



Australian Government

AURTTX004 Inspect and service hydrostatic transmissions

Release: 1

AURTTX004 Inspect and service hydrostatic transmissions

Modification History

Release	Comment
Release 1	New unit of competency.

Application

This unit describes the performance outcomes required to inspect and service hydrostatic transmissions and associated components. It involves preparing for the task, inspecting the transmission and components, 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 hydrostatic transmissions include those of agricultural machinery, 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 hydrostatic 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 hydrostatic 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 hydrostatic 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 machinery 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 hydrostatic 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:	- use mathematical operations, including addition and subtraction, to determine liquid quantities - interpret pressure gauges and units of pressure.
Problem solving skills to:	refer problems outside area of responsibility to appropriate person.

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: - working with high oil pressures - working with stored hydraulic accumulator pressures - isolating and stabilising machinery - environmental requirements, including procedures for trapping, storing and disposing of oil released from hydrostatic transmissions.
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Unit Mapping Information

Equivalent to AURTTX2004 Service transmissions (hydrostatic)

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 AURTTX004 Inspect and service hydrostatic 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 hydrostatic transmissions of two different 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 hydrostatic transmissions, including procedures for:
 - working with high oil pressures
 - working with stored hydraulic accumulator pressures
 - isolating and stabilising machinery
- environmental requirements, including procedures for trapping, storing and disposing of oil released from hydrostatic transmissions
- identification, function and basic operation of hydrostatic transmission and components, including:
 - charge pump
 - main pump
 - drive motor
 - filters
 - hydraulic lines
 - heat exchanger
 - reservoir
 - control valve
- types and applications of hydraulic oil

- inspection procedures for hydrostatic transmissions, including:
 - hydraulic oil sampling
 - oil leaks
 - pressure checks as required
- service and adjustment procedures for hydrostatic transmissions, including
 - adjusting or replenishing oil level as required
 - replacing filters as required
- post-service testing procedures for hydrostatic 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 hydrostatic 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:

- mechanical repair workplace or simulated workplace
- workplace instructions
- manufacturer hydrostatic transmission specifications
- two different machinery with hydrostatic transmissions requiring servicing
- tools, equipment and materials appropriate for inspecting and servicing hydrostatic transmissions.

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