



INDUSTRIAL EQUIPMENT

Industrial Equipment youth apprentices set up, operate, monitor, and control production equipment. Requirements. Apprentices must adhere to industry safety and security standards.

Length of Apprenticeship: One or Two Years

COMPETENCIES

Industrial Equipment youth apprentice must complete all **7** Manufacturing Fundamentals Competencies. No substitutions to this list. Students completing a one-year program must complete **13** of the 26 Industrial Equipment competencies from the list below. Second-year students will complete the remaining **13** Industrial Equipment competencies. Employers can substitute up to **1** competency per year with another occupationally appropriate skill. Substitutions should be added to the competency list for assessment. Note that where necessary, skills can be simulated.

Note: Students completing a 2-year industrial equipment youth apprenticeship must select different industrial equipment processes than the first year.

***Students who completed one year of Industrial Equipment or a previous Manufacturing YA program do *not* need to repeat the Manufacturing Fundamentals Competencies.

Manufacturing Fundamentals Competencies	Industrial Equipment Competencies
<ol style="list-style-type: none"> 1. Focus on customer needs 2. Use various instruments 3. Operate tools and equipment safely 4. Practice quality assurance principles 5. Follow personal safety requirements 6. Maintain a safe work environment 7. Demonstrate professional role to be used in an emergency 	<ol style="list-style-type: none"> 1. Read technical drawings and work orders 2. Interpret equipment symbols and procedures 3. Maintain schedules, communication, and documentation 4. Monitor equipment for correct operation 5. Identify maintenance requirements 6. Layout and plan work 7. Perform safety checks 8. Use hand tools 9. Perform preventive maintenance (PM) 10. Perform lubrication procedures 11. Support basic equipment problem identification and diagnosis 12. Assist with basic equipment repair 13. Assist re-qualifying equipment 14. Calibrate tools and equipment

	<ol style="list-style-type: none"> 15. Set up metal 16. Mount a bearing 17. Install mechanical fasteners 18. Assist with electrical circuit problem identification and diagnosis 19. Assist with motor control problem identification and diagnosis 20. Assist with hydraulic and/or pneumatic problem identification and diagnosis 21. Maintain and repair mechanical drive system components 22. Maintain and repair electrical control system components 23. Maintain and repair hydraulic system components 24. Assist installation and qualification of equipment 25. Maintain and repair pneumatic system components 26. Fabricate metal
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REGISTERED APPRENTICESHIP BRIDGING OPPORTUNITIES

Some of the related instruction courses can bridge into the following registered apprenticeship:

- Industrial Manufacturing Technician
- Industrial Electrician

POST-SECONDARY PATHWAY OPPORTUNITIES

There are several post-secondary pathway opportunities in this area. Following is partial list.

- Industrial Maintenance Mechanic Technical Diploma
- Industrial Maintenance Technician Technical Diploma
- Industrial Mechanic Technical Diploma



INDUSTRIAL EQUIPMENT

Youth Apprenticeship

ON-TH-JOB LEARNING PERFORMANCE STANDARD GUIDE

YOUTH APPRENTICESHIP INFORMATION

Youth Apprentice Name	
YA Coordinator	YA Consortium
School District	High School Graduation Date

REQUIREMENTS

Level One Requirements

Youth apprentices must complete ALL the items listed below. Check completed areas.

- Competency checklist (all Manufacturing Fundamentals & 13 Industrial Equipment competencies)
- Employability Skills checklist (in this OJL Guide) or the DPI Employability Skills Certificate
- Related instruction equal to 1 high school credit or at least 3 college credits
- Minimum of 450 work hours

Level Two Requirements

Youth apprentices must complete ALL the items listed below. Check completed areas.

- Competency checklist (the remaining **13** Industrial Equipment competencies)
- Employability Skills checklist (in this OJL Guide) or the DPI Employability Skills Certificate
- Related instruction equal to 2 high school credits or at least 6 college credits
- Minimum of 900 work hours

HOURS

Record the hours the youth apprentice worked.

Total Hours Employed	Company Name	Telephone Number

COMPETENCIES

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Rating Scale

3: Exceeds entry level criteria | Requires minimal supervision | Consistently displays this behavior

2: Meets entry level criteria | Requires some supervision | Often displays this behavior

1: Needs improvement | Requires much assistance and supervision | Rarely displays behavior

MANUFACTURING FUNDAMENTALS – Complete all competencies

Competency and Rating Criteria	Minimum Rating of 2 for EACH Check Rating		
	1	2	3
1. Focus on customer needs <ul style="list-style-type: none"> • Identify internal and external customers impacted by the production process • Satisfy internal and external customer's expectations • Collaborate with team • Assist work site professional to keep internal and/or external customers informed of project progress and decisions that may affect them • Define the impact of the Voice of the Customer • Determine the impact of your work to the internal and external customer 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Competency and Rating Criteria	Minimum Rating of 2 for EACH Check Rating		
	1	2	3
<p>2. Use various instruments</p> <ul style="list-style-type: none"> • Consider the degree of precision required by the part feature • Choose correct measuring instrument for task • Verify equipment is available for use and in working order • Verify equipment preventative maintenance and/or calibration • Inspect tools and work area for safety considerations • Clean and adjust measuring instrument prior to use • Use gauges, calipers, and micrometer instruments • Use semi-precision and precision layout tools • Use digital gauges, checking fixtures • Use digital scales, thermometers • Confirm measurement accuracy • Record measurement correctly including unit of measurement at proper interval • Calibrate, clean, and store measuring instruments properly • Convert standard to metric – metric to standard measurement units 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>3. Operate tools and equipment safely</p> <ul style="list-style-type: none"> • Operate only tool/equipment that he/she is trained on • Choose correct tool/equipment for the task • Follow tool check list • Verify tool/equipment is available for use and in working order • Verify tool/equipment is current for preventative maintenance and/or calibration • Wear appropriate Personal Protective Equipment (PPE) • Inspect tool/equipment and work area for safety considerations • Prepare tool/equipment for safe operation • Operate tool/equipment safely with guarding devices • Monitor tool/equipment for safe operation while operating • Compare tool/equipment performance regularly to optimal equipment operations • Follow facility procedures for clean-up and shut down after use • Perform required preventative maintenance procedures • Report abnormal tool/equipment conditions • Properly shuts down and labels any tool/equipment that is not operating as expected • Follow Lock Out/Tag Out procedures as applicable • Document use and maintenance 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Competency and Rating Criteria	Minimum Rating of 2 for EACH Check Rating		
	1	2	3
<p>4. Practice quality assurance principles</p> <ul style="list-style-type: none"> • Inspect materials/piece/product at all stages of production • Identify quality or condition of materials/piece/product • Monitor materials, processes, equipment, tools, and products throughout the production process • Inspect final product/piece to ensure it meets specifications • Identify and segregate materials and/or product that do not meet specification • Communicate with work site professional if materials/product do not meet requirements • Document all quality checks • Participate in root-cause analysis of process/product • Take ownership of work • Collaborate with work site professional on corrective action 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>5. Follow personal safety requirements (safety)</p> <ul style="list-style-type: none"> • Participate in required safety training • Follow all worksite guidelines for personal safety • Apply principles of proper body mechanics • Report exposures, injuries, near misses, or accidents, personal or to others immediately • Locate key information on Material Safety Data Sheets (MSDS) • Handle and dispose of any hazardous materials appropriately • Operate equipment that he/she is trained on • Adhere to equipment safety standards • Visually inspect equipment before operation • Wear required Personal Protective Equipment (PPE) at all times • Follow company emergency action plan • Identify hazardous conditions and restricted areas in the workplace • Avoid pinch points • Be aware of surroundings 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Competency and Rating Criteria	Minimum Rating of 2 for EACH Check Rating		
	1	2	3
<p>6. Maintain a safe work environment (safety)</p> <ul style="list-style-type: none"> • Comply with posted safety warnings and symbols • Identify unsafe conditions and/or work habits • Report unsafe conditions and/or work habits • Help maintain a clean and safe working environment free of debris and obstacles • Maintain clean, organized work area • Use hazardous materials according to company procedure • Report any indications of insects or pests, if necessary • Follow appropriate Lock out – tag out procedures • Adhere to Occupational Safety and Health Administration (OSHA) Safety guidelines • Follow rules for operating equipment (Powered Industrial Vehicle PIV) • Identify applicable Emergency Stops 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>7. Demonstrate professional role to be used in an emergency (safety)</p> <ul style="list-style-type: none"> • Participate in emergency safety simulations and drills • Describe company’s policy and procedures for work site incidents, accidents, electrical, fire, tornado, bomb threats, robbery, hostage situations, and other emergency situations • Identify the closest fire alarms and emergency exits • Identify the fire extinguishers • Identify appropriate alarms and procedures for using alarms • Contact emergency personnel in the event of an emergency • Contribute to emergency incident documentation 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>Comments:</p>			

