



OIL ANALYSIS REPORT

Sample Rating Trend

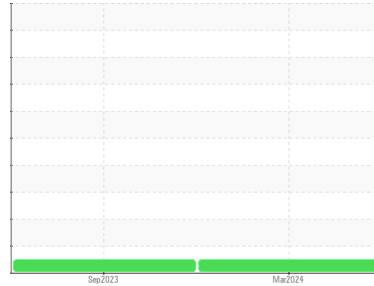
NORMAL



Machine Id
934054

Component
Natural Gas Engine

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



DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor. (Customer Sample Comment: Engine oil sample)

Wear

All component wear rates are normal.

Contamination

Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. No other contaminants were detected in the oil.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	GFL0114477	GFL0093235	---
Sample Date	Client Info	12 Mar 2024	13 Sep 2023	---
Machine Age	mls	Client Info	1689	600
Oil Age	mls	Client Info	1689	600
Oil Changed	Client Info	Not Changed	Changed	---
Sample Status		NORMAL	NORMAL	---

CONTAMINATION

method	limit/base	current	history1	history2
Water	WC Method	>0.1	NEG	NEG

WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m	>50	17	35
Chromium	ppm	ASTM D5185m	>4	2	<1
Nickel	ppm	ASTM D5185m	>2	<1	<1
Titanium	ppm	ASTM D5185m		<1	0
Silver	ppm	ASTM D5185m	>3	0	0
Aluminum	ppm	ASTM D5185m	>9	21	25
Lead	ppm	ASTM D5185m	>30	<1	2
Copper	ppm	ASTM D5185m	>35	2	14
Tin	ppm	ASTM D5185m	>4	0	2
Vanadium	ppm	ASTM D5185m		<1	<1
Cadmium	ppm	ASTM D5185m		0	0

ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m	50	10	13
Barium	ppm	ASTM D5185m	5	0	0
Molybdenum	ppm	ASTM D5185m	50	56	56
Manganese	ppm	ASTM D5185m	0	<1	9
Magnesium	ppm	ASTM D5185m	560	615	839
Calcium	ppm	ASTM D5185m	1510	1750	1407
Phosphorus	ppm	ASTM D5185m	780	755	749
Zinc	ppm	ASTM D5185m	870	1014	995
Sulfur	ppm	ASTM D5185m	2040	3079	2767

CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>+100	5	26
Sodium	ppm	ASTM D5185m		11	5
Potassium	ppm	ASTM D5185m	>20	73	104

INFRA-RED

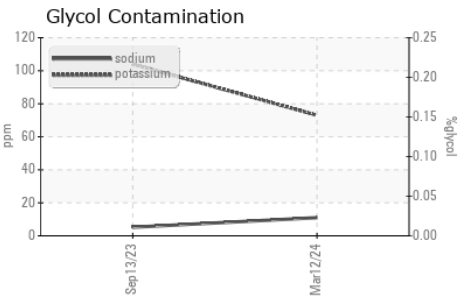
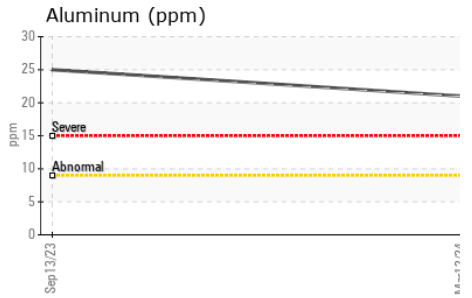
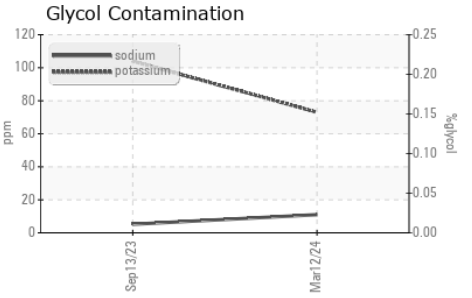
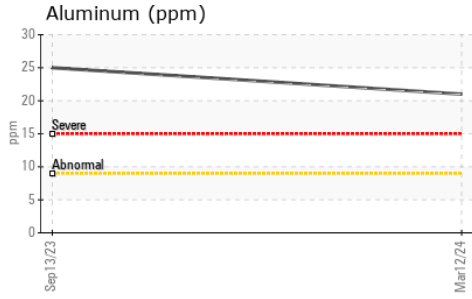
method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844		0	0.1
Nitration	Abs/cm	*ASTM D7624	>20	11.6	10.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.1	20.8

FLUID DEGRADATION

method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414	>25	19.3	18.6
Base Number (BN)	mg KOH/g	ASTM D2896	10.2	5.3	5.4



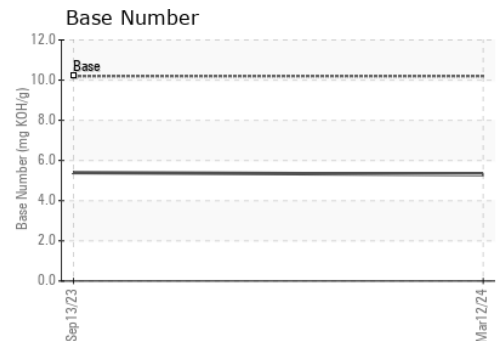
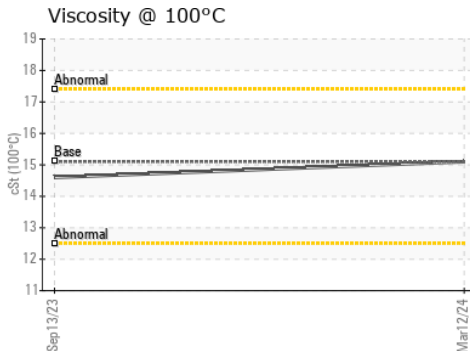
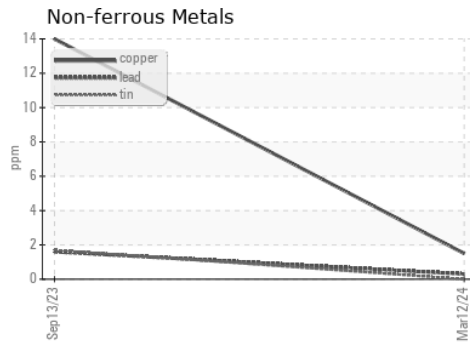
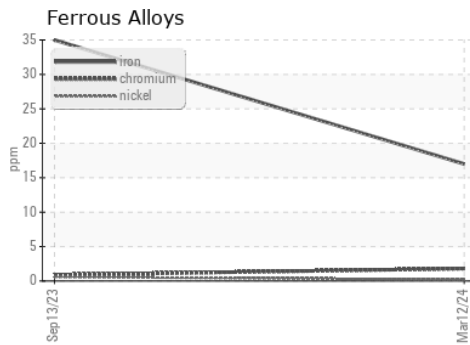
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.1	NEG	---
Free Water	scalar	*Visual		NEG	---

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

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0114477 **Received** : 19 Mar 2024
Lab Number : 06123005 **Tested** : 21 Mar 2024
Unique Number : 10937156 **Diagnosed** : 21 Mar 2024 - Don Baldrige
Test Package : FLEET (Additional Tests: Glycol)

GFL Environmental - 865 - East Mount Hauling
 7213 East Mount Houston Road
 Houston, TX
 US 77050
 Contact: Saul Castillo
 saul.castillo@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)

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