

Title	Demonstrate knowledge of tractor and agricultural machine final drive assemblies		
Level	4	Credits	4

Purpose	People credited with this unit standard are able to demonstrate knowledge of tractor and agricultural machine final drive assemblies.
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Classification	Motor Industry > Automotive Transmission Systems
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Available grade	Achieved
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Guidance Information

1 Definition

Service information may include but is not limited to – technical information of a vehicle, machine, or product detailing operation; installation and servicing procedures; manufacturer instructions and specifications; technical terms and descriptions; and detailed illustrations. This can be accessed in hard copy or electronic format and is normally sourced from the manufacturer.

- 2 It is recommended that people seeking credit for this unit standard first hold credit for Unit 2316, *Describe heavy vehicle and machine driveshafts and final drives*.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of tractor and agricultural machine final drive assemblies.

Performance criteria

- 1.1 Final drive assembly construction is described in accordance with service information.

Range includes but is not limited to – wheeled tractors, combine harvesters, specialist self-propelled harvesters; features, identification of components, layout of components.

- 1.2 Tractor differential lock assembly and limited slip differential assembly construction and operation are described in accordance with service information.
- Range includes but is not limited to – features, identification of components, layout and operation of components, purpose.
- 1.3 Tractor and agricultural machinery drive gear reduction unit construction and operation are described in accordance with service information.
- Range includes but is not limited to – bull gears, inboard epicyclic gear trains, drive hub epicyclic gear trains.
- 1.4 Tractor and agricultural machinery transfer case construction and operation are described in accordance with service information.
- Range includes but is not limited to – power divider differential assemblies, direct drive from tractor main drive shaft, manual engagement, hydraulic engagement, electronic engagement.
- 1.5 Tractor and agricultural machinery driveshaft operation, and method of installation, are described in accordance with service information.
- Range includes but is not limited to – universal joints, slip joints, shaft phasing, angles and balancing, safety shear pins, torque shafts.
- 1.6 Tractor front axle differential unit construction and operation are described in accordance with service information.
- Range includes but is not limited to – crown wheel and pinion, ratios matching front and rear differentials, the influence of tyre sizes.
- 1.7 Tractor four wheel drive front steering and drive axle systems are described in accordance with service information.
- Range includes but is not limited to – universal joints, tractor constant velocity joints, geared right angle drives.
- 1.8 Tractor front wheel hub construction is identified in accordance with service information.
- Range includes but is not limited to – king pin assemblies, hub carrier assemblies, bearings.
- 1.9 Harvesting machine final drive unit with variable speed transmission operation is described in accordance with service information.
- Range includes but is not limited to – hydraulic drive, continuous variable transmission, friction cones.

- 1.10 Tractor and agricultural machinery final drive assembly, and limited slip differential assembly diagnosing and repair procedures are described in accordance with service information.

Range includes but is not limited to – removal, inspection, reassembly, settings, adjustments.

Replacement information	This unit standard and unit standard 24324 replaced unit standard 5441.
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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	25 February 2008	31 December 2020
Review	2	30 August 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.