



# CONSTRUCTION EQUIPMENT

## VOLVO A45G 352841 - DIESEL ENGINE



**Sample No:** VCP420052  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:**



### SAMPLE INFORMATION

Sample Number	<b>VCP420052</b>	VCP422709	VCP386688	VCP336698
Sample Date	<b>22 Nov 2023</b>	27 Jun 2023	31 Jan 2023	21 Dec 2021
Machine Hours	<b>3353</b>	2655	2059	500
Oil Hours	<b>0</b>	0	0	0
Oil Changed	<b>Changed</b>	Changed	N/A	Changed
Sample Status	<b>ATTENTION</b>	ATTENTION	ABNORMAL	ATTENTION

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### OIL CONDITION

Visc @ 100°C	cSt	<b>▲ 12.4</b>	▲ 11.0	■ 12.8	▲ 11.8
Base Number (BN)	mg KOH/g	<b>■ 9.2</b>	■ 8.4	■ 9.1	■ 9.4
Oxidation (PA)	%	<b>76</b>	55	80	84

### Diagnosis

Oil and filter change at the time of sampling has been noted. 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>■ 0.6</b>	■ 0.6	■ 0.6	■ 0.1
Nitration (PA)	%	<b>71</b>	76	74	78
Sulfation (PA)	%	<b>60</b>	54	62	61
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>&lt;1.0</b>	■ 0.7	<1.0	■ 1.5
Silicon	ppm	<b>■ 7</b>	■ 15	■ 9	■ 10
Sodium	ppm	<b>■ 2</b>	■ <1	■ <1	■ <1
Potassium	ppm	<b>■ 0</b>	■ 1	■ 2	■ <1



### WEAR METALS

Iron	ppm	<b>■ 10</b>	■ 25	■ 21	■ 6
Copper	ppm	<b>■ 2</b>	■ 9	■ 8	■ 6
Lead	ppm	<b>■ &lt;1</b>	■ 1	■ <1	■ <1
Tin	ppm	<b>■ 1</b>	■ 2	■ 2	■ <1
Aluminum	ppm	<b>■ 3</b>	■ 7	■ 2	■ 0
Chromium	ppm	<b>■ &lt;1</b>	■ <1	■ <1	■ <1
Molybdenum	ppm	<b>■ 47</b>	■ 56	■ 50	■ 57
Nickel	ppm	<b>■ 3</b>	▲ 8	▲ 12	■ 0
Titanium	ppm	<b>0</b>	<1	■ 0	■ <1
Silver	ppm	<b>■ 0</b>	■ 0	■ 0	■ 0
Manganese	ppm	<b>■ &lt;1</b>	■ 1	■ 1	■ <1
Vanadium	ppm	<b>&lt;1</b>	<1	0	0



### ADDITIVES

Calcium	ppm	<b>■ 1658</b>	■ 1461	■ 1707	■ 2023
Magnesium	ppm	<b>■ 563</b>	749	■ 483	■ 542
Zinc	ppm	<b>■ 1069</b>	■ 1067	■ 1131	■ 1134
Phosphorus	ppm	<b>■ 964</b>	■ 887	■ 939	■ 1108
Barium	ppm	<b>■ 0</b>	■ 0	■ 0	■ 0
Boron	ppm	<b>■ 25</b>	■ 37	■ 31	■ 22

**Depot:** VOLVO0090  
**Unique No:** 10763884  
**Signed:** Don Baldrige  
**Report Date:** 01 Dec 2023



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## GRAPHS

