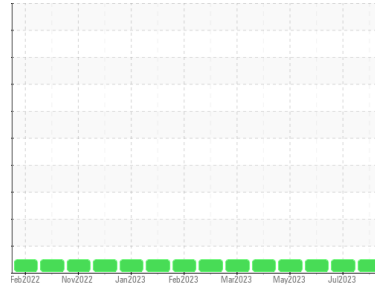




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
731120

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	GFL0087142	GFL0087169	GFL0083798
Sample Date	Client Info	11 Aug 2023	13 Jul 2023	15 Jun 2023
Machine Age	hrs	5778	5588	5412
Oil Age	hrs	0	0	0
Oil Changed	Client Info	Not Changed	Not Changed	Not Changed
Sample Status		NORMAL	NORMAL	NORMAL

WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m >50	34	29	64
Chromium	ppm	ASTM D5185m >4	3	2	1
Nickel	ppm	ASTM D5185m >2	1	<1	3
Titanium	ppm	ASTM D5185m	<1	<1	3
Silver	ppm	ASTM D5185m >3	<1	0	<1
Aluminum	ppm	ASTM D5185m >9	5	3	5
Lead	ppm	ASTM D5185m >30	3	18	3
Copper	ppm	ASTM D5185m >35	1	2	16
Tin	ppm	ASTM D5185m >4	1	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	9	7	11
Barium	ppm	ASTM D5185m 5	0	<1	2
Molybdenum	ppm	ASTM D5185m 50	58	62	51
Manganese	ppm	ASTM D5185m 0	2	1	7
Magnesium	ppm	ASTM D5185m 560	554	661	757
Calcium	ppm	ASTM D5185m 1510	1631	1805	1338
Phosphorus	ppm	ASTM D5185m 780	669	790	698
Zinc	ppm	ASTM D5185m 870	917	1069	981
Sulfur	ppm	ASTM D5185m 2040	2672	3049	2950

CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >+100	13	7	45
Sodium	ppm	ASTM D5185m	9	11	6
Potassium	ppm	ASTM D5185m >20	3	1	13

INFRA-RED

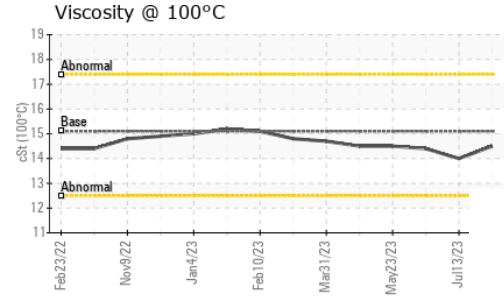
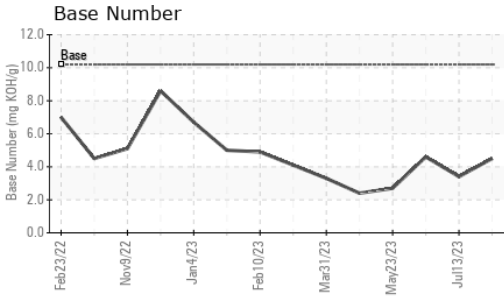
method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844	0	0.1	0.1
Nitration	Abs/cm	*ASTM D7624 >20	10.8	11.9	11.3
Sulfation	Abs/.1mm	*ASTM D7415 >30	21.3	25.0	23.5

FLUID DEGRADATION

method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414 >25	18.2	20.2	19.2
Base Number (BN)	mg KOH/g	ASTM D2896 10.2	4.5	3.4	4.6



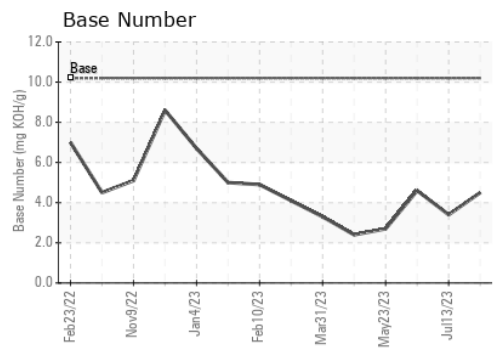
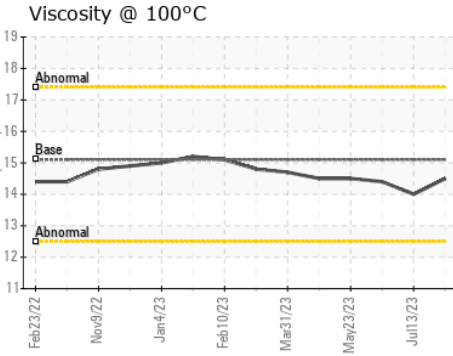
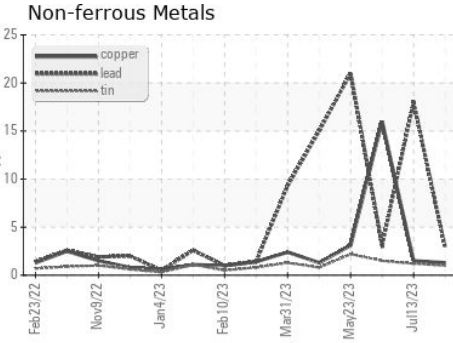
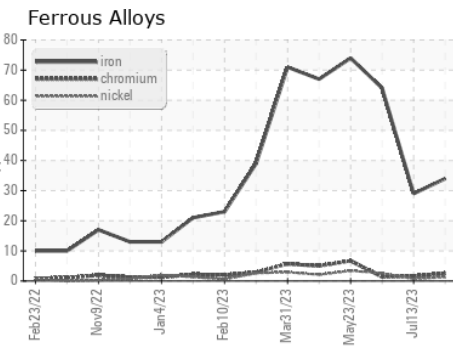
OIL ANALYSIS REPORT



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	14.5	14.0	14.4

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0087142 **Received** : 18 Aug 2023
Lab Number : **05928002** **Diagnosed** : 21 Aug 2023
Unique Number : 10607949 **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:

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)