



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

Area

**GFL035**

Machine Id

**2511**

Component

**Diesel Engine**

Fluid

**PETRO CANADA DURON SHP 15W40 (38 QTS)**

**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>GFL0116509</b>	GFL0102338	GFL0085237
Sample Date		Client Info		<b>22 May 2024</b>	26 Jan 2024	19 Oct 2023
Machine Age	hrs	Client Info		<b>0</b>	0	74211
Oil Age	hrs	Client Info		<b>600</b>	600	600
Filter Age	hrs	Client Info		<b>0</b>	0	600
Oil Changed		Client Info		<b>Not Changd</b>	Not Changd	Changed
Filter Changed		Client Info		<b>N/A</b>	N/A	Changed
Sample Status				<b>ABNORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>165	<b>21</b>	27	36
Chromium	ppm	ASTM D5185m	>5	<b>&lt;1</b>	<1	2
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	<1
Silver	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>2</b>	3	4
Lead	ppm	ASTM D5185m	>150	<b>1</b>	3	6
Copper	ppm	ASTM D5185m	>90	<b>&lt;1</b>	<1	1
Tin	ppm	ASTM D5185m	>5	<b>0</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

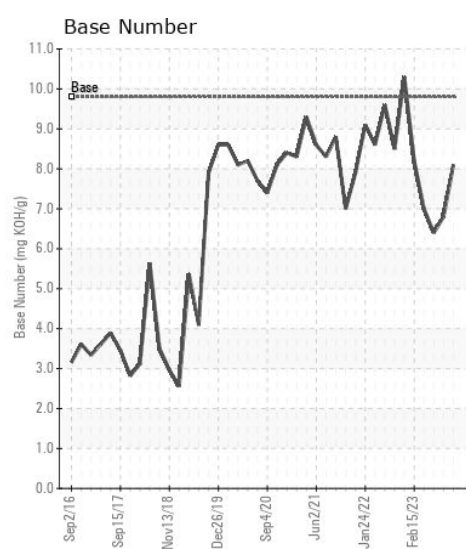
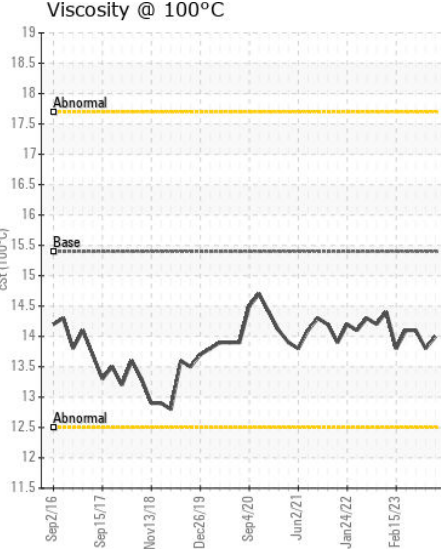
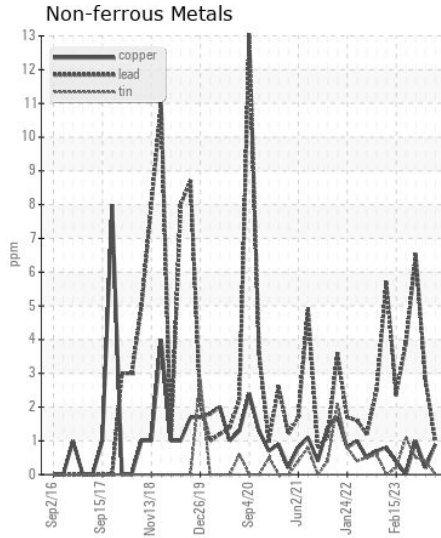
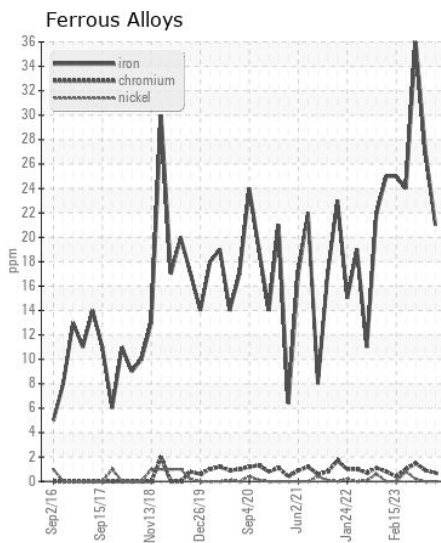
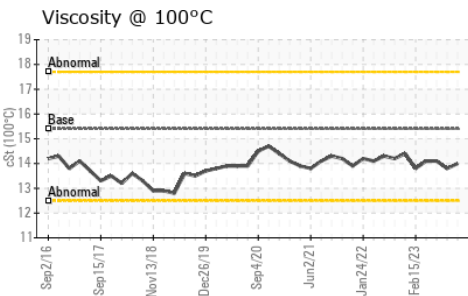
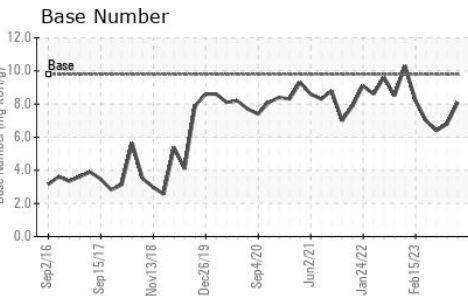
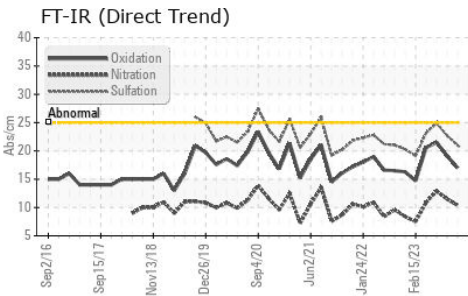
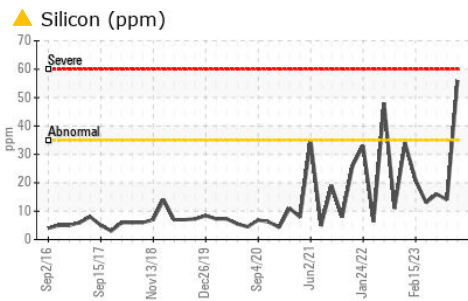
Elemental level of silicon (Si) above normal indicating ingress of seal material.

Silicon	ppm	ASTM D5185m	>35	<b>▲ 56</b>	14	16
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	2	4
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	>7.5	<b>0.8</b>	1.1	1.2
Nitration	Abs/cm	*ASTM D7624	>20	<b>10.4</b>	11.5	12.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>21.0</b>	22.7	24.9
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>4</b>	9	8
Boron	ppm	ASTM D5185m	0	<b>0</b>	6	3
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	60	<b>62</b>	64	68
Manganese	ppm	ASTM D5185m	0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	1010	<b>1027</b>	918	995
Calcium	ppm	ASTM D5185m	1070	<b>1184</b>	1146	1130
Phosphorus	ppm	ASTM D5185m	1150	<b>1155</b>	1113	1148
Zinc	ppm	ASTM D5185m	1270	<b>1340</b>	1300	1319
Sulfur	ppm	ASTM D5185m	2060	<b>3832</b>	3010	3574
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>17.0</b>	19.1	21.5
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>8.1</b>	6.8	6.4
Visc @ 100°C	cSt	ASTM D445	15.4	<b>14.0</b>	13.8	14.1



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0116509  
**Lab Number** : 06191451  
**Unique Number** : 11048203  
**Test Package** : FLEET

**GFL Environmental - 035 - Greensboro**  
 1236 Elon Place  
 High Point, NC  
 US 27263  
 Contact: JORGE COSTA  
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 T: (336)668-3712  
 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)