



# CONSTRUCTION EQUIPMENT

## VOLVO A45G 352841 - DIESEL ENGINE



**Sample No:** VCP422709  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:**



### SAMPLE INFORMATION

Sample Number	<b>VCP422709</b>	VCP386688	VCP336698	---
Sample Date	<b>27 Jun 2023</b>	31 Jan 2023	21 Dec 2021	---
Machine Hours	<b>2655</b>	2059	500	---
Oil Hours	<b>0</b>	0	0	---
Oil Changed	<b>Changed</b>	N/A	Changed	---
Sample Status	<b>ATTENTION</b>	ABNORMAL	ATTENTION	---

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### OIL CONDITION

Visc @ 100°C	cSt	<b>▲ 11.0</b>	■ 12.8	▲ 11.8	---
Base Number (BN)	mg KOH/g	■ <b>8.4</b>	■ 9.1	■ 9.4	---
Oxidation (PA)	%	<b>55</b>	80	84	---



### CONTAMINATION

Soot %	%	■ <b>0.6</b>	■ 0.6	■ 0.1	---
Nitration (PA)	%	<b>76</b>	74	78	---
Sulfation (PA)	%	<b>54</b>	62	61	---
Glycol	%	<b>NEG</b>	NEG	NEG	---
Fuel	%	■ <b>0.7</b>	<1.0	■ 1.5	---
Silicon	ppm	■ <b>15</b>	■ 9	■ 10	---
Sodium	ppm	■ <b>&lt;1</b>	■ <1	■ <1	---
Potassium	ppm	■ <b>1</b>	■ 2	■ <1	---

### Diagnosis

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. The nickel level has decreased, but is still abnormal. 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.



### WEAR METALS

Iron	ppm	■ <b>25</b>	■ 21	■ 6	---
Copper	ppm	■ <b>9</b>	■ 8	■ 6	---
Lead	ppm	■ <b>1</b>	■ <1	■ <1	---
Tin	ppm	■ <b>2</b>	■ 2	■ <1	---
Aluminum	ppm	■ <b>7</b>	■ 2	■ 0	---
Chromium	ppm	■ <b>&lt;1</b>	■ <1	■ <1	---
Molybdenum	ppm	■ <b>56</b>	■ 50	■ 57	---
Nickel	ppm	▲ <b>8</b>	▲ 12	■ 0	---
Titanium	ppm	<1	■ 0	■ <1	---
Silver	ppm	■ <b>0</b>	■ 0	■ 0	---
Manganese	ppm	■ <b>1</b>	■ 1	■ <1	---
Vanadium	ppm	<1	0	0	---



### ADDITIVES

Calcium	ppm	■ <b>1461</b>	■ 1707	■ 2023	---
Magnesium	ppm	<b>749</b>	■ 483	■ 542	---
Zinc	ppm	■ <b>1067</b>	■ 1131	■ 1134	---
Phosphorus	ppm	■ <b>887</b>	■ 939	■ 1108	---
Barium	ppm	■ <b>0</b>	■ 0	■ 0	---
Boron	ppm	■ <b>37</b>	■ 31	■ 22	---

**Depot:** VOLVO0090  
**Unique No:** 10537679  
**Signed:** Jonathan Hester  
**Report Date:** 03 Jul 2023



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## GRAPHS

