



Australian Government

AURTTX102 Inspect and service manual transmissions

Release: 1

AURTTX102 Inspect and service manual transmissions

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 manual transmissions. It involves preparing for the task, inspecting the transmission, reporting the inspection findings, servicing and adjusting the transmission, and completing workplace processes and documentation.

This unit applies to those working in the automotive service and repair industry. The manual transmissions include those of agricultural machinery, heavy commercial vehicles, light vehicles, motorcycles, mobile plant machinery or outdoor power equipment.

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

Unit Sector

Mechanical Miscellaneous Technical - Transmission

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 manual transmission	1.1 Determine job requirements from workplace instructions 1.2 Source and interpret servicing information 1.3 Identify hazards associated with the work and manage risks 1.4 Select and check tools, equipment and materials for serviceability
2. Inspect manual transmission	2.1 Carry out inspection according to manufacturer specifications, workplace procedures, and safety and environmental requirements 2.2 Compare inspection results with manufacturer specifications 2.3 Report recommendations for required repairs or adjustments

ELEMENTS	PERFORMANCE CRITERIA
	according to workplace procedures
3. Service manual transmission	3.1 Carry out service and adjustments according to manufacturer specifications, workplace procedures, and safety and environmental requirements, and without causing damage to components or systems 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 service procedures and specifications relating to manual transmissions.
Oral communication	Clarifies instructions.
Numeracy	Calculates liquid volumes and service schedule intervals using basic mathematical operations, including addition and subtraction.

Unit Mapping Information

Supersedes and is equivalent to AURTTX002 Inspect and service manual transmissions.

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 AURTTX102 Inspect and service manual transmissions

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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 manual transmissions of at least two different vehicles or machinery.

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 manual transmissions, including:
 - information provided by customer and supervisors
 - manufacturer specifications and procedures or equivalent documentation
- workplace procedures required to inspect and service manual transmissions, including:
 - establishing serviceability of tools and equipment
 - documentation procedures, including:
 - inspection findings and 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 inspecting and servicing manual transmissions, including procedures for handling transmission oils
- environmental requirements, including procedures for trapping, storing and disposing of oils released from transmissions
- identification and function of manual transmissions, including:

- major components
- gearshift mechanisms
- basic operation of manual transmissions, including:
 - transaxle
 - longitudinal transmission
 - transfer case
- types and applications of transmission oils
- inspection procedures for manual transmissions, including:
 - evaluating lubricant condition
 - carrying out visual inspections for damage or lubricant leaks
- service and adjustment procedures for manual transmissions, including:
 - replacing oils as required
 - inspecting and adjusting lubricant levels
 - adjusting linkages as required
- post-service testing procedures for 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 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 manual transmission specifications
- two different vehicles or machinery with manual transmissions requiring servicing
- tools, equipment and materials appropriate for inspecting and servicing manual transmissions.

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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