

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### LIEBHERR R920 043304-1705 - Swing Drive

Sample No: LH0254112

Oil Type: LIEBHERR GEAR BASIC 90 LS



#### SAMPLE INFORMATION

Sample Number	LH0254112	LH0207418	LHMC129105	LHMC121338
Sample Date	20 Apr 2023	15 Jul 2022	28 Jun 2018	18 Sep 2017
Machine Hours	3738	3190	1040	516
Oil Hours	548	727	505	516
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	ABNORMAL	ABNORMAL

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



#### OIL CONDITION

Visc @ 40°C	cSt	347	365	236.0	250.5
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T: (703)392-0111  
F: (703)331-5604



#### CONTAMINATION

Water	%	---	---	0.576	0.917
Silicon	ppm	<1	<1	3	0
Sodium	ppm	<1	<1	2	2
Potassium	ppm	0	0	2	3

#### 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. Confirm oil type. The condition of the oil is acceptable for the time in service.



#### WEAR METALS

Iron	ppm	608	331	758	758
Copper	ppm	165	99	30	48
Lead	ppm	0	<1	0	0
Tin	ppm	12	10	0	2
Aluminum	ppm	<1	1	<1	<1
Chromium	ppm	5	2	6	5
Molybdenum	ppm	<1	<1	0	0
Nickel	ppm	0	0	0	<1
Titanium	ppm	0	0	0	<1
Silver	ppm	0	1	0	0
Manganese	ppm	4	2	5	6
Vanadium	ppm	0	0	0	0



#### ADDITIVES

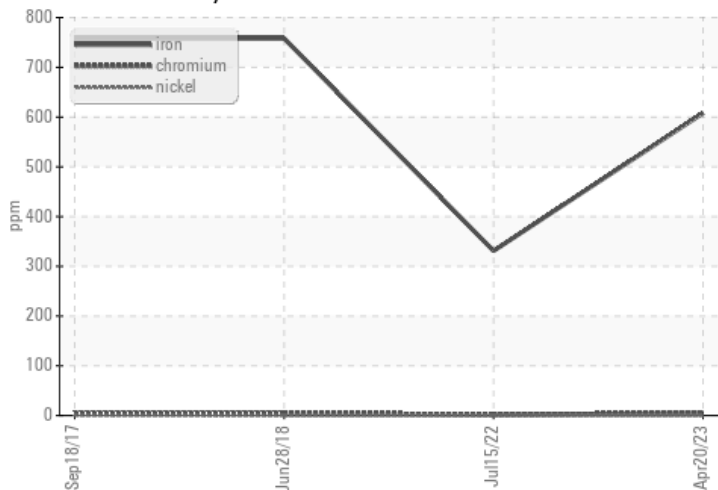
Calcium	ppm	63	4	7	10
Magnesium	ppm	0	0	4	<1
Zinc	ppm	52	13	17	56
Phosphorus	ppm	1317	1060	1868	1940
Barium	ppm	0	0	<1	3
Boron	ppm	0	1	5	8

Depot: ACEMAN  
Unique No: 10552350  
Signed: Don Baldrige  
Report Date: 13 Jul 2023

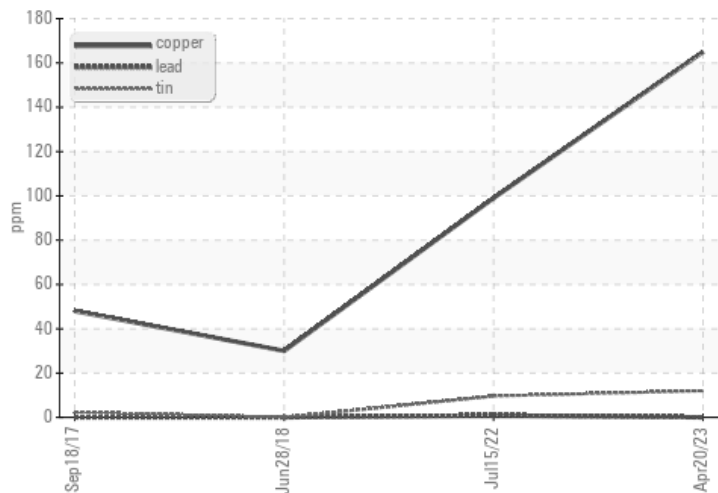


### GRAPHS

#### Ferrous Alloys



#### Non-ferrous Metals



#### Viscosity @ 40°C

