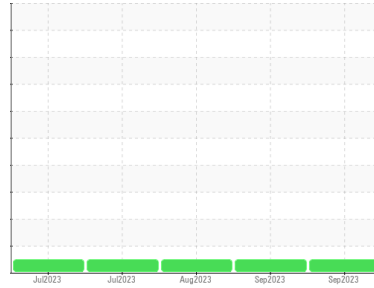




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
934021
 Component
Natural Gas Engine
 Fluid
PETRO CANADA DURON GEO LD 15W40 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

Metal levels are typical for a new component breaking in.

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		GFL0090682	GFL0090646	GFL0087208
Sample Date	Client Info		13 Sep 2023	04 Sep 2023	16 Aug 2023
Machine Age	hrs	Client Info	633	594	490
Oil Age	hrs	Client Info	633	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	41	10	37
Chromium	ppm	ASTM D5185m >5	1	<1	<1
Nickel	ppm	ASTM D5185m >4	2	0	<1
Titanium	ppm	ASTM D5185m >5	0	0	0
Silver	ppm	ASTM D5185m >3	<1	0	0
Aluminum	ppm	ASTM D5185m >25	10	2	5
Lead	ppm	ASTM D5185m >40	2	<1	1
Copper	ppm	ASTM D5185m >150	18	<1	17
Tin	ppm	ASTM D5185m >4	2	<1	2
Vanadium	ppm	ASTM D5185m	<1	0	<1
Cadmium	ppm	ASTM D5185m	<1	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 50	10	11	10
Barium	ppm	ASTM D5185m 5	0	0	0
Molybdenum	ppm	ASTM D5185m 50	56	54	54
Manganese	ppm	ASTM D5185m 0	10	<1	10
Magnesium	ppm	ASTM D5185m 560	830	584	796
Calcium	ppm	ASTM D5185m 1510	1338	1704	1279
Phosphorus	ppm	ASTM D5185m 780	766	701	715
Zinc	ppm	ASTM D5185m 870	1056	982	934
Sulfur	ppm	ASTM D5185m 2040	2662	2820	2687

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	35	4	34
Sodium	ppm	ASTM D5185m	7	7	6
Potassium	ppm	ASTM D5185m >20	12	0	3

INFRA-RED

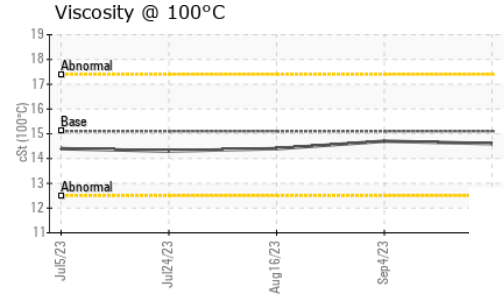
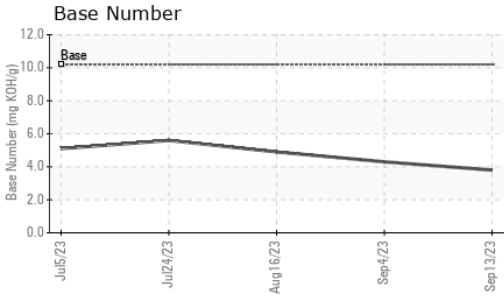
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	0.1	0.1	0
Nitration	Abs/cm	*ASTM D7624 >20	11.7	10.8	11.2
Sulfation	Abs/.1mm	*ASTM D7415 >30	23.0	21.9	21.0

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	21.6	18.2	19.6
Base Number (BN)	mg KOH/g	ASTM D2896 10.2	3.8	4.3	4.9



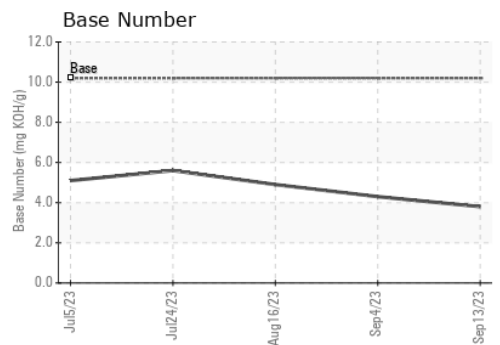
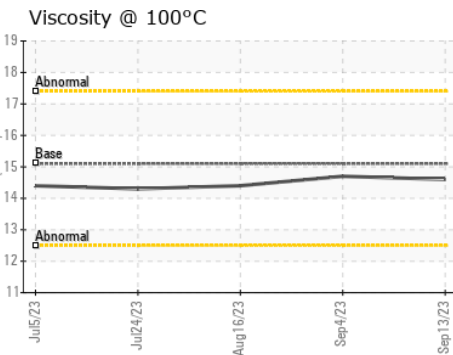
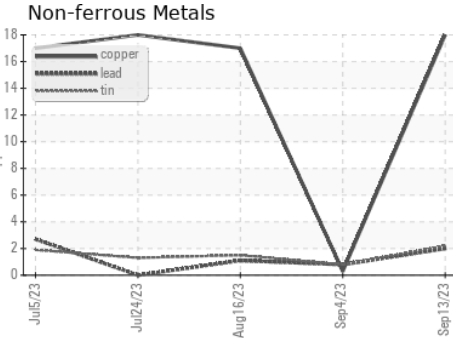
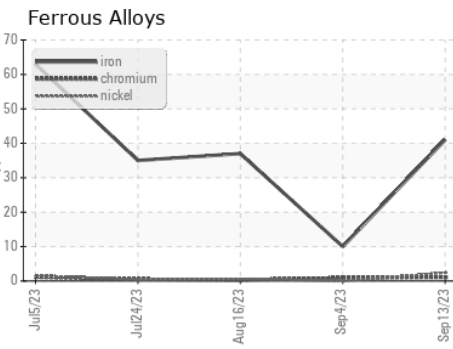
OIL ANALYSIS REPORT



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	14.7	14.4

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0090682 **Received** : 18 Sep 2023
Lab Number : 05953800 **Diagnosed** : 19 Sep 2023
Unique Number : 10655013 **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)