



# CONSTRUCTION EQUIPMENT

## X21402 CRH VOLVO L220H 2821 - DIESEL ENGINE



**Sample No:** VCP410549  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:** X21402 CRH



### SAMPLE INFORMATION

Sample Number	<b>VCP410549</b>	VCP433551	VCP404684	VCP405899
Sample Date	<b>30 Oct 2023</b>	21 Sep 2023	19 Jul 2023	15 May 2023
Machine Hours	<b>9286</b>	9058	8643	8210
Oil Hours	<b>0</b>	500	500	500
Oil Changed	<b>N/A</b>	Changed	Changed	Changed
Sample Status	<b>NORMAL</b>	NORMAL	NORMAL	NORMAL



**HOUSBY HEAVY EQUIPMENT**  
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### OIL CONDITION

Visc @ 100°C	cSt	<b>12.9</b>	12.4	12.5	12.4
Base Number (BN)	mg KOH/g	<b>10.6</b>	9.3	9.8	10.2
Oxidation (PA)	%	<b>78</b>	75	80	82



### CONTAMINATION

Soot %	%	<b>0.1</b>	0.1	0.2	0.1
Nitration (PA)	%	<b>45</b>	47	53	54
Sulfation (PA)	%	<b>60</b>	58	61	62
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>&lt;1.0</b>	<1.0	<1.0	0.3
Silicon	ppm	<b>8</b>	5	5	8
Sodium	ppm	<b>0</b>	5	2	4
Potassium	ppm	<b>2</b>	<1	0	1



### WEAR METALS

Iron	ppm	<b>2</b>	4	4	5
Copper	ppm	<b>&lt;1</b>	1	0	<1
Lead	ppm	<b>0</b>	0	0	0
Tin	ppm	<b>0</b>	<1	0	<1
Aluminum	ppm	<b>&lt;1</b>	<1	1	<1
Chromium	ppm	<b>&lt;1</b>	<1	<1	<1
Molybdenum	ppm	<b>44</b>	39	44	50
Nickel	ppm	<b>0</b>	<1	0	3
Titanium	ppm	<b>0</b>	0	0	0
Silver	ppm	<b>0</b>	0	0	0
Manganese	ppm	<b>0</b>	1	<1	<1
Vanadium	ppm	<b>0</b>	0	0	0



### ADDITIVES

Calcium	ppm	<b>1613</b>	1718	1807	1991
Magnesium	ppm	<b>484</b>	501	546	587
Zinc	ppm	<b>1082</b>	1133	1085	1284
Phosphorus	ppm	<b>898</b>	961	883	1067
Barium	ppm	<b>0</b>	0	0	0
Boron	ppm	<b>62</b>	51	59	66

### 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:** VOLVO0074  
**Unique No:** 10724885  
**Signed:** Wes Davis  
**Report Date:** 02 Nov 2023



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## GRAPHS

