

Title	Describe the principles of static and dynamic balancing, and carry out static balancing		
Level	3	Credits	4

Purpose	People credited with this unit standard are able to describe the principles of static and dynamic balancing, and carry out static balancing of components.
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Classification	Mechanical Engineering > Maintenance and Diagnostics in Mechanical Engineering
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Available grade	Achieved
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Explanatory notes

- 1 Reference
Health and Safety in Employment Act 1992.
- 2 Definition
Industry practice – safe and sound trade practices generally accepted by competent persons within the mechanical engineering industry.
Worksite procedures – documents that include: worksite rules, codes, and practices; equipment operating instructions and maintenance schedules; documented quality management systems; and health and safety requirements.

Outcomes and evidence requirements

Outcome 1

Describe the principles of static and dynamic balancing.

Evidence requirements

- 1.1 The difference between static and dynamic balancing of components is described.
- 1.2 The terminology associated with static and dynamic balancing is used.

Range force of gravity, centrifugal force, axis of rotation, bearing vibration, balancing weights, weight placement.
- 1.3 The effects of an out of balance component on machine performance are described.

- 1.4 Methods of statically and dynamically balancing components are described with reference to balancing equipment and material addition and removal.

Range components – flywheel or disk, large rotor.

Outcome 2

Carry out static balancing of components.

Range may include but is not limited to – lathe face plates, shafts, grinding wheels, propellers, impellers, fans;
evidence is required for the balancing of at least two components.

Evidence requirements

- 2.1 Safety hazards are identified, and precautions are taken in accordance with worksite procedures.
- 2.2 Components are statically balanced in accordance with job requirements.
- 2.3 Balancing of components is recorded and checked in accordance with worksite procedures.

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Status information and last date for assessment for superseded versions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	25 October 1994	31 December 2011
Revision	2	14 April 1997	31 December 2011
Revision	3	5 January 1999	31 December 2011
Revision	4	18 September 2001	31 December 2011
Review	5	28 April 2003	31 December 2011
Rollover	6	20 June 2008	31 December 2014
Review	7	15 April 2011	31 December 2022
Review	8	17 August 2017	31 December 2022

Consent and Moderation Requirements (CMR) reference

0013

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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