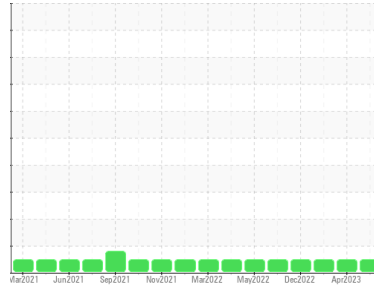




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**411013**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (44 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	history 1	history 2
Sample Number	Client Info		<b>GFL0083304</b>	GFL0069414	GFL0065787
Sample Date	Client Info		<b>29 Jun 2023</b>	14 Apr 2023	28 Feb 2023
Machine Age	hrs	Client Info	<b>3085</b>	177	634
Oil Age	hrs	Client Info	<b>576</b>	3085	634
Oil Changed	Client Info		<b>N/A</b>	N/A	N/A
Sample Status			<b>NORMAL</b>	NORMAL	NORMAL

## CONTAMINATION

	method	limit/base	current	history 1	history 2
Fuel	WC Method	>3.0	<b>&lt;1.0</b>	<1.0	<1.0
Glycol	WC Method		<b>NEG</b>	NEG	NEG

## WEAR METALS

	method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185m >120	<b>5</b>	6	17
Chromium	ppm	ASTM D5185m >20	<b>0</b>	<1	<1
Nickel	ppm	ASTM D5185m >5	<b>0</b>	<1	2
Titanium	ppm	ASTM D5185m >2	<b>&lt;1</b>	0	<1
Silver	ppm	ASTM D5185m >2	<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185m >20	<b>&lt;1</b>	1	4
Lead	ppm	ASTM D5185m >40	<b>0</b>	0	1
Copper	ppm	ASTM D5185m >330	<b>1</b>	<1	2
Tin	ppm	ASTM D5185m >15	<b>&lt;1</b>	<1	<1
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	<1
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

	method	limit/base	current	history 1	history 2
Boron	ppm	ASTM D5185m 0	<b>0</b>	8	6
Barium	ppm	ASTM D5185m 0	<b>14</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>46</b>	61	61
Manganese	ppm	ASTM D5185m 0	<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m 1010	<b>743</b>	918	860
Calcium	ppm	ASTM D5185m 1070	<b>852</b>	1150	1244
Phosphorus	ppm	ASTM D5185m 1150	<b>806</b>	1055	1026
Zinc	ppm	ASTM D5185m 1270	<b>1038</b>	1267	1256
Sulfur	ppm	ASTM D5185m 2060	<b>2854</b>	3809	2767

## CONTAMINANTS

	method	limit/base	current	history 1	history 2
Silicon	ppm	ASTM D5185m >25	<b>2</b>	1	8
Sodium	ppm	ASTM D5185m	<b>&lt;1</b>	1	3
Potassium	ppm	ASTM D5185m >20	<b>5</b>	3	5

## INFRA-RED

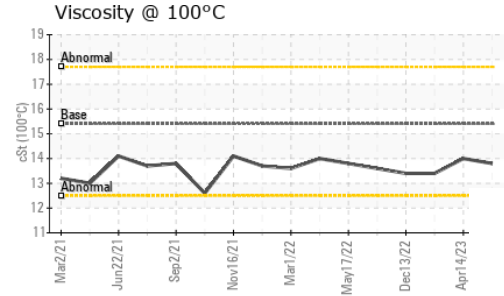
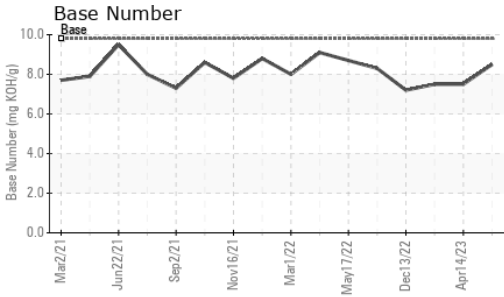
	method	limit/base	current	history 1	history 2
Soot %	%	*ASTM D7844 >4	<b>0.3</b>	0.2	0.3
Nitration	Abs/cm	*ASTM D7624 >20	<b>7.9</b>	6.4	9.4
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>19.9</b>	16.7	18.6

## FLUID DEGRADATION

	method	limit/base	current	history 1	history 2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>15.4</b>	13.6	14.4
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>8.5</b>	7.5	7.5



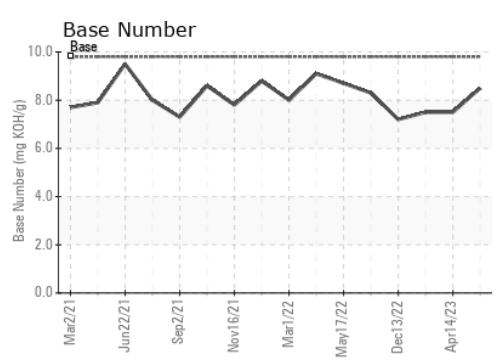
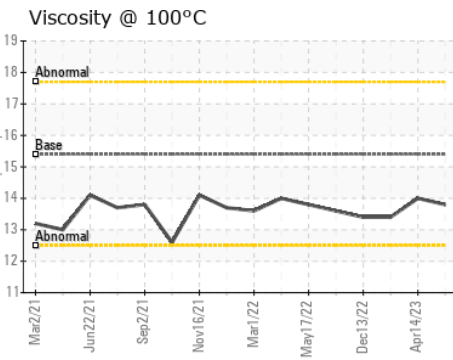
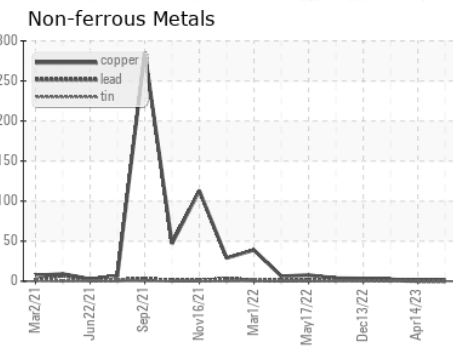
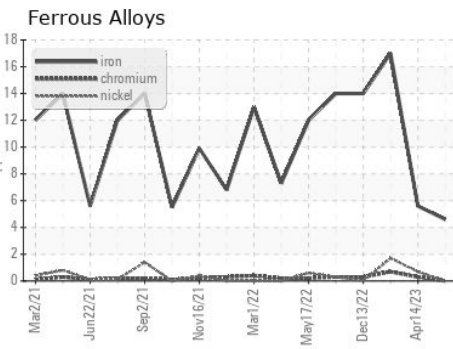
# OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history 1	history 2
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	history 1	history 2	
Visc @ 100°C	cSt	ASTM D445	15.4	<b>13.8</b>	14.0	13.4

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0083304 **Received** : 30 Jun 2023  
**Lab Number** : **05887632** **Diagnosed** : 02 Jul 2023  
**Unique Number** : 10538115 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 017 - Durham**  
 148 Stone Park Court  
 Durham, NC  
 US 27703  
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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)