



# CONSTRUCTION EQUIPMENT

## PETERSON 6170D 32D-41-2619 - DIESEL ENGINE



**Sample No:** VCP455004  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:**



### SAMPLE INFORMATION

Sample Number	<b>VCP455004</b>	VCP436148	VCP367582	VCP319029
Sample Date	<b>24 Apr 2024</b>	18 Dec 2023	07 Jan 2023	05 Dec 2021
Machine Hours	<b>5597</b>	0	2788	410
Oil Hours	<b>0</b>	0	0	0
Oil Changed	<b>Changed</b>	Changed	Changed	Changed
Sample Status	<b>SEVERE</b>	ABNORMAL	ABNORMAL	ABNORMAL

**ALTA EQUIPMENT COMPANY**  
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### OIL CONDITION

Visc @ 100°C	cSt	<b>▲ 10.3</b>	▲ 11.5	▲ 12.5	▲ 11.1
Base Number (BN)	mg KOH/g	<b>■ 7.6</b>	■ 4.9	■ 5.2	■ 7.9
Oxidation (PA)	%	<b>82</b>	99	118	89



### CONTAMINATION

Water	%	<b>NEG</b>	NEG	NEG	NEG
Soot %	%	<b>■ 0.5</b>	■ 0.6	■ 1.9	■ 0.4
Nitration (PA)	%	<b>79</b>	103	128	93
Sulfation (PA)	%	<b>62</b>	74	85	64
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>▲ 12.6</b>	▲ 9.8	▲ 5.8	▲ 6.0
Silicon	ppm	<b>■ 5</b>	■ 6	■ 13	■ 38
Sodium	ppm	<b>■ 1</b>	■ 3	■ 4	■ 4
Potassium	ppm	<b>■ 3</b>	■ 7	■ 8	■ 20



### WEAR METALS

Iron	ppm	<b>■ 17</b>	■ 45	▲ 116	■ 46
Copper	ppm	<b>■ 4</b>	■ 7	■ 13	■ 315
Lead	ppm	<b>■ 2</b>	■ 9	■ 23	■ 5
Tin	ppm	<b>■ &lt;1</b>	■ 1	■ 3	■ 6
Aluminum	ppm	<b>■ 3</b>	■ 6	■ 14	■ 12
Chromium	ppm	<b>■ &lt;1</b>	■ 1	■ 3	■ 3
Molybdenum	ppm	<b>■ 41</b>	■ 46	■ 62	■ 42
Nickel	ppm	<b>■ 0</b>	■ <1	■ <1	■ 0
Titanium	ppm	<b>&lt;1</b>	0	<1	■ <1
Silver	ppm	<b>■ 0</b>	■ 0	■ 0	■ <1
Manganese	ppm	<b>■ 0</b>	■ <1	■ 2	■ 3
Vanadium	ppm	<b>&lt;1</b>	<1	<1	0



### ADDITIVES

Calcium	ppm	<b>■ 1444</b>	■ 1540	■ 1832	■ 1742
Magnesium	ppm	<b>■ 444</b>	■ 467	■ 542	■ 518
Zinc	ppm	<b>■ 987</b>	■ 1171	■ 1252	■ 1040
Phosphorus	ppm	<b>■ 824</b>	■ 940	■ 931	■ 934
Barium	ppm	<b>■ 0</b>	■ 0	■ 0	■ 0
Boron	ppm	<b>■ 16</b>	■ 21	■ 5	■ 16

### Diagnosis

We advise that you check the fuel injection system. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. All component wear rates are normal. There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

**Depot:** VOLVO0090  
**Unique No:** 11004822  
**Signed:** Wes Davis  
**Report Date:** 02 May 2024



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## GRAPHS

