

LIEBHERR

CONSTRUCTION EQUIPMENT



MS20 - Hydraulic System

Sample No: LH0244827

Oil Type: {unknown}



SAMPLE INFORMATION

Sample Number	LH0244827	LH0244842	---	---
Sample Date	09 Mar 2024	14 Dec 2023	---	---
Machine Hours	4046	3388	---	---
Oil Hours	4046	0	---	---
Oil Changed	Not Changd	Not Changd	---	---
Sample Status	NORMAL	ABNORMAL	---	---

OSCAR WINSKI CO. INC

2407 N. 9TH STREET

LAFAYETTE, IN

US 47904

Contact: JAYSON FRAZIER

frazierj@oscarwinski.com

T: (765)376-1230

F: x:



OIL CONDITION

Visc @ 40°C	cSt	35.1	35.0	---	---
Acid Number (AN)	mg KOH/g	0.97	0.88	---	---



CONTAMINATION

Water	%	NEG	NEG	---	---
Particles >4µm		1609	---	---	---
Particles >6µm		379	---	---	---
Particles >14µm		16	---	---	---
ISO 4406:1999 (c)		18/16/11	---	---	---
Silicon	ppm	3	2	---	---
Sodium	ppm	8	7	---	---
Potassium	ppm	2	0	---	---



WEAR METALS

Iron	ppm	8	7	---	---
Copper	ppm	6	6	---	---
Lead	ppm	3	1	---	---
Tin	ppm	3	<1	---	---
Aluminum	ppm	<1	0	---	---
Chromium	ppm	1	<1	---	---
Molybdenum	ppm	<1	0	---	---
Nickel	ppm	1	0	---	---
Titanium	ppm	<1	<1	---	---
Silver	ppm	0	<1	---	---
Manganese	ppm	<1	<1	---	---
Vanadium	ppm	<1	0	---	---



ADDITIVES

Calcium	ppm	1041	1047	---	---
Magnesium	ppm	4	0	---	---
Zinc	ppm	612	625	---	---
Phosphorus	ppm	512	517	---	---
Barium	ppm	<1	0	---	---
Boron	ppm	<1	0	---	---

Diagnosis

Resample at the next service interval to monitor. Please specify the component make and model with your next sample. Please specify the brand, type, and viscosity of the oil on your next sample. 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.

Depot: OSCLAF

Unique No: 10940521

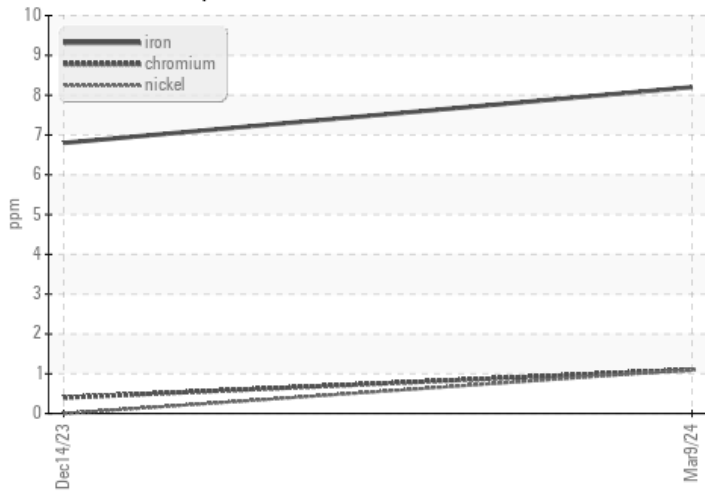
Signed: Wes Davis

Report Date: 25 Mar 2024

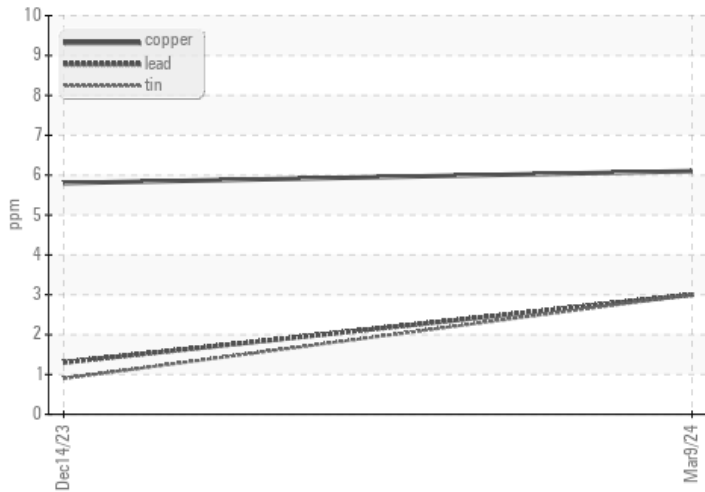


GRAPHS

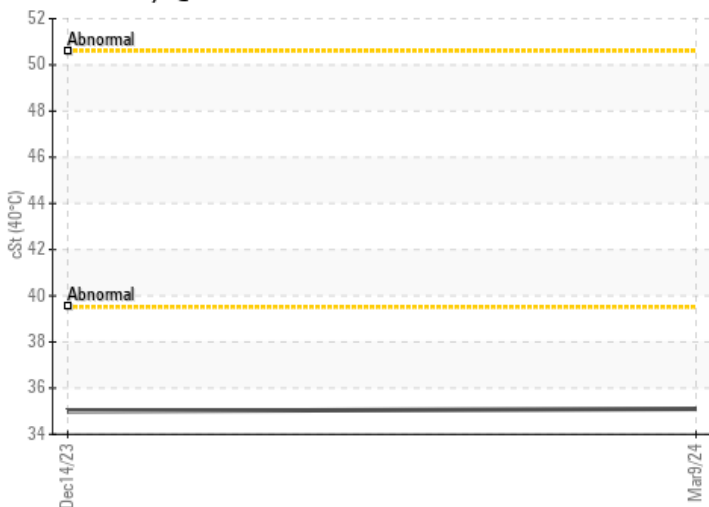
Ferrous Alloys



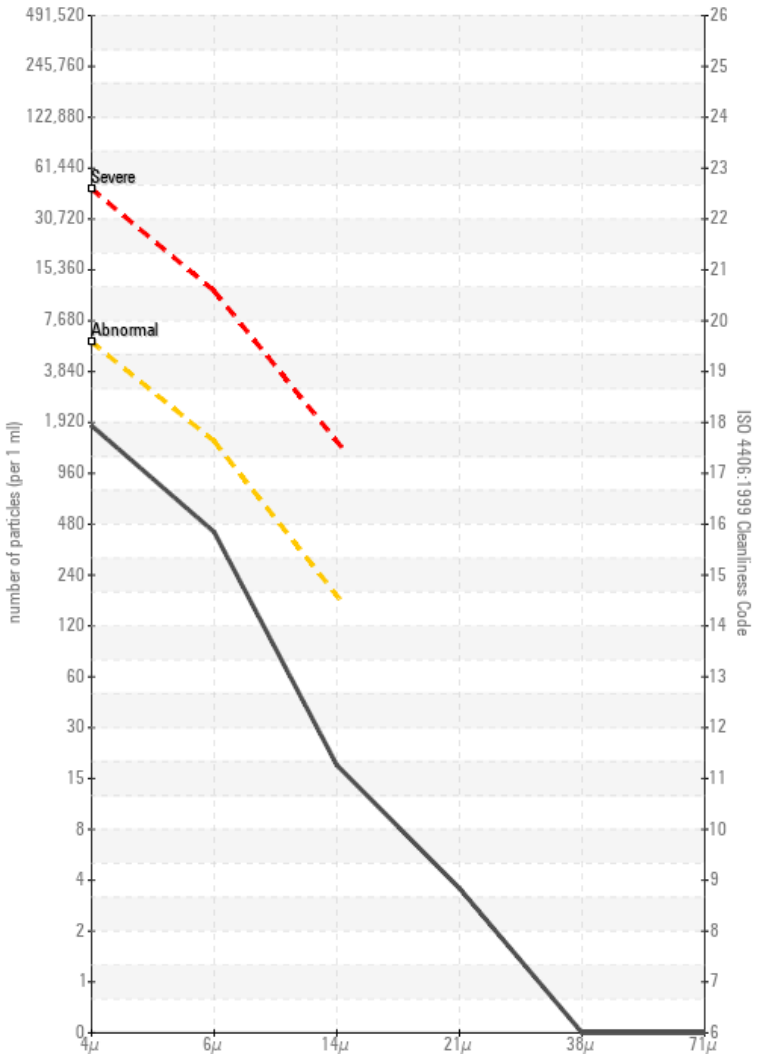
Non-ferrous Metals



Viscosity @ 40°C



Particle Count



Acid Number

