



# PROBLEM SUMMARY

Sample Rating Trend

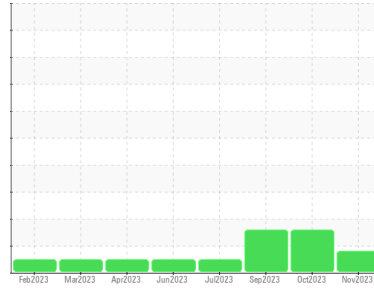
**WEAR**



Machine Id  
**813077**

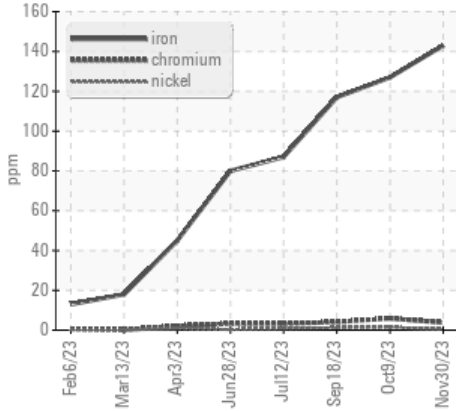
Component  
**Diesel Engine**

Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

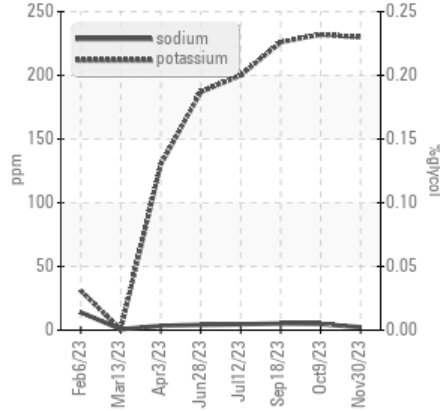


## COMPONENT CONDITION SUMMARY

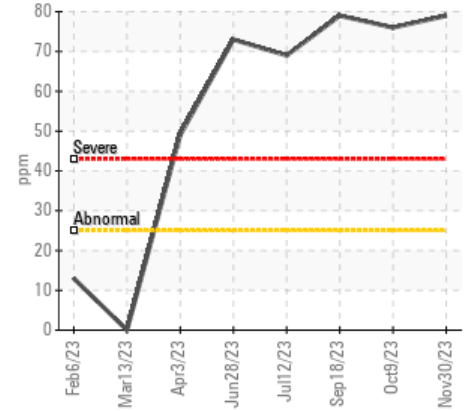
### ▲ Ferrous Alloys



### Glycol Contamination



### Aluminum (ppm)



## RECOMMENDATION

No corrective action is recommended at this time.  
Resample at the next service interval to monitor.

## PROBLEMATIC TEST RESULTS

Sample Status

Iron	ppm	ASTM D5185m	>110	ABNORMAL	ABNORMAL	ABNORMAL
▲	143	▲	127	▲	117	

Customer Id: GFL844  
Sample No.: GFL0078293  
Lab Number: 06029115  
Test Package: FLEET



To manage this report scan the QR code

To discuss the diagnosis or test data:  
Don Baldrige +1  
[don.b505@comcast.net](mailto:don.b505@comcast.net)

To change component or sample information:  
Customer Service +1 1-800-237-1369  
[customerservice@wearcheck.com](mailto:customerservice@wearcheck.com)

## RECOMMENDED ACTIONS

There are no recommended actions for this sample.

## HISTORICAL DIAGNOSIS

### 09 Oct 2023 Diag: Don Baldrige

WEAR



No corrective action is recommended at this time. Resample at the next service interval to monitor. Cylinder, crank, or cam shaft wear is indicated. Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. No other contaminants were detected in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

view report



### 18 Sep 2023 Diag: Don Baldrige

WEAR



Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor. Cylinder, crank, or cam shaft wear is indicated. Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. No other contaminants were detected in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

view report



### 12 Jul 2023 Diag: Don Baldrige

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

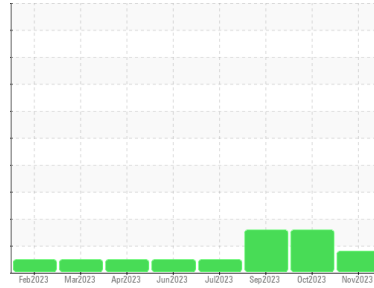
view report





# OIL ANALYSIS REPORT

Sample Rating Trend



**WEAR**



Machine Id  
**813077**

Component  
**Diesel Engine**

Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

## DIAGNOSIS

### ▲ Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

### ▲ Wear

Cylinder, crank, or cam shaft wear is indicated.

### Contamination

Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. No other contaminants were detected in the oil.

### Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>GFL0078293</b>	GFL0080045	GFL0080055
Sample Date	Client Info		<b>30 Nov 2023</b>	09 Oct 2023	18 Sep 2023
Machine Age	hrs	Client Info	<b>2442</b>	2061	1897
Oil Age	hrs	Client Info	<b>0</b>	150	612
Oil Changed	Client Info		<b>Not Chngd</b>	Not Chngd	Changed
Sample Status			<b>ABNORMAL</b>	ABNORMAL	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>▲ 143</b>	▲ 127	▲ 117
Chromium	ppm	ASTM D5185m >4	<b>4</b>	▲ 6	▲ 4
Nickel	ppm	ASTM D5185m >2	<b>&lt;1</b>	1	1
Titanium	ppm	ASTM D5185m	<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >25	<b>79</b>	76	79
Lead	ppm	ASTM D5185m >45	<b>0</b>	0	<1
Copper	ppm	ASTM D5185m >85	<b>14</b>	15	14
Tin	ppm	ASTM D5185m >4	<b>&lt;1</b>	2	2
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	<1
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>15</b>	20	32
Barium	ppm	ASTM D5185m 0	<b>5</b>	0	14
Molybdenum	ppm	ASTM D5185m 60	<b>105</b>	107	109
Manganese	ppm	ASTM D5185m 0	<b>8</b>	9	9
Magnesium	ppm	ASTM D5185m 1010	<b>879</b>	905	916
Calcium	ppm	ASTM D5185m 1070	<b>1344</b>	1384	1458
Phosphorus	ppm	ASTM D5185m 1150	<b>927</b>	941	892
Zinc	ppm	ASTM D5185m 1270	<b>1138</b>	1151	1143
Sulfur	ppm	ASTM D5185m 2060	<b>2659</b>	2804	2547

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >30	<b>16</b>	17	17
Sodium	ppm	ASTM D5185m	<b>2</b>	5	5
Potassium	ppm	ASTM D5185m >20	<b>230</b>	232	226

## INFRA-RED

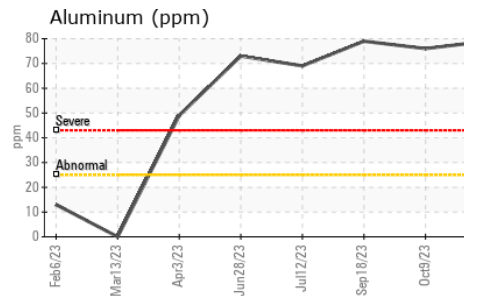
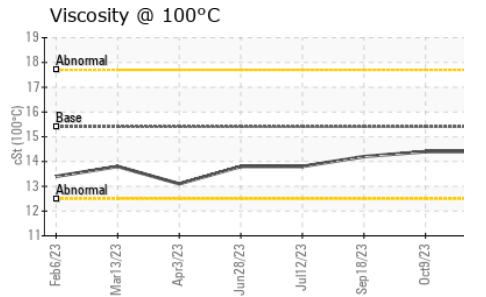
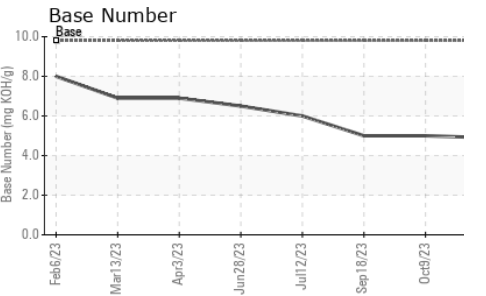
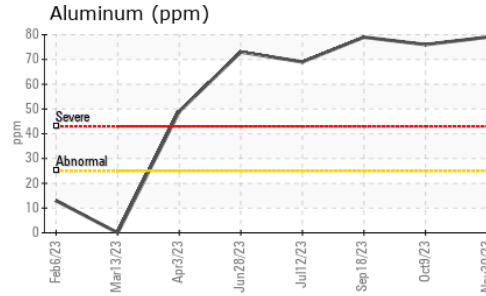
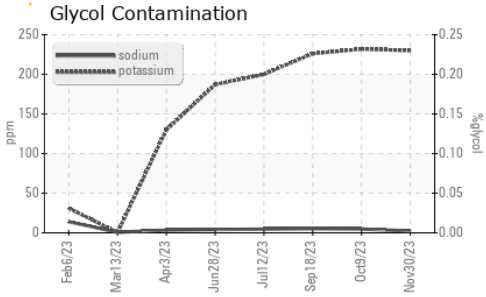
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>1.1</b>	1.1	1
Nitration	Abs/cm	*ASTM D7624 >20	<b>14.0</b>	14.1	13.6
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>30.3</b>	30.3	29.1

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>30.0</b>	29.6	27.6
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>4.9</b>	5.0	5.0



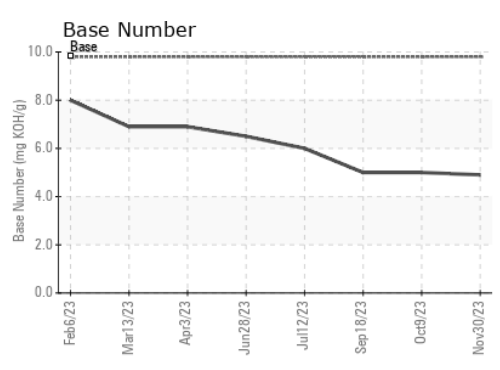
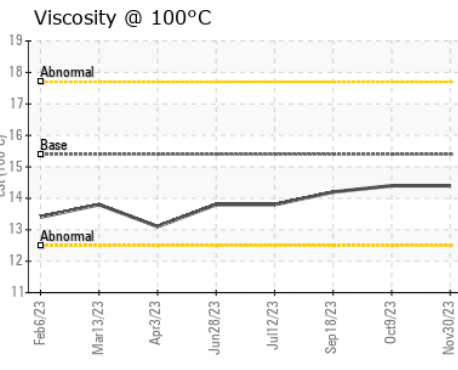
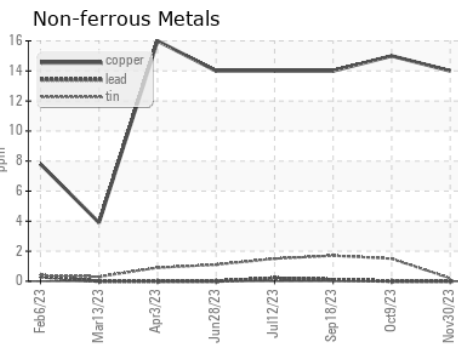
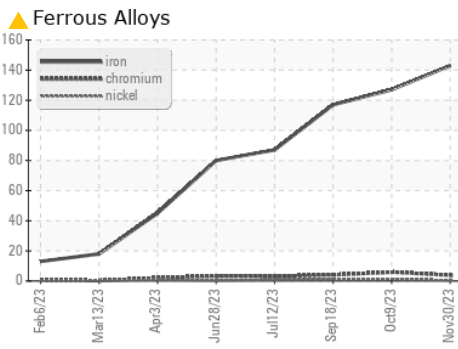
# OIL ANALYSIS REPORT



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	14.4	14.2

### GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0078293  
**Lab Number** : 06029115  
**Unique Number** : 10778906  
**Test Package** : FLEET

**GFL Environmental - 844 - Princeton Hauling**  
 10129 Highway 62 West  
 Princeton, KY  
 US 42445  
 Contact: ROBERT THIBAUT  
 robert.thibault@gflenv.com  
 T: (931)237-6045  
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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)