



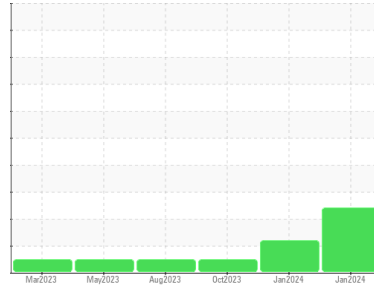
PROBLEM SUMMARY

Sample Rating Trend

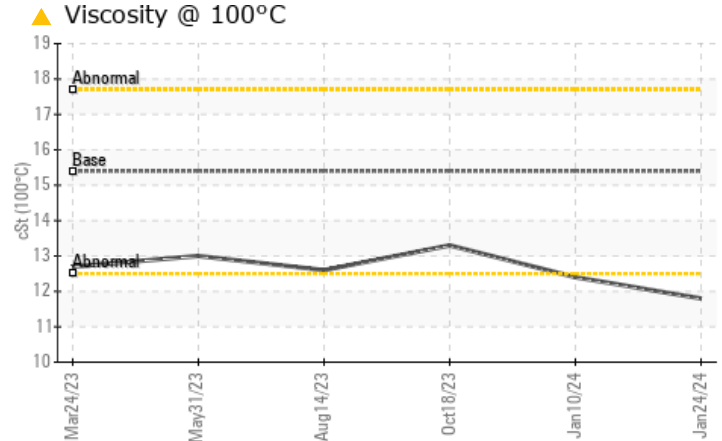
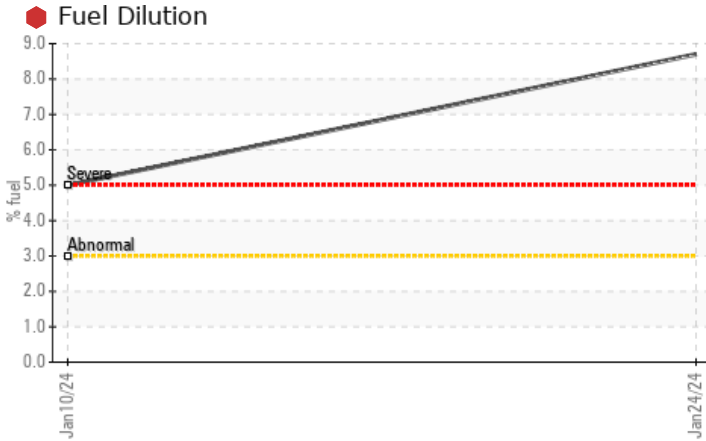
FUEL



Machine Id
420092 - SW4020
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 an early resample to monitor this condition. (Customer Sample Comment: Engine resample)

PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	ABNORMAL	NORMAL
Fuel	%	ASTM D3524	>3.0	8.7	5.0	<1.0
Visc @ 100°C	cSt	ASTM D445	15.4	11.8	12.4	13.3

Customer Id: GFL983
Sample No.: GFL0105512
Lab Number: 06072604
Test Package: FLEET



To manage this report scan the QR code

To discuss the diagnosis or test data:
Jonathan Hester +1 919-379-4092 x4092
jhester@wearcheckusa.com

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

10 Jan 2024 Diag: Don Baldrige

FUEL



We advise that you check the fuel injection system. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. All component wear rates are normal. There is a moderate 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.

view report



18 Oct 2023 Diag: Don Baldrige

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

view report



14 Aug 2023 Diag: Don Baldrige

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

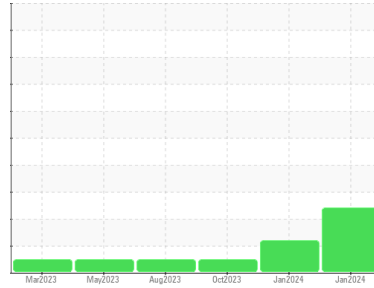
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OIL ANALYSIS REPORT

Sample Rating Trend



FUEL



Machine Id
420092 - SW4020
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

Recommendation

We advise that you check the fuel injection system. We recommend an early resample to monitor this condition. (Customer Sample Comment: Engine resample)

Wear

All component wear rates are normal.

Contamination

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

Fluid Condition

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		GFL0105512	GFL0105542	GFL0094084
Sample Date	Client Info		24 Jan 2024	10 Jan 2024	18 Oct 2023
Machine Age	mls	Client Info	143203	141662	132193
Oil Age	mls	Client Info	143203	141662	132193
Oil Changed	Client Info		N/A	Changed	N/A
Sample Status			SEVERE	ABNORMAL	NORMAL

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 >120	3	6	2
Chromium	ppm	ASTM D5185m >20	0	0	<1
Nickel	ppm	ASTM D5185m >5	<1	0	<1
Titanium	ppm	ASTM D5185m >2	0	0	<1
Silver	ppm	ASTM D5185m >2	<1	0	0
Aluminum	ppm	ASTM D5185m >20	2	<1	2
Lead	ppm	ASTM D5185m >40	2	<1	2
Copper	ppm	ASTM D5185m >330	0	1	2
Tin	ppm	ASTM D5185m >15	<1	<1	<1
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	0	0	<1

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	0	5	0
Barium	ppm	ASTM D5185m 0	0	0	9
Molybdenum	ppm	ASTM D5185m 60	52	50	49
Manganese	ppm	ASTM D5185m 0	<1	<1	<1
Magnesium	ppm	ASTM D5185m 1010	16	5	6
Calcium	ppm	ASTM D5185m 1070	2489	2392	2562
Phosphorus	ppm	ASTM D5185m 1150	1118	1091	988
Zinc	ppm	ASTM D5185m 1270	1285	1238	1243
Sulfur	ppm	ASTM D5185m 2060	3135	3081	3710

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	4	7	5
Sodium	ppm	ASTM D5185m	1	2	0
Potassium	ppm	ASTM D5185m >20	3	0	4
Fuel	%	ASTM D3524 >3.0	8.7	5.0	<1.0

INFRA-RED

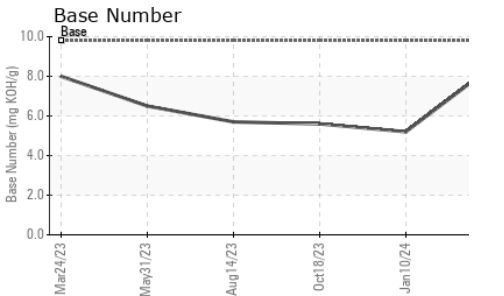
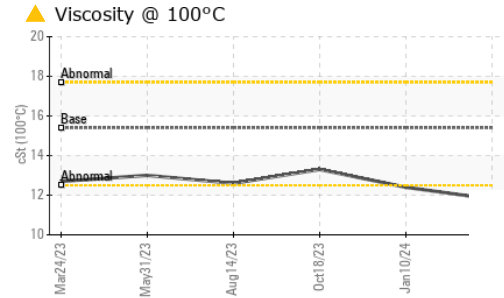
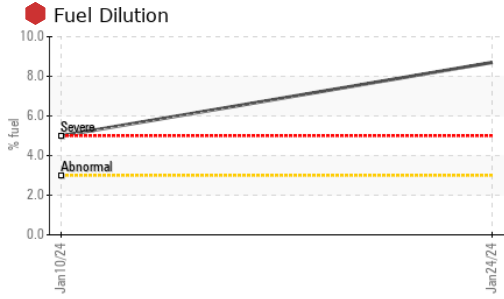
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	0.1	0.2	0.2
Nitration	Abs/cm	*ASTM D7624 >20	5.8	8.8	7.9
Sulfation	Abs/.1mm	*ASTM D7415 >30	15.2	20.2	19.5

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	9.2	11.5	11.3
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	8.5	5.2	5.6



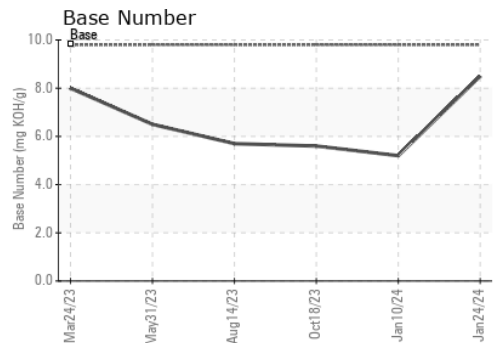
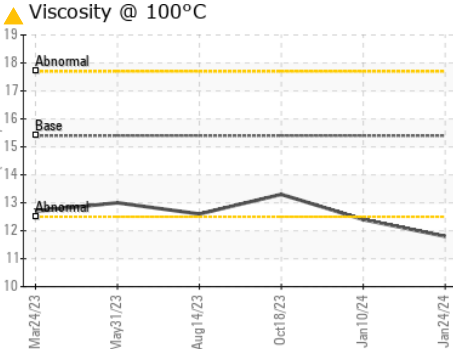
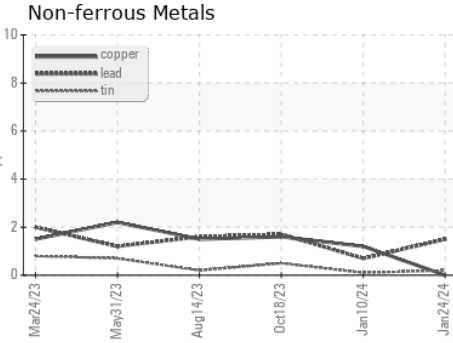
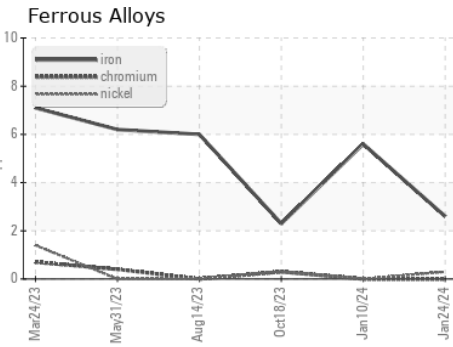
OIL ANALYSIS REPORT



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	▲ 11.8	▲ 12.4	13.3

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : GFL0105512 **Received** : 29 Jan 2024
 Lab Number : **06072604** **Diagnosed** : 31 Jan 2024
 Unique Number : 10849281 **Diagnostician** : Jonathan Hester
 Test Package : FLEET (Additional Tests: PercentFuel)

GFL Environmental - 983 - Sugar Land Hauling
 16011 West Belfort Street
 Sugar Land, TX
 US 77498
 Contact: Adrian Martinez
 adrianmartinez@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)

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F: