

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR R946 046853-1491 - Left Final Drive

Sample No: LH0258287

Oil Type: LIEBHERR HYPOID 85W-140 EP



SAMPLE INFORMATION

Sample Number	LH0258287	LH0229882	LH0220894	LH0199809
Sample Date	31 Jul 2023	06 Oct 2022	25 May 2022	24 Sep 2021
Machine Hours	4055	2811	2271	1745
Oil Hours	1244	2311	0	769
Oil Changed	Changed	Changed	Not Changd	Changed
Sample Status	NORMAL	ABNORMAL	NORMAL	NORMAL

ACECO

10119 RESIDENCY ROAD
MANASSAS, VA
US 20110
Contact: RON BROCK



OIL CONDITION

Visc @ 40°C	cSt	368	363	366	363
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T: (703)392-0111
F: (703)331-5604



CONTAMINATION

Silicon	ppm	42	129	74	36
Sodium	ppm	1	5	3	2
Potassium	ppm	2	4	3	<1

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 condition of the oil is acceptable for the time in service.



WEAR METALS

Iron	ppm	225	727	294	125
Copper	ppm	2	<1	<1	<1
Lead	ppm	0	0	<1	0
Tin	ppm	0	0	0	0
Aluminum	ppm	8	34	18	8
Chromium	ppm	2	9	4	2
Molybdenum	ppm	0	<1	<1	0
Nickel	ppm	1	4	2	1
Titanium	ppm	<1	2	1	<1
Silver	ppm	0	0	<1	0
Manganese	ppm	3	7	3	2
Vanadium	ppm	0	<1	0	0



ADDITIVES

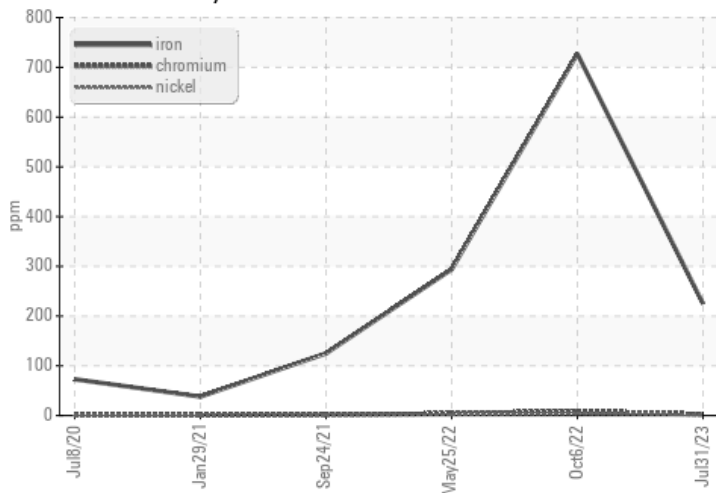
Calcium	ppm	17	2	16	14
Magnesium	ppm	6	7	5	4
Zinc	ppm	12	9	10	7
Phosphorus	ppm	1094	1070	1255	890
Barium	ppm	7	0	0	<1
Boron	ppm	0	0	2	22

Depot: ACEMAN
Unique No: 10635942
Signed: Don Baldrige
Report Date: 10 Sep 2023

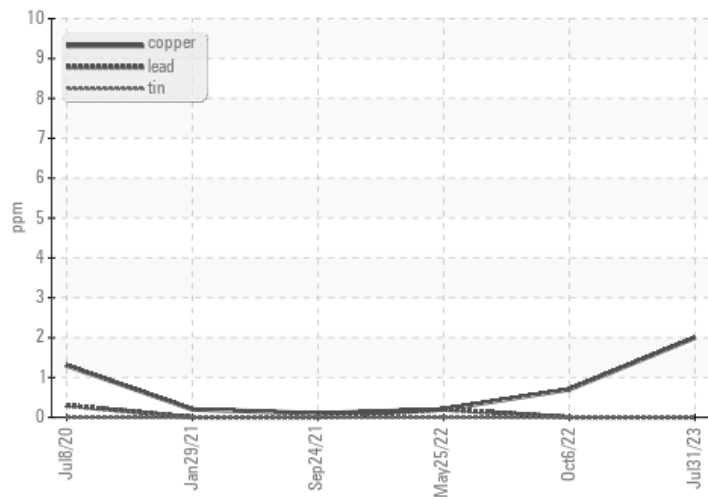


GRAPHS

Ferrous Alloys



Non-ferrous Metals



Viscosity @ 40°C

