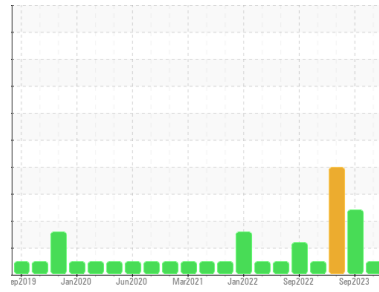




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id

Grande West Vicinity 1844

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

Test for glycol is negative. 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		WC0937200	WC0830320	WC0811581
Sample Date	Client Info		25 Jun 2024	16 Sep 2023	19 Jun 2023
Machine Age	kms	Client Info	276067	0	228696
Oil Age	kms	Client Info	0	0	0
Oil Changed	Client Info		N/A	N/A	N/A
Sample Status			NORMAL	ABNORMAL	ABNORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.1	NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>50	6	31	36
Chromium	ppm	ASTM D5185(m)	>4	<1	3	4
Nickel	ppm	ASTM D5185(m)	>2	<1	<1	<1
Titanium	ppm	ASTM D5185(m)		0	<1	2
Silver	ppm	ASTM D5185(m)	>3	0	0	0
Aluminum	ppm	ASTM D5185(m)	>9	1	4	3
Lead	ppm	ASTM D5185(m)	>30	0	0	0
Copper	ppm	ASTM D5185(m)	>35	<1	2	2
Tin	ppm	ASTM D5185(m)	>4	0	0	<1
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)		13	8	8
Barium	ppm	ASTM D5185(m)		0	2	0
Molybdenum	ppm	ASTM D5185(m)		50	140	127
Manganese	ppm	ASTM D5185(m)		<1	1	1
Magnesium	ppm	ASTM D5185(m)		793	772	794
Calcium	ppm	ASTM D5185(m)		1204	1179	1208
Phosphorus	ppm	ASTM D5185(m)		622	616	675
Zinc	ppm	ASTM D5185(m)		825	860	847
Sulfur	ppm	ASTM D5185(m)		1870	2029	1948
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>+100	5	16	18
Sodium	ppm	ASTM D5185(m)		6	213	201
Potassium	ppm	ASTM D5185(m)	>20	13	1509	1381
Glycol	%	ASTM D7922*		0.0	0.0	0.0

INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*		0	0	0
Nitration	Abs/cm	ASTM D7624*	>20	11.4	14.2	14.9
Sulfation	Abs/.1mm	ASTM D7415*	>30	20.9	25.9	26.1

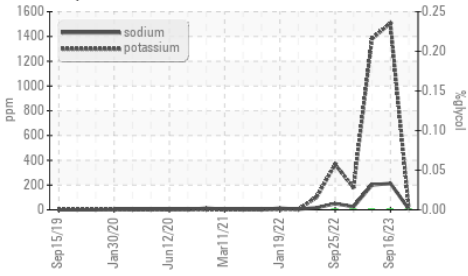
FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	ASTM D7414*	>25	19.2	21.5	22.6

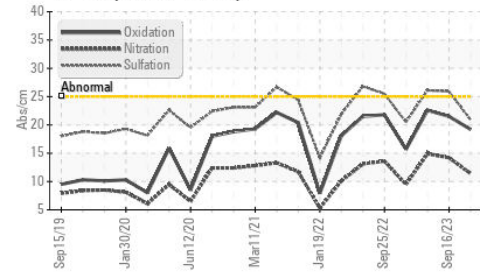


OIL ANALYSIS REPORT

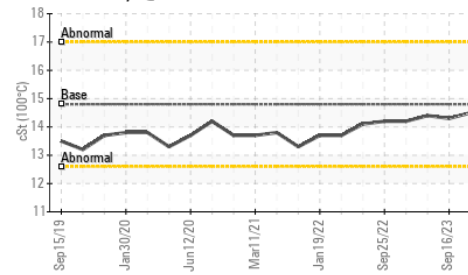
Glycol Contamination



FT-IR (Direct Trend)



Viscosity @ 100°C

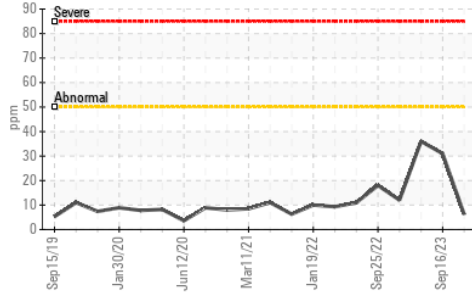


VISUAL	method	limit/base	current	history1	history2
Emulsified Water	scalar	Visual*	>0.1	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG

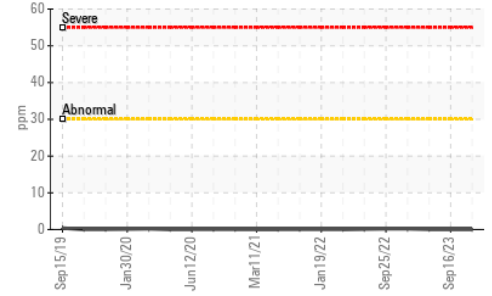
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	14.8	14.5	14.3

GRAPHS

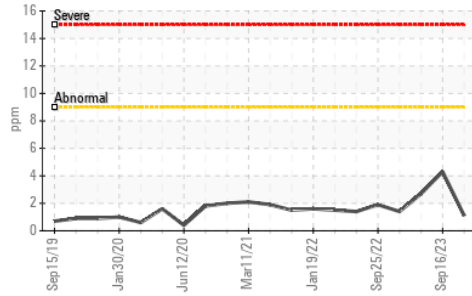
Iron (ppm)



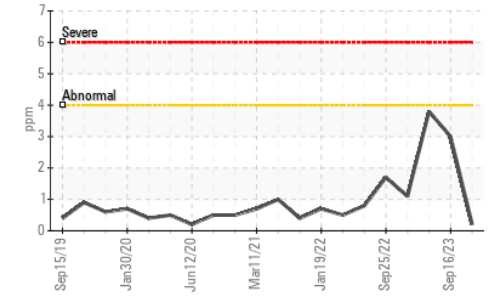
Lead (ppm)



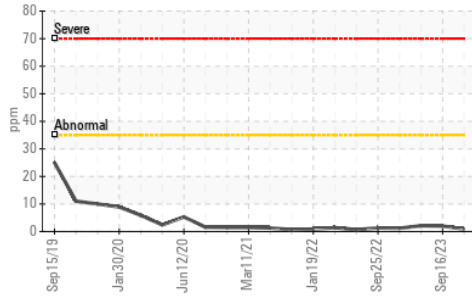
Aluminum (ppm)



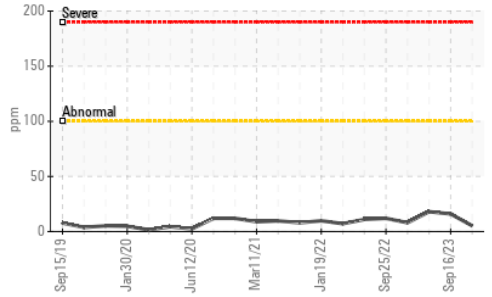
Chromium (ppm)



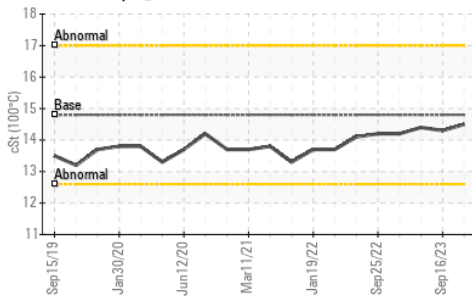
Copper (ppm)



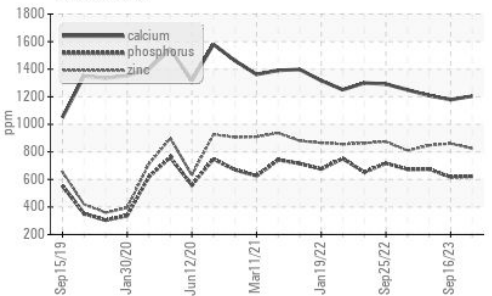
Silicon (ppm)



Viscosity @ 100°C



Additives



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0937200 **Received** : 28 Jun 2024
Lab Number : 02644554 **Tested** : 28 Jun 2024
Unique Number : 5802093 **Diagnosed** : 28 Jun 2024 - Wes Davis
Test Package : MOB 1 (Additional Tests: Glycol)

CITY OF HAMILTON
 2200 UPPER JAMES., MOUNTAIN TRANSIT STOREROOM
 MOUNT HOPE, ON
 CA L0R LW0
 Contact: Jeff Parr
 jeff.parr@hamilton.ca
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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.