

## **NOTE ON PERFORMANCE TESTING**

Performance Profile Sheet(s) are included in a format that can be easily photocopied for each trainee. This examination is designed to measure competency in the tasks taught in each module.

Please note the number of tasks to be tested while teaching each module. Each trainee should be tested on all the tasks listed on the Performance Profile Sheet(s). Before performance testing, the instructor should brief the trainees on:

- Test objectives and criteria
- Safety precautions
- Procedures for each task to be tested

The instructor administering the performance testing should also do the following:

- Ensure that all of the needed equipment is available and operating properly.
- Set up the testing stations.
- Organize and administer the test in a way that allows for optimal performance.
- Complete the Performance Profile Sheet(s) for each trainee by assigning a pass/fail score for each listed task. Include the testing date and start and end times for each task in the rating boxes.
- Monitor adherence to all safety regulations and precautions.
- Provide adequate supervision to prevent injuries.
- Take immediate and effective action to remedy any emergency.

### **Performance Testing**

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If Performance Testing is done as part of the NCCER Standardized Craft Training Program, the following conditions must be met:

1. The Craft Instructor must hold valid NCCER instructor certification.
2. The training must be delivered through an Accredited Training Sponsor recognized by NCCER.
3. The specific performance testing must be completed successfully.
4. The results of the testing must be recorded and submitted to the local Accredited Training Sponsor for approval through NCCER's Registry system.

### **Certified Plus Credential**

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If the sponsor is working through an NCCER-Accredited Assessment Center, candidates who successfully pass performance testing may be eligible for a Certified Plus credential. A number of NCCER's Performance Profiles cross over to NCCER's Assessment Performance Verifications and may be completed simultaneously. Note that two other important conditions are required for the Certified Plus credential:

1. Candidates must first pass the associated written assessment.
2. An NCCER-Accredited Assessment Administrator must sign off on the Performance Verification before it is submitted to NCCER.

# PERFORMANCE PROFILE SHEET



**Craft: HVAC**

**Module: 03313**

**Module Title: Fasteners, Hardware, and Wiring Terminations**

**NCCER TRAINING**

TRAINEE NAME: \_\_\_\_\_

TRAINING PROGRAM SPONSOR: \_\_\_\_\_

INSTRUCTOR: \_\_\_\_\_

**Rating Levels:** (1) Passed: performed task (2) Failed: did not perform task  
Be sure to list the date the testing for each task was completed.

**Recognition:** When testing for the NCCER Training Program, record performance testing results and submit them to your Training Program Sponsor through the Registry System.

| OBJECTIVE | TASK  | RATING | DATE | START TIME | END TIME |
|-----------|---|--------|------|------------|----------|
| 1         | 1. Torque threaded hardware to a specific torque value.                               |        |      |            |          |
| 1         | 2. Select the appropriate drill bit and install an anchor in brick or concrete block. |        |      |            |          |
| 3         | 3. Terminate line- and low-voltage wiring on a compressor contactor.                  |        |      |            |          |

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# PERFORMANCE PROFILE SHEET



**Craft: HVAC**

**Module: 03314**

**Module Title: Control Circuit and Motor Troubleshooting**

**NCCER TRAINING**

TRAINEE NAME: \_\_\_\_\_

TRAINING PROGRAM SPONSOR: \_\_\_\_\_

INSTRUCTOR: \_\_\_\_\_

**Rating Levels:** (1) Passed: performed task (2) Failed: did not perform task  
Be sure to list the date the testing for each task was completed.

**Recognition:** When testing for the NCCER Training Program, record performance testing results and submit them to your Training Program Sponsor through the Registry System.

| OBJECTIVE | TASK   | RATING | DATE | START TIME | END TIME |
|-----------|--|--------|------|------------|----------|
| 2         | 1. Wire, check the operation of, and adjust the cycle rate of a thermostat.  |        |      |            |          |
| 1, 3      | 2. Interpret control circuit diagrams.   |        |      |            |          |
| 1, 3      | 3. Perform electrical tests and/or troubleshooting procedures on the following: <ul style="list-style-type: none"><li>• Single- and three-phase power sources</li><li>• Fuses and circuit breakers</li><li>• Resistive loads</li><li>• Relays and/or contactors</li><li>• Motor windings</li><li>• Start and run capacitors</li><li>• Start relays and thermistors</li></ul> |        |      |            |          |

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# PERFORMANCE PROFILE SHEET



**Craft: HVAC**

**Module: 03210**

**Module Title: Troubleshooting Cooling**

**NCCER TRAINING**

TRAINEE NAME: \_\_\_\_\_

TRAINING PROGRAM SPONSOR: \_\_\_\_\_

INSTRUCTOR: \_\_\_\_\_

**Rating Levels:** (1) Passed: performed task (2) Failed: did not perform task  
Be sure to list the date the testing for each task was completed.

**Recognition:** When testing for the NCCER Training Program, record performance testing results and submit them to your Training Program Sponsor through the Registry System.

| OBJECTIVE | TASK  | RATING | DATE | START TIME | END TIME |
|-----------|---|--------|------|------------|----------|
| 1, 2      | 1. Demonstrate the ability to isolate and determine the solution for at least four of the following types of malfunctions: <ul style="list-style-type: none"><li>• Compressor failures</li><li>• System-related compressor problems</li><li>• Refrigerant undercharge or overcharge</li><li>• Evaporator and condenser problems</li><li>• Metering device problems</li><li>• Refrigerant lines and accessories</li><li>• Non-condensables and refrigerant circuit contamination</li></ul> |        |      |            |          |

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# PERFORMANCE PROFILE SHEET



**Craft:** HVAC

**Module:** 03311

**Module Title:** Troubleshooting Heat Pumps

**NCCER TRAINING**

TRAINEE NAME: \_\_\_\_\_

TRAINING PROGRAM SPONSOR: \_\_\_\_\_

INSTRUCTOR: \_\_\_\_\_

**Rating Levels:** (1) Passed: performed task (2) Failed: did not perform task  
Be sure to list the date the testing for each task was completed.

**Recognition:** When testing for the NCCER Training Program, record performance testing results and submit them to your Training Program Sponsor through the Registry System.

| OBJECTIVE | TASK   | RATING | DATE | START TIME | END TIME |
|-----------|--|--------|------|------------|----------|
| 3         | 1. Demonstrate the ability to isolate and determine the solution for various electrical and mechanical malfunctions in heat pumps. |        |      |            |          |
| 3         | 2. Initiate the defrost cycle if a heat pump.  |        |      |            |          |

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# PERFORMANCE PROFILE SHEET



**Craft: HVAC**

**Module: 03209**

**Module Title: Troubleshooting Gas Heating**

**NCCER TRAINING**

TRAINEE NAME: \_\_\_\_\_

TRAINING PROGRAM SPONSOR: \_\_\_\_\_

INSTRUCTOR: \_\_\_\_\_

**Rating Levels:** (1) Passed: performed task (2) Failed: did not perform task  
Be sure to list the date the testing for each task was completed.

**Recognition:** When testing for the NCCER Training Program, record performance testing results and submit them to your Training Program Sponsor through the Registry System.

| OBJECTIVE | TASK  | RATING | DATE | START TIME | END TIME |
|-----------|---|--------|------|------------|----------|
| 1         | 1. Using the proper tools, instruments, and control circuit diagrams, isolate and correct malfunctions in a gas heating system. |        |      |            |          |
| 3         | 2. Complete a combustion analysis on a gas furnace or boiler.   |        |      |            |          |

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# PERFORMANCE PROFILE SHEET



**Craft: HVAC**

**Module: 03310**

**Module Title: Troubleshooting Oil Heating**

**NCCER TRAINING**

TRAINEE NAME: \_\_\_\_\_

TRAINING PROGRAM SPONSOR: \_\_\_\_\_

INSTRUCTOR: \_\_\_\_\_

**Rating Levels:** (1) Passed: performed task (2) Failed: did not perform task  
Be sure to list the date the testing for each task was completed.

**Recognition:** When testing for the NCCER Training Program, record performance testing results and submit them to your Training Program Sponsor through the Registry System.

| OBJECTIVE | TASK   | RATING | DATE | START TIME | END TIME |
|-----------|--|--------|------|------------|----------|
| 1, 2, 3   | <ol style="list-style-type: none"><li>Complete any two of the following:<ul style="list-style-type: none"><li>Remove and reinstall an oil pump in single-pipe and two-pipe systems.</li><li>Test a cad cell flame detector.</li><li>Conduct a complete combustion analysis (smoke test and draft included).</li><li>Remove and replace an oil burner nozzle and set the electrode gap.</li></ul></li></ol> |        |      |            |          |

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# PERFORMANCE PROFILE SHEET



**Craft: HVAC**

**Module: 03312**

**Module Title: Troubleshooting Accessories**

**NCCER TRAINING**

TRAINEE NAME: \_\_\_\_\_

TRAINING PROGRAM SPONSOR: \_\_\_\_\_

INSTRUCTOR: \_\_\_\_\_

**Rating Levels:** (1) Passed: performed task (2) Failed: did not perform task  
Be sure to list the date the testing for each task was completed.

**Recognition:** When testing for the NCCER Training Program, record performance testing results and submit them to your Training Program Sponsor through the Registry System.

| OBJECTIVE | TASK  | RATING | DATE | START TIME | END TIME |
|-----------|---|--------|------|------------|----------|
| 1, 2      | 1. Using the correct tools and circuit diagrams isolate and correct malfunctions in selected accessories. |        |      |            |          |

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# PERFORMANCE PROFILE SHEET

Craft: HVAC

Module: 03315

Module Title: Zoning, Ductless, and Variable-Refrigerant  
Flow Systems



NCCER TRAINING

TRAINEE NAME: \_\_\_\_\_

TRAINING PROGRAM SPONSOR: \_\_\_\_\_

INSTRUCTOR: \_\_\_\_\_

**Rating Levels:** (1) Passed: performed task (2) Failed: did not perform task  
Be sure to list the date the testing for each task was completed.

**Recognition:** When testing for the NCCER Training Program, record performance testing results and submit them to your Training Program Sponsor through the Registry System.

| OBJECTIVE | TASK   | RATING | DATE | START TIME | END TIME |
|-----------|--|--------|------|------------|----------|
| 2         | 1. Troubleshoot and repair a typical ductless or variable refrigerant flow system. |        |      |            |          |
| 2         | 2. Program the controller for a ductless or variable refrigerant flow system.      |        |      |            |          |

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# PERFORMANCE PROFILE SHEET



**Craft: HVAC**

**Module: 03305**

**Module Title: Commercial Hydronic Systems**

**NCCER TRAINING**

TRAINEE NAME: \_\_\_\_\_

TRAINING PROGRAM SPONSOR: \_\_\_\_\_

INSTRUCTOR: \_\_\_\_\_

**Rating Levels:** (1) Passed: performed task (2) Failed: did not perform task  
Be sure to list the date the testing for each task was completed.

**Recognition:** When testing for the NCCER Training Program, record performance testing results and submit them to your Training Program Sponsor through the Registry System.

| OBJECTIVE | TASK   | RATING | DATE | START TIME | END TIME |
|-----------|--|--------|------|------------|----------|
| 2, 3      | 1. Identify the major components of commercial hot water-heating and chilled-water cooling hydronic systems.             |        |      |            |          |
| 2         | 2. Identify the types of common piping configurations used with commercial hot-water and chilled-water hydronic systems. |        |      |            |          |

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# PERFORMANCE PROFILE SHEET



**Craft: HVAC**

**Module: 03306**

**Module Title: Steam Systems**

**NCCER TRAINING**

TRAINEE NAME: \_\_\_\_\_

TRAINING PROGRAM SPONSOR: \_\_\_\_\_

INSTRUCTOR: \_\_\_\_\_

**Rating Levels:** (1) Passed: performed task (2) Failed: did not perform task  
Be sure to list the date the testing for each task was completed.

**Recognition:** When testing for the NCCER Training Program, record performance testing results and submit them to your Training Program Sponsor through the Registry System.

| OBJECTIVE | TASK  | RATING | DATE | START TIME | END TIME |
|-----------|---|--------|------|------------|----------|
|           | Perform any two of the following:   |        |      |            |          |
| 2, 3      | 1. Perform selected operating procedures on low-pressure steam boilers and systems. |        |      |            |          |
| 4         | 2. Maintain selected steam traps.   |        |      |            |          |
| 3         | 3. Identify common piping configurations used with steam systems                    |        |      |            |          |

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# PERFORMANCE PROFILE SHEET



**Craft: HVAC**

**Module: 03304**

**Module Title: Retail Refrigeration Systems**

**NCCER TRAINING**

TRAINEE NAME: \_\_\_\_\_

TRAINING PROGRAM SPONSOR: \_\_\_\_\_

INSTRUCTOR: \_\_\_\_\_

**Rating Levels:** (1) Passed: performed task (2) Failed: did not perform task  
Be sure to list the date the testing for each task was completed.

**Recognition:** When testing for the NCCER Training Program, record performance testing results and submit them to your Training Program Sponsor through the Registry System.

| OBJECTIVE | TASK   | RATING | DATE | START TIME | END TIME |
|-----------|--|--------|------|------------|----------|
| 1         | 1. Set up a defrost timer for a freezer.                         |        |      |            |          |
| 4         | 2. Isolate a fault in refrigeration equipment or an ice machine. |        |      |            |          |
| 4         | 3. Clean an ice machine.   |        |      |            |          |

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# PERFORMANCE PROFILE SHEET



**Craft: HVAC**

**Module: 03316**

**Module Title: Customer Relations**

**NCCER TRAINING**

TRAINEE NAME: \_\_\_\_\_

TRAINING PROGRAM SPONSOR: \_\_\_\_\_

INSTRUCTOR: \_\_\_\_\_

**Rating Levels:** (1) Passed: performed task (2) Failed: did not perform task  
Be sure to list the date the testing for each task was completed.

**Recognition:** When testing for the NCCER Training Program, record performance testing results and submit them to your Training Program Sponsor through the Registry System.

| OBJECTIVE | TASK  | RATING | DATE | START TIME | END TIME |
|-----------|---|--------|------|------------|----------|
| 1, 2      | 1. Participate in at least three different role-playing scenarios related to challenging customer situations. |        |      |            |          |