



Australian Government

AURMTA102 Assemble and prepare competition vehicles for motor sport events

Release: 1

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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 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.

The unit 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.

Unit Sector

Motorsport Technical

Elements and Performance Criteria

ELEMENTS	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Collect event category information and analyse assembly requirements	1.1 Determine job requirements from event category information and workplace instructions 1.2 Check vehicle operating conditions and seek clarification of specifications as required 1.3 Source and interpret methods for assembly and preparation and select those required for the circumstances 1.4 Propose modifications or adaptation of equipment as required 1.5 Prepare component requirements list and communicate to

ELEMENTS	PERFORMANCE CRITERIA
	required persons 1.6 Determine procedures for minimising waste material
2. Prepare work area and equipment	2.1 Source and check tools and equipment for safe and effective operation 2.2 Clean and lay out work area for job requirements according to work safety requirements and team procedures 2.3 Identify hazards associated with the work and manage risks 2.4 Report problems with work area or operation of equipment to persons according to team procedures
3. Prepare components for assembly	3.1 Source and interpret assembly procedures and information 3.2 Clean components to facilitate pre-assembly inspection according to team procedures and safety and environmental requirements, and without causing damage to components 3.3 Inspect components for function and quality to ensure optimum use of resources 3.4 Report problems with components to persons according to team procedures as required
4. Install sub-assemblies	4.1 Inspect sub-assemblies for quality and readiness for installation according to manufacturer specifications 4.2 Install sub-assemblies and tension fasteners according to safety requirements and manufacturer installation sequences and techniques 4.3 Make checks to ensure accurate and complete fitting according to team procedures and manufacturer specifications 4.4 Report problems with sub-assemblies to persons according to team procedures as required
5. Install ancillary systems	5.1 Locate critical components according to function, susceptibility to damage, and ease of maintenance 5.2 Install critical components and tension fasteners according to team procedures and manufacturer specifications 5.3 Confirm optimum layout for wiring loom, connectors, hoses, hard lines and ancillary components 5.4 Install wiring loom, connectors, hoses, hard lines and ancillary components and tension fasteners according to manufacturer specifications, team procedures and safety requirements 5.5 Secure entire installation and shield to maximise reliability and minimise susceptibility to damage according to manufacturer specifications, team procedures and safety requirements 5.6 Make checks during and after installation to ensure accurate and complete fitting according to team procedures and manufacturer specifications

ELEMENTS	PERFORMANCE CRITERIA
	5.7 Report problems with components to persons according to team procedures as required
6. Conduct post-assembly checks	6.1 Check and top up vehicle fluid levels as required according to team procedures and manufacturer specifications 6.2 Remove temporary bungs and covers and conduct engine pre-start checks 6.3 Check sub-assemblies and ancillary systems for operation
7. Set vehicle baseline configuration	7.1 Determine vehicle baseline settings from team instructions, category regulations, and component supplier specifications 7.2 Establish level surface on which to place vehicle for set-up 7.3 Install springs and dampers according to manufacturer specifications, team procedures and safety requirements 7.4 Measure and adjust ride height and corner weight as required and according to manufacturer specifications, team procedures and safety requirements 7.5 Measure and adjust steering angles as required and according to manufacturer specifications, team procedures and safety requirements 7.6 Report potential or existing problems to persons according to team procedures as required
8. Complete work processes	8.1 Conduct final inspection according to workplace procedures and confirm vehicle is ready for use 8.2 Clear work area and dispose of or recycle materials according to workplace procedures 8.3 Check and store tools and equipment, and pack and store surplus components and consumables according to workplace procedures 8.4 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	• Locates required sources of information efficiently.
Numeracy	• Measures components and uses basic addition, subtraction, division and multiplication, to calculate tolerances and clearances • Uses basic mathematical operations to calculate volume and area.
Oral communication	• Clarifies instructions • Reports problems with the work area, the operation of the equipment, or components and sub-assemblies.
Reading	• Interprets team instructions, supplementary regulations and manufacturer specifications.
Problem solving	• Determines assembly sequence and avoids backtracking or workflow interruptions.

Unit Mapping Information

Supersedes and is equivalent to AURMTA002 Assemble and prepare a competition vehicle for motor sport events.

Links

Companion Volume Implementation Guide is found on VETNet -

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

Assessment Requirements for AURMTA102 Assemble and prepare competition vehicles for motor sport events

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Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

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

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- methods to locate and interpret information required to assemble and prepare competition vehicles for motor sport events, including:
 - information provided by customer and supervisors
 - manufacturer specifications and procedures or equivalent documentation, including:
 - allowable design
 - quality
 - materials, equipment, and quantities
 - event category information, including:
 - supplementary regulations
- workplace procedures required to assemble and prepare competition vehicles for motor sport events including:
 - establishing serviceability of tools and equipment
 - documentation procedures
 - housekeeping procedures, including:
 - examination of tools and equipment
 - storage of equipment
 - identification, tagging and isolation of faulty equipment

- disposal of excess materials
 - recycling procedures
- work health and safety (WHS) 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
 - methods of panel creation and their processes
- 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, including:
 - abnormal noise
 - leaks
 - pressures
 - temperatures
 - 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

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.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

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