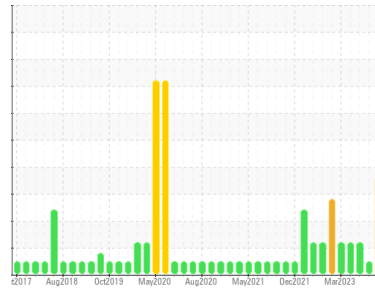




# OIL ANALYSIS REPORT

Sample Rating Trend



**DEGRADATION**



Machine Id  
**10794**

Component  
**Diesel Engine**

Fluid  
**PETRO CANADA DURON SHP 15W40 (11 GAL)**

## DIAGNOSIS

### ▲ Recommendation

Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

### Wear

All component wear rates are normal.

### Contamination

Fuel content negligible. There is no indication of any contamination in the oil.

### ▲ Fluid Condition

The oil viscosity is lower than normal. Additive levels indicate the addition of a different brand, or type of oil. The BN level is low. Confirm oil type.

## SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	<b>GFL0074622</b>	GFL0092499	GFL0083645
Sample Date	Client Info	<b>22 Dec 2023</b>	15 Aug 2023	04 Jul 2023
Machine Age	hrs	<b>82379</b>	15981	15733
Oil Age	hrs	<b>0</b>	0	489
Oil Changed	Client Info	<b>Changed</b>	Changed	Changed
Sample Status		<b>ABNORMAL</b>	NORMAL	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 >75	<b>71</b>	23	46
Chromium	ppm	ASTM D5185m >5	<b>1</b>	1	2
Nickel	ppm	ASTM D5185m >4	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185m >2	<b>0</b>	<1	0
Silver	ppm	ASTM D5185m >2	<b>0</b>	<1	<1
Aluminum	ppm	ASTM D5185m >15	<b>3</b>	3	2
Lead	ppm	ASTM D5185m >25	<b>&lt;1</b>	<1	2
Copper	ppm	ASTM D5185m >100	<b>&lt;1</b>	1	1
Tin	ppm	ASTM D5185m >4	<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>&lt;1</b>	2	4
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>26</b>	64	72
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 1010	<b>▲ 350</b>	990	848
Calcium	ppm	ASTM D5185m 1070	<b>▲ 429</b>	1101	1116
Phosphorus	ppm	ASTM D5185m 1150	<b>▲ 496</b>	1007	996
Zinc	ppm	ASTM D5185m 1270	<b>▲ 620</b>	1244	1185
Sulfur	ppm	ASTM D5185m 2060	<b>▲ 1296</b>	3383	2717

## CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >25	<b>10</b>	12	15
Sodium	ppm	ASTM D5185m	<b>99</b>	37	▲ 84
Potassium	ppm	ASTM D5185m >20	<b>6</b>	3	4
Fuel	%	ASTM D3524 >3.0	<b>&lt;1.0</b>	<1.0	<1.0
Glycol	%	*ASTM D2982	<b>0.0</b>	NEG	NEG

## INFRA-RED

method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844 >6	<b>0.7</b>	0.8	1.2
Nitration	Abs/cm	*ASTM D7624 >20	<b>8.5</b>	10.0	12.6
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>19.4</b>	21.2	25.3

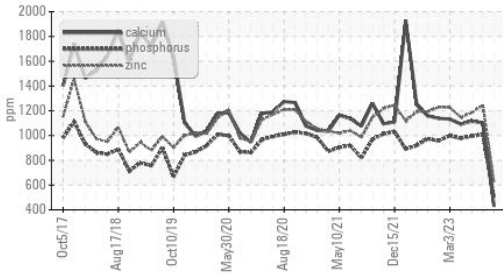
## FLUID DEGRADATION

method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>15.8</b>	17.5	21.8
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>▲ 1.7</b>	7.4	6.0

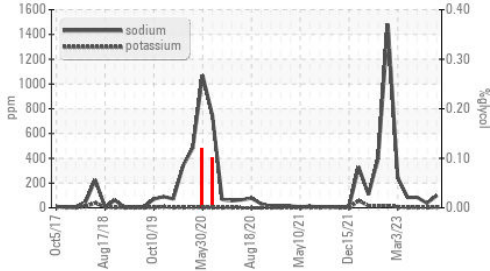


# OIL ANALYSIS REPORT

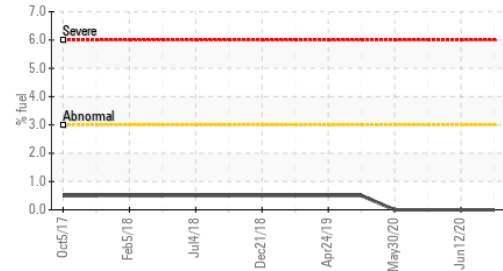
## ▲ Additives



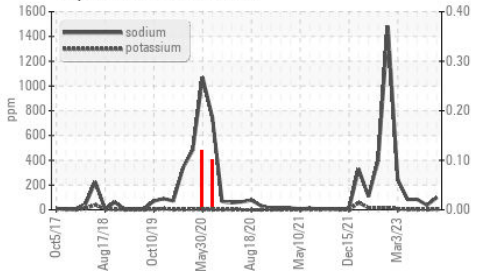
## ● Glycol Contamination



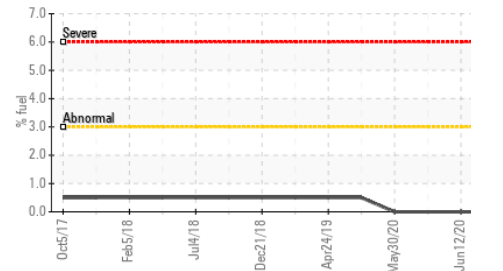
## ● Fuel Dilution



## ● Glycol Contamination



## ● Fuel Dilution

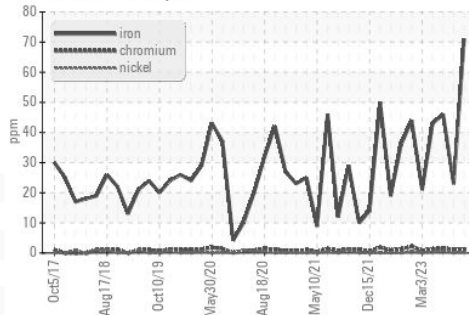


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

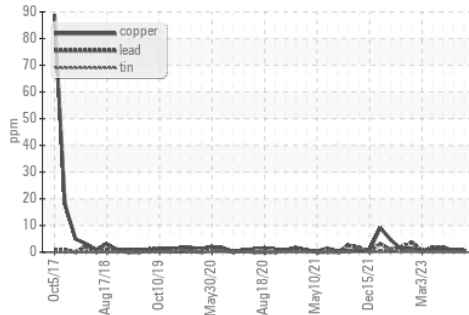
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4 ▲ 9.1	13.8	13.2

## GRAPHS

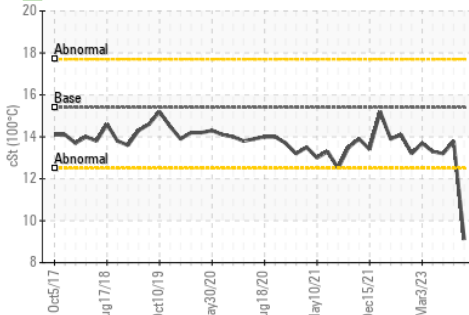
### Ferrous Alloys



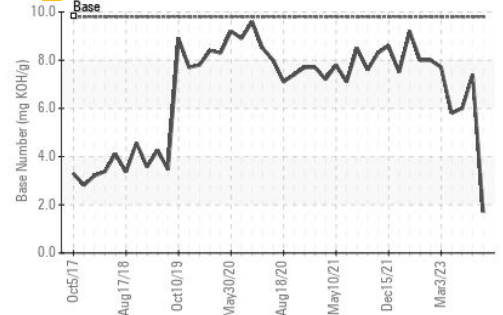
### Non-ferrous Metals



### ▲ Viscosity @ 100°C



### ▲ Base Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0074622 **Received** : 27 Dec 2023  
**Lab Number** : 06046586 **Diagnosed** : 29 Dec 2023  
**Unique Number** : 10807194 **Diagnostician** : Jonathan Hester  
**Test Package** : FLEET ( Additional Tests: FuelDilution, Glycol, PercentFuel )

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)

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