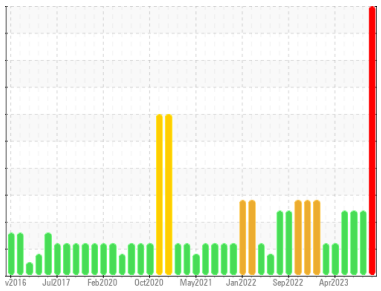
OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL

Machine Id
NEW FLYER 1010
Component
Diesel Engine
Fluid
SAFETY-KLEEN PERFORMANCE PLUS XHD-7 15W40 (--- GAL)

DIAGNOSIS

Recommendation

We advise that you check the fuel injection system. We advise that you check for the source of the coolant leak. We recommend that you drain the oil from the component if this has not already been done. We advise that you flush the component thoroughly before re-filling with oil. We recommend an early resample to monitor this condition. NOTE: Test values may be askew due high concentration of free water present in sample.

Wear

All component wear rates are normal.

Contamination

Test for glycol is positive. There is a high amount of fuel present in the oil. There is a high concentration of glycol present in the oil. There is a high concentration of water present in the oil. Excessive free water present. Tests confirm the presence of fuel in the oil.

Fluid Condition

Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0877994**	WC0830210	WC0849828
Sample Date		Client Info		**04 Dec 2023**	16 Oct 2023	28 Aug 2023
Machine Age	kms	Client Info		**0**	1036904	102678
Oil Age	kms	Client Info		**0**	0	0
Oil Changed		Client Info		**N/A**	N/A	N/A
Sample Status				**SEVERE**	SEVERE	SEVERE

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>0.2	**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>75	**28**	37	26
Chromium	ppm	ASTM D5185(m)	>5	**1**	1	1
Nickel	ppm	ASTM D5185(m)	>4	**<1**	<1	0
Titanium	ppm	ASTM D5185(m)	>2	**0**	0	0
Silver	ppm	ASTM D5185(m)	>2	**<1**	<1	<1
Aluminum	ppm	ASTM D5185(m)	>15	**2**	1	2
Lead	ppm	ASTM D5185(m)	>25	**<1**	1	2
Copper	ppm	ASTM D5185(m)	>100	**2**	1	1
Tin	ppm	ASTM D5185(m)	>4	**0**	<1	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

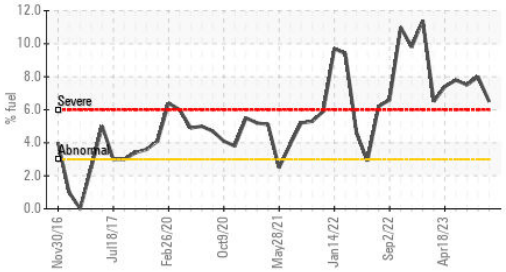
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		**4**	<1	<1
Barium	ppm	ASTM D5185(m)		**<1**	<1	0
Molybdenum	ppm	ASTM D5185(m)		**55**	53	53
Manganese	ppm	ASTM D5185(m)		**0**	0	<1
Magnesium	ppm	ASTM D5185(m)		**862**	840	867
Calcium	ppm	ASTM D5185(m)		**1001**	919	920
Phosphorus	ppm	ASTM D5185(m)		**820**	840	919
Zinc	ppm	ASTM D5185(m)		**1044**	1038	1043
Sulfur	ppm	ASTM D5185(m)		**2179**	2135	2240
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	**6**	4	3
Sodium	ppm	ASTM D5185(m)		**11**	3	3
Potassium	ppm	ASTM D5185(m)	>20	▲ **25**	0	<1
Fuel	%	ASTM D7593*	>3.0	⬢ **6.5**	⬢ 8	⬢ 7.5
Glycol	%	ASTM D7922*		⬢ **0.317**	NEG	NEG

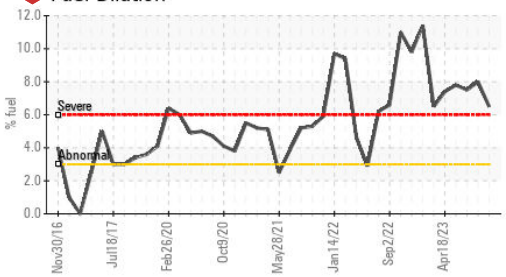
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>6	**0.4**	0.7	0.6
Nitration	Abs/cm	ASTM D7624*	>20	**12.1**	10.5	10.5
Sulfation	Abs/.1mm	ASTM D7415*	>30	**24.2**	24.7	25.2

OIL ANALYSIS REPORT

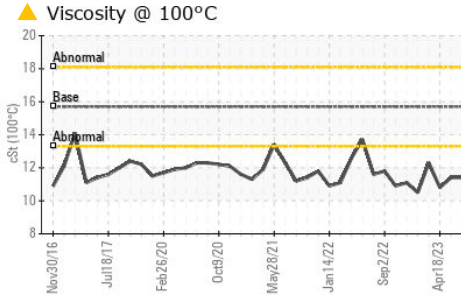
Fuel Dilution



Fuel Dilution



Viscosity @ 100°C



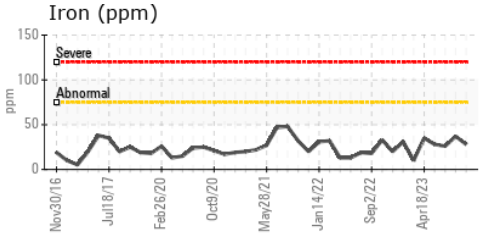
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**24.5**	25.7	24.5

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**	---	---
Debris	scalar	Visual*	NONE	**NONE**	---	---
Sand/Dirt	scalar	Visual*	NONE	**NONE**	---	---
Appearance	scalar	Visual*	NORML	**NORML**	---	---
Odor	scalar	Visual*	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	Visual*	>0.2	▲ **.5%**	NEG	NEG
Free Water	scalar	Visual*		⬢ **5%**	NEG	NEG

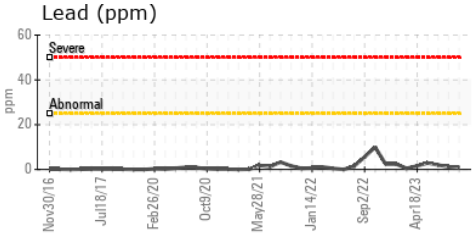
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	15.7	▲ **11.8**	▲ 11.2	▲ 11.4

GRAPHS

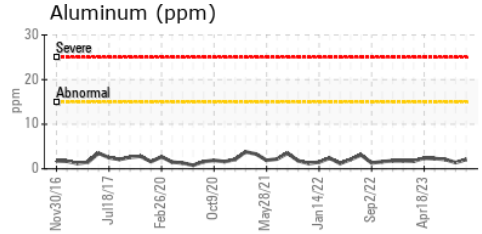
Iron (ppm)



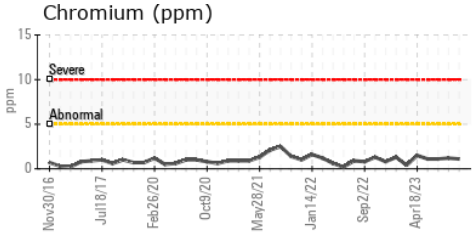
Lead (ppm)



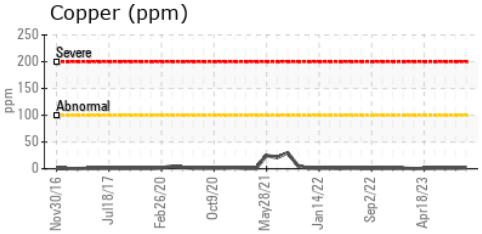
Aluminum (ppm)



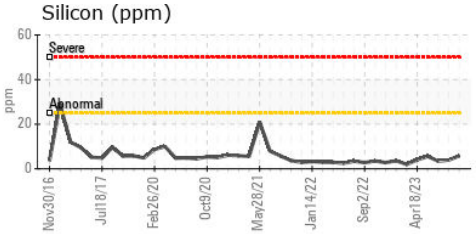
Chromium (ppm)



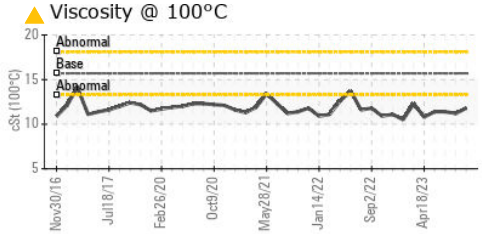
Copper (ppm)



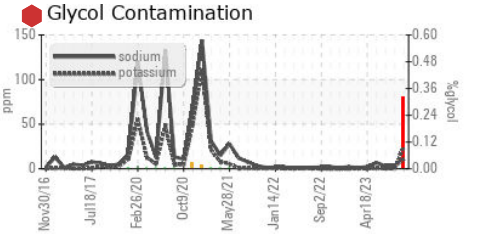
Silicon (ppm)



Viscosity @ 100°C



Glycol Contamination



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0877994 **Received** : 06 Dec 2023
Lab Number : 02601198 **Diagnosed** : 07 Dec 2023
Unique Number : 5694283 **Diagnostician** : Bill Quesnel
Test Package : MOB 1 (Additional Tests: Glycol, PercentFuel, Visual)

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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