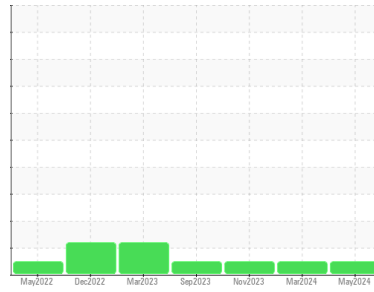




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**220025-106703**

Component  
**Diesel Engine**

Fluid  
**PETRO CANADA DURON SHP 15W40 (--- LTR)**

## 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>GFL0106031</b>	GFL0106107	GFL0082079
Sample Date	Client Info		<b>20 May 2024</b>	04 Mar 2024	29 Nov 2023
Machine Age	hrs	Client Info	<b>7752</b>	7320	6775
Oil Age	hrs	Client Info	<b>600</b>	545	0
Oil Changed	Client Info		<b>Changed</b>	Changed	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>14</b>	15	16
Chromium	ppm	ASTM D5185m >4	<b>1</b>	<1	<1
Nickel	ppm	ASTM D5185m >2	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185m	<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m >2	<b>1</b>	0	0
Aluminum	ppm	ASTM D5185m >25	<b>8</b>	10	7
Lead	ppm	ASTM D5185m >45	<b>&lt;1</b>	0	0
Copper	ppm	ASTM D5185m >85	<b>2</b>	<1	1
Tin	ppm	ASTM D5185m >4	<b>&lt;1</b>	<1	0
Vanadium	ppm	ASTM D5185m	<b>&lt;1</b>	0	0
Cadmium	ppm	ASTM D5185m	<b>&lt;1</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>9</b>	6	4
Barium	ppm	ASTM D5185m 0	<b>&lt;1</b>	0	2
Molybdenum	ppm	ASTM D5185m 60	<b>63</b>	58	61
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	0
Magnesium	ppm	ASTM D5185m 1010	<b>857</b>	919	880
Calcium	ppm	ASTM D5185m 1070	<b>1142</b>	1020	1068
Phosphorus	ppm	ASTM D5185m 1150	<b>1019</b>	1012	953
Zinc	ppm	ASTM D5185m 1270	<b>1208</b>	1276	1179
Sulfur	ppm	ASTM D5185m 2060	<b>3220</b>	2970	4046

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >30	<b>5</b>	4	3
Sodium	ppm	ASTM D5185m	<b>1</b>	<1	0
Potassium	ppm	ASTM D5185m >20	<b>8</b>	8	9

## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0.4</b>	0.5	0.4
Nitration	Abs/cm	*ASTM D7624 >20	<b>9.2</b>	9.8	9.6
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>19.2</b>	19.3	19.7

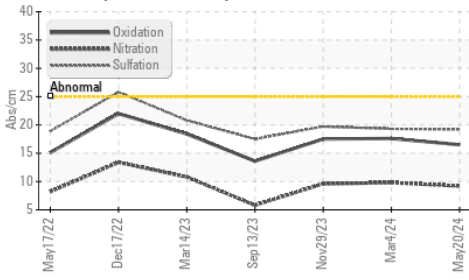
## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>16.5</b>	17.6	17.5
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>7.6</b>	7.0	7.6

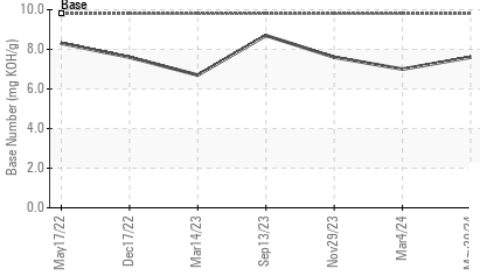


# OIL ANALYSIS REPORT

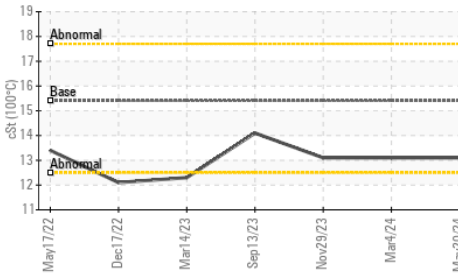
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

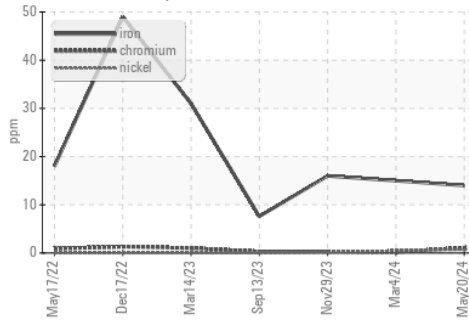


PARAMETER	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

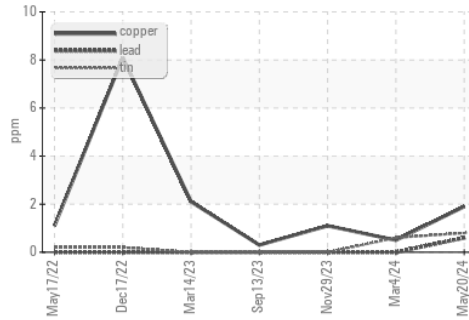
PARAMETER	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.1	13.1

## GRAPHS

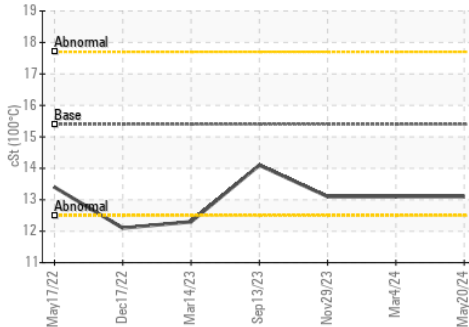
Ferrous Alloys



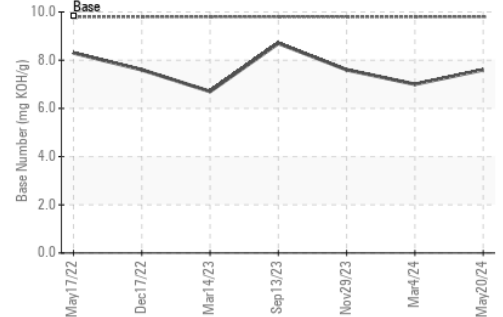
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : GFL0106031  
 Lab Number : 06191942  
 Unique Number : 11048694  
 Test Package : FLEET

Received : 28 May 2024  
 Tested : 29 May 2024  
 Diagnosed : 30 May 2024 - Don Baldrige

GFL Environmental - 152 - Jacksonville  
 7580 PHILIPS HWY  
 Jacksonville, FL  
 US 32256  
 Contact: GRANVILLE CARROLL  
 gcarroll@gflenv.com

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: