



# OIL ANALYSIS REPORT

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

Area  
**ESTRUCTURE [154147]**  
Machine Id  
**FIRE PUMP**  
Component  
**Diesel Engine**  
Fluid  
**VALVOLINE 15W40 (--- GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>CU0022776</b>	CU0021458	CU0019948
Sample Date		Client Info		<b>21 Mar 2024</b>	14 Aug 2023	25 Nov 2022
Machine Age	hrs	Client Info		<b>180</b>	0	155
Oil Age	hrs	Client Info		<b>0</b>	0	0
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Not Chngd</b>	Changed	Changed
Filter Changed		Client Info		<b>Not Chngd</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185(m)	>51	<b>2</b>	2	3
Chromium	ppm	ASTM D5185(m)	>11	<b>0</b>	0	0
Nickel	ppm	ASTM D5185(m)	>5	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185(m)		<b>0</b>	<1	1
Silver	ppm	ASTM D5185(m)	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>31	<b>&lt;1</b>	<1	1
Lead	ppm	ASTM D5185(m)	>26	<b>0</b>	0	<1
Copper	ppm	ASTM D5185(m)	>26	<b>&lt;1</b>	4	15
Tin	ppm	ASTM D5185(m)	>4	<b>0</b>	0	<1
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0
White Metal	scalar	Visual*	NONE	<b>VLITE</b>	---	VLITE
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	---	NONE

## CONTAMINATION

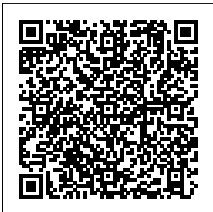
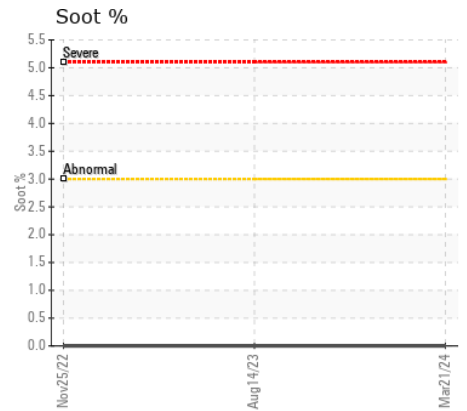
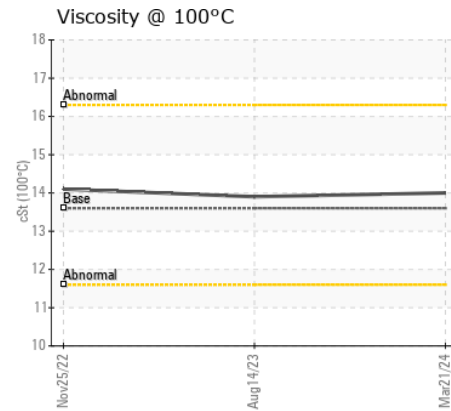
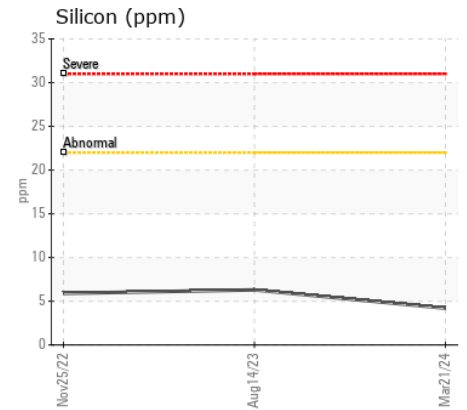
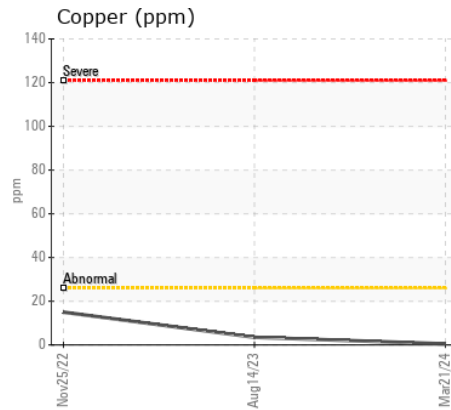
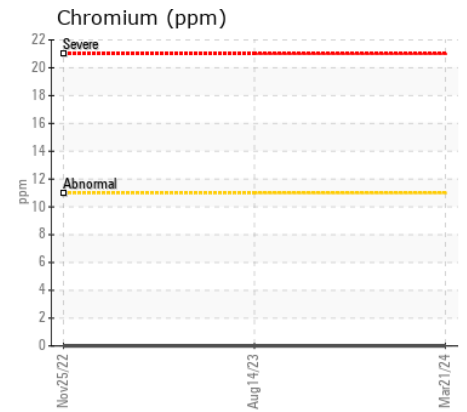
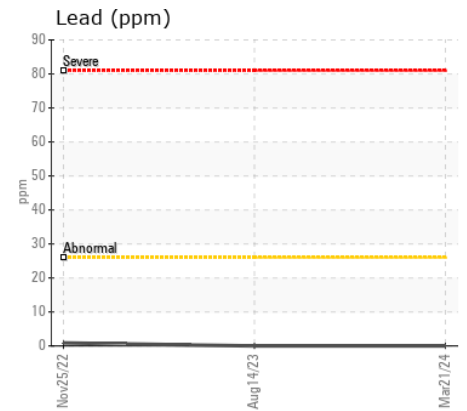
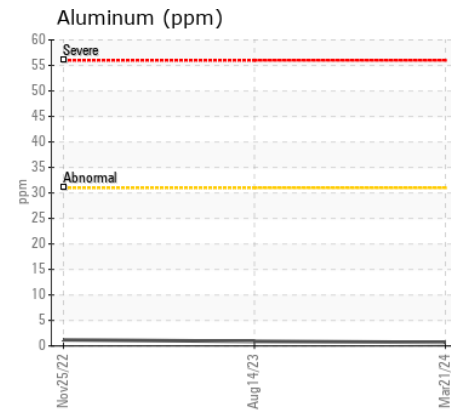
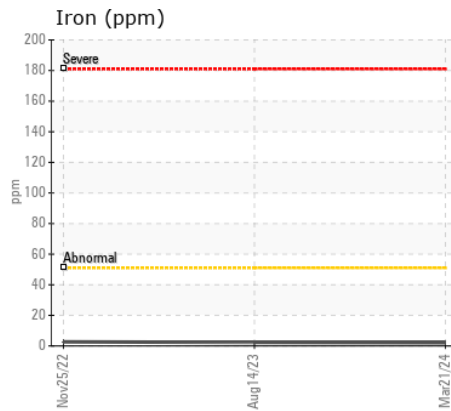
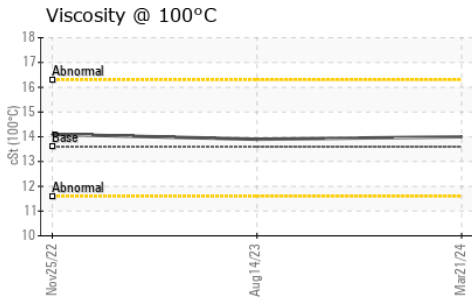
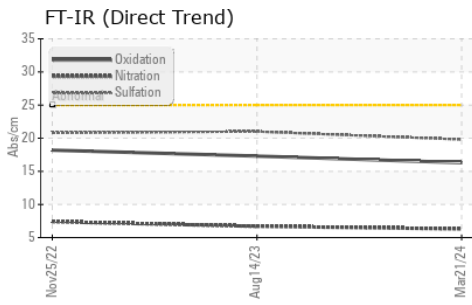
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>22	<b>4</b>	6	6
Potassium	ppm	ASTM D5185(m)	>20	<b>0</b>	<1	1
Fuel		WC Method	>2.1	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.21	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	ASTM D7844*	>3	<b>0</b>	0	0
Nitration	Abs/cm	ASTM D7624*	>20	<b>6.3</b>	6.7	7.4
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>19.8</b>	21.0	20.8
Silt	scalar	Visual*	NONE	<b>NONE</b>	---	NONE
Debris	scalar	Visual*	NONE	<b>NONE</b>	---	NONE
Sand/Dirt	scalar	Visual*	NONE	<b>NONE</b>	---	NONE
Appearance	scalar	Visual*	NORML	<b>NORML</b>	---	NORML
Odor	scalar	Visual*	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	Visual*	>0.21	<b>NEG</b>	NEG	NEG

## FLUID CONDITION

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

Sodium	ppm	ASTM D5185(m)	>31	<b>3</b>	3	4
Boron	ppm	ASTM D5185(m)	39	<b>45</b>	47	42
Barium	ppm	ASTM D5185(m)	1	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	49	<b>45</b>	43	43
Manganese	ppm	ASTM D5185(m)	1	<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185(m)	616	<b>782</b>	836	828
Calcium	ppm	ASTM D5185(m)	1554	<b>1193</b>	1149	1161
Phosphorus	ppm	ASTM D5185(m)	899	<b>699</b>	779	840
Zinc	ppm	ASTM D5185(m)	1069	<b>801</b>	836	905
Sulfur	ppm	ASTM D5185(m)	2624	<b>1921</b>	2004	2221
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>16.3</b>	17.3	18.2
Visc @ 100°C	cSt	ASTM D7279(m)	13.6	<b>14.0</b>	13.9	14.1



ISO 17025:2017  
Accredited  
Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : CU0022776  
**Lab Number** : 02631851  
**Unique Number** : 5773004  
**Test Package** : MOB 1 ( Additional Tests: Visual )

**CUMMINS CANADA ULC - GENERATOR DIVISION**  
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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.