



# OIL ANALYSIS REPORT

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

Machine Id  
**1821**  
Component  
**Diesel Engine**  
Fluid  
**SHELL ROTELLA T 15W40 (--- LTR)**

## RECOMMENDATION

Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0905424</b>	WC0887384	WC0882992
Sample Date		Client Info		<b>14 Feb 2024</b>	08 Jan 2024	23 Nov 2023
Machine Age	hrs	Client Info		<b>19231</b>	18775	18261
Oil Age	hrs	Client Info		<b>457</b>	514	574
Filter Age	hrs	Client Info		<b>457</b>	0	574
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>N/A</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>100	<b>14</b>	16	17
Chromium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185(m)	>4	<b>0</b>	<1	<1
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)	>3	<b>&lt;1</b>	<1	<1
Aluminum	ppm	ASTM D5185(m)	>20	<b>1</b>	1	1
Lead	ppm	ASTM D5185(m)	>40	<b>0</b>	0	<1
Copper	ppm	ASTM D5185(m)	>330	<b>3</b>	4	4
Tin	ppm	ASTM D5185(m)	>15	<b>0</b>	0	0
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0

## CONTAMINATION

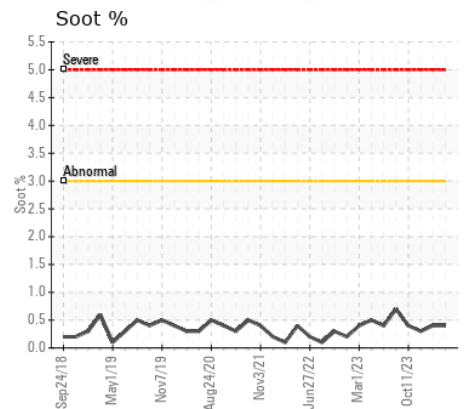
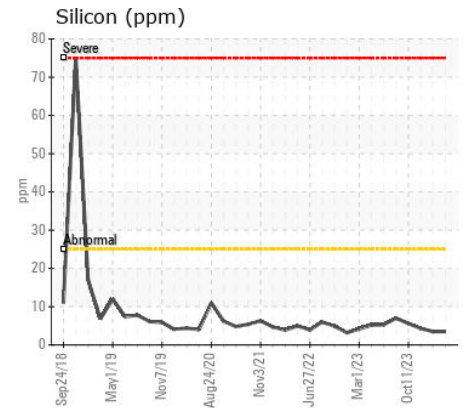
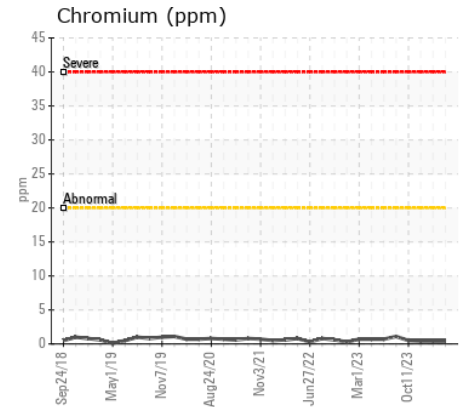
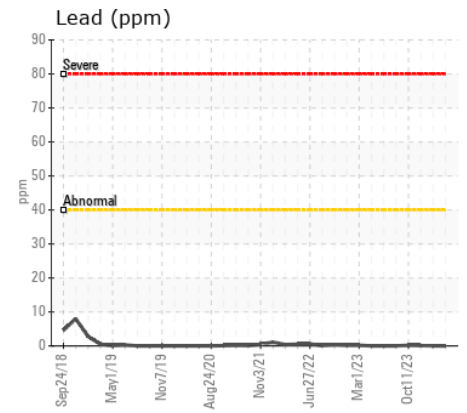
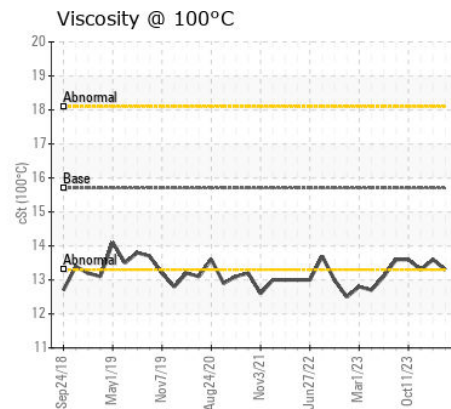
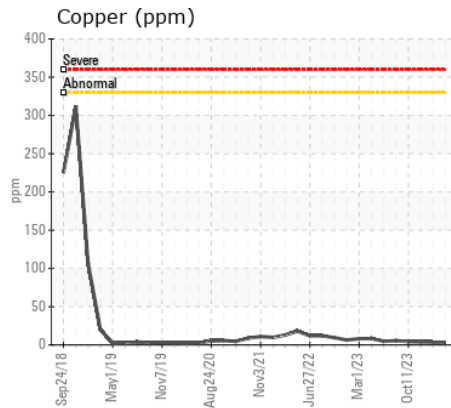
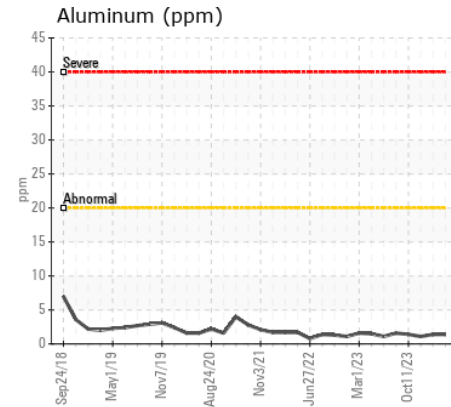
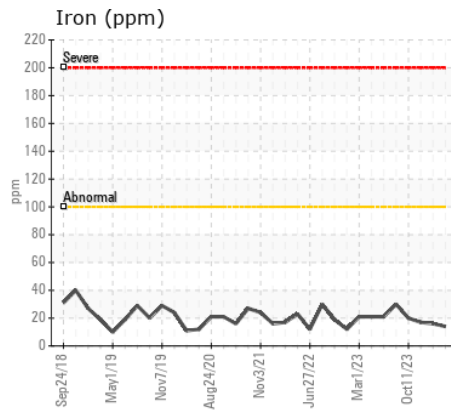
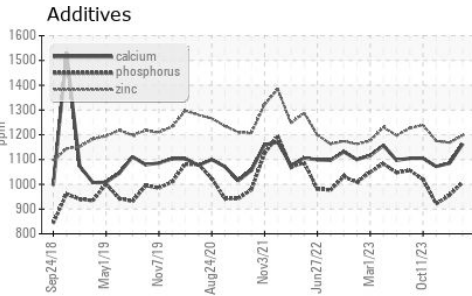
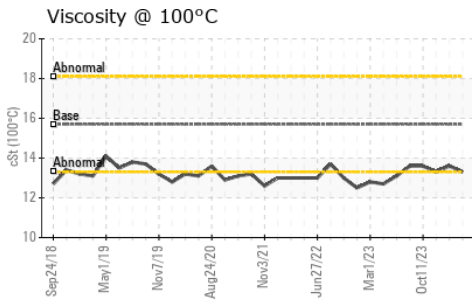
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>25	<b>4</b>	4	4
Potassium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	0	0
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	ASTM D7844*	>3	<b>0.4</b>	0.4	0.3
Nitration	Abs/cm	ASTM D7624*	>20	<b>10.5</b>	11.7	10.9
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>23.2</b>	25.5	27.1
Emulsified Water	scalar	Visual*	>0.2	<b>NEG</b>	NEG	NEG

## 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.

Sodium	ppm	ASTM D5185(m)		<b>2</b>	1	2
Boron	ppm	ASTM D5185(m)	35	<b>2</b>	3	2
Barium	ppm	ASTM D5185(m)	0	<b>0</b>	0	<1
Molybdenum	ppm	ASTM D5185(m)	0	<b>59</b>	60	60
Manganese	ppm	ASTM D5185(m)	0	<b>0</b>	0	0
Magnesium	ppm	ASTM D5185(m)	10	<b>956</b>	966	970
Calcium	ppm	ASTM D5185(m)	2340	<b>1163</b>	1085	1072
Phosphorus	ppm	ASTM D5185(m)	1110	<b>1008</b>	956	921
Zinc	ppm	ASTM D5185(m)	1210	<b>1198</b>	1168	1175
Sulfur	ppm	ASTM D5185(m)	3890	<b>2767</b>	2586	2406
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>22.3</b>	26.0	30.4
Visc @ 100°C	cSt	ASTM D7279(m)	15.7	<b>13.3</b>	13.6	13.3



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0905424  
**Lab Number** : 02618624  
**Unique Number** : 5735734  
**Test Package** : MOB 1  
**Received** : 28 Feb 2024  
**Tested** : 28 Feb 2024  
**Diagnosed** : 28 Feb 2024 - Wes Davis

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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.