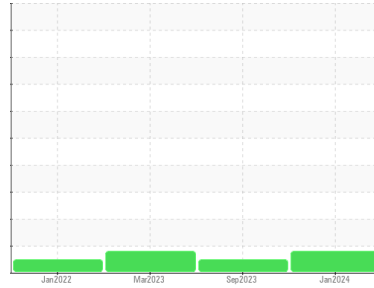




# OIL ANALYSIS REPORT

Sample Rating Trend



**WEAR**



Machine Id  
**211005-632125**

Component  
**Diesel Engine**

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

## DIAGNOSIS

### Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor. ( Customer Sample Comment: Engine oil sample )

### Wear

The aluminum level is abnormal. All other 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 acceptable for the time in service.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>GFL0100560</b>	GFL0093255	GFL0074179
Sample Date	Client Info		<b>17 Jan 2024</b>	27 Sep 2023	30 Mar 2023
Machine Age	mls	Client Info	<b>153726</b>	137233	2669
Oil Age	mls	Client Info	<b>153726</b>	137233	2669
Oil Changed	Client Info		<b>Not Chngd</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
Glycol	WC Method		<b>NEG</b>	NEG	NEG

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	<b>43</b>	13	59
Chromium	ppm	ASTM D5185m >20	<b>2</b>	<1	3
Nickel	ppm	ASTM D5185m >4	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m	<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m >3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >20	<b>▲ 23</b>	7	▲ 67
Lead	ppm	ASTM D5185m >40	<b>0</b>	0	0
Copper	ppm	ASTM D5185m >330	<b>2</b>	<1	2
Tin	ppm	ASTM D5185m >15	<b>0</b>	0	<1
Antimony	ppm	ASTM D5185m	<b>---</b>	---	---
Vanadium	ppm	ASTM D5185m	<b>&lt;1</b>	<1	<1
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>0</b>	2	0
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>60</b>	62	62
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	1
Magnesium	ppm	ASTM D5185m 1010	<b>1033</b>	1008	956
Calcium	ppm	ASTM D5185m 1070	<b>1134</b>	1249	1103
Phosphorus	ppm	ASTM D5185m 1150	<b>1066</b>	1059	993
Zinc	ppm	ASTM D5185m 1270	<b>1344</b>	1313	1257
Sulfur	ppm	ASTM D5185m 2060	<b>2963</b>	3015	2918

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>7</b>	4	10
Sodium	ppm	ASTM D5185m	<b>2</b>	3	3
Potassium	ppm	ASTM D5185m >20	<b>20</b>	11	141

## INFRA-RED

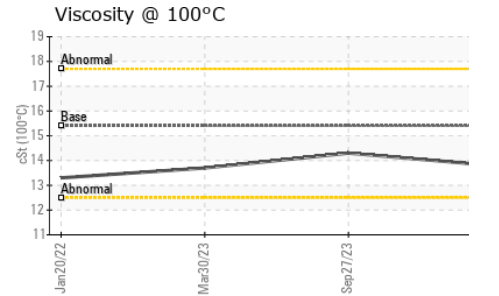
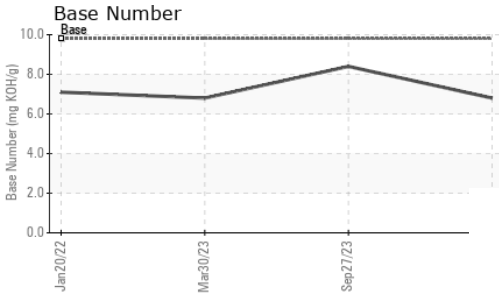
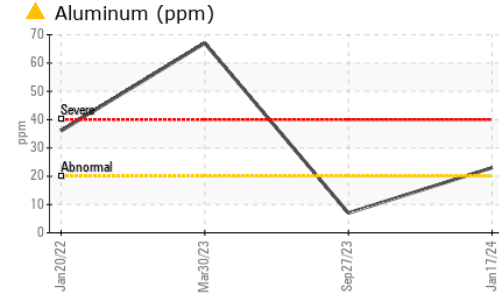
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>1.3</b>	0.5	1.2
Nitration	Abs/cm	*ASTM D7624 >20	<b>12.0</b>	8.5	13.3
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>23.8</b>	19.4	25.1

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>20.3</b>	16.2	23.1
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>6.8</b>	8.4	6.8



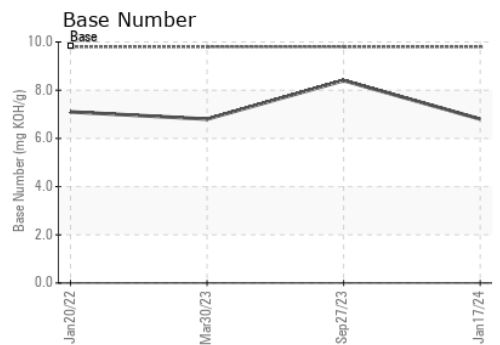
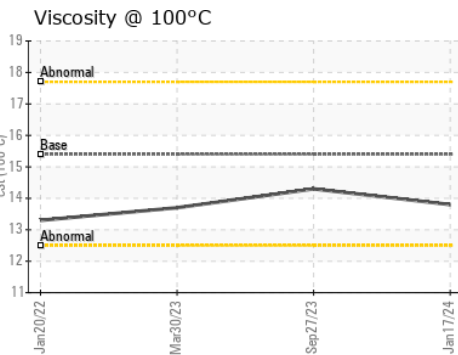
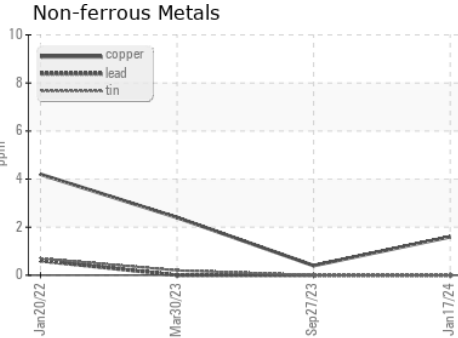
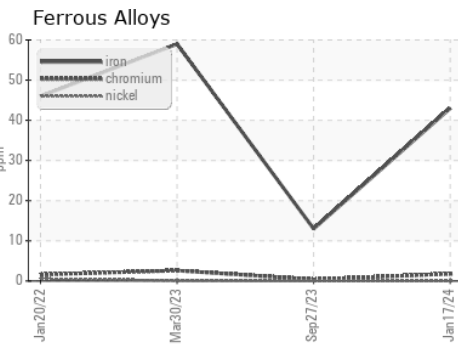
# OIL ANALYSIS REPORT



VISUAL	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>13.8</b>	14.3	13.7

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0100560 **Recieved** : 23 Jan 2024  
**Lab Number** : 06068930 **Diagnosed** : 25 Jan 2024  
**Unique Number** : 10845607 **Diagnostician** : Sean Felton  
**Test Package** : FLEET

**GFL Environmental - 865 - East Mount Hauling**  
 7213 East Mount Houston Road  
 Houston, TX  
 US 77050  
 Contact: Saul Castillo  
 saul.castillo@gflenv.com  
 T:  
 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)