

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR LH110 155976-1227 - Front Left Wheel Hub

Sample No: LH0267254

Oil Type: GEAR OIL SAE 80W90



KINDER MORGAN

4301 IVERSON

TRINITY, AL

US 35601

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Sample Information

Sample Number	LH0267254	LH0267549	LH0267533	LH0280576
Sample Date	08 Jun 2024	12 May 2024	18 Apr 2024	23 Feb 2024
Machine Hours	2430	1951	1623	995
Oil Hours	479	956	628	0
Oil Changed	Not Changd	Changed	Not Changd	Changed
Sample Status	ATTENTION	NORMAL	NORMAL	NORMAL



Oil Condition

Visc @ 40°C	cSt	100	116	118	173
		●	●	●	●



Contamination

Water	%	NEG	NEG	NEG	NEG
Silicon	ppm	● 4	● 5	● 4	● 16
Sodium	ppm	● 1	● 5	● 0	● 3
Potassium	ppm	● 1	● 2	● 0	● 1



Wear Metals

Iron	ppm	● 29	● 22	● 23	● 41
Copper	ppm	● <1	● <1	● 0	● <1
Lead	ppm	● 0	● <1	● 0	● 0
Tin	ppm	● 0	● 0	● 0	● 0
Aluminum	ppm	● 2	● 2	● 0	● 1
Chromium	ppm	● <1	● <1	● <1	● <1
Molybdenum	ppm	● 2	● 2	● 2	● 0
Nickel	ppm	● 0	● <1	● 0	● <1
Titanium	ppm	● <1	● <1	● 0	● <1
Silver	ppm	● 0	● <1	● 0	● 0
Manganese	ppm	● 0	● <1	● <1	● 1
Vanadium	ppm	● <1	● <1	● 0	● 0



Additives

Calcium	ppm	● 208	● 162	● 149	● 143
Magnesium	ppm	● 35	● 6	● 0	● 2
Zinc	ppm	● 158	● 88	● 75	● 25
Phosphorus	ppm	● 410	● 355	● 432	● 1542
Barium	ppm	● 0	● 0	● 0	● 0
Boron	ppm	● 7	● <1	● <1	● 3

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 oil viscosity is lower than normal. Confirm oil type.

Depot: KINTRI

Unique No: 11089052

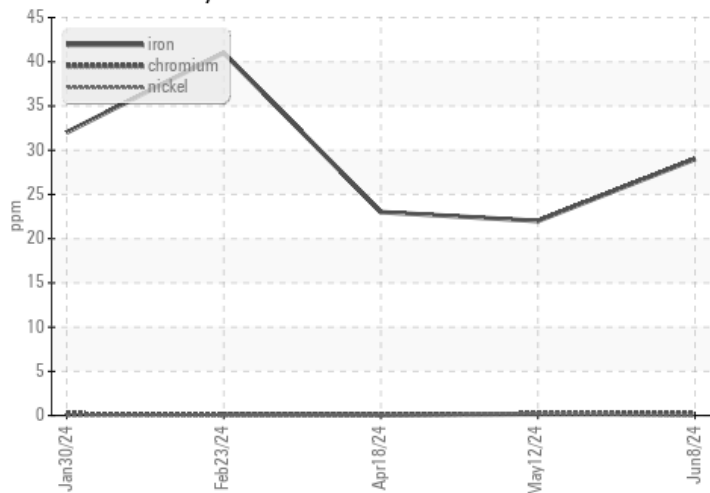
Signed: Don Baldrige

Report Date: 23 Jun 2024

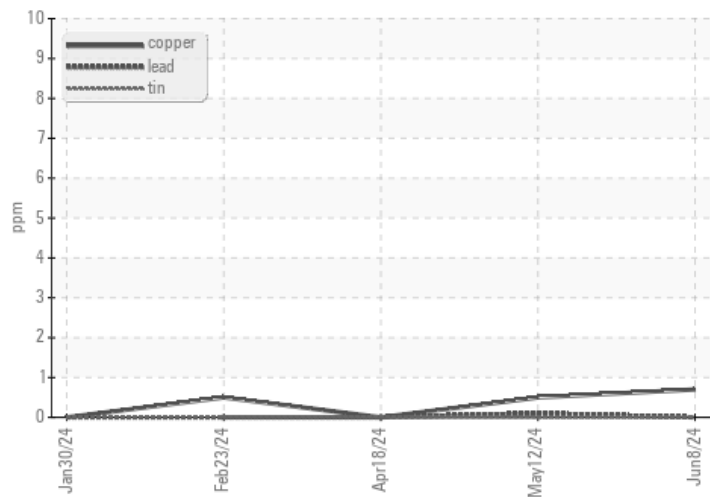


Graphs

Ferrous Alloys



Non-ferrous Metals



Viscosity @ 40°C

