



Australian Government

AUMFTE001 Conduct engine hot tests

Release: 1

AUMFTE001 Conduct engine hot tests

Modification History

Release	Comment
Release 1	Unit updated to reflect the new standards for Training Packages Replaces AUMFTE3001 Conduct engine hot test

Application

This unit describes the performance outcomes required to assess the status of an engine for operating inconsistencies or faults.

It applies to those in an automotive manufacturing environment and involves the application of skills and knowledge at a specialist level.

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

Competency Field

Manufacturing - Passenger Vehicle

Unit Sector

Technical - Engines

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 italicised text is used, further information is detailed in the range of conditions section
1. Plan and prepare	1.1 Work instructions and specifications are identified and confirmed 1.2 Tools and equipment for the job are inspected and faults are rectified or reported 1.3 Materials list is interpreted and materials are selected and prepared
2. Shift and mount engine	2.1 <i>Workplace procedures</i> are identified and followed

Elements	Performance Criteria
	2.2 Engine is transferred from assembly line to the engine testing area 2.3 Engine is mounted in engine testing cradle for hot test procedures
3. Hot test engine	3.1 Services are connected to the engine, simulating normal operating conditions, and engine is brought to hot operating conditions 3.2 Mechanical, sensory and electronic scan tool tests are conducted and results are compared against performance specifications 3.3 Minor modifications are carried out according to workplace procedures 3.4 Test results are recorded and documented 3.5 Engine is designated as conforming or requiring rectification, and is labelled and prepared for transfer to assembly line or engine rectification area
4. Complete work processes	4.1 Workplace documentation is completed 4.2 Work area is cleaned and materials disposed of, reused or recycled according to workplace procedures 4.3 Tools and equipment are cleaned, checked, maintained and stored according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

Skills	Description
Reading skills to:	- interpret work instructions and inspection reports - interpret manuals and specification sheets.
Writing skills to:	- complete faulty engine and equipment tags - complete test and fault rectification reports.
Numeracy skills to:	- identify engineering specifications - measure parts and components to determine compliance with specifications - interpret results from test equipment.
Digital literacy skills to:	use engine electronic test equipment.
Planning and organising	prepare work area, engines and equipment

Skills	Description
skills to:	manage engine test time.
Problem-solving skills to:	identify engine running defects.

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>Workplace procedures</i> must include:	- engine test equipment operations - recording and reporting - work health and safety (WHS) requirements - workplace quality guidelines.
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Unit Mapping Information

No equivalent unit.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=bd587669-08b3-4cd5-85f0-f9fa0c6304c1>

Assessment Requirements for AUMFTE001 Conduct engine hot tests

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Performance Evidence

Before competency can be determined, individuals must have competently conducted an engine hot test on a minimum of three occasions.

Individuals must demonstrate they can:

- interpret and apply job specifications and work instructions when conducting engine hot test
- apply quality requirements when conducting engine hot test
- use tools and equipment safely when conducting engine hot test
- use engine hot test procedures to identify non-conforming engine faults, using electronic scan tools, mechanical and sensory tests, following work health and safety (WHS) requirements and workplace procedures
- complete workplace test records and documents.

Knowledge Evidence

Individuals must be able to demonstrate knowledge of:

- WHS requirements and workplace procedures for conducting hot engine tests
- workplace production quality standards
- manufacturing and production techniques for engines
- engine testing terminology
- types and uses of engine test tools and equipment
- engine faults and symptoms
- engine parts and construction
- engine testing techniques and equipment
- processes for calculating material requirements.

Assessment Conditions

Assessors must satisfy SNR/AQTF assessor requirements and relevant vehicle operating licences.

Competency is to be assessed in the workplace or a simulated environment that accurately reflects performance in a real workplace setting.

Where assessment of competency includes third-party evidence, individuals must provide evidence that links them to the vehicles on which they have worked, e.g. work sheets.

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 workshop
- workplace procedures to conduct hot engine tests
- work instructions for conducting hot engine tests
- tools, equipment and machinery required to conduct an engine hot test
- engines requiring hot engine tests and engine manufacturer specifications
- engine test cradle or workplace equivalent.

Links

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