



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
LIEBHERR A924C 063156-1049
Component
Diesel Engine
Fluid
PETRO CANADA 10W30 (29 LTR)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH	LH0278548	LH
Sample Date		Client Info		18 Apr 2024	19 Jan 2024	04 Oct 2023
Machine Age	hrs	Client Info		21928	21415	0
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	N/A	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>100	15	15	31
Chromium	ppm	ASTM D5185(m)	>5	0	<1	<1
Nickel	ppm	ASTM D5185(m)	>5	0	<1	0
Titanium	ppm	ASTM D5185(m)		0	0	4
Silver	ppm	ASTM D5185(m)	>3	0	0	<1
Aluminum	ppm	ASTM D5185(m)	>15	<1	1	<1
Lead	ppm	ASTM D5185(m)	>30	<1	1	3
Copper	ppm	ASTM D5185(m)	>125	7	10	63
Tin	ppm	ASTM D5185(m)	>5	0	<1	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0

CONTAMINATION

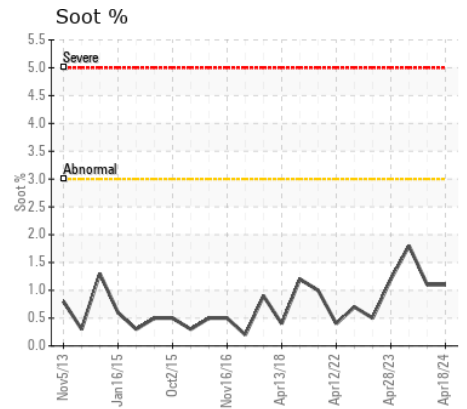
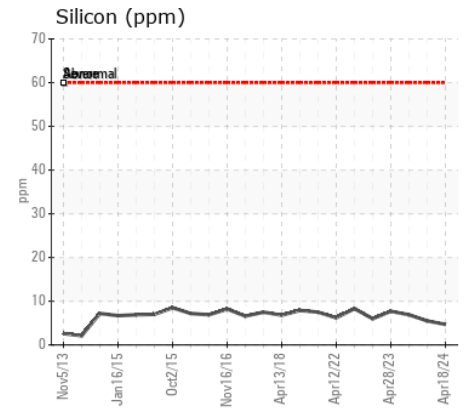
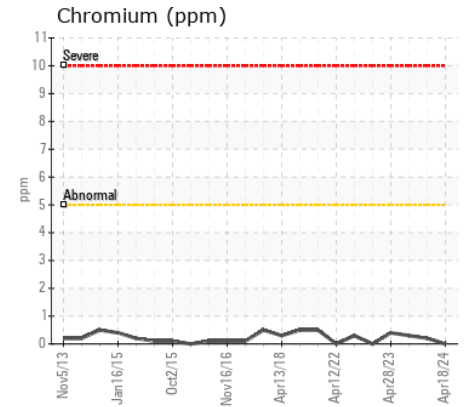
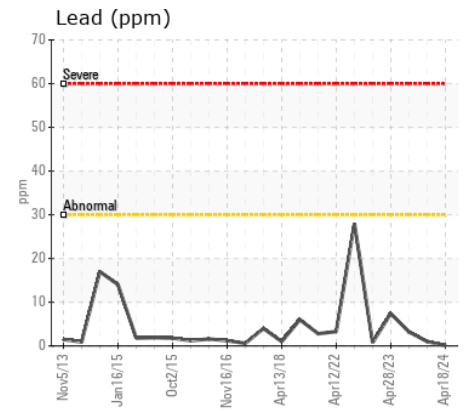
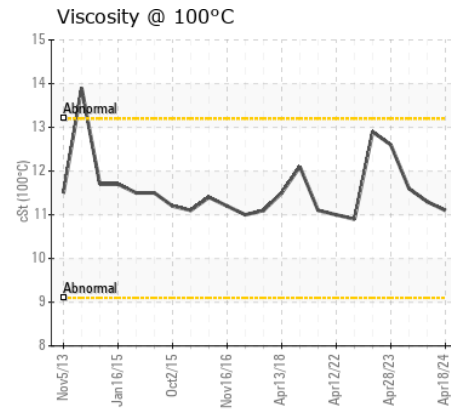
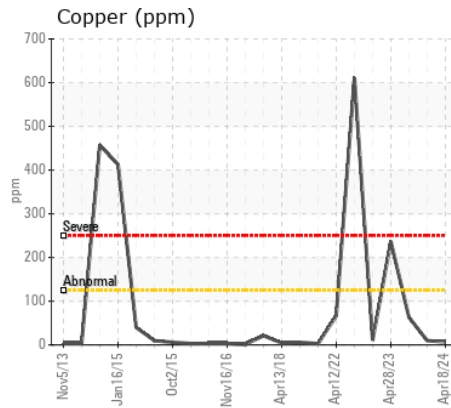
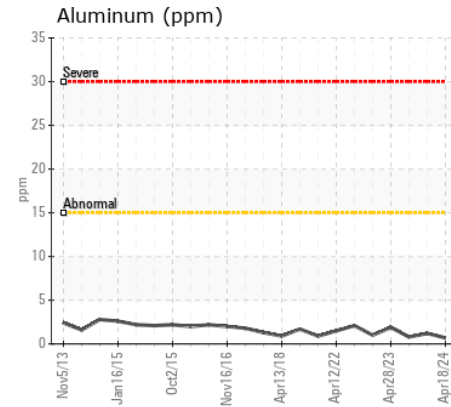
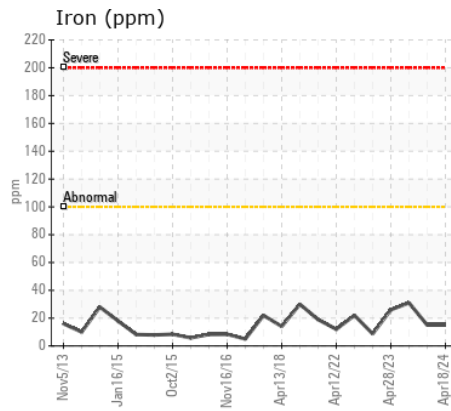
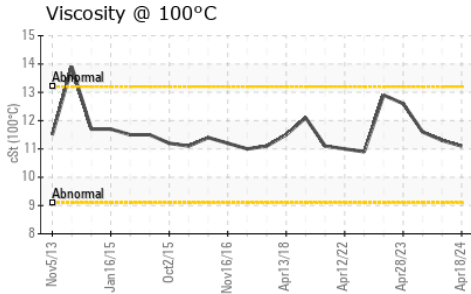
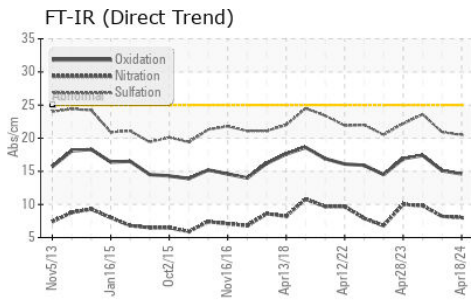
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>60	5	6	7
Potassium	ppm	ASTM D5185(m)	>20	3	11	1
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	0.0	NEG
Soot %	%	ASTM D7844*	>3	1.1	1.1	1.8
Nitration	Abs/cm	ASTM D7624*	>20	8.0	8.2	9.8
Sulfation	Abs/.1mm	ASTM D7415*	>30	20.5	20.9	23.6
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)		2	3	3
Boron	ppm	ASTM D5185(m)		<1	<1	6
Barium	ppm	ASTM D5185(m)		0	0	<1
Molybdenum	ppm	ASTM D5185(m)		63	62	62
Manganese	ppm	ASTM D5185(m)		<1	0	0
Magnesium	ppm	ASTM D5185(m)		1010	984	1002
Calcium	ppm	ASTM D5185(m)		1089	1088	1152
Phosphorus	ppm	ASTM D5185(m)		1039	1030	1012
Zinc	ppm	ASTM D5185(m)		1211	1208	1253
Sulfur	ppm	ASTM D5185(m)		2571	2701	2266
Oxidation	Abs/.1mm	ASTM D7414*	>25	14.6	15.1	17.4
Visc @ 100°C	cSt	ASTM D7279(m)		11.1	11.3	11.6



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH
Lab Number : 02631838
Unique Number : 5772991
Test Package : MOB 1
Received : 29 Apr 2024
Tested : 29 Apr 2024
Diagnosed : 29 Apr 2024 - Wes Davis

Urban Mine
 72 Rothwell Rd.
 Winnipeg, MB
 CA R3P 2H7
 Contact: SERVICE

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: