



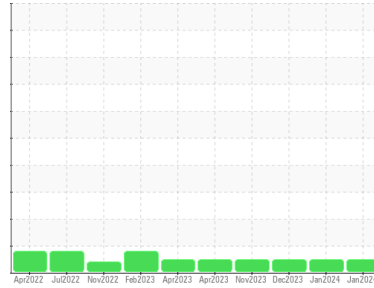
# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**923036-205290**  
 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>GFL0093570</b>	GFL0048367	GFL0093566
Sample Date	Client Info	<b>29 Jan 2024</b>	02 Jan 2024	22 Dec 2023
Machine Age	hrs	<b>4689</b>	4592	4557
Oil Age	hrs	<b>231</b>	134	99
Oil Changed	Client Info	<b>Not Changed</b>	Not Changd	Not Changed
Sample Status		<b>NORMAL</b>	NORMAL	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 >120	<b>6</b>	4	3
Chromium	ppm ASTM D5185m >20	<b>&lt;1</b>	<1	<1
Nickel	ppm ASTM D5185m >5	<b>2</b>	2	2
Titanium	ppm ASTM D5185m >2	<b>50</b>	54	57
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>&lt;1</b>	0	0
Copper	ppm ASTM D5185m >330	<b>8</b>	5	5
Tin	ppm ASTM D5185m >15	<b>&lt;1</b>	<1	0
Vanadium	ppm ASTM D5185m	<b>&lt;1</b>	<1	<1
Cadmium	ppm ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	<b>61</b>	79	83
Barium	ppm ASTM D5185m 0	<b>0</b>	0	<1
Molybdenum	ppm ASTM D5185m 60	<b>29</b>	21	21
Manganese	ppm ASTM D5185m 0	<b>0</b>	<1	<1
Magnesium	ppm ASTM D5185m 1010	<b>633</b>	628	601
Calcium	ppm ASTM D5185m 1070	<b>1380</b>	1379	1422
Phosphorus	ppm ASTM D5185m 1150	<b>893</b>	1037	1003
Zinc	ppm ASTM D5185m 1270	<b>1158</b>	1226	1185
Sulfur	ppm ASTM D5185m 2060	<b>3610</b>	3598	3317

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	<b>4</b>	5	6
Sodium	ppm ASTM D5185m	<b>1</b>	5	6
Potassium	ppm ASTM D5185m >20	<b>4</b>	4	2

## INFRA-RED

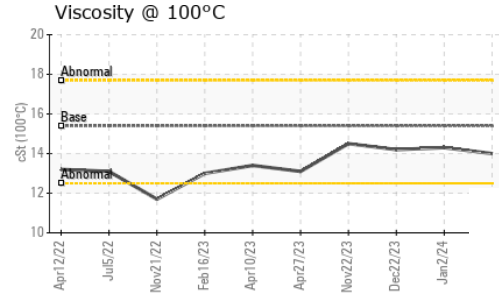
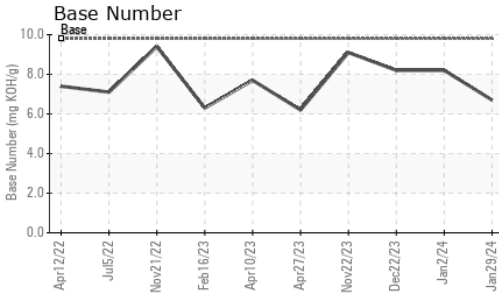
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >4	<b>0.1</b>	0.1	0.1
Nitration	Abs/cm *ASTM D7624 >20	<b>7.5</b>	6.8	6.8
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>19.0</b>	19.0	19.2

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>15.3</b>	14.7	14.8
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>6.7</b>	8.2	8.2



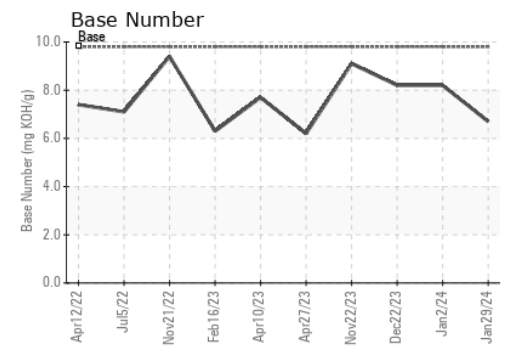
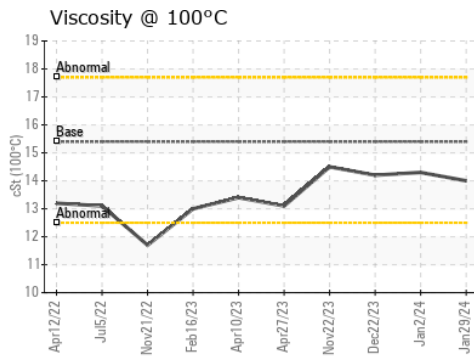
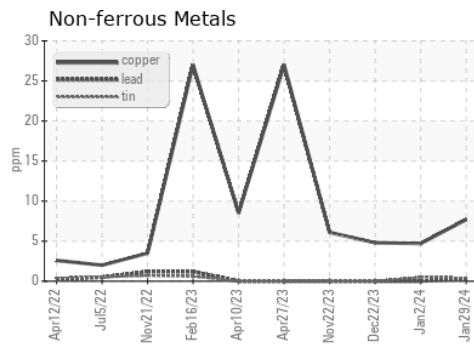
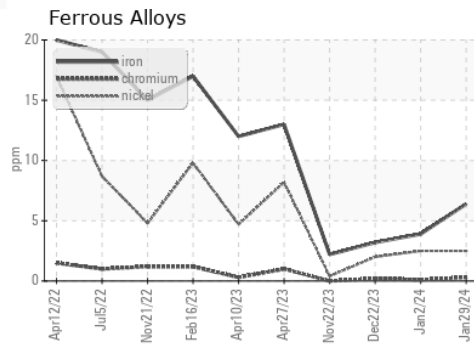
# OIL ANALYSIS REPORT



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	LIGHT	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>14.0</b>	14.3	14.2

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0093570 **Received** : 30 Jan 2024  
**Lab Number** : **06073799** **Diagnosed** : 31 Jan 2024  
**Unique Number** : 10855890 **Diagnostician** : Don Baldrige  
**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:

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)