



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
[154522]
 Machine Id
74959518
 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		CU0022781	CU0020859	---
Sample Date		Client Info		29 Feb 2024	12 Mar 2023	---
Machine Age	hrs	Client Info		1605	633	---
Oil Age	hrs	Client Info		1	633	---
Filter Age	hrs	Client Info		1	0	---
Oil Changed		Client Info		Changed	Changed	---
Filter Changed		Client Info		Changed	Changed	---
Sample Status				NORMAL	NORMAL	---

WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185(m)	>90	20	40	---
Chromium	ppm	ASTM D5185(m)	>20	<1	<1	---
Nickel	ppm	ASTM D5185(m)	>2	0	<1	---
Titanium	ppm	ASTM D5185(m)	>2	0	<1	---
Silver	ppm	ASTM D5185(m)	>2	0	0	---
Aluminum	ppm	ASTM D5185(m)	>20	1	2	---
Lead	ppm	ASTM D5185(m)	>40	0	4	---
Copper	ppm	ASTM D5185(m)	>330	2	64	---
Tin	ppm	ASTM D5185(m)	>15	0	1	---
Vanadium	ppm	ASTM D5185(m)		0	0	---
White Metal	scalar	Visual*	NONE	NONE	VLITE	---
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	---

CONTAMINATION

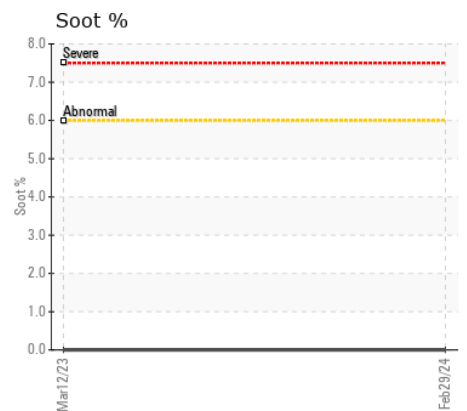
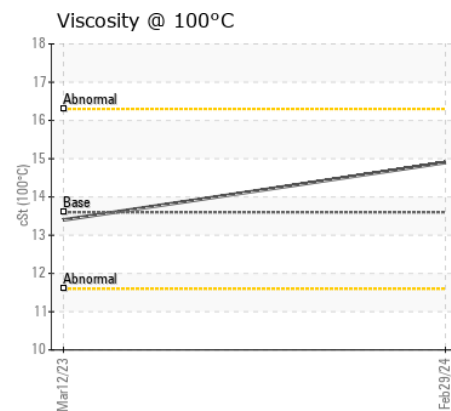
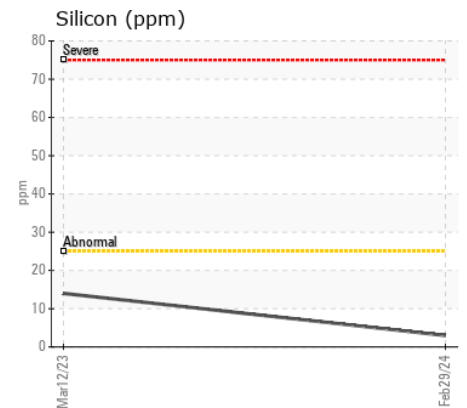
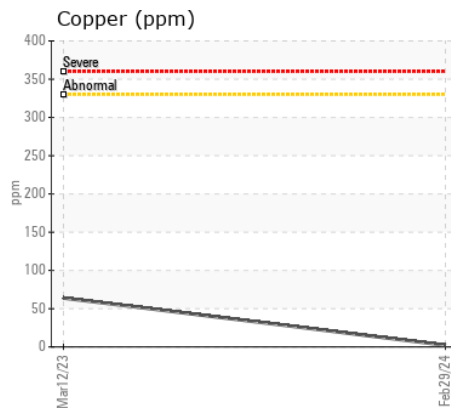
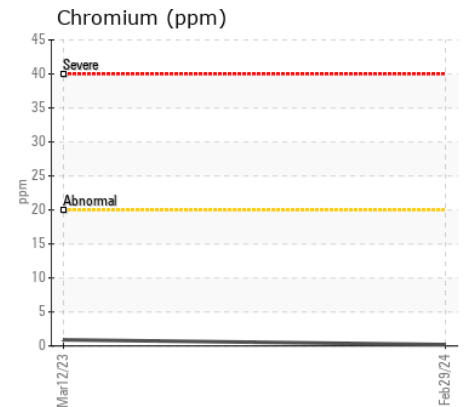
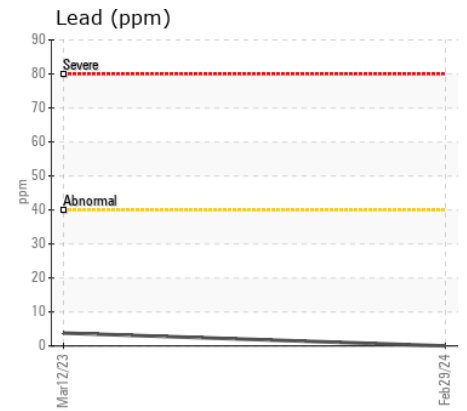
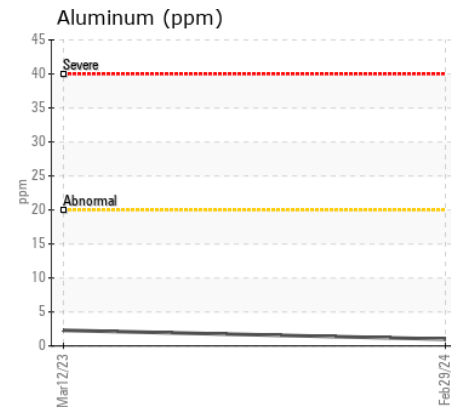
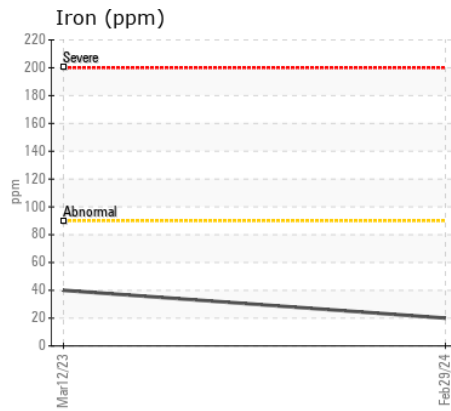
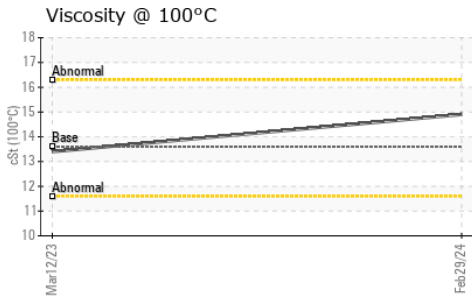
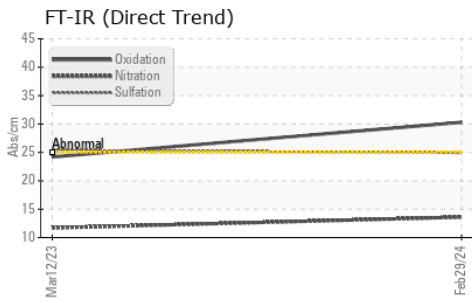
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>25	3	14	---
Potassium	ppm	ASTM D5185(m)	>20	<1	0	---
Fuel		WC Method	>3.0	<1.0	<1.0	---
Water		WC Method	>0.2	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	ASTM D7844*	>6	0	0	---
Nitration	Abs/cm	ASTM D7624*	>20	13.6	11.7	---
Sulfation	Abs/.1mm	ASTM D7415*	>30	24.9	25.4	---
Silt	scalar	Visual*	NONE	NONE	NONE	---
Debris	scalar	Visual*	NONE	NONE	NONE	---
Sand/Dirt	scalar	Visual*	NONE	VLITE	NONE	---
Appearance	scalar	Visual*	NORML	NORML	NORML	---
Odor	scalar	Visual*	NORML	NORML	NORML	---
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	---

FLUID CONDITION

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

Sodium	ppm	ASTM D5185(m)		6	7	---
Boron	ppm	ASTM D5185(m)	39	41	42	---
Barium	ppm	ASTM D5185(m)	1	0	5	---
Molybdenum	ppm	ASTM D5185(m)	49	64	59	---
Manganese	ppm	ASTM D5185(m)	1	<1	5	---
Magnesium	ppm	ASTM D5185(m)	616	1069	1078	---
Calcium	ppm	ASTM D5185(m)	1554	834	965	---
Phosphorus	ppm	ASTM D5185(m)	899	940	998	---
Zinc	ppm	ASTM D5185(m)	1069	1163	1152	---
Sulfur	ppm	ASTM D5185(m)	2624	2513	2515	---
Oxidation	Abs/.1mm	ASTM D7414*	>25	30.3	24.2	---
Visc @ 100°C	cSt	ASTM D7279(m)	13.6	14.9	13.4	---



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : CU0022781 **Received** : 10 Jun 2024
Lab Number : 02640654 **Tested** : 10 Jun 2024
Unique Number : 5789816 **Diagnosed** : 10 Jun 2024 - Kevin Marson
Test Package : MOB 1 (Additional Tests: Visual)

CN RAIL
 76 INTERMODAL DR
 BRAMPTON, ON
 CA L6T 5B3
 Contact: Service Manager

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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F: