

LIEBHERR

CONSTRUCTION EQUIPMENT



[(340370)] LIEBHERR R945 050696-1866 - Hydraulic System

Sample No: LH0278849

Oil Type: LIEBHERR HYDRAULIC HVI



SAMPLE INFORMATION

Sample Number	LH0278849	LH0247503	LH0178577	LH0222721
Sample Date	17 Jan 2024	15 Mar 2023	18 Jul 2022	28 Apr 2022
Machine Hours	4963	3454	2482	2019
Oil Hours	0	0	0	0
Oil Changed	Changed	Not Changd	Not Changd	Not Changd
Sample Status	NORMAL	ATTENTION	NORMAL	NORMAL

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OIL CONDITION

Visc @ 40°C	cSt	42.3	43.0	43.0	43.3



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Particles >4µm		4465	6759	1451	13138
Particles >6µm		1253	1531	200	878
Particles >14µm		57	81	12	26
ISO 4406:1999 (c)		19/17/13	20/18/14	18/15/11	21/17/12
Silicon	ppm	5	4	4	4
Sodium	ppm	4	3	3	2
Potassium	ppm	1	<1	1	1

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 condition of the oil is acceptable for the time in service.



WEAR METALS

Iron	ppm	13	10	8	8
Copper	ppm	5	5	4	4
Lead	ppm	1	<1	1	<1
Tin	ppm	0	<1	0	0
Aluminum	ppm	1	<1	<1	<1
Chromium	ppm	<1	0	0	<1
Molybdenum	ppm	0	0	0	0
Nickel	ppm	<1	0	0	<1
Titanium	ppm	0	<1	0	0
Silver	ppm	0	0	0	0
Manganese	ppm	0	<1	<1	<1
Vanadium	ppm	0	0	0	0



ADDITIVES

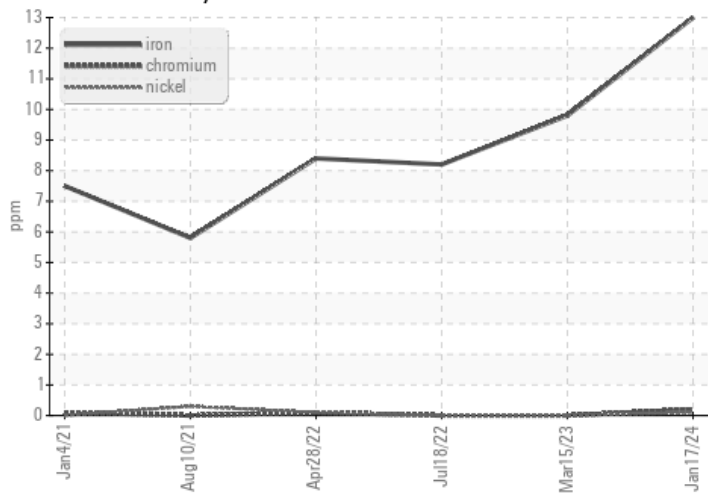
Calcium	ppm	1410	1424	1415	1395
Magnesium	ppm	6	8	6	5
Zinc	ppm	699	703	694	714
Phosphorus	ppm	617	671	624	672
Barium	ppm	0	0	0	0
Boron	ppm	<1	2	<1	<1

Depot: CLOPEM
 Unique No: 5711669
 Signed: Wes Davis
 Report Date: 24 Jan 2024

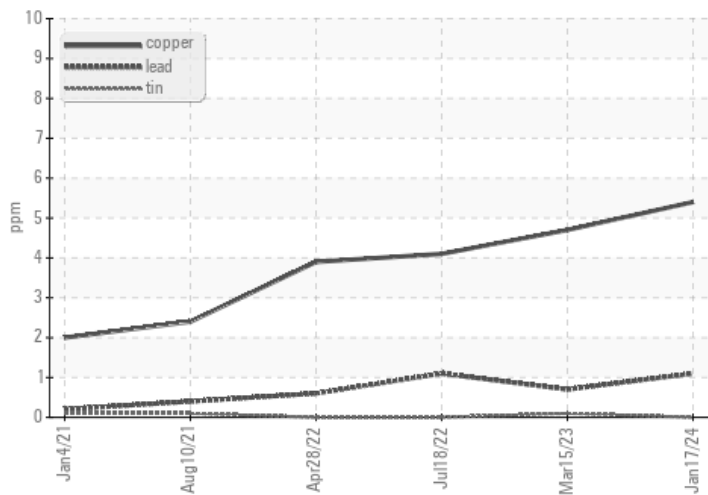


GRAPHS

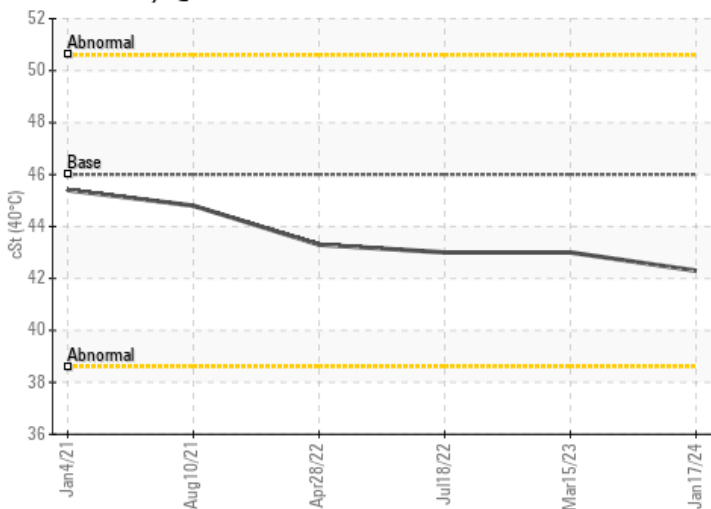
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 40°C



Particle Count

