

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR L538 1559-58274 - Front Differential

Sample No: LH0253891

Oil Type: GEAR OIL SAE 80W90



SAMPLE INFORMATION

Sample Number	LH0253891	LH0236494	LH0220651	LH0220590
Sample Date	02 Aug 2023	15 Mar 2023	01 Aug 2022	23 May 2022
Machine Hours	5816	5998	4096	3630
Oil Hours	0	1000	1000	500
Oil Changed	Changed	Changed	Changed	Not Changd
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

REPUBLIC SERVICES

2495 117TH STREET
INVER GROVE HEIGHTS, MN
US 55077

Contact: JOHN SCHAFFER
jschaffer@republicservices.com

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OIL CONDITION

Visc @ 40°C	cSt	148	167	153	152
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CONTAMINATION

Element	Unit	2	1	2	2
Silicon	ppm	2	1	2	2
Sodium	ppm	0	3	3	<1
Potassium	ppm	1	1	0	1



WEAR METALS

Element	Unit	32	72	49	58
Iron	ppm	32	72	49	58
Copper	ppm	<1	0	<1	<1
Lead	ppm	0	0	0	0
Tin	ppm	0	0	0	0
Aluminum	ppm	0	<1	<1	0
Chromium	ppm	0	<1	<1	<1
Molybdenum	ppm	2	2	2	4
Nickel	ppm	0	0	0	0
Titanium	ppm	0	0	0	0
Silver	ppm	0	0	0	0
Manganese	ppm	<1	<1	1	1
Vanadium	ppm	0	0	0	0



ADDITIVES

Element	Unit	24	23	25	41
Calcium	ppm	24	23	25	41
Magnesium	ppm	6	4	4	15
Zinc	ppm	18	14	16	32
Phosphorus	ppm	962	1074	1166	1089
Barium	ppm	<1	0	0	1
Boron	ppm	8	30	19	27

Diagnosis

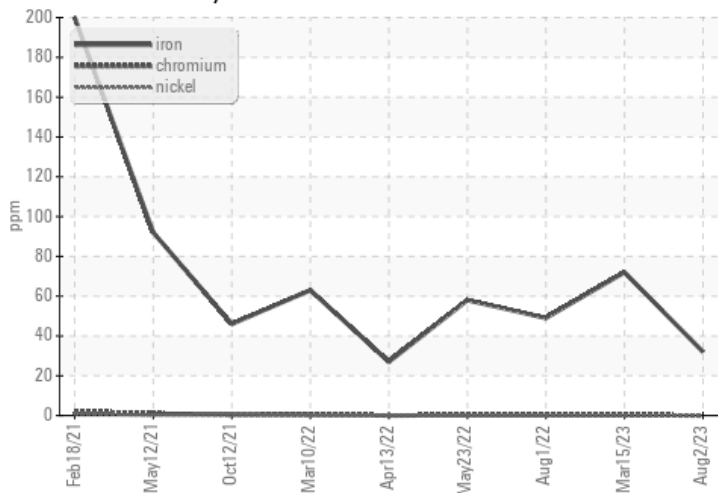
Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The condition of the oil is acceptable for the time in service.

Depot: REPINV
Unique No: 10605587
Signed: Jonathan Hester
Report Date: 17 Aug 2023

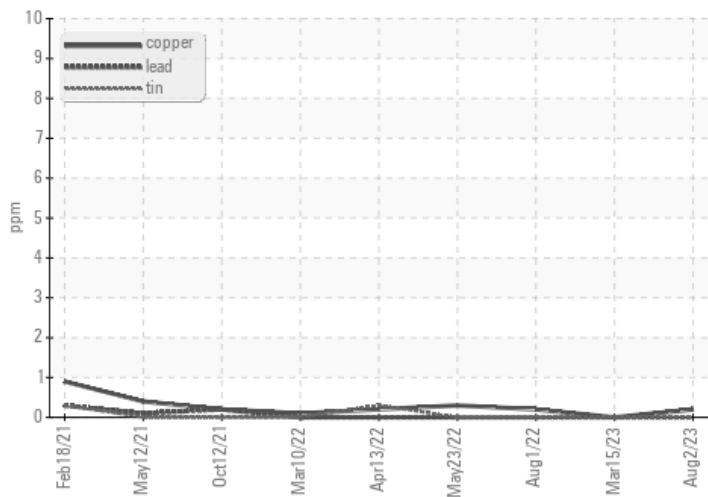


GRAPHS

Ferrous Alloys



Non-ferrous Metals



Viscosity @ 40°C

