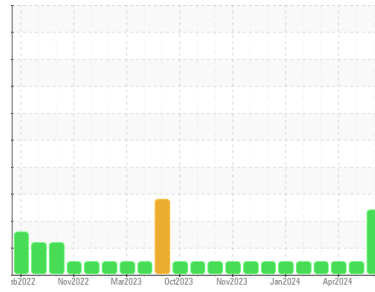




# OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL



Machine Id  
**721031-362017**

Component  
**Diesel Engine**

Fluid  
**PETRO CANADA DURON SHP 15W40 (8 GAL)**

## DIAGNOSIS

### Recommendation

We advise that you check for the source of the coolant leak. Check for low coolant level. We recommend an early resample to monitor this condition.

### Wear

All component wear rates are normal.

### Contamination

Sodium and/or potassium levels are high.

### Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>GFL0112262</b>	GFL0112209	GFL0112229
Sample Date	Client Info		<b>17 May 2024</b>	26 Apr 2024	05 Apr 2024
Machine Age	hrs	Client Info	<b>10444</b>	10267	10117
Oil Age	hrs	Client Info	<b>150</b>	600	150
Oil Changed	Client Info		<b>Not Changed</b>	Changed	Not Changed
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

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	<b>6</b>	7	9
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	<1	1
Nickel	ppm	ASTM D5185m >4	<b>0</b>	1	<1
Titanium	ppm	ASTM D5185m	<b>0</b>	<1	<1
Silver	ppm	ASTM D5185m >3	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185m >20	<b>2</b>	4	3
Lead	ppm	ASTM D5185m >40	<b>0</b>	<1	<1
Copper	ppm	ASTM D5185m >330	<b>2</b>	2	<1
Tin	ppm	ASTM D5185m >15	<b>&lt;1</b>	<1	1
Vanadium	ppm	ASTM D5185m	<b>0</b>	<1	<1
Cadmium	ppm	ASTM D5185m	<b>0</b>	<1	<1

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>4</b>	<1	0
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>104</b>	75	67
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 1010	<b>884</b>	1202	1033
Calcium	ppm	ASTM D5185m 1070	<b>985</b>	1322	1173
Phosphorus	ppm	ASTM D5185m 1150	<b>1033</b>	1370	1102
Zinc	ppm	ASTM D5185m 1270	<b>1192</b>	1589	1330
Sulfur	ppm	ASTM D5185m 2060	<b>3428</b>	4010	3487

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>5</b>	6	4
Sodium	ppm	ASTM D5185m	<b>▲ 233</b>	5	35
Potassium	ppm	ASTM D5185m >20	<b>▲ 309</b>	4	31
Glycol	%	*ASTM D2982	<b>NEG</b>	NEG	NEG

## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0.2</b>	0.2	0.3
Nitration	Abs/cm	*ASTM D7624 >20	<b>6.6</b>	7.4	6.5
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>18.1</b>	19.8	19.0

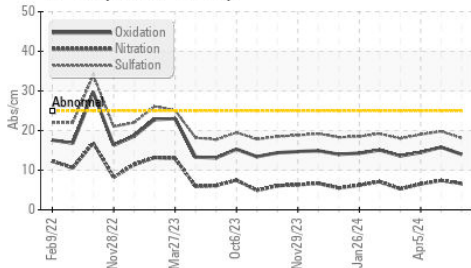
## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>14.0</b>	15.8	14.5
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>9.3</b>	7.8	8.3

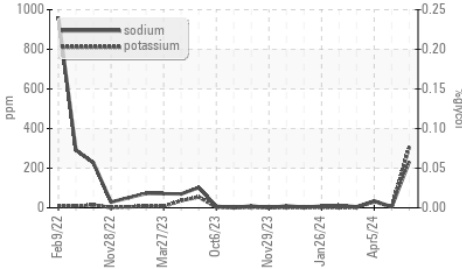


# OIL ANALYSIS REPORT

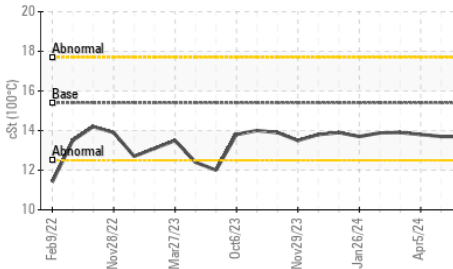
### FT-IR (Direct Trend)



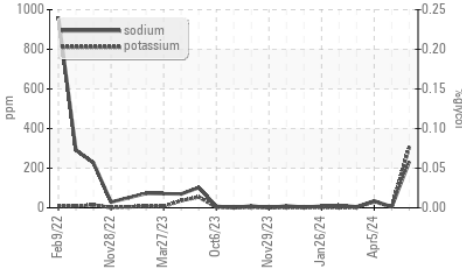
### Glycol Contamination



### Viscosity @ 100°C



### Glycol Contamination

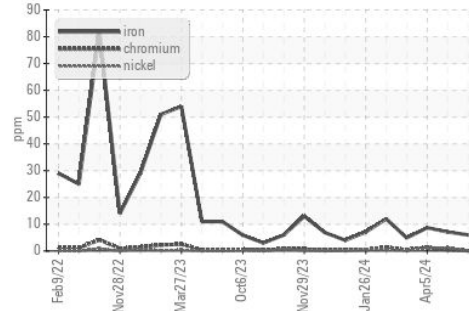


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

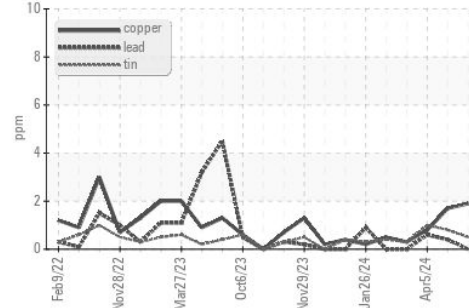
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.7	13.8

### GRAPHS

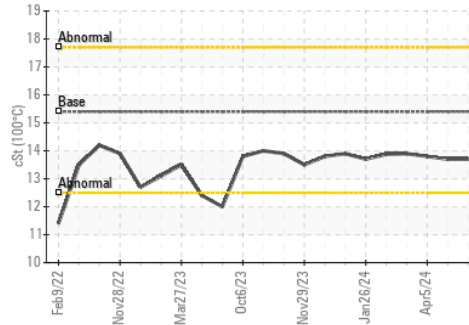
#### Ferrous Alloys



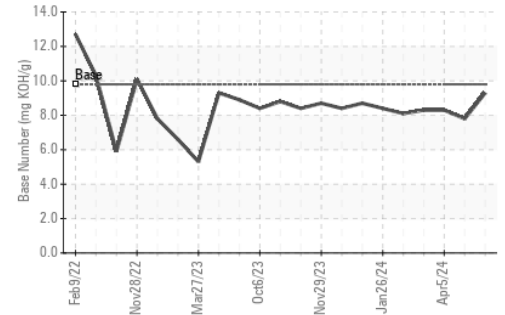
#### Non-ferrous Metals



#### Viscosity @ 100°C



#### Base Number



Certificate L2367

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)

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

Sample No. : GFL0112262

Lab Number : 06185841

Unique Number : 11042593

Test Package : FLEET ( Additional Tests: Glycol )

Received : 21 May 2024

Tested : 23 May 2024

Diagnosed : 23 May 2024 - Jonathan Hester

GFL Environmental - 829 - Wilco Hauling

5054 Highway HH

Hartville, MO

US 65667

Contact: James Jones

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