

ADVANCED TECHNOLOGY®

# POLICE FLEET

BEST STOPPING POWER, NOISE CONTROL AND COST PER MILE



FRICTION • ROTORS • CALIPERS

**Raybestos**  
The best in brakes®





## HELPING YOU MAXIMIZE THE USEFUL LIFE OF YOUR POLICE FLEET

### Raybestos® Brand Police Brake System Products:

**Protect your reputation** by meeting or exceeding the original design and performance requirements of the products.

**Increase your shop efficiency** with full line coverage that's first-to-market; including broad, deep coverage for special service vehicles.

**Help you keep your fleet safe and on duty** by building products that tolerate the higher speeds and increased horsepower of today's vehicles.

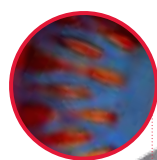


# MORE THAN TWO MILLION MILES OF FLEET TESTING



## GREY FUSION PROTECTIVE COATING

Corrosion resistant coating, tested to withstand 300 hours of saltwater exposure, keeps rotor edges and vanes clear of rust for optimal cooling air flow.



Police specific vane configuration enhances cooling air flow throughout the rotor allowing for optimal heat dissipation - something quite important during pursuit driving.



## ADVANCED TECHNOLOGY POLICE ROTORS

*Why we made this:* Developed for hardworking police vehicles that endure extreme conditions and require extra long life. Delivers best in class performance and durability.

### • Vehicle Specific Designs

Match OE form, fit and function for ultimate strength

### • Quiet on Arrival (QOA) Technology

Ensures noise-free braking

### • Application Specific Metallurgy

Enhanced (damped) iron maximizes noise suppression... long, thick carbon fibers absorb noise; higher thermal conductivity for improved braking performance

#### Raybestos® Brand:

Long, thick pieces absorb MORE.



DAMPED IRON

#### Competitive Brand:

Short, thin pieces absorb LESS.



NON DAMPED IRON

### • Vehicle Specific Vane Configurations

Match OE cooling vane configurations for optimal cooling, reduced brake fade, less noise and increased pad life

### • Coat of Armor

Advanced polymer coating is evenly applied over the rotor for protection against the elements and longest possible service life

### • Rotors meet 30,000 PSI for tensile strength

OE-matched G3000 material for structural integrity and maximum service life

### • No Turn Guarantee

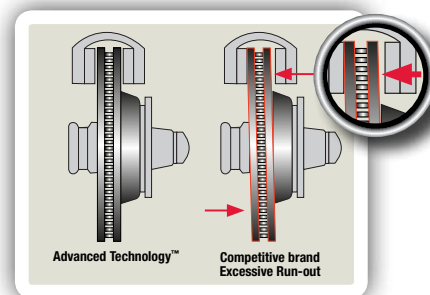
Advanced Technology rotors are ready to install right out of the box

### • Mill Balanced

2 ounce-inch standard ensures proper balance; minimizes vibration

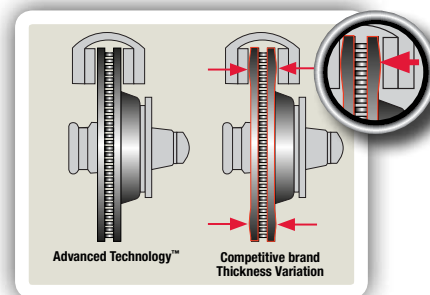
### • Tightest Lateral Runout

0.002" or less for less pedal pulsation and brake noise; extended pad life



### Absolute Parallelism

Rotors thickness variation is less than 0.0004"; parallelism is .002" or less; minimizes pedal pulsation and brake noise





# POLICE AGENCY TEST



## ADVANCED TECHNOLOGY POLICE DISC BRAKE PADS

*Why we made this:* Developed specifically for Police applications. Delivers best in class performance and durability.



