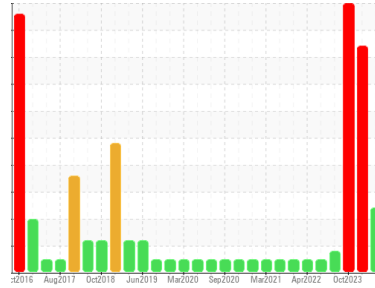




# OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL



Machine Id  
**10649**

Component  
**Diesel Engine**

Fluid  
**PETRO CANADA DURON SHP 15W40 (10 GAL)**

## DIAGNOSIS

### Recommendation

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

Sodium and/or potassium levels are high. 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 acceptable for the time in service.

## SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	<b>GFL0092690</b>	GFL0092702	GFL0092695
Sample Date	Client Info	<b>10 Jan 2024</b>	25 Oct 2023	04 Oct 2023
Machine Age	hrs	<b>13201</b>	13201	13006
Oil Age	hrs	<b>626</b>	195	562
Oil Changed	Client Info	<b>Changed</b>	N/A	Changed
Sample Status		<b>ATTENTION</b>	SEVERE	SEVERE

## 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

## WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >100	<b>29</b>	51	332
Chromium	ppm ASTM D5185m >20	<b>1</b>	1	7
Nickel	ppm ASTM D5185m >4	<b>0</b>	<1	3
Titanium	ppm ASTM D5185m	<b>0</b>	0	<1
Silver	ppm ASTM D5185m >3	<b>0</b>	0	0
Aluminum	ppm ASTM D5185m >20	<b>6</b>	7	44
Lead	ppm ASTM D5185m >40	<b>&lt;1</b>	<1	5
Copper	ppm ASTM D5185m >330	<b>3</b>	4	22
Tin	ppm ASTM D5185m >15	<b>0</b>	0	1
Vanadium	ppm ASTM D5185m	<b>0</b>	0	<1
Cadmium	ppm ASTM D5185m	<b>0</b>	<1	<1

## ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	<b>5</b>	7	11
Barium	ppm ASTM D5185m 0	<b>0</b>	<1	11
Molybdenum	ppm ASTM D5185m 60	<b>61</b>	78	195
Manganese	ppm ASTM D5185m 0	<b>&lt;1</b>	<1	4
Magnesium	ppm ASTM D5185m 1010	<b>927</b>	845	632
Calcium	ppm ASTM D5185m 1070	<b>1157</b>	1082	1065
Phosphorus	ppm ASTM D5185m 1150	<b>1010</b>	950	863
Zinc	ppm ASTM D5185m 1270	<b>1241</b>	1149	1009
Sulfur	ppm ASTM D5185m 2060	<b>3203</b>	3238	2792

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	<b>6</b>	12	66
Sodium	ppm ASTM D5185m	<b>74</b>	426	3162
Potassium	ppm ASTM D5185m >20	<b>45</b>	215	1685
Glycol	% *ASTM D2982	<b>NEG</b>	0.10	0.20

## INFRA-RED

method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	<b>0.9</b>	0.4	1.5
Nitration	Abs/cm *ASTM D7624 >20	<b>11.4</b>	8.9	23.3
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>22.5</b>	19.8	30.3

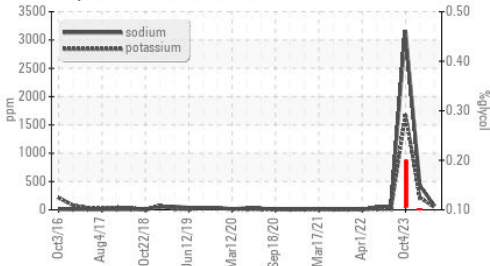
## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>18.8</b>	15.6	22.6
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>6.8</b>	9.9	15.6

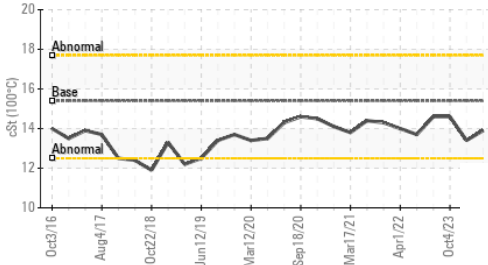


# OIL ANALYSIS REPORT

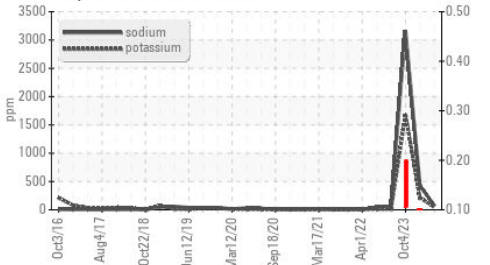
### Glycol Contamination



### Viscosity @ 100°C



### Glycol Contamination

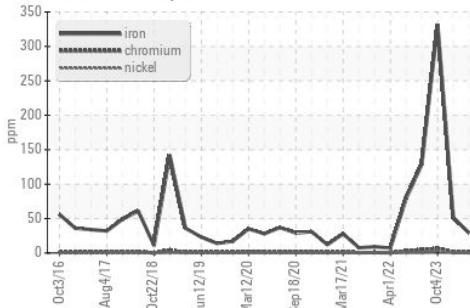


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

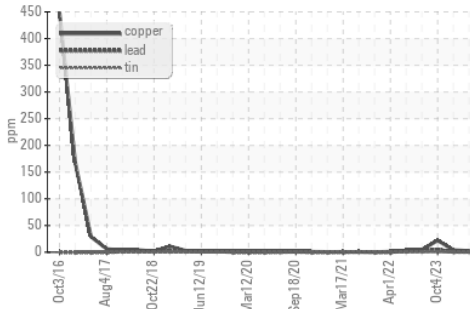
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.9	13.4

### GRAPHS

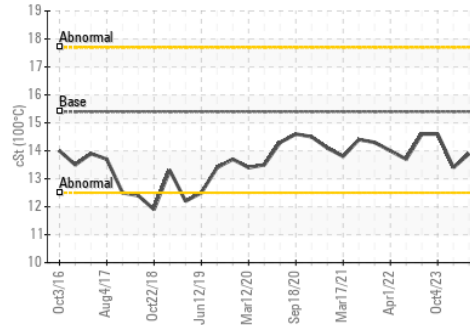
#### Ferrous Alloys



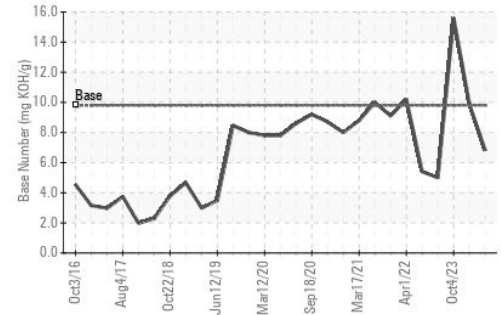
#### Non-ferrous Metals



#### Viscosity @ 100°C



#### Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : GFL0092690  
 Lab Number : 06063480  
 Unique Number : 10834862  
 Test Package : FLEET

Received : 17 Jan 2024  
 Diagnosed : 19 Jan 2024  
 Diagnostician : Jonathan Hester

GFL Environmental - 005 - Wilson/Tri-East(CNG)  
 2810 Contentnea Road S  
 Wilson, NC  
 US 27893-8501  
 Contact: SPENCER LIGGON  
 spencer.liggon@gflenv.com  
 T: (800)207-6618  
 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)