Course Description

This course is designed for technicians who will be troubleshooting Fanuc controlled machinery. It will concentrate on the use of ladder logic and various diagnostic screens to troubleshoot machine problems. During the course the student will examine the ladder logic in detail for one machine. During this process we will also cover various programming techniques used by other machine builders. Multiple circuits, including M-codes, spindle commands, interlocks and alarms, will be covered.

Topic Outline

1. Ladder logic general description
2. Inputs / Outputs
3. Fanuc PMC addresses
4. Function Statements
5. Alarm Messages
6. Reverse Engineering Alarms
7. Ladder display and searching
8. Trace function, Trigger Function
9. M-codes
10. Interlocks
11. Sub-routines
12. PMC parameters
13. Backing up PMC data
14. PMC Diagnostics

Prerequisites

The student must have an electrical background and be familiar with basic ladder logic.

Customer Supplied Training Equipment

The customer will provide a classroom and access to a machine tool with a Fanuc 16, 18 or 21 controllers suitable for training purposes. The instructor will need unlimited access to the machining center for the duration of the class. Ladder logic samples will be provided for each student. Errors will be introduced into the equipment. The student will use the information learned in the classroom to diagnose the error.

Course Length

32 hours