



Machine Id
934062
 Component
Natural Gas Engine
 Fluid
PETRO CANADA DURON GEO LD 15W40 (--- GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0113973	---	---
Sample Date		Client Info		28 May 2024	---	---
Machine Age	hrs	Client Info		1114	---	---
Oil Age	hrs	Client Info		1114	---	---
Filter Age	hrs	Client Info		0	---	---
Oil Changed		Client Info		Changed	---	---
Filter Changed		Client Info		Changed	---	---
Sample Status				ABNORMAL	---	---

WEAR

Piston, ring and cylinder wear is indicated.

Iron	ppm	ASTM D5185m	>50	▲ 58	---	---
Chromium	ppm	ASTM D5185m	>4	▲ 8	---	---
Nickel	ppm	ASTM D5185m	>2	<1	---	---
Titanium	ppm	ASTM D5185m		<1	---	---
Silver	ppm	ASTM D5185m	>3	0	---	---
Aluminum	ppm	ASTM D5185m	>9	71	---	---
Lead	ppm	ASTM D5185m	>30	5	---	---
Copper	ppm	ASTM D5185m	>35	14	---	---
Tin	ppm	ASTM D5185m	>4	2	---	---
Vanadium	ppm	ASTM D5185m		0	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

CONTAMINATION

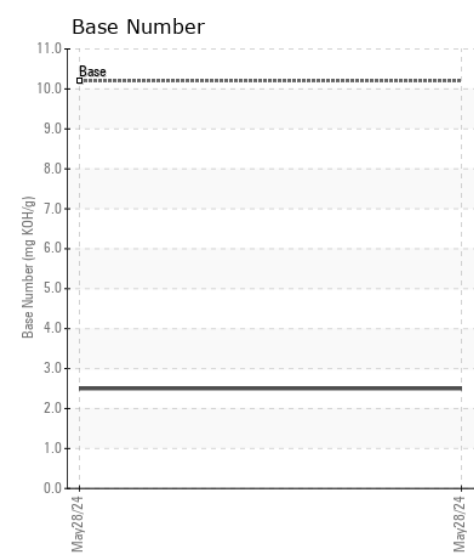
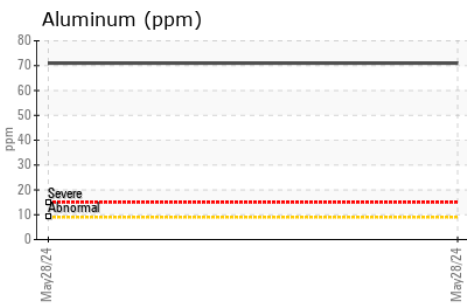
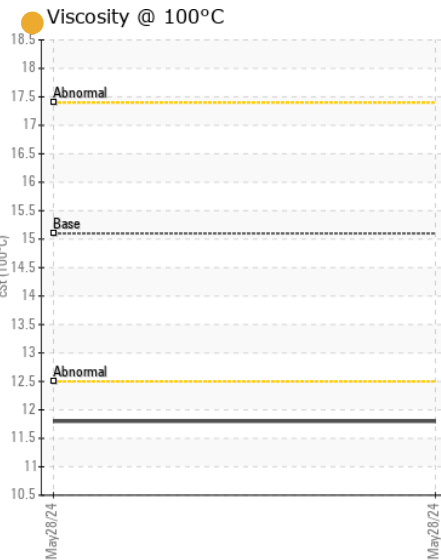
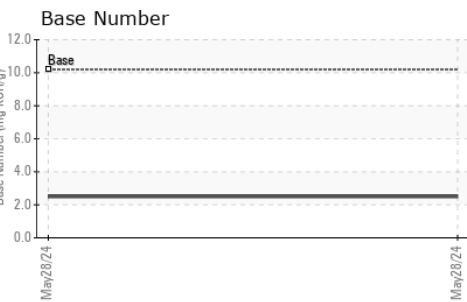
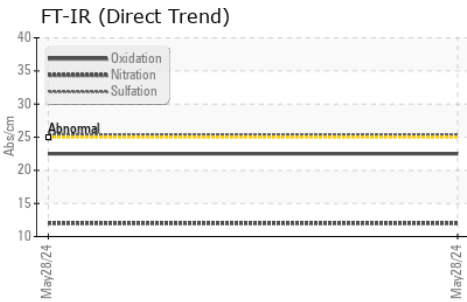
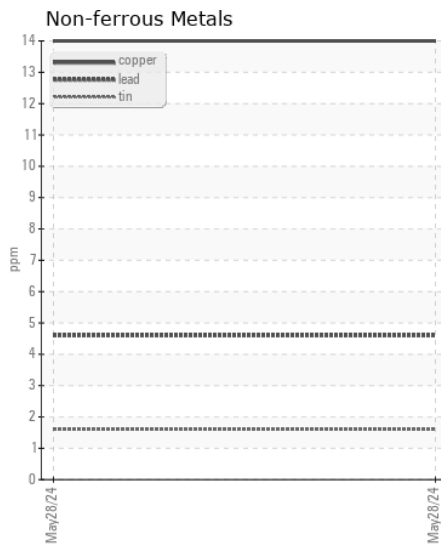
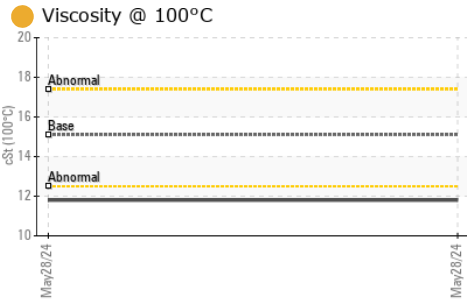
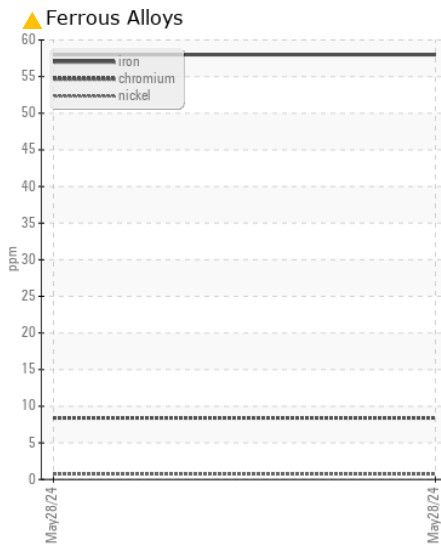
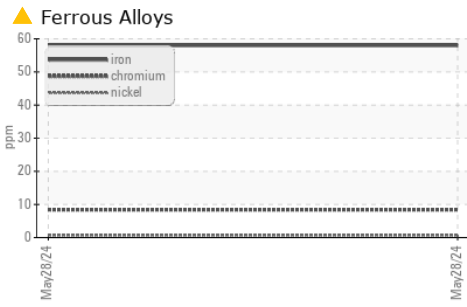
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>+100	92	---	---
Potassium	ppm	ASTM D5185m	>20	175	---	---
Water		WC Method	>0.1	NEG	---	---
Soot %	%	*ASTM D7844		0.1	---	---
Nitration	Abs/cm	*ASTM D7624	>20	12.0	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	25.4	---	---
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	---	---

FLUID CONDITION

The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Sodium	ppm	ASTM D5185m		5	---	---
Boron	ppm	ASTM D5185m	50	16	---	---
Barium	ppm	ASTM D5185m	5	6	---	---
Molybdenum	ppm	ASTM D5185m	50	60	---	---
Manganese	ppm	ASTM D5185m	0	5	---	---
Magnesium	ppm	ASTM D5185m	560	777	---	---
Calcium	ppm	ASTM D5185m	1510	1238	---	---
Phosphorus	ppm	ASTM D5185m	780	765	---	---
Zinc	ppm	ASTM D5185m	870	931	---	---
Sulfur	ppm	ASTM D5185m	2040	2616	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	22.5	---	---
Base Number (BN)	mg KOH/g	ASTM D2896	10.2	2.5	---	---
Visc @ 100°C	cSt	ASTM D445	15.1	● 11.8	---	---



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0113973 **Received** : 03 Jun 2024
Lab Number : 06197442 **Tested** : 05 Jun 2024
Unique Number : 11059565 **Diagnosed** : 05 Jun 2024 - Jonathan Hester
Test Package : FLEET (Additional Tests: FUELDILUTION, PercentFuel)

GFL Environmental - 932 - Muskego HC
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 Muskego, WI
 US 53150
 Contact: Brian Schlomann
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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)