

K-03b

ELECTRICIAN TRAINING

SKILL CHECK GUIDE

DUTY K: PLC (Modicon)

K-03b: Load Program

Issued 01/01/98

Rationale

This Skill Development Guide provides the knowledge needed to load a program. At Caterpillar, the Learner loads a program if a new machine is installed, a processor goes bad, a new machine program is written, or a PLC lockup has occurred. Loading a program incorrectly could result in erasing the machine program or loading an older version of the program, which could result in a “wreck” or more downtime.

Skill Check Set-Up

Contact the Operator where a PLC is located to schedule a convenient time for the Skill Check. Before the Learner begins, verify that the program is backed up. Remove the program from the PLC and have the Learner begin loading the program. Require that the Learner perform the task twice, once with each programmer. Make sure that the program is the correct version and that the machine is back to its original condition when the Skill Check is complete. 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 loading a program.



- 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
- Modbus Plus Data Highway Chart



Skill Check

Upon notification of a new machine installation, a bad processor, a PLC lockup, or a new machine program, load a program.

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 program is loaded on the P190 when the “Load Complete” prompt is displayed. |
| _____ | _____ | 2. The program is loaded on the P230 when the Controller Status Information Screen is displayed. |
| _____ | _____ | 3. The “Verify OK” prompt indicates the program loaded successfully for both programmers. |



Evaluator's Sign-Off

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

Evaluator: _____ Date: _____

Learner: _____ Clock No: _____