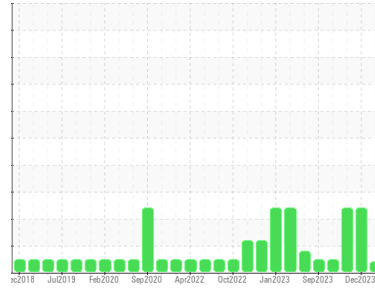




# OIL ANALYSIS REPORT

Sample Rating Trend



## VISCOSITY



Area  
**GFL836**  
Machine Id  
**425062-402315**  
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.

#### Wear

All component wear rates are normal.

#### Contamination

Fuel content negligible. There is no indication of any contamination in the oil.

#### Fluid Condition

The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

### SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	<b>GFL0103328</b>	GFL0103366	GFL0099939
Sample Date	Client Info	<b>18 Jan 2024</b>	20 Dec 2023	18 Nov 2023
Machine Age	hrs	<b>24978</b>	24793	24505
Oil Age	hrs	<b>0</b>	0	0
Oil Changed	Client Info	<b>Not Changed</b>	Not Changed	Not Changed
Sample Status		<b>ATTENTION</b>	SEVERE	SEVERE

### CONTAMINATION

method	limit/base	current	history1	history2
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>7</b>	39	37
Chromium	ppm ASTM D5185m >20	<b>&lt;1</b>	2	2
Nickel	ppm ASTM D5185m >4	<b>3</b>	0	0
Titanium	ppm ASTM D5185m	<b>0</b>	0	0
Silver	ppm ASTM D5185m >3	<b>0</b>	0	0
Aluminum	ppm ASTM D5185m >20	<b>6</b>	3	5
Lead	ppm ASTM D5185m >40	<b>0</b>	2	0
Copper	ppm ASTM D5185m >330	<b>4</b>	3	<1
Tin	ppm ASTM D5185m >15	<b>&lt;1</b>	<1	<1
Vanadium	ppm ASTM D5185m	<b>&lt;1</b>	<1	0
Cadmium	ppm ASTM D5185m	<b>0</b>	0	0

### ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	<b>55</b>	<1	2
Barium	ppm ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm ASTM D5185m 60	<b>17</b>	52	53
Manganese	ppm ASTM D5185m 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm ASTM D5185m 1010	<b>877</b>	825	891
Calcium	ppm ASTM D5185m 1070	<b>1262</b>	883	920
Phosphorus	ppm ASTM D5185m 1150	<b>781</b>	870	923
Zinc	ppm ASTM D5185m 1270	<b>909</b>	1067	1129
Sulfur	ppm ASTM D5185m 2060	<b>2467</b>	2374	2594

### CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	<b>4</b>	8	9
Sodium	ppm ASTM D5185m	<b>2</b>	3	2
Potassium	ppm ASTM D5185m >20	<b>4</b>	0	<1
Fuel	% ASTM D3524 >5	<b>0.6</b>	13.7	11.3

### INFRA-RED

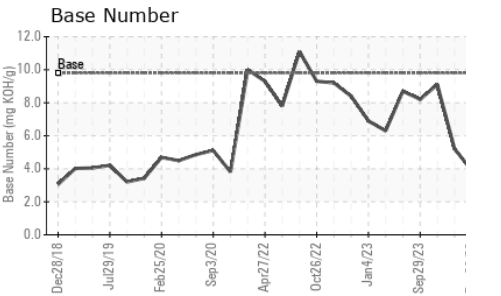
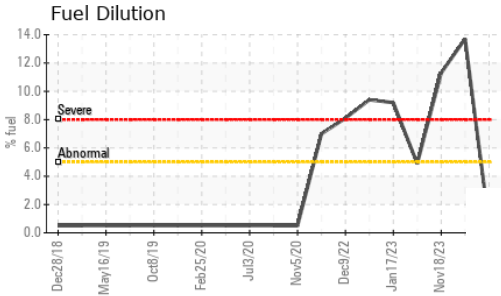
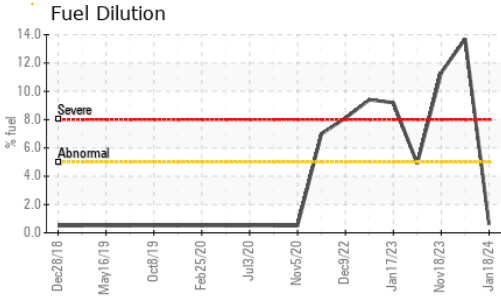
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	<b>0.2</b>	1.2	1.2
Nitration	Abs/cm *ASTM D7624 >20	<b>8.9</b>	14.0	12.8
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>21.9</b>	28.3	26.3

### FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>19.5</b>	30.5	27.1
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>8.8</b>	3.9	5.2



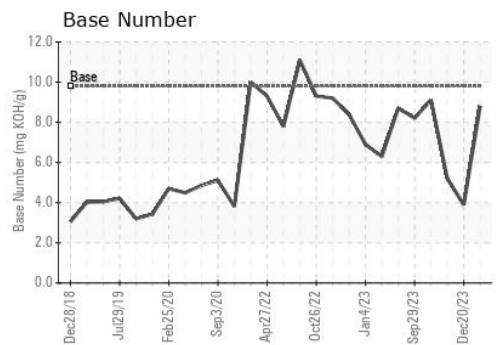
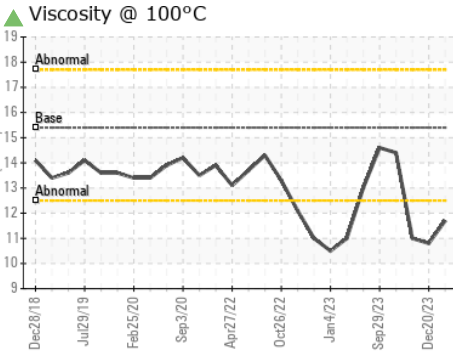
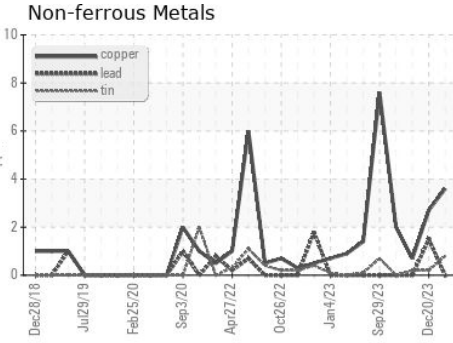
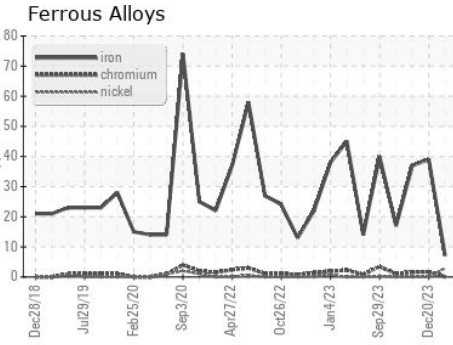
# OIL ANALYSIS REPORT



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 ▲ 11.7	▲ 10.8	▲ 11.0

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0103328 **Received** : 23 Jan 2024  
**Lab Number** : 06068256 **Diagnosed** : 30 Jan 2024  
**Unique Number** : 10844933 **Diagnostician** : Jonathan Hester  
**Test Package** : FLEET ( Additional Tests: PercentFuel )

**GFL Environmental - 836 - Kansas City Hauling**  
 7801 East Truman Road  
 Kansas City, MO  
 US 64126  
 Contact: Robert Hart  
 rhart@gflenv.com  
 T: (580)461-1509  
 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)