

# **Oil Coated Fittings versus Penn Machine Standard Phosphate Coated Fittings**

Humidity & Salt Spray Testing

Purpose: To see poorly coated areas  
that are subject to rusting.

# 24 Hour Salt Spray Test



40% Red Rust  
Observed on  
Oil Coated  
Fitting



5% Red Rust  
Observed on  
Phosphate  
Coated Fitting

# **336 Hour Non-Condensing Humidity Test**

Heavy Rust  
Observed on  
Faces of Oil  
Coated  
Fittings



Heavy Rust  
Observed on  
Faces of Oil  
Coated  
Fittings



0 – 1%  
Red Rust  
Observed on  
Phosphate  
Coated  
Fittings



0 – 1%  
Red Rust  
Observed on  
Phosphate  
Coated  
Fittings



# Oil Coated Vs. Phosphate Coated Fittings



Rust Noticed on Face of fittings as well as other areas of fittings that were Oil Coated, It is evident that the oil is not systematically applied, leaving areas un-protected.

On Phosphate Coated Fitting the coating is uniformly applied. The fittings are evenly coated protecting all surface areas of the fittings.

# **Oil Coated Vs.** **Phosphate Coated Fittings**

## **Conclusion**

- Oil Coating does not evenly coat all surfaces of the fitting.
- Oil Coating easily comes off, leaving fitting unprotected.
- Oil Coating application is not uniform and therefore is inconsistent in its application.
- Other Coatings such as phosphate are uniformly applied to all surfaces both internal and external.
- Testing and Pictures show the inadequate protection of all surfaces of sampled fittings using Oil Coating versus Phosphate Coating.

***Want to avoid this condition on your shelf or installed on your jobsite ?  
Penn Machine offers Phosphate Coatings on all applicable fittings as a standard service.***



Make a statement on your purchase order that you would like your fitting protected with a Phosphate Conversion Coating