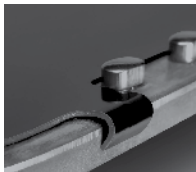
- **Application Specific Ceramic and Semi-metallic Formulations**

Industry leading performance; minimal noise, wheel dusting and brake fade

- **Quiet on Arrival (QOA) Technology**  
Ensures noise-free braking
- **Confident Pedal Feel from the First Stop**  
Post cured to eliminate break in
- **Steel Plate Mechanical Attachment**  
Unmatched sheer strength for severe duty and problem applications; prevents rust jacking

- **Shims, Slots and Chamfers Match OE Design**  
Reduce noise, vibration and harshness; allow braking gasses to escape like the original pad

- **Spring Lock Shims**  
Keep the shims in place for the service life of the friction



- **Nitrile-polymer Coated Hardware**  
Maximizes noise suppression and service life



- **Shaved Abutment Surfaces**

Consistent flat surface at the points of contact between the brake pad and caliper assembly; tighter tolerances reduce noise



- **Industry and Government Safety Qualifications**

Conform to government FMVSS 105/135 guidelines based on SAE testing

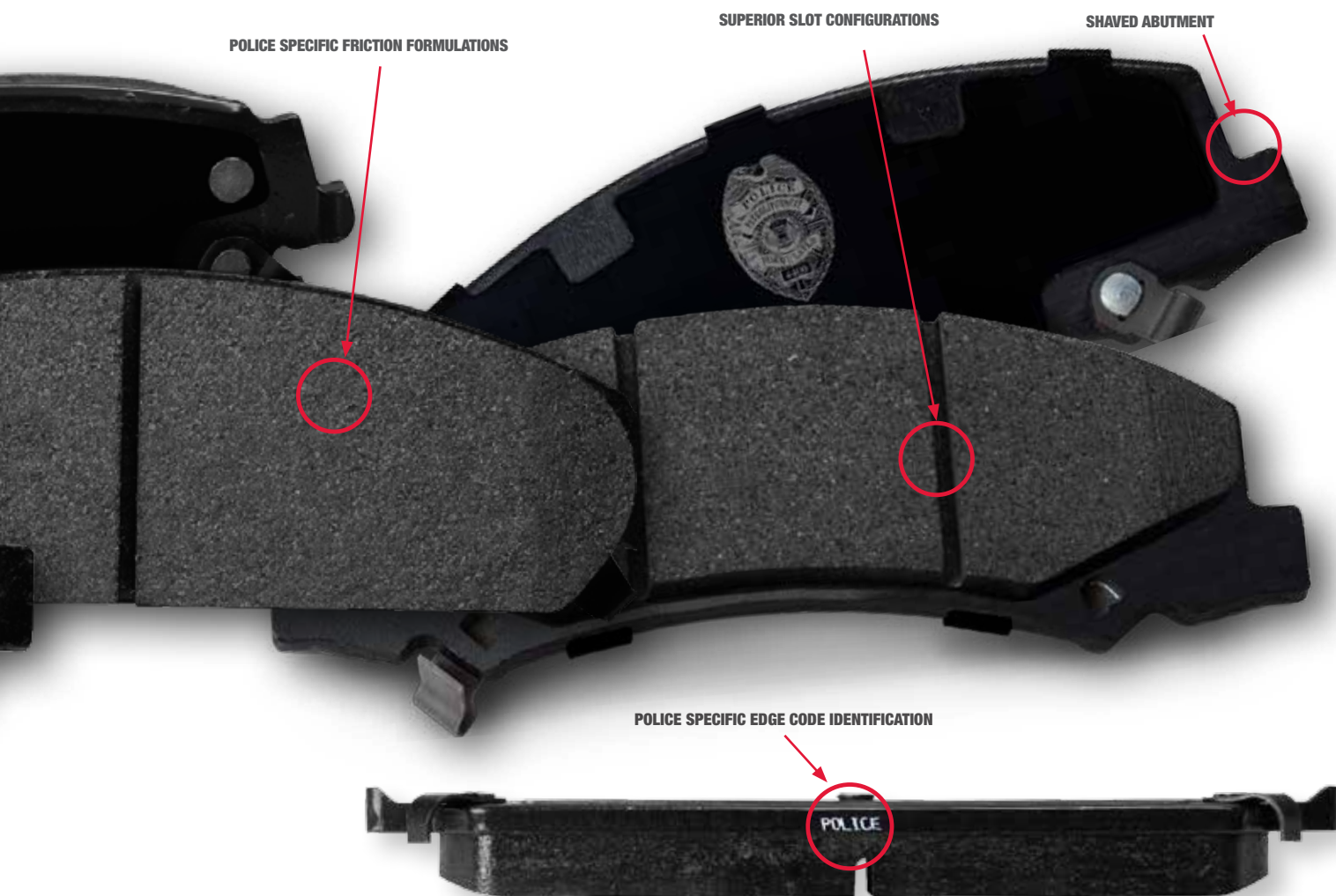
- **Integral Electronic Wear Sensor**

Perfect match to OE design; included where applicable

- **Expanded Abutment Hardware Coverage**

Critical to proper operation and quiet performance

# ED TO EXCEED EXPECTATIONS



## THE NATIONAL INSTITUTE OF JUSTICE (NIJ) AND THE MICHIGAN STATE POLICE HAVE EVALUATED AFTERMARKET DISC BRAKE PADS FOR POLICE DUTY.

