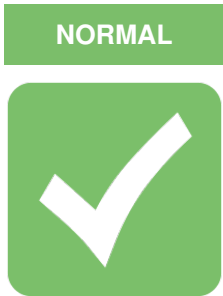
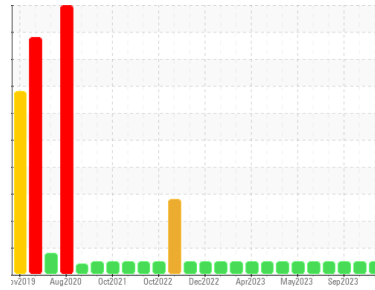




# OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id  
**429060-402468**

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>GFL0098466</b>	GFL0098489	GFL0083714
Sample Date	Client Info	<b>31 Oct 2023</b>	11 Oct 2023	21 Sep 2023
Machine Age	hrs	Client Info	0	0
Oil Age	hrs	Client Info	0	600
Oil Changed	Client Info	<b>Not Changed</b>	Not Changed	Changed
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 >110	<b>12</b>	10	42
Chromium	ppm	ASTM D5185m >4	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m >2	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m	<b>0</b>	<1	<1
Silver	ppm	ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >25	<b>2</b>	2	1
Lead	ppm	ASTM D5185m >45	<b>&lt;1</b>	1	6
Copper	ppm	ASTM D5185m >85	<b>&lt;1</b>	<1	2
Tin	ppm	ASTM D5185m >4	<b>&lt;1</b>	<1	<1
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	<1
Cadmium	ppm	ASTM D5185m	<b>0</b>	<1	<1

## ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m 0	<b>4</b>	<1	<1
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>58</b>	51	60
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 1010	<b>899</b>	886	964
Calcium	ppm	ASTM D5185m 1070	<b>1167</b>	1075	1276
Phosphorus	ppm	ASTM D5185m 1150	<b>1043</b>	905	1000
Zinc	ppm	ASTM D5185m 1270	<b>1247</b>	1178	1278
Sulfur	ppm	ASTM D5185m 2060	<b>3004</b>	2837	3503

## CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >30	<b>4</b>	4	6
Sodium	ppm	ASTM D5185m	<b>5</b>	4	6
Potassium	ppm	ASTM D5185m >20	<b>1</b>	4	6

## INFRA-RED

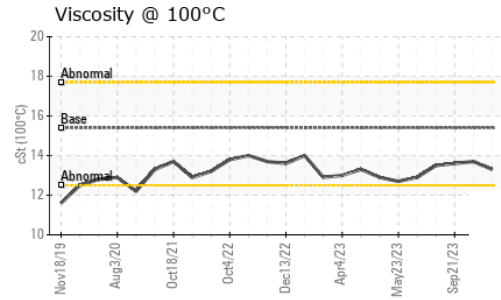
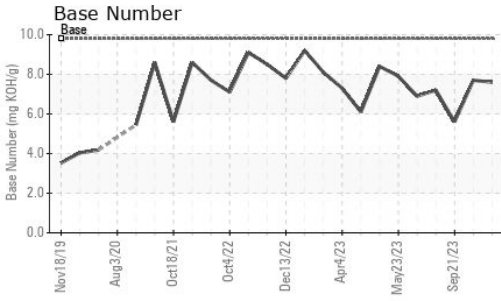
method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844 >3	<b>0.2</b>	0.2	0.4
Nitration	Abs/cm	*ASTM D7624 >20	<b>8.4</b>	6.9	11.1
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>21.0</b>	19.1	24.3

## FLUID DEGRADATION

method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>17.3</b>	15.2	21.8
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>7.6</b>	7.7	5.6



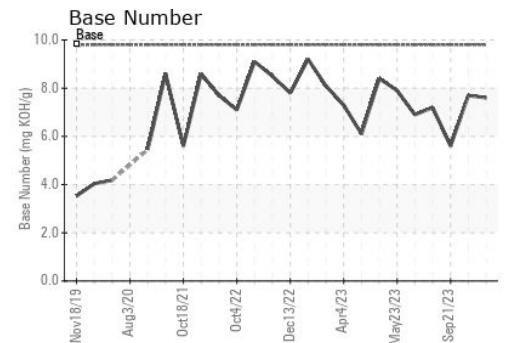
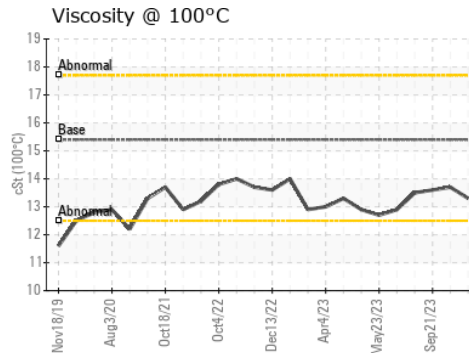
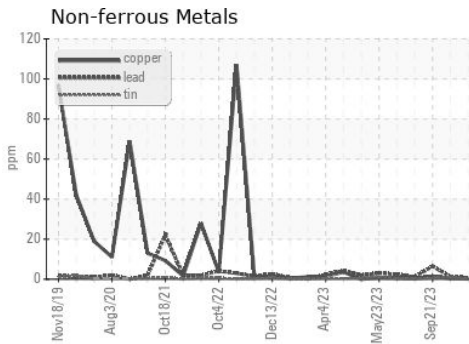
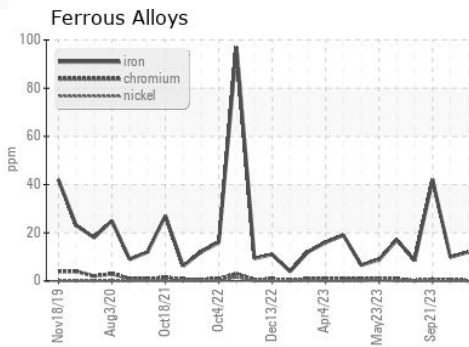
# OIL ANALYSIS REPORT



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>13.3</b>	13.7

## GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : GFL0098466  
 Lab Number : **05998654**  
 Unique Number : 10727014  
 Test Package : FLEET

**GFL Environmental - 846 - Mayfield Hauling**  
 3426 State Route 45  
 Mayfield, KY  
 US 42066  
 Contact: Jack Lindsey  
 jack.lindsey@gflenv.com  
 T: (270)970-3690  
 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)