



# CONSTRUCTION EQUIPMENT

## CATERPILLAR M-2 - DIESEL ENGINE



**Sample No:** VCP442923  
**Oil Type:** MOBIL DELVAC 1300 SUPER15W40  
**Job No:**



### SAMPLE INFORMATION

Sample Number	<b>VCP442923</b>	VCP408926	VCP403863	VCP405012
Sample Date	<b>21 Nov 2023</b>	25 Oct 2023	20 Apr 2023	17 Mar 2023
Machine Hours	<b>5984</b>	5892	5559	5508
Oil Hours	<b>92</b>	219	52	1
Oil Changed	<b>Changed</b>	Changed	Not Changd	Not Changd
Sample Status	<b>NORMAL</b>	NORMAL	MARGINAL	NORMAL

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### OIL CONDITION

Visc @ 100°C	cSt	<b>13.1</b>	12.7	12.2	13.6
Base Number (BN)	mg KOH/g	<b>10.1</b>	10.2	10.1	10.4
Oxidation (PA)	%	<b>76</b>	78	72	71

### 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.



### CONTAMINATION

Water	%	<b>NEG</b>	NEG	NEG	NEG
Soot %	%	<b>0.2</b>	0.4	0.1	0.1
Nitration (PA)	%	<b>44</b>	50	43	39
Sulfation (PA)	%	<b>59</b>	60	57	58
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>&lt;1.0</b>	<1.0	<b>3.7</b>	0.7
Silicon	ppm	<b>6</b>	23	5	8
Sodium	ppm	<b>2</b>	0	2	3
Potassium	ppm	<b>&lt;1</b>	2	0	2



### WEAR METALS

Iron	ppm	<b>&lt;1</b>	6	5	<1
Copper	ppm	<b>&lt;1</b>	1	<1	0
Lead	ppm	<b>0</b>	<1	0	0
Tin	ppm	<b>0</b>	<1	0	<1
Aluminum	ppm	<b>1</b>	2	1	1
Chromium	ppm	<b>0</b>	0	<1	<1
Molybdenum	ppm	<b>45</b>	40	41	40
Nickel	ppm	<b>0</b>	<1	0	0
Titanium	ppm	<b>0</b>	0	0	<1
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>1616</b>	1503	1685	1668
Magnesium	ppm	<b>539</b>	481	544	526
Zinc	ppm	<b>944</b>	857	899	917
Phosphorus	ppm	<b>716</b>	768	754	716
Barium	ppm	<b>0</b>	4	0	0
Boron	ppm	<b>59</b>	47	62	56

**Depot:** MARDIC  
**Unique No:** 10762491  
**Signed:** Wes Davis  
**Report Date:** 28 Nov 2023



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## VOLVO GRAPHS

