



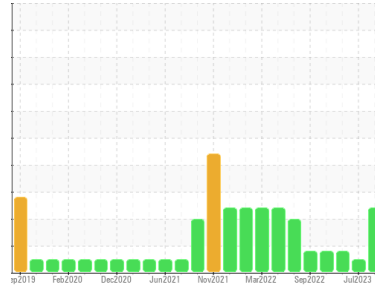
PROBLEM SUMMARY

Sample Rating Trend

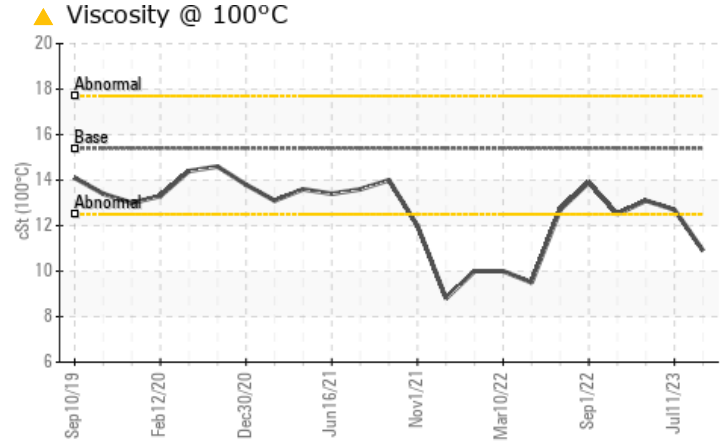
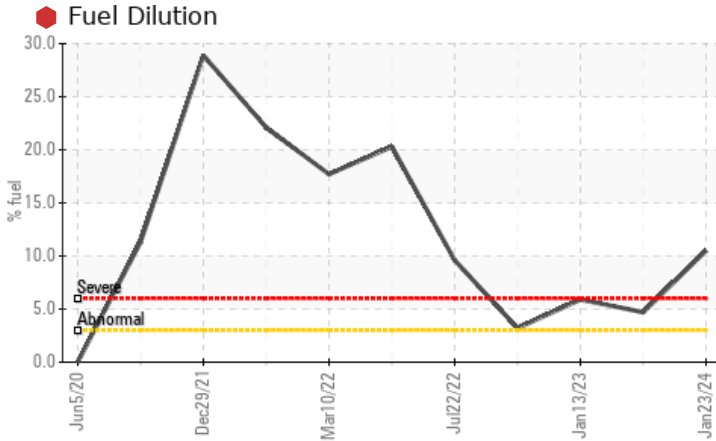
FUEL



Area
(YA152760) GFL035
 Machine Id
12068
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (32 QTS)



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	NORMAL	MARGINAL
Fuel	%	ASTM D3524	>3.0	10.5	<1.0	4.7
Visc @ 100°C	cSt	ASTM D445	15.4	10.9	12.7	13.1

Customer Id: GFL035
 Sample No.: GFL0085175
 Lab Number: 06072661
 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 Jul 2023 Diag: Wes Davis

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



23 Feb 2023 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 BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

view report



13 Jan 2023 Diag: Wes Davis

FUEL



The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. All component wear rates are normal. There is a moderate 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





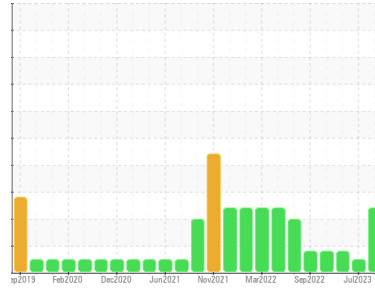
OIL ANALYSIS REPORT

Sample Rating Trend

FUEL



Area
(YA152760) GFL035
Machine Id
12068
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (32 QTS)



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	GFL0085175	GFL0071573	GFL0053168
Sample Date	Client Info	23 Jan 2024	11 Jul 2023	23 Feb 2023
Machine Age	hrs	0	9909	9909
Oil Age	hrs	600	600	600
Oil Changed	Client Info	Not Changed	Changed	Changed
Sample Status		SEVERE	NORMAL	MARGINAL

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 >75	28	28	13
Chromium	ppm ASTM D5185m >5	<1	<1	<1
Nickel	ppm ASTM D5185m >4	0	2	0
Titanium	ppm ASTM D5185m >2	0	0	0
Silver	ppm ASTM D5185m >2	0	0	<1
Aluminum	ppm ASTM D5185m >15	3	2	1
Lead	ppm ASTM D5185m >25	<1	0	<1
Copper	ppm ASTM D5185m >100	<1	1	<1
Tin	ppm ASTM D5185m >4	<1	<1	<1
Vanadium	ppm ASTM D5185m	0	0	<1
Cadmium	ppm ASTM D5185m	0	0	0

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	6	5	9
Barium	ppm ASTM D5185m 0	0	<1	0
Molybdenum	ppm ASTM D5185m 60	57	60	61
Manganese	ppm ASTM D5185m 0	<1	<1	<1
Magnesium	ppm ASTM D5185m 1010	857	920	873
Calcium	ppm ASTM D5185m 1070	974	1120	1124
Phosphorus	ppm ASTM D5185m 1150	946	977	974
Zinc	ppm ASTM D5185m 1270	1133	1267	1267
Sulfur	ppm ASTM D5185m 2060	2582	3443	3386

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	8	9	8
Sodium	ppm ASTM D5185m	12	13	11
Potassium	ppm ASTM D5185m >20	3	1	3
Fuel	% ASTM D3524 >3.0	10.5	<1.0	4.7

INFRA-RED

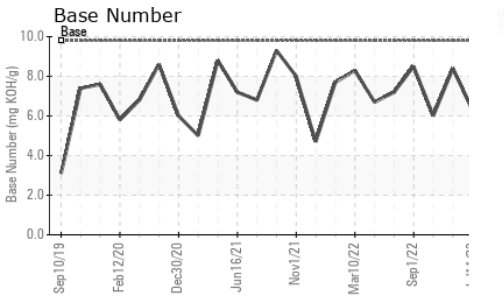
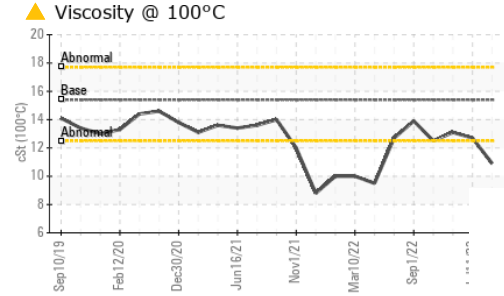
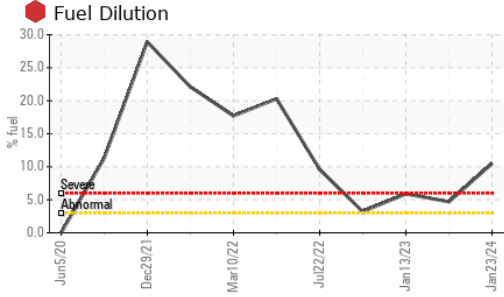
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >6	0.5	0.6	0.9
Nitration	Abs/cm *ASTM D7624 >20	11.1	12.9	9.1
Sulfation	Abs/.1mm *ASTM D7415 >30	21.4	23.3	21.5

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	20.9	23.1	15.7
Base Number (BN)	mg KOH/g ASTM D2896 9.8	6.1	6.3	8.4



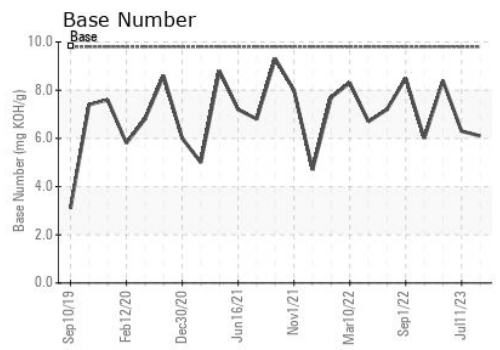
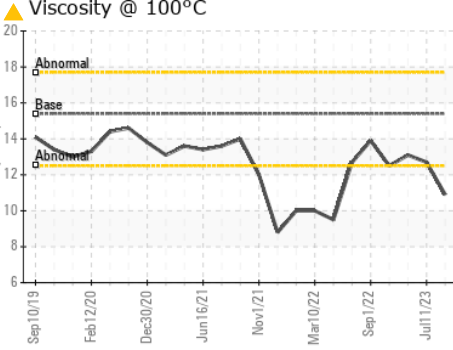
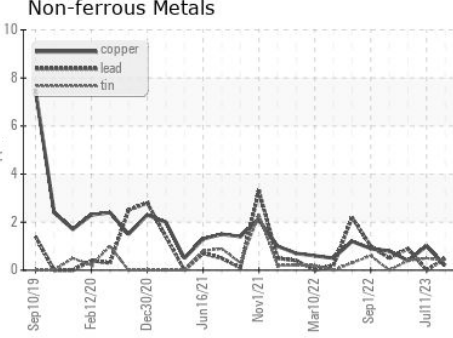
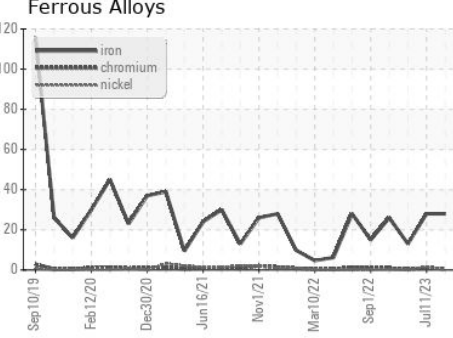
OIL ANALYSIS REPORT



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 ▲ 10.9	12.7	13.1

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0085175 **Received** : 29 Jan 2024
Lab Number : 06072661 **Diagnosed** : 31 Jan 2024
Unique Number : 10849338 **Diagnostician** : Wes Davis
Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

GFL Environmental - 035 - Greensboro
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 High Point, NC
 US 27263
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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)