Stopping engine trouble before catastrophic failure in a Royal Navy Destroyer

A case study profiling the achievements of the Machine Care Plus® service in support of military forces.

This short report highlights the benefits derived by identifying the early signs of engine failure on board a Royal Navy Sheffield Class (Type 42) Destroyer.

Machine Care Plus's routine analysis for the warship showed that excessive wear was occurring on one of its 1.2 MW diesel generators. On recommendation, the engine was removed for an in-depth investigation to be carried out by the approved repair agency. Warship Support Agency staff were present to witness the investigation at first hand. By stripping down and examining the engine the cause of wear was revealed and Machine Care Plus® recommendations confirmed.

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> **"Machine Care Plus® helps us to manage engine problems more effectively".**

In the opinion of the repair agency, "if the engine had not been removed there would have been further deterioration of the already damaged two main bearings which could have resulted in catastrophic engine failure".

A catastrophic engine failure at sea has major safety, operational and financial implications. Neither crew nor shore based support staff were aware of this potential failure prior to the Machine Care Plus® recommendation.
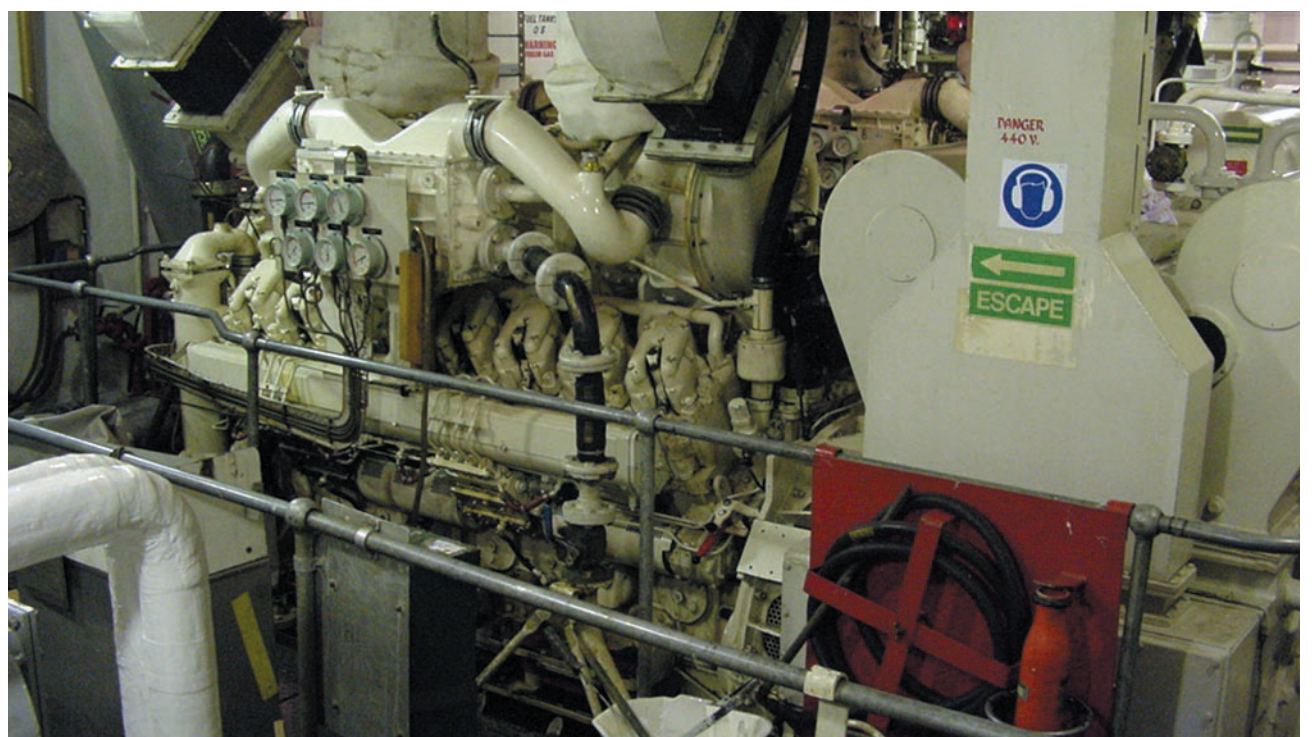
Mr Stuart Lock, Deputy Head of the Warship Support Agency's Marine Propulsion Systems Diesel Section explains the importance of the partnership he has helped to forge with AES: "Machine Care Plus® helps us to manage engine problems more effectively. For example, if we need to determine whether an engine can be run-on for another two months, Machine Care Plus® gives us the insight we need to make informed decisions".

1.2MW Diesel Generator