



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL



Machine Id
LIEBHERR HS895 188297

Component
Luffing Winch

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

RECOMMENDATION

We advise that you check for the source of water entry. We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0295144	LH0260279	---
Sample Date		Client Info		18 Jun 2024	02 May 2023	---
Machine Age	hrs	Client Info		16385	13473	---
Oil Age	hrs	Client Info		0	0	---
Filter Age	hrs	Client Info		0	0	---
Oil Changed		Client Info		N/A	N/A	---
Filter Changed		Client Info		N/A	N/A	---
Sample Status				ABNORMAL	NORMAL	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>150	10	8	---
Chromium	ppm	ASTM D5185(m)	>10	0	0	---
Nickel	ppm	ASTM D5185(m)	>10	<1	0	---
Titanium	ppm	ASTM D5185(m)		0	0	---
Silver	ppm	ASTM D5185(m)		<1	0	---
Aluminum	ppm	ASTM D5185(m)	>5	<1	<1	---
Lead	ppm	ASTM D5185(m)	>15	0	<1	---
Copper	ppm	ASTM D5185(m)	>80	1	1	---
Tin	ppm	ASTM D5185(m)		0	0	---
Vanadium	ppm	ASTM D5185(m)		0	0	---
White Metal	scalar	Visual*	NONE	NONE	NONE	---
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	---

CONTAMINATION

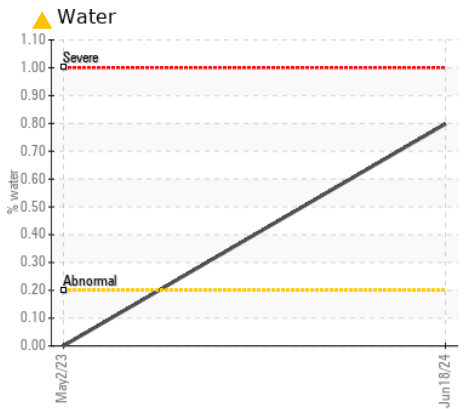
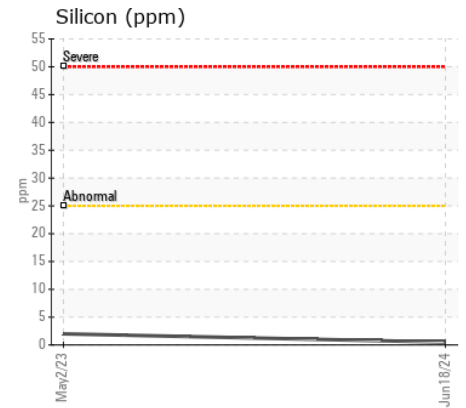
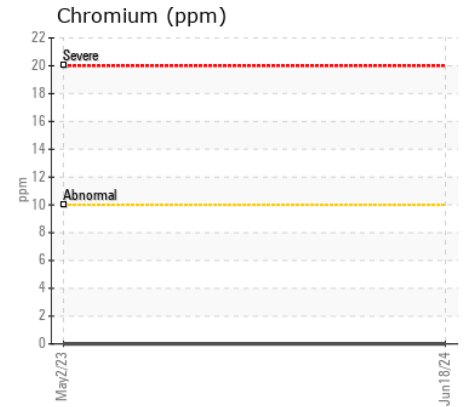
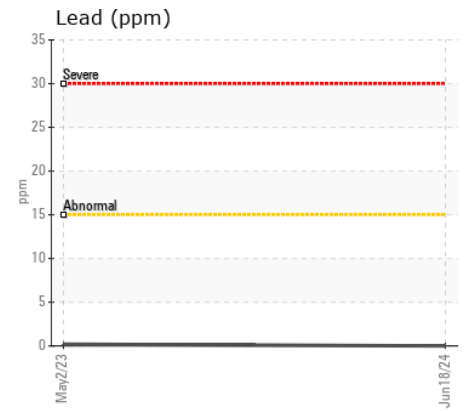
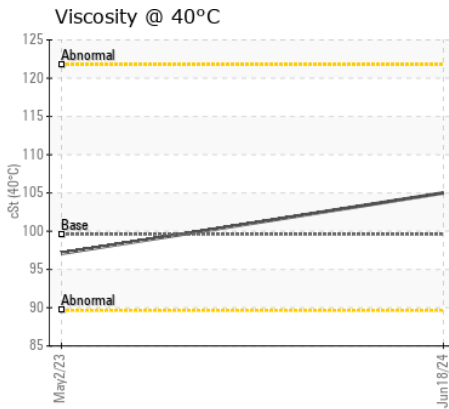
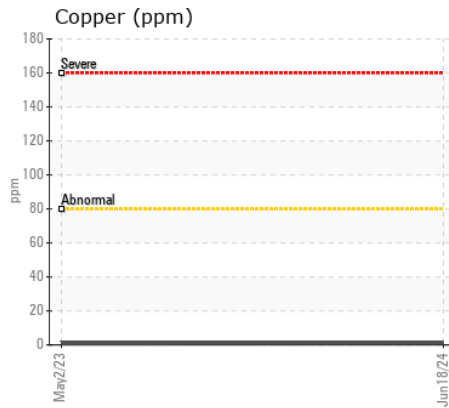
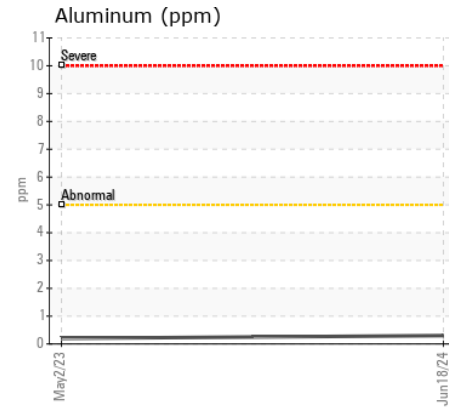
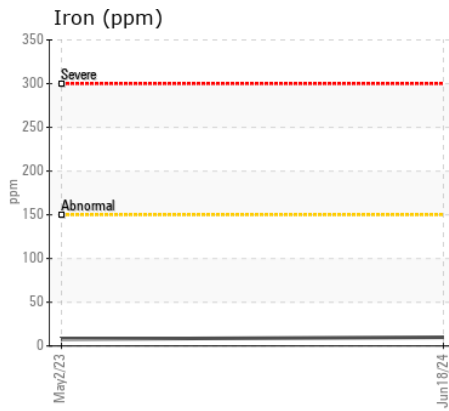
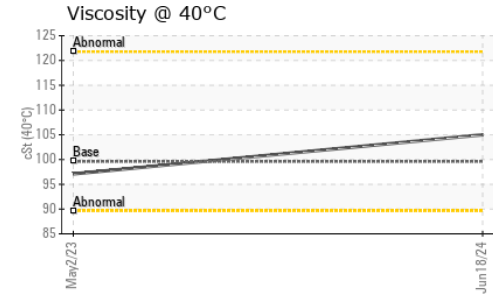
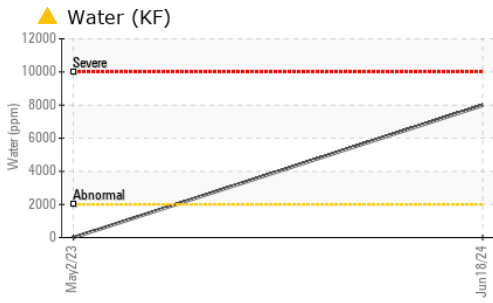
There is a moderate concentration of water present in the oil.

Silicon	ppm	ASTM D5185(m)	>25	<1	2	---
Potassium	ppm	ASTM D5185(m)	>20	4	0	---
Water	%	ASTM D6304*	>0.2	▲ 0.798	---	---
ppm Water	ppm	ASTM D6304*	>2000	▲ 7980	---	---
Silt	scalar	Visual*	NONE	NONE	NONE	---
Debris	scalar	Visual*	NONE	NONE	NONE	---
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	---
Appearance	scalar	Visual*	NORML	▲ WGOIL	NORML	---
Odor	scalar	Visual*	NORML	NORML	NORML	---
Emulsified Water	scalar	Visual*	>0.2	▲ 1%	NEG	---

FLUID CONDITION

The oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185(m)		2	<1	---
Boron	ppm	ASTM D5185(m)	328	182	312	---
Barium	ppm	ASTM D5185(m)	1	0	0	---
Molybdenum	ppm	ASTM D5185(m)		0	0	---
Manganese	ppm	ASTM D5185(m)		<1	0	---
Magnesium	ppm	ASTM D5185(m)	1	2	2	---
Calcium	ppm	ASTM D5185(m)	7	7	9	---
Phosphorus	ppm	ASTM D5185(m)	1145	1144	1387	---
Zinc	ppm	ASTM D5185(m)	3	32	19	---
Sulfur	ppm	ASTM D5185(m)	17909	20620	22158	---
Visc @ 40°C	cSt	ASTM D7279(m)	99.6	105	97.1	---



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH0295144 **Received** : 26 Jun 2024
Lab Number : 02644210 **Tested** : 26 Jun 2024
Unique Number : 5801749 **Diagnosed** : 27 Jun 2024 - Kevin Marson
Test Package : MOB 1 (Additional Tests: KF)

Harbour Development
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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: