LIEBHERR

CONSTRUCTION EQUIPMENT

LIEBHERR LH40M 1202-75629 - Diesel Engine

Sample No: LHMC99442

Oil Type: LIEBHERR MOTOROIL 10W-40 LOW ASH

<u> </u>							
SAMPLEINFORMATION							
Sample Number	LHMC99442	LHMC100341	LHMC79599	LHMC99431			
Sample Date	22 Jan 2024	13 Feb 2023	22 Nov 2022	13 Aug 2020			
Machine Hours	12340	10878	10524	6190			
Oil Hours	52	138	35	551			
Oil Changed	Not Changd	Changed	Not Changd	Changed			
Sample Status	ABNORMAL	NORMAL	NORMAL	NORMAL			

	OIL CO	NDITION				
Visc @	100°C	cSt	<u> </u>	O 13.2	13.8	14.4
Base Nu	mber (BN)	mg KOH/g	8.7	○ 8.3	10.3	
Oxidatio	n (PA)	%	69	82	80	85

CONTAMINATION						
Water	%	NEG	NEG	NEG	NEG	
Soot %	%	0.4	O 1.2	0.5	O 1.1	
Nitration (PA)	%	63	95	74	103	
Sulfation (PA)	%	52	60	59	60	
Glycol	%	NEG	NEG	NEG	NEG	
Fuel	%	5.9	<1.0	<1.0	<1.0	
Silicon	ppm	7	8	8	9	
Sodium	ppm	2	3	O 2	6	
Potassium	ppm	2	3	O 2	1 3	

(O) WEAT					
WEA	R METALS				
Iron	ppm	9	O 26	O 15	○ 20
Copper	ppm	2	3	O 1	○ 3
Lead	ppm	() <1	O 1	O 1	O 2
Tin	ppm	() <1	O <1	O <1	O 1
Aluminum	ppm	2	5	3	O 12
Chromium	ppm	0	O <1	O <1	O <1
Molybdenum	ppm	2	O 2	O 2	○ 28
Nickel	ppm	0	O 0	O <1	O <1
Titanium	ppm	0	0	0	<1
Silver	ppm	0	O 0	O <1	0
Manganese	ppm	() <1	O <1	O <1	O <1
Vanadium	ppm	0	0	<1	0

ADI	DITIVES					
ADI	DIIIAE2					
Calcium	ppm	1382	O 1380	O 1457	O 1366	
Magnesium	ppm	832	O 771	○ 829	○ 863	
Zinc	ppm	935	925	933	832	
Phosphorus	ppm	821	780	○ 816	728	
Barium	ppm	0	0	O 0	0	
Boron	ppm	175	68	O 155	○ 33	



PSC METALS INC 656 NEW CASTLE RD SLIPPERY ROCK, PA US 16057 Contact: SERVICE MANAGER

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Diagnosis

We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition. All component wear rates are normal. There is a moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

Depot:PSCSLIUnique No:10848731Signed:Wes DavisReport Date:30 Jan 2024

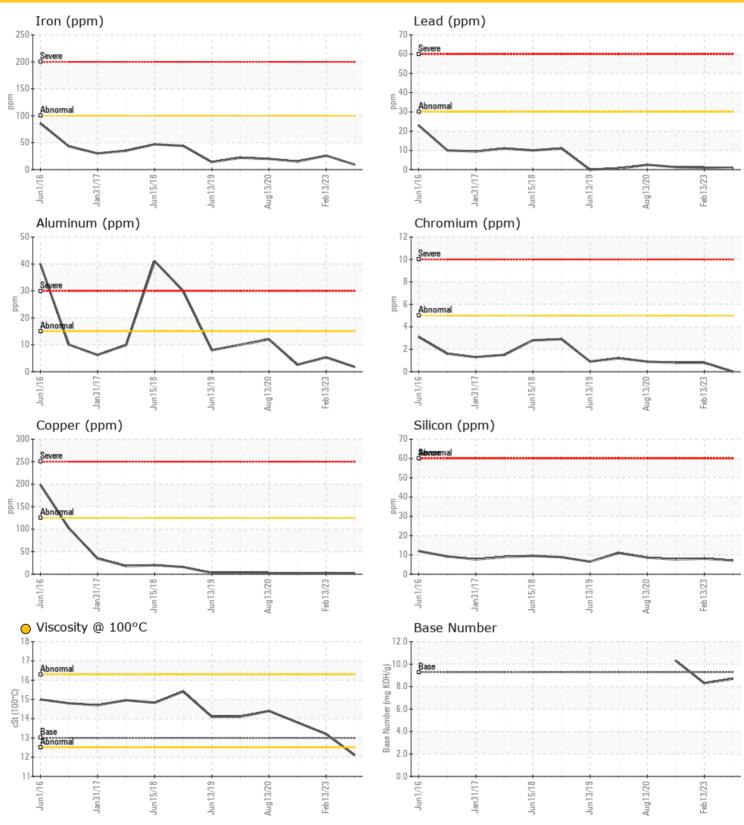
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GRAPHS



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