

LIEBHERR

CONSTRUCTION EQUIPMENT



2021.14.0530 - Diesel Engine

Sample No: LH0277662

Oil Type: MOBIL 1 FS 0W40



SAMPLE INFORMATION

Sample Number	LH0277662	---	---	---
Sample Date	28 Nov 2023	---	---	---
Machine Hours	0	---	---	---
Oil Hours	0	---	---	---
Oil Changed	N/A	---	---	---
Sample Status	ABNORMAL	---	---	---

LIEBHERR CANADA LTD. - REMAN
 1015 SUTTON DRIVE
 BURLINGTON, ON
 CA L7L 5Z8
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OIL CONDITION

Visc @ 100°C	cSt	13.8	---	---	---
Oxidation (PA)	%	67	---	---	---



CONTAMINATION

Water	%	0.325	---	---	---
Soot %	%	0	---	---	---
Nitration (PA)	%	63	---	---	---
Sulfation (PA)	%	53	---	---	---
Glycol	%	0.0	---	---	---
Fuel	%	<1.0	---	---	---
Silicon	ppm	31	---	---	---
Sodium	ppm	221	---	---	---
Potassium	ppm	265	---	---	---



WEAR METALS

Iron	ppm	55	---	---	---
Copper	ppm	243	---	---	---
Lead	ppm	49	---	---	---
Tin	ppm	3	---	---	---
Aluminum	ppm	14	---	---	---
Chromium	ppm	1	---	---	---
Molybdenum	ppm	5	---	---	---
Nickel	ppm	0	---	---	---
Titanium	ppm	0	---	---	---
Silver	ppm	<1	---	---	---
Manganese	ppm	2	---	---	---
Vanadium	ppm	0	---	---	---



ADDITIVES

Calcium	ppm	1931	---	---	---
Magnesium	ppm	119	---	---	---
Zinc	ppm	958	---	---	---
Phosphorus	ppm	876	---	---	---
Barium	ppm	2	---	---	---
Boron	ppm	11	---	---	---

Diagnosis

Check for low coolant level. We advise that you check for the source of water entry. We recommend that you drain the oil from the component if this has not already been done. Confirm the source of the lubricant being utilized for top-up/fill. We recommend an early resample to monitor this condition. Lead ppm levels are abnormal. Bearing wear is indicated. Water treatment chemicals present, indicating slow coolant leak. There is a light concentration of water present in the oil. Test for glycol is negative. Additive levels indicate the addition of a different brand, or type of oil. The oil is no longer serviceable as a result of the abnormal and/or severe wear. The condition of the oil is acceptable for the time in service (see recommendation).

Depot: REMAN
 Unique No: 5684673
 Signed: Kevin Marson
 Report Date: 30 Nov 2023



GRAPHS

