

# Wilwood Disc Brake Installation

## Front ProMatrix Brake Installation on a 2005 Ford Mustang GT



The fifth generation Ford Mustang begins with the 2005 model year and includes various trim lines including the GT. The stock brakes are adequate at best even in tame street conditions. 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. Wilwood offers an intermediate upgrade with our ProMatrix pad and rotor kit for car enthusiasts not ready for a complete big brake kit. Since 1977 **Wilwood Disc Brakes** has had the solution! Now Wilwood brings all that racing experience to your Ford Mustang GT.

Wilwood's new front ProMatrix kit (P/N [140-12148-D](#)) features 12.44" diameter, 1.19" thick rotors. The kit comes with aluminum hats, and all hardware for an easy bolt-on installation. ProMatrix 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.

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 including the stainless steel braided flexline kit, P/N 220-12336.



Wilwood part number [140-12148-D](#) comes complete with SRP drilled and slotted rotors, aluminum hats, ProMatrix 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.

**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](mailto:support@wilwood.com), or visit our web site at [www.wilwood.com](http://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 a flat head screw driver pry off the rotor retaining washers from around the wheel studs.



**Sequence 2:** Using a breaker bar and socket or wrench, break loose the caliper mounting bolts from the back side of the rotor.



**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.



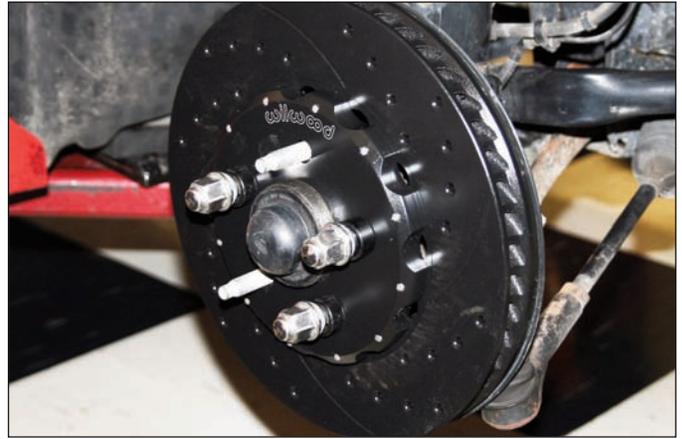
**Sequence 3:** Lift off the caliper and hang off to the side using a piece of wire.



**Sequence 6:** The hat needs to be bolted to the rotor. Orient the rotor over the hat in the configuration shown above. Place one flat washer over each hole on the rotor mounting tabs.



**Sequence 7:** Apply red *Loctite*® 271 to the mounting bolts and thread into the hat.



**Sequence 10:** Secure the hat/rotor with three lug nuts (finger tight) to keep the hat/rotor assembly in place while continuing with the installation.



**Sequence 8:** Using an alternating sequence, torque bolts to 155 in-lbs.



**Sequence 11:** Remove the original brake pads from the caliper and insert new Wilwood brake pads with the friction material facing the rotor.



**Sequence 9:** 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 12:** Reinstall the caliper in its original location and torque the mounting bolts to manufacturer's specification.



**Sequence 13:** 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 16:** Remove the old mounting bracket from the chassis. Save the mounting bolt.



**Sequence 14:** Slip the new mounting bracket over the Wilwood flexline and secure with clip.



**Sequence 17:** Secure the new mounting bracket to the chassis using the saved OE bolt.



**Sequence 15:** Attach the Wilwood flexline to the brake hard line.



**Sequence 18:** Disconnect the other end of the rubber hose from the caliper. Try to keep fluid leakage to a minimum.



**Sequence 19:** Route line along the same path as the OEM hose and connect the other end of the flexline to the caliper.



**Sequence 21:** 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 20:** Secure fluid 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.

## 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 Disc Brakes**

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