



# CONSTRUCTION EQUIPMENT

## VOLVO A40G 352921 - DIESEL ENGINE



**Sample No:** VCP434287  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:**



### SAMPLE INFORMATION

Sample Number	<b>VCP434287</b>	VCP434286	VCP367210	VCP336670
Sample Date	<b>01 Nov 2023</b>	31 Oct 2023	19 Oct 2022	19 Dec 2021
Machine Hours	<b>4224</b>	4224	2303	497
Oil Hours	<b>0</b>	0	0	0
Oil Changed	<b>Changed</b>	Changed	Changed	Changed
Sample Status	<b>SEVERE</b>	SEVERE	NORMAL	ABNORMAL

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### OIL CONDITION

Visc @ 100°C	cSt	<b>12.3</b>	12.4	12.6	10.5
Base Number (BN)	mg KOH/g	<b>10.0</b>	7.8	9.8	5.3
Oxidation (PA)	%	<b>83</b>	80	86	63

### Diagnosis

We advise that you check for the source of the coolant leak. Check for low coolant level. Oil and filter change at the time of sampling has been noted. 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.



### CONTAMINATION

Water	%	<b>NEG</b>	NEG	NEG	NEG
Soot %	%	<b>0.4</b>	0.4	0.3	0.2
Nitration (PA)	%	<b>100</b>	95	79	91
Sulfation (PA)	%	<b>66</b>	63	66	60
Glycol	%	<b>0.10</b>	0.10	NEG	NEG
Fuel	%	<b>&lt;1.0</b>	<1.0	<1.0	0.2
Silicon	ppm	<b>15</b>	15	8	32
Sodium	ppm	<b>1095</b>	1083	2	2
Potassium	ppm	<b>260</b>	258	0	4



### WEAR METALS

Iron	ppm	<b>11</b>	11	8	19
Copper	ppm	<b>9</b>	9	6	183
Lead	ppm	<b>&lt;1</b>	<1	1	1
Tin	ppm	<b>&lt;1</b>	<1	1	5
Aluminum	ppm	<b>2</b>	2	3	<1
Chromium	ppm	<b>&lt;1</b>	<1	<1	<1
Molybdenum	ppm	<b>111</b>	111	56	99
Nickel	ppm	<b>4</b>	4	1	2
Titanium	ppm	<b>0</b>	0	0	<1
Silver	ppm	<b>0</b>	0	0	0
Manganese	ppm	<b>&lt;1</b>	<1	<1	3
Vanadium	ppm	<b>0</b>	0	0	0



### ADDITIVES

Calcium	ppm	<b>1553</b>	1550	1614	2651
Magnesium	ppm	<b>533</b>	533	563	33
Zinc	ppm	<b>1103</b>	1095	1075	1173
Phosphorus	ppm	<b>869</b>	872	883	1159
Barium	ppm	<b>&lt;1</b>	<1	0	0
Boron	ppm	<b>17</b>	18	18	17

**Depot:** VOLVO0090  
**Unique No:** 10724899  
**Signed:** Jonathan Hester  
**Report Date:** 07 Nov 2023



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## GRAPHS

