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## Voltage Related Symptoms

Symptoms of motor problems related to either voltage unbalance or to voltages not matching the nameplate rating are not always easy to diagnose because both the utility and facility distribution voltages vary as the system load and other system characteristics vary. Measuring the steady-state voltage at accessible points in the motor circuit is a very good way to determine whether a potential for voltage problems exists.

A few symptoms that may trigger such an investigation include:

- Unusually high numbers of motor failures
- Not getting the expected motor life between rewinds
- Unexplained motor trips
- Motors that are more sensitive to voltage sags than other electrical process equipment
- Difficulty getting a specific motor started
- Nuisance tripping of a motor-protective device.

Source: "Resolving Voltage Quality Problems with AC Induction Motors." by Doug Dorr and Philip Lim, *U.S. Department of Energy's Energy Matters Newsletter*, Spring 2005.

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).