



# CONSTRUCTION EQUIPMENT

687084 DIPRO MCC ST80T 90439 - DIESEL ENGINE



**Sample No:** VCP447059  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:** 687084 DIPRO



## SAMPLE INFORMATION

Sample Number	<b>VCP447059</b>	VCP399406	VCP373931	---
Sample Date	<b>28 Mar 2024</b>	07 Mar 2023	28 Jul 2022	---
Machine Hours	<b>7107</b>	0	3902	---
Oil Hours	<b>0</b>	0	500	---
Oil Changed	<b>Changed</b>	Changed	Changed	---
Sample Status	<b>SEVERE</b>	SEVERE	SEVERE	---

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## OIL CONDITION

Visc @ 100°C	cSt	<b>▲ 10.3</b>	▲ 9.8	▲ 11.1	---
Base Number (BN)	mg KOH/g	<b>■ 6.6</b>	■ 8.8	■ 8.3	---
Oxidation (PA)	%	<b>118</b>	104	120	---

## Diagnosis

We advise that you check the fuel injection system. Oil and filter 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. Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants.



## CONTAMINATION

Water	%	<b>NEG</b>	NEG	NEG	---
Soot %	%	<b>■ 1.5</b>	■ 1.4	■ 0.3	---
Nitration (PA)	%	<b>138</b>	128	113	---
Sulfation (PA)	%	<b>75</b>	71	77	---
Glycol	%	<b>NEG</b>	NEG	NEG	---
Fuel	%	<b>▲ 17.8</b>	▲ 20.4	▲ 11.3	---
Silicon	ppm	<b>■ 6</b>	■ 6	■ 6	---
Sodium	ppm	<b>■ 5</b>	■ 2	■ <1	---
Potassium	ppm	<b>■ 0</b>	■ 0	■ 2	---



## WEAR METALS

Iron	ppm	<b>■ 92</b>	■ 87	■ 43	---
Copper	ppm	<b>■ 4</b>	■ 5	■ 3	---
Lead	ppm	<b>■ &lt;1</b>	■ 0	■ 0	---
Tin	ppm	<b>■ 0</b>	■ <1	■ <1	---
Aluminum	ppm	<b>■ 5</b>	■ 6	■ 4	---
Chromium	ppm	<b>■ 1</b>	■ 2	■ <1	---
Molybdenum	ppm	<b>■ 60</b>	■ 49	121	---
Nickel	ppm	<b>■ &lt;1</b>	■ 0	■ 0	---
Titanium	ppm	<b>0</b>	0	0	---
Silver	ppm	<b>■ 0</b>	■ <1	■ 0	---
Manganese	ppm	<b>■ &lt;1</b>	■ 2	■ <1	---
Vanadium	ppm	<b>&lt;1</b>	<1	0	---



## ADDITIVES

Calcium	ppm	<b>■ 1796</b>	1049	■ 1602	---
Magnesium	ppm	<b>■ 172</b>	770	■ 577	---
Zinc	ppm	<b>■ 937</b>	■ 991	■ 905	---
Phosphorus	ppm	<b>■ 850</b>	■ 720	687	---
Barium	ppm	<b>■ 0</b>	■ 0	■ 0	---
Boron	ppm	<b>■ 38</b>	■ 33	222	---

**Depot:** VOLVO2990  
**Unique No:** 10968723  
**Signed:** Don Baldrige  
**Report Date:** 16 Apr 2024



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## GRAPHS

