



# CONSTRUCTION EQUIPMENT

## VOLVO L110H 631332 - DIESEL ENGINE



**Sample No:** VCP443912  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:**



### SAMPLE INFORMATION

Sample Number	<b>VCP443912</b>	VCP440642	VCP426190	VCP393527
Sample Date	<b>17 Apr 2024</b>	13 Dec 2023	06 Sep 2023	08 May 2023
Machine Hours	<b>10389</b>	9794	9270	8702
Oil Hours	<b>0</b>	0	500	0
Oil Changed	<b>Changed</b>	N/A	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>13.4</b>	13.3	13.4	13.1
Base Number (BN)	mg KOH/g	<b>9.8</b>	9.9	10.4	10.1
Oxidation (PA)	%	<b>78</b>	80	80	81

### 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>0.3</b>	0.3	0.3	0.3
Nitration (PA)	%	<b>68</b>	63	68	68
Sulfation (PA)	%	<b>58</b>	60	61	61
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>&lt;1.0</b>	<1.0	<1.0	<1.0
Silicon	ppm	<b>8</b>	4	6	6
Sodium	ppm	<b>3</b>	2	0	3
Potassium	ppm	<b>2</b>	1	2	<1



### WEAR METALS

Iron	ppm	<b>32</b>	10	16	17
Copper	ppm	<b>3</b>	<1	<1	1
Lead	ppm	<b>&lt;1</b>	<1	<1	<1
Tin	ppm	<b>&lt;1</b>	0	<1	<1
Aluminum	ppm	<b>6</b>	2	0	4
Chromium	ppm	<b>&lt;1</b>	0	<1	<1
Molybdenum	ppm	<b>45</b>	33	39	75
Nickel	ppm	<b>&lt;1</b>	0	<1	0
Titanium	ppm	<b>&lt;1</b>	1	14	0
Silver	ppm	<b>0</b>	0	0	0
Manganese	ppm	<b>&lt;1</b>	0	<1	<1
Vanadium	ppm	<b>0</b>	0	0	0



### ADDITIVES

Calcium	ppm	<b>1668</b>	1789	1624	1676
Magnesium	ppm	<b>562</b>	444	476	633
Zinc	ppm	<b>1163</b>	1210	1128	1244
Phosphorus	ppm	<b>1006</b>	910	933	1026
Barium	ppm	<b>0</b>	0	1	0
Boron	ppm	<b>48</b>	47	32	30

**Depot:** RIPTAM  
**Unique No:** 11050441  
**Signed:** Wes Davis  
**Report Date:** 30 May 2024

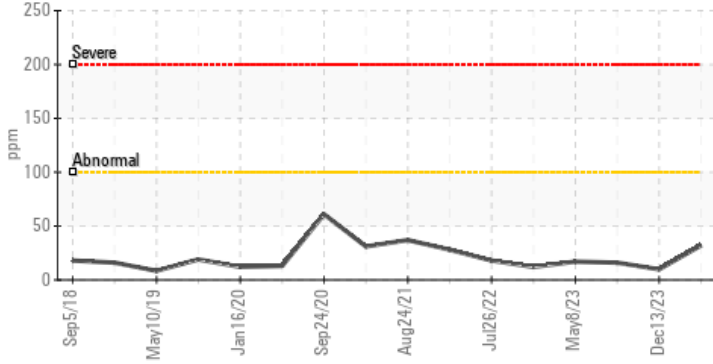


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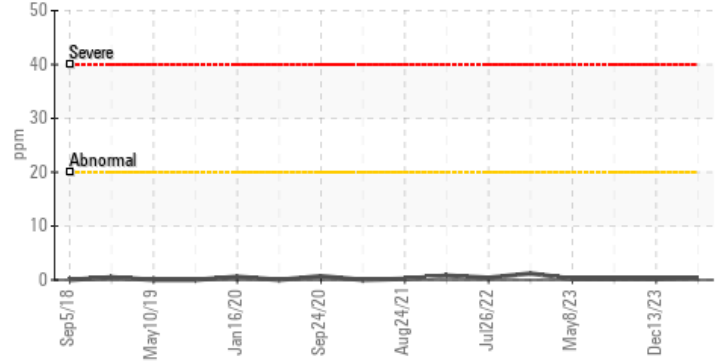


## GRAPHS

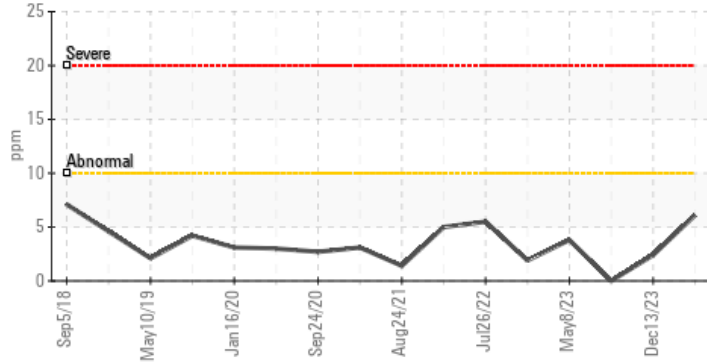
### Iron (ppm)



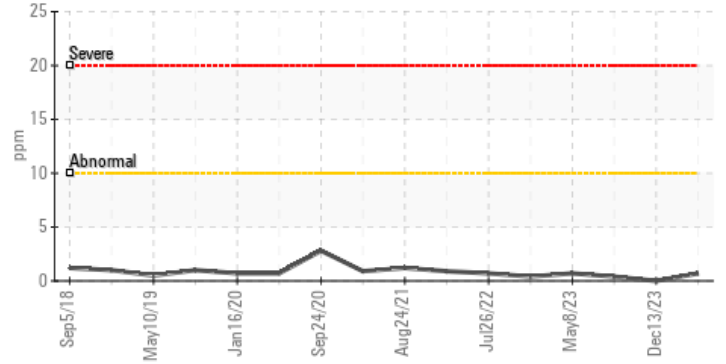
### Lead (ppm)



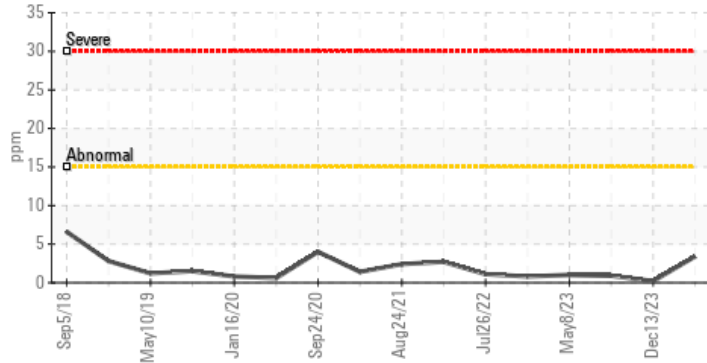
### Aluminum (ppm)



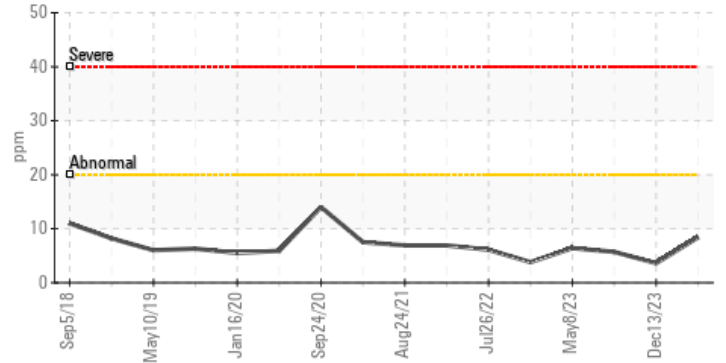
### Chromium (ppm)



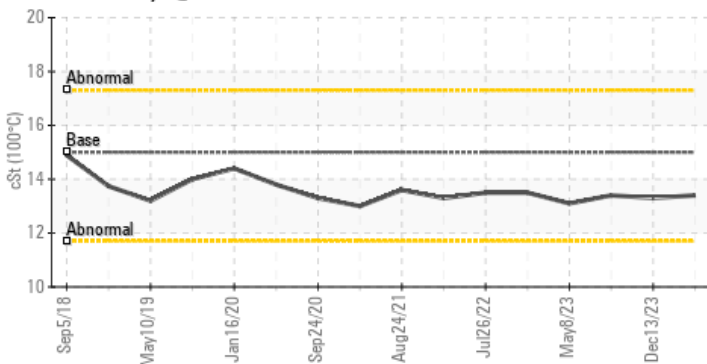
### Copper (ppm)



### Silicon (ppm)



### Viscosity @ 100°C



### Base Number

