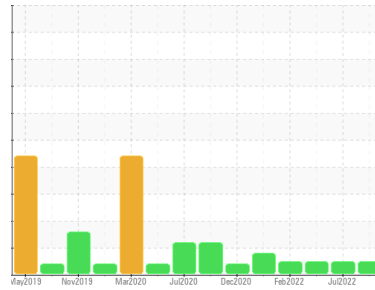




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**425058-402291**  
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>GFL0087901</b>	GFL0048666	GFL0048747
Sample Date	Client Info	<b>24 Jul 2023</b>	07 Jul 2022	29 Mar 2022
Machine Age	hrs	<b>20839</b>	377607	18138
Oil Age	hrs	<b>600</b>	0	0
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 >3.0	<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 >120	<b>21</b>	7	11
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m >5	<b>2</b>	<1	1
Titanium	ppm	ASTM D5185m >2	<b>0</b>	0	0
Silver	ppm	ASTM D5185m >2	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185m >20	<b>5</b>	2	3
Lead	ppm	ASTM D5185m >40	<b>1</b>	<1	<1
Copper	ppm	ASTM D5185m >330	<b>41</b>	2	2
Tin	ppm	ASTM D5185m >15	<b>1</b>	1	<1
Antimony	ppm	ASTM D5185m	<b>---</b>	---	---
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>&lt;1</b>	2	2
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>64</b>	61	59
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 1010	<b>1070</b>	992	1040
Calcium	ppm	ASTM D5185m 1070	<b>1119</b>	1175	1139
Phosphorus	ppm	ASTM D5185m 1150	<b>1031</b>	1032	1094
Zinc	ppm	ASTM D5185m 1270	<b>1380</b>	1284	1371
Sulfur	ppm	ASTM D5185m 2060	<b>3020</b>	3451	2604

## CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >25	<b>8</b>	4	4
Sodium	ppm	ASTM D5185m	<b>16</b>	6	7
Potassium	ppm	ASTM D5185m >20	<b>12</b>	0	1

## INFRA-RED

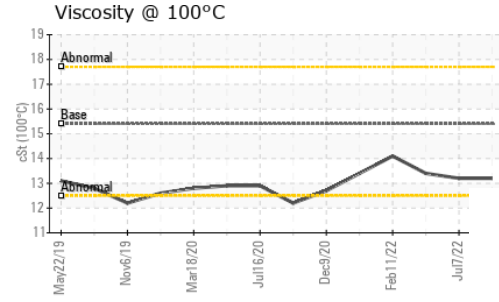
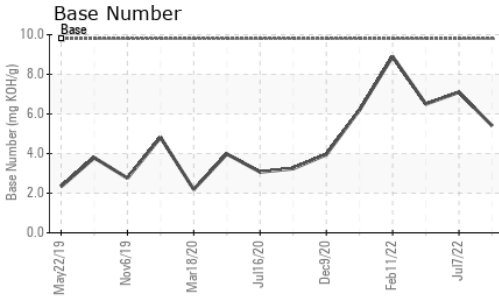
method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844 >4	<b>1.2</b>	0.5	0.5
Nitration	Abs/cm	*ASTM D7624 >20	<b>10.7</b>	9.1	9.2
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>23.2</b>	20.9	21.2

## FLUID DEGRADATION

method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>19.9</b>	16.9	17.1
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>5.4</b>	7.1	6.5



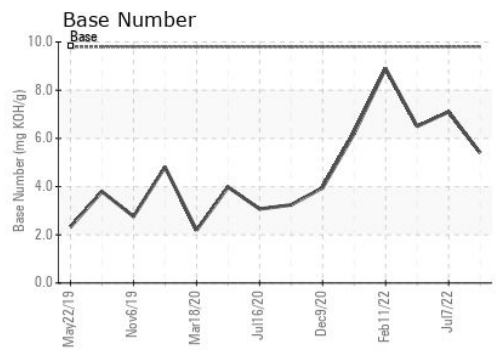
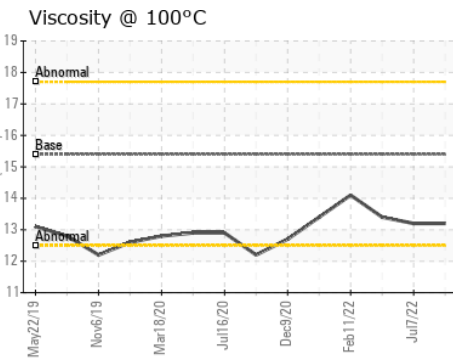
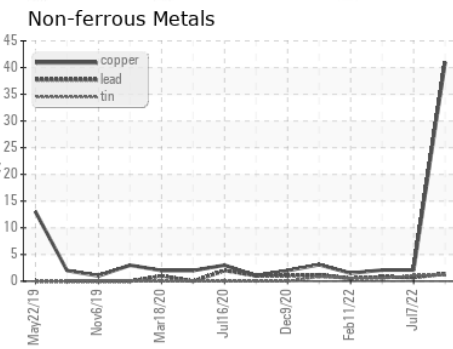
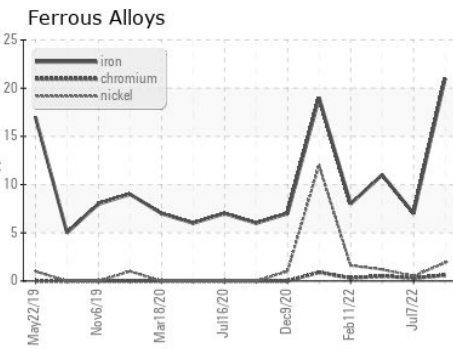
# OIL ANALYSIS REPORT



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	<b>13.2</b>	13.2	13.4

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0087901 **Received** : 08 Aug 2023  
**Lab Number** : **05918398** **Diagnosed** : 09 Aug 2023  
**Unique Number** : 10590312 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 856 - Houston South**  
 8515 Highway 6 South  
 Houston, TX  
 US 77083  
 Contact: KEITH ROWALD  
 krowald@gflenv.com  
 T: (303)641-3906  
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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)