



Australian Government

AURLTX013 Diagnose and repair light vehicle clutch systems

Release: 1

AURLTX013 Diagnose and repair light vehicle clutch systems

Modification History

Release	Comment
Release 1	New unit of competency.

Application

This unit describes the skills and knowledge required to diagnose and repair faults in the clutch systems of light vehicles. It involves preparing for the task, selecting the correct diagnostic procedure, carrying out the diagnosis and the repair, performing post-repair testing, and completing workplace processes and documentation.

It applies to those working in the automotive light vehicle service and repair industry. Clutch systems include those in light vehicles or light commercial vehicles. This unit does not apply to agricultural machinery, heavy commercial vehicles, marine vessels, mobile plant machinery or motorcycles.

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

Unit Sector

Technical - Transmission

Elements and Performance Criteria

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Diagnose a light vehicle clutch system	1.1 Identify job requirements from workplace instructions 1.2 Obtain and interpret diagnostic information in order to identify diagnostic options required for the job 1.3 Identify hazards and environmental issues, assess potential risks and implement control measures in line with workplace policies 1.4 Identify diagnostic tools and equipment required for the job and examine for serviceability 1.5 Perform diagnostic tests according to workplace procedures and workplace health and safety requirements 1.6 Examine diagnostic test results to identify causes of faults, report findings and make recommendations for necessary repairs or

	adjustments according to workplace procedures
2. Repair light vehicle clutch system	2.1 Obtain and interpret repair information in order to identify repair options required for the job 2.2 Identify repair tools, equipment and materials for the job and examine for serviceability 2.3 Carry out repair or replacement and adjustments according to workplace procedures, manufacturer specifications, workplace health and safety and environmental requirements 2.4 Carry out post-repair testing according to workplace procedures, workplace health and safety and environmental requirements to confirm fault rectification and repair any issues identified
3. Complete work processes	3.1 Carry out final inspection to ensure work meets workplace expectations and vehicle is ready for use 3.2 Clear work area and dispose of or recycle materials according to workplace procedures 3.3 Examine and store tools and equipment according to workplace procedures 3.4 Complete documentation 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 relevant sources of light vehicle clutch systems information efficiently
Reading skills to:	read and interpret information from workplace procedures and documentation when seeking clutch system specifications and procedures
Writing skills to:	legibly and accurately fill out workplace documentation when reporting diagnostic findings, making repair recommendations, and recording parts and material used
Oral communication skills to:	- clarify instructions - report diagnostic findings - make repair recommendations
Numeracy skills to:	- measure clutch system components - use basic mathematical operations, including addition, subtraction and multiplication - calculate distances, areas, tolerances and deviations from manufacturer specifications

Planning and organising skills to:	- plan own work requirements - prioritise actions to achieve required outcomes - ensure tasks are completed within workplace timeframes
Technology skills to:	use precision measuring equipment, including vernier calipers, micrometers and dial indicators

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AURLTX013 Diagnose and repair light vehicle clutch systems (Release 1)	AURLTX003 Diagnose and repair light vehicle clutch systems (Release 1)	Wording changes to ensure compliance with Standards for Training Packages. Combination of performance elements to create three performance criteria. Removal of references to OHS requirements. Removal of range of conditions. Addition of dual clutch systems to knowledge evidence. Addition of minor elements to knowledge evidence and assessment conditions. Addition of assessor requirements.	Equivalent

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 AURLTX013 Diagnose and repair light vehicle clutch systems

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Performance Evidence

The candidate must demonstrate they can perform the following according to the standards defined in the elements, performance criteria and foundation skills of this unit.

The candidate must demonstrate a diagnosis and repair of light vehicle clutch system that safely follows workplace procedures to meet required outcomes. This includes demonstrating the ability to:

- remove and refit a light vehicle manual transmission
- diagnose and repair of a light vehicle clutch system in which the work must include removing, refitting or replacing the following components:
 - light vehicle flywheel
 - clutch friction disc
 - clutch pressure plate assembly
 - clutch pressure plate release bearing
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Knowledge Evidence

The candidate must demonstrate the following knowledge:

Key policies and procedures relating to the diagnosis and repair of light vehicle clutch systems including:

- how to locate and interpret manufacturer specifications and workplace procedures for the diagnosis and repair of light vehicle clutch systems
- the following workplace health and safety requirements for diagnosis and repair of light vehicle clutch systems:
 - safety procedures for lifting and supporting light vehicle transmissions
 - safety procedures handling and controlling clutch dust and clutch fluid
- the following environmental requirements for diagnosis and repair of light vehicle clutch systems:
 - procedures for trapping, storing and disposing of brake dust and brake fluid released from clutch systems

- the following diagnostic testing procedures for light vehicle clutch systems:
 - road testing procedures
- the following repair procedures for light vehicle clutch systems:
 - removing, replacing and adjusting the systems
- post-repair testing procedures for light vehicle clutch systems
- workplace housekeeping and documentation procedures

Key features of light vehicle clutch systems and associated components, including:

- the operating principles of:
 - coefficient of friction
- the purpose and operation of the following light vehicle clutch systems and components:
 - wet and dry single and multi-plate clutch
 - dual mass flywheels
 - dampening systems
 - cable operated clutch
 - hydraulically operated clutch
 - dual clutch systems
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Assessment Conditions

The assessment must:

- include access to:
 - an automotive repair workplace or simulated workplace that reflects workplace conditions - where simulation is used, it must reflect real working conditions by modelling industry operating conditions and contingencies, as well as, using suitable facilities, equipment and resources
 - repair orders and workplace instructions relating to diagnose and repair activity
 - workplace procedures relating to diagnose and repair activity
 - manufacturer light vehicle clutch systems specifications and procedures or equivalent documentation to complete diagnose and repair activity
 - light vehicle with manual transmission and with clutch system faults
 - diagnostic equipment for light vehicle clutch systems
- tools, equipment and materials appropriate for repairing light vehicle clutch systems, including:
 - transmission lifting equipment
 - clutch aligning tool
- be demonstrated in the workplace or in a simulated environment that reflects workplace conditions
- be conducted in a safe environment

- be assessed in compliance with relevant policies, procedures, processes and operational manuals directly related to the industry sector for which it is being assessed
- confirm consistent performance can be applied in a range of relevant workplace circumstances

Assessor requirements

Assessors of this unit must:

- satisfy the assessor requirements in applicable vocational education and training legislation, frameworks and/or standards
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