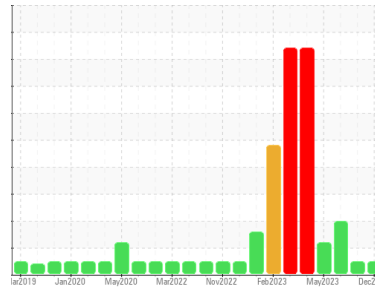




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**726039-361627**

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>GFL0092030</b>	GFL0092095	GFL0084688
Sample Date	Client Info	<b>04 Dec 2023</b>	02 Dec 2023	13 Jun 2023
Machine Age	hrs	<b>22229</b>	358869	234601
Oil Age	hrs	<b>600</b>	124268	0
Oil Changed	Client Info	<b>Changed</b>	Not Changd	Changed
Sample Status		<b>NORMAL</b>	NORMAL	ABNORMAL

## 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>10</b>	27	37
Chromium	ppm ASTM D5185m >4	<b>&lt;1</b>	<1	2
Nickel	ppm ASTM D5185m >2	<b>0</b>	0	0
Titanium	ppm ASTM D5185m	<b>&lt;1</b>	0	<1
Silver	ppm ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm ASTM D5185m >25	<b>2</b>	2	8
Lead	ppm ASTM D5185m >45	<b>2</b>	<1	2
Copper	ppm ASTM D5185m >85	<b>16</b>	15	▲ 89
Tin	ppm ASTM D5185m >4	<b>&lt;1</b>	0	<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>&lt;1</b>	<1	2
Barium	ppm ASTM D5185m 0	<b>0</b>	2	0
Molybdenum	ppm ASTM D5185m 60	<b>43</b>	62	63
Manganese	ppm ASTM D5185m 0	<b>&lt;1</b>	0	<1
Magnesium	ppm ASTM D5185m 1010	<b>751</b>	935	1024
Calcium	ppm ASTM D5185m 1070	<b>740</b>	1110	1139
Phosphorus	ppm ASTM D5185m 1150	<b>703</b>	979	1083
Zinc	ppm ASTM D5185m 1270	<b>918</b>	1209	1382
Sulfur	ppm ASTM D5185m 2060	<b>1943</b>	2829	3566

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >30	<b>4</b>	7	17
Sodium	ppm ASTM D5185m	<b>8</b>	9	▲ 142
Potassium	ppm ASTM D5185m >20	<b>9</b>	4	17

## INFRA-RED

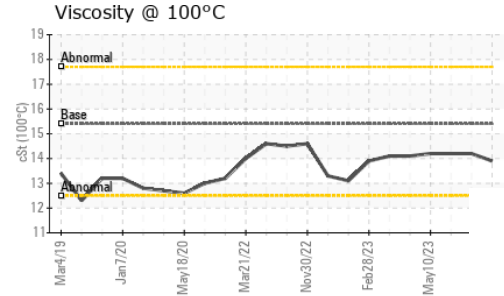
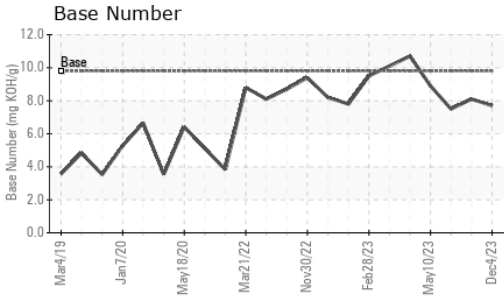
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	<b>0.7</b>	0.8	0.8
Nitration	Abs/cm *ASTM D7624 >20	<b>9.8</b>	10.1	10.4
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>22.2</b>	22.8	23.6

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>18.6</b>	19.5	20.2
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>7.7</b>	8.1	7.5



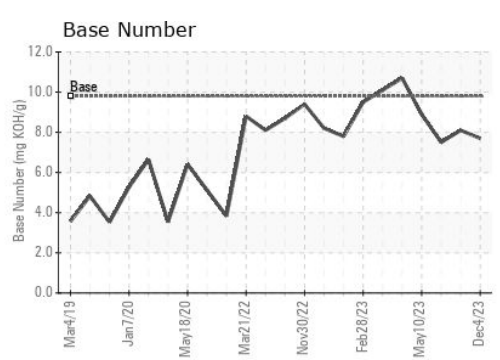
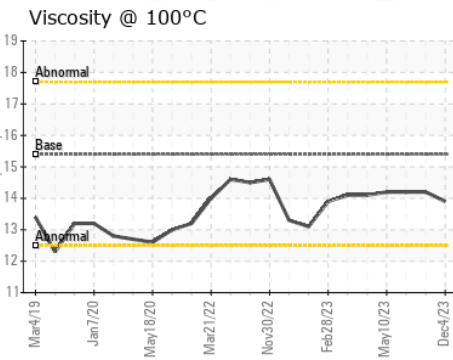
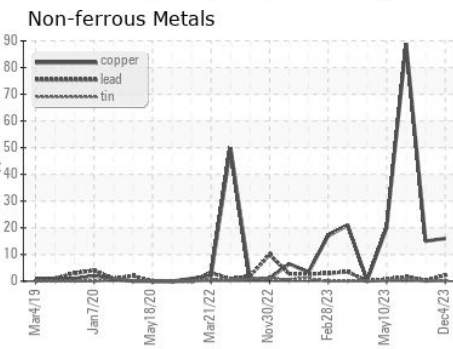
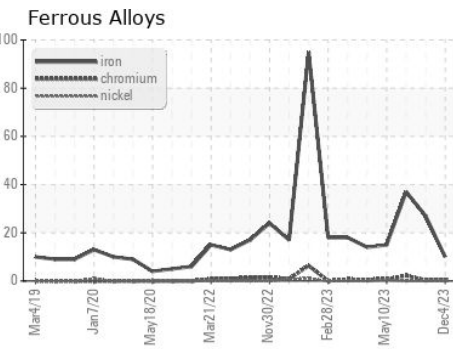
# OIL ANALYSIS REPORT



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>13.9</b>	14.2	14.2

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0092030 **Received** : 06 Dec 2023  
**Lab Number** : **06027078** **Diagnosed** : 08 Dec 2023  
**Unique Number** : 10776869 **Diagnostician** : Don Baldrige  
**Test Package** : FLEET

**GFL Environmental - 856 - Houston South**  
 8515 Highway 6 South  
 Houston, TX  
 US 77083  
 Contact: Apolinar Zacarias  
 pzacariascano@gflenv.com  
 T:  
 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)