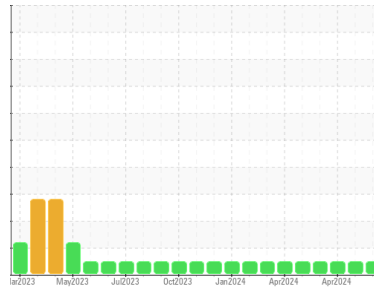




# OIL ANALYSIS REPORT

Area  
**(62A1037) ALEXANDER CITY**  
 Machine Id  
**413057**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

Sample Rating Trend



**NORMAL**



## 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 acceptable for the time in service.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>GFL0085978</b>	GFL0079729	GFL0091349
Sample Date	Client Info		<b>23 May 2024</b>	04 May 2024	17 Apr 2024
Machine Age	hrs	Client Info	<b>2736</b>	2666	2504
Oil Age	hrs	Client Info	<b>2736</b>	2666	2504
Oil Changed	Client Info		<b>Not Chngd</b>	N/A	N/A
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 >120	<b>24</b>	15	10
Chromium	ppm	ASTM D5185m >20	<b>1</b>	<1	<1
Nickel	ppm	ASTM D5185m >5	<b>2</b>	2	0
Titanium	ppm	ASTM D5185m >2	<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185m >2	<b>1</b>	<1	0
Aluminum	ppm	ASTM D5185m >20	<b>4</b>	3	2
Lead	ppm	ASTM D5185m >40	<b>&lt;1</b>	0	0
Copper	ppm	ASTM D5185m >330	<b>4</b>	3	2
Tin	ppm	ASTM D5185m >15	<b>1</b>	1	<1
Vanadium	ppm	ASTM D5185m	<b>&lt;1</b>	<1	<1
Cadmium	ppm	ASTM D5185m	<b>&lt;1</b>	<1	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>8</b>	5	6
Barium	ppm	ASTM D5185m 0	<b>1</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>64</b>	60	56
Manganese	ppm	ASTM D5185m 0	<b>1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 1010	<b>911</b>	827	808
Calcium	ppm	ASTM D5185m 1070	<b>1101</b>	1023	987
Phosphorus	ppm	ASTM D5185m 1150	<b>1036</b>	957	836
Zinc	ppm	ASTM D5185m 1270	<b>1205</b>	1149	1004
Sulfur	ppm	ASTM D5185m 2060	<b>3064</b>	2826	2886

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>8</b>	7	6
Sodium	ppm	ASTM D5185m	<b>12</b>	4	3
Potassium	ppm	ASTM D5185m >20	<b>8</b>	6	2

## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	<b>0.5</b>	0.4	0.3
Nitration	Abs/cm	*ASTM D7624 >20	<b>8.7</b>	9.0	7.8
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>19.6</b>	19.4	18.6

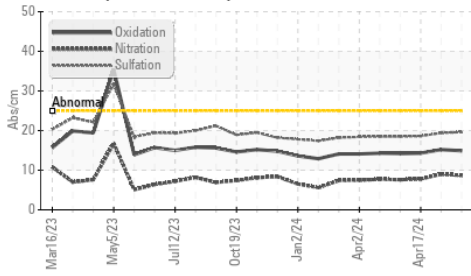
## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>14.9</b>	15.2	14.3
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>6.5</b>	6.8	6.9

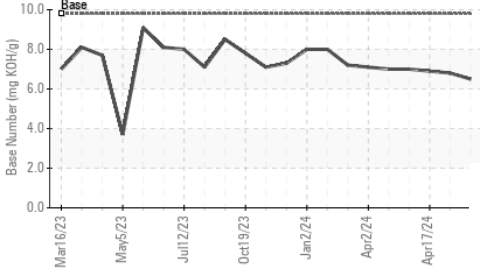


# OIL ANALYSIS REPORT

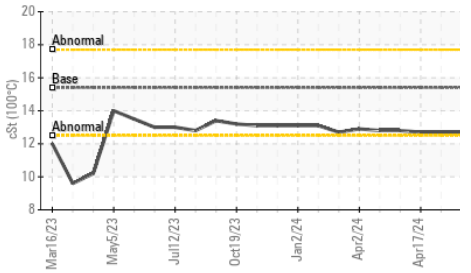
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

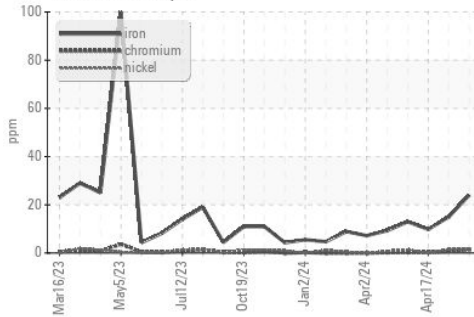


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

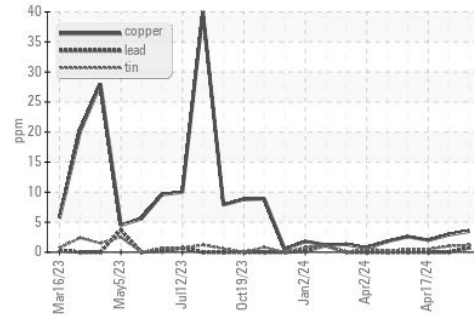
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	12.7	12.7

## GRAPHS

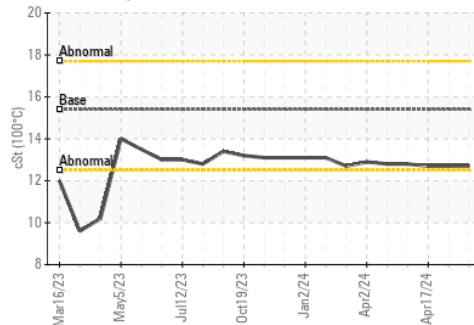
Ferrous Alloys



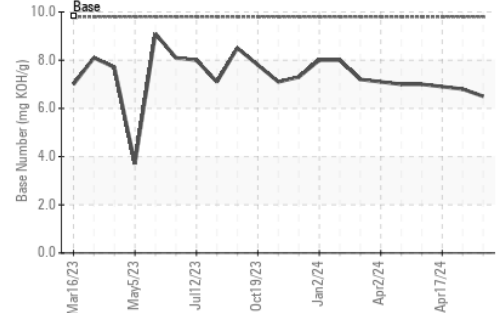
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0085978  
**Lab Number** : 06192067  
**Unique Number** : 11048819  
**Test Package** : FLEET

**Received** : 28 May 2024  
**Tested** : 29 May 2024  
**Diagnosed** : 30 May 2024 - Sean Felton

GFL Environmental - 172 - Montgomery-Alexander City-Tallahassee  
 Multiple Sites  
 Montgomery, AL  
 US 36108

Contact: BRANDON HURST  
 brandonhurst@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)

T:  
 F: