



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



Machine Id  
**934037**  
Component  
**Natural Gas Engine**  
Fluid  
**PETRO CANADA 15W40 (--- GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>GFL0111875</b>	GFL0111868	GFL0111814
Sample Date		Client Info		<b>16 Apr 2024</b>	27 Mar 2024	21 Mar 2024
Machine Age	hrs	Client Info		<b>1031</b>	884	836
Oil Age	hrs	Client Info		<b>147</b>	884	836
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Not Changed</b>	Changed	Not Changed
Filter Changed		Client Info		<b>Not Changed</b>	Changed	Not Changed
Sample Status				<b>NORMAL</b>	NORMAL	ABNORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	<b>13</b>	66	65
Chromium	ppm	ASTM D5185m	>4	<b>1</b>	2	1
Nickel	ppm	ASTM D5185m	>2	<b>2</b>	2	1
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Silver	ppm	ASTM D5185m	>3	<b>&lt;1</b>	<1	<1
Aluminum	ppm	ASTM D5185m	>9	<b>3</b>	9	9
Lead	ppm	ASTM D5185m	>30	<b>2</b>	2	1
Copper	ppm	ASTM D5185m	>35	<b>3</b>	17	15
Tin	ppm	ASTM D5185m	>4	<b>2</b>	2	2
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

There is no indication of any contamination in the oil.

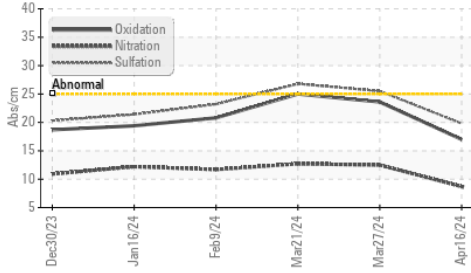
Silicon	ppm	ASTM D5185m	>+100	<b>7</b>	29	29
Potassium	ppm	ASTM D5185m	>20	<b>5</b>	40	21
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844		<b>0</b>	0	0
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.7</b>	12.5	12.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.8</b>	25.5	26.8
Silt	scalar	*Visual	NONE	<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**

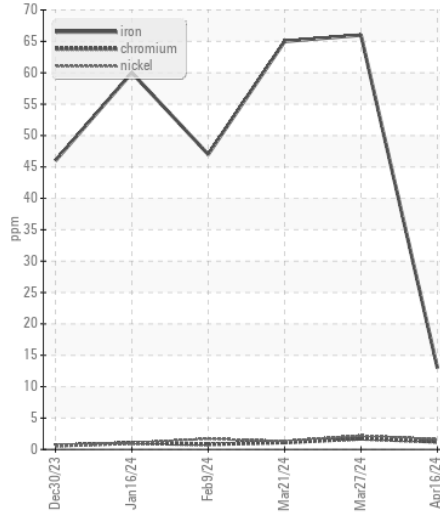
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>5</b>	7	5
Boron	ppm	ASTM D5185m		<b>26</b>	8	6
Barium	ppm	ASTM D5185m		<b>&lt;1</b>	2	3
Molybdenum	ppm	ASTM D5185m		<b>50</b>	65	56
Manganese	ppm	ASTM D5185m		<b>3</b>	16	16
Magnesium	ppm	ASTM D5185m		<b>552</b>	766	799
Calcium	ppm	ASTM D5185m		<b>1506</b>	1347	1220
Phosphorus	ppm	ASTM D5185m		<b>819</b>	772	751
Zinc	ppm	ASTM D5185m		<b>924</b>	1000	987
Sulfur	ppm	ASTM D5185m		<b>2762</b>	2367	2592
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>17.0</b>	23.6	25.0
Base Number (BN)	mg KOH/g	ASTM D2896		<b>7.8</b>	3.5	▲ 2.8
Visc @ 100°C	cSt	ASTM D445		<b>14.8</b>	14.6	14.4

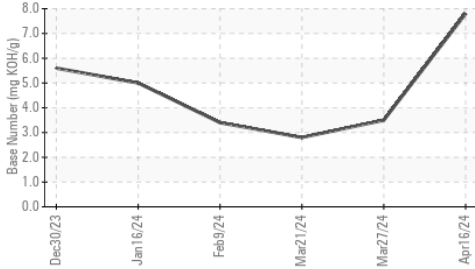
FT-IR (Direct Trend)



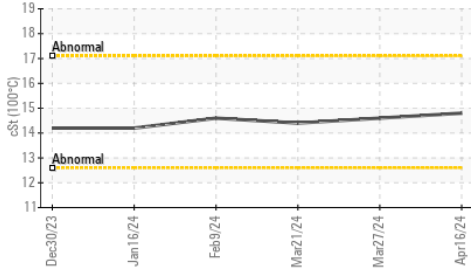
Ferrous Alloys



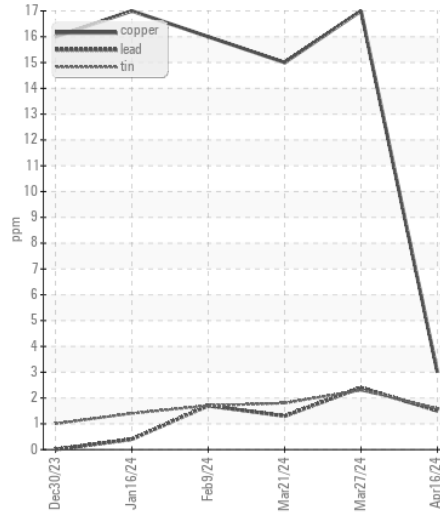
Base Number



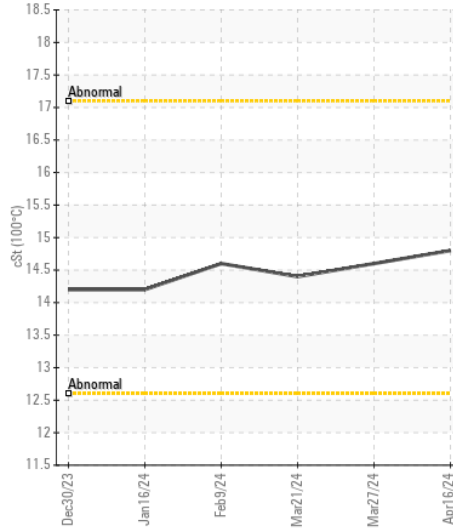
Viscosity @ 100°C



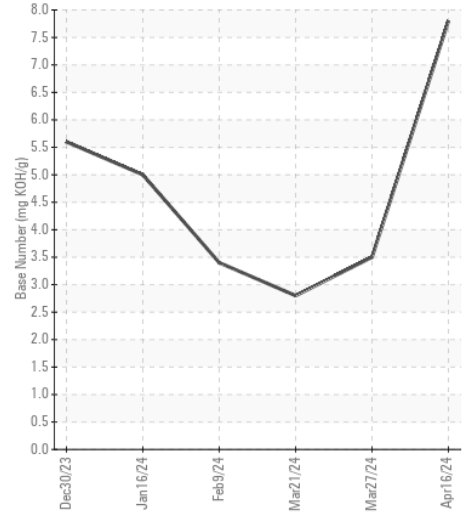
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0111875  
**Lab Number** : 06152848  
**Unique Number** : 10982926  
**Test Package** : FLEET

**Received** : 18 Apr 2024  
**Tested** : 19 Apr 2024  
**Diagnosed** : 19 Apr 2024 - Wes Davis

**GFL Environmental - 652 - Fredericksburg Hauling**  
 10954 Houser Drive  
 Fredericksburg, VA  
 US 22408  
 Contact: WILLIAM MILO  
 wmi@gflenv.com

To discuss this sample report, contact Customer Service at 1-800-237-1369.

\* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

T:  
F: