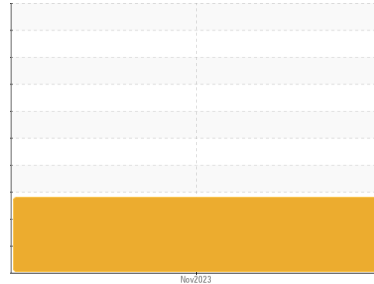




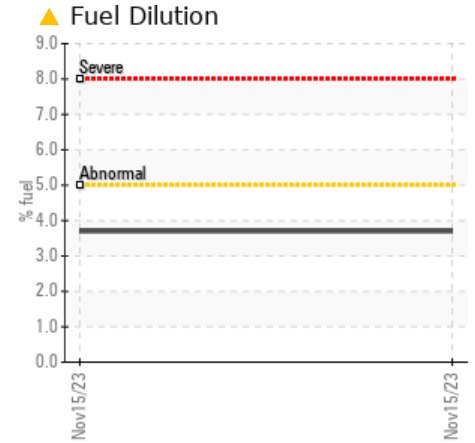
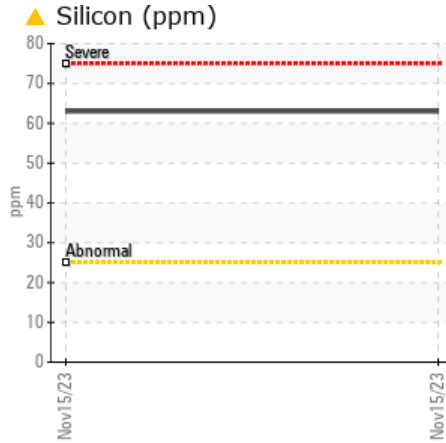
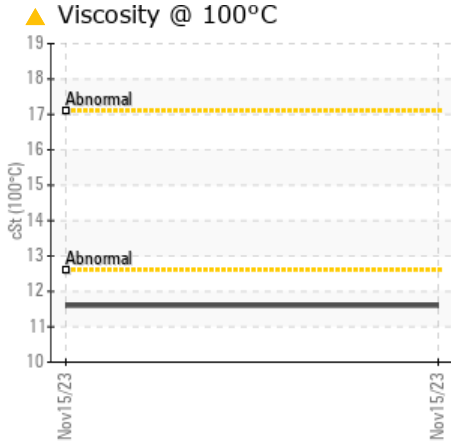
PROBLEM SUMMARY

Sample Rating Trend



Machine Id
826010
 Component
Diesel Engine
 Fluid
PETRO CANADA 15W40 (--- GAL)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

Sample Status	ABNORMAL		---	---
Silicon	ppm	ASTM D5185m >25	▲ 63	---
Fuel	%	ASTM D3524 >5	▲ 3.7	---
Visc @ 100°C	cSt	ASTM D445	▲ 11.6	---

Customer Id: GFL019
 Sample No.: GFL0094475
 Lab Number: 06009406
 Test Package: FLEET



To manage this report scan the QR code

To discuss the diagnosis or test data:
 Sean Felton +1 919-379-4092
sfelton@wearcheckusa.com

To change component or sample information:
 Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Fluid	---	---	?	Oil and filter change at the time of sampling has been noted.
Change Filter	---	---	?	Oil and filter change at the time of sampling has been noted.
Check Fuel/injector System	---	---	?	We advise that you check the fuel injection system.

HISTORICAL DIAGNOSIS



OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id
826010
 Component
Diesel Engine
 Fluid
PETRO CANADA 15W40 (--- GAL)

DIAGNOSIS

Recommendation
 Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear
 All component wear rates are normal.

Contamination
 Elemental level of silicon (Si) above normal indicating ingress of seal material. Light fuel dilution occurring.

Fluid Condition
 Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	GFL0094475	---	---
Sample Date	Client Info	15 Nov 2023	---	---
Machine Age	hrs Client Info	9923	---	---
Oil Age	hrs Client Info	600	---	---
Oil Changed	Client Info	Changed	---	---
Sample Status		ABNORMAL	---	---

CONTAMINATION

method	limit/base	current	history1	history2
Water	WC Method >0.2	NEG	---	---
Glycol	WC Method	NEG	---	---

WEAR METALS

method	limit/base	current	history1	history2
Iron ppm	ASTM D5185m >100	35	---	---
Chromium ppm	ASTM D5185m >20	<1	---	---
Nickel ppm	ASTM D5185m >4	3	---	---
Titanium ppm	ASTM D5185m	<1	---	---
Silver ppm	ASTM D5185m >3	0	---	---
Aluminum ppm	ASTM D5185m >20	2	---	---
Lead ppm	ASTM D5185m >40	1	---	---
Copper ppm	ASTM D5185m >330	10	---	---
Tin ppm	ASTM D5185m >15	2	---	---
Vanadium ppm	ASTM D5185m	<1	---	---
Cadmium ppm	ASTM D5185m	0	---	---

ADDITIVES

method	limit/base	current	history1	history2
Boron ppm	ASTM D5185m	3	---	---
Barium ppm	ASTM D5185m	<1	---	---
Molybdenum ppm	ASTM D5185m	59	---	---
Manganese ppm	ASTM D5185m	2	---	---
Magnesium ppm	ASTM D5185m	895	---	---
Calcium ppm	ASTM D5185m	1081	---	---
Phosphorus ppm	ASTM D5185m	942	---	---
Zinc ppm	ASTM D5185m	1193	---	---
Sulfur ppm	ASTM D5185m	2843	---	---

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon ppm	ASTM D5185m >25	▲ 63	---	---
Sodium ppm	ASTM D5185m	7	---	---
Potassium ppm	ASTM D5185m >20	5	---	---
Fuel %	ASTM D3524 >5	▲ 3.7	---	---

INFRA-RED

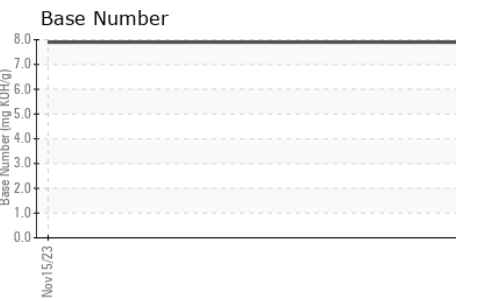
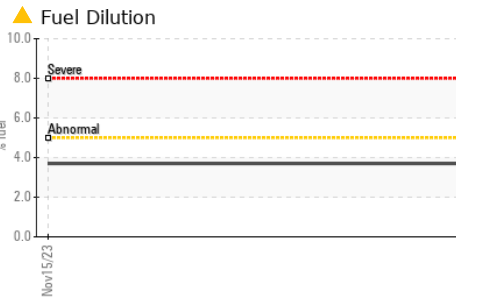
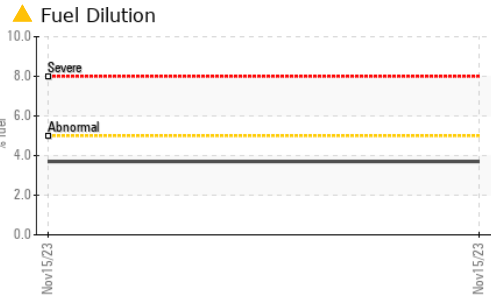
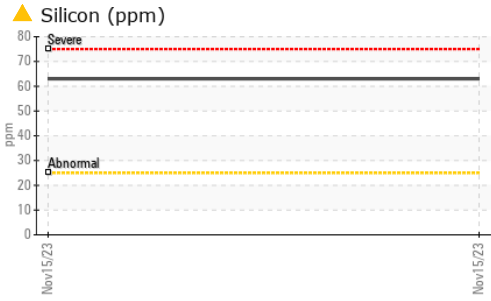
method	limit/base	current	history1	history2
Soot %	*ASTM D7844 >3	0.1	---	---
Nitration	*ASTM D7624 >20	7.5	---	---
Sulfation	*ASTM D7415 >30	20.3	---	---

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	15.9	---	---
Base Number (BN)	mg KOH/g ASTM D2896	7.9	---	---



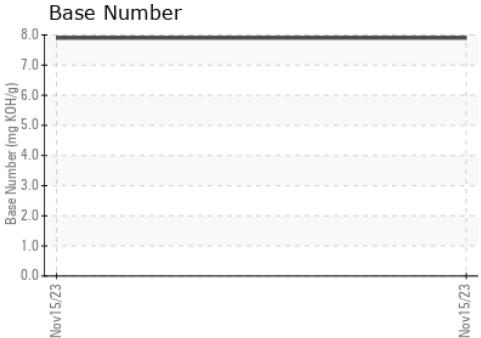
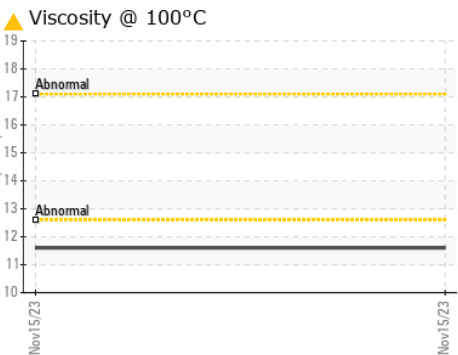
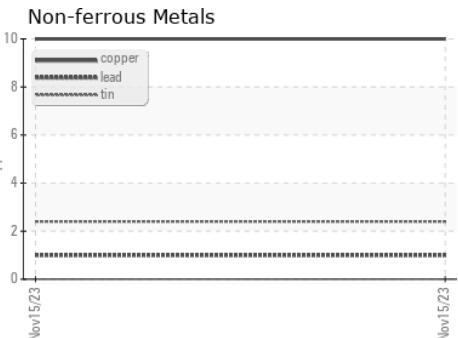
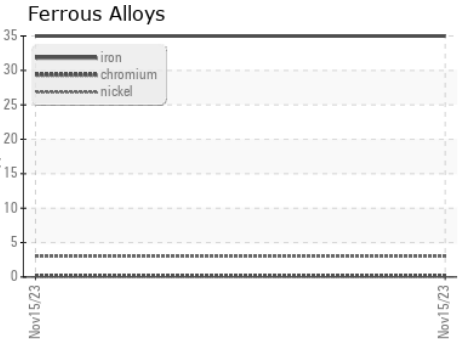
OIL ANALYSIS REPORT



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	▲ 11.6	---	---

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0094475 **Received** : 16 Nov 2023
Lab Number : 06009406 **Diagnosed** : 20 Nov 2023
Unique Number : 10743168 **Diagnostician** : Sean Felton
Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

GFL Environmental - 019 - Greenville/TriEast
 415 Staton Road
 Greenville, NC
 US 27834
 Contact: Spencer Ligon
 spencer.ligon@gflenv.com
 T: (800)207-6618
 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)