



Australian Government

AURJTE103 Inspect and service motorcycle engines

Release: 1

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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 inspect and service motorcycle engines. It involves preparing for the task, inspecting the engine, reporting the inspection findings, servicing and adjusting the engine, and completing workplace processes and documentation.

The unit applies to those working on motorcycles in the automotive service and repair industry.

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

Unit Sector

Mechanical Motorcycle 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 to inspect and service engine	1.1 Identify job requirements from workplace instructions 1.2 Obtain and interpret servicing information 1.3 Identify hazards associated with the work, assess potential risks and implement control measures in line with workplace policies and procedures 1.4 Identify tools and equipment required for servicing activity and establish serviceability according to workplace procedures
2. Inspect motorcycle engine	2.1 Carry out inspection according to manufacturer specifications, workplace procedures, workplace health and safety and environmental requirements

ELEMENTS	PERFORMANCE CRITERIA
	2.2 Compare inspection results with manufacturer specifications 2.3 Report inspection findings and recommendations for necessary repairs according to workplace procedures
3. Service motorcycle engine	3.1 Carry out service and adjustments according to manufacturer specifications, workplace procedures, workplace health and safety and environmental requirements 3.2 Carry out post-service testing according to workplace procedures
4. Complete work processes	4.1 Conduct final inspection according to workplace procedures and confirm vehicle is ready for use 4.2 Clear work area and dispose of or recycle materials according to workplace procedures 4.3 Complete documentation 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	Locates required sources of information efficiently.
Reading	Interprets information from manufacturer and workshop literature when seeking engine service procedures and specifications.
Oral communication	Clarifies instructions.
Numeracy	Calculates liquid volumes and service schedule intervals, using mathematical operations, including addition and subtraction.

Unit Mapping Information

New unit.

Links

Companion Volume Implementation Guide is found on VETNet -

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

Assessment Requirements for AURJTE103 Inspect and service motorcycle engines

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Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- inspect and service the engines of two different motorcycles, and for each engine the work must involve:
 - inspecting the vehicle for oil and fluid leaks
 - inspecting and shim adjusting the valve clearances of a single cylinder engine
 - analysing abnormal engine noises
 - inspecting ancillary components
 - replacing the engine oil and filters
 - starting up and running engine to operating temperature
 - checking for leaks and abnormal noises.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- methods to locate and interpret information required to inspect and service motorcycle engines, including:
 - vehicle manufacturer specifications and procedures or equivalent documentation
- workplace procedures required to inspect and service motorcycle engines, including:
 - establishing the serviceability of tools and equipment
 - documentation procedures
 - housekeeping procedures, including:
 - examination of tools and equipment
 - storage of equipment
 - identification, tagging and isolation of faulty equipment
 - disposal of excess materials

- recycling procedures
- workplace health and safety (WHS) requirements relating to inspecting and servicing engines, including procedures for working with:
 - rotating and hot components
 - engine oils
 - high energy ignition and charging systems
- environmental requirements relating to inspecting and servicing engines, including procedures for:
 - trapping, storing and disposing of fluids released from engines
- identification and function of major engine components, including:
 - cylinder block and head
 - piston and connecting rod
 - crankshaft
 - valve train
 - manifolds
 - ports and reed valve
- identification and function of engine systems, including:
 - lubrication
 - cooling system
 - fuel system
 - air system
- basic operation of spark ignition engines and compression ignition engines, including:
 - two-stroke spark ignition engines
 - four-stroke spark ignition engines
- types and applications of engine configurations, including:
 - two-stroke spark ignition engines
 - four-stroke spark ignition engines
- types and applications of engine oils and filters
- inspection procedures for engines, including:
 - oil and fluid leaks
 - ancillary components, including:
 - mountings
 - belts, pulleys and hoses
- service and adjustment procedures for engines, including:
 - adjusting or replacing engine components
 - replacing oil
 - replacing filter
 - valve clearances
- post-service testing procedures for engines.

Assessment Conditions

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 motorcycle engines that they have worked on, 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
- workplace instructions
- manufacturer motorcycle engine specifications
- two different motorcycles for servicing as specified in the performance evidence
- tools, equipment and materials appropriate for inspecting and servicing motorcycle engines.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

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