# PLATINUMSHIELD® III COATING CONQUERS RUST-JACKING – AND THE COMPETITION





PLATINUMSHIELD® III COATING CRUSHES THE COMPETITION.

Since 2009, when PlatinumShield coating was created for our reman brake shoes, Meritor® has relied on test data to drive superior product performance. We test our PlatinumShield coating solution against the real-world problem of rust-jacking. Since then, PlatinumShield has often been imitated. To update the record, we decided to test PlatinumShield III coating and share the results. Recent tests show how well PlatinumShield III coating performs against competitors.

#### **Testing Procedures.**

Meritor conducted coating analysis tests on multiple lined brake shoes to measure resistance to corrosion.

To determine the resistance of the brake shoes to corrosion, our engineers subjected the shoes to multiple thermal cycle and torque load conditions meant to simulate real road conditions of exposing the shoes to extreme heat and deflection. This results in micro-abrasion at the surface of the shoe tables, caused by movement of the brake linings. Finally, the shoes endured 400 hours of ASTM B-117 salt spray testing, which accelerates the potential for corrosion or rust – the primary cause of rust-jacking.



After exposure, a third party laboratory measured the degree of rust using the scale set forth in ASTM D610-08. Under ASTM D610-08, to achieve a rating of 9, the shoe can have no greater than 0.03% of surface corrosion within a designated area. The results were dramatic.

#### **Brake Shoe Coating Performance Testing Results.**

| Brake Shoe Tested          | Part Identification  | Conditioning | Salt Spray<br>Status | Rust Grade Rating |
|----------------------------|----------------------|--------------|----------------------|-------------------|
| Meritor PlatinumShield III | XKMG14707QP          | Complete     | Complete             | 9                 |
| Bendix® PermaGuard         | KT4707QBA201         | Complete     | Complete             | 1                 |
| Gorilla Tuff Coat          | GBEK4707Q20STD       | Complete     | Complete             | 1                 |
| Neobrake <sup>™</sup>      | MB4707QKIT           | Complete     | Complete             | 1                 |
| Silverback® HD             | 020S/SB WK4707Q-23SB | Complete     | Complete             | 1                 |

### Seeing Is Believing. The Proof Is In The Testing.

This chart shows how select brands of brake shoes performed in our test. It's a dramatic reminder that if you want premium protection against rust-jacking, the choice is Meritor PlatinumShield III coating.

| BRAKE SHOE TESTED*         | RUST GRADE RATING | SHOES |
|----------------------------|-------------------|-------|
| Meritor PlatinumShield III | 9                 |       |
| Bendix PermaGuard          | 1                 |       |
| Gorilla Tuff Coat          | 1                 |       |
| Neobrake                   | 1                 |       |
| Silverback HD              | 1                 |       |

All tests were conducted from December 2017 through January 2018. Shoes are shown after thermal cycling and torque load conditioning by Meritor. Friction lining removed from brake shoe after conditioning and before salt spray testing. A third party administered salt spray testing per ASTM B-117 for 400 hours and evaluated the rust grade using the scale set forth in ASTM D610-08 (2012).

<sup>\*</sup>Brake shoe part numbers tested include Meritor PlatinumShield III XKMG14707QP, Bendix PermaGuard KT4707QBA201, Gorilla Tuff Coat GBEK4707Q20STD, Neobrake MB4707QKIT and Silverback HD 020S/SB WK4707Q-23SB.





## Our Original Rust-Jacking Solution. Optimized.

It's hard to improve on an original, especially a game-changing original such as PlatinumShield, but that's exactly what our team of engineers did. And it's going to pay even bigger dividends for Meritor customers.

Our superior test performance is bolstered by our continuous investment in upgrading PlatinumShield technology. Meritor engineers are continually conducting research to discover ways to improve our PlatinumShield coating process.

PlatinumShield III, our third-generation coating with advanced engineering, extends our exceptional resistance to rust-jacking.

In developing PlatinumShield III, our Meritor aftermarket engineering team discovered a refinement in the process that provides superior adhesion of the coating to the surface of the shoe. Superior adhesion enables the coating to protect the brake shoe, increasing the shoe's ability to withstand the corrosion caused by salt. The result is a quantum leap in technological performance relative to our aftermarket competitors that creates a new standard of brake shoe durability. PlatinumShield III coating provides resistance to rust-jacking.

As a result, Meritor brake shoes with PlatinumShield III coating deliver everything you expect from a worldwide brake leader, including our 3-Year/300,000-Mile warranty against rust-jacking.

## Why Does Rust-Jacking Require A Long-Lasting Solution?

- Rust-jacking often shortens the life of brake shoes and brake linings while increasing downtime for maintenance and replacement, both of which prevent truck operators from getting the full life out of their equipment.
- Rust-jacking is a field condition that can be caused by harsh anti-icing liquids in winter road solvents, combined with moisture that penetrates the brake shoe coating while equipment is at rest. This causes rust to build up on the brake shoe table.
- As rust builds up, it pushes outward against the lining, "jacking" it up between the rivets until the lining cracks.
- When the lining cracks, it should be replaced, cutting short the brake shoe life and denying truck operators its full value often with a thick amount of lining remaining. Cracked linings may also lead to failed Department of



Transportation (DOT) inspections, which raises the risk of an out-of-service violation that could remove your vehicle from operation until the lining is replaced and reinspected.

■ Rust-jacking is found most often where intense brake heat cannot dry out the shoe table, such as with the front and trailer shoes.

| Meritor Truck/Tractor Wheel End<br>Extended Warranty |                                       | Purchase/install these three products together and receive 3-year/300,000-mile coverage. | Purchase/install these four products together for 5-year/unlimited mileage coverage.                           |
|--|---------------------------------------|--|--|
| Product  | Aftermarket<br>Warranty               | 3-Year/300,000-Mile<br>Wheel End Warranty <sup>1</sup>                                   | 5-Year/Unlimited Mileage<br>Wheel End Warranty <sup>1</sup>  |
| Temper-Loc® Spindle Nuts                             | 3 Years <sup>3</sup>                  | V DED WARD   | <b>v</b> _   |
| Meritor Premium Wheel Seals                          | 2 Years or 300,000 Miles <sup>3</sup> | WERITOR T  | V JUDED WARRY  |
| Meritor PlatinumShield™ III<br>Lined Brake Shoes     | 3 Years or 300,000 Miles <sup>4</sup> | WHEEL END  | WHEEL END  |
| Doctor Preload®                                      | 1 Year                                |  | Temper-Loc Nuts must be installed utilizing the Doctor Preload tool to qualify for unlimited mileage warranty. |
| Meritor Bearing Sets                                 | 1 Year                                |  |  |
| Timken® Bearing Sets                                 | 1 Year                                |  |  |
| Meritor Standard Wheel Seals                         | 1 Year or 150,000 Miles <sup>3</sup>  |  |  |

| Meritor Trailer Wheel End Extended Warranty      |                                       | Purchase/install these four products together and receive 3-year/300,000-mile coverage. | Purchase/install these five products together for 5-year/unlimited mileage coverage.                           |
|--|---------------------------------------|---|--|
| Product  | Aftermarket<br>Warranty               | 3-Year/300,000-Mile<br>Wheel End Warranty <sup>1</sup>                                  | 5-Year/Unlimited Mileage<br>Wheel End Warranty <sup>1</sup>  |
| Meritor Hub Caps <sup>2</sup>                    | 1 Year                                | <b>✓</b>  | <b>✓</b>   |
| Temper-Loc® Spindle Nuts                         | 3 Years <sup>3</sup>                  | V WOED WARA   | V DED WARA   |
| Meritor Premium Wheel Seals                      | 2 Years or 300,000 Miles <sup>3</sup> | MERITOR   | WERITOR 7  |
| Meritor PlatinumShield™ III<br>Lined Brake Shoes | 3 Years or 300,000 Miles <sup>4</sup> | WHEEL END   | WHEEL END  |
| Doctor Preload®                                  | 1 Year                                |   | Temper-Loc Nuts must be installed utilizing the Doctor Preload tool to qualify for unlimited mileage warranty. |
| Meritor Bearing Sets                             | 1 Year                                |   |  |
| Timken® Bearing Sets                             | 1 Year                                |   |  |
| Meritor Standard Wheel Seals                     | 1 Year or 150,000 Miles <sup>3</sup>  |   |  |

<sup>&</sup>lt;sup>1</sup> As part of proper wheel end maintenance, Meritor recommends the installation of new brake drums and brake hardware.

# **Extended Protection Against Rust-Jacking And Longer Wheel End Coverage.**

PlatinumShield III coating for new and remanufactured Meritor brake shoes not only provides coverage against rust-jacking for 3 Years/300,000-Miles, but also positively impacts wheel end extended warranty coverage. When you purchase and install the combination of Meritor Tire Inflation System (MTIS™) Dual Dynamics hubcaps, Temper-Loc® spindle nuts, Meritor Premium wheel seals and Meritor PlatinumShield III lined brake shoes, you get a 5-Year/Unlimited-Mileage wheel end extended warranty. For more information, go to MeritorPartsWarranty.com.

#### Get Our Extended Brake Shoe Life, Plus Reduced Stopping Distance (RSD) Friction Material.

Meritor RSD friction materials are available on PlatinumShield III brake shoes. No other brake shoe delivers stopping power with the corrosive protection of PlatinumShield III. It's a winning combination available only from Meritor. For the total service and support you deserve, call our Customer Care Center at (888) 725-9355. In Canada, call (800) 387-3889.

<sup>&</sup>lt;sup>2</sup> Includes Meritor Tire Inflation System (MTIS™) Dual Dynamics Hub Caps.

<sup>&</sup>lt;sup>3</sup> From date of installation.

<sup>&</sup>lt;sup>4</sup> Against rust-jacking only.



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