LIEBHERR
CONSTRUCTION EQUIPMENT

LIEBHERR R945 055435-1866 - Hydraulic System

Sample No: LH0252145

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		**LH0252145**	LH0256976	---	---
Sample Date		**27 Nov 2023**	27 Mar 2023	---	---
Machine Hours		**2000**	1015	---	---
Oil Hours		**0**	0	---	---
Oil Changed		**Not Changd**	Not Changd	---	---
Sample Status		**NORMAL**	ATTENTION	---	---

OIL CONDITION

Visc @ 40°C	cSt	**42.9**	43.9	---	---
Acid Number (AN)	mg KOH/g	**1.68**	---	---	---

CONTAMINATION

Water	%	**NEG**	NEG	---	---
Particles >4µm		**9982**	28440	---	---
Particles >6µm		**2537**	9695	---	---
Particles >14µm		**63**	401	---	---
ISO 4406:1999 (c)		**20/19/13**	22/20/16	---	---
Silicon	ppm	**4**	4	---	---
Sodium	ppm	**3**	2	---	---
Potassium	ppm	**<1**	1	---	---

WEAR METALS

Iron	ppm	**8**	8	---	---
Copper	ppm	**5**	4	---	---
Lead	ppm	**<1**	<1	---	---
Tin	ppm	**0**	0	---	---
Aluminum	ppm	**<1**	<1	---	---
Chromium	ppm	**<1**	<1	---	---
Molybdenum	ppm	**0**	0	---	---
Nickel	ppm	**0**	<1	---	---
Titanium	ppm	**0**	0	---	---
Silver	ppm	**<1**	2	---	---
Manganese	ppm	**0**	<1	---	---
Vanadium	ppm	**0**	0	---	---

ADDITIVES

Calcium	ppm	**1352**	1479	---	---
Magnesium	ppm	**3**	4	---	---
Zinc	ppm	**725**	726	---	---
Phosphorus	ppm	**656**	718	---	---
Barium	ppm	**<1**	0	---	---
Boron	ppm	**<1**	<1	---	---

Diagnosis

Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor.All component wear rates are normal. 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 AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Depot: CLOPEM
Unique No: 5684957
Signed: Kevin Marson
Report Date: 01 Dec 2023

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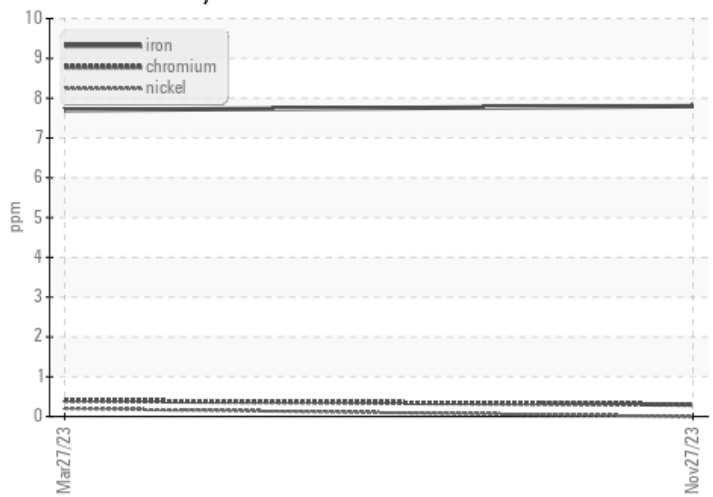
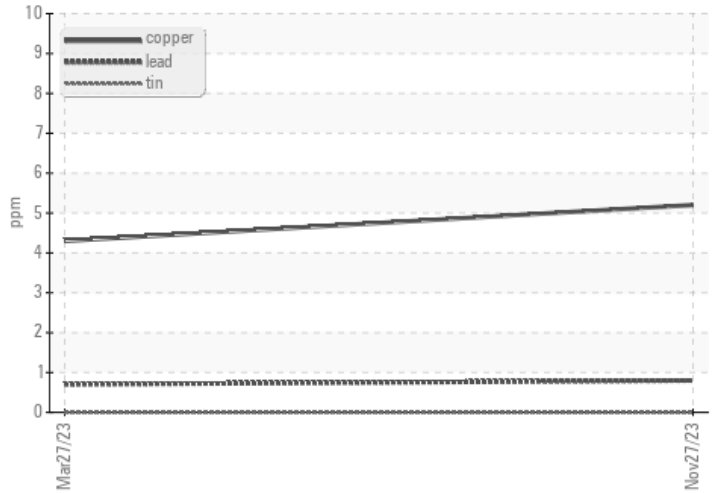
GRAPHS

Ferrous Alloys

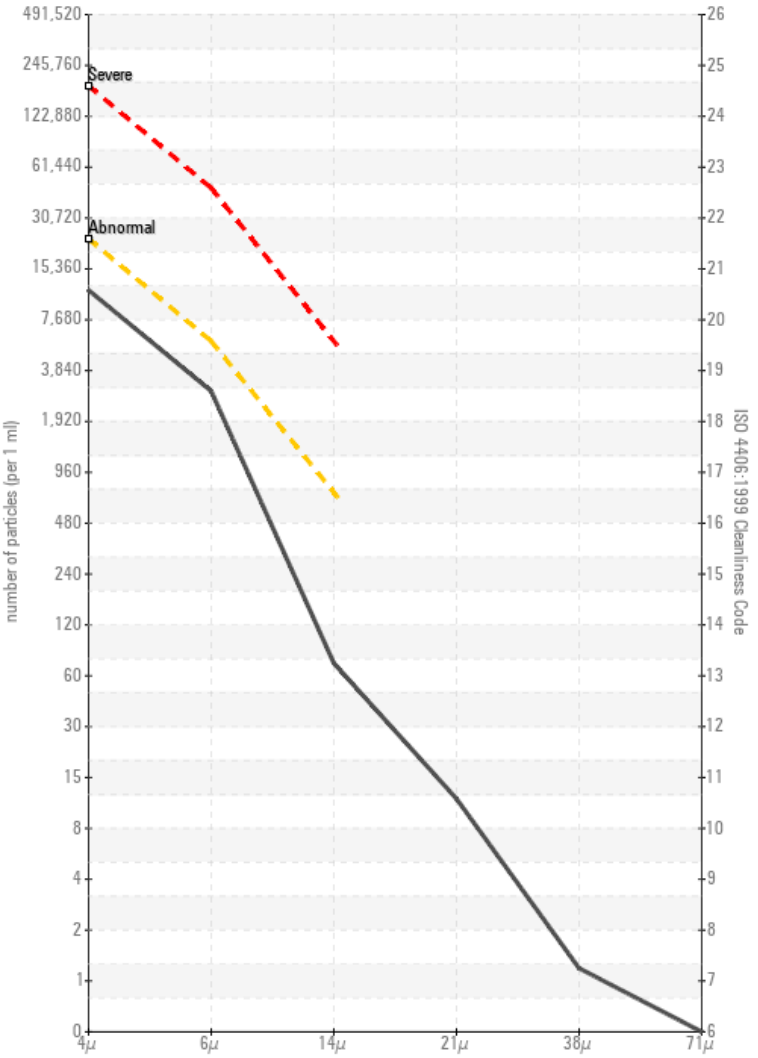


Non-ferrous Metals



Viscosity @ 40°C

Particle Count



Acid Number