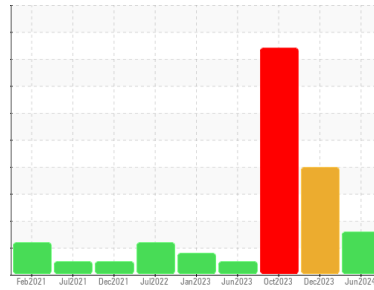




# OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL



Area  
**(H904568)**

Machine Id  
**225145**

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 remain high. Fuel content negligible. Test for glycol is negative.

### Fluid Condition

The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

## SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	<b>GFL0106941</b>	GFL0106945	GFL0098804
Sample Date	Client Info	<b>18 Jun 2024</b>	14 Dec 2023	20 Oct 2023
Machine Age	hrs	<b>20811</b>	20466	20396
Oil Age	hrs	<b>332</b>	301	231
Oil Changed	Client Info	<b>Changed</b>	Changed	Not Changed
Sample Status		<b>ATTENTION</b>	ABNORMAL	SEVERE

## 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 >150	<b>4</b>	23	17
Chromium	ppm ASTM D5185m >15	<b>0</b>	<1	<1
Nickel	ppm ASTM D5185m >4	<b>&lt;1</b>	1	<1
Titanium	ppm ASTM D5185m	<b>0</b>	0	<1
Silver	ppm ASTM D5185m >3	<b>0</b>	0	<1
Aluminum	ppm ASTM D5185m >15	<b>2</b>	5	5
Lead	ppm ASTM D5185m >70	<b>&lt;1</b>	5	2
Copper	ppm ASTM D5185m >175	<b>&lt;1</b>	2	2
Tin	ppm ASTM D5185m >5	<b>&lt;1</b>	<1	0
Vanadium	ppm ASTM D5185m	<b>0</b>	<1	<1
Cadmium	ppm ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	<b>23</b>	40	50
Barium	ppm ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm ASTM D5185m 60	<b>69</b>	133	117
Manganese	ppm ASTM D5185m 0	<b>&lt;1</b>	<1	0
Magnesium	ppm ASTM D5185m 1010	<b>859</b>	1269	904
Calcium	ppm ASTM D5185m 1070	<b>945</b>	1365	1058
Phosphorus	ppm ASTM D5185m 1150	<b>1006</b>	1321	1028
Zinc	ppm ASTM D5185m 1270	<b>1143</b>	1664	1208
Sulfur	ppm ASTM D5185m 2060	<b>3395</b>	4253	3342

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	<b>10</b>	▲ 27	23
Sodium	ppm ASTM D5185m	● <b>352</b>	● 1627	● 1828
Potassium	ppm ASTM D5185m >20	<b>7</b>	12	13
Fuel	% ASTM D3524 >3.0	<b>0.8</b>	▲ 3.2	▲ 3.1
Glycol	% *ASTM D2982	<b>NEG</b>	NEG	▲ 0.12

## INFRA-RED

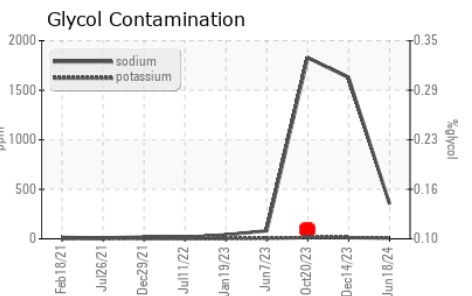
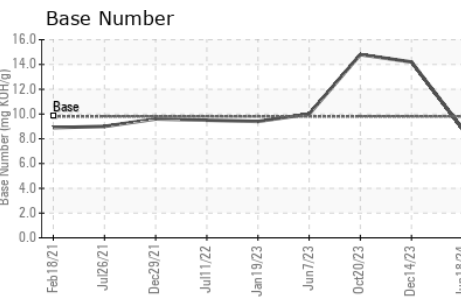
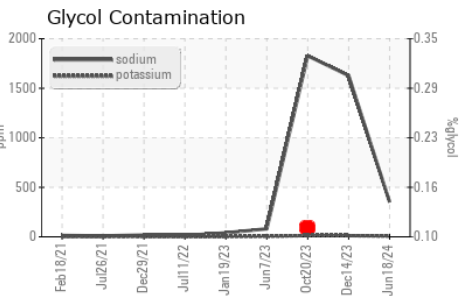
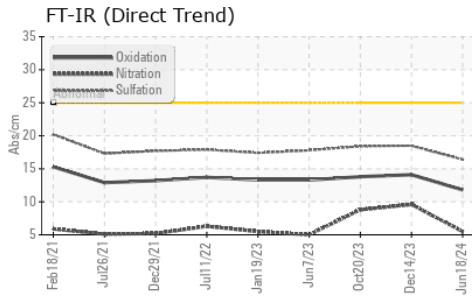
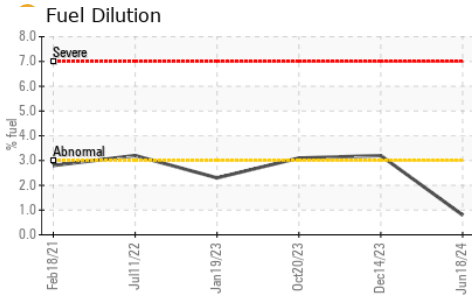
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	<b>0.1</b>	0.1	0.1
Nitration	Abs/cm *ASTM D7624 >20	<b>5.5</b>	9.6	8.8
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>16.4</b>	18.5	18.4

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>11.8</b>	14.1	13.8
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>8.8</b>	14.2	14.8



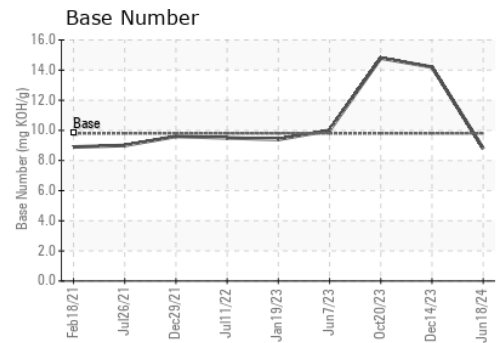
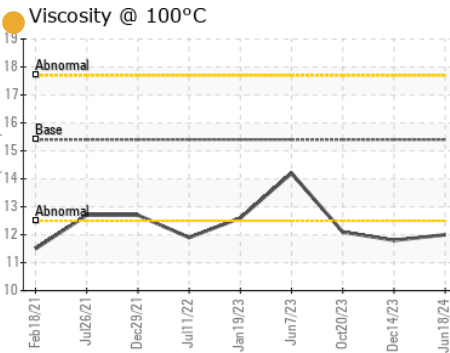
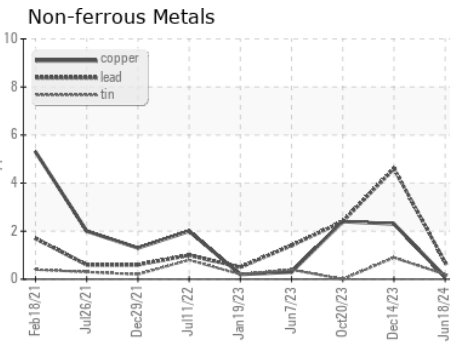
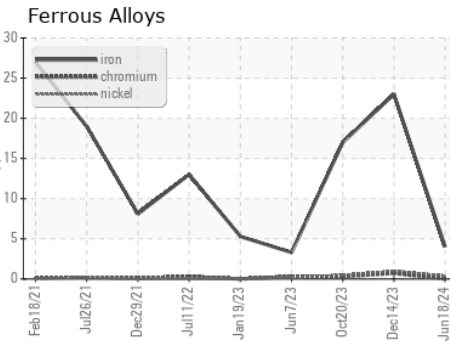
# OIL ANALYSIS REPORT



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	12.0	11.8

## GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : GFL0106941  
 Lab Number : 06215424  
 Unique Number : 11088288  
 Test Package : FLEET ( Additional Tests: Glycol, PercentFuel )

GFL Environmental - 097 - Knoxville Hauling  
 1901 Sutherland Ave  
 Knoxville, TN  
 US 37921

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)

Contact: Doug Weeden  
 dweeden@gflenv.com

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 F: