



Australian Government

AURTTX002 Inspect and service manual transmissions

Release: 1

AURTTX002 Inspect and service manual transmissions

Modification History

Release	Comment
Release 1	New unit of competency.

Application

This unit describes the performance outcomes 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.

It 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.

Competency Field

Mechanical Miscellaneous

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. Where bold and italicised text is used, further information is detailed in the range of conditions section.
1. Prepare to inspect and service manual transmission	1.1 Job requirements are determined from workplace instructions 1.2 Servicing information is sourced and interpreted 1.3 Hazards associated with the work are identified and risks are managed

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold and italicised text is used, further information is detailed in the range of conditions section.
	1.4 Tools, equipment and materials are selected and checked for serviceability
2. Inspect manual transmission	2.1 Inspection is carried out according to manufacturer specifications, workplace procedures, and <i>safety and environmental requirements</i> 2.2 Inspection results are compared with manufacturer specifications 2.3 Inspection findings are reported according to workplace procedures, including recommendations for necessary repairs or adjustments
3. Service manual transmission	3.1 Service and adjustments are carried out according to manufacturer specifications, workplace procedures, and safety and environmental requirements, and without causing damage to components or systems 3.2 Post-service testing is carried out according to workplace procedures
4. Complete work processes	4.1 Final inspection is made to ensure work is to workplace expectations and vehicle is presented ready for use 4.2 Work area is cleaned, waste and non-recyclable materials are disposed of, and recyclable material is collected 4.3 Tools and equipment are checked and stored according to workplace procedures 4.4 Workplace documentation is processed 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 appropriate sources of information efficiently.
Reading skills to:	interpret information from manufacturer and workshop literature when seeking service procedures and specifications relating to manual transmissions.
Writing skills to:	legibly and accurately fill out workplace documentation when reporting inspection findings, making recommendations, and

Skills	Description
	recording parts and material used.
Oral communication skills to:	- clarify instructions - report inspection findings and make repair recommendations.
Numeracy skills to:	calculate liquid volumes and service schedule intervals using basic mathematical operations, including addition and subtraction.

Range of Conditions

This section specifies work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included. Bold italicised wording, if used in the performance criteria, is detailed below.

<i>Safety and environmental requirements</i> must include:	- work health and safety (WHS) and occupational health and safety (OHS) requirements, including procedures for handling transmission oils - environmental requirements, including procedures for trapping, storing and disposing of oils released from transmissions.
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Unit Mapping Information

Equivalent to AURTTX2002 Inspect and service transmissions (manual)

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 AURTTX002 Inspect and service manual transmissions

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Performance Evidence

Before competency can be determined, individuals must demonstrate they can perform the following according to the standards defined in this unit's elements, performance criteria, range of conditions and foundation skills:

- inspect and service the manual transmissions of two different vehicle or machinery.

Knowledge Evidence

Individuals must be able to demonstrate knowledge of:

- work health and safety (WHS) and occupational health and safety (OHS) 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

Assessors must satisfy NVR/AQTF assessor requirements.

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.

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