



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
LIEBHERR R922 56035
Component
Diesel Engine
Fluid
PETRO CANADA 10W40 (22 LTR)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0288106	LH0280950	LH0281134
Sample Date		Client Info		17 May 2024	19 Mar 2024	21 Dec 2023
Machine Age	hrs	Client Info		2509	2105	1650
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		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>100	11	16	16
Chromium	ppm	ASTM D5185(m)	>5	0	<1	<1
Nickel	ppm	ASTM D5185(m)	>5	0	0	<1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)	>3	0	0	0
Aluminum	ppm	ASTM D5185(m)	>15	<1	1	2
Lead	ppm	ASTM D5185(m)	>30	0	0	<1
Copper	ppm	ASTM D5185(m)	>125	1	2	2
Tin	ppm	ASTM D5185(m)	>5	0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0

CONTAMINATION

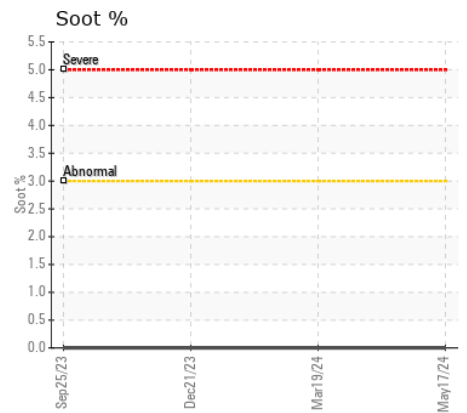
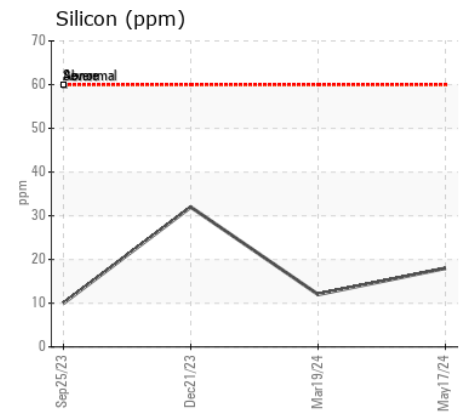
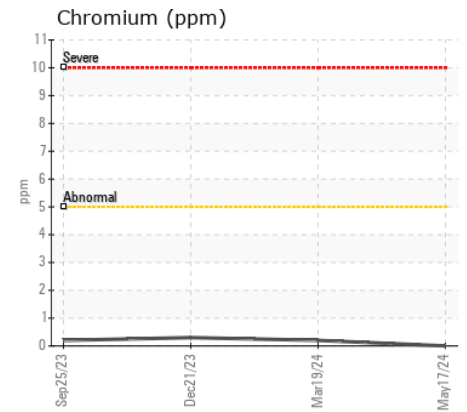
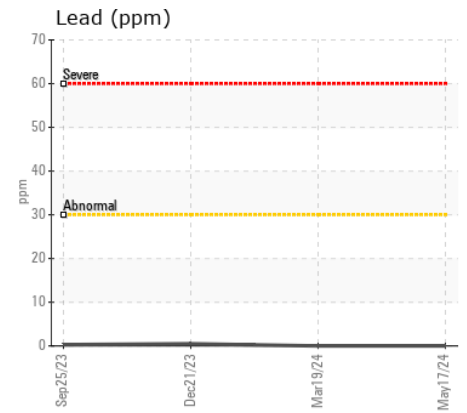
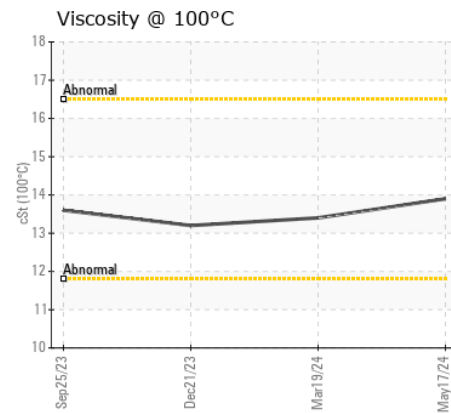
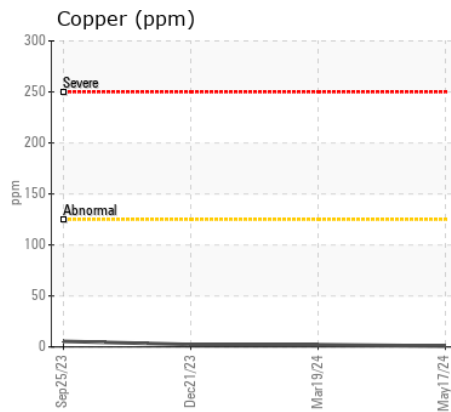
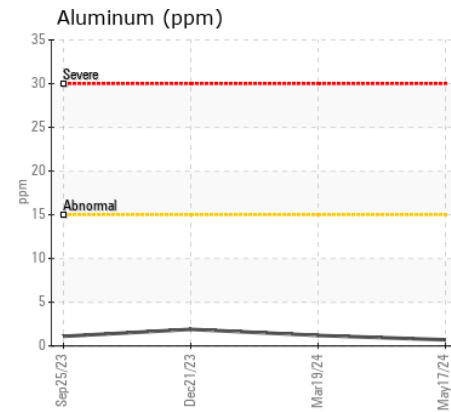
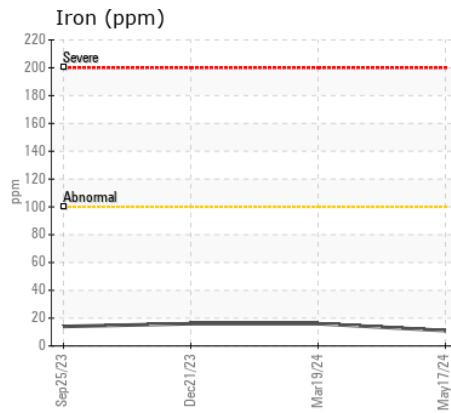
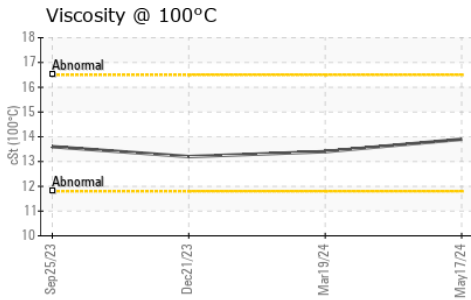
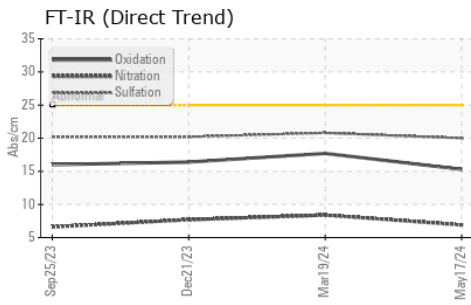
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>60	18	12	32
Potassium	ppm	ASTM D5185(m)	>20	0	0	<1
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	0	0	0
Nitration	Abs/cm	ASTM D7624*	>20	6.9	8.4	7.7
Sulfation	Abs/.1mm	ASTM D7415*	>30	20.0	20.8	20.2
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	2	2	2
Boron	ppm	ASTM D5185(m)		1	<1	2
Barium	ppm	ASTM D5185(m)		0	0	0
Molybdenum	ppm	ASTM D5185(m)		62	62	61
Manganese	ppm	ASTM D5185(m)		<1	0	0
Magnesium	ppm	ASTM D5185(m)		1024	1037	999
Calcium	ppm	ASTM D5185(m)		1117	1166	1137
Phosphorus	ppm	ASTM D5185(m)		1035	996	990
Zinc	ppm	ASTM D5185(m)		1222	1277	1247
Sulfur	ppm	ASTM D5185(m)		2449	2335	2530
Oxidation	Abs/.1mm	ASTM D7414*	>25	15.3	17.7	16.4
Visc @ 100°C	cSt	ASTM D7279(m)		13.9	13.4	13.2



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH0288106
Lab Number : 02638375
Unique Number : 5787537
Test Package : MOB 1
Received : 29 May 2024
Tested : 29 May 2024
Diagnosed : 29 May 2024 - Wes Davis

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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