

APPLICATION PROFILE

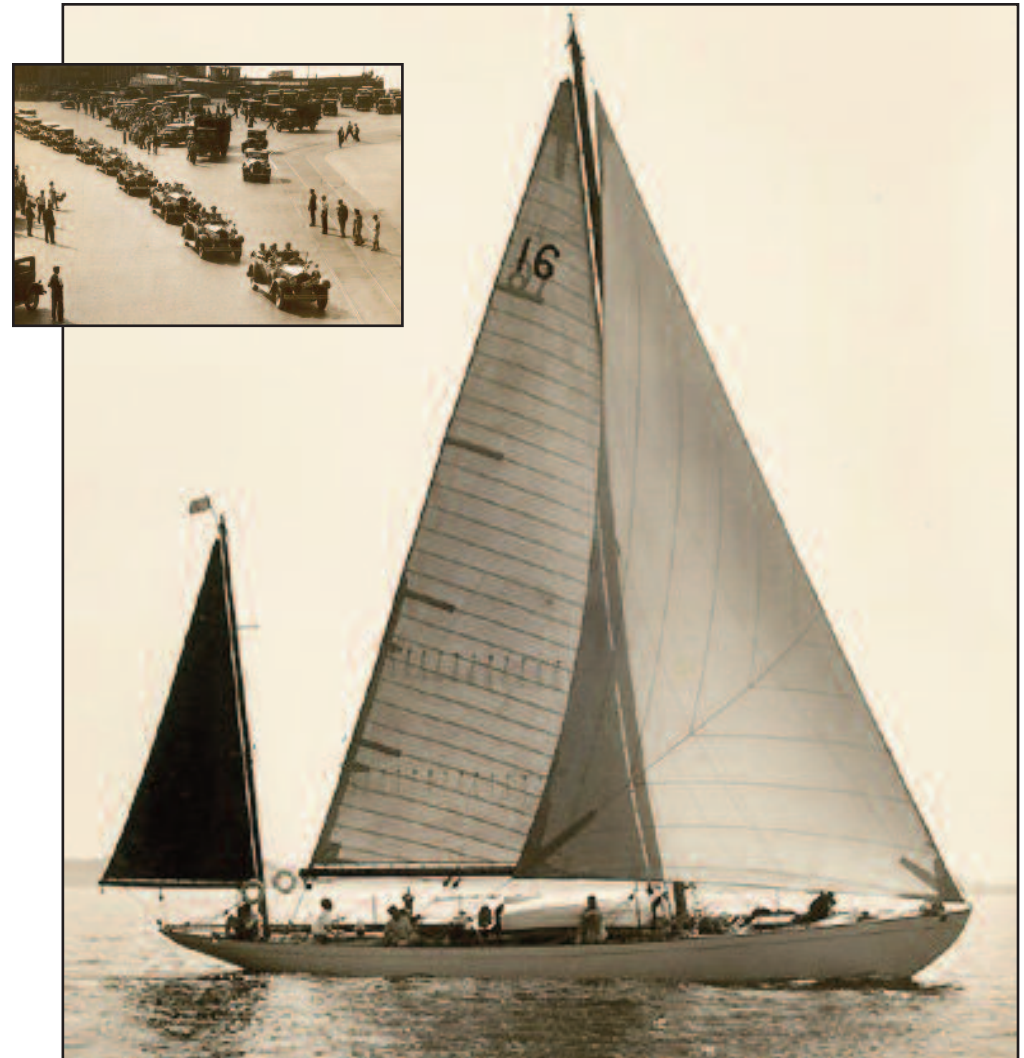
Vessel: Dorade
Naval architects: Sparkman & Stephens -- 1929
Builder: Minneford Yacht Yard, City Island, NY, 1930
Engine installation: 2011 design by Nelson Marek/Sparkman & Stephens
Application: Ocean racing boat
Power: Yanmar 3YM30
Drive shaft alignment: Aquadrive 20000 series

Dorade helped to establish the reputation of the now world famous naval architecture firm, Sparkman & Stephens. Dorade won a string of impressive victories, including the 1931 transatlantic race which Dorade won by two days over its competitors. Following victories in Europe and Bermuda in 1932, Dorade returned to the U.S with a ticker tape parade down Broadway held in its honor.

After years of maintaining the boat in its original design, its owners went back to Sparkman & Stephens to design the addition of diesel propulsion. Since the Dorade did not originally have an engine, finding a location to position the engine and a propeller shaft required careful planning. The Aquadrive system expanded the designers' options to place the machinery in the best spot. Instead of being installed directly in line with the prop shaft, Aquadrive CV joints permit an

engine to be installed at a different angle from the shaft, or offset from being directly in line with the shaft. This enabled the Dorade's engine to be installed without destroying the interior cabinetry or the structural integrity of the hull. The Aquadrive system also protects the boat and hull from vibration, which can weaken fasteners, and ultimately the structure, over time. It also makes the boat much quieter since the hull of Dorade is similar to a violin and would resonate and amplify vibrations without the isolation characteristics of an Aquadrive system.

Mack Boring provided the Yanmar 3YM 30 diesel engine with ZF 15MIV V-drive transmission and an Aquadrive 20000 series CV axle and thrust bearing. MTC engineers designed stub shaft to accommodate the tunnel style ZF V-drive to make the installation possible.



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