

# New Zealand Apprenticeship in Power Boat Systems Servicing and Repair (Technician) (Level 4)

What you will learn:

- Servicing and repair of outboard motors and inboard engines.
- Servicing and repair of power boat systems and equipment.



Credits: 230  
Duration: 4 years

  
**NZmarine  
& composites**  
INDUSTRY TRAINING  
ORGANISATION

For more information  
contact us at:  
[www.nzmacito.org.nz](http://www.nzmacito.org.nz)  
0800 600 242

| Generic Skills              | Unit standard number | Title   |
|-----------------------------|----------------------|---|
|                             | -                    | Select, use, and care for hand tools used in the marine or composite industry                         |
|                             | -                    | Select, use, and care for portable power tools used in the marine or composite industry               |
|                             | -                    | Calculate quantities and costs of marine or composite projects  |
|                             | -                    | Contribute to a project team in a marine or composite workplace                                       |
|                             | -                    | Identify and explain the causes and prevention of material deterioration in the marine environment    |
|                             | -                    | Apply health and safety procedures in a marine or composite workplace                                 |
|                             | -                    | Demonstrate knowledge of marine or composite workplaces   |
|                             | -                    | Operate mechanical plant used in the marine or composite industry                                     |
|                             | -                    | Operate simple mechanical plant used in the marine or composite industry                              |
|                             | -                    | Apply environmentally sustainable work practices and principles in the marine or composite industry   |
|                             | -                    | Collaborate within a project team in the marine or composite industry                                 |
| Knowledge and Understanding | -                    | Demonstrate knowledge of powerboat propeller operation, types, servicing, and installation procedures |
|                             | -                    | Demonstrate knowledge of power boat water jet propulsion systems                                      |
|                             | -                    | Demonstrate knowledge and install a production powerboat fuel system                                  |
|                             | -                    | Demonstrate knowledge of powerboat hydraulic principles, systems and components                       |
|                             | -                    | Demonstrate knowledge of adhesives used in a marine or composites workplace                           |
|                             | -                    | Demonstrate basic knowledge of the operation of pleasure/small craft by day                           |
|                             | -                    | Demonstrate knowledge of marine electrical systems  |
|                             | -                    | Demonstrate knowledge of forced air intake systems on a marine engine                                 |
|                             | -                    | Demonstrate knowledge of a marine fuel systems (diesel and petrol)                                    |
|                             | -                    | Demonstrate knowledge of marine engine operation  |
|                             | -                    | Demonstrate knowledge of petrol and electronic fuel injection (EFI) system on a marine engine         |
|                             | -                    | Demonstrate knowledge of carburettor system in a marine engine  |

## Practical Skills

- Launch and retrieve power boats
- Preserve and evaluate previously-submerged power plant
- Check and service power boat systems
- Explain stern drive transmission
- Inspect, test, and repair and inboard engine cooling system on a power boat
- Carry out a sea trial for a power boat
- Check and determine the suitability of a propeller for a power boat
- Inspect, test, and repair a power boat water jet propulsion system
- Install electrical systems in a production power boat
- Install an outboard motor on a production power boat
- Diagnose, repair, and test marine engine electrical wiring
- Test, diagnose, and rectify faults on marine electronic fuel injection (EFI) system
- Rectify faults on marine engine short block
- Explain marine engine management system
- Apply lubricants and sealants in a marine engine system
- Inspect and test a four stroke petrol marine engine
- Service an outboard marine engine
- Inspect, diagnose, and repair faults in a two stroke marine engine