



PROBLEM SUMMARY

Sample Rating Trend

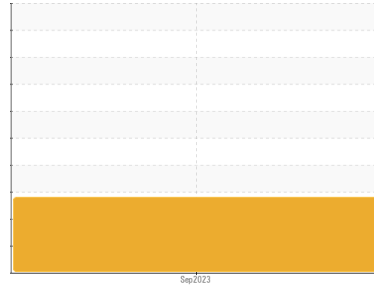
FUEL



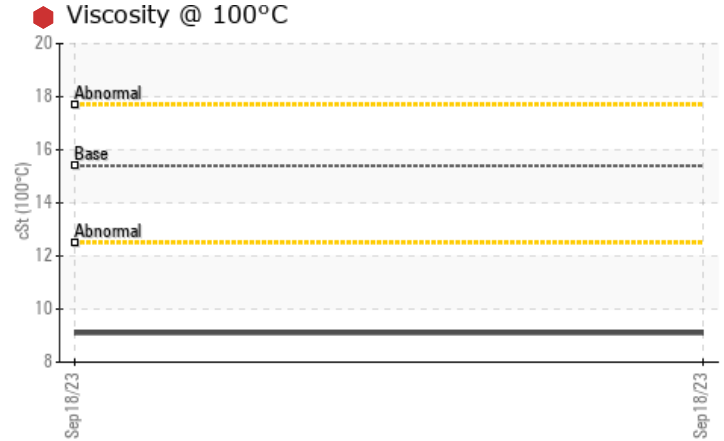
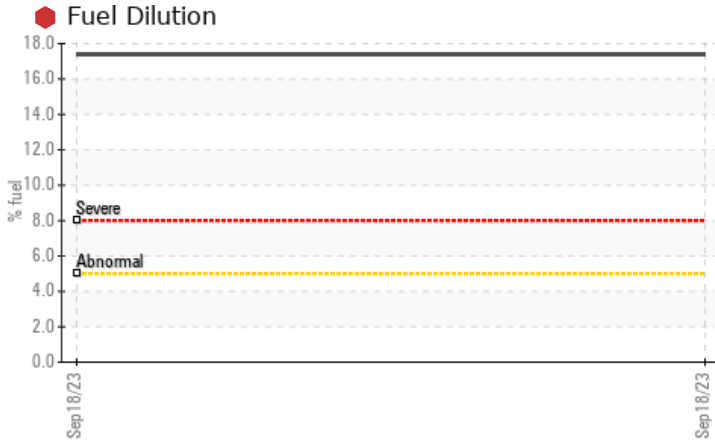
Machine Id
13001

Component
Diesel Engine

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



COMPONENT CONDITION SUMMARY



RECOMMENDATION

We advise that you check the fuel injection system. 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				SEVERE	---	---
Fuel	%	ASTM D3524	>5	17.4	---	---
Visc @ 100°C	cSt	ASTM D445	15.4	9.1	---	---

Customer Id: GFL960
Sample No.: GFL0087932
Lab Number: 05964432
Test Package: FLEET



To manage this report scan the QR code

To discuss the diagnosis or test data:
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To change component or sample information:
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RECOMMENDED ACTIONS

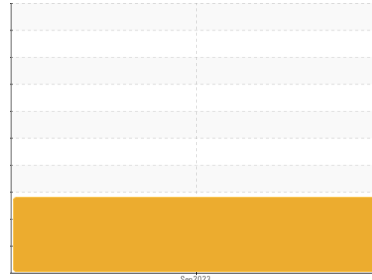
Action	Status	Date	Done By	Description
Change Fluid	---	---	?	Oil and filter change at the time of sampling has been noted.
Change Filter	---	---	?	Oil and filter change at the time of sampling has been noted.
Resample	---	---	?	We recommend an early resample to monitor this condition.
Check Fuel/injector System	---	---	?	We advise that you check the fuel injection system.

HISTORICAL DIAGNOSIS



OIL ANALYSIS REPORT

Sample Rating Trend



FUEL



Machine Id
13001

Component
Diesel Engine

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

DIAGNOSIS

Recommendation

We advise that you check the fuel injection system. 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

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

Fluid Condition

The oil viscosity is lower than normal. Fuel is present in the oil and is lowering the viscosity. 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	GFL0087932	---	---
Sample Date	Client Info	18 Sep 2023	---	---
Machine Age	hrs	Client Info	34112	---
Oil Age	hrs	Client Info	600	---
Oil Changed	Client Info	Changed	---	---
Sample Status		SEVERE	---	---

CONTAMINATION

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

WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	32	---
Chromium	ppm	ASTM D5185m >20	2	---
Nickel	ppm	ASTM D5185m >4	0	---
Titanium	ppm	ASTM D5185m	0	---
Silver	ppm	ASTM D5185m >3	0	---
Aluminum	ppm	ASTM D5185m >20	3	---
Lead	ppm	ASTM D5185m >40	3	---
Copper	ppm	ASTM D5185m >330	<1	---
Tin	ppm	ASTM D5185m >15	<1	---
Vanadium	ppm	ASTM D5185m	0	---
Cadmium	ppm	ASTM D5185m	0	---

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	5	---
Barium	ppm	ASTM D5185m 0	0	---
Molybdenum	ppm	ASTM D5185m 60	51	---
Manganese	ppm	ASTM D5185m 0	<1	---
Magnesium	ppm	ASTM D5185m 1010	715	---
Calcium	ppm	ASTM D5185m 1070	945	---
Phosphorus	ppm	ASTM D5185m 1150	796	---
Zinc	ppm	ASTM D5185m 1270	1001	---
Sulfur	ppm	ASTM D5185m 2060	3013	---

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	3	---
Sodium	ppm	ASTM D5185m	2	---
Potassium	ppm	ASTM D5185m >20	2	---
Fuel	%	ASTM D3524 >5	17.4	---

INFRA-RED

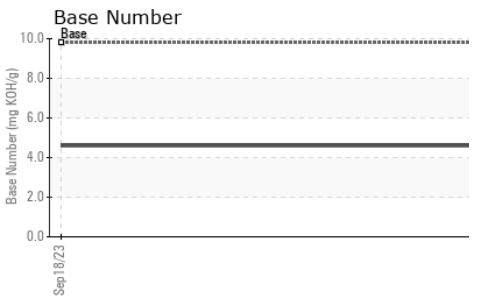
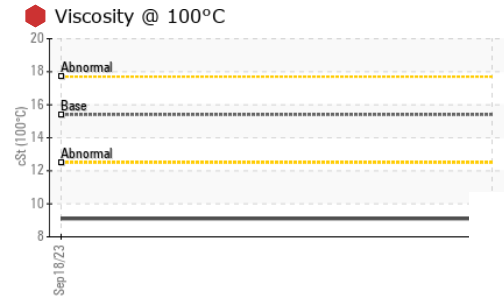
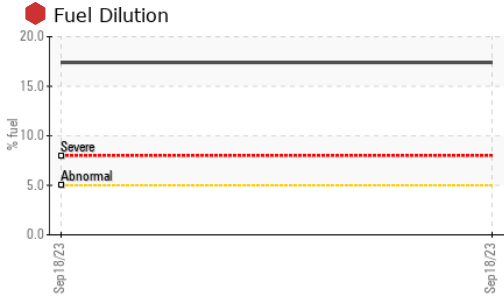
method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.6	---
Nitration	Abs/cm	*ASTM D7624 >20	10.9	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	26.3	---

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	31.0	---
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	4.6	---



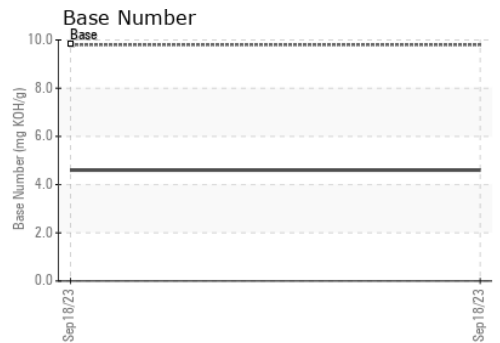
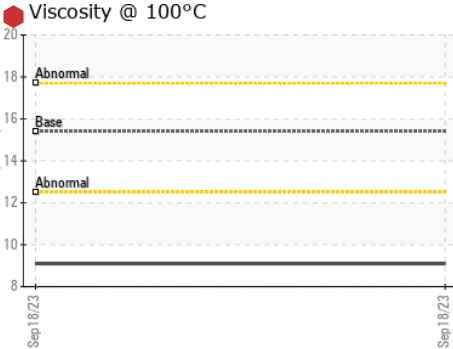
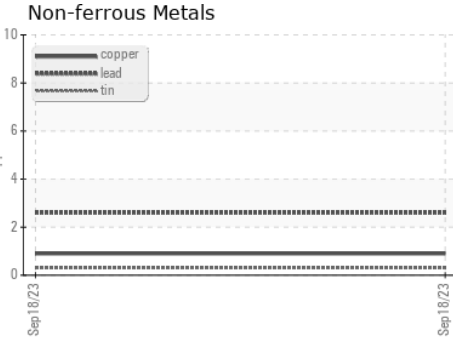
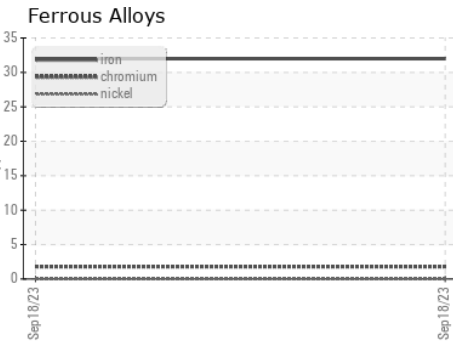
OIL ANALYSIS REPORT



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	9.1	---	---

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0087932 **Received** : 29 Sep 2023
Lab Number : 05964432 **Diagnosed** : 03 Oct 2023
Unique Number : 10670983 **Diagnostician** : Angela Borella
Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

GFL Environmental - 960 - West Central HC JacksonvilleHC
 2263 State Hwy 104
 Jacksonville, IL
 US 62656
 Contact: David Bradshaw
 david.bradshaw@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: