

Wilwood Disc Brake Installation

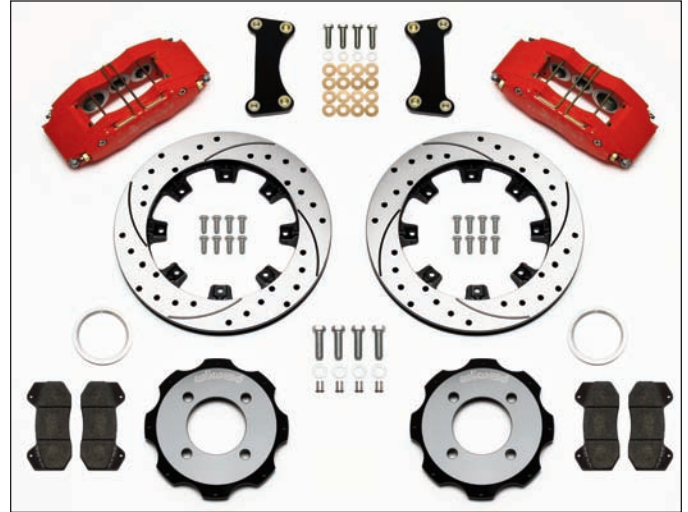
Front Big Brake Installation on a 2011 Ford Fiesta



The Ford Fiesta is a front wheel drive subcompact that just begs for customization. Even in tame street conditions, the brakes are just adequate. However, when pushing these vehicles to the limit in track day or road race conditions, it becomes evident that updating the brake system can provide a competitive edge. This is clearly illustrated by the fact that more cars are passed under braking than anywhere else on the track. For over 33 years **Wilwood Disc Brakes** has had the solution! Now Wilwood brings all that racing experience to your Ford Fiesta.

Wilwood's new front kit (P/N 140-11899) features Wilwood's DynaPro 6 six-piston differential bore lug mount calipers clamping down on large 12.19" diameter, .81" thick rotors. The kit comes with aluminum hats, mounting brackets, and all hardware for an easy bolt-on installation. BP-10 high performance street pads round out the kit. Other brake pad compounds with higher friction and temperature characteristics designed for on track performance are an option. Kits are available with red or black powder coated calipers, and either HP plain face rotors or SRP drilled and slotted rotors.

As you read through the installation procedure you will see that it is basically a bolt-on kit, just as Wilwood advertises. Kit includes everything necessary for an easy and complete installation. However, the stainless steel braided flexline kit, P/N 220-11906 is a necessary item and must be ordered separately. You will be amazed as to how much better the Wilwood brake kit performs over the original factory brakes.



Wilwood part number 140-11899 comes complete with DP6 calipers, caliper mounting brackets, HP rotors (SRP optional), aluminum hats, BP-10 brake pads and all necessary hardware for an easy bolt-on installation.

A standard set of mechanics tools including torque wrenches will be necessary. Also, a bottle of red *Loctite*® 271, PTFE thread tape, and Wilwood's Hi-Temp 570 racing brake fluid (P/N 290-0632) or Wilwood EXP 600 Plus Hi-Temp racing brake fluid (P/N 290-6209) for extreme temperature applications.

Before you begin the installation, read over the instructions carefully to be sure you understand the procedure, and if the job seems a little beyond your capabilities, there's no shame in calling in a professional. Compare the parts you received with the parts list on the installation document that came with the kit to ensure all necessary components are included. Also, review the wheel clearance diagram www.wilwood.org/review/140-11899_WCD.pdf to verify that there is adequate clearance with the wheels you will be using with this kit.

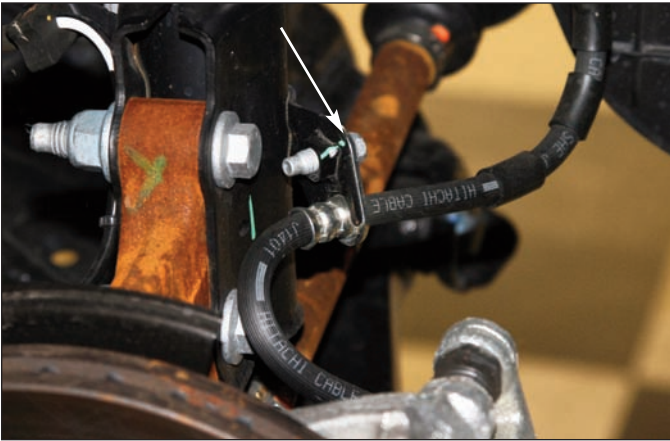
NOTE: *Disc brakes should only be installed by someone experienced and competent in the installation and maintenance of disc brakes. If you are not sure, get help or return the product. You may obtain additional information and technical support by calling Wilwood at 805 • 388-1188, e-mail for technical assistance at: support@wilwood.com, or visit our web site at www.wilwood.com.*



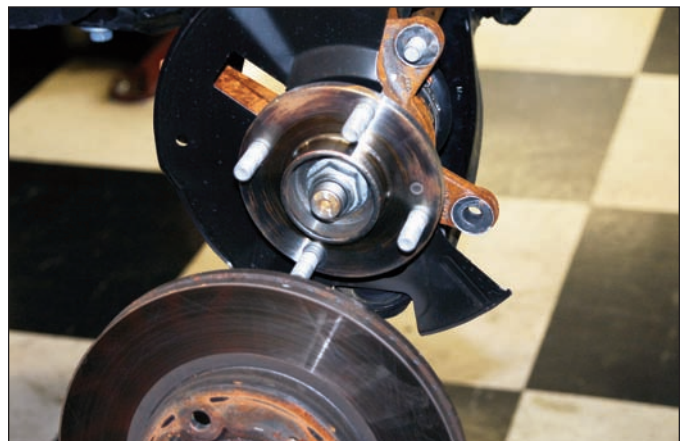
Sequence 1: Raise the front wheels off the ground and support the front suspension according to the vehicle manufacturer's instructions. Remove the lug nuts and lift off the wheel.



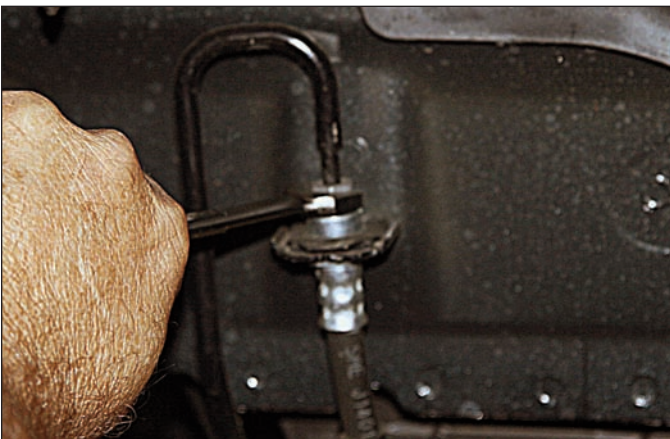
Sequence 4: Using an impact driver or breaker bar and socket, break loose the caliper mounting bolts from the back side of the rotor. Lift off the caliper and keep the fluid line hose in the vertical position to avoid spilling brake fluid that remains in the hose.



Sequence 2: Remove screw and slide apart bracket holding the rubber original equipment brake fluid hose.



Sequence 5: Slide off the rotor from the hub. If it is stuck, it may be necessary to hit it a few times with a rubber mallet to break loose.



Sequence 3: Disconnect the OEM brake fluid hose where it connects to the brake hard line. Temporarily cap (not included) the line to minimize fluid loss.



Sequence 6: Insert a sleeve in each of the original caliper mounting holes in the spindle "ears".



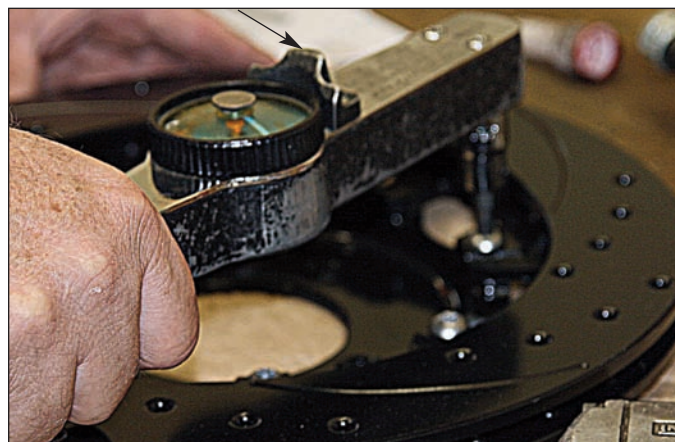
Sequence 7: Slide the caliper bracket mounting bolts with washer thru OEM caliper mounting ears from the inboard side.



Sequence 10: The hat needs to be bolted to the rotor. Orient the rotor over the hat in the configuration shown above. Apply red *Loctite*® 271 to the mounting bolts and thread into the hat.



Sequence 8: Attach the Wilwood caliper mounting bracket to the OEM mounting ears on the outboard side. Temporarily tighten the mounting bolts. **NOTE:** *The bracket must fit squarely against the mounting ears.* Inspect for interference from casting irregularities, burrs, etc. Grind as necessary. Remove the bolts one at a time and coat with red *Loctite*® 271, torque to 60 ft-lbs.



Sequence 11: Using an alternating sequence, torque rotor bolts to 25 ft-lb.



Sequence 9: Install the rotor registration adapter over the axle register against the hub face with the larger O.D. facing inward toward the hub face.



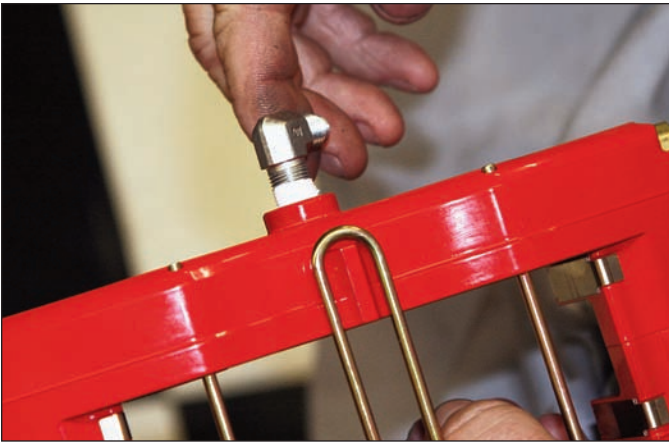
Sequence 12: Install the hat/rotor assembly over the hub assembly. **NOTE:** *The hat/rotor must fit flush against the axle hub flange or excessive rotor run out may result.*



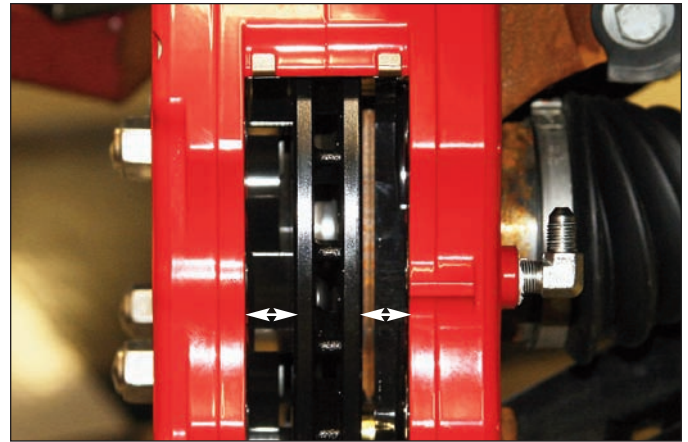
Sequence 13: Secure the hat/rotor with three lug nuts (finger tight) to keep the hat/rotor assembly in place while continuing with the installation.



Sequence 16: Mount the caliper onto the bracket so that the largest pistons are at the rotor exit end of the caliper, in relation to the direction of rotor rotation.



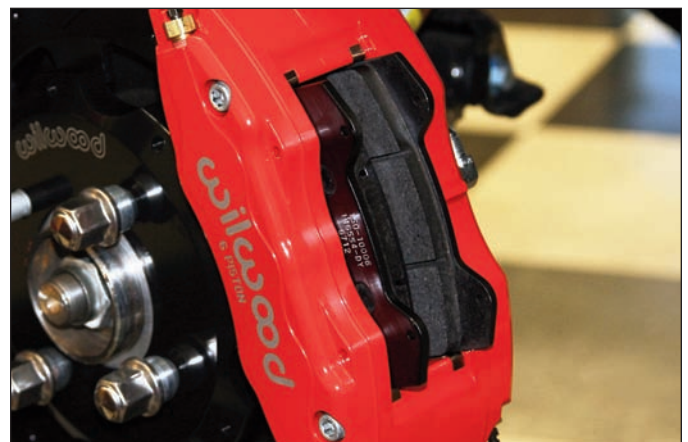
Sequence 14: Remove the protective sticker from the caliper fluid inlet. Coat the inlet fitting with PTFE thread tape and screw into the caliper with the 90° angle in the up position parallel to the length of the caliper.



Sequence 17: View the rotor through the top opening of the caliper. The rotor should be centered in the caliper. If not, adjust by adding or subtracting shims between the bracket and the caliper mounting tabs. Once the caliper alignment is correct, remove the mounting bolts one at a time and apply red *Loctite*® 271 to the threads and torque to 40 ft-lbs.



Sequence 15: Initially place two shim washers on each bolt between caliper mounting tab and the mounting ears on the bracket.



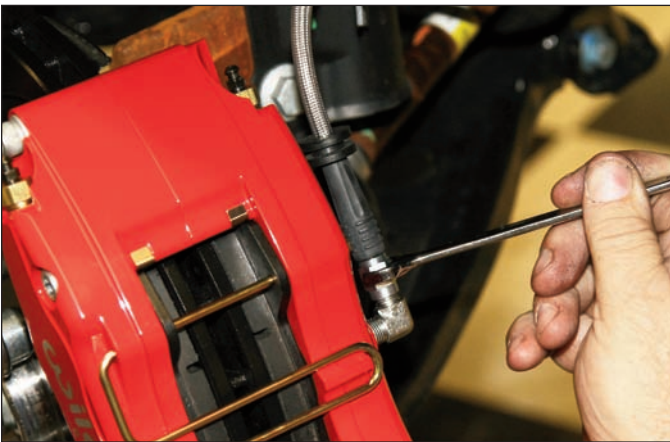
Sequence 18: Insert the brake pads into the caliper with the friction material facing the rotor.



Sequence 19: Secure brake pads in place with the pad clip retainer.



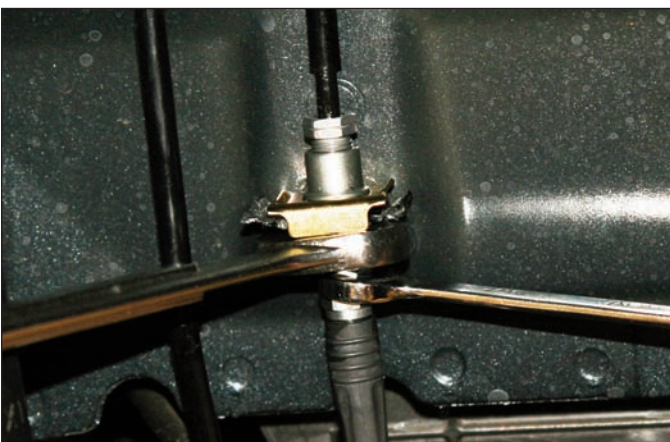
Sequence 22: Slice a grommet so that it can be slid over the Wilwood flexline that is already attached to the hard line. Install into the OE bracket and attach bracket using OE bolt in original location. Secure line as necessary to prevent contact with moving suspension, brake, or wheel components. Bleed the system referring to the additional information in the data sheet as necessary for proper bleeding instructions.



Sequence 20: Connect one end of the flexline to the previously installed caliper fitting.



Sequence 23: Install the wheel and torque the lug nuts to manufacturer's specification. Rotate the wheel and check for any interference. Bed in the brake pads and rotor in a safe location before general use driving.



Sequence 21: Route flexline line along the same path as the OEM hose and connect the other end of the flexline to the fitting at the brake hard line.

Brake Testing

**WARNING • DO NOT DRIVE ON UNTESTED BRAKES
BRAKES MUST BE TESTED AFTER INSTALLATION OR MAINTENANCE
MINIMUM TEST PROCEDURE**

- Make sure pedal is firm: Hold firm pressure on pedal for several minutes, it should remain in position without sinking. If pedal sinks toward floor, check system for fluid leaks. DO NOT drive vehicle if pedal does not stay firm or can be pushed to the floor with normal pressure.
- At very low speed (2-5 mph) apply brakes hard several times while turning steering from full left to full right, repeat several times. Remove the wheels and check that components are not touching, rubbing, or leaking.
- Carefully examine all brake components, brake lines, and fittings for leaks and interference.
- Make sure there is no interference with wheels or suspension components.
- Drive vehicle at low speed (15-20 mph) making moderate and hard stops. Brakes should feel normal and positive. Again check for leaks and interference.
- Always test vehicle in a safe place where there is no danger to (or from) other people or vehicles.
- Always wear seat belts and make use of all safety equipment.

Wilwood Engineering
4700 Calle Bolero, Camarillo, CA 93012
805 / 388-1188 • www.wilwood.com
Copyright © 2012 Wilwood Engineering
All Rights Reserved