



A Leader in Electric Motor Testing

Tip Of The Week

March 9, 2015

For the month of March PdMA has decided to go retro and re-visit some of the most popular tips from the past years. Our many thanks to you, our customers and followers, who have provided us with the endless ideas and topics for writing these tips. Keep the ideas coming.

January 25, 2010

New Year's Motor Tip (revised)

As a follow up on our New Year's resolution to improve reliability for electric motors, the need for proper storage of electric motors was identified. So let's look a little deeper.

When a motor is not properly cared for, damage to its bearings may occur. The two main failure modes that occur are false brinelling and static corrosion.

False brinelling occurs when vibration from passing warehouse machinery causes the rolling elements of a bearing to vibrate against the raceway in a single location. Over time this vibration can remove small bits of metal. This type of wear will appear as evenly spaced marks lining up with the spacing of the rolling elements.

Static corrosion occurs when either vibration or the weight of the rotor shaft resting on the rollers forces the grease out from between the rollers and the nearing raceway. Also, if the grease has little or poor corrosion inhibitors the problem is compounded. When the film is no longer present between the metal surfaces, galvanic corrosion occurs leading to rust deposits on the machined surfaces.

Prevention is as simple as ensuring the bearings are properly greased prior to being placed in storage. The type of grease and date should be tagged to the motor. The motor itself should be placed on a vibration absorbing material such as wood. Finally on a routine basis the shaft of the motor should be rotated to ensure the grease is redistributed and maintains a corrosion preventing film.

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.

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