

# STOP THAT FAIRLANE

## How to install Wilwood disc brakes on a '66 Fairlane convertible

The Wilwood part number 140-4304 front brake kit comes complete with the calipers, the rotors, the caliper brackets, the brake pads and all of the hardware needed to complete the installation. The new bearings are also included in the kit.



The Wilwood part number 140-7139 rear brakes feature the calipers, brake pads, special rotors used with the small internal parking brake system and the horseshoe shaped bearing retainer. This kit is also very easy to install and it provides plenty of stopping power



Many of the early muscle cars had strong running engines that could propel them from 0-60 in a quick six seconds. Now if you wanted to stop that same car with the brakes that were factory available it

took much longer than six seconds. If you applied the brakes hard a few time in a row the stopping power decreased as the brakes heated up. If you tried to stop the car in wet weather, forget it because the car felt like it didn't even have brakes. If you owned a muscle car in the early '60s you know exactly what I am talking about.

The early brakes didn't work as well as the early engines and it remained that way until disc brakes became optionally available. Even then, many young enthusiasts could barely pay for a stripped muscle car so the additional cost of the improved brakes was out of the question. Instead the enthusiasts would pay the additional price for the higher horsepower engine option. When you find an old '60s car today there is a good chance that it will be equipped with the base drum front/drum rear brake package. The problem you will run into currently is the new cars have very good brakes so if you are driving your '60s car in traffic and the person in front of you applies the brakes hard, you will probably find your front end deeply embedded in his trunk. Improved brakes are necessary if you plan to drive your '60s car around town or on the highway.

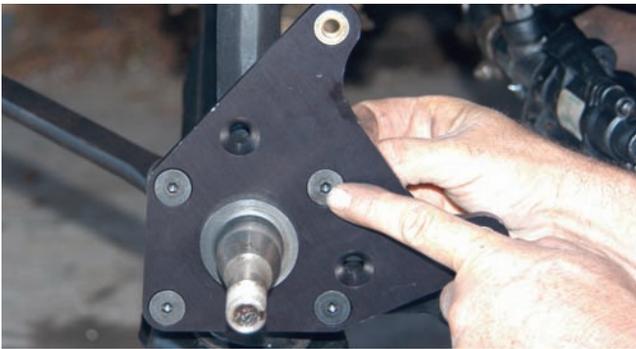


The owner of this '66 390 powered Fairlane GT convertible wanted to make a few improvements when he started the car's restoration, or in this case "restification". He knew the brakes would need an upgrade so he found out that Wilwood offers a kit for the early Fairlanes as well as Falcons and Mustangs that bolts on without the need for difficult fabrication or special tools. The kit works great, looks nice and the entire installation can be done in a day. The owner wanted front and rear disc brakes so he ordered a Wilwood part number 140-4304 front disc brake kit and a 140-7139 rear disc brake kit. The front disc brake kit will also need a 220-6471 hose kit to complete the installation.

Wilwood Engineering specifies that persons experienced in the installation and proper operation of disc brake systems should only do the installation of these kits. If you have this experience and good mechanical ability you can do it yourself. The tools required to complete this installation include a floor jack and jack stands, an assortment of wrenches and sockets, an impact gun, and an inch-pound and foot-pound torque wrench. In this case a bearing grease packer tool, and a grease seal installation tool were also used. It would also be a good .

idea to spread out all of the parts and make sure all of the parts listed on the instruction sheet are there. In this article we will show you the entire

installation so you can decide whether you can do the work yourself or if it would be a better idea to have a professional do it for you.



Before the brakes were installed, the front suspension was rebuilt and painted chassis black. After the front end was rebuilt, the caliper bracket was installed with four flat head Allen bolts. The bolts should be liberally coated with Loctite.



Using an Allen wrench and an open-end 9/16 wrench, the brackets were secured to the spindles. Notice there are two additional holes in the bracket so it can also be used on another Ford spindle style.



The lug bolts do not come installed in the hub, so the installer has to install them using the correct bolt pattern for the car. Since the lug bolts are steel and the hubs are aluminum it is a good idea to coat the lugs with anti seize before they are installed.



The aluminum hubs are drilled with two bolt patterns, Ford-Chrysler 5 x 4.5 and Chevy-Pontiac-Olds that is 5 x 4.75. The Ford pattern was selected for this application.



The Studs were installed with an impact gun because it does a good job of tightening the lugs. They should be tightened to 77 ft-lbs using a foot-pound torque wrench.



The hub has to be connected to an aluminum spacer ring. This must remain tight so the high strength Allen head button bolts were coated with Loktite to keep the bolts from backing out.



Take a close look at the spacer ring because the dished portion has to face forward. It can be bolted on the other way but the rotor will not line up with the caliper.



The Allen head button bolts were tightened with an impact gun. If you try to do this with wrenches the bolts will not be tight enough. After the bolts are snug they should be tightened to 180 in-lbs using an inch-pound torque wrench.



Now the steel rotor can be connected to the aluminum hub assembly. Take a close look at how the mounting tabs for the rotors face forward.



The rotor bolts were coated with Loctite and then they were installed with an impact gun. The bolts should be tightened to 22 ft-lbs using a foot-pound torque wrench.



After the rotors are assembled they can be installed on the spindles. First the bearings have to be packed with grease. This can be done by hand or with a packing tool so we will show you how it works. The bearing was installed in the lower section.



The upper section was installed and then the fitting on the top was connected to a grease gun. The gun pumped the grease into the small tool and it was forced to go through the bearing.



The top section of the tool was removed and you can see that the bearing was packed with grease. This tool is great, but if you don't have one the packing can be done by hand.



The coated bearing was installed in the aluminum rotor and hub assembly. The hub is delivered in the kit with the correct races installed.



The seal was secured in the hub with this seal installation tool. A few taps with the hammer and the seal is secured in the hub.



The rotor assembly was lifted and it was installed on the spindle. Here is a good look at the rotor assembly after it was loaded on the spindle.



The small front bearing was also packed with grease and then it was installed over the spindle and into the front bearing race.



The large washer that was supplied in the kit was installed next. This washer will keep the front bearing securely in the rotor.



The spindle nut was installed with channel lock pliers and it was tightened to the point of being snug, but not too tight. If the nut is cranked down tight, the bearings will wear out prematurely.



After the nut was tight, a castle nut cover was installed along with a cotter key to keep it from backing out. This is a very important safety procedure so make sure the cotter key is used.



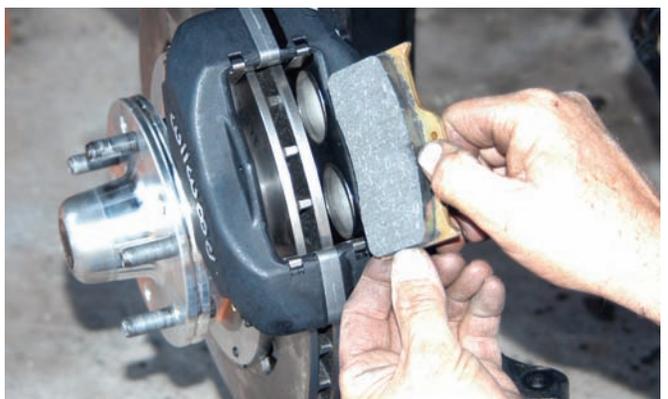
Installing the screw-on grease cap finished the front spindle assembly. The cap is easy to install and it looks nice.



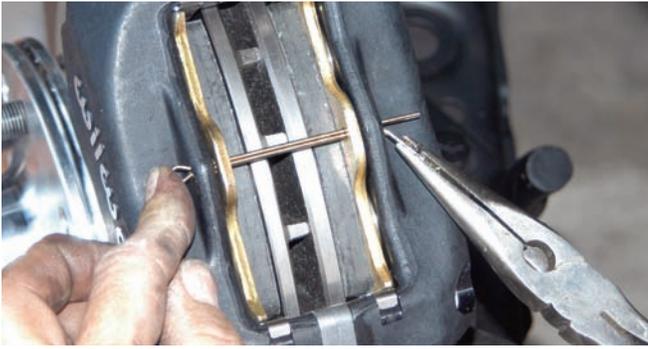
The large caliper was installed next and it was secured with the two mounting bolts included in the kit. It would be a good idea to coat the installation bolts with Loctite so they stay secure.



The rotor has to be centered inside of the caliper. Shims are included in the kit to make this possible. Here the rotor is centered and ready to go.



The pads are installed from the top making pad changes easy. Here one side is being installed. The calipers are being equipped with BP-10 Smart Pads, which are excellent for normal street use.



After the other pad was installed they were secured with this large cotter key. This keeps the pads in place. When the key is bent, it should be done gently so that it can be straightened when a pad change is necessary.



Now the rear brakes can be installed. Cleaning the old gasket off of the differential flange assembly with a razor blade started the procedure.



The flange was coated with silicon to prevent oil leaks. The four special head flange bolts were installed.



The small emergency brake assembly was installed over the four flange bolts. The assembly is actually a miniature drum brake and it also features a bracket for the caliper that will be installed later.



Since the axle had to be removed to install the brakes, the installer thought changing the axle bearing would be a good idea. The area that will ride in the axle seal was coated with white grease.



The splined end of the axle was coated with anti seize lubricant to make it easier to install and remove later if necessary.



The axle was loaded into the axle assembly making sure that the splines at the end are lined up properly. You can feel the axle slip inward when the splines line up.



The splines were lined up in the differential, but some persuasion was needed to get the axle bearing to bottom out in the housing.



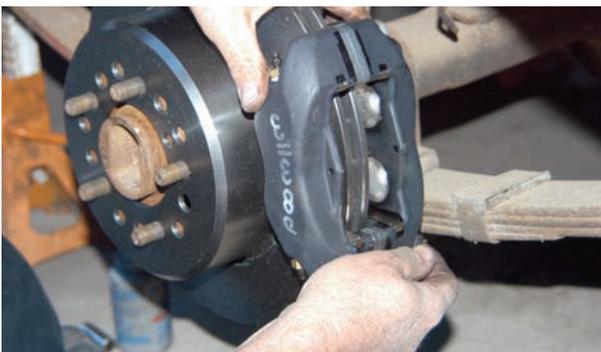
A horseshoe shaped bracket secures the parking brake unit and caliper bracket to the housing and it is secured with four locknuts. Here one of the locknuts was being installed.



The axle flange features an axle bolt access hole. Here the bolt is being secured with a socket wrench. This photo also gives you a good look at the caliper bracket.



The rear rotor was installed on the axle flange. Notice that the rotor has several holes drilled into it making it a universal part. The bolts that match the Ford lug pattern were selected.



The caliper was installed on the bracket. The rotor should be centered in the middle of the caliper so it may have to be shimmed to accomplish the desired clearance.



The mounting bolts were coated with Loctite and then they were screwed into the mounting bracket. Here the bolts are being tightened with a long 9/16-inch wrench.



The brake pads were installed in the calipers from the top. These are large calipers so they should work great on this lightweight Fairlane. The calipers were being equipped with BP-10 smart pads.



The pads were secured with a long cotter key. The end of the key should be bent over enough to keep it in place but not too much because it will have to be straightened when the car needs new pads.



Here is the rear brake system after it was installed. The large caliper and rotor provide excellent stopping power and the internal emergency brake works great. This Fairlane convertible finally has brakes that can bring this 390ci powered car to a quick stop in any situation.

Wilwood Engineering  
4700 Calle Bolero  
Camarillo, CA 93012  
(805) 388-1188  
[www.wilwood.com](http://www.wilwood.com)

Copyright © 2010 Wilwood Engineering,  
Inc. - All Rights Reserved