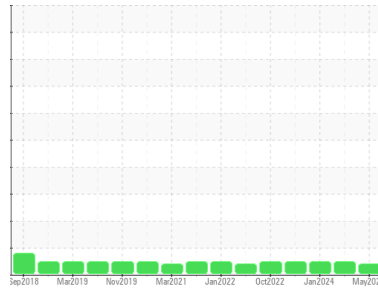


# OIL ANALYSIS REPORT

## Sample Rating Trend



## VISCOSITY



Machine Id  
**VOLVO A35G 342019**  
 Component  
**Diesel Engine**  
 Fluid  
**VOLVO VDS-4.5 Premium Motor Oil 15W40 (--- 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

Fuel content negligible. 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>ML0001815</b>	ML0000810	VCP449043
Sample Date	Client Info		<b>23 May 2024</b>	21 Mar 2024	05 Jan 2024
Machine Age	hrs	Client Info	<b>8637</b>	8225	7825
Oil Age	hrs	Client Info	<b>412</b>	500	0
Oil Changed	Client Info		<b>Changed</b>	Changed	Changed
Sample Status			<b>ATTENTION</b>	NORMAL	NORMAL

### CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.2	<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 >200	<b>5</b>	6	6
Chromium	ppm	ASTM D5185m >20	<b>0</b>	<1	0
Nickel	ppm	ASTM D5185m >10	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m	<b>0</b>	<1	<1
Silver	ppm	ASTM D5185m >2	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m >30	<b>2</b>	4	3
Lead	ppm	ASTM D5185m >40	<b>&lt;1</b>	1	<1
Copper	ppm	ASTM D5185m >20	<b>1</b>	2	2
Tin	ppm	ASTM D5185m >20	<b>0</b>	1	<1
Vanadium	ppm	ASTM D5185m	<b>&lt;1</b>	<1	<1
Cadmium	ppm	ASTM D5185m	<b>0</b>	<1	0

### ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	<b>30</b>	51	38
Barium	ppm	ASTM D5185m	<b>0</b>	2	0
Molybdenum	ppm	ASTM D5185m	<b>54</b>	97	80
Manganese	ppm	ASTM D5185m	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	<b>691</b>	26	35
Calcium	ppm	ASTM D5185m	<b>1512</b>	2443	2063
Phosphorus	ppm	ASTM D5185m	<b>859</b>	1100	1007
Zinc	ppm	ASTM D5185m	<b>1001</b>	1260	1186
Sulfur	ppm	ASTM D5185m	<b>3215</b>	4343	3703

### CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >20	<b>4</b>	5	6
Sodium	ppm	ASTM D5185m	<b>2</b>	0	2
Potassium	ppm	ASTM D5185m >20	<b>0</b>	2	<1
Fuel	%	ASTM D3524 >3.0	<b>0.3</b>	<1.0	<1.0

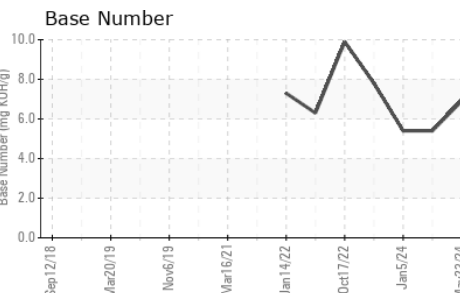
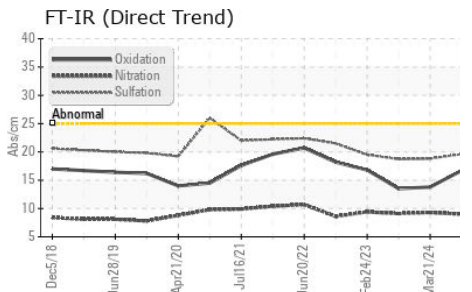
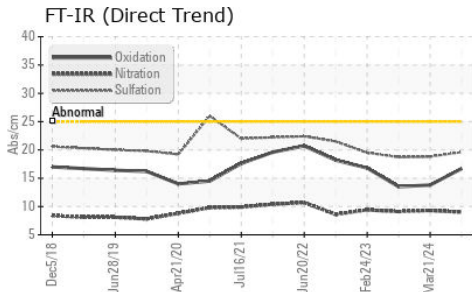
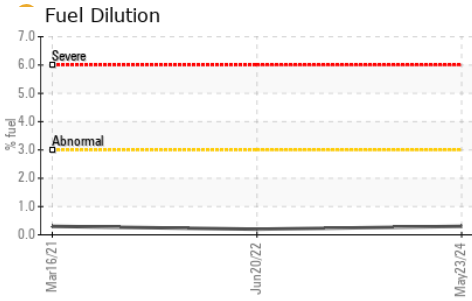
### INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0.2</b>	0.1	0.2
Nitration	Abs/cm	*ASTM D7624 >20	<b>9.0</b>	9.3	9.1
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>19.6</b>	18.8	18.7

### FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>16.7</b>	13.8	13.5
Base Number (BN)	mg KOH/g	ASTM D2896	<b>6.9</b>	5.4	5.4

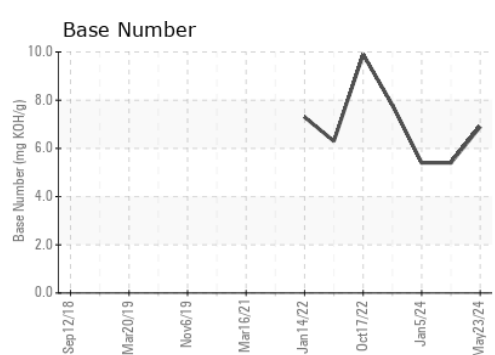
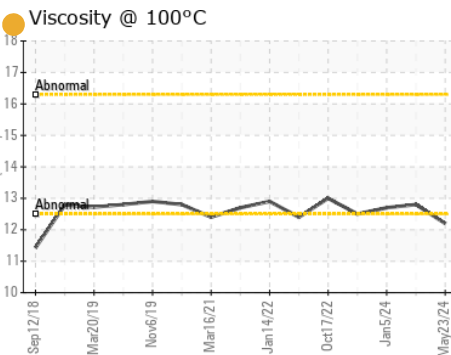
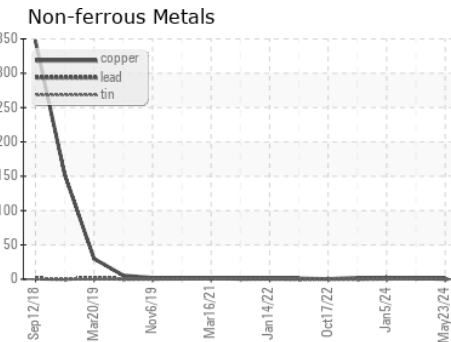
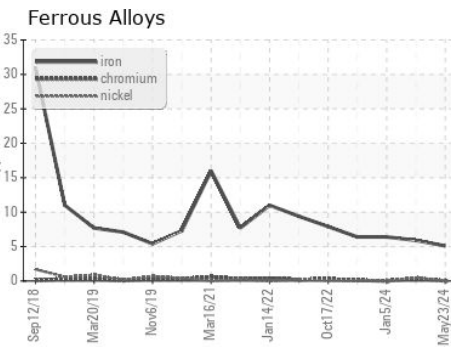
# OIL ANALYSIS REPORT



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	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	● 12.2	12.8	12.7

### GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : ML0001815      **Received** : 29 May 2024  
**Lab Number** : 06193494      **Tested** : 31 May 2024  
**Unique Number** : 11050246      **Diagnosed** : 31 May 2024 - Don Baldrige  
**Test Package** : CONST ( Additional Tests : FuelDilution, PercentFuel, TBN )

**McCLUNG-LOGAN EQUIPMENT CO - RICHMOND**  
 1345 MOUNTAIN ROAD  
 GLEN ALLEN, VA  
 US 23060  
 Contact: KYLE RATLIFF  
 KRATLIFFE@McCLUNG-LOGAN.COM

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)      F: (804)266-1611