



# CONSTRUCTION EQUIPMENT

SPM566531 VOLVO L220H 2822 - DIESEL ENGINE



**Sample No:** VCP415745  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:** SPM566531



## SAMPLE INFORMATION

Sample Number	<b>VCP415745</b>	VCP370078	VCP376548	VCP310184
Sample Date	<b>30 Jun 2023</b>	20 Feb 2023	20 Jul 2022	14 Aug 2021
Machine Hours	<b>10936</b>	10007	9117	7254
Oil Hours	<b>0</b>	500	0	0
Oil Changed	<b>N/A</b>	Changed	Changed	Changed
Sample Status	<b>NORMAL</b>	NORMAL	NORMAL	NORMAL

## ALTA EQUIPMENT

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## OIL CONDITION

Visc @ 100°C	cSt	<b>12.9</b>	12.9	12.7	12.6
Base Number (BN)	mg KOH/g	<b>8.8</b>	9.7	10.2	---
Oxidation (PA)	%	<b>90</b>	72	90	60



## CONTAMINATION

Water	%	<b>NEG</b>	NEG	NEG	NEG
Soot %	%	<b>0.3</b>	0.1	0.3	0.3
Nitration (PA)	%	<b>70</b>	53	76	68
Sulfation (PA)	%	<b>63</b>	57	68	55
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>&lt;1.0</b>	<1.0	<1.0	<1.0
Silicon	ppm	<b>5</b>	4	20	1
Sodium	ppm	<b>3</b>	<1	2	<1
Potassium	ppm	<b>2</b>	1	0	0



## WEAR METALS

Iron	ppm	<b>6</b>	3	26	5
Copper	ppm	<b>1</b>	<1	4	1
Lead	ppm	<b>&lt;1</b>	0	1	1
Tin	ppm	<b>&lt;1</b>	0	<1	<1
Aluminum	ppm	<b>&lt;1</b>	0	7	<1
Chromium	ppm	<b>&lt;1</b>	0	1	<1
Molybdenum	ppm	<b>40</b>	46	39	56
Nickel	ppm	<b>0</b>	0	<1	0
Titanium	ppm	<b>0</b>	0	<1	0
Silver	ppm	<b>0</b>	0	<1	0
Manganese	ppm	<b>&lt;1</b>	<1	<1	<1
Vanadium	ppm	<b>&lt;1</b>	0	0	0



## ADDITIVES

Calcium	ppm	<b>1772</b>	1421	1613	1208
Magnesium	ppm	<b>534</b>	640	488	833
Zinc	ppm	<b>1142</b>	1121	1115	1182
Phosphorus	ppm	<b>909</b>	940	902	985
Barium	ppm	<b>&lt;1</b>	0	0	0
Boron	ppm	<b>28</b>	35	38	12

## 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.

**Depot:** VOLVO0142  
**Unique No:** 10546809  
**Signed:** Wes Davis  
**Report Date:** 06 Jul 2023



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## GRAPHS

