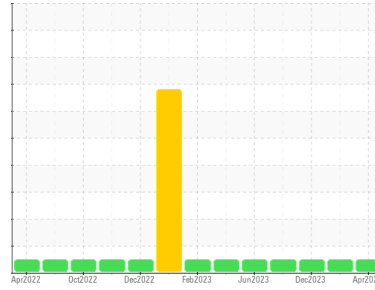




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**741002-310091**

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>GFL0106917</b>	GFL0092176	GFL0091998
Sample Date	Client Info		<b>02 Apr 2024</b>	29 Jan 2024	08 Dec 2023
Machine Age	hrs	Client Info	<b>625</b>	52	92182
Oil Age	hrs	Client Info	<b>600</b>	0	600
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>8</b>	4	12
Chromium	ppm	ASTM D5185m >4	<b>&lt;1</b>	<1	1
Nickel	ppm	ASTM D5185m >2	<b>0</b>	<1	1
Titanium	ppm	ASTM D5185m	<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >25	<b>2</b>	2	1
Lead	ppm	ASTM D5185m >45	<b>0</b>	<1	2
Copper	ppm	ASTM D5185m >85	<b>&lt;1</b>	<1	1
Tin	ppm	ASTM D5185m >4	<b>0</b>	<1	1
Vanadium	ppm	ASTM D5185m	<b>&lt;1</b>	0	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	<1

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>7</b>	10	6
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	11
Molybdenum	ppm	ASTM D5185m 60	<b>55</b>	56	57
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	0	<1
Magnesium	ppm	ASTM D5185m 1010	<b>576</b>	535	592
Calcium	ppm	ASTM D5185m 1070	<b>1776</b>	1579	1711
Phosphorus	ppm	ASTM D5185m 1150	<b>687</b>	719	732
Zinc	ppm	ASTM D5185m 1270	<b>1017</b>	966	1012
Sulfur	ppm	ASTM D5185m 2060	<b>2971</b>	2478	2813

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >30	<b>3</b>	2	5
Sodium	ppm	ASTM D5185m	<b>7</b>	4	8
Potassium	ppm	ASTM D5185m >20	<b>2</b>	2	2

## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0</b>	0	0
Nitration	Abs/cm	*ASTM D7624 >20	<b>10.9</b>	10.6	12.0
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>21.8</b>	20.5	24.2

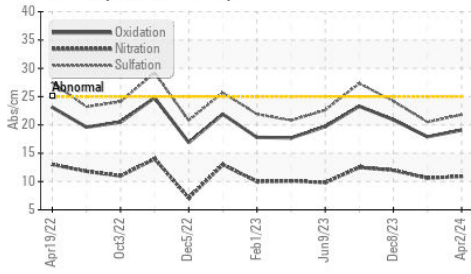
## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>19.1</b>	17.9	20.9
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>4.2</b>	5.2	3.7

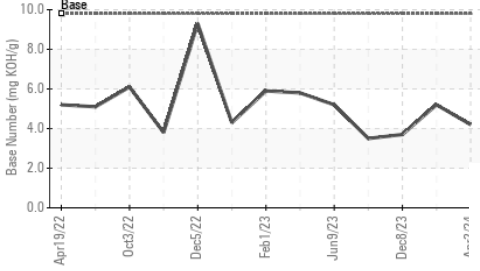


# OIL ANALYSIS REPORT

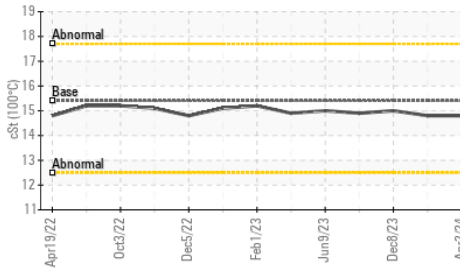
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

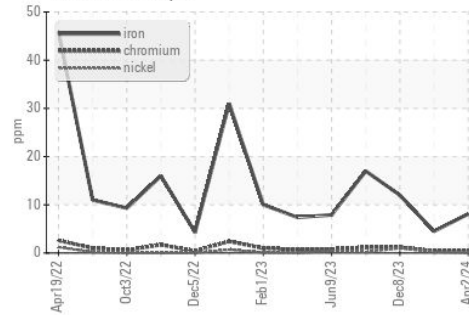


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

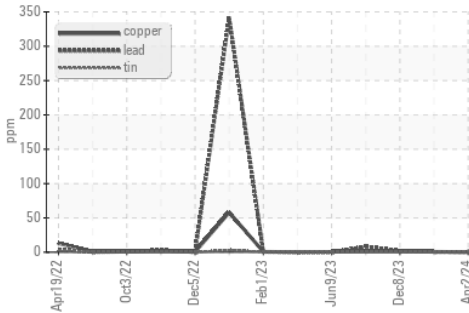
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	14.8	15.0

## GRAPHS

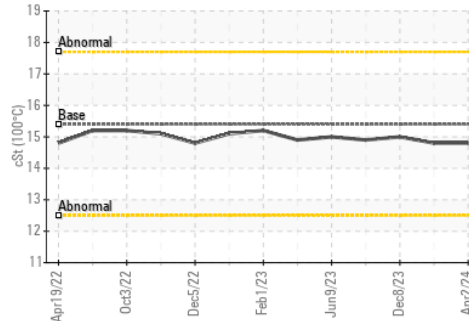
Ferrous Alloys



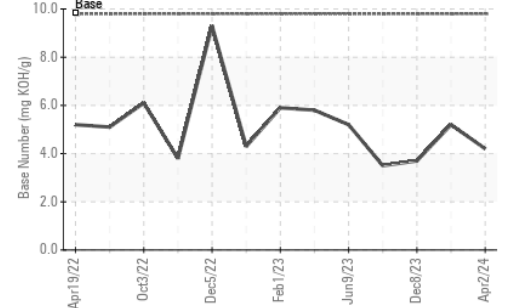
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0106917  
**Lab Number** : 06138393  
**Unique Number** : 10963201  
**Test Package** : FLEET

**Received** : 04 Apr 2024  
**Tested** : 05 Apr 2024  
**Diagnosed** : 06 Apr 2024 - Don Baldrige

**GFL Environmental - 856 - Houston South**  
 8515 Highway 6 South  
 Houston, TX  
 US 77083

Contact: Apolinar Zacarias  
 pzacariascano@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: