



PROBLEM SUMMARY

Sample Rating Trend

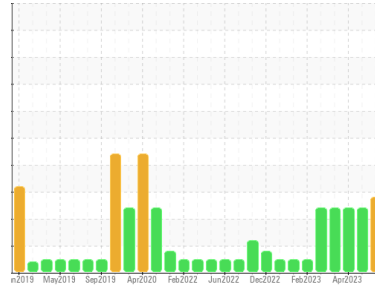
FUEL



Machine Id
427092-402367

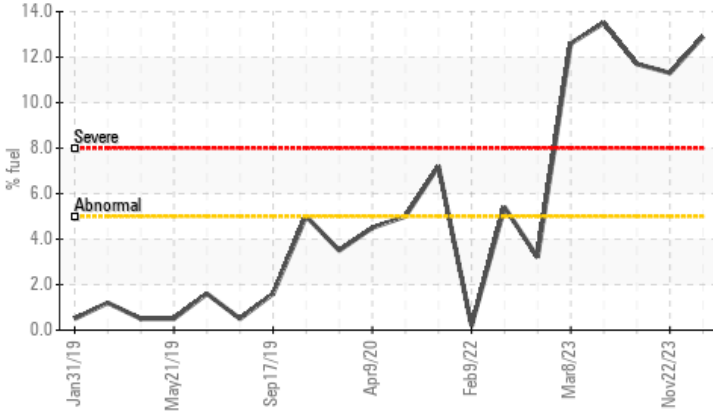
Component
Diesel Engine

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

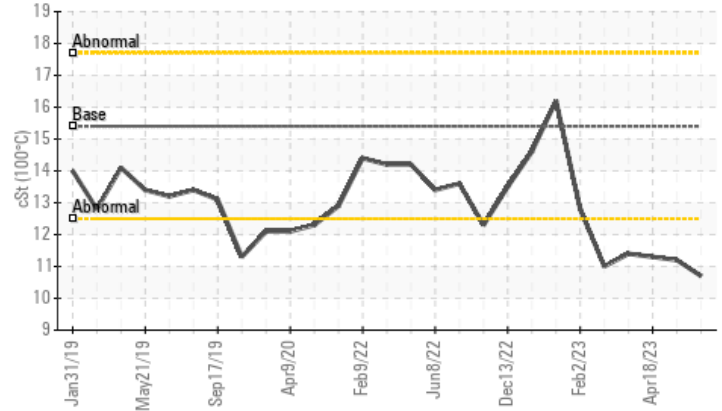


COMPONENT CONDITION SUMMARY

Fuel Dilution



Viscosity @ 100°C



RECOMMENDATION

We advise that you check the fuel injection system. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	SEVERE	SEVERE
Fuel	%	ASTM D3524	>5	12.9	11.3	11.7
Visc @ 100°C	cSt	ASTM D445	15.4	10.7	11.2	11.3

Customer Id: GFL891
Sample No.: GFL0093589
Lab Number: 06040319
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
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

22 Nov 2023 Diag: Wes Davis

FUEL



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. Metal levels are typical for a new component breaking in. There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants.

[view report](#)



18 Apr 2023 Diag: Wes Davis

FUEL



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. All component wear rates are normal. There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants.

[view report](#)



30 Mar 2023 Diag: Don Baldrige

FUEL



We advise that you check the fuel injection system. We recommend that you drain the oil and perform a filter service on this component if not already done. We recommend an early resample to monitor this condition. All component wear rates are normal. There is a high amount of fuel present in the oil. Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants.

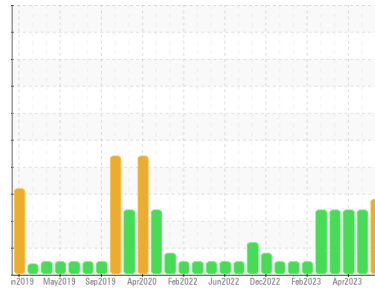
[view report](#)





OIL ANALYSIS REPORT

Sample Rating Trend



FUEL



Machine Id
427092-402367

Component
Diesel Engine

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

DIAGNOSIS

Recommendation

We advise that you check the fuel injection system. The oil 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

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		GFL0093589	GFL0093600	GFL0078052
Sample Date	Client Info		19 Dec 2023	22 Nov 2023	18 Apr 2023
Machine Age	hrs	Client Info	17903	17732	451423
Oil Age	hrs	Client Info	643	472	0
Oil Changed	Client Info		Changed	Not Changd	Not Changd
Sample Status			SEVERE	SEVERE	SEVERE

CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.2	NEG	NEG	NEG
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	17	12	21
Chromium	ppm	ASTM D5185m >20	<1	<1	1
Nickel	ppm	ASTM D5185m >4	0	0	0
Titanium	ppm	ASTM D5185m	<1	<1	0
Silver	ppm	ASTM D5185m >3	0	0	0
Aluminum	ppm	ASTM D5185m >20	1	1	3
Lead	ppm	ASTM D5185m >40	3	2	5
Copper	ppm	ASTM D5185m >330	<1	<1	<1
Tin	ppm	ASTM D5185m >15	0	0	<1
Vanadium	ppm	ASTM D5185m	<1	<1	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	0	0	0
Barium	ppm	ASTM D5185m 0	0	0	0
Molybdenum	ppm	ASTM D5185m 60	51	53	55
Manganese	ppm	ASTM D5185m 0	0	<1	<1
Magnesium	ppm	ASTM D5185m 1010	770	879	849
Calcium	ppm	ASTM D5185m 1070	847	930	991
Phosphorus	ppm	ASTM D5185m 1150	799	850	922
Zinc	ppm	ASTM D5185m 1270	971	1167	1170
Sulfur	ppm	ASTM D5185m 2060	2287	2665	2808

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	3	2	4
Sodium	ppm	ASTM D5185m	4	4	2
Potassium	ppm	ASTM D5185m >20	0	<1	2
Fuel	%	ASTM D3524 >5	12.9	11.3	11.7

INFRA-RED

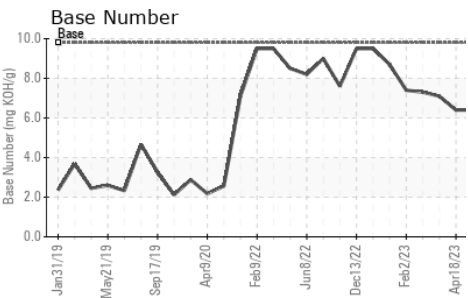
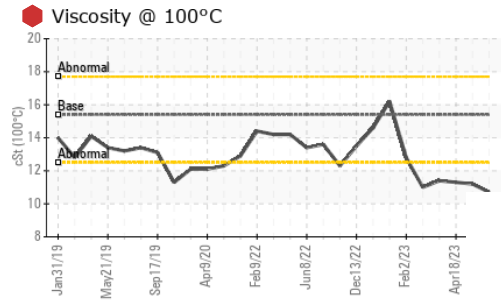
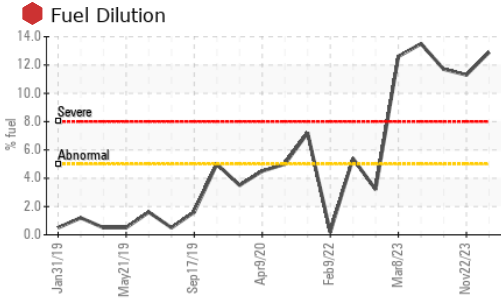
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.5	0.4	0.6
Nitration	Abs/cm	*ASTM D7624 >20	11.5	10.5	12.2
Sulfation	Abs/.1mm	*ASTM D7415 >30	22.3	21.2	22.9

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	21.4	19.4	22.3
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	5.9	6.4	6.4



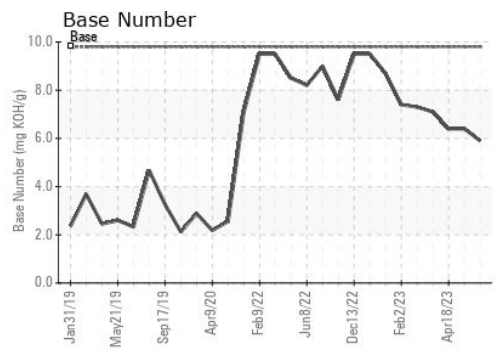
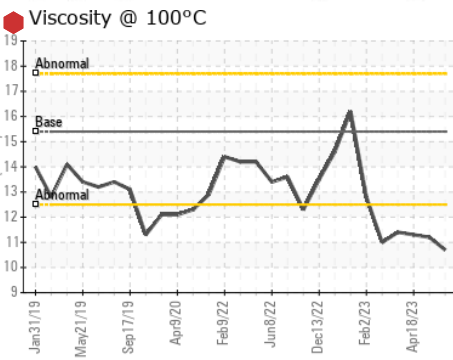
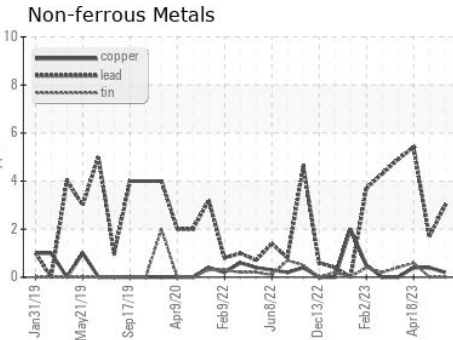
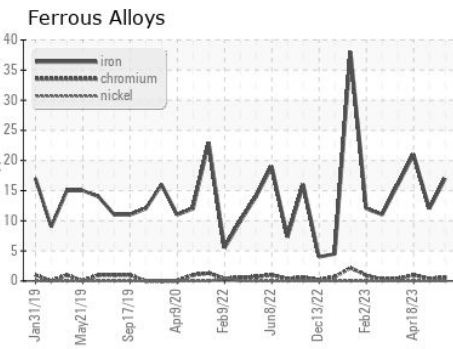
OIL ANALYSIS REPORT



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	10.7	11.2

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0093589 **Received** : 20 Dec 2023
Lab Number : 06040319 **Diagnosed** : 22 Dec 2023
Unique Number : 10795548 **Diagnostician** : Wes Davis
Test Package : FLEET (Additional Tests: PercentFuel)

GFL Environmental - 891 - Oklahoma City Hauling
 1001 South Rockwell
 Oklahoma City, OK
 US 73128
 Contact: Andy Smith
 andrew.smith@gflenv.com
 T: (405)306-1651
 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)