



LIEBHERR

OIL ANALYSIS REPORT

WEAR
CONTAMINATION
FLUID CONDITION

SEVERE
ABNORMAL
NORMAL



Machine Id
LIEBHERR LH22M 110435-1250

Component
Swing Drive

Fluid
PETRO CANADA TRAXON 75W90 SYNTHETIC (--- GAL)

RECOMMENDATION

We advise that you check for the source of water entry. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0288031	LH0283996	LH0260473
Sample Date		Client Info		30 May 2024	31 Jan 2024	14 Aug 2023
Machine Age	hrs	Client Info		13142	12137	11129
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				SEVERE	ABNORMAL	NORMAL

WEAR

Iron ppm levels are severe. The low ferrous density (PQ) index indicates the wear metal levels are due to corrosion.

PQ		ASTM D8184*		0	0	0
Iron	ppm	ASTM D5185(m)	>350	▲ 1157	444	691
Chromium	ppm	ASTM D5185(m)	>15	8	4	6
Nickel	ppm	ASTM D5185(m)	>5	0	<1	0
Titanium	ppm	ASTM D5185(m)		<1	0	0
Silver	ppm	ASTM D5185(m)		0	0	0
Aluminum	ppm	ASTM D5185(m)	>5	<1	<1	1
Lead	ppm	ASTM D5185(m)	>10	2	<1	2
Copper	ppm	ASTM D5185(m)	>300	72	32	67
Tin	ppm	ASTM D5185(m)	>15	4	2	3
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	NONE	NONE	VLITE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE

CONTAMINATION

There is a moderate concentration of water present in the oil.

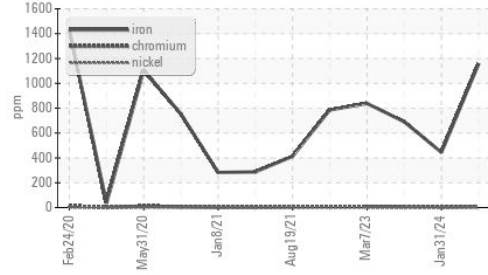
Silicon	ppm	ASTM D5185(m)	>15	5	5	7
Potassium	ppm	ASTM D5185(m)	>20	0	1	<1
Water	%	ASTM D6304*	>0.2	▲ 0.645	---	---
ppm Water	ppm	ASTM D6304*	>2000	▲ 6451	---	---
Silt	scalar	Visual*	NONE	LIGHT	NONE	VLITE
Debris	scalar	Visual*	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	VLITE	NONE	NONE
Appearance	scalar	Visual*	NORML	NORML	▲ WGOIL	NORML
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.2	▲ .5%	▲ .2%	NEG

FLUID CONDITION

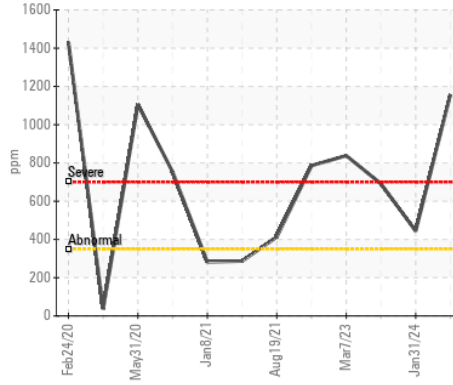
The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Sodium	ppm	ASTM D5185(m)		<1	<1	1
Boron	ppm	ASTM D5185(m)	328	101	115	145
Barium	ppm	ASTM D5185(m)	1	<1	0	<1
Molybdenum	ppm	ASTM D5185(m)		0	0	<1
Manganese	ppm	ASTM D5185(m)		7	2	5
Magnesium	ppm	ASTM D5185(m)	1	2	1	1
Calcium	ppm	ASTM D5185(m)	7	8	8	17
Phosphorus	ppm	ASTM D5185(m)	1145	1297	1330	1446
Zinc	ppm	ASTM D5185(m)	3	23	17	20
Sulfur	ppm	ASTM D5185(m)	17909	21882	21665	21611
Visc @ 40°C	cSt	ASTM D7279(m)	99.6	107	109	109

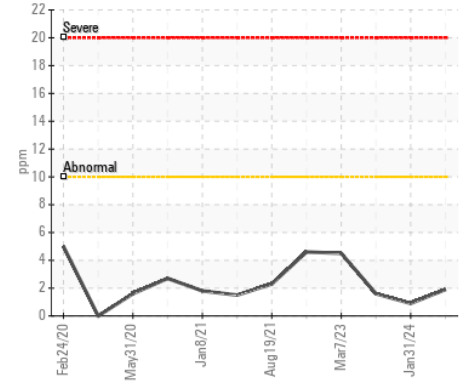
▲ Ferrous Alloys



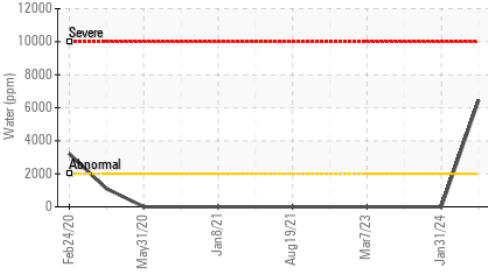
▲ Iron (ppm)



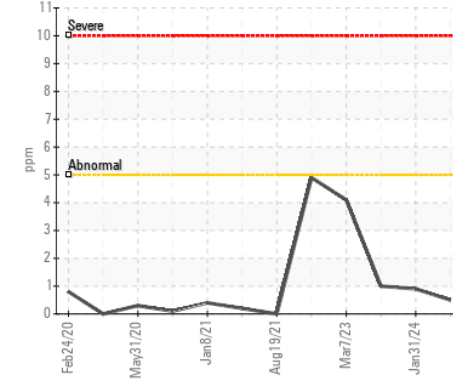
Lead (ppm)



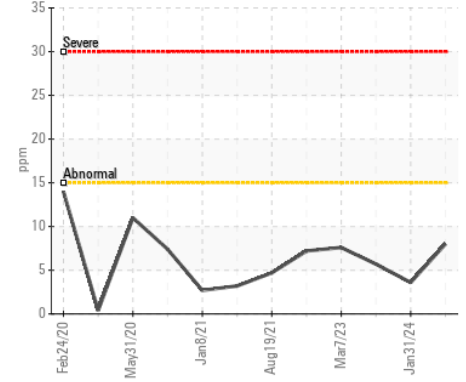
▲ Water (KF)



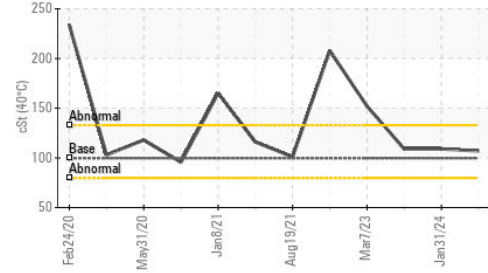
Aluminum (ppm)



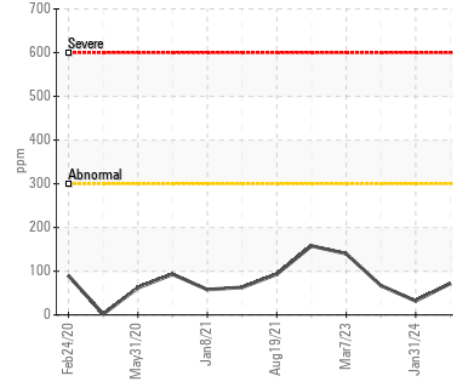
Chromium (ppm)



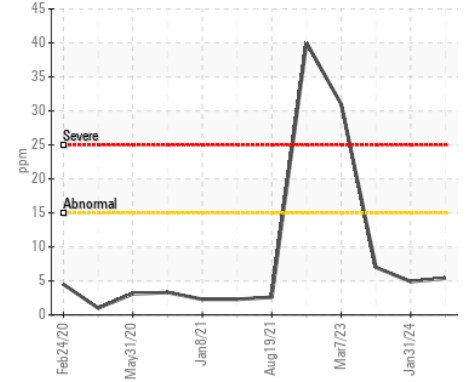
Viscosity @ 40°C



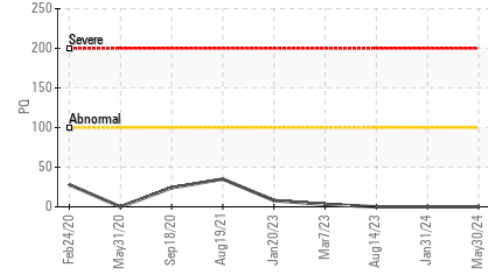
Copper (ppm)



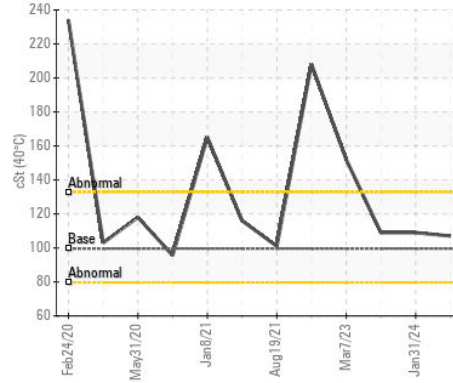
Silicon (ppm)



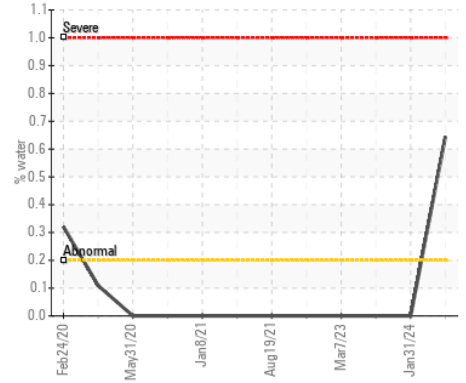
PQ



Viscosity @ 40°C



▲ Water



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH0288031 **Received** : 12 Jun 2024
Lab Number : 02641505 **Tested** : 13 Jun 2024
Unique Number : 5799044 **Diagnosed** : 13 Jun 2024 - Kevin Marson
Test Package : MOB 1 (Additional Tests: KF, PQ)

ECOWASTE INDUSTRIES
 4 SPRUCE ST
 NEW WESTMINSTER, BC
 CA V3L 5G6
 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.

T:
F: