Industrial Equipment

WISCONSIN—
YOUTH APPRENTICESHIP

Youth Apprenticeship

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

REQUIRED COMPETENCIES

Youth apprentices must become proficient in both general employability and occupation-specific competencies. All of these, and examples of how each can be demonstrated, are found in the following pages. A total 20 occupational competencies must be learned for this occupation. **Year 1**: All 7 Manufacturing Fundamentals competencies with no substitution, plus 13 Industrial Equipment competencies. **Year 2**: All 7 Manufacturing Fundamentals competencies with no substitution, plus the remaining 13 Industrial Equipment competencies. Employers may substitute out one Industrial Equipment competency per year and should write in the competency they are adding. Where necessary, skills can be simulated. Youth apprentices must be evaluated on these competencies at least two times each year of their apprenticeship.

Note: 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
1. Focus on customer needs	Read technical drawings and work orders
2. Use various instruments	Interpret equipment symbols and procedures
3. Operate tools and equipment safely	3. Maintain schedules, communication, and
4. Practice quality assurance principles	documentation
5. Follow personal safety requirements	4. Monitor equipment for correct operation
6. Maintain a safe work environment	5. Identify maintenance requirements
7. Demonstrate professional role to be used	6. Layout and plan work
in an emergency	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
	15. Set up metal

Manufacturing Fundamentals Competencies	Industrial Equipment Competencies
	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

REGISTERED APPRENTICESHIP BRIDGING OPPORTUNITIES

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

- Electrical and Instrumentation (E&I)Technician
- 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-THE-JOB LEARNING PERFORMANCE STANDARDS GUIDE

YOUTH APPRENTICE INFORMATION

Youth Apprentice Name	
YA Coordinator	
YA Consortium	
School District	
SIGNATURES	
The On-the-Job Learning Performance Standar	ds Guide includes a list of competencies youth
apprentices learn through mentoring and train	·
should be reviewed with the employer/mento	ors and School-Based or YA coordinators: This document r, school-based or YA coordinator on a regular basis with lan future steps to ensure completion of the required
competencies. Mentors, school-based, 1A coor	dinator, and the apprentice sign below.
<u> </u>	ployer/Mentor
1 st Evaluation (Required)	2 nd Evaluation (Required)
Employer/Mentor Signature	Employer/Mentor Signature
Employer/Mentor	Employer/Mentor
Business/Company	Business/Company
Date Signed	Date Signed
3 rd Evaluation (Optional)	4th Evaluation (Optional)
Employer/Mentor Signature	Employer/Mentor Signature
Employer/Mentor	Employer/Mentor
Business/Company	Business/Company
Date Signed	Date Signed

School-Based and/or YA Coordinator

1st Evaluation (Required)

2nd Evaluation (Required)

School-Based and/or YA Coordinator Signature	School-Based and/or YA Coordinator Signature
School-Based and/or YA Coordinator	School-Based and/or YA Coordinator
School District or Organization	School District or Organization
Date Signed	Date Signed

3rd Evaluation (Optional)

4th Evaluation (Optional)

School-Based and/or YA Coordinator Signature	School-Based and/or YA Coordinator Signature
School-Based and/or YA Coordinator	School-Based and/or YA Coordinator
School District or Organization	School District or Organization
Date Signed	Date Signed

Youth Apprentice

1st Evaluation (Required)

2nd Evaluation (Required)

Youth Apprentice Signature	Youth Apprentice Signature
Youth Apprentice	Youth Apprentice
School District / High School	School District / High School
Date Signed	Date Signed

3rd Evaluation (Optional)

4th Evaluation (Optional)

Youth Apprentice Signature	Youth Apprentice Signature
Youth Apprentice	Youth Apprentice
School District / High School	School District / High School
Date Signed	Date Signed

EMPLOYABILITY SKILLS (TO BE COMPLETED BY YA EMPLOYER/MENTOR

All youth apprentices must demonstrate the key employability skills listed below in order to complete the YA program. They do so by earning at least a "Meets Expectation" rating in each. **At least two evaluations are required each year of a youth apprenticeship.** More columns are included below for those who choose to conduct more frequent reviews.

	-
1	Working to Meet Expectations: Needs improvement; requires much assistance and supervision;
	rarely displays this behavior
2	Meets Expectations: Meets entry-level criteria; requires some supervision; often displays this
	behavior
3	Exceeds Expectations: Exceeds entry-level criteria; requires minimal supervision; consistently
	displays this behavior

	Employability Skills		Rati	ing	
	Competency and Rating Criteria	Initial	Mid Year 1	Mid Year 2	Final
1.	 Develops positive work relationships with others. Examples of qualities and habits that the employee might exhibit include: Interacts with others with respect and in a non-judgmental manner Responds to others in an appropriate and non-offensive manner Helps co-workers and peers accomplish tasks or goals Applies problem-solving strategies to improve relations with others When managing others, shows traits such as compassion, listening, coaching, team development, and appreciation 	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	□ 1 □ 2 □ 3	☐ 1 ☐ 2 ☐ 3
2.	 Communicates effectively with others Examples of qualities and habits that the employee might exhibit include Adjusts the communication approach for the target audience, purpose, and situation to maximize impact Organizes messages/information in a logical and helpful manner Speaks clearly and writes legibly Models behaviors to show active listening Applies what was read to actual practice Asks appropriate questions for clarity 	☐ 1 ☐ 2 ☐ 3			
3.	 Collaborates with others Examples of qualities and habits that the employee might exhibit include Works effectively in teams with people of diverse backgrounds regardless of sex, race, ethnicity, nationality, sexuality, religion, political views, and abilities Shares responsibility for collaborative work and decision making Uses the problem-solving process to work through differences of opinion in a constructive manner to achieve a reasonable compromise Avoids contributing to an unproductive group conflict Shares information and carries out responsibilities in a timely manner 	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	□1 □2 □3	☐ 1 ☐ 2 ☐ 3

	Employability Skills		Rati	ing	
	Competency and Rating Criteria	Initial	Mid	Mid	Final
4.	Maintains composure under pressure		Year 1	Year 2	
٦.	Examples of qualities and habits that the employee might exhibit include			<u> 1</u>	
	Uses critical thinking to determine the best options or outcomes when faced	☐ 2 ☐ 3		<u> </u>	∐ 2 □ 2
	with a challenging situation	3	∐3	∐3	∐3
	 Carries out assigned duties while under pressure Acts in a respectful, professional, and non-offensive manner while under 				
	pressure				
	 Applies stress management techniques to cope under pressure 				
5.	Demonstrates integrity	□ 1	□ 1	□ 1	□ 1
	Examples of qualities and habits that the employee might exhibit include	☐ 2	□ 2	□ 2	□ 2
	 Carries out responsibilities in an ethical, legal and confidential manner Responds to situations in a timely manner 	□ 3	□ 3	☐ 3	□3
	Takes personal responsibility to correct problems				
	Models behaviors that demonstrate self-discipline, reliability, and				
	dependability				
6.	Performs quality work	<u> </u>	<u></u> 1	1	1
	Examples of qualities and habits that the employee might exhibit include	□ 2	□2	□ 2	□2
	Carries out written and verbal directions accurately	 3	 □3	 3	 □3
	Completes work efficiently and effectivelyPerforms calculations accurately				
	 Conserves resources, supplies, and materials to minimize costs and 				
	environmental impact				
	Uses equipment, technology, and work strategies to improve workflow				
	Applies problem-solving strategies to improve productivity				
	Adheres to worksite regulations and practices Maintains an arganized work area.				
	Maintains an organized work area				
7.	Provides quality goods or services (internal and external)	□ 1	□ 1	□ 1	1
	Examples of qualities and habits that the employee might exhibit include	□ 2	□ 2	□ 2	□ 2
	 Shows support for the organizational goals and principles by own personal actions 	□ 3	□ 3	□ 3	□ 3
	Displays a respectful and professional image to customers				
	Displays an enthusiastic attitude and desire to take care of customer needs				
	Seeks out ways to increase customer satisfaction				
	Produces goods to workplace specifications				
8.	Shows initiative and self-direction	<u> </u>	□ 1	1	1
	Examples of qualities and habits that the employee might exhibit include	_ 2	_ 2	_ 2	2
	Prioritizes and carries out responsibilities without being told	 3	_ 3	 3	_ 3
	 Responds with enthusiasm and flexibility to handle tasks that need immediate attention 	1		_	
	Reflects on any unsatisfactory outcome as an opportunity to learn				
	• Improves personal performance by doing something different or differently				
	Analyzes how own actions impact the overall organization				
	Supports own action with sound reasoning and principles Palances personal activities to minimize interference with work responsibilities.				
	Balances personal activities to minimize interference with work responsibilities				

Employability Skills		Rati	ing	
Competency and Rating Criteria	Initial	Mid	Mid	Final
	IIIICIGI	Year 1	Year 2	Tillai
 Adapts to change Examples of qualities and habits that the employee might exhibit include Shows flexibility and willingness to learn new skills for various job roles Uses problem-solving and critical-thinking skills to cope with changing circumstances Modifies own work behavior based on feedback, unsatisfactory outcomes, efficiency, and effectiveness Displays a "can do" attitude 	☐ 1	☐ 1	☐ 1	☐ 1
	☐ 2	☐ 2	☐ 2	☐ 2
	☐ 3	☐ 3	☐ 3	☐ 3
 10. Demonstrates safety and security regulations and practices Examples of qualities and habits that the employee might exhibit include Follows personal safety requirements Maintains a safe work environment Demonstrates professional role in an emergency Follows security procedures Maintains confidentiality 	☐ 1	☐ 1	□1	☐ 1
	☐ 2	☐ 2	□2	☐ 2
	☐ 3	☐ 3	□3	☐ 3
 11. Applies job-related technology, information, and media Examples of qualities and habits that the employee might exhibit include Applies technology effectively in the workplace Assesses and evaluates information on the job Assesses training manuals, website, and other media related to the job 	☐ 1	☐ 1	☐ 1	☐ 1
	☐ 2	☐ 2	☐ 2	☐ 2
	☐ 3	☐ 3	☐ 3	☐ 3
 12. Fulfills training or certification requirements for employment Examples of this requirement may include Participation in required career-related training and/or educational programs Passing certification tests to qualify for licensure and/or certification Participation in company training or orientation 	□ 1	☐ 1	□ 1	□1
	□ 2	☐ 2	□ 2	□2
	□ 3	☐ 3	□ 3	□3
 13. Sets personal goals for improvement Examples of this requirement may include Setting goals that are specific and measurable Setting work-related goals that align with the organization's mission Identifying strategies to reach goals Reflecting on goal progress to regularly evaluate and modify goals 	□ 1	□ 1	□ 1	□1
	□ 2	□ 2	□ 2	□2
	□ 3	□ 3	□ 3	□3

OCCUPATIONAL COMPETENCIES (TO BE COMPLETED BY YA EMPLOYER/MENTOR)

Youth apprentices must earn a rating of at least "MEETS EXPECTATIONS" in each competency by the conclusion of the apprenticeship. A total 20 occupational competencies must be learned for this occupation. Year 1: All 7 Manufacturing Fundamentals competencies with no substitution, plus 13 Industrial Equipment competencies. Year 2: All 7 Manufacturing Fundamentals competencies with no substitution, plus the remaining 13 Industrial Equipment competencies. Employers may substitute one of the Industrial Equipment competencies per year with other occupationally appropriate skill and should write in the competency they are adding. Where necessary, skills can be simulated. Youth must be evaluated on these competencies at least two times each year of their apprenticeship. More columns are included below for those who choose to conduct more frequent reviews.

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

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	behavior
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	displays this behavior

Manufacturing Fundamentals Occupational Competencies	Rating			
	1	Evalua	ation	
	Minimum Rating of 2 for EAG			EACH
Competency and Rating Criteria		Check I	Rating	
	Initial	Mid	Mid	Final
	IIIICIAI	Year 1	Year 2	IIIIai
1. Focus on customer needs	□ 1	□ 1	□ 1	□ 1
 identify internal and external customers impacted by the production 	□ 2	□2	□2	□ 2
process	 □3	 3	 3	_ 3
 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				

Manufacturing Fundamentals Occupational Competencies	Rating			
	Evaluation			
	Minim		g of 2 for	EACH
Competency and Rating Criteria		Check I	Rating	
	Initial	Mid	Mid	Final
	miliai	Year 1	Year 2	
2. Use various instruments	□ 1	□ 1	□ 1	□ 1
consider the degree of precision required by the part feature	2	□ 2	□ 2	□ 2
choose correct measuring instrument for task	□3	□3	□3	Пз
 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 				
3. Operate tools and equipment safely	1	□ 1	□ 1	□ 1
 operate only tool/equipment that he/she is trained on 	□ 2	□ 2	□ 2	□ 2
choose correct tool/equipment for the task	☐ 3	□ 3	□ 3	3
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				

Manufacturing Fundamentals Occupational Competencies		Rat	ing	
	n 41 - 1	Evalua		FAC::
Competency and Rating Criteria	IVIINIM	um Katin Check	g of 2 for Rating	EACH
Competency and Nating Criteria		Mid	Mid	
	Initial	Year 1	Year 2	Final
 4. Practice quality assurance principles 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 	□1 □2 □3	□1 □2 □3	□ 1 □ 2 □ 3	□1 □2 □3
 Follow personal safety requirements (safety) 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 	□ 1 □ 2 □ 3	□ 1 □ 2 □ 3		□ 1 □ 2 □ 3

Manufacturing Fundamentals Occupational Competencies		Rating			
		Evaluation			
	Minim	Minimum Rating of 2 for EACH			
Competency and Rating Criteria		Check	Rating		
	Initial	Mid	Mid	Final	
	IIIIciai	Year 1	Year 2	· · · · · ·	
6. Maintain a safe work environment (safety)	□ 1	□ 1	□ 1	□ 1	
 comply with posted safety warnings and symbols 	□ 2	□ 2	□ 2	□ 2	
 identify unsafe conditions and/or work habits 	3	3	3	3	
 report unsafe conditions and/or work habits 					
 help maintain a clean and safe working environment free of debris and 	b				
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) Safe 	ty				
guidelines					
 follow rules for operating equipment (Powered Industrial Vehicle PIV) 					
 identify applicable Emergency Stops 					
7. Demonstrate professional role to be used in an emergency (safety)	□1	□ 1	□ 1	□ 1	
 participate in emergency safety simulations and drills 	□ 2	□ 2	2	☐ 2	
 describe company's policy and procedures for work site incidents, 	□ 3	□3	□ 3	□ 3	
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 					
Comments:					

Industrial Equipment (TO BE COMPLETED BY YA EMPLOYER/MENTOR)

	Occupational Competencies	Rating			
	Competency and Rating Criteria	Initial	Mid Year 1	Mid Year 2	Final
1.	Read technical drawings and work orders		Year 1	Rating	
	review technical drawing	□1	□ 1	1	□ 1
	gather reference materials as needed	□ - □ 2	□ - □ 2	☐ 2	☐ 2
	determine type of print and views used	□ - □ 3			☐3
	determine material specifications				
	determine critical dimensions and tolerances		Voor D	ating 2	
	analyze supplementary data datarmine product or job instructions and specifications.				
	 determine product or job instructions and specifications interpret equipment symbols and procedure 	□ 1	<u></u>	<u></u> 1	□ 1
	interpret equipment symbols and procedure	<u> </u>	□ 2	2	<u>2</u>
		□ 3	□ 3	3	3
2.	Interpret equipment symbols and procedures		Year 1	Rating	
	interpret technical drawings accurately as needed for job task	□ 1	□ 1	□ 1	□ 1
	use appropriate terminology	 2		2	
	• identify lines, views, symbols, and representations on the	 3	 3	 ☐3	
	drawings				
	 interpret dimensions, tolerances, and scale on the drawings interpret threads, tapers, and shop notes on the drawings 	Year 2 Rating			
	 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,		∐ 1		
	fixtures and holders as applicable	☐ 2	<u></u>	☐ 2	<u></u>
		3	□ 3	3	3
3.	Maintain schedules, communication, and documentation		Year 1 Rating		
	• identify frequency of maintenance tasks, i.e., daily, every other day, weekly, monthly, yearly, etc.	□ 1	□ 1	□ 1	□ 1
	 update schedules as maintenance is completed 	☐ 2	□ 2	□ 2	□ 2
	 schedule preventive and repair maintenance with all internal and 	☐ 3	□ 3	□3	□ 3
	external parties with limited disruption to production				
	 communicate maintenance and repair needs clearly 		Year 2	Rating	
	use the correct reporting formats for documentation and	□ 1	□ 1	□ 1	□ 1
	communication	□ 2	□ 2	□ 2	<u> </u>
	 document maintenance and repair activities accurately report back and document any maintenance and repair issues in a 	☐ 3	□ 3	□3	□ 3
	 report back and document any maintenance and repair issues in a timely manner 				
	document maintenance completely				
	document maintenance timely and accurate				
	the second secon				
				1	

