# TECH SESSIONS WITH HARRISON MOTORSPORTS
## *BRAKE PAD/ROTOR REPLACEMENT*
## (All BMWs)

One of the most crucial and fundamental systems on your BMW is the braking system. BMWs are known for their superior braking ability; proper and routine maintenance of the brakes is required to keep your vehicle stopping smoothly and reliably each time. This article will cover installation of brand new rotors and pads.

While it is not necessary to replace pads and rotors at all four corners simultaneously, it is required that pads and rotors are replaced in pairs. If the left front pads and rotors and changed, the right front pads and rotors must also be changed, so as to maintain balance in the car's braking.

The first step to replacing pads and rotors is to jack your BMW up, and support it on jack stands. Never work under a vehicle unless it is supported by jack stands, not the jack itself.

Once the wheel is removed, you will see a metal clip that is mounted vertically to the caliper. This is the anti-rattle spring. Pry from the center of the hub assembly outward. The caliper guide bolts are located on the rear of the caliper. After removing the anti-rattle clip, reach around to the back of the caliper and locate these bolts. They may be covered by a rubber boot. You will need a 7mm Allen wrench to remove the bolts. If your vehicle has a brake pad wear sensor, disconnect it and remove the wiring from its holder. Once these bolts are removed, you can slide the caliper assembly up and off the rotor. Be careful to not let the caliper hang by the brake line. Support the caliper with a sturdy metal hanger.

Now you can remove the rotor. You will need a 5 or 6mm Allen wrench to remove the recessed bolt holding the rotor on. You may want to use an impact wrench, as this bolt is usually very tight.

Now you can remove the old pads and install the new pads. Make sure the caliper piston does not push back into the caliper while the pads are removed. Residual hydraulic pressure may cause this; the best way to prevent it is to hold the piston in place with a wooden block. Install the new brake pad sensor into the cutout on the pad. You must replace the wear sensors if the brake lining dash indicator light turned on prior to pad replacement. On the front axle, install the sensor on the left wheel. On the rear axle, install the sensor on the right wheel. Make sure to route the wire out of the way of any moving suspension parts.

Coat the backs of the pads with brake lube, and reinstall into the caliper. Be sure to install the pads with the correct side facing towards the rotor! Install the caliper back onto the rotor, and tighten the caliper guide bolts. Mount the anti-rattle clip, pump the brake pedal about 8-10 times, and remount the wheel. The procedure is the same for all corners.

Finally, bed the new pads and rotors per the instructions on the boxes. This usually requires near complete stops from ~30 mph, brake cooling time, and then additional harder stops from ~50mph, and additional cool-down time.