

ASSEMBLY INSTRUCTIONS
FOR
**REAR PROMATRIX OE UPGRADE ROTOR KIT, WITH
12.88" DIAMETER VENTED ROTOR**

2005 - 2012 FORD MUSTANG GT

PART NUMBER GROUP

Z-140-12468 • 140-12468-D

**DISC BRAKES SHOULD ONLY BE INSTALLED BY SOMEONE
EXPERIENCED AND COMPETENT IN THE INSTALLATION AND
MAINTENANCE OF DISC BRAKES**

READ ALL WARNINGS



WARNING

**DO NOT OPERATE ANY VEHICLE ON UNTESTED BRAKES!
SEE MINIMUM TEST PROCEDURE WITHIN**

ALWAYS UTILIZE SAFETY RESTRAINT SYSTEMS AND ALL OTHER AVAILABLE SAFETY EQUIPMENT WHILE OPERATING THE VEHICLE

IMPORTANT • READ THE DISCLAIMER OF WARRANTY INCLUDED IN THE KIT

NOTE: Some cleaners may stain or remove the finish on brake system components. Test the cleaner on a hidden portion of the component before general use.

Important Notice - Read This First

Before any tear-down or disassembly begins, review the following information:

- Review the Wheel Clearance Diagram (Figure 2, page 3) to verify that there is adequate clearance with the wheels you will be using with the installation.
- Due to OEM production differences and other variations from vehicle to vehicle, the fastener hardware and other components in this kit may not be suitable for a specific application or vehicle.
- It is the responsibility of the purchaser and installer of this kit to verify suitability / fitment of all components and ensure all fasteners and hardware achieve complete and proper engagement. Improper or inadequate engagement can lead to component failure.

Photographic Tip

We suggest you take digital photos of the brake system setup before and during the disassembly procedure. This will aid in the event that something is not compatible with the new brake components and be a valuable tool to assist in the trouble-shooting process.

Exploded Assembly Diagram

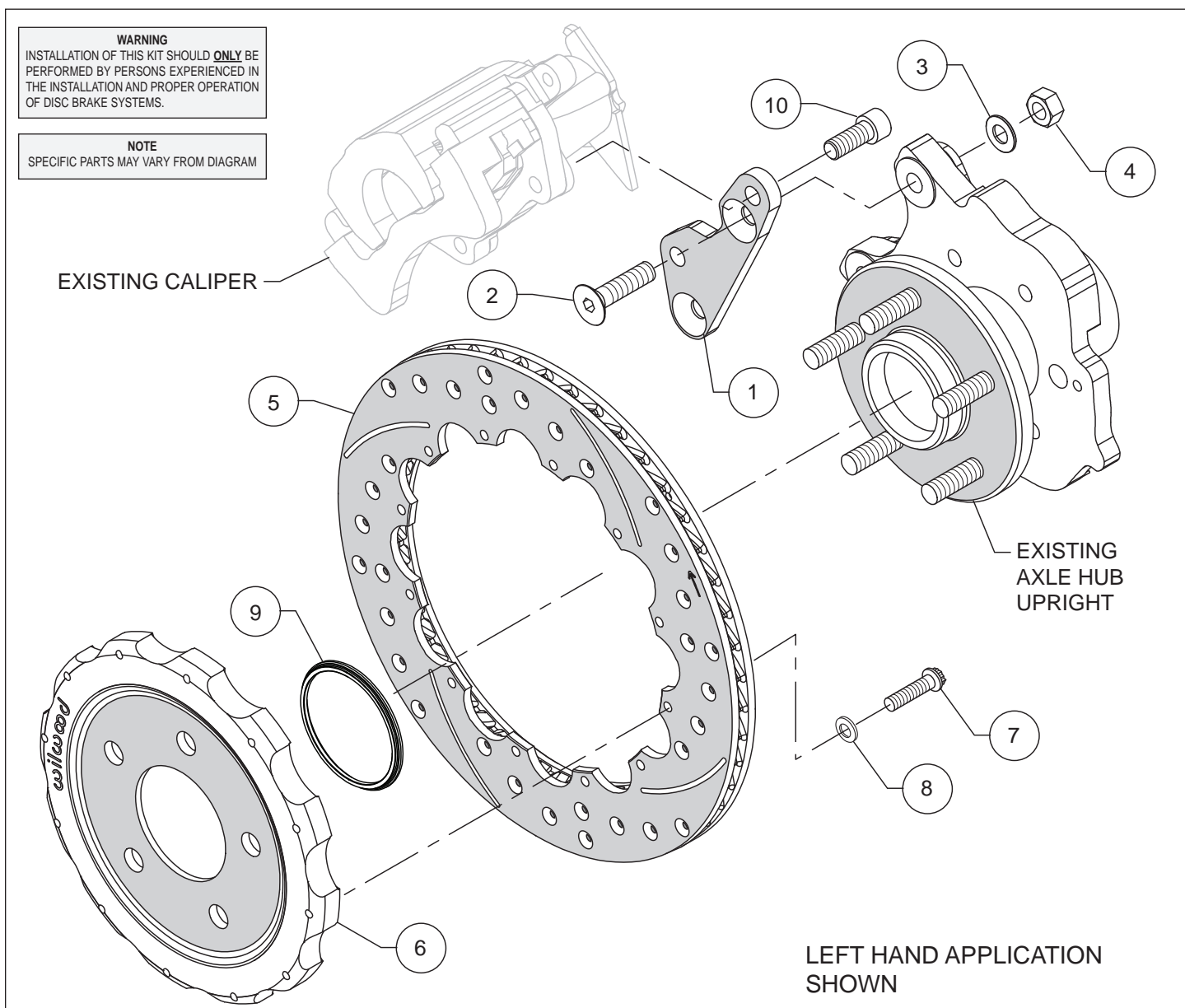


Figure 1. Typical Installation Configuration

Parts List

ITEM NO.	PART NO.	DESCRIPTION	QTY
1	249-12472/73	Bracket, Caliper	1
2	230-12476	Bolt, M12-1.75 x 50 mm Long, Flat Head	4
3	240-0476	Washer, .477 I.D. x .922 O.D. x .063 Thick	4
4	230-12477	Nut, M12-1.75, Hex	4
5	160-12469/70-BK	Rotor, .75" Thk x 12.88" Dia, 12 x 8.75" Bolt Circle (one each, right and left)	2
6	170-12471	Hat, .090 Offset	2
7	230-8037	Bolt, 1/4-20 x .75 Long, 12 Point	24
8	240-11240	Washer, .265 I.D. x .500 O.D. x .063 Thick	24
9	300-11532	Rotor Registration Adapter	2
10	230-12457	Bolt, M12-1.75 x 30 mm Long, Socket Head	4

NOTES:

Part Number 230-8008 Bolt Kit, rotor to hat, includes part numbers 230-8037, 240-11240

Part Number 230-12474 Bolt Kit, bracket to spindle, includes part numbers 230-12475, 230-12476, 230-12477 and 240-0476

General Information, Disassembly, and Assembly Instructions

- Installation of this kit should **ONLY** be performed by persons experienced in the installation and proper operation of disc brake systems. Before assembling this Wilwood rear disc brake kit, double check the following to ensure a trouble free installation.

- Make sure this is the correct kit to fit the exact make and model year. This kit is specifically designed as a direct bolt-on OE replacement for 2005 through present model year Ford Mustang GT.

- Verify the hat pattern in this kit matches the lug pattern of the vehicle's axle hub.

- Verify your wheel clearance using Figure 2.

- Inspect the package contents against the parts list to ensure that all components are included.

Disassembly Instructions

- Disassemble the original equipment rear brakes:

Raise the rear wheels off the ground and support the suspension according to the vehicle manufacturer's instructions.

Remove the wheel, caliper, and rotor. Do not disconnect the brake line.

Remove all nicks or burrs on the axle flange face, registration diameter, and caliper mount lugs on the upright that may interfere with the installation of the new components.

Clean and de-grease the axle flange and upright.

Assembly Instructions (numbers in parenthesis refer to the parts list and Figure 1 on the preceding page):

- The caliper mount bracket (1) should initially be installed with clean, dry threads on the mounting bolts. Orient the bracket as shown in Figure 1 and install using bolts (2) washers (3) and nuts (4). Temporarily tighten the mounting bolts. **NOTE: The bracket must fit squarely against the mounting points on the axle hub.** Inspect for interference from casting irregularities, machining ridges, burrs, etc. Remove bolts one at a time, apply red *Loctite*® 271 to threads, and torque nuts to 70 ft-lb.

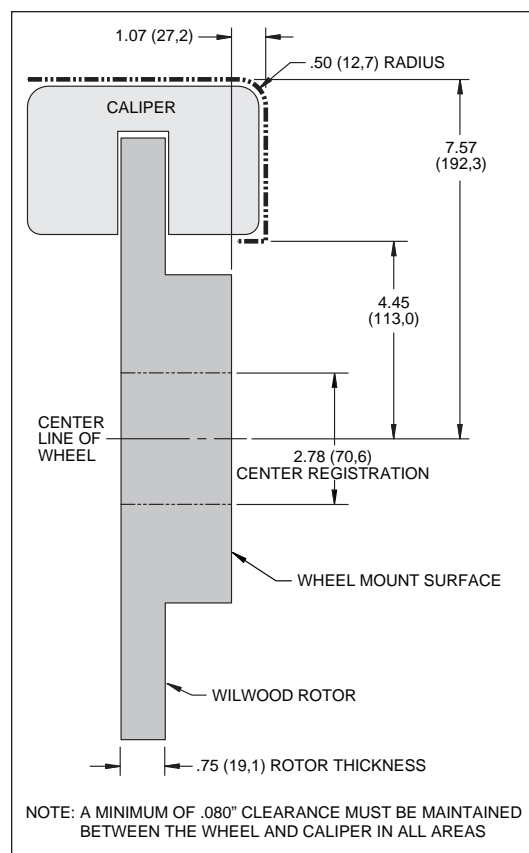


Figure 2. Wheel Clearance Diagram

Assembly Instructions (Continued)

- Orient the rotor (5) and the hat (6) as shown in Figure 1. Attach rotor to hat using bolts (7) and washers (8). Using an alternating sequence, apply red *Loctite*® 271 to the threads, and torque to 155 **in-lbs**. For an added measure of security, the bolts may be safety wired using standard 0.032 inch diameter stainless steel safety wire as shown in Figure 3.

- Slide the rotor registration adapter (9) onto the axle register on the axle flange with the smaller O.D. facing toward the hat/rotor (5/6). Slide the hat/rotor assembly onto the axle hub. **NOTE:** *The hat must fit flush against the axle hub flange or excessive rotor run out may result.* Install three lug nuts (finger tight) to keep the rotor in place while continuing with the installation.

- Mount the caliper (Shelby supplied) onto the caliper mounting bracket (1) using bolts (10) as shown in Figure 1. Torque caliper mounting bolts to 70 ft-lb.

• **NOTE:** *For best performance and service life, Wilwood recommends using new brake pads with new replacement rotors.*

- Remove the lug nuts that were holding the rotor in place. Install the wheel and torque the lug nuts to the manufacturer's specification. Ensure that the wheel rotates freely without any interference.

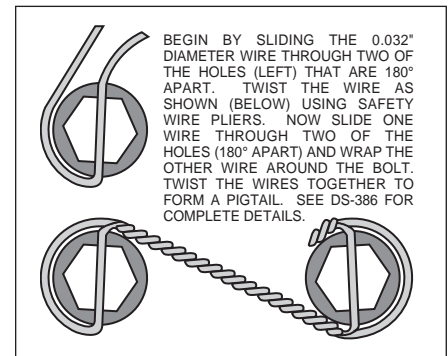


Figure 3. Safety Wire Diagram

Additional Information and Recommendations

- Fill and bleed the new system with Wilwood Hi-Temp° 570 grade fluid or higher. For severe braking or sustained high heat operation, use Wilwood EXP 600 Plus Racing Brake Fluid. Used fluid must be completely flushed from the system to prevent contamination. **NOTE:** *Silicone DOT 5 brake fluid is **NOT** recommended for racing or performance driving.*
- Properly bleed the brake system according to the vehicle manufacturer's instructions, generally beginning with the caliper farthest from the master cylinder. **NOTE:** *When using a new master cylinder, it is important to bench bleed the master cylinder first.*
- Test the brake pedal. It should be firm, not spongy and stop at least 1 inch from the floor under heavy load.
If the brake pedal is spongy, bleed the system again.

If the brake pedal is initially firm, but then sinks to the floor, check the system for fluid leaks. Correct the leaks (if applicable) and then bleed the system again.
- **NOTE:** *With the installation of after market disc brakes, the wheel track may change depending on the application. Check your wheel offset before final assembly.*
- If after following the instructions, you still have difficulty in assembling or bleeding your Wilwood disc brakes, consult your local chassis builder, or retailer where the kit was purchased for further assistance.

Brake Testing and Pad Bedding

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.

PAD BEDDING STEPS:

Once the brake system has been tested and determined safe to operate the vehicle, follow these steps for bedding of all pad materials and rotors. This procedure should be performed on a race track or other safe location where you can safely and legally obtain speeds up to 65 MPH while also being able to rapidly decelerate.

- Proceed with a series of 8-10 hard stops from 55-65 MPH down to 25 MPH allowing 20-30 seconds of cool down time between each stop.
- Drive at a moderate cruising speed, with the least amount of brake contact possible, until most of the heat has dissipated from the brakes. Avoid sitting stopped with the brake pedal depressed to hold the car in place during this time. Park the vehicle and allow the brakes to cool to ambient air temperature.

Associated Components

<u>PART NO.</u>	<u>DESCRIPTION</u>
260-1874	Wilwood Residual Pressure Valve (2 lb for disc brakes)
260-1876	Wilwood Residual Pressure Valve (10 lb for drum brakes)
260-8419	Wilwood Proportioning Valve
290-0632	Wilwood Racing Brake Fluid (Hi-Temp° 570) (12 oz)
290-6209	Wilwood Racing Brake Fluid (EXP 600 Plus) (16.9 oz)
340-1285	Wilwood Floor Mount Brake Pedal (with balance bar)
340-1287	Wilwood Swing Mount Brake Pedal (with balance bar)
260-6764	Wilwood 3/4 inch High Volume Aluminum Master Cylinder
260-6765	Wilwood 7/8 inch High Volume Aluminum Master Cylinder
260-6766	Wilwood 1 inch High Volume Aluminum Master Cylinder
260-4893	1-1/16 inch Tandem Master Cylinder (aluminum housing)
250-2406	Mounting Bracket Kit (tandem master cylinder)
260-8555	Wilwood 1 inch Aluminum Tandem Chamber Master Cylinder
260-8556	Wilwood 1-1/8 inch Aluminum Tandem Chamber Master Cylinder
350-2038	1971 - 1973 Pinto Rack and Pinion (new, not rebuilt)
270-2016	Quick Release Steering Hub (3/4 inch shaft)
270-2017	Quick Release Steering Hub (5/8 inch shaft)