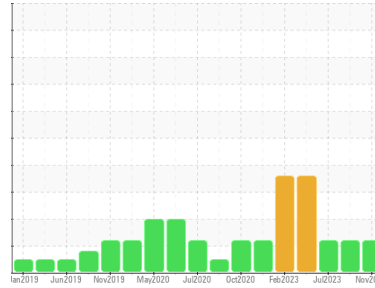




PROBLEM SUMMARY

Sample Rating Trend



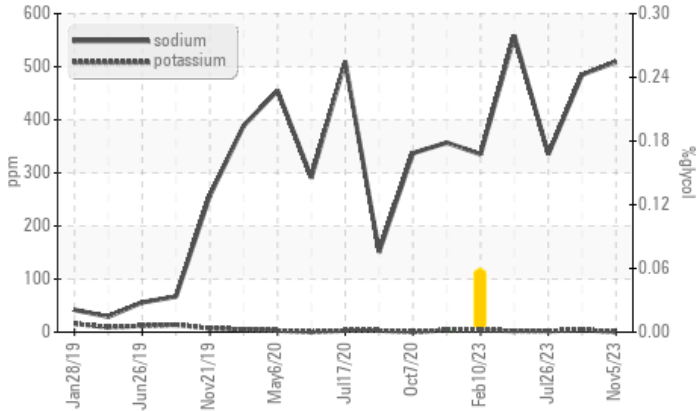
GLYCOL



Machine Id
723034-303005
 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 an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status	ABNORMAL	ABNORMAL	ABNORMAL
Sodium	▲ 509	▲ 485	▲ 335

Customer Id: GFL837
 Sample No.: GFL0098648
 Lab Number: 05999720
 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
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

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

[view report](#)



26 Jul 2023 Diag: Jonathan Hester

GLYCOL



We advise that you check for possible 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. The BN result indicates that there is suitable alkalinity remaining in the oil.

[view report](#)



12 Jun 2023 Diag: Jonathan Hester

DIRT



We advise that you check for the source of the coolant leak. Check for low coolant level. We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. 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. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. The BN result indicates that there is suitable alkalinity remaining in the oil.

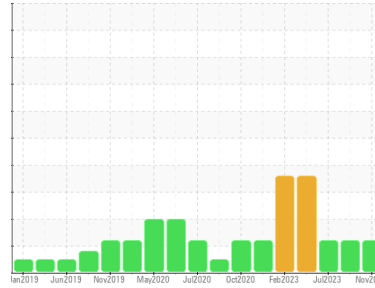
[view report](#)





OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL



Machine Id
723034-303005
 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 an early resample to monitor this condition.

Wear

All 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	GFL0098648	GFL0093722	GFL0087697
Sample Date	Client Info	05 Nov 2023	09 Oct 2023	26 Jul 2023
Machine Age	hrs	21770	21642	21197
Oil Age	hrs	0	0	0
Oil Changed	Client Info	N/A	Not Changd	Changed
Sample Status		ABNORMAL	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 >80	83	75	42
Chromium	ppm	ASTM D5185m >5	3	3	2
Nickel	ppm	ASTM D5185m >2	<1	1	<1
Titanium	ppm	ASTM D5185m	0	<1	<1
Silver	ppm	ASTM D5185m >3	0	0	0
Aluminum	ppm	ASTM D5185m >30	8	8	5
Lead	ppm	ASTM D5185m >30	5	5	<1
Copper	ppm	ASTM D5185m >150	3	4	2
Tin	ppm	ASTM D5185m >5	1	1	<1
Vanadium	ppm	ASTM D5185m	<1	<1	<1
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m 0	19	14	9
Barium	ppm	ASTM D5185m 0	0	12	0
Molybdenum	ppm	ASTM D5185m 60	91	90	73
Manganese	ppm	ASTM D5185m 0	<1	1	<1
Magnesium	ppm	ASTM D5185m 1010	1246	1189	1054
Calcium	ppm	ASTM D5185m 1070	1372	1322	1190
Phosphorus	ppm	ASTM D5185m 1150	1352	1234	1036
Zinc	ppm	ASTM D5185m 1270	1620	1505	1362
Sulfur	ppm	ASTM D5185m 2060	3181	3096	3338

CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >20	18	18	13
Sodium	ppm	ASTM D5185m	▲ 509	▲ 485	▲ 335
Potassium	ppm	ASTM D5185m >20	0	5	2
Glycol	%	*ASTM D2982	NEG	NEG	NEG

INFRA-RED

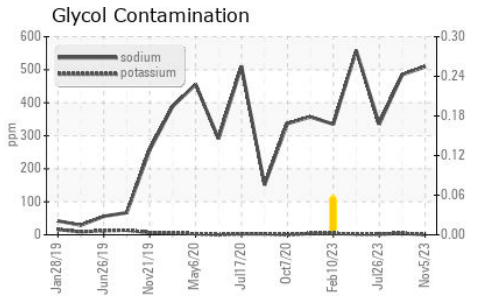
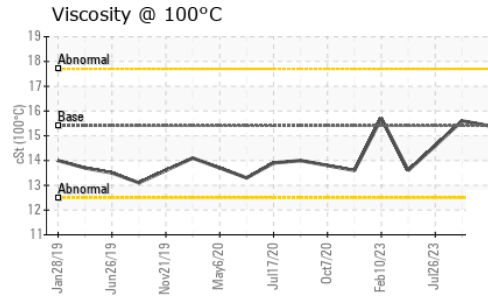
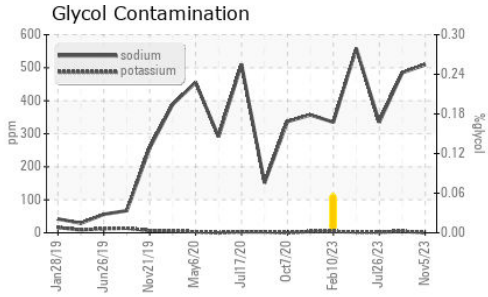
method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844 >3	2.3	2.5	2.3
Nitration	Abs/cm	*ASTM D7624 >20	14.6	14.4	13.9
Sulfation	Abs/.1mm	*ASTM D7415 >30	29.7	28.8	25.8

FLUID DEGRADATION

method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414 >25	24.5	23.2	21.7
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	9.7	9.6	9.4



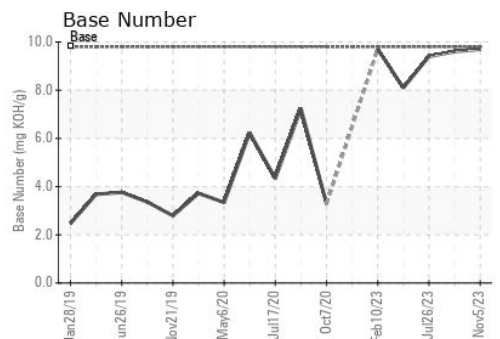
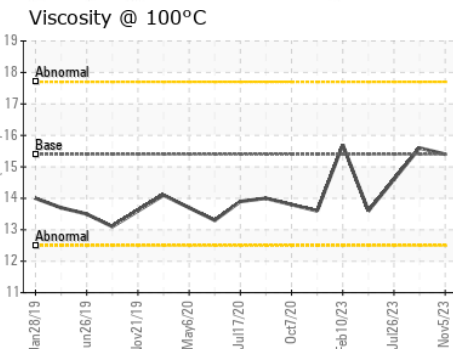
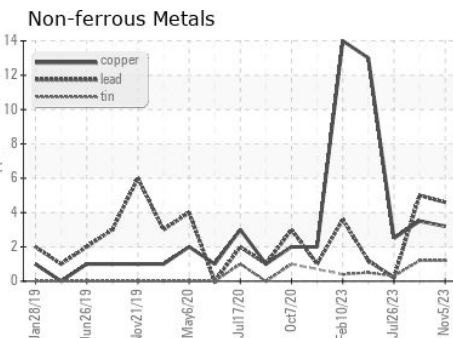
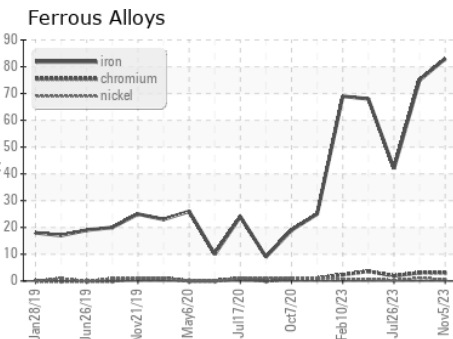
OIL ANALYSIS REPORT



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	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	15.6	14.6

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0098648 **Received** : 06 Nov 2023
Lab Number : 05999720 **Diagnosed** : 08 Nov 2023
Unique Number : 10728080 **Diagnostician** : Jonathan Hester
Test Package : FLEET (Additional Tests: Glycol)

GFL Environmental - 837 - Harrison TS
 22820 S State Route 291
 Harrisonville, MO
 US 64701
 Contact: BRYAN SWANSON
 bryanswanson@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:
F: