



Area

(YA115786)

Machine Id

3491C

Component

Natural Gas Engine

Fluid

PETRO CANADA DURON GEO LD 15W40 (30 GAL)

RECOMMENDATION

We advise that you check for the source of the coolant leak. Check for low coolant level. We recommend that you drain the oil and perform a filter service on this component if not already done. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0082421	GFL0082436	GFL0050800
Sample Date		Client Info		16 Apr 2024	05 Jan 2024	22 Feb 2023
Machine Age	hrs	Client Info		0	97464	13324
Oil Age	hrs	Client Info		0	97464	987
Filter Age	hrs	Client Info		0	97464	987
Oil Changed		Client Info		N/A	Changed	Changed
Filter Changed		Client Info		N/A	Changed	Changed
Sample Status				SEVERE	ABNORMAL	NORMAL

WEAR

Piston and cylinder wear is indicated. Bearing and/or bushing wear is indicated.

Iron	ppm	ASTM D5185m	>50	▲ 82	▲ 60	18
Chromium	ppm	ASTM D5185m	>4	4	3	<1
Nickel	ppm	ASTM D5185m	>2	<1	2	0
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m	>3	<1	0	0
Aluminum	ppm	ASTM D5185m	>9	▲ 13	4	2
Lead	ppm	ASTM D5185m	>30	11	2	<1
Copper	ppm	ASTM D5185m	>35	▲ 55	3	<1
Tin	ppm	ASTM D5185m	>4	3	<1	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

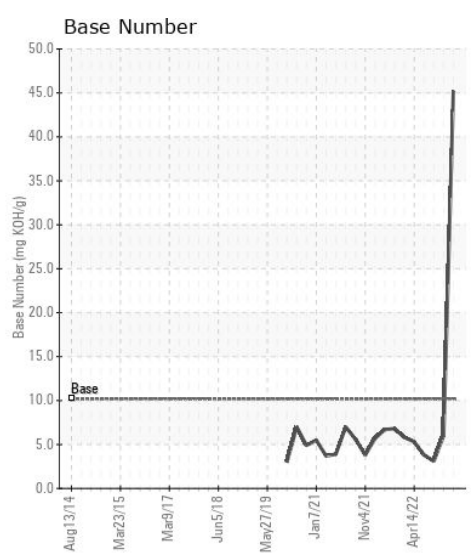
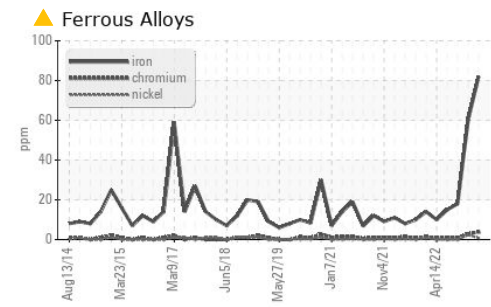
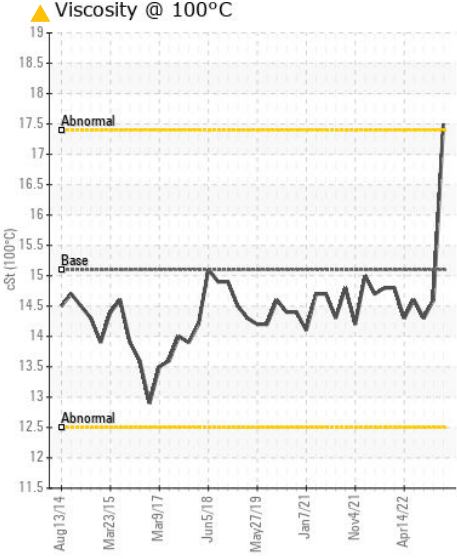
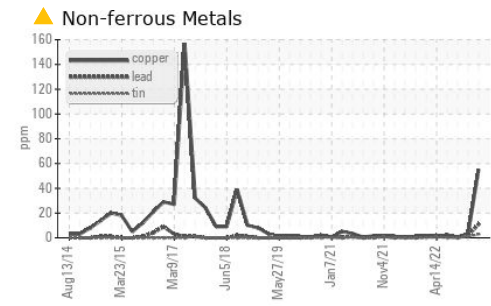
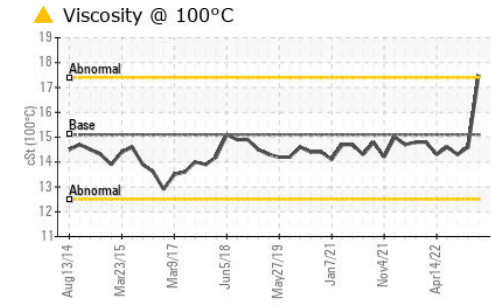
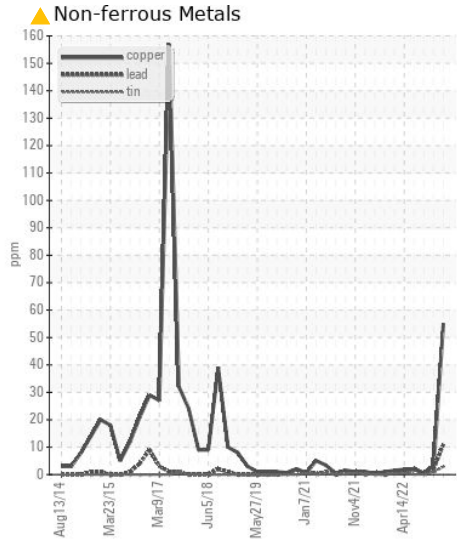
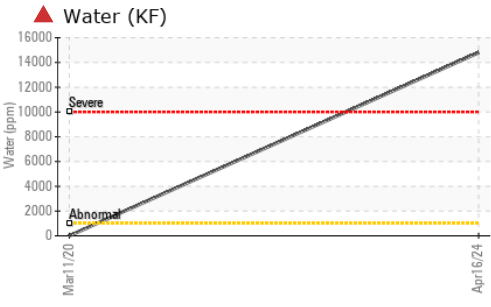
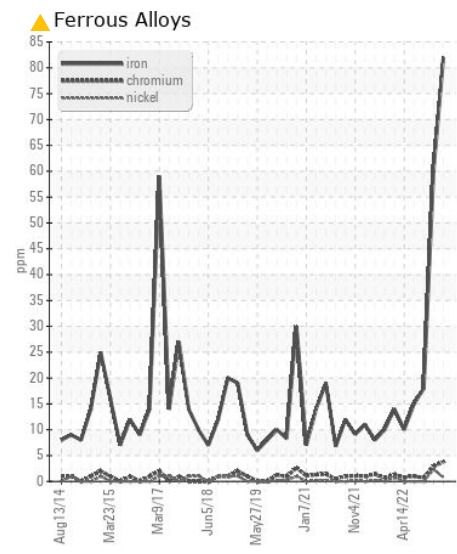
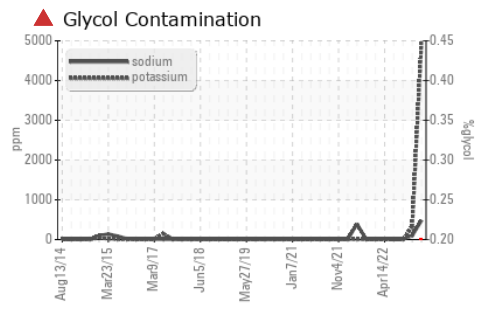
Sodium and/or potassium levels are high. There is a high concentration of glycol present in the oil. There is a high concentration of water present in the oil.

Silicon	ppm	ASTM D5185m	>+100	29	12	4
Potassium	ppm	ASTM D5185m	>20	▲ 4933	▲ 321	0
Water	%	ASTM D6304	>0.1	▲ 1.48	---	---
ppm Water	ppm	ASTM D6304	>1000	▲ 14800	---	---
Glycol	%	*ASTM D2982		▲ 0.20	---	---
Soot %	%	*ASTM D7844		0.1	0	0.1
Nitration	Abs/cm	*ASTM D7624	>20	15.5	11.4	11.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	13.6	20.8	23.9
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	● SOLID	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	▲ 0.2%	NEG	NEG

FLUID CONDITION

The oil viscosity is higher than normal. The oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185m		▲ 483	▲ 99	7
Boron	ppm	ASTM D5185m	50	30	8	1
Barium	ppm	ASTM D5185m	5	0	0	0
Molybdenum	ppm	ASTM D5185m	50	91	57	50
Manganese	ppm	ASTM D5185m	0	2	2	<1
Magnesium	ppm	ASTM D5185m	560	464	536	495
Calcium	ppm	ASTM D5185m	1510	1386	1592	1640
Phosphorus	ppm	ASTM D5185m	780	702	686	631
Zinc	ppm	ASTM D5185m	870	889	971	869
Sulfur	ppm	ASTM D5185m	2040	2329	2356	2307
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.5	17.8	19.0
Base Number (BN)	mg KOH/g	ASTM D2896	10.2	45.2	6.0	3.1
Visc @ 100°C	cSt	ASTM D445	15.1	▲ 17.5	14.6	14.3



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0082421
Lab Number : 06151441
Unique Number : 10981519
Test Package : FLEET (Additional Tests: Glycol, KF)

Received : 17 Apr 2024
Tested : 19 Apr 2024
Diagnosed : 19 Apr 2024 - Jonathan Hester

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)

GFL Environmental - 007 - Brunswick
 2809 Galloway Road
 Bolivia, NC
 US 28422
 Contact: DONALD CRAVEN
 dcraven@gflenv.com
 T:
 F: (910)253-4179