

LIEBHERR

CONSTRUCTION EQUIPMENT



[REMAN] LIEBHERR A954B 015423-714 - Diesel Engine

Sample No: LH06117615

Oil Type: DIESEL ENGINE OIL SAE 5W40



SAMPLE INFORMATION

Sample Number	LH06117615	LH0257973	LHMC67825	LH0086524
Sample Date	19 Feb 2024	01 May 2023	30 Dec 2014	20 Nov 2014
Machine Hours	30986	1032	12202	11977
Oil Hours	124	0	250	0
Oil Changed	Not Changd	N/A	Changed	Not Changd
Sample Status	SEVERE	SEVERE	NORMAL	NORMAL

TUBE CITY IMS

300 STEEL MILL RD
DARLINGTON, SC
US 29540

Contact: GEORGE HENDERSON
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OIL CONDITION

Visc @ 100°C	cSt	12.3	3.6	14.21	14.2
Base Number (BN)	mg KOH/g	13.7	11.5	---	---
Oxidation (PA)	%	66	41	56	61



CONTAMINATION

Water	%	0.103	NEG	NEG	NEG
Soot %	%	0.4	0.5	0.2	0.1
Nitration (PA)	%	85	76	50	57
Sulfation (PA)	%	57	39	47	57
Glycol	%	0.12	NEG	NEG	NEG
Fuel	%	0.7	60.5	<1.0	<1.0
Silicon	ppm	30	18	6	14
Sodium	ppm	526	52	16	28
Potassium	ppm	588	39	3	0



WEAR METALS

Iron	ppm	67	45	16	20
Copper	ppm	155	33	5	4
Lead	ppm	80	0	1	1
Tin	ppm	6	0	0	<1
Aluminum	ppm	14	10	2	4
Chromium	ppm	4	7	1	1
Molybdenum	ppm	117	27	42	36
Nickel	ppm	0	0	1	<1
Titanium	ppm	<1	0	<1	<1
Silver	ppm	<1	0	0	0
Manganese	ppm	3	2	<1	<1
Vanadium	ppm	0	0	0	0



ADDITIVES

Calcium	ppm	1240	704	1449	1431
Magnesium	ppm	819	459	810	614
Zinc	ppm	1136	594	1075	1024
Phosphorus	ppm	995	489	940	894
Barium	ppm	12	0	0	19
Boron	ppm	17	25	45	53

Diagnosis

We advise that you check for the source of the coolant leak. Check for low coolant level. We recommend that you drain the oil and perform a filter service on this component if not already done. We recommend an early resample to monitor this condition. Moderate concentration of visible metal present. Bearing and/or bushing wear is indicated. Sodium and/or potassium levels are high. Test for glycol is positive. Fuel content negligible. There is a light concentration of water present in the oil. The oil is no longer serviceable due to the presence of contaminants.

Depot: TUBDAR
Unique No: 10926448
Signed: Jonathan Hester
Report Date: 19 Mar 2024



GRAPHS

