

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR A934C 038194-1007 - Swing Drive

Sample No: LH0244694

Oil Type: LIEBHERR GEAR BASIC 90 LS



Sample Information

Sample Number	LH0244694	LH0244915	LH0230031	LH0157855
Sample Date	06 May 2024	25 Apr 2023	28 Nov 2022	19 Jan 2021
Machine Hours	36956	35282	33296	29638
Oil Hours	0	0	0	0
Oil Changed	Not Changd	Changed	Not Changd	Not Changd
Sample Status	ABNORMAL	SEVERE	NORMAL	ABNORMAL

INTEGRITY METALS

835 EAST INDUSTRIAL
MORRISTOWN, IN
US 46161

Contact: HEIDI KERSTIENS
heidi@integrity-metals.com
T: (765)763-8000
F: (765)763-8001



Oil Condition

Visc @ 40°C	cSt	197	245	171	239
-------------	-----	-----	-----	-----	-----



Contamination

Water	%	0.619	1.80	NEG	0.224
Silicon	ppm	2	4	4	5
Sodium	ppm	2	5	4	16
Potassium	ppm	1	0	<1	5



Wear Metals

Iron	ppm	417	1137	97	1038
Copper	ppm	41	140	101	104
Lead	ppm	0	0	1	4
Tin	ppm	4	5	2	0
Aluminum	ppm	<1	0	<1	<1
Chromium	ppm	5	10	4	9
Molybdenum	ppm	0	<1	<1	0
Nickel	ppm	0	2	<1	2
Titanium	ppm	0	<1	0	<1
Silver	ppm	0	0	0	<1
Manganese	ppm	5	9	1	8
Vanadium	ppm	0	<1	0	0



Additives

Calcium	ppm	18	23	33	21
Magnesium	ppm	4	3	3	2
Zinc	ppm	17	37	29	35
Phosphorus	ppm	2290	2176	2360	1641
Barium	ppm	0	0	0	11
Boron	ppm	5	6	0	10

Diagnosis

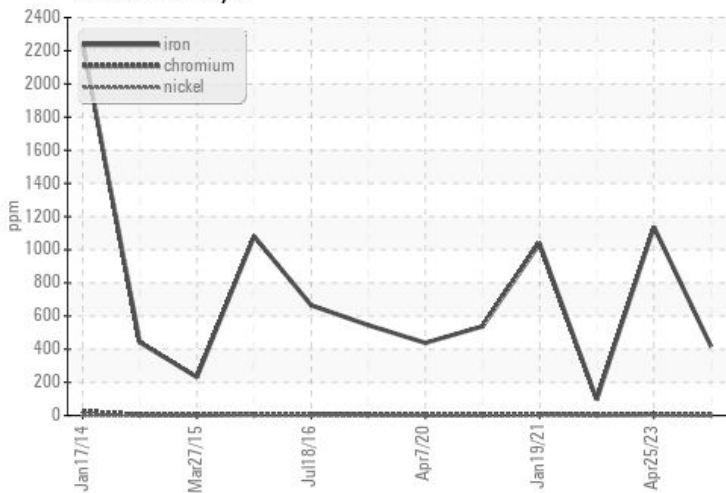
We advise that you check for the source of water entry. Resample at the next service interval to monitor. All component wear rates are normal. There is a moderate concentration of water present in the oil. The condition of the oil is acceptable for the time in service.

Depot: INTMORLH
Unique No: 11018142
Signed: Don Baldrige
Report Date: 09 May 2024

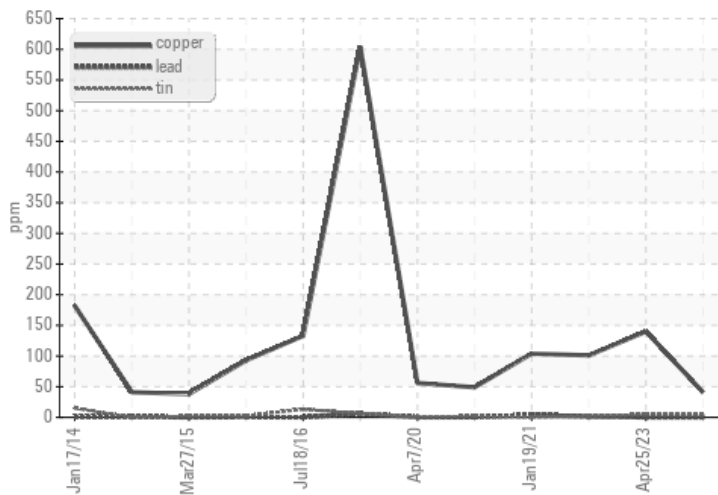


Graphs

Ferrous Alloys



Non-ferrous Metals



Viscosity @ 40°C

