

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR LH50M 107 256-1216 - Diesel Engine

Sample No: LHMC141035

Oil Type: DIESEL ENGINE OIL SAE 5W30



DIEHL AND NUEMAIER
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SAMPLE INFORMATION

Sample Number	LHMC141035	LH0580084	LH05509386	LH05323671
Sample Date	17 Aug 2023	22 Mar 2023	03 Apr 2022	09 Aug 2021
Machine Hours	3752	3500	2974	2500
Oil Hours	752	3500	0	0
Oil Changed	N/A	Not Changd	Changed	N/A
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL



OIL CONDITION

Visc @ 100°C	cSt	● 10.1	● 10.3	● 10.5	● 10.9
Base Number (BN)	mg KOH/g	● 4.2	● 5.4	● 4.3	---
Oxidation (PA)	%	81	64	100	62



CONTAMINATION

Soot %	%	● 0.1	● 0.1	● 0.2	● 0.1
Nitration (PA)	%	93	82	111	81
Sulfation (PA)	%	70	62	79	57
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	● 9	● 9	● 9	● 9
Sodium	ppm	● 4	● <1	● 4	● 4
Potassium	ppm	● 4	● 4	● 5	● <1



WEAR METALS

Iron	ppm	● 11	● 7	● 14	● 6
Copper	ppm	● 5	● 4	● 8	● 5
Lead	ppm	● 6	● 4	● 11	● 8
Tin	ppm	● <1	● <1	● 1	● 0
Aluminum	ppm	● 5	● 2	● 2	● 1
Chromium	ppm	● <1	● <1	● <1	● <1
Molybdenum	ppm	● 10	11	● 3	● 2
Nickel	ppm	● 0	● 0	● 0	● 1
Titanium	ppm	● <1	● <1	● <1	● <1
Silver	ppm	● <1	● 0	0	<1
Manganese	ppm	● <1	● <1	● <1	● <1
Vanadium	ppm	0	0	<1	<1



ADDITIVES

Calcium	ppm	● 1325	● 1228	● 1446	● 1308
Magnesium	ppm	● 705	● 603	● 718	● 721
Zinc	ppm	● 865	● 801	● 822	● 764
Phosphorus	ppm	● 741	● 691	● 704	● 755
Barium	ppm	● 0	● 0	● 0	● <1
Boron	ppm	● 27	● 44	● 22	● 46

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 BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Depot: DIEDEF
 Unique No: 10619296
 Signed: Don Baldrige
 Report Date: 26 Aug 2023



GRAPHS

