

LIEBHERR

CONSTRUCTION EQUIPMENT



[(343446)] LIEBHERR LH60M 124381-1217 - Hydraulic System

Sample No: LH0289699

Oil Type: AW HYDRAULIC OIL ISO 46



Sample Information

Sample Number	LH0289699	LH0285015	LH0265842	LH0261592
Sample Date	16 Apr 2024	12 Feb 2024	26 Jun 2023	03 May 2023
Machine Hours	13245	12500	10141	9520
Oil Hours	0	0	0	0
Oil Changed	Changed	Not Changd	Not Changd	Not Changd
Sample Status	ABNORMAL	ABNORMAL	ABNORMAL	ABNORMAL

RAM IRON AND METAL

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Oil Condition

Visc @ 40°C	cSt	32.9	37.2	33.9	34.2



Contamination

Water	%	NEG	NEG	NEG	NEG
Particles >4µm		6420	5380	7184	8228
Particles >6µm		1500	1414	1578	2169
Particles >14µm		82	89	50	127
ISO 4406:1999 (c)		20/18/14	20/18/14	20/18/13	20/18/14
Silicon	ppm	0	<1	1	1
Sodium	ppm	2	<1	2	2
Potassium	ppm	0	<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. Viscosity of sample indicates oil is within ISO 32 range, advise investigate. The condition of the oil is acceptable for the time in service.



Wear Metals

PQ		---	---	1	0
Iron	ppm	7	8	67	66
Copper	ppm	1	1	4	3
Lead	ppm	0	0	<1	<1
Tin	ppm	0	0	0	<1
Aluminum	ppm	0	<1	<1	<1
Chromium	ppm	<1	<1	2	2
Molybdenum	ppm	0	0	<1	<1
Nickel	ppm	0	<1	0	0
Titanium	ppm	0	0	0	0
Silver	ppm	0	0	0	0
Manganese	ppm	0	0	<1	1
Vanadium	ppm	0	0	0	0



Additives

Calcium	ppm	57	69	227	244
Magnesium	ppm	1	2	8	7
Zinc	ppm	345	361	434	434
Phosphorus	ppm	276	295	373	389
Barium	ppm	0	0	0	0
Boron	ppm	<1	<1	2	2

Depot: RAMTOR
Unique No: 5762804
Signed: Kevin Marson
Report Date: 18 Apr 2024

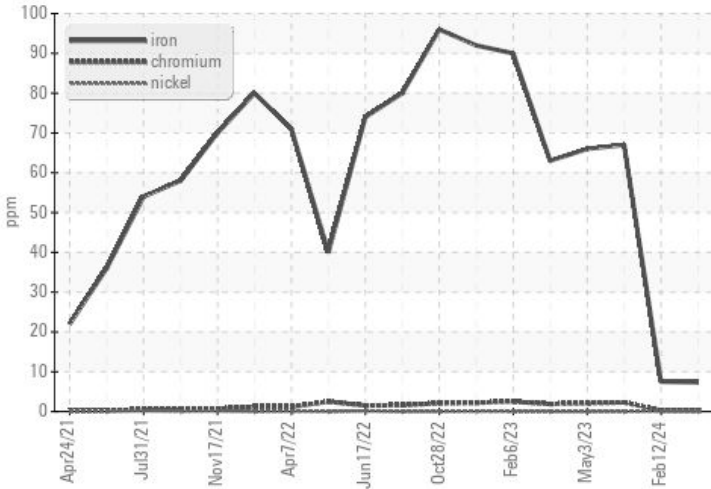
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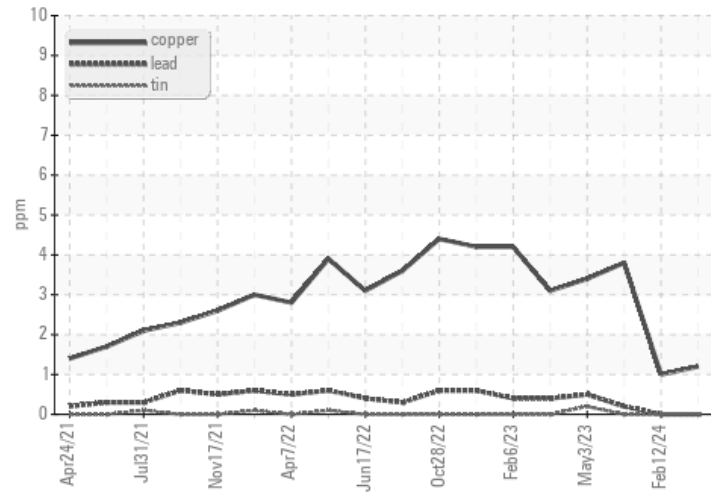


Graphs

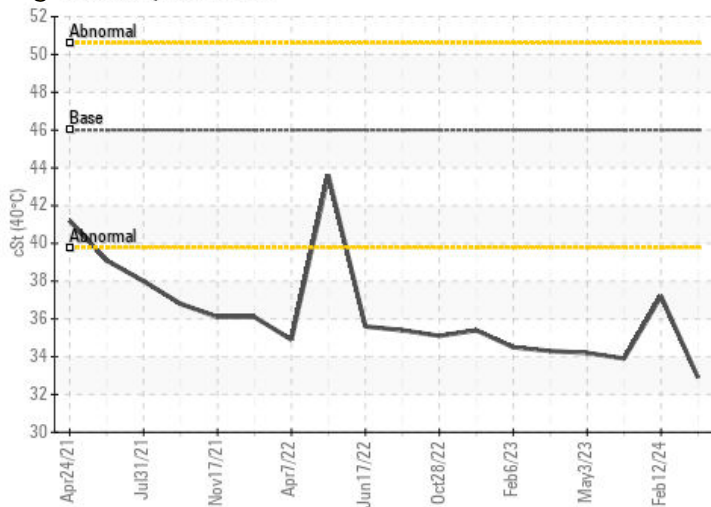
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 40°C



Particle Count

