

<b>Title</b>	<b>Preserve and evaluate a previously-submerged power plant</b>		
<b>Level</b>	<b>4</b>	<b>Credits</b>	<b>3</b>

<b>Purpose</b>	People credited with this unit standard are able to, for a previously-submerged power plant: prevent further deterioration; identify the nature and extent of damage; and evaluate action required to restore operational effectiveness.
----------------	--

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

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

---

### Guidance Information

- 1 This unit standard does not cover the retrieval of power plants from under water.
- 2 Recommended for entry: Unit 11777, *Determine repair requirements for inboard power plants and power trains*.
- 3 Definitions  
*Power plant* – the engine (petrol or diesel) and its subframe, plus ancillary equipment and systems, including water jacketed manifolds and exhaust systems, coolers (heat exchangers, intercoolers, oil coolers, gearbox coolers), raw water pumps, charging systems, drives (hydraulic and electric), refrigeration system, engine controls and instrumentation, steering system (mechanical, hydraulic, and electronic), and fuel system.  
*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 requirements to eliminate hazard/risk in the workplace.
- 4 Range  
power plant – inboard petrol or diesel, or outboard petrol or diesel.
- 5 All required equipment must be set up, started up, operated, and shutdown in accordance with workplace policies and procedures.
- 6 All work practices must meet recognised codes of practice and documented worksite health and safety procedures (where these exceed code) for personal, product, and worksite health and safety, and must meet the obligations required under the Health and Safety at Work Act 2015, Resource Management Act 1991, Fair Trading Act 1986, Consumer Guarantees Act 1993, and any subsequent amendments.

---

## Outcomes and performance criteria

### Outcome 1

Prevent further deterioration of a previously-submerged power plant.

#### Performance criteria

1.1 Actions are taken to prevent danger to the power plant, personnel, and the environment.

Range disposal of battery fluid, refrigerant and oil; dispersal of explosive gases.

1.2 Actions taken to minimise further deterioration are appropriate for the time elapsed since retrieval of the power plant from under water.

### Outcome 2

Identify the nature and extent of damage to a previously-submerged power plant.

#### Performance criteria

2.1 Submerged power plant is inspected and cleaned, and the extent of damage and deterioration is assessed in accordance with workplace policies and procedures.

Range cylinder linings, crankshaft, rods, pistons, block and cylinder head, turbocharger, injection pump.

2.2 Specialist advice regarding the integrity of ancillaries is sought in accordance with workplace policies and procedures.

Range ancillaries – electrical and electronic.

### Outcome 3

Evaluate actions required to restore operational effectiveness.

Range actions include – repair, recondition, replace.

#### Performance criteria

3.1 Required actions are evaluated in accordance with workplace policies and procedures.

3.2 Required actions are costed in accordance with workplace policies and procedures.

Range costs may include – parts, machining, labour, testing, painting, meeting the costs of any relevant survey and/or regulatory requirements, transport fees, haul-out fees, storage fees.

3.3 Required actions are confirmed in accordance with workplace policies and procedures.

<b>Planned review date</b>	31 December 2022
----------------------------	------------------

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

Process	Version	Date	Last Date for Assessment
Registration	1	27 August 1997	31 December 2019
Revision	2	20 March 2001	31 December 2019
Revision	3	16 April 2004	31 December 2019
Rollover	4	20 March 2009	31 December 2019
Review	5	14 December 2017	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 Composites Industry Training Organisation [training@nzmarine.com](mailto:training@nzmarine.com) if you wish to suggest changes to the content of this unit standard.