

<b>Title</b>	<b>Describe milking machine maintenance, faults, and water quality, and develop cleaning procedures</b>		
<b>Level</b>	<b>3</b>	<b>Credits</b>	<b>10</b>

<b>Purpose</b>	People credited with this unit standard are able to describe: milking machine maintenance and rubberware replacement, and identification of faults; milking machine and rubberware cleaning procedures, and identify and describe the procedures to rectify faults; and the relationship between the quality of water used to clean milking machines, and milk quality.
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<b>Classification</b>	Agriculture > Dairy Farming
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<b>Available grade</b>	Achieved
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**Explanatory notes**

- 1 Legislation includes but is not limited to – Health and Safety in Employment Act 1992, Animal Products Act 1999, Animal Welfare Act 1999, Health Act 1956, Food Act 1981, Agricultural Compounds and Veterinary Medicines Act 1997, Resource Management Act 1991, Hazardous Substances and New Organisms Act 1996.
- 2 References  
*NZCP-1, New Zealand Dairy Industry Farm Dairy Code of Practice*, New Zealand Food Safety Authority, ISBN 0-908946-00-7, referred to as the code of practice.  
*DPC 2: Animal Products (Dairy) Approved Criteria for Farm Dairies*, referred to as DPC 2 Available from the Ministry of Primary Industries website, <http://www.mpi.govt.nz>.
- 3 *On-farm quality management procedures* refer to the documented procedures for farm dairy hygiene practices, which must meet legislative and dairy company requirements. On-farm quality management procedures are available from all dairy companies.

**Outcomes and evidence requirements**

**Outcome 1**

Describe milking machine maintenance and rubberware replacement, and identification of faults.

**Evidence requirements**

- 1.1 Milking machines are described in terms of correct operation.

- Range vacuum levels, pulsation, liner compatibility with shell.
- 1.2 Milking machine components are described in terms of their features, faults, and procedures for maintenance or correction.
- Range components – cluster (shell, pulse tube, claw), air admission hole, long milk tube, vacuum tap, stainless dropper, elbows, washline injector, vacuum gauge, pulsator, pulsator airline, receiver airline, sanitary trap, main airline, vacuum regulator, interceptor, vacuum pump, receiver, jumbo rubber, milk pump, filter, plate cooler, delivery line to milk tank, liners, milk silo, silo inlet valve or pipe, non-return cleaning in place (CIP) valve, spray ball, agitator, silo manhole rubber, test bucket and rubbers, jettors; evidence is required for at least one fault in each component.
- 1.3 Rubberware is described in terms of the factors that affect their deterioration.
- Range evidence is required for at least three factors.
- 1.4 Factors to consider when replacing rubberware are described in terms of manufacturer's instructions.
- 1.5 Rubberware is replaced in milk machines in accordance with manufacturer's recommendations.
- Range liners, long milk tubes, short milk tubes, long and short pulse tubes, milklime union seals, milk pump intake rubbers, milk pump diaphragms/impellers, plate cooler seals, delivery line union seals, vat valve seals, vat door seal.

## Outcome 2

Describe, and develop, milking machine and rubberware cleaning procedures, and identify and describe the procedures to rectify faults.

### Evidence requirements

- 2.1 Milking plant cleaning is described in terms of the operation and in comparison of plant cleaning systems.
- Range plant cleaning systems include – jetter, reverse flow, bucket.
- 2.2 An on-farm milking machine and rubberware cleaning procedure is developed to minimise the risk of milk residue build-up in the milking plant, and in accordance with the code of practice and manufacturer's instructions.
- 2.3 Detergents and sanitisers are described in terms of their functions and properties, and are selected for milking machine cleaning to match the properties of milk residue.
- Range detergents include but are not limited to – alkali, acid.

- 2.4 Milking machines are inspected, faults are identified, and procedures to rectify are described in accordance with on-farm quality management and on-farm procedures.

Range protein build-up, mineral deposit, perished rubberware.

### Outcome 3

Describe the relationship between the quality of water used to clean milking machines and milk quality.

### Evidence requirements

- 3.1 The quality of water used to clean milking machines in the farm dairy is described in terms of the implications for, and risks to, milk quality.

Range may include presence of – E.coli, turbidity or clarity, pH.

- 3.2 A water management plan for the farm dairy is described in terms of its purpose and features, and in accordance with the requirements of DPC 2.

<b>Replacement information</b>	This unit standard has been replaced by unit standard 28938
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**This unit standard is expiring. Assessment against the standard must take place by the last date for assessment set out below.**

### Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	24 August 2007	31 December 2020
Review	2	16 July 2015	31 December 2020

<b>Consent and Moderation Requirements (CMR) reference</b>	0052
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

### Please note

Providers must be granted consent to assess against standards (accredited) by NZQA, before they can report credits from assessment against unit standards or deliver courses of study leading to that assessment.

Industry Training Organisations must be granted consent to assess against standards by NZQA before they can register credits from assessment against unit standards.

Providers and Industry Training Organisations, which have been granted consent and which are assessing against unit standards must engage with the moderation system that applies to those standards.

Requirements for consent to assess and an outline of the moderation system that applies to this standard are outlined in the Consent and Moderation Requirements (CMR). The CMR also includes useful information about special requirements for organisations wishing to develop education and training programmes, such as minimum qualifications for tutors and assessors, and special resource requirements.

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expiring