



The ultimate boat for the ultimate crossing

Ever since Richard Branson claimed the Blue Riband for the fastest crossing of the Atlantic, there has been a concerted effort by adventurers of the sea to build a faster, better boat to beat his time and speed. Two contenders have so far tried and failed, but it now looks as if there will be a vessel capable of destroying Branson's record - Atlantic Sprinter.

As yet unbuilt, artists impressions and models of Sprinter show it to be possibly the ultimate boat. And with a water jet powered by a Rolls Royce RB-211-22B Lockheed Tristar jet engine, there is no doubt she will probably be the fastest boat around.

SPECIFICATIONS

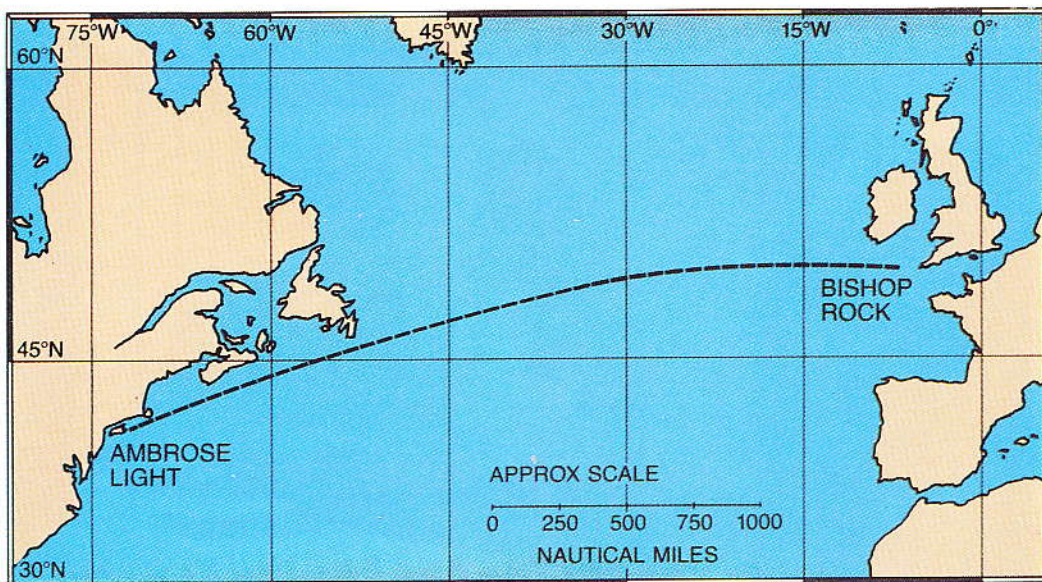
LOA: 164 ft
Beam: 28ft
Draught: 6ft 6 in
Powerplant: Rolls Royce RB-211-22B modified for shaft drive
Displacement light: 110 tonnes
Displacement max: 430 tonnes
Fuel capacity: 320 tonnes (83,760 imperial gallons)
Propulsion: 2x KaMeWa 112 series water jet units
Max Thrust: 600 Kn (60 tonnes) at 50 Knots (excluding engine exhaust)
Auxilliary power: 2x 55Kw diesel engines
Emergency propulsion: 2x 350HP Sabre diesels with retractable propulsion

The idea for Sprinter was born when Adrian Hamilton, better known in endurance motor racing circles, was privileged enough to be in the control centre during Bransons successful crossing of the Atlantic in Virgin Atlantic Challenger II. Whilst there, two things struck him: firstly that the crossing was made with three fuel stops, and secondly that there was not enough television coverage. To this end Adrian enlisted the help of offshore powerboat designer Don Shead, and World Land Speed Record holder, Richard Noble and together they began to make plans for an unrefuelled run across the Atlantic.

Although Sheads design for Sprinter is unique, the powerplant is really the most radical part of her.

After deciding that diesel engines of the size Sprinters team wanted to use would be too heavy, Noble decided to look for other means of propelling the boat. By a strange twist of fate he heard that Rolls Royce was scrapping four of its old RB-211-22B engines, used to power Lockheed Tri-Star planes. One of these engines is capable of producing 30,000 HP and is only five percent of the weight of an equivalent diesel.

He said: 'I rushed up to the site where these



engines were and had a look at them. Three were useless for our purposes, but the fourth one had nothing wrong with it. We were told later that although one of the earliest of this type of engine, it had only been run for 41 hours and was used for settling test beds for other engines.

'We bought it and within nine days had it shipped to the Cranfield Institute of Technology in Bedford where it was bolted to a concrete road and tested. It fired first time with no problems at all.'

Now that they were in business the next step was to start converting the engine to drive a water jet propulsion system. Basically this means that water is sucked in and then expelled through stern pipes at high speed, thus producing the thrust. The two 1.1 metre diameter KaMeWa waterjets are capable of providing 60 tonnes of thrust with a mass flow of 31 cubic metres per second. Put simply it means the waterjets are capable of emptying an Olympic size swimming pool - which holds 2 million litres of water - in 64 seconds.

Unlike diesel engines with propellers, the RB-211 with water jets increases its efficiency as the vessels speed is increased.

Said Richard: 'As the jet engine is optimised to run a Tristar airliner at 600mph, the conversion and this system means that we can run Sprinter at a maximum 70 knots with a cruising speed of 50 knots.'

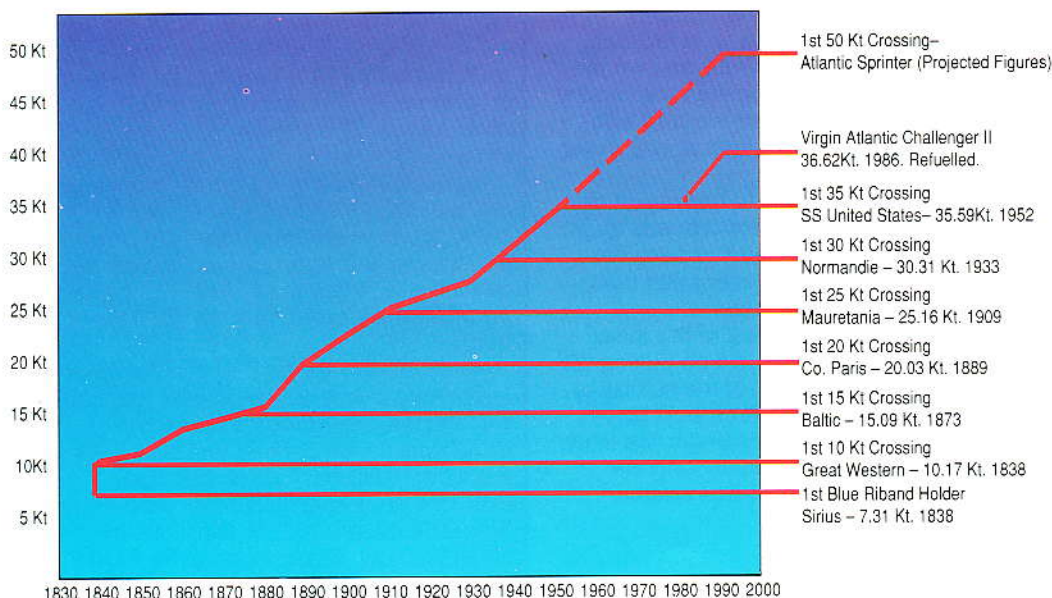
All other contenders for the Blue Riband register 50-52 knots maximum speed. According to Richard's computer analysis averaging 50 knots means that Sprinter will complete the journey in under 60 hours.

The main disadvantage to using the jet engine is that it increases its fuel consumption per horsepower as it is throttled back (something that will have to be done as Sprinter becomes lighter, to maintain cruising speed). However, Richard has produced spread sheets on fuel consumption per mile and analysed that despite this, the 300 tonnes of Shell aviation fuel that Sprinter will carry will last the entire 2,900+ miles - and further.

Because of the size of the water jets and

BLUE RIBAND HOLDERS 1838 - 1986

The chart shows the steady growth curve of the speed of Blue Riband Holders. Bransons record broke this trend, but projected figures for Atlantic Sprinter will continue it.



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Richard Noble OBE

Chairman and Managing Director of Thrust Cars Ltd. Raised £2 million in cash and product to build a car to break the World Land Speed Record, from a zero cash base.

October 1983 broke World Land Speed Record at 633.468mph (still current) in 35,000 HP Thrust 2 jet car.

Adrian Hamilton

The Inspiration for Atlantic Sprinter, and provider of early capital. Managing Director of Duncan Hamilton and Co., specialists in rare historic competition cars for 20 years.

Adrian's father, Duncan, raced cars in the '50s and won the Le Mans 24 Hour race in 1953. Adrian has also entered the endurance race and has managed entries for the 24 Hour Endurance Classic.

Don Shead

Internationally renowned designer of powercraft and World Diesel Record holder. Shead's designs have won three World Offshore Championships, six European Championships and 10 Cowes - Torquay races. In recent years Don has designed two of the fastest ever gas turbine yachts - Shergar for the Aga Khan and Fortuna for the King of Spain.

their power, Sprinter can only get directional stability from a rudder. (Water jets are normally directional and steer craft). And should the jet engine fail she has two auxiliary 350HP diesel engines to power her.

Sprinter will be crewed by an eight man team, comprising chief engineer, captain, Richard, Don, Adrian, one watchman and a navigator. In addition there will be two television crew members from ITN who will be recording the whole crossing and relaying it via satellite to 100 of the World's countries.

The accommodation on the vessel is spartan - basically beds and toilet facilities. The crew will be on a watch rota, so over the two-and-a-half days it is estimated the journey will take, this is enough. Extra facilities also mean extra weight, which would slow Sprinter down.

So far, Atlantic Sprinter Ltd has raised all but £600,000 of the first million it needs to get the boat built. Altogether the company has budgeted for £4 million to get Sprinter built, tested and make the challenge.

Said Richard: 'Once the rest of this initial money has been raised, we will be putting the contract for the construction of the hull out to tender. We hope Sprinter will be built by summer of 1990 when we will begin sea trials, and realistically we will be attempting the crossing in the summer of 1991 - weather permitting.'

Atlantic Sprinter, the jet powered vessel designed by Don Shead, driven by Richard Noble and part financed by Adrian Hamilton, is challenging for:-

The Blue Riband: an award given for the fastest crossing of the Atlantic Ocean (no restrictions)

The Virgin Atlantic Trophy: for the fastest crossing of the Atlantic either fuelled or unrefuelled

The Daily Mail Trophy: for the fastest crossing of the Atlantic eastbound unrefuelled

It is also hoped that a pending change in the rules will mean that Sprinter can challenge for the Hales Trophy. At present the rules for this trophy restrict experimental boats like Sprinter, but a decision on this is imminently expected from the Trustees of the trophy.

The crew of Atlantic Sprinter has set-up a supporters club. For five pounds, you can join and will be regularly informed on developments on Sprinter and be eligible to enter competitions. One of the prizes available is a trip to the control centre during Sprinter's Atlantic run. To join just cut out the coupon below. All proceeds go to Save the Children Fund and the RNLI (see coupon).

I wish to join the Atlantic Sprinter



Supporters' Club

Enclose a Cheque/Postal Order for £5.00



Atlantic Sprinter Supporters' Club
P.O. Box 669, London, GB, SW6 3DE

Name _____
Address _____

Tel. _____
with proceeds in aid of   **Lifeboat**