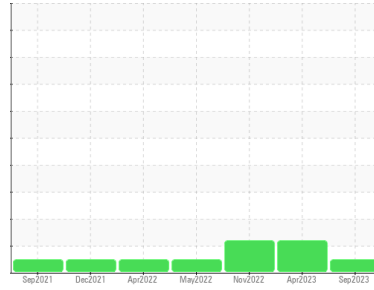




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
744007

Component
Natural Gas Engine

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

DIAGNOSIS

Recommendation

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		GFL0089736	GFL0077338	GFL0063864
Sample Date	Client Info		07 Sep 2023	07 Apr 2023	03 Nov 2022
Machine Age	hrs	Client Info	5072	4146	3126
Oil Age	hrs	Client Info	1946	1020	1183
Oil Changed	Client Info		Changed	Not Changd	Changed
Sample Status			NORMAL	ATTENTION	ATTENTION

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >50	4	18	20
Chromium	ppm	ASTM D5185m >4	<1	<1	1
Nickel	ppm	ASTM D5185m >2	0	<1	0
Titanium	ppm	ASTM D5185m	0	<1	<1
Silver	ppm	ASTM D5185m >3	0	0	0
Aluminum	ppm	ASTM D5185m >9	2	6	2
Lead	ppm	ASTM D5185m >30	<1	2	2
Copper	ppm	ASTM D5185m >35	<1	<1	1
Tin	ppm	ASTM D5185m >4	<1	0	<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	27	3	5
Barium	ppm	ASTM D5185m 5	0	0	0
Molybdenum	ppm	ASTM D5185m 50	49	56	58
Manganese	ppm	ASTM D5185m 0	1	<1	<1
Magnesium	ppm	ASTM D5185m 560	614	543	521
Calcium	ppm	ASTM D5185m 1510	1585	1528	1634
Phosphorus	ppm	ASTM D5185m 780	801	661	688
Zinc	ppm	ASTM D5185m 870	1022	935	966
Sulfur	ppm	ASTM D5185m 2040	3131	2507	2864

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >+100	3	4	4
Sodium	ppm	ASTM D5185m	4	▲ 142	▲ 100
Potassium	ppm	ASTM D5185m >20	3	24	10

INFRA-RED

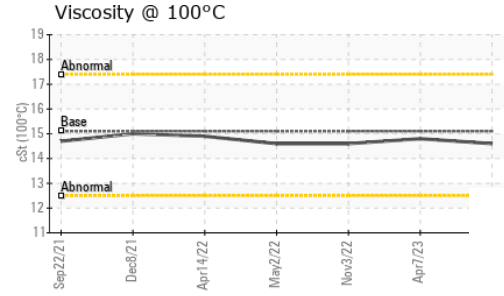
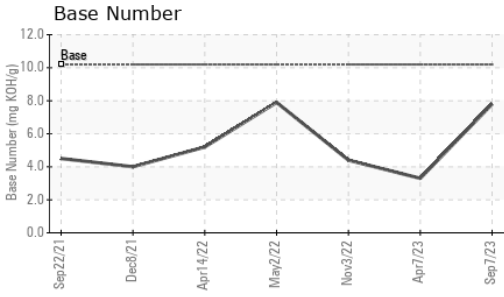
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	0.1	0	0.1
Nitration	Abs/cm	*ASTM D7624 >20	8.1	11.2	12.4
Sulfation	Abs/.1mm	*ASTM D7415 >30	18.3	23.5	25.3

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	15.7	18.5	19.8
Base Number (BN)	mg KOH/g	ASTM D2896 10.2	7.8	3.3	4.4



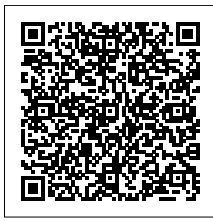
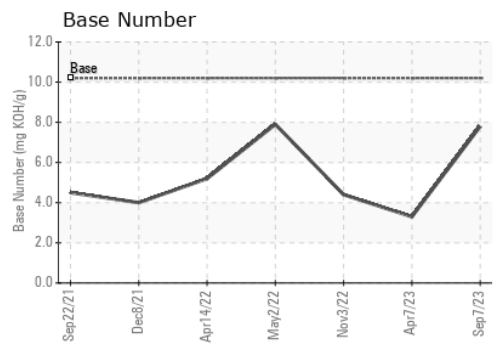
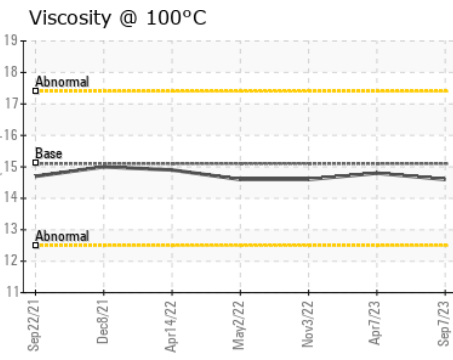
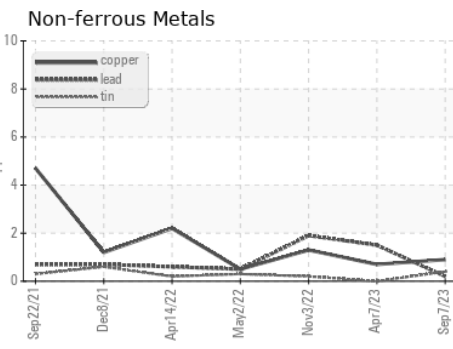
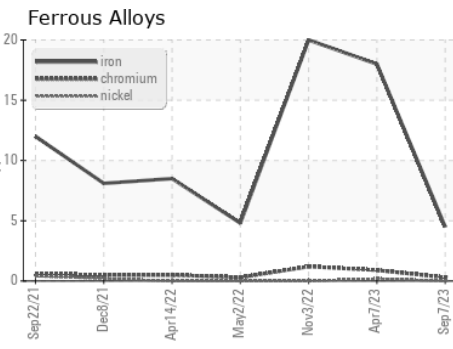
OIL ANALYSIS REPORT



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	15.1	14.6	14.8	14.6

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0089736 **Received** : 11 Sep 2023
Lab Number : **05946896** **Diagnosed** : 12 Sep 2023
Unique Number : 10642855 **Diagnostician** : Wes Davis
Test Package : FLEET

GFL Environmental - 882 - Gainesville
 5002 SW 41st Blvd
 Gainesville, FL
 US 32608
 Contact: ROBERT CLARK
 robert.clark@gflenv.com

Certificate L2367
 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)