

Q-SPD

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Rakiura Explorer – Stewart Island, NZ



Length: 19.6m (64ft)
Displacement: 40,000kg (88,185lb)
Power: 2 x Scania DI 14 - 675hp (503kW) each
Drives: Q-SPD WB350
Propellers: 990mm (39") 5 Blade Q-SPD
Top Speed: 29knots Cruise: 23.5knots



"Predator", a Richard McBride designed planning catamaran, was originally built by Rex Barnett of Barnett Engineering in Blenheim. Rex also performed the recent lengthening and propulsion refit. The twin hulls were modified slightly to suit the relatively simple mounting of the Q-SPD drives.

Despite 2.8 meters being added to the hulls, the engines were left exactly on their original mounts. To offer the simplest conversion from the original water jet system to the Q-SPD driveline, Q-SPD supplied a custom built drive line to suit the application. The Q-SPD supplied drive system included a Python Drive thrust bearing and heavy duty CV drive shafts, ensuring the angle change between the engine and the new drive line was smooth and vibration free.

Whilst the added length increased the buoyancy of the vessel, the addition of cranes and other equipment took the operating displacement from its original 26 tonnes to a new fully laden weight of 40 tonnes.

Now, what is really intriguing is that this vessel has relatively small engines for its size - 675hp Scania's. The original boat at 26 tonnes displacement and using water-jets would, on a really good day, achieve 22 knots - downhill, but most days an operating speed in the low teens was the norm. However add 2.8m, 14 tonnes and Q-SPD drives, and the new "Rakiura Explorer" boasts an easy and comfortable top speed of 29 knots and cruise of 23knots fully laden at 40 tonnes.

Captains Log:

"It is hard to believe that by adding 2.85 meters of length, 14 tonnes of weight and changing the propulsion units from jet units to Q-SPD surface drives, that you can gain 10kts of speed, improve the trim, handling and fuel efficiency. But the "Rakiura Explorer" is working proof that it can be done.

When I first inspected this catamaran, she was 16.5m long and instantly you could see there was a problem. Working with the designer and boat builder, we came up with the concept of lengthening the vessel and changing the propulsion to Q-SPD surface drives. Changes that have proven to be a great success, improving the vessels over all performance by 200%!

The vessel is now faster, more fuel efficient and can be manoeuvred in around rocks and wharves with ease. The Q-SPD propulsion units are smooth running with no cavitations and no vibration. The vessel has very positive steering at high speed and excellent transverse thrust for manoeuvring into those 'tight spots'. All in all we are very impressed with the Q-SPD surface drive units, as the boat's over all performance is now exceptional!"

Jason Wells - Boat Operations Manager, Stewart Island Adventures Group

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