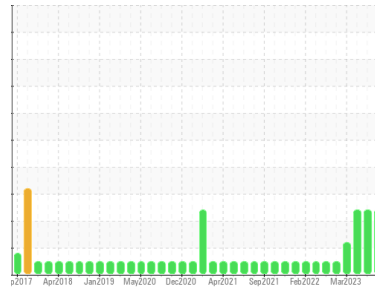




OIL ANALYSIS REPORT

Sample Rating Trend



COOL CHEMICALS



Area
(P635738)
 Machine Id
2686C
 Component
Natural Gas Engine
 Fluid
PETRO CANADA DURON GEO LD 15W40 (50 QTS)

DIAGNOSIS

Recommendation

We advise that you check for the source of the coolant leak. Check for low coolant level. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

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.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		GFL0101768	GFL0090102	GFL0070787
Sample Date	Client Info		30 Apr 2024	27 Oct 2023	07 Jun 2023
Machine Age	hrs	Client Info	16599	15980	14945
Oil Age	hrs	Client Info	600	600	600
Oil Changed	Client Info		Changed	Changed	Changed
Sample Status			ABNORMAL	ABNORMAL	ABNORMAL

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	5	15	6
Chromium	ppm	ASTM D5185m >4	<1	2	1
Nickel	ppm	ASTM D5185m >2	0	<1	1
Titanium	ppm	ASTM D5185m	<1	<1	0
Silver	ppm	ASTM D5185m >3	0	0	<1
Aluminum	ppm	ASTM D5185m >9	2	1	1
Lead	ppm	ASTM D5185m >30	2	10	2
Copper	ppm	ASTM D5185m >35	<1	<1	0
Tin	ppm	ASTM D5185m >4	<1	0	<1
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	46	8	11
Barium	ppm	ASTM D5185m 5	0	0	0
Molybdenum	ppm	ASTM D5185m 50	50	50	54
Manganese	ppm	ASTM D5185m 0	0	<1	<1
Magnesium	ppm	ASTM D5185m 560	524	503	551
Calcium	ppm	ASTM D5185m 1510	1468	1478	1602
Phosphorus	ppm	ASTM D5185m 780	812	611	728
Zinc	ppm	ASTM D5185m 870	945	836	1005
Sulfur	ppm	ASTM D5185m 2040	2766	2173	3068

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >+100	5	12	11
Sodium	ppm	ASTM D5185m	▲ 61	▲ 96	▲ 74
Potassium	ppm	ASTM D5185m >20	▲ 137	▲ 185	▲ 50

INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	0	0	0.1
Nitration	Abs/cm	*ASTM D7624 >20	7.3	12.2	10.2
Sulfation	Abs/.1mm	*ASTM D7415 >30	20.4	26.7	22.0

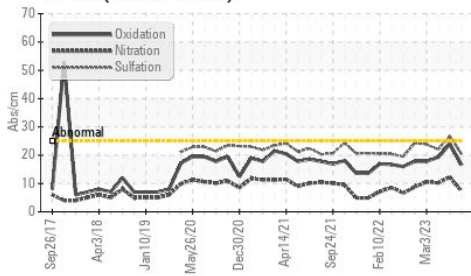
FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	16.6	23.9	19.3
Base Number (BN)	mg KOH/g	ASTM D2896 10.2	7.3	2.6	4.7

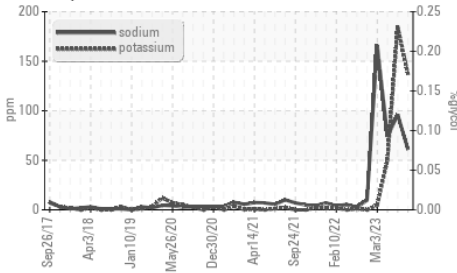


OIL ANALYSIS REPORT

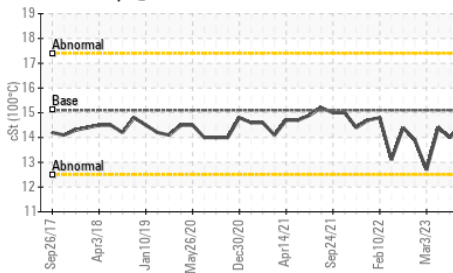
FT-IR (Direct Trend)



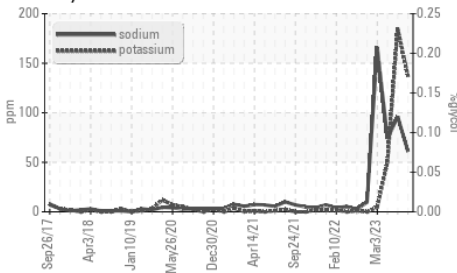
Glycol Contamination



Viscosity @ 100°C



Glycol Contamination

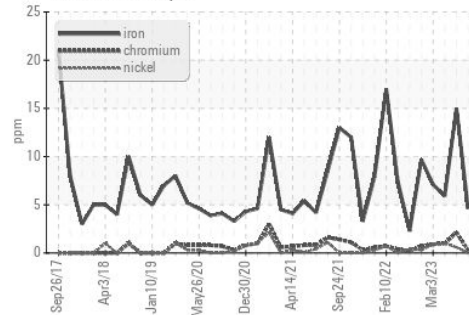


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

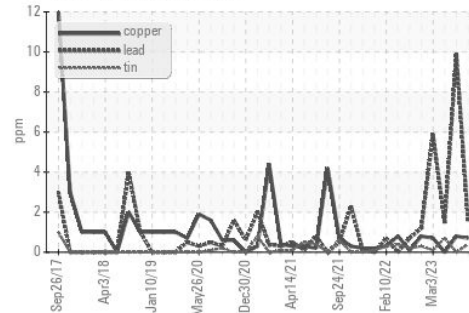
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.1	14.5	14.0

GRAPHS

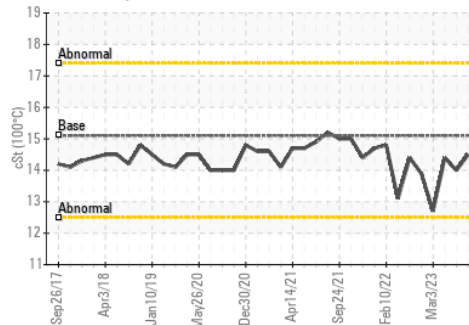
Ferrous Alloys



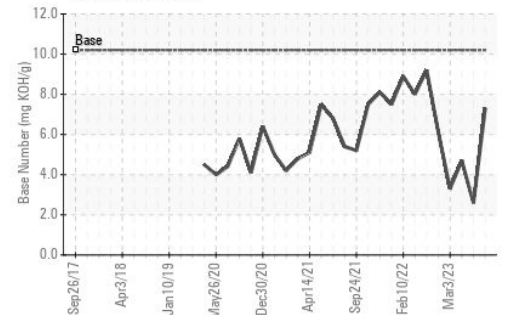
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

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

Sample No. : GFL0101768

Lab Number : 06174964

Unique Number : 11021017

Test Package : FLEET (Additional Tests: Glycol)

Received : 09 May 2024

Tested : 15 May 2024

Diagnosed : 15 May 2024 - Sean Felton

GFL Environmental - 030 - Conway Myrtle Beach

3010 HWY 378

Conway, SC

US 29527

Contact: ARCILIO RUEZ

aruiz@gflenv.com

T:

F:

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)