

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR LH50M 083859-1203 - Diesel Engine

Sample No: LH0278958

Oil Type: PETRO CANADA 10W30



SAMPLE INFORMATION

Sample Number	LH0278958	LH0251390	LH0247524	LH0234703
Sample Date	21 Jan 2024	18 Jan 2023	10 Nov 2022	21 Sep 2022
Machine Hours	12230	10073	9475	8941
Oil Hours	0	0	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	ABNORMAL	NORMAL	NORMAL

RAM IRON AND METAL

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OIL CONDITION

Visc @ 100°C	cSt	12.2	13.4	14.3	14.4
Oxidation (PA)	%	95	92	76	82



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	1.9	2.7	1.9	2.8
Nitration (PA)	%	104	119	96	113
Sulfation (PA)	%	73	81	69	77
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	9	10	7	8
Sodium	ppm	5	5	3	6
Potassium	ppm	13	<1	0	3

Diagnosis

Resample at the next service interval to monitor. All component wear rates are normal. Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. 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	34	38	23	35
Copper	ppm	39	33	4	11
Lead	ppm	2	6	1	3
Tin	ppm	2	2	<1	1
Aluminum	ppm	9	5	2	3
Chromium	ppm	1	1	<1	1
Molybdenum	ppm	43	58	55	60
Nickel	ppm	<1	<1	0	0
Titanium	ppm	0	<1	<1	<1
Silver	ppm	0	0	0	0
Manganese	ppm	<1	<1	<1	<1
Vanadium	ppm	0	0	0	0



ADDITIVES

Calcium	ppm	1745	987	1197	1089
Magnesium	ppm	546	1029	876	977
Zinc	ppm	901	1175	1143	1161
Phosphorus	ppm	767	963	1009	987
Barium	ppm	2	2	0	0
Boron	ppm	14	11	6	2

Depot: RAMTOR
 Unique No: 5711329
 Signed: Wes Davis
 Report Date: 23 Jan 2024



GRAPHS

