

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### LIEBHERR LH50M 120737-1216 - Diesel Engine

Sample No: LHMC108372

Oil Type: CHEVRON URSA SUPER PLUS EC 15W40



#### STAIMAN RECYCLING

201 HEPBURN ST  
WILLIAMSPORT, PA  
US 17701

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#### SAMPLE INFORMATION

Sample Number	LHMC108372	LHMC104641	---	---
Sample Date	24 Oct 2020	04 Sep 2020	---	---
Machine Hours	681	308	---	---
Oil Hours	373	308	---	---
Oil Changed	Changed	Changed	---	---
Sample Status	ABNORMAL	ABNORMAL	---	---



#### OIL CONDITION

Visc @ 100°C	cSt	12.8	12.1	---	---
Oxidation (PA)	%	76	173	---	---



#### CONTAMINATION

Soot %	%	0.1	0.1	---	---
Nitration (PA)	%	65	82	---	---
Sulfation (PA)	%	63	100	---	---
Glycol	%	NEG	NEG	---	---
Fuel	%	<1.0	1.0	---	---
Silicon	ppm	8	9	---	---
Sodium	ppm	2	2	---	---
Potassium	ppm	3	3	---	---



#### WEAR METALS

Iron	ppm	5	8	---	---
Copper	ppm	236	235	---	---
Lead	ppm	0	4	---	---
Tin	ppm	0	1	---	---
Aluminum	ppm	2	1	---	---
Chromium	ppm	<1	<1	---	---
Molybdenum	ppm	90	51	---	---
Nickel	ppm	<1	0	---	---
Titanium	ppm	<1	<1	---	---
Silver	ppm	<1	<1	---	---
Manganese	ppm	<1	2	---	---
Vanadium	ppm	0	0	---	---



#### ADDITIVES

Calcium	ppm	1379	1408	---	---
Magnesium	ppm	510	815	---	---
Zinc	ppm	862	926	---	---
Phosphorus	ppm	880	744	---	---
Barium	ppm	3	25	---	---
Boron	ppm	269	107	---	---

#### Diagnosis

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. The copper level is abnormal. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core). All other metal levels are typical for a new component breaking in. There is no indication of any contamination in the oil. The condition of the oil is acceptable for the time in service.

Depot: STAWILLH

Unique No: 9235504

Signed: Don Baldrige

Report Date: 03 Nov 2020



### GRAPHS

