



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
LIEBHERR A934 061746-1418
Component
Diesel Engine
Fluid
PETRO CANADA 10W40 (29 LTR)

RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH	LH0251439	LH0193162
Sample Date		Client Info		11 Apr 2024	09 Jan 2023	30 Jul 2021
Machine Age	hrs	Client Info		13245	13240	11430
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	Not Changd	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)	>66	26	25	6
Chromium	ppm	ASTM D5185(m)	>4	<1	<1	0
Nickel	ppm	ASTM D5185(m)	>4	0	<1	<1
Titanium	ppm	ASTM D5185(m)		0	<1	<1
Silver	ppm	ASTM D5185(m)	>3	0	0	0
Aluminum	ppm	ASTM D5185(m)	>8	2	2	1
Lead	ppm	ASTM D5185(m)	>10	3	3	2
Copper	ppm	ASTM D5185(m)	>74	96	94	50
Tin	ppm	ASTM D5185(m)	>4	0	<1	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	NONE	---	---
Yellow Metal	scalar	Visual*	NONE	NONE	---	---

CONTAMINATION

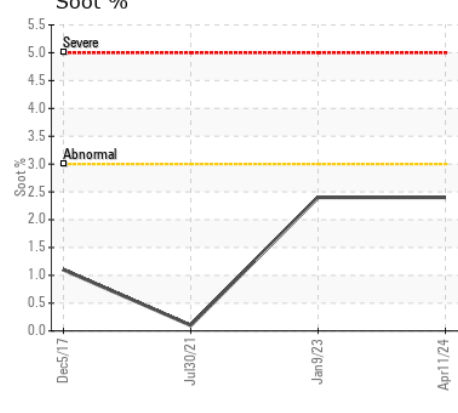
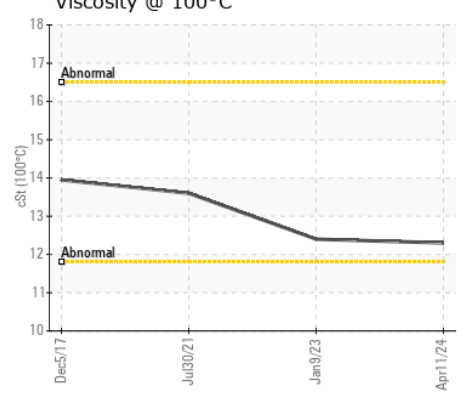
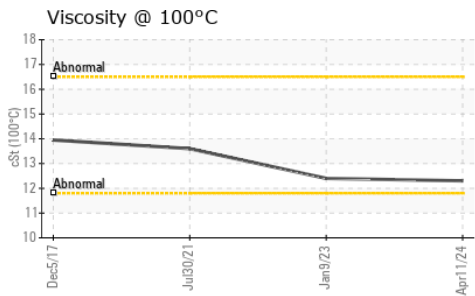
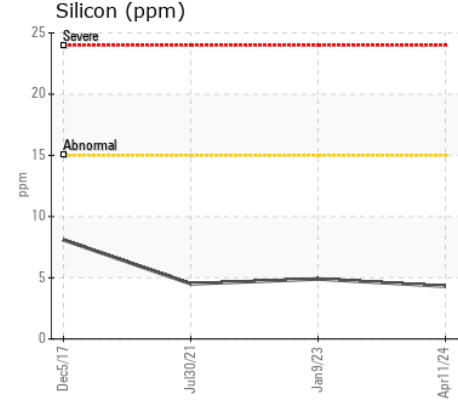
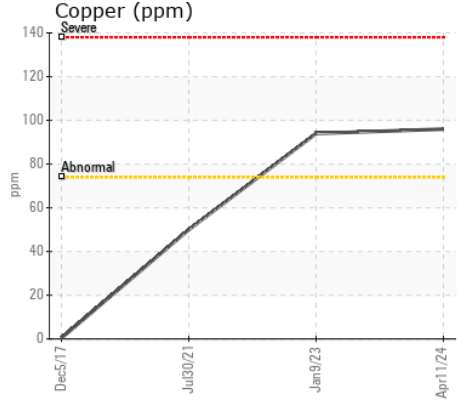
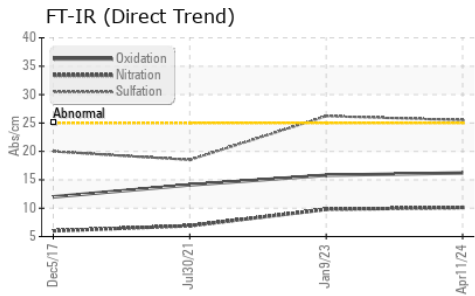
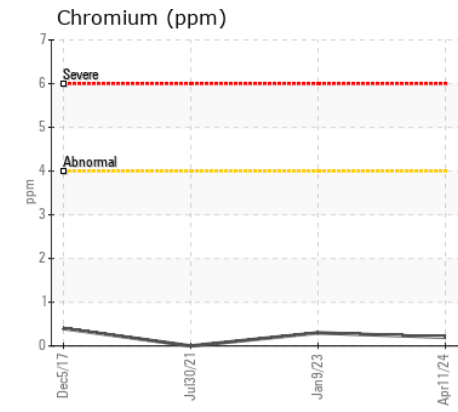
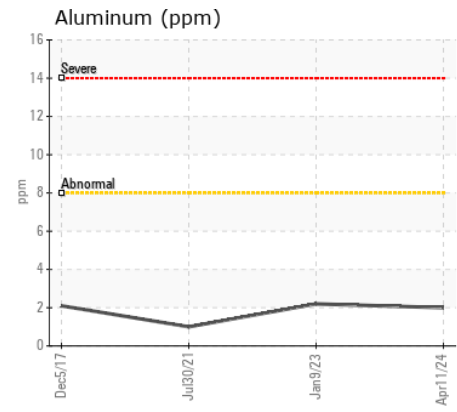
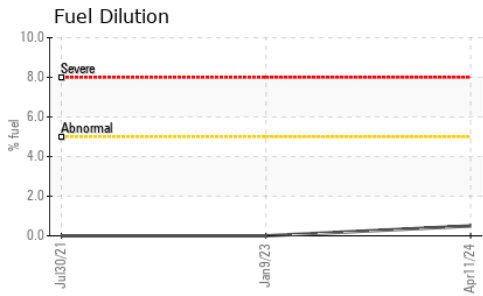
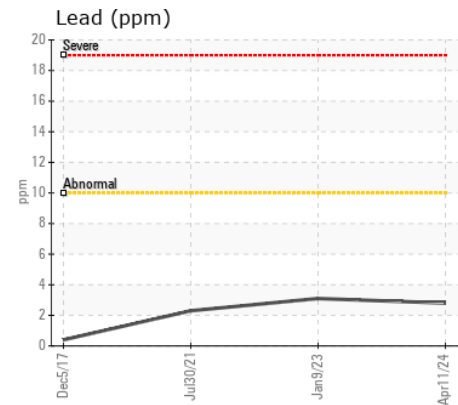
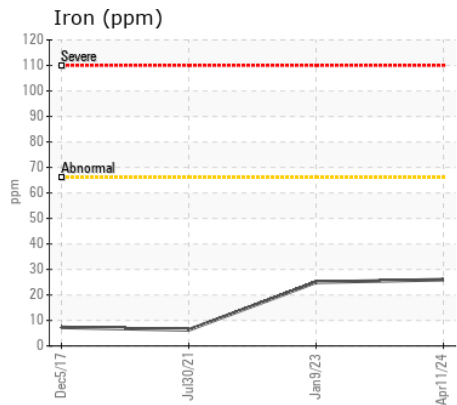
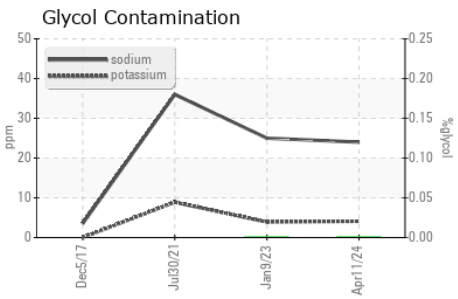
Fuel content negligible. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>15	4	5	4
Potassium	ppm	ASTM D5185(m)	>20	4	4	9
Fuel	%	ASTM D7593*	>5	0.5	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	ASTM D7922*		0.0	0.0	NEG
Soot %	%	ASTM D7844*	>3	2.4	2.4	0.1
Nitration	Abs/cm	ASTM D7624*	>20	10.1	9.8	6.9
Sulfation	Abs/.1mm	ASTM D7415*	>30	25.5	26.2	18.5
Silt	scalar	Visual*	NONE	NONE	---	---
Debris	scalar	Visual*	NONE	VLITE	---	---
Sand/Dirt	scalar	Visual*	NONE	NONE	---	---
Appearance	scalar	Visual*	NORML	NORML	---	---
Odor	scalar	Visual*	NORML	NORML	NORML	---
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)	>20	24	25	36
Boron	ppm	ASTM D5185(m)		4	4	107
Barium	ppm	ASTM D5185(m)		0	0	0
Molybdenum	ppm	ASTM D5185(m)		60	59	2
Manganese	ppm	ASTM D5185(m)		<1	<1	<1
Magnesium	ppm	ASTM D5185(m)		911	904	734
Calcium	ppm	ASTM D5185(m)		1141	1185	1198
Phosphorus	ppm	ASTM D5185(m)		856	934	1003
Zinc	ppm	ASTM D5185(m)		1124	1141	1106
Sulfur	ppm	ASTM D5185(m)		2068	2169	3086
Oxidation	Abs/.1mm	ASTM D7414*	>25	16.2	15.8	14.1
Visc @ 100°C	cSt	ASTM D7279(m)		12.3	12.4	13.6



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH **Received** : 12 Apr 2024
Lab Number : **02628332** **Tested** : 16 Apr 2024
Unique Number : 5761464 **Diagnosed** : 16 Apr 2024 - Wes Davis
Test Package : MOB 1 (Additional Tests: FUELDILUTION, Glycol, PercentFuel, Visual)

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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.