



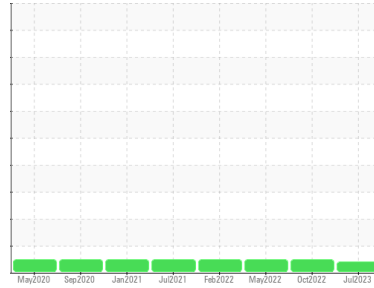
# OIL ANALYSIS REPORT

Sample Rating Trend

VISCOSITY



Machine Id  
**422004**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**



## DIAGNOSIS

### Recommendation

No corrective action is recommended at this time. Confirm the source of the lubricant being utilized for top-up/fill. 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

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>GFL0078499</b>	GFL0061960	GFL0046672
Sample Date	Client Info		<b>12 Jul 2023</b>	28 Oct 2022	03 May 2022
Machine Age	kms	Client Info	<b>0</b>	26002	24802
Oil Age	kms	Client Info	<b>641769</b>	613	464
Oil Changed	Client Info		<b>N/A</b>	Changed	Changed
Sample Status			<b>ABNORMAL</b>	NORMAL	NORMAL

## CONTAMINATION

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

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m) >120	<b>4</b>	4	4
Chromium	ppm	ASTM D5185(m) >20	<b>0</b>	0	0
Nickel	ppm	ASTM D5185(m) >5	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185(m) >2	<b>0</b>	<1	0
Silver	ppm	ASTM D5185(m) >2	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185(m) >20	<b>1</b>	1	1
Lead	ppm	ASTM D5185(m) >40	<b>&lt;1</b>	2	<1
Copper	ppm	ASTM D5185(m) >330	<b>&lt;1</b>	<1	1
Tin	ppm	ASTM D5185(m) >15	<b>0</b>	<1	<1
Antimony	ppm	ASTM D5185(m)	<b>0</b>	<1	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>37</b>	3	11
Barium	ppm	ASTM D5185(m) 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m) 60	<b>40</b>	57	58
Manganese	ppm	ASTM D5185(m) 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185(m) 1010	<b>515</b>	934	946
Calcium	ppm	ASTM D5185(m) 1070	<b>1585</b>	1113	1026
Phosphorus	ppm	ASTM D5185(m) 1150	<b>797</b>	1051	1022
Zinc	ppm	ASTM D5185(m) 1270	<b>881</b>	1172	1160
Sulfur	ppm	ASTM D5185(m) 2060	<b>2096</b>	2623	2581
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>4</b>	3	5
Sodium	ppm	ASTM D5185(m)	<b>3</b>	4	2
Potassium	ppm	ASTM D5185(m) >20	<b>&lt;1</b>	<1	0
Fuel	%	ASTM D7593* >3.0	<b>1.7</b>	<1.0	<1.0

## INFRA-RED

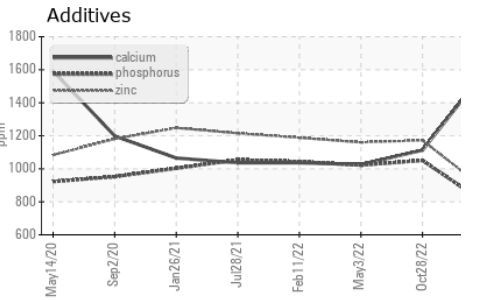
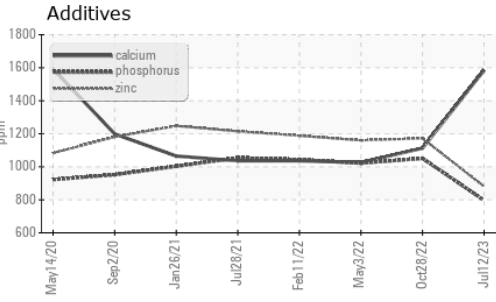
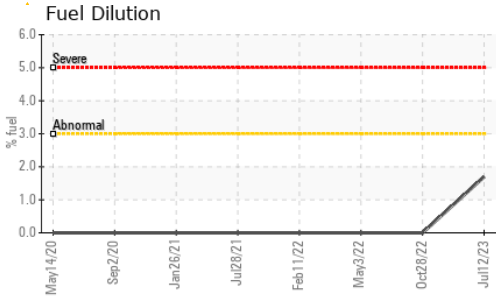
	method	limit/base	current	history1	history2
Soot %	%	ASTM D7844* >4	<b>0</b>	0	0
Nitration	Abs/cm	ASTM D7624* >20	<b>8.1</b>	8.0	7.2
Sulfation	Abs/.1mm	ASTM D7415* >30	<b>21.6</b>	19.6	19.6

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414* >25	<b>20.8</b>	16.0	14.0



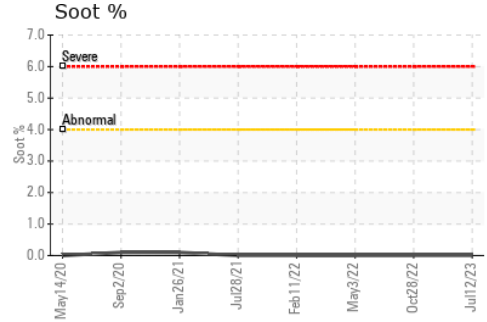
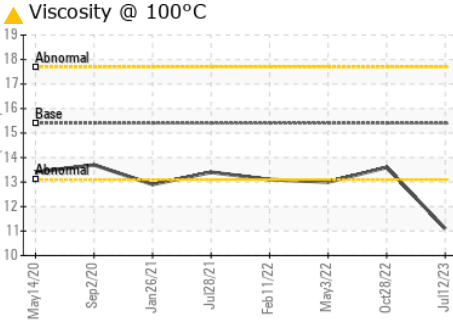
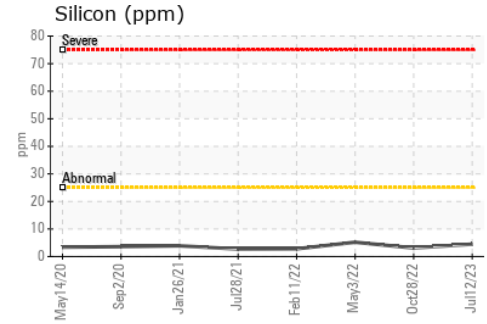
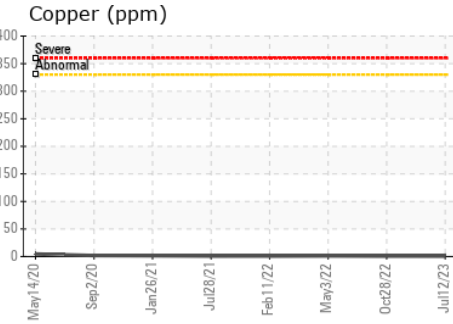
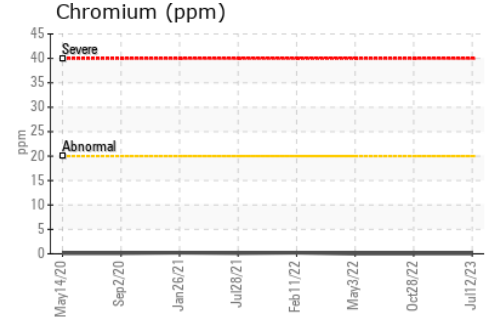
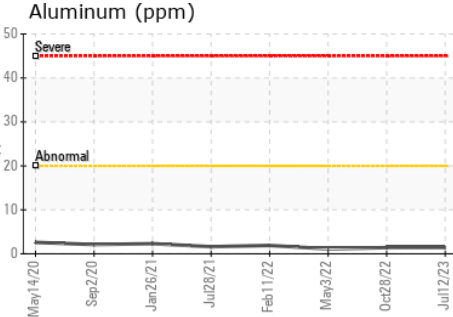
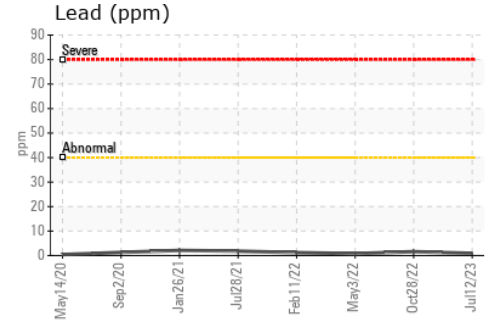
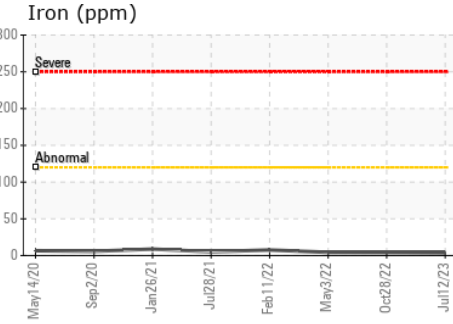
# OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
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 D7279(m)	▲ 11.1	13.6	13.0

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **GFL Environmental - 246 - Windsor**  
**Sample No.** : GFL0078499 **Received** : 13 Jul 2023  
**Lab Number** : 02569654 **Diagnosed** : 14 Jul 2023  
**Unique Number** : 5606700 **Diagnostician** : Kevin Marson  
**Test Package** : MOB 1 ( Additional Tests: FuelDilution, PercentFuel )  
 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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