

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### [EARTH BORING [591174]] 117032 - Diesel Engine

Sample No: LH0281547

Oil Type: PETRO CANADA SUPREME 5W30



#### SAMPLE INFORMATION

Sample Number	LH0281547	LH0247292	---	---
Sample Date	28 Dec 2023	27 Jun 2023	---	---
Machine Hours	999	474	---	---
Oil Hours	0	0	---	---
Oil Changed	N/A	N/A	---	---
Sample Status	NORMAL	NORMAL	---	---

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#### OIL CONDITION

Visc @ 40°C	cSt	---	70.5	---	---
Visc @ 100°C	cSt	11.9	12.0	---	---
Viscosity Index (VI)	Scale	---	167	---	---
Oxidation (PA)	%	221	197	---	---

#### Diagnosis

Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor. Metal levels are typical for a new component breaking in. 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. There is no indication of any contamination 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.



#### CONTAMINATION

Water	%	NEG	NEG	---	---
Soot %	%	0.1	0	---	---
Nitration (PA)	%	119	106	---	---
Sulfation (PA)	%	115	106	---	---
Glycol	%	NEG	NEG	---	---
Fuel	%	<1.0	<1.0	---	---
Silicon	ppm	9	8	---	---
Sodium	ppm	2	2	---	---
Potassium	ppm	203	133	---	---



#### WEAR METALS

Iron	ppm	39	20	---	---
Copper	ppm	53	49	---	---
Lead	ppm	14	2	---	---
Tin	ppm	2	1	---	---
Aluminum	ppm	58	40	---	---
Chromium	ppm	2	1	---	---
Molybdenum	ppm	42	40	---	---
Nickel	ppm	<1	<1	---	---
Titanium	ppm	0	<1	---	---
Silver	ppm	<1	<1	---	---
Manganese	ppm	2	2	---	---
Vanadium	ppm	0	0	---	---



#### ADDITIVES

Calcium	ppm	1468	1436	---	---
Magnesium	ppm	825	805	---	---
Zinc	ppm	843	825	---	---
Phosphorus	ppm	674	698	---	---
Barium	ppm	19	15	---	---
Boron	ppm	64	77	---	---

Depot: LIEMIS  
 Unique No: 5707281  
 Signed: Kevin Marson  
 Report Date: 03 Jan 2024



### GRAPHS

