

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR R944CR944C - Diesel Engine

Sample No: LH0224643

Oil Type: CHEVRON DELO 400 LE 15W40



SAMPLE INFORMATION

Sample Number	LH0224643	LH0178472	LH0178481	LH0155578
Sample Date	19 Oct 2023	09 Apr 2021	03 Dec 2020	13 May 2020
Machine Hours	16000	15500	510	505
Oil Hours	500	500	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	ATTENTION	NORMAL	NORMAL

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OIL CONDITION

Visc @ 100°C	cSt	13.1	9.1	11.8	11.5
Oxidation (PA)	%	61	41	60	60



CONTAMINATION

Soot %	%	0.6	0.5	1.2	1.1
Nitration (PA)	%	57	53	68	86
Sulfation (PA)	%	63	49	62	71
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	0.4	<1.0	<1.0
Silicon	ppm	5	4	6	6
Sodium	ppm	2	3	2	2
Potassium	ppm	<1	1	2	2

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	15	11	11	8
Copper	ppm	4	7	8	7
Lead	ppm	1	2	4	3
Tin	ppm	0	<1	<1	<1
Aluminum	ppm	3	1	3	2
Chromium	ppm	<1	<1	<1	<1
Molybdenum	ppm	121	10	81	26
Nickel	ppm	0	<1	<1	0
Titanium	ppm	0	0	<1	<1
Silver	ppm	<1	<1	0	0
Manganese	ppm	0	<1	<1	<1
Vanadium	ppm	0	0	<1	<1



ADDITIVES

Calcium	ppm	1492	799	1316	1360
Magnesium	ppm	625	387	532	677
Zinc	ppm	803	625	865	815
Phosphorus	ppm	708	528	714	723
Barium	ppm	<1	<1	<1	<1
Boron	ppm	282	40	169	80

Depot: CRABEL
 Unique No: 5667952
 Signed: Kevin Marson
 Report Date: 23 Oct 2023



GRAPHS

