



# CONSTRUCTION EQUIPMENT

729565 VOLVO L110H 631978 - DIESEL ENGINE



**Sample No:** VCP440330  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:** 729565



## SAMPLE INFORMATION

Sample Number	<b>VCP440330</b>	VCP433365	VCP411091	VCP381369
Sample Date	<b>14 Jun 2024</b>	31 Aug 2023	08 May 2023	08 Dec 2022
Machine Hours	<b>5953</b>	4344	3755	3188
Oil Hours	<b>500</b>	500	0	500
Oil Changed	<b>Changed</b>	Changed	Changed	Changed
Sample Status	<b>NORMAL</b>	NORMAL	NORMAL	NORMAL

**RIPA AND ASSOCIATES**  
 10149 FISHER AVENUE  
 TAMPA, FL  
 US 33619  
 Contact: PM Services  
 PMServices@ripaconstruction.com  
 T:  
 F:

## OIL CONDITION

Visc @ 100°C	cSt	<b>13.1</b>	13.1	13.1	13.1
Base Number (BN)	mg KOH/g	<b>10.0</b>	10.5	10.3	10.3
Oxidation (PA)	%	<b>73</b>	82	82	78

## CONTAMINATION

Water	%	<b>NEG</b>	NEG	NEG	NEG
Soot %	%	<b>0.5</b>	0.5	0.4	0.4
Nitration (PA)	%	<b>66</b>	64	62	60
Sulfation (PA)	%	<b>59</b>	61	62	60
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>&lt;1.0</b>	<1.0	<1.0	<1.0
Silicon	ppm	<b>8</b>	6	6	5
Sodium	ppm	<b>3</b>	0	3	3
Potassium	ppm	<b>&lt;1</b>	2	1	<1

**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.

## WEAR METALS

Iron	ppm	<b>26</b>	13	13	11
Copper	ppm	<b>1</b>	1	2	1
Lead	ppm	<b>0</b>	<1	0	<1
Tin	ppm	<b>0</b>	1	1	1
Aluminum	ppm	<b>7</b>	0	4	4
Chromium	ppm	<b>1</b>	<1	<1	<1
Molybdenum	ppm	<b>41</b>	44	48	42
Nickel	ppm	<b>0</b>	<1	<1	0
Titanium	ppm	<b>&lt;1</b>	<1	0	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>1636</b>	1608	1697	1686
Magnesium	ppm	<b>587</b>	467	553	520
Zinc	ppm	<b>1104</b>	1096	1170	1090
Phosphorus	ppm	<b>963</b>	902	957	888
Barium	ppm	<b>0</b>	2	0	0
Boron	ppm	<b>24</b>	25	33	38

**Depot:** RIPTAM  
**Unique No:** 11126331  
**Signed:** Wes Davis  
**Report Date:** 17 Jul 2024

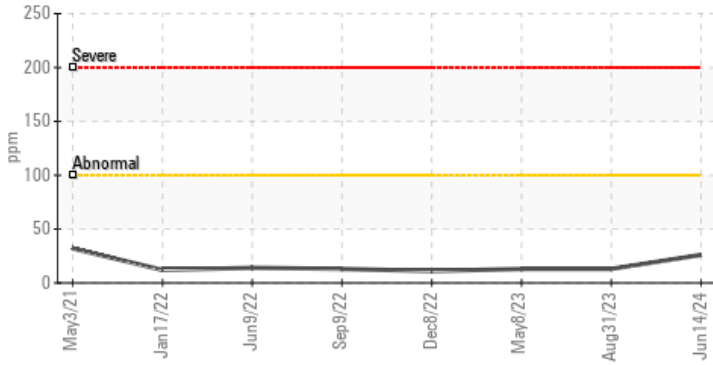


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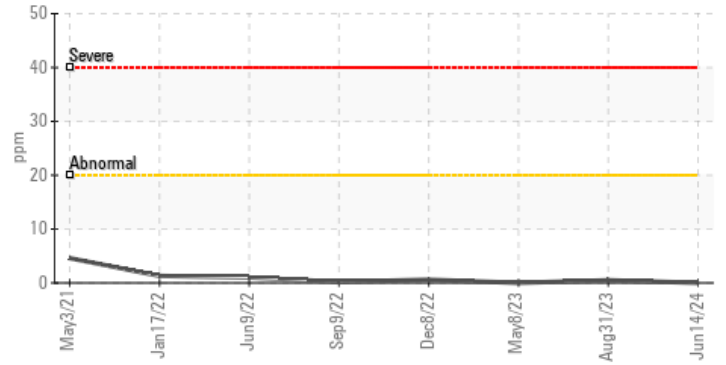


## GRAPHS

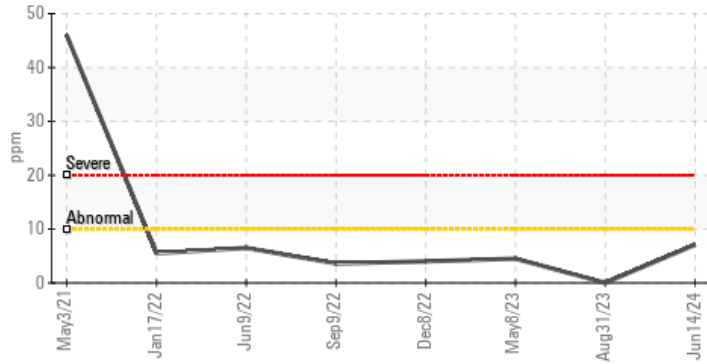
### Iron (ppm)



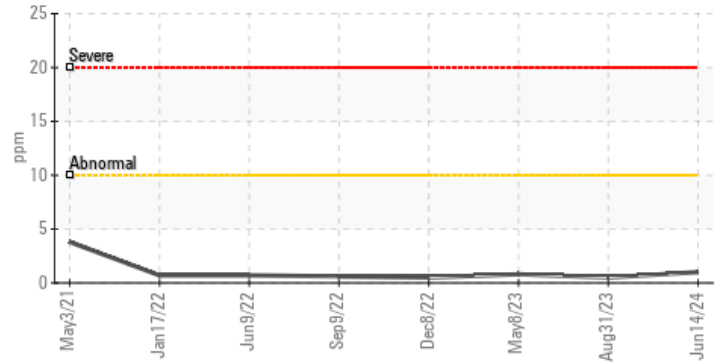
### Lead (ppm)



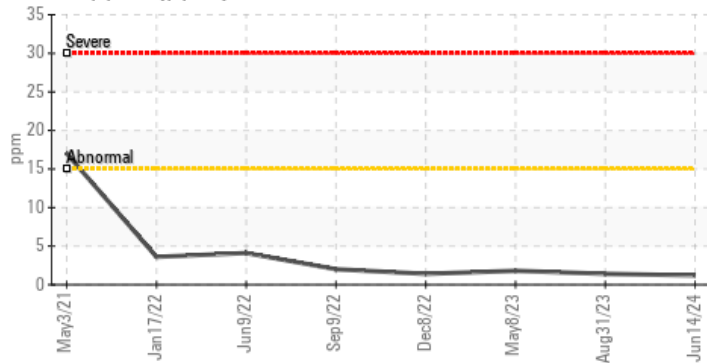
### Aluminum (ppm)



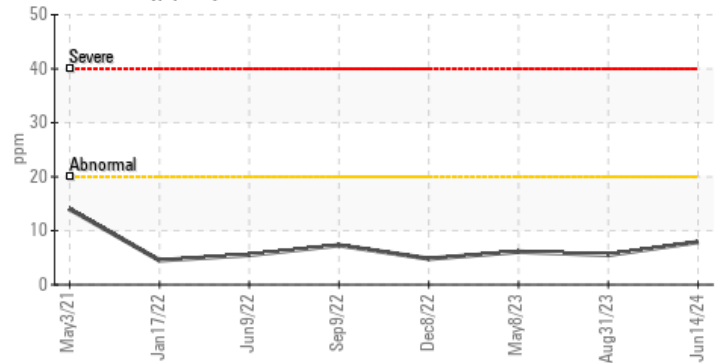
### Chromium (ppm)



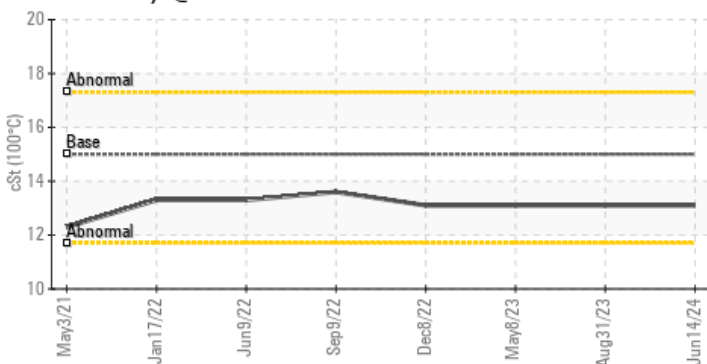
### Copper (ppm)



### Silicon (ppm)



### Viscosity @ 100°C



### Base Number

