

<b>Title</b>	<b>Identify, diagnose and rectify machined product defects</b>		
<b>Level</b>	<b>4</b>	<b>Credits</b>	<b>25</b>

<b>Purpose</b>	People credited with this unit standard are able to: demonstrate knowledge of the causes of machine product defects; and diagnose and rectify machined product defects.
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<b>Classification</b>	Solid Wood Manufacturing > Timber Machining
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<b>Available grade</b>	Achieved
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### Guidance Information

- 1 Legislation  
Health and Safety at Work Act 2015.  
Resource Management Act 1991.
- 2 Definitions  
*Accepted industry practice* refers to approved codes of practice and standardised procedures accepted by the wider wood manufacturing industry as examples of best practice.  
*Corrective action* refers to actions such as communication to management, communication to on-site technical person, communication to off-site technical support person, cleaning, communication with maintenance staff, recalibration, or changes made to the operating system in accordance with workplace procedures.  
*Workplace procedures* refer to documented policies and procedures set by the organisation carrying out the work, and to documented or other directions provided to staff, and applicable to the tasks being carried out. They may include but are not limited to – standard operating procedures, site specific procedures, site safety procedures, equipment operating procedures, quality assurance procedures, product quality specifications, references, approved codes of practice, housekeeping standards, environmental considerations, on-site briefings, supervisor’s instructions, and procedures to comply with legislative and local body requirements relevant to the wood manufacturing sector.
- 3 Assessment information  
All activities and evidence must meet workplace procedures and accepted industry practice.
- 4 Recommended unit standards for entry: Unit 675, *Set up a timber planer for dress four sides*; and Unit 15774, *Demonstrate knowledge of timber machining*.

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## Outcomes and performance criteria

### Outcome 1

Demonstrate knowledge of the causes of machined product defects.

#### Performance criteria

1.1 Raw material characteristics influencing final product quality are identified from product samples and explained.

Range characteristics include – moisture content, grade, tree age, species, grain.

1.2 The process of monitoring and controlling product quality is explained.

1.3 Machine operating faults that influence final machined product quality are identified from product samples and explained.

Range faults may include but are not limited to – wear, feed issues, broken parts, alignment, operating speeds; a minimum of 10 samples is required.

1.4 Machine set-up factors that affect final machined product quality are identified from product samples and explained.

Range factors may include but are not limited to – setting up of feed system, bed, fence plates, cutterheads, pressures, chip breakers, in-feed, out-feed systems.

1.5 Product defects relating to cutter grinding and preparation are identified from product samples and explained.

Range may include but are not limited to – cutter setting, cutter grinding, grinding wheel specification, cutter balance, cutter jointing.

### Outcome 2

Diagnose machined product defects.

Range defects identified in a production situation.

#### Performance criteria

2.1 Raw material product defects are determined.

Range may include but is not limited to – moisture content, grade-related defects, irregular dimensions, mechanical damage prior to machining.

2.2 Machine operating faults causing defective machined product are diagnosed.

Range may include but is not limited to – machine wear, damage.

2.3 Machine set-up factors causing a defective machined product are diagnosed.

Range may include but is not limited to – incorrect calibration, alignment, adjustments, cutter grinding, cutter setting, grinding wheel specifications, feed speeds.

2.4 The process for diagnosing the cause of defective machined product is described.

### Outcome 3

Rectify machined product defects.

Range defects rectified in a production situation.

### Performance criteria

3.1 Corrective action is implemented to rectify raw materials product defects.

Range defects may include but are not limited to – moisture content, grade, dimensions, mechanical damage prior to machining.

3.2 Corrective action is implemented to rectify machine operating faults causing defective machined product.

Range defects may include but are not limited to – wear, damage.

3.3 Corrective action is implemented to rectify machine set-up factors causing defective machined product.

Range set-up factors may include but are not limited to – calibration, alignment, machine set-up.

3.4 Safe work practices associated with rectifying machine product defects are applied.

3.5 Equipment and work area are left clean, clear, and tidy.

3.6 Communication, and recording or reporting, is carried out.

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<b>Planned review date</b>	31 December 2024
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**Status information and last date for assessment for superseded versions**

Process	Version	Date	Last Date for Assessment
Registration	1	27 December 2002	31 December 2012
Review	2	18 December 2006	31 December 2012
Review	3	15 April 2011	N/A
Review	4	25 June 2020	N/A

**Consent and Moderation Requirements (CMR) reference**

0013

This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

**Comments on this unit standard**

Please contact Competenz [qualifications@competenz.org.nz](mailto:qualifications@competenz.org.nz) if you wish to suggest changes to the content of this unit standard.