



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



Machine Id  
**549M**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>GFL0122363</b>	GFL0117723	GFL0108880
Sample Date		Client Info		<b>21 May 2024</b>	09 Apr 2024	19 Mar 2024
Machine Age	hrs	Client Info		<b>22250</b>	21900	21800
Oil Age	hrs	Client Info		<b>21900</b>	21356	21800
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Changed</b>	Changed	Not Changd
Filter Changed		Client Info		<b>Changed</b>	Changed	Not Changd
Sample Status				<b>NORMAL</b>	SEVERE	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>90	<b>65</b>	▲ 133	6
Chromium	ppm	ASTM D5185m	>20	<b>3</b>	4	0
Nickel	ppm	ASTM D5185m	>2	<b>1</b>	2	0
Titanium	ppm	ASTM D5185m	>2	<b>&lt;1</b>	<1	0
Silver	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>8</b>	▲ 19	<1
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	0	0
Copper	ppm	ASTM D5185m	>330	<b>2</b>	1	0
Tin	ppm	ASTM D5185m	>15	<b>1</b>	1	0
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**

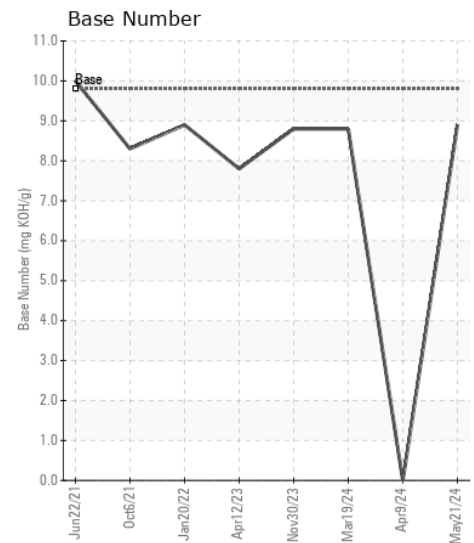
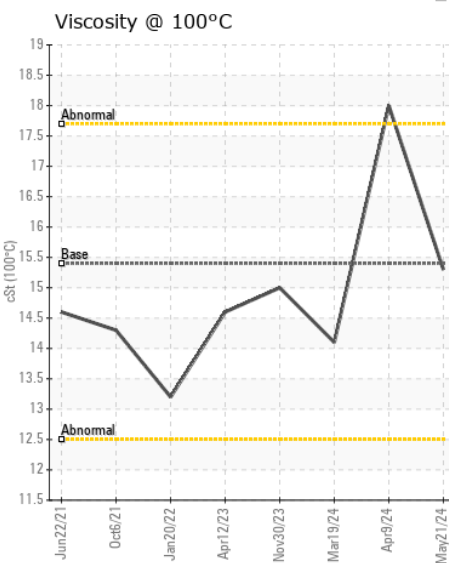
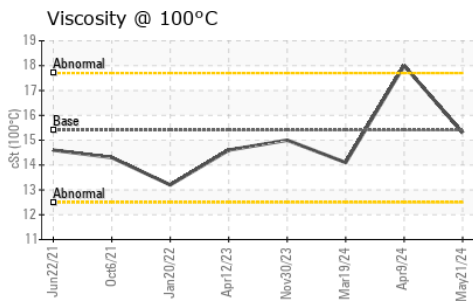
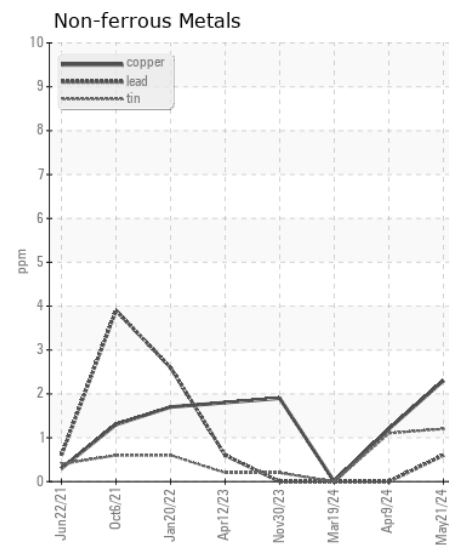
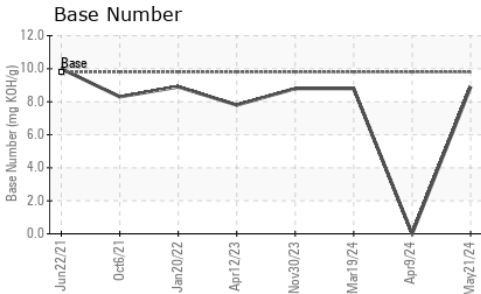
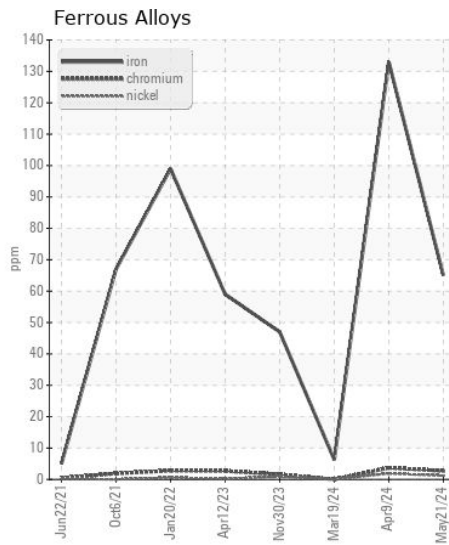
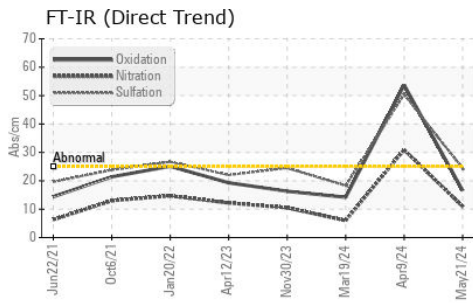
No evidence of coolant present in the oil. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>8</b>	13	2
Potassium	ppm	ASTM D5185m	>20	<b>8</b>	▲ 25	0
Fuel		WC Method	>3.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>6	<b>3</b>	▲ 8.6	0.3
Nitration	Abs/cm	*ASTM D7624	>20	<b>11.0</b>	30.9	6.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>24.4</b>	50.4	18.3
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 suitable for further service.

Sodium	ppm	ASTM D5185m		<b>70</b>	▲ 220	2
Boron	ppm	ASTM D5185m	0	<b>0</b>	4	0
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	60	<b>66</b>	68	55
Manganese	ppm	ASTM D5185m	0	<b>&lt;1</b>	1	0
Magnesium	ppm	ASTM D5185m	1010	<b>1004</b>	976	949
Calcium	ppm	ASTM D5185m	1070	<b>1149</b>	1108	1052
Phosphorus	ppm	ASTM D5185m	1150	<b>964</b>	1079	1045
Zinc	ppm	ASTM D5185m	1270	<b>1309</b>	1355	1251
Sulfur	ppm	ASTM D5185m	2060	<b>3165</b>	3586	3565
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>16.6</b>	53.7	14.2
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>8.9</b>	▲ 0.0	8.8
Visc @ 100°C	cSt	ASTM D445	15.4	<b>15.3</b>	▲ 18.0	14.1



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0122363  
**Lab Number** : 06190325  
**Unique Number** : 11047077  
**Test Package** : FLEET

**Received** : 24 May 2024  
**Tested** : 30 May 2024  
**Diagnosed** : 30 May 2024 - Jonathan Hester

**GFL Environmental - 415 - Michigan East**  
 6200 Elmridge  
 Sterling Heights, MI  
 US 48313  
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 T: (586)825-9514  
 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)