

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### C12.02.90047 - Diesel Engine

Sample No: LH0274684

Oil Type: CONOCO PHILLIPS GUARDOL ECT 15W40



#### SAMPLE INFORMATION

Sample Number	LH0274684	---	---	---
Sample Date	16 Sep 2023	---	---	---
Machine Hours	45472	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Changed	---	---	---
Sample Status	ABNORMAL	---	---	---

**LIEBHERR CANADA LTD. - REMAN**  
 1015 SUTTON DRIVE  
 BURLINGTON, ON  
 CA L7L 5Z8  
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#### OIL CONDITION

Visc @ 100°C	cSt	12.4	---	---	---
Oxidation (PA)	%	47	---	---	---



#### CONTAMINATION

Soot %	%	0	---	---	---
Nitration (PA)	%	42	---	---	---
Sulfation (PA)	%	49	---	---	---
Glycol	%	NEG	---	---	---
Fuel	%	0.9	---	---	---
Silicon	ppm	10	---	---	---
Sodium	ppm	22	---	---	---
Potassium	ppm	2	---	---	---

#### Diagnosis

No corrective action is recommended at this time. Resample at the next service interval to monitor. All component wear rates are normal. Fuel content negligible. There is no indication of any contamination in the oil. Viscosity of sample indicates oil is within SAE 30 range, advise investigate. The condition of the oil is acceptable for the time in service.



#### WEAR METALS

Iron	ppm	13	---	---	---
Copper	ppm	4	---	---	---
Lead	ppm	2	---	---	---
Tin	ppm	<1	---	---	---
Aluminum	ppm	1	---	---	---
Chromium	ppm	<1	---	---	---
Molybdenum	ppm	37	---	---	---
Nickel	ppm	0	---	---	---
Titanium	ppm	2	---	---	---
Silver	ppm	<1	---	---	---
Manganese	ppm	<1	---	---	---
Vanadium	ppm	0	---	---	---



#### ADDITIVES

Calcium	ppm	1591	---	---	---
Magnesium	ppm	556	---	---	---
Zinc	ppm	1108	---	---	---
Phosphorus	ppm	965	---	---	---
Barium	ppm	34	---	---	---
Boron	ppm	41	---	---	---

Depot: REMAN  
 Unique No: 5655654  
 Signed: Kevin Marson  
 Report Date: 05 Oct 2023



### GRAPHS

