LIEBHERR
CONSTRUCTION EQUIPMENT

LIEBHERR R920 045422-1705 - Hydraulic System

Sample No: LHMC116238

Oil Type: LIEBHERR HYDRAULIC HVI

POTOMAC METALS
42702 DULLES TRADE CT
STERLING, VA
US 20166
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SAMPLE INFORMATION

Sample Number		**LHMC116238**	LH0229834	LH0217223	LHMC104449
Sample Date		**11 Jul 2023**	29 Nov 2022	15 Apr 2022	07 Feb 2022
Machine Hours		**9805**	8143	7593	7059
Oil Hours		**0**	8143	7593	7059
Oil Changed		**Not Changd**	Not Changd	Changed	Not Changd
Sample Status		**NORMAL**	ATTENTION	NORMAL	NORMAL

OIL CONDITION

Visc @ 40°C	cSt	**41.0**	39.8	39.0	39.5
Acid Number (AN)	mg KOH/g	**0.60**	0.69	0.66	0.74

CONTAMINATION

Particles >4µm		**3856**	23614	1002	946
Particles >6µm		**471**	4832	134	241
Particles >14µm		**11**	325	9	31
ISO 4406:1999 (c)		**19/16/11**	22/19/16	17/14/10	17/15/12
Silicon	ppm	**3**	4	4	3
Sodium	ppm	**2**	<1	1	0
Potassium	ppm	**0**	<1	<1	0

WEAR METALS

Iron	ppm	**5**	7	7	6
Copper	ppm	**4**	6	6	6
Lead	ppm	**<1**	<1	<1	<1
Tin	ppm	**0**	0	0	<1
Aluminum	ppm	**1**	<1	<1	<1
Chromium	ppm	**0**	<1	<1	<1
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	0	<1
Vanadium	ppm	**<1**	0	0	0

ADDITIVES

Calcium	ppm	**421**	448	547	591
Magnesium	ppm	**2**	10	9	9
Zinc	ppm	**560**	557	645	628
Phosphorus	ppm	**454**	426	486	536
Barium	ppm	**0**	0	0	0
Boron	ppm	**0**	<1	2	0

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.

Depot: POTSTE
Unique No: 10635726
Signed: Don Baldridge
Report Date: 10 Sep 2023

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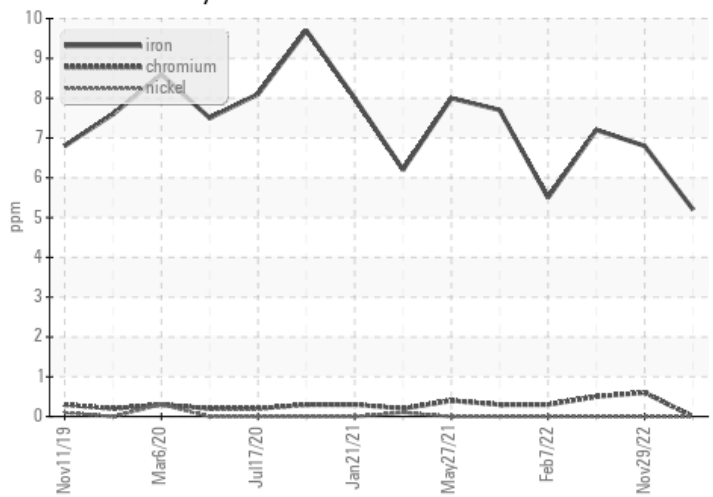
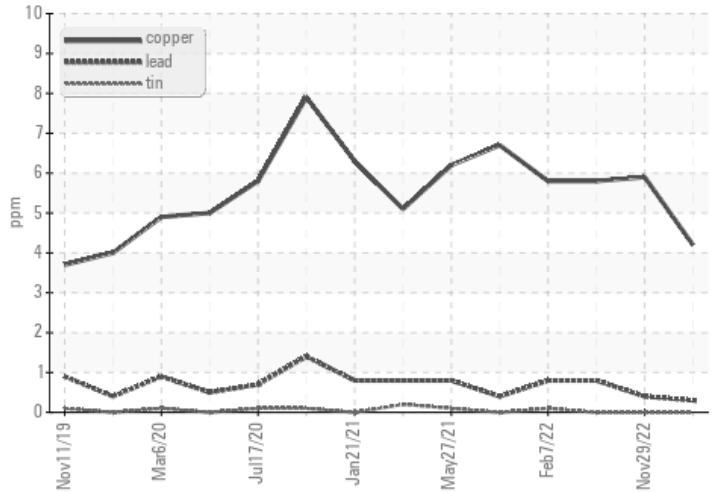
GRAPHS

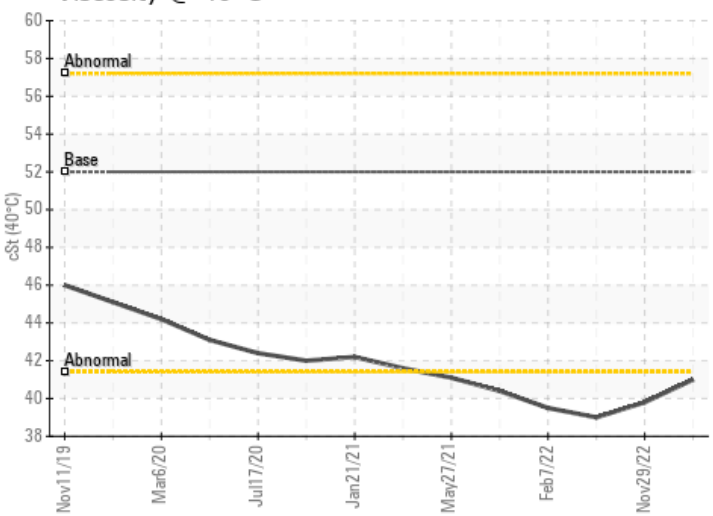
Ferrous Alloys



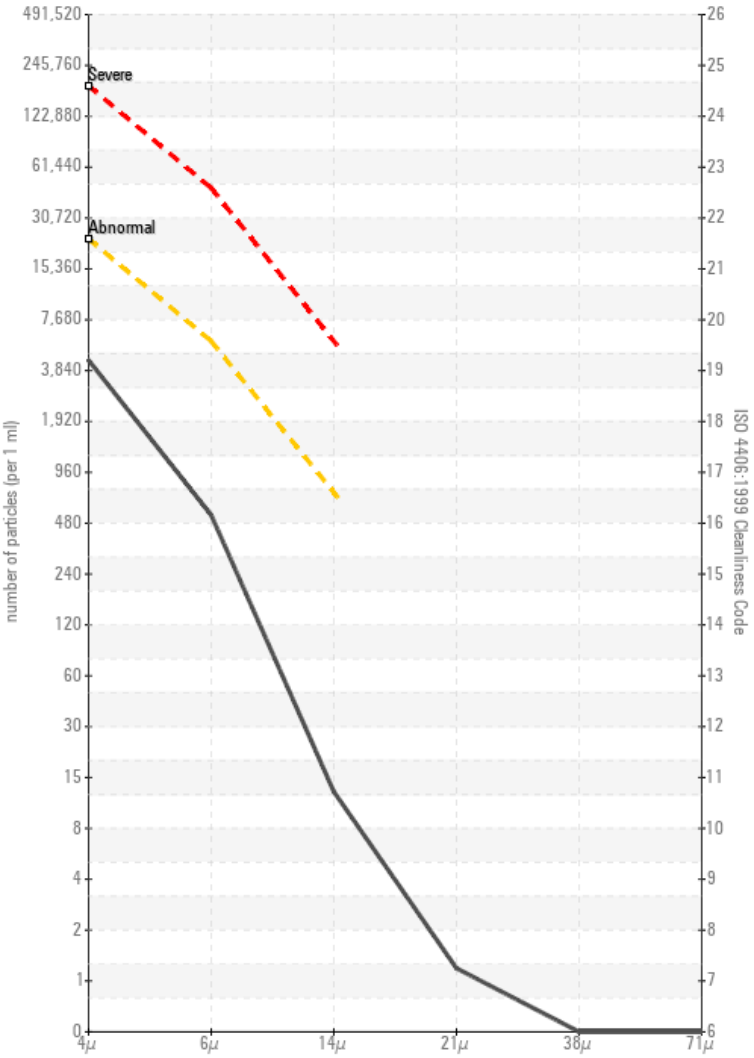
Non-ferrous Metals



Viscosity @ 40°C



Particle Count



Acid Number