



# CONSTRUCTION EQUIPMENT

## VOLVO A45G 352841 - DIESEL ENGINE



**Sample No:** VCP445943  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:**



### SAMPLE INFORMATION

Sample Number	<b>VCP445943</b>	VCP420052	VCP422709	VCP386688
Sample Date	<b>18 Mar 2024</b>	22 Nov 2023	27 Jun 2023	31 Jan 2023
Machine Hours	<b>3993</b>	3353	2655	2059
Oil Hours	<b>0</b>	0	0	0
Oil Changed	<b>Changed</b>	Changed	Changed	N/A
Sample Status	<b>ATTENTION</b>	ATTENTION	ATTENTION	ABNORMAL

**ALTA EQUIPMENT COMPANY**  
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### OIL CONDITION

Visc @ 100°C	cSt	<b>12.4</b>	12.4	11.0	12.8
Base Number (BN)	mg KOH/g	<b>8.9</b>	9.2	8.4	9.1
Oxidation (PA)	%	<b>79</b>	76	55	80

### 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	0.6
Nitration (PA)	%	<b>72</b>	71	76	74
Sulfation (PA)	%	<b>60</b>	60	54	62
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>&lt;1.0</b>	<1.0	0.7	<1.0
Silicon	ppm	<b>10</b>	7	15	9
Sodium	ppm	<b>2</b>	2	<1	<1
Potassium	ppm	<b>0</b>	0	1	2



### WEAR METALS

Iron	ppm	<b>12</b>	10	25	21
Copper	ppm	<b>&lt;1</b>	2	9	8
Lead	ppm	<b>&lt;1</b>	<1	1	<1
Tin	ppm	<b>0</b>	1	2	2
Aluminum	ppm	<b>6</b>	3	7	2
Chromium	ppm	<b>0</b>	<1	<1	<1
Molybdenum	ppm	<b>44</b>	47	56	50
Nickel	ppm	<b>2</b>	3	8	12
Titanium	ppm	<b>0</b>	0	<1	0
Silver	ppm	<b>0</b>	0	0	0
Manganese	ppm	<b>0</b>	<1	1	1
Vanadium	ppm	<b>0</b>	<1	<1	0



### ADDITIVES

Calcium	ppm	<b>1792</b>	1658	1461	1707
Magnesium	ppm	<b>497</b>	563	749	483
Zinc	ppm	<b>1096</b>	1069	1067	1131
Phosphorus	ppm	<b>947</b>	964	887	939
Barium	ppm	<b>0</b>	0	0	0
Boron	ppm	<b>33</b>	25	37	31

**Depot:** VOLVO0090  
**Unique No:** 10941516  
**Signed:** Don Baldrige  
**Report Date:** 27 Mar 2024



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## GRAPHS

