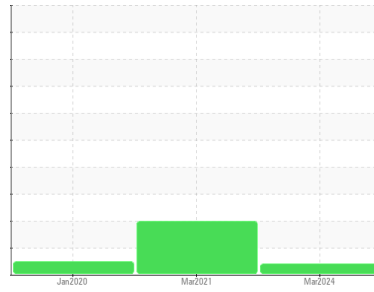


# OIL ANALYSIS REPORT

## Sample Rating Trend



## VISCOSITY



Machine Id  
**VOLVO A25D 742205**  
 Component  
**Diesel Engine**  
 Fluid  
**VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3 (--- GAL)**

### DIAGNOSIS

#### Recommendation

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

#### Wear

All component wear rates are normal.

#### Contamination

There is no indication of any contamination in the oil.

#### Fluid Condition

The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

### SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>ML0000454</b>	VCP304320	VCP270238
Sample Date	Client Info		<b>26 Mar 2024</b>	01 Mar 2021	22 Jan 2020
Machine Age	hrs	Client Info	<b>4305</b>	1976	1419
Oil Age	hrs	Client Info	<b>0</b>	500	450
Oil Changed	Client Info		<b>Changed</b>	Changed	Changed
Sample Status			<b>ATTENTION</b>	ABNORMAL	NORMAL

### CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.1	<b>NEG</b>	NEG	NEG
Glycol	WC Method		<b>NEG</b>	NEG	NEG

### WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	<b>21</b>	10	6
Chromium	ppm	ASTM D5185m >10	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m >10	<b>0</b>	<1	1
Titanium	ppm	ASTM D5185m	<b>0</b>	<1	<1
Silver	ppm	ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >10	<b>6</b>	0	1
Lead	ppm	ASTM D5185m >20	<b>&lt;1</b>	<1	1
Copper	ppm	ASTM D5185m >15	<b>3</b>	▲ 127	17
Tin	ppm	ASTM D5185m >10	<b>&lt;1</b>	<1	0
Antimony	ppm	ASTM D5185m	<b>---</b>	0	<1
Vanadium	ppm	ASTM D5185m	<b>&lt;1</b>	0	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	0

### ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 2.5	<b>7</b>	65	57
Barium	ppm	ASTM D5185m 0.0	<b>0</b>	0	<1
Molybdenum	ppm	ASTM D5185m 0.7	<b>86</b>	5	27
Manganese	ppm	ASTM D5185m 0.0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 256	<b>758</b>	658	507
Calcium	ppm	ASTM D5185m 2057	<b>1281</b>	1416	1846
Phosphorus	ppm	ASTM D5185m 935	<b>991</b>	738	786
Zinc	ppm	ASTM D5185m 1223	<b>1152</b>	778	915
Sulfur	ppm	ASTM D5185m 4079	<b>3254</b>	2621	2384

### CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >20	<b>8</b>	4	8
Sodium	ppm	ASTM D5185m	<b>11</b>	0	2
Potassium	ppm	ASTM D5185m >20	<b>&lt;1</b>	1	3
Fuel	%	ASTM D3524 >3.0	<b>&lt;1.0</b>	▲ 2.6	<1.0

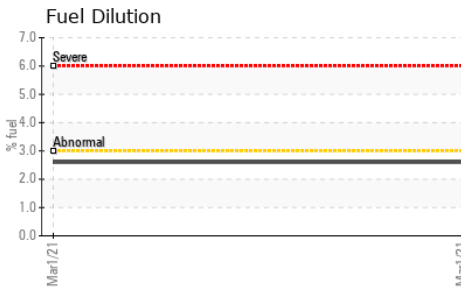
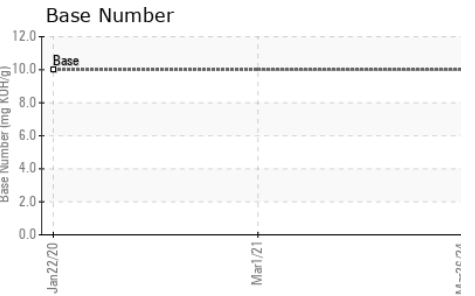
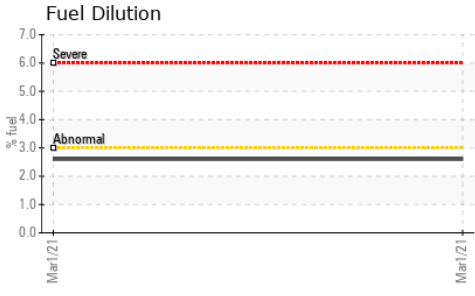
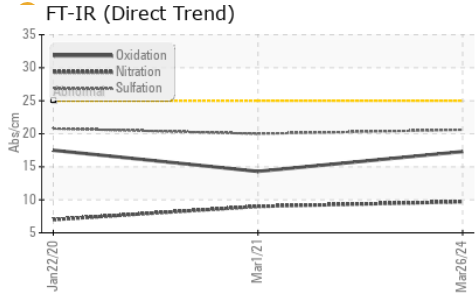
### INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0.6</b>	0.3	0.2
Nitration	Abs/cm	*ASTM D7624 >20	<b>9.7</b>	9	7
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>20.6</b>	20	20.8

### FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>17.3</b>	14.3	17.5
Base Number (BN)	mg KOH/g	ASTM D2896 10	<b>7.1</b>	---	---

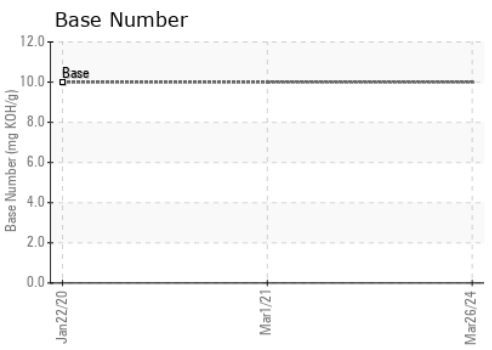
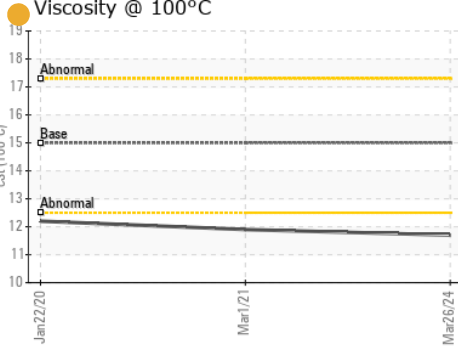
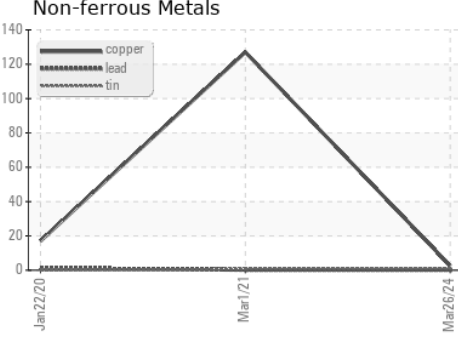
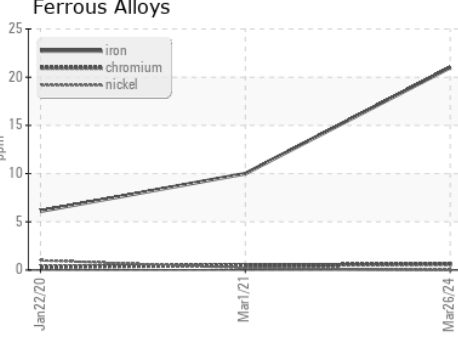
# OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	15.0	● 11.7	▲ 11.9	12.2

### GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : ML0000454      **Received** : 02 Apr 2024  
**Lab Number** : 06136765      **Tested** : 05 Apr 2024  
**Unique Number** : 10956230      **Diagnosed** : 05 Apr 2024 - Jonathan Hester  
**Test Package** : CONST ( Additional Tests: FUELDILUTION, PercentFuel, TBN )

**McCLUNG-LOGAN EQUIPMENT CO - CHESAPEAKE**  
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 CHESAPEAKE, VA  
 US 23323  
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 T: (757)485-3314  
 F: (757)485-3415

To discuss this sample report, contact Customer Service at 1-800-237-1369.  
 \* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.  
 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)