



2021.16.0875 - Diesel Engine

Sample No: LH0274335

Oil Type:

{unknown}

SAMPLE INFORMATION

Sample Number	LH0274335	 	
Sample Date	08 Feb 2024	 	
Machine Hours	0	 	
Oil Hours	0	 	
Oil Changed	N/A	 	
Sample Status	SEVERE	 	

30.9

185

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OIL CONDITION Visc @ 100°C cSt

%

Oxidation (PA)

Water	%	NEG	 	
Soot %	%	0.4	 	
Nitration (PA)	%	388	 	
Sulfation (PA)	%	0	 	
Glycol	%	● >.70	 	
Fuel	%	<1.0	 	
Silicon	ppm	0 44	 	
Sodium	ppm	0 2071	 	
Potassium	ppm	<u> </u>	 	

WEAR METALS

Iron	ppm	0 26	 	
Copper	ppm	0 181	 	
Lead	ppm	09	 	
Tin	ppm	01	 	
Aluminum	ppm	08	 	
Chromium	ppm	○ <1	 	
Molybdenum	ppm	248	 	
Nickel	ppm	01	 	
Titanium	ppm	0	 	
Silver	ppm	0 🔘	 	
Manganese	ppm	2	 	
Vanadium	ppm	0	 	

ADDITIVES					
Calcium	ppm	973			
Magnesium	ppm	622			
Zinc	ppm	0 751			
Phosphorus	ppm	688			
Barium	ppm	3			
Boron	ppm	520			

LIEBHERR CANADA LTD. - REMAN 1015 SUTTON DRIVE BURLINGTON, ON CA L7L 5Z8 Contact: Morteza Mahmoudi

morteza.mahmoudi@liebherr.com T: (905)319-9222 F: (905)319-6622

Diagnosis

We advise that you check for the source of the coolant leak. We recommend that you drain the oil from the component if this has not already been done. We advise that you flush the component thoroughly before re-filling with oil. We recommend an early resample to monitor this condition. Please specify the brand, type, and viscosity of the oil on your next sample.Copper ppm levels are noted. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core). All other component wear rates are normal. Test for glycol is positive. There is a high concentration of glycol present in the oil. There is a moderate concentration of water present in the oil. The oil is no longer serviceable due to the presence of contaminants.

Depot: REMAN Unique No: 5723696 Signed: Kevin Marson **Report Date:** 12 Feb 2024

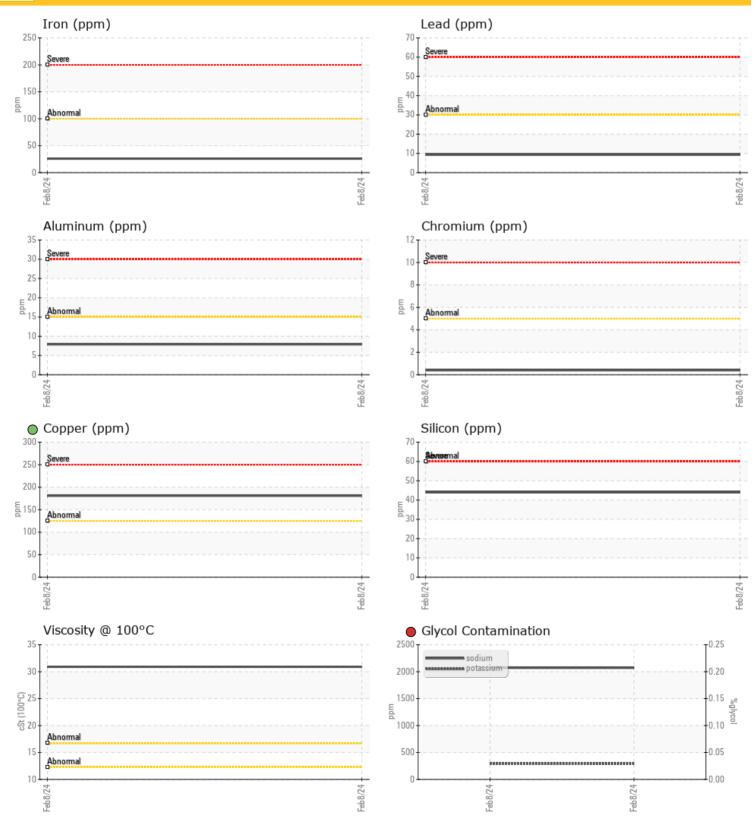
Contact/Location: Morteza Mahmoudi - REMAN

CONSTRUCTION EQUIPMENT



GRAPHS

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Contact/Location: Morteza Mahmoudi - REMAN