

## NC-200

### Fanuc CNC Advanced Machine Troubleshooting

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#### *Course Description*

This course is designed for technicians who will be troubleshooting CNC equipment with Fanuc controls. We will emphasize the importance for technicians to fully understand how the electronics and mechanics interact in order to troubleshoot a problem. The course will cover the three primary areas of CNC troubleshooting:

- Electrical
- Mechanical
- Environmental

#### *Customer Supplied Training Equipment & Schematics*

This class is available on site or at our location. If done on site, the customer must provide a classroom suitable for training purposes. A 220VAC supply will be needed for the simulator.

#### *Topical Outline*

During the course the students will assemble a CNC machine. This includes items such as box and linear guide rails, gibbs, ballscrews and a lubrication system. Once this is complete, the students will add the motors, servo drives and all of the necessary wiring. In the next step they will install the control, operator panel, parameters and ladder logic. As they assemble the machine we will discuss each component, how to adjust it, and how it can fail.

We will cover the interface between the CNC and the machine tool in detail. After the assembly, errors will be introduced into the machine. The students will use what they have learned in class to diagnose the problems. The students will also be presented with various scenarios dealing with machine failures. They will discuss potential causes for the failure and determine a logical series of tests in order to quickly isolate the problem.

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

#### *Prerequisites*

**This is an advanced course.** The students should have prior experience with troubleshooting CNC equipment. An advanced understanding of diagnostic procedures is recommended.

#### *Course Length*

36 hours / 4.5 days

#### *CEU's*

3.3