



Australian Government

Department of Education, Employment and Workplace Relations

AHCMKH303A Service and repair milking equipment

Release: 1

AHCMKH303A Service and repair milking equipment

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers the process of non-company specific service and repair of milking equipment on farm so as to meet prescribed maintenance schedules or to rectify poor performance and defines the standard required to monitor and evaluate the performance of milking equipment; operate the full range of milking equipment components; carry out mechanical testing of milking equipment; apply information from operator's manuals and supplied maintenance and diagnostic data; disassemble and re-assemble a range of milking equipment components such as pulsators, regulators and vacuum pumps.
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Application of the Unit

Application of the unit	This unit applies to technicians and dairy farm workers who service and repair specific machine components. It requires some judgement and discretion and is likely to be carried out independently, with advice sought from milk company representatives or equipment resellers.
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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

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1. Service and repair vacuum pumps and the vacuum regulator	1.1. Vacuum pump capacity is established as a part of mechanical testing and performance assessed against design parameters and shed requirements. 1.2. Vacuum pump is disassembled, serviced and reassembled. 1.3. Vacuum pump exhaust and housing is checked and repaired as required to minimise noise and ensure that levels remain within prescribed workplace standards. 1.4. Regulators are checked for performance cleaned and defective parts replaced.
2. Service pulsators and electronic systems	2.1. Pulsator performance is assessed during milking and as a part of mechanical testing. 2.2. Electronic or pneumatic pulsators are removed and repaired or replaced as identified in mechanical testing. 2.3. Extra low voltage segments of the pulsation and wash systems controllers are tested and replaced as required.
3. Service and repair milk pumps and the milk releasing system	3.1. Milk pumps are checked for pumping performance. 3.2. Milk pumps are disassembled and repairs as required including drives and couplings. 3.3. Milk releaser is inspected and checked with rubber seals and flaps replaced as required.
4. Repair and maintain the milk transport system	4.1. Rubberware is inspected for correct specification including liner/teat cup matching and replaced or adjusted as required. 4.2. Claws and claw bowls are inspected for cleanliness and correct connection to suit the specific pulsation system. 4.3. The operation of automatic vacuum cut-off in the claw is assessed and air admission holes cleaned as required. 4.4. Milk lines and air lines are inspected and joins checked for compliance with industry minimum standard recommendations. 4.5. Cans and vessels are checked for dents and damage and shut off valves checked for correct operation. 4.6. Plate cooler is disassembled, cleaned and re-assembled and filters cleaned and replaced as required.

ELEMENT	PERFORMANCE CRITERIA
5. Service and repair non-milking systems	5.1. Jetters and cleaning system are inspected to ensure adequate air admission during cleaning and correct water volumes are circulating. 5.2. Repairs or replacement of cleaning system components are effected as required 5.3. Automatic cup removers are checked to ensure that detectors are clean and effective and that the pistons operate effectively. 5.4. Automatic cup removers are repaired or replaced as required. 5.5. Herd recording equipment is inspected and valves and rubberware replaced as required. 5.6. Feed systems are inspected and repaired or maintained as required.

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
- observe and critically evaluate the performance of milking equipment
- competently operate the full range of milking equipment components
- efficiently and effectively carry out mechanical testing of milking equipment
- operate hand tools and use a range of test equipment proficiently
- communicate effectively with the dairy farmer, milkers and other personnel to identify all contributing factors to milking equipment performance
- disassemble and re-assemble a range of milking equipment components such as pulsators, regulators and vacuum pumps
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- 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

- familiarity with the components that make up milking equipment installations and

REQUIRED SKILLS AND KNOWLEDGE

- their individual contributions to milking function
- common symptoms of poor milking machine performance
- symptoms demonstrated by animals in the milking environment that indicates poor performance such as cup slip, agitation or frequent urination or defecation.
- routine maintenance requirements for milking equipment
- consumable replacement strategies recommended for milking equipment
- lubrication requirements for milking equipment
- industry safety standards for milking equipment installations.
- Occupational Health and Safety (OHS) guidelines for working with machinery in the rural sector.

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: • monitor and evaluate the performance of milking equipment • operate the full range of milking equipment components • carry out mechanical testing of milking equipment • apply information from operator's manuals and supplied maintenance and diagnostic data • disassemble and re-assemble a range of milking equipment components such as pulsators, regulators and vacuum pumps.
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.	
International Standards may include:	• International Standards for Milking Machines ISO5707 Construction and Performance and ISO6690 Mechanical Tests.
Service and repair may include:	• low voltage pulsation or other electronic systems (up to 36v DC).
Adjustments may include:	• vacuum pumps and vacuum regulator may also include the adjustment of vacuum pressure or

RANGE STATEMENT	
	available effective reserve.
Pumps may include:	centrifugal or diaphragm and slow speed two vane, high speed four vane or liquid ring vacuum pumps.

Unit Sector(s)

Unit sector	Milk harvesting
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Co-requisite units

Co-requisite units		

Competency field

Competency field	
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