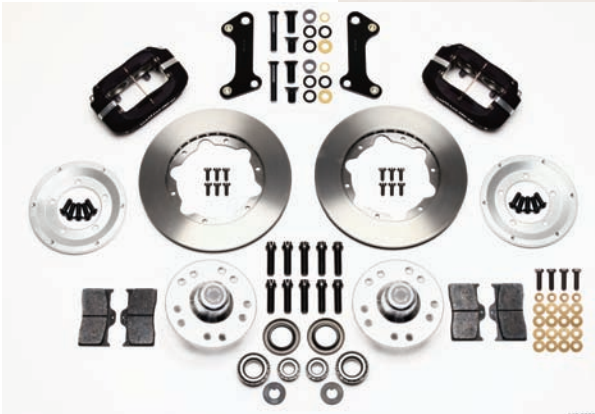


## EARLY CAMARO BRAKES

Wilwood Engineering brake kits for the '67-'69 Camaro



The front disc brake kit comes with the rotors, calipers with pads, caliper brackets, and all of the hardware required to complete the installation. A full set of instructions is also included to show you how the installation is done.

People in the know say you can't keep a secret in Detroit, but Ford proved them wrong when the Mustang debuted in 1964. The management at Ford was looking for a sporty car they could sell to the youth market, so they borrowed some mechanical parts from the Falcon and designed a body that was irresistible. Just before it was released Ford leaked some information about the Mustang to the car magazines, as well as automotive editors working for the newspapers to get public reaction. When the car was released, people flocked to the dealerships and the Mustang set a record for first day sales.

The management at General Motors was taken by surprise and responded by ordering a Chevy alternative that debute almost three years later. Unfortunately nothing was on the drawing board, so the engineers and stylists team had to create a nice looking car to compete with the Mustang. The engineers and stylists didn't want to copy the Mustang, they wanted a completely new



The rear disc brake kit comes with the rotors, caliper brackets that include the parking brake mechanism, the calipers with pads, and all of the hardware required to complete the installation. A full set of instructions is also included to show you how the installation is done.

car that was superior to it in every way. They wanted it to look better, handle better, and have a wide selection of engine options available, so the buyer could use the options selection to order a car that was perfect for their needs. Finally in October 1966 the new Camaro was released as a 1967 model car and it was the first Chevy equipped with the new 300hp 350ci engine as part of the Super Sport option. Camaros came with a wide range of other engine selections from the base six-cylinder on up to the powerful 396ci engine. The 1967 Camaro was a beautiful car that surpassed the Mustang in every way and it turned out to be a sales leader for many years to come

When you ask muscle car and street machine enthusiasts what is their favorite car, the early Camaro generally takes the top spot to own and restore. Wilwood Engineering was well aware of their popularity, so the company released brake kits to upgrade the Camaro's stopping ability. The

base Camaro was offered with four-wheel drum brakes with front disc brakes as an option. The 1967 Camaro we are going to upgrade is a base model that uses front and rear drum brakes. The front brake system that was selected to upgrade this Camaro was a Wilwood part number 140-2285-B kit that features Forged Dynalite calipers running BP-10 smart pads. The rear brake kit is a Wilwood part number 140-7141 and it features Forged Dynalite calipers with BP-10 smart pads. The master cylinder was an original Chevy unit from 1967 and wasn't looking good, plus it wouldn't work with disc brakes, so a Wilwood part number 260-9439-P will replace it. The Camaro also needs new front brake lines so we ordered Wilwood part number 220-7056 Flex lines. Since this an entirely new brake system a proportioning valve, Wilwood part number 260-8419 will also be installed. The kits and parts that we are going to show you are popular upgrades that are available from your local Wilwood dealer.

Wilwood Engineering states that disc brakes should only be installed by someone experienced and competent in the installation and maintenance of disc brakes. If you are mechanically inclined, work on your own car, and have done your share of brake work over the years,



Using a breaker bar and the correct size socket, the wheels were removed from the car. If you want to speed things up you can use an impact gun.



This '67 Camaro came from the factory with standard four-wheel drum brakes. Disc brakes were optional in 1967 and they were primitive. We are updating this Camaro with a Wilwood part number 140-2285-B disc brake kit that can be installed on disc or drum brake spindles.

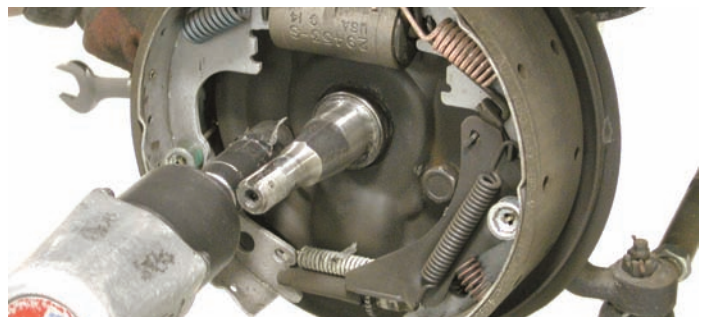
the kits we are showing are relatively simple to install. In order to perform this installation you or your mechanic will need a floor jack and jack stands, a good assortment of SAE wrenches, an assortment of line wrenches, a socket wrench set with SAE sockets, an impact gun, safety wire pliers, a drip pan, Loctite 271 thread locker, an inch pound torque wrench and a foot-pound torque wrench.

Before you start, make sure the kits that you are using are the correct ones for the make and model of car you are working on. Spread out all of the parts and make sure you have all of the items listed on the instruction sheet parts list. It would also be advisable to verify the hub stud pattern to make sure it is the correct one to fit your wheels. The hub generally has several holes so make sure you use the correct set.

We are going to follow along as this disc brake installation is done on a 1967 Camaro, so if you plan on doing the same installation on your car, this should provide the information you need to decide whether you want to do it yourself or if it would be better to have a professional do it for you.



After the cotter key was removed, the spindle nut and large flat washer were disconnected with a large Crescent wrench and then the nut was loosened by hand. After the nut was disconnected, the hub assembly was removed. The nut and washer were retained for use later.

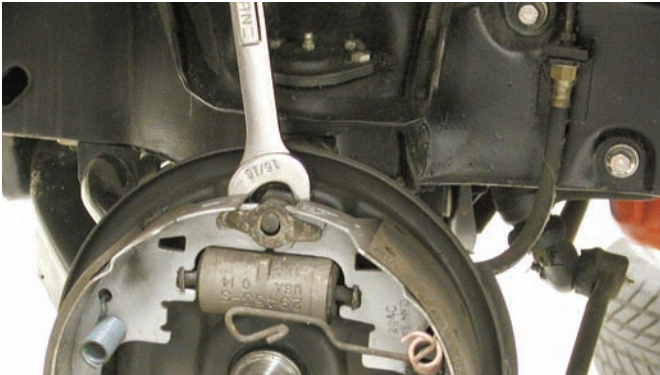


Using an impact gun and an open-end wrench, the backing plate bolts to spindle were removed. The backing plate and brakes will be removed as a unit.





The springs that are connected to the special center bolt were removed. The center spring connection is also a bolt that fastens to the spindle.



Using a large 15/16-inch wrench, the center bolt was removed from the backing plate and spindle.



Before the backing plate could be removed, the brake hose had to be disconnected from the steel line. Here the connection is being disconnected with an open-end wrench and a line wrench.



After the backing plate was removed, the caliper bracket could be installed. The bolts were coated with Loctite 271 before installation.



The caliper bracket was installed using the two spacers in the kit. The large spacer and a washer are used at the top connection and a small spacer and a washer are used at the lower connection.



The upper bolt was tightened to 120 ft-lbs and the lower bolt was tightened to 77 ft-lbs. Because there are tolerance variations among spindles, it may be necessary to install a shim washer between the spacers and the bracket.



Using the correct Chevy 5 on 4 3/4-inch spacing, the lugs were installed into the aluminum hub assembly. The lug studs were tightened to 77 ft-lbs.

