



Motor Diagnostics Workshop 3 Day Itinerary

The itinerary is subject to change daily. This is a general guide.

DAY 1

○ *Morning*

7:30 – 8:00 **Continental Breakfast**

Class Introduction
Introduction to Electrical Reliability
(Maintenance Philosophies)
Basic Electrical Theory for Motor Diagnostics

9:45 – 10:00 **Break**

Basic Motor and Transformer Theory
Motor Faults (Electrical Maintenance) Multiple Technology

○ *Afternoon*

12:00 – 1:00 **Lunch**

Mechanical Considerations
Alignment Considerations
Balance Considerations
Lubrications

2:45 – 3:00 **Break**

Introduction to Motor Circuit Analysis (Off-Line Testing)
Three Phase AC Motors
DC Motors
Transformers





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DAY 2

○ *Morning*

7:30 – 8:00

Continental Breakfast

Review of 1st Day
Hands-On Testing Off-Line
Interpretation of Data

9:45 – 10:00

Break

EMCAT PRO 2005 Software
DC Motor Testing
Transformer Testing

○ *Afternoon*

12:00 – 1:00

Lunch

Introduction to Electrical Signature Analysis (On-Line Testing)
Understanding FFT

2:45 – 3:00

Break

Understanding Dynamic Faults (Electrical and Mechanical)
Static Eccentricity
Dynamic Eccentricity
Unbalance, Alignment
Gear Problems
Bearing Faults





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DAY 3

- *Morning*

7:30 – 8:00 **Continental Breakfast**

Review of 2nd Day
Hands-On Testing Using the ATPOL

9:45 – 10:00 **Break**

Introduction to EMCAT On-Line Software
Interpretation of Electrical Signatures (ESA)

- *Afternoon*

12:00 – 1:00 **Lunch**

Continuation of ESA

2:45 – 3:00 **Break**

Developing a Motor Diagnostics Program
Estimating Time to Failure
Wrap-up

