

LIEBHERR

CONSTRUCTION EQUIPMENT



117010 - Diesel Engine

Sample No: LH0274469

Oil Type: SAE 5W40



SAMPLE INFORMATION

Sample Number	LH0274469	---	---	---
Sample Date	26 Jul 2023	---	---	---
Machine Hours	3035	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Changed	---	---	---
Sample Status	NORMAL	---	---	---

LIEBHERR CANADA LTD.
 1015 SUTTON DRIVE
 BURLINGTON, ON
 CA L7L 5Z8
 Contact: Joseph Rodgers
 joseph.rodgers@liebherr.com
 T: (905)319-9222
 F: (905)319-6622



OIL CONDITION

Visc @ 100°C	cSt	12.2	---	---	---
Oxidation (PA)	%	104	---	---	---



CONTAMINATION

Soot %	%	0.1	---	---	---
Nitration (PA)	%	102	---	---	---
Sulfation (PA)	%	72	---	---	---
Glycol	%	NEG	---	---	---
Fuel	%	1.8	---	---	---
Silicon	ppm	6	---	---	---
Sodium	ppm	9	---	---	---
Potassium	ppm	96	---	---	---



WEAR METALS

Iron	ppm	16	---	---	---
Copper	ppm	3	---	---	---
Lead	ppm	<1	---	---	---
Tin	ppm	<1	---	---	---
Aluminum	ppm	39	---	---	---
Chromium	ppm	1	---	---	---
Molybdenum	ppm	61	---	---	---
Nickel	ppm	0	---	---	---
Titanium	ppm	0	---	---	---
Silver	ppm	<1	---	---	---
Manganese	ppm	<1	---	---	---
Vanadium	ppm	0	---	---	---



ADDITIVES

Calcium	ppm	852	---	---	---
Magnesium	ppm	1176	---	---	---
Zinc	ppm	1268	---	---	---
Phosphorus	ppm	1113	---	---	---
Barium	ppm	<1	---	---	---
Boron	ppm	17	---	---	---

Diagnosis

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time. All component wear rates are normal. Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. Light fuel dilution occurring. The water content is negligible. No other contaminants were detected in the oil. The condition of the oil is acceptable for the time in service.

Depot: LIEMIS
 Unique No: 5619233
 Signed: Wes Davis
 Report Date: 09 Aug 2023



GRAPHS

