



# CONSTRUCTION EQUIPMENT

## 1428 VOLVO EC350 314668 - DIESEL ENGINE



**Sample No:** VCP429811  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:** 1428



### SAMPLE INFORMATION

Sample Number	VCP429811	---	---	---
Sample Date	08 Dec 2023	---	---	---
Machine Hours	657	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Changed	---	---	---
Sample Status	ABNORMAL	---	---	---

**VCES- VOLVO CONSTRUCTION EQUIPMENT**  
 8594 FRUITRIDGE ROAD  
 SACRAMENTO, CA  
 US 95826  
 Contact: RAY KRANZUSCH  
 ray.kranzusch@vcesvolvo.com  
 T:  
 F:



### OIL CONDITION

Visc @ 100°C	cSt	▲ 11.8	---	---	---
Base Number (BN)	mg KOH/g	■ 5.3	---	---	---
Oxidation (PA)	%	■ 53	---	---	---



### CONTAMINATION

Water	%	NEG	---	---	---
Soot %	%	■ 0.1	---	---	---
Nitration (PA)	%	■ 64	---	---	---
Sulfation (PA)	%	■ 56	---	---	---
Glycol	%	NEG	---	---	---
Fuel	%	■ 1.1	---	---	---
Silicon	ppm	■ 18	---	---	---
Sodium	ppm	■ 2	---	---	---
Potassium	ppm	■ 3	---	---	---



### WEAR METALS

Iron	ppm	■ 10	---	---	---
Copper	ppm	▲ 306	---	---	---
Lead	ppm	■ 0	---	---	---
Tin	ppm	■ 2	---	---	---
Aluminum	ppm	■ 2	---	---	---
Chromium	ppm	■ 0	---	---	---
Molybdenum	ppm	■ 17	---	---	---
Nickel	ppm	■ <1	---	---	---
Titanium	ppm	<1	---	---	---
Silver	ppm	■ 0	---	---	---
Manganese	ppm	■ 2	---	---	---
Vanadium	ppm	0	---	---	---



### ADDITIVES

Calcium	ppm	■ 2065	---	---	---
Magnesium	ppm	■ 131	---	---	---
Zinc	ppm	■ 1020	---	---	---
Phosphorus	ppm	■ 888	---	---	---
Barium	ppm	■ <1	---	---	---
Boron	ppm	■ 11	---	---	---

### Diagnosis

The oil change at the time of sampling has been noted. 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. Fuel content negligible. 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:** VOLVO4485  
**Unique No:** 10794205  
**Signed:** Don Baldrige  
**Report Date:** 23 Dec 2023



# CONSTRUCTION EQUIPMENT



## GRAPHS

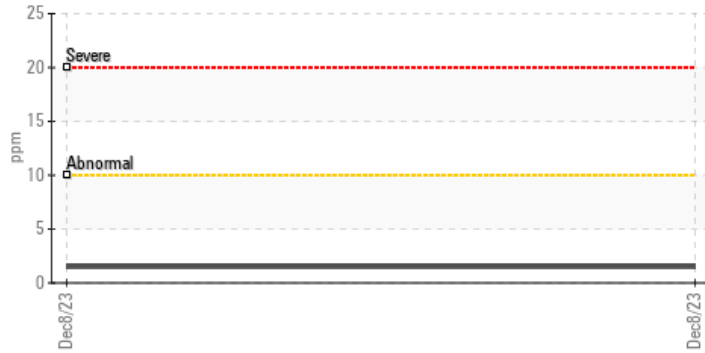
### Iron (ppm)



### Lead (ppm)



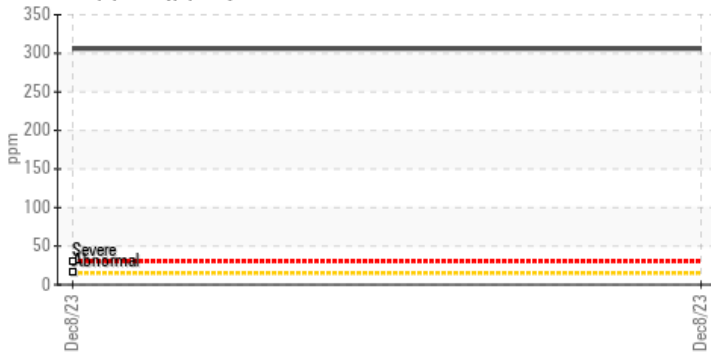
### Aluminum (ppm)



### Chromium (ppm)



### Copper (ppm)



### Silicon (ppm)



### Viscosity @ 100°C



### Base Number

