



# OIL ANALYSIS REPORT

WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>

Area  
**CN RAIL [153817]**

Machine Id  
**2**

Component  
**Diesel Engine**

Fluid  
**VALVOLINE PREMIUM BLUE EXTREME 5W40 (--- GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>CU0022230</b>	CU0022456	---
Sample Date		Client Info		<b>08 Feb 2024</b>	03 Jan 2024	---
Machine Age	hrs	Client Info		<b>2342</b>	2171	---
Oil Age	hrs	Client Info		<b>0</b>	0	---
Filter Age	hrs	Client Info		<b>0</b>	0	---
Oil Changed		Client Info		<b>Changed</b>	Changed	---
Filter Changed		Client Info		<b>Changed</b>	Changed	---
Sample Status				<b>NORMAL</b>	NORMAL	---

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>90	<b>11</b>	32	---
Chromium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	---
Nickel	ppm	ASTM D5185(m)	>2	<b>0</b>	<1	---
Titanium	ppm	ASTM D5185(m)	>2	<b>0</b>	0	---
Silver	ppm	ASTM D5185(m)	>2	<b>0</b>	0	---
Aluminum	ppm	ASTM D5185(m)	>20	<b>2</b>	2	---
Lead	ppm	ASTM D5185(m)	>40	<b>0</b>	2	---
Copper	ppm	ASTM D5185(m)	>330	<b>3</b>	15	---
Tin	ppm	ASTM D5185(m)	>15	<b>0</b>	0	---
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	---

## CONTAMINATION

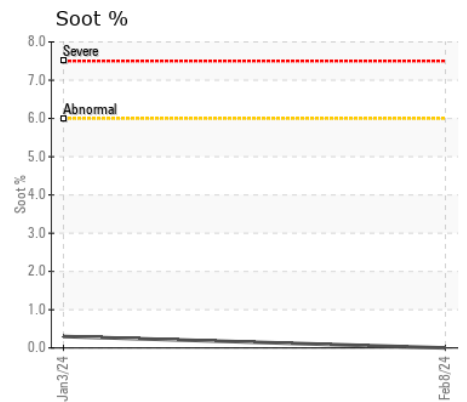
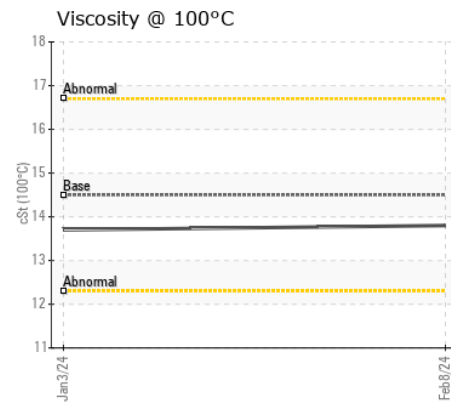
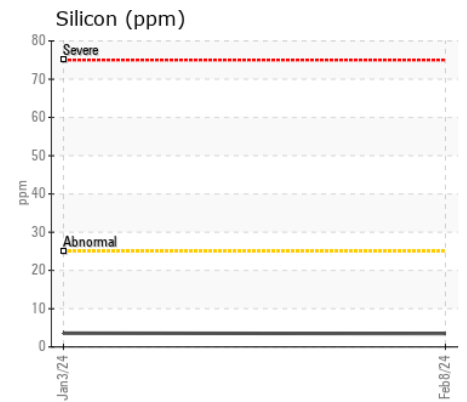
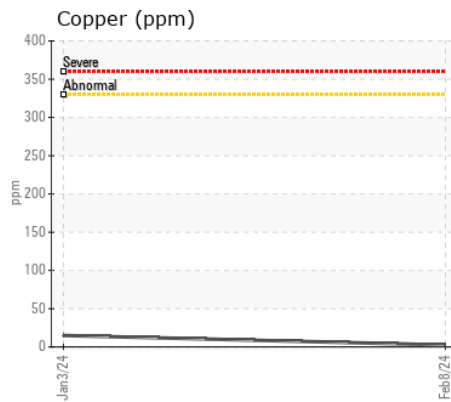
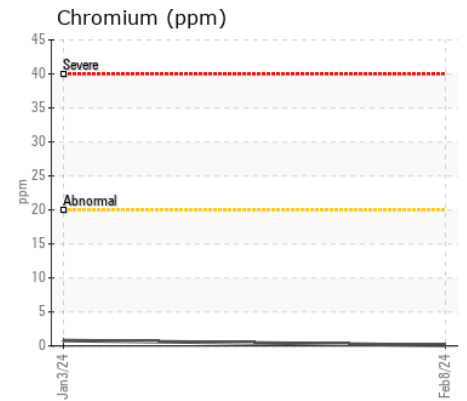
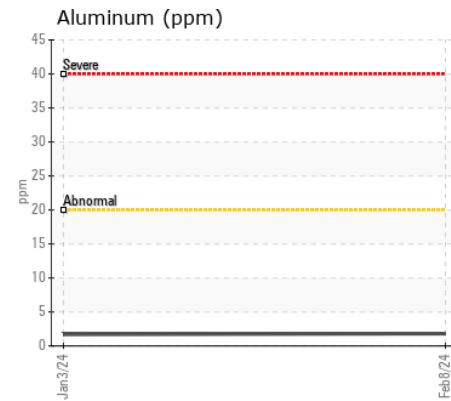
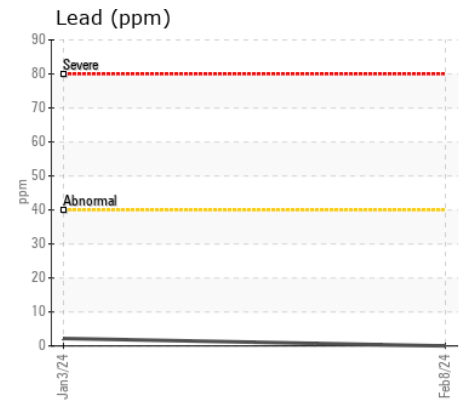
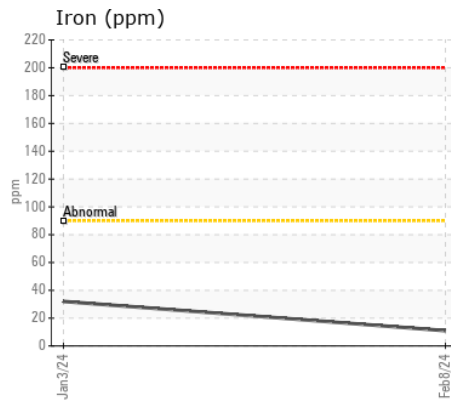
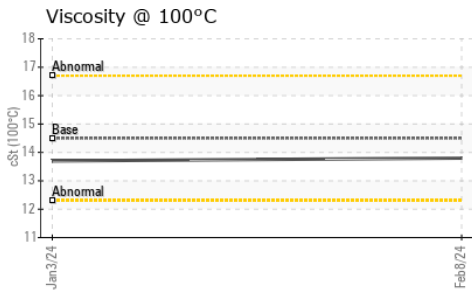
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>25	<b>4</b>	4	---
Potassium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	---
Fuel		WC Method	>3.0	<b>&lt;1.0</b>	<1.0	---
Water		WC Method	>0.2	<b>NEG</b>	NEG	---
Glycol		WC Method		<b>NEG</b>	NEG	---
Soot %	%	ASTM D7844*	>6	<b>0</b>	0.3	---
Nitration	Abs/cm	ASTM D7624*	>20	<b>8.1</b>	11.3	---
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>20.6</b>	22.9	---
Emulsified Water	scalar	Visual*	>0.2	<b>NEG</b>	NEG	---

## FLUID CONDITION

The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)		<b>3</b>	4	---
Boron	ppm	ASTM D5185(m)		<b>52</b>	31	---
Barium	ppm	ASTM D5185(m)		<b>0</b>	0	---
Molybdenum	ppm	ASTM D5185(m)		<b>63</b>	63	---
Manganese	ppm	ASTM D5185(m)		<b>0</b>	0	---
Magnesium	ppm	ASTM D5185(m)		<b>1101</b>	1122	---
Calcium	ppm	ASTM D5185(m)		<b>849</b>	828	---
Phosphorus	ppm	ASTM D5185(m)		<b>1003</b>	989	---
Zinc	ppm	ASTM D5185(m)		<b>1148</b>	1209	---
Sulfur	ppm	ASTM D5185(m)		<b>2894</b>	2743	---
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>18.6</b>	23.9	---
Visc @ 100°C	cSt	ASTM D7279(m)	14.5	<b>13.8</b>	13.7	---



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : CU0022230  
**Lab Number** : 02615888  
**Unique Number** : 5732998  
**Test Package** : MOB 1  
**Received** : 15 Feb 2024  
**Tested** : 15 Feb 2024  
**Diagnosed** : 15 Feb 2024 - Wes Davis

**CUMMINS CANADA ULC - GENERATOR DIVISION**  
 7175 PACIFIC CIRCLE  
 MISSISSAUGA, ON  
 CA L5T 2A5  
 Contact: Zaneef Abboobakar  
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To discuss this sample report, contact Customer Service at 1-800-268-2131.  
 Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab.  
 Validity of results and interpretation are based on the sample and information as supplied.

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