

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR A934 047548-1007 - Hydraulic System

Sample No: LH0272111

Oil Type: AW HYDRAULIC OIL ISO 46



NORTHERN METAL RECYCLING
 2800 PACIFIC ST N
 MINNEAPOLIS, MN
 US 55411
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Sample Information

Sample Number	LH0272111	LH0220528	LH0220544	LH0190681
Sample Date	17 May 2024	30 May 2023	07 Nov 2022	01 Sep 2021
Machine Hours	33496	31696	30241	28529
Oil Hours	0	1000	0	0
Oil Changed	Not Changd	N/A	Not Changd	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL



Oil Condition

Visc @ 40°C	cSt	46.8	43.8	44.8	45.4
Acid Number (AN)	mg KOH/g	0.33	0.33	0.33	0.442



Contamination

Water	%	NEG	NEG	NEG	NEG
Particles >4µm		5836	9942	13762	448
Particles >6µm		1608	537	1326	87
Particles >14µm		136	21	127	8
ISO 4406:1999 (c)		20/18/14	20/16/12	21/18/14	16/14/10
Silicon	ppm	0	<1	<1	1
Sodium	ppm	<1	<1	0	1
Potassium	ppm	<1	<1	0	0



Wear Metals

Iron	ppm	0	4	2	5
Copper	ppm	0	<1	<1	2
Lead	ppm	0	0	0	0
Tin	ppm	0	0	<1	<1
Aluminum	ppm	0	0	0	0
Chromium	ppm	0	<1	<1	1
Molybdenum	ppm	3	5	4	3
Nickel	ppm	0	0	0	0
Titanium	ppm	0	0	0	0
Silver	ppm	0	0	0	0
Manganese	ppm	0	<1	0	<1
Vanadium	ppm	0	0	0	0



Additives

Calcium	ppm	112	108	123	126
Magnesium	ppm	20	25	19	33
Zinc	ppm	464	466	472	476
Phosphorus	ppm	363	405	368	361
Barium	ppm	0	0	0	0
Boron	ppm	2	3	0	6

Diagnosis

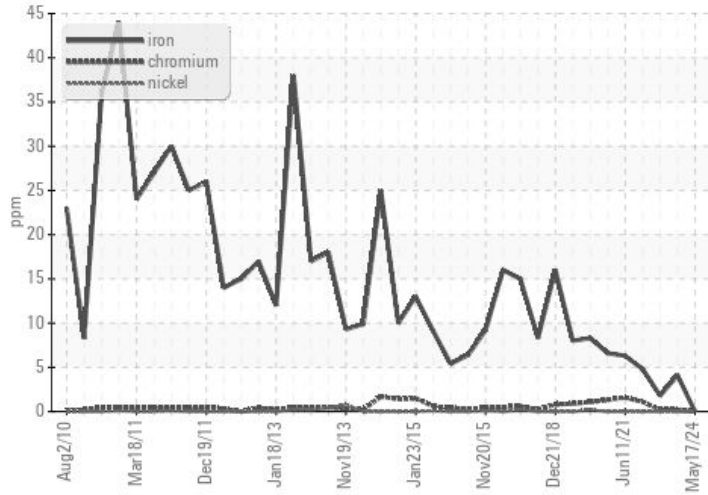
Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample. All component wear rates are normal. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Depot: NORMINLH
 Unique No: 11061174
 Signed: Wes Davis
 Report Date: 07 Jun 2024

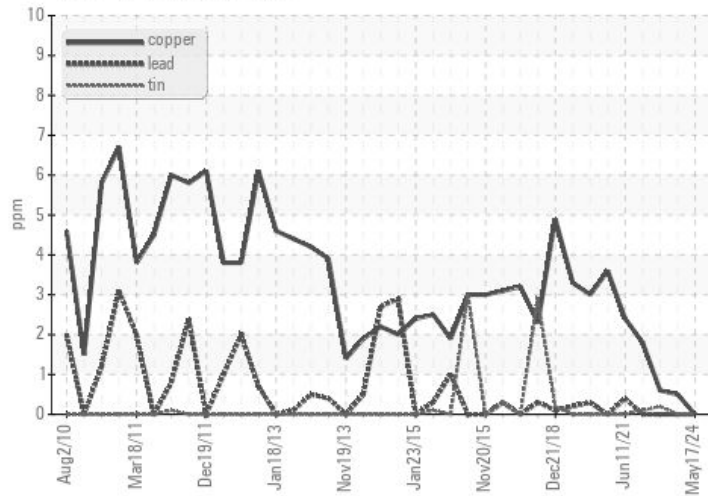


Graphs

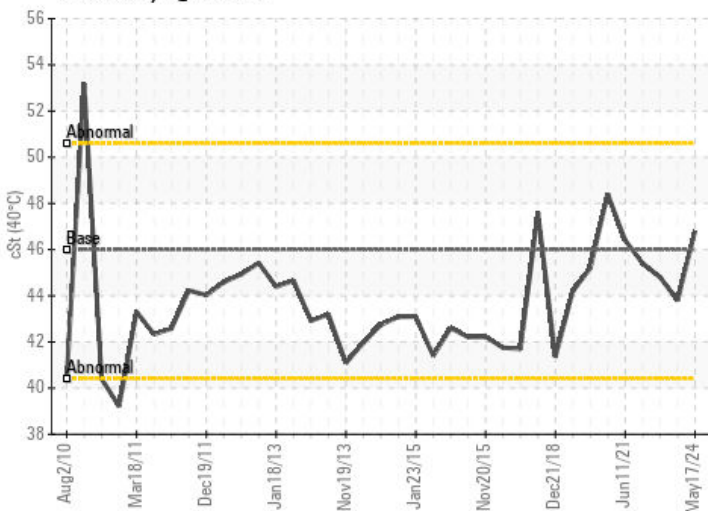
Ferrous Alloys



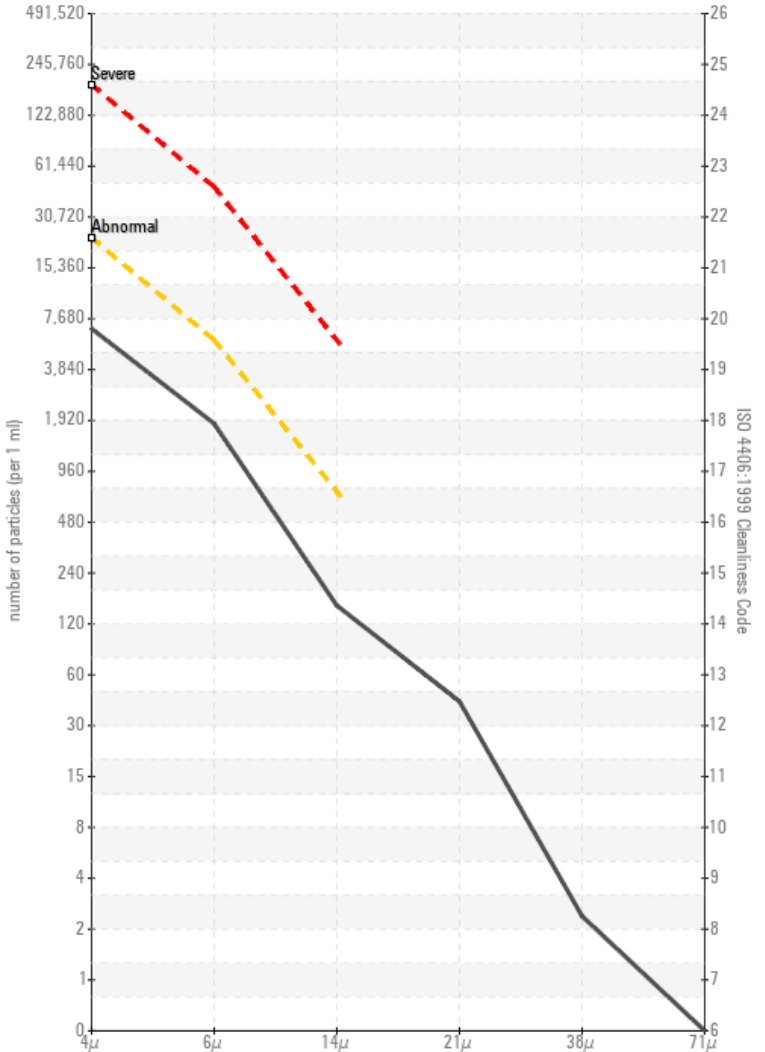
Non-ferrous Metals



Viscosity @ 40°C



Particle Count



Acid Number

