



# CONSTRUCTION EQUIPMENT

20790 VOLVO ECR88 217893 - DIESEL ENGINE



**Sample No:** VCP413704  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:** 20790



## SAMPLE INFORMATION

Sample Number	VCP413704	---	---	---
Sample Date	12 Sep 2023	---	---	---
Machine Hours	588	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Changed	---	---	---
Sample Status	ABNORMAL	---	---	---

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## OIL CONDITION

Visc @ 100°C	cSt	█ 13.3	---	---	---
Base Number (BN)	mg KOH/g	█ 6.8	---	---	---
Oxidation (PA)	%	65	---	---	---



## CONTAMINATION

Soot %	%	█ 0.2	---	---	---
Nitration (PA)	%	71	---	---	---
Sulfation (PA)	%	62	---	---	---
Glycol	%	NEG	---	---	---
Fuel	%	<1.0	---	---	---
Silicon	ppm	█ 11	---	---	---
Sodium	ppm	█ 5	---	---	---
Potassium	ppm	█ 1	---	---	---



## WEAR METALS

Iron	ppm	█ 22	---	---	---
Copper	ppm	▲ 114	---	---	---
Lead	ppm	█ <1	---	---	---
Tin	ppm	█ <1	---	---	---
Aluminum	ppm	█ 5	---	---	---
Chromium	ppm	█ <1	---	---	---
Molybdenum	ppm	█ 26	---	---	---
Nickel	ppm	█ 0	---	---	---
Titanium	ppm	<1	---	---	---
Silver	ppm	█ 0	---	---	---
Manganese	ppm	█ 2	---	---	---
Vanadium	ppm	0	---	---	---



## ADDITIVES

Calcium	ppm	█ 2281	---	---	---
Magnesium	ppm	█ 156	---	---	---
Zinc	ppm	█ 1003	---	---	---
Phosphorus	ppm	█ 866	---	---	---
Barium	ppm	█ 0	---	---	---
Boron	ppm	█ 29	---	---	---

## Diagnosis

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor. The copper level is abnormal. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core). All other metal levels are typical for a new component breaking in. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

**Depot:** VOLV00124  
**Unique No:** 10648355  
**Signed:** Sean Felton  
**Report Date:** 19 Sep 2023



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## GRAPHS

