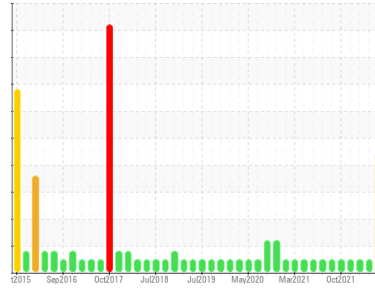




PROBLEM SUMMARY

Sample Rating Trend



WATER

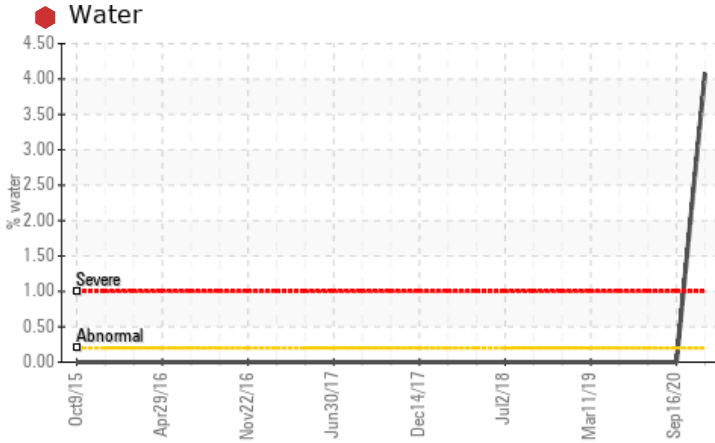


Machine Id
3537

Component
Diesel Engine

Fluid
PETRO CANADA DURON SHP 15W40 (8 GAL)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

We advise that you check for the source of water entry. 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	NORMAL	NORMAL
Water	%	ASTM D6304	>0.2	🔴 4.08	---	---
ppm Water	ppm	ASTM D6304	>2000	🔴 40800	---	---
Debris	scalar	*Visual	NONE	🟡 MODER	NONE	NONE
Appearance	scalar	*Visual	NORML	🟡 LAYRD	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	🔴 0.2%	NEG	NEG

Customer Id: GFL102
Sample No.: GFL0045913
Lab Number: 05703367
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 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	SKIPPED	Jan 30 2023	?	We recommend an early resample to monitor this condition.
Check Water Access	SKIPPED	Jan 30 2023	?	We advise that you check for the source of water entry.
Other Action (see Note)	DONE	Jan 30 2023	?	No recommended actions

HISTORICAL DIAGNOSIS

01 Apr 2022 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



25 Mar 2022 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



27 Oct 2021 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.

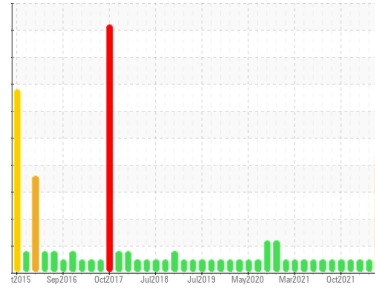
view report





OIL ANALYSIS REPORT

Sample Rating Trend



WATER



Machine Id
3537

Component

Diesel Engine

Fluid

PETRO CANADA DURON SHP 15W40 (8 GAL)

DIAGNOSIS

Recommendation

We advise that you check for the source of water entry. 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 concentration of water present in the oil. Moderate concentration of visible dirt/debris present in the oil.

Fluid Condition

The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		GFL0045913	GFL0049235	GFL0038574
Sample Date	Client Info		23 Nov 2022	01 Apr 2022	25 Mar 2022
Machine Age	hrs	Client Info	600	30177	30154
Oil Age	hrs	Client Info	600	600	300
Oil Changed	Client Info		Changed	Changed	Not Changed
Sample Status			SEVERE	NORMAL	NORMAL

CONTAMINATION

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

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	15	41	11
Chromium	ppm	ASTM D5185m >20	<1	2	<1
Nickel	ppm	ASTM D5185m >4	<1	<1	0
Titanium	ppm	ASTM D5185m	<1	<1	0
Silver	ppm	ASTM D5185m >3	<1	<1	0
Aluminum	ppm	ASTM D5185m >20	4	11	2
Lead	ppm	ASTM D5185m >40	<1	<1	3
Copper	ppm	ASTM D5185m >330	2	5	3
Tin	ppm	ASTM D5185m >15	0	<1	<1
Antimony	ppm	ASTM D5185m	---	---	---
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	<1	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	57	28	6
Barium	ppm	ASTM D5185m 0	0	0	0
Molybdenum	ppm	ASTM D5185m 60	59	68	63
Manganese	ppm	ASTM D5185m 0	<1	<1	<1
Magnesium	ppm	ASTM D5185m 1010	706	1041	959
Calcium	ppm	ASTM D5185m 1070	1035	1219	1176
Phosphorus	ppm	ASTM D5185m 1150	698	1144	1093
Zinc	ppm	ASTM D5185m 1270	980	1307	1347
Sulfur	ppm	ASTM D5185m 2060	2800	2979	2076

CONTAMINANTS

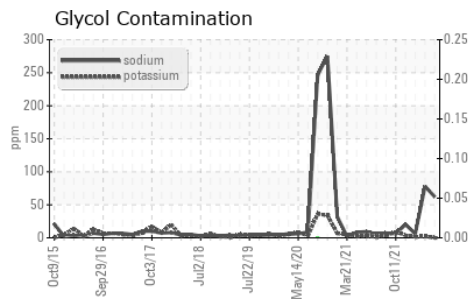
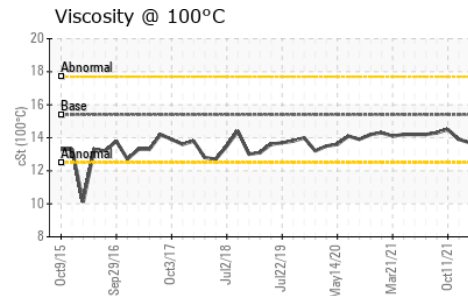
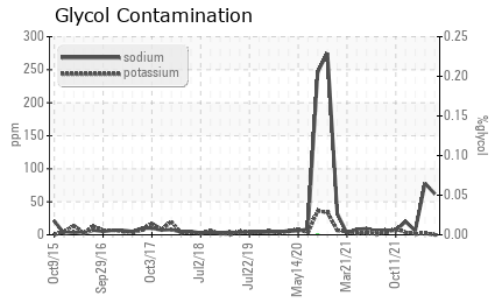
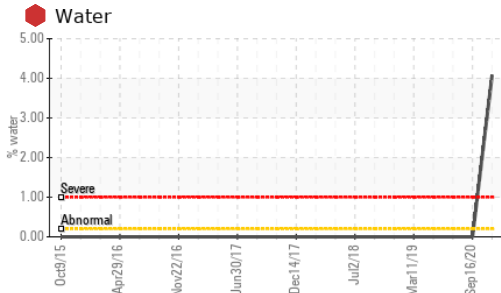
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	14	21	4
Sodium	ppm	ASTM D5185m	62	78	6
Potassium	ppm	ASTM D5185m >20	<1	2	2
Water	%	ASTM D6304 >0.2	4.08	---	---
ppm Water	ppm	ASTM D6304 >2000	40800	---	---
Glycol	%	*ASTM D2982	NEG	NEG	NEG

INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.5	0.4	0.4
Nitration	Abs/cm	*ASTM D7624 >20	17.9	7.5	11.3
Sulfation	Abs:1mm	*ASTM D7415 >30	7.0	19.4	22.9



OIL ANALYSIS REPORT

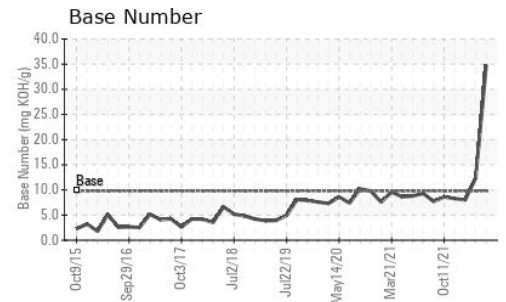
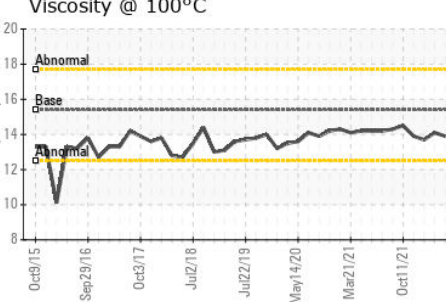
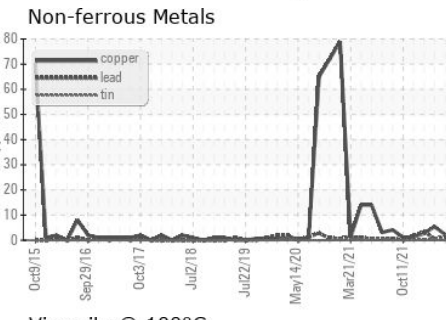
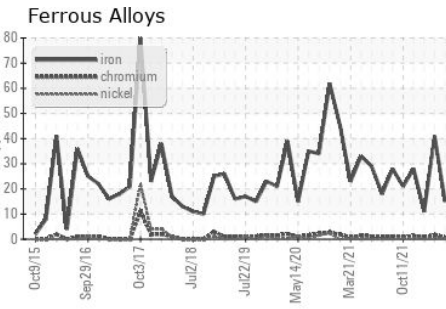


FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs./1mm	*ASTM D7414	>25	22.0	15.0	19.5
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	34.8	12.3	8

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	▲ MODER	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	▲ LAYRD	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	0.2%	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.9	14.1	13.7

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0045913 **Received** : 28 Nov 2022
Lab Number : **05703367** **Diagnosed** : 30 Nov 2022
Unique Number : 10232941 **Diagnostician** : Jonathan Hester
Test Package : FLEET (Additional Tests: Glycol, KF)

GFL Environmental - 102 - Morristown TN
 415 Ryder Lane, PO Box 1894
 Morristown, TN
 US 37813
 Contact: Ricky Dunlap
 ricky.dunlap@gflenv.com
 T: (800)207-6618
 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)