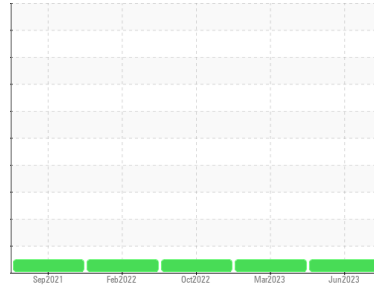




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**928022-537**

Component  
**Diesel Engine**

Fluid  
**PETRO CANADA DURON HP 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	history 1	history 2
Sample Number	Client Info	<b>GFL0062192</b>	GFL0062238	GFL0055093
Sample Date	Client Info	<b>26 Jun 2023</b>	13 Mar 2023	05 Oct 2022
Machine Age	hrs	<b>25645</b>	25577	25478
Oil Age	hrs	<b>168</b>	99	518
Oil Changed	Client Info	<b>Not Chngd</b>	Not Chngd	Changed
Sample Status		<b>NORMAL</b>	NORMAL	NORMAL

## CONTAMINATION

method	limit/base	current	history 1	history 2
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	history 1	history 2
Iron	ppm ASTM D5185m >100	<b>8</b>	15	47
Chromium	ppm ASTM D5185m >20	<b>&lt;1</b>	<1	2
Nickel	ppm ASTM D5185m >4	<b>&lt;1</b>	0	1
Titanium	ppm ASTM D5185m	<b>0</b>	0	1
Silver	ppm ASTM D5185m >3	<b>0</b>	0	1
Aluminum	ppm ASTM D5185m >20	<b>1</b>	1	2
Lead	ppm ASTM D5185m >40	<b>0</b>	<1	1
Copper	ppm ASTM D5185m >330	<b>&lt;1</b>	<1	2
Tin	ppm ASTM D5185m >15	<b>&lt;1</b>	0	1
Antimony	ppm ASTM D5185m	<b>---</b>	---	---
Vanadium	ppm ASTM D5185m	<b>0</b>	0	2
Cadmium	ppm ASTM D5185m	<b>0</b>	0	<1

## ADDITIVES

method	limit/base	current	history 1	history 2
Boron	ppm ASTM D5185m	<b>12</b>	6	8
Barium	ppm ASTM D5185m	<b>0</b>	0	<1
Molybdenum	ppm ASTM D5185m	<b>60</b>	60	60
Manganese	ppm ASTM D5185m	<b>&lt;1</b>	<1	2
Magnesium	ppm ASTM D5185m	<b>929</b>	845	864
Calcium	ppm ASTM D5185m	<b>1120</b>	1118	1106
Phosphorus	ppm ASTM D5185m	<b>1031</b>	971	1000
Zinc	ppm ASTM D5185m	<b>1262</b>	1138	1191
Sulfur	ppm ASTM D5185m	<b>3798</b>	2928	3265

## CONTAMINANTS

method	limit/base	current	history 1	history 2
Silicon	ppm ASTM D5185m >25	<b>3</b>	5	10
Sodium	ppm ASTM D5185m	<b>1</b>	0	20
Potassium	ppm ASTM D5185m >20	<b>&lt;1</b>	2	2

## INFRA-RED

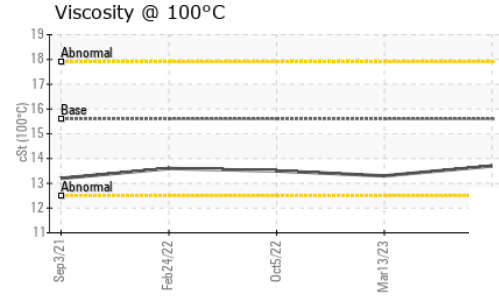
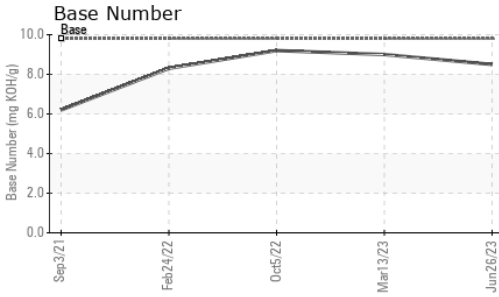
method	limit/base	current	history 1	history 2
Soot %	% *ASTM D7844 >3	<b>0.3</b>	0.3	0.9
Nitration	Abs/cm *ASTM D7624 >20	<b>5.4</b>	5.9	8.4
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>18.3</b>	17.8	20.9

## FLUID DEGRADATION

method	limit/base	current	history 1	history 2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>14.3</b>	12.8	15.0
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>8.5</b>	9.0	9.2



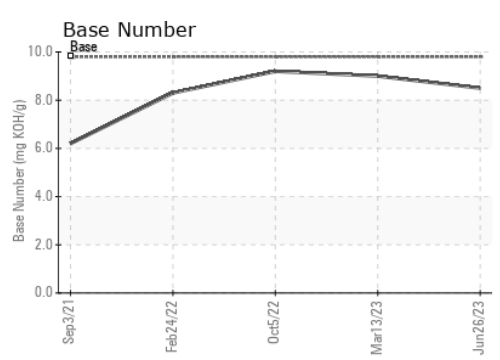
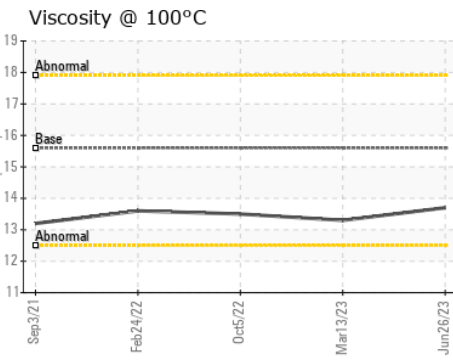
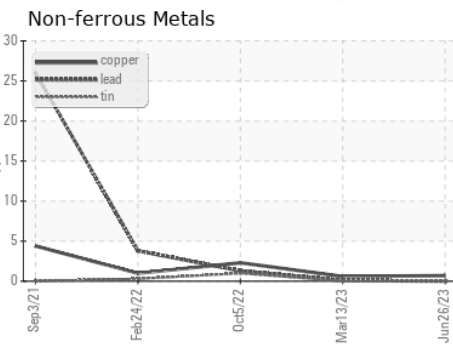
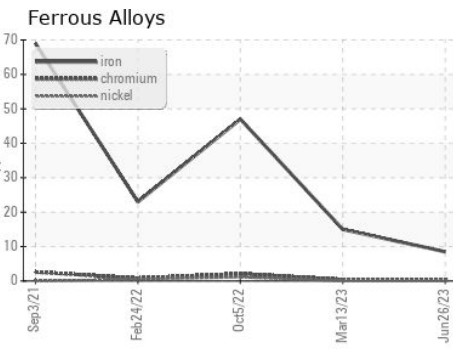
# OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history 1	history 2
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	history 1	history 2	
Visc @ 100°C	cSt	ASTM D445	15.6	<b>13.7</b>	13.3	13.5

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0062192 **Received** : 29 Jun 2023  
**Lab Number** : **05886465** **Diagnosed** : 02 Jul 2023  
**Unique Number** : 10536948 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 626 - Cadillac Hauling**  
 1501 Ron Wilson St  
 Cadillac, MI  
 US 49601  
 Contact: GARY BREWER  
 gbrewerjr@gflenv.com  
 T:  
 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)