Assessment Blueprint

Agriculture Equipment Technician Apprenticeship Level 1

Test Code: 8855 / Version: 01
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Test Type: The apprenticeship level assessments are based on industry standards determined by Equipment Dealerships in the Northeast. Participants can earn certification and a digital badge.
Written Assessment

This written assessment consists of questions to measure an individual’s factual theoretical knowledge.

**Administration Time:** 2 hours  
**Number of Questions:** 58  
**Number of Sessions:** This assessment may be administered in one session.

### Areas Covered

- **Basic Skills:** 19%  
- **Interpersonal Skills:** 9%  
- **Safety:** 14%  
- **Engine Systems: 4-Stroke Gasoline:** 3%  
- **Machinery Systems: Powertrains:** 14%  
- **Farm Equipment Systems: Planting, Harvesting, Tillage:** 19%  
- **Material Fabrication and Welding:** 2%  
- **Problem Solving/Critical Thinking:** 3%  
- **Hydraulic/Hydrostatic (Fluid Power) Systems:** 3%  
- **Electrical Systems:** 14%
Specific Competencies and Skills Tested in this Assessment

Basic Skills
• Demonstrate understanding of basic math
• Demonstrate effective use of computers and software to access or retrieve data
• Demonstrate proper selection and use of basic tools
• Demonstrate proper writing and reading skills for the workplace
• Communicate clearly, honestly, and appropriately with coworkers, management, and customers

Interpersonal Skills
• Demonstrate proper work dress and grooming
• Demonstrate active listening skills and clarification of communication
• Demonstrate respect for customers and coworkers
• Demonstrate organizational skills and effective time management
• Practice good housekeeping procedures

(Continued on the following page)
Specific Competencies and Skills (continued)

Safety
- Use the proper personal protective equipment (PPE) required for the various tasks
- Identify safety signs, safety data sheets, and icons in the agriculture industry
- Define safety procedures that promote avoidance of shop hazards and accidents
- Define “Lockout/Tagout”
- Identify the safety requirements before operating machines and equipment

Engine Systems: 4-Stroke Gasoline
- Locate the name plate and engine information

Machinery Systems: Powertrains
- Research and institute procedures for required periodic services
- Describe the physical and mechanical principles of mechanical, hydraulic, pneumatic, and electrical power transfer
- Properly identify different parts (bearings and hardware)
Specific Competencies and Skills (continued)

Farm Equipment Systems: Planting, Harvesting, Tillage
• Identify and describe agricultural equipment and operations
• Review operating and service manuals, schedules, and conduct procedures as needed
• Perform safety inspection on equipment before operation
• Properly lubricate machinery, equipment, and parts

Material Fabrication and Welding
• Demonstrate welding jobsite safety procedures

Problem Solving/Critical Thinking
• Determine and evaluate the problem

Hydraulic/Hydrostatic (Fluid Power) Systems
• Explain the theory and principles of hydraulic systems

Electrical Systems
• Identify a simple electrical circuit and its components (battery, fuse, switch, light, and ground)
• Describe the differences between alternating (AC) and direct current (DC)
• Use a digital multimeter to determine voltage and current
Sample Questions

Use of a brass hammer can prevent
   A. oxidation
   B. sparks
   C. fluxation
   D. rust

The major goal of good housekeeping around the work area is to
   A. enhance appearance
   B. halt the spread of disease
   C. prevent accidents
   D. attract new business

Loose clothing is a hazard in the shop because it could
   A. cause an excessive amount of heat
   B. catch on rotating machinery
   C. not look neat
   D. slow the mechanic's movements

A combine is used to
   A. harvest
   B. plant
   C. till
   D. bale

A restricted air filter will cause
   A. a decrease in fuel consumption
   B. white exhaust smoke
   C. a loss of power
   D. cooler exhaust temperatures