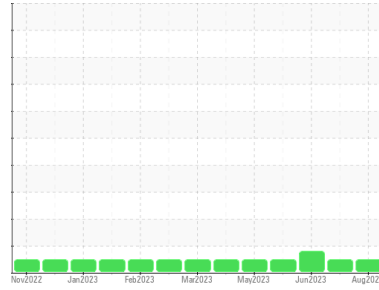




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
933021

Component
Natural Gas Engine

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

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	GFL0087199	GFL0087190	GFL0083805
Sample Date	Client Info	15 Aug 2023	18 Jul 2023	14 Jun 2023
Machine Age	hrs	2546	2369	2201
Oil Age	hrs	0	1200	0
Oil Changed	Client Info	Not Changed	Changed	Not Changed
Sample Status		NORMAL	NORMAL	ABNORMAL

WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m >50	3	6	▲ 61
Chromium	ppm	ASTM D5185m >4	0	<1	1
Nickel	ppm	ASTM D5185m >2	0	0	2
Titanium	ppm	ASTM D5185m	0	0	3
Silver	ppm	ASTM D5185m >3	0	0	<1
Aluminum	ppm	ASTM D5185m >9	1	2	5
Lead	ppm	ASTM D5185m >30	<1	0	2
Copper	ppm	ASTM D5185m >35	<1	2	16
Tin	ppm	ASTM D5185m >4	0	<1	2
Vanadium	ppm	ASTM D5185m	<1	0	<1
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m 50	34	12	13
Barium	ppm	ASTM D5185m 5	0	<1	2
Molybdenum	ppm	ASTM D5185m 50	49	51	51
Manganese	ppm	ASTM D5185m 0	<1	<1	7
Magnesium	ppm	ASTM D5185m 560	557	585	729
Calcium	ppm	ASTM D5185m 1510	1643	1641	1334
Phosphorus	ppm	ASTM D5185m 780	769	727	681
Zinc	ppm	ASTM D5185m 870	925	958	958
Sulfur	ppm	ASTM D5185m 2040	2814	2851	2847

CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >+100	6	10	43
Sodium	ppm	ASTM D5185m	4	3	6
Potassium	ppm	ASTM D5185m >20	0	1	12

INFRA-RED

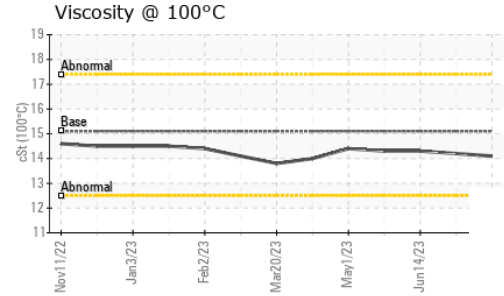
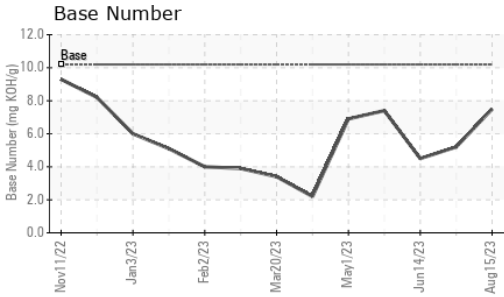
method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844	0	0.1	0.1
Nitration	Abs/cm	*ASTM D7624 >20	7.5	10.4	11.3
Sulfation	Abs/.1mm	*ASTM D7415 >30	18.6	20.4	23.4

FLUID DEGRADATION

method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414 >25	15.5	17.5	19.2
Base Number (BN)	mg KOH/g	ASTM D2896 10.2	7.5	5.2	4.5



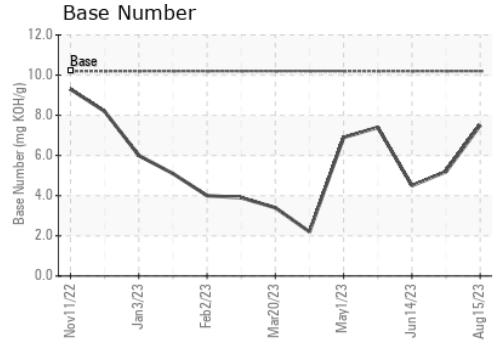
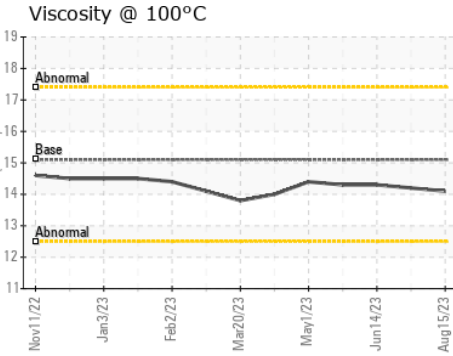
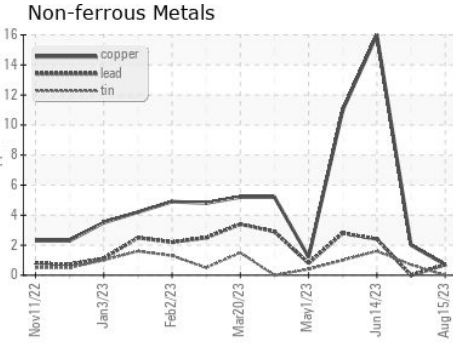
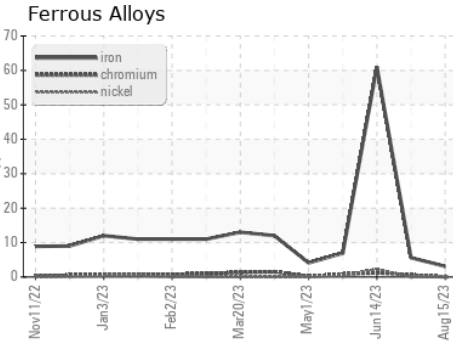
OIL ANALYSIS REPORT



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	14.1	14.2	14.3

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0087199 **Received** : 22 Aug 2023
Lab Number : **05931404** **Diagnosed** : 23 Aug 2023
Unique Number : 10616675 **Diagnostician** : Wes Davis
Test Package : FLEET

GFL Environmental - 836 - Kansas City Hauling
 7801 East Truman Road
 Kansas City, MO
 US 64126
 Contact: Robert Hart
 rhart@gflenv.com
 T: (580)461-1509
 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)