LIEBHERR

CONSTRUCTION EQUIPMENT



Sample No: LH0274352

Oil Type: PETRO CANADA 10W40

Sample Number		LH0274352	LH0111028	LH0070188	
Sample Date		17 Oct 2023	24 Nov 2016	28 Jan 2013	
Machine Hours		8483	7483	2064	
Oil Hours		0	0	0	
Oil Changed		N/A	Changed	Changed	
Sample Status		NORMAL	NORMAL	NORMAL	
A					
OIL	ONDITI	ON			
/isc @ 100°C	cSt	12.7	O 14.1	O 13.2	
Oxidation (PA)	%	79	O 67	85	
**					
CON	TAMIN	ATION			
CON Soot %	TAMIN/	ATION © 0.5	○ 0.5	0.6	
			0.5 71	0.6 92	
Soot %	%	0.5		Ŭ	
Soot % Nitration (PA)	%	© 0.5 88	O 71	O 92	
Soot % Nitration (PA) Sulfation (PA)	% % %	© 0.5 88 64	○ 71 ○ 63	9294	
Soot % Nitration (PA) Sulfation (PA) Glycol	% % %	© 0.5 88 64 NEG	○ 71 ○ 63 NEG	92 94 NEG	
Soot % Nitration (PA) Sulfation (PA) Glycol Fuel Silicon	% % % %	© 0.5 88 64 NEG © 1.5	○ 71 ○ 63 NEG <1.0	92 94 NEG <1.0	
Soot % Nitration (PA) Sulfation (PA) Silycol Fuel	% % % % % ppm	 ○ 0.5 88 64 NEG ○ 1.5 ○ 5 	○ 71 ○ 63 NEG <1.0	92 94 NEG <1.0	

()					
WEA	R MET	ALS			
Iron	ppm	18	1 0	2 6	
Copper	ppm	13	O 4	O 72	
Lead	ppm	5	O <1	10	
Tin	ppm	○ <1	O <1	1	
Aluminum	ppm	2	O 2	3	
Chromium	ppm	○ <1	O <1	O <1	
Molybdenum	ppm	53	O 1	O <1	
Nickel	ppm	0	O <1	O <1	
Titanium	ppm	0	<1	0	
Silver	ppm	0	0	<1	
Manganese	ppm	0	O <1	<1	
Vanadium	ppm	0	0	0	

ADDI	TIVES				
Calcium	ppm	1499	O 2472	O 2528	
Magnesium	ppm	882	26	O 11	
Zinc	ppm	1343	O 1288	1365	
Phosphorus	ppm	1090	O 1090	O 1015	
Barium	ppm	 <1	O <1	O 1	
Boron	ppm	21	O 50	○ 20	



LIEBHERR CANADA LTD.

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Diagnosis

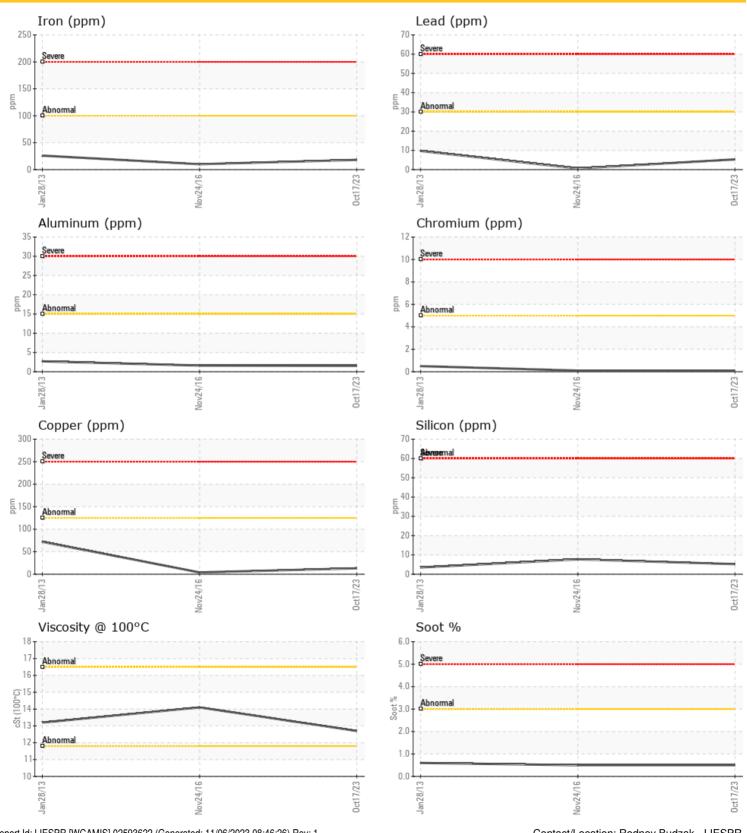
No corrective action is recommended at this time. Resample at the next service interval to monitor.All component wear rates are normal. Light fuel dilution occurring. No other contaminants were detected in the oil. The condition of the oil is acceptable for the time in service.

Depot:LIESPRUnique No:5670701Signed:Wes DavisReport Date:06 Nov 2023





GRAPHS



Report Id: LIESPR [WCAMIS] 02593622 (Generated: 11/06/2023 08:46:26) Rev: 1

Contact/Location: Rodney Budzak - LIESPR