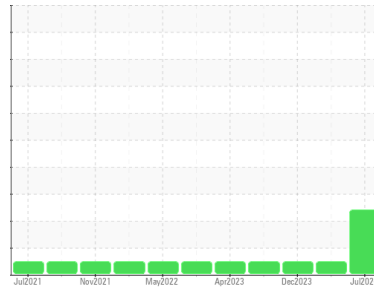




# OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL



Machine Id  
**846001**  
 Component  
**Natural Gas Engine**  
 Fluid  
**PETRO CANADA DURON GEO LD 15W40 (--- LTR)**

## DIAGNOSIS

### Recommendation

Check for low coolant level. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

Sodium and/or potassium levels are high.

### 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>GFL0119139</b>	GFL0115501	GFL0106973
Sample Date	Client Info		<b>12 Jul 2024</b>	22 Mar 2024	16 Dec 2023
Machine Age	hrs	Client Info	<b>20480</b>	19789	19258
Oil Age	hrs	Client Info	<b>691</b>	531	1577
Oil Changed	Client Info		<b>Changed</b>	Changed	Changed
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>18</b>	20	3
Chromium	ppm	ASTM D5185m >4	<b>1</b>	0	<1
Nickel	ppm	ASTM D5185m >2	<b>1</b>	<1	0
Titanium	ppm	ASTM D5185m	<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m >3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >9	<b>7</b>	2	1
Lead	ppm	ASTM D5185m >30	<b>3</b>	1	<1
Copper	ppm	ASTM D5185m >35	<b>3</b>	<1	<1
Tin	ppm	ASTM D5185m >4	<b>&lt;1</b>	<1	0
Vanadium	ppm	ASTM D5185m	<b>&lt;1</b>	0	<1
Cadmium	ppm	ASTM D5185m	<b>&lt;1</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 50	<b>8</b>	4	25
Barium	ppm	ASTM D5185m 5	<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185m 50	<b>68</b>	59	48
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	0
Magnesium	ppm	ASTM D5185m 560	<b>741</b>	878	530
Calcium	ppm	ASTM D5185m 1510	<b>1757</b>	1069	1421
Phosphorus	ppm	ASTM D5185m 780	<b>1020</b>	1021	710
Zinc	ppm	ASTM D5185m 870	<b>1247</b>	1249	876
Sulfur	ppm	ASTM D5185m 2040	<b>3313</b>	3401	2307

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >+100	<b>5</b>	3	2
Sodium	ppm	ASTM D5185m	<b>54</b>	17	4
Potassium	ppm	ASTM D5185m >20	<b>49</b>	10	0

## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	<b>0.3</b>	1.5	0.1
Nitration	Abs/cm	*ASTM D7624 >20	<b>11.7</b>	10.4	8.4
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>23.0</b>	20.6	18.7

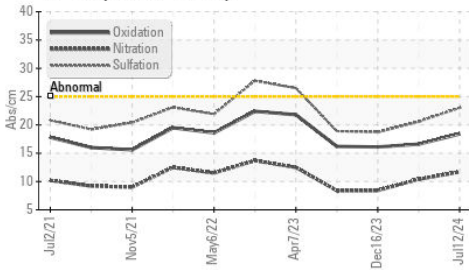
## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>18.4</b>	16.6	16.1
Base Number (BN)	mg KOH/g	ASTM D2896 10.2	<b>5.6</b>	8.8	7.7

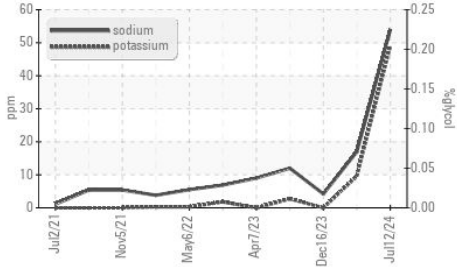


# OIL ANALYSIS REPORT

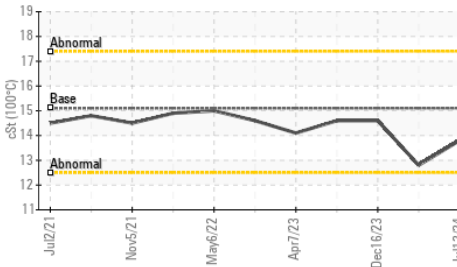
FT-IR (Direct Trend)



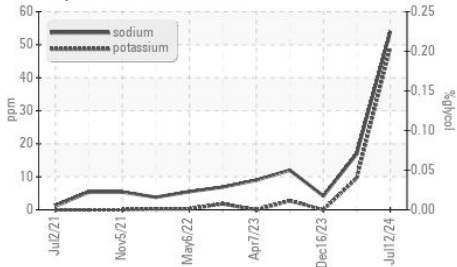
Glycol Contamination



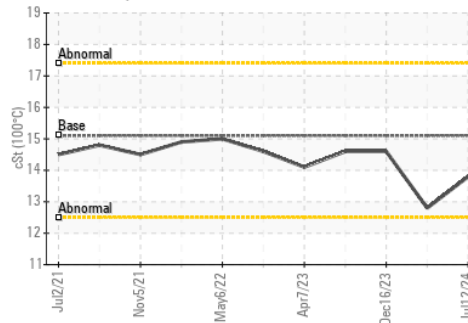
Viscosity @ 100°C



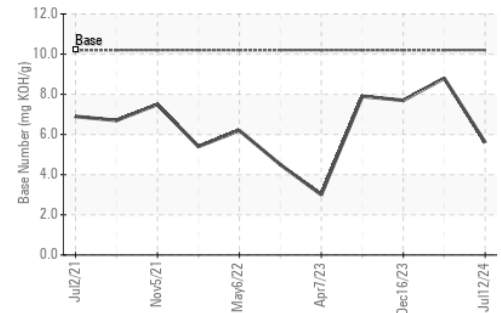
Glycol Contamination



Viscosity @ 100°C



Base Number

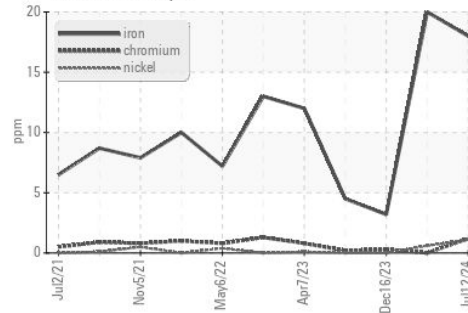


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

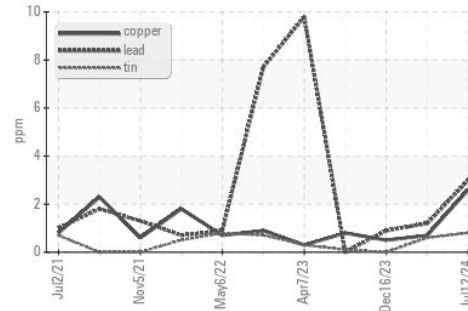
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.1	13.8	12.8

## GRAPHS

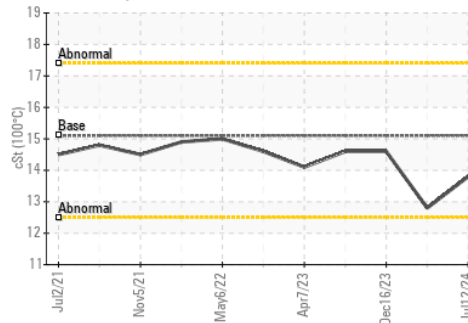
Ferrous Alloys



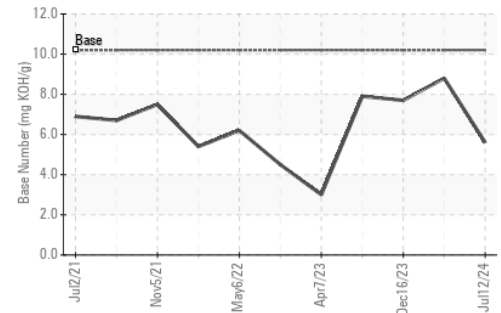
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

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

Sample No. : GFL0119139

Lab Number : 06238958

Unique Number : 11127792

Test Package : FLEET ( Additional Tests: Glycol )

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)

Received : 17 Jul 2024

Tested : 19 Jul 2024

Diagnosed : 19 Jul 2024 - Sean Felton

GFL Environmental - 882 - Gainesville

5002 SW 41st Blvd

Gainesville, FL

US 32608

Contact: ROBERT CLARK

robert.clark@gflenv.com

T:

F: