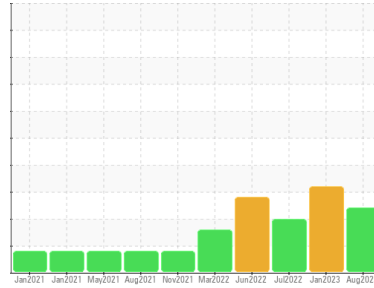


OIL ANALYSIS REPORT

Sample Rating Trend



WEAR



Machine Id
NEW FLYER 431 (S/N 6511727991)
Component
Transmission (Auto)
Fluid
PETRO CANADA DuraDrive HD Synthetic 668 (30 LTR)

DIAGNOSIS

Recommendation

We recommend that you drain the fluid from the component if this has not already been done. We recommend you service the filters on this component. We recommend an early resample to monitor this condition.

Wear

Aluminum and tin ppm levels are abnormal. Torque converter wear is indicated. Bearing wear is indicated.

Contamination

There is a light amount of silt (particulates < 14 microns in size) present in the fluid. The water content is negligible.

Fluid Condition

The AN level is acceptable for this fluid. The fluid is no longer serviceable as a result of the abnormal and/or severe wear.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	PC0069433	PC0064075	PC0064079
Sample Date	Client Info	08 Aug 2023	20 Jan 2023	13 Jul 2022
Machine Age	kms	0	163262	122941
Oil Age	kms	0	146825	106504
Oil Changed	Client Info	N/A	Not Changd	Not Changd
Sample Status		ABNORMAL	ABNORMAL	ABNORMAL

WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m) >230	209	215	171
Chromium	ppm	ASTM D5185(m) >2	<1	<1	<1
Nickel	ppm	ASTM D5185(m) >5	<1	<1	<1
Titanium	ppm	ASTM D5185(m) >2	0	0	0
Silver	ppm	ASTM D5185(m) >5	<1	0	0
Aluminum	ppm	ASTM D5185(m) >65	▲ 70	▲ 66	49
Lead	ppm	ASTM D5185(m) >55	35	26	13
Copper	ppm	ASTM D5185(m) >85	23	24	21
Tin	ppm	ASTM D5185(m) >5	▲ 6	▲ 6	▲ 6
Antimony	ppm	ASTM D5185(m)	0	<1	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) 78	53	56	61
Barium	ppm	ASTM D5185(m)	<1	0	0
Molybdenum	ppm	ASTM D5185(m) 0	<1	<1	<1
Manganese	ppm	ASTM D5185(m)	2	3	2
Magnesium	ppm	ASTM D5185(m) 0	1	1	1
Calcium	ppm	ASTM D5185(m) 113	95	87	88
Phosphorus	ppm	ASTM D5185(m) 222	245	244	221
Zinc	ppm	ASTM D5185(m)	9	8	7
Sulfur	ppm	ASTM D5185(m) 1326	1154	887	923
Lithium	ppm	ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

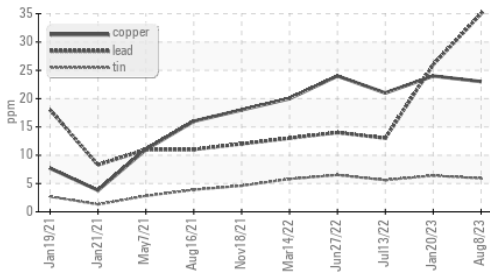
method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m) >20	12	12	10
Sodium	ppm	ASTM D5185(m)	11	11	10
Potassium	ppm	ASTM D5185(m) >20	3	3	2
Water	%	ASTM D6304* >0.1	0.032	0.006	0.029
ppm Water	ppm	ASTM D6304* >1000	328.8	69.5	291.8
Glycol	%	ASTM D7922*	0.0	0.0	0.0

INFRA-RED

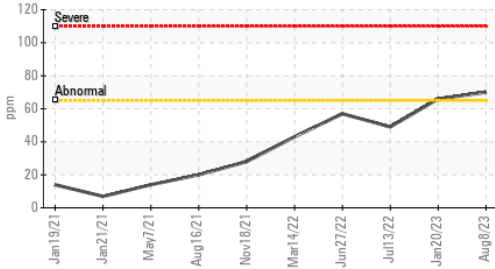
method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	0	0	0
Nitration	Abs/cm	ASTM D7624*	5.9	5.7	5.6
Sulfation	Abs/.1mm	ASTM D7415*	39.3	42.3	42.0

OIL ANALYSIS REPORT

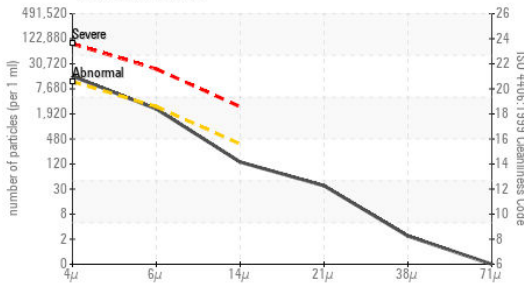
▲ Non-ferrous Metals



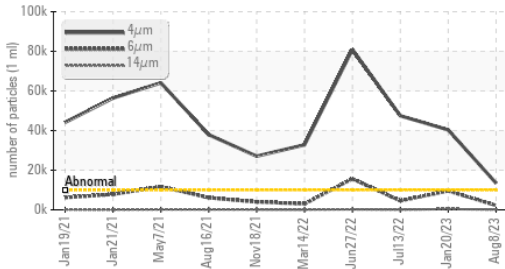
▲ Aluminum (ppm)



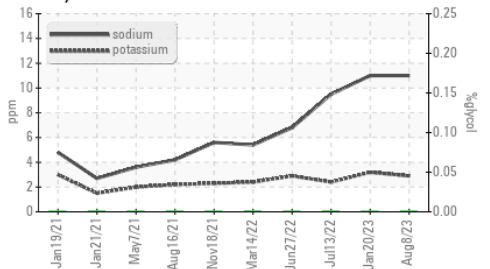
▲ Particle Count



▲ Particle Trend



Glycol Contamination



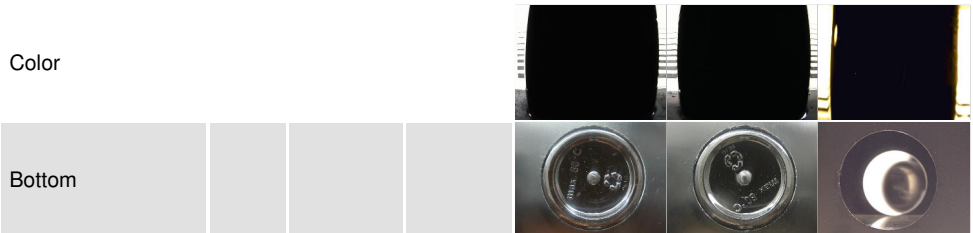
FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>10000	▲ 13462	▲ 40361	▲ 47464
Particles >6µm	ASTM D7647	>2500	2210	▲ 9519	▲ 4549
Particles >14µm	ASTM D7647	>320	118	▲ 360	87
Particles >21µm	ASTM D7647	>80	32	65	10
Particles >38µm	ASTM D7647	>20	2	3	1
Particles >71µm	ASTM D7647	>4	0	0	0
Oil Cleanliness	ISO 4406 (c)	>20/18/15	▲ 21/18/14	▲ 23/20/16	▲ 23/19/14

FLUID DEGRADATION	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm ASTM D7414*		53.4	55.3	56.7
Acid Number (AN)	mg KOH/g ASTM D974*	1.4	1.51	1.18	1.17

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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt ASTM D7279(m)	34.8	33.5	33.8	34.3
Visc @ 100°C	cSt ASTM D7279(m)	7.0	6.6	6.6	6.7
Viscosity Index (VI)	Scale ASTM D2270*	167	156	154	156

SAMPLE IMAGES



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0069433 **Received** : 09 Aug 2023
Lab Number : 02574931 **Diagnosed** : 10 Aug 2023
Unique Number : 5619982 **Diagnostician** : Kevin Marson
Test Package : MOB 2 (Additional Tests: FT-IR, Glycol, KF, KV100, PrtCount, TAN Man, VI)

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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