

K-04a

ELECTRICIAN TRAINING

SKILL CHECK GUIDE

Duty K: PLC (Allen-Bradley)
K-04a: Access and Modify Data Table

Issued 01/01/98

Rationale

This Skill Development Guide provides the knowledge a Learner needs to access and modify a data table. At Caterpillar, some of the reasons data is modified include: to resequence a machine; to compensate for mechanical problems; or to troubleshoot the machine. If a machine is down, a data table may need to be temporarily modified to return the machine to operational status. It is important to know how the new data will affect the machine's performance.

Skill Check Set-Up

Select a PLC-controlled machine for the Skill Check. Contact the Operator where the PLC is located to schedule a convenient time for the Skill Check. Provide the Learner with new data that will produce a predictable effect. Use data that is different than the data used in the practice. A few suggestions include the following:

- Set up a situation where new data is needed to correct an “out-of-sequence” condition.
- Change the data to enable the machine to perform a non-standard function.
- Change the data associated with specific production parts.

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 accessing and modifying a data table.

SAFETY FIRST

**DON'T TAKE
CHANCES**

- 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.
- Use caution when making any modifications, pay attention to values, addresses, etc.
- When making any modifications to a program data table, use caution when cycling the machine.



- PC equipped with PLC software
- PLC
- Interconnect cable
- Floppy disk (to back up processor memory, if needed)
- Processor Keyswitch Key (if the processor is not in the REM position)
- Password (if necessary)



- Electrical Schematics
- Ladder Diagram printout
- Engineering Modification



Skill Check

Upon receiving a request to modify a data table, or after determining a need to perform a temporary modification, access and modify the data table.

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. |
| _____ | _____ | 5. Use caution when making any modifications, pay attention to values, addresses, etc. |
| _____ | _____ | 6. When making any modifications to a program data table, use caution when cycling the machine. |

Task Standards

- | | | |
|-------|-------|--|
| _____ | _____ | 1. When the machine is cycled, the machine demonstrates the effect of the data table modification. |
| _____ | _____ | 2. The machine operates within specifications and meets production requirements. |



Evaluator's Sign-Off

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

Evaluator: _____ Date: _____

Learner: _____ Clock No: _____