

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR L566 025731-460 - Diesel Engine

Sample No: LHMC89108

Oil Type: PETRO CANADA 15W40



SAMPLE INFORMATION

Sample Number	LHMC89108	LHMC87126	LHMC87951	LHMC74414
Sample Date	13 Feb 2014	11 Dec 2013	10 Oct 2013	09 Sep 2013
Machine Hours	0	5917	5518	5291
Oil Hours	500	399	448	250
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

LIEBHERR EQUIPMENT SOURCE

4100 CHESTNUT AVENUE
NEWPORT NEWS, VA
US 23607

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OIL CONDITION

Visc @ 100°C	cSt	13.26	14.11	13.51	14.74
Oxidation (PA)	%	36	44	44	36



CONTAMINATION

Soot %	%	0.3	0.8	0.7	0.4
Nitration (PA)	%	33	42	50	33
Sulfation (PA)	%	42	47	44	42
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	6	6	8	6
Sodium	ppm	3	3	4	3
Potassium	ppm	2	<1	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 component. The condition of the oil is acceptable for the time in service.



WEAR METALS

Iron	ppm	6	15	9	7
Copper	ppm	2	3	2	2
Lead	ppm	2	1	2	0
Tin	ppm	0	<1	0	0
Aluminum	ppm	4	2	1	2
Chromium	ppm	<1	<1	<1	<1
Molybdenum	ppm	8	15	31	2
Nickel	ppm	0	<1	0	<1
Titanium	ppm	<1	0	<1	<1
Silver	ppm	<1	0	<1	0
Manganese	ppm	<1	<1	<1	<1
Vanadium	ppm	<1	0	0	0



ADDITIVES

Calcium	ppm	1871	2209	1526	2146
Magnesium	ppm	34	141	652	29
Zinc	ppm	948	1129	1292	1070
Phosphorus	ppm	836	1030	1074	937
Barium	ppm	0	0	0	0
Boron	ppm	20	24	<1	1

Depot: LIEBHERRUS

Unique No: 6545465

Signed: Elizabeth Valachovic

Report Date: 04 Mar 2014



GRAPHS

