

Fields Engineering and Technology, and Manufacturing

Review of *Trailer Boat Systems, Boatbuilding, and Sailmaking* unit standards

Subfield	Domain	ID
Motor Industry	Trailer Boat Systems	15454, 15459, 15464, 15469
Boating Industries	Boatbuilding	23251, 25152, 25345, 26090, 26092, 26094, 26098, 26106, 26107, 26108, 27319, 27320, 27321, 27322, 27323, 27324, 27325, 27326
Industrial Textile Fabrication	Sailmaking	11802, 11803, 11804, 11807, 11808, 11814, 23519

The New Zealand Marine and Composite Industry Training Organisation (NZMAC ITO) has completed the review of the unit standards listed above.

Date new versions published

August 2020

Planned review date

December 2025

Summary

NZMAC ITO carried out a review to better align these unit standards to the graduate profile outcomes of the New Zealand qualifications relating to the marine industry, and also to reflect current health and safety legislation. Email consultation was undertaken with the impacted SSBs – MITO and Unitec. Industry and subject matter experts provided feedback and input into the review of these unit standards.

Main changes

- Content and titles were updated to better reflect the unit standard outcomes.
- Guidance information was updated to reflect the changes in legislation, range statements, and definitions.
- 15 unit standards were designated expiring without replacement since they are no longer fit for purpose.
- Titles of unit standards 11804, 15454, 27321, 27324, 27325, and 27326 were amended to better reflect the standard outcomes.

Category D unit standards will expire at the end of December 2022

The last date for assessment of superseded versions of Category B unit standards is December 2022

Key to review category	
A	Dates changed, but no other changes are made - the new version of the standard carries the same ID and a new version number
B	Changes made, but the overall outcome remains the same - the new version of the standard carries the same ID and a new version number
C	Major changes that necessitate the registration of a replacement standard with a new ID
D	Standard will expire and not be replaced

All changes are in **bold**.

Engineering and Technology > Motor Industry > Trailer Boat Systems

ID	Title	Level	Credit	Review Category
15454	Demonstrate knowledge of trailer boat propeller operation, types, servicing, and installation procedures Demonstrate knowledge of power boat propeller operation, types, and servicing	3	4	B
15459	Demonstrate knowledge of trailer boat surface piercing drive units and servicing requirements	3	2	D
15464	Check and arrange the restoration of previously submerged marine engines, systems, and/or components	5	6	D
15469	Inspect and rebuild trailer boat stern legs	4	8	D

Manufacturing > Boating Industries > Boatbuilding

ID	Title	Level	Credit	Review Category
23251	Demonstrate knowledge of production processes used in trailer boat building	3	8	D
25152	Apply 2D CAD/CAM in boatbuilding	4	5	D
25345	Demonstrate knowledge of terminology used in the marine industry	2	6	D
26090	Demonstrate knowledge of trim and stability variation on vessels	4	5	D
26092	Explain cathodic protection for marine vessels	5	6	B
26094	Determine scantlings for a wooden boat	5	10	D
26098	Supervise and survey hull welding to classification society requirements	5	6	D
26106	Interpret installation requirements and plan a custom power plant and power train installation on a vessel	5	6	D
26107	Apply 3D CAD/CAM in boatbuilding	5	5	D
26108	Explain the prevention of fouling and corrosion in saltwater pipework on vessels	5	4	D
27319	Demonstrate knowledge of marine electrical power supply, monitoring and charging systems	4	15	B
27320	Demonstrate knowledge of documentation and compliance requirements for marine electrical systems	4	5	B
27321	Demonstrate knowledge of digital switching marine electrical systems Demonstrate knowledge of marine electrical digital switching systems	4	4	B
27322	Demonstrate knowledge of marine electronic equipment types, functions and connection	3	6	B
27323	Demonstrate knowledge of marine genset electrical installation, maintenance and troubleshooting	4	4	B
27324	Explain and interpret electronic schematic and connection drawings on vessels Explain and interpret electronic system schematic and connection drawings on vessels	4	3	B
27325	Demonstrate knowledge of NMEA and proprietary on-board data communication systems Explain NMEA standards and proprietary on-board data communication systems	3	4	B

ID	Title	Level	Credit	Review Category
27326	Explain AC and DC system earthing and isolation safety requirements on vessels Explain AC system earthing and DC system grounding, and isolation safety requirements on vessels	3	3	B

Manufacturing > Industrial Textile Fabrication > Sailmaking

ID	Title	Level	Credit	Review Category
11802	Demonstrate knowledge of boat rigging in the sailmaking industry	2	4	D
11803	Make and fit patches to sails in the sailmaking industry	2	5	B
11804	Measure, mark out, and make covers in the sailmaking industry Make and fit covers in the sailmaking industry	3	10	B
11807	Identify job requirements, draw a scale plan, and make a sail pattern in the sailmaking industry	4	8	D
11808	Identify requirements and design a sail in the sailmaking industry	5	20	D
11814	Set up and cut materials using a computerised plot cutter in the sailmaking industry	3	5	B
23519	Demonstrate knowledge of the sail construction process in the sailmaking industry	3	4	B