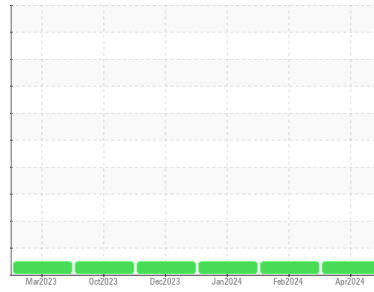




# OIL ANALYSIS REPORT

## Sample Rating Trend



**NORMAL**



Machine Id  
**212019**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

## 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>GFL0109419</b>	GFL0109318	GFL0093541
Sample Date	Client Info		<b>12 Apr 2024</b>	27 Feb 2024	17 Jan 2024
Machine Age	hrs	Client Info	<b>2636</b>	2373	2270
Oil Age	hrs	Client Info	<b>263</b>	562	459
Oil Changed	Client Info		<b>Not Changed</b>	Changed	Not Changed
Sample Status			<b>NORMAL</b>	NORMAL	NORMAL

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<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 >90	<b>8</b>	26	14
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	2	2
Nickel	ppm	ASTM D5185m >2	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m >2	<b>6</b>	0	<1
Silver	ppm	ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >20	<b>4</b>	16	10
Lead	ppm	ASTM D5185m >40	<b>0</b>	0	0
Copper	ppm	ASTM D5185m >330	<b>&lt;1</b>	1	3
Tin	ppm	ASTM D5185m >15	<b>&lt;1</b>	0	0
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>9</b>	3	0
Barium	ppm	ASTM D5185m 0	<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>53</b>	66	57
Manganese	ppm	ASTM D5185m 0	<b>0</b>	<1	1
Magnesium	ppm	ASTM D5185m 1010	<b>871</b>	1020	872
Calcium	ppm	ASTM D5185m 1070	<b>1101</b>	1120	952
Phosphorus	ppm	ASTM D5185m 1150	<b>1049</b>	1132	993
Zinc	ppm	ASTM D5185m 1270	<b>1187</b>	1342	1145
Sulfur	ppm	ASTM D5185m 2060	<b>3167</b>	3144	2708

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>4</b>	6	5
Sodium	ppm	ASTM D5185m	<b>&lt;1</b>	2	0
Potassium	ppm	ASTM D5185m >20	<b>7</b>	33	16

## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >6	<b>0.2</b>	0.6	0.5
Nitration	Abs/cm	*ASTM D7624 >20	<b>6.0</b>	9.1	8.1
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>18.2</b>	19.5	19.1

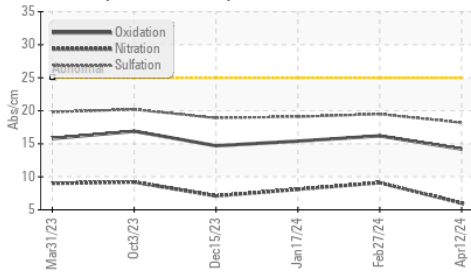
## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>14.2</b>	16.2	15.4
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>8.9</b>	7.7	8.2

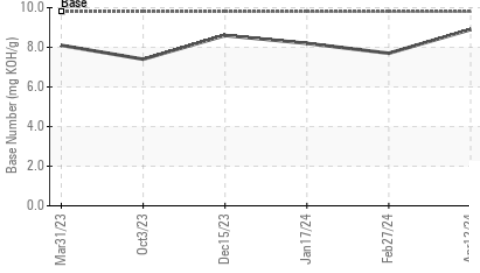


# OIL ANALYSIS REPORT

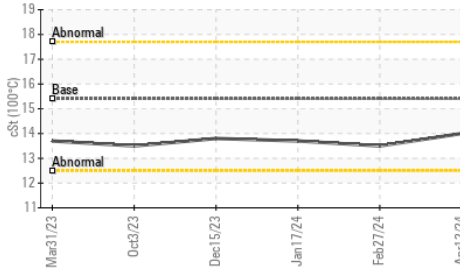
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

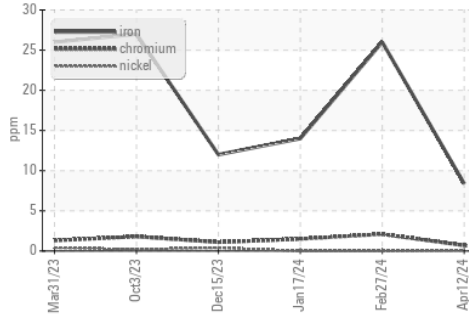


PARAMETER	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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

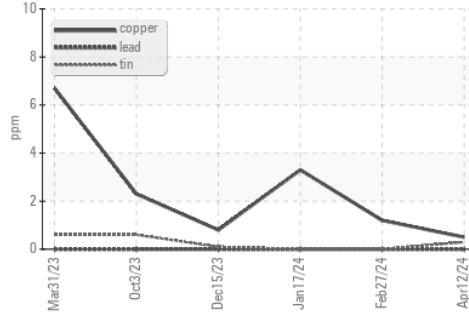
PARAMETER	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	14.0	13.5

## GRAPHS

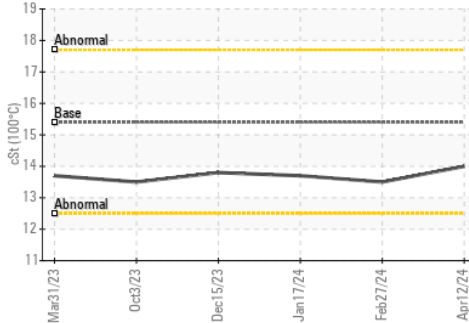
Ferrous Alloys



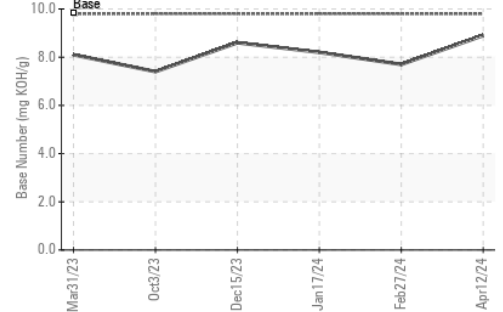
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : GFL0109419  
 Lab Number : 06148483  
 Unique Number : 10978561  
 Test Package : FLEET

GFL Environmental - 891 - Oklahoma City Hauling  
 1001 South Rockwell  
 Oklahoma City, OK  
 US 73128

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)

Received : 15 Apr 2024  
 Tested : 16 Apr 2024  
 Diagnosed : 16 Apr 2024 - Wes Davis

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