



# OIL ANALYSIS REPORT

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

Machine Id  
**60082**  
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>WC0911712</b>	WC0887288	WC0809085
Sample Date		Client Info		<b>27 May 2024</b>	07 Feb 2024	12 Sep 2023
Machine Age	kms	Client Info		<b>129274</b>	103931	69800
Oil Age	kms	Client Info		<b>10000</b>	10000	10000
Filter Age	kms	Client Info		<b>10000</b>	10000	10000
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>75	<b>15</b>	8	14
Chromium	ppm	ASTM D5185(m)	>5	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185(m)	>4	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185(m)	>2	<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)	>2	<b>0</b>	<1	<1
Aluminum	ppm	ASTM D5185(m)	>15	<b>2</b>	2	1
Lead	ppm	ASTM D5185(m)	>25	<b>0</b>	0	<1
Copper	ppm	ASTM D5185(m)	>100	<b>3</b>	2	3
Tin	ppm	ASTM D5185(m)	>4	<b>0</b>	0	0
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

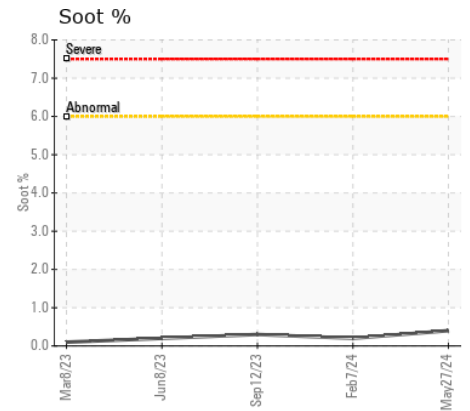
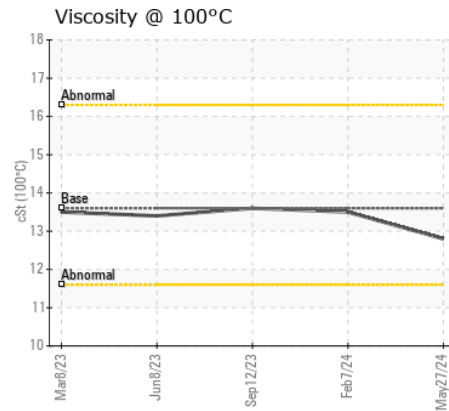
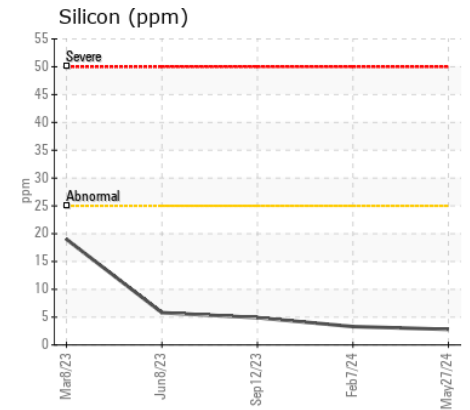
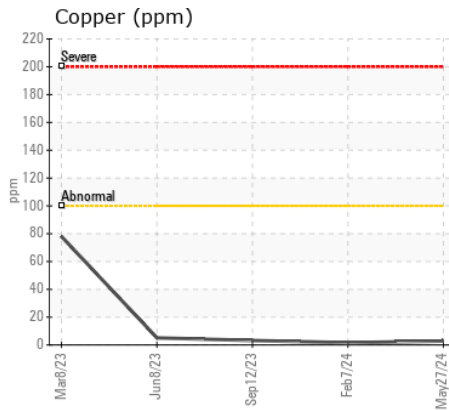
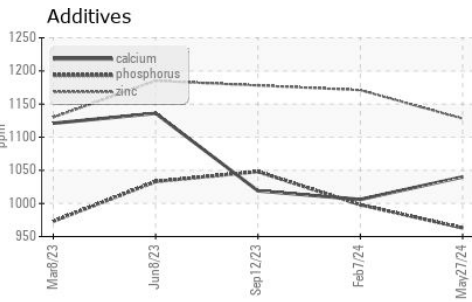
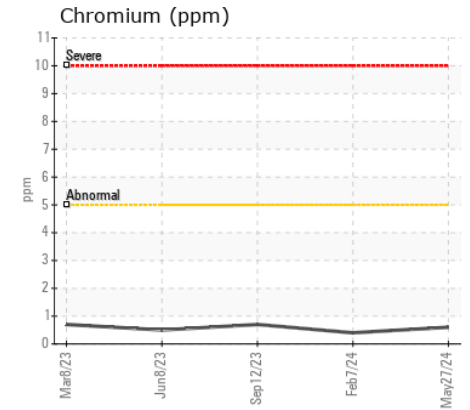
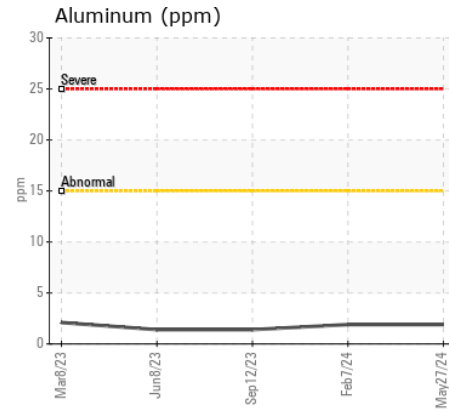
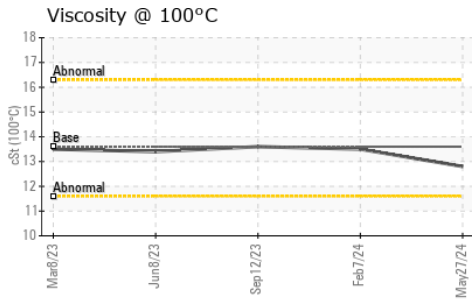
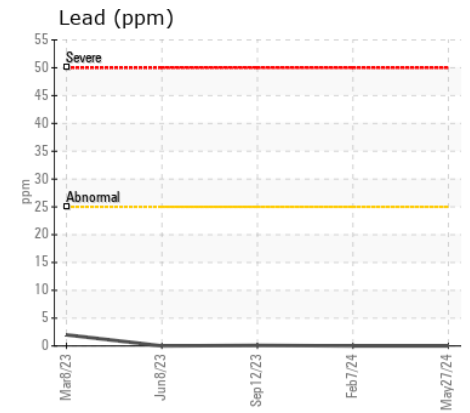
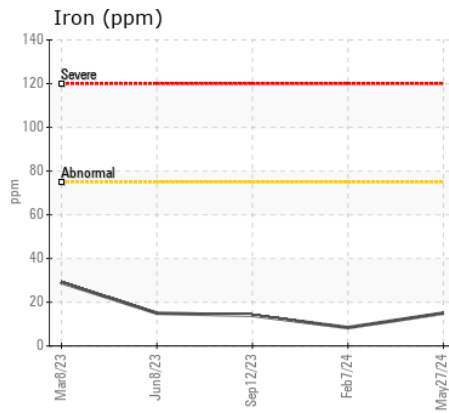
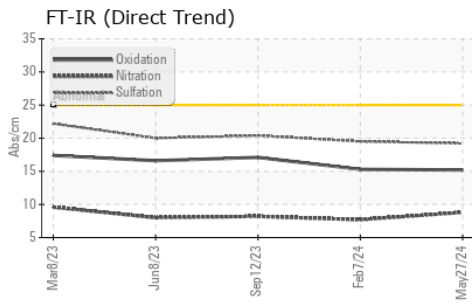
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>25	<b>3</b>	3	5
Potassium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	<1
Fuel		WC Method	>3.0	<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*	>6	<b>0.4</b>	0.2	0.3
Nitration	Abs/cm	ASTM D7624*	>20	<b>8.8</b>	7.7	8.2
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>19.2</b>	19.5	20.4
Silt	scalar	Visual*	NONE	<b>NONE</b>	---	---
Debris	scalar	Visual*	NONE	<b>NONE</b>	---	---
Sand/Dirt	scalar	Visual*	NONE	<b>NONE</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)		<b>5</b>	4	5
Boron	ppm	ASTM D5185(m)	39	<b>11</b>	2	2
Barium	ppm	ASTM D5185(m)	1	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	49	<b>61</b>	57	58
Manganese	ppm	ASTM D5185(m)	1	<b>&lt;1</b>	0	<1
Magnesium	ppm	ASTM D5185(m)	616	<b>913</b>	929	967
Calcium	ppm	ASTM D5185(m)	1554	<b>1040</b>	1006	1019
Phosphorus	ppm	ASTM D5185(m)	899	<b>963</b>	998	1048
Zinc	ppm	ASTM D5185(m)	1069	<b>1128</b>	1171	1178
Sulfur	ppm	ASTM D5185(m)	2624	<b>2445</b>	2669	2468
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>15.2</b>	15.3	17.1
Visc @ 100°C	cSt	ASTM D7279(m)	13.6	<b>12.8</b>	13.5	13.6



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0911712 **Received** : 03 Jun 2024  
**Lab Number** : 02639345 **Tested** : 03 Jun 2024  
**Unique Number** : 5788507 **Diagnosed** : 03 Jun 2024 - Wes Davis  
**Test Package** : MOB 1 ( Additional Tests: Visual )

**CITY OF PETERBOROUGH**  
 791 WEBBER AVENUE., MUNICIPAL OPERATIONS CENTRE  
 PETERBOROUGH, ON  
 CA K9J 8N3  
 Contact: Bryan Powers  
 bpowers@peterborough.ca  
 T: (705)745-1386  
 F: (705)743-3223

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.