



PROBLEM SUMMARY

Sample Rating Trend

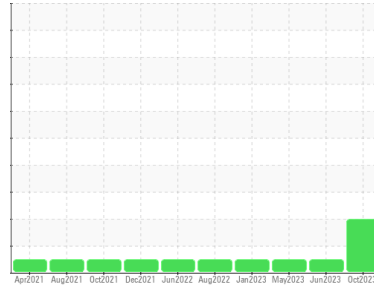
GLYCOL



Machine Id
948015-205260

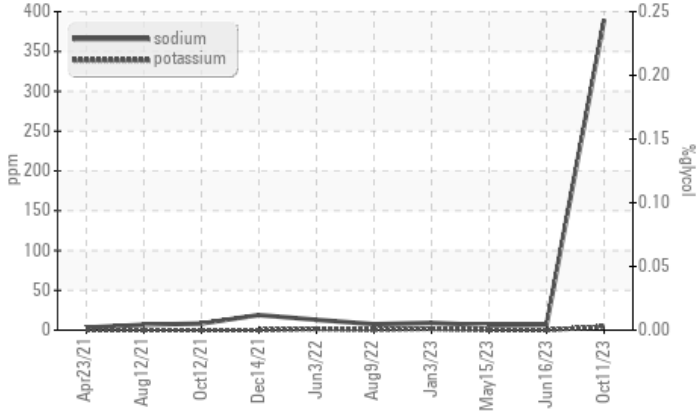
Component
Natural Gas Engine

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

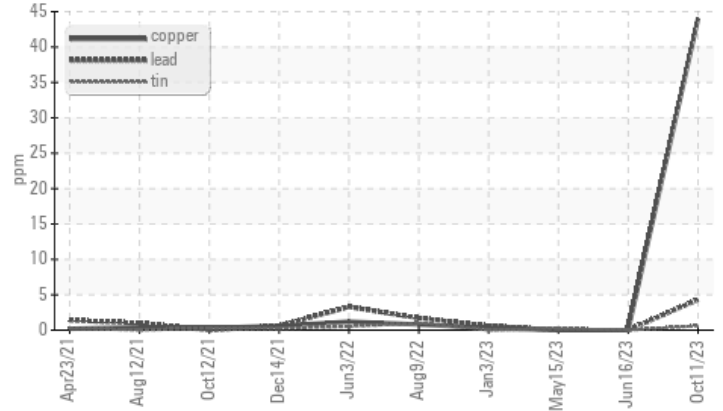


COMPONENT CONDITION SUMMARY

▲ Glycol Contamination



▲ Non-ferrous Metals



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			ABNORMAL	NORMAL	NORMAL
Copper	ppm	ASTM D5185m	>35	▲ 44	0
Sodium	ppm	ASTM D5185m		▲ 390	7

Customer Id: GFL883
Sample No.: GFL0071767
Lab Number: 05977564
Test Package: FLEET



To manage this report scan the QR code

To discuss the diagnosis or test data:
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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

16 Jun 2023 Diag: Sean Felton

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



15 May 2023 Diag: Sean Felton

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 Jan 2023 Diag: Sean Felton

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

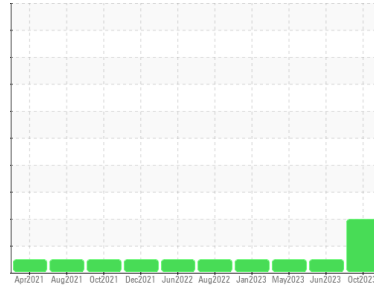
GLYCOL



Machine Id
948015-205260

Component
Natural Gas Engine

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



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

The copper level is abnormal. All other 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	GFL0071767	GFL0071737	GFL0058479
Sample Date	Client Info	11 Oct 2023	16 Jun 2023	15 May 2023
Machine Age	hrs	30776	14538	14357
Oil Age	hrs	600	600	400
Oil Changed	Client Info	Changed	Changed	Oil Added
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	18	11	8
Chromium	ppm ASTM D5185m >4	2	1	<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	4	3	3
Lead	ppm ASTM D5185m >30	4	0	0
Copper	ppm ASTM D5185m >35	44	0	0
Tin	ppm ASTM D5185m >4	<1	0	<1
Vanadium	ppm ASTM D5185m	<1	0	0
Cadmium	ppm ASTM D5185m	0	0	0

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 50	5	15	22
Barium	ppm ASTM D5185m 5	0	0	0
Molybdenum	ppm ASTM D5185m 50	63	57	55
Manganese	ppm ASTM D5185m 0	1	<1	<1
Magnesium	ppm ASTM D5185m 560	532	621	529
Calcium	ppm ASTM D5185m 1510	1565	1806	1678
Phosphorus	ppm ASTM D5185m 780	716	887	740
Zinc	ppm ASTM D5185m 870	992	1128	984
Sulfur	ppm ASTM D5185m 2040	2168	3291	2688

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >+100	8	4	4
Sodium	ppm ASTM D5185m	390	7	6
Potassium	ppm ASTM D5185m >20	4	0	0

INFRA-RED

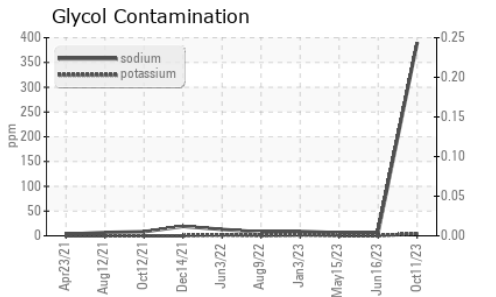
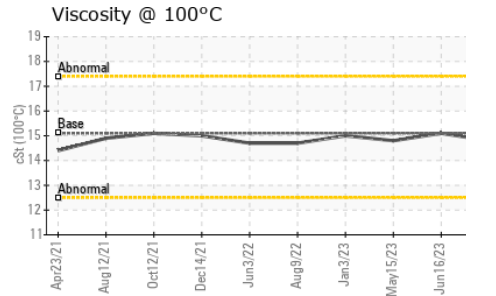
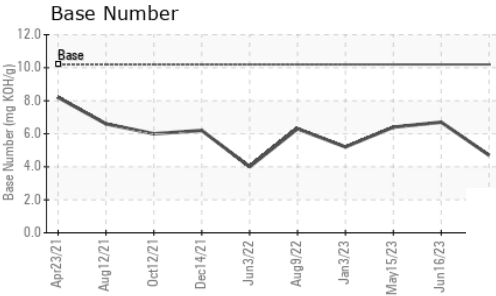
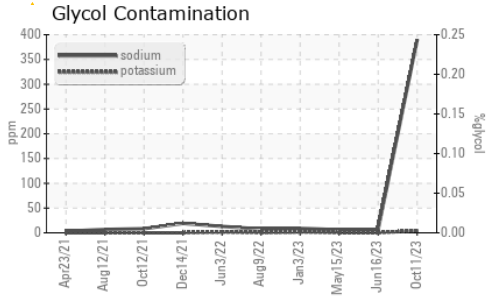
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844	0	0.1	0.1
Nitration	Abs/cm *ASTM D7624 >20	11.7	10.4	9.3
Sulfation	Abs/.1mm *ASTM D7415 >30	22.6	21.0	20.9

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	19.4	17.1	17.4
Base Number (BN)	mg KOH/g ASTM D2896 10.2	4.7	6.7	6.4



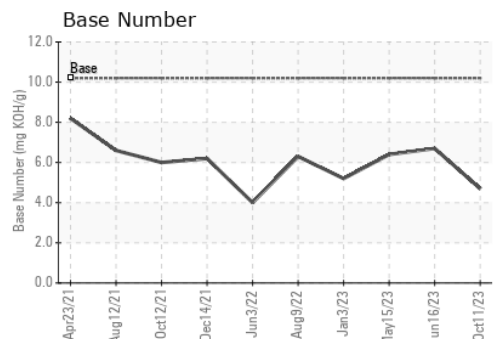
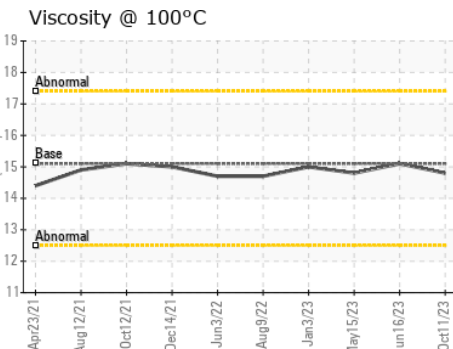
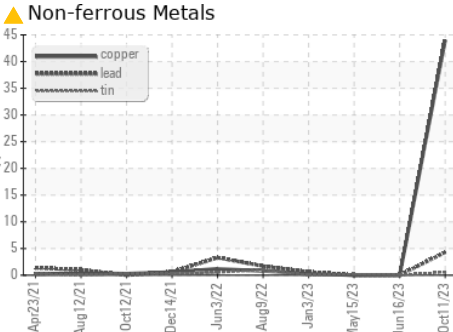
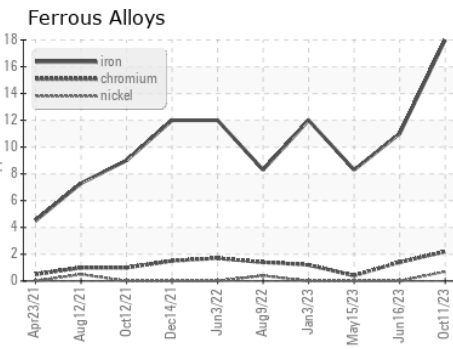
OIL ANALYSIS REPORT



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	14.8	14.8

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0071767 **Received** : 12 Oct 2023
Lab Number : 05977564 **Diagnosed** : 16 Oct 2023
Unique Number : 10689514 **Diagnostician** : Jonathan Hester
Test Package : FLEET (Additional Tests: Glycol)

GFL Environmental - 883 - Orange City
 1378 South Volusia Ave
 Orange City, FL
 US 32763
 Contact: JEFF COOPERSMITH
 JCOOPERSMITH@GFLENV.COM
 T: (386)503-8468
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Certificate L2367
 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)