

## Case Study 131: Eco Tourism Vessel

### SPECIFICATIONS

<b>Waterjets:</b>	<b>DJ120Z (single)</b>
<b>Engines:</b>	<b>Yanmar 6LY3AM-UTP 380hp @ 3100rpm</b>
<b>Gearboxes:</b>	<b>ZF280-1</b>
<b>Vessel:</b>	<b>9.0m L.O.A 8.0m L.W.L 4.8 tonne</b>
<b>Performance:</b>	<b>36 knots</b>



### Another hard working tourism boat from Australia's Calibre Marine

This aluminium 9.0m monohull, propelled by a single **DOEN DJ120** waterjet, is the first of a new and innovative vessel design to take passengers on day and night time rides through spectacular eco-sensitive areas. Built by Calibre Marine in South Australia, the vessel was designed specifically to transport up to 12 paying passengers quickly and efficiently across open water to the tourist area. Then, using its shallow draft capability navigate and maneuver through the eco-sensitive shallow mangrove areas.

A DOEN DJ120 jet, coupled via ZF transmissions, to the Yanmar 380hp engine is ideally suited to the task. The 310mm diameter, high volume axial flow impellers, provides this vessel with a 36knot top speed and cruise efficient cruise capability at full load. The high volume pump ensures full control and excellent maneuverability even at low engine idle when exploring shallow waters.

The DOEN balanced steering nozzle gives fast, precise response with minimal input force allowing simple light duty steering system to be used. An electric power steering system is used to provide small turn ratio's with little effort. The heart of the package is the microprocessor controlled pump unit which senses loads and instantly delivers flow and pressure when loads are applied, reverting to minimum current draw when no load is sensed. This provides the vessel with precise control for the quick and aggressive maneuvers that this boat has to perform many times in daily operations

The DJ120 waterjet is fitted with DOEN's Rotary Servo Control (RSC), which is an proportional hydraulic control system providing simple and exact follow up control of the waterjets reverse buckets, by conventional lever. This system has fully integrated hydraulics with in built cooling; bulkhead mounted steering and reverse cylinders and all connections inboard and protected from corrosion. This system interfaces with the standard Yanmar engine control system providing a simple single lever throttle and reverse bucket control.