

LIEBHERR

CONSTRUCTION EQUIPMENT



MS19 - Hydraulic System

Sample No: LH0244649
 Oil Type: NOT GIVEN



SAMPLE INFORMATION

Sample Number	LH0244649	LHMC122792	---	---
Sample Date	08 Dec 2023	03 Aug 2023	---	---
Machine Hours	3512	2706	---	---
Oil Hours	0	0	---	---
Oil Changed	Not Changd	Not Changd	---	---
Sample Status	NORMAL	ABNORMAL	---	---

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OIL CONDITION

Visc @ 40°C	cSt	34.5	34.9	---	---
Acid Number (AN)	mg KOH/g	0.83	0.92	---	---



CONTAMINATION

Water	%	NEG	0.113	---	---
Particles >4µm		555	1514	---	---
Particles >6µm		104	177	---	---
Particles >14µm		24	7	---	---
ISO 4406:1999 (c)		16/14/12	18/15/10	---	---
Silicon	ppm	2	1	---	---
Sodium	ppm	5	4	---	---
Potassium	ppm	0	0	---	---

Diagnosis

Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.



WEAR METALS

Iron	ppm	7	7	---	---
Copper	ppm	7	5	---	---
Lead	ppm	<1	<1	---	---
Tin	ppm	0	0	---	---
Aluminum	ppm	0	0	---	---
Chromium	ppm	1	<1	---	---
Molybdenum	ppm	0	0	---	---
Nickel	ppm	0	0	---	---
Titanium	ppm	0	0	---	---
Silver	ppm	0	<1	---	---
Manganese	ppm	<1	<1	---	---
Vanadium	ppm	0	0	---	---



ADDITIVES

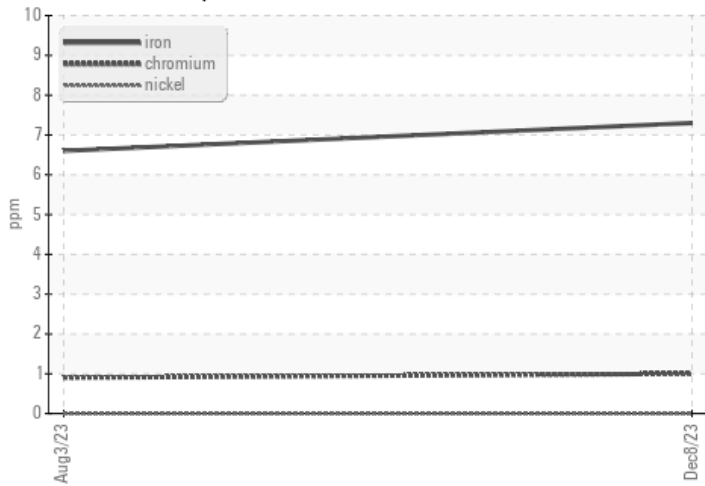
Calcium	ppm	1151	1134	---	---
Magnesium	ppm	5	8	---	---
Zinc	ppm	628	640	---	---
Phosphorus	ppm	528	460	---	---
Barium	ppm	<1	0	---	---
Boron	ppm	0	0	---	---

Depot: OSCLAF
 Unique No: 10806709
 Signed: Jonathan Hester
 Report Date: 02 Jan 2024

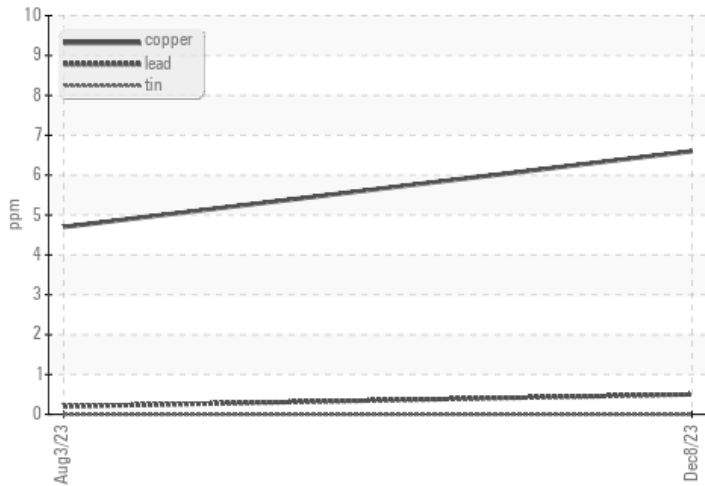


GRAPHS

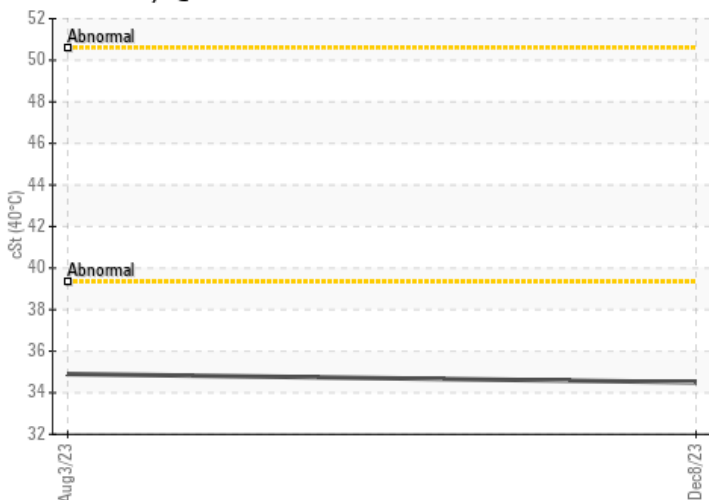
Ferrous Alloys



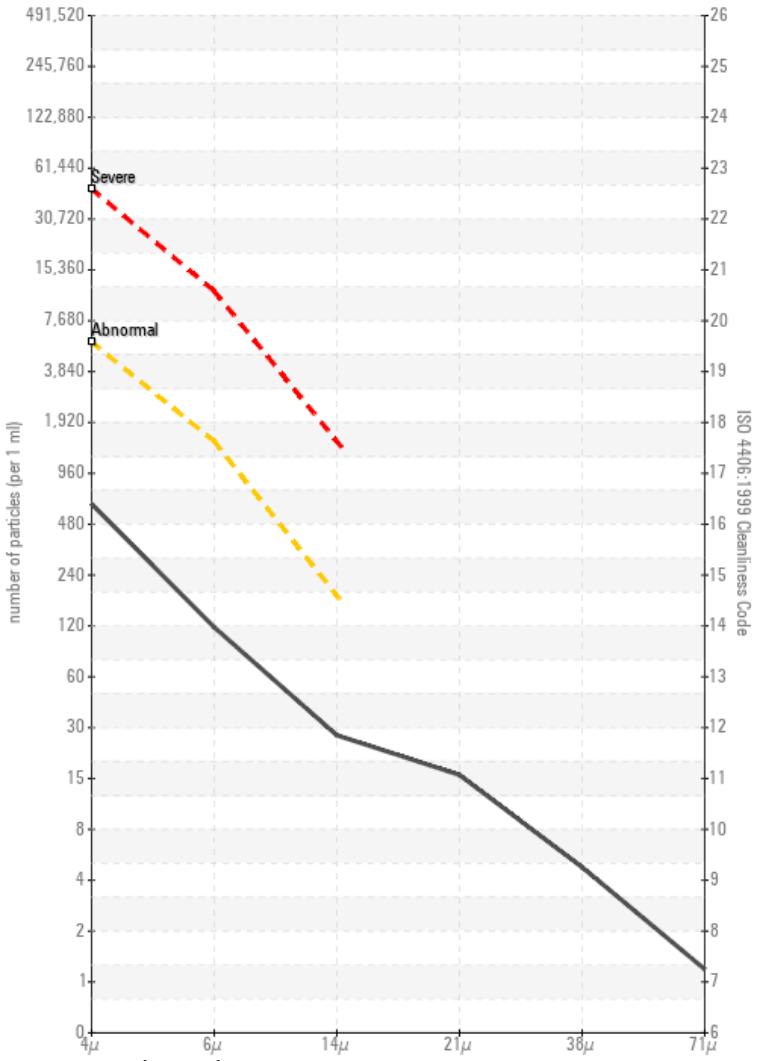
Non-ferrous Metals



Viscosity @ 40°C



Particle Count



Acid Number

