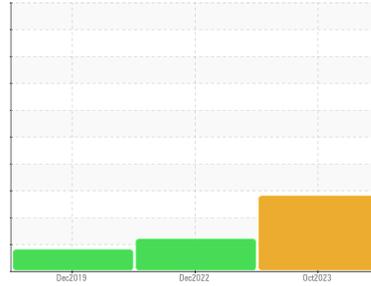




PROBLEM SUMMARY

Sample Rating Trend



FUEL

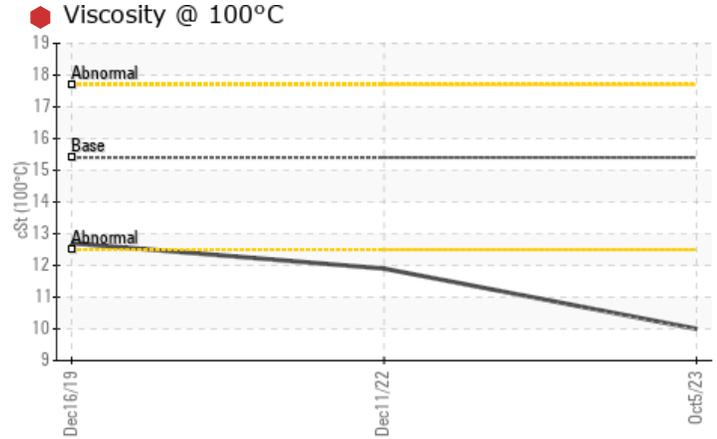
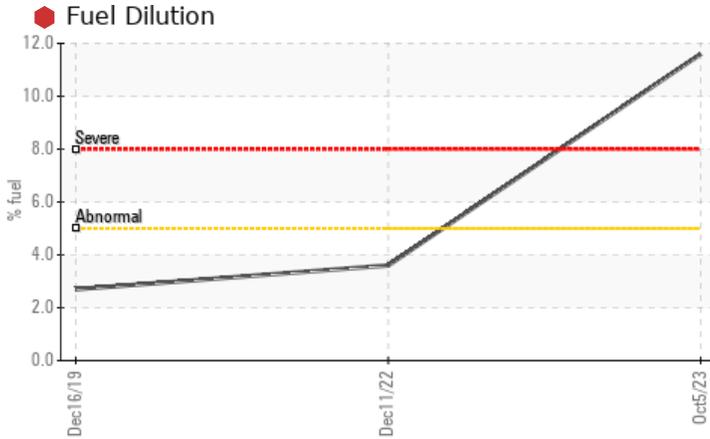


Machine Id
226042-670479

Component
Diesel Engine

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

COMPONENT CONDITION SUMMARY



RECOMMENDATION

We advise that you check the fuel injection system. We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	ATTENTION	MARGINAL
Fuel	%	ASTM D3524	>5	11.6	3.6	2.7
Visc @ 100°C	cSt	ASTM D445	15.4	10.0	11.9	12.7

Customer Id: GFL821
Sample No.: GFL0090146
Lab Number: 05972500
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.
Resample	---	---	?	We recommend an early resample to monitor this condition.
Check Fuel/injector System	---	---	?	We advise that you check the fuel injection system.

HISTORICAL DIAGNOSIS

11 Dec 2022 Diag: Jonathan Hester

FUEL



The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. All component wear rates are normal. Light fuel dilution occurring. The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

[view report](#)



16 Dec 2019 Diag: Wes Davis

FUEL



No corrective action is recommended at this time. Resample at the next service interval to monitor. All component wear rates are normal. Light fuel dilution occurring. No other contaminants were detected in the oil. The condition of the oil is acceptable for the time in service.

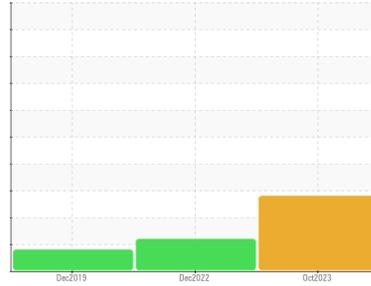
[view report](#)





OIL ANALYSIS REPORT

Sample Rating Trend



FUEL



Machine Id
226042-670479

Component
Diesel Engine

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

DIAGNOSIS

Recommendation

We advise that you check the fuel injection system. We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

Contamination

There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	GFL0090146	GFL0051388	GFLH-279848
Sample Date	Client Info	05 Oct 2023	11 Dec 2022	16 Dec 2019
Machine Age	hrs	5427	5187	132330
Oil Age	hrs	150	600	5000
Oil Changed	Client Info	Not Changed	Changed	Changed
Sample Status		SEVERE	ATTENTION	MARGINAL

CONTAMINATION

method	limit/base	current	history1	history2
Glycol	WC Method	NEG	NEG	NEG

WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m >100	26	37	47
Chromium	ppm	ASTM D5185m >20	<1	<1	1
Nickel	ppm	ASTM D5185m >2	0	0	0
Titanium	ppm	ASTM D5185m >2	0	0	0
Silver	ppm	ASTM D5185m >2	0	0	0
Aluminum	ppm	ASTM D5185m >25	9	3	12
Lead	ppm	ASTM D5185m >40	<1	<1	0
Copper	ppm	ASTM D5185m >330	3	2	1
Tin	ppm	ASTM D5185m >15	0	<1	0
Antimony	ppm	ASTM D5185m	---	---	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	5	<1	264
Barium	ppm	ASTM D5185m 0	0	0	0
Molybdenum	ppm	ASTM D5185m 60	50	56	132
Manganese	ppm	ASTM D5185m 0	<1	<1	0
Magnesium	ppm	ASTM D5185m 1010	763	808	681
Calcium	ppm	ASTM D5185m 1070	845	1055	1545
Phosphorus	ppm	ASTM D5185m 1150	842	927	698
Zinc	ppm	ASTM D5185m 1270	1035	1118	839
Sulfur	ppm	ASTM D5185m 2060	2891	2606	---
Lithium	ppm	ASTM D5185m	---	---	0

CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >25	8	6	11
Sodium	ppm	ASTM D5185m	39	1	2
Potassium	ppm	ASTM D5185m >20	6	2	1
Fuel	%	ASTM D3524 >5	11.6	3.6	2.7

INFRA-RED

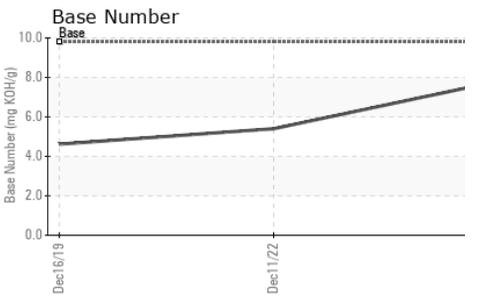
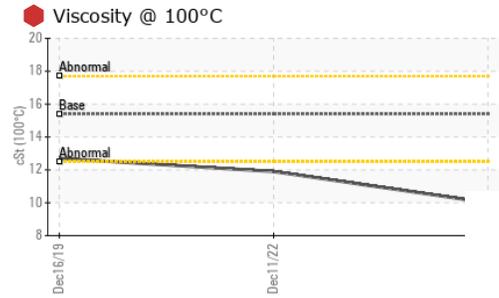
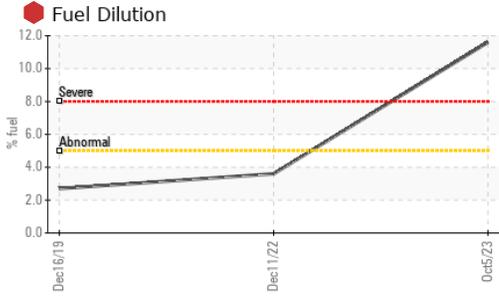
method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844 >3	0.9	0.7	0
Nitration	Abs/cm	*ASTM D7624 >20	7.7	12.1	11
Sulfation	Abs/.1mm	*ASTM D7415 >30	20.1	25.6	---

FLUID DEGRADATION

method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414 >25	15.6	22.9	16
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	7.7	5.4	4.62



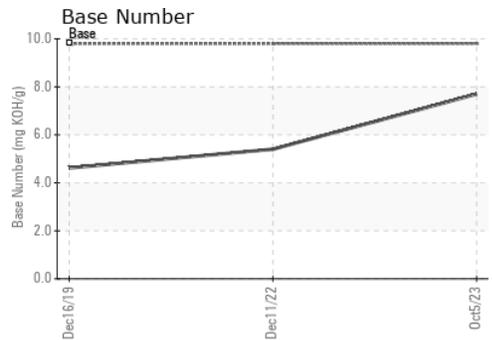
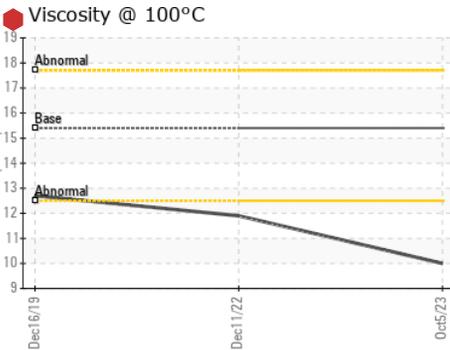
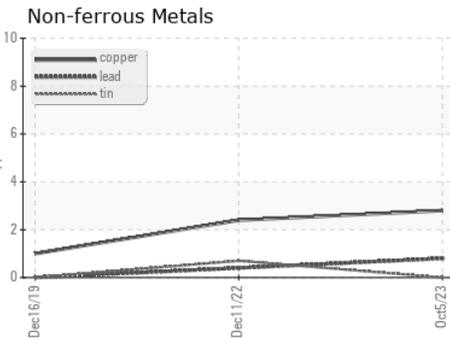
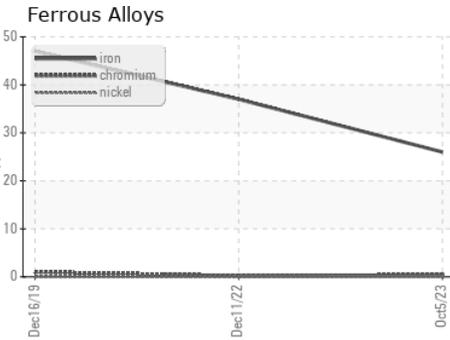
OIL ANALYSIS REPORT



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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4 ◆ 10.0	11.9 ▲	12.7

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0090146 **Received** : 09 Oct 2023
Lab Number : 05972500 **Diagnosed** : 10 Oct 2023
Unique Number : 10684450 **Diagnostician** : Wes Davis
Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

GFL Environmental - 821 - Ozarks Hauling
 33924 Olath Drive
 Lebanon, MO
 US 65536
 Contact: Landen Johnson
 landen.johnson@gflenv.com
 T: (417)664-0010
 F:

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)