BRAKE PAD INSTALLATION GUIDE

The installation guide is for reference only. Please refer to the vehicle's service manual or professional installer for complete instructions.

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Ninety percent of the brake pad changes you make during the life of your vehicle will be to the front brakes because they do 60% to 70% of the braking. On most cars, you can look through the openings on the outside of the wheel rim assembly to see the pads. On some vehicles, you must remove the tire to see the pads. Look at it from above at the side. The pad will be pressed against the shiny metal rotor.

The best way to inspect a pad is through visual inspection. If the pad depth is less than 3/16 inch, plan on replacing it soon. If it's less than 1/8 inch, you should change the brakes immediately.

You can also tell if the brakes should be replaced if you hear noise from the wear sensor on the pad. However, some parts do not have wear sensor clips, i.e., noninterchangeable clips that are mounted on the brake pad to tell you when the pads need to be changed. If you hear a scraping sound when you apply the brakes, then you are due for a brake change. (If the sound is more like a metal rasp or grinding sound, then you’ve already damaged your rotors and need to fix the brakes immediately.)

STEP 1 HAVE THE FOLLOWING PARTS AVAILABLE BEFORE YOU START THE BRAKE CHANGE:

- Power Stop Performance Brake Pads
- Power Stop Cross-Drilled & Slotted Performance Rotors
- DOT 3 or 4 Brake Fluid (as recommended by your owner’s manual)
- High-Temperature Brake Pad Lubricant
- C-Clamp, Car Jack & Jack Stands

STEP 2
Block the rear wheels so the car won’t roll once you jack it up. Put the car in park and set the parking brake firmly.

STEP 3
Before jacking the car up off the ground, set the parking brake and loosen the lug nuts on the wheels just enough to break them free. Work them off just enough until they loosen their resistance and become easy to turn with the tire iron. Be sure to jack the vehicle on a level ground, and use jack stands designed to support the weight of the vehicle. Raise the car and support with jack stands placed at the manufacturer’s recommended lift points. Usually the frame support area is immediately to the rear of the front wheels.

STEP 4
Remove the lug nuts and the wheel. It is best to work on one wheel at a time, leaving the other side intact as a point of reference. As a safety precaution, roll the wheel off the car, between the jack stands, and set it down beneath the engine’s Remember in the event of a faulty jack stand.

STEP 5
Review the brake components. A disc brake assembly is composed of a caliper, two brake pads, and a rotor. The caliper works on pressurized brake fluid through a piston in the caliper. The caliper mounting bracket is bolted to the spindle, and holds the brake pads in position relative to the brake rotor. The caliper fits over the pads and is fastened to the wheels with special holding bolts. These bolts usually have dust boots. Once the brake pads are replaced, the caliper piston squashes the pads against the rotor creating friction.

STEP 6
Remove the bolts fastening the caliper to the caliper mounting bracket. Gently slide it out and away from the rotor. Hang the caliper inside the wheel well using a coat hanger, so that the face is not stressed. Do not let the caliper dangle from the brake hose line. Inspect the inside of the caliper and remove the brake pads. Remove the remaining bolts that hold the caliper bracket to the knuckle. Use a wire brush to clean rust from the rack where the pads contact the caliper.

CAUTION: ALWAYS USE JACK STANDS. NEVER ATTEMPT TO WORK ON AN ELEVATED VEHICLE HELD IN PLACE ONLY BY A HYdraulIC JACK.

NOTE: IF YOU ARE NOT REPLACING OR TURNING DOWN THE ROTOR, THEN INSTALL 2 LUG NUTS BACKWARDS TO HOLD THE ROTOR IN PLACE WHEN REMOVING THE CALIPER.
STEP 8
The next step is to move the piston back inside the caliper. The piston has extended as the pad material wears. With new thicker pads, you must return the piston back inside the caliper body to give the thicker pads room for installation. First check open the bleed screw on the caliper to allow brake fluid to be released. Place a container under the caliper to collect the fluid. Get a large Co2-damp, place the used brake pad over the face of the piston to protect the surface from marring, and work it back that way. As you form the handle on the clamp, it will increase pressure on the piston, until it becomes flush with the surrounding metal. Brake fluid will be released through the bleeders. Then loosen and remove the O-ring. Close the bleed screw for a second, if you cannot open the bleed screw, then push the Co2-damp in slowly to prevent unsafe back pressure and damage to the ARS modulator, brake valve or master cylinder. It may be necessary to drain some fluid from the master cylinder reservoir.

STEP 9
Check and replace all hardware as needed. Improper hardware can lead to noise or poor brake pad performance. Clean the caliper rails or hardware slides where the pads make contact. Clean the hub rubbing surface with a wire brush. Rust or debris on the hub can cause rotor run out and lead to wheel vibration.

STEP 10
Resurface the rotor or replace the rotor. Most auto retailer stores provide rotor resurfacing. After machining, use a 120-grit sandpaper on the rotor in a light circular motion to give a non-directional finish. Clean the rotor with mild soap and wipe clean with a Tri-Free cloth. Do not use petroleum-based cleaners.

STEP 11
Install the new rotor and remove the caliper bracket (not the piston pad) to the spindle knuckle arm. Use brake grease to lubricate the edge of the brake pad backing plate where it touches the caliper bracket sliding surfaces. Do not put grease on the friction material. The lubricant also goes between the brake pad backing plate and the piston or caliper back. Don’t over-wax this. If you don’t do it, you may get brake noises when you apply the brakes.

STEP 12
With the caliper bracket bolted to the spindle, reinstall the brake pads. Slide the caliper over the pads and rotor and line up the bolt holes. Belt the caliper to the caliper bracket. Torque caliper and caliper bracket bolts to manufacturer specifications.

STEP 13
Wash the brakes to reveal rust from the brake line. First make sure the brake fluid is full to the top. When you open the bleed screw, have a buddy press down slowly on the pedal as you maneuver the bleed screw. Before it releases the pedal, close the bleed screw. This prevents sucking air back into the brake caliper. Repeat this process until you see a constant stream of fluid with no bubbles, then close the bleed screw. It usually takes 5 or 6 pumps of the pedal to clear the air and old brake fluid out of the line. You may need to pump a few times more if you haven’t changed your brake fluid in a long time. Check the master cylinder reservoir and replace brake fluid to the MAX line. Do not overtight the reservoir. Pump the brakes several times to seal the brake pads to the rotor and check the reservoir one more time. Top off as necessary.

STEP 14
Replace the wheel and lug nuts. Drop the car to the ground to finish tightening the bolts to the manufacturer’s specified bolt torque. Alternate tightening sequence by going to the opposite side of the hub. A torque gun is not recommended.

STEP 15
Break-in New Brake Pads and Rotors as Shown Below.

BREAK-IN PROCEDURE

1. 5 aggressive decelerations from 40mph to 10mph in rapid succession without letting the brakes cool and do not come to a complete stop. If you’re forced to stop, either shift into neutral or give room in front so you can allow the vehicle to roll slightly. The rotors will be very hot and holding down the brake pedal will cause the pad to create an imprint on the rotor, causing UV/Disc Thickness Variation Issues. Shift into neutral and keep your foot off the brake pedal.

2. 5 moderate decelerations from 35mph to 5mph in rapid succession without letting the brakes cool. You should expect to smell some resin as the brakes get hot.

3. Drive Slowly to Cool Down Your Brakes

The break-in procedure is critical to brake performance. The reason for a proper break-in is to establish an even layer of frictional material deposited on the rotors from the brake pads. It is very important that this initial layer of frictional material is evenly distributed.