



# CONSTRUCTION EQUIPMENT

## 12298 FREEDOM CONSTR VOLVO ECR145E 315603 - DIESEL ENGINE



**Sample No:** VCP429634  
**Oil Type:** MOBIL 15W40  
**Job No:** 12298 FREEDOM CONSTR



### SAMPLE INFORMATION

Sample Number	<b>VCP429634</b>	VCP430920	VCP408980	VCP399159
Sample Date	<b>15 Mar 2024</b>	03 Nov 2023	05 Jul 2023	28 Mar 2023
Machine Hours	<b>3858</b>	3308	2810	2335
Oil Hours	<b>0</b>	0	0	500
Oil Changed	<b>N/A</b>	N/A	N/A	Changed
Sample Status	<b>NORMAL</b>	NORMAL	NORMAL	NORMAL

**HOFFMAN EQUIPMENT - LIONVILLE**  
 120 GORDON DRIVE  
 LIONVILLE, PA  
 US 19341  
 Contact: JIM FEHR  
 jim.fehr@hoffmanequip.com  
 T: (610)363-9200  
 F: (610)594-0829



### OIL CONDITION

Visc @ 100°C	cSt	<b>12.8</b>	13.3	13.5	13.6
Base Number (BN)	mg KOH/g	<b>10.3</b>	10.1	7.3	7.8
Oxidation (PA)	%	<b>86</b>	78	46	51

### 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	NEG
Soot %	%	<b>0.3</b>	0.3	0.2	0.2
Nitration (PA)	%	<b>67</b>	63	65	63
Sulfation (PA)	%	<b>63</b>	60	50	50
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>&lt;1.0</b>	<1.0	<1.0	<1.0
Silicon	ppm	<b>7</b>	7	4	6
Sodium	ppm	<b>3</b>	3	1	<1
Potassium	ppm	<b>1</b>	<1	2	2



### WEAR METALS

Iron	ppm	<b>15</b>	14	11	12
Copper	ppm	<b>2</b>	1	1	1
Lead	ppm	<b>&lt;1</b>	<1	<1	0
Tin	ppm	<b>1</b>	<1	<1	<1
Aluminum	ppm	<b>4</b>	2	3	2
Chromium	ppm	<b>1</b>	<1	<1	<1
Molybdenum	ppm	<b>38</b>	40	15	27
Nickel	ppm	<b>&lt;1</b>	<1	<1	<1
Titanium	ppm	<b>&lt;1</b>	0	<1	<1
Silver	ppm	<b>0</b>	0	0	0
Manganese	ppm	<b>&lt;1</b>	<1	<1	<1
Vanadium	ppm	<b>&lt;1</b>	0	<1	0



### ADDITIVES

Calcium	ppm	<b>1725</b>	1808	2136	1872
Magnesium	ppm	<b>480</b>	435	161	355
Zinc	ppm	<b>1135</b>	1166	1063	1141
Phosphorus	ppm	<b>987</b>	947	848	962
Barium	ppm	<b>0</b>	0	0	2
Boron	ppm	<b>38</b>	32	5	10

**Depot:** VOLVO8879  
**Unique No:** 10937572  
**Signed:** Wes Davis  
**Report Date:** 21 Mar 2024



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## GRAPHS

