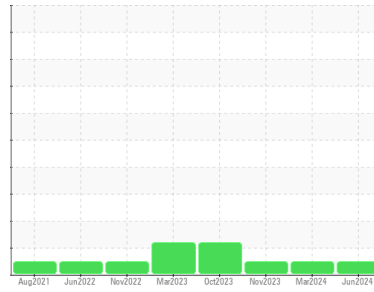




# OIL ANALYSIS REPORT

## Sample Rating Trend



**NORMAL**



Machine Id

**525028-971**

Component

**Diesel Engine**

Fluid

**PETRO CANADA DURON SHP 15W40 (--- GAL)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor. (Customer Sample Comment: Sampled oil )

### 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>GFL0120877</b>	GFL0110285	GFL0102785
Sample Date	Client Info		<b>01 Jun 2024</b>	04 Mar 2024	30 Nov 2023
Machine Age	hrs	Client Info	<b>18690</b>	18479	18423
Oil Age	hrs	Client Info	<b>300</b>	7	18330
Oil Changed	Client Info		<b>Not Changed</b>	Not Changd	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>21</b>	10	6
Chromium	ppm	ASTM D5185m >20	<b>2</b>	<1	<1
Nickel	ppm	ASTM D5185m >4	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m	<b>2</b>	2	2
Silver	ppm	ASTM D5185m >3	<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185m >20	<b>4</b>	2	2
Lead	ppm	ASTM D5185m >40	<b>3</b>	<1	1
Copper	ppm	ASTM D5185m >330	<b>4</b>	2	1
Tin	ppm	ASTM D5185m >15	<b>1</b>	<1	1
Vanadium	ppm	ASTM D5185m	<b>0</b>	<1	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>6</b>	9	12
Barium	ppm	ASTM D5185m 0	<b>2</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>65</b>	62	58
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 1010	<b>868</b>	835	880
Calcium	ppm	ASTM D5185m 1070	<b>1209</b>	1136	1116
Phosphorus	ppm	ASTM D5185m 1150	<b>988</b>	860	1019
Zinc	ppm	ASTM D5185m 1270	<b>1210</b>	1085	1219
Sulfur	ppm	ASTM D5185m 2060	<b>3310</b>	2852	3164

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>13</b>	8	8
Sodium	ppm	ASTM D5185m	<b>24</b>	21	16
Potassium	ppm	ASTM D5185m >20	<b>13</b>	4	3

## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0.4</b>	0.3	0.2
Nitration	Abs/cm	*ASTM D7624 >20	<b>8.9</b>	7.1	6.5
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>19.8</b>	17.9	17.5

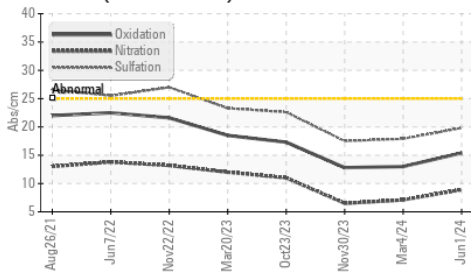
## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>15.4</b>	13.0	12.8
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>7.5</b>	8.3	8.5

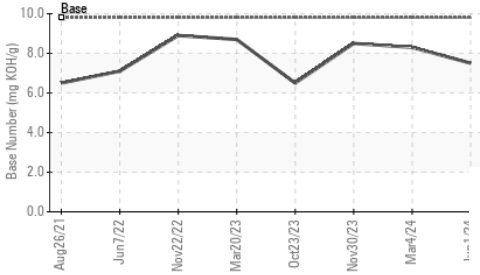


# OIL ANALYSIS REPORT

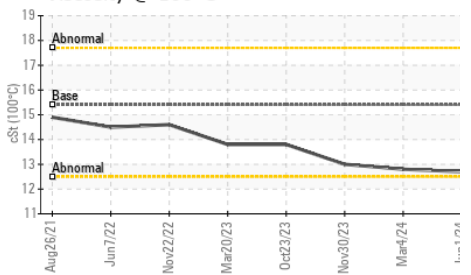
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

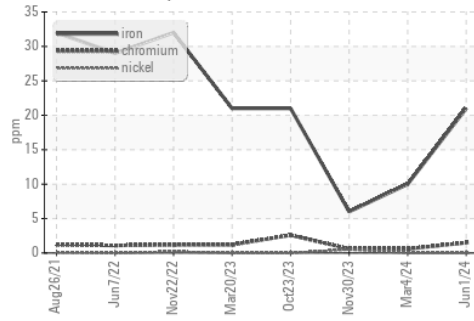


PARAMETER	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

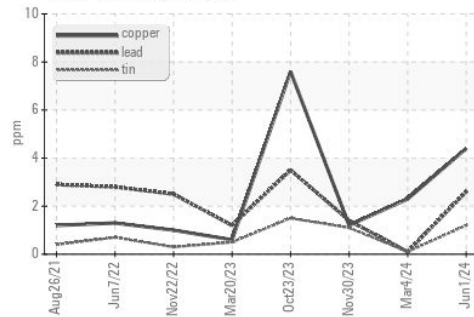
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	12.7	12.8

## GRAPHS

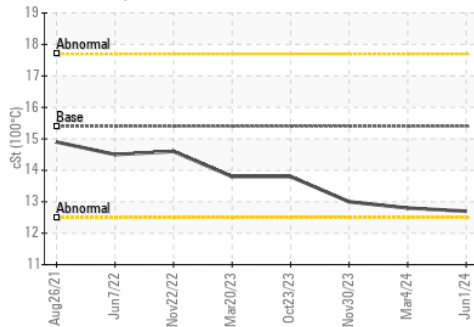
Ferrous Alloys



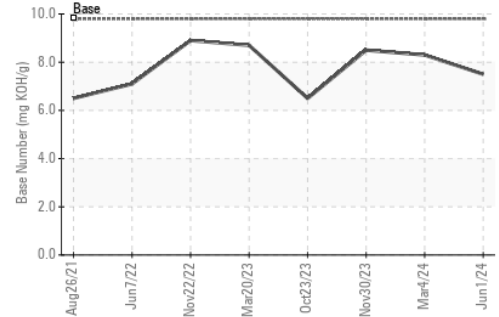
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : GFL0120877  
 Lab Number : 06201069  
 Unique Number : 11063192  
 Test Package : FLEET

GFL Environmental - 622 - Traverse City Hauling  
 160 Hughes Dr  
 Traverse City, MI  
 US 49686  
 Contact: GARY BREWER

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: