

Title	Check and adjust vehicle front and rear wheel alignment		
Level	3	Credits	4

Purpose	People credited with this unit standard are able to carry out a pre-alignment check on a vehicle, check the steering angles of the front and rear wheels, and rectify incorrect front and rear wheel alignment.
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Classification	Motor Industry > Vehicle Steering and Suspension
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Available grade	Achieved
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Prerequisites	Appropriate driver's licence for the vehicle being driven.
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Guidance Information

- 1 It is recommended that people hold credit for Unit 24026, *Demonstrate knowledge of, and the procedures for carrying out, vehicle wheel alignment* 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, and company requirements and legislative requirements. This includes the knowledge and use of suitable tools and equipment.
- 3 Performance of the outcomes of this unit standard must comply with the following:
Health and Safety at Work Act 2015;
Land Transport Rule: Steering Systems 2001;
Land Transport Rule: Vehicle Repair 1998;
Land Transport Rule: Vehicle Standards Compliance 2002;
The Official New Zealand Road Code.
- 4 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.
- 5 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.
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

Carry out a pre-alignment check on a vehicle.

Performance criteria

- 1.1 Information regarding vehicle steering symptoms and related alignment problems is obtained from the customer and recorded for an analysis of the fault(s).
- 1.2 Road test is performed to isolate steering faults.
- Range may include – flat road, left hand corner, right hand corner, area to stop and restart, bump, dip.
- 1.3 Faulty vehicle steering symptoms are identified and noted.
- Range may include – vehicle tracking and/or pulling to one side, steering wheel position incorrect, wheel shimmy, vibration and shake, abnormal noises, steering light and heavy, excessive road shock, braking instability, poor returnability of the steering wheel, wander and instability, tyre squeal and/or scuffing on turns, excessive body sway, memory steer, bump steer, torque steer.
- 1.4 Visual inspection of a vehicle for steering faults is completed.
- Range may include – tyre condition, vehicle height, steering linkage, ball joints, wheel bearings, bushes, struts and shock absorbers, chassis damage, brakes dragging and leaking, CV joints and boots, steering box adjustment and centralisation, rack and pinion adjustment and centralisation.

Outcome 2

Check the steering angles of the front and rear wheels.

Range camber, caster, steering axis inclination, toe, toe-out on turns.

Performance criteria

- 2.1 The vehicle is prepared for measuring the steering angles.
- 2.2 Steering angles and measurements are checked in accordance with service information, and the need for adjustment is determined by comparison of the results with the vehicle specifications.

Outcome 3

Rectify incorrect front and rear wheel alignment.

Performance criteria

- 3.1 Faulty components causing incorrect alignment are repaired and/or replaced.
- 3.2 Incorrect wheel alignment angles and measurements are adjusted.
- 3.3 Front and rear wheel alignment specifications are checked to be within the vehicle manufacturer tolerances.
- 3.4 The road test confirms that the vehicle's steering and tracking complies with Land Transport Rules.

Range may include – over the same test route as for the pre-alignment check, all steering related problems previously noted during the pre-alignment check rectified.

Planned review date	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	29 October 1993	31 December 2022
Review	2	4 October 1996	31 December 2022
Review	3	26 February 1999	31 December 2022
Review	4	26 November 2007	31 December 2022
Review	5	29 July 2021	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.