



Australian Government

Department of Education, Employment and Workplace Relations

AHCMKH305A Mechanically test milking machines

Release: 1

AHCMKH305A Mechanically test milking machines

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers the process of the static testing of milking equipment and the compilation of results according to industry standard reporting procedures and defines the work practices required to: disassemble and reassemble milking machines and equipment; operate milking machine testing equipment; calculate effective reserve and vacuum pump capacity for the plant; measure air consumption and component leakage, and adjust vacuum to optimise performance; record measurements of milking machine performance; identify and make appropriate recommendations to the dairy manager.
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Application of the Unit

Application of the unit	This unit applies to working independently as part of preparing for milking. The information from testing is supplied to the supervisor or employer
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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. Record milking machine specifications	1.1. Herd details and health status are established in consultation with dairy farmer. 1.2. Overall machine specifications are recorded to establish expected performance. 1.3. Component condition is assessed and recorded. 1.4. Occupational Health and Safety (OHS) hazards are identified and risks assessed in line with workplace OHS and industry standards, and reported to supervisor.
2. Calculate required milking machine performance	2.1. Effective reserve is calculated based on individual shed specification. 2.2. Vacuum pump capacity is calculated from effective reserve. 2.3. Manufacturer's recommended component specification and matching is recorded.
3. Measure milking machine performance	3.1. Working vacuum levels are measured in line with required performance. 3.2. Vacuum is adjusted as required to optimise plant performance. 3.3. Air consumption and component leakage is established and reported. 3.4. Pulsators are tested in line with manufacturer's recommendations. 3.5. Working air consumption is established and matched to manufacturer's recommendations in line with industry standards.
4. Make recommendations to optimise machine performance	4.1. Test results are interpreted in line with desired performance and herd details. 4.2. Verbal recommendations backed with a written report are provided to the farmer or shed manager on safety considerations for the specific installation tested. 4.3. Written recommendations on plant performance are provided to the farmer. 4.4. Report on component condition is completed in line with manufacturer's requirements.

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 operating procedures
- complete the necessary calculations and identify leakage and defects isolated from a machine test
- competently disassemble and reassemble milking machines and equipment
- competently operate milking machine testing equipment
- effectively communicate with the farmer or shed manager and relevant industry professionals
- access and interpret relevant industry standards
- identify and make appropriate recommendations on aspects of milking equipment and shed safety identified during equipment testing procedures
- demonstrate the use of tools and testing equipment, and in the disassembly and reassembly milking equipment
- 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 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

- the International Standards ISO 6690 - 1983 (Mechanical Tests) and ISO5707 (Construction and Performance) together with the Industry Standard Minimum recommendations established by the Australian Milking Machine Trade Association are the basis of testing procedures - knowledge needs to include an awareness of these documents and an ability to use and interpret their contents in a working environment
- OHS hazards associated with milking machines and principles of risk control including machine guarding, protection from hot water or steam scalds, noise control, electrical safety in the dairy, and the responsibilities of people in the workplace
- vacuum requirements, pulsation and the interaction between these characteristics in a milking machine
- the components that make up milking equipment
- how milking machines work
- pulsation systems, e.g. difference between 2x2 or 4x1 systems
- the effects of high or low milking machine vacuum on animal health
- the establishment and recording of machine specifications includes a working knowledge of how to obtain and interpret manufacturer's specifications
- environmental legislative and enterprise 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: • disassemble and reassemble milking machines and equipment • operate milking machine testing equipment • calculate effective reserve and vacuum pump capacity for the plant • measure air consumption and component leakage, and adjust vacuum to optimise performance • record measurements of milking machine performance • identify and make appropriate recommendations to the dairy manager.
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.	
Sheds may include:	• herringbone sheds • rotary sheds • conventional sheds.
Data collected for overall machine specifications may include:	• details of vacuum pumps • milkline size • milkline fall

RANGE STATEMENT

	• airline sizes • regulator detail • pulley and belt sizes • electric motor size • claw specifications • liner and cup specifications • shaft speeds.
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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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