



# CONSTRUCTION EQUIPMENT

## 580547 VOLVO A40G 3525 13 - DIESEL ENGINE



**Sample No:** VCP420925  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:** 580547



### SAMPLE INFORMATION

Sample Number	<b>VCP420925</b>	VCP420242	VCP390648	VCP354475
Sample Date	<b>31 Jul 2023</b>	22 Apr 2023	26 Sep 2022	17 Jun 2022
Machine Hours	<b>5166</b>	4603	3603	3027
Oil Hours	<b>500</b>	500	500	1500
Oil Changed	<b>Changed</b>	Changed	Changed	Changed
Sample Status	<b>NORMAL</b>	NORMAL	NORMAL	NORMAL

### RIPA AND ASSOCIATES

10149 FISHER AVENUE  
TAMPA, FL  
US 33619  
Contact: ROBERT TURNER  
rtturner@ripatampa.com  
T:  
F:

### OIL CONDITION

Visc @ 100°C	cSt	<b>12.8</b>	12.4	13.1	12.9
Base Number (BN)	mg KOH/g	<b>9.1</b>	7.3	11.0	11.3
Oxidation (PA)	%	<b>76</b>	89	88	86

### CONTAMINATION

Soot %	%	<b>0.4</b>	0.4	0.3	0.2
Nitration (PA)	%	<b>65</b>	86	69	67
Sulfation (PA)	%	<b>58</b>	66	67	65
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>&lt;1.0</b>	0.6	<1.0	<1.0
Silicon	ppm	<b>4</b>	6	4	4
Sodium	ppm	<b>2</b>	4	5	2
Potassium	ppm	<b>2</b>	2	1	<1

### Diagnosis

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 BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

### WEAR METALS

Iron	ppm	<b>8</b>	11	5	6
Copper	ppm	<b>&lt;1</b>	15	4	3
Lead	ppm	<b>&lt;1</b>	2	0	<1
Tin	ppm	<b>&lt;1</b>	2	<1	<1
Aluminum	ppm	<b>4</b>	3	2	2
Chromium	ppm	<b>&lt;1</b>	<1	0	<1
Molybdenum	ppm	<b>40</b>	44	38	41
Nickel	ppm	<b>&lt;1</b>	3	0	0
Titanium	ppm	<b>0</b>	0	0	<1
Silver	ppm	<b>0</b>	0	0	2
Manganese	ppm	<b>&lt;1</b>	<1	0	<1
Vanadium	ppm	<b>0</b>	<1	0	0

### ADDITIVES

Calcium	ppm	<b>1713</b>	1604	1655	1657
Magnesium	ppm	<b>493</b>	514	478	490
Zinc	ppm	<b>1187</b>	1125	1080	1140
Phosphorus	ppm	<b>975</b>	885	916	945
Barium	ppm	<b>0</b>	0	0	0
Boron	ppm	<b>33</b>	15	20	41

**Depot:** RIPTAM  
**Unique No:** 10601866  
**Signed:** Wes Davis  
**Report Date:** 11 Aug 2023



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## GRAPHS

