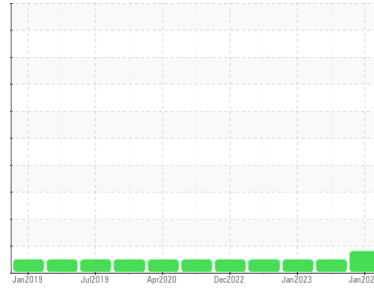




# OIL ANALYSIS REPORT

Sample Rating Trend



**WEAR**



Machine Id  
**928075-205272**

Component  
**Diesel Engine**

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

## DIAGNOSIS

### ▲ Recommendation

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

### ▲ Wear

Cylinder, crank, or cam shaft wear is indicated. All other 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>GFL0099272</b>	GFL0080052	GFL0069437
Sample Date	Client Info		<b>19 Jan 2024</b>	04 Oct 2023	11 Jan 2023
Machine Age	hrs	Client Info	<b>12255</b>	12234	11951
Oil Age	hrs	Client Info	<b>0</b>	0	0
Oil Changed	Client Info		<b>Changed</b>	Not Changd	Not Changd
Sample Status			<b>ABNORMAL</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>▲ 106</b>	88	46
Chromium	ppm	ASTM D5185m >20	<b>3</b>	3	2
Nickel	ppm	ASTM D5185m >4	<b>&lt;1</b>	<1	0
Titanium	ppm	ASTM D5185m	<b>&lt;1</b>	<1	0
Silver	ppm	ASTM D5185m >3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >20	<b>2</b>	45	6
Lead	ppm	ASTM D5185m >40	<b>&lt;1</b>	<1	<1
Copper	ppm	ASTM D5185m >330	<b>&lt;1</b>	17	2
Tin	ppm	ASTM D5185m >15	<b>&lt;1</b>	<1	<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>6</b>	5	<1
Barium	ppm	ASTM D5185m 0	<b>0</b>	12	0
Molybdenum	ppm	ASTM D5185m 60	<b>49</b>	35	61
Manganese	ppm	ASTM D5185m 0	<b>1</b>	3	<1
Magnesium	ppm	ASTM D5185m 1010	<b>978</b>	920	903
Calcium	ppm	ASTM D5185m 1070	<b>986</b>	1298	1128
Phosphorus	ppm	ASTM D5185m 1150	<b>983</b>	908	1013
Zinc	ppm	ASTM D5185m 1270	<b>1161</b>	1128	1247
Sulfur	ppm	ASTM D5185m 2060	<b>2853</b>	2820	2812

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>8</b>	12	16
Sodium	ppm	ASTM D5185m	<b>2</b>	4	3
Potassium	ppm	ASTM D5185m >20	<b>2</b>	98	2

## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0.1</b>	1.1	1.7
Nitration	Abs/cm	*ASTM D7624 >20	<b>5.5</b>	13.6	11.6
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>17.7</b>	28.6	22.8

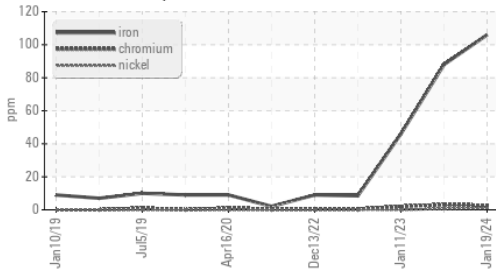
## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>13.7</b>	25.5	17.6
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>8.9</b>	4.3	7.0

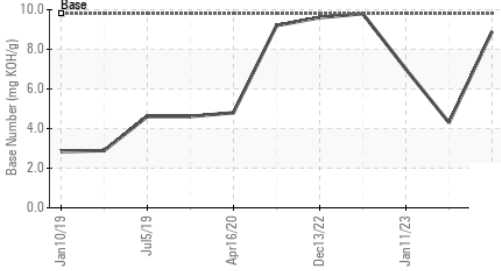


# OIL ANALYSIS REPORT

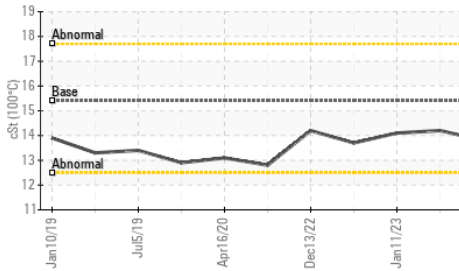
### ▲ Ferrous Alloys



### Base Number



### Viscosity @ 100°C

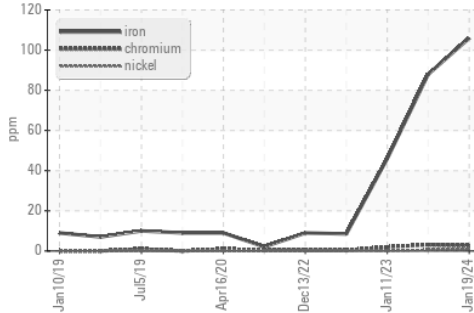


PARAMETER	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

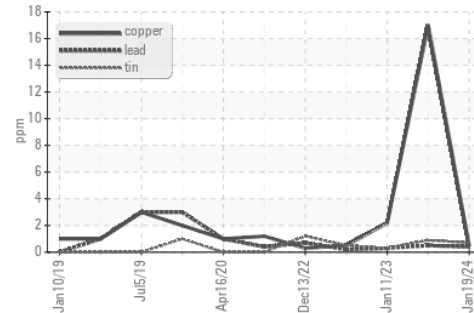
FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	15.4	13.8	14.2	14.1

### GRAPHS

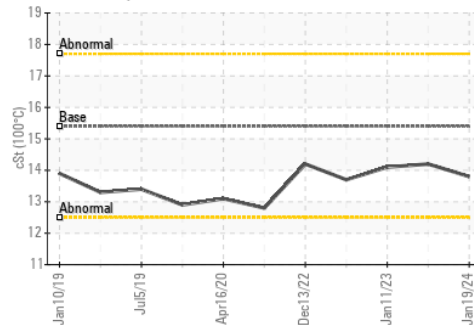
### ▲ Ferrous Alloys



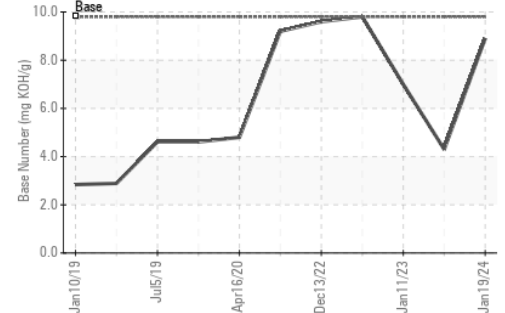
### Non-ferrous Metals



### Viscosity @ 100°C



### Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : GFL0099272  
 Lab Number : 06076318  
 Unique Number : 10858409  
 Test Package : FLEET

GFL Environmental - 844 - Princeton Hauling  
 10129 Highway 62 West  
 Princeton, KY  
 US 42445

Contact: ROBERT THIBAUT  
 robert.thibault@gflenv.com

T: (931)237-6045

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)