This kit is for axles with a 3 1/8” spread center to center on the top two bolt holes (pictured left).

**Rotor Measurements:**

Rotor Center = 2 3/4" - Rotor Hat Section Inside Diameter = 6 3/16"

You will need to modify your axles if they will not fit inside the rotor hat and you will need to modify the rotor if the center hole is too small for your axles.
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:

1. Prepare the car

Begin by securely supporting the car on jack stands. Chock the front wheels to be sure vehicle does not roll. Always work on a flat, even surface. Remove the wheels to gain access to the factory drum brakes.

2. Remove the old drum brakes

"C" Clip Axles

"C" Clip rear ends require you to open the rear housing cover and remove the "C" clips before removing the axles. After removing the clips, your axles should pull out of the axle tubes.

Note: Most “C” clip eliminator kits can be used with our conversion. Due to the wide variety of eliminator kit manufacturers, we can’t guarantee their compatibility with our kit. Changes in track width can occur.

After the axles are out, you can unbolt the drum brakes and remove them as a complete assembly. There is no need to remove the drum shoes and hardware before removing the backing plate. Dress the front and back of the axle flange with some steel wool or a wire brush to prepare it for the new caliper brackets.

Drop Out Axles

Unbolt the axle flange from the rear housing to free the axle. After unbolting the flange, your axles should pull out of the axle tubes.

After the axles are out, you can unbolt the drum brakes and remove them as a complete assembly. There is no need to remove the drum shoes and hardware before removing the backing plate. Dress the front and back of the axle flange with some steel wool or a wire brush to prepare it for the new caliper brackets.
3. Re-install the axles

"C" Clip Axles

Push the axles back in the tube and install the “C” clips. Replace the housing gasket and re-install the cover. The flange spacer pictured to the bottom right is not required on “C” clip installations. Do not bolt the axle flange in place at this time.

Drop Out Axles

Drop out axles require a flange spacer (pictured right) to take the place of the old drum backing plate. Place the spacer on the flange and slide the axle back in the tube. Do not bolt the axle flange in place at this time.
4. Install the new caliper brackets

The new caliper brackets mount to the back (inboard) side of the axle flange. The recessed machined surface should face the axle flange. The Caliper opening should face the rear of the car.  *

Place the large 1/4” spacer between the bracket and flange as shown below. The other spacers are not required at this time. Bolt the assembly together with the supplied hardware. If you have a problem with the pads hitting the rotors, see step 5 for information on adjusting the caliper spacing.

*Attention Staggered Shock Owners:

Staggered shock rear ends require you to mount the driver’s side caliper towards the front of the car. The passenger’s side caliper still mounts towards the rear of the car. Make sure you have the correct kit for staggered shocks.
5. Install the rotors

Before installing the rotor, dress the center hub with steel wool or a wire brush. Slide the rotor over the studs and tighten it down with two or three lug nuts. Occasionally, the center opening in the rotor is too small to slide over the hub. You'll need to enlarge it slightly with a die grinder, file or have it machined by a machine shop.

6. Install and center the calipers

Position the caliper in the bracket and install the caliper mounting pins. Be sure the mounting ears are on the backside of the caliper brackets. The parking brake assembly should be on top with the bleeder pointing towards the front of the car.* If the pads do not clear the rotor, you’ll need to adjust the caliper position with the included spacers.

If the inside pad hits the rotor, you’ll need to add spacers between the flange and caliper bracket. If the outside pad hits the rotor, you’ll need to use one of the smaller spacers or remove the spacers completely. Spacers can be stacked to achieve the required thickness.

*Attention Staggered Shock Owners:
Staggered shock rear ends will have the emergency brake assembly pointing two different directions. The driver’s side assembly will point towards the rear of the car and the passenger’s side assembly will point towards the front of the car. Make sure you have the correct kit for staggered shocks.
7. Attach the flex hoses
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.

8. Install the emergency brake cables and adjust the calipers
You rear disc conversion comes with new rear emergency brake cables. You’ll use the existing intermediate and front cables on your car. Run the cable up thru the center of the spring and insert the metal bung on the end of the cable securely into the notch on the emergency brake lever. No clip is required to hold the cable to the caliper. Attach the other end to your existing intermediate cable using the included hardware.

After the cables are installed, you need to adjust the system. Engage and release the emergency brake lever several times to activate the self-adjustment mechanism built into the calipers. You’ll know you’ve got it when emergency brake is fully engaged and the rear wheels will no longer turn by hand. If your rear caliper pistons do not ratchet out by use of the e-brake arm on the caliper follow the following procedure to get the piston to extend the brake pads to the rotor surface. Remove the spring and the e-brake arm from the caliper. Turn the threaded bolt extending from the body of the caliper by hand or with the aid of a wrench. Continue to turn the bolt until the brake pads come in contact with the rotor. After the pad comes into contact with the rotor back the bolt out until the first position that you can put the arm back on. After the desired adjustment is achieved reattach the e-brake arm and the spring onto the caliper. Continue with the bleeding procedure.

**Note:** It is important that you regularly use the emergency brake to keep them properly adjusted.

**Attention Staggered Shock Owners:**
Staggered shock rear ends require two different length brake cables. The short cable is used on the passenger’s side. The longer cable comes out of the driver’s side caliper towards the back of the car and loops back around to the front. Make sure you have the correct kit for staggered shocks.
9. Install the flex house mounting tabs

Before installing these tabs you either need to shorten your existing rear axle lines or purchase a pre-shortened rear axle line set. The shortening of the rear axle line is necessary to compensate for the flex hose coming off of the caliper. As a general rule of thumb your lines will be about 6” – 8” shorter than the factory lines. Mount these tabs where your hard lines end. They will need to be tack welded to your rear axle housing. It is ok to tack weld the tabs after your rear end has been assembled. After they have been welded to your axle housing, insert your flex hose into the bracket and secure with the flex hose clip provided. After you have secured your hose into the bracket, screw your axle line into the end of the flex hose and tighten it with a wrench.
10. Bleed the system

If you are concerned with the damaging effects of DOT 3 brake fluid, Summit Racing suggests synthetic DOT 5. Summit Racing is not liable for damage caused by system fluids.

Make sure the emergency brakes have been adjusted properly as discussed in step eight before bleeding the brakes. 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
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 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 positrack, use a Hypoid or Limited Slip additive that is designed for your particular rear end. If you do not have positrack, 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. Please feel free to give us a call at 330-630-0240

Thank You for Your Business!