



# CONSTRUCTION EQUIPMENT

## VOLVO EC220EL 310769 - DIESEL ENGINE



**Sample No:** VCP424054  
**Oil Type:** VOLVO VDS-4.5 Premium Motor Oil 15W40  
**Job No:**



### SAMPLE INFORMATION

Sample Number	<b>VCP424054</b>	VCP424052	VCP306238	VCP385540
Sample Date	<b>26 Jan 2024</b>	07 Nov 2023	15 Apr 2023	12 Jan 2023
Machine Hours	<b>8375</b>	7834	6569	6114
Oil Hours	<b>0</b>	0	0	600
Oil Changed	<b>N/A</b>	N/A	N/A	Changed
Sample Status	<b>ATTENTION</b>	ABNORMAL	NORMAL	NORMAL

**ULSTER COUNTY RESOURCE RECOVERY AGENCY**  
 999 FLATBUSH AVE  
 KINGSTON, NY  
 US 12401  
 Contact: CHARLES WHITTAKER  
 cw hf@ucrra.net  
 T: (845)399-2686  
 F:



### OIL CONDITION

Visc @ 100°C	cSt	<b>▲ 10.6</b>	▲ 11.6	■ 14.0	■ 15.2
Base Number (BN)	mg KOH/g	<b>■ 6.2</b>	■ 6.7	■ 8.1	■ 6.5
Oxidation (PA)	%	<b>88</b>	100	110	111

### 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 oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.



### CONTAMINATION

Water	%	<b>NEG</b>	NEG	NEG	NEG
Soot %	%	<b>■ 0.1</b>	■ 0.2	■ 0.1	■ 0.2
Nitration (PA)	%	<b>64</b>	77	91	98
Sulfation (PA)	%	<b>67</b>	70	71	73
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>&lt;1.0</b>	■ 0.2	<1.0	<1.0
Silicon	ppm	<b>■ 11</b>	■ 21	■ 11	■ 18
Sodium	ppm	<b>■ 4</b>	■ <1	■ 3	■ 3
Potassium	ppm	<b>■ 0</b>	■ 2	■ <1	■ <1



### WEAR METALS

Iron	ppm	<b>■ 10</b>	■ 14	■ 14	■ 23
Copper	ppm	<b>■ 6</b>	■ 4	■ 1	■ 3
Lead	ppm	<b>■ 0</b>	■ <1	■ 0	■ 2
Tin	ppm	<b>■ 1</b>	■ 0	■ <1	■ 1
Aluminum	ppm	<b>■ 3</b>	■ 3	■ 3	■ 4
Chromium	ppm	<b>■ 4</b>	■ 3	■ 1	■ 2
Molybdenum	ppm	<b>■ 37</b>	■ 38	■ 51	■ 74
Nickel	ppm	<b>■ &lt;1</b>	■ 0	■ <1	■ <1
Titanium	ppm	<b>&lt;1</b>	0	0	0
Silver	ppm	<b>■ 0</b>	■ 0	■ 0	■ 0
Manganese	ppm	<b>■ &lt;1</b>	■ 0	■ <1	■ <1
Vanadium	ppm	<b>&lt;1</b>	0	0	0



### ADDITIVES

Calcium	ppm	<b>■ 1413</b>	■ 1496	■ 1845	■ 1688
Magnesium	ppm	<b>395</b>	■ 427	■ 589	873
Zinc	ppm	<b>■ 981</b>	■ 1064	■ 1249	■ 1437
Phosphorus	ppm	<b>■ 806</b>	■ 776	■ 980	■ 1113
Barium	ppm	<b>■ 0</b>	■ 0	■ 0	■ 0
Boron	ppm	<b>■ 28</b>	■ 18	■ 42	■ 50

**Depot:** ULSKIN  
**Unique No:** 10871600  
**Signed:** Don Baldrige  
**Report Date:** 12 Feb 2024



# CONSTRUCTION EQUIPMENT



## VOLVO GRAPHS

