



# CONSTRUCTION EQUIPMENT

662078 VOLVO A30F 82303 - DIESEL ENGINE



**Sample No:** VCP432045  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:** 662078



## SAMPLE INFORMATION

Sample Number	<b>VCP432045</b>	VCP411548	VCP390245	VCP299456
Sample Date	<b>02 Feb 2024</b>	11 Aug 2023	28 Dec 2022	13 May 2021
Machine Hours	<b>12787</b>	12173	11500	10638
Oil Hours	<b>500</b>	500	500	500
Oil Changed	<b>Changed</b>	Changed	Changed	Changed
Sample Status	<b>ABNORMAL</b>	ABNORMAL	NORMAL	ABNORMAL

**RIPA AND ASSOCIATES**  
 10149 FISHER AVENUE  
 TAMPA, FL  
 US 33619  
 Contact: PM Services  
 PMServices@ripaconstruction.com  
 T:  
 F:

## OIL CONDITION

Visc @ 100°C	cSt	▲ <b>12.0</b>	▲ 11.5	■ 12.2	▲ 11.5
Base Number (BN)	mg KOH/g	■ <b>9.6</b>	■ 8.7	■ 7.7	---
Oxidation (PA)	%	<b>76</b>	68	48	80

## CONTAMINATION

Water	%	<b>NEG</b>	NEG	NEG	NEG
Soot %	%	■ <b>0.2</b>	■ 0.2	■ 0.1	■ 0.3
Nitration (PA)	%	<b>73</b>	68	58	74
Sulfation (PA)	%	<b>58</b>	55	46	64
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	▲ <b>2.7</b>	▲ 3.6	<1.0	■ 1.7
Silicon	ppm	■ <b>10</b>	■ 9	■ 5	■ 8
Sodium	ppm	■ <b>23</b>	▲ 69	■ 5	■ 14
Potassium	ppm	▲ <b>54</b>	▲ 162	■ 8	■ 11

**Diagnosis**  
 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. Sodium and/or potassium levels are high. Light fuel dilution occurring. Test for glycol is negative. The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

## WEAR METALS

Iron	ppm	■ <b>18</b>	■ 24	■ 4	■ 22
Copper	ppm	■ <b>2</b>	■ 3	■ <1	■ 8
Lead	ppm	■ <b>1</b>	■ <1	■ <1	■ 2
Tin	ppm	■ <b>&lt;1</b>	■ <1	■ <1	■ 1
Aluminum	ppm	■ <b>7</b>	■ 10	■ 2	■ 11
Chromium	ppm	■ <b>&lt;1</b>	■ <1	■ 0	■ <1
Molybdenum	ppm	■ <b>50</b>	■ 73	■ 78	■ 42
Nickel	ppm	■ <b>&lt;1</b>	■ <1	■ 0	■ 1
Titanium	ppm	<b>0</b>	<1	0	<1
Silver	ppm	■ <b>0</b>	■ 0	■ <1	0
Manganese	ppm	■ <b>&lt;1</b>	■ <1	■ <1	■ <1
Vanadium	ppm	<b>0</b>	<1	0	0

## ADDITIVES

Calcium	ppm	■ <b>1544</b>	■ 1646	■ 1898	■ 1528
Magnesium	ppm	■ <b>457</b>	■ 545	■ 214	■ 580
Zinc	ppm	■ <b>1064</b>	■ 1138	■ 1158	■ 1055
Phosphorus	ppm	■ <b>921</b>	■ 960	■ 981	■ 938
Barium	ppm	■ <b>0</b>	■ 0	■ 0	■ 0
Boron	ppm	■ <b>23</b>	■ 20	■ 66	■ 37

**Depot:** RIPTAM  
**Unique No:** 10886750  
**Signed:** Jonathan Hester  
**Report Date:** 22 Feb 2024



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## GRAPHS

