

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR A934C 061188-1419 - Rear Differential

Sample No: LH0253879

Oil Type: HARTLAND 80W90 LS



NORTHERN METAL RECYCLING
 2800 PACIFIC ST N
 MINNEAPOLIS, MN
 US 55411
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SAMPLE INFORMATION

Sample Number	LH0253879	LH0236050	LH0220530	LH0220614
Sample Date	21 Sep 2023	23 Nov 2022	27 Sep 2022	04 Apr 2022
Machine Hours	27222	25468	0	23959
Oil Hours	0	1000	1000	1000
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL



OIL CONDITION

Visc @ 40°C	cSt	153	153	156	161
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CONTAMINATION

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



WEAR METALS

Iron	ppm	5	7	10	8
Copper	ppm	<1	1	2	<1
Lead	ppm	0	0	0	0
Tin	ppm	<1	0	0	<1
Aluminum	ppm	0	<1	<1	<1
Chromium	ppm	0	0	0	0
Molybdenum	ppm	0	1	2	1
Nickel	ppm	<1	0	0	0
Titanium	ppm	<1	0	0	0
Silver	ppm	<1	0	0	<1
Manganese	ppm	<1	<1	<1	<1
Vanadium	ppm	0	0	0	0



ADDITIVES

Calcium	ppm	28	22	28	21
Magnesium	ppm	10	6	5	5
Zinc	ppm	19	6	19	7
Phosphorus	ppm	1301	1004	1180	1467
Barium	ppm	0	0	0	0
Boron	ppm	9	11	4	16

Diagnosis

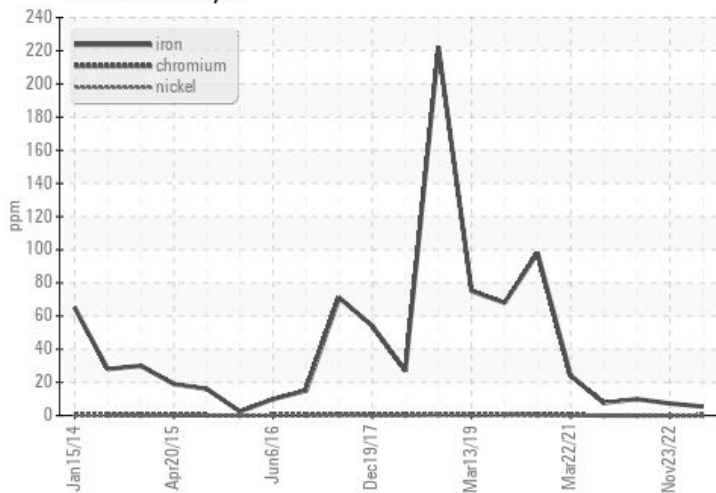
Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The condition of the oil is acceptable for the time in service.

Depot: NORMINLH
 Unique No: 10736228
 Signed: Sean Felton
 Report Date: 10 Nov 2023

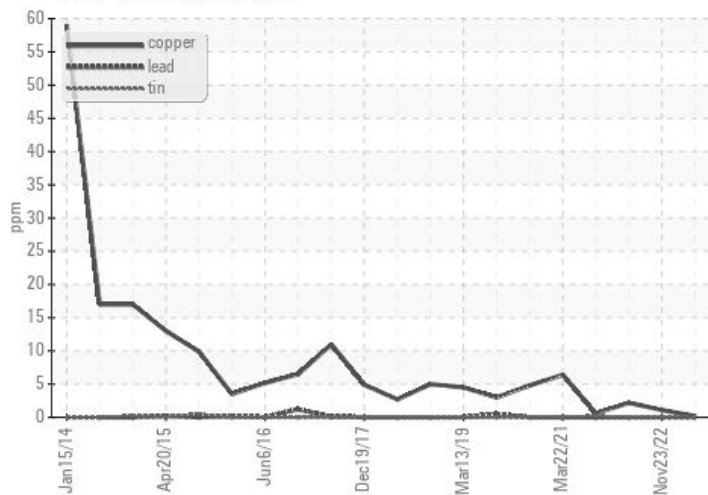


GRAPHS

Ferrous Alloys



Non-ferrous Metals



Viscosity @ 40°C

