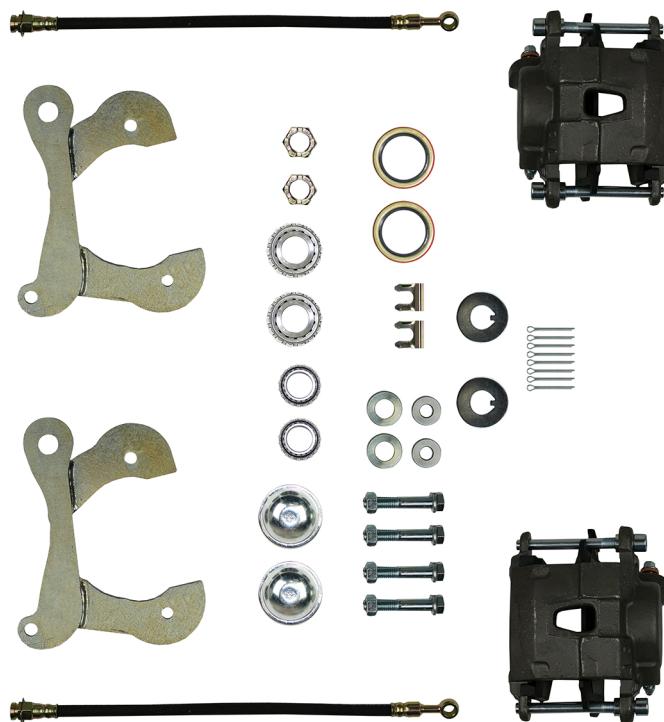




Installation Instructions

55-64 Full Size Chevy
SUM-BK1514 / SUM-BK1514-DS
SUM-BK1515 / SUM-BK1515-DS



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. Ball joint fork or “pickle fork” (For drop spindle kits only)
2. Drum brake tool (optional)

Attention: Before 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!

Disclaimer:

Summit Racing values your safety above all things. For this reason, we recommend all brake systems and components be installed by professionals. The installer of the brake parts is responsible for ensuring fitment and suitability of the parts for the vehicle it is being installed on. Brakes should be tested in a controlled open area with success before driving on the road. If you are unsure or uncomfortable with any part of your kit, please call for further instructions from our tech staff before driving.

Installation Instructions:

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 tie rod ends

Remove the cotter pin and castle nut that secures the tie rod to the steering arm. You will reuse the castle nuts later. Use a heavy hammer to remove the tie rod end from the steering arm. A ball joint fork or “pickle fork” may be needed to break things loose.

3. 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.

4a. Remove drum brake assemblies and steering Arms (Standard Height Kit)

Remove the original drum brake hardware from the spindle. You should also unbolt the steering arms at this time. Since this kit uses your existing drum brake spindles you do not need to remove the spindles from the ball joints. After the original drum brake hardware and the steering arms are removed you are ready to move to step 5.

4b. Remove drum brake assemblies and steering arms (Drop Spindle Kit)

Before removing the spindles first remove the steering arms. It is easier to remove them with the spindles still on the car, after you have removed the arms it is time to remove the spindles. Follow the steps below to remove your spindles. We highly recommend the use of a spring compression tool. Failure to handle the spring properly can result in serious injury to you and damage to the vehicle!

Preferred method:

- a. Remove the shock absorber
- b. Install the spring compressor following the directions supplied with the tool
- c. Compress the spring until all pressure is released from the control arm
- d. Remove the cotter pin and castle nut from the upper ball joint
- e. Keep the castle nut for reuse later
- f. Use a ball joint fork to release the upper ball joint from the spindle
- g. Raise the upper control arm up out of the way
- h. Repeat steps “d” and “f” to release the lower ball joint and remove the spindle assembly

Note: If you have a sway bar you may want to remove the sway bar link to allow for easier access to the ball joints and free movement of the lower control arm.

5. 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. Also inspect sway bar links and bushings.

6a. Install the new disc brake drop spindles (Drop spindle kit only)

Place the spindle on the lower ball joint and attach it with the original castle nut. Torque the nut to the specifications provided in the assembly manual.

Note: Both of your new spindles are identical. There is no left or right.

Pull the upper control arm down and insert the upper ball joint into place. Attach the upper ball joint with the original castle nut. Torque the nut to the specifications provided in the assembly manual (Most are 40-60 ft/lbs.). You are now ready to release the pressure on the coil spring. Slowly release the spring compressor and reinstall the shock absorber. Install the appropriate caliper bracket onto the spindle. Fasten everything in place with the special 5/8" bolt supplied with the kit.

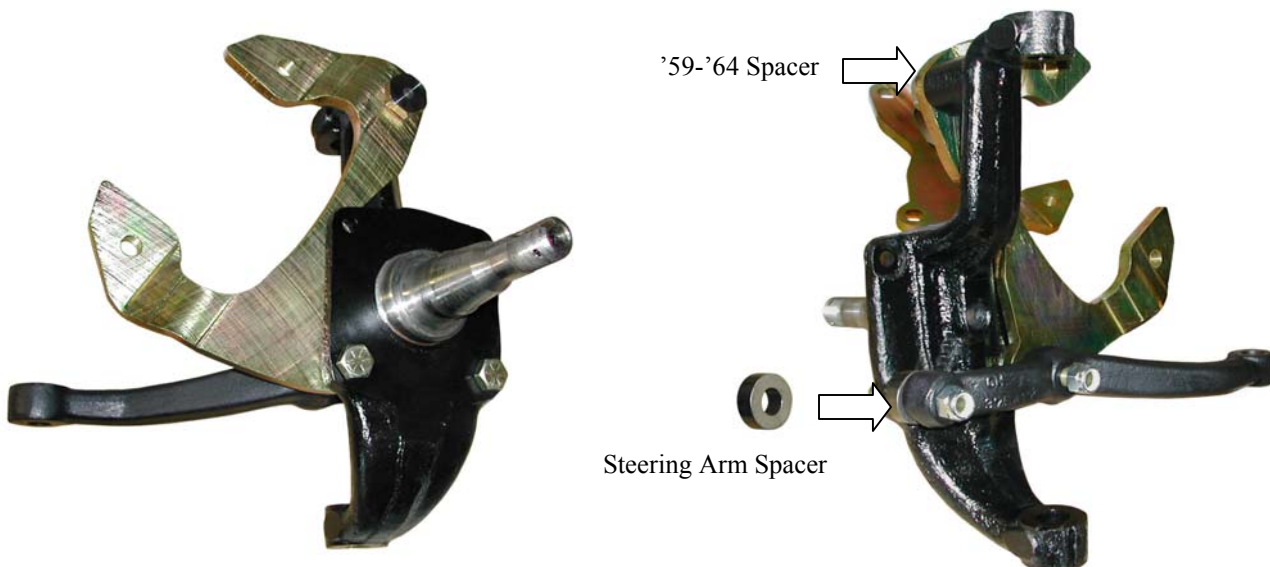
Note: The opening for the caliper should face towards the rear of the car. Left is driver's side, right is passenger's side.

6b. Install the caliper brackets and steering arms (Standard Height Kit)

Install the appropriate caliper bracket onto the spindle and hold it in place with the special 5/8" bolt. '59 - '64 owners need to use the large diameter washer to space the bracket out away from the spindle.

Note: The opening for the caliper should face towards the rear of the car. Left is driver's side, right is passenger's side. The picture shows the caliper bracket on the same side as the steering arm but if you have a front steer car it will be on the opposite side as the steering arm.

Reinstall your old steering arm using the new bolts. Use the small diameter washer to space out the front steering arm bolt. Place the tie rod end back into the steering arm and fasten it with the original castle nut. Torque the nut to the specifications provided in the assembly manual. Fix it in place with the new cotter pin supplied with your kit.



7. Grease the bearings and install the rotors

You are now ready to install the bearings and rotor. Start by placing the rotor face down. Inspect the bearing area of the rotor for casting sand and other debris that may have fallen in that area before installing the bearings. 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. A small block of wood works well to protect the seal.



Inner Bearing Assembly



Outer Bearing Assembly

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 tighten the nut to seat the bearings. Then back the nut off until the rotor spins freely. 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.

8. 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 (Most are around 50 ft/lbs). 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 flex 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 (Most are 40 – 50 ft/lbs).

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. This is normal. The suspension is flexed to the absolute limits of its travel. You would have to be airborne while making a sharp turn to recreate these conditions while driving. If when the car is on the ground 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.

You have now concluded installing the wheel assembly.

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.

Solutions Guide

to commonly asked questions.

Why is my brake pedal soft?

1) In most cases, Air is trapped in the lines or calipers. Try re-bleeding the system. Do not force new fluid into new brake lines. It may foam and be very difficult to bleed. **Make sure that the bleeder screws on the calipers are facing upward!**

2) If all the air is out of the system, the pushrod from the booster may need adjustment, under the dash, to make it longer. Do not extend it too long or it will not allow the fluid to return, causing brakes to drag. Your pushrod may not be adjustable. If the pushrod can be made longer, try ¼ turn adjustments at a time. Summit stocks adjustable pushrods for many vehicles. In addition, the pushrod between the Booster and the Master Cylinder may need adjustment. Not all Booster to Master pushrods are adjustable.

3) You may have a bad Master Cylinder. Before you determine this, you should make sure that all the air is out of the system. When installing a new Master Cylinder, always bench bleed first. If you did not, take off the Master Cylinder and bench bleed it. (See Bench Bleeding Instructions below)

Why does the car pull to one side?

The side that the car is pulling to is the caliper that is working. Re-bleed the opposite side and try carefully stopping again.

Why does it feel like there is no Power Assist?

The Booster may not be getting enough vacuum to operate. On some high lift cams, the engine does not develop enough vacuum. The Booster needs at least 16" of vacuum to operate correctly at idle. If you do not have at least 16 inches of vacuum at idle, you may have to add a vacuum pump to your system.

Check for vacuum leaks. There may be leaks in the intake manifold or hoses that would cause low vacuum. The Booster may be bad. Do a vacuum test. If the Booster can retain a vacuum for three (3) minutes after the vehicle is shut off, it is not a bad Booster (refer to steps 1 & 2). All Master Cylinders must be bench bled in a vise before being installed on the vehicle.

How do you bench bleed a Master Cylinder?

Secure one of the ears in a vise so that you can take a large screwdriver and push the piston in. Fill the reservoir with clean fluid. Take a dummy line or our M/C bleeding kit and hook it up to the two ports. Front line to front and rear line to rear reservoirs. Slowly stroke the master and let it return slowly. You should see many air bubbles in the fluid. Repeat this step until you do not see any more air bubbles. Summit recommends ten (10) slow pumping strokes after you see no more air bubbles. This will insure a good hard pedal. (See Summit master cylinder bleeder kit instruction Sheet)

What is the best pad for my vehicle?

Your choice of pads should be determined by how and where you drive the vehicle. If you drive in heavy stop and go traffic you would need a different pad than someone who is road racing. Contact Summit for the correct application.

How often should brake fluid be changed? (street application only, not racing)

When brake fluid turns brown, it is time to change the fluid. The brown color indicates that the fluid has absorbed water and dirt. D.O.T. #3 & #4 fluids absorb water. Silicone brake fluid is not for track racing.

How can I tell which reservoir is the front or rear of the Master Cylinder?

The front reservoir is usually larger than the rear. In some cases, they are the same size. As a rule, for GM cars & trucks, the rear reservoir is for the rear brakes. On Ford cars & trucks, the front reservoir is for the rear brakes. On front wheel drive vehicles, the brakes are split diagonally. Each bowl of the master cylinder services one front wheel and one rear wheel. This will be important if you are installing a distribution block, proportioning valve, or residual valve. Hint: The larger bowl will feed the disc brakes.

Where is the best place to install a proportioning valve?

The best place to install a proportioning valve is after the distribution block. **Do Not install it between the Distribution Block and the Master Cylinder.** You will not be able to get a hard pedal. Anywhere after the Distribution Block and before the rear flex hose is acceptable for installation.

Why should the flex hoses be replaced? They look O.K. from the outside.

Flex hoses should be replaced every time the calipers are serviced. They flex up and down, just like a shock absorber. They are also under high pressure internally. Flex hoses have a rubber liner that will collapse over time. If it does collapse, it will act as a check valve and not allow fluid to return to the Master Cylinder.

Will my pedal get harder by replacing the flex hoses?

No. When the flex hoses are replaced, re-bleed the brake system. Normally what happens is that bleeding causes a harder brake pedal. A better bleeding job and taking your time will result in the same situation.

Are the rubber flex hoses expanding causing a soft pedal?

Not likely. A soft pedal is usually a sign of air in the system due to poor bleeding. Flex hoses have nylon webbing that is molded into the internal rubber. It is very strong and will hold up to 3,000 P.S.I. Installing braided stainless steel hoses is not necessary; it only improves appearance.

How much brake pressure does it take to stop my vehicle?

Most vehicles, power or non power brake, develop 1,200 P.S.I. When you panic stop or jump on the brakes hard, a surge of 1,400 P.S.I. can be achieved. If a factory proportioning valve installed on the vehicle, the rear brakes are only developing 600 – 700 P.S.I. Drum brakes require lower pressure because they grab more quickly. When rear disc brakes are installed, the rear brake pressure may be increased to 800 – 1,000 P.S.I. or more. A good way to check the pressures and to see if the system is working correctly, use a pressure gauge screwed into the bleeder port. A vehicle with less than 600 P.S.I. will not stop!

How tight should the wheel bearings be?

The front bearings should always be torqued. Not just hand tightened. Bearings usually require 12-15 Ft./Lbs. of torque. Then you will probably need to back off a little to align the cotter pin hole. Do Not over tighten; the bearing life will be shortened. This procedure only applies to rear wheel drive vehicles with separate bearings and races. On vehicles with one piece sealed bearing assemblies or hub assemblies, refer to a service manual.

What type of differential fluid should I use in my rear axle?

If you have positraction, use a Hypoid or Limited Slip additive that is designed for your particular rear end. If you do not have positraction, any type of 80 –90 weight gear lube is acceptable. Fluid should be changed often if you are trailering or any type of extreme usage. This fluid does brake down with time and usage.

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.

Thank You for Your Business!



The information contained in this document is based on information we believe to be true and reliable, however the accuracy or completeness thereof is not guaranteed.