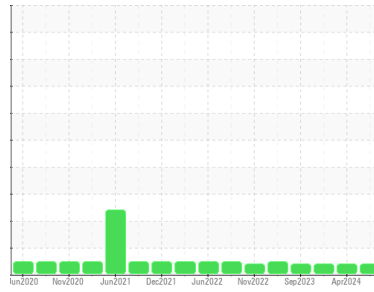




# OIL ANALYSIS REPORT

Sample Rating Trend



## VISCOSITY



Machine Id  
**728004**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

### DIAGNOSIS

#### Recommendation

Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor. The fluid was specified as PETRO CANADA DURON SHP 15W40, however, a fluid match indicates that this fluid is SAE 30 Diesel Engine Oil. Please confirm the oil type and grade on your next sample.

#### Wear

All component wear rates are normal.

#### Contamination

Tests indicate that there is no fuel present in the oil. There is no indication of any contamination in the oil.

#### Fluid Condition

Viscosity of sample indicates oil is within SAE 30 range, advise investigate. This plus the additive levels indicates that this is not the same brand, or type of oil as reported. 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>GFL0113211</b>	GFL0113243	GFL0097332
Sample Date	Client Info	<b>08 Jul 2024</b>	16 Apr 2024	04 Jan 2024
Machine Age	hrs	<b>0</b>	0	0
Oil Age	hrs	<b>13809</b>	13277	12706
Oil Changed	Client Info	<b>N/A</b>	N/A	N/A
Sample Status		<b>ABNORMAL</b>	ABNORMAL	ABNORMAL

### CONTAMINATION

method	limit/base	current	history1	history2
Water	WC Method >0.2	<b>NEG</b>	NEG	NEG

### WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185(m) >120	<b>7</b>	8	6
Chromium	ppm ASTM D5185(m) >20	<b>&lt;1</b>	0	0
Nickel	ppm ASTM D5185(m) >5	<b>1</b>	1	1
Titanium	ppm ASTM D5185(m) >2	<b>0</b>	0	0
Silver	ppm ASTM D5185(m) >2	<b>&lt;1</b>	0	0
Aluminum	ppm ASTM D5185(m) >20	<b>2</b>	3	2
Lead	ppm ASTM D5185(m) >40	<b>0</b>	0	<1
Copper	ppm ASTM D5185(m) >330	<b>&lt;1</b>	<1	<1
Tin	ppm ASTM D5185(m) >15	<b>&lt;1</b>	0	0
Antimony	ppm ASTM D5185(m)	<b>0</b>	0	0
Vanadium	ppm ASTM D5185(m)	<b>0</b>	0	0
Beryllium	ppm ASTM D5185(m)	<b>0</b>	0	0
Cadmium	ppm ASTM D5185(m)	<b>0</b>	0	0

### ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185(m) 0	<b>90</b>	41	31
Barium	ppm ASTM D5185(m) 0	<b>0</b>	0	0
Molybdenum	ppm ASTM D5185(m) 60	<b>6</b>	35	43
Manganese	ppm ASTM D5185(m) 0	<b>&lt;1</b>	<1	0
Magnesium	ppm ASTM D5185(m) 1010	<b>65</b>	445	533
Calcium	ppm ASTM D5185(m) 1070	<b>2019</b>	1674	1656
Phosphorus	ppm ASTM D5185(m) 1150	<b>857</b>	694	728
Zinc	ppm ASTM D5185(m) 1270	<b>1055</b>	844	881
Sulfur	ppm ASTM D5185(m) 2060	<b>2545</b>	2019	2134
Lithium	ppm ASTM D5185(m)	<b>&lt;1</b>	<1	<1

### CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185(m) >25	<b>3</b>	3	4
Sodium	ppm ASTM D5185(m)	<b>9</b>	9	7
Potassium	ppm ASTM D5185(m) >20	<b>9</b>	2	1
Fuel	% ASTM D7593* >3.0	<b>0.0</b>	0.8	0.8
Glycol	% ASTM D7922*	<b>0.0</b>	NEG	NEG

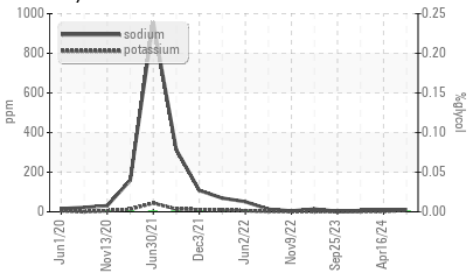
### INFRA-RED

method	limit/base	current	history1	history2
Soot %	% ASTM D7844* >4	<b>0.2</b>	0.7	0.2
Nitration	Abs/cm ASTM D7624* >20	<b>8.7</b>	7.9	8.6
Sulfation	Abs./1mm ASTM D7415* >30	<b>21.7</b>	21.8	22.2

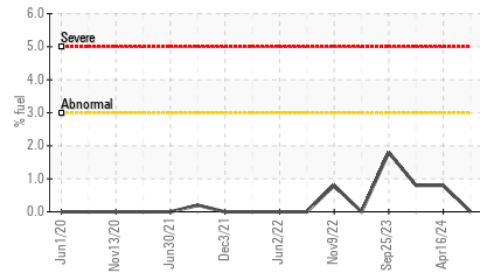


# OIL ANALYSIS REPORT

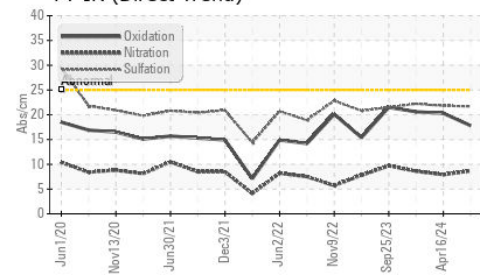
## Glycol Contamination



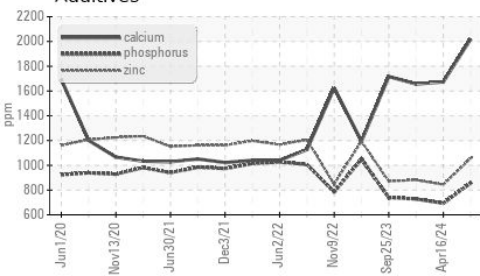
## Fuel Dilution



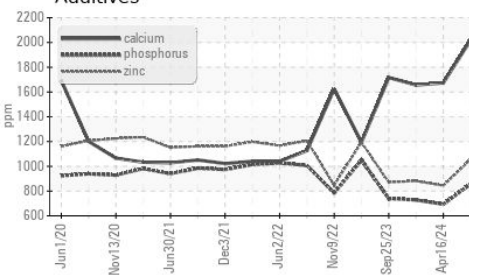
## FT-IR (Direct Trend)



## Additives



## Additives



## FLUID DEGRADATION

method	limit/base	current	history1	history2	
Oxidation	Abs./1mm ASTM D7414*	>25	17.8	20.3	20.6

## VISUAL

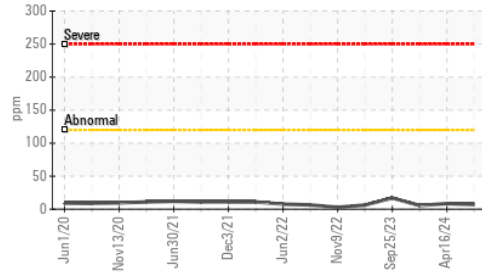
method	limit/base	current	history1	history2	
Emulsified Water	scalar Visual*	>0.2	NEG	NEG	NEG
Free Water	scalar Visual*		NEG	NEG	NEG

## FLUID PROPERTIES

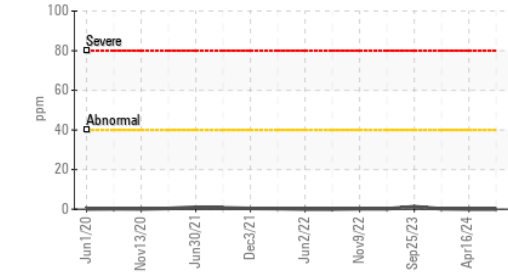
method	limit/base	current	history1	history2	
Visc @ 100°C	cSt ASTM D7279(m)	15.4	▲ 11.8	▲ 11.6	▲ 11.5

## GRAPHS

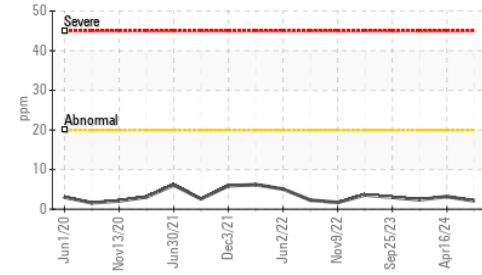
### Iron (ppm)



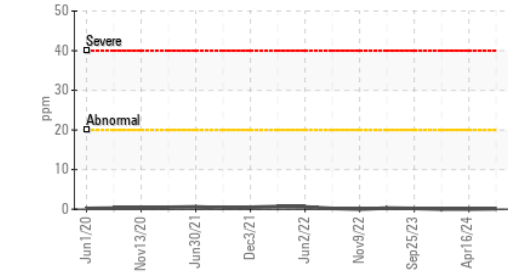
### Lead (ppm)



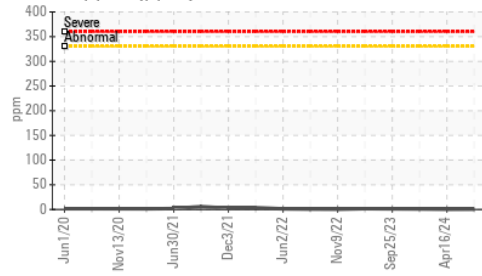
### Aluminum (ppm)



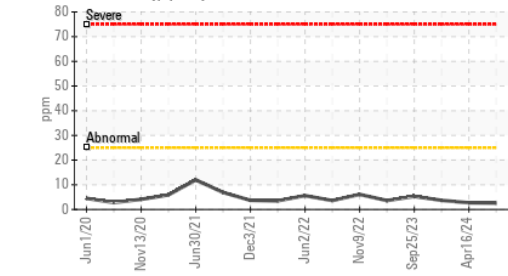
### Chromium (ppm)



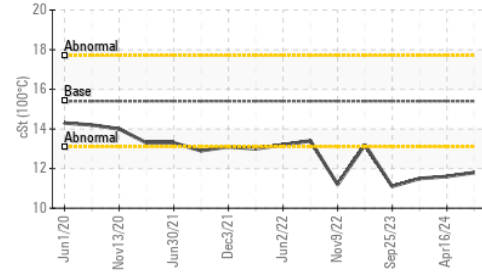
### Copper (ppm)



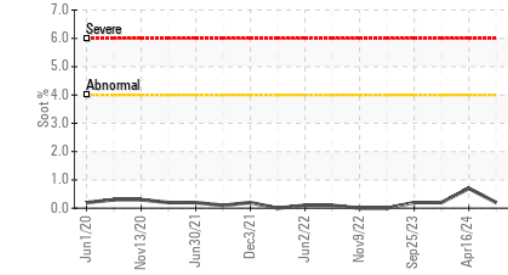
### Silicon (ppm)



### Viscosity @ 100°C



### Soot %



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : GFL0113211  
**Lab Number** : 02646664  
**Unique Number** : 5812216  
**Test Package** : MOB 1 ( Additional Tests: FUELDILUTION, Glycol, PercentFuel )

**GFL Environmental - 246 - Windsor**  
 2700 Deziel Dr  
 Windsor, ON  
 CA N8W 5H8

**Received** : 09 Jul 2024  
**Tested** : 12 Jul 2024  
**Diagnosed** : 12 Jul 2024 - Kevin Marson  
 To discuss this sample report, contact Customer Service at 1-800-268-2131.  
 Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab.  
 Validity of results and interpretation are based on the sample and information as supplied.

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 T: (519)944-8009  
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