Royston

Case Study
Volov Penta D8, Ferry operator

Ferry Genset Repower to Deliver IMO III Compliance

Problem
A ferry operator needed to replace two Scania DI12 gensets while the vessel was alongside in dock during a planned maintenance period. The existing units had reached end of life and no longer met the vessel's future operational requirements, with an upgrade needed from IMO II to IMO III emissions compliance.

The project required a replacement package that would deliver the right power output, improve fuel efficiency, meet current emissions standards, and integrate with the vessel's existing systems without creating major installation challenges. A like-for-like footprint was also important to help simplify the repower and reduce disruption onboard.

Solution
Following survey and specification work, Royston supported the customer through the full repower process, from initial planning through to final handover.

The existing Scania DI12 gensets were removed under Royston's supervision and replaced with two Volvo Penta D8 IMO III gensets with SCR aftertreatment. The Volvo Penta D8 units were selected as the best fit for the application, offering the closest power rating, improved fuel efficiency, and compliance with IMO III emissions requirements, while maintaining a footprint that was broadly like-for-like with the outgoing sets
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Royston's scope included survey and specification, storage of the engines until the client was ready, transport of the engines and SCR equipment, installation, commissioning, and training for both vessel and engineering crew, including Vodia diagnostic training, through to project handover.

As part of the wider upgrade, the vessel also required an exhaust system upgrade to IMO III standard and new box coolers. Royston also integrated the new gensets with the vessel's existing systems, enabling Volvo Penta's MCC to communicate with the Praxis vessel management system and ensuring continuity of monitoring and alarm functions onboard.

To verify performance following installation, each genset underwent a full six-hour load bank test across a range of operating points from 0% to 110% load.

Result
The repower provided the customer with a modern, compliant generating package aligned with current emissions legislation and the vessel's operational needs.

By replacing the end-of-life units with new Volvo Penta D8 IMO III gensets, the operator benefited from improved fuel efficiency, updated emissions compliance, and a solution designed to work within the vessel's existing layout and control architecture. Comprehensive commissioning and load testing gave confidence in the performance of both sets before handover, while onboard training helped ensure the vessel and engineering teams were fully prepared to operate and support the new equipment.

The project demonstrated Royston's ability to manage a genset repower from initial specification through to installation, integration, testing and training, delivering a complete support package for the customer.