HEAVY DUTY FLEET

Features & Benefits

- **IDEAL Brake Parts friction material is mechanically attached to the plates providing exceptional attachment and shear strength.**
- **Specially designed formulation to withstand extreme temperatures.**
- **Slots and chamfers were applicable**
- **Post cured for consistent performance**
- **Copper Free formulation**
- **OE style abutment kits**
- **100% Asbestos Free**

IDEAL Brake Parts also just passed the following series of tests in order to receive Supplier's Declaration of Conformity for Police brake products. This Conformity consists of the individual test under the J2704B protocols which are:

Los Angeles County Sheriff Department's Pomona duty cycle.
This laboratory protocol (developed as an inertia-dynamometer test to correlate braking energies, temperature regimes, and wear and integrity patterns) enables the assessment of the brake corner behavior when replicating four handling cycles and two pursuit cycles. The assessment includes the ability to develop the deceleration levels from the test course, structural integrity, and durability of the friction material.

FMVSS 105/135 dynamometer evaluation per SAE J2784.
The laboratory evaluation per the FMVSS 105 and 135 protocols replicates the loading conditions, thermal history, deceleration and kinetic energy, and failed systems as experienced during typical vehicle-level test. The vehicle performance is predicted using the Link-CA model which combines the actual SAE J2784 test results in combination with the OE on the reference axle, vehicle-specific measurements, and vehicle dynamics models to predict the vehicle stopping distance.

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Jason Janssen
General Manager
Jason@ABSFriction.com
1.226.217.2202

Features & Benefits

Noise squeal evaluation per SAE J2521.
Noise squeal propensity is critical for driver's and general public's comfort. The SAE J2521 protocol replicates critical driving behaviors or conditions which tend to generate squeal noise during driveway, parking lot, city, rural, and highway driving. Since police duty is a year-round activity, the inertia-dynamometer squeal evaluation includes noise evaluation during cold driving and after severe heating cycles, which can be encountered by police cars during regular operation. The assessment of the noise level and occurrence compares the to the OE friction couple of friction material and brake rotor.

Durability and wear behavior per SAE J2707– Method B.
The test results from this SAE Recommended Practice compares to the OE the overall friction material and the brake rotor wear level after a series of multiple city, rural, highway, and mountain descent driving simulation. Brake component durability is critical to the police fleet availability and total cost of ownership. Providing wear rates similar to those observed on the Original Equipment provided as part of the police package by the vehicle manufacturer ensures consistent and predictable maintenance costs and schedules.

Friction coefficient behavior per ISO 26867.
Friction coefficient is one of the most critical performance factors on any brake system. The ISO 26867 inertia-dynamometer test standard determines the level and scatter of the friction coefficient during an extensive evaluation at different speeds, input pressures, brake temperatures (including two severe fade schedules and elevated temperature effectiveness), and braking history. With friction coefficient in mind, the Police Declaration of Conformity program relies on the average, minimum and maximum friction coefficients of friction from this standard to audit, and to detect sudden changes or drifts from the initial friction values declared by the supplier. The ISO 26867 tests are used every year as part of the automatic audit testing.

Bonding shear strength of the friction material per SAE J840.
High-deceleration braking (as experienced during emergency conditions, or pursuit cycles) can impose significant shear stresses on the bonding system between the friction material and its backing plate. The SAE J840 test measures the amount of force required to shear the friction material off its backing plate on multiple samples. The test results combined with vehicle dynamic weight transfer and brake size provides the quantification of the safety margin of the bonding layer at 1.0 g deceleration rates. Using extensive OE testing activities and specifications requiring at least a 40% safety margin, the program determines the ability of the replacement friction material to withstand those loads safely. This test procedure is also used as part of the yearly audit activity to ensure consistent and reliable product behavior and performance.

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