Understanding Brake Edge Codes

Brake Edge Codes can be found on the edge of the friction material or on the backing plate of every brake pad, along with some other codes. In this bulletin, we primarily focus on the final two letters, but here is an example of what the code consists of:

- The first group of letters identifies the manufacturer of the friction material
- The next group of digits identifies the formulation or composition
- The final two letters denote the Coefficient of Friction (C.F.).

The final two letters (EE, FF, FE, GG, etc.), simply represent the coefficient of friction values taken from a standardized Society of Automotive Engineers (SAE) recommended practice. These values describe a range of normal and hot friction values measured when a 1” square piece of the friction material is subjected to varying conditions of temperature, pressure, and rubbing speed on a test machine, better known as a chase machine.

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Some would have you believe that one friction material is better than another purely on the basis of the friction edge code. This is simply not true. An edge code has nothing to do with product quality, nor is it indicative of stopping performance or wear.

Another myth about edge codes is that they relate to the hardness of a friction material, and that hardness plays a role in stopping performance. In reality, an edge code has no relationship to the hardness of a part, nor is a part’s hardness an indicator of the stopping performance or wear characteristics of the material.
Friction is a resistive force that prevents two objects from sliding freely against each other. The coefficient of friction is a number that is the ratio of the resistive force of friction divided by the perpendicular force pushing the objects together.

The alpha C.F. edge code values simply represent the coefficient of friction values taken from the SAE Recommended Practice, the purpose of which is to establish a uniform laboratory procedure for securing and reporting the friction and wear characteristics of brake linings. The first letter of the code represents the “Normal” coefficient where temperatures range from 200°F–400°F. The second letter represents the “High” coefficient, with temperatures ranging from 300°F–650°F.

In short, make sure you’ve got at least your OE coefficient of friction or better, and that will keep you running strong and safe down the road.