

K-09a

ELECTRICIAN TRAINING

SKILL CHECK GUIDE

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

Issued 01/01/98

Rationale

This Skill Development Guide provides the knowledge a Learner needs to troubleshoot a processor. If a processor will not enter the RUN mode or if its status lights indicate a problem, a troubleshooter needs to identify the source of the problem. It is important for the troubleshooter to know how to use the troubleshooting sections of the User's Manual. Failure to identify the problem may result in the machine not operating to specifications, intermittent problems, or excessive downtime.

Skill Check Set-Up

Select a processor for the Skill Check. Set up the Skill Check in the Lab, on a simulator, or at a PLC location in the plant. If the Learner will perform the Skill Check at a PLC location, contact the Operator where the PLC is located to schedule a convenient time for the Skill Check.

Set up a problem by inserting a fault in the hardware or software that would cause an abnormal condition with the processor's status indicators or cause the program to display a "FAULTED" message when the Learner attempts to go online. Ask the Learner to identify the problem and recommend corrective action(s).

You must make available the tools, materials, and resources needed to demonstrate the task.

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



Skill Check

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

Needs
Mastered Practice

Safe Work Practices

- | | | |
|-------|-------|---|
| _____ | _____ | 1. Follow all Caterpillar Facility Safety Standards when performing this task in the plant. |
| _____ | _____ | 2. Use caution when working around the PLC; high voltage is present on the inside of the PLC cabinet door and near the I/O chassis. |
| _____ | _____ | 3. Be careful when working near moving or rotating machinery. |
| _____ | _____ | 4. Wear safety glasses and hearing protection in assembly and production areas. |

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 corrects the problem. |



Evaluator's Sign-Off

The Learner has demonstrated safe work practices and competent performance of the task.

Evaluator: _____ Date: _____

Learner: _____ Clock No: _____

