

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR LH110 1227-155752 - Front Right Wheel Hub

Sample No: LH0267078

Oil Type: GEAR OIL SAE 80W90



KINDER MORGAN

4301 IVERSON

TRINITY, AL

US 35601

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Sample Information

Sample Number	LH0267078	LH0267544	LH0280588	LH0280588
Sample Date	10 Jun 2024	20 May 2024	18 Apr 2024	19 Mar 2024
Machine Hours	2998	2578	1980	1544
Oil Hours	967	547	0	0
Oil Changed	Changed	Not Changd	Changed	Not Changd
Sample Status	ATTENTION	ATTENTION	NORMAL	ABNORMAL



Oil Condition

Visc @ 40°C	cSt	97.1	97.3	116	122
		●	●	●	●



Contamination

Water	%	NEG	NEG	NEG	NEG
Silicon	ppm	● 5	● 5	● 7	● 4
Sodium	ppm	● 2	● 5	● 0	● 0
Potassium	ppm	● 1	● 2	● 0	● 2



Wear Metals

Iron	ppm	● 37	● 31	● 40	● 23
Copper	ppm	● <1	● 3	● 0	● <1
Lead	ppm	● 0	● 0	● 0	● <1
Tin	ppm	● 0	● 0	● 0	● 1
Aluminum	ppm	● 2	● 2	● <1	● 1
Chromium	ppm	● <1	● <1	● <1	● <1
Molybdenum	ppm	● 3	● 5	● 2	● 2
Nickel	ppm	● 0	● <1	● 0	● <1
Titanium	ppm	● <1	● <1	● 0	● 0
Silver	ppm	● 0	● <1	● 0	● 0
Manganese	ppm	● <1	● <1	● <1	● <1
Vanadium	ppm	● <1	● <1	● 0	● <1



Additives

Calcium	ppm	● 211	● 217	● 166	● 187
Magnesium	ppm	● 42	● 40	● 0	● 6
Zinc	ppm	● 164	● 153	● 83	● 96
Phosphorus	ppm	● 408	● 340	● 450	● 427
Barium	ppm	● 0	● 0	● 0	● 0
Boron	ppm	● 9	● 8	● 1	● 1

Diagnosis

The oil change at the time of sampling has been noted. 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: 11089045

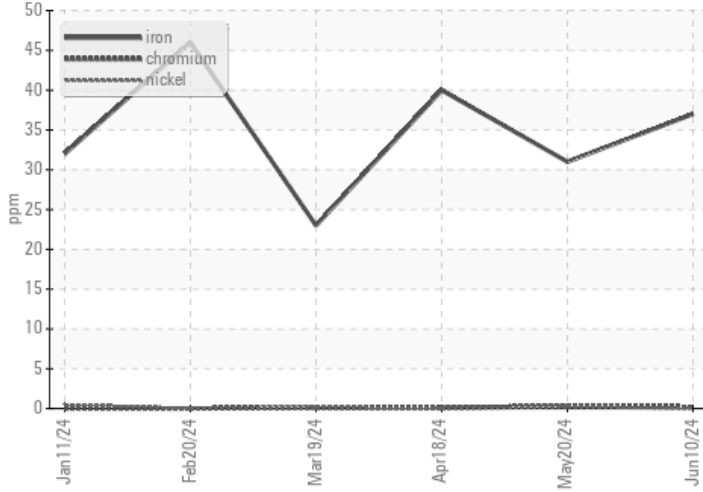
Signed: Don Baldrige

Report Date: 23 Jun 2024

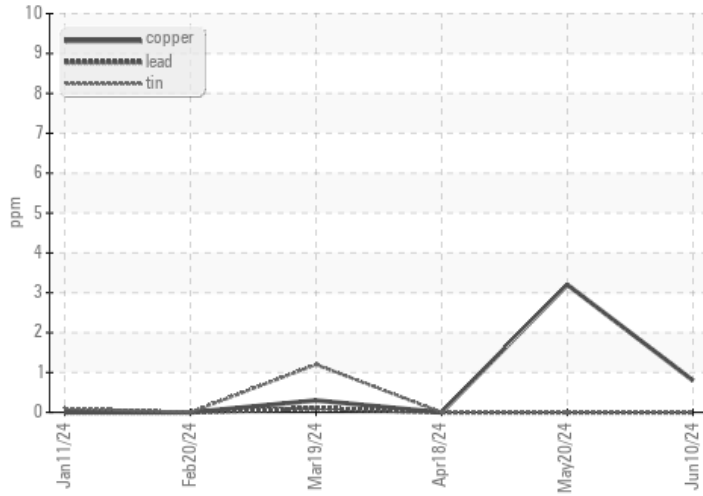


Graphs

Ferrous Alloys



Non-ferrous Metals



Viscosity @ 40°C