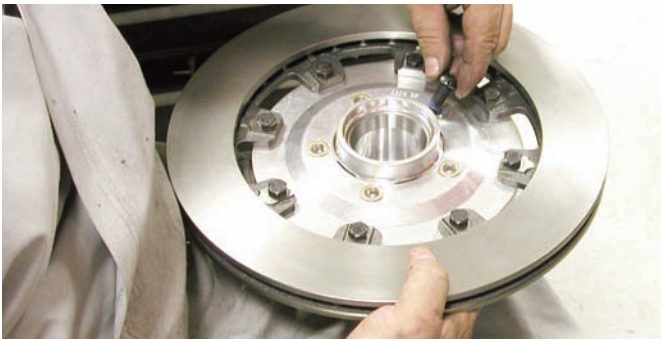




The rotor adapter plate was connected to the rotor using the bolts supplied in the kit. Before the bolts were installed they were coated with Loctite 271.



The rotor adapter plate to rotor bolts were tightened to 180 in-lbs and then they were safety wired in place. A safety wire diagram can be found in the instruction sheet.



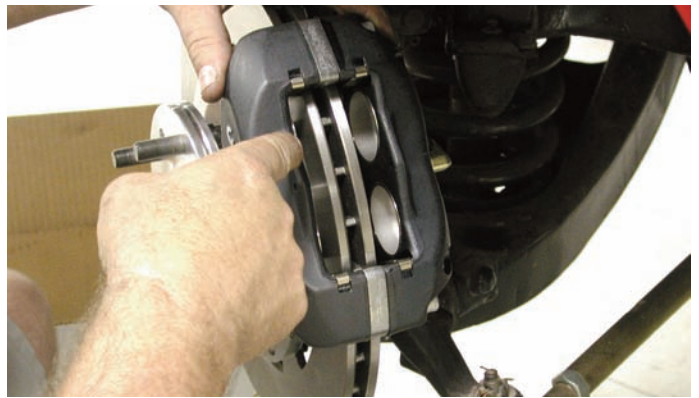
The hub assembly was connected to the rotor adapter plate using the bolts supplied in the kit. Using a torque wrench, the bolts were tightened to 22 ft-lbs and then they were safety wired.



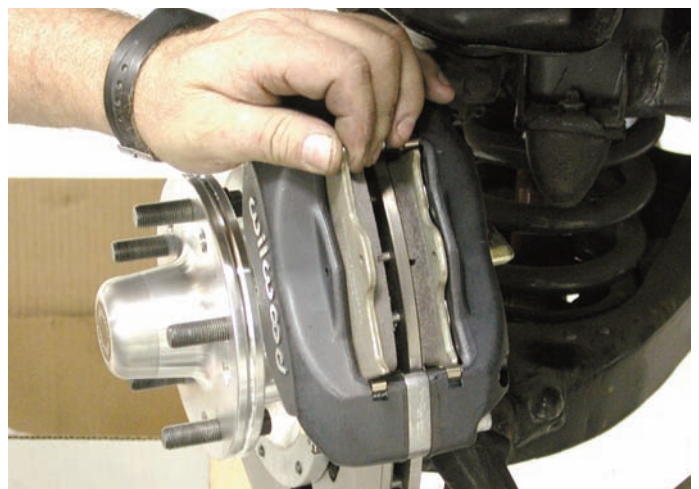
The hubs come complete with the inner and outer spindle bearings, so before they were installed, they were packed with high temperature disc brake bearing grease. The large bearing was placed into the rotor hub and then the grease seal was installed.



The rotor was placed on the spindle, the small bearing was installed into the front of the rotor, the washer was placed back on and then the large nut was screwed onto the spindle end. This is a critical connection so the nut was tightened snug but not over tight because that could cause premature bearing failure. After the nut was snug the castle portion was aligned with the hole in the spindle end and a large cotter key was installed to keep the nut in place.

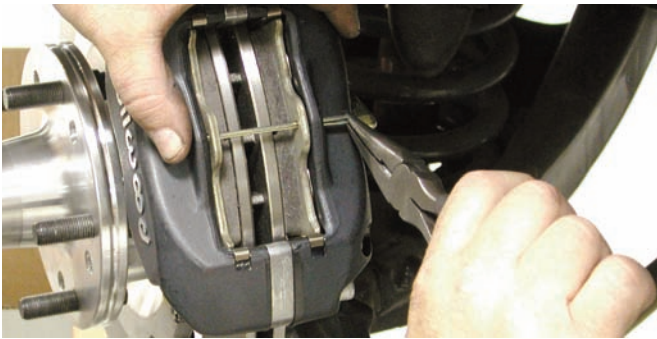


After the rotor was in place, the caliper was connected to the caliper bracket using the bolts, washers and shims in the kit. The caliper was bolted to the bracket and then the caliper to rotor centering was checked. Shims are used to get the centering perfect.



The BP-10 Smart Pads were installed into the rotors from the top. They should fit in without any binding and should seat all the way in. The Smart Pads are perfect for normal driving around town and on the highway.





The brake pads are secured with a long cotter key. The ends were bent enough to hold the key in place but not too much because the key will have to be used again when the pads are replaced in the future.



Using an open-end wrench, the part number 220-7056 Wilwood Flexline was connected to the caliper.



The Wilwood Flexline was connected to the original steel line using an open-end wrench. The Flexline was secured with an open-end wrench and the steel line was tightened with a line wrench after the initial connection was made.



Here is the front brake assembly after the installation was completed. This should be a huge improvement over the original Chevy drum brakes in overall stopping and in bad weather conditions.



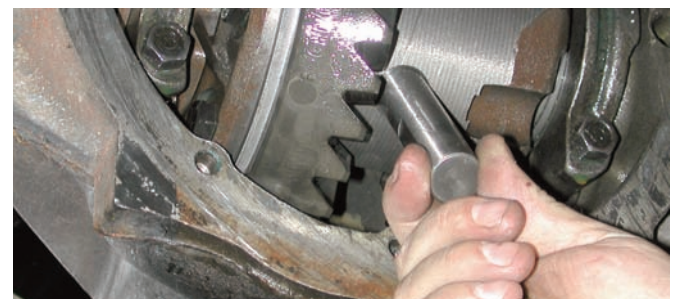
The front wheels were bolted onto the disc brakes and the front of the car was lowered so the rear of the Camaro could be elevated. This Camaro features a strong running small-block Chevy engine so it is equipped with a 12-bolt Chevy differential. Drum brakes are used at the rear so Wilwood rear disc brakes will get this Camaro stopping efficiently.



Using a line wrench, the original steel lines were disconnected from the wheel cylinders on both sides of the car.



The axles have to be removed from the differential so the differential cover was removed to access the C-clips. A drip pan was placed under the axle, the cover bolts were disconnected and then the cover was carefully lifted and removed from the axle. Before this is done, it would be advisable to have another pan gasket and some silicone ready for installation.



The parts that secure the axle to the housing were disconnected so that the axles could be removed. If you have a shop manual for your car, use it as a guide for axle removal.





The axles were carefully removed from the housing making sure you note which side they came out of. Many differentials have a short and a long axle.



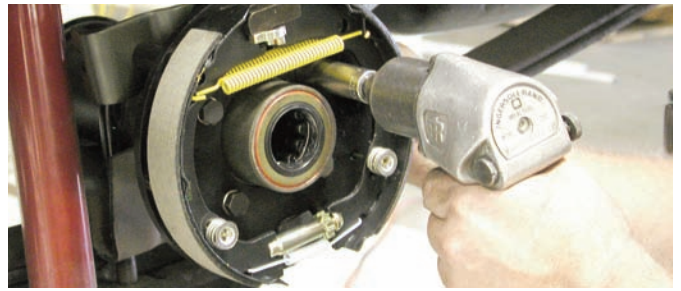
Wilwood hats center on 1/2-inch studs and Chevy uses 7/16-inch studs. You will have to take the axles to a machine shop and have the lug holes drilled and tapped for fine thread 1/2-inch lug studs.



