

Title	Describe heavy vehicle and machine driveshafts and final drives		
Level	3	Credits	4

Purpose	People credited with this unit standard are able to describe heavy vehicle and machine driveshafts and final drives.
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Classification	Motor Industry > Automotive Transmission Systems
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Available grade	Achieved
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Guidance Information

- 1 It is recommended that people hold credit for Unit 30561, *Demonstrate knowledge of drivelines and final drives*, before being assessed against this unit standard.
- 2 Evidence presented for assessment against this unit standard must be consistent with safe working practices and be in accordance with applicable service information, company requirements and legislative requirements. This includes the knowledge and use of suitable tools and equipment.
- 3 Legislation, regulations and/or industry standards relevant to this unit standard include but are not limited to the current version of the Health and Safety at Work Act 2015 and any subsequent amendments or replacements.
- 4 Definitions

Company requirements refers 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.

Heavy vehicle may include a motor vehicle that is of Class MD3, MD4, ME, NB, NC, TC or TD; or has a gross vehicle mass that exceeds 3500 kg and is not of a class specified in the Table of vehicle classes as listed from New Zealand Transport Agency website <https://www.nzta.govt.nz/vehicles/vehicle-types/vehicle-classes-and-standards/vehicle-classes/#Registration-classification>.

Machines may include – forklifts, earth-moving equipment, grader equipment, loaders, dozers, tractors, agricultural equipment, dump trucks, prime movers; electric machines, including – forklift, walk-behind pallet, ride-on pallet, reach truck, order picker, counterbalance truck, turret truck.

Service information may include – technical information for a vehicle, machine, or product detailing operation; installation and servicing procedures; manufacturer instructions; technical terms and descriptions; and detailed illustrations.

Outcomes and performance criteria

Outcome 1

Describe heavy vehicle and machine driveshafts.

Performance criteria

1.1 Driveshaft operation is described.

Range driveline angles, shaft phasing, runout, two- and three-piece shafts, universal joints, slip joints.

1.2 Driveshaft fault diagnosis is described.

Outcome 2

Describe heavy vehicle and machine final drives.

Performance criteria

2.1 Final drive operation is described.

Range power dividers, diff locks, hub reduction, double reduction.

2.2 Final drive fault diagnosis is described.

2.3 Checking crown wheel and pinion backlash and tooth contact is described.

Planned review date	31 December 2023
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	28 September 1994	31 December 2020
Review	2	21 February 1999	31 December 2020
Review	3	25 February 2008	31 December 2020
Review	4	26 July 2018	N/A

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

Comments on this unit standard

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