



Australian Government

AURKTA004 Inspect, service and repair spraying and spreading equipment

Release: 1

AURKTA004 Inspect, service and repair spraying and spreading equipment

Modification History

Release	Comment
Release 1	New unit of competency.

Application

This unit describes the performance outcomes required to inspect, service and repair faults in spraying and spreading equipment. It involves preparing for the task, inspecting the equipment to determine the service and repair requirements, carrying out the service and repair, performing post-repair testing, and completing workplace processes and documentation.

It applies to those working in the automotive service and repair industry. The spraying and spreading equipment is that of agricultural machinery and refers to specialised equipment that may be self-propelled, trailed or three-point linkage, with controls for pressure, volume and coverage. It does not cover generalised equipment or systems that form the platform or the towing vehicle.

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

Competency Field

Mechanical - Mobile Plant

Unit Sector

Technical

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.

Elements Elements describe the essential outcomes.	Performance Criteria 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 spraying and spreading equipment	1.1 Job requirements are determined from workplace instructions 1.2 Inspection procedures and information are sourced and interpreted 1.3 Options are analysed and those most appropriate to the circumstances are selected 1.4 Hazards associated with the work are identified and risks are managed 1.5 Tools, equipment and materials are selected and checked for serviceability
2. Conduct inspection and analyse results	2.1 Inspection of <i>spraying equipment</i> and <i>spreading equipment</i> 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, and include recommendations for necessary service, repairs or adjustments
3. Service and repair spraying and spreading equipment	3.1 Service and repair procedures and information are sourced and interpreted 3.2 Service and repair tools, equipment and materials are selected and checked 3.3 Service and adjustments are carried out according to manufacturer specifications, workplace procedures, and safety and environmental requirements 3.4 Repairs and component replacements and adjustments are carried out according to manufacturer specifications, workplace procedures, and safety and environmental requirements 3.5 Equipment and systems are test run and adjustments are carried out as required
4. Prepare equipment for operation	4.1 Variable operating parameters are identified from manufacturer specifications and analysis of proposed work environment and conditions 4.2 Equipment variables, including management system settings, controls and monitoring systems, are established and prepared for proposed operations 4.3 Equipment and systems are test run and final adjustments are carried out 4.4 Post-repair testing is carried out according to workplace procedures

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5. Complete work processes	5.1 Final inspection is made to ensure work is to workplace expectations and equipment is presented ready for use, including ensuring that protective guards, safety features and cowlings are in place 5.2 Work area is cleaned, waste and non-recyclable materials are disposed of, and recyclable material is collected 5.3 Tools and equipment are checked and stored according to workplace procedures 5.4 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 information efficiently.
Reading skills to:	interpret information from manufacturer and workshop literature when seeking spraying and spreading equipment specifications and procedures.
Writing skills to:	legibly and accurately fill out workplace documentation when reporting diagnostic findings, making repair recommendations, and recording parts and material used.
Oral communication skills to:	clarify workplace instructions and determine job requirements.
Numeracy skills to:	- measure spraying and spreading equipment components and use basic mathematical operations, including addition and subtraction, to calculate distances, tolerances and deviations from manufacturer specifications - understand measuring and test equipment divisions.
Planning and organising skills to:	plan own work requirements and prioritise actions to achieve required outcomes and ensure tasks are completed within workplace timeframes.
Technology skills to:	operate spraying and spreading diagnostic test equipment.

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>Spraying equipment</i> must include:	• equipment to distribute: • liquid pesticides • herbicides • fertilisers.
<i>Spreading equipment</i> must include:	• equipment to distribute: • solids • semi-solids, including fertilisers and waste products.
<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: • spraying chemicals • high pneumatic and hydraulic pressures • rotating shafts • environmental requirements, including procedures for waste and chemical management, machine hygiene, dust and clean-up management.

Unit Mapping Information

Equivalent to AURKTA3004 Inspect, service and repair spraying and spreading equipment

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 AURKTA004 Inspect, service and repair spraying and spreading equipment

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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, service and repair:
 - one spraying equipment
 - one spreading equipment
- during above work, adjust flow and pressure of delivery system to manufacturer specifications.

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, servicing and repairing spraying and spreading equipment, including procedures for working with:
 - spraying chemicals
 - high pneumatic and hydraulic pressures
 - rotating shafts
- environmental requirements, including procedures for waste and chemical management, machine hygiene, dust and clean-up management
- procedures for flushing chemicals from spraying and spreading equipment prior to inspect, service and repair work
- operating principles of spraying and spreading equipment, including:
 - pumps, pressure and flow
 - drive systems
- application, purpose and operation of spraying and spreading equipment, including:

- spraying equipment for distributing liquid pesticides, herbicides and fertilisers, including:
 - pumping system
 - nozzle liquid delivery system
 - mixing system
 - marking and covering system
 - electronic weed identification system
- spreading equipment for distributing solids and semi-solids, including fertilisers and waste products:
 - distribution control
 - delivery system
 - pumping system
 - material handling and storage
- inspection procedures for spraying and spreading equipment, including:
 - component wear analysis
 - system operation analysis
 - electronic system interrogation
- service and repair procedures for spraying and spreading equipment, including:
 - removing, replacing and repairing components
 - adjusting pressure, volume and coverage of spraying and spreading equipment
- post-repair testing procedures for spraying and spreading equipment, including:
 - variable operating parameters
 - impact of environmental factors.

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 spraying and spreading equipment that they have serviced and repaired, 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 spraying and spreading specifications
- one spraying equipment and one spreading equipment requiring service and repair

- diagnostic equipment for spraying and spreading equipment
- tools and equipment appropriate for inspecting, servicing, repairing and adjusting spraying and spreading equipment.

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