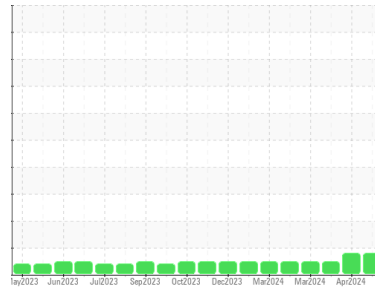




OIL ANALYSIS REPORT

Sample Rating Trend



WEAR



Machine Id
433005

Component
Natural Gas Engine

Fluid
PETRO CANADA DURON GEO LD 15W40 (--- GAL)

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear

Cylinder, crank, or cam shaft wear is indicated. All other 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		GFL0120150	GFL0117163	GFL0117201
Sample Date	Client Info		28 May 2024	24 Apr 2024	02 Apr 2024
Machine Age	hrs	Client Info	3167	2840	2861
Oil Age	hrs	Client Info	0	0	0
Oil Changed	Client Info		Not Changed	Not Changed	Not Changed
Sample Status			ABNORMAL	ABNORMAL	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	▲ 56	▲ 62	3
Chromium	ppm	ASTM D5185m >4	2	3	0
Nickel	ppm	ASTM D5185m >2	0	1	<1
Titanium	ppm	ASTM D5185m	0	<1	0
Silver	ppm	ASTM D5185m >3	0	0	0
Aluminum	ppm	ASTM D5185m >9	3	6	3
Lead	ppm	ASTM D5185m >30	0	2	1
Copper	ppm	ASTM D5185m >35	0	1	<1
Tin	ppm	ASTM D5185m >4	0	1	<1
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 50	37	7	13
Barium	ppm	ASTM D5185m 5	0	<1	0
Molybdenum	ppm	ASTM D5185m 50	51	61	48
Manganese	ppm	ASTM D5185m 0	<1	1	<1
Magnesium	ppm	ASTM D5185m 560	580	554	535
Calcium	ppm	ASTM D5185m 1510	1533	1796	1533
Phosphorus	ppm	ASTM D5185m 780	817	782	762
Zinc	ppm	ASTM D5185m 870	945	1029	966
Sulfur	ppm	ASTM D5185m 2040	2724	3020	2934

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >+100	15	19	6
Sodium	ppm	ASTM D5185m	6	10	5
Potassium	ppm	ASTM D5185m >20	0	<1	1

INFRA-RED

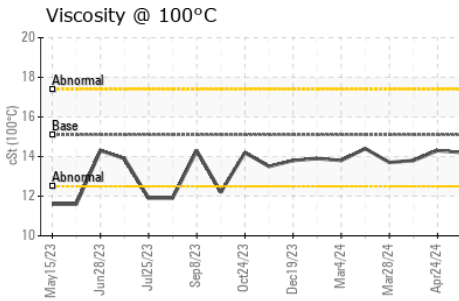
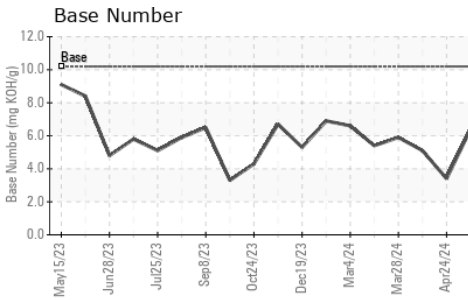
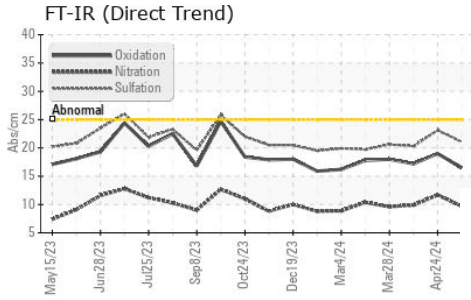
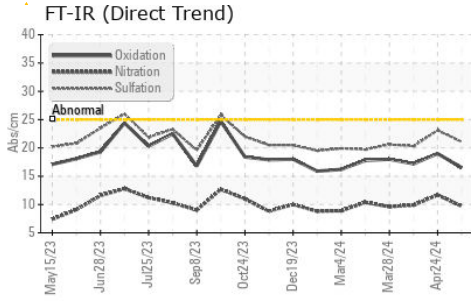
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	0.3	0.1	0
Nitration	Abs/cm	*ASTM D7624 >20	9.7	11.7	9.9
Sulfation	Abs/.1mm	*ASTM D7415 >30	21.1	23.1	20.3

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	16.5	19.0	17.2
Base Number (BN)	mg KOH/g	ASTM D2896 10.2	6.4	3.4	5.1



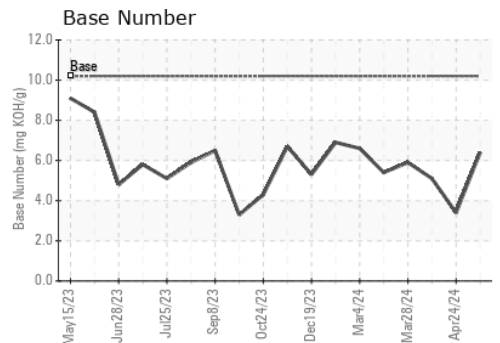
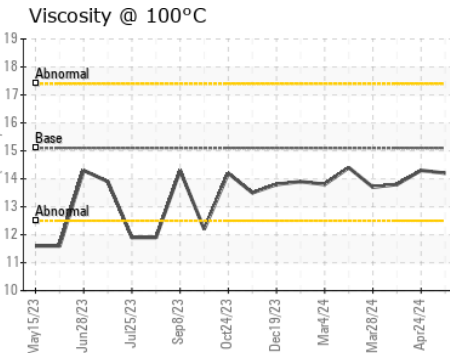
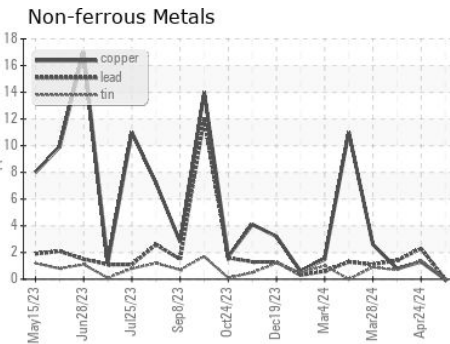
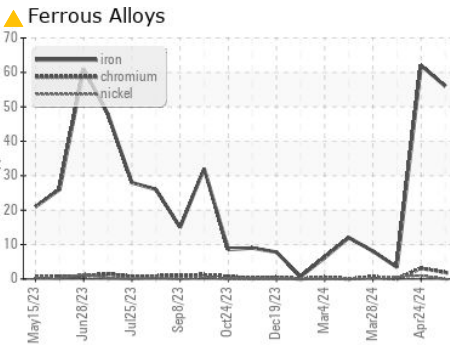
OIL ANALYSIS REPORT



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	15.1	14.2	14.3

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : GFL0120150
 Lab Number : 06195253
 Unique Number : 11057376
 Test Package : FLEET

Received : 30 May 2024
 Tested : 31 May 2024
 Diagnosed : 31 May 2024 - Sean Felton

GFL Environmental - 836 - Kansas City Hauling
 7801 East Truman Road
 Kansas City, MO
 US 64126
 Contact: Loyce Stewart
 loyce.stewart@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)