

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR LH50 1203-77107 - Swing Drive

Sample No: LH0272547

Oil Type: CHEVRON DELO GEAR ESI OIL 80W90



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SAMPLE INFORMATION

Sample Number	LH0272547	LH0254748	LH0221018	LH0229283
Sample Date	28 Nov 2023	16 Jun 2023	22 Dec 2022	31 May 2022
Machine Hours	20037	18994	17940	16365
Oil Hours	0	0	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	ABNORMAL	NORMAL



OIL CONDITION

Visc @ 40°C	cSt	● 132	● 135	● 147	● 139
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CONTAMINATION

Water	%	● 0.197	NEG	● 0.118	NEG
Silicon	ppm	● 4	● 2	● 7	● 2
Sodium	ppm	● 0	● <1	● 0	● <1
Potassium	ppm	● <1	● <1	● 4	● 2



WEAR METALS

Iron	ppm	● 1200	● 1069	● 1627	● 834
Copper	ppm	● 187	● 325	● 331	● 217
Lead	ppm	● 0	● <1	● <1	● 0
Tin	ppm	● 12	● 27	● 29	● 11
Aluminum	ppm	● 0	● 0	● 4	● 2
Chromium	ppm	● 12	● 12	● 16	● 10
Molybdenum	ppm	● 0	● <1	● 2	● 2
Nickel	ppm	● 2	● 1	● 0	● 2
Titanium	ppm	1	0	<1	0
Silver	ppm	0	0	0	<1
Manganese	ppm	● 12	● 6	● 15	● 8
Vanadium	ppm	0	0	0	0



ADDITIVES

Calcium	ppm	● 98	● 48	● 158	● 10
Magnesium	ppm	● 16	● 5	● 18	● 13
Zinc	ppm	● 61	● 61	● 65	● 52
Phosphorus	ppm	● 832	● 686	● 983	● 725
Barium	ppm	● 0	● 0	● 0	● 0
Boron	ppm	● 14	● 17	● 40	● 20

Diagnosis

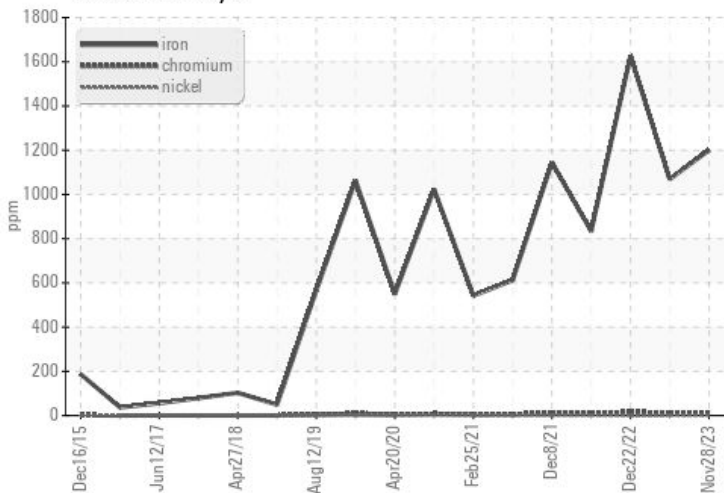
The oil change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor. All component wear rates are normal. The water content is negligible. No other contaminants were detected in the oil. The condition of the oil is acceptable for the time in service.

Depot: LEC0008
Unique No: 10781653
Signed: Sean Felton
Report Date: 14 Dec 2023

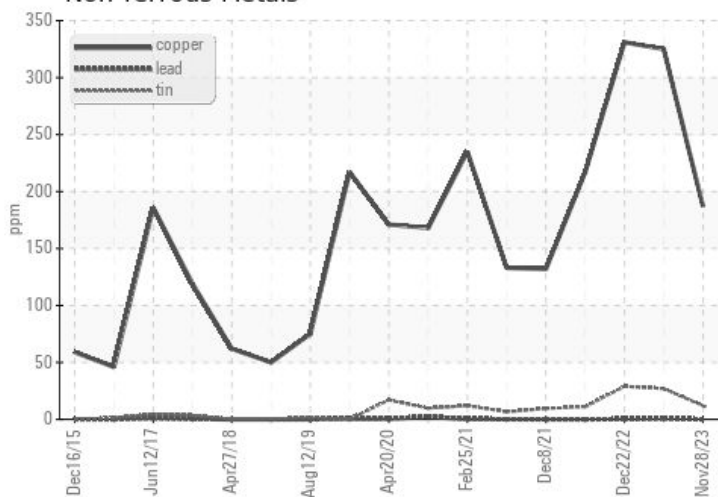


GRAPHS

Ferrous Alloys



Non-ferrous Metals



Viscosity @ 40°C

