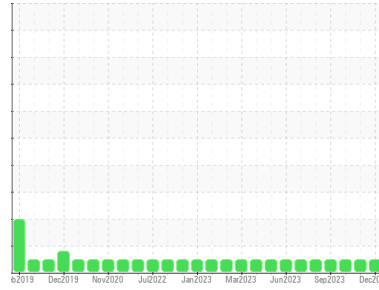




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**726036-310024**

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>GFL0099924</b>	GFL0099955	GFL0095103
Sample Date	Client Info	<b>19 Dec 2023</b>	21 Nov 2023	27 Oct 2023
Machine Age	hrs	<b>15990</b>	15820	15623
Oil Age	hrs	<b>0</b>	0	0
Oil Changed	Client Info	<b>Not Chngd</b>	Not Chngd	Not Chngd
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 >110	<b>17</b>	8	4
Chromium	ppm ASTM D5185m >4	<b>2</b>	<1	<1
Nickel	ppm ASTM D5185m >2	<b>0</b>	0	<1
Titanium	ppm ASTM D5185m	<b>0</b>	<1	0
Silver	ppm ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm ASTM D5185m >25	<b>2</b>	1	2
Lead	ppm ASTM D5185m >45	<b>0</b>	0	1
Copper	ppm ASTM D5185m >85	<b>&lt;1</b>	<1	<1
Tin	ppm ASTM D5185m >4	<b>&lt;1</b>	0	<1
Vanadium	ppm ASTM D5185m	<b>&lt;1</b>	<1	0
Cadmium	ppm ASTM D5185m	<b>&lt;1</b>	0	0

## ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	<b>34</b>	3	6
Barium	ppm ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm ASTM D5185m 60	<b>51</b>	60	55
Manganese	ppm ASTM D5185m 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm ASTM D5185m 1010	<b>612</b>	971	840
Calcium	ppm ASTM D5185m 1070	<b>1380</b>	1102	986
Phosphorus	ppm ASTM D5185m 1150	<b>864</b>	970	1004
Zinc	ppm ASTM D5185m 1270	<b>1016</b>	1338	1152
Sulfur	ppm ASTM D5185m 2060	<b>2732</b>	3134	2725

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >30	<b>5</b>	3	4
Sodium	ppm ASTM D5185m	<b>32</b>	1	4
Potassium	ppm ASTM D5185m >20	<b>2</b>	1	2

## INFRA-RED

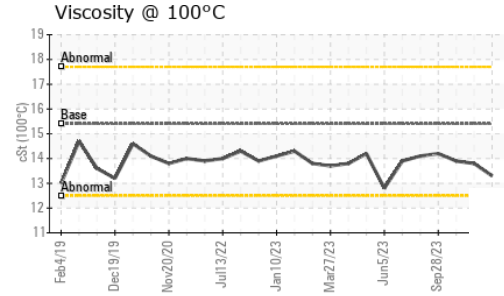
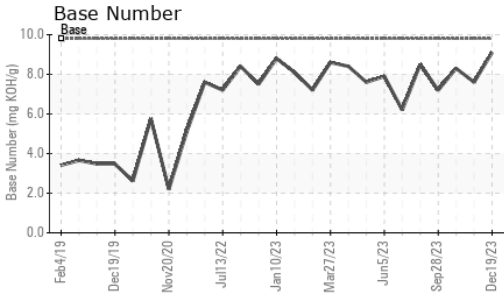
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	<b>1.1</b>	0.3	0.2
Nitration	Abs/cm *ASTM D7624 >20	<b>8.2</b>	8.4	6.9
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>20.6</b>	20.2	19.3

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>16.6</b>	17.7	16.0
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>9.1</b>	7.6	8.3



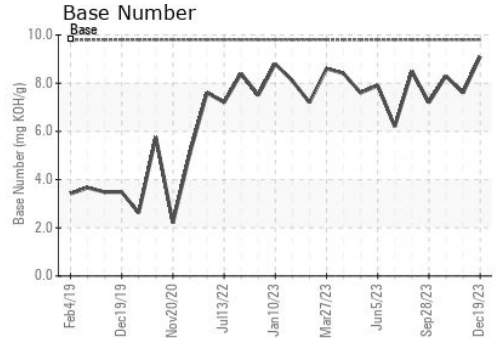
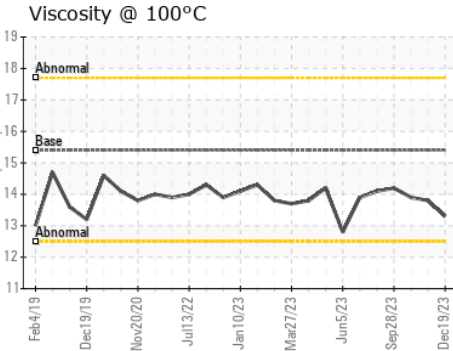
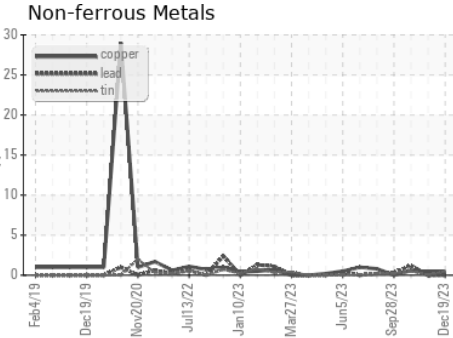
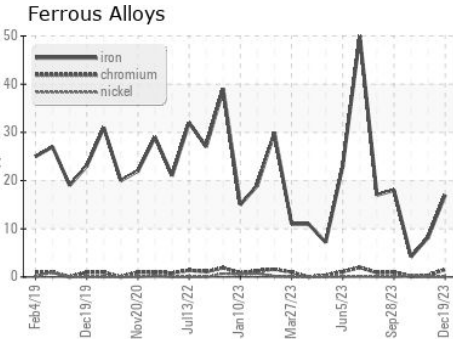
# OIL ANALYSIS REPORT



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>13.3</b>	13.8	13.9

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0099924 **Received** : 21 Dec 2023  
**Lab Number** : **06041822** **Diagnosed** : 22 Dec 2023  
**Unique Number** : 10802430 **Diagnostician** : Don Baldrige  
**Test Package** : FLEET

**GFL Environmental - 836 - Kansas City Hauling**  
 7801 East Truman Road  
 Kansas City, MO  
 US 64126  
 Contact: Robert Hart  
 rhart@gflenv.com  
 T: (580)461-1509  
 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)