LIEBHERR
CONSTRUCTION EQUIPMENT

LIEBHERR R924 054969 - Hydraulic System

Sample No: LH0277741

Oil Type: PETRO CANADA HYDREX XV ALL SEASON HYDRAULIC OIL

CLOUTHIER VENTURES LTD.
59 MATTHEWS STREET, R.R. # 5
PEMBROKE, ON
CA K8A 0A6
Contact: Travis Bennett
tbennett@clouthierconst.com
T: (613)735-6531
F: (613)735-2769

SAMPLE INFORMATION

Sample Number		**LH0277741**	LH0242478	---	---
Sample Date		**17 Oct 2023**	17 Nov 2022	---	---
Machine Hours		**2060**	543	---	---
Oil Hours		**0**	0	---	---
Oil Changed		**Not Changd**	Not Changd	---	---
Sample Status		**SEVERE**	NORMAL	---	---

OIL CONDITION

Visc @ 40°C	cSt	**42.7**	45.2	---	---

CONTAMINATION

Water	%	**NEG**	NEG	---	---
Particles >4µm		**9329**	15946	---	---
Particles >6µm		**2025**	3437	---	---
Particles >14µm		**110**	155	---	---
ISO 4406:1999 (c)		**20/18/14**	21/19/14	---	---
Silicon	ppm	**5**	5	---	---
Sodium	ppm	**4**	5	---	---
Potassium	ppm	**0**	2	---	---

WEAR METALS

Iron	ppm	**6**	5	---	---
Copper	ppm	**56**	10	---	---
Lead	ppm	**9**	3	---	---
Tin	ppm	**2**	<1	---	---
Aluminum	ppm	**<1**	<1	---	---
Chromium	ppm	**<1**	0	---	---
Molybdenum	ppm	**0**	0	---	---
Nickel	ppm	**<1**	0	---	---
Titanium	ppm	**0**	<1	---	---
Silver	ppm	**<1**	<1	---	---
Manganese	ppm	**0**	<1	---	---
Vanadium	ppm	**0**	0	---	---

ADDITIVES

Calcium	ppm	**1153**	1171	---	---
Magnesium	ppm	**4**	5	---	---
Zinc	ppm	**689**	667	---	---
Phosphorus	ppm	**590**	631	---	---
Barium	ppm	**<1**	0	---	---
Boron	ppm	**2**	1	---	---

Diagnosis

We recommend that you drain the oil from the component if this has not already been done. Confirm the source of the lubricant being utilized for top-up/fill. We recommend an early resample to monitor this condition.Copper ppm levels are severe. Lead ppm levels are abnormal. Bearing and/or bushing wear is indicated. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable. Additive levels indicate the addition of a different brand, or type of oil. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Depot: CLOPEM
Unique No: 5672193
Signed: Kevin Marson
Report Date: 22 Nov 2023

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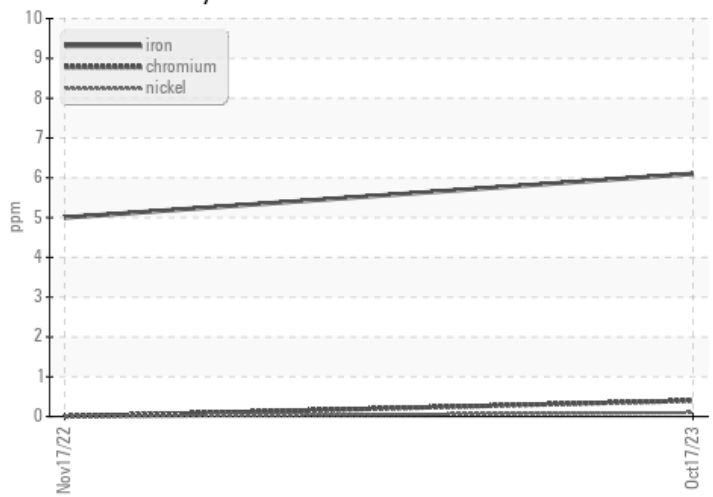
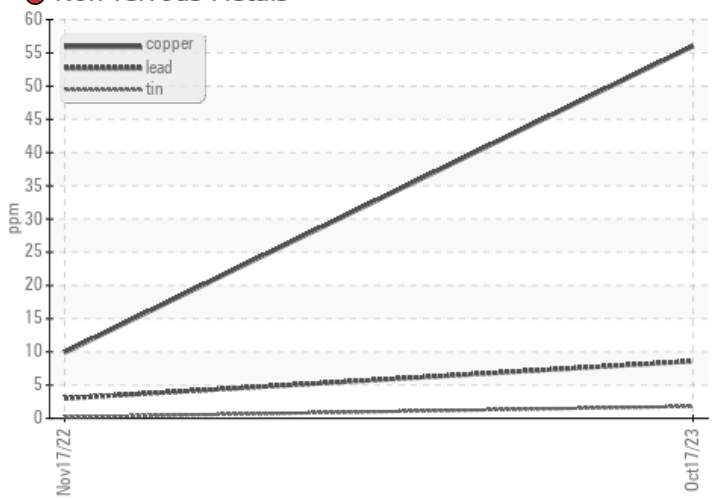
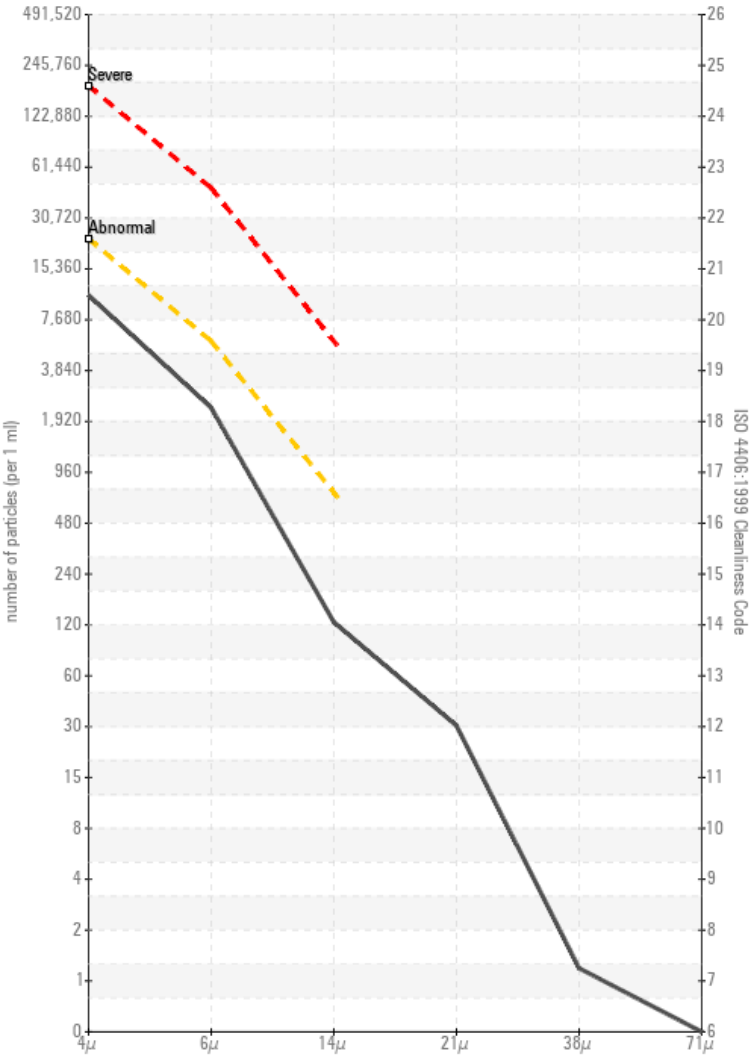
GRAPHS

Ferrous Alloys



Non-ferrous Metals



Viscosity @ 40°C

Particle Count