



# CONSTRUCTION EQUIPMENT

661545 VOLVO L120 633396 - DIESEL ENGINE



**Sample No:** VCP439085  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:** 661545



## SAMPLE INFORMATION

Sample Number	VCP439085	---	---	---
Sample Date	25 Jan 2024	---	---	---
Machine Hours	1010	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Changed	---	---	---
Sample Status	ABNORMAL	---	---	---

**ORANGE COUNTY SOLID WASTE**  
 5901 YOUNG PINE ROAD  
 ORLANDO, FL  
 US 32829  
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## OIL CONDITION

Visc @ 100°C	cSt	█ 12.5	---	---	---
Base Number (BN)	mg KOH/g	█ 7.7	---	---	---
Oxidation (PA)	%	82	---	---	---



## CONTAMINATION

Water	%	NEG	---	---	---
Soot %	%	█ 0.6	---	---	---
Nitration (PA)	%	71	---	---	---
Sulfation (PA)	%	63	---	---	---
Glycol	%	NEG	---	---	---
Fuel	%	<1.0	---	---	---
Silicon	ppm	▲ 32	---	---	---
Sodium	ppm	█ 5	---	---	---
Potassium	ppm	█ 4	---	---	---



## WEAR METALS

Iron	ppm	█ 38	---	---	---
Copper	ppm	▲ 48	---	---	---
Lead	ppm	█ 8	---	---	---
Tin	ppm	█ 6	---	---	---
Aluminum	ppm	▲ 30	---	---	---
Chromium	ppm	█ 2	---	---	---
Molybdenum	ppm	█ 40	---	---	---
Nickel	ppm	█ <1	---	---	---
Titanium	ppm	<1	---	---	---
Silver	ppm	█ 1	---	---	---
Manganese	ppm	█ 3	---	---	---
Vanadium	ppm	<1	---	---	---



## ADDITIVES

Calcium	ppm	█ 1513	---	---	---
Magnesium	ppm	█ 556	---	---	---
Zinc	ppm	█ 1144	---	---	---
Phosphorus	ppm	█ 942	---	---	---
Barium	ppm	25	---	---	---
Boron	ppm	█ 25	---	---	---

## Diagnosis

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. The copper level is abnormal. All other component wear rates are normal. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

**Depot:** ORAORL  
**Unique No:** 10856387  
**Signed:** Don Baldrige  
**Report Date:** 31 Jan 2024



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## GRAPHS

