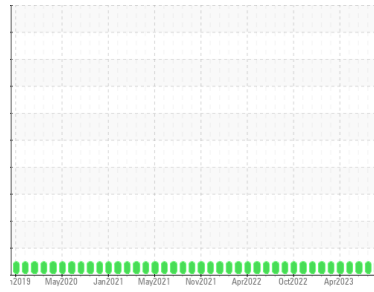




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
(YA133457)

Machine Id
10641C

Component
Natural Gas Engine

Fluid
PETRO CANADA DURON GEO LD 15W40 (36 QTS)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. (Customer Sample Comment: B service)

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	GFL0111076	GFL0087749	GFL0082257
Sample Date	Client Info	23 Apr 2024	14 Sep 2023	22 Jun 2023
Machine Age	hrs	21279	20849	20537
Oil Age	hrs	742	312	1107
Oil Changed	Client Info	Not Chngd	Not Chngd	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	11	9	11
Chromium	ppm ASTM D5185m >4	<1	2	2
Nickel	ppm ASTM D5185m >2	0	<1	<1
Titanium	ppm ASTM D5185m	0	<1	0
Silver	ppm ASTM D5185m >3	0	0	0
Aluminum	ppm ASTM D5185m >9	3	1	2
Lead	ppm ASTM D5185m >30	0	1	2
Copper	ppm ASTM D5185m >35	1	<1	1
Tin	ppm ASTM D5185m >4	0	1	<1
Vanadium	ppm ASTM D5185m	0	0	0
Cadmium	ppm ASTM D5185m	0	<1	0

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 50	14	11	13
Barium	ppm ASTM D5185m 5	0	44	0
Molybdenum	ppm ASTM D5185m 50	54	51	60
Manganese	ppm ASTM D5185m 0	<1	1	<1
Magnesium	ppm ASTM D5185m 560	576	523	602
Calcium	ppm ASTM D5185m 1510	1743	1465	1744
Phosphorus	ppm ASTM D5185m 780	764	675	813
Zinc	ppm ASTM D5185m 870	995	901	1068
Sulfur	ppm ASTM D5185m 2040	2643	2490	2831

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >+100	6	5	4
Sodium	ppm ASTM D5185m	5	6	4
Potassium	ppm ASTM D5185m >20	0	4	1

INFRA-RED

method	limit/base	current	history1	history2
Soot %	% *ASTM D7844	0	0.1	0.1
Nitration	Abs/cm *ASTM D7624 >20	10.2	9.7	10.2
Sulfation	Abs/.1mm *ASTM D7415 >30	21.4	19.7	23.2

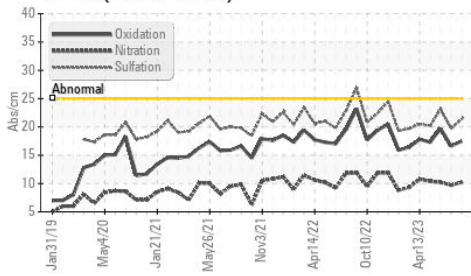
FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	17.5	16.6	19.7
Base Number (BN)	mg KOH/g ASTM D2896 10.2	5.6	6.0	4.9

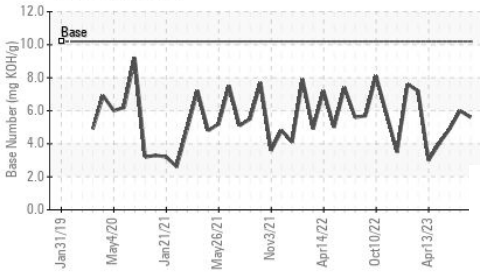


OIL ANALYSIS REPORT

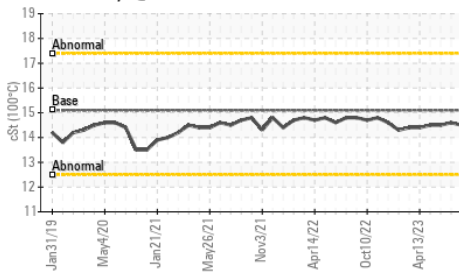
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C



VISUAL

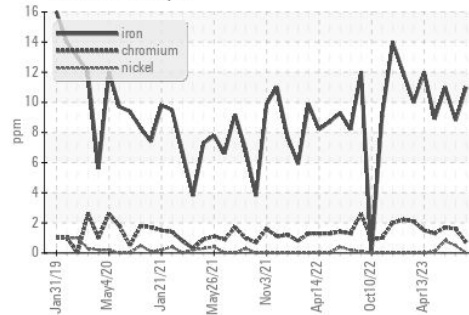
	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar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

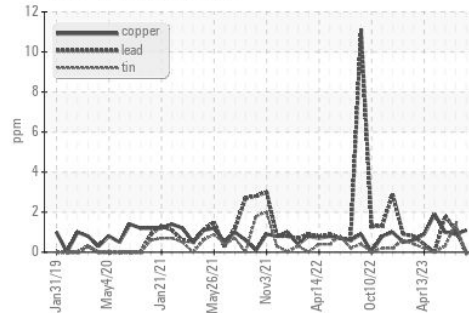
	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.1	14.5	14.5

GRAPHS

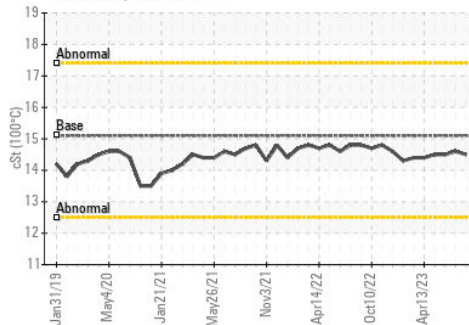
Ferrous Alloys



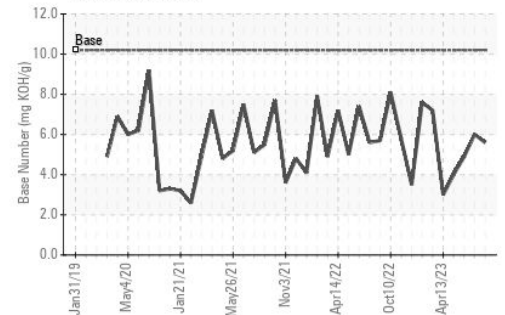
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0111076
Lab Number : 06158917
Unique Number : 10994340
Test Package : FLEET

Received : 24 Apr 2024
Tested : 25 Apr 2024
Diagnosed : 25 Apr 2024 - Wes Davis

GFL Environmental - 006 - Wilmington
 3618 US Highway 421 N
 Wilmington, NC
 US 28401
 Contact: Eric Wood
 eric.wood@gflenv.com
 T: (717)723-1956
 F: (910)762-6880

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)