

Q-02

ELECTRICIAN TRAINING

SKILL CHECK GUIDE

Duty Q: Cranes and Hoists
Q-02: PM/Troubleshoot Hoists

Issued 01/01/99

Rationale

This Skill Development Guide provides the knowledge a Learner needs to troubleshoot and perform preventive maintenance on hoists. The Learner must be able to troubleshoot and PM a hoist.

Skill Check Set-Up

Identify a hoist that requires a preventive maintenance check. Check to ensure the availability of replacement parts.

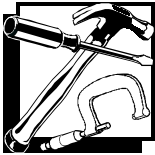
The evaluator provides the tools, materials, and resources needed to demonstrate the task.

What The Learner Will Need

This section contains the safety information, tools, and resources you will need before troubleshooting and performing preventive maintenance on a hoist.



- Follow all Caterpillar facility safety standards when performing this task.
- Harness must be worn when working on the scissor lift/JLG.
- The hoist must be locked and tagged after the power on checks has been completed during the PM check. An electrical hazard exists inside the electrical cabinet and at the power connection.



- scissors lift/JLG
- flashlight
- Electricians hand tools
- ruler
- feeler gauge
- lock and tag
- Digital Volt Meter (DVM)/Fluke
- gear adjuster (located inside the rotary limit switch)
- 1/2 x 2 3/4 inch bolt



- none



Skill Check

Given a work request, troubleshoot and perform preventive maintenance on a hoist.

Needs
Mastered Practice

Safe Work Practices

- | | | |
|-------|-------|---|
| _____ | _____ | 1. Follow all Caterpillar facility safety standards when performing this task. |
| _____ | _____ | 2. Harness must be worn when working on the scissor lift/JLG. |
| _____ | _____ | 3. The hoist must be locked and tagged after the power on checks has been completed during the PM check. An electrical hazard exists inside the electrical cabinet and at the power connection. |

Task Standards

- | | | |
|-------|-------|--|
| _____ | _____ | 1. The brake pad must display no less than 2/3 of the original thickness (9mm). |
| _____ | _____ | 2. The brake seal must not leak. |
| _____ | _____ | 3. The air gap must be set within 1/32 to 1/8 inch. |
| _____ | _____ | 4. The collector mechanical components must be aligned with the power bar. |
| _____ | _____ | 5. The control panel(s) connections must be snug, and the wiring and terminals must show no signs of damage. |
| _____ | _____ | 6. The up/down limit switches must operate within manufacturer's specifications. |
| _____ | _____ | 7. Bridge, trolley, hoist controllers must show no sign of wear. |
| _____ | _____ | 8. Bridge, trolley, hoist controllers must operate within manufacturer's specifications. |

_____ 9. Weight limit switches must operate within manufacturer's specifications.

_____ 10. All safe practices must be demonstrated.



Evaluator's Sign-Off

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

Evaluator: _____ Date: _____

Learner: _____ Clock No: _____