

“My Brakes Are Making Noises. Do I Need New Brakes?”

The piercing, high-pitched squeal of defective brakes. When you hear it next to you from another car, it's annoying. When you hear it from your own car, it's scary.

When is a little squealing just a natural mechanical sound of brakes doing their job, and when is it a sign of serious mechanical failure?

Many mechanics will say that squealing from your brakes – even brakes on a reasonably new car or new brakes recently installed on a used car – is “normal.” That's a misnomer. The condition is never "normal," but it is "common."

Modern brake pads (the plates used to protect the main metal parts in your braking system) and their linings are no longer made of asbestos (thanks to the EPA), but of tiny slivers of metal and other materials compressed tightly together. These high-tech brake pads and linings are much harder than asbestos. They have excellent friction qualities, but, unfortunately, they often make noise because of the metal fibers contained in them. If you rub metal on metal, even if it's nearly microscopic metal fibers, you can imagine how you're going to hear some squealing.

The trick is to determine whether the noise is a problem or just an annoyance.

Sometimes the sounds are the result of tiny variations in the surface of the pad. The newer type pads often don't conform as easily to the surface of the rotor. For example when the perfectly sized asbestos pad (with its snug fit to your brake parts) was replaced by the high-tech metal fiber pad, either the newer pad wasn't made to fit quite as well – or the metal fibers don't adhere to the brake part as efficiently.

In such cases, the imperfect fit will leave tiny gaps in the brake pad's service, leaving room for slight friction that can give rise to a squeal. In such cases, it's not a major problem and not worth worrying about as a driver.

A squeak or squeal may also be the result of vibrations. If you've had a new set of brake pads installed and are hearing this sound, have the brake work re-checked by the mechanic that did the work. Chances are something was not installed properly. They should be looking for loose parts.

Changes in temperature or changes in the moisture content of the atmosphere also affect friction characteristics that can set off a round of squeaking and squealing. In these cases, intervention by your mechanic isn't necessary.

However, when should you consult a professional to look at your brakes?

- ✓ Drip, drip, drip. First, look down where car was parked after you move out a parking space. Are you leaking brake fluid? You're checking for stains or small puddles of

fluid that don't look like oil or coolant. Motor oil will probably have a brown or black look and feel slimy to the touch. Coolant will appear green and more watery. Brake fluid can look like fresh motor oil, but it doesn't have that slimy feel. You'll need to get your hands dirty, but check those puddles. If you're leaking brake fluid, consult a mechanic. You may need to check the seals or bleed the brake lines.

- ✓ Squeal, squeal, squeal: If the noise from your brakes is constant, you probably have a problem. Consult a mechanic immediately. He or she will check the brake calipers, brake shoes, master cylinder, etc. The cost of the potential repair will vary according to the fault.
- ✓ Scrape, scrape, scrape: One sound you should never hear from your brakes is the horrible scraping of metal on metal. In such cases, you have no brake pad left and are literally stopping your car by grinding your metal brake parts against each other. After only a few instances of this metal on metal friction, your brakes parts will be absolutely ruined. As soon as you hear such metallic scraping, call a tow truck and get to a mechanic. The money you spend on the tow will be nothing compared to the money you'd spend on an entire new brake system.

So, your brakes requires a little detective work on your part. A sharp ear, a few dirty fingernails and some common sense will keep you going – or, in this case, stopping – for countless miles to come.