

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR A924C064060-1049 - Front Differential

Sample No: LH0229949

Oil Type: REPUBLIC CRANE GEAR OIL 90LS PLUS



SAMPLE INFORMATION

Sample Number	LH0229949	LHMC158140	LHMC144425	LHMC144422
Sample Date	09 Jan 2024	01 Sep 2022	22 Oct 2020	17 Feb 2020
Machine Hours	23880	20945	16690	15294
Oil Hours	0	0	1350	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	ABNORMAL	ABNORMAL	ABNORMAL	ATTENTION

MIDWEST METALS CORP
 40 WINDHURST WAY
 SHELBYVILLE, KY
 US 40065
 Contact: JIMMY RENFROE
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 F: (502)633-5212



OIL CONDITION

Visc @ 40°C	cSt	213	203	197	196
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CONTAMINATION

Water	%	0.341	0.273	0.262	0.185
Silicon	ppm	1	2	2	<1
Sodium	ppm	3	5	1	<1
Potassium	ppm	<1	0	<1	2



WEAR METALS

Iron	ppm	404	468	340	144
Copper	ppm	2	3	2	1
Lead	ppm	0	0	<1	0
Tin	ppm	0	<1	0	0
Aluminum	ppm	<1	2	0	<1
Chromium	ppm	2	2	2	<1
Molybdenum	ppm	0	<1	<1	0
Nickel	ppm	9	10	8	6
Titanium	ppm	0	0	<1	0
Silver	ppm	<1	0	<1	0
Manganese	ppm	4	5	5	2
Vanadium	ppm	<1	0	0	0



ADDITIVES

Calcium	ppm	31	43	39	32
Magnesium	ppm	2	2	2	1
Zinc	ppm	21	14	8	10
Phosphorus	ppm	2240	2140	2323	1933
Barium	ppm	1	<1	0	0
Boron	ppm	0	0	4	2

Diagnosis

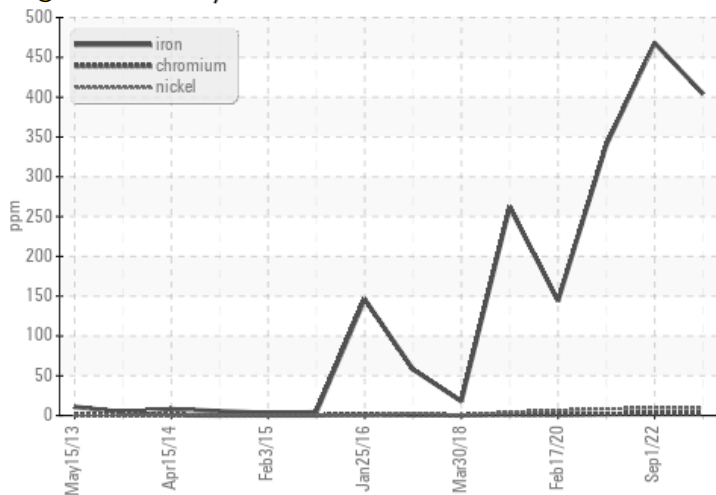
No corrective action is recommended at this time. The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. Gear wear is indicated. All other component wear rates are normal. There is a light concentration of water present in the oil. The condition of the oil is acceptable for the time in service.

Depot: MIDSHELH
 Unique No: 10843018
 Signed: Don Baldrige
 Report Date: 23 Jan 2024

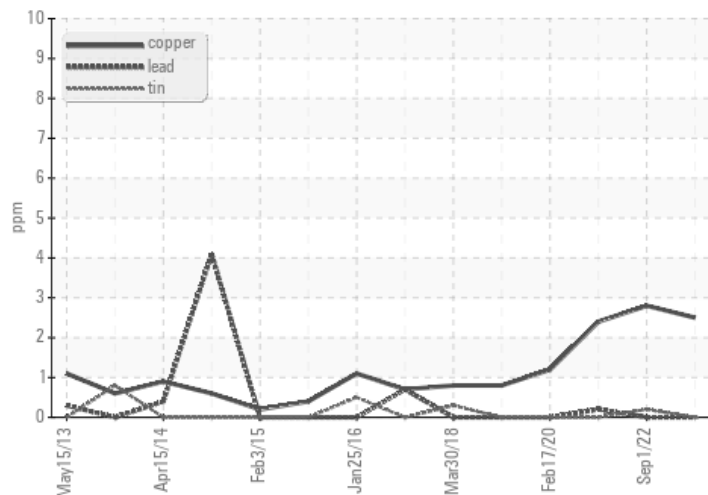


GRAPHS

● Ferrous Alloys



Non-ferrous Metals



Viscosity @ 40°C

