

Rotor Seasoning for Street or Light Track Applications

The first step in preparing the brake system for duty is to “SEASON” the rotors. The most visible effects are that of burning the machine oils from the surface of the iron and establishing a wear pattern between the pad and rotor. The most complex task it performs is that of relieving the internal stresses within the material. If you’ve ever poured water into a glass of ice, and noticed the ice cracking, then you’ve witnessed, first hand, the effects of internal stresses. The rotor casting and cooling processes leave the rotor with internal stresses.

By gradually heating the material, the crystalline matrix will reconfigure to relieve these internal stresses. After these stresses are relieved, the rotor is ready to accept the heat of bedding pads. Heating the rotors before they are fully seasoned can result in material deformation due to the unrelieved internal stresses in the material. This deformation may cause a vibration from the brakes. In order to prevent this vibration, all PRO-RACE+ rotors are trued before shipping.

Rotors need to be gradually elevated to “race” temperatures before any severe use. A “nibble”, or slight vibration, normally indicates rotors that were heated too quickly. After initial “Seasoning”, when running your car at open track events or serious canyon carving, you should use the first lap of a session (or first couple miles of open road), to warm the brakes as well as the engine, gearbox, etc. Where an engine turns chemical energy into motion, the brakes turn that motion into thermal energy.... and lots of it! And where there is no cooling system for the brakes as there is for the engine, and there’s not, the brakes could use the courtesy of a warm-up lap.

Remember to ALWAYS WARM THE BRAKES before any heavy use!

Seasoning Procedure:

Before you begin, please note: The following represents the minimum recommended, “Seasoning” process. If your situation offers any opportunity to perform gentle preliminary “Seasoning” outlined in Step 2 below for a longer period of time, this will generally render even better performance and increase further long-term rotor life. Use the vehicle for 5 to 6 days of gentle driving. Use the brakes to the same extent that you used the stock brakes, **DO NOT TEST PERFORMANCE or ATTEMPT HEAVY USE UNTIL ALL ITEMS OUTLINED HAVE BEEN COMPLETED.** It is imperative that excessive heat is not put into the rotors at this stage. They need temperature-cycling to relieve the internal stresses.

Note: Zinc plated rotors (which are an extra cost option) need a couple of extra days of driving to wear through the plating before “Seasoning” actually will begin.

Find a safe location where the brakes can be run to temperature.

Your goal is to gradually increase brake temperatures with progressively faster stops. Start by performing four 60 to 70 mph stops, as you would in the normal course of driving.

Next, perform four medium effort partial stops (about 50 %) from 60 mph down to 15 mph. Follow this with five minutes of freeway driving with LITTLE to NO BRAKING to allow the rotors to cool.

Then, perform four medium-hard effort partial stops (about 75 %) from 60 mph down to 15 mph. Follow this with ten minutes of freeway driving with LITTLE to NO BRAKING to allow the rotors to cool.

Park the car and allow the brakes to cool overnight to ambient temperature. You are now 50 % done with the rotor "Seasoning/Bedding" procedure proceed to STEP 4 the following day.

Return to the safe location where the brakes can be run to temperature.

Make sure the brakes are warmed to full operating temperature and then, perform four medium effort partial stops (about 50 %) from 60 mph down to 15 mph. Follow this with five minutes of freeway driving with LITTLE to NO BRAKING to allow the rotors to cool.

Then, perform four medium-hard effort partial stops (about 75 %) from 60 mph down to 15 mph. Follow this with ten minutes of freeway driving with LITTLE to NO BRAKING to allow the rotors to cool.

NOW, make six HARD partial stops from 60+ mph down to 15 mph or until rotors have reached an operation temperature of between 900 and 1,100° (Note: Temperature paints to accurately measure rotor temperature may be purchased from Baer Racing). Every effort should be made to perform this procedure without locking a wheel. Follow this with ten minutes of freeway driving with LITTLE to NO BRAKING to allow the rotors to cool.

Let the system cool off over night. The rotors are then ready for the next step in Preparing your Brake System: Bedding Pads.