

LIEBHERR

CONSTRUCTION EQUIPMENT



C23.03.90055 - Diesel Engine

Sample No: LH0270459

Oil Type: SAE 5W30



SAMPLE INFORMATION

Sample Number	LH0270459	---	---	---
Sample Date	09 Oct 2023	---	---	---
Machine Hours	19308	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Not Chngd	---	---	---
Sample Status	SEVERE	---	---	---

LIEBHERR CANADA LTD. - REMAN
 1015 SUTTON DRIVE
 BURLINGTON, ON
 CA L7L 5Z8
 Contact: Jeff Carter
 jeff.carter@liebherr.com
 T: (905)319-9222
 F: (905)319-6622



OIL CONDITION

Visc @ 100°C	cSt	11.6	---	---	---
Oxidation (PA)	%	39	---	---	---



CONTAMINATION

Soot %	%	0	---	---	---
Nitration (PA)	%	81	---	---	---
Sulfation (PA)	%	39	---	---	---
Glycol	%	0.403	---	---	---
Fuel	%	<1.0	---	---	---
Silicon	ppm	9	---	---	---
Sodium	ppm	8	---	---	---
Potassium	ppm	11	---	---	---

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. All 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. Free water present. The oil is no longer serviceable due to the presence of contaminants.



WEAR METALS

Iron	ppm	5	---	---	---
Copper	ppm	3	---	---	---
Lead	ppm	<1	---	---	---
Tin	ppm	0	---	---	---
Aluminum	ppm	3	---	---	---
Chromium	ppm	0	---	---	---
Molybdenum	ppm	18	---	---	---
Nickel	ppm	0	---	---	---
Titanium	ppm	0	---	---	---
Silver	ppm	<1	---	---	---
Manganese	ppm	0	---	---	---
Vanadium	ppm	0	---	---	---



ADDITIVES

Calcium	ppm	4189	---	---	---
Magnesium	ppm	87	---	---	---
Zinc	ppm	1177	---	---	---
Phosphorus	ppm	1042	---	---	---
Barium	ppm	2	---	---	---
Boron	ppm	228	---	---	---

Depot: REMAN
Unique No: 5667973
Signed: Kevin Marson
Report Date: 23 Oct 2023



GRAPHS

