

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR R938 1650-50726 - Hydraulic System

Sample No: LH0244727

Oil Type: LIEBHERR HYDRAULIC HVI



SAMPLE INFORMATION

Sample Number	LH0244727	LH0236516	---	---
Sample Date	13 Oct 2023	01 Aug 2022	---	---
Machine Hours	973	516	---	---
Oil Hours	0	516	---	---
Oil Changed	Not Changd	Not Changd	---	---
Sample Status	NORMAL	ABNORMAL	---	---

DIEHL AND NUEMAIER

5466 NORWAY GROVE SCHOOL RD
DE FOREST, WI
US 53532
Contact: ELLIOT DIEHL
diehlneumaier@yahoo.com
T: (608)846-4824
F: (608)846-2077



OIL CONDITION

Visc @ 40°C	cSt	● 43.1	● 43.7	---	---
Acid Number (AN)	mg KOH/g	● 1.15	● 1.00	---	---



CONTAMINATION

Particles >4µm		● 6080	● 67406	---	---
Particles >6µm		● 322	● 3305	---	---
Particles >14µm		● 11	● 29	---	---
ISO 4406:1999 (c)		20/16/11	23/19/12	---	---
Silicon	ppm	● 4	● 4	---	---
Sodium	ppm	● 2	● <1	---	---
Potassium	ppm	● <1	● 2	---	---

Diagnosis

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. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.



WEAR METALS

Iron	ppm	● 22	● 11	---	---
Copper	ppm	● 5	● 4	---	---
Lead	ppm	● <1	● <1	---	---
Tin	ppm	● 0	● <1	---	---
Aluminum	ppm	● <1	● <1	---	---
Chromium	ppm	● 3	● 2	---	---
Molybdenum	ppm	● 0	● <1	---	---
Nickel	ppm	● 0	● 0	---	---
Titanium	ppm	0	0	---	---
Silver	ppm	0	<1	---	---
Manganese	ppm	● <1	● <1	---	---
Vanadium	ppm	0	0	---	---



ADDITIVES

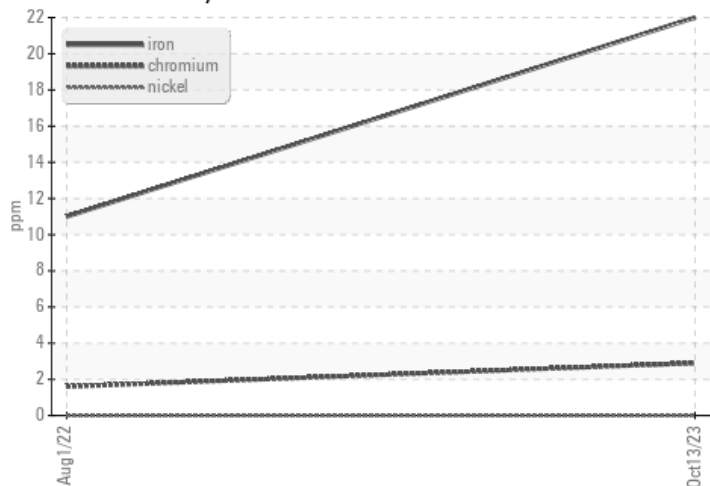
Calcium	ppm	● 1088	● 1041	---	---
Magnesium	ppm	● 4	● 6	---	---
Zinc	ppm	● 668	● 639	---	---
Phosphorus	ppm	● 574	● 519	---	---
Barium	ppm	● 0	● 0	---	---
Boron	ppm	● 0	● 1	---	---

Depot: DIEDEF
Unique No: 10701461
Signed: Wes Davis
Report Date: 20 Oct 2023

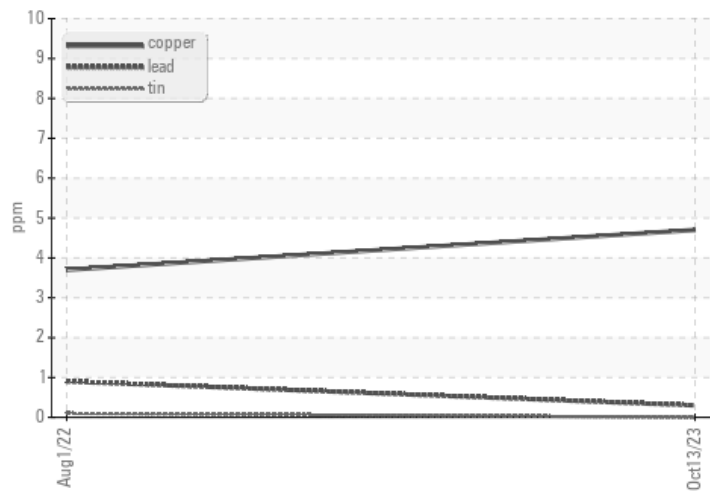


GRAPHS

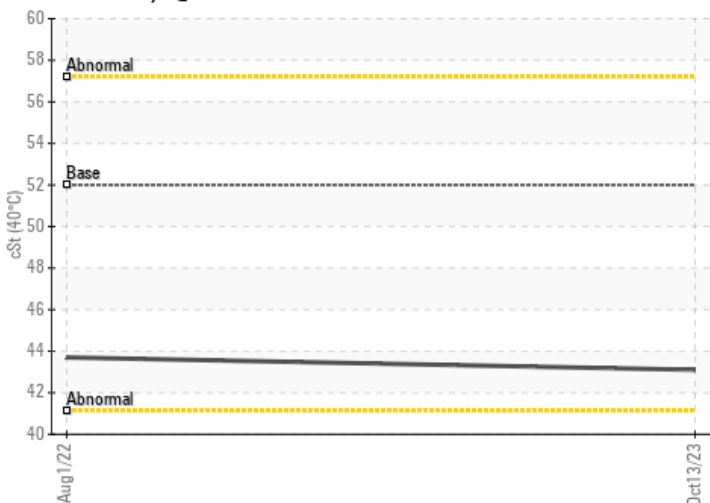
Ferrous Alloys



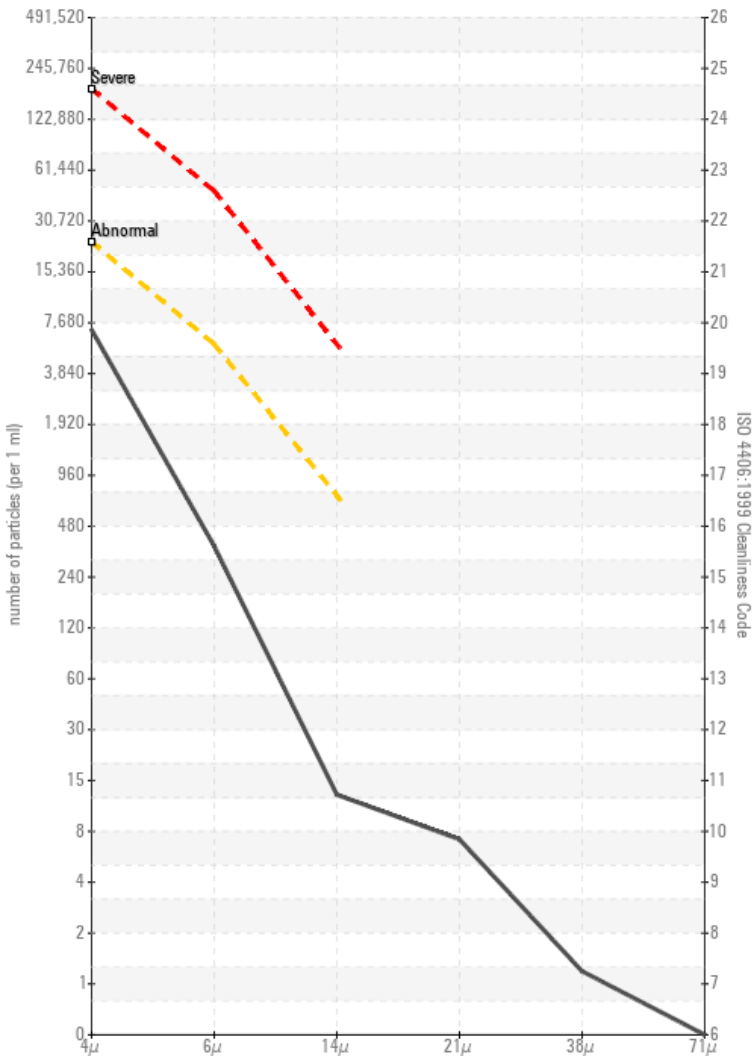
Non-ferrous Metals



Viscosity @ 40°C



Particle Count



Acid Number

