LIEBHERR

CONSTRUCTION EQUIPMENT

045705-1491 - Diesel Engine

Sample No: LH0265685

Oil Type: PETRO CANADA 10W40



Campic Number	L110203003	LI 10 100320	L110132072	LI 102 13 130
Sample Date	01 Aug 2023	02 Dec 2022	24 May 2022	07 Dec 2021
Machine Hours	4919	3979	3424	2976
Oil Hours	0	0	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	ABNORMAL	NORMAL	NORMAL	NORMAL

OIL CO	NDITION				
Visc @ 100°C	cSt	<u> </u>	11.4	O 12.1	13.0
Oxidation (PA)	%	76	86	30	25

CONTAMINATION					
Soot %	%	0 0	0 0	0 0	O 0
Nitration (PA)	%	78	87	36	30
Sulfation (PA)	%	57	63	35	36
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	2	<1.0	<1.0	<1.0
Silicon	ppm	5	0 8	6	O 5
Sodium	ppm	4	5	4	O 2
Potassium	ppm	1	3	O 2	7

WEAR METALS						
Iron	ppm	4	O 10	6	6	
Copper	ppm	0 1	3	O 2	0 2	
Lead	ppm	 <1	O <1	O <1	O <1	
Tin	ppm	○ <1	O <1	O <1	O <1	
Aluminum	ppm	2	O 2	O 2	O 2	
Chromium	ppm	○ <1	O <1	O <1	O <1	
Molybdenum	ppm	59	60	5 3	39	
Nickel	ppm	0	O <1	O 0	O <1	
Titanium	ppm	0	<1	<1	0	
Silver	ppm	○ <1	O 0	<1	<1	
Manganese	ppm	0	O <1	O <1	O <1	
Vanadium	ppm	0	0	0	0	

ADDITIVES						
Calcium	ppm	792	915	O 1021	1488	
Magnesium	ppm	1099	O 1172	O 1029	O 658	
Zinc	ppm	1173	O 1291	1227	1227	
Phosphorus	ppm	1032	O 1168	1082	1063	
Barium	ppm	0	0	0	O <1	
Boron	ppm	27	26	○ 36	○ 34	





American Iron and Metal 1273 Kelly Lake Rd. Sudbury, ON CA P3E 5P5 Contact: Service Manager

T: F:

Diagnosis

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. All component wear rates are normal. Light fuel dilution occurring. Fuel is present in the oil and is lowering the viscosity. The condition of the oil is acceptable for the time in service.

Depot:AIMSUDUnique No:5618627Signed:Kevin MarsonReport Date:03 Aug 2023

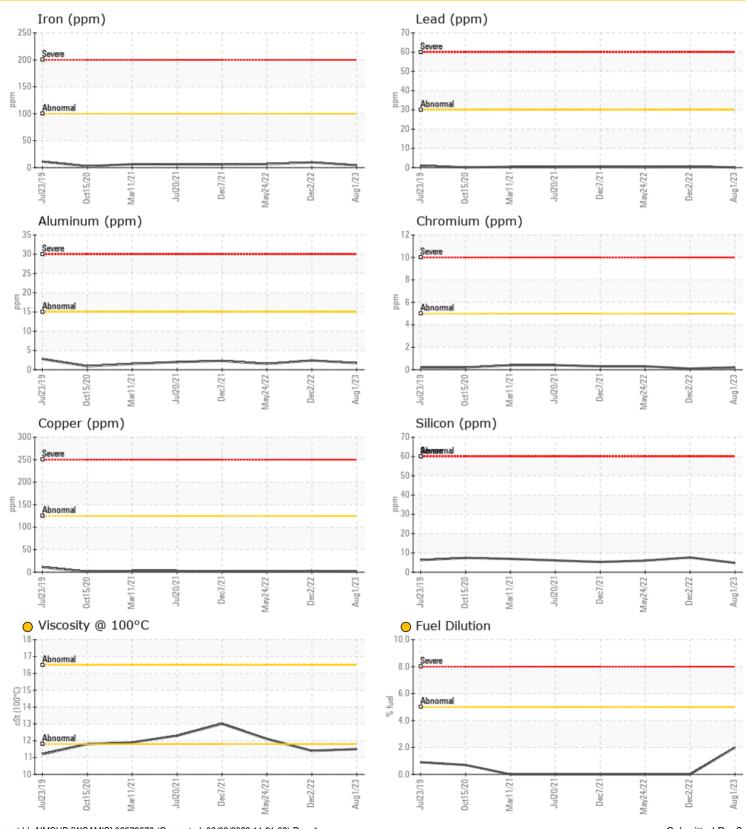
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GRAPHS



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