



# CONSTRUCTION EQUIPMENT

## MWO0000232-1 FREIGHTLINER M2 EDFYN7858 (S/N 3ALACWDTZEDFYN858) - DIESEL ENGINE



**Sample No:** VCP414544  
**Oil Type:** VALVOLINE 15W40  
**Job No:** MWO0000232-1



### SAMPLE INFORMATION

Sample Number	<b>VCP414544</b>	VCP409423	VCP287612	VCP246462
Sample Date	<b>25 Sep 2023</b>	31 Jul 2023	10 Aug 2020	16 Oct 2019
Machine Hours	<b>11462</b>	150914	9069	7979
Oil Hours	<b>0</b>	0	0	0
Oil Changed	<b>Changed</b>	Changed	Changed	Changed
Sample Status	<b>NORMAL</b>	ABNORMAL	NORMAL	NORMAL

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 T:  
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### OIL CONDITION

Visc @ 100°C	cSt	<b>13.8</b>	13.7	13.6	14.1
Base Number (BN)	mg KOH/g	<b>8.4</b>	6.7	---	---
Oxidation (PA)	%	<b>75</b>	66	96	151

### Diagnosis

Resample at the next service interval to monitor. All component wear rates are normal. Test for glycol is negative. 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

Soot %	%	<b>0.6</b>	0.6	0.7	1.3
Nitration (PA)	%	<b>86</b>	78	100	147
Sulfation (PA)	%	<b>59</b>	54	63	92
Glycol	%	<b>0.0</b>	NEG	NEG	NEG
Fuel	%	<b>&lt;1.0</b>	<1.0	<1.0	<1.0
Silicon	ppm	<b>5</b>	6	5	5
Sodium	ppm	<b>141</b>	▲ 169	4	10
Potassium	ppm	<b>52</b>	▲ 80	6	7



### WEAR METALS

Iron	ppm	<b>19</b>	41	20	63
Copper	ppm	<b>&lt;1</b>	2	<1	3
Lead	ppm	<b>&lt;1</b>	0	<1	1
Tin	ppm	<b>&lt;1</b>	<1	<1	2
Aluminum	ppm	<b>2</b>	6	4	6
Chromium	ppm	<b>&lt;1</b>	2	<1	2
Molybdenum	ppm	<b>56</b>	57	35	42
Nickel	ppm	<b>0</b>	<1	<1	<1
Titanium	ppm	<b>0</b>	<1	0	<1
Silver	ppm	<b>0</b>	<1	0	0
Manganese	ppm	<b>&lt;1</b>	1	<1	2
Vanadium	ppm	<b>&lt;1</b>	<1	0	0



### ADDITIVES

Calcium	ppm	<b>1363</b>	1275	1636	1451
Magnesium	ppm	<b>822</b>	807	441	571
Zinc	ppm	<b>981</b>	923	773	1010
Phosphorus	ppm	<b>786</b>	735	692	880
Barium	ppm	<b>0</b>	0	0	0
Boron	ppm	<b>23</b>	21	22	13

**Depot:** VOLVO8882  
**Unique No:** 10675082  
**Signed:** Wes Davis  
**Report Date:** 04 Oct 2023

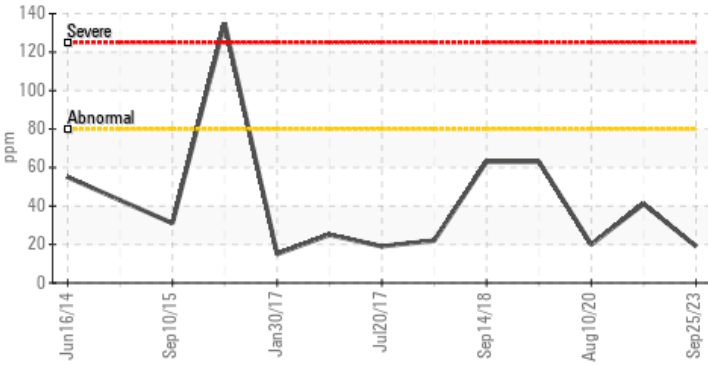


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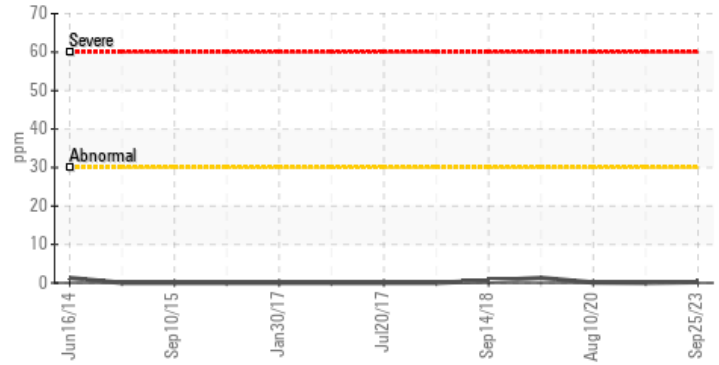


## GRAPHS

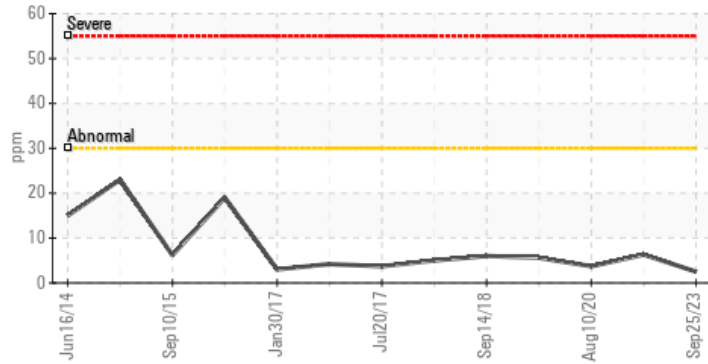
### Iron (ppm)



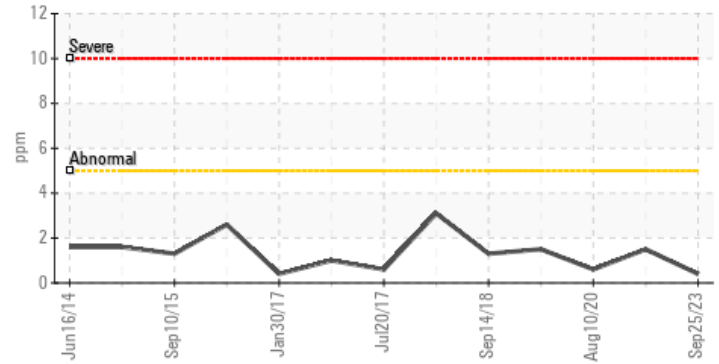
### Lead (ppm)



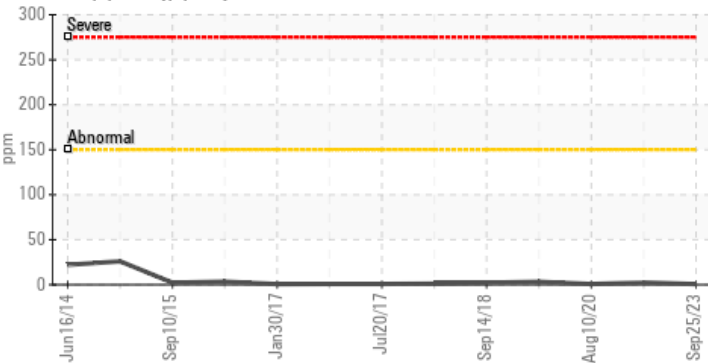
### Aluminum (ppm)



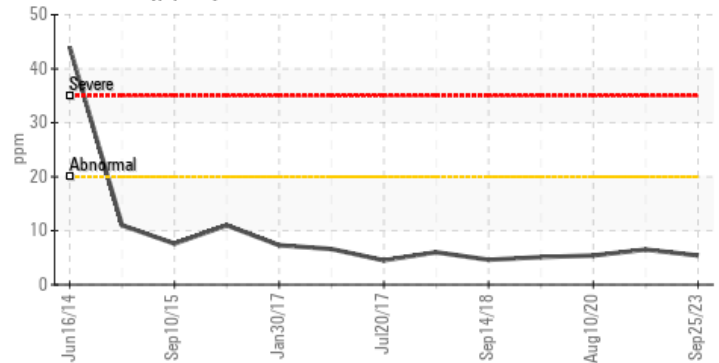
### Chromium (ppm)



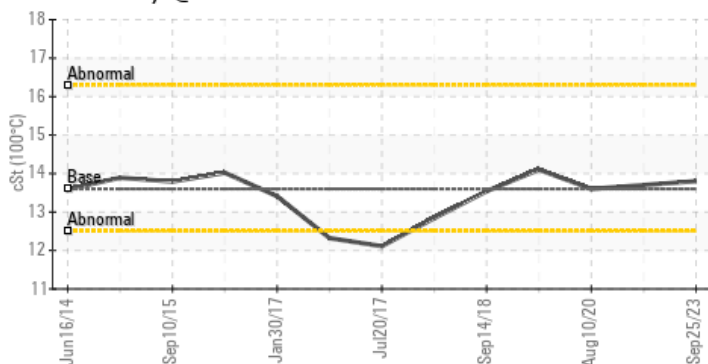
### Copper (ppm)



### Silicon (ppm)



### Viscosity @ 100°C



### Base Number

