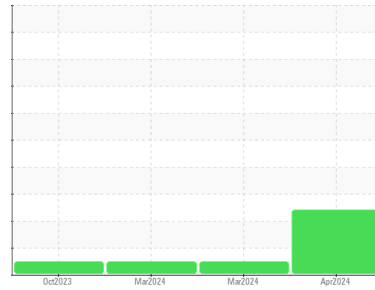




OIL ANALYSIS REPORT

Sample Rating Trend



COOL CHEMICALS



Area
(YA180902)

Machine Id
833000

Component
Natural Gas Engine

Fluid
PETRO CANADA 15W40 (8 GAL)

DIAGNOSIS

Recommendation

We advise that you check for possible coolant leak. Check for low coolant level. We recommend an early resample to monitor this condition.

Wear

Cylinder, crank, or cam shaft wear is indicated.

Contamination

Sodium and/or potassium levels are high.

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		GFL0090058	GFL0090005	GFL0090009
Sample Date	Client Info		02 Apr 2024	08 Mar 2024	05 Mar 2024
Machine Age	hrs	Client Info	0	0	0
Oil Age	hrs	Client Info	0	0	0
Oil Changed	Client Info		Not Changed	Changed	Not Changed
Sample Status			ABNORMAL	NORMAL	NORMAL

CONTAMINATION

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

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >50	▲ 89	5	7
Chromium	ppm	ASTM D5185m >4	1	<1	0
Nickel	ppm	ASTM D5185m >2	<1	0	0
Titanium	ppm	ASTM D5185m	<1	0	0
Silver	ppm	ASTM D5185m >3	0	0	0
Aluminum	ppm	ASTM D5185m >9	6	<1	1
Lead	ppm	ASTM D5185m >30	2	0	0
Copper	ppm	ASTM D5185m >35	7	1	2
Tin	ppm	ASTM D5185m >4	1	0	<1
Vanadium	ppm	ASTM D5185m	<1	0	0
Cadmium	ppm	ASTM D5185m	<1	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	85	28	13
Barium	ppm	ASTM D5185m	0	0	0
Molybdenum	ppm	ASTM D5185m	28	45	47
Manganese	ppm	ASTM D5185m	3	<1	1
Magnesium	ppm	ASTM D5185m	312	541	548
Calcium	ppm	ASTM D5185m	735	1463	1444
Phosphorus	ppm	ASTM D5185m	611	749	701
Zinc	ppm	ASTM D5185m	524	872	888
Sulfur	ppm	ASTM D5185m	5918	2359	2211

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >+100	18	4	6
Sodium	ppm	ASTM D5185m	16	5	5
Potassium	ppm	ASTM D5185m >20	▲ 74	0	0

INFRA-RED

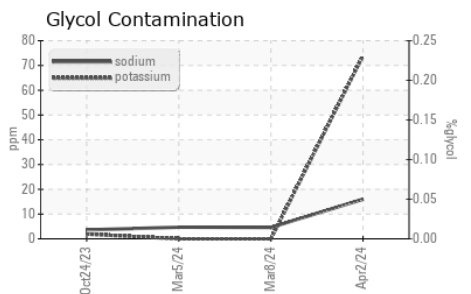
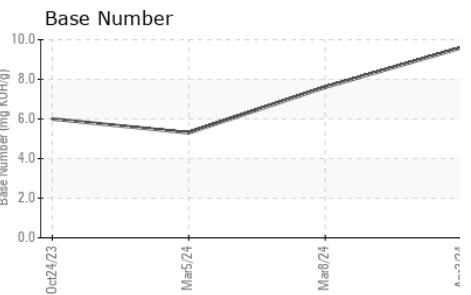
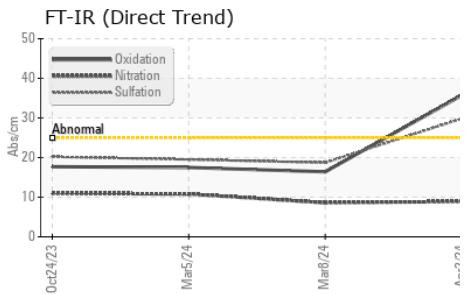
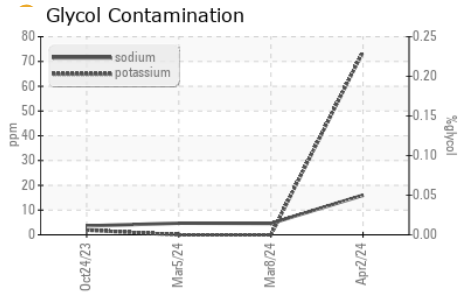
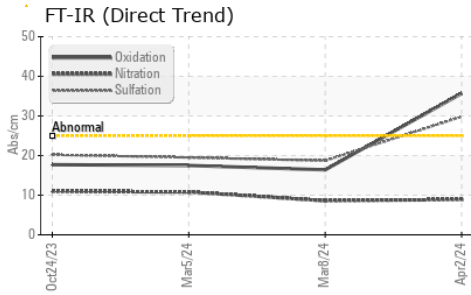
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	0.3	0	0
Nitration	Abs/cm	*ASTM D7624 >20	8.9	8.6	10.8
Sulfation	Abs/.1mm	*ASTM D7415 >30	29.8	18.7	19.5

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	35.7	16.4	17.5
Base Number (BN)	mg KOH/g	ASTM D2896	9.6	7.6	5.3



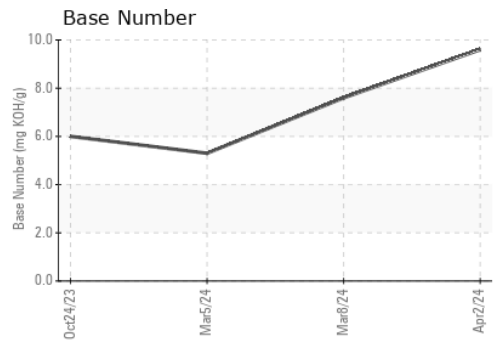
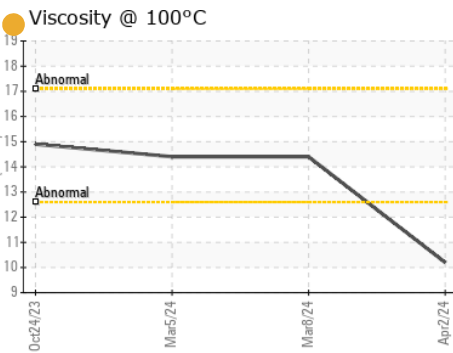
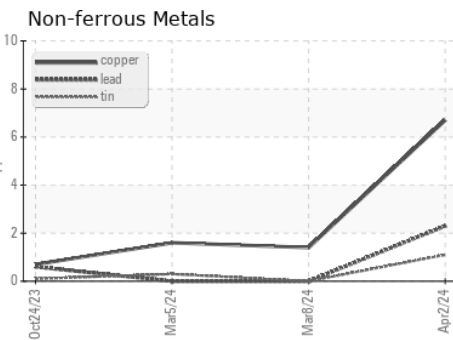
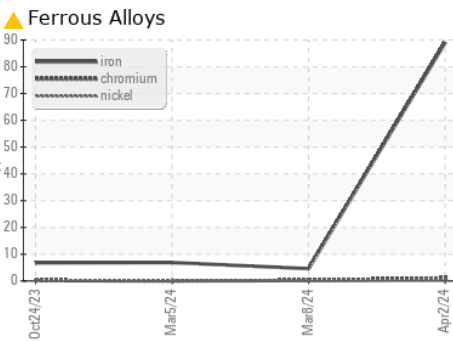
OIL ANALYSIS REPORT



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	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	10.2	14.4	14.4

GRAPHS



Certificate L2367

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

Sample No. : GFL0090058

Lab Number : 06138256

Unique Number : 10963064

Test Package : FLEET (Additional Tests: Glycol)

Received : 04 Apr 2024

Tested : 09 Apr 2024

Diagnosed : 09 Apr 2024 - Jonathan Hester

GFL Environmental - 018 - Fayetteville

4621 Marracco Drive

Hope Mills, NC

US 28348

Contact: Robert Carter

robert.carter@gflenv.com

T: (910)596-1170

F:

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)