



# CONSTRUCTION EQUIPMENT

580404 VOLVO L110H 631298 - DIESEL ENGINE



**Sample No:** VCP414216  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:** 580404



## SAMPLE INFORMATION

Sample Number	<b>VCP414216</b>	VCP420212	VCP398705	VCP386812
Sample Date	<b>18 Jul 2023</b>	10 Apr 2023	16 Dec 2022	12 Sep 2022
Machine Hours	<b>8405</b>	7851	7287	6803
Oil Hours	<b>500</b>	500	500	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  
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 T:  
 F:

## OIL CONDITION

Visc @ 100°C	cSt	<b>13.0</b>	13.3	12.5	13.3
Base Number (BN)	mg KOH/g	<b>10.1</b>	9.0	10.5	11.7
Oxidation (PA)	%	<b>80</b>	79	71	85

## CONTAMINATION

Soot %	%	<b>0.3</b>	0.3	0.2	0.2
Nitration (PA)	%	<b>64</b>	62	66	66
Sulfation (PA)	%	<b>58</b>	55	56	64
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>&lt;1.0</b>	<1.0	<1.0	<1.0
Silicon	ppm	<b>8</b>	5	4	6
Sodium	ppm	<b>3</b>	<1	2	1
Potassium	ppm	<b>1</b>	1	0	<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>21</b>	11	7	8
Copper	ppm	<b>2</b>	2	2	2
Lead	ppm	<b>&lt;1</b>	<1	<1	<1
Tin	ppm	<b>2</b>	<1	<1	<1
Aluminum	ppm	<b>5</b>	<1	2	2
Chromium	ppm	<b>1</b>	<1	<1	<1
Molybdenum	ppm	<b>46</b>	50	51	46
Nickel	ppm	<b>&lt;1</b>	0	0	0
Titanium	ppm	<b>&lt;1</b>	0	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>1786</b>	1712	1731	1762
Magnesium	ppm	<b>559</b>	473	418	445
Zinc	ppm	<b>1239</b>	1139	1163	1124
Phosphorus	ppm	<b>1015</b>	928	937	942
Barium	ppm	<b>0</b>	0	0	0
Boron	ppm	<b>26</b>	27	37	33

**Depot:** RIPTAM  
**Unique No:** 10601868  
**Signed:** Wes Davis  
**Report Date:** 11 Aug 2023



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## VOLVO GRAPHS

