

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### 053987-1650 - Hydraulic System

Sample No: LH0274274

Oil Type: AW HYDRAULIC OIL ISO 46



#### SAMPLE INFORMATION

Sample Number	LH0274274	LH	LH0250888	LH0227225
Sample Date	02 Oct 2023	04 May 2023	31 Jan 2023	19 Sep 2022
Machine Hours	2037	1500	1076	540
Oil Hours	0	0	0	0
Oil Changed	N/A	Not Changd	Not Changd	Not Changd
Sample Status	ABNORMAL	ABNORMAL	NORMAL	NORMAL

**Delsan - American Iron and Metal**  
 2187 Montee Masson  
 Laval, QC  
 CA H7B 0A6  
 Contact: MANNY MARQUES  
 mmarques@delsan-aim.com  
 T:  
 F:



#### OIL CONDITION

Visc @ 40°C	cSt	47.4	45.4	45.6	46.0
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#### CONTAMINATION

Particles >4µm	18744	4877	3771	3979
Particles >6µm	6304	1211	911	741
Particles >14µm	424	79	54	25
ISO 4406:1999 (c)	21/20/16	19/17/13	19/17/13	19/17/12
Silicon ppm	7	3	2	2
Sodium ppm	4	5	2	<1
Potassium ppm	<1	1	<1	0



#### WEAR METALS

PQ	0	0	---	---
Iron ppm	71	52	31	14
Copper ppm	3	3	3	4
Lead ppm	2	1	<1	0
Tin ppm	<1	<1	<1	0
Aluminum ppm	2	2	1	1
Chromium ppm	5	4	3	<1
Molybdenum ppm	0	0	0	0
Nickel ppm	<1	<1	<1	0
Titanium ppm	0	0	0	0
Silver ppm	<1	0	0	0
Manganese ppm	<1	<1	<1	0
Vanadium ppm	0	0	0	0



#### ADDITIVES

Calcium ppm	25	15	10	<1
Magnesium ppm	1	1	<1	0
Zinc ppm	81	68	54	25
Phosphorus ppm	259	255	241	190
Barium ppm	<1	0	0	0
Boron ppm	1	1	1	<1

#### Diagnosis

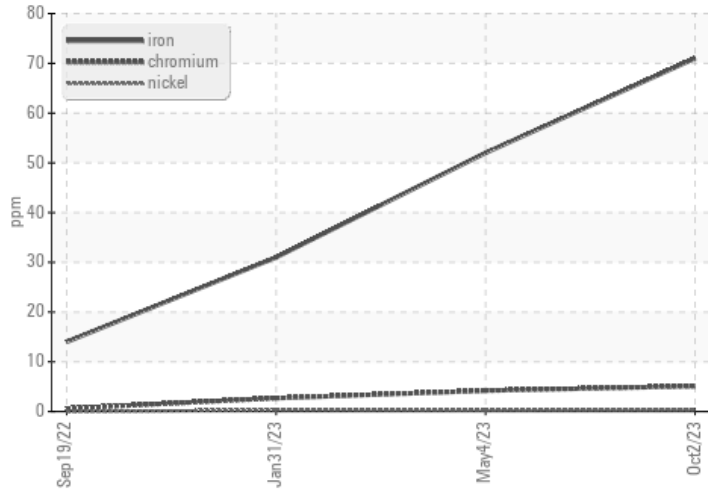
We recommend that you drain the oil from the component if this has not already been done. We recommend you service the filters on this component. We recommend an early resample to monitor this condition. Iron ppm levels are abnormal. The low ferrous density (PQ) index indicates the wear metal levels are due to corrosion. There is a light amount of silt (particulates < 14 microns in size) present in the oil. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Depot: DEL782MON  
 Unique No: 5657708  
 Signed: Kevin Marson  
 Report Date: 13 Oct 2023

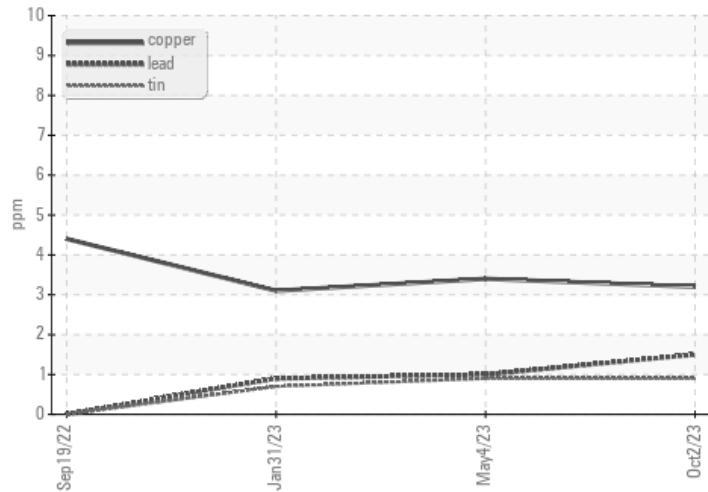


### GRAPHS

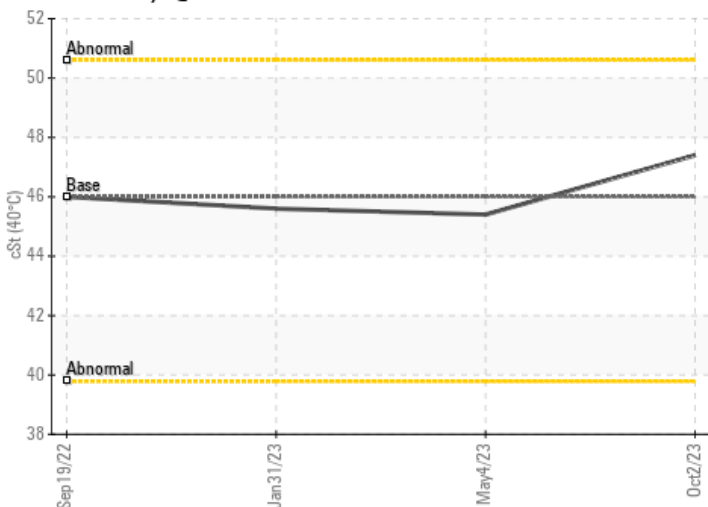
#### ● Ferrous Alloys



#### Non-ferrous Metals



#### Viscosity @ 40°C



#### ● Particle Count

