MOB I

LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ABNORMAL

Machine Id
LIEBHERR LH60 142206
Component
Diesel Engine
Fluid
PETRO CANADA 10W40 (--- GAL)

RECOMMENDATION

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time.

WEAR

All component wear rates are normal.

CONTAMINATION

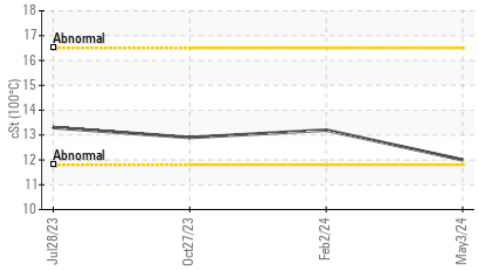
Light fuel dilution occurring. No other contaminants were detected in the oil.

FLUID CONDITION

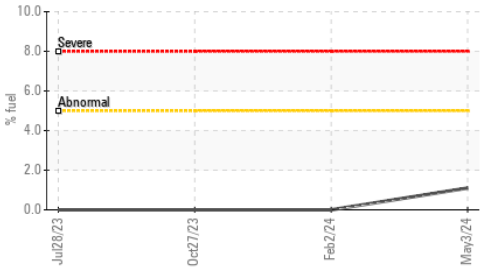
Viscosity of sample indicates oil is within SAE 30 range, advise investigate. The condition of the oil is acceptable for the time in service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0286869	LH0278787	LH0217715
Sample Date		Client Info		03 May 2024	02 Feb 2024	27 Oct 2023
Machine Age	hrs	Client Info		2984	2490	1995
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	NORMAL	NORMAL
Iron	ppm	ASTM D5185(m)	>100	5	5	4
Chromium	ppm	ASTM D5185(m)	>5	<1	<1	<1
Nickel	ppm	ASTM D5185(m)	>5	0	<1	0
Titanium	ppm	ASTM D5185(m)		<1	0	0
Silver	ppm	ASTM D5185(m)	>3	0	0	0
Aluminum	ppm	ASTM D5185(m)	>15	1	3	1
Lead	ppm	ASTM D5185(m)	>30	0	<1	1
Copper	ppm	ASTM D5185(m)	>125	1	2	3
Tin	ppm	ASTM D5185(m)	>5	0	<1	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
Silicon	ppm	ASTM D5185(m)	>60	10	21	6
Potassium	ppm	ASTM D5185(m)	>20	2	6	<1
Fuel	%	ASTM D7593*	>5	1.1	<1.0	<1.0
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	10.2	9.5	9.0
Sulfation	Abs/.1mm	ASTM D7415*	>30	21.0	19.5	19.4
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG
Sodium	ppm	ASTM D5185(m)	>20	3	1	2
Boron	ppm	ASTM D5185(m)		21	<1	<1
Barium	ppm	ASTM D5185(m)		<1	<1	<1
Molybdenum	ppm	ASTM D5185(m)		58	59	60
Manganese	ppm	ASTM D5185(m)		0	0	0
Magnesium	ppm	ASTM D5185(m)		1089	979	977
Calcium	ppm	ASTM D5185(m)		936	1093	1080
Phosphorus	ppm	ASTM D5185(m)		1033	1021	994
Zinc	ppm	ASTM D5185(m)		1226	1205	1202
Sulfur	ppm	ASTM D5185(m)		2662	2710	2447
Oxidation	Abs/.1mm	ASTM D7414*	>25	21.1	18.2	17.3
Visc @ 100°C	cSt	ASTM D7279(m)		▲ 12.0	13.2	12.9

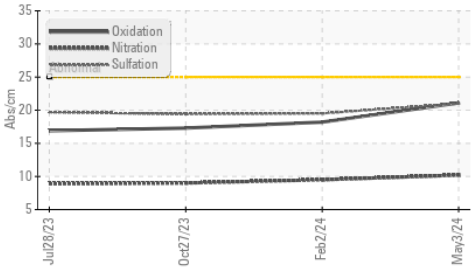
Viscosity @ 100°C



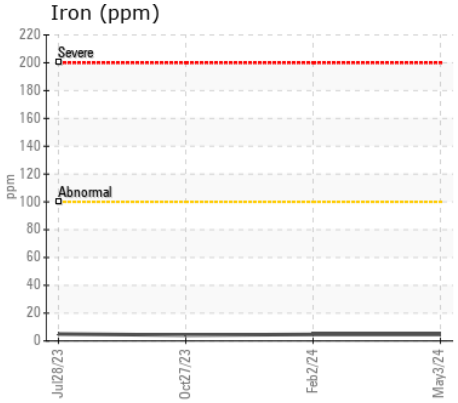
Fuel Dilution



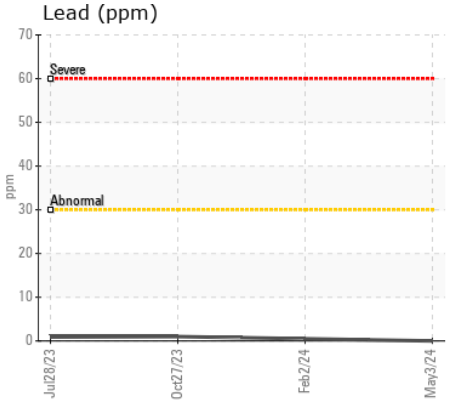
FT-IR (Direct Trend)



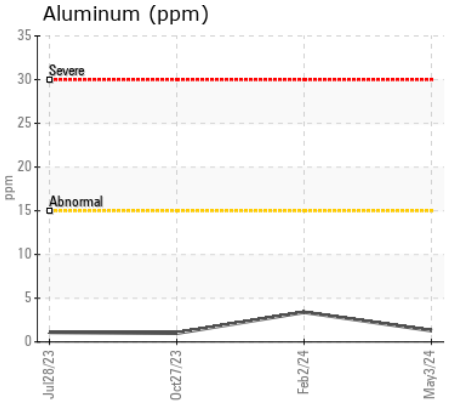
Iron (ppm)



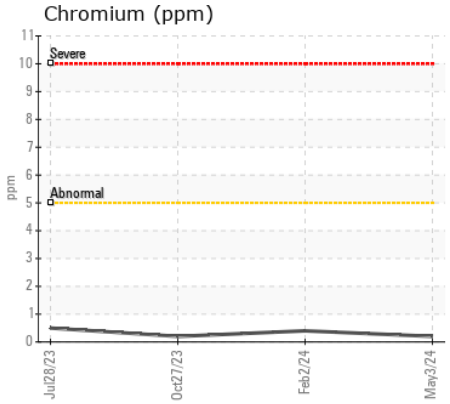
Lead (ppm)



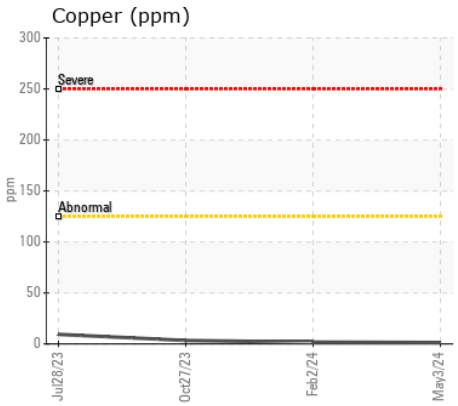
Aluminum (ppm)



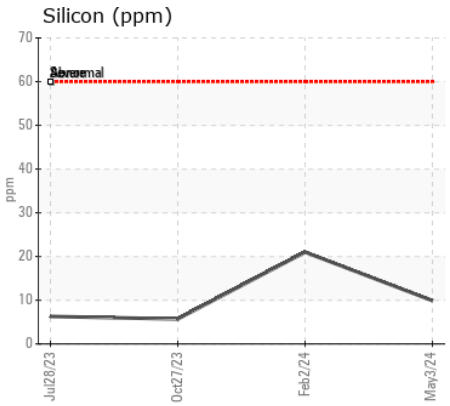
Chromium (ppm)



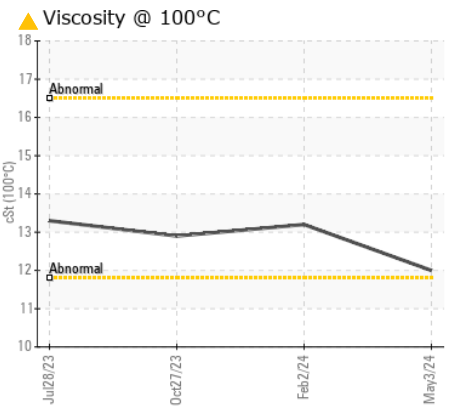
Copper (ppm)



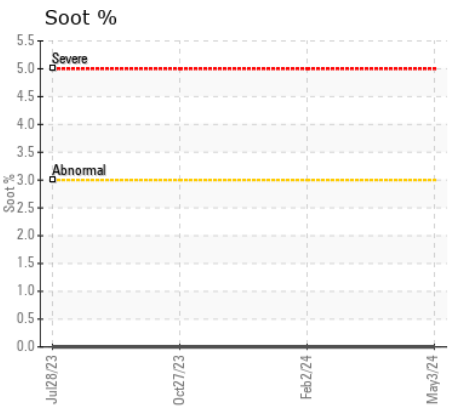
Silicon (ppm)



Viscosity @ 100°C



Soot %



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH0286869 **Received** : 06 May 2024
Lab Number : 02633415 **Tested** : 08 May 2024
Unique Number : 5774568 **Diagnosed** : 08 May 2024 - Kevin Marson
Test Package : MOB 1 (Additional Tests: FUELDILUTION, PercentFuel)

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.

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