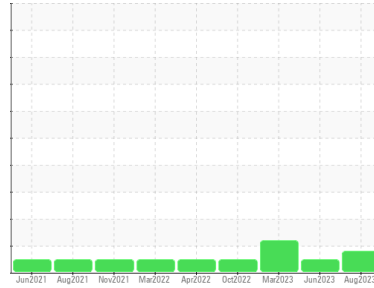




PROBLEM SUMMARY

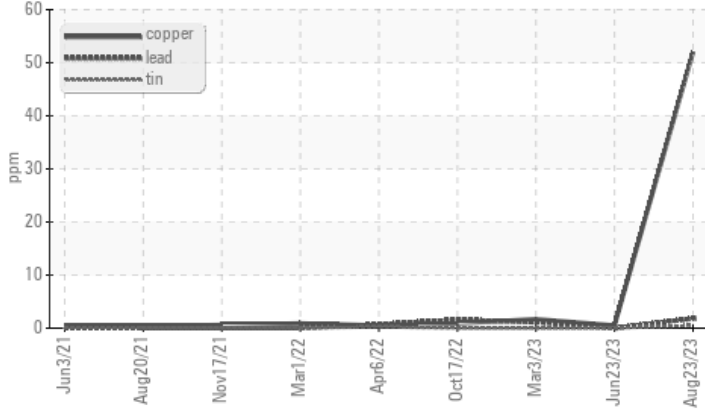
Sample Rating Trend



Machine Id
744002
 Component
Natural Gas Engine
 Fluid
PETRO CANADA DURON GEO LD 15W40 (--- LTR)

COMPONENT CONDITION SUMMARY

▲ Non-ferrous Metals



RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

Sample Status				ABNORMAL	NORMAL	ATTENTION
Copper	ppm	ASTM D5185m	>35	▲ 52	<1	2

Customer Id: GFL882
 Sample No.: GFL0089756
 Lab Number: 05936929
 Test Package: FLEET



To manage this report scan the QR code

To discuss the diagnosis or test data:
 Sean Felton +1 919-379-4092
sfelton@wearcheckusa.com

To change component or sample information:
 Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Fluid	---	---	?	Oil and filter change at the time of sampling has been noted.
Change Filter	---	---	?	Oil and filter change at the time of sampling has been noted.

HISTORICAL DIAGNOSIS

23 Jun 2023 Diag: Jonathan Hester

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

view report



03 Mar 2023 Diag: Don Baldrige

GLYCOL



Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition. All component wear rates are normal. Sodium and/or potassium levels are high. Test for glycol is negative. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

view report



17 Oct 2022 Diag: Don Baldrige

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

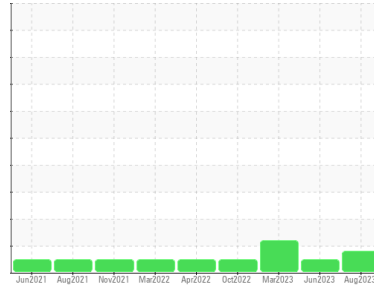
view report





OIL ANALYSIS REPORT

Sample Rating Trend



WEAR



Machine Id
744002

Component
Natural Gas Engine

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

DIAGNOSIS

Recommendation

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear

The copper level is abnormal. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core). All other 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	GFL0089756	GFL0085391	GFL0063838
Sample Date	Client Info	23 Aug 2023	23 Jun 2023	03 Mar 2023
Machine Age	hrs	22195	21809	21131
Oil Age	hrs	386	678	814
Oil Changed	Client Info	Changed	Changed	Changed
Sample Status		ABNORMAL	NORMAL	ATTENTION

CONTAMINATION

method	limit/base	current	history1	history2
Glycol	WC Method	---	---	0.0

WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m >50	15	4	10
Chromium	ppm	ASTM D5185m >4	<1	0	<1
Nickel	ppm	ASTM D5185m >2	<1	0	0
Titanium	ppm	ASTM D5185m	<1	0	<1
Silver	ppm	ASTM D5185m >3	0	0	0
Aluminum	ppm	ASTM D5185m >9	2	0	2
Lead	ppm	ASTM D5185m >30	2	0	1
Copper	ppm	ASTM D5185m >35	52	<1	2
Tin	ppm	ASTM D5185m >4	<1	0	0
Vanadium	ppm	ASTM D5185m	<1	0	<1
Cadmium	ppm	ASTM D5185m	<1	0	0

ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m 50	<1	25	2
Barium	ppm	ASTM D5185m 5	0	0	0
Molybdenum	ppm	ASTM D5185m 50	52	52	57
Manganese	ppm	ASTM D5185m 0	<1	<1	<1
Magnesium	ppm	ASTM D5185m 560	557	536	532
Calcium	ppm	ASTM D5185m 1510	1597	1535	1604
Phosphorus	ppm	ASTM D5185m 780	645	780	664
Zinc	ppm	ASTM D5185m 870	948	947	946
Sulfur	ppm	ASTM D5185m 2040	2672	2643	2591

CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >+100	3	2	3
Sodium	ppm	ASTM D5185m	37	1	240
Potassium	ppm	ASTM D5185m >20	5	2	3

INFRA-RED

method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844	0	0.1	0.1
Nitration	Abs/cm	*ASTM D7624 >20	11.6	8.0	13.3
Sulfation	Abs/.1mm	*ASTM D7415 >30	23.1	19.5	24.9

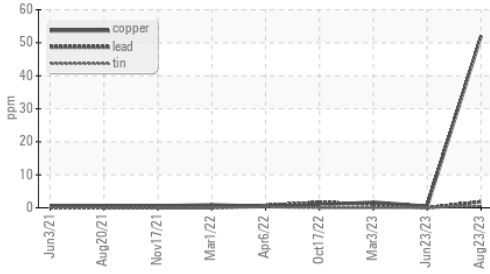
FLUID DEGRADATION

method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414 >25	19.0	17.4	19.6
Base Number (BN)	mg KOH/g	ASTM D2896 10.2	3.6	7.5	3.3



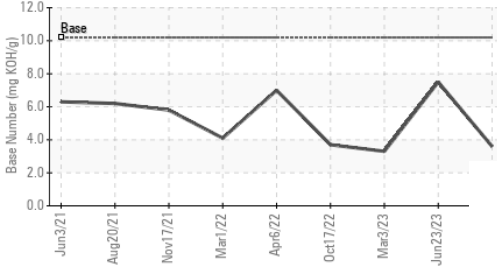
OIL ANALYSIS REPORT

▲ Non-ferrous Metals



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

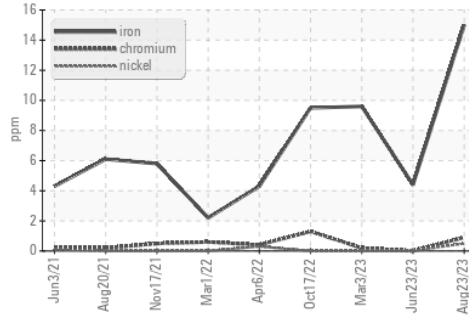
Base Number



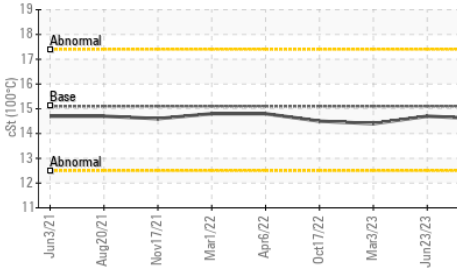
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.1	14.6	14.7

GRAPHS

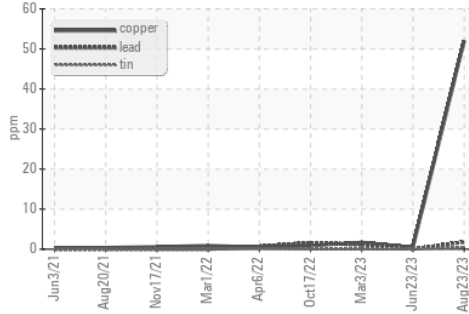
Ferrous Alloys



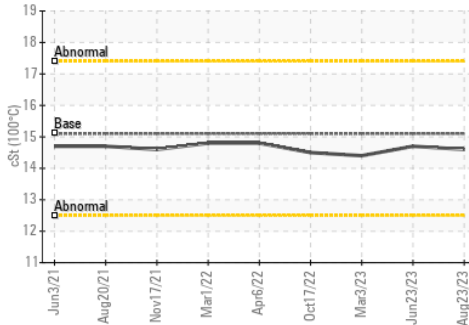
Viscosity @ 100°C



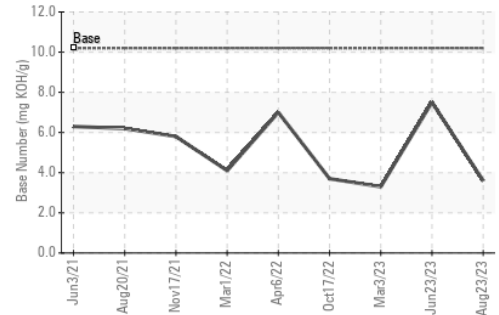
▲ Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0089756 **Received** : 29 Aug 2023
Lab Number : 05936929 **Diagnosed** : 29 Aug 2023
Unique Number : 10622200 **Diagnostician** : Sean Felton
Test Package : FLEET

GFL Environmental - 882 - Gainesville
 5002 SW 41st Blvd
 Gainesville, FL
 US 32608
 Contact: ROBERT CLARK
 robert.clark@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: