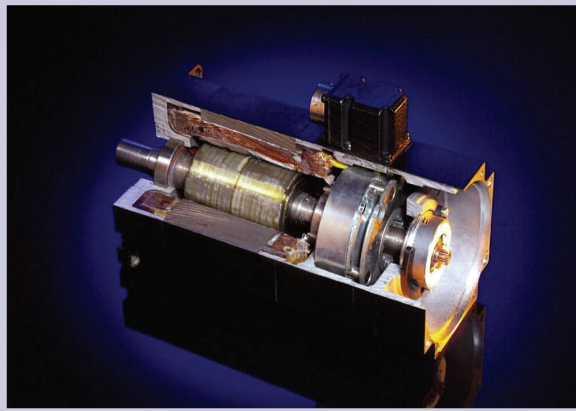


Servo Motor Operation and Testing



- Four days of training for the motor technician
- A practical approach to servo motor operation and testing.

Subjects covered:

- ★ **Definition of a servo motor**
Operating principles of servo motors
- ★ **Permanent magnets used in brushless servo motors**
Materials used, checking the condition of magnets
- ★ **Feedback devices used on servo motors**
Encoders, Resolvers, Hall sensors,
- ★ **Electronic commutation of brushless servo motors**
Proper setting of commutation feedback devices
- ★ **Brushless servo motor testing**
Servo motor static and dynamic tests

When: April 27 - 30, 2010
September 21 - 24, 2010

Where: Indianapolis, Indiana

Tuition: \$1575.00

Servo Motor Operation and Testing

This is practical training for the technician who will be working with these high-tech motors.

Training that will continue to pay-off with improved capability, competence, confidence, and quality.

- ★ **Training manual “Servo Motor Operation and Testing” and extensive servo motor information files will be furnished during the seminar.**
- ★ **Mitchell Electronics and other testing equipment used during the seminar**
- ★ **Ten percent discount for more than one attendee from the same company.**
- ★ **Past attendees who want to refresh this training may attend again at half price.**

Lunch and refreshments will be furnished.

Location of Servo Motor Training Seminar

**Near the Indianapolis Airport
Candlewood Suites
5250 Bradbury Ave.
Bradbury Training Center
Indianapolis, IN 46241**

Travel and living expenses are the responsibility of the attendee.

Training Outline

Day one

- Definition of a servo motor
- A.C. & D.C. motor review
- Brushless servo motors
- Tools & instruments needed
- Testing of magnets
- Using the oscilloscope

Day two

- Auxiliary feedback devices
 - Incremental encoders
 - Resolvers
 - Hall effect switches

Day three

- Electronic commutation
- Waveform relationships
- Setting commutation signals

Day Four

- Gray code and serial encoders
- Testing servo motors
 - Electrical tests
 - Mechanical tests
- Record keeping

Description

This training is intended to be good practical instruction for the servo motor technician.

Solid basics on servo motor operation with most of the time spent on brushless permanent magnet servo motors.

Ideal training for any repairman or service technician who is involved with servo motors.

There is very little mathematics presented. However, it is assumed that the attendee has previous knowledge of basic electricity, magnetism, Ohm's law, and the use of electrical test instruments. Some servo motor experience would be helpful but not a requirement for attending.

Testing and setting of the feedback devices used on these motors will be demonstrated.

Quality Solutions Company LLC

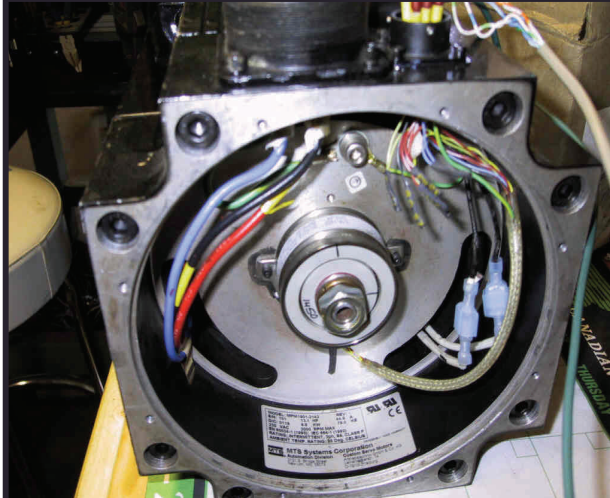
Greenwood, Indiana 46143

Website : www.motor-solutions.com

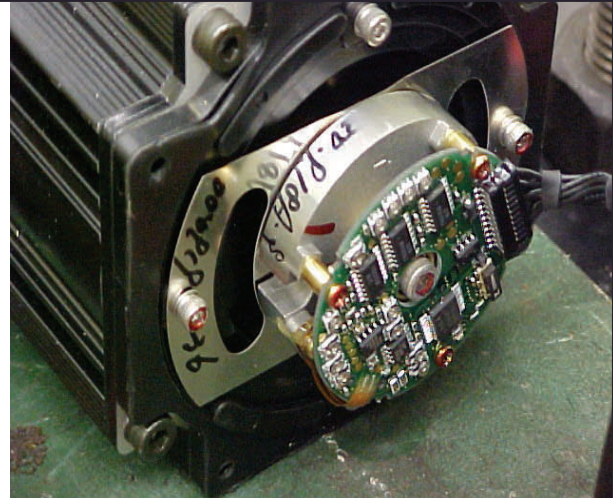
Make your reservation today

Voice: (317) 887-3386

Fax: (317) 889-6758



Resolver



Incremental Encoder

The learning objectives of this training are for the attendee to obtain a working knowledge of:

- **The electrical operating principals of the brushless servo motor.**
- **The differences in brushless servo motors and other electric motors such as AC three phase, or DC brush motors.**
- **Testing of the permanent magnets that are used in these motors.**
- **Inspection and testing of various feedback devices that are used such as encoders, Hall Effect devices, and resolvers.**
- **Alignment of the commutation signals from the feedback devices for proper commutation of a servo motor.**
- **Electrical and mechanical tests for brushless servo motors.**
- **Record keeping of tests and inspections of servo motors**