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

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

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.
<table>
<thead>
<tr>
<th>OBJECTIVE</th>
<th>TASK</th>
<th>RATING</th>
<th>DATE</th>
<th>START TIME</th>
<th>END TIME</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1. Point out the components used in a functional AC power supply circuit and explain their functions.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>2. Following applicable safety practices, test AC components, including transformers, capacitors, and motor windings.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OBJECTIVE</td>
<td>TASK</td>
<td>RATING</td>
<td>DATE</td>
<td>START TIME</td>
<td>END TIME</td>
</tr>
<tr>
<td>-----------</td>
<td>--------------------------------------------------------</td>
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<td>----------</td>
</tr>
<tr>
<td>3</td>
<td>1. Use an acid/moisture test kit to test a refrigerant circuit.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>2. Measure and record the electrical and mechanical operating parameters of an operational compressor.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Performance Profile Sheet**

Craft: HVAC  
Module: 03301  
Module Title: Refrigerants and Oils

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**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.

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<th>Date</th>
<th>Start Time</th>
<th>End Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>1. Install refrigerant gauges on a functional system and calculate superheat and subcooling using the appropriate PT chart.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1, 3</td>
<td>2. Identify unknown refrigerants by temperature and pressure using a refrigerant gauge manifold.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Performance Profile Sheet

**Craft:** HVAC  
**Module:** 03205  
**Module Title:** Leak Detection, Evacuation, Recovery, and Charging

### 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

<table>
<thead>
<tr>
<th>Objective</th>
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<th>Start Time</th>
<th>End Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><strong>1. Use a mixture of nitrogen with traces of HCFC-22 refrigerant to pressurize a refrigerant system in preparation for leak testing.</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| 1         | **2. Using at least two of the following methods, leak test a pressurized refrigerant circuit:**  
          | — Electronic leak detection  
          | — Ultrasonic leak detection  
          | — Liquids  
          | — Ultraviolet/fluorescent systems |        |      |            |          |
| 2         | **3. Use a recovery unit to recover the refrigerant from a system.**                                                                                                                                 |        |      |            |          |
| 3         | **4. Evacuate a system using the deep vacuum method and perform a vacuum leak test.**                                                                                                               |        |      |            |          |
| 3         | **5. Evacuate a system using the triple evacuation method.**                                                                                                                                          |        |      |            |          |

*continued*
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<th>START TIME</th>
<th>END TIME</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>6. Demonstrate how to properly charge a refrigerant circuit by the following methods: — By weight — By superheat (fixed orifice metering device) — By subcooling (thermostatic expansion valve metering device)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Performance Profile Sheet**

**Craft:** HVAC  
**Module:** 03303  
**Module Title:** Metering Devices

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**Trainee Name:** ____________________________________________

**Training Program Sponsor:** __________________________________

**Instructor:** _______________________________________________

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**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.

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<th>Start Time</th>
<th>End Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>1. Replace the orifice piston in a piston type metering device.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>2. Install an externally equalized expansion valve, correctly placing the sensing bulb and equalizer tube.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>3. Calculate superheat and adjust expansion valve to obtain the correct superheat.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Craft: HVAC  
Module: 03211  
Module Title: Heat Pumps

<table>
<thead>
<tr>
<th>OBJECTIVE</th>
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<th>RATING</th>
<th>DATE</th>
<th>START TIME</th>
<th>END TIME</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>1. Install a heat pump and complete a proper startup.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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.
# Performance Profile Sheet

**Craft:** HVAC  
**Module:** 03215  
**Module Title:** Basic Maintenance

## 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

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<thead>
<tr>
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<th>Start Time</th>
<th>End Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>1. Lubricate a bearing using a grease gun.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>2. Properly install, align, and adjust a drive belt.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>3. Perform an inspection and periodic maintenance on a gas furnace and document the inspection results on a checklist.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>3. Perform an inspection and periodic maintenance on a cooling or heat pump system and document the inspection results on a checklist.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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Module 03202 has no Performance Profile Sheet; performance testing is not required for this module.
Module 03213 has no Performance Profile Sheet; performance testing is not required for this module.
Module 03214 has no Performance Profile Sheet; performance testing is not required for this module.
Module 03201 has no Performance Profile Sheet; performance testing is not required for this module.
Module 03204 has no Performance Profile Sheet; performance testing is not required for this module.
# PERFORMANCE PROFILE SHEET

**Craft:** HVAC  
**Module:** 03203  
**Module Title:** Introduction to Hydronic Systems

<table>
<thead>
<tr>
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<th>DATE</th>
<th>START TIME</th>
<th>END TIME</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>1. Disassemble a hydronic circulating pump and identify its internal components.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

**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.