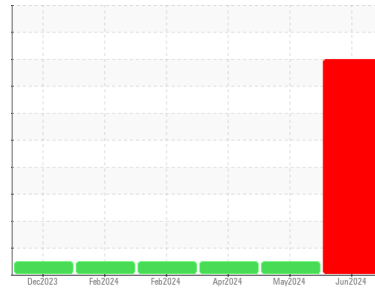




# OIL ANALYSIS REPORT

Sample Rating Trend



DEGRADATION



Area  
**(TFY1477)**  
 Machine Id  
**934058**  
 Component  
**Natural Gas Engine**  
 Fluid  
**PETRO CANADA DURON GEO LD 15W40 (--- GAL)**

## DIAGNOSIS

### Recommendation

We advise that you check for a possible overheat condition. We recommend that you drain the oil from the component if this has not already been done. We recommend you service the filters on this component. ( Customer Sample Comment: Sample )

### Wear

Tin, aluminum and iron ppm levels are abnormal. Cylinder, crank, or cam shaft wear is indicated. Piston wear is indicated.

### Contamination

There is an abnormal level of sulfation indicated.

### Fluid Condition

The oil viscosity is lower than normal. The BN level is low. An additive depletion is indicated. The oil is no longer serviceable.

## SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	<b>GFL0125244</b>	GFL0117806	GFL0117752
Sample Date	Client Info	<b>21 Jun 2024</b>	08 May 2024	24 Apr 2024
Machine Age	hrs	<b>2577</b>	2214	2107
Oil Age	hrs	<b>0</b>	207	489
Oil Changed	Client Info	<b>Not Chngd</b>	Changed	N/A
Sample Status		<b>ABNORMAL</b>	NORMAL	NORMAL

## CONTAMINATION

method	limit/base	current	history1	history2
Water	WC Method >0.1	<b>NEG</b>	NEG	NEG

## WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >50	<b>▲ 48</b>	10	14
Chromium	ppm ASTM D5185m >4	<b>&lt;1</b>	<1	2
Nickel	ppm ASTM D5185m >2	<b>&lt;1</b>	0	2
Titanium	ppm ASTM D5185m	<b>&lt;1</b>	0	<1
Silver	ppm ASTM D5185m >3	<b>&lt;1</b>	0	0
Aluminum	ppm ASTM D5185m >9	<b>▲ 17</b>	8	11
Lead	ppm ASTM D5185m >30	<b>9</b>	0	<1
Copper	ppm ASTM D5185m >35	<b>10</b>	3	2
Tin	ppm ASTM D5185m >4	<b>▲ 3</b>	<1	2
Vanadium	ppm ASTM D5185m	<b>&lt;1</b>	0	<1
Cadmium	ppm ASTM D5185m	<b>&lt;1</b>	0	1

## ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 50	<b>70</b>	14	5
Barium	ppm ASTM D5185m 5	<b>&lt;1</b>	0	0
Molybdenum	ppm ASTM D5185m 50	<b>● 2</b>	53	56
Manganese	ppm ASTM D5185m 0	<b>1</b>	1	1
Magnesium	ppm ASTM D5185m 560	<b>● 19</b>	554	606
Calcium	ppm ASTM D5185m 1510	<b>● 104</b>	1572	1854
Phosphorus	ppm ASTM D5185m 780	<b>● 296</b>	777	824
Zinc	ppm ASTM D5185m 870	<b>● 23</b>	944	1093
Sulfur	ppm ASTM D5185m 2040	<b>● 1203</b>	2656	3259

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >+100	<b>5</b>	4	6
Sodium	ppm ASTM D5185m	<b>4</b>	8	7
Potassium	ppm ASTM D5185m >20	<b>9</b>	22	40

## INFRA-RED

method	limit/base	current	history1	history2
Soot %	% *ASTM D7844	<b>0.1</b>	0.2	0
Nitration	Abs/cm *ASTM D7624 >20	<b>4.7</b>	10.1	10.6
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>▲ 48.5</b>	22.0	21.3

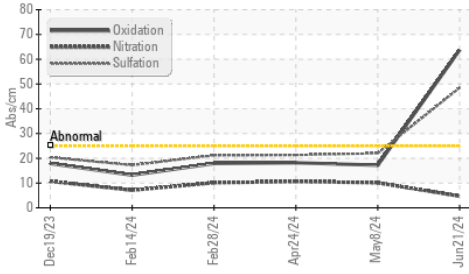
## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>▲ 63.7</b>	17.2	18.2
Base Number (BN)	mg KOH/g ASTM D2896 10.2	<b>▲ -0.3</b>	6.1	5.2

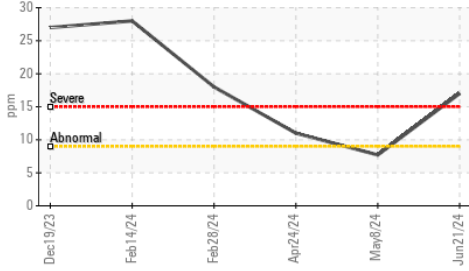


# OIL ANALYSIS REPORT

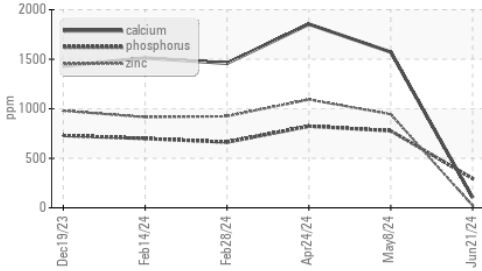
▲ FT-IR (Direct Trend)



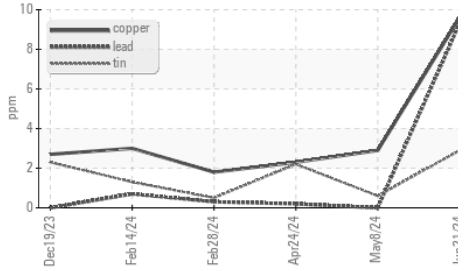
▲ Aluminum (ppm)



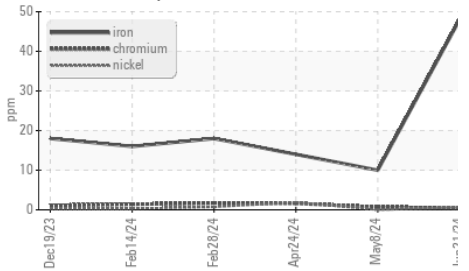
● Additives



▲ Non-ferrous Metals



▲ Ferrous Alloys

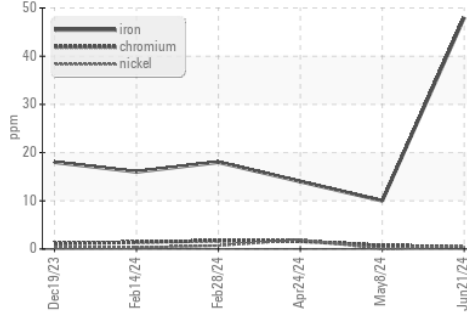


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

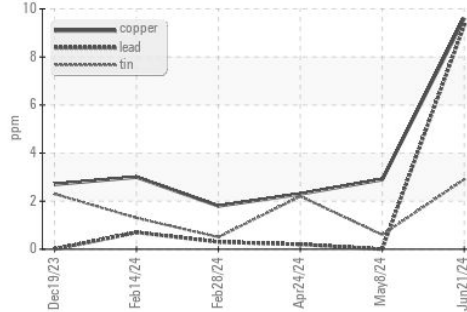
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.1 ▲ 7.1	14.7	14.5

## GRAPHS

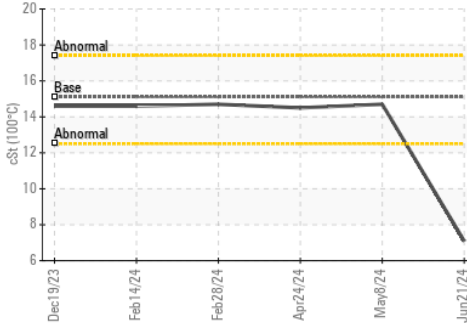
▲ Ferrous Alloys



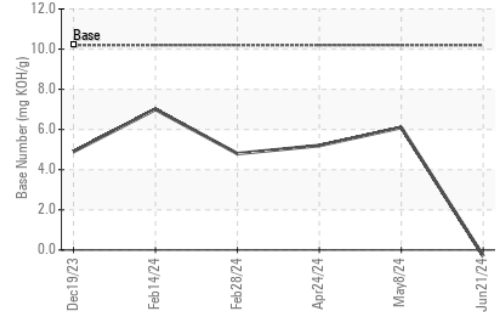
▲ Non-ferrous Metals



▲ Viscosity @ 100°C



▲ Base Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0125244  
**Lab Number** : 06224231  
**Unique Number** : 11102428  
**Test Package** : FLEET

**Received** : 28 Jun 2024  
**Tested** : 01 Jul 2024  
**Diagnosed** : 01 Jul 2024 - Angela Borella

**GFL Environmental - 865 - East Mount Hauling**  
 7213 East Mount Houston Road  
 Houston, TX 77050  
 Contact: TECHNICIAN ACCOUNT  
 wcgfldemo@gmail.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)