## Description:
Hydraulic Systems Specialists repair and maintain hydraulic systems and associated components such as pumps, valves, cylinders, motors, and filters to keep hydraulic 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.

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Role: Hydraulic Systems Specialist

Description:

Hydraulic Systems Specialists repair and maintain hydraulic systems and associated components such as pumps, valves, cylinders, motors, and filters to keep hydraulic systems in operating condition.

Duty Area 1: Hydraulic 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: Hydraulic Systems Specialist
Duty Area 1: Hydraulic Systems
Duty 1.01: Maintenance

Responsibility:
Inspect and maintain hydraulic 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. Starting up and shutting down hydraulic systems
2. Adjusting:
   a. Operating pressure
   b. Actuator speeds
3. Servicing filters and fluids
4. Installing hydraulic components

Critical Thinking
1. Conducting job safety analysis
2. Determining:
   a. When to make adjustments
   b. Fluid conditions and specifications
3. Verifying:
   a. Components to replace
   b. System and component operations

Compliance:
Full

Evaluation:
Equipment verification, observation

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Role: Hydraulic Systems Specialist
Duty Area 1: Hydraulic Systems
Duty 1.02: Troubleshooting

Responsibility:
Trace errors within hydraulic 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

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Role: Hydraulic Systems Specialist
Duty Area 1: Hydraulic Systems
Duty 1.03: Planning

Responsibility:
Formulate maintenance procedures for hydraulic systems.

Resources:
Access to equipment and workflow

Performance:
Practical
   Documenting maintenance procedures

Critical Thinking
   Determining maintenance procedures

Compliance:
Full

Evaluation:
Plan verification
Role: Hydraulic Systems Specialist
Duty Area 1: Hydraulic Systems
Duty 1.04: Improvements

Responsibility:
Evaluate hydraulic 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

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Role: Hydraulic Systems Specialist
Duty Area 1: Hydraulic 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: Hydraulic Systems Specialist
Duty Area 1: Hydraulic Systems
Duty 1.06: Measurements

Responsibility:
Select and use appropriate Measuring and Test Equipment (M&TE) to measure hydraulic 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