



# Agriculture Mechanic Technician

Youth Apprenticeship

## AGRICULTURE MECHANIC TECHNICIAN

Agriculture Mechanic Technician youth apprentices gain skills related to the maintenance and repair of agricultural equipment including use of tools, materials, engines, parts, diagnostic tools, welding, hydraulics, electronics, and documentation. Apprentices must adhere to industry safety and security standards.

**Length of Apprenticeship:** One or two years

## COMPETENCIES

Agriculture Mechanic Technician youth apprentices can be complete as a one- or two-year program.

Level One (one year) = Required Technical Skills + 3 Additional Skills

Level Two (two years) = Required Technical Skills + 10 Additional Skills\*

*To Include previously completed Level One Additional Skills*

Agriculture Mechanic Technician Competencies	
Required Technical Skills	Additional Skills
<ol style="list-style-type: none"> <li>1. Select correct hand tools and light duty power tools required for job</li> <li>2. Operate hand tools, light duty power tools and stationary tools safely</li> <li>3. Maintain a safe work environment</li> <li>4. Use fasteners correctly</li> <li>5. Handle and store oils, grease, chemicals, cleaners, solvents, etc. according to the Material Safety Data Sheet (MSDS)</li> <li>6. Test and maintain engines</li> <li>7. Operate, maintain, and repair engines and equipment safely</li> <li>8. Perform pre-inspection of equipment components</li> <li>9. Setup equipment and machinery</li> <li>10. Retrieve diagnostic trouble codes</li> <li>11. Check fluid levels and lubricate machinery and equipment</li> <li>12. Maintain vehicle and machinery appearance and cleanliness prior to inspection delivery</li> <li>13. Complete written documentation of work performed, and parts used</li> </ol>	<ol style="list-style-type: none"> <li>14. Look up parts</li> <li>15. Use specific diagnostic tools</li> <li>16. Cut metal using an oxyacetylene torch and plasma arc torch</li> <li>17. Interpret hydraulic symbols and flow on a schematic drawing</li> <li>18. Maintain and repair basic hydraulic systems</li> <li>19. Inspect hydraulic components</li> <li>20. Repair and maintain system components</li> <li>21. Interpret electrical symbols and wiring schematics</li> <li>22. Apply basic electrical theory</li> <li>23. Repair failed components and/or repair of wiring</li> <li>24. Inspect and diagnose electrical/electronic components</li> <li>25. Maintain and repair electrical/electronic components</li> <li>26. Troubleshoot and install instrumentation and data acquisition system</li> <li>27. Dismantle defective machines and equipment</li> <li>28. Reassemble machines and equipment</li> <li>29. Calibrate and monitor equipment</li> </ol>

## **REGISTERED APPRENTICESHIP BRIDGING OPPORTUNITIES**

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

- Maintenance Mechanic

## **POST-SECONDARY PATHWAY OPPORTUNITIES**

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There are several post-secondary pathway opportunities in this area. The following is a partial list.

- Mechanical Maintenance Technical Diploma
- Agronomy Technician



# Agriculture Mechanic Technician

Youth Apprenticeship

## ON-THE-JOB LEARNING PERFORMANCE STANDARDS GUIDE

### YOUTH APPRENTICE 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.

- ☐ Year 1 Competency checklist
- ☐ 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.

- ☐ Year 2 Competency checklist
- ☐ 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

## CAREER PREPARATION

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Youth apprentices must complete one of the following during Youth Apprenticeship participation:

- ☐ 1. Student is participating in a local or regional career pathway\*.

Identify the pathway below:

For more information contact the [Wisconsin Department of Public Instruction](#). Additional help may be found on the WI DPI [Wisconsin Pathways – Regional Career Pathways](#) and [DPI Career Clusters and Pathways](#) web pages.

**\*Local and Regional career pathways** as defined by the WI DPI means that a student is participating in or has completed at least one CTE class in a cluster pathway sequence and has completed at least one of the other career pathway components: instructional related course, work-based learning, dual college credit, and/or career and technical student organization.

- ☐ 2. Student has completed one of the following certificates during their YA program or possess current certification earned previously.

A copy of the certificate must be uploaded with the completed checklist. Select the certificate from the list below.

- ☐ Leadership Certificate (DPI)
- ☐ First Aid/CPR
- ☐ OSHA 10
- ☐ Wisconsin Youth Tractor and Machinery Safety Certification
- ☐ Other certificates identified by the Career and Technical Education (CTE) Approved Certifications List related to this occupational field (or related to this occupation)  
[dwd.wisconsin.gov/det/cte/incentive/](http://dwd.wisconsin.gov/det/cte/incentive/) (YA certificates excluded)

Title of Certification:

- ☐ 3. Student is participating in a [Dual Enrollment Course](#) connected to any postsecondary education provider including UW System, Wisconsin Association of Independent Colleges and Universities (WAICU), and any of the 16 Wisconsin Technical Colleges (WTCS).

College Name:

College Course Title:

Course Number:

For more information on Dual Enrollment opportunities, please click on one of the below resources:

- [WTCS](#)
- [WAICU](#)
- UW System – connect with the college of choice.

## SIGNATURES

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The On-the-Job Learning Performance Standards Guide includes a list of competencies youth apprentices learn through mentoring and training at the worksite.

Instructions for the Worksite Employers/Mentors and School-Based or YA coordinators.

This document should be reviewed with the employer / mentor, school-based or YA coordinator on a regular basis with the youth apprentice to record progress and plan future steps to ensure completion of the required competencies. Mentors, school-based / YA coordinator, and the apprentice sign below.

Employer/Mentor Signature	Employer/Mentor Signature
Employer/Mentor	Employer/Mentor
Business/Company	Business/Company
Date Signed	Date Signed
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 Signature	Youth Apprentice Signature
Youth Apprentice	Youth Apprentice
School District / High School	School District / High School
Date Signed	Date Signed

## EMPLOYABILITY SKILLS

Youth apprentices must demonstrate key employability skills.

The DWD YA program employability skills requirement may be attained and demonstrated through two processes. (See options listed below.) Employability skills must be completed for every year a student is in the program. The DPI Employability Skills Certificate may be counted as meeting one of those two years, provided the certificate is earned in the same year the student is enrolled in youth apprenticeship or they can complete the YA Employability Skills in the OJL. The Employability Skills Certificate must be obtained through the DPI.

1. If a student has successfully completed a Wisconsin Department of Public Instruction (DPI) State-Certified Cooperative Education, [Co-Op Employability Skill certification](#) then they have met the YA Employability Skills requirement for that year. A copy of the student's DPI Co-Op Employability Skill Certificate must be maintained on file with their YA regional consortium.

☐ Earned Wisconsin Employability Skills Certificate (checked if applicable) or,

2. Completed and rated "Employability Skills" through this YA OJL guide as described below.

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

The following skills are required of all youth apprentices.

Employability Skills		Rating		
Competency and Rating Criteria		Minimum Rating of 2 for EACH Check Rating		
		1	2	3
1. Develops positive work relationships with others. <i>Examples of qualities and habits that the employee might exhibit include . . .</i>		Year 1 Rating		
<ul style="list-style-type: none"> <li>• Interacts with others with respect and in a non-judgmental manner</li> <li>• Responds to others in an appropriate and non-offensive manner</li> <li>• Helps co-workers and peers accomplish tasks or goals</li> <li>• Applies problem-solving strategies to improve relations with others</li> <li>• When managing others, shows traits such as compassion, listening, coaching, team development, and appreciation</li> </ul>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Year 2 Rating		
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Communicates effectively with others <i>Examples of qualities and habits that the employee might exhibit include . . .</i>		Year 1 Rating		
<ul style="list-style-type: none"> <li>• Adjust the communication approach for the target audience, purpose, and situation to maximize impact</li> <li>• Organizes messages/information in a logical and helpful manner</li> <li>• Speaks clearly and writes legibly</li> <li>• Models behaviors to show active listening</li> <li>• Applies what was read to actual practice</li> <li>• Asks appropriate questions for clarity</li> </ul>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Year 2 Rating		
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<p>3. Collaborates with others</p> <p><i>Examples of qualities and habits that the employee might exhibit include . . .</i></p> <ul style="list-style-type: none"> <li>• Works effectively in teams with people of diverse backgrounds regardless of sex, race, ethnicity, nationality, sexuality, religion, political views, and abilities</li> <li>• Shares responsibility for collaborative work and decision making</li> <li>• Uses the problem-solving process to work to work through differences of opinion in a constructive manner to achieve a reasonable compromise</li> <li>• Avoids contributing to an unproductive group conflict</li> <li>• Shares information and carries out responsibilities in a timely manner</li> </ul>	<b>Year 1 Rating</b>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<b>Year 2 Rating</b>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>4. Maintains composure under pressure</p> <p><i>Examples of qualities and habits that the employee might exhibit include . . .</i></p> <ul style="list-style-type: none"> <li>• Uses critical thinking to determine the best options or outcomes when faced with a challenging situation</li> <li>• Carries out assigned duties while under pressure</li> <li>• Acts in a respectful, professional, and non-offensive manner while under pressure</li> <li>• Applies stress management techniques to cope under pressure</li> </ul>	<b>Year 1 Rating</b>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<b>Year 2 Rating</b>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>5. Demonstrates integrity</p> <p><i>Examples of qualities and habits that the employee might exhibit include . . .</i></p> <ul style="list-style-type: none"> <li>• Carries our responsibilities in an ethical, legal and confidential manner</li> <li>• Responds to situations in a timely manner</li> <li>• Takes personal responsibility to correct problems</li> <li>• Models behaviors that demonstrate self-discipline, reliability, and dependability</li> </ul>	<b>Year 1 Rating</b>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<b>Year 2 Rating</b>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>6. Performs quality work</p> <p><i>Examples of qualities and habits that the employee might exhibit include . . .</i></p> <ul style="list-style-type: none"> <li>• Carries out written and verbal directions accurately</li> <li>• Completes work efficiently and effectively</li> <li>• Preforms calculations accurately</li> <li>• Conserves resources, supplies, and materials to minimize costs and environmental impact</li> <li>• Uses equipment, technology, and work strategies to improve workflow</li> <li>• Applies problem-solving strategies to improve productivity</li> <li>• Adheres to worksite regulations and practices</li> <li>• Maintains an organized work area</li> </ul>	<b>Year 1 Rating</b>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<b>Year 2 Rating</b>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<p>7. Provides quality goods or services (internal and external)  <i>Examples of qualities and habits that the employee might exhibit include . . .</i></p> <ul style="list-style-type: none"> <li>• Shows support for the organizational goals and principles by own personal actions</li> <li>• Displays a respectful and professional image to customers</li> <li>• Displays an enthusiastic attitude and desire to take care of customer needs</li> <li>• Seeks out ways to increase customer satisfaction</li> <li>• Produces goods to workplace specifications</li> </ul>	<b>Year 1 Rating</b>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<b>Year 2 Rating</b>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>8. Shows initiative and self-direction  <i>Examples of qualities and habits that the employee might exhibit include . . .</i></p> <ul style="list-style-type: none"> <li>• Prioritizes and carries out responsibilities without being told</li> <li>• Responds with enthusiasm and flexibility to handle tasks that need immediate attention</li> <li>• Reflects on any unsatisfactory outcome as an opportunity to learn</li> <li>• Improves personal performance by doing something different or differently</li> <li>• Analyzes how own actions impact the overall organization</li> <li>• Supports own action with sound reasoning and principles</li> <li>• Balances personal activities to minimize interference with work responsibilities</li> </ul>	<b>Year 1 Rating</b>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<b>Year 2 Rating</b>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>9. Adapts to change  <i>Examples of qualities and habits that the employee might exhibit include . . .</i></p> <ul style="list-style-type: none"> <li>• Shows flexibility and willingness to learn new skills for various job roles</li> <li>• Uses problem-solving and critical-thinking skills to cope with changing circumstances</li> <li>• Modifies own work behavior based on feedback, unsatisfactory outcomes, efficiency, and effectiveness</li> <li>• Displays a "can do" attitude</li> </ul>	<b>Year 1 Rating</b>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<b>Year 2 Rating</b>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>10. Demonstrates safety and security regulations and practices  <i>Examples of qualities and habits that the employee might exhibit include . . .</i></p> <ul style="list-style-type: none"> <li>• Follows personal safety requirements</li> <li>• Maintains a safe work environment</li> <li>• Demonstrates professional role in an emergency</li> <li>• Follows security procedures</li> <li>• Maintains confidentiality</li> </ul>	<b>Year 1 Rating</b>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<b>Year 2 Rating</b>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>11. Applies job-related technology, information, and media  <i>Examples of qualities and habits that the employee might exhibit include . . .</i></p> <ul style="list-style-type: none"> <li>• Applies technology effectively in the workplace</li> <li>• Assesses and evaluates information on the job</li> <li>• Assesses training manuals, website, and other media related to the job</li> </ul>	<b>Year 1 Rating</b>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<b>Year 2 Rating</b>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>12. Fulfills training or certification requirements for employment  <i>Examples of qualities and habits that the employee might exhibit include . . .</i></p> <ul style="list-style-type: none"> <li>• Participation in required career-related training and/or educational programs</li> <li>• Passing certification tests to qualify for licensure and/or certification</li> <li>• Participation in company training or orientation</li> </ul>	<b>Year 1 Rating</b>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<b>Year 2 Rating</b>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



<b>13. Sets personal goals for improvement</b> <i>Examples of qualities and habits that the employee might exhibit include . . .</i> <ul style="list-style-type: none"> <li>• Setting goals that are specific and measurable</li> <li>• Setting work-related goals that align with the organization's mission</li> <li>• Identifying strategies to reach goals</li> <li>• Reflecting on goal progress to regularly evaluate and modify goals</li> </ul>	<b>Year 1 Rating</b>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<b>Year 2 Rating</b>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## COMPETENCIES

Agriculture Mechanic Technician youth apprentices must complete the competencies captured below. A one-year apprentice must complete 13 competencies from the Required Technical Skills list and 3 additional skills. Two-year youth apprentices must complete the Required Technical skills and 10 additional skills. Employers can substitute up to **1** competency with another occupationally appropriate skill. Substitutions must be added to the competency list for assessment.

**Level One** (one year) = Required Technical Skills + 3 Additional Skills

**Level Two** (two years) = Required Technical Skills + 10 Additional Skills\*

*To Include previously completed Level One Additional Skills*

### 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 this behavior

### AGRICULTURE MECHANIC TECHNICIAN – REQUIRED SKILLS

Competency and Rating Criteria	Minimum Rating of 2 for EACH Check Rating		
	1	2	3
<b>1. Select correct hand tools and light duty power tools required for job</b> <ul style="list-style-type: none"><li>• use correct hand tools in a safe and appropriate manner</li><li>• identify capabilities and limitations of hand tools</li><li>• identify capabilities and limitations of power tools</li><li>• identify worn, damaged, or abused tools</li><li>• verify equipment safety procedures</li><li>• identify proper Personal Protective Equipment (PPE) needed for tool/equipment use</li><li>• handle and store tools properly</li></ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Competency and Rating Criteria	Minimum Rating of 2 for EACH Check Rating		
	1	2	3
<b>2. Operate hand tools, light duty power tools and stationary tools safely</b> <ul style="list-style-type: none"> <li>• operate tool/equipment trained to use</li> <li>• operate tool/equipment with guarding devices in manner required for job task</li> <li>• inspect tool/equipment and work area for safety considerations</li> <li>• demonstrate general safety rules for operating all power tools</li> <li>• follow tool checklist</li> <li>• verify tool/equipment is available for use and in working order</li> <li>• verify tool/equipment is current for preventative maintenance and/or calibration</li> <li>• wear the required Personal Protective Equipment (PPE) at all times as required for the operation of the tool/equipment</li> <li>• monitor tool/equipment for safe operation during use</li> <li>• document use and maintenance as required</li> <li>• shut down tool/equipment according to proper use</li> <li>• report abnormal tool/equipment conditions or failures in operation</li> <li>• perform required preventative maintenance procedures</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>3. Maintain a safe work environment</b> <ul style="list-style-type: none"> <li>• inspect tools and work area for safety considerations</li> <li>• comply with posted safety warnings and symbols</li> <li>• identify unsafe conditions and/or work habits and</li> <li>• report unsafe conditions to the worksite professional immediately</li> <li>• help maintain a clean and safe working environment free of debris and obstacles</li> <li>• dispose of waste and recyclable materials properly</li> <li>• store materials and tools properly</li> <li>• follow facility procedures for clean-up and shut down after use</li> <li>• clean light fixtures to ensure proper lighting</li> <li>• store tools and equipment properly</li> <li>• clean and dry floors</li> <li>• follow general shop housekeeping procedures</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Competency and Rating Criteria	Minimum Rating of 2 for EACH Check Rating		
	1	2	3
<b>4. Use fasteners correctly</b> <ul style="list-style-type: none"> <li>• identify correct fasteners for task (screws, bolts, nuts, washers, keys, snap rings, pins, and studs)</li> <li>• select correct tools/equipment to adjust fasteners</li> <li>• measure bolt and nut length, diameter, and thread types accurately</li> <li>• extract broken bolts properly</li> <li>• restore internal and external threads properly</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>5. Handle and store oils, grease, chemicals, cleaners, solvents, etc. according to the Material Safety Data Sheet (MSDS)</b> <ul style="list-style-type: none"> <li>• safely Identify, handles, Store, and uses materials according to company procedure, if applicable</li> <li>• review MSDS sheet to identify hazardous materials</li> <li>• perform the approved storage procedures for flammable materials found in repair facilities</li> <li>• dispose of hazardous materials following safety procedures</li> <li>• wear appropriate personal protective equipment (PPE)</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>6. Test and maintain engines</b> <ul style="list-style-type: none"> <li>• determine appropriate inspections and test(s) to perform based on customer concern</li> <li>• assist with repair using parts manual</li> <li>• develop a preventative maintenance schedule for equipment</li> <li>• adjust equipment for safe and efficient operation</li> <li>• determine the cost of routine equipment maintenance</li> <li>• apply service-related information, including service bulletins, manuals, and parts catalogues</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Competency and Rating Criteria	Minimum Rating of 2 for EACH Check Rating		
	1	2	3
<b>7. Operate, maintain, and repair engines and equipment safely</b> <ul style="list-style-type: none"> <li>• assist with follow up on repaired equipment to ensure that corrective action solved the problem</li> <li>• assist with the investigation of abnormal equipment conditions in a timely manner</li> <li>• follow tool/equipment repair manual</li> <li>• follow safety precautions when operating, servicing, and maintaining machines and equipment</li> <li>• research vehicle and service information, vehicle service history, service precautions, and technical service bulletins</li> <li>• verify operation of the instrument panel engine warning indicators</li> <li>• review equipment quality measures for trends and problems</li> <li>• compare current equipment performance to optimal equipment operations</li> <li>• report noted deviations from expected performance</li> <li>• document all monitoring activities</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>8. Perform pre-inspection of equipment components</b> <ul style="list-style-type: none"> <li>• complete a visual inspection</li> <li>• determine appropriate inspections and test(s) to perform based on customer concern</li> <li>• check for operation and leaks of hoses, lines, valves, and nozzles</li> <li>• identify information needed and the service requested on a repair order</li> <li>• locate repair parts, using catalogs, microfiche, and computers.</li> <li>• review vehicle service history</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>9. Setup equipment and machinery</b> <ul style="list-style-type: none"> <li>• organize workspace</li> <li>• verify equipment is available for use and in working order</li> <li>• verify equipment is current for preventative maintenance and/or calibration</li> <li>• stage pieces and materials for assembly</li> <li>• assemble and adjust tools and equipment as required</li> <li>• document service completed</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Competency and Rating Criteria	Minimum Rating of 2 for EACH Check Rating		
	1	2	3
<b>10. Retrieve diagnostic trouble codes</b> <ul style="list-style-type: none"> <li>connect diagnostic software to equipment</li> <li>operate different types of service software</li> <li>verify connection to software and equipment using manual</li> <li>use general computer skills</li> <li>toggle between screens using software</li> <li>interpret readings to icons</li> <li>verify math and make conversions when appropriate</li> <li>perform procedures as indicated by the service software</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>11. Check fluid levels and lubricate machinery and equipment</b> <ul style="list-style-type: none"> <li>review manufacturer safety and service procedures</li> <li>determine the type of lubricant recommended based on original equipment manufacturer (OEM) requirements</li> <li>identify importance of oil analysis as a management tool</li> <li>replace torn or missing seals</li> <li>apply grease to each fitting and wipe away excess</li> <li>inspect fluid levels using dipstick</li> <li>change oil filters</li> <li>verify work and adjust</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>12. Maintain vehicle and machinery appearance and cleanliness prior to inspection delivery</b> <ul style="list-style-type: none"> <li>install shields and hoods</li> <li>verify machinery is washed and prepped</li> <li>inspect cleanliness of the cab</li> <li>assure windows are clean</li> <li>verify that there are no external leaks from the machinery/equipment</li> <li>follow any company procedures condition Report</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>13. Complete written documentation of work performed, and parts used</b> <ul style="list-style-type: none"> <li>identify the purpose and importance of keeping records</li> <li>demonstrate procedures for keeping records of equipment maintenance and services</li> <li>document customer concern on repair order</li> <li>verify work orders, service invoices, and requisitions</li> <li>prepare a written cost estimate of repair work</li> <li>document parts used for service repair</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Competency and Rating Criteria	Minimum Rating of 2 for EACH Check Rating		
	1	2	3
<b>Competency Substitute</b> (if you replaced a competency above, note the competency and rating)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Comments:</b>			

## AGRICULTURE MECHANIC TECHNICIAN – ADDITIONAL SKILLS

Competency and Rating Criteria	Minimum Rating of 2 for EACH Check Rating		
	1	2	3
<b>14. Look up parts</b> <ul style="list-style-type: none"> <li>• locate repair parts, using catalogs, microfiche, and computers</li> <li>• collect necessary information to determine part requirements</li> <li>• locate and accesses serial numbers</li> <li>• identify section and component location on machinery/equipment</li> <li>• review previous repair orders</li> <li>• perform basic computer operation</li> <li>• write up request for parts order</li> <li>• maintain agriculture mechanics business records</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>15. Use specific diagnostic tools</b> <ul style="list-style-type: none"> <li>• verify the causes of concerns with stored or active diagnostic trouble codes</li> <li>• obtain, graph, and interpret scan tool data</li> <li>• determine necessary action</li> <li>• inspect computerized engine control system sensors</li> <li>• test computerized engine control system sensors</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<b>16. Cut metal using an oxyacetylene torch and plasma arc torch</b> <ul style="list-style-type: none"> <li>• operate all welding and cutting equipment safely</li> <li>• interpret drawings and welding symbols</li> <li>• select appropriate welding and cutting tips for specific applications</li> <li>• diagnose equipment failure</li> <li>• set up, adjust, operate, and shut down oxy-fuel, welding and brazing equipment for a given job</li> <li>• lay out and prepare metals for welding</li> <li>• cut metal to specifications</li> <li>• heat metal parts to assist removal</li> <li>• perform start up and shut down of equipment</li> <li>• weld basic joints in various positions</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>17. Interpret hydraulic symbols and flow on a schematic drawing</b> <ul style="list-style-type: none"> <li>• identify basic hydraulic components</li> <li>• inspect operation of hydraulic circuit</li> <li>• verify basic hydraulic component functions</li> <li>• identify essential safety practices related to the operation of agriculture equipment using hydraulics</li> <li>• perform routine service and maintenance using appropriate service manuals</li> <li>• reference the service manual for correct schematic of component</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>18. Maintain and repair basic hydraulic systems</b> <ul style="list-style-type: none"> <li>• review equipment specifications (relief valve pressures, pump output, engine revolutions per minute (rpm), and operating temperature) to accurately test the system</li> <li>• comply with personal safety practices concerning clothing, tool usage, proper ventilation of fumes and securing machining</li> <li>• inspect system for temperature, pump flow, pressure tests, leakage etc.</li> <li>• use a pressure and flow tester in diagnosing malfunctions and repairing hydraulic system</li> <li>• perform all procedures according to manufacturing requirements</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



<b>19. Inspect hydraulic components</b> <ul style="list-style-type: none"> <li>• complete visual inspection to identify customer complaint based on how the system is supposed to operate</li> <li>• consult with worksite professional to determine appropriate inspection and test(s) to perform based on customer concern</li> <li>• compare test to manufacturer specifications</li> <li>• perform tests according to manual procedures</li> <li>• verify an accurate diagnosis of the problem</li> <li>• wear appropriate personal protective equipment (PPE) when checking for leaks</li> <li>• properly uses safety equipment appropriate to working conditions</li> <li>• adjust pressure control and relief valves</li> <li>• measure pressure within hydraulic system</li> <li>• measure flow within hydraulic system</li> <li>• diagnose hydraulic failure</li> <li>• prepare for service or cleanup work area, return tools to proper location</li> <li>• complete appropriate documentation</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>20. Repair and maintain system components</b> <ul style="list-style-type: none"> <li>• consult with worksite professional to determine appropriate inspection and test(s) to perform based on customer concern</li> <li>• retrieve shop manuals and/or electronic retrieval systems</li> <li>• change filters and drain, flush, and refill the hydraulic system</li> <li>• repair and replace parts of the system according to manufacturing procedures and specifications</li> <li>• verify service and adjust the system for proper operation</li> <li>• check fluid levels and condition</li> <li>• change hydraulic fluids</li> <li>• inspect system for external leaks and correct where necessary</li> <li>• clean and flush system based on MFG specifications and recommendations</li> <li>• maintain cleanliness during repair</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<b>21. Interpret electrical symbols and wiring schematics</b> <ul style="list-style-type: none"> <li>• locate and inspect sensors and monitoring systems</li> <li>• examine electrical circuits</li> <li>• interpret drawings and symbols in service manuals</li> <li>• apply information from schematics to identify flow through circuit current</li> <li>• test and troubleshoot electrical systems and components</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>22. Apply basic electrical theory</b> <ul style="list-style-type: none"> <li>• identify components in machinery that use electrical components</li> <li>• examine machines that use DC currents</li> <li>• operate tools and equipment to measure electrical output</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>23. Repair failed components and/or repair of wiring</b> <ul style="list-style-type: none"> <li>• interpret a circuit diagram to trouble shoot an electrical problem</li> <li>• test electrical and electronic sensing devices</li> <li>• locate the parts to be tested for electrical problems</li> <li>• use instruments to measure Ohms, amps, and volts</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>24. Inspect and diagnose electrical/electronic components</b> <ul style="list-style-type: none"> <li>• complete visual inspection to identify customer complaint based on how the system is supposed to operate</li> <li>• consult with worksite professional to determine appropriate inspection and test(s) to perform based on customer concern</li> <li>• compare test to manufacturer specifications</li> <li>• perform tests according to manual procedures</li> <li>• verify an accurate diagnosis of the problem</li> <li>• wear appropriate personal protective equipment (PPE) when checking for leaks.</li> <li>• use safety equipment appropriate to working conditions</li> <li>• prepare for service or cleanup work area, returns tools to proper location</li> <li>• complete appropriate documentation</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<b>25. Maintain and repair electrical/electronic components</b> <ul style="list-style-type: none"> <li>• repair common failures related to electrical components</li> <li>• obtain equipment and materials needed</li> <li>• repair switches, connectors, relays, solenoid devices for proper operation as needed</li> <li>• repair the wires to ensure proper connection and wearing, rubbing, or fraying</li> <li>• inspect devices and wires during maintenance and repairs</li> <li>• clean-up work area and return tools to proper location</li> <li>• complete appropriate documentation</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>26. Troubleshoot and install instrumentation and data acquisition system</b> <ul style="list-style-type: none"> <li>• complete visual inspection to identify customer complaint based on how the system is supposed to operate</li> <li>• connect equipment to diagnostic software to evaluate potential errors</li> <li>• consult with worksite professional to determine appropriate inspection and test(s) to perform based on customer concern</li> <li>• compare test to manufacturer specifications</li> <li>• perform tests according to manual procedures</li> <li>• verify an accurate diagnosis of the problem</li> <li>• wear appropriate personal protective equipment (PPE) when checking for leaks.</li> <li>• uses safety equipment appropriate to working conditions</li> <li>• clean-up work area and return tools to proper location</li> <li>• complete appropriate documentation</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>27. Dismantle defective machines and equipment</b> <ul style="list-style-type: none"> <li>• examine assembled product for visual and/or dimensional specification prior to tear down</li> <li>• prepare work area to lay out parts after disassembly</li> <li>• remove parts according to proper procedure</li> <li>• examine parts for defects, such as breakage or excessive wear</li> <li>• document part orientation and location</li> <li>• maintain organization and Clean work environment</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<b>28. Reassemble machines and equipment</b> <ul style="list-style-type: none"> <li>gather equipment required to reassemble machinery and equipment</li> <li>study blueprints or manufacturers' manuals to determine correct installation or operation of machinery</li> <li>assemble and adjust agricultural equipment, following manufacturer's direction</li> <li>repair or replace broken or malfunctioning components of machinery or equipment</li> <li>record parts or materials used and orders or requisition new parts or materials as necessary</li> <li>maintain organized and clean work environment</li> <li>verify set up meets assembly requirements and product specifications</li> <li>operate newly repaired machinery or equipment to verify the adequacy of repairs</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>29. Calibrate and monitor equipment</b> <ul style="list-style-type: none"> <li>perform calibrations of metering equipment</li> <li>assist a worksite professional with set up prior to calibration</li> <li>prepare tractors and/or equipment prior to calibration</li> <li>verify tractor calibrations</li> <li>assist with diagnosing monitoring systems with onboard vehicle diagnostics</li> <li>perform calibration and no error codes in the software once calibration is completed</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Competency Substitute</b> (if you replaced a competency above, note the competency and rating)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Comments:</b>   			

# RELATED INSTRUCTION

Indicate which related instruction courses the youth apprentice completed:

Course Title	Credits	Location



# Post-Program Completion Survey

Youth Apprenticeship

## YA POST-PROGRAM COMPLETION SURVEY

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The [Post-Program Completion Survey](#) form is to be provided to each student completing the Youth Apprenticeship program to capture information on the student's plans after leaving the program. The form should be filled out during the final meeting between the student, mentor, and Local Youth Apprenticeship Coordinator, when the final checklist is filled out and signed. Information captured on this form must be entered online using the Youth Apprenticeship Online Data Application (YODA) System.

DWD is an equal opportunity employer and service provider. If you have a disability and need assistance with this information, please dial 7-1-1 for Wisconsin Relay Service. Please contact the Division of Employment and Training at 888-258-9966 and press 6 to request information in an alternate format, including translated to another language.

