



# CONSTRUCTION EQUIPMENT

## HILLSBOROUGH CO BOC VOLVO EW160EL 324178 - DIESEL ENGINE



**Sample No:** VCP449883  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:** HILLSBOROUGH CO BOC



### SAMPLE INFORMATION

Sample Number	<b>VCP449883</b>	VCP435613	VCP431775	---
Sample Date	<b>13 Jun 2024</b>	19 Feb 2024	07 Nov 2023	---
Machine Hours	<b>1437</b>	929	479	---
Oil Hours	<b>0</b>	0	479	---
Oil Changed	<b>Changed</b>	N/A	Changed	---
Sample Status	<b>NORMAL</b>	NORMAL	ATTENTION	---

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### OIL CONDITION

Visc @ 100°C	cSt	<b>12.7</b>	12.8	10.7	---
Base Number (BN)	mg KOH/g	<b>10.1</b>	9.5	9.6	---
Oxidation (PA)	%	<b>69</b>	73	82	---

### Diagnosis

Resample at the next service interval to monitor. All component wear rates are normal. 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.



### CONTAMINATION

Water	%	<b>NEG</b>	NEG	NEG	---
Soot %	%	<b>0.1</b>	0.1	0.1	---
Nitration (PA)	%	<b>55</b>	53	53	---
Sulfation (PA)	%	<b>56</b>	57	61	---
Glycol	%	<b>NEG</b>	NEG	NEG	---
Fuel	%	<b>&lt;1.0</b>	<1.0	0.4	---
Silicon	ppm	<b>17</b>	29	25	---
Sodium	ppm	<b>&lt;1</b>	2	4	---
Potassium	ppm	<b>2</b>	3	2	---



### WEAR METALS

Iron	ppm	<b>9</b>	9	14	---
Copper	ppm	<b>1</b>	2	6	---
Lead	ppm	<b>0</b>	<1	<1	---
Tin	ppm	<b>&lt;1</b>	1	2	---
Aluminum	ppm	<b>2</b>	2	4	---
Chromium	ppm	<b>&lt;1</b>	1	1	---
Molybdenum	ppm	<b>42</b>	45	34	---
Nickel	ppm	<b>&lt;1</b>	2	5	---
Titanium	ppm	<b>&lt;1</b>	<1	0	---
Silver	ppm	<b>0</b>	0	0	---
Manganese	ppm	<b>&lt;1</b>	1	4	---
Vanadium	ppm	<b>0</b>	<1	0	---



### ADDITIVES

Calcium	ppm	<b>1595</b>	1319	1448	---
Magnesium	ppm	<b>651</b>	585	496	---
Zinc	ppm	<b>1172</b>	1083	1039	---
Phosphorus	ppm	<b>923</b>	910	866	---
Barium	ppm	<b>0</b>	2	0	---
Boron	ppm	<b>41</b>	31	48	---

**Depot:** VOLVO0093  
**Unique No:** 11089392  
**Signed:** Wes Davis  
**Report Date:** 24 Jun 2024



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## GRAPHS

