

BOAT REPORT **BROOM OCEAN 34**

Broom revived the Ocean name with their 31 displacement cruiser last year. Now the baby of the range has a larger semi-displacement sister.





WHEN Broom introduced the Ocean 31 last year (see MBM Aug 93 p34), it signalled a return to their roots as builders of high-quality inland waterways cruisers.

With its river-kindly hull, standard single engine and displacement speeds, the boat provided the perfect complement to the rest of the company's range of fast offshore cruisers. Yet it offered the same high standard of interior finish, plus coastal capabilities, and the option of twin engines for owners with more extensive seagoing plans. It also, at a stroke, halved the cost of entering the Broom range.

The 31 had no real competition from British builders, but was firmly aimed at the sector of the market occupied by the Dutch steel displacement cruisers which became so popular during the late 1980s and early 1990s. The

devaluation of the pound in 1992, plus the ability to build a more modern line easily, in GRP, gave Broom a big price and design advantage.

The success of the boat has prompted the Norfolk builders to improve on their ideas in a larger form, with the semi-displacement Ocean 34 launched at this year's London Boat Show.

The model exhibited featured one of the first installations of Perkins Sabre's new jointly developed 135hp naturally-aspirated six-cylinder diesel, and we were fast off the mark when it came to arranging a test.

Design

The Ocean 31 and 34 share the same designer, Norfolk-based Andrew Wolstenholme, who was also responsible for the faster 33 and 36 models

The open-plan design (above left and right), with the standard arrangement of a single helm station on the aft deck (below), gives a very spacious feel which will appeal particularly to those who harbour any claustrophobia. Those who don't like noise will also be pleased, although access to the encapsulated Perkins Sabre (right) is best with floorboards removed. Below right: a Broom speciality, the aft cabin.

in the Broom range.

The 31 is of simple hard chine displacement form, but for the 34 Wolstenholme has drawn a traditional semi-displacement hull, with a round bilge forward and flatter sections aft to create the necessary lift.

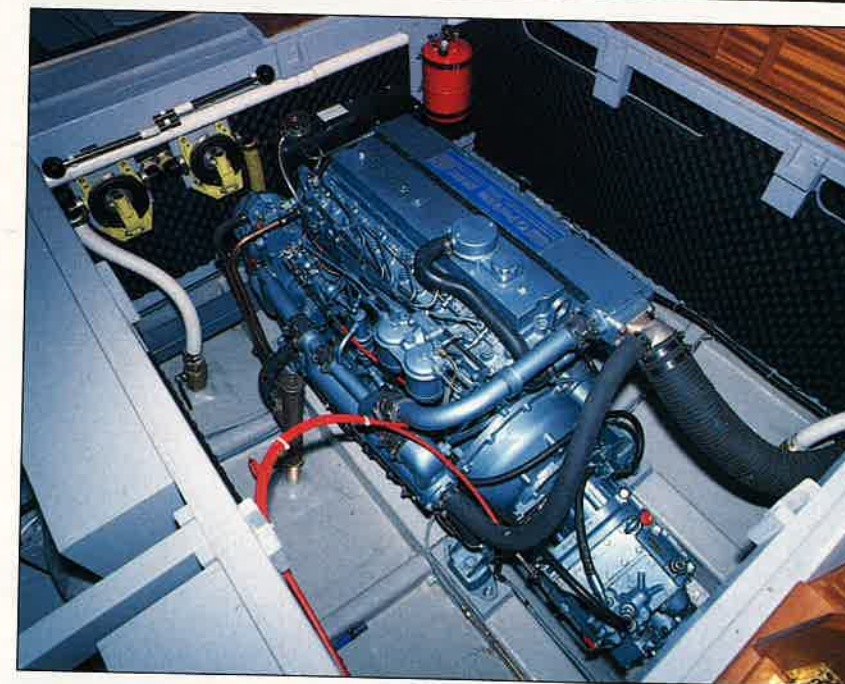
A single sprayrail on the forward sections will come into play on higher-powered examples, while a knuckle in the topsides deflects the bow wave at slower speeds. The result is a hull which has no chine or rail at the waterline to make an annoying 'wave slap' noise when cruising on the river or when moored at night — a welcome feature for all the crew, insomniac or not.

On single-engined 34s, the shaft runs through a deep keel and the propeller is protected by a skeg carrying the large rudder's bottom bearing, while a shallow tunnel in the hull above gives the necessary clearance. On twin-engined versions, the full keel will still be incorporated in the design but faired off aft, although still deep enough to provide good protection for the sterngear.

Accommodation

Broom have followed their normal practice in having an aft-cabin layout, with the two main sleeping areas therefore divided by the saloon for maximum privacy; given the saloon settees converting into a generous single, this makes five berths, though a double could be provided here if requested. One major change of approach, though, is an option of an open forward cabin, a continental idea which often finds favour in the UK, especially with female crewmembers.

As with other recent Brooms, the standard helm position is on the aft deck, and for most owners this will prove sufficient. However, an interior helm station (to port) is available as a





Many hours of careful, skilled work is required before a GRP craft can go into production. Key to the new boat's overall quality are the wooden plugs from which the moulds are taken. Seen under construction here at Brundall are (from the top) the plugs for the aft deck dodgers, hull and superstructure of the Ocean 34. Bottom: the cavernous engineroom of the first 34, before the sound-deadening fore and aft bulkheads were added (compare with the photograph on p75).

£3500 option. Another influence from Dutch steel cruisers and earlier Broom models is the optional sliding wheelhouse door (also to port) at a cost of £985.

So many of Broom's customers spend all their time driving from the outside helm that they have developed this as a comfortable all-weather area, with solid GRP dodgers around the rails, cushioned seating and a quickly-erected hood which snugly closes-in the double helm seat and forward area. In cold conditions, opening the saloon door allows you to share the heat from down below, provided the cover is zipped tight.

The saloon is reached via a clear sliding perspex door to port, and a flight of steps. On our test boat, the first off the line, these steps were on the steep side; on future models this is likely to be altered, with the addition of a post at the bottom to provide a handhold.

Your immediate reaction when entering the saloon is how large it is. This is partly due to the 34's generous beam, partly thanks to the absence of a lower helm, and partly because of the open forward area.

The settee to starboard is C-shaped, with room for up to six people well out of the way of anyone using the rest of the saloon. Beneath it are storage drawers, while outboard is a narrow shelf. The standard settee makes up into a single berth, but could be modified to provide a double.

The lounge windows have sliding sections port and starboard for ventilation, plus deep channels to collect condensation. Headroom is 6ft 2in (1.88m), and a section of the overhead can be removed should it ever be necessary to lift out the engine.

To port is a full-length sideboard, with a fiddle shelf above and three lockers underneath. These are wide, but only medium-depth to the ship's side; one is tailored for bottles and glasses.

At the forward end of the saloon is a three-quarter-height hanging locker which would take oilskins or coats. An annoying feature is the use of finger-hole catches for closing doors and drawers, here and throughout the boat. Most other builders have now replaced these with press-to-lock catches, which are positive and convenient yet still attractive.

Three steps lead down forward to the galley, starboard. This is big and open, with a good worktop area surrounded by a wooden fiddle. The stainless steel sink is of good proportions, showing the importance Broom attach to serious living on board their boats. Similarly practical is the rail around the three-burner gas hob, to keep pots from sliding off. Beneath is a combined oven/grill, plus a fridge. Storage space is only moderate, with five small lockers overhead and two medium lockers below.

Opposite the galley, to port, the boat's second toilet compartment is a good size, attractively finished in white moulded GRP and grey Formica. The moulded sink is flanked by a good worktop area, with a locker below it. A shower is an optional extra.

Forward again is the open dinette/cabin area. In the standard boat this has just a cleverly-tailored curtain to close it off, but a bulkhead door are a no-cost option. The settees convert into two very large single berths or a double, using the fiddled five-person table. Storage is a way of two small lockers under the seats, plus shelf outboard and forward, though this would

Broom Ocean 34

Engine: single Perkins Sabre M135 diesel, 135hp at 2600rpm, 6cyl, 6000cc.

Conditions: River Thames. **Load:** fuel 50%, water 50%, crew 4.

rpm	knots	gph	lph	mpg	range	trim	sound levels dB(A)			
							saloon	fwdcab	aftcab	aftdk
800	3.6	—	—	—	—	—	62	63	67	56
1000	4.6	—	—	—	—	—	62	62	66	63
1400	5.8	1.2	5	4.8	432	—	66	65	68	61
1800	7.0	2.1	9	3.3	300	—	72	70	77	67
2000	7.6	3.0	14	2.5	228	—	75	73	79	68
2200	8.5	3.7	17	2.3	207	—	77	76	81	71
2400	9.6	4.9	22	2.0	180	—	80	78	83	73
2600	10.5	6.2	28	1.7	152	—	82	81	86	76

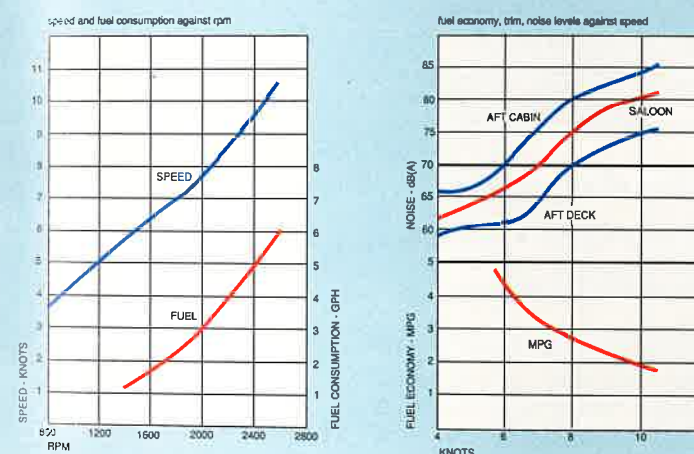
(range figures allow 20% margin)

Loa	34ft 0in (10.4m)	Air draught (screens down)	8ft 5in (2.6m)
Lwl	32ft 6in (9.9m)	Displacement	7.5 tonnes
Beam	12ft 4in (3.8m)	Fuel capacity	90gal (410lt)
Draught	3ft 2in (0.9m)	Water capacity	80gal (365lt)

Price: from £82,500 ex VAT, £92,185 as tested.

Builders: C J Broom, Brundall, Norwich, Norfolk NR13 5PX. Tel: 0603 712334.

Suppliers: Val Wyatt Marine, Willow Lane, Wargrave on Thames, Berkshire RG10 8DY. Tel: 0734 403211.



not give much room for bedding and clothes.

The aft cabin, reached via three steps in the port corner of the saloon, is full-width and large, with a tapered central double berth. To port is a dressing table, plus three drawers with catches to keep them closed, and forward is a three-quarter-height hanging locker with a fiddled shelf on top. To starboard is a second hanging locker, while two drawers are found under the bed. Either side of the bedhead are good-sized lockers (the one to port is lined, but the other is not), with access through to the rudder greaser.

The large en-suite bathroom has 6ft 1in (1.86m) headroom, a large storage locker and a separate shower stall. A sliding window and overhead vent supply the ventilation.

The joinery throughout the boat is in light mahogany, finished to Broom's usual high standard both in visible areas and inside lockers and drawers.

Exterior

The major feature of the exterior is the aft deck, which has a useful seating and entertaining area as well as the helm station.

The helm itself is forward to port, with two bucket seats facing a simple but sufficient console which contains engine instruments, an echo-sounder, a log and 12 ready-use switches. The single Morse control lever is to the right of the wheel, while to the left is a large chart area with a hinged perspex lid.

A good feature is the grey gelcoat finish of the dashboard, which will reduce glare from the sun. The windscreens are large, with two wipers, and they hinge flat for negotiating low bridges, as does the goalpost mast.

At the aft end of the deck are seat/lockers, port and starboard; the former has room for ropes or loose items, while the latter houses three 15lb (7kg) gas bottles. On the transom are four large fender stowages. Between them is a vertical ladder down to the full-width bathing platform, which itself is a useful place to stow a tender.

Raised aft decks can be draughty places, but GRP dodgers all round help to alleviate this. The canvas cover is particularly well designed, giving full headroom and a snug area forward, yet quick access to the decks when required.

The good-width side decks have a moulded non-slip finish and a raised gunwale lip. Solid outboard guardrails, with a solid lower rail, offer security when you are moving about, backed up by inboard rails on the cabin. Chain breaks amidships, port and starboard, allow for easy boarding, and tie in with rubber-covered steps in the topsides, though the flare of the hull makes these difficult to locate with your feet when climbing down.

Mooring is taken care of by good-size 10in (250mm) aluminium bollards forward, midships and aft, while the anchor is handled by a manual windlass and an excellent stemhead stowage. There is no foredeck locker, but you have a good clear area for working on.

Engine

The 34 we tested featured one of the first installations of the new Perkins Sabre M135 naturally-aspirated six-cylinder diesel. One of the

first fruits of the joint venture between the two companies, this promises a great deal for the mid-size, slower motorboat designs which are coming back into vogue.

There was a time when any number of 120hp naturally-aspirated engines were available on the market, giving steady, reliable performance at everything from full-power to tickover. Gradually, however, turbocharged units took over, giving the same maximum power from considerably smaller and lighter blocks. These are fine for planing craft, which operate most of the time at 50% power or more, but on vessels that spend long periods at low speeds the turbocharger can soot up and the increased noise and vibration of the faster-revving units can become wearing.

The Ocean 34 is perfect for a test of the M135's abilities and benefits. At river speeds of 4-5 knots, 20hp or so will be quite sufficient, and smooth running becomes the priority, but if you want to push the boat up to 10 knots for coastal passages you will probably need close to 100hp. The Perkins Sabre should be equally suited to both ends of the spectrum.

A host of other inboard diesel options are available, from Perkins or Volvo Penta, ranging from a single 59hp giving a maximum of 8 knots, designed mainly for river use, up to twin 130hp engines with a 14-knot top speed, aimed at the predominantly seagoing owner. The standard price is quoted with the single 59hp MD22 Volvo; the 135hp Perkins adds £3100 to this, while twin 130 Volvos will set you back an additional £19,950.

On the boat we tested, the M135 was mounted conventionally under the saloon, driving through a standard shaft and prop. Access had not been completely worked out, complicated by the fact that the engine is boxed in by soundproofed fore-and-aft bulkheads on each side. This follows up a suggestion we made after testing the 31, when we felt the effectiveness of the soundproofing was being reduced by the empty space in a full-width compartment which housed only one engine; we are pleased to report that noise levels on the 34 are excellently low as a result, but it does mean that the two small hatches in the saloon sole give only limited access. For more involved work you have to lift the carpet, and take up the floorboards as required, though this is not a great problem as they are conveniently sized and easy to remove.

It is notable that even the hidden woodwork down here is treated with full coats of gloss paint, and all edges smoothed and rounded off. This attention to detail, continued throughout the boat, goes a long way to explaining the popularity of the craft with experienced owners and their keen appreciation of secondhand values.

With the boards up, you can easily reach the inlet strainer, the fuel filter and the two manual pumps. One of these is a bilge pump back-up, and the other empties the optional holding tank.

Handling and performance

The Thames in flood provided conditions that would tax any craft, but on our main test run the 34 handled them as flawlessly as we would expect from the marque.

Our model had the optional bow-thruster fitted. We would recommend this to anyone buying a boat of this cost and sophistication, but even

without it the Broom, with its large rudder and easy steering, could be turned virtually in its own length. Where the thruster came into its own was in enabling you to put the bow alongside with precision, no matter what the cross-current or sidewind. Underway, the 34 tracked a straight course with minimum attention to the wheel.

The engine, too, performed as well as we had hoped. At normal river speeds of 4-5 knots (4½-5½mph), it simply purled along. Down in the saloon it was present only as a background hum, while on the aft deck it was virtually unnoticeable, with none of the exhaust bark that can be annoying when you are sitting right above it.

But it was when we eased the throttle open that we got the greatest surprise. You could tell the engine was running faster, because the pitch of the note went up, but there was almost no increase in the actual amount of noise, right up to 7 knots.

Only at maximum rpm did the noise start to intrude, and even then only down in the saloon, and to the kind of level we would normally expect.

The actual figures were most impressive: 63dB(A) for the aft deck and 62dB(A) for the saloon at 4.5 knots (5mph); 64dB(A) and 66dB(A) at 5.8 knots (6.5mph); and 67dB(A) and 72dB(A) at 7.0 knots (8mph). Maximum figures were 76dB(A) and 82dB(A) respectively.

The top speed we recorded was 10.5 knots, which gives a handy reserve to punch a tide when working coastal and estuarial waters.

We were unable to run fuel consumption measurements on this test, but have estimated results from the manufacturers' own figures. These show a miserly 4.8mpg at a shade under 6 knots, rising as you would expect of this type of design to 2.5mpg at 7½ knots and 1.7mpg at the full speed of 10½ knots. At river speeds, you can expect consumption of under 1gph.

Conclusion

Broom have repeated and improved the successful formula of the Ocean 31, and produced a boat which will attract owners both old and new.

The price is extremely competitive, especially when compared with equivalent Dutch steel models, while the standard of finish matches the name Broom have established for themselves over 80 years of building high-class riverboats. Sound levels and economy of operation at seagoing speeds also compare most favourably, while the layout options reflect the versatility that buyers in this market sector now expect.

After our day with the new Perkins, we would recommend it as the single-engine buyer's best option. At river speeds it just purrs along, while the power in reserve is more than sufficient for coastal use. It might be tempting to go for the lower power option and save £3000, but in our view, quite apart from the extra fuss of the smaller engine, you will have a much less saleable boat when you come to trade it in.

As for whether you should opt for twin engines if you have coastal cruising in mind, the debate will probably go on for ever in Britain. Given the choice of a single Perkins Sabre with a well protected prop or a more expensive and noisier pair of four-cylinder diesels, there is surely a very good case to be made for the former. It will be interesting to see whether the market agrees. □

Perkins Sabre M135

The Perkins Sabre M135 is the fourth unit to be jointly developed by these well established British marine power companies.

The 6lit straight-six diesel utilises a Perkins core engine and is marinised by Sabre at their Wimborne, Dorset development facility.

Although the cubic capacity of the engine is large for its rating, compared with turbocharged units, clever design of the ancillaries has produced a compact package which Perkins Sabre claim is the narrowest and lowest in its class.

The engineering is interesting as well, with gear-driven seawater and freshwater pumps, an integral plate engine oil cooler and a freshwater-cooled exhaust manifold, to name just three features.

Maximum performance is 135hp at a lazy 2600rpm.

Service intervals (oil changes) are a very generous 400 hours. This is particularly beneficial for slower boat applications, where average engine hours tend to be much higher (not least because it takes longer to get from one place to another).