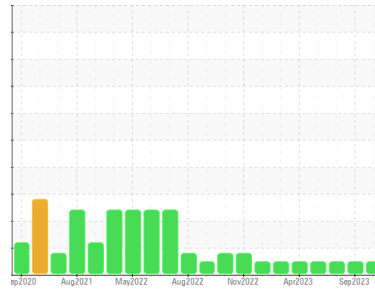




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Area  
**PWGSC [919881]**  
 Machine Id  
**UNIT 2 (S/N 7A70867)**  
 Component  
**Diesel Engine**  
 Fluid  
**SHELL ROTELLA T 15W40 (--- GAL)**

## DIAGNOSIS

### Recommendation

Confirm the source of the lubricant being utilized for top-up/fill. 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

Additive levels indicate the addition of a different brand, or type of oil. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			<b>CU0020716</b>	CU0020718	CU0019807
Sample Date	Client Info			<b>03 Oct 2023</b>	11 Sep 2023	10 Jul 2023
Machine Age	hrs	Client Info		<b>1100</b>	1174	1172
Oil Age	hrs	Client Info		<b>0</b>	0	2
Oil Changed	Client Info			<b>Not Chngd</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method	>5		<b>&lt;1.0</b>	<1.0	<1.0
Glycol	WC Method			<b>NEG</b>	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>100	<b>3</b>	3	3
Chromium	ppm	ASTM D5185(m)	>20	<b>0</b>	0	0
Nickel	ppm	ASTM D5185(m)	>4	<b>0</b>	0	0
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)	>3	<b>&lt;1</b>	0	<1
Aluminum	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	<1
Lead	ppm	ASTM D5185(m)	>40	<b>0</b>	0	<1
Copper	ppm	ASTM D5185(m)	>330	<b>&lt;1</b>	<1	<1
Tin	ppm	ASTM D5185(m)	>15	<b>0</b>	0	<1
Antimony	ppm	ASTM D5185(m)		<b>0</b>	0	0
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Beryllium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Cadmium	ppm	ASTM D5185(m)		<b>0</b>	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	35	<b>44</b>	45	44
Barium	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	0	<b>49</b>	48	48
Manganese	ppm	ASTM D5185(m)	0	<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185(m)	10	<b>793</b>	787	789
Calcium	ppm	ASTM D5185(m)	2340	<b>1152</b>	1128	1121
Phosphorus	ppm	ASTM D5185(m)	1110	<b>702</b>	726	729
Zinc	ppm	ASTM D5185(m)	1210	<b>808</b>	800	792
Sulfur	ppm	ASTM D5185(m)	3890	<b>1931</b>	1913	1884
Lithium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1

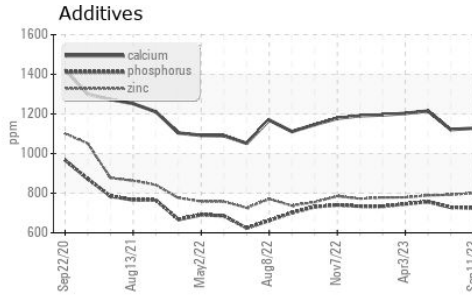
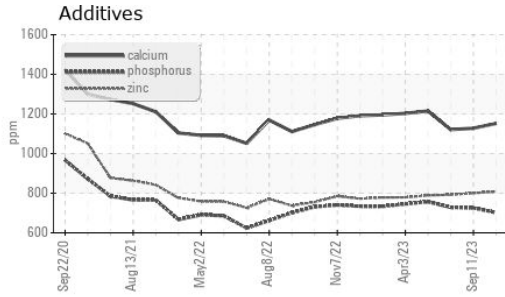
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	<b>6</b>	6	6
Sodium	ppm	ASTM D5185(m)		<b>4</b>	3	3
Potassium	ppm	ASTM D5185(m)	>20	<b>0</b>	<1	<1

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	<b>0</b>	0	0
Nitration	Abs/cm	ASTM D7624*	>20	<b>6.0</b>	6.0	6.1
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>19.8</b>	19.8	20.2

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>16.0</b>	16.1	16.3



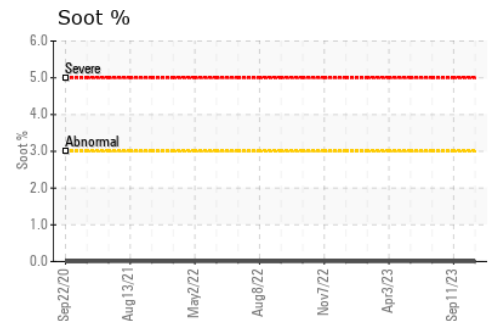
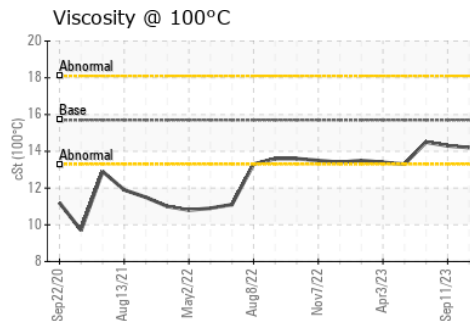
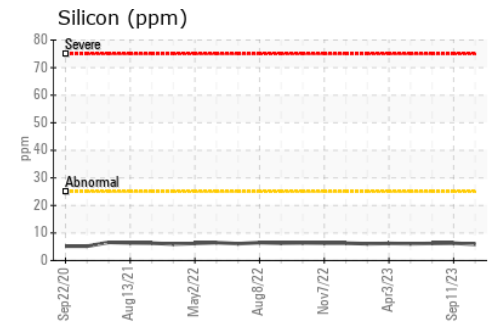
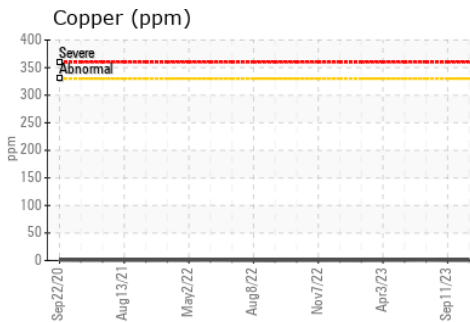
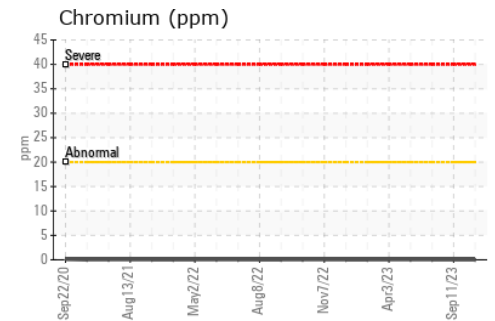
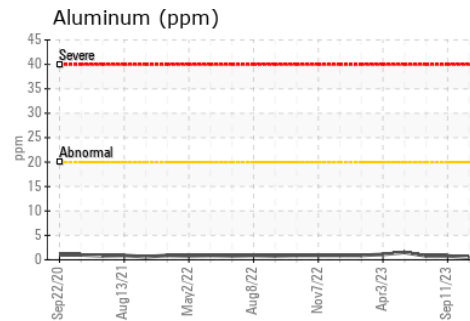
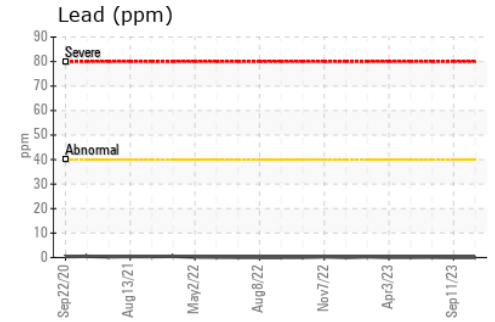
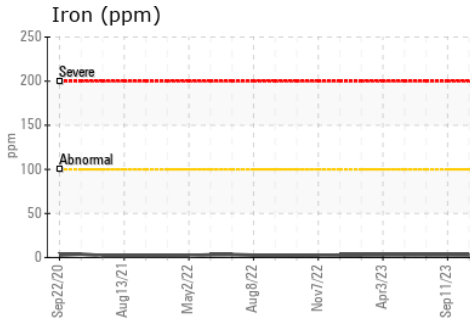
# OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
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 D7279(m)	15.7	14.2	14.3

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : CU0020716  
**Lab Number** : 02586985  
**Unique Number** : 5656051  
**Test Package** : MOB 1

**CUMMINS EASTERN CANADA LP**  
 3189 SWANSEA CRESCENT  
 OTTAWA, ON  
 CA K1G 3W5  
 Contact: Cindy Harrison  
 cindy.harrison@cummins.com  
 T: (613)736-1146  
 F: x:

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.