



**Australian Government**

# **AUR31512 Certificate III in Automotive Diesel Engine Technology**

**Release: 1**

# AUR31512 Certificate III in Automotive Diesel Engine Technology

## Modification History

Release	Comment
Release 1	Replaces AUR30611 Certificate III in Automotive Specialist

## Description

This qualification covers the skills and knowledge required to perform a range of tasks on a variety of diesel engines and associated systems within the automotive service and repair sector.

### Job roles and employment outcomes

The Certificate III in Automotive Diesel Engine Technology is intended to prepare new employees or recognise and develop existing workers performing mechanical work in the diesel engine service and repair sector.

Employment outcomes targeted by this qualification include:

- diesel engine technicians

### Application

This qualification is suitable for an Australian Apprenticeship pathway.

## **Pathways Information**

### **Pathways into the qualification**

Credit may be granted towards this qualification by those who have completed AUR20512 Certificate II in Automotive Servicing Technology, AUR20712 Certificate II in Automotive Vocational Preparation or other relevant qualifications.

### **Pathways from the qualification**

Further training pathways from this qualification include AUR40212 Certificate IV in Automotive Mechanical Diagnosis, AUR40812 Certificate IV in Automotive Mechanical Overhauling or other relevant qualifications.

## **Licensing/Regulatory Information**

There are no specific licences that relate to this qualification. However, some units in this qualification may have licensing or regulatory requirements, depending on the work context. Local regulations should be checked for details.

## **Entry Requirements**

This qualification may be accessed by direct entry.

## Employability Skills Summary

### EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

The following table contains a summary of the employability skills as identified by the automotive industry for this qualification. The employability skills facets described here are broad industry requirements that may vary depending on qualification packaging options.

Employability Skill	Industry/enterprise requirements for this qualification include:
<b>Communication</b>	<ul style="list-style-type: none"> <li>clearly communicating workplace information and ideas with workplace colleagues (verbal and non-verbal), including use of automotive terms</li> <li>completing workplace reports</li> <li>using and contributing to workplace procedures</li> <li>maintaining workplace records</li> <li>communicating with colleagues and clients to handle verbal enquiries, such as clarifying instructions and responding to requests for information</li> <li>interpreting the needs of customers</li> <li>reading and interpreting workplace related documentation</li> </ul>
<b>Teamwork</b>	<ul style="list-style-type: none"> <li>identifying and describe own role and role of others</li> <li>working within a team</li> <li>working with diverse individuals and groups</li> <li>applying knowledge of own role to complete activities efficiently to support team activities and tasks</li> </ul>
<b>Problem solving</b>	<ul style="list-style-type: none"> <li>recognising a workplace problem or a potential problem and take action</li> <li>determining problems needing priority action</li> <li>referring problems outside area of responsibility to appropriate person and suggesting possible causes</li> <li>seeking information and assistance as required to solve problems</li> <li>using a range of problem-solving techniques</li> <li>taking action to resolve concerns</li> <li>developing practical responses to common breakdowns in workplace systems and procedures</li> </ul>
<b>Initiative and enterprise</b>	<ul style="list-style-type: none"> <li>adapting to new and emerging situations in the workplace</li> <li>being proactive and creative in responding to workplace problems, changes and challenges</li> </ul>
<b>Planning and organising</b>	<ul style="list-style-type: none"> <li>planning own work requirements and prioritising actions to achieve required outcomes and ensure tasks are completed on time</li> <li>identifying risk factors and taking action to minimise risk</li> </ul>

**EMPLOYABILITY SKILLS QUALIFICATION SUMMARY**

The following table contains a summary of the employability skills as identified by the automotive industry for this qualification. The employability skills facets described here are broad industry requirements that may vary depending on qualification packaging options.

<b>Employability Skill</b>	<b>Industry/enterprise requirements for this qualification include:</b>
<b>Self-management</b>	<ul style="list-style-type: none"><li>• selecting and using appropriate equipment, materials, processes and procedures</li><li>• recognising limitations and seeking timely advice</li><li>• planning own work requirements, setting own work program and managing time to ensure tasks are completed on time</li><li>• following workplace documentation, such as codes of practice or operating procedures</li></ul>
<b>Learning</b>	<ul style="list-style-type: none"><li>• asking questions to gain information</li><li>• identifying sources of information, assistance and expert knowledge to expand knowledge, skills and understanding</li><li>• participating in self-improvement activities</li><li>• participating in development of workplace continuous improvement strategies</li><li>• helping others develop competency</li></ul>
<b>Technology</b>	<ul style="list-style-type: none"><li>• operating diagnostic and test equipment</li><li>• performance testing of components, systems and equipment</li><li>• using tools and equipment efficiently and safely</li><li>• storing and caring for components, parts, tools, test equipment and support equipment</li><li>• using business technology to collect, analyse and provide information</li></ul>

## Packaging Rules

To be awarded this qualification, competency must be demonstrated in **28 units** of competency, consisting of:

- **14 core units**

plus

- **14 elective units**, of which:

- up to **14** elective units may be chosen from the elective units listed below
- up to **5** elective units may be chosen from a Certificate III qualification or above in this Training Package or another endorsed Training Package or accredited course, provided that the units chosen contribute to the vocational outcome of this qualification and do not duplicate the outcome of another unit chosen for the qualification.

### Core units

Unit code	Unit title
<b>Common - Environment</b>	
AURAEA3003	Monitor environmental and sustainability best practice in the automotive mechanical industry
<b>Common - Health &amp; Safety</b>	
AURASA2002	Apply safe working practices in an automotive workplace
<b>Electrical - Technical - Electrical and Electronic</b>	
AURETR2012	Test and repair basic electrical circuits
AURETR3025	Test, charge and replace batteries
<b>Mechanical - Heavy Vehicle - Technical - Engines</b>	
AURHTE3002	Repair engines and associated engine components (heavy vehicle)
<b>Mechanical Miscellaneous - Technical</b>	
AURTTA2004	Carry out servicing operations
AURTTA3018	Carry out diagnostic procedures
<b>Mechanical Miscellaneous - Technical - Engines</b>	
AURTTE2004	Inspect and service engines
<b>Mechanical Miscellaneous - Technical - Fuel Systems</b>	

Unit code	Unit title
AURTTTF3004	Repair diesel fuel injection systems
<b>Mechanical Miscellaneous - Technical - Tools and Equipment</b>	
AURTTK2001	Use and maintain measuring equipment in an automotive workplace
AURTTK2002	Use and maintain workplace tools and equipment
<b>Mechanical Miscellaneous - Technical - Manufacture</b>	
AURTTM3004	Assemble engine blocks and sub-assemblies
AURTTM3008	Dismantle and evaluate engine blocks and sub-assemblies
AURTTM3011	Recondition engine cylinder heads

**Elective units**

Unit code	Unit title
<b>Common - Foundation Skills</b>	
AURAF2003	Communicate effectively in an automotive workplace
<b>Common - Management, Leadership and Supervision</b>	
AURAMA2001	Work effectively with others
<b>Electrical - Technical - Electrical and Electronic</b>	
AURETR3024	Diagnose and repair electronic compression ignition engine management systems
AURETR3028	Diagnose and repair instruments and warning systems
AURETR3029	Diagnose and repair charging systems
AURETR3030	Diagnose and repair starting systems
AURETR3032	Repair electrical systems
<b>Mechanical - Heavy Vehicle - Technical - Engines</b>	
AURHTE2001	Remove and install heavy vehicle engine assemblies

Unit code	Unit title
<b>Mechanical - Heavy Vehicle - Technical - Transmission</b>	
AURHTX3004	Diagnose and repair heavy vehicle clutch systems
<b>Mechanical - Heavy Vehicle - Technical - Emission and Exhaust</b>	
AURHTZ3001	Diagnose and repair heavy vehicle emission control systems
<b>Motorsport - Technical - Engines</b>	
AURMTE4001	Test engines using a dynamometer
<b>Mechanical Miscellaneous - Technical</b>	
AURTTA2005	Select and use bearings, seals, gaskets, sealants and adhesives
AURTTA2009	Carry out pre-repair operations (mechanical)
<b>Mechanical Miscellaneous - Technical - Fuel Systems</b>	
AURTTF2002	Service diesel fuel injection systems
AURTTF3005	Inspect and repair engine forced induction systems
<b>Mechanical Miscellaneous - Technical - Alternative Fuels</b>	
AURTTL3001	Service CNG fuel systems
AURTTL3002	Diagnose and repair CNG fuel systems
<b>Vehicle Body - Technical - Welding, Grinding, Machining and Soldering</b>	
AURVTW2001	Carry out manual metal arc welding procedures
AURVTW2003	Carry out gas metal arc welding procedures
<b>Imported Units</b>	
MEM05006C	Perform brazing and or silver soldering
MEM05007C	Perform manual heating and thermal cutting
MEM18028B	Maintain engine lubrication systems



## **Custom Content Section**

Not applicable.