



# CONSTRUCTION EQUIPMENT

SWA105627-30 VOLVO A40G 352082 - DIESEL ENGINE



**Sample No:** VCP404553  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:** SWA105627-30



## SAMPLE INFORMATION

Sample Number	VCP404553	VCP349817	---	---
Sample Date	03 Apr 2023	14 Mar 2022	---	---
Machine Hours	6357	5908	---	---
Oil Hours	0	0	---	---
Oil Changed	Changed	Not Changd	---	---
Sample Status	ABNORMAL	ATTENTION	---	---

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## OIL CONDITION

Visc @ 100°C	cSt	█ 12.3	▲ 9.77	---	---
Base Number (BN)	mg KOH/g	█ 7.2	█ 6.9	---	---
Oxidation (PA)	%	61	72	---	---



## CONTAMINATION

Water	%	NEG	NEG	---	---
Soot %	%	█ 0.3	█ 0	---	---
Nitration (PA)	%	73	85	---	---
Sulfation (PA)	%	59	58	---	---
Glycol	%	0.0	NEG	---	---
Fuel	%	█ 0.7	█ 0.3	---	---
Silicon	ppm	█ 12	█ 5	---	---
Sodium	ppm	▲ 192	█ 23	---	---
Potassium	ppm	█ 19	█ 1	---	---



## WEAR METALS

Iron	ppm	█ 76	█ 22	---	---
Copper	ppm	▲ 87	█ 27	---	---
Lead	ppm	█ 1	█ 1	---	---
Tin	ppm	█ <1	█ <1	---	---
Aluminum	ppm	█ 14	█ 3	---	---
Chromium	ppm	█ 2	█ <1	---	---
Molybdenum	ppm	█ 99	█ 62	---	---
Nickel	ppm	▲ 13	█ 2	---	---
Titanium	ppm	0	█ 0	---	---
Silver	ppm	█ 0	2	---	---
Manganese	ppm	█ 2	█ <1	---	---
Vanadium	ppm	<1	0	---	---



## ADDITIVES

Calcium	ppm	█ 1751	█ 1157	---	---
Magnesium	ppm	█ 1417	█ 1035	---	---
Zinc	ppm	█ 1879	█ 1281	---	---
Phosphorus	ppm	█ 1524	█ 1140	---	---
Barium	ppm	█ 0	█ 0	---	---
Boron	ppm	█ 13	█ 12	---	---

## Diagnosis

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. The copper level is abnormal. Exhaust valve wear is indicated. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core). Fuel content negligible. Test for glycol is negative. No other contaminants were detected 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:** VOLVO0095  
**Unique No:** 10416473  
**Signed:** Doug Bogart  
**Report Date:** 12 Apr 2023



# CONSTRUCTION EQUIPMENT



## GRAPHS

