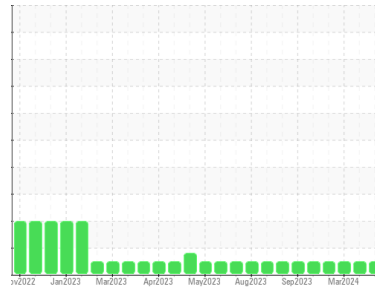




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**413005**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (12 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>GFL0118669</b>	GFL0118708	GFL0110575
Sample Date	Client Info		<b>24 May 2024</b>	01 May 2024	20 Mar 2024
Machine Age	hrs	Client Info	<b>3477</b>	47838	3059
Oil Age	hrs	Client Info	<b>200</b>	600	200
Oil Changed	Client Info		<b>Not Chngd</b>	Not Chngd	Not Chngd
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>11</b>	7	6
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m >5	<b>2</b>	<1	2
Titanium	ppm	ASTM D5185m >2	<b>&lt;1</b>	0	<1
Silver	ppm	ASTM D5185m >2	<b>&lt;1</b>	0	<1
Aluminum	ppm	ASTM D5185m >20	<b>2</b>	2	2
Lead	ppm	ASTM D5185m >40	<b>&lt;1</b>	<1	<1
Copper	ppm	ASTM D5185m >330	<b>3</b>	2	2
Tin	ppm	ASTM D5185m >15	<b>&lt;1</b>	<1	1
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	<1
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	<1

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>0</b>	1	<1
Barium	ppm	ASTM D5185m 0	<b>&lt;1</b>	0	1
Molybdenum	ppm	ASTM D5185m 60	<b>65</b>	59	60
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	1	1
Magnesium	ppm	ASTM D5185m 1010	<b>975</b>	960	946
Calcium	ppm	ASTM D5185m 1070	<b>1090</b>	1052	1056
Phosphorus	ppm	ASTM D5185m 1150	<b>1011</b>	1043	973
Zinc	ppm	ASTM D5185m 1270	<b>1202</b>	1261	1184
Sulfur	ppm	ASTM D5185m 2060	<b>2838</b>	3438	3032

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>6</b>	4	5
Sodium	ppm	ASTM D5185m	<b>3</b>	3	<1
Potassium	ppm	ASTM D5185m >20	<b>6</b>	4	5

## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	<b>0.4</b>	0.3	0.2
Nitration	Abs/cm	*ASTM D7624 >20	<b>8.2</b>	7.9	6.2
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>19.7</b>	19.5	18.2

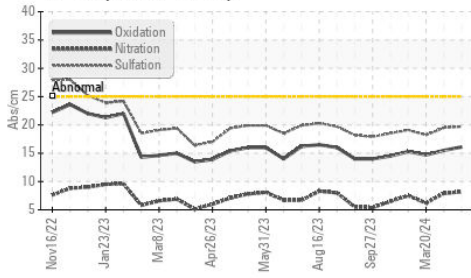
## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>16.1</b>	15.5	14.7
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>7.8</b>	8.0	8.4

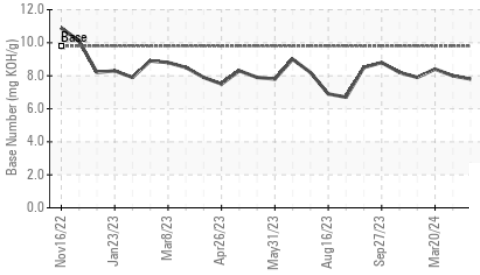


# OIL ANALYSIS REPORT

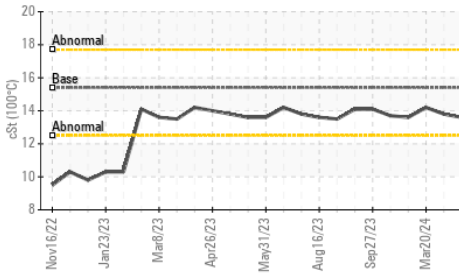
### FT-IR (Direct Trend)



### Base Number



### Viscosity @ 100°C

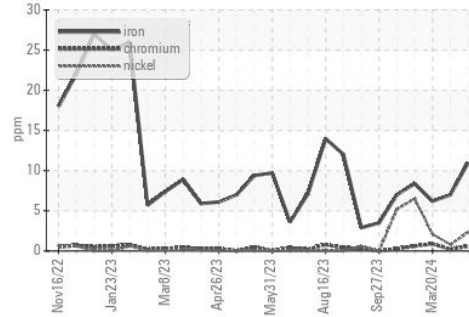


PARAMETER	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

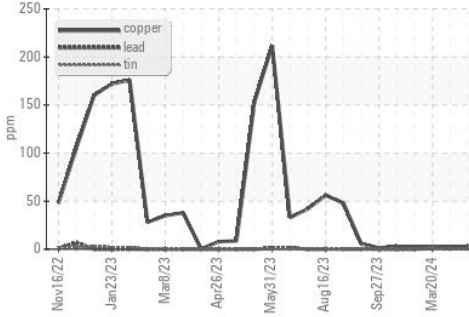
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.6	13.8

### GRAPHS

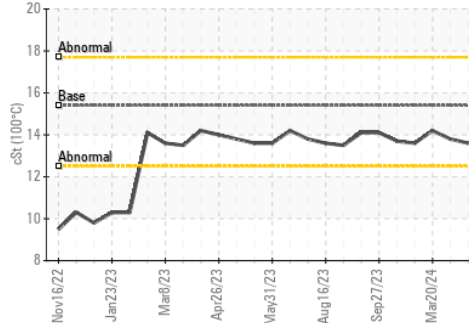
#### Ferrous Alloys



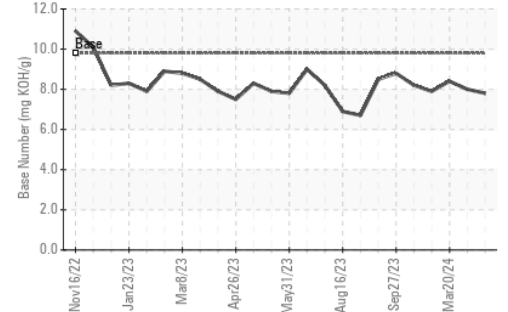
#### Non-ferrous Metals



#### Viscosity @ 100°C



#### Base Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0118669  
**Lab Number** : 06196291  
**Unique Number** : 11058414  
**Test Package** : FLEET

**Received** : 31 May 2024  
**Tested** : 03 Jun 2024  
**Diagnosed** : 03 Jun 2024 - Wes Davis

**GFL Environmental - 166 - Phenix City**  
 18 Old Brickyard Rd  
 Phenix City, AL  
 US 36869  
 Contact: DEAN PEACE JR  
 dean.peace@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)