

Boat Report

Broom 35CL

Wind against tide off Cowes bore an uncanny resemblance to wind against tide in the Thames Estuary. How would this river-gearred cruiser fare in a tough but representative test of its abilities?



The 35 was the first model from the Norfolk yard of C J Broom to find itself with the builders' new CL designation, for 'coastal'.

This effectively replaces the rather misleading Ocean name, which previously marked out the company's evolving displacement and semi-displacement range aimed at inland and coastal work; boats simply called 'Broom' through that same period, which have full planing hulls, are now termed 'OS', denoting their offshore intentions.

However the CL term in itself encompasses two distinct types of hull. The 38 (see MBM Jul 97 p34) and a 42-footer currently in development have hard-chine forms, with significant keels, capable of speeds from river pace to 20 knots and beyond. But their two smaller sisters offer more rounded forms (again with keels), of the type suitable for extended use on inland waters whilst still offering seagoing capability at lower speeds.

We tested the Ocean 34 in its aft-cabin (see MBM Apr 94 p72) and Sedan (see MBM Feb 98 p60) versions, on the rivers Thames and Trent respectively. So we were pleased to arrange a sea trial for the new aft-cabin 35CL, the 34's direct replacement, to see how it would cope with much harder conditions.

Blustery weather allowed the Solent to simulate suitably angry estuary antics, helping to provide a full range of answers.

Decks

The guardrails have a midships break both port and starboard, in each case accompanied by a mid-height topside step which helps when you are boarding from low quaysides.

The side decks themselves are an easy 11in (28cm) wide. A combination of a gentle gradient and a single step takes them from bow to raised aft deck, giving the



boat what appears to be an uninterrupted sheer rather than the broken, stepped outline of earlier aft-cabin designs.

Up at the sharp end there is plenty of clear deck space in which to work the ground tackle, which includes a manual windlass as standard. There is no foredeck locker, the chain being accessed via the forward cabin.

Mooring hardware comprises 10in (25cm) cleats fore, aft and amidships.

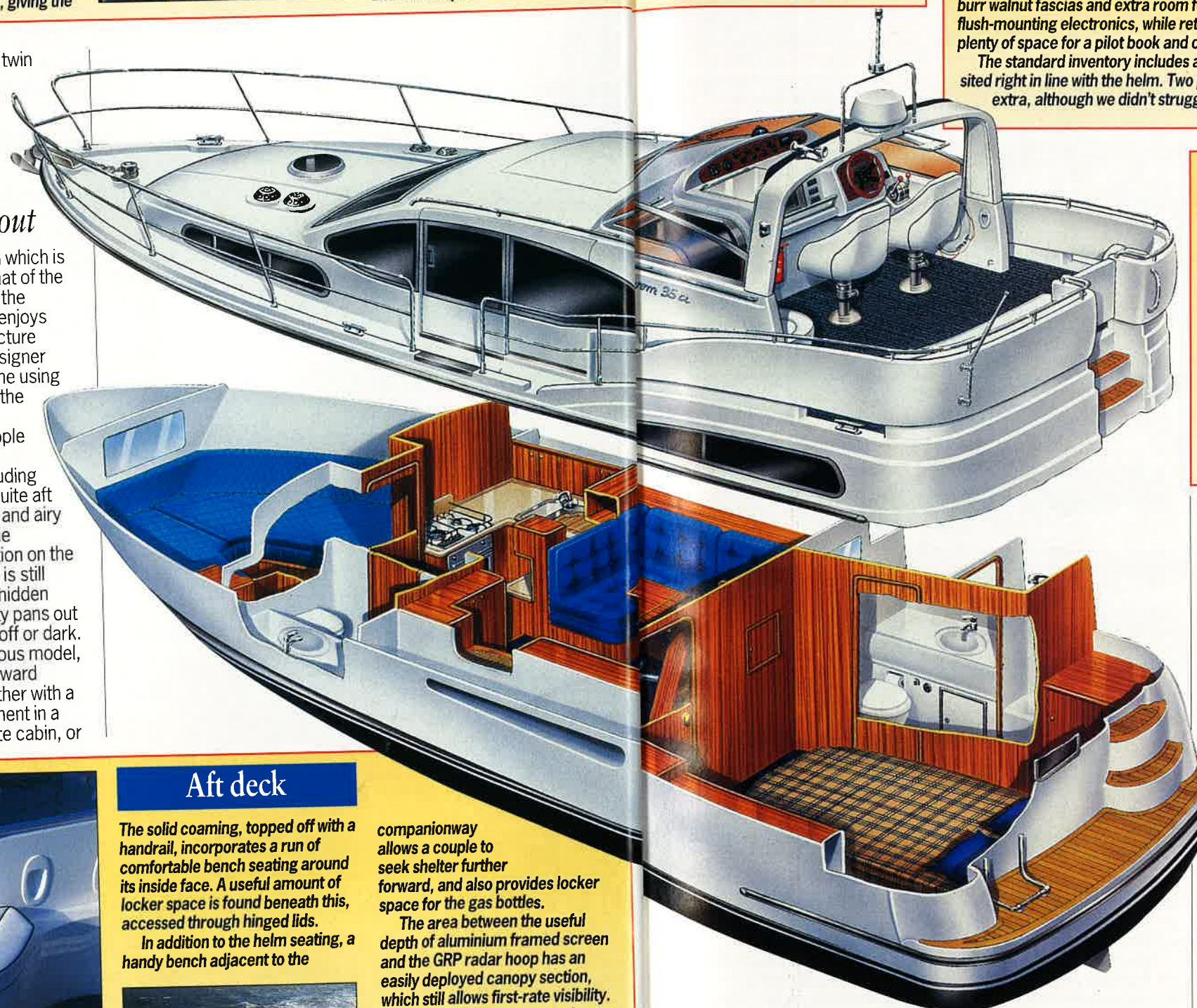
The engine package, twin 170hp Yanmar diesels, added more interest, being the most powerful option yet fitted to this hull.

Design & layout

The 35CL uses a hull which is almost identical to that of the Ocean 34, except in the transom area, but it enjoys an all-new superstructure drawn by original designer Andrew Wolstenholme using the style he set with the popular 38.

Much of what people liked about the 34's layout remains, including its comfortable en-suite aft cabin, the spacious and airy saloon and the single protected helm station on the aft deck. The galley is still forward and down, hidden enough to keep dirty pans out of sight but not cut-off or dark.

As with the previous model, Broom offer the forward accommodation either with a vee-berth arrangement in a completely separate cabin, or



Aft deck

The solid coaming, topped off with a handrail, incorporates a run of comfortable bench seating around its inside face. A useful amount of locker space is found beneath this, accessed through hinged lids.

In addition to the helm seating, a handy bench adjacent to the



companionway allows a couple to seek shelter further forward, and also provides locker space for the gas bottles.

The area between the useful depth of aluminium framed screen and the GRP radar hoop has an easily deployed canopy section, which still allows first-rate visibility. You can batten-down fully using a rear section to turn the area into an enclosed wheelhouse.

When required, the hoop can be dropped quite readily, reducing the boat's air draught to just over 10ft (3m).

Helm

The helm position offers two individual adjustable bucket seats on pedestals. These are comfortable to use, although, given the usual shortage of deck storage on aft-cabin boats, a moulded plinth incorporating a couple more lockers would be a good option.

There is room to stand if preferred, and the wheel and throttles fall readily to hand.

Compared to the Ocean 34 you find several improvements, including smarter burr walnut fascias and extra room for flush-mounting electronics, while retaining plenty of space for a pilot book and chart.

The standard inventory includes a Raytheon Bidata speed and depth unit, plus an easy-to-view compass sited right in line with the helm. Two pantograph wipers clear the windscreen effectively; demisters are an extra, although we didn't struggle with misting problems on our damp and cool test day.



Bathing platform

A neat set of easily negotiated steps emerge through a GRP door in the fully moulded coaming. This makes a world of difference when you are boarding across the stern, although a welcome addition would be another handhold to the left of the steps, to back-up the one on the right.

The teak decking to the platform is an extra, as is the case with the other deck areas.



better aft deck layout.

The saloon's supplementary door out onto the port side deck is retained, and is a sensible feature, offering quick access at locks and extra ventilation when cruising on often airless inland waters. But the more rounded superstructure tucks its slide-track within the windowline moulding, making for much cleaner lines.

Underwater configuration depends to some extent on the engine option chosen. For single installations, the shaft emerges from the central keel and a shoe-extension protects the propeller and supports the rudder. For twin installations, the keel is retained, and is of sufficient depth to ground before prop tips and rudders.

The forward sections of the hull are round-bilge, and quite full, so as to give a useful reserve of buoyancy at sea and plenty of volume to the accommodation. A chine develops halfway back, and the sections shallow to a deadrise

of 5.5° at the transom.

A single sprayrail runs well below the waterline at the bow, and a knuckle is located well above it on the topsides. The big advantage is that there are no flat surfaces against which water can slap and tickle at the mooring; the downside is that the positioning is less efficient at knocking spray well away.

Twin 170hp Yanmar 4LH-DTE diesels, as fitted to the test boat, are the most potent engine installation offered. The standard, for twins, is a pair of 130hp Volvo Penta TAMD31Ls. Yanmar's 140hp 4LH-HTE model is unlisted but worth consideration. Single-engine choices run from the standard 62hp Nanni, through a Perkins Sabre M135L, up to a 200hp Volvo Penta TAMD41P.

Handling & performance

The 35CL offers no surprises when you first take her out. Handling at low speed is

with a convertible dinette in the vee and no bulkhead to make the area more open-plan. A day toilet is included, whichever layout you opt for.

The differences are found in an abundance of subtle

improvements, not least in much improved access from the now curved bathing platform, by way of moulded steps rather than a ladder. Their offset location to starboard also makes for a

vice-free, both ahead and astern, especially with helm and throttle worked together.

The generous and fairly low side decks make it easy for the crew to do their job, and visibility from the helm is usually good enough not to require guesswork or called directions, even with the full canopy in place.

At river speeds, little work is required on the helm, which totals a manageable 4¼ turns lock to lock. You can drop to one engine with only a small amount of corrective helm, and the Broom swings easily enough against the working motor. The only glitch if opting for the twin 170hp Yanmars are the fairly high idle speeds of 4.7 knots on two and 3.5 knots on one; extended periods inland with no seagoing breaks would likely result in bore glazing and turbocharger sooting problems.

Whether using one or two engines, sound levels are very restrained and that same lazy feel is maintained up to 8½ knots. Our calculations indicate a range of over 500 miles at this pace, considerably better than a



Saloon



Treadmaster-covered steps lead down from the aft deck into the saloon, or you can enter via the sliding door from the port side deck, which has its own neat pull-out step. Headroom inside is around 6ft 2in (1.89m).

With no interior helm to intrude, the sideboard extends right past this midships access to offer additional lockers. These include a unit geared for a television and video player, as well as a cocktail cabinet.

As expected on a Broom, the mahogany joinery is executed to an exacting standard; all flat surfaces incorporate fiddles, and all cupboard interiors are lined in wood. The thick carpeting is bound and all hatches are edged.

The U-shaped dinette will accommodate six people, and there is certainly space to add a further couple of stools if required. It is shame that the stowage within the seat-base is perhaps the least well thought-out part of the boat; although there is a useful chart drawer, the lockers are unnecessarily awkward to get at, with the seat cushions attached to the wooden hatches being too large for easy handling.

The fuel cocks are located beneath the rearmost section of the dinette.

Forward cabin

There is standing headroom over the dressing area of the forward cabin, while the vee-berth arrangement is wide enough at the apex to avoid any two occupants playing footsie; the mattresses each measure 6ft 2in (1.89m) long by 2ft 2in wide (0.67m).

Two hanging lockers are supplemented by a couple of deep drawers within the bunk-base, and there is a large void towards its foot for spares and the like.

Potentially of appeal to owners foreseeing only occasional guests, an optional layout offers a more rounded convertible dinette arrangement, with a removable backrest, in which case the fixed bulkhead is replaced by a curtain so that the area has day and night uses.



Day toilet

The forward toilet compartment is largely of GRP, including a moulded-in basin of useful proportions, which makes it easy to keep clean but rather plain.

It is fine for use as a day toilet, or for a lick-and-a-promise wash, but showering will be more easily accomplished in the en-suite facilities aft.

The toilet itself was of the manual variety on our test boat, but electric versions can be specified instead. A holding tank is an extra, which is odd on a boat clearly intended to be suitable for inland cruising.

Stowage is provided in a cupboard beneath the sink, ventilation by a fixed vent and also an opening side port.



twin-engined Dutch steel cruiser of equivalent length would usually achieve.

Push the throttle further and the Yanmars propel the boat onward without obvious strain. The bow rises to its maximum trim before settling down half a degree or so beyond 17 knots. On a conventional planing boat this would represent the point where it was starting to work better, but on this traditional

semi-displacement hull it served as a warning that maximum design speed had been reached and exceeded.

Broom quote a top speed of 16 knots for the twin 170hp Yanmar installation, but we measured 19.7 knots on our test boat with nearly full tanks but no cruising inventory.

Heading down Southampton Water at close to this pace, past Calshot and across to an

Galley

The U-shaped galley is nicely lit, well ventilated and easy to work in. There is plenty of work surface, with our test boat featuring a non-standard Avonite top.

Stowage is also good, boosted by a range of cupboards outboard and by the eye-height peninsula that separates the galley from the main saloon area. A double cupboard for larger items resides under the 1½-bowl sink, while an adjacent gashbin is let into the countertop itself.

The three-burner gas hob is dressed with a stainless steel fiddle, a sensible feature even if you are most likely to be cooking alongside a riverbank, as the wash of an inconsiderate boat can easily upset the soup.

Built-in below is a grill and oven, and opposite are a fridge, with a freezer compartment of useful proportions, and a cutlery drawer.



Aft suite

The aft cabin is dominated by a very comfortable-looking 6ft 4in (1.93m) by 4ft 5in (1.37m) berth. Despite its size, there is clear room to get right round it.

You sit on one edge of the berth to use the dressing table, which forms part of a run of cupboards and drawers along the port side. This includes a hanging locker, and a further wardrobe is situated to starboard.

The berth itself has small side-lockers together with a couple of deep drawers in its base. Remaining space underneath is taken up by the water tank, and by access to the steering gear.

A cupboard in the forward bulkhead hides the electrical panel and main battery switches. The escape hatch is incorporated into the rear bulkhead, and overlooks the bathing platform.

The en-suite facilities are a useful size, with the shower tucked into its own cubicle. As with the forward toilet compartment,

however, it feels a little bland, not least because the basin and associated work surface are left as bare mouldings. The only stowage is a lined cupboard beneath the basin.



easterly Force 5 wind against a lively current, the 35CL was happily hauling into waves from anywhere forward of the beam. But it was a wayward child downwind, requiring plenty of corrective helm to keep close to track. We did not press the case beyond recovery, but there were occasions in the 6ft-high, steep-sided seas that it felt as though a broach was possible, given

inattention or inexperience.

The answer was simple. Throttling back to the low teens meant the stern sat lower and everything was perfectly controllable. We found 14 knots restrained in terms of helm effort and noise levels.

At this speed, the boat's range should be around 280 miles (100 miles better than flat-out), and the helm steadies to the point where a

good autopilot ought to have coped easily on all points of the compass in the conditions of our test day. Should conditions quickly worsen, as they can in estuarial waters, lowering the speed again brings further gains in handling prowess, which is a very useful trait.

Typical of its hull form, the 35CL is a wet boat, readily throwing large quantities of water about, much of which

lands aboard. With just the forward canopy in place, spray is readily sucked back inside the helm area, so you would want to deploy the rear sections as well if planning a faster passage into anything other than a flat sea.

Several positives can be noted, however. The wipers do a good job of maintaining visibility. The reserve of buoyancy forward inspires

Engineroom

Two aluminium-framed hatches in the saloon sole lift to allow quick engineroom checks, including access to dipsticks and to the manual bilge pump. For anything more serious, you roll back the carpet and lift another section of sole, which is faced with loaded insulation.

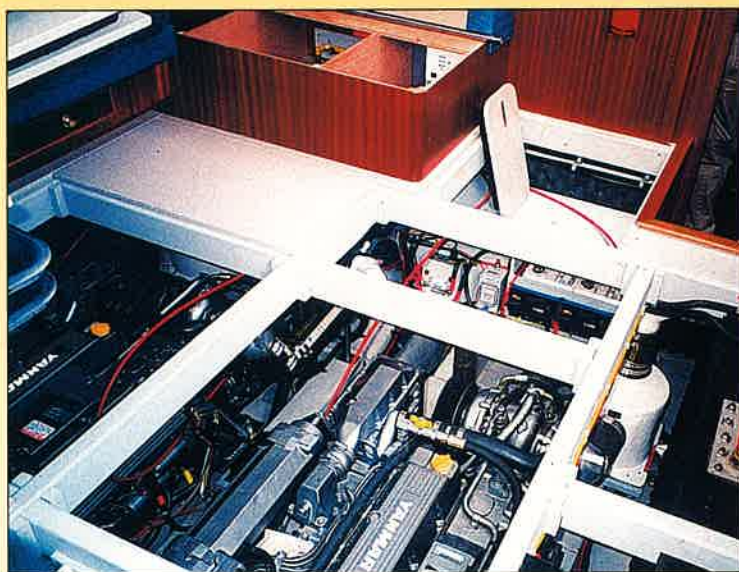
With space to stand on the treadplate between the engines, you can get at most areas. However, the front of the starboard unit is pretty tight to the calorifier, and its fuel filters are also awkward as they are on the outboard side, next to the fuel tank.

Trickier still is access to the two most important maintenance items, namely the raw-water strainers and



the primary fuel filters. On our test boat this required the aft companionway steps to be lifted clear, then a limbo through to their location on the aft bulkhead, although Broom have told us the installation will be modified to make servicing easier.

Otherwise the engineering appears to be text-book, with everything well mounted, and cables and pipework run clear of potential problems.



confidence; despite driving through and occasionally falling off vertically-sided waves, we only once managed to dip the bow low enough to scoop green water. And despite streaming screens, canopies and superstructure, we didn't spot any leaks, even around the exposed side door or between the canopy and screen.

Neither did we hear any nasty creaks and groans, despite getting the boat airborne for at least half its length on several occasions.

Conclusions

Motorboats are quite unreasonably expected to be completely foolproof. This is a

nonsense with any vessel, and certainly so with the 35CL when fitted with its most powerful engine option.

The 170hp Yanmars give a useful reserve of performance to cope with heavy cruising inventories and late-season hull fouling, as well as providing fair-weather sprint capability. But they can also propel the hull into territory for which it was never designed. It is up to the discerning buyer either to have the satisfaction of handling that ability properly, or to opt for one of the less powerful installations.

If speed is no object, and you are not hung up on the British obsession for twin engines, the

option of a single naturally aspirated Perkins Sabre is well worth considering, especially for extended inland work.

The 35CL's predecessor, the Ocean 34, was designed to provide a viable alternative for enthusiasts of steel displacement cruisers, and this boat deserves similar comparison. It combines versatile aft-cabin accommodation, practical deck layout and excellent low-speed handling with modern styling and the potential for much better performance and/or economy than its heavier and less hydrodynamically efficient competitors.

Restricted access to some daily service items in the engineroom is our most significant criticism; a boat geared for serious cruising ought to offer better, without prompting.

In other respects the boat fulfils its promise, being yet another well-built and comfortable Broom aft-cabin cruiser suitable for a mix of inland and sea cruising. It also impressed us that a factory-fresh example, with virtually no shakedown time on its log, survived a very stiff first test completely leak-free, with all its fixtures and furnishings intact. □

BUILD

glass-reinforced plastic

RCD

category B

DIMENSIONS

LOA

34ft 10in (10.60m)

HULL LENGTH

32ft 9in (10.00m)

BEAM

12ft 34in (3.80m)

DRAUGHT

3ft 2in (0.92m)

AIR DRAUGHT

10ft 2in (3.10m)
with radar hoop down

DISPLACEMENT

7.6 tonnes

FUEL CAPACITY

180gal (820lt)

WATER CAPACITY

80gal (364lt)

ENGINES

twin Yanmar 4LH-DTEs

4cyl 3.46lt diesels

170hp at 3300rpm

PRICE

£155,750 ex VAT as tested

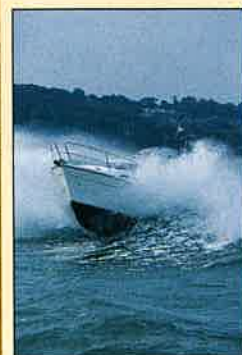
BROOM 35CL

PERFORMANCE & CONSUMPTION							SOUND LEVELS dB(A)		
rpm	knots [#]	gph [†]	lph [†]	mpg [†]	range [*]	trim	saloon	aft cab	aft deck
1800	8.6	2.3	10	3.74	538	1.5	69	71	68
2200	10.2	4.2	19	2.43	350	3.5	72	78	71
2600	13.9	7.0	32	1.98	286	4.5	72	80	72
2800	15.4	8.8	40	1.75	252	5.0	73	80	74
3000	17.0	11.0	50	1.55	223	4.5	75	81	75
3250	19.7	15.2	69	1.30	186	4.5	78	83	78

[#] Measured by radar gun. [†] Calculated from engine manufacturers' figures. ^{*} Estimated, allowing 20% margin.

CONDITIONS ~ wind easterly Force 5, sea moderate

LOAD ~ fuel 90%, water 100%, crew 4



SUPPLIERS

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