Royal Navy - Lubricants Training Video

Excerpt

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Narrator:

Lubrication is key to the effective operation of all types of equipment in the Royal Navy Fleet.

It is vital to understand the properties of these lubricants, how to use the right lubricant, and how to follow the correct operating procedures, at all times.

This video will explain the various lubricant specifications and the reasons for Defence Standards.

CUT TO LUBRICANTS BEING ADDED

It will provide an overview of the main lubricants currently being used, and show how they are applied to engines, gearboxes and hydraulic systems.

CUT TO ON BOARD TESTS

There will be information on the various tests on board ship….

CUT TO SAMPLE BEING PACKAGED

How to take and despatch lubricant samples…..

CUT TO DERA PYESTOCK LAB FOOTAGE

… and the correct response to external laboratory results.

CAPTION: Base Oils and Additives.

Before we look at the main lubricants used in the Fleet, it is important to understand what a lubricant is.

Any material that can lower friction and, as a consequence, reduce wear from a mechanical system, can be used as a lubricant.

Mineral oil, which is still widely available, has been found to be very efficient, and forms the base component of most lubricants in the Fleet.

Mineral oil is obtained from a refinery, which processes crude oil. This base stock is generally not good enough to lubricate most modern systems and requires additives to make it work more efficiently.

CAPTIONS OVER SLO-MO CASTROL FOOTAGE

Mineral Oil Additives

Improve friction
Reduce wear
Prevent corrosion
Disperse soot and sludge

By using additives, oils can be tailored for particular applications.

They may contain compounds - to improve friction, reduce wear and prevent corrosion.

Dispersants to suspend soot or sludges…

Or additives to neutralise acidic gases produced during the burning of fuel, usually referred to as ‘blow by’ gases.