



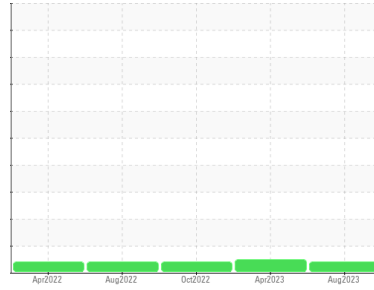
# PROBLEM SUMMARY

Sample Rating Trend

VISCOSITY

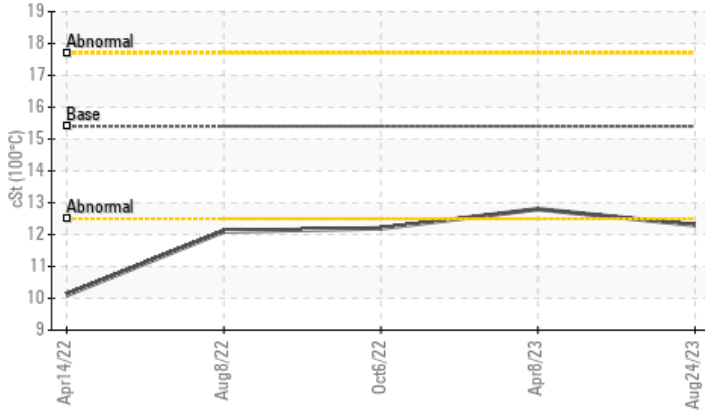


Machine Id  
**912031**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**



## COMPONENT CONDITION SUMMARY

### ▲ Viscosity @ 100°C



## RECOMMENDATION

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

## PROBLEMATIC TEST RESULTS

Sample Status				ATTENTION	NORMAL	ATTENTION
Visc @ 100°C	cSt	ASTM D445	15.4	▲ 12.3	12.8	▲ 12.2

Customer Id: GFL663  
Sample No.: GFL0079786  
Lab Number: 05945403  
Test Package: FLEET



To manage this report scan the QR code

To discuss the diagnosis or test data:  
Jonathan Hester +1 919-379-4092 x4092  
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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

### 08 Apr 2023 Diag: Don Baldrige

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. 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



### 06 Oct 2022 Diag: Don Baldrige

VISCOSITY



Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

view report



### 08 Aug 2022 Diag: Don Baldrige

VISCOSITY



Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. All component wear rates are normal. Fuel content negligible. There is no indication of any contamination in the oil. The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

view report





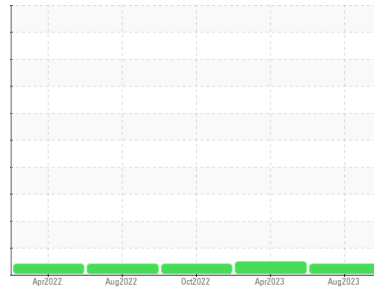
# OIL ANALYSIS REPORT

Sample Rating Trend

VISCOSITY



Machine Id  
**912031**  
 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

All component wear rates are normal.

### Contamination

There is no indication of any contamination in the oil.

### Fluid Condition

The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>GFL0079786</b>	GFL0059576	GFL0055054
Sample Date	Client Info		<b>24 Aug 2023</b>	08 Apr 2023	06 Oct 2022
Machine Age	hrs	Client Info	<b>3913</b>	2694	1595
Oil Age	hrs	Client Info	<b>605</b>	1099	1126
Oil Changed	Client Info		<b>Not Chngd</b>	N/A	Changed
Sample Status			<b>ATTENTION</b>	NORMAL	ATTENTION

## CONTAMINATION

	method	limit/base	current	history1	history2
Glycol	WC Method		<b>NEG</b>	NEG	NEG

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >120	<b>19</b>	18	18
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	<1	1
Nickel	ppm	ASTM D5185m >5	<b>&lt;1</b>	8	7
Titanium	ppm	ASTM D5185m >2	<b>11</b>	8	3
Silver	ppm	ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >20	<b>3</b>	2	4
Lead	ppm	ASTM D5185m >40	<b>&lt;1</b>	<1	<1
Copper	ppm	ASTM D5185m >330	<b>2</b>	12	46
Tin	ppm	ASTM D5185m >15	<b>&lt;1</b>	<1	1
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>12</b>	13	12
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	2
Molybdenum	ppm	ASTM D5185m 60	<b>55</b>	51	61
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 1010	<b>896</b>	793	823
Calcium	ppm	ASTM D5185m 1070	<b>1251</b>	1073	1164
Phosphorus	ppm	ASTM D5185m 1150	<b>952</b>	889	920
Zinc	ppm	ASTM D5185m 1270	<b>1228</b>	1114	1199
Sulfur	ppm	ASTM D5185m 2060	<b>3300</b>	2590	2982

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>5</b>	5	5
Sodium	ppm	ASTM D5185m	<b>6</b>	4	3
Potassium	ppm	ASTM D5185m >20	<b>3</b>	2	6
Fuel	%	ASTM D3524 >3.0	<b>&lt;1.0</b>	<1.0	<1.0

## INFRA-RED

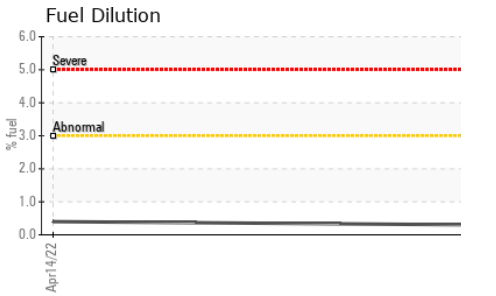
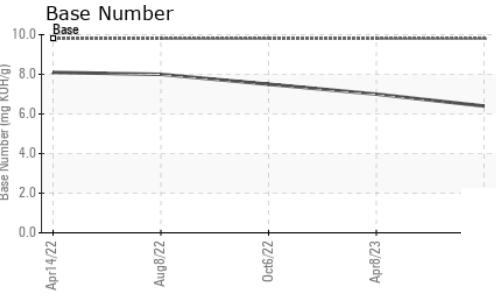
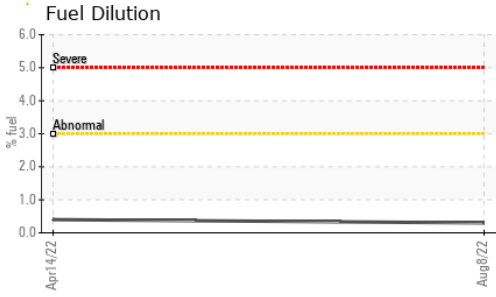
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	<b>0.6</b>	0.5	0.5
Nitration	Abs/cm	*ASTM D7624 >20	<b>8.3</b>	8.7	8.6
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>20.0</b>	19.7	20.7

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>15.2</b>	15.5	15.7
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>6.4</b>	7.0	7.5



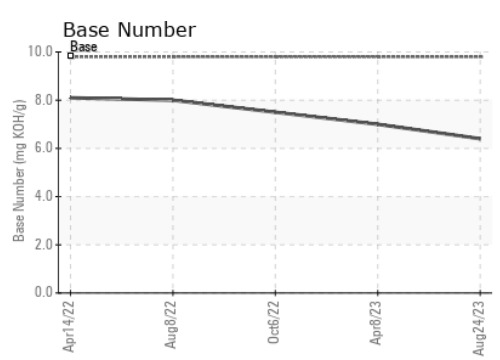
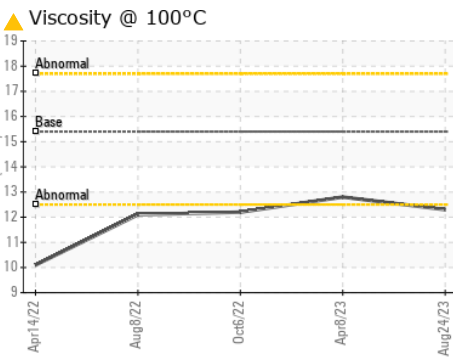
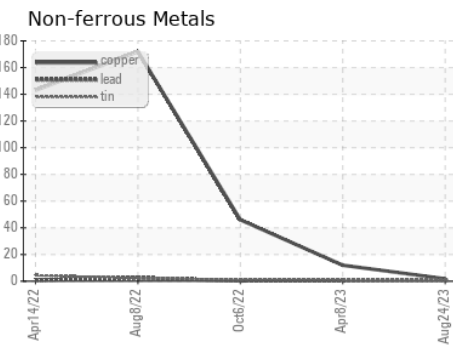
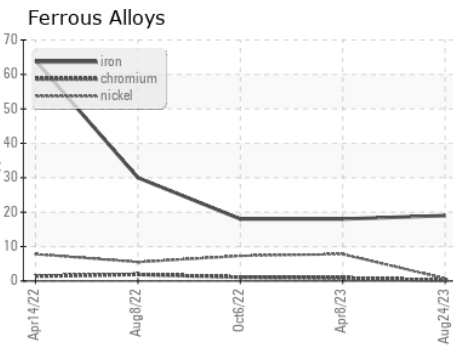
# OIL ANALYSIS REPORT



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	▲ 12.3	12.8	▲ 12.2

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0079786 **Received** : 08 Sep 2023  
**Lab Number** : 05945403 **Diagnosed** : 08 Sep 2023  
**Unique Number** : 10636015 **Diagnostician** : Jonathan Hester  
**Test Package** : FLEET ( Additional Tests: FuelDilution )

**GFL Environmental - 663 - Lake Ariel (Scranton Hauling)**  
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 Lake Ariel, PA  
 US 18436  
 Contact: Eric Merone  
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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)