



Australian Government

AURMTS001 Construct hose and pipe assemblies for competition vehicles

Release: 1

AURMTS001 Construct hose and pipe assemblies for competition vehicles

Modification History

Release	Comment
Release 1	New unit of competency.

Application

This unit describes the performance outcomes required to construct hose and pipe assemblies for competition vehicles. It involves preparing for the task, selecting the correct assembly procedure, carrying out the assembly, performing post-assembly testing, and completing workplace processes and documentation. It includes calculating material requirements, selecting components, and constructing hose and pipe assemblies.

It applies to those working in the motor sport industry.

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

Competency Field

Motor Sport

Unit Sector

Technical - Fabrication

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. Prepare for work	1.1 Job requirements are determined from <i>competition information</i> 1.2 Materials and consumables are selected and checked according to application and procedures to minimise waste material 1.3 Tools and equipment are selected and checked for serviceability

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.
	1.4 Hazards associated with the work are identified and risks are managed 1.5 Work area is cleaned and prepared according to job requirements
2. Construct hose and pipe assemblies	2.1 Hose and pipe length is measured and material requirements are calculated 2.2 Hose and pipe are cut to length according to team procedures and safety requirements 2.3 Hose and pipe are bent to conform to fitting requirements according to team procedures and safety requirements 2.4 Hose and pipe fittings are connected according to component supplier specifications and procedures and team requirements 2.5 Hose and pipe assembly is cleaned and pressure-tested according to component supplier specifications, team procedures and safety requirements
3. Complete work processes	3.1 Final inspection is made to ensure work is to workplace expectations and vehicle is presented ready for use 3.2 Work area is cleaned, waste and non-recyclable material is disposed of and recyclable material is collected 3.3 Tools and equipment are checked and stored according to workplace procedures 3.4 Surplus components and consumables are tagged and stored 3.5 Workplace documentation is processed according to team 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 appropriate sources of information efficiently.
Reading skills to:	interpret team instructions, supplementary regulations, and component supplier specifications.
Writing skills to:	legibly and accurately fill out workplace documentation when reporting findings, and recording parts and material used.

Skills	Description
Oral communication skills to:	clarify instructions and report problems with the work area or the operation of equipment.
Numeracy skills to:	measure hoses and pipes and use basic mathematical operations, including addition and subtraction, to calculate required material.
Planning and organising skills to:	plan own work requirements and prioritise actions to achieve required outcomes and ensure tasks are completed within workplace timeframes.
Technology skills to:	use hose and pipe bending and pressure-testing equipment.

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>Competition information</i> must include:	- team instructions - supplementary regulations and component supplier specifications, including allowable design, quality, materials, equipment and quantities.
<i>Safety requirements</i> must include:	- work health and safety (WHS) and occupational health and safety (OHS) requirements, including procedures for safely use: - hose and pipe cutting equipment or machinery - equipment for joining hoses and pipes to connectors.

Unit Mapping Information

Equivalent to AURMTS3001 Construct hose and pipe assemblies for competition vehicles

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 AURMTS001 Construct hose and pipe assemblies for competition vehicles

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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:

- construct and test the following competition vehicle hose and pipe assemblies:
 - two different hose assemblies
 - two different pipe assemblies.

Knowledge Evidence

Individuals must be able to demonstrate knowledge of:

- work health and safety (WHS) and occupational health and safety (OHS) requirements relating to constructing hose and pipe assemblies for competition vehicles, including procedures for safely use:
 - hose and pipe cutting equipment or machinery
 - equipment for joining hoses and pipes to connectors
- types of and procedures for selecting hoses, pipes and fittings, including:
 - sizing of hoses, pipes and fittings, including Army-Navy (AN) thread dash number, Society of Automotive Engineers (SAE) and National Pipe Thread (NPT)
 - swaged and reusable fittings
 - hose and pipe material and construction
 - compatibility of hose and pipe material with fuel, lubricants, coolants, chemicals and heat conditions
- construction procedures for hose and pipe assemblies, including:
 - methods for locating and determining the layout of hose and pipe assemblies
 - hose and pipe assembly measurement and cutting procedures
 - hose and pipe bending and flaring procedures

- hose and pipe assembly procedures
- protection methods for hose and pipe assemblies
- post-construction testing procedures, including hose and pipe assembly flushing and testing procedures
- storage and maintenance procedures for hose and pipe assemblies.

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 hose and pipe assemblies that they have constructed, 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 workplace or simulated workplace
- instructions detailing customer requirements
- hose and pipe material required to construct two different hose assemblies and two different pipe assemblies, including hose and pipe fittings
- hose and pipe bending equipment
- hose and pipe assembly cleaning and pressure-testing equipment
- tools and equipment for hose and pipe construction.

Links

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