



# OIL ANALYSIS REPORT

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

Machine Id  
**MANITOU 732 FOR411**  
Component  
**Diesel Engine**  
Fluid  
**DIESEL ENGINE OIL SAE 15W40 (--- GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0916273</b>	WC0861401	WC0750450
Sample Date		Client Info		<b>23 Mar 2024</b>	21 Oct 2023	18 May 2023
Machine Age	hrs	Client Info		<b>10755</b>	9954	9327
Oil Age	hrs	Client Info		<b>0</b>	0	250
Filter Age	hrs	Client Info		<b>0</b>	0	250
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	N/A	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>100	<b>10</b>	10	9
Chromium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	0
Nickel	ppm	ASTM D5185(m)	>4	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	<1
Silver	ppm	ASTM D5185(m)	>3	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185(m)	>20	<b>2</b>	2	1
Lead	ppm	ASTM D5185(m)	>40	<b>0</b>	0	<1
Copper	ppm	ASTM D5185(m)	>330	<b>2</b>	2	1
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>	---	---
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	---	---

## CONTAMINATION

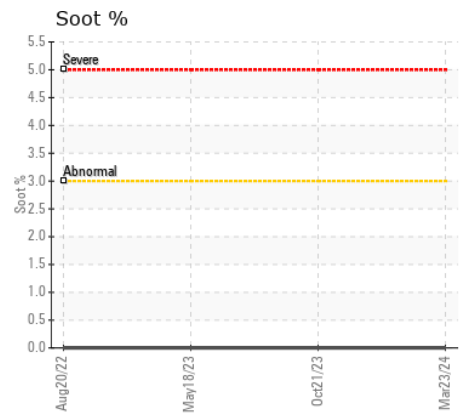
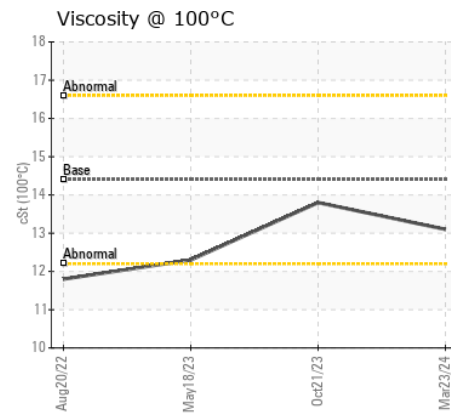
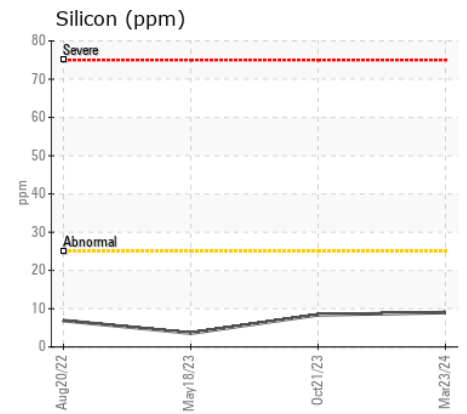
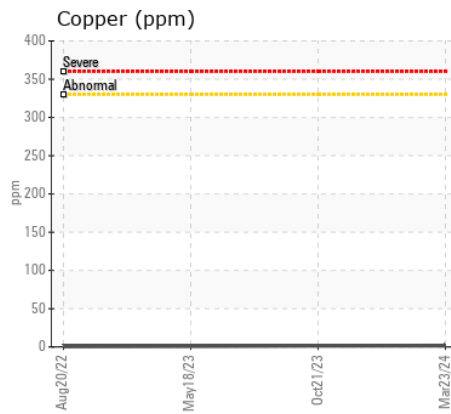
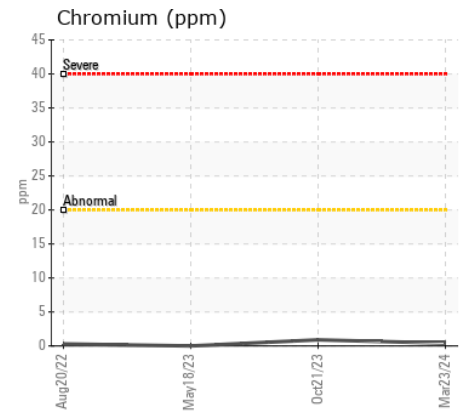
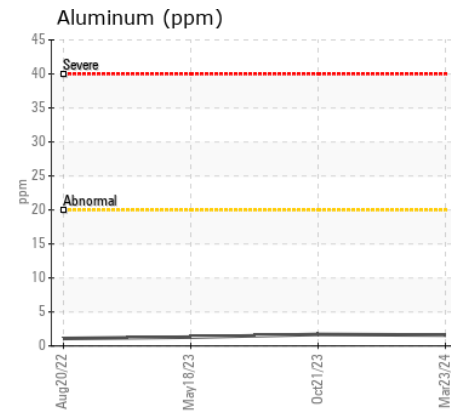
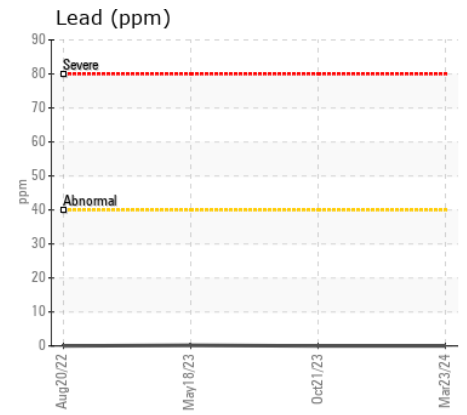
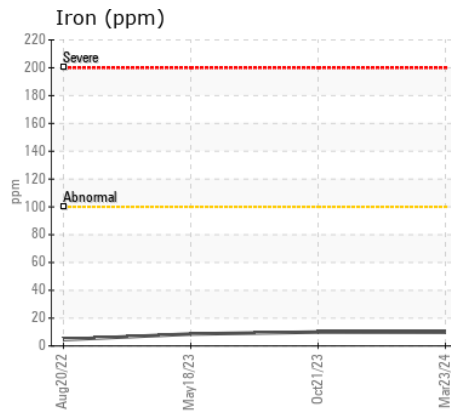
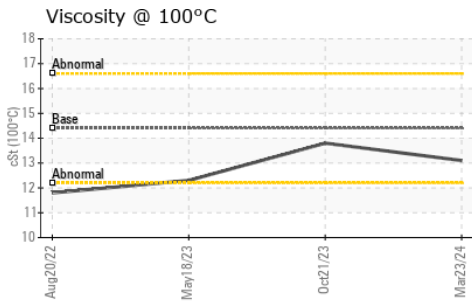
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>25	<b>9</b>	8	4
Potassium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	5	<1
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</b>	0	0
Nitration	Abs/cm	ASTM D7624*	>20	<b>6.1</b>	7.0	6.4
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>21.2</b>	20.3	18.8
Silt	scalar	Visual*	NONE	<b>NONE</b>	---	---
Debris	scalar	Visual*	NONE	<b>NONE</b>	---	---
Sand/Dirt	scalar	Visual*	NONE	<b>VLITE</b>	---	---
Appearance	scalar	Visual*	NORML	<b>NORML</b>	---	---
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)	>158	<b>2</b>	2	2
Boron	ppm	ASTM D5185(m)	250	<b>54</b>	137	15
Barium	ppm	ASTM D5185(m)	10	<b>0</b>	<1	0
Molybdenum	ppm	ASTM D5185(m)	100	<b>38</b>	9	55
Manganese	ppm	ASTM D5185(m)		<b>0</b>	0	<1
Magnesium	ppm	ASTM D5185(m)	450	<b>517</b>	64	840
Calcium	ppm	ASTM D5185(m)	3000	<b>1645</b>	2150	1241
Phosphorus	ppm	ASTM D5185(m)	1150	<b>748</b>	994	1051
Zinc	ppm	ASTM D5185(m)	1350	<b>860</b>	1147	1126
Sulfur	ppm	ASTM D5185(m)	4250	<b>2144</b>	3020	2779
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>19.7</b>	15.6	13.7
Visc @ 100°C	cSt	ASTM D7279(m)	14.4	<b>13.1</b>	13.8	12.3



ISO 17025:2017  
Accredited  
Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9

**Sample No.** : WC0916273

**Lab Number** : 02625548

**Unique Number** : 5750667

**Test Package** : MOB 1 ( Additional Tests: Visual )

**Received** : 01 Apr 2024

**Tested** : 01 Apr 2024

**Diagnosed** : 01 Apr 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.