



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ABNORMAL



Machine Id
LIEBHERR PR776 26710
Component
Hydraulic System
Fluid
PETRO CANADA HYDREX AW 46 (510 LTR)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0265127	LH0151020	---
Sample Date		Client Info		10 Jun 2024	05 Nov 2023	---
Machine Age	hrs	Client Info		5154	1049	---
Oil Age	hrs	Client Info		0	0	---
Filter Age	hrs	Client Info		0	0	---
Oil Changed		Client Info		Changed	Not Changed	---
Filter Changed		Client Info		N/A	N/A	---
Sample Status				ABNORMAL	ABNORMAL	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>20	11	5	---
Chromium	ppm	ASTM D5185(m)	>10	<1	<1	---
Nickel	ppm	ASTM D5185(m)	>10	<1	<1	---
Titanium	ppm	ASTM D5185(m)		0	0	---
Silver	ppm	ASTM D5185(m)		0	<1	---
Aluminum	ppm	ASTM D5185(m)	>10	2	<1	---
Lead	ppm	ASTM D5185(m)	>10	3	4	---
Copper	ppm	ASTM D5185(m)	>75	11	11	---
Tin	ppm	ASTM D5185(m)	>10	0	0	---
Vanadium	ppm	ASTM D5185(m)		0	0	---
White Metal	scalar	Visual*	NONE	NONE	NONE	---
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	---

CONTAMINATION

The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

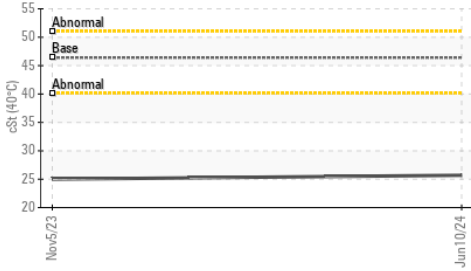
Silicon	ppm	ASTM D5185(m)	>20	8	7	---
Potassium	ppm	ASTM D5185(m)	>20	1	<1	---
Water		WC Method	>0.1	NEG	NEG	---
Particles >4µm		ASTM D7647	>20000	3645	8659	---
Particles >6µm		ASTM D7647	>5000	1492	2538	---
Particles >14µm		ASTM D7647	>640	98	68	---
Particles >21µm		ASTM D7647	>160	11	7	---
Particles >38µm		ASTM D7647	>40	0	2	---
Particles >71µm		ASTM D7647	>10	0	2	---
Oil Cleanliness		ISO 4406 (c)	>21/19/16	19/18/14	20/19/13	---
Silt	scalar	Visual*	NONE	NONE	NONE	---
Debris	scalar	Visual*	NONE	NONE	NONE	---
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	---
Appearance	scalar	Visual*	NORML	NORML	NORML	---
Odor	scalar	Visual*	NORML	NORML	NORML	---
Emulsified Water	scalar	Visual*	>0.1	NEG	NEG	---

FLUID CONDITION

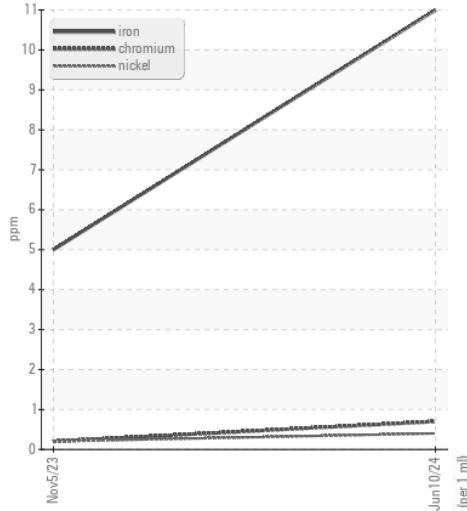
Viscosity of sample indicates oil is within ISO 22 range, advise investigate. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)		6	3	---
Boron	ppm	ASTM D5185(m)	0	<1	<1	---
Barium	ppm	ASTM D5185(m)	0	0	<1	---
Molybdenum	ppm	ASTM D5185(m)	0	0	0	---
Manganese	ppm	ASTM D5185(m)	0	<1	0	---
Magnesium	ppm	ASTM D5185(m)	0	4	5	---
Calcium	ppm	ASTM D5185(m)	50	128	145	---
Phosphorus	ppm	ASTM D5185(m)	330	196	● 144	---
Zinc	ppm	ASTM D5185(m)	430	180	● 102	---
Sulfur	ppm	ASTM D5185(m)	760	820	598	---
Visc @ 40°C	cSt	ASTM D7279(m)	46.4	▲ 25.7	▲ 25.0	---

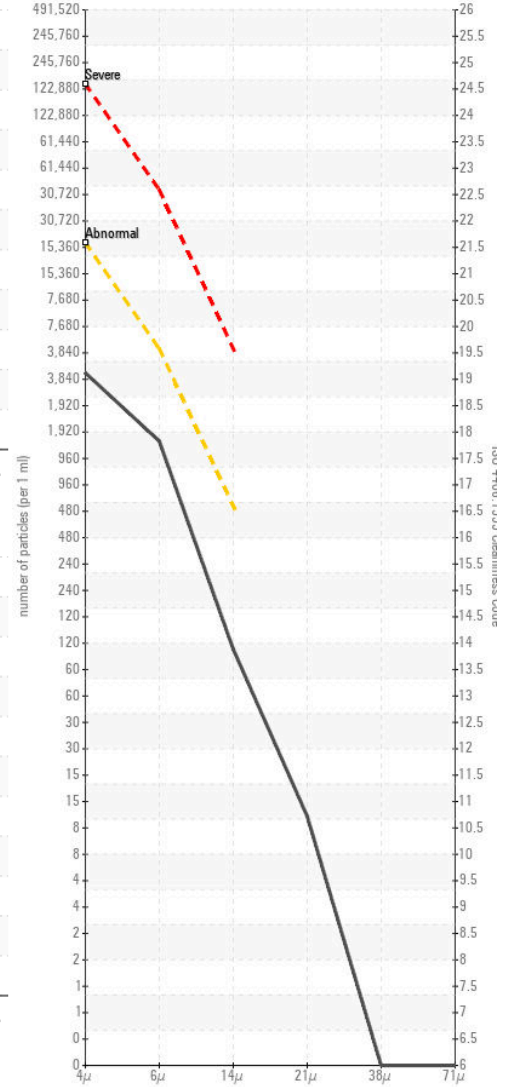
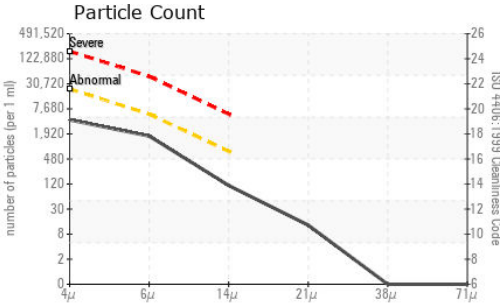
▲ Viscosity @ 40°C



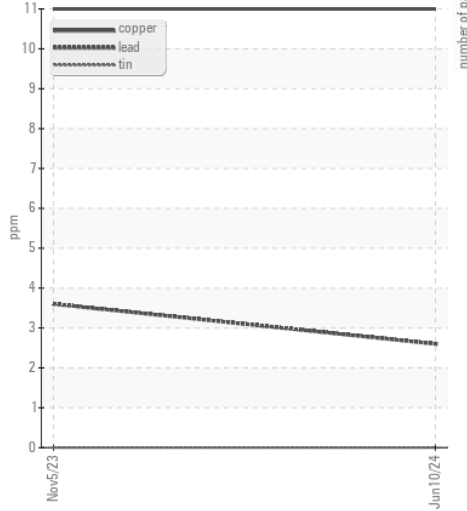
Ferrous Alloys



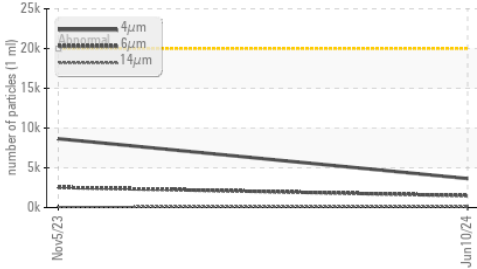
Particle Count



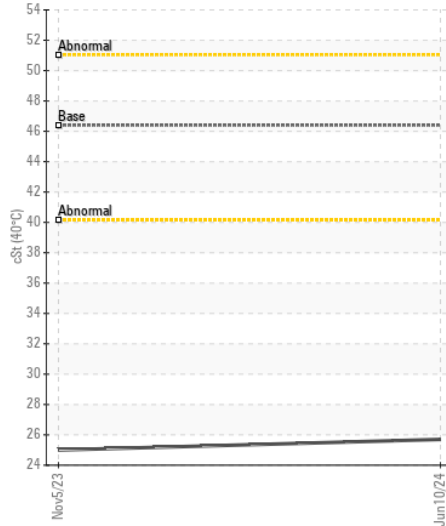
Non-ferrous Metals



Particle Trend



▲ Viscosity @ 40°C



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH0265127 **Received** : 17 Jun 2024
Lab Number : 02642363 **Tested** : 18 Jun 2024
Unique Number : 5799902 **Diagnosed** : 18 Jun 2024 - Kevin Marson
Test Package : MOB 1 (Additional Tests: PrtCount)

ARGONAUT GOLD
 DUBREUILVILLE MINE
 DUBREUILVILLE, ON
 CA
 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.

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F: