

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### LIEBHERR A944 016166-744 - Hydraulic System

Sample No: LH0244636

Oil Type: CONOCO PHILLIPS GUARDOL ECT 15W40



#### SAMPLE INFORMATION

Sample Number	LH0244636	LH0208104	LH0171889	LHMC154734
Sample Date	23 Jun 2023	20 Jun 2022	10 May 2021	19 Oct 2020
Machine Hours	48037	45836	42672	41574
Oil Hours	0	300	0	0
Oil Changed	Not Changd	Changed	Not Changd	Not Changd
Sample Status	ABNORMAL	NORMAL	ABNORMAL	NORMAL

**NILES IRON & METAL CO. INC.**

P.O. BOX 166

NILES, OH

US 44446

Contact: CRAIG STINSON

cstinson529@gmail.com;canastasio@wearcheckusa.com

T: (330)652-2262

F: (330)652-1240



#### OIL CONDITION

Visc @ 40°C	cSt	70.4	71.3	64.4	65.0
Acid Number (AN)	mg KOH/g	1.81	1.57	1.271	1.511



#### CONTAMINATION

Particles >4µm		55363	6422	72644	10378
Particles >6µm		3495	3499	1497	503
Particles >14µm		93	595	26	24
ISO 4406:1999 (c)		23/19/14	20/19/16	23/18/12	21/16/12
Silicon	ppm	4	4	3	3
Sodium	ppm	3	4	2	<1
Potassium	ppm	2	2	2	2



#### WEAR METALS

Iron	ppm	6	15	11	9
Copper	ppm	2	4	4	4
Lead	ppm	0	<1	<1	<1
Tin	ppm	<1	<1	<1	<1
Aluminum	ppm	0	2	0	0
Chromium	ppm	1	3	6	6
Molybdenum	ppm	26	23	20	15
Nickel	ppm	0	0	0	0
Titanium	ppm	11	2	4	5
Silver	ppm	0	<1	<1	1
Manganese	ppm	<1	<1	<1	<1
Vanadium	ppm	<1	0	<1	<1



#### ADDITIVES

Calcium	ppm	1697	1487	1516	1580
Magnesium	ppm	569	550	539	542
Zinc	ppm	1203	1178	1079	1122
Phosphorus	ppm	1060	1030	990	1071
Barium	ppm	0	0	0	0
Boron	ppm	88	99	106	111

#### Diagnosis

The filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition. All component wear rates are normal. There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. The system cleanliness is above the acceptable limit for the target ISO 4406 cleanliness code. The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

Depot: NILNIL

Unique No: 10559864

Signed: Wes Davis

Report Date: 17 Jul 2023

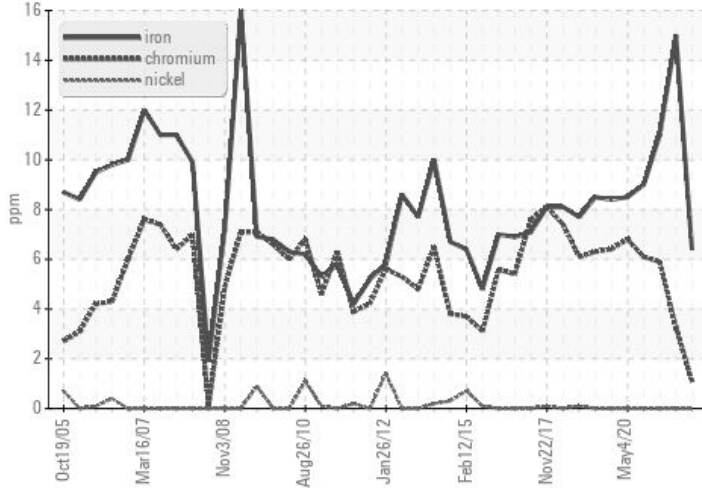
# LIEBHERR

## CONSTRUCTION EQUIPMENT

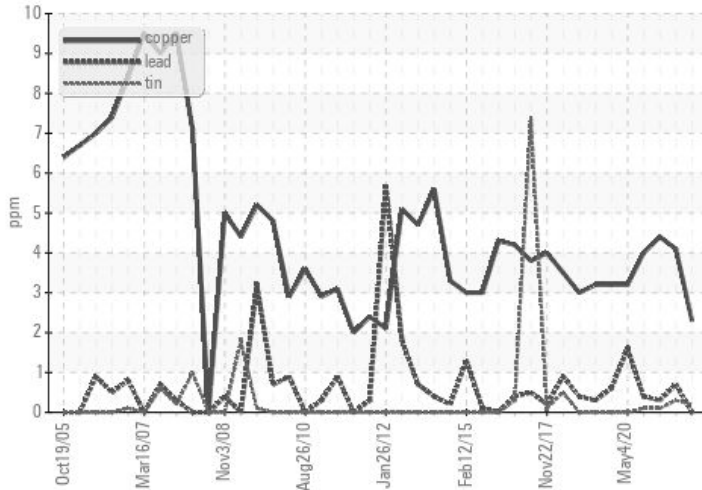


### GRAPHS

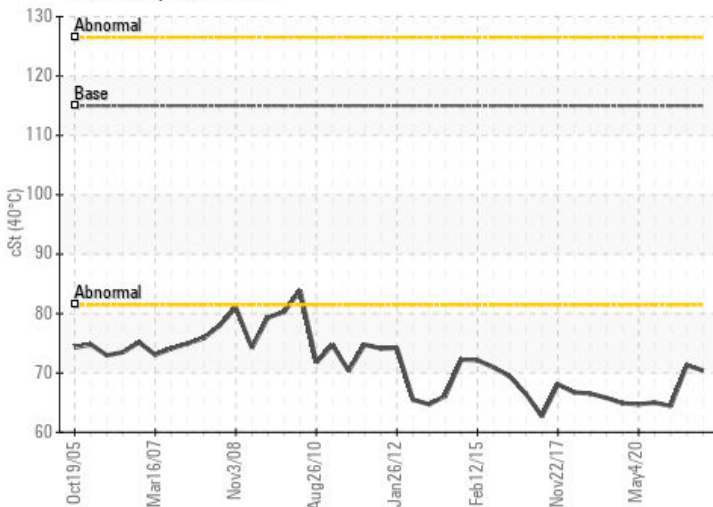
Ferrous Alloys



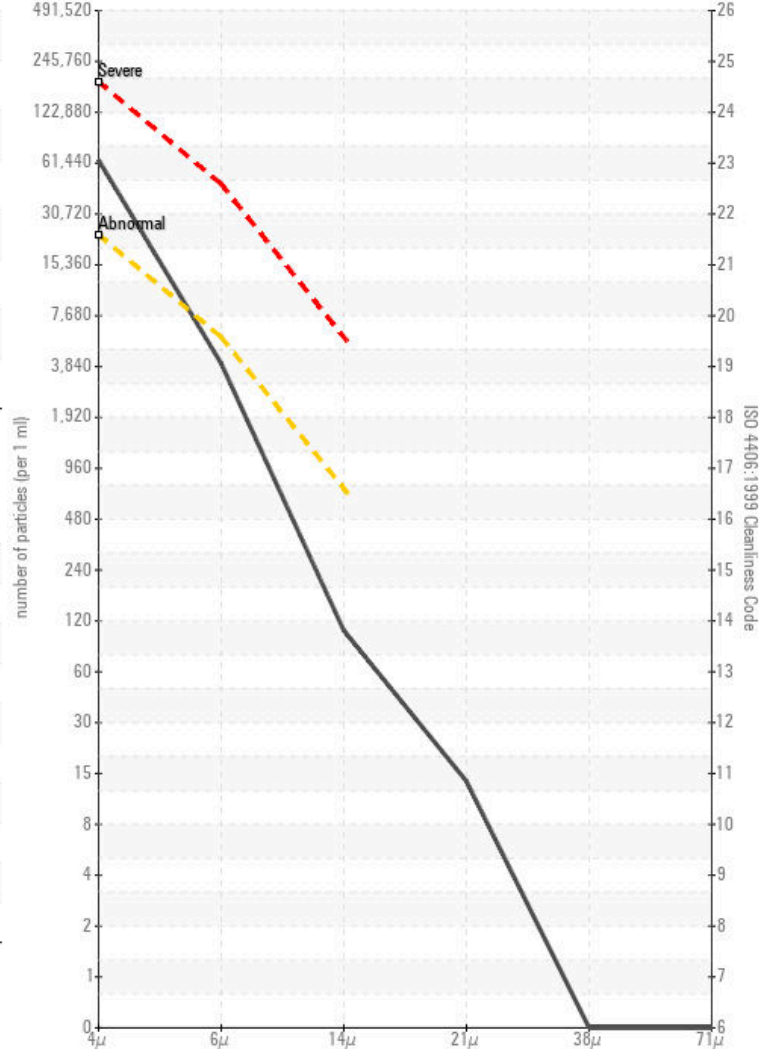
Non-ferrous Metals



Viscosity @ 40°C



Particle Count



Acid Number

