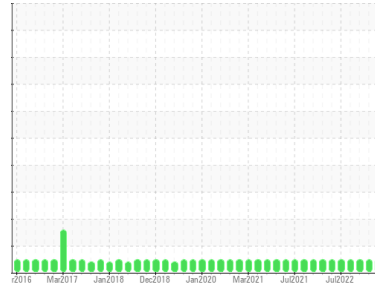




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id

**2513**

Component

**Diesel Engine**

Fluid

**PETRO CANADA DURON SHP 15W40 (34 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>GFL0092735</b>	GFL0092711	GFL0086428
Sample Date	Client Info		<b>15 Dec 2023</b>	03 Nov 2023	04 Jul 2023
Machine Age	hrs	Client Info	<b>92071</b>	92071	92071
Oil Age	hrs	Client Info	<b>636</b>	375	582
Oil Changed	Client Info		<b>Changed</b>	Not Changd	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
Water	WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol	WC Method		<b>NEG</b>	NEG	NEG

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >90	<b>44</b>	25	73
Chromium	ppm	ASTM D5185m >20	<b>2</b>	1	3
Nickel	ppm	ASTM D5185m >2	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m >2	<b>0</b>	0	<1
Silver	ppm	ASTM D5185m >2	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185m >20	<b>12</b>	8	15
Lead	ppm	ASTM D5185m >40	<b>21</b>	9	22
Copper	ppm	ASTM D5185m >330	<b>5</b>	4	9
Tin	ppm	ASTM D5185m >15	<b>1</b>	<1	2
Vanadium	ppm	ASTM D5185m	<b>0</b>	<1	<1
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>5</b>	10	6
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	<1
Molybdenum	ppm	ASTM D5185m 60	<b>65</b>	65	63
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 1010	<b>1005</b>	1014	1005
Calcium	ppm	ASTM D5185m 1070	<b>1171</b>	1200	1219
Phosphorus	ppm	ASTM D5185m 1150	<b>1055</b>	1088	1059
Zinc	ppm	ASTM D5185m 1270	<b>1363</b>	1396	1317
Sulfur	ppm	ASTM D5185m 2060	<b>2771</b>	3204	3511

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>15</b>	9	21
Sodium	ppm	ASTM D5185m	<b>14</b>	3	4
Potassium	ppm	ASTM D5185m >20	<b>9</b>	3	3

## INFRA-RED

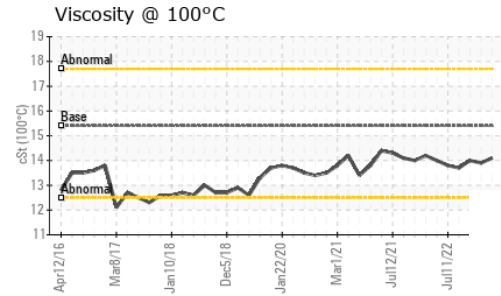
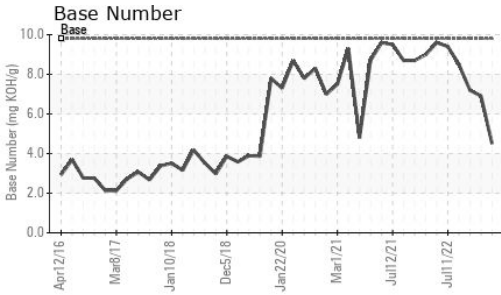
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >6	<b>0.9</b>	0.6	1.1
Nitration	Abs/cm	*ASTM D7624 >20	<b>14.0</b>	10.0	11.4
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>28.3</b>	22.6	24.4

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>26.8</b>	19.5	21.0
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>4.5</b>	6.9	7.2



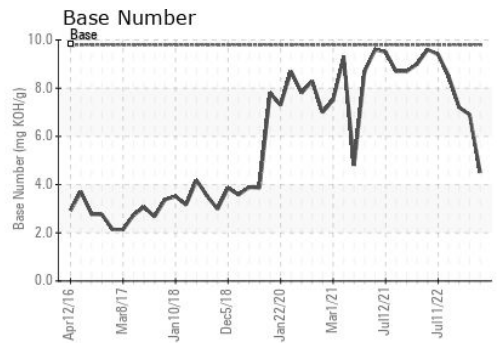
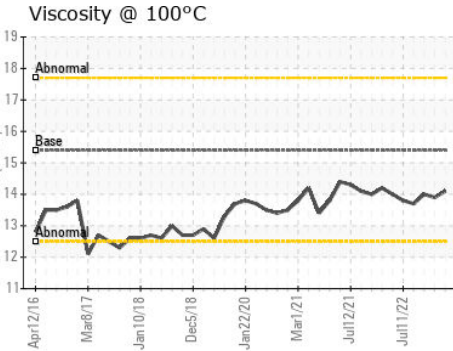
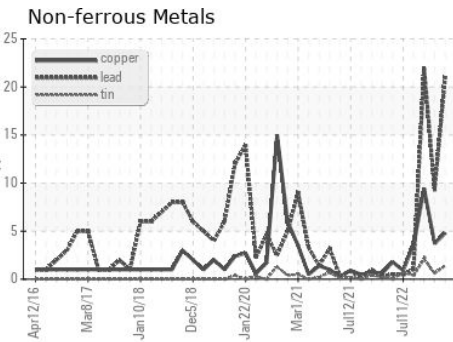
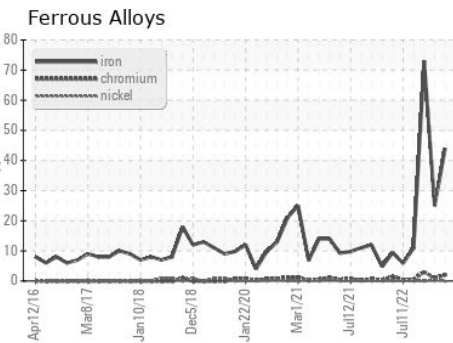
# OIL ANALYSIS REPORT



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	14.1	13.9

## GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : GFL0092735  
 Lab Number : 06037527  
 Unique Number : 10792756  
 Test Package : FLEET

GFL Environmental - 005 - Wilson/Tri-East (CNG)  
 2810 Contentnea Road S  
 Wilson, NC  
 US 27893-8501  
 Contact: SPENCER LIGGON  
 spencer.liggon@gflenv.com  
 T: (800)207-6618  
 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)