



# CONSTRUCTION EQUIPMENT

## 688274 ATLAS ORGANIC VOLVO EC220E 314134 - DIESEL ENGINE



**Sample No:** VCP455399  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:** 688274 ATLAS ORGANIC



### SAMPLE INFORMATION

Sample Number	<b>VCP455399</b>	VCP435629	VCP418339	VCP412979
Sample Date	<b>18 Mar 2024</b>	21 Dec 2023	12 Sep 2023	21 Jun 2023
Machine Hours	<b>8240</b>	7771	7093	6525
Oil Hours	<b>0</b>	0	0	0
Oil Changed	<b>Changed</b>	Changed	Changed	Changed
Sample Status	<b>NORMAL</b>	NORMAL	NORMAL	NORMAL

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### OIL CONDITION

Visc @ 100°C	cSt	<b>14.7</b>	15.3	15.1	14.9
Base Number (BN)	mg KOH/g	<b>8.0</b>	6.9	7.6	6.4
Oxidation (PA)	%	<b>102</b>	115	106	91

### 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>0.2</b>	0.3	0.3	0.3
Nitration (PA)	%	<b>93</b>	108	102	87
Sulfation (PA)	%	<b>68</b>	74	70	72
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>&lt;1.0</b>	<1.0	<1.0	<1.0
Silicon	ppm	<b>16</b>	8	10	8
Sodium	ppm	<b>0</b>	2	3	0
Potassium	ppm	<b>4</b>	0	1	2



### WEAR METALS

Iron	ppm	<b>23</b>	14	15	14
Copper	ppm	<b>2</b>	1	1	1
Lead	ppm	<b>3</b>	1	<1	<1
Tin	ppm	<b>3</b>	2	<1	<1
Aluminum	ppm	<b>5</b>	3	2	2
Chromium	ppm	<b>1</b>	<1	1	<1
Molybdenum	ppm	<b>63</b>	76	68	102
Nickel	ppm	<b>1</b>	0	<1	<1
Titanium	ppm	<b>&lt;1</b>	<1	0	0
Silver	ppm	<b>&lt;1</b>	0	0	0
Manganese	ppm	<b>1</b>	<1	<1	<1
Vanadium	ppm	<b>&lt;1</b>	0	0	0



### ADDITIVES

Calcium	ppm	<b>1881</b>	2030	1826	1541
Magnesium	ppm	<b>544</b>	659	528	417
Zinc	ppm	<b>1314</b>	1532	1355	1344
Phosphorus	ppm	<b>1304</b>	1228	1067	1113
Barium	ppm	<b>&lt;1</b>	0	0	0
Boron	ppm	<b>90</b>	72	50	175

**Depot:** VOLVO0093  
**Unique No:** 10941023  
**Signed:** Sean Felton  
**Report Date:** 26 Mar 2024

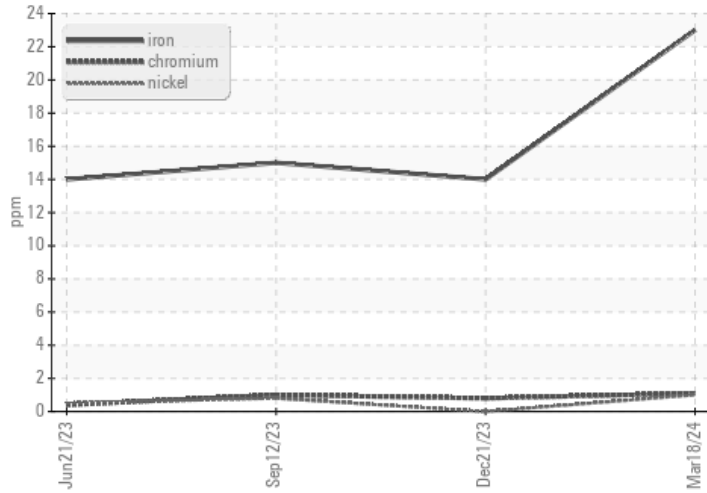


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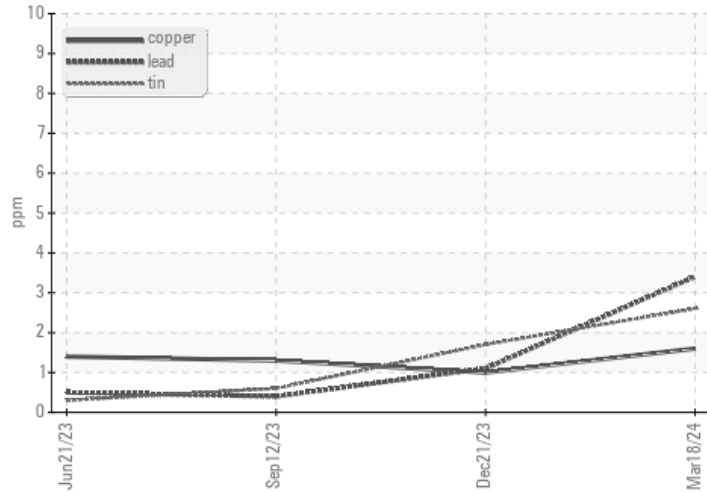


## GRAPHS

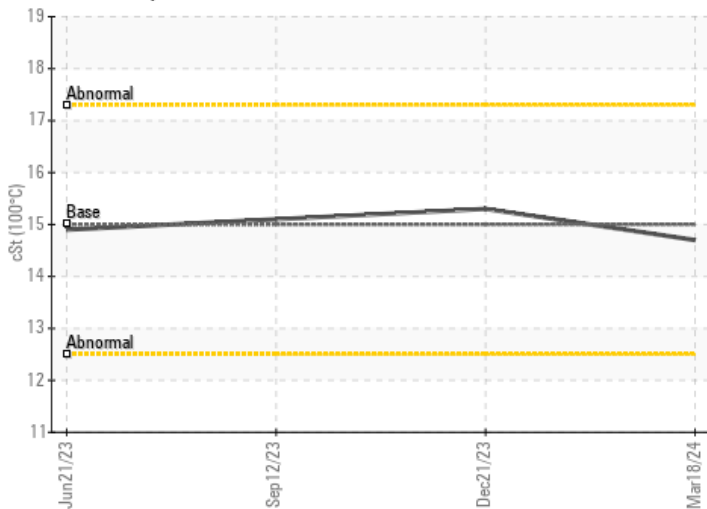
### Ferrous Alloys



### Non-ferrous Metals



### Viscosity @ 100°C



### Base Number

