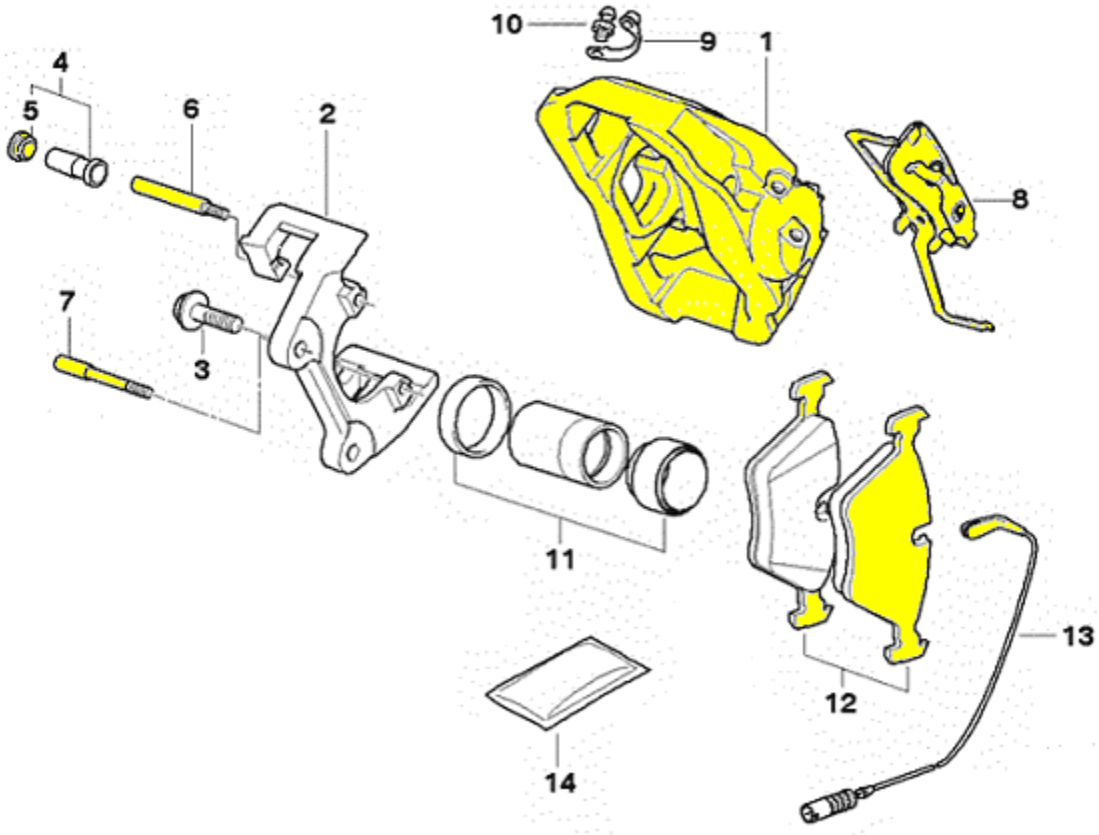
BMW E9x Brake Pad Replacement
Do It Yourself

What you need:

- ❑ Jack, preferably with jack pad adapter for jacking slot
- ❑ Jack stand, preferably with jack pad adapter for jacking slot
- ❑ 8mm socket with ¼” driver ratchet wrench (for removing filter atop the master cylinder)
- ❑ 9mm/11mm box end wrench (for brake bleeders)
- ❑ 7mm allen socket and a 3/8” drive ratchet wrench
- ❑ A 6" (or larger) C-clamp, or a piston retraction tool
- ❑ Medium or large Channel-lock pliers, or large standard pliers
- ❑ Something to rest the caliper housing on, or a short bungee w. hook ends to hang the caliper
- ❑ Replacement pads
- ❑ Rubber gloves
- ❑ Brake bleeding apparatus
- ❑ Zip ties or safety wire
- ❑ Can of brake parts cleaner and a rag

Exploded view of the front caliper assembly:



For this procedure, you will unbolt the caliper housing (#1) to remove and replace the pads (#12). The caliper housing is bolted to the carrier (#2) by two retaining bolts (#6, #7). NOTE: The retaining bolts are of different lengths - the longer of which is on the bottom. Once familiar with this procedure, it should only take about 20 minutes per side.

STEP 1. Jack up car from the front jacking point, high enough to lift both the front and rear. Place a jack stand under the rear jacking point. Remove the front and rear wheels. Remove filter box from atop master cylinder. The remaining steps pertain to the front brakes, however, the rear is very similar (and a little easier).

STEP 2. Remove the pad wear sensor that is clipped onto the inner brake pad. Just pull on it and it will come out. Be careful not to lose the retaining clip that secures the sensor in place (it should stay in the pad's backing plate). These clips are not sold separately, and if you lose one, you'll need to buy a new sensor. You can release the fluid line from the suspension to provide more clearance.

STEP 3. Remove the large anti-rattle spring (#8) using a pair of channel locks or sturdy pliers to pry back one end at a time (I start with the top). If you do this, it should not spring out of place, decreasing risk of injury. Do not use your fingers. Since there is a chance the spring might pop out, wear safety glasses.

STEP 4. Remove the two plastic caps (#5) that protect the retaining bolts. You should be able to do this with your fingers. If not, use the end of the spring to pry it.

STEP 5. Unscrew the retaining bolts using the 7mm allen socket and 3/8” ratchet. The picture below shows a standard allen wrench, which makes it a little more difficult to get proper leverage:

A more detailed view on an allen wrench inserted in to the retaining bolt:

A view of a retaining bolt upon removal:

STEP 6. You may need to retract the caliper piston if the pads you are removing have worn significantly thinner than the pads you are installing. You can do this while the caliper is still on the rotor, or if you have a piston retractor tool, you can do it after you remove the caliper housing.

STEP 7. Place one end of a 6” (or larger) C-clamp onto the pad itself and the other end on the back of the caliper housing. Be careful not to place it on the bleeder valve, fluid line, or anything else that can be damaged. Use the cast housing itself as show in the picture.

STEP 8. Slowly tighten the C-clamp. You will see the caliper housing move away from the rotor and toward you as the piston retracts. This should not require too much effort. If it does, you are doing something wrong. When the piston goes all the way back in, you'll feel a distinct change in resistance because it cannot go any further.

NOTE: Keep an eye on the brake fluid level in your reservoir. As you push the piston back, it will rise slightly and should not be allowed to overflow.

STEP 9. Grab the caliper and move it away from the rotor and the carrier. Be careful with the fluid line (don't tug on it). Place an object beneath the caliper housing to support it (as seen in the next picture), or use a short bungee cord to hang it from the suspension.

STEP 10. Remove the pads. They are held in the caliper and the piston by springs at this point and will come out when you pull on them. Here, you can see the caliper housing with the

piston pushed almost all the way back.

STEP 11. Clip the replacement pads into the piston and the caliper housing.

STEP 12. Place the caliper housing back on the carrier and the rotor. Make sure the caliper housing is properly aligned, so that the pads are covering the entire swept area of the rotor. You might need to wiggle the caliper housing a little before screwing in the retainer bolts.

STEP 13. Insert and tighten the two retaining bolts (install the bottom one first as the fluid line can get in the way of the top one (do not over torque them).

STEP 14. Insert the anti-rattle spring. Again, use the channel lock or large pliers to twist it into place. Clip the brake wear sensor back into the inside pad.

STEP 15. Check all bolt, clips, springs, and fittings to make sure they are tight and properly installed, including the sensor wire that slips into the bleeder cap. If your aftermarket pads are not provisioned for the pad wear sensors, simply tie them up and out of the way of the wheel using zip ties or safety wire. Use brake parts cleaner to remove dirt or fluid that may have gotten on the rotor and caliper.