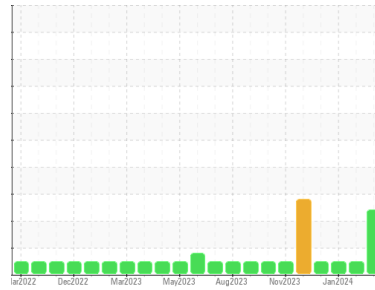




OIL ANALYSIS REPORT

Sample Rating Trend



COOL CHEMICALS



Machine Id
731114

Component
Natural Gas Engine

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

DIAGNOSIS

Recommendation

We advise that you check for possible coolant leak. Check for low coolant level. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

Contamination

Sodium and/or potassium levels are high.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	GFL0114072	GFL0114095	GFL0103283
Sample Date	Client Info	25 Mar 2024	06 Mar 2024	04 Jan 2024
Machine Age	hrs	7176	7059	6750
Oil Age	hrs	0	0	0
Oil Changed	Client Info	Not Changed	Not Changed	Not Changed
Sample Status		ABNORMAL	NORMAL	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	24	13	11
Chromium	ppm ASTM D5185m >4	2	0	1
Nickel	ppm ASTM D5185m >2	1	0	<1
Titanium	ppm ASTM D5185m	<1	0	0
Silver	ppm ASTM D5185m >3	<1	0	0
Aluminum	ppm ASTM D5185m >9	4	1	2
Lead	ppm ASTM D5185m >30	4	2	3
Copper	ppm ASTM D5185m >35	23	<1	<1
Tin	ppm ASTM D5185m >4	<1	0	1
Vanadium	ppm ASTM D5185m	<1	0	0
Cadmium	ppm ASTM D5185m	<1	0	0

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 50	15	6	12
Barium	ppm ASTM D5185m 5	0	0	0
Molybdenum	ppm ASTM D5185m 50	79	57	54
Manganese	ppm ASTM D5185m 0	1	0	<1
Magnesium	ppm ASTM D5185m 560	738	534	581
Calcium	ppm ASTM D5185m 1510	2194	1561	1614
Phosphorus	ppm ASTM D5185m 780	1065	632	809
Zinc	ppm ASTM D5185m 870	1330	903	986
Sulfur	ppm ASTM D5185m 2040	3598	2245	2503

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >+100	8	4	5
Sodium	ppm ASTM D5185m	▲ 107	3	7
Potassium	ppm ASTM D5185m >20	▲ 33	0	0

INFRA-RED

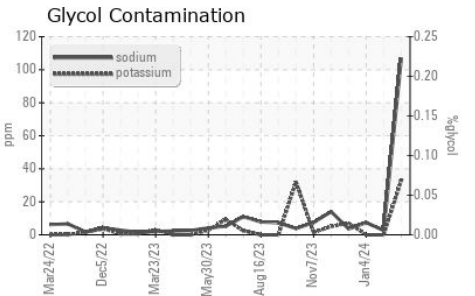
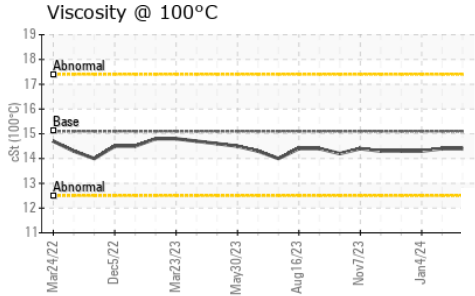
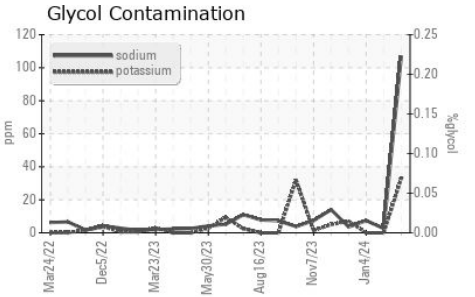
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844	0	0	0.2
Nitration	Abs/cm *ASTM D7624 >20	10.4	11.6	9.8
Sulfation	Abs/.1mm *ASTM D7415 >30	19.6	24.4	20.0

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	17.2	20.1	16.6
Base Number (BN)	mg KOH/g ASTM D2896 10.2	5.5	3.4	5.4



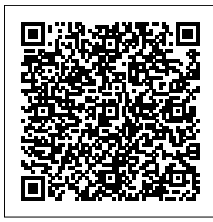
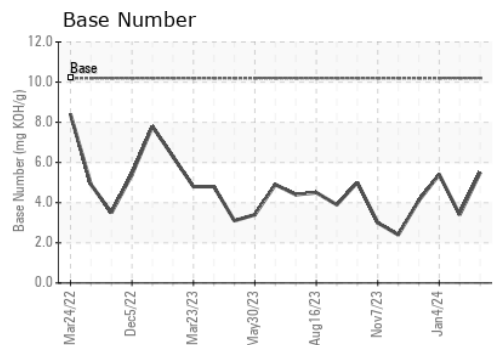
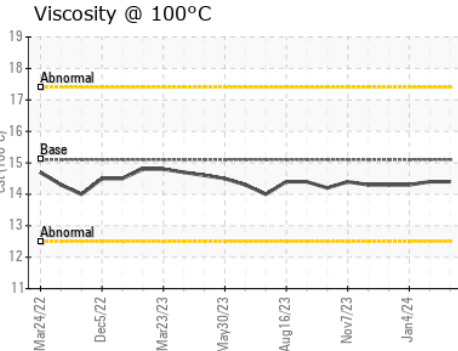
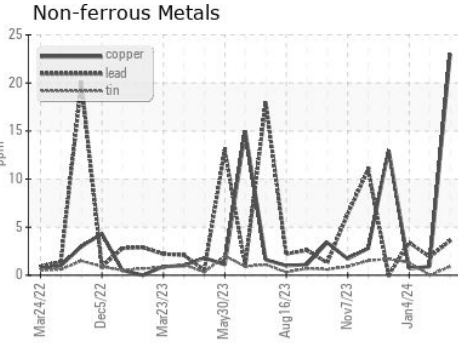
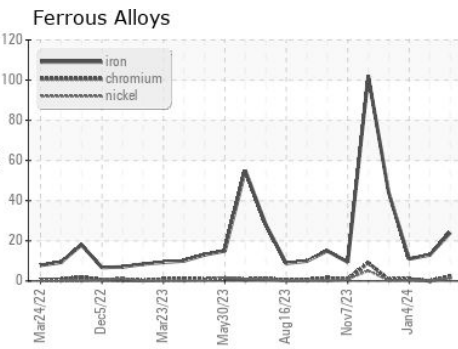
OIL ANALYSIS REPORT



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	14.4	14.3

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0114072 **Received** : 28 Mar 2024
Lab Number : 06131757 **Tested** : 02 Apr 2024
Unique Number : 10951222 **Diagnosed** : 02 Apr 2024 - Jonathan Hester
Test Package : FLEET (Additional Tests: Glycol)

GFL Environmental - 836 - Kansas City Hauling
 7801 East Truman Road
 Kansas City, MO
 US 64126
 Contact: Loyce Stewart
 loyce.stewart@gflenv.com

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)

T:
F: