

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### HYSTER F31 - Hydraulic System

Sample No: LH0250510

Oil Type: PETRO CANADA HYDREX MV 46



#### SAMPLE INFORMATION

Sample Number	LH0250510	LH0240778	LH0240789	LH0218533
Sample Date	20 Sep 2023	23 Mar 2023	29 Nov 2022	30 Jun 2022
Machine Hours	4556	4305	4054	3814
Oil Hours	0	0	0	0
Oil Changed	Not Changd	Not Changd	Not Changd	Not Changd
Sample Status	SEVERE	SEVERE	SEVERE	SEVERE

#### Radius Recycling Canada Ltd.

12195 Musqueam Dr.

Surrey, BC

CA V3V 3T2

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#### OIL CONDITION

Visc @ 40°C	cSt	43.6	41.7	41.9	42.1



#### CONTAMINATION

Particles >4µm		98160	86677	86918	68851
Particles >6µm		14237	11226	10130	2243
Particles >14µm		63	19	39	117
ISO 4406:1999 (c)		24/21/13	24/21/11	24/21/12	23/18/14
Silicon	ppm	6	4	3	1
Sodium	ppm	2	2	2	1
Potassium	ppm	<1	<1	<1	9



#### WEAR METALS

PQ		0	0	---	---
Iron	ppm	27	23	12	6
Copper	ppm	<1	<1	<1	0
Lead	ppm	<1	<1	<1	<1
Tin	ppm	0	0	0	0
Aluminum	ppm	2	2	1	<1
Chromium	ppm	9	9	5	2
Molybdenum	ppm	<1	<1	<1	<1
Nickel	ppm	0	0	0	0
Titanium	ppm	0	<1	0	0
Silver	ppm	<1	0	0	0
Manganese	ppm	0	<1	<1	0
Vanadium	ppm	0	0	0	0



#### ADDITIVES

Calcium	ppm	258	45	45	48
Magnesium	ppm	9	5	5	5
Zinc	ppm	140	83	86	98
Phosphorus	ppm	596	630	626	586
Barium	ppm	<1	0	0	0
Boron	ppm	2	<1	<1	<1

#### Diagnosis

Check seals and/or filters for points of contaminant entry. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We recommend you service the filters on this component. Resample in 30-45 days to monitor this situation. Iron ppm levels are noted. The low ferrous density (PQ) index indicates the wear metal levels are due to corrosion. All other component wear rates are normal. There is a high amount of silt (particulates < 14 microns in size) present in the oil. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

Depot: AMISUR

Unique No: 5658744

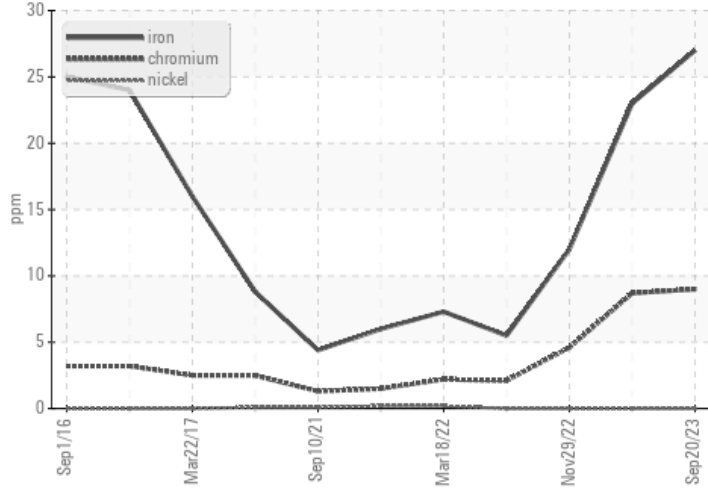
Signed: Kevin Marson

Report Date: 18 Oct 2023

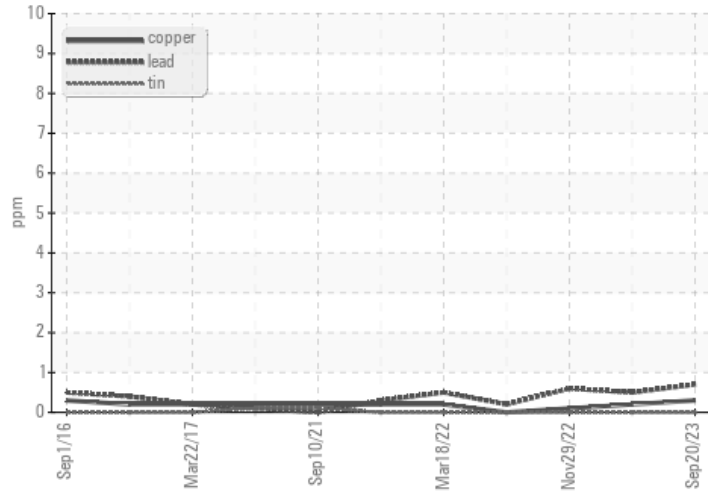


### GRAPHS

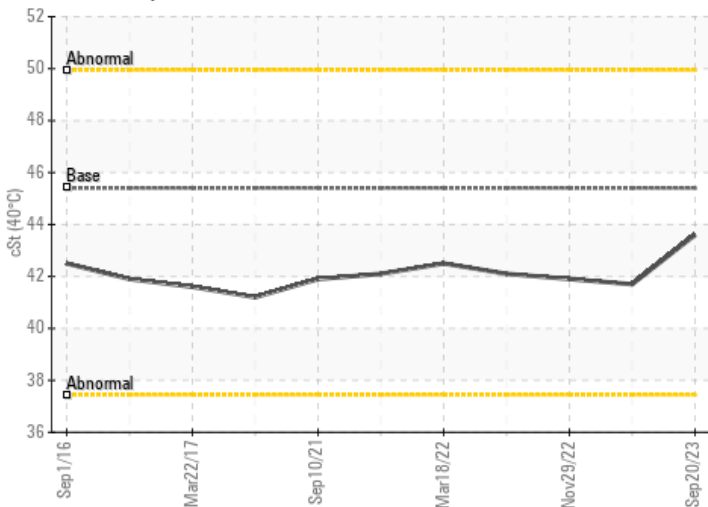
#### ● Ferrous Alloys



#### Non-ferrous Metals



#### Viscosity @ 40°C



#### ● Particle Count

