

K-09a

ELECTRICIAN TRAINING

TRAINER'S GUIDE

**Duty K: PLC (Allen-Bradley)
K-09a: Troubleshoot Processor**

Issued 01/01/98

Instructions To The Trainer

1. The Learner will contact you when ready to practice troubleshooting a processor.
2. Be prepared to demonstrate the steps for this task.
3. Ask the Learner to contact the Evaluator when ready for the Skill Check.



Skill Objective

If a processor's status lights indicate an abnormal condition or if a "FAULTED" message is displayed on screen, troubleshoot the processor.

Task Standards

1. The Learner identifies the processor's problem.
2. The Learner recommends the appropriate corrective action.
3. The machine operates within specifications after the Learner correct the problem.

What The Learner Will Need

This section contains the safety information, tools, and resources you will need before troubleshooting a processor.



- Follow all Caterpillar Facility Safety Standards when performing this task in the plant.
- Use caution when working around the PLC; high voltage is present on the inside of the PLC cabinet door and near the input/output (I/O) chassis.
- Be careful when working near moving or rotating machinery.
- Wear safety glasses and hearing protection in assembly and production areas.



- PC equipped with PLC software
- PLC
- Interconnect cable
- Processor Keyswitch Key (if the processor is not in the REM position)
- Password (if necessary)



- User's Manual for processor



Practice Set-Up

The Learner may perform the following practice to help prepare for the Skill Check. Set up the practice for the Learner. Assist the Learner during the practice, if necessary; answer any questions concerning the task; and be prepared to demonstrate the task to the Learner. Make sure the Learner follows safe work practices while practicing the task.

Practice

Designate a location for the practice. The Learner may practice in the Lab or at a simulator.

- Insert a problem into the hardware or software. Use one of the following problems or create a problem that would require troubleshooting:
- Insert a negative number for the preset value of a timer.
- Cause an indirect address to be out of range.
- Cause a Jump to Subroutine to a nonexistent program file.
- Jump to a nonexistent Target.
- Reset the DIP switches to cause a “System configured wrong” error message.
- Delete some or all of the program files.

Ask the Learner to demonstrate and explain the steps required to identify the problem. After the Learner identifies the problem, ask him or her to recommend the corrective action.

Ask the Learner to demonstrate the safe work practices while performing this task.

Practice Objective

The Learner should locate and identify the problem and recommend the appropriate corrective action. The Learner should demonstrate safe work practices.

Next Step

Allow the Learner to continue practicing and developing skills needed to demonstrate the task. The Learner should ask the Evaluator to schedule a Skill Check whenever he or she is ready to demonstrate the task unaided and meet all the task standards and safe work practices.

