



A Leader in Electric Motor Testing

Tip Of The Week

October 28, 2019

Motor Magnetic Center

Running a motor uncoupled will pull the motor rotor into a magnetic center, often marked on the shaft to ensure that the rotor is lined up on the magnetic center when it is coupled to the load. Axial misalignment of a coupling can occur if the coupling ends are not close enough when they are bolted together resulting in pulling the rotor out of magnetic center. When this happens the rotor is constantly trying to pull itself through axial thrusting back to magnetic center and could result in uneven and or excessive bearing wear. Using the EMAX technology you can evaluate the 5th harmonic peak as an indicator of this magnetic center offset and axial movement. Normally the 5th harmonic is a single clean peak in the current spectrum. However, if axial thrusting is occurring the 5th harmonic will split into two smeared peaks.

To see an example and hear a case study on a suspect magnetic center offset visit the PdMA YouTube Channel at <https://www.youtube.com/watch?v=Mh2Cx6yqviw>

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. 166 or lou@pdma.com.

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