

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### 61282 - Hydraulic System

Sample No: LH0286398

Oil Type: AW HYDRAULIC OIL ISO 22



#### Sample Information

Sample Number	LH0286398	---	---	---
Sample Date	06 May 2024	---	---	---
Machine Hours	23000	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Not Chngd	---	---	---
Sample Status	SEVERE	---	---	---

**LIEBHERR CANADA LTD.**  
 10374 267 ST.  
 ACHESON, AB  
 CA T7X 6A2  
 Contact: Dustin Fluet  
 dustin.fluet@liebherr.com  
 T: (780)962-6088  
 F: (780)962-6799



#### Oil Condition

Visc @ 40°C	cSt	● 23.1	---	---	---
-------------	-----	--------	-----	-----	-----



#### Contamination

Water	%	NEG	---	---	---
Particles >4µm		● 145690	---	---	---
Particles >6µm		● 74459	---	---	---
Particles >14µm		● 4555	---	---	---
ISO 4406:1999 (c)		24/23/19	---	---	---
Silicon	ppm	● 2	---	---	---
Sodium	ppm	● 2	---	---	---
Potassium	ppm	● <1	---	---	---



#### Wear Metals

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



#### Additives

Calcium	ppm	● 133	---	---	---
Magnesium	ppm	● 3	---	---	---
Zinc	ppm	● 327	---	---	---
Phosphorus	ppm	● 282	---	---	---
Barium	ppm	● 4	---	---	---
Boron	ppm	● 2	---	---	---

#### Diagnosis

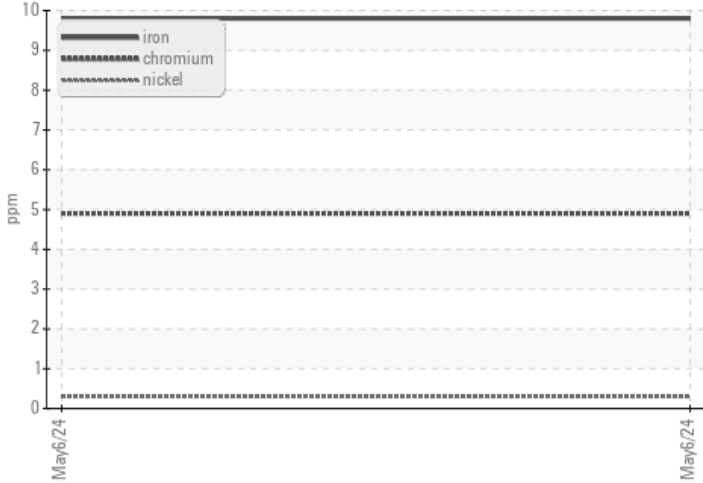
We advise that you check all areas where contaminants can enter the system. Check seals and/or filters for points of contaminant entry. We recommend that you drain the oil from the component if this has not already been done. The air breather requires service. If unrated, we recommend that you replace 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. The fluid was not specified, however, a fluid match indicates that this fluid is (GENERIC) AW HYDRAULIC OIL ISO 22. Please confirm. All component wear rates are normal. There is a high amount of particulates (2 to 100 microns in size) present in the oil. There is a moderate concentration of water present in the oil. Free water present. The oil is no longer serviceable due to the presence of contaminants.

**Depot:** LIESPR  
**Unique No:** 5775038  
**Signed:** Kevin Marson  
**Report Date:** 08 May 2024

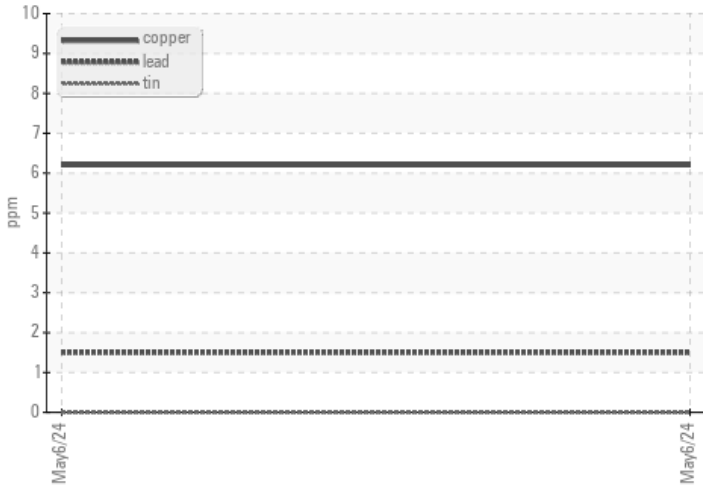


### Graphs

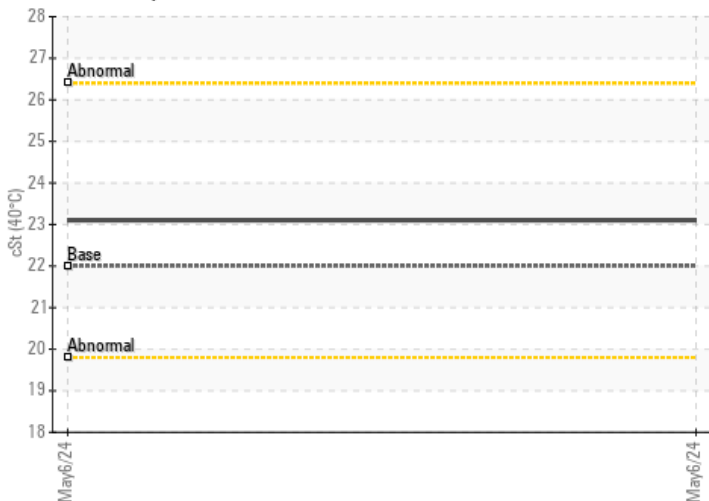
#### Ferrous Alloys



#### Non-ferrous Metals



#### Viscosity @ 40°C



#### Particle Count

