

Course Description

This course is designed for technicians who will be troubleshooting Fanuc controlled machinery. The course will use specific examples from your machine applications. We will emphasize the importance for technicians to fully understand how the electronics and mechanics interact in order to troubleshoot all of the problems that can occur with the machine.

During the course, errors will be induced into a machine producing various failures. Students will learn to isolate and troubleshoot the cause of the failures.

Fanuc training manuals, exercises, and classroom materials will be provided.

Topical Outline

Boot up Troubleshooting using LED Display

- Main CPU
- Power Supply

Fanuc CNC Alarms

- Description of alarms and probable causes

Alpha Series Alarms

- Troubleshooting tips such as cable swap, scale by-pass, axis disconnect, etc.
- Over Current Alarms
- Pulse Coder Disconnect
- Soft Over Travel

Field Serviceable Items and Testing

- Closed Loop vs. Semi-closed Loop
- Encoder replacement
- Scale by-pass
- Demonstration of Servo Check Board
- By-pass plugs

Machine Tool Builder Alarms (A##)

- Distinguishing between Fanuc and MTB alarms.

CNC Diagnostics

- Program stops but no alarm displayed
- Loss of cycle start status
- Digital servo alarms
- Following error
- Servo Tuning Screen

NC-200

Fanuc CNC Advanced Machine Troubleshooting

Topical Outline - continued

PLC Diagnostics

- Relationship between CNC and PLC
- G- signals from the PLC to the CNC
- F- signals from the CNC to the PLC
- A- MTB alarms
- K- Special keep relays
- Diagnostic Status Display
- Trace Function Description

If you wish to add, remove or concentrate on any of the topics please let us know. We will accommodate any special requests.

Prerequisites

The technicians must be familiar with the use of diagnostic tools such as multi-meters and mega ohmmeters. They should also be familiar with the Fanuc control, basic ladder logic and machine operation.

Course Length

36 hours

CEU's

3.3