



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

Machine Id  
**413027**  
 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>GFL0090973</b>	GFL0090929	GFL0103031
Sample Date		Client Info		<b>05 Jan 2024</b>	28 Dec 2023	29 Nov 2023
Machine Age	hrs	Client Info		<b>1033</b>	997	867
Oil Age	hrs	Client Info		<b>36</b>	130	145
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>26</b>	23	16
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>4	<b>7</b>	7	3
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	<1	<1
Aluminum	ppm	ASTM D5185m	>20	<b>6</b>	6	5
Lead	ppm	ASTM D5185m	>40	<b>0</b>	2	3
Copper	ppm	ASTM D5185m	>330	<b>209</b>	210	144
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	2	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**

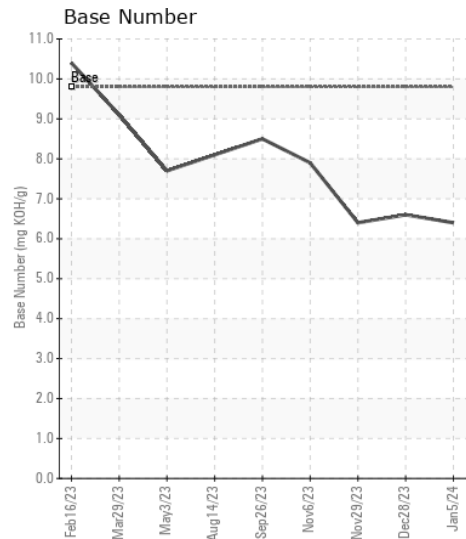
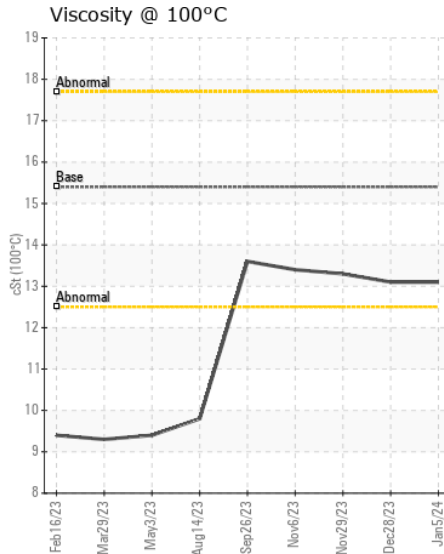
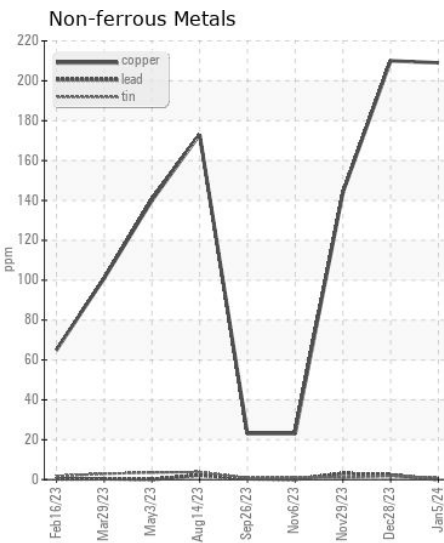
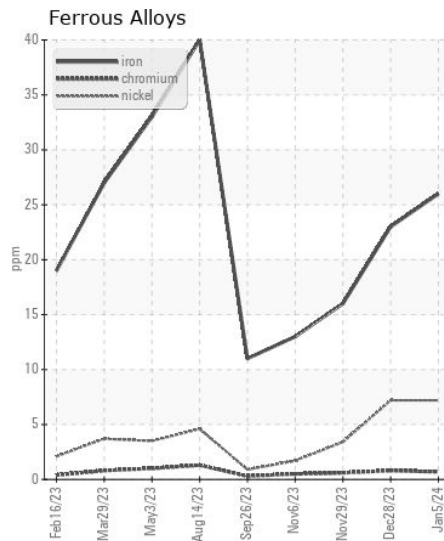
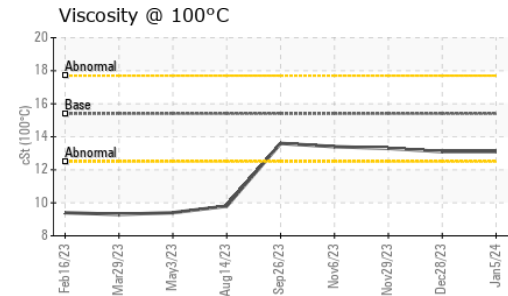
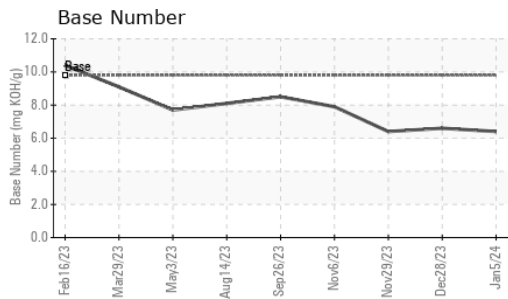
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>11</b>	11	10
Potassium	ppm	ASTM D5185m	>20	<b>18</b>	15	14
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	0.2
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.8</b>	8.7	7.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>20.2</b>	20.2	19.7
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 suitable for further service.

Sodium	ppm	ASTM D5185m		<b>3</b>	2	3
Boron	ppm	ASTM D5185m	0	<b>5</b>	7	12
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	60	<b>67</b>	67	57
Manganese	ppm	ASTM D5185m	0	<b>&lt;1</b>	1	<1
Magnesium	ppm	ASTM D5185m	1010	<b>941</b>	1014	907
Calcium	ppm	ASTM D5185m	1070	<b>1057</b>	1128	1011
Phosphorus	ppm	ASTM D5185m	1150	<b>1018</b>	1024	930
Zinc	ppm	ASTM D5185m	1270	<b>1179</b>	1298	1170
Sulfur	ppm	ASTM D5185m	2060	<b>2827</b>	2727	2293
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>17.1</b>	17.0	16.0
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>6.4</b>	6.6	6.4
Visc @ 100°C	cSt	ASTM D445	15.4	<b>13.1</b>	13.1	13.3



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0090973 **Received** : 09 Jan 2024  
**Lab Number** : 06055796 **Diagnosed** : 10 Jan 2024  
**Unique Number** : 10821745 **Diagnostician** : Jonathan Hester  
**Test Package** : FLEET

**GFL Environmental - 814 - Little Rock Hauling**  
 4005 Hwy 161 N.  
 Little Rock, AR  
 US 72117  
 Contact: Brad Manager

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: