

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### 116431-1217 - Hydraulic System

Sample No: LH0202951

Oil Type: LIEBHERR HYDRAULIC HVI



#### SAMPLE INFORMATION

Sample Number	LH0202951	LH0173444	LH0195493	LH0153848
Sample Date	20 Sep 2021	22 Apr 2021	08 Apr 2021	23 Dec 2019
Machine Hours	4187	3269	3172	559
Oil Hours	0	0	0	0
Oil Changed	Not Changd	Not Changd	Not Changd	Not Changd
Sample Status	ABNORMAL	ABNORMAL	ABNORMAL	ATTENTION

#### American Iron and Metal

2555 Sheffield Road  
Ottawa, ON  
CA K1B 3V6  
Contact: Dan Dupelle  
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T: (613)228-9380  
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#### OIL CONDITION

Visc @ 40°C	cSt	41.5	42.0	41.7	44.9
Acid Number (AN)	mg KOH/g	---	---	---	1.42



#### CONTAMINATION

Particles >4µm		2601	359	41483	23075
Particles >6µm		521	108	8265	237
Particles >14µm		20	12	97	5
ISO 4406:1999 (c)		19/16/11	16/14/11	23/20/14	22/15/10
Silicon	ppm	2	2	2	1
Sodium	ppm	2	2	2	0
Potassium	ppm	1	<1	1	1



#### WEAR METALS

PQ		0	0	3	---
Iron	ppm	76	65	68	24
Copper	ppm	4	4	4	2
Lead	ppm	<1	<1	<1	<1
Tin	ppm	<1	0	<1	0
Aluminum	ppm	<1	<1	<1	<1
Chromium	ppm	<1	<1	<1	<1
Molybdenum	ppm	<1	<1	<1	<1
Nickel	ppm	<1	<1	0	0
Titanium	ppm	0	0	0	<1
Silver	ppm	0	<1	<1	0
Manganese	ppm	1	1	1	<1
Vanadium	ppm	<1	<1	<1	0



#### ADDITIVES

Calcium	ppm	1038	1141	1166	1241
Magnesium	ppm	5	7	7	8
Zinc	ppm	694	715	705	721
Phosphorus	ppm	624	591	577	620
Barium	ppm	0	<1	<1	<1
Boron	ppm	1	<1	<1	<1

#### Diagnosis

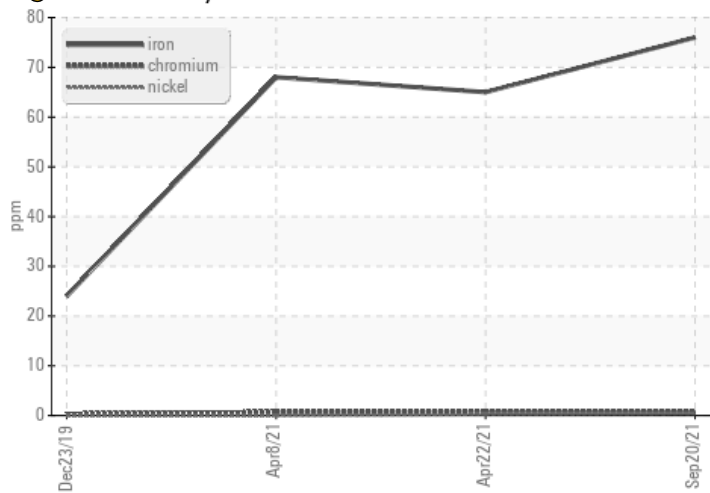
We recommend an early resample to monitor this condition. Iron ppm levels are abnormal. The low ferrous density (PQ) index indicates the wear metal levels are due to corrosion. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Depot: BAKOTT  
Unique No: 5280897  
Signed: Kevin Marson  
Report Date: 23 Sep 2021

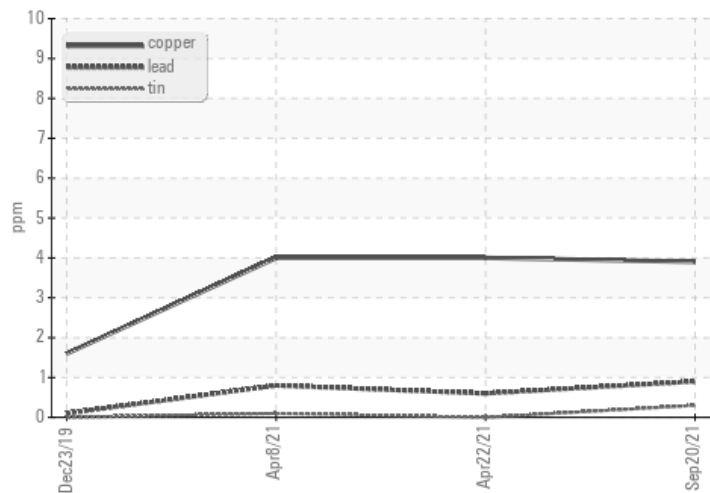


### GRAPHS

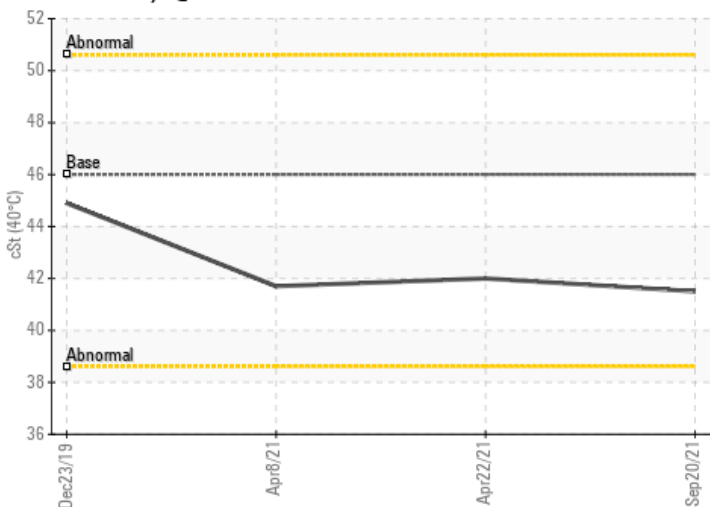
#### ● Ferrous Alloys



#### Non-ferrous Metals



#### Viscosity @ 40°C



#### Particle Count

