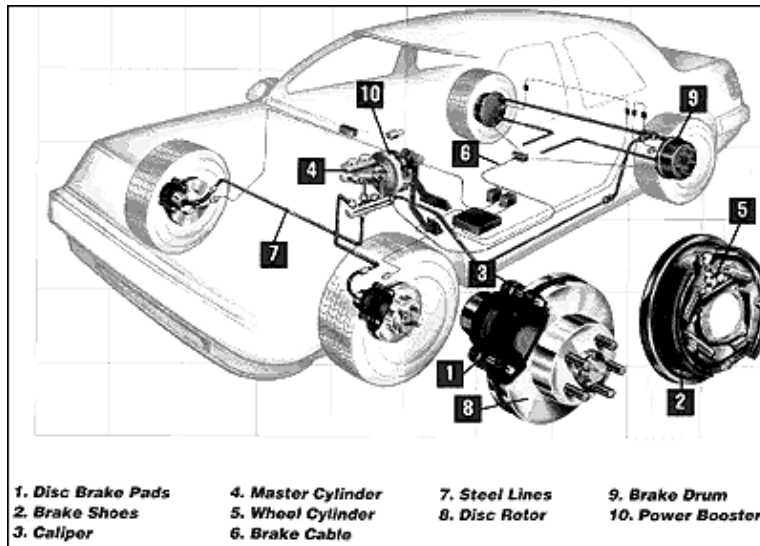


## **Beware of the Cheap Brake Job**

These days we all are looking to save money any way we can. However you may want to think twice before going cheap on your next brake job. It irritates me to see those ads on television, in the papers, and in coupon books that state \$59.99 brake job or some other ridiculously low price. These types of ads have trained the motoring public to think that brake jobs consist of installing a new set of brake pads and resurfacing the rotors. In my opinion these offers are just an old fashioned bait and switch. I decided to write this for our *"Tools and Tips"* page because I recently had a salesman try and get me to run an ad stating some miraculously low price for brake jobs and I just couldn't do it. I felt it was misleading to my customers when I can almost guarantee that, except in some rare cases, we would have to do additional work or would need additional parts to do the job correctly. With today's cars it is rare to find a brake system in such good shape that all it needs is a set of pads and resurface the rotors. I would bet that in 99% of these "deals" the customer is either upsold the parts needed to do a proper brake job resulting in a much higher bill or the vehicle receives a substandard brake job. Where the customer is back at the offending shop with brake problems a short time later. The fact is that the braking system on your vehicle consists of a lot more than a set of pads and a couple rotors. True, these are the most well known parts but we must not forget about the brake calipers, flexible brake hoses, and brake fluid. These components are often believed to be good for the life of the vehicle. This is not true. These are moving parts that require maintenance and occasional replacement. This is why at Overbecks we will not "menu" price brake jobs. We evaluate each vehicle individually and give you an accurate price to do a proper brake service.



**Figure 1 Typical brake system layout**

Brake calipers usually consist of a casting that makes up the body of the caliper, a carrier or slide assembly that holds the caliper and allows the caliper to move or float to compensate for brake pad wear; and a piston that is precisely fitted in the bore of the caliper body and is the part that actually applies the clamping pressure to the brake pads and rotor. The piston does this by transferring the pressure that comes from your foot on the brake pedal into the master cylinder, then out of the master cylinder in the form of hydraulic pressure in the brake lines to the back of the piston in the caliper. The piston holds back the hydraulic pressure with a series of seals and o-rings. It is important that the piston moves freely in the caliper bore and does not leak. This combination of parts that make up the brake caliper is exposed to the elements and all of the associated unfriendly things the bottom of your car sees. As a result the years go by, the miles rack up and the performance of the brake caliper begins to falter. The slides get sticky and the seals and o-rings begin to deteriorate. This can cause braking performance issues such as uneven pad wear, brake pull where the vehicle will dart left or right when the brakes are applied, or increased brake noise or squealing during brake application, leaving the customer to wonder why they got 50, 60, 70,000 miles on their first set of brakes and only 30,000 miles on the replacement “brake job” .

Another often overlooked component of the braking system are the flexible hydraulic brake hoses. These are rubber hoses that bring the hydraulic fluid from the solid steel brake lines mounted on the body of the car to the brake caliper mounted on

the hub. These hoses are in constant motion as you roll down the road. Every time you turn the steering wheel or hit a bump in the road they are moving. Not to mention they are exposed to the same nasty environment that the brake calipers are. Over the years, the hoses that hold thousands of pounds of hydraulic pressure will begin to form cracks visible from the outside of the hose. However more often than not the hoses will begin to deteriorate from the inside out causing braking performance issues including soft or spongy pedal, a brake pull, or a brake drag where brake line pressure will continue holding the brake on even after you have taken your foot off the pedal causing increased pad wear and lower fuel economy. We recommend replacement of hoses during any brake service if they have been on the car for over 60,000 miles.

Many people don't know that brake fluid needs to be changed just like the other fluids in your car. Brake fluid is hygroscopic, meaning the fluid will absorb water over a period of time. This is actually a good thing. Moisture naturally finds its way into brake systems and if the brake fluid did not absorb it the water would collect in the master cylinder and in the calipers. Then under extreme heat situations, such as during a panic stop or descending long or large hills the water will boil causing the brake pedal to drop to the floor, effectively losing braking ability. So brake fluid needs to absorb water. However this can cause a number of problems if the fluid is not maintained. The accumulated moisture in older brake fluid can lower the boiling point of the fluid causing brake fade requiring longer distances to stop and increased pedal effort. More often, these days we see a lot of damaged brake components as a result of moisture causing corrosion in the internal brake components. Anti lock Brake units can be ruined, steel brake lines can rust, the machined bores of the master cylinder and caliper pistons can become rusted and pitted. We recommend that the brake fluid be flushed at every brake service, 60,000 miles, or when it turns the color of iced tea or cola. Clean fluid should be clear.

"Can't you just turn the rotors?" This is a question we often hear. I think this comes from back in the days of full service gas stations and leaded fuel. Don't get me wrong, in some cases, brake rotors can be turned but a lot of times there is just no point. Turning or resurfacing the rotors means to use a lathe to remove a layer of material off of the rotor exposing a fresh perfectly flat and true surface for the new brake pads to ride on. The days of turning the rotors on a lathe located at the corner

auto parts store is over. The only way to properly resurface brake rotors on modern vehicles (and the only one most vehicle manufacturers endorse) is to use an *on the car brake lathe*. This ensures that the rotor surface is perfectly flat and true to the hub virtually eliminating the possibility of brake pulsation or wobble in the steering wheel when you hit the brakes. Rest assured that Overbeck Auto Services has one of the only manufacturer recommended brake lathes on the market today manufactured by Pro Cut. But again, “Can’t you just turn the rotors?” In most cases, no. The vehicle manufacturer specifies a minimum rotor thickness to ensure proper brake performance. Today’s cars are made to be lighter thus more fuel efficient and better handling. As a result the thickness of the rotors has been minimized from the start, meaning there is less material to machine off with the brake lathe. In most cases when a vehicle is due for brakes, the rotors have already worn down a bit due to the natural wear that occurs between the brake pads and rotor. Further machining or thinning of the rotors will result in a rotor that is under or just at the minimum manufacturer specified thickness. So in most cases, rotor replacement is the best way to ensure a proper, safe and reliable brake job.

Last, but not least, Brake Pads. What kind of brake pads do you think you are getting when you purchase a \$59.99 brake job? Did they come from your vehicles manufacturer? Do they meet the manufacturers specs for the brake material compound? Or do they just happen to fit your car. I personally love the “Lifetime Warranty” brake parts chain stores offer. They purposely put cheap low quality parts of your car that they know are going to wear out quickly so they can put more cheap pads on later. So you think “Big deal, as long as I am not paying for it.” Think again. I bet in over 90% of the cases where a chain store replaces the “lifetime warranty” pads, the customer is sold something else while they are there. These offers do nothing more than generate door traffic, so they can nickel and dime you to death. At Overbecks we believe in fixing it once and fixing it right. We only recommend the use of OE (original equipment) or OE equivalent brake pads to our customers. These pads are tested extensively by the manufacturers to give you the proper brake pedal feel, stopping power and pad life.

So what does all of this mean? Most proper brake jobs entail far more than just a cheap set of pads and resurfacing rotors. To do a proper brake job the whole braking

system must be evaluated and treated because we are returning the system back to original, like new performance. This is the only way to ensure a safe, reliable brake job that will provide many miles of worry free performance. Lets face it, you got 50 - 70,000 miles on your first set of brakes, why not get the same out of the replacement set. The last thing you want is to do is save a couple bucks today, only to have reoccurring problems requiring you to spend more money and time in the shop. Remember brakes are your life!