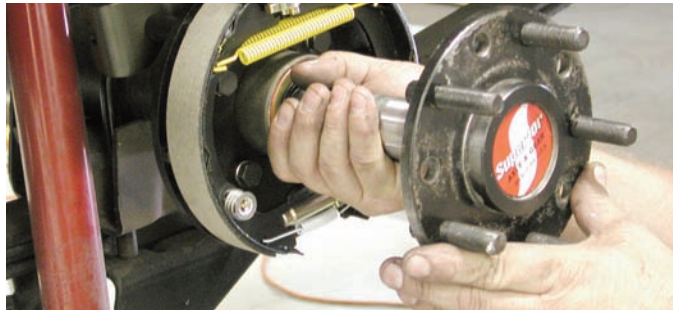
The lug studs were coated with Loctite 271 and then they were screwed into the holes. The studs were tightened to 77 ft-lbs.



The four backing plate to axle flange bolts were removed using an impact gun and an open-end wrench. After the bolts were disconnected the backing plate was removed from the axle.



After the backing plate was removed, the axle flange was cleaned off with a wire brush and then the Wilwood caliper bracket and internal parking brake mechanism was installed using the same four mounting holes. The bolts were tightened with an impact gun and an open-end wrench.



Following the installation of the internal parking brake mechanism and caliper mount, the axles were re-installed into the axle housing. Replace all of the parts in the center section and then install the differential cover using a new gasket.

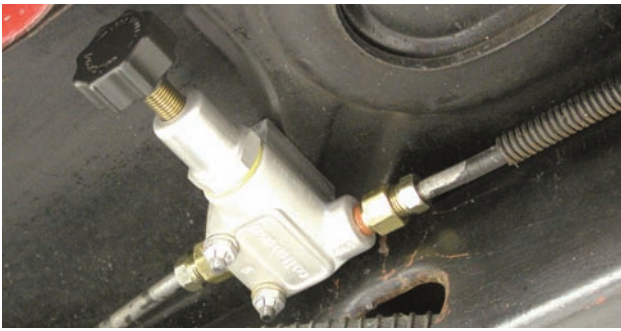


The caliper was held up to the bracket to check the bolt spacing. Everything was looking good but the caliper couldn't be installed until the rotor was connected.



The rotor was installed and it was bolted to the axle. The caliper was connected to the bracket and then the caliper to rotor centering was determined. After the caliper was in alignment, the bolts were coated with Loctite 271 and then they were installed and tightened to 30 ft-lbs. After the caliper was centered, the BP-10 Smart Pads were installed.





Since this is an entirely new brake system a part number 260-8419 proportioning valve was installed to the rear brake lines under the Camaro. The knob was positioned toward the outside of the car for easy access. This valve can be used to set the front to rear brake bias.



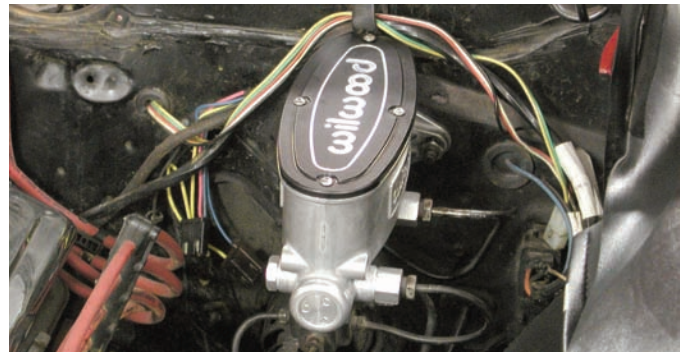
In 1967 all American cars had to have a dual master cylinder for safety, so this Camaro had a non-power master cylinder designed for drum brakes. This original master cylinder will have to be changed to a Wilwood dual master cylinder designed for disc brakes front and rear.



The old master cylinder was removed and the new one was bolted in place. The Wilwood part number 260-9439-P master cylinder has slotted mounting holes so it will fit perfectly in many locations such as this Camaro where it bolts right on.



Using a large and small line wrench, the original brake line was connected to the new master cylinder.



The master cylinder is filled with Wilwood Hi-Temp 570 racing brake fluid and it is ready for bleeding. This Wilwood master cylinder works great and it is also a nice appearance addition to any vehicle.



Here is the finished rear brake assembly and it certainly will be a nice performance addition to this '67 Camaro. After the bleeding procedure is finished the brakes will have to be bedded following the procedure outlined on the instruction sheet.

Stand back and enjoy your new performance brake kits.