



Australian Government

Assessment Requirements for AURLTX101 Diagnose and repair light vehicle manual transmissions

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

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:

- diagnose and repair faults in two different light vehicle manual transmissions, including faults in a different component from among the following for each vehicle:
 - input or primary shaft gear or bearing
 - secondary shaft or main shaft gear or bearing
 - synchroniser assembly
 - shift rail, shift fork, interlock and detent mechanisms
 - counter shaft gear or bearing
- remove, refit or replace one manual transmission in a light vehicle
- carry out a diagnostic test in the course of the above work for at least one of the following faults:
 - abnormal or irregular noises
 - faulty shifts
 - mechanical malfunctions.

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 diagnose and repair light vehicle manual transmissions, including:
 - information provided by customer and supervisors
 - manufacturer specifications and procedures or equivalent documentation
- workplace procedures required to diagnose and repair light vehicle manual transmissions, including:
 - establishing serviceability of tools and equipment

- documentation and diagnosis reporting procedures, including:
 - recommendations for required repairs or adjustments
- housekeeping procedures, including:
 - examination of tools and equipment
 - storage of equipment
 - identification, tagging and isolation of faulty equipment
 - disposal of excess materials
 - recycling procedures
- work health and safety (WHS) requirements relating to diagnosing and repairing light vehicle manual transmissions, including procedures for lifting, supporting and manual handling light vehicle manual transmissions
- environmental requirements, including procedures for trapping, storing and disposing of fluids released from transmissions
- operating principles light vehicle manual transmissions, including:
 - gear types
 - gear ratios and torque reduction and multiplication
 - simple gear trains
 - compound gear trains
 - lubricant types
- application, purpose and operation of light vehicle manual transmissions and components, including:
 - power flows, including:
 - longitudinal manual transmissions
 - transaxles
 - transfer cases
 - synchromesh operation
 - gearshift mechanisms
 - transfer cases, including:
 - part-time four wheel drives
 - full-time four wheel drives
 - all-wheel drives
- diagnostic testing procedures for light vehicle manual transmissions, including:
 - abnormal noise diagnosis
 - shift diagnosis
- repair procedures for light vehicle manual transmissions, including procedures for removing, replacing and adjusting them
- post-repair testing procedures for light vehicle manual transmissions.

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 light vehicle manual transmissions 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 light vehicle manual transmission specifications
- two different light vehicles with faults in the manual transmission components specified in the performance evidence
- diagnostic equipment for light vehicle manual transmissions
- tools, equipment and materials appropriate for repairing light vehicle manual transmissions.

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

Links

Companion Volume Implementation Guide is found on VETNet -

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