



# CONSTRUCTION EQUIPMENT

## MACK 1M1AA13X5YW126177 - DIESEL ENGINE



**Sample No:** VCE250027  
**Oil Type:** MYSTIC 15W40  
**Job No:**



### SAMPLE INFORMATION

Sample Number	<b>VCE250027</b>	VCP246832	VCP188667	VC426573
Sample Date	<b>24 May 2023</b>	23 May 2019	26 Dec 2017	22 Oct 2015
Machine Hours	<b>419348</b>	402522	15395	14208
Oil Hours	<b>16826</b>	628	0	0
Oil Changed	<b>Changed</b>	Changed	Changed	N/A
Sample Status	<b>NORMAL</b>	NORMAL	NORMAL	NORMAL



### OIL CONDITION

Visc @ 100°C	cSt	<b>12.7</b>	12.6	12.75	13.22
Base Number (BN)	mg KOH/g	<b>7.2</b>	---	---	---
Oxidation (PA)	%	<b>94</b>	81	68	36



### CONTAMINATION

Soot %	%	<b>2.3</b>	0.8	1.1	0.8
Nitration (PA)	%	<b>113</b>	76	67	50
Sulfation (PA)	%	<b>75</b>	62	55	50
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>&lt;1.0</b>	<1.0	<1.0	<1.0
Silicon	ppm	<b>4</b>	3	3	2
Sodium	ppm	<b>9</b>	7	6	7
Potassium	ppm	<b>19</b>	20	0	8



### WEAR METALS

Iron	ppm	<b>62</b>	17	38	27
Copper	ppm	<b>7</b>	4	7	8
Lead	ppm	<b>28</b>	7	22	10
Tin	ppm	<b>&lt;1</b>	2	<1	9
Aluminum	ppm	<b>&lt;1</b>	1	<1	2
Chromium	ppm	<b>1</b>	<1	<1	<1
Molybdenum	ppm	<b>65</b>	53	46	43
Nickel	ppm	<b>0</b>	<1	<1	0
Titanium	ppm	<b>&lt;1</b>	<1	6	0
Silver	ppm	<b>0</b>	0	0	0
Manganese	ppm	<b>&lt;1</b>	<1	<1	<1
Vanadium	ppm	<b>0</b>	0	0	0



### ADDITIVES

Calcium	ppm	<b>1128</b>	1021	1199	1190
Magnesium	ppm	<b>988</b>	1010	807	814
Zinc	ppm	<b>1245</b>	1098	1153	1151
Phosphorus	ppm	<b>947</b>	938	813	906
Barium	ppm	<b>0</b>	0	0	0
Boron	ppm	<b>0</b>	2	7	0



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### 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:** LIPLIP  
**Unique No:** 10508398  
**Signed:** Wes Davis  
**Report Date:** 09 Jun 2023



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## GRAPHS

