DJ130 Waterjet

Performance **Reliability** Simplicity

Case Study 114: **Utility Response Boat**

SPECIFICATIONS

Waterjet:	**DJ130 (Single)**
Engine:	**Caterpillar 3126** **400hp @ 2800 rpm**
Gearbox:	**Twin Disc MG5075 SC**
Vessel:	**9.14m L.O.A** **8.22m L.W.L** **7 tonne**
Performance:	**27 knots**

A tough, high speed response boat for Police use.

A **DOEN DJ130** waterjet propels this aluminium RHIB 9.14m designed and built by SeaArk, in Arkansas USA. This vessel was built for use by the Security Police whose activities include harbour patrol, homeland defence and surveillance activities.

The DOEN DJ130, 13.0-inch (330mm) diameter high volume axial flow impeller provides this vessel with an excellent cruise performance; allowing long range patrols at reduced fuel consumption with high top speed capability under all load conditions. Additionally the large diameter pumps ensures high thrust at low speed and high bollard pull which is essential for this vessels towing capability.

Power is provided by a single CAT 3126 coupled to the DOEN waterjet through a Twin Disc marine transmission. A reduction ratio is used to optimise the waterjet impeller selection and the gearbox also provides the vessel with disengagement and a back flushing capability.

The DOEN balanced steering nozzle gives fast, precise response with minimal input force. This is simply controlled using a conventional manual hydraulic steering system with inboard cylinder , which is mechanically connected to the waterjets inboard steering tiller. This provides the vessel with exceptionally easy control at both high and low speeds.

The DJ130 waterjet is fitted with an electronic control system. This fully electronic control provides single lever function which combines control of the engine throttle and waterjet reverse bucket into one simple and reliable system. The reverse function provides full follow up control of the reverse bucket by way of the jet mounted hydraulic system incorporating a proportional solenoid valve. Control of the marine transmission is by way of separate, simple to use, touch pad.

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