

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### LIEBHERR LH50M 118290-1216 - Diesel Engine

Sample No: LH0260115

Oil Type: DIESEL ENGINE OIL SAE 40



**Weyerhaeuser**  
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 Kenora, ON  
 CA P9N 3X8  
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#### SAMPLE INFORMATION

Sample Number	LH0260115	LH0158796	LH0158908	LH0158904
Sample Date	11 Aug 2023	23 Oct 2021	09 Oct 2021	07 Sep 2021
Machine Hours	19366	1980	9990	9490
Oil Hours	0	0	0	0
Oil Changed	Not Chngd	Changed	Changed	Changed
Sample Status	SEVERE	NORMAL	NORMAL	NORMAL



#### OIL CONDITION

Visc @ 100°C	cSt	4.3	13.7	13.5	13.7
Oxidation (PA)	%	34	57	53	53



#### CONTAMINATION

Soot %	%	0	0	0	0
Nitration (PA)	%	51	75	63	62
Sulfation (PA)	%	40	59	46	46
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	49	<1.0	<1.0	<1.0
Silicon	ppm	11	2	3	3
Sodium	ppm	2	1	4	2
Potassium	ppm	<1	<1	1	<1



#### WEAR METALS

Iron	ppm	23	2	2	2
Copper	ppm	<1	111	<1	1
Lead	ppm	<1	3	1	<1
Tin	ppm	0	0	<1	<1
Aluminum	ppm	2	2	2	2
Chromium	ppm	4	<1	0	0
Molybdenum	ppm	2	0	<1	<1
Nickel	ppm	<1	0	<1	<1
Titanium	ppm	0	<1	0	0
Silver	ppm	<1	<1	<1	<1
Manganese	ppm	<1	<1	0	0
Vanadium	ppm	<1	0	0	0



#### ADDITIVES

Calcium	ppm	1158	2214	2074	2300
Magnesium	ppm	20	8	13	11
Zinc	ppm	562	1113	1062	1186
Phosphorus	ppm	522	976	928	1057
Barium	ppm	<1	<1	0	0
Boron	ppm	2	1	1	3

#### Diagnosis

We advise that you check the fuel injection system. We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition. All component wear rates are normal. There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

Depot: WEY100KEN  
 Unique No: 5629144  
 Signed: Kevin Marson  
 Report Date: 17 Aug 2023

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### GRAPHS

