

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR A934C 061188-1419 - Hydraulic System

Sample No: LH0263924

Oil Type: AW HYDRAULIC OIL ISO 46



SAMPLE INFORMATION

Sample Number	LH0263924	LH0253882	LH0253903	LH0253945
Sample Date	10 Nov 2023	21 Sep 2023	13 Jul 2023	05 Jun 2023
Machine Hours	27562	27222	26744	26455
Oil Hours	0	0	0	0
Oil Changed	Not Changd	Not Changd	Not Changd	Not Changd
Sample Status	ATTENTION	ATTENTION	NORMAL	NORMAL

NORTHERN METAL RECYCLING

2800 PACIFIC ST N
MINNEAPOLIS, MN
US 55411
Contact: CHRIS GILMER
chris.gilmer@emrgrgroup.com
T: (612)305-7338
F:



OIL CONDITION

Visc @ 40°C	cSt	41.73	41.4	40.8	41.0
Acid Number (AN)	mg KOH/g	0.30	0.34	0.40	0.35



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Particles >4µm		21596	26076	495	638
Particles >6µm		3861	5020	143	178
Particles >14µm		301	180	18	14
ISO 4406:1999 (c)		22/19/15	22/20/15	16/14/11	16/15/11
Silicon	ppm	3	2	1	2
Sodium	ppm	0	1	2	2
Potassium	ppm	2	0	<1	1

Diagnosis

No corrective action is recommended at this time. The filter change at the time of sampling has been noted. Resample at the next service interval to monitor. All component wear rates are normal. There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.



WEAR METALS

Iron	ppm	31	30	31	24
Copper	ppm	3	2	4	3
Lead	ppm	1	0	0	0
Tin	ppm	<1	0	0	0
Aluminum	ppm	2	0	<1	0
Chromium	ppm	2	2	3	2
Molybdenum	ppm	<1	0	<1	<1
Nickel	ppm	<1	0	0	0
Titanium	ppm	<1	0	0	0
Silver	ppm	0	0	0	0
Manganese	ppm	<1	0	<1	<1
Vanadium	ppm	0	0	0	0



ADDITIVES

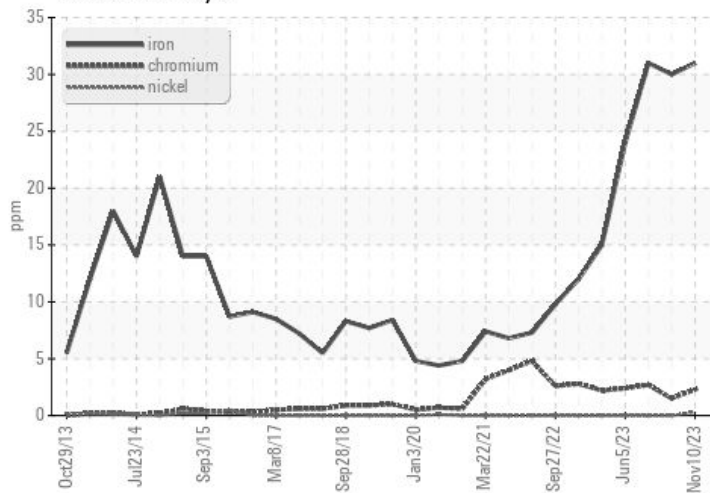
Calcium	ppm	261	281	363	348
Magnesium	ppm	5	2	4	4
Zinc	ppm	258	302	356	360
Phosphorus	ppm	271	274	317	324
Barium	ppm	0	0	0	0
Boron	ppm	4	3	6	6

Depot: NORMINLH
Unique No: 10844306
Signed: Don Baldrige
Report Date: 25 Jan 2024

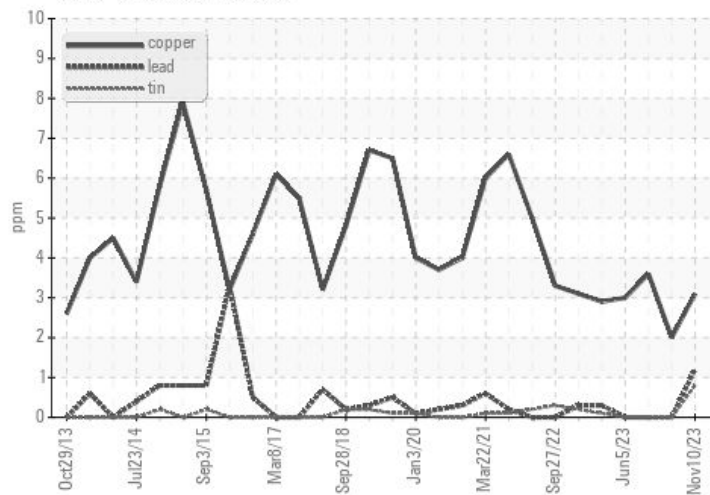


GRAPHS

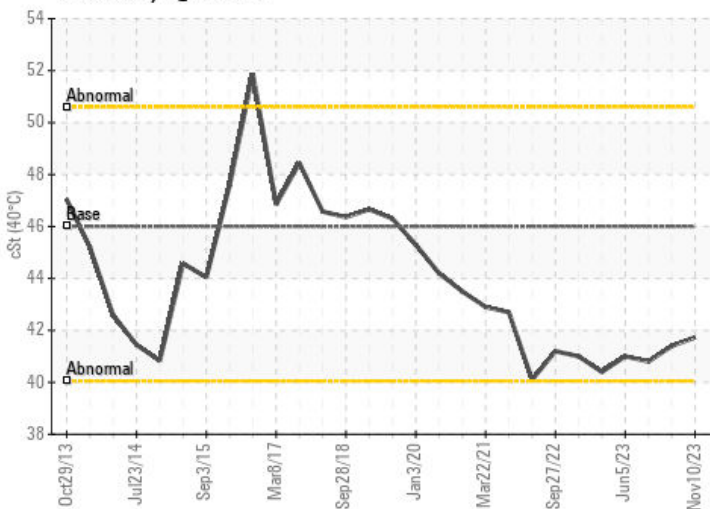
Ferrous Alloys



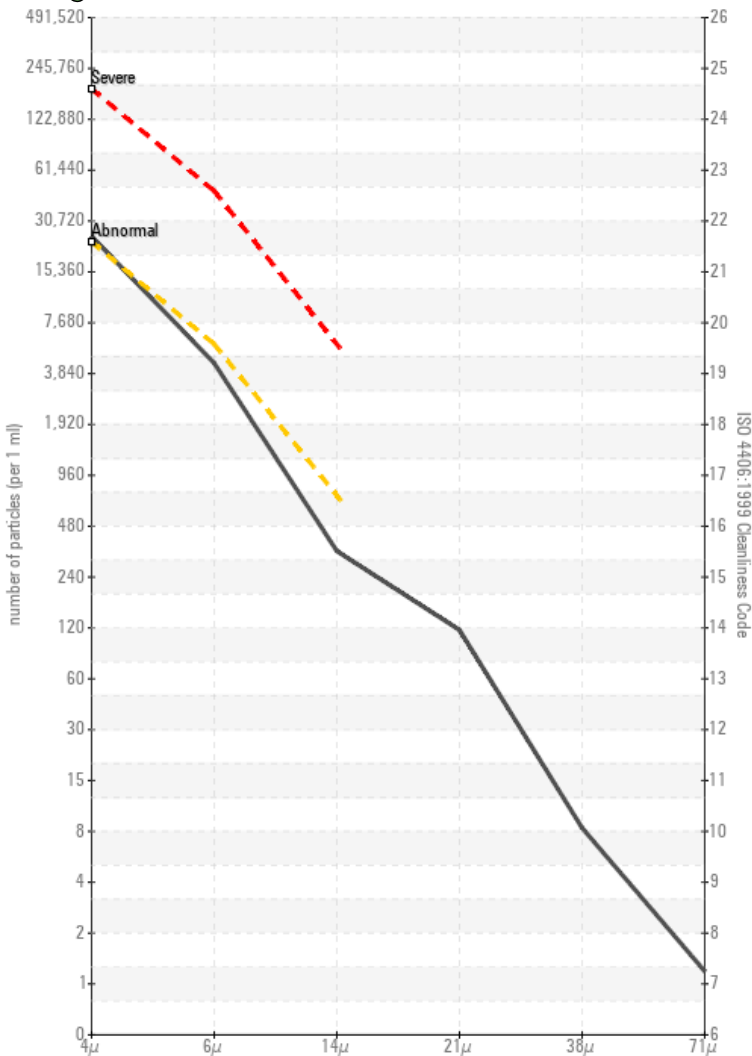
Non-ferrous Metals



Viscosity @ 40°C



Particle Count



Acid Number

