



# OIL ANALYSIS REPORT

Sample Rating Trend

**WEAR**

Area  
**020**  
Machine Id  
**421077**

Component  
**Diesel Engine**  
Fluid

**PETRO CANADA DURON SHP 15W40 (38 QTS)**



## DIAGNOSIS

### ▲ Recommendation

No corrective action is recommended at this time. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

### ▲ Wear

Piston, ring and cylinder wear is indicated.

### 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>GFL0103784</b>	---	---
Sample Date	Client Info		<b>22 Mar 2024</b>	---	---
Machine Age	hrs	Client Info	<b>6423</b>	---	---
Oil Age	hrs	Client Info	<b>615</b>	---	---
Oil Changed	Client Info		<b>Changed</b>	---	---
Sample Status			<b>ABNORMAL</b>	---	---

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<b>&lt;1.0</b>	---	---
Water	WC Method	>0.2	<b>NEG</b>	---	---
Glycol	WC Method		<b>NEG</b>	---	---

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	<b>▲ 133</b>	---	---
Chromium	ppm	ASTM D5185m >20	<b>5</b>	---	---
Nickel	ppm	ASTM D5185m >4	<b>2</b>	---	---
Titanium	ppm	ASTM D5185m	<b>&lt;1</b>	---	---
Silver	ppm	ASTM D5185m >3	<b>0</b>	---	---
Aluminum	ppm	ASTM D5185m >20	<b>▲ 22</b>	---	---
Lead	ppm	ASTM D5185m >40	<b>2</b>	---	---
Copper	ppm	ASTM D5185m >330	<b>13</b>	---	---
Tin	ppm	ASTM D5185m >15	<b>2</b>	---	---
Vanadium	ppm	ASTM D5185m	<b>&lt;1</b>	---	---
Cadmium	ppm	ASTM D5185m	<b>&lt;1</b>	---	---

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>12</b>	---	---
Barium	ppm	ASTM D5185m 0	<b>&lt;1</b>	---	---
Molybdenum	ppm	ASTM D5185m 60	<b>98</b>	---	---
Manganese	ppm	ASTM D5185m 0	<b>2</b>	---	---
Magnesium	ppm	ASTM D5185m 1010	<b>40</b>	---	---
Calcium	ppm	ASTM D5185m 1070	<b>2451</b>	---	---
Phosphorus	ppm	ASTM D5185m 1150	<b>1196</b>	---	---
Zinc	ppm	ASTM D5185m 1270	<b>1373</b>	---	---
Sulfur	ppm	ASTM D5185m 2060	<b>3774</b>	---	---

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>23</b>	---	---
Sodium	ppm	ASTM D5185m	<b>8</b>	---	---
Potassium	ppm	ASTM D5185m >20	<b>29</b>	---	---

## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>2.3</b>	---	---
Nitration	Abs/cm	*ASTM D7624 >20	<b>17.4</b>	---	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>36.4</b>	---	---

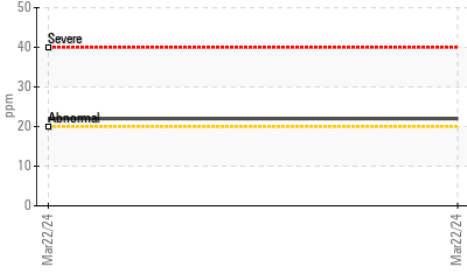
## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>36.0</b>	---	---
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>4.0</b>	---	---

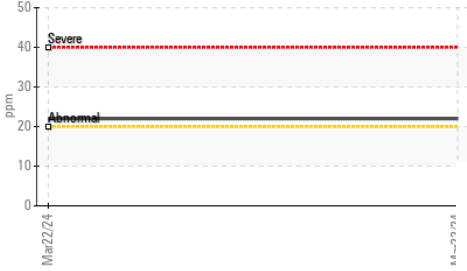


# OIL ANALYSIS REPORT

▲ Aluminum (ppm)



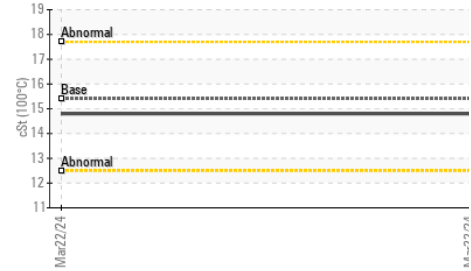
▲ Aluminum (ppm)



Base Number



Viscosity @ 100°C

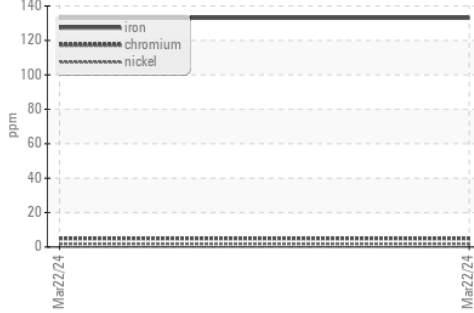


VISUAL	method	limit/base	current	history1	history2	
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---
Precipitate	scalar	*Visual	NONE	NONE	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	NONE	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
Appearance	scalar	*Visual	NORML	NORML	---	---
Odor	scalar	*Visual	NORML	NORML	---	---
Emulsified Water	scalar	*Visual	>0.2	NEG	---	---
Free Water	scalar	*Visual		NEG	---	---

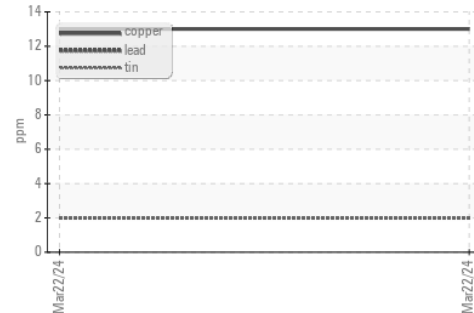
FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	15.4	14.8	---	---

## GRAPHS

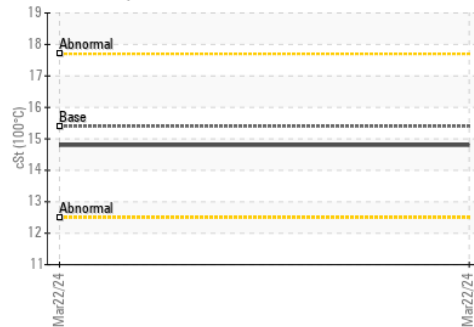
▲ Ferrous Alloys



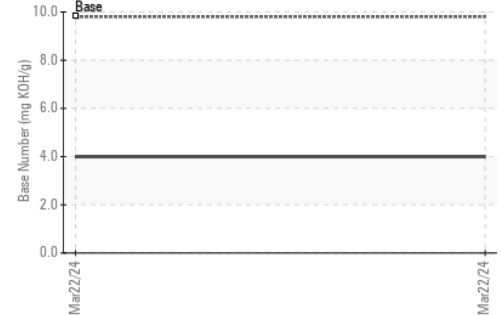
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : GFL0103784

Lab Number : 06130199

Unique Number : 10949664

Test Package : FLEET

Received : 27 Mar 2024

Tested : 27 Mar 2024

Diagnosed : 29 Mar 2024 - Don Baldrige

GFL Environmental - 020 - Alamance

703 East Gilbreath St

Graham, NC

US 27253

Contact: JEREMY SHORES

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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)