

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR R920 043304-1705 - Left Final Drive

Sample No: LH0254110

Oil Type: LIEBHERR GEAR BASIC 90 LS



SAMPLE INFORMATION

Sample Number	LH0254110	LH0207420	LHMC129108	LHMC121334
Sample Date	20 Apr 2023	15 Jul 2022	28 Jun 2018	18 Sep 2017
Machine Hours	3738	3190	1040	516
Oil Hours	548	0	505	516
Oil Changed	Changed	Not Changd	Changed	Changed
Sample Status	ABNORMAL	SEVERE	ABNORMAL	NORMAL

ACECO

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



OIL CONDITION

Visc @ 40°C	cSt	359	350	191.8	356.9
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T: (703)392-0111
F: (703)331-5604



CONTAMINATION

Silicon	ppm	119	581	99	65
Sodium	ppm	2	5	4	4
Potassium	ppm	12	29	8	6

Diagnosis

We advise that you check all areas where dirt can enter the system. 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. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. The oil viscosity is higher than normal. Confirm oil type.



WEAR METALS

Iron	ppm	457	1481	152	98
Copper	ppm	<1	<1	<1	<1
Lead	ppm	0	<1	0	0
Tin	ppm	0	<1	0	0
Aluminum	ppm	39	140	47	26
Chromium	ppm	5	17	2	1
Molybdenum	ppm	<1	1	<1	0
Nickel	ppm	2	4	0	<1
Titanium	ppm	2	11	3	2
Silver	ppm	0	<1	0	0
Manganese	ppm	5	13	1	1
Vanadium	ppm	<1	<1	0	0



ADDITIVES

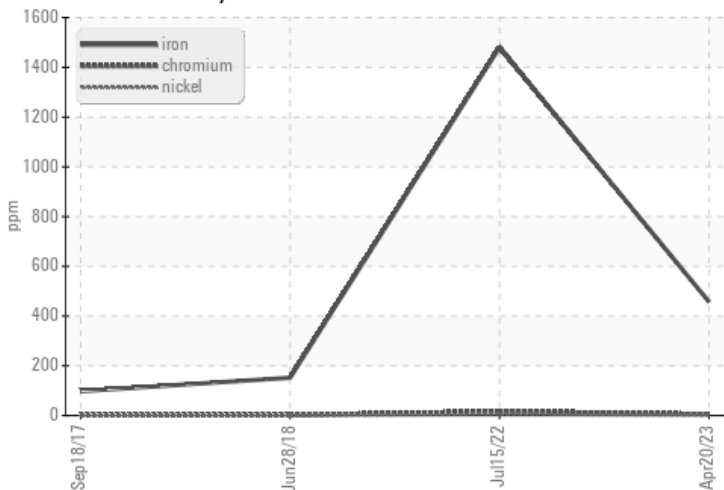
Calcium	ppm	20	103	10	13
Magnesium	ppm	4	15	7	8
Zinc	ppm	24	38	5	10
Phosphorus	ppm	1347	1218	1962	2043
Barium	ppm	0	0	<1	1
Boron	ppm	0	6	4	6

Depot: ACEMAN
Unique No: 10550488
Signed: Sean Felton
Report Date: 12 Jul 2023

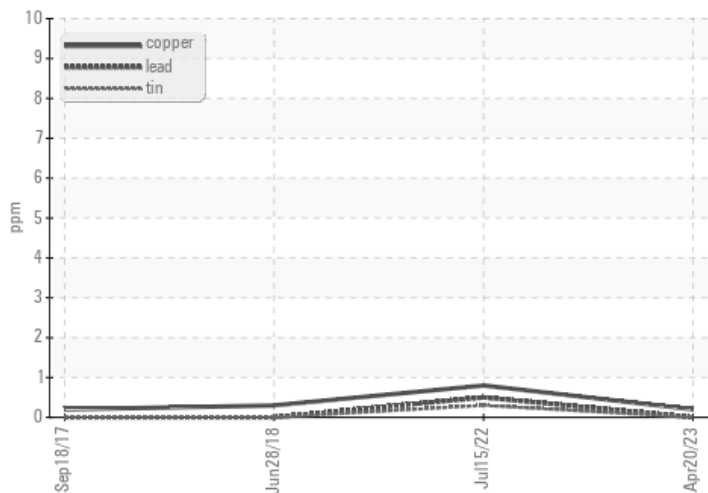


GRAPHS

Ferrous Alloys



Non-ferrous Metals



● Viscosity @ 40°C

