LIEBHERR
CONSTRUCTION EQUIPMENT

[(361220)] LIEBHERR LH50M 134706-1216 - Swing Drive

Sample No: LH

Oil Type: GEAR OIL SAE 80W90

Industrial Metals
550 Messier St.
Winnipeg, MB
CA R2J 0G5
Contact: Service Manager

T:
F:

SAMPLE INFORMATION

Sample Number		**LH**	LH	LH0250099	LH0242831
Sample Date		**15 Feb 2024**	12 Sep 2023	27 Mar 2023	31 Oct 2022
Machine Hours		**5100**	4000	2020	2020
Oil Hours		**0**	0	0	0
Oil Changed		**Changed**	Changed	N/A	N/A
Sample Status		**NORMAL**	NORMAL	NORMAL	NORMAL

OIL CONDITION

Visc @ 40°C	cSt	**176**	184	171	170

CONTAMINATION

Water	%	**NEG**	0.029	NEG	NEG
Silicon	ppm	**<1**	1	<1	2
Sodium	ppm	**<1**	3	1	2
Potassium	ppm	**<1**	3	<1	<1

WEAR METALS

Iron	ppm	**28**	58	34	120
Copper	ppm	**13**	12	24	29
Lead	ppm	**<1**	<1	2	1
Tin	ppm	**<1**	<1	<1	<1
Aluminum	ppm	**<1**	<1	0	<1
Chromium	ppm	**0**	<1	0	<1
Molybdenum	ppm	**0**	0	0	0
Nickel	ppm	**<1**	<1	0	<1
Titanium	ppm	**0**	0	0	0
Silver	ppm	**0**	0	0	0
Manganese	ppm	**0**	<1	<1	1
Vanadium	ppm	**0**	0	0	0

ADDITIVES

Calcium	ppm	**8**	15	9	28
Magnesium	ppm	**1**	<1	<1	<1
Zinc	ppm	**9**	11	5	14
Phosphorus	ppm	**2242**	2428	2400	2440
Barium	ppm	**0**	<1	<1	4
Boron	ppm	**12**	7	29	22

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

Depot: IND550WIN
Unique No: 5733879
Signed: Wes Davis
Report Date: 20 Feb 2024

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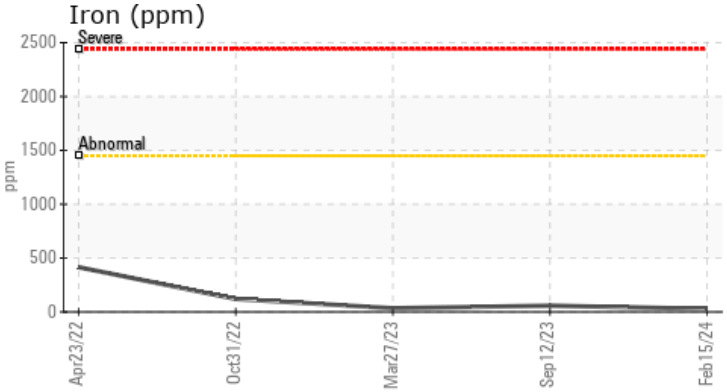
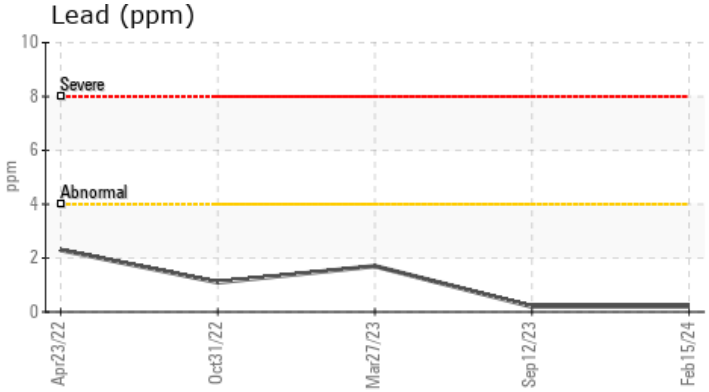
GRAPHS

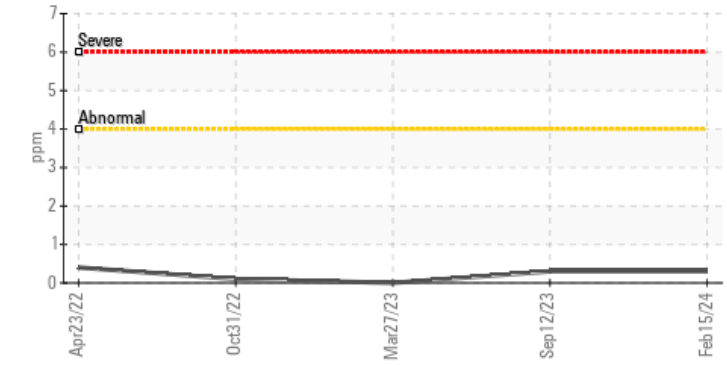
Iron (ppm)



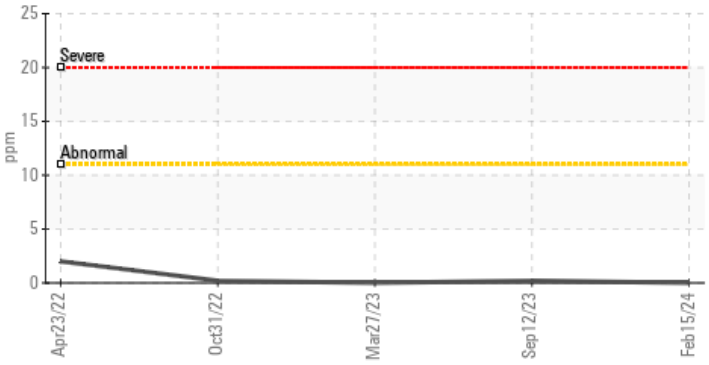
Lead (ppm)



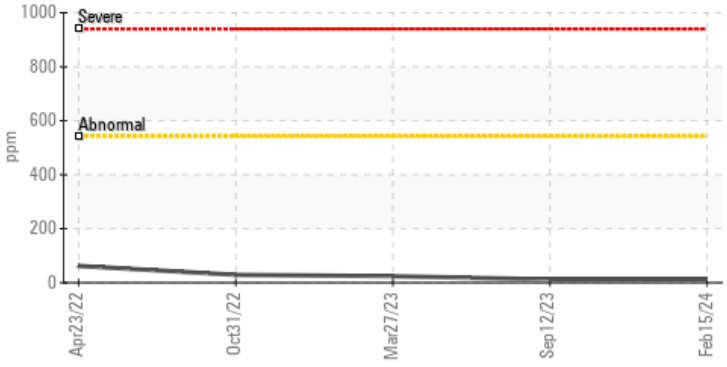
Aluminum (ppm)



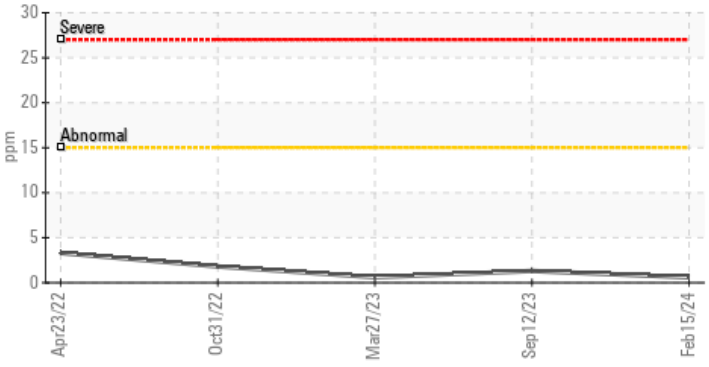
Chromium (ppm)



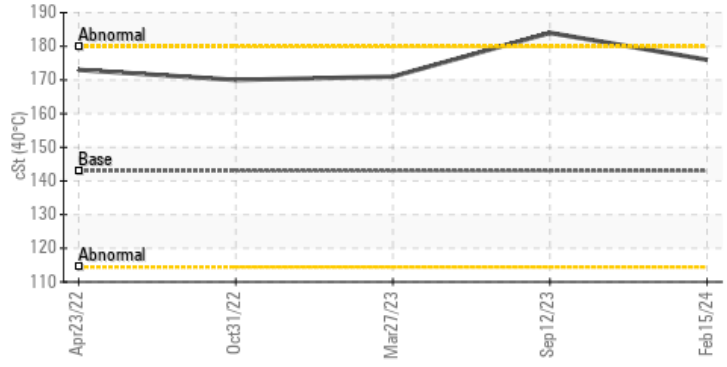
Copper (ppm)



Silicon (ppm)



Viscosity @ 40°C



Additives