

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR R920 043304-1705 - Hydraulic System

Sample No: LH0254078

Oil Type: LIEBHERR HYDRAULIC HVI



SAMPLE INFORMATION

Sample Number	LH0254078	LH0207417	LHMC129109	LHMC109232
Sample Date	20 Apr 2023	15 Jul 2022	28 Jun 2018	18 Sep 2017
Machine Hours	3738	3190	1040	516
Oil Hours	0	0	505	516
Oil Changed	Not Changd	Not Changd	Not Changd	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

ACECO

10119 RESIDENCY ROAD
MANASSAS, VA
US 20110
Contact: RON BROCK



OIL CONDITION

Visc @ 40°C	cSt	43.9	45.2	45.55	45.62
Acid Number (AN)	mg KOH/g	1.05	1.02	1.326	1.026

T: (703)392-0111
F: (703)331-5604



CONTAMINATION

Particles >4µm		6334	10102	1842	17421
Particles >6µm		514	1395	284	2365
Particles >14µm		10	80	17	98
ISO 4406:1999 (c)		20/16/10	21/18/13	18/15/11	21/18/14
Silicon	ppm	3	3	4	6
Sodium	ppm	3	2	2	2
Potassium	ppm	0	0	<1	13

Diagnosis

Resample at the next service interval to monitor. 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.



WEAR METALS

Iron	ppm	11	10	12	10
Copper	ppm	7	6	6	5
Lead	ppm	0	<1	0	0
Tin	ppm	0	<1	0	0
Aluminum	ppm	<1	<1	1	<1
Chromium	ppm	2	1	1	1
Molybdenum	ppm	0	0	<1	0
Nickel	ppm	0	0	0	<1
Titanium	ppm	<1	0	0	<1
Silver	ppm	0	<1	<1	0
Manganese	ppm	<1	<1	<1	<1
Vanadium	ppm	0	0	0	0



ADDITIVES

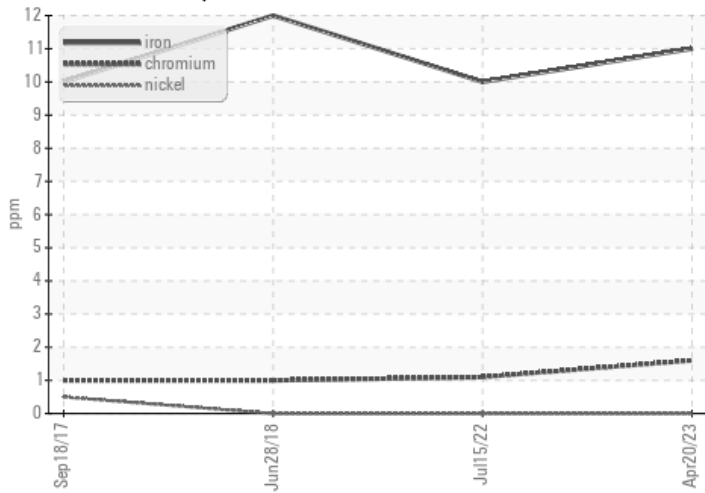
Calcium	ppm	1305	1247	1209	1286
Magnesium	ppm	9	5	6	6
Zinc	ppm	625	592	612	624
Phosphorus	ppm	511	520	512	548
Barium	ppm	0	0	<1	0
Boron	ppm	0	2	<1	<1

Depot: ACEMAN
Unique No: 10550159
Signed: Wes Davis
Report Date: 11 Jul 2023

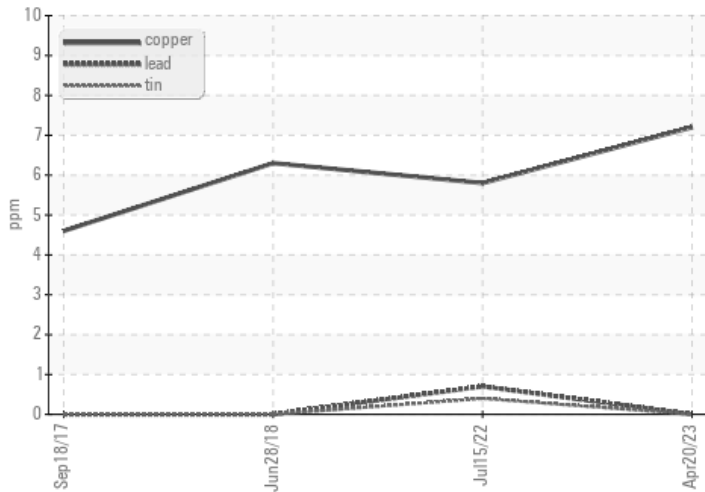


GRAPHS

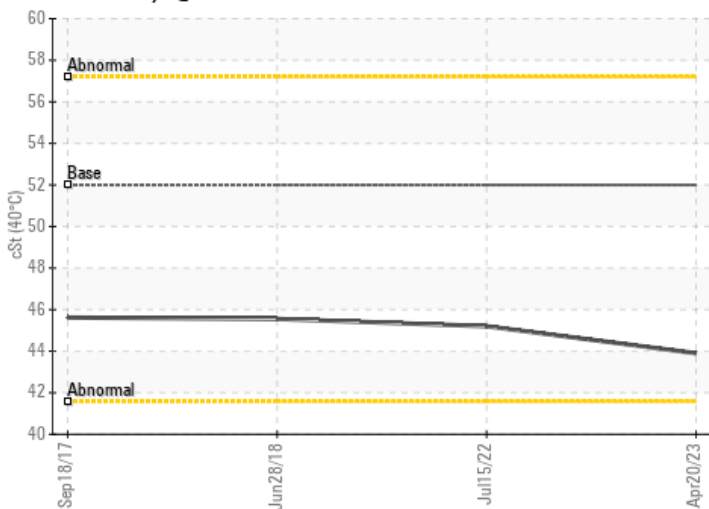
Ferrous Alloys



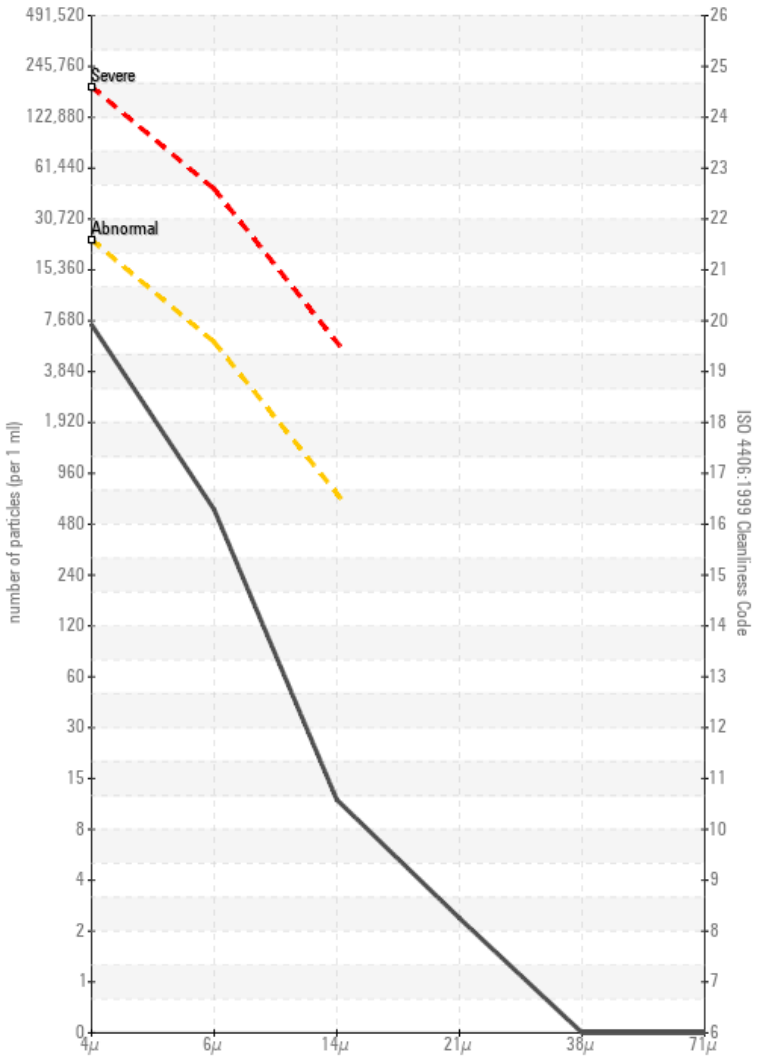
Non-ferrous Metals



Viscosity @ 40°C



Particle Count



Acid Number

