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Confirming Current Unbalance

While EMAX testing, or when simply using a clamp-on amperage probe, confirming current unbalance online can help you determine where your offline test connections are placed later.

While testing a motor circuit you receive an unbalanced current reading. When possible, you can verify the cause of the unbalance by 'rotating the phases'. This means moving test leads from phase A to phase B, phase B to phase C, and phase C to phase A. This will maintain the motor's proper direction of rotation. After the phases are rotated, test the motor circuit again. If the current unbalance moves with the phase shift, it is a supply power line issue. If the current unbalance stays with the same motor T-lead, then it is a motor issue.

Schedule a shutdown of the motor power circuit and proceed with up-stream, or T-lead MCE offline testing, based on your 'rotating the phases' results.

Thanks to Marty Brunello, Engineering PdM Technician with Abbott Laboratories, in Abbott Park, Illinois, for today's tip.

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.