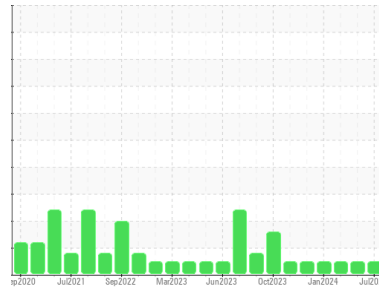




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**423013-408**

Component  
**Diesel Engine**

Fluid  
**PETRO CANADA DURON SHP 15W40 (--- LTR)**

## 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>GFL0091910</b>	GFL0112774	GFL0112730
Sample Date	Client Info		<b>03 Jul 2024</b>	17 Apr 2024	03 Apr 2024
Machine Age	hrs	Client Info	<b>24246</b>	23710	35483
Oil Age	hrs	Client Info	<b>0</b>	23710	0
Oil Changed	Client Info		<b>Changed</b>	Changed	Not Changed
Sample Status			<b>NORMAL</b>	NORMAL	NORMAL

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<b>&lt;1.0</b>	<1.0	<1.0
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>8</b>	8	6
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	1	0
Nickel	ppm	ASTM D5185m >5	<b>0</b>	3	0
Titanium	ppm	ASTM D5185m >2	<b>0</b>	<1	0
Silver	ppm	ASTM D5185m >2	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185m >20	<b>2</b>	3	4
Lead	ppm	ASTM D5185m >40	<b>0</b>	2	0
Copper	ppm	ASTM D5185m >330	<b>0</b>	2	<1
Tin	ppm	ASTM D5185m >15	<b>0</b>	2	0
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	2	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>2</b>	0	<1
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>56</b>	53	59
Manganese	ppm	ASTM D5185m 0	<b>0</b>	1	0
Magnesium	ppm	ASTM D5185m 1010	<b>1000</b>	1016	1036
Calcium	ppm	ASTM D5185m 1070	<b>1110</b>	1153	1155
Phosphorus	ppm	ASTM D5185m 1150	<b>1131</b>	1106	1087
Zinc	ppm	ASTM D5185m 1270	<b>1357</b>	1327	1311
Sulfur	ppm	ASTM D5185m 2060	<b>3937</b>	3831	3756

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>6</b>	4	4
Sodium	ppm	ASTM D5185m	<b>&lt;1</b>	4	2
Potassium	ppm	ASTM D5185m >20	<b>0</b>	3	0

## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	<b>0.3</b>	0.3	0.5
Nitration	Abs/cm	*ASTM D7624 >20	<b>6.7</b>	8.2	8.2
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>18.2</b>	18.9	19.3

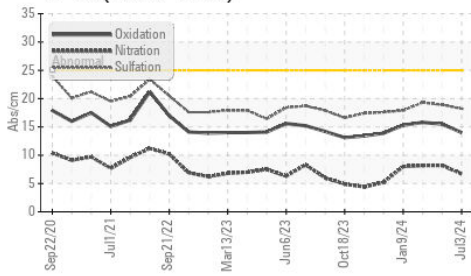
## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>14.0</b>	15.5	15.8
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>8.9</b>	7.0	8.0

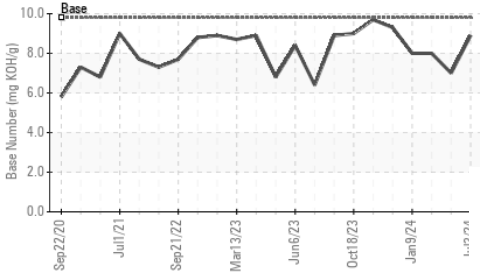


# OIL ANALYSIS REPORT

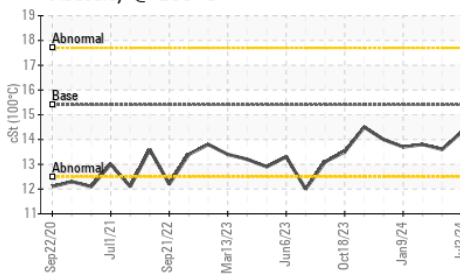
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

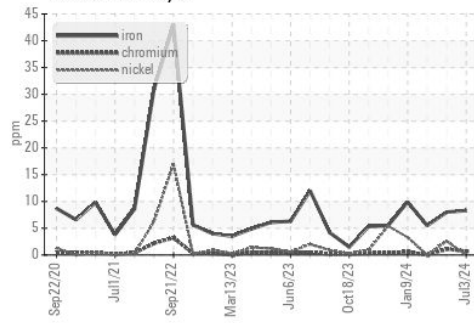


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

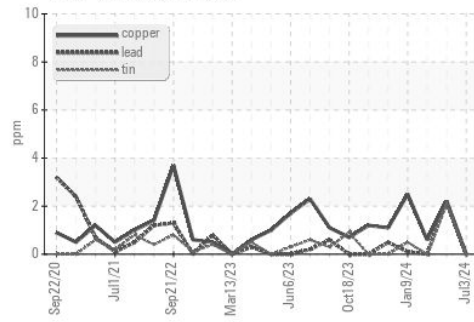
FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	15.4	<b>14.3</b>	13.6	13.8

## GRAPHS

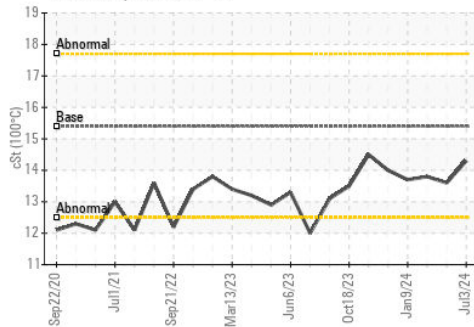
Ferrous Alloys



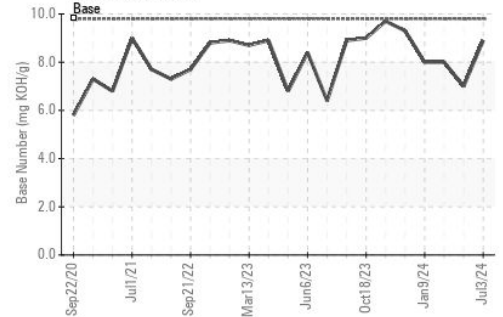
Non-ferrous Metals



Viscosity @ 100°C



Base Number



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0091910 **Received** : 10 Jul 2024  
**Lab Number** : **06232835** **Tested** : 11 Jul 2024  
**Unique Number** : 11116328 **Diagnosed** : 11 Jul 2024 - Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 654 - Richmond Hauling**  
 11800 Lewis Road  
 Chester, VA  
 US 23831  
 Contact: Jimmy Mayes  
 jmayes@gflenv.com

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)