

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR A944 038569-194 - Diesel Engine

Sample No: LH0204205

Oil Type: DIESEL ENGINE OIL SAE 5W40



ALTER SCRAP
2400 NORTH 14TH AVENUE
WAUSAU, WI
US 54401
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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.



SAMPLE INFORMATION

Sample Number	LH0204205	LH0200251	LHMC155884	LHMC155771
Sample Date	26 Oct 2023	01 Apr 2022	04 May 2021	18 Apr 2020
Machine Hours	14477	13780	13326	12800
Oil Hours	500	500	0	0
Oil Changed	Changed	Changed	Changed	N/A
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL



OIL CONDITION

Visc @ 100°C	cSt	13.7	13.39	13.7	13.4
Base Number (BN)	mg KOH/g	5.9	9.0	---	---
Oxidation (PA)	%	62	63	83	71



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	1.4	1	2.2	0.5
Nitration (PA)	%	83	84	93	69
Sulfation (PA)	%	63	59	65	54
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	8	7	4	7
Sodium	ppm	4	3	3	3
Potassium	ppm	4	5	3	7



WEAR METALS

Iron	ppm	10	24	9	6
Copper	ppm	8	10	3	2
Lead	ppm	3	<1	2	<1
Tin	ppm	2	<1	<1	0
Aluminum	ppm	3	2	1	2
Chromium	ppm	<1	<1	<1	<1
Molybdenum	ppm	7	2	<1	2
Nickel	ppm	0	0	<1	0
Titanium	ppm	92	69	0	<1
Silver	ppm	0	0	<1	0
Manganese	ppm	<1	<1	<1	<1
Vanadium	ppm	2	<1	0	<1



ADDITIVES

Calcium	ppm	1326	1842	1395	1749
Magnesium	ppm	710	518	717	708
Zinc	ppm	1202	1176	842	866
Phosphorus	ppm	954	1020	714	725
Barium	ppm	0	0	0	0
Boron	ppm	51	119	75	126

Depot: ALTWAU
Unique No: 10833225
Signed: Wes Davis
Report Date: 17 Jan 2024



GRAPHS

