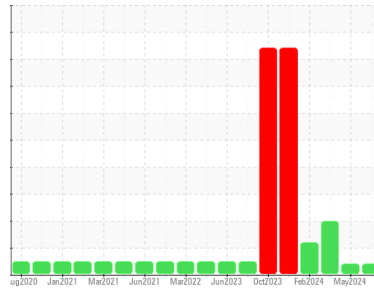




# OIL ANALYSIS REPORT

Sample Rating Trend



## VISCOSITY



Area  
**(26831XA)**

Machine Id  
**528006**

Component  
**Diesel Engine**

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

### DIAGNOSIS

#### Recommendation

No corrective action is recommended at this time. 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

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>GFL0119275</b>	GFL0070958	GFL0058106
Sample Date	Client Info	<b>15 Jun 2024</b>	16 May 2024	09 May 2024
Machine Age	hrs	<b>14902</b>	14684	14640
Oil Age	hrs	<b>0</b>	0	0
Oil Changed	Client Info	<b>Changed</b>	Not Changd	Not Changd
Sample Status		<b>ATTENTION</b>	ATTENTION	ABNORMAL

### CONTAMINATION

method	limit/base	current	history1	history2
Water	WC Method	<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>21</b>	17	13
Chromium	ppm	ASTM D5185m	>20	<b>0</b>	<1	0
Nickel	ppm	ASTM D5185m	>4	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Silver	ppm	ASTM D5185m	>3	<b>&lt;1</b>	<1	0
Aluminum	ppm	ASTM D5185m	>20	<b>3</b>	3	2
Lead	ppm	ASTM D5185m	>40	<b>0</b>	<1	<1
Copper	ppm	ASTM D5185m	>330	<b>4</b>	3	<1
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	0	0
Vanadium	ppm	ASTM D5185m		<b>0</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>28</b>	62	67
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	60	<b>30</b>	28	26
Manganese	ppm	ASTM D5185m	0	<b>1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	1010	<b>785</b>	754	709
Calcium	ppm	ASTM D5185m	1070	<b>1428</b>	1473	1354
Phosphorus	ppm	ASTM D5185m	1150	<b>902</b>	860	787
Zinc	ppm	ASTM D5185m	1270	<b>1016</b>	982	895
Sulfur	ppm	ASTM D5185m	2060	<b>3642</b>	3733	3399

### CONTAMINANTS

method	limit/base	current	history1	history2		
Silicon	ppm	ASTM D5185m	>25	<b>9</b>	7	7
Sodium	ppm	ASTM D5185m		<b>6</b>	4	3
Potassium	ppm	ASTM D5185m	>20	<b>15</b>	11	11
Fuel	%	ASTM D3524	>5	<b>&lt;1.0</b>	<1.0	2.5

### INFRA-RED

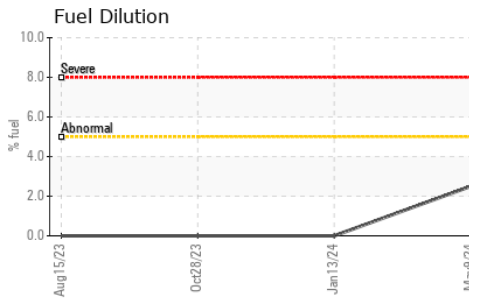
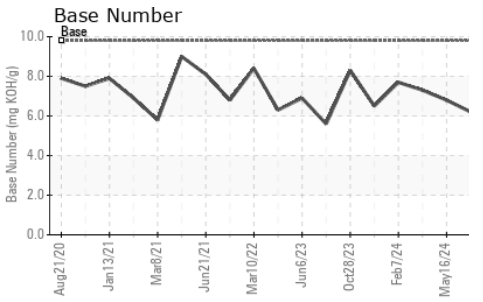
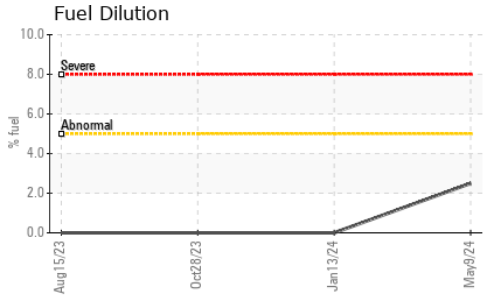
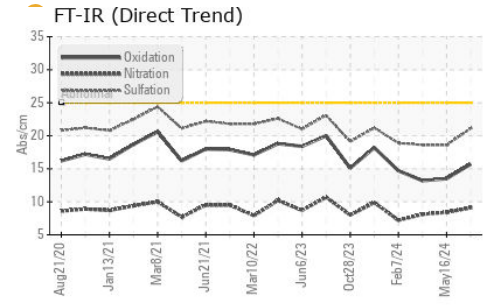
method	limit/base	current	history1	history2		
Soot %	%	*ASTM D7844	>3	<b>0.4</b>	0.3	0.2
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.1</b>	8.4	8.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>21.1</b>	18.6	18.6

### FLUID DEGRADATION

method	limit/base	current	history1	history2		
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>15.7</b>	13.5	13.2
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>6.2</b>	6.8	7.3



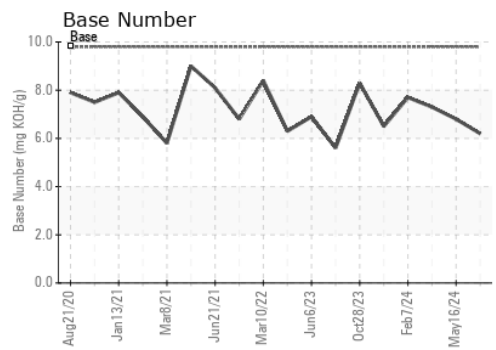
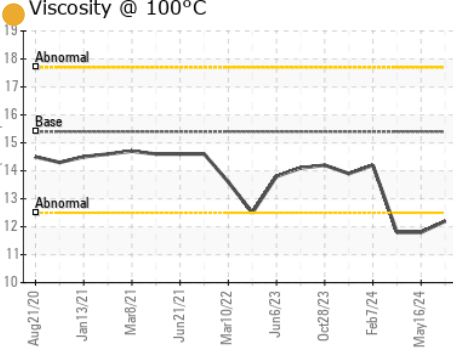
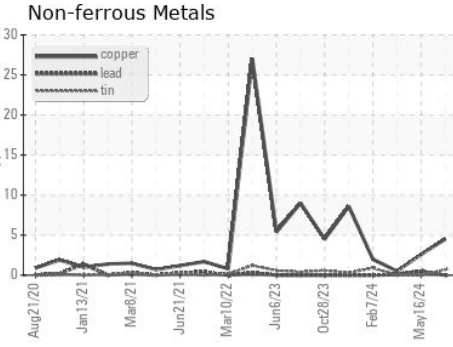
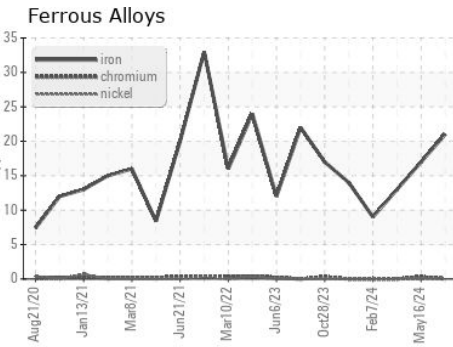
# OIL ANALYSIS REPORT



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	12.2	11.8

### GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513

**Sample No.** : GFL0119275

**Lab Number** : 06213284

**Unique Number** : 11086148

**Test Package** : FLEET ( Additional Tests : FuelDilution )

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)

**Received** : 18 Jun 2024

**Tested** : 19 Jun 2024

**Diagnosed** : 20 Jun 2024 - Sean Felton

**GFL Environmental - 654 - Richmond Hauling**

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Chester, VA

US 23831

Contact: Jimmy Mayes

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