



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

Machine Id  
**211006-632124**

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>GFL0104921</b>	GFL0088142	GFL0088074
Sample Date		Client Info		<b>08 Jan 2024</b>	30 Nov 2023	23 Oct 2023
Machine Age	hrs	Client Info		<b>3959</b>	3860	3716
Oil Age	hrs	Client Info		<b>3959</b>	0	0
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Changed</b>	N/A	N/A
Filter Changed		Client Info		<b>Changed</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	ABNORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>14</b>	55	4
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	5	0
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	1	0
Titanium	ppm	ASTM D5185m		<b>0</b>	<1	<1
Silver	ppm	ASTM D5185m	>3	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185m	>20	<b>26</b>	91	10
Lead	ppm	ASTM D5185m	>40	<b>0</b>	<1	0
Copper	ppm	ASTM D5185m	>330	<b>&lt;1</b>	▲ 410	<1
Tin	ppm	ASTM D5185m	>15	<b>0</b>	2	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

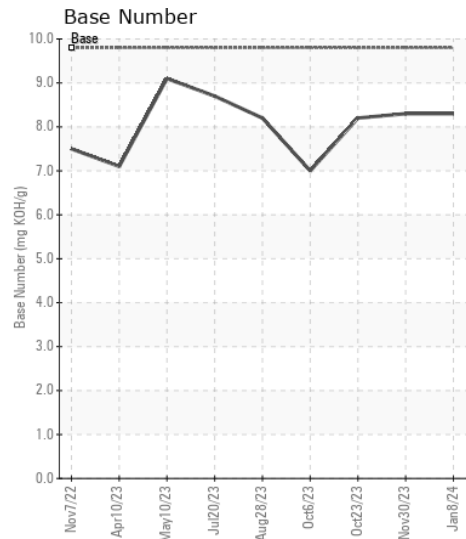
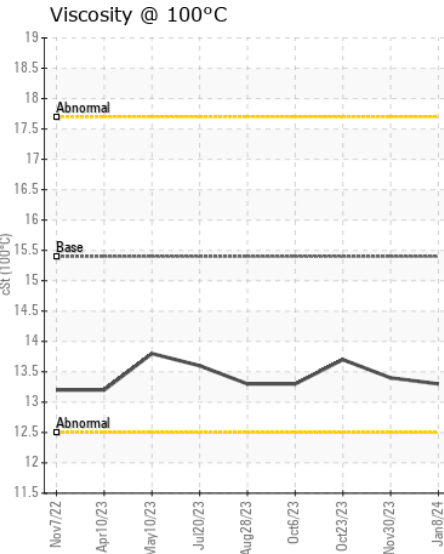
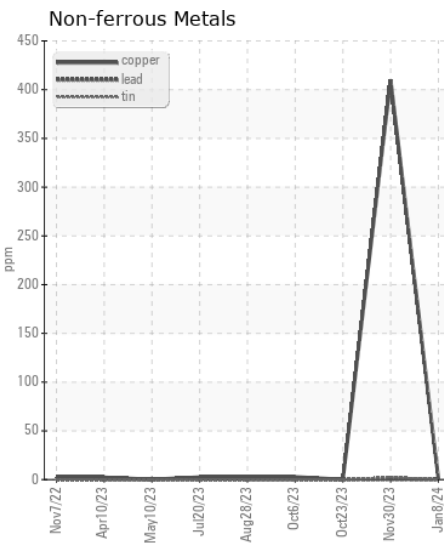
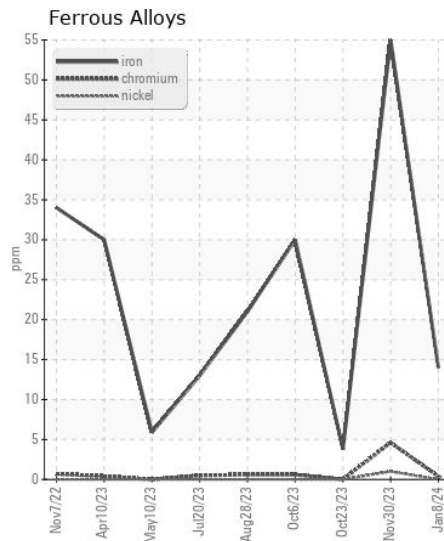
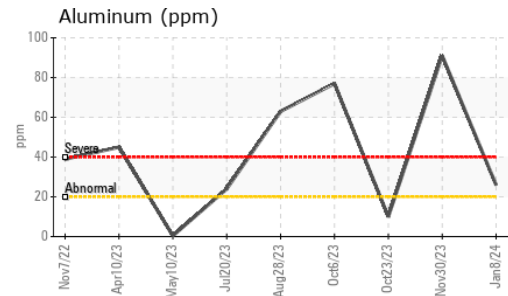
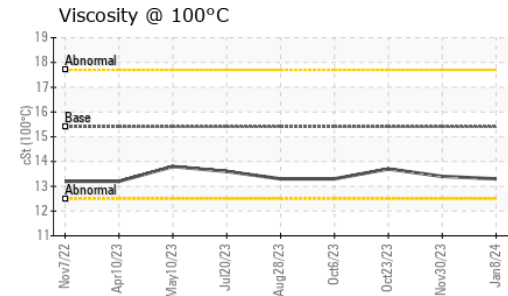
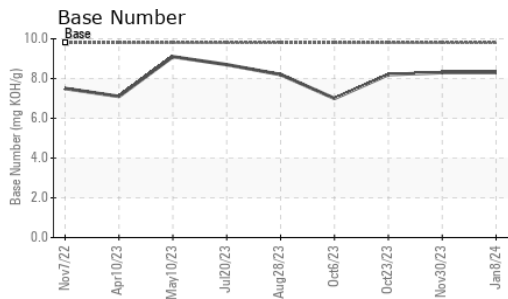
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>4</b>	8	3
Potassium	ppm	ASTM D5185m	>20	<b>53</b>	236	23
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>0.4</b>	0.3	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.5</b>	6.6	4.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>18.6</b>	18.1	17.1
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>2</b>	7	1
Boron	ppm	ASTM D5185m	0	<b>&lt;1</b>	45	0
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	60	<b>56</b>	53	51
Manganese	ppm	ASTM D5185m	0	<b>&lt;1</b>	4	0
Magnesium	ppm	ASTM D5185m	1010	<b>927</b>	551	842
Calcium	ppm	ASTM D5185m	1070	<b>1019</b>	1709	932
Phosphorus	ppm	ASTM D5185m	1150	<b>982</b>	778	916
Zinc	ppm	ASTM D5185m	1270	<b>1188</b>	938	1111
Sulfur	ppm	ASTM D5185m	2060	<b>2893</b>	2609	2649
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>14.8</b>	14.1	12.7
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>8.3</b>	8.3	8.2
Visc @ 100°C	cSt	ASTM D445	15.4	<b>13.3</b>	13.4	13.7



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0104921 **Received** : 12 Jan 2024  
**Lab Number** : 06060017 **Diagnosed** : 15 Jan 2024  
**Unique Number** : 10831399 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 820 - Joplin Hauling**  
 3700 West 7th Street  
 Joplin, MO  
 US 64801  
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 F:

Certificate L2367  
 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)