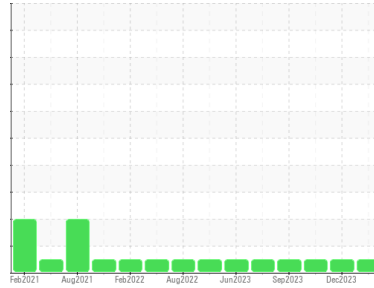




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**511027-1360**

Component  
**Diesel Engine**

Fluid  
**PETRO CANADA DURON SHP 15W40 (46 QTS)**

## 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>GFL0110310</b>	GFL0102790	GFL0090461
Sample Date	Client Info		<b>08 Mar 2024</b>	01 Dec 2023	10 Oct 2023
Machine Age	hrs	Client Info	<b>8721</b>	8097	7795
Oil Age	hrs	Client Info	<b>926</b>	7795	895
Oil Changed	Client Info		<b>Changed</b>	Not Changd	Changed
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 >100	<b>74</b>	25	58
Chromium	ppm	ASTM D5185m >20	<b>3</b>	1	4
Nickel	ppm	ASTM D5185m >4	<b>0</b>	<1	<1
Titanium	ppm	ASTM D5185m	<b>0</b>	0	<1
Silver	ppm	ASTM D5185m >3	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185m >20	<b>5</b>	3	4
Lead	ppm	ASTM D5185m >40	<b>13</b>	2	10
Copper	ppm	ASTM D5185m >330	<b>1</b>	<1	2
Tin	ppm	ASTM D5185m >15	<b>1</b>	<1	1
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	<1

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>0</b>	5	7
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	3
Molybdenum	ppm	ASTM D5185m 60	<b>70</b>	64	62
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	1
Magnesium	ppm	ASTM D5185m 1010	<b>1053</b>	934	885
Calcium	ppm	ASTM D5185m 1070	<b>1271</b>	1085	1112
Phosphorus	ppm	ASTM D5185m 1150	<b>1139</b>	1068	937
Zinc	ppm	ASTM D5185m 1270	<b>1413</b>	1300	1152
Sulfur	ppm	ASTM D5185m 2060	<b>2970</b>	2968	2208

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>15</b>	14	7
Sodium	ppm	ASTM D5185m	<b>7</b>	3	7
Potassium	ppm	ASTM D5185m >20	<b>2</b>	2	4

## INFRA-RED

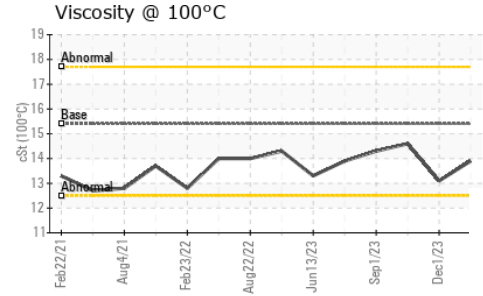
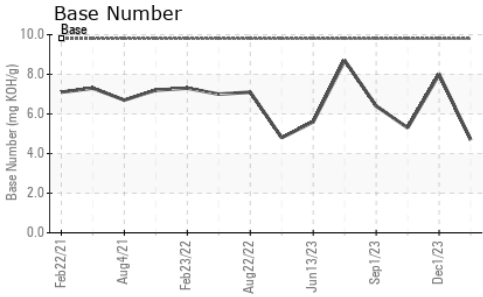
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>1.9</b>	0.9	2.3
Nitration	Abs/cm	*ASTM D7624 >20	<b>13.3</b>	8.8	12.8
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>28.1</b>	20.7	27.8

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>25.9</b>	15.9	23.0
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>4.7</b>	8.0	5.3



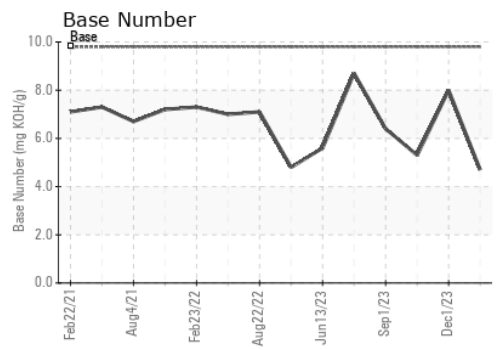
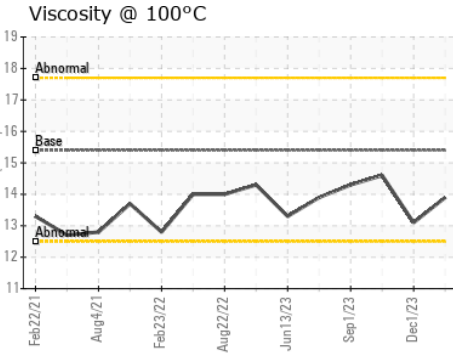
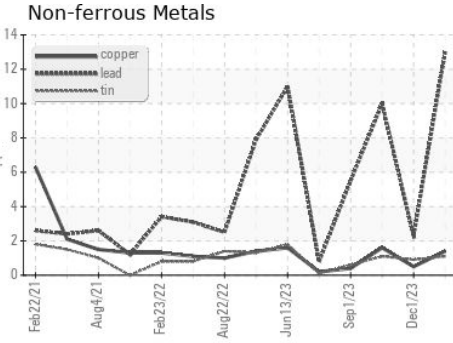
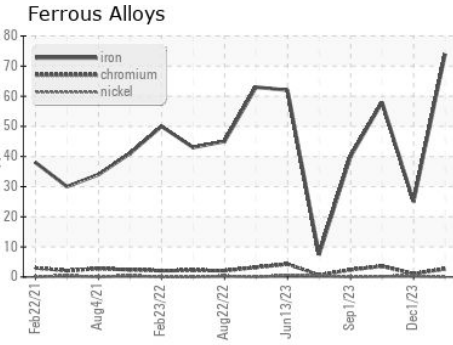
# OIL ANALYSIS REPORT



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>	13.1	14.6

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0110310      **Received** : 12 Mar 2024  
**Lab Number** : **06116377**      **Tested** : 13 Mar 2024  
**Unique Number** : 10925210      **Diagnosed** : 14 Mar 2024 - Don Baldrige  
**Test Package** : FLEET

**GFL Environmental - 622 - Traverse City Hauling**  
 160 Hughes Dr  
 Traverse City, MI  
 US 49686  
 Contact: GARY BREWER

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)

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F: