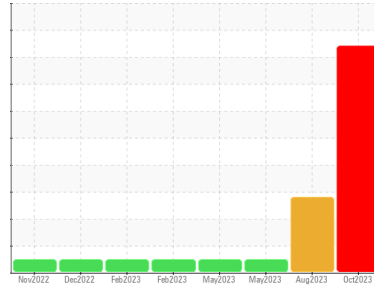




PROBLEM SUMMARY

Sample Rating Trend



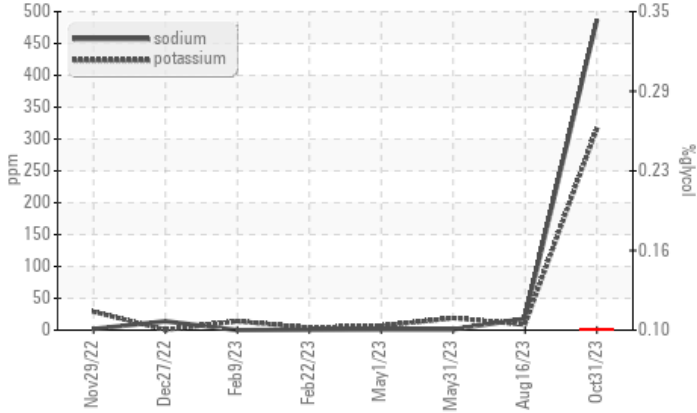
GLYCOL



Machine Id
212018
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

COMPONENT CONDITION SUMMARY

Glycol Contamination



RECOMMENDATION

We advise that you check for the source of the coolant leak. Check for low coolant level. We recommend that you drain the oil and perform a filter service on this component if not already done. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	SEVERE	NORMAL
Sodium	ppm	ASTM D5185m		▲ 487	18	1
Potassium	ppm	ASTM D5185m	>20	▲ 317	9	19
Glycol	%	*ASTM D2982		● 0.10	NEG	NEG

Customer Id: GFL821
 Sample No.: GFL0090276
 Lab Number: 05997616
 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	---	---	?	We recommend that you drain the oil and perform a filter service on this component if not already done.
Change Filter	---	---	?	We recommend that you drain the oil and perform a filter service on this component if not already done.
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 Aug 2023 Diag: Wes Davis

FUEL



We advise that you check the fuel injection system. We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition. All component wear rates are normal. There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

[view report](#)



31 May 2023 Diag: Wes Davis

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](#)



01 May 2023 Diag: Wes Davis

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](#)





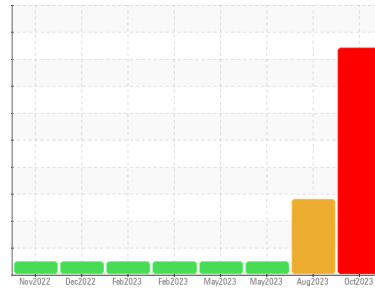
OIL ANALYSIS REPORT

Sample Rating Trend

GLYCOL



Machine Id
212018
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)



DIAGNOSIS

Recommendation

We advise that you check for the source of the coolant leak. Check for low coolant level. We recommend that you drain the oil and perform a filter service on this component if not already done. 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. Fuel content negligible.

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		GFL0090276	GFL0090243	GFL0076794
Sample Date	Client Info		31 Oct 2023	16 Aug 2023	31 May 2023
Machine Age	hrs	Client Info	2841	0	2669
Oil Age	hrs	Client Info	150	150	600
Oil Changed	Client Info		Not Changed	N/A	Changed
Sample Status			SEVERE	SEVERE	NORMAL

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >80	20	29	21
Chromium	ppm	ASTM D5185m >5	1	<1	1
Nickel	ppm	ASTM D5185m >2	<1	0	0
Titanium	ppm	ASTM D5185m	0	0	0
Silver	ppm	ASTM D5185m >3	<1	0	0
Aluminum	ppm	ASTM D5185m >30	1	0	10
Lead	ppm	ASTM D5185m >30	5	<1	0
Copper	ppm	ASTM D5185m >150	11	2	0
Tin	ppm	ASTM D5185m >5	<1	0	0
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	<1	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	8	0	2
Barium	ppm	ASTM D5185m 0	5	2	0
Molybdenum	ppm	ASTM D5185m 60	121	25	50
Manganese	ppm	ASTM D5185m 0	<1	<1	<1
Magnesium	ppm	ASTM D5185m 1010	788	349	898
Calcium	ppm	ASTM D5185m 1070	905	467	1042
Phosphorus	ppm	ASTM D5185m 1150	948	563	952
Zinc	ppm	ASTM D5185m 1270	1107	724	1341
Sulfur	ppm	ASTM D5185m 2060	2966	1488	3714

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >20	5	8	4
Sodium	ppm	ASTM D5185m	▲ 487	18	1
Potassium	ppm	ASTM D5185m >20	▲ 317	9	19
Fuel	%	ASTM D3524 >5	1.4	● 8.7	<1.0
Glycol	%	*ASTM D2982	● 0.10	NEG	NEG

INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.4	0.2	0.5
Nitration	Abs/cm	*ASTM D7624 >20	8.3	5.3	8.4
Sulfation	Abs/.1mm	*ASTM D7415 >30	18.1	18.2	20.0

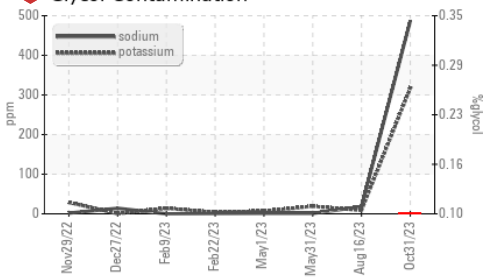
FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	13.6	11.7	17.2
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	12.4	3.4	7.8



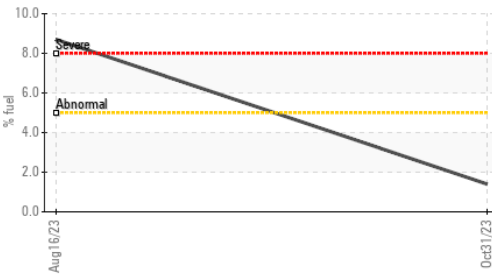
OIL ANALYSIS REPORT

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

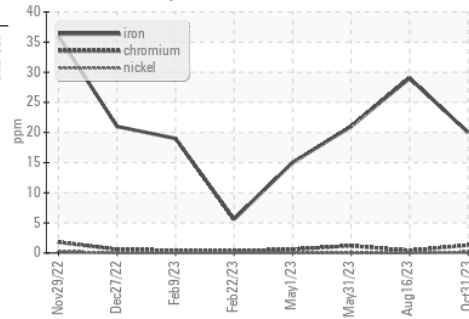
Fuel Dilution



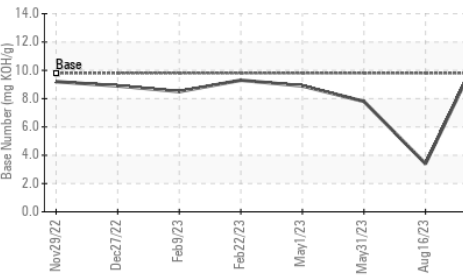
FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	15.4	14.4	7.8	13.6

GRAPHS

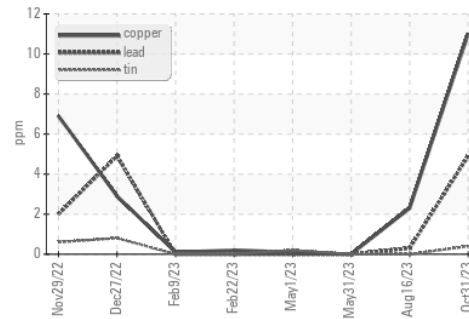
Ferrous Alloys



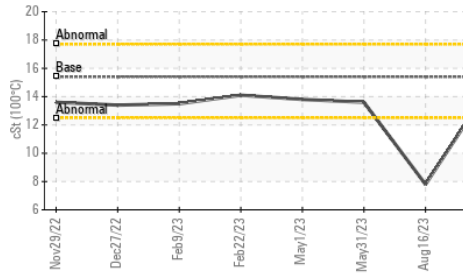
Base Number



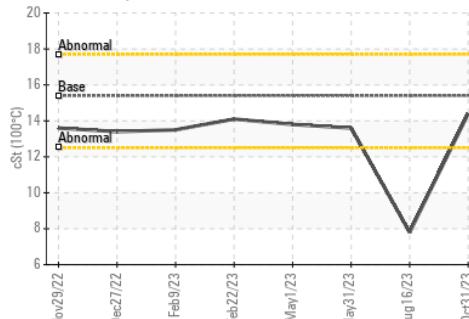
Non-ferrous Metals



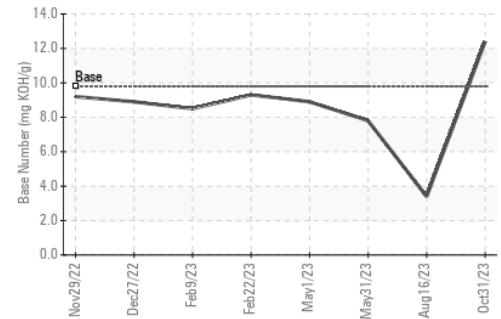
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0090276 **Received** : 03 Nov 2023
Lab Number : 05997616 **Diagnosed** : 07 Nov 2023
Unique Number : 10725976 **Diagnostician** : Jonathan Hester
Test Package : FLEET (Additional Tests: Glycol, PercentFuel)

GFL Environmental - 821 - Ozarks Hauling
 33924 Olath Drive
 Lebanon, MO
 US 65536
 Contact: Landen Johnson
 landen.johnson@gflenv.com
 T: (417)664-0010
 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)