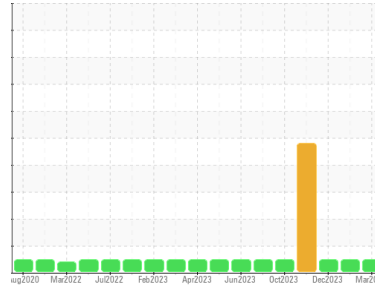




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**828022-1193**

Component  
**Diesel Engine**

Fluid  
**PETRO CANADA DURON SHP 15W40 (--- LTR)**

## 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>GFL0113597</b>	GFL0113596	GFL0103818
Sample Date	Client Info	<b>21 Mar 2024</b>	08 Mar 2024	29 Dec 2023
Machine Age	hrs	<b>72607</b>	2381	2475
Oil Age	hrs	<b>72607</b>	499	593
Oil Changed	Client Info	<b>N/A</b>	N/A	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
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 >80	<b>36</b>	36	18
Chromium	ppm ASTM D5185m >5	<b>1</b>	1	<1
Nickel	ppm ASTM D5185m >2	<b>&lt;1</b>	<1	0
Titanium	ppm ASTM D5185m	<b>&lt;1</b>	<1	0
Silver	ppm ASTM D5185m >3	<b>0</b>	0	0
Aluminum	ppm ASTM D5185m >30	<b>5</b>	6	3
Lead	ppm ASTM D5185m >30	<b>&lt;1</b>	<1	0
Copper	ppm ASTM D5185m >150	<b>2</b>	1	<1
Tin	ppm ASTM D5185m >5	<b>2</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 0	<b>3</b>	5	7
Barium	ppm ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm ASTM D5185m 60	<b>59</b>	63	57
Manganese	ppm ASTM D5185m 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm ASTM D5185m 1010	<b>957</b>	976	899
Calcium	ppm ASTM D5185m 1070	<b>1119</b>	1169	1041
Phosphorus	ppm ASTM D5185m 1150	<b>959</b>	1121	1021
Zinc	ppm ASTM D5185m 1270	<b>1261</b>	1312	1221
Sulfur	ppm ASTM D5185m 2060	<b>3525</b>	3458	3064

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >20	<b>13</b>	15	7
Sodium	ppm ASTM D5185m	<b>6</b>	6	2
Potassium	ppm ASTM D5185m >20	<b>2</b>	2	<1

## INFRA-RED

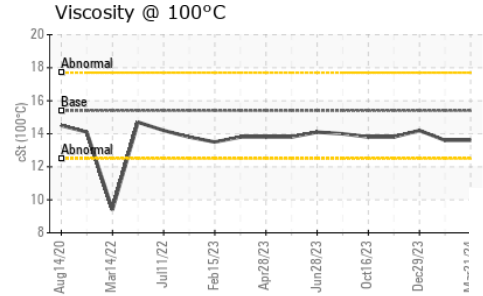
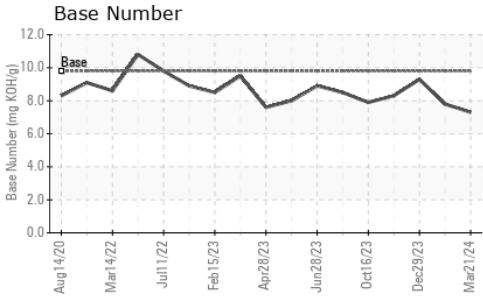
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	<b>0.3</b>	0.3	0.1
Nitration	Abs/cm *ASTM D7624 >20	<b>9.2</b>	8.8	5.2
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>19.2</b>	18.6	17.3

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>16.4</b>	15.7	13.2
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>7.3</b>	7.8	9.3



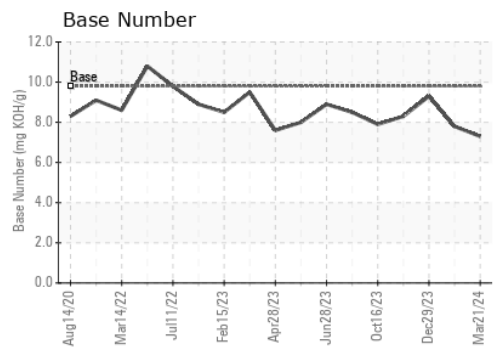
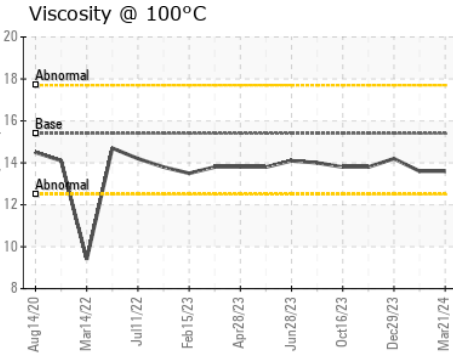
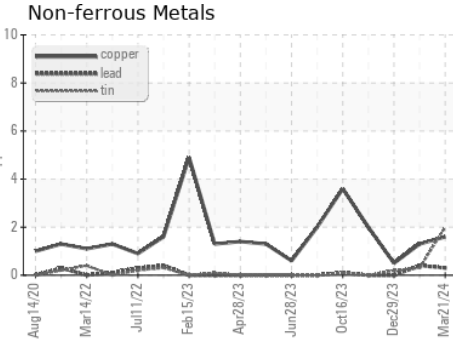
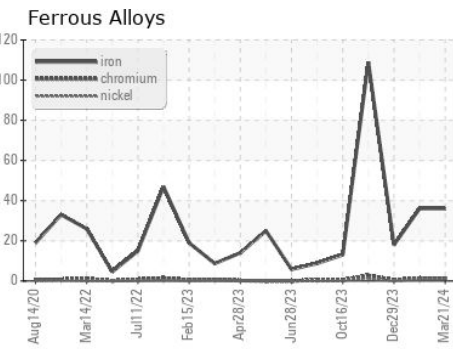
# OIL ANALYSIS REPORT



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>13.6</b>	13.6	14.2

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0113597 **Received** : 27 Mar 2024  
**Lab Number** : **06131352** **Tested** : 28 Mar 2024  
**Unique Number** : 10950817 **Diagnosed** : 28 Mar 2024 - Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 654S - Midlothian**  
 12230 Deergrove Road  
 Midlothian, VA  
 US 23112  
 Contact: Corbin Umphlet  
 cumphlet@gflenv.com

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)