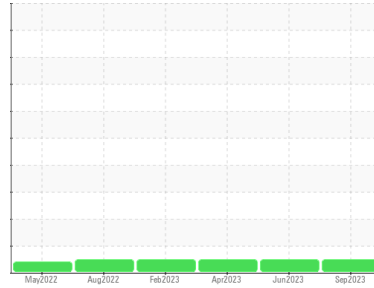




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**412036**

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>GFL0092516</b>	GFL0077915	GFL0071640
Sample Date	Client Info		<b>12 Sep 2023</b>	12 Jun 2023	26 Apr 2023
Machine Age	hrs	Client Info	<b>4433</b>	3267	2660
Oil Age	hrs	Client Info	<b>604</b>	604	623
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	>5	<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 >100	<b>9</b>	10	11
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m >4	<b>&lt;1</b>	3	5
Titanium	ppm	ASTM D5185m	<b>0</b>	0	0
Silver	ppm	ASTM D5185m >3	<b>&lt;1</b>	<1	0
Aluminum	ppm	ASTM D5185m >20	<b>0</b>	<1	2
Lead	ppm	ASTM D5185m >40	<b>0</b>	2	0
Copper	ppm	ASTM D5185m >330	<b>0</b>	2	2
Tin	ppm	ASTM D5185m >15	<b>0</b>	1	0
Vanadium	ppm	ASTM D5185m	<b>0</b>	<1	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	<1	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>1</b>	<1	0
Barium	ppm	ASTM D5185m 0	<b>0</b>	<1	0
Molybdenum	ppm	ASTM D5185m 60	<b>60</b>	63	61
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 1010	<b>983</b>	1034	1026
Calcium	ppm	ASTM D5185m 1070	<b>1071</b>	1148	1120
Phosphorus	ppm	ASTM D5185m 1150	<b>961</b>	1047	1030
Zinc	ppm	ASTM D5185m 1270	<b>1257</b>	1322	1292
Sulfur	ppm	ASTM D5185m 2060	<b>3322</b>	3400	3160

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>3</b>	6	3
Sodium	ppm	ASTM D5185m	<b>4</b>	6	2
Potassium	ppm	ASTM D5185m >20	<b>2</b>	2	3

## INFRA-RED

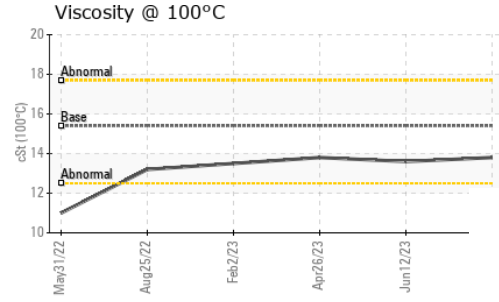
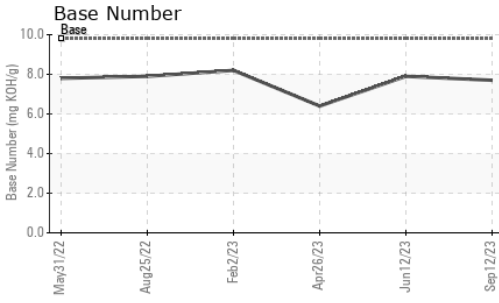
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0.4</b>	0.4	0.4
Nitration	Abs/cm	*ASTM D7624 >20	<b>8.2</b>	8.7	8.2
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>19.7</b>	20.4	17.9

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>16.6</b>	17.2	15.7
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>7.7</b>	7.9	6.4



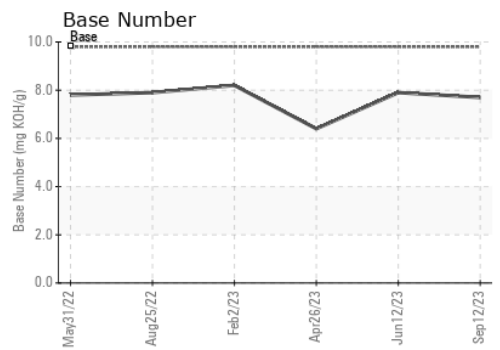
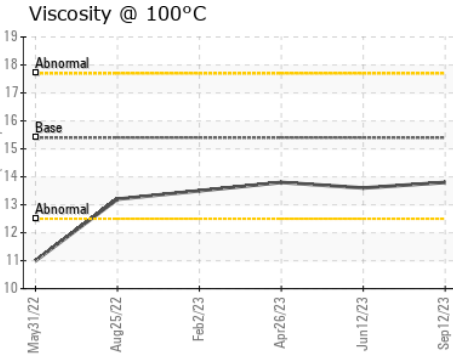
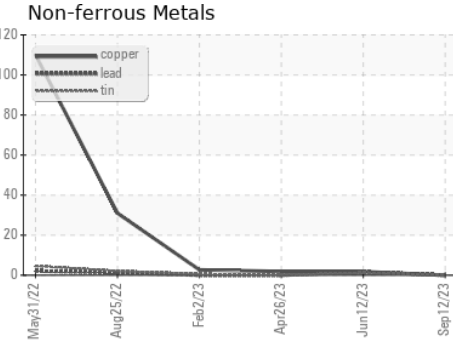
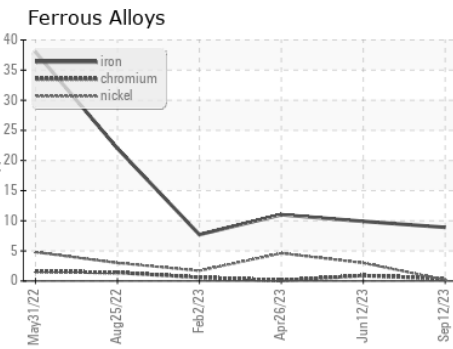
# OIL ANALYSIS REPORT



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	<b>13.8</b>	13.6	13.8

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0092516 **Received** : 18 Sep 2023  
**Lab Number** : 05954592 **Diagnosed** : 20 Sep 2023  
**Unique Number** : 10655805 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

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