

R-04

ELECTRICIAN TRAINING

SKILL CHECK GUIDE

Duty R: Magnetic Controls (120V and below)

R-04: Troubleshoot Machine Grounds

Issued 03/01/98

Rationale

This Skill Development Guide provides the knowledge a Learner needs to troubleshoot machine grounds. The Learner must be able to troubleshoot the machine grounds.

Skill Check Set-Up

You will provide a machine with a ground fault. Ask the Learner to isolate the ground with a digital volt-ohmmeter (DVM) or megger. After the Learner has identified and isolated the ground, the machine is locked out and tagged and the ground is cleared. When the ground has been cleared, the machine is tested to verify normal operation.

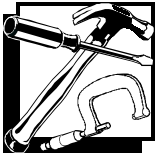
You must make available the tools, materials, and resources needed to demonstrate the task.

What The Learner Will Need

This section contains the safety information, tools, and resources you will need before troubleshooting machine grounds.



- You will be working with potentially hazardous electricity. Caution must be exercised. Machines or parts of machines may still be moving.
- Knowledge of the machine you are working on is pertinent to your safety and the safety of those in the area.
- Follow all Caterpillar safety standards.



- digital volt-ohmmeter (DVM)
- megger
- standard electrical handtools



- ZMS for repair after locating problem
- blueprint of machine



Skill Check

Given a machine that an operator indicates has a blown fuse(s) or a circuit breaker tripped, a switch or other peripheral grounded, or there is water in the cabinet or peripheral, troubleshoot the machine grounds.

Needs
Mastered Practice

Safe Work Practices

- | | | |
|-------|-------|--|
| _____ | _____ | 1. You will be working with potentially hazardous electricity. Caution must be exercised. Machines or parts of machines may still be moving. |
| _____ | _____ | 2. Knowledge of the machine you are working on is pertinent to your safety and the safety of those in the area. |
| _____ | _____ | 3. Follow all Caterpillar safety standards. |

Task Standards

- | | | |
|-------|-------|--|
| _____ | _____ | 1. The machine ground is identified. |
| _____ | _____ | 2. The machine ground is cleared. |
| _____ | _____ | 3. When tested, the machine operates normally according to the machine operator. |



Evaluator's Sign-Off

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

Evaluator:

Date:

Learner:

Clock No:
