

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR LH50 1216-115016 - Hydraulic System

Sample No: LH0156674

Oil Type: LIEBHERR HYDRAULIC HVI



SAMPLE INFORMATION

Sample Number	LH0156674	LH0156617	LH0156716	LH0156590
Sample Date	30 Aug 2023	25 Apr 2023	25 Jan 2023	21 Jul 2020
Machine Hours	16752	15594	14552	3000
Oil Hours	0	0	0	0
Oil Changed	Not Changd	Not Changd	Not Changd	N/A
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

BOISE WHITE PAPER

3RD AVE AND HWY 11, 400 2ND ST
INTERNATIONAL FALLS, MN
US 56649
Contact: GARY MANN
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T:
F: (218)285-5860



OIL CONDITION

Visc @ 40°C	cSt	31.3	31.2	31.2	33.4
Acid Number (AN)	mg KOH/g	0.37	0.32	0.36	0.199



CONTAMINATION

Particles >4µm		6791	1942	4041	1957
Particles >6µm		1292	343	1082	519
Particles >14µm		81	24	73	44
ISO 4406:1999 (c)		20/17/14	18/16/12	19/17/13	18/16/13
Silicon	ppm	<1	<1	<1	4
Sodium	ppm	0	0	0	2
Potassium	ppm	<1	<1	<1	<1

Diagnosis

Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.



WEAR METALS

Iron	ppm	2	5	7	13
Copper	ppm	<1	<1	<1	2
Lead	ppm	0	0	0	<1
Tin	ppm	0	0	0	0
Aluminum	ppm	0	0	0	<1
Chromium	ppm	0	0	0	<1
Molybdenum	ppm	<1	<1	<1	0
Nickel	ppm	0	0	0	0
Titanium	ppm	0	0	0	0
Silver	ppm	0	0	0	<1
Manganese	ppm	0	0	0	<1
Vanadium	ppm	0	0	0	0



ADDITIVES

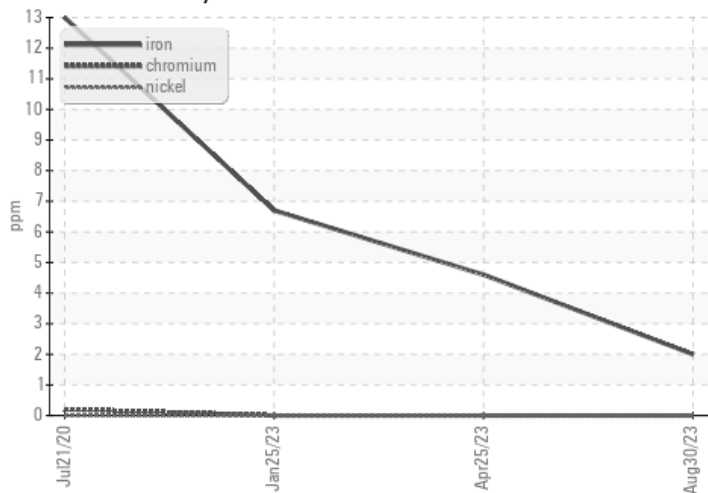
Calcium	ppm	71	59	60	395
Magnesium	ppm	3	3	4	1
Zinc	ppm	429	446	431	174
Phosphorus	ppm	328	325	327	474
Barium	ppm	2	0	<1	0
Boron	ppm	0	0	0	2

Depot: BOIINT
Unique No: 10633556
Signed: Don Baldrige
Report Date: 08 Sep 2023

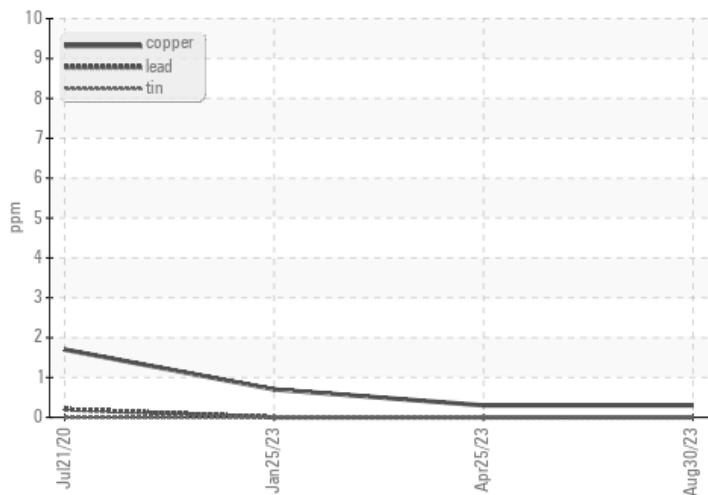


GRAPHS

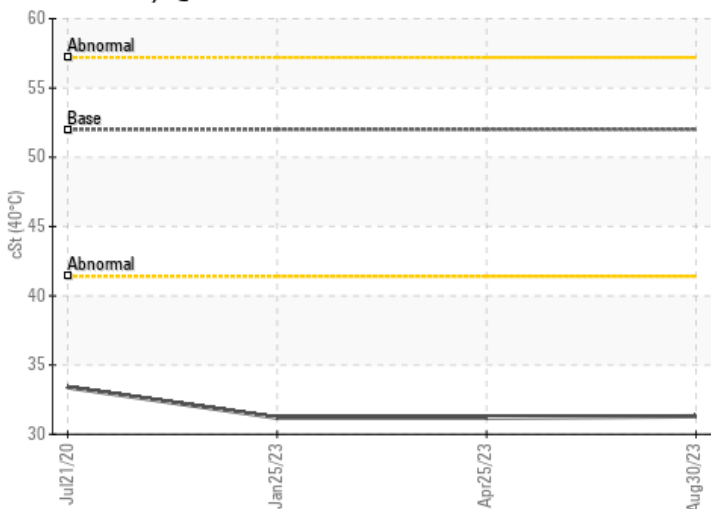
Ferrous Alloys



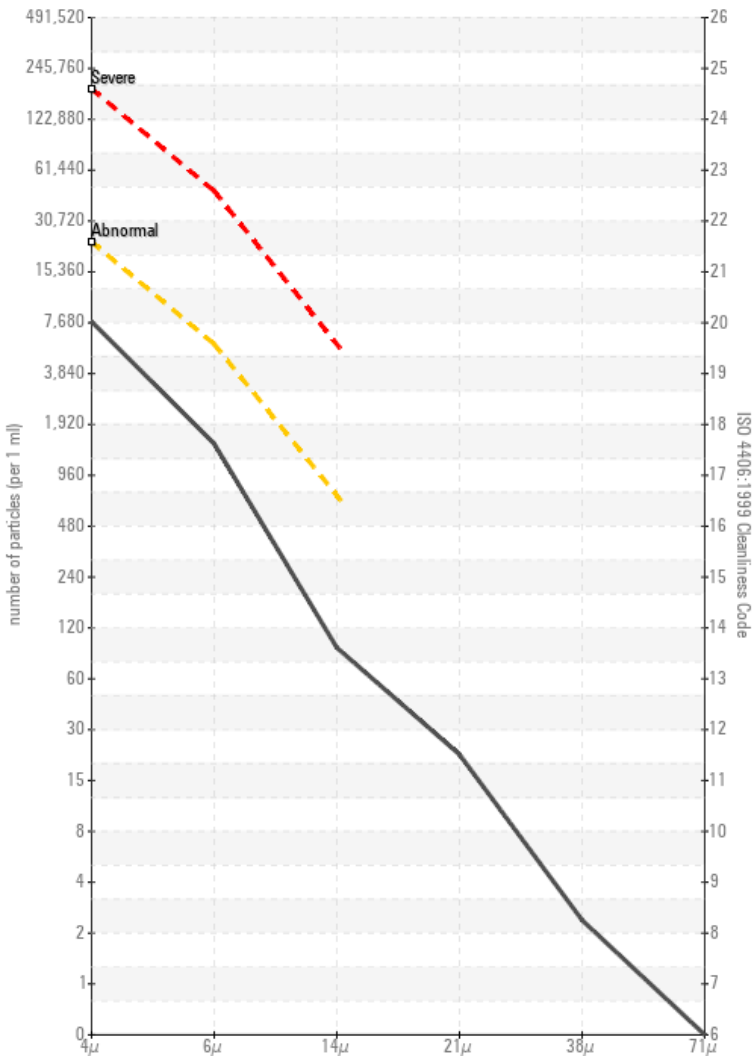
Non-ferrous Metals



Viscosity @ 40°C



Particle Count



Acid Number

