TOUGH BRAKES

Installing Wilwood Brakes on a new 2010 Camaro

The 2010 Camaro features the 140-11269 front brake kit and the 140-11270 rear brake kit with red calipers and drilled and slotted rotors.

Chevrolet released the Camaro in 1967 and it was an instant success with sales reaching 220,906 units. Over the years the Camaro was an enthusiast favorite and the management stimulated sales with special models such as the Z/28 in 1967 and later the IROC Z/28 in 1985. The special models were distinguishable from the other models because of the special graphics and design features. When the fourth generation Camaros were introduced there was nothing that distinguished the special Z/28 model from the base models so that was a disappointment to many Chevy enthusiasts. Since Chevy and GM's management evolved from car enthusiast to accountants "bean counters" there was no effort to tie the Camaro into any racing events like they did in the past to stimulate sales because there was always a cost factor involved. The Z/28 did receive some nice engine options over the years starting with the LT1 and it did receive some press coverage in enthusiast publications, but the car received no marketing effort directed at the general public. Even without effective marketing the Camaro it still remained an enthusiast favorite, but sales were down below 50,000 units in the late '90s. The Camaro was running on a 12-year design cycle, 1970 to 1982, 1982 to 1994, so Chevy's management had to make a decision to update the Camaro or cease production, so instead of investing in the only enthusiast related Chevy the company made, the management decided to stop making it to the dismay of many Chevy lovers.

The Ford Mustang engineers and stylists in Dearborn must have celebrated when they heard the news. The Mustang was the only car of its type geared at the performance enthusiast and they took advantage of that with both styling and mechanical advancements. Perhaps the smartest thing they did was come out with a retro-styled Mustang that closely resembled what many people believe was the ultimate Mustang, the 1969-1970 model. The concept car was debuted at the Detroit and Los Angeles Autorama and enthusiasts loved the concept. After receiving the positive feedback, Ford started working on the production model at the same time Chevy was killing the Camaro. The bean counters may have realized they were making a mistake when the Mustang sales figures started to climb, but it was too late to change, the big wheels at GM were already in motion, and like a 70 mph freight train, nothing was going to stop it. As it turned out the Camaro wasn't dead, it was on life support and it didn't take long before the Camaro was revived and on the drawing board. Chrysler stimulated that decision when they released a concept Challenger and there were orders for the car before the management authorized its production. The stylists and engineers at Chevy studied the competition and came up with their wild retro-style Camaro that features good looks with wild power options. The new Camaro became a big hit with Chevy enthusiasts, and just like the Challenger, orders were coming in years before the car was even released. Similar to all of the past Camaros, Wilwood Engineering has released a front and rear brake kit for the new Camaro to improve the car's stopping ability and add to the car's macho appearance.

Over the years Wilwood Engineering has manufactured and offered brake kits for all of the Camaro generations and the 2010 model is no exception. If

you want to improve the brake system on your new Camaro, you can order Wilwood part number 140-11269 for the front and it features 14.25-inch E-coated rotors and large W6A six-piston calipers. The Wilwood rear brake kit is part number 140-11270 and it features 14.25-inch E-coated rotors and large W4A four-piston calipers. The brake system on this Camaro features a Wilwood part number 140-11269-R brake kit with drilled rotors and red calipers on the front and a part number 140-11270-R brake kit with drilled rotors and red calipers on the rear. The Camaro also features part number 220-11382 Flexlines on the front and part number 220-11383 Flexlines on the rear.

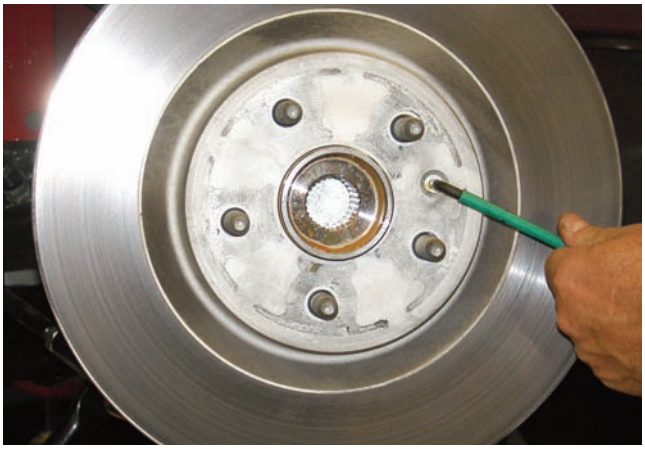
Wilwood Engineering specifies that persons experienced in the installation and proper operation of disc brake systems should only do the installation of this kit. This kit installation requires a jack and jack stands, a good assortment of metric wrenches and sockets, a foot-pound and inch-pound torque wrench, Loctite 271 thread locker, and a metal cutting tool such as a plasma cutter, a three-inch cut-off wheel or an air powered saw. It would also be a good idea to have a small three-inch angle sander to clean off some sharp edges.

It would also be advisable to lay all of the parts out, and using the parts list on the instruction sheet, make sure all of the parts are there. We followed along on a 2010 Camaro installation so you can see the steps involved in performing the installation so this should give you an idea if you have the ability to do it yourself or if it would be better to have it done by a professional.

The new Camaro comes standard with large diameter alloy five-spoke wheels and low profile tires. If you look through the windows in the wheels you can see the standard disc brake system.

A floor jack elevated the Camaro and then jack stands were placed under the car for safety. After the car was safely elevated, the wheels and tires were removed.

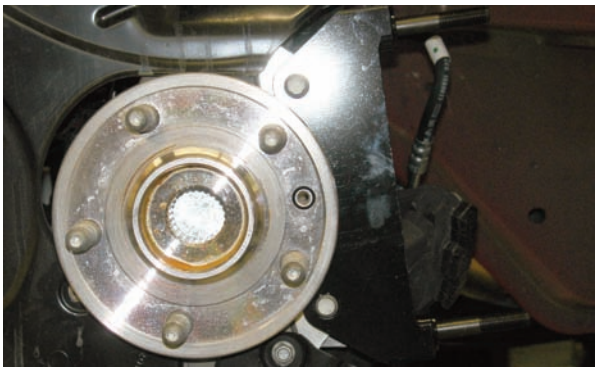
The wheel and tire assembly was removed, revealing the stock brake system and the splined hub assembly. This new Camaro definitely has state-of-the-art styling and engineering.



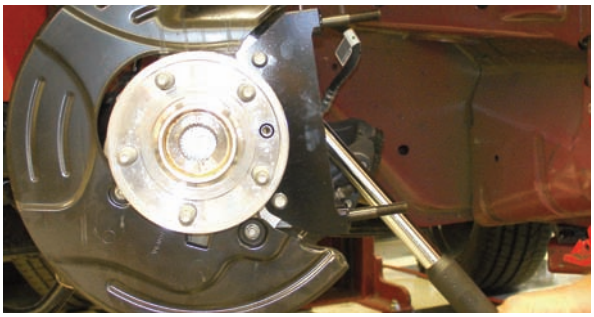
The caliper was removed from the bracket by disconnecting the bolts and washers, and then the rotor followed. Here the small rotor attachment bolt is being removed.

The rotor was removed and it revealed the high-tech hub assembly, the dust shield and the aluminum suspension parts.

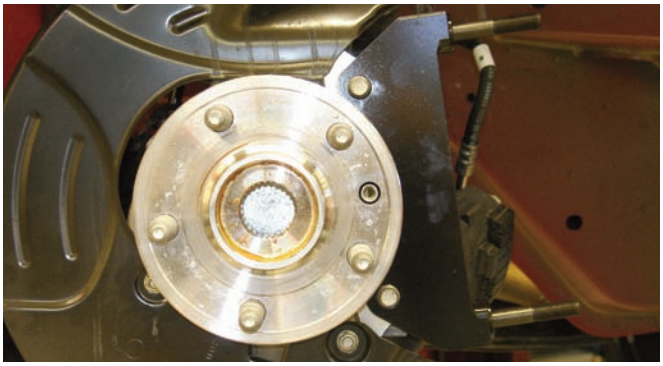
Here is a close look at the hub assembly and the aluminum caliper bracket. The Wilwood Engineering caliper bracket attaches to the original caliper bracket.



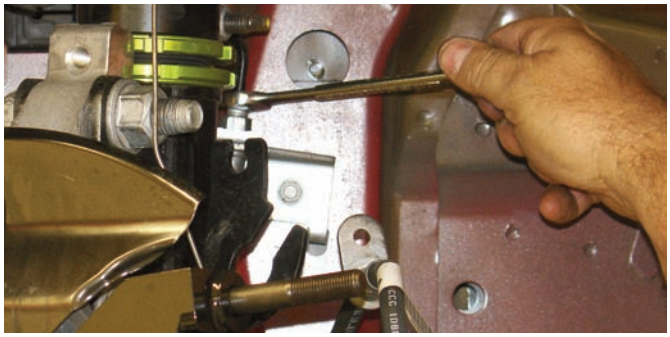
The caliper bracket was secured to the original bracket using the bolts and washers in the kit. Here is the bracket after the bolts were tightened with a socket wrench.



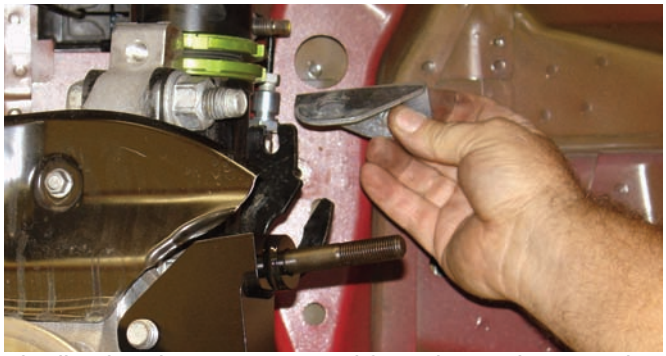
The bolts were tightened with a torque wrench to 47 ft-lbs. The caliper was attached to the bracket and the centering must be correct before the bolts are removed and coated with Loctite and tightened for the final time.



Here is the mounting bracket for the caliper, finished and ready for the installation of the rotor and caliper. This mounting bracket is designed to work perfectly with the original dust shield.



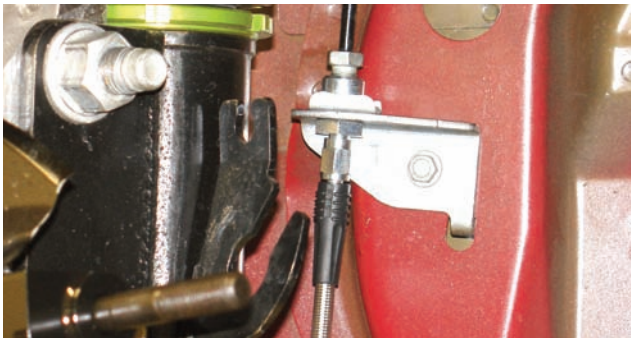
Before the caliper and rotor were installed, the original rubber line had to be disconnected from the steel line. Here the line is being disconnected with a line wrench.



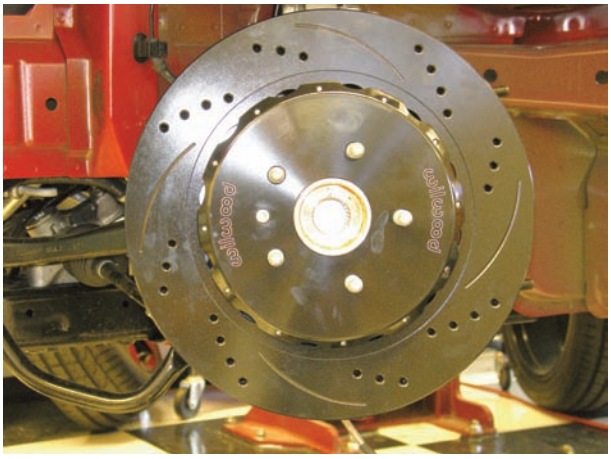
The line bracket was removed from the car because it will have to be slightly modified to work with the new Wilwood Flexline fitting.

The line bracket was installed in a vise and the hole was enlarged one size with a drill motor and the appropriately size drill bit. This process could also be done with a step drill.

Here is the bracket with the Wilwood fitting installed. The bracket was reinstalled in the same location in the wheel well.

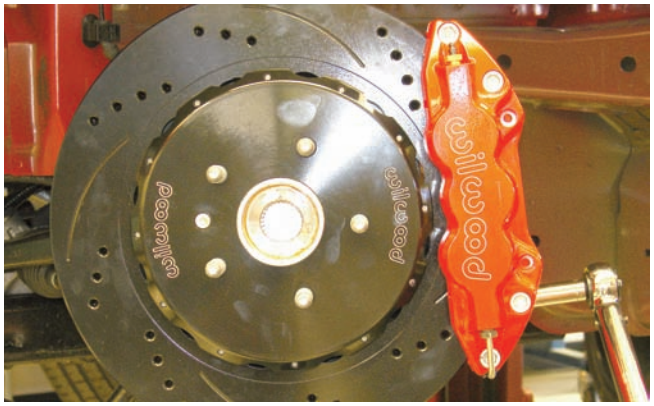


The bracket was returned to the original location and here the factory steel line is connected to one end and the Wilwood flex line part number 220-11382 is connected to the other end.



The rotor was attached to the hub assembly and it was secured with the original bolt. This drilled rotor is E-coated for maximum durability.

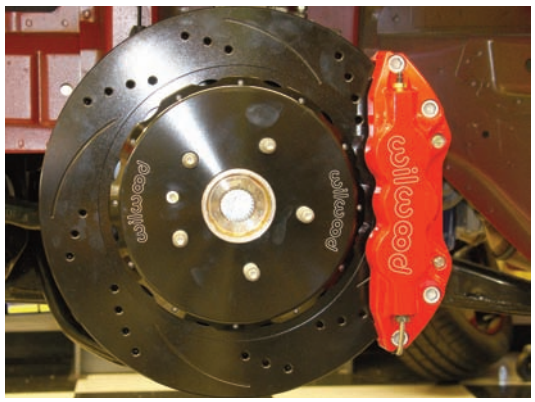
The Wilwood inlet fitting was wrapped with Teflon tape and then it was installed into the caliper using a line wrench.



The six-piston W6A Wilwood caliper was installed on the mounting bracket and then it was tightened to check the rotor to caliper centering. When adjustments are required, shims can be used to get the rotor perfectly centered in the caliper.

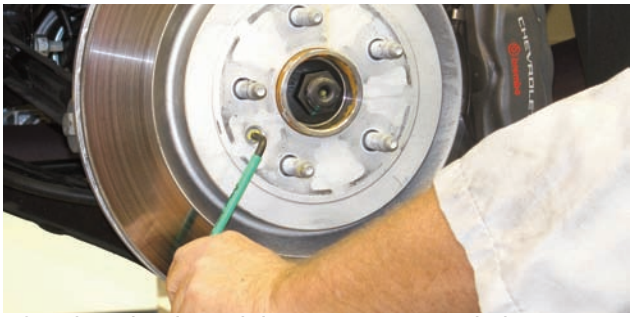
After the caliper was centered properly, the pads were installed by dropping them in from the top. This kit comes standard with the BP-10 Smart Pads, but other pad compounds are available on special request.

The pads were pushed down into place and then the two snap ring retainer pins were installed. At this point the rotor circumference to pad alignment was checked and it was perfect.

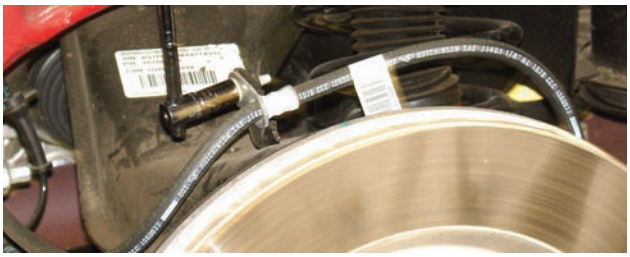


Here is the finished brake assembly ready for action. The red caliper looks terrific because it matches the color on the car.

The wheels and tires were mounted on the front and then the Camaro was removed from the jack. The rear of the Camaro was elevated and jack stands were installed underneath the car to prevent it from falling. The wheels and tires were removed from the rear suspension system using an impact gun and the correct size socket.



After the wheels and tires were removed, the rotor was exposed. The rotor will be removed, so the small bolt that secures the rotor to the hub was disconnected.



The clip that retains the original brake line was removed from the car in preparation for modification to accept the Wilwood Engineering flex line.

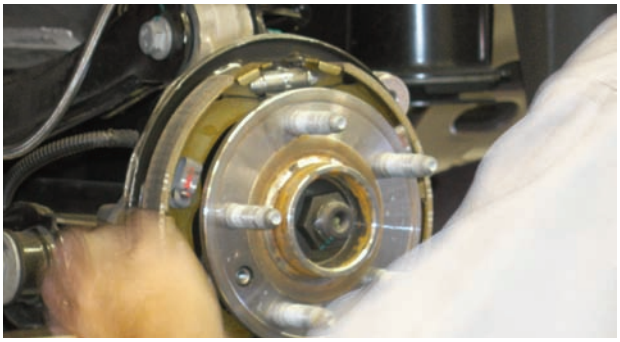
After the line was disconnected, the original caliper was unbolted from the bracket and then the rotor was removed. This car uses an internal parking brake assembly and it will be retained and used with the Wilwood rear rotor that was designed for this system. The nice thing about that is the internal parking brake will work with the original parking brake cables.

Using a line wrench, the original flex line was disconnected from the steel line. The bracket was removed from the car because it will have to be modified just like the front bracket was.

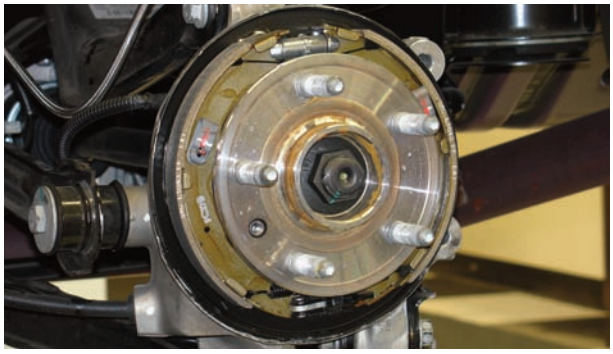
The bracket was removed from the inner fender well, and then it was placed in a vise and drilled to the appropriate size. When it was finished the bracket was reinstalled in the original location.

The Wilwood flex line was connected to the fitting in the bracket and then it was routed through the other bracket that was modified for the new line. At this point the line was basically moved out of the way while another modification was done.

The original dust shield will not work with the Wilwood rotor so it was trimmed back. The easiest way to do that was to cut the dust shield with a plasma cutter as seen here. The trimmed-off section of the shield can also be seen here.

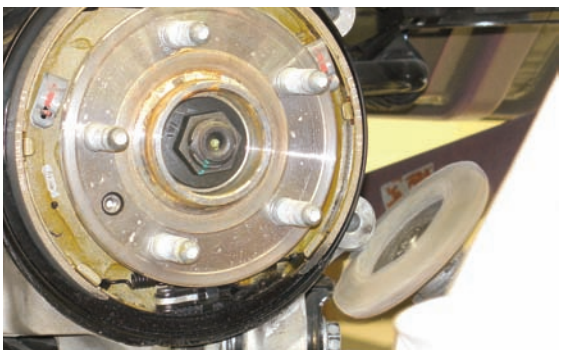


After the dust shield was trimmed, it will require some sanding to get the edges smooth. This was done with a three-inch angle sander and in some areas was done by hand.

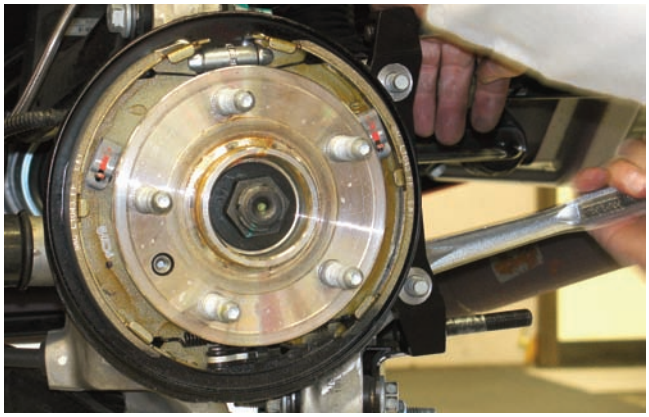


Here is the internal parking brake assembly after the trimming was finished. The brake linings are very narrow, but they are more than enough to keep the Camaro from moving after it is parked.

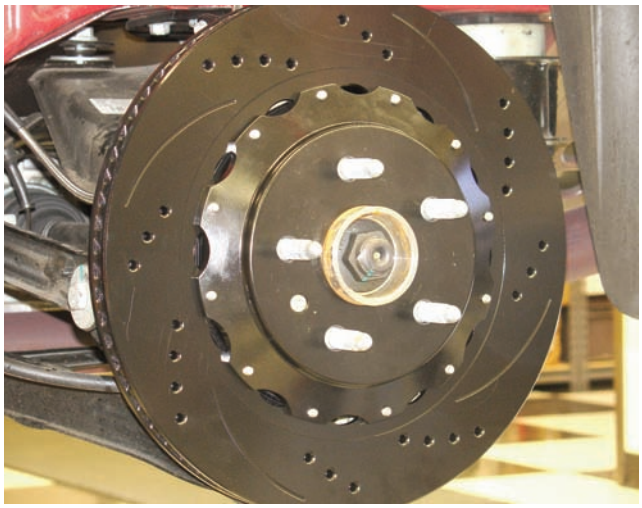
The two-piece rotor assembly was connected with the small bolts in the kit. The bolts were installed finger tight to start with and then they were tightened in an alternating sequence to 103 in-lbs using an inch-pound torque wrench.



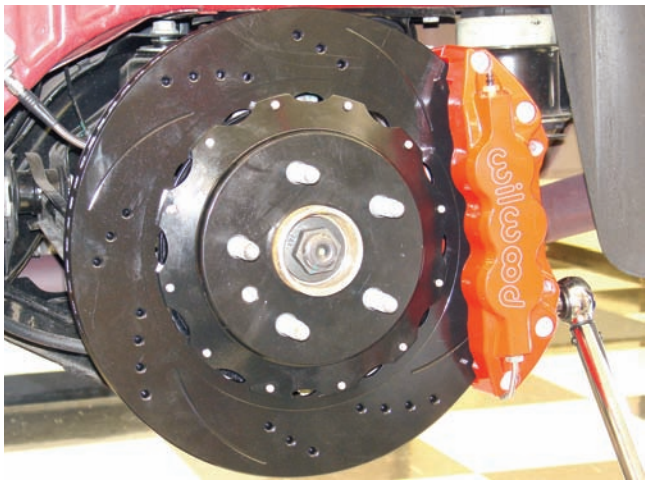
The original caliper bracket was dressed and cleaned after the plasma cutting operation. Here the bracket is being lightly sanded to remove the residue.



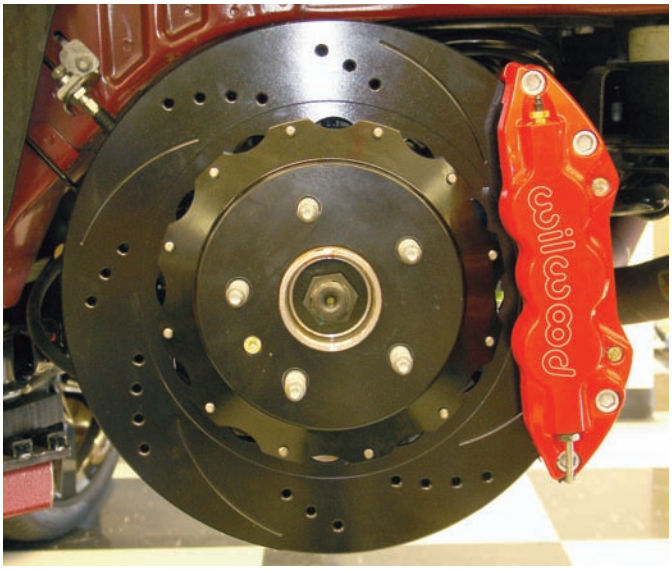
The Wilwood caliper mounting bracket was connected to the original caliper mounting bracket using the bolts and washers in the kit. The bolts can't be permanently installed until the caliper to rotor centering is finished. The caliper to rotor centering was done by shimming the bracket. After that step was completed, the bolts were coated with Loctite 271 and then it was tightened to 47 ft-lbs.



The black E-coated rotor was installed to the hub assembly and then it was connected with the small mounting bolt. After the car is driven, the black surface of the rotor will be cleaned off to bare metal.



The caliper was placed over the studs in the mounting bracket and then the nuts were tightened to 47 ft-lbs. After the calipers were in place the pads were installed and secured with the snap ring retainer pins.



Here is the black E-coated rotor and red caliper mounted and ready for action. The rear system looks nice and it works together with the original Camaro internal parking brake assembly.

The wheels and tires were reinstalled and now the brakes are ready for bleeding and the bedding in process. Before you start driving the car read the brake bleeding and bedding instructions found on your instruction sheet. The Wilwood Engineering brakes work great and they also look terrific on this Camaro, especially since the brake caliper color matches the car color.

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