INDUSTRIAL EQUIPMENT

Competency and Rating Criteria	Minimum Rating of 2 for EACH Check Rating		
	1	2	3
<p>1. Read technical drawings and work orders</p> <ul style="list-style-type: none"> • Review technical drawing • Gather reference materials as needed • Determine type of print and views used • Determine material specifications • Determine critical dimensions and tolerances • Analyze supplementary data • Determine product or job instructions and specifications • Interpret equipment symbols and procedure 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>2. Interpret equipment symbols and procedures</p> <ul style="list-style-type: none"> • Interpret technical drawings accurately as needed for job task • Use appropriate terminology • Identify lines, views, symbols, and representations on the drawings • Interpret dimensions, tolerances, and scale on the drawings • Interpret threads, tapers, and shop notes on the drawings • Interpret the maintenance, installation and/or repair plan from a technical drawing which includes tools, equipment, speeds, feeds, fixtures and holders as applicable 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>3. Maintain schedules, communication, and documentation</p> <ul style="list-style-type: none"> • Identify frequency of maintenance tasks, i.e., daily, every other day, weekly, monthly, yearly, etc. • Update schedules as maintenance is completed • Schedule preventive and repair maintenance with all internal and external parties with limited disruption to production • Communicate maintenance and repair needs clearly • Use the correct reporting formats for documentation and communication • Document maintenance and repair activities accurately • Report back and document any maintenance and repair issues in a timely manner • Document maintenance completely • Document maintenance timely and accurate 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Competency and Rating Criteria	Minimum Rating of 2 for EACH Check Rating		
	1	2	3
<p>4. Monitor equipment for correct operation</p> <ul style="list-style-type: none"> • Review equipment quality measures for trends and problems • Compare current equipment performance to optimal equipment operations on a regular basis • Report noted deviations from expected performance • Review relevant data before making suggestions • Support investigation of abnormal equipment conditions in a timely manner • Monitor corrected action solved the problem • Document monitoring activities • Verify repair history is complete, current, and accurate 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>5. Identify maintenance requirements</p> <ul style="list-style-type: none"> • Review applicable technical drawings, work orders, and/or procedures for maintenance work • Review procedure and safety requirements • Identify set up needed • Verify production schedule, deadlines, and time frames to perform maintenance with work site professional 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>6. Layout and plan work</p> <ul style="list-style-type: none"> • Identify maintenance requirements • Plan sequencing, tools, and equipment needed for maintenance procedure • Select tools and maintenance equipment to be used • Gather resources needed at the workstation 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>7. Perform safety checks</p> <ul style="list-style-type: none"> • Review safety requirements of procedure • Verify safety equipment and Personal Protective Equipment (PPE) needed for maintenance process • Inspect tools and work area for safety considerations • Examine equipment labeling and safeguarding • Ensure Lock Out/Tag Out procedures have been implemented as required prior to maintenance 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>8. Use hand tools</p> <ul style="list-style-type: none"> • Review safety procedures • Select the appropriate hand tool for the job • Use hand tools according to established guidelines for the task to be completed • Piece(s) meet specification 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Competency and Rating Criteria	Minimum Rating of 2 for EACH Check Rating		
	1	2	3
<p>9. Perform preventive maintenance (PM)</p> <ul style="list-style-type: none"> • Complete scheduled preventive maintenance (PM) tasks in a timely manner • Communicate PM to production and other applicable parties • Assure alternative equipment is available • Consult worksite professionals, technical drawings, maintenance manuals, and equipment history for PM • Determine type of lubrication requirements • Gather equipment and supplies needed to perform PM • Ensure equipment is properly labeled and pulled from production use • Follow appropriate Lock Out/Tag Out procedures prior to performing PM • Follow all safety requirements and wear appropriate Personal Protective Equipment (PPE) • Assist work site professional to follow PM schedule to calibrate and maintain equipment, tools and workstations • Assist work site professional to re-qualify equipment for operation • Document preventative actions completed • Assess PM through follow up 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>10. Perform lubrication procedures</p> <ul style="list-style-type: none"> • Follow preventive maintenance and repair of equipment steps • Perform safety checks • Check lubricant levels • Check for and correct any leakages • Draw lubricant samples for analysis • Test lubricant for contamination and viscosity • Drain lubricant if required • Fill reservoir with correct lubricant • Follow procedures to avoid contamination • Clean inlet strainer and filters • Add additional lubrication • Document lubrication procedures completed 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Competency and Rating Criteria	Minimum Rating of 2 for EACH Check Rating		
	1	2	3
<p>11. Support basic equipment problem identification and diagnosis</p> <ul style="list-style-type: none"> • Ensure equipment is properly labeled and pulled from production use • Interpret technical drawings for the equipment and process under investigation • Locate the equipment reference materials and manuals • Review previous preventative maintenance and repair history records on the equipment under investigation • Assist work site professional to identify the components to be checked for proper operation • Ensure appropriate safety devices and personal protective equipment are in place prior to diagnosis • Ensure all labeling and Lock Out/Tag Out procedures are in place prior to diagnosis • Follow all safety requirements and wears appropriate Personal Protective Equipment (PPE) as required • Assist the work site professional to take appropriate readings using meters and testing equipment • Assist the work site professional in locating and determining the cause of the problems reported • Assist work site professional to match suggested remedies with problems for the inoperative systems • Document testing and evaluation • Ensure equipment is properly labeled, pulled from production, and communicated regarding repair • Investigations are complete, timely, and include indication of root cause 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Competency and Rating Criteria	Minimum Rating of 2 for EACH Check Rating		
	1	2	3
<p>12. Assist with basic equipment repair</p> <ul style="list-style-type: none"> • Identify equipment problems through malfunction or production or quality indicators • Communicate repair needs to production and other applicable parties • Assure that alternative equipment is available if needed by production • Consult work site professionals, technical drawings, maintenance manuals, and equipment history for repair • Determine type of lubrication requirements • Gather equipment and supplies needed to perform repair • Ensure that equipment is properly labeled and pulled from production use • Follow appropriate Lock Out/Tag Out procedures prior to performing repair • Follow all safety requirements and wears appropriate Personal Protective Equipment (PPE) as required • Assist with basic equipment problem identification and diagnosis • Assist work site professional to isolate system and component failure action plan • Assist work site professional to re-qualify equipment for operation • Document repairs completed • Assess repair work through follow up 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>13. Assist re-qualifying equipment</p> <ul style="list-style-type: none"> • Review the requirements for re-qualification • Perform safety checks • Assist the work site professional to re-qualify the equipment • Place equipment back into service • Notify production • Document re-qualification and update maintenance schedules 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Competency and Rating Criteria	Minimum Rating of 2 for EACH Check Rating		
	1	2	3
<p>14. Calibrate tools and equipment</p> <ul style="list-style-type: none"> • Follow schedule to calibrate tools and instruments • Perform safety checks • Check tool/instrument certification regularly by reviewing documentation and through observation of use • Clean and adjust instruments before calibrating • Calibrate tools and instruments accurately and correctly • Promptly re-calibrate tools out of calibration • Re-qualify tools and instruments sent out for recalibration or repairs • Label tools and equipment that have been calibrated • Document all calibration activities 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>15. Set up metal</p> <ul style="list-style-type: none"> • Layout and plan work • Perform safety checks • Place parts and assemblies into fixtures • Set up equipment for fabrication • Locate parts or subassemblies needed • Determine the order for the part or subassembly placement • Position, align, and bolt jigs, holding fixtures, guides, and stops onto machines • Position, align and/or clamp work pieces into jigs and/or holding fixtures • Tighten all holding and positioning clamps • Inspect assembly 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Competency and Rating Criteria	Minimum Rating of 2 for EACH Check Rating		
	1	2	3
<p>16. Mount a bearing</p> <ul style="list-style-type: none"> • Follow preventive maintenance and repair of equipment steps • Perform safety checks • Check running machine for signs (e.g., heat, noise, vibration, etc.) of malfunctioning bearings • Find the correct reference for bearing numbering • Verify the correct bearing for the application • Inspect bearing for condition and lubrication • Verify mounting clearances according to specification • Handle bearings properly to avoid contamination and damage • Assist worksite professional to remove used bearings carefully and correctly • Assist worksite professional to prepare all appropriate surfaces (the shaft and bore) as required • Assist worksite professional to mount bearing according to specifications • Assist worksite professional to analyze reason bearing failed • Document bearing installation 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>17. Install mechanical fasteners</p> <ul style="list-style-type: none"> • Follow preventive maintenance and repair of equipment steps • Perform safety checks • Select the appropriate fastener for the application • Install various fasteners according to specifications • Use the correct tools to install mechanical fastener • Document fastener installation 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Competency and Rating Criteria	Minimum Rating of 2 for EACH Check Rating		
	1	2	3
<p>18. Assist with electrical circuit problem identification and diagnosis</p> <ul style="list-style-type: none"> • Assist worksite profession to identify and diagnose equipment problem • Interpret electrical schematics • Perform safety checks • Assist with electrical circuit testing • Measure current draw • Test circuit for specified readings to isolate possible causes of fault • Test for voltage, resistance, open circuits and shorted elements if required • Utilize electrical tests logically in process of elimination • Assist worksite professional to identify specific cause of the problem in electrical circuits • Document electrical circuit testing completed 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>19. Assist with motor control problem identification and diagnosis</p> <ul style="list-style-type: none"> • Assist work site profession to identify and diagnose equipment problem • Interpret single electric motor control diagrams • Perform safety checks • Assist work site professional to take appropriate readings on motor control system using meters and testing instruments • Assist work site professional in locating and determining the cause of problems in motor control system • Document motor control testing completed 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>20. Assist with hydraulic and/or pneumatic problem identification and diagnosis</p> <ul style="list-style-type: none"> • Assist work site profession to identify and diagnose equipment problem • Interpret schematics for basic hydraulic system or pneumatic circuit • Perform safety checks • Assist in taking appropriate readings using meters and testing instruments • Check pressure in a hydraulic OR pneumatic system at the appropriate location • Assist work site professional to locate and determine the cause of problems in hydraulic or pneumatic systems • Document hydraulic and/or pneumatic system testing completed 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Competency and Rating Criteria	Minimum Rating of 2 for EACH Check Rating		
	1	2	3
<p>21. Maintain and repair mechanical drive system components</p> <ul style="list-style-type: none"> • Assist work site profession to identify and diagnose equipment problem • Interpret schematics for mechanical drive systems • Perform safety checks • Check pulley and belts for tension, wear and damage • Mount new pulleys to shafts as required • Maintain, install, align, and adjust tension on a belt drive • Clean, install, and align gear drives • Maintain, install, align, and adjust tension a chain and sprocket drive • Install and align couplings • Check and corrects motor mounting for soft foot condition, angular and groove alignment • Apply lubrication to mechanical drive system according to specifications • Remove foreign debris from cooling towers • Replace air filters • Document mechanical drive system maintenance 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>22. Maintain and repair electrical control system components</p> <ul style="list-style-type: none"> • Assist work site profession to identify and diagnose equipment problem • Interpret schematics for electrical control systems • Perform safety checks • Replace faulty lighting components • Replace blown fuse or tripped circuit breaker • Construct common control circuits using switches and relays • Assist to adjust, repair or replace faulty circuit components • Assist to install conduit and wiring • Document electrical control system maintenance 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Competency and Rating Criteria	Minimum Rating of 2 for EACH Check Rating		
	1	2	3
<p>23. Maintain and repair hydraulic system components</p> <ul style="list-style-type: none"> • Assist work site profession to identify and diagnose equipment problem • Interpret schematics for hydraulic and/or pneumatic systems • Perform safety checks • Measure and adjust relief, unloading, and pressure control valves for proper pressure • Measure and adjust flow controls for proper rates • Check for system leaks • Draw sample of hydraulic fluid for analysis • Test hydraulic fluids for contamination and viscosity • Drain hydraulic fluids as required • Fill reservoir with correct fluid or hydraulic fluid • Use procedures to avoid fluid contamination • Clean inlet strainer and filters as required • Check hydraulic power unit for proper performance • Inspect and replaces seals and gaskets as required • Inspect and replaces hoses, tubing and fittings as required • Check operation of control valves and cylinders and replace as required • Document hydraulic system maintenance 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Competency and Rating Criteria	Minimum Rating of 2 for EACH Check Rating		
	1	2	3
<p>24. Assist installation and qualification of equipment</p> <ul style="list-style-type: none"> • Identify required technical, environmental, safety and performance features of equipment • Verify final selection of equipment from qualified vendor • Obtain manufacturer's recommendations for installation site requirements • Check equipment operation site for fulfillment of manufacturer's recommendations • Receive equipment and check for damage • Install equipment according to manufacturer recommendations • Determine performance start up qualification (criteria, procedures, critical parameters, test intervals) and sample analysis for each run or use • Determine cleaning, preventive maintenance (PM), routine servicing and authorized repair engineers • Update maintenance schedules with new equipment PM and servicing • Document qualification and installation such as initial calibration, initial operational testing, quality control procedures and parameters, customization and testing, determination of maintenance and servicing, list of authorized service engineers, etc. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Competency and Rating Criteria	Minimum Rating of 2 for EACH Check Rating		
	1	2	3
<p>25. Maintain and repair pneumatic system components</p> <ul style="list-style-type: none"> • Assist work site profession to identify and diagnose equipment problem • Interpret schematics for hydraulic and/or pneumatic systems • Perform safety checks • Measure and adjust relief, unloading, and pressure control valves for proper pressure • Measure and adjust flow controls for proper rates • Check for system leaks • Measure and adjust pressure regulators and in-line filters and replace as required • Check and repair lines for air leaks • Check and manually operate all safety valves • Check air dryer for proper operation • Check operation of control valves and cylinders and replaces as required • Align piston (rod) of pneumatic cylinder • Check operation of water separator/drain as necessary • Drain receiver tanks • Drain and blow out mains and header pipes • Inspect and fill air lubricators • Document pneumatic system maintenance 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>26. Fabricate metal</p> <ul style="list-style-type: none"> • Prepare base metal • Add or adjust safety guards • Verify machine or equipment settings for fabrication of metal material • Verify blades, shears, dies, etc., appropriate for metal fabrication to be completed • Perform equipment pre-check • Adjust holding devices, blade speeds, and metal positions safely as needed • Operate tools and equipment safely • Process metal according to specifications • Inspect, measure, or test completed metal pieces • Shut down and secure equipment • Clean up • Report any discrepancies or equipment concerns to worksite professional immediately • Document fabrication process 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>Competency Substitute (if you replaced a competency above, note the competency and rating)</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Competency and Rating Criteria	Minimum Rating of 2 for EACH Check Rating		
	1	2	3
Comments:			

RELATED INSTRUCTION

Indicate which related instruction courses the youth apprentice completed:

Year 1

Course Title	Credits	Location

Year 2 (if applicable)

Course Title	Credits	Location