LIEBHERR
CONSTRUCTION EQUIPMENT

LIEBHERR L538 064492-1754 - Rear Left Wheel Hub

Sample No: LH0263965

Oil Type: GEAR OIL LS 80W90

AMERICAN STATE EQUIPMENT CO.
2400 NORTH 14TH AVENUE
WAUSAU, WI
US 54401
Contact: CHRIS BARTNIK
cbartnik@amstate.com
T: (715)675-6900
F: (715)675-9748

SAMPLE INFORMATION

Sample Number		**LH0263965**	LH0220797	---	---
Sample Date		**25 Oct 2023**	18 Jan 2023	---	---
Machine Hours		**1045**	464	---	---
Oil Hours		**0**	0	---	---
Oil Changed		**Changed**	Changed	---	---
Sample Status		**NORMAL**	NORMAL	---	---

OIL CONDITION

Visc @ 40°C	cSt	**134**	172	---	---

CONTAMINATION

Silicon	ppm	**2**	7	---	---
Sodium	ppm	**2**	3	---	---
Potassium	ppm	**0**	<1	---	---

WEAR METALS

Iron	ppm	**29**	31	---	---
Copper	ppm	**0**	<1	---	---
Lead	ppm	**0**	0	---	---
Tin	ppm	**0**	<1	---	---
Aluminum	ppm	**0**	<1	---	---
Chromium	ppm	**0**	<1	---	---
Molybdenum	ppm	**0**	<1	---	---
Nickel	ppm	**0**	<1	---	---
Titanium	ppm	**0**	<1	---	---
Silver	ppm	**0**	0	---	---
Manganese	ppm	**<1**	1	---	---
Vanadium	ppm	**0**	0	---	---

ADDITIVES

Calcium	ppm	**33**	56	---	---
Magnesium	ppm	**4**	2	---	---
Zinc	ppm	**36**	48	---	---
Phosphorus	ppm	**1030**	1759	---	---
Barium	ppm	**0**	4	---	---
Boron	ppm	**1**	4	---	---

Diagnosis

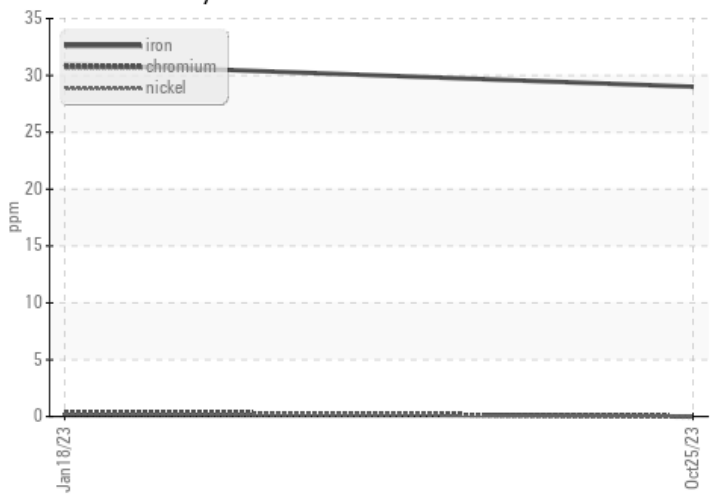
Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the oil. The condition of the oil is acceptable for the time in service.

Depot: LEC0008
Unique No: 10726901
Signed: Sean Felton
Report Date: 06 Nov 2023

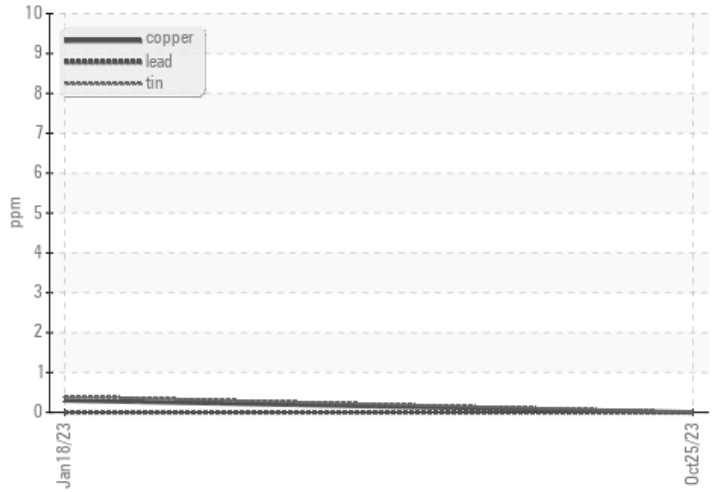
LIEBHERR
CONSTRUCTION EQUIPMENT

GRAPHS

Ferrous Alloys



Non-ferrous Metals



Viscosity @ 40°C