

# **K-08a**

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## **ELECTRICIAN TRAINING**

### **SKILL CHECK GUIDE**

**Duty K: PLC (Allen-Bradley)**  
**K-08a: Troubleshoot Peripheral**  
Issued 01/01/98

## **Rationale**

This Skill Development Guide provides the knowledge a Learner needs to troubleshoot a peripheral. The Learner needs to be able to determine if the problem is an input problem from the peripheral or an output problem to the peripheral device. The Learner needs to be able to use the Ladder Diagram printout to verify machine conditions.

## **Skill Check Set-Up**

Select a PLC with a peripheral device as a location for the Skill Check. 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 that would cause a peripheral-related problem to occur. Ask the Learner to identify the problem and recommend the corrective action.

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 peripheral.



- 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.
- Perform Lockout and Tagout procedure if you must place the machine static state.
- 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
- Basic electrical hand tools
- Voltmeter
- Processor Keyswitch Key (if the processor is not in the REM position)
- Password (if necessary)



- Electrical Schematics
- Ladder Diagram printout
- ZMS procedure
- Diagnostic screens (Marquee, Panel View)
- User's Manual for peripheral devices



## Skill Check

Upon notification of a peripheral-related problem, troubleshoot the peripheral.

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 input/output (I/O) chassis. |
| _____ | _____ | 3. Perform Lockout and Tagout procedure if you must place the machine static state.  |
| _____ | _____ | 4. Be careful when working near moving or rotating machinery.  |
| _____ | _____ | 5. Wear safety glasses and hearing protection in assembly and production areas.  |

### Task Standards

- |       |       |  |
|-------|-------|--|
| _____ | _____ | 1. The Learner identifies the peripheral-related problem.    |
| _____ | _____ | 2. The Learner recommends the appropriate corrective actions |



## Evaluator's Sign-Off

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

Evaluator: \_\_\_\_\_ Date: \_\_\_\_\_

Learner: \_\_\_\_\_ Clock No: \_\_\_\_\_