OJT CORE COMPETENCIES

# Industrial Maintenance Mechanic

## TERM OF APPRENTICESHIP

The term of the apprenticeship is 3 years.

## APPRENTICESHIP APPROACH

Time-based ☐ Competency-based ☒ Hybrid ☐

*Apprenticeships may be time-based, requiring a set number of OJT (on-the-job training) and RTI (related technical instruction) hours; competency-based, allowing completion once all skills are mastered; or hybrid, blending both time and competency requirements.*

## SCHEDULE AND CHECKLIST

| Essential Job Categories | Competencies |
|---|---|
| Safety | • Demonstrates an understanding and use of appropriate personal protective equipment (PPE)<br>• Maintains a clean and organized workspace<br>• Demonstrates knowledge, proper use, and storage of hazardous materials<br>• Reads safety data sheets (SDS) and applies appropriate safety precautions<br>• Demonstrates proper use, maintenance, and safe storage of tools/equipment<br>• Properly disposes of waste according to company policies and procedures and in accordance with OSHA, EPA, and local regulations and guidelines<br>• Describes when and how to use proper Lockout/Tag Out procedures<br>• Demonstrates knowledge and use of proper lifting/hoisting equipment and techniques<br>• Describes proper response and reporting of safety incidents<br>• Employer specific competency |
| Mechanical Systems | • Adheres to mechanical power safety rules<br>• Inspects dimensions of shafts and other components<br>• Troubleshoots and repairs power transmissions, engines, motors, etc.<br>• Aligns and adjust gear drives<br>• Lubricates equipment appropriately<br>• Performs preventive maintenance<br>• Reads and interprets resources<br>• Uses hand tools to align, adjust, tighten, assemble, disassemble equipment<br>• Uses hoists and other tools to handle/move parts and equipment<br>• Employer specific competency |

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| Essential Job Categories | Competencies |
|---|---|
| Hydraulic Systems | • Adheres to fluid power system safety rules<br>• Reads and interprets basic fluid power schematics<br>• Operates the functions of a hydraulic system<br>• Reads, interprets and adjusts system pressure<br>• Reads, interprets and adjusts hydraulic actuator speed<br>• Services hydraulic filter<br>• Adds, changes, and properly disposes of waste<br>• Installs and monitors hydraulic conductors<br>• Tests and troubleshoots basic hydraulic circuit and/or rotary actuator circuit<br>• Employer specific competency |
| Pneumatic Systems | • Adheres to pneumatic system safety rules<br>• Adjusts pneumatic system branch hand actuator speed operating pressure<br>• Services pneumatic filters<br>• Services pneumatic lubricators<br>• Installs and monitors pneumatic conductors<br>• Operates a reciprocating air compressor<br>• Installs and monitors operation of components in a basic linear or rotary circuit<br>• Installs and monitors components in a pneumatic circuit that uses vacuum generators<br>• Tests and troubleshoots basic pneumatic circuits<br>• Employer specific competency |
| Electrical Systems | • Adheres to electronic power and control system safety rules<br>• Connects and tests a DC power supply<br>• Installs and tests solid-state AC and DC discrete and analog relays<br>• Installs and tests analog electronic sensors and signal conditioning equipment<br>• Adjusts and repairs AC drive<br>• Employer specific competency |
| Process Control Systems | • Transfers programs to programmable controller<br>• Creates a basic PLC program<br>• Installs and tests basic PLC components<br>• Performs basic troubleshooting of PLC components<br>• Employer specific competency |

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| Essential Job Categories | Competencies |
|---|---|
| Piping Systems | • Reads and interprets piping schematics<br>• Identifies and selects appropriate piping material<br>• Measures, cuts and prepares piping for installation<br>• Installs, tests, and monitors piping systems<br>• Employer specific competency |
| Welding / Fabrication | • Adheres to welding rules and regulations for safety<br>• Able to assess and determine appropriate fabrication technique to repair parts, fabricate new parts, or assemble new equipment.<br>• Uses acetylene torch<br>• Able to perform appropriate benchwork<br>• Uses Shielded Metal Arc Welding (SMAW) Welder<br>• Uses Gas Metal Arc Welding (GMAW) Welder<br>• Uses appropriate inspection tools and techniques for integrity and functionality<br>• Uses plasma cutter<br>• Employer specific competency |
| Quality Assurance | • Adheres to quality policy<br>• Follows procedures for Hot Work<br>• Reads and interprets blueprints and other schematics<br>• Examines and inspects parts for defects<br>• Analyzes test results, machine error messages, or information from operators to diagnose equipment problems<br>• Receives and performs work orders for PM and scheduled maintenance and follows proper procedures<br>• Study blue prints, manufacturers' manuals, to determine correct installation or operation of machinery<br>• Understands and abides by stock room procedures<br>• Employer specific competency |

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