

# Putting the brakes on flash rust

## The Challenge

A leading remanufacturer of automotive brake calipers was having problems with flash rust appearing on their finished goods. What was even worse was the fact that the issue was not revealing itself until after the remanufactured parts were already shipped to retail stores and customers were pulling boxes off of store shelves and seeing the surface rust, forcing the chain stores to return the products to the distributor.

A Senior Technical Product Manager for the remanufacturer approached Hubbard-Hall at AAPEX 2015 about solving the flash rust problem, as well as restoring the confidence of the company to distributors of its products.

## The Approach

Hubbard-Hall's technical staff assessed the production methods of the remanufacturer and learned that the facility was using a water-based application to try to treat the surface during the refurbishing process. In addition, before the parts were boxed and prepared for shipping they were wrapped in vapor corrosion inhibiting (VPI) paper that is chemically treated to continuously blocks out rust, corrosion and oxidation. However, the VPI was trapping moisture from the water-based application, causing flash rust.

Hubbard-Hall's staff recommended that the manufacturer discontinue the water-based product and instead utilize Metal Guard® 560, a solvent-based, water-displacing rust preventer that can be applied by dipping, spraying or brushing, and will displace moisture on the metal



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## Executive Summary

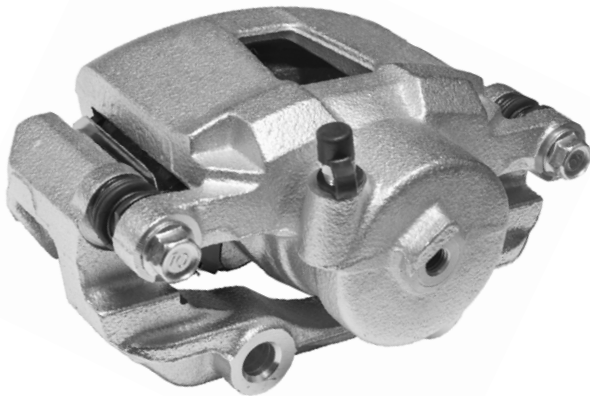
### Key features of Metal Guard 560.

- Solvent based
- Rapid water displacement
- Available for dip, spray and brush application
- Can be used at ambient temperature
- Low odor
- Low flashpoint

surface to leave a continuous film of Metal Guard® 560. The product has been shown to improve corrosion protection, safety and the working environment, while also reducing energy cost. It has rapid water displacement, a high flashpoint for safety, and can be used at ambient temperature with low odor.

## The Outcome

The remanufacturer started using Metal Guard® 560 on one line in their facility, but quickly saw that it was being extremely effective in preventing the flash rust issue, and then installed it on the other operating lines within the plant. The parts passed all industry standard salt-spray tests, and the flash rust issues ceased. With the rework issue now behind them, the remanufacturer increased its product of the refurbished brake parts and calipers from 1.5 million units annually to more than 9 million units each year. More importantly, the remanufacturer improved its reputation with the retailers it was supplying brake parts, as rejects nearly disappeared because of the rust issues.



FF-1020

“I asked Hubbard-Hall to fix the problem and help us gain trust back with our customers. Metal Guard® 560 worked exactly as they said, and the flash rust issue was resolved.”

**Sr. Technical Product Manager**

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