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Comparing Rust Preventive Liquids for a Driveshaft Company

Background: A driveshaft manufacturer sent 5 outer races to Cortec. They would like two rust

preventive liquids evaluated and compared to similar Cortec products in humidity testing.

Purpose: To compare rust preventive coatings currently used by the driveshaft manufacturer to

similar products offered by Cortec.

Method: ASTM D-1748 Humidity Cabinet (120°F, 95% relative humidity)

Materials: 5 outer races, provided by drive shaft manufacturer

PSW50 liquid, provided by drive shaft manufacturer Anticorit P307 liquid, provided by drive shaft manufacturer

BioCorr EcoLine 3690

Procedure: The following procedure was used:

1) All five of the outer races were cleaned with methanol prior to testing.

2) After cleaning, parts were dipped in one of the following solutions:

a. PSW50 (used as received)

b. Anticorit P307 (used as received)

c. BioCorr

d. EcoLine 3690

e. Control (no treatment)

3) After dipping, the parts were allowed to air dry overnight.

4) After drying, the parts were placed in ASTM D-1848 humidity cabinet.

5) All parts were visually inspected periodically.

6) After 500 hours, all the parts were removed from ASTM D-1748 humidity.

7) All parts were visually inspected and photographed.

Results: The following results were found:

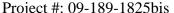
Treatment	Time to Failure (Hours)
Control	<24
PSW50	144
Anticorit P307	216
BioCorr	DNF*
EcoLine 3690	DNF*

DNF – Did not fail during 500 hours of humidity testing.

Conclusion: Humidity testing showed that both EcoLine 3690 and BioCorr provide significantly

better corrosion protection than the products currently used by the drive shaft manufacturer. These products provided between 6 and 9 days of corrosion protection, while the Cortec products provided greater than 21 days of protection. Furthermore, the Cortec products are both environmentally friendly and biobased: BioCorr is

soybean oil based, while EcoLine 3690 is canola oil based.







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