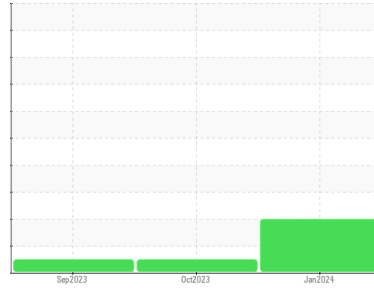




OIL ANALYSIS REPORT

Sample Rating Trend

WATER



Area
{UNASSIGNED}
Machine Id
934031
Component
Natural Gas Engine
Fluid
PETRO CANADA DURON SHP 15W40 (8)

DIAGNOSIS

▲ Recommendation

We advise that you check for the source of water entry. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

▲ Contamination

There is a light concentration of water present in the oil. Moderate concentration of visible dirt/debris present in the oil.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		GFL0107262	GFL0097885	GFL0094335
Sample Date	Client Info		08 Jan 2024	04 Oct 2023	14 Sep 2023
Machine Age	hrs	Client Info	746	293	147
Oil Age	hrs	Client Info	153	293	147
Oil Changed	Client Info		Not Chngd	Not Chngd	Not Chngd
Sample Status			ABNORMAL	NORMAL	NORMAL

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >50	15	44	37
Chromium	ppm	ASTM D5185m >4	<1	0	<1
Nickel	ppm	ASTM D5185m >2	<1	0	<1
Titanium	ppm	ASTM D5185m	0	0	<1
Silver	ppm	ASTM D5185m >3	<1	0	0
Aluminum	ppm	ASTM D5185m >9	6	16	8
Lead	ppm	ASTM D5185m >30	<1	0	<1
Copper	ppm	ASTM D5185m >35	3	16	16
Tin	ppm	ASTM D5185m >4	1	0	<1
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	0	14	35
Barium	ppm	ASTM D5185m 0	0	0	0
Molybdenum	ppm	ASTM D5185m 60	59	47	47
Manganese	ppm	ASTM D5185m 0	2	12	13
Magnesium	ppm	ASTM D5185m 1010	934	691	757
Calcium	ppm	ASTM D5185m 1070	1022	967	1103
Phosphorus	ppm	ASTM D5185m 1150	1000	682	761
Zinc	ppm	ASTM D5185m 1270	1260	829	881
Sulfur	ppm	ASTM D5185m 2060	2981	2206	3054

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >+100	7	32	32
Sodium	ppm	ASTM D5185m	2	5	5
Potassium	ppm	ASTM D5185m >20	13	62	31
Water	%	ASTM D6304 >0.1	▲ 0.256	---	---
ppm Water	ppm	ASTM D6304 >1000	▲ 2560	---	---

INFRA-RED

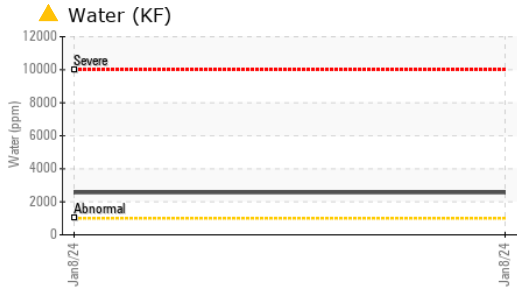
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	0	0	0.1
Nitration	Abs/cm	*ASTM D7624 >20	7.7	10.1	8.3
Sulfation	Abs/.1mm	*ASTM D7415 >30	18.2	26.0	25.8

FLUID DEGRADATION

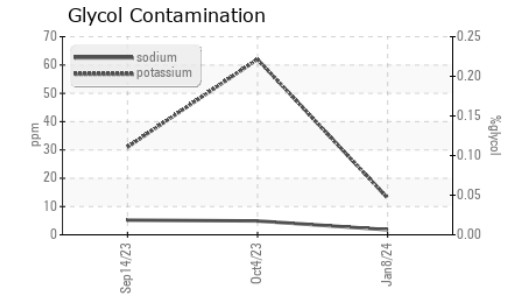
	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	15.5	27.0	25.7
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	7.8	4.0	5.8



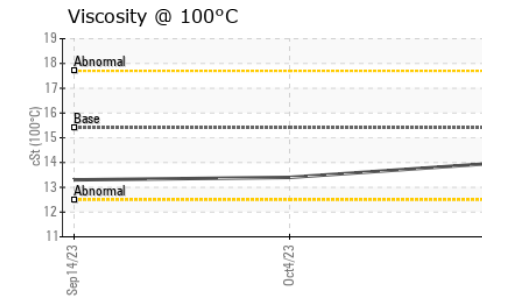
OIL ANALYSIS REPORT



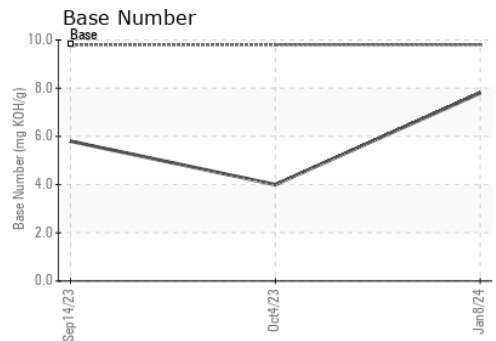
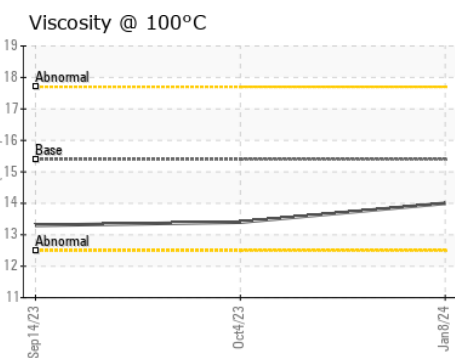
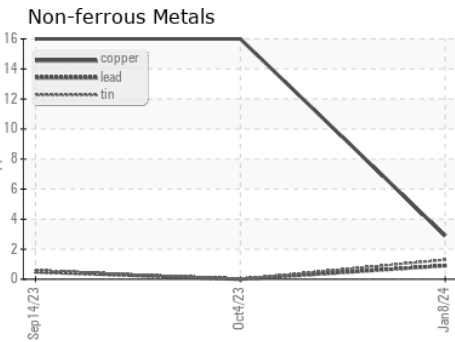
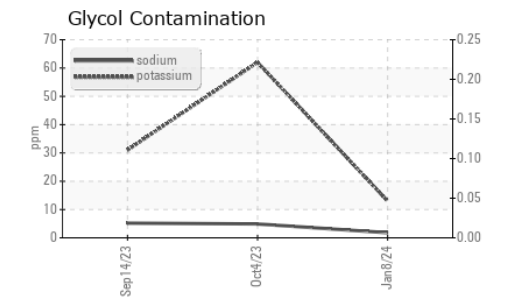
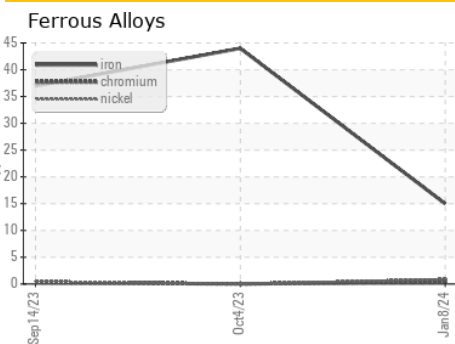
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	0.2%	NEG
Free Water	scalar	*Visual		NEG	NEG



FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	14.0	13.4



GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0107262 **Recieved** : 11 Jan 2024
Lab Number : 06057856 **Diagnosed** : 15 Jan 2024
Unique Number : 10829238 **Diagnostician** : Jonathan Hester
Test Package : FLEET (Additional Tests: Glycol, KF)

GFL Environmental - 010 - Stockbridge
 1280 Rum Creek Parkway
 Stockbridge, GA
 US 30281
 Contact: JOSHUA TINKER
 joshuatinker@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: