



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area
SOLETANCHE [604374]
Machine Id
LIEBHERR HS8100 186028
Component
Diesel Engine
Fluid
PETRO CANADA SUPREME 5W30 (--- LTR)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0286953	LH0239608	LH0192762
Sample Date		Client Info		06 Apr 2024	12 Aug 2022	09 Feb 2022
Machine Age	hrs	Client Info		2891	983	541
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	Changed	Changed
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>100	3	4	10
Chromium	ppm	ASTM D5185(m)	>5	0	0	<1
Nickel	ppm	ASTM D5185(m)	>5	0	0	<1
Titanium	ppm	ASTM D5185(m)		0	<1	<1
Silver	ppm	ASTM D5185(m)	>3	0	0	<1
Aluminum	ppm	ASTM D5185(m)	>15	<1	1	2
Lead	ppm	ASTM D5185(m)	>30	0	2	4
Copper	ppm	ASTM D5185(m)	>125	1	3	11
Tin	ppm	ASTM D5185(m)	>5	0	<1	1
Vanadium	ppm	ASTM D5185(m)		0	0	0

CONTAMINATION

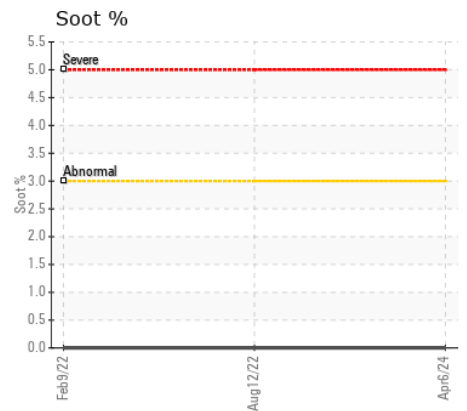
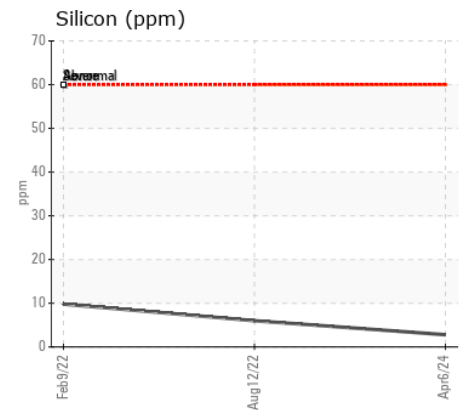
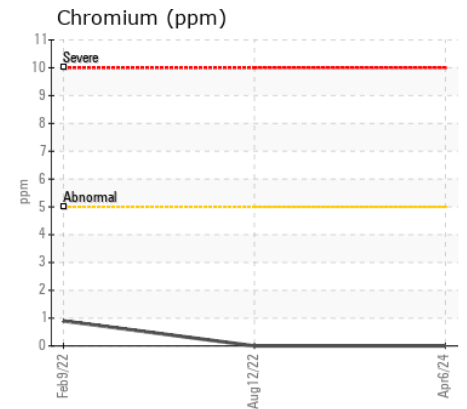
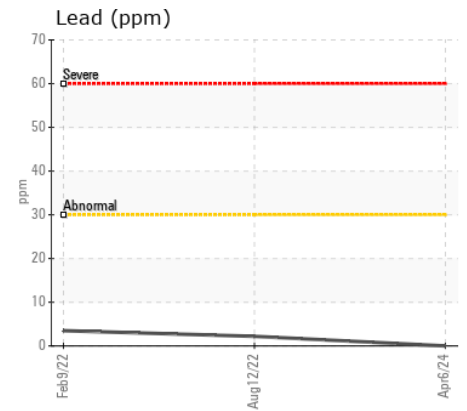
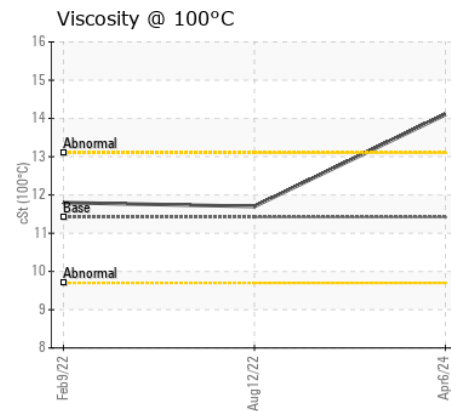
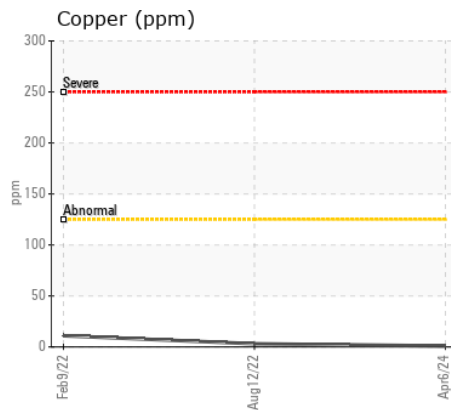
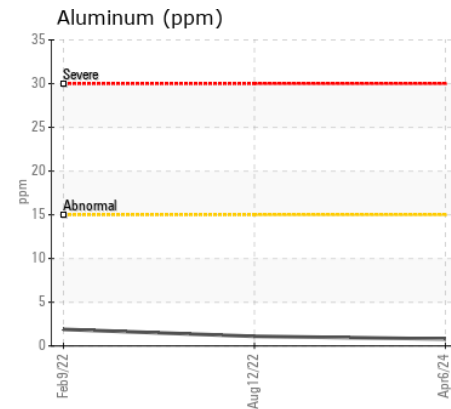
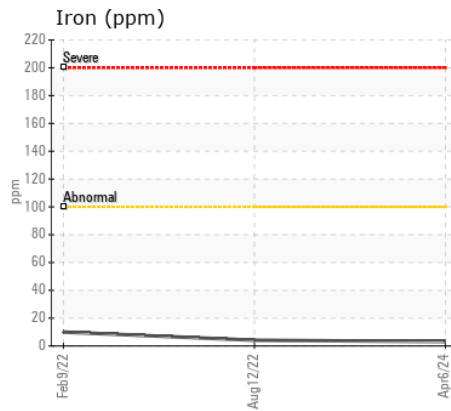
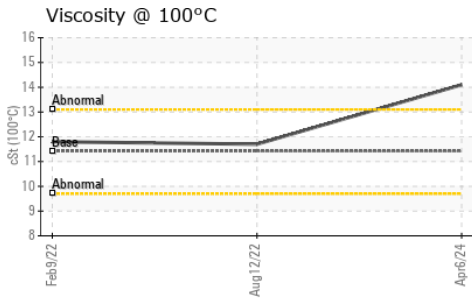
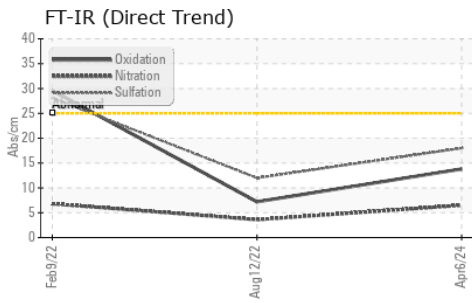
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>60	3	6	10
Potassium	ppm	ASTM D5185(m)	>20	<1	<1	3
Fuel		WC Method	>5	<1.0	<1.0	1.1
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	ASTM D7844*	>3	0	0	0
Nitration	Abs/cm	ASTM D7624*	>20	6.5	3.6	6.8
Sulfation	Abs/.1mm	ASTM D7415*	>30	18.0	12.0	28.1
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG

FLUID CONDITION

Viscosity of sample indicates oil is within SAE 40 range, advise investigate. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)		1	4	3
Boron	ppm	ASTM D5185(m)	186	4	49	130
Barium	ppm	ASTM D5185(m)	<1	<1	2	29
Molybdenum	ppm	ASTM D5185(m)	79	60	55	45
Manganese	ppm	ASTM D5185(m)	0	0	<1	3
Magnesium	ppm	ASTM D5185(m)	578	921	1073	898
Calcium	ppm	ASTM D5185(m)	1002	1053	836	1460
Phosphorus	ppm	ASTM D5185(m)	745	993	1058	799
Zinc	ppm	ASTM D5185(m)	837	1208	1159	882
Sulfur	ppm	ASTM D5185(m)	2502	2590	2789	2068
Oxidation	Abs/.1mm	ASTM D7414*	>25	13.8	7.2	29.6
Visc @ 100°C	cSt	ASTM D7279(m)	11.42	14.1	11.7	11.8



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH0286953 **Received** : 10 Apr 2024
Lab Number : 02627814 **Tested** : 10 Apr 2024
Unique Number : 5760946 **Diagnosed** : 10 Apr 2024 - Kevin Marson
Test Package : MOB 1

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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.