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## *Evaluating Rust Preventives for Customer*

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**Project #:** 11-200-1825(bis)

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**Background:** Customer sent five coated springs to Cortec for evaluation. The springs have been coated with a variety of rust preventive products; the product they currently use, along with three similar Cortec products. They would like the corrosion inhibiting properties of the products evaluated.

**Sample Received:** Five springs, packaged in clear polyethylene film and labeled as follows:

- Control
- Shaeffer
- BioCorr
- EcoLine 3220
- VpCI-325

**Method:** ASTM D-1748 humidity (Modified)

**Materials:** Five springs  
Coated paper clips

**Procedure:** The following procedure was used:

- 1) Springs arrived packaged in plain PE bags, labeled according to their product treatment.
  - a. All springs were treated by customer prior to being shipped.
- 2) Springs were unpackaged, visually inspected, and hung individually in ASTM D-1748 humidity cabinet.
- 3) Springs were visually inspected periodically.
- 4) After 72 hours, all springs were removed from ASTM D-1748 humidity cabinet.
- 5) Springs were visually inspected and photographed.

**Results:** The following results were found:

Corrosion Inhibitor	Time to Corrosion (Hours)
None (control)	<24
Shaeffer	24
BioCorr	24
VpCI-325	24
EcoLine 3220	DNF*

DNF – Did not fail during 72 hours of humidity testing.

**Photos:**



Figure 1: Springs after 72 hours of ASTM D-1748 humidity testing.  
From L-R: Control, Shaeffer, BioCorr, VpCI-325, EcoLine 3220

**Interpretations:** EcoLine 3220 provided the best corrosion protection on the springs submitted. EcoLine 3220 is a ready to use, canola oil based product that can successfully replace conventional petroleum based products.