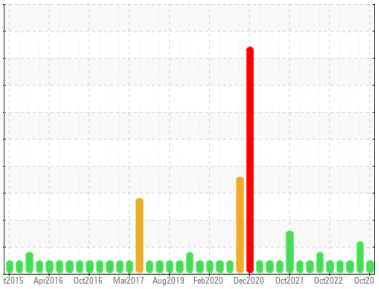
OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Area
[1490053]
Machine Id
NEW FLYER 1420
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
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. 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		**WC0849765**	WC0830344	WC0791284
Sample Date		Client Info		**05 Oct 2023**	05 Jul 2023	12 Apr 2023
Machine Age	kms	Client Info		**586068**	565000	842438
Oil Age	kms	Client Info		**0**	0	0
Oil Changed		Client Info		**N/A**	N/A	N/A
Sample Status				**NORMAL**	ABNORMAL	NORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>50	**14**	16	19
Chromium	ppm	ASTM D5185(m)	>4	**2**	2	2
Nickel	ppm	ASTM D5185(m)	>2	**<1**	<1	1
Titanium	ppm	ASTM D5185(m)		**0**	<1	3
Silver	ppm	ASTM D5185(m)	>3	**<1**	0	0
Aluminum	ppm	ASTM D5185(m)	>9	**2**	2	3
Lead	ppm	ASTM D5185(m)	>30	**1**	2	3
Copper	ppm	ASTM D5185(m)	>35	**2**	2	2
Tin	ppm	ASTM D5185(m)	>4	**<1**	<1	<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)		**4**	4	4
Barium	ppm	ASTM D5185(m)		**<1**	0	0
Molybdenum	ppm	ASTM D5185(m)		**61**	57	56
Manganese	ppm	ASTM D5185(m)		**<1**	<1	1
Magnesium	ppm	ASTM D5185(m)		**921**	924	837
Calcium	ppm	ASTM D5185(m)		**1364**	1354	1464
Phosphorus	ppm	ASTM D5185(m)		**780**	813	794
Zinc	ppm	ASTM D5185(m)		**978**	946	913
Sulfur	ppm	ASTM D5185(m)		**2014**	1946	2003
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>+100	**7**	20	6
Sodium	ppm	ASTM D5185(m)		**8**	9	10
Potassium	ppm	ASTM D5185(m)	>20	**7**	<1	0

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*		**0**	0	0
Nitration	Abs/cm	ASTM D7624*	>20	**14.0**	14.9	14.7
Sulfation	Abs/.1mm	ASTM D7415*	>30	**28.4**	29.9	30.7

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**27.6**	▲ 30.3	27.2

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

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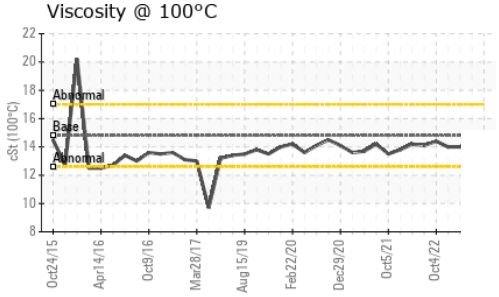
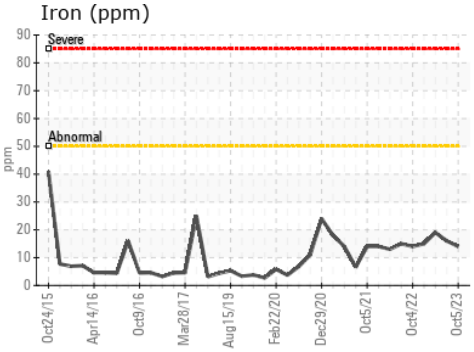
Viscosity @ 100°C



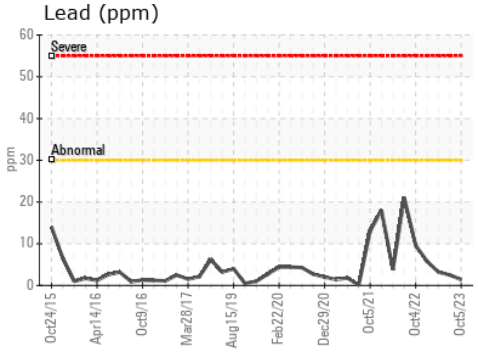
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	14.8	**14.6**	14.6	14.0

GRAPHS

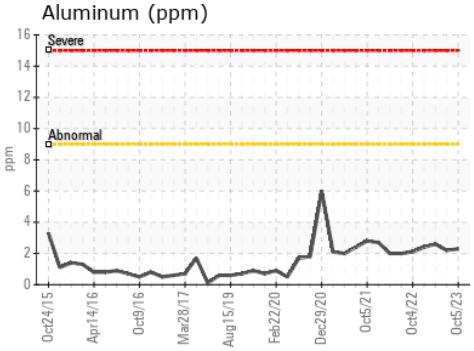
Iron (ppm)



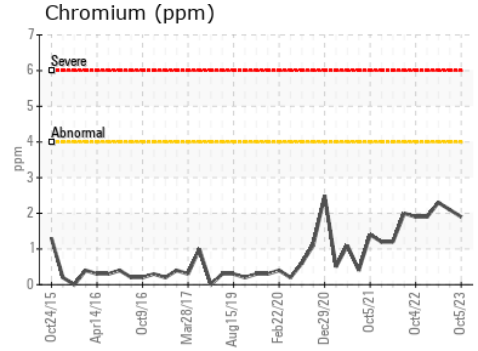
Lead (ppm)



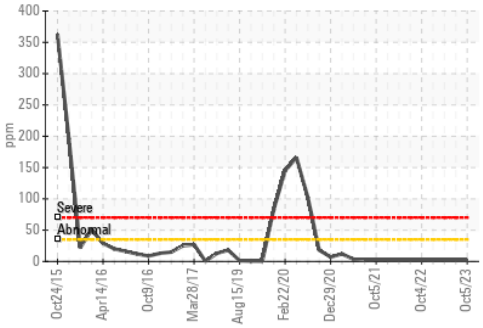
Aluminum (ppm)



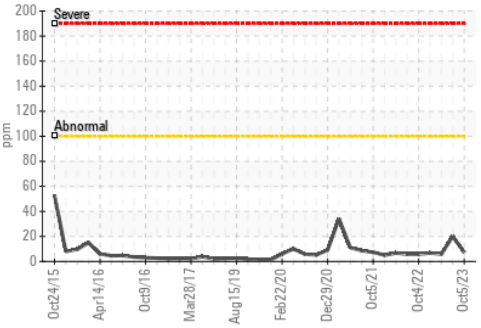
Chromium (ppm)



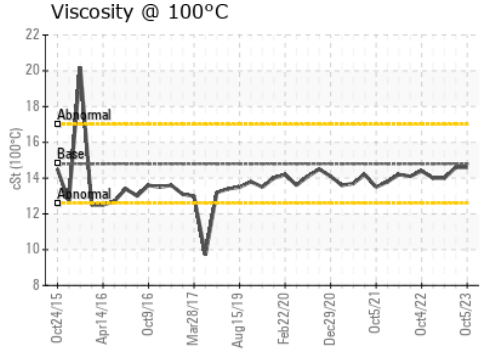
Copper (ppm)



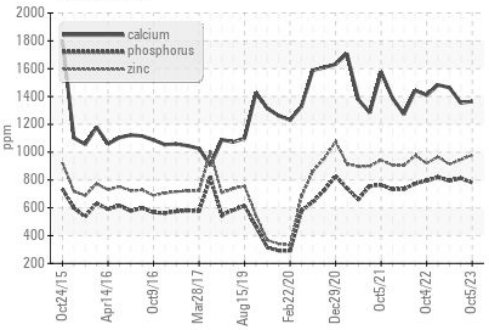
Silicon (ppm)



Viscosity @ 100°C



Additives



ISO 17025:2017 Accredited Laboratory

Laboratory	: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9		
Sample No.	: WC0849765	**Received**	: 11 Oct 2023
Lab Number	: 02588261	**Diagnosed**	: 12 Oct 2023
Unique Number	: 5657327	**Diagnostician**	: Kevin Marson
Test Package	: MOB 1		

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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