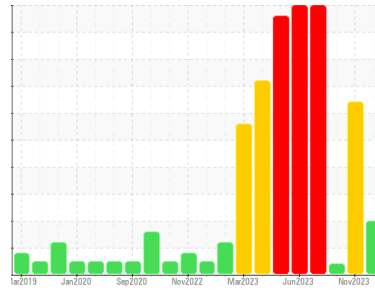




# OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL



Machine Id  
**425063-402316**

Component  
**Diesel Engine**

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

## DIAGNOSIS

### Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

Sodium and/or potassium levels remain high. Light fuel dilution occurring. Test for glycol is negative.

### 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>GFL0103334</b>	GFL0099890	GFL0095151
Sample Date	Client Info	<b>24 Jan 2024</b>	15 Nov 2023	05 Oct 2023
Machine Age	hrs	<b>13839</b>	13665	13618
Oil Age	hrs	<b>0</b>	600	0
Oil Changed	Client Info	<b>Not Changed</b>	Changed	Not Changed
Sample Status		<b>ATTENTION</b>	SEVERE	ATTENTION

## CONTAMINATION

method	limit/base	current	history1	history2
Water	WC Method >0.2	<b>NEG</b>	NEG	NEG

## WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >100	<b>17</b>	38	6
Chromium	ppm ASTM D5185m >20	<b>&lt;1</b>	2	0
Nickel	ppm ASTM D5185m >4	<b>0</b>	0	<1
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>	4	2
Lead	ppm ASTM D5185m >40	<b>&lt;1</b>	2	0
Copper	ppm ASTM D5185m >330	<b>11</b>	36	6
Tin	ppm ASTM D5185m >15	<b>0</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>37</b>	20	390
Barium	ppm ASTM D5185m 0	<b>0</b>	0	1
Molybdenum	ppm ASTM D5185m 60	<b>54</b>	102	144
Manganese	ppm ASTM D5185m 0	<b>&lt;1</b>	1	<1
Magnesium	ppm ASTM D5185m 1010	<b>529</b>	861	815
Calcium	ppm ASTM D5185m 1070	<b>1530</b>	958	1582
Phosphorus	ppm ASTM D5185m 1150	<b>786</b>	803	850
Zinc	ppm ASTM D5185m 1270	<b>920</b>	1100	1043
Sulfur	ppm ASTM D5185m 2060	<b>2475</b>	2623	3253

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	<b>9</b>	▲ 30	8
Sodium	ppm ASTM D5185m	▲ <b>184</b>	▲ 1110	0
Potassium	ppm ASTM D5185m >20	<b>24</b>	▲ 188	8
Fuel	% ASTM D3524 >5	▲ <b>4.1</b>	◆ 8.7	0.4
Glycol	% *ASTM D2982	<b>NEG</b>	0.0	0.0

## INFRA-RED

method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	<b>0.5</b>	1	0.1
Nitration	Abs/cm *ASTM D7624 >20	<b>9.8</b>	13.8	6.8
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>20.7</b>	23.7	23.7

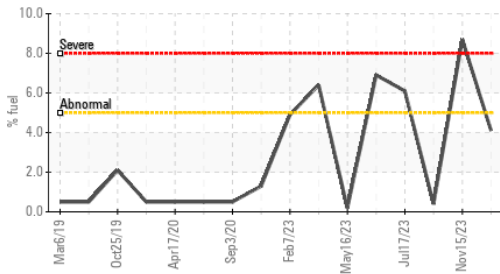
## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>17.7</b>	22.5	19.4
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>7.5</b>	9.6	8.5

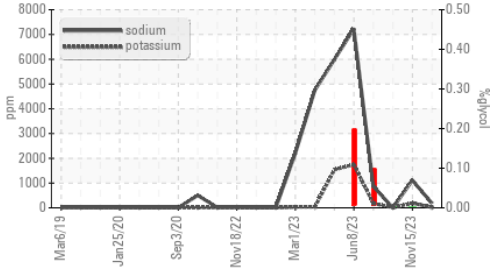


# OIL ANALYSIS REPORT

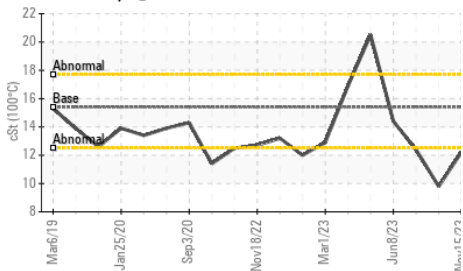
## Fuel Dilution



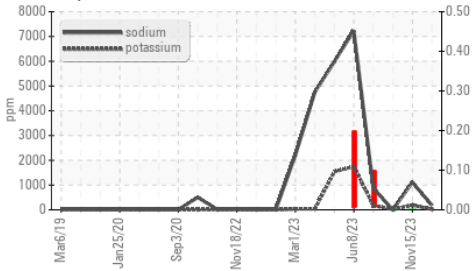
## Glycol Contamination



## Viscosity @ 100°C



## Glycol Contamination



## VISUAL

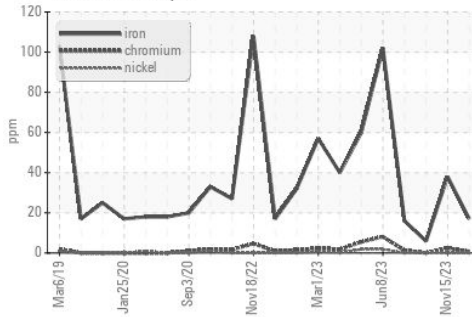
	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar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

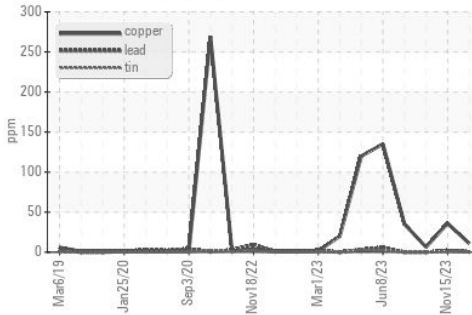
	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	12.6	▲ 12.2 ▲ 9.8

## GRAPHS

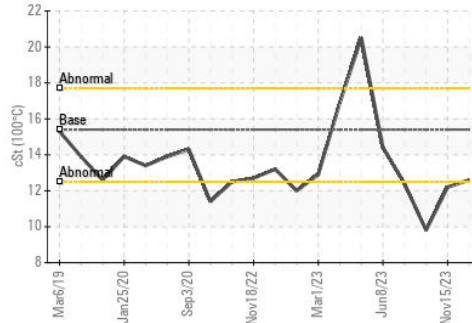
### Ferrous Alloys



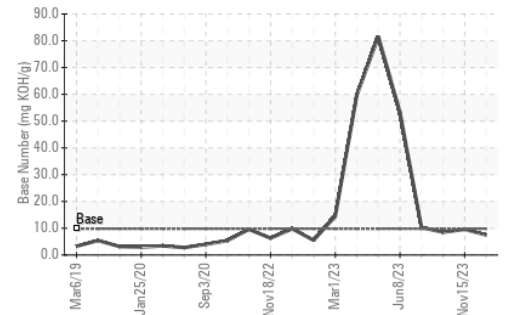
### Non-ferrous Metals



### Viscosity @ 100°C



### Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : GFL0103334 Recieved : 29 Jan 2024  
 Lab Number : 06072524 Diagnosed : 31 Jan 2024  
 Unique Number : 10849201 Diagnostician : Jonathan Hester  
 Test Package : FLEET ( Additional Tests: Glycol, PercentFuel )

GFL Environmental - 836 - Kansas City Hauling  
 7801 East Truman Road  
 Kansas City, MO  
 US 64126  
 Contact: Robert Hart  
 rhart@gflenv.com  
 T: (580)461-1509  
 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)