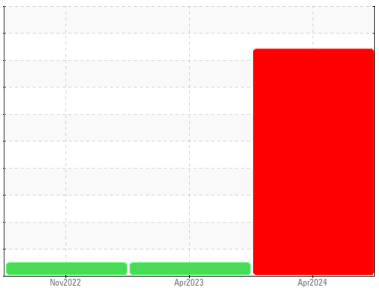
PROBLEM SUMMARY

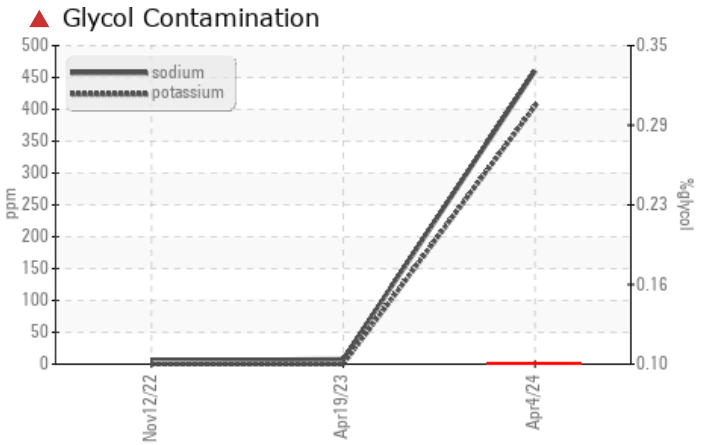
Sample Rating Trend



GLYCOL

Machine Id
946007
Component
Natural Gas Engine
Fluid
PETRO CANADA DURON GEO LD 15W40 (--- GAL)

COMPONENT CONDITION SUMMARY



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.

PROBLEMATIC TEST RESULTS

Sample Status				**SEVERE**	NORMAL	NORMAL
Sodium	ppm	ASTM D5185m		▲ **460**	8	6
Potassium	ppm	ASTM D5185m	>20	▲ **405**	0	0
Glycol	%	*ASTM D2982		▲ **0.10**	---	---

Customer Id: GFL932
Sample No.: GFL0108392
Lab Number: 06144039
Test Package: FLEET

To manage this report scan the QR code

To discuss the diagnosis or test data:
Jonathan Hester +1 919-379-4092 x4092
jhester@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.
Resample	---	---	?	We recommend an early resample to monitor this condition.
Check Glycol Access	---	---	?	We advise that you check for the source of the coolant leak.

HISTORICAL DIAGNOSIS

NORMAL

19 Apr 2023 Diag: Wes Davis
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

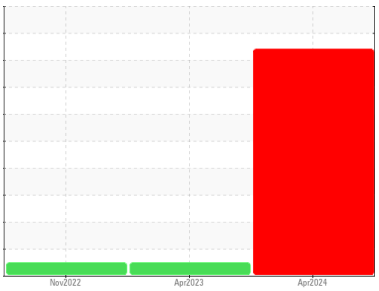
NORMAL

12 Nov 2022 Diag: Jonathan Hester
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



GLYCOL

Machine Id
946007
Component
Natural Gas Engine
Fluid
PETRO CANADA DURON GEO LD 15W40 (--- GAL)

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. Test for glycol is positive.

Fluid Condition
The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**GFL0108392**	GFL0071262	GFL0065035
Sample Date		Client Info		**04 Apr 2024**	19 Apr 2023	12 Nov 2022
Machine Age	hrs	Client Info		**18312**	16027	14831
Oil Age	hrs	Client Info		**18312**	16027	14831
Oil Changed		Client Info		**Changed**	Not Changd	Not Changd
Sample Status				**SEVERE**	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	**28**	12	12
Chromium	ppm	ASTM D5185m	>4	**3**	2	4
Nickel	ppm	ASTM D5185m	>2	**2**	0	<1
Titanium	ppm	ASTM D5185m		**<1**	<1	2
Silver	ppm	ASTM D5185m	>3	**0**	0	0
Aluminum	ppm	ASTM D5185m	>9	**3**	3	2
Lead	ppm	ASTM D5185m	>30	**11**	10	11
Copper	ppm	ASTM D5185m	>35	**2**	<1	1
Tin	ppm	ASTM D5185m	>4	**2**	<1	<1
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	**24**	15	12
Barium	ppm	ASTM D5185m	5	**0**	0	0
Molybdenum	ppm	ASTM D5185m	50	**94**	57	50
Manganese	ppm	ASTM D5185m	0	**2**	<1	<1
Magnesium	ppm	ASTM D5185m	560	**835**	603	572
Calcium	ppm	ASTM D5185m	1510	**2481**	1861	1591
Phosphorus	ppm	ASTM D5185m	780	**996**	760	707
Zinc	ppm	ASTM D5185m	870	**1438**	1027	927
Sulfur	ppm	ASTM D5185m	2040	**3708**	2705	2521

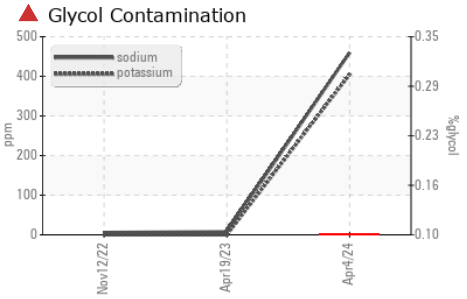
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>+100	**14**	4	7
Sodium	ppm	ASTM D5185m		▲ **460**	8	6
Potassium	ppm	ASTM D5185m	>20	▲ **405**	0	0
Glycol	%	*ASTM D2982		▲ **0.10**	---	---

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844		**0.1**	0	0.1
Nitration	Abs/cm	*ASTM D7624	>20	**12.7**	12.5	13.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	**26.8**	27.3	26.5

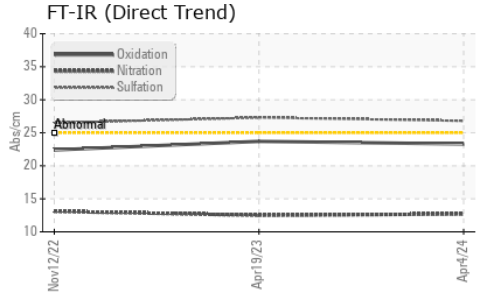
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**23.3**	23.7	22.4
Base Number (BN)	mg KOH/g	ASTM D2896	10.2	**3.8**	3.3	5.5

OIL ANALYSIS REPORT

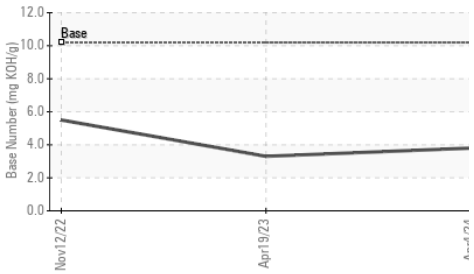
Glycol Contamination



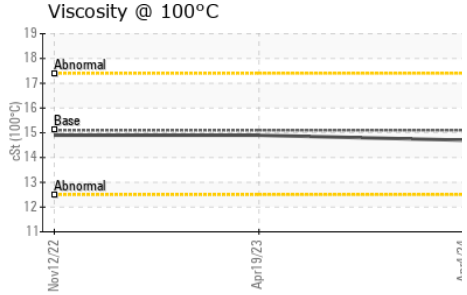
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

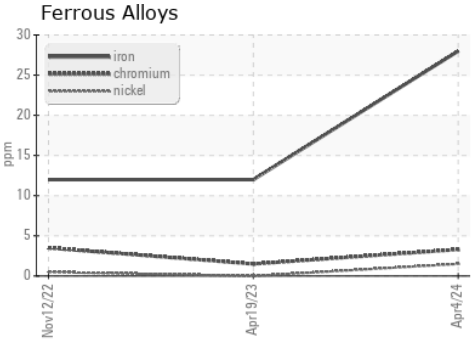


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

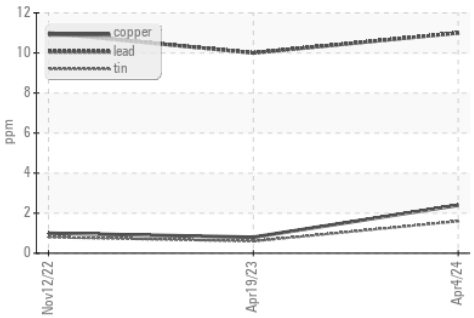
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.1	**14.7**	14.9	14.9

GRAPHS

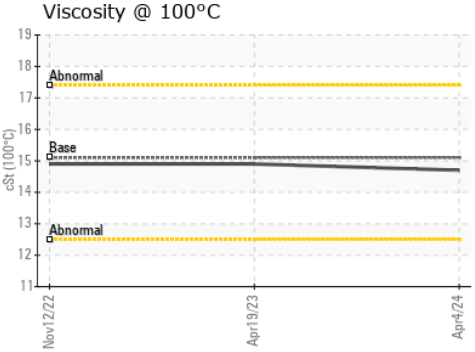
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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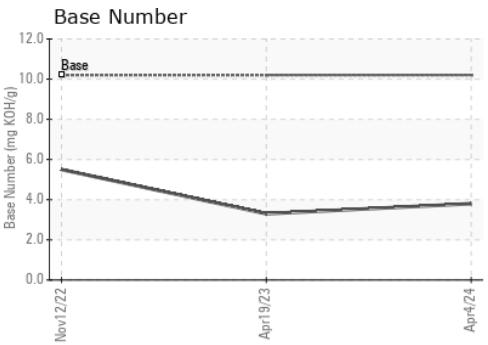

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0108392
Lab Number : 06144039
Unique Number : 10968847
Test Package : FLEET (Additional Tests: Glycol)

Received : 10 Apr 2024
Tested : 12 Apr 2024
Diagnosed : 12 Apr 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 - 932 - Muskego HC
W144 S6400 College Ct.
Muskego, WI
US 53150
Contact: Brian Schlomann
brian.schlomann@gflenv.com
T: (262)510-4586
F:

Report Id: GFL932 [WUSCAR] 06144039 (Generated: 04/12/2024 19:19:58) Rev: 1

Submitted By: GFL932,GFL414 - BECKY FLETCHER