# ON A HONDA

Installing a Wilwood disc brake kit on a Honda

This Honda is going to be equipped with a Forged Dynalite Big Brake Front Brake Kit part number 140-8695 that features forged billet Dynalite four-piston calipers in a Platinum-E finish, 11-inch rotors, aluminum rotor adapters, caliper brackets, BP-10 Smart Pads and all of the hardware required to finish the installation.

The Honda brand has been in the United States since 1959 when the first Motorcycle dealership was opened. The company originated in Japan after World War II when gasoline was being rationed and the economy was rebuilding. Soichiro Honda was interested in and was working on motor vehicles before the War, and when it concluded he saw the need for low cost transportation. He heard about a company that was making small two-stroke industrial engines for the war effort and after the war the engines were going to be scrapped or sold in bulk, so Soichiro purchased the little engines for a small sum and started adapting them to bicycle frames. He modified the engines to be able to run on gasoline, turpentine or a combination of both. The motorized bikes sold well and before long he started running out of his supply of engines, so he decided to make his own engine based on the one he purchased.

In 1948 he opened up Honda Motor Company and started producing motorbikes with stamped steel frames and front and rear suspensions. Over the years the Honda motorcycle developed into a wide variety of models from little scooters to full size motorcycles. After Honda's U.S. introduction in 1959, the dealership network started expanding and the Honda scooters and motorcycles started becoming the transportation of many college students and others who needed an economic method of transportation.

He started building cars in the '60s and they were very acceptable for the Japanese market, but still did not make a big splash with the American buyers. In the '70s, Honda produced the popular, economic Civic. The timing was good because the car was introduced during the oil embargo when people started to look for basic transportation cars that offered good gas mileage.

The Honda Civics became very popular with younger buyers, women and college students who needed reliable economy cars. Honda started with the Civic and expanded the line to include the Accord. Wilwood became interested in the Honda in 1988 after the more powerful Acura was released in 1986. The Honda and Acura shared the same undercarriage so the kits were almost interchangeable. In fact, many of the Honda and Acura cars went through body changes, but the suspension remained essentially the same so Wilwood was able to create many brake improvement kits that cover a broad range of Honda cars.

The fellow who owns this car wanted to make a brake improvement for his street driven Honda and also wanted to improve the car's appearance, so he looked at the Wilwood website and found exactly what he was looking for. He selected a Forged Dynalite Big Brake Front Brake Kit part number 140-8695 that features forged billet Dynalite Platinum-E coated calipers, 11-inch rotors, caliper brackets, BP-10 Smart Pads and all of the hardware required to install the brake kit. He also ordered a 220-6419 hose kit to finish the installation.

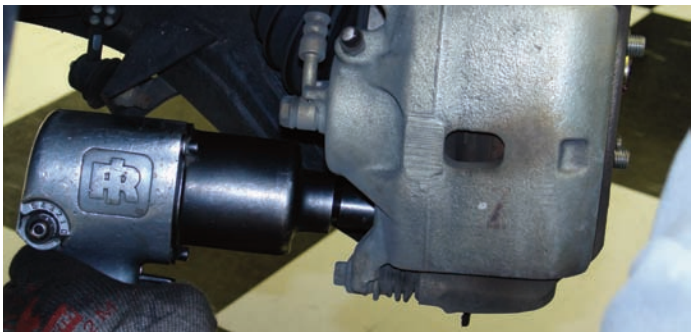
Wilwood Engineering recommends that persons experienced in the installation and proper operation of disc brake system should only perform the installation of this kit. A hobby builder can install this kit if he has good mechanical knowledge and ability, car building experience and a good assortment of tools. The installer will need a floor jack and jack stands, an impact gun, metric wrenches and sockets, an inch-pound torque wrench and a foot-pound torque wrench. It would be advisable to spread the kit components out to make sure you have all of the parts listed on the instruction sheet. It would also be handy to have a few other items such as a bottle of Loctite 271, a roll of PTFE Thread Tape and a few bottles of Wilwood Hi-Temp Racing Brake Fluid or Wilwood EXP 600 Plus Hi-Temp Racing Brake Fluid. We are going to show you how this installation is done, so you can decide for yourself if you can perform this installation or if it would be better to have a professional do it for you.

Using an impact gun and the proper size socket, the lug nuts were disconnected, and then the wheels and tires were removed.

The screws that secure the rotor to the hub were removed with a screwdriver aided by lockjaw pliers. The screws are installed very tight.

After the wheels and tires were removed, you can see the original Honda brake assembly. The Honda is equipped with a floating caliper.

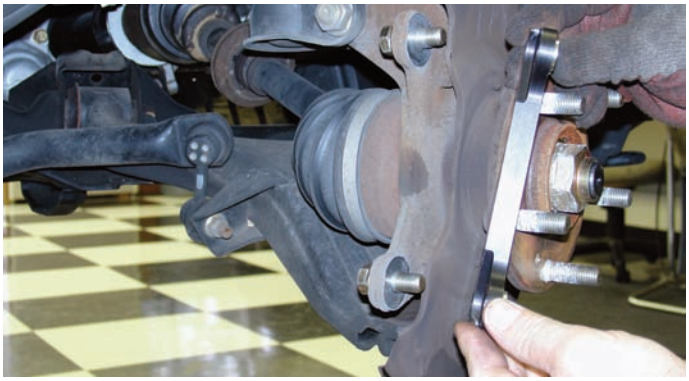
After the mounting screws were disconnected, the rotor was carefully removed from the assembly.



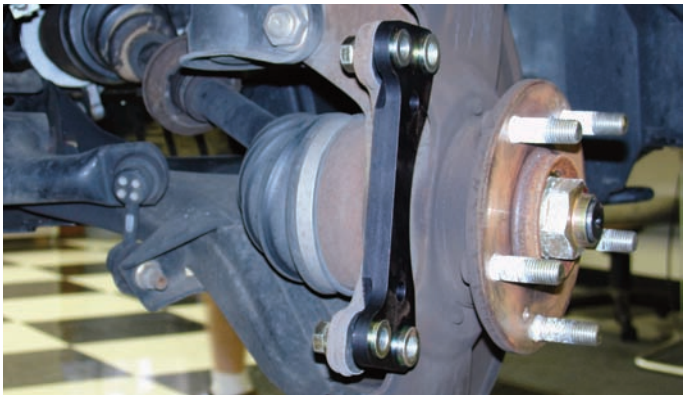
Using an impact gun and the appropriate size socket, the caliper bolts were disconnected and the caliper was removed from the assembly.

After the rotor disengaged from the centering ring, it was removed and that revealed the hub assembly and the original caliper mounting ears.

The holes in the original mounting ears are larger than the Wilwood mounting bolts, so sleeves were installed to take up the slack.



The bolts were inserted through the holes in the mounting ears and then a shim washer was installed before the caliper brackets were mounted.



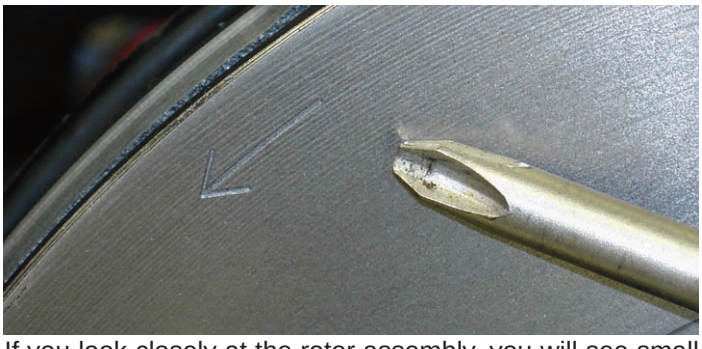
Here is the Wilwood bracket after it was mounted to the original caliper mounting ears. The bolts should be tight to check the caliper to rotor centering, but not too tight because more shims may be necessary.

The caliper inlet fitting was wrapped with PTFE Thread Tape and then it was screwed into the caliper.

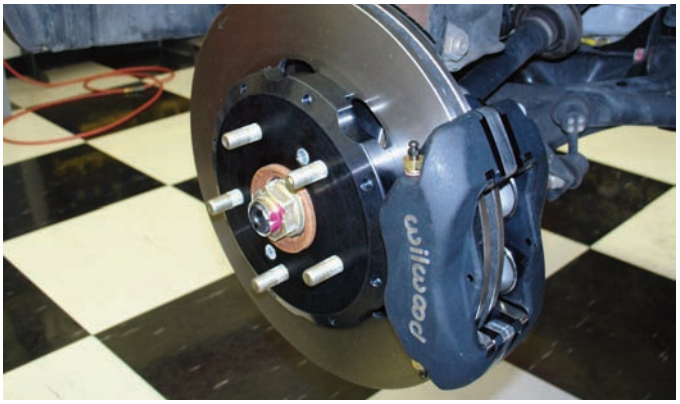
The caliper mounting bolts were installed in the caliper and then both of the bolts were loaded with two shim washers.

Before the caliper was installed, the rotor was placed onto the hub assembly. Here the aluminum hat was secured to the rotor with the bolts in the kit. The connection bolts were coated with Loctite 271 and then they were tightened to 85 in-lbs.

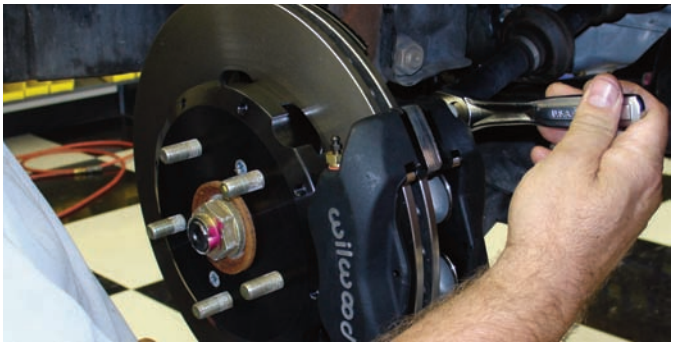
When the Wilwood rotors were installed, the holes for the mounting screws were aligned with the holes in the hub assembly. The original screws were used to mount the caliper to the hub assembly.



If you look closely at the rotor assembly, you will see small arrows that will show you the direction the rotors should be turning.

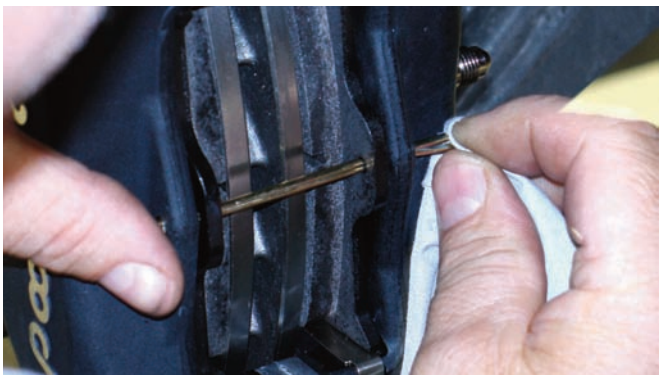


The Dynalite caliper was bolted to the caliper mount so that the caliper to rotor centering can be seen. Adding or subtracting shim washers can obtain perfect alignment.



The calipers were centered so the bolts could be tightened. Here the bolts are being tightened with a socket wrench and then they were tightened to 35 ft-lbs using a foot-pound torque wrench.

After the calipers were centered, the BP-10 Smart Pads were installed. They install from the top making brake pad changes easy.

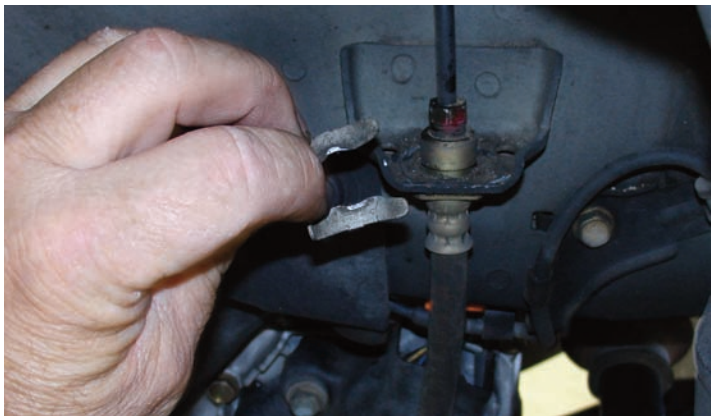


The brake pads are secured with a large long cotter key as seen here.

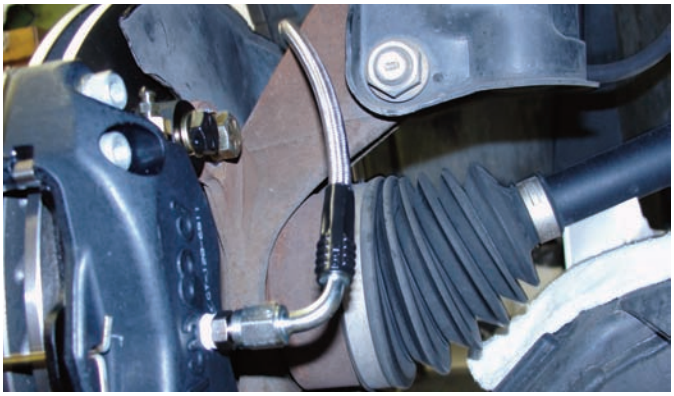
The cotter key end was folded over to keep it in place.

This car had a brake line bracket, so it was disconnected from the strut assembly using an open-end wrench.

The brake hard line was removed from the hose where they meet at the bracket on the inner fender well.



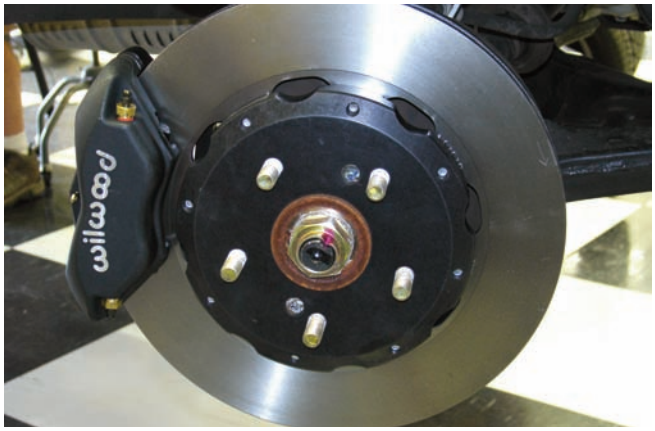
The clip was removed from the bracket so that the two lines could be disconnected.



The Wilwood 220-6419 braided stainless steel brake line was connected to the caliper inlet fitting.

The other end of the hose was connected to the bracket on the inner fender well and it was secured with a clip.

The original hose bracket was modified to work with the new brake line. A bracket similar to the one shown can also be made from strap steel.




Here is the Wilwood brake installation finished and ready for bleeding and bedding. This brake system will bring the car to a quick stop and will look good when it is doing that.

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