



# CONSTRUCTION EQUIPMENT

## VOLVO EC380 314840 - DIESEL ENGINE



**Sample No:** VCP420012  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:**



### SAMPLE INFORMATION

Sample Number	<b>VCP420012</b>	VCP396471	VCP368973	VCP363891
Sample Date	<b>06 Jul 2023</b>	31 Jan 2023	19 Dec 2022	27 Aug 2022
Machine Hours	<b>3195</b>	1849	1563	1084
Oil Hours	<b>0</b>	0	0	0
Oil Changed	<b>Changed</b>	Changed	Changed	Changed
Sample Status	<b>ABNORMAL</b>	ATTENTION	ABNORMAL	ABNORMAL

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### OIL CONDITION

Visc @ 100°C	cSt	<b>▲ 12.2</b>	▲ 12.2	▲ 12.3	▲ 12.4
Base Number (BN)	mg KOH/g	<b>■ 8.7</b>	■ 9.7	■ 9.4	■ 10.3
Oxidation (PA)	%	<b>86</b>	80	81	92



### CONTAMINATION

Soot %	%	<b>■ 0.1</b>	■ 0.1	■ 0.1	■ 0.1
Nitration (PA)	%	<b>77</b>	58	69	68
Sulfation (PA)	%	<b>63</b>	60	63	69
Glycol	%	<b>NEG</b>	NEG	NEG	■ 0.0
Fuel	%	<b>&lt;1.0</b>	<1.0	■ 0.9	■ 0.7
Silicon	ppm	<b>■ 6</b>	■ 5	■ 8	■ 8
Sodium	ppm	<b>■ 0</b>	■ 3	■ 4	■ 3
Potassium	ppm	<b>■ 1</b>	■ 0	■ 2	■ 0



### WEAR METALS

Iron	ppm	<b>■ 7</b>	■ 4	■ 7	■ 7
Copper	ppm	<b>▲ 56</b>	■ 7	▲ 32	▲ 85
Lead	ppm	<b>■ &lt;1</b>	■ <1	■ 2	■ 1
Tin	ppm	<b>■ &lt;1</b>	■ <1	■ 2	■ 2
Aluminum	ppm	<b>■ 2</b>	■ <1	■ 3	■ 2
Chromium	ppm	<b>■ &lt;1</b>	■ 0	■ <1	■ <1
Molybdenum	ppm	<b>■ 51</b>	■ 43	■ 43	■ 43
Nickel	ppm	<b>■ 0</b>	■ 0	■ <1	■ <1
Titanium	ppm	<b>0</b>	0	<1	0
Silver	ppm	<b>■ 0</b>	■ 0	■ 0	1
Manganese	ppm	<b>■ &lt;1</b>	■ <1	■ 1	■ <1
Vanadium	ppm	<b>0</b>	0	0	0



### ADDITIVES

Calcium	ppm	<b>■ 1598</b>	■ 1677	■ 1850	■ 1681
Magnesium	ppm	<b>■ 567</b>	■ 493	■ 539	■ 501
Zinc	ppm	<b>■ 1110</b>	■ 1067	■ 1161	■ 1132
Phosphorus	ppm	<b>■ 912</b>	■ 887	■ 923	■ 920
Barium	ppm	<b>■ 0</b>	■ 0	■ 0	■ 0
Boron	ppm	<b>■ 12</b>	■ 44	■ 26	■ 43

### Diagnosis

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor. The copper level is abnormal. All other component wear rates are normal. Fuel content negligible. 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.

**Depot:** VOLVO0090  
**Unique No:** 10551290  
**Signed:** Angela Borella  
**Report Date:** 13 Jul 2023



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## GRAPHS

