



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



Machine Id  
**420096 - SW4024**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor. ( Customer Sample Comment: Engine )

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>GFL0112065</b>	GFL0108108	GFL0094060
Sample Date		Client Info		<b>13 Mar 2024</b>	30 Jan 2024	08 Dec 2023
Machine Age	hrs	Client Info		<b>142429</b>	9202	134132
Oil Age	hrs	Client Info		<b>142429</b>	0	134132
Filter Age	hrs	Client Info		<b>142429</b>	0	0
Oil Changed		Client Info		<b>Changed</b>	Not Changd	Changed
Filter Changed		Client Info		<b>Changed</b>	Not Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>120	<b>5</b>	7	5
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>5	<b>0</b>	<1	<1
Titanium	ppm	ASTM D5185m	>2	<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>3</b>	2	2
Lead	ppm	ASTM D5185m	>40	<b>2</b>	<1	<1
Copper	ppm	ASTM D5185m	>330	<b>2</b>	<1	2
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</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**

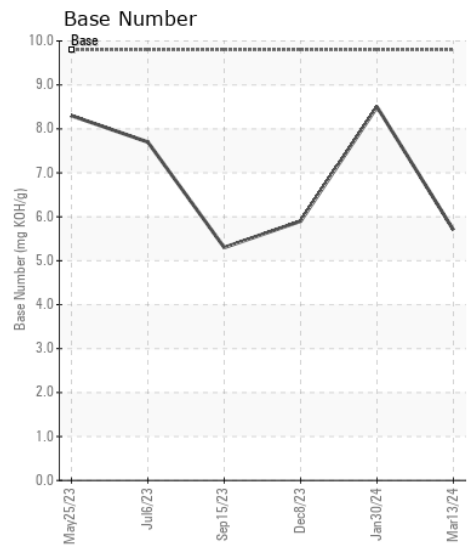
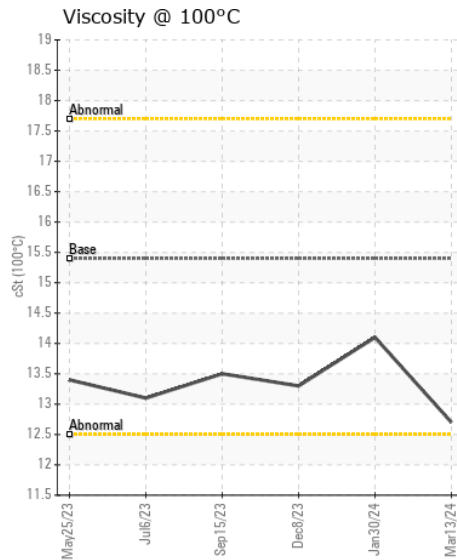
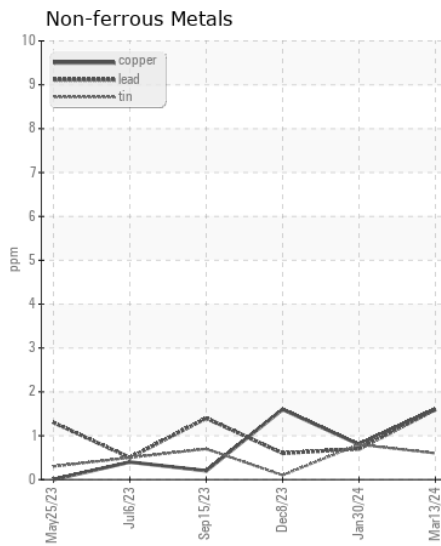
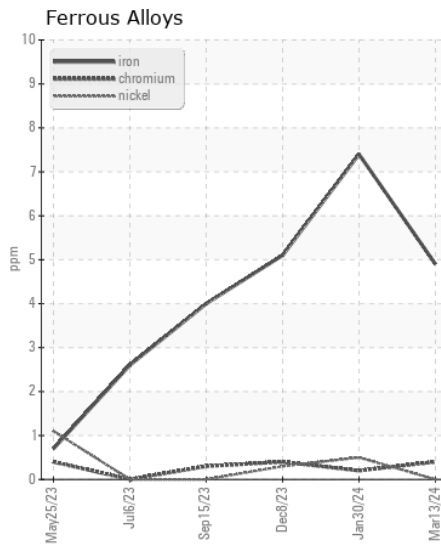
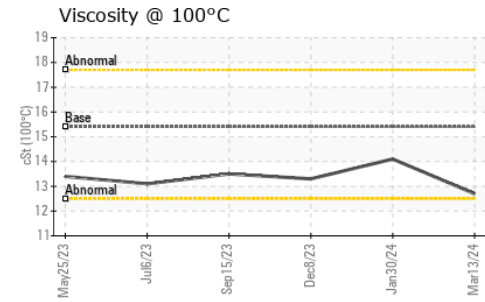
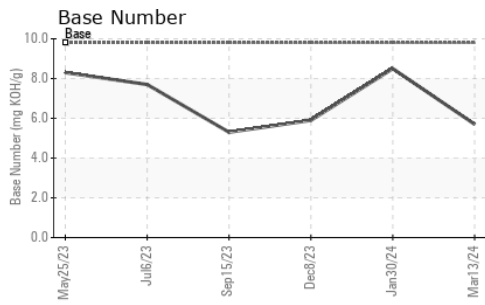
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>6</b>	15	7
Potassium	ppm	ASTM D5185m	>20	<b>4</b>	2	5
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	>4	<b>0.2</b>	0.5	0.2
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.0</b>	6.5	8.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>21.0</b>	18.9	19.8
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	>0.2	<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>&lt;1</b>	0	3
Boron	ppm	ASTM D5185m	0	<b>0</b>	0	0
Barium	ppm	ASTM D5185m	0	<b>2</b>	13	0
Molybdenum	ppm	ASTM D5185m	60	<b>60</b>	64	48
Manganese	ppm	ASTM D5185m	0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	1010	<b>7</b>	938	23
Calcium	ppm	ASTM D5185m	1070	<b>2695</b>	1046	2517
Phosphorus	ppm	ASTM D5185m	1150	<b>1085</b>	957	1014
Zinc	ppm	ASTM D5185m	1270	<b>1276</b>	1235	1207
Sulfur	ppm	ASTM D5185m	2060	<b>3379</b>	3067	3540
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>12.9</b>	14.1	12.0
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>5.7</b>	8.5	5.9
Visc @ 100°C	cSt	ASTM D445	15.4	<b>12.7</b>	14.1	13.3



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0112065  
**Lab Number** : 06124778  
**Unique Number** : 10938929  
**Test Package** : FLEET  
**Received** : 21 Mar 2024  
**Tested** : 22 Mar 2024  
**Diagnosed** : 24 Mar 2024 - Don Baldrige

**GFL Environmental - 983 - Sugar Land Hauling**  
 16011 West Belfort Street  
 Sugar Land, TX  
 US 77498  
 Contact: Adrian Martinez  
 adrianmartinez@gflenv.com  
 T:  
 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)