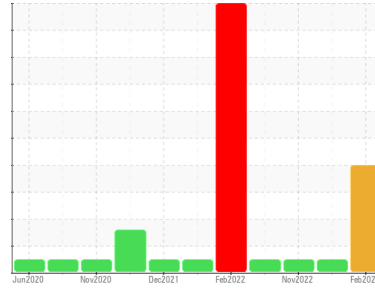




OIL ANALYSIS REPORT

Sample Rating Trend



DIRT



Area
(EAQ340)

Machine Id
10976

Component
Diesel Engine

Fluid
PETRO CANADA DURON SHP 15W40 (8 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. Elemental level of silicon (Si) above normal indicating ingress of seal material.

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	GFL0089604	GFL0083037	GFL0066559
Sample Date	Client Info	27 Feb 2024	11 Aug 2023	25 Nov 2022
Machine Age	days	0	0	90
Oil Age	days	0	0	90
Oil Changed	Client Info	Not Changed	Not Changed	N/A
Sample Status		ABNORMAL	NORMAL	NORMAL

CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >3.0	<1.0	<1.0	<1.0
Water	WC Method >0.2	NEG	NEG	NEG

WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >75	124	3	16
Chromium	ppm ASTM D5185m >5	2	<1	<1
Nickel	ppm ASTM D5185m >4	<1	0	0
Titanium	ppm ASTM D5185m >2	<1	<1	1
Silver	ppm ASTM D5185m >2	0	<1	<1
Aluminum	ppm ASTM D5185m >15	8	2	2
Lead	ppm ASTM D5185m >25	1	0	<1
Copper	ppm ASTM D5185m >100	16	1	2
Tin	ppm ASTM D5185m >4	<1	0	<1
Vanadium	ppm ASTM D5185m	<1	0	0
Cadmium	ppm ASTM D5185m	0	0	0

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	124	5	11
Barium	ppm ASTM D5185m 0	0	0	0
Molybdenum	ppm ASTM D5185m 60	124	58	67
Manganese	ppm ASTM D5185m 0	2	<1	<1
Magnesium	ppm ASTM D5185m 1010	866	611	916
Calcium	ppm ASTM D5185m 1070	967	1293	1124
Phosphorus	ppm ASTM D5185m 1150	970	959	983
Zinc	ppm ASTM D5185m 1270	1088	1122	1218
Sulfur	ppm ASTM D5185m 2060	3040	3103	3512

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	▲ 77	16	5
Sodium	ppm ASTM D5185m	▲ 2082	<1	6
Potassium	ppm ASTM D5185m >20	10	1	0
Glycol	% *ASTM D2982	NEG	NEG	NEG

INFRA-RED

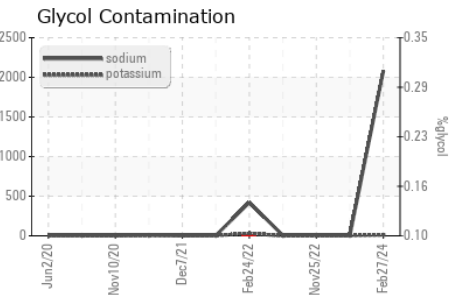
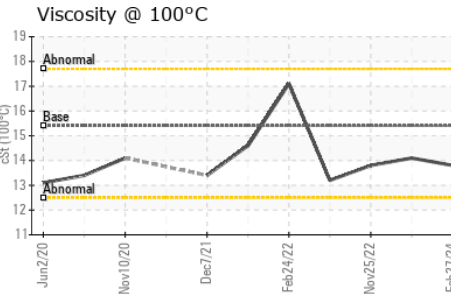
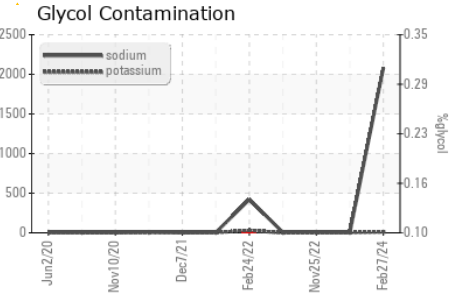
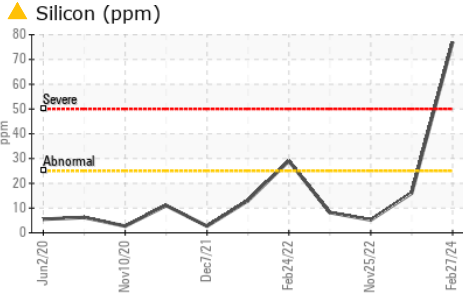
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >6	2.2	0.1	1
Nitration	Abs/cm *ASTM D7624 >20	11.3	4.0	9.3
Sulfation	Abs/.1mm *ASTM D7415 >30	23.4	16.6	21.9

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	13.8	12.4	16.6
Base Number (BN)	mg KOH/g ASTM D2896 9.8	▲ 15.8	9.2	9.7



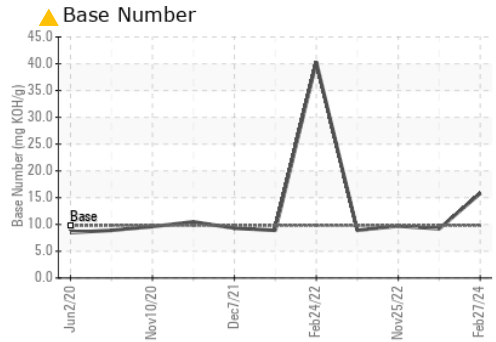
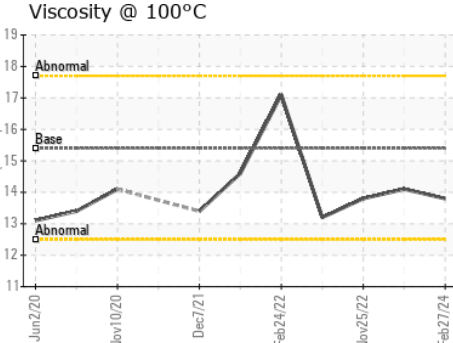
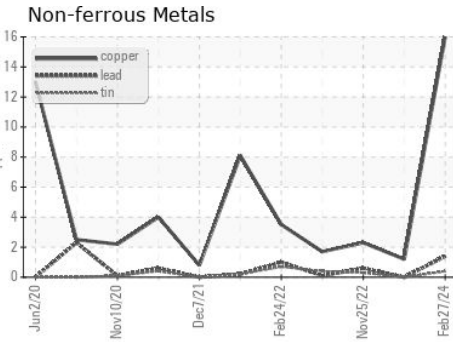
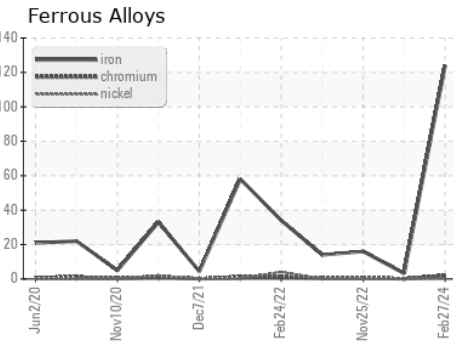
OIL ANALYSIS REPORT



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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.8	14.1

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0089604
Lab Number : 06111057
Unique Number : 10914554
Test Package : FLEET (Additional Tests: Glycol)

GFL Environmental - 072 - Americus - Transwaste
 361 McMath Mill Road
 Americus, GA
 US 31719
 Contact: RICHARD HEINZERLING
 richard.heinzerling@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: (229)924-3669

F: