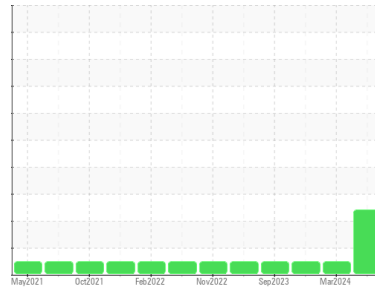




OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL



Machine Id
946025

Component
Natural Gas Engine

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

DIAGNOSIS

▲ Recommendation

Check for low coolant level. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

▲ Contamination

Sodium and/or potassium levels are high.

● Fluid Condition

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.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			GFL0119138	GFL0115500	GFL0106972
Sample Date	Client Info			12 Jul 2024	22 Mar 2024	16 Dec 2023
Machine Age	hrs	Client Info		19993	18830	18270
Oil Age	hrs	Client Info		19433	560	613
Oil Changed	Client Info			Changed	Not Changd	Changed
Sample Status				ABNORMAL	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	15	18	4
Chromium	ppm	ASTM D5185m	>4	<1	0	<1
Nickel	ppm	ASTM D5185m	>2	<1	0	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>9	5	<1	1
Lead	ppm	ASTM D5185m	>30	2	<1	<1
Copper	ppm	ASTM D5185m	>35	2	<1	<1
Tin	ppm	ASTM D5185m	>4	<1	0	0
Vanadium	ppm	ASTM D5185m		<1	<1	<1
Cadmium	ppm	ASTM D5185m		<1	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	50	7	2	26
Barium	ppm	ASTM D5185m	5	<1	0	0
Molybdenum	ppm	ASTM D5185m	50	57	50	47
Manganese	ppm	ASTM D5185m	0	<1	<1	0
Magnesium	ppm	ASTM D5185m	560	614	761	527
Calcium	ppm	ASTM D5185m	1510	1459	936	1422
Phosphorus	ppm	ASTM D5185m	780	859	856	709
Zinc	ppm	ASTM D5185m	870	1060	1004	866
Sulfur	ppm	ASTM D5185m	2040	2783	2909	2301

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>+100	4	2	3
Sodium	ppm	ASTM D5185m		43	15	4
Potassium	ppm	ASTM D5185m	>20	40	5	<1

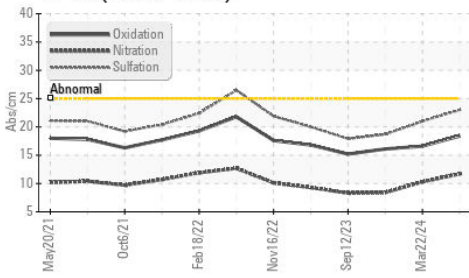
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844		0.3	1.5	0.1
Nitration	Abs/cm	*ASTM D7624	>20	11.7	10.3	8.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.0	21.0	18.7

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	18.4	16.6	16.1
Base Number (BN)	mg KOH/g	ASTM D2896	10.2	5.7	8.7	7.7

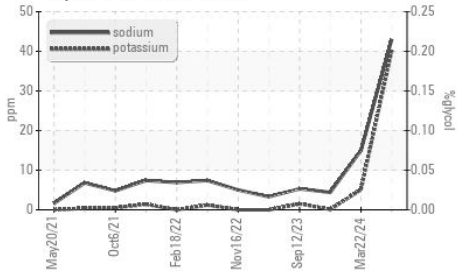


OIL ANALYSIS REPORT

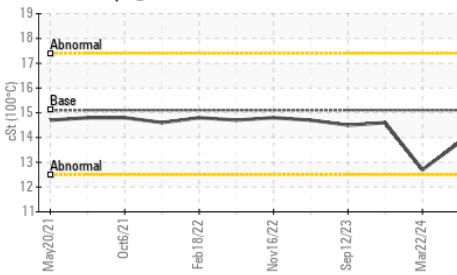
FT-IR (Direct Trend)



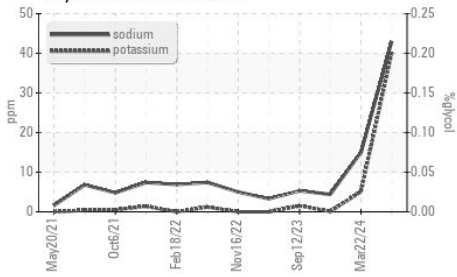
Glycol Contamination



Viscosity @ 100°C



Glycol Contamination

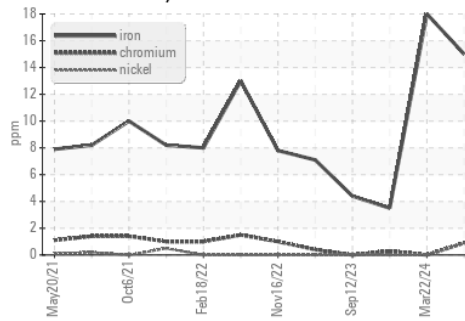


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

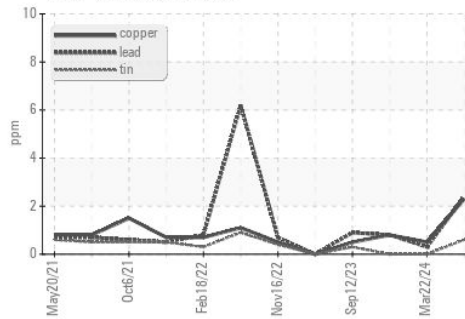
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.1	13.8	12.7

GRAPHS

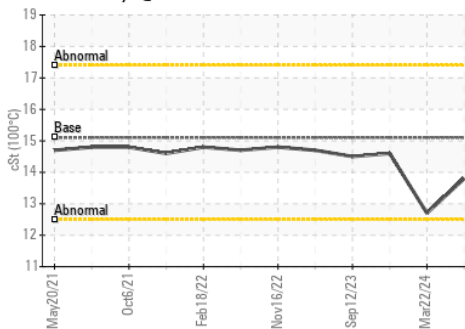
Ferrous Alloys



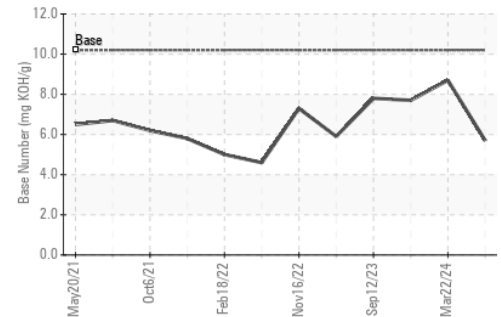
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

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

Sample No. : GFL0119138

Lab Number : 06238961

Unique Number : 11127795

Test Package : FLEET (Additional Tests: Glycol)

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 : 17 Jul 2024

Tested : 19 Jul 2024

Diagnosed : 19 Jul 2024 - Sean Felton

GFL Environmental - 882 - Gainesville

5002 SW 41st Blvd

Gainesville, FL

US 32608

Contact: ROBERT CLARK

robert.clark@gflenv.com

T:

F: