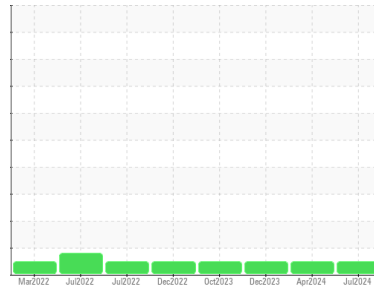




# OIL ANALYSIS REPORT

### Sample Rating Trend



**NORMAL**



Machine Id

**228037**

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>GFL0125451</b>	GFL0116134	GFL0104545
Sample Date	Client Info		<b>05 Jul 2024</b>	24 Apr 2024	27 Dec 2023
Machine Age	hrs	Client Info	<b>9113</b>	8806	8104
Oil Age	hrs	Client Info	<b>307</b>	605	147
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 >100	<b>11</b>	18	11
Chromium	ppm	ASTM D5185m >20	<b>0</b>	0	0
Nickel	ppm	ASTM D5185m >4	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m	<b>0</b>	0	0
Silver	ppm	ASTM D5185m >3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >20	<b>5</b>	5	4
Lead	ppm	ASTM D5185m >40	<b>&lt;1</b>	0	<1
Copper	ppm	ASTM D5185m >330	<b>2</b>	5	<1
Tin	ppm	ASTM D5185m >15	<b>0</b>	0	<1
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>&lt;1</b>	0	<1
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>62</b>	64	64
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	0	<1
Magnesium	ppm	ASTM D5185m 1010	<b>1075</b>	1077	1095
Calcium	ppm	ASTM D5185m 1070	<b>1221</b>	1205	1158
Phosphorus	ppm	ASTM D5185m 1150	<b>1152</b>	1120	1119
Zinc	ppm	ASTM D5185m 1270	<b>1359</b>	1414	1373
Sulfur	ppm	ASTM D5185m 2060	<b>3777</b>	3442	3341

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>4</b>	3	3
Sodium	ppm	ASTM D5185m	<b>4</b>	2	2
Potassium	ppm	ASTM D5185m >20	<b>7</b>	11	8

## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>1.1</b>	1.6	0.9
Nitration	Abs/cm	*ASTM D7624 >20	<b>10.1</b>	12.8	9.0
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>20.7</b>	23.5	20.2

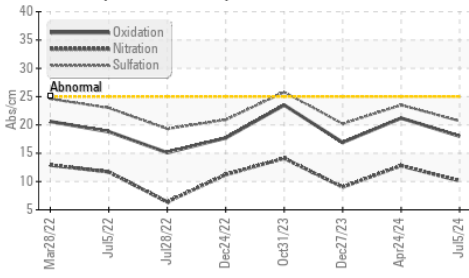
## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>18.0</b>	21.2	16.9
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>9.3</b>	7.9	9.2

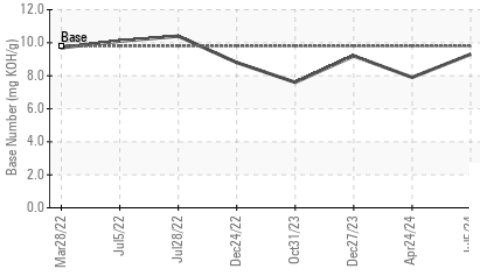


# OIL ANALYSIS REPORT

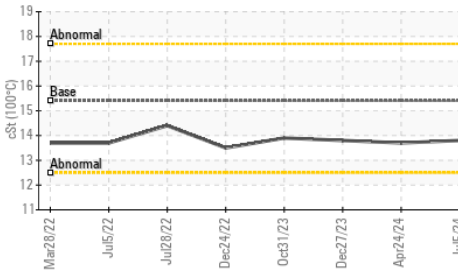
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

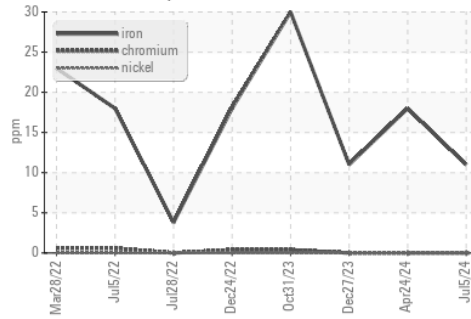


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

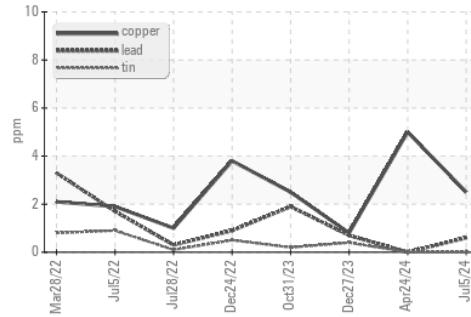
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.8	13.7

## GRAPHS

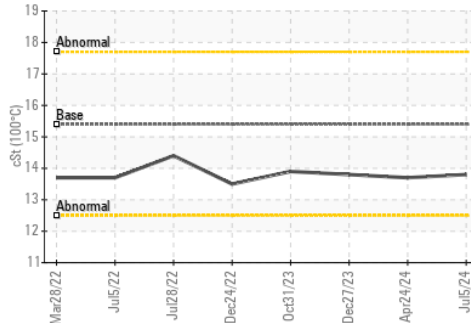
Ferrous Alloys



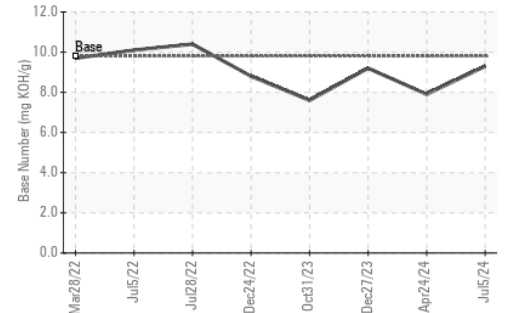
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : GFL0125451  
 Lab Number : 06231026  
 Unique Number : 11114519  
 Test Package : FLEET

Received : 08 Jul 2024  
 Tested : 10 Jul 2024  
 Diagnosed : 10 Jul 2024 - Wes Davis

GFL Environmental - 947 - WB Horicon HC  
 N7296 County Rd V  
 Horicon, WI  
 US 53032  
 Contact: Tim Kieffer  
 tim.kieffer@gflenv.com  
 T: (608)219-0288  
 F:

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)