



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
LIEBHERR A934C 063551
Component
Diesel Engine
Fluid
PETRO CANADA 15W40 (28 LTR)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0286433	LH0284061	LH0260537
Sample Date		Client Info		14 Jun 2024	18 Mar 2024	15 Nov 2023
Machine Age	hrs	Client Info		19528	19058	18492
Oil Age	hrs	Client Info		470	566	703
Filter Age	hrs	Client Info		470	566	703
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>66	14	15	20
Chromium	ppm	ASTM D5185(m)	>4	<1	0	<1
Nickel	ppm	ASTM D5185(m)	>4	0	0	0
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)	>3	0	0	0
Aluminum	ppm	ASTM D5185(m)	>8	<1	1	2
Lead	ppm	ASTM D5185(m)	>10	<1	<1	2
Copper	ppm	ASTM D5185(m)	>74	<1	<1	1
Tin	ppm	ASTM D5185(m)	>4	0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0

CONTAMINATION

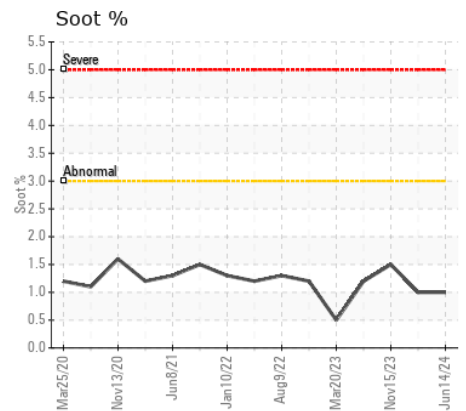
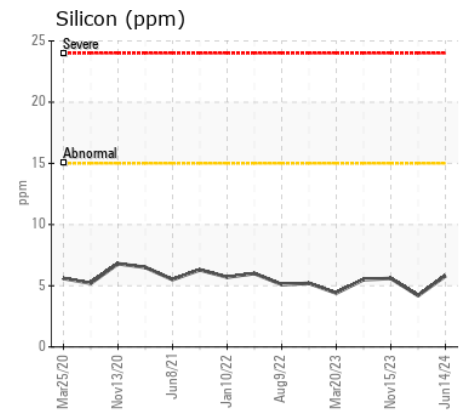
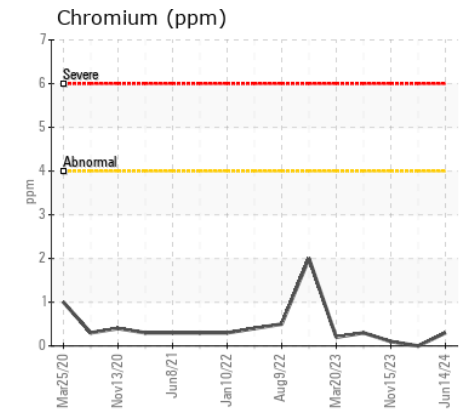
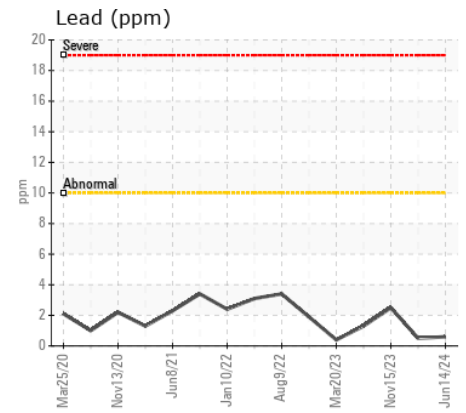
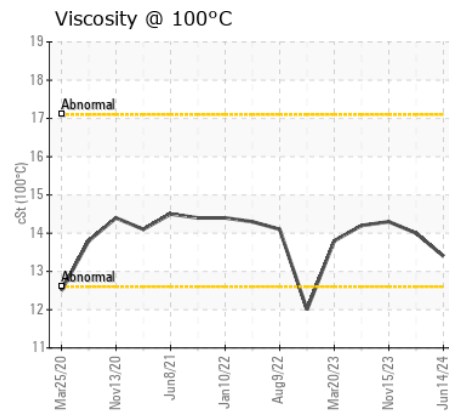
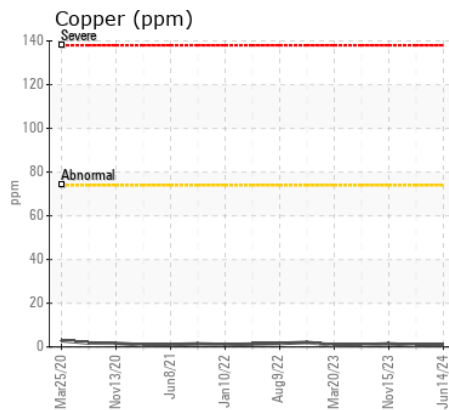
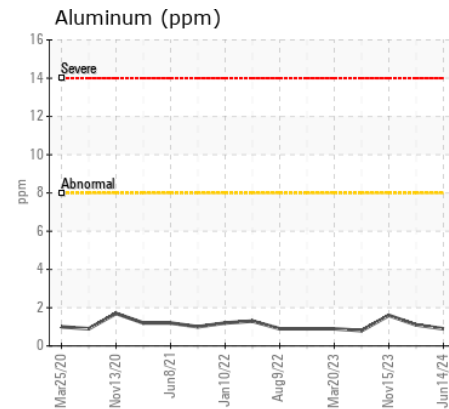
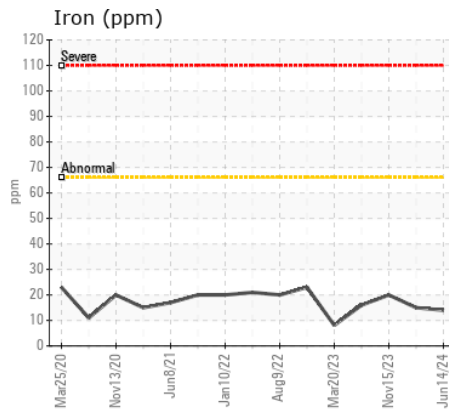
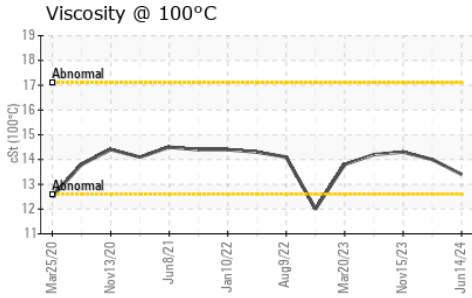
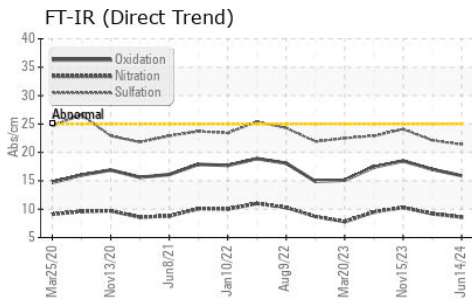
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>15	6	4	6
Potassium	ppm	ASTM D5185(m)	>20	<1	0	0
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	1	1	1.5
Nitration	Abs/cm	ASTM D7624*	>20	8.6	9.2	10.3
Sulfation	Abs/.1mm	ASTM D7415*	>30	21.4	22.1	24.1
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)		1	2	2
Boron	ppm	ASTM D5185(m)		6	2	2
Barium	ppm	ASTM D5185(m)		0	0	<1
Molybdenum	ppm	ASTM D5185(m)		63	65	67
Manganese	ppm	ASTM D5185(m)		<1	0	0
Magnesium	ppm	ASTM D5185(m)		988	1051	1100
Calcium	ppm	ASTM D5185(m)		1105	1153	1188
Phosphorus	ppm	ASTM D5185(m)		1001	1027	1097
Zinc	ppm	ASTM D5185(m)		1208	1253	1306
Sulfur	ppm	ASTM D5185(m)		2507	2453	2524
Oxidation	Abs/.1mm	ASTM D7414*	>25	15.9	17.0	18.5
Visc @ 100°C	cSt	ASTM D7279(m)		13.4	14.0	14.3



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH0286433
Lab Number : 02643340
Unique Number : 5800879
Test Package : MOB 1

Received : 21 Jun 2024
Tested : 21 Jun 2024
Diagnosed : 21 Jun 2024 - Wes Davis

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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