Australian Government

AURTTE001 Apply knowledge of engine science

Release: 1

AURTTE001 Apply knowledge of engine science

Modification History

Release	Comment
Release 1	New unit of competency.

Application

This unit describes the performance outcomes required to apply knowledge of the construction and operation of engines and their components during engine repair or reconditioning activities. It involves identifying engine components and describing their function.

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 - Engines

Elements and Performance Criteria

Elements Elements describe the essential outcomes.	**Performance Criteria** 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. Identify relevant information of engine construction and operation	1.1 Components of engine are identified during repair or reconditioning activities 1.2 Functions of engine components are identified during repair or reconditioning activities 1.3 Relationships between engine components, including effects on other components' tolerances and clearances, are identified

Elements Elements describe the essential outcomes.	Performance Criteria 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.
	during repair or reconditioning activities 1.4 Engine configurations are identified during repair or reconditioning activities
2. Apply relevant information of engine construction and operation to work activities	2.1 Knowledge of engine construction and operation is used during repair or engine reconditioning activities to carry out work according to manufacturer specifications and workplace procedures 2.2 Knowledge of engine diagnosis is used during repair or reconditioning activities to identify causes of engine component wear or failure
3. Evaluate knowledge of engine science	3.1 Knowledge of engine science is regularly checked with colleagues and supervisor to ensure currency and accuracy 3.2 Knowledge of engine science is updated as required to complement own work role

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 engine reconditioning procedures and engine specifications in workshop and manufacturer literature efficiently.
Reading skills to:	• interpret technical information and terminology found in workshop manuals and automotive textbooks relating to engines.
Communication skills to:	• discuss interpretation of engine science with colleagues and supervisor using listening skills and correct industry terminology.
Numeracy skills to:	• interpret numbers and units in information relating to engines in workshop manuals and automotive textbooks • use basic mathematical operations, including addition, subtraction and multiplication, to calculate engine dimensions • use simple formulas, such as $A = \pi r^2$ • interpret numbers and units used with measuring equipment, such as compression gauges and cylinder leakage testers.

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 AURTTE3001 Apply knowledge of engine sciences

Links

Companion Volume implementation guides are found in VETNet - https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b4278d82-d487-4070-a8c4-78045ec695b1