



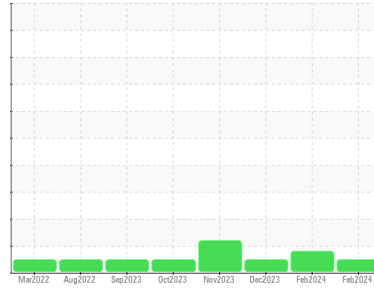
# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**4611M**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (36 QTS)**



## 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>GFL0109974</b>	GFL0110027	GFL0104314
Sample Date	Client Info	<b>02 Feb 2024</b>	02 Feb 2024	27 Dec 2023
Machine Age	hrs	<b>21742</b>	21742	21327
Oil Age	hrs	<b>600</b>	600	21203
Oil Changed	Client Info	<b>Changed</b>	Changed	N/A
Sample Status		<b>NORMAL</b>	ATTENTION	NORMAL

## CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >3.0	<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 >90	<b>7</b>	12	13
Chromium	ppm ASTM D5185m >20	<b>&lt;1</b>	<1	<1
Nickel	ppm ASTM D5185m >2	<b>0</b>	0	<1
Titanium	ppm ASTM D5185m >2	<b>0</b>	0	<1
Silver	ppm ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm ASTM D5185m >20	<b>2</b>	2	<1
Lead	ppm ASTM D5185m >40	<b>0</b>	0	0
Copper	ppm ASTM D5185m >330	<b>0</b>	<1	3
Tin	ppm ASTM D5185m >15	<b>0</b>	0	<1
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>2</b>	2	2
Barium	ppm ASTM D5185m 0	<b>5</b>	5	0
Molybdenum	ppm ASTM D5185m 60	<b>58</b>	80	59
Manganese	ppm ASTM D5185m 0	<b>0</b>	0	<1
Magnesium	ppm ASTM D5185m 1010	<b>914</b>	▲ 1281	964
Calcium	ppm ASTM D5185m 1070	<b>949</b>	1261	1105
Phosphorus	ppm ASTM D5185m 1150	<b>875</b>	1182	983
Zinc	ppm ASTM D5185m 1270	<b>1176</b>	▲ 1638	1232
Sulfur	ppm ASTM D5185m 2060	<b>2825</b>	3828	2872

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	<b>5</b>	4	4
Sodium	ppm ASTM D5185m	<b>0</b>	3	3
Potassium	ppm ASTM D5185m >20	<b>2</b>	5	2

## INFRA-RED

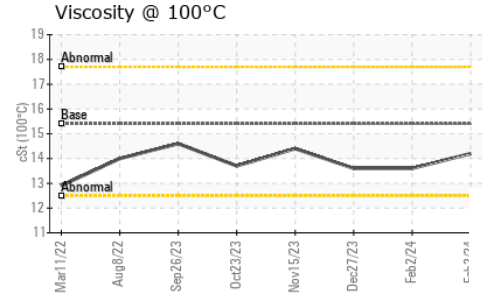
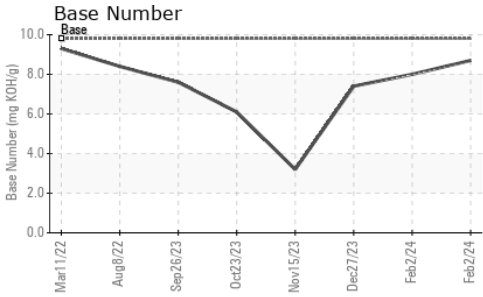
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >6	<b>0</b>	0.1	0.5
Nitration	Abs/cm *ASTM D7624 >20	<b>4.5</b>	7.4	8.1
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>17.8</b>	19.2	19.5

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>13.2</b>	15.6	15.6
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>8.7</b>	8.0	7.4



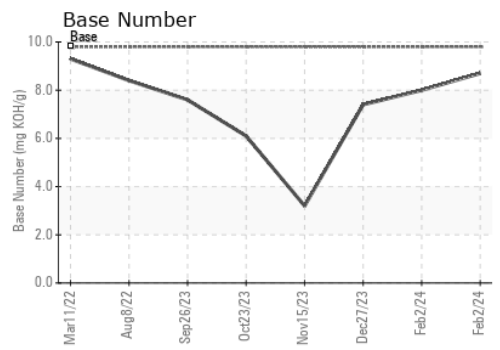
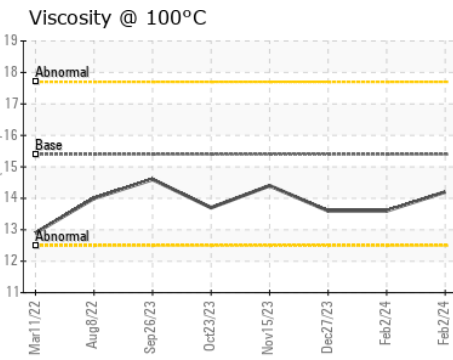
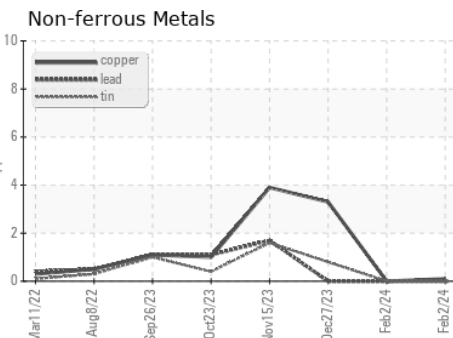
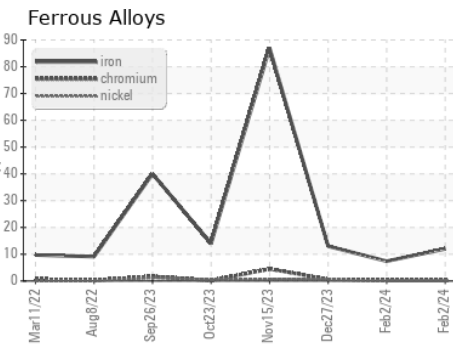
# OIL ANALYSIS REPORT



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>14.2</b>	13.6	13.6

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0109974 **Recieved** : 06 Feb 2024  
**Lab Number** : **06081136** **Diagnosed** : 06 Feb 2024  
**Unique Number** : 10863227 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 410 - Michigan West**  
 39000 Van Born Rd  
 Wayne, MI  
 US 48184  
 Contact: Belal Dgheish  
 bdgheish@gflenv.com  
 T: (734)714-2340  
 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)