



LIEBHERR

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
LIEBHERR R922 54275

Component
Hydraulic System

Fluid
PETRO CANADA HYDREX XV ALL SEASON HYDRAULIC OIL (200 LTR)

RECOMMENDATION

Confirm the source of the lubricant being utilized for top-up/fill. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0288060	LH0242085	---
Sample Date		Client Info		25 Mar 2024	06 Nov 2023	---
Machine Age	hrs	Client Info		2608	2080	---
Oil Age	hrs	Client Info		0	0	---
Filter Age	hrs	Client Info		0	0	---
Oil Changed		Client Info		Not Changd	Not Changd	---
Filter Changed		Client Info		N/A	N/A	---
Sample Status				ABNORMAL	ABNORMAL	---

WEAR

Copper and lead ppm levels are abnormal. Bearing and/or bushing wear is indicated.

Iron	ppm	ASTM D5185(m)	>50	15	13	---
Chromium	ppm	ASTM D5185(m)	>15	<1	<1	---
Nickel	ppm	ASTM D5185(m)	>5	0	<1	---
Titanium	ppm	ASTM D5185(m)		0	0	---
Silver	ppm	ASTM D5185(m)		0	<1	---
Aluminum	ppm	ASTM D5185(m)	>8	<1	<1	---
Lead	ppm	ASTM D5185(m)	>5	▲ 7	▲ 7	---
Copper	ppm	ASTM D5185(m)	>15	▲ 58	▲ 60	---
Tin	ppm	ASTM D5185(m)	>5	1	2	---
Vanadium	ppm	ASTM D5185(m)		0	0	---
White Metal	scalar	Visual*	NONE	NONE	NONE	---
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	---

CONTAMINATION

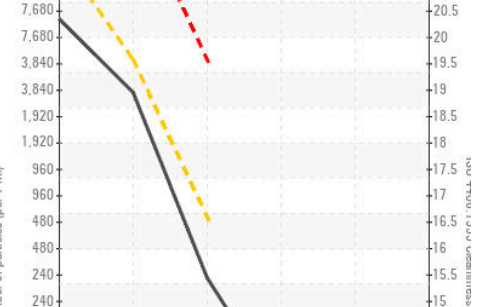
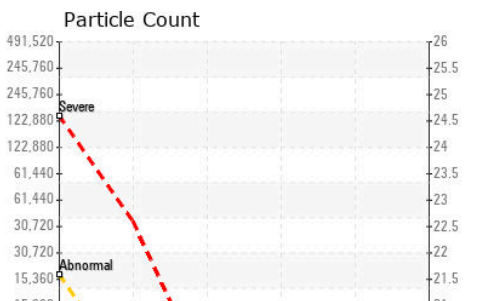
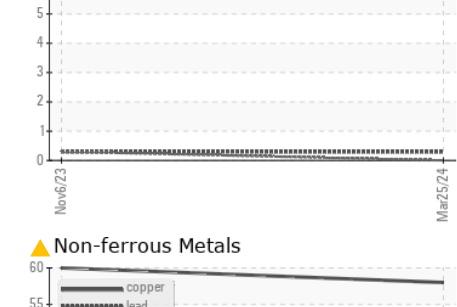
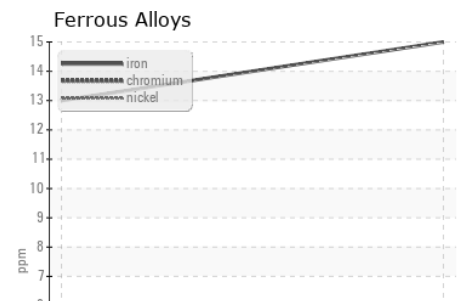
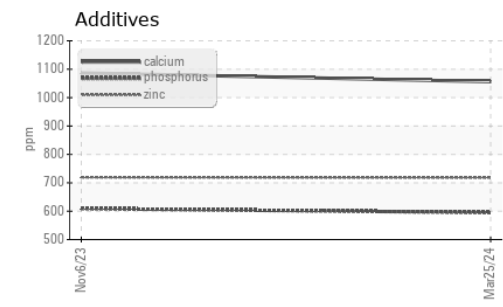
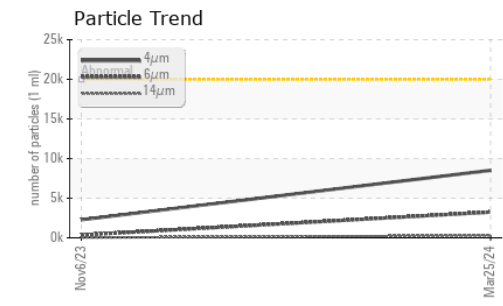
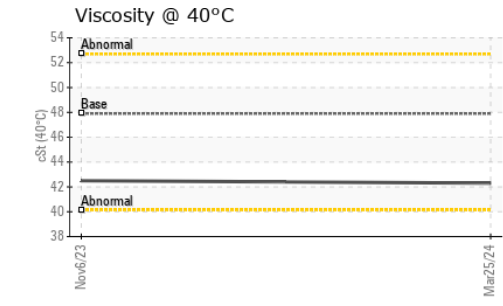
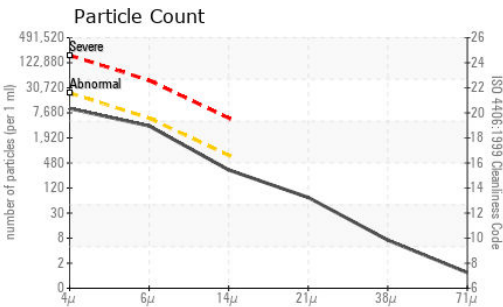
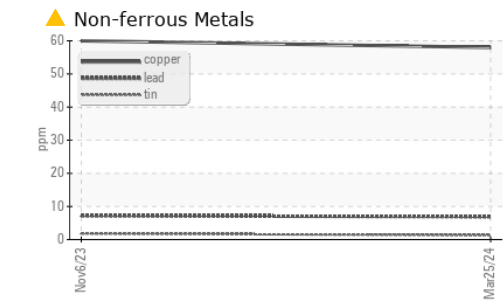
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.
NOTE: An increase in the particle count is noted.

Silicon	ppm	ASTM D5185(m)	>25	5	7	---
Potassium	ppm	ASTM D5185(m)	>20	<1	0	---
Water		WC Method	>0.1	NEG	NEG	---
Particles >4µm		ASTM D7647	>20000	8517	2282	---
Particles >6µm		ASTM D7647	>5000	3246	353	---
Particles >14µm		ASTM D7647	>640	287	23	---
Particles >21µm		ASTM D7647	>160	63	6	---
Particles >38µm		ASTM D7647	>40	6	1	---
Particles >71µm		ASTM D7647	>10	1	0	---
Oil Cleanliness		ISO 4406 (c)	>21/19/16	20/19/15	18/16/12	---
Silt	scalar	Visual*	NONE	NONE	NONE	---
Debris	scalar	Visual*	NONE	NONE	NONE	---
Sand/Dirt	scalar	Visual*	NONE	VLITE	NONE	---
Appearance	scalar	Visual*	NORML	NORML	NORML	---
Odor	scalar	Visual*	NORML	NORML	NORML	---
Emulsified Water	scalar	Visual*	>0.1	NEG	NEG	---

FLUID CONDITION

Additive levels indicate the addition of a different brand, or type of oil. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)		4	4	---
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)	1	0	0	---
Magnesium	ppm	ASTM D5185(m)	0	3	3	---
Calcium	ppm	ASTM D5185(m)	100	1056	1087	---
Phosphorus	ppm	ASTM D5185(m)	670	595	609	---
Zinc	ppm	ASTM D5185(m)	850	718	719	---
Sulfur	ppm	ASTM D5185(m)	1600	3664	3853	---
Visc @ 40°C	cSt	ASTM D7279(m)	47.9	42.3	42.5	---



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH0288060 **Received** : 27 Mar 2024
Lab Number : 02624983 **Tested** : 28 Mar 2024
Unique Number : 5750102 **Diagnosed** : 28 Mar 2024 - Kevin Marson
Test Package : MOB 1 (Additional Tests: PrtCount)

MITCHELL METAL RECYCLING
 12100 MITCHELL RD
 RICHMOND, BC
 CA V6V 1MB
 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: (778)235-0918
 F: