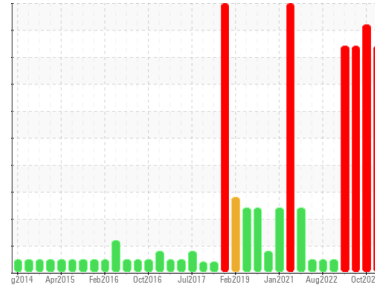




PROBLEM SUMMARY

Sample Rating Trend



GLYCOL



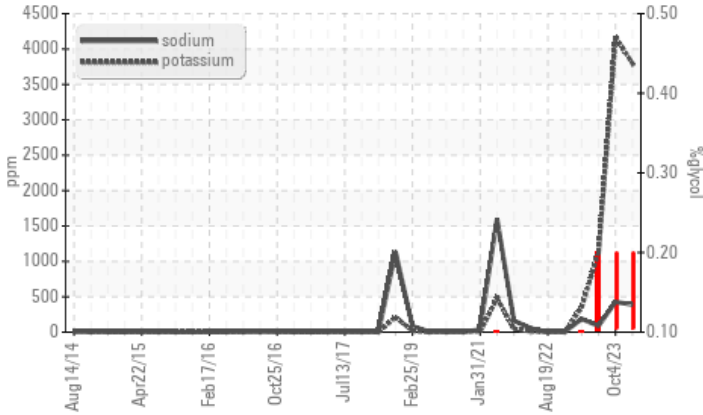
Machine Id
10446

Component
Diesel Engine

Fluid
PETRO CANADA DURON SHP 15W40 (8 GAL)

COMPONENT CONDITION SUMMARY

Glycol Contamination



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	SEVERE	SEVERE
Sodium	ppm	ASTM D5185m		▲ 390	▲ 427	▲ 89
Potassium	ppm	ASTM D5185m	>20	▲ 3798	▲ 4168	▲ 1128
Glycol	%	*ASTM D2982		● 0.20	● 0.20	● 0.20

Customer Id: GFL018
 Sample No.: GFL0089972
 Lab Number: 06002778
 Test Package: FLEET



To manage this report scan the QR code

To discuss the diagnosis or test data:
 Doug Bogart +1 (800)237-1369 x4016
dougb@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

04 Oct 2023 Diag: Doug Bogart

GLYCOL



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. The copper level is abnormal. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core). All other component wear rates are normal. Sodium and/or potassium levels are high. Test for glycol is positive. The BN result indicates that there is suitable alkalinity remaining in the oil.

[view report](#)



25 Apr 2023 Diag: Jonathan Hester

GLYCOL



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. All component wear rates are normal. Sodium and/or potassium levels are high. Test for glycol is positive. The BN result indicates that there is suitable alkalinity remaining in the oil.

[view report](#)



07 Apr 2023 Diag: Wes Davis

GLYCOL



We advise that you check for the source of the coolant leak. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. All component wear rates are normal. Test for glycol is positive. There is a high concentration of glycol present in the oil. 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.

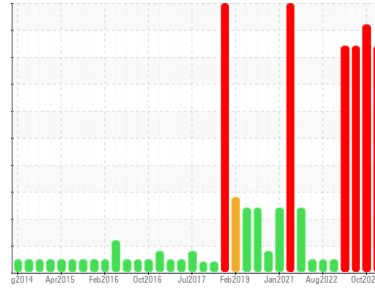
[view report](#)





OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL



Machine Id
10446

Component
Diesel Engine

Fluid
PETRO CANADA DURON SHP 15W40 (8 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.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		GFL0089972	GFL0080537	GFL0074434
Sample Date	Client Info		07 Nov 2023	04 Oct 2023	25 Apr 2023
Machine Age	hrs	Client Info	59145	59145	59145
Oil Age	hrs	Client Info	59145	59145	59145
Oil Changed	Client Info		Changed	Changed	Changed
Sample Status			SEVERE	SEVERE	SEVERE

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<1.0	<1.0	<1.0
Water	WC Method	>0.2	NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m	>75	32	33	15
Chromium	ppm	ASTM D5185m	>5	1	2	<1
Nickel	ppm	ASTM D5185m	>4	<1	<1	0
Titanium	ppm	ASTM D5185m	>2	<1	<1	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>15	5	5	2
Lead	ppm	ASTM D5185m	>25	1	<1	0
Copper	ppm	ASTM D5185m	>100	92	▲ 105	9
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	0	2	1	2
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	66	72	63
Manganese	ppm	ASTM D5185m	0	<1	<1	<1
Magnesium	ppm	ASTM D5185m	1010	904	872	948
Calcium	ppm	ASTM D5185m	1070	988	1009	1090
Phosphorus	ppm	ASTM D5185m	1150	941	942	1038
Zinc	ppm	ASTM D5185m	1270	1213	1177	1296
Sulfur	ppm	ASTM D5185m	2060	2844	2911	3333

CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>25	17	17	5
Sodium	ppm	ASTM D5185m		▲ 390	▲ 427	▲ 89
Potassium	ppm	ASTM D5185m	>20	▲ 3798	▲ 4168	▲ 1128
Glycol	%	*ASTM D2982		■ 0.20	■ 0.20	■ 0.20

INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844	>6	0.3	0.3	0.2
Nitration	Abs/cm	*ASTM D7624	>20	12.6	12.3	7.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	25.7	25.3	18.7

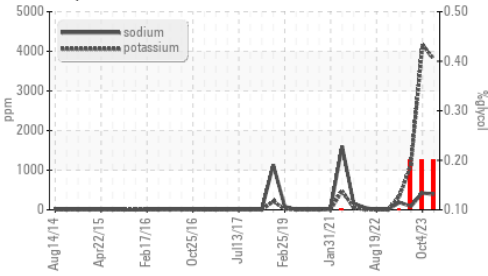
FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.4	16.3	15.2
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	12.3	12.1	10.7



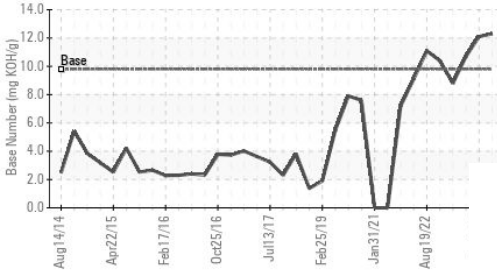
OIL ANALYSIS REPORT

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	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

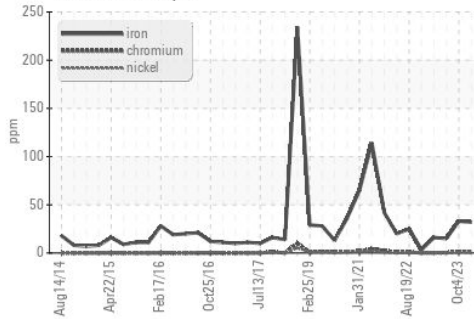
Base Number



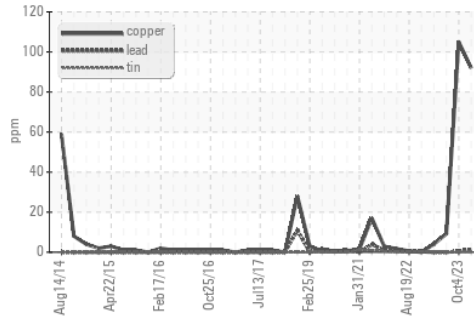
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	14.4	14.4

GRAPHS

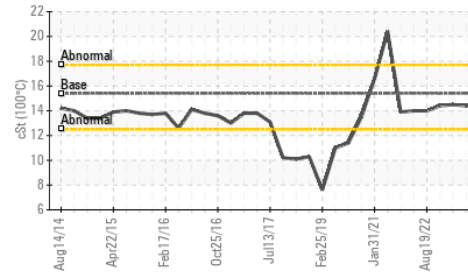
Ferrous Alloys



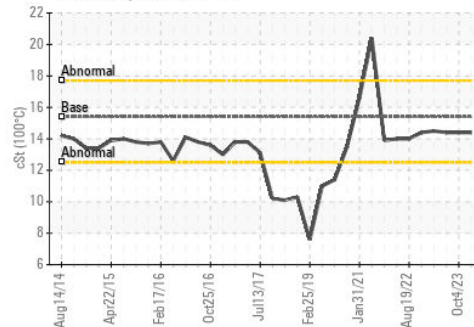
Non-ferrous Metals



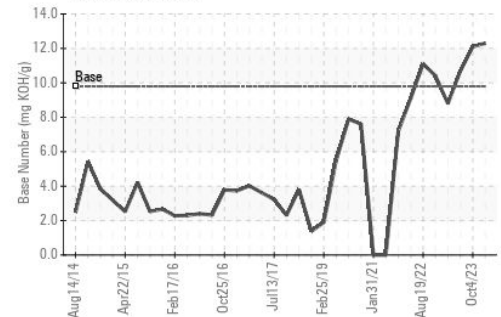
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : GFL0089972
 Lab Number : 06002778
 Unique Number : 10736540
 Test Package : FLEET

GFL Environmental - 018 - Fayetteville
 4621 Marracco Drive
 Hope Mills, NC
 US 28348
 Contact: Robert Carter
 robert.carter@gflenv.com
 T: (910)596-1170
 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)