



# CONSTRUCTION EQUIPMENT

## VOLVO L110H 631121 - DIESEL ENGINE



**Sample No:** VCP412101  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:**



### SAMPLE INFORMATION

Sample Number	<b>VCP412101</b>	VCP398797	VCP375986	VCP350112
Sample Date	<b>15 Jun 2023</b>	28 Dec 2022	17 Jun 2022	10 Feb 2022
Machine Hours	<b>9469</b>	8847	8013	7433
Oil Hours	<b>500</b>	500	500	500
Oil Changed	<b>Changed</b>	Changed	Changed	Changed
Sample Status	<b>NORMAL</b>	SEVERE	NORMAL	NORMAL

### RIPA AND ASSOCIATES

10149 FISHER AVENUE  
TAMPA, FL  
US 33619  
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### OIL CONDITION

Visc @ 100°C	cSt	█ <b>12.9</b>	▲ 7.9	█ 13.7	█ 13.6
Base Number (BN)	mg KOH/g	█ <b>9.1</b>	█ 10.4	█ 11.9	█ 11.6
Oxidation (PA)	%	<b>78</b>	34	91	85

### 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

Soot %	%	█ <b>0.3</b>	█ 0.3	█ 0.6	█ 0.3
Nitration (PA)	%	<b>83</b>	33	85	71
Sulfation (PA)	%	<b>59</b>	53	67	64
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>&lt;1.0</b>	▲ 2.3	<1.0	<1.0
Silicon	ppm	█ <b>4</b>	● 52	█ 5	█ 4
Sodium	ppm	█ <b>2</b>	█ 11	█ 0	█ <1
Potassium	ppm	█ <b>0</b>	█ <1	█ 2	█ 0



### WEAR METALS

Iron	ppm	█ <b>12</b>	● 566	█ 15	█ 11
Copper	ppm	█ <b>&lt;1</b>	█ 2	█ 1	█ 1
Lead	ppm	█ <b>0</b>	█ <1	█ <1	█ <1
Tin	ppm	█ <b>&lt;1</b>	█ <1	█ <1	█ 1
Aluminum	ppm	█ <b>4</b>	█ 5	█ 6	█ 4
Chromium	ppm	█ <b>&lt;1</b>	█ 6	█ <1	█ <1
Molybdenum	ppm	█ <b>55</b>	█ 14	█ 43	█ 44
Nickel	ppm	█ <b>0</b>	█ 3	█ 0	█ 0
Titanium	ppm	<b>&lt;1</b>	2	6	<1
Silver	ppm	█ <b>0</b>	█ 0	0	0
Manganese	ppm	█ <b>&lt;1</b>	█ 14	█ <1	█ <1
Vanadium	ppm	<b>&lt;1</b>	<1	0	0



### ADDITIVES

Calcium	ppm	█ <b>1731</b>	█ 3860	█ 1834	█ 1701
Magnesium	ppm	█ <b>415</b>	█ 23	█ 528	█ 607
Zinc	ppm	█ <b>1102</b>	█ 1588	█ 1208	█ 1107
Phosphorus	ppm	█ <b>909</b>	█ 1277	█ 1020	█ 943
Barium	ppm	█ <b>0</b>	█ 0	█ 0	█ 0
Boron	ppm	█ <b>23</b>	█ 127	█ 31	█ 26

**Depot:** RIPTAM  
**Unique No:** 10551670  
**Signed:** Wes Davis  
**Report Date:** 12 Jul 2023



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## VOLVO GRAPHS

