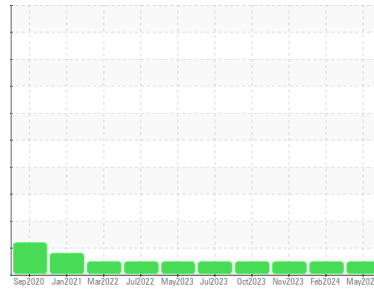




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**926009-9011**

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>GFL0091857</b>	GFL0112710	GFL0045470
Sample Date	Client Info		<b>01 May 2024</b>	13 Feb 2024	29 Nov 2023
Machine Age	hrs	Client Info	<b>22271</b>	21847	21249
Oil Age	hrs	Client Info	<b>22271</b>	40076	0
Oil Changed	Client Info		<b>N/A</b>	Not Changd	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>17</b>	14	15
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	<1	0
Nickel	ppm	ASTM D5185m >5	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185m >2	<b>&lt;1</b>	<1	0
Silver	ppm	ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >20	<b>5</b>	5	10
Lead	ppm	ASTM D5185m >40	<b>&lt;1</b>	<1	0
Copper	ppm	ASTM D5185m >330	<b>2</b>	2	2
Tin	ppm	ASTM D5185m >15	<b>&lt;1</b>	1	<1
Vanadium	ppm	ASTM D5185m	<b>&lt;1</b>	<1	0
Cadmium	ppm	ASTM D5185m	<b>&lt;1</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>0</b>	1	1
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>55</b>	56	58
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	0
Magnesium	ppm	ASTM D5185m 1010	<b>868</b>	919	974
Calcium	ppm	ASTM D5185m 1070	<b>1076</b>	1004	1049
Phosphorus	ppm	ASTM D5185m 1150	<b>982</b>	919	991
Zinc	ppm	ASTM D5185m 1270	<b>1150</b>	1167	1235
Sulfur	ppm	ASTM D5185m 2060	<b>2945</b>	2639	2779

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>10</b>	6	6
Sodium	ppm	ASTM D5185m	<b>4</b>	2	5
Potassium	ppm	ASTM D5185m >20	<b>6</b>	0	5

## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	<b>0.2</b>	0.2	0.3
Nitration	Abs/cm	*ASTM D7624 >20	<b>6.7</b>	6.9	7.4
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>19.2</b>	19.0	19.2

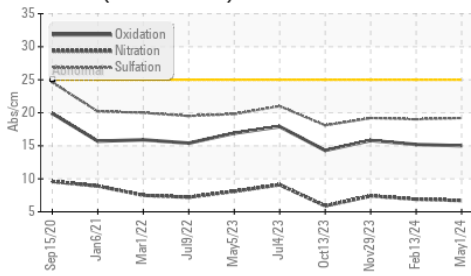
## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>15.0</b>	15.2	15.8
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>7.7</b>	7.9	7.9

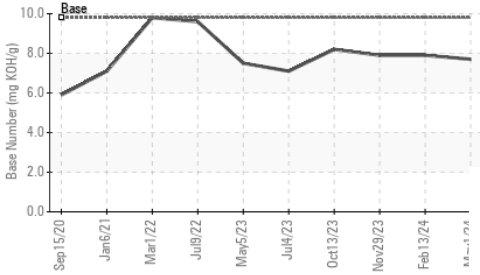


# OIL ANALYSIS REPORT

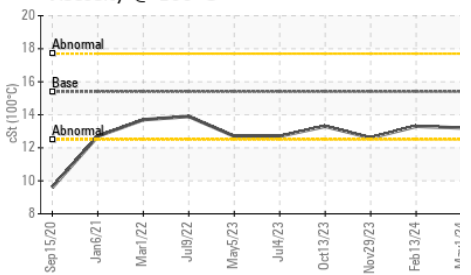
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

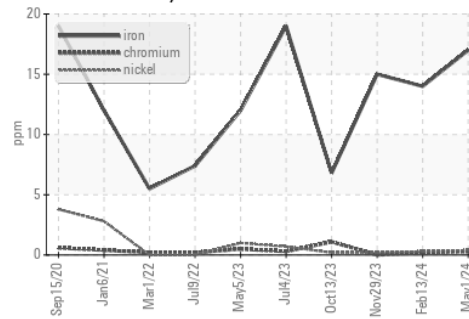


PARAMETER	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

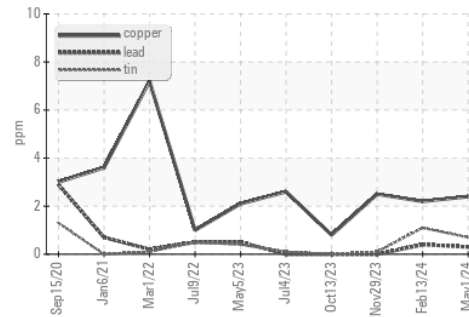
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.2	13.3

## GRAPHS

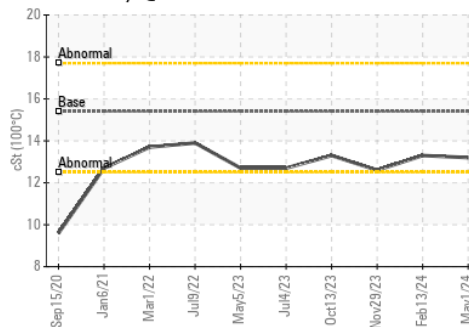
Ferrous Alloys



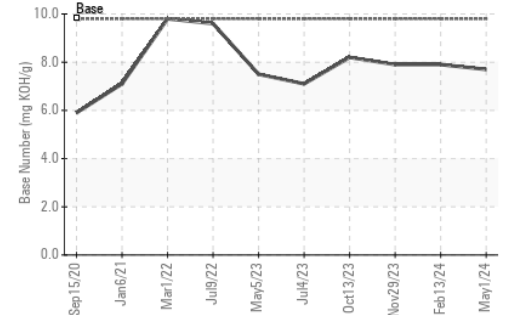
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : GFL0091857  
 Lab Number : 06174861  
 Unique Number : 11020914  
 Test Package : FLEET

Received : 09 May 2024  
 Tested : 10 May 2024  
 Diagnosed : 10 May 2024 - Wes Davis

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)