



# OIL ANALYSIS REPORT

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



Machine Id  
**CATERPILLAR 2XR02303**  
Component  
**Left Diesel Engine**  
Fluid  
**SHELL ROTELLA T4 15W40 (27 LTR)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0948617</b>	WC909843	WC991503
Sample Date		Client Info		<b>10 Jan 2024</b>	10 Jan 2022	15 Oct 2016
Machine Age	hrs	Client Info		<b>0</b>	1497	1240
Oil Age	hrs	Client Info		<b>40</b>	70	75
Filter Age	hrs	Client Info		<b>40</b>	0	75
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>100	<b>11</b>	6	23
Chromium	ppm	ASTM D5185(m)	>20	<b>0</b>	0	<1
Nickel	ppm	ASTM D5185(m)	>2	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185(m)	>2	<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)	>2	<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185(m)	>25	<b>&lt;1</b>	<1	2
Lead	ppm	ASTM D5185(m)	>40	<b>0</b>	0	<1
Copper	ppm	ASTM D5185(m)	>330	<b>5</b>	4	21
Tin	ppm	ASTM D5185(m)	>15	<b>0</b>	0	<1
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0
White Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	VLITE
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

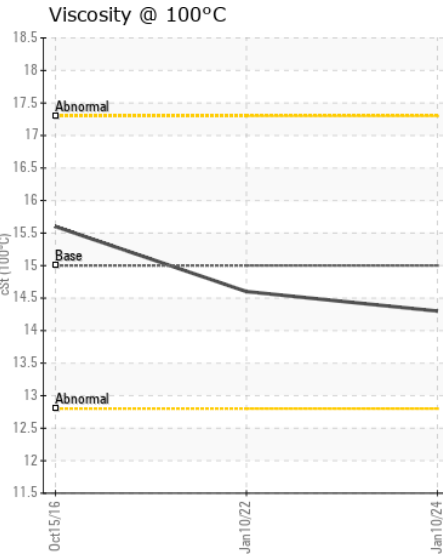
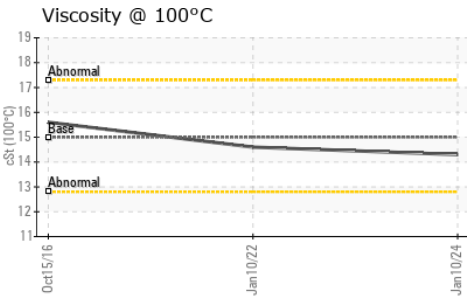
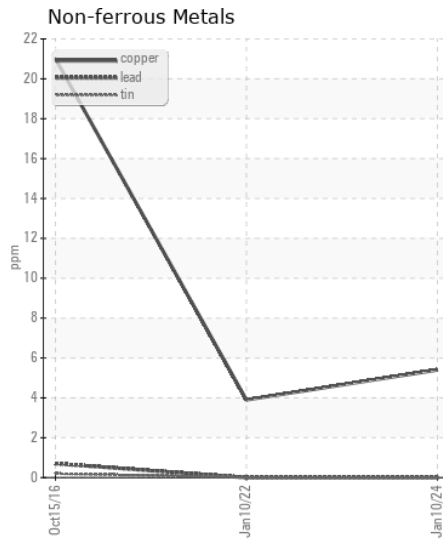
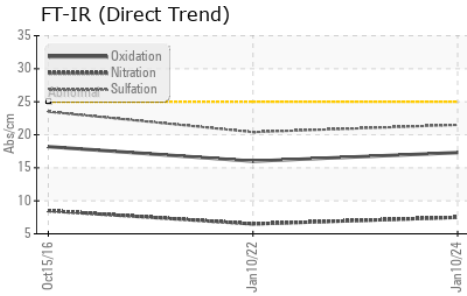
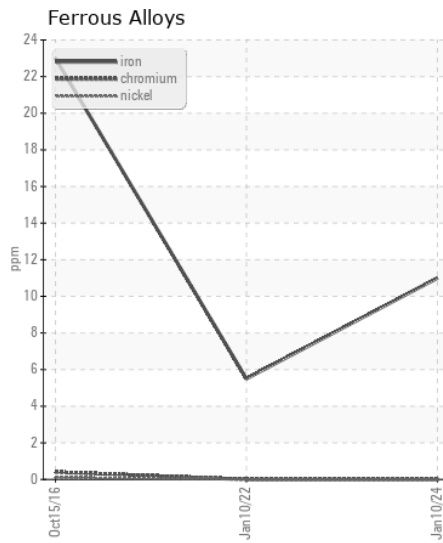
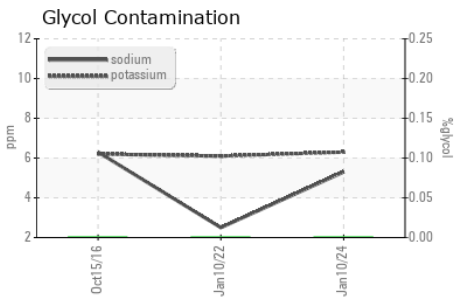
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>25	<b>2</b>	<1	4
Potassium	ppm	ASTM D5185(m)	>20	<b>6</b>	6	6
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol	%	ASTM D7922*		<b>0.0</b>	0.0	0.0
Soot %	%	ASTM D7844*	>3	<b>0.1</b>	0	0.1
Nitration	Abs/cm	ASTM D7624*	>20	<b>7.5</b>	6.5	8.5
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>21.5</b>	20.4	23.5
Silt	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	Visual*	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	Visual*	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	Visual*	>0.2	<b>NEG</b>	NEG	NEG

## FLUID CONDITION

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

Sodium	ppm	ASTM D5185(m)		<b>5</b>	2	6
Boron	ppm	ASTM D5185(m)		<b>141</b>	154	30
Barium	ppm	ASTM D5185(m)		<b>0</b>	0	<1
Molybdenum	ppm	ASTM D5185(m)		<b>0</b>	0	<1
Manganese	ppm	ASTM D5185(m)		<b>0</b>	0	<1
Magnesium	ppm	ASTM D5185(m)		<b>22</b>	11	11
Calcium	ppm	ASTM D5185(m)		<b>1982</b>	1947	2460
Phosphorus	ppm	ASTM D5185(m)		<b>886</b>	866	1005
Zinc	ppm	ASTM D5185(m)		<b>1042</b>	1033	1248
Sulfur	ppm	ASTM D5185(m)		<b>2654</b>	2637	3390
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>17.3</b>	16.0	18.2
Visc @ 100°C	cSt	ASTM D7279(m)	15	<b>14.3</b>	14.6	15.6



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0948617 **Received** : 23 May 2024  
**Lab Number** : 02637120 **Tested** : 24 May 2024  
**Unique Number** : 5786282 **Diagnosed** : 24 May 2024 - Wes Davis  
**Test Package** : MAR 1 ( Additional Tests: Glycol )

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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