LIEBHERR
CONSTRUCTION EQUIPMENT

LIEBHERR LH60M 1204-91655 - Hydraulic System

Sample No: LH0243886

Oil Type: AW HYDRAULIC OIL ISO 68

LIEBHERR EQUIPMENT SOURCE
4100 CHESTNUT AVENUE
NEWPORT NEWS, VA
US 23607
Contact: LUKE APPLEBY
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SAMPLE INFORMATION

Sample Number		**LH0243886**	LH0220403	LHMC105720	LHMC121226
Sample Date		**22 Feb 2024**	04 Oct 2022	08 Mar 2018	10 Nov 2017
Machine Hours		**17102**	14908	2994	2075
Oil Hours		**0**	14908	2994	2075
Oil Changed		**Not Changd**	Not Changd	Not Changd	Not Changd
Sample Status		**ABNORMAL**	ABNORMAL	NORMAL	NORMAL

OIL CONDITION

Visc @ 40°C	cSt	**48.8**	43.4	45.17	42.38
Acid Number (AN)	mg KOH/g	**0.43**	0.52	0.746	0.694

CONTAMINATION

Water	%	**NEG**	NEG	NEG	NEG
Particles >4µm		**---**	43389	14543	1426
Particles >6µm		**---**	3717	3189	777
Particles >14µm		**---**	334	281	132
ISO 4406:1999 (c)		**---**	23/19/16	21/19/15	18/17/14
Silicon	ppm	**2**	2	7	7
Sodium	ppm	**<1**	1	4	5
Potassium	ppm	**2**	0	<1	8

WEAR METALS

Iron	ppm	**9**	6	2	2
Copper	ppm	**2**	3	1	2
Lead	ppm	**0**	0	<1	0
Tin	ppm	**0**	0	0	0
Aluminum	ppm	**2**	<1	0	<1
Chromium	ppm	**1**	<1	<1	<1
Molybdenum	ppm	**<1**	1	2	2
Nickel	ppm	**0**	0	0	0
Titanium	ppm	**<1**	0	0	<1
Silver	ppm	**0**	0	0	0
Manganese	ppm	**0**	<1	<1	<1
Vanadium	ppm	**0**	0	0	<1

ADDITIVES

Calcium	ppm	**174**	433	3701	3068
Magnesium	ppm	**9**	8	23	19
Zinc	ppm	**502**	530	1348	1254
Phosphorus	ppm	**368**	443	1178	1026
Barium	ppm	**0**	0	0	0
Boron	ppm	**2**	12	98	81

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. We were unable to perform a particle count due to a high concentration of particles present in this sample.All component wear rates are normal. Moderate concentration of visible dirt/debris present in the oil. The AN level is acceptable for this fluid. The condition of the oil is acceptable for the time in service.

Depot: LIEBHERRUS
Unique No: 10915577
Signed: Don Baldridge
Report Date: 10 Mar 2024

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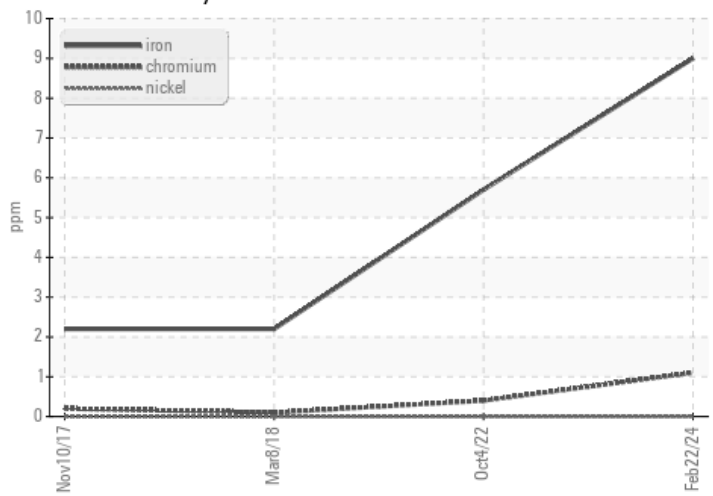
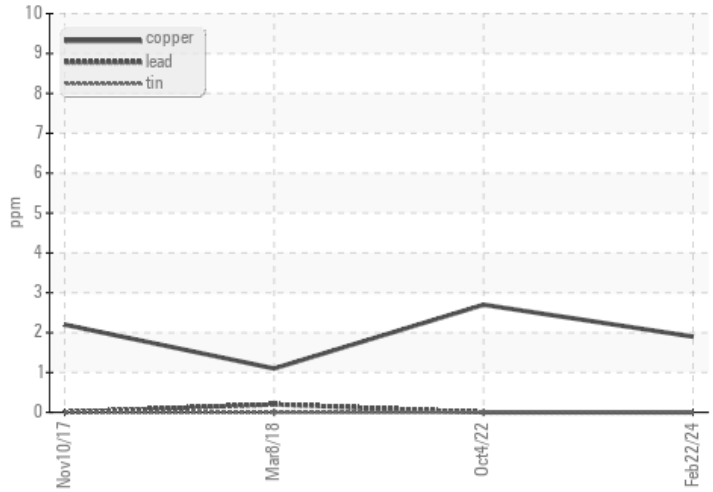
GRAPHS

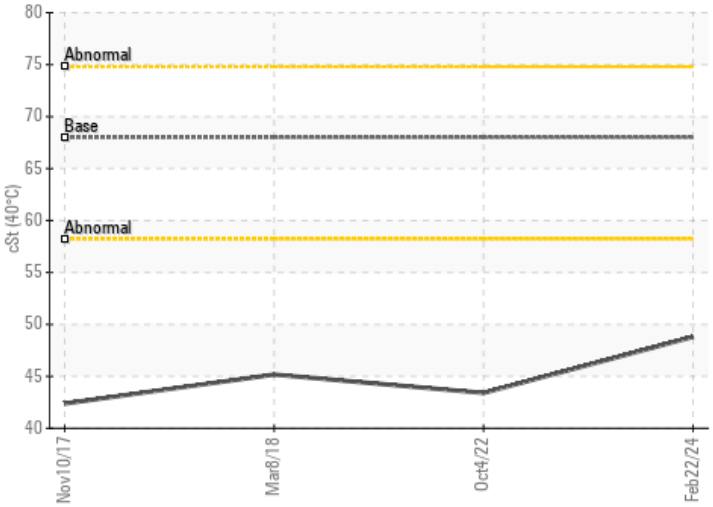
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 40°C



Acid Number