

Supacat's Pre-Production Lifeboat Launcher starts beach trials

Thursday 1st September 2011

The programme to bring the Royal National Lifeboat Institution (RNLI)'s new Shannon class all weather lifeboat into service reached a key milestone in July with beach trials starting on the upgraded pre-production Lifeboat Launch and Recovery System (L&RS), which has been developed by Devon based Supacat in association with the RNLI.

Following previous trials Supacat rebuilt the prototype L&RS into a pre-production system, incorporating a series of design upgrades to improve performance and longevity. These include a new lightweight composite cab with improved all-round vision, a Supacat designed marine proofed track system and new 13L Scania engine.



The L&RS is a track mounted, partially submersible tractor and powered-carriage system which has been custom designed by Supacat to launch and recover the new all weather lifeboat and carry it between the boathouse and water at stations where a harbour or slipway cannot be used.

To solve this challenge, the design uses a permanent, software controlled Four-Track-Drive system providing the mobility to negotiate the steepest gradients and gullies and travel long distances over flat sand or shingle, and a 360 degree rotating cradle facilitating the safer `Bow First` launch and recovery. The L&RS can be operated in heavy surf conditions, and in water at depths approaching 3m. In case of immobilisation, it is designed to withstand submersion in water up to 9m deep.

"The new pre-production L&RS is a significant engineering achievement for Supacat and the RNLI project teams who have found a unique solution to an extremely demanding requirement. It is a very important programme to Supacat since it demonstrates our innovation and skill in developing bespoke solutions as well as our specialisation in hostile environment engineering and high mobility transportation", said Nick Ames, Managing Director, Supacat.

"The RNLI's aim is to launch a lifeboat within 10 minutes of notification. For the new Shannon Class lifeboat the effectiveness of launch and recovery system is crucial to achieving this target. The Supacat L&RS provides a marked improvement to the existing equipment from an operational and health and safety perspective; as demonstrated during the recent trials where the Supacat's capability, versatility and robustness were clearly displayed. The combination of the Shannon Class all weather lifeboat (presently in the final stages of build) and Supacat L&RS will not only allow the RNLI to reach casualties faster, but also enable swifter recovery to shore if required", commented Chris Eves, RNLI FCB2 Project Manager.



This first trial phase involves testing the alterations to the L&RS against diverse conditions at different stations, starting at Llandudno where an undulating and deep shingle bank cannot be negotiated using existing in-service launch systems, then Dungeness for its steep pebble beach, followed by Hoylake where spring tides mean distances of up 3 miles have to be covered from boathouse to water.

The second phase will focus on the interface and compatibility between the L&RS and the new lifeboat. This is scheduled to start January 2012 at Hayle by which time the prototype Shannon lifeboat with enhanced hull design will be ready for trials. All pre-production trialling is expected to be completed by mid 2012 with the first production L&RS build commencing soon afterwards for delivery in 2013.

The key upgrades to the original prototype are:

- Lightweight composite cab offering all round vision with a water tight door and roof hatch to replace the prototype's steel cab with roof hatch only.
- Supacat designed, marinised, low maintenance track system for the tractor to replace an industrial specification track system.
- A new 13 Litre Scania engine replaces the original 12 Litre Mercedes, offering commonality with the boat engine.
- A Controller Area Network (CANbus) electrical system has been introduced to replace a conventional hard wired system and the operator's controls have been revised to utilise the CANbus capabilities.
- The boat cradle has been re-designed to accommodate an enhanced boat hull design.
- Stainless steel pipework replaces steel hydraulic pipework for ultimate corrosion protection.
- General design enhancements throughout to reduce maintenance and increase longevity.

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