



LIEBHERR

OIL ANALYSIS REPORT

WEAR
CONTAMINATION
FLUID CONDITION

ABNORMAL

SEVERE

NORMAL



Machine Id

LIEBHERR R924 038847-1318

Component

Swing Drive

Fluid

PETRO CANADA TRAXON 75W90 SYNTHETIC (8 LTR)

RECOMMENDATION

We advise that you check all areas where dirt can enter the system. The oil change at the time of sampling has been noted. Confirm the source of the lubricant being utilized for top-up/fill. We recommend an early resample to monitor this condition.

WEAR

Chromium and iron ppm levels are abnormal. The low ferrous density (PQ) index indicates the wear metal levels are due to corrosion.

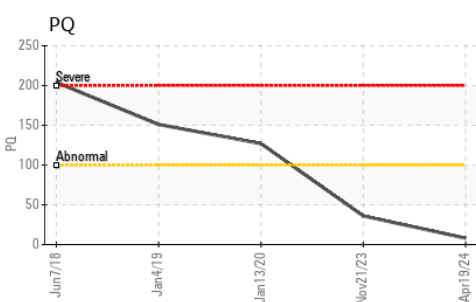
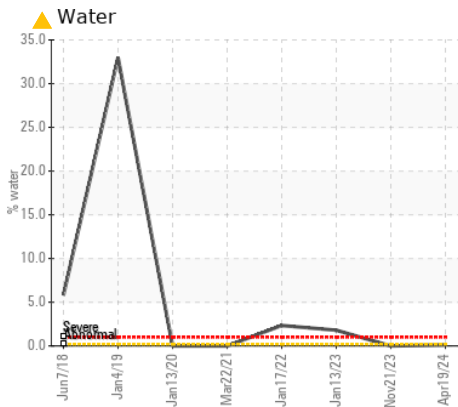
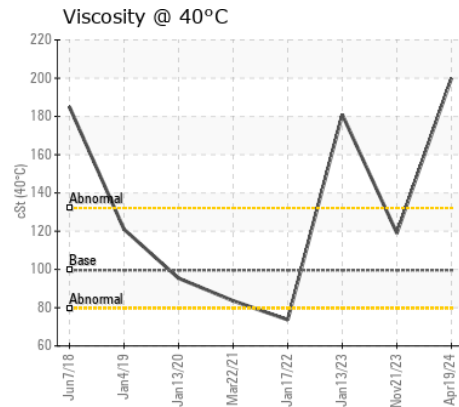
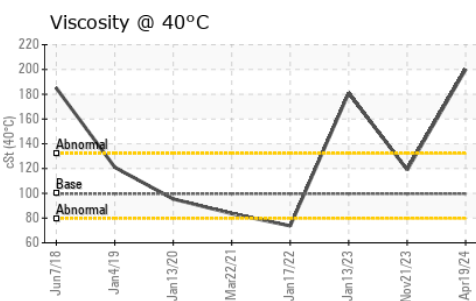
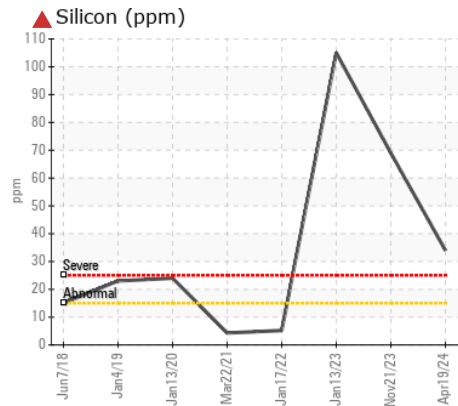
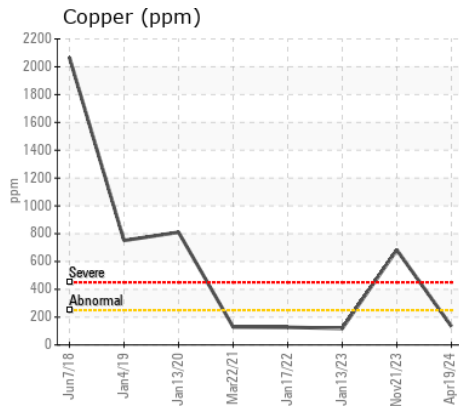
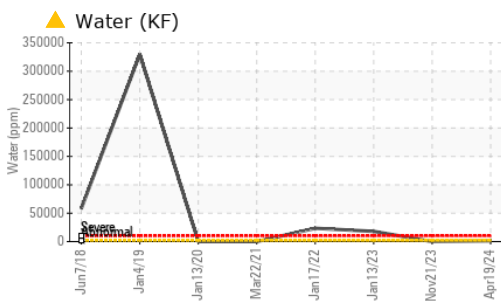
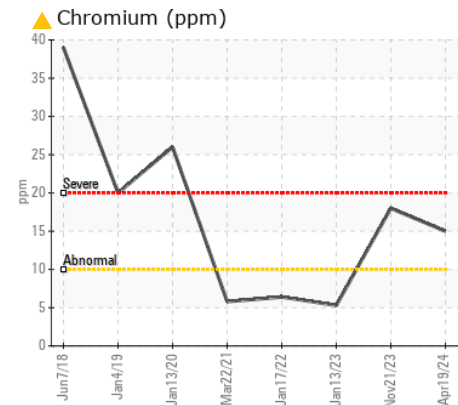
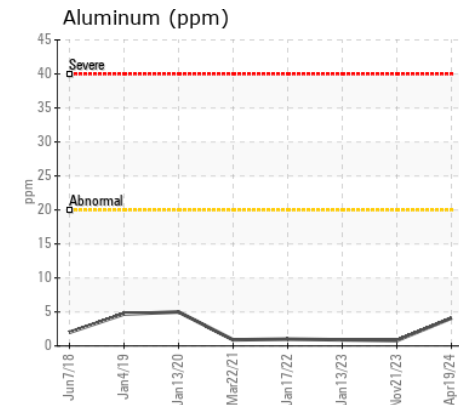
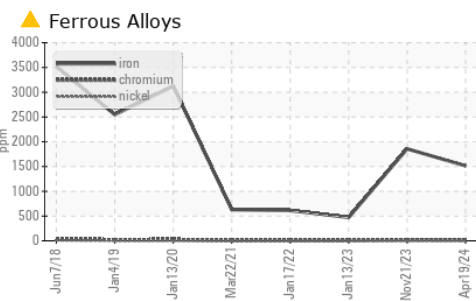
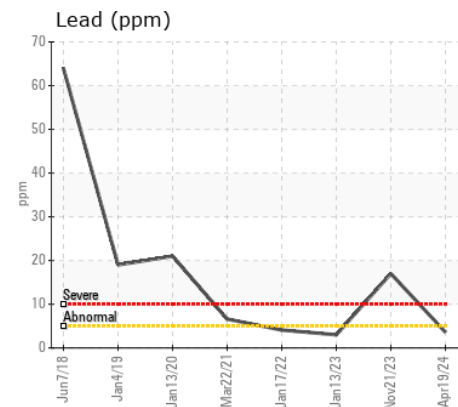
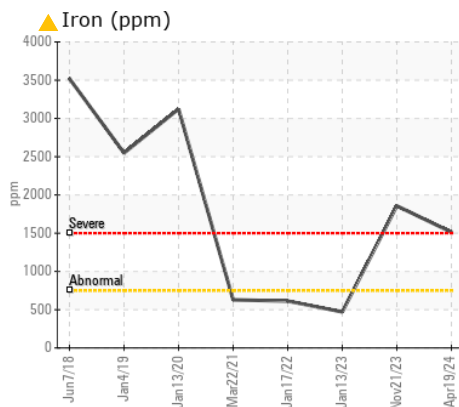
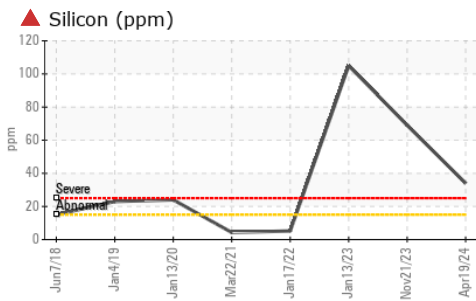
CONTAMINATION

