



# Electric Motor Testing Tip of the Week

revolutionizing *electrical* reliability

January 29, 2007

## Dynamic DC Motor Analysis

A shorted armature circuit will result in a modulating armature current. The frequency of the modulating current will be the product of the armature rotation (Hz) and the number of poles passed in a single rotation. A two-pole DC motor running at 510 rpm with a shorted armature winding will exhibit a 17 Hz armature current modulation.

Visit [www.pdma.com/PDF/Articles/Online\\_Fault\\_Analysis\\_of\\_DC\\_Motors.pdf](http://www.pdma.com/PDF/Articles/Online_Fault_Analysis_of_DC_Motors.pdf) for a detailed description of online DC motor testing techniques.

---

You are invited to submit an Electric Motor Testing Tip of your own and receive a free PdMA mug or hat if we publish it! Contact Lou at 813-621-6463 ext. 126 or [lou@pdma.com](mailto:lou@pdma.com).

Copyright 2007 PdMA Corporation. All rights reserved. The PdMA Tip of the Week is produced by PdMA. PdMA shall not be liable for any errors or delays in the content, or for any actions taken in reliance thereon.