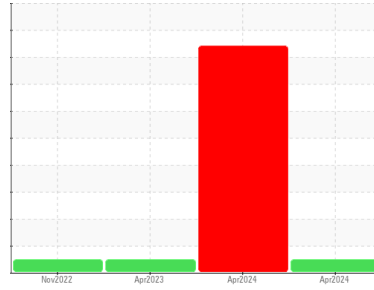




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id

946007

Component

Natural Gas Engine

Fluid

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

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. (Customer Sample Comment: re sample)

Wear

All component wear rates are normal.

Contamination

No evidence of coolant present in the oil. 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		GFL0113954	GFL0108392	GFL0071262
Sample Date	Client Info		18 Apr 2024	04 Apr 2024	19 Apr 2023
Machine Age	hrs	Client Info	18365	18312	16027
Oil Age	hrs	Client Info	53	18312	16027
Oil Changed	Client Info		Not Changed	Changed	Not Changed
Sample Status			NORMAL	SEVERE	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	5	28	12
Chromium	ppm	ASTM D5185m >4	<1	3	2
Nickel	ppm	ASTM D5185m >2	0	2	0
Titanium	ppm	ASTM D5185m	0	<1	<1
Silver	ppm	ASTM D5185m >3	0	0	0
Aluminum	ppm	ASTM D5185m >9	1	3	3
Lead	ppm	ASTM D5185m >30	1	11	10
Copper	ppm	ASTM D5185m >35	<1	2	<1
Tin	ppm	ASTM D5185m >4	0	2	<1
Vanadium	ppm	ASTM D5185m	0	<1	0
Cadmium	ppm	ASTM D5185m	0	<1	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 50	40	24	15
Barium	ppm	ASTM D5185m 5	0	0	0
Molybdenum	ppm	ASTM D5185m 50	51	94	57
Manganese	ppm	ASTM D5185m 0	<1	2	<1
Magnesium	ppm	ASTM D5185m 560	580	835	603
Calcium	ppm	ASTM D5185m 1510	1595	2481	1861
Phosphorus	ppm	ASTM D5185m 780	753	996	760
Zinc	ppm	ASTM D5185m 870	914	1438	1027
Sulfur	ppm	ASTM D5185m 2040	2657	3708	2705

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >+100	7	14	4
Sodium	ppm	ASTM D5185m	37	▲ 460	8
Potassium	ppm	ASTM D5185m >20	30	▲ 405	0
Glycol	%	*ASTM D2982	---	▲ 0.10	---

INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	0.1	0.1	0
Nitration	Abs/cm	*ASTM D7624 >20	7.7	12.7	12.5
Sulfation	Abs/.1mm	*ASTM D7415 >30	20.3	26.8	27.3

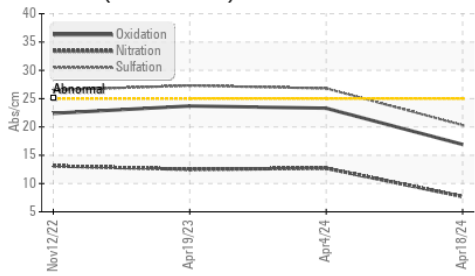
FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	16.9	23.3	23.7
Base Number (BN)	mg KOH/g	ASTM D2896 10.2	7.3	3.8	3.3

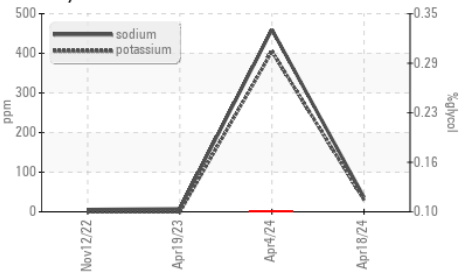


OIL ANALYSIS REPORT

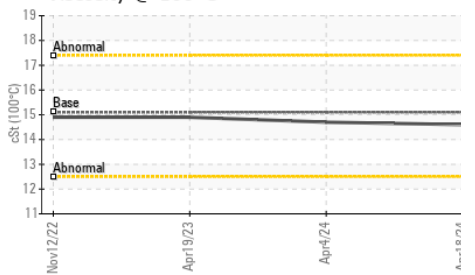
FT-IR (Direct Trend)



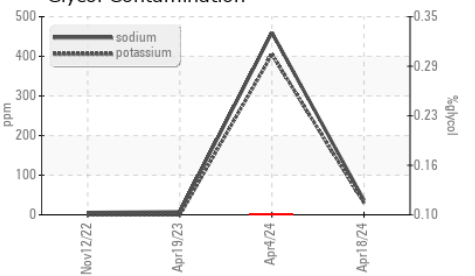
Glycol Contamination



Viscosity @ 100°C



Glycol Contamination

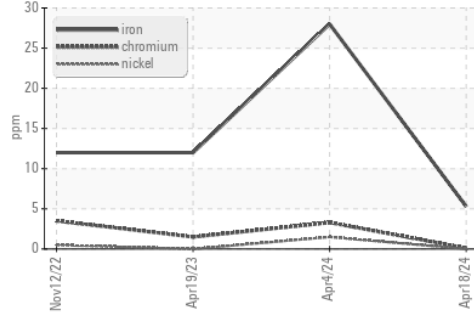


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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

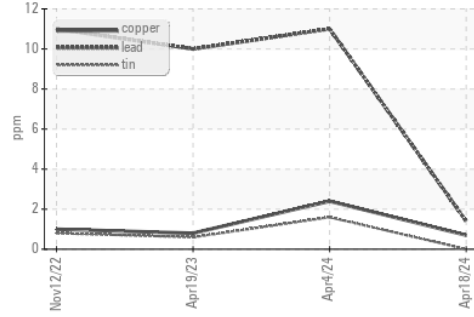
FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	15.1	14.6	14.7	14.9

GRAPHS

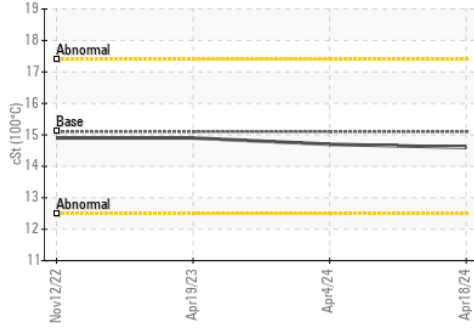
Ferrous Alloys



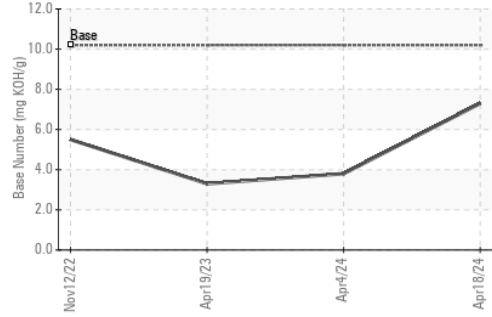
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0113954 **Received** : 24 Apr 2024
Lab Number : 06158772 **Tested** : 26 Apr 2024
Unique Number : 10994195 **Diagnosed** : 26 Apr 2024 - Jonathan Hester
Test Package : FLEET

GFL Environmental - 932 - Muskego HC
 W144 S6400 College Ct.
 Muskego, WI
 US 53150

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)