Drain Oil Analysis

CHRIS-MARINE®

DRAIN OIL ANALYSIS

Determine root cause for high cylinder liner wear rates in low-speed engines and verify countermeasures through the Chris-Marine drain oil analysis laboratory service.



Service features

- Follow-up action after detection of high cylinder wear.
- Fast and easy to collect samples – collection from one cylinder within seconds.
- Chris-Marine recommends counter-measures.
- No need for crew to analyse results.
- The oil samples are analysed by one of our experts with state-of-art laboratory equipment.
- A summary report is produced within two working days after reception of samples.

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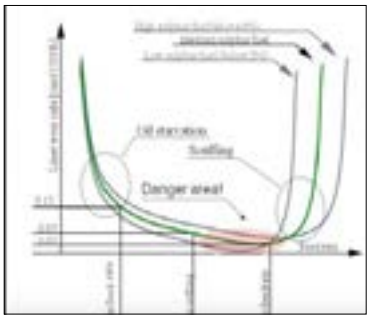
DRAIN OIL ANALYSIS

Determine root cause and verify counter-measures when experiencing high cylinder liner wear rates

The Chris-Marine LDM and replica products can detect high cylinder liner wear rate and contribute to root cause analysis. Drain oil analysis is an excellent complementary service after detection high wear rates and when implementing counter-measures at minimnum cost.



Measure cylinder wear and surface structure to detect wear issues.



Use drain oil sampling for choosing correct lube oil and feed rate. Verify that the wear issue has been solved at minimum cost.

Fast and easy process



1) Collect sample
Collect one >30 ml drain oil sample from each cylinder under normal operating conditions. Also collect an unused lube oil sample and the bunker note.

Vessel name				
IMO number				
Lube oil type	Mobilgard 570 (70BN)			
Bunker oil Sulphur level [%]	1.53%			
Sample ID	Cylinder #	Eh	SLOC [g/kWh]	Cylinder condition observations
#1	1	13231	0.95	Rough surface on top ring
#2	2	13231	0.80	Normal

2) Fill in a sample form

3) Send sample and form to Chris-Marine





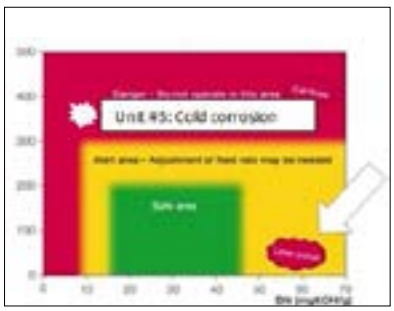
4) Laboratory analysis
A Chris-Marine expert analyses the oil through XRF.

5) Report
A report with root cause analysis and recommended counter-measures is created and shared with the customer.

Elements analysed and recommendations

Element	Concentration
Ca 20	22659.8 ppm
Cl 17	91.34 ppm
Co 27	ND <0.14 ppm
Cr 24	2.66 ppm
Cu 29	9.53 ppm
Fe 26	59.39 ppm
K 19	ND <3.88 ppm
Mn 25	3.96 ppm
Ni 28	26.33 ppm
P 15	566.5 ppm
S 16	1.476 wt%
Ti 22	ND <0.65 ppm
V 23	76.85 ppm
Zn 30	127.3 ppm

Example of elements detetected through lube oil analysis. Rest TBN is calculated from the composition.



Get a target map for your engine and the current position for each cylinder.



Change lube oil and feed rates according to recommendations. Verify counter-measures.

Want to solve the problem on your own?
Rent a portable lube oil and fuel oil wear analyser from Chris-Marine.

For more information, please contact:
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Contact one of our offices to get in touch with your local agent.

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