

<b>Title</b>	<b>Diagnose, repair, and test marine engine electrical wiring faults</b>		
<b>Level</b>	<b>4</b>	<b>Credits</b>	<b>5</b>

<b>Purpose</b>	People credited with this unit standard are able to demonstrate knowledge of a marine engine electrical wiring diagram; diagnose and repair marine engine electrical wiring faults; and test marine engine electrical circuits.
----------------	---

<b>Classification</b>	Boating Industries > Boatbuilding
-----------------------	-----------------------------------

<b>Available grade</b>	Achieved
------------------------	----------

---

## Guidance Information

- 1 Definition  
*Workplace policies and procedures* refers 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.
- 2 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.
- 3 Range  
marine engine – inboard or outboard.

---

## Outcomes and performance criteria

### Outcome 1

Demonstrate knowledge of a marine engine electrical wiring diagram.

### Performance criteria

- 1.1 Wiring diagram information is explained in relation to marine engine electrical systems.  
  
Range      circuit protection, coding and routing of wires, location and specification of components and connectors.
- 1.2 Current capacity ratings in a cable are identified in terms of cable types and applications in accordance with manufacturer's specifications.

**Outcome 2**

Diagnose and repair marine engine electrical wiring faults.

**Performance criteria**

- 2.1 Marine engine electrical circuits are checked and faults are diagnosed in accordance with manufacturer's instructions.
- 2.2 Electrical wiring components are selected in accordance with current capacity requirements.
- Range components include – cable types, cable size, battery types, cable load capacity.
- 2.3 Damaged electrical circuits are repaired or replaced in accordance with manufacturer's instruction and job specifications.
- Range wires include – single connectors, multiple connectors, cables, looms.
- 2.4 All joins are insulated for adequate protection.
- 2.5 Short circuit faults are located and rectified.

**Outcome 3**

Test marine engine electrical circuits.

**Performance criteria**

- 3.1 Electrical circuit is tested to ensure adequate circuit protection.
- 3.2 Electrical circuit is tested to ensure circuit components meets manufacturer's specification and job specifications.

<b>Planned review date</b>	31 December 2023
----------------------------	------------------

**Status information and last date for assessment for superseded versions**

Process	Version	Date	Last Date for Assessment
Registration	1	26 July 2018	N/A

<b>Consent and Moderation Requirements (CMR) reference</b>	0136
--	------

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 Composite Industry Training Organisation [training@nzmarine.com](mailto:training@nzmarine.com) if you wish to suggest changes to the content of this unit standard.