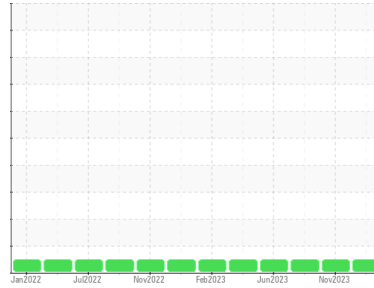




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Area  
**166**  
 Machine Id  
**223029-8**

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>GFL0100240</b>	GFL0100183	GFL0087884
Sample Date	Client Info	<b>11 Dec 2023</b>	27 Nov 2023	12 Sep 2023
Machine Age	mls Client Info	<b>442309</b>	600	32214
Oil Age	mls Client Info	<b>0</b>	600	200
Oil Changed	Client Info	<b>Changed</b>	Not Changd	Not Changd
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 >80	<b>3</b>	5	3
Chromium	ppm ASTM D5185m >5	<b>&lt;1</b>	<1	<1
Nickel	ppm ASTM D5185m >2	<b>0</b>	<1	<1
Titanium	ppm ASTM D5185m	<b>0</b>	0	0
Silver	ppm ASTM D5185m >3	<b>0</b>	0	<1
Aluminum	ppm ASTM D5185m >30	<b>1</b>	2	2
Lead	ppm ASTM D5185m >30	<b>&lt;1</b>	0	<1
Copper	ppm ASTM D5185m >150	<b>&lt;1</b>	<1	<1
Tin	ppm ASTM D5185m >5	<b>0</b>	0	0
Vanadium	ppm ASTM D5185m	<b>&lt;1</b>	0	<1
Cadmium	ppm ASTM D5185m	<b>0</b>	0	<1

## ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	<b>25</b>	29	30
Barium	ppm ASTM D5185m 0	<b>0</b>	2	2
Molybdenum	ppm ASTM D5185m 60	<b>58</b>	58	66
Manganese	ppm ASTM D5185m 0	<b>0</b>	0	<1
Magnesium	ppm ASTM D5185m 1010	<b>896</b>	835	926
Calcium	ppm ASTM D5185m 1070	<b>1014</b>	1017	1113
Phosphorus	ppm ASTM D5185m 1150	<b>1053</b>	927	1083
Zinc	ppm ASTM D5185m 1270	<b>1264</b>	1146	1278
Sulfur	ppm ASTM D5185m 2060	<b>2604</b>	4657	3620

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >20	<b>4</b>	3	4
Sodium	ppm ASTM D5185m	<b>2</b>	2	2
Potassium	ppm ASTM D5185m >20	<b>0</b>	<1	<1

## INFRA-RED

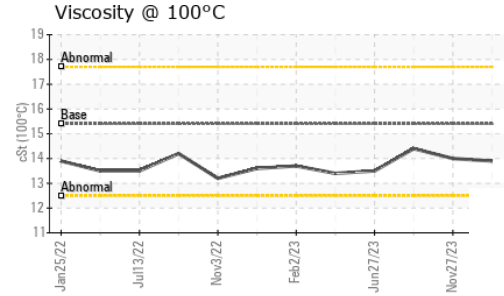
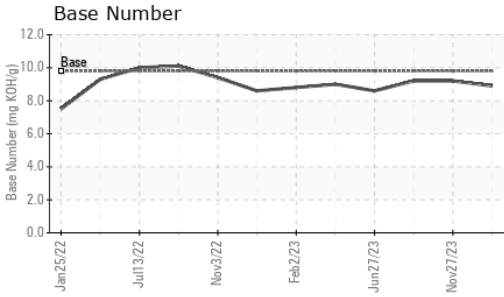
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	<b>0.2</b>	0.2	0.1
Nitration	Abs/cm *ASTM D7624 >20	<b>4.9</b>	4.9	4.7
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>17.8</b>	18.0	17.8

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>13.2</b>	13.3	13.3
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>8.9</b>	9.2	9.2



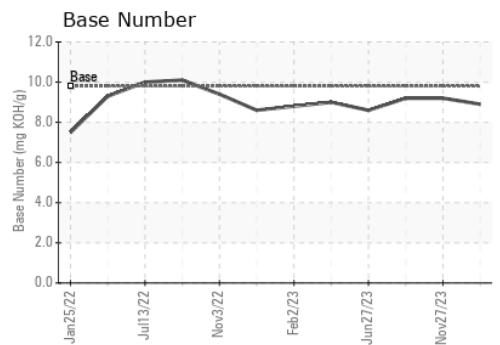
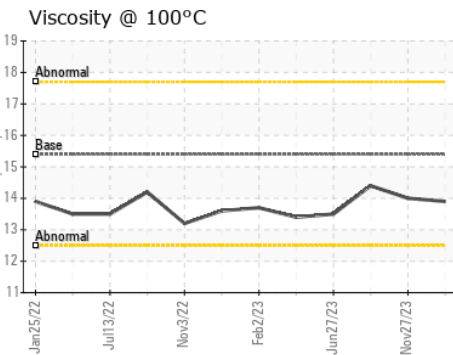
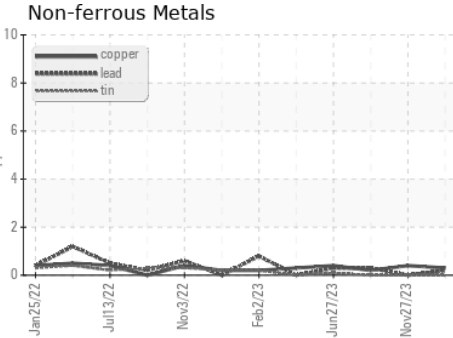
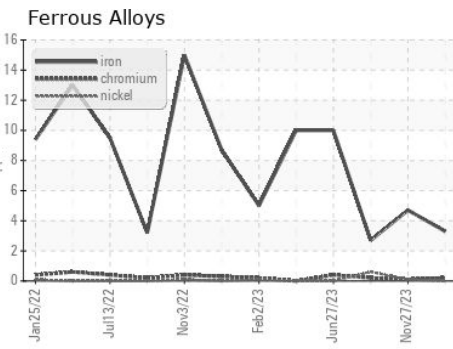
# OIL ANALYSIS REPORT



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	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>	14.0	14.4

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0100240 **Received** : 14 Dec 2023  
**Lab Number** : **06034362** **Diagnosed** : 15 Dec 2023  
**Unique Number** : 10789591 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 166 - Phenix City**  
 18 Old Brickyard Rd  
 Phenix City, AL  
 US 36869  
 Contact: DEAN PEACE JR  
 dean.peace@gflenv.com

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)