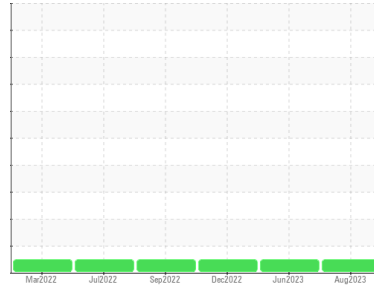




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**810033**

Component  
**Diesel Engine**

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

## DIAGNOSIS

### Recommendation

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 BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

## SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	<b>GFL0092518</b>	GFL0077916	GFL0064267
Sample Date	Client Info	<b>18 Aug 2023</b>	30 Jun 2023	30 Dec 2022
Machine Age	hrs	<b>4456</b>	4146	3263
Oil Age	hrs	<b>610</b>	602	604
Oil Changed	Client Info	<b>Changed</b>	Changed	Changed
Sample Status		<b>NORMAL</b>	NORMAL	NORMAL

## CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >3.0	<b>&lt;1.0</b>	<1.0	<1.0
Glycol	WC Method	<b>NEG</b>	NEG	NEG

## WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m >90	<b>27</b>	52	41
Chromium	ppm	ASTM D5185m >20	<b>1</b>	2	2
Nickel	ppm	ASTM D5185m >2	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185m >2	<b>0</b>	0	0
Silver	ppm	ASTM D5185m >2	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m >20	<b>7</b>	17	8
Lead	ppm	ASTM D5185m >40	<b>&lt;1</b>	<1	<1
Copper	ppm	ASTM D5185m >330	<b>2</b>	4	2
Tin	ppm	ASTM D5185m >15	<b>&lt;1</b>	<1	<1
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>&lt;1</b>	3	0
Barium	ppm	ASTM D5185m 0	<b>3</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>59</b>	65	60
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 1010	<b>927</b>	964	921
Calcium	ppm	ASTM D5185m 1070	<b>1023</b>	1141	1081
Phosphorus	ppm	ASTM D5185m 1150	<b>987</b>	1043	962
Zinc	ppm	ASTM D5185m 1270	<b>1158</b>	1264	1277
Sulfur	ppm	ASTM D5185m 2060	<b>2770</b>	2907	3223

## CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >25	<b>6</b>	10	5
Sodium	ppm	ASTM D5185m	<b>5</b>	4	4
Potassium	ppm	ASTM D5185m >20	<b>11</b>	26	9

## INFRA-RED

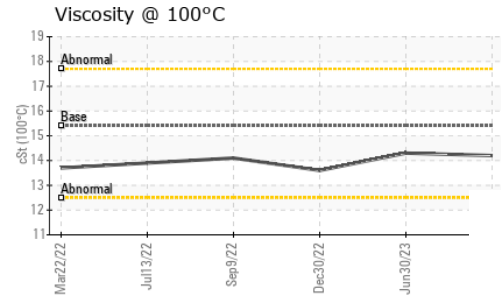
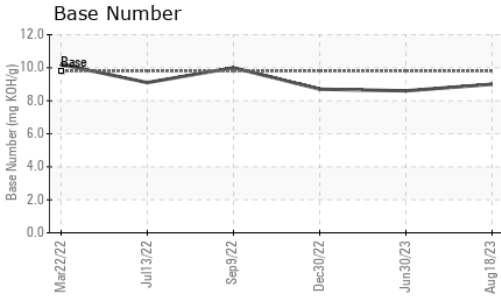
method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844 >6	<b>0.9</b>	1.5	1.2
Nitration	Abs/cm	*ASTM D7624 >20	<b>8.0</b>	10.3	9.0
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>20.0</b>	22.1	19.9

## FLUID DEGRADATION

method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>15.3</b>	17.2	15.4
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>9.0</b>	8.6	8.7



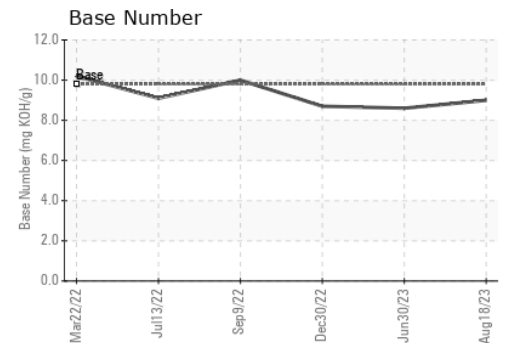
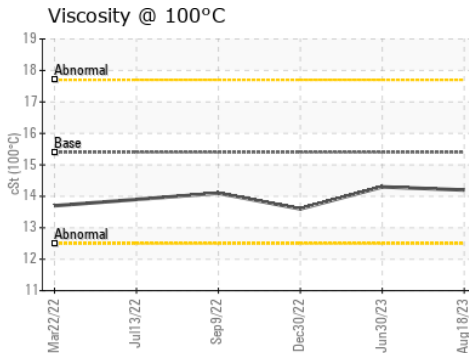
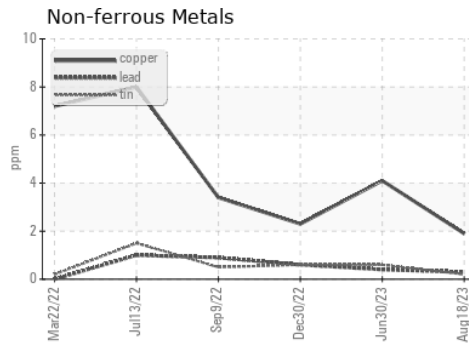
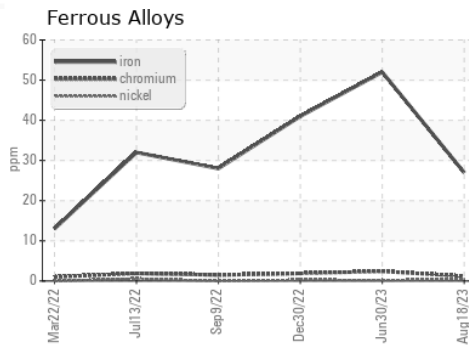
# OIL ANALYSIS REPORT



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

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	15.4	<b>14.2</b>	14.3	13.6

## GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : GFL0092518 Received : 28 Aug 2023  
 Lab Number : **05936518** Diagnosed : 29 Aug 2023  
 Unique Number : 10621789 Diagnostician : Don Baldrige  
 Test Package : FLEET

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:

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)