



Australian Government

Department of Education, Employment and Workplace Relations

AUR30911 Certificate III in Motorsport

Release: 2

AUR30911 Certificate III in Motorsport

Modification History

Three new AUR units of competency:

AURTTE3001
AURTTM3001
AURTTM3002

Ten AUR units of competency updated:

AURTTM3003 replaces AURT301357A
AURTTM3004 replaces AURT301383A
AURTTM3005 replaces AURT334606A
AURTTM3006 replaces AURT334608A
AURTTM3008 replaces AURT301383A
AURTTM3010 replaces AURT301359A
AURTTM3011 replaces AURT301483A
AURVNN4001 replaces AURV465101A
AURVNN4001 replaces AURV465102A
AURVNP4001 replaces AURV465201A

One imported unit of competency updated:

MEM05017D replaces MEM05017C

Description

This qualification covers the skills and knowledge required to service and repair the mechanical parts, transmission and suspension systems of vehicles within the motorsport sector. It is suitable for entry into the automotive motorsport service and repair sector.

Job roles/employment outcomes

The AUR30911 Certificate III in Motorsport offers training to service and repair the mechanical components of motorsport vehicles, and to operate sustainably and safely within a motorsport environment.

Employment outcomes targeted by this qualification include:

- a number three mechanic within a V8 Supercar team
- a vehicle service and repair mechanic within a motorsport race team
- service/pit crew race team member
- an opportunity to branch into different roles within a race team which may include data technician, engine technician, driveline technician, machinist, fabricator or promotional activities.

Application

This qualification is typically used to develop employees or recognise and develop existing workers who are performing mechanical technology service and repair tasks in the motorsport sector of the automotive industry.

They would be expected to perform a range of skilled operations involving known routines, methods and procedures and take some accountability for the quality of outcomes. Some complex and non-routine activities involving individual responsibility or autonomy and/or collaboration with others maybe expected.

Training programs for this qualification are suitable to be undertaken as part of a formal training contract with an employer under an Australian Traineeship arrangement.

Pathways Information

Pathways into the qualification

This qualification may be accessed by direct entry. Credit may be granted towards this qualification by those who have completed AUR21011 Certificate II in Motorsport, or other relevant qualifications. Credit for this qualification may also include units contained within relevant skill sets.

Pathways from the qualification

Further training pathways from this qualification include AUR40305 Certificate IV in Motorsport, or other relevant qualifications.

Licensing/Regulatory Information

Licensing considerations

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

Not Applicable.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

The following table contains a summary of the Employability Skills for this qualification as identified by the motorsport sector of the automotive industry. 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 information to others (verbal and non-verbal), including use of automotive terms • completing workplace reports • communicating ideas and information with workplace colleagues • 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 • communicating with people who speak languages other than English and in a cross cultural context • 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 within a team • 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 a 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

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
Planning and organising	<ul style="list-style-type: none"> • prioritising actions to achieve required outcomes • planning own work requirements • allocating resources to workplace tasks and requirements • identifying risk factors and take action to minimise risk
Self-management	<ul style="list-style-type: none"> • selecting and using appropriate equipment, materials, processes and procedures • recognising limitations and seek timely advice • planning own work requirements, set own work program and manage time to ensure tasks are done on time • following workplace documentation, such as codes of practice or 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"> • selecting and using appropriate equipment and materials • operating diagnostic and test equipment • performance testing of components, systems and equipment • using tools and equipment efficiently and safely • storing and caring for components, parts, tools, test equipment and support equipment

Packaging Rules

Packaging Rules

To be awarded the AUR30911 Certificate III in Motorsport, competency must be achieved in **thirty six (36)** units of competency.

- **nine (9)** core units of competency
- **twenty seven (27)** elective units of competency from Groups A and B, as specified below.
 - a minimum of **twenty two (22)** specialist elective units from Group A, with a minimum of **nine (9)** units selected from the Motorsport group
 - a maximum of **five (5)** elective units from Group B
 - a maximum of **nine (9)** units of competency may be at Certificate II level
 - a maximum of **two (2)** units of competency may be at Certificate IV level.

Up to **six (6)** elective units may be imported from other qualifications in this Training Package, other endorsed Training Packages and accredited courses as described in Groups A and B.

Note: Where prerequisite units are identified, they must be considered in the total number of units required for completion of the qualification.

The following pairs of units must not be chosen together when achieving this qualification:

MEM05003B	Perform soft soldering
AURV223808A	Carry out soft soldering techniques

MEM05004C	Perform routine oxy acetylene welding
AURV223608A	Carry out oxy acetylene welding, thermal cutting and thermal heating procedures

MEM05007C	Perform manual heating and thermal cutting
AURV223608A	Carry out oxy acetylene welding, thermal cutting and thermal heating procedures

MEM05017D	Weld using gas metal arc welding process
AURV281308A	Carry out gas metal arc (MIG) welding procedures

Core units of competency

- Complete the following **nine (9)** units of competency.

Unit code	Unit title
AURM340175A	Follow motorsport event and team safety requirements
AURT201170A	Inspect and service engines
AURT206670A	Inspect and service transmissions (manual)
AURT210170A	Inspect and service braking systems
AURT213170A	Service final drive (driveline)
AURT216170A	Inspect and service suspension systems
AURT271781A	Implement and monitor environmental regulations in the automotive mechanical industry
AURT366108A	Carry out diagnostic procedures
MSAENV272B	Participate in environmentally sustainable work practices

Elective units of competency

Group A: Specialist electives

- Complete **twenty two (22)** units from the following lists, including a minimum of **nine (9)** units of competency from the Motorsport group.
- One relevant Group A unit may be chosen from other qualifications in this Training Package, other endorsed Training Packages and accredited courses, where that unit is available at Certificate III or IV.

Brakes

Unit code	Unit title
AURT210605A	Attach friction materials and radius grind
AURT210736A	Machine brake drums and brake disc rotors
AURT310104A	Assemble and fit braking systems/components
AURT310166A	Repair hydraulic braking systems
AURE311666A	Repair electric braking systems

Unit code	Unit title
AURT410145AA	Overhaul braking system components (light)

Electrical

Unit code	Unit title
AURE218664A	Remove and replace electrical/electronic units/assemblies
AURE218670A	Service, maintain or replace batteries
AURE218676A	Test, service and charge batteries
AURE218708A	Carry out repairs to single electrical circuits
AURE218764A	Remove, refit and test electrical componentry for normal operation following body repair activities
AURE219531A	Install ancillary electrical components
AURE220140A	Manufacture and repair wiring harness/looms
AURE224008A	Carry out soldering of electrical wiring/circuits
AURE318866A	Repair electrical systems
AURE318966A	Repair instruments and warning systems
AURE319145A	Overhaul charging system alternators
AURE319166B	Repair charging systems
AURE319245A	Overhaul starting motors
AURE319266B	Repair starting systems
AURE320031B	Install marine electrical systems and components
AURE320066B	Diagnose and repair marine electrical systems and components
AURE320871A	Service and repair electronically controlled steering systems
AURE320971A	Service and repair electronically controlled suspension systems
AURE321066A	Repair electronic systems
AURE321171A	Service and repair electronic spark ignition engine management

Unit code	Unit title
	systems
AURE321271A	Service and repair electronic drive management systems
AURE321371A	Service and repair electronic body management systems
AURE321471A	Service and repair electronically controlled anti-lock braking systems
AURE321571A	Service and repair electronically operated traction control systems
AURE321671A	Service and repair electronically operated stability control systems
AURE321771A	Service and repair electronic compression ignition engine management systems
AURE321831B	Install marine electronic systems/components

Ignitions

Unit code	Unit title
AURE320666B	Repair ignition systems

Engines, systems and transmissions		Prerequisites
AURT202166B	Repair cooling systems	
AURT202170B	Inspect and service cooling systems	
AURT203170B	Service petrol fuel systems	
AURT204670A	Inspect and service emission control systems	
AURT205123A	Fabricate exhaust system/components	
AURT205166A	Repair exhaust system components	
AURT206670A	Inspect and service transmissions (manual)	
AURT207170A	Inspect and service transmissions (automatic)	
AURT212670A	Service final drive assemblies	
AURT303166B	Repair petrol fuel systems	

Engines, systems and transmissions		Prerequisites
AURT304666A	Repair and replace emission control systems	
AURT306170A	Inspect, service and/or repair clutch assemblies and associated operating system components	
AURT335108A	Carry out machining operations	
AURT401145A	Overhaul engines and associated engine components	
AURT403145B	Overhaul petrol fuel system components	
AURT406145A	Overhaul clutch assemblies	
AURT406645A	Overhaul transmissions (manual)	
AURT407145A	Overhaul transmissions (automatic)	
AURT412645A	Overhaul final drive assemblies	
AURTH301166A	Repair engines and associated engine components (heavy vehicle)	
AURTH306666A	Repair transmissions - manual (heavy vehicle)	
AURTH307165A	Inspect, test and replace transmissions - automatic (heavy vehicle)	
AURTH307166A	Repair transmissions - automatic (heavy vehicle)	
AURTH312666A	Repair final drive assemblies (heavy vehicle)	
AURTH313166A	Repair final drive - driveline (heavy vehicle)	
AURTL301166A	Repair engines and associated engine components (light vehicle)	
AURTL306666A	Repair transmissions - manual (light vehicle)	
AURTL307166A	Repair transmissions - automatic (light vehicle)	
AURTL312666A	Repair final drive assemblies (light vehicle)	
AURTL313166A	Repair final drive - driveline (light vehicle)	
AURTTE3001	Apply knowledge of engine science	

Engines, systems and transmissions		Prerequisites
AURTTM3001	Operate and monitor computer numerical control machines	
AURTTM3002	Repair bearing tunnels and connecting rods in engines	
AURTTM3003	Apply metal to rebuild engine components	
AURTTM3004	Assemble engine blocks and sub-assemblies	
AURTTM3005	Balance rotating and reciprocating engine components	
AURTTM3006	Perform advanced machining and blueprinting of engine components	
AURTTM3008	Dismantle and evaluate engine blocks and sub-assemblies	
AURTTM3010	Heat treat, straighten and reclaim engine components	
AURTTM3011	Recondition engine cylinder heads	
MEM07005C	Perform general machining	MEM09002B MEM12023A MEM18001C

Environmental and safety

Unit code	Unit title
AURC270103A	Apply safe working practices
MSAENV472B	Implement and monitor environmentally sustainable work practices

General mechanical

Unit code	Unit title
AURC252103A	Apply basic automotive troubleshooting processes
AURT200108A	Carry out servicing operations
AURT225156A	Read and interpret engineering drawings

Unit code	Unit title
AURT225191A	Produce drawings from design concepts
AURT225667A	Use and maintain measuring equipment
AURT466208A	Carry out diagnosis of complex system faults
MEM09002B	Interpret technical drawing
MEM12023A	Perform engineering measurements
MEM18001C	Use hand tools
MEM18002B	Use power tools/hand held operations
MEM30012A	Apply mathematical techniques in a manufacturing, engineering or related environment

Common

Unit code	Unit title
BSBRES401A	Analyse and present research information
BSBOHS407A	Monitor a safe workplace
HLTFA301B	Apply first aid

Motorsport

Unit code	Unit title	Prerequisites
AURM240080B	Operate in a motorsport environment	
AURM240172B	Set up and dismantle temporary work location and equipment	
AURM240173A	Transport a light competition vehicle and support equipment	
AURM240174A	Prepare and service a light competition vehicle	
AURM340204B	Assemble and prepare a competition vehicle	AURM341051B AURM340550B AURTL317108A
AURM340205A	Load and unload a competition vehicle and	

Unit code	Unit title	Prerequisites
	support equipment	
AURM340312B	Collect and log motorsport data	
AURM340550B	Conduct non-destructive testing	
AURM340607B	Construct hose and pipe assemblies for competition vehicles	
AURM340710B	Coordinate operations of a motorsport team	
AURM340851B	Perform competition vehicle preparation procedures at an event	AURM340204A
AURM340951B	Perform pit lane/service area operations	
AURM341051B	Perform torquing and fastening	
AURM441293B	Analyse and repair complex performance driveline systems	AURM340550B AURTL306666A AURTL312666A AURTL313166A
AURM441394A	Analyse and repair complex performance carburetted fuel systems	AURE321171A AURT203170B AURT303166B
AURM441395A	Analyse and repair performance fuel injection systems	AURE321171A AURT203170B AURT303166B
AURM441438B	Manage motorsport data acquisition	AURM340312B AURE218708A MEM30012A
AURM441538B	Manage personal presentation and development	
AURM441638B	Manage the preparation of a competition vehicle	
AURM441749B	Prepare competition vehicle suspension	AURT216170A AURT316166B
AURM441868B	Select and prepare tyres and wheels for motorsport applications	
AURM441976B	Test engines using a dynamometer	

Unit code	Unit title	Prerequisites
AURM442076B	Test suspension dampers using a dynamometer	BSBRES401A MEM30012A

Motorsport officiating

Unit code	Unit title
AURMO2001A	Develop and update motorsport industry knowledge
AURMO2002A	Follow health, safety and risk management procedures
AURMO2003A	Comply with motorsport rules and regulations when officiating
AURMO2004A	Assist with motorsport officiating duties
AURMO3001A	Implement and monitor safety and risk management in a motorsport environment
AURMO3002A	Monitor compliance with motorsport rules and regulations
AURMO3003A	Communicate with flags and signals
AURMO3004A	Inspect motorsport vehicles and equipment for compliance
AURMO3005A	Act as a steward in a motorsport event
AURMO3006A	Act as a marshal in a motorsport event
AURMO3007A	Recover a motorsport vehicle

Steering and suspension

Unit code	Unit title
AURT215130A	Inspect steering systems
AURT215170A	Inspect and service steering systems
AURT216130A	Inspect suspension systems
AURT415145A	Overhaul steering system components
AURTH315166A	Repair steering systems (heavy vehicle)
AURTH316166A	Repair suspension systems (heavy vehicle)

AURTL315166A	Repair steering systems (light vehicle)
AURTL316166A	Repair suspension systems (light vehicle)
AURTM316166A	Repair suspension systems (motorcycle)
AURTM315166A	Repair steering systems (motorcycle)

Tyres, rims and wheels

Unit code	Unit title
AURT217606A	Balance wheels and tyres
AURT217665A	Remove, fit and inspect wheel assemblies
AURT217668A	Select tyres and rims for specific applications (light)
AURT217766A	Remove, inspect, repair and fit tyres and tubes (light)
AURTH317108A	Carry out wheel alignment operations (heavy vehicle)
AURTL317108A	Carry out wheel alignment operations (light vehicle)

Vehicle body

Unit code	Unit title
AURV327164A	Remove and replace supplementary restraint systems (SRS)
AURV328166A	Repair and align motorcycle frames
AURVNN4001	Evaluate vehicle bodywork for damage and identify repair requirements
AURVNP4001	Evaluate vehicle paintwork for damage and identify refinish requirements

Welding

Unit code	Unit title	Prerequisites
AURV223608A	Carry out oxy acetylene welding, thermal cutting and thermal heating procedures	
AURV223808A	Carry out soft soldering techniques	

Unit code	Unit title	Prerequisites
AURV281108A	Carry out manual metal arc welding procedures	
AURV281208A	Carry out brazing procedures	
AURV281308A	Carry out gas metal arc (MIG) welding procedures	
AURV281408A	Carry out gas tungsten arc (TIG) welding procedures	
AURV281508A	Carry out spot welding procedures	
AURV323908A	Carry out thermoplastic welding procedures	
MEM05003B	Perform soft soldering	
MEM05004C	Perform routine oxy acetylene welding	
MEM05007C	Perform manual heating and thermal cutting	
MEM05050B	Perform routine gas metal arc welding	
MEM05017D	Weld using gas metal arc welding process	MEM05050B MEM05051A MEM05052A MEM12023A MEM18001C MEM18002B MEM09002B

Group B

The balance of units, to a maximum of **five (5)** units, may be drawn in any combination from:

- units not already chosen from Groups A above
- relevant units available in this Training Package, other endorsed Training Packages and accredited courses, where those units are available at Certificates III and IV.