

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR LH80M 1218-157090 - Front Left Wheel Hub

Sample No: LH0267272

Oil Type: GEAR OIL SAE 80W90



KINDER MORGAN

4301 IVERSON

TRINITY, AL

US 35601

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Sample Information

Sample Number	LH0267272	LH0282876	LH0282887	LH0282898
Sample Date	10 Jun 2024	18 May 2024	19 Apr 2024	19 Mar 2024
Machine Hours	2008	1559	997	545
Oil Hours	1035	0	0	0
Oil Changed	Changed	Not Changd	Changed	Not Changd
Sample Status	ATTENTION	ATTENTION	NORMAL	NORMAL



Oil Condition

Visc @ 40°C	cSt	91.3	95.8	155	161



Contamination

Water	%	NEG	NEG	NEG	NEG
Silicon	ppm	4	11	18	26
Sodium	ppm	1	5	10	8
Potassium	ppm	1	2	0	<1



Wear Metals

Iron	ppm	23	329	194	113
Copper	ppm	11	11	6	6
Lead	ppm	<1	0	0	0
Tin	ppm	0	0	0	1
Aluminum	ppm	2	2	<1	3
Chromium	ppm	<1	2	<1	<1
Molybdenum	ppm	3	3	0	<1
Nickel	ppm	0	<1	0	<1
Titanium	ppm	<1	<1	0	<1
Silver	ppm	0	<1	0	0
Manganese	ppm	<1	3	2	2
Vanadium	ppm	<1	<1	0	<1



Additives

Calcium	ppm	150	89	249	68
Magnesium	ppm	33	15	0	0
Zinc	ppm	119	82	113	21
Phosphorus	ppm	423	486	1147	1249
Barium	ppm	0	0	0	0
Boron	ppm	7	5	5	<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: 11089061

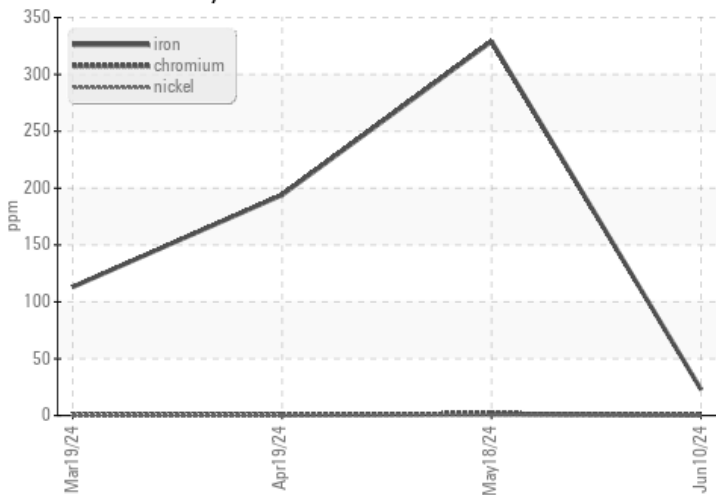
Signed: Don Baldrige

Report Date: 23 Jun 2024

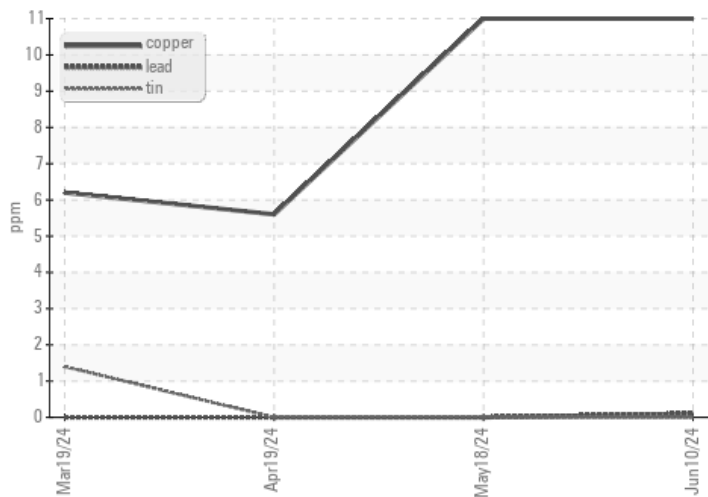


Graphs

Ferrous Alloys



Non-ferrous Metals



Viscosity @ 40°C

