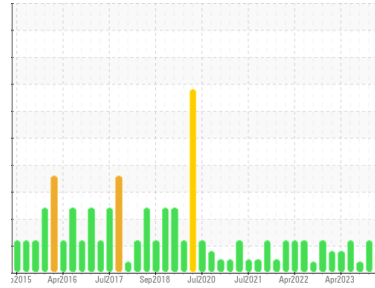


# OIL ANALYSIS REPORT



Area  
**(YA111541)**  
Machine Id  
**2470**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON SHP 15W40 (10 GAL)**

Sample Rating Trend



**FUEL**



## DIAGNOSIS

### ▲ Recommendation

The oil 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

There is a moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

### Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>PCA0101758</b>	PCA0101781	PCA0101731
Sample Date	Client Info		<b>28 Feb 2024</b>	09 Jan 2024	05 Sep 2023
Machine Age	hrs	Client Info	<b>24410</b>	24147	23553
Oil Age	hrs	Client Info	<b>263</b>	785	785
Oil Changed	Client Info		<b>Changed</b>	Changed	Changed
Sample Status			<b>ABNORMAL</b>	ABNORMAL	ATTENTION

## CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol	WC Method		<b>NEG</b>	NEG	NEG

## WEAR METALS

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

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>14</b>	5	10
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>59</b>	63	70
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 1010	<b>667</b>	776	874
Calcium	ppm	ASTM D5185m 1070	<b>1262</b>	1017	1272
Phosphorus	ppm	ASTM D5185m 1150	<b>970</b>	895	970
Zinc	ppm	ASTM D5185m 1270	<b>1192</b>	1100	1188
Sulfur	ppm	ASTM D5185m 2060	<b>3481</b>	2743	3516

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>4</b>	7	4
Sodium	ppm	ASTM D5185m	<b>3</b>	19	3
Potassium	ppm	ASTM D5185m >20	<b>&lt;1</b>	0	2
Fuel	%	ASTM D3524 >3.0	<b>▲ 3.2</b>	▲ 4.8	0.5

## INFRA-RED

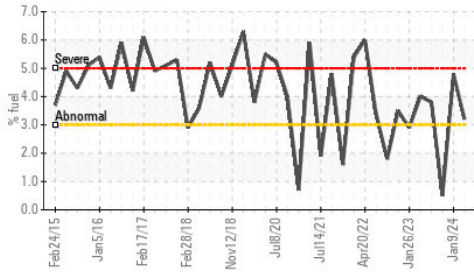
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	<b>0.1</b>	0.1	0.1
Nitration	Abs/cm	*ASTM D7624 >20	<b>7.1</b>	8.2	6.8
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>17.1</b>	18.5	16.8

## FLUID DEGRADATION

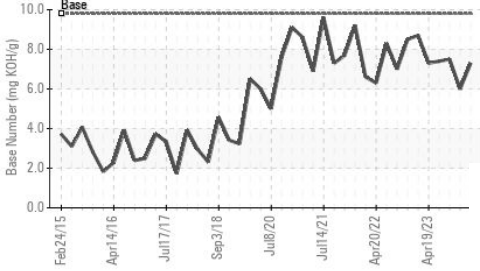
	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>13.1</b>	14.1	12.4
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>7.3</b>	6.0	7.5

# OIL ANALYSIS REPORT

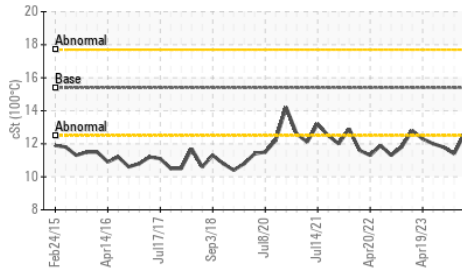
## ▲ Fuel Dilution



## Base Number



## Viscosity @ 100°C

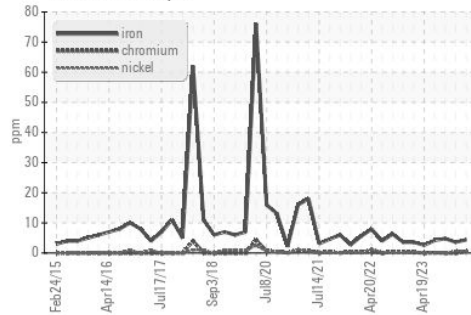


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

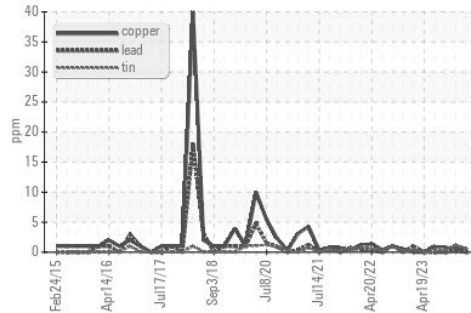
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	12.6 ▲	11.4 ●

## GRAPHS

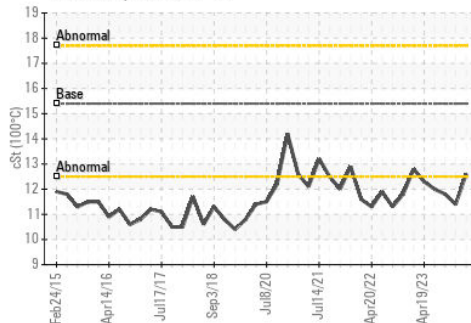
### Ferrous Alloys



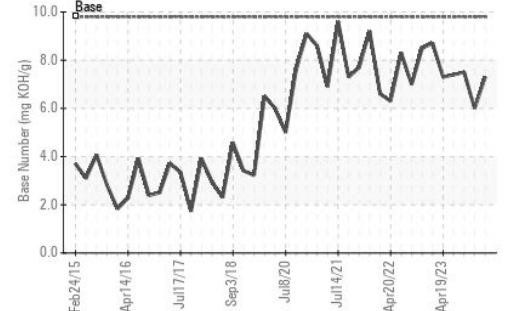
### Non-ferrous Metals



### Viscosity @ 100°C



### Base Number



Certificate L2367

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

**Sample No.** : PCA0101758

**Lab Number** : 06104048

**Unique Number** : 10902278

**Test Package** : FLEET ( Additional Tests: PercentFuel )

**Received** : 29 Feb 2024

**Tested** : 04 Mar 2024

**Diagnosed** : 04 Mar 2024 - Wes Davis

**GFL Environmental - 002 - Vance-Granville**

241 Vanco Mill Rd

Henderson, NC

US 27537

Contact: Cameron King

cameron.king@gflenv.com

T: (252)438-5333

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)