

N-02

MAINTENANCE MECHANIC TRAINING

TRAINER'S GUIDE

Duty N: System Troubleshooting
N-02: Troubleshoot Pneumatic System

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Instructions To The Trainer

1. The Learner will contact you when ready to practice troubleshooting a pneumatic system.
2. Be prepared to demonstrate the steps for this task.
3. Ask the Learner to contact the Evaluator when ready for the Skill Check.



Skill Objective

Given a pneumatic system that is not operating according to manufacturer's specifications, troubleshoot pneumatic system.

Task Standards

1. The fault must be identified.
2. The recommended corrective action must return the pneumatic system to normal operating conditions as shown on the pneumatic print or manufacturer's specifications.

What The Learner Will Need

This section contains the safety information, tools, and resources you will need before troubleshooting a pneumatic system.



- Follow all Caterpillar facility safety standards when performing this task.
- Perform lockout/tagout when checking operation of the three-way solenoid valve. There is 110 VAC or 24 VDC supplied to the valve.



- Maintenance Mechanic hand tools



- pneumatic print, if available
- manufacturer's specifications



Practice Set-Up

The Learner may perform the following practice to help prepare for the Skill Check. Set up the practice for the Learner. Assist the Learner during the practice, if necessary; answer any questions concerning the task; and be prepared to demonstrate the task to the Learner. Make sure the Learner follows safe work practices while practicing the task.

Practice

Set up a machine for troubleshooting the pneumatic system. Ask the Learner to troubleshoot the system using the print for the machine, if necessary.

Introduce a fault into the system. Examples of faults may include:

- 1) Removing electrical supply from the solenoid operated valve so that manual override is necessary.
- 2) Install a faulty actuator.
- 3) Install a faulty solenoid operated valve.

Tools and equipment for Practice

Machine with a pneumatic system

Machine pneumatic print

Practice Objective

The Learner must identify the fault in the system. The Learner must recommend a corrective action that you agree will restore the pneumatic system to normal operating conditions. All safe work practices must be demonstrated.

Next Step

Allow the Learner to continue practicing and developing skills needed to demonstrate the task. The Learner should ask the Evaluator to schedule a Skill Check when ready to demonstrate the task unaided and meet all the task standards and safe work practices.

