

RYA Diesel Engine Maintenance Course

Course Outline

Learn how to look after a marine diesel engine and practice simple maintenance procedures on this enjoyable and informative hands-on course.

This course will give you the knowledge to carry out routine daily maintenance checks on a marine diesel engine and diagnose and rectify common minor malfunctions. You will learn how a diesel engine works and how all the sub-systems – fuel, oil and cooling – work. You will learn how to bleed a fuel system, change fuel filters, do an oil and filter change and replace a defective cooling water pump impeller. You will gain hands on experience working on a real diesel engine with real components but in a classroom environment.

On any small craft, a reliable diesel engine is an important piece of safety equipment to say nothing of the inconvenience and pressure on the skipper when something goes wrong. Mechanical breakdown is the most common cause of RNLI launches to assist small craft. When things go wrong at sea engineering help is usually some way away. Even in a harbour it may take days rather than hours to get help – especially on a bank holiday weekend. Yet most problems can be avoided by simple housekeeping and proper maintenance. Even simple daily inspections before setting off can detect problems and solve them in the convenience of your homeport. And if you have some basic knowledge the most common problems can often be diagnosed and perhaps fixed. At least you will be able to talk sensibly with a technician on the end of a phone line.

Format Options

One Day Course at Chatham (0900 to 1700)

Previous Knowledge/Experience

None.

Locations

[Chatham, Kent.](#)

Age

There is no minimum or maximum age limit.

Achievement (certificate awarded and ability after the course)

You will be able to carry out basic maintenance tasks on a marine diesel engine and diagnose and rectify minor problems which may occur at sea.

Basic Syllabus

Introduction – principles of the diesel engine.

The Four- Stroke Cycle. Naturally aspirated engines. Turbocharging. Intercooling and aftercooling.

The fuel system. Fuel tanks. Water-separating pre-filter. Fuel lift pump. Engine fine fuel filter. Injection pump. Injectors. Bleeding the fuel system.

The cooling system. Seawater cooling,. Freshwater cooling. Temperature Control. The thermostat. Seawater impeller pumps.

Lubrication. Engine Oils and specifications. Oil circulation system.

The air system. The airway IN – ventilation requirements, air filters. The airway OUT. Exhaust systems.

Engine Electrical Systems. Battery capacity and care. Drive belts. The alternator.

Spares and Tools.

Winterisation and servicing. Engine lubrication oil changes. Transmission system oil changes. Service Schedule.

Fault-finding.

Additional Topics Included on Elite Sailing Diesel Courses:

- Battery types and performance. Battery charging systems – alternator and shore power chargers. Split charging and relay charging systems. Engine instruments – oil pressure, coolant temperature, charging current.
- Transmission systems. Gearboxes and couplings. Propeller shafts, bearings, shaft seals, p-brackets. Propellers.
- Engine Controls. Throttle and gearshift. Morse controls.
- Troubleshooting Guidance