



# CONSTRUCTION EQUIPMENT

## 3026 VOLVO EC220EL 311050 - DIESEL ENGINE



**Sample No:** VCP401512  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:** 3026



### SAMPLE INFORMATION

Sample Number	VCP401512	VCP383169	VCP379123	VCP350293
Sample Date	10 Nov 2023	25 May 2023	29 Nov 2022	06 Jun 2022
Machine Hours	4780	4300	3785	3110
Oil Hours	0	0	500	500
Oil Changed	Changed	N/A	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

**LEONARDS CONTRACTING**  
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### OIL CONDITION

Visc @ 100°C	cSt	13.3	14.0	14.3	13.5
Base Number (BN)	mg KOH/g	9.7	10.3	10.9	10.9
Oxidation (PA)	%	94	96	109	96

### 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

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.2	0.2	0.3	0.2
Nitration (PA)	%	81	87	104	82
Sulfation (PA)	%	64	65	70	66
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	13	9	9	8
Sodium	ppm	4	3	3	<1
Potassium	ppm	3	3	0	<1

### WEAR METALS

Iron	ppm	20	12	15	11
Copper	ppm	2	<1	2	1
Lead	ppm	<1	<1	1	0
Tin	ppm	<1	<1	<1	<1
Aluminum	ppm	5	4	3	3
Chromium	ppm	1	<1	<1	<1
Molybdenum	ppm	56	74	48	40
Nickel	ppm	<1	<1	<1	0
Titanium	ppm	<1	0	0	0
Silver	ppm	0	0	0	0
Manganese	ppm	<1	<1	<1	<1
Vanadium	ppm	<1	<1	0	0

### ADDITIVES

Calcium	ppm	2021	1850	1845	1588
Magnesium	ppm	661	641	576	477
Zinc	ppm	1411	1315	1271	1111
Phosphorus	ppm	1144	1058	986	907
Barium	ppm	13	0	0	2
Boron	ppm	38	66	27	36

**Depot:** LEOMAD  
**Unique No:** 10791730  
**Signed:** Wes Davis  
**Report Date:** 18 Dec 2023



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## GRAPHS

