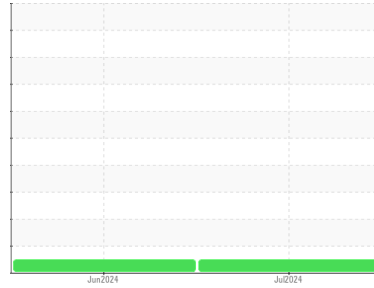




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Area  
**{UNASSIGNED}**  
 Machine Id  
**FREIGHTLINER M2 106 02-012 (S/N 1FVACWDT0GHHK1277)**  
 Component  
**Diesel Engine**  
 Fluid  
**VOLVO VDS-4.5 Premium Motor Oil 15W40 (--- GAL)**

## DIAGNOSIS

### Recommendation

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 BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			<b>ML0002676</b>	ML0001905	---
Sample Date	Client Info			<b>09 Jul 2024</b>	06 Jun 2024	---
Machine Age	mls	Client Info		<b>192693</b>	184641	---
Oil Age	mls	Client Info		<b>5159</b>	5000	---
Oil Changed	Client Info			<b>Changed</b>	Changed	---
Sample Status				<b>NORMAL</b>	NORMAL	---

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method	>5		<b>&lt;1.0</b>	<1.0	---
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	>80	<b>12</b>	12	---
Chromium	ppm	ASTM D5185m	>5	<b>0</b>	0	---
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	0	---
Titanium	ppm	ASTM D5185m		<b>0</b>	0	---
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	---
Aluminum	ppm	ASTM D5185m	>30	<b>3</b>	3	---
Lead	ppm	ASTM D5185m	>30	<b>0</b>	<1	---
Copper	ppm	ASTM D5185m	>150	<b>&lt;1</b>	2	---
Tin	ppm	ASTM D5185m	>5	<b>0</b>	0	---
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	---
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	---

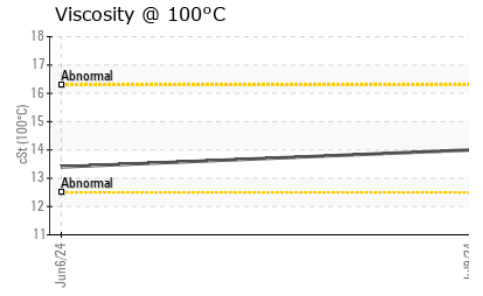
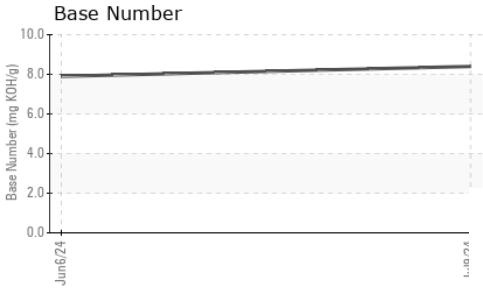
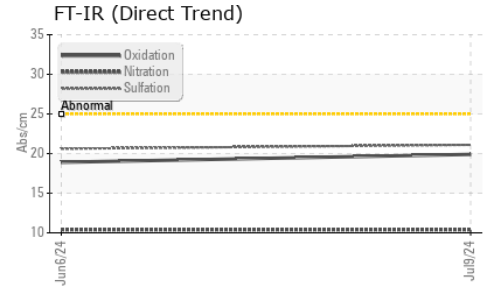
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		<b>22</b>	42	---
Barium	ppm	ASTM D5185m		<b>0</b>	0	---
Molybdenum	ppm	ASTM D5185m		<b>47</b>	56	---
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	---
Magnesium	ppm	ASTM D5185m		<b>756</b>	766	---
Calcium	ppm	ASTM D5185m		<b>1299</b>	1315	---
Phosphorus	ppm	ASTM D5185m		<b>789</b>	778	---
Zinc	ppm	ASTM D5185m		<b>904</b>	932	---
Sulfur	ppm	ASTM D5185m		<b>2695</b>	2762	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>20	<b>6</b>	5	---
Sodium	ppm	ASTM D5185m		<b>4</b>	3	---
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	4	---

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	<b>0.4</b>	0.4	---
Nitration	Abs/cm	*ASTM D7624	>20	<b>10.4</b>	10.4	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>21.1</b>	20.6	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>19.9</b>	18.9	---
Base Number (BN)	mg KOH/g	ASTM D2896		<b>8.4</b>	7.9	---

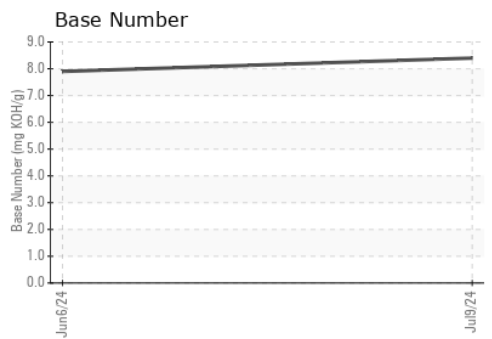
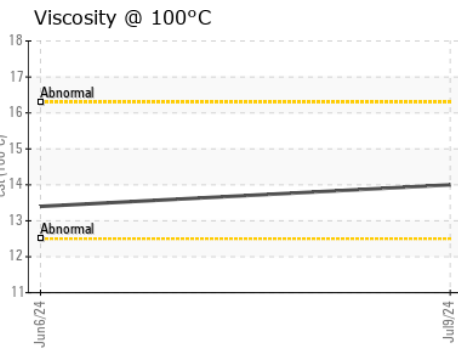
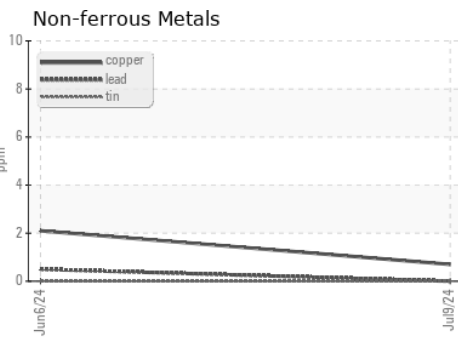
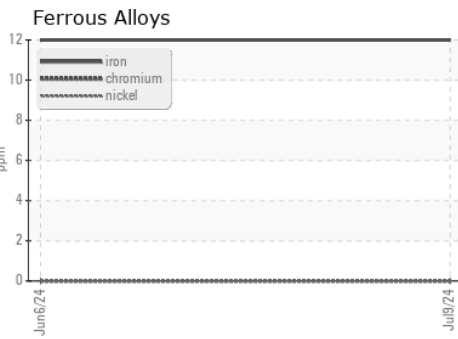
# OIL ANALYSIS REPORT



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	<b>14.0</b>	13.4	---

### GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : ML0002676      **Received** : 15 Jul 2024  
**Lab Number** : **06235661**      **Tested** : 16 Jul 2024  
**Unique Number** : 11124495      **Diagnosed** : 16 Jul 2024 - Don Baldrige  
**Test Package** : CONST ( Additional Tests: TBN )

**McCLUNG-LOGAN EQUIPMENT CO - RICHMOND**  
 1345 MOUNTAIN ROAD  
 GLEN ALLEN, VA  
 US 23060  
 Contact: Alex Anderson  
 aanderson@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