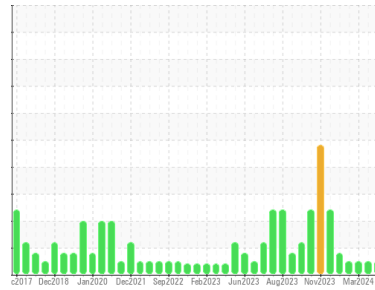




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**10809**  
 Component  
**Diesel Engine**  
 Fluid

**PETRO CANADA DURON SHP 15W40 (7 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>GFL0118087</b>	GFL0115725	GFL0112338
Sample Date	Client Info		<b>21 May 2024</b>	01 Apr 2024	05 Mar 2024
Machine Age	hrs	Client Info	<b>20085</b>	20062	19921
Oil Age	hrs	Client Info	<b>286</b>	263	122
Oil Changed	Client Info		<b>Changed</b>	Not Changd	Not Changd
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 >75	<b>14</b>	3	8
Chromium	ppm	ASTM D5185m >5	<b>1</b>	0	0
Nickel	ppm	ASTM D5185m >4	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m >2	<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m >2	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m >15	<b>4</b>	1	2
Lead	ppm	ASTM D5185m >25	<b>&lt;1</b>	0	<1
Copper	ppm	ASTM D5185m >100	<b>1</b>	<1	1
Tin	ppm	ASTM D5185m >4	<b>1</b>	0	0
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>52</b>	11	15
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>47</b>	60	61
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	0	<1
Magnesium	ppm	ASTM D5185m 1010	<b>726</b>	906	870
Calcium	ppm	ASTM D5185m 1070	<b>1114</b>	1085	1026
Phosphorus	ppm	ASTM D5185m 1150	<b>727</b>	936	999
Zinc	ppm	ASTM D5185m 1270	<b>828</b>	1154	1186
Sulfur	ppm	ASTM D5185m 2060	<b>2582</b>	3542	3336

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>10</b>	5	6
Sodium	ppm	ASTM D5185m	<b>11</b>	3	14
Potassium	ppm	ASTM D5185m >20	<b>2</b>	<1	1

## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >6	<b>0.2</b>	0.1	0.3
Nitration	Abs/cm	*ASTM D7624 >20	<b>12.5</b>	4.8	6.2
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>27.9</b>	16.5	17.2

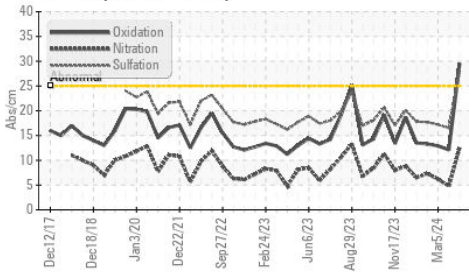
## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>29.5</b>	12.1	12.9
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>4.8</b>	8.5	8.3

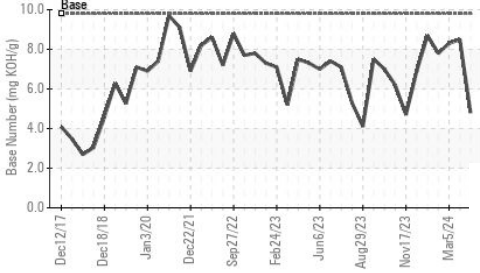


# OIL ANALYSIS REPORT

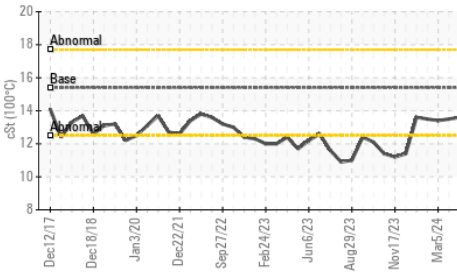
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

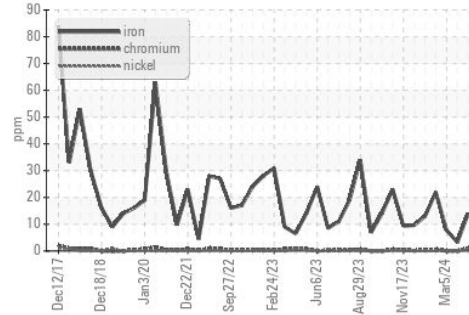


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

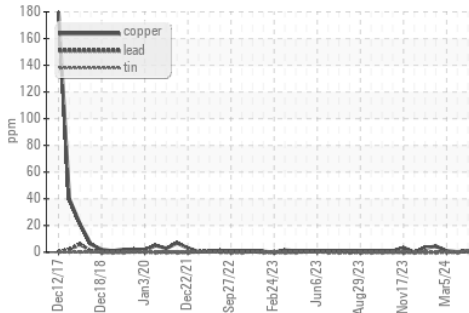
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.6	13.5

## GRAPHS

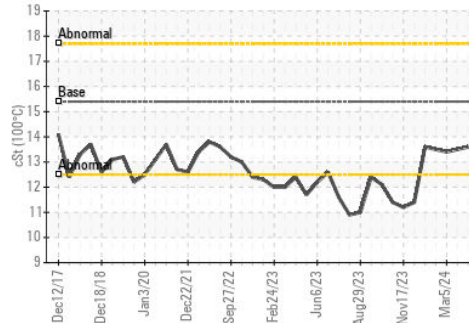
Ferrous Alloys



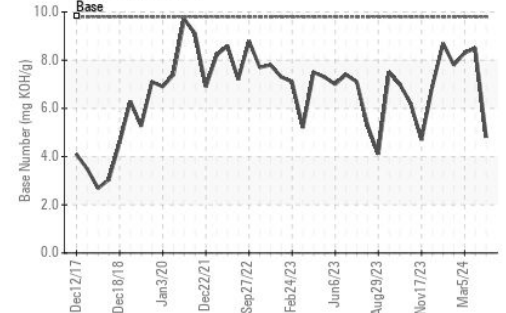
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

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

Sample No. : GFL0118087

Lab Number : 06187395

Unique Number : 11044147

Test Package : FLEET

Received : 22 May 2024

Tested : 23 May 2024

Diagnosed : 24 May 2024 - Don Baldrige

GFL Environmental - 010 - Stockbridge

1280 Rum Creek Parkway

Stockbridge, GA

US 30281

Contact: JOSHUA TINKER

joshuatinker@gflenv.com

T:

F:

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)