

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### LIEBHERR L586 1334-48253 - Diesel Engine

Sample No: LHMC102345

Oil Type: LIEBHERR MOTOROIL 5W30



#### SAMPLE INFORMATION

Sample Number	LHMC102345	LHMC102342	LHMC102334	LHMC102294
Sample Date	24 Nov 2020	29 Jul 2020	13 Mar 2020	24 May 2019
Machine Hours	5128	4056	2948	1010
Oil Hours	1000	1000	948	1010
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	ABNORMAL

**METAL X LLC**  
7300 STATE HIGHWAY 109  
DELTA, OH  
US 43515  
Contact: TIM WOZNY



#### OIL CONDITION

Visc @ 100°C	cSt	12.3	12.2	12.7	11.6
Oxidation (PA)	%	96	96	104	182

T: (419)874-6001  
F:



#### CONTAMINATION

Soot %	%	0.3	0.4	0.4	0.2
Nitration (PA)	%	100	103	96	94
Sulfation (PA)	%	65	69	67	102
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	4	23	10	12
Sodium	ppm	2	16	2	3
Potassium	ppm	<1	11	1	2

#### Diagnosis

Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The condition of the oil is acceptable for the time in service.



#### WEAR METALS

Iron	ppm	12	45	24	16
Copper	ppm	4	11	36	206
Lead	ppm	4	6	4	<1
Tin	ppm	<1	0	3	2
Aluminum	ppm	5	15	5	3
Chromium	ppm	<1	1	1	<1
Molybdenum	ppm	3	<1	4	38
Nickel	ppm	0	0	<1	<1
Titanium	ppm	<1	<1	0	<1
Silver	ppm	<1	<1	<1	0
Manganese	ppm	<1	1	1	3
Vanadium	ppm	0	<1	0	0



#### ADDITIVES

Calcium	ppm	1333	1468	1258	1655
Magnesium	ppm	824	704	839	830
Zinc	ppm	884	801	812	862
Phosphorus	ppm	706	698	692	660
Barium	ppm	0	<1	4	30
Boron	ppm	22	31	30	86

**Depot:** METDEL  
**Unique No:** 9309463  
**Signed:** Jonathan Hester  
**Report Date:** 06 Jan 2021



### GRAPHS

