



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ABNORMAL



Machine Id
LIEBHERR PR736LGP 020009-1736
Component
Diesel Engine
Fluid
PETRO CANADA SUPREME 5W30 (29 LTR)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0286750	LH0274331	LH0237750
Sample Date		Client Info		25 Mar 2024	16 Nov 2023	22 Feb 2023
Machine Age	hrs	Client Info		2903	2505	2011
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	Changed
Sample Status				ABNORMAL	ABNORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>100	5	9	6
Chromium	ppm	ASTM D5185(m)	>5	<1	<1	<1
Nickel	ppm	ASTM D5185(m)	>5	0	0	<1
Titanium	ppm	ASTM D5185(m)		1	9	3
Silver	ppm	ASTM D5185(m)	>3	0	<1	0
Aluminum	ppm	ASTM D5185(m)	>15	1	2	2
Lead	ppm	ASTM D5185(m)	>30	0	<1	<1
Copper	ppm	ASTM D5185(m)	>125	1	3	3
Tin	ppm	ASTM D5185(m)	>5	0	<1	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0

CONTAMINATION

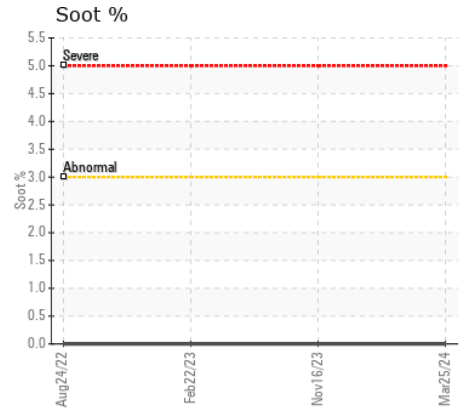
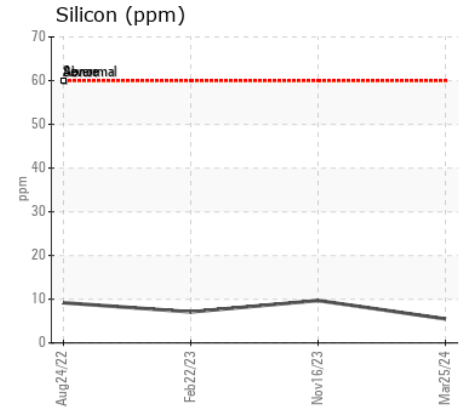
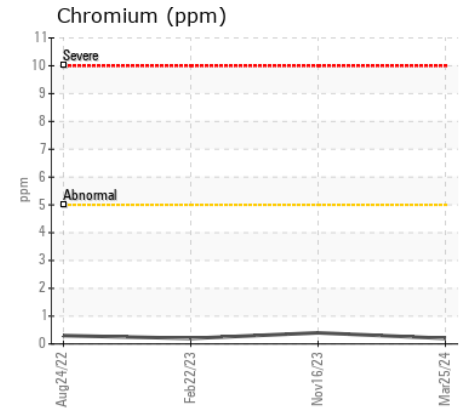
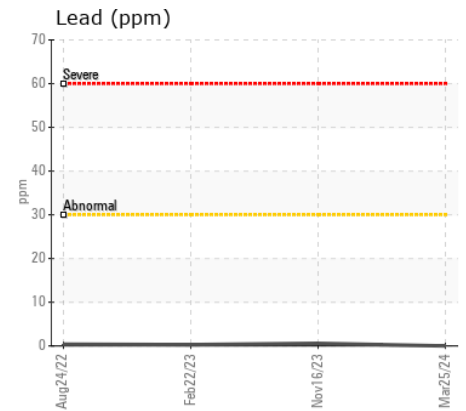
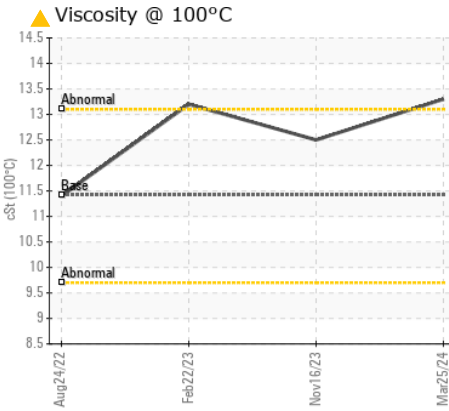
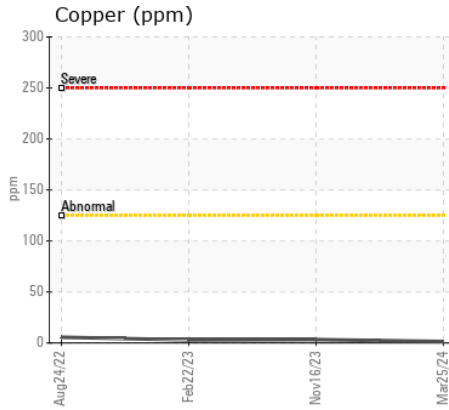
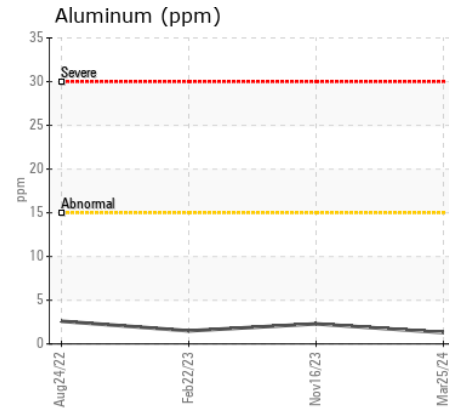
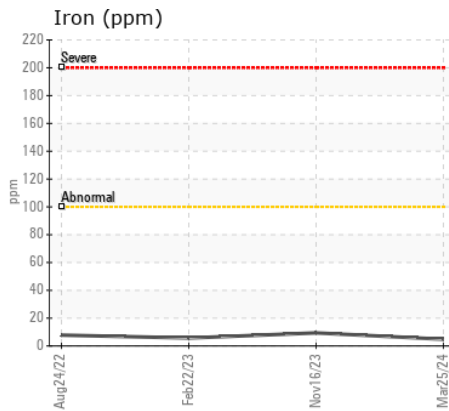
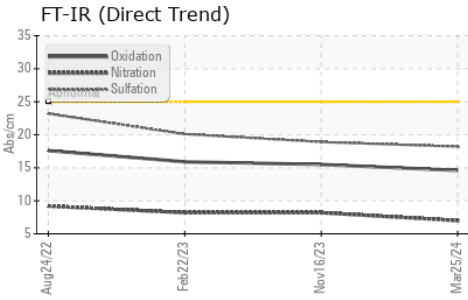
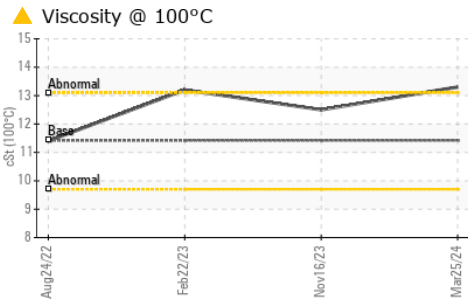
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>60	6	10	7
Potassium	ppm	ASTM D5185(m)	>20	<1	0	0
Fuel		WC Method	>5	<1.0	1.8	<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	7.0	8.2	8.2
Sulfation	Abs/.1mm	ASTM D7415*	>30	18.2	18.9	20.1
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG

FLUID CONDITION

Viscosity of sample indicates oil is within SAE 40 range, advise investigate. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)		2	2	1
Boron	ppm	ASTM D5185(m)	186	2	12	9
Barium	ppm	ASTM D5185(m)	<1	<1	<1	0
Molybdenum	ppm	ASTM D5185(m)	79	57	52	57
Manganese	ppm	ASTM D5185(m)	0	0	0	<1
Magnesium	ppm	ASTM D5185(m)	578	967	889	954
Calcium	ppm	ASTM D5185(m)	1002	1046	1108	1159
Phosphorus	ppm	ASTM D5185(m)	745	976	984	1087
Zinc	ppm	ASTM D5185(m)	837	1163	1162	1208
Sulfur	ppm	ASTM D5185(m)	2502	2523	2553	2670
Oxidation	Abs/.1mm	ASTM D7414*	>25	14.6	15.5	15.9
Visc @ 100°C	cSt	ASTM D7279(m)	11.42	▲ 13.3	▲ 12.5	13.2



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH0286750
Lab Number : 02629533
Unique Number : 5762665
Test Package : MOB 1
Received : 17 Apr 2024
Tested : 17 Apr 2024
Diagnosed : 18 Apr 2024 - Kevin Marson

THOMAS CAVANAGH CONSTRUCTION LTD
 RR # 2, 9094 CAVANAGH ROAD
 ASHTON, ON
 CA K0A 1B0
 Contact: Keith

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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