



Australian Government

AURATA002 Read, interpret and apply engineering drawings

Release: 1

AURATA002 Read, interpret and apply engineering drawings

Modification History

Release	Comment
Release 1	New unit of competency.

Application

This unit describes the performance outcomes required to read, interpret and determine work task and material requirements from engineering drawings. It involves referring to engineering drawings of systems and components when fabricating, modifying and repairing vehicles or equipment.

It applies to those working on agricultural machinery, heavy commercial vehicles, light vehicles, marine vessels, motorcycles, mobile plant machinery or outdoor power equipment in the automotive service and repair industry.

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

Competency Field

Common

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. Prepare for work	1.1 Workplace instructions are used to determine job requirements 1.2 Hazards are recognised and precautions are taken according to safety requirements 1.3 Engineering drawings are sourced that relate to the vehicle or

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	equipment being repaired, manufactured or modified 1.4 Engineering drawings are checked to ensure they are current and include latest amendments
2. Read and interpret engineering drawings	2.1 Symbols, codes, legends and diagrams in engineering drawings are identified and interpreted 2.2 Technical information, material specifications, finishes, dimensions and tolerances are identified and interpreted 2.3 Product, system and components represented by the drawing are identified and interpreted
3. Apply information from engineering drawings	3.1 Information from vehicle and equipment engineering drawings is applied to assist in the fabrication, modification and repair of vehicle and equipment systems and components 3.2 Specific customer and work task requirements are identified as required 3.3 Manufacturing processes are identified from drawings, and materials are selected according to customer requirements and workplace procedures
4. Complete work processes	4.1 Work order is prepared according to engineering drawings and workplace procedures 4.2 Engineering drawings are stored and version control maintained 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:	identify own skills and abilities required to carry out the work task and access learning opportunities to expand them.
Reading skills to:	- interpret and understand a combination of graphical illustrations and technical terminology when viewing engineering drawings - interpret technical information and terminology found in workshop manuals and automotive textbooks relating to vehicle and equipment engineering drawings.
Writing skills to:	legibly and accurately convey written ideas and information

Skills	Description
	relating to engineering drawings, using vehicle component and system terminology.
Oral communication skills to:	- communicate ideas and information when: - confirming work requirements and specifications - reporting work outcomes and problems.
Numeracy skills to:	use mathematical ideas and techniques to interpret engineering drawing specifications.
Technology skills to:	- use workplace technology to: - access engineering drawings - use specialist tooling, measuring equipment, computerised technology and communication devices - report and document results.

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.

There is no Range of Conditions for this unit.

Unit Mapping Information

Equivalent to AURATA2002 Read and interpret engineering drawings

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 AURATA002 Read, interpret and apply engineering drawings

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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 the unit's elements and performance criteria and foundation skills:

- interpret and apply engineering drawings when fabricating or modifying three different vehicles, vessels or machinery.

Knowledge Evidence

Individuals must be able to demonstrate knowledge of:

- terminology, symbols, codes, legends and diagrammatic representations used in automotive engineering drawings
- requirements of quality standards relating to drawings, including relevant Australian Design Rules (ADRs)
- procedures for amending and maintaining version control status for engineering drawings, particularly as they apply to vehicle or equipment fabrication, modification and repairs
- quality standards applicable to maintaining vehicle or equipment engineering drawings and service information
- procedures for reporting work outcomes and maintaining workplace records and information.

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 having read and interpreted engineering drawings when carrying out fabrication, modification or repairs, 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 repair workplace or simulated workplace
- engineering drawings and work task specifications relating to three different vehicles, vessels or machinery
- engineering drawing standards, including:
 - codes
 - symbols
 - legends
 - measurements
- ADRs.

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