

BOAT REPORT

SUNSEEKER 38 MARTINIQUE

Yamaha's new diesel outdrive will make its world debut at the Southampton Boat Show. We present an exclusive first sea trial of this exciting new unit, fitted into an established model from Sunseeker's cruiser range.

TALL STACKS





THE mid-range diesel market is one of the hottest sectors of the marine business today. Everyone wants 200-300hp, in the lightest, smallest, smoothest package possible, to power family cruisers and sportsboats in the 30ft-40ft bracket.

Volvo were previously the main players in this game, but they are now being challenged by Mercruiser, OMC, Cummins and others. The latest to join the battle are Yamaha, who have added to their existing range of petrol outdrives a pair of diesels, turning out 165hp and 247hp respectively at the crankshaft, 150hp and 230hp at the prop.

For their floating test-bed, Yamaha chose the Sunseeker 38 Martinique, and invited Motorboats Monthly to evaluate the top-of-the-range units as part of a report on this craft.

THE BOAT

The 38 started its life with a length of 36ft (11m), in which form it was introduced in 1989. One year later it had grown another 2ft and emerged as the 38 Martinique at the Southampton Boat Show.

The boat fits into what Sunseeker call their Cruiser range, slower than the Performance models and with more accommodation. 'Slow', by Sunseeker standards, is still 40 knots plus,

given the right engines, and the seakeeping is still amongst the best in the world. But you get full standing headroom and more creature comforts below than in the out-and-out speed machines.

The layout consists of a main saloon plus a double cabin forward and a second double under the cockpit. The cockpit is the main living area on a boat such as this, and the Martinique obliges with all-round seating for eight to ten people aft, plus three seats at the helm.

As with all the Sunseeker range, the hull design is by Don Shead, and the form of the 38 follows his normal thinking for these craft. The medium-to-deep-vee hull has a deadrise amidships of 23°, reducing to 20° aft. The boat carries its beam well forward, increasing the living space in the saloon, but still keeps the sections as fine as possible, enabling it to maintain fast cruising speeds into head seas. The formula works well on all the range, and the Martinique is no exception.

Power is provided by twin outdrives, either petrol or diesel, up to 270hp each, with maximum speeds up to 42 knots. Of more than 100 boats built to date, most have been fitted with diesels, chosen for their greater fuel economy but nevertheless giving more than adequate performance for most customers, up to 38 knots.

The Martinique strikes an attractive balance between a huge entertaining area in the cockpit and snug below-decks accommodation. It is no slouch though, and the 247hp Yamaha diesels installed in our test boat made a good match for the Don Shead hull.



Interior

A sliding perspex door gives access down three steps to the saloon, which is a sensible size for entertaining should the weather turn chilly.

To port is an angled settee, facing a table which drops to form the infill to create a somewhat unusually shaped double berth. Lockers under the settee will take clothes and some bedding, but they are not lined, dropping straight to the gelled-out inside of the hull.

Opposite is the galley. This has a double-hinged lid covering a combined twin-burner gas hob, drainer and sink, and we liked the clever and stylish retractable mixertap and control. Worktop space is found alongside and outboard.

Underneath is a gas oven and grill, two good-sized lockers and three drawers. Further small lockers are provided overhead. The fridge is mounted outboard of the worktop. At the forward end is a simple electrical distribution panel.

An angled door aft to starboard leads to the toilet compartment. This is a reasonable size, finished in moulded GRP with a moulded sink on the left. To the right, the WC is neatly concealed under a GRP seat, but the moulding is close enough to the pump handle that you could trap your fingers when operating it. Two good-sized

lockers, outboard and under the sink, are matched by a sensible shelf outboard, providing ample storage. A hatch in the aft bulkhead gives good access to the back of the helm console.

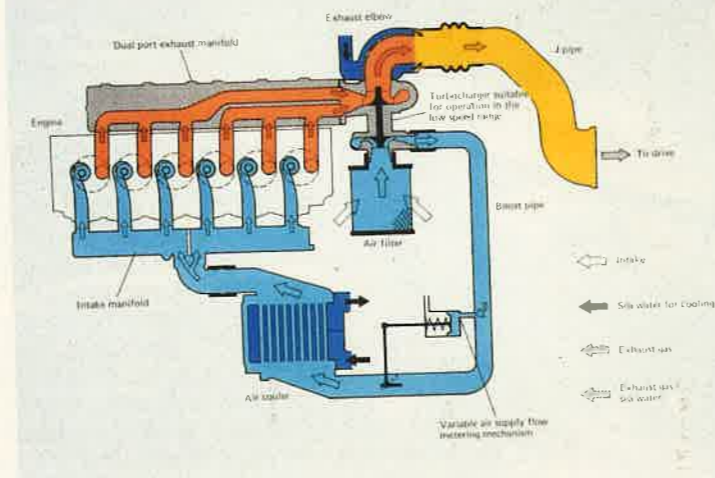
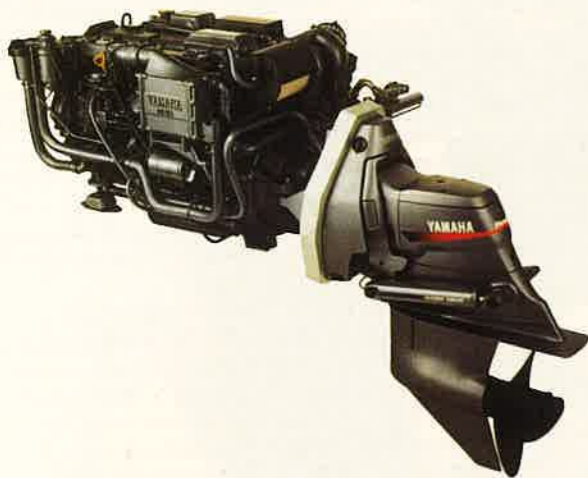
Opposite to port is a matching angled door to the aft cabin, which runs under the cockpit. To port is a full-height standing and dressing area. Across the width of the boat are two single berths plus an infill section, with headroom varying from 2ft to 3ft 6in (0.6m-1.0m). Stowage is provided by a narrow hanging locker forward, three shelves aft and lockers under the berths.

The master cabin is forward of the saloon, and here you have a double berth with standing room at its foot. Port and starboard are two half-height hanging lockers, two drawers are built into the berth and a locker is found under the mattress.

The interior of the Martinique is finished in cream vinyl for the bulkheads and overheads. Most of the furniture is in cream lacquered wood, with veneered inset worktops, though the main cabin doors are finished with formica facing.

Exterior

The Martinique's cockpit is arranged in two areas, with a low, 3in (75mm) step between the two. The aft area has wraparound seating on both



sides and across the transom for a maximum of ten people. Lockers are provided under these seats for stowing loose items. The centre section on each side lifts out, giving access to the lifting floor panels outboard, which allow you to reach the outermost parts of the engine compartment.

A walk-through door on the port side of the transom, with an easily-operated catch to hold it closed, gives access to the integral bathing platform. This is a reasonable size, but half its depth is taken up by a near full-width optional fender stowage, reducing the usable area.

A double-hinged boarding ladder stows under a GRP lid to port. Also to port is the shorepower electrical socket, set in a lid-less recess in the wing, leaving it exposed to spray. To starboard, a matching recess houses a hot-and-cold shower.

The aft section of the cockpit coaming hinges forward to reveal a sensible-sized locker which takes gas bottles and cockpit covers.

At the forward end of the cockpit, to port, you have a bar area. A small ice-chest is set in its after end, with the space under the rest of it creating the standing area for the double cabin beneath.

Similarly, the helm seat to starboard, set on a plinth, forms the headroom over the berths beneath. The seat itself will take three people, with the wheel offset to the right-hand side.

The helmsman faces a semi-wraparound console, with engine instruments set in a panel ahead, and VHF, echo-sounder and log to port. The engine controls are conveniently sited to starboard, with power-trim buttons on the control lever and trim-tab switches ahead.

Either side of the wheel are two ready-use panels, but these are disappointing. The switch-breakers are small and flimsy with sharp corners. Also, they do not look waterproof, a prerequisite for an open boat such as this.

Ahead of the console is a small compass, and over to port a small chart area. There is a surprising lack of storage space around the helm, with no lockers or shelves for the items normally needed to hand.

Deck

Well-placed handrails help you in and out of the cockpit. The side-decks are 6in (150mm) wide, with a good moulded non-slip and toerail. Low outboard rails run from amidships forward. The coachroof has a central section for a cushioned

sunbathing area, flanked by raised strips, while the non-slip carries over the whole of this area, which is important when you are moving quickly across the boat.

The foredeck has a large locker, with a half-height bulkhead dividing the chain locker from the rest of the stowage area, which will take fenders and warps. The anchor itself stows in a substantial stemhead fitting, and is handled by a horizontal electric windlass.

Mooring is taken care of by practical but attractive stainless steel cleats, 10in (250mm) at the bow and stern and 6in (150mm) amidships.

Handling and performance

Weather conditions for our test were perfect, with sunshine for the photographs and rough weather to challenge the boat's handling. It was the first day of Cowes Week, and by the afternoon the fleet was being blown all around the Solent by Force 6 winds which were gusting 8 or more.

The wind was from the west, with the tide underneath it, so in the Solent itself it was merely on the choppy side of rough. Even so, these are the very conditions many planing boats find difficult to handle, with short, steep waves which can stop you in your tracks.

However, the 38 dealt with them as if they were not there. It was quite happy to run at full speed, with the throttles hard on the deck and 39 knots showing on the log. We tried it at all angles to the waves, then just to show off we ran circles around the struggling racing yachts. Nothing could catch the 38 out, no matter how hard we turned or how suddenly we changed direction.

The Yamaha engine controls have a single power-trim switch on the side of the port throttle lever, which controls both legs together. This is the perfect arrangement for these conditions, allowing you to control the angle of the two legs instantly, without taking your eye off the sea ahead or your hand off the throttle. Two further switches on the control head allow you to adjust the legs individually if required, but at speed this is rarely needed.

In practice, we hardly had to touch the legs. Accelerating hard onto the plane we needed to tuck them right in to avoid propeller slip, but once running, one setting handled most conditions.

The new engines have massive low-down torque, and were perfectly matched to the 38,

Yamaha's new diesel is derived from Toyota vehicle units. A pressure-control valve in the inlet manifold limits boost at high rpm, enabling the use of a turbocharger which reacts faster and hence gives greater low-down torque, making the engine ideal for performance boats such as the Sunseeker.

Sunseeker 38 Martinique

Engine: twin Yamaha ME420 STI diesels, 247bhp at 3800rpm, 6cyl, 4.2lt.

Conditions: wind SW Force 3, sea slight. Load: fuel 50%, water 50%, crew 4.

rpm	knots	gph	lph	mpg	range	trim	sound levels dB(A)			
							saloon	fwdcab	ckpt	helm
1400	8.0	2.3	10	3.47	503	2.0	66	65	75	70
2000	11.0	6.6	29	1.67	242	4.5	71	70	81	76
2200	13.6	8.2	37	1.65	239	5.0	72	71	81	77
2400	17.4	9.6	44	1.81	262	5.0	73	71	81	77
2600	20.8	10.9	50	1.91	277	5.0	75	72	82	78
2800	24.2	12.7	58	1.91	277	5.0	77	73	82	78
3000	26.2	14.9	68	1.75	254	4.5	77	74	83	79
3200	29.5	16.1	73	1.83	265	4.0	77	74	83	79
3400	32.9	18.5	84	1.77	257	4.0	79	75	84	80
3600	34.6	22.0	100	1.57	227	3.5	80	76	85	80
3900	38.5	27.2	124	1.41	204	3.5	81	77	86	81

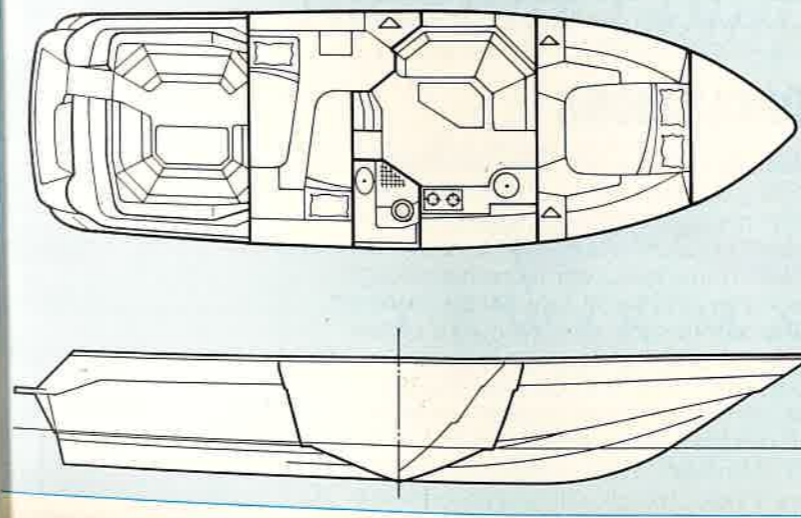
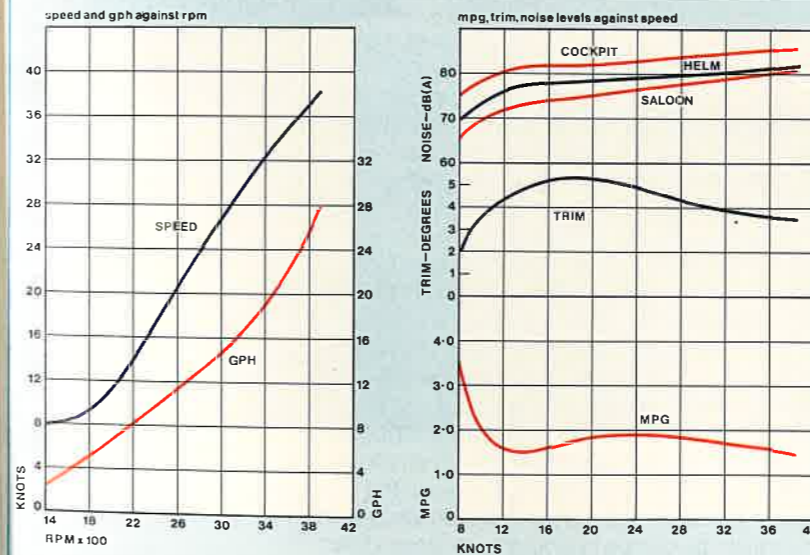
Acceleration: 0-20 knots, 8.9sec; 0-30 knots, 14.5sec.

Loa	38ft 0in (11.58m)	Displacement	7 tonnes
Beam	12ft 0in (3.65m)	Fuel capacity	145gal (660lt)
Draught	3ft 5in (1.04m)	Water capacity	45gal (205lt)

Price: £115,175 ex VAT for the basic boat as tested.

Builders: Sunseeker International, West Quay Road, Poole, Dorset BH15 1HX. Tel: 0202 675071. Fax: 0202 681646.

Engine enquiries: Mitsui Machinery Sales (UK) Ltd, Sopwith Drive, Brooklands, Weybridge, Surrey KT13 0UZ. Tel: 0932 358000. Fax: 0932 358030.



BOAT REPORT

firing it onto the plane almost regardless of how many people were on board, as witnessed by our acceleration time of 8.9sec for 0-20 knots. This was a further bonus once we hit the real waves.

If it was just rough inside the Solent, out through Hurst into the English Channel it became really unpleasant. The wind had started the day before in the south-west, but just to add a mean twist it now veered round to north of west, and piped up even more. The combination of the earlier swell and fresh cross-waves produced some of the nastiest seas you could find.

These are the conditions no-one would recommend you set out in, but they are also just the conditions that can blow up halfway through a passage, at which point getting to your destination in one piece becomes a matter of having chosen the right boat in the first place. The Sunseeker would certainly fit the bill.

Throttling back, we could still punch into the waves at a remarkable 20-25 knots, keeping easily on the plane and taxing neither boat nor crew. The responsiveness of the engines, and the torque low down, meant you could throttle back for the worst holes in the water, then pick up on the other side, hardly dropping off the plane. Occasionally we would hit a big one too hard, yet the hull either soaked it up or took it with a grunt, but without the desperate crashes and rattles many of its competitors produce.

We drove on out to sea until there was nothing else to prove, then turned back for home. Now it became just plain fun. We really could have run just as fast as we liked, but settled for 35 knots as being more responsible than flat-out. Sometimes the waves were right behind us, sometimes they were coming from the quarter; it just didn't seem to matter. We picked the nose up slightly with the trims, but this was only fine-tuning.

Running down the biggest rollers, we braced ourselves for the nose to bury, but it just hung there, defying the sea to wet the decks. As we came past the Shingles Bank there were near standing waves in the overfalls, but the 38 ran straight and true — a remarkable performance.

The conditions were so bad that we were unable to find a sheltered place to record test figures. Having found one buoy to run past in comparative calm, we looked up to discover the Yarmouth lifeboat bearing down on us, towing in a dismasted yacht, so we gave up for the day.

In calmer conditions later that week, we recorded a top speed of 38.5 knots, with the engines just starting to overrev. This was explained by the fact that our test boat was fitted with 19in-pitch props, in deference to the number of passengers it was having to take out for demonstration runs, and to the fact that it was shortly to be delivered to the hotter climes of the Med. Earlier tests run with 21in props had apparently given 41.5 knots at 3800 revs, which would make sense.

Fuel consumption at 38.5 knots was 27.2gph (124lph), which gives 1.41mpg and a maximum range of 204 miles. Dropping to 3200rpm and 30 knots improves these figures to 16.0gph, 1.80mpg, and 265 miles respectively.

Noise levels from the big diesels were generally good. There was no mistaking the turbocharger whine when they were accelerating hard, but this was quickly lost in the noise of the wind and waves. The figures confirmed this, with 81dB(A) at the helm and

85dB(A) in the cockpit at full speed, reducing to 79dB(A) and 83dB(A) respectively at 30 knots.

THE ENGINES

When Yamaha introduced their first sterndrive engines in 1989, the first models were petrol units, and followed the well-tried formula of taking existing blocks from the USA — straight-fours, V6s, and V8s — and marrying them to a Yamaha leg. The new drives did not break any major new ground, but were characterised by many thoughtful details which made for ease of installation and use.

It was only logical, given world demand, that diesel engines would be added to the range, and in July they were unveiled to the boat manufacturers at Loch Lomond in Scotland.

Design

The new units comprise a four-cylinder model, developing 165hp at the crankshaft and 150hp at the prop, and a six, producing 247hp and 230hp respectively. They have been married to Yamaha's Hydra Drive leg, introduced last year, to take the power of the top-of-the-range 330hp big-block petrol V8.

The main design innovation of the Hydra Drive is that gear-shifting is carried out by multi-plate clutches in the top of the leg, rather than by the more usual dog-clutches in the lower unit. The main benefits are silky-smooth shifts and reduced shock-loading on engine and transmission when you go in and out of gear. Additional advantages are a lower gearcase of smaller diameter, reducing drag, and the removal of the need for a rubber bush in the propeller hub, with shock-loading taken by the clutch plates.

For their new diesels, Yamaha have taken two units from the Toyota range of roadgoing engines, one of which is used for the Landcruiser model. The main design innovation is a unique control mechanism for the turbocharger, which Yamaha call Variable Boost System.

The basis of this is a pressure-control valve in the inlet manifold which limits boost at high rpm. This allows a faster-running, higher-pressure turbocharger to be fitted, which gives increased boost pressure at low rpm, increasing torque at lower speeds and getting boats onto the plane quicker. As the revs rise, the boost pressure would then go too high, over-pressuring the engine, but the boost control governs this, with a spring-loaded butterfly valve partially closing the inlet manifold.

A wastegate valve can be used in the exhaust manifold to achieve the same aim, but this mechanism has to operate in an extremely hostile environment, at high temperatures and surrounded by saltwater from the cooling system. In comparison, the Yamaha boost control is small, simple and should be reliable.

A further feature of the new engines is a dual exhaust manifold, splitting the output from the cylinders in two and smoothing the flow into the turbocharger.

The Yamahas also include an impressive array of details which contribute to improved reliability, servicing and safety.

Amongst these are a combined fuel filter and water separator, mounted on the engine. This is

an improvement on the more usual filter-only arrangement, and also includes a warning light at the helm console to indicate water in the filter, and a butterfly valve in the base to drain it.

The sea-water inlet piping contains a flow sensor which also sounds an alarm at the helm should the cooling water stop for any reason, giving you advance warning of a problem vital minutes before the overheating indicator in the secondary system sounds.

The inlet filter itself is mounted high at the front of the engine, making for easy checking and clearing. Next to this is the electric fuel-lift pump, which features a manual override switch enabling you to prime the fuel system from dry without turning the engine over.

Handed dipsticks will be appreciated by anyone who has had to struggle to the outside of an engine. Finally, a neutral interlock switch has a warning light at the console, and prevents the engines from being started in gear accidentally.

Having the gearbox in the top of the leg enables the shift linkage to be mounted on the top of the engine, with a simple changeover giving handed rotation of the props on twin installations. The props themselves are stainless steel as standard, with through-prop exhaust.

Installation

In the Sunseeker, the six-cylinder diesels made a remarkably neat package.

Routine access is gained by lifting a central hatch in the cockpit sole, and for more extensive work you can get at the outboard sides by removing the seat bases and panels in the sole. With the centre hatch hinged up, there is plenty of room to climb down in front of the engines. A moulded GRP bin across the front of the space provides stowage for the liferaft plus other gear.

Access around the outside and above the engines is excellent, while between them there is a clear 15in (600mm) or more, a tribute to the slim overall package. Fuel filters, inlet strainers and lift-pumps are easily reached.

A Jabsco 1750 electric bilge pump is mounted in the bottom of the boat, ahead of the engines, and this, the echo-sounder and log-transducers are vulnerable to being stepped on. The reason they are not fitted out of the way between the engines is that when the alternative power option is installed it becomes impossible to reach down between them, but a simple GRP cover or box would solve the problem without relocation.

Batteries are mounted outboard to port, in plastic boxes, with plenty of room to get over them, while the calorifier is to starboard.

CONCLUSIONS

Sunseeker have a justified reputation for the handling and seakeeping of their boats, and it is always pleasing to find test conditions which enable us to exploit these qualities to the full. This occasion provided us with more than enough opportunity, and the 38 fully met the challenge.

The new Yamaha diesels proved a perfect match to the boat, giving enough torque low-down to dispel any notions of sluggish take-offs, plus a top speed which would be more than enough for most owners.

This amounts to an excellent package from the point of view of practicality and performance. □

Yamaha ME370STI

Crankshaft power 165hp (123kW).

Propshaft power 150hp (112kW).

Cylinders 4 in line.

Displacement 3700cc.

Rpm 3200.

Weight 1061lb (490kg) including drive.

Yamaha ME420STI

Crankshaft power 247hp (186kW).

Propshaft power 230hp (172kW).

Cylinders 6 in line.

Displacement 4200cc.

Rpm 3800.

Weight 1215lb (551kg) including drive.

UK debut

The new Yamahas will make their public debut at the Southampton Boat Show, on stand J68. The Sunseeker 38 Martinique we tested will not be there, as it is bound for the Mediterranean, but the engines can be tested in other craft, including the Draco Zircon, the Windy 11600 and the Surfrider Warrior.