	Occupational Competencies	Rating			
	Competency and Rating Criteria	Initial	Mid	Mid	Final
		IIIICIAI	Year 1	Year 2	lillai
4.	Monitor equipment for correct operation		Year 1	Rating	
	review equipment quality measures for trends and problems	1	1	□ 1	□ 1
	compare current equipment performance to optimal equipment	 2	 2	 2	 2
	operations on a regular basis	 ☐ 3	 ☐ 3	☐3	
	report noted deviations from expected performance				
	review relevant data before making suggestions		V2	D-4:	
	support investigation of abnormal equipment conditions in a		Year 2		
	timely manner	□ 1	1	□ 1	□ 1
	monitor corrected action solved the problem desument manitoring activities	☐ 2	□ 2	□ 2	☐ 2
	document monitoring activitiesverify repair history is complete, current, and accurate	□ 3	☐ 3	□3	□ 3
	verify repair history is complete, current, and accurate				
5.	Identify maintenance requirements		Year 1	Rating	
	 review applicable technical drawings, work orders, and/or 	□1	□1	□1	□ 1
	procedures for maintenance work	 2	 2	 2	
	review procedure and safety requirements	□ - □ 3	□ -	☐3	□ - □ 3
	identify set up needed				
	 verify production schedule, deadlines, and time frames to perform maintenance with work site professional 	Year 2 Rating			
	perform maintenance with work site professional				
		☐ 1	∐1		∐1
		2	<u></u>	2	_ <u></u>
		3	∐ 3	□ 3	∐ 3
	Lavant and also week			_	<u> </u>
6.	Layout and plan workidentify maintenance requirements		Year 1	Rating	
	 plan sequencing, tools, and equipment needed for maintenance 	□ 1	□ 1	□ 1	□ 1
	procedure	□ 2	□ 2	□ 2	☐ 2
	 select tools and maintenance equipment to be used 	□ 3	☐ 3	□ 3	☐ 3
	 gather resources needed at the workstation 				
	5		Year 2	Rating	
		□1	□1	□1	□1
		 □2	 □ 2	_ □2	 2
		 □3	 □ 3		
7.	Perform safety checks		Year 1	Rating	
	review safety requirements of procedure	□ 1			□1
	• verify safety equipment and Personal Protective Equipment (PPE)	☐ 1 ☐ 2	□ <u>+</u>		
	needed for maintenance process		□ 2		
	 inspect tools and work area for safety considerations 	3	∐ 3	□ 3	∐ 3
	 examine equipment labeling and safeguarding 				i
	ensure Lock Out/Tag Out procedures have been implemented as		Year 2	Rating	
	required prior to maintenance	□ 1	□ 1	□ 1	□ 1
		□ 2	□ 2	□ 2	☐ 2
		□ 3	☐ 3	□3	□ 3
				i l	

	Occupational Competencies		Rat	ting	
	Competency and Rating Criteria	Initial	Mid Year 1	Mid Year 2	Final
8. L	Jse hand tools		Year 1	Rating	
•	select the appropriate hand tool for the job	☐ 1 ☐ 2 ☐ 3			
	piece(s) meet specimeation		Year 2	Rating	
		☐ 1 ☐ 2 ☐ 3			
9. P	Perform preventive maintenance (PM)		Year 1	Rating	
•	assure alternative equipment is available	☐ 1 ☐ 2 ☐ 3			
	manuals, and equipment history for PM		Year 2	Rating	
•	gather equipment and supplies needed to perform PM ensure equipment is properly labeled and pulled from production use	☐ 1 ☐ 2 ☐ 3			
•	performing PM follow all safety requirements and wear appropriate Personal Protective Equipment (PPE)				
•	document preventative actions completed				
•	assess PM through follow up				
	Perform lubrication procedures		Year 1	Rating	
•	perform safety checks check lubricant levels check for and correct any leakages	☐ 1 ☐ 2 ☐ 3			
•	, , , , , , , , , , , , , , , , , , , ,		Year 2	Rating	
	fill reservoir with correct lubricant	☐ 1 ☐ 2 ☐ 3			

Occupational Competencies	Rating			
Competency and Rating Criteria	Initial	Mid	Mid	Final
44 Commant having any important annulum identification and discussion		Year 1	Year 2	
 Support basic equipment problem identification and diagnosis ensure equipment is properly labeled and pulled from production 		Year 1	Rating	
use	□ 1	□ 1	□ 1	□ 1
 interpret technical drawings for the equipment and process 	□ 2	□ 2	□ 2	□ 2
under investigation	□ 3	☐ 3	□ 3	□ 3
 locate the equipment reference materials and manuals 				
 review previous preventative maintenance and repair history 		Year 2	Rating	
records on the equipment under investigation	□ 1	□ 1	□ 1	□ 1
 assist work site professional to identify the components to be checked for proper operation 	□ 2	□ 2	□ 2	□ 2
ensure appropriate safety devices and personal protective	□ 3	□ 3	□ 3	□ 3
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				

Occupational Competencies	Rating				
Competency and Rating Criteria	Initial	Mid Year 1	Mid Year 2	Final	
12. Assist with basic equipment repair		Year 1 Rating			
 identify equipment problems through malfunction or production or quality indicators communicate repair needs to production and other applicable parties 	☐ 1 ☐ 2 ☐ 3				
assure that alternative equipment is available if needed by				<u> </u>	
 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 	☐ 1 ☐ 2 ☐ 3	Year 2	Rating 1 2 3	☐ 1 ☐ 2 ☐ 3	
document repairs completedassess repair work through follow up					
13. Assist re-qualifying equipment		Year 1	Rating		
 review the requirements for re-qualification perform safety checks assist the work site professional to re-qualify the equipment place equipment back into service 	☐ 1 ☐ 2 ☐ 3				
 notify production 		Year 2	Rating		
 document re-qualification and update maintenance schedules 	☐ 1 ☐ 2 ☐ 3				
14. Calibrate tools and equipment		Year 1	Rating		
 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 	☐ 1 ☐ 2 ☐ 3				
 calibrate tools and instruments accurately and correctly 		Year 2	Rating		
 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 	☐ 1 ☐ 2 ☐ 3				

Occupational Competencies	Rating			
Competency and Rating Criteria	Initial	Mid	Mid	Final
	IIIILIAI	Year 1	Year 2	Fillal
15. Set up metal		Year 1	Rating	
layout and plan work	□ 1	□ 1	□1	□ 1
 perform safety checks 	□	□		
 place parts and assemblies into fixtures 		☐ 2 ☐ 3		□ ² □ 3
 set up equipment for fabrication 	□3	3	□3	3
 locate parts or subassemblies needed 				<u> </u>
 determine the order for the part or subassembly placement 		Year 2	Rating	
 position, align, and bolt jigs, holding fixtures, guides, and stops 	□ 1	□ 1	□ 1	□ 1
onto machines	□ 2	□ 2	□ 2	□ 2
 position, align and/or clamp work pieces into jigs and/or holding 	_ 3	_ 3	_ 	 3
fixtures				
 tighten all holding and positioning clamps 				
 inspect assembly 				
4C. Married has view				<u> </u>
16. Mount a bearing		Year 1	Rating	
follow preventive maintenance and repair of equipment steps perform sefety shocks	□ 1	□ 1	□ 1	□ 1
perform safety checks perform safety checks perform safety checks	□ 2	□ 2	□ 2	□ 2
 check running machine for signs (e.g., heat, noise, vibration, etc.) 	□3	□ 3	□ 3	□3
of malfunctioning bearings				<u> </u>
 find the correct reference for bearing numbering verify the correct bearing for the application 		Year 2	Rating	
 inspect bearing for condition and lubrication 				
 verify mounting clearances according to specification 	1	□ 1	1	□ 1
 handle bearings properly to avoid contamination and damage 	□ 2	□ 2	□ 2	2
 assist worksite professional to remove used bearings carefully 	□ 3	□ 3	□ 3	□ 3
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				
document bearing instantation				
17. Install mechanical fasteners		Year 1	Rating	
 follow preventive maintenance and repair of equipment steps 	□ 1	□1		□1
 perform safety checks 				
 select the appropriate fastener for the application 	<u> </u> 2	<u></u>	<u></u>	
 install various fasteners according to specifications 	3	∐ 3	□ 3	∐ 3
 use the correct tools to install mechanical fastener 				<u> </u>
 document fastener installation 	Year 2 Rating			
	1	□ 1	□ 1	□ 1
	 2		 2	2
	☐ 3	□ - □ 3	☐3	□ - □ 3
				_ _
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Occupational Competencies	Rating			
Competency and Rating Criteria	Initial	Mid Year 1	Mid Year 2	Final
18. Assist with electrical circuit problem identification and diagnosis	Year 1 Rating			
 assist worksite profession to identify and diagnose equipment problem interpret electrical schematics perform safety checks 	□ 1 □ 2 □ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3
 assist with electrical circuit testing measure current draw 		Year 2	Rating	
 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 	□ 1 □ 2 □ 3			
19. Assist with motor control problem identification and diagnosis		Vear 1	Rating	
 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 	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	
motor control system using meters and testing instruments		Year 2	Rating	
 assist work site professional in locating and determining the cause of problems in motor control system document motor control testing completed 	☐ 1 ☐ 2 ☐ 3			
20. Assist with hydraulic and/or pneumatic problem identification		Year 1	Rating	
 and diagnosis assist work site profession to identify and diagnose equipment problem interpret schematics for basic hydraulic system or pneumatic circuit 	☐ 1 ☐ 2 ☐ 3			
perform safety checks	Year 2 Rating			
 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 	□ 1 □ 2 □ 3	1 2 3	□ 1 □ 2 □ 3	□ 1 □ 2 □ 3

Occupational Competencies	Rating			
Competency and Rating Criteria	Initial	Mid	Mid	Final
		Year 1	Year 2	
21. Maintain and repair mechanical drive system components	Year 1 Rating			
assist work site profession to identify and diagnose equipment	□ 1	□ 1	□ 1	□ 1
problem	□ 2	□2	□2	□2
interpret schematics for mechanical drive systems	 3	 3	 3	
perform safety checks				
check pulley and belts for tension, wear and damage		V2	Datin -	
mount new pulleys to shafts as required		Year 2	Kating	Г
maintain, install, align, and adjust tension on a belt drive	□ 1	□ 1	□ 1	□ 1
clean, install, and align gear drives	□ 2	□ 2	□ 2	□ 2
 maintain, install, align, and adjust tension a chain and sprocket 	□3	□3	□ 3	□3
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 filtersdocument mechanical drive system maintenance				
document mechanical unive system maintenance	ļ			
22. Maintain and repair electrical control system components		Year 1	Rating	<u> </u>
 assist work site profession to identify and diagnose equipment 				
problem	□1	□ 1	<u></u> 1	□ 1
 interpret schematics for electrical control systems 	<u> </u>	<u></u>	<u></u>	<u></u>
perform safety checks	3	∐ 3	☐ 3	☐ 3
 replace faulty lighting components 				
 replace blown fuse or tripped circuit breaker 		Year 2	Rating	
 construct common control circuits using switches and relays 	□ 1	□ 1	□ 1	□ 1
 assist to adjust, repair, or replace faulty circuit components 				
 assist to install conduit and wiring 			□ <u>-</u> □3	☐ _
 document electrical control system maintenance 				
	ļ			

Occupational Competencies	Rating			
Competency and Rating Criteria	Initial	Mid Year 1	Mid	Final
23. Maintain and repair hydraulic system components			Year 2	
	Year 1 Rating			
 assist work site profession to identify and diagnose equipment problem 	□ 1	□ 1	□ 1	□ 1
	□ 2	□ 2	□ 2	□ 2
	□3	□ 3	□3	□3
perform safety checks				
 measure and adjust relief, unloading, and pressure control valves 		Voor 2	Datina	
for proper pressure	Year 2 Rating			
measure and adjust flow controls for proper rates	□ 1	□ 1	□ 1	□ 1
check for system leaks	□ 2	□ 2	2	□ 2
draw sample of hydraulic fluid for analysis	□3	□3	□3	□3
 test hydraulic fluids for contamination and viscosity 				
 drain hydraulic fluids as required 				ı
 fill reservoir with correct fluid or hydraulic fluid 				ı
 use procedures to avoid fluid contamination 				İ
 clean inlet strainer and filters as required 				ı
 check hydraulic power unit for proper performance 				ı
 inspect and replaces seals and gaskets as required 				ı
 inspect and replaces hoses, tubing and fittings as required 				ı
 check operation of control valves and cylinders and replace as 				ı
required				İ
 document hydraulic system maintenance 				i
24. Assist installation and qualification of equipment		Year 1	Rating	
identify required technical, environmental, safety and	□ 1	□ 1	□ 1	□ 1
performance features of equipment	□2	□2	□ 2	□2
verify final selection of equipment from qualified vendor			 ☐ 3	 □3
 obtain manufacturer's recommendations for installation site requirements 				
 check equipment operation site for fulfillment of manufacturer's 		Year 2	Rating	
recommendations	□ 1	□1		□ 1
 receive equipment and check for damage 				-
 install equipment according to manufacturer recommendations 	∐2		□ 2	
 determine performance start up qualification (criteria, 	∐ 3	∐ 3	∐ 3	∐ 3
procedures, critical parameters, test intervals) and sample				ı
analysis for each run or use				ı
 determine cleaning, preventive maintenance (PM), routine 				ı
servicing and authorized repair engineers				ı
 update maintenance schedules with new equipment PM and 				ı
servicing				ı
 document qualification and installation such as initial calibration, 				ı
initial operational testing, quality control procedures and				ı
parameters, customization and testing, determination of				ı
maintenance and servicing, list of authorized service engineers,				ı
etc.				ı
				ı
				ı

Occupational Competencies	Rating			
Competency and Rating Criteria	Initial	Mid Year 1	Mid Year 2	Final
25. Maintain and repair pneumatic system components	Year 1 Rating			
 assist work site profession to identify and diagnose equipment problem interpret schematics for hydraulic and/or pneumatic systems perform safety checks 	□ 1 □ 2 □ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3
 measure and adjust relief, unloading, and pressure control valves for proper pressure 	Year 2 Rating			
 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 	□1 □2 □3	□ 1 □ 2 □ 3	□ 1 □ 2 □ 3	□ 1 □ 2 □ 3
26. Fabricate metal	Year 1 Rating			
 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 	□ 1 □ 2 □ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	□ 1 □ 2 □ 3
to be completed		Year 2	Rating	
 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 	□1 □2 □3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3

Occupational Competencies		Rating		
Competency and Rating Criteria	Initial	Mid Year 1	Mid Year 2	Final
Competency Substitute (if you replaced a competency above, note the competency and rating)	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3
Comments:				

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