

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR R934C 29333 - Diesel Engine

Sample No: LH0178236

Oil Type: KENDALL 10W30



SAMPLE INFORMATION

Sample Number	LH0178236	LH0247112	LH0247108	LH0247118
Sample Date	11 Jul 2023	21 Jun 2023	15 May 2023	12 Apr 2023
Machine Hours	0	17030	16950	16889
Oil Hours	40	200	150	200
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

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OIL CONDITION

Visc @ 100°C	cSt	11.4	11.5	11.5	11.7
Oxidation (PA)	%	53	55	55	55



CONTAMINATION

Soot %	%	0.2	0.3	0.3	0.7
Nitration (PA)	%	41	43	45	50
Sulfation (PA)	%	52	52	54	56
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	4	3	4	6
Sodium	ppm	2	1	1	1
Potassium	ppm	<1	0	0	<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	3	4	4	8
Copper	ppm	1	2	<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	0
Molybdenum	ppm	62	62	63	65
Nickel	ppm	0	0	0	0
Titanium	ppm	<1	<1	<1	<1
Silver	ppm	0	0	0	0
Manganese	ppm	0	<1	<1	<1
Vanadium	ppm	0	0	0	0



ADDITIVES

Calcium	ppm	1682	1689	1729	1764
Magnesium	ppm	435	431	414	423
Zinc	ppm	1148	1151	1115	1136
Phosphorus	ppm	1027	1021	1023	1030
Barium	ppm	0	0	0	0
Boron	ppm	121	112	113	109

Depot: DOMBUR

Unique No: 5607370

Signed: Wes Davis

Report Date: 17 Jul 2023



GRAPHS

