Photo 1**).
4. Remove the springs retaining the butterfly shaped guide plate.
5. Remove the cups, springs and pins retaining the brake shoes.
6. Remove the two bottom bolts that hold the backing plate and the steering arm.
7. Use a chisel to bend the French lock washer away from the hex to remove wheel cylinder bolt (**Photo 2**).
8. Remove wheel cylinder bolt using 15/16" deep-well socket.
9. Remove backing plate from spindle.
10. Remove inner wheel bearing.
11. Clean spindle in area where new parts will be attached.



Photo 1



Photo 2



Photo 3

Disc Brake Bracket Attachment (cont.)

Assembly:

1. Install the small bracket on outside of spindle in the holes that held the backing plate and steering arm. Use the 2-1/2" bolt in the front hole and the 3" bolt in the rear hole. Connect the steering arm on the back of the bolts with the locknuts supplied (**Photo 4**). (A 1958 steering arm will be reversed because the steering arm is forward facing so, the length of attaching bolts will also be reversed). Torque these bolts to a minimum of **58 FT/lbs.** Using a 5/8" socket and wrench.

2. Attach the larger bracket with the new wheel cylinder bolt and French washer to the spindle. (The "C" of the bracket should face towards the back and the notch should be facing inside) (**Photo 5**). Fit the 25/32" long, 3/4" diameter spacer supplied between the two brackets with a 2-1/2" bolt and locknut (**Photo 6**). Torque bolt using 5/8 socket and 5/8 wrench to a minimum of **58 FT/lbs.** Tighten upper wheel cylinder bolt using 15/16" socket to **65 FT/lbs.**

3. Hammer French lock washer over front of caliper bracket and side of nut using chisel and hammer (**photo 7**).

This completes the attachment of the disc brake brackets. Repeat steps above for the other side of the vehicle.

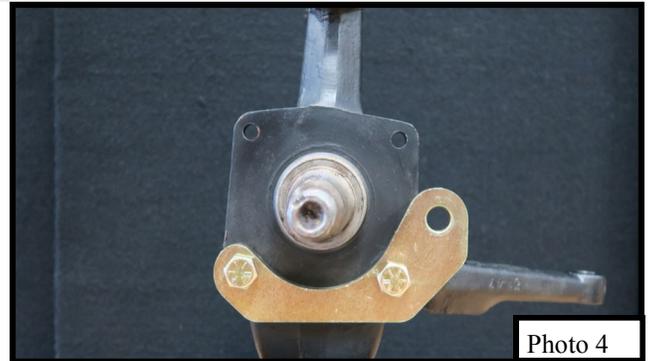


Photo 4

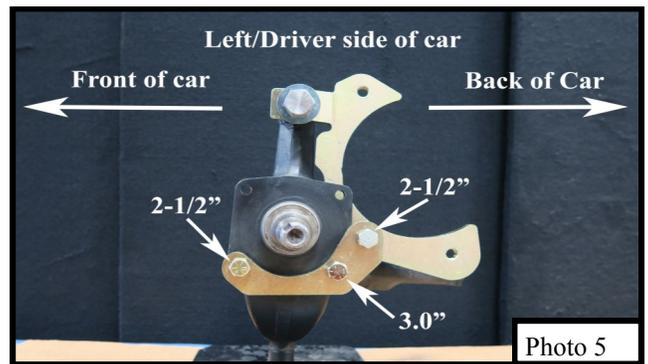


Photo 5

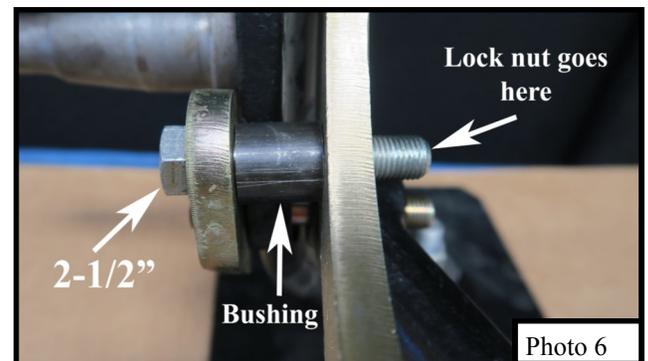


Photo 6

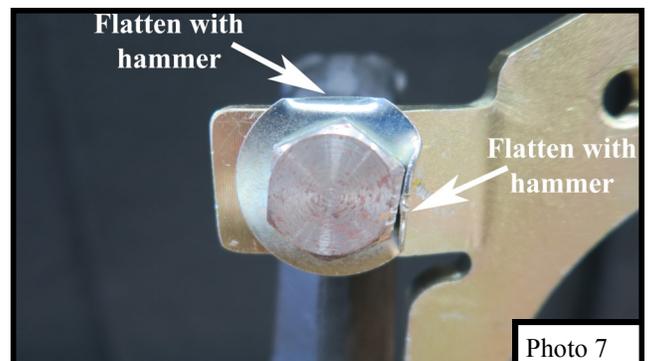


Photo 7

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 drivers side (left side) of the car.

1. Remove protective coating from new rotors using brake cleaner (available at most auto parts stores).
2. Pack inner and outer bearings with grease (research how to properly pack bearings before installation).
3. Install larger (greased) inner bearing in back of rotor.
4. Install grease seal into back of rotor using a soft mallet or flat plate so as not to distort the seal. (Make sure it is seating properly before you hammer it all the way down).
5. Put a small amount of grease on seal inner rubber edge.
6. Install rotor and smaller (greased) outer bearing. Use supplied spindle washer and nut (**must use new supplied nut as it is a different thickness than the original**).
7. Turn the rotor while torqueing spindle nut to 17-25 (FT/lbs). Back off the nut 1/2 turn and re-tighten to 10-15 (IN/lbs) (or 1 FT/lbs). (Rotor should not be turned during this IN/lbs torqueing part of the operation).
8. Line up pin hole in spindle with crown nut. Lock it in place with cotter pin. Fold over the ends of the pin.
9. Install dust cup using enclosed mounting tube. To prevent dents in the dust cup, use the supplied mounting tube. Do not just use a hammer to install the dust cup!! *Be sure to keep this mounting tube as it also functions to install other dust cups as well (Photo 8).



Photo 8

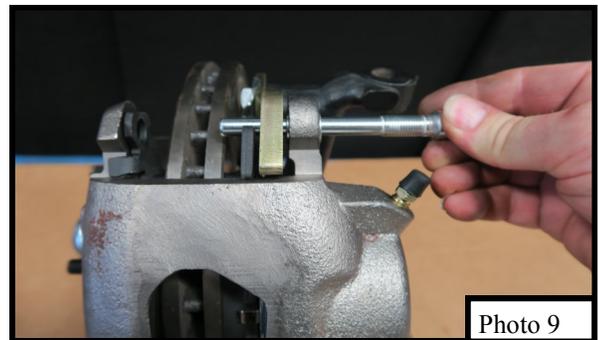


Photo 9

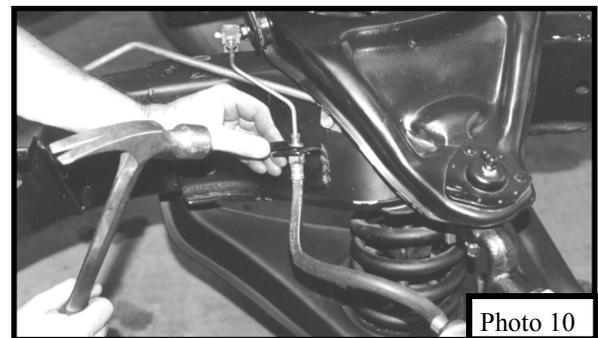


Photo 10

10. Slightly grease the ends of the socket head caliper pin bolts or the rubber bushing on the caliper.
11. Place calipers with pads over the rotor onto newly installed "C" shaped plate (Photo 9). **Make sure the bleeder screw is in facing up!**
12. Insert the 2 caliper pin bolts and tighten with a 3/8" hex key.
13. Install brake hose to caliper. **Use the new copper washers supplied.** Tighten using a 7/16" open end wrench.
14. Attach new steel brake wheel line on junction block on the frame using 3/8" tubing wrench. Attach hose to steel line through bracket on frame. Hammer on brake hose clip to frame to secure (Photo 10) Tighten together with 3/8" tubing wrench and an 11/16" wrench on hose.

This completes the installation for the wheel area. Repeat wheel area steps 1-8 for the other side of the vehicle.

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 ONLY!) Before installing the booster/master cylinder assembly onto vehicle, screw union 3/8" to 1/2" onto the boosters threaded rod. Lock down sleeve with locking nut. Screw rod into union 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 11)**. Slide rubber boot over back of booster

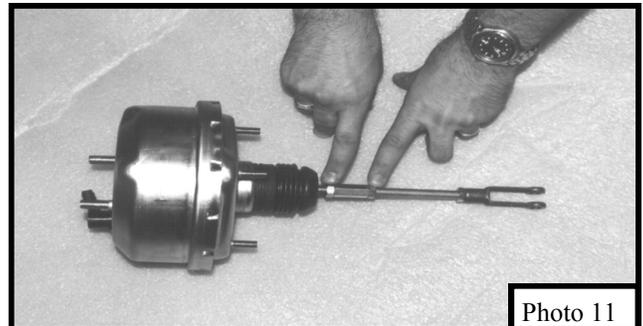


Photo 11

2. Install booster with brackets to the firewall using original nuts and washers (install gasket (not supplied) if applicable). **Do not tighten nuts at this time!! (Photo 12)**.

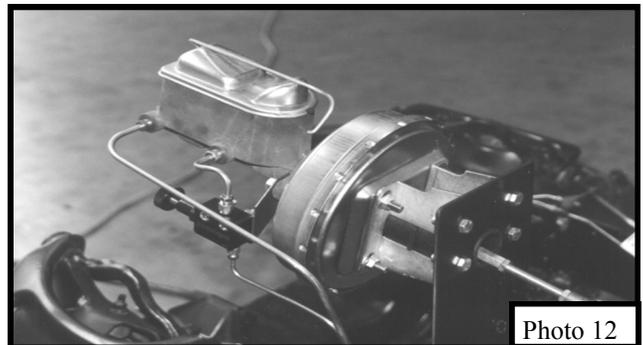


Photo 12

3. Connect the 3/8" hose from the intake manifold or carburetor to the check valve of the booster using the provided hose clamps.

4. **UNDER THE DASH: You must drill a 3/8" hole 1" lower than the original hole on the brake pedal. You may need to remove the brake pedal to do this and you might need assistance.**

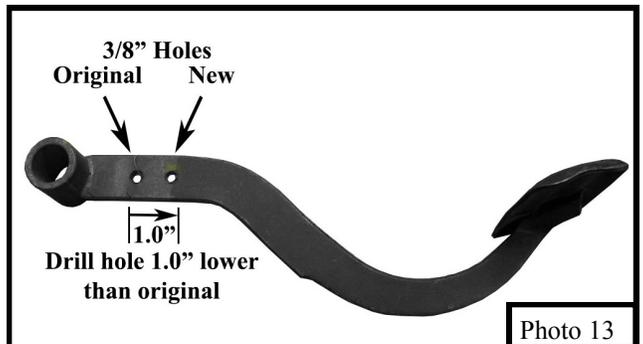


Photo 13

5. Connect the yoke and clevis pin to the brake pedal assembly in the new hole 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 on rod at this time using a 1/2" wrench on the sleeve and a 9/16" wrench on the nuts. **Tighten booster bracket nuts at this time!! (Photo 12)**.



Photo 14

NOTE: Brake Line Installation

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

Upper Disc Brake Area (cont.)

Brake Line Installation

6. Attach 1/4" brake line to the front hole in master cylinder. Line goes from M/C to original location in block on the frame (**Photo 14**). Tighten top nut with 1/2" wrench, tighten lower nut with 7/16" wrench.

7. Install the new original replacement 1/4" crossover front brake line. This line runs from front of drivers side junction block to front of passenger side junction block. Tighten with 1/2" wrench.

8. Install 3/16" line in bottom ("out") of proportioning valve. Do not tighten at this time (**Photo 15**). Line feeds across frame to the right front junction block. (This line does not connect to the block).

9. Remove front to rear brake line from block and attach to the coupling on the front line just installed (**Photo 15**). Tighten nuts using 3/8" wrench on the nuts and a 7/16" wrench on the coupling.

10. Install plug in rear of junction block using 7/16" wrench (**Plug seen in Photo 15 and Photo 17**).

11. Now tighten the line fitting at the proportioning valve with 3/8" wrench.

12. Install line clip for 1955-57 kits on 3/16" line and attach to existing drivers side junction block using existing bolt. Tighten using 1/2" wrench (**Photo 17**).

13. Install rubberized line clip to existing bolt attaching passenger side original junction block. Tighten using 1/2" wrench (**Photo 17**).

NOTE: To prevent interference with steering, the 3/16" brake line **MUST** be held out of the way by attaching the line to the existing front clips (**Photo 18**). The clips are located in different locations on the frames depending on model/year, however the two lines should follow each other in layout.

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.

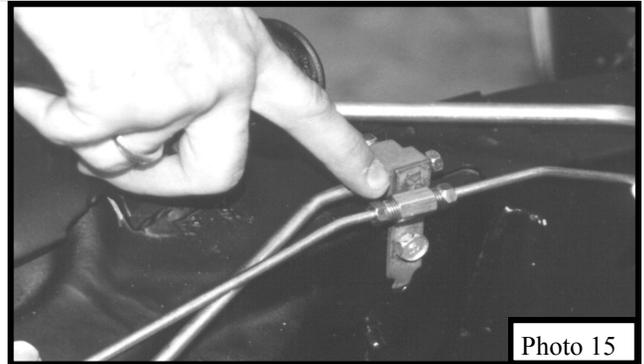


Photo 15

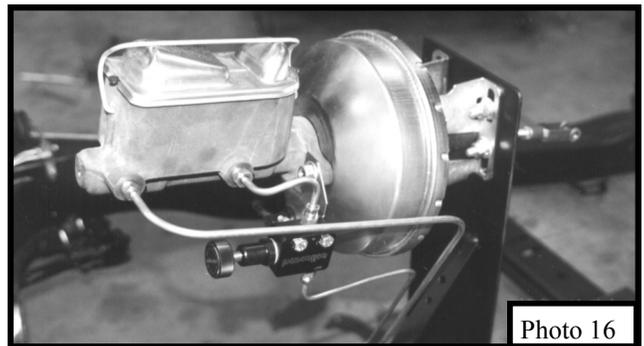


Photo 16

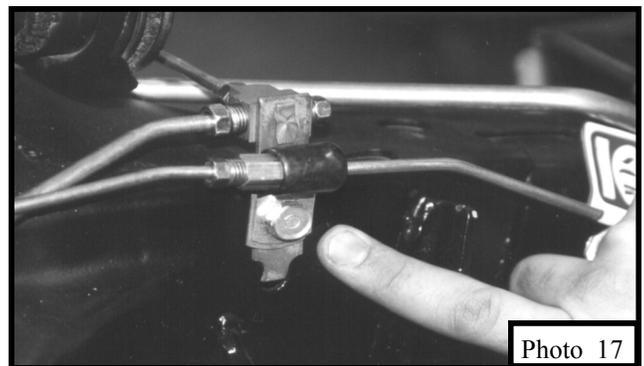


Photo 17



Photo 18



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.) **You shouldn't mix the fluids! If you are changing to a silicon fluid you must completely drain out the glycol based fluid !**
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 lightly 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 letting 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."



Disc Brake System Filling and Bleeding (cont.)

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. If this doesn't happen, check that you have sufficient vacuum for the booster and that there are no vacuum leaks.
11. Pedal height can be adjusted by lengthening or shortening the pushrod between the pedal and the master cylinder.

NOTE: When adjusting the manually adjusted proportioning valve (if included), turn valve all the way to one end. Then turn the valve all the way to the other end. Count the revolutions from one end to the other. Turn the valve back half of those counted revolutions to the middle of the adjustment. This is a great point to start for adjusting the amount of pressure needed to equalize the front and rear brakes.

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.