

## **NOTE ON PERFORMANCE TESTING**

Performance Profile Sheet(s) are included in a format that can be easily photocopied for each trainee. Performance tests are 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. Also, include the testing date for each task in the rating box.
- 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 National Center for Construction Education and Research Standardized Craft Training Program, the following conditions must be met:

1. The Craft Instructor must hold valid NCCER instructor certification for the craft being tested.
2. The training must be delivered through a Accredited Training Sponsor recognized by NCCER.
3. For every module, the specific performance testing must be completed to the satisfaction of the instructor.
4. The results of the testing must be recorded on the Training Report Form 200. This form must be provided to the local Accredited Training Sponsor to be forwarded to the NCCER National Registry.

### **Certified Plus Credential**

Provided 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. Go to [www.nccer.org](http://www.nccer.org) and select the Assessments tab to locate the Performance Verifications associated with this craft. Note 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.



**Craft: Industrial Maintenance Mechanic**

**Module Number: 32201-07**

**Module Title: Basic Layout**



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Learning Series

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

TRAINEE SOCIAL SECURITY NUMBER: \_\_\_\_\_

CLASS: \_\_\_\_\_

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

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

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

**Recognition:** When testing for the NCCER Standardized Craft Training Program, be sure to record Performance testing results on Craft Training Report Form 200, and submit the results to the Training Program Sponsor.

**Certified Plus Credential:** Trainees who successfully complete these performance tasks may be eligible for a Certified Plus Credential. Refer to the Note on Performance Testing of this Performance Profile for eligibility requirements, or contact NCCER for more information.

Objective	TASK	RATING
2, 3	1. Lay out perpendicular lines from a reference line using:	
	<ul style="list-style-type: none"> <li>• Arc method</li> </ul>	
	<ul style="list-style-type: none"> <li>• 3-4-5 method</li> </ul>	

continued

**Craft: Industrial Maintenance Mechanic**

**Module Number: 32201-07**

**Module Title: Basic Layout**



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Learning Series

Objective	TASK	RATING
4-9	2. Scribe the following:	
	<ul style="list-style-type: none"> <li>• Straight lines</li> </ul>	
	<ul style="list-style-type: none"> <li>• Perpendicular lines to a base line using a square</li> </ul>	
	<ul style="list-style-type: none"> <li>• Perpendicular lines to an edge using a combination square</li> </ul>	
	<ul style="list-style-type: none"> <li>• Angled lines using a combination square</li> </ul>	
	<ul style="list-style-type: none"> <li>• Angled lines using a protractor</li> </ul>	
	<ul style="list-style-type: none"> <li>• Circles using dividers</li> </ul>	
	<ul style="list-style-type: none"> <li>• Perpendicular lines from base lines using dividers</li> </ul>	
	<ul style="list-style-type: none"> <li>• Perpendicular lines from base lines using reference points</li> </ul>	
10	3. Bisect lines using dividers.	
11	4. Divide lines into equal parts.	
12	5. Divide circles into equal parts.	
13	6. Lay out equipment locations.	

**Module 32301-08 has no Performance Profile Sheet;  
no performance testing is required for this module.**

**Craft: Industrial Maintenance Mechanic**

**Module Number: 32302-08**

**Module Title: Precision Measuring Tools**



Contren® Learning Series

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

TRAINEE SOCIAL SECURITY NUMBER: \_\_\_\_\_

CLASS: \_\_\_\_\_

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

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

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

**Recognition:** When testing for the NCCER Standardized Craft Training Program, be sure to record Performance testing results on Craft Training Report Form 200, and submit the results to the Training Program Sponsor.

