



A Leader in Electric Motor Testing

# Tip Of The Week

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## Wound Rotor Motors - Troubleshooting Considerations

Squirrel cage induction motors are tested through the stator winding leads only, and all analysis including that of the rotor is performed using the same stator winding test signal. A wound rotor motor, which is also an induction motor, presents three different test locations to connect and analyze the motor fault zones. These connections include the three phase stator winding leads, three phase rotor winding leads, and the three phase resistor bank leads. The ability to send unique test signals through each of these motor sections allows for easier segregation and isolation of the fault mechanism resulting in quick and accurate corrective action and return to production.

One important test consideration is using caution when disconnecting the three phase rotor or stator circuit for MCE<sup>®</sup> testing. Because the rotor, like the stator is a three phase winding, the magnetic interaction between the rotor and stator must be considered very sensitive. It is critical that when the resistor bank leads or the stator phase leads are lifted for testing that they be insulated from each other when testing either the rotor or stator. Incidental contact between two phases on the stator will create a false high inductive imbalance on the rotor and vice versa.

To view a wound rotor motor case study visit the PdMA YouTube channel at:

<https://www.youtube.com/watch?v=Hm4X6wrlAFQ>

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