### STAGE ONE (PRESCREENING):

- Conducted independent testing in Detroit, MI
- FMVSS 135-based inertia dynamometer laboratory performance screening with high-speed (125 mph) pursuit sections added
- 28 friction suppliers submitted product for testing
- Only five suppliers made it past Stage One dynamometer testing

### STAGE TWO (ON-TRACK EVALUATION):

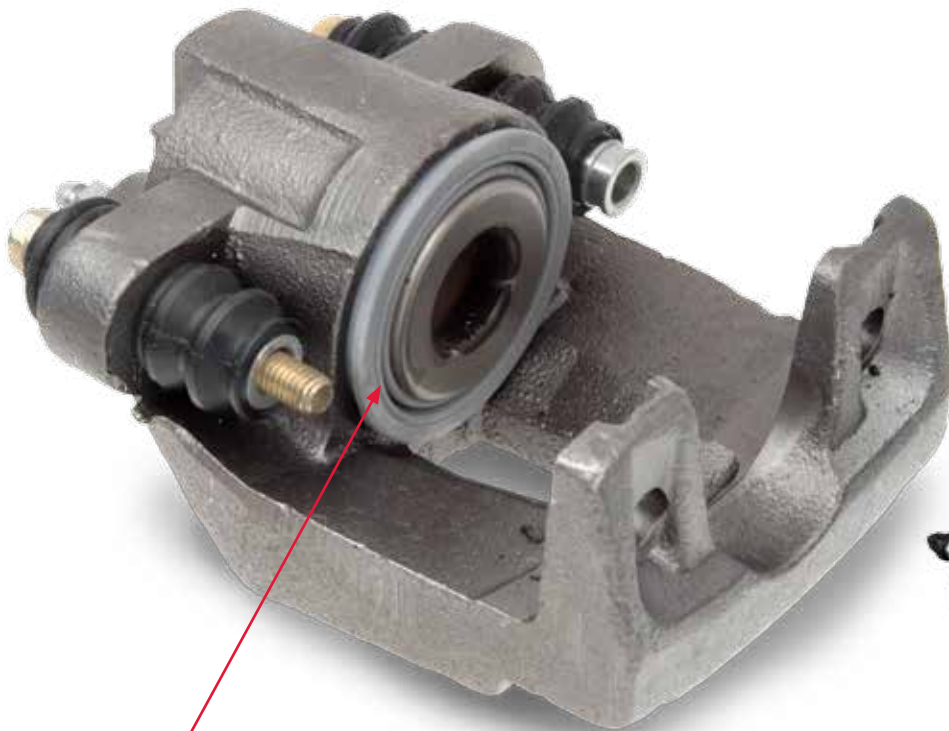
- Conducted on Dodge Charger, Ford Crown Victoria Police Interceptor, Chevrolet Impala and Chevrolet Tahoe
- Simulated actual conditions encountered in emergency and pursuit situations
- Measured straight-line braking from two series of 60-0 mph and 125-0 mph stops
- Each vehicle was driven on an enclosed course for 32 timed laps using four different drivers

### THE RESULTS:

- Raybestos passed Stage One testing on all four vehicle platforms
- The other four suppliers that made Stage Two testing each passed on only one platform
- Very few brands passed Stage One testing on the Dodge Charger and Chevrolet Tahoe, but Raybestos passed with unbeaten results
- Raybestos outperformed OE in stopping distance on three of four platforms

**TESTING CONFIRMED RAYBESTOS ADVANCED TECHNOLOGY POLICE DISC BRAKE PADS TO BE A LEADING CHOICE IN ALL STAGES OF DYNAMOMETER TESTING AND ON-TRACK EVALUATION.**

# IMPROVE OFFICER SAFETY, REDUCE COST PER MILE



## HIGH-TEMPERATURE SILICONE

The high temperature silicone boot used in every Raybestos® brand Police caliper can withstand temperatures up to 600° F.

Tested at 500° F for 4 hours.

**RESULTS:** Silicone boot remained flexible with no deterioration.

**CONCLUSION:** Sustained performance under pressure.



## TRADITIONAL EPDM RUBBER

Tested at 500° F for 4 hours.

**RESULTS:** Melted EPDM rubber boot has hardened and is ready to flake.

**CONCLUSION:** Replacement necessary.



## ADVANCED TECHNOLOGY POLICE LOADED CALIPERS

*Why we made this:* Developed to save you time during the service process. Delivers everything you need for a safe, leak-free installation.

- **100% Pressure Tested**  
Dependable operation and leak-free performance
- **Quiet on Arrival (QOA) Technology**  
Ensures noise-free braking

- **Materials Match OE**  
Vehicle specific designs, cast iron or aluminum depending on the OE specifications
- **Friction Matches OE**  
Pre-lubed and loaded with Police formulated friction
- **High-Temperature Silicone Components**  
Superior resistance to heat, corrosion and leakage; can withstand temperatures up to 600° F

- **Easy Installation**  
Fully assembled with new bleeder screws, copper sealing washers, hardware and mounting brackets
- **Smooth Operation**  
Critical areas are pre-lubricated with a high temperature synthetic lubricant; new phenolic pistons (where OE is phenolic)



# POLICE SPECIAL SERVICE VEHICLES



## **SPECIAL SERVICE VEHICLE POLICE DISC BRAKE PADS**

*Why we made this:* Developed specifically for Police Special Service Vehicle heavy duty applications. Delivers exceptional stopping power and temperature stability.

- **Application Specific Semi-metallic Formulations**

Enhanced formulations maximize stopping power and minimize noise and brake fade; address the higher energy requirements of heavily loaded patrol vehicles operating at normal load to Max GVW

- **Shims, Slots and Chamfers Match OE Design**

Reduce noise, vibration and harshness; allow braking gasses to escape like the original pad

- **Confident Pedal Feel From the First Stop**

Post cured to eliminate break in

- **Steel Plate Mechanical Attachment**

Unmatched sheer strength for severe duty and problem applications; prevents rust jacking

- **Rubber Coated Abutment Clips**

Maximizes noise suppression and service life

- **Shaved Abutment Surfaces**

Consistent flat surface at the points of contact between the brake pad and caliper assembly; tighter tolerances reduce noise

- **Industry and Government Safety Qualifications**

Conform to government FMVSS 105/135 guidelines based on SAE testing

# THE RAYBESTOS® BRAKES COMMITMENT TO QUALITY

Raybestos Professional Grade® and Advanced Technology® friction is consistently manufactured to meet OE quality standards and ISO/TS certification requirements. Global engineering expertise ensures that all testing requirements are consistently enforced; confirming the friction material maintains the same stopping power, service life and safety as the original equipment counterpart.

## ISO/TS16949-2002 Accreditation

- All Raybestos friction manufacturing facilities have earned ISO/TS16949-2002 Accreditation.
- This certification for quality validation and manufacturing superiority is required of every company who supplies an OE manufacturer.

## Systematic and Diagnostic Testing

- **Physical and Chemical Testing** – Tests the strength and chemical properties of the material to ensure they can handle the stresses of a severe or sudden braking situation
- **Dynamometer Testing** – Tests for performance, noise and wear at infinite pressure, temperature and noise frequency levels; verifies the proper combination of front and rear braking for a complete vehicle system
- **On Car Performance Testing** – Measures critical variables to evaluate performance, noise and wear; anti-lock brake systems and individual brakes can be switched on and off to measure the effect on safety in the event of related system failures
- **Fleet Testing** – Several fleets around the country are used to measure real-world performance in severe environments; new formulations typically have more than one million miles of fleet testing before achieving production approval

Every formulation from every manufacturing facility is audited monthly and subjected to additional quarterly testing to ensure that every Raybestos brake pad performs consistently and as expected. Each friction formula mix must pass three specific tests before production release:

- **Gogan Hardness Test** – Measures compressibility and must fall into a narrow range specific for each formulation
- **Shear Test** – Measures the strength of the bond between the steel backing plate and the friction material
- **Density Test** – Measures the weight and volume of the formula mix and ensures adherence to the material specifications

**Raybestos**  
The best in brakes®



## RAYBESTOS ENGINEERING PUTS SAFETY FIRST

- RIGOROUSLY RESEARCHED
- EXTENSIVELY TESTED
- FLEET PROVEN

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