

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### LIEBHERR LH80M 1218-157090 - Front Differential

Sample No: LH0267079

Oil Type: GEAR OIL SAE 80W90



**KINDER MORGAN**

4301 IVERSON

TRINITY, AL

US 35601

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#### Sample Information

Sample Number	LH0267079	LH0282870	LH0282881	LH0282892
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	77.7	83.5	162	163



#### Contamination

Water	%	NEG	NEG	NEG	NEG
Silicon	ppm	5	6	6	5
Sodium	ppm	0	3	3	4
Potassium	ppm	1	2	1	<1



#### Wear Metals

Iron	ppm	14	29	14	9
Copper	ppm	2	2	5	3
Lead	ppm	0	0	0	0
Tin	ppm	0	0	<1	2
Aluminum	ppm	2	6	1	<1
Chromium	ppm	<1	<1	0	<1
Molybdenum	ppm	4	5	0	0
Nickel	ppm	0	<1	0	<1
Titanium	ppm	<1	<1	0	0
Silver	ppm	0	<1	0	0
Manganese	ppm	0	<1	1	<1
Vanadium	ppm	0	<1	0	<1



#### Additives

Calcium	ppm	193	202	8	4
Magnesium	ppm	42	38	0	<1
Zinc	ppm	154	134	0	0
Phosphorus	ppm	412	358	1543	1464
Barium	ppm	9	7	223	241
Boron	ppm	11	10	65	68

#### 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: 11089049

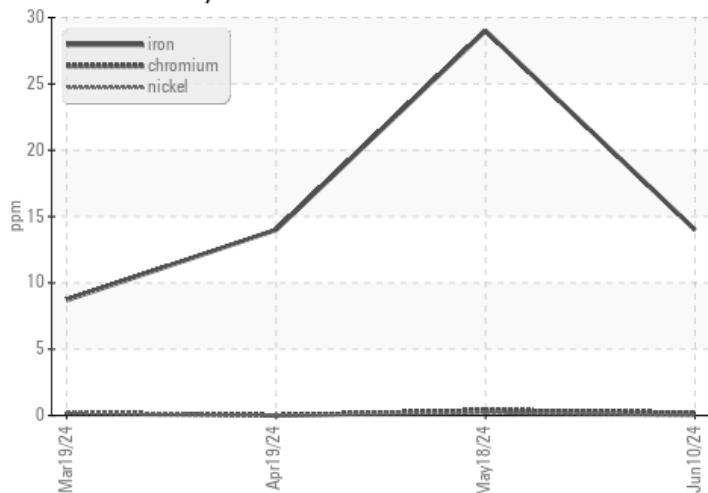
Signed: Don Baldrige

Report Date: 23 Jun 2024

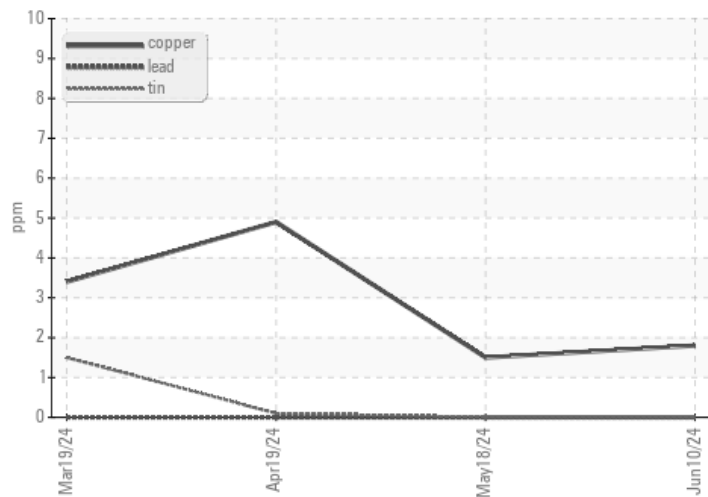


### Graphs

#### Ferrous Alloys



#### Non-ferrous Metals



#### Viscosity @ 40°C

