

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR L538 036624-1268 - Diesel Engine

Sample No: LH

Oil Type: PETRO CANADA SUPREME 5W30



SAMPLE INFORMATION

Sample Number	LH	LH0261114	LHMC125263	LHMC101614
Sample Date	22 Sep 2023	06 Sep 2023	17 Apr 2018	30 Mar 2016
Machine Hours	7106	2104	4025	0
Oil Hours	0	0	0	0
Oil Changed	Changed	Not Changd	N/A	N/A
Sample Status	NORMAL	SEVERE	NORMAL	ABNORMAL

JON M HALL COMPANY
 1920 BOOTHE CIRCLE
 LONGWOOD, FL
 US 32750
 Contact: SERVICE MANAGER



OIL CONDITION

Visc @ 100°C	cSt	14.5	6.9	12.72	12.1
Oxidation (PA)	%	51	46	52	68

T:
F:



CONTAMINATION

Soot %	%	0	0	0.3	0.3
Nitration (PA)	%	38	67	58	75
Sulfation (PA)	%	49	51	50	58
Glycol	%	NEG	NEG	NEG	0.0
Fuel	%	1.7	20.9	<1.0	<1.0
Silicon	ppm	4	6	5	12
Sodium	ppm	4	9	4	7
Potassium	ppm	2	11	5	31

Diagnosis

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time. All component wear rates are normal. Light fuel dilution occurring. No other contaminants were detected in the oil. Viscosity of sample indicates oil is within SAE 40 range, advise investigate. The condition of the oil is acceptable for the time in service.



WEAR METALS

Iron	ppm	7	51	17	57
Copper	ppm	<1	3	2	263
Lead	ppm	<1	1	7	7
Tin	ppm	0	0	0	0
Aluminum	ppm	1	8	4	17
Chromium	ppm	0	2	<1	1
Molybdenum	ppm	55	8	115	174
Nickel	ppm	0	<1	<1	1
Titanium	ppm	0	<1	<1	<1
Silver	ppm	<1	0	0	0
Manganese	ppm	0	<1	<1	3
Vanadium	ppm	0	0	0	0



ADDITIVES

Calcium	ppm	1031	1080	1386	1432
Magnesium	ppm	929	506	498	636
Zinc	ppm	1122	625	826	981
Phosphorus	ppm	959	586	718	845
Barium	ppm	0	0	0	<1
Boron	ppm	5	71	164	117

Depot: JONLONLH
 Unique No: 5645944
 Signed: Bill Quesnel
 Report Date: 26 Sep 2023



GRAPHS

