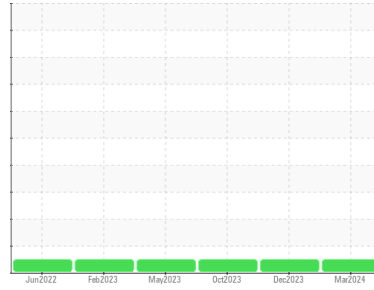




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
945014-260271

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		GFL0106788	GFL0092009	GFL0084619
Sample Date	Client Info		26 Mar 2024	01 Dec 2023	20 Oct 2023
Machine Age	hrs	Client Info	61730	61112	69973
Oil Age	hrs	Client Info	600	600	0
Oil Changed	Client Info		Changed	Changed	Changed
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	6	5	7
Chromium	ppm	ASTM D5185m >4	0	<1	<1
Nickel	ppm	ASTM D5185m >2	0	0	<1
Titanium	ppm	ASTM D5185m	0	0	<1
Silver	ppm	ASTM D5185m >3	0	0	0
Aluminum	ppm	ASTM D5185m >9	1	1	2
Lead	ppm	ASTM D5185m >30	<1	0	<1
Copper	ppm	ASTM D5185m >35	<1	0	<1
Tin	ppm	ASTM D5185m >4	0	0	<1
Vanadium	ppm	ASTM D5185m	<1	0	0
Cadmium	ppm	ASTM D5185m	0	0	<1

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 50	36	38	17
Barium	ppm	ASTM D5185m 5	0	2	3
Molybdenum	ppm	ASTM D5185m 50	48	48	54
Manganese	ppm	ASTM D5185m 0	<1	0	<1
Magnesium	ppm	ASTM D5185m 560	578	514	561
Calcium	ppm	ASTM D5185m 1510	1638	1435	1582
Phosphorus	ppm	ASTM D5185m 780	758	714	758
Zinc	ppm	ASTM D5185m 870	885	859	969
Sulfur	ppm	ASTM D5185m 2040	2801	2413	2705

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >+100	7	6	4
Sodium	ppm	ASTM D5185m	4	2	1
Potassium	ppm	ASTM D5185m >20	<1	1	2

INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	0	0	0
Nitration	Abs/cm	*ASTM D7624 >20	7.3	6.8	9.5
Sulfation	Abs/.1mm	*ASTM D7415 >30	19.0	18.7	20.7

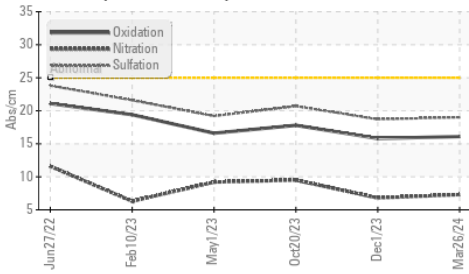
FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	16.1	15.8	17.8
Base Number (BN)	mg KOH/g	ASTM D2896 10.2	8.3	8.3	6.7

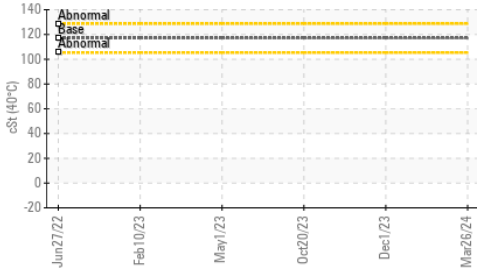


OIL ANALYSIS REPORT

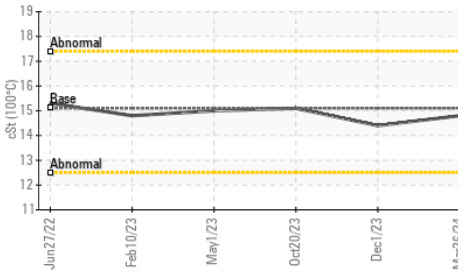
FT-IR (Direct Trend)



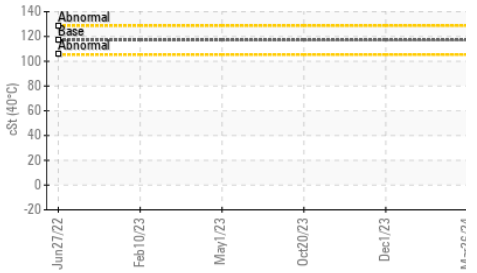
Viscosity @ 40°C



Viscosity @ 100°C



Viscosity @ 40°C

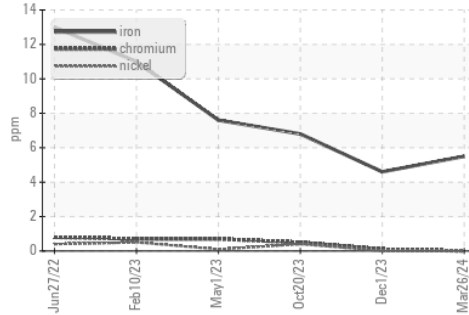


PARAMETER	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

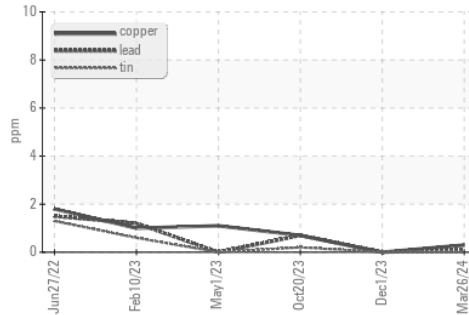
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.1	14.8	14.4

GRAPHS

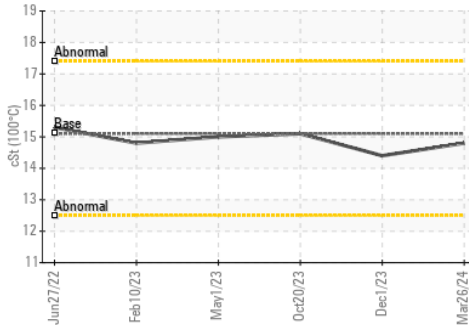
Ferrous Alloys



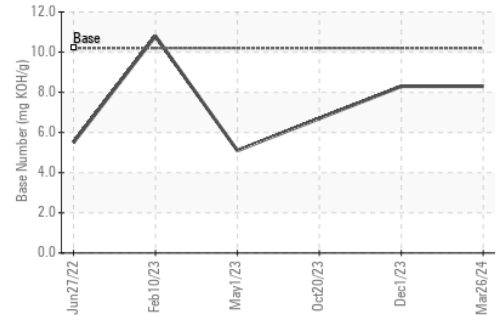
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : GFL0106788

Lab Number : 06136110

Unique Number : 10955575

Test Package : FLEET (Additional Tests: KV40)

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)

Received : 02 Apr 2024

Tested : 04 Apr 2024

Diagnosed : 04 Apr 2024 - Jonathan Hester

GFL Environmental - 856 - Houston South

8515 Highway 6 South

Houston, TX

US 77083

Contact: Jose Gonzalez

jgonzalez2@gflenv.com

T:

F: