

Bulletin BPI 09-06

Subject: Brake Pad Burnishing

Vehicle Involved: Severe Duty applications, such as police service or before track testing

Condition: After replacing brake pads

Repair Procedure: When replacing brake pads, a “break-in” or “burnishing” procedure is recommended to properly condition both the brake pads and brake rotors for best service and long life.

The burnish process, if done correctly, does at least three things to the pads and/or the rotor:

1. Physically and thermally converts the composition of the pad and/or rotor surfaces.
2. Smooths the asperities (roughness, unevenness) of the mating surfaces.
3. Heat cycles the entire pad structure.

For anticipated severe duty, such as police service, or before track testing, a more intensive burnish procedure should be performed.

This recommended procedure is:

- 8 moderate brake applications from 40 to 10 mph at approximately ¼-mile intervals.
- 8 somewhat harder brake applications from 60 to 10 mph at approximately ½-mile intervals.
- Drive 1.5 miles
- * 5 hard (but less than ABS) applications from 80 to 20 mph at ¾-mile intervals. Drive at least two miles after last application.
- Allow brakes to cool at least 15 minutes either by parking the vehicle or continuing to drive at moderate speeds with minimal brake applications.

*If practical. If not, repeat the 60 to 10 mph section.

The brake friction materials and rotors are now ready for service.

Notes:

1. The “moderate”, “somewhat harder”, and “hard” applications do not need to be at precise deceleration rates as the amount of energy dissipated will be the same.
2. Some odor and smoke from the brakes is normal during and after the 60 and 80 mph sections.
3. Even after completion of this procedure some fade, odor, and smoke may occur initially if the vehicle is immediately subjected to hard high speed braking.