

Title	Commission marine electrical and electronic systems and equipment		
Level	4	Credits	10

Purpose	People credited with this unit standard are able to, for marine electrical and electronic systems and equipment: establish commissioning criteria; check equipment and system installations; check system performance against criteria and calibrate equipment; and complete post instalment processes and documentation.
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Classification	Boating Industries > Boatbuilding
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Available grade	Achieved
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Guidance Information

- 1 All work practices must meet recognised codes of practice and workplace policies and procedures (where these exceed code) for personal, product, and workplace health and safety, and must meet the obligations required under the Health and Safety at Work Act 2015 and Resource Management Act 1991, and any subsequent amendments.
- 2 This unit standard applies to the provision of both electrical and electronic services.
- 3 Assessment against this unit standard must be presented across the following elements:
 - a systems may include – AC/DC generation, distribution and reticulation systems; electrical vessel control and monitoring systems; marine electronic systems including communications, navigation, hydro acoustics and entertainment systems; evidence of at least one system is required.
 - b equipment may include – electrical includes pumps, generators, batteries and electrical equipment attached to other systems, such as engines; electronic includes all communications, navigation, hydro acoustic, entertainment and electronic equipment attached to other systems, such as engines; evidence of at least one equipment is required.
- 4 Definitions

AC – Alternating Current
 DC – Direct Current
Commission refers to the process of verifying all regulatory, quality, and operational requirements of a system and its components are inspected, tested, checked, and designated ready for use.
Job specifications refer to the standard requirements of the job being undertaken.

Workplace policies and procedures refer to the documented procedures and policies providing guidelines of the tasks and activities carried out in the workplace. This typically includes relevant health and safety policies to manage risk in the workplace.

Outcomes and performance criteria

Outcome 1

Establish commissioning criteria for marine electrical and electronic systems and equipment.

Performance criteria

- 1.1 Commissioning criteria are established to job specifications and manufacturer's requirements.
- 1.2 A commissioning schedule is developed that enables tests to be carried out through a range of agreed contexts in accordance with commissioning criteria, within the agreed time and without the need for retesting.
- 1.3 Commissioning plan is co-ordinated with boat commissioning plan and with personnel commissioning other systems.
- 1.4 Preparations for sea trials are agreed with owner and boat builder.

Outcome 2

Check equipment and system installations for marine electrical and electronic systems and equipment.

Performance criteria

- 2.1 Equipment and system installations are checked in accordance with manufacturer's instructions and workplace policies and procedures.

Outcome 3

Check system performance against criteria and calibrate equipment for marine electrical and electronic systems and equipment.

Performance criteria

- 3.1 Equipment is operated in accordance with manufacturer's instructions and workplace policies and procedures.
- 3.2 Tests are carried out in accordance with the commissioning plan, manufacturer's warranty requirements and boat commissioning plan.
- 3.3 Sea trials are carried out in accordance with workplace policies and procedures, and equipment manufacturer's instructions.

Outcome 4

Complete post instalment processes and documentation for marine electrical and electronic systems and equipment.

Performance criteria

- 4.1 Systems, equipment and training are completed in accordance with commissioning criteria.
- 4.2 Any outstanding work is reported in accordance with workplace policies and procedures.
- 4.3 Commissioning reports are documented in accordance with workplace policies and procedures.

Planned review date	31 December 2026
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	27 August 1997	31 December 2023
Revision	2	9 October 1998	31 December 2023
Revision	3	20 March 2001	31 December 2023
Revision	4	16 April 2004	31 December 2023
Rollover	5	20 March 2009	31 December 2023
Rollover and Revision	6	26 July 2018	31 December 2023
Review	7	26 August 2021	N/A

Consent and Moderation Requirements (CMR) reference	0136
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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 the NZ Marine and Composites ITO training@nzmarine.com if you wish to suggest changes to the content of this unit standard.