



CUSTOMIZED ASSESSMENT BLUEPRINT

AGRICULTURE EQUIPMENT TECHNICIAN **APPRENTICESHIP LEVEL 1**

Test Code: 8855

Version: 01

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

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)

Agriculture Equipment Technician Apprenticeship Level 1 (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

Agriculture Equipment Technician Apprenticeship Level 1 (continued)

Written Assessment:

Administration Time: 2 hours
Number of Questions: 58

Areas covered:

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

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