

Title	Service a lead-acid automotive battery		
Level	2	Credits	2

Purpose	This unit standard is for people who wish to enter or are employed in the motor industry. People credited with this unit standard are able to determine the serviceability of a lead-acid battery, replace a lead-acid battery on a vehicle, charge a lead-acid battery, and carry out an emergency start on a flat battery.
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Classification	Motor Industry > Automotive Electrical and Electronics
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Available grade	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 manufacturer's specifications, service information, company and legislative requirements (this includes the knowledge and/or use of suitable tools and equipment).
- 2 Legislation, regulations and/or industry standards relevant to this unit standard include but are not limited to the current version of including updated amendments to, and replacements of – Health and Safety at Work Act 2015; Hazardous Substances and New Organisms Act 1996.
- 3 Definitions
Company requirements refer to instructions to staff on policy and procedures which are documented in memo or manual format and are available in the workplace. These requirements include but are not limited to – company specifications and procedures, work instructions, manufacturer specifications, product quality specifications and legislative requirements.
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 may be accessed from the manufacturer.
Suitable tools and equipment means 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

Determine the serviceability of a lead-acid battery.

Performance Criteria

- 1.1 Test equipment is selected that will enable the serviceability of the battery to be determined.
- 1.2 A battery is inspected visually and all physical defects are identified and reported.
- 1.3 The state of charge is tested and compared to the battery manufacturer's guidelines.

Outcome 2

Replace a lead-acid battery on a vehicle.

Performance criteria

- 2.1 The battery is selected for the particular make and model of vehicle.
- 2.2 The battery is disconnected in the sequence specified by the vehicle manufacturer, and is removed ensuring that any electronic memories are protected.
- 2.3 The battery is replaced (installed and connected) in the manner specified by the battery and/or vehicle manufacturer.

Outcome 3

Charge a lead-acid battery.

Performance criteria

- 3.1 The battery is cleaned, and the electrolyte level is checked and corrected so that it is ready for charging.

Range may include but is not limited to – mixing electrolyte, adding electrolyte, adding water, precautions when topping up a dry battery.
- 3.2 The battery is connected to the charger until the level of charge required is achieved.
- 3.3 Checks are made throughout the charging process to ensure minimum risk of overheating, loss of electrolyte, and gassing.

Outcome 4

Carry out an emergency start on a flat battery.

Performance criteria

- 4.1 Flat battery is connected to an emergency starting device in a manner that ensures that the risk of explosion and component damage is eliminated.
- Range two of the following emergency starting devices – portable starting pack, spike resistant jumper leads and slave battery, replacement battery.
- 4.2 The engine is started, in accordance with the vehicle manufacturer's instructions, and run until warm, and then stopped.
- 4.3 Battery is disconnected from the emergency starting device in a manner that ensures that battery explosion and damage to the vehicle's electrical and electronic circuits do not occur.
- 4.4 The engine is restarted and run to ensure the starting system functions according to the vehicle manufacturer's specifications.

Replacement information	This unit standard was replaced by unit standard 30556.
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This unit standard is expiring. Assessment against the standard must take place by the last date for assessment set out below.

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	28 February 1993	31 December 2018
Review	2	4 August 1995	31 December 2018
Revision	3	30 October 1997	31 December 2018
Revision	4	28 May 1998	31 December 2018
Review	5	20 December 1998	31 December 2018
Revision	6	13 March 2001	31 December 2018
Revision	7	16 October 2003	31 December 2018
Review	8	27 July 2005	31 December 2018
Review	9	21 April 2016	31 December 2020
Review	10	26 October 2017	31 December 2020

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>.