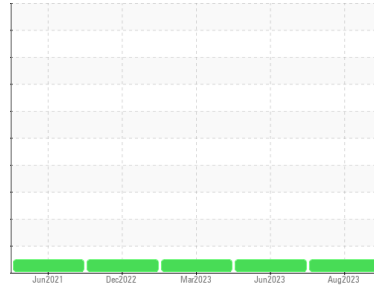




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**424019-856**

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	history1	history2
Sample Number	Client Info		<b>GFL0062212</b>	GFL0062187	GFL0062236
Sample Date	Client Info		<b>01 Aug 2023</b>	25 Jun 2023	13 Mar 2023
Machine Age	hrs	Client Info	<b>17293</b>	17075	16487
Oil Age	hrs	Client Info	<b>820</b>	360	500
Oil Changed	Client Info		<b>Changed</b>	Not Changd	N/A
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>35</b>	24	51
Chromium	ppm	ASTM D5185m >20	<b>1</b>	<1	2
Nickel	ppm	ASTM D5185m >4	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m	<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m >3	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m >20	<b>4</b>	4	7
Lead	ppm	ASTM D5185m >40	<b>2</b>	0	7
Copper	ppm	ASTM D5185m >330	<b>2</b>	1	4
Tin	ppm	ASTM D5185m >15	<b>&lt;1</b>	<1	1
Vanadium	ppm	ASTM D5185m	<b>&lt;1</b>	0	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	<b>6</b>	8	11
Barium	ppm	ASTM D5185m	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	<b>67</b>	66	78
Manganese	ppm	ASTM D5185m	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	<b>1048</b>	1014	1001
Calcium	ppm	ASTM D5185m	<b>1280</b>	1214	1338
Phosphorus	ppm	ASTM D5185m	<b>1115</b>	1092	1125
Zinc	ppm	ASTM D5185m	<b>1381</b>	1360	1347
Sulfur	ppm	ASTM D5185m	<b>3527</b>	3698	2984

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>17</b>	21	13
Sodium	ppm	ASTM D5185m	<b>4</b>	2	0
Potassium	ppm	ASTM D5185m >20	<b>6</b>	4	13

## INFRA-RED

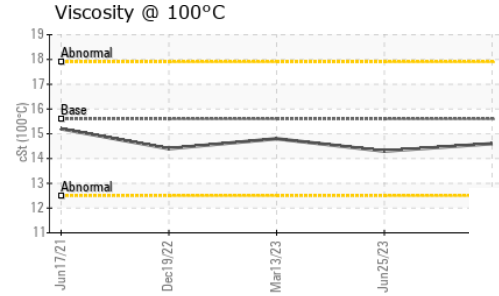
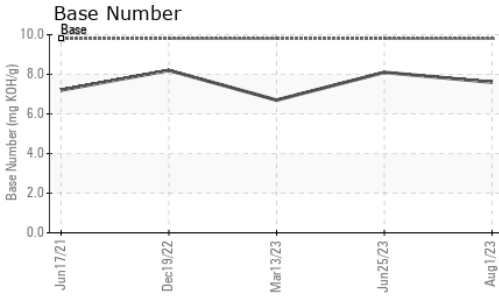
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>1.4</b>	1.2	2.5
Nitration	Abs/cm	*ASTM D7624 >20	<b>10.9</b>	9.7	13.6
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>23.3</b>	22.7	28.9

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>18.6</b>	18.3	21.9
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>7.6</b>	8.1	6.7



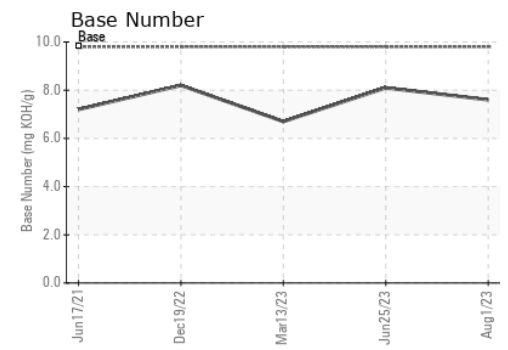
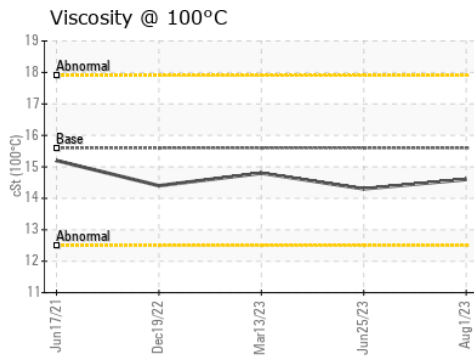
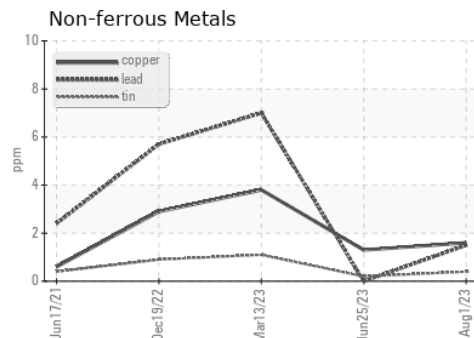
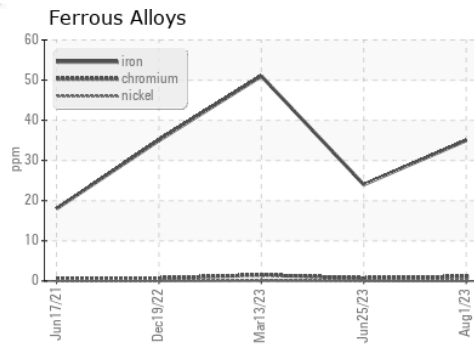
# OIL ANALYSIS REPORT



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	15.6	<b>14.6</b>	14.3	14.8

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0062212 **Received** : 08 Aug 2023  
**Lab Number** : **05918343** **Diagnosed** : 08 Aug 2023  
**Unique Number** : 10590257 **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

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)