



# CONSTRUCTION EQUIPMENT

SWA535991 VOLVO A45G 352371 - DIESEL ENGINE



**Sample No:** VCP455205  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:** SWA535991



## SAMPLE INFORMATION

Sample Number	<b>VCP455205</b>	VCP442671	VCP349911	---
Sample Date	<b>09 May 2024</b>	02 Feb 2024	03 Feb 2022	---
Machine Hours	<b>5551</b>	5814	2372	---
Oil Hours	<b>0</b>	0	0	---
Oil Changed	<b>Changed</b>	N/A	Not Changd	---
Sample Status	<b>ABNORMAL</b>	NORMAL	ABNORMAL	---

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## OIL CONDITION

Visc @ 100°C	cSt	<b>12.8</b>	12.6	15.79	---
Base Number (BN)	mg KOH/g	<b>9.3</b>	8.4	12.5	---
Oxidation (PA)	%	<b>77</b>	79	82	---



## CONTAMINATION

Water	%	<b>NEG</b>	NEG	NEG	---
Soot %	%	<b>0.5</b>	0.5	0.3	---
Nitration (PA)	%	<b>73</b>	78	73	---
Sulfation (PA)	%	<b>61</b>	60	57	---
Glycol	%	<b>NEG</b>	NEG	NEG	---
Fuel	%	<b>&lt;1.0</b>	<1.0	<1.0	---
Silicon	ppm	<b>▲ 29</b>	5	▲ 33	---
Sodium	ppm	<b>0</b>	2	3	---
Potassium	ppm	<b>3</b>	0	2	---

## Diagnosis

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. 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. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. 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>38</b>	10	45	---
Copper	ppm	<b>2</b>	2	2	---
Lead	ppm	<b>2</b>	<1	<1	---
Tin	ppm	<b>2</b>	<1	<1	---
Aluminum	ppm	<b>● 8</b>	3	● 6	---
Chromium	ppm	<b>3</b>	<1	2	---
Molybdenum	ppm	<b>50</b>	50	44	---
Nickel	ppm	<b>1</b>	3	1	---
Titanium	ppm	<b>&lt;1</b>	0	<1	---
Silver	ppm	<b>0</b>	0	0	---
Manganese	ppm	<b>&lt;1</b>	<1	<1	---
Vanadium	ppm	<b>&lt;1</b>	0	0	---



## ADDITIVES

Calcium	ppm	<b>1661</b>	1629	1845	---
Magnesium	ppm	<b>543</b>	567	580	---
Zinc	ppm	<b>1128</b>	1132	969	---
Phosphorus	ppm	<b>1042</b>	980	825	---
Barium	ppm	<b>2</b>	<1	0	---
Boron	ppm	<b>45</b>	27	72	---

**Depot:** VOLVO0090  
**Unique No:** 11022902  
**Signed:** Sean Felton  
**Report Date:** 14 May 2024



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## GRAPHS

