



# CONSTRUCTION EQUIPMENT

659444 MOSAIC FERT VOLVO EC480EL 315147 - DIESEL ENGINE



**Sample No:** VCP442577  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:** 659444 MOSAIC FERT



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## SAMPLE INFORMATION

Sample Number	VCP442577	VCP417083	---	---
Sample Date	13 Jan 2024	21 Aug 2023	---	---
Machine Hours	1647	812	---	---
Oil Hours	600	812	---	---
Oil Changed	Changed	Changed	---	---
Sample Status	ABNORMAL	ABNORMAL	---	---

## OIL CONDITION

Visc @ 100°C	cSt	▲ 12.3	▲ 11.0	---	---
Base Number (BN)	mg KOH/g	■ 6.4	■ 4.4	---	---
Oxidation (PA)	%	80	73	---	---

## CONTAMINATION

Water	%	NEG	NEG	---	---
Soot %	%	■ 0.1	■ 0.1	---	---
Nitration (PA)	%	89	91	---	---
Sulfation (PA)	%	62	65	---	---
Glycol	%	NEG	NEG	---	---
Fuel	%	<1.0	■ 0.6	---	---
Silicon	ppm	■ 15	■ 27	---	---
Sodium	ppm	■ 2	■ 3	---	---
Potassium	ppm	■ 0	■ 2	---	---

## WEAR METALS

Iron	ppm	■ 11	■ 16	---	---
Copper	ppm	▲ 33	▲ 168	---	---
Lead	ppm	■ <1	■ 2	---	---
Tin	ppm	■ 1	■ 3	---	---
Aluminum	ppm	■ 2	■ 4	---	---
Chromium	ppm	■ <1	■ 0	---	---
Molybdenum	ppm	■ 35	■ 79	---	---
Nickel	ppm	■ <1	■ 0	---	---
Titanium	ppm	<1	0	---	---
Silver	ppm	■ 0	■ 0	---	---
Manganese	ppm	■ <1	■ 2	---	---
Vanadium	ppm	<1	0	---	---

## ADDITIVES

Calcium	ppm	■ 1913	■ 2130	---	---
Magnesium	ppm	■ 374	66	---	---
Zinc	ppm	■ 1126	■ 1189	---	---
Phosphorus	ppm	■ 843	■ 928	---	---
Barium	ppm	■ 0	■ 0	---	---
Boron	ppm	■ 8	■ 6	---	---

## Diagnosis

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. The copper level has decreased, but is still abnormal. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core). 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:** VOLVO0093  
**Unique No:** 10886300  
**Signed:** Sean Felton  
**Report Date:** 21 Feb 2024



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## GRAPHS

