



# CONSTRUCTION EQUIPMENT

688170 STONE CO VOLVO L220H 3280 - DIESEL ENGINE



**Sample No:** VCP438002  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:** 688170 STONE CO



## SAMPLE INFORMATION

Sample Number	<b>VCP438002</b>	VCP452377	VCP431992	VCP418195
Sample Date	<b>21 Mar 2024</b>	08 Jan 2024	26 Oct 2023	23 Aug 2023
Machine Hours	<b>7952</b>	7483	7008	6479
Oil Hours	<b>500</b>	0	500	500
Oil Changed	<b>Changed</b>	N/A	Changed	Changed
Sample Status	<b>NORMAL</b>	NORMAL	NORMAL	NORMAL

**ALTA EQUIPMENT COMPANY - METRO WEST**  
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## OIL CONDITION

Visc @ 100°C	cSt	<b>13.1</b>	13.0	13.2	14.1
Base Number (BN)	mg KOH/g	<b>9.1</b>	9.0	9.1	8.5
Oxidation (PA)	%	<b>59</b>	57	57	54



## CONTAMINATION

Water	%	<b>NEG</b>	NEG	NEG	NEG
Soot %	%	<b>0.2</b>	0.3	0.3	0.3
Nitration (PA)	%	<b>58</b>	59	57	58
Sulfation (PA)	%	<b>51</b>	52	53	51
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>&lt;1.0</b>	<1.0	<1.0	<1.0
Silicon	ppm	<b>2</b>	2	2	2
Sodium	ppm	<b>2</b>	1	0	2
Potassium	ppm	<b>2</b>	<1	<1	<1



## WEAR METALS

Iron	ppm	<b>3</b>	3	<1	3
Copper	ppm	<b>2</b>	<1	0	2
Lead	ppm	<b>0</b>	0	0	0
Tin	ppm	<b>0</b>	0	<1	<1
Aluminum	ppm	<b>&lt;1</b>	<1	1	<1
Chromium	ppm	<b>0</b>	0	0	<1
Molybdenum	ppm	<b>57</b>	55	61	64
Nickel	ppm	<b>0</b>	0	0	0
Titanium	ppm	<b>0</b>	0	0	0
Silver	ppm	<b>0</b>	0	0	0
Manganese	ppm	<b>0</b>	<1	0	<1
Vanadium	ppm	<b>&lt;1</b>	0	0	0



## ADDITIVES

Calcium	ppm	<b>1120</b>	1052	1060	1349
Magnesium	ppm	<b>993</b>	909	938	833
Zinc	ppm	<b>1357</b>	1162	1258	1318
Phosphorus	ppm	<b>952</b>	989	1021	1069
Barium	ppm	<b>0</b>	0	0	0
Boron	ppm	<b>4</b>	6	15	9

## 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:** VOLVO2990  
**Unique No:** 10949728  
**Signed:** Don Baldrige  
**Report Date:** 29 Mar 2024



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## GRAPHS

