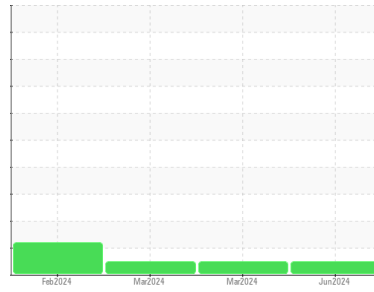




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id

434025

Component

Natural Gas Engine

Fluid

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

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

Metal levels are typical for a new component breaking in.

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.

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		GFL0125238	GFL0114452	GFL0114450
Sample Date	Client Info		13 Jun 2024	11 Mar 2024	05 Mar 2024
Machine Age	mls	Client Info	23867	720	684
Oil Age	mls	Client Info	0	720	0
Oil Changed	Client Info		Changed	Not Changd	Not Changd
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	19	10	8
Chromium	ppm	ASTM D5185m >4	1	<1	<1
Nickel	ppm	ASTM D5185m >2	<1	<1	0
Titanium	ppm	ASTM D5185m	0	<1	0
Silver	ppm	ASTM D5185m >3	0	0	0
Aluminum	ppm	ASTM D5185m >9	16	7	4
Lead	ppm	ASTM D5185m >30	4	<1	<1
Copper	ppm	ASTM D5185m >35	3	3	2
Tin	ppm	ASTM D5185m >4	2	<1	0
Vanadium	ppm	ASTM D5185m	0	<1	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 50	10	26	28
Barium	ppm	ASTM D5185m 5	0	2	0
Molybdenum	ppm	ASTM D5185m 50	59	55	48
Manganese	ppm	ASTM D5185m 0	2	1	1
Magnesium	ppm	ASTM D5185m 560	689	595	615
Calcium	ppm	ASTM D5185m 1510	1770	1513	1534
Phosphorus	ppm	ASTM D5185m 780	879	699	822
Zinc	ppm	ASTM D5185m 870	1127	953	976
Sulfur	ppm	ASTM D5185m 2040	3154	2455	2986

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >+100	8	6	4
Sodium	ppm	ASTM D5185m	8	3	4
Potassium	ppm	ASTM D5185m >20	54	24	15

INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	0	0.1	0
Nitration	Abs/cm	*ASTM D7624 >20	11.4	7.7	7.1
Sulfation	Abs/.1mm	*ASTM D7415 >30	25.0	19.0	18.9

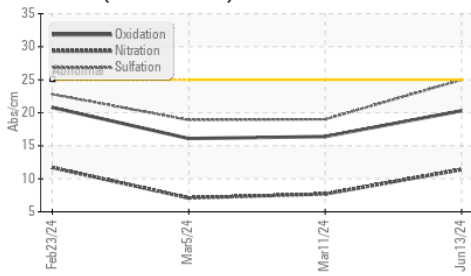
FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	20.3	16.4	16.1
Base Number (BN)	mg KOH/g	ASTM D2896 10.2	4.5	7.9	8.2

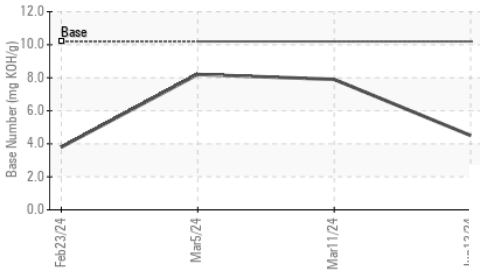


OIL ANALYSIS REPORT

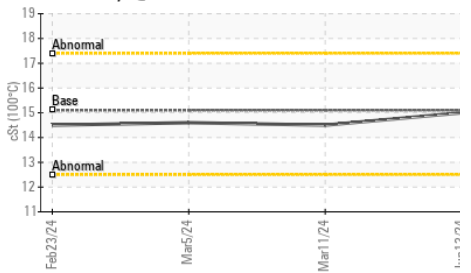
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

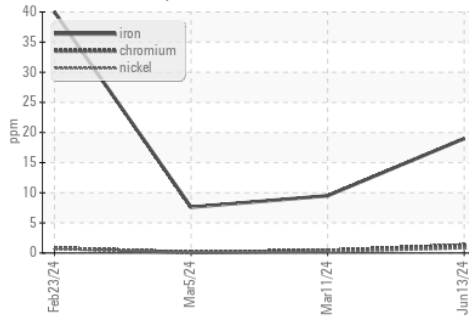


PARAMETER	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

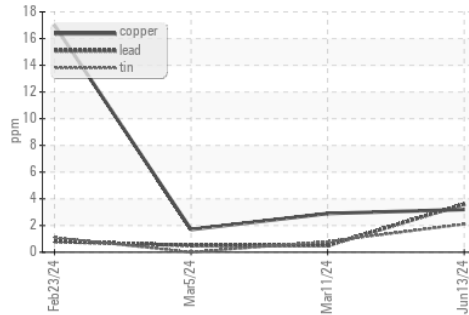
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.1	15.0	14.5

GRAPHS

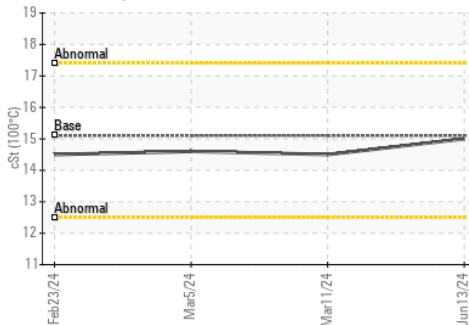
Ferrous Alloys



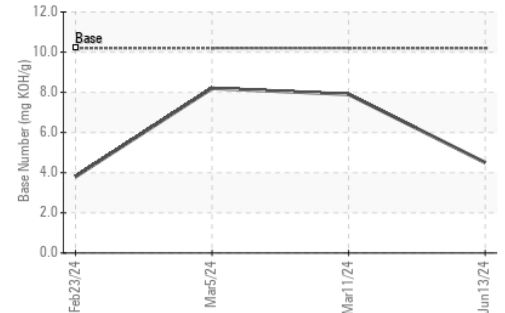
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0125238
Lab Number : 06217574
Unique Number : 11090438
Test Package : FLEET

Received : 21 Jun 2024
Tested : 24 Jun 2024
Diagnosed : 24 Jun 2024 - Wes Davis

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)

T:
 F: