



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

Machine Id  
**420086 - SW4004**  
 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>GFL0105453</b>	GFL0085486	GFL0089380
Sample Date		Client Info		<b>06 Feb 2024</b>	10 Oct 2023	04 Aug 2023
Machine Age	mls	Client Info		<b>217346</b>	208332	199996
Oil Age	mls	Client Info		<b>217346</b>	208332	199996
Filter Age	mls	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Changed</b>	N/A	Changed
Filter Changed		Client Info		<b>Changed</b>	N/A	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>80	<b>4</b>	<1	2
Chromium	ppm	ASTM D5185m	>5	<b>&lt;1</b>	<1	0
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>30	<b>1</b>	2	<1
Lead	ppm	ASTM D5185m	>30	<b>0</b>	<1	<1
Copper	ppm	ASTM D5185m	>150	<b>6</b>	6	3
Tin	ppm	ASTM D5185m	>5	<b>0</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

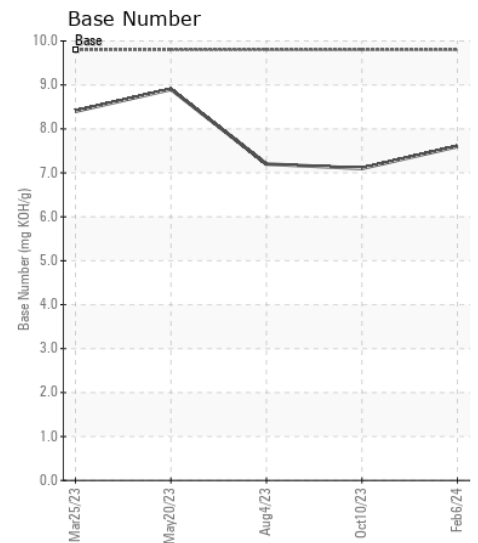
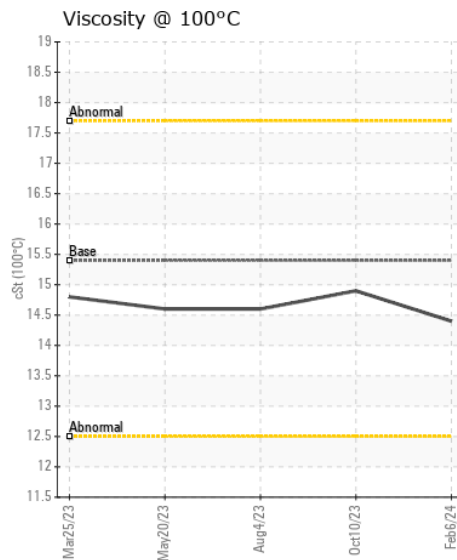
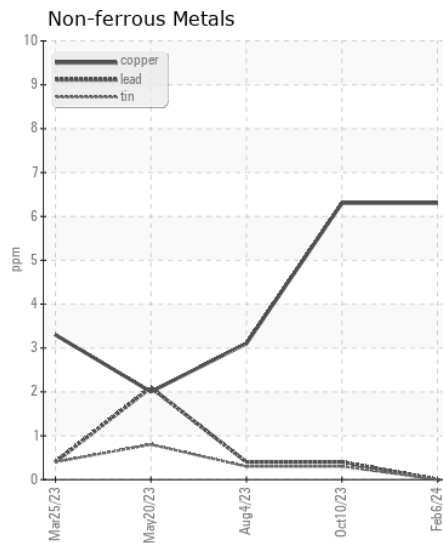
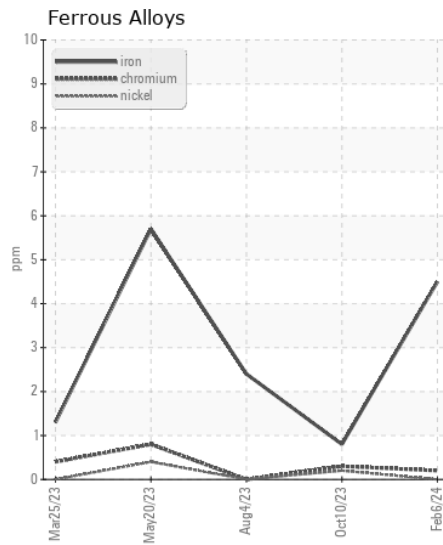
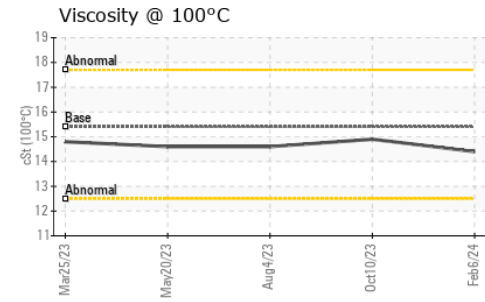
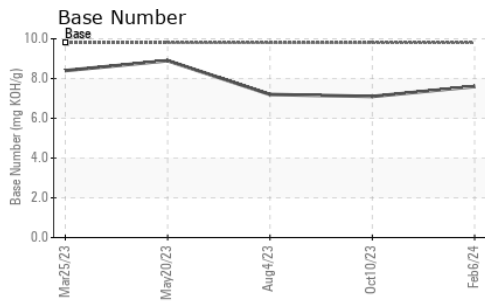
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	<b>5</b>	5	6
Potassium	ppm	ASTM D5185m	>20	<b>4</b>	2	2
Fuel		WC Method	>5	<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	>3	<b>0.3</b>	0.3	0.3
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.3</b>	7.3	6.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>18.0</b>	18.2	17.4
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>0</b>	0	0
Boron	ppm	ASTM D5185m	0	<b>0</b>	0	0
Barium	ppm	ASTM D5185m	0	<b>0</b>	9	0
Molybdenum	ppm	ASTM D5185m	60	<b>57</b>	52	45
Manganese	ppm	ASTM D5185m	0	<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m	1010	<b>14</b>	3	4
Calcium	ppm	ASTM D5185m	1070	<b>2725</b>	2406	2640
Phosphorus	ppm	ASTM D5185m	1150	<b>1135</b>	930	1094
Zinc	ppm	ASTM D5185m	1270	<b>1325</b>	1216	1415
Sulfur	ppm	ASTM D5185m	2060	<b>3437</b>	3290	4030
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>10.2</b>	10.7	10.2
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>7.6</b>	7.1	7.2
Visc @ 100°C	cSt	ASTM D445	15.4	<b>14.4</b>	14.9	14.6



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0105453  
**Lab Number** : 06086884  
**Unique Number** : 10874329  
**Test Package** : FLEET

**Received** : 13 Feb 2024  
**Tested** : 13 Feb 2024  
**Diagnosed** : 14 Feb 2024 - Sean Felton

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

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F: