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| <b>Title</b> | <b>Demonstrate knowledge of machining brake disc rotors and brake drums</b> |                |          |
| <b>Level</b> | <b>3</b>  | <b>Credits</b> | <b>1</b> |

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| <b>Purpose</b> | People credited with this unit standard are able to demonstrate knowledge of machining brake disc rotors and brake drums. |
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| <b>Classification</b> | Motor Industry > Vehicle Braking Systems |
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| <b>Available grade</b> | Achieved |
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### Guidance Information

- 1 Evidence presented for assessment against this unit standard must be consistent with safe working practices and be in accordance with applicable service information, and company requirements and legislative requirements. This includes the knowledge and use of suitable tools and equipment.
- 2 Performance of the outcomes of this unit standard must comply with the following:  
Health and Safety at Work Act 2015;  
Land Transport Rule: Heavy Vehicles 2004;  
Land Transport Rule: Vehicle Repair 1998.
- 3 Any new, amended or replacement Acts, regulations, standards, codes of practice, guidelines, or authority requirements or conditions affecting this unit standard will take precedence for assessment purposes, pending review of this unit standard.
- 4 Definitions  
*Company requirements* refer to instructions to staff on policy and procedures that are available in the workplace. These requirements may include – company policies and procedures, work instructions, product quality specifications and legislative requirements.  
*Lathe manufacturer instructions* refer to specifications and/or instructions provided by the brake lathe manufacturer for the correct machining operation of brake rotors and drums. This includes both on-vehicle and off-vehicle machining.  
*Service information* refers to information such as technical information for a vehicle, machine, or product detailing operation; installation and servicing procedures; manufacturer instructions; technical terms and descriptions; and detailed illustrations.  
*Suitable tools and equipment* refer to industry approved tools and equipment that are recognised within the industry as being the most suited to complete the task in a professional and competent manner with due regard to safe working practices.

## Outcomes and performance criteria

### Outcome 1

Demonstrate knowledge of machining brake disc rotors and brake drums.

### Performance criteria

- 1.1 The purpose of machining disc rotors and drums is identified.
- Range efficient functioning, reducing wear of linings.
- 1.2 The reasons for maximum tolerances of disc rotor thickness and surface condition are described in accordance with vehicle manufacturer specifications.
- Range calliper action, pedal pulsation, heat dissipation, manufacturer design capabilities, safety.
- 1.3 Procedures for machining drum and disc surfaces are described.
- Range lathe cutting bits checked for condition, lathe cutting depth, feed and speed calculated, reference to manufacturer's minimum thickness standard, mounting surfaces clean and free of burrs and grease, mounting hub runout, use of noise dampening device, equal cut on disc surfaces; runout and parallelism within manufacturer tolerances, disc thickness within manufacturer tolerance.
- 1.4 Method of producing a non-directional finish to the machined surfaces is described.

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| <b>Replacement information</b> | This unit standard and unit standard 24411 replaced unit standard 948. |
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| <b>Planned review date</b> | 31 December 2025 |
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### Status information and last date for assessment for superseded versions

| Process      | Version | Date            | Last Date for Assessment |
|--------------|---------|-----------------|--------------------------|
| Registration | 1       | 25 January 2008 | 31 December 2022         |
| Review       | 2       | 29 July 2021    | N/A                      |

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| <b>Consent and Moderation Requirements (CMR) reference</b> | 0014 |
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

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**Comments on this unit standard**

Please contact MITO New Zealand Incorporated [info@mito.org.nz](mailto:info@mito.org.nz) if you wish to suggest changes to the content of this unit standard.