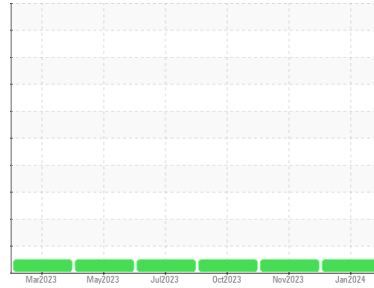




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**912088**

Component  
**Diesel Engine**

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

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

There is no indication of any contamination in the oil.

### 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.

## SAMPLE INFORMATION

method	limit/base	current	history1	history2	
Sample Number	Client Info	<b>GFL0102770</b>	GFL0090488	GFL0090529	
Sample Date	Client Info	<b>05 Jan 2024</b>	21 Nov 2023	09 Oct 2023	
Machine Age	hrs	Client Info	<b>2922</b>	2624	2326
Oil Age	hrs	Client Info	<b>596</b>	298	615
Oil Changed	Client Info	<b>Changed</b>	Not Changd	Changed	
Sample Status		<b>NORMAL</b>	NORMAL	NORMAL	

## 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
Glycol	WC Method	<b>NEG</b>	NEG	NEG

## WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >100	<b>19</b>	7	17
Chromium	ppm ASTM D5185m >20	<b>2</b>	<1	2
Nickel	ppm ASTM D5185m >4	<b>0</b>	<1	<1
Titanium	ppm ASTM D5185m	<b>0</b>	0	<1
Silver	ppm ASTM D5185m >3	<b>0</b>	0	0
Aluminum	ppm ASTM D5185m >20	<b>13</b>	6	17
Lead	ppm ASTM D5185m >40	<b>&lt;1</b>	<1	0
Copper	ppm ASTM D5185m >330	<b>&lt;1</b>	0	1
Tin	ppm ASTM D5185m >15	<b>&lt;1</b>	<1	<1
Vanadium	ppm ASTM D5185m	<b>0</b>	0	0
Cadmium	ppm ASTM D5185m	<b>0</b>	0	<1

## ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	<b>6</b>	6	<1
Barium	ppm ASTM D5185m 0	<b>0</b>	0	3
Molybdenum	ppm ASTM D5185m 60	<b>63</b>	55	57
Manganese	ppm ASTM D5185m 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm ASTM D5185m 1010	<b>948</b>	830	855
Calcium	ppm ASTM D5185m 1070	<b>1098</b>	995	1003
Phosphorus	ppm ASTM D5185m 1150	<b>1101</b>	1027	897
Zinc	ppm ASTM D5185m 1270	<b>1334</b>	1147	1099
Sulfur	ppm ASTM D5185m 2060	<b>3265</b>	2970	2674

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	<b>3</b>	2	3
Sodium	ppm ASTM D5185m	<b>4</b>	4	4
Potassium	ppm ASTM D5185m >20	<b>27</b>	17	43

## INFRA-RED

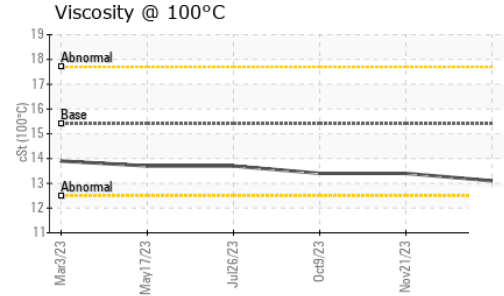
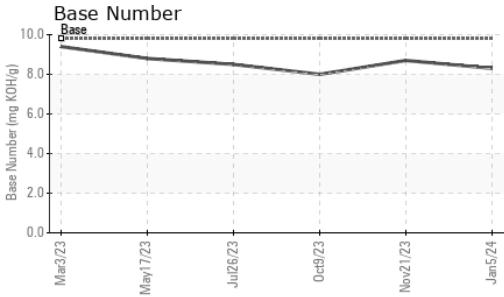
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	<b>0.6</b>	0.4	0.4
Nitration	Abs/cm *ASTM D7624 >20	<b>7.5</b>	6.3	7.3
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>19.4</b>	18.2	18.5

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>14.1</b>	13.4	13.7
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>8.3</b>	8.7	8.0



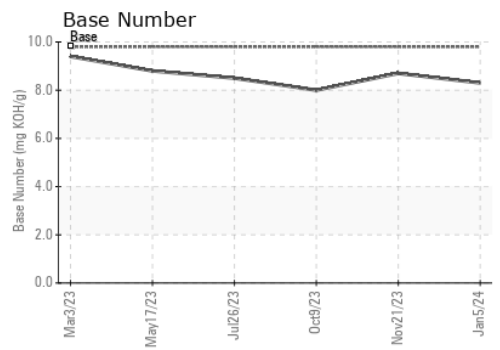
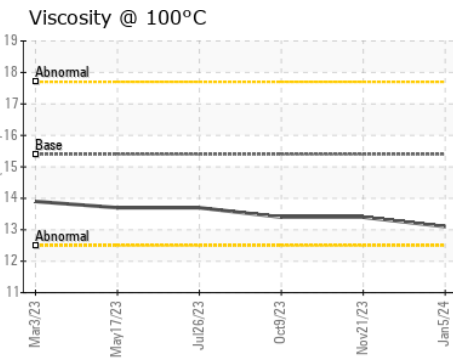
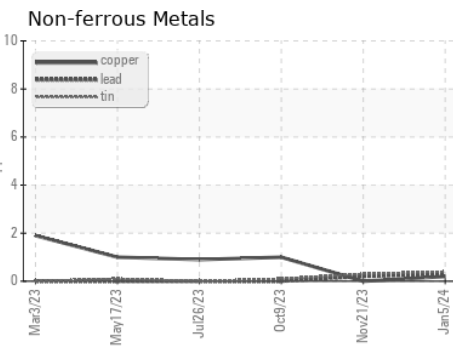
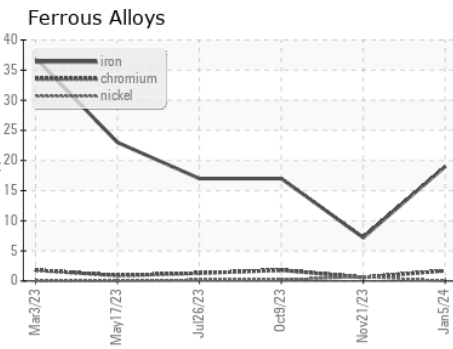
# OIL ANALYSIS REPORT



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

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	15.4	<b>13.1</b>	13.4	13.4

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0102770 **Received** : 08 Jan 2024  
**Lab Number** : 06054640 **Diagnosed** : 09 Jan 2024  
**Unique Number** : 10820589 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 622 - Traverse City Hauling**  
 160 Hughes Dr  
 Traverse City, MI  
 US 49686  
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 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)