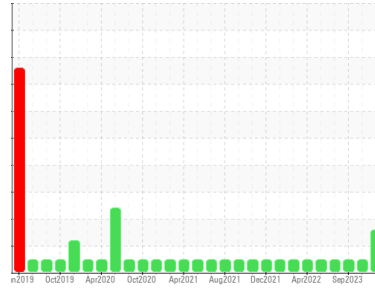




# OIL ANALYSIS REPORT

Sample Rating Trend



Area  
**(P663812)**  
Machine Id  
**10890C**

Component  
**Diesel Engine**  
Fluid

**PETRO CANADA DURON GEO LD 15W40 (11 GAL)**

## DIAGNOSIS

### Recommendation

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

Elemental level of silicon (Si) above normal.

### Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

## SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	<b>GFL0096915</b>	GFL0069749	GFL0050899
Sample Date	Client Info	<b>08 Feb 2024</b>	02 Jan 2024	20 Sep 2023
Machine Age	hrs	Client Info	13485	12845
Oil Age	hrs	Client Info	13077	12437
Oil Changed	Client Info	<b>Changed</b>	Not Changd	Not Changd
Sample Status		<b>ABNORMAL</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 >90	<b>51</b>	21	8
Chromium	ppm ASTM D5185m >20	<b>5</b>	2	<1
Nickel	ppm ASTM D5185m >2	<b>2</b>	<1	0
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>	3	<1
Lead	ppm ASTM D5185m >40	<b>7</b>	5	<1
Copper	ppm ASTM D5185m >330	<b>2</b>	2	<1
Tin	ppm ASTM D5185m >15	<b>1</b>	<1	0
Vanadium	ppm ASTM D5185m	<b>0</b>	0	0
Cadmium	ppm ASTM D5185m	<b>&lt;1</b>	0	0

## ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 50	<b>10</b>	6	9
Barium	ppm ASTM D5185m 5	<b>3</b>	18	0
Molybdenum	ppm ASTM D5185m 50	<b>78</b>	62	59
Manganese	ppm ASTM D5185m 0	<b>2</b>	<1	<1
Magnesium	ppm ASTM D5185m 560	<b>802</b>	602	625
Calcium	ppm ASTM D5185m 1510	<b>1825</b>	1544	1676
Phosphorus	ppm ASTM D5185m 780	<b>955</b>	864	812
Zinc	ppm ASTM D5185m 870	<b>1276</b>	979	1086
Sulfur	ppm ASTM D5185m 2040	<b>2664</b>	2739	3182

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	<b>▲ 46</b>	24	4
Sodium	ppm ASTM D5185m	<b>9</b>	7	31
Potassium	ppm ASTM D5185m >20	<b>4</b>	4	10

## INFRA-RED

method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >6	<b>0.1</b>	0	0
Nitration	Abs/cm *ASTM D7624 >20	<b>13.3</b>	11.5	9.5
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>25.4</b>	26.2	18.7

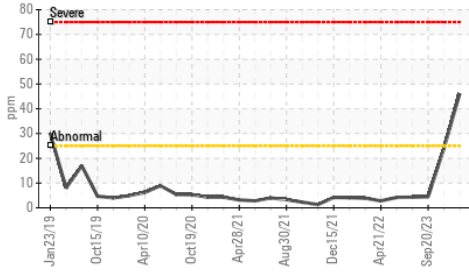
## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>20.1</b>	20.7	15.8
Base Number (BN)	mg KOH/g ASTM D2896 10.2	<b>5.7</b>	3.5	5.6

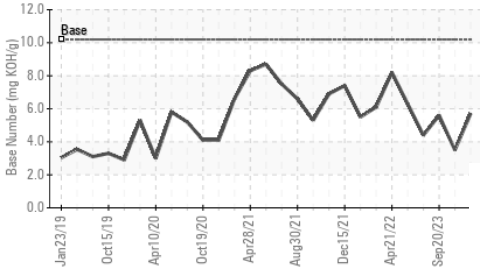


# OIL ANALYSIS REPORT

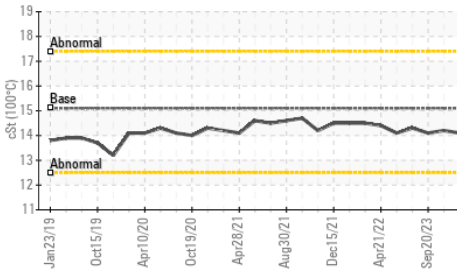
▲ Silicon (ppm)



Base Number



Viscosity @ 100°C

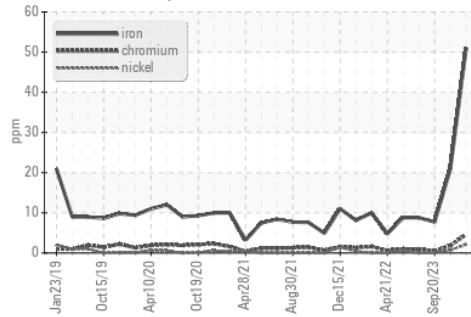


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

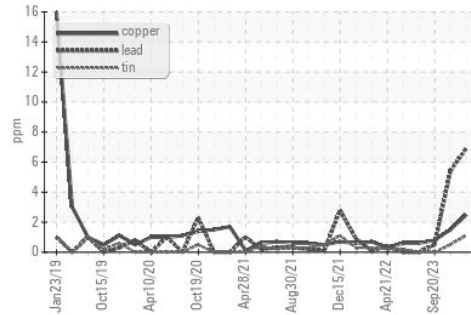
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.1	14.1	14.2

## GRAPHS

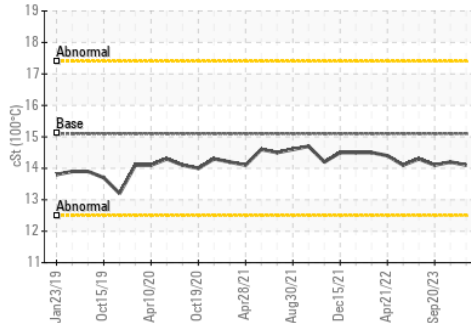
Ferrous Alloys



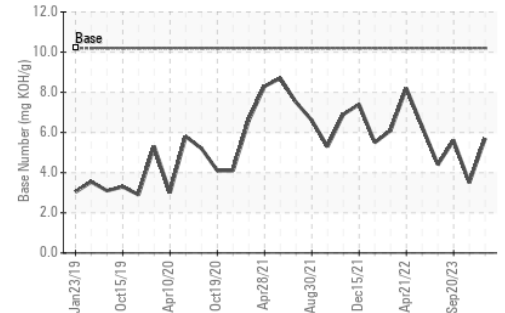
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : GFL0096915  
 Lab Number : 06085284  
 Unique Number : 10872729  
 Test Package : FLEET

Received : 09 Feb 2024  
 Tested : 12 Feb 2024  
 Diagnosed : 12 Feb 2024 - Don Baldrige

GFL Environmental - 031 - Greenville/Spartanburg  
 1635 Antioch Church Rd  
 Piedmont, SC  
 US 29673  
 Contact: TECHNICIAN ACCOUNT  
 catherine.anastasio@wearcheck.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)

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F: