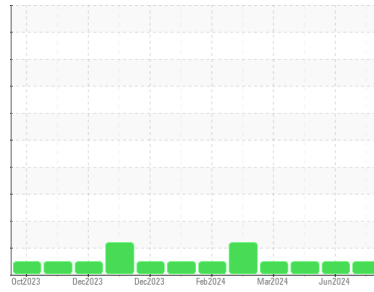




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**834045**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON GEO LD 15W40 (--- 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>GFL0122851</b>	GFL0122876	GFL0118786
Sample Date	Client Info		<b>09 Jul 2024</b>	06 Jun 2024	09 May 2024
Machine Age	hrs	Client Info	<b>1669</b>	1524	1343
Oil Age	hrs	Client Info	<b>1320</b>	1356	168
Oil Changed	Client Info		<b>Not Changed</b>	Not 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>20</b>	20	17
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m >5	<b>&lt;1</b>	<1	<1
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>4</b>	3	3
Lead	ppm	ASTM D5185m >40	<b>&lt;1</b>	1	<1
Copper	ppm	ASTM D5185m >330	<b>3</b>	2	3
Tin	ppm	ASTM D5185m >15	<b>&lt;1</b>	<1	<1
Vanadium	ppm	ASTM D5185m	<b>&lt;1</b>	<1	<1
Cadmium	ppm	ASTM D5185m	<b>&lt;1</b>	0	<1

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 50	<b>11</b>	8	24
Barium	ppm	ASTM D5185m 5	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 50	<b>53</b>	55	50
Manganese	ppm	ASTM D5185m 0	<b>2</b>	2	2
Magnesium	ppm	ASTM D5185m 560	<b>560</b>	617	542
Calcium	ppm	ASTM D5185m 1510	<b>1631</b>	1736	1447
Phosphorus	ppm	ASTM D5185m 780	<b>737</b>	783	732
Zinc	ppm	ASTM D5185m 870	<b>958</b>	1011	893
Sulfur	ppm	ASTM D5185m 2040	<b>2321</b>	2798	2363

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>8</b>	8	7
Sodium	ppm	ASTM D5185m	<b>6</b>	7	6
Potassium	ppm	ASTM D5185m >20	<b>6</b>	4	3

## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	<b>0</b>	0	0
Nitration	Abs/cm	*ASTM D7624 >20	<b>11.2</b>	11.2	8.9
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>22.1</b>	20.3	19.5

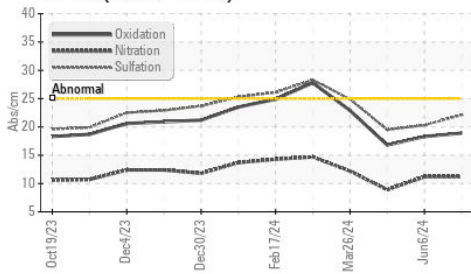
## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>18.9</b>	18.3	16.8
Base Number (BN)	mg KOH/g	ASTM D2896 10.2	<b>5.0</b>	4.9	7.4

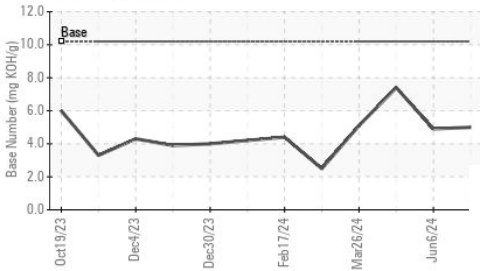


# OIL ANALYSIS REPORT

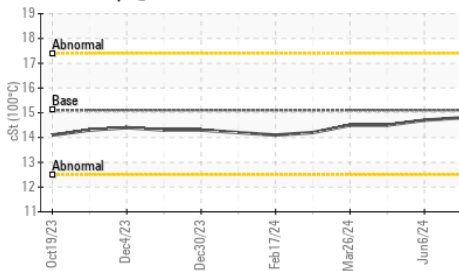
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

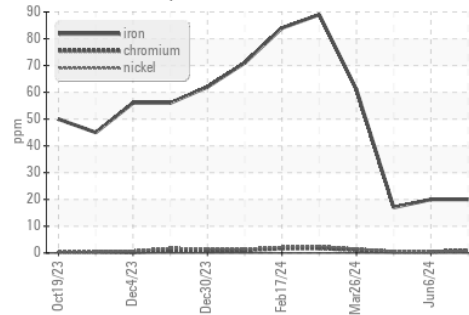


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	LIGHT
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

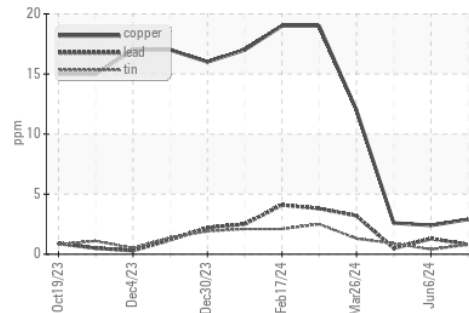
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.1	14.8	14.7

## GRAPHS

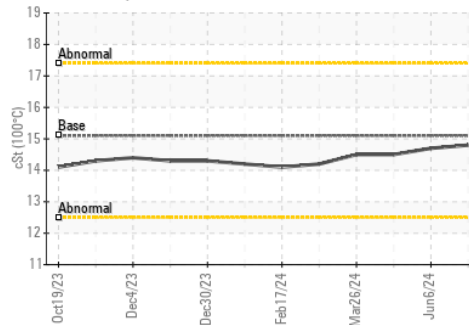
Ferrous Alloys



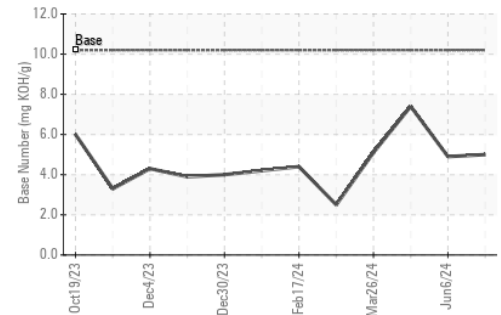
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : GFL0122851  
 Lab Number : 06238719  
 Unique Number : 11127553  
 Test Package : FLEET

Received : 16 Jul 2024  
 Tested : 17 Jul 2024  
 Diagnosed : 17 Jul 2024 - Wes Davis

GFL Environmental - 837 - Harrison TS  
 22820 S State Route 291  
 Harrisonville, MO  
 US 64701  
 Contact: SARA PATRICK  
 spatrack@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)

T:  
F: