



OIL ANALYSIS REPORT

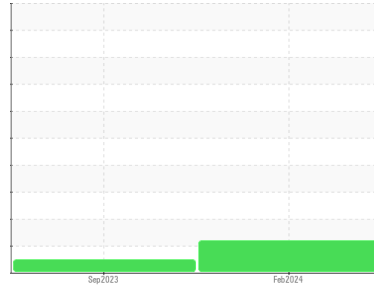
Sample Rating Trend

DEGRADATION

Machine Id
946000

Component
Natural Gas Engine

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



DIAGNOSIS

Recommendation

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

The BN level is low.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	GFL0098072	GFL0071289	---
Sample Date	Client Info	15 Feb 2024	12 Sep 2023	---
Machine Age	hrs	3939	2804	---
Oil Age	hrs	3939	2804	---
Oil Changed	Client Info	Changed	Not Changd	---
Sample Status		ABNORMAL	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	10	10	---
Chromium	ppm ASTM D5185m >4	<1	1	---
Nickel	ppm ASTM D5185m >2	0	0	---
Titanium	ppm ASTM D5185m	0	0	---
Silver	ppm ASTM D5185m >3	0	0	---
Aluminum	ppm ASTM D5185m >9	2	0	---
Lead	ppm ASTM D5185m >30	18	13	---
Copper	ppm ASTM D5185m >35	4	6	---
Tin	ppm ASTM D5185m >4	0	1	---
Vanadium	ppm ASTM D5185m	0	0	---
Cadmium	ppm ASTM D5185m	0	0	---

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 50	6	10	---
Barium	ppm ASTM D5185m 5	<1	0	---
Molybdenum	ppm ASTM D5185m 50	57	60	---
Manganese	ppm ASTM D5185m 0	0	1	---
Magnesium	ppm ASTM D5185m 560	674	811	---
Calcium	ppm ASTM D5185m 1510	1509	1756	---
Phosphorus	ppm ASTM D5185m 780	806	926	---
Zinc	ppm ASTM D5185m 870	1044	1172	---
Sulfur	ppm ASTM D5185m 2040	2478	3116	---

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >+100	5	8	---
Sodium	ppm ASTM D5185m	3	11	---
Potassium	ppm ASTM D5185m >20	3	3	---

INFRA-RED

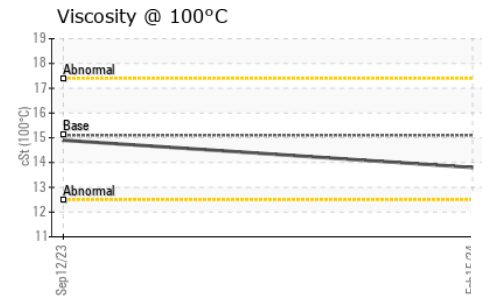
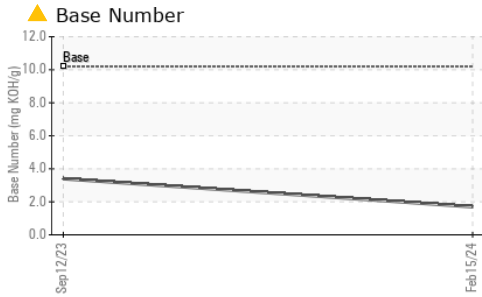
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844	0.1	0	---
Nitration	Abs/cm *ASTM D7624 >20	14.0	13.8	---
Sulfation	Abs/.1mm *ASTM D7415 >30	30.6	31.2	---

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	29.9	29.5	---
Base Number (BN)	mg KOH/g ASTM D2896 10.2	▲ 1.7	3.4	---



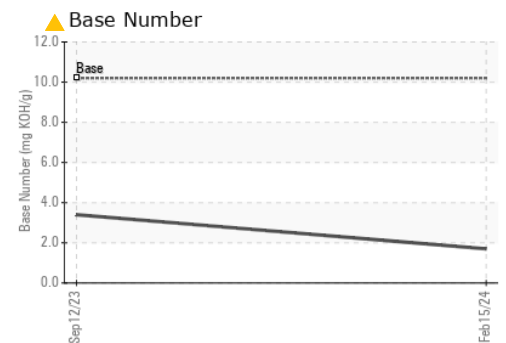
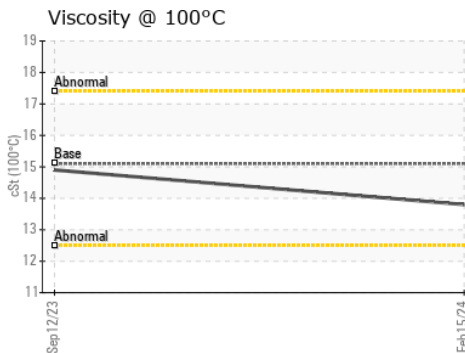
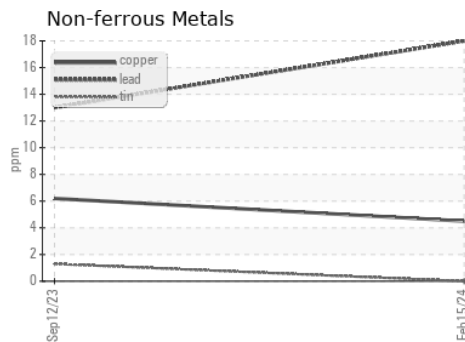
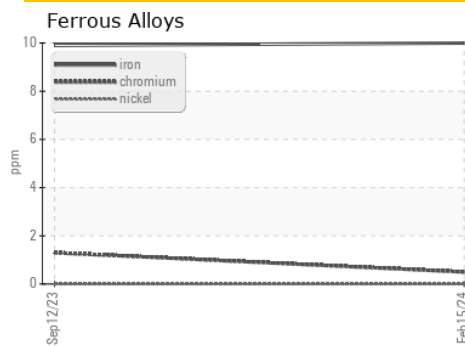
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VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	---
Sand/Dirt	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	13.8	14.9

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : GFL0098072
 Lab Number : 06095251
 Unique Number : 10888104
 Test Package : FLEET

Received : 21 Feb 2024
 Tested : 21 Feb 2024
 Diagnosed : 22 Feb 2024 - Sean Felton

GFL Environmental - 932 - Muskego HC
 W144 S6400 College Ct.
 Muskego, WI
 US 53150

Contact: Brian Schломann
 brian.schlomann@gflenv.com

T: (262)510-4586

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)