

# [[CLEVELAND CLIFFS]] LIEBHERR LH60M 119014-1217 - Diesel E

Sample No: LH0267592

Oil Type: DIESEL ENGINE OIL SAE 5W40

## SAMPLE INFORMATION

LH0267592

06 Nov 2023 1619

Changed NORMAL

500

Sample Number	
Sample Date	
Machine Hours	
Oil Hours	
Oil Changed	
Sample Status	

## OIL CONDITION

Visc @ 100°C	cSt	0 12.5				
Base Number (BN)	mg KOH/g	0 4.2				
Oxidation (PA)	%	82				

Water	%	NEG			
Soot %	%	0.1			
Nitration (PA)	%	85			
Sulfation (PA)	%	66			
Glycol	%	NEG			
Fuel	%	<1.0			
Silicon	ppm	9			
Sodium	ppm	02			
Potassium	ppm	0 11			

#### $\bigcirc$ WEAR METALS Iron ppm 09 Copper 0 55 ppm Lead 03 ppm Tin 0 <1 ppm Aluminum 2 ppm Chromium ○ <1 ppm Molybdenum ppm 0 13 Nickel ○ <1 ppm Titanium <mark>()</mark> <1 ppm Silver 0 0 ppm Manganese ppm ○ <1</p> Vanadium ppm 0

Calcium	ppm	1287			
Magnesium	ppm	695			
Zinc	ppm	808			
Phosphorus	ppm	0 721			
Barium	ppm	0 16			
Boron	ppm	0 34			
201011	pp	0			

#### FINKBINER EQUIPMENT CO.

15 W 400 N FRONTAGE RD BURR RIDGE, IL US 60527 Contact: DON FITZGERALD dfitzgerald@finkbiner.com T: (815)546-8991 F: (630)654-3792

## 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.



Contact/Location: DON FITZGERALD - LEC0033





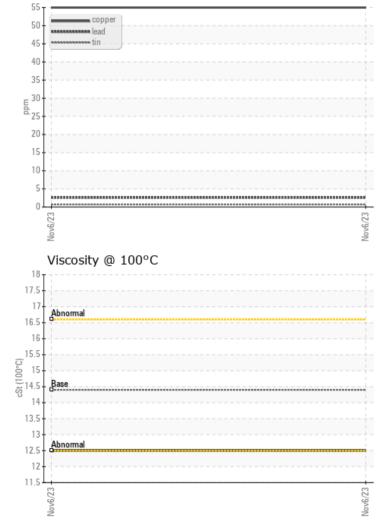
## Ferrous Alloys

GRAPHS

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## Non-ferrous Metals



#### Base Number 13.0-Abnormal 12.0 11.0 10.0 (<sup>b</sup>/HOX <sup>B</sup>.0 <sup>b</sup>/HOX <sup>B</sup>.0 <sup>c</sup>/HOX <sup>b</sup>/<sub>2</sub>.0 Base Base Number 6.0 Abnormal 5.0 4.0 3.0 2.0 1.0 0.0 Nov6/23 Nov6/23



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