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Objective	TASK	RATING
1	1. Use a level.	
2	2. Use a feeler gauge.	
3	3. Use calipers.	
4	4. Use a micrometer.	
5	5. Use a dial indicator.	

continued

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**Craft: Industrial Maintenance Mechanic****Module Number: 32302-08****Module Title: Precision Measuring Tools**

Contren® Learning Series

<b>Objective</b>	<b>TASK</b>	<b>RATING</b>
6	6. Use a protractor.	
7	7. Use gauge blocks.	
8	8. Use speed measurement tools.	
9	9. Use a pyrometer.	

**Craft: Industrial Maintenance Mechanic**

**Module Number: 32207-07**

**Module Title: Introduction to Bearings**



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

TRAINEE SOCIAL SECURITY NUMBER: \_\_\_\_\_

CLASS: \_\_\_\_\_

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

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

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

**Recognition:** When testing for the NCCER Standardized Craft Training Program, be sure to record Performance testing results on Craft Training Report Form 200, and submit the results to the Training Program Sponsor.

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Objective	TASK	RATING
1	1. Identify various types of bearings.	
3	2. Identify parts of bearings.	



**Craft: Industrial Maintenance Mechanic**

**Module Number: 32303-08**

**Module Title: Installing Bearings**



Contren® Learning Series

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

TRAINEE SOCIAL SECURITY NUMBER: \_\_\_\_\_

CLASS: \_\_\_\_\_

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

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

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

**Recognition:** When testing for the NCCER Standardized Craft Training Program, be sure to record Performance testing results on Craft Training Report Form 200, and submit the results to the Training Program Sponsor.

**Certified Plus Credential:** Trainees who successfully complete these performance tasks may be eligible for a Certified Plus Credential. Refer to the Note on Performance Testing of this Performance Profile for eligibility requirements, or contact NCCER for more information.

Objective	TASK	RATING
1	1. Remove a bearing.	
3	2. Install a bearing.	

**Craft: Industrial Maintenance Mechanic**

**Module Number: 32304-08**

**Module Title: Installing Couplings**



Contren® Learning Series

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

TRAINEE SOCIAL SECURITY NUMBER: \_\_\_\_\_

CLASS: \_\_\_\_\_

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

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

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

**Recognition:** When testing for the NCCER Standardized Craft Training Program, be sure to record Performance testing results on Craft Training Report Form 200, and submit the results to the Training Program Sponsor.

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Objective	TASK	RATING
1, 2	1. Identify, assemble, and install couplings as assigned by the instructor.	
3	2. Remove a coupling using mechanical pullers.	
3	3. Remove a coupling using the hydraulic or thermal method.	

**Craft: Industrial Maintenance Mechanic**

**Module Number: 32308-08**

**Module Title: Installing Mechanical Seals**



Contren® Learning Series

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

TRAINEE SOCIAL SECURITY NUMBER: \_\_\_\_\_

CLASS: \_\_\_\_\_

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

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

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

**Recognition:** When testing for the NCCER Standardized Craft Training Program, be sure to record Performance testing results on Craft Training Report Form 200, and submit the results to the Training Program Sponsor.

**Certified Plus Credential:** Trainees who successfully complete these performance tasks may be eligible for a Certified Plus Credential. Refer to the Note on Performance Testing of this Performance Profile for eligibility requirements, or contact NCCER for more information.

Objective	TASK	RATING
1	1. Identify given mechanical seals and explain their applications.	
2	2. Safely and accurately remove and inspect a mechanical seal.	
3	3. Safely and accurately install a mechanical seal.	

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**Craft: Industrial Maintenance Mechanic**

**Module Number: 32306-08**

**Module Title: Conventional Alignment**



Contren® Learning Series

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

TRAINEE SOCIAL SECURITY NUMBER: \_\_\_\_\_

CLASS: \_\_\_\_\_

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

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

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

**Recognition:** When testing for the NCCER Standardized Craft Training Program, be sure to record Performance testing results on Craft Training Report Form 200, and submit the results to the Training Program Sponsor.

**Certified Plus Credential:** Trainees who successfully complete these performance tasks may be eligible for a Certified Plus Credential. Refer to the Note on Performance Testing of this Performance Profile for eligibility requirements, or contact NCCER for more information.

Objective	TASK	RATING
2	1. Use the straightedge and feeler gauge methods, and then a dial indicator to:	
	• Level and align the driven on a base.	
	• Adjust vertical angularity of the driver.	
	• Adjust vertical offset of the driver.	

continued

**Craft: Industrial Maintenance Mechanic**

**Module Number: 32306-08**

**Module Title: Conventional Alignment**



Contren® Learning Series

Objective	TASK	RATING
	<ul style="list-style-type: none"> <li>• Adjust horizontal angularity of the driver.</li> </ul>	
	<ul style="list-style-type: none"> <li>• Adjust horizontal offset of the driver.</li> </ul>	
	<ul style="list-style-type: none"> <li>• Adjust vertical offset and angularity.</li> </ul>	
	<ul style="list-style-type: none"> <li>• Adjust horizontal offset and angularity.</li> </ul>	
3	2. Check for and eliminate coupling stress.	
2	3. Check for and calculate indicator sag.	

**Craft: Industrial Maintenance Mechanic**

**Module Number: 32404-09**

**Module Title: Reverse Alignment**



Contren® Learning Series

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

TRAINEE SOCIAL SECURITY NUMBER: \_\_\_\_\_

CLASS: \_\_\_\_\_

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

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

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

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Objective	TASK	RATING
3	1. Measure shaft runout, using a dial indicator jig.	
4	2. Set up a complex reverse alignment jig.	
5	3. Measure indicator sag, using a complex reverse dial indicator jig.	
6	4. Perform reverse alignment, using the alignment demonstration rig and the graphical chart.	
6	5. Perform reverse alignment, using the alignment demonstration rig and the mathematical equation.	

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**Craft: Industrial Maintenance Mechanic**

**Module Number: 32405-09**

**Module Title: Laser Alignment**



Contren® Learning Series

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

TRAINEE SOCIAL SECURITY NUMBER: \_\_\_\_\_

CLASS: \_\_\_\_\_

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

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

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

**Recognition:** When testing for the NCCER Standardized Craft Training Program, be sure to record Performance testing results on Craft Training Report Form 200, and submit the results to the Training Program Sponsor.

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Objective	TASK	RATING
1	1. Identify the major components of the Optalign® laser alignment system.	
2	2. Perform a rough alignment.	
2	3. Set up the laser alignment equipment.	
2	4. Check the initial alignment.	

continued

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**Craft: Industrial Maintenance Mechanic****Module Number: 32405-09****Module Title: Laser Alignment**

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<b>Objective</b>	<b>TASK</b>	<b>RATING</b>
3	5. Draw a scale graphical plot of a machinery train.	
3	6. Align the machinery train.	
4	7. Vertically align a machine.	



**Craft: Industrial Maintenance Mechanic**

**Module Number: 32307-08**

**Module Title: Installing Belt and Chain Drives**



Contren® Learning Series

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

TRAINEE SOCIAL SECURITY NUMBER: \_\_\_\_\_

CLASS: \_\_\_\_\_

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

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

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

**Recognition:** When testing for the NCCER Standardized Craft Training Program, be sure to record Performance testing results on Craft Training Report Form 200, and submit the results to the Training Program Sponsor.

**Certified Plus Credential:** Trainees who successfully complete these performance tasks may be eligible for a Certified Plus Credential. Refer to the Note on Performance Testing of this Performance Profile for eligibility requirements, or contact NCCER for more information.

Objective	TASK	RATING
1	1. Identify belt drive types.	
2	2. Install a belt drive.	
3	3. Identify chain drive types.	
4	4. Install a chain drive.	

**Craft: Industrial Maintenance Mechanic**

**Module Number: 32202-07**

**Module Title: Introduction to Piping Components**



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Learning Series

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

TRAINEE SOCIAL SECURITY NUMBER: \_\_\_\_\_

CLASS: \_\_\_\_\_

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

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

**Rating Levels:** (1) Passed: performed task (2) Failed: did not perform task  
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**Certified Plus Credential:** Trainees who successfully complete these performance tasks may be eligible for a Certified Plus Credential. Refer to the Note on Performance Testing of this Performance Profile for eligibility requirements, or contact NCCER for more information.

Objective	TASK	RATING
2	1. Identify the type of piping system designated by the following:	
	• Red color-code	
	• Yellow color-code	
	• Green color-code	
	• Bright blue color-code	

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**Craft: Industrial Maintenance Mechanic**

**Module Number: 32203-07**

**Module Title: Copper and Plastic Piping Practices**



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Learning Series

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

TRAINEE SOCIAL SECURITY NUMBER: \_\_\_\_\_

CLASS: \_\_\_\_\_

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

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

**Rating Levels:** (1) Passed: performed task (2) Failed: did not perform task  
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**Certified Plus Credential:** Trainees who successfully complete these performance tasks may be eligible for a Certified Plus Credential. Refer to the Note on Performance Testing of this Performance Profile for eligibility requirements, or contact NCCER for more information.

Objective	TASK	RATING
8	1. Correctly measure the diameter of copper tubing.	
8	2. Cut and ream copper tubing using a tube cutter.	
8	3. Correctly bend copper tubing using bending tools.	
8	4. Make a swage joint in a section of copper tubing.	

continued

**Craft: Industrial Maintenance Mechanic**

**Module Number: 32203-07**

**Module Title: Copper and Plastic Piping Practices**



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Objective	TASK	RATING
8	5. Make and join single flare connections.	
8	6. Join two sections of tubing using a compression fitting.	
8	7. Cut and join two sections of plastic pipe using appropriate fittings.	

**Craft: Industrial Maintenance Mechanic**  
**Module Number: 32204-07**  
**Module Title: Introduction to Ferrous Metal Piping Practices**



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 Learning Series

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

TRAINEE SOCIAL SECURITY NUMBER: \_\_\_\_\_

CLASS: \_\_\_\_\_

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

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

**Rating Levels:** (1) Passed: performed task (2) Failed: did not perform task  
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**Certified Plus Credential:** Trainees who successfully complete these performance tasks may be eligible for a Certified Plus Credential. Refer to the Note on Performance Testing of this Performance Profile for eligibility requirements, or contact NCCER for more information.

Objective	TASK	RATING
1	1. Identify types of carbon steel pipe.	
2	2. Identify pipe sizes and weights.	
4, 5, 6	3. Identify various pipe fittings.	
2	4. Use three methods for measuring pipe.	

continued

**Craft: Industrial Maintenance Mechanic**  
**Module Number: 32204-07**  
**Module Title: Introduction to Ferrous Metal Piping Practices**



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Objective	TASK	RATING
5	5. Apply pipe dope to pipe threads.	
5	6. Apply Teflon <sup>®</sup> tape to pipe threads.	
5	7. Assemble threaded pipe to fittings.	

**Craft: Industrial Maintenance Mechanic**

**Module Number: 32205-07**

**Module Title: Identify, Install, and Maintain Valves**



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

TRAINEE SOCIAL SECURITY NUMBER: \_\_\_\_\_

CLASS: \_\_\_\_\_

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

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

**Rating Levels:** (1) Passed: performed task (2) Failed: did not perform task  
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**Certified Plus Credential:** Trainees who successfully complete these performance tasks may be eligible for a Certified Plus Credential. Refer to the Note on Performance Testing of this Performance Profile for eligibility requirements, or contact NCCER for more information.

<b>Objective</b>	<b>TASK</b>	<b>RATING</b>
1, 2	1. Identify various types of valves and explain their purposes and installation.	
3	2. Replace a valve stem O-ring.	
4	3. Replace a bonnet gasket.	
6	4. Repack a valve.	

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