

K-04b

ELECTRICIAN TRAINING

SKILL CHECK GUIDE

Duty K: PLC (Modicon)

K-04b: Access and Modify Data Table

Issued 01/01/98

Rationale

This Skill Development Guide provides the knowledge needed to access and modify a data table. At Caterpillar, typical PLC problems such as a machine or part breakdown occur. The Learner must exercise extreme caution when modifying a data table. Modifying the Ladder Diagram incorrectly could result in unexpected movement of the machinery or damage to a part.

Skill Check Set-Up

Select a part on a machine to modify in the machine program for the Skill Check. Contact the Operator where the PLC is located to schedule a convenient time for the Skill Check. Before the Learner begins, confer with the operator to select a “problem” part. As a part of the process have the Learner identify the part number from the machine and Ladder Diagram printout. Ask the Learner to enter the Ladder Diagram program and access the required data table. Have the Learner make the correct modification to the timer or counter in order to put the machine back to its original condition. 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.



- Follow all Caterpillar Facility Safety Standards when performing this task in the plant.
- You will perform this task online. Perform the steps carefully; mistakes could result in injury to personnel or damage to the equipment.
- 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.



- P190 programmer (Typically used with the 184, 384, 484, 584, 884, and 984 processors.)
- P230 programmer (Used with the 984 processor and the 184, 384, 484, 584, and 884 processors in the P190 emulator mode.)
- PLC communication cable
- Tape Loader Tape (P190 only)
- Program Loader Tape (P190 only)
- Modicon Bus Plus (Used with all processors.)



- Basic Help Keys, available on programmer software
- Modsoft Programmer User's Manual (GM-MSFT-001 Rev. F)
- Modicon P230 Quick Key reference card
- Ladder Diagram Printout and Cross Reference
- Modbus Plus Data Highway Chart
- Machine Print



Skill Check

Upon notification of a machine timer problem, a part problem, or if data is needed from the data table, 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. You will perform this task online. Perform the steps carefully; mistakes could result in injury to personnel or damage to the equipment. |
| _____ | _____ | 3. 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. |

Task Standards

- | | | |
|-------|-------|--|
| _____ | _____ | 1. The location of the needed data register is identified. |
| _____ | _____ | 2. The stored information from that register is accessed. |
| _____ | _____ | 3. The data table is modified to improve the machine's current program so that the machine will function according to production specifications. |



Evaluator's Sign-Off

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

Evaluator: _____ Date: _____

Learner: _____ Clock No: _____