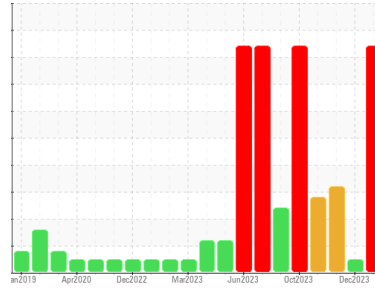




PROBLEM SUMMARY

Sample Rating Trend



GLYCOL



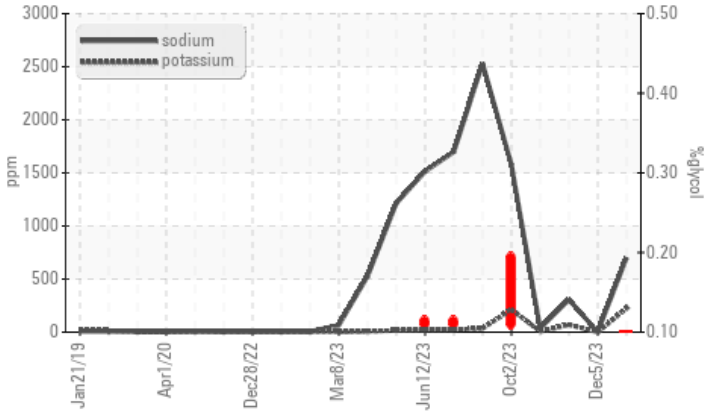
Machine Id
726047-310048

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 from the component if this has not already been done. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	NORMAL	ABNORMAL
Sodium	ppm	ASTM D5185m		▲ 698	<1	▲ 306
Potassium	ppm	ASTM D5185m	>20	▲ 225	<1	▲ 69
Glycol	%	*ASTM D2982		● 0.10	NEG	NEG

Customer Id: GFL821
 Sample No.: GFL0090322
 Lab Number: 06042857
 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 from the component if this has not already been 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

05 Dec 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



25 Oct 2023 Diag: Jonathan Hester

GLYCOL



We advise that you check for the source of the coolant leak. Check for low coolant level. We recommend an early resample to monitor this condition. All component wear rates are normal. Sodium and/or potassium levels are high. Light fuel dilution occurring. The BN result indicates that there is suitable alkalinity remaining in the oil.

view report



04 Oct 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.

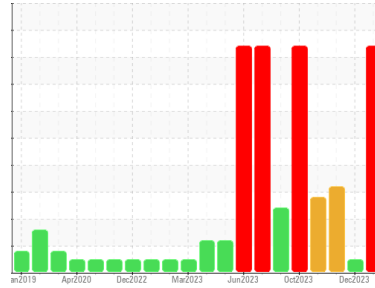
view report





OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL



Machine Id
726047-310048

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 from the component if this has not already been 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.

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	GFL0090322	GFL0090315	GFL0090253
Sample Date	Client Info	20 Dec 2023	05 Dec 2023	25 Oct 2023
Machine Age	hrs	20254	20180	19890
Oil Age	hrs	450	150	150
Oil Changed	Client Info	Not Changed	Not Changed	Not Changed
Sample Status		SEVERE	NORMAL	ABNORMAL

CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >5	<1.0	<1.0	▲ 2.2
Water	WC Method >0.2	NEG	NEG	NEG

WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >110	29	<1	10
Chromium	ppm ASTM D5185m >4	2	0	<1
Nickel	ppm ASTM D5185m >2	0	<1	0
Titanium	ppm ASTM D5185m	0	0	<1
Silver	ppm ASTM D5185m >2	0	0	0
Aluminum	ppm ASTM D5185m >25	3	<1	2
Lead	ppm ASTM D5185m >45	<1	<1	0
Copper	ppm ASTM D5185m >85	1	<1	<1
Tin	ppm ASTM D5185m >4	0	0	<1
Vanadium	ppm ASTM D5185m	<1	<1	0
Cadmium	ppm ASTM D5185m	0	0	0

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	0	2	<1
Barium	ppm ASTM D5185m 0	0	0	0
Molybdenum	ppm ASTM D5185m 60	118	58	77
Manganese	ppm ASTM D5185m 0	<1	<1	0
Magnesium	ppm ASTM D5185m 1010	881	1008	860
Calcium	ppm ASTM D5185m 1070	943	1088	964
Phosphorus	ppm ASTM D5185m 1150	932	1088	928
Zinc	ppm ASTM D5185m 1270	1163	1306	1145
Sulfur	ppm ASTM D5185m 2060	2886	3309	2693

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >30	8	6	3
Sodium	ppm ASTM D5185m	▲ 698	<1	▲ 306
Potassium	ppm ASTM D5185m >20	▲ 225	<1	▲ 69
Glycol	% *ASTM D2982	● 0.10	NEG	NEG

INFRA-RED

method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	0.7	0.1	0.4
Nitration	Abs/cm *ASTM D7624 >20	12.0	4.3	7.9
Sulfation	Abs/.1mm *ASTM D7415 >30	21.9	17.3	19.0

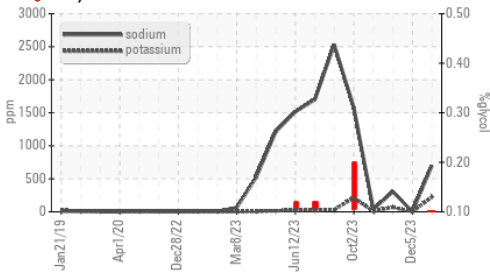
FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	18.5	12.9	14.7
Base Number (BN)	mg KOH/g ASTM D2896 9.8	8.7	9.0	8.6



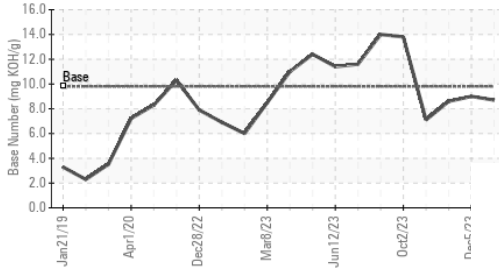
OIL ANALYSIS REPORT

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

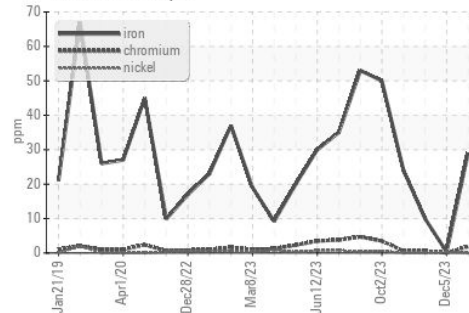
Base Number



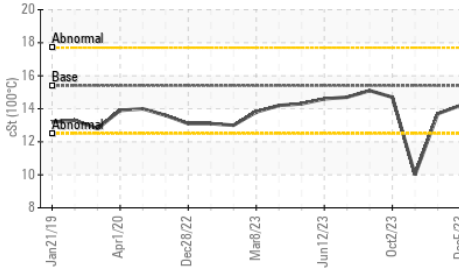
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.2	14.2

GRAPHS

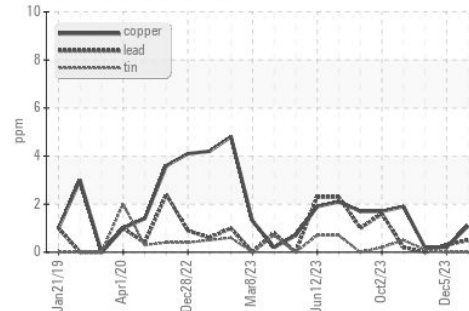
Ferrous Alloys



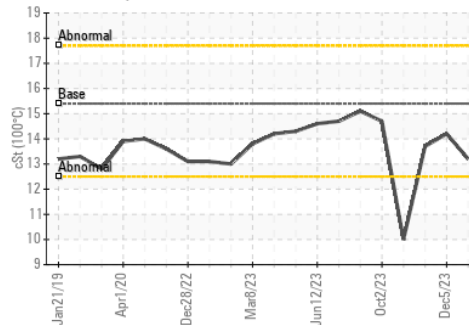
Viscosity @ 100°C



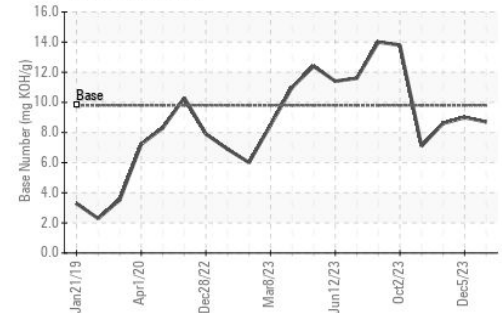
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0090322 **Received** : 22 Dec 2023
Lab Number : 06042857 **Diagnosed** : 26 Dec 2023
Unique Number : 10803465 **Diagnostician** : Jonathan Hester
Test Package : FLEET (Additional Tests: Glycol)

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)