

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR LH110 1227-155752 - Rear Differential

Sample No: LH0280582

Oil Type: GEAR OIL SAE 80W90



KINDER MORGAN
4301 IVERSON
TRINITY, AL
US 35601
Contact: CHIP OAKES

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Sample Information

Sample Number	LH0280582	LH0280582	LH0280571	LH0280560
Sample Date	18 Apr 2024	19 Mar 2024	20 Feb 2024	11 Jan 2024
Machine Hours	1980	1544	1022	507
Oil Hours	0	0	0	0
Oil Changed	Changed	Not Changd	Changed	Not Changd
Sample Status	ATTENTION	ATTENTION	NORMAL	NORMAL



Oil Condition

Visc @ 40°C	cSt	97.0	103	149	149



Contamination

Water	%	NEG	NEG	NEG	NEG
Silicon	ppm	5	4	8	7
Sodium	ppm	<1	1	2	4
Potassium	ppm	0	<1	0	1



Wear Metals

Iron	ppm	47	38	61	34
Copper	ppm	14	10	27	16
Lead	ppm	0	0	<1	0
Tin	ppm	0	1	0	<1
Aluminum	ppm	<1	<1	<1	<1
Chromium	ppm	<1	<1	<1	0
Molybdenum	ppm	1	2	<1	0
Nickel	ppm	0	<1	0	<1
Titanium	ppm	<1	0	0	0
Silver	ppm	0	0	0	0
Manganese	ppm	1	<1	2	1
Vanadium	ppm	0	<1	<1	0



Additives

Calcium	ppm	178	172	110	106
Magnesium	ppm	4	3	0	2
Zinc	ppm	101	90	23	23
Phosphorus	ppm	471	467	1459	1225
Barium	ppm	0	0	<1	2
Boron	ppm	0	2	6	5

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: 11031842
Signed: Don Baldrige
Report Date: 17 May 2024



Graphs

