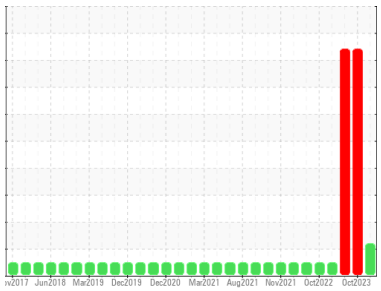
OIL ANALYSIS REPORT

Sample Rating Trend



COOL CHEMICALS

Area
(P618186)
Machine Id
2677C
Component
Natural Gas Engine
Fluid
PETRO CANADA DURON GEO LD 15W40 (40 QTS)

DIAGNOSIS

Recommendation
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. Test for glycol is negative.

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		**GFL0101787**	GFL0090114	GFL0070764
Sample Date		Client Info		**18 Mar 2024**	03 Oct 2023	18 May 2023
Machine Age	hrs	Client Info		**14655**	13526	12585
Oil Age	hrs	Client Info		**600**	600	600
Oil Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**ATTENTION**	SEVERE	SEVERE

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	**8**	6	9
Chromium	ppm	ASTM D5185m	>4	**1**	2	1
Nickel	ppm	ASTM D5185m	>2	**<1**	<1	0
Titanium	ppm	ASTM D5185m		**<1**	0	<1
Silver	ppm	ASTM D5185m	>3	**0**	0	0
Aluminum	ppm	ASTM D5185m	>9	**2**	3	4
Lead	ppm	ASTM D5185m	>30	**4**	2	<1
Copper	ppm	ASTM D5185m	>35	**<1**	<1	<1
Tin	ppm	ASTM D5185m	>4	**<1**	<1	0
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	50	**9**	8	14
Barium	ppm	ASTM D5185m	5	**0**	0	0
Molybdenum	ppm	ASTM D5185m	50	**52**	50	56
Manganese	ppm	ASTM D5185m	0	**<1**	<1	1
Magnesium	ppm	ASTM D5185m	560	**538**	563	435
Calcium	ppm	ASTM D5185m	1510	**1556**	1594	1559
Phosphorus	ppm	ASTM D5185m	780	**676**	652	601
Zinc	ppm	ASTM D5185m	870	**946**	951	855
Sulfur	ppm	ASTM D5185m	2040	**2438**	2343	2215

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>+100	**7**	10	20
Sodium	ppm	ASTM D5185m		**20**	56	284
Potassium	ppm	ASTM D5185m	>20	**48**	173	892
Glycol	%	*ASTM D2982		**---**	0.012	0.12

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844		**0**	0	0.1
Nitration	Abs/cm	*ASTM D7624	>20	**11.4**	11.5	12.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	**24.6**	23.9	22.4

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**21.0**	20.8	18.3
Base Number (BN)	mg KOH/g	ASTM D2896	10.2	**3.1**	3.9	6.3

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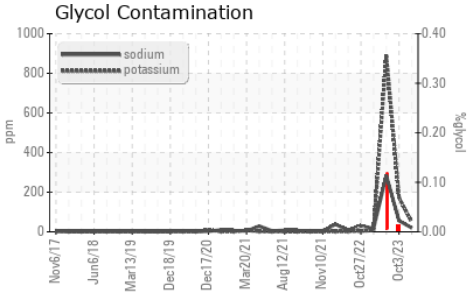
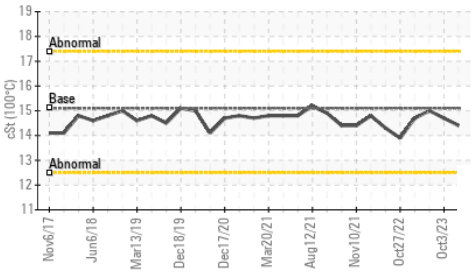
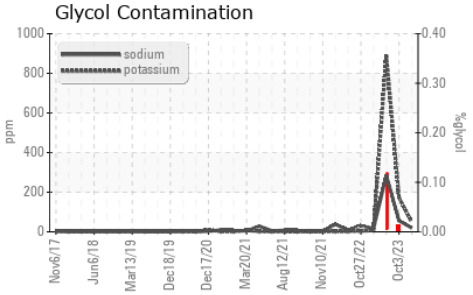
Glycol Contamination



Viscosity @ 100°C



Glycol Contamination

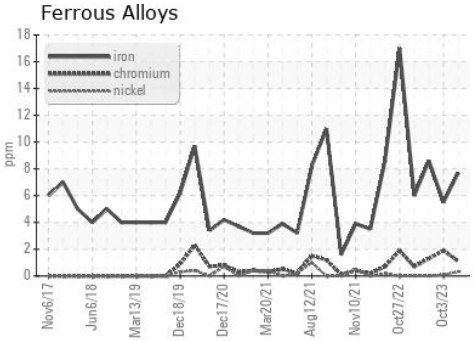


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	**NORML**	NORML	NORML
Odor	scalar	*Visual	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	**NEG**	NEG	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

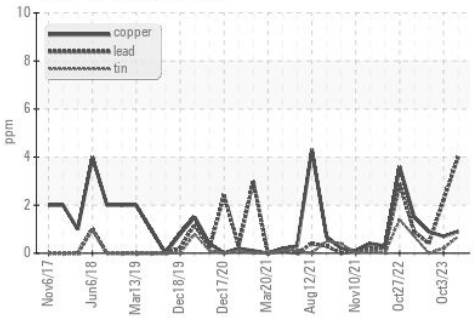
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.1	**14.4**	14.7	15.0

GRAPHS

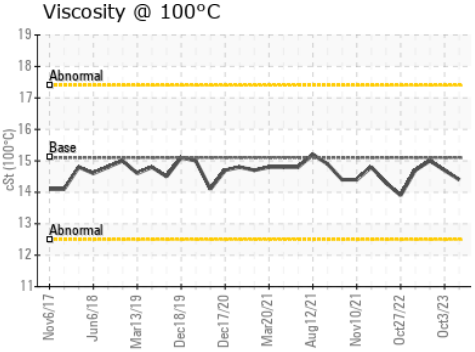
Ferrous Alloys



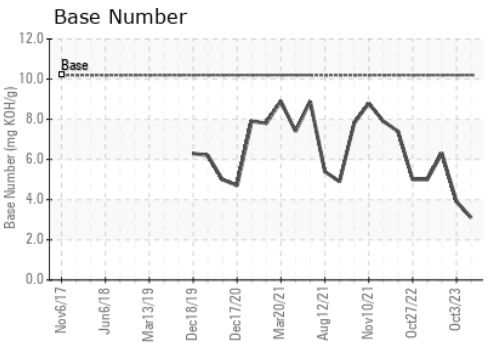
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0101787
Lab Number : 06121942
Unique Number : 10936093
Test Package : FLEET

Received : 19 Mar 2024
Tested : 21 Mar 2024
Diagnosed : 21 Mar 2024 - Jonathan Hester

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)

GFL Environmental - 030 - Conway Myrtle Beach
3010 HWY 378
Conway, SC
US 29527
Contact: ARCILIO RUEZ
aruiz@gflenv.com
T:
F: