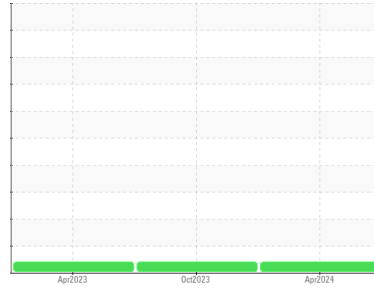




# OIL ANALYSIS REPORT

## Sample Rating Trend



## VISCOSITY



Machine Id

**727176**

Component

**Diesel Engine**

Fluid

**PETRO CANADA DURON SHP 15W40 (22 QTS)**

### DIAGNOSIS

#### Recommendation

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>GFL0110784</b>	GFL0092852	GFL0076895
Sample Date	Client Info		<b>01 Apr 2024</b>	05 Oct 2023	14 Apr 2023
Machine Age	hrs	Client Info	<b>18996</b>	18823	18594
Oil Age	hrs	Client Info	<b>173</b>	274	600
Oil Changed		Client Info	<b>Changed</b>	Changed	Changed
Sample Status			<b>ATTENTION</b>	ATTENTION	ATTENTION

### CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>2.0	<b>&lt;1.0</b>	<1.0	1.3
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>	27	28
Chromium	ppm	ASTM D5185m >20	<b>0</b>	0	<1
Nickel	ppm	ASTM D5185m >4	<b>0</b>	0	<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>1</b>	1	0
Lead	ppm	ASTM D5185m >40	<b>0</b>	<1	<1
Copper	ppm	ASTM D5185m >330	<b>&lt;1</b>	<1	<1
Tin	ppm	ASTM D5185m >15	<b>0</b>	0	0
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	0

### ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>6</b>	12	15
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>60</b>	63	69
Manganese	ppm	ASTM D5185m 0	<b>0</b>	0	<1
Magnesium	ppm	ASTM D5185m 1010	<b>961</b>	916	925
Calcium	ppm	ASTM D5185m 1070	<b>1153</b>	1103	1134
Phosphorus	ppm	ASTM D5185m 1150	<b>1053</b>	985	1048
Zinc	ppm	ASTM D5185m 1270	<b>1236</b>	1189	1231
Sulfur	ppm	ASTM D5185m 2060	<b>3776</b>	3031	3271

### CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>4</b>	3	3
Sodium	ppm	ASTM D5185m	<b>14</b>	9	19
Potassium	ppm	ASTM D5185m >20	<b>&lt;1</b>	<1	2

### INFRA-RED

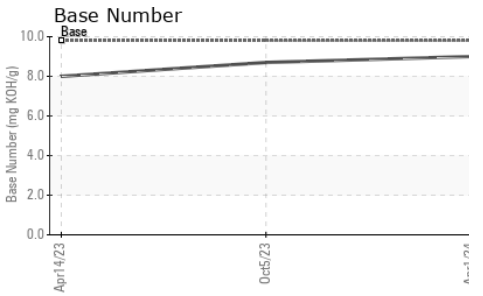
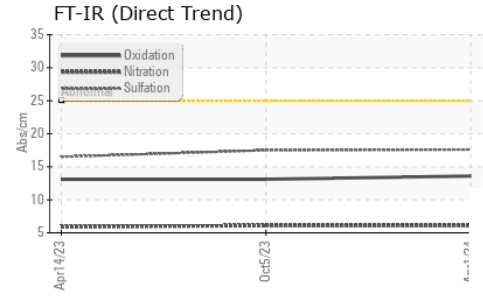
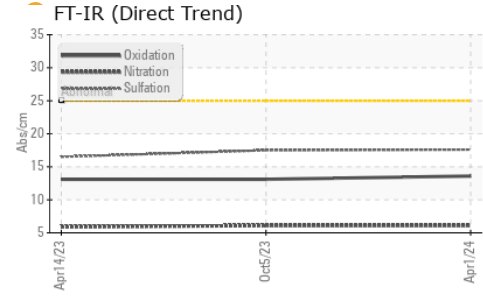
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0.2</b>	0.3	0.2
Nitration	Abs/cm	*ASTM D7624 >20	<b>6.1</b>	6.1	5.9
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>17.6</b>	17.5	16.5

### FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>13.6</b>	13.1	13.1
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>9.0</b>	8.7	8.0



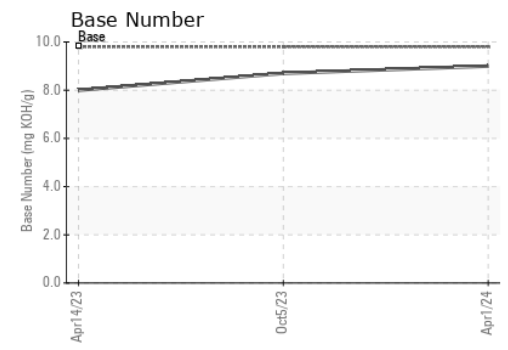
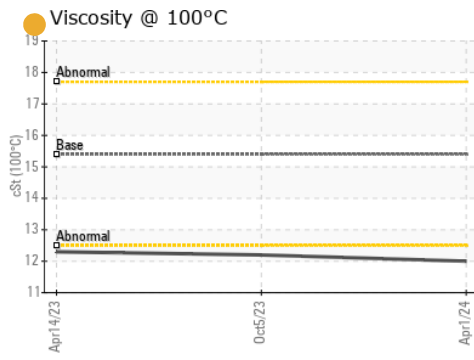
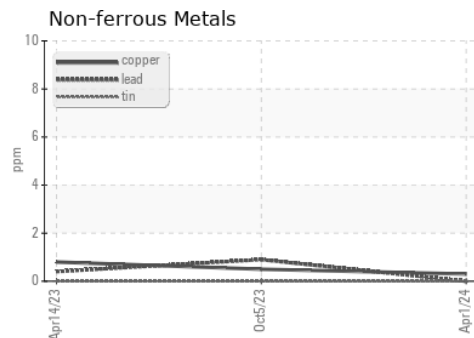
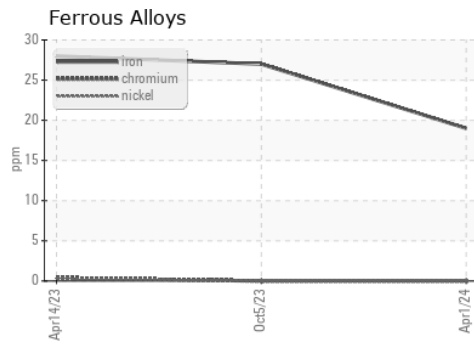
# OIL ANALYSIS REPORT



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	<span style="color: orange;">●</span> 12.0	<span style="color: orange;">●</span> 12.2	<span style="color: orange;">●</span> 12.3

### GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0110784      **Received** : 08 Apr 2024  
**Lab Number** : 06141959      **Tested** : 09 Apr 2024  
**Unique Number** : 10966767      **Diagnosed** : 10 Apr 2024 - Don Baldrige  
**Test Package** : FLEET

**GFL Environmental - 411 - Kingsford HC**  
 1001 E Blvd  
 Kingsford, MI  
 US 49802  
 Contact: Service Manager

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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