

Hybrid link-up is an international effort

Japanese engine company Yanmar Marine and Italian transmission specialist Transfluid have teamed up to develop a new hybrid diesel powerplant suitable for any workboat.

The companies have spent two years testing the new combination of Yanmar's 6LY440 diesel engine assembled with Transfluid's HM2000-40 hybrid system. The engine underwent a year of bench-testing followed by a further 12 months of sea trials on board Yanmar EX38, a single-screw sport-fishing

cruiser at Yanmar shipyard.

Following the successful completion of the sea trials in the South of Japan Sea, Yanmar has begun offering the engine for sale, focusing initially on the domestic market and the Pacific Ocean area, including the US West Coast. The package offers increased redundancy, making it particularly suitable for these difficult deep sea waters.

The 6LY440 is a 6-cylinder in-line engine with 5.8-litres of displacement and is rated at 324kW at 3,300 rev/min. Transfluid's system

is the HM2000-40 equipped with a 40kW permanent magnet electric machine, with 2:1 ratio marine gear and LiFePO4 battery with 19.2kWh energy at 96VDC.

Transfluid's hybrid works in several modes including electric, diesel, booster (diesel-plus-electric) and battery-recharge. Transition from electric to diesel and vice versa is automatic at any speed. The company's entire HM family and batteries have DNV GL type approval certification, so can be installed in any workboat application around the world.

Battery power conversion work nears completion

The first OSV in the Gulf of Mexico to operate on hybrid power is due to return to service following completion of its upgrade to lithium battery power.

Seacor Maya is the first of four OSVs operated by Mantenimiento Express Marítimo (Mexmar) – US-headquartered Seacor Marine's joint venture in Mexico – to undergo modifications to run on hybrid power.

Work on the vessel was due to finish shortly after IT&O went to press. A further three Mexmar OSVs – Seacor Azteca, Seacor Warrior and Seacor Viking – are currently being converted to a battery system with the



▲ Seacor Maya

upgrade expected to be completed in July.

Seacor Marine has selected US classification society ABS to class the OSVs, requesting the optional BATTERY-Li

notation for the vessels. Canadian company Corvus Energy is supplying the lithium ion-based storage systems for the four OSVs – expected to reduce fuel consumption by up to 20 per cent.

Tim Clerc, Seacor manager of engineering, said: "Integrating new technologies is complex. To help Seacor realise the benefit of using cutting-edge hybrid power, we partnered with ABS to class the lithium battery system to help validate its reliability. The operational savings gained from a hybrid power solution will also reduce emissions and facilitate our compliance to strict environmental regulations."



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