LIEBHERR

CONSTRUCTION EQUIPMENT



[ZANCON FOUNDATIONS] LIEBHERR LB28 115549 - Diesel Eng

Sample No: LH0277554

Oil Type: PETRO CANADA 10W40

5				
U SAM	PLE INF	ORMATION		
Sample Number		LH0277554	LH0261809	
Sample Date		14 Feb 2024	16 May 2023	
Machine Hours		6734	5786	
Oil Hours		0	0	
Oil Changed		Changed	Not Changd	
Sample Status		ABNORMAL	NORMAL	
OILC	ONDIT	ON		
Visc @ 100°C	cSt	14.0	14.5	
Oxidation (PA)	%	63	52	
-4				
CONT	TAMIN	ATION		

CONTAMINATION					
Water	%	NEG	NEG		
Soot %	%	1	0.3		
Nitration (PA)	%	70	49		
Sulfation (PA)	%	59	51		
Glycol	%	NEG	NEG		
Fuel	%	<1.0	<1.0		
Silicon	ppm	7	4		
Sodium	ppm	2	0 1		
Potassium	ppm	<1	0		

WEA	R METALS				
Iron	ppm	47	O 13		
Copper	ppm	4	0 1		
Lead	ppm	1	O <1		
Tin	ppm	○ <1	O <1		
Aluminum	ppm	20	5		
Chromium	ppm	4	0 1		
Molybdenum	ppm	55	O 52		
Nickel	ppm	○ <1	O <1		
Titanium	ppm	0	<1		
Silver	ppm	0	0		
Manganese	ppm	0	O <1		
Vanadium	ppm	0	0	***	

ADDITIVES					
Calcium	ppm	1388	O 1336		
Magnesium	ppm	858	○ 860		
Zinc	ppm	1170	O 1138		
Phosphorus	ppm	1008	O 1051		
Barium	ppm	O <1	O 0		
Boron	ppm	14	O 12		



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Diagnosis

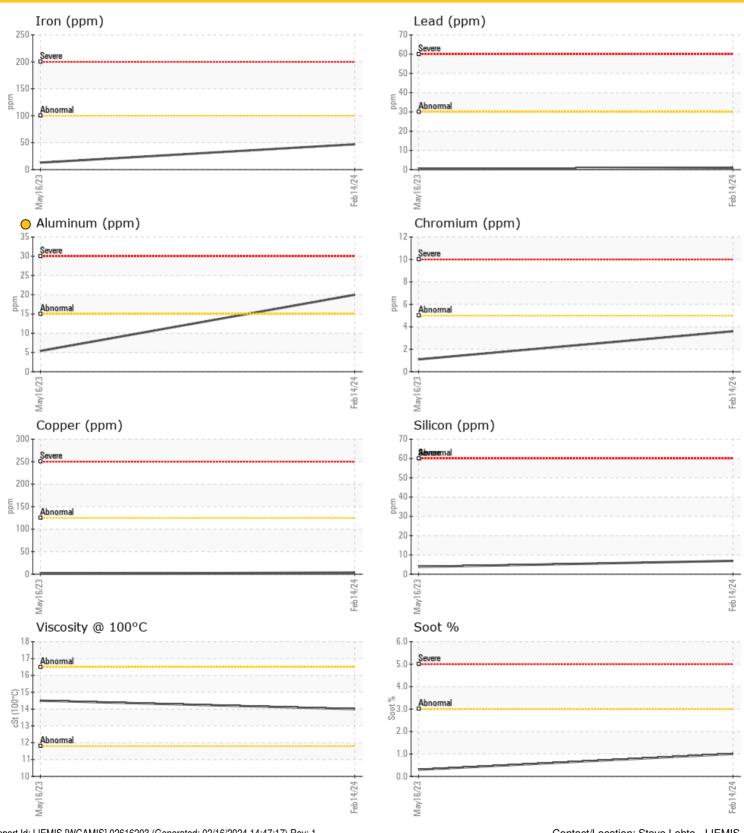
The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. Aluminum ppm levels are abnormal. Piston wear is indicated. There is no indication of any contamination in the oil. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Depot:LIEMISUnique No:5733313Signed:Kevin MarsonReport Date:16 Feb 2024





GRAPHS



Report Id: LIEMIS [WCAMIS] 02616203 (Generated: 02/16/2024 14:47:17) Rev: 1

Contact/Location: Steve Lehto - LIEMIS