



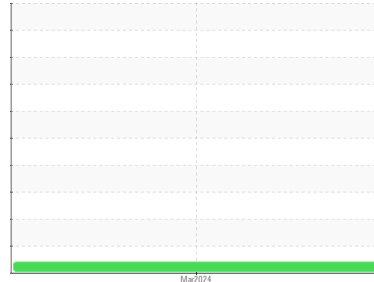
# OIL ANALYSIS REPORT

Sample Rating Trend

VISCOSITY



Machine Id  
**914034**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**



## DIAGNOSIS

### Recommendation

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

### Wear

Metal levels are typical for a new component breaking in.

### Contamination

Fuel content negligible. 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>GFL0116162</b>	---	---
Sample Date	Client Info		<b>20 Mar 2024</b>	---	---
Machine Age	hrs	Client Info	<b>634</b>	---	---
Oil Age	hrs	Client Info	<b>634</b>	---	---
Oil Changed	Client Info		<b>Changed</b>	---	---
Sample Status			<b>ATTENTION</b>	---	---

## CONTAMINATION

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

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >120	<b>53</b>	---	---
Chromium	ppm	ASTM D5185m >20	<b>1</b>	---	---
Nickel	ppm	ASTM D5185m >5	<b>4</b>	---	---
Titanium	ppm	ASTM D5185m >2	<b>&lt;1</b>	---	---
Silver	ppm	ASTM D5185m >2	<b>0</b>	---	---
Aluminum	ppm	ASTM D5185m >20	<b>6</b>	---	---
Lead	ppm	ASTM D5185m >40	<b>&lt;1</b>	---	---
Copper	ppm	ASTM D5185m >330	<b>96</b>	---	---
Tin	ppm	ASTM D5185m >15	<b>3</b>	---	---
Vanadium	ppm	ASTM D5185m	<b>&lt;1</b>	---	---
Cadmium	ppm	ASTM D5185m	<b>0</b>	---	---

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>146</b>	---	---
Barium	ppm	ASTM D5185m 0	<b>0</b>	---	---
Molybdenum	ppm	ASTM D5185m 60	<b>118</b>	---	---
Manganese	ppm	ASTM D5185m 0	<b>4</b>	---	---
Magnesium	ppm	ASTM D5185m 1010	<b>777</b>	---	---
Calcium	ppm	ASTM D5185m 1070	<b>1540</b>	---	---
Phosphorus	ppm	ASTM D5185m 1150	<b>749</b>	---	---
Zinc	ppm	ASTM D5185m 1270	<b>888</b>	---	---
Sulfur	ppm	ASTM D5185m 2060	<b>2847</b>	---	---

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>63</b>	---	---
Sodium	ppm	ASTM D5185m	<b>2</b>	---	---
Potassium	ppm	ASTM D5185m >20	<b>6</b>	---	---
Fuel	%	ASTM D3524 >3.0	<b>0.4</b>	---	---

## INFRA-RED

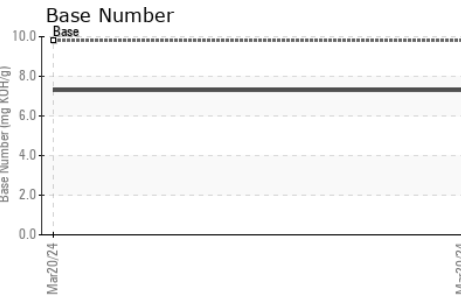
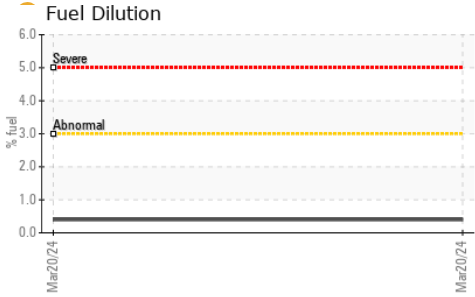
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	<b>0.5</b>	---	---
Nitration	Abs/cm	*ASTM D7624 >20	<b>9.9</b>	---	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>24.1</b>	---	---

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>21.9</b>	---	---
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>7.3</b>	---	---



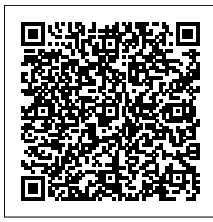
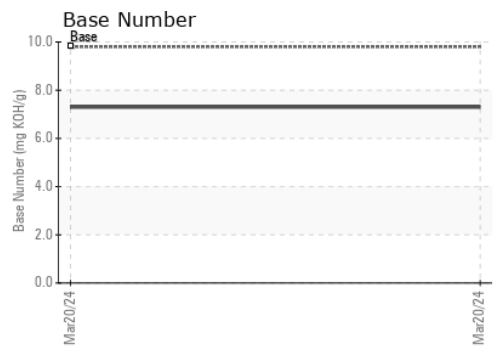
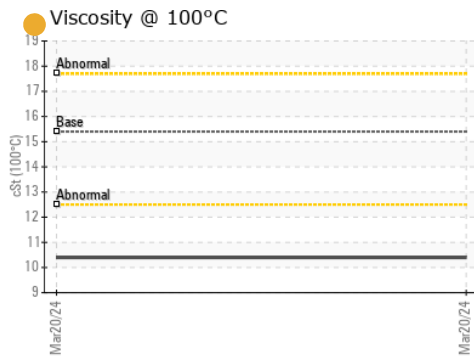
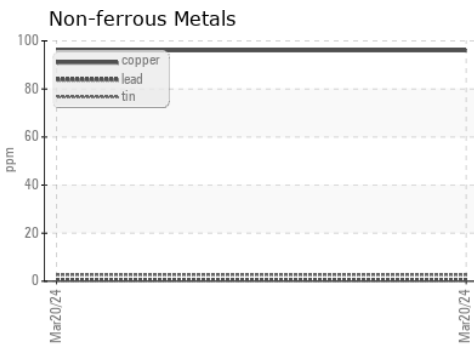
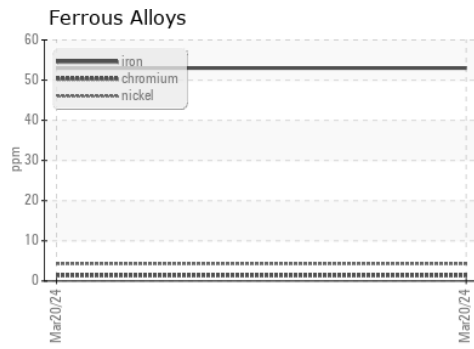
# OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2	
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---
Precipitate	scalar	*Visual	NONE	NONE	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	NONE	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
Appearance	scalar	*Visual	NORML	NORML	---	---
Odor	scalar	*Visual	NORML	NORML	---	---
Emulsified Water	scalar	*Visual	>0.2	NEG	---	---
Free Water	scalar	*Visual		NEG	---	---

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	15.4	● 10.4	---	---

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0116162 **Received** : 26 Mar 2024  
**Lab Number** : 06129771 **Tested** : 02 Apr 2024  
**Unique Number** : 10949236 **Diagnosed** : 02 Apr 2024 - Jonathan Hester  
**Test Package** : FLEET ( Additional Tests: FuelDilution, PercentFuel )

**GFL Environmental - 947 - WB Horicon HC**  
 N7296 County Rd V  
 Horicon, WI  
 US 53032  
 Contact: Tim Kieffer  
 tim.kieffer@gflenv.com  
 T: (608)219-0288  
 F:

Certificate L2367  
 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)