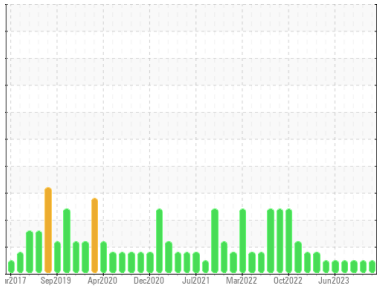
OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Area
[1494869]
Machine Id
NEW FLYER 0908
Component
Diesel Engine
Fluid
SAFETY-KLEEN PERFORMANCE PLUS XHD-7 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		**WC0849885**	WC0849754	WC0849691
Sample Date		Client Info		**08 Dec 2023**	26 Oct 2023	11 Sep 2023
Machine Age	kms	Client Info		**1138932**	113166	112216
Oil Age	kms	Client Info		**0**	0	0
Oil Changed		Client Info		**Changed**	N/A	N/A
Sample Status				**NORMAL**	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	**<1.0**	<1.0	<1.0
Water		WC Method	>0.2	**NEG**	NEG	NEG
Glycol		WC Method		**NEG**	NEG	0.0

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>75	**22**	28	45
Chromium	ppm	ASTM D5185(m)	>5	**<1**	<1	2
Nickel	ppm	ASTM D5185(m)	>4	**0**	0	0
Titanium	ppm	ASTM D5185(m)	>2	**0**	0	<1
Silver	ppm	ASTM D5185(m)	>2	**<1**	<1	0
Aluminum	ppm	ASTM D5185(m)	>15	**2**	2	2
Lead	ppm	ASTM D5185(m)	>25	**0**	<1	<1
Copper	ppm	ASTM D5185(m)	>100	**<1**	7	<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)		**1**	2	9
Barium	ppm	ASTM D5185(m)		**0**	<1	0
Molybdenum	ppm	ASTM D5185(m)		**63**	70	63
Manganese	ppm	ASTM D5185(m)		**0**	0	<1
Magnesium	ppm	ASTM D5185(m)		**1015**	1144	1003
Calcium	ppm	ASTM D5185(m)		**1096**	1226	1171
Phosphorus	ppm	ASTM D5185(m)		**1022**	1155	983
Zinc	ppm	ASTM D5185(m)		**1236**	1402	1166
Sulfur	ppm	ASTM D5185(m)		**2445**	2770	2270
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	**4**	5	5
Sodium	ppm	ASTM D5185(m)		**10**	9	20
Potassium	ppm	ASTM D5185(m)	>20	**6**	5	23

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>6	**0.7**	0.9	1.8
Nitration	Abs/cm	ASTM D7624*	>20	**11.1**	10.0	13.7
Sulfation	Abs/.1mm	ASTM D7415*	>30	**23.4**	23.7	28.4

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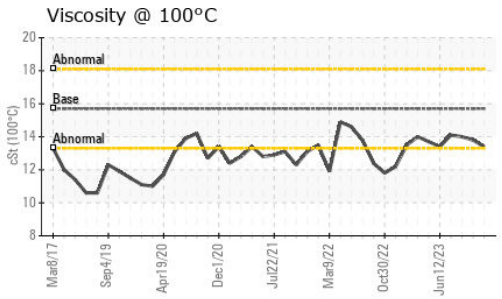
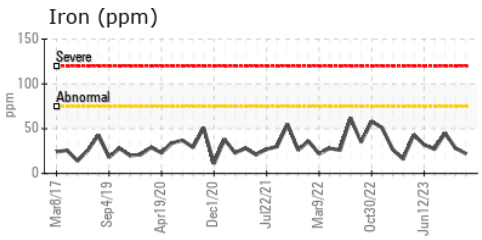


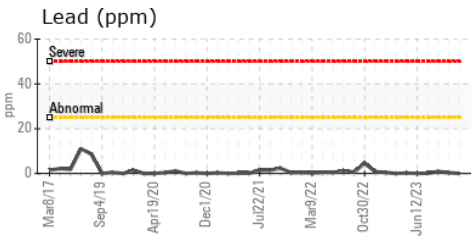
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**22.1**	21.4	26.5

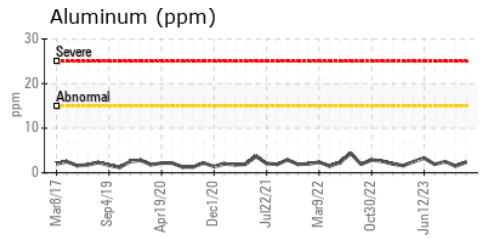
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	**NONE**	---	---
Yellow Metal	scalar	Visual*	NONE	**NONE**	---	---
Precipitate	scalar	Visual*	NONE	**NONE**	---	---
Silt	scalar	Visual*	NONE	**NONE**	---	---
Debris	scalar	Visual*	NONE	**NONE**	---	---
Sand/Dirt	scalar	Visual*	NONE	**NONE**	---	---
Appearance	scalar	Visual*	NORML	**NORML**	---	---
Odor	scalar	Visual*	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	Visual*	>0.2	**NEG**	NEG	NEG
Free Water	scalar	Visual*		**NEG**	NEG	NEG

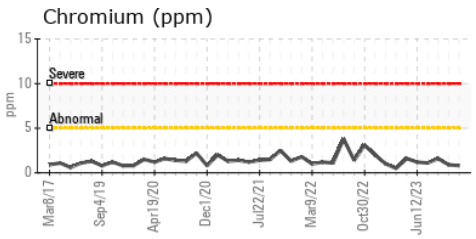
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	15.7	**13.4**	13.8	14.0

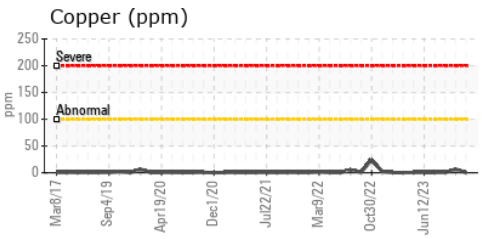
GRAPHS

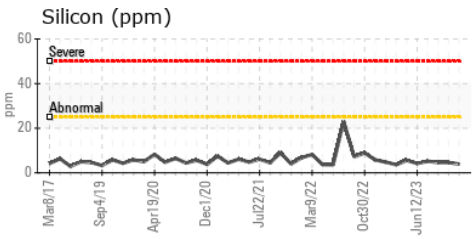


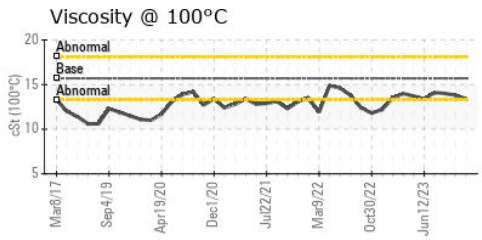


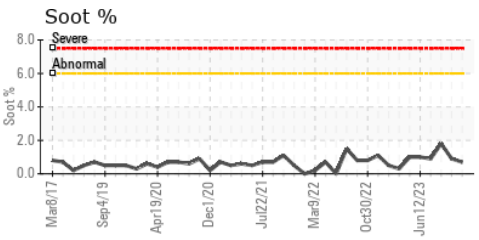












CALA Testing Accreditation No. 1005078
ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0849885 **Received** : 12 Dec 2023
Lab Number : 02602532 **Diagnosed** : 12 Dec 2023
Unique Number : 5695617 **Diagnostician** : Wes Davis
Test Package : MOB 1 (Additional Tests: 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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