



CUSTOMIZED ASSESSMENT BLUEPRINT

AGRICULTURE EQUIPMENT TECHNICIAN **APPRENTICESHIP LEVEL 4**

Test Code: 8858

Version: 01

Specific competencies and skills tested in this assessment:

Engine Systems: 4-Stroke Gasoline

Master diagnostic and engine analysis procedures and equipment

Engine Systems: Diesel

Analyze, evaluate, and troubleshoot fuel injection systems

Analyze, evaluate, and troubleshoot after-treatment systems

Analyze, evaluate, and troubleshoot diesel engine

Hydraulic/Hydrostatic (Fluid Power) Systems

Remove, inspect, and replace major components

Troubleshoot hydrostatic systems

Electrical Systems

Effectively use a laptop to diagnose and troubleshoot a problem on a unit

Agriculture Equipment Technician Apprenticeship Level 4 (continued)

Written Assessment:

Administration Time: 2 hours
Number of Questions: 43

Areas covered:

26%	Engine Systems: 4-Stroke Gasoline
28%	Engine Systems: Diesel
28%	Hydraulic/Hydrostatic (Fluid Power) Systems
18%	Electrical Systems

Sample Questions:

What could cause a unit to regenerate excessively?

- A. high operating temperature
- B. fuel pressure fluxuating
- C. plugged air filter
- D. turbo leaking oil

The main purpose of an EGR system is to

- A. boost horsepower
- B. cool intake air
- C. increase air volume
- D. lower emissions

There is a PFC system on a tractor. All valves are at neutral. What pressure should be at the pump outlet?

- A. same as signal line pressure
- B. low pressure standby
- C. max high pressure
- D. zero psi

The voltage of a CAN BUS system should equal _____ volts.

- A. 2.5
- B. 5
- C. 7
- D. 12

What is a consequence of using low Sulphur fuel in a T4 final engine?

- A. after-treatment system malfunction
- B. there are no consequences
- C. it will use more DEF
- D. fuel injection system malfunction

Agriculture Equipment Technician Apprenticeship Level 4 (continued)

Performance Assessment:

Administration Time: 2 hours and 30 minutes (6 hours and 40 minutes including preparation and evaluation time)
Number of Jobs: 3

Areas Covered:

- 32% **Electrical/Electronic Control Calibration and Setup**
Participants will calibrate transmission, EHR remote, hitch, and monitor settings..

- 32% **Upload Software**
Participants will determine if service software tool is correct, determine current software, and available software for all controllers, download software, re-verify the software version.

- 36% **Troubleshoot Agricultural Tractor Issues**
Participants must resolve customer complaints, the remote #1, front suspension, and 3 pt. hitch do not operate.

Sample Job: Upload Software

Maximum Job Time: 30 minutes

Participant Activity: Participants will determine if service software tool is correct, determine current software, and available software for all controllers. If updated software is available, download software or re-flash software. Re-verify the software version is the latest version.