

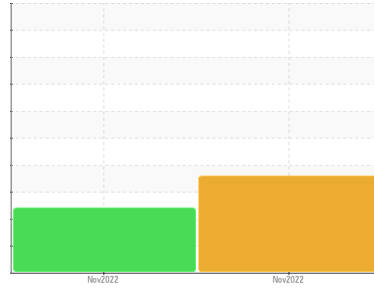


PROBLEM SUMMARY



Area
[gfl0064206]
 Machine Id
426053-402041
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

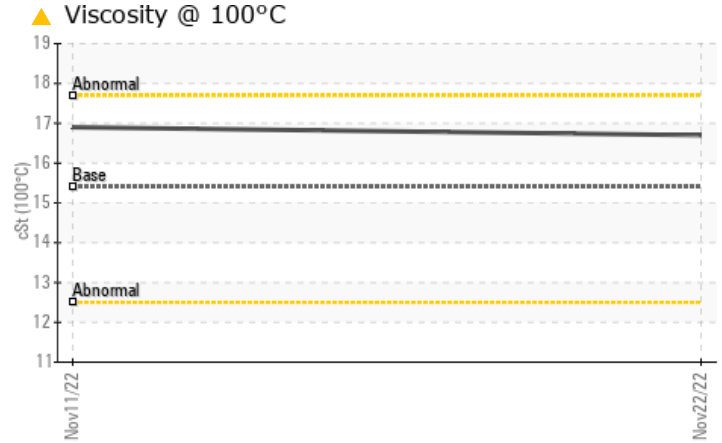
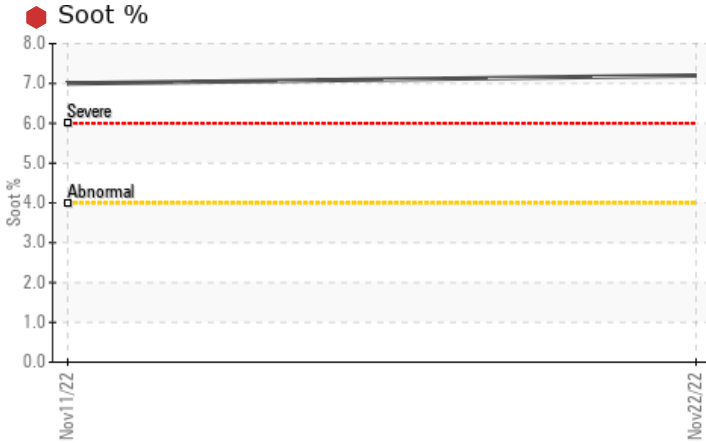
Sample Rating Trend



SOOT



COMPONENT CONDITION SUMMARY



RECOMMENDATION

We advise that you check for faulty combustion, plugged air filters, or aftercoolers. The oil change at the time of sampling has been noted. We recommend you service the filters on this component. We recommend an early resample to monitor this condition. NOTE: High solids (carbon/soot) in the sample have limited the accuracy of Infra-Red data including Total Base Number (TBN) value.

PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	ABNORMAL	---
Soot %	%	*ASTM D7844	>4	7.2	7	---
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	0.0	0.0	---
Visc @ 100°C	cSt	ASTM D445	15.4	16.7	16.9	---

Customer Id: GFL868
 Sample No.: GFL0064206
 Lab Number: 05703453
 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
Change Filter	MISSED	Jan 10 2023	?	We recommend you service the filters on this component.
Resample	MISSED	Jan 10 2023	?	We recommend an early resample to monitor this condition.
Alert	MISSED	Jan 10 2023	?	NOTE: High solids (carbon/soot) in the sample have limited the accuracy of Infra-Red data including Total Base Number (TBN) value.
Check Combustion	MISSED	Jan 10 2023	?	We advise that you check for faulty combustion, plugged air filters, or aftercoolers.

