



A&P Falmouth

PRESS RELEASE

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For Immediate Release

EUROPEAN SEAWAY – GEARBOX EXCHANGE

A&P Falmouth recently won a contract from P&O Ferries to replace the port main propulsion gearbox on the freight ferry European Seaway, the fifth time A&P Falmouth has exchanged main engine gearboxes on this class of ferry. The vessel drydocked on 24th December 2007 and sailed on 9th February 2008.

The gearbox weighs some 22,000 kg, and is driven by two Wartsila ZA 40 engines rated at 5,280 kW each to produce an output torque of 643 kNm.

The spare gearbox was reconditioned by Germany's Flender Werft and new input shaft pinions and main output shaft Bull gears were fitted to the gearbox. As the main car deck cannot be accessed without a linkspan, the reconditioned gearbox was placed on the main deck prior to the vessel's arrival at Falmouth. Access to remove the gearbox from the engine room was made through the engine room deckhead to the main car deck. Lifting equipment was rigged from the main car deckhead beams above the gearbox access. The vessel was then trimmed to its mean trim and draft. Alignment control measurements were taken and a temporary support bracket was fitted to the forward intermediate shaft before the gearbox coupling was disconnected. The pneumatic clutches were removed along with the main engine charge air coolers to allow an unobstructed vertical lift of the gearbox to the main car deck. The removed gearbox was suspended away from the deck access to allow the new gearbox to be manoeuvred into position. The new gearbox was lowered onto the foundation. The deck access plate was welded back into position and the deckhead reinsulated. The gearbox was roughly aligned to the previously supported intermediate shaft coupling face and periphery. After undocking the vessel's draft and trim was confirmed to allow fine alignment of the gearbox to the shaft line.

Both main engines were aligned to the gearbox input shafts after the main engines were found to be out of line. The main engines were realigned to the OEM recommended horizontal and vertical offsets. The gearbox installation required that the box was positioned on 42 pieces of steel chock. The 18 steel chocks around the thrust bearing were secured by toleranced-fitted bolts. All chocks were hand-fitted and blue marked to achieve in excess of 80% contact. On completion of the chock fitting, the 18 fitted bolts were drilled and reamed to fit new toleranced-fitted bolts. The gearbox fastening bolts were adjusted to the recommended torque value.

The engines were fine aligned to the secured gearbox. Temporary dams were fitted around the engine block and resin chocks poured between the engine and foundation plate. When the resin chocks were cured, the engine fastening bolts were tensioned to the recommended value. Crankshaft deflections were taken to confirm alignment. New toleranced-fitted bolts were drilled, reamed and fitted to each engine.

The manufacturer's gearbox and engine run-in periods were completed. Final alignment checks were made. The vessel completed successful berth and sea trials prior to acceptance back into service.

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Notes to Editors:

A&P Falmouth, part of A&P Group is strategically located for customers operating in North West Europe. A&P Falmouth offers extensive shiprepair facilities with 3 dry docks, vast quay space, craneage and workshops, providing high quality and guaranteed turnaround times that encourage customers to return time after time. Visit us online @ www.ap-group.co.uk for further information.

Thursday, 3rd April 2008

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