



OIL ANALYSIS REPORT

Sample Rating Trend

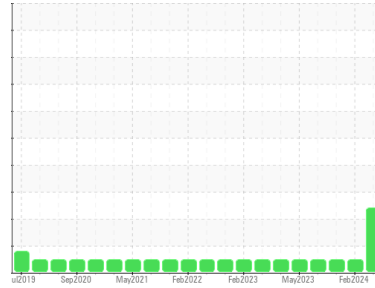
COOL CHEMICALS

Area
(YA149648)

Machine Id
3849C

Component
Natural Gas Engine

Fluid
PETRO CANADA DURON GEO LD 15W40 (46 GAL)



DIAGNOSIS

Recommendation

We advise that you check for the source of the coolant leak. Check for low coolant level. Oil and filter change at the time of sampling has been noted. 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		GFL0090004	GFL0089998	GFL0080596
Sample Date	Client Info		03 Feb 2024	03 Feb 2024	20 Jul 2023
Machine Age	hrs	Client Info	13130	13219	6367
Oil Age	hrs	Client Info	600	1800	6367
Oil Changed	Client Info		Changed	Changed	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	22	14	11
Chromium	ppm	ASTM D5185m >4	<1	<1	<1
Nickel	ppm	ASTM D5185m >2	0	0	0
Titanium	ppm	ASTM D5185m	0	0	0
Silver	ppm	ASTM D5185m >3	0	0	0
Aluminum	ppm	ASTM D5185m >9	1	1	2
Lead	ppm	ASTM D5185m >30	11	0	<1
Copper	ppm	ASTM D5185m >35	<1	<1	<1
Tin	ppm	ASTM D5185m >4	0	0	0
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 50	43	22	11
Barium	ppm	ASTM D5185m 5	9	8	0
Molybdenum	ppm	ASTM D5185m 50	56	51	59
Manganese	ppm	ASTM D5185m 0	0	0	<1
Magnesium	ppm	ASTM D5185m 560	532	502	648
Calcium	ppm	ASTM D5185m 1510	1406	1396	1798
Phosphorus	ppm	ASTM D5185m 780	675	647	800
Zinc	ppm	ASTM D5185m 870	906	877	1093
Sulfur	ppm	ASTM D5185m 2040	2508	2295	3121

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >+100	11	5	5
Sodium	ppm	ASTM D5185m	▲ 132	3	17
Potassium	ppm	ASTM D5185m >20	▲ 360	4	8

INFRA-RED

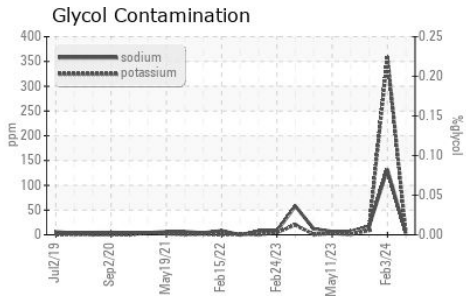
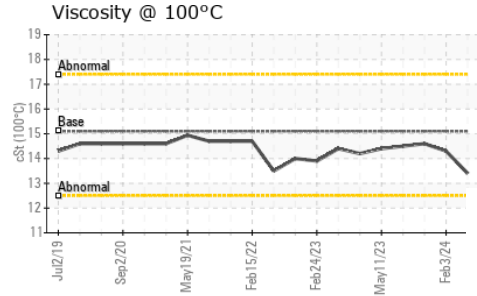
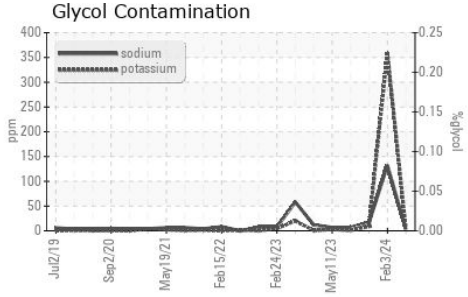
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	0.1	0	0
Nitration	Abs/cm	*ASTM D7624 >20	9.0	10.6	11.5
Sulfation	Abs/.1mm	*ASTM D7415 >30	19.3	19.7	23.8

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	16.7	16.6	19.8
Base Number (BN)	mg KOH/g	ASTM D2896 10.2	9.3	5.8	4.5



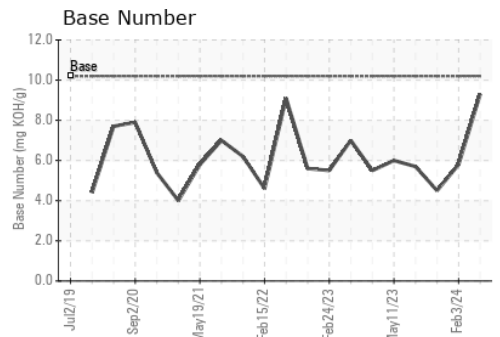
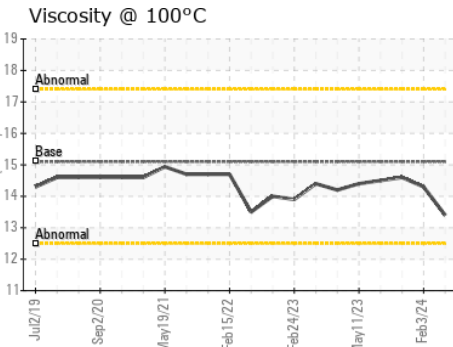
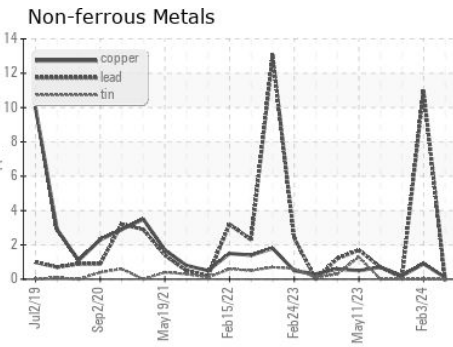
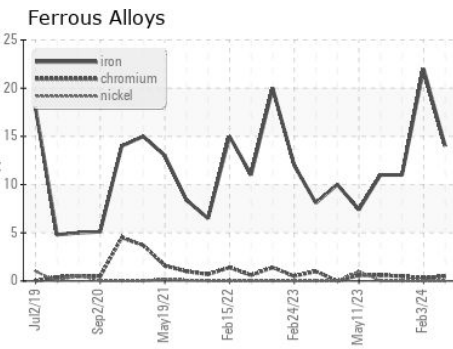
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VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	LIGHT
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
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	13.4	14.3

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0090004 **Received** : 14 Feb 2024
Lab Number : 06088561 **Tested** : 15 Feb 2024
Unique Number : 10876006 **Diagnosed** : 15 Feb 2024 - Jonathan Hester
Test Package : FLEET (Additional Tests: Glycol)

GFL Environmental - 018 - Fayetteville
 4621 Marracco Drive
 Hope Mills, NC
 US 28348
 Contact: Robert Carter
 robert.carter@gflenv.com
 T: (910)596-1170
 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)