

### CASE STUDIES AVAILABLE

Many of the common problems with motor boats and the answers to queries from owners have been written-up as Case Studies or are reprints of articles. These are available free of charge to all boaters. They are not intended to be definitive answers to queries but aim to provide an easy to read guide for fellow boaters. Below is a list of the Case Studies available. To receive one, or more, of these send an email request to: [john@birchwoodclassics.com](mailto:john@birchwoodclassics.com) quoting the title shown.

#### **Adjusting a boat's steering system**

James Ruffell's queried on Birchwood Group facebook page how to adjust the steering to his Volvo Penta outdrive on his Birchwood 22. Response from Birchwood aficionado Simon Butler and a parts diagram and input from Volvo.

#### **Bathing platforms and engine mount**

This covers not only the purchase and fitting of bathing platforms but also examples of platforms made and fitted by owners.

#### **Bellows replacement**

An explanation of the job of the bellows on an outdrive, how to check them and how to replace damaged bellows. Complete with pictures, technical illustration and references to associated websites.

#### **Drive Shaft replacement**

The replacement of the shaft on John Pridmore's Birchwood 25, in 2001. What started as the ingress of excessive river water into the engine bilges and repacking of the stern gland resulted in a major exercise. Also see 'Water in Bilge'.

#### **Cooker replacement**

A report on replacing a cooker that had not passed the Boat Safety exam. A search on-line found a unit that was fitted perfectly into the cooker recess on a Birchwood 25.

#### **Console (dash board) refurb/renewal - instruments - electrics**

This is in more than one part as it includes article reprints from MBO and info from a Birchwood owner.

#### **Decking and flooring**

This report on decking and flooring suppliers, produced from the 2018 Southampton Boat Show, is updated as new info and recommendations are provided. The report provides a summary of products offered and details of the suppliers.

#### **Engine overheating**

This study explains some of the reasons for a boat engine to overheat. It uses the 'Sea Tiger' on a Birchwood 25 to describe 'cures'. Thanks are given to [freemancruisers.com](http://freemancruisers.com), Jones Boatyard, [sheridanmarine.com](http://sheridanmarine.com), [vetus.com](http://vetus.com) and WaterMota for advice and information. Also to Tony Martin of ASM who actually relieved the pressure!

#### **Flybridge removal**

See Case Study 'Transporting a Birchwood 48'.

#### **Fridge installations**

How owners have installed/replaced fridges.

#### **Gas water heater installation**

This covers the sourcing, re-siting and fitting of a new gas water heater.

#### **GRP patch - ready made - on roof**

Barry Cropper's use of a fibreglass patch on the roof of his Birchwood 33 is described and supplier details provided

#### **Heating repairs and installation**

A guide to how warm air systems work and owner's comments.

#### **Impeller replacement**

Guide to fitting a new impeller on inboard engines

#### **Renovation – the oldest Birchwood**

The renovation of what may be the oldest Birchwood boat is covered in this Case Study.

#### **Birchwood 29 renovation**

Garry and Rosemary Mills' renovation of a Birchwood 29 Sedan Sport found in a yard. It was just an empty hull. Now fitted out to an exemplary standard. They also refurbished a Birchwood 25 Executive.

#### **Birchwood 33 restoration**

This five page study covers the total refurb by Simon Butler including: window leaks, fitting window seals, woodwork, locker upgrades, new seating, panelling, electrics, hull polishing, rubbing strakes, and its launch in 2019.

#### **Making of a Birchwood**

Using historical pics and data from Birchwood a clear picture is given of the build quality of Birchwood boats. An appendix describes the production of a Shetland 27 as experienced by its owner and John Pridmore.

#### **Marine electrics – rewiring a boat**

This covers many points made in Pat Manley's book, *Essential Boat Electrics*, as used in an article on the website, [safeskipper.com](http://safeskipper.com). It can be used in conjunction with the two other Case Study reports from Birchwood Classics, 'Marine electrics the basics and controls' and 'Rewire guide theory and practice'.

#### **Rewire guide theory and practice**

This illustrates how wiring is built up from the 12 volt battery to the engine and other electrical parts. The info is extracted from the website of: [newwiremarine.com](http://newwiremarine.com) and the full address of this site is included.

#### **Marine electrics – the basics and controls**

Basic elements of volts, amps, watts and ohms covered in simple terms. Battery capacity and demand is explained, circuit design shown and power distribution, wires, terminals and fuses described.

#### **Outboard engine fitting**

This describes how owners have fitted transom platforms and outboard engines to their boats.

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**Propeller selection**

Reprint of article in Practical Boat Owner, June 2019. Covers propeller theory, pitch, diameter, hull resistance, cavitation and blade design. Helping you to choose the correct prop for your boat. Contact details for prop specialists are given.

**Roof cover**

The consistent problem of a leaking cockpit roof was overcome with the purpose made cover fitted to John Pridmore's Birchwood 25. Many have followed this quick fix. But you should see what other owners have done for permanent cures.

**Rubbing strakes – inserts – suppliers – fitting**

Suppliers of inserts and rubbing strakes provided, as well as Simon Butler's fitting of an alternative to his Birchwood 33.

**Showers - repair/replacing**

A first draft details a repair on an owner's boat, the fitting of a shower and an article on a water saving shower.

**Toilet installation**

An owner describes how he fitted a new toilet into his Birchwood.

**Transporting a Birchwood 48**

The transport of Birchwood 48, 'Travel Blue' from the Shannon to the River Trent near Newark required its flybridge to be parted from the superstructure. The owner, John Ridlington also provided pics showing his renovation work.

**Raw water strainer on Volvo Penta AQ140A**

This is from an issue of Motor Boat Owner where the editor has answered a query about the location of the strainer. Good advice given as well as contact details for Volvo Penta.

**Upgrade of a 58ft motor yacht**

This is a reprint from the September issue of Motor Boat & Yachting and covers the refurb of a Fairline Squadron 58.

**Volvo Penta marine steering system**

Pages from Volvo illustrate mechanical and hydraulic systems and show how they operate..

**Volvo outdrives/renovation**

Developed from queries on facebook, shows illustrations of outdrives and describes repair and renovation.

**Volvo Workshop Manual**

This is the manual provided by Volvo for its marine engines; AQ105A, AQ115A, AQ130A, AQ130B, AQ130C, AQ165A, AQ170A, AQ170B, AQ170C.

**Water in bilge - gland packing**

In July 2020 Kate Tarr found water in the engine bay and cabin of her Birchwood 22. Owners on facebook suggested the gland packing should be checked. This report shows the problem and describes how it was resolved by referring to an issue of PBO which features Ben Meakins' guide on how to repack a stern gland.

**Wheelhouse roof refurb**

A complete renovation of the cockpit roof of a Birchwood 25 is described and supported with pict of work in progress.

**Windows - leaks - and at other places**

This covers much of the work of Simon Butler on his Birchwood 33 with emphasis on the leaks all around the boat. It is supplemented with other boat types having similar problems and fixes. (Reprinted in GOBA News, Winter 2021)

**Windows - refitting**

This is another interesting page from an issue of MBO. There is also a list of window suppliers.

**Windows - replacement**

Examples are shown of replacement screens, windows and hatches.

**Winterising Tips (Pages 1 & 2)**

This was published in the Winter 2020 issue of 'GOBA News' the magazine of the Great Ouse Boating Association.

**More?** Additional Case Studies will be produced as queries on specific subjects arise.

If you have a subject you want covered please let me know: [john@birchwoodclassics.com](mailto:john@birchwoodclassics.com)

**Birchwood brochures**

Birchwood Classics has the most comprehensive library of information on Birchwood boats. Copies are available FOC from [john@birchwoodclassics.com](mailto:john@birchwoodclassics.com) It also maintains a library of photos of owner's boats and has produced Owner's Manuals for the: 22, 25, TS 290, TS 340 and the 380. The 27, 29 and 33 are being considered.

*Birchwood Classics is a not-for-profit website providing information, gathered over 30 years, on Birchwood boats. Income from sales of decals and owner's handbooks is used to cover some of the costs associated with production and the website. All other information is provided FOC via email. Donations are welcome as is additional information from owners. [birchwoodclassics.com](http://birchwoodclassics.com) is one of the top performing sites on the Internet.*

**Birchwood**

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