



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
LIEBHERR R922 56035
Component
Diesel Engine
Fluid
PETRO CANADA 10W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0281134	LH0242030	---
Sample Date		Client Info		21 Dec 2023	25 Sep 2023	---
Machine Age	hrs	Client Info		1650	959	---
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	NORMAL	---

WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185(m)	>100	16	14	---
Chromium	ppm	ASTM D5185(m)	>5	<1	<1	---
Nickel	ppm	ASTM D5185(m)	>5	<1	0	---
Titanium	ppm	ASTM D5185(m)		0	0	---
Silver	ppm	ASTM D5185(m)	>3	0	<1	---
Aluminum	ppm	ASTM D5185(m)	>15	2	1	---
Lead	ppm	ASTM D5185(m)	>30	<1	<1	---
Copper	ppm	ASTM D5185(m)	>125	2	6	---
Tin	ppm	ASTM D5185(m)	>5	0	0	---
Vanadium	ppm	ASTM D5185(m)		0	0	---

CONTAMINATION

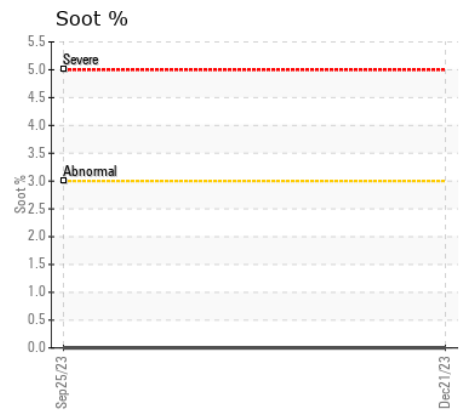
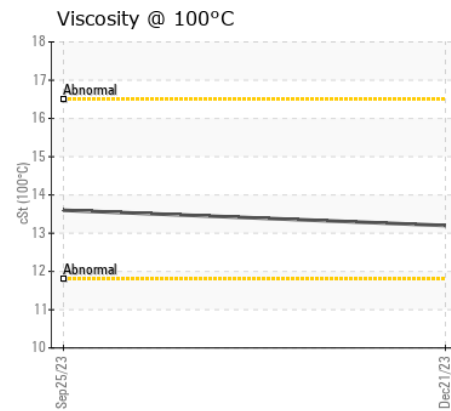
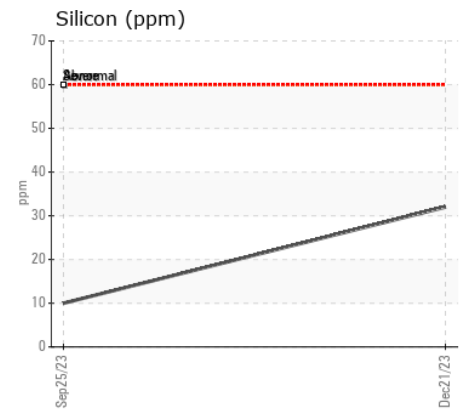
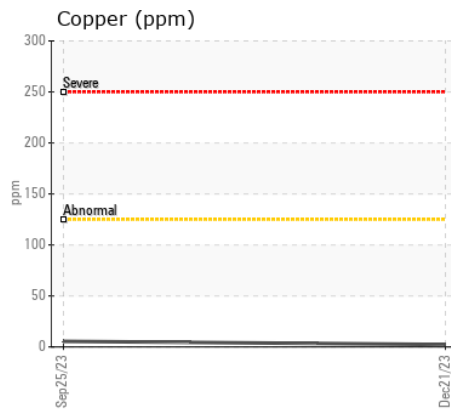
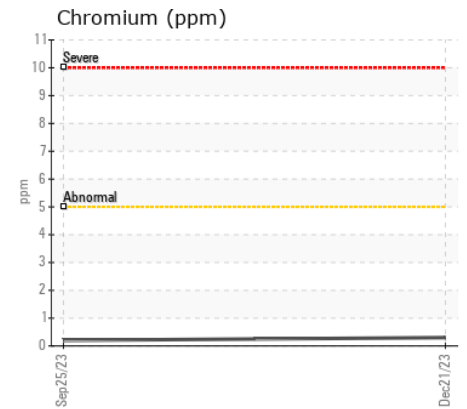
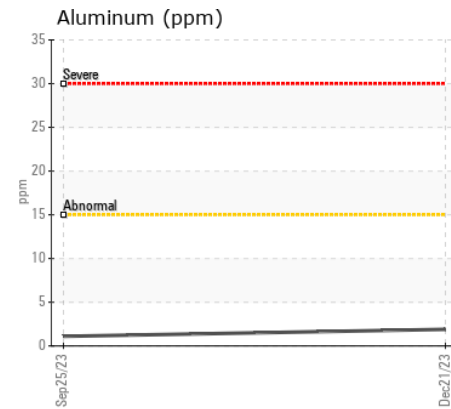
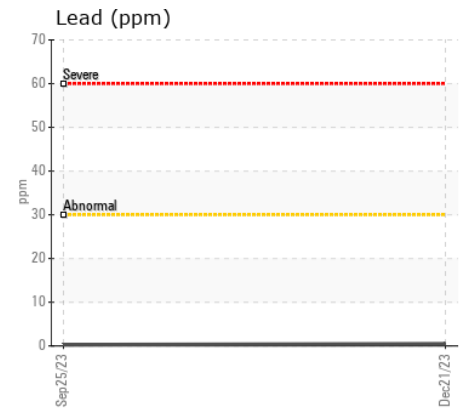
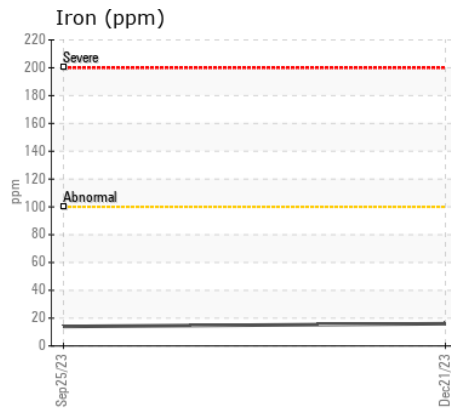
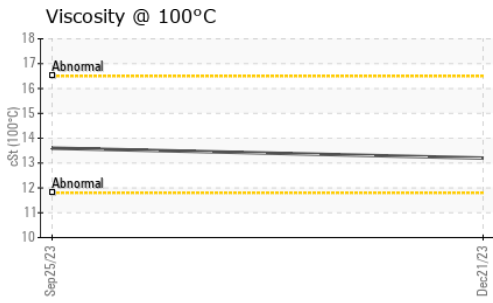
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>60	32	10	---
Potassium	ppm	ASTM D5185(m)	>20	<1	0	---
Fuel		WC Method	>5	<1.0	<1.0	---
Water		WC Method	>0.2	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	ASTM D7844*	>3	0	0	---
Nitration	Abs/cm	ASTM D7624*	>20	7.7	6.6	---
Sulfation	Abs/.1mm	ASTM D7415*	>30	20.2	20.2	---
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	2	2	---
Boron	ppm	ASTM D5185(m)		2	5	---
Barium	ppm	ASTM D5185(m)		0	<1	---
Molybdenum	ppm	ASTM D5185(m)		61	59	---
Manganese	ppm	ASTM D5185(m)		0	0	---
Magnesium	ppm	ASTM D5185(m)		999	978	---
Calcium	ppm	ASTM D5185(m)		1137	1113	---
Phosphorus	ppm	ASTM D5185(m)		990	981	---
Zinc	ppm	ASTM D5185(m)		1247	1200	---
Sulfur	ppm	ASTM D5185(m)		2530	2447	---
Oxidation	Abs/.1mm	ASTM D7414*	>25	16.4	16.0	---
Visc @ 100°C	cSt	ASTM D7279(m)		13.2	13.6	---



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH0281134 **Received** : 08 Jan 2024
Lab Number : 02606946 **Diagnosed** : 08 Jan 2024
Unique Number : 5708032 **Diagnostician** : Kevin Marson
Test Package : MOB 1

MITCHELL METAL RECYCLING
 12100 MITCHELL RD
 RICHMOND, BC
 CA V6V 1MB
 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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