SHANNON

LAUNCH AND RECOVERY SYSTEM

The Shannon Launch and Recovery System has been developed to launch and recover the 18-tonne Shannon class lifeboat from extremely rugged and harsh environments. The tractor and carriage can negotiate beaches with steep gradients and gullies, or travel long distances over flat, saturated sand or shingle.

Connected by a pivoting swan neck, hydraulic motors power both the tractor and the rear carriage. The system incorporates several unique and innovative features including a software-controlled four-track drive system that provides exceptional mobility.

The vehicle can be operated in calm water to a depth of 2.4m and shut down to withstand full submersion in water up to 9m deep if stranded on an incoming tide.

The Shannon class all-weather lifeboat can be launched and recovered bow first. The cradle that carries the lifeboat rotates through 180° using a unique turntable feature built into the carriage. This reduces the time and space needed to prepare for relaunch – a crucial factor if the Shannon is to receive more than one call out in a day.

CAB

The cab is built from composite materials and provides good visibility and driver protection. The door and hatch have watertight seals in case of immersion. Access to the cab and surrounding walkway is provided by means of a ladder on the front of the tractor.

There is space for three people – the driver and two others. The driver can face forwards or backwards on a 180° rotating seat.

CONTROLS

The controls and displays needed to operate and monitor the equipment are located in the cab. Some, like the joystick, are sited on the driver's seat arm to make the rig easier to drive. Others are on a screen.

CCTV is provided to make sure winching operations are conducted safely.

RUNNING GEAR

The tractor and carriage have identical track systems with low maintenance rubber tracks and road wheels. The tracks pivot to allow them to paddle over undulating or uneven ground.

WINCH

The winch is used to recover the lifeboat onto the cradle and can also be used for self-recovery of the launch and recovery system.

The winch rope is a synthetic rope instead of a conventional wire rope. It is light and strong and will not whip or recoil if it were to break or snatch, making it safer for the shore crew.

SWAN NECK

The swan neck connects the carriage to the tractor.

This feature can angle the carriage using a tilt ram for slipway launching and recovery. It is also used to reduce the overall height of the rig when entering or exiting the boathouse.

CARRIAGE FOOT

The carriage support foot enables disconnection/connection of the carriage from/to the tractor on a variety of beach conditions.

The carriage foot is used for emergency disconnection if there is a problem with the rig and is not normally used during launch and recovery.

CARRIAGE UNIT

The carriage unit allows the lifeboat to be launched and recovered bow first. The unit has a cradle to support the lifeboat. The rig can be tilted for launch and recovery by means of hydraulic rams on the swan neck and drawbar assembly. When on the carriage the bow of the lifeboat extends 1m over the front of the carriage.

CRADLE

Plastic keel rollers and skids on the cradle are used to prevent damage to the keel of the lifeboat.

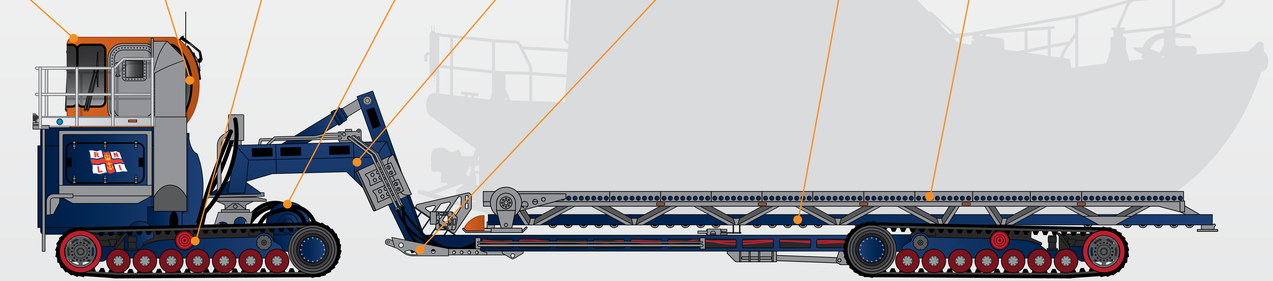
Righting wheels lift the lifeboat from a heeled state (lying partially on its side) and protect the hull during recovery.

LAUNCH

There are two modes of launching, slipway and drive off. The lifeboat is released from the carriage using a single-point release controlled by the coxswain. The launch procedure only requires the vehicle to enter the water deep enough for the lifeboat to float or for the jets to have drive.

RECOVERY

The lifeboat is recovered bow first onto the cradle from a partially afloat or beached state and is then rotated through 180° so that the lifeboat can be relaunched bow first. The lifeboat can be ready for its next launch in less than 10 minutes.



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LENGTH OF TRACTOR AND CARRIAGE
19.3m without lifeboat
20.3m with lifeboat

TRACTOR WIDTH 3.5m

TRACTOR HEIGHT 4m

WEIGHT
37 tonnes

WINCH WIRE PULL
18.5 tonnes

ENGINE
Scania DC13 12.7-litre turbo-charged diesel, 331kW

FUEL CAPACITY
300 litres

MAX SPEED 10 MPH