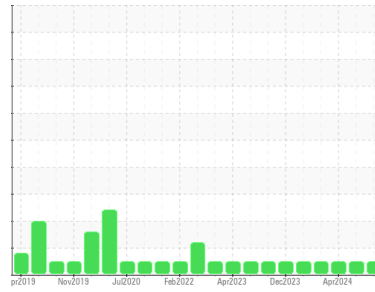




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Area  
**(72248V)**  
 Machine Id  
**829066-101270**  
 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>GFL0117941</b>	GFL0117945	GFL0111945
Sample Date	Client Info		<b>28 May 2024</b>	23 May 2024	08 Apr 2024
Machine Age	hrs	Client Info	<b>67694</b>	67683	67526
Oil Age	hrs	Client Info	<b>600</b>	0	600
Oil Changed	Client Info		<b>Changed</b>	Not Changd	Changed
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 >90	<b>10</b>	13	41
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	<1	2
Nickel	ppm	ASTM D5185m >2	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m >2	<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185m >2	<b>&lt;1</b>	<1	0
Aluminum	ppm	ASTM D5185m >20	<b>2</b>	4	8
Lead	ppm	ASTM D5185m >40	<b>1</b>	<1	0
Copper	ppm	ASTM D5185m >330	<b>&lt;1</b>	<1	0
Tin	ppm	ASTM D5185m >15	<b>&lt;1</b>	0	<1
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>2</b>	1	5
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>60</b>	62	62
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 1010	<b>941</b>	1046	978
Calcium	ppm	ASTM D5185m 1070	<b>1121</b>	1156	1156
Phosphorus	ppm	ASTM D5185m 1150	<b>1063</b>	1125	1116
Zinc	ppm	ASTM D5185m 1270	<b>1209</b>	1322	1354
Sulfur	ppm	ASTM D5185m 2060	<b>3548</b>	3888	3791

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>3</b>	8	5
Sodium	ppm	ASTM D5185m	<b>4</b>	2	5
Potassium	ppm	ASTM D5185m >20	<b>2</b>	2	2

## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >6	<b>0.3</b>	0.3	0.9
Nitration	Abs/cm	*ASTM D7624 >20	<b>5.8</b>	5.7	9.5
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>18.2</b>	18.1	20.5

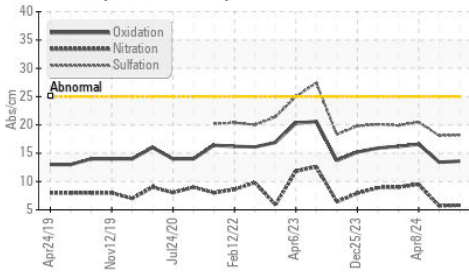
## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>13.6</b>	13.4	16.6
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>9.0</b>	9.0	8.3

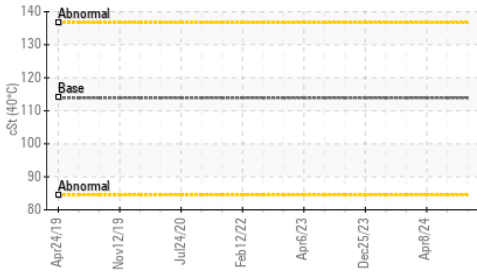


# OIL ANALYSIS REPORT

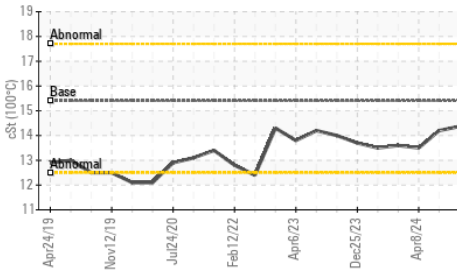
FT-IR (Direct Trend)



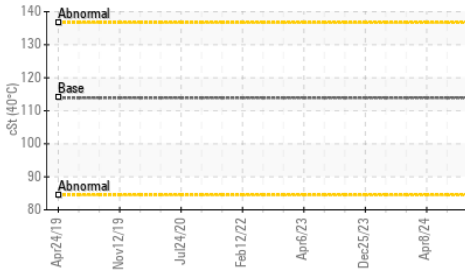
Viscosity @ 40°C



Viscosity @ 100°C



Viscosity @ 40°C

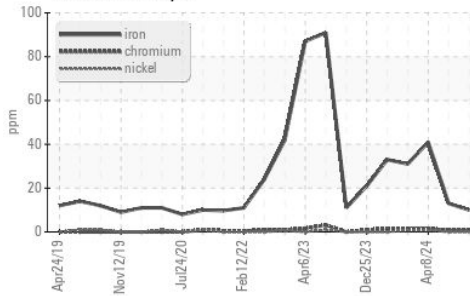


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

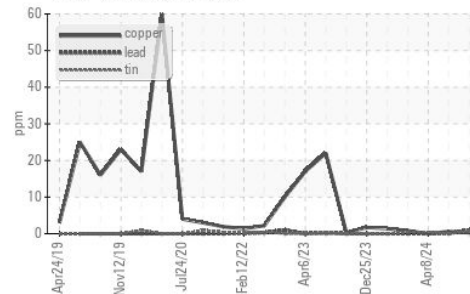
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	113.9	103.3	---
Visc @ 100°C	cSt	ASTM D445	15.4	14.37	14.2
Viscosity Index (VI)	Scale	ASTM D2270	142	142	---

## GRAPHS

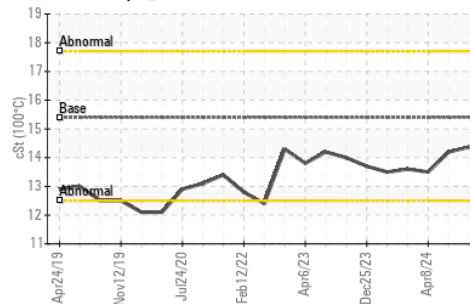
Ferrous Alloys



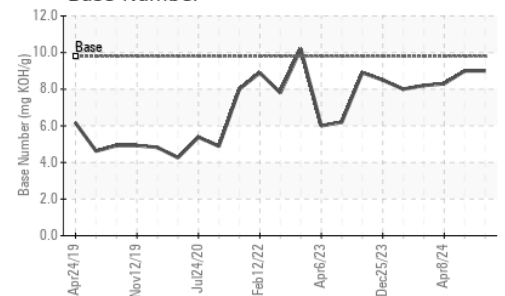
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : GFL0117941  
 Lab Number : 06194773  
 Unique Number : 11056896  
 Test Package : FLEET ( Additional Tests: KV40, VI )

Received : 29 May 2024  
 Tested : 03 Jun 2024  
 Diagnosed : 03 Jun 2024 - Wes Davis

GFL Environmental - 893 - OK East Hauling  
 2100 Lilly Street  
 Seminole, OK  
 US 74868

Contact: Roger Barlow  
 rbarlow@gflenv.com  
 T: (405)204-6183

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)