

News and analysis

Leak discovered on HMS Queen Elizabeth



The news

The Royal Navy's largest aircraft carrier, HMS Queen Elizabeth, is leaking as a result of a problem with a shaft seal.

The aircraft carrier has been in service since December 2017, and the problem with one of its propeller shafts was first identified during sea trials.

The Sun newspaper reports that the ship has been taking on up to 200 litres of sea water every hour because of the fault.

"An issue with a shaft seal has been identified during HMS Queen Elizabeth's sea trials. This is scheduled for repair while she is alongside at Portsmouth," a Royal Navy spokesman said.

"It does not prevent her from sailing again and her sea trials programme will not be affected."

The £3.1bn aircraft carrier, which has a crew of 700, was formally welcomed into the Fleet by the Queen on 7 December.

At 280m long and with an estimated 50-year working life, the carrier is the largest and most powerful warship ever built for the UK's Royal Navy.



The views

The UK's Defence Secretary, Gavin Williamson, said the cost of the repair would be funded by the contractors that built it. He said: "This is the reason why we have the sea trials, to make sure that everything is working absolutely perfectly."

Rear Admiral Chris Parry, a former director of operational capability at the UK Ministry of Defence, said the headlines were "very embarrassing" but the leak "in reality is no big deal".

"You expect to take some water in when you're operating a warship at sea," he told the BBC.

"It's been out for sea trials, it's been under pressure. They've been testing all their systems to the extremes and I'm afraid to say this is what happens at sea."

BAE Systems, which confirmed the affected section was built at its site in Govan, said: "It is normal practice for a volume of work and defect resolution to continue following vessel acceptance. This will be completed prior to the nation's flagship recommencing her programme at sea this year."



The analysis

Richard Corderoy, CQP MCQI, is a Partner at Oakland Consulting. He said: "The headline story should be about how the project has successfully integrated the thousands of systems that are part of a warship. Some failures are inevitable and, whilst embarrassing, this issue needn't impact the long-term capability of the ship.

"The faulty components will have already been through a complex lifecycle involving design, material selection, manufacture, transportation, storage, installation, commissioning and operation.

"There is often a belief that having a detailed specification for all components and parts will ensure quality – it won't. For critical components, the plan must include all aspects of the product lifecycle. Many progressive industries use APQP [advanced product quality planning] to 'design quality in' from the outset. Such techniques cut across the entire supply chain and greatly improve the overall quality levels."

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