



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

Machine Id  
**928074-205262**

Component  
**Diesel Engine**

Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

**RECOMMENDATION**

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>GFL0109229</b>	GFL0098353	GFL0098366
Sample Date		Client Info		<b>15 Feb 2024</b>	24 Jan 2024	27 Dec 2023
Machine Age	hrs	Client Info		<b>18570</b>	18288	18123
Oil Age	hrs	Client Info		<b>700</b>	600	150
Filter Age	hrs	Client Info		<b>700</b>	0	150
Oil Changed		Client Info		<b>Not Changd</b>	Changed	Not Changd
Filter Changed		Client Info		<b>Not Changd</b>	Changed	Changed
Sample Status				<b>ABNORMAL</b>	ABNORMAL	NORMAL

**WEAR**

An increase in the aluminum level is noted. All other component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>26</b>	18	8
Chromium	ppm	ASTM D5185m	>20	<b>1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>18</b>	1	4
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	<1	<1
Copper	ppm	ASTM D5185m	>330	<b>&lt;1</b>	<1	<1
Tin	ppm	ASTM D5185m	>15	<b>0</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

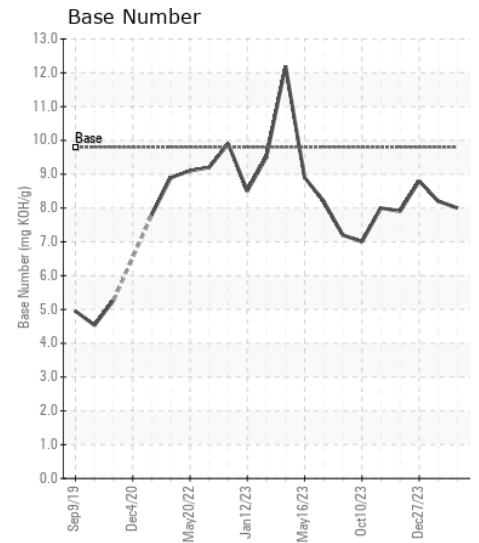
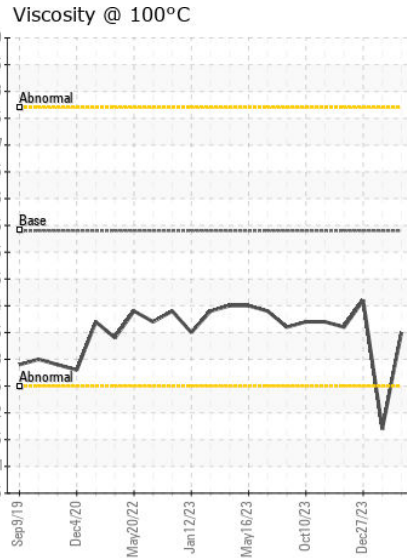
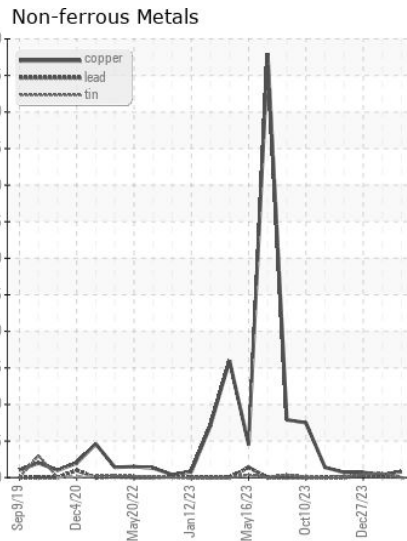
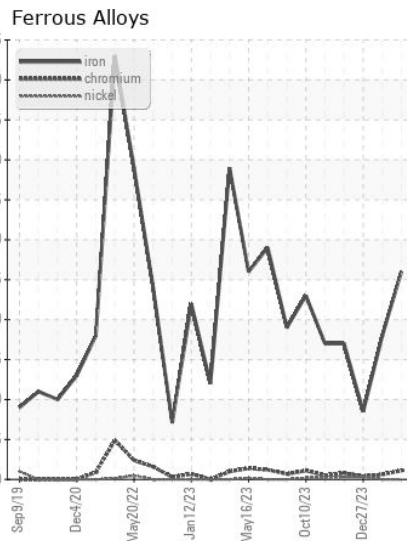
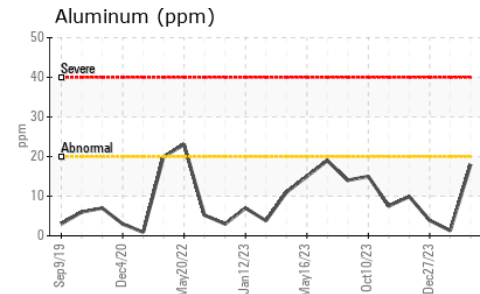
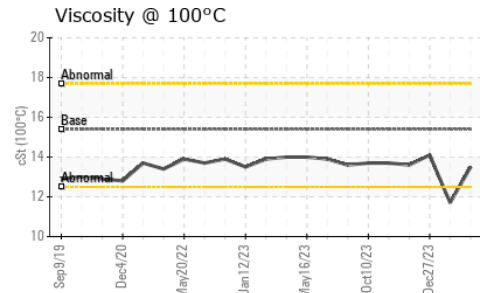
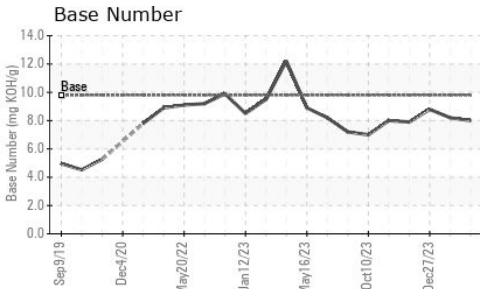
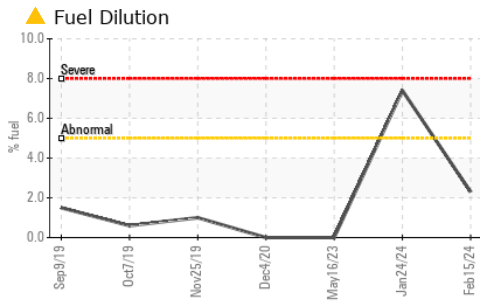
Light fuel dilution occurring.

Silicon	ppm	ASTM D5185m	>25	<b>6</b>	4	4
Potassium	ppm	ASTM D5185m	>20	<b>24</b>	<1	10
Fuel	%	ASTM D3524	>5	<b>▲ 2.3</b>	▲ 7.4	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>1</b>	0.3	0.3
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.6</b>	7.0	5.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>20.5</b>	18.3	17.7
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	>0.2	<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 acceptable for the time in service.

Sodium	ppm	ASTM D5185m		<b>31</b>	3	9
Boron	ppm	ASTM D5185m	0	<b>0</b>	1	<1
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	8
Molybdenum	ppm	ASTM D5185m	60	<b>61</b>	51	57
Manganese	ppm	ASTM D5185m	0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	1010	<b>981</b>	914	914
Calcium	ppm	ASTM D5185m	1070	<b>1075</b>	949	1033
Phosphorus	ppm	ASTM D5185m	1150	<b>1071</b>	975	922
Zinc	ppm	ASTM D5185m	1270	<b>1276</b>	1136	1170
Sulfur	ppm	ASTM D5185m	2060	<b>3105</b>	2846	3106
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>16.4</b>	14.1	13.3
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>8.0</b>	8.2	8.8
Visc @ 100°C	cSt	ASTM D445	15.4	<b>13.5</b>	▲ 11.7	14.1



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513

**Sample No.** : GFL0109229

**Lab Number** : 06099003

**Unique Number** : 10897233

**Test Package** : FLEET ( Additional Tests: PercentFuel )

**Received** : 23 Feb 2024

**Tested** : 27 Feb 2024

**Diagnosed** : 27 Feb 2024 - Sean Felton

**GFL Environmental - 822 - Springfield Hauling**

2120 West Bennett Street

Springfield, MO

US 65807

Contact: Dennis Moore

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T: (417)403-3641

F:

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)