



# CONSTRUCTION EQUIPMENT

632869 HILLSBOROUGH VOLVO EW160EL 324178 - DIESEL ENGINE



**Sample No:** VCP431775  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:** 632869 HILLSBOROUGH



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## SAMPLE INFORMATION

Sample Number	VCP431775	---	---	---
Sample Date	07 Nov 2023	---	---	---
Machine Hours	479	---	---	---
Oil Hours	479	---	---	---
Oil Changed	Changed	---	---	---
Sample Status	ATTENTION	---	---	---



## OIL CONDITION

Visc @ 100°C	cSt	▲ 10.7	---	---	---
Base Number (BN)	mg KOH/g	■ 9.6	---	---	---
Oxidation (PA)	%	82	---	---	---



## CONTAMINATION

Water	%	NEG	---	---	---
Soot %	%	■ 0.1	---	---	---
Nitration (PA)	%	53	---	---	---
Sulfation (PA)	%	61	---	---	---
Glycol	%	NEG	---	---	---
Fuel	%	■ 0.4	---	---	---
Silicon	ppm	■ 25	---	---	---
Sodium	ppm	■ 4	---	---	---
Potassium	ppm	■ 2	---	---	---



## WEAR METALS

Iron	ppm	■ 14	---	---	---
Copper	ppm	■ 6	---	---	---
Lead	ppm	■ <1	---	---	---
Tin	ppm	■ 2	---	---	---
Aluminum	ppm	■ 4	---	---	---
Chromium	ppm	■ 1	---	---	---
Molybdenum	ppm	■ 34	---	---	---
Nickel	ppm	■ 5	---	---	---
Titanium	ppm	0	---	---	---
Silver	ppm	■ 0	---	---	---
Manganese	ppm	■ 4	---	---	---
Vanadium	ppm	0	---	---	---



## ADDITIVES

Calcium	ppm	■ 1448	---	---	---
Magnesium	ppm	■ 496	---	---	---
Zinc	ppm	■ 1039	---	---	---
Phosphorus	ppm	■ 866	---	---	---
Barium	ppm	■ 0	---	---	---
Boron	ppm	■ 48	---	---	---

## Diagnosis

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. 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:** VOLVO0093  
**Unique No:** 10764752  
**Signed:** Don Baldrige  
**Report Date:** 01 Dec 2023



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## GRAPHS

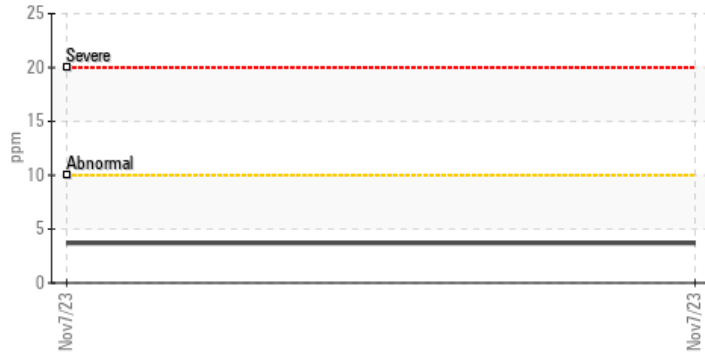
### Iron (ppm)



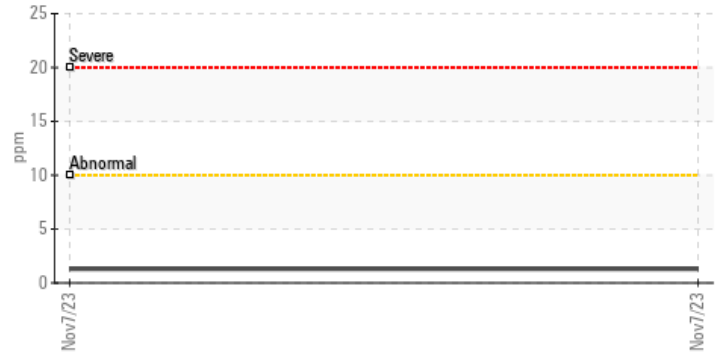
### Lead (ppm)



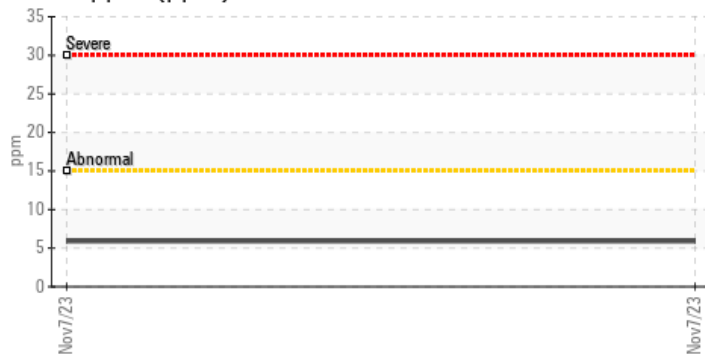
### Aluminum (ppm)



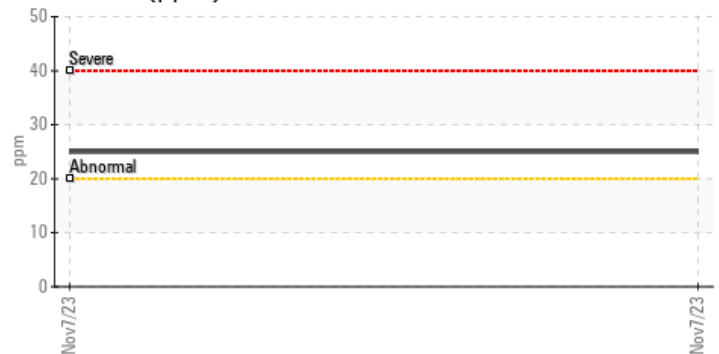
### Chromium (ppm)



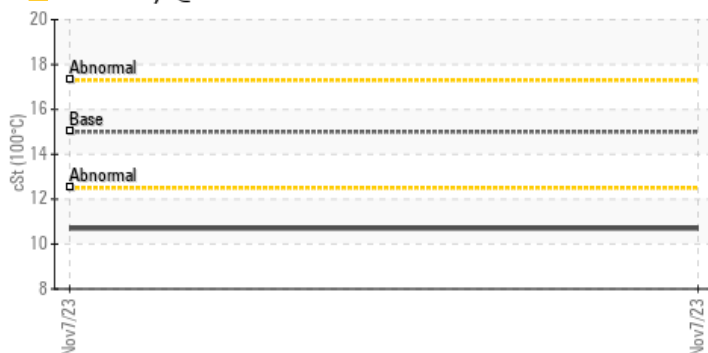
### Copper (ppm)



### Silicon (ppm)



### ▲ Viscosity @ 100°C



### Base Number

