



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area
(48016R) {UNASSIGNED}
Machine Id
421044
Component
Diesel Engine
Fluid
PETRO CANADA 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0119870	GFL0119862	---
Sample Date		Client Info		24 Jun 2024	20 May 2024	---
Machine Age	hrs	Client Info		0	0	---
Oil Age	hrs	Client Info		540	500	---
Filter Age	hrs	Client Info		540	500	---
Oil Changed		Client Info		N/A	N/A	---
Filter Changed		Client Info		N/A	N/A	---
Sample Status				NORMAL	NORMAL	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>120	42	13	---
Chromium	ppm	ASTM D5185m	>20	<1	<1	---
Nickel	ppm	ASTM D5185m	>5	2	<1	---
Titanium	ppm	ASTM D5185m	>2	0	<1	---
Silver	ppm	ASTM D5185m	>2	<1	<1	---
Aluminum	ppm	ASTM D5185m	>20	4	2	---
Lead	ppm	ASTM D5185m	>40	7	<1	---
Copper	ppm	ASTM D5185m	>330	3	3	---
Tin	ppm	ASTM D5185m	>15	1	1	---
Vanadium	ppm	ASTM D5185m		<1	0	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

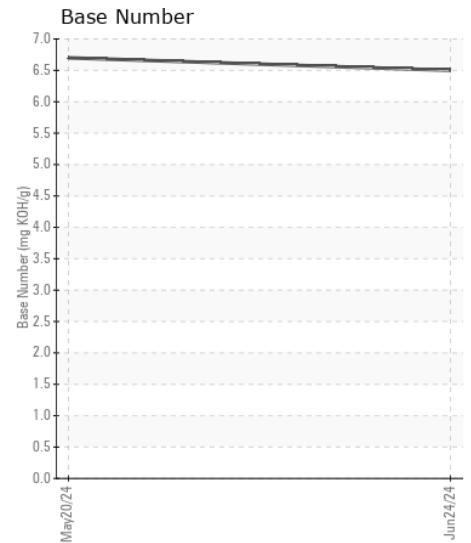
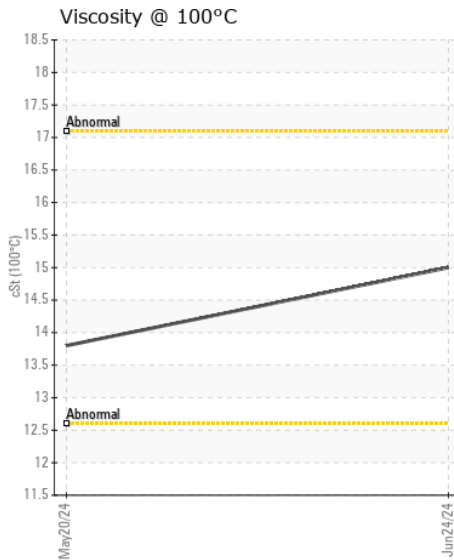
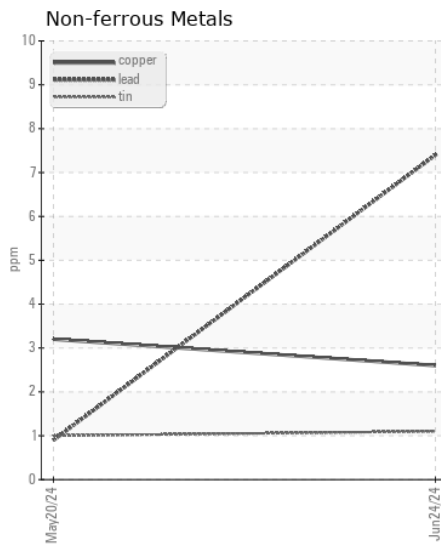
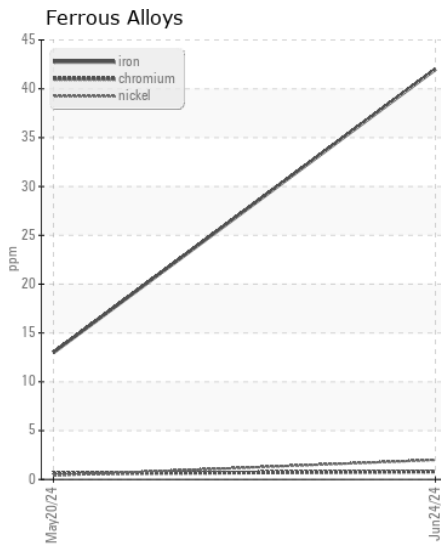
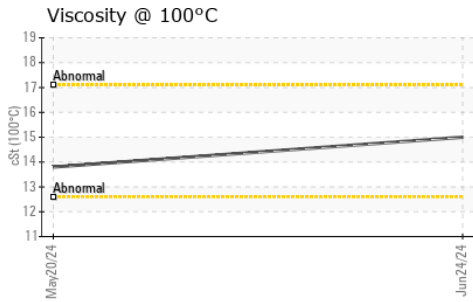
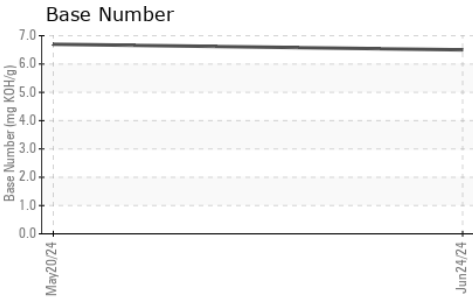
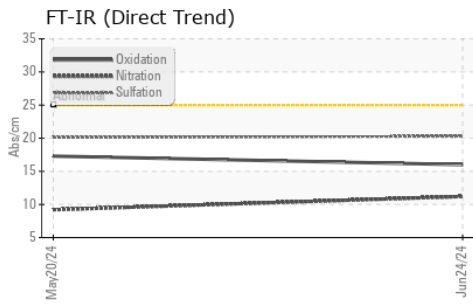
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	12	5	---
Potassium	ppm	ASTM D5185m	>20	6	4	---
Fuel		WC Method	>3.0	<1.0	<1.0	---
Water		WC Method	>0.2	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844	>4	0.6	0.4	---
Nitration	Abs/cm	*ASTM D7624	>20	11.2	9.2	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.3	20.1	---
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	>0.2	NEG	NEG	---

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.

Sodium	ppm	ASTM D5185m		7	1	---
Boron	ppm	ASTM D5185m		66	<1	---
Barium	ppm	ASTM D5185m		0	0	---
Molybdenum	ppm	ASTM D5185m		71	64	---
Manganese	ppm	ASTM D5185m		1	<1	---
Magnesium	ppm	ASTM D5185m		69	1031	---
Calcium	ppm	ASTM D5185m		2406	1150	---
Phosphorus	ppm	ASTM D5185m		1095	1083	---
Zinc	ppm	ASTM D5185m		1341	1366	---
Sulfur	ppm	ASTM D5185m		4596	3507	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.0	17.3	---
Base Number (BN)	mg KOH/g	ASTM D2896		6.5	6.7	---
Visc @ 100°C	cSt	ASTM D445		15.0	13.8	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0119870
Lab Number : 06223043
Unique Number : 11101240
Test Package : FLEET

Received : 27 Jun 2024
Tested : 28 Jun 2024
Diagnosed : 28 Jun 2024 - Wes Davis

GFL Environmental - 958 - Tri County HC Morton
 1090 W. Jefferson St.
 Morton, IL
 US 61550
 Contact: Bryan Link
 blink@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)

T:
F: