CASE STUDY



In the November 2018 issue of Cummins Commentary, we showed photos of Cummins' highest-horsepower diesel engine, the QSK95, being lowered into the hull of Kilimanjaro VII during construction of the fast passenger ferry for Azam Marine, a company based in Tanzania, Africa,

Like the previous six Kilimanjaro vessels - all Cummins-powered and all designed by Incat Crowther - Kilimanjaro VII was being built by Richardson Devine Marine (RDM), the world-renowned Australian shipbuilder based in Hobart, Tasmania.

With a 500-passenger capacity, the 45-metre aluminium catamaran – its twin 95-litre V16 engines each rated at 3,600 hp - was the first fast passenger ferry in the world specified with Cummins QSK95 power.

The most powerful Cummins engines previously installed in a Kilimanjaro were a pair of 60-litre QSK60s, each rated at 2,500 hp, in version VI of the vessel. The Kilimanjaro fleet operates between mainland Tanzania and the Zanzibar Archipelago, moving up to 12,000 passengers a day.

During August 2019, RDM owners Toby Richardson and Ron Devine signaled completion of Kilimanjaro VII, with sea trials to be held on River Derwent which flows through Hobart and into the Tasman Sea. Managing director of Azam Marine, Abubakar Aziz Salim, would be in attendance.

The build quality of Kilimanjaro VII is exceptional.



QSK95 being lowered into the hull last year.



From left, Ron Devine (RDM), Jason McLaughlan (Cummins operations manager, Tasmania), Kristian Kovacevic (Cummins sales executive), Toby Richardson (RDM).



Going into the sea trials, expectations were high that Kilimanjaro VII would meet performance targets. In fact, *Jewel of Zanzibar* "exceeded expectations" says Toby Richardson, achieving 38 knots with the QSK95s turning over at 1760 rpm, delivering their power to Kamewa waterjets.

"We used a fair bit of sound insulation but the vessel is amazingly quiet and the engines are very smooth," he adds.

The QSK95 is the most powerful diesel engine RDM has fitted to a vessel. Fitment in Kilimanjaro VII actually exceeds Cummins' installation requirements, reflecting the high build quality. The vessel has a 22,000-litre fuel capacity, and the twin 95s draw the diesel through 40 mm (internal diameter) lines while delivering their power through ZF marine gears to the Rolls-Royce Kamewa waterjets.

The Cummins influence isn't confined to propulsion power; the electrical needs on all Kilimanjaro ferries are met by Cummins generator sets.

Build quality "exceptional".

RDM has won global recognition in the marine industry with its Cummins-powered Kilimanjaro vessels. Kilimanjaro VII is 'hull 73' for RDM, a business established by Richardson and Devine in 1989.

"The build quality of Kilimanjaro VII is exceptional," says Azam Marine MD Abubakar Aziz Salim. "The vessel reflects the strong relationship we have forged with RDM since the first Kilimanjaro was built in 2009.

"Discussions are already underway for Kilimanjaro VIII."

He says the performance of Kilimanjaro VII was "very impressive" during the sea trials. "We're looking forward to this vessel joining the Kilimanjaro fleet as the flagship," he adds.



On its way to Tanzania.



3,600 hp QSK95 fitment in Kilimanjaro VII exceeds Cummins' installation requirements, reflecting high build quality.

The success of the fleet is testimony to the quality aluminium construction produced by RDM. "The vessels are operating in harsh, incredibly saline conditions and constantly high water temperatures around the 30 degrees Celsius mark," Toby Richardson points outs. "It's a highly corrosive environment."

Kilimanjaro VII went into service in November, operating between the Tanzanian mainland city of Dar es Salaam and the Zanzibar Archipelago in the Indian Ocean. During peak periods the Kilimanjaro fleet moves thousands of passengers a day, many of them international tourists who have discovered the magnificent destination of Tanzania.

The new catamaran's interior offers an extravagant level of comfort and luxury for passengers on the one and a half hour journey, emphasising Azam Marine's commitment to providing a world-class service. ■

