



Australian Government

AURMTA002 Assemble and prepare competition vehicles for motor sport events

Release: 1

AURMTA002 Assemble and prepare competition vehicles for motor sport events

Modification History

Release	Comment
Release 1	New unit of competency.

Application

This unit describes the performance outcomes required to assemble and prepare a competition vehicle in a motor sport environment. It involves preparing for the task, preparing components, installing sub-assemblies and systems, setting vehicle baseline configuration according to team requirements, supplementary regulations and component supplier specifications, and completing workplace processes and documentation.

It applies to those working in the motor sport industry. A competition vehicle is any vehicle that competes in a motor sport event of a competitive nature under one of the following categories: race, speed, rally road, off road, auto test and timed.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.

Competency Field

Motor Sport

Unit Sector

Technical

Elements and Performance Criteria

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold and italicised text is used, further information is detailed in the range of conditions section.
1. Collect event category information and analyse	1.1 Job requirements are determined from <i>event category information</i> and workplace instructions

Elements Elements describe the essential outcomes.	Performance Criteria Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold and italicised text is used, further information is detailed in the range of conditions section.
assembly requirements	1.2 Vehicle operating conditions are checked and clarification of specifications sought as required 1.3 Methods for assembly and preparation are sourced and interpreted and those most appropriate to the circumstances are selected 1.4 Modifications or adaptation of equipment are proposed as required 1.5 Component requirements list is prepared and communicated to appropriate persons 1.6 Procedures for minimising waste material are determined
2. Prepare work area and equipment	2.1 Tools and equipment are sourced and checked for safe and effective operation 2.2 Work area is cleaned and laid out for job requirements according to work safety requirements and team procedures 2.3 Hazards associated with the work are identified and risks are managed 2.4 Problems with work area or operation of equipment are reported to appropriate persons according to team procedures
3. Prepare components for assembly	3.1 Assembly procedures and information are sourced and interpreted 3.2 Components are cleaned to facilitate pre-assembly inspection according to team procedures and safety and environmental requirements , and without causing damage to components 3.3 Components are inspected for function and quality to ensure optimum use of resources 3.4 Problems with components are reported to appropriate persons according to team procedures as required
4. Install sub-assemblies	4.1 Sub-assemblies are inspected for quality and readiness for installation according to manufacturer specifications 4.2 Sub-assemblies are installed and fasteners tensioned according to safety requirements and manufacturer installation sequences and techniques 4.3 Checks are made to ensure accurate and complete fitting according to team procedures and manufacturer specifications 4.4 Problems with sub-assemblies are reported to appropriate persons according to team procedures as required

Elements Elements describe the essential outcomes.	Performance Criteria Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold and italicised text is used, further information is detailed in the range of conditions section.
5. Install ancillary systems	5.1 Critical components are located according to function, susceptibility to damage, and ease of maintenance 5.2 Critical components are installed and fasteners tensioned according to team procedures and manufacturer specifications 5.3 Optimum layout for wiring loom, connectors, hoses, hard lines and ancillary components is confirmed 5.4 Wiring loom, connectors, hoses, hard lines and ancillary components are installed and fasteners tensioned according to manufacturer specifications, team procedures and safety requirements 5.5 Entire installation and shield are secured to maximise reliability and minimise susceptibility to damage according to manufacturer specifications, team procedures and safety requirements 5.6 Checks are made during and after installation to ensure accurate and complete fitting according to team procedures and manufacturer specifications 5.7 Problems with components are reported to appropriate persons according to team procedures as required
6. Conduct post-assembly checks	6.1 Vehicle fluid levels are checked and topped up as required according to team procedures and manufacturer specifications 6.2 Temporary bungs and covers are removed and engine <i>pre-start checks</i> are conducted 6.3 Sub-assemblies and ancillary systems are checked for correct operation
7. Set vehicle baseline configuration	7.1 Vehicle baseline settings are determined from team instructions, category regulations, and component supplier specifications 7.2 Level surface is established on which to place vehicle for set-up 7.3 Springs and dampers are installed according to manufacturer specifications, team procedures and safety requirements 7.4 Ride height and corner weight are measured and adjusted as required and according to manufacturer specifications, team procedures and safety requirements 7.5 Steering angles are measured and adjusted as required and according to manufacturer specifications, team procedures and safety requirements 7.6 Potential or existing problems are reported to appropriate persons according to team procedures as required

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold and italicised text is used, further information is detailed in the range of conditions section.
8. Complete work processes	8.1 Final inspection is made to ensure work is to workplace expectations and vehicle is cleaned and presented ready for use 8.2 Work area is cleaned, waste and non-recyclable material is disposed of and recyclable material is collected 8.3 Tools and equipment are checked and stored, and surplus components and consumables are packed and stored according to workplace procedures 8.4 Workplace documentation is processed according to workplace procedures

Foundation Skills

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

Skills	Description
Learning skills to:	locate supplementary regulations and manufacturer specifications regarding motor sport events and team safety requirements for events.
Reading skills to:	interpret team instructions, supplementary regulations and manufacturer specifications.
Writing skills to:	legibly and accurately fill out workplace documentation when recording parts and material used.
Oral communication skills to:	- clarify instructions - report problems with the work area, the operation of the equipment, or components and sub-assemblies.
Numeracy skills to:	- measure components and use basic addition, subtraction, division and multiplication, to calculate tolerances and clearances - use basic mathematical operations to calculate volume and area.
Problem solving skills to:	determine assembly sequence and avoid backtracking or workflow interruptions.
Teamwork skills to:	work as part of a team to ensure components and materials are available as needed and time wastage is minimised.

Range of Conditions

This section specifies work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included. Bold italicised wording, if used in the performance criteria, is detailed below.

<i>Event category information</i> must include:	• supplementary regulations • manufacturer specifications, including allowable design, quality, material, equipment and quantities.
<i>Safety and environmental requirements</i> must include:	• work health and safety (WHS) and occupational health and safety (OHS) requirements, including procedures for: • selecting and using personal protective equipment (PPE) • using chemical cleaning and lubricating agents • environmental requirements, including procedures for trapping, storing and disposing of chemicals and fluids released during assembly process.
<i>Pre-start checks</i> must include:	• abnormal noise • leaks • pressures • temperatures.

Unit Mapping Information

Equivalent to AURMTA3002 Assemble and prepare a competition vehicle

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b4278d82-d487-4070-a8c4-78045ec695b1>

Assessment Requirements for AURMTA002 Assemble and prepare competition vehicles for motor sport events

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Performance Evidence

Before competency can be determined, individuals must demonstrate they can perform the following according to the standards defined in this unit's elements, performance criteria, range of conditions and foundation skills:

- assemble and prepare two different competition vehicles, in which the work must involve:
 - installing body, mechanical and electrical systems
 - installing fluid or pneumatic and fire systems.

Knowledge Evidence

Individuals must be able to demonstrate knowledge of:

- work health and safety (WHS) and occupational health and safety (OHS) requirements relating to assembling and preparing competition vehicles, including procedures for:
 - selecting and using personal protective equipment (PPE) when assembling competition vehicles
 - using chemical cleaning and lubricating agents
- environmental requirements, including procedures for trapping, storing and disposing of chemicals and fluids released during assembly process
- details of competition vehicle design, quality, and material, equipment and quantities in team instructions, supplementary regulations and manufacturer specifications
- typical stages of competition vehicle assembly
- procedures for setting up work area and component layout
- component cleaning and inspection procedures
- procedures for assembling and installing sub-assemblies and ancillary systems, including:
 - sub-assembly and ancillary system installation sequence and techniques
 - optimum layout for conduits and ancillary components
 - types of securing devices and securing methods

- types of shielding devices and shielding methods
- procedures for checking fitting of sub-assemblies and ancillary systems
- post-assembly checking procedures, including:
 - checking and topping up fluid levels
 - engine pre-start checks
 - measuring pressures, temperatures, noise and checking for leaks of components
 - checking correct operation of sub-assemblies and ancillary systems
- procedures for establishing vehicle baseline configuration
- procedures for installing springs and dampers and measuring and adjusting ride height and corner weight
- procedures for measuring and adjusting steering angles.

Assessment Conditions

Assessors must satisfy NVR/AQTF assessor requirements.

Competency is to be assessed in the workplace or a simulated environment that accurately reflects performance in a real workplace setting.

Assessment must include direct observation of tasks.

Where assessment of competency includes third-party evidence, individuals must provide evidence that links them to the competition vehicles that they have assembled and prepared for a motor sport event, e.g. work order.

Assessors must verify performance evidence through questioning on skills and knowledge to ensure correct interpretation and application.

The following resources must be made available:

- motor sport repair workplace or simulated workplace
- two different motor sport competition vehicles
- sub-assemblies and ancillary components to be installed in competition vehicles
- controlling body rules, category rules and supplementary regulations for the motor sport event
- personal and motor sport team safety procedures and requirements, including PPE
- tools, equipment and material for assembling and preparing a competition vehicle.

Links

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