

LIEBHERR

CONSTRUCTION EQUIPMENT



[EARTH BORING] LIEBHERR LB28 115607 - Auxiliary Winch

Sample No: LH0286850

Oil Type: GEAR OIL SAE 75W90



SAMPLE INFORMATION

Sample Number	LH0286850	LH0227328	LH0230906	LH0136079
Sample Date	13 Mar 2024	14 Dec 2022	05 Jul 2022	08 Jun 2020
Machine Hours	9668	8263	7685	5768
Oil Hours	0	0	0	0
Oil Changed	Changed	N/A	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

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OIL CONDITION

Visc @ 40°C	cSt	105	106	102	103
		●	●	●	●



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Silicon	ppm	● 3	1	● 8	2
Sodium	ppm	● <1	● <1	● 1	● 0
Potassium	ppm	● <1	● <1	● 1	● <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	● 10	● 2	● 37	● 6
Copper	ppm	● <1	● 0	● <1	<1
Lead	ppm	● 0	0	● 0	0
Tin	ppm	0	0	0	0
Aluminum	ppm	● <1	<1	● 1	<1
Chromium	ppm	● 0	● 0	0	● <1
Molybdenum	ppm	● 0	● 0	● <1	● <1
Nickel	ppm	● <1	● <1	0	● <1
Titanium	ppm	0	0	<1	<1
Silver	ppm	<1	0	0	0
Manganese	ppm	● 0	● 0	● <1	● 0
Vanadium	ppm	0	0	0	0



ADDITIVES

Calcium	ppm	● 32	● 15	● 21	● 15
Magnesium	ppm	● 3	● 2	● 2	● 4
Zinc	ppm	● 14	● 15	● 18	● 13
Phosphorus	ppm	● 1231	● 1275	● 1241	● 1325
Barium	ppm	● 0	● 0	● <1	● <1
Boron	ppm	● 305	● 295	● 317	● 333

Depot: LIERIC
 Unique No: 5747217
 Signed: Wes Davis
 Report Date: 14 Mar 2024



GRAPHS

