



Australian Government

AURTTA015 Produce engineering drawings for vehicle components

Release: 1

AURTTA015 Produce engineering drawings for vehicle components

Modification History

Release	Comment
Release 1	New unit of competency.

Application

This unit describes the performance outcomes required to produce engineering drawings for manufacturing or modifying vehicle components. It involves preparing for the task, producing engineering drawings, and completing workplace processes and documentation.

It applies to those working 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

Mechanical Miscellaneous

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 to produce engineering drawing	1.1 Job requirements are determined from workplace instructions 1.2 Vehicle component or item to be drawn is identified 1.3 Information for proposed engineering drawing content is located and interpreted
2. Produce engineering	2.1 Drawing instruments, equipment and materials are selected and

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.
drawing	prepared 2.2 Required engineering drawing is produced to specifications and quality standards 2.3 Engineering drawing is completed and checked for accuracy according to workplace procedures
3. Complete work processes	3.1 Final inspection is made to ensure drawing is to workplace expectations and ready for use 3.2 Work area is cleaned, waste and non-recyclable materials are disposed of, and recyclable material is collected 3.3 Tools and equipment are checked and stored according to workplace procedures 3.4 Drawing and workplace documentation are 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 appropriate sources of information efficiently.
Reading skills to:	- interpret engineering plans and specifications - interpret technical information and terminology relating to engineering drawings.
Writing skills to:	- produce engineering drawings using symbols, codes, legends and diagrammatic representations - legibly and accurately fill out workplace documentation using correct industry terminology and conventions.
Numeracy skills to:	- measure components and use basic mathematical operations, including addition, subtraction, multiplication and division, to draw components to scale - interpret engineering drawing specifications.
Planning and organising skills to:	plan own work requirements and prioritise and sequence actions to achieve required outcomes and ensure tasks are completed within workplace timeframes.

Skills	Description
Technology skills to:	• use drawing tools and equipment for production of engineering drawings.

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>Drawing</i> must include:	• correct symbols and codes • legends and diagrammatic representations • dimensions, tolerances and material specifications.
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Unit Mapping Information

Equivalent to AURTTA3015 Prepare 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 AURTTA015 Produce engineering drawings for vehicle components

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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:

- produce engineering drawings covering the manufacture or modification of three different vehicle components using hand and computer-aided drawing (CAD) equipment.

Knowledge Evidence

Individuals must be able to demonstrate knowledge of:

- engineering drawing techniques and procedures, including:
 - hand drawing
 - computer-aided drawing
- engineering drawing terminology, symbols, codes, legends and diagrammatic representations
- quality standards for producing, maintaining and storing engineering drawings
- procedures for recording, reporting and maintaining engineering plans, 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 the engineering drawings of vehicle components that they have produced, 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
- work instructions, including drawing specifications and dimensions
- material relevant to the production of engineering drawings
- drawing tools and CAD equipment appropriate for producing engineering drawings of vehicle components.

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