



Brake Tek 2 Objectives

1. You will know the process of bedding in pads.
2. You will know the thermal stresses seen by the rotor.
3. You will know how to take care of your pads and rotors to make them last longer and save money.

Bedding in Pads:

Reasons:

1. Heat cycle the rotor
2. Heat cycle the resins in the pad
3. Mate the surface of the pad to the rotor.
4. Initiate the transfer layer from the pad to the rotor.

Problems:

1. Heat to quickly during initial warm up.
2. Not hot enough during final stages
3. Incorrect pad for heat generated
4. Irregular transfer layer patches causes pedal pulsation.

Thermal stresses seen by the rotor.

1. Rotors Job to absorb intense heat and dissipate that heat.
2. The amount of heat generated in the brakes is a factor of speed and weigh of your car not the pad compound or braking distance.
3. The shorter the braking distance the more time the rotors have to cool without heat being added.
4. Normal thermal stress cracks start in the center as small non-directional "spider" cracks. These are normal and initially are not a concern.
5. These spider cracks will become wider and form into longer directionally radial cracks that migrate to the outer edge and deeper into the rotor.
6. Watch these cracks and replace the rotor when they become larger or if they reach the outer edge of the rotor. Look on the inside of the rotor as well as the outside.

You will know how to take care of your pads and rotors to make them last longer and save money.

Taking care of your brakes saves money

1. Gradually warm up rotors similar to tires, engine oil, transmission, differential. Minimize initial thermal shock.
 - a. Hint: Accelerate then apply the brakes in a straight line repeatedly for the first lap of warm up. Swerving back and forth does not accomplish this it only removes debris from the tires.
2. Keep your rotors as cool as possible.
 - a. Cooler rotors last longer and saves money.
 - b. Install and maintain large cooling ducts to the center of the rotor.
 - c. Brake in short distances allows more time for cooling.
 - d. Cooler rotors also extends the life of the pads. Cooler pads last longer and saves money.