



Australian Government

Assessment Requirements for AURLTX102 Diagnose and repair light vehicle automatic transmissions

Release: 1

Assessment Requirements for AURLTX102 Diagnose and repair light vehicle automatic transmissions

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 a fault in two different light vehicles with different automatic transmissions, in which the fault in each must involve a different component from the following:
 - torque converter
 - transmission oil pump
 - front pump seal
 - valve body
 - shift or pressure solenoid
 - clutch pack
 - brake band
 - brake band servo
 - one-way clutch
 - planetary gear set
 - continuously variable transmission (CVT) belt or pulley
 - internal bearings or thrust washers
- in course of the above, remove, refit or replace one of the light vehicle automatic transmissions
- carry out a diagnostic test in the course of the above work for at least one of the following faults:
 - abnormal or irregular noises
 - leaking fluid pressure
 - damaged solenoids, connectors or wiring.

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 automatic transmissions, including:
 - information provided by customer and supervisors
 - manufacturer specifications and procedures or equivalent documentation
- workplace procedures required to diagnose and repair light vehicle automatic 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 automatic transmissions, including procedures for lifting, supporting and manual handling light vehicle automatic transmissions
- environmental requirements, including procedures for trapping, storing and disposing of fluids released from light vehicle automatic transmissions
- operating principles of light vehicle automatic transmissions and associated components, including:
 - fluid couplings
 - planetary gears, including:
 - single planetary gear operation
 - types of compound planetary gears, including Ravigneaux and Simpson planetary gear sets
 - gear ratios and torque reduction and multiplication
 - lubricant types and properties
- application, and key features of light vehicle automatic transmissions and components, including:
 - torque converters, including:
 - impeller, stator, one-way clutch and turbine operation
 - lock-up torque converters
 - automatic transmission mechanical components, including brake bands, clutch packs, one-way clutches, and compound planetary gear sets
 - power flows, including:
 - longitudinal automatic transmissions

- automatic transaxles
- automatic transmission hydraulic components and hydraulic control components, including:
 - oil pumps
 - hydraulic valves, including pressure regulating valves, manual valves, shift valves, governor valves and throttle pressure valves
- automatic transmission electronic components, including:
 - electronic control module
 - input sensors, including vehicle speed sensor, throttle position sensor, mass air flow (MAF) sensor, manifold absolute pressure (MAP) sensor, transmission range sensor, engine speed sensor and temperature sensor
 - electronic control module outputs, including indicator lamps, shift solenoids, pressure control solenoids and torque converter clutch solenoids
- continuously variable transmissions, including operating principles of belts and pulleys
- diagnostic testing procedures for light vehicle automatic transmissions, including procedures for:
 - stall tests
 - pressure test
 - using scan tools when testing
- repair procedures for light vehicle automatic transmissions, including procedures for removing, replacing and adjusting them
- post-repair testing procedures for light vehicle automatic 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 automatic 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 automatic transmission specifications
- two different light vehicles with faults in the automatic transmission components specified in the performance evidence
- diagnostic equipment for light vehicle automatic transmissions
- tools, equipment and materials appropriate for repairing light vehicle automatic 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>