



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ABNORMAL



Machine Id
LIEBHERR L586 059953-1334
Component
Transmission (Manual)
Fluid
PETRO CANADA 30W (--- GAL)

RECOMMENDATION

Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor. The fluid was specified as PETRO CANADA 30W, however, a fluid match indicates that this fluid is SAE 20 Transmission/Drive Train Oil. Please confirm the fluid type and grade on your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0270299	LH0284944	LH0242570
Sample Date		Client Info		04 Mar 2024	01 Feb 2024	01 Oct 2022
Machine Age	hrs	Client Info		7962	4939	3002
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	Not Changd	Changed
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>200	32	28	16
Chromium	ppm	ASTM D5185(m)	>5	0	0	0
Nickel	ppm	ASTM D5185(m)	>5	<1	0	<1
Titanium	ppm	ASTM D5185(m)		0	0	<1
Silver	ppm	ASTM D5185(m)	>7	<1	0	<1
Aluminum	ppm	ASTM D5185(m)	>25	2	2	2
Lead	ppm	ASTM D5185(m)	>45	0	0	<1
Copper	ppm	ASTM D5185(m)	>225	<1	1	1
Tin	ppm	ASTM D5185(m)	>10	0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE

CONTAMINATION

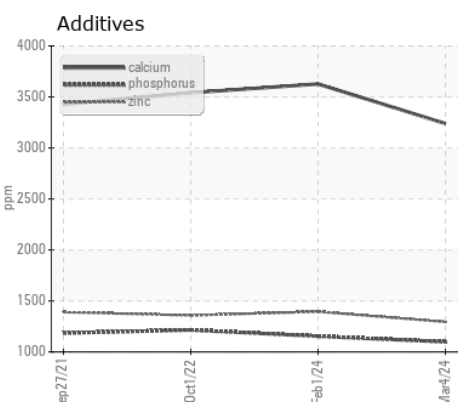
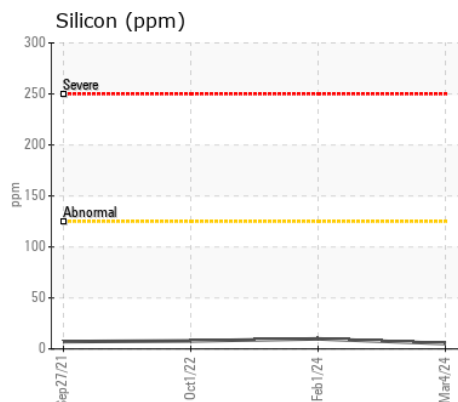
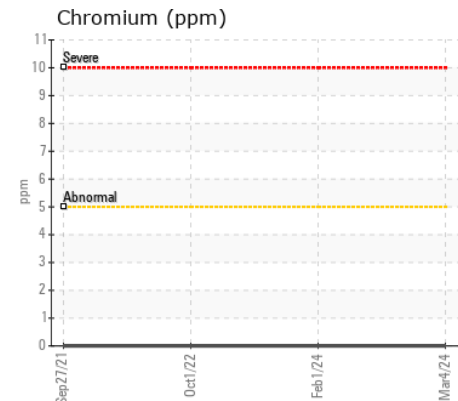
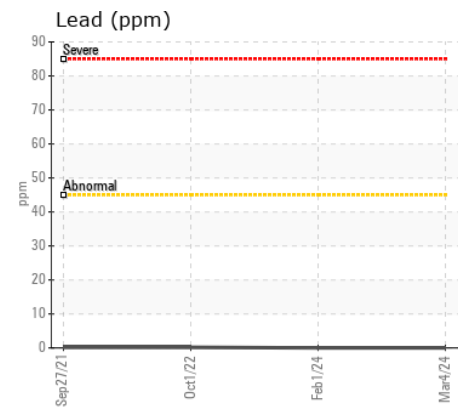
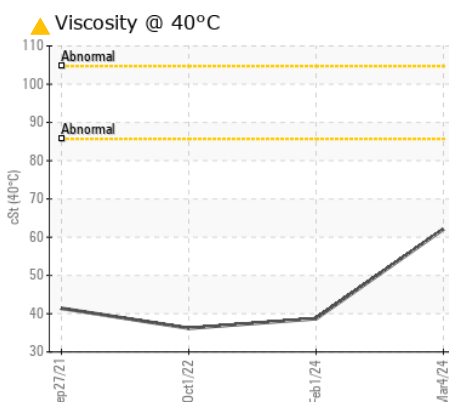
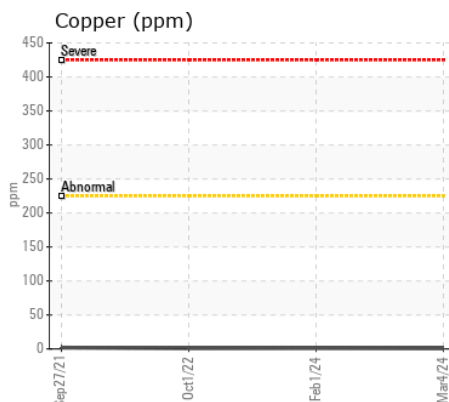
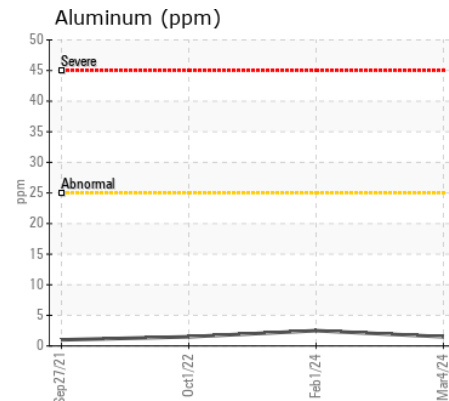
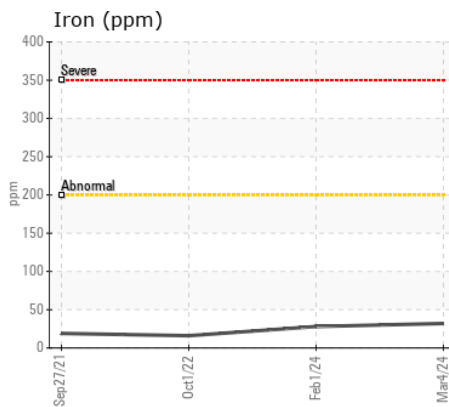
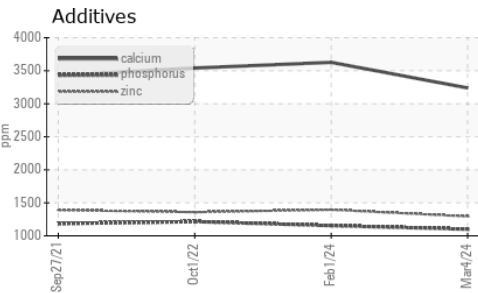
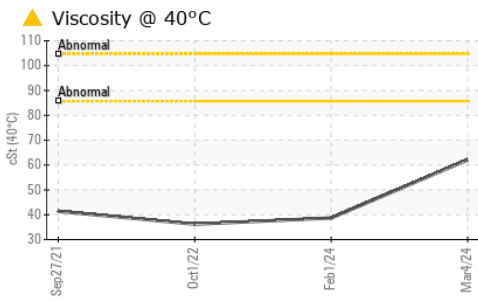
There is no indication of any contamination in the fluid.

Silicon	ppm	ASTM D5185(m)	>125	5	10	8
Potassium	ppm	ASTM D5185(m)	>20	1	2	<1
Water		WC Method	>0.1	NEG	NEG	NEG
Silt	scalar	Visual*	NONE	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	NONE
Appearance	scalar	Visual*	NORML	NORML	NORML	NORML
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.1	NEG	NEG	NEG

FLUID CONDITION

Viscosity of sample indicates oil is within SAE 20 range, advise investigate. This plus the additive levels indicates that this is not the same brand, or type of oil as reported. The condition of the fluid is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)		1	3	5
Boron	ppm	ASTM D5185(m)		58	91	102
Barium	ppm	ASTM D5185(m)		0	0	0
Molybdenum	ppm	ASTM D5185(m)		1	0	0
Manganese	ppm	ASTM D5185(m)		0	0	<1
Magnesium	ppm	ASTM D5185(m)		20	13	11
Calcium	ppm	ASTM D5185(m)		3239	3627	3541
Phosphorus	ppm	ASTM D5185(m)		1099	1154	1215
Zinc	ppm	ASTM D5185(m)		1294	1395	1358
Sulfur	ppm	ASTM D5185(m)		3858	4154	3238
Visc @ 40°C	cSt	ASTM D7279(m)		▲ 62.1	▲ 38.7	▲ 36.2



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH0270299
Lab Number : 02620613
Unique Number : 5737723
Test Package : MOB 1
Received : 07 Mar 2024
Tested : 07 Mar 2024
Diagnosed : 07 Mar 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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