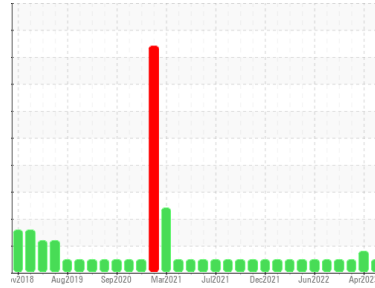


# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**10875**

Component  
**Diesel Engine**

Fluid  
**PETRO CANADA DURON SHP 15W40 (9 GAL)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

There is no indication of any contamination in the oil.

### 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>PCA0095831</b>	PCA0077277	PCA0074693	
Sample Date	Client Info	<b>28 Aug 2023</b>	19 Apr 2023	26 Jan 2023	
Machine Age	hrs	Client Info	<b>11606</b>	11194	10887
Oil Age	hrs	Client Info	<b>412</b>	307	587
Oil Changed	Client Info	<b>Changed</b>	Changed	Changed	
Sample Status		<b>NORMAL</b>	MARGINAL	NORMAL	

## CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >3.0	<b>&lt;1.0</b>	▲ 4.6	<1.0

## WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m >75	<b>52</b>	7	11
Chromium	ppm	ASTM D5185m >5	<b>&lt;1</b>	0	<1
Nickel	ppm	ASTM D5185m >4	<b>&lt;1</b>	0	<1
Titanium	ppm	ASTM D5185m >2	<b>0</b>	0	0
Silver	ppm	ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >15	<b>3</b>	3	2
Lead	ppm	ASTM D5185m >25	<b>0</b>	0	<1
Copper	ppm	ASTM D5185m >100	<b>32</b>	0	<1
Tin	ppm	ASTM D5185m >4	<b>&lt;1</b>	0	<1
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>26</b>	19	12
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>76</b>	63	63
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 1010	<b>895</b>	825	852
Calcium	ppm	ASTM D5185m 1070	<b>1161</b>	1193	1226
Phosphorus	ppm	ASTM D5185m 1150	<b>1028</b>	954	960
Zinc	ppm	ASTM D5185m 1270	<b>1283</b>	1218	1219
Sulfur	ppm	ASTM D5185m 2060	<b>3895</b>	3295	3456

## CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >25	<b>8</b>	4	4
Sodium	ppm	ASTM D5185m	<b>72</b>	2	2
Potassium	ppm	ASTM D5185m >20	<b>42</b>	<1	<1
Glycol	%	*ASTM D2982	<b>0.0</b>	NEG	NEG

## INFRA-RED

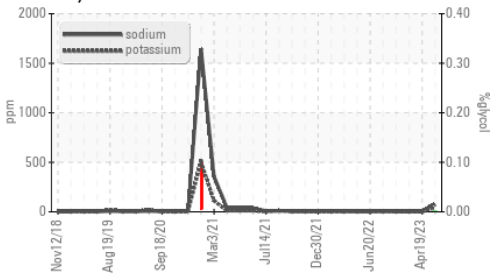
method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844 >6	<b>0.1</b>	0.3	0.5
Nitration	Abs/cm	*ASTM D7624 >20	<b>4.8</b>	7.1	8.1
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>16.2</b>	18.7	18.7

## FLUID DEGRADATION

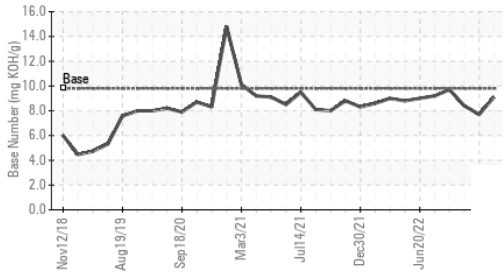
method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>11.5</b>	15.5	14.6
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>9.1</b>	7.7	8.4

# OIL ANALYSIS REPORT

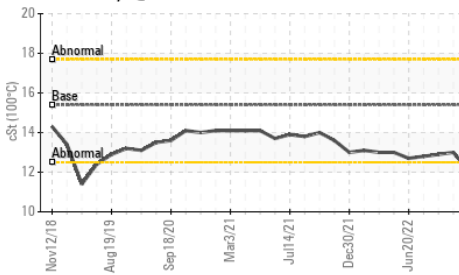
**Glycol Contamination**



**Base Number**



**Viscosity @ 100°C**

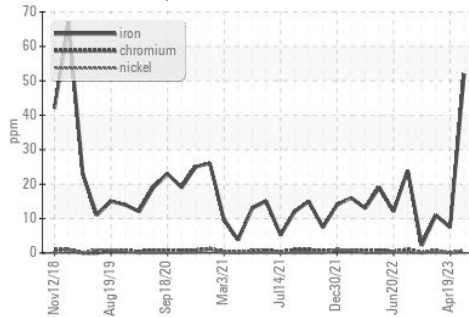


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

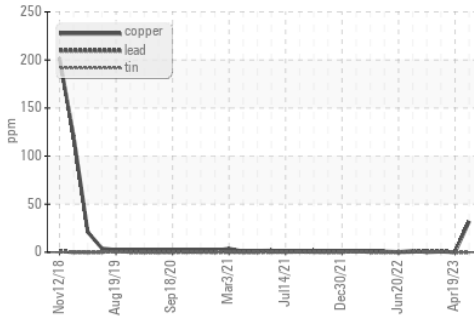
FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	15.4	<b>13.2</b>	12.1	13.0

## GRAPHS

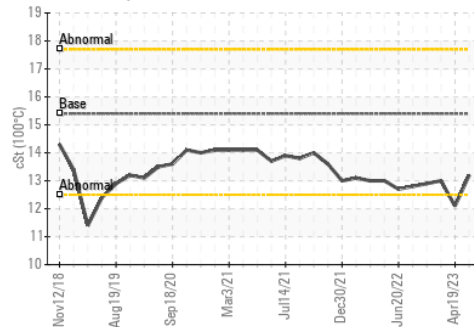
**Ferrous Alloys**



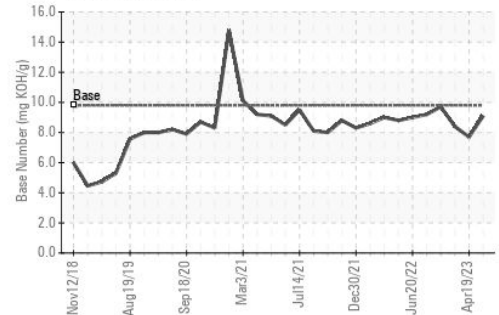
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0095831 **Received** : 30 Aug 2023  
**Lab Number** : **05938145** **Diagnosed** : 01 Sep 2023  
**Unique Number** : 10628757 **Diagnostician** : Wes Davis

**GFL Environmental - 002 - Vance-Granville**  
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 Henderson, NC  
 US 27537  
 Contact: Cameron King  
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 F: (252)431-1635

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)