

TECHNICAL WHITEPAPER:

Removal of Uneven Pad Deposits with Aggressive Friction

Uneven pad deposits can often be effectively removed from rotors by using a pad compound that is more abrasive at lower temperatures. StopTech has found the Hawk 9012 (Hawk Blue) compound to be particularly effective in removing uneven pad deposits from rotors. Other higher temperature performance pads may also effectively “scrub” off uneven pad deposits, however we have found the Hawk 9012 to be the best for this application.

WARNING: Only keep abrasive pads in place long enough to remove the uneven deposits. Leaving pads that are abrasive at low temperatures in service on the street longer than necessary will dramatically wear the rotors.

Before installing the replacement pads, characterize the vibration issues you are trying to cure. Drive the vehicle in a safe area at different speeds using different pedal efforts to get a good feel for where the vibration is most noticeable. Make notes if necessary to track progress of vibration abatement.

After characterizing the vibration, replace the pads with the Hawk 9012 or a suitable alternate pad. The key to effectively using the pads in their abrasive mode is to brake aggressively enough to remove the uneven deposits, but not allow the brake system to get hot enough to have the Hawk 9012 pads start transferring material to the rotor. A series of 3 consecutive decelerations from 60 to 30 mph is a good guideline. The decelerations should be very aggressive (80-90% of the effort needed to engage ABS or lock the tires) with no cool down between the 3 decelerations. After 3 decelerations in a row, allow the system to cool by driving passively and avoiding hard use of the brakes for several minutes. Repeat approximately 10 cycles of 3 each decelerations.

After 10 cycles of 3 decelerations, repeat the original sequence of braking maneuvers that produced the most noticeable vibrations. If vibrations are still present, continue with more cycles of decelerations as described above and re-check the status of the system.

Once the vibrations have been effectively reduced or eliminated, remove the alternate pads from service as soon as possible. **DO NOT RUN THE ALTERNATE PADS LONGER THAN NECESSARY AS EXCESSIVE ROTOR WEAR WILL OCCUR.** Keep the pads in service long enough to do the job, but monitor rotor wear if more than 30-40 cycles of 3 decelerations are performed.

After removal of the alternate pads, immediately clean any brake dust and debris from the vehicle as a high metallic content of some high performance pads may cause damage to wheel and body finishes if allowed to remain in place, especially if they get wet.

The rotors will have a “bare metal” appearance after using the alternate pads, meaning no pad material is adhered to the rotor face. Replace the pads with the parts you intend to run and re-bed the system as if the rotors were brand new.

The above procedure has about a 75% success rate in effectively removing uneven pad deposits. In some cases, primarily if the rotors were severely over-heated (continued track use) with a vibration present, hard spots on the rotor may cause a return of the vibration as the rotor begins to wear. The only effective way to save a rotor with hard spots is Blanchard grinding. StopTech does not offer this service, and it may be less expensive to replace the rotor if hard spots are present.

If you are using the Hawk 9012 pads supplied by StopTech on a return basis, please return the pads to StopTech in the packaging they were shipped in. Make note of the order number on the packing slip with the pads or include a copy of the paperwork with the pad return.

The best way to avoid uneven pad deposits is proper selection and bed-in of pads. The most common cause of uneven pad deposits and associated vibration is use of street performance pads on the track.

Please contact StopTech Technical Support (310-325-4799 X 105 or support@stoptech.com) with any questions regarding this procedure.

by Matt Weiss of StopTech



Stoptech is the performance engineering and manufacturing division of Centric Parts. It is the leader in Balanced Brake Upgrades for production cars and has three patents in basic brake technology and one other pending. With a worldwide network of resellers, StopTech's product line includes Balanced Brake Upgrades for approximately 450 applications featuring StopTech's own six-, four- and two-piston calipers, two-piece AeroRotor Direct Replacement Kits, braided stainless steel brake lines and slotted and drilled original-dimension rotors. StopTech also stocks a wide range of performance brake pads. The company's website, www.stoptech.com, is a clearinghouse of performance brake information, and provides details on StopTech products.

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