LIEBHERR
CONSTRUCTION EQUIPMENT

LIEBHERR A934C 061188-1419 - Hydraulic System

Sample No: LH0253882

Oil Type: AW HYDRAULIC OIL ISO 46

NORTHERN METAL RECYCLING
2800 PACIFIC ST N
MINNEAPOLIS, MN
US 55411
Contact: CHRIS GILMER
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T: (612)305-7338
F:

SAMPLE INFORMATION

Sample Number		**LH0253882**	LH0253903	LH0253945	LH0236493
Sample Date		**21 Sep 2023**	13 Jul 2023	05 Jun 2023	17 Mar 2023
Machine Hours		**27222**	26744	26455	25857
Oil Hours		**0**	0	0	0
Oil Changed		**Not Changd**	Not Changd	Not Changd	Not Changd
Sample Status		**ATTENTION**	NORMAL	NORMAL	NORMAL

OIL CONDITION

Visc @ 40°C	cSt	**41.4**	40.8	41.0	40.4
Acid Number (AN)	mg KOH/g	**0.34**	0.40	0.35	0.39

CONTAMINATION

Particles >4µm		**26076**	495	638	576
Particles >6µm		**5020**	143	178	165
Particles >14µm		**180**	18	14	15
ISO 4406:1999 (c)		**22/20/15**	16/14/11	16/15/11	16/15/11
Silicon	ppm	**2**	1	2	2
Sodium	ppm	**1**	2	2	0
Potassium	ppm	**0**	<1	1	1

WEAR METALS

Iron	ppm	**30**	31	24	15
Copper	ppm	**2**	4	3	3
Lead	ppm	**0**	0	0	<1
Tin	ppm	**0**	0	0	<1
Aluminum	ppm	**0**	<1	0	<1
Chromium	ppm	**2**	3	2	2
Molybdenum	ppm	**0**	<1	<1	<1
Nickel	ppm	**0**	0	0	0
Titanium	ppm	**0**	0	0	0
Silver	ppm	**0**	0	0	0
Manganese	ppm	**0**	<1	<1	<1
Vanadium	ppm	**0**	0	0	0

ADDITIVES

Calcium	ppm	**281**	363	348	345
Magnesium	ppm	**2**	4	4	4
Zinc	ppm	**302**	356	360	348
Phosphorus	ppm	**274**	317	324	284
Barium	ppm	**0**	0	0	0
Boron	ppm	**3**	6	6	6

Diagnosis

The filter change at the time of sampling has been noted. Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.All component wear rates are normal. There is a light 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.

Depot: NORMINLH
Unique No: 10735968
Signed: Wes Davis
Report Date: 09 Nov 2023

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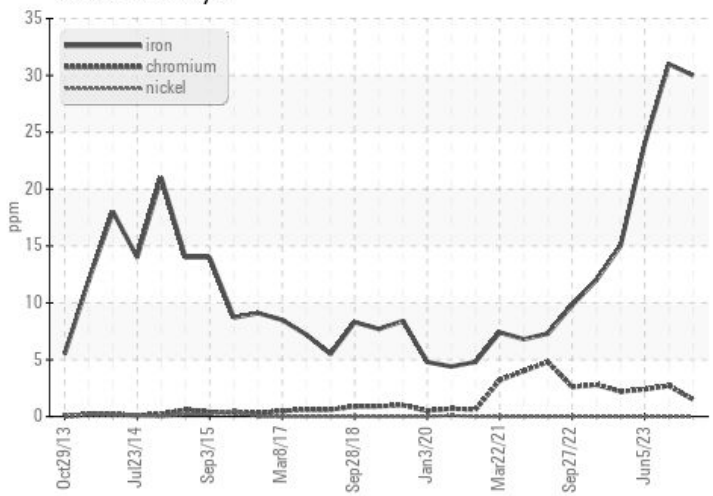
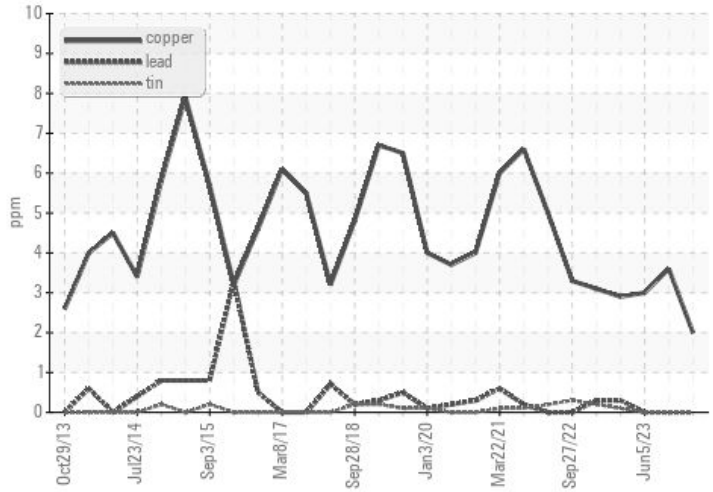
GRAPHS

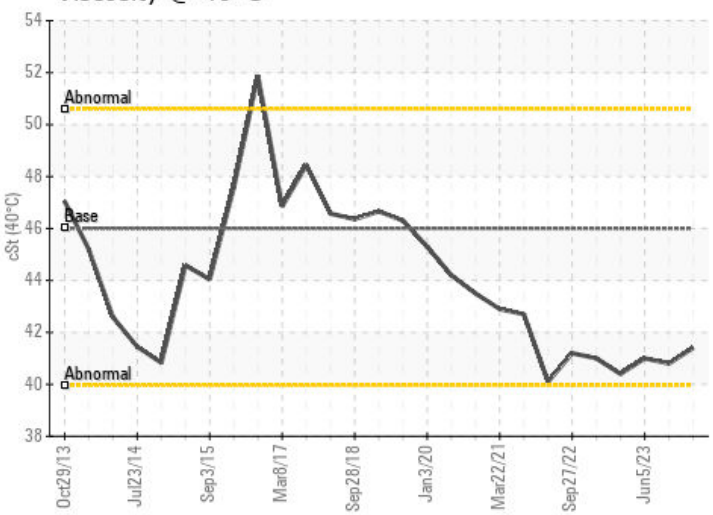
Ferrous Alloys



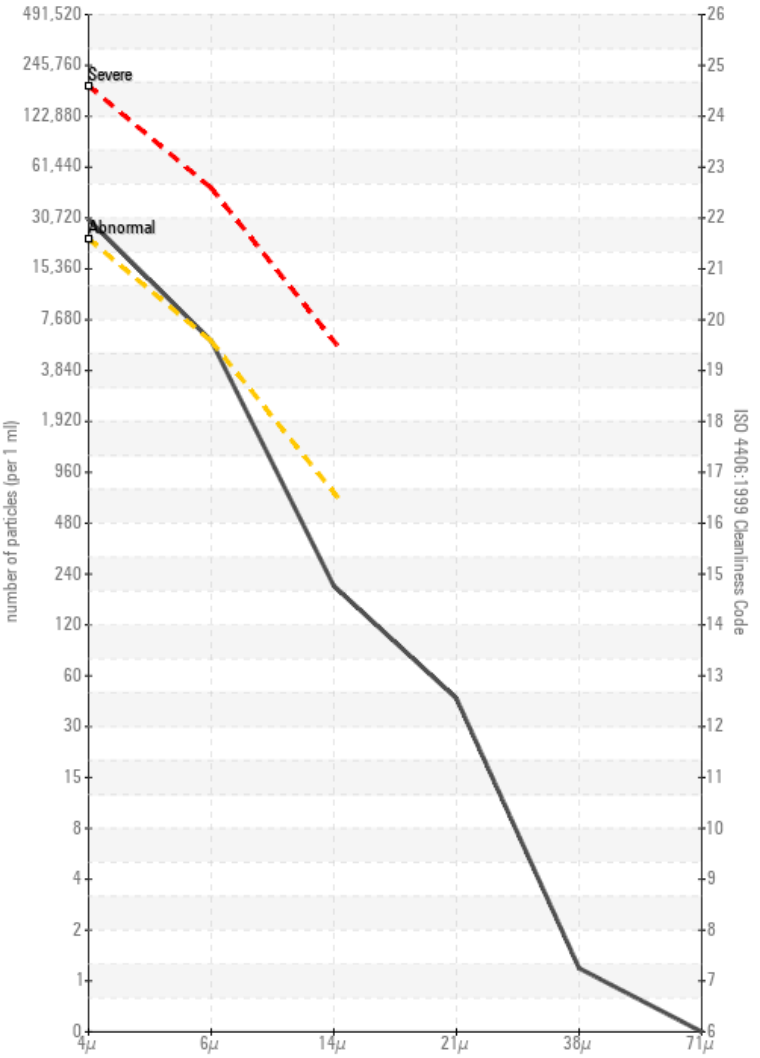
Non-ferrous Metals



Viscosity @ 40°C



Particle Count



Acid Number