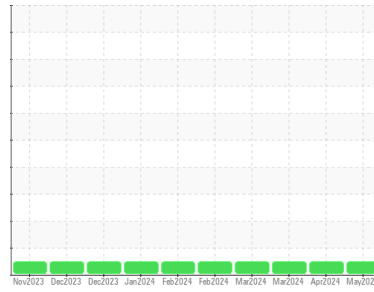




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id

834047

Component

Natural Gas Engine

Fluid

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

DIAGNOSIS

Recommendation

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

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		GFL0122932	GFL0118761	GFL0114162
Sample Date	Client Info		21 May 2024	16 Apr 2024	27 Mar 2024
Machine Age	hrs	Client Info	1616	1459	1319
Oil Age	hrs	Client Info	1616	1459	1319
Oil Changed	Client Info		Not Chngd	Not Chngd	Filtered
Sample Status			NORMAL	NORMAL	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	25	18	14
Chromium	ppm	ASTM D5185m >4	2	<1	0
Nickel	ppm	ASTM D5185m >2	1	1	0
Titanium	ppm	ASTM D5185m	<1	<1	0
Silver	ppm	ASTM D5185m >3	1	<1	0
Aluminum	ppm	ASTM D5185m >9	4	3	<1
Lead	ppm	ASTM D5185m >30	2	1	0
Copper	ppm	ASTM D5185m >35	5	4	2
Tin	ppm	ASTM D5185m >4	2	1	0
Vanadium	ppm	ASTM D5185m	<1	<1	0
Cadmium	ppm	ASTM D5185m	<1	<1	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 50	18	22	32
Barium	ppm	ASTM D5185m 5	0	0	0
Molybdenum	ppm	ASTM D5185m 50	75	52	50
Manganese	ppm	ASTM D5185m 0	3	3	1
Magnesium	ppm	ASTM D5185m 560	866	560	624
Calcium	ppm	ASTM D5185m 1510	2224	1475	1691
Phosphorus	ppm	ASTM D5185m 780	955	801	826
Zinc	ppm	ASTM D5185m 870	1391	910	952
Sulfur	ppm	ASTM D5185m 2040	3782	2573	2941

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >+100	15	8	6
Sodium	ppm	ASTM D5185m	12	4	5
Potassium	ppm	ASTM D5185m >20	2	2	<1

INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	0	0.1	0
Nitration	Abs/cm	*ASTM D7624 >20	11.2	9.5	8.3
Sulfation	Abs/.1mm	*ASTM D7415 >30	20.7	20.2	19.7

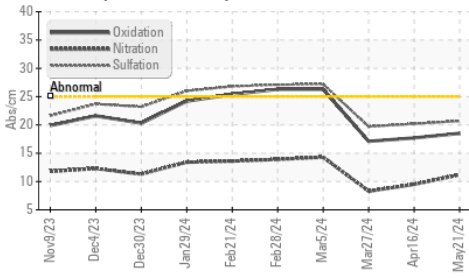
FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	18.5	17.7	17.1
Base Number (BN)	mg KOH/g	ASTM D2896 10.2	5.4	7.0	7.8

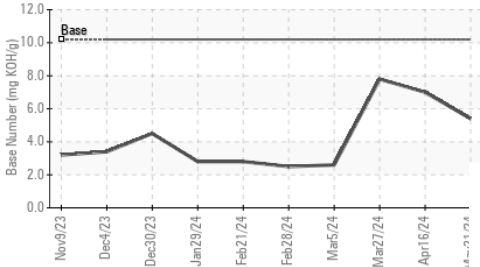


OIL ANALYSIS REPORT

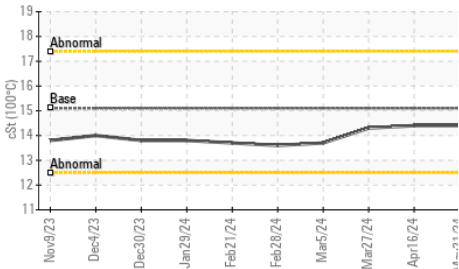
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C



VISUAL

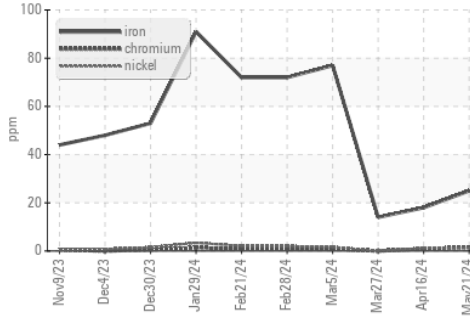
	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*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

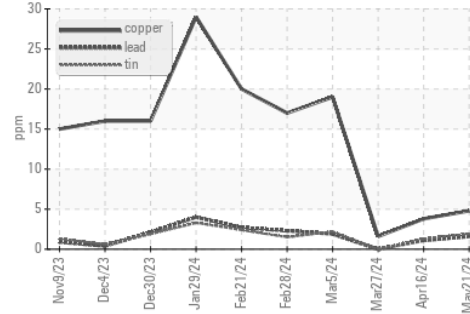
	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.1	14.4	14.3

GRAPHS

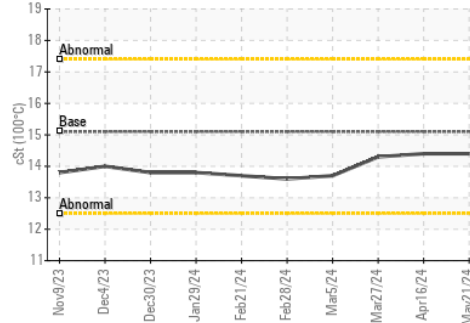
Ferrous Alloys



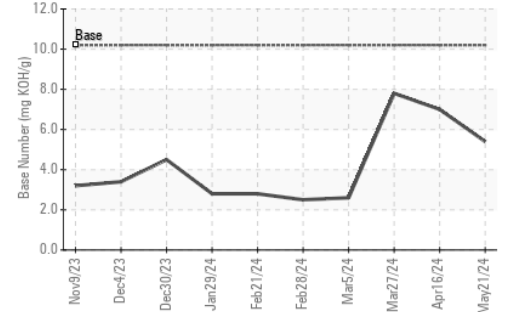
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : GFL0122932
 Lab Number : 06190244
 Unique Number : 11046996
 Test Package : FLEET

Received : 24 May 2024
 Tested : 25 May 2024
 Diagnosed : 29 May 2024 - Sean Felton

GFL Environmental - 837 - Harrison TS
 22820 S State Route 291
 Harrisonville, MO
 US 64701
 Contact: SARA PATRICK
 spatrack@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)

T:
F: