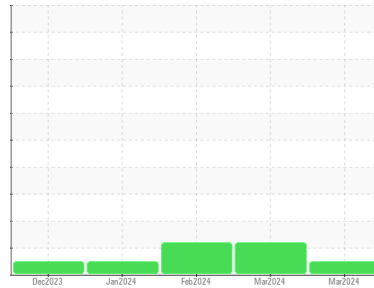




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
934037
 Component
Natural Gas Engine
 Fluid
PETRO CANADA 15W40 (--- GAL)

DIAGNOSIS

Recommendation

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

There is no indication of any contamination in the oil.

Fluid Condition

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

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	GFL0111868	GFL0111814	GFL0108254
Sample Date	Client Info	27 Mar 2024	21 Mar 2024	09 Feb 2024
Machine Age	hrs	884	836	538
Oil Age	hrs	884	836	538
Oil Changed	Client Info	Changed	Not Changd	Not Changd
Sample Status		NORMAL	ABNORMAL	ABNORMAL

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	66	65	47
Chromium	ppm ASTM D5185m >4	2	1	<1
Nickel	ppm ASTM D5185m >2	2	1	2
Titanium	ppm ASTM D5185m	<1	0	<1
Silver	ppm ASTM D5185m >3	<1	<1	<1
Aluminum	ppm ASTM D5185m >9	9	9	5
Lead	ppm ASTM D5185m >30	2	1	2
Copper	ppm ASTM D5185m >35	17	15	16
Tin	ppm ASTM D5185m >4	2	2	2
Vanadium	ppm ASTM D5185m	<1	0	<1
Cadmium	ppm ASTM D5185m	<1	0	<1

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m	8	6	6
Barium	ppm ASTM D5185m	2	3	17
Molybdenum	ppm ASTM D5185m	65	56	50
Manganese	ppm ASTM D5185m	16	16	14
Magnesium	ppm ASTM D5185m	766	799	639
Calcium	ppm ASTM D5185m	1347	1220	1090
Phosphorus	ppm ASTM D5185m	772	751	690
Zinc	ppm ASTM D5185m	1000	987	822
Sulfur	ppm ASTM D5185m	2367	2592	2532

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >+100	29	29	28
Sodium	ppm ASTM D5185m	7	5	1
Potassium	ppm ASTM D5185m >20	40	21	18

INFRA-RED

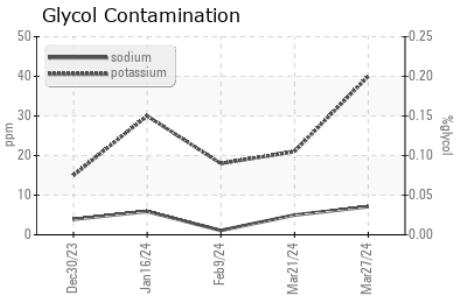
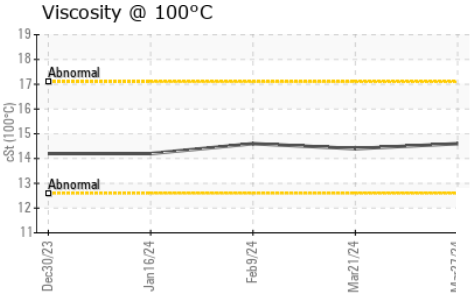
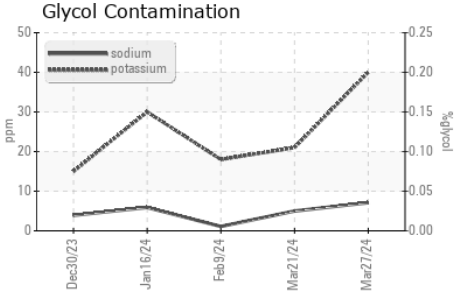
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844	0	0	0
Nitration	Abs/cm *ASTM D7624 >20	12.5	12.7	11.7
Sulfation	Abs/.1mm *ASTM D7415 >30	25.5	26.8	23.2

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	23.6	25.0	20.8
Base Number (BN)	mg KOH/g ASTM D2896	3.5	▲ 2.8	▲ 3.4



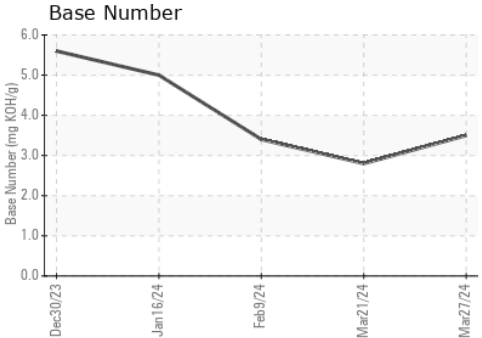
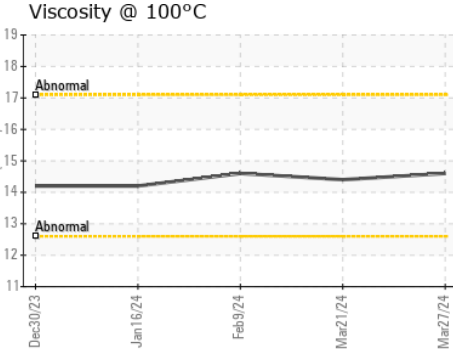
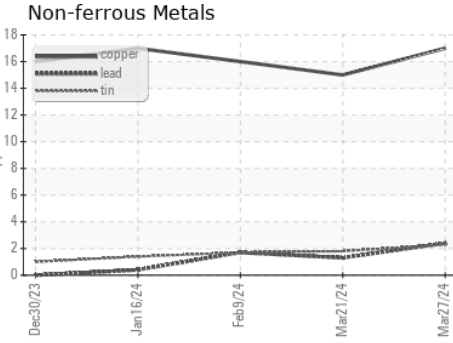
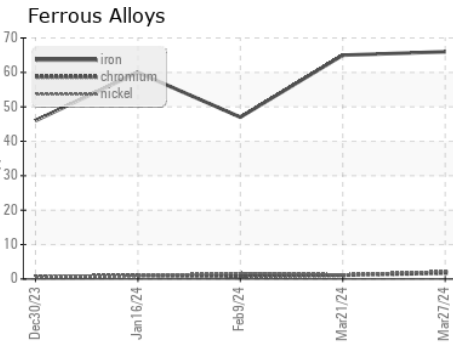
OIL ANALYSIS REPORT



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	14.6	14.4	14.6

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0111868
Lab Number : 06131789
Unique Number : 10951254
Test Package : FLEET (Additional Tests: Glycol)

Received : 28 Mar 2024
Tested : 02 Apr 2024
Diagnosed : 02 Apr 2024 - Don Baldrige

GFL Environmental - 652 - Fredericksburg Hauling
 10954 Houser Drive
 Fredericksburg, VA
 US 22408
 Contact: WILLIAM MILO
 wmilo@gflenv.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: