



Australian Government

AURVTN029 Set up and operate universal vehicle measuring systems

Release: 1

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Modification History

Release	Comment
Release 1	New unit of competency.

Application

This unit describes the performance outcomes required to set up and use a universal measuring system to measure vehicle chassis misalignment at pre- and post-repair intervals. It involves preparing for the task, selecting and using specialist tools and equipment, setting measuring equipment, measuring vehicle upper and underbody in three dimensions, and completing workplace processes and documentation.

It applies to those working in the automotive body repair industry.

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

Competency Field

Vehicle Body

Unit Sector

Technical - Body

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 to set up and operate universal measuring system	1.1 Job requirements are determined from workplace instructions 1.2 <i>Set-up information</i> is accessed and interpreted 1.3 Hazards associated with the work are identified and risks are managed

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 <i>Measuring equipment</i> is selected, <i>set up</i> , and calibrated and checked for serviceability 1.5 Work is planned to complete job requirements efficiently
2. Carry out measurement activities	2.1 Measuring system is secured and adjusted to vehicle according to original equipment manufacturer (OEM) or authorised agency's recommended procedures and <i>safety requirements</i> 2.2 Vehicle is <i>measured in three dimensions</i> according to OEM or authorised agency's requirements and workplace procedures, and without causing damage to vehicle system or components 2.3 Pre- and post-repair measurements are recorded according to workplace procedures
3. Complete measurement processes	3.1 Final checks are made to ensure measurements are accurate, meet workplace expectations, and comply with OEM or authorised agency's specifications 3.2 Work area is cleaned, waste and non-recyclable materials are disposed of, and recyclable material is collected and stored 3.3 Measuring equipment is checked and maintained according to manufacturer specifications, reported if faulty, and stored according to workplace procedures 3.4 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 specifications and relevant information efficiently.
Writing skills to:	legibly and accurately fill out workplace documentation.
Oral communication skills to:	- clarify instructions and procedures - clearly report quality issues and job outcomes.
Numeracy skills to:	- interpret, set up and calibrate universal measuring system - interpret OEM or authorised agency's specifications, measurements and tolerances.

Skills	Description
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 specialist universal measuring 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>Set-up information</i> must include:	- workplace procedures - measuring equipment information - OEM or authorised agency vehicle chassis specifications.
<i>Measuring equipment</i> must include:	- universal measuring system - hand tools and equipment.
<i>Set up</i> must comply with:	- recommended workplace procedures - specifications of OEM or authorised agency - vehicle specifications.
<i>Safety requirements</i> must include:	- work health and safety (WHS) and occupational health and safety (OHS) requirements, including procedures for: - following universal measuring equipment safety requirements - selecting and using personal protective equipment (PPE) - manual handling techniques.
<i>Three dimensions of measurement</i> must include:	- length - height - width.

Unit Mapping Information

Equivalent to AURVTN3029 Set up and operate universal measuring systems

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 AURVTN029 Set up and operate universal vehicle measuring systems

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Performance Evidence

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

- set up and operate a universal measuring system on two occasions to take three-dimensional measurements (length, width and height) of upper and underbody on two vehicles with different types of chassis, including checking for the following types of damage:
 - diamond
 - twist
 - kick-up and kick-down.

Knowledge Evidence

Individuals must be able to demonstrate knowledge of:

- work health and safety (WHS) and occupational health and safety (OHS) requirements relating to setting up and operating universal vehicle measuring systems, including procedures for:
 - following universal measuring equipment safety requirements
 - selecting and using personal protective equipment (PPE)
 - manual handling techniques
- vehicle designs, including:
 - mono chassis
 - space frame
- types of vehicle chassis misalignment damage, including:
 - diamond
 - twist

- kick-up and kick-down
- sag
- mash and sway damage
- original equipment manufacturer (OEM) or authorised agency's specifications, including pre- and post-repair measurement intervals
- procedures for final inspection of set-up and operation of a universal measuring system.

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 vehicles that they have measured and repaired using a universal measuring system, e.g. repair orders.

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

The following resources must be made available:

- automotive workplace or simulated workplace
- workplace instructions
- OEM or authorised agency specifications and measurements
- PPE required to set up and operate a universal vehicle measuring system
- universal vehicle measuring system
- universal vehicle measuring system operating instructions
- two vehicles with different chassis types requiring pre- and post-repair measuring of the misalignment damage specified in the performance evidence
- tools, equipment and materials appropriate for setting up and operating universal vehicle measuring systems.

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