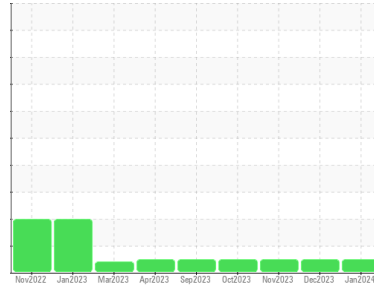




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**413001**

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>GFL0093561</b>	GFL0093595	GFL0093530	
Sample Date	Client Info	<b>02 Jan 2024</b>	14 Dec 2023	08 Nov 2023	
Machine Age	hrs	Client Info	<b>3130</b>	3034	2825
Oil Age	hrs	Client Info	<b>96</b>	595	418
Oil Changed	Client Info	<b>Not Changed</b>	Changed	Not 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
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 >100	<b>1</b>	10	7
Chromium	ppm ASTM D5185m >20	<b>0</b>	<1	0
Nickel	ppm ASTM D5185m >4	<b>&lt;1</b>	2	0
Titanium	ppm ASTM D5185m	<b>18</b>	<1	0
Silver	ppm ASTM D5185m >3	<b>&lt;1</b>	<1	0
Aluminum	ppm ASTM D5185m >20	<b>2</b>	4	2
Lead	ppm ASTM D5185m >40	<b>0</b>	0	0
Copper	ppm ASTM D5185m >330	<b>&lt;1</b>	6	4
Tin	ppm ASTM D5185m >15	<b>&lt;1</b>	1	0
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>29</b>	2	0
Barium	ppm ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm ASTM D5185m 60	<b>44</b>	55	58
Manganese	ppm ASTM D5185m 0	<b>&lt;1</b>	<1	0
Magnesium	ppm ASTM D5185m 1010	<b>829</b>	919	1053
Calcium	ppm ASTM D5185m 1070	<b>1111</b>	981	1156
Phosphorus	ppm ASTM D5185m 1150	<b>1066</b>	958	1133
Zinc	ppm ASTM D5185m 1270	<b>1249</b>	1201	1362
Sulfur	ppm ASTM D5185m 2060	<b>3357</b>	2743	3274

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	<b>3</b>	6	4
Sodium	ppm ASTM D5185m	<b>3</b>	4	3
Potassium	ppm ASTM D5185m >20	<b>4</b>	10	7

## INFRA-RED

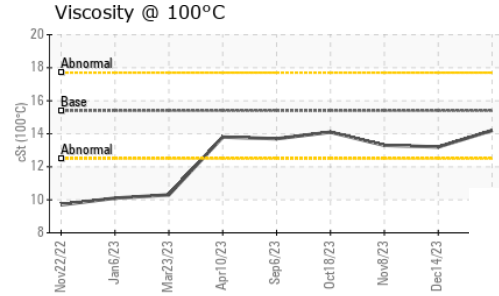
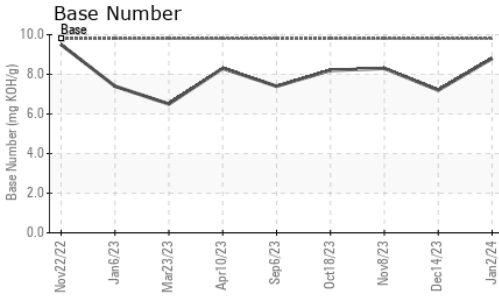
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	<b>0.1</b>	0.4	0.3
Nitration	Abs/cm *ASTM D7624 >20	<b>5.5</b>	8.2	7.0
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>18.1</b>	19.5	19.0

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>14.0</b>	16.2	15.2
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>8.8</b>	7.2	8.3



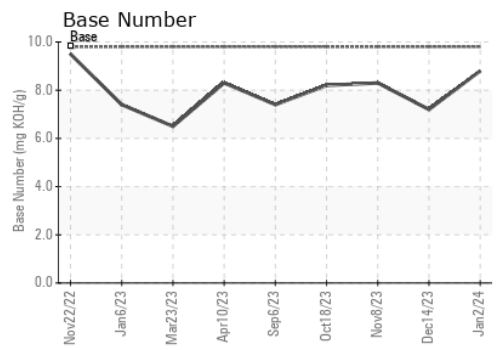
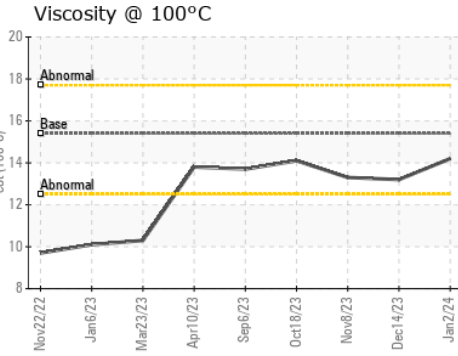
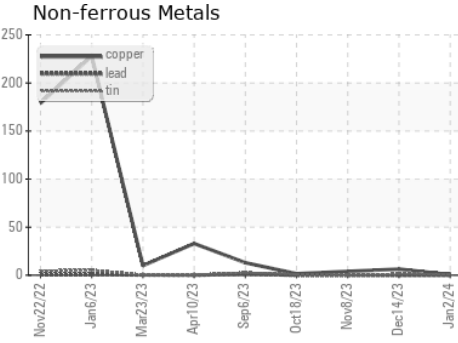
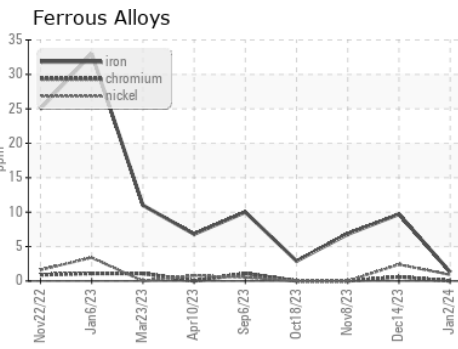
# OIL ANALYSIS REPORT



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>14.2</b>	13.2	13.3

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0093561 **Received** : 03 Jan 2024  
**Lab Number** : **06049714** **Diagnosed** : 04 Jan 2024  
**Unique Number** : 10810322 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 891 - Oklahoma City Hauling**  
 1001 South Rockwell  
 Oklahoma City, OK  
 US 73128  
 Contact: Andy Smith  
 andrew.smith@gflenv.com  
 T: (405)306-1651  
 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)