Fuel consumption monitoring – yacht

Customer yacht owner

Machinery recreational yacht

Task fuel consumption monitoring

Solution
- DFM D S7 fuel flow meter
- MasterCAN S7 NMEA converter

Result accurate fuel consumption measurement, route planning

CUSTOMER

A business consultant from the Netherlands. Owner and captain of a recreational yacht. The yacht is used on weekends by the captain, his family, and friends for daytime and short coastal cruises along the shores of the North and Baltic Seas.

MACHINERY

Sabreline 36 Express yacht

Sabreline 36 Express yacht belongs to the Downeast class. Its key features include an extended bow, a V-shaped hull that ensures stability in rough waters, and spacious deck areas.

Yacht is 12.2 meters long, 3.8 meters wide, with a draft of 1 meter. Interior includes a cabin, saloon, galley, and bathroom.

Yacht is powered by a Caterpillar 3116 DI TA JW diesel engine, delivering 300 HP (220 kW), allowing a top speed of over 30 knots (55 km/h).

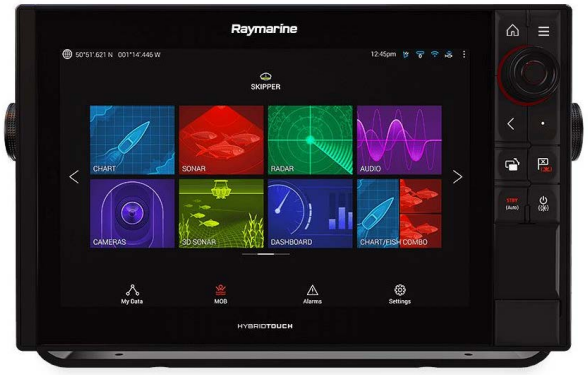
Fuel tank capacity is 1,380 liters.

TASK

Yacht is equipped with a multifunctional marine navigation display – Raymarine HybridTouch. It allows for route planning and waypoint tracking using marine chart data and GPS. Display can receive, process, and visualize data from video cameras, echo sounders, sonars, and additional sensors connected via the NMEA 2000 interface.

Accurate information on current fuel consumption and remaining fuel is essential for safe route planning. However, the yacht's standard sensors are unable to provide this data.

To solve this, the yacht's captain decided to install a fuel monitoring system. **System is designed to monitor real-time fuel consumption, calculate total consumption over a selected period, and display this data on the Raymarine screen.**



Raymarine HybridTouch display installed on the yacht

SOLUTION

Yacht owner discovered Technoton's fuel monitoring equipment online, on the website www.jv-technoton.com.

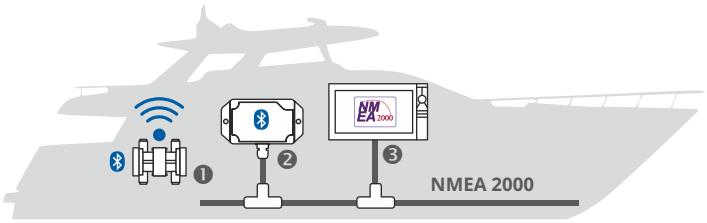
For his yacht, he selected a monitoring system consisting of a DFM D S7 fuel flow meter and a MasterCAN S7 NMEA data converter.

Flow meter is installed in both the supply and return fuel lines of the engine. It directly measures actual fuel consumption and transmits the data via Bluetooth. MasterCAN S7 NMEA converter receives this data, converts it into NMEA 2000 messages, and sends it over the vessel's data bus to the onboard display.

Installation, connection, and configuration of all components were carried out independently by the yacht's captain. All necessary information was obtained from the User Manuals for the DFM fuel flow meter and the MasterCAN S7 NMEA converter.

On the Raymarine HybridTouch display, the owner can now view all essential fuel-related data:

- hourly fuel consumption,
- engine runtime,
- fuel consumption per trip.



Fuel monitoring system components: ❶ DFM D S7 fuel flow meter ❷ MasterCAN S7 NMEA converter ❸ Raymarine HybridTouch display

Left: DFM D S7 flow meter connected to the supply (➖) and return (➕) fuel lines
Right: Fuel consumption data displayed on the Raymarine HybridTouch screen

Maksim Damarad, sales engineer, Technoton

"Captain of a private yacht contacted us after a long search for a reliable fuel monitoring solution.
Real-time, accurate fuel data was essential for safe route planning and confidence in fuel reserves.
We offered a ready-to-use solution based on the DFM D S7 flow meter and the MasterCAN S7 NMEA converter.
Client installed the entire system himself and is now using the data on his Raymarine HybridTouch display.
Captain is fully satisfied – with fuel now under control, no surprises at sea can catch him off guard."

RESULT

MasterCAN S7 NMEA converter reliably receives data from the fuel flow meter without interruptions or distortion. All information is accurately and fully transmitted to the NMEA 2000 bus and displayed on the Raymarine screen. Technoton equipment integrates seamlessly with Raymarine marine electronics – no additional modules are required.

Client receives all the essential data on fuel consumption and engine runtime. This information enables precise route planning and helps avoid critical situations – ensuring that fuel won't run out unexpectedly and the vessel won't lose power at sea.

Yacht owner

"I spent a long time searching for equipment that could truly meet my needs. Out of all the options on the market, only Technoton offered a complete, ready-to-use solution – I couldn't find any real alternatives.
Technoton equipment was delivered quickly and in full, including mounting kit for DFM flow meter. Even though I'm not a specialist in installing such hardware, the detailed user manual made everything clear. Installation, and setup were smooth and hassle-free."