

CYLINDER CONDITION OPTIMIZATION PROGRAM

Maximize cylinder oil savings and optimize your engine condition. Find out why our CCOP model gives you the most comprehensive analysis in the market.

Increased engine complexity

Running a two-stroke engine efficiently is becoming increasingly complex. Enhanced environmental regulations (such as SECA, IMO2020, EEXI and CII), changes in marine engine design (now operating at higher temperatures and pressures), new operation requirements (slow steaming/part load operation), and the reduced specialism of crew all add to this.

That's why it's more important than ever to work with cylinder lubrication specialists to help maintain a healthy cylinder condition.

Advantages:

- Improved engine performance and condition
- Improved cylinder condition
- Extended Time Between Overhaul (TBO)

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 Detection of early warning signs (eg. cold corrosion and build-up deposits on piston rings)

Turn the page \longrightarrow



Smedevaenget 1-3 DK - 9560 Hadsund

Comprehensive analysis

To present a complete overview of your cylinder condition, we consider all relevant parameters. Our experts in lubrication and tribology provide tailored recommendations for running your engine efficiently. The exact program elements are decided during the initial consultation.

We consider the following program elements: SCRAPE DOWN ANALYSIS (SDA) Our SDA considers the type of lubrication system, use of Automatic Cleaning Sequence, LCD and more. **ENGINE DESIGN** Long stroke engines are more SCAVENGE PORT INSPECTION exposed to potential wear of Based on images of the piston rings, the cylinder liner. cylinder liner wall, cylinder crown and piston top land, our engineers evaluate the condition of your cylinder. **CYLINDER LUBRICATION SYSTEM** CONDITION LINER CALIBRATION The type of lubrication system determines how to We have the tools and the interpret data. expertise needed for measu-**OPTIMIZATION** ring the wear of liner. **PROGRAM FUEL REPORT** The fuel you use plays an important role in the overall assesment and recommendations we give. **REPLICA ANALYSIS** Reveals any signs of abrasive wear due to Cat Fine, corrosion and wear due to under- or over-lubrication. PISTON RING COATING Periodic measurement of piston ring coating thickness is recom-OTHER DATA mended by engine OEMs.

Not just another SDA

We conduct root cause analysis, taking all parameters into consideration such as the lubrication system, engine design, piston ring design, fuel and cylinder oil in use.

Findings are analyzed by our cylinder specialists with sailing experience, who base their conclusions on the specific operational conditions onboard your vessel.

This comprehensive process is completed as part of our Cylinder Condition Optimization Program.

Trained specialists

Hans Jensen Lubricators has a century of experience in lubrication technology and offers leading expertise within cylinder lubrication and condition analysis.

We are the only independent lubrication specialist. Our client portfolio contains thousands of ships now realizing the full potential of their engine.

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This includes Purifyer efficiency and other relevant data.