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SAE J866 MAR85

**Friction Coefficient
Identification System
for Brake Linings**

SAE Recommended Practice
Completely Revised March 1985

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φ **FRICTION COEFFICIENT
IDENTIFICATION SYSTEM
FOR BRAKE LININGS—SAE J866 MAR85**

SAE Recommended Practice

Report of the Brake Committee, approved March 1964, completely revised, March 1985.

1. **Scope**—This SAE Recommended Practice is intended to provide a uniform means of identification which may be used to classify the friction coefficient of brake linings, based on data obtained from tests conducted in accordance with SAE J661.

NOTE: It is emphasized that this recommended practice does not establish friction requirements for brake linings, nor does it designate significant characteristics of brake linings which must be considered in overall brake performance. Due to other factors that include brake system design and operating environment, the friction coefficients obtained from this recommended practice can not reliably be used to predict brake system performance.

2. **Coding**—The code will consist of two letters reflecting the friction coefficients as follows:

Code letter	Friction Coefficient
C	Not over 0.15
D	Over 0.15 but not over 0.25
E	Over 0.25 but not over 0.35
F	Over 0.35 but not over 0.45
G	Over 0.45 but not over 0.55
H	Over 0.55
Z	Unclassified

2.1 The first letter will represent normal friction coefficient and the second will represent hot friction coefficient.

2.2 **Normal Friction Coefficient**—Normal friction coefficient is defined as the average of 4 points on the second fade curve, located at 200°F (93°C), 250°F (121°C), 300°F (149°C), and 400°F (204°C).

2.3 **Hot Friction Coefficient**—Hot friction coefficient is defined as the average of 10 points located at 400°F (204°C) and 300°F (149°C) on the first recovery; 450°F (232°C), 500°F (260°C), 550°F (288°C), 600°F (316°C), and 650°F (343°C) on the second fade; and 500°F (260°C), 400°F (204°C), and 300°F (149°C) on the second recovery.

NOTE: If any temperature point or points required to calculate friction coefficients are not reached in the prescribed time limit, the coefficient of friction value at 10 min shall be used to give the full number of points required.

2.4 **Example**—A lining having a normal friction coefficient of 0.29 and a hot friction coefficient of 0.40 would be coded "EF."

2.5 **Location of Code**—The appropriate code designation will be marked on an external non-contacting surface in letters not less than 2.8 mm in height where a brake lining is 3.2 mm or greater in thickness, or no more than 0.4 mm less than the thickness where the brake lining thickness is less than 3.2 mm.

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