



Performance Verification Packet
INDUSTRIAL MAINTENANCE
SUPPORT MECHANIC

This performance verification is designed as one method to evaluate job skills and safe work habits of a participant. The performance of the participant must be evaluated by an NCCER certified evaluator, at an NCCER authorized assessment site and be approved by an NCCER accredited assessment center.

Last Updated: February 2008

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13614 Progress Blvd • Alachua, FL 32615

1-888-622-3720

Performance Verification Form

How to fill out and file your information

Participant

- 1) Print your last name, first name, and social security number.
- 2) Print your company name, current employer, and the state where your employer's main office is located.
- 3) In the space provided for "Participant Signature," sign your name and enter the date you signed the form.

Performance Evaluator

- 1) In the space provided for "Site Code," enter the postal zip code of the location where the performance verification is being conducted.
- 2) In the column provided for "Date," enter the date the participant completed each of the tasks. This date is important because there may be times a participant does not complete a performance verification in one day.
- 3) In the space provided for "Performance Evaluator," sign your name.
- 4) In the space provided for "Date," next to your signature, list the date the participant successfully completed all of the tasks.

Administrator

- 1) In the space provided for "Administrator," sign your name. Your signature indicates that the performance evaluator is certified to conduct this performance verification and that it was conducted within the guidelines of the NCCER.
- 2) In the space provided for "Date," next to your signature, list the date that this performance verification form is being sent to the NCCER for entry into the National Registry.
- 3) In the space provided for "Accredited Assessment Center," print the name of the accredited assessment center that is conducting this performance verification.

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Objectives

The candidate will demonstrate the ability to demonstrate good safety practices and high quality standards as well as basic mechanical and mathematical skills. The candidate should know how to isolate and blind, clean and assist in working on industrial equipment, and assist in testing and leak detection.

Scope

This Performance Verification provides a means to observe and evaluate competencies in the following areas:

- Identifying tools, materials and equipment
- Rigging a gate valve
- Installing a gasket
- Identifying pipes and fittings
- Using PPE and tools for work on heat exchangers, cooling towers, and fin fans
- Identifying blinding, fill and vent points for hydro testing heat exchangers
- Performing a service test

Materials Required

Identifying tools, materials, and equipment

- Portable power drive
- Portable grinder
- Thread gauge
- Packing puller
- Easy-out
- Tap
- Scriber
- Protractor
- Dial gauge
- Ring gasket
- Flat gasket
- Slug/knocker wrench
- Spud wrench
- Combination wrench
- Socket wrenches
- Sockets
- Impact sockets

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- Hydro test pump
- Diaphragm pump
- Trash pump

Rig a Gate Valve

- Several types of ratchet-lever hoists
- Gate valve
- Support from which to hang equipment
- Selection of different sizes of slings
- Selection of different sizes of shackles

Install a Gasket

- Several types of gaskets
- Several types of flanges
- Measurement tool
- Adhesive, sealer or lubricant
- Hold-down bolts
- Calibrated torque wrench
- Properly sized boxed-end wrench
- Properly sized socket
- Alignment bar or spud wrench

Identify Pipes and Fittings

- 40-50 types of fittings for copper, plastic and ferrous metal piping
- Various types of copper, plastic, and ferrous metal pipes

Demonstrate PPE and Tools for Working on Heat Exchangers, Cooling Towers and Fin Fans

- Gloves
- Hard hat
- Steel-toed shoes
- Face shield
- Safety harness
- Lifelines
- Goggles

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- Rubber gloves and boots
- Slicker suit
- Monitors (LEL, oxygen, CO)

Identify Blinding, Fill and Vent Points for Hydro Test on a Heat Exchanger

(heat exchanger diagram may be used in place of the following)

- Heat exchanger
- Wrenches
- Wedges
- Hydro test blinds
- Test gaskets
- Pressure gauge
- Hydro test pump
- High-pressure test hose
- Low-pressure suction hose
- NOTE: Blind on the shell side for a tube test

Perform a Service Test

- Piece of equipment with a liquid running through it.

Time Required

4-6 hours

Tasks

- **Identify tools, materials and equipment**
 - Correctly identify 90% of the items.
 - Evaluator may use photos in lieu of actual items.
 - Complete task in 30 minutes or less.

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- **Rig a gate valve**
 - Choose proper sized slings, shackles, and hoists.
 - Use proper rigging method.
 - Observe proper safety.
 - Complete task in 30 minutes or less, unless otherwise specified.

- **Install a gasket**
 - Choose appropriate gasket and flanges.
 - Install them correctly in the proper sequence.
 - Observe proper safety.
 - Complete task in 45 minutes or less.

- **Identify pipes and fittings**
 - Correctly identify at least 80% of the pipes and fittings selected by the evaluator.
 - Complete task in 45 minutes or less.

- **Demonstrate PPE and tools for working on heat exchangers, cooling towers, and fin fans**
 - Properly identify the personal protective equipment and tools for each task.
 - Complete the task in 45 minutes or less.

- **Identify blinding, fill, and vent points for a hydro test on a heat exchanger**
 - Using equipment or a diagram provided by the evaluator, correctly identify 90% of the points.
 - Complete the task in 30 minutes or less.

- **Perform a service test on a given piece of equipment**
 - Correctly perform a service test on equipment specified by the evaluator.
 - Complete the task in 60 minutes or less.

NCCER PERFORMANCE EVALUATOR CHECKLIST
INDUSTRIAL MAINTENANCE SUPPORT MECHANIC

Date Completed Task To Perform

- __-__-__ 1. **Identify tools, materials, and equipment**
- Identified at least 18 of the 20 items
 - Completed task in 30 minutes or less
-
- __-__-__ 2. **Rig a gate valve**
- Chose properly sized slings
 - Chose properly sized shackles
 - Chose properly sized hoists
 - Used properly rigging method
 - Observed proper safety
 - Completed task in 30 minutes or less, unless large valve used.
-
- __-__-__ 3. **Install a gasket**
- Chose appropriate gasket
 - Chose appropriate flanges
 - Installed them correctly in the proper sequence
 - Observed proper safety
 - Completed task in 45 minutes or less
-
- __-__-__ 4. **Identify pipes and fittings**
- Correctly identified at least 80% of the fittings and pipes
 - Completed task in 45 minutes or less.
-
- __-__-__ 5. **Demonstrate PPE and tools for working on heat exchangers, cooling towers, and fin fans**
- Properly identified PPE and tools for each environment
 - Completed task in 45 minutes or less
-
- __-__-__ 6. **Identify blinding, fill, and vent points for hydro test on a heat exchanger**
- May use heat exchanger diagram instead of actual equipment (see answer key)
 - Correctly identified 90% of the components
 - Completed task in 30 minutes or less
-
- __-__-__ 7. **Perform a service test**
- Correctly performed the test
 - Completed task in 60 minutes or less

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PERFORMANCE VERIFICATION FORM

INDUSTRIAL MAINTENANCE SUPPORT MECHANIC IMSUP32 - CRAFT

Participant Information:

Last Name First Name Social Security Number

Employer/Company Name State Site Code

Performance Evaluator:

Last Name First Name Social Security Number

Table with 5 columns: TASK #, SPECIFIC DUTIES/TASKS, DATE, START TIME, END TIME. Rows 01-07 describe tasks like 'Identify Tools, Materials, and Equipment' and 'Perform a Service Test'.

Consent/Release: I, the undersigned, do hereby authorize the National Center for Construction Education and Research (NCCER) to release the information and results attained through the administration of the National Craft Assessment and Certification Program (NCACP) to the organization referenced below, and acknowledge that the employer noted above is my present employer.

ACCREDITED ASSESSMENT CENTER: _____

PARTICIPANT: _____ SIGNATURE _____ DATE: _____

PERFORMANCE EVALUATOR: _____ SIGNATURE _____ DATE: _____

ADMINISTRATOR: _____ SIGNATURE _____ DATE: _____

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Return Completed Form To:
NCCER Registry
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