There is a trace of moisture present in the oil. High concentration of dirt present in the oil. High amount of ingressed dirt has caused abrasive wear to the component.

FLUID CONDITION

Additive levels indicate the addition of a different brand, or type of oil. Viscosity of sample indicates oil is within SAE 90 range, advise investigate. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0288051	LH0242050	LH0246964
Sample Date		Client Info		19 Apr 2024	21 Nov 2023	13 Jan 2023
Machine Age	hrs	Client Info		11005	10101	8980
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		None	None	None
Sample Status				SEVERE	SEVERE	SEVERE
PQ		ASTM D8184*		8	36	---
Iron	ppm	ASTM D5185(m)	>750	▲ 1513	▲ 1857	471
Chromium	ppm	ASTM D5185(m)	>10	▲ 15	▲ 18	5
Nickel	ppm	ASTM D5185(m)	>5	<1	<1	<1
Titanium	ppm	ASTM D5185(m)		<1	0	<1
Silver	ppm	ASTM D5185(m)		0	<1	0
Aluminum	ppm	ASTM D5185(m)	>20	4	<1	<1
Lead	ppm	ASTM D5185(m)	>5	4	▲ 17	3
Copper	ppm	ASTM D5185(m)	>250	134	▲ 683	119
Tin	ppm	ASTM D5185(m)	>10	7	8	▲ 34
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	NONE	VLITE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185(m)	>15	▲ 34	▲ 69	▲ 105
Potassium	ppm	ASTM D5185(m)	>20	3	<1	2
Water	%	ASTM D6304*	>0.2	▲ 0.135	---	▲ 1.797
ppm Water	ppm	ASTM D6304*	>2000	▲ 1354	---	▲ 17976.9
Silt	scalar	Visual*	NONE	NONE	VLITE	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*	>0.2	▲ .2%	▲ .2%	▲ .5%
Sodium	ppm	ASTM D5185(m)		6	2	3
Boron	ppm	ASTM D5185(m)	328	27	74	12
Barium	ppm	ASTM D5185(m)	1	11	<1	6
Molybdenum	ppm	ASTM D5185(m)		0	0	<1
Manganese	ppm	ASTM D5185(m)		15	12	5
Magnesium	ppm	ASTM D5185(m)	1	2	<1	<1
Calcium	ppm	ASTM D5185(m)	7	11	20	12
Phosphorus	ppm	ASTM D5185(m)	1145	2006	1315	1886
Zinc	ppm	ASTM D5185(m)	3	40	30	66
Sulfur	ppm	ASTM D5185(m)	17909	23789	20761	23754
Visc @ 40°C	cSt	ASTM D7279(m)	99.6	200	119	▲ 181



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH0288051 **Received** : 02 May 2024
Lab Number : 02632855 **Tested** : 03 May 2024
Unique Number : 5774008 **Diagnosed** : 03 May 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: