

# 65-68 Full Size Chevy

Installation Instructions

Manual Disc Conversion



9" slimline booster pictured

Your new disc brake conversion kit can be bolted up with standard hand tools. The only tools you may not find in your toolbox are listed below.

1. Drum brake tool (optional)

Attention: <u>Before</u> modifying, painting, or powder coating any part of this kit, please trial fit all components and check rim clearance. We recommend you run 15" or larger wheels with this kit. We do not support the use of 14" wheels on this kit.

Modified, Painted, and Powder Coated parts are not returnable!

### Lower Assembly

### **1. Prepare the car**

Begin by securely supporting the car on jack stands. Chock the rear wheels and set the parking brake to be sure vehicle does not roll. Always work on a flat, even surface. Remove the wheels to gain access to the brake system.

### 2. Disconnect front flex hoses

Unscrew the hard line from the flex hose, being careful not to get brake fluid on painted surfaces. Remove the flex hose retaining clip and pull the hose out of the frame mounted bracket.

### 3. Remove drum brake assemblies

Remove the original drum brake hardware from the spindle.

### 4. Inspect suspension components

Now is the time to clean up and inspect your suspension components. Check the inner and outer tie rod ends and ball joints for wear and replace if needed. Inspect the rubber boots for cracks or tears. Universal replacements are available at most automotive parts stores.

### 5. Install the caliper brackets

Install the caliper bracket onto the spindle and hold it in place with the special 5/8" bolt at the top. Do not torque this bolt down at this time.

**Note**: The opening for the caliper normally face towards the rear of the car. Left is driver's side, right is passenger's side.

Install the support bracket onto the back of the steering arm and spindle. The threaded hole of the support bracket matches up with the forward steering arm hole and the "U" shape between the two bolt holes should be upside down as pictured below. Place the  $\frac{1}{2}$ "

spacer between the support bracket and the steering arm on the forward hole and bolt the components together using the 3" bolts included in the kit. The bolt head should be on the rotor side of the spindle, not on the support bracket side. If you would like you can use lock-tite on the threads of this bolt since there is no lock washer. Next, use the remaining 3" bolt for the rear steering arm hole. When attaching this bolt use the lock washer and nut provided in the kit to secure the bolt into place. Torque both bolts using GM's recommended torque for the steering arm bolts.



Driver's Side, Front View

Driver's Side, Side View



Passenger's Side, Rear View



Passenger's Side, Rear View, Off Of Car

Join the two brackets together using the  $\frac{3}{4}$ " spacers and the 2  $\frac{1}{2}$ " bolts provided in the kit. Tilt the main bracket up until the two holes in the lower corner match up with the two remaining holes in the support bracket. Insert the spacer between the two brackets and bolt them together using the aforementioned hardware. Torque the  $\frac{5}{8}$ " main spindle bolt using GM's factory torque specs for that bolt and then torque the two bolts that join the main bracket to the support bracket to roughly 50-60 lbs. With your hand move the spindle back and forth simulating the wheel turning. If necessary trim the excess threads off of the back of the forward steering arm bolt (the bolt without lock washer and nut) for control arm clearance.

### 6. Grease the bearings and install the rotors

You are now ready to install the bearings and rotor. Start by placing the rotor face down. Races come preinstalled in the rotors. If you received additional races with your bearings, they will not be used. Apply a little bearing grease to the bearing race already in the rotor and pack the larger of the two bearings (Inner) with grease. Install the bearing into the rotor and place the grease seal on the rotor. Tap the seal into place being careful not to damage the rubber portion of the seal.



Inner Bearing Assembly

Outer Bearing Assembly

**Note**: Drilled and/or slotted rotors are directional. Be sure you have the appropriate rotor for the side of the car you are working on. Left is driver's side, right is passenger's side.

Turn the rotor face up and grease the bearing race. Pack the smaller bearing (Outer) and place it in the rotor. Slide the rotor onto the spindle being careful that the outer bearing does not fall out of place. Install the keyed washer and castle nut and torque to the specifications provided in the assembly manual. Fix it in place with the new cotter pin supplied with your kit. Install the dust cap with a mallet and a large socket placed over the dust cap. A screwdriver can also be used along the edges.

### 7. Mount the calipers and flex hose

Your new calipers come fully loaded with pads, bolts, and copper washers. Start by removing the caliper pins and position the caliper in the bracket with the bleeder screw at the 12 o'clock position. If the caliper won't install in the brackets with the bleeder pointed up, you probably have the opposite side caliper. Insert the caliper pins and torque to the specifications provided in the assembly manual. Due to variations in brake pads, you may need to modify the wear sensor to clear the caliper bracket.

**Note**: The bleeder screws must be pointed up. If the bleeders are pointed down, the calipers will trap air and you will not get the system to bleed properly.

Remove the banjo bolt and copper washers from the caliper. Place a copper washer on top of the **f**ex hose and insert the banjo bolt. Place the second copper washer over the banjo bolt on the bottom of the flex hose and bolt the hose onto the caliper with the specifications provided in the assembly manual.

**Note**: Make sure the flex hose seats square against the caliper. You may need to flip the hose over.

Insert the other end of the flex hose into your original frame brackets. You may need to file the inside of your original brackets to accommodate the new flex hose. Push on the new flex hose clip supplied with your kit. At this point the hose might seem a little tight when you turn the wheels from lock to lock. If the hose is unacceptably tight you may find it necessary to grind the lip that surrounds the hose on the caliper. Grind down the lip surrounding the banjo bolt hole so that you can rotate the hose to an angle that will allow it a more acceptable amount of slack. Make certain when grinding to not nick the rings surrounding the banjo bolt hole with the grinder, these rings are crucial to fluid not leaking from the caliper.



### **Upper Assembly**

#### 1. Remove the old master cylinder assembly

Remove the master cylinder brake lines being careful not to get fluid on any painted surfaces. Remove the clevis from the pedal rod under the dash. If your original system was power, you should be able to remove the booster mounting nuts from the firewall and remove the booster/master assembly. If your original system was not power, simply remove the master cylinder mounting nuts from the firewall and remove the master cylinder.

#### 2. Mount the new master cylinder

- a. Place the master cylinder over the top two studs on the firewall and hold it in place with nut on the passenger's side.
- b. Slide the valve bracket over the driver's side stud and loosely tighten it down with the nut.

**Note**: Leave the mounting nuts a little loose at this point. It makes the lines much easier to install if there is a little play in the bracket.

- c. Bolt the proportioning valve to the outside (driver's side) of the bracket with the hardware supplied in your kit.
- d. Now you're ready to install the master cylinder lines. If you purchased lines with your conversion kit, the two small loop lines are the master cylinder lines.
- e. Tighten the nuts up on the firewall

### 3. Install and adjust the pedal rod

Insert the rod and clevis assembly into the master cylinder. You can reuse your old rod or use the universal unit that came with your kit. You may need to cut the universal rod to suite your application. Adjust the pedal rod so there is about  $\frac{1}{4}$ " of free travel at the top of the pedal. Be sure to tighten all jam nuts on the pedal rod to lock it in place after all your adjustments are made.

### **Bleeding the system**

Working your way forward from the wheel farthest from the master cylinder will help insure a good bleed and a firm pedal. It is important to bleed the system in the following order:

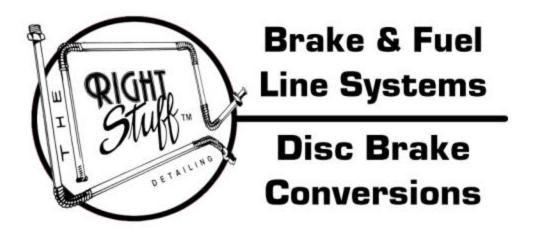
- 1. Right Rear
- 2. Left Rear
- 3. Right Front
- 4. Left Front

If you have a spongy pedal, be sure the bleeder screws are pointed up and try re-bleeding the system.

### **Technical Support**

We want your conversion project to go smoothly. Double check that you have followed these instructions correctly and those included with any upgrade components you may have purchased. If you need additional help getting your new disc brakes to function properly, we're here for you. Give us a call at (800) 405-2000 or you can email your questions including photos to tech@rightstuffdetailing.com

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### **PV71 Fixed Combination Valve Supplement**

This supplement is for customers who have chosen the "fixed" combination valve with the purchase of our disc brake conversion kits. This diagram shows where each port of the valve routes. If you have any further questions or concerns, please don't hesitate to call our toll free technical support line. Thank you again for your business.

