



# CONSTRUCTION EQUIPMENT

## 380415 VOLVO EC305CL 110686 - DIESEL ENGINE



**Sample No:** VCP408491  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:** 380415



### SAMPLE INFORMATION

Sample Number	<b>VCP408491</b>	VCP405731	---	---
Sample Date	<b>05 Oct 2023</b>	12 Apr 2023	---	---
Machine Hours	<b>4660</b>	4370	---	---
Oil Hours	<b>400</b>	300	---	---
Oil Changed	<b>Not Chngd</b>	Changed	---	---
Sample Status	<b>SEVERE</b>	ABNORMAL	---	---

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### OIL CONDITION

Visc @ 100°C	cSt	<b>15.2</b>	▲ 11.8	---	---
Base Number (BN)	mg KOH/g	<b>43.2</b>	■ 9.0	---	---
Oxidation (PA)	%	<b>71</b>	67	---	---



### CONTAMINATION

Soot %	%	<b>0.3</b>	■ 0.1	---	---
Nitration (PA)	%	<b>73</b>	43	---	---
Sulfation (PA)	%	<b>44</b>	54	---	---
Glycol	%	<b>0.10</b>	NEG	---	---
Fuel	%	<b>&lt;1.0</b>	■ 0.2	---	---
Silicon	ppm	<b>13</b>	▲ 29	---	---
Sodium	ppm	<b>456</b>	■ 6	---	---
Potassium	ppm	<b>339</b>	■ 11	---	---



### WEAR METALS

Iron	ppm	<b>20</b>	■ 14	---	---
Copper	ppm	<b>13</b>	■ 5	---	---
Lead	ppm	<b>0</b>	■ <1	---	---
Tin	ppm	<b>1</b>	■ 1	---	---
Aluminum	ppm	<b>3</b>	■ 2	---	---
Chromium	ppm	<b>3</b>	■ 5	---	---
Molybdenum	ppm	<b>54</b>	■ 54	---	---
Nickel	ppm	<b>&lt;1</b>	■ 0	---	---
Titanium	ppm	<b>9</b>	0	---	---
Silver	ppm	<b>&lt;1</b>	■ 0	---	---
Manganese	ppm	<b>1</b>	■ 2	---	---
Vanadium	ppm	<b>&lt;1</b>	0	---	---



### ADDITIVES

Calcium	ppm	<b>1643</b>	■ 1573	---	---
Magnesium	ppm	<b>512</b>	■ 446	---	---
Zinc	ppm	<b>1226</b>	■ 1071	---	---
Phosphorus	ppm	<b>973</b>	■ 893	---	---
Barium	ppm	<b>0</b>	■ 2	---	---
Boron	ppm	<b>86</b>	107	---	---

### Diagnosis

We advise that you check for the source of the coolant leak. Check for low coolant level. We recommend that you drain the oil and perform a filter service on this component if not already done. We recommend an early resample to monitor this condition. All component wear rates are normal. Sodium and/or potassium levels are high. Test for glycol is positive. The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants.

**Depot:** VOLVO0046  
**Unique No:** 10701660  
**Signed:** Jonathan Hester  
**Report Date:** 24 Oct 2023



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## GRAPHS

