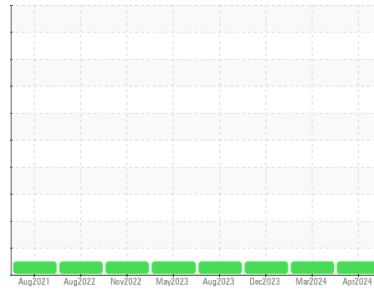




# OIL ANALYSIS REPORT

## Sample Rating Trend



**NORMAL**



Machine Id

**929052**

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>GFL0116913</b>	GFL0116861	GFL0107097
Sample Date	Client Info		<b>04 Apr 2024</b>	26 Mar 2024	20 Dec 2023
Machine Age	hrs	Client Info	<b>10222</b>	10222	10222
Oil Age	hrs	Client Info	<b>600</b>	600	600
Oil Changed	Client Info		<b>Changed</b>	Changed	Not 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 >110	<b>38</b>	10	10
Chromium	ppm	ASTM D5185m >4	<b>2</b>	<1	<1
Nickel	ppm	ASTM D5185m >2	<b>1</b>	<1	0
Titanium	ppm	ASTM D5185m	<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >25	<b>6</b>	3	3
Lead	ppm	ASTM D5185m >45	<b>&lt;1</b>	<1	0
Copper	ppm	ASTM D5185m >85	<b>2</b>	<1	<1
Tin	ppm	ASTM D5185m >4	<b>1</b>	2	0
Vanadium	ppm	ASTM D5185m	<b>&lt;1</b>	<1	0
Cadmium	ppm	ASTM D5185m	<b>&lt;1</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>&lt;1</b>	0	0
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>81</b>	59	58
Manganese	ppm	ASTM D5185m 0	<b>1</b>	<1	0
Magnesium	ppm	ASTM D5185m 1010	<b>1336</b>	959	916
Calcium	ppm	ASTM D5185m 1070	<b>1486</b>	1088	1051
Phosphorus	ppm	ASTM D5185m 1150	<b>1479</b>	1018	1019
Zinc	ppm	ASTM D5185m 1270	<b>1754</b>	1262	1201
Sulfur	ppm	ASTM D5185m 2060	<b>4480</b>	3612	3359

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >30	<b>8</b>	2	3
Sodium	ppm	ASTM D5185m	<b>20</b>	5	0
Potassium	ppm	ASTM D5185m >20	<b>3</b>	1	3

## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0.6</b>	0.4	0.3
Nitration	Abs/cm	*ASTM D7624 >20	<b>9.0</b>	9.6	6.4
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>20.2</b>	19.3	18.4

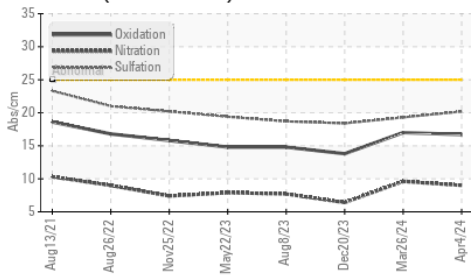
## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>16.7</b>	17.0	13.8
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>8.0</b>	7.1	8.8

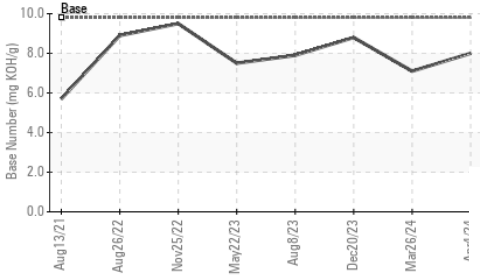


# OIL ANALYSIS REPORT

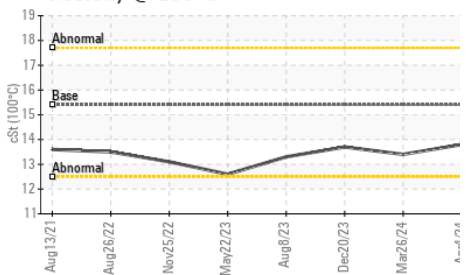
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

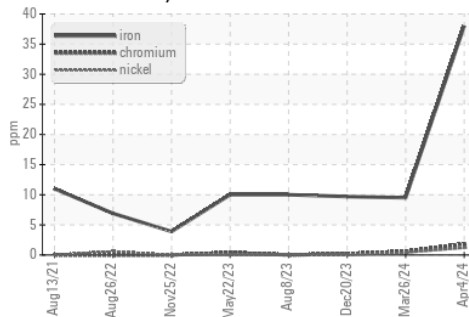


PARAMETER	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

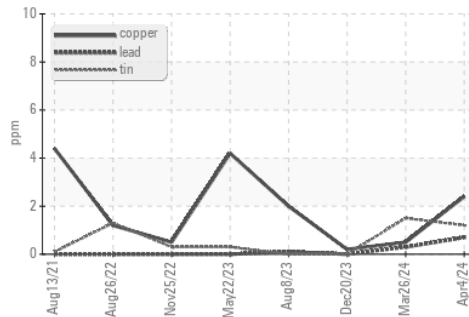
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.8	13.4

## GRAPHS

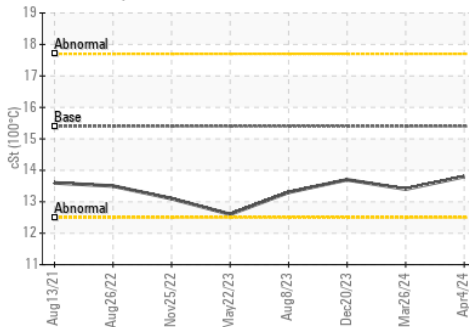
Ferrous Alloys



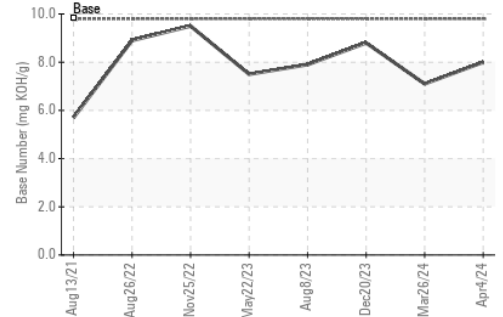
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : GFL0116913  
 Lab Number : 06143606  
 Unique Number : 10968414  
 Test Package : FLEET

Received : 09 Apr 2024  
 Tested : 10 Apr 2024  
 Diagnosed : 12 Apr 2024 - Don Baldrige

GFL Environmental - 465 - Pontiac  
 888 Baldwin  
 Pontiac, MI  
 US 48340

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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