



# CONSTRUCTION EQUIPMENT

## 443773 VOLVO A40G 342315 - DIESEL ENGINE



**Sample No:** VCP441196  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:** 443773



### SAMPLE INFORMATION

Sample Number	<b>VCP441196</b>	VCP329511	VCP337365	VCP301937
Sample Date	<b>01 Feb 2024</b>	16 Dec 2021	18 Aug 2021	26 Mar 2021
Machine Hours	<b>7233</b>	3976	3420	3215
Oil Hours	<b>0</b>	0	0	0
Oil Changed	<b>Changed</b>	N/A	Changed	Not Changd
Sample Status	<b>ABNORMAL</b>	NORMAL	ATTENTION	ABNORMAL

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

Visc @ 100°C	cSt	<b>12.6</b>	12.9	12.3	13.6
Base Number (BN)	mg KOH/g	<b>6.4</b>	10.7	---	---
Oxidation (PA)	%	<b>98</b>	79	79	65



### CONTAMINATION

Water	%	<b>NEG</b>	NEG	NEG	0.138
Soot %	%	<b>0.7</b>	0.2	0.1	0.1
Nitration (PA)	%	<b>113</b>	61	51	46
Sulfation (PA)	%	<b>74</b>	61	65	63
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>&lt;1.0</b>	<1.0	0.0	<1.0
Silicon	ppm	<b>21</b>	24	15	25
Sodium	ppm	<b>72</b>	2	1	5
Potassium	ppm	<b>1</b>	0	<1	1



### WEAR METALS

Iron	ppm	<b>59</b>	28	25	22
Copper	ppm	<b>16</b>	2	7	9
Lead	ppm	<b>8</b>	<1	1	<1
Tin	ppm	<b>2</b>	<1	<1	<1
Aluminum	ppm	<b>34</b>	8	6	5
Chromium	ppm	<b>6</b>	1	<1	<1
Molybdenum	ppm	<b>57</b>	42	50	117
Nickel	ppm	<b>19</b>	<1	<1	<1
Titanium	ppm	<b>&lt;1</b>	<1	<1	<1
Silver	ppm	<b>0</b>	0	0	<1
Manganese	ppm	<b>2</b>	<1	<1	<1
Vanadium	ppm	<b>&lt;1</b>	0	0	0



### ADDITIVES

Calcium	ppm	<b>1521</b>	1743	1604	1345
Magnesium	ppm	<b>573</b>	512	513	570
Zinc	ppm	<b>1078</b>	1099	1020	804
Phosphorus	ppm	<b>854</b>	951	868	672
Barium	ppm	<b>0</b>	0	0	0
Boron	ppm	<b>5</b>	39	104	380

### 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 aluminum level is abnormal. Valve wear is indicated. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

**Depot:** VOLVO0090  
**Unique No:** 10870666  
**Signed:** Don Baldrige  
**Report Date:** 09 Feb 2024



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## GRAPHS

