



OIL ANALYSIS REPORT

Sample Rating Trend

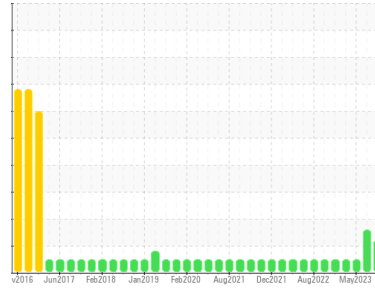
COOL CHEMICALS

Area
(YA135985)

Machine Id
3711C

Component
Natural Gas Engine

Fluid
PETRO CANADA DURON GEO LD 15W40 (32 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		GFL0098513	GFL0087784	GFL0073784
Sample Date	Client Info		15 Jan 2024	06 Aug 2023	05 May 2023
Machine Age	hrs	Client Info	16733	0	15664
Oil Age	hrs	Client Info	1630	0	561
Oil Changed	Client Info		Changed	N/A	Not Changd
Sample Status			ABNORMAL	ABNORMAL	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	35	▲ 40	17
Chromium	ppm	ASTM D5185m >4	6	▲ 6	3
Nickel	ppm	ASTM D5185m >2	<1	1	<1
Titanium	ppm	ASTM D5185m	0	<1	<1
Silver	ppm	ASTM D5185m >3	0	<1	0
Aluminum	ppm	ASTM D5185m >9	3	4	<1
Lead	ppm	ASTM D5185m >30	3	12	2
Copper	ppm	ASTM D5185m >35	32	29	18
Tin	ppm	ASTM D5185m >4	<1	1	<1
Vanadium	ppm	ASTM D5185m	<1	0	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 50	6	<1	7
Barium	ppm	ASTM D5185m 5	0	0	0
Molybdenum	ppm	ASTM D5185m 50	80	68	53
Manganese	ppm	ASTM D5185m 0	1	2	1
Magnesium	ppm	ASTM D5185m 560	574	622	554
Calcium	ppm	ASTM D5185m 1510	1735	1918	1608
Phosphorus	ppm	ASTM D5185m 780	740	850	673
Zinc	ppm	ASTM D5185m 870	1007	1093	964
Sulfur	ppm	ASTM D5185m 2040	2496	2618	2889

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >+100	8	9	8
Sodium	ppm	ASTM D5185m	▲ 482	31	14
Potassium	ppm	ASTM D5185m >20	10	4	<1

INFRA-RED

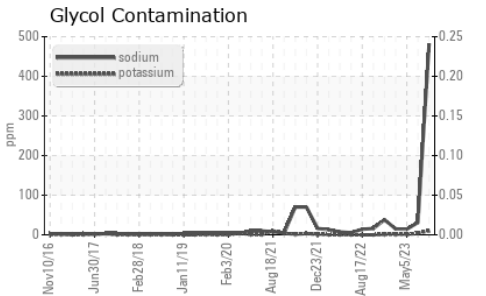
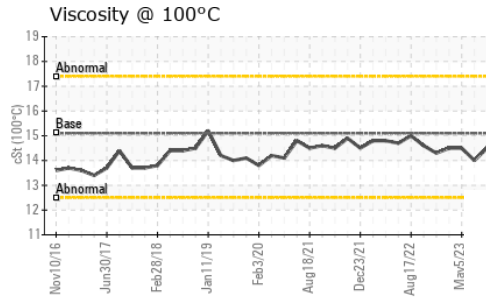
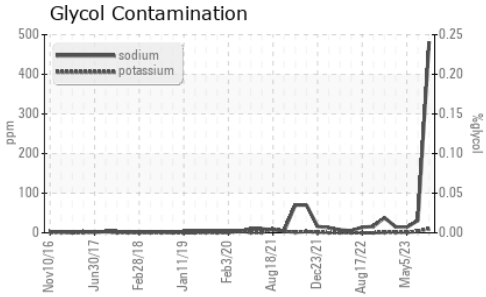
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	0	0.1	0
Nitration	Abs/cm	*ASTM D7624 >20	12.5	12.6	10.9
Sulfation	Abs/.1mm	*ASTM D7415 >30	24.4	27.1	21.2

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	19.6	22.5	17.5
Base Number (BN)	mg KOH/g	ASTM D2896 10.2	5.1	3.7	2.9



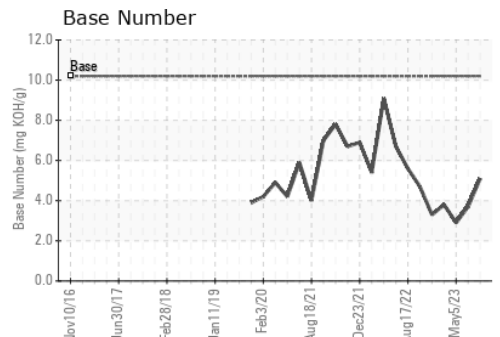
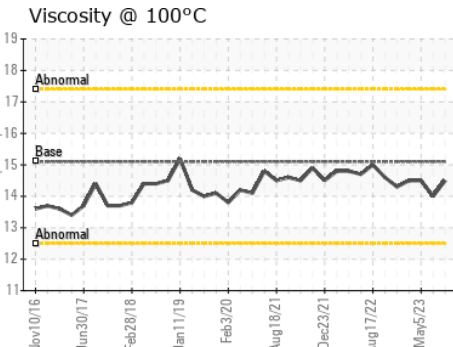
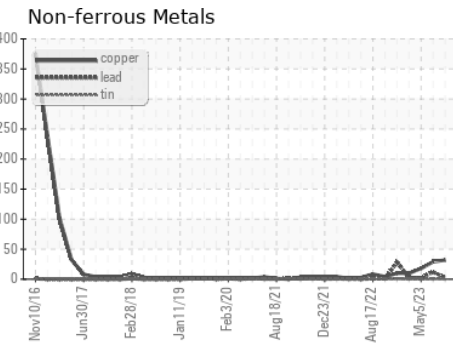
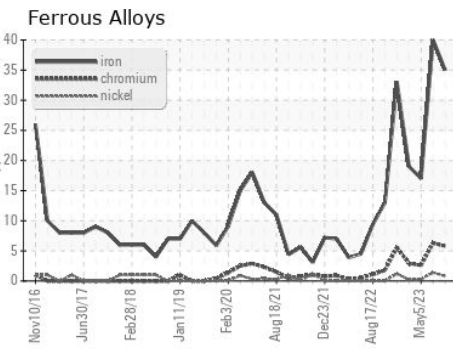
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VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
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	14.0	14.5

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0098513 **Received** : 17 Jan 2024
Lab Number : 06062346 **Diagnosed** : 18 Jan 2024
Unique Number : 10833728 **Diagnostician** : Jonathan Hester
Test Package : FLEET (Additional Tests: Glycol)

GFL Environmental - 006 - Wilmington
 3618 US Highway 421 N
 Wilmington, NC
 US 28401
 Contact: Eric Wood
 eric.wood@gflenv.com
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 F: (910)762-6880

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)