



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area
(358362)
Machine Id
LIEBHERR R930 052244-1716
Component
Diesel Engine
Fluid
PETRO CANADA 10W40 (32 LTR)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0281064	LH0225005	---
Sample Date		Client Info		19 Feb 2024	18 May 2023	---
Machine Age	hrs	Client Info		1457	1024	---
Oil Age	hrs	Client Info		0	0	---
Filter Age	hrs	Client Info		0	0	---
Oil Changed		Client Info		Changed	Changed	---
Filter Changed		Client Info		N/A	N/A	---
Sample Status				NORMAL	ABNORMAL	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>100	4	6	---
Chromium	ppm	ASTM D5185(m)	>5	0	<1	---
Nickel	ppm	ASTM D5185(m)	>5	<1	0	---
Titanium	ppm	ASTM D5185(m)		0	<1	---
Silver	ppm	ASTM D5185(m)	>3	0	0	---
Aluminum	ppm	ASTM D5185(m)	>15	2	2	---
Lead	ppm	ASTM D5185(m)	>30	<1	4	---
Copper	ppm	ASTM D5185(m)	>125	16	115	---
Tin	ppm	ASTM D5185(m)	>5	<1	<1	---
Vanadium	ppm	ASTM D5185(m)		0	0	---

CONTAMINATION

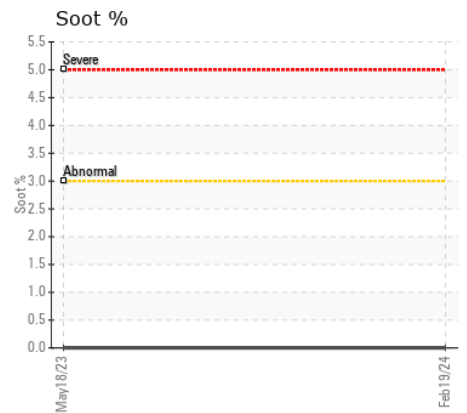
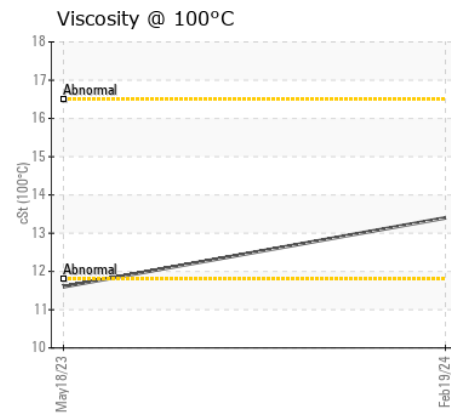
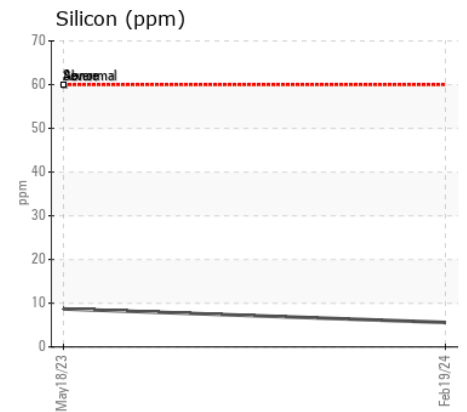
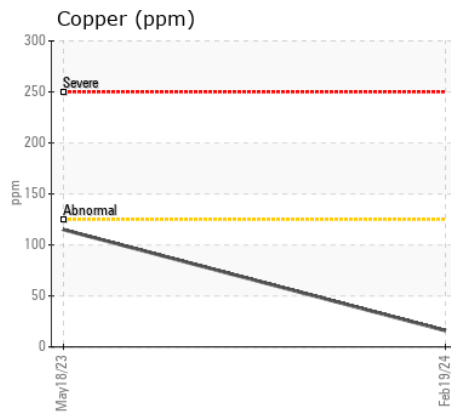
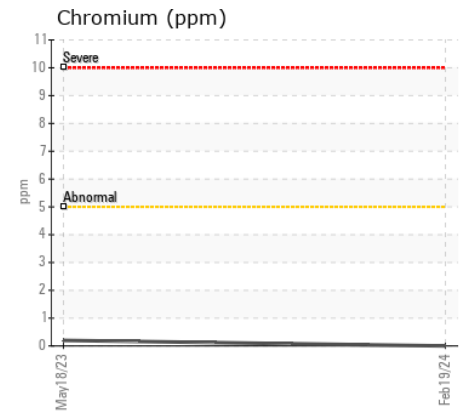
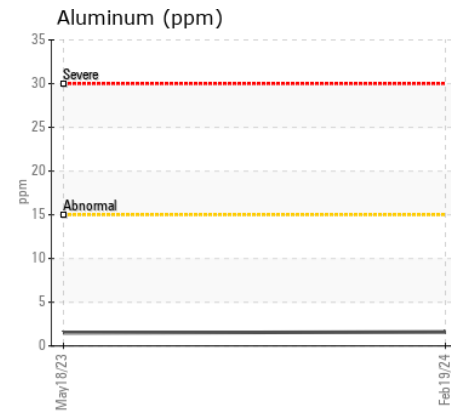
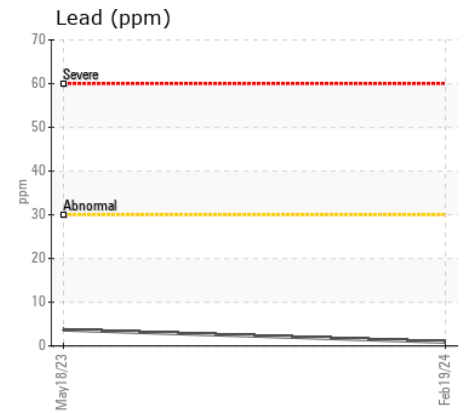
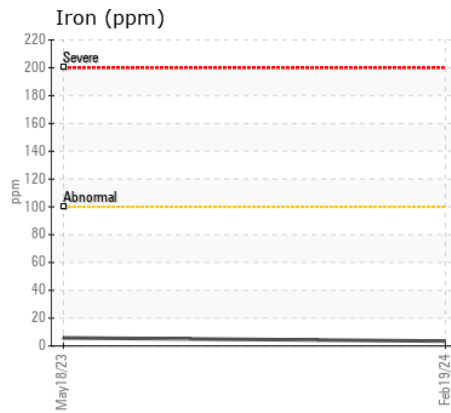
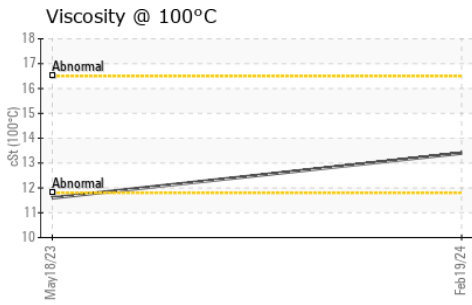
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>60	6	9	---
Potassium	ppm	ASTM D5185(m)	>20	<1	<1	---
Fuel		WC Method	>5	<1.0	1.1	---
Water		WC Method	>0.2	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	ASTM D7844*	>3	0	0	---
Nitration	Abs/cm	ASTM D7624*	>20	6.8	9.4	---
Sulfation	Abs/.1mm	ASTM D7415*	>30	19.2	21.4	---
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	---

FLUID CONDITION

The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)	>20	1	4	---
Boron	ppm	ASTM D5185(m)		3	45	---
Barium	ppm	ASTM D5185(m)		<1	2	---
Molybdenum	ppm	ASTM D5185(m)		58	58	---
Manganese	ppm	ASTM D5185(m)		0	<1	---
Magnesium	ppm	ASTM D5185(m)		970	1128	---
Calcium	ppm	ASTM D5185(m)		1035	916	---
Phosphorus	ppm	ASTM D5185(m)		1009	1108	---
Zinc	ppm	ASTM D5185(m)		1158	1232	---
Sulfur	ppm	ASTM D5185(m)		2710	2671	---
Oxidation	Abs/.1mm	ASTM D7414*	>25	15.2	20.9	---
Visc @ 100°C	cSt	ASTM D7279(m)		13.4	▲ 11.6	---



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH0281064
Lab Number : 02616586
Unique Number : 5733696
Test Package : MOB 1
Received : 20 Feb 2024
Tested : 20 Feb 2024
Diagnosed : 20 Feb 2024 - Wes Davis

HAYSHAKERS BOBCAT SERVICES
 501 761 HWY
 LESLIEVILLE, AB
 CA T0M 1H0
 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.

T:
F: