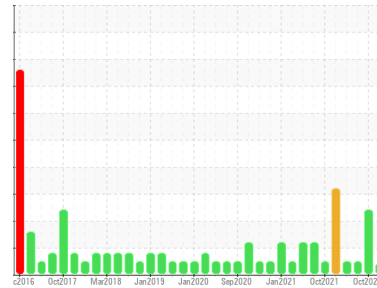




# OIL ANALYSIS REPORT

Sample Rating Trend



## VISCOSITY



Machine Id  
**3725**

Component  
**Diesel Engine**

Fluid  
**PETRO CANADA DURON SHP 15W40 (11 GAL)**

### DIAGNOSIS

#### ▲ Recommendation

Oil and filter change at the time of sampling has been noted. 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 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>GFL0106102</b>	GFL0092474	GFL0083641
Sample Date	Client Info		<b>26 Dec 2023</b>	12 Oct 2023	30 Jun 2023
Machine Age	hrs	Client Info	<b>17763</b>	16874	16874
Oil Age	hrs	Client Info	<b>0</b>	91	383
Oil Changed	Client Info		<b>Changed</b>	Not Changd	Changed
Sample Status			<b>ATTENTION</b>	ABNORMAL	NORMAL

### CONTAMINATION

	method	limit/base	current	history1	history2
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 >75	<b>34</b>	12	20
Chromium	ppm	ASTM D5185m >5	<b>2</b>	<1	<1
Nickel	ppm	ASTM D5185m >4	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m >2	<b>0</b>	0	0
Silver	ppm	ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >15	<b>8</b>	0	1
Lead	ppm	ASTM D5185m >25	<b>&lt;1</b>	<1	0
Copper	ppm	ASTM D5185m >100	<b>0</b>	<1	1
Tin	ppm	ASTM D5185m >4	<b>2</b>	<1	0
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>10</b>	2	11
Barium	ppm	ASTM D5185m 0	<b>0</b>	2	0
Molybdenum	ppm	ASTM D5185m 60	<b>54</b>	51	62
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 1010	<b>823</b>	▲ 632	894
Calcium	ppm	ASTM D5185m 1070	<b>900</b>	▲ 802	1111
Phosphorus	ppm	ASTM D5185m 1150	<b>964</b>	775	992
Zinc	ppm	ASTM D5185m 1270	<b>1138</b>	▲ 897	1236
Sulfur	ppm	ASTM D5185m 2060	<b>2808</b>	2285	3540

### CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>9</b>	4	5
Sodium	ppm	ASTM D5185m	<b>25</b>	3	58
Potassium	ppm	ASTM D5185m >20	<b>1</b>	1	3
Fuel	%	ASTM D3524 >3.0	<b>&lt;1.0</b>	▲ 1.6	<1.0

### INFRA-RED

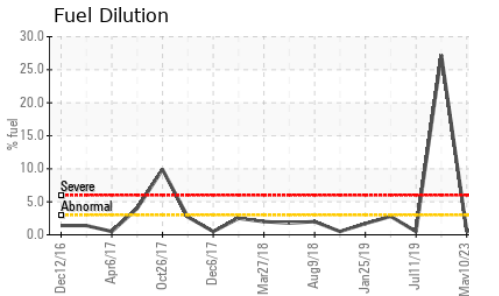
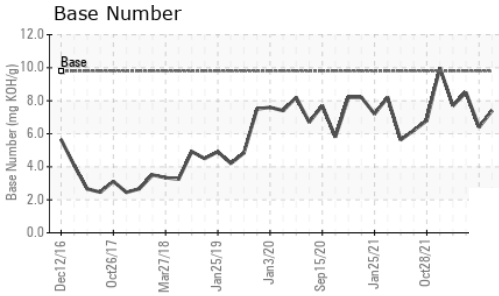
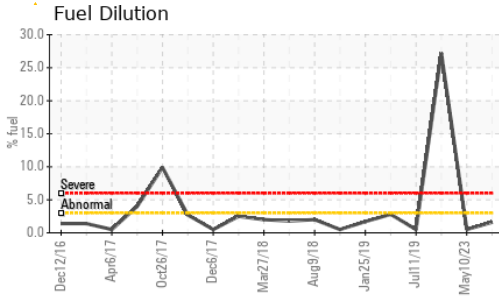
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >6	<b>0.8</b>	0.5	0.6
Nitration	Abs/cm	*ASTM D7624 >20	<b>9.2</b>	5.7	7.5
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>19.8</b>	16.6	19.4

### FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>15.5</b>	10.9	13.9
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>7.4</b>	6.4	8.5



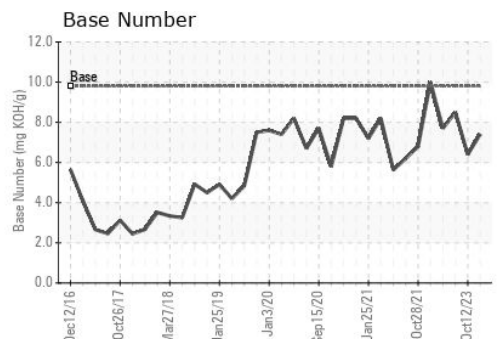
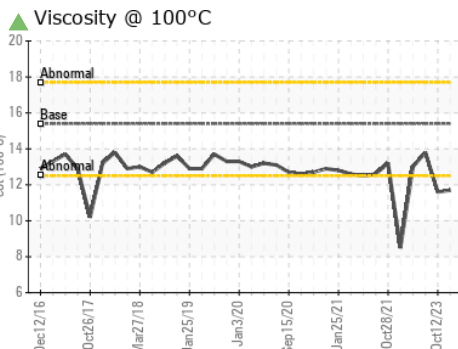
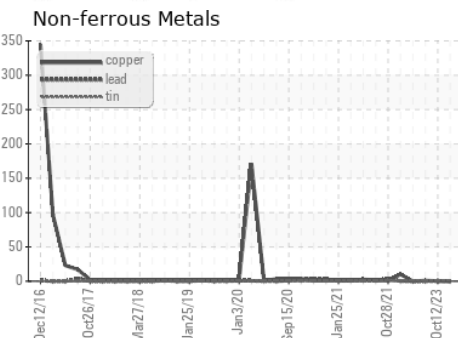
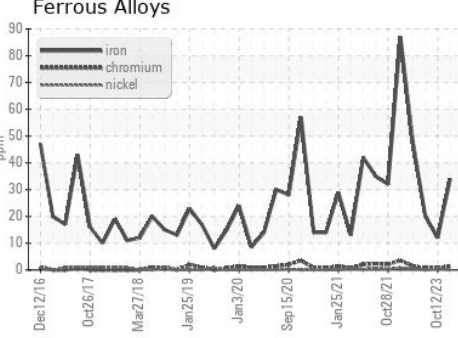
# OIL ANALYSIS REPORT



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	▲ 11.7	▲ 11.6

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0106102 **Received** : 28 Dec 2023  
**Lab Number** : 06047162 **Diagnosed** : 29 Dec 2023  
**Unique Number** : 10807770 **Diagnostician** : Jonathan Hester  
**Test Package** : FLEET ( Additional Tests: FUELDILUTION, PercentFuel )

**GFL Environmental - 152 - Jacksonville**  
 7580 PHILIPS HWY  
 Jacksonville, FL  
 US 32256  
 Contact: GRANVILLE CARROLL  
 gcarroll@gflenv.com  
 T: 1(904)252-6815  
 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)