

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### 123312-1216 - Diesel Engine

Sample No: LH0289601

Oil Type: DIESEL ENGINE OIL SAE 30



#### Sample Information

Sample Number	<b>LH0289601</b>	LH0270498	LH0251786	LH0242271
Sample Date	<b>16 Apr 2024</b>	23 Jul 2023	02 Mar 2023	14 Oct 2022
Machine Hours	<b>4318</b>	3278	2683	2145
Oil Hours	<b>0</b>	0	0	0
Oil Changed	<b>Changed</b>	Changed	Changed	Changed
Sample Status	<b>NORMAL</b>	NORMAL	ABNORMAL	NORMAL

**American Iron and Metal**  
 3518 DAVIS DRIVE  
 EAST GWILLIMBURY, ON  
 CA L0G 1E0  
 Contact: Service Manager



#### Oil Condition

Visc @ 100°C	cSt	<b>13.2</b>	13.0	11.4	10.9
Oxidation (PA)	%	<b>62</b>	64	101	84

T:  
F:



#### Contamination

Water	%	<b>NEG</b>	NEG	NEG	NEG
Soot %	%	<b>0</b>	0	0	0
Nitration (PA)	%	<b>66</b>	70	93	96
Sulfation (PA)	%	<b>52</b>	53	71	70
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>&lt;1.0</b>	<1.0	<1.0	1.3
Silicon	ppm	<b>5</b>	6	19	7
Sodium	ppm	<b>1</b>	2	6	3
Potassium	ppm	<b>0</b>	<1	2	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	<b>4</b>	4	30	7
Copper	ppm	<b>2</b>	4	47	48
Lead	ppm	<b>0</b>	<1	2	7
Tin	ppm	<b>0</b>	0	<1	<1
Aluminum	ppm	<b>&lt;1</b>	1	2	2
Chromium	ppm	<b>0</b>	<1	<1	0
Molybdenum	ppm	<b>57</b>	58	62	81
Nickel	ppm	<b>0</b>	0	<1	0
Titanium	ppm	<b>0</b>	<1	<1	7
Silver	ppm	<b>0</b>	<1	0	0
Manganese	ppm	<b>0</b>	<1	<1	<1
Vanadium	ppm	<b>0</b>	0	0	<1



#### Additives

Calcium	ppm	<b>1089</b>	1056	1027	2126
Magnesium	ppm	<b>969</b>	978	1182	212
Zinc	ppm	<b>1185</b>	1191	1292	1153
Phosphorus	ppm	<b>990</b>	1061	1118	1035
Barium	ppm	<b>&lt;1</b>	<1	<1	2
Boron	ppm	<b>2</b>	4	23	22

**Depot:** AIMEAS  
**Unique No:** 5762636  
**Signed:** Wes Davis  
**Report Date:** 17 Apr 2024



### Graphs

