



Australian Government

AURMTE101 Test engines using a dynamometer

Release: 1

AURMTE101 Test engines using a dynamometer

Modification History

Release	Comments
Release 1	This version first released with AUR Automotive Retail, Service and Repair Training Package Version 6.0

Application

This unit describes the skills and knowledge required to test engines using a dynamometer. The engines being tested may be in a vehicle or stand alone. It involves preparing for the task, selecting the correct test procedure, carrying out testing, analysing test results, and completing workplace processes and documentation. It involves setting up and conducting dynamometer tests on engines, and logging, analysing and reporting the test data in order to maximise engine performance.

The unit applies to those working in the motor sport industry.

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

Unit Sector

Motorsport Technical - Engines

Elements and Performance Criteria

ELEMENTS	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for dynamometer operation	1.1 Determine job requirements from test information 1.2 Check dynamometer for calibration and serviceability according to manufacturer and workplace procedures 1.3 Select and check tools, equipment and materials for serviceability 1.4 Identify hazards associated with the work and manage risks according to safety and environmental requirements 1.5 Check engine or vehicle prior to testing according to manufacturer and workplace procedures 1.6 Check and secure engine or vehicle connections to

ELEMENTS	PERFORMANCE CRITERIA
	dynamometer according to manufacturer, workplace and safety procedures
2. Conduct dynamometer testing	2.1 Determine required load and run sequence and test parameters 2.2 Carry out selected dynamometer testing sequence according to manufacturer and team procedures and safety requirements, and document data 2.3 Calculate correction factors and apply to data
3. Analyse test results	3.1 Analyse dynamometer test data and draw conclusions about condition and performance of engine and associated systems according to manufacturer specifications and workplace procedures 3.2 Report findings based on dynamometer data according to workplace procedures 3.3 Test recommended engine modifications on dynamometer according to manufacturer and workplace procedures and safety requirements, and document data 3.4 Present data to team members according to workplace procedures
4. Complete work processes	4.1 Carry out dynamometer shutdown procedure according to manufacturer and workplace procedures and safety requirements 4.2 Disconnect engine from dynamometer according to manufacturer and workplace procedures 4.3 Check and maintain dynamometer and associated equipment according to workplace procedures 4.4 Check and store tools and equipment according to workplace procedures 4.5 Process workplace documentation, including dynamometer test results, according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

SKILL	DESCRIPTION
Learning	<ul style="list-style-type: none"> • Locates required sources of information efficiently • Applies learning and processes to different situations.
Numeracy	<ul style="list-style-type: none"> • Uses basic mathematical operations to complete measurements, calculate analytical requirements, calibrate

SKILL	DESCRIPTION
	testing equipment, and present test results.
Reading	<ul style="list-style-type: none"> Identifies, organises and interprets technical information relating to engine dynamometer testing.
Planning and organising	<ul style="list-style-type: none"> Plans own work requirements Prioritises actions to achieve required outcomes Ensures tasks are completed within workplace timeframes.
Technology	<ul style="list-style-type: none"> Uses specialised equipment.

Unit Mapping Information

Supersedes and is equivalent to AURMTE001 Test engines using a dynamometer.

Links

Companion Volume Implementation Guide is found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b4278d82-d487-4070-a8c4-78045ec695b1>