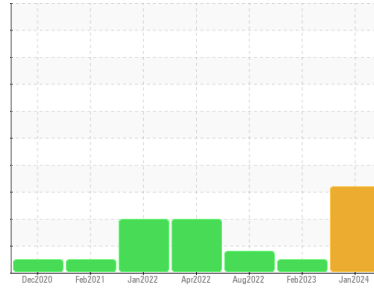




# OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL



Machine Id  
**828039-1051**

Component  
**Diesel Engine**

Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

## DIAGNOSIS

### Recommendation

We advise that you check for the source of the coolant leak. Check for low coolant level. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

### Wear

An increase in the copper level is noted.

### Contamination

Sodium and/or potassium levels are high.

### Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>GFL0110180</b>	GFL0060464	GFL0053275
Sample Date	Client Info		<b>08 Jan 2024</b>	15 Feb 2023	31 Aug 2022
Machine Age	mls	Client Info	<b>158680</b>	145715	135296
Oil Age	mls	Client Info	<b>0</b>	0	0
Oil Changed	Client Info		<b>Changed</b>	Changed	Changed
Sample Status			<b>ABNORMAL</b>	NORMAL	ABNORMAL

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water	WC Method	>0.2	<b>NEG</b>	NEG	NEG

## WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m	>110	<b>60</b>	13	52
Chromium	ppm	ASTM D5185m	>4	<b>2</b>	<1	2
Nickel	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>25	<b>3</b>	<1	4
Lead	ppm	ASTM D5185m	>45	<b>10</b>	0	<1
Copper	ppm	ASTM D5185m	>85	<b>50</b>	0	2
Tin	ppm	ASTM D5185m	>4	<b>&lt;1</b>	0	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m	0	<b>10</b>	0	0
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	3
Molybdenum	ppm	ASTM D5185m	60	<b>173</b>	56	64
Manganese	ppm	ASTM D5185m	0	<b>1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	1010	<b>834</b>	824	848
Calcium	ppm	ASTM D5185m	1070	<b>970</b>	1046	1139
Phosphorus	ppm	ASTM D5185m	1150	<b>956</b>	915	977
Zinc	ppm	ASTM D5185m	1270	<b>1157</b>	1088	1246
Sulfur	ppm	ASTM D5185m	2060	<b>2841</b>	3287	2615

## CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>30	<b>19</b>	3	9
Sodium	ppm	ASTM D5185m		<b>1677</b>	8	36
Potassium	ppm	ASTM D5185m	>20	<b>89</b>	<1	<1
Glycol	%	*ASTM D2982		<b>NEG</b>	NEG	NEG

## INFRA-RED

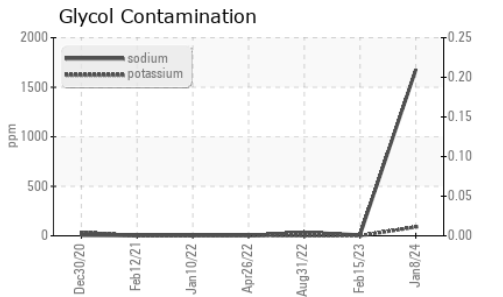
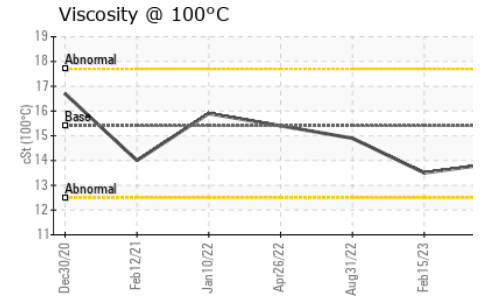
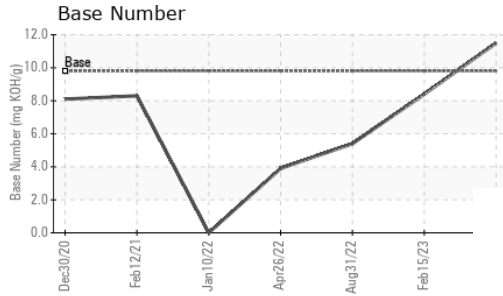
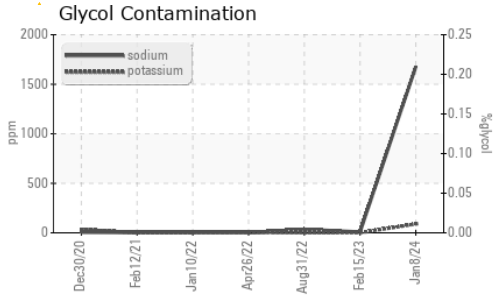
	method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844	>3	<b>1</b>	1.1	<b>4.4</b>
Nitration	Abs/cm	*ASTM D7624	>20	<b>13.4</b>	6.5	13.6
Sulfation	Abs.1mm	*ASTM D7415	>30	<b>23.6</b>	19.1	29.9

## FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Oxidation	Abs.1mm	*ASTM D7414	>25	<b>16.4</b>	13.0	19.2
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>11.5</b>	8.4	5.4



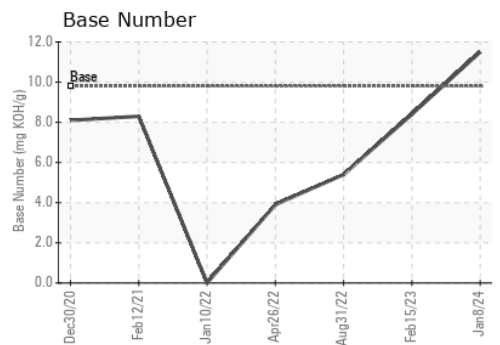
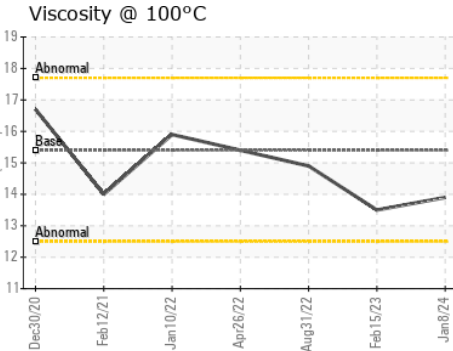
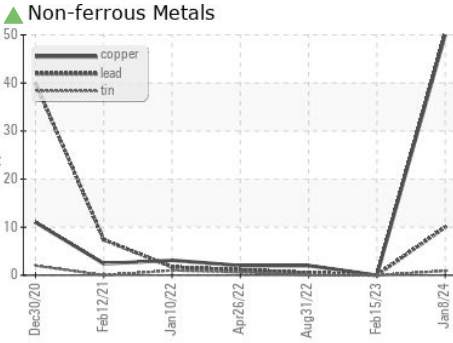
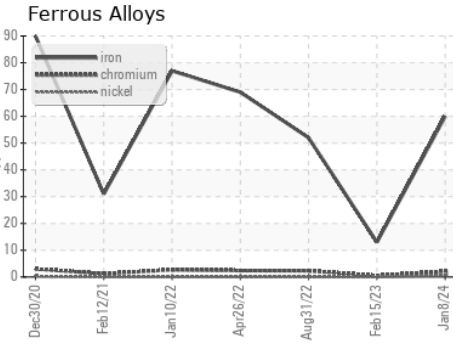
# OIL ANALYSIS REPORT



PARAMETER	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

PARAMETER	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.9	13.5

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0110180 **Received** : 11 Jan 2024  
**Lab Number** : 06058630 **Diagnosed** : 15 Jan 2024  
**Unique Number** : 10830012 **Diagnostician** : Jonathan Hester  
**Test Package** : FLEET ( Additional Tests: Glycol )

**GFL Environmental - 660 - Lynchburg Hauling**  
 2410 Mayflower Drive  
 Lynchburg, VA  
 US 24501  
 Contact: Delbert Beasley  
 dbeasley@countyrecycling.net  
 T: (434)665-5998  
 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)