Title	**Demonstrate knowledge of automotive body electrical and electronic systems**		
Level	**4**	**Credits**	**6**

Purpose	People credited with this unit standard are able to demonstrate knowledge of: accessory motors and electrical circuits; automotive gauges and instruments; automotive body electronic systems; and the diagnosis and calibration of automotive body electronic systems.

Classification	Motor Industry > Automotive Electrical and Electronics

Available grade	Achieved

Guidance Information

1 It is recommended that people hold credit for Unit 30571, *Demonstrate knowledge of the principles and testing of automotive electrical circuits* 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 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 and replacements.

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.
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.

5 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.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of accessory motors and electrical circuits.

Range may include – wipers, door locks, cruise control, seats, mirrors, sunroofs, lighting.

Performance criteria

1.1 Accessory motors are identified and their function is described.

1.2 Electrical circuit diagrams are interpreted.

Outcome 2

Demonstrate knowledge of automotive gauges and instruments.

Performance criteria

2.1 Gauges and instruments are identified and their operation is described.

Range analogue, digital.

Outcome 3

Demonstrate knowledge of automotive body electronic systems.

Performance criteria

3.1 Electronic systems are described.

Range anti-theft, collision avoidance, entertainment, head-up display, navigation; global positioning, fleet management.

Outcome 4

Demonstrate knowledge of the diagnosis and calibration of automotive body electronic systems.

Performance criteria

4.1 Methods of diagnosing electronic system faults are described.

Range may include – anti-theft, collision avoidance, entertainment, navigation.

4.2 Methods of calibrating electronic systems are described.

Range may include – sensors, actuators, ECU.

Replacement information	This unit standard replaced unit standard 16114, unit standard 24121, unit standard 24122 and unit standard 24123.

Planned review date	31 December 2022

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	1 March 2018	N/A

Consent and Moderation Requirements (CMR) reference	0014

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.