Comparing Corrosion Protection of VpCI-369 and Black Oxide Coating on ATV Wheel Spacers

Background: Cord Stewart from Crown Packaging sent in two ATV Wheel Spacers from CRJ Performance Inc. Uncoated, the threads on the wheel spacer screws will corrode, and CRJ would like Cortec to find a solution. They are currently using a black oxide coating, and this protection will be compared to VpCI-369.

Purpose: Compare currently used black oxide coating to VpCI-369. Compare protection, in salt spray, on ATV wheel spacers from CRJ Performance Inc.

Method: ASTM B 117 Salt Fog Cabinet

Materials: Two ATV Wheel Spacers, provided by CRJ Performance Inc.
VpCI-369

Procedure: The following procedure was used:

1) Two wheel spacers arrived and were inspected.
   a. The screw portion on the first screw was black oxide coated, and the second was not coated.
2) The uncoated spacer screw was dipped in VpCI-369 and hung to dry overnight. The black oxide coated screw was not treated.
3) After hanging, both spacers were placed into ASTM B 117 Salt Fog Cabinet.
4) Spacers were visually inspected periodically.
5) After 336 hours, both spacers were removed.
6) Spacers were visually inspected and photographed.

Results: The following results were found:

1) The spacer screw with the black oxide coating showed corrosion in less than 8 hours. At the end of testing, corrosion was severe, covering the entire surface of the screw.
2) The spacer screw dipped in VpCI-369 showed no corrosion after 336 hours of testing.

Conclusion: VpCI-369 showed excellent results in salt spray testing. Since VpCI-369 has some oil in it, ATV wheel spacers could be dipped and implemented into a system without cleanup. The black oxide coating did not stand up to salt spray conditions, as it corroded in less than 8 hours.

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366 hours in ASTM B 117 Salt Spray Cabinet. VpCI-369 on left, Black Oxide coating on the right.