



**Australian Government**

# **AURHTL101 Inspect, diagnose and repair alternative fuel systems in heavy vehicle engines**

**Release: 1**

# AURHTL101 Inspect, diagnose and repair alternative fuel systems in heavy vehicle engines

## Modification History

Release	Comments
Release 1	This version first released with AUR Automotive Retail, Service and Repair Training Package Version 6.0

## Application

This unit describes the skills and knowledge required to inspect, diagnose and repair alternative fuel systems in heavy vehicle engines. The unit involves preparing for the task, inspecting the system, developing a diagnostic testing strategy, diagnosing the cause of the fault, carrying out the repair, performing post-repair testing, and completing workplace processes and documentation.

The unit applies to those who work on the alternative fuel systems of agricultural machinery, heavy commercial vehicles, marine vessels or mobile plant machinery.

Licensing, legislative, regulatory or certification requirements may apply to this unit in some jurisdictions. Users are advised to check with the relevant regulatory authority.

## Unit Sector

Mechanical – Heavy Vehicle Technical – Alternative Fuels

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to inspect alternative fuel system	1.1 Identify job requirements from workplace instructions 1.2 Obtain and interpret servicing information 1.3 Identify hazards associated with the work, assess potential risks and implement control measures in line with workplace policies and procedures 1.4 Identify tools and equipment required for servicing activity and establish serviceability according to workplace procedures

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
2. Inspect fuel system	2.1 Carry out inspection according to manufacturer specifications, workplace procedures, workplace health and safety and environmental requirements 2.2 Compare inspection results with manufacturer specifications 2.3 Report inspection findings according to workplace procedures
3. Prepare to diagnose and repair fuel system	3.1 Identify required information for diagnosis activity 3.2 Analyse diagnostic options and develop testing strategy to identify cause of fault using workplace and manufacturer procedures 3.3 Identify hazards and environmental issues associated with diagnose and repair activity, assess potential risks and implement control measures in line with workplace policies and procedures 3.4 Identify tools and equipment required for testing strategy and establish serviceability according to workplace procedures
4. Diagnose fuel system	4.1 Implement diagnostic tests set out in testing strategy according to manufacturer and workplace procedures, and workplace health and safety requirements 4.2 Identify cause of fault through analysis of diagnostic test results. 4.3 Confirm and report cause of fault according to workplace procedures 4.4 Develop and report recommendations for necessary repairs according to workplace procedures
5. Repair fuel system	5.1 Identify required information for repair activity 5.2 Identify tools, equipment and materials required for repair activity and establish serviceability according to workplace procedures 5.3 Carry out repairs according to workplace and manufacturer procedures, manufacturer specifications, workplace health and safety and environmental requirements 5.4 Carry out post-repair testing according to workplace procedures, workplace health and safety and environmental requirements
6. Complete work processes	6.1 Conduct final inspection according to workplace procedures and confirm vehicle is ready for use 6.2 Clear work area and dispose of or recycle materials according to workplace procedures 6.3 Complete documentation according to workplace procedures

## Foundation Skills

*This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.*

SKILL	DESCRIPTION
Learning	<ul style="list-style-type: none"><li>• Locates required sources of information efficiently</li><li>• Develops a sequenced plan for a specific task</li></ul>
Reading	<ul style="list-style-type: none"><li>• Organises and interprets technical information from workplace procedures, manufacturer procedures and manufacturer specifications</li></ul>
Oral communication	<ul style="list-style-type: none"><li>• Clarifies instructions</li><li>• Obtains information from customers and supervisors</li></ul>
Numeracy	<ul style="list-style-type: none"><li>• Measures alternative fuel system components</li><li>• Uses mathematical operations, including addition, subtraction and multiplication</li><li>• Calculates distances, areas, volumes and tolerances</li><li>• Calculates deviations from manufacturer specifications</li></ul>
Planning and organising	<ul style="list-style-type: none"><li>• Plans own work requirements</li><li>• Prioritises actions to achieve required outcomes</li><li>• Ensures tasks are completed within workplace timeframes</li></ul>
Technology	<ul style="list-style-type: none"><li>• Uses precision measuring equipment and diagnostic equipment</li></ul>

## Unit Mapping Information

Supersedes and is equivalent to AURHTL001 Inspect, diagnose and repair alternative fuel systems for heavy vehicle engines.

## Links

Companion Volume Implementation Guide is found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b4278d82-d487-4070-a8c4-78045ec695b1>