

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### LIEBHERR L580 1414-56018 - Diesel Engine

Sample No: LH06077364

Oil Type: LIEBHERR MOTOROIL 5W30



#### SAMPLE INFORMATION

Sample Number	LH06077364	LH0158328	LH06027016	LH05999672
Sample Date	31 Jan 2024	13 Jan 2024	05 Dec 2023	05 Nov 2023
Machine Hours	15515	1000	0	0
Oil Hours	0	0	15017	14495
Oil Changed	Not Changd	N/A	Changed	Not Changd
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

**VERSO CORP - QUINNESEC MILL**  
W6791 US HWY 2  
QUINNESEC, MI  
US 49876  
Contact: ERIC LARSON  
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T:  
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#### OIL CONDITION

Visc @ 100°C	cSt	12.1	12.0	12.6	12.3
Base Number (BN)	mg KOH/g	13.7	15.0	12.1	12.8
Oxidation (PA)	%	66	50	89	77



#### CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.1	0.1	0.2	0.2
Nitration (PA)	%	133	108	157	144
Sulfation (PA)	%	53	46	67	61
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	7	8	9	8
Sodium	ppm	3	4	3	2
Potassium	ppm	0	0	0	0



#### WEAR METALS

Iron	ppm	6	7	12	9
Copper	ppm	<1	<1	2	<1
Lead	ppm	2	<1	2	0
Tin	ppm	1	<1	2	<1
Aluminum	ppm	2	2	3	3
Chromium	ppm	<1	<1	<1	<1
Molybdenum	ppm	<1	2	1	0
Nickel	ppm	0	0	1	0
Titanium	ppm	<1	<1	0	<1
Silver	ppm	0	0	0	0
Manganese	ppm	<1	<1	0	<1
Vanadium	ppm	0	<1	<1	<1



#### ADDITIVES

Calcium	ppm	4475	4350	5013	5033
Magnesium	ppm	34	50	52	50
Zinc	ppm	1229	1245	1366	1411
Phosphorus	ppm	1090	1140	1101	1194
Barium	ppm	0	0	0	0
Boron	ppm	269	267	239	237

#### 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 BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Depot: VERQUI  
Unique No: 10859455  
Signed: Wes Davis  
Report Date: 02 Feb 2024

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### GRAPHS

