



Name:	Candidate ID (optional):
Role: Electrical Systems Specialist	
Date Completed:	

Description:

Electrical Systems Specialists repair and maintain electrical systems and associated components such as wiring, fuses and circuit breakers, switches, relays, solenoids, and motors to keep electrical systems in operating condition.

Directions for Submitting Affidavit:

- ▲ Log on to *nims-skills.org* with Evaluator credentials
- ▲ Access the Testing Center
- ▲ Access the “Evaluate Candidates” window
- ▲ Select “Submit Affidavit” for any assigned candidate
- ▲ Follow the on-screen instructions to mark “Pass” or “Fail” for each duty

Please refer to the [standards](#) to access performance requirements for each duty.

Electrical Systems	Date Completed
1.01 Maintenance	
1.02 Troubleshooting	
1.03 Planning	
1.04 Improvements	
1.05 Standardizing	
1.06 Measurements	

Role: Electrical Systems Specialist

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Duty Area 1: Electrical Systems

- Duty 1.01: Maintenance
- Duty 1.02: Troubleshooting
- Duty 1.03: Planning
- Duty 1.04: Improvements
- Duty 1.05: Standardizing
- Duty 1.06: Measurements

Role: Electrical Systems Specialist

Duty Area 1: Electrical Systems

Duty 1.01: Maintenance

Responsibility:

Inspect and maintain electrical systems to prevent future failures or restore to serviceable and acceptable operating conditions.

Resources:

Access to equipment, operating artifacts, schematics, Measuring and Test Equipment (M&TE), and hand tools

Performance:

Practical

1. Adjusting:
 - a. Switches
 - b. Sensors
2. Repairing:
 - a. Wiring and machine grounds
 - b. Transformers
3. Installing:
 - a. Fuses and circuit breaker
 - b. Electrical control components

Critical Thinking

1. Conducting job safety analysis
2. Determining:
 - a. When to make adjustments
 - b. If circuit breakers are tripped
 - c. Size of fuses and circuit breakers
3. Verifying:
 - a. Components to replace
 - b. System and component operations

Compliance:

Full

Evaluation:

Equipment verification, observation

Role: Electrical Systems Specialist

Duty Area 1: Electrical Systems

Duty 1.02: Troubleshooting

Responsibility:

Trace errors within electrical systems.

Resources:

Access to equipment, operating artifacts, schematics, Measuring and Test Equipment (M&TE), and hand tools

Performance:

Practical

1. Exercising equipment
2. Checking inputs and outputs
3. Documenting findings

Critical Thinking

1. Verifying symptoms
2. Determining:
 - a. System and component failures
 - b. If failures require adjustments
 - c. Replacement components
 - d. When to escalate failures

Compliance:

Full

Evaluation:

Error verification, observation

Role: Electrical Systems Specialist

Duty Area 1: Electrical Systems

Duty 1.03: Planning

Responsibility:

Formulate maintenance procedures for electrical systems.

Resources:

Access to equipment and workflow

Performance:

Practical

Documenting maintenance procedures

Critical Thinking

Determining maintenance procedures

Compliance:

Full

Evaluation:

Plan verification

Role: Electrical Systems Specialist

Duty Area 1: Electrical Systems

Duty 1.04: Improvements

Responsibility:

Evaluate electrical systems for improvements.

Resources:

Access to systems, original system design, system information, and user feedback

Performance:

Practical

1. Researching new technologies
2. Documenting and presenting proposed changes

Critical Thinking

1. Determining:
 - a. Areas for improvement
 - b. Technologies to optimize
 - c. New technologies to deploy
2. Comparing current system design to proposed changes
3. Analyzing benefits and investments

Compliance:

Full

Evaluation:

Observation

Role: Electrical Systems Specialist

Duty Area 1: Electrical Systems

Duty 1.05: Standardizing

Responsibility:

Check Measuring and Test Equipment (M&TE) to ensure accuracy, repeatability, and reproducibility.

Resources:

Access to M&TE, standardization equipment or artifact, applicable specification, standardization procedure, and any related accessories

Performance:

Practical

1. Taking measurements in accordance with standardization procedure
2. Cleaning and adjusting M&TE

Critical Thinking

1. Ensuring the artifact is in good condition and clean
2. Selecting correct standardization equipment or artifact
3. Interpreting measurement result
4. Evaluating potential sources of error

Compliance:

Full

Evaluation:

Measurement verification, observation

Role: Electrical Systems Specialist

Duty Area 1: Electrical Systems

Duty 1.06: Measurements

Responsibility:

Select and use appropriate Measuring and Test Equipment (M&TE) to measure electrical system and component conditions in an accurate, repeatable, and reproducible manner.

Resources:

Access to hand-held M&TE and applicable specifications, system and component specifications, and any related accessories

Performance:

Practical

1. Taking measurements
2. Recording results of measurements

Critical Thinking

1. Selecting appropriate M&TE for measurement
2. Applying appropriate measurement technique
3. Determining need for traceability of M&TE
4. Interpreting measurement result
5. Evaluating potential sources of error

Compliance:

Full

Evaluation:

Measurement verification, observation