



Australian Government

AUR40212 Certificate IV in Automotive Mechanical Diagnosis

Release: 1

AUR40212 Certificate IV in Automotive Mechanical Diagnosis

Modification History

Release	Comment
Release 1	Replaces AUR40208 Certificate IV in Automotive Technology

Description

This qualification covers the skills and knowledge required to perform advanced diagnostic operations in the automotive retail, service and repair environment.

Job roles and employment outcomes

The Certificate IV in Automotive Mechanical Diagnosis provides advanced training for automotive technicians who want to further develop their diagnostic and technical skills. Job roles related to this qualification include:

- automotive lead or master technician
- automotive technical adviser.

Application

This qualification is suitable for an Australian apprenticeship pathway.

Pathways Information

Pathways from the qualification

Further training pathways from this qualification include AUR50112 Diploma of Automotive Management, AUR50212 Diploma in Automotive Technology 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. Local regulations should be checked for details.

Entry Requirements

Those undertaking Certificate IV in Automotive Mechanical Diagnosis are required to have completed an automotive mechanical Certificate III qualification or be able to demonstrate equivalent competency.

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

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

Packaging Rules

To be awarded this qualification, competency must be demonstrated in **10 units** of competency, consisting of:

- **1 core unit**

plus

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

- up to **9** elective units may be chosen from the elective units listed below
- up to **2** 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
Mechanical Miscellaneous – Technical	
AURTTA4021	Carry out diagnosis of complex system faults

Elective units

Unit code	Unit title	Prerequisites
Common – Environment		
AURAEA4004	Manage environmental compliance in an automotive workplace	
Electrical – Technical – Electrical and Electronic		
AURETR3023	Diagnose and repair electronic spark ignition engine management systems	
AURETR3025	Test, charge and replace batteries	
AURETR4037	Diagnose complex electrical and electronic faults in light vehicle safety systems	
Electrical – Technical – Hybrid Vehicle and Battery Electric Vehicle		
AURETH3001	Depower battery electric vehicles	
AURETH3002	Service and maintain battery electric vehicles	AURETH3001

Unit code	Unit title	Prerequisites
AURETH4003	Test and repair high voltage battery systems in battery electric vehicles	AURETH3001 AURETR3025
AURETH4004	Diagnose and repair traction motor speed control device in battery electric vehicles	AURETH3001
AURETH4005	Diagnose and repair high voltage traction motors in battery electric vehicles	AURETH3001
AURETH4006	Diagnose and repair auxiliary motors and associated components in battery electric vehicles	AURETH3001
AURETH4007	Diagnose and repair system instrumentation and safety interlocks in battery electric vehicles	AURETH3001
AURETH4008	Diagnose and repair high voltage cabin heating and cooling systems in battery electric vehicles	AURETH3001
AURETH4009	Diagnose and repair DC to DC converters in battery electric vehicles	AURETH3001 AURETR3025
AURETH4010	Test high voltage batteries in hybrid electric vehicles	AURETR3025
AURETH4011	Deactivate and reinitialise power supply in hybrid electric vehicles	
AURETH4012	Service and maintain electrical components in hybrid electric vehicles	AURETH4011
Electrical – Technical – Air Conditioning and HVAC		
AURETU4006	Diagnose complex faults in air conditioning and HVAC systems	
Mechanical – Heavy Vehicle – Technical – Brakes		
AURHTB4006	Diagnose complex faults in heavy commercial vehicle braking systems	
Mechanical – Heavy Vehicle – Technical – Steering and Suspension		
AURHTD4006	Diagnose complex faults in heavy commercial vehicle steering and suspension	

Unit code	Unit title	Prerequisites
	systems	
Mechanical – Heavy Vehicle – Technical – Engines		
AURHTE4003	Diagnose complex faults in heavy vehicle diesel engines	
Mechanical – Heavy Vehicle – Technical – Transmission		
AURHTX4006	Diagnose complex faults in heavy commercial vehicle transmission and driveline systems	
Mechanical – Motorcycle – Technical – Steering and Suspension		
AURJTD4005	Diagnose complex faults in motorcycle steering and suspension systems	
Mechanical – Motorcycle – Technical – Engines		
AURJTE4002	Diagnose complex faults in motorcycle engine and transmission systems	
Mechanical – Mobile Plant – Technical		
AURKTA4009	Diagnose complex faults in mobile plant hydraulic systems	
Mechanical – Mobile Plant – Technical – Brakes		
AURKTB4003	Diagnose complex faults in mobile plant braking systems	
Mechanical – Mobile Plant – Technical – Steering and Suspension		
AURKTD4005	Diagnose complex faults in mobile plant steering and suspension systems	
Mechanical – Mobile Plant – Technical – Transmission		
AURKTX4003	Diagnose complex faults in mobile plant transmission systems	
Mechanical – Light Vehicle – Technical – Brakes		
AURLTB4004	Diagnose complex faults in light vehicle braking systems	

Unit code	Unit title	Prerequisites
Mechanical – Light Vehicle – Technical – Steering and Suspension		
AURLTD4009	Diagnose complex faults in light vehicle steering and suspension systems	
Mechanical – Light Vehicle – Technical – Engines		
AURLTE4004	Diagnose complex faults in light vehicle petrol engines	
AURLTE4005	Diagnose complex faults in light vehicle diesel engines	
Mechanical – Light Vehicle – Technical – Fuel Systems		
AURLTF3001	Diagnose and repair mechanical fuel injection systems	
Mechanical – Light Vehicle – Technical – Driveline and Final Drives		
AURLTQ3001	Repair final drive assemblies (light vehicle)	
AURLTQ3002	Repair final drive – driveline (light vehicle)	
Mechanical – Light Vehicle – Technical – Transmission		
AURLTX3001	Repair transmissions - manual (light vehicle)	
AURLTX4004	Diagnose complex faults in light vehicle transmission and driveline systems	
Motorsport – Technical		
AURMTA3007	Conduct non-destructive testing	
Motorsport – Technical – Steering and Suspension		
AURMTD4001	Test suspension dampers using a dynamometer	MEM30012A BSBRES401A
Motorsport – Technical – Engines		
AURMTE4001	Test engines using a dynamometer	
Motorsport – Technical – Fuel Systems		
AURMTF4001	Analyse and repair complex performance	AURETR3023 AURTTTF2001

Unit code	Unit title	Prerequisites
	carburetted fuel systems	AURLTF3001
AURMTF4002	Analyse and repair performance fuel injection systems	AURETR3023 AURTTTF2001 AURLTF3001
Motorsport – Technical – Driveline and Final Drives		
AURMTQ4001	Analyse and repair complex performance driveline systems	AURLTX3001 AURLTQ3001 AURLTQ3002 AURMTA3007
Mechanical Miscellaneous – Technical		
AURTTA4025	Diagnose complex faults in vehicle integrated stability control systems	
AURTTA4026	Diagnose complex faults in vehicle electric-over-hydraulic systems	
Mechanical Miscellaneous – Technical – Fuel Systems		
AURTTTF2001	Service petrol fuel systems	
Mechanical Miscellaneous – Technical – Alternative Fuels		
AURTTL4011	Diagnose complex faults in CNG fuel systems	
AURTTL4012	Diagnose complex faults in LNG fuel systems	
AURTTL4013	Diagnose complex faults in LPG fuel systems	
Mechanical Miscellaneous – Technical – Electrical and Electronic		
AURTTR4001	Diagnose complex faults in engine management systems	
Imported Units		
BSBRES401A	Analyse and present research information	
MEM30012A	Apply mathematical techniques in a manufacturing engineering or related environment	

Custom Content Section

Not applicable.