



# CONSTRUCTION EQUIPMENT

## SWA547843-10 VOLVO EC700C 110759 - DIESEL ENGINE



**Sample No:** VCP430327  
**Oil Type:** VOLVO VDS-4.5 Premium Motor Oil 15W40  
**Job No:** SWA547843-10



### SAMPLE INFORMATION

Sample Number	<b>VCP430327</b>	VCP363204	VCP373360	VCP332157
Sample Date	<b>01 May 2024</b>	12 Aug 2022	22 Mar 2022	30 Dec 2021
Machine Hours	<b>0</b>	12003	11462	11000
Oil Hours	<b>60</b>	500	500	500
Oil Changed	<b>Changed</b>	Changed	Changed	Changed
Sample Status	<b>ABNORMAL</b>	NORMAL	NORMAL	NORMAL

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### OIL CONDITION

Visc @ 100°C	cSt	<b>▲ 12.2</b>	■ 14.6	■ 13.9	■ 14.2
Base Number (BN)	mg KOH/g	■ <b>8.3</b>	■ 8.2	■ 8.3	■ 7.9
Oxidation (PA)	%	<b>79</b>	118	105	113

### Diagnosis

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. Fuel content negligible. Elemental level of silicon (Si) above normal indicating ingress of seal material. The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.



### CONTAMINATION

Water	%	<b>NEG</b>	NEG	NEG	NEG
Soot %	%	■ <b>0.3</b>	■ 0.4	■ 0.2	■ 0.3
Nitration (PA)	%	<b>63</b>	108	99	95
Sulfation (PA)	%	<b>60</b>	83	76	82
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	■ <b>0.6</b>	<1.0	<1.0	<1.0
Silicon	ppm	<b>▲ 25</b>	■ 8	■ 10	■ 14
Sodium	ppm	■ <b>8</b>	■ 0	■ 3	■ 2
Potassium	ppm	■ <b>11</b>	■ 2	■ 3	■ <1



### WEAR METALS

Iron	ppm	■ <b>7</b>	■ 19	■ 13	■ 16
Copper	ppm	<b>▲ 21</b>	■ 1	■ <1	■ <1
Lead	ppm	■ <b>1</b>	■ 6	■ 3	■ 5
Tin	ppm	■ <b>1</b>	■ <1	■ <1	■ 1
Aluminum	ppm	■ <b>2</b>	■ 2	■ 3	■ 2
Chromium	ppm	■ <b>&lt;1</b>	■ <1	■ <1	■ <1
Molybdenum	ppm	■ <b>40</b>	■ 83	■ 79	■ 86
Nickel	ppm	■ <b>&lt;1</b>	■ 0	■ 1	■ 0
Titanium	ppm	<b>&lt;1</b>	<1	<1	<1
Silver	ppm	■ <b>0</b>	0	<1	0
Manganese	ppm	■ <b>2</b>	■ <1	■ <1	■ <1
Vanadium	ppm	<b>0</b>	0	<1	0



### ADDITIVES

Calcium	ppm	■ <b>1607</b>	■ 1512	■ 1717	■ 1555
Magnesium	ppm	<b>472</b>	746	■ 494	■ 449
Zinc	ppm	■ <b>1066</b>	■ 1401	■ 1384	■ 1317
Phosphorus	ppm	■ <b>946</b>	■ 1133	■ 1100	■ 1031
Barium	ppm	■ <b>0</b>	■ 0	■ 0	■ 0
Boron	ppm	■ <b>70</b>	■ 98	■ 264	■ 274

**Depot:** THAFIS  
**Unique No:** 11015858  
**Signed:** Jonathan Hester  
**Report Date:** 10 May 2024



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## GRAPHS

