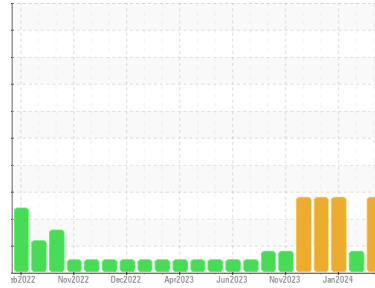




# OIL ANALYSIS REPORT

Sample Rating Trend



**DIRT**



Machine Id  
**227068-9**

Component  
**Diesel Engine**

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

## DIAGNOSIS

### Recommendation

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

Light fuel dilution occurring. No other contaminants were detected in the oil.

### Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity.

## SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	<b>GFL0110607</b>	GFL0110595	GFL0100213
Sample Date	Client Info	<b>08 Mar 2024</b>	27 Feb 2024	15 Jan 2024
Machine Age	hrs	<b>19892</b>	400	0
Oil Age	hrs	<b>600</b>	400	600
Oil Changed	Client Info	<b>Changed</b>	Not Changd	Not Changd
Sample Status		<b>ABNORMAL</b>	MARGINAL	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 >80	<b>14</b>	13	20
Chromium	ppm ASTM D5185m >5	<b>1</b>	2	2
Nickel	ppm ASTM D5185m >2	<b>0</b>	<1	<1
Titanium	ppm ASTM D5185m	<b>0</b>	<1	<1
Silver	ppm ASTM D5185m >3	<b>0</b>	0	0
Aluminum	ppm ASTM D5185m >30	<b>2</b>	3	2
Lead	ppm ASTM D5185m >30	<b>0</b>	<1	<1
Copper	ppm ASTM D5185m >150	<b>5</b>	6	<1
Tin	ppm ASTM D5185m >5	<b>0</b>	<1	<1
Vanadium	ppm ASTM D5185m	<b>0</b>	<1	<1
Cadmium	ppm ASTM D5185m	<b>0</b>	<1	0

## ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	<b>2</b>	3	2
Barium	ppm ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm ASTM D5185m 60	<b>59</b>	65	62
Manganese	ppm ASTM D5185m 0	<b>0</b>	<1	<1
Magnesium	ppm ASTM D5185m 1010	<b>922</b>	941	1064
Calcium	ppm ASTM D5185m 1070	<b>1013</b>	981	1075
Phosphorus	ppm ASTM D5185m 1150	<b>1016</b>	1001	1123
Zinc	ppm ASTM D5185m 1270	<b>1182</b>	1211	1356
Sulfur	ppm ASTM D5185m 2060	<b>3154</b>	2967	3795

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >20	<b>▲ 48</b>	46	5
Sodium	ppm ASTM D5185m	<b>26</b>	27	1
Potassium	ppm ASTM D5185m >20	<b>4</b>	5	2
Fuel	% ASTM D3524 >5	<b>▲ 4.8</b>	▲ 3.4	▲ 11.0

## INFRA-RED

method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	<b>0.2</b>	0.1	0.3
Nitration	Abs/cm *ASTM D7624 >20	<b>8.1</b>	6.9	10.4
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>18.7</b>	18.3	19.4

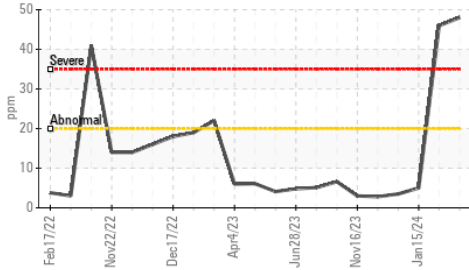
## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>15.7</b>	14.7	19.0
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>9.2</b>	9.0	8.3

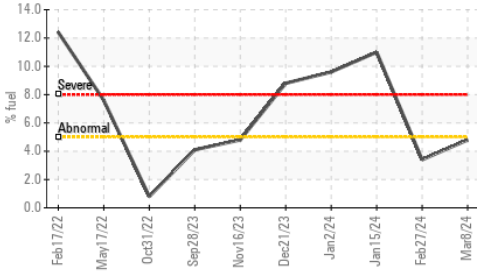


# OIL ANALYSIS REPORT

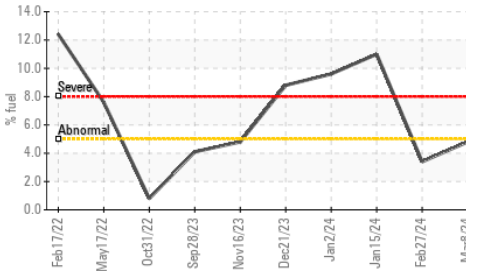
▲ Silicon (ppm)



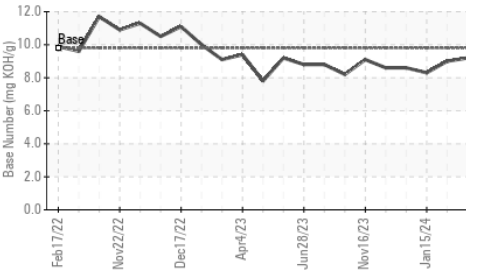
▲ Fuel Dilution



▲ Fuel Dilution



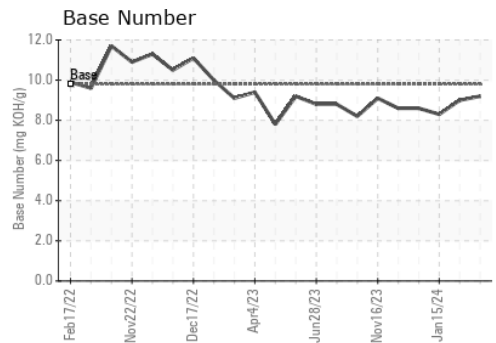
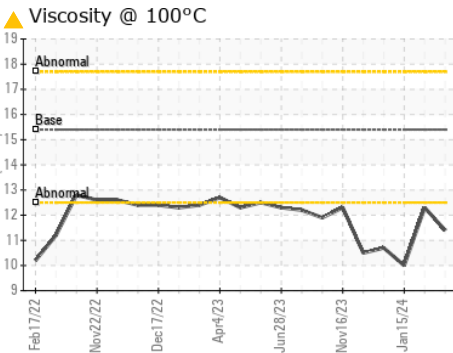
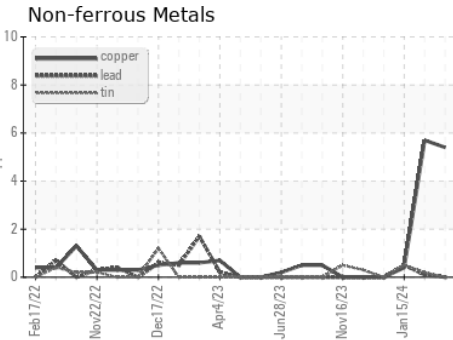
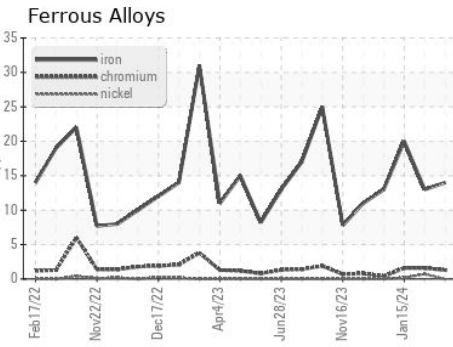
Base Number



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 ▲ 11.4	12.3	▲ 10.0

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0110607  
**Lab Number** : 06119367  
**Unique Number** : 10928200  
**Test Package** : FLEET ( Additional Tests: FuelDilution, PercentFuel )

**GFL Environmental - 166 - Phenix City**  
 18 Old Brickyard Rd  
 Phenix City, AL  
 US 36869  
 Contact: DEAN PEACE JR  
 dean.peace@gflenv.com

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)

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F: