

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR LH50 1216-139058 - Diesel Engine

Sample No: LHMC50265
 Oil Type: MOBIL 15W40



PACKAGING CORP. OF AMERICA
 N9090 COUNTY RD E
 TOMAHAWK, WI
 US 54487
 Contact: ROSS RICHARD
 rossrichards@packagingcorp.com
 T: (715)453-2131
 F: (715)453-0430



SAMPLE INFORMATION

Sample Number	LHMC50265	LHMC85084	LHMC85075	LHMC51529
Sample Date	19 Jan 2024	23 Nov 2023	11 Oct 2023	17 Aug 2023
Machine Hours	5606	5101	4598	4098
Oil Hours	500	500	500	500
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL



OIL CONDITION

Visc @ 100°C	cSt	13.1	12.8	12.7	13.0
Base Number (BN)	mg KOH/g	9.5	9.7	9.7	9.8
Oxidation (PA)	%	86	88	88	88



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.1	0.1	0.1	0.1
Nitration (PA)	%	64	66	68	68
Sulfation (PA)	%	59	60	60	60
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	8	9	9	12
Sodium	ppm	<1	0	3	3
Potassium	ppm	0	3	3	1



WEAR METALS

Iron	ppm	3	3	2	3
Copper	ppm	<1	1	<1	<1
Lead	ppm	0	<1	0	0
Tin	ppm	0	<1	0	<1
Aluminum	ppm	1	2	1	5
Chromium	ppm	<1	<1	0	<1
Molybdenum	ppm	45	41	39	41
Nickel	ppm	0	<1	0	0
Titanium	ppm	0	<1	0	0
Silver	ppm	0	0	0	0
Manganese	ppm	<1	<1	0	<1
Vanadium	ppm	0	0	0	0



ADDITIVES

Calcium	ppm	1619	1600	1621	1760
Magnesium	ppm	503	494	485	554
Zinc	ppm	923	894	855	961
Phosphorus	ppm	689	769	693	793
Barium	ppm	0	12	0	0
Boron	ppm	47	48	39	43

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: PACTOM
 Unique No: 10876678
 Signed: Wes Davis
 Report Date: 15 Feb 2024

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GRAPHS

