



WEAR	<b>NORMAL</b>
CONTAMINATION	<b>SEVERE</b>
FLUID CONDITION	<b>NORMAL</b>



Machine Id  
**NEW FLYER 302 (S/N 6511548133)**  
 Component  
**Transmission (Auto)**  
 Fluid  
**PETRO CANADA DuraDrive HD Synthetic 668 (30)**

**RECOMMENDATION**

Check seals and/or filters for points of contaminant entry. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We recommend you service the filters on this component. Resample in 30-45 days to monitor this situation.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>PC0060045</b>	PC0060044	PC0060047
Sample Date		Client Info		<b>05 Mar 2023</b>	05 Mar 2023	07 Feb 2023
Machine Age	kms	Client Info		<b>0</b>	0	308932
Oil Age	kms	Client Info		<b>0</b>	0	134861
Filter Age	kms	Client Info		<b>0</b>	0	134861
Oil Changed		Client Info		<b>N/A</b>	N/A	Not Changed
Filter Changed		Client Info		<b>N/A</b>	N/A	N/A
Sample Status				<b>SEVERE</b>	ATTENTION	ABNORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>230	<b>77</b>	94	98
Chromium	ppm	ASTM D5185(m)	>2	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185(m)	>5	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185(m)	>2	<b>0</b>	<1	<1
Silver	ppm	ASTM D5185(m)	>5	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>65	<b>26</b>	31	33
Lead	ppm	ASTM D5185(m)	>55	<b>5</b>	6	7
Copper	ppm	ASTM D5185(m)	>85	<b>15</b>	19	19
Tin	ppm	ASTM D5185(m)	>5	<b>1</b>	1	2
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0
White Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

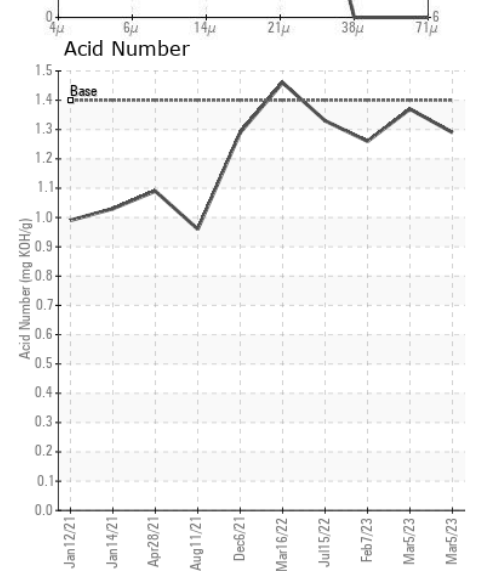
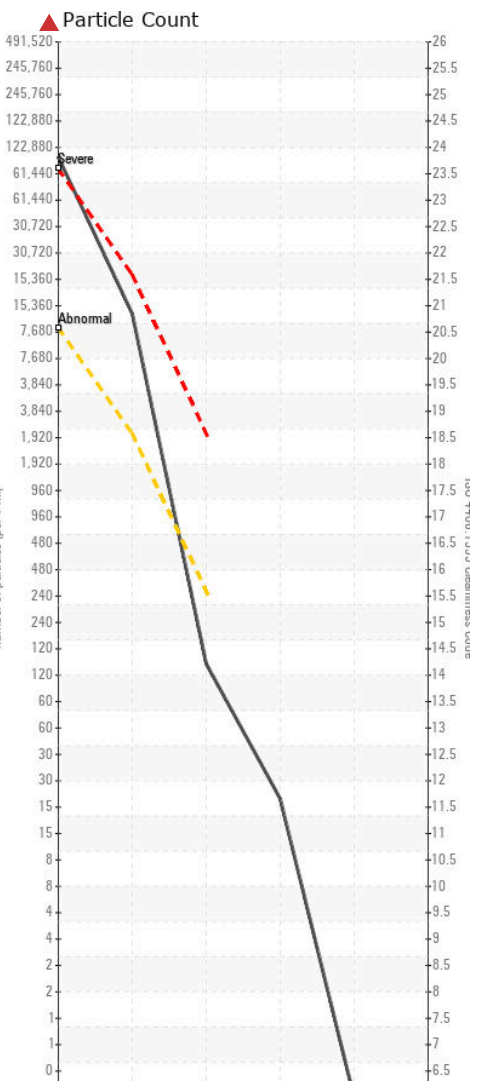
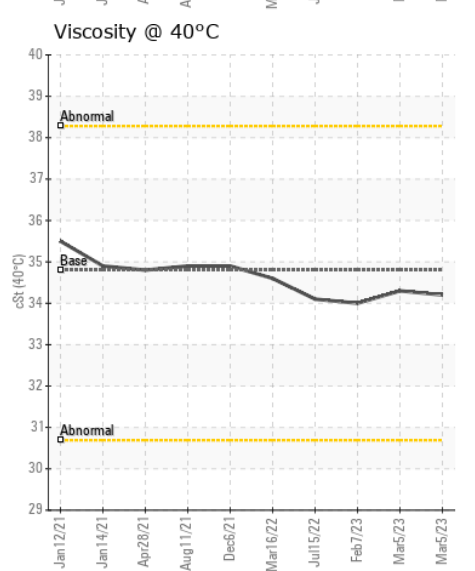
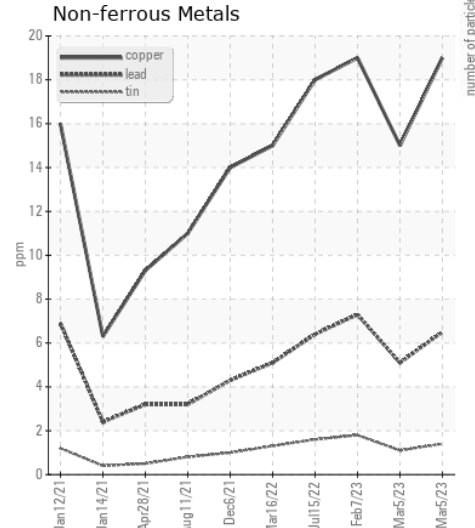
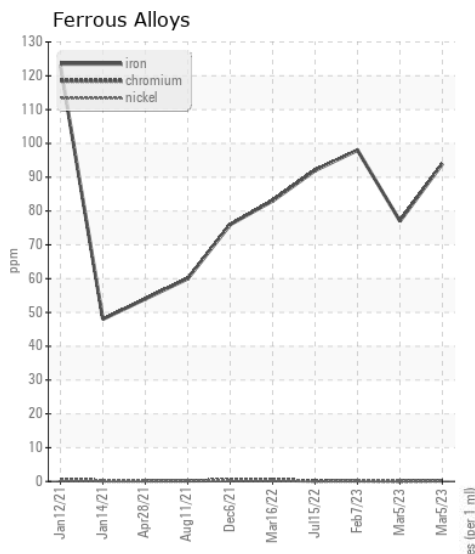
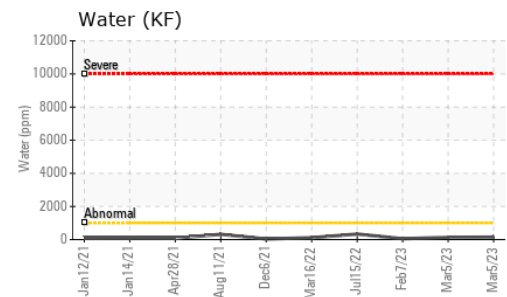
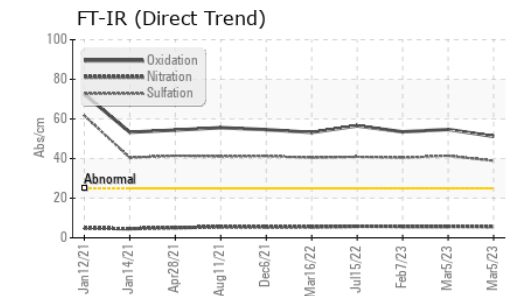
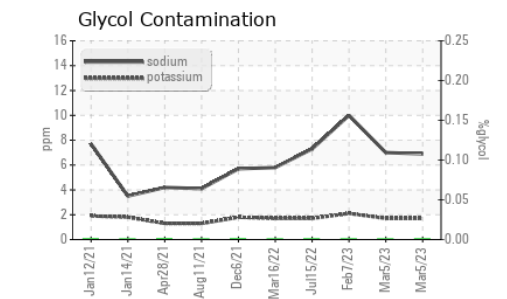
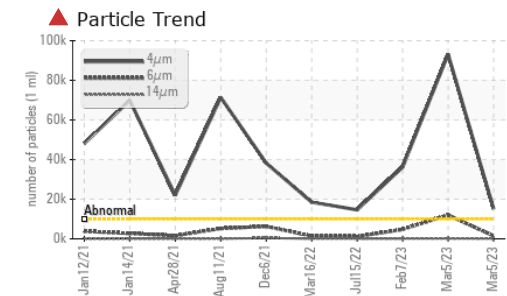
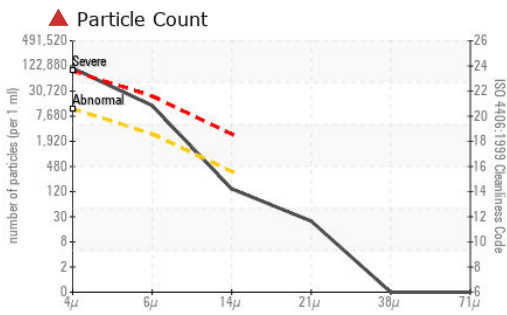
Particles >4µm and oil cleanliness are severely high. Particles >6µm are abnormally high. The water content is negligible.

Silicon	ppm	ASTM D5185(m)	>20	<b>8</b>	8	11
Potassium	ppm	ASTM D5185(m)	>20	<b>2</b>	2	2
Water	%	ASTM D6304*	>0.1	<b>0.014</b>	0.013	0.005
ppm Water	ppm	ASTM D6304*	>1000	<b>146.4</b>	135.7	51.0
Glycol	%	ASTM D7922*		<b>0.0</b>	0.0	0.0
Soot %	%	ASTM D7844*		<b>0</b>	0	0
Nitration	Abs/cm	ASTM D7624*		<b>5.6</b>	5.7	5.7
Sulfation	Abs/.1mm	ASTM D7415*		<b>38.9</b>	41.4	40.4
Particles >4µm		ASTM D7647	>10000	<b>▲ 93134</b>	● 15158	▲ 36211
Particles >6µm		ASTM D7647	>2500	<b>▲ 12006</b>	● 1474	● 4745
Particles >14µm		ASTM D7647	>320	<b>123</b>	43	87
Particles >21µm		ASTM D7647	>80	<b>21</b>	7	13
Particles >38µm		ASTM D7647	>20	<b>0</b>	1	1
Particles >71µm		ASTM D7647	>4	<b>0</b>	0	1
Oil Cleanliness		ISO 4406 (c)	>20/18/15	<b>▲ 24/21/14</b>	● 21/18/13	▲ 22/19/14
Silt	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	Visual*	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	Visual*	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	Visual*	>0.1	<b>NEG</b>	NEG	NEG

**FLUID CONDITION**

The AN level is acceptable for this fluid. The fluid is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

Sodium	ppm	ASTM D5185(m)		<b>7</b>	7	10
Boron	ppm	ASTM D5185(m)	78	<b>71</b>	72	67
Barium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	0	<b>0</b>	0	0
Manganese	ppm	ASTM D5185(m)		<b>&lt;1</b>	1	1
Magnesium	ppm	ASTM D5185(m)	0	<b>1</b>	1	2
Calcium	ppm	ASTM D5185(m)	113	<b>104</b>	98	103
Phosphorus	ppm	ASTM D5185(m)	222	<b>248</b>	255	248
Zinc	ppm	ASTM D5185(m)		<b>5</b>	5	6
Sulfur	ppm	ASTM D5185(m)	1326	<b>1183</b>	1121	1164
Oxidation	Abs/.1mm	ASTM D7414*		<b>51.2</b>	54.7	53.5
Acid Number (AN)	mg KOH/g	ASTM D974*	1.4	<b>1.29</b>	1.37	1.26
Visc @ 40°C	cSt	ASTM D7279(m)	34.8	<b>34.2</b>	34.3	34.0
Visc @ 100°C	cSt	ASTM D7279(m)	7.0	<b>6.8</b>	6.7	6.7
Viscosity Index (VI)	Scale	ASTM D2270*	167	<b>161</b>	156	158



ISO 17025:2017  
Accredited  
Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : PC0060045  
**Lab Number** : 02543201  
**Unique Number** : 5540206  
**Test Package** : MOB 2 ( Additional Tests: FT-IR, Glycol, KF, KV100, PrtCount, TAN Man, VI )

**Received** : 06 Mar 2023  
**Tested** : 07 Mar 2023  
**Diagnosed** : 07 Mar 2023 - Kevin Marson

**WINNIPEG TRANSIT**  
 421 OSBORNE STREET  
 WINNIPEG, MB  
 CA R3L 2A2  
 Contact: Jason Lavoie  
 jlavoie@winnipeg.ca  
 T: (204)986-4762

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.