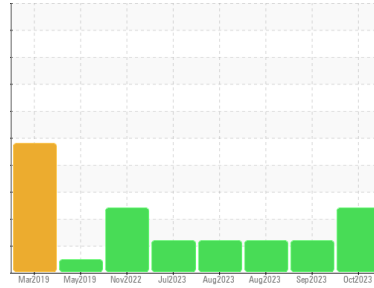




PROBLEM SUMMARY

Sample Rating Trend



GLYCOL



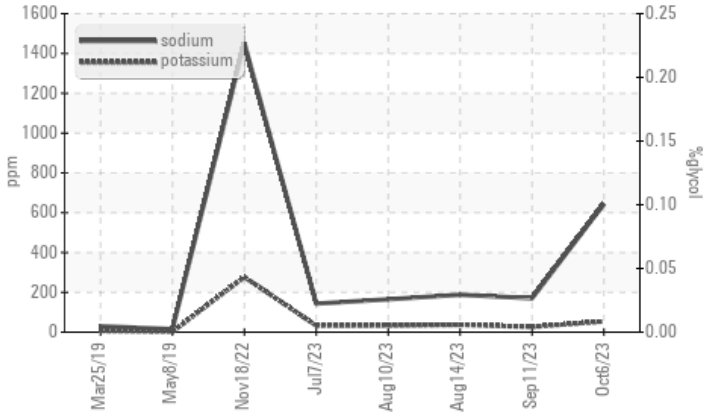
Machine Id
924022-260240

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. 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			ABNORMAL	ATTENTION	ATTENTION
Sodium	ppm	ASTM D5185m	▲ 644	▲ 170	▲ 188
Potassium	ppm	ASTM D5185m >20	▲ 54	26	37

Customer Id: GFL820
 Sample No.: GFL0088233
 Lab Number: 05976784
 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	---	---	?	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

11 Sep 2023 Diag: Jonathan Hester

GLYCOL



No corrective action is recommended at this time. Resample at the next service interval to monitor. All component wear rates are normal. Sodium and/or potassium levels remain elevated. Test for glycol is negative. 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](#)



14 Aug 2023 Diag: Jonathan Hester

GLYCOL



No corrective action is recommended at this time. Resample at the next service interval to monitor. All component wear rates are normal. Sodium and/or potassium levels remain elevated. Test for glycol is negative. 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](#)



10 Aug 2023 Diag: Jonathan Hester

GLYCOL



No corrective action is recommended at this time. Resample at the next service interval to monitor. All component wear rates are normal. Sodium and/or potassium levels remain elevated. Test for glycol is negative. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

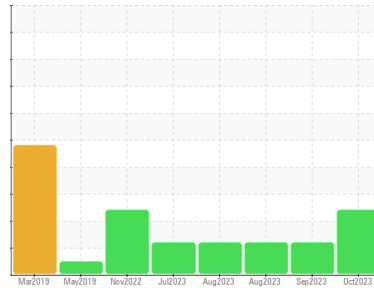
[view report](#)





OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL



Machine Id
924022-260240

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. 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.

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		GFL0088233	GFL0088245	GFL0088160
Sample Date	Client Info		06 Oct 2023	11 Sep 2023	14 Aug 2023
Machine Age	hrs	Client Info	12591	0	0
Oil Age	hrs	Client Info	9903	0	0
Oil Changed	Client Info		Changed	N/A	N/A
Sample Status			ABNORMAL	ATTENTION	ATTENTION

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	9	10	22
Chromium	ppm	ASTM D5185m >20	0	<1	2
Nickel	ppm	ASTM D5185m >4	0	0	0
Titanium	ppm	ASTM D5185m	0	0	0
Silver	ppm	ASTM D5185m >3	0	0	0
Aluminum	ppm	ASTM D5185m >20	3	4	6
Lead	ppm	ASTM D5185m >40	0	<1	0
Copper	ppm	ASTM D5185m >330	<1	<1	0
Tin	ppm	ASTM D5185m >15	0	0	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	<1	0	2
Barium	ppm	ASTM D5185m 0	0	0	0
Molybdenum	ppm	ASTM D5185m 60	122	76	89
Manganese	ppm	ASTM D5185m 0	0	<1	0
Magnesium	ppm	ASTM D5185m 1010	881	926	1151
Calcium	ppm	ASTM D5185m 1070	943	1080	1273
Phosphorus	ppm	ASTM D5185m 1150	918	1007	1234
Zinc	ppm	ASTM D5185m 1270	1131	1235	1646
Sulfur	ppm	ASTM D5185m 2060	2789	3491	4898

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	6	4	6
Sodium	ppm	ASTM D5185m	▲ 644	▲ 170	▲ 188
Potassium	ppm	ASTM D5185m >20	▲ 54	26	37
Glycol	%	*ASTM D2982	NEG	NEG	NEG

INFRA-RED

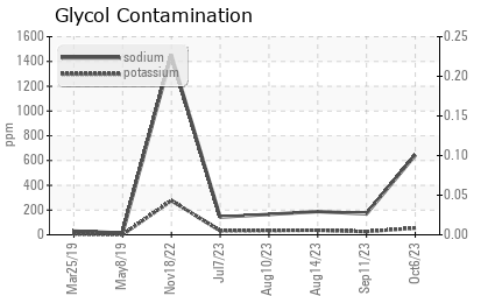
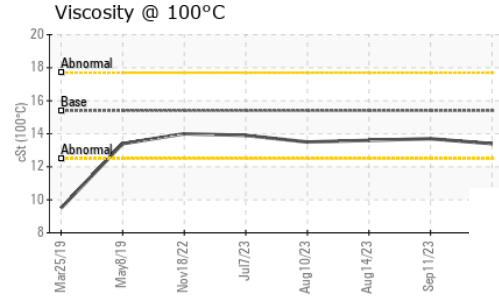
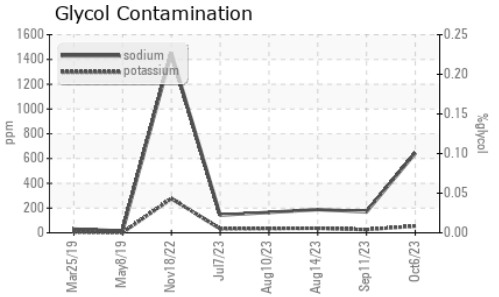
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.3	0	0.4
Nitration	Abs/cm	*ASTM D7624 >20	7.9	7.5	7.3
Sulfation	Abs/.1mm	*ASTM D7415 >30	17.8	21.4	19.1

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	13.1	15.0	14.1
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	10.3	9.4	8.8



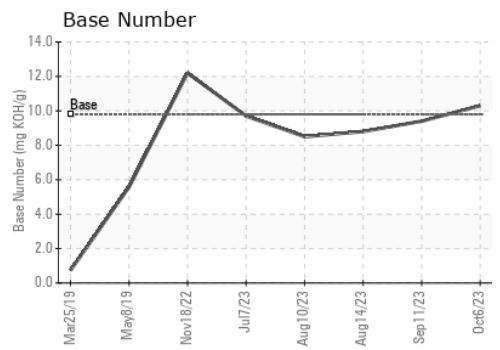
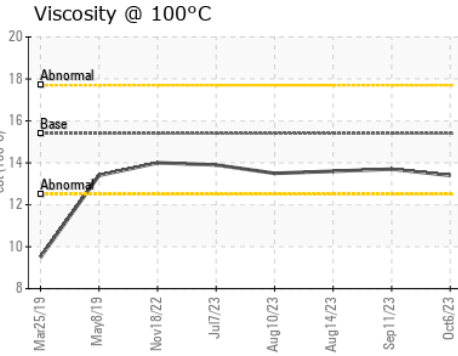
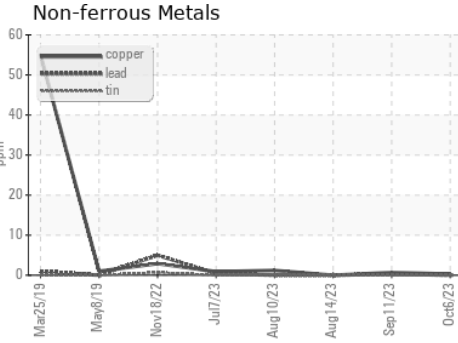
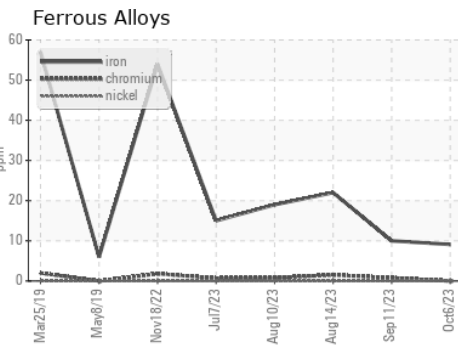
OIL ANALYSIS REPORT



PARAMETER	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

PARAMETER	method	limit/base	current	history1	history2
FLUID PROPERTIES					
Visc @ 100°C	cSt	ASTM D445	15.4	13.4	13.7

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0088233 **Received** : 12 Oct 2023
Lab Number : 05976784 **Diagnosed** : 16 Oct 2023
Unique Number : 10688734 **Diagnostician** : Jonathan Hester
Test Package : FLEET (Additional Tests: Glycol)

GFL Environmental - 820 - Joplin Hauling
 3700 West 7th Street
 Joplin, MO
 US 64801
 Contact: James Jarrett
 jjarrett@gflenv.com
 T: (417)310-2802
 F:

Certificate L2367
 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)