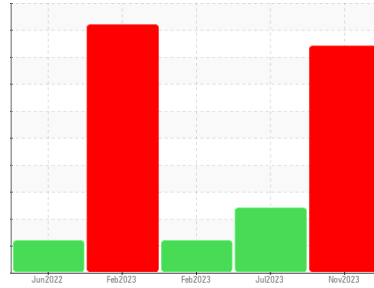




PROBLEM SUMMARY

Sample Rating Trend



GLYCOL



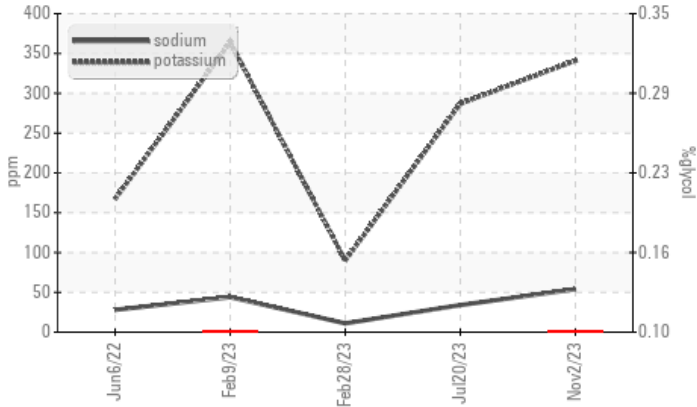
Machine Id
729091

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. We recommend that you drain the oil from the component if this has not already been done. We advise that you flush the component thoroughly before re-filling with oil. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	ABNORMAL	ABNORMAL
Sodium	ppm	ASTM D5185m		▲ 54	▲ 34	11
Potassium	ppm	ASTM D5185m >20		▲ 341	▲ 287	▲ 90
Glycol	%	*ASTM D2982		● 0.10	NEG	NEG

Customer Id: GFL652
 Sample No.: GFL0083880
 Lab Number: 05998342
 Test Package: FLEET



To manage this report scan the QR code

To discuss the diagnosis or test data:
 Wes Davis +1 905-569-8600 x223
wesd@wearcheck.ca

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.
Flush System	---	---	?	We advise that you flush the component thoroughly before re-filling with oil.
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

20 Jul 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. The BN result indicates that there is suitable alkalinity remaining in the oil.

view report



28 Feb 2023 Diag: Angela Borella

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. The BN result indicates that there is suitable alkalinity remaining in the oil.

view report



09 Feb 2023 Diag: Wes Davis

GLYCOL



We advise that you check for the source of the coolant leak. We recommend that you drain the oil from the component if this has not already been done. We advise that you flush the component thoroughly before re-filling with oil. We recommend an early resample to monitor this condition. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the component make and model with your next sample. Aluminum ppm levels are marginal. All other 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.

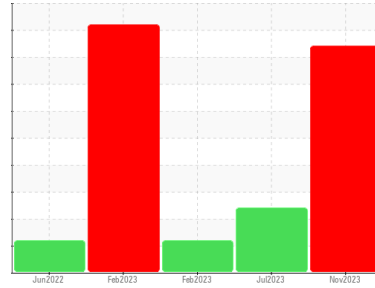
view report





OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL



Machine Id
729091

Component
Diesel Engine

Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

Recommendation

We advise that you check for the source of the coolant leak. We recommend that you drain the oil from the component if this has not already been done. We advise that you flush the component thoroughly before re-filling with oil. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

Contamination

Test for glycol is positive. There is a high concentration of glycol present in the oil.

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	GFL0083880	GFL0083838	GFL0061500
Sample Date	Client Info	02 Nov 2023	20 Jul 2023	28 Feb 2023
Machine Age	hrs	14389	0	0
Oil Age	hrs	14389	0	0
Oil Changed	Client Info	N/A	N/A	N/A
Sample Status		SEVERE	ABNORMAL	ABNORMAL

CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >5	<1.0	<1.0	<1.0

WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >100	24	20	13
Chromium	ppm ASTM D5185m >20	<1	<1	<1
Nickel	ppm ASTM D5185m >4	<1	0	<1
Titanium	ppm ASTM D5185m	0	0	0
Silver	ppm ASTM D5185m >3	<1	0	<1
Aluminum	ppm ASTM D5185m >20	5	6	5
Lead	ppm ASTM D5185m >40	<1	0	0
Copper	ppm ASTM D5185m >330	1	2	2
Tin	ppm ASTM D5185m >15	<1	0	0
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 0	9	0	8
Barium	ppm ASTM D5185m 0	0	2	0
Molybdenum	ppm ASTM D5185m 60	113	102	75
Manganese	ppm ASTM D5185m 0	<1	<1	<1
Magnesium	ppm ASTM D5185m 1010	944	944	902
Calcium	ppm ASTM D5185m 1070	1067	1127	1172
Phosphorus	ppm ASTM D5185m 1150	1015	1066	1039
Zinc	ppm ASTM D5185m 1270	1345	1272	1257
Sulfur	ppm ASTM D5185m 2060	3249	3177	3486

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	8	0	3
Sodium	ppm ASTM D5185m	54	34	11
Potassium	ppm ASTM D5185m >20	341	287	90
Glycol	% *ASTM D2982	0.10	NEG	NEG

INFRA-RED

method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	0.4	0.3	0.2
Nitration	Abs/cm *ASTM D7624 >20	9.6	9.0	6.2
Sulfation	Abs/.1mm *ASTM D7415 >30	19.2	19.7	18.6

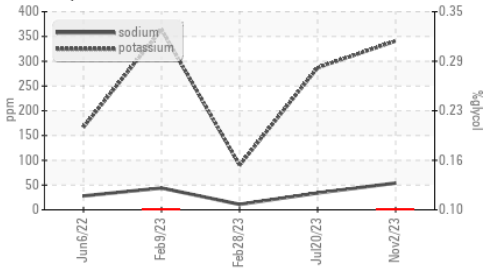
FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	14.5	15.7	14.1
Base Number (BN)	mg KOH/g ASTM D2896 9.8	8.6	7.7	8.8



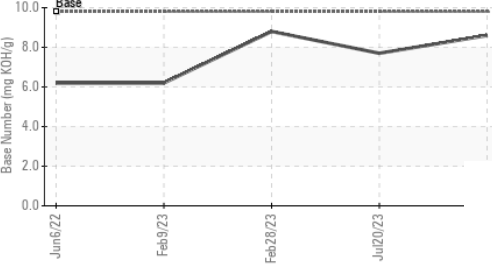
OIL ANALYSIS REPORT

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

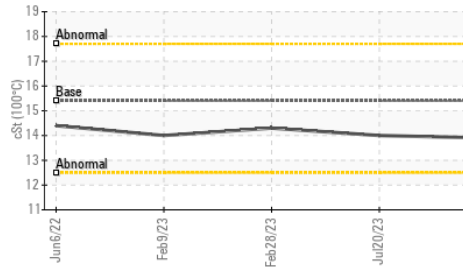
Base Number



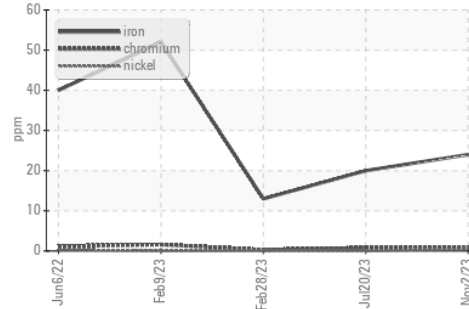
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.9	14.0

GRAPHS

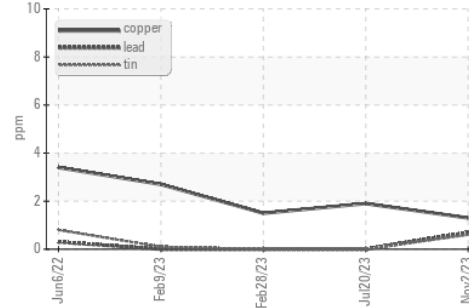
Viscosity @ 100°C



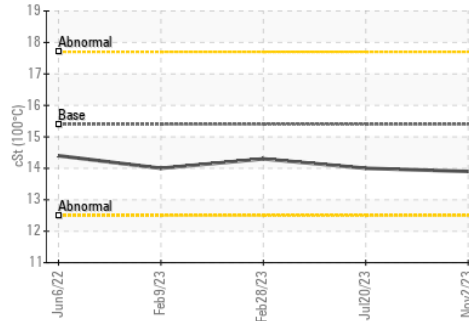
Ferrous Alloys



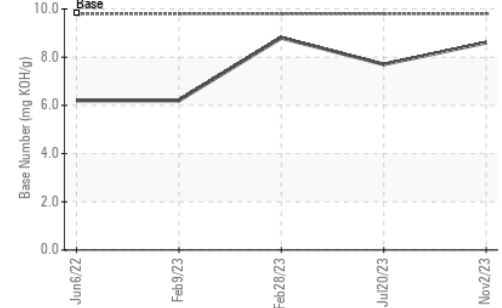
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0083880 **Received** : 03 Nov 2023
Lab Number : 05998342 **Diagnosed** : 07 Nov 2023
Unique Number : 10726702 **Diagnostician** : Wes Davis
Test Package : FLEET (Additional Tests: Glycol)

GFL Environmental - 652 - Fredericksburg Hauling
 10954 Houser Drive
 Fredericksburg, VA
 US 22408
 Contact: WILLIAM MILO
 wmilo@gflenv.com

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)

T:
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