



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
LIEBHERR R945 055788-1866
Component
Diesel Engine
Fluid
PETRO CANADA SUPREME 5W30 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0276880	LH0265570	LH0250745
Sample Date		Client Info		22 Mar 2024	23 Aug 2023	07 Mar 2023
Machine Age	hrs	Client Info		1446	967	500
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	8	11	14
Chromium	ppm	ASTM D5185(m)	>5	<1	<1	<1
Nickel	ppm	ASTM D5185(m)	>5	0	0	<1
Titanium	ppm	ASTM D5185(m)		0	0	<1
Silver	ppm	ASTM D5185(m)	>3	0	0	0
Aluminum	ppm	ASTM D5185(m)	>15	2	2	3
Lead	ppm	ASTM D5185(m)	>30	<1	2	7
Copper	ppm	ASTM D5185(m)	>125	12	64	173
Tin	ppm	ASTM D5185(m)	>5	<1	1	2
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	NONE	---	VLITE
Yellow Metal	scalar	Visual*	NONE	NONE	---	NONE

CONTAMINATION

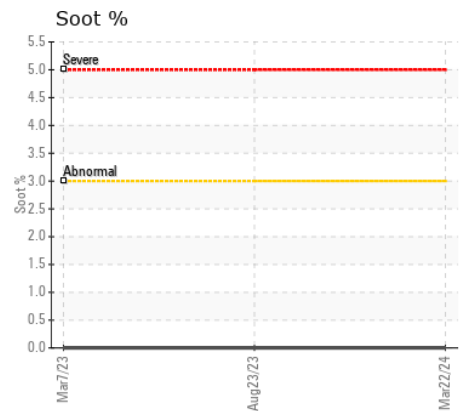
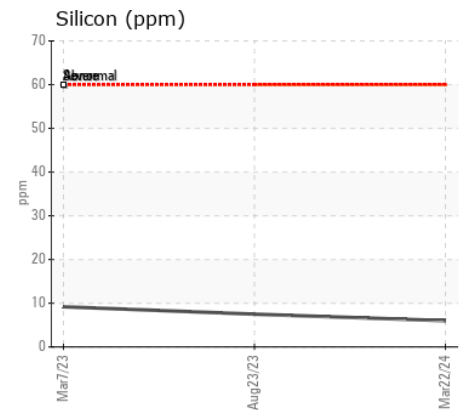
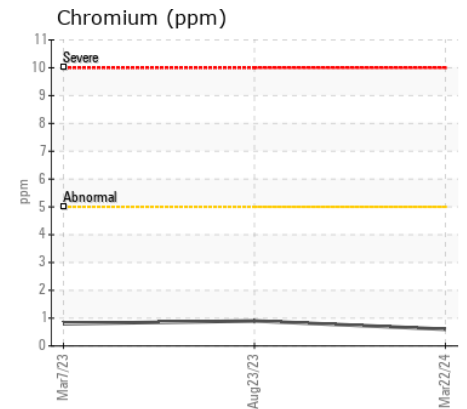
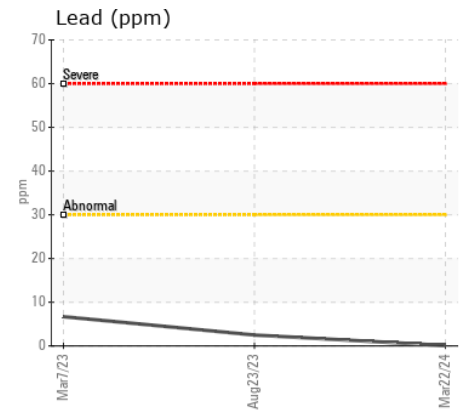
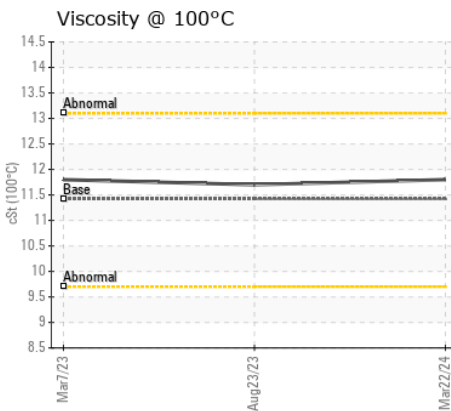
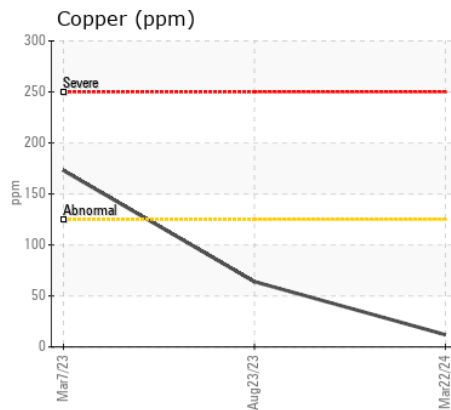
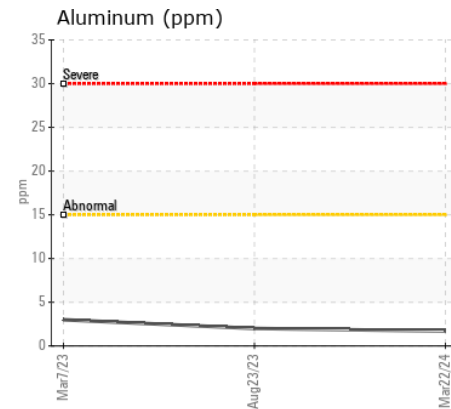
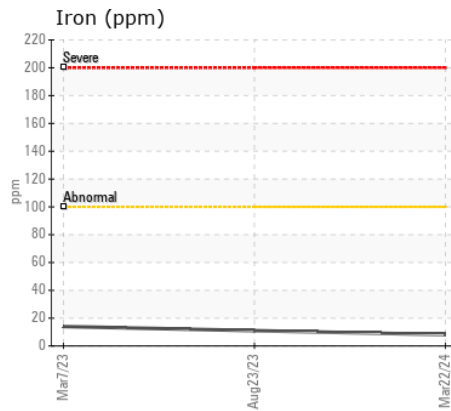
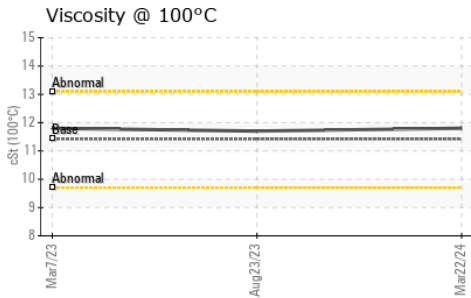
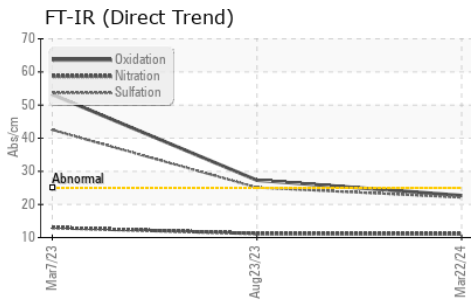
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>60	6	8	9
Potassium	ppm	ASTM D5185(m)	>20	2	3	4
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	11.1	11.2	13.0
Sulfation	Abs/.1mm	ASTM D7415*	>30	22.1	25.1	42.5
Silt	scalar	Visual*	NONE	NONE	---	NONE
Debris	scalar	Visual*	NONE	NONE	---	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	---	NONE
Appearance	scalar	Visual*	NORML	NORML	---	NORML
Odor	scalar	Visual*	NORML	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)		4	4	2
Boron	ppm	ASTM D5185(m)	186	32	31	93
Barium	ppm	ASTM D5185(m)	<1	<1	5	27
Molybdenum	ppm	ASTM D5185(m)	79	57	58	45
Manganese	ppm	ASTM D5185(m)	0	<1	<1	1
Magnesium	ppm	ASTM D5185(m)	578	1124	1075	897
Calcium	ppm	ASTM D5185(m)	1002	833	916	1494
Phosphorus	ppm	ASTM D5185(m)	745	967	960	734
Zinc	ppm	ASTM D5185(m)	837	1171	1113	833
Sulfur	ppm	ASTM D5185(m)	2502	2637	2362	1866
Oxidation	Abs/.1mm	ASTM D7414*	>25	22.7	27.3	53.2
Visc @ 100°C	cSt	ASTM D7279(m)	11.42	11.8	11.7	11.8



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH0276880 **Received** : 15 Apr 2024
Lab Number : 02628783 **Tested** : 16 Apr 2024
Unique Number : 5761915 **Diagnosed** : 16 Apr 2024 - Wes Davis
Test Package : MOB 1 (Additional Tests: Visual)

American Iron and Metal
 997 CARPIN BEACH RD
 SAULT ST MARIE, ON
 CA P6A 6K4
 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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