



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area
[600286]
Machine Id
LIEBHERR HS895HD 188227
Component
Diesel Engine
Fluid
PETRO CANADA 10W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0286558	LH0277699	LH0234997
Sample Date		Client Info		01 Mar 2024	13 Oct 2023	29 Nov 2022
Machine Age	hrs	Client Info		26121	25204	23243
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	Changed
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	ABNORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>100	34	72	26
Chromium	ppm	ASTM D5185(m)	>5	1	3	1
Nickel	ppm	ASTM D5185(m)	>5	<1	2	<1
Titanium	ppm	ASTM D5185(m)		0	0	<1
Silver	ppm	ASTM D5185(m)	>3	0	<1	0
Aluminum	ppm	ASTM D5185(m)	>15	3	3	3
Lead	ppm	ASTM D5185(m)	>30	5	7	2
Copper	ppm	ASTM D5185(m)	>125	128	181	4
Tin	ppm	ASTM D5185(m)	>5	<1	2	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0

CONTAMINATION

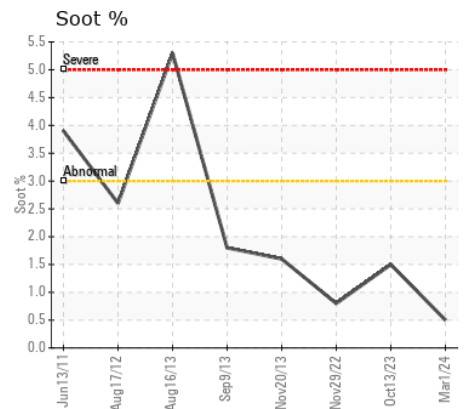
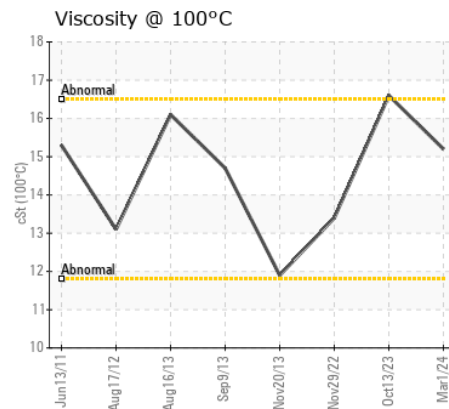
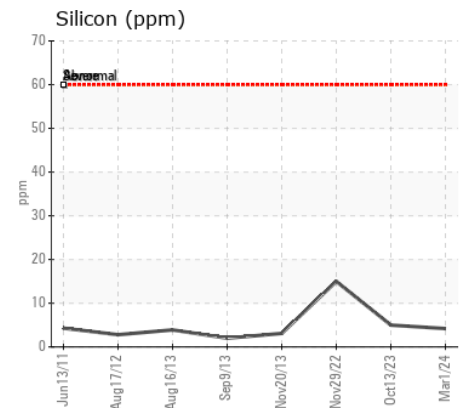
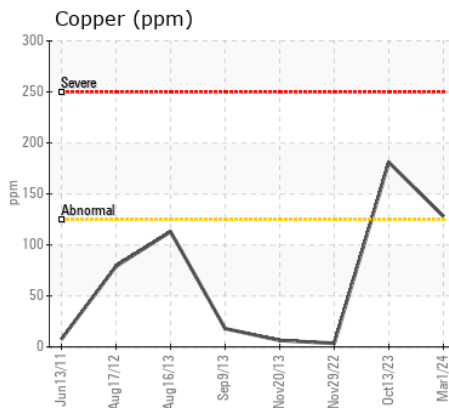
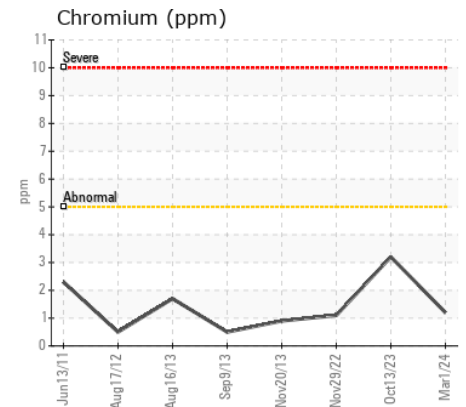
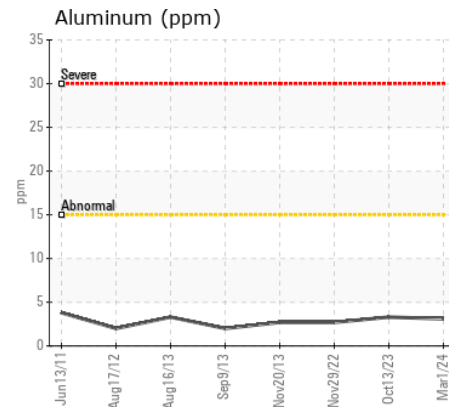
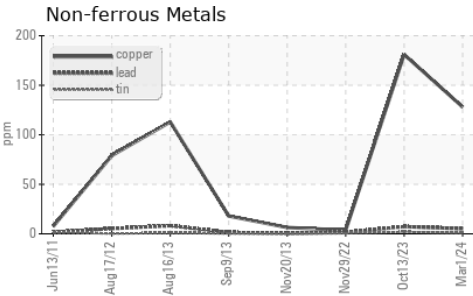
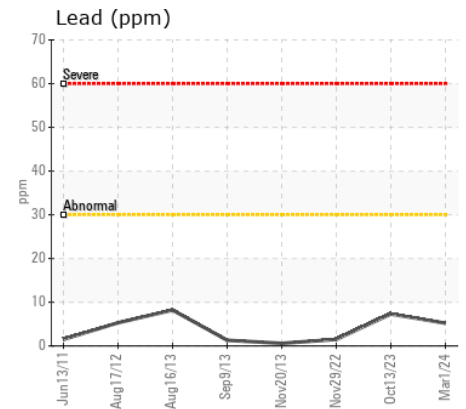
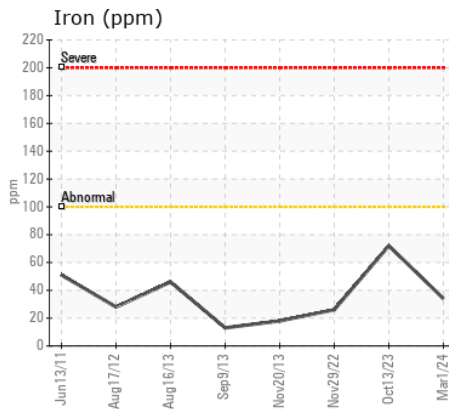
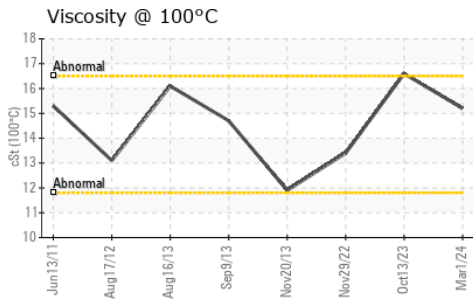
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>60	4	5	15
Potassium	ppm	ASTM D5185(m)	>20	<1	8	<1
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	ASTM D7844*	>3	0.5	1.5	0.8
Nitration	Abs/cm	ASTM D7624*	>20	11.3	14.2	7.5
Sulfation	Abs/.1mm	ASTM D7415*	>30	25.3	29.1	19.8
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG

FLUID CONDITION

The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)	>20	2	7	6
Boron	ppm	ASTM D5185(m)		3	11	4
Barium	ppm	ASTM D5185(m)		0	1	0
Molybdenum	ppm	ASTM D5185(m)		76	83	22
Manganese	ppm	ASTM D5185(m)		0	<1	<1
Magnesium	ppm	ASTM D5185(m)		1240	1283	318
Calcium	ppm	ASTM D5185(m)		1391	1446	2035
Phosphorus	ppm	ASTM D5185(m)		1184	1210	1020
Zinc	ppm	ASTM D5185(m)		1527	1585	1095
Sulfur	ppm	ASTM D5185(m)		2636	2356	2985
Oxidation	Abs/.1mm	ASTM D7414*	>25	24.7	29.6	11.7
Visc @ 100°C	cSt	ASTM D7279(m)		15.2	16.6	13.4



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH0286558
Lab Number : 02619844
Unique Number : 5736954
Test Package : MOB 1
Received : 05 Mar 2024
Tested : 05 Mar 2024
Diagnosed : 06 Mar 2024 - Kevin Marson

HIGGS & HIGGS
 RR # 4
 ST THOMAS, ON
 CA N5P 3S8
 Contact: Bernie Higgs

To discuss this sample report, contact Customer Service at 1-800-268-2131.
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
 Validity of results and interpretation are based on the sample and information as supplied.

T: (519)631-4095
 F: (519)631-2745