



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area
(360376)
Machine Id
LIEBHERR LH40M 134365-1215
Component
Diesel Engine
Fluid
PETRO CANADA SUPREME 5W30 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0288365	LH0281347	LH0276895
Sample Date		Client Info		31 May 2024	18 Jan 2024	23 Sep 2023
Machine Age	hrs	Client Info		4811	4274	3785
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		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

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

CONTAMINATION

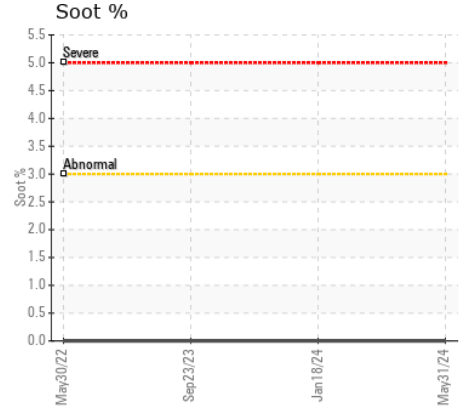
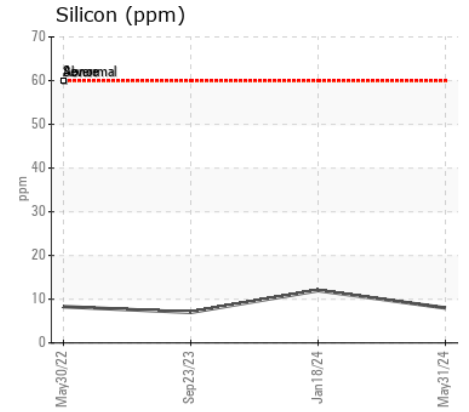
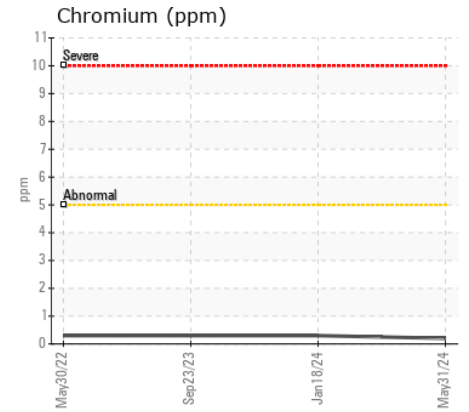
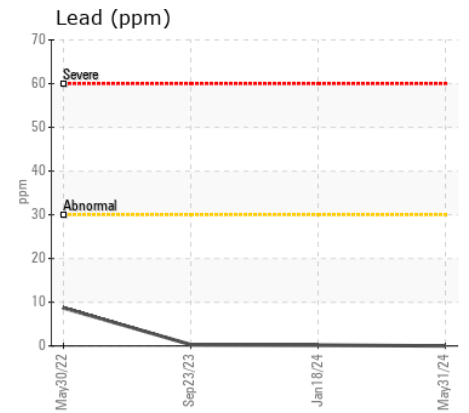
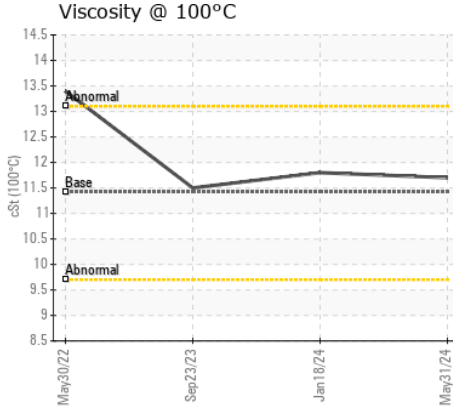
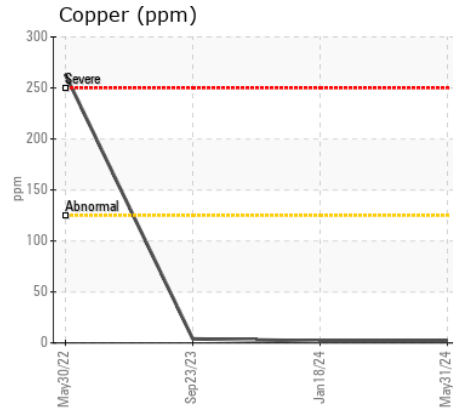
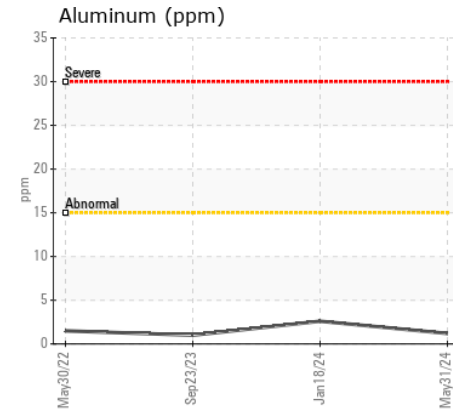
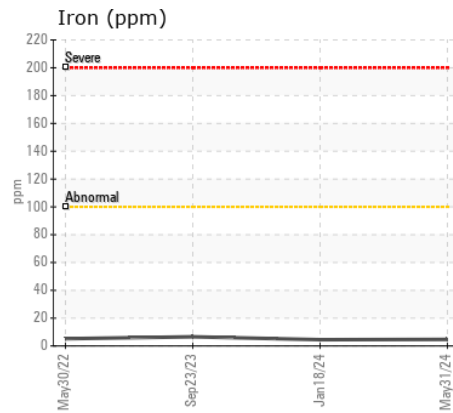
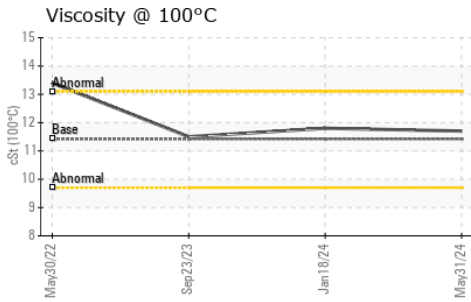
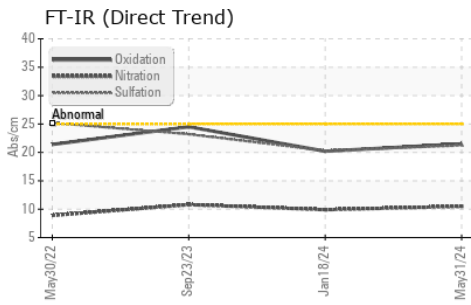
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>60	8	12	7
Potassium	ppm	ASTM D5185(m)	>20	2	3	<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	0	0
Nitration	Abs/cm	ASTM D7624*	>20	10.5	9.9	10.8
Sulfation	Abs/.1mm	ASTM D7415*	>30	21.2	20.3	23.2
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)		4	4	5
Boron	ppm	ASTM D5185(m)	186	36	33	22
Barium	ppm	ASTM D5185(m)	<1	<1	0	<1
Molybdenum	ppm	ASTM D5185(m)	79	56	55	63
Manganese	ppm	ASTM D5185(m)	0	0	0	0
Magnesium	ppm	ASTM D5185(m)	578	1104	1081	1108
Calcium	ppm	ASTM D5185(m)	1002	815	807	843
Phosphorus	ppm	ASTM D5185(m)	745	975	1020	994
Zinc	ppm	ASTM D5185(m)	837	1179	1153	1207
Sulfur	ppm	ASTM D5185(m)	2502	2722	2934	2710
Oxidation	Abs/.1mm	ASTM D7414*	>25	21.5	20.2	24.5
Visc @ 100°C	cSt	ASTM D7279(m)	11.42	11.7	11.8	11.5



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH0288365 **Received** : 04 Jun 2024
Lab Number : 02639568 **Tested** : 05 Jun 2024
Unique Number : 5788730 **Diagnosed** : 05 Jun 2024 - Wes Davis
Test Package : MOB 1

American Iron and Metal
 997 CARPIN BEACH RD
 SAULT ST MARIE, ON
 CA P6A 6K4
 Contact: Service Manager

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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F: