

LIEBHERR

CONSTRUCTION EQUIPMENT



2013.04.2783 - Diesel Engine

Sample No: LH0285146

Oil Type: PETRO CANADA SUPREME SYNTHETIC 0W40



SAMPLE INFORMATION

Sample Number	LH0285146	LH0285145	---	---
Sample Date	02 Mar 2024	19 Feb 2024	---	---
Machine Hours	19680	50	---	---
Oil Hours	0	0	---	---
Oil Changed	Changed	N/A	---	---
Sample Status	NORMAL	ABNORMAL	---	---

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



OIL CONDITION

Visc @ 100°C	cSt	12.1	11.9	---	---
Oxidation (PA)	%	69	65	---	---



CONTAMINATION

Water	%	NEG	NEG	---	---
Soot %	%	0.1	0	---	---
Nitration (PA)	%	67	55	---	---
Sulfation (PA)	%	55	53	---	---
Glycol	%	NEG	0.0	---	---
Fuel	%	1.1	0.9	---	---
Silicon	ppm	10	9	---	---
Sodium	ppm	22	20	---	---
Potassium	ppm	3	1	---	---

Diagnosis

The oil change at the time of sampling has been noted. Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor. No other corrective action is recommended at this time. All component wear rates are normal. Light fuel dilution occurring. No other contaminants were detected in the oil. Additive levels indicate the addition of a different brand, or type of oil. The condition of the oil is acceptable for the time in service.



WEAR METALS

Iron	ppm	16	8	---	---
Copper	ppm	34	15	---	---
Lead	ppm	9	6	---	---
Tin	ppm	4	1	---	---
Aluminum	ppm	2	2	---	---
Chromium	ppm	<1	<1	---	---
Molybdenum	ppm	56	57	---	---
Nickel	ppm	<1	<1	---	---
Titanium	ppm	0	0	---	---
Silver	ppm	<1	<1	---	---
Manganese	ppm	<1	<1	---	---
Vanadium	ppm	0	0	---	---



ADDITIVES

Calcium	ppm	859	859	---	---
Magnesium	ppm	1083	1089	---	---
Zinc	ppm	1171	1163	---	---
Phosphorus	ppm	1023	1041	---	---
Barium	ppm	34	19	---	---
Boron	ppm	46	55	---	---

Depot: REMAN
 Unique No: 5746413
 Signed: Kevin Marson
 Report Date: 13 Mar 2024



GRAPHS

