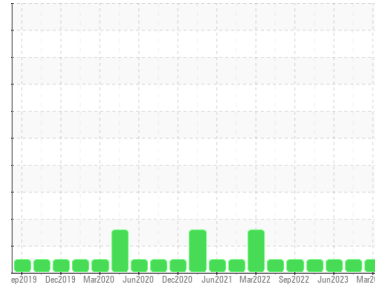




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
Grande West Vicinity 1846

Component
Natural Gas Engine

Fluid
VALVOLINE PREMIUM BLUE 9200 15W40 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

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

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			WC0917605	WC0849698	WC0811588
Sample Date	Client Info			13 Mar 2024	10 Sep 2023	15 Jun 2023
Machine Age	kms	Client Info		209236	0	172697
Oil Age	kms	Client Info		0	0	0
Oil Changed	Client Info			N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Water	WC Method	>0.1		NEG	NEG	NEG
Glycol	WC Method			---	0.0	---

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>50	9	12	15
Chromium	ppm	ASTM D5185(m)	>4	<1	<1	1
Nickel	ppm	ASTM D5185(m)	>2	<1	<1	<1
Titanium	ppm	ASTM D5185(m)		0	<1	1
Silver	ppm	ASTM D5185(m)	>3	0	0	0
Aluminum	ppm	ASTM D5185(m)	>9	2	2	2
Lead	ppm	ASTM D5185(m)	>30	0	0	0
Copper	ppm	ASTM D5185(m)	>35	1	2	1
Tin	ppm	ASTM D5185(m)	>4	0	0	0
Antimony	ppm	ASTM D5185(m)		0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
Beryllium	ppm	ASTM D5185(m)		0	0	0
Cadmium	ppm	ASTM D5185(m)		0	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		7	7	7
Barium	ppm	ASTM D5185(m)		0	0	0
Molybdenum	ppm	ASTM D5185(m)		51	52	49
Manganese	ppm	ASTM D5185(m)		0	<1	<1
Magnesium	ppm	ASTM D5185(m)		843	859	849
Calcium	ppm	ASTM D5185(m)		1276	1258	1229
Phosphorus	ppm	ASTM D5185(m)		724	780	756
Zinc	ppm	ASTM D5185(m)		865	897	840
Sulfur	ppm	ASTM D5185(m)		2074	2010	1856
Lithium	ppm	ASTM D5185(m)		<1	<1	1

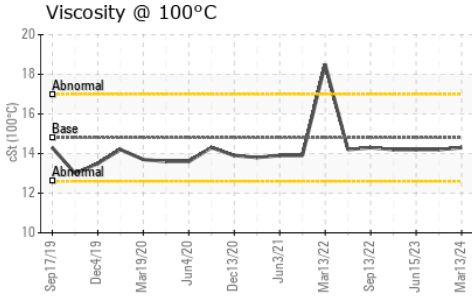
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>+100	11	16	38
Sodium	ppm	ASTM D5185(m)		5	9	21
Potassium	ppm	ASTM D5185(m)	>20	1	11	1

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*		0	0	0
Nitration	Abs/cm	ASTM D7624*	>20	13.5	13.6	14.0
Sulfation	Abs/.1mm	ASTM D7415*	>30	27.2	25.4	27.3

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	25.4	23.3	25.9



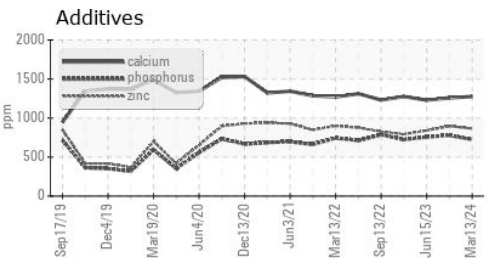
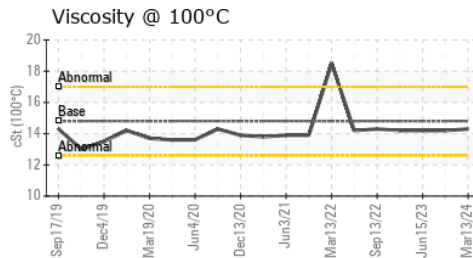
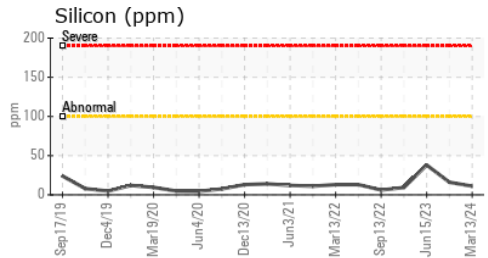
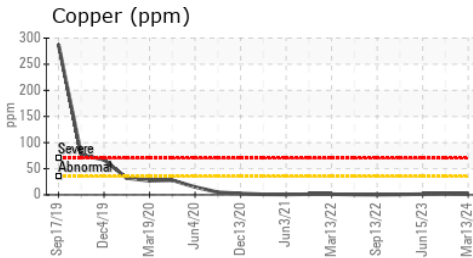
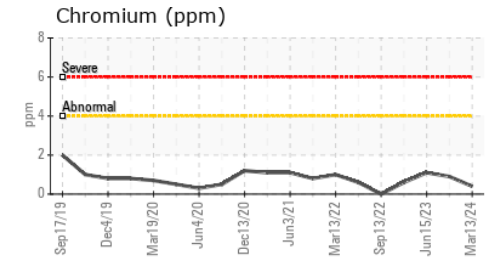
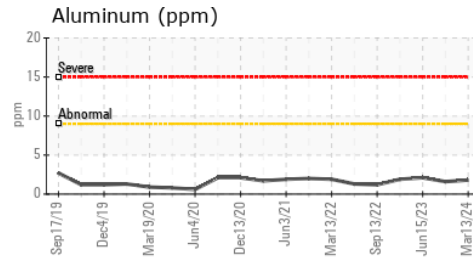
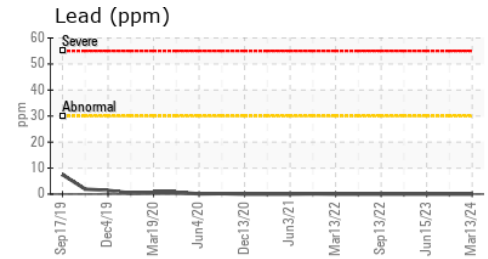
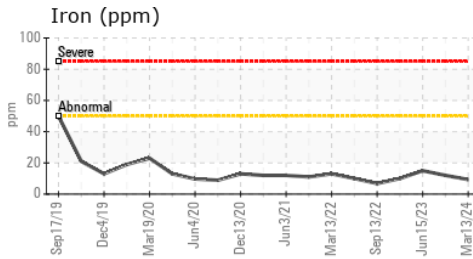
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	---
Yellow Metal	scalar	Visual*	NONE	NONE	---
Precipitate	scalar	Visual*	NONE	NONE	---
Silt	scalar	Visual*	NONE	NONE	VLITE
Debris	scalar	Visual*	NONE	NONE	---
Sand/Dirt	scalar	Visual*	NONE	NONE	---
Appearance	scalar	Visual*	NORML	NORML	---
Odor	scalar	Visual*	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.1	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	14.8	14.3	14.2	14.2

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0917605 **Received** : 18 Mar 2024
Lab Number : **02622663** **Tested** : 18 Mar 2024
Unique Number : 5747782 **Diagnosed** : 19 Mar 2024 - Kevin Marson
Test Package : MOB 1 (Additional Tests: Visual)

CITY OF HAMILTON
 2200 UPPER JAMES., MOUNTAIN TRANSIT STOREROOM
 MOUNT HOPE, ON
 CA L0R 1W0
 Contact: Jeff Parr
 jeff.parr@hamilton.ca
 T: (905)546-2424
 F: (905)679-4502

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.