

# CASE STUDY

## APPLETON MARINE INC WINCH MIDSHIPS CRANE MAIN WINCH REFURBISHMENT

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### OVERVIEW

Pressure Dynamics was engaged to complete the refurbishment of an Appleton Marine AMD-2025 winch, restoring the system to full operational capability. The scope involved a full strip-down, inspection and NDT, replacement of worn and end-of-life components, gearbox refurbishment, reassembly, and a comprehensive testing program including brake stall testing and independent line pull testing to verify the winch achieved its rated lifting capacity as per OEM requirements.

### APPROACH

The main crane winch was fully dismantled and inspected, allowing the team to identify worn and end-of-life components requiring replacement. During disassembly, additional gearbox components were identified for refurbishment and replacement to ensure long-term reliability and operational performance. Pressure Dynamics managed the procurement and installation of replacement parts before reassembling the winch and conducting a comprehensive testing program. This included bench testing and independent line pull testing to verify the winch achieved its rated lifting capacity and operated in accordance with required performance standards. Alongside the mechanical refurbishment works, the team completed a full documentation package, including certification and manufacturer data records to support compliance and ongoing asset management requirements.

### OUTCOME

The refurbishment successfully restored the crane main winch to full operational capacity, supporting safe and continued lifting operations aboard the vessel. Independent load testing confirmed the winch was performing to its rated capacity, providing confidence in the reliability and integrity of the equipment. The delivery of a complete certification and documentation package also ensured ongoing compliance and traceability for the client. This project demonstrates Pressure Dynamics' capability in delivering specialised mechanical refurbishment and testing services for critical lifting equipment, combining technical expertise, quality assurance and practical execution to achieve reliable outcomes for offshore operations.

