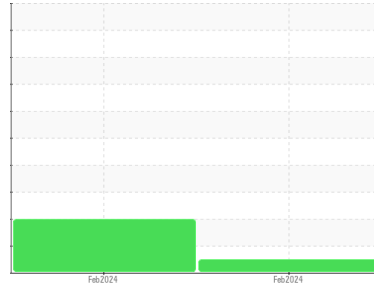




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
414073
 Component
1 Diesel Engine
 Fluid
PETRO CANADA 15W40 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

Metal levels are typical for a new component breaking in.

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		GFL0112717	GFL0112761	---
Sample Date	Client Info		16 Feb 2024	07 Feb 2024	---
Machine Age	hrs	Client Info	516	434	---
Oil Age	hrs	Client Info	0	434	---
Oil Changed	Client Info		Not Changed	Changed	---
Sample Status			NORMAL	ABNORMAL	---

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<1.0	0.5	---
Water	WC Method	>0.2	NEG	NEG	---
Glycol	WC Method		NEG	NEG	---

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >120	2	30	---
Chromium	ppm	ASTM D5185m >20	<1	2	---
Nickel	ppm	ASTM D5185m >5	0	4	---
Titanium	ppm	ASTM D5185m >2	0	<1	---
Silver	ppm	ASTM D5185m >2	<1	1	---
Aluminum	ppm	ASTM D5185m >20	3	14	---
Lead	ppm	ASTM D5185m >40	0	<1	---
Copper	ppm	ASTM D5185m >330	47	246	---
Tin	ppm	ASTM D5185m >15	0	3	---
Vanadium	ppm	ASTM D5185m	0	<1	---
Cadmium	ppm	ASTM D5185m	0	<1	---

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	21	245	---
Barium	ppm	ASTM D5185m	0	0	---
Molybdenum	ppm	ASTM D5185m	59	109	---
Manganese	ppm	ASTM D5185m	<1	4	---
Magnesium	ppm	ASTM D5185m	863	647	---
Calcium	ppm	ASTM D5185m	973	1277	---
Phosphorus	ppm	ASTM D5185m	907	660	---
Zinc	ppm	ASTM D5185m	1128	794	---
Sulfur	ppm	ASTM D5185m	2788	2595	---

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	11	▲ 69	---
Sodium	ppm	ASTM D5185m	0	0	---
Potassium	ppm	ASTM D5185m >20	0	39	---

INFRA-RED

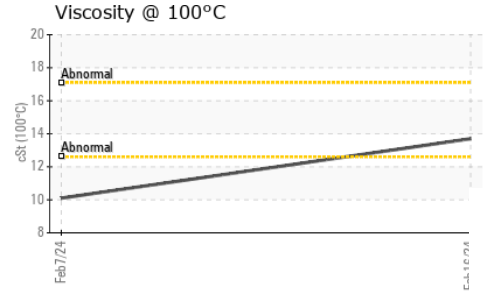
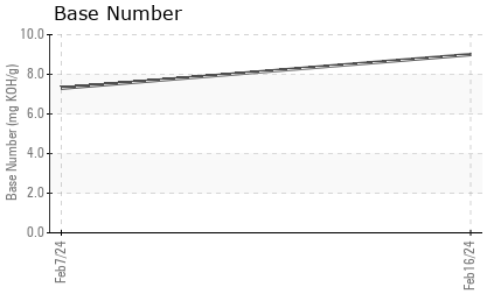
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	0.1	0.6	---
Nitration	Abs/cm	*ASTM D7624 >20	5.5	10.4	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	18.9	26.0	---

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	14.9	23.9	---
Base Number (BN)	mg KOH/g	ASTM D2896	9.0	7.3	---



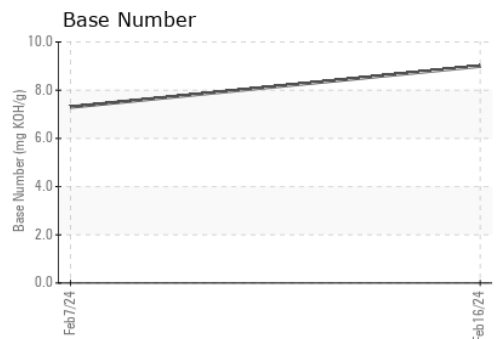
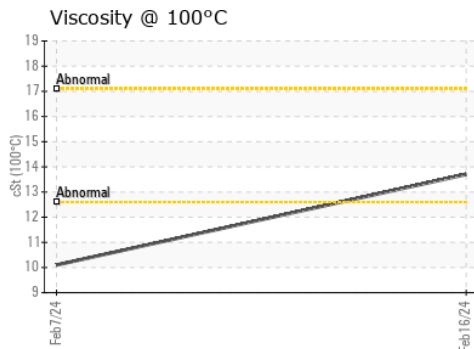
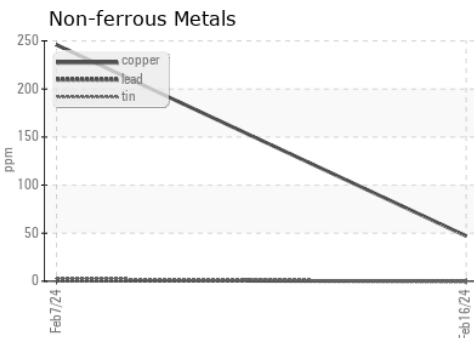
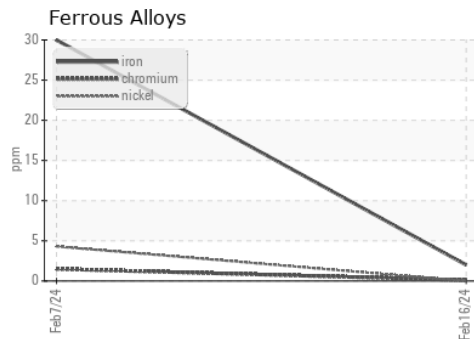
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.2	NEG	---
Free Water	scalar	*Visual		NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	13.7	▲ 10.1	---

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0112717 **Received** : 26 Feb 2024
Lab Number : 06100856 **Tested** : 27 Feb 2024
Unique Number : 10899086 **Diagnosed** : 27 Feb 2024 - Wes Davis
Test Package : FLEET

GFL Environmental - 654 - Richmond Hauling
 11800 Lewis Road
 Chester, VA
 US 23831
 Contact: Jimmy Mayes
 jmayes@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)