



# CONSTRUCTION EQUIPMENT

## SPM645114-10 VOLVO EC480EL 315150 - DIESEL ENGINE



**Sample No:** VCP405371  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:** SPM645114-10



**ALTA EQUIPMENT COMPANY**  
 5151 DR MARTIN LUTHER KING BLVD  
 FORT MYERS, FL  
 US 33905  
 Contact: TODD LARK  
 tlark@altaequipfl.com  
 T:  
 F: (239)481-3302



### SAMPLE INFORMATION

Sample Number	<b>VCP405371</b>	VCP418619	---	---
Sample Date	<b>07 Dec 2023</b>	11 Aug 2023	---	---
Machine Hours	<b>1188</b>	640	---	---
Oil Hours	<b>0</b>	0	---	---
Oil Changed	<b>N/A</b>	Changed	---	---
Sample Status	<b>ABNORMAL</b>	ABNORMAL	---	---



### OIL CONDITION

Visc @ 100°C	cSt	<b>▲ 11.9</b>	▲ 11.9	---	---
Base Number (BN)	mg KOH/g	<b>■ 7.3</b>	■ 5.2	---	---
Oxidation (PA)	%	<b>83</b>	56	---	---



### CONTAMINATION

Water	%	<b>NEG</b>	NEG	---	---
Soot %	%	<b>■ 0.1</b>	■ 0.1	---	---
Nitration (PA)	%	<b>70</b>	67	---	---
Sulfation (PA)	%	<b>62</b>	58	---	---
Glycol	%	<b>NEG</b>	NEG	---	---
Fuel	%	<b>&lt;1.0</b>	■ 1.5	---	---
Silicon	ppm	<b>■ 11</b>	■ 27	---	---
Sodium	ppm	<b>■ &lt;1</b>	■ 2	---	---
Potassium	ppm	<b>■ 0</b>	■ 2	---	---



### WEAR METALS

Iron	ppm	<b>■ 6</b>	■ 18	---	---
Copper	ppm	<b>▲ 74</b>	▲ 265	---	---
Lead	ppm	<b>■ &lt;1</b>	■ <1	---	---
Tin	ppm	<b>■ 0</b>	■ 2	---	---
Aluminum	ppm	<b>■ 0</b>	■ 2	---	---
Chromium	ppm	<b>■ 0</b>	■ <1	---	---
Molybdenum	ppm	<b>■ 48</b>	■ 23	---	---
Nickel	ppm	<b>■ 0</b>	■ <1	---	---
Titanium	ppm	<b>0</b>	0	---	---
Silver	ppm	<b>■ 0</b>	■ 0	---	---
Manganese	ppm	<b>■ &lt;1</b>	■ 3	---	---
Vanadium	ppm	<b>0</b>	0	---	---



### ADDITIVES

Calcium	ppm	<b>■ 1691</b>	■ 2136	---	---
Magnesium	ppm	<b>■ 451</b>	■ 151	---	---
Zinc	ppm	<b>■ 1046</b>	■ 1108	---	---
Phosphorus	ppm	<b>■ 844</b>	■ 903	---	---
Barium	ppm	<b>■ 0</b>	■ 0	---	---
Boron	ppm	<b>■ 14</b>	■ 2	---	---

### Diagnosis

No corrective action is recommended at this time. Resample at the next service interval to monitor. The copper level has decreased, but is still abnormal. All other component wear rates are normal. There is no indication of any contamination in the oil. The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

**Depot:** VOLVO0090  
**Unique No:** 10780111  
**Signed:** Don Baldrige  
**Report Date:** 13 Dec 2023



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## GRAPHS

