



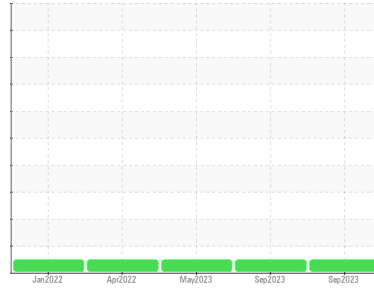
# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Area  
**(BD08803)**  
Machine Id  
**927100**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON SHP 15W40 (8 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>GFL0041811</b>	GFL0104535	GFL0041846
Sample Date	Client Info	<b>06 Sep 2023</b>	06 Sep 2023	15 May 2023
Machine Age	hrs Client Info	<b>186670</b>	186670	186670
Oil Age	hrs Client Info	<b>600</b>	600	600
Oil Changed	Client Info	<b>Changed</b>	Changed	Changed
Sample Status		<b>NORMAL</b>	---	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>8</b>	11	4
Chromium	ppm ASTM D5185m >20	<b>&lt;1</b>	<1	<1
Nickel	ppm ASTM D5185m >5	<b>0</b>	0	0
Titanium	ppm ASTM D5185m >2	<b>0</b>	0	0
Silver	ppm ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm ASTM D5185m >20	<b>4</b>	4	2
Lead	ppm ASTM D5185m >40	<b>&lt;1</b>	2	0
Copper	ppm ASTM D5185m >330	<b>&lt;1</b>	<1	1
Tin	ppm ASTM D5185m >15	<b>&lt;1</b>	<1	<1
Vanadium	ppm ASTM D5185m	<b>0</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>3</b>	10	1
Barium	ppm ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm ASTM D5185m 60	<b>59</b>	80	11
Manganese	ppm ASTM D5185m 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm ASTM D5185m 1010	<b>877</b>	840	155
Calcium	ppm ASTM D5185m 1070	<b>1099</b>	1046	2139
Phosphorus	ppm ASTM D5185m 1150	<b>1045</b>	936	918
Zinc	ppm ASTM D5185m 1270	<b>1223</b>	1167	1117
Sulfur	ppm ASTM D5185m 2060	<b>2961</b>	2970	4343

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	<b>4</b>	7	3
Sodium	ppm ASTM D5185m	<b>63</b>	▲ 391	8
Potassium	ppm ASTM D5185m >20	<b>20</b>	▲ 216	4

## INFRA-RED

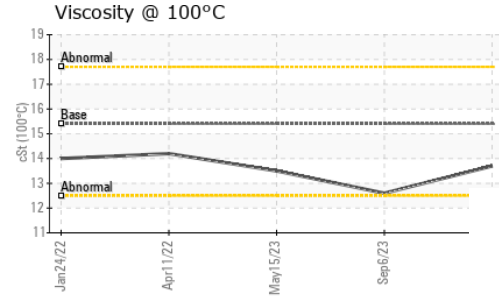
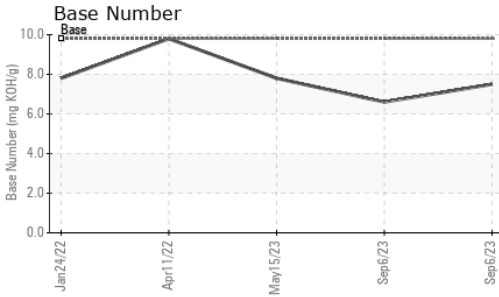
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >4	<b>0.8</b>	0.6	0.2
Nitration	Abs/cm *ASTM D7624 >20	<b>8.8</b>	10.0	6.8
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>19.7</b>	19.7	16.3

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>14.5</b>	14.4	9.9
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>7.5</b>	6.6	7.8



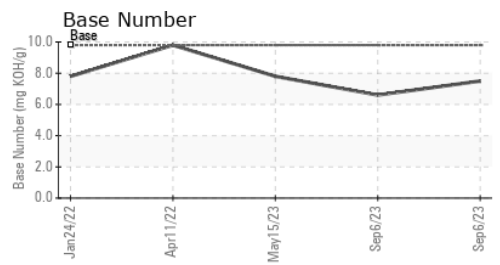
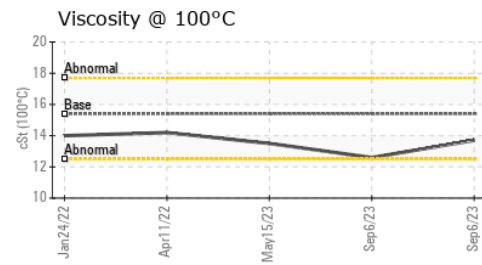
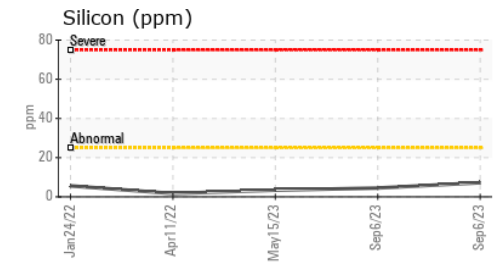
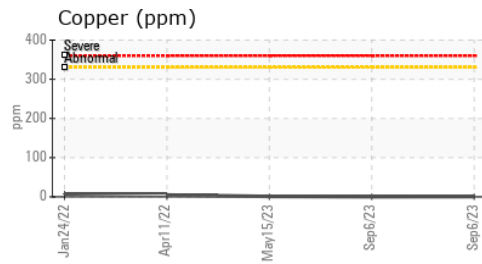
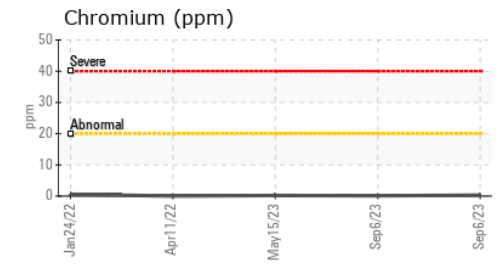
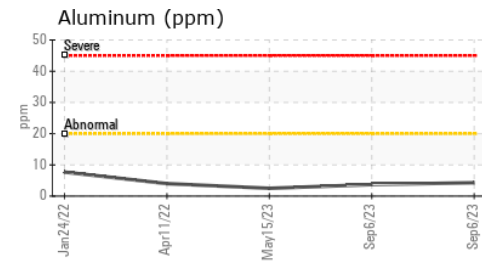
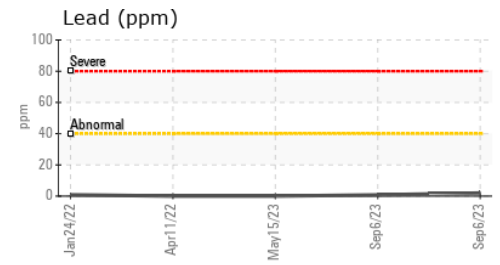
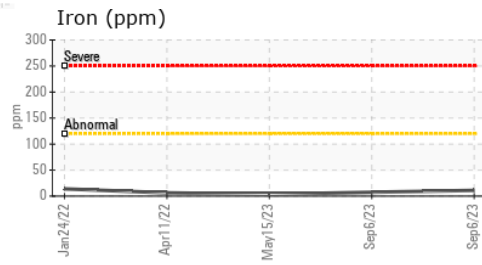
# OIL ANALYSIS REPORT



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>13.7</b>	12.6	13.5

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0041811 **Recieved** : 16 Jan 2024  
**Lab Number** : 06060768 **Diagnosed** : 17 Jan 2024  
**Unique Number** : 10832150 **Diagnostician** : Wes Davis  
**Test Package** : MOB1+

**GFL Environmental - 461 - Smith Hauling**  
 3239 W. M 28  
 Brimley, MI  
 US 49715  
 Contact: Jim Smith  
 jim.smith@gflenv.com  
 T: (906)635-3380  
 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)