



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
031629-793
Component
Diesel Engine
Fluid
PETRO CANADA 10W40 (38 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0289504	LH0285001	LH0227401
Sample Date		Client Info		24 May 2024	01 Mar 2024	08 Apr 2022
Machine Age	hrs	Client Info		16113	15574	13549
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	Changed	Changed
Sample Status				NORMAL	ABNORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>100	40	82	23
Chromium	ppm	ASTM D5185(m)	>5	<1	2	<1
Nickel	ppm	ASTM D5185(m)	>5	0	<1	0
Titanium	ppm	ASTM D5185(m)		<1	0	0
Silver	ppm	ASTM D5185(m)	>3	0	<1	0
Aluminum	ppm	ASTM D5185(m)	>15	1	3	1
Lead	ppm	ASTM D5185(m)	>30	3	11	<1
Copper	ppm	ASTM D5185(m)	>125	57	158	1
Tin	ppm	ASTM D5185(m)	>5	2	▲ 6	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0

CONTAMINATION

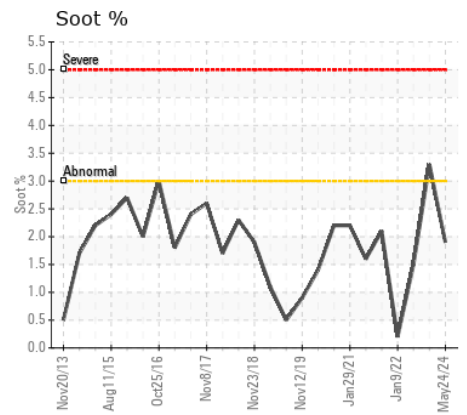
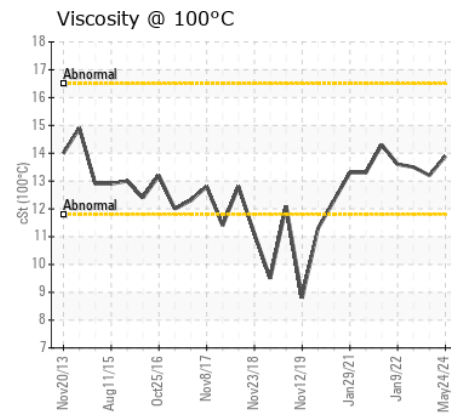
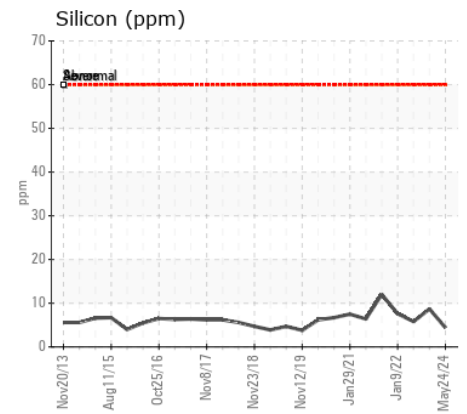
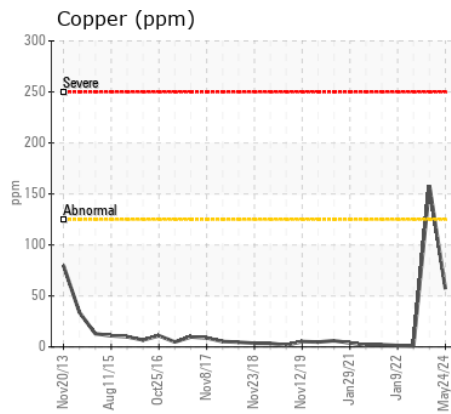
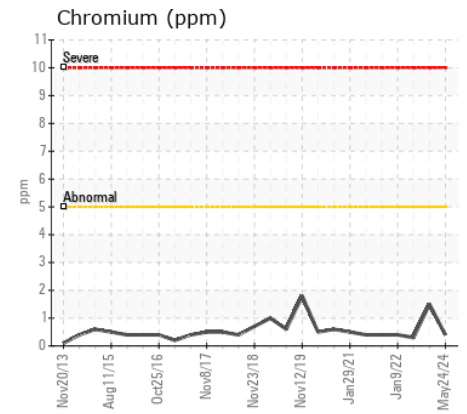
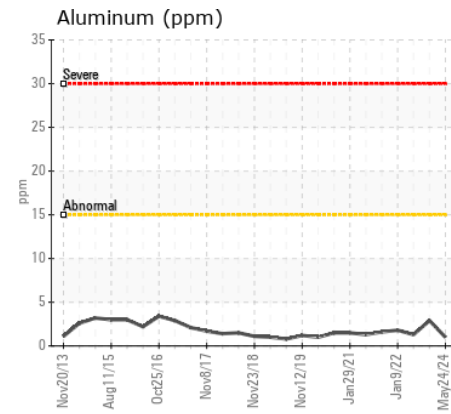
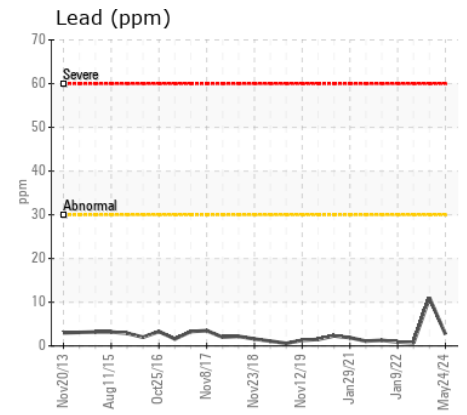
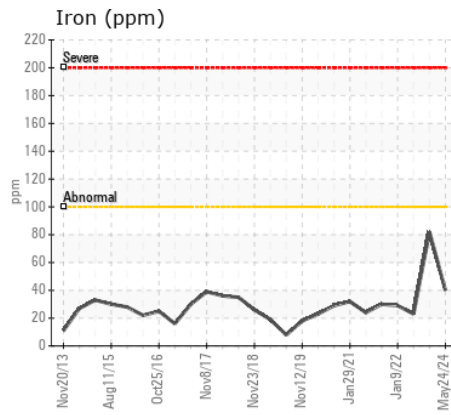
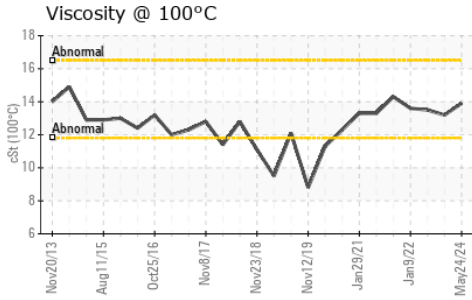
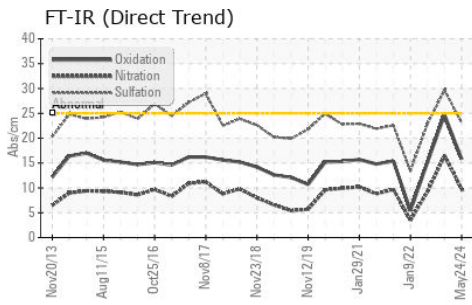
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>60	4	9	6
Potassium	ppm	ASTM D5185(m)	>20	<1	2	<1
Fuel		WC Method	>5	<1.0	1.1	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	0.0	NEG
Soot %	%	ASTM D7844*	>3	1.9	▲ 3.3	1.5
Nitration	Abs/cm	ASTM D7624*	>20	9.8	16.5	9.3
Sulfation	Abs/.1mm	ASTM D7415*	>30	23.2	29.6	22.9
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	11	44	1
Boron	ppm	ASTM D5185(m)		5	37	4
Barium	ppm	ASTM D5185(m)		3	16	0
Molybdenum	ppm	ASTM D5185(m)		61	52	62
Manganese	ppm	ASTM D5185(m)		<1	2	<1
Magnesium	ppm	ASTM D5185(m)		1000	924	1034
Calcium	ppm	ASTM D5185(m)		1285	1928	1086
Phosphorus	ppm	ASTM D5185(m)		1054	1120	1083
Zinc	ppm	ASTM D5185(m)		1256	1290	1266
Sulfur	ppm	ASTM D5185(m)		2323	2558	2588
Oxidation	Abs/.1mm	ASTM D7414*	>25	15.8	24.7	15.2
Visc @ 100°C	cSt	ASTM D7279(m)		13.9	13.2	13.5



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH0289504
Lab Number : 02638412
Unique Number : 5787574
Test Package : MOB 1

Received : 29 May 2024
Tested : 29 May 2024
Diagnosed : 29 May 2024 - Wes Davis

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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