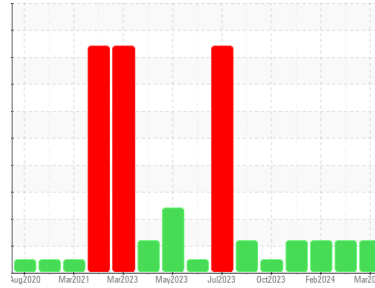




# OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL



Machine Id  
**523004-704**

Component  
**Diesel Engine**

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

## 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. 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>GFL0112725</b>	GFL0112795	GFL0112722
Sample Date	Client Info	<b>14 Mar 2024</b>	29 Feb 2024	23 Feb 2024
Machine Age	hrs	<b>22336</b>	22336	22336
Oil Age	hrs	<b>0</b>	0	0
Oil Changed	Client Info	<b>Not Chngd</b>	Not Chngd	Not Chngd
Sample Status		<b>ATTENTION</b>	ATTENTION	ATTENTION

## 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

## WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >120	<b>8</b>	9	8
Chromium	ppm ASTM D5185m >20	<b>0</b>	0	0
Nickel	ppm ASTM D5185m >5	<b>2</b>	<1	2
Titanium	ppm ASTM D5185m >2	<b>0</b>	0	0
Silver	ppm ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm ASTM D5185m >20	<b>3</b>	3	3
Lead	ppm ASTM D5185m >40	<b>&lt;1</b>	0	3
Copper	ppm ASTM D5185m >330	<b>&lt;1</b>	4	<1
Tin	ppm ASTM D5185m >15	<b>0</b>	0	0
Vanadium	ppm ASTM D5185m	<b>0</b>	0	0
Cadmium	ppm ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	<b>2</b>	0	1
Barium	ppm ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm ASTM D5185m 60	<b>71</b>	64	68
Manganese	ppm ASTM D5185m 0	<b>0</b>	<1	<1
Magnesium	ppm ASTM D5185m 1010	<b>1071</b>	950	1139
Calcium	ppm ASTM D5185m 1070	<b>1201</b>	1032	1174
Phosphorus	ppm ASTM D5185m 1150	<b>1184</b>	1027	1154
Zinc	ppm ASTM D5185m 1270	<b>1418</b>	1228	1382
Sulfur	ppm ASTM D5185m 2060	<b>4273</b>	2880	3663

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	<b>6</b>	4	4
Sodium	ppm ASTM D5185m	<b>19</b>	11	21
Potassium	ppm ASTM D5185m >20	<b>67</b>	47	74
Glycol	% *ASTM D2982	<b>NEG</b>	NEG	NEG

## INFRA-RED

method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >4	<b>0.2</b>	0.3	0.2
Nitration	Abs/cm *ASTM D7624 >20	<b>6.7</b>	7.7	6.6
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>18.1</b>	18.6	17.9

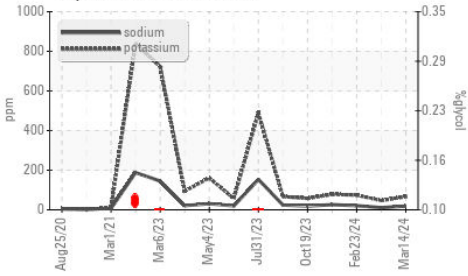
## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>14.3</b>	15.1	14.4
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>8.8</b>	7.9	8.9

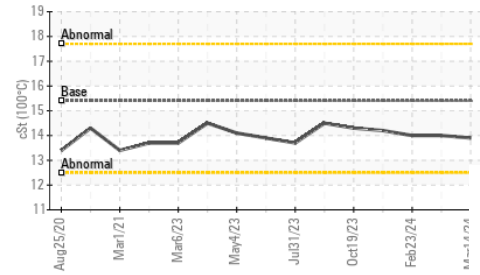


# OIL ANALYSIS REPORT

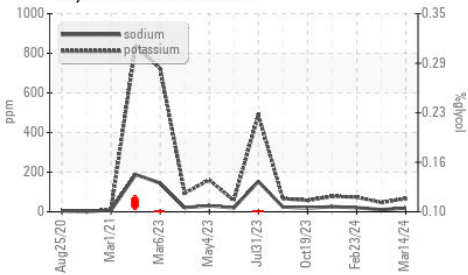
### Glycol Contamination



### Viscosity @ 100°C



### Glycol Contamination

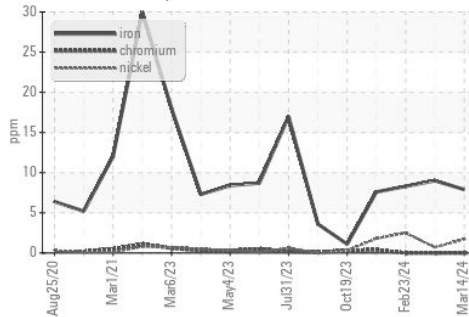


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

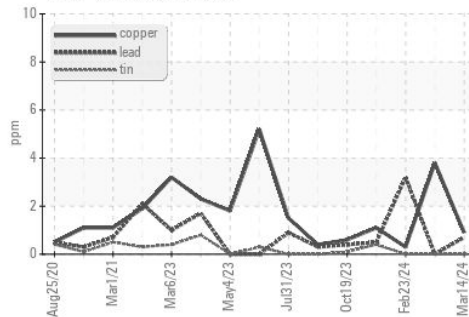
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.9	14.0

### GRAPHS

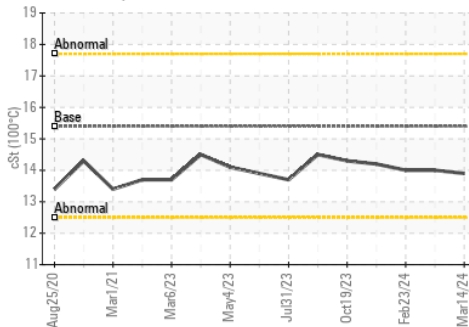
### Ferrous Alloys



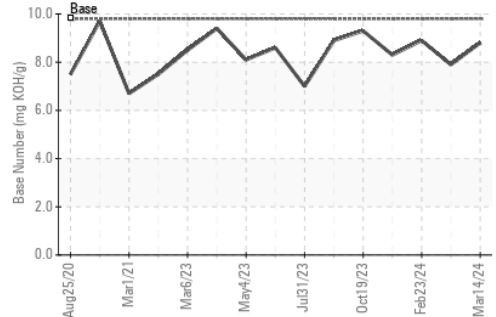
### Non-ferrous Metals



### Viscosity @ 100°C



### Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : GFL0112725

Lab Number : 06123030

Unique Number : 10937181

Test Package : FLEET ( Additional Tests: Glycol )

Received : 19 Mar 2024

Tested : 21 Mar 2024

Diagnosed : 21 Mar 2024 - Don Baldrige

GFL Environmental - 654 - Richmond Hauling

11800 Lewis Road

Chester, VA

US 23831

Contact: Jimmy Mayes

jmayes@gflenv.com

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)

T:

F: