

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### LIEBHERR A934C 045480-1007 - Swing Drive

Sample No: LH0263942

Oil Type: GEAR OIL SAE 80W90



#### SAMPLE INFORMATION

Sample Number	LH0263942	LHMC142438	LHMC92415	LHMC81358
Sample Date	19 Dec 2023	03 May 2019	08 Jan 2016	21 Jul 2015
Machine Hours	31068	22895	14859	13822
Oil Hours	2000	1000	1000	1000
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	SEVERE	NORMAL	ATTENTION	ABNORMAL

#### NORTHERN METAL RECYCLING

2800 PACIFIC ST N  
MINNEAPOLIS, MN  
US 55411  
Contact: CHRIS GILMER  
chris.gilmer@emrgroup.com  
T: (612)305-7338  
F:



#### OIL CONDITION

Visc @ 40°C	cSt	137	230	276.7	115.8
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#### CONTAMINATION

Water	%	NEG	0.165	0.402	NEG
Silicon	ppm	13	5	5	1
Sodium	ppm	1	3	2	2
Potassium	ppm	0	0	1	4



#### WEAR METALS

Iron	ppm	3148	654	275	230
Copper	ppm	968	47	29	43
Lead	ppm	8	3	<1	<1
Tin	ppm	19	0	2	6
Aluminum	ppm	<1	<1	<1	<1
Chromium	ppm	29	5	2	2
Molybdenum	ppm	2	0	0	<1
Nickel	ppm	2	0	<1	<1
Titanium	ppm	<1	<1	<1	0
Silver	ppm	0	0	0	0
Manganese	ppm	32	5	2	1
Vanadium	ppm	<1	<1	0	0



#### ADDITIVES

Calcium	ppm	35	62	130	26
Magnesium	ppm	4	16	7	7
Zinc	ppm	50	37	78	40
Phosphorus	ppm	636	2015	833	676
Barium	ppm	0	<1	2	<1
Boron	ppm	38	39	102	12

#### Diagnosis

The oil change at the time of sampling has been noted. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition. Gear wear is indicated. Bearing and/or bushing wear is indicated. There is no indication of any contamination in the oil. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Depot: NORMINLH  
Unique No: 10844589  
Signed: Don Baldrige  
Report Date: 24 Jan 2024

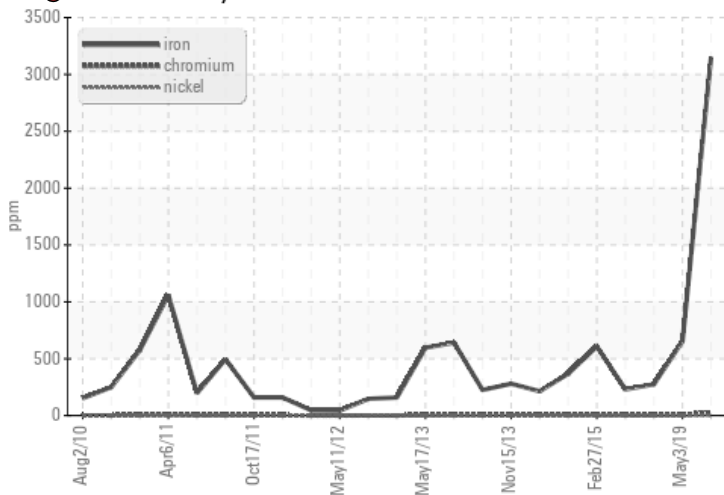
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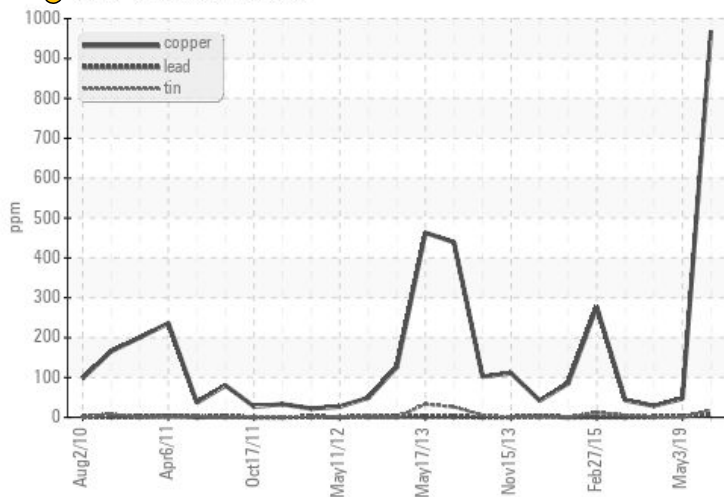


### GRAPHS

#### ● Ferrous Alloys



#### ● Non-ferrous Metals



#### Viscosity @ 40°C

