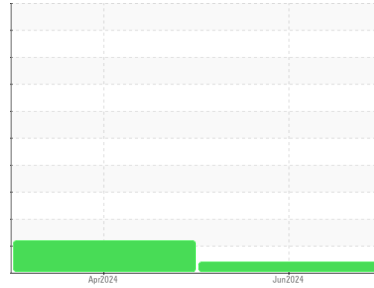




# OIL ANALYSIS REPORT

Sample Rating Trend



VISCOSITY



Area

[W/O 10897]

Machine Id

**VOLVO A45G 352606**

Component

**Diesel Engine**

Fluid

**VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3 (14 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>ML0002259</b>	ML0001156	---
Sample Date	Client Info		<b>04 Jun 2024</b>	15 Apr 2024	---
Machine Age	hrs	Client Info	<b>4115</b>	3711	---
Oil Age	hrs	Client Info	<b>404</b>	500	---
Oil Changed	Client Info		<b>Changed</b>	Changed	---
Sample Status			<b>ATTENTION</b>	ABNORMAL	---

## CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.2	<b>NEG</b>	NEG	---
Glycol	WC Method		<b>NEG</b>	NEG	---

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	<b>1</b>	27	---
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	<1	---
Nickel	ppm	ASTM D5185m >2	<b>3</b>	<1	---
Titanium	ppm	ASTM D5185m	<b>0</b>	<1	---
Silver	ppm	ASTM D5185m >2	<b>0</b>	0	---
Aluminum	ppm	ASTM D5185m >25	<b>1</b>	6	---
Lead	ppm	ASTM D5185m >40	<b>0</b>	<1	---
Copper	ppm	ASTM D5185m >330	<b>2</b>	1	---
Tin	ppm	ASTM D5185m >15	<b>0</b>	<1	---
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	---
Cadmium	ppm	ASTM D5185m	<b>2</b>	<1	---

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 2.5	<b>114</b>	30	---
Barium	ppm	ASTM D5185m 0.0	<b>0</b>	0	---
Molybdenum	ppm	ASTM D5185m 0.7	<b>52</b>	50	---
Manganese	ppm	ASTM D5185m 0.0	<b>1</b>	<1	---
Magnesium	ppm	ASTM D5185m 256	<b>523</b>	542	---
Calcium	ppm	ASTM D5185m 2057	<b>1622</b>	1516	---
Phosphorus	ppm	ASTM D5185m 935	<b>860</b>	1084	---
Zinc	ppm	ASTM D5185m 1223	<b>1025</b>	1222	---
Sulfur	ppm	ASTM D5185m 4079	<b>3067</b>	3405	---

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>4</b>	10	---
Sodium	ppm	ASTM D5185m	<b>3</b>	▲ 413	---
Potassium	ppm	ASTM D5185m >20	<b>3</b>	12	---
Fuel	%	ASTM D3524 >6.0	<b>0.5</b>	<1.0	---

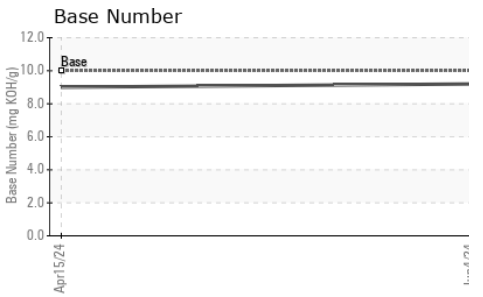
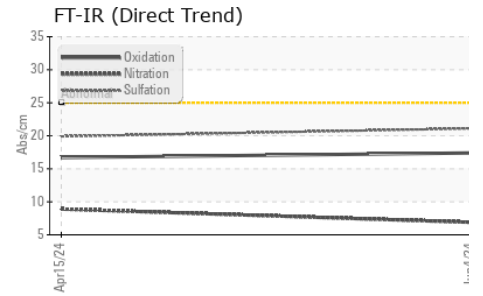
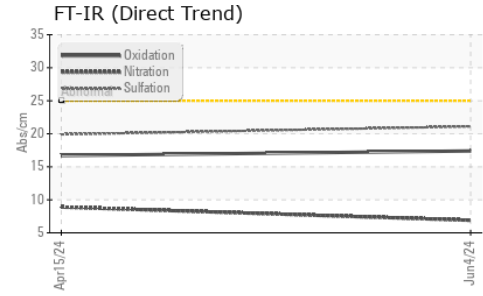
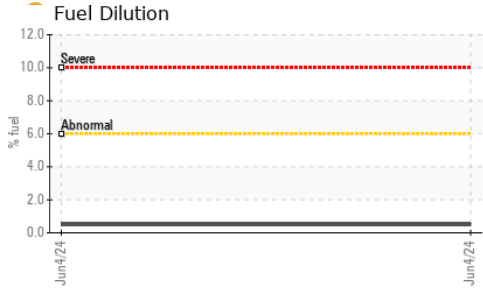
## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0.3</b>	0.2	---
Nitration	Abs/cm	*ASTM D7624 >20	<b>6.9</b>	8.9	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>21.1</b>	19.9	---

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>17.4</b>	16.7	---
Base Number (BN)	mg KOH/g	ASTM D2896 10	<b>9.2</b>	9.0	---

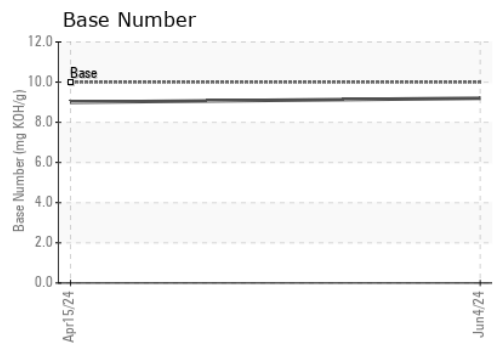
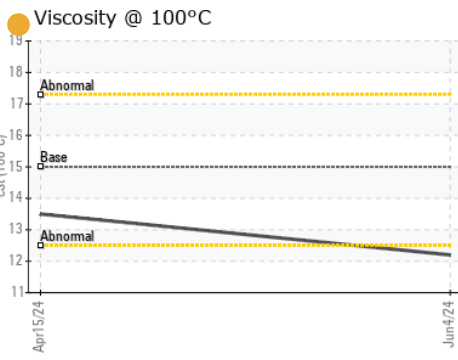
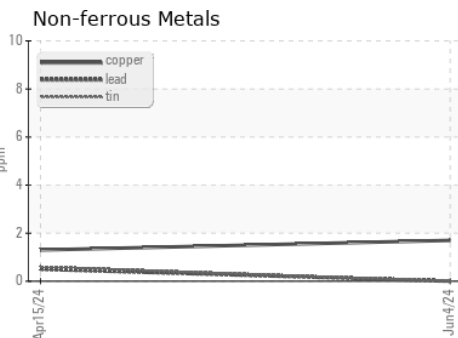
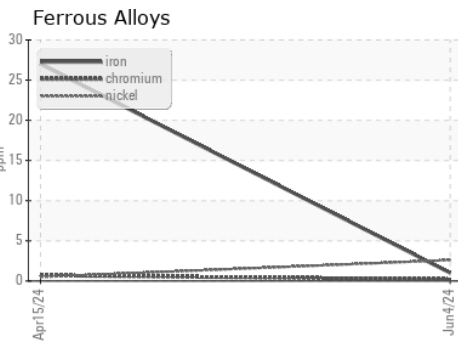
# OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.2	NEG	---
Free Water	scalar	*Visual		NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	15.0	● 12.2	13.5	---

### GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : ML0002259      **Received** : 13 Jun 2024  
**Lab Number** : 06209452      **Tested** : 19 Jun 2024  
**Unique Number** : 11076913      **Diagnosed** : 19 Jun 2024 - Jonathan Hester  
**Test Package** : CONST ( Additional Tests: FuelDilution, PercentFuel, TBN )

**McCLUNG-LOGAN EQUIPMENT CO - BALTIMORE**  
 4601 WASHINGTON BOULEVARD  
 BALTIMORE, MD  
 US 21227  
 Contact: DELANO GREGORY  
 dggregory@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: (410)242-7835