HISTORICAL DIAGNOSIS

11 Nov 2022 Diag: Don Baldrige

DEGRADATION



We advise that you check for faulty combustion, plugged air filters, or aftercoolers. We recommend you service the filters on this component. We recommend an early resample to monitor this condition. NOTE: High solids (carbon/soot) in the sample have limited the accuracy of Infra-Red data including Total Base Number (TBN) value. All component wear rates are normal. There is an abnormal amount of solids and carbon present in the oil. The oil viscosity is higher than normal. The BN level is low.

view report





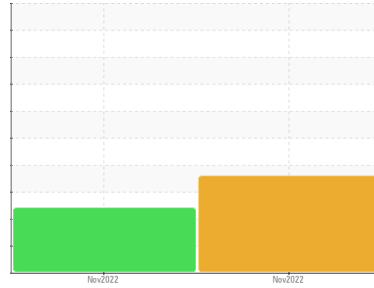
OIL ANALYSIS REPORT

Sample Rating Trend

SOOT



Area
[gfl0064206]
 Machine Id
426053-402041
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)



DIAGNOSIS

Recommendation

We advise that you check for faulty combustion, plugged air filters, or aftercoolers. The oil change at the time of sampling has been noted. We recommend you service the filters on this component. We recommend an early resample to monitor this condition. NOTE: High solids (carbon/soot) in the sample have limited the accuracy of Infra-Red data including Total Base Number (TBN) value.

Wear

All component wear rates are normal.

Contamination

There is an abnormal amount of solids and carbon present in the oil.

Fluid Condition

The oil viscosity is higher than normal. The BN level is low.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		GFL0064206	GFL0064202	---
Sample Date	Client Info		22 Nov 2022	11 Nov 2022	---
Machine Age	hrs	Client Info	36531	36516	---
Oil Age	hrs	Client Info	36531	36516	---
Oil Changed	Client Info		Changed	Not Changd	---
Sample Status			SEVERE	ABNORMAL	---

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<1.0	<1.0	---
Glycol	WC Method		NEG	NEG	---

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >120	55	52	---
Chromium	ppm	ASTM D5185m >20	2	2	---
Nickel	ppm	ASTM D5185m >5	0	0	---
Titanium	ppm	ASTM D5185m >2	0	0	---
Silver	ppm	ASTM D5185m >2	0	0	---
Aluminum	ppm	ASTM D5185m >20	2	2	---
Lead	ppm	ASTM D5185m >40	4	4	---
Copper	ppm	ASTM D5185m >330	3	3	---
Tin	ppm	ASTM D5185m >15	<1	<1	---
Vanadium	ppm	ASTM D5185m	0	0	---
Cadmium	ppm	ASTM D5185m	0	0	---

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	3	3	---
Barium	ppm	ASTM D5185m 0	0	2	---
Molybdenum	ppm	ASTM D5185m 60	58	61	---
Manganese	ppm	ASTM D5185m 0	<1	<1	---
Magnesium	ppm	ASTM D5185m 1010	898	856	---
Calcium	ppm	ASTM D5185m 1070	1026	1055	---
Phosphorus	ppm	ASTM D5185m 1150	919	924	---
Zinc	ppm	ASTM D5185m 1270	1175	1155	---
Sulfur	ppm	ASTM D5185m 2060	3275	3210	---

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	6	6	---
Sodium	ppm	ASTM D5185m	3	2	---
Potassium	ppm	ASTM D5185m >20	6	7	---

INFRA-RED

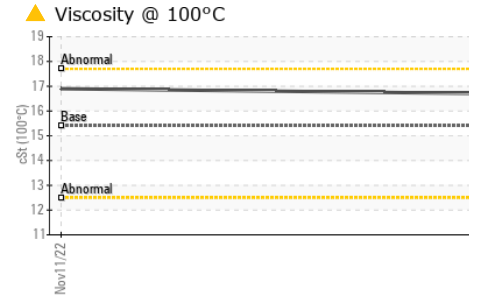
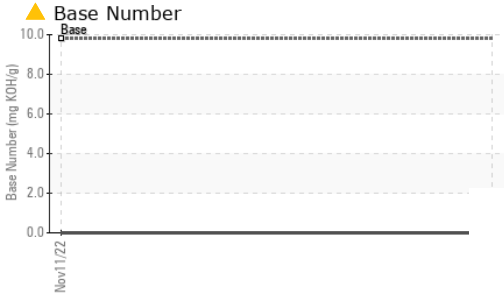
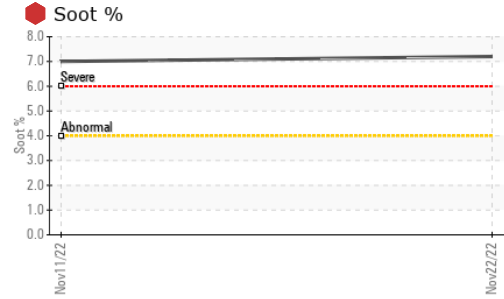
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	7.2	7	---
Nitration	Abs/cm	*ASTM D7624 >20	15.9	16.6	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	36.3	35.7	---

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	20.9	22.8	---
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	0.0	0.0	---



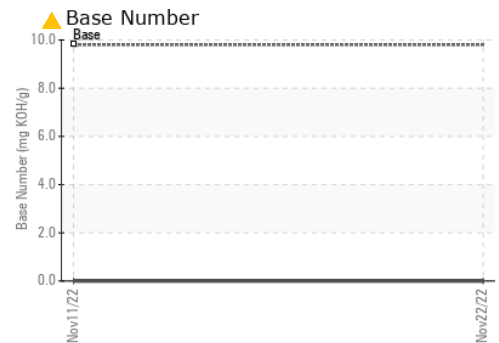
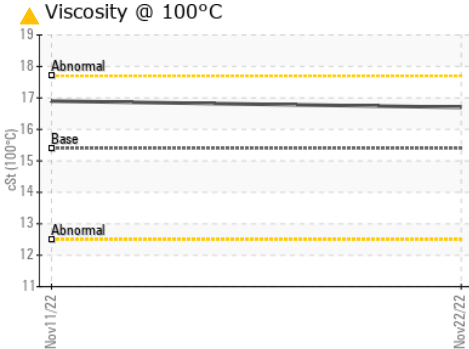
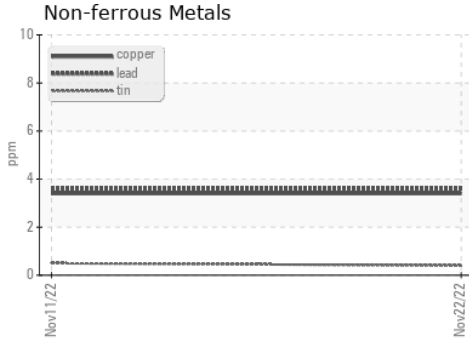
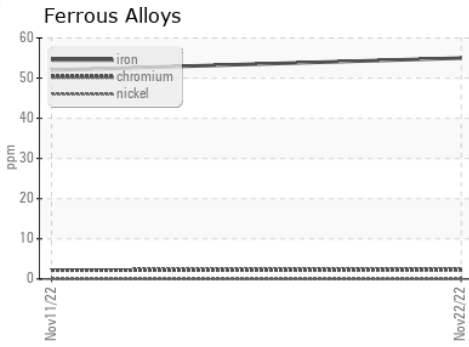
OIL ANALYSIS REPORT



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	▲ 16.7	▲ 16.9

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0064206 **Received** : 28 Nov 2022
Lab Number : 05703453 **Diagnosed** : 30 Nov 2022
Unique Number : 10233027 **Diagnostician** : Jonathan Hester
Test Package : FLEET

GFL Environmental - 868 - Childersburg Fines Hauling (Alpine)
 13737 Plant Rd
 Childersburg, AL
 US 35044
 Contact: JONATHAN WILLIAMS
 jonathan.williams@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: