



Australian Government

Department of Education, Employment and Workplace Relations

AHCLSK321A Service and repair bores and windmills

Release: 1

AHCLSK321A Service and repair bores and windmills

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers the process of maintaining bores and windmills and defines the standard required to: maintain all components of bores and windmills; carry out testing procedures to determine correct operation; recognise and rectify mechanical faults; carry out repairs to bore, mill heads and pumps to ensure the full function and flow of water supplies; dismantle and assemble windmills and mechanical components; source and apply specialist direction; and refer to bore histories for troubleshooting.
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Application of the Unit

Application of the unit	This unit is likely to be carried out under routine supervision with intermittent checking within enterprise guidelines. It requires the application of discretion and judgement to assess and determine requirements for specialist direction, and refer more complex faults for specialist advice.
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA

ELEMENT	PERFORMANCE CRITERIA
1. Establish bore history and enterprise policy	<p>1.1. Enterprise records are accessed, inspected and bore history is established.</p> <p>1.2. Enterprise policy regarding service and repairs to bores and windmills is established in consultation with the supervisor.</p> <p>1.3. Specialist instructions and assistance are sought as required from recognised industry sources according to enterprise requirements.</p>
2. Prepare to carry out service and repairs	<p>2.1. Tools, equipment and materials appropriate to job requirements are selected and inspected for serviceability.</p> <p>2.2. Dismantling and stripping of windmill is carried out to industry standards and according to enterprise requirements.</p> <p>2.3. Existing and potential Occupational Health and Safety (OHS) hazards in the workplace are identified, and risks assessed and controlled according to enterprise requirements.</p>
3. Carry out service and repairs	<p>3.1. Suitable personal protective equipment (PPE) is selected, used and maintained according to OHS and enterprise requirements.</p> <p>3.2. Service and repairs to bores, windmills, motors and pumps are carried out according to manufacturer specifications, operator manuals and enterprise requirements.</p> <p>3.3. Complex faults and repairs are reported and referred for specialist advice and remedial action according to enterprise requirements.</p> <p>3.4. Lost equipment is safely retrieved according to OHS guidelines and enterprise requirements.</p>
4. Complete service and repair activities	<p>4.1. Bore and windmill components are reassembled and tested for operation according to manufacturer specifications to ensure the restoration of full function and flow.</p> <p>4.2. Work site, tools and equipment are cleaned, returned to operating order and stored according to OHS and enterprise requirements.</p> <p>4.3. Waste from service and repair activities is collected, treated and disposed or recycled according to enterprise environmental requirements.</p> <p>4.4. Relevant information is documented according to industry and enterprise requirements.</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- identify hazards and implement safe work procedures
- apply basic diagnostic techniques
- recognise faults and deterioration of components and carry out mechanical repairs
- select and match tools and equipment with work requirements
- apply hand-eye coordination
- apply safe workplace and positive environmental procedures
- read and interpret enterprise policy, maintenance plans, manufacturer specifications and material safety data sheets (MSDS)
- effectively communicate with contractors and supervisor, and record and report maintenance details and outcomes
- calculate volumes, and measure speed, flow rates and distance
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

Required knowledge

- construction of bores and windmills and maintenance requirements
- diesel engine components, maintenance requirements and repair procedures
- working principles of diesel engines
- drive systems and components
- types and uses of lubricants and other servicing materials
- servicing characteristics of bores and windmills
- types, characteristics, uses and limitations of hand and power tools
- basic diagnostic processes and techniques
- environmental codes of practice with regard to maintenance activities
- OHS legislative requirements.

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- maintain all components of bores and windmills
- carry out testing procedures to determine correct operation
- recognise and rectify mechanical faults
- carrying out repairs to bore, mill heads and pumps to ensure the full function and flow of water supplies
- dismantle and assemble windmills and mechanical components
- source and apply specialist direction and refer to bore histories for troubleshooting.

Context of and specific resources for assessment

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole.

Service requirements may include:

- the pulling of the bore which includes fitting clamps, removing rods and columns
- the laying out of rods and columns
- replacing worn or faulty parts
- checking rods for straightness and checking spacers for wear
- examining for and noting lime deposits.

RANGE STATEMENT	
Programmed procedures for the checking of the bore head may include:	<ul style="list-style-type: none">checking of the belt condition, glands, pulleys, vibration or noise, slipping, throwing or loose belts, low flows, correct rotation, worn parts and bearings.
The service and repair of windmills may include:	<ul style="list-style-type: none">stripping the windmill, carrying out checks and repairs to mill blades, fan structure, mill head, differential head and gearbox.

Unit Sector(s)

Unit sector	Livestock
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Co-requisite units

Co-requisite units		

Competency field

Competency field	
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