

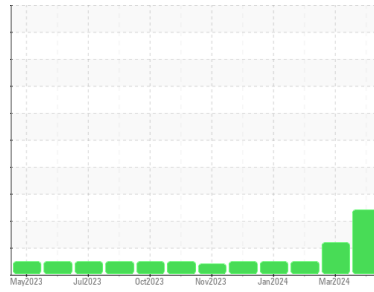


OIL ANALYSIS REPORT



Machine Id
934023
 Component
Natural Gas Engine
 Fluid
PETRO CANADA DURON GEO LD 15W40 (--- GAL)

Sample Rating Trend



WATER



DIAGNOSIS

▲ Recommendation

We advise that you check for the source of water entry. We recommend an early resample to monitor this condition. Please note that there was too much water present in the oil to perform an accurate viscosity test.

Wear

All component wear rates are normal.

▲ Contamination

There is a moderate concentration of water present in the oil. Moderate concentration of visible dirt/debris present in the oil.

● Fluid Condition

The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		GFL0114004	GFL0114018	GFL0109850
Sample Date	Client Info		03 Apr 2024	08 Mar 2024	16 Feb 2024
Machine Age	hrs	Client Info	1951	1793	1676
Oil Age	hrs	Client Info	0	0	0
Oil Changed	Client Info		Not Changed	Not Changd	Not Changed
Sample Status			ABNORMAL	ABNORMAL	NORMAL

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >50	20	20	10
Chromium	ppm	ASTM D5185m >4	2	1	<1
Nickel	ppm	ASTM D5185m >2	<1	1	0
Titanium	ppm	ASTM D5185m	0	0	0
Silver	ppm	ASTM D5185m >3	0	0	0
Aluminum	ppm	ASTM D5185m >9	2	7	2
Lead	ppm	ASTM D5185m >30	3	4	3
Copper	ppm	ASTM D5185m >35	18	3	1
Tin	ppm	ASTM D5185m >4	<1	2	0
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 50	9	8	17
Barium	ppm	ASTM D5185m 5	0	0	<1
Molybdenum	ppm	ASTM D5185m 50	57	60	51
Manganese	ppm	ASTM D5185m 0	<1	2	0
Magnesium	ppm	ASTM D5185m 560	579	635	531
Calcium	ppm	ASTM D5185m 1510	1783	1837	1449
Phosphorus	ppm	ASTM D5185m 780	802	856	753
Zinc	ppm	ASTM D5185m 870	1068	1104	947
Sulfur	ppm	ASTM D5185m 2040	3158	3026	2438

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >+100	7	8	5
Sodium	ppm	ASTM D5185m	66	9	0
Potassium	ppm	ASTM D5185m >20	19	3	2
Water	%	ASTM D6304 >0.1	▲ 0.391	---	---
ppm Water	ppm	ASTM D6304 >1000	▲ 3910	---	---
Glycol	%	*ASTM D2982	0.0	---	---

INFRA-RED

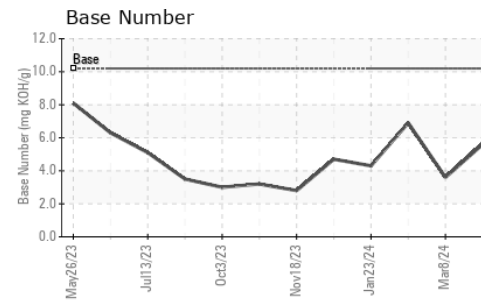
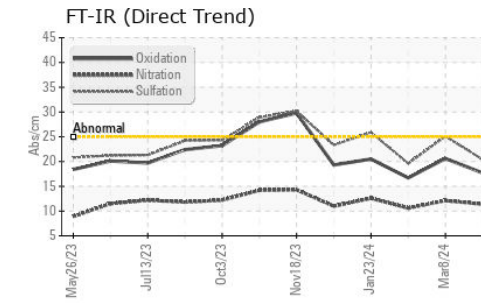
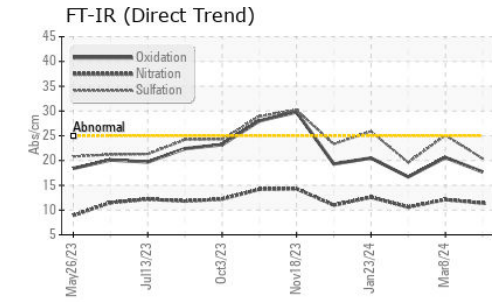
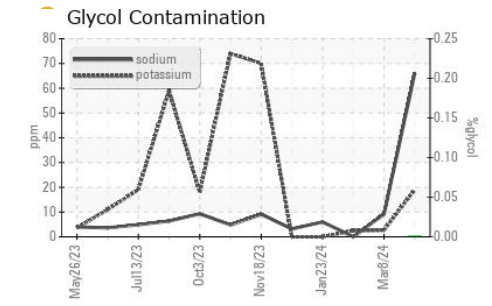
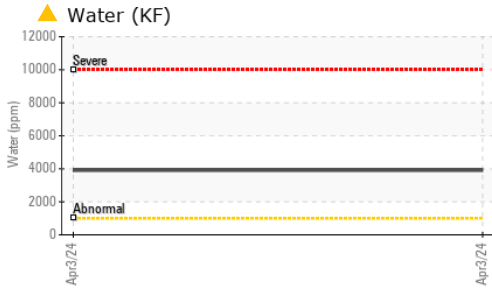
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	0.1	0	0.1
Nitration	Abs/cm	*ASTM D7624 >20	11.4	12.1	10.6
Sulfation	Abs/.1mm	*ASTM D7415 >30	20.4	25.1	19.6

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	17.7	20.6	16.7
Base Number (BN)	mg KOH/g	ASTM D2896 10.2	5.6	▲ 3.6	6.9



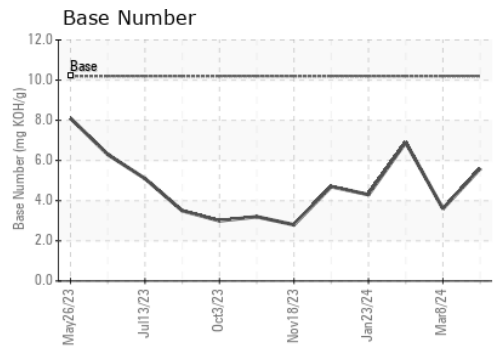
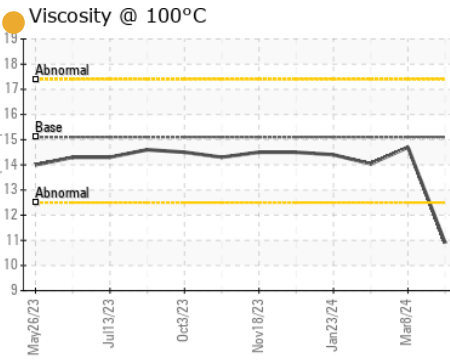
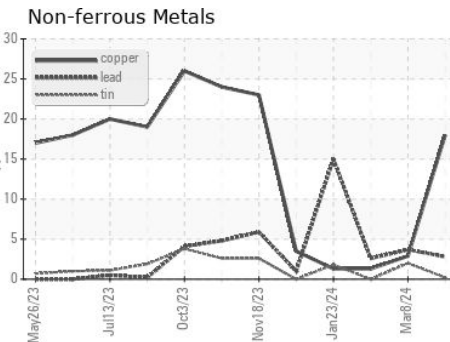
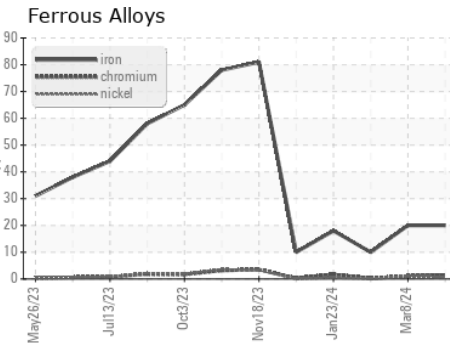
OIL ANALYSIS REPORT



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	0.2%	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.1	10.9	14.7

GRAPHS



Certificate L2367

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

Sample No. : GFL0114004

Lab Number : 06140840

Unique Number : 10965648

Test Package : FLEET (Additional Tests: Glycol, KF)

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 : 08 Apr 2024

Tested : 15 Apr 2024

Diagnosed : 15 Apr 2024 - Jonathan Hester

GFL Environmental - 836 - Kansas City Hauling

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Kansas City, MO

US 64126

Contact: Loyce Stewart

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