



# CONSTRUCTION EQUIPMENT

## MW0000320 FREIGHTLINER M2 JHJS0601 - DIESEL ENGINE



**Sample No:** VCP420896  
**Oil Type:** MOBIL 15W40  
**Job No:** MW0000320



### SAMPLE INFORMATION

Sample Number	<b>VCP420896</b>	VCP419411	VCP319486	VCP309737
Sample Date	<b>12 Dec 2023</b>	09 Jun 2023	13 Aug 2021	20 Apr 2021
Machine Hours	<b>60120</b>	4580	40364	34669
Oil Hours	<b>0</b>	0	0	0
Oil Changed	<b>Changed</b>	Changed	Changed	Changed
Sample Status	<b>NORMAL</b>	NORMAL	NORMAL	NORMAL

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### OIL CONDITION

Visc @ 100°C	cSt	<b>13.4</b>	13.3	13.0	12.9
Base Number (BN)	mg KOH/g	<b>7.0</b>	6.0	---	---
Oxidation (PA)	%	<b>77</b>	85	82	89

### 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 acceptable for the time in service.



### CONTAMINATION

Water	%	<b>NEG</b>	NEG	NEG	NEG
Soot %	%	<b>0.3</b>	0.4	0.3	0.3
Nitration (PA)	%	<b>90</b>	92	95	99
Sulfation (PA)	%	<b>57</b>	62	58	62
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>&lt;1.0</b>	<1.0	<1.0	<1.0
Silicon	ppm	<b>5</b>	5	5	3
Sodium	ppm	<b>6</b>	5	5	6
Potassium	ppm	<b>5</b>	16	10	8



### WEAR METALS

Iron	ppm	<b>12</b>	25	14	12
Copper	ppm	<b>2</b>	3	2	2
Lead	ppm	<b>&lt;1</b>	<1	2	<1
Tin	ppm	<b>0</b>	<1	0	<1
Aluminum	ppm	<b>3</b>	7	4	4
Chromium	ppm	<b>&lt;1</b>	<1	<1	<1
Molybdenum	ppm	<b>48</b>	54	48	46
Nickel	ppm	<b>0</b>	<1	<1	<1
Titanium	ppm	<b>0</b>	<1	<1	<1
Silver	ppm	<b>0</b>	0	<1	<1
Manganese	ppm	<b>0</b>	<1	<1	<1
Vanadium	ppm	<b>&lt;1</b>	<1	0	<1



### ADDITIVES

Calcium	ppm	<b>1141</b>	1147	1224	1179
Magnesium	ppm	<b>685</b>	889	764	701
Zinc	ppm	<b>893</b>	1153	781	820
Phosphorus	ppm	<b>680</b>	875	670	665
Barium	ppm	<b>0</b>	0	0	0
Boron	ppm	<b>24</b>	4	24	33

**Depot:** VOLVO0002  
**Unique No:** 10789537  
**Signed:** Sean Felton  
**Report Date:** 18 Dec 2023

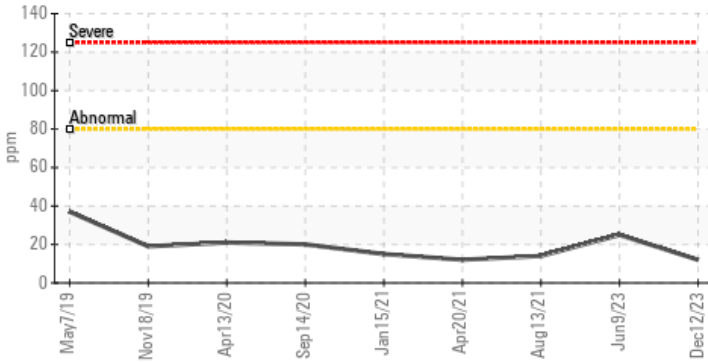


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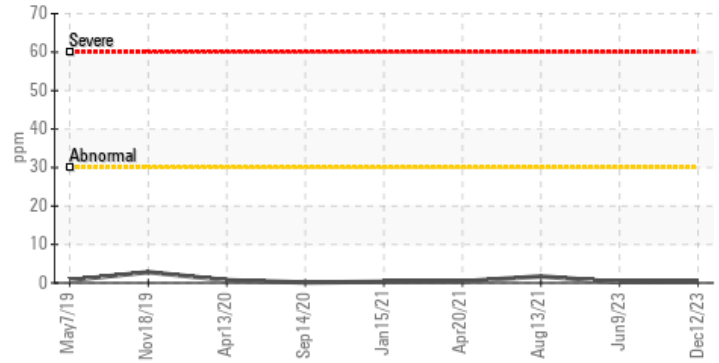


## VOLVO GRAPHS

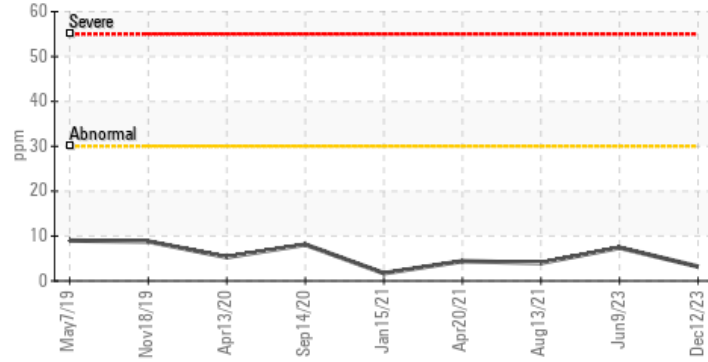
### Iron (ppm)



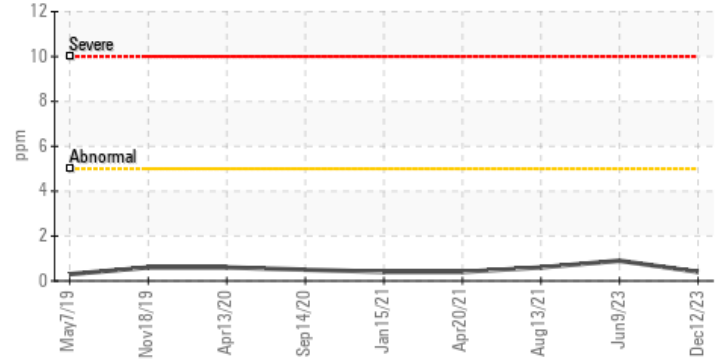
### Lead (ppm)



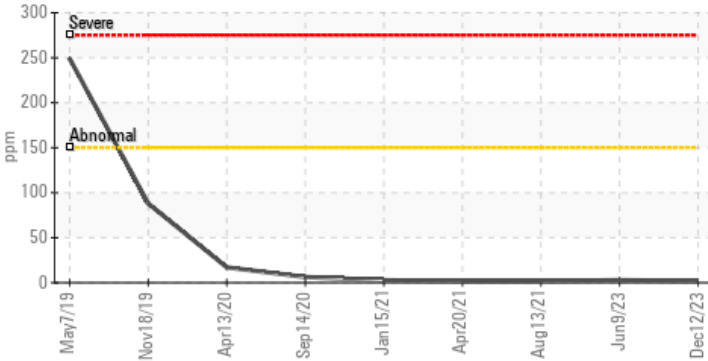
### Aluminum (ppm)



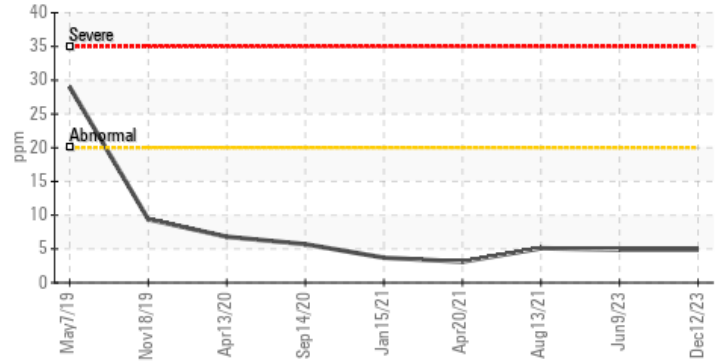
### Chromium (ppm)



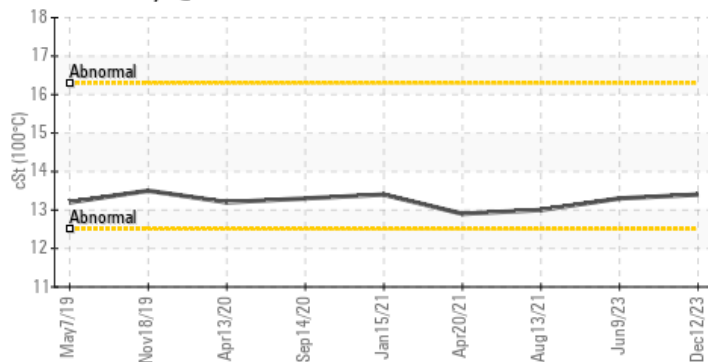
### Copper (ppm)



### Silicon (ppm)



### Viscosity @ 100°